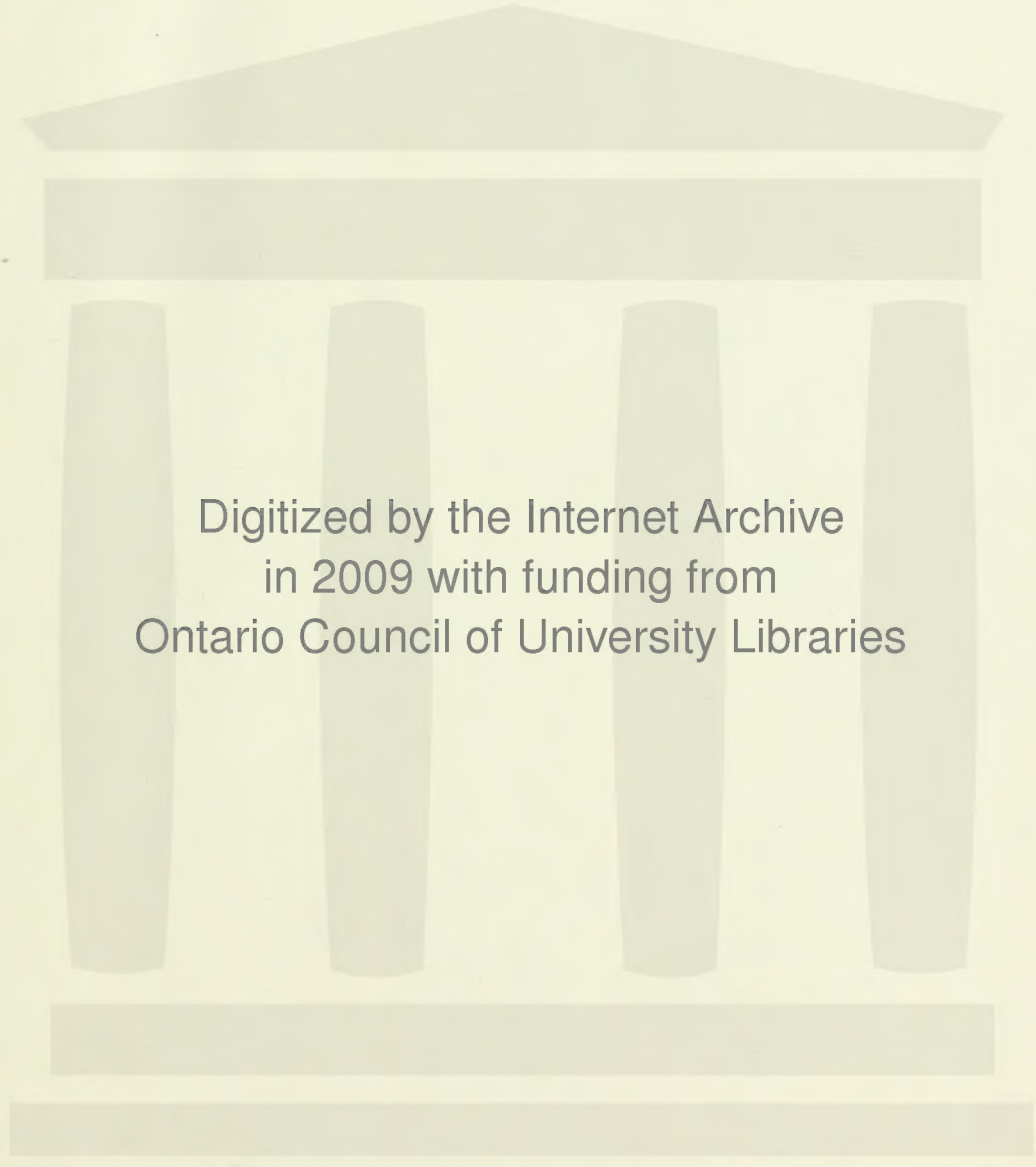


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A Lecture

ON

THE TREATMENT OF RECENT FRACTURES.

DELIVERED AT THE POLYCLINIC, DECEMBER 17TH, 1906.

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THERE is no more important surgical subject than the treatment of fractures of the long bones, both from the point of view of the difficulties of the treatment, and also of the functional results which may be obtained. Unless the ends of the bones unite in fairly good apposition, much disability may be produced which may be of serious moment to the patient.

DISABILITY AFTER FRACTURE.

Perhaps the most frequent forms of disability are due to *mal-union* of the fracture, and this is commonly associated with overlapping of the ends of the bones. This leads directly to shortening of the limb, and in the lower extremity may cause very serious lameness. Not uncommonly, also, the overlapping of the ends of the bones is combined with marked rotation of the lower fragment; or, again, an angular deformity may be produced. A second cause of trouble is *non-union* of the broken ends. In some instances the fractured ends, instead of overlapping, become separated from one another owing to muscular action, with the result that union does not occur, the best examples of such conditions being fracture of the patella, fracture of the olecranon, fracture of the trochanter of the femur, and fracture of the tuberosities or condyles of the humerus, etc. Non-union may also occur without separation of the fragments. A third class of bad results may be due to *stiffness* of the joints, tendons, and muscles in the vicinity of the broken bone.

Two causes lead to the deformity which occurs in connexion with fractures. In the first place, it is produced by the force which caused the fracture, and, in the second place, it is kept up and aggravated by muscular contraction and by the weight of the limb below the broken ends. Of these, the most important point, and the one which has to be dealt with in the first instance, is the displacement of the bones directly due to the force which produced the fracture. The importance of muscular action is in keeping up or aggravating this displacement, or in aiding the weight of the limb in causing rotation of the lower fragment, angular deformity at the seat of fracture, etc., in cases where the fracture has not been properly rectified in the first instance. The cases where muscular action is of primary importance are those where separation of the fragments tends to occur. The trouble in all these cases of deformities is primarily due to imperfect reduction of the fractured ends and inefficient retention of the fragments in position.

A subsequent and very important trouble resulting from fracture is inability to use the limb completely afterwards. This may be due to mal-union of the fragments, especially where the fracture is in the vicinity of a joint; but it is chiefly caused by adhesions of tendons and muscles to their sheaths, or to each other, or to the bones at the seat of fracture. It may also be caused by adhesions in the neighbouring joints, atrophy of the muscles of the limb, etc. These troubles are essentially due to prolonged fixation of the injured parts, for it must be borne in mind that in a fracture the lesion is not confined to the bone itself, but also affects the soft tissues, the result being that blood and lymph are poured out into the soft tissues, and if they are not removed by movement and massage they lead to development of fibrous tissue, which tends to bind the various parts together.

In considering the treatment of fractures we have, therefore, various points to bear in mind—the reduction of the fracture; the retention of the fragments in position and their proper fixation; and the avoidance of the secondary troubles which have been referred to. Of these various points it is evident that the proper reduction of the fracture is of paramount importance. Unless the broken ends are brought into accurate apposition at the time of the injury, or soon after, they will never come right subsequently, and a perfect result cannot be obtained; if, on the other hand, they are properly brought together at the time, it is in most cases comparatively easy to keep them in good position, and thus to prevent many of the bad after-results. For example, the adhesion of tissues to the region of fracture with the consequent stiffness, the involvement of nerves in callus, etc., most often occur in cases where the fragments are overlapping and in bad position.

REDUCTION.

I doubt if, as a rule, sufficient attention is paid to the accurate replacement of the fractured ends at the time of the injury. Most of the papers which are published on the subject of the treatment of fractures at the present time deal chiefly with the question of massage versus the use of splints, that is to say, with the after-treatment of the fracture rather than with the primary reduction of the fractured ends. In my opinion, however, these are secondary matters, the first and most important point to be considered in the treatment of recent fractures being whether, and in what way, the fractured ends of the bones can be brought into accurate apposition. It must be borne in mind that if such replacement is not carried out in the first instance no amount of extension of the limb afterwards, and no possible arrangement of splints and apparatus will bring the bones into proper apposition subsequently. The real function of apparatus in the treatment of fractures is to retain the fragments in position, and to prevent their displacement after the broken ends have been brought into line; and the object of massage is to keep up the nutrition of the limb and the mobility of the joints, and to prevent organization of blood and lymph and the subsequent formation of adhesions. I hold, therefore, that in the treatment of fractures the chief stress must be laid on the question of the reduction or setting of the fracture.

By reduction of a fracture I mean an attempt to interlock the broken ends. The ends of the bones are never broken off smoothly; there are always projecting portions on both surfaces, and if only these can be fitted into each other the ends will frequently retain their position to a considerable and sufficient extent without much trouble or pressure. No doubt it is often a very difficult matter

to obtain really accurate interlocking of the broken ends owing to the obliquity of the surfaces and their tendency to slip apart, and also because the swelling of the soft parts around and the depth at which the bone lies prevent the surgeon from accurately feeling what he is about. This is especially so in fractures of the femur, and in fractures about the upper end of the humerus. Indeed, accurate apposition is in a good many cases impossible without an operation; and although it is the thing to be aimed at, the question naturally arises in cases where it is evidently not possible to carry it out, whether it is in the particular instance essential. This depends very much on the situation of the fracture. For example, where a fracture extends into a joint, or is in the immediate vicinity of a joint, no pains should be spared to get accurate replacement of the fragments, otherwise there will subsequently be a great deal of restriction of movement in the joint, and often complete stiffness, owing to the altered lines of the joint surfaces. This applies more especially to fractures about the elbow joint, and also about the knee, ankle, and wrist. Fractures in the shaft of the long bones are not necessarily of such importance; fractures of the leg, more especially, often give a perfect functional result, even although the bones are not accurately in apposition. In fractures of the shaft of the femur, on the other hand, such apposition is important, because if the ends overlap, shortening, often to a marked degree, is very apt to occur.

Obstacles to Reduction.

The chief obstacles to reduction are muscular contraction and the interposition of materials such as fascia, periosteum, muscle, etc., between the ends of the bones, but other factors also come into play.

Muscular contraction is a very important matter. If once overlapping of the fragments has occurred, the contraction of the muscles, which is increased and kept up by the irritation of the broken ends, not only increases the deformity, but is very difficult to overcome when we attempt to reduce the fracture. In other cases, again, for example, in fractures of the patella and olecranon, the muscular contraction causes separation of the fragments, and prevents them from being kept together afterwards.

Interposition of material, such as periosteum, between the broken ends renders the proper reduction of the fracture a very difficult and sometimes impossible matter, but unless it is rectified non-union is very apt to occur.

Rotation of the fragments is also a great obstacle to accurate reduction. Dr. Griffiths, of Cambridge, has shown that most fractures are spiral, and not simply transverse or oblique, and the result is that as the force continues to act after the bone is broken, the spiral movement is continued, and not only does the lower fragment overlap the other, but it is rotated to a very serious extent. If, now in reducing the fracture attention be not paid to this point, the broken surfaces will not come properly into apposition and there will be no possibility of interlocking the ends consequently as soon as the extension is released the muscles come into play and the overlapping recurs. This is a most important point to bear in mind, especially in oblique fractures, for if some degree of interlocking is not obtained at the time, shortening of the limb will inevitably occur, as no amount of extension will bring or even keep, the lower fragment in position subsequently against the pull of the muscles.

Comminution of the broken ends is also another cause of difficulty in the proper setting of fractures; instead of having simply two surfaces which can be interlocked sufficiently to retain their position without much effort, one or other surface may be so irregular that no proper approximation is possible, and besides some of the fragments may get in between the ends of the bones and prevent proper reduction.

The small size of one of the fragments is another obstacle to the proper reduction of a fracture. This of course, is especially the case where the fracture is in the immediate neighbourhood of a joint, and where the one fragment is so small that one cannot grasp it properly and get the two ends in apposition and yet in these particular cases it is most important to do so. Further, in such fractures the difficulty is increased by the fact that usually there is a large amount of swelling present which prevents one seeing and getting a proper hold of the small fragment.

Difficulties in Retaining Fractures in Position.

It is also well to bear in mind the chief difficulties in retaining the fractured ends in position afterwards.

Incomplete reduction of the broken ends is the main cause of difficulty, but in some cases a better result may not be possible from manipulations, while in others, even after proper reduction, the fractured ends are very apt to slip out of position subsequently.

For example, in the case of oblique fractures, the broken surfaces are often comparatively smooth, and the interlocking of the ends, even when they are brought accurately together, is imperfect; so that often, in spite of careful reduction, displacement may occur during the application of the apparatus; and if this takes place, it will frequently be found that in a short time, owing to muscular action, marked overlapping of the fragments has occurred.

The weight of the lower part of the limb, unless carefully guarded against in putting up the fracture, will produce bending, and in the case of oblique fractures, unlocking of the fragments with subsequent overlapping of the ends. For instance, in cases of fracture of the tibia, the foot unless properly supported, is apt to fall back and lead to a bending at the seat of fracture; or, in cases of fracture of the shaft of the femur, it is very apt to produce rotation outwards.

Where one fragment is short and has a strong muscle attached to it, it is very apt to be tilted and rotated out of position unless attention is paid to bringing the longer fragment into line with the displaced shorter one. The best examples of this trouble are fractures below the lesser trochanter of the femur, and fractures near the upper end of the radius.

Methods of Reduction.

Having considered the obstacles to reduction and the points to be guarded against subsequently, we may now proceed to consider the best methods of bringing the fragments into position. In the first place, before commencing the necessary manipulations, it is essential to have all the retentive arrangements fully prepared, so that they may be applied at once when the parts have been brought into proper line. To pull the limb about and allow the displacement to recur while the retentive apparatus is being got ready is only to lacerate the parts twice without any corresponding advantage.

In the great majority of fractures reduction should be effected under an anaesthetic. Complete relaxation of the muscles is a very important point, otherwise they form a formidable obstacle to reduction, and the necessary manipulations increase their contraction, and thus render the accurate reduction of the fracture very difficult, or perhaps impossible. Assistance is also necessary wherever it can be obtained, the duty of the assistant being to make the necessary extension on the distal fragment, which must be done steadily and not in jerks; to see that the extension is being carried out in the proper direction and, more especially, to see that the position of the limb as regards rotation is correct. The body must also be fixed, and, wherever it is possible, a second assistant (who need not, however, be a skilled one) should be obtained for this purpose; the important point being that the surgeon should have both hands free to manipulate the fragments into position. Proper extension and counter-extension having been obtained, the surgeon proceeds to *manipulate* the fragments and try to interlock them as accurately as possible.

In the first place, he has to see that nothing intervenes between the broken ends. This he judges of by the completeness of the crepitus, taking care, however, in testing this that he does not grind the surfaces together, and so break off any irregularities which will be of use in the way of interlocking the ends. Having made sure of this point, he tries to get the ends into accurate position by rotation and lateral movements, while steady extension is being carried out by the assistant. Theoretically this sounds simple, practically it is not at all easy. It is especially difficult in a fleshy part like the thigh to feel the bones and to make sure that they are really in position. Hence, wherever it is possible, it is well to perform the reduction under the *x* ray screen, so that the surgeon can see as well as feel whether the bones are in proper apposition; and this is especially important in cases of fracture about joints, where accuracy is very necessary

It is not, of course, by any means possible to carry this out in all cases, partly on account of the absence of the necessary apparatus, and partly on account of the expense; and, unless the matter is a very important one, the surgeon cannot leave the patient in pain while the apparatus is being obtained and fitted up. It is only, of course, in fractures of the upper extremity that patients can be taken to an *x*-ray establishment, and the fracture rectified there. In any case, however, it is important to have *x*-ray photographs taken as soon as possible after the fracture has been put up, and these skiagrams should always be stereoscopic. This should be done as soon as possible while the injured parts are still soft, so that if any alteration in position seems necessary it can still be carried out. If it is left for a week or two, the tissues by that time have become so rigid and fixed that no proper rectification is possible without an open operation.

Operation on Recent Fractures.

Should it be found impossible for some reason or other to get the bones into accurate apposition, the question of what should be done must be at once considered, that is to say, one must decide whether to be content with the best position obtainable by manipulation, or whether further steps should be taken to ensure a more perfect result. This raises the question of operation on recent fractures, for under these circumstances the difficulty cannot as a rule be overcome in any other way. In considering this question two points must be borne in mind. In the first place, operations of this kind are of a severe and serious nature. The severity may be considerable, especially in the case of deep-seated bones, for in such circumstances an extensive incision must as a rule be employed in order to gain good access to the parts, and this involves considerable loss of blood, as well as a more or less prolonged operation, before the ends of the bones are satisfactorily fixed. The seriousness arises from the risk of sepsis, for if suppuration occurs in the wound disaster is very likely to follow; the various general septic diseases may set in, there may be necrosis of the ends of the bones, prolonged suppuration, and so on. Hence, unless the operator is certain of his aseptic work, he should not operate in cases of recent fracture. In the second place, even supposing that the surgeon is sure as regards asepsis, it must be remembered that some of the methods of fixation employed in these cases are not very satisfactory; and it is especially essential that the fixation should be firm, because after these operations there is always a good deal of bloody oozing, sometimes necessitating several changes of dressings before the wound has healed. This implies a good deal of movement and risk of displacement unless the parts are firmly fixed, and the assistance of one or more individuals at each dressing. Thus, in deciding the question of operation, one has to consider the severity of the operation, the risk of sepsis, the firmness of the fixation, and whether the necessary assistance in the subsequent dressings is likely to be forthcoming. On the other hand, absolute apposition of the fragments is by no means always necessary for a satisfactory functional result; and a little overlapping of the fragments, which may look very bad in a skiagram, may not affect the functional result at all.

Hence a great deal of judgement must be exercised in deciding the question of open operation in cases of recent fracture, and before undertaking it the surgeon must be satisfied that if it is not done the functional result will be bad; that by the operation he can distinctly improve matters; and that it can be performed with safety. In regard to this question of operation, if it is to be done it should be within three or four days of the accident, otherwise the tissues become so infiltrated and firm that it is extremely difficult to get the ends of the bones into position, and more extensive incisions than are altogether desirable may be necessary to effect the object. In certain cases it is most desirable, where possible, to operate. Such are injuries where the fragments become separated by muscular action, and where soft tissues get in between the ends of the bones; such as fractures of the patella or olecranon. In fractures involving joints with displacement of fragments, operation is also very necessary. This is more especially the case in fractures about the elbow joint, particularly when the lower end of the humerus is broken up into two or more pieces. Other examples are fractures through or just above the condyles of the femur if it be found impossible to get or retain the fragments in position. T-shaped fractures into joints almost always require operation. Fractures of the tibia where the lower end of the upper fragment tends to tilt forward and perforate the skin, or conversely, where it is found impossible to keep the heel forwards satisfactorily, should be fixed by operation. Where pieces are broken off from bones, as in fracture of the great trochanter of the femur, or of the great tuberosity of the humerus, it may also be necessary to fix them in position.

More difficult is the question of operation on deep-seated bones, such as the femur, and on double bones, such as the bones of the forearm. Operations on the shaft of the femur are difficult and extensive on account of the depth of the bone, the large incision required, and the risk of sepsis if great care is not taken. On the other hand, they are often oblique and difficult to interlock in the first instance, and to retain in position afterwards, and marked overlapping of the fragments and consequent shortening is very apt to occur in spite of the use of as great a degree of extension as can be borne. There are no doubt many cases of fracture of the femur where the results are not satisfactory, especially from the point of view of shortening. Hence it seems to me that the proper plan in these and similar fractures is to watch the case very carefully, to take frequent measurements and skiagrams, and if in a few days it is evident that the result is not likely to be satisfactory, to cut down before the parts have become so matted together that they will not stretch. The question of the forearm is also a difficult one. The proper fixation of the two bones by operation is by no means an easy matter; while, on the other hand, the fracture can be seen very readily and the ends of the bone brought in position under *x* rays. Here, again, a good deal will depend on the progress of the case, and except in rare instances I should not advocate operation in the first instance.

Much depends on the manner of fixation employed. Except for the patella and olecranon wires are of little use, and the means I employ are plates, screws, and pegs. In such cases as detachment of the trochanter and tuberosity of the humerus, screws or pegs, preferably the former (ordinary unplated steel screws), are the best. About the elbow, small metal or ivory pegs or nails are most frequently useful. But wherever the parts are large enough to permit of it I use an aluminium plate embracing the two fragments and fastened on with tacks or small screws. The aluminium plates which I employ are pieces of sheet aluminium which can be readily bent but are not too thin, and are perforated with a number of small holes. The fractured ends having been laid bare on one side for at least an inch above and below the line of fracture, a piece of aluminium is cut and folded about one-third of the way round the bone so as to project about an inch (or longer if possible) above and below the fracture. The plate need not surround the bone to a greater extent, as long as it is well curved and securely nailed on. In most bones, unless they are very dense, ordinary tintacks or thin nails can be driven in and will hold the plates; in dense bones, and if the plate is employed for old, mal-united fractures, the tintacks will not penetrate the dense bone, and it will be necessary to bore holes and put in small screws. Once the plate is securely fixed one can handle the limb readily without any fear of displacement; the wound is stitched up without any drainage tube, and in a great majority of cases the plate gives no further trouble. I have used this method in a considerable number of cases where bones have either been divided intentionally or accidentally, and am extremely satisfied with the firm fixation thus obtained: but, of course, in certain parts—such as the condyles of the humerus—the plate is not suitable, and one must be content with pegs or nails. In cases of fracture of two bones I have now on two or three occasions—for example, in the case of the fibula—where there has been an oblique fracture and a long splinter running down, pushed the long splinter into the medulla of the other fragment, and in this way obtained absolute steadiness and perfect union without any sign of the line of fracture subsequently; and I think this method is well worth bearing in mind under such circumstances, and might be extended with advantage in a considerable number of cases.

Having effected the reduction of the fracture, either with or without operation, suitable retentive apparatus

must be applied. This varies, of course, for each fracture, but the guiding principle is the following: The splints are meant to retain the fractured ends of the bones in their proper position after they have been reduced and correctly fixed. They are not supposed to rectify an imperfectly-corrected displacement by either constantly forcing or pulling the bones into position. This is a very important point. If the fractured ends have been more or less satisfactorily interlocked, very little pressure is required to keep them in position, and consequently a splint may be put on so as to be comfortable to the patient without any special pressure being applied; that is to say, to keep the bones in line and prevent the displacement from mechanical causes rather than to keep them forcibly in apposition and violently oppose muscular contraction.

The question of massage in the after-treatment of fractures has been much discussed, and more or less general agreement has been come to. It is quite evident that the sooner movements and massage can be begun, the quicker will the function of the limb be restored so long as no displacement of the bones occurs during the manipulations. My own belief is that the fractured ends ought to be left quite still for eight or ten days after the injury, except in the case of fractures of the forearm where the fingers can be left out and moved from the first. By that time the bones will be more or less stuck together with fairly firm material, so that a certain amount of force would be necessary to displace them; and from that time onwards the splints may be taken off once or twice a day, and massage and careful active and passive movements of the neighbouring joints and muscles carried out so as to prevent the occurrence of stiffness. In most cases, provided the patient does not put any strain on the part, the splints may be left off entirely in from three to four weeks. I do not at all approve of treating fractures without any splints, or of looking on massage as a panacea of primary importance and reduction and retention as of quite minor value.

FUNCTIONAL ALBUMINURIA IN ATHLETES.*

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My interest in the subject of functional albuminuria was aroused twenty years ago by a paper published by Dr. Pavy,[1] in which he insisted that a class of cases existed in which albumen was found in the urine at certain periods of the day under certain circumstances, and that this class of case should be carefully distinguished from the class of case which would fall within the category of albuminuria from Bright's disease. In order to prove his point Dr. Pavy cited several cases of young people, in which albumen appeared some hours after rising but never after rest. A few weeks later, influenced I have no doubt by the teaching of the late Sir George Johnson, whose clinical clerk I had been, I ventured to publish a case of intermittent albuminuria occurring in an undergraduate, which had been known to exist for some years, and urged that certain additional symptoms which were present pointed to slowly developing secondary changes in the kidneys. I argued that if Dr. Pavy would patiently watch his cases for some years, many, if not all, might develop all the usual symptoms of Bright's disease.

As time went on I found that at Oxford I had unusually good opportunities of studying at least one form of functional albuminuria. Each succeeding October brought up to Oxford between seven and eight hundred youths, fresh from the public schools, a large number of whom were next year to engage in severe athletic competitions, and in order to satisfy the wishes of their parents, many of them sought medical advice to decide whether they were sound enough to undergo the strain. Of those who consulted me, I soon found, as the result of my examinations, I had to advise more men to avoid these competitions because of pronounced albuminuria than for any degree of weakness in either their hearts or lungs. For the past twenty years I have every term been examining men apparently in the very best of health, whose urine a short time after exercise will contain a very definite and in many cases a very large quantity of albumen, and after a night's rest all traces of it will have disappeared only to return again after exercise, and the quantity thrown down will be approximately in proportion to the work done. I would here emphasize the fact that these men had never exhibited any of the symptoms which so often accompany the intermittent albuminuria of the schoolboy, and which have been so graphically described by Dr. Dukes, of Rugby, and Mr. Armstrong, of Wellington.

In the past my custom has been to advise such men to give up all competitions involving great muscular strain such as rowing in races and running in athletic sports and to be content with more moderate exercise afforded by golf, lawn tennis, etc. It seemed to me that the appearance of albumen after exercise was probably due to some defect in the walls of the renal blood vessels, and that by constantly throwing increased pressure on these walls the defect would almost certainly be increased. The knocking off an apparently healthy and vigorous young fellow from one or other form of athletic competition on which he had set his mind was, I thoroughly realized, often a very serious matter so far as he himself was concerned, and I frequently suggested that he should consult his parent and get a second opinion. My advice was often taken and in this way I had the opportunity of learning the opinions of many of the leaders of the profession on the subject. I have at the present moment in my possession letters from a considerable number of consultants in London, living or dead. I may at once say that in every instance they endorsed my opinion and advised the patient to give up athletic competitions. I wish to emphasize this point. It is interesting because, as I hope to show, such advice was quite unnecessary and therefore wrong. I will quote a few of these opinions:—

In 1894 a London consultant writes: I agree entirely with you that your patient should not row. I should imagine that his vascular system is not strong enough to withstand the pressure of severe exertion.

Another writes in 1899: I have little doubt your observations agree with mine, that muscular exercise has a marked influence on the amount of albumen passed, and that therefore it would be advisable for him not to row, as it might aggravate his condition.

A third writes: I always try to make such patients lead quiet lives: I take it the albumen is an indication of renal incompetence, and therefore the patient should live down to his weak organs.

One of my patients, who was under the care of a very eminent specialist on renal diseases, was ordered to winter abroad for three consecutive years, without in the least affecting his condition. Another, who was anxious to enter for the Indian Civil Service, I sent to the physician (since dead) who I knew examined these candidates for the Government, and the opinion he expressed was so absolutely at variance with my own that I quote it:—

You remark on the very large number of undergraduates who suffer in this way. I have also been surprised by the very considerable number of candidates for the Civil Service who present intermittent albuminuria after their literary examination. I can hardly recall one case in which, after a little time and management, the affection has not passed away.

My experience is absolutely contrary to this physician's. My experience has been that if I have found albumen in my patient's first year of residence, it has continued throughout his university career, and then I lose sight of him. Nor have I seen any of the various lines of treatment suggested by London consultants in any way influence the deposition of albumen after exercise. For many years I kept my patients under observation for a considerable time and endeavoured to impress on them the necessity of leading quiet lives, free from great muscular exertion. I knew that a certain percentage of them ignored this advice and went in for hard rowing and running just as usual, without, apparently, being any the worse. In recent years I have become less strict.

When three years ago your Society announced a discussion on the subject of functional albuminuria I attended with the intention of speaking, but, like many others on that occasion, time brought the discussion to an end without giving us an opportunity. I was particularly anxious to learn in what light speakers would regard intermittent albuminuria from the point of view of insurance. Fortunately several of them expressed a definite opinion. Your then President, Dr. de Havilland Hall, closed his paper with these words: "I would say that the presence of albuminuria is sufficient ground for deferring the proposal." Dr. Samuel West's advice was

* Read before the Medical Society of London, December 10th, 1906.

reject all such lives above 40, to load heavily between 30 and 40, to make some addition to every case under 30, and to wait a while and watch the cases in adolescence and youth. Dr. Garrod argued that the question was so open that it would be very unwise to depart from the cautious attitude which insurance offices had taken up in the matter.

I must acknowledge that the opinions here expressed, with the exception of Dr. West, with which I am in partial agreement, did not commend themselves to me. As I pondered over the subject it seemed to me rather absurd that a man's future depended on whether his medical examination took place in the morning or afternoon. I knew that I could produce several young men at Oxford who, if they wished to insure themselves or enter for the Indian Civil Service, would be accepted as first-class lives if they were examined in the morning, and would fail in the afternoon, because after a certain amount of exercise their urine would show a definite amount of albumen. I had had cases of this sort of my own refused, and that, too, in spite of protest.

It had often occurred to me that, after all, one only had had the opportunity of examining a small percentage of the athletes at the University, and that it would be very interesting to make a systematic examination of the urines of a large number of men indulging in severe muscular exercise under precisely similar conditions.

Accordingly during last Easter term (February, 1906) I arranged, with the help of Mr. H. C. Lecky, who was at the time holding the appointment of House-Physician to the Radcliffe Infirmary, to examine the urine of the various college crews who were training for the Torpids. We agreed one of us should test the urines by the cold nitric acid test, while the other should subject a portion of the same sample of urine to the heat and acetic acid test. We arranged that the specimens should be passed from an hour to an hour and a half after rowing.

My previous experience with undergraduates led me to anticipate that we should find numerous cases of albuminuria, but I was quite unprepared for what we did find. In some cases the urine of every member of the crew contained albumen, and sometimes the urine of two or three, or even four, members would contain very heavy clouds of albumen: especially was this true of the head boats on the river. The better the crew, it seemed, the more cases of albuminuria, the probable explanation being the harder the work the heavier percentage of albumen.

We examined 156 men in training for the Torpids.
With the cold nitric acid test:
49 showed no trace
24 slight ring,
54 definite ring
27 very thick ring

That is, with this test 81 specimens out of 156 contained a very definite amount of albumen.
With the heat and acetic acid:
26 showed no trace.
41 a faint trace,
58 a definite cloud,
31 a thick cloud:

89 out of 156 showed a very definite amount of albumen—57 per cent.

It must be remembered that in the case of many of these crews only a moderate amount of work had been done. On four or five occasions, when specimens were sent us by crews who had been rowing the course at racing pace, the number of those passing very definite amounts of albumen was strikingly increased.

Later on we examined the urines of the crews competing in the Inter-University Boat Race. From the Oxford crew we obtained specimens from the eight members of the crew one hour after rowing the full course from Putney to Mortlake, and in every instance albumen was present, in 50 per cent. in large quantities. We were only able to obtain specimens from three members of the Cambridge crew, but in each instance albumen was present.

I next attempted to get specimens from those who were to take part in the Inter-University Athletic Sports, but was far less successful. I was only able to examine about a dozen specimens; in not a single instance did I fail to find albumen after racing, and generally in considerable quantities.

I next sought the aid of the medical officers of some of our large public schools, asking them to examine the urines of some of their boys from ½ to 1½ hours after racing. Dr. Whittingdale of Sherborne, the late Dr. Ferguson of Cheltenham, and Dr. Cronk of Repton were good enough to make a few observations for me, and of 38 specimens examined, 37 contained albumen.

I should like to compare these results with those obtained by Sir Grainger Stewart in 1888. Of 32 soldiers marching eight to ten miles in heavy marching order, he found after breakfast and before exercise 40 per cent., while before breakfast 15 per cent. showed albumen, and after the march only 28 per cent. Thus the exercise acted beneficially on the dietetic albuminuria. In one or two instances albumen was present only after marches. He next tested the effect of muscular exertion on 36 soldiers, who had to carry coal up steep inclines, and found that while 44 per cent. had albumen before the exercise, 64 per cent. had it at the end of their work. Of 25 schoolboys after an hour's football, 3 showed a trace with cold nitric acid and 12 with picric acid—60 per cent. altogether. In commenting on these cases, Sir Grainger says: "You will observe that this experiment confirms the view that it is only a slight albuminuria which is produced by violent exercise in healthy people."

I do not at all agree with these conclusions, as my investigations go to show that with the cold nitric acid test, a very much less sensitive test than the picric acid, 57 per cent. showed albumen, and 51 per cent. showed a very definite ring of albumen.

I am well aware that my observations are very incomplete; it would have been more satisfactory to have ascertained what percentage of the urines of my rowing friends were free from albumen in the early morning and contained a definite trace later in the day after ordinary exercise. My previous experience would lead me to feel certain that I should have found a very considerable number of such cases. I hope later on to have the opportunity of continuing my investigations on these lines.

Unfortunately the patients I have had in the past under prolonged observations, have at the end of three or four years left Oxford and I have neither seen nor heard more of them. In the few cases I have been able to follow in later life the albumen has permanently disappeared.

I would especially mention one patient who, on the advice of the late Sir George Johnson, spent a winter in Egypt and two at Biarritz, whose urine so far as I could observe was not in the slightest degree influenced by these precautions, for he passed just as much albumen after exercise when he left Oxford as when he came. In his case I have recently learnt that for quite ten years now his urine has been free from albumen after exercise.

Again we may learn something from the University crew. Here we have a picked body of men who have to pass a careful medical examination before their training commences, and yet we find that every member of the crew without exception passes albumen after a hard row, and at least half the crew a very considerable amount. Some years ago the late Dr. Morgan, of Manchester, made a thoroughly exhaustive inquiry into the after-health of men who had taken part in the Inter-University Boat Race since its commencement. His inquiry included some 294 competitors, and one of the conclusions arrived at was that the chances of long life in their case was distinctly greater than that of the average man. We have no reason to believe that University crews were any freer from athletic albuminuria in the past than in the present day.

In conclusion I wish to raise two points:

Ought one any longer to advise young men who pass large quantities of albumen after severe muscular exercise to give up all hard athletic competitions? I think not. These investigations would seem to prove that if so, we must discourage severe athletic competitions altogether. Of this year's Oxford University crew every member after rowing a trial over the full course passed a definite amount of albumen, and at least half the crew passed a very considerable quantity. With the College crews the same thing happened. In the New College boat, head of the river in the Torpids, after rowing a course every member's urine contained some, while in five of the crew the amount was large. The running men seemed to pass even more than the rowing men. In short, it would appear that just as we may expect to get evidence of hypertrophy of the left ventricle of the heart and emphysema of the lungs in the man who habitually indulges in violent athletic contests, so we may expect to find a definite amount of albumen in

his urine for a few hours after taking part in these exercises.

Finally, ought the assurance companies to continue to refuse to consider the acceptance of the lives of young men between the ages of say 18 and 30, whose urines are found to contain albumen after exercise when it can be shown that no albumen is present after rest or after a meal? I think not. I have known instances of men who have been absolutely refused because they happened to be examined in the afternoon after exercise, when they would certainly have been accepted had they been examined in the earlier part of the day. To me this seems a very unsatisfactory state of affairs.

I have already apologized for the incompleteness of my observations, but I am anxious to take an early opportunity to draw attention to a subject which seems to me one of great interest and which calls for a considerable amount of further investigation.

REFERENCE.
1 *Lancet*, March 6th, 1886.

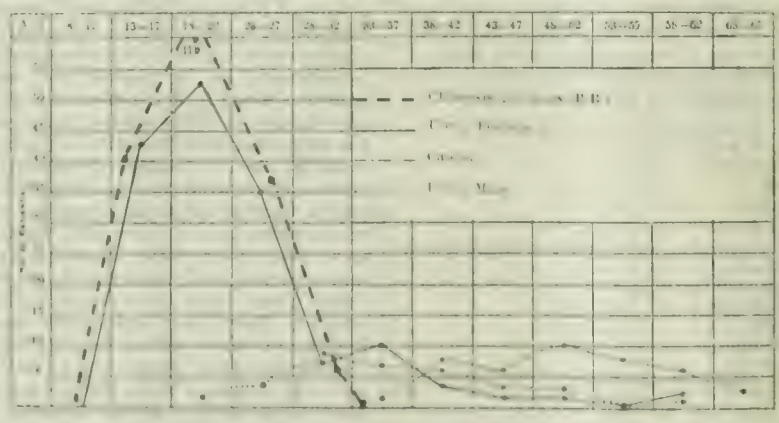
AGE INCIDENCE OF GASTRIC ULCER IN THE MALE AND FEMALE.*

BY WILLIAM CALWELL, M.A., M.D.,
PHYSICIAN TO THE ROYAL VICTORIA HOSPITAL, BELFAST.

SEVERAL questions continually face us with regard to the etiology of gastric ulcer. Is the affection more common in the male or the female? What is the incidence of the affection in the sexes, especially in the adolescent female? Is there any new light as to the pathology? These problems of both clinical medicine and of pathology are rendered no easier by Dr. Hale White's "Gastrostaxis," in the address which appeared in the *Lancet* of November 3rd, despite its valuable suggestiveness and information.

Regarding the age incidence in the female, there is one fact of importance namely, the sudden and profuse haemorrhage which occasionally attacks the adolescent female who has made little or no complaint of stomach trouble; it is quite possible that this blood may come from an oozing, but in other cases it has been clearly demonstrated that it is from an ulcerated blood vessel. In one of my own cases, which proved fatal, a perfectly fresh ulcer of the stomach, not larger than a sixpence, was found, but found only when the stomach was stretched out, a large blood vessel was lying across the ulcer, and in it a hole the size of a large pin head: when the walls of the stomach were allowed to fall together again, and lie in the natural folds, the ulcer was not visible; if a careful examination had not been made, it would not have been discovered, and it would most probably have escaped detection at an exploratory operation.

Chart showing Ages of Onset of Ulcer of Stomach in Male and Female in 200 Cases.



It is very credible that such ulcers both form and heal with great rapidity, clinical histories would make one believe that they may break down in a few hours, and we have operative evidence to prove that wounds in the stomach heal with no greater delay. A healing ulcer is but a wound. We can easily understand that such an ulcer, if once the pathological action had come to an end, and if kept at rest with the edges lying in apposition, might heal in a few days, perhaps in twenty four hours. In passing, it may be observed that the *post mortem* appearance of this case supports the view lately put forward that in cases of haematemesis repeated bleeding may be brought about by alternating distension and contraction of the stomach, and that attention is to be paid to the extent of gastric resonance, and frequent sippings of a mild carminative tried as a treatment.

Such cases are not rare, although a fatal termination is rare; but there is still the much larger class of case, which resemble this case in their often slight, evanescent dyspepsia and in their chlorotic condition, but do not complete the picture by an attack of haematemesis; they are mostly classified as "tea," "anaemic," or "neurotic dyspeptics." The simplest explanation seems to be that many of these cases are really cases of ulcers, and that the accident of haematemesis depends on whether the ulcer is situated on a vessel or not, and the accident of perforation, which also occurs unexpectedly, on the depth of the ulcer. In such acute cases where, as happens in the very large majority, no complication occurs, recovery is rapid with rest and a little starvation. Each time, however, these attacks recur, the symptoms of chronic ulcer become more apparent. Nearly every one of these female patients is chlorotic, and if we pursue our investigations, nearly every chlorotic, in marked contradistinction to the adolescent male, has, or has had, some stomach trouble.

Three years ago I tabulated the age at which symptoms commenced in 200 cases, comprising instances both of undoubted gastric ulcer and of these cases in which the symptoms were the symptoms of gastric ulcer without the haematemesis. I then reduced Byrom Bramwell's chart of 314 cases of chlorosis to the proportion of my numbers, and superimposed it on my chart.

A study of this chart shows at once the enormous rise of ulcer in the female during the age of adolescence, and that this rise exactly corresponds with that of chlorosis. Further, chlorosis is absent in the male, and this type of stomach trouble is extremely rare in the male. Again after the age of 25 to 30, the onset of ulcer is about equal in both male and female. If any one objects that these cases are not ulcers, I shall simply vary the name, and say, "the age incidence of ulcer and of ulcer-like dyspepsia."

There is presumptive evidence that if we exclude all cases of ordinary gastric catarrh, of dyspepsia from irritant food, and of dyspepsia of neurotic origin, we have still a large number of cases of "dyspepsia" in the adolescent female which are really due to ulcer; that these ulcers rapidly form and probably as rapidly heal and that it is only by the accident of haemorrhage or of perforation, or of repeated relapses leading to chronicity that we recognize their real nature; and lastly, that there are apparently two kinds of ulcer, one connected in some mysterious way with chlorosis and frequently with amenorrhoea, probably being a developmental disease; and the other being a type which occurs pretty equally in both male and female, and is not often seen till after 20.

The importance of this in treatment is paramount. Cases of "dyspepsia" in the adolescent chlorotic female are to be treated as ulcers, and, further, cases of chlorosis with or without stomach symptoms, are to be looked upon as potential cases of ulcer, and so of haemorrhage and of perforation.

Of a large number of cases which ultimately came into the surgeon's hands, not one, as far as the history went, received full treatment of both ulcer and chlorosis that is, the due *preventive* treatment of adhesions, hour-glass stomach, chronic ulcer, perforation, etc.

* [illegible] Medical Lecture.

PRELIMINARY LARYNGOTOMY.

By J. W. BOND, M.D., B.S.,
PHYSICIAN TO THE THROAT HOSPITAL, GOLDEN SQUARE, W.

For the past 15 years I have performed laryngotomy with plugging of the air passage above as a preliminary to larger operations about the upper air passages, with the intent: (1) To make such operations less dangerous to life; (2) to increase the number of cases which could be operated upon owing to the diminished danger; (3) to help surgically in the operation by getting rid of the respiration through the pharynx during the time of operation, and of the hindrance caused by perpetual sponging and coughing; (4) to give the chloroformist a clear field for his work away from the site of operation, so that he may do his work uninterruptedly without taking turns about with the surgeon; (5) to lessen the time needed to perform certain operations attended by bleeding difficult to control; (6) to get rid of tracheotomy as a preliminary operation in all suitable cases, and so again to assist in making the operations in question more easy, quick, and efficient in saving life.

With regard to tracheotomy—high or low—all who have seen much of it in hospitals must agree that it is often difficult to perform, that whether done hurriedly or slowly it is apt to be associated with the suction of blood into the trachea and lungs, and that the deep tissue of the neck is opened up in the operation, so that tracheotomy as a preliminary operation intended to facilitate the operation required may unhappily increase danger and even be the cause of death.

Laryngotomy, on the other hand, as a preliminary operation, can be done in a few seconds, without any haemorrhage of consequence, and with but slight opening up of the neck tissues. The wound can be healed in a few hours, and the whole operation is without danger, and easy to perform. In most cases the method of operating is as follows:

First, an assistant lifts up a vertical fold of skin, the centre of which should be at the level of the upper border of the cricoid cartilage when the head is extended.

Secondly, the centre of the uplifted fold is transfixed and cut through so as to make a transverse cut of 1 in. in length. It will be found that the veins running vertically in this region have not been cut, and are exposed at the bottom of the wound.

Thirdly, a pair of sharp closed scissors curved on the flat are plunged through the crico-thyroid membrane downwards and backwards in the mid-line, keeping close to the upper border of the cricoid, so as to avoid the little artery. The scissors are then widely opened.

Fourthly, the laryngotomy tube is inserted between the blades of the widely-opened scissors, or retractors can be used after withdrawing the scissors. In most cases it is quite easy to pass the tube with the left forefinger nail serving as a guide above, whilst an assistant holds the partly-opened scissors in position. The laryngotomy tube should be a little flatter than a tracheotomy tube; it should be fitted with a pilot with not too blunt a point, and the tube should project beyond the plate externally, so that the chloroformist can easily fix an indiarubber tube through which to give the anaesthetic. If need be, a small or medium Durham's tracheotomy tube will serve every purpose.

Lastly, the pharynx can be firmly packed with a large flat sponge, a series of which should be in readiness, and the preliminary operation preparations for some graver matter are therewith ended.

In a few cases where it is necessary to have more room in the middle pharynx, the plugging can be modified by plugging the top of the larynx. The eyed end of a long bent probe can be passed up through the wound into the mouth, and one end of a tape, to the middle of which a small sponge has been fixed, threaded through the eye of the probe and pulled down through the wound. The sponge can then be pulled down and firmly fixed into the top of the larynx by tying the lower end of the tape to the upper end, which has been carried through the mouth.

The operation of preliminary laryngotomy with plugging of the pharynx has now been extensively tried by myself and others, and can be commended to surgeons as a great aid in many difficult and dangerous operations. It is particularly of use when operations about the pharynx, mouth, nose, and jaws are likely to be associated with severe haemorrhage under an anaesthetic, and especially as an aid in the removal of fibromas and fibro-sarcomas of the naso-pharynx.

PRELIMINARY LARYNGOTOMY.

By HENRY T. BUTLIN, F.R.C.S., D.C.L.,
CONSULTING SURGEON TO ST. BARTHOLOMEW'S HOSPITAL

The removal of the upper and lower jaw, of the whole or a portion of the tongue, of large tumours of the naso-pharynx (which are prone to bleed severely), of tumours of the pharynx, and indeed of any part above the larynx, is attended with such difficulty and danger on account of blood making its way into the trachea and bronchi, of imperfect anaesthesia, and the consequent struggles of the patient, that various means have been adopted with the view of meeting these disadvantages. Among these are tracheotomy and a certain posture of the patient, with the head hanging over the end of the table (Trendelenburg's posture), or lying on the side with the head forwards. The objections to tracheotomy are so strong that, although it has been recommended again and again by eminent surgeons, it has never been generally acceptable, and has never held its place for long.

Trendelenburg's posture is undesirable on account of the congestion of the vessels of the head and neck, and because it is inconvenient to the operator. The side posture is preferable, but, again, it is not convenient to the surgeon, and the anaesthetist and surgeon are both at work in the same space, so that it is almost impossible to maintain continuous and uninterrupted anaesthesia during the whole of the operation. Nevertheless, I used it for many of these operations, as I have been accustomed to do for the operation of adenoids, and I might have continued to do so to the present time had it not been for a suggestion made by Dr. James Bond during the course of a discussion at the Laryngological Society towards the end of the year 1899. We were discussing the safest method of removing a formidable naso-pharyngeal growth which had been shown to the members, and Dr. Bond's suggestion was that laryngotomy should first be performed, which could be done in the very shortest time and with the least danger. A sponge could then be thrust down into the lowest part of the pharynx, so that the removal of the tumour could be effected without the fear of blood entering the air passages, and with the same deliberation and thoroughness which are possible in operations on the more exposed parts of the body. I was very much struck with the idea, and determined to apply it to all those operations in which it might be useful. For the last seven years I have done so, and I have formed the opinion that, although it is not always as perfect as I could desire, it is, on the other hand, by far the most efficient method of protecting the patient, and of enabling the operator to perform his work with the least loss of blood, and with the greatest prospect of success. I do not know how many times I have employed this preliminary laryngotomy, but certainly more than a hundred times, so that I am now in a position to urge the importance of it on the profession, and to point out some of the difficulties which may be met with. They are not many.

In the first place, I have seen slight subcutaneous emphysema on two or three occasions. It has either ceased spontaneously or has been treated successfully by the introduction of a tiny strip of gutta-percha tissue into the wound in the skin.

On two or three occasions I was surprised to find some difficulty in passing the tube into the windpipe, even when it certainly had not passed into the soft tissues in front of the cricoid and trachea. On one of these occasions, when I was operating at the hospital, I determined to discover the reason of the difficulty. On opening the wound I found that the instrument I had used (a strong sharp director) had split the cricoid cartilage and thrust the upper margin, with the soft parts behind it, into the lumen of the trachea. I have never experienced this difficulty since, for I have first used a sharp curved needle on a handle to find my way through the crico-thyroid membrane, and have passed the director upon that as a guide.

Once or twice there has been a little bleeding a day or two after the operation from the subcutaneous tissue, but

this has easily been controlled by a tiny strip of gauze. The wound is usually healed within three days, and the scar is so insignificant that it can only be discerned by close scrutiny.

The instruments I am in the habit of using are a knife, with which the skin is cut transversely for about two-thirds of an inch, and not deep enough to wound the subcutaneous veins; a curved needle on a handle, which is carefully pressed through the middle of the cricoid membrane; two straight sharp-pointed directors, which are introduced on either side of the needle, and which are separated by an ordinary narrow bone elevator or by a tracheotomy dilator; the opening is enlarged with the dilator, and the flat laryngotomy tube is passed on a guide, the end of which is bluntly pointed. The guide and tube were made for me by Messrs. Beauchamp, whose business has now passed into the hands of Messrs. Bailey, of 38, Oxford Street, where they can be obtained.

A sponge with a strip of narrow tape tied round it is thrust down to the bottom of the pharynx, and the anæsthetic is now administered through the tube. If the tube is not quite long enough the end is apt to be tilted against the back wall of the trachea, and the lumen is thus partially occluded. This is easily remedied by fixing a pair of pressure forceps on the broad flange of the tube, and manipulating it as occasion may require.

The operation does not occupy as much as a minute in most cases. Indeed, Dr. Bond tells me that he can now perform it in a few seconds by substituting for the instruments I have named a knife and a pair of sharp-pointed curved scissors, which he directly presses through the crico-thyroid membrane after he has transfixed the skin horizontally at the level of the upper border of the cricoid cartilage.

During the visit of the French medical men to London two years ago, three of the surgeons were present at a partial excision of the tongue which I performed, and were so impressed with the advantage of the preliminary laryngotomy that Professor Poirier told me he should introduce it into Paris.

AN INQUIRY INTO THE ALLEGED FREQUENCY OF CATARACT IN BOTTLE MAKERS.

By SIMEON SNELL, F.R.C.S.Edin.,

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At different times articles have been published, chiefly in Germany, asserting the frequency of cataract among glass workers. It has been sought to connect this with the powerful heats to which their work exposes them, and also the sweating which accompanies it. In publications[1] dealing with occupations and their relation to eyesight, I have in past years referred to this question, and said that I had seen something of men following this occupation, and had operated on some of them for cataract, and that, whilst my experience did not permit of my supporting the assertion as to the frequency of cataract among these men, it might be regarded as too limited to contradict the statements of other observers. If extreme heat and consequent loss of moisture were to be regarded as authorities for the production of cataract, then it should be found especially among iron and steel workers, and that my experience did not show was the case."

In the early part of 1905 a paper[2] appeared in the British Medical Journal, asserting a remarkable frequency of cataract among one particular group of men employed in glass works—namely, bottle finishers. Details were given of some cases, and it was stated that out of 76 lens extracts in one year (1902) 13 were in bottle finishers. This number is rendered all the more noteworthy as it was further mentioned that in that particular district, with a population of 1½ millions, the bottle finishers only numbered 250 or 300. If the former (300) be taken as the correct number there would be a percentage of 4·3, if the latter (250) of nearly 6 per cent. of cases actually operated upon, meaning, of course, a much larger number suffering from incipient cataract in various stages, and whose defective sight must have been, more or less, a hindrance to their work. That a generalization, however, on too small data was made may be considered as shown by the fact that the number in subsequent years decreased in the following manner: In 1903, there were 57 senile, and 6 in bottle finishers; in 1904, 74 and 2; and in 1905, 85 and 2, and I understand there has been no case at all this year (1906).

Some time since an opportunity presented itself to me for making an investigation with the object of discovering whether or not my doubt as to the real frequency of cataract among the employés in glass-bottle works was well founded or not. Sheffield is situated, I am given to understand, in the centre almost of what may be regarded as the largest bottle-making district in this country, but this will again be referred to. For the purpose of this inquiry I visited a bottle-making manufactory a few miles from Sheffield. I was here given every facility for witnessing the process of bottle-making and of questioning the men whilst at their work. Besides this, a considerable number of the men were assembled afterwards for their eyes to be examined. In this visit and examination I had the assistance of Dr. C. W. Smith, my house-surgeon, and Dr. Barnes, who was also working in my department at the Royal Infirmary. Information as to the work carried on was supplied to me by one who had himself been employed there for many years.

When in full work something like 300 persons were employed, exclusive of those engaged in packing or working in the yard. There were two work places, one known as the bottle-house, and the other, which was the smaller one, the flint-house.

In the bottle-house the workers were engaged in five processes—gatherer, wetter-off, blower, bottle finisher, and taker-in. This round was called a hole, and there were forty-nine holes. The duties of the workers were as follows:

The gatherer gets the metal from the furnace and takes it to the blower.

The blower blows the bottle which has been brought to him by the gatherer on the end of a long blow-pipe.

The wetter-off (a boy) receives the bottle from the blower, who has blown it into a mould. He wets the end with cold water where it is to be broken off, and then hits it over the blow-pipe with a piece of wood. He then takes it to the finisher.

The bottle finisher puts the rim on the top of the bottle.

The taker-in is a lad, and he takes the finished bottle to the kiln to be baked.

The bottle finisher uses a rod, about 5 ft. long, with which he takes a portion of the metal out of the furnace. He sits by the side of the fire, and his right side is most exposed to the heat. There is a board between each furnace. The gatherer, however, who takes the metal from the furnace to the blower on a blow-pipe is really more exposed to the heat, but not so continuously as the finisher. The latter, however, rarely gets his face blistered, but the gatherer does, as the whole of the face is exposed to the light and heat. The blower has no more than the heat of the mass he is blowing to face. The distance which the gatherer has to go with the metal on the blow-pipe is from 4 to 6 yards. This description applies to the making of all bottles except medical and small ones.

For every furnace there are what are called founders, 4 in the bottle-house and 3 in the flint-house. Their work consists in putting the glass into the furnace to make the metal, and they have to stoke. If, for example, they have fed the furnace with 30 barrels of material, they will be looking at the heat and brightness more or less for twenty minutes or half an hour. After that for the next two or three hours they will have to look occasionally only, to disturb it and see if all is right. At the end of about three hours the furnace will need replenishing. During this operation they are exposed to as much heat and light as the finishers or the gatherers. The replenishing has to be done three times a day.

The number of bottles finished each day varies according to size, but the finisher has to face the fire for every bottle. Some days he will finish from 50 to 120 dozen.

In the flint house, there were 10 holes and 4 workers to each, a bottle finisher, a gatherer, a blower, and a taker-in. The processes are similar to those in the other house, except that here ordinary fuel is used and in the bottle-house gas was employed. The smaller and superior bottles are made in this house. The

[1] During the years I have acted as ophthalmic surgeon to the Sheffield Royal Infirmary, I have had numerous cases of cataract [illegible] and I have had the opportunity of operating on a large number of them. I have had [illegible] among these operations a number of bottle makers.

blow-pipes are much lighter. The heat is not so intense. A finisher here may do as many as 140 dozen a day. He warms the bottle to the degree of heat required in a "gloricle," a smaller opening not occasioning such exposure as does a furnace, and then rolls it, and completes the ring. In this house the gatherer is the workman who is most exposed to the heat.

My informant was aged 35, and had been employed by the firm since he was 14. He began as a taker-in, and worked at this for one year and a half, then he became a wetter-off for about fifteen months; at the end of this time for two or three years he was a gatherer. (Whilst employed gathering, the boys learn blowing.) He was only a blower for one year. He has been a finisher since he was 20. The men generally stay on for years, and do not change. At that time there were over 50 bottle finishers, and the same number of gatherers and glass blowers at his place, but he only remembered one man who went away the year before to be operated upon, he thinks for cataract, and he has not been able to work since. He was 60 years old. My informant said he would have known if cataract had been frequent.

I then proceeded to question the men I found working as to their eyesight. In the first shop there were 30 workers, 10 each working as bottle finishers, gatherers, and blowers. None of them admitted to their eyes being affected. In the second shop there were 24 men with whom I conversed, and here, again, similar statements as to sight being unaffected were given. Eight of these men were bottle finishers, 8 were gatherers, and 8 were blowers. The boys were not questioned in either house.

After this we proceeded to a room away from the works, where a fellow workman had collected a number of employés who were not working in the shift I had witnessed in progress. All these men were examined with the ophthalmoscope, but, of course, the use of a mydriatic was out of the question. Among them were 10 bottle finishers, whose ages and length of time at that particular kind of work were as follows:

One was aged	48,	and had been a finisher for 17 years.
The second was	47,	" " for 26 years.
The third was	42,	" " for 20 years.
The fourth was	47,	" " for 20 years.
The fifth was	35,	" " for 10 years.
The sixth was	62,	" " for 42 years.
The seventh was	42,	" " for 22 years.
The eighth was	36,	" " for 12 years.
The ninth was	38,	" " for 20 years.
The tenth was	59,	" " for 38 years.

One was a gatherer, aged 32, and he had worked as such for 12 years. Of 3 glass blowers, one was aged 27, and he had worked as such for 6 years. Another was aged 24, and he had worked for 8 years. The third was aged 29. There was one founder, aged 38, who had worked as such for 4½ years. One of the bottle finishers was at that time a day manager (No. 1), but he said he had to look into the furnaces far more than when he was a finisher. He had been through all the stages at a glass-house from taker-in upwards, and had been a bottle finisher for 17 years. One bottle finisher and one glass blower worked at the flint-house.

I found no evidence of cataract or impaired vision in any of these men. The manager did not remember any one during his 39 years' experience who had to go away on account of his eyes; a similar absence of any acquaintance with eye affections was expressed by the others examined, with two exceptions. A bottle finisher (No. 3) said his father went blind at 45, but inquiry satisfied me that it was not from cataract: another bottle finisher (No. 5) said his father went blind at 70, not having worked for 17 years previously, cause not known. His brother, aged 67, who was a bottle finisher, was going blind.

The only man acquainted with any one with cataract was No. 5, and it was his father-in-law (No. 10) who was affected. He had brought him for examination. His age was 59 and he had been a bottle finisher for 38 years. His sight had been failing for 4 years. He had not known anybody who was obliged to give up work on account of his eyes. This man afterwards came to Sheffield for a better examination under a mydriatic. In both eyes was incipient cataract with the usual characteristics. In the right $V = \frac{6}{9}$, and in the left .

When all these men were assembled together the question was asked of one finisher which class of work was most trying to the eyes. He answered "gathering" and all the others present agreed. A gatherer, too, asserted that "gatherers" got the left side of the face and left arm reddened by the heat.

At a later date, accompanied by Dr. Barnes, I visited another factory—a flint-house—where all work is done at gas tanks. Here the following were employed:

Founders, 14; bottle finishers, 35; blowers, 35; takers-in, 35; and wetters-off, 35. The following were questioned: 4 founders, 9 bottle finishers, and 18 gatherers and blowers (the blowers did their own gathering).

In reply to my questions I found an absence of any knowledge among these men of any failure of sight in their fellow workmen or acquaintances in similar works.* One bottle finisher, aged 43, had worked thirty-three years at all kinds of bottle work. He said that sight in each eye was good, and stated that he had never heard of cataract among the employés.

I met two of the directors of the company and the manager. One director, who had been in the trade for forty years, gave me valuable information, which will be used later. He was connected with other factories, employing altogether a large number of men. He mentioned that one man, aged 66, had to leave his work (not the place I visited) on account of his eyes; there was no evidence of cataract, and he had only been in the hands of quacks. Another man, aged 55, had gone blind from the results of a blow. He had no knowledge of other cases. The other director told me that after an experience of thirty years in the trade he had never heard of a case of cataract, and he had known many hundreds of men. In his own business open gas tanks were used.

During this inquiry I questioned and examined 100 men.

A bottle finisher recently under my care for an accident has given me further useful information. He is aged 56, and has worked in many places in England, Scotland, and Ireland, and has been acquainted with about 2,000 bottle hands. He only knew of one man having cataract, and this was one who came to me, and was operated on successfully and returned to his work. He is included among those to be referred to later.

It has been mentioned that Sheffield may be looked upon as the centre of the largest district of the bottle-making industry, something like 6,000 men being employed. Most of the towns and villages in which the factories are situated are those from which patients are regularly received at the Sheffield Royal Infirmary, but a smaller portion will, in part, gravitate more north for treatment.

To further the inquiry I addressed letters asking for information to fifteen different factories, in addition to the two which I visited. Each letter was accompanied by a form desiring information under the following heads:

Number of workers, divided in classes as under:
- Founders,
- Bottle finishers,
- Gatherers,
- Blowers-off,
- Wetters-off,
- Takers-in.

Proportionate division between—
- "Furnaces" (tanks) and
- "Pots."

Have you any knowledge that "bottle finishers," "founders," "blowers," or other operatives are particularly prone to cataract? If so, which are the operatives?

How many instances have you known during the last year, or last five years?

Please mention the ages at about which this has occurred.

Replies were received from nine firms, making eleven with the two works which I visited. A table of the results is given on page 10.

I have received an interesting report from a bottle-makers' sick society. It is not a large society, but has been established for over thirty years. During this time there have been 468 members, and of this number 285 have at various times been receiving sick pay, but only one during the whole period has undergone operation for cataract.

The age of those suffering from cataract in glass workers has been recorded variously by different observers. The ages of the cases to which Dr. Robinson particularly alludes are given as 59, 59, 59, 53, 40, and 55. Three of these, aged 59, 40, and 55, were incipient, and had not

*At this place statements were made that bottle finishers and gatherers were the most exposed to the heat. Faces do not get burnt, but sometimes the neck does. Blowers not often.

	Employés.								
	Founders.	Bottle Finishers.	Gatherers.	Blowers.	Wetters-off.	Takers-in.	Total.	Description of Bottles Made.	Extract from Firms' Replies as to Cataract.
1	10	29	2	56	10	31	138	All kinds of green and flint, medical and perfumery	"I have no knowledge of any case of cataract during an experience of over fifty years; and my brother, who is three years older than I, confirms this. We can only remember a very few workmen whose sight seemed to fail when they reached 60. It may surprise you to know that my brother, now 65, can read quite small print with the naked eye, and this after working as a bottle finisher for over forty years before both coal and gas furnaces, and where both 'pots' and 'tanks' have been used."
2	24	24	24	24	24	28	136	All kinds of common green glass bottles. Codd's patent, wine, spirit, and jam jars	"Not a single case came under our personal knowledge."
3	14	32	—	64	—	32	142	Not stated	"We beg to state we have never known of a case during over fifty years' experience."
4	32	82	82	82	82	82	442	Mineral water, beer and similar bottles	"We have no knowledge whatever of a single case of cataract, or anything else which necessitated operation on the eye, ever having occurred on these works, and our experience extends over thirty years."
5	8	19	4	34	5	18	88	Medical glass bottles	"None."
6	27	46	47	47	42	43	251	All kinds	"We have not heard of any cases of cataract among our workmen."
7	7	59	59	59	49	59	292	All sorts	"One case only."
8	22	48	48	48	42	48	256	Not stated	"After thirty years' experience, we have never known a case of cataract among our workmen."
9	18	50	50	50	50	50	278	Aërated water bottles	"No knowledge of any case."
10	14	35	35	35	35	35	189	Medical bottles and others	"No case."
11			Works	closed	—			Dispensing bottles	"When works were running we did not hear of any operatives suffering with their eyes."
			Total	...	...		2,202		

then been operated upon. I can find records of 4 cases only in my practice upon which I had operated in the last six years. This may not be strictly accurate, as the occupation of patients has not invariably been mentioned in the case-books. The ages of these, however, were 55 64, 59, and 66. The age does not differ much from that of ordinary cataract patients undergoing operation in this country.

Out of the last 1,042 consecutive cataract extractions in my hospital practice 668 were for men, and of these there were only three glass workers, their ages being 55, 64, 59. Of the 668 men, 47 were between the ages of 30 and 40; 67 between 40 and 50; 159 between 50 and 60; and 237 between 60 and 70, the greater number being about 60 or over.

Quite different as to age are the observations of Meyhofer, Hirschberg, and Pröbsting. Meyhofer[1] in a little more than two years had 4 cases of cataract in glass makers, aged respectively 28, 27, 29, and 24. His examination showed that the cataracts were soft; two were mature in the left eye, in one the left was more advanced, and in the other the right was normal. His examination of 59 glass workers bore out the frequency of affection of the lens in young workers. Hirschberg[2] gives a higher age. Five cases "40 and over": 2 had been operated upon and 3 had not advanced so far. Pröbsting,[3] whilst affirming the occurrence of cataract in glass workers found the percentage twice as great in men over 40 as in men under that age. On the other hand, Evitzki[4] in Russia (Moscow) examined 70 workers, and 4 only were affected, the ages being from 45 to 56, a period in which he mentions that cataract is observed even under the most normal conditions. Meyhofer's and Hirschberg's assertion that the left eye is mainly affected is not borne out by the English cases I have cited.

It has been asserted that there is a special liability to cataract in bottle finishers. If it were proved that these men were more often affected than the blowers and gatherers, it must be recollected that the older men are to be found among the bottle finishers. For in the bottle trade there is a progression upwards towards the position which is the better paid and for this reason the older hands will, as a rule, be found among the bottle finishers and the founders. It should be remembered also, that the gatherer is more exposed to the heat and glare of the furnace than the finisher.

Hirschberg, in support of his contention that exposure to heat causes cataract, mentions that he had himself noticed in the East Indies the early appearance of cataract. Most Hindus whom he saw in hospital or operated upon at Calcutta and other places or met accidentally after they had been operated upon were only 40, or little more, whilst he gives the average age of the appearance of senile cataract in Germany as 62. It has been already shown that the age of the glass workers in this country coming for operation for cataract is about the same (62). Thinking, however, that his statement as to the age of cataract patients in India needed some investigation, I asked my friend, Dr. Drake Brockman, whose extensive experience of cataract in the East is so well known, kindly to give me any information he could on this point. He sent me the following particulars, which hardly bear out the statement made by Hirschberg, especially if taken in connexion with the early maturity and short lives of the natives.

The number of persons operated on for cataract is shown in the following table:

Age	Males.	Females.	Total.
21 to 30	99	59	158
31 to 40	309	298	607
41 to 50	872	893	1,765
51 to 60	1,225	762	1,987
61 to 70	503	168	671
	3,008	2,180	5,188

Those included in the first of the above decades of life comprised soft and congenital cataracts; those in the second embraced cortical and diabetic cataracts, occurring in Hindus; those in the third decade were principally cortico-nuclear, with a few Morgagnian cataracts, occurring principally in Hindus. those in the fourth decade comprised, in addition to the last-named forms, the hard nuclear cataract, chiefly in Hindus; those in the fifth decade were hard, senile nuclear cataracts, in some of which degenerative change in the cortex had taken place. With a very few exceptions all occurred in Mohammedans.

The length of life of natives of India is shorter than that of Europeans. The Mohammedans as a class, as far as I have been able to judge, attain to a greater age than Hindus.

Native women enjoy a shorter life than native men, and become prematurely aged at an earlier date.

Mohammedan men and women live to a greater age than Hindu men and women, as a rule.

In all classes of natives maturity is attained at an earlier period than in Europeans, and but rarely does the period of child bearing in native females extend beyond the age of 40. Menstruation begins at an earlier age, and the menopause arrives earlier than in the European.

My investigation appears to me to justify, as far as

this country is concerned, the conclusion to which my practice in a large bottle-making district had previously inclined me—that though, as in other trades, there are men engaged in the bottle trade who undoubtedly do suffer from cataract, and who come under treatment for it, there is not sufficient evidence to show that they are liable to the affection to such an extent as has been asserted.

REFERENCES.

[1] Notably in the article in Oliver's *Dangerous Trades*, on *Eye Diseases and Eye Accidents in Relation to Industrial Occupations*, and a paper at the Bristol meeting (1894) of the British Medical Association on the Relation of Some Occupations to Eye Diseases. [2] *Bottle Finishers' Cataract*, by William Robinson, M.D., M.S., F.R.C.S., BRITISH MEDICAL JOURNAL, January 24th, 1903. [3] Taken from the reports of the Sunderland Eye Infirmary. [4] Etiology of cataract: cataract in glass workers. *Klin. Monatsbl. f. Augenheilk.*, February 1886. [5] *Centralbl. f. Augenheilk.*, April, 1898. [6] *Centralbl. f. d. Gesundheitspflege*, vol. xviii. [7] Abstract in *Ophthalmic Review*, 1890, p. 306.

ACHONDROPLASIA.

WITH NOTES OF CASES.

BY

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ACHONDROPLASIA is a rare form of dwarfism which, though of ancient origin, has not been brought into prominent notice, probably because the majority of cases are either stillborn or survive birth for a very short time. Nothing is known of its etiology, and the only fact which seems clear in its pathology is that there exists a "more or less complete inhibition of the normal row formation of the proliferating cartilage cells in the preparatory stage of ossification." It resembles rickets on the one hand and cretinism on the other, but is readily distinguishable from both, although its close relationship to rickets probably accounts for the occurrence of a certain number of cases in which the characteristic features of the two disorders are more or less blended.

The prominent symptoms of achondroplasia are: A congenital origin; an abnormally large vault to the cranium; depression of the root of the nose; prognathus; arrested development of the long bones of the extremities, with exaggeration of their normal curves; normal development of the trunk; beaded ribs and enlargement of the ends of the long bones from diaphysial and epiphysial changes; decentralization of the mid-point of the body, which is invariably and persistently above, and not below, the umbilicus; characteristic wheel-spoke appearance of the hands, described as the "*main en trident*"; excess of adipose tissue; protuberant abdomen; lordosis; smooth, pliable skin, with abundance of glossy hair in all the ordinary situations; normal mental condition; a tendency to other congenital malformations, especially to high-arched palate and inguinal hernia.

IN the BRITISH MEDICAL JOURNAL of June 30th, 1906, there appeared a paper by Dr. Guthrie Rankin and Dr. Ernest C. Mackay, to which we would refer those interested for a full description of this uncommon and interesting disorder.

The patient who was the text of that paper is a boy, G. G., 9 years of age, 35 in. tall, the youngest of three children, who was delivered after a normal and unassisted labour, but was observed to be misshapen at birth. He has never been seriously ill, and he is more than usually bright and intelligent. His head is abnormally large; the nose is flattened, and there is marked retraction of the bridge; there is pronounced prognathus; the abdomen is fat and prominent, partly from spinal lordosis; the mid-point of the body is immediately below the tip of the ensiform cartilage; the arms are thick and short, and the fingers barely reach the tips of the great trochanters; the humeri and femora are remarkably stumped; the bones of the forearms and of the legs below the knee are curved; the hands are foreshortened, and the fingers are of almost equal length, and deviate from the second interphalangeal joints like the spokes of a wheel. Most of these points are brought out in the annexed illustrations.



Fig. 1.



Fig. 2.

The publication of this case has brought to light two others, equally characteristic, which we are glad to have the opportunity of presenting along with it. Dr. John Cranke sends the account of the first of these cases from Griquatown in Cape Colony. The boy, P. G., is the sixth child of Afrikander Dutch parents, and was born under normal circumstances six years ago. His brothers and sisters are strong and healthy. He is 34 in. tall, sturdy, and intelligent. He was observed to be short-limbed at birth and he has not grown like an ordinary child. He has a large dome-shaped cranium, marked shortening of the long proximal bones of the limbs, moderate lordosis, decentralization of the mid-point of the body, and well-marked "*main en trident*."

The remaining case is specially interesting because of his age. The true nature of his dwarfism was first discovered by Dr. Lunn when the patient presented himself for admission to the St. Marylebone Infirmary. The man, J. G., is 53 years of age, and says he can quite remember

his mother telling him he was "born short." His family history, as far as it can be ascertained, is unimportant, and he has never been seriously ill, but has suffered repeatedly from sciatica. He is strong, and, until recently, has been regularly employed as a road labourer. He is mentally acute and of average intelligence. He is of small stature; the vault of his cranium is high; the bridge of the nose is retracted; the humeri and femora are much shortened, and the bones of the distal segments of both upper and lower limbs are curved; the fingers are of equal length, and the same abnormality is observed in the toes; the abdomen is prominent, and there is a considerable degree of lordosis; the palate is highly arched; and the central point of the body is nearer the ensiform cartilage than the umbilicus.



Fig. 3.



Fig. 4.



Fig. 5.

ACHONDROPLASIA: NOTES OF THREE CASES.

By J. HOUSTON PORTER, M.R.C.S., L.R.C.P.,

[illegible] to the Hospital

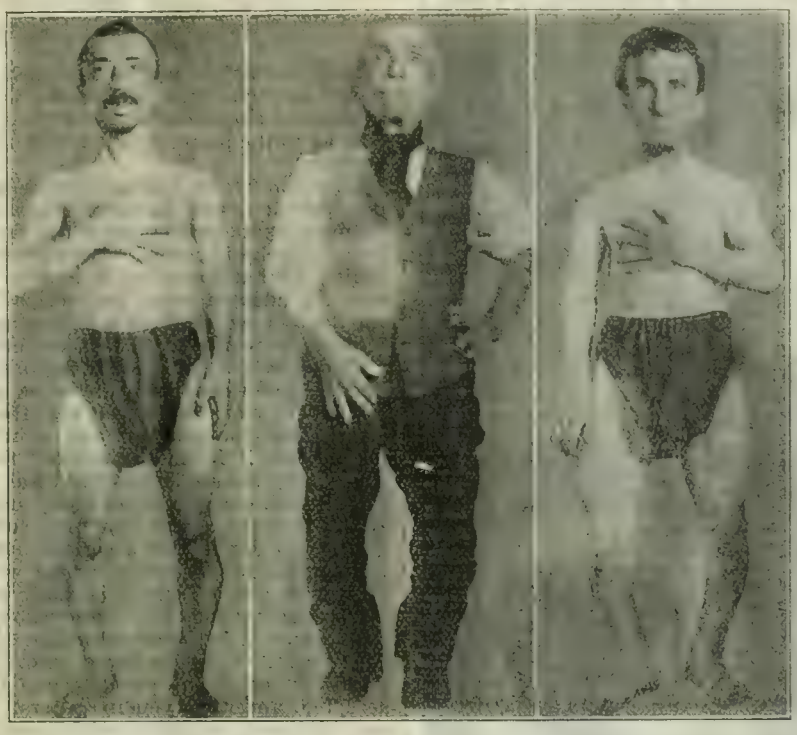
[illegible] is a condition the considerable peculiarity and rarity of which are, I think, sufficient reasons for the publication of the following brief notes, with photographs, of [illegible] which have been under my observation during the [illegible] two months.

It would be impossible for me to add to the exhaustive description of [illegible] which Dr. Guthrie Rankin published in the pages of the BRITISH MEDICAL JOURNAL for June 30th, and I therefore content myself with endeavouring to elucidate certain points of interest which the patients present.

History.—W. W., [illegible] a widower and father of [illegible] children, [illegible]. He [illegible] a perfectly normal baby, [illegible] a good attack of whooping-cough, and [illegible] the usual childish ailments, having become [illegible] during the past four months. He is in good health. He has all his life been a bargeman, working most often on barges engaged in carrying ice, and being frequently occupied in pumping out the water caused by its melting. It is noteworthy that one so handicapped should be able to follow a calling entailing so much hard work and exposure to weather, especially as he frequently sailed as far down the river as Rochester and other towns on the estuary. His health has always been good, and he can remember no serious illness in his life, and only relinquished his work at the age of about 70.

Appearance.—He presents many of the characteristic features of achondroplasia, namely, marked micrencephalia, the shortness of the limbs, affecting the upper segments more than the lower, as is usually the case, the upper arm and thigh being shorter in proportion than the forearm and leg. The affected long bones show considerable exaggeration of the normal curves, this being well exhibited in radii and femora. Long bones normally straight are also curved, notably the tibiae and fibulae, this condition being very probably attributable to unrecognised rickets in early life, an occurrence quite common in these people. The epiphyses are in nearly every case thickened and nodular, the result of excessive and irregular deposition of subperiosteal bone. This, though not a constant feature of the disease, is present in each of these cases in varying degrees. There is but little departure from the normal in the angle formed by the neck of the femur with the shaft, the

upper border of the great trochanter being just on Nélaton's line. The feet are small, owing to the shortness of metatarsals and phalanges, and square in shape. The gait is decidedly rolling and waddling. The pelvis is small, but presents no striking disproportion to the rest of the body. The ribs appear normal, and show no definite beading. The sternum is curved, the gladiolus being convex forwards. The skull is of the usual type found in these subjects; the bones of the vault, which are developed in membrane, are of at least average size and usual shape, while those of the base, which are developed in cartilage and undergo an early synostosis, are small. The face is thus in general outline triangular, the small lower jaw producing a pointed chin, which forms the apex of the inverted triangle.



The features of the skull here alluded to, although present, are not very pronounced in the father, but are conspicuous in both sons, as may be seen by reference to the photographs.

In the father the parietal eminences are prominent, and the frontal suture is felt and seen as a well-marked broad ridge—further evidence of previous rickets. In each the nose is not of the usually described "snub" variety, but of average size, with normal bridge and generally well formed. When standing upright the palm of the hand is on a level with the trochanter, a position much higher than the natural one, but lower than that generally observed in children who are the subjects of this disease, in whom the fingers may reach but little below the iliac crest. Perhaps this may be taken to indicate that, although slow, the growth in the long bones is sufficient to diminish the disproportion between the length of the limbs and that of the trunk as adult life is reached.



In the father the lips are somewhat thick and protruding, but in the sons not so, neither is there thickening of the eyelids. Also, in the older man, the thyroid gland could not be felt, but I think this may be sufficiently accounted for by his age, the tracheal rings not being unduly distinct to the touch in the other men.

Lordosis is not as prominent a feature in these cases as usually described, and there is no dislocation of the hip, and, as I have said, little evidence of bending of the neck of the femur.

The abdomen is somewhat prominent, but no enlargement or other abnormality of its viscera was found. There were no congenital defects of palate, heart, extremities, or ears, and no herniae. The skin was normal, the usual parts well covered with hair, and the external genitalia were well developed. Their intelligence is good, especially in the case of the younger son, who is certainly well up to the average in this respect.

Family History.—This is of great interest, well showing how great an influence heredity seems to exercise in the production of achondroplasia. W. W. had three sons, two of whom are shown with him in the photographs; the other was drowned; his father and brothers emphatically state that he was physically in all respects similar to themselves. There were no daughters. His wife, now dead, was a normal woman of average height. He had one brother, also like himself; but again there were no girls in this family, the old man having no sisters.

He states unhesitatingly that his father was exactly like himself, and the sons also say that they remember their grandfather, and entirely agree with their father in his description of him. Here again the wife was normal. We thus have pretty clear evidence

(*a*) Of the disease occurring in 6 members of a family constituting three generations.

(*b*) Of its appearing only in the male sex.

(*c*) Of the interesting fact that in those three generations no females were produced.

Dr. Guthrie Rankin tells us that statistics indicate a slightly greater prevalence of the disease among females, but other writers have stated the reverse to be the case. Perhaps the history of this family would lend support to the theory that in families such as this with a strong hereditary predisposition to achondroplasia the disease really affects the female fetus more severely than the male, often preventing its ever reaching maturity, while the less severely afflicted males manage to survive and become the only representatives of their line. I tried to find evidence bearing upon this point by questioning the old man upon his wife's and his mother's obstetric histories, but, having regard to his age and entire immunity from educational influences, I did not attach much importance to his inability to give me any information on the subject.

Consanguinity of parents has been invoked as an etiological factor in the disease under consideration, but it has played no part in its production in these cases. Of syphilis there is no history, and there have been no serious illnesses during infancy or childhood.

The diagnosis of achondroplasia in the adult is both easier and less important than in children—easier because the occasional difficulty met with in the child of distinction from cretinism no longer exists; less important because the cases which call for treatment must be extremely few in number and limited to the very rare necessity for an osteotomy to correct a particularly severe bony curve.

Prognosis.—The prognosis is well set forth by this family:

one of the men has already well exceeded the allotted span of human life, while the other two have passed 50, and should not fall far behind their father's record of long and healthy life.

The appended table gives in parallel columns for purposes of comparison some measurements taken from one of these men, with corresponding figures obtained from a



normal man, 5 ft. 8 in. in height, this being generally taken as the average for healthy men in England and Wales.

Some of the striking features of the achondroplasic skeleton are there well seen. Thus with a total deficiency of 16 in. in height the shortness of the legs is responsible for all but 2 in. of this amount.

	Normal	Achondroplasic male
	ft. in.	ft. in.
	1 6	3 4
	2 10½	2 8
	2 11½	1 9½
	1 7½	0 11½
	1 7½	0 7½
	0 7½	0 7½
	1 3½	0 9½
	0 8½	0 6
	1 3½	0 7½
	2 10	1 4

The photographs are by Herrmann C. T. Gardiner, F.C.S.

ON THE USE OF TAXIS FOR HERNIA, AND ON SOME COMPLICATIONS THAT MAY ARISE DURING AND AFTER ITS EMPLOYMENT.*

By H. BETHAM ROBINSON, M.S., F.R.C.S.,

SURGEON TO OUT-PATIENTS, ST. THOMAS'S HOSPITAL.

In bringing before you to-day such a simple subject for your consideration I need make no apology, for at the present time opinions are changing, and differ considerably as to the propriety of employing taxis as a remedial measure.

The term "taxis" means the reduction of a hernia by manipulation, and in extension would include also the ordinary reduction effected by the patient himself in putting back his hernia. The expression is more usually limited to that procedure of a more purposeful character which is adopted when the hernia fails to return as it should, and where there are associated symptoms which indicate some altered relationship of parts.

To-day we are going to deal with taxis as a measure to be employed when there are signs present of strangulation. There are many that urge that taxis should never be tried for strangulation, and would advocate operation for all cases. It must be allowed that inspection of the contents of the sac is the only ideal method that is consistent with a maximum of safety and a minimum of risk. If all, or even the majority, were submitted to operation, there is no doubt that a certain number of cases where bad symptoms subsequently arise would be satisfactorily dealt with, and our statistics would considerably improve. I myself am at one with those who insist that for safety's sake operation is the ideal method of treatment, but I feel sure that the complete abolition of taxis for strangulated hernia is not at the present time likely to be generally accepted, and that you in general practice would have some difficulty in dealing with some of your cases should taxis be altogether abandoned.

If we, then, assent to the proposition that taxis for strangulated hernia is not likely to become a dead-letter, we must have a clear conception as to the right way to do it, and as to the cases in which it may be, and those in which it should not be, attempted.

In performing taxis the pressure on the hernial sac must be gentle, steady, and equal all over the tumour, and it should be in the reverse way to the normal descent of the hernia. At the same time support should be given by the other hand to the neck of the sac, so as to steady it. If intestine is in the sac it will be gradually emptied of its fluid and flatus, and should then return with the characteristic gurgle. It is usually directed that the tense structures pressing on the sac should be relaxed, and for this purpose the thigh is flexed, adducted, and rotated inwards.

By some this has been taken exception to, it being considered that the taxis is more likely to succeed when the fibrous tissues outside the sac are tense; thus, with an inguinal hernia the thigh would be extended, and in a femoral it would be adducted and rotated outwards. Perhaps if this is true it is the support given by the fingers to the neck of the sac when the fibrous rings are relaxed that prevents disaster. What, however, is very certain is that if the taxis is improperly done mishaps can easily occur.

Irrespective of the length of time it may be tried, one knows that the attempt to reduce the hernia is frequently a continuous push on the lower pole of the sac, forcing the whole up towards the abdomen, and if this procedure is done without any support to the neck then certain dire results may ensue, about which I shall speak to you presently.

With experience, the manipulation of a few moments will, as a rule, decide whether reduction is likely to take place; when it does occur, the contents go back with a characteristic gurgle, especially if gut occupies the sac. Success is more likely to be obtained if it is done under chloroform, and particularly after a hot bath.

Now, when the sac contents have been apparently satisfactorily reduced, we have, however, taken a leap in the dark, for what do we know as to the pathological conditions

* Read before the Norwood Division of the South-Eastern Branch.

present in the sac or its contents? We assume certain things and hope for the best. If strangulation has been for only a limited period, we consider that in the time very little damage can have occurred, but outside somewhat narrow limits we stand to risk a great deal. What do we know as to the nature or septicity of the effused fluid in the sac, or as to the condition of the coil of bowel, how damaged its walls are, or how much ulceration has occurred at its neck, or anything about adhesions, whether they are of the bowel itself to the neck of the sac or between the bowel and omentum; and, lastly, what is the condition of the sac itself?

There are certain conditions in which it is inadvisable to attempt taxis at all, and operation should be immediately done. If there is much vomiting, especially if this is stercoraceous, hiccough, collapse, signs of inflammation over the tumour, or marked abdominal pain, there should be no delay. The time factor, again, when the above symptoms are not pronounced, has to be considered.

Speaking generally, inguinal and umbilical herniae will stand strangulation with less acute damage. The reason for this is that the constriction is more often due to the fascial structures of the abdominal wall, which vary in tension, and thus do not exert such a continuous pressure on the sac and its contents. In these cases, although the signs of strangulation may have been of the mildest form, a three days' history should demand operation, and it may be said definitely that if after twenty-four hours the symptoms are at all severe it is wiser not to try taxis; up to this time, except under special circumstances, it should be safe in the majority to do so.

There are certain cases of inguinal hernia in which, although the signs of strangulation may be of quite recent onset, I would counsel early operation. These are the congenital and funicular forms, where the sac results from the persistence of the whole or upper part of the processus vaginalis testis. Here the constriction is in the form of a ring about the neck of and in the sac itself, and it is due to the progressive attempt at closure between the peritoneal cavity and the funicular portion. This ring produces an uncompromising pressure, and the symptoms of strangulation are frequently very acute. Such forms of hernia, although more likely to be met with in early life, occur in young adults or later. In young children a relatively small proportion of the cases become strangulated, and of these in the majority the reduction by taxis is not difficult, as there is not such rigidity of the ring in the neck of the sac; in adults, however, this ring is often very tight, the effect being that a line of ulceration in the bowel may form very rapidly, or even gangrene occur.

In the case of a femoral hernia there is very little margin for delay, for the tense unyielding tissue about the neck of the sac, here Gimbernat's ligament, very rapidly forms a line of ulceration in the bowel, which may give way in the taxis, or after the return of the bowel into the peritoneal cavity. For this reason, if it is determined that the sac contains a knuckle of gut, it would be far safer to operate at once. One would probably be guided by the severity of the symptoms, but, any way, delay is inadvisable after the end of twenty-four hours. If the surgeon felt sure that the sac only contained omentum a little more latitude might be allowed.

Let us now consider some ill results which may follow taxis where all the hernial contents have been effectually reduced. Certain of these may be directly due to the procedure, when the cases dealt with are even within the limits laid down for its apparently safe performance. Vigorous manipulation of the gut, which is already congested and oedematous, may cause extensive bruising; this may be shown by haemorrhage into the bowel, accompanied probably by diarrhoea. Rough handling may induce a subsequent gangrene, or may cause a tear at the seat of constriction, which leaks after reduction; in both of these cases septic peritonitis will follow.

If taxis is performed outside the limitations advised with all care, the contents of the sac may be in such a condition as to cause contamination of the peritoneal cavity. The fluid may infect the peritoneum, perhaps only locally; the gut may be gangrenous, or on its way to become so; the line of ulceration may be so deep that perforation takes place almost immediately. These possibilities are the strongest argument for actual inspection of the existing condition of things, especially in the cases where such effects are more prone to occur, namely, in the femoral and congenital inguinal herniae.

After a successful taxis performed in properly selected cases, and without the subsequent troubles just related, symptoms of obstruction may persist, the cause of which it cannot be gainsaid would in many cases have been cleared up by an open operation. Instances of such would be where the gut is strangulated in the sac by adherent omentum, or by adhesions between the coil or coils of intestine. In another case exploration of the irreducible contents of a sac may show that there is here no cause of strangulation, and that the real cause is within the abdomen, as from a band or volvulus, or from a ring stricture in the large bowel. A condition allied to the above is where again real reduction of the tumour has taken place, but the bowel is pushed under an adhesion in the neighbourhood of the internal ring. The following is a case in point:

G. C., a stableman, aged 45, was admitted under my care at St. Thomas's Hospital on January 22nd, 1900. He had had a right inguinal hernia for ten years, which at times he had had trouble in reducing; he had never worn a truss. Four days before admission the hernia had become painful, and he could not reduce it. He became very sick, and continued so. There was no action of the bowels and no flatus passed. Attempts at taxis had apparently reduced the hernia, but his symptoms remained the same. On admission he was in a state of collapse, with a temperature of 97.4°. A lump was to be felt in the region of the appendix, but there was little abdominal distension, and his inguinal canal was quite free. At the operation an incision was made over the outer border of the rectus, and on opening the belly a loop of gut was found obstructed by a band, which was wide and firm, stretching from the posterior wall of the hernial sac, just within its mouth, upwards, inwards, and backwards to the posterior parietal peritoneum. The mouth of the sac was a little pulled up towards the abdomen. The constricting band was divided, and removed close to its attachments, and the imprisoned bowel set free, none the worse for its nipping. A radical cure of the hernia was done at the same time. His bowels were opened the next day, and he made an uneventful recovery.

I will now pass on to speak of cases of "false reduction," where the hernial swelling has been made to disappear, but there is no relief given to the symptoms, because the constricting cause remains undisturbed.

The simplest form of such would be in the case of a large hernia, where apparently it is completely reduced, but a small knuckle of gut is left nipped deep down in the ring. This is incomplete reduction, and to avoid this be careful to feel if the sac and its rings are quite empty.

In the next group of cases it must be borne in mind that some of these disasters have a causal relationship with ill-conducted or prolonged taxis. A lack of support to the neck of the sac, or a continuous pushing on the lower pole of the hernial tumour will cause loosening of the subperitoneal connective tissue about the neck of the sac, and so facilitate certain misplacements.

The first class to which I would draw your attention is when the sac ruptures in the neighbourhood of the sac on its distal side, and the sac contents are gradually squeezed through this hole into the subperitoneal connective tissue, and the sac is emptied. Birkett, who first drew attention to this possible accident, says that the rent is usually on the posterior wall. If there is no suspicion of anything abnormal having occurred at the time, we shall soon, however, become cognizant that all is not well, because the former symptoms persist and become more marked. Palpation locally should demonstrate abnormal fullness, with an empty hernial sac. In these cases, if care is exercised in the taxis, the surgeon's suspicions should be aroused if reduction has taken place without the usual somewhat typical sensation when the hernia slips back.

Closely allied to the last would be the instances recorded in which, again, rupture takes place distally to the neck of the sac, but only the fluid in the sac is displaced into the subperitoneal tissue. What here is so deceptive is that the whole of the tumour may appear to have been reduced, whereas a small knuckle of gut remains strangulated deep in the neck. It is stated that as a result of an energetic taxis the constricting ring at the neck may alone be torn away, and reduced into the belly with the bowel.

The next class of case is where after a prolonged taxis the whole sac with its contents is made to disappear in the connective tissue behind the abdominal or pelvic walls, particularly in the iliac fossa. We are indebted to the

French surgeons of the early part of the last century for its recognition, and also for the term by which it is generally known, "reduction *en bloc*" or "*en masse*." Luke, in this country, first described it in the *Transactions* of the Medico-Chirurgical Society, vol. xxvi, p. 159. Examination will show that the inguinal region and the rings are free, but a lump will be felt behind the abdominal wall. It has only been recorded in connexion with old inguinal herniae. In the reduction the hernia would have disappeared without the characteristic gurgle, and symptoms of obstruction would remain. Instances of it are rare, and the following case, which was under my care in St. Thomas's Hospital, is a good example:

C. C., aged 52 had been ruptured for ten years, for which he had worn a double truss. This latterly had not been satisfactory, failing to keep up the tumour. On November 19th such happened, and he was unable to reduce his hernia: he tried to do so himself for two hours, but being unsuccessful he sent for his doctor, who after some three hours came in the afternoon, did taxis for half an hour, and apparently reduced the hernia. Soon after there was pain, followed by nausea, and then he vomited on three occasions in the evening. I was called to see him on the next mid-day 20th: he had then bilious vomiting, with a dry, brown tongue. His pulse was 88, a little tense, but this was possibly due to arterial degeneration. His belly was soft, and the inguinal canal was empty of any hernial tumour, but there was some puffiness over the external ring. Deep behind the abdominal wall, about the brim of the pelvis, could be felt a lump, but nothing abnormal could be detected per rectum. His testis was normally placed, and he was certain that he had had no hernia in early life. An operation was done immediately. On slitting the external oblique the tissues of the cord were greyish, with some blood extravasation and some oedema. The connective tissue over the front of the cord as well was loosened and lacerated, and no sac could be seen. On pulling on this loose subperitoneal tissue a rounded dark swelling came up from the margin of the pelvis. This was the displaced sac containing the strangulated bowel. This was opened up, and blood-stained fluid and recent fibrin were set free. The loop of bowel was dark, of good polish, and appeared to have been especially nipped over the free margin, as occurs in a Richter's hernia, and the explanation of this was forthcoming when the sac was further examined. This had a small orifice, just taking the little finger with a squeeze (three-eighths of an inch), in which the small portion of the bowel's lumen had become wedged. The size of the sac distally to this was not more than a pigeon's egg: centrally to the constricted opening was a well-marked peritoneal pouch, with a wide opening into the cavity. It is probable that this constriction represented the original internal ring, which had been gradually displaced downwards. There was no omentum in the sac, and the portion of the bowel involved was the ileum. A Bassini's operation was done, and the after-progress calls for no comment except for the supervention of a haematoma of the cord, which was probably related with the bruised state of the connective tissue seen at the operation.

Reduction *en masse* may also take place between the planes of the abdominal muscles.

There remains for our consideration another very interesting condition, where obstruction persists after reduction, namely when there is a bilocular sac, and the intestine is simply forced from its sac in the inguinal region into one occupying a posterior position, the lower sac not being displaced as in reduction *en masse*. The second pouch will be distally placed to the site of the constriction, which is usually at the internal ring, but it may be placed between the layers of the abdominal wall, forming the interparietal form of interstitial hernia; or behind the parietal wall in the subperitoneal tissue, when it is termed "properitoneal." The clinical history in this last case is practically the same as with a reduction *en masse*, and differentiation only takes place at the operation.

A very marked example of a properitoneal hernia was recently [illegible] in the *Transactions* of the Medico-Chirurgical Society [illegible], to which paper I would refer you for further details.

Before concluding this subject, there is a condition we must consider which may ensue after the best regulated cases, or even after the return of the bowel by operation. The longer the strangulation the greater is the probability of its occurrence, and the propensity should be another determinant in performing the [illegible] previously mentioned. When a loop of bowel has been considerably altered by pressure it must be borne in mind that normal peristalsis may not be re-established and symptoms of obstruction will persist. The signs indicating this untoward process will be progressive distension of the bowel with gas, without any passage of flatus per anum; nausea succeeded by vomiting, or vomiting itself, will persist from the first. The pulse will be weak and rather quick, but in the early stage there will be no marked alteration in temperature or in rate of respiration. If this complication is not soon relieved the vomiting will be persistent, and the bilious-coloured fluid, becoming progressively darker, will be towards the end literally pumped up. Symptoms of collapse will become more marked, the pulse will increase in rate but decrease in force, the temperature will rise, and the respirations will be more rapid, owing to the increasing pressure on the diaphragm from the distended intestines. As these symptoms may take a very few hours to run their course, it is most important to recognize the condition promptly, and to act accordingly. The great point is not to be misled with the idea that the signs are due to some temporary peritoneal inflammation. Distinguishing features between the two are that in the paretic state the signs continue after reduction, the pulse has not the wiry character nor is there the pain, increased temperature, local tenderness, or rigidity which we might expect in peritonitis. It will also be noticed that although the bowels are distended there is an absence of visible peristalsis, such as would be observed with distension of the bowel on the proximal side of a hand.

FRACTURE OF THE FIFTH METATARSAL BONE.

By GEO. H. GRAHAM, M.D.,

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FRACTURES of the metatarsal bones due to causes other than direct violence are sufficiently uncommon to justify recording when a case presents itself. Direct violence is usually the cause of these fractures, and frequently involves severe damage to the soft parts, when the surgical consequences may be serious. If the fracture so caused is simple, and is recognized, the injury is of little importance if proper treatment be adopted. But when no violence has been received, and there seems little or even no cause for a fracture, the injury, being unsuspected, is liable to be overlooked, and the patient, instead of keeping at rest, walks about, partially disabled, suffering much pain for a long period. Such cases, according to von Bergmann, may ultimately cause permanent partial disablement.

A clergyman, about 50 years of age, whom I had attended for some years, consulted me on September 29th, 1906, for pain on the outer side of the right foot. He informed me that on August 10th, while walking on a gravel path and wearing ordinary shoes, he felt a sudden pain after he had been walking from twenty to twenty-five minutes. He had not twisted the foot, nor been jumping. Shortly afterwards he seemed to feel something slip at the site of pain, but felt no grating. The pain increased greatly in severity, and he reached home with difficulty. He was treated with lotions and partial rest under medical advice. Two or three days after the injury he had a slight attack of gout in the great toe of the same foot, but this soon passed off. He experienced no relief from the pain on walking till about five weeks later, when he bound his foot round with plaster.

I found over the base of the fifth metatarsal a distinct enlargement when compared with the other foot, somewhat painful on pressure, but hard and obviously bony. No crepitus could be felt. An *x* ray screen examination disclosed a transverse fracture of the tubercular eminence at the base of the fifth metatarsal. The skiagraph showed marked separation of the fragment, with little or no attempt at bone union. On direct examination, after the *x* rays had shown the nature of the injury, a very slight transverse groove could be made out over the site of the fracture.

The cause for such a fracture occurring without any violence in an apparently healthy man while simply walking is not very clear. The patient had never previously broken a bone; he showed no evidence of tabes or any other nerve lesion. Myeloid changes were as far as possible excluded by an examination of the urine. Mr. Eccles reported on a specimen that it "contained a most minute trace of serum albumen, but none of the tests employed showed the presence of albumose." In the absence of any inversion of the foot or any undue strain it is difficult to believe that the action of a comparatively weak muscle, such as the peroneus brevis, would be [illegible] to cause such a fracture.

The literature on the subject, as far as I have been able to discover, is very limited, the large majority of authorities briefly dismissing it with the remark that such fractures are due to direct violence. Tobold,[1] however,

reports many cases in soldiers from prolonged marches, jumping, etc. Von Bergmann[2] agrees that the condition is one more frequently met with in soldiers, and considers that the heavy knapsack they carry has some bearing in this connexion. He mentions that in more than 90 per cent. of the cases reported the break was in the middle of the second and third metatarsal, and never in the first. He further states that with the *x*-rays Schulte, Stechow, and Kirchner found that what Breithaupt described as "tumour of the foot" was due to the fracture of a metatarsal bone (the majority being incomplete greenstick fractures), produced generally by slight violence and usually overlooked at first owing to the slight disturbance occasioned.



Robert Jones[3] reported the fracture of his own fifth metatarsal near the base while dancing, and four other cases from some slight indirect violence. In all these cases, as shown by the skiagraphs published, the fracture is anterior to the base, some being nearly in the centre of the shaft. He explains the fractures in his cases thus:

"When the heel is on the ground the body weight expends itself upon the fifth metatarsal, rotating it slightly inward. The opposition to this force takes place at its base, where the strongly attached ligaments resist its displacement. A fracture occurs, therefore, exactly where our skiagraphs illustrate [that is, anteriorly to the base].

"It will be observed that in the case now reported the fracture involves the articulation with the cuboid, and has broken off only the tubercular eminence, where it should [be] when there should be little or no strain, with no inversion of the foot occurring at the time. Jones lays stress on the difficulty in diagnosis of these cases without *x* rays, as crepitus is in the majority of them unobtainable.

Whitman[4] alone among the authorities I have consulted states that the injury may occur without apparent cause other than walking, and that the pain and swelling may be inexplicable without *x* rays, but he gives no instances nor any explanation for a fracture thus occurring.

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MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

FILARIA IN BIRDS.

WITH reference to the notes by Professor St. Clair Symmers and Dr. A. C. Coles in the BRITISH MEDICAL JOURNAL of October 20th and November 3rd on the occurrence of filariae in blackbirds, it may be of interest to say that I have found filariae in the blood of at least half a dozen jungle crows (*Corvus macrorhynchus*) in this place.

These filariae swarm in the blood, as many as ten being often seen in one field, under a ⅛ power, while the crows containing them seem to be in perfect health. They resemble those described by Professor Symmers. They are devoid of sheath, with a smooth, structureless cuticle. The ends are blunt—one so blunt as to be almost square, the other slightly more pointed. On staining they are seen to be full of granules, with a clear space about one-third of the length from the sharper end.

I have not measured their length, but in breadth they are rather less than the shorter diameter of the red cells.

Halteridia were also present in two of the crows.

F. WYVILLE THOMSON,
Dehra Doon, India. Lieutenant-Colonel, I.M.S.

A CASE OF BULLET WOUND.

A YOUNG coloured woman, aged 19 years, was accidentally shot by a man who was standing within two yards of her with a loaded revolver. The bullet entered the *left* ala nasi about three-quarters of an inch from its free margin and at its junction with the cheek, and emerged half an inch in front of and a little above the *right* external auditory meatus. When seen by me, within an hour of the accident, there was profuse bleeding from the wound of exit and from the pharynx. I administered a full dose of opium and 15 gr. of Burroughs, Wellcome and Co.'s suprarenal tabloids. Four hours afterwards all bleeding had ceased, and the girl was quite comfortable. Two days after the injury the right eye became considerably suffused, and there was profuse lachrymation. This condition, however, disappeared after a few days, as did also some air crepitus in the right cheek over the antrum. There was but slight shock and never any fever, and the girl was to all intents and purposes well in a fortnight.

The case seems remarkable on account of the apparently light injury inflicted by a fairly large and heavy bullet (0.38 calibre) in traversing such an important region.

Richmond, Jamaica. P. O. MALABRE, M.D., C.M.Edin.

PYTHOGENIC PNEUMONIA.

THE following instance of so-called "pythogenic pneumonia," which recently occurred in my practice, appears worth recording.

On October 1st, 1906, I saw Mrs. D., aged 28. She was suffering from severe catarrhal sore throat presenting all the appearances of the ordinary "hospital sore throat," and her temperature was 104° F. Rain had fallen heavily on that day after a long spell of dry weather; I learnt that the water supply to the house had given out some days previously, and that the closets had not been flushed for three days. The next day Mr. D., aged 30, was in bed with a temperature of 102° F., and all the symptoms of pneumonia. On the following day a large consolidated patch corresponding to the lower lobe of the right lung could be distinctly made out. The course of his attack was uneventful, the temperature falling gradually and remaining below 99° F. after the ninth day.

In the meantime Mrs. D.'s throat had got well, and she had helped to nurse her husband until October 20th, when she also was attacked with pneumonia at the base of the right lung, her temperature rising rapidly to 105° F. on October 22nd. On October 26th the left lung became

affected, delaying her recovery till November 2nd, from which date her temperature remained below 100° F., and she rapidly picked up.

The interest of these events seems to be:

1. The almost simultaneous infection of Mrs. D.'s throat and Mr. D.'s lung at a time when the house drains were dry and foul, favouring the opinion that the nature of the infection was the same in both (septic?), and fixing the incubation period of the pneumonia to within three days.

2. The infectiousness of the disease, as proved by Mrs. D.'s attack, unless it be supposed that her system had been infected from her throat, and that the disease had developed later in the lung—a supposition, I think, rendered of little value by the fortnight of health she enjoyed between the two complaints.

3. The influence of insanitary conditions as a source of the infection, lending weight to the term "pythogenic pneumonia."

Llangollen. H. FREETH, M.D.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ST. MARY'S HOSPITAL, MANCHESTER.

A CASE OF ABDOMINAL SECTION FOR ECTOPIC GESTATION.*

(Reported by D. LLOYD ROBERTS, M.D., F.R.C.P., Physician to the Hospital.)

E. W., aged 37, married, with two children aged 12 years and 9 months respectively, was admitted on May 4th, 1906.

History.—After her last confinement (in July, 1905), she had amenorrhoea until December, 1905, when she had a normal menstrual period, a second occurring a month later (in January, 1906). She then had another period of amenorrhoea, lasting ten weeks, at the end of which time she was suddenly attacked with severe pain in the right side, which necessitated her going to bed. She also fainted several times. No haemorrhage occurred at this time, but a fortnight later she had what she considered a normal menstrual period, in which she passed a few shreds of skin like material.

State on Admission.—Abdominal examination revealed nothing abnormal, but bimanually a fluctuant tender mass, about the size of an orange, could be felt behind to the right, and adherent to a rather small uterus. The patient was kept in bed for some time, in the hope that the mass would be absorbed; but as absorption did not take place, it was decided to perform an abdominal section.

Operation.—On July 19th, 1906, the abdomen was opened in the middle line, exposing to view a dark red very friable mass about the size of an orange, lying behind and to the right of the uterus. Some time was spent in separating adhesions about this point. The pelvis contained about three pints of dark blood clot, and on clearing this out a fold of tube about 2 in. in length was brought to the surface. A rent of about two inches in length was found in the tube, and from this blood appeared to have escaped into the abdominal cavity. It appeared obvious that the foetus had escaped into the broad ligament by a rupture of the tube, and had then developed in the broad ligament, and had ruptured into the abdominal cavity. The tube was then ligatured in two places and divided between the ligatures, and the stump dropped into the pelvis. The broad ligament was then opened, and the foetus and placenta removed. The placenta was found to be attached to the posterior layer of the broad ligament, and was left in situ. The edges of the broad ligament were then sutured with catgut, and the abdominal cavity closed in the usual manner.



(From a drawing by D. Lloyd Roberts.)

Ectopic gestation. The foetus and placenta have been removed, and the broad ligament sutured with catgut. T = tube, which was ligatured at two points and divided between the ligatures. O = ovary.

The patient made an uninterrupted recovery.

Description of Specimen.—The specimen consists of a right Fallopian tube, ruptured on its superior surface, and the right ovary. The Fallopian tube forms the main mass of the specimen, being greatly distended with placental tissue, internal to which is a cavity lined with fetal membranes. The ovary was cystic, flattened out and adherent to the surface of the mass external to its main bulk. To the ovary was attached the unruptured fimbriated extremity of the Fallopian tube. The whole specimen measured 5 in. long by 3 in. wide.

REMARKS.—The case is one of a ruptured ectopic gestation occupying the central portion of the Fallopian tube. There is no history of severe haemorrhage into the abdominal cavity. This is unusual, especially considering that the rent in the tubal sac was sufficiently large to allow a three months fetus to be extruded into the folds of the broad ligament. A considerable portion of the sac had become attenuated by pressure of the developing contents, and had rendered it more than usually friable from necrotic changes, and thus not so liable to haemorrhage. The abdominal ostium of the tube was firmly occluded, probably from an early stage of the pregnancy, thus perhaps preventing tubal abortion.

MANCHESTER ROYAL INFIRMARY.

A CASE OF HAIR BALL IN THE STOMACH.

(By F. G. PELL-IDDERTON, M.B., Ch.B.Manch., late House-Surgeon, Manchester Royal Infirmary.)

By permission of Mr. Thorburn I am enabled to report the case of E. T., aged 29, milliner, admitted to the Manchester Royal Infirmary, March 18th, 1906, complaining of persistent pain and vomiting after meals.

When 15 years of age she had scarlet fever, which left her in a very debilitated condition, from which she has never recovered. At this time also her hair fell out, and it has not grown at its usual rate since.

In the autumn of 1904 she began to be troubled with occasional vomiting after meals. The condition gradually became worse, till she vomited all the food she took. Under medical treatment, rest in bed, etc., her condition improved somewhat, but directly she got out of bed the vomiting began again.

Condition on Admission.—The patient is a pale, thin girl, the constant loss of food having reduced her to a weak state. She has considerable abdominal pain after meals, frequently followed by vomiting, but she can usually keep the food down if she remains in the recumbent posture. On examination a mass can be felt in the epigastrium, extending over into each hypochondrium, which rises and falls with respiration, and is freely movable. Her hair is scanty and is about 3 in. long.

Operation.—On April 3rd, 1906, a median incision was made by Mr. Thorburn from the ensiform cartilage to the umbilicus, and the abdominal cavity opened. The mass was found to be in the stomach, which was drawn up into the wound, and a longitudinal incision about 3 in. long made in its anterior wall. The stomach was opened and a hair ball removed. The wound in the stomach was closed with three rows of catgut sutures, and the viscera returned to the abdomen. The abdominal wall was sutured up, and a dry dressing applied. The wound healed by first intention, and the patient made a good recovery.

REMARKS.—The hair ball was shaped exactly like the stomach. It weighed in the dry condition 2¼ oz., and measured: Length, 5¼ in.; depth, 2½ in.; and width, 1½ in.

After the operation the patient was occasionally caught eating her hair, and she admitted having been addicted to the habit ever since she had scarlet fever fourteen years ago.

REPORTS OF SOCIETIES.

HUNTERIAN SOCIETY.—At a meeting on December 12th, 1906, Dr. WILLIAM RAWES, Vice-President, in the chair, Dr. KENNEDY HILL read a paper on *Toxic insanity*. After a few remarks on the importance of heredity he said that he considered that some toxaemic condition was present in all cases of acute insanity. Any toxic condition which gave rise to delirium might give rise to insanity. Dr. WILLIAM RAWES was of opinion that acute rheumatism played a more important part in the causation of insanity than was thought generally, and gave details of a case in which rectal injections of polyvalent antistreptococcus serum had diminished the leucocytosis and brought about great improvement in the mental and general condition of an insane patient. Dr. FORTESCUE FOX discussed the relation between gout, chronic constipation, and disorders of the liver and mental disease, and he asked whether epochal insanities could be explained by the toxic theory. Dr. LANGDON BROWN commented on the fact that all biological questions became chemical questions when brought down to first principles. Dr. F. R. HUMPHREYS hoped that no more would be heard of heredity in insanity. Ideas about heredity had blocked the treatment of tuberculosis for many years, and the treatment of insanity was in danger of being hampered in the same way. Dr. KENNEDY HILL replied.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—At a meeting on December 13th, 1906, Mr. H. SHIRLEY-JONES (Droitwich), President, in the chair, Dr. LEONARD WILLIAMS read a paper on *The Treatment of Gout by the Ingestion of Common-salt-containing Waters*. The author contended that Widal's work on the subject of common salt and its effect in cases of renal inadequacy called for a review of the probable effects of common salt waters given by the mouth in the treatment of gout. As gouty people were for the most part potentially inadequate in the matter of renal excretion, it was unwise to send them to salt water spas. Certain spas, notably in Germany, such as Kissingen, Homburg, and Wiesbaden, were unsuited to the treatment of gout when regarded from this point of view. Inasmuch as the bowels were only accessory excretory organs where the products of nitrogenous metabolism were concerned, the wiser course was to send gouty patients to those spas such as Contrexéville, Vittel, and more especially Evian, whose waters were known to exercise a stimulating effect upon the kidneys, which constituted, after all, the normal physiological route for the discharge of nitrogenous waste. The PRESIDENT remarked that simple waters, given in large quantities, and without sufficient intervals, did not give the diuretic effect produced by moderate quantities, and this was especially true of waters containing large quantities of sodium chloride. Hence it was necessary to watch carefully the action of the kidneys in treating gouty cases with saline waters. There were no cases so hopeful as those which showed early diuretic action. Dr. DOLLY (Harrogate) said that whatever theoretical objection there might be to the use of salt-containing waters in gout, there was no doubt that practical experience went to prove that these waters were beneficial. Leaving out acute cases, for which Harrogate waters were never recommended, all ordinary cases of gout were benefited by the strongest saline water of Harrogate, if only precautions were taken to secure from the first a thorough though not drastic aperient action. Dr. A. P. LUFF said that he could not agree that all gouty patients should be debarred from taking mineral waters containing sodium chloride. In cases in which gross renal inadequacy existed it was right to forbid the use of such waters, but in other cases the waters were of great value as stimulants of hepatic metabolism. Dr. C. W. BUCKLEY (Buxton) considered it probable that the chloride radicle of common salt was of much importance in the therapeutic effect of these waters in gout, in view of the value of ammonium chloride and also nitro-hydrochloric acid in functional disorders of the liver. Hydrochloric acid had been used as a remedy for gout with success, a fact which also supported this view. He was quite in agreement with Dr. Luff that the kidneys were not the only organs to be considered, and that the function of common-salt-containing waters was to act upon the liver, but he held that any renal inadequacy contraindicated them, no matter how slight it might be.

ULSTER MEDICAL SOCIETY.—At a meeting on December 13th, Dr. GAUSSEN (the President) in the chair, Dr. JOHN CAMPBELL read a paper on the use of *Rubber Gloves in Midwifery Practice*. All the principles of aseptic surgery applied to midwifery; and if sepsis occurred after the use of gloves, then the source must be elsewhere than from the doctor's hands. Their use removed a considerable amount of responsibility from the shoulders of the medical man. A considerable number of parturients became infected from their own canal; he had seen pus issuing from the urethra of a case of puerperal fever who gave a history of urethritis. There were other sources besides the urethra, such as a salpingitis; but the medical man or midwife was always blamed. Not only, then, were the use of gloves an aseptic method, removing the chance of the attendant conveying infection, but they were a protection to the doctor in the double sense of shielding his own hands from infection and also of removing from him the charge of acting as the carrier of disease. He strongly recommended the thick kind about the use of which he gave some practical hints. The PRESIDENT said that he had lately used india-rubber gloves, and had found them of great service; the objections he found were that if kept too long on the hand they were apt to macerate the skin. Ordinary presentations could be easily made out, but not the exact cranial presentation if the head was high up; he advocated taking them off, and putting them on again if the case was long. —Dr. DARLING read a paper on behalf of himself and Dr. WILSON on a case of cerebro-spinal meningitis, from the lumbar puncture of which a pleomorphic diplococcus was isolated. The case occurred under Dr. Darling in Lurgan during the autumn, and lasted about two months; three times he drew off from 6 to 9 drachms of spinal fluid, each time with slight temporary improvement in the patient. The full result of the bacteriological examination by Dr. Wilson was detailed. Professor SYMMERS said that Dr. Wilson had established the identity of Poynton and Payne's *Diplococcus rheumaticus* with the diplococcus found in this case, and with the *Diplococcus faecalis*; and, secondly, that these show a pleomorphic growth on Conradi-Drigalski medium, becoming bacillary, but returning to the coccus form on being replanted again in the ordinary media. —Mr. ROBERT CAMPBELL showed a case of ischaemic rigidity of the forearm in a child, following the application of splints for a fracture; he said that the myosin was suppose to coagulate and the muscle to degenerate.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—At a meeting on Friday, November 9th, 1906, the PRESIDENT, Dr. Woods (Dublin), in the chair. Mr. CHAS. HEATH showed 10 cases illustrating the cure of chronic suppuration of the middle ear without removal of the drum, or ossicles, or loss of hearing, as described by him in the *Lancet* of August 11th, 1906. Dr. A. WYLIE congratulated Mr. Heath upon having made a distinct advance in aural surgery. The patients heard well after the operation, when the complete radical operation would have destroyed the hearing. He himself had tried Mr. Heath's method in four cases, three with success, but one had failed, probably from the existence of attic disease. He asked how one could tell when there was attic disease. Mr. MAYO COLLIER thought the cases represented an emphatic advance in the surgical treatment of middle-ear suppuration. It had fallen to Mr. Heath to discriminate between those cases which require the radical operation and those which would get well with curetting. Mr. CHICHELE NOURSE associated himself with the congratulations offered to Mr. Heath. Hitherto the sole object of the radical mastoid operation had been the saving of life, but by adopting a new line of thought Mr. Heath had made the preservation of the hearing a matter to be considered. He would try the new operation on the first opportunity. Dr. FREDERICK SPICER had tried Mr.

Heath's new method with most encouraging results. The President was much impressed by the results shown. The method adopted seemed the most important advance made since the radical mastoid operation was first devised. Mr. Heath's operation must not, however, be too hastily and too enthusiastically praised. Many more cases had to be operated on before they could say that the operation was perfect. The difficulty was in cases of attic disease. Mr. CHAS. HEATH thanked the President and Fellows for their congratulation. In regard to attic disease, he had lately operated on three of these cases; and he had found not only attic, but antrum disease, and probably the attic in these cases would recover when the antrum was cured. In extensive attic disease he would probably perform the radical operation, but he hoped in future, by performing the new operation early in the course of a suppuration of the middle ear, to eliminate the necessity for the radical one. He hoped to cure the disease before the osseous structure in the attic were affected. He agreed with Mr. Nourse regarding the necessity of preserving the lining membrane of the tympanum, and with the President in his desire to see more cases. Since the 10 cases published in the *Lancet*, he had operated on twelve patients with equally good results. One of these had been a sufferer from perforation and suppuration for thirty-two years. He had now gone home with a sound drum.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—At a meeting on December 10th, 1906, Dr. J. LINDSAY STEVEN, President, in the chair, Dr. CARSTAIRS DOUGLAS described an improved clinical method for the estimation of the factors of gastric acidity and demonstrated the tests. The tests were performed in three stages with decinormal soda solution run in from a burette. First, titration of 10 c.cm. of the filtered gastric juice with tropeolin for the free HCl, subsequent treatment with di-methyl-amido-azo-benzol for the presence of the organic acids, and by phenolphthalein for the total acidity, while the last reading of itself gave the combined HCl and acid salts. A second quantity of filtered gastric contents was treated with sodium-alazarin-sulphonate in water, and this gave the value of all the elements except the combined HCl. The value of the combined HCl was thus obtained from the difference of the figures in the two estimations. Lastly, a fresh quantity after evaporation was titrated with phenolphthalein, and the reading obtained gave the total acidity less that due to the volatile organic acids. The difference of this estimation and that obtained for total acidity represented the value of the volatile organic acids.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—At a special meeting on December 14th, 1906, Dr. E. CAUTLEY in the chair, the subject under discussion was *Rickets*. In regard to etiology, Dr. DUDGEON considered that at present there was no ground for the discussion of a toxic theory. Referring to diagnosis and symptoms, Dr. POYNTON criticized the common statement that the bones were tender in rickets; this pointed to scurvy or osteomyelitis imperfecta. Head nodding was due to local irritation from teeth or ears, etc. Craniotabes was much commoner in syphilitic rickets. Fetal rickets he believed did exist. It might be discussed as to whether late rickets was a true rickets; if so, was it a relapse of early rickets, or did it develop *de novo*? The pathology and morbid anatomy was discussed by Dr. MILLIGAN, who showed gross and microscopical specimens illustrating the subject, dealing with surgical procedures necessitated by rickets. Mr. HARRISON KINNEAR said in regard to genu valgum, that he would not operate on a case under 5 years of age, and then particular care must be taken to see that no active rickets was still present. In reference to treatment Dr. R. HUTCHISON emphasized the importance of fat in the diet; he recommended cod-liver oil above 1 year old (1 oz., which was rich in fat), and fat also half the yolk of an egg daily. Lime-salt juice was specially indicated in cases of intolerance, but in children over 18 months cooked meat should be given instead. In medical treatment cod-liver oil took the first place, on account of the large amount of fat, but in cases of intolerance of milk [illegible] gave equally good results. Lecithin he considered not superior to yolk of egg, in which it was a chief constituent. Loss of appetite might be best combated by change of air. In bronchitis cough mixtures should be avoided if possible, as cod-liver oil was of more value. Chloral seemed most effective for neurotic complications.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At a meeting on December 12th, 1906, Dr. A. HILL GRIFFITH (President) in the chair, Professor A. H. WHITE (Dublin), in opening a discussion on *Opsonins*, said the blood should be repeatedly examined in order (*a*) to regulate the size of the dose, and thus eliminate the negative phase effect as far as possible, and (*b*) to determine the length of time its effects last. When clinical improvement followed a surgical operation, where only a part of the disease was removed, it was coincident with a rise of opsonic index, and when relapse with involvement of a fresh area resulted, a fall in the index took place. Such cases might be completely cured by inoculation of suitable and properly interspaced doses. Dr. G. E. LOVELDAY showed that an attempt to find a small dose of tuberculin which could be used empirically in all cases failed. Different doses of T.R. had very different actions in the same person. A very small dose might give a curve of opsonic indices very similar to that obtained by too large a dose. In some cases it was really too large, and still smaller doses were required, while in others a larger dose gave satisfactory results. There was an optimum dose for each patient, only to be determined by frequent observations of the opsonic index. Dr. A. RAMSBOTTOM emphasized the value of staphylococcic vaccine in cases of furunculosis and the severer forms of acne, where the pustular eruption was plentiful and the individual pustules large; the milder cases of acne consisting of a "few spots on the face" did not seem to yield so readily to this treatment. In the former class the opsonic index, before treatment, was low, but in the milder forms of acne it was about, or just above, normal.

THERAPEUTICAL SOCIETY.—At a meeting on December 18th, 1906, Dr. BURTON BROWN (President) in the chair, Dr. J. PORTER PARKINSON reported cases of very severe gonococcal general infection in which immediate improvement and good recovery resulted from giving *Antistreptococcic serum*. The latter was in all cases administered per rectum, the initial dose usually being 20 c.cm. followed by 10 c.cm. every second day afterwards. Polyvalent serum was always used.—Dr. W. B. HOPE discussed the benefit of *Antidiphtheritic serum in tuberculous diseases*. Having noted rapid improvement in a case of tuberculous knee in which the serum was given on account of actual diphtheria, he had given the serum in several cases of phthisis and of local tuberculous diseases—in some with great benefit, in others with none. He felt certain that the serum was an additional aid to the cure of early phthisis and of chronic tuberculous lesions of joints, whilst it was not of benefit in advanced cases or cases in which the disease was extensive. In the discussion which followed it was suggested that the chloretone in the serums might be responsible for the benefits obtained, and it was asked whether the giving of antidiphtheritic serum had any effect upon the tuberculo-opsonic index. There was general agreement that in diphtheria anti-streptococcic serum was as efficacious given per rectum as hypodermically.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—At a meeting at Manchester on December 14th, 1906, Dr. R. FOVELL (Sheffield), President, in the chair, Dr. LLOYD ROBERTS (Manchester) showed a *Rounded interstitial fibroid* removed by supravaginal hysterectomy. The cavity of the uterus was 5 in. long and sigmoid in shape, which accounted for the fact that no relief had followed curettage for metrorrhagia. Not more than half of the cavity could have been reached by the curette.—Mr. E. STANMORE BISHOP (Manchester) described a case of Cæsarean section in which iodized catgut had been used for suturing the uterus, and recommended the use of this material.—Dr. F. O. CLARKE (Leeds) showed a fibroid which had completely blocked the pelvis; it was removed during pregnancy, without interrupting its course, by division of the broad pedicle, followed by closure of the wound by buried [illegible] sutures.—Dr. J. DE VILLE MATHER (Man-

chester) gave figures in 45 cases of cancer of the cervix, showing that malignant disease was generally preceded by chronic metritis or by fibromata. He argued that *the precancerous character* of these conditions was an additional ground for their radical treatment by vaginal hysterectomy, which he thought should be more frequently performed apart from actual malignant disease.

Leeds and West Riding Medico-Chirurgical Society.—At a meeting on December 11th, 1906, Dr. Cheetham in the chair, Dr. A. S. Grünbaum discussed the dangers of *Serum treatment*, commenting especially on the effect noted in several cases after repeated injections of Marmorek's serum. In these the patients became increasingly susceptible and alarming symptoms occurred. Mr. J. Stewart showed an *Appendical concretion* removed from a woman, aged 31. She had an "abdominal crisis" while attending her business, and was first seen a week later. A diagnosis of perforated appendical abscess was made and a large collection of pus localized in the pelvis. On opening the abdomen the following day purulent fluid spurted two or three feet, and the concretion shown was discharged. A large and completely shut-off collection of thick, stinking pus in the pelvis was then opened and drained, as was the abdominal cavity. After two days the condition was quite satisfactory till the twelfth day, when the temperature began to rise; pelvic abscess was suspected, and on exploration per vaginam was discovered and drained (about a teacupful of pus). This was on the fourteenth day after operation. On the nineteenth she passed a motion and drainage tube through the vagina. Recovery had since been uninterrupted, and there had been a gain of 2 st. in weight, and there was now no trace of a fistulous opening.—Mr. W. Thompson showed a *Primary carcinoma* of the fourth part of the duodenum: the symptoms were mainly gastric, suggesting pyloric obstruction. Gastro-jejunostomy was performed.—Mr. H. Littlewood showed a patient who had suffered from a large *Pyloric tumour*, which at the time of operation was thought to be malignant. Gastro-enterostomy was performed and the tumour had apparently quite disappeared.—Mr. Lawford Knaggs showed a youth who had sustained a *Rupture of the intestine* from a kick. There was extensive septic peritonitis at the time of operation (thirty hours after the injury). The ruptured segment was removed, an artificial anus was formed, with subsequent closure by end-to-end anastomosis.—Dr. Maxwell Telling showed a case of *Congenital tylosis* of the palms and soles; the condition had occurred in four members of the family.

British Gynaecological Society.—At a meeting on December 13th, 1906, Mr. F. Bowreman Jessett, President, in the chair, Dr. Swanton read notes on a case in which a fibroid was removed from the abdomen of a patient aged 44 under *Spinal analgesia*, and by a modification of Boyen's method. The intraspinal injection consisted of 2 c.cm. of a 5 per cent. isotonic solution of novocain and suprarenin. The tumour was removed without any pain or shock, but a general anaesthetic was used while passing some of the final sutures. The patient left the hospital on the twenty-fourth day.—Mr. Charles Ryall showed a uterus removed under spinal analgesia from a patient aged 30. She was injected with 8 c.cm. of novocain and suprarenin solution. Analgesia followed in ten minutes, and the entire operation lasted forty-one minutes. The patient did not complain of actual pain, but when the uterus was seized and drawn up, she was conscious of something being pulled on. The operation was satisfactorily concluded, and the patient made an uninterrupted recovery. He considered spinal analgesia was preferable in some classes of cases, such as the condition known as "acute abdomen," especially in its later stage; also in acute or serious chronic pulmonary lesions and in certain cardiac diseases. In major operations it was an advantage to have a patient unconscious. Shock was said to be diminished under spinal analgesia, but he considered that by careful manipulation of the abdominal viscera it could be lessened to a large extent. Dr. Macnaughton Jones, who gave some notes from the clinics of Heidelberg and Freiberg, also gave an account of spinal analgesia as there employed. He concluded that none of the methods in use showed an all-round advantage over general anaesthesia.

REVIEWS.

LORD HERBERT OF LEA AND ARMY SANITATION.

"With all his aristocratic and conservative instincts, Sidney Herbert was a born reformer. . . . Had his life been spared a little longer, reforms lately made would have been effected years ago." Thus writes Lord Stanmore in a recently-published memoir of Sidney Herbert, Lord Herbert of Lea,[1] and on closing the two volumes of which the memoir is composed we realize but too regretfully the truth of Lord Stanmore's estimate of the work of this great statesman, who more than any politician of modern times mastered the requirements for an efficient War Office and army. More especially does this fact appeal to us in its bearing upon the medical service of the army and the hygiene of the soldier. The universal mismanagement of every department of the army during the Crimean war naturally figures prominently in the record of a career which was devoted, as Secretary at War, and later as Secretary of State for War, to army affairs.



Lord Herbert of Lea.

Lord Stanmore is well qualified to deal with this portion of Sidney Herbert's career, for he was private secretary to his father the Earl of Aberdeen, who was Prime Minister when the Crimean war broke out, and has himself had a long experience of public life. Though the greater part of the actual narrative is given in Sidney Herbert's own words in letters and notes, Lord Stanmore has not shrunk from the task of writing summaries and appreciations of the more important incidents and epochs. The work is published in two volumes, and among its illustrations is a portrait after a drawing by Mr. George Richmond, R.A., a reduced copy of which we are enabled by the courtesy of the publisher to print here.

The British forces landed in the Crimea achieved remarkable victories over the Russians, but as the war dragged along without the accomplishment of a crowning success, popular outcry demanded explanations as to why the invasion had not promptly led to a result to rival the Roman's *Veni, vidi, vici!* The populace were not aware that the Roman empire was a military empire. "Why is it?" exclaims Mr. Herbert. "It is because through every Government and every Parliament we have always had the same stereotyped system of economy in military affairs. . . . Whenever I have brought forward, as I have done, what are called peace estimates, I have constantly been met with motions for large reductions. . . . At the commencement of the war we had to make means, and to create an army and to use it at the same time. . . . We have no conscription in England; we have no compulsory service whatever in England, except for internal defence; we have to trust entirely to the voluntary system. You cannot make an army as other nations may. You cannot make an army by a stroke of the pen."

Owing to these economies in peace, and the impossibility of raising warriors by the mere sowing of dragons' teeth, the reinforcements to the Crimea were insufficient to carry forward the tide of the invasion; the departments were inefficient owing to their peace training in parsimony, and the medical service suffered as the result of the absence of autonomic organization, and its consequent dependence upon others for transport, supplies, and hospital accommodation. The sufferings entailed upon the soldier were excessive. One of the generals wrote: "You have sent out plenty of everything, and you have sent it 3,000 miles; but the distance to the camp is 3,006." The supplies could not be transported from Balaclava to the camp! Popular indignation led to the formation of a committee of inquiry. The newspapers published harrowing reports from the field, which naturally swelled national

[1] *Sidney Herbert, Lord Herbert of Lea.* A memoir by Lord Stanmore. London: John Murray. 1906. Two volumes. (Demy 8vo. 24s. net.)

anger at the distress endured by the troops, but these reports were not always dictated by an accurate knowledge of the facts. "Mr. Layard's idea about an officer to take care of the cleanliness of the camp is carried out already, divisionally and regimentally. But we want men to do the work, not an officer to direct it. . . . The remedy is not to be found in an officer to direct . . . we want the men to do the work." The deficiencies in transport and ambulances, the deplorable chaos of mismanagement at the general hospital at Scutari, are sufficiently exposed in Volume I of the memoir, and afford an unpleasant reminder of incidents of a nearer date.

These coincidences of more remote history with the history of recent times do not here demand more than this passing reference. It is matter for profound regret that the lessons which should have been learnt were neglected. It is matter for earnest hope that Lord Herbert's appreciation of those lessons will at last bear fruit. It is deplorable that another war was required to press home the value of his proposals.

After the war Sidney Herbert accepted the Chairmanship of a Commission of Inquiry into the sanitary state of the army. The student of army administration will profit by a study of Chapter iv of the second volume, which contains Mr. Herbert's views upon the question of the physical well-being of the soldier, if he desires to obtain an insight into the condition of the army and a grasp of its sanitary requirements. The matters dealt with by the Commission were the education of the medical officer, the organization of general and regimental hospitals, the sanitary conditions affecting barracks, hospitals, clothing, rations, etc., the pay, rank, and promotion of the medical department, and the constitution of the army medical head quarters.

Although Mr. Herbert had to defend the Government from the charge of having "fooled away" money on the improvement of barracks and hospitals, he persisted in his efforts to improve the sanitary surroundings of the soldier. We may confine our further remarks to this branch of his work, dealing as it did with the main duties of the Army Medical Department. 'The duty of an army surgeon is curative, but it is not so much so as it is preventive. Health is the first condition of success to an army, for health means numbers. . . . Death affects an army less than disease. For death only diminishes numbers, whereas disease not only diminishes numbers but detracts from the efficiency of the remainder who are still unaffected by it. The hospital intercepts rations, transports guards, surgeons, money, all of which are wanted to maintain, in efficiency, the army at the front.' These points lay bare the secret of military efficiency in the field; this chapter (iv, vol. ii) should be read by every officer, combatant and departmental from general to subaltern. Mr. Herbert's observations should be marked and learnt by all such as affording a cue for future action. "At present a military disaster is like a railway accident—no one is ever to blame; but when once the man whose business it is to advise is made to record his advice and the man who is to act to record his reasons we shall know, as the Turkish pasha said, 'whose beard to pull.' . . . They propose to educate the medical officer to give advice, but they do not propose to educate the combatant officer to receive it and appreciate it.' Recent measures have after forty-six years, at last removed the negative from the last sentence. 'After forty-six years' Delay" is not only a loss but a sin, and one which we trust that the country will not long allow our rulers to commit." But the country did allow the delay, as the army has found to its cost. The intimate cause of delay is to be sought in the War Office administration and to objections raised in the Treasury to schemes involving fresh expenditure (see ch. viii of vol. iii). These obstructive elements are sufficiently exposed in the memoir. The remarks of Mr. Herbert are in their essence as applicable to the present as they were to his day. Let it be hoped that the exposure of their shortcomings will be read by every official, and that the result of the perusal will be to divert their energies to the promotion of measures designed for the country's good. Lord Stanmore writes: "Few of the schemes which Herbert had already initiated for the moral and social elevation of the soldier were allowed their proper development, and much of his policy was, through disapprobation of its aims, actually reversed. This chapter (viii) is instructive, for it makes plain the difficulties in the path of the Secretary of State for War. The reader is filled with dismay at the deliberate rejection of Mr. Herbert's sanitary measures; he is buoyed by the hope that the efforts of the army medical authorities of the present day will be materially assisted by the publication of this memoir.

Within this century many real reforms have been initiated; but over our heads is suspended the sword—the sword of reversal. The thing that hath been, it is that which shall be. The traditional policy of the Treasury may yet regain mastery, and the improvements set in motion by Mr. Brodrick may, like Lord Herbert's, be "actually reversed." But the value of books of this description lies in the inculcation of lessons taught by experience. We read here the lessons of the Crimean war; we have still fresh within our memories the lessons of the South African war; these should act as a warning and a stimulus to every official to remove the scandal of past neglect by an honest support to the army medical authorities in their efforts to further sanitary knowledge and practice in the army.

VIRCHOW'S LETTERS.

THE main interest in Rudolf Virchow's *Letters to His Parents, 1839-1864*,[3] which have just been published by his daughter, Mrs. RABL, lies in the fact that they form a most valuable human document. We all know Virchow "arrived"—the founder of modern pathology, the prominent politician, the distinguished ethnologist, the leader in numerous other scientific and humanitarian movements; but, with the exception of a few bare facts concerning his early youth, his mission to Upper Silesia to study the appalling ravages caused in that province in 1847-8 by typhus, and his participation in the revolutionary movement of 1848, very little is known about the development of the great qualities which made Virchow so unique a personality. Yet the knowledge of his development is of the highest importance for the understanding of the character of the man. Virchow himself expressed his opinion on this point most precisely in a memorial speech devoted to his father-in-law, Professor Karl Mayer, when he said: "Here I must frankly confess that I consider it quite impossible to show clearly the man's course of development, when it has been, as in his case, so little decided by the accident of external conditions, but has, on the contrary, been so much formed from inner motives. Only statements from the deceased's own pen can help here, but, ideally as he (Professor Mayer) has kept his case-books, he has never thought of keeping a record of his human experiences. To lay before you satisfactorily that which is most instructive for the thinking observer, the knowledge of the process of development; that which is most telling for our human interest, and therefore most durable for our memory—namely, the question of the personality and of the changes brought about by the course of time—is no longer possible."

The very fortunate circumstance that Virchow's father religiously kept every letter sent to him and his wife by their distinguished son from the moment the boy left the paternal abode until the time of the father's death enables us to fill up in Virchow's own case the gap which he deplores when speaking of his father in law. We cannot be grateful enough to his family that they have allowed his contemporaries to have an insight into the development of the character of a man who, as these letters show was equally good and great. The letters, one of which is autographically reproduced, cover a period of twenty-five years. They are preceded by a very interesting and sympathetic preface by the editress, by Virchow's own application for his final examination before leaving the High School at Koeslin, and by the German essay he wrote on that occasion. It is impossible within the limits of a review to give even a partial reproduction of this essay, but those of our readers who are conversant with German will be amply repaid by a perusal of the original. It is an excellent illustration of the old saying that the boy is father of the man. That strong sense of duty which formed one of the main characteristics of the man

[3] [illegible] (Herausgegeben von Marie Rabl, geb. Virchow). Mit einer Heliogravüre, drei Vollbildern und einem Brief in Autographie. Leipzig: Verlag von Wilhelm Engelmann. 1906.

of 80 here appears astonishingly developed in the boy of 18.

The letters themselves start from the moment when young Virchow left his father's house at Schievelbein in order to begin his medical studies as a pupil of the Academy of Military Medicine, the so-called "Pépinière" at Berlin. Nothing is stated in the volume as to what induced Virchow to become a medical man. In his application for admission to the final examination before leaving the High School, he merely mentions that natural science, history, and geography were his favourite studies. That he whose sense of independence was already then very strongly developed should have elected to submit from the very onset of his professional studies to the severe Prussian military discipline is, however, easily explicable by the strained financial position of his father. His grand-daughter, the editress of the present volume, says of him that his life was almost exclusively devoted to farming his little estate, and that unfortunately he had more joy and pleasure in doing this than circumspection and knowledge, so that he was constantly in monetary straits, which towards the end of his life rendered assistance from his son more and more necessary.

The son in this, as in many other respects, was the absolute antithesis of his father. From the very first his letters show—sometimes very touchingly—how anxiously he endeavoured not to spend a penny more than was absolutely necessary, and to devote every minute of his time to nothing else but the pursuit of his work. There is true pathos, although not without a humorous element in it, when young Virchow assures his father in one of his letters that he really was as economical as possible, but that everybody dissuaded him from buying ready-made trousers! In another letter he tells his parents that he had been invited to a ball, and that, after borrowing a hat and gloves, he was just then busy mending his trousers! When finally, having passed his doctor's examination, he was compelled by the German academic custom to give his friends a *Doctorschmaus* (the young doctor's welcome dinner), he asked his father whether perhaps he could supply him with wine from his own cellar for that occasion. Two bottles of wine "of a minor quality" would suffice, he thinks, "to make a man drunk," and when the *Doctorschmaus* has taken place he carefully brings the rest of the wine supplied by the indulgent father home with him to make a cup from it for the next day!

But, as is obvious from these letters, the relations between father and son were not always of so cordial a character as on the occasion just described. Their views in many points disagreed. The father for many years evidently did not appreciate the capacities and greatness of his son, and often enough, as is seen from the latter's replies, heaped rather unjust reproaches upon him. It also was unfortunate for their better mutual understanding that the "undemonstrativeness" of the son's nature was very marked from his early youth. More than once he admits and regrets this himself. Thus, in a touching letter written to congratulate his father jointly upon his birthday and Christmas, 1840, he says:

> Why, my dear father, should I lay many wishes for your happiness before you? You may think them fictitious since you are inclined to call my natural outward coldness indifference, my retiring and reticent disposition repulsion of paternal love. I have been seldom understood by anybody; the stone only gives forth sparks if one attempts to get them out of it. But do believe me that nobody knows more truly and lovingly how to keep and retain his love for you than myself. I am not changeable, and time and space have little effect upon me.

The sentiment so feelingly expressed in these few lines pervades the whole correspondence. However much he might have at times dissented from his difficult father, have felt impatient with his evidently weak and sentimental mother, the fundamental tone of his letters is always filial love and deference, and from the very moment that he was able to lay by the first thaler from his small income there is evidence that he devoted all that he could possibly spare, not only whilst he was bachelor, but later on even when he had married, to the support of his father, although he knew well enough that his hard-earned money would in all probability be but too quickly frittered away in pursuit of his parent's hobbies.

The most important part of the letters is undoubtedly that in which young Virchow gives an account, incidental as it were but nevertheless continuous, not only of the pursuit of his medical studies and of the external events of his life, but above all of his own internal development during his university life. It is astonishing to see how rapidly his character formed and became consolidated. The Virchow of 1848 is absolutely identical with the Virchow of 1903. There is the same decision and precision, the same inexorable criticism of himself and others, the same clearness of purpose and courage in carrying it out. No boasting, but a full feeling of his own worth, never losing his head, even in the most critical situation, but always ready to console and to fortify others much less affected than himself by adverse turns of fate—in one word, a man.

Whilst the external incidents of his student days are nowadays interesting only so far as they give an insight into the imperfections of medicine in those days and into the narrowness of civic existence in that period of stagnation of German life between the Napoleonic wars and the Revolution of 1848, they become more and more interesting as that critical year approaches. Indeed, whilst the whole correspondence is characterized by the singularly unemotional, equable tone of the letters, their language becomes different, more impassioned, sometimes almost inspired, from the commencement of that critical year. Virchow had, as is well known, been sent by the Prussian Government to study the pathology of the "hungertyphus" then raging in Upper Silesia. Already his critical mind had become gradually more and more incensed against the reactionary Government under which he was living. What he saw in Silesia of the incapacity, recklessness, and indifference of the Government roused him further, and when he returned to Berlin, and was an eye-witness of the bloody March scenes enacted at Berlin, his indignation burst into open flame. He did not actually fight, because, as he quaintly says in a letter to his father written on March 19th, "he could only get a pistol." But he took an active share in helping to build some barricades. His political activity after the temporary victory of the revolution was positively feverish. Only a man of his iron constitution, indomitable power of will, and exceedingly little need of sleep could have gone through the amount of electioneering and other political work, in addition to his official duties and to his scientific pursuits, which he describes in his letters to his father from March, 1848, to March, 1849. Most interesting is a self-characterization contained in a letter dated May 1st, 1848:

> You will not be angry with me that I have plainly told you my opinion. For a long time I have been conscious that I am standing free and clear in our time, and take in its movements fresh and early. Often I have been deceived in men, not yet in the age. From this I have derived the advantage of the consciousness that I am now no longer a half-man, but a whole man, and my medical credo is identical with my political and social one. As a naturalist I cannot but be a republican; for the realization of the demands rendered necessary by natural laws, which arise from human nature, is really attainable only in the Republican form of State. I do not, however, care so much for a Republic with an elected President, but I am ready to accept an hereditary President, a King without prerogatives.

It is also immensely interesting to note from his letters of that time how clearly he foresaw the coming power of the Labour party, and how heartily he agreed with its demands: We have not crushed the power of the monarchy and of the junkers in order to elevate a sleek bourgeoisie on the shield. This is the sense of many utterances of this time, and this credo drove him into the ranks of what was called at that time the Extreme Left, although in the light of present political development what was then Extreme Left would be called extremely moderate now.

Nevertheless, when the reactionary party regained its power but too quickly, he did not escape the consequences of his active participation in the revolutionary movement. Already, then, through his scientific achievements he had become a power. He had established himself as *Privat-docent* in the University of Berlin in 1847, having passed his final examination only one year previously. His courses on pathological anatomy were largely attended and extremely popular. In a letter to his father of June 17th, 1847, he gives an amusing illustration of this:

Some time ago I was at a ball at Madame Crelinger's. I danced a contredanse with a young lady, to whom I had just been presented. In an interval, she said: "Have I understood rightly? Are you Dr. Virchow?" When I affirmed this, she asked again: "V-i-r-c-h-o-w?" Very much surprised, I answered also this question in the affirmative, when she replied: "Oh, surely then it is your father who gives the courses on pathological anatomy?"

In the same year in which he thus dances quadrilles his *Archiv für pathologische Anatomie* was founded. In the Charité Hospital, in which he was acting as Prosector, he was equally esteemed and beloved by his superiors, his colleagues, and his patients. His name was known far beyond the frontiers of Germany. It was not easy, even for the dark powers of the Prussian reaction, summarily to dispose of such a man. Nevertheless, this had to be done. The bureaucracy could not tolerate that an official—namely, the Prosector—attached to a Royal Hospital should at the same time publish "exciting pamphlets" (Letter of March 8th, 1849). Virchow replied that his official position had nothing to do with his political actions, and that he had not abused the former in order to exercise the latter. Nevertheless, the truth of this explanation did not shield its author from the consequences of his political activity. On March 30th, 1849, he was formally deposed, and given notice to quit his official residence within one month's time. Fortunately for him, the Medical Faculty of Würzburg had already unanimously proposed him for the Professorship of Pathological Anatomy at that University, and after some difficulties, also connected with his political beliefs, the position was conferred upon him.

From the time of his migration to Würzburg and his marriage to Miss Rosa Mayer, daughter of the well-known gynaecologist, Karl Mayer, the correspondence, as the editress states in the preface, ceases to be of general interest. Communications concerning everyday life and family events replace the political and scientific information he had given his father until then, and only a small number of letters have been reproduced in the volume. Of these, the report to his parents of his gradually awakening love for his future wife, and of a journey into Switzerland shortly after the marriage had been celebrated, are specially interesting on account of the warmth of feeling and power of description by which they are distinguished. The last two letters of the series, in which he describes to his wife the death of his father and the feelings awakened in him by this sad event, are extremely touching and human.

Altogether the reader of this volume will find that if he has previously admired Virchow he has now learnt to love him. Naturally, as the letters are addressed to lay people, there is very little purely medical in them. Beyond an attempt to explain to his father the nature of phlebitis, early announcements as to papers written, journals planned or started, scientific journeys about to be undertaken or accomplished, and so on, refer to the professional side of his life. It is not, however, the scientist, but the man Virchow, whom the reader will seek in these pages and from what has been stated it will have been seen that he will not be disappointed in his search.

F. S.

ALLBUTT AND ROLLESTON'S *SYSTEM*

True to their promise, Professor Allbutt and Dr. Rolleston have issued the second volume of the new edition of the *System of Medicine* within the current year. So large however is the amount of matter to be dealt with that the substantial book before us represents the first part only of Vol. II. Within its 1,037 pages are contained the completion of the section on Infections and Intoxications.

The list of contributors will be found, as heretofore, to contain the names of recognized experts in the several subjects comprised under the heading. Some of the articles have only been revised and brought up to date by their authors, others have been entirely rewritten, while a certain number are quite new. The same thoroughness of treatment characterizes them all, but in some instances the subjects have been dealt with at greater length than others, and in these days, when time allotted to steady reading is apt to be curtailed, it is to be feared that the long stories are those which will obtain least attention. No fewer than 200 pages are devoted to the General Pathology of Infection, by Professor James Ritchie. This section is prefaced by the paper written by the late Dr. Kanthack in 1897, summarizing the subject, with Professor Ritchie's comments and additions written during the past year. Within the compass of twenty pages, it sets forth the established facts and the evidence that has served to establish them in plain terms, while the limitations of knowledge are no less clearly indicated. This summary should be of immense service to those older members of the profession who find it hard to keep pace with the advancement of knowledge and have difficulty in separating the wheat from the chaff. Space will not permit of a detailed report of Professor Ritchie's article; the fact that no fewer than five closely-printed pages are required to accommodate the references alone will sufficiently indicate the exhaustive character of the paper.

The chapter on Tuberculosis, originally prepared by Dr. Sidney Martin, is revised by Dr. Bosanquet, who gives an adequate account of all that is actually known on the subject. The "immense number of publications dealing with tuberculosis," to which reference is made, do not appear to have added proportionately to previous knowledge. The "opsonic index" is still *sub judice*. As an introduction to Dr. Acland's admirable account of actinomycosis Professor Foulerton has discussed the pathology of streptothrix infection, a subject which will doubtless obtain more attention in the future than in the past, as its relation to tuberculous infection becomes more closely studied.

Syphilis now takes its place among the chronic infections of established bacteriology, and as such is dealt with by Mr. Jonathan Hutchinson in an article teeming with the results of accurate observation associated with practical wisdom and sound common sense. Although the *Spirochaeta* is only referred to in a footnote, its value as a probable means of differentiating sores is commented on.

Infective Diseases of Doubtful Nature are grouped together, and, comprising as they do most of the common fevers to which mankind, especially in childhood, is heir, are dealt with by very competent authorities with commendable brevity.

Dr. Eustace Smith discusses Whooping-cough and Mumps in the convincing manner familiar to all readers of his larger works. Dr. Dawson Williams's articles on measles and German measles are concise and clear. Two short articles on glandular fever and infective coryza from the same pen may be mentioned. The former disease is not as yet widely recognized, and is here fully described. The latter, so widely recognized and so little understood, is handled from the clinical standpoint, and many popular fictions and fancies with respect to it are ruthlessly dispelled.

Rheumatic fever finds a place in this section, and is discussed as to its general features by Sir William Church, as to its method of attack in childhood by Dr. Cheadle, and as to its pathology by Dr. Bulloch. The latter draws a clear picture of the various efforts that have been made to establish the true nature of the infective poison. From it may be drawn the strong inference that such a cause exists, but has yet to be found.

Under the heading of "Infective Diseases of Doubtful Nature communicable from Animals to Man" are included vaccinia, foot and mouth disease, and hydrophobia. Dr. Theodore Acland's clinical study of vaccinia in man is followed by an exhaustive review of the subject of vaccination as a branch of preventive medicine by Dr. McVail, illustrated by many tables and statistics. Special interest attaches to a short article by Sir John McFadyean on foot and mouth disease, which he describes as frequently transmitted from certain animals to man. The features of the disease as here recounted are in the main those observed in animals, but a few cases are recorded of direct infection of human beings. This transmissibility is not recognized by all pathologists, as would appear by the direct denial of it in the paper already referred to by Professor Lutchin.

The final section of the volume deals with Intoxications, ushered in by a new and interesting paper on food poisoning by Dr. Batty Shaw.

The new instalment of the *System* will thus be seen to be as full and complete a work of reference as the most expert writers and the most discriminating of editors can make it. A tendency to prolixity and excessive reference to special work, which has not in all cases been proved to be of value, is perhaps the only fault to be found with a work which presents a trustworthy compendium of all that is really known upon the subjects with which it deals.

NOTES ON BOOKS.

WE have received a copy of the Presidential Address delivered by Dr. THOMAS BEATTIE before the North of England Branch of the British Medical Association, reprinted from the *Northumberland and Durham Medical Journal* of October, 1906. It dealt with the treatment of infective pulmonary processes, and contained an interesting summary of the present state of knowledge of the causation of infective diseases of the lungs, and the tendency of modern treatment of such disorders. A general principle which, though it appears to be self-evident, has taken long to obtain acceptance, is well enunciated by Dr. Beattie as follows: "Recognize the dependence upon micro-organisms of any departure from health, and you admit infectivity." As to drug treatment Dr. Beattie sums up the matter thus: "With the full knowledge that they are not curative, but are exhibited with the intent solely of relieving distressing or dangerous symptoms, drugs (and external applications) must retain a useful place amongst the means at our command. The rational aim of treatment is to attempt to improve the "soil" by general hygienic measures, and to reach the seed and destroy it, for example, by antiseptics; or by serums, antitoxines and vaccines, to imitate the natural process of immunization. The address is a good type of what such an address should be, inaugurating a new session by summarizing the latest advances in some branch of professional knowledge, and stimulating thought amongst those over whom the speaker has been called to preside.

The collection of addresses to the sick called *Stray Thoughts in Sickness and in Health*[1] is said by the author to be mainly an attempt to meet some "week-day phases of ill-health." It is a revised edition with a new title of a book called *Stray Thoughts for Invalids*, but it is claimed that two-thirds of the present volume are new. The addresses contain common-sense advice to invalids, intended to check the natural tendency to querulousness and dissatisfaction with their surroundings, their nurses, and their medical attendants which are only too likely to trouble the serenity of the sick room, when ill-health becomes confirmed and suffering has to be borne with patient endurance, receiving little apparent help from the medical or surgical treatment which is being carried out. These addresses are accompanied by well-chosen verses, not hymns, and texts which strike us as being far more suitable than those usually recommended under similar circumstances. The little book entitled *For the Quiet Hour*[2] is intended for those who "find it difficult in the rush and hurry of everyday life to get time for rest and quiet, and it is with the object of placing before them thoughts that would help and inspire that this little volume has been designed." It is, however, doubtful whether those who have little time to read have more time to think, and whether they can without "time and quiet" make use of this wisdom culled from the varied collection of counsellors, from Saint Augustine and Epictetus to Mr. Augustine Birrell and General Lew Wallace. It is, in fact, a collection of very much the same kind as that seen in birthday books and almanacks, the real utility of which may be doubted, for the problems of life are not to be solved by cut and dried maxims. When are we to accept the advice of Longfellow, given on page 43, to "speak what we think," or that of Plutarch on the next page, to "bridle our tongues"? No doubt there are occasions for each, but the choice of this, the all-important question of opportuneness, is left to the judgement of the individual, who receives no guidance from any number of wise saws and modern instances.

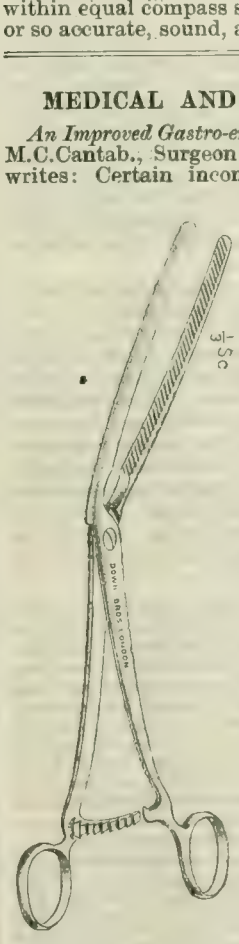
It is almost idle to praise *Whitaker's Almanack* for 1907. It is the thirty-ninth annual edition, and is thus well established in popular favour because it has proved its usefulness to all sorts of people under almost every sort of circumstance. With no desire to pick holes in the editor's complex web, we may yet invite him to consider the propriety of revising the first paragraph under the head "Medical Fees"; it does not express the facts quite correctly, and is, perhaps, in its wording a little ungracious.

The twenty-third annual issue of *The Year Book of Scientific and Learned Societies*[3] has now appeared, the volume, with its 310 pages of letterpress, being divided into fifteen sections. By far the largest of these is devoted to societies occupying themselves with several branches of science or with science and literature combined, and societies concerned with the theory and practice of medicine. Undoubtedly this handbook, with its comprehensive lists of papers which have been read, is of great use to all scientific writers and research students. The lists of papers are supplied by the secretaries of the societies themselves, and are suggestive of the general lines of thought which are now being pursued.

The third edition of the late Dr. RAKHALDAS GHOSH'S *Treatise on Materia Medica and Therapeutics*[4] has been very thoroughly revised by Lieutenant-Colonel C. P. LUKIS, M.D., I.M.S., who has made many important alterations and additions, including two new chapters on serum therapeutics and organo-therapy. In its present form the book maintains its character as a well-arranged and compendious exposition of pharmacy, and an exhaustive description of drugs, official and non-official, and their properties and action. We know of no work containing within equal compass such a large amount of information, or so accurate, sound, and easy of access.

MEDICAL AND SURGICAL APPLIANCES.

An Improved Gastro-enterostomy Clamp.—Mr. J. Basil Hall, M.C.Cantab., Surgeon to the Royal Infirmary, Bradford, writes: Certain inconveniences in connexion with the usual types of gastro-enterostomy clamps have led me to ask Messrs. Down Brothers to make me an instrument on the lines of the accompanying sketch. I have found that with clamps of the Doyen type the pressure of the curved blade is not evenly distributed, and also that the curves of the blade does not allow the stomach wall to be readily lifted into the abdominal incision. The blades are scarcely long enough, and the shanks also being comparatively short, the handles are sometimes in the way. On the other hand, in clamps of the straight type, the shanks, though longer, do not readily lie flat upon the abdominal wall, and the handles project upwards in an awkward manner. The clamp here depicted has a straight blade full 4½ in. long. It is serrated and bowed in the usual way. It obtains a good grip with a very evenly-distributed pressure over an ample area of the stomach wall. The instrument is bent "on the flat" at the joint to an angle of 20°, which I find to be just sufficient to allow the shanks to lie perfectly flat upon the body wall, when the stomach is well lifted into the abdominal incision. On account of the extra length of the shanks, the handles are well out of the way during suturing. I have now used this instrument, not only for gastro-enterostomy but also for other operations upon the stomach, and find it most efficient. The pressure exerted by it is so even and well graduated that it is quite unnecessary to ensheath the blades with rubber.



[1] *Stray Thoughts in Sickness and in Health.* By H. M. Soulsby. London: Longmans, Green, and Co. 1906. (Crown 8vo, pp. 200. 2s. 6d.)

[2] *For the Quiet Hour.* Selected by J. E. and H. S. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. (16mo, pp. 191. 1s.)

[3] *The Year Book of the Scientific and Learned Societies of Great Britain and Ireland.* London: Charles Griffin and Co. 1906. (Demy 8vo, pp. 330.)

[4] *A Treatise on Materia Medica and Therapeutics.* By Rakhaldas Ghosh, L.M.S.Cal.Univ. Edited by C. P. Lukis, M.D., F.R.C.S., Lieutenant-Colonel, I.M.S. Third edition. Calcutta: Hilton and Co. 1906. (Cr. 8vo, pp. 737. Price Rs.5, or 7s. 6d.)

THE REPORT OF THE INSPECTOR UNDER THE INEBRIATES ACTS CONCERNING THE INMATES.

Dr. Branthwaite's account of the characteristics of "habitual drunkards" as met with in reformatories is of great clinical interest. It reveals a condition of things undreamt of before the Inebriates Acts enabled these persons to be collected under control. We are reminded that all the cases under detention, in addition to actual drunkenness, have been convicted over and over again for offences resulting from their habits, such as disorderly conduct, assault, wilful damage, theft, attempted suicide, or neglect of children and have undergone periods of imprisonment for many years. The report says:

Under these circumstances it will scarcely be surprising to find that many committals are in the lowest possible state of unimprovable degradation, and that it has become necessary to set apart some of our institutions as little better than moral refuse heaps, for the detention of the hopelessly defective, at the lowest possible cost to the country.

The cases are, according to their mental state, classified as follows:

1. Insane—certified and sent to asylums	48
2. Very defective—imbeciles, degenerates, epileptics	271
3. Defective as above, but less marked, eccentric, silly, dull, senile, or subject to periodical paroxysms of ungovernable temper	857
4. Of average mental capacity—on admission, or after six months' detention	697
Total admissions	1,873

It is, therefore, evident that this hopeless mass of material affords little or no chance of "reform," for upwards of 62 per cent. are insane or mentally defective.

The insane cases include examples of delusional insanity, mania, dementia, melancholia, suicidal, epileptic, and recurrent insanities. And in all these cases there is sufficient evidence that congenital defect or tendency to insanity, and not the accident of drunkenness, have really determined the condition in which these cases are found.

As regards the defective cases, certain peculiarities of cranial formation, general physique, and conduct have long been recognized as evidences of congenital defect. Nearly all the 1,128 defective cases possess some of these peculiarities. Stunted growth, abnormally small heads, misshapen heads, and case after case of developmental arrest, or deformity of the upper and lower jaws, are common. Most common in women is the heavy, repulsive, masculine type, with a tendency to violence and brutality, beady eyes, square jaws, and dull, flabby, expressionless face. The features are often unsymmetrical and the palate abnormal in shape. A selection of twenty four characteristic photographs is given in the report, of which a few are here reproduced:

Refractory and violent defectives cause considerable difficulty and require constant supervision to prevent injury to themselves or others. They are always restless, uncertain, excitable, and ready to take umbrage on the least provocation, or on [illegible] which would not be considered provocation by [illegible]. A chance word, an innocent action misinterpreted, is construed as contempt, [illegible] or premeditated attack, and is resented accordingly. Such persons do not care in the very least for the opinion of others, nothing is too good for them, they can be made to see no reason why dictation from others should be obeyed. According to their own lucubrations they are tyrants, and by reason of the [illegible] of organized persons [illegible] the [illegible] to the constable who arrests [illegible] and the person who [illegible] are in league together to [illegible] injure [illegible] for the sake of the [illegible] pleasure and gratification. These females always full of provocation, are [illegible] to obtain [illegible]; they never [illegible] of the Visiting Committee of the inspector to [illegible] a [illegible] interview full of complaints and they are eternally writing to the Secretary of State to appeal for the real or [illegible] wrongs. There is usually [illegible] for the [illegible] of their intemperate habits, but the [illegible] are described as [illegible]. In their opinion they want to get drunk they have a right to do so, they are merely spending their own money, and any effort at prevention by others is [illegible]. If they become [illegible] and [illegible] or [illegible] they [illegible] themselves responsible for [illegible] those when they happen to be angry or "a bit on." Drunkenness in [illegible] fiable, prostitution is justifiable, crime is justifiable, any course they choose to adopt is justifiable, so long as they can show (to their own satisfaction) some "reason" for such conduct. It is useless to point out defects in their arguments, for they are incapable of reasoning any question to a conclusion; deficient in moral sense, they cannot be made to understand the ethics of social life, and an unfriendly attitude is manifested towards all who endeavour to exercise refining influences.

This brief sketch roughly indicates the mental attitude of these refractory defectives during their quieter moments; but some reference to the recurrent outburst of uncontrollable anger is necessary to complete the picture. The mad fit while it lasts is not pleasant to witness—utter abandonment to



Fig. 1



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.



Fig. 6.

[illegible] passion, wanton destruction of anything handy, unmeasured violence against all who happen to be near (especially if they attempt to restrain), absence of all sense of decency, and use of the vilest possible language, are some of its chief characteristics. A large number of persons, now under control in reformatories, subject to these passionate impulsive attacks, only need the possession of a lethal weapon at such times to cause injury, even death, to any person against whom their anger is directed. In fact, many of them have served years of punishment for violent assault or attempts to kill, and at least two have been sent to penal servitude for manslaughter since leaving reformatories, one woman for killing her husband during a drunken quarrel, and another for contributing to the death of her child by violence.

Among the quieter cases intelligence generally is of an exceedingly low order. There is no power of thought or deliberation, no memory, and wandering attention. They are often personally unclean, and pilfer and hide useless trifles. The word "morality" has no meaning; nearly all have led irregular lives.

The only possibility of an orderly life for such persons lies in total abstinence from alcohol, for, as time passes, further mental deterioration results from continued indulgence. Structural tissue change, and constantly disordered function both aid in completing the wreck,

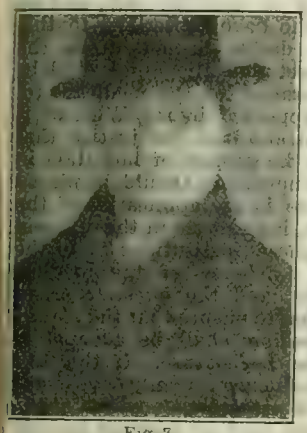


Fig. 7.



Fig. 8.

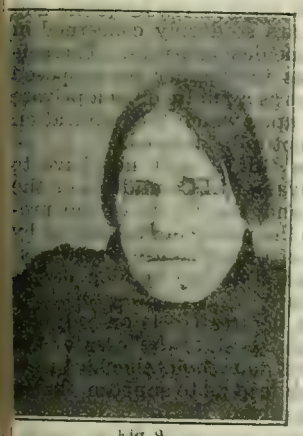


Fig. 9.



Fig. 10.



Fig. 11.



Fig. 12.

sions run riot, moral degradation, restlessness, and itement prevail, and "we have the finished article, the ane or defective police-court inebriate." It is needless mphasize the uselessness of any determinate sentence uch cases.

Ir. Branthwaite points to a consideration that is still often overlooked in the treatment of the more rmable, less severe cases—namely, that the fact that y have sunk into the slavery of drink is in itself dence of the existence of some defect in power of gement and control over impulses. He reminds us t "whatever defect may exist, is capable of modifica- or removal, and in the majority of cases a normal state can be produced if sufficient time is allowed for its development."

There is considerable evidence to show that ill-health, accident and the weakness and impaired control of old age are often factors in the production of habitual drunkenness. There are many patients to be found in reformatories who before the onset of these conditions had lived decent useful lives. Before being committed to reformatories, these people had previously for years been treated in the usual way "bandied like shuttlecocks between police-courts and prison because they had become drunkards, punished in fact, for disease."

When Dr. Branthwaite turns to the milder cases found in licensed retreats he reiterates his remarks upon the existence of mental defect in the majority of cases.

> The presence of some weakness or defect is more often present in retreat cases than is realized, and the treatment meted out to reformatory cases would have produced the same advanced mental defect in retreat cases if it had been applied to them.

Dr. Branthwaite insists that the difference is less one of character than of degree.

Some pointed remarks are made upon certain drug treatments. Speaking of the drugs used it is said:

> One wonders why these drugs, administered in retreats by English medical practitioners, are found to have no value other than the narcotic, stimulant, or tonic properties ordinarily attributed to them, whereas, when administered by American doctors, chemists, and philanthropic clergymen outside retreats) they develop magnificent specific values! Proper medical treatment, including the administration of drugs when necessary, is essential to the proper conduct of a retreat, and for that reason no licensed institution is permitted to exist without the appointment of a medical officer; but those in charge have no need to rely, as outsiders have to do, upon systematic and continuous drugging to obtain a result which can be better obtained without resort to artificial and sometimes injurious means.

This opinion is worthy of the notice of those practitioners who believe that a short cut to sobriety or even a permanent cure is to be obtained by the employment of these drugs as specific remedies for the disease.

THE MILK SUPPLY.

THE USE OF PRESERVATIVES.

IN July last the Local Government Board addressed a circular letter to certain sanitary authorities drawing attention to the serious objections to the use of preservatives in milk, and stating that the Departmental Committee on Preservatives and Colouring Matter in Food reported that preservatives in milk could be relied on to protect those engaged in the milk trade against the immediate results of neglect of scrupulous cleanliness. The Board further stated that under the influence of these preservatives milk might be exposed without sensible injury to conditions which otherwise would render it unsaleable. It might remain sweet to taste and smell, and yet have incorporated disease germs of various kinds. With this communication before them, the Batley Corporation could hardly have done otherwise than prosecute a dairyman, a sample of whose milk was recently found to contain boracic acid to an amount equal to nearly 40 gr. per gallon. When inflicting a fine of £5 the Chairman of the bench of magistrates referred to the importance of securing a pure supply of milk, especially for young children and for invalids.

WOMEN NURSES FOR THE AMERICAN NAVY.—Surgeon-General Presley M. Rixey, of the United States Navy, has made a further strong recommendation that Congress be requested to enact a law authorizing the employment of trained women nurses for the navy. The Surgeon-General points out that in all modern wars the services of women nurses have proved invaluable for the care of the sick and wounded. In time of peace such nurses would secure for the sick at naval hospitals a better medical and surgical nursing service than was now obtained, and would be of great use in teaching and training the men of the hospital corps. In time of war they would be needed, in addition, for hospital ships, and their presence in hospitals would release a large number of hospital corps men for duty on board men-of-war. The recommendations of the Surgeon-General for the establishment of a corps of trained nurses in the navy has, according to the *New York Medical Journal*, met with the approval of the Navy Department.

THE PROPOSED BILL TO INCORPORATE KING EDWARD'S HOSPITAL FUND FOR LONDON.

AT the annual meeting of the General Council of King Edward's Hospital Fund for London, which was held on December 17th, 1906 (BRITISH MEDICAL JOURNAL, December 22nd, 1906, p. 1826), the Prince of Wales announced that he had, with the sanction of the King, determined, as President, to apply to Parliament for an Act to incorporate the Fund and to place its administration upon a strictly legal basis. He explained that, owing to shortness of time, the text of the Bill had not previously been submitted to the Council, but copies were submitted to the members present at the meeting, by whom it was unanimously approved.

The text of the Bill is published in the SUPPLEMENT to this issue. Its main objects stand revealed in Clause 3. They are (i) to provide for the establishment of a General Fund into which all subscriptions, donations, and bequests, and all real or personal property now held in trust by any person for the existing Fund shall be paid; and (ii) to provide that either the capital or income of the Fund shall be applied as the President of the Corporation shall *in his uncontrolled discretion from time to time think fit*—

(*a*) in or towards the support or benefit of all or such one or more to the exclusion of the others of the Hospitals of London as the said President *in his like discretion shall think fit* and whether such application shall be for the general or any special purposes of any particular one or more of such hospitals of London (*b*) in giving aid or assistance generally to all or any one or more of such Hospitals of London as the said President *in his like discretion shall think fit* and (*c*) generally in doing all such other things as are incidental or may be thought conducive to the attainment of the best interests of the Hospitals of London or any one or more of them or of the persons or any of them for whose benefit such Hospitals exist which the said President *in his like discretion shall determine.*

Clause 4 appoints the Prince of Wales President of the Corporation during the pleasure of the Sovereign, "and every succeeding President shall be appointed by and hold office during the pleasure of the Sovereign."

By Clause 5 the direction, control, and management and property of the Corporation, and the application of all moneys, property, and income of the Corporation are vested in the President. Under this clause he will have power (*inter alia*) to appoint and at pleasure remove the members of the General Council, trustees, treasurers, secretaries, and auditors; to make and rescind by-laws for the management of the Society and its affairs; and to determine whether any institution is or is not within the limits of the objects of the Act.

We have italicized certain passages which appear to be of peculiar interest.

If the most careful draughtsman were to set to work he could hardly produce a measure better calculated to confer absolute and unfettered power and discretion upon the President of the Fund. He need not, apparently, pay any heed to or take advice from any person interested in or connected with the principal objects of the charity—namely, the great hospitals of London. Nor is there any guarantee that the medical profession, which is very seriously concerned in the judicious administration of the Fund, will be in any way consulted, much less that it will be given any voice in the control of the policy of the Fund.

It would not, of course, be right to ignore the fact, recited in the preamble, that the Prince of Wales has in the past from time to time appointed certain persons to act as an Advisory Council and as Committees and in various other capacities and has, with the advice and assistance of such Council and Committees, administered the Fund. Doubtless the same excellent practice will continue, but the Bill gives no assurance on this head.

In effect, if it becomes law in its present form, the Bill must give entire control to the reigning sovereign. The President will be his nominee; and, while it will be competent for that President to administer the trust reposed upon him as he pleases, he can hardly fail to observe and carry out the wishes of his august patron. In saying this much, we need hardly add that the medical profession would not be likely to take exception to the appointment of His Royal Highness the present Prince of Wales as President; nor is it to be imagined that our present King would ever appoint any person to this responsible office who would administer the funds otherwise than impartially, and in accordance with the wishes of the donors, the hospitals, and the medical profession. Nevertheless, it would be dangerous in the extreme to pass an Act for the administration of a public fund without recognizing in some degree the right of popular control.

Having regard to the nature of the objects with which the Fund was called into existence, and to the far-reaching consequences which would follow errors of policy in its administration, it is essential in the public interest that the medical profession should have a voice in the administration of the Fund. The efficiency of every hospital depends upon the efficiency of its medical staff; and we venture to think that people who have subscribed to this Fund, and the public who derive benefit from the hospitals are entitled to expect that the Fund shall be administered with the co-operation of the medical profession, and upon principles approved by it. Without it no hospital could be carried on, and it is but justice that when the public subscribe to the support of hospitals in general, the partner of their benevolence should be placed in a position to have some voice in the application of the Fund, not so much in his own interest as in the interest of the patients who attend these institutions. As the Bill now stands, the very existence of the medical profession is entirely ignored, and the question arises whether steps cannot be taken to ensure that the claims in this matter of the profession shall be adequately brought to the notice of the Legislature. If the Bill becomes an Act, professional influence can only be brought to bear through the somewhat precarious medium of the General Council. Its members may or may not include representatives of the medical staffs of the hospitals and of general practitioners, who are so deeply concerned in the proper administration of medical charities. There is at present some uncertainty as to whether the proposed Act is to go before Parliament as a public or as a private measure, and this is a point upon which the publication of a definite statement ought not to be delayed.

If it is treated as a public Bill it will not have to undergo the ordeal of the Private Bill Committee of the two Houses of Parliament, and the views of the profession can only be brought to the notice of Parliament by inducing individual members of either House to interest themselves in the subject, and state the opinion of the profession in the course of debate.

On the other hand, if it is to be treated as an ordinary private Bill, it may be possible to state the case of the profession in a more detailed and comprehensive way, and there are indications which lead us to suppose that it is, and will be dealt with as, a private Bill.

A private Bill in Parliament generally is so called because it concerns the interest of private, or *quasi*-private, parties, as distinct from a Bill in which the nation at large are interested.[1] The facts that the Fund is to pay the expense of its promotion (see Clause 11), and the statement by the Prince of Wales that "the Bill had to be lodged" by a certain day, seem to show that the promoters themselves realize that it is a private Bill.[2]

The term "private Bill" has not, so far as we are aware, been defined in any Act of Parliament; but all "private Bills" are by S.O. 1 of the Standing Orders of the House of Commons divided into two classes, according to the subjects to which they respectively relate. In the first class are included "Bills relating to property held in trust for public or charitable purposes"; this Bill relates to property held in trust for charitable purposes.

(*a*) *Procedure of Opponents.*

Assuming, then, that it is a private Bill, it may be useful to inquire what steps may be taken by any person or body of persons who desire to oppose.

The first step to be taken by any one who wishes to oppose a private Bill is to present a petition against it. No petition can be taken into consideration by the Committee unless it distinctly specify the ground on which the petitioners object to any of the provisions thereof, and the petitioners can only be heard on the grounds so stated (S.O. 128). For this reason the petition must be drawn so as to embrace as many objections as possible. It must be prepared and signed in strict conformity with the rules and orders of the House, and must be deposited

[1] Clifford's *Practice of Private Bills*, 1900, p. 1.

[2] Standing Order 2 provides that a petition for a Private Bill must be deposited in the Private Bill Office on or before December 21st.

in the Private Bill Office not later than ten clear days after the first reading of the Bill.

(*b*) *The Question of Locus Standi.*

As to this, the procedure is shortly as follows: If the promoters, after presentation of a petition against a Bill in the House of Commons take objection to the *locus standi* of the petitioners, they may serve a notice to this effect on the petitioners. The matter is then dealt with by the Court of Referees, which consists of the Chairman of Ways and Means, and not less than three other persons appointed by the Speaker. In the House of Lords, however, the question of *locus standi* is determined by the Committee, which considers the Bill on its merits. The principles upon which a *locus* will be conceded or disallowed appear to be the same in both Houses. The general principle of *locus standi* is that petitioners shall not be heard merely for the purpose of getting some advantage conferred on them by the Bill, but for the purposes of meeting some injury which will be caused to them by the provisions of the Bill. A search through what are known as the *Locus Standi* Reports reveals no case where the question of *locus standi* was considered in relation to a Bill similar to that under discussion.

In one case (Salford Corporation Bill, May 6th, 1897, S. and A. 218) a corporation proposed to extend the limits of the area receiving the benefit of an ancient charity. It was decided that a person who was not a distributor or beneficiary of the charity, although a ratepayer and the Secretary of the Charity Fund Association, has no right to a *locus standi* against the Bill. That case, however, does not go very far, for it is generally recognized that when a Bill is promoted by a local body, the promoters represent the state of local feeling on the subject. It has been established, however, that where a multitude of little claims are put forward by the proper representative body they will be heard (*Glasgow, etc., Railway Petition* (1892), R. and S., 193).

That we have been unable to find any case which throws light on the question under discusion is not surprising, having in view the fact that there is probably no private Act which confers such extraordinary powers on a single individual. It may be stated generally, however, that Parliament is not anxious to stifle opposition to schemes for which there is no precedent; and if some body representative of the medical profession in London were to ask to be heard in opposition to this measure we have little doubt that a *locus* would be granted. Indeed, we can hardly imagine that the promoters of the Bill under notice would try to prevent any person or class of persons who may be affected from placing his or their views before Parliament. It is to be remembered, moreover, that the concession of a *locus standi* commits Parliament to nothing.

It should be stated here that it may not be possible to ascertain before Parliament meets whether the Bill will be introduced in the House of Lords or in the House of Commons. As has been shown, if it is presented in the Lords, the petitioner may appear before the Committee of the Lords. That Committee has the right to say whether he has a *locus standi* or not.

(*c*) *Procedure before the Private Bill Committees.*

Assuming that a *locus standi* is allowed, the objectors may appear by counsel before a Committee of the House of Commons. The Committee is appointed by the Committee of Selection, and must consist of members who are not locally or otherwise interested in the Bill. In the House of Lords every opposed Bill is referred to a Select Committee of five. The objectors may be heard by counsel, and may call witnesses in support of their views, but the objections may be entirely ignored by the Committee.

If the opposition fails before the House of Commons Committee, the opponents may appear and renew the attack when the measure comes before the Lords Committee. If the opposition fails before the Committee in either house, it is, of course, still competent for any Member of Parliament to raise an objection to the passing of the Bill by the full house.

UNDER the will of the late Mrs. Mary Ann Watkinson, of Derby, the Royal Derbyshire Infirmary receives £500, a sum of £100 being also bequeathed to the Derbyshire Hospital for Sick Children.

Nova et Vetera.

SHAKESPEARE'S "INSANE ROOT."

"Or have we eaten of the insane root,
That takes the reason prisoner?"—*Macbeth*, Act I. Sc. 3.

WHEN Shakespeare used the expression "the insane root" in *Macbeth*, it has been thought that he had the root of some particular plant in his mind. Hemlock, mandrake, belladonna, and henbane root have each in turn been supposed to be the root referred to. Which of these conjectures, it may well be asked, appears to be the most probable?

As regards the first-named it does not perhaps deserve consideration, for toxicologists state that it has no action on the intellectual faculties. Socrates, we have every reason to believe, was poisoned by hemlock, and yet was able to talk to his friends with a perfectly clear mind till just before his death. The evidence produced in favour of "the insane root" being hemlock is a quotation from Greene's play, *Never Too Late* (1616): "You gaz'd against the sun and so blemished your sight, or else you have eaten of the roots of hemlock, that makes men's eyes conceit unseen objects." But this passage only seems to allude to some disorder of the sight, such as hemlock produces when it paralyses the third nerve, and not to any derangement of mind. Also, it has been added, that "root of hemlock" is one of the ingredients of the witches' cauldron.

Mandrake, the deadly nightshade, and henbane, had all of them the reputation of causing madness in Shakespeare's time. About mandrake there was the strange belief that its roots, when torn out of the ground, uttered shrieks, which had the effect of driving those who heard them mad:

> And shrieks like mandrakes torn out of the earth,
> That living mortals hearing them, run mad.
> *Romeo and Juliet*, Act IV, Sc. 3.

Altogether the word "mandrake" occurs four times in Shakespeare's plays, and "mandragora" twice. According to the *Encyclopaedia Britannica* the passage in *Macbeth* concerning the insane root contains an allusion to mandrake. This, too, is apparently the view of a popular writer of fiction, Mrs. Campbell Praed, who has lately produced a romance entitled, *The Insane Root*, in which mandrake plays an important part in the development of the plot. But it must be remembered that the scene in *Macbeth*, where Banquo says, "Or have we eaten of the insane root?" etc., is laid in Scotland. The question, then, arises whether it is not more likely that Shakespeare was thinking of some plant common to the soil of our island rather than of mandrake, the natural home of which is in the South of Europe and the East.

If Shakespeare had such a knowledge of herbs and their properties as existed in his day, he could not have been ignorant of the deadly nightshade or henbane, both of which grow wild in certain parts of Scotland, and have long been known to produce a kind of temporary insanity when they are eaten. Gerarde, in his *Herbal* (1597), writes of the deadly nightshade: "This kinde of nightshade causeth sleepe, troubleth the minde, bringeth madnes if a few of the berries be inwardly taken." Douce, the antiquary, quotes in favour of henbane. *Batman Uppon Bartholome de Proprietatibus Rerum*, lib. xvii, ch. 87: "Henbane . . . is called Insana, mad, for the vse thereof is perillous: for if it be eate or dronke, it breadeth madnesse . . . it taketh avaye wit and reason."

It is just after the three witches have vanished from sight that Banquo, to account for their appearance, questions whether he and Macbeth have eaten a certain root which has the effect of disordering the reason. They are soldiers, and it appears to have been Shakespeare's view that to have to feed on roots was a common experience of a soldier's life. In *Titus Andronicus* Aaron is made to say to "the thick-lipped slave": "I'll make you feed on berries and on roots . . . and bring you up to be a warrior and command a camp." As though to learn how to live on berries and roots were part of a soldier's training. Soldiers have often had to suffer for indiscriminately eating the berries or roots of such wild plants as they found growing near them. About one hundred and fifty French soldiers, it is stated on the authority of Orfila, were poisoned by eating the berries of the deadly nightshade.

Perhaps Shakespeare, in writing the passage in *Macbeth* now under consideration, was thinking, as a commentator suggests, of that remarkable account given by Plutarch in his *Life of Antony* of the poisoning of the Roman soldiers by some unknown herb. Antony's soldiers were much distressed from want of provisions during the Parthian war. In trying to relieve their sufferings, Plutarch says: "Those who sought for roots and pot herbs found few that they had been accustomed to eat, and in tasting unknown herbs, they met with one that brought on madness and death. He that had eaten of it immediately lost all memory and knowledge; but at the same time, would busy himself in turning and moving every stone he met with, as if he was upon some very important pursuit. The camp was full of unhappy men bending to the ground, and thus digging up and removing stones, till at last they were carried off by a bilious vomiting, when wine, the only remedy, was not to be had." This "unknown herb" was judged by Sauvages, the celebrated French botanist, to be belladonna, and it has also been said to be aconite. The present writer once saw a person poisoned by belladonna liniment, and certainly she behaved very much like those "unhappy men" in Antony's camp. She kept constantly stooping down to pick up or move imaginary objects on the ground. When she was conveyed in a cab to a hospital, if she had not been restrained, she would have busied herself the whole way in fumbling with her hands at the bottom of the vehicle.

Many of our wild plants are mentioned by Shakespeare, but the deadly nightshade is not among them. Still, it is improbable that he was unacquainted with it, for it has been known from time immemorial as a most dangerous plant, and was exceedingly common in this country many years ago. Around Furness Abbey, in Lancashire, it was so abundant that the valley in which the ruins now stand was called the Valley of Deadly Nightshade. And it is curious to note, by the way, that the monks did the plant the honour of having representations of it on the common seal of their abbey. This seal was attached to the deed of surrender on the dissolution of the monastery in 1537. But what is more to the point is that Holinshed's chronicle which furnished the groundwork of the tragedy of *Macbeth*, contains an instance of poisoning by belladonna. The history of Scotland, incorporated by Hollnshed into his chronicle, is chiefly a translation from the Latin of Hector Boece, and he calls the plant used by the Scots to poison the Danes, *Solatrum Amat ile*, or the deadly nightshade. Holinshed's chronicle says that Duncan, when he was besieged in a castle by the Danes, who had invaded Scotland under Sweno, at first feigned to be willing to yield, and then offered to supply the Danes with provisions, as they were in great want, their offer being gladly accepted by the Danes.

"The Scots hereupon took the juyce of Mekilwort berries, and mixed the same in theyr ale and bread sending victuals and wine infected in great abundance vnto their enemies.

"They eating that they had got meete and drinke sufficient to satisfie theyr bellies, fell to eating and drinking after such a greedy wise, that it seemed they strone who might deuoure and swallow vp most, till the operation of the herbes spred so sore through all the parts of their bodies, that they were in the ende brought into a fast dead sleepe, that in maner it was impossible to awake them.

"Then Duncane sent vnto Makbeth, commaunding him with all diligence to come and set vpon the enimies, being (as he said) cleane prickt to be ouercome.

"Makbeth making no delay came with his people to the place, where he entring were lodged, and first killing the watche, afterwards entred the campe, and made suche slaughter on all sides without any resistance, that it was a wonderfull matter to behold, for the Danes were so heauy of sleepe, that the most parte of them were slayne and neuer stirred, other that were awakened eyther by the noyse of the slayers, or by the wounds they receyued, were so amazed and dyzzie headed vpon their wakening, that they were not able to make any defence. So that of the whole numbers there escaped but verie fewe, and onely those humble and tenne ships appointed by whose help they got to their shippes lying at rode in the mouth of Ley."

A plant, the juice of which is said to have been so effective when used by the Scots as a military poison may well have attracted the attention of Shakespeare as he read the old chronicle on which he founded his great tragedy.

It has been shown that in former times henbane was called "Insana, mad," so that it is not improbable that its root may have been known then as "the insane root." The word put into the mouth of the ghost in *Hamlet*, and spelt "hebona" in the quartos, and "hebenon" in the folios, is thought by some commentators to signify henbane. Pliny (xxv, 4, Holland's translation, 1601) says in regard to henbane, that "an oile is made of the seed thereof, which if it be but dropped into the eares, is ynough to trouble the braine." From this it has been inferred that "hebenon" was written for "hene-bon," by which Shakespeare meant henbane. But a more convincing explanation of the term is that "the juice of cursed hebenon" is the sap of the ebony tree, which it is said was judged in days gone by to be poisonous. In the sixteenth century ebony was sometimes spelt "heben," the word being derived perhaps from the Latin "hebenus." It is so spelt in Spenser's *Faerie Queen* (Bk. II, Cant. vii). Marlowe, in *The Jew of Malta* (Act II, Sc. 3), mentions "the juice of hebon" as a deadly poison, and here the spelling is more like that in the quartos, "hebona." The idea, then, of this mysterious poison being henbane had better be abandoned. Indeed, there is not enough evidence in Shakespeare's works to make us feel sure that he was acquainted with henbane as a poison. Still, it is exceedingly likely that he was, for the plant is described as such by the writers of his age.

Cases of poisoning by henbane are not very common. One of the most striking in ancient times is that recorded by Sonnenschein. Some monks by mistake ate the root, and became very uproarious, singing drinking songs, and behaving just like madmen. But belladonna has far more often taken "the reason prisoner" than henbane, for there is something peculiarly attractive about the black shining berries of the former. As regards the root which has been a frequent cause of mental disturbance, it is hard to determine whether it or henbane root has the better claim to the title of "the insane root."

It must, however, be acknowledged in favour of belladonna that the symptoms of intoxication it produces are very graphically described in Holinshed's chronicle, and we know that Shakespeare adopted a great deal from it in the construction of many of his plays, and that *Macbeth* was among them.

THE SERUM TREATMENT OF PLAGUE. In a letter addressed to the Sanitary Commissioner with the Government of India, Dr. Choksy, Special Assistant Health Officer in charge of Arthur Road and Maratha Plague Hospitals, under date July 6th, 1906, criticizes the conclusions arrived at in volume No. 20 of the *Scientific Memoirs* by officers of the Medical and Sanitary Departments of the Government of India as to the "Serum Therapy of Plague in India," edited by Lieutenant-Colonel W. B. Bannerman, I.M.S. He considers that if the editor's and Haffkine's views be accepted without protest an erroneous impression would be created to the effect that the serum treatment of plague was of no practical value. Dr. Choksy, it may be remembered, recently published a book on this subject, a notice of which appeared in the BRITISH MEDICAL JOURNAL recently, and in this his main conclusion was that Lustig's or Roux Yersin's serums are capable of reducing the case mortality of plague in the non-septicaemic cases, and that this is especially true if they are administered on the first day of the illness. The effects of the serums used for plague have been disappointing, and in no way to be compared with the brilliant results obtained by the antitoxin for diphtheria, and we are therefore inclined to side with the writers in the *Scientific Memoirs* in their views on the subject. Statistics do not help us much here, as the balance of difference on the side of the serum is slight. Again, a statement such as Dr. Choksy's that plague is robbed of all its terrors if the serum is used early, is hardly reconcilable with a case mortality of 61.11 per cent. on his own figure, and gives one the idea that he is disposed to put the matter in a much more favourable light than it deserves. Nevertheless, it does not follow that this is not the right line to follow, though it still remains for some investigator to discover an antitoxin or serum, or something of this nature which will be uniformly efficacious and about the value of which there will be absolutely no doubt.

THE late Mr. Robert Oliver Orton, of Cheshire, whose will has now been proved, left £100 to the Chester Infirmary.

MONT' ESTORIL AND THE NEIGHBOURHOOD.



Bussaco.

IN April last, at the time of the International Congress at Lisbon, we visited Mont' Estoril, situated at the mouth of the Tagus, close to the Atlantic Ocean, and were very much impressed with its suitability as a health resort, especially during the winter months. It is easily reached from Lisbon by a fairly-well served line of railway. The place is, indeed, a charming spot, the soil consisting of decomposed granite; built on rock and sand, at an elevation, for the greater part, of 200 to 300 ft. above sea level. It lies due west of Lisbon on the shores of the blue bay of Cascaes, and is built on rising ground facing due south. It is well protected from the east by a pine forest. The foliage is ample and luxuriant; palm trees, oranges, eucalyptus, and pepper trees grow well there, and roses can be gathered almost all the year round. It lies 300 miles further south than the Mediterranean Riviera.



Mont' Estoril: The Sea Front.

The neighbourhood is full of interest. Cascaes with its Bôcca do Inferno, into which the sea rushes with tremendous force, is close at hand. For pedestrians the walk along the coast to Cintra is full of interest and beauty. Cintra itself, with its granitic crags and boulders, its Moorish Castle, and the Castella de Pena, from the neighbourhood of which Emanuel, King of Portugal, is said to have watched for the return of Vasco de Gama from the East Indies, is full of interest. Monserrate, the property of Sir F. Cook, is on the road to Cintra from Cascaes. Its grounds, filled with tropical and subtropical trees, are well worth a visit. From the point of view of the holiday seeker, and of those who require change of scene, Mont' Estoril offers many advantages as a health resort.

Dr. D. G. Dalgado, to whom we are indebted for much information respecting Mont' Estoril, said in his paper, read at the International Congress at Lisbon, that the climate of Mont' Estoril may be classified as intermediate between tonic and stimulant on the one hand, and tonic and sedative on the other. It partakes in suitable cases and constitutions of the qualities of both. It acts as a stimulant in cases of debility arising from fevers or lung complaints, in infantile wasting, in senile debility, and in some forms of dyspepsia; it acts as a sedative in most cases of asthma, insomnia, and nervous irritability; while its equable temperature and comparative dryness are extremely beneficial in chronic rheumatism and gout, and in most of the chronic catarrhs of the lungs.

A portion of the Gulf Stream passes up the coast of Portugal, going north, and as its temperature is about 51° to 52° F. it prevents excessive cold in the winter, the average temperature being about 53° to 55° F., which compares favourably with Biarritz, with an average temperature of 45° F., or Nice, which is slightly higher. The rainfall is not excessive, and moisture is easily absorbed by the soil. Dr. Dalgado says that it rains more often during the night than the day, and that the number of days an invalid is prevented from taking morning and afternoon walks does not exceed ten during the whole winter.

The water supply is of a satisfactory character, being brought from a considerable distance in covered conduits, and being kept in covered reservoirs. The water is soft and agreeable to use, both for drinking and for washing.

The manner in which the place slopes downwards towards the sea lends itself to effectual drainage. The drains are now carried into the sea beyond the low-water mark sufficiently far to justify the statement that the sewerage is satisfactory. The drains of the two hotels are ventilated; the soil pipes are trapped and ventilated, as is also the main sewer. The sanitary regulations and laws with regard to persons suffering from phthisis are somewhat draconic in Portugal, where consumption has always been regarded as an infectious disease both by the medical profession and by the public. Hotel proprietors are compelled to keep special linen and crockery for the use of consumptives, to give notice if any person so affected changes his room, leaves the hotel, or dies, and are bound to have the rooms disinfected. In fact, the natives have such a fear of the disease that they would cease to frequent any place where consumptives were known to be received. Clauses are inserted in leases of houses with reference to this matter, and compensation required if any person suffering from consumption stays or dies in any such house. If, therefore, persons suffering from phthisis desire to visit Mont' Estoril, special arrangements will have to be made. A sanatorium for the reception of such persons is a desideratum.

Given good weather, the most pleasant way of getting to Lisbon, and thence to Mont' Estoril, is, in our opinion, by steamer. We had a most enjoyable journey there on board the ss. *Ambrose*, of the Booth Line. This vessel has all her accommodation in deck cabins, so that no matter practically how stormy it might be the port hole could be

kept open, and the horrible stuffy air usual in cabins on board ship avoided. The attendance and the food were extremely good. On our way out we stopped at Leixoes, the port of Oporto, which gave us the opportunity of visiting that ancient and interesting city. If thought desirable, the rest of the journey to Lisbon can be made by rail, and the opportunity taken of visiting Bussaco, once a convent, with grounds with a circumference of six miles, into which, by a papal bull of Gregory VIII (temp. 1620), no women were allowed to enter, nor were any of the trees to be cut down. Here, on "Bussaco's iron ridge," it was that Wellington rolled back the tide of the French invasion. The palace has been converted into a hotel, which is an ideal place for a holiday; it stands 2,000 feet above the sea level, which makes it cool in summer, and is protected by forests, so that it is warm in winter. It is surrounded by most picturesque scenery. The hotel stands on a hill, and commands magnificent views facing the south, surrounded as it is by woods penetrated in every direction by paths, either level or on the incline. Sheltered from cold winds, it is indeed a place to rest in free from the noisy surroundings of a town. To the north-west there are mountains covered with pine forests. It is therefore a very suitable place for persons suffering from neurasthenia and catarrhal bronchitis. There are numerous sulphur and mineral springs in the neighbourhood, and baths can be obtained. Around the hotel is a sheltered gallery in which the air can be enjoyed without exposure or fatigue. Not being far from the sea, it also has the benefit of the sea breezes. The proprietor of the hotel is a Swiss who does all he can to make the visitors comfortable. The terms for accommodation are very moderate.



Mont' Estoril: The Landward Side.

From Bussaco, Coimbra and the monastery of Batalha — the building of which was commenced by John I of Portugal and his English wife Philippa, daughter of John of Gaunt—can be visited *en route* for Lisbon.

GEORGE JACKSON, F.R.C.S.Eng.,
CHARLES J. RENSHAW, M.D.

REPORT OF THE SELECT COMMITTEE ON THE HOUSING OF THE WORKING CLASSES ACTS AMENDMENT BILL.

A BILL to amend the Housing of the Working Classes Acts and otherwise to facilitate the Building of Houses for the Working Classes in Rural Districts was introduced into the last session of Parliament by Mr. Mackarness, and was committed to a Select Committee of the House of Commons. The report of this Committee —of which Sir John Dickson-Poynder was chairman—has just been issued.

PRESENT DEFECTS.

After detailing the provisions of the Bill, the report reviews the present condition of the law relating to rural housing.

System of Appointing Medical Officers of Health.

Particular consideration is given to the appointment of medical officers of health and inspectors of nuisances in rural districts. The appointments of medical officers of health are made for periods varying from one to six years. In 557 instances they are of annual tenure, and in only 66 cases, where the appointments have been sanctioned by the Local Government Board, are they permanent. Under these circumstances there is a natural desire on the part of the medical officer to avoid friction with the appointing authority and a consequent reluctance to set the law in motion against those whose disapproval of an officer's acts might lead to unpleasant relations, if not failure to secure reappointment. Consequently the attitude of the district councils towards sanitation and housing matters is reflected in the lack of zeal or activity on the part of the officer. In this connexion the Committee considers that the Local Government Board's memorandum respecting the annual reports of medical officers of health is too indefinite. They also think that wherever these reports indicate indifference or apathy the matter should be followed up by inquiry upon reports of a more satisfactory character. As it is, it would appear that the Local Government Board have for the most part accepted anything that may have been sent.

Inadequate Inspection.

It was contended before the Committee that the reluctance of medical officers and their councils to condemn insanitary property was due to the fact that sufficient accommodation was not available, that the procedure was complicated, and that building by the council was out of the question because of the loss that would occur. This contention, the Committee maintains, loses its force in view of the absence of any effort at adequate inspection. Nuisances may be suppressed and defects made good as they occur without any question of demolition arising at all. If medical officers of health and inspectors of nuisances had carried out the existing law in bringing the facts before the owners from time to time by notices and summonses much could have been done to prevent houses getting into a state of disrepair. Whatever difficulties there may be in the way of building new cottages, keeping the existing ones in reasonable repair under the existing law, so as not to be a nuisance or injurious to health, is practicable, and ought to be insisted upon.

Insufficient Housing in Rural Districts.

Abundant evidence was before the Committee as to the insufficiency of cottages in rural districts. Cases were brought to their notice in which people had had to leave a village because of lack of house accommodation, while others had been prevented from coming to live in a district because no house or cottage was to be found fit to live in. The house famine in town and country which exists in regard to the working classes is incontestable. The Housing Acts have been allowed to become practically a dead letter in rural parishes, and the authorities who have been entrusted with carrying them out have deplorably failed to fulfil their obligations. The Committee admit that cottages, without adjacent land, cannot be built in agricultural districts to secure a return to cover interest and sinking fund in addition to the other usual outgoings

if let at the prevailing rents paid by farm labourers, but they consider there is abundant evidence to show that the difficulty of rent would be largely diminished by the addition of land to the cottage.

Building By-laws.

The vexed question of building by-laws is only briefly mentioned in the report. In many cases the Committee thinks they have imposed conditions occasioning unnecessary expense; on the other hand, modifications have had little stimulating effect, while the cottage question has been quite as acute where no building by-laws exist at all.

Rural Depopulation.

The Committee considers that if the present volume of immigration from country districts is an evil, the remedy lies rather in retaining the existing rural population than in endeavouring to restore to the land those who have already left it. In support of this view it is stated that out of 10,000 men out of work or in casual employment found by the distress committees formed under the Unemployed Workmen's Act, 1905, the percentage of countrybred men ranged only from 6 per cent. to 14 per cent. Whereas in a selected number of large undertakings, such as the Post Office, police, municipal service, gasworks, etc., 46 per cent. of the men employed were found to be countryborn.

RECOMMENDATIONS.

Coming to suggested remedies for the bad housing conditions in rural districts, described as of a widespread and fundamental character, the Committee confesses that if any real improvement is to be effected, it can only be by drastic changes in the character and administration of the law.

Transfer of Powers to County Councils.

It at once recommends that the administration of the Public Health and Housing Acts in rural districts should be transferred to the county councils, leaving, however, to the district councils the power to carry out Part III of the Housing of the Working Classes Act, 1890, concurrently with the county councils. The reasons given by the Committee for this recommendation are that experience has shown that sanitary powers cannot be entrusted to comparatively small bodies whose members may be tempted to oppose reforms for fear of increasing their own rates, while some members may be owners of cottage property, or builders or agents having a direct interest in putting restraint on the administration of the existing law. A district council again is at a disadvantage in regard to building cottages, whereas an authority having jurisdiction over a wider area could enter into larger contracts, and could borrow money more cheaply. In the event of the county councils objecting to extra work being imposed upon them, it is suggested that there should be an increase in the number of members.

County Public Health and Housing Committees.

It is further proposed that the powers to be transferred to the county council should be delegated to a statutory public health and housing committee who might have added to their number men and women outside the council who are known to be specially interested or well-informed on the question of housing.

County Medical Officers.

County councils would then be under an obligation to appoint as chief executive officer a medical officer of health, and it should be at such a salary as would secure the services of a properly-qualified and experienced man who should devote his whole time to the duties of his office, and only be removable from office with the consent of the Local Government Board. By placing sanitary matters under the inspection of capable and disinterested officials influenced by no local prejudice or interests, greater uniformity and efficiency would, the Committee considers, be secured. An adequate staff of inspectors—to be called sanitary inspectors, and not inspectors of nuisances—should be provided to work under the medical officer of health.

Register of Cottages.

An important suggestion of practical administration is made by the Committee. It proposes that a register should be kept of every house and tenement in a rural district below a certain value—say a rental of £20 per annum—the register to contain among other details particulars of the number and description of the rooms, the number of occupants at the time of survey, the state of repair, sanitary condition, and water supply. In connexion with this register, owners of property should be required to fill in and return every year a form containing a declaration as to the state of their property.

County By-laws.

Other administrative recommendations are that it shall be compulsory for county councils to frame and enforce by-laws within the area of their jurisdiction.

Central Housing and Public Health Department.

It is recommended, also, that the Local Government Board should create a special housing and public health department, with a staff of travelling sanitary and housing inspectors to supervise the administration of the public health and housing laws by the county councils.

Finance.

Incorporated in the report are several instructive tables showing what would be the approximate rate in the £ which would have to be levied in what may be termed the 16 rural counties during the existence of the loans necessary to build 500 cottages, each costing either £150 or £200, and let at 2s. weekly. In only a few instances does the rate exceed one penny, and in some is less than a farthing in the £. The estimated annual loss upon 10,000 cottages, each costing £150, and let at 2s. weekly, and assuming the capital to be borrowed at 4 per cent. for 60 years, would be £38,833; and when this sum, says the Committee, is contrasted with the recent grant of £200,000 for the alleviation of the unemployed, admittedly an unproductive expenditure, and with the permanent benefit that would result from the erection of 10,000 cottages in the rural counties, it will be recognized that the call upon the national funds is in reality a small demand, and out of all proportion to the good that would result.

LITERARY NOTES.

WE have received the first number of the *British Journal of Tuberculosis*, a new quarterly, the coming of which was heralded in our last issue. It is well printed on good paper, and altogether presents an attractive appearance. The contents are of quite exceptional interest and value. Among the contributors are Professor Clifford Allbutt, Sir Richard Douglas Powell, Sir John William Moore, Sir Lauder Brunton, Sir Hermann Weber, and Sir Samuel Wilks. We congratulate the editor, Dr. Kelynack; the publishers, Messrs. Baillière, Tindall, and Cox; and all concerned in the production of the new journal, on a highly successful first appearance. It seems to us fully to fulfil its aim of providing "a responsible organ for the record of all that relates to that world-wide movement of rational thought and reasonable action known as the Antituberculosis Campaign."

Charles Lever, whose novels still find numerous readers was by first intention a doctor. After a diversified academic career, which included visits to Göttingen, Heidelberg, Vienna, and other Continental seats of learning, besides the traditional exercise of "walking the hospitals" in Dublin, he obtained the degree of Bachelor of Medicine from Trinity College. He did good work as medical officer during a cholera epidemic at Kilrush in County Clare, and was afterwards a dispensary doctor at Portstewart. The position was uncongenial, and in 1837 he settled in Brussels, where he was told there was only one good English physician, and "he constantly in gaol for debt." Interesting details of his professional career are given in his *Life and Letters*, by Mr. Edmund Downey, which recently appeared. The ordinary fee in Brussels was 5 francs, and he at first found the small fee more profitable, "as it is always offered and taken for each visit, and tendered for visits which rarely would elicit the guinea." He had some trouble in getting permission to practise, but by the influence of the British Ambassador he got over this difficulty. He was, however, fined for illegal practice, and this, with costs, amounted to £20. He comforts himself with the reflection: "Still I made more than that by the delinquency, so that, after all, I am no loser." At one time we find him sanguine as to his prospects, with all sorts of distinguished persons among his

patients and making from £2 to £3 a day. Then he is depressed, striving to make both ends meet by writing. It should be said that he entertained with reckless hospitality. Of one of his parties he says: "I had three earls and two ambassadors on Tuesday, and am keeping that set exclusively in my interest." That he did not find this profitable is shown by his continual complaints of wanting money "most considerably." Finally, in 1840, he writes that he has thrown physic to the dogs and determined to trust his fortune to the frail skiff of literature. He seems sometimes to have regretted that step. Shortly before his death we find him moralizing as follows:

Having given up the profession, for which I believe I had some aptitude, to follow the precarious life of a writer, I suppose I am admitting only what many others, under like circumstances, might declare, that I have had my moments, and more than mere moments, of doubt and misgiving that I had made the wiser choice: and bating the intense pleasure an occasional success has afforded, I have been led to think that the career I abandoned would have been more rewarding, more safe from reverses, and less exposed to those variations of public taste which are the terrors of all who live by the world's favour.

We are inclined to think that Lever, with his mercurial temperament and his pleasure-loving disposition, was out of place in a profession requiring so absolute a devotion, and so full of trials and disappointments as that of medicine.

Lever tells a story which may serve to point a moral at present, as it shows the evils to which the want of regard for professional secrecy may lead:

You have heard, I suppose, of the great gossip of the day—Lady Lincoln's affair with her doctors. The real case appears to be a most infamous one, nothing less than this: These two Polish M.Ds. have threatened, unless they receive 400,000 francs, to disclose certain secrets her ladyship unfortunately let slip in the ravings of her insanity during her illness. Lord Lincoln resents the iniquitous demand, and the affair is to come before Le Tribunal. Anything so thoroughly blackguard I never heard of before.

He goes on to draw the moral, which is gratifying to our national pride as well as edifying in itself:

But it is a salutary lesson to the English for their mad preference of foreign quacks and humbugs to the highly educated medical men of Ireland and England.

Hamvasztás is the title of a new periodical issued at Buda-Pesth devoted to the popularization of cremation in Hungary. The editors are Dr. Wilhelm Friedrich and Herr Samuel Pap.

MEDICAL NEWS.

The British Gynæcological Society will hold its dinner at the Café Monico, Piccadilly Circus, on Thursday, January 17th, at 7.30 p.m.

The next formal session at the West London Post-Graduate College, West London Hospital, commences on Monday, January 14th.

A dentist has been appointed to the Rudolf Virchow Hospital in Berlin. This is said to be the first time in Berlin and possibly in the German empire that dentistry has been accorded a place in a hospital staff.

Dr. Lucas, on her resignation of the post of Resident Medical Officer at the Tooting Park Workhouse Infirmary, prior to her leaving was presented with an illuminated address, medical books, and a set of surgical instruments by the staff of the workhouse and infirmary.

Dr. William Byam Grant, District Surgeon, Federated Malay States, and formerly P.M.O. Government Hospital, Port Said, has received permission to accept the Fourth Class of the Order of the Medjidieh conferred upon him by the Khedive of Egypt in recognition of valuable services rendered by him.

The Board formed in connexion with the candidature of Drs. Langley Browne, Lattimer, and McManus for the General Medical Council has been duly audited. The expenses amounted altogether to £73 0s. 6d., towards which generous subscriptions to the amount of £43 12s. 6d. were received.

The governors of the Victoria Infirmary, Glasgow, at their meeting on December 19th, placed on record in the minutes of the meeting their appreciation of the able and efficient manner in which Dr. Eunice Dunlop had managed the affairs of the infirmary as acting superintendent during the four months' absence of the superintendent.

The report for the year, submitted at the annual general meeting of the constituents of the Hospital Sunday Fund for London on December 20th, showed that the total collection for the year amounted to £63,000. Of this sum, however, only £44,647 was collected in places of worship, or less by over £4,000 than the amount of such contributions in 1905. It was determined to hold the next Hospital Sunday on June 9th, an appeal being made in the Roman Catholic churches on the preceding Sunday.

In the course of an inquest of January 1st, in which the possibly detrimental effect of an expensive patent medicine used by the deceased came into question, the Southwark coroner, Dr. F. J. Waldo, said that he had had to deal with numbers of cases of quack medicine. People were deceived by the duty stamp on the packages and bottles, and were deluded into believing that it constituted a Government guarantee. Government reaped a rich harvest from these stamps, which, however, should be abandoned, so that the people might no longer be deceived.

The *Evening Standard and St. James's Gazette* published on the last day of the year its annual list of British centenarians, or, rather, of the persons to whose attainment to the reputed age of 100 or upwards attention has, in one way or another, been attracted. These lists have been published for the last twenty years, and appear to be kept in such fashion that the same person cannot be counted twice over. Of the 57 who receive mention this year, 41 are women and only 16 men. The gross number of centenarians whose existence our contemporary has recorded from 1886 to 1905, both years inclusive, is 868, about 63 per cent. of the total being women.

The report of Livingstone College for the past year records the foundation of an exhibition of £25, in memory of Mrs. Bishop, an old supporter of the College, who was greatly impressed with the practical importance to missionaries of a sound knowledge of hygiene. The great need of the College at the present seems to be an increase of students; this will doubtless follow so soon as missionary institutions more generally recognize the wisdom of arming those whom they send abroad with a knowledge of the best means of protecting their own health. The report also mentions that an institution, modelled on Livingstone College, is about to be started in Germany—a fact which affords strong testimony to the value of the work done by the Principal, Dr. C. F. Harford, and his assistants.

The Board of Hygiene and Temperance formed some time ago to promote scientific teaching in these subjects in elementary schools, by arranging courses of instruction for teachers, has recently completed its first course, and the results have been so satisfactory that a second course will be commenced at the Birkbeck College Laboratory, Chancery Lane, W.C., on January 11th. The syllabus of the course includes instruction in elementary physiology, in personal hygiene, in the disabilities and diseases of childhood, and in the sanitation of the school and home. Mr. Birrell, in replying to a memorial, stated last summer that he was convinced that the teaching in hygiene and temperance in elementary schools should, as far as possible, be given by the ordinary members of the school staff, and in this opinion we believe that most medical and educational authorities would heartily agree. It is to be hoped that the work commenced by the Board of Hygiene and Temperance may be increasingly successful, and that eventually similar classes may be held in other centres where they have not yet been established.

Medical Magistrates.—Dr. W. M. Morison, Annfield Plain, has been appointed to the Commission of the Peace for the county of Durham. The Lord Chancellor has added the name of Dr. J. H. Croudace, of Foregate, to the list of borough justices for Stafford.

Rochdale Infirmary.—Dr. Richard Burdett Sellers, Senior Surgeon to the Rochdale Infirmary and Dispensary, resigned his appointment last month after twenty-four years in the service of the institution. The Board, in accepting his retirement, passed a resolution appointing him Consulting Surgeon, and placed upon the minutes an expression of its extreme regret at the loss of his services in an active capacity; these, both professionally and as a member of the House Committee, having been of the greatest value.

Belgian Parliamentary Group.—The medical members of the Belgian Parliament have, in a petition addressed to the Minister of the Interior and of Public Instruction, asked him to consider the expediency of creating a clinic of dentistry in each of the State Universities. They express the opinion that such a step is desirable. The Minister has agreed to look into the matter. The Parliamentary Group has further decided to press forward as much as possible the debate on the proposed law on the practice of medicine, and that on compulsory vaccination.

British Medical Journal.

SATURDAY, JANUARY 5TH, 1907.

THE ASSOCIATION AND THE FUND BILL.

THE British Medical Association, which has for so many years stood forward as the champion of the profession when its honour or interests have been assailed, and which only a few years ago underwent reorganization that it might in future act with more authority, effect, and promptitude, is now faced with a fresh crisis which has suddenly arisen in the long-drawn-out story of hospital administration in London.

The Bill for the incorporation of the King Edward's Hospital Fund for London is printed in the SUPPLEMENT this week (p. 1), and some observations on the procedure likely to be followed in respect to it will be found elsewhere in this issue (p. 28). Its provisions will excite a good deal of criticism and not a little astonishment that men experienced in affairs should have advised the preparation of such a measure at the present day. The King, the founder and first President of the Fund, and the Prince of Wales, who is now President, have in many ways and on many occasions given convincing proofs not only of their interest in hospital work, but also of their sympathy with the aims and aspirations of the medical profession, and the Prince, in his speech at the annual meeting of the General Council of the Fund, said that in sanctioning a proposal to seek an Act of Incorporation to place the administration of the Fund upon a strictly legal basis he was acting upon the advice of those most closely connected with the matter, and of a Committee appointed to confer with those responsible for the drafting of the Bill. It is permissible, therefore, frankly to point out some of the features of the Bill which appear to us to prove that the advice tendered to His Royal Highness has been exceedingly injudicious.

The Fund has received the support of the benevolent public to an unprecedented and probably an unanticipated extent, and those responsible for its administration no doubt felt that it was for many reasons desirable that its legal position as the holder and distributor of funds given for a public purpose should be more clearly defined. We believe, moreover, that the influence of the Fund where it has been exerted has been altogether for good, and that in particular it has encouraged more efficient and more economical administration of hospitals and checked ill-considered schemes for their multiplication and undue extension. But neither the financial success nor the good administrative record of the Fund justify the unusual, and as we venture to think, retrograde provisions of the Bill which the Committee proposes to submit to Parliament. This Committee has ignored absolutely the wishes, rights, and instructions of those by whose exertions or gifts the Fund has been built up, that is to say, of testators, donors, and subscribers, past, present, or future. It has ignored also the fact that the medical profession whose members staff the hospitals have an indisputable claim to share in the direction of these institutions and in the mode in which medical charity shall be administered. Finally, the Committee has committed the serious indiscretion of placing the President of the Fund, who is to be the nominee of the Sovereign, in the invidious position of being absolutely and unconditionally responsible for the whole working of the Fund. He, on his own sole authority, is to make, vary, and rescind by-laws, and he is to be the sole arbiter of how the moneys of the Fund shall be invested, and to what hospitals or hospital—for power is even taken to give all to one hospital—the whole, or any part, of the capital or income of the Fund shall be allotted. Private Bills sometimes, as every one knows, contain strange provisions, but we very much doubt whether any precedent could be found for provisions of this kind, and make bold to say that no Bill containing such provisions has obtained the sanction of Parliament for the last hundred years at any rate. Its provisions are contrary to the spirit of the constitution and to the spirit of the age.

At present the scheme of the Committee of the Fund seems to have attracted very little public attention. Probably its nature is not generally known, as the Bill in which it is embodied has not hitherto been published. When the public understand the scheme the Committee has propounded, we cannot believe that the proposals will escape criticism. The representative principle is too well understood in this country, forms too essential a part of our conception of the way in which public affairs should be conducted, to make it possible to believe that the public would approve a scheme conceived in direct opposition to that principle. The objections felt by the medical profession belong to the same category of ideas, but they are felt with particular force by men who give their time and energies, who recognize that the future progress of medicine is intimately bound up with the wise administration of medical relief, and who know that their means of livelihood are endangered by the maladministration of hospitals.

The matter has already been taken into consideration by the executive of the Metropolitan Counties Branch of the British Medical Association, and will be discussed at the meeting of the Central Hospitals Committee next week, which will have before it the recommendations of the Medical Charities Committee of the Branch.

SYPHILIS AND MARRIAGE.

IN two recent communications[1] Professor Fournier has drawn renewed attention to this important subject. From his statistics of syphilis in women of all classes, he finds that in 20 per cent. it occurred in those who were married. Out of 312 cases of syphilis in married women, in 218, or about 70 per cent., it arose from syphilis contracted by the husband before marriage, and in 94, or about 30 per cent., from syphilis contracted by the husband subsequent to marriage. Professor Fournier's papers deal only with the first class of case, those in which the wife was contaminated through the agency of syphilis acquired by the husband prior to marriage. It is significant that out of 154 cases of this class the manifestations of the disease presented themselves in no less than 117 of wives thus contaminated during the first six months after marriage, whilst in only 13 did they appear in the second six months, and in 9 in the course of the second year. Equally significant is it that in 3 cases the first symptoms manifested themselves as late as the sixth year of marriage, in 2 in

[1] La syphilis des honnêtes femmes. *Bulletin de l'académie de Médecine* Séances des 2 et 9 Octobre, 1906; and BRITISH MEDICAL JOURNAL, October 13th, p. 977, and October 27th, p. 1155.

the seventh, and in 2 others as late as the eighth and ninth years respectively. Some cases of early contamination after marriage were due to a syphilis in a state of incubation in the husband, acquired as the result of a traditional and dangerous ceremony entitled "enterrement de la vie de garçon," where a sensual orgie is participated in as a preliminary to the lawful indulgence of matrimony. A still greater number of early cases were due to husbands marrying with syphilis in the full tide of secondary manifestations.

Fournier laments the too-frequent infection of an innocent wife by a syphilitic husband, since it is a calamity largely preventable. For its occurrence he holds the medical profession to some extent responsible. With the criminally callous who marry while suffering from a recent chancre, and with the recklessly indifferent who do so in the stage of secondary manifestations, no conceivable measures will prevail. But a large part of the evil, he pleads, is due to sheer ignorance on the part of the laity, and might be prevented by instruction from the profession as to the nature and course of the disease. But how any further instruction other than that at present available is to be given is not very apparent. In a minor number of cases he blames the medical profession for sanctioning the marriages of syphilitic men too soon after infection. Especially does he lament that a master like Jonathan Hutchinson, for whose writings no one has a greater admiration than he, should sanction marriage at so early a period as two years after infection. It should be remembered, however, that Mr. Hutchinson sanctions marriage at such an early period only when he is satisfied that treatment has been thorough and complete, and states that he has never had to regret his sanction under such conditions. The lack of information as to amount and length of treatment, indeed, does much to minimize Fournier's strictures on those members of the profession who sanction marriage at an earlier period after infection than he is inclined to adopt. Nevertheless, and in spite of Mr. Hutchinson's personal success, we are disposed to think Fournier's advice to delay marriage until four or five years after infection right and reasonable, especially when the welfare of the offspring has to be considered as well as that of the wife. It has been said that the extreme caution enjoined by some authorities on this point would soon depopulate the earth but the answer may well be neglected.

Dealing with the cases of 142 women infected after marriage, Professor Fournier tabulates the ages the syphilis had attained in the husbands at the times of marriage. According to his statistics, in about 50 per cent. the syphilis was more than two years old before marriage; this would be a strong condemnation of Mr Hutchinson's advice were there no other factors to be considered. In 28 cases, moreover, or in about 20 per cent. the syphilis in the husband was more than five years old at the time of marriage, so that the time limit Fournier would put proves before sanctioning marriage was exceeded in these cases. But here, again, the figures are vitiated by the distorting element of treatment, and it may well be that it is safer for a man well treated to marry a year only after infection, than for a man ill treated after a lapse of five or even ten years.

Another notable feature in the table is the extreme length of time the power of contagion was retained in some of the cases of men having married seventeen years after infection, and another even as late as eighteen years. Such cases are confirmatory of the precedent view that the importance of the distinction between the so-called secondary and tertiary stages of syphilis was overestimated by older authorities, and that secondary infective lesions can occur at the period when freedom from contagion was supposed to have been gained by the disease having reached the tertiary stage.

It is interesting that in a very large proportion of the cases in which syphilis in the husband was of long standing the infection of the wife was a buccal and not a genital one. For these buccal infections Fournier blames the habit of smoking, and suggests that a promise to abstain from smoking should be obtained from every syphilitic male before sanctioning his marriage with a healthy woman. Such a promise would be difficult to extract in many cases, and the keeping of it might possibly be a very doubtful benefit. A condition of syphilis, so slightly latent that the mere irritation of smoking leads to the eruption of infective lesions in the mouth, is a source of danger to the wife, and still more so to the offspring, for the maxim of Kassowitz that when contamination of the wife is merely a remote possibility transmission to the offspring is certain, contains more than a germ of truth. Smoking, then, by revealing an unexpected source of danger, and so leading to further treatment, may act as a safeguard to both parents and possibly to the offspring. In the active stages of secondary syphilis smoking is, of course, rightly prohibited.

Syphilis in innocent married women is more deplorable than the disease in others, for the reason, as Fournier points out, that it is apt to be worse treated. In many cases the husband, from cowardice, keeps the knowledge of his wife's contamination to himself and the treatment of it in his own hands. In other cases he prevails upon the doctor to treat his wife without imparting to her the real state of affairs. In either instance the wife's ignorance of her condition leads to treatment being abandoned on the first disappearance of active symptoms, with disastrous results both in the near and distant future. It is not uncommon, Fournier states, for doctors to be misled in the later stages of syphilis acquired in this way by the wife's confident assertion that she had never suffered from the disease. The subject of syphilis in chaste women is important, and Fournier's communications are worthy of his high reputation.

THE PUBLIC HEALTH SERVICE OF ENGLAND AND WALES.

THE Parliamentary Session which has just closed was singularly barren as regards public health legislation, but there is reason to expect more fruitful results from that of 1907. Indications are not wanting of the intention of the Government to introduce a measure or measures for the reform of the administration of the Public Health Acts in England and Wales. The reports of the medical inspectors of the Local Government Board upon the administration—or too often the maladministration of rural district councils have lately been appearing with the regularity of a weekly newspaper, and among the recommendations of the inspectors there has been a remarkable agreement. With rare exceptions they have advised that, with a view to securing better supervision and the advice and guidance of a skilled officer, an endeavour should be made by the particular authority interested to enter into combination with adjoining districts for the purpose of appointing a properly qualified and experienced whole time medical officer of health. This community of recommendation points to a general policy of the Board favouring the creation of combined sanitary districts.

A still further development of the principle of enlarged administrative areas is advocated by Sir John Dickson-Poynder's Committee upon the Housing of the Working Classes in Rural Districts, an abstract of whose report will be found on page 32. The Committee recommends that the administration of the Public Health and Housing Acts should be transferred from rural district councils to the county council, the latter body being obliged to appoint a medical officer of health as executive officer. The sweeping nature of the proposal is admitted by the Committee, but it considers it justified by the failure of rural district councils to deal with the condition of existing houses by proper inspection and administration of the law, and by the neglect of medical officers of health and inspectors of nuisances to bring the existence of nuisances and defects before the owners of cottages from time to time by notices and summonses. The reflection upon public health officers implied in this last statement is one which we cannot allow to pass without protest. If the Committee had obtained evidence, as it might, from a representative body of medical officers of health, such as the Public Health Committee of this Association or the Society of Medical Officers of Health, it would have learnt that in the vast majority of instances activity on the part of a medical officer of health in the direction indicated by the Committee would merely result in his failure to secure re-election at the end of his term of office. The condition of the houses would remain the same, for another officer, made wise by the experience of his predecessor, would be installed, and the public health would not be benefited one whit. The general lowering not only of the death-rate but of the sickness-rate, which of late years has been a noticeable feature in rural districts, is eloquent testimony to the activity of medical officers of health. As a body they realize to the full the responsibilities of their office, and, considering the monstrously unfair conditions under which they hold office, the wonder is that they have been able to do so much.

With the broad principle underlying the chief recommendation of the Committee the medical profession will be in agreement. The Public Health Acts will undoubtedly be better administered by a body having jurisdiction over a large area than over a small one. But as to whether that body should be the County Council there is likely to be some difference of opinion. Of the sixty county councils in England and Wales less than one-half have appointed a special officer of health and the majority have shown the most supreme indifference to the improvement of the public health generally. Although they possess powers of initiative in more than one direction, such as the provision of isolation hospital accommodation and the prevention of the pollution of rivers, they have only exceptionally made use of them. It can hardly be expected, therefore, that a body which has conspicuously neglected the few public health functions it does possess will carry out with much enthusiasm any additional powers which the Legislature places upon it. The Committee itself seems to anticipate that the county councils will not welcome the proposed tranference of powers, and suggests that the staff of the Local Government Board should be strengthened by the appointment of officers whose duty it would be to stimulate county councils in the performance of their duties, and to supervise the construction, sanitary condition, and repair of houses under the Public Health Acts, and the provision of houses under the Housing Acts. But the proposal of the Committee as it appears in the report is hopelessly unworkable for other reasons. It would place the rural districts under the jurisdiction of the county council and the county medical officer of health, but it would leave the small urban districts which are in the midst of and closely connected with the rural districts, and in many of which there are only a few thousand inhabitants, still in charge of the urban district councils. No extension of administrative area will be satisfactory which does not include town and country districts, so that economies of administration may be practised not only as regards officials, but in the provision of hospital accommodation, disinfecting apparatus, of a bacteriological laboratory, and in other ways.

Although we have considered it our duty to criticize the report somewhat adversely, we do not wish to suggest that the labours of the Committee have been wasted. Information of the highest value has been collected, and, with the exceptions indicated, the conclusions and recommendations set out appear to be just and fair. The report is an important contribution to the solution of the problem which is even now before us of the reorganization of the public health service in England and Wales.

THE NEW WORKMEN'S COMPENSATION ACT.

THE Workmen's Compensation Act, which comes into force on July 1st, will very materially affect the interests and increase the liability of employers. While the main object of the Act of 1897 was to provide for the payment of compensation to persons injured by accident in employment which involves some element of danger, this principle was partially abandoned in 1900, when the Act of 1897 was extended to agricultural labourers, and is altogether departed from in the new Act. From the fact that a domestic servant is now included in the term "workman" as used in the new Act, some idea may be formed of the number of persons affected, whether as employer or employed. Inasmuch as it contains provisions which are of peculiar interest and importance to the medical profession, we propose to deal with the Act more fully as soon as the final text can be obtained from the King's printers.

THE RESPONSIBILITY OF THE MEDICAL PROFESSION TOWARDS THE PUBLIC.

Two cases have occurred recently in which members of the profession have had to submit to more or less public censure in the press on account of failure to render adequate assistance to persons whom they have been summoned to attend. The first case, reported in the *Daily News*, is from Birmingham, where it is stated that early on Christmas morning a man named Tomkins was taken seriously ill, and his wife went to call a doctor; two neighbouring practitioners declined to attend without their fees; she next went to the police-station, but as "the horse ambulance was out they "could not help her." She then tried other medical practitioners, in all eight, but, according to her account, the only one who did not decline to get up without his fee was ill with influenza. Eventually "a local chemist, "who is also a surgeon, was persuaded to see the man, "and he ordered his removal to the hospital," the removal being carried out by the men from the "Linford Street" Fire Station, who are said to have been "most solicitous during the day for the welfare of the "Tomkins's family." As, according to Kelly's *Directory*, there is no Linford Street in Birmingham, it is probable that this story is as inexact as the address given. But, assuming it to be true, we can only say that we sympathize with medical practitioners who decline to attend cases without a

reasonable probability of being paid for their services. It is very well for the public to express cheap sympathy with the sorrows of sick persons unable to obtain medical assistance, but it cannot fairly ask that such attendance should be obtained at the expense of the medical profession. If the present Poor-law arrangements are not sufficient to supply the needs of emergencies, let them be modified. As we have frequently pointed out, an excellent system prevails in Paris to meet such cases. There is a fund, partly derived from charitable donations, and partly from public money, like the magistrate's poor-box money, and from this, medical practitioners so summoned are paid. In an emergency, any person unable to pay a medical practitioner, applies at the nearest police office, where a list is kept of medical men willing to undertake this class of work: by this arrangement people know exactly where to go, and have no difficulty in obtaining medical assistance. Until some equally efficient plan is adopted in this country we do not see how unfortunate occurrences, such as that reported from Birmingham, can be prevented, and we protest against the responsibility for them being placed upon the medical profession. The other case is more complicated. At the meeting of the General Medical Council last November the name of James William Ayres was removed from the *Medical Register* on the ground that he had been convicted of misdemeanour, the facts being, as reported at the time, that he was convicted of being drunk in a certain public street in Liverpool, and, while drunk, of riotous behaviour. He was subsequently convicted of wilfully neglecting his four children, all under the age of 16 years. This man, in spite of the removal of his name from the *Medical Register*, apparently continues to practise, and was called in to see a Mrs. Robinson, who was being attended by an unregistered midwife. As the case presented certain complications, Ayres asked for a consultation, but a medical practitioner who was summoned to meet him declined on the ground of Ayres's position as an unregistered practitioner. This difficulty was got over by Ayres withdrawing from the case, and the medical man who took his place, having summoned another to consult with him, eventually decided that the woman should be removed to a hospital. He left word at the hospital for an ambulance to be sent, but it is stated that he was not told that it could be sent, or allowed to believe that it would be sent, and that he was informed that the person to whom he should have applied was the relieving officer, who resided only a few minutes' walk away. The doctor however, considered that he had relieved himself of responsibility by leaving the message at the hospital and did not see the woman again. As the ambulance did not come for her and she continued very ill, a third doctor was called in; eventually under his care a dead child was born, and the mother died later. According to the report in the *Liverpool Daily Courier*, it was shown by *post mortem* examination that the cause of death was "heart "failure and collapse consequent on a rupture," and it was added that death might have "occurred irrespective of any neglect." The jury seem to have returned a verdict in accordance with the evidence but added a rider "severely reprimanding" the medical man who attended the case after Ayres withdrew for his "heartless conduct," and they considered that Ayres should be censured for attending the case he being unregistered as a medical "practitioner." The coroner expressed his agreement with the censure of the medical practitioner, but would say nothing about the conduct of Ayres, whom he seems to have regarded as outside the law. The *Liverpool Daily Courier* comments on what it calls the awkwardness of a medical man attending "vital cases "when he is professionally ostracized," and the editor admits that "if Ayres had not been in "attendance on Mrs. Robinson, the other doctors "would probably have responded more promptly to the "urgent call, and the woman's life might have been "saved, if not the baby's." The case illustrates in a striking manner the unsatisfactory condition of the present law, which permits persons not on the *Medical Register* to practise, yet, when they withdraw from a case, throws all responsibility upon members of the medical profession. Here we have not only an unregistered practitioner but an unregistered midwife co-operating with him, and, presumably, both these persons would be on their respective *Registers* but for proved personal unfitness; yet they commit no offence in the eye of the law by continuing to practise. Such persons do infinitely more harm to the public than to the regular practitioners with whom they compete, and it is in the interest of the public, and not of the medical profession, that we urge the need for an amendment of the law. With regard to the conduct of the registered practitioner who was censured, we admit that a practitioner who sees a case accepts a certain responsibility towards the patient, and, if the condition is urgent, does not divest himself of that obligation until he has ascertained definitely that the patient will be taken charge of by some one else. As in Liverpool, to the great credit of the city, there exists a well-organized system of ambulances in connexion with the hospitals, he, no doubt, believed that there would be no difficulty in removing the patient from her home to the hospital; and as we do not know exactly what he did or said at the hospital, or what the hospital authorities said to him, we hesitate to accept the opinion that he actually failed in the performance of his duty towards the patient.

THE PREVENTION OF CORRUPTION ACT, 1906.

By the Prevention of Corruption Act, 1906, which came into force on the first day of this year, a serious attempt has been made by the Legislature to put an end to the many corrupt practices, great and small, pursued by tradesmen with a view to promote business by bribing agents and employés at the expense of their principals and employers. The provisions of the Act are explained at page 56, but a few further observations may not be out of place. Although we have always maintained that the charges brought against the medical profession by Sir Edward Fry were exaggerated, and that for some part of them there was no foundation whatever, it must be admitted that things have occasionally been done in the past which are forbidden by the new law, and that in future those who have been not too scrupulous in accepting discounts, douceurs, and commissions will have to act with more circumspection, or they may find themselves exposed to legal penalties. Medical practitioners should not receive commissions from tradespeople in return for recommending them or their wares, or from dentists for recommending patients; nor should they pay commissions to hotel proprietors, lodging house keepers, monthly nurses, midwives, or others for introductions to cases. A consultant should not share his fee with the medical attendant, nor should the latter make such a demand. Happily this custom does not exist in England, but it prevails to a considerable extent in France, and, although condemned there, seems very difficult to eradicate. Commission should not be paid by proprietors of lunatic asylums to relieving officers or other public officials who may send them patients, as such commission is in the nature of a bribe. Commissions may be paid to agencies for introducing resident patients but no medical practitioner should receive a commission for recommending a patient to a colleague;

or from hotels, boarding houses, lunatic asylums, sanatoriums, or touring agents; or for any service where his whole duty is to his patient, from whom alone he should accept remuneration. Commission may be accepted from insurance companies, but the medical practitioner must not act as medical examiner for cases introduced by him. The above list is not founded upon imagination; it is in every case based upon instances which have been brought to our notice, usually by medical practitioners who have indignantly rejected the proposals. Yet the suspicion is unavoidable that such circulars would not be issued if they were wholly useless. On the other hand, a person acting honestly and in good faith in giving a small present in return for services rendered is not exposed to any risk of prosecution under this Act, for any gift or consideration must be given or accepted *corruptly* in order to establish the offence. Further, no prosecution can be undertaken without the consent of the Attorney-General or Solicitor-General. Indeed, it is possible that there will be difficulty in putting the law in motion unless the police are willing, as they usually are not, to undertake the prosecution of offenders. We should certainly advise any of our readers who receive such circulars as have been sent to the profession in the past by instrument makers, brewers, wine merchants, tobacconists, and other tradesmen, to forward them to the police.

ARMY SANITATION.

THE term "military surgery" may be held to embrace not merely the art of surgery but the whole scope of the duties of the army surgeon. Foremost among those duties should be that of maintaining the health and vigour of the soldier; the speciality of the army surgeon should be hygiene. Such are the views of "Miles" in a pamphlet recently published on *Military Surgery in its Relation to the Science and Art of War*.[1] In order to bring the surgeon into closer touch with the soldier and so to bring hygiene into his training, he advocates further reform of the Army Medical Service. He desires a radical change. "To accomplish this, high technical "training, with complete knowledge of military science "and art, is necessary for the surgeon service." He wishes to see a corps of Royal Surgeons made part and parcel of the army in training, object, and feeling. He is in agreement with the policy so long advocated in these columns of granting executive powers to sanitary officers of the army; but, unless his rhetoric disguises his real meaning, he would go further—he would turn army surgeons into soldiers. For the measures he proposes would lead to the surgeon becoming so engrossed in attaining to full knowledge of military science and art that but little leisure would remain for the acquisition of a full knowledge of his special technical duties. "Miles" states that "on the outbreak of the South African "war there should have been at home 192 800 effective "men." But of these, it was admitted in Parliament, "92,000 were ineffective!" He regarded this large number of ineffectives as due to bad recruiting or improper after-management. As a matter of fact, they were almost all men who either had not completed their training, or had not reached the age-limit prescribed for foreign service. It is not reasonable to adopt the pessimist views of "Miles" regarding the ruin now being worked upon the recruit by ill-arranged courses of physical exercise, views in support of which he advances figures open, as shown above, to other explanation than that adopted by him for rhetorical purposes; but it is reasonable to agree with him that the physical training and exercises of the soldier should be judiciously undertaken. Surely no "radical change" is required in the "Surgeon Service" to effect this. There is no necessity to put the medical service again in the melting pot in order to effect the purpose which "Miles" ostensibly has in view. The health of the army is bound up with the great questions of efficiency and economy. The natural outcome of the recognition of this fact will doubtless be the adoption of measures to guarantee the effective application of hygienic principles. "Miles" presses this point, and his little work will assist in drawing attention to the necessity for bringing sanitation in the army to the highest perfection.

[1] *Military Surgery in its Relation to the Science and Art of War.* By "Miles." London: H. J. Drane. (Fcap. 8vo. pp. 16. 6d.)

A MODERN GERMAN HOSPITAL.

DR. DENEKE has recently published a volume giving a complete account of the new buildings of the General Hospital of St. George, Hamburg. This hospital, of which he is Medical Superintendent, has recently been restored and remodelled on a very elaborate scale, and is now probably one of the largest and best equipped hospitals in existence, containing as it does in its present state altogether 1,590 beds. The original hospital was built in 1821 3, and as now remodelled this part contains 658 beds. Two new sets of buildings have been added, the first erected between 1898 and 1901, containing 323 beds, and the most recent, commenced in 1902 and recently completed, containing 609 beds. The new buildings are two-story pavilions 9 metres in height, the distance between each being 22 metres, so that ample access of fresh air to all parts is provided for. Each pavilion contains 80 to 90 beds, except one building on each side of the hospital, containing 160 to 180 beds. Each ward contains 116 beds, as experience showed that one sister with the help of a day-nurse and one nurse at night could look after that number of patients. The usual number in German hospitals is 30 beds in a ward. The general arrangement of the pavilions, with a central corridor about which the various rooms are grouped, is much the same as that adopted in this country in many isolation hospitals. All the doors leading into the central corridor have glass windows, and the staircase opening out from it is well lighted and airy. The operation house is a special two-storied pavilion completely separated from the wards. The upper story is devoted to the Roentgen Institute, and is very elaborately fitted up. The lower story contains anaesthetic and preparing rooms, and separate rooms for aseptic and for septic operations, with separate staffs for each. The walls of the aseptic operating room, facing the north-east and north-west, are composed of a double layer of glass, the outer layer transparent and the inner opaque, with a space between of about 1½ ft., in order to facilitate cleaning. A glass roof rests on these glass walls. The floor of the operating room is composed of metal plates cemented together, and the walls are lined with Dutch tiles to a height of 1.50 metres. There are, of course, no sharp corners or ledges to collect dust, and every effort is made to obtain a germ-free atmosphere. There is no direct communication with the outside air; air sucked into the room by means of an electric motor first passes through an elaborate system of filters, consisting of stones, gravel coke, and finally a layer of sand 20 c.cm. thick, which has been proved experimentally to remove all organisms. In winter it is warmed by passing over radiators, and cooled in summer by ice. During an operation the air is kept at a higher pressure than that outside the room, so that when a door is opened air passes out and the entrance of impure air is avoided. It is not claimed that the air is rendered absolutely germ free by this method, as the organic exhalations of the operator and

[1] *Die Neubauten des allgemeinen Krankenhauses St. Georg, Hamburg.* Herausgegeben von Dr. Deneke, Aerztl. Direktor. The new buildings of the General Hospital of St. George, Hamburg. Edited by Dr. Deneke, Medical Superintendent. With a frontispiece and 148 illustrations. Jena: Gustav Fischer. (8vo. 163 pp. 1906.)

his assistants must be taken into account, but Dr. Deneke considers that an atmosphere relatively free from micro-organisms is obtained. There is further an arrangement to sterilize the air of the whole room after an operation by means of steam. The equipment of the hospital is completed by a bath-house, with hydro-electric, sand baths, etc., and a completely fitted pathological institute. The new buildings have cost altogether a sum of close on 4,000,000 marks (£200,000), and the cost of furnishing and fitting, including telephone installation to all parts, amounted to 1,115,000 marks (£55,750). This estimate does not include the cost of remodelling the old buildings, which is not yet quite completed. The operation house and Roentgen Institute cost 180,000 marks (£9,050). The total cost per bed is estimated at 4,397 marks (about £218), which is less than half the cost per bed of the Virchow Hospital, Berlin (10,000 marks), and can hardly be considered excessive when regard is had to the elaborate style in which everything has been completed, though a captious critic might perhaps consider that electric reading lamps which can either be hung on the walls or placed by the patient's bedside, and special bed-tables for reading and writing are something out of place in a general hospital. While no one can grudge any reasonable expenditure directed to the furtherance of aseptic surgery, one may be permitted to ask whether there is not a modern tendency to a great deal of unnecessary expenditure in over-elaboration of details.

DOCTOR AND MAGISTRATE.

IN a case of attempted suicide tried at Chatham Police Court on December 24th the stipendiary magistrate seems to have gone out of his way to make some insulting and quite uncalled-for remarks with reference to the refusal of Dr. Godfrey Taunton to attend to give evidence without having received a subpoena. It appears that on December 17th the prisoner, a potman, was brought to the doctor's house, suffering from the effects of oxalic acid which he had taken in beer. Dr. Taunton used the stomach pump and directed his removal to the local hospital. Asked by the police on December 19th to attend court to give evidence on December 20th, he replied that he would not do so unless compelled, and suggested that the house-surgeon at the hospital might possibly do so. When the case came on it was remanded, and on December 21st Dr. Taunton received his subpoena, in accordance with which he attended to give evidence on December 24th. When his evidence was finished, the following conversation took place. The Magistrate: 'I understand that when the police asked you to come to court you refused to do so unless subpoenaed. Is that so?' Dr. Taunton: 'Yes, I have always adopted that course.' The Magistrate: 'Then I think it is a very foolish and stupid course you are adopting. You are making yourself out to be very important. Let me warn you that when you are asked to come and give evidence in a criminal case it is your duty to do so, and if you do not come when subpoenaed you may be sent to prison. If I have to subpoena every witness a pretty mess we will be in. Being in a higher station of life than the majority of people who have to give evidence in criminal cases, you ought to set an example to other people.' In delivering this little lecture the learned magistrate seems for the moment to have forgotten that, sitting in the seat of justice, it was his first duty to keep the latter *dicta* within legal limits, that there is no law in England to compel a doctor to attend court on the mere request of a policeman, and that Dr. Taunton, in attending in answer to the subpoena served upon him, had done all that could legally be required of him. The worst of these silly utterances on the part of magistrates is that they are sure to be published in full in the local papers, and may possibly impress ignorant people with an idea of the magistrate's profundity. It is not many months (BRITISH MEDICAL JOURNAL, September 29th) since we published a case in which a doctor who had attended court at the request of the police, was disallowed his fee because the police had made a mistake in the day. We advise all medical witnesses to take warning by this case, and wherever necessary to have the courage of their opinions, and act as Dr. Taunton has done in spite of possible magisterial censures.

MORE LAST WORDS FROM THE "BLOODLESS SURGEON."

ON December 10th, 1906, Mr. H. A. Barker wrote that that was probably the last occasion on which he would trouble us. Since then we have received some more last words. They call for little comment from us. He charges us with omitting the very pith and marrow of the meaning of his letters. This we simply deny; we have given the relevant parts of all his communications, mostly in his own words. Nor have we "dodged" what he calls his acceptance of our challenge; he has taken particular care not to accept it. We may point out that we have not challenged him to prove the utility of his methods, but to give surgeons an opportunity of forming a judgement about them. The way to do this is not to invite a few more or less incompetent persons to witness a display of manipulations for replacing bones that are "out," but to describe the principles on which he makes his diagnosis and selects his cases, and the precise way in which he exercises his manipulative art upon them. Mr. Barker appears unwilling to do this, doubtless for reasons that seem to him good and sufficient. Nothing will serve him but a test by a committee. But who are to form the committee? Not qualified surgeons surely, for whom the bonesetter professes the utmost contempt. Probably a jury of newspaper reporters would best suit Mr. Barker, for, we take it, the true inwardness of the test is advertisement. He is wroth because we do not publish the letters of his grateful patients, and asks, "When has the direct "and first-hand evidence of reputable witnesses ceased "to be of value?" Such evidence could without difficulty be produced in proof of the efficacy of any treatment whatever. It may be remembered that we suggested to Mr. Barker that he should get himself admitted *in nostro docto corpore*, when all the difficulties of which he complains would disappear. To this he replies that he does not qualify because he does not care to waste his time in studying methods of surgical treatment the utter inadequacy of which, as far as his special work is concerned, he has demonstrated every working day of his life. This being the case, we ask again on what ground does he complain that justice is refused him by men who, on his own showing, must necessarily be incapable of judging his work. We have already indicated one possible reason for his preferring to remain outside the fold, another may be hinted at in a story which bears its moral writ large on its face. As may be gathered from the illuminating remarks about the persecution of 'Lithot' for using the stethoscope (!) Mr. Barker seems to have dabbled in the history of the healing art; he may therefore have heard of Frere Jacques. That friar is said to have cut some 2,000 patients for stone. He operated with the boldness of ignorance. The surgeons induced him to learn the anatomy of the parts with which he dealt so freely. It is open to Mr. Barker to say that they did this to disarm a rival whom they felt to be formidable. At any rate, the result of their instruction was that

Frère Jacques, appalled at the dangers through which he had been wont to cut his way light-heartedly, gave up operating. With this bit of history, which was described by Bolingbroke as philosophy teaching by example, we take our leave of the "bloodless surgeon." He cannot deny that we have given him a good run, and we have made no charge for the advertisement. He appeals to the public to judge between us, but the public must forgive us if we decline to accept its judgement on matters as to which it is incapable of forming an opinion.

PEOPLE'S LEAGUE OF MEDICAL FREEDOM.

THE existence of a body calling itself the People's League of Medical Freedom has only recently come to our knowledge, and we hasten to inform the profession of the appearance of what we take to be a rival body. Its origin and previous history are, as far as we are concerned, "wrop in mist'ry," like the birth of Jeames. But it seems to be organized so far as to possess an executive committee. That committee held a meeting not long ago which was presided over by Mr. J. P. Swan, of Liverpool, of whom, at the risk of having it retorted upon us that "whom not to know argues "oneself unknown," we have to confess we never before heard. From a short account of the proceedings which appears in the *Liverpool Daily Courier*, we gather that it was decided to recommend that an Education Board, consisting of an equal number of representatives of the National Association of Medical Herbalists, the People's League of Medical Freedom, and the "University Extension Movement of the Physio-" medical Colleges of U.S.A." should be formed for the purpose of establishing a herbalists' college in this country on Thomsonian lines. Who is, or was, Thomson? And what are Thomsonian lines? We feel ashamed of our ignorance, and can only comfort ourselves with the saying of the poet that "the world "knows nothing of its greatest men." The meeting expressed regret that the Privy Council had not granted the herbalists the Royal Charter for which they asked. We are not in the secrets of the Council, but it is just possible that that most honourable body thought the application an impertinence. The People's League of Medical Freedom further decided to address a circular letter to representative public men who are "in "sympathy with the practice of unorthodox medicine" inviting them to subscribe towards a fund for promoting cancer research by herbalists. There are several public men in this category, but we venture to doubt whether the sympathy of most of them is strong enough to loosen their purse strings to any substantial extent. Of what herbalistic cancer research is, we get a glimpse from an offer by a Mr. W. H. Webb to hand over his "sanatorium for two years free of rent and rates, for the "treatment of cancer patients for a committee of "inquiry." A condition attached to the offer is that each herbalist is to prescribe his own treatment to his patient "and have consultations only with herbalists "and other natural healers not on the British *Medical* "*Register*." Apparently there is not among herbalists any *locus penitentiae* such as there is under the wings of Mother Eddy, for 'verts from medical orthodoxy.

"CHARACTERS."

ALTHOUGH, as a general rule, libel actions are only of interest to medical men when they relate to the conduct of some physician or surgeon in his professional capacity, there are some cases involving the discussion of general principles which should not be allowed to pass unnoticed. The question whether a "character" given to a servant or some other person is privileged or not is one which concerns every employer. A case in point was heard recently in the King's Bench Division. The plaintiff, a male nurse, who had been employed at an infirmary, applied to the defendant, a medical officer of the institute, for a character in order that he might obtain a new situation. Mistaking the person who applied to him, the defendant described the plaintiff as "a pauper who had been treated in "the infirmary in consequence of an accident." It was alleged that as a result of this the plaintiff was unable to get work. The judge directed the jury that unless there was malice the occasion was privileged, and there should be a verdict for the defendant. The jury found accordingly; but, in case there should be any question hereafter, they assessed the damages provisionally at £5. The law upon this subject, as exemplified in a long series of cases, is very clear. A master is under no obligation to give a character to a servant, but if he does, a duty is cast upon him to state fully and honestly all that he knows either for or against the servant; and any communication made in the performance of this duty is clearly privileged for the sake of the common convenience of society, even though it should turn out that the former master was mistaken in some of his statements. If out of anger or any ill feeling against the servant, or from a desire to retain her in his own service, he gives a bad character when he knows that a good one is deserved, he is acting maliciously, and all privilege is lost. If from any wrong motive, therefore, he makes statements about character or work which he does not know to be true, careless whether they be true or false, such recklessness is tantamount to malice, and takes the case out of the privilege.

CATHETER CYSTITIS AND BACTERIA.

IN considering the causes of cystitis in women three main channels of infection must be distinguished—one by way of the ureters, a second directly through the bladder wall from some of the surrounding structures, and the third from below by way of the urethra. Of these three channels, the most frequent transmitter of infection is the urethra. Dr. Taussig of St. Louis, Missouri, has recently[1] made bacteriological examinations of the urethral secretion in 50 women free from any disease of the urinary tract or acute pelvic inflammation. In addition various tests were made in regard to the manner of catheter infection. The full details of these important researches should be studied by surgeons as well as by gynaecologists, but it will suffice here to say that Dr. Taussig summarizes his experience as to the relation of urethral bacteria to the production of catheter cystitis in women as follows: The normal urethra, free of disease, was sterile in 8 out of 45 cases investigated. Pathogenic germs were present in 62.5 per cent. The pathogenic organism most commonly found was the *Staphylococcus pyogenes albus*. The occurrence of the *Bacillus coli* seemed to be very variable. It has been found frequently in patients confined to bed; but Taussig isolated it only three times. Urethral bacteria are actually carried into the bladder by catheterization, a fact which Taussig demonstrated in eight examinations in which the urethral secretion and the urine obtained by catheterization were compared. In 6 cases the bacterial findings were identical, whilst in the remaining two the difference was slight. Irrigation of the urethra with boric acid removed a large proportion of the urethral bacteria, but did not remove all when the number was large. The double catheter devised for the purpose of avoiding contamination with the urethral bacteria does not, in Taussig's opinion, "as yet deserve to be generally used." A catheter of this class proved only a partial protector against infection, and it had other objections, so that the common glass catheter seems preferable. In

[1] Urethral Bacteria as a Factor in the Etiology of Cystitis in Women, *American Journal Obst.*, October, 1906, p. 565.

conclusion he advises certain precautions to prevent infection of the bladder by urethral bacteria wherever repeated catheterization is necessary. He recommends internal doses of urotropine or of some allied product. The ordinary glass catheter should be passed half-way into the urethra, which is then irrigated with half a pint of boric acid solution, care being taken that the fluid does not enter the bladder. The catheter is then introduced into the bladder and the urine drawn off. The bladder is afterwards irrigated with from one to two pints more of boric acid solution. These precautions, he says, may seem troublesome, but laboratory experiments and clinical experiences show thus far that they constitute the only reliable prophylaxis against the production of a catheter cystitis.

POPULAR DIETETICS.

IN an annotation under this heading published on December 22nd, 1906, reference was made to a demonstration given by Mr. Eustace Miles at the Cookery Exhibition, and it was said that he made use of protene. Mr. Miles informs us that the material used is a proteid food of his own composition, consisting of a blend of two kinds of dried milk, in which the natural salts, the lactose, and some of the fat are retained, with wheat proteid and some salts from fruit; he has also another variety to which salts from vegetables have been added. Mr. Miles has taken us to task because we ventured to hint a doubt whether any method of cooking could ensure that green vegetables such as Brussels sprouts shall be digested without risk of fermentation. As has already been stated, he manages to cook them without diffusing through the circumambient air the unpleasant smell generally associated in the householder's mind with that process. He contends that by cooking vegetables in their juices, which, as was pointed out, is a different process from steaming them, not only is the production of offensive odours during the cooking prevented, but the vegetables are rendered easily digestible; he attributes this to the retention of the alkaline salts, which are undoubtedly almost completely lost in boiling; cabbage loses nine-tenths of its salts in this way. The increased interest which so many people are now taking in practical dietetics cannot fail to be productive of much good in the long run, and all the many experiments now being made will be watched with interest by physiologists and physicians. At present the evidence has gone rather to establish the doctrine that reduction of quantity is of more importance than alteration of quality, but it is more than probable that further experience may render necessary a modification of this view.

CREMATION IN GREAT BRITAIN.

CREMATION continues to make steady, if somewhat slow, progress in Great Britain. Mr. Herbert T. Herring, Medical Referee of the Cremation Society of England, has obligingly supplied us with the following figures. The total number of cremations in Great Britain during the year 1906 was 762, being an increase of 42 on the number for the previous year. The total number of cremations now at work is 15. Of these the oldest is at Woking, which was opened in 1879, next in order of formation come Manchester (1892), Glasgow (1895), Liverpool (1896), Hull and Darlington (1901), Golder's Green and Leicester (1902), Birmingham (1903), and Ilford (City of London Corporation), Leeds (Municipal), Bradford, and Sheffield (1905). The cremations were distributed among these various places as follows: Golder's Green, Hampstead, 208; Woking, 131; Manchester, 90; Liverpool, 46; Glasgow, 44; Birmingham, 25; Ilford, 23; Leeds, 15; Hull, 12; Darlington and Bradford each 13; Leicester, 1; Sheffield, 5. It will be seen that Golder's Green still heads the list. There were 42 more cremations in 1906 than in the previous year, and the total number since its opening in 1902 is 933. Woking shows a somewhat larger increase (45) during the past year; the total number of cremations carried out there since 1885 is 2,888. Manchester shows a slight falling off (7) as compared with 1905; the total number since 1892 is 1,028. Of the other places, Ilford shows an increase during last year of 14, Bradford of 12, Liverpool of 11, Glasgow and Darlington of 9, Birmingham of 3; on the other hand, cremations have fallen off at Leicester by 4 and at Leeds and Sheffield by 1. The total number of cremations carried out in this country since 1885 is 5,763. From the facts here stated we think it may fairly be deduced that the public mind is gradually becoming habituated to the idea of cremation; appreciation of the advantages of that mode of disposing of the bodies of the dead can scarcely fail to follow a wider diffusion of hygienic knowledge. We respect the difficulty felt by many on religious grounds, though we cannot say we understand it; for, as Bishop Fraser has well said: "The omnipotence of God is not limited, and "He would raise the dead whether He had to raise "our bodies out of churchyards, or whether he had "to call our remains, like the remains of some ancient "Romans, out of an urn in which they were deposited "2,000 years ago." Another objection is the supposed costliness of cremation as compared with burial. There seems to be no solid ground for this belief; some figures before us show that at Golder's Green the average cost of cremation, together with a niche in the columbarium and a memorial tablet, is 13 guineas. An estimate of the cost of burial, with a memorial stone, based on the average cost of interment in the ordinary ground at six London cemeteries, is 18 guineas.

ECONOMIC PROBLEMS IN THE PRACTICE OF MEDICINE.

A SPECIAL meeting of the Marylebone Division will be held at the rooms of the Medical Society, Chandos Street, W., on the evening of Thursday, January 24th, at 8.30. The second of a series of discussions on Economic Problems in the Practice of Medicine will take place. The resolution submitted will be, "That "the development of properly organized systems of "mutual assurance for the costs of illness offers the "most readily available method of reducing the admitted evils of excessive medical charity and the "misuse of hospitals." The debate will be opened by Dr. R. C. Buist, Mr. H. W. Armit, Mrs. Scharlieb, Dr. L. S. McManus, and Dr. J. H. Keay. Any member of the profession will be admitted on presentation of his card. The Honorary Secretary will be glad to receive the names of those willing to take part in the debate.

SCOTTISH POOR-LAW MEDICAL OFFICERS' INQUIRY.

IT is earnestly requested that those Scottish Poor-Law medical officers who received Schedules A B and C from the General Secretary of the British Medical Association during the early part of December, 1906, will be kind enough to fill in the forms if they have not already done so and post them in the addressed envelope to 429, Strand, W.C., without delay.

PROFESSOR FIORE and Dr. Felice Santini have addressed to the Italian Minister of Public Instruction a formal inquiry as to the intentions of the Government in regard to the teaching of paediatrics in universities. The importance of the subject is pointed out, and the necessity of providing for such teaching in medical schools, where at present there is no chair of paediatrics, is strongly insisted upon.

Canada.

MEDICAL ORGANIZATION IN CANADA.

VOLUNTARY AND STATE ASSOCIATIONS.

MEDICAL association in Canada can be described as being of two kinds, one of which is voluntary and the other compulsory. Under the first heading is included a variety of societies or aggregations of medical men, with a voluntary and elective membership, whose purpose is the advancement of the knowledge of the members by discussion, reading and hearing of papers, exhibition of patients or specimens, etc. The other form of association is that to which each practitioner must belong, and to which the entrance is guarded by lions in the form of fees and examinations.

Besides the local divisions of the British Medical Association, there are in Canada two general or national associations of medical men—the Canadian Medical Association and the Canadian Medical Protective Association. There is also the Maritime Medical Association, and a number of separate provincial associations: the British Columbia Medical Association, the British Columbia Association of Graduates of McGill University, the Southern Manitoba Medical Association, the New Brunswick Medical Society, the Medical Society of Nova Scotia, the Ontario Medical Association, the Ontario Medical Library Association, the Prince Edward Island Medical Association, and the Quebec Medico-Psychological Society.

The title of the Canadian Medical Protective Association explains its purpose; it is a combination to oppose vexatious and costly suits. If a member be threatened with a suit for damages, the case is put into the hands of the solicitors of the Association, who manage it at the expense of the Association, if it is considered to be such a case as should be defended. With this exception all associations mentioned are for the purposes indicated above as those of voluntary associations; their separate existence is determined by the locality in which they are formed, political divisions forming their boundaries. Any man or group of men can start a new body, if adherents are to be found. Possibly there would accrue advantages from combination of such bodies, but distance means isolation, and travel is expensive in time and money.

By the British North America Act, 1867, the Dominion of Canada was constituted, and the powers of the State were divided between the central Government and the provincial Governments; all matters of general importance were put under the control of the former, while by the 93rd Section of the Act matters relating to education, including the granting of licence to practise medicine, were made the subject of local legislative control. In this way there has grown up a system by which each province has its separate and distinct licensing body and examination, and only by this route can the field be entered. At first, and even yet, Ontario set the highest standard of medical education, and required of its practitioners the best qualifications. In this way there were shut out those from other provinces whose attainments were not up to the mark, and they in their turn retaliated by closing their doors to men from Ontario. For some time the English qualification was the "open sesame," but now it is "the home market for the home product," and even be his qualification never so high he must bow to be examined in primary subjects by the provincial gatekeepers. This unfortunate and ridiculous state of affairs has resulted in separate registration for each province, the profession of the country is divided, and a doctor cannot move outside his own province without loss; he cannot attend a patient across an artificial provincial boundary without being liable to a fine.

Attempts have been made to alter this state of things by the institution of a general register which would entitle to practise anywhere, the provincial registration being retained for those who would be satisfied with it. Dr. Roddick worked in Parliament to this end for many years, and eventually an Act of the Canadian Parliament made this possible, but Quebec has blocked the way, the fear being that as there is a large French population the province would gain no advantage. It is hoped that the time will soon come, however, when either with or without Quebec there will be general registration, and, if possible, such a one as will serve as a basis of reciprocity with the mother land.

PROVINCIAL MEDICAL REGISTRATION.

Ontario.

The rules applying to medical registration in Ontario are similar to those obtaining in the other provinces. There is a "College of Physicians and Surgeons," consisting of all the registered practitioners in the province; there is a Council of this College, consisting of certain *ex-officio* members representative of living and defunct teaching institutions, and members appointed by ballot from certain electoral divisions into which the province has been divided under the Medical Act. This body has the power to determine what persons shall be admitted to the register of the province, to fix the standard by means of examination, and to it members are responsible for their conduct as professional men; it is charged to oversee the welfare of the profession and proceed under the Act against those guilty of unprofessional conduct.

Candidates for registration must fulfil certain requirements. They must pass a matriculation examination, unless they have passed the examination of the first year of a chartered Canadian university, or are graduates of any university in His Majesty's dominions. Every student must spend a period of five years in actual professional studies, which shall include four sessions of eight months each and one year spent in clinical work, of which six months must be spent in a public hospital, dispensary, or laboratory; the student must show that he has attended at least one hundred clinical lectures or demonstrations.

Graduates in medicine from recognized colleges outside the Dominion of Canada who desire to qualify themselves for registration must pass the matriculation required by the Council, and must attend one or more full winter courses in an Ontario medical college, and must complete fully the curriculum required after the fourth year, and shall pass before the examiners all the examinations to complete fully the curriculum.

British registered medical practitioners, on paying all fees and passing the intermediate and final examinations, shall be registered, providing that they have been in active practice for five years after having been registered on the British *Register*. British registered medical practitioners who have not been in practice five years will be registered on passing the professional examinations and paying all necessary fees. Professional examinations are divided into three parts—primary, taken after the second session; intermediate, and final. The fees are: Registration of matriculation, $20; primary examination, $30; intermediate and final, $50; registration of membership, $25; registration of additional degrees, $2; annual assessment, $2.

British Columbia.

British Columbia requires of all who apply for registration that they produce evidence that they have attended a college course of four years, that they were in good standing where they last practised, that they pay $100, and that they pass an examination on eleven subjects; but

> The Council shall admit upon the *Register* every person mentioned in Chap. 48 of the Acts of Parliament of the United Kingdom, passed in the forty-ninth and fiftieth years of Her Majesty's reign, duly registered under the Medical Act (Imperial), prior to and inclusive to the 30th day of June, 1887, upon complying with the orders, regulations and By-laws of the Council, and giving due proof of such registration, and that the person applying for registration has not lost the benefit of the same by reason of misconduct or otherwise.

Such person is admitted on application to the registrar and payment of the fee without examination.

Homœopathic physicians holding a diploma of qualification from any homœopathic college requiring at least four years' course are required to pass an examination in anatomy, physiology, pathology, chemistry, obstetrics and surgery, and to comply with the regulations. In case of failure to pass the examination fifty dollars of the fee shall be returned. Examinations are held twice a year, beginning on the first Tuesday of May and the last Tuesday of October, in the Parliament Buildings, Victoria. Further information may be had from the registrar, Victoria, B.C.

Manitoba.

In this province there is a college of physicians and surgeons, which means the whole licensed membership in the province; it is the sole licensing body in medicine in the province, and the University of Manitoba is the sole examining body.

If the applicant be a graduate in medicine in any Canadian university he is eligible to sit for the qualifying examination, if a graduate of a foreign college he is required to submit for approval by the Council information as to his matriculation and medical course, and in case of such approval he is allowed to sit. The fee for examination is $15, the fee for licence to those who have been successful is $75. There is an annual fee of $2.

New Brunswick.

Four years of study are required, including a graded collegiate course of four sessions of not less than six months each, at some recognized college or university, and all candidates for registration are required to pass a professional examination irrespective of any diploma which they may possess. A professional examination is held each year, commencing on the fourth Wednesday in June, at St. John's.

Quebec.

Here it is required that the applicant for permission to practise in the province shall either be a graduate of one of the medical colleges in the province or a graduate of a recognized university elsewhere, in which case he must pass a prescribed examination. If the institution from which he is a graduate is situated outside His Majesty's dominions, he shall be required to pass the examination, and, in addition, attend a six months' course of lectures at a college in the province.

Nova Scotia.

Every applicant for registration in Nova Scotia is required to produce evidence of having passed the two primary and preliminary examinations, and of having attended a four years' course at a college satisfactory to the Council; but on evidence of registration in another province will be required to take only the subjects of the final examination, which include medicine, clinical medicine, surgery and surgical anatomy, clinical surgery, obstetrics and diseases of women and children, and medical jurisprudence and hygiene.

Prince Edward Island.

This province requires a matriculation, but accepts the matriculation of New Brunswick and Nova Scotia, and of any other that reciprocates in this respect. A four years' course is required in a college of good standing; examinations are held twice a year, in July and October, and the fee is $15; the fee for registration is $20, and the annual fee $5. Any person registered and in good standing in a province which reciprocates in this regard with Prince Edward Island may be admitted to practise upon application and payment of the fee.

Yukon.

The Council of the College of Physicians and Surgeons of the North-West Territories, consisting of five elective members, shall admit upon the *Register* (1) any person having a diploma from any medical school in Great Britain and Ireland, (2) any member of any College of Physicians and Surgeons of any province of Canada, (3) any person having a diploma from any recognized medical college who shall pass a satisfactory examination. Registration fee $50, annual fee $2.

Saskatchewan and Alberta.

In Saskatchewan and Alberta, the two new provinces formed in 1905, the formation of separate Colleges of Physicians and Surgeons is under consideration, in which regulations similar to those in the older provinces will be adopted.

Newfoundland.

In Newfoundland, which is a separate colony, practitioners who are graduates of a regular medical college with a course satisfactory to the Medical Board, may be admitted to practice.

Licences to practise for a stated time in a stated locality is also granted after examination to persons not graduates, with qualification satisfactory to the Board.

Number of Registered Practitioners.

There are medical schools in Ontario, Quebec, Nova Scotia, and Manitoba; the number of registered practitioners in the various provinces (according to *Polk's Register*, 1906) is as follows:

Ontario...	2518	Alberta...	134
Quebec	1617	Saskatchewan ...	112
New Brunswick ..	246	British Columbia ...	131
Prince Edward Island	80	Yukon	18
Nova Scotia	486	Newfoundland ...	68
Manitoba	289		

Sydney.

Patent Medicine Legislation.

It was reported by cable from London recently that:

Forty leading proprietors and makers of proprietary articles and patent medicines met the London Chamber of Commerce, and carried a resolution asserting that the publication of trade secrets would render their trade impossible in Australasia. They resolved to ask the Secretary of State for the Colonies to receive a deputation in favour of amendments of the Commonwealth Commerce Act. Several speakers at the meeting threatened to withdraw their advertisements in the event of legislation in Australasia requiring the disclosure of the contents of their preparations.

In reply to these statements the Comptroller-General for Customs points out that Section 16 of the Commerce Act provides that the regulations under Sections 7 and 11 of the Act shall not require a trade description which discloses the trade secrets of a manufacture or preparation, unless, in the opinion of the Governor-General, a disclosure is necessary for the protection of the health or welfare of the public. In an explanatory work, published by the department, it is stated that the object of this section is to prevent the proprietors of trade secrets from losing the benefit of such by their being divulged in trade description. Where, however, an article such as a patent medicine contains anything of a kind which may be injurious if taken without due precaution, such as opium, the regulation may require the fact to be stated on the trade description. It seems probable that manufacturers in England have not made themselves familiar with the Act. Some of these patent medicines contain large amounts of alcohol, opium, and other potent drugs, and where this is the case it is desirable that the fact should be stated on the label. A stringent resolution was passed in the House of Representatives last session in favour of stamping on medicine packages a statement of their contents and the purposes for which they are intended to be used; but this resolution is in no way connected with the Commerce Act.

A Committee on Bread.

A Parliamentary Select Committee has been appointed to take evidence in connexion with the proposed amendment of the Bread Act. The Chief Inspector of Weights and Measures in giving evidence referred to the legislation which had been enacted in England and Scotland. In respect to local supervision he thought that inspectors should test the bread in transit, and if found light, it should be ordered back to the shop. He considered that the department should have power to make regulations providing: (1) For the licensing of bakehouses; (2) registration of shops selling bread; (3) compliance with the Health Board laws; (4) the adding to or restricting the make of certain loaves, with an allowance for waste or evaporation, not exceeding a limit of 2 oz. per 2 lb. loaf; (5) that special loaves may be of such weight as may be thought fit by the baker; (6) that the use of improper or impure materials in the manufacture of bread should be dealt with under the Public Health and Adulteration of Foods Act.

Registration of Nurses and Midwives and Inspection of Private Hospitals.

The Hon. Dr. C. K. Mackellar, M.L.C., has introduced into the Legislative Council a Bill to provide for the regulation and inspection of private hospitals. This Bill provides for the registration of trained nurses and midwives, imposes on nurses the duty of notifying any change of address, and empowers the Board of Health, as the keeper of the register, to remove the names of nurses from the register on certain conditions. It also requires

every private hospital to be licensed under certain conditions, and provides for the management and efficient supervision of these institutions by Government officials. One of the main objects aimed at by Dr. Mackellar in introducing this Bill is the suppression of so-called private hospitals and nurses' homes, which are nothing more or less than abortion shops, countenanced by a certain class of medical man. Under the provisions of this Act no such institution could exist, at any rate for long, and it is hoped that the Bill will be carried without any material amendment in its main provisions. It is, however, improbable that it will be passed this session. In introducing the measure in the Council, Dr. Mackellar said that within the city and suburbs there were no fewer than 107, and in the country 343, establishments which would come under the scope of this Bill. A special feature of the Bill was that dealing with lying-in homes, and legislation in that direction was absolutely necessary, though it might include well-regulated institutions, to which no exception could be taken. In the course of the debate the measure was described as of too sweeping a nature, and as objectionable. Sir Arthur Renwick said that the Government ought to have introduced a Bill of that description years ago. He moved that the Bill be referred to a Select Committee for consideration and report. This was agreed to.

Friendly Societies.

The annual report of the Registrar of Friendly Societies for 1905 has just been issued. The total number of societies remains the same, but during the year 56 new branches were formed. An increase of between 3,000 and 4,000 members is also recorded, the total membership at the end of the year 1905 being 101,463. There were 18,348 persons sick for an aggregate term of 104,289 weeks, and the total cost in sick pay was £83,375. There were 740 deaths, equal to 7.4 per 1,000 of mean membership. An amount of £87,465 was paid away during the year to provide for medical attendance and medicines. This represents an average cost of 17s. 6d. a head on the mean membership.

Lodge Contracts.

Some few months ago a Committee, composed of delegates from the various metropolitan medical associations and from the Western Medical Association, drew up what is called a "skeleton" agreement to be used by medical officers as a basis of contract with Friendly Societies. This agreement was discussed and criticized and finally approved of by the New South Wales Branch of the British Medical Association. Two important innovations in this agreement are: First, a provision for the payment of a fee to the medical officer for the examination of all candidates for membership, whether they be accepted or not; secondly, the enforcement of a wage limit of £200 per annum.

Considerable difference of opinion exists as to how to bring this agreement into general use, some advocating a general "strike" on a certain date, so as to bring all the societies on the same footing; others think that the agreement should only be introduced gradually and applied in the case of new contracts only. Meantime the friendly societies have taken up the question and are freely discussing the new agreement in anything but favourable terms. A conference of representatives from the various friendly societies in the eastern suburbs was held last week, and it is clear that unless some conciliatory spirit is manifested there will be an open rupture. With the bombast so characteristic of lodge officials, one speaker said that "the doctors' proposals were 'unheard of'; they received quite sufficient remuneration for their services." Another speaker is reported to have said that the lodges were better able to do without the doctors than the doctors were to quit the lodges; he considered the doctors' proposals as "impudent." Another speaker suggested that the societies could establish a medical institute of their own; that the friendly societies were not charitable institutions, were not under any obligation to the doctors, and were quite prepared to pay for their services. If necessary, medical men could be procured from abroad. After further discussion the following resolutions were carried:

> That we agree to advise our respective societies that no agreement be entered into with medical officers which contains the following provisions: (1) To charge a candidate or the lodge for such candidate's examination. (2) Making a member receiving £200 per annum ineligible for medical benefits. (3) Medicines to be supplied by medical officers in lieu of by chemists, as at present. That the representatives of the Eastern Suburbs Friendly Societies meet in conference with a view to drafting an agreement to be used as a contract between each lodge and its medical officers.

It is well that the profession in Great Britain should be warned before accepting any appointments in connexion with any lodges in Sydney or suburbs to make sure of their ground. If they came to Sydney and took up appointments as medical officers to any of these projected "medical institutes" they would find themselves in a very uncomfortable position. The Australian lodge official recognizes the evils of sweating as applied to his own trade, but he regards the medical officer of his lodge as a legitimate object to be sweated to the full extent. Hence arises the constant friction between the lodges and their medical officers. This will continue to exist, no matter what agreements are made, until the medical men recognize that it is their duty and their business to say whom they will and whom they will not attend, and until they take into their hands entirely the control of the medical attendance on lodge members.

India.

Indian Factory Conditions.

The Secretary of State for India has appointed Sir H. Freer-Smith, formerly H.M. Superintending Inspector of Factories for Dangerous Trades and Dangerous Machinery, to inquire into certain matters connected with factory conditions in India; and, at the request of the Secretary of State of the Government of India, the Bombay municipality has consented that Dr. Turner, their Executive Health Officer, should be associated with Sir H. Freer-Smith in the inquiry. The Hon. Sir Pherozeshah Metha, in moving that Dr. Turner should be given the necessary leave, said that the question was one of importance not only to the Bombay Presidency but to the whole of India, and that nobody was better acquainted than Dr. Turner with the conditions of labourers in Bombay, so that his co-operation and advice would be of invaluable service to Sir H. Freer-Smith.

Pesterine.

In a paper read before the Bombay Medical and Physical Society, Dr. John A. Turner, Executive Health Officer of the Bombay Municipality, describes the use of "pesterine" as a plague disinfectant. The substance to which he has given this name is the residue of the distillation of crude petroleum and is practically the same as what is termed in France *l'huile de schiste*, a product which has been found very efficacious for killing flies. Pesterine very readily destroys fleas, and Dr. Turner considers these insects to be very important agents in the transmission of plague. It has been definitely ascertained, he says, that fleas from plague-infected rats contain the *Bacillus pestis* in their stomachs, and that susceptible animals such as rats, guinea-pigs, monkeys, or rabbits, will contract plague if put into a room with infected fleas. He also states that plague bacilli are to be found in the faeces of infected fleas, and that this material if rubbed into a susceptible animal's skin will produce fatal infection from the disease.

The flea, therefore, either by direct inoculation, by bite or by the faeces gaining access to the body by abrasion of the skin, conveys plague from animal to animal, and from place to place, and from animal to man.

In support of these statements, experiments are quoted in which guinea-pigs have been fatally infected with plague by fleas present in infected rooms. Neither mercuric chloride nor sulphur dioxide appears to kill fleas readily. For example, in thirty-one houses which had been disinfected with one or both of these agents guinea-pigs were allowed to run free, and in nine houses the animals contracted plague, whilst "in practically every house" fleas were caught in large numbers. Pesterine, on the other hand, as Dr. Turner has shown by numerous experiments, is thoroughly efficacious as a flea-destroying agent. When a room is to be disinfected, a little pesterine is sprinkled on the floor before the furniture has been cleared out in order to catch

any fleas which may be dislodged in the process of its removal. The room is then emptied, and pesterine is spread with a long brush first over the ceiling, and then along the upper parts of the walls. The walls are then completely swabbed with the disinfectant, special attention being paid to all nooks, cracks, and ledges. The next step is to sprinkle a little more pesterine on the floor, and spread it all over with a broom. Finally, a small quantity is poured into every rat hole seen on the floor. The process is then complete; the room is left undisturbed for twenty-four hours, and is then fit for reoccupation. Pesterine is also recommended for the disinfection of excreta. It is not readily inflammable, and its use does no damage except to oil-painted walls. It has also the advantage of being cheap, the price being 2 annas a gallon.

Scotland.

COMPLIMENTARY DINNER TO DR. NORMAN WALKER.

DR. NORMAN WALKER, Representative-elect for Scotland on the General Medical Council, was entertained at dinner at Kirkcaldy on December 28th, 1906, under the auspices of the Fifeshire Medical Association. In spite of the storm which prevailed a goodly number were present, but a large number of apologies were intimated, many being storm-stayed. After dinner, the toast of "The King" having been loyally honoured, the Chairman, Dr. Balfour Graham of Leven, President of the Association, proposed the principal toast, "The Guest of the Evening." He said that when he first heard of the idea of giving Dr. Walker a complimentary dinner, he thought that it might be considered an invidious thing that a judge should be entertained by those who might afterwards come before him for judgement. But he had reflected that it was extremely unlikely that any Fife medical man would furnish material for a case of discipline. Dr. Walker was well known to them all, and only last year he had been their President. He had passed through many stages, but that which he had now reached was a most enviable one. He had gone through the hard work of a general practitioner, and was now a leading man in his speciality. To the general practitioner the specialist seemed to have the best of it in the profession, not such hard work nor so ill remunerated. But the general practitioner endeavoured to maintain the honour of his profession and to agitate for means whereby it might be improved, and Dr. Walker seemed to have a thorough grasp of the ideas which were in the minds of the profession. Fixity of tenure was certainly one of these, and this subject had been handled by Dr. Walker in his recent campaign with marked ability. Not only on this matter but in everything else Dr. Walker seemed to associate himself with progress. Dr. Graham concluded by alluding with satisfaction to the fact that Dr. Walker was a "Fifer." The toast was drunk with enthusiasm.

Dr. Walker, in responding, said that he felt that he was in a position both of honour and embarrassment. Most dinners of a similar nature were given either to men who were retiring or were going away. He was going to do neither. The contest was now over, and he had nothing to regret in it. He acknowledged the great assistance he had received from many friends, from Aberdeen in the north to Dumfries in the south. The result of their activity was that the majority was far greater than he had ever dreamed of. He hoped to be of use to them on the General Medical Council. It had been put to him that he might have had a seat there by being sent to represent the Royal College of Physicians; but he had rather represent the general body of Scottish practitioners, as it was much the larger constituency, and moreover he had a freer hand. The General Medical Council was said to be a very slow moving body. That was true, for it could not afford to make a wrong step and in point of fact its decisions had always been upheld on appeal. It should also be remembered that while that body could do much for the improvement of the profession, it could not do everything; much must be done by the profession itself. He was proud of the honour, proud of his friends, and especially pleased that this function should have taken place in Kirkcaldy—a town endeared to him by many personal associations.

Other toasts were "The General Medical Council," by Dr. Gibson; "Kindred Medical Associations," by Dr. Douglas. Dr. Gulland contributed an inimitable original sketch, and songs and stories were given by Drs. Thin, Haultain, Gibson, and others. Apologies were intimated from the Lord Provost of Edinburgh, the Provost of Kirkcaldy, Mr. Munro Ferguson, M.P., Professor Stockman, and about forty others.

THE LABORATORY OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.

The medical profession in Edinburgh still awaits the advent of the new Superintendent of the Laboratory. Dr. Noël Paton, the late Superintendent, has for some months now been Professor of Physiology in the University of Glasgow; for some time longer the probability of change has been evident, and consequently for a somewhat lengthy period the Council of the Royal College of Physicians has had the subject of this appointment under consideration. The work of a large and comprehensive laboratory, such as this is, can be but inefficiently conducted in the absence of a guiding hand, and the delay in the appointment leads to the hope and expectation that there is in prospect the election to the post of a pre-eminently first-class man. By the election of such a man the Council of the Royal College of Physicians will do much for the advancement of medical science in Edinburgh, and by such an election only will the Laboratory form an important asset to the Edinburgh Medical School.

EDINBURGH ROYAL INFIRMARY.

The following representatives have been elected to the Board of Management for the year 1907:

Royal College of Physicians.—Dr. C. E. Underhill and Dr. J. O. Affleck.

Royal College of Surgeons.—Mr. Geo. A. Berry, F.R.C.S.E., and R. McKenzie Johnston, M.D., F.R.C.S.E.

W. S. Society.—Mr. Patrick Blair.

Chamber of Commerce and Manufactures.—Mr. Robert McVitie.

The Rev. Dr. Scott moved a vote of thanks to Dr. P. H. McLaren and Dr. James Ritchie for the valuable services they had rendered to the infirmary, not only as members of the Board, but as conveners of the committees over which they had presided. It was stated that the six members of the Board who retired at this time had all been nominated for re-election, and that a seventh nomination had also been made, so that a poll would have to be taken at the annual meeting of contributors on January 7th.

SCARLET FEVER AT ST. ANDREWS.

The epidemic of scarlet fever that broke out recently at St. Andrews appears now to be at an end. Altogether 19 cases have been notified, 17 cases having had, it is stated, a common origin in the milk supply from a dairy in the country, and the other two being due to direct contagion. The cases were all of a mild type.

EXTENSION OF THE WESTERN INFIRMARY, GLASGOW.

At the annual Christmas meeting of the Western Infirmary, held in the new dispensary buildings, Sir Matthew Arthur, the Chairman of the Managers, stated that during the past year nearly one hundred beds had been added to the Infirmary, but despite this addition it was still unable to meet the demands made upon it for the treatment of accident and urgent cases. This pressure was due to the great increase of public works in the Western district of the city and along the banks of the Clyde. The managers were, therefore, about to make an appeal for funds to complete the Infirmary buildings. Plans had been prepared and the sum required was estimated at £80,000. It is to be hoped that the managers will prove successful in obtaining funds, but the demands upon the charitable public of Glasgow have been very numerous lately. The recent extension of the Western Infirmary was partly financed by donations spread over a period of years, and as some of these contributions have not yet been exhausted the source of fresh funds is thereby limited.

Ireland.

THE SUGGESTED STATE MEDICAL SERVICE IN IRELAND.

THE Viceregal Commission on Poor-law Reform in Ireland suggested, as has already been stated, the establishment of a State medical service, to ensure a supply of medical officers to all rate-supported or rate-aided hospitals in Ireland. The Commissioners, while stating that they considered any change in the dispensary and public health services to be outside the scope of their inquiry, except in so far as dispensary medical officers would *ex officio* have charge of district hospitals, added that their suggestions as regards hospitals could more easily be worked into some general scheme for an Irish county and union medical service. They assumed that the State at present paid one-half the salaries of medical officers, and on this ground expressed the opinion that the establishment of a State medical service in Ireland would mean a very small increase in the Parliamentary grant. This statement must necessarily confirm the common belief that the other half of the salaries of each medical officer is paid by the local authority, but the State already pays more than half, it in fact pays three-quarters in most instances.

Paragraph 116 of the report is as follows:

If the Infirmary and Hospital Medical Service in Ireland were being organized anew, and indeed even as circumstances are at present, it seems that the best and most impartial test would be one that should provide for entrance into the service by competitive examination, open to students educated in Ireland, with a representative medical council, to assign the successful candidates to suitable places, and to deal with all important questions of promotion, removal, censure, or dismissal, and of remuneration and superannuation, subject to Treasury approval of scales of payment. *Such a system, it would appear, involves the payment by the State of the whole, instead of half, of the salaries of medical officers, as at present*—or, in other words, that there should be a State Medical Service, with local bodies to assist in the administration of relief to the sick. We would not suggest this most important change unless the Government were willing *to defray the whole cost of the service in lieu of their contribution of half the cost, as at present.* If a State service of the kind were established, the Government could (subject to rights and customs affecting existing medical officers) require the medical staff, as part of their ordinary duty, to attend constabulary, coastguards, soldiers, post-office officials, and such other persons in the prison or other public service, as now receive medical attendance at the public expense. Doctors in the State service would, of course, also act as medical officers of health. It is, we may state, contemplated that the present privileges as to private practice should continue. In some populous districts, however, we think it would be desirable that on the occurrence of vacancies the State medical officers should be required to devote their whole time to their public duties.

We have italicized those portions of this paragraph which require to be dealt with.

In order to understand the legal bearings of the matter it is necessary to consider certain provisions of the Local Government (Ireland) Act, 1898. In the first place, it is probable that the Commissioners have founded their statement upon S. 58 of the Act. Under that section there is paid out of the Consolidated Fund to the Local Taxation (Ireland) Account (*a*) a sum equal to the amount of the duties collected by the Commissioners of Inland Revenue on certain local taxation licences; and (*b*) an annual sum of £79 000. Out of the Local Taxation Account there is paid (*inter alia*) to each county council, on behalf of the guardians of every union, "one-half of the said salaries of the medical officers of the workhouse and dispensaries in respect of their duties under those guardians." Such salaries have to be approved by the Local Government Board. Where a union is situated in more counties than one, the amount payable on behalf of the guardians is divided in the proportion in which the expenses of such guardians are divided.

While it is clear from this section that half the salary of every medical officer of a workhouse or dispensary is paid directly out of the local taxation account, the section does not mention the source whence the other half is to be derived. It must of necessity be paid by the county councils out of their general income. But the income of a county council is not by any means derived solely from rates. Section 48 of the Act provides that there shall be paid to county councils out of the Consolidated Fund to the Local Taxation (Ireland) Account a sum (termed "the agricultural grant"), equal to half the amount raised in the standard year ending September 29th, 1897, in the whole of Ireland by poor-rate and county cess off agricultural land. The portion of the agricultural grant certified to be paid to each county council is paid to these bodies every half-year. Having regard to the definition of "agricultural land" (in Subsection [4] of this Section), the benefit of the agricultural grant is confined to land outside urban sanitary districts, the term "land" including everything entered as land in the valuation list which is not part of a railway or canal. We are informed that there are very few dispensary districts in Ireland which do not benefit by this grant. It appears to follow that the income of each county council entitled to share in the agricultural grant is made up partly from rates and partly from this agricultural grant, payable under the foregoing provisions. Each county council applies its portion towards payment of the amount required to meet its expenses in the manner prescribed by Section 51 of the same Act. That Section provides, in effect, that agricultural land shall be relieved of payments to the county fund to the extent of the portion of the agricultural grant which is paid to the county. It is thus made plain that, to the extent of the agricultural grant, general county expenses are not paid through local taxation, but are paid by the State. Consequently, every payment by a county council which receives the agricultural grant is derived to a greater or less extent from the public revenues; so that, if the whole salary of a medical officer was paid by guardians with moneys provided by the county council, it would not be paid out of rates alone.

As an illustration of how the matter works out in practice we may take the case of one union where, in a recent year, the amount estimated by the guardians in their demand note to the county council was £4,420.

The county council met this by a sum of £1,363 10s. paid to it under the agricultural grant; a sum of £484 paid to it in respect of half their medical and educational expenses; a sum of £472 paid from other Government grants (probate, estate duties); and a sum of £2,100 10s. raised by poor-rate. The total amount paid to the county council by the Government thus amounted to £2,319 10s., which was £219 more than the amount raised by poor-rates.

Applying these figures, it is possible to trace the source from which a salary of £100 paid to a medical officer is derived:

£50 is paid directly by the Local Government Board from account for reduction of local taxation.

£50 is a charge on the union poor-rate; but half the poor-rate is met by a free grant from the agricultural grant, thus leaving £25, or one-fourth of the salary, to be met by local rates.

While the estimate of the guardians may vary, the amount paid by the agricultural grant cannot exceed the amount fixed in the standard fees, so that circumstances might arise under which the amount to be levied by the county council might be more than the half of the total required.

It is true, also, that dispensaries altogether confined within urban boundaries, and comprising no agricultural lands, would obtain no relief under the agricultural grant, and that such additional salaries as have been recently granted in some 30 out of 159 unions have to be altogether met by the local rates. Nevertheless the general statement that the State by direct and indirect payments provides three-fourths of the medical officers' salaries holds good.

THE NEW LUNATIC ASYLUM FOR BELFAST.

In the last few years Belfast has rejoiced in a number of new public buildings. Two new general hospitals, a new maternity hospital, several much-required laboratories at the Queen's College, a large and magnificent city hall, a large and well-equipped technical institute have been erected; within the last few days the new fever hospital has been reported as ready for the admission of most of the infectious fevers, and the Poor-law Consumptive Sanatorium is now nearly finished. The annual report of Mr. G. M. Courtney, Inspector of Asylums, which was read at the last monthly meeting of the Asylum Committee, brings before the public another institution which is approaching completion. The new asylum is being built on the villa system; villas Nos. 4 and 5 are now com-

plete and equipped and are occupied each by fifty patients. The grounds have been laid out around them and furnished with garden seats, and roads have been made connecting the buildings already erected with each other. A work of great magnitude and importance has also been progressing; the old mill is being gradually converted into a hydro-electric power station; extensive alterations have been made in the course of the stream, and reservoirs have been constructed, so as to obtain the power necessary for driving the turbines. From these it is proposed to obtain the power necessary for the lighting of the new colony, and for pumping part of the water supply. Connexion with the city sewerage system has been obtained by 950 yards of 9-in. sewer pipe, with ventilating shafts and inspection chambers. The Committee, in consultation with Dr. Graham, the Medical Superintendent, and Mr. Hine, the Architect, has now decided on the block plan of the future buildings; they will consist of villas designed for the treatment of the various forms of insanity, with the necessary administrative departments, and the work, when powers are obtained, will be carried on with the greatest expedition. At present there are 1,114 patients, of whom 652 are in the old buildings on the Grosvenor Road, 400 are already living in the villas erected at Purdysburn, and 62 are boarded out in the Ballymena Workhouse. It would be much more economical if all these patients were under one roof, and the administration would be much facilitated. The inspector says:

> At Purdysburn the villas now in use afford examples of the most modern and most liberal ideas of the proper treatment of the insane. In these comfortable and elegantly-furnished houses every effort is made to remove those curtailments of personal liberty usually met with; the doors are always open and the windows down to their fullest extent. The homely surroundings which prevail must add greatly to the comfort and happiness of the patients. The cooking is done by one of the nurses, assisted by some of the patients.

The report all through reflects much credit on the administration of the medical superintendent, and in the discussion on the report the Committee expressed its high satisfaction with the medical and administrative work of the institution—an expression of opinion which will be received by the profession with the utmost satisfaction and pleasure, and endorsed as their own.

Opening of the New Fever Hospital, Belfast.

The Medical Officer of Health for Belfast has forwarded to the profession in the city a notice that the new hospital is now ready for the admission of cases of scarlet fever, typhoid fever, typhus, and diphtheria. An office has been opened at the Old Town Hall, and on the receipt at that office of a medical certificate, giving the name and address of the patient, the disease, and a recommendation for removal, an ambulance and nurse will be sent and the patient removed.

Re-election of Medical Officer.

An election under peculiar circumstances of a medical officer for Cahirconlish Dispensary District was held at the recent meeting of the Limerick Board of Guardians. On September 26th, 1906, the Board proceeded to make the appointment, for which there were two candidates, Dr. John Corboy and Dr. Christopher Waters. Dr. Corboy was elected by 45 votes to 41, but the Local Government Board annulled the election, as Dr. Corboy had not a vaccination diploma or certificate. It ordered a fresh election in answer to a resolution of the guardians on the subject, and in the interim Dr. Corboy obtained the necessary vaccination certificate. Accordingly he and Dr. Waters were again candidates for the office, and Dr. Corboy was elected by 52 votes to 41 for Dr. Waters.

Lancashire.

Cancer Hospital at Manchester.

The annual meeting of the Christie Hospital (for Manchester Cancer Pavilion and Home) was held on December 13th, 1906, the Lord Mayor in the chair. The report stated that during the year 241 cases had been treated, of which 169 were in-patients. Of the total 165 were new cases since October 1st, 1905. During the year the hospital had provided a permanent home for 65 patients who could not be properly treated at home owing to the grave character of their ailment. From the first the Committee had been anxious not only to found a home, but to give the Board an opportunity for progressive cancer research. It had added the Professor of Pathology of the University to the staff, and also Dr. White, a research scholar, who, through a munificent bequest, was able to devote the whole of his time to the study of cancer.

The result of treatment had been satisfactory. Many cases were too far advanced, but many had been cured, and, as their subsequent history showed, perfectly cured. The lives of others had been prolonged. There was practically only one method of treatment, and that was the removal of the cancer soon after it had commenced to grow. If it was only diagnosed soon enough, and if the patient would only submit to an operation, it could be cured. The percentage of recovery was now about 40 per cent., and there was a great increase in the cases that recovered. Referring to the so-called remedies, he said they had tried them all, but they had not been at all successful. He thought, however, they might be justified in saying, in view of recent research, that cancer was a disease that might either be exterminated or rendered much less frequent.

Dr. Wild, who also supported the motion, said that the experiments with mice during the last twelve months had given much greater ground for hope in the future than there was three or four years ago. So long as it only occurred in man and under conditions which they were unable to produce artificially, they could merely observe that which had taken place, but when it was found that certain animals suffered from the disease, and that they could produce the disease under conditions which they could vary at will, they could study the conditions under which cancerous growths took place, under which they grew and ceased, and under which they could not grow at all. It was found that a certain number of mice would not grow cancer, and that a certain number of mice that had cancerous growths got well, after which they could not be infected with the disease again. If there were certain conditions under which mice were curable, it was a fact that needed thorough investigation, and which was full of hope for the future of the treatment of cancer in man. In the hospital they had tried almost everything that had been recommended which was not capable of doing actual harm. Two "remedies" which had been much boomed recently were violet leaves and trypsin. They had tried them, and not found any benefit whatever, and at present they were not using one or the other. The radium and *x*-rays boom was passing. They did good in certain cases. Radium was perfectly effective in relieving small early growths of cancer, but they could be relieved equally well, more quickly, and less expensively in other ways. In the case of *x* rays, where the growth was on the surface of the body the treatment would undoubtedly cure it, and there were cases, especially of the small slowly-growing forms of cancer on the face, where the *x* rays were the best possible means of treatment because they left little scar, and the results as far as could be judged were just as permanent as when the growth was removed in the ordinary way. For the deeper forms of cancer and cancer of the internal organs, he did not think the *x* rays were likely to do any good. There was no doubt that the early removal of the smallest growth which was at all suspicious was at the present time the only right manner of treatment for all cases of true cancer or those of doubtful nature.

A Deceiving Example.

At a recent meeting of the Health Committee of the Eccles Town Council it had before it a letter from a Mr. Edward Potts, a Manchester architect, who, inspired by the success of Alderman Broadbent's philanthropic efforts for the reduction of infant mortality at Huddersfield, has decided to follow his example. He therefore offered £1 for every child which attained the age of 12 months in one ward of the borough between January 1st, 1907, and January 1st, 1908. A limit either as to the earnings of the parents or of the rent of the houses is to be fixed, and the Ladies' Health Committee is asked to co-operate in carrying out the proposals.

A MIDWIVES' PROTECTION ASSOCIATION.

The midwives of Manchester and district recently held a meeting for the purpose of taking steps to form an association to protect them against "further adverse legislation."

Newcastle-upon-Tyne.

ROYAL VICTORIA INFIRMARY: APPOINTMENT OF GYNAECOLOGIST.

AT a meeting of the Election Committee of the Royal Victoria Infirmary Dr. R. P. Ranken Lyle, Lecturer on Midwifery, College of Medicine, was appointed Gynaecologist to the infirmary. A ward has been set aside for the treatment of diseases special to women, and the gynaecologist is to have the right to operate.

BALL FOR FUNDS.

A ball was recently held in the Assembly Rooms with the object of securing sufficient money to wipe off the debt connected with the decoration of the children's wards. Mrs. Albert Lord, who was instrumental in promoting the ball, has always taken a keen and practical interest in the children's wards. It is largely owing to her initiative, when Mayoress of Newcastle, that the children's wards are so beautifully decorated.

INFLUENZA EPIDEMIC.

There has been quite an epidemic of influenza among the residents and the nurses of the infirmary, although, strange to say, the patients in the wards have escaped.

FESTIVITIES.

The Christmas festivities passed off wonderfully well in the infirmary. Owing to the kindly forethought of the matron, Miss McCall Anderson, each of the female patients received among other things a gift of underclothing, which was much appreciated. The children, too, were not forgotten, as they had a Christmas tree a few days later. The proceedings on Christmas Day commenced with a service in the Chapel, conducted by the Chaplain—the lessons for the day being read by Sir George H. Philipson, who also waited afterwards to see the dinner served under the direction of the House Governor, Mr. Orde, the Senior House-Physician, Dr. Wm. Hume, and the junior residents. In the afternoon the residents visited each of the wards, and gave a variety performance.

PROBABLE REMOVAL OF THE LYING-IN HOSPITAL.

The Town Improvement Committee has intimated that it may possibly require the site of the present Lying-in Hospital in view of the street improvements to be carried out in the city. Although not a large building, the present hospital is doing good work. There are few places where practical midwifery can be better learned than in Newcastle. The present building in New Bridge Street is extremely centrally situated, and it will be difficult to find a site equally convenient in all respects.

POST-GRADUATE COURSES.

So long as the old infirmary was occupied, it was felt that it was impossible to institute post-graduate courses of instruction on a large scale; but with the removal to the Royal Victoria Infirmary, there is the feeling that the time has now come to take steps in this direction. At a meeting of the honorary staff of the Royal Victoria Infirmary and the professors and lecturers of the University of Durham College of Medicine, a joint committee of the two bodies was appointed to make inquiries and to draw out a scheme. With the large amount of excellent clinical material in and around Newcastle, there should be no difficulty in establishing a post-graduate course of lectures on an adequate scale.

SANATORIUM FOR CONSUMPTION.

The sanatorium for the treatment of consumption has not yet been opened owing to want of funds to maintain it. The building, which is situated in the North Tyne district, is quite complete. It is more than likely that the Newcastle Corporation will move in the matter, and, by becoming a handsome subscriber, enable the Sanatorium Committee at an early date to announce its readiness to receive patients.

Liverpool.

REPORT BY THE LICENSING JUSTICES.

Reduction in the Licences during the past Seventeen Years.

THE regulation of the drink traffic so closely affects the health of the community that a recent report upon the action of the Liverpool Licensing Committee in reducing licences since 1890 will be of interest to medical men in Liverpool and elsewhere. It describes the method followed and sets out in detail the action of the justices in the areas where demolition of insanitary property and rebuilding of workmen's dwellings has taken place. The result of the rehousing schemes was a very large reduction in the population of the areas, and the justices felt that they were entitled to consider critically the wants of the neighbourhood thus altered. This was pioneer work in licensing administration, and was most strenuously opposed at first, but with the support of the County Quarter Sessions and the backing of public opinion, the great reform introduced into Liverpool was speedily followed in other parts of the country. On January 1st, 1890, there were 2,093 "on" licences in the city, with a population of 520,000. Ten years later the licences were increased by one, while the population had increased to 680,628. Owing to the fact that by the extension of the city in 1895, 183 public-houses previously extramural had been taken into the city area, there was in the ten years an actual reduction of 182.

In August and September, 1900, the justices began to deal with "demolition areas," and between January 1st, 1900, and December 31st, 1905, the "on" licences were reduced from 2,095 to 1,886. By the extension of the city in 1902, there were added 38 "on" licences, and again, by the extension in 1905, 2 more were included. The actual reduction of licences during the five years ending 1905 was, therefore, 248. The ratio of "on" licences to population has, therefore, altered from 1 to every 249 persons in 1890, to 1 to every 388 persons on December 31st, 1905. Taking the demolition areas alone, the ratio of "on" licences in five areas has been reduced as follows:

(1) from 1 to 144	persons	to 1 to 186
(2) from 1 to 174	,,	to 1 to 214
(3) from 1 to 192	,,	to 1 to 251
(4) from 1 to 194	,,	to 1 to 254
(5) from 1 to 211	,,	to 1 to 273

During the year 1906 there will have been a further reduction of 56. Allowing for the increase of population, this will have reduced the ratio to 1 to 404 persons on December 31st, 1906. Comparing this ratio with that of January 1st, 1890, when it was 1 to 249, we recognize that a remarkable change in the direction of lessened facilities for obtaining intoxicating drink has been effected during the intervening seventeen years.

The resolutions sent to the justices by the City Council and by the Citizens' Meeting both ask that the attention of the justices shall be specially directed to those areas in which the insanitary property is being dealt with by the Corporation. This course has been adopted in the past, and there is nothing to prevent the justices continuing their good work in the future, provided they refrain from deciding which licences shall be taken away before hearing the parties interested, and considering any evidence they may tender. There must be no understanding between the justices and the Corporation that, if the former will take away the licences in any given area, the latter will deal with the insanitary property. An agreement between the Corporation of Leeds and the licensing justices with regard to the closing of licensed houses in a demolition area was quashed by the Court of Appeal on the ground (*inter alia*) that the justices were not acting judicially in making such an agreement.

There is no licensing district in the country which can show such a record as Liverpool for reduction of licences, or such an improvement in the conditions under which the drink traffic is carried on, and, while the Committee admits that much remains to be done, yet it is clear that all the existing powers have been fully exercised in recent years.

HOSPITAL SUNDAY.

Hospital Sunday will, as usual, be the second Sunday in the year. With a view to increasing the amount of the collections and the general interest in the medical charities of the city the citizens prominent in philanthropic efforts have come forward with a very generous

offer—namely, to guarantee 10 per cent. on the amount collected for the Hospital Sunday and Saturday Funds over and above the amount collected last year.

Leeds.

The General Infirmary.

Mr. W. H. Brown, whose connexion with the infirmary has extended over many years, has, to the great and sincere regret of his colleagues and the Board, found it necessary to resign his position as surgeon to the institution. Mr. Brown, who studied at Leeds, was, on taking his qualifications, appointed one of the resident assistants, as the house-physicians and house-surgeons were then termed. He then became House Surgeon, that is, head of the resident surgical staff, an office which is now known as the resident surgical officership. In 1884 he was appointed Assistant Surgeon, and in 1890 was promoted to the full staff. The resolution, which was proposed by the Chairman, Mr. Charles Lupton, and passed unanimously at a very full meeting of the Board, expresses so faithfully the feelings of his colleagues that we cannot do better than quote its terms:

> That in accepting Mr. W. H. Brown's resignation of his position as Honorary Surgeon to the General Infirmary at Leeds, the Weekly Board desire to place on record their high appreciation of the great services which Mr. Brown has rendered during the period of his association with the infirmary, and in particular during the sixteen years that he has held the post of Honorary Surgeon. Conspicuous for his interest in his patients and his care for the honour of the infirmary, he has also won high esteem from his colleagues on the Weekly Board and the faculty, and from the members of the staff of the institution. The Weekly Board desire to express their great sympathy with Mr. Brown in his inability to bear the double strain of his public and private practice, but hope that now he is relieved from his heavy duties at the infirmary he will speedily regain his full health and strength.

Certain changes in the staff result from Mr. Brown's resignation. Mr. Heyniban, who, after serving ten years as Assistant Surgeon, was recently appointed "Honorary Surgeon, with charge of out-patients," becomes one of the four Honorary Surgeons. A vacancy is thus caused on the out-patient staff, which will shortly be filled by the appointment of an Assistant Surgeon.

The Public Dispensary.

The vacancy in the position of Pathologist to the Dispensary has been filled by the appointment of Mr. G. W. Watson, M.D.Lond., M.R.C.P. Mr. W. H. Carter has resigned the position of Honorary Dental Surgeon, and Mr. Perkin has been promoted from the assistant staff to fill the vacancy; Mr. Alan Lorty has been appointed Assistant Dental Surgeon.

Association for the Prevention and Cure of Tuberculosis.

The work at the sanatorium and at the hospital for the more acute cases having increased there has arisen the necessity for the appointment of an Assistant Physician, and to this position Dr. G. W. Watson has been elected.

North Staffordshire.

The Christmas Season.

No effort has been spared to brighten the season for those compelled to spend it as patients in hospital—the North Staffordshire Infirmary, the Burslem Haywood Hospital, and the Longton Cottage Hospital—and the efforts of the staffs and their friends have been greatly appreciated. At a Christmas gathering of workers at the North Staffordshire Bond Workshops it was stated that steps are being taken to purchase the freehold of the premises, and it was announced that nearly the whole of the money required was in hand. The blind workers present gave unanimous expression to their appreciation of the value of the new weekly paper in Braille type. The Burslem Isolation Hospital has been snowed up and cut off from communication. In some outlying districts food supplies had run so short, before the Press made the roads passable, that the price of bread had risen to eightpence a loaf.

SPECIAL CORRESPONDENCE.

PARIS.

Professor Albert Robin on the Treatment of Pneumonia.—Annual General Meeting of the Académie de Médecine.

At the meeting of the Académie de Médecine on December 4th, 1906, Professor Albert Robin made an interesting communication on the treatment of pneumonia. He has been studying the organic exchanges during the course of pneumonia with the object of finding some indication for a rational treatment. He found that during defervescence, and sometimes at its commencement, there is very generally a discharge of urea and uric acid, sometimes in large amounts; it is not exceptional to find 40 grams of urea and more than 1 gram of uric acid in the urine of twenty-four hours. He recently had in his wards at the Beaujon Hospital a man aged 38, with a morning temperature of 40.6° C., pulse 120, intense dyspnoea, delirious, the tongue dry and fuliginous. The case seemed hopeless; but the urine treated with nitric acid gave an abundant coagulum of urea nitrate, the actual quantity being 52·1 grams in twenty-four hours. The temperature fell by crisis to 38.6° C. in the morning and 38.2° C. in the evening, and, after slight variations on the following days, the patient recovered. In hypertoxic pneumonias which end fatally the coefficient of nitrogen utilized is perceptibly lowered, falling on the average to between 68 and 73 per 100. In cases which recover it never falls so low, and the coefficient varies between 77 and 82 per 100 during the feverish period, to rise still higher at defervescence. In a man aged 45, with very grave pneumonia of the left lung, the day before the temperature fell the coefficient rose from 80.3 per cent., which it had been previously, to 91. On the two following days, while defervescence was going on, it rose to 93.8 and 98.8 per cent. There are many exceptions to the typical cases, but in the majority of pure cases of pneumonia the crisis corresponds to an exaggeration of all chemical actions of a hydrating and oxydo-reducing nature. They show the energy the organism exerts in its defence and are essential conditions of a favourable crisis. This increase of the coefficient of utilization of nitrogen, at the time of defervescence, is not due to a more active oxidation of albuminoid matter or of the morbid and toxic products of their disintegration, because Armand Gautier has shown that urea is a product of reducing action and not of directly oxidizing actions. A comparative examination of the respiratory exchanges during the acute stage and during defervescence confirmed this opinion. The total consumption of oxygen by kilogram of weight and per minute is more feeble during defervescence than during the acute stage; especially does the amount of oxygen consumed by the tissues fall, that is to say, the oxygen not used to make carbonic acid. It results from this comparison between the general exchanges and the respiratory exchanges during pneumonia that the increase of urea and of the coefficient of nitrogen utilized, far from coinciding with a parallel increase in the respiratory exchanges, follows exactly the fall of the latter. The spontaneous crisis of pneumonia has therefore, if not as cause, at least as a determining condition, acts of hydration and not actions of direct oxidation, which express the reactional method of defence of the organism against the pneumococcic invasion, and whose essential agents are the ferments set free by the intense destruction of leucocytes which occurs at the same moment. Frequently the discharges take place before the crisis, and "pre-critical discharges" are of great value in prognosis; and the art of therapeutics should consist in bringing about at the desired moment the spontaneously curative chemical actions which they express and in aiding them when insufficient. Drugs which increase the total nitrogen, the urea, uric acid, and the coefficient of nitrogen utilized, while they diminish the consumption of oxygen, act therefore along the same lines as the spontaneous curative effort of Nature in pneumonia, and are useful, though they have no action on the pneumococcus itself. If the patient is vigorous, with a full, strong pulse, Professor Robin draws off 300 to 400 grams of blood by venesection in the arm; on the following day he gives 0·40 gr. of calomel in four powders of 10 cg. each

at hourly intervals, alcohol in moderate doses, quinine hydrochlorate (0.30 gr.) morning and evening; on the day after the calomel he adds to the evening dose of quinine a cachet of pyramidon (0.30 gr.) to provoke diaphoresis: and on the fifth day he applies a large blister (10 cm. square), followed by a linseed poultice. One of the agents which Professor Robin has called metallic ferments[1] is given in deep-seated hypodermic injections at the dose of 10 c.cm., or in very grave cases by intravenous injections of 5 c.cm. The nature of the metal employed (gold, silver, platinum, palladium, etc.) seems a matter of indifference. The injections should be begun on the fourth day, and repeated every other day. They generally cause lowerings of the temperature, a special urinary reaction, and a slight increase of the arterial tension. In the Beaujon Hospital Professor Robin has treated 53 cases of pneumonia by this method, 26 of these being very grave cases; only 6 cases died—11.32 per cent. In 63 per 100 of the cases defervescence occurred before the eighth day. The treatment seems to be less effective in serious cases of secondary broncho-pneumonia. Of 13 grave cases treated 6 were fatal—a mortality of 46 per 100.

The annual general meeting of the Académie de Médecine was held on December 11th, M. Guéniot, President, being in the chair. Dr. Motel, the Annual Secretary, read his report of the prizes given by the Académie in 1906; in concluding, he referred in turn to the work of the five members who have died since the last annual meeting—Drs. Colin, Josias, Prunier, Professor Brouardel, and M. Megnin. The President then proclaimed the names of the laureates of the prizes in 1906. The proceedings concluded by Professor Jaccoub, the Perpetual Secretary, reading a paper on the life and work of Professor Nocard of Alfort, who it will be remembered was one of the official French delegates of the International Tuberculosis Congress when it was held in London.

CORRESPONDENCE.

MEDICAL INSPECTION OF SCHOOLS.

SIR,—The medical inspection of schools comes under the duties of medical officers of health, and has, so far as their other duties would permit, been carried out by them ever since their creation by the Act of 1875.

More recently attention has been directed to the subject by the Committee on Physical Deterioration, who recommended that elementary schools should be medically inspected. Local education authorities have the power to appoint "necessary officers," and throughout the country are appointing school medical officers.

The number of schools, however, under each authority is so large that each school can only be visited at intervals of weeks or months, and the individual inspection of the children is impossible. Accordingly the medical officers are training the teachers in the work of inspection; they are taught partly by pamphlet and partly by demonstration on affected children to recognize various infectious diseases; they exclude from school cases of infectious diseases, and also children coming from infected houses; they notify infectious cases to the medical officer of health and also to the school medical officer; in some cases there are central clinical laboratories to which the teachers, or nurses who are sometimes employed, can send hairs from suspected cases of ringworm; in these laboratories also swabs are examined from suspected cases of diphtheria; but it is not quite clear by whom the swabs are "taken"; the teachers also test the children's sight and recommend the parents of those they think defective to obtain medical advice; this results, as a rule, in the child being taken to a hospital. Further information on this subject will be found in the report of the Committee on the Medical Inspection of School Children (1905).

What strikes one in this connexion is the large amount of responsible work that is being entrusted to the laity; it is not medical inspection by medical men or women, but teacher inspection for medical purposes; and, with all respect to those who are building up this system, one would submit that it is wrong, and that the proper course would have been, and still is, to appoint a separate school medical officer to each school, and to make it part of his (or her) duty to visit the school every morning, and on emergencies arising.

It seems to be assumed that the medical profession would not undertake this work on any terms that the ratepayers could afford. But is it so? The Committee reports that the cost of the present system does not exceed a tenth of a penny in the £ in the rates. In London there are 750,000 elementary scholars. Allowing 1,000 children to each school, we have 750 schools; a rate of 1d. in the £ produces £180,000; thus a rate of one-tenth of a penny would produce a sum sufficient to pay a salary of £24 a year to a medical officer at every school. Moreover, the Committee leaves out of account that the inspections are held during school hours, when the salaries of the teachers are running; the teachers must therefore be held to be paid; and it results, therefore, in the case of the defects of vision that the teachers are paid to find patients for the hospital oculists to treat for nothing. How in the face of this is it fair to say that this medical work must be taken from our profession and given to teachers because we will only work for a prohibitive wage?—I am, etc.,

December 28th, 1906. J. S.

[1] See BRITISH MEDICAL JOURNAL, 1894, vol. ii, p. 1661.

QUACKERY AND MEDICAL LAW REFORM.

SIR,—Discussing the subject of fraudulent quackery, and the misery to which it gives rise, Mr. Edmund Owen, in his Bradshaw Lecture, puts the following question:

> Is it too much to hope that as time goes on it will be made illegal for any one to act as a medical practitioner unless by study, examination, and registration he has acquired the right and the privilege to do so?

Would you allow me once more to urge that Mr. Owen's aspiration is not likely to be realized in the time of his contemporaries unless the case for legislation be first established irrefutably, and to the satisfaction of our lawmakers? No new law dealing with quacks falsely pretending to be qualified can be effectual unless the traffic in fraudulent quack medicines be dealt with at the same time. The two trades are inseparably bound up together. That practice of a profession by unqualified pretenders can be prevented is shown by the case of the solicitors. That the sale of fraudulent nostrums could be put an end to has been lately proved, not for the first time, in a case tried at the Lewes Assizes. Very little modification of the present law would ensure the prosecution of most quack medicine vendors for obtaining money under false pretences.

The case for medical law reform could be established by means of a Royal Commission. It can be done in no other way. Before such a Commission it could be demonstrated that new laws, whilst giving the profession the modicum of protection asked for, which is after all less than its due from the State, would confer incalculably greater advantages upon the people and those classes—the simple, the weak, the suffering—who are now the easy victims of an army of cynical tricksters. The days of legislation by private members have gone, and no project of law to satisfy the profession can have the least chance of a hearing unless introduced by Government. The political weakness of the profession as a body is deplorable; but were its power as great as it ought to be, it would be insufficient to compel reform unless backed by the weight of public opinion. The public, including the majority of members in both Houses of Parliament, are at present completely uninformed upon the question. They can be enlightened only by the means I suggest. If my contention be correct, is it not desirable that the forces and resources of the Association should be at once diverted towards achievement of the preliminary step without which all efforts in the desired direction must prove futile?—I am, etc.,

London, W., Dec. 22nd, 1906. HENRY SEWILL.

VOLUNTEER MEDICAL ORGANIZATION.

SIR,—I quite agree with "Un Guerrilla Malgre Lui" that, on the face, it seems that to require men trained for nursing to carry stretchers is a step back. But the exigencies of active service not only prevent the presence of female nurses in the front, but make it requisite that the rank and file of the R.A.M.C. Vol. must be trained in first aid, stretcher drill, and nursing, for the "field ambulance" of which they will form the *personnel* combines the hitherto dual wants of bearer companies and field

hospitals. Such being the case, these men must be taught the elements of anatomy and physiology, first aid, stretcher drill, and nursing.

Though the establishment of "the field ambulance" provides for a coarser material for the actual bearers, the demands of war are such that at any moment the specially and technically trained may be required to carry a stretcher. Nursing can, and has been, taught to volunteers successfully by lectures, demonstrations, and the actual experience obtainable in "the field hospitals" of volunteer camps and at military hospitals.

A dominant note in the British Medical Journal Committee's Report for Volunteer Medical Organization is that greatly increased facilities should be given to the R.A.M.C.Vol. for practical instruction in hospital duties. I look forward to the day when three certificates will be obtainable:

1. As the present [illegible]
2. For nursing and hospital duties.
3. Camp and field sanitation.

As regards female nursing, both in South Africa and Manchuria, there was no difficulty in getting for station hospitals female nurses, civil dressers, or civil medical men. The work even under R.A.M.C. supervision is very similar to hospital work in peace. The difficulty was to get disciplined officers and men trained for active service with troops in the field; for that reason, a reliable, technically-trained, and disciplined body is absolutely necessary.

Nothing can be satisfactory which does not create an auxiliary medical service and form a department, the R.A.M.C.(Auxiliary), with an establishment, say, of 1,200 officers and 12,000 rank and file, and co-ordinate the R.A.M.C.A. as closely as possible with the R.A.M.C.

(*a*) 1. Same rank. 2. Same instruction. 3. Same uniform, except that A on the shoulder to distinguish.
(*b*) Have a R.A.M.C.A. upon the Board of the Director-General.
(*c*) Have Honorary Physician and Surgeon to the Sovereign.
(*d*) A representative upon the Advisory Board.
(*e*) A fair share of honours.
(*f*) Preference for public medical appointments.
(*g*) A fair rate of pay when in camp or doing public duty.

From this department all shortages

(1) of establishment of R.A.M.C., and (2) wastage could be supplied

(*h*) Establish a home reserve. 1. Retired R.A.M.C. 2. Retired R.A.M.C.A. 3. St. John's medical officers and men, who would fill up any gaps as the R.A.M.C.A. were called out.

This would allow the best trained being available for co-ordinate service with the R.A.M.C., keep a supply for home, and so prevent the mistakes of the past.—I am, etc.,

J. B. Giles,
Surgeon Colonel Commandant Volunteer Ambulance [illegible] of Instruction.

Bletchley, Dec. 29th, 1906.

KING EDWARD'S HOSPITAL FUND BILL.

Sir,—When commenting in your last issue on this proposed Bill now lying on the table in the House, you stated that the Medical Charities Committee would be glad to have comments and suggestions with regard to the same before their meeting on January 8th.

I understand you will thus have given all an opportunity of seeing this Bill and of drawing to it the attention it deserves.

The best thing necessary in the interests of the public and the medical profession is that steps be taken by every London hospital (Board and every Metropolitan Division to have it [illegible]

The Bill contains the worst features of an American trust or combine, and in an attempt to place in all time in the hands of one person who is to be independent of every log of the land the absolute control of hospital philanthropy in London to the exclusion of all individual charity.

It is to be regretted that a number of our profession—Sir W. Collins absent here—met at the meeting where the Bill was [illegible] that he would support it. One cannot but speculate as to how those who have recently left large sums of money for this kind would have done so if their wishes had they thought it possible that such an attempt to return to the dark ages would be made.

As a profession, what are we in London proposing to do?

The Marylebone Division, which has recently provided an academic discussion on hospital questions of the most approved type, might well lead us now in some steps of practical utility. Will they do it? Within that area resides enough influence to settle this Bill within six weeks. Are they in sufficient sympathy with the rest of the profession to act?

The tendency of the past has been too much talk and respectability. What is now required is action. The Representative Meeting passed in July a resolution that the profession should be adequately represented on this Hospital Board. That request has been thrown back at us, and this Bill is the accompanying answer.

Are we willing to let matters rest there? or will the various Divisions now begin to organize their opinions on hospital administration, and so bring home to those who at present rule in these matters the fact that where medical charity is concerned we demand adequate representation, and if it is not given we will withdraw the aid necessary in dispensing it?

I believe Dr. Ford Anderson of Hampstead will welcome all comments and suggestions.—I am, etc.,

E. Rowland Fothergill.

Southfields, S.W., Dec. 31st, 1906.

HOSPITAL ABUSE.

Sir,—The subject of hospital abuse is at present exciting great interest, and if there is to be any reform as the outcome of the agitation the discussion ought to be conducted on reasonable lines. Many of the demands urged are impossible, and the case is only stated of grievances of one class of the medical profession.

The first thing that seems necessary to put the discussion on a proper basis is to define the class to whom the benefits of hospital relief should be extended. Hospital patients should be so sick that they require medical or surgical treatment, and so poor that they are unable to pay for it. As to their fitness as hospital patients on the score of sickness, the only judge of this matter can be the physician or surgeon under whom the patient is to be treated. He guarantees the medical suitability of the case, and is responsible to the hospital authorities for its treatment. The outside medical attendant is no doubt a good judge of the medical fitness for admission, but as he is not actually responsible to the hospital authorities he cannot expect his judgement to override that of the responsible medical officer.

As regards the second qualification—the poverty of the patient—this has always seemed to me a matter for the decision of the lay Board. A reasonable wages limit having been fixed, the Committee prevent abuse through an almoner or Charity Organization Society. As regards the almoner, it is evident that he cannot extend his inquiries over the whole of the wide area from which hospital patients come. The Charity Organization Society is open to the same objection. The recommendations of outside medical men as to the monetary suitability of the patient have, in my experience, been far from trustworthy. It is frequently convenient to shirk the responsibility of a small operation or get rid of a tedious case by removing it to hospital, although the financial state of the patient makes him unsuitable.

Another point which has been advocated by many speakers is payment by all patients. This seems to me a very questionable reform. It is impossible to remove from the patient's mind the impression that the 3d. or 6d. paid to the hospital is the return for the medical service and treatment, and if the hospital treats him for 6d. it is entering into competition with outside practitioners and degrading the services of the honorary staff.

Other speakers have advocated the erection of paying wards, with the paid services of medical officers. I think this is a very difficult matter to carry out in most hospitals, as it requires, among other things, an entirely different class of catering for such patients. The proposal to admit cases under the care of outside practitioners seems to me impossible. It must be understood that the directors of public hospitals accept responsibility for their officials, and that they are damaged by any carelessness or neglect of those officials. Again, rules are drawn up which are obeyed by the honorary staff of the hospital; such rules would carry no force with those who were not attached to

the institution. I see no reason why nursing homes should not be created on a provident system, and these would afford hospital facilities, and could be officered by the medical attendants of the patients. There are many other points of great interest, but the length of the present letter precludes their discussion.—I am, etc.,

Dec. 26th, 1906. PROVINCIAL HOSPITAL SURGEON.

MEDICINE AND THE LAY PRESS: A PROTEST.

SIR,—I shall be glad if you will allow me to state that I have addressed to the editor of a monthly medical journal the following letter, which explains itself:

In consequence of the communication to the lay press of advance sheets of the contents of the forthcoming issue of the ———— on the treatment of influenza, I beg, as a protest, to withdraw my name from the list of subscribers and have given my bankers orders to cancel my cheque.

Since it is very properly considered unprofessional for a medical man to publish communications in other than professional journals, I cannot understand why the editors of professional papers should consider themselves free from the same obligation.

I shall do my best to impress this view on all my professional brethren.

It is unnecessary for me to remind your readers that the public are already dosing themselves with tabloids and other drugs, the names of which they obtain from advertisements and from doctors pernicious prescriptions. Such being the case, it surely is improper for the medical press to connive at and contribute to the deplorable results so often arising from this fashion of self-medication.

I am aware that editors are not responsible for what may happen after publication; but I maintain that sending advance sheets is a direct invitation to the lay press to publish extracts; that this is unprofessional and ought to be discontinued.—I am, etc.,

Reading, Dec. 20th, 1906. J. HOPKINS WALTERS.

TRYPSIN IN CANCER.

SIR,—I was interested to see the letter published on December 21st, p. 1843, respecting the use of trypsin in cancerous cases; but, with your permission, I should like to make a few comments regarding the facts to which your correspondent bears testimony.

In the first place, no precise information is given as to the exact condition of the patients at the time the treatment was applied. Obviously in the last stages of inoperable cancerous disease, or in those gravely complicated, no treatment can possibly prove curative. I have furthermore myself stated that in certain complications pain may be increased rather than diminished. Again, nothing is said in respect of the particular preparation of trypsin employed and the mode or dosage of its administration. Furthermore, we are not informed whether the full methods of treatment laid down in my little book, *The Nature and Treatment of Cancer*, were duly and accurately followed, especially as I desire it to be clearly understood that in each case of malignant disease in which the treatment by trypsin is indicated, this does not consist merely in the use of trypsin as the sole remedy which the case may demand.

To condemn, therefore, the whole method of the treatment of inoperable cancer by that which is now known as the trypsin method, merely because non-success has followed in two or three particular instances, the details of which have not been made known, does not appear to me to be either logical, instructive or conclusive.—I am, etc.,

JOHN A. SHAW-MACKENZIE, M.D.Lond.

London, W., Dec. 21st, 1906.

THE BEST WAY TO REMOVE THE TONSILS.

SIR,—Mr. Hey Groves's unfavourable opinion of the present method of removing the superficial diseased elevations of the tonsil with the guillotine and his advocacy of a method well known but seldom practised may possibly be due to a misconception of the nature and anatomy of the tonsils.

The tonsil is not a single gland but a collection of innumerable minute lymphatic glands. It is not comparable to a lymphatic gland as found in the axilla or groins, and therefore is not to be treated as such.

The lymphatic arrangement of the alimentary canal from the mouth to the anus consists of a more or less continuous layer of minute lymphatic collections, in most cases smaller than a millet seed. The number of these minute glands varies according to the locality. In some parts of the small intestine they are crowded together in patches of considerable density. In other parts, such as the oesophagus, rectum, inside the cheeks and lips, they are few and far between.

The dense collections of these are known in the small intestine as Peyer's patches. The same arrangement exists in the pharynx and post-nasal space. At the root of the tongue, between the pillars of the fauces, in the fossa of Rosenmüller, in the vault of the pharynx, and between the Eustachian tube and the posterior end of the lower turbinal body similar collections exist.

In all these regions the mucous covering is bunched up and partly involuted by the action presumably of the subjacent muscles. Depressions and lacunae are thus formed, whose walls are lined with minute lymphatic collections. These recesses, as a rule, do not dip deeply into the fibrous stroma of the tonsil, but are arranged, for the most part, on the pharyngeal aspect of this body.

The recesses are most marked in the tonsils, probably from the constant movements and adjustments of the palato-glossi and palato-pharyngei muscles.

In typhoid fever or in tuberculous disease of the intestine not all the glands in a Peyer's patch are affected. Only a very small proportion are sufficiently affected to cause ulceration. The same is true of affections of the tonsil. In lacunar tonsillitis and other affections many glands escape, and it would be like killing the cow to cure it to on all occasions enucleate the tonsils because one or more of its follicles were the subject of pathological changes. In these cases the guillotine properly used removes all those parts internal to the plane of the pillars of the fauces and as a rule removes the greater part of the lymphatic tissue of the tonsil.

Other reasons against the wholesale enucleation of the tonsil are quite apparent. The tonsil is a barrier between the cavity of the mouth and the internal carotid artery. The fossa for the tonsil is separated only by the thinnest tissues from the actual coats of the artery. The stump of fibrous tissue left by the guillotine serves as a protector and shield to this most important structure.

On these grounds, as well as on many others, enucleation of the tonsil as a routine procedure is not the best way to remove the tonsils.—I am, etc.,

MAYO COLLIER, M.S.Lond., F.R.C.S.Eng.,
Senior Surgeon to the North-West London Hospital, and late President of the British Laryngological, Rhinological, and Otological Association.

London, W., Dec., 30th, 1906.

CONDITIONS OF EYESIGHT REQUIRED FOR THE MILITARY SERVICE.

SIR,—I have read Mr. Arnold Lawson's paper with great interest, and I feel sure all ophthalmic surgeons will agree with his main conclusions. I would claim a wider latitude than that allowed for admission into the Royal Engineers. I suggest that in myopia, up to 6 D of correction should be permitted in this branch of the service, always assuming that visual acuteness is good—that is, with correction V=1.

It may seem a little ungracious to find fault with so excellent an article, but there are two statements in it to which I must take exception:

(*a*) $D = \frac{6}{V}$,
(*b*) $M = -4.5\,d$.

To me both of these formulae are meaningless as they stand. Literally interpreted they signify:

(*a*) Distance $= \frac{\text{distance patient stands}}{\text{distance at which the letters ought to be read}}$

(*b*) Myopia $= \frac{1 \text{ metre}}{-4.5\,d}$.

Perhaps Mr. Lawson will be kind enough to enlighten your readers on the matter.—I am, etc.,

London, W., Dec. 31st, 1906. KENNETH CAMPBELL.

THE EVAPORATION OF CHLOROFORM DURING INHALATION.

SIR,—Dr. Barton, in his letter to the JOURNAL of November 24th, 1906, p. 1522, puts the question, "How does Dr. Levy, in giving chloroform from a mask, arrange that the whole of the chloroform is evaporated through

the agency of the respiratory air currents only?" In reply, I have to point out, in default of any specific reference to this aspect of the matter, that the whole of the experimental work in Sections C and D of my paper of August 4th was performed under such conditions. With regard to the practical application of this work, it will suffice to refer to the principle discussed in detail in Section D, which I concluded was the most suitable to adopt when administering chloroform from a "mask," the anaesthetic being in this case retained in the strands of a loosely-woven fabric, it is continuously volatized through the agency of the alternating (outgoing and incoming) currents of expired and inspired air which pass through the meshes of the material. The absence of waste from fortuitous evaporation is strikingly manifested by the diminished quantity of chloroform which it is found necessary to use in this connexion.—I am, etc.,

Sydney, British Columbia, Dec. 6th, 1906. A. G. LEVY.

THE TREATMENT OF FRACTURES.

SIR,—In the discussion of this treatment Professor Wright expresses his great disapproval of passive movements, but confines this, in his last letter of December 22nd, 1906, more particularly to "forced passive movements."

Every experienced operator, I suppose, agrees that any "forced movements," whether active or passive, are likely to be injurious and ought to be avoided; but I maintain that passive movements, applied with reasonable care and precaution, have a very important physiological part to play, and should be fully utilized for the purpose of this treatment. The avoidance of injury and undue strain is in my opinion simply a matter of skill and proper management. Passive movements act more particularly on the joints, and active movements on the muscles and soft parts; both have a beneficial massage effect, due to the alternating tension and relaxation of the tissues, which constitutes one of the provisions of Nature, a sort of automassage of the body, similar to the action of the heart stroke on the walls of the blood vessels, as described in my paper to the *Zeitschrift für Biologie*, 1889, vol. xxv, or to the effect of the respiratory movements on the heart and the large serous cavities (Kronecker and Hedenius).

Professor Wright goes so far as to say, "pain is an indication of injury," and, as many other writers, including Dr Lucas-Championnière, also state, that in no case should pain be caused. I am glad that Dr. Greenfield in the British Medical Journal of December 15th, 1906, fully in with my views and discriminates between pain at the seat of fracture and pain elsewhere. If joints and tendons have been allowed to get stiff before treatment is applied, and unfortunately this happens in the majority of cases, I do not see how pain can be entirely prevented if the results are to be satisfactory.

In cases of long standing after the bone is firmly consolidated I use mechanical power exclusively, applied by machinery similar to that designed by Dr. Zander of Stockholm and Berlin. I have better results in this way than with the manual method, because patients generally trust machinery but are afraid of using heart, involuntarily oppose the passive movements done by hand. These appliances are constructed for active and passive movements of all joints, and are accurately graduated, so that any degree of resistance, from zero to the maximum, and any range of movement, can be easily obtained.

I demonstrated this method of treatment first in 1897 in St. Thomas's, St. George's and King's College Hospitals, with the permission of Mr. Clayton, Mr. Watson Cheyne and Mr. Wagstaffe. Cheyne did my experiments almost entirely me in saying that both passive and active movements, properly applied and controlled, are beneficial and can advantageously be applied without disturbing the fragments or causing pain at the seat of fracture.—I am, etc.,

London, W., Dec. 26th, 1906. GEORGE HAMEL.

THE PROPOSED UNION OF MEDICAL SOCIETIES.

SIR,—We shall be much obliged if you will permit us to inform your readers of the decision of the societies on the above question.

Twelve societies have decided to form the union, namely: British Laryngological, Rhinological, and Otological; Clinical of London; Dermatological of Great Britain and Ireland; Dermatological of London; Epidemiological; Neurological; Odontological of Great Britain; Obstetrical of London; Pathological of London; Royal Medical and Chirurgical.

Four societies are willing to join under certain conditions, namely: British Balneological and Climatological; Laryngological of London; Otological of the United Kingdom; Therapeutical.

In the case of some societies, such as the Anatomical of Great Britain and Ireland, the Physiological, the Medico-Psychological, and the Medico-Legal, there are peculiar difficulties, but the members of certain of these societies have indicated their willingness to form similar sections in the new society.

Five societies have definitely refused to join the union, namely: Life Assurance Medical Officers' Association, Medical Society of London, Ophthalmological Society of the United Kingdom, Society of Anaesthetists, Society for the Study of Diseases of Children.

The first meeting of the representatives of the societies which are forming the union will be held at 20, Hanover Square on Friday, January 18th, at 5 p.m.—We are, etc.,

ARTHUR LATHAM,
HERBERT S. PENDLEBURY,
Honorary Secretaries of the Organizing Committee.

London, W., Dec. 28rd, 1906.

OBITUARY.

THOMAS HENRY CHEATLE, M.R.C.S., L.S.A., J.P., BURFORD, OXON.

WE regret to announce the death of Mr. Thomas Henry Cheatle, which occurred at his residence, Bridge House, Burford, on December 15th, 1906, in the 76th year of his age. Mr. Cheatle was descended from an ancient family that settled in Worcestershire in the early part of the fourteenth century. At the beginning of the nineteenth century Mr. Cheatle's father commenced to practise in Burford, and Mr. Cheatle himself, after studying at King's College, London, becoming M.R.C.S.Eng. in 1852, settled in Burford and carried on his father's practice. For many years he was the only medical man resident in the district, and was consequently brought into close touch with every section of the community.

During a long life, in addition to his medical work, he associated himself with every movement in his district which made for progress. For many years he was a Governor of the Grammar School. He took a deep interest in Church matters and played an important part in bringing about the restoration of the beautiful old Parish Church of Burford in 1870. He was mainly instrumental in founding and carrying on a most efficient cottage hospital. He was appointed a Justice of the Peace for the County of Oxford in 1895, and won the golden opinions of his fellow townsmen for the efficient and kindly manner in which he carried out his duties.

Mr. Cheatle joined the British Medical Association in 1874. When, in 1879, the Oxford Branch was started, he was elected a member of its first Council and one of its first Presidents; later on he represented the Branch on the Central Council from 1900 to 1904. Living as he did at a considerable distance from Oxford and five miles from a railway station, he set many of his younger colleagues an admirable example, as he rarely missed up to the time of his death a meeting of the Division, and was ever ready to take part in the discussions, his opinion being always listened to with interest.

A man of fine presence and possessed of a kindly and generous nature, he will be greatly missed by his medical colleagues and by a large body of friends and patients. He leaves a wife and several children. His eldest son, Mr. Cyril Cheatle, will, we believe, succeed his father in the practice.

A friend writes: Mr. Cheatle was the last burgess of the old Burford Corporation, as his father was the last alderman, and thus the insignia and regalia came into his possession. If there was one thing more than another which gave him delight it was his connexion with Burford, and his time was spent in promoting everything that

went on of interest in the town. He gave liberal help towards the restoration of the beautiful old church, and with his sisters gave the stained glass window at the east end in memory of his father and mother. He was instrumental in establishing the new cottage hospital, liberally subscribing himself and collecting money for the building and equipment thereof. He was a man of great culture, and his knowledge of the archaeology and antiquities of the locality was unsurpassed, and nothing gave him greater pleasure than to impart his knowledge to others, and show them the beautiful spots in the lovely old Cotswold town—that forgotten town with all its glorious memories on the banks of the Windrush.

The funeral took place on December 19th, 1906, and was very largely attended, the church being completely filled by a crowded congregation, showing in what deep esteem Mr. Cheatle was held by every one.

HERBERT W. KENDALL, F.R.C.S.,

SURGEON, ROYAL HOSPITAL FOR SICK CHILDREN, BRISTOL.

WE regret to record the death, on December 22nd, 1906, of Mr. Herbert W. Kendall, F.R.C.S., at Clifton, Bristol, at the early age of 39. Mr. Kendall was one of a much-esteemed family at Bourton-on-the-Water, Gloucestershire, where his father practised and his brother now practises as solicitor. He joined the Middlesex Hospital in 1887, and his loss will be much felt by the many friends he made during his career there, for he was one of those men who by sterling worth and honest integrity of purpose attract life-long friends. In his studies he was gifted with steady energy and met with much success, and before starting in practice in Bristol in 1895 he had held the posts of House-Surgeon and of Obstetric Officer to the Middlesex Hospital, and later that of House-Surgeon at the Great Northern Hospital, London. In these appointments he gained much experience and the affection of those with whom he was associated.

On taking up medical work in Bristol he soon acquired a growing connexion, and could count many of his patients amongst his best friends. He became Surgeon to the Bristol Hospital for Children, and served that institution with characteristic perseverance and ability, and his loss will be keenly felt by his colleagues and Committee. In addition he was Medical Officer to the Maternity Home and to the Surgical Aid Society.

It was during the performance of his busy private and public services that he first became ill, dating his malady from the time he had to operate on a child for appendicitis. After about a day's malaise he was seized suddenly with acute and general abdominal pain, with a short rigor, and pyrexia. Next day the temperature fell, but for more than a week it never became subnormal; and although the pulse was slow, slight pain and tenderness persisted in the region of the appendix. During this time he was devotedly nursed by his wife, who was formerly connected with the Great Northern Hospital. After ten days the local pain and tenderness increased, and the temperature began to rise. After consultation between two of his surgical friends, he was transferred to a nursing home and the inflamed appendix removed. The abdominal symptoms then completely subsided, but in a short time pulmonary signs developed. These, in turn, improved; and with the wound healed at the end of a week it was confidently hoped that he would completely recover, but during the next two days slight haemoptysis occurred, and after a cheerful day, and sleeping peacefully during the early part of the night, he cried out suddenly, became unconscious, and passed away in a short time, the cause of death being pulmonary thrombosis.

Mr. Kendall was a deacon at Tyndale Chapel, and at the funeral service on December 27th, attended by numerous professional and lay friends, the Rev. Dr. Glover said, "We are here by our presence to express our high regard for the dead, our sacred sympathy with the living, and to give a last farewell to one who was the friend of all who knew him. One who was very true, very tender, strong, able, manly, very fit for life and fit for death. . . . He leaves amongst the poor a multitude of grateful hearts, and amongst all who knew him a sweet memory of love and a quickening example of faithfulness." The interment subsequently took place at Bourton-on-the Water. The profession is the poorer for the loss of so high-minded and true a practitioner of the healing art, and the social area of his work will sadly miss his presence. We record our sincerest sympathy for Mrs. Kendall and the three young children left behind, and for the family of which he was a living example of constancy and devotion.

ANDREW BALFOUR, M.D., J.P.,

PORTOBELLO.

BY the unlooked-for death, on December 26th, 1906, at the age of 57, of Dr. Andrew Balfour the medical profession of Portobello and the Edinburgh district generally has lost one of its most highly esteemed and influential members. His illness—a heart affection—was but of a few weeks' duration. He was born in Hong Kong, where his father had medical charge of the Seaman's Hospital, and was brought at the age of 2 years to Portobello, where his father settled and soon developed a large family practice. In 1873 he took the degrees of M.B. and C.M. at the University of Edinburgh, and in 1877 the degree of M.D. Immediately after graduation in 1873 he joined his father in practice, and since his father's death, twenty years ago, had been in partnership with his brother Dr. John H. Balfour. Till Portobello became a part of Edinburgh he was for ten years medical officer for that burgh. Since 1896 he had been local police casualty surgeon, and more recently medical officer for the Portobello district of Edinburgh parochial administration.

In 1877 he was the chief founder of the Portobello Working Men's Institute, and he held office as President for a period of all but thirty years. In connexion with this Institute he organized and carried on for a long time a Sunday Bible Class. For twenty-seven years he was the Superintendent of the children's service in the mission district; he took infinite pleasure in making them happy, and the children enjoyed nothing better than having "Dr. Andrew" among them or speaking to them. For many years he was Superintendent of the Sunday School at New Craighall. In 1888 he founded the local company of the Boy's Brigade, and since that time he had filled the office of President, and had taken a deep interest in all work in connexion with the company. He interested himself in the pastimes of the miners, in billiards, bowls, and golf, and his interest was always practical and personal. For many years he was an Elder in Portobello Free Church, but after the union with the United Presbyterian Church he associated himself with the Established Church of Scotland, of which he became an Elder.

He was a member of the British Medical Association, and had recently joined the Poor-law Subcommittee of the Scottish Committee, but only lived to attend one meeting. In politics he was a keen Conservative, and took a lively interest in the local political association.

At the time of his death he held something like thirty official appointments, most of which were honorary. He was the most important factor in the social life of Portobello, and he will be greatly missed for many a day to come. How he found time to do so much for the social life of his district and yet carry on a large family practice is a marvel and a reproof to his profession.

Dr. Balfour is survived by a widow, a daughter, and three sons—one a medical student, another a botanist, and the third an architect—to whom much sympathy will be given by a wide circle of friends of the late "Dr. Andrew." His death causes a serious blank in the social life and work of Portobello.

FREDERIC CHARLES GRIFFITH GRIFFIN,

M.A., M.B OXON.,

CONSULTING SURGEON, WEYMOUTH HOSPITAL.

THE death is announced of Dr. Griffin, of Weymouth, who, though in ill-health for several years, has until quite recently been constantly to be seen in Weymouth taking the air in a bath-chair. Dr. Griffin was the second son of the late Mr. Griffin, a surgeon who in the middle period of last century likewise practised in Weymouth; he was born on December 4th, 1837. His general education he received at King's College School, London, and afterwards at Oxford; medicine he learned partly at Oxford, partly as a student of St. Bartholomew's Hospital, partly in Paris. To Oxford he went in 1856 as a scholar of Lincoln College, and there had a most distinguished career. He obtained first-class honours in Natural Science in 1860, and became

M.A., M.B., M.R.C.S.Eng., in 1864. He was the Radcliffe Travelling Fellow from 1863 to 1866. In 1866 he was appointed District Officer for Cholera in Southampton, and in 1871, Special Vaccinator to the Channel Squadron. About this time his professional connexion with Weymouth consolidated, and throughout its duration and until his health began to fail some seven years ago, he held a high position in the town, being greatly esteemed alike by his professional colleagues and his town-fellows. He joined the staff of the Weymouth Royal Hospital and Dispensary at an early date, and after serving it for some eighteen years, finally became Consulting Surgeon. He was also Surgeon to the Sanatorium, and Medical Referee to several assurance companies. Dr. Griffin was a member of the West Dorset Division of the Dorset and West Hants Branch of the British Medical Association, and took much interest in science apart from its application to medicine; in astronomy in particular he was highly proficient, and much of his spare time he passed with a telescope. He was married, and leaves a widow, a son, and a daughter.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE PREVENTION OF CORRUPTION.

A CIRCULAR recently addressed by the Local Government Board to the councils of counties and municipal boroughs draws attention to the Prevention of Corruption Act, 1906, which came into force on January 1st, 1907. This measure is designed to remove a canker which is deep-seated in our commercial system, namely, the giving and receiving of secret commissions. To make men honest by Act of Parliament may be an impossibility; but the Act affords a means whereby those who are honest may bring those who try to seduce them from the path of virtue within the reach of the criminal law.

Before drawing attention to the provisions of the Act, it may be well to consider the law with regard to secret commissions as it stood before. At common law, no agent is permitted to acquire any personal benefit in the course or by means of his agency without the knowledge and consent of the principal. Further, it is his duty to account to his principal for every benefit, and pay over every profit acquired by him in the course or by means of the agency without such knowledge and consent even if, in acquiring the benefit or profit, he incurred a risk of loss, and the principal suffered no injury thereby. Further, if he had been induced by the bribe to depart from his duty to his principal, he was also liable jointly and severally with the person who bribed him to make good any loss suffered by the principal in consequence of that departure from duty. Finally, a principal was justified in dismissing without notice any agent who accepted a bribe in the course of his agency.

Under the law as it stood until the end of 1906 the agent who received a secret commission was guilty of a civil offence for which the law provides a civil remedy. But it was no offence to give a bribe, nor could the attempt to induce an agent to break faith with his principal be punished in any way whatever. This may be explained by a simple illustration. Suppose that, with a view to obtaining an order for the supply of provisions, a contractor offered a bribe to the manager of the workhouse and it was accepted and that before any order was given the guardians discovered the fact of the bribe. They might dismiss the manager and recover the bribe from him, but they had no remedy against the contractor.

It had long been recognized that the giving and receiving of secret commissions ought to be brought within the jurisdiction of criminal courts, and it was with this object that the Legislature passed the Prevention of Corruption Act, 1906, which comprises practically only one section. It provides that

[illegible]

meanour and be liable to fine or imprisonment or both. It should be observed that "consideration" includes valuable consideration of any kind. An officer under the Act may be either dealt with summarily or tried at assizes. No prosecution, however, may be instituted unless the assent of the Attorney-General is first had and obtained.

Stating the effect of the Act in the fewest possible words, it renders criminal (*a*) the receipt, or attempt to receive, a secret commission; (*b*) the gift or the attempt to give or offer a secret commission; and (*c*) the falsification by an agent of any document, etc., with a view to deceiving his principal in relation to secret commission.

To the casual reader it may appear to be futile to declare that the gift or receipt of a bribe shall be a criminal offence, seeing that a conviction can only be obtained upon the evidence of the receiver or the giver, both of whom are equally guilty; but it is all-important to note that the Act makes the attempt to corrupt a criminal offence. So if A. attempts to bribe B., and B. is an honest man, he may lay an information against A. without incriminating himself. Further, we have to consider another important point—namely, that although offences against the Act may be difficult to prove or to detect, the Act makes a crime of what has hitherto been an offence against the common law. Whether the fact that they are committing a crime will serve to deter the receivers and givers of secret commissions to any great extent remains to be seen. The Act, however, is undoubtedly a step in the right direction.

PROFESSIONAL SECRECY.

THE CASE OF THE RAILWAY SIGNALMAN.

THE following letter from a signalman in the employment of one of the principal railway companies will be read with interest by those correspondents who were alarmed for the possible consequences of the opinion expressed in these columns on December 15th, p. 1753:

"Last week a letter appeared in *Thomson's Weekly News*, taken from your paper, *re* Secrecy: Medical Practitioner and Asthmatic Signalman. I think 'Practitioner' is troubling himself needlessly. Of course he cannot be expected to know much of a signalman's duties, any more than we know the effects of certain drugs. Should a signalman drop down insensible in his box, nothing can happen of any danger to trains. Bells, levers, etc., will remain as he leaves them; nothing can act without him; consequently nothing except stopping traffic can go wrong. Many seem to think when the signalman is *hors de combat* a terrible accident must happen. Such may happen in America or in penny novels; but English train working is practically safe. The last two great accidents—Salisbury and Grantham—were not signalmen's faults, but high-speed running. Trains are worked as follows: Take signal boxes A, B, C, D, three miles apart. Let us imagine the asthmatic signalman at Box C. An express passenger train leaves A; B gets two rings on the bell, meaning train has left A. B now rings one bell, *attention*, to C; C is helpless. Does B let the train fly ahead? Oh! no. Failing to get C's attention, he stops the express, tells the driver the circumstances, and cautions the train forward to C, when the situation is explained. Even if C accepted the explanation and fell, the train would pull up at C, as his signals would be on; and even if he had forwarded to D, and had his signals off, nothing could happen.

"The train would rush on to D, who, on finding he had not got bells on line, would try to get C's attention; failing, he would communicate with B., and they would conclude something was wrong at C, and would caution trains accordingly. A signalman may take ill, but usually have their wits about them and send to head quarters for relief. If the signalman cannot move, the trains cannot move; so there is no accidents likely to happen. Only five minutes' delay to a passenger train or shunting engine would soon bring some one to the signal-box to see what was wrong. Overwork and drink are the railwayman's worst enemies.

"Whenever a train is shunting from one main line to another the main line signals are locked. The worst part of a signalman's life at a busy junction is not in having to deal with a lot of trains—he usually does his best to get the traffic away. But, even after this, he is bombarded with type-written letters as to why this delay and that to certain trains, when it is a sheer impossibility to avoid delays, owing to heavy traffic.

"These reports get on one's nerves more than train working. A continual explanation wanted, which may take a man an hour to work out."

Many of the London and provincial newspapers have been discussing the case, and a good deal of nonsense has of course been written, but we notice a sensible letter in the *Daily Mail*, signed "Dublin Surgeon." He says:

"The position of the doctor retains for the company is clear, and the company for whom I act have their servants examined upon entering their employment and each time they present themselves for promotion, which occurs on an average about every five or six years. In the event of illness of an employé, he cannot return to duty unless certified as medically fit, which is necessary after any illnesses they may have. In my experience, railway companies are very particular that nothing

should be wrong with the servant liable to lead to sudden indisposition at an important post, and I have often been struck with the sympathetic way that a place was found for the wounded soldier in some department where no physical contingency of his could injure the public."

MEDICAL OFFICERS OF WORKHOUSE INFIRMARIES AND INQUEST FEES.

L. M. N. asks (1) if the medical officer of a workhouse and infirmary attached thereto is entitled to fees for giving evidence before the coroner on a person who dies (*a*) in the workhouse, (*b*) in the infirmary. (2) Has a judicial decision been given on this question? If so, when and where? 3. What is the necessary proceeding to recover the fee?

*** "Where an inquest is held on the body of a person who has died in a county or other lunatic asylum, or in a public hospital, infirmary, or other medical institution, or in a building or place belonging thereto, or used for the reception of the patients thereof, whether the same be supported by endowments or by voluntary subscriptions, the medical officer whose duty it may have been to attend the deceased person as a medical officer of such institution as aforesaid shall not be entitled to such fee or remuneration." Coroners Act, 1887, Sec. 22, Subsec. 2. (1) (*a*) Yes, according to the above section, and has never been disputed. (*b*) There has been doubt cast on the meaning of "infirmary," as to whether a pauper infirmary is a public infirmary. In the counties of London and Kent the county council pays the medical officers of the infirmary as well as those of the workhouse, in accordance with an opinion obtained from Sir Henry Poland. In Middlesex and adjoining county, as in nearly all other counties, the reverse is the custom. (2) A legal decision was given at Croydon by His Honour Judge Lushington in 1885 concerning this question, when he held that a workhouse infirmary was a public infirmary within the meaning of the Act, and consequently the medical officer did not receive a fee. There was no appeal, though leave was given. (3) The procedure for recovery of a fee is by obtaining a summons in the county court against the coroner.

THE GIVING OF ANAESTHETICS FOR UNREGISTERED PRACTITIONERS.

M.B.—There can, we think, be no doubt that a registered practitioner who gave an anaesthetic for an unregistered bonesetter would come within the terms of the resolution adopted by the General Medical Council on November 23rd, 1897, as follows:

> "In regard to the practice commonly known as 'covering,' the Council gives notice that any registered medical practitioner who, by his presence, countenance, advice, assistance, or co-operation, knowingly enables an unqualified or unregistered person (whether described as an assistant or otherwise) to attend or treat any patient . . . is liable to be judged as guilty of 'infamous conduct in a professional respect,' and to have his name erased from the *Medical Register*."

MEDICAL TITLES.

THORIUM.—(1) According to English ideas, our correspondent, not being a graduate of a university, should not use the letters "M.D." (2) It is not usual on visiting cards to put any degrees or letters indicating professional diplomas. A Doctor of Medicine usually calls himself "Dr. X. Y. Z.," giving his christian names in full.

LIABILITY FOR ATTENDANCE ON DOMESTIC SERVANT.

M.D., F.R.C.S.E. writes that he was recently called in by a lady to see a maid servant, whom he found to be very ill, and requiring an immediate operation. He advised her removal to the cottage hospital for this purpose, and there, with the assistance of three other medical practitioners, he performed an abdominal section for perforating gastric ulcer. The patient made a good recovery, and he wishes to know from whom he is entitled to recover a fee. The patient is 26 years of age, and without means, and her father is a fairly well-to-do tradesman but declines all liability.

*** The patient is the only person against whom our correspondent has a legal claim. The father is not liable. Had his daughter died, and been buried at the expense of the local Board of Guardians, they might have recovered the cost from him. In many cases the master or mistress, though not legally bound to, is willing to pay reasonable expenses on behalf of their servants; and, where this is not the case, the servant is usually treated at the expense of the Poor Law, or in the wards of a general hospital. Under the new Workmen's Compensation Act, domestic servants will be able to claim half their wages during illness.

CONTRACTS NOT TO PRACTISE.

SAY NINETY NINE writes: By an agreement in writing an assistant binds himself not to practise within a certain area of his principal's house for a specified time after the termination of his assistantship. Would this agreement prevent an assistant who had started in practice just outside this area from seeing patients who had come to him from within the forbidden area?

*** No; he is not precluded from seeing those who voluntarily come to him at his house, but he cannot visit those residing within the forbidden area without incurring legal risk.

NEGOTIATIONS FOR THE SALE OF A PRACTICE.

R. H. writes: A. inspects B.'s practice, which is for sale, but incidentally hears that another practitioner in the same neighbourhood is negotiating for a partner. Would there be any objection to his entering into such a partnership after having interviewed B.?

*** The answer must depend upon what is meant by inspection. If A. has merely inspected the books and obtained some general information about the practice, he would not be debarred from accepting a partnership in the neighbourhood, but if he has been introduced to any patients as B.'s possible successor we do not think he would be justified in breaking off negotiations and joining another practitioner in the same neighbourhood.

THE OWNERSHIP OF NEGATIVES.

FOCUS TUBE writes: What is the law respecting the following questions?

(1) If persons pay fees to hospitals for *x*-ray examination, can they demand to be given the negatives, or are prints sufficient evidence to be handed to them? (2) In a dispute as to an injury in court, must original negatives be produced or will prints be accepted? (3) Seeing that prints can be "faked" are not negatives the only evidence worth production, more especially as they show more detail?

*** (1) It is difficult to enunciate any general principle which governs the relationship of a photographer and his customer, but we are advised that, in the absence of agreement, while the copyright belongs to the customer (*Boncas v. Cooke*, 19, T.L.R., 475) the negative belongs to the photographer. It is a nice question whether this doctrine applies to *x*-ray photographs, where the actual negative is important. (2 and 3). It is a mistake to assume that photographs of any kind are "evidence"; they can only be made evidence by admission (see *Noden v. Murray*, 3 Camp. 224). Even if the photographer himself is called, he can only use the photographs to refresh his memory. The other side may object to their being put in. It is possible, however, that a judge would allow *x*-ray photographs to be shown to the jury if their accuracy was sworn to by the photographer. In such a case, it is obvious that the actual negative would be more valuable than a print.

MEDICAL OFFICERS OF HEALTH AND THEIR PROFESSIONAL COLLEAGUES.

M.D. writes that there has been an epidemic of diphtheria in his neighbourhood, and that he sent a nurse, who, in his opinion, was suffering from the disease, to the local infectious hospital. While there a bacteriological examination of the throat was made, with a negative result. As the patient was otherwise well the medical superintendent asked the medical officer of health whether, in view of the negative result of the bacteriological examination, the patient need be detained any longer for mere quarantine purposes. To this the medical officer of health assented, but "M.D.," having heard of it, protested, and complains of his diagnosis being thus set aside. The medical officer of health, on receiving the protest, agreed that the nurse should remain in the hospital for another week if she were willing to stay. But "M.D." is dissatisfied, and complains that he has been treated in a very high-handed manner, that a doubt was cast upon his diagnosis, and that his professional reputation has suffered. He insists that he ought to obtain redress, and that the medical officer of health should apologize.

*** In our opinion "M.D." has no ground for considering himself ill-treated by the medical officer of health, who seems to have shown him due consideration. The suggestion that the patient should be discharged came from the medical superintendent of the hospital and not from the medical officer of health, who was justified in consenting to it, in view of the negative results of the bacteriological examination.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

The following candidates have been approved at the examinations indicated:

Mechanics and Physics—W. H. D. Aland, Christ Church; G. Adam, Christ Church; W. A. Akers, Christ Church; R. Atkin, Jesus; O. Barkas, Trinity; G. E. Beaumont, University; H. S. Brocklehurst, St. John's; W. Burridge, Christ Church; D. J. Carr, Magdalen; F. A. Hampton, New College; G. T. Hebert, Christ Church; J. S. Huxley, Balliol; H. E. Jones, Jesus; P. E. M. [illegible], St. John's; F. R. Morton, Balliol; W. H. Ogilvie, New College; D. R. Parry-Jones, St. John's; A. D. Ogilvie, New College; D. R. Parry-Jones, St. John's; A. D. Pilcher, Jesus; P. Pickford, Lincoln; Q. D. Pictor, Exeter; P. [illegible], Jesus; P. Pickford, Lincoln; V. R. [illegible], St. John's; W. R. Reynell, Balliol; V. R. [illegible], St. John's; W. R. Reynell, Balliol; A. H. [illegible], Christ Church; D. B. Sothers, St. John's; W. G. K. [illegible], Magdalen; J. F. Venables, Magdalen; H. T. Vincent, Exeter; C. Wortley, Balliol; G. I. Wishart, Jesus; R. S. Wix, Balliol.

Chemistry—G. Adam, Christ Church; W. A. Akers, Christ Church; R. Atkin, Jesus; G. E. Beaumont, University; W. H. Bleaden, Worcester; H. S. Breakspear, St. John's; [illegible], Christ Church; C. C. Clarence, Magdalen; W. A. [illegible], Christ Church; A. W. Dennis, Keble; D. Ll. Hammick, Corpus Christi; F. A. Hampton, New College; G. T. Hebert, Christ Church; E. E. Jones, Jesus; A. Jowett, Brasenose; S. P. L. Lord Mayor, Christ Church; F. R. Morton, Balliol; I. S. Morrice, Queen's; P. L. North, Pembroke; W. H. Ogilvie, New College; W. I. Perrin, Worcester; A. D. Pilcher, Jesus; P. Pickford, Lincoln; A. W. Reynell, Balliol; A. H. Simpson, Corpus Christi; D. B. Smithers, St. John's; R. O. Spencer-Smith, St. John's; W. D. Stephens, St. John's; R. B. Turnbull, Christ Church; J. F. Venables, Magdalen; H. T. Vincent, Exeter; C. Wortley, Balliol; R. B. Wright, Christ Church; G. I. Wishart, Jesus; R. S. Wix, Balliol; [illegible], Christ Church; J. A. Wood, University.

Botany—P. G. Jones, Trinity; L. B. Holland, Trinity; E. G. Pilcher, Jesus; E. O'Connor, Lincoln; R. L. Robinson, Magdalen; [illegible], New College; E. O'Connor, Lincoln; R. L. Robinson, Magdalen; [illegible], Merton.

Physiology—W. A. Cowie, Worcester; G. Cronstown, Oriel; C. H. F. Pearson, Christ Church; S. P. L. Lord Mayor, Christ Church; N. S. Lucas, Hertford; C. [illegible], Salisbury, Oriel; [illegible], New College; C. I. Beevor, Christ Church; [illegible], New College; C. I. Beevor, Christ Church; C. F. C. [illegible], Exeter; C. B. Fenwick, Exeter; C. F. C. [illegible], Exeter; C. B. Fenwick, B.A., Magdalen; A. D. [illegible], B.A., University; H. M. C. Green, Magdalen; A. D. [illegible], B.A., University; H. M. C. Green, Magdalen; A. D. [illegible], B.A., University; H. M. C. Green, Magdalen; N. F. Hallows, Keble; C. H. L. Harper, B.A., Worcester; N. F. Hallows, Keble; C. H. L. Harper, B.A., Worcester; [illegible], University; G. J. Z. Jessel, B.A., University; G. J. Z. Jessel, B.A., University; G. J. Z. Jessel, B.A., University; [illegible], New College; A. E. Mavrogordato, B.A., New College; A. E. Mavrogordato, B.A., New College; [illegible], B.A., New College; A. E. Mavrogordato, B.A., New College; [illegible], Hertford; T. A. Townsend, New College; [illegible], Hertford; T. A. Townsend, New College; [illegible], Hertford; T. A. Townsend,

Women's Hostel.

The scheme for building a residential hostel for women students is progressing. About £14,000 is required for this purpose, and already £9,000 has been promised.

UNIVERSITY OF LEEDS.

THE final examination for degrees in Medicine, which, in conformity with a recent regulation, are now held in March and December, instead of in March and July, were concluded on Monday, December 17th, 1906, and on Wednesday the degrees of M.B., B.Ch. were conferred by the Vice-Chancellor in the Library of the Medical School on the following successful candidates:

V. C. Hackworth, W. O. McKane, E. W. Reed, T. Whitehead.

TRINITY COLLEGE, DUBLIN.

THE following degrees and licences were conferred on December 20th:

M.D.—R. P. Beatty, B. G. Brooke, de V. Condon, T. L. De Courcy, F. O'B. Ellison, J. A. Hartley, W. P. Ringland, E. S. Smythe *(in absentiâ)*.

M.B., Ch.B., B.A.O.—M. K. Acheson, F. Casement, R. A. Connell, C. T. Conyngham, E. C. Crawford, P. B. Egan, F. O'B. Ellison, T. O. Graham, W. Hutcheson, H. B. Leech, J. du P. Langrishe, M. P. Leahy, T. C. Somerville, D. F. Torrens, G. S. Walton.

LICENCE IN SURGERY, MEDICINE, AND OBSTETRICS.—L. V. Hunt.

The following candidates have been approved at the examination indicated:

D.P.H.—Part I: W. J. Powell. Part II: J. T. Wigham, H. Knaggs.

LONDON SCHOOL OF TROPICAL MEDICINE.

THE following gentlemen have been approved at the twenty-second sessional examination:

*Major S. A. Harriss, I.M.S.; *F. M. Suckling, M.B., Ch.M Syd.; *P. H. Pereira, M.B Madras (Colonial Service); *W. B. Orme (Colonial Service); *Major J. B. Smith, I.M.S.; O. Bluhme, M.D. Havana; W. Cammack, M.D. Chicago; Mrs. W. Cammack, M.D., State Univ., Iowa; E. P. Caropoulos, M.D. Athens; C. F. Fothergill; D. Giordano, M.D. Rome; H. W. Gush, M.B., Ch.B. Edin. (Colonial Service); F. I. M. Jupe, M.A. Camb. (Colonial Service); E. J. Maxwell, B.A., M.B., B.C. Camb.; H. B. G. Newham, H. McG. Newport (Colonial Service); Captain J. M. Phalen (U.S. Army); Miguel Paz, M.D. Guatemala; A. R. S. Powell (Colonial Service); C. C. Robinson, M.B. Lond. (Colonial Service); F. O. Stoehr, M.B. Oxon.; K. R. Tampi; W. A. Trumper; A. H. Wilson, M.D. Camb. (Colonial Service), W. W. Woolliscroft.

* With distinction.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved at the examinations indicated:

Surgery.—*†R. L. H. Davy, *G. B. Messenger, *F. B. O'Dowd, *†W. F. Skinner, *S. H. Watton.

Medicine.—*†A. E. Blythman, *†R. L. H. Davy, *†Q. S. Keat, *D. E. C. Pottinger, *†W. F. Skinner.

Forensic Medicine.—R. L. H. Davy, D. E. C. Pottinger, W. F. Skinner, W. W. Stacey.

Midwifery.—R. L. H. Davy, D. E. C. Pottinger.

The diploma of the Society has been granted to Messrs. R. L. H. Davy and Q. S. Keat.

* Section I. † Section II.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

VACCINATION.

Calf Lymph.

TU QUOQUE.—(1) It is not possible for a private practitioner to obtain the calf lymph supplied by the Local Government Board by purchase or otherwise. (2) "Tu Quoque" will find the lymph prepared by the Lister Institute for Preventive Medicine, for which Messrs. Allen and Hanburys are agents, excellent, as is also that prepared by Dr. Renner, 75, Upper Gloucester Place, London, N.W.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

R.A.M.C. VOLS. (GLASGOW COMPANIES).

THE annual gathering of this regiment was held recently in the St. Andrew's Halls. This was the first occasion on which the annual gathering had taken the form of a dance, but the success of this year is likely to result in the repetition of this form of social gathering as on the whole the most suitable. The *Corps Annual* was distributed during the evening, maintaining its high standard both in literary matter and in illustrations. The Glasgow companies are in a very flourishing condition. They commenced a good number of years ago in a modest way, but they have now definitely established themselves in popular favour, and the numbers on the roll amount to close on 700 men, though this year there is a slight decrease compared with the numbers of the previous year.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Actiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR, 2631, Gerrard. GENERAL SECRETARY AND MANAGER, 2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

Q. asks any reader who has used a glass wind screen on a motor car to give his experience of its value.

INCOME TAX.

J. B. writes: A. and B. are interested in a partnership to the extent of two-thirds and one-third respectively. How ought the income-tax return to be made and paid?

*** The return should be made in one sum by the precedent acting partner, and duly paid accordingly. If, however, the total income of either partner does not exceed £700, he may claim to be separately assessed in respect to his share of the partnership profits in order that he may obtain the allowance of the abatement applicable to his income.

THE ODOUR OF FISH MANURE.

T. M. W. asks if an attack of illness characterized by "pain at stomach, vomiting, and nervous prostration," and lasting six weeks, could be produced by the odour emitted from a heap of rotting fish manure at a distance of 120 yards, and inhaled on the day before the onset of the illness. The patient was a nervous young woman.

*** We cannot undertake the responsibility of diagnosing the cause of the illness referred to. It is difficult to take our correspondent's question quite seriously, but we advise him to discriminate between the physiological and the psychological potency of the odour of fish manure. We know of no scientific observations which would justify the belief that the illness could have been produced by the direct physiological action of toxic gases inhaled under the conditions specified. Psychologically considered, the problem is very abstruse, because the mental possibilities of a "nervous young woman" are not amenable to precise calculation. Of course, a nasty smell might upset her—gastric disturbances are often neurotic in origin; but one would like to know if she really thinks that it was the fish manure that upset her and, if so, why it took a day before the upset came on; probably she knows better than anybody else. The psychological influence of smell is a subject which has been much neglected, and if our correspondent wishes to enlighten it by some scientific observations he has a wide field before him. He might well begin by studying the influence upon the neurotic of an offensive odour such as that of fish manure, and then, as control experiments upon normal subjects are always necessary in scientific investigations, the record of his own experiences would be valuable.

PATHOLOGICAL TECHNIQUE.

I.M.S. asks: (1) How to stain Schaudinn's spirochaete of syphilis; (2) the nature of van Gieson's stain; (3) the name of an up-to-date textbook on methods of preparing and staining pathological sections.

*** (1) Prepare a mixture of 10 drops of Geimsa's stain (which must be brought ready prepared), 50 drops of distilled water, and 2 drops of a 1 in 1,000 solution of potassium

carbonate. The films, previously fixed by absolute alcohol, are to be stained in this mixture for half an hour, then washed in distilled water, dried, and mounted. (2) Van Gieson's stain is particularly useful for the demonstration of connective tissue in pathological sections—for example, in specimens of cirrhosis of the liver. The sections are first stained in haemalum or haemotoxylin in order to demonstrate the nuclei: they are then dipped into a saturated watery solution of picric acid, to which has been added enough (from 1 to 2 per cent.) saturated watery solution of acid fuchsin to turn the solution the colour of old port wine. Then wash in water, dehydrate, clear, and mount. The connective tissue should be red and the protoplasm of the parenchymatous cells yellow. Failure to bring out this differentiation is generally due to excess of acid fuchsin. (3) *Methods of Morbid Histology and Clinical Pathology*, by Walker Hall, M.D., and G. Herxheimer, M.D. Edinburgh and London: William Green and Sons. 1905.

ANSWERS.

H. E. D.—*La Semaine Médicale*, published at 53, Avenue de Villiers, Paris, or *Le Progrès Médical* (14, Rue des Carmes, Paris), would probably meet our correspondent's requirements in regard to French medical literature. Of German periodicals, the best known are the *Berliner klinische Wochenschrift* (68, Unter den Linden, Berlin, N.W.), the *Deutsche medizinische Wochenschrift* (published by Georg Thieme, 2, Rubensteinplatz, Leipzig), and the *Muenchener medizinische Wochenschrift* (published by J. F. Lehmann, 15a, Paul Heysestrasse, Munich).

OESOPHAGEAL STRICTURE.

R. J. There is no statement in any of Dr. de Havilland Hall's writings in regard to reflex association of stricture of the oesophagus and primary uterine malignancy. Functional dysphagia in women may originate from many reflex disturbances, and there does not appear to be evidence of this being particularly connected with malignant disease of the uterus.

HYGIENIC CUSTOMS OF JEWISH WOMEN.

E. M.—The chief hygienic practices peculiar to Jewish women have reference to the menstrual period. A woman is considered to be unclean for seven days from the commencement of menstruation, and during that time sexual intercourse is strictly forbidden. At the end of the week a bath is obligatory. Among the more orthodox section of the Jewish community, especially recent immigrants, this bath has to be of a special character to satisfy their idea of ritual requirements, it being considered necessary that the bathing should be in running water and in a receptacle holding some 120 gallons. Public baths of this character have been built in the East of London and are called "Mikwahs." After parturition a similar bath of purification has to be employed, and this may not be taken at the earliest till the eighth day after the birth of a male child, or, in the case of a female child, the fifteenth day. A bath of this description is always taken by orthodox Jewish women before marriage: it also forms an important part of the ceremony appertaining to the conversion of a non-Jewish female to Judaism.

HOME FOR DEAF AND DUMB FEEBLE-MINDED GIRL.

J. S. The question propounded is not easily answered, as the double calamity of deaf-mutism and imbecility is a disqualification for most institutions. As the patient is a girl, aged 14, application might be made to Miss Kirby, Secretary of the National Association for Feeble-minded, 72, Denbigh House, Marshall Bridge Road, S.W., or to Mrs. Kinsey, Secretary Institutions for Deaf Children, Cheltenham Hill, Edgbaston, Birmingham, either of whom might be able to give information as to where the child might be admitted. If the patient's deafness is not complete, admission to the Royal Normal College for the Blind, Upper Norwood, S.E., might be obtained. Whether the child is sufficiently imbecile she might be received into the County Asylum, Hereford.

MEDICAL TITLE.

Dr. T. S. Peters Hughes (Ilfracombe, Heath Tipton) writes: In reply to "Medicus" (page 1844 of the BRITISH MEDICAL JOURNAL of December 22nd, 1906), I have been using a Dr. De Dion car for two years, with the Soy pneumatic tyres on driving wheels and Dunlop non-skidding pneumatics on steering wheels, and I can say that the combination performs perfectly. The wheels are fitted with 28 in. steel and wood shield wheels. Dr. De Dion could fit 4 in. tyres on driving and 3 in. on steering wheels, but I prefer running with the smaller tyres, as the speed is not much greater and the cost practically nil.

Dr. J. Cameron Chapplow writes: I have used solid tyres for years and find Scott's rubber cluncher tyre to be the best, costing, per foot run, inclusive of new rim to wheel, 1s. 6d. for 3 in. and 2s. for 3½ in. rubber tyres. Pneumatic tyres are all right in theory, but rather demur, as they are expensive and rather delicate. Much depends on the quality of rubber used in making. Much depends on the quality of motor used, but for private motors solid tyres are extremely satisfactory and economical. A local carriage works would put on the new rim and get the rubber from the North British Rubber Company. "Skidding" is certainly less with "solids."

LETTERS, NOTES, ETC.

THE CASE OF MR. PEERS: A MISCARRIAGE OF JUSTICE.

MR. C. H. PRING, M.A., L.S.A., Honorary Treasurer (278, Old Kent Road, S.E.), writes: I am pleased to acknowledge the following additional contributions:

		£	s.	d.
Amount previously acknowledged	...	31	12	6
Sir Hugh Beevor, M.D., F.R.C.P.	...	1	1	0
F. W. Brook, M.R.C.S., L.R.C.P.	...	0	10	6
R. W. Councell, M.R.C.S., L.S.A.	...	0	10	6
R. P. Marshall, M.R.C.S., L.R.C.P.	...	0	10	6

making, together with my own contribution of £1 1s., the sum of £35 6s. The fund being now closed, I am forwarding to Mr. Peers this amount, which I believe will be almost sufficient to reimburse him. Needless to say I am very grateful for the liberal response my proposal has met with.

IODINE IN THE VOMITING OF PREGNANCY.

MR. A. RAJASINGHAM, C.M., M.B.Aberd. (Edinburgh), writes: In the BRITISH MEDICAL JOURNAL of December 15th, 1906, Dr. A. H. W. Ayling, while recommending minim doses of iodine in an ounce of water as a recipe of great value in obstinate cases of vomiting of pregnancy, states that he "cannot find this form of treatment named in any textbook on midwifery." This statement is certainly not correct, as this remedy was recommended in a work on midwifery and known to me about eight years ago. To a primipara of about 20 years of age who received no benefit from the ordinary drugs I administered tr. iodi in water in small doses, and it certainly did good; and there was no need for altering the prescription, though I cannot say "it acted like magic."

STERILIZATION OF CERTAIN DEGENERATES.

DR. ROBERT R. RENTOUL (Liverpool) writes: Those who support the above proposal will be more than glad to see that Dr. T. E. K. Stansfield, Medical Superintendent of the Bexley Asylum, has in his last annual report to the Asylum Committee, London County Council, reported to the Asylum Committee in the following and far-reaching language: "The question of sterilization of the insane becomes more and more pressing." Dr. F. H. Craddock, late Medical Superintendent of the Gloucester County Asylums—whose death all pioneer workers deeply deplore—has also reported strongly in favour. While Dr. Bevan Lewis has backed my proposal up in a letter which I have inserted in my work, *Race Culture, or Race Suicide*. It is also of interest that in 1905 the State of Pennsylvania discussed a Bill approving of sterilization; while in the early part of 1907 the State of California will introduce a measure providing for sterilization. It would be of great help if the Asylum Committee of each county council in the United Kingdom followed the example of the Lancashire County Council and appointed a strong committee to consider and report upon my proposal.

AN OSTEOPATHIC DIAGNOSIS.

WE have all heard of the astronomer who while gazing at the heavens fell into a ditch. A somewhat similar fate, we gather from the *St. Louis Medical Review*, has befallen two adepts of the system of glorified bonesetting known as osteopathy in a city of the Middle West of the United States. A patient with an eruption called on these pundits who diagnosed the case as one of "faulty circulation consequent on a subluxation of the tenth dorsal vertebra." It may be presumed that osteopathic methods were applied in accordance with this subtle diagnosis, but in this instance at least the course of manipulative treatment did not run smooth. Ten days after the patient came under the hands of the osteopath, an official from the Health Department came on the scene and finding them suffering from typical small-pox sent them to durance vile in the Quarantine Hospital. The source of contagion was clearly shown to be the patient whose tenth dorsal vertebra was said to have misconducted itself in so remarkable a manner.

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A page					

An approximate number of words

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An Address
ON
ARTERIAL SCLEROSIS.

DELIVERED BEFORE THE WEST SOMERSET BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

BY W. P. HERRINGHAM, M.D., F.R.C.P.,
PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL.

GENTLEMEN,—I am half ashamed to ask your attention to such a common disease as arterial sclerosis. But though it is common there is very little known about it, and since it is common the more we know about it the better.

I suppose the picture that will occur to every one's mind is that of a rather stout man of about 50, who has led a fairly hard-working and fairly successful business life, whose exercise has consisted in going to and fro between his office and his house, most of the way, perhaps, by train, and whose interests have lain almost entirely in getting the better of other people. His amusements have been confined to a little social intercourse with friends very like himself, and he has had three hearty meals every day of his life. At about that age he begins to feel certain inconveniences. He gets dizzy when he is lacing his boots; if he has to hurry to catch his train he gets very short of breath; he notices that he gets palpitation now and again without known cause; that sometimes he has a certain amount of discomfort about the heart as if he had not quite room enough in his chest, and perhaps that at the end of the day there is a little swelling about his ankles. As he has never, according to his own ideas, exceeded due limits, he cannot make out why he should be troubled. We find that his heart is a little enlarged, and that after walking backwards and forwards for a few yards quickly it beats rather forcibly. His pulse is perhaps occasionally intermittent, but the most striking thing about it is that if, while feeling it with the left forefinger, we try and stop it with the right, it takes a very considerable pressure to obliterate it. In a stout man it is not easy to be sure of the thickness of the arterial wall, but this can sometimes be felt to be abnormal. Under such conditions we naturally examine the urine. As such patients are not in bed it is not easy to obtain a proper sample of the twenty-four hours' urine. We cannot then know the total quantity, and if we do not, the specific gravity of a single sample is often misleading. The urine is usually acid, clear, and contains no albumen. We do not feel quite justified in diagnosing chronic interstitial nephritis, yet the rest of the conditions are such as usually coincide with that complaint.

Or the picture may be a little different. The patient may be thin and spare, may have led a highly-intellectual strenuous life, may have been temperate and self-controlled, and may have played golf regularly and done a good deal of walking in his holidays. Yet he complains of much the same symptoms; we find his heart the same, and, in addition to an incompressible pulse, we find an artery like a vas deferens and highly tortuous.

In both these cases we may soothe our minds by saying that there is chronic interstitial nephritis, but the evidence for this is nothing more than inference, and even if the inference were true, it would not help us much, for the patient's complaints refer entirely to faults in his circulation. To say that he has interstitial nephritis is no direct explanation of his symptoms, and the present tendency of pathologists is to consider interstitial nephritis to be a consequence of arterial disease rather than a cause of it. I have purposely chosen slight degrees of the condition; every one is familiar with cerebral haemorrhage, and fatal cardiac failure as the end of these cases.

The faults of circulation of which this man complains are of two kinds. From what we can feel in his radial we may guess that his dizziness when stooping depends on a similar stiffness in his cerebral vessels, which prevents them from following closely the variations of pressure produced by position, and thus at times deprives his brain of blood. All the rest of his symptoms can be explained if we suppose that his heart, though manifestly hypertrophied, has become not quite competent for its task.

But how have these changes come about? Why, without any evident cause, should the arteries have become inelastic? And why should the heart, which was strong enough to stand the muscular life of youth, fail to support the much quieter life of middle age? The answer to these questions may be found by examining the condition of the arteries after death and the blood pressure during life.

1. THE CHANGES IN THE ARTERIES.

There is probably no point of pathology better established than that, as a broad rule, the inner coat of arteries becomes with advancing age increasingly subject to certain morbid changes. In the larger arteries these changes are usually styled "atheroma," sometimes "endarteritis deformans"; in the microscopic arteries we find hyaline swelling and hyperplasia of the elastic layer and of the subendothelial cells. These changes are capricious; the abdominal vessels, forming what is called "the splanchnic area," may be free when the skeletal vessels are affected or the reverse, and the cerebral vessels may be free when the rest are diseased. The carotid and the external iliac—two arteries which are nearly of the same size and bear almost the same relation to the trunk of the aorta—are attacked by atheroma quite differently; in the first it is extremely common, in the second extremely rare. The pulmonary arteries, except in special circumstances, nearly always escape.

Again, the microscopic changes above mentioned, which are very common in the vessels of the kidney and of the spleen, are not generally distributed. They are, for instance, hardly ever seen in those of the liver or of the muscles (Jorés).

We should naturally turn to experiment for the explanation. But it happens that the animals which pathologists can use for experiment are not subject to this disease. Very severe lesions can indeed be produced by the injection of adrenalin and of nicotin, but they differ widely from what we may call the natural disease in man. We are thus driven to observation of man as our only method of understanding these conditions, which, though probably comprising more than one disease, are commonly grouped together under the name of arterial sclerosis.

It is common knowledge that arterial sclerosis as seen in man may be due to certain poisons such as that of syphilis and lead, and alcohol is generally supposed to have a similar influence. It is quite certain, too, that chronic diffuse nephritis can produce endarteritis in young people. But the great majority of cases do not fall under any of these heads, and in them the cause of arterial sclerosis is still undecided. It has been found by Virchow and other observers that the changes in the intima are usually greatest where blood pressure is highest, and it is well known that though the pulmonary arteries are seldom affected, the cases in which they suffer are cases in which from some cause or other the blood pressure in this system is raised. Just so is it in experiment. Those poisons, adrenalin and nicotin, which produce severe lesions of the intima, are poisons which greatly raise the blood pressure.

Thus, while atheroma and endarteritis tend in their turn to raise the blood pressure by offering increased resistance, they seem to be often, and perhaps usually, the result of a high pressure antecedent to themselves.

But however this may be, we know from experiment that, unless calcareous plates are present, these changes in the intima are not the cause of stiffness in the vessel. A highly atheromatous aorta may stretch as readily as one that is not atheromatous, and if an artery is stiff you may peel off its inner coat and yet leave it as stiff as before. The loss of elasticity in arteries cannot, therefore, be explained by any of the conditions which we have yet considered.

If, now, we pass from these visible changes to examine the mechanical properties of arteries, a rather remarkable result appears. Wills and I, amplifying some work done by Roy, found that from the age of 20, the earliest we could examine, to the latest period of life, there was a continuous loss of elasticity in the aorta, which could not be ascribed to any cause other than age. No disease appeared to interfere with, or sensibly to increase, the gradual stiffening which age produces.

What, then, can there be in age which has this effect? We were quite unable to find in the middle coat, which is

the seat of this stiffening, any anatomical change by which we could explain it. But we found a second fact which is very significant. In successive decades the arteries not only lose elasticity, but also become progressively wider. The stiffer the artery the wider it is.

Put in that way the statement is not very illuminating, but if you turn it the other way round and say the wider the artery the less it will stretch, then at once the explanation suggests itself that arteries are inelastic because they have already been dilated, and, therefore, that the whole thing—both the changes in the intima and the loss of elasticity in the media—may, perhaps, be resolved into increase of blood pressure.

2. Increase of Blood Pressure.

Ever since von Basch and Potain, thirty years ago, began the study of blood pressure in the living man an immense amount of work and of invention has been devoted to it. Many instruments have been devised for its measurement, one of the best of which is a sphygmomanometer, due to Riva Rocci, with an arm-band 12 cm. broad added by Martin.

You will easily understand that, even with the best instrument, we cannot reach the same precision on the living body as from experiments with a strip of artery taken from the dead. But it is quite firmly established that, just as we should expect from the results of the latter, the blood pressure rises as age advances. There is a marked difference between the average pressure of apparently normal persons at 20, 40, and 60 years of age, and this is increased if we include the diseased, since most chronic diseases tend to raise pressure.

And another fact appears almost equally important. I stated that we could not find that any disease sensibly affected the elasticity of the aorta at death. Individuals in each decade certainly varied one from another, but in the 100 male cases we examined no disease seemed to have any consistent effect at all comparable with that of time. On the other hand, there is no question about the effect of some diseases, for instance, diffuse nephritis, upon blood pressure. They may increase it very greatly.

From this side also, therefore, it seems probable that a rise in blood pressure is antecedent to change in the vessels, and even requires considerable time before it deprives them of their natural elasticity.

But what is antecedent to the rise in blood pressure? What conditions have brought that about?

Here we enter upon a region of dispute in which there are many theories and few facts. The pressure must be the result of increased resistance. The heart responds to this by increasing the size of its fibres.[1] As the resistance becomes greater, the heart hypertrophies again and so the process goes on till at last the heart's power of reaction is worn out and the resistance becomes too great for it to overcome.

Where is the resistance? It might be due to some disease in the blood vessels. If so it must be in the minute vessels, for the radial, and probably all arteries visible to the naked eye are not themselves the seat of resistance. They lie in the area of dilatation between the heart and the resistance. It is conceivable that in these minute vessels some anatomical change takes place which blocks the passage through them. Gull and Sutton talked of arterio-capillary fibrosis, Johnson described muscular hypertrophy, and now days though both these ideas have lost their hold we recognize the hyaline swelling and the hyperplastic thickening of the intima of which I have already spoken. But lately as I said before, the tendency has been to regard these rather as the consequence than as the cause of high pressure.

Again, it has been suggested that the blood becomes more viscous in old age, and that the increased friction accounts for the resistance. Direct attempts to verify this have however failed to show that increase in viscosity is the rule even in cases of nephritis.

Thirdly, it has been supposed that the blood contains toxins or toxi-created products or extracts of animal tissues or even excretory substances which have failed of excretion, and that these or some of these may by their effect upon the fluid or upon the vessels which contain it render the blood flow more difficult.

We can find examples that might easily fit this hypothesis of an impurity in the blood.

1. Thayer found that old typhoid fever patients had a much higher blood pressure than was natural, and it is conceivable that this is the after-effect of some toxin or antitoxin formed in the blood.

2. It is very tempting to believe that the high pressure of plethoric men is due to the imperfect performance of the final or muscular stage of digestion. Their stomachs and intestines act well, their livers work up the portal products, but they do not take sufficient exercise, and in consequence do not disintegrate by muscular chemistry the intermediate forms of metabolism.

3. Contamination with excretory substances has often been suggested to explain the symptoms of nephritis. This idea has derived some support from the fact that in nephritis the freezing point of the blood is generally lowered, which implies that the blood contains a greater number of molecules than the normal.

4. In the last year or two experimenters (Tigerstedt and Bergmann, Ascoli, Batty Shaw) have shown that extracts of renal tissue when injected into the system have an extraordinary power of raising blood pressure. It is therefore a plausible theory that in chronic nephritis much renal tissue dies and is removed by the absorbents, and that this substance, returned into the blood, produces at any rate a large number of the cases of high pressure.

You see, therefore, that the elderly gentlemen with high blood pressure, of whom I spoke at first, may be accounted for in more than one way. If they have not had typhoid fever they may have had some other complaint with a possible toxin. If they have not greatly over-eaten themselves they are very exceptional specimens. If they happen to pass water rather frequently we can at once suppose that they have a latent nephritis, and can then choose between two different explanations of their high pressure.

But these hypotheses cannot in any individual case be established upon a firm basis. Even with the most careful examination we cannot reach certainty. As far as we can tell, any one of them may be true of a given patient.

Treatment.

In this necessary state of doubt it seems to me that our business is to act upon that one of them which gives the most hope for treatment. We cannot expect to remove disease already fixed permanently in the arteries. We can with some hopefulness attack a floating impurity in the blood. It is on this side that the chances of treatment are best.

Of course, if symptoms are severe, the first necessity is rest in bed, and under it alone a good many cases improve. Muscular effort produces for the time great rise of pressure, and complete muscular rest removes these moments of strain and gives the heart a chance to recover its tone.

But I have chosen a slight case for my example, and chiefly on this account—that in such a case the last stage has not been reached, and that we can not only remove the symptoms for the time, but to a great extent prevent their increase and recurrence.

Such a patient will not be in bed, and will not be greatly benefited by going there. We can, however, do him a great deal of good by drugs, by diet, and by regulation of his habits.

1. *Habits.*

It is highly important that such a man should take a certain amount of regulated exercise daily; for, though exercise, if severe, strains the heart, it is, when moderate, the best possible means of ensuring a healthy metabolism. I have suggested that this may be through the chemical activity of the muscles themselves. That is only a suggestion—nothing more. The effect may be due to other causes; but of its reality I think there cannot be any doubt at all.

A second point is early rising. I cannot give you any other reason why this should do good than that perhaps it promotes metabolism by giving opportunity for a little exercise before any large meal has been taken.

And a third is the renunciation of tobacco. The power of a pipe of tobacco in raising the pressure in man is as certain as is the result of its injection in animals. And though we cannot suppose that smoking produces such extreme changes in the arteries as do the strong injections used in animal experiments, the results of these must weigh greatly with us in treatment.

2. *Drugs.*

In some cases severe symptoms are for the time greatly relieved by nitrites. But their effect is usually transient. Still, I have known men made much more comfortable by small doses of nitroglycerine given for a week or two. For a more permanent effect small doses of potassium iodide have been highly recommended.

But I do not think that any drug approaches calomel. Given in small doses of 1 gr. or ½ gr. every night for a short time and repeated at intervals, it sometimes is of very great use. It is not its purgative effect that is needed; it is really what is called an alterative. Every one appreciates its effect on the spirits, and I believe this to be chiefly an effect on the blood pressure, for it is known that melancholy is a state in which the pressure is high.

Alkalies act chiefly by increasing the flow of urine, and this, especially in cases complicated—for this is my view of the position—by nephritis, is often of great importance.

3. *Diet.*

I think that diet is perhaps even more important than either habits or drugs. I have not any doubt that in some cases a very light diet acts like a charm. Let me give an example:

A man of over 50, very thin and spare, was admitted under me. He was complaining of severe dyspnoea and oppression, and had been in bed for some time at home without benefit. He could not lie down. There was no disease of his lungs, no oedema, no dilatation of the right side of his heart, and no albuminuria. I am not prepared to say his kidneys were healthy; probably they were fibrous. But the main thing about him was extreme degeneration of his radial artery and a very high blood pressure. He was put on our hospital milk diet, and from that moment improved rapidly. He went out, resumed his usual food, and in three weeks his symptoms returned. This time I made him go on milk diet at his own home and the result was as good as before.

This effect, however, does not always follow. Almost at the same time I tried this diet on a rather older man with the same symptoms without producing any effect on his blood pressure. He improved slowly, just as such cases usually improve when they lie up.

Whereas in the first case it seemed that the alteration in diet really removed to a great extent the cause of high pressure, which was, therefore, probably a floating impurity, in the second case it is reasonable to suppose that the pressure was due to some permanent changes in the vessels. Under such circumstances the high pressure is necessary for the blood flow, and all we can do is by rest and small doses of digitalis to strengthen the heart for its task.

I do not quite know how, when this treatment succeeds, the effect is produced. It is not the necessary result of milk, for if milk alone is given, which involves drinking pints daily, it is said to increase the blood pressure rather than diminish it. Our milk diet, however, contains milk (2 pints), bread and butter, rice or custard pudding, and tea (1 pint). There are about 70 grams of proteid in it.

The reduction of blood pressure, therefore, might be due either to the reduction of proteid or to the alteration of the kind of proteid taken.

In some cases I think the first is certainly the most important. In chronic nephritis, which always means diffuse nephritis—for interstitial nephritis is a latent disease—it used to be the custom to prohibit meat. Hale White and von Noorden have written against this treatment, and I fully agree with them. Such patients do much better with meat than without it, but the total of their food must be kept at a very moderate level, because their means of disposal of refuse are crippled.

But we must not expect to reduce pressure in them; in later stages, at any rate, it does not fall, even when, owing to uraemic vomiting, scarcely any food is taken. This obstinacy may perhaps be due to disease of the abdominal arteries. It is known that these vessels have a preponderating influence on blood pressure, and also that they are nearly always diseased in chronic nephritis of middle life. But it seems to me more probable that, as experiment suggests, the degenerating renal tissue pours a toxin into the blood which no change of diet could remove. In such cases the one important thing is to drain the poison off by increasing the flow of urine.

In other cases, however, I think it impossible to deny that the kind of proteid taken is of importance. I am not at all a faddist about food. I do not share the belief that meat invariably floods our tissues with uric acid, and I think that many people are the better for a little wine. But my observation leads me to think that there is a great variety in the metabolism of different persons, and that the diet which is good for one is, quite apart from gastric indigestion, poison for another. There is exaggeration in this as in all things, and it is not often that a patient's observation of his own symptoms can be accepted without reserve. Still, it is my belief that chemical analysis has much further to go than the mere estimation of calories, or of the nitrogenous contents of the ingesta and excreta, and that our own observations if carefully made will often tell us more than chemistry can yet explain. Chronic rheumatism, of which you see plently here, some forms of headache, and high blood pressure, appear to me to be clues of special importance in examining the effects of different forms of proteid, and I think there is a great deal to be done by following them up.

I do not ascribe the same importance to carbohydrates. They have great influence on digestion. Some people cannot eat bread or potatoes, some can eat raw sugar but not cooked sugar, and so on; but I have not observed that they affect blood pressure.

I should say the same of minerals. Salt has a certain connexion with oedema, but this is not through blood pressure. Calcium I never saw have any effect at all.

This, however, may be from want of observation on my own part, for I see that others think differently.

Meanwhile there is one lesson that middle age has always to learn, and that is that it must be moderate, and that moderation means for it something very different from the ordinary meals of healthy and active youth.

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Remarks

ON

SOME POINTS IN THE PATHOLOGY AND TREATMENT OF ADHERENT PERICARDIUM.

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THE subject of this study is a boy, son of healthy parents. His brothers and sisters are also healthy. There are no cases of tuberculosis in the family. He is living in the country, under exceptionally favourable hygienic conditions. His father is a doctor.

There seemed to be nothing wrong with him until the summer of 1903; he then got an exudative pleurisy on the left side. There were pain and fever during some weeks, and a certain amount of fluid. The fluid was absorbed, but dullness remained, with marked retraction of the lung. He did not, however, regain his appetite, and there was some shortness of breath.

A year afterwards, in the summer of 1904, a pericarditis followed. There was again a considerable amount of fluid, there was fever, and the boy was very weak. Again the fluid and the fever disappeared, but at the moment the exudate seemed to be locally reabsorbed, alarming symptoms made their appearance. The pulse became very quick and weak; an extreme shortness of breath and a very painful and enormously swollen liver were developed.

I was asked to see the patient, and found the symptoms characteristic of adherent pericardium. The pulse was small, weak, and frequent, diminishing during inspiration (*pulsus paradoxus*); the veins were considerably overfilled, and during inspiration there was marked swelling of the veins in the neck. In the regio cordis there was a visible and palpable systolic retraction of the ribs and the intercostal spaces. The heart sounds were faint but pure. The liver was huge and hard, reaching nearly to the umbilicus, and very sensitive to touch. Its size seemed out of proportion to the stasis of blood in the venous system (see Fig. 8 *a*).

The history of this disease, or rather of its symptomatology, is connected with many a great name. Kussmaul, Friedreich, and many French and English clinicists, have

contributed to our knowledge of the disease, and of the genesis of its curious symptoms. Still there is much that is obscure, and there is a great deal of controversy concerning the explanation of some of its most striking features.

HAMPERING OF THE HEART.

The disturbance of the circulation in adherent pericardium is a purely mechanical one. We, therefore, have to study minutely what are the anatomical conditions that put such a strain on the heart and the circulatory system. The pernicious influence of the adhesion of heart and the pericardium to surrounding structures is described in a masterly way by Dr. Arthur Keith in his Hunterian Lectures.[1] The movements of the heart are very complicated. Keith points out that during systole the auricle first pulls up the ventricle, afterwards the ventricle pulls down and stretches the auricle, while even the contractions of the auricular appendages have a certain influence on the propulsion of the blood. For the perfect action of the heart it is necessary that all parts of the heart move freely within the pericardium and, to some extent, in the chest. An adhesion of heart and pericardium, therefore, has to be looked upon as an impediment to the propulsion of the blood through and out of the heart. There is a general opinion that this hindrance may be overcome by a healthy heart-muscle, so that an adherent pericardium may be found *post-mortem* in cases where there was no reason for suspecting the disease during life.

Another state of things arises when there is in addition a firm attachment of the pericardium to surrounding structures to the chest wall, in front and behind, and to the diaphragm. These adhesions may be formed by pleuritic adhesions (as probably in our case), or by inflammatory processes in the mediastinum, or by both affections. It is easily understood, and well described by Keith,[1] Harris,[2] and Brauer,[3] what an enormous strain is thrown on the heart by these adhesions. Indeed, the heart is hindered in its lateral forward movements by tough and hard fibrinous masses, so that it can neither be properly filled nor properly emptied. By its shortening at every systole it pulls the chest wall in front, and, by means of the posterior mediastinum, at the vertebral column. Neither of these structures gives way. In youthful individuals the ribs may be so flexible that the heart is able to pull them inward; in older patients this will be impossible; and in both cases the heart has opposed to it an enormous amount of extra work. There cannot be a long struggle, the heart must be soon exhausted, and the well-known symptoms of heart failure supervene.

The mechanical impediments to the heart's action in the first instance are responsible for the following symptoms:

1. Insufficient circulation, frequent heart action, weak pulse, low arterial pressure, overfilling of the veins.
2. Systolic retraction of the chest wall in the regio cordis.

DISTURBANCE OF RESPIRATION.

There is another important function that is hampered by the adhesions in the chest, namely, the respiration. In literature we find but few and brief remarks on the respiratory disturbances in this disease (see Gibson[4]). Keith says: "When the pericardium becomes fixed by adhesions to the lungs and chest wall a number of obscure symptoms follow, owing to the arrest of the normal respiratory movements of the heart." Indeed, I do not doubt that many of these "obscure symptoms" are much more the sequence of respiratory disturbance than of failing heart action.

In normal conditions the chest wall is lifted up during inspiration, by which movement the lungs expand in an upward and forward direction. At the same time the diaphragm descends so that space is gained in a downward direction too. The diaphragm not only widens the chest, but compresses the abdominal contents, liver and bowels have to give way downward and forward, and the wall of the abdomen is thereby pushed forward. Thus the visible respiratory movements of the body wall are a moving of the chest wall upward and forward, of the abdomen in a forward direction only. These movements may be seen in Fig. 1, which shows the outlines by instantaneous photographs taken during inspiration (dotted line) and during expiration. The forward movement is easily recognized; the upward movement of the chest is obvious from the changed position of the shoulder, the sternal end of the clavicle, and the nipple.

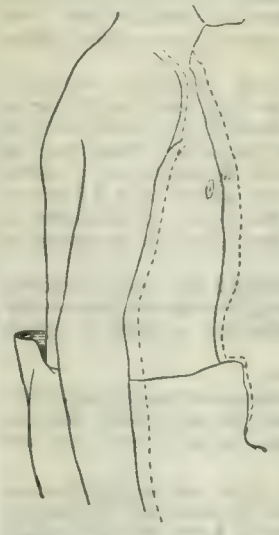


Fig. 1.—Normal respiration. The dotted line is the position in inspiration (from photographs of a healthy young man).

With the diaphragm the heart descends in inspiration, and not only the apex of the heart, but the whole heart with the roots of the lungs. Keith has worked out this problem in an excellent way, and showed how "the lungs carry their pump with them" in respiration. These complicated movements are very important for circulation and respiration. By the downward movement of the heart space for air is gained in the middle of the chest, as may be seen diagrammatically in Fig. 2. The upper parts of the lungs, taking the least advantage of the respiratory movements of the chest (Keith), profit most by this sinking of the heart. During expiration the heart, like a wedge between the lungs, contributes to the emptying of the lungs.

What will happen now, when adhesions fix the heart and the diaphragm to the chest wall?

The "crura" of the diaphragm will try to pull the diaphragm downward; the diaphragm is fixed to the heart; the heart is fastened to the chest wall in front and to the surrounding mediastinal parts behind. The heart is, therefore, unable to follow the diaphragm, and the diaphragm is hampered in its descent. As a result note—

1. The descent of the diaphragm is insignificant.
2. During inspiration the crura pull at the heart, and, via the heart, at the chest wall, at the roots of the lungs, and the posterior mediastinum. The traction will be in the direction of the arrows in the diagram (Fig. 3).
3. The heart and large vessels being fixed to their surroundings, inspiration produces a worse condition than expiration.
4. Respiration becomes very defective in all its factors.

CLINICAL SYMPTOMS.

We have now to ask, What clinical symptoms result from this disturbed mechanism of respiration?

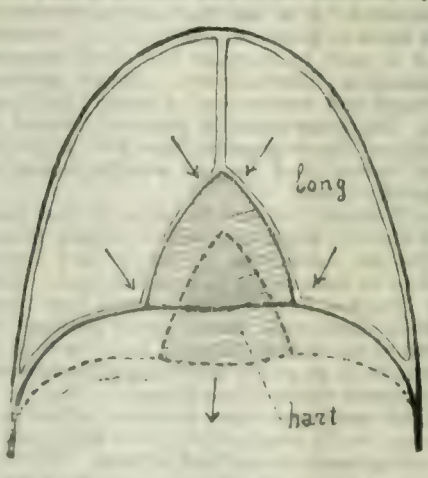


Fig. 2.—Diagrammatical front view of the chest (expansion of the lungs in downward direction during inspiration dotted line).

Taking the last point first, we find the diaphragm greatly limited in its movements; thus the abdomen will not be pushed forward during inspiration or very slightly. At that same moment the diaphragm pulls, by means of the heart, at the chest wall in the regio cordis so there is no forward movement of the chest, but rather an inspiratory retraction of the chest (see later).

This failure of the respiratory movements will have most pernicious influence on the flow of blood from the splanchnic area to the heart. It is well known that the alternating rise and fall in thoracic and abdominal pressures are the chief factors that force the blood from the splanchnic area into the thorax

So we may expect, and we find, a stasis of blood in the abdomen.

This inspiratory traction on the heart, which cannot give way, is bound to affect injuriously the action of this organ. The "debit" of the heart, too small in expiration, must become still smaller during inspiration. As a result of this embarrassing action during inspiration, the well-known symptom of pulsus paradoxus is produced — namely, a lessening of the blood pressure and of the pulse wave in the arterial system. Another symptom furnishes further proof that during inspiration the heart is working under worse conditions —namely, the inspiratory swelling of the veins at the neck. In normal conditions these veins are emptied by the increased suction of the thoracic cavity during inspiration. Here the contrary happens; the flow of blood to the heart is diminished. We may put aside the more subtle question whether there is a direct traction on the aorta or on the large veins, as some authors assume. The more embarrassed condition of the heart during inspiration is obvious, and both symptoms—the *pulsus paradoxus* and the swelling of the veins—are coupled together and have the same origin. Perhaps it is noteworthy that in the patient here described both symptoms were present; in another patient I saw both were absent.

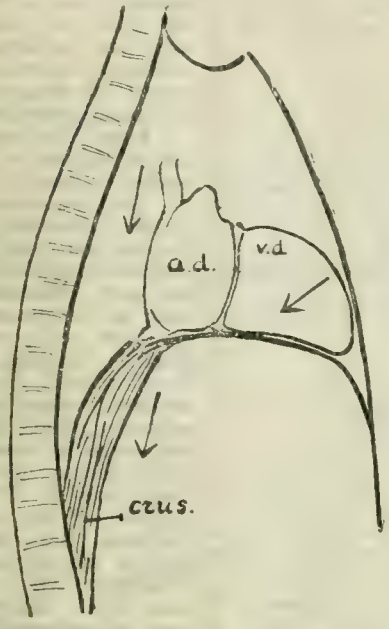


Fig. 3.—Diagram of chest, heart, and diaphragm seen from the right. The arrows show the direction of the traction exercised by the crura diaphragmatis.

I am quite aware that some clinicians give another explanation of the origin of the pulsus paradoxus. Sir James Barr[5] says:

> In the so-called pulsus paradoxus (there is no paradox, but merely an exaggeration of a perfectly normal phenomenon), and in Müller's experiment of expanding the chest with the glottis shut, the pulse may disappear at the wrist. This is due to the sudden emptying of the veins to fill up the vacuum of the chest, and with this removal of the obstruction to the capillary flow there is a simultaneous depletion of the arteries. It is not due, as has been supposed, to any kinking of the large vessels, nor to any sucking back of the blood into the aorta, as has been imagined by those who have forgotten that the pressure in the aorta is always high, and cannot be affected by a negative pressure in the thorax. It is due to a certain fall in pressure affecting the veins, capillaries, and arteries, and is most marked in cases of low arterial pressure.

A great deal might be said about this assertion. Certainly the explanation by an increased suction of the chest (be it working on the arteries or on the veins) holds good in a great many cases, distinctly where there are a low arterial pressure, a weak heart action, and strong inspiratory movements. But it does not hold good in the cases of adherent pericardium. The particular consequence of this disease is the impediment to inspiration, not by narrowing of the air tract, but by the anchoring of the diaphragm. There is not an increased fall of pressure in the chest, but a very deficient inspiratory mechanism. And the proof that there is *not* an increased suction of the chest and *not* a sudden emptying of the veins is shown by the inspiratory *swelling* of the veins. So we have to adopt the explanation of an increased hindrance to circulation during inspiration; and I venture to think that the increase of the hindrance is due to the tugging of the diaphragm on the heart, that cannot give way on account of its being fixed to its immovable surroundings.

Analysis of Heart Action.

In the four or five months after my first visit to the patient he was growing much worse. The heart action became still more weak and frequent; there was dropsy of the whole body and the face. The liver remained enormously swollen and very sensitive to touch, so much, indeed, that the boy was not able to stoop, on account of the compression of the liver by this movement; nor could he lie flat on his back. The spleen was enlarged, and the veins were greatly overfilled, especially at the upper half of his body. The urine passed was not half a litre. The heart was irregular, and its size increased; the sounds faint, but pure. A minute analysis of the action of the heart was made by recording tracings of radial and venous pulses and apex beat.

Fig. 5 shows the radial pulse taken at the same time with the venous pulse, the apex beat, and the liver pulse. The venous pulse (phleb.) shows a large auricular wave *a*. The period of ventricular systole (*E*) in normal cases is represented by a negative phase in the venous pulse, lasting till the end of the systole and the closing of the semilunar valves. Here this depression is very shallow (*c* is the carotid wave), and at the end of the period *E* there is a rise in the tracing; this rise is due not to a regurgitation through the tricuspid valves, but to overfilling of the veins and the right auricle. The end of the systole is marked by a small wave (*v*) which appears in the "postsphygmic" period.

The liver pulse is more interesting. In cases of regurgitation from the right ventricle the well-known "positive" or "ventricular" venous pulse may be found, not only in the veins but even in the liver. Mackenzie showed that in some rare cases, such as tricuspid stenosis, a venous pulse of the normal "auricular" type may be found in the liver. Here we find the same phenomenon: by taking the radial pulse as a standard we easily recognize that the waves of the liver pulse are the same as those in the jugular pulse. The only difference is that they come just a little later, which may be explained by the longer way the waves have to travel before arriving in the periphery of the liver.



a *b*

Fig. 4.—Paradoxical respiration. The patient in the expiratory (*a*) and the inspiratory (*b*) position.

In the cardiogram (card.) the details of the systolic retraction of the chest wall may be studied. Comparing this tracing with the venous pulse we see that not only the ventricular contractions (card., 2—3), but even the auricular systole may be recognized (card., 1—2). Of course the ventricular contraction gives a deeper fall in the tracing. As soon as the contraction stops the ribs fly back; this moment (3) is exactly marked in the venous,

pulse by the beginning of the wave *v*. There is still more to be seen in this tracing—namely, the inspiratory tugging of the diaphragm at the heart, which is apparent from the deeper depression of the tracing during inspiration, at the same time the pulse wave becomes smaller. The whole tracing is sinking to a lower level, proving that there is not a heaving of the chest (and therefore a deeper systolic retraction), but a retraction of the whole chest wall. From this analysis it is evident that the heart symptoms in our patient are exactly what they might be expected from deduction.

A closer inquiry into the changes of the respiratory mechanism brought about by the adhesions in the chest is not less interesting. When the patient is breathing quietly scarcely any respiratory movement of the chest is visible. Only on deep and forced inspiration is there visible an upward movement of the chest. A lateral expansion of the chest, as was expected by Keith, was absent in this case. The increase of circumference of the chest was, in forced inspiration, not quite 1 cm.

Instantaneous photographs of the inspiratory and expiratory positions show clearly that there is only an upward movement of the chest, and that very limited. (Compare Fig. 6, I, with Fig. 2.) There is no forward movement of the chest wall whatever. Looking at the patient, we see an inspiratory retraction of the lower part of the sternum and the ribs.

Looking at the photographs of Fig. 4, one might think *b* to be the rest position, *a*, with the vaulted chest to be the inspiratory position, but really it is just the contrary; *b* is the chest in deep inspiration. That there is a real inspiratory retraction and not only a semblance of it is proved by Fig. 6, I, which gives the outlines of the photographs superimposed. So we find in this disease a paradoxical respiratory movement of the chest, a pendant to the so-called paradoxical pulse. The explanation of the phenomenon lies in the fact that by the adhesions the diaphragm not only pulls at the heart, but pulls at the chest wall in front. In youthful individuals, the lower part of the sternum and the cartilages of the ribs may give way a little. The absence of a marked descent of the diaphragm in inspiration is proved by the absence of the vaulting of the abdominal wall. Even we see (Fig. 6, I) an inward movement, probably due to the fact that the chest with the adherent diaphragm is strongly heaved off from the abdominal contents.

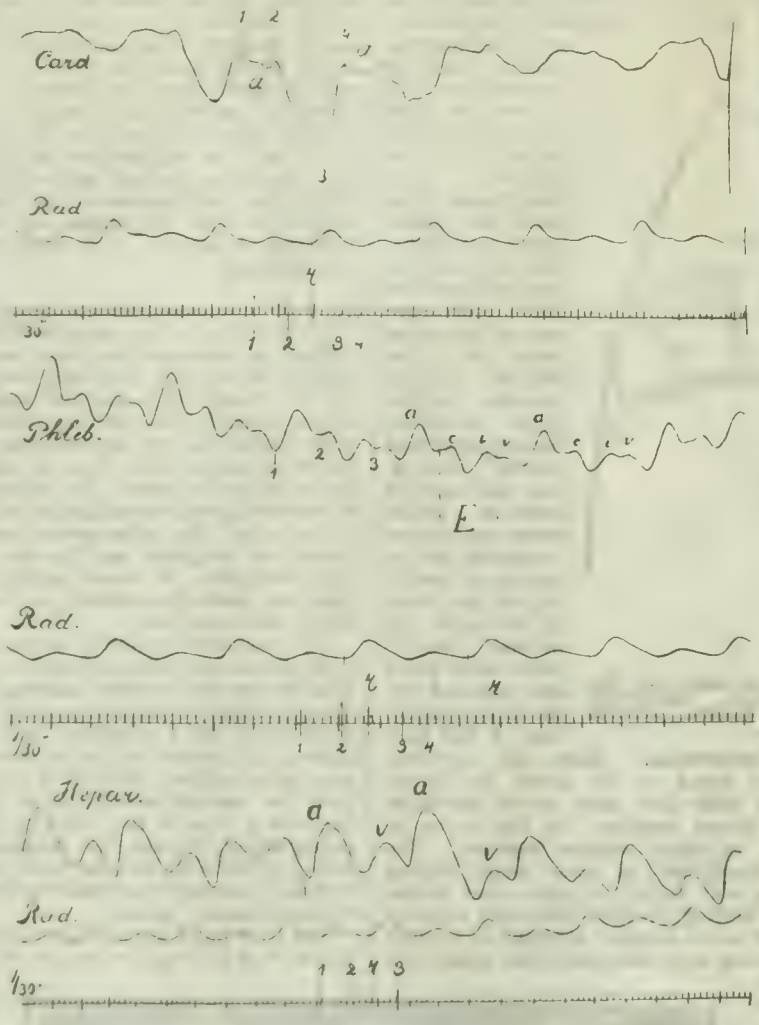


Fig. 5.—Tracings of radial pulse (rad.), taken together with venous pulse (phleb.), apex beat (card.), and liver pulse (hepar.).

I found this paradoxical respiration in another patient (Fig. 7). Here we see not a true retraction of the sternum, but an absolute standstill of this part. (The little knob on the sternum was due to a cold abscess.) Looking at this patient there seems to occur a real retraction, but this semblance is caused by the heaving of the chest and a little vaulting of the epigastrium, the lower part of the sternum remaining on the same level. But one may gather from this fact that this loss of forward movement of the chest is easily recognized in patients. It is not at all necessary to take photographs to detect this phenomenon, and I insist on this point because I think it is a very valuable sign for the diagnosis of adherent pericardium, and reliable symptoms are greatly wanted here. Indeed, all other symptoms mentioned may be found in other morbid affections or may be absent in adherent pericardium. Recent writers are unanimous, and I join them, in stating that the pulsus paradoxus is a fallacious symptom; one may find it in perfectly healthy people or in other diseases. It may be absent in cases of adherent pericardium (in the case of Fig. 7 for instance). Inspiratory swelling of the veins I found in other conditions, for example, in cases of very big hearts (cor bovinum). Every one who has studied Mackenzie's book on the pulse knows that a negative apex beat may be found in many people with healthy or enlarged hearts. A strong systolic retraction of the ribs may be conclusive, but it is very often absent. Some authors regard a diastolic collapse of the neck-veins as pathognomonic for this affection. As may be seen from Fig. 5 there was no such collapse in this case and from analysis of many hundreds of tracings I can say that this

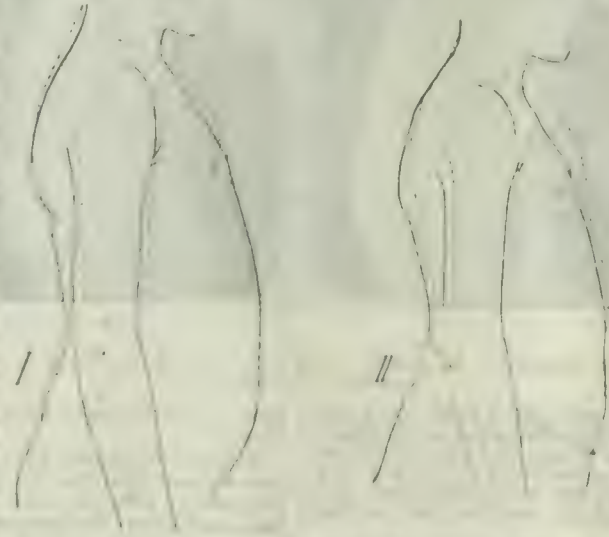


Fig. 6.—Respiratory movement I before operation, II after operation.

diastolic collapse may be seen in most cases of marked stasis in the veins with an enlarged heart acting not too quickly. The second diastolic heart sound, a nearly forgotten symptom recently called to memory by Brauer, is not always present; I missed it in 2 cases.

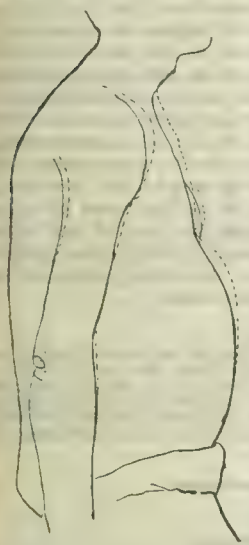


Fig. 7.—Inspiration (dotted line) and expiration in a second case.

So every new symptom has to be welcomed, and I venture to think that the arrest or even the retraction of the lower part of the sternum with its cartilages in inspiration *must* be found in every case where there are adhesions between diaphragm, heart, and chest wall. At least I should be greatly pleased if some of my readers would seek for this symptom (shortly mentioned by some others, vide Gibson[4]) when they have the opportunity of examining such patients.

CAUSE, PROGNOSIS, TREATMENT.

In our patient there can be little doubt about the cause of the disease. The pleurisy, followed a year later by pericarditis, and the long-continuing rise of temperature, point to tuberculosis, which so often affects the serous membranes. There is no tuberculosis of the lungs, but probably the mediastinum is affected; there is a broad area of dullness on the sternum and a corresponding broad central shadow on the Roentgen screen. This mediastinitis, with the adhesions of the lung and the pleura on the left side, may form the "external" adhesions for the heart and the pericardium.

Prognosis is extremely sad in these cases, and therapy has been regarded as utterly powerless. In his admirable monograph on this subject, Harris,[2] after giving sixty-five pages of valuable information, deals, in a few lines, with therapy. He says: "There is little to be said on the question of treatment of this affection. . . . Our chief attention has to be directed to support and maintain the strength of the heart and to postpone, as long as possible, the onset of heart muscle failure." That was all, indeed, that might be said about treatment!

We have to thank L. Brauer for an improvement of this sad prognosis. Some years ago attempts had been made to bring relief to these patients by surgical treatment. Beck and Delorme proposed to loosen the adhesions of the heart and the pericardium by operation. This operation was generally considered as too radical, and, moreover, the adhesions might be expected to be formed again in a short time. So no more was heard of this operation. Brauer, on the other hand, argued thus: The heart is fixed to the chest wall in front and behind. At every systole it has to pull on these immovable parts, and is hampered in its contraction; the bony construction of the thorax gives way neither behind nor in front. Would it not be a great saving of work for the heart if at the apex of the heart the chest wall could be changed into a weak and supple membrane by resecting the ribs? The idea was as simple as that of Columbus and the egg. Brauer realized it, and at the German Congress of Surgeons in 1903 had the pleasure of showing three patients greatly improved by his operation. Brauer called it "cardiolysis"; it loosens the chains of the heart. The resection of some ribs and cartilages in the regio cordis was generally regarded as not very dangerous. Moreover, the improvement of the patients was so remarkable that Brauer's proposition to try this operation in cases of adherent pericardium was received favourably by the surgeons present.



a



b

Fig. 8.—Aspect of the patient before (*a*) and after (*b*) cardiolysis.

In our case prognosis seemed as bad as in every other case. Dyspnoea and dropsy went on increasing; digitalis and other tonics and stimulants had only a temporary effect; diuretics and a salt-free diet were useless. An attempt to help the patient by operation therefore seemed justified. Brauer thinks that the best cases for operation are those where a strong systolic retraction of the ribs may be seen as a sign of a still vigorous heart muscle.

In our case this retraction was not so very strong; but, seeing no other issue, operation was decided upon with general consent. I am indebted to Professor Koch of this University for his interest in this case, and for the skilful performance of the operation. On January 11th, 1905, a horseshoe-shaped incision was made in the regio cordis. (See Fig. 8 *b*.) The cartilages and part of the fourth to seventh ribs were removed and the left border of the sternum was nibbled off. The first phase of the operation gave some trouble; the recumbent position plus the chloroform gave the patient an attack of extreme oppression with severe dyspnoea and a very small pulse. Happily this attack soon ceased, and when narcosis was well established all went well. The operation requires a well-trained hand, the periosteum of the ribs having to be removed carefully, which is made somewhat difficult on account of the stormy movements of the heart. These wild movements give one the impression that the operation has really been a releasing of the heart. Another observation made during operation was the apparent relief to the respiration. As soon as the arcus costarum was removed respiration became more effective, and the patient became much quieter. Strong adhesions in front of the heart were not found, so here the fixation of the heart must have been produced chiefly by the pleuritic adhesions on the left side. Perhaps this may be the reason that the result of the operation has not been so successful as in Brauer's cases.

Still, the result of the operation was very remarkable, as may be seen by comparing Fig. 8 *a* and Fig. 8 *b*. The most visible improvements were a better respiration and the decrease of the enormous liver. Having to deal extensively with these two phenomena at the end of this paper, we may first consider the other symptoms. The heart's action did not improve much, the pulse frequency fell from 125 per minute to 110 and 100 per minute, the pulse remained small and weak, the arterial pressure (diastolic after Oliver) remained 73 to 75 mm. The pulsus paradoxus and the inspiratory swelling of the veins persisted. The flow of urine did not increase very much, seldom reaching 1 litre; the general anasarca diminished slowly. Still, after four or five weeks the patient was much better, there being only some oedema of the legs, and the general anasarca had greatly diminished. He felt much better, and was now able to lie on his back and to stoop.

In the eighteen months now passed away the heart's action has not improved much, which makes it probable that there is still a hindrance. But we have to consider that the morbid affection itself did not come to a standstill after operation. Until the three last months there was a daily rise of temperature, probably due to tuberculous processes in the mediastinum. Another impediment to the training and re-education of his heart was the appearance of ascites. It is well known that ascites (often without general anasarca) is a very common occurrence in adherent pericardium. There is a great deal to be said about the genesis of this ascites, but it would take me too far to discuss this point here. So I will merely state that puncture and drainage have been performed twice, after which the ascites, without any

special treatment, disappeared. Small doses of digitalis were given occasionally to stimulate the heart, and to increase the flow of urine. Only at present, after the disappearance of the fever and the ascites, we may make our first attempt to improve the circulation by carefully graduated gymnastics, by massage, and other methods of physical therapeutics. Still, looking back at the time before operation, we may surely say that cardiolysis, though not so successful here as in some other cases, has saved the life of our patient, at least made life bearable to him.

THE SWELLING OF THE LIVER.

Before taking leave of the subject, we have to deal with one of the most striking symptoms of adherent pericardium—namely, the enormous liver. In nearly all cases of adherent pericardium there is a history of swelling of the liver, and many authors mention the fact that the swelling of the liver is beyond all proportion to the general venous stasis. As a matter of fact, we may find, as in our case, the liver a huge hard and painful mass in the abdomen before there is any sign of back pressure in the other veins. Some authors have mentioned the fact without giving an explanation, simply putting the problem before their readers; others have given explanations which cannot be called wholly satisfactory. One may find complete information about this subject in an excellent little book of Otto Hess.[6]

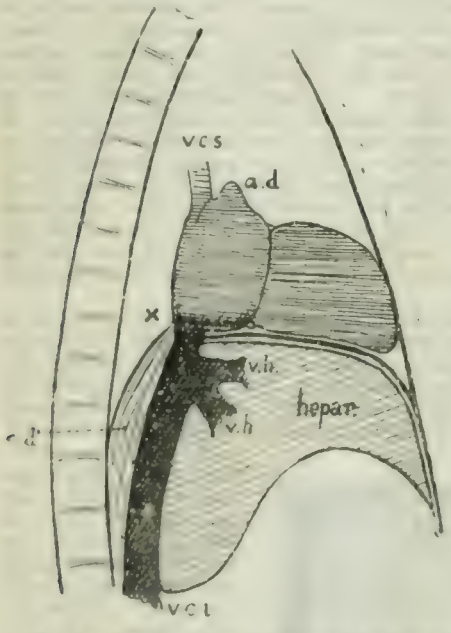


Fig. 9.—Diagram of heart, liver, and diaphragm, and the relation of the crus to these organs.

The following explanation I deduce from the very instructive figures given by Keith in his papers, and from the result of the operation of cardiolysis in our case.

After operation, it struck me that, as I pointed out before, the mechanism of respiration had profited from the cardiolysis much more than the heart itself. An objective proof of this improved respiration is given in Fig. 6, II, where the inspiratory heaving of the chest is seen to be much higher than before operation. A second change, not visible in the figure but very conspicuous on inspection of the patient, is brought about by the deep retraction of the operated area during inspiration. Coincident with the improved respiration, the liver became much smaller.

Taking into account the insignificant improvement of the heart's action, it seems probable that a relation exists between the improvement of the respiratory mechanism and the decrease in size of the liver. Keith has shown how the diaphragm in its descent not only compresses the abdominal contents and widens the chest, but actually compresses the liver, so that this particular function of the diaphragm is lost. In adherent pericardium, the wide and flaccid inferior vena cava passes to the heart behind the liver, practically in a groove. Immediately below the diaphragm it receives the contents of the liver veins; immediately above the diaphragm it pours its contents into the right auricle. Behind the vein the crus dextrum, the chief motor of the diaphragm, extends from the lumbar vertebræ to the aponeurosis of the diaphragm, being closely attached to the pericardium under and behind the right auricle (see Keith and the diagram Fig. 9).

In normal conditions the arrangement of the crura and the border muscles of the diaphragm causes a downward and forward movement of the central tendon, pericardium heart, and roots of the lungs (Keith), and the liver is pushed in the same direction. All these organs coming down in perfect harmony, the vena cava inferior is gently compressed between the crus and the liver, and by this aid is emptied into the heart. In adherent pericardium, however, the crus and the border muscles of the diaphragm are pulling, but the whole complex of organs is immovably fixed in the chest. The contraction of the crus has not now a gentle action on the vena cava, but compresses it more strongly, the liver remaining in its expiratory position; at the same time the crus pulls on the heart and the pericardium at the spot marked X in Fig. 9. A narrowing or a closing of the vena cava must be the consequence of this movement, the heart not giving way to the traction. So I think in inspiration the issue of the vena cava is narrowed by the traction of the crus, the part of the vena cava behind the liver is compressed by the same movement, and the contents of the vein, not being allowed to flow back, are pumped into the liver veins.

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An Address

ON

ANOMALOUS CASES OF PERNICIOUS ANAEMIA.

DELIVERED BEFORE THE PERTHSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION ON NOVEMBER 9TH, 1906.

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GENTLEMEN,—I have been much honoured by your kindness in asking me to come here to-night, and I had some difficulty in thinking of a subject upon which to address you which would be of interest. My experience with the post-graduate classes which have recently been held in Edinburgh has shown me that diseases of the blood are now awakening a very wide interest among men in general practice, and I should like to take the opportunity of talking over with you what I have seen in a large number of cases of pernicious anaemia which have specially impressed me in the last year or two.

I do not propose to discuss the ordinary typical cases, but desire to take up rather those which showed unusual features, either as regards diagnosis, clinical appearances, or the results of treatment.

I have a distinct impression that pernicious anaemia is becoming a more common disease than it was fifteen or twenty years ago. During the last year I have seen 37 cases, 21 in private, 16 in Chalmers Hospital, and in addition a number of cases which were under the care of the physicians in the Royal Infirmary, or were seen in the medical waiting room, and of which I have not kept full records. A large number of these were, of course, sent to me as being specially interested in the disease, but an almost equal number were met with, so to speak, by chance. A dozen years ago a case of pernicious anaemia was regarded as something of a rarity, even in the Edinburgh Infirmary. Now one would hardly ever see a ward on the medical side without one, and I have on one occasion had as many as six cases at one time in Chalmers Hospital. If this increase in number is a real one, it behoves us to be very much on the look out for the condition, and to be ready to diagnose it; and this all the more, because it may present itself under the most diverse aspects, and the anaemia may apparently be quite a secondary consideration.

In thinking of the disease, one must keep clearly before one's mind the fact that it is not essentially a blood disease at all, but is a toxaemia of largely unknown, and

possibly very various origin, which affects the blood, the blood-forming organs, the nervous system, and the gastro-intestinal tract, in proportions which vary infinitely in different cases. The old idea of pernicious anaemia, that it is a condition of rapidly-advancing anaemia leading within a short time to a fatal issue, must be given up, for cases are on record of very prolonged duration, and there are many in which almost from first to last the anaemia is quite in the background, and the prominent symptoms are those due to the affection of one or other of the other systems mentioned.

I can best illustrate my meaning by describing shortly to you the clinical histories of some aberrant cases.

Amaurosis.

I saw R. S., a man aged 40, last November. He had been rather anaemic in the previous spring, but had rapidly recovered, and for some time before I saw him had had haemoglobin varying from 80 to 100. For three weeks he had been getting blind, and an oculist reported that he had a paracentral scotoma in both eyes without any change in the discs. He had a little difficulty in walking, and his knee-jerks were exaggerated. When I saw him he was a thin man, not specially pale, and with evidence of a little neuritis in both legs and very slightly in both hands. His blindness was so marked that he had to be helped into the room, but there was practically nothing else to be made out about him. When I came to examine his blood I found that the haemoglobin was 80, and the red corpuscles 2,780,000, that is to say, a colour index of 1.4, and, in spite of this relatively high red count, the films were markedly typical of pernicious anaemia. There were many megaloblasts and a great deal of other typical alteration. Of course, here the examination of the blood cleared up the diagnosis at once, which had not been suspected by some other physicians who had seen him. He was put on proper treatment and had begun to mend, when unfortunately he took pneumonia, which carried him off in a couple of days.

Symptoms Resembling Peripheral Neuritis.

Mrs. E., from one of the Colonies, the year before I saw her had complained of numbness and loss of power in her fingers and toes. This gradually progressed until she ceased to be able to walk. She suffered from dropped hand and dropped foot, and as she had in addition very considerable uterine trouble, she got altogether into a very low state of health, but it had never struck any of her attendants to regard her as specially anaemic. When I first saw her I found that she had recovered slightly and was able to walk a little. There was marked wasting of the small muscles of the hands, of the kind that is usual in progressive muscular atrophy. The forearm and upper arm had also wasted slightly, but the shoulder muscles not at all. In the lower limbs there was also wasting and clawing of the feet and wasting of the leg muscles. There was a good deal of impairment of sensation in the areas where wasting had occurred. All the reflexes were lost; Babinski's sign was negative. Here I was misled by the history, and as there was a very considerable amount of uterine and tubal mischief, with a great deal of very foul discharge, considered that the case was one of a toxic neuritis from this source, and possibly from alcohol also, as she had been in a very rough part of the country where medicine could not be procured, and her old nurse had given her large quantities of spirit. At this time, when I first saw her, she did not impress me as anaemic at all, and it did not occur to me to examine the blood.

About a month afterwards I saw her again. During this time the paralytic symptoms had improved, but she had become more anaemic, and when the blood was examined she was found to have red corpuscles 2,160,000, haemoglobin 50, colour index 1.1, while the films were quite sufficiently characteristic. Under treatment her blood improved very greatly, and the paralysis also got much better.

Besides these cases I have seen a number of others which were supposed to be suffering primarily from locomotor ataxy or neuritis and secondarily from anaemia, and the anaemia was put down generally to any cause but the proper one. I do not want to multiply these cases needlessly, but I am anxious to impress upon you that very often the nervous symptoms are prominent before the anaemia comes to be at all marked; and one curious fact about them is that the nervous symptoms and the anaemia very often alternate, the one improving as the other gets worse. On the other hand, in some cases the anaemia may precede the nervous symptoms.

Aphasia.

Last year I saw on several occasions a gentleman who had had a mild attack of pernicious anaemia some months before, but who was holding his own with a red count of about 3,800,000. One day he came to see me, and while we were talking he became aphasic and after a few minutes had a very violent epileptiform convulsion. From this he recovered, but it was repeated a quarter of an hour later while I was taking him in a cab to Chalmers Hospital. He remained there for three weeks, during which time he greatly improved. There was no recurrence of the fits, nor could any evidence of organic brain disease be made out. Some time after his return home he became more permanently aphasic and mentally enfeebled, and ultimately died in this condition. Unfortunately permission to make a *post-mortem* examination could not be obtained.

Another group of cases are those in which the gastro-intestinal symptoms are the most prominent.

Gastro-intestinal Symptoms.

Quite recently I have been attending a lady who, about two years ago, began to suffer from diarrhoea, which had continued practically without intermission until she came under my care, though, of course, it varied in severity. She also came from another part of the world, and it seems that at one time during the course of her illness she was practically comatose for two or three weeks, and at that time she must have been anaemic, as a diagnosis of pernicious anaemia was definitely made after a blood examination. So persistent, however, was the diarrhoea, and so worn out was she by it that a physician specially skilled in tropical diseases regarded the condition as being sprue, and sent her home to this country for treatment. She was also almost paralysed in the lower limbs from either neuritis or possibly a combined sclerosis of the cord. The blood was definitely characteristic, the first count being: Red corpuscles, 2,480,000; haemoglobin, 56; colour index, 1.14. Since I first saw her the red count has fallen to 1,800,000, but is now rising again.

There is, next, a large class of cases in which the stomach symptoms are most prominent; where there is pain, sickness, vomiting, sometimes of blood, and gradual loss of weight. These cases are almost always accompanied by anaemia, and they so closely simulate ulcerating cancer of the stomach without a palpable tumour that I defy any one to make a definite diagnosis without a careful examination of the blood. This is the more necessary because in both these sets of cases a test meal usually shows that hydrochloric acid is absent, which is a condition, of course, associated with gastric cancer. I have over and over again seen cases which I felt certain from the clinical history were pernicious anaemia, and discovered, on examining the blood, that the anaemia was secondary and due to cancer; and, on the other hand, I have seen cases which I thought were cancer and which turned out to be pernicious anaemia.

The diagnosis of the blood is perfectly simple in cancer of the stomach with anaemia; the anaemia is always secondary in type—that is to say, the colour index is low, while in pernicious anaemia of course the colour index is always high, at least in cases of sufficient severity to attract attention by the anaemic appearance.

I have never seen one of those cases which are sometimes referred to in literature, where a gastric cancer alone gave the blood changes of pernicious anaemia, and I think it will be found that most of them date from a time when our conception of pernicious anaemia was not so definite as it is now. There is, of course, no reason why pernicious anaemia should not be associated with cancer in the stomach or anywhere else. I have, as a matter of fact, once seen it associated with cancer of the larynx, which was not recognized clinically, and once with an early cancer of the suprarenal; but in neither of these was there any causal connexion between the two conditions.

Kidney disease also sometimes masks pernicious anaemia, and one case of the kind which I have seen was so unusual that I may quote it rather fully.

Kidney Disease Masking Pernicious Anaemia.

The patient, a woman aged 24, had been anaemic for some time, but the anaemia was quite naturally supposed to be chlorotic. She had had a severe bleeding after the extraction of some teeth in November, 1904, but recovered and was married in the following January. She became pregnant, and was delivered on December 10th of a five and a half months fetus. She had placenta praevia, and lost a great deal of blood at the confinement. She was very pale at this time, and immediately after the confinement the kidneys stopped acting entirely. The catheter was passed repeatedly, but only a drop or two came away. She had a normal temperature, a pulse of 100, of rather high tension, a dry furred tongue, but she was perfectly coherent and conscious. There was no oedema. I saw her three days after this state commenced, when there had been in addition some haemorrhage from the nose, and it is possible that she swallowed some of this blood, as there was melæna afterwards. There was a little subconjunctival haemorrhage in the right eye, a small haemorrhage in the left iris, none in the retina, and no haemorrhages elsewhere. I had been asked to see her because of the kidney mischief. The doctor had been so much impressed by this that he put down the pallor, which was definite enough, entirely to the

kidney condition and to the loss of blood which had occurred at the confinement and which had been considerable, and I do not think that pernicious anaemia had occurred to him at all. There was nothing whatever to attract attention in any of the organs. The uterus was normal, the heart, of course, dilated, with systolic murmurs, but the blood was extremely characteristic: red corpuscles, 1,324,000; haemoglobin, 35; colour index, 1.3; and—what was quite unusual—leucocytes, 31,100. It was quite evident from this count and from the films that one was dealing with a pernicious anaemia, and that the pallor was due to that rather than to the kidney mischief, though that must have been extreme. The leucocytosis, though it was so marked, did not present the characteristics of that due to an inflammatory or septic condition, for the glycogen reaction was a very slight one, and there was, as a matter of fact, no inflammatory condition present except the kidney one. The patient had been treated with all the usual remedies for the uraemic state without any effect, and I suggested that we should try the transfusion of defibrinated blood. This was done on the following day, and she improved slightly; but two or three days afterwards she had a convulsion, followed by others, and died. During the whole week of her final illness she did not pass more than about a tablespoonful of urine, and yet remained quite conscious till near the end.

About the same time I saw another case which was also associated with renal mischief.

Acute Bright's Disease.

The patient (a woman about 50) was sent into Chalmers Hospital suffering from acute Bright's disease. She was pale, oedematous all over, with systolic murmurs in the heart and a very sharp second sound, and the urine was loaded with albumen and contained casts. Under treatment the urine improved to a certain extent, the oedema passed off, but she remained as pale as ever, and on examination of her blood she was found to have very well marked pernicious anaemia, the count being red corpuscles 800,000, haemoglobin 20, colour index 1.25, white corpuscles 23,000. She ultimately died in a more or less uraemic condition, after being about three weeks in hospital. At the *post-mortem* examination, besides the typical changes of pernicious anaemia, the kidneys were found to be extremely contracted, one of them was indeed the smallest contracted kidney I have ever seen, and there was some acute inflammatory mischief in them in addition.

It is interesting to note that in this case also there was a leucocytosis, and in another case which did not otherwise present any special features, I found a leucocytosis of 13,000, and on the strength of it advised the doctor to examine the urine, in which he found a large quantity of albumen.

These are almost the only cases in my whole series in which there has been a marked leucocytosis, and they all had albumen in the urine. I should not like to say from this that the presence of leucocytosis in a pernicious anaemia is conclusive evidence of marked kidney mischief, but it is certainly curious that pneumonia in the course of a pernicious anaemia or as a terminal infection usually does not produce a leucocytosis, but simply a proportional increase of polymorphs, and sometimes not even that; while septic conditions also do not usually affect the leucocyte count. I saw an admirable instance of this quite lately—again a case in Chalmers Hospital.

Intercurrent Pyaemia.

A man had a slight tonsil itis when he was admitted. This passed off and his pernicious anaemia seemed to be improving. While I was away for my holiday in August he had a rise of temperature, for which no definite cause was found, and which I suspect to have been due to a slight recurrence of the tonsilitis. When I returned in the beginning of September, I found that his temperature had again risen, that he had a left-sided pleurisy and some effusion of fluid. He died after some days during which the leucocyte count did not rise above 4,000, and at the *post-mortem* examination we found fairly numerous abscesses (all walled off in each diverse situations as the head, wall the subcutaneous tissue and muscles in front of the chest, and also a few abscesses in the kidneys (which except for the abscesses were fairly healthy and only showed about the size of a small bean immediately under the pleura in the left lung. It was from this, of course, that the pleurisy arose. These abscesses could not be explained otherwise than as the result of a pyaemia, and this was probably due to the tonsilitis which had yet no leucocytosis had occurred, and the blood remained practically normal. A few pus cells had been found microscopically, but there was no albumen.

I have been struck however, with the frequency with which patients with pernicious anaemia die of what in other cases would be called uraemia. They become gradually more and more drowsy and comatose, often have twitchings, hemiplegia, and so on, and in a study of the pathological anatomy of the disease which Dr. Goodall and I made some time ago, we found that the kidneys were hardly ever quite normal, and were sometimes pretty seriously affected. This may be due, of course, to the fact that a large number of the patients were people pretty well up in years, and very possibly owed their kidney mischief rather to other causes than to their anaemia; but it seems, possible, also, that the toxins which cause the symptoms may, in so far as they are eliminated, be passed out through the kidneys, and may very likely give rise to changes there. In any case, I strongly advise you, if you find a leucocytosis in pernicious anaemia, to think of kidney mischief as a possible explanation of it.

Another set of cases are those in which the symptoms known as nervous prostration are the most prominent. These cases seem to occur principally in women who are past middle life, and are usually of a very chronic type. I have seen cases which went from one doctor to another undergoing Weir Mitchell treatment, electrical applications, and so on, without a diagnosis being arrived at. They are almost always cases of the chronic type, in which the red cells seldom fall below 2,500,000, and as that usually means a haemoglobin percentage of about 70, the anaemia is not marked, and the shortness of breath to which it gives rise is apt to be put down as a neurotic symptom. Sometimes, unfortunately, these cases are difficult to treat, even after the diagnosis is made, but I shall have more to say of that later on.

In yet another series of cases mental symptoms are most prominent. One very striking case which I saw recently began with symptoms like those of peripheral neuritis, and the lady was so depressed mentally as frequently to threaten suicide, and on one occasion to attempt it. Not unnaturally, these manifestations entirely distracted the attention of her doctors from the blood condition, which at that time was not very marked; and I only saw her late in the disease, when the anaemia had become extreme and the case was hopeless. By that time the mental symptoms had almost entirely disappeared.

In another case the mental depression was so marked that the patient was confined in an asylum for some months. While there, she recovered both from her mental symptoms and from the anaemia, and lived without recurrence in a marked way of either of them for about ten years after, although she never was very strong. At the end of this period she had another attack of pernicious anaemia and died.

Of course, delusions and hallucinations are extremely common during the acutely anaemic stage, and I have almost always found that they are apt to take the form of suspicion either of the patient's attendants or of his relatives. I have seen some extremely distressing cases in which patients refused to see or speak to their own husbands or wives because they fancied that they intended some mischief to them. These mental derangements are certainly not due to the anaemia, because they do not necessarily occur when the anaemia is extreme, but are almost certainly to be referred to the general toxic condition.

You will ask me on what one is to ground the diagnosis of pernicious anaemia in cases such as those I have spoken of, where symptoms referable to other systems were more prominent than the anaemia itself? It is from the blood that you must always seek information, and you will require to make a thorough examination of the blood in every suspicious case, because from a film alone the diagnosis cannot always be made with certainty. It is, of course, the easiest thing in the world to diagnose a pernicious anaemia from the film alone when one is dealing with a case in the advanced stage, but in the more chronic conditions and remissions it requires very careful search and expert knowledge to make the diagnosis from films alone.

The essential point in the diagnosis of pernicious anaemia is a high colour index, that is to say, a condition in which the red corpuscles, on the average, carry each more than their proper amount of haemoglobin. This relation must be made out by a very careful estimation of the red corpuscles and of the haemoglobin percentage, and you will find if you multiply the first two figures of the red count by 2, in order to get the percentage of red corpuscles present, and divide the haemoglobin percentage by the figure so arrived at, that in pernicious anaemia the result will come out as 1, or more usually at some figure between 1.1 and 1.4. On the other hand, cases of secondary

anaemia—as, for instance, from haemorrhage, cancer, sepsis, and so on—invariably show a low colour index—that is to say, something usually well below 1. The average colour index in a well-marked case of chlorosis, for example, is usually about 0.5. In certain pernicious anaemias, especially those extremely rare cases where the bone marrow does not hypertrophy but remains fatty, the colour index may be below 1, and occasionally pernicious anaemias, which have been under treatment and are recovering will show a colour index below 1, usually at about the period when the reds get up to 3,500,000, or thereabouts. This is much more likely to occur if the patient is recovering from a first attack. Later, when the disease has become thoroughly established, the colour index often remains high during the whole period of remission.

There are certain other anaemias, such as the rare leukanaemias, the terminal stages of acute lymphatic leukaemias, and some others even rarer, in which the colour index may rise to 1, or sometimes even above it. But these are hardly likely to come into consideration in the kind of cases we are talking of. If the colour index leaves you in any doubt, the next criterion is the presence of megaloblasts or large nucleated red corpuscles in the film. These appear with constancy in all cases of pernicious anaemia at some time. They are usually more numerous the more anaemic the blood, but they can almost always be found in any case of pernicious anaemia, even during remission, though in the latter set of cases the search may have to be very prolonged and may have to extend over several films.

There are other changes in the blood, such as the presence of granular degeneration in the reds, a leukopenia with a relative lymphocytosis and so on, which are of importance when considered along with other points, but which occur in too many other conditions to be of value alone. Of course, the expression in the film of a high colour index is the presence of a large number of megalocytes, the large red cells which are produced by the loss of the nucleus from megaloblasts, and in using Jenner's stain one finds the polychromatic change in the red corpuscles with infinitely greater frequency in pernicious anaemia in all stages, than in any other disease. This change is shown by the fact that the red corpuscles which suffer from it pick up a certain amount of the basic part of the stain, the methylene blue, in addition to the acid part, the eosin, and thus instead of looking pink in the film, are of various shades of purple; but you will almost always find that the colour index is sufficient to guide you provided that you make an accurate estimation of the reds, and that you use an accurate haemoglobinometer. In my experience the best for clinical work is Haldane's modification of Gowers's instrument.

I have come gradually to be of opinion that pernicious anaemia is seldom, if ever, an acute disease. One comes across cases frequently which die in a few days or weeks from the time when they first come under observation, but if one goes carefully into the history of these cases, one will almost always find that there has been a long period of gradually failing health preceding the fatal attack. The change is usually so gradual that it has perhaps escaped the notice both of the patient and of his medical attendant, if indeed he has been seen by any one. An interesting case of this kind came under my notice within the last few days.

Cases of Long-continued Anaemia: Acute Terminal Attack.

A doctor in a town in the South of Scotland sent me some films from a case with the following history: The patient had just returned from a week's holiday. On the day he left for his holiday he had felt out of sorts and shivery. During the whole time he was away he felt seedy, and developed a pain in his left side. When the doctor saw him he looked very ill, was of the typical lemon-yellow tint, and had a very large spleen—hard and very tender. His temperature was 101° at first, and remained high during the whole course of his illness. The heart was much dilated, and he passed into a state of muttering delirium. The films were absolutely typical of pernicious anaemia in an advanced stage, but there was an unusually high percentage of polymorphs in the leucocytes, and in these a well-marked glycogen reaction.

On going into his history the doctor found that he had been feeling fagged and not up to his work for some months at least, and in all probability the case was one of pernicious anaemia complicated by a terminal septic infection; but as no *post-mortem* examination was obtained it was impossible to find what relation the enlarged spleen had to this. Of course, it is not unusual to find a certain enlargement of the spleen in pernicious anaemia, but I have never seen it so large and so acutely inflamed as it evidently was in this case.

Another case occurs to me as illustrating this point of long-continued pernicious anaemia with a terminal acute attack. Some years ago I saw an old gentleman with a practitioner in Edinburgh. He had been feeling out of sorts and a little breathless, and the doctor suspected that it might be a pernicious anaemia. I examined the blood, found haemoglobin 75, and red corpuscles 3,100,000, that is to say, a colour index of 1.2. I looked through several films, but could find no megaloblasts, and made a diagnosis of pernicious anaemia on the colour index alone. The patient was put on treatment, and recovered so rapidly that the doctor was a little inclined to be doubtful of the correctness of my diagnosis. I heard nothing of the patient for a year. He had been apparently well in the meantime, and I was then asked to see him again in what would otherwise have been diagnosed as a primary acute attack. The reds had fallen to 1,344,000, with a haemoglobin percentage of 40, and he died a month later with the very low count of 500,000, with 18 per cent. of haemoglobin.

I could cite plenty of other cases to the same effect, but these may suffice. The fact seems to be that an anaemia, provided it comes on sufficiently gradually, and in a patient who is not exposed to any great strain, but who is living quietly, may pass practically unnoticed, and the condition may not be diagnosed until, as is usually the case, it suddenly becomes worse.

EARLY DIAGNOSIS.

This question of early diagnosis is, of course, intimately wrapped up with the matter of treatment, because it is only in cases which are diagnosed reasonably early that treatment is of much value. As of course you all know, pernicious anaemia is a disease in which the symptoms run a cyclic course. You may have an attack with recovery, a period of remission, and one or more recurrences before the end. Now as matters at present stand, we have no means of *curing* pernicious anaemia as we know it in this country. In those cases which are associated with the presence of *Bothriocephalus latus* in the intestine, the expulsion of the dead or decaying worm is followed by a permanent cure provided the anaemia has not advanced too far. It is quite definitely proved to my mind that the toxaemia of most of the pernicious anaemias which one sees in this country is due to some process in the alimentary canal, but I have no sympathy with those who look upon the mouth as the essential source of the condition. I have, it is true, seen many cases of pernicious anaemia with foul mouths and bad teeth. I have, however, seen quite as many in persons with well-kept mouths and teeth, and I have seen the disease in people who for years had not had a tooth in their heads and did not wear plates. I do not believe that the streptococcus or any other organism that we know is responsible for the condition. Everything that one finds in the blood in streptococcus infections is exactly the opposite of what one finds in pernicious anaemia. The anaemia caused by the streptococcus is secondary. It causes a leucocytosis, not a leucopenia, with an excess of polymorphs instead of an absolute diminution as in a pernicious anaemia, and where nucleated red cells appear in the blood, they are normoblasts and not megaloblasts, and this applies equally to acute and chronic infections. The organism of pernicious anaemia—if it is an organism—has still to be found. Over and over again I have examined the faeces of pernicious anaemia patients for ova, parasites, unusual organisms, or anything else, and have been uniformly unsuccessful. The blood of pernicious anaemia represents in some ways a throw-back to the blood of early fetal life, and it seems possible that in the people who become affected there may be an inherent weakness of the resisting power and of the blood-forming organs which allows the bacterial processes which go on in every intestine to get out of hand, so that quite ordinary organisms acquire an unusual virulence, and set up the haemolytic and other toxic processes which one sees in pernicious anaemias. I have been strengthened in this feeling by the fact that within the last few months I have come across three cases of people in middle life whose fathers had died of pernicious anaemia, in one case ten, in another twelve, and in the third eight years before. This seems to point to an inherited weakness of the bone marrow.

TREATMENT.

If there is any reasonableness in this hypothesis, it will

at once be evident what must be the main lines on which treatment should be based. One must bring the patient under the best hygienic conditions possible in order to assist the general resisting powers of the body; one must endeavour to diminish bacterial changes in the intestine, and one must endeavour to stimulate the blood-forming organs.

The first indication is to be met by rest in bed in the first place. This should always be insisted on until the patient is well advanced towards recovery, were it only in order to relieve the dilated heart which is so common; plenty of sunshine and fresh air should be insisted on, and I find that cases do extremely well if they are exposed to the open air as fully as patients suffering from phthisis. Of course, all disturbing influences—excitement, worry, and so on—should be removed, therefore cases do better in hospital or in a nursing home than they do at home, except in exceptional cases.

A very important matter is diet. This must be arranged with care to suit each case, but the broad principles are that as long as the blood count is low, it should consist entirely of milk and farinaceous food; no meat of any kind should be permitted. Of course, this change of diet partly meets the second indication, the diminution of bacterial processes in the intestine. It is not uncommon to find that patients when they are first seen have large quantities of indican and similar substances in the urine, and that after a week or two on a farinaceous diet, these practically disappear. In some cases it may be necessary to supplement this by giving intestinal disinfectants, of which in my experience calomel and salol are the most efficient, and in still others it may be necessary to wash out the bowel daily with large enemata of normal saline solution. Theoretically, the stomach might be washed out as well, but patients who are so seriously ill as to require this are seldom in a condition to stand the strain which it involves. The secretion of hydrochloric acid in the stomach is practically always deficient and usually absent in this disease, and I have sometimes found marked improvement from giving hydrochloric acid and pepsin in several doses after meals.

For the necessary stimulation of the blood-forming organs, arsenic is by far the most useful drug, and my habit is to begin with very small doses, to increase fairly rapidly until the patient just begins to show signs of intolerance, and then to continue with a little more than half the dose which was found to produce this effect. The reason for doing this is that patients vary enormously in their powers of tolerating the drug: some will show symptoms of intolerance with 10 minims of Fowler's solution in the day, others can take 60 with impunity, though this is exceptional. Arsenic has sometimes been given with the view that it was an intestinal disinfectant, but its effect is much more probably due to the fact that it stimulates the bone marrow very vigorously, and it must be remembered that this power of stimulation can be carried too far. It is not wise to keep a patient with pernicious anaemia on arsenic during the whole of his time of remission lest the stimulation be too great, his reserve of marrow hypertrophy be drawn on too soon, and a relapse come on earlier than would otherwise have been the case; for it must be remembered that the progress of the disease is strictly conditioned by the power of the red blood-forming marrow to hypertrophy. If for some reason as yet unknown the marrow does not hypertrophy at all, as happens in the very rare cases of aplastic anaemia, the first attack is always fatal, but from what one sees of cases cut off by intercurrent maladies the process of hypertrophy is in most cases a slow one, and it is only when the normoblastic mode of proliferation of red cells is entirely replaced by the megaloblastic that death necessarily occurs from the anaemia. It must be obvious, therefore, that the marrow should be spared as much as possible, and when once a good result has been obtained by arsenic it should be stopped, and only resumed when an examination of the blood shows that the patient is falling back. This indeed constitutes the principal difficulty in the treatment of these cases. The patient and the doctor are so delighted at the apparent cure of the condition that they neglect to watch the progress of events during the remission whilst as a matter of fact it is during the remission that the doctor should be most on his guard, and that the patient should be kept most carefully under observation. In all these cases the blood should be examined at least once a month, if it is at all possible to do this. If this were systematically done, the lives of pernicious anaemias would be much longer, and there would be much less talk of the necessarily fatal character of the disease.

As regards other drugs than arsenic it must be remembered that iron is an absolute poison in pernicious anaemia. It almost always upsets the digestion, and any one conversant with the pathology of the condition would never give it, because in pernicious anaemia there is always a vast amount of iron stored up in the liver, and this can be drawn upon whenever it is required. If iron is given, it probably increases the store accumulated there, and almost certainly hampers the liver cells in their duty of dealing with toxins. I remember an admirable object lesson of this in one case. A patient with pernicious anaemia had been seen by another consultant, who had advised iron, arsenic, and a meat diet. Under this treatment the man rapidly became worse, and was very nearly at death's door when I saw him. I put him upon the lines which I have already mentioned; he improved almost immediately, recovered a normal blood, and lived a useful life for more than a year before he relapsed.

Iron has sometimes to be given when the blood has become nearly normal, in those comparatively rare cases where the colour index becomes low at this stage, because in all probability the store of iron in the liver is exhausted, but it should be given at no other stage.

I have tried fresh bone marrow, dried bone marrow, and extracts of bone marrow in many different forms, but I have never been able to satisfy myself that they were of the slightest use, and I have often kept cases upon them for some time without any improvement, then changed to arsenic, and found the improvement begin at once. A good many cases have been treated with antistreptococcic serum, and some have recovered, but as almost all of them received arsenic in addition, I do not think that we need look to the serum to cure the disease; and from what I have said it will be evident that any serum given hypodermically might help in promoting general resistance, and that the antibody of the streptococcus has no special value in the treatment.

The most difficult pernicious anaemias to treat are the chronic cases in which the red cells never fall much below 2,000,000. They are most apt to occur in people beyond middle life, and perhaps more frequently in women than in men. One reason for the want of response to treatment may be that they are often associated with arterio-sclerosis or some other general tissue defect. Arsenic is not usually very well borne, and it is not possible to give large doses. One is often driven to rely quite as much on general tonic and hygienic treatment, and even with that the patients are apt to drift into a state of chronic invalidism. Fortunately, however, the danger to life in these cases is comparatively small, and if they will realize their limitations, they can often lead sufficiently happy lives.

Of course, complications must be treated in the usual way, and the nervous symptoms in particular must be watched over very carefully.

The elements of prognosis in pernicious anaemia are extremely difficult to formulate as so much depends not only on the actual condition of the blood but on the general constitution of the patient. Generally speaking, the younger the patient the more likely is a rapid course, but of course there are numerous exceptions to this rule. Just as in all other conditions, obvious constitutional defects, such as alcoholism, syphilis, Bright's disease, and so on, modify the prognosis unfavourably, and it must always be borne in mind that pernicious anaemias have a poor resisting power generally, and are very apt to be cut off by intercurrent maladies, perhaps most frequently of all by pneumonia. It will be obvious, therefore, that it is necessary to shield them from such infections as that of influenza as much as possible. As regards the blood itself as an element in prognosis, it is almost impossible in an acute attack, while the blood is on the downward grade, to make a prognosis from it, though generally speaking a high colour index, the presence of numerous megaloblasts and an excessive leucopenia are unfavourable elements; while a moderate colour index, the absence of megaloblasts in appreciable number, the leucocyte count at or near the normal, and, according

to some authorities, the presence of a fair number of eosinophiles, are favourable signs. With this last point I do not altogether agree, as I have seen numerous eosinophiles shortly before death in a good many cases.

A constantly raised temperature, even though it be comparatively slight in degree, is unfavourable, especially if no definite cause can be found for it.

When a case has got over the first attack, and has begun to improve, one hopes to see the colour index become low, if possible below 1.0, for these cases usually have a long remission. Cases whose colour index remains high are apt to go downhill again rapidly, and on slight cause.

To sum up, then, what I want specially to impress upon you is that pernicious anaemia is by no means an uncommon disease, that many cases are undiagnosed because of the unusual way in which they commence or in which they run their course, and that there is no means of diagnosis except the examination of the blood. If blood examination were made more of a routine matter in ordinary practice, as it might quite well be, we should attain a much greater accuracy in diagnosis, not only of pernicious anaemia but of the most diverse conditions; and if we practise it constantly we shall not only save ourselves many unpleasant surprises, but shall attain a more comfortable certainty about cases which now trouble us unduly.

OBSERVATIONS ON THE POISONED SPINES OF THE WEEVER FISH (TRACHINUS DRACO).

By H. MUIR EVANS, M.D.Lond.,
LOWESTOFT.

The painful wounds inflicted by certain fish which are commonly caught by fishermen around our coasts are well known to all who are in any way brought in contact with the men who supply our markets with fish. However, those who most frequently suffer from the pricks from spinous fishes are trawlers, because the weever is less frequently found in the nets of herring or mackerel fishermen. Amateurs are not infrequently stung through ignorance of the dangerous nature of these fish.

There has been comparatively little written by Englishmen on this subject, and those who would read an interesting account of fish with poison organs will find the whole subject treated historically and descriptively by Dr. Bottard in a book published in 1889 entitled *Les Poissons Vénimeux*.

It is important to bear in mind that the weever fish is not poisonous, although it has a poison organ; that is to say, the fish is perfectly good to eat, and has an excellent flavour, but has the power of inflicting dangerous wounds by certain spines on its dorsal fin, and on either gill cover or operculum.

The following account of the symptoms of a weever sting is quoted by Bottard:

I have been pricked several times by *Trachinus vipera*, and am able to give an exact account of the various phenomena the result of such an injury.

The symptoms are almost always the same. They differ only according to the depth of the puncture and the site of the wound; also according to the time of the year and the nature of the spine, whether it be dorsal or opercular.

In the month of October, 1885, I was pricked fairly deep in the middle of the palmar aspect of the right thumb. The pain was similar to that of a burn. At the end of only a few seconds all the other fingers, as well as that pricked, had become immovable, and were painfully numb. In two or three minutes the numbness had reached the forearm. The numbness seemed to follow the course of the nerves. The joints were particularly tender. At the end of from five to seven minutes the poison made itself felt on the heart, as shown by somewhat severe palpitation. I then felt cold and shivered. The wounded hand all this time was very painful and tender to the least touch. I was unable to dress it until three-quarters of an hour after the accident, when it was impossible to move the arm, and I was unable to undress myself alone. Three days later the surrounding parts were still very painful, and the tissues were swollen.

Gressin describes the symptoms as follows:

One experiences at first a very acute pain, lancinating and paralysing, often, among nervous persons, associated with vomiting. Then a sort of painful tingling attacks the wounded part, which swells up and becomes inflamed, and if one neglects to attend to it this may go on to phlegmonous inflammation and gangrene. Frequently certain general symptoms, as fever, delirium, and bilious vomiting, accompany this state. They may last two or three hours, or make themselves felt for several days.

The fishermen attribute, with some reason, this irregularity in the effects to the amount of poison inserted, or to the time of year, the spawning season being the most dangerous.

My investigations into the poison organ of *Trachinus draco* were the result of observing the pain and suffering among all associated with the fish trade, both fishermen and packers. I must express my indebtedness, in the first place, to Mr. Borley, of the Marine Biological Association at Lowestoft, who has examined with me the anatomy, naked eye and microscopic, of the weever, and has also helped me in getting together the literature of the subject; and, in the second place, to Professor Sidney Martin, in whose laboratory and with the help of whose assistant, Dr. Stevenson, the experiments on the physiological properties of the venom took place. I must further thank Dr. Stevenson for the great interest he has taken in the subject and the time he has willingly put at my disposal.

The most recent work on the subject of the venom of *Trachinus draco* is to be found in several communications by M. A. Briot.[1] My own experiments, several years later, were made in complete ignorance of this work, and therefore have the value of being free from any bias. This literature was not referred to in so recent a work as the *Cambridge Natural History* (1905).

The methods adopted by Briot to collect sufficient poison for investigation differed to some extent from those of Phisalix. The latter macerated the gland in chloroform water and glycerine, and the fluid resulting from the maceration was used in his experiments. Briot took the venomous spines and adjacent tissues, pounded them in a mortar, and made a glycerine extract. He employed the filtered liquid for his researches, and used the opercular and dorsal spines of 350 weevers caught between the end of May and the beginning of June and 70 caught in September.

The method that I employed was, I think, more scientific and accurate. I obtained freshly-caught weevers from a buyer who was in the habit of collecting fish for the Board of Trade, and could be thoroughly trusted. These I washed under a tap, and with pledgets of absorbent gauze wiped any mucus and dirt from the opercular spines. I then laid the fish in rows and again wiped the heads with wool. With a sterilized syringe I extracted from within the sheath, by inserting the needle along the groove of the spine, as much poison as possible, obtaining, no doubt, a certain quantity of cellular elements, but I avoided those heads in which there was *post-mortem* staining of the vascular tissue of the sheath. The fluid thus obtained—say, from 100 fish—was collected in a watch-glass and placed in a desiccator (Hempel's), the rim being filled with pure sulphuric acid and the air exhausted by means of a pump. In this way, from nearly 2,000 fish I obtained several grams of dried weever poison. This, before making experiments, was finely powdered in a mortar and dissolved in either distilled water or normal saline solution. These solutions were used either with a certain quantity of solid matter suspended, or filtered, or, better, after being centrifuged, to obtain a clear fluid.

The local effects of the poison injected subcutaneously are described in the passages quoted from Bottard and Gressin. It causes mortification of the tissues, and appears to produce a local paralysis which is very evident in experiments on fish. If the poison be injected in the region of the lateral line, the fish is sharply bent away from the lesion on account of the predominant action of the lateral muscles of the opposite side. These experiments have been repeated in the laboratory of University College, London.

A gold fish (A) 4 in. in length died in one hour and a half after injecting 0.015 gram dried venom.

Another (B) died in four hours with the same dose. Seven minutes after injection it lay on its left side, curved away from the site of inoculation into the muscles of the right lateral line.

Another (C), injected with 0.01 gram, showed the next day some local swelling at the site of injection, and continued to live until ten days after the commencement of experiment. *Post-mortem* examination showed extravasated areas of blood at the site of inoculation, and great congestion of the peritoneum.

Another (D) died three days after injection of 0.01 gram, and showed a marked haemorrhagic area along the track of the needle.

Gold-fish (E), injected with 0.005 gram, died eight days after

inoculation. There was a soft puffy area with swelling where the injection took place. On incision into this there was a small cavity in the muscles with ill-defined breaking down walls. It seemed as if there was a pure necrosis of muscles. The surrounding area showed bloody engorgement, well seen on the peritoneal aspect.

In a frog 0·015 gram caused death in two and a half hours with paralytic symptoms.

In a mouse (A) 0·02 gram dried venom caused death from a dry necrosis at the site of inoculation in two days. During the day after injection there was marked paralysis of the hind quarters the injection having been made under the skin of the back. The large vessels in the neck and axilla were engorged and the sinuses of the brain were full.

Mouse (B), injected with 0.01 gram dried venom, showed weakness of the hind quarters two days after injection, and five days after a small greenish area appeared on the skin at the site of inoculation. The animal died seven days after the injection with similar local symptoms as mouse (A), but the brain sinuses were not so engorged.

In a guinea-pig 0.05 gram injected intraperitoneally caused death in three hours. After preliminary pallor and convulsions, the animal became gradually weaker and showed paralysis of the hind quarters. After two hours the heart could not be felt beating, but catchy respirations continued for another hour. *Post-mortem* there was clotting in the superficial vessels and general venous engorgement.

Briot was the first to make intravenous injections in the rabbit; 0·5 c.cm. of his solution caused death so rapidly that he had not time to finish his injection. With 0.2 or 0.1 c.cm. death was slower, taking several minutes, and, according to this observer, it was death by asphyxia. He says:

On opening the animal immediately after the pupil reflex was abolished, one found that the blood was not coagulated in the portal vein or heart. The heart continued to beat for several moments, and artificial stimuli caused it to contract for some little time. There was no doubt that death was due to respiratory failure. I was not able to say precisely whether this was due to a direct paralysis of the respiratory muscles or to an effect on the respiratory centre. But I am inclined to think that it is due to a direct action on the respiratory muscles, as much from the rapidity of the death as from the fact that when death did not result in a relatively short time (eight to ten minutes) it did not occur later.

INTRAVENOUS INJECTIONS.

The result of experiments, as illustrated by simultaneous tracings of carotid blood pressure and respiratory movements, does not altogether agree with Briot's statement that death in the case of intravenous injections is due to respiratory failure. The action appears to follow the course of that which occurs with most snake venoms, that is, a slightly preliminary rise followed by a very rapid and deep fall in blood pressure.

Experiment I.—Rabbit, weight 1·900 grams; anaesthetic, ether. After an injection of 0·05 gram dried venom there was a fall in blood pressure lasting 45 seconds. Then, after 25 seconds of irregular low pressure, the pressure gradually rose. After an interval of 7 minutes, during which the cardiac pulsations had steadied down to a normal rate, a further 0·05 gram of dried venom was injected into the femoral vein. Immediately the blood pressure fell rapidly for 20 seconds with almost imperceptible cardiac pulsations, and in 24 seconds a further fall took place, immediately preceding complete cardiac failure and death.

Experiment II.—Cat, weight 2·750 grams; 0·1 gram dried venom; ether. Immediately after injection marked fall of blood pressure and to slow, powerful beats in 10 seconds (that is, 144 per minute (normal 192 per minute). This was followed by a rise of blood pressure in 10 seconds to normal, and then another gradual fall with marked slowing of the heart. 40 seconds from last injection the cannula was washed out with 0·6 per cent. sodium chloride solution and the cardiac contractions became gradually small and the pressure continuously fell, so that 2 minutes from the commencement of experiment the heart had ceased to beat. During this time the respiration, although affected so as to become at first rapid and then very fitful, with a deep inspiration continued and there were nine deep inspirations during the period of exactly 2 minutes which elapsed between the last cardiac beat and the last respiration. This tracing shows in a very striking way the typical fall of blood pressure the result of an intravenous injection of a venom [illegible] that the cause of death is in the case of snake poisons always due to respiratory failure.

Experiment III.—Cat, weight 2·3 grams. Ether, injected with 0·1 gram dried venom dissolved in 5 c.cm. of 0·6 per cent. sodium chloride solution. The resulting solution was then centrifugalized and the clear fluid injected into the femoral vein. During the first 5 seconds of the injection there was a slight fall in blood pressure, followed during the next 5 seconds by a slight rise. Then, 40 seconds from the commencement of experiment, there was a gradual and deep fall of pressure, reaching its lowest point 2 minutes from the commencement. During this fall the cardiac pulsations became less strong, the rate being 150 per minute as against the normal of 168 per minute. During the first 30 seconds the respirations were 8 per minute as against a normal of 9 per minute; they gradually quickened, until at the end of the second minute they amounted to from 14 to 12 per minute. Four minutes from the commencement the respirations had slowed down to 6 per minute, with cardiac pulsations stronger, 96 per minute. At the eighth minute the respiration became very slow, while during the ninth minute respirations were very irregular—4 per minute, with clonic twitching of abdominal and leg muscles. During tenth and eleventh minutes there were only 2 respirations per minute, with clonic twitchings; in fact, death almost resulted from respiratory failure. During the fifteenth minute the animal began to recover, 6 respirations per minute and heart 126. The experiment was then completed.

In this case death did not result from the immediate action on the cardiac system, but the later effects on the respiration nearly ended in death.

It would no doubt have been interesting, from a scientific standpoint, to have gone further and repeated these experiments after division of the nerves: but, inasmuch as the poison is not, in practice, ever injected in sufficient quantity to cause death either by heart failure or respiratory failure, it seemed more important to study the local effects and the blood changes which not infrequently result in man in phlegmonous inflammation and septicaemic conditions.

The neurotoxic effects of the poison have not been fully worked out at present, as I have been unable to spare the time away from practice, but I have devoted what time has been available to experiments on the haemolytic properties of the venom.

HAEMOLYTIC ACTION OF WEEVER POISON.

This had been studied up to a certain point by M. Briot, but only as regards the blood of warm-blooded animals.

It has been established that snake venom only produces haemolysis in certain animals when certain components of serum are also present. If red corpuscles be washed in normal saline and venom added, no solution occurs; but if normal serum heated to 62° C. be added, haemolysis occurs. It is necessary to heat the serum to prevent an antihaemolysin present at low temperatures from protecting the erythrocytes against the solvent action of the venom. These are the views held by the school of Calmette. Briot has repeated Calmette's experiments on snake venom with weever poison. In a series of test tubes he put a drop of washed corpuscles in suspension in 2 c.cm. of normal saline; he then added normal serum heated to 60° C. for one hour, and variable doses of his solution of weever venom. Complete haemolysis took place in 1½ hours.

Two controls were made, one without the venom and one without the heated normal serum; in neither tube did solution take place, nor did it take place when unheated serum was added. Briot also observed that the haemolytic effect of the venom remained intact after heating for an hour at 75° C., and that even after heating for twenty minutes at 100° C. dissolution still took place, though slowly.

These observations were limited to the blood of certain warm-blooded animals. I have carried the investigations further by experimenting with the blood of the roach and perch. I took 2 minims of a solution of equal parts of fresh weever venom and normal saline, and added it to 2 c.cm. of normal saline in which were suspended 5 drops of the nucleated red corpuscles of roach which had been washed and centrifugalized three times with saline. Solution began to occur in from one hour to two hours, and no formed elements remained a few hours after commencing the experiment, the red corpuscles remaining as a sediment in the control tube with white clear supernatant fluid, while in the tube in which the weever venom was added no sediment remained, and the fluid was deep red. This experiment has been frequently repeated, and always with the same result. The same result was obtained with perch blood.

The explanation of this apparent difference in result is made clear by the work of Preston Kyes on the mode of action of cobra venom. It had been established by Flexner and Noguchi that snake venom is made up of a number of substances acting after the manner of amboceptors or immune bodies which are activated by certain complements of the serum. In fact, snake venom does

not act as a simple poison after the manner of toxins but in a complex manner, being identical in action with the haemolysins of blood serum, as this has been conceived by Ehrlich and Morgenroth. Kyes then experimented with cobra venom in the blood of different animals, and found that there were two groups of blood cells: (1) Those dissolved by cobra venom; (2) those only affected by venom after the addition of other substances, complements, etc. He then showed that the red corpuscles in the first group were only acted upon by the venom because they themselves contained endocomplements which allowed the amboceptor of the venom to act on the cell.

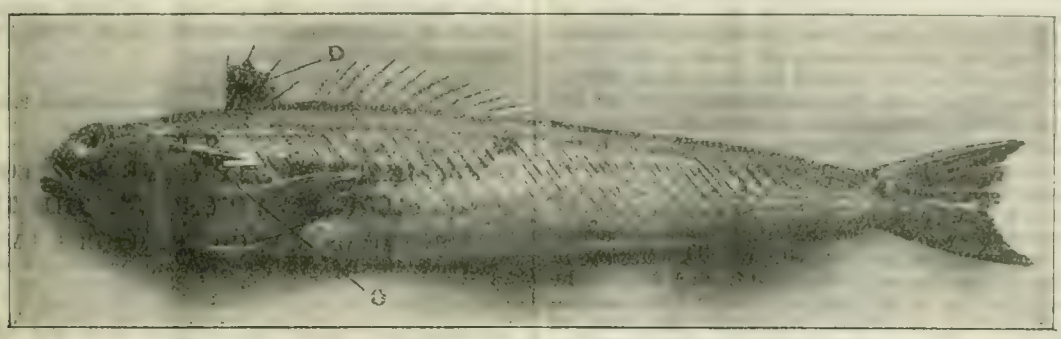


Fig. 1.—The weever fish (*Trachinus draco*). D, Dorsal spine; O, opercular spine.

It is not for me to discuss the experiments which proved this point, but they are very convincing, and there seems no doubt that certain blood cells themselves contain complement-like substances or endocomplements. My own experiments with different bloods with weever poison at any rate support his views, and we see the venom-producing haemolysis in roach and perch blood without the intervention of complements of added serum.

It seemed important, having made these preliminary investigations with the blood of fish, to carry them further into the realm of warm-blooded animals. The blood of pigeon, guinea-pig, sheep, ox, horse, and man, was used. The more exact methods of haemolytic experiments, as employed by Ehrlich's school and fully described in an article by Morgenroth in Ehrlich's volume of collected studies on immunity, were used in these investigations.

The blood, having been defibrinated, was centrifugalized to remove the serum, which was carefully pipetted off; 10 c.cm. of normal saline was added to 0.5 c.cm. of corpuscles, and well mixed, centrifugalized, and the clear solution pipetted off. This was repeated three times, and finally a 5 per cent. emulsion of red corpuscles was made in 0.85 per cent. salt solution. Either 2 c.cm. or 1 c.cm. of this solution was put in a series of tubes, the poison added in varying doses and the mixtures put into the incubator for two or more hours at 37° C. They were then allowed to settle in a cool place for several hours.

With pigeon blood one drop of a 50 per cent. solution of fresh weever poison was sufficient in two hours to produce marked haemolysis. The poison solution used was obtained by extracting the venom with a needle and syringe previously sterilized; in order to get all the milky fluid from the syringe, an equal quantity of salt solution was added to wash it out, so that a 50 per cent. solution of fresh poison was obtained. This was kept in a cellar on a block of ice in the dark, and its virulence remained intact. From a great number of experiments I found that uniform results were obtained if the poison was removed from freshly-caught fish, and extracted at once. It appears, as the fishermen state, that the poison loses its effects soon after death. With one specimen of venom I got most contradictory results, due to my using a batch of 100 fish which were not quite fresh, although they had been kept on ice.

The effect on birds is interesting, inasmuch as a smacksman has related to me how he has seen gulls fall into the sea as if struck dead when he has thrown live weevers overboard to them.

With guinea-pig corpuscles, two drops of 50 per cent. weever poison were added to one tube containing 2 c.cm. emulsion, and to two other tubes the same quantity of weever poison, with in one tube some normal serum, and in another serum heated for an hour at 62° C. In all three tubes marked haemolysis took place; in the control,

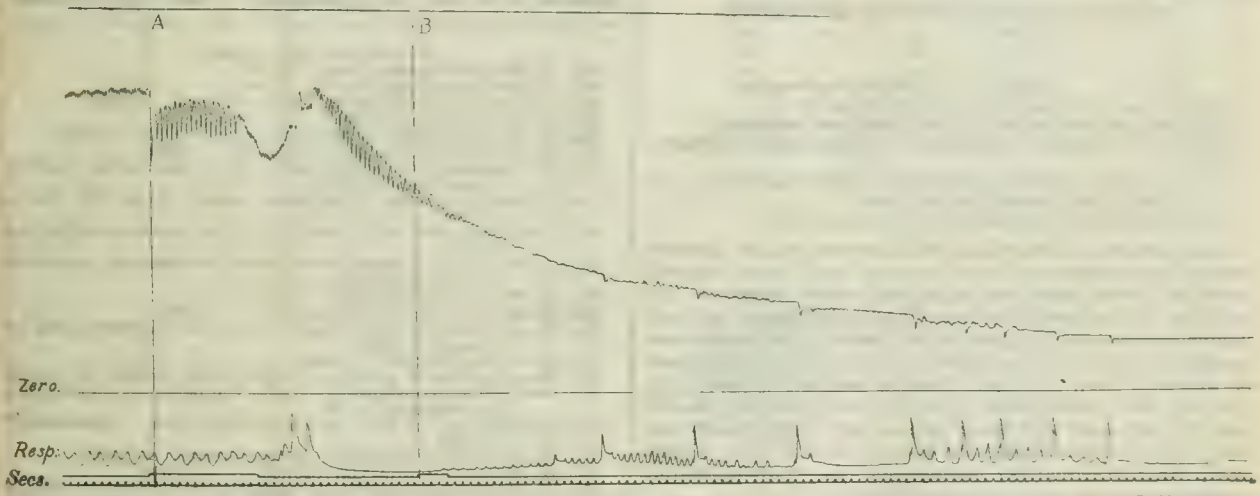


Fig. 2.—Tracing of carotid blood pressure and respiratory movements. Weever poison, 0.1 gram dried venom. Cat. weight 3,400 grams. Ether. A, Injection, lasting 14 secs; B, 35 secs. from the beginning of the injection. Cannula washed out with normal saline.



Fig. 3.—2 c.cm. of 5 per cent. emulsion guinea-pig corpuscles washed three times in normal saline; i, control; ii, two drops 50 per cent. weever venom added; complete haemolysis.

none. We see here, again, the presence of endocomplements in the guinea-pig corpuscles, and we have a slightly greater action with the presence of heated serum than with unheated serum.

A similar experiment was made with sheep's blood. In this case, with 5 per cent. emulsion and two drops of 50 per cent. weever poison, there was advanced haemolysis, and with the same quantity of poison, with both normal serum and serum heated for an hour at 62° C., there was complete haemolysis after two hours in the incubator at 37° C. We have here a very marked example of the amboceptor of weever poison combining with the endocomplement of the sheep corpuscles, resulting in rapid haemolysis. The increased haemolysis with the added serum was not affected by heating to 62° C.

With human blood we also find that there is haemolysis of the washed corpuscles without the addition of serum. But unless the venom is quite fresh 1 drop of the 50 per cent. solution is not sufficient to produce haemolysis, although 2 drops suffice. It seemed important, in the light of Briot's investigations previously referred to, to be quite sure of this. I have made seven separate experiments with human blood. The following experiment was very conclusive:

Six tubes, each containing 1 c.cm. of 5 per cent. washed human corpuscles, were numbered 0, 1, 2, 3, 4, and 5; 0 was the control.

1 contained 1 drop of 50 per cent. weever poison.
2 ,, 2 drops ,, ,, ,,
3 ,, 3 ,, ,, ,, ,,
4 ,, 4 ,, ,, ,, ,,
5 ,, 2 drops + 0.1 c.cm. normal serum.

0 underwent no change after two hours at 37° C.
1 showed medium haemolysis with dark red sediment.
2 showed well-marked haemolysis with dark pink sediment.
3 ditto.
4 showed very marked haemolysis, almost complete, the sediment being merely a faint pink.
5 showed complete haemolysis; sediment yellow.

There seems no doubt that trachinus venom can dissolve human corpuscles without serum, and that normal unheated serum does not delay, but rather increases, the solution. Experiments were made to endeavour to activate venom insufficient in quantity to dissolve the human corpuscles by means of sheep serum and ox serum. A venom of which 1 drop did not dissolve washed human corpuscles, was mixed with 0.3 c.cm. sheep serum, and a control was made with sheep serum only. The result was that with 1 drop of weever poison in 0.3 c.cm. sheep serum there was marked haemolysis; the control showed agglutination but very faint haemolysis.

A similar experiment was made with ox serum, 0.1 c.cm. of which was used for activation. There was complete haemolysis with ox serum and 1 drop of weever poison, and slight haemolysis in ox serum and blood alone. In both the above experiments there were two other controls with the corpuscles and weever poison, and no haemolysis occurred. A further experiment was made with ox serum heated for an hour to 62° C.; with 1 drop weever poison the control gave no result, the unheated serum slight haemolysis, and the heated serum *nil*. With 2 drops the control had marked haemolysis; unheated serum, medium; and heated slight. Apparently the heated serum delayed haemolysis.

I have made experiments with the idea of activating the venom towards human blood by means of lecithin, and have succeeded on two occasions; but as other experiments have not given uniform results, I am continuing this investigation with lecithin recommended by Preston Keyes.

Horse blood gave the haemolytic reaction with washed corpuscles alone. Seven tubes were filled with 1 c.cm. of 5 per cent. emulsion. 1 was [illegible] 1 drop 50 per cent. weever poison.

[illegible]

With 2 [illegible]

The results of these experiments establish (1) that weever venom has a haemolytic property capable of dissolving washed corpuscles of all the bloods so far experimented on without the addition of serum. (2) That the addition of the serum of the same animal does not inhibit, but rather increases the activity of the venom. (3) That in most cases heating the serum for an hour to 62° C. diminishes its activating power. (4) That minimal doses of the venom can be activated by the serum of other animals in the case of man, or the corpuscles are rendered more susceptible to the poison. (5) That probably the poison is an amboceptor, which unites with the endocomplements of the blood cells.

REFERENCE.
1 *Comptes Rendus de la Société de Biologie de Paris*, 1902 3-4.

PRELIMINARY NOTE ON THE DEVELOPMENT OF PIROPLASMA CANIS IN THE TICK.

BY CAPTAIN S. R. CHRISTOPHERS, I.M.S.,
SUPERINTENDENT, KING INSTITUTE OF PREVENTIVE MEDICINE, MADRAS.

THE only work which has hitherto shed any light upon the development of the piroplasmata in ticks is that of Koch on the piroplasmata of cattle in East Africa, and that of his colleague Kliene on the development *in vitro* of *Piroplasma canis*. But these observations still leave us very much in the dark regarding the cycle of development of piroplasma in the tick, and the life-history of the parasite in the main is still unknown. I have been fortunate

EXPLANATION OF FIGURES.

Fig. 1.—Endocorpuscular forms. × 2,000.
Fig. 2.—Free form in gut of tick. × 2,000.
Figs. 3, 4, and 5.—Developmental forms in the gut. × 2,000.
Fig. 6.—Conjugation. × 2,000.
Fig. 7.—Developing club-shaped bodies from the gut. × 2,000.
Fig. 8. Fully developed club-shaped body. × 2,000.
Fig. 9. Immature club-shaped bodies from the tissues. Living preparation. × 2,000.
Figs. 10 and 11. Living club-shaped bodies from the ovary. × 2,000.
Fig. 12.—Club-shaped body showing the disc structure on the flat. × 2,000.
Figs. 13 and 14. Club-shaped bodies from the tissues of nymphs of the second generation. × 2,000.
Fig. 15.—Parent forms (oocyst). × 2,000.
Fig. 16.—Binary fission of a parent form. × 2,000.
Fig. 17. A group of "sporoblasts" from the salivary gland of nymph. × 2,000.
Fig. 18.—Two of the same. × 4,000.
Fig. 19.—A portion of a salivary cell of unfed nymph of second generation showing a few of the parasites embedded in its substance. × 500.
Fig. 20. Division of the chromatin into two "sporoblasts." × 2,000.
Fig. 21.—Division of sporoblast into small forms. × 2,000.
Fig. 22.—Free small forms (sporozoites). × 2,000.
Fig. 23. A group of sporoblasts probably derived from a single parent form lying in connexion with the nucleus of a tissue cell and showing signs of division into sporozoites. × 2,000.
Fig. 24. Sporozoites (?) in a cell of developing salivary acinus. × 500.
Fig. 25.—Large body with stellate chromatin lying in cell of limb of unfed tick adult. × 2,000.
Fig. 26.—Sporulation of this form. × 2,000.

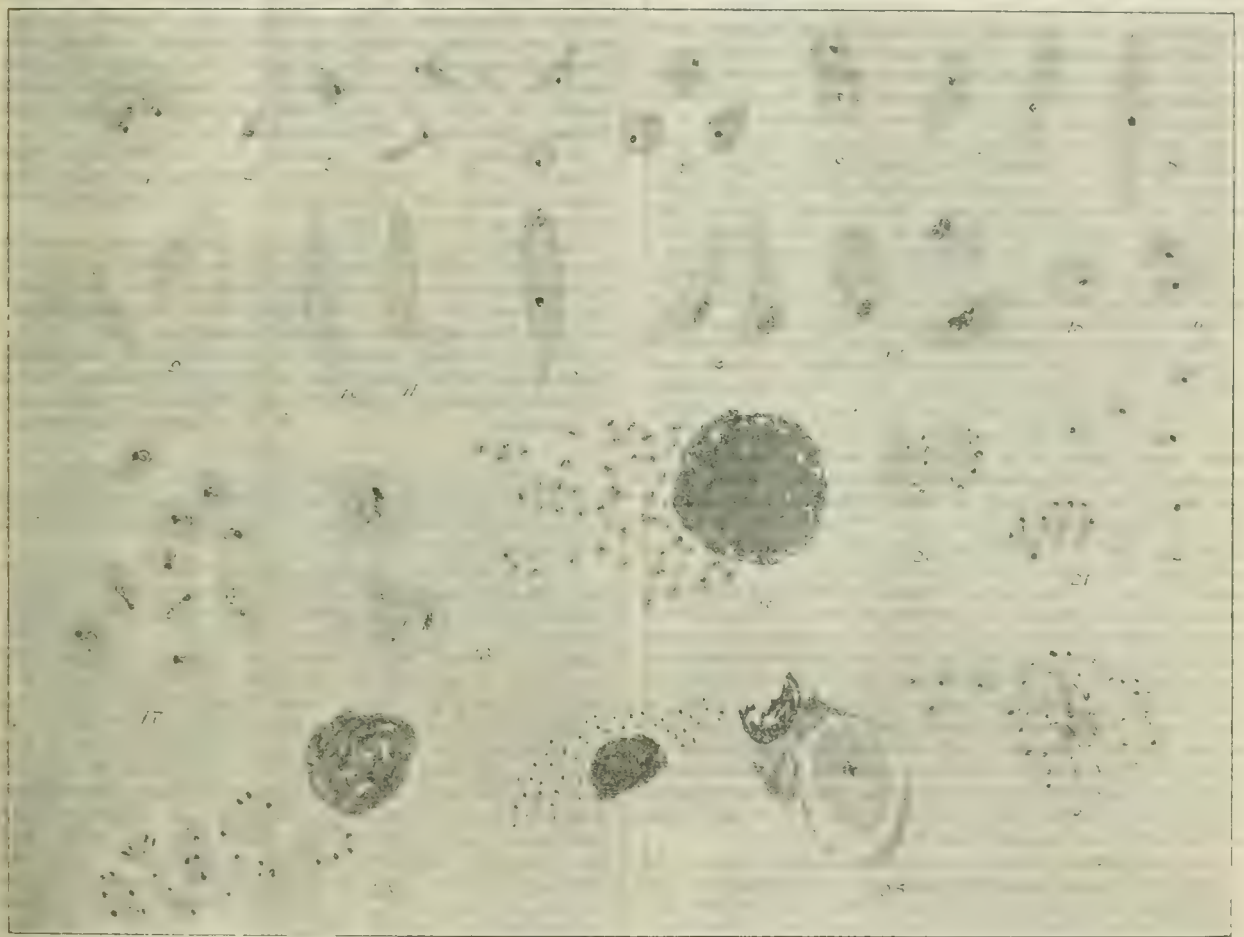
enough, however, to have been able to trace in its entirety the life cycle of *Piroplasma canis*, and presumably incidentally that of the other piroplasmata.

Canine piroplasmosis is described from Europe and Africa, but I have found it also endemic among the native dogs of India. Though it has been universally assumed on analogy that the disease is carried by ticks, the actual facts regarding its transmission have only been worked out with respect to the disease in the Cape, and the observations of Lounsbury and Nuttall yield the only precise information we have on the subject. In South Africa the disease is transmitted by the tick *Haemaphysalis leachi* (Audouin), the adults of the second generation only being infective. In Madras *Haemaphysalis leachi* is not found, and a preliminary investigation was undertaken to determine what species acted as the carrier here, and at what stages it took in and transmitted infection. These experiments will shortly be published at length; it is only necessary at present to note that the tick generally concerned is *Rhipicephalus sanguineus* (Latreille), and that infected adults give rise to infective progeny. The larvae hatched from the eggs of an infected mother are apparently unable to transmit infection, but the nymphs and adults reared from these do so. Though infection can pass through the egg, it can also be taken in during the nymphal engorgement and be transmitted later by the adult stage, a fact, I believe, Mr. Lounsbury had previously arrived at in regard to certain of the Cape piroplasmata

There is in this case no question of mere direct transmission, for the same cycle of development of the parasite occurs whether infection is transmitted hereditarily or not.

As already stated, the life-cycle has been followed in its entirety, though no doubt many details are still to be added and additional facts accumulated. In the present account I intend only to indicate the appearances seen, reserving a fuller description to a later date. In the gut of adult ticks and also in that of nymphs fed on infected dogs one sees a varying number of free forms resembling those seen in the blood. These in many cases have enlarged considerably (Figs. 3 and 4) and the chromatin has become more distinct. Certain forms are seen with processes, but I do not find this is a necessary stage of development, nor have the forms seen by me ever exhibited the irregularities in the chromatin figured by Koch and Kliene. The result of the initial changes leads to the formation of the very characteristic bodies delineated in Fig. 5. These measure about 3·5 μ in diameter, and are more or less globular, though they very frequently show two or three blunt processes at one side. Numbers of these bodies are at certain times found in couples, the appearances suggesting conjugation rather than fission. As a final result of development in the gut large club-shaped bodies are formed, which may be seen in every stage of development, from those shown in Fig. 7 to the vermicule-like forms shown in Figs. 8 to 12. These are the bodies described by Koch in the egg, though, as a matter of fact, they are not by any means confined to this situation. In the case of the adult they leave the gut to enter the ova, and may be seen in fresh preparations in numbers, penetrating the walls of the oviducts and ovary. In the nymph, whether hereditarily or directly infected, they are found in the salivary gland and other tissues. Observed in the living condition, these bodies are seen to be endowed with pretty active movements. In what appear to be the less developed forms the movements are euglenoid in character, but the more matured forms have a fixed body shape, and exhibit, in the main, side-to-side movements of the tail. Many of them possess at the anterior extremity a disc-like structure provided with distinct cusps (Figs. 8 and 12). Occasionally this structure is seen on the flat, when a central and four or five peripheral processes can often be made out. In the tissues of nymphs from infected mothers one finds these forms to be present, though they are as a rule swollen and otherwise altered. In some cases what is undoubtedly the altered disc structure can still be seen. In a great many instances the tail is flexed upon the body, and the parasite is apparently becoming the form we are about to describe.

In the tissues of the unfed nymphs (examination of infected larvae since my discovery has not yet been possible) bred from infected mothers there are, especially in the cells of the salivary glands, numerous, often swarms of, comparatively large, round, oval, or even pear-shaped forms having a general resemblance to piroplasma in the blood, except that they are much larger, and that the chromatin is arranged in a very characteristic way. These



bodies, 4 μ or more in diameter, are not very readily stained, so that they have a peculiar light blue transparent appearance when coloured by Giemsa. The most striking feature is the chromatin, which shows in a very marked degree an appearance very like that recently described by Nuttall in the parasite in the blood, and which I have also noted in the Madras parasite. Passing out from a dense mass of chromatin there is an area of loose chromatin reticulum, or even of separate woolly strands (Fig. 17). These forms are aggregated especially in the large cells of the salivary glands (Fig. 19). In heavily infected ticks hundreds of parasites are often present in a single cell. It is probably such a cell which Koch has figured, and which he erroneously thinks to be a cell of the gut. The bodies are the result of fission of a similar but somewhat large parent form, each of which is derived directly from a club-shaped body. Single parent forms are often seen embedded in the protoplasm of young cells close to the nucleus, and groups, clearly the result of fission, are seen in the same position.

These bodies, packed as they were in thousands in the

salivary cells of the nymph, gave rise to the belief that this was the final stage of development. Such, however, is not the case, for in nymphs undergoing changes into the adult further developmental stages are seen. It is probable, however, that the bodies I have already described can give rise to infection in the dog, since the nymph is highly infective, the disease being induced with an incubation period sometimes so short as three and a half days. The body of the adult tick is in great part formed independently of the original tissues of the gorged and the inactive nymph, and the salivary glands of the nymph are soon lost among the active tissue changes which go on at this time. If squash preparation be made of the already partly recognizable tissues of the unhatched adult, the groups of fission forms will be found to have become disseminated among these occurring even in situations which will eventally form the limbs. The changes at this time are very striking. The chromatin of each body becomes split up and arranges itself peripherally, often mainly upon one side (Fig. 20). The strand-like processes of chromatin already referred to are also dragged about, and portions are seen attached to, or in attendance upon, each of the denser masses. This arrangement is the prelude to the division of the bodies into from three to ten small forms resembling very exactly piroplasma in the blood (Fig. 22). Groups of as many as fifty of these small forms are to be seen, usually lying within some kind of cell, and it is probable that these represent the progeny of a single parent form (Fig. 24). Many such groups are found in tissue which will eventually become the salivary glands of the adult. The fate of the bodies in cells other than those eventually forming the salivary gland is doubtful, but I have seen single bodies embedded in cells and they often show what appear to be amoeboid processes, so that it is quite possible such parasites eventually reach the gland.

This appears to be the usual cycle of development in the tick, but I have reason to think that another cycle leading to a similar result exists. At present observations are too imperfect to enable me to speak with precision, but in the cells of the tissue of the developing adult one sees large forms with a stellate arrangement of the chromatin, very like certain forms sometimes seen in the gut, which do not appear to enter into the formation of the club-shaped motile vermicules. These bodies increase greatly in size, measuring in some cases so much as 15 μ, and they then break up into a rosette of from 50 to 100 small forms, such as result from the previously-described cycle. It is premature to discuss yet the full significance of the changes here described, but it appears at present reasonable to conclude that a true conjugation takes place in the gut, and that the travelling club-shaped bodies are the ookinite. The bodies formed in the salivary gland of the nymph are possibly homologous with the sporoblasts of the malarial zygote, and the further subdivision of these into sporozoites would account for the small forms with a simple chromatin mass. That the salivary glands of the nymph are stocked with one type of body and those of the adult with another is a very singular fact.

Cape Colony Asylums.—According to the thirteenth annual report of the Cape Colony for Imbeciles recently issued, the colony occupies 1,595 acres of land with 30 houses, 6 more providing accommodation for 200 additional patients being erected. The number of patients in the colony is nearly 1,500 when the new buildings are completed the colony will be approximately 1,800. There are now about 1,600 epileptics in New York State and it is stated that there is no room. A considerable amount of surgical work is done at the colony, as is shown by the fact that 1,000 operations for surgical purposes were given by the year. The cost of [illegible] per annum for each patient. The establishment of a special asylum for epileptics nearer [illegible] is advocated.

Lunacy Statistics.—The Lunacy Board of Victoria have recently issued their report for the first time on the history of the movement, a brief sketch of which appeared in the Australian Medical Gazette last April. Under the Lunacy Act the Governor in Council appoints not all the members of the Board, but only three of the Board of Health to act on the Lunacy Board. A large number of applications for the office have been made, and a committee, consisting of [illegible] and [illegible] has been appointed to consider the matter. The report is [illegible] and [illegible] and [illegible] and

to carrying out the treatment I wished to adopt. This was to place him on his back, with a straight splint to the back of his neck, and strapping firmly but gently applied, supported by the gentle pressure of an icebag on the left side of his neck to maintain the correct position. There was some considerable swelling of the tissues round the thyroid cartilage during the night, with pain and a feeling of suffocation, but beyond this no untoward symptom has occurred. Two or three days later his condition became more tolerable, and now, except for the lateral deviation to the left of his pomum Adami, his larynx does not cause him much trouble. Apparently the clothes-line had struck him diagonally and forcibly pushed the thyroid cartilage to one side. As such an accident is very unusual, the question of treatment was naturally a very vexed one in my mind. Had the dyspnoea been severe I should have performed tracheotomy, with a view to the subsequent rectification of the displacement. Now, however, all urgent symptoms have subsided, and beyond the slight deviation of the thyroid cartilage, there is no other indication warranting interference. In view of his voice remaining unaffected, and the absence of emphysema or oedema, I am inclined to do no more. I should, however, be much interested to hear of any similar case, and to know whether further surgical treatment is suggested with regard to replacing the misplaced cartilage and anchoring it down to its old position by suture. I have named the condition partial displacement of the larynx, for want of a better nomenclature to adequately describe it.

Middlesbrough. HAROLD WALKER, F.R.C.S.

A CASE OF PELIOSIS RHEUMATICA.

ON October 19th, 1906, I saw a boy, aged 13 years, said to be suffering from rheumatism. He was pale and delicate-looking, and complained of sore throat, pain and swelling of the right knee. The temperature was 102° F. He was sent to bed, and put on sodium salicylate. Two days later his mother drew my attention to spots on his legs; they were brownish in colour, and did not disappear on pressure. On October 23rd a large purpuric patch appeared on his right cheek. It was dark-red in colour, and situated on a wheal similar to that produced in urticaria. His right upper eyelid and brow were deeply ecchymosed and considerably swollen. All over the upper lip, which was so much swollen as to overhang the lower lip, were bright red petechiae. The temperature was 100° F., taken by the mouth. Three days later the temperature went up to 102.4° F., and he complained of pain over the left elbow and right great toe; the parts were tender to touch, red and swollen, with red purpuric patches round them. He also complained of pain in the stomach and abdomen. On October 27th he had diarrhoea and a free haemorrhage from the bowels, the blood being bright red. His sputum contained blood. The gums were not spongy, and did not bleed readily. The tongue was dry and had a dirty-brown fur. The breath had a very foul odour. The following day the temperature became normal and remained so. The urine contained no blood or albumen. The pain in the joints and belly disappeared, and the boy was altogether better. Later on during convalescence an urticarial rash freely sprinkled with purpuric petechiae broke out all over his trunk and right leg. His illness lasted one month.

The family history is of some interest. His brother when 16 years of age had a precisely similar attack, and now has violent attacks of epistaxis. His father nearly bled to death on two occasions. His mother bore many children without any untoward symptoms, and now menstruates regularly and in normal quantity.

The treatment adopted was at first 10 gr. of sodium salicylate every three hours; this drug had no effect whatsoever upon the haemorrhage. Calcium lactate in 10-gr. doses was then given with excellent results.

Morriston. M. W. WILLIAMS, M.B., Ch.B.

UNDER the will of the late Mr. Adam Murray, of Higher Broughton, the Manchester Royal Infirmary and the Salford Royal Hospital each receives a sum of £200; and the Northern Counties Hospital for Incurables, the Ancoats Hospital and Dispensary, the Hospital for Skin Diseases, the Manchester Children's Hospital, the Royal Eye Hospital, and the Northern Hospital for Women and Children, each £100.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE ROYAL BERKSHIRE HOSPITAL, READING.

A CASE OF SUPPURATIVE MENINGITIS.

(By W. S. ORTON, M.R.C.S., L.R.C.P., House-Physician.)

A MAN was admitted into the Royal Berkshire Hospital on October 8th, 1906, under Dr. W. T. Freeman, suffering from headache, drowsiness, and pyrexia. He was quite well and doing his ordinary work as a plasterer up to September 29th, when he had a slight fall, and knocked his head against a rung of a ladder. He was not stunned at the time, and there was no external wound, but ever since he has complained of severe frontal headache; on three or four occasions he had had attacks of vomiting, and on October 2nd he had slight epistaxis, and again on October 7th. On October 6th he had a rigor, his temperature reaching 104°. Up to this time he had never lost consciousness.

State on Admission.—He looked very ill, was of a rather sallow complexion, and was inclined to be very drowsy, but could easily be roused; the temperature was 103.4°, the pulse 84, and quite even: there was no paralysis of the limbs or retraction of the head: the pupils were equal, and reacted to light and accommodation, and there was no optic neuritis either on admission or subsequently, the discs being found to be normal. Nothing abnormal was found on examining the chest. There were no signs of ear or nose disease discoverable. The abdomen was normal, except that there were three or four small red spots, which faded on pressure; these and the occurrence of epistaxis, headache, and the condition of the tongue, which was clean round the edges with furred bands down the centre, suggested typhoid, which was negatived by the non-reaction of a Widal test. Taking the general condition of the patient into consideration, although no cardinal symptoms were present, meningitis was diagnosed.

Progress.—On October 9th he had a rigor lasting half an hour, the temperature rising to 105.4°, and another on October 10th, when his temperature rose to 106.4°, and one on the 11th, the temperature reaching 106°. Between the rigors his temperature varied between 102° and 104°. He had icebags applied to his head and epigastrium, he took his feeds well, and had his bowels opened with enemata.

In the early morning of October 12th he had a severe rigor, his temperature going up to 107.4°, and later in the day he had another, when his temperature reached 105.8°; up to this time he had always had profuse perspirations about half an hour after the rigors, but from this date the perspirations ceased. On this day also he had incontinence of urine and faeces, which lasted until his death.

On the 13th his upper eyelids began to swell, and there was a good deal of exudation of yellowish lymph; he had three rigors on this day. On the 14th he also had three rigors, his temperature reaching 106°; he became more drowsy, and it was more difficult to rouse him. On the 15th his swallowing became difficult, the respirations became more rapid, and when left alone he was practically in a comatose condition: he had three rigors on this day, his temperature rising to 106 4°.

Result.—On the 16th he was evidently very much worse, his breathing had become stertorous and of the Cheyne-Stokes variety. At three o'clock his temperature rose to 107.4° without a rigor, and he died an hour later.

Post-mortem Appearances.—At the autopsy I found a very purulent septic meningitis over the left half of the brain; the brain substance itself was rather softer than normal, but otherwise healthy. There were septic thrombi in the cavernous sinuses, which accounted for the purulent infiltration of the eyelids. There was also a small area of necrosis of the sella turcica of the sphenoid bone, through which pus was exuding from the posterior ethmoidal cells.

COMMENTS.—On looking over the case, and taking into account the autopsy, one might suggest two theories as to the causation. I think the most likely one is that there was some chronic nasal trouble, of some years' standing, which he had neglected, and that it was lying in a dormant state when he had the slight knock on the head, which lighted up the old mischief, and so brought about the above sequence of events; or perhaps a septic thrombus was the cause of transient giddiness and the fall, really being the first symptom of serious mischief within and without his cranium.

BALLINROBE UNION HOSPITAL.

A CASE OF OTITIS MEDIA PURULENTA WITH REPEATED RIGORS: OPERATION: RECOVERY.

(Reported by R. B. MAHON, M.D., F.R.C.S.Eng., Surgeon.)

THE discussion in the Section of Laryngology and Otology at the Toronto meeting on the papers read by Drs. Hugh E. Jones, McKernon, and Bacon, makes the following case of interest.

Constable F., aged 36, a man of fine physique, was admitted to hospital on the 19th, 1906. He was suffering from "pain in the ear" and gave a history of deafness in the right ear of long duration, with occasional slight attacks of pain, always relieved by a purulent discharge.

State on Examination.—An old perforation of large size was evident in the right tympanum; there was no discharge from the ear; the mastoid was the seat of tenderness and pain, and his temperature registered 100° F.

Progress.—For six days his temperature kept about this level. At 7.50 p.m. on the night of March 25th it suddenly shot up to 104·2° F., and the patient had a severe and prolonged rigor which lasted for some time, and left him very exhausted and drenched in sweat. On the night of the 28th he had a second rigor, the thermometer registering a temperature of 103·6° F., and for the ensuing nine days the temperature exhibited a characteristic pyaemic curve rising to 105° at various hours between 12.30 and 2.30 a.m., falling to 98° or lower about 9 a.m. A rigor occurred with each exacerbation of temperature. During those days there was no discharge from the ear, there was much delirium and great and progressive loss of strength. Vomiting was frequent and severe, the knee and shoulder joints became enlarged tender and painful. Tenderness over the right internal jugular vein was complained of, with rigidity of the neck and slight swelling under the sterno-mastoid muscle. Altogether the case was unpromising and the symptoms pointed to septic thrombo-phlebitis of the right lateral sinus with probable extension into the jugular vein.

Operation.—Operative treatment all along was urged on the patient and his friends, but was declined until the night of April 6th, twelve days from the occurrence of the first rigor, when the patient's condition became so desperate I was at last given a free hand. This night some large râles were detected in the bases of the patient's lungs, and a hacking cough came on. Next morning, April 7th, A.C.E. mixture being administered by Dr. Martin Semple, I made a curved incision 2 in. long behind the ear down to the bone. The bone having been cleared a few taps of a wooden mallet on a chisel penetrated the outer table, and by means of a sharp gouge the mastoid antrum was entered, very fetid pus flowing freely. The operation followed the lines of Schwartze's procedure. Rotten, fetid, carious bone and some granulation tissue were removed by means of a sharp spoon and the mastoid cells broken down. The patient's condition was now so bad I determined to forego my intention of laying open the lateral sinus and, if necessary, ligating and excising the internal jugular vein. The bony cavity was cautiously irrigated, mopped with pure phenol and plugged with gauze soaking in corrosive sublimate lotion.

Result.—The symptoms were immediately much relieved and convalescence was rapid, only interrupted by a slight rigor on April 13th, seven days after operation. Next morning I evacuated through the external auditory meatus about a teaspoonful of [illegible] pus, and from that time forth the temperature fell steadily to normal, the patient leaving hospital some weeks after, completely rid of his trouble. He has since resumed duty, and at the time of writing (November) is in excellent health.

Remarks.—The points of interest in this case are the [illegible] of all pyaemic symptoms after free evacuation of pus, without opening the lateral sinus or excising the internal jugular vein, and the occurrence of the single rigor seven days after operation, a [illegible] of temperature, relieved by evacuation of pus through the [illegible] opening in the tympanum.

[illegible] days before operation, while the patient and his friends were reluctant to the knife, a trial was given to [illegible] of antistreptococcic serum. Three injections of [illegible] were made, but effect other than some local [illegible] following the last injection.

[illegible] Dr. Lockwood A. Cook, who is [illegible] has communicated for the first time to [illegible] Mr. W. Kingsley Morse, who acted as the [illegible] anæsthetist in the Western hemisphere, and who began at the University of New York the [illegible] of the Long Island and the New York State Medical [illegible] Few [illegible] have been engaged to a considerable extent in [illegible] from [illegible]. Added to the [illegible] of [illegible] the expedition he [illegible] Commander [illegible] and again in [illegible] was [illegible] Amundsen in the [illegible] antarctic [illegible].

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

HARRISON CRIPPS, F.R.C.S., Vice-President, in the Chair.

Tuesday, January 8th, 1907.

CHEYNE-STOKES RESPIRATION.

DR. FREDERICK TAYLOR, Dr. M. S. PEMBREY, Dr. A. P. BEDDARD, and Dr. HERBERT FRENCH communicated the results of observations on two cases of this condition, from which they deduced the following conclusions: The periodicity of Cheyne-Stokes respiration was apparently in great part due to a diminished excitability of the nervous system associated with a defective supply of arterial blood; the CO_2 accumulated, and the oxygen diminished, until at last the nerve cells were stimulated, the waxing respirations began, and culminated in hyperpnoea, whereby a large quantity of CO_2 was washed out and sufficient oxygen was taken in; apnoea followed, due apparently to the absence of sufficient CO_2 to stimulate the nerve cells. The inhalation of air containing more than 2 per cent. of CO_2 abolished apnoea by maintaining the partial pressure of the CO_2 in the alveolar air and blood at its stimulating value. The administration of pure oxygen by means of a mask and valves abolished apnoea by maintaining the partial pressure of CO_2 in the blood at its stimulating value; the respiratory centre was no longer excited by lack of oxygen to send out the forcible impulses which had previously resulted in excessive ventilation of the lungs, whereby CO_2 had been washed out of the alveoli and lungs.

Dr. G. NEWTON PITT, Dr. M. S. PEMBREY, and Dr. R. W. ALLEN communicated a third case from which they made similar deductions. In their case a small proportion only of the cells of the vagal nucleus had a normal appearance.

Dr. A. M. GOSSAGE asked how it was that the respiration did not cease precisely at the point where there was the smallest amount of carbonic acid in the lungs.

Dr. A. E. GARROD asked for an explanation of the waxing and waning of the respiration—why, for example, the dyspnoeic phase did not begin suddenly.

Professor A. CUSHNY described a case associated with hiccough, and asked if in Cheyne-Stokes breathing vascular and parenchymatous nervous lesions were to be expected.

Dr. PEMBREY replied.

DEMONSTRATION.

Mr. MCLENNAN gave a description and demonstration of the spirochaetes of syphilis and yaws indicating their life-cycle.

Mr. JACKSON CLARKE gave a demonstration purporting to show the relation of the spirochaete to certain protozoal forms he had previously described.

EDINBURGH OBSTETRICAL SOCIETY.

N. T. BREWIS, M.D., in the Chair.

Wednesday, December 12th, 1906.

PREGNANCY AND FIBROIDS.

DR. N. T. BREWIS described two cases. In one a fibroid tumour filled the pelvis, and caused such pain and obstruction at the fifth month of pregnancy that laparotomy was performed, and the child delivered by Cæsarean section. It was found to be impossible to enucleate the tumour, so supravaginal hysterectomy was carried out. In the second case the tumour occupied so much of the pelvis that natural delivery would be impossible. It caused a considerable amount of pain from pressure, but, as this was to a large extent relieved by an abdominal belt, operation was postponed till the child had reached full term. Laparotomy was then performed, and the child delivered by Cæsarean section. In this case, also, it was necessary to remove the uterus.

NEPHRECTOMY AND PREGNANCY.

DR. HALL EDGAR read notes of a case of labour in a primipara from whom a kidney had been removed some years since for tuberculous disease, and who had a pelvis of the kyphotic type and albuminous urine. Owing to the pelvic contraction labour was induced, but it was too late, and the child's head had to be delivered by craniotomy. In addition to the above complications there was present a lateral placenta praevia, and lastly an adherent placenta. The albumen disappeared from the urine soon after delivery, and the patient made a good recovery. Women

who had had a kidney removed should not marry for at least three years after, so as to allow of a sufficient hypertrophy of the remaining kidney taking place. Even then the patient should be closely watched throughout the pregnancy and the urine be frequently examined.

OBSTETRICAL SOCIETY OF LONDON.

W. R. DAKIN, M.D., President, in the Chair.

Wednesday, December 5th, 1906.

THE TREATMENT OF OVARIAN PROLAPSE.

DR. VICTOR BONNEY read a paper on this subject, advocating in certain cases shortening of the ligament. The operation suggested consisted in pleating the ovarian ligament by means of a "gathering" stitch, which, beginning on the posterior aspect of the uterus just within the point of origin of the ligament, terminated at its attachment to the ovary. The ligament by this means was not only shortened but thickened, and the ovary brought up under the uterine cornu.

MRS. BOYD had drawn attention to the desirability of suspending the ovary in some cases, in a paper on conservative surgery read before the British Medical Association at Ipswich in 1900. She had employed practically the same procedure as Dr. Bonney. She did not, however, think it was necessary as a routine practice in connexion with ventrifixation, as in most cases the ovaries were restored with the uterus to a normal position by ventrifixation, just as in some other cases by a pessary. The recurrence of cystic disease in the ovary, which she had unfortunately seen several times after resection of diseased ovaries, was not due to readhesion of the ovary to the bed out of which it had been detached. It was rather owing to pathological processes persisting in the ovary itself, which would not be prevented by suspending it elsewhere.

Dr. HERMAN thought that ovarian prolapse had received all the attention it deserved. He knew of no evidence that change in the position of a healthy ovary made it tender. Tenderness of the ovaries was generally a local manifestation of neurasthenia. He had watched patients with tender ovaries taken into hospital, there given the benefits of food, rest, and sleep, who had left the hospital with the ovaries in the same position as when they were admitted, but no longer tender. He had treated patients with tender ovaries, had lost sight of them for many months or years, and then seen them again and found the ovaries in the old position, but no longer tender.

Dr. BLACKER quite agreed with Dr. Herman that operative treatment was seldom called for. One of the best means of treating such cases was the occurrence of pregnancy. In these conditions the ovary, placed at rest as it was for a period of nine months and elevated out of the pelvis, tended to become less painful, and if proper care was taken to ensure normal involution of the uterus and its ligaments, the displacement often did not recur after delivery. The fact that many of these patients were neurasthenics was a factor to be borne in mind in counselling any operative treatment. Improvement of the general health was of far greater importance. He could not understand how any abnormality in the position of the ovary could play any very great part in the production of cystic degeneration of these organs. Nor did he understand how the action of gravity could have any great effect. Intra abdominal pressure acted equally in all directions, and gravity could hardly have any influence on the ovary, apart from the other viscera inside the peritoneal cavity.

Dr. BRIGGS believed that operation for uncomplicated ovarian prolapse was very rarely necessary.

Dr. EDEN was quite disposed to think that the operation described by Dr. Bonney might prove to be useful in cases of uncomplicated ovarian prolapse, which resisted all other methods of treatment and were not associated with well marked neurasthenia. Such cases did occur, although they were rare. He also quite agreed with Dr. Bonney as to the importance of conserving the ovaries, especially in the case of young women; but most cases of salpingo-oöphoritis were due to infection, and the question which the operator had to face was whether by leaving the ovary he would not also allow a focus of infection to remain which would give rise to further trouble in future.

Dr. VICTOR BONNEY replied.

LIVERPOOL MEDICAL INSTITUTION.

FRANK T. PAUL, F.R.C.S., President, in the Chair.

Thursday, December 20th, 1906.

DUODENAL ULCER AND LUNG ABSCESS.

MR. G. P. NEWBOLT read notes of a case of perforating duodenal ulcer complicated by abscess of the lung in a male patient aged 30 years, who had previously been in robust health. The treatment was by injections of polyvalent serum. Frequent attempts were made to localize the abscess with exploring needles; the abscess eventually emptied itself, on some days a pint to a pint and a half of pus being expectorated. Finally, the patient made a good recovery. The organism isolated conformed to the type of streptococcus termed *S. salivarius* by Andrewes and Horder.

OPERATIONS DURING TYPHOID FEVER.

MR. W. THELWALL THOMAS read notes of two cases of surgical operations during the course of typhoid fever, one for perforation and one for appendicitis, both of which had recovered. He drew attention to the fatal character of perforation unless surgically treated, when the recovery-rate was 30 per cent. or more. Although in many cases the diagnosis was uncertain, stress would be laid on pain, rigidity, and increased pulse-rate; even when in doubt it would be wiser to explore (under local anaesthesia) than to wait until general septic peritonitis had set in. The treatment of the perforation by quick suture or the formation of a faecal fistula appeared to be the two alternatives; fancy work such as enterectomy with end-to-end anastomosis was not to be recommended; enterostomy had the further advantage of draining and keeping the typhoid intestine at rest. The first patient was a man who had been walking about until a few days before symptoms of perforation occurred; the case was diagnosed as perforative appendicitis and immediately operated upon, with the result that a typhoid perforation was found. The second was a young lady in the third week of typhoid; though a provisional diagnosis of perforation was made, at the operation acute appendicitis was found. Mr. Thomas briefly described two other previous cases in which he had operated for typhoid perforation without being able to save the patients' lives.

THE PRESIDENT referred to two cases, one illustrating the difficulty of making a certain diagnosis in typhoid perforation; the other, a perforation 12 in. from the caecum three months after the onset of typhoid fever. In the latter case the ulceration was so extensive that the perforation could only be closed by excising it, and the patient died nine days after the operation.

MR. T. C. LITTLER JONES mentioned a case he had operated upon successfully last July. A Lascar boy was brought to the infirmary at the end of the second day after perforation of a typhoid ulcer. Simple suture of the ulcer was performed and the abdomen cleaned of intestinal contents. The boy was transferred to his ship three weeks afterwards. Perforation was rare in Hindus and the infection comparatively slight. The difficulty of diagnosis was illustrated by a case he had seen at Pretoria in a soldier suffering from typhoid and scurvy. The man had taken several strong doses of lime juice at once, and the consequent colic, rigidity of the abdomen, pain, and collapse closely simulated perforation of the intestine. Fortunately the cause was discovered in time. Mr. Littler Jones agreed with Mr. Thomas that the chances of success depended upon the time that had elapsed since the perforation, and on the speed with which the operation was performed.

MR. R. W. MURRAY said that better results from operative interference would probably be obtained if as a general rule the bowel at the point of perforation was brought to the surface and a faecal fistula temporarily established. Such an operation could be quickly performed, and would have the great advantage of allowing the inflamed bowel rest, and so afford the ulcerated surface every opportunity of healing.

ACUTE LYMPHATIC LEUKAEMIA.

DR. R. J. M. BUCHANAN, in a paper on acute lymphatic leukaemia, drew attention to the rarity of the disease. Its symptom complex resembled in many ways that of an acute specific fever. The blood picture was one quite different from that seen in myeloid leukaemia, and was due to a hyperplasia of definite cell elements. The clinical

picture was described and illustrated by an acute case of nine days' duration, in which the symptoms pointed, in the later stages, on the one hand to a morbid blood state, and on the other to an acute abdominal lesion, most probably haemorrhage into the pancreas. A blood count revealed a lymphocytosis of 528,000 per cubic metre. The case was under the care of Dr. Schofield (Southport), to whom Dr. Buchanan expressed his thanks for the notes of the early condition.

MEDICAL WORTHIES.

Dr. A. CASSELS BROWN read a paper, entitled, Two Forgotten Medical Worthies. Its subjects were Dr. Gabriel Broughton and Dr. William Hamilton, both of whom played a somewhat important part in the early struggles of the "Company" in India.

A vote of thanks was accorded to Dr. Cassels Brown for his most interesting paper.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—At a meeting of the Section of Obstetrics, on December 4th, 1906, Dr. R. D. PUREFOY, President, in the chair, Dr. HENRY JELLETT showed a uterus with cancer of both cervix and fundus. In the past one of the indications for supravaginal amputation of the cervix was said to be cancer of the cervix, and he thought this specimen showed the untenable nature of such a position. The specimen was also a rare one; Cullen in his work on cancer of the cervix only recorded half a dozen cases. Such cases might be divided into two classes: First, those in which the two cancers were independent of one another. Such cases were difficult to allocate with certainty, since, unless the two cancers were of a different nature, it was difficult to say that they did arise independently of one another. The mere fact of a cervical and fundal cancer co-existing without macroscopic connexion did not afford evidence that the two were dissociated. The second class of case was that before them, in which it was possible to trace definite connexion. In the present case, of a patient about 54 years of age, he had operated for cervical cancer, and had no reason to respect fundal cancer, but the first thing he saw on opening the abdomen was a slight adhesion of the intestines to the fundus. In the specimen a fine line of connexion could be seen between the two growths, and this presumably followed the lymphatics traversing the muscular wall from one growth to the other.—Dr. ALBERT SMITH described a case in which a patient about three months after the removal of a large ovarian cyst began to suffer increasing pain during micturition, and her medical adviser was satisfied that she had stone in the bladder. Eventually she came to him. He found the bladder filled with stone, and after lithotrity he removed the ligature shown. The natural explanation of how the ligature got into the bladder would be that there was some inflammatory disturbance around the pedicle but if such were present it would presuppose some evidence of pain, but the only pain complained of was that already mentioned. The CHAIRMAN recalled a parallel case.—Dr. YEO instanced a case in which the patient passed a quantity of pus in the urine some time after the removal of a large myoma, but none of the ligatures came away.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on December 6th, 1906, Dr. J. LEDINGHAM SLEEVES, President, in the chair, Dr. JAMES BOWAS showed (*a*) a man, aged 25, with *Ectropion* of the lower lids of both eyes, following a burn with molten lead. The projecting conjunctiva was rough and granular, and there were numerous corneal opacities. The condition was worse in the left eye, and with it he could hardly tell light from darkness. The case was to be treated simply by touching the inner surface with blue ointment once a week. (*b*) A man who had had complete *Symblepharon* of one eye with blindness for over fifteen years following a burn with molten lead. The lids were dissected off and the edges of skin and conjunctiva brought together. Vision was now 6/9, without correcting glasses.—Dr. J. J. CHISHOLM read a paper on *Heart block*, and demonstrated illustrative tracings from a typical case in a man aged 71. He suffered from attacks of giddiness for the past three years. The pulse-rate averaged 35 to 45 beats, with occasional drops to 8 to 15 beats per minute. Tracings of the venous pulse in the internal jugular showed that the auricles were beating at a rhythm independent of that of the ventricles—generally two auricular for each ventricular contraction. The auricular beat did not occupy any definite relationship to that of the ventricles, as the ventricular contraction came in at varying positions in the tracing—most frequently during the auricular pause. X-ray examination confirmed this interpretation. Epileptiform attacks developed, and were associated with a further slowing of the pulse. When the intermissions of the radial pulse exceeded fifteen seconds an attack followed. The longest intermission observed was thirty-five seconds. During a period of five hours eight of these attacks were counted, and Cheyne-Stokes respiration supervened. The respiratory changes came on independently of the intermissions of the pulse.—Dr. KERR (Morocco) read a paper on some prevalent diseases in Morocco, referring chiefly to malaria, syphilis, and small-pox. He described epidemics of syphilis where the disease was spread by flies which had been feeding on the open sores of syphilitic patients.

LARYNGOLOGICAL SOCIETY OF LONDON.—At a meeting on December 7th, 1906, Dr. J. B. BALL, President, in the chair, Dr. DUNDAS GRANT showed a case of *Naevus* involving the left half of the fauces and of the pharynx, to ascertain the views of those present as regards treatment; the condition had given rise to no discomfort nor haemorrhage. The PRESIDENT, together with Dr. F. W. BENNETT and Dr. FITZGERALD POWELL, counselled leaving it alone.—Dr. G. C. CATHCART showed a professional singer with a very large *Laryngeal cystic tumour* situated over the left arytenoid region and extending along the arytenoepiglottidean fold which was pushed over the ventricular band of that side. Sir FELIX SEMON advised that it should be snared off *in toto*. Dr. JOBSON HORNE expressed a caution against using a snare which could not be made hot if necessary; he advised the use of an electric snare to be applied cold and the current to be connected at the last moment when the wire had been drawn home. In this way the minimum amount of injury was done to adjacent tissue.—Dr. LAMBERT LACK showed a patient in whom Jacobson's organ was persistent.—Dr. HERBERT TILLEY showed a patient with *Chronic oedema of the face* commencing at the sides of the nose spreading out over the cheeks and extending upwards on to the forehead. Mr. BETHAM ROBINSON said he had been accustomed to regard such cases as chronic lymphangitis and advised the use of antistreptococcic serum.

HARVEIAN SOCIETY.—At a meeting on December 6th, 1906, Dr. F. W. COCK, President, in the chair, the subject discussed was modern methods of dealing with ordinary cases of labour. Dr. BONALL said the mortality in private cases was still high. It was not merely the use of antiseptics but the methods of using them which had led to better results in lying-in hospitals. Training in their use was as essential to students as to nurses and midwives; it was owing to deficiency in the training of the former that the mortality from sepsis remained high in private cases. Neither cubic space nor even general hygienic surroundings was so important as the proper employment of antiseptics. Dr. HORROCKS did not approve of the administration of chloroform, nor of the application of forceps unless absolutely unavoidable. Even if the application of forceps was aseptic and was not followed by puerperal fever, laceration and tears might result, and trouble often ensued from this. At Guy's Hospital forceps were only applied in about 4 or 5 per cent. of cases, and the mortality was very low. Dr. HERBERT PHILLIPS said that the mortality in his cases was only 1 per cent. He usually examined more than once, always using antiseptics. He only douched, as a rule, after instrumental delivery, and then only once if possible. He left delivery to Nature as far as possible. Dr. ADAMS objected to the use of chloroform; it had a marked effect in diminishing the pains and often necessitated the use of instruments. Dr. BUCKLEY considered that laceration of the perineum might be prevented by care in the majority of cases even in primiparae, and also when forceps were employed. Dr. PAYNE raised the question as to whether the routine employment of ergot was advisable. Dr. HANDFIELD JONES said that a distinction must be made in the treatment of hospital and private cases. For instance, chloroform was hardly ever used

in hospital cases, but in private cases its use was often essential and extremely beneficial in neurotic subjects. If used with moderation, it did not interfere with labour in the first or second stage, and in the third stage it might save rupture of the perineum. In hospital cases, again, ergot was unnecessary, but in weakly private patients it was often of service. He did not agree with Dr. Boxall that the mortality of cases treated out of hospital was due to deficient training of students of midwifery. The statistics of cases attended by students—for example, at Guy's Hospital—was very low. The excessive mortality was due rather to the insanitary surroundings of poor patients, the examination of patients by ignorant, unskilled, "so-called" midwives, who infected cases before they were seen by a doctor at all. Dr. LEWERS maintained that it was advisable to dispense with vaginal examination as far as possible. Absolute disinfection of the hands was impossible, and these were therefore a source of danger. In cases where vaginal examination was necessary, he would advocate the using of sterilized rubber gloves. Some cases of sepsis might be caused by the introduction of pathogenic organisms from the vulva. The PRESIDENT held that a large proportion of cases of septic poisoning were due to infection by unskilled and ignorant midwives. He would say, "Mark well your hands; therein the danger lies."

SOUTH-WEST LONDON MEDICAL SOCIETY.—At a meeting on December 12th, 1906, Dr. MACKINTOSH, President, in the chair, Dr. MILNE BRAMWELL, the lecturer, gave an account of his early experiences with *Hypnotism*, in which he had made use of hypnotic sleep as an anaesthetic in surgical operations as well as for the conveyance of therapeutic suggestions. More modern investigations had shown that suggestion could be carried out successfully without the subject being thrown into a state of sleep, and that loss of consciousness was not a necessary part of treatment; hypnotism as an anaesthetic was very uncertain in its action. As for methods of conveying suggestions, he had no idea why systematized suggestion as practised by himself should be successful when identical suggestions by eminent physicians had failed in their object. He referred in particular to cases of dipsomania, *grande hystérie*, and obsessions as cases in point. In answer to a number of questions addressed to him at the close of the lecture, Dr. Bramwell stated that it was possible to teach any one how to hypnotize, but the power acquired depended on the individual and experience; in no case had any accident occurred in his practice, and he was of opinion that no suggestion to commit a criminal action could be enforced on a subject owing to the "moral hyperaesthesia" induced by hypnotism. During the whole of his experience he had never come across any evidence of the possibility of thought transference.

MANCHESTER CLINICAL SOCIETY.—At a meeting of this Society, held on December 18th, 1906, Dr. LE PAGE, President, in the chair, Mr. E. STANMORE BISHOP brought forward three cases of partial gastrectomy for carcinoma, and showed one patient, his first two having died shortly after operation. Of these, one died in consequence of leakage at "Billroth's fatal angle"; a subphrenic abscess formed, and death followed. In the second, the growth had involved the mesocolon (transverse), necessitating the ablation of 4 in. of the transverse colon, with so much resultant shock that the patient succumbed. The patient shown was operated upon on November 5th, 1906, and had made a good recovery; she had increased in weight, was free from pain and vomiting, symptoms which before operation had been marked and increasing. A radiograph by Messrs. Bythell and Barclay was shown, in which the outlines of the truncated stomach were well shown, being defined by bismuth. It was noticeable that although the duodenum had not been rendered movable, the stomach, united to it, was not drawn over to the right, but lay in the left hypochondrium, having apparently drawn the duodenum over to that side.

THE THERAPEUTICAL SOCIETY.—In an account of the proceedings of this society on December 18th, published in the BRITISH MEDICAL JOURNAL for January 5th, the words "in diphtheria" were accidentally inserted in the last sentence, which should read, "There was general agreement that anti-streptococcic serum was as efficacious given per rectum as hypodermically."

REVIEWS.

HELMHOLTZ.

"IN the historical record of science," says Lord Kelvin in his preface to the life of Helmholtz,[1] "the name of Helmholtz stands unique in grandeur as a master and leader in mathematics, in biology, and in physics." His career was unparalleled in the history of professions. Trained as a surgeon of the Prussian army, he was successively teacher of anatomy in the Academy of Arts, Berlin—a post he held for one year; Professor of Pathology and Physiology at Königsberg for six years; Professor of Anatomy in Bonn for three years; Professor of Physiology in Heidelberg for thirteen years; Professor of Physics in Berlin for twenty years; and finally director of the Physikalisch-Technische Reichsanstalt in Charlottenburg. Supported by a donation of half a million marks and the gift of a site from his friend, Werner von Siemens, and ultimately aided by the State, Helmholtz created the Reichsanstalt, "an institute which," Lord Kelvin says, "has conferred already inestimable benefits on the whole world—an example tardily and imperfectly followed by Great Britain and other countries, which are only now beginning to learn that scientific research contributes to the welfare of the whole people."

There are very few men who could fill equally well chairs of anatomy, physiology, and physics. Helmholtz could have filled as easily a chair of mathematics or astronomy. For the first seven years of his life he was an ailing child, confined to his room for long periods, and often to his bed. He occupied his time especially with wooden blocks, and when sent to school at the age of seven astonished his masters in geometry by knowing (thanks to his toy blocks) all the facts they expected him to learn. His father's cousin must have had a true insight into the boy's nature when she wrote:

> You must not be distressed because he has learned little so far. I am sure it will be for good not to begin before his eighth year. Alexander von Humboldt learned nothing before he was eight, and now the king has made him President of the Academy of Sciences, with the title of Excellency, and a big yearly stipend—and this is what I predict for your son.

Helmholtz's father was a professor at the Potsdam Gymnasium, a man weighed down by his sense of duty and scrupulous conscientiousness. His influence was the most important factor in the boy's intellectual development. "He strove to arouse his children to a sense of the ideal in poetry, art, and music, and at the same time to make them good patriots." His mother was "profoundly emotional and of quick intellect. Her homely judgements were clear and luminous, and she seemed to penetrate obscure points by intuition."

The straitened circumstances under which the Helmholtz family were brought up is shown by the astonishment of the elder Helmholtz at his son receiving so early in life a salary of £120 as professor at Königsberg, a salary greater than any he had himself attained in all his years of service. The father and son at first came into a state of intellectual variance, for while the father admitted only the deductive method, and held inductive reasoning to be inimical to science, Helmholtz from the beginning concentrated himself upon experimental evidence and held inductive reasoning to be the salvation of science. "The father missed no opportunity in their daily intercourse of bringing his general philosophical convictions and metaphysical conceptions to bear upon the young man, doing all he could to shake him in his methods of thought and experiment."

The attainment by Helmholtz, at the age of 28, of a professorship with the princely salary of £120, however, revolutionized the ideas of the old philosopher, and from that time onward "he became keenly desirous of becoming acquainted with all his son's work, and whenever possible, of taking part in it."

We get an interesting and pathetic picture of the poor over-conscientious philosopher writing to the Prussian Government to say he wished to participate in a pension scheme for widows and receiving the following rebuke:

[1] *Hermann von Helmholtz.* By Leo Koenigsberger. Translated by Frances A. Welby. Preface by Lord Kelvin. Oxford: Clarendon Press. 1906. (Demy 8vo, pp. 440. 16s.)

Your memorial is incomplete in its contents and most reprehensible in form. . . . You ought to know or your sense of propriety should have informed you, that an official statement or memorial to the Board should not be drawn up upon a single page, but should occupy an entire sheet. The leaf you have handed in testifies to the greatest inattention and neglect of the respect due to the Board. . . . We recommend you to observe the claims of propriety and duty.

Young Helmholtz at school was at the outset hampered by the want of a good memory for disconnected facts; "this showed itself," he says fifty years later, "in the difficulty which I still distinctly remember of distinguishing between right and left; later on, when I got to languages in my school work, it was harder for me to learn the vocabularies, grammatical irregularities, and idiomatical expressions, than for the others. . . . I found no difficulty in learning the poems of the great masters, but the more laboured verses of second-rate poets were far less easy." For all big men, we fancy, it has been equally hard to learn as boys the rubbish hitherto largely taught in schools and called education.

While his class were reading Cicero or Virgil, which did not interest him, young Helmholtz would often be engaged beneath the table in working out the passage of rays of light through the telescope, or in learning some of the optical theorems that served him in good stead later on in the construction of the ophthalmoscope. With no other appliances than some spectacle glasses and a little botanical lens belonging to his father, he and a friend contrived to make up some optical instruments, modifying the construction again and again until they hit off some practical arrangement. The necessary knowledge had to be acquired from a few antiquated textbooks on physics and chemistry possessed by his father, to which the discoveries of Lavoisier and Humphry Davy had not yet penetrated. This experience served him in good stead in after-life, for so poor was the provision for the chairs he held at first (£15 a year was allowed him at König-berg for laboratory expenses) that he used to construct his bits of apparatus for optical experiments from his wife's reels and his children's bricks, with ends of wax and bits of string. When he invented the ophthalmoscope he constructed his instrument out of spectacle glasses and cover glasses, and after about eight days' work, "had the great joy of being the first to see a living human retina." In this practice he found a fellow in Faraday, of whom he writes after his first visit: "He is as simple, charming, and unaffected as a child. I have never seen a man with such winning ways. He was, moreover, extremely kind, and showed me all there was to see. That, indeed, was little enough, for a few wires, and some old bits of wood and iron seem to serve him for the greatest discoveries." When Helmholtz perfected his myograph, we read that "even du Bois did not venture, on account of its high price, to suggest to Joh. Müller to purchase one for the Anatomical Institute." Now we should find half a score to a score at the disposal of the students in every laboratory in this country.

At 16, Helmholtz was described by his fellow students at the Gymnasium as reserved and self contained, showing invariable kindness to those weaker than himself. At 17, he entered the Royal Frederick Wilhelm Institute to be trained as an army surgeon. His father writes to him: "Be good, and devote yourself seriously and wholeheartedly to your profession, to science, and to virtue." His mother writes: "Write to me of your classes, your children, your teachers, your friends, and the good things that happen to you." To his parents Helmholtz wrote:

"The [illegible] classes, including two in [illegible], have all started, and we [illegible] through the morning lectures [illegible] afternoon till our heads split. It is enough to [illegible] but once I have had an attack of [illegible] and [illegible] every one here is [illegible] by [illegible]. [illegible] heads of [illegible] [illegible] [illegible]." But it [illegible] and [illegible] [illegible] [illegible]

believe, as I have proved from my experiment of taking an electric shock at any point on my skin and then trying to move my hand as quickly as might be.

We have quoted more than enough to show the interesting nature of Professor KOENIGSBERGER's account of this great man. The rest of Helmholtz's scientific achievements, his great work on vision and audition, his relation to the famous work of his pupil Hertz, and as a forerunner to the great discoveries of wireless telegraphy, radio-activity, etc., will all be found in this book, for which we owe a debt of gratitude to Professor Koenigsberger and to Miss WELBY for her careful translation. To the ordinary reader, and even to the scientist, much of the scientific part of the book will be difficult, owing to the width and depth of the problems dealt with. We can comfort ourselves with the remark of Kirchoff, the famous discoverer of spectrum analysis, that there were many things in Helmholtz's writings he could not understand.

TEXTBOOKS FOR MIDWIVES.

THIS book, Dr. H. R. ANDREWS'S *Midwifery for Nurses*,[2] consists of the lectures given by the author to the pupil midwives at the London Hospital. These pupil midwives are to be congratulated on having so competent a teacher. It is written in a clear and easy style, and it is hardly necessary to say that the information is accurate. The author has erred on the side of giving too much information rather than too little. Some will think, for instance, that it is not a nurse's duty to treat chorea in pregnancy. We observe at page 198, in advising as to inversion of the uterus, the author—rightly, we think—tells the nurse that if a doctor cannot be fetched within a few minutes, she should herself try to press back the inverted uterus. He tells her she should make pressure above the pubes, "to prevent the uterus from being torn away from the vagina." He does not explain that the resistance to replacement comes from the contracted os internum, and that the best service the hand on the abdomen can render is to stretch open the contracted os internum. At page 230 the author expresses a definite opinion on a point about which there may be difference of view. He says:

> I think a nurse ought not to perform version in England. If she intends to practise midwifery in some foreign country, where doctors are few and far between, she may obtain special instruction with the phantom and fetus, and learn how to turn, when to turn, and when not to turn. The doctrine that it is better for a patient to run the risk of dying of haemorrhage than to have version performed by a nurse sounds a hard one, but the ordinary training of a nurse does not develop sufficient manipulative skill for her to perform version with safety, and unless she were given much more training than is at present considered necessary she would be very likely to do her patient grievous bodily harm.

With this, as applied to version in placenta praevia, or to version early in labour, we entirely agree. But we think it may reasonably be said that if a nurse when called to a case finds the membranes unruptured, the os uteri fully dilated, the child lying transversely and freely movable, she does better if she takes hold of a foot and delivers than if she sends for a doctor and runs the risk that the membranes may rupture, the liquor amnii escape, and the uterus contract round the child before he comes. In such cases there is hardly any risk in version, the risk being to the child in extraction, and extraction in breech cases is recognized as part of a midwife's duty. We observe that the author recommends a douche of tr. iodi ʒj ad Oj, but he does not mention that such a solution must be used immediately after it has been made, as the iodine rapidly evaporates. The book is one of the best of its kind.

The volume entitled *Lectures on Midwifery for Midwives*[3] has been given to the world, Dr. CALDER tells us, to gratify the wish of pupils who wished his lectures published "just in the words they were delivered to the class." The consequence is that the style is marked by the diffuseness and occasional repetition which characterize oral teaching. These very features may to the minds of many be attractive, they may excite interest and help remembrance. The author is excellent on the great question of antiseptics, as the most important thing in a midwife is that she shall be perfect in her antiseptic methods; this chapter alone stamps the book as a good one. It is full in detail, orderly, and emphatic. The author very correctly points out the difference between uterine exhaustion—often called secondary uterine inertia—and toxic contraction of the uterus. They are, he says, "alike in this, that labour stops"; but in the former "without any danger further than is occasioned by the worry, anxiety, and probable disappointment the mother may suffer from," and that "after a sleep labour will return and the child will be delivered." But in the next page he says that "in case of inertia, as we find the pains diminishing and the intervals increasing assistance must be summoned and forceps applied, and the patient relieved before the uterus is so exhausted that no pains are left to contract it and prevent *post-partum* haemorrhage when the child is born" (p. 198). We are inclined to think the practice hinted at in the preceding page is better: to let the patient sleep and then be naturally delivered; but this is a question for the doctor, not the midwife. At p. 194 the author gives as a cause of *post-partum* haemorrhage mismanagement of the second stage of labour in "allowing" the child to emerge suddenly, the uterus not having time to follow it down and become retracted. The word "allowing" here is surely out of place. The child will not be spontaneously expelled except by the contraction of the uterus. It can only pass into the world more quickly than the uterus can follow it when it is forcibly dragged out.

DR. COMYNS BERKELEY'S *Handbook for Midwives and Maternity Nurses*[4] contains the usual elementary information about midwifery, but differs from most of its class and size in that it gives rather more information about the pathology of pregnancy and the puerperium, the infant, antiseptics, and sanitation. The author is cautious in his use of antiseptics. Lysol for injection he recommends in a 1 in 100 solution, mercury biniodide 1 in 5,000. There are those who would use stronger solutions. There is one point we feel constrained to touch upon, because we think both that it is important and that the author gives a wrong impression. Ophthalmia neonatorum, he tells the reader, is due to gonorrhoea in the mother, dirt due to careless nursing, and the use of too strong an antiseptic for the eyes at birth. "Careless nursing" is a little vague; we think the author would have done better if he had explained that it means in this connexion the indirect transmission of gonorrhoeal infection. This is a trifle. What we feel obliged to object to is the third cause assigned for ophthalmia. "Too strong antiseptics," we presume, means Credé's preventive measure of dropping one drop of a 2 per cent. solution of silver nitrate into the eye. It is not the fact that this produces ophthalmia, and we know of no antiseptic the use of which has been recommended that will produce ophthalmia. Crédé's silver nitrate solution produces a little transitory conjunctivitis that lasts a day or two and always gets well—nothing in the least like ophthalmia. It is a pity to deter persons from using Credé's discovery, for it has not yet failed when put in practice. Mr. Sydney Stephenson, in his comprehensive paper (*Obstetrical Trans.*, 1903) on the subject, shows that the only thing that approaches it in efficacy is a 1 per cent. solution of corrosive sublimate. The 1 in 2,000 mercury solution recommended in this work is too weak to be relied upon. The choice is, we think, between doing nothing, except in cases where gonorrhoea is suspected, and the routine use of Credé's method. The book is clearly written and freely illustrated. When we find statements from which we differ, we have to remember that the author has no space at his disposal in which to give his reasons. We cannot agree with the advice to extract the fetal head between the pains. If the pains are so violent as to expose the perineum to risk of rupture, it is better to keep the head back, that the perineum may be gradually stretched by more than one pain.

[2] *Midwifery for Nurses*, by Henry Russell Andrews, M.D., B.S.Lond., M.R.C.P.Lond., Assistant Obstetric Physician to the London Hospital, Examiner to the Central Midwives Board. With illustrations. London: Edward Arnold. 1906. (Crown 8vo, pp. 308. 4s. 6d.)

[3] *Lectures on Midwifery for Midwives*. By A. B. Calder, M.B., M.R.C.S., Lecturer on Midwifery to the London County Council, to St. Mary's Midwifery Training School, Fulham, *etc.* London: Baillière, Tindall and Cox. 1906. (Demy 8vo, pp. 274. 7s.

[4] *Handbook for Midwives and Maternity Nurses*. By Comyns Berkeley, B.A., M.B., B.C.Cantab., M.R.C.P.Lond., Assistant Obstetric Physician to the Middlesex Hospital, Lecturer on Midwifery at the Middlesex Hospital Medical School, etc. London: Cassell and Co. 1906. (Fcap. 8vo, pp. 3[illegible]

Dr. Victor Bonney has prepared a *Series of Midwifery Diagrams*, 160 in number, designed to assist especially in the teaching of pupil midwives, whose lack of anatomical and physiological knowledge makes the help of diagrams, in his experience, almost indispensable. The diagrams have been drawn by Mr. F. C. Lewin, from Dr. Bonney's instructions. They are frankly diagrammatic; they make no pretence at being true to nature; they are to illustrate, not to represent. They are not copies, although the author as to some of them says that they have been "suggested by" the authors of illustrated books previously published. In some of these instances the author has not traced back the suggestion to its original source. Thus Figs. 75 and 96 are said to have been "suggested by Herman"; but reference to that author's work on *Diseases of Labour* reveals that he gives the credit of them to Robert Barnes. Fig. 131 is said to have been "suggested by Edgar"; but we believe the method depicted was first recommended and figured by Herman in his *First Lines in Midwifery*. The author claims to have supplied a complete pictorial course, and this he certainly has done. His diagrams are too many rather than too few. We do not see that the diagrams of mammary abscess and of phlegmasia dolens help very much; all they show is a big breast and a big leg. It is interesting rather than useful to show midwives a picture of the organisms that cause puerperal fever, including the gonococcus. We congratulate Dr. Bonney on the completion of his self-imposed task, and hope he will now feel himself free to turn his ability to more ambitious aims.

CHEMISTRY.

Readers of the *Cornhill Magazine* will have no hesitation in according a hearty welcome to Mr. Shenstone's collection, under the title *The New Physics and Chemistry*, of the scientific essays which he contributed recently to the pages of that periodical. The author is to be congratulated alike on the skill with which he divests the most technical subjects of their technicality and on the widely-divergent aspects of scientific work which he has selected for comment. He has discussed the methods employed for the weighing of a world and of an atom; he has dealt with the modern conceptions of light and of the ether, and explains current suggestions about the constitution of matter; nor has he recoiled from the difficulties which lie on the borderland of biology and chemistry. It is perhaps superfluous to add that the volume contains more than one essay on the nature of the radio-active bodies and the problems to which their behaviour has given prominence. In his essay on "the origin of life," Mr. Shenstone has corrected a very widespread error which attributes the mass of the work in this connexion to Pasteur. Without in any way belittling the value of Pasteur's researches, he has pointed out that it was Francesco Redi who first devised experiments to disprove the wild statements current in Van Helmont's day, as that the gases of marshes "produce frogs, slugs, beetles, grasses and other things," that corn may readily be transmuted into mice and the like. By his admirable presentation of these theories, which are of vital interest at the present, Mr. Shenstone should secure a wider audience than that to which his preface appeals. Even the wedding chemist is not already averse to getting away from the bedroom. The essays should appeal with especial force to all those who have received a less than ordinary education and who for various causes are unable to follow the latest developments in all their details. The statement of the results achieved and the indication of the methods which have led to them possible will satisfy a long-felt want.

In accordance with *Principles of Qualitative Analysis* (Leipzig: Dr. [illegible]) supplied the want which Dr. Ostwald deplored in his preface to the *Scientific Foundations of Analytical Chemistry*. His object was to demonstrate that the work undertaken by the analyst was not only in harmony with the more advanced theories of ionization, but that it was only intelligible when viewed from that standpoint. He insisted on the importance of keeping electrolytic dissociation continually before the student from the earliest stages, and devoted considerable space to emphasizing this view. The translation by Mr. Smeaton remains consistent with the original. Apart from the able manner in which the author has dealt with the ionic theory, we would draw especial attention to the incorporated essays on Reversible Reactions, on Oxidation and Reduction, and on many other kindred subjects, which are too often referred to in books of this sort without the necessary explanations. We cannot help thinking that the author is optimistic in his belief that the beginner will be able to understand and appreciate his work; it seems to us rather to be valuable as a minor book of reference to those who have some knowledge of the phenomena which Dr. Böttger describes. Mr. Smeaton's translation, more than satisfactory in other respects, suffers from the quite unreasonable number of italics which he has seen fit to introduce. But is it he or the author who is responsible for the curiously-worded footnote on page 206: "Potassium cyanide is sometimes used as an active reducing agent. Caution! Hood!"?

NOTES ON BOOKS.

The illustrations of *Spemann's Historischer Medicinal-Kalendar für [illegible]*, the third year of issue, have been renewed and the text revised by the compilers, Dr. J. Pagel, Professor of the History of Medicine in the University of Berlin, and Dr. J. Schwalbe, editor of the *Deutsche medizinische Wochenschrift*. The idea is most excellent and well carried out; two days are given on each page, the dates being printed in bold type at the bottom of the leaf, while at the top is a picture, usually the portrait of a medical celebrity, but occasionally the reproduction of a subject picture. In the intervening space are notes consisting for the most part of biographical sketches of one or more persons who died or were born on that day of the month. The compilers have been cosmopolitan in their selection of famous men, and any one who will hang the calendar on his wall and look at it every day will pick up a good deal of historical knowledge during the year. But if the calendar is to achieve the popularity it deserves there is one suggestion which Dr. Schwalbe should consider, and that is to print the text in Roman instead of Gothic type. The type chosen is rather small, the calendar hanging vertically is not very well lighted, and the print is only just within the range of normal vision; to persons not habituated to reading Gothic type the difficulty is increased. We admit that the type is artistic, but it is a pity to sacrifice utility to the picturesque.

In a pamphlet on the *Saprophytic Theory of Cancer*, Mr. G. Campbell Murray argues that the geographical distribution of cancer is such that suspicion readily fastens itself upon the burial grounds. Senile decay marks the time when cancer is most prevalent in the body, and organic decay marks the place in our surroundings where cancer is most prevalent. These observations, taken together, are regarded as providing a strong indication that cancer is due to a saprophyte. The author is much impressed by the resemblances pointed out by various writers between cancer and the "finger and toe" disease of plants, and thinks that the cancer organism is present in the soil, conveyed by the soil and water, and is probably a protozoon.

The third volume of *The Ophthalmic Year Book*, contains a digest of the literature of ophthalmology, with index of publications for the year 1905. The editors are Dr. Edward Jackson of Colorado and Dr. [illegible] Schweinitz of Philadelphia. Considering the enormous ground it covers,

[illegible], M.D., M.S., F.R.C.S. [illegible] Price M. [illegible]
[illegible] By G. Campbell Murray, F.R.C.P. [illegible] Lancet and Chalmers. (Fcap 8vo, [illegible]
[illegible] Vol. II. Containing a Digest of the [illegible], with Index of Publication for the [illegible], M.D., and George E. [illegible], M.D. Denver, Colorado. The Herrick Book [illegible], 8vo, pp. 256, with 32

the volume is certainly not excessively large. It is arranged according to the different structures and diseases of the eye, and a very good idea of the literature of any subject can be obtained by reference to the particular section required. Of course everything is not mentioned, but reference to all papers of importance will be found, so that nothing of value is likely to be missed. It is impossible to really review the material contained in such a book as this, but enough has been said to indicate its value, and if an author wishes to turn up the literature of a given subject he will be able to do so quickly. We can fully appreciate the immense amount of labour required to bring out such a useful work, but we might suggest that closer attention to proof reading would eliminate some obvious mistakes.

MEDICINAL AND DIETETIC PREPARATIONS.

Argyrol.

THIS is the name given to an organic compound of silver, which is stated to have strongly antiseptic properties, while non-irritating and non-toxic in the strengths usually employed. Messrs. Burroughs, Wellcome, and Co. (Snow Hill Buildings, London, E.C.) have submitted specimens of soloids of argyrol 1 gr., and ophthalmic tabloids of ¼ gr. The material yields on analysis about 20 per cent. of silver: the products dissolve entirely in water, and much more readily than some other organic compounds of silver that are in use; the solution is neutral, and is not precipitated by albumen or by sodium chloride; hydrochloric acid causes precipitation.

Calcium Iodide.

Attention has recently been drawn (BRITISH MEDICAL JOURNAL, July 21st, 1906, p. 138) to the use of this salt in the treatment of ulcers. We have received from Messrs. Harrington Bros. (4, Oliver's Yard, City Road, London, E.C.) a sample of the salt which they are supplying for medicinal use. It is a yellowish-white salt of indistinctly crystalline character, very deliquescent in air and rapidly soluble in water. The yellowish colour is due to the presence of a trace of free iodine: the salt submitted contained 83 per cent. of anhydrous calcium iodide, CaI_2, the remainder being water in combination.

Preparations of Suprarenal Gland.

The active principle of the suprarenal gland has come into use under a variety of names, most of the firms making it having given a proprietary name to their own article. Messrs. Burroughs, Wellcome, and Co. have adopted the name "hemisine," and supply various tabloids and soloids of the substance, both alone and mixed with other drugs. We have examined samples of tabloids containing 1 mg. (1/64 gr.) of hemisine, and soloids containing ½ mg. (1/128 gr.) of hemisine, with eucaine hydrochloride and sodium chloride, and ½ mg. (1/320 gr.) of hemisine with atropine sulphate; the soloids are intended for preparing solutions for hypodermic use; they dissolve in water rather slowly unless previously powdered. In each case tests showed the active principle of the gland to be present in an unaltered state.

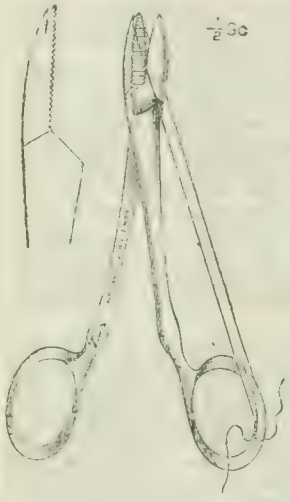
Messrs. Armour and Co. (46A, Holborn Viaduct, London, E.C.) have submitted samples of a mixture of the active principle of the gland with eucaine lactate, to which they have given the name "eucarenalin." This combination is recommended for the production of local anaesthesia and anaemia, for bloodless and painless minor operations; the eucaine is employed in the form of lactate on account of the superior solubility of this salt. The eucarenalin solution which we have examined was bright and colourless, and gave evidence of the active principle being present in an unaltered state; triturate tablets of the same mixture were also submitted, which dissolved easily in water, but gave a solution that was by no means bright.

Alypin.

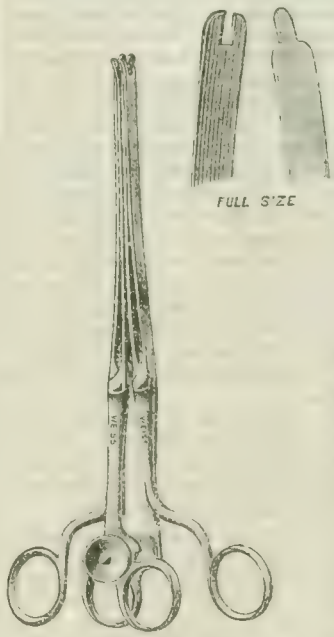
One of the most recent substitutes for cocaine, which seems likely to become important as a local anaesthetic, is the hydrochloride of benzoyl-tetramethyl-diamino-pentanol, which is now being produced by the Bayer Co. (19, St. Dunstan's Hill, London, W.) under the name of alypin. This substance is reported to be suitable for use in all cases in place of cocaine as a local anaesthetic, and equal to it in strength; the advantages claimed for it are that it is considerably less toxic, causes no mydriasis or disturbance of accommodation, and being more stable than cocaine its solution can be sterilized by boiling for a short time without decomposition. We have examined a sample of alypin submitted by the company; it is a white, finely granular powder, somewhat hygroscopic, and very readily soluble in water. Heated in a water oven it lost 4·5 per cent. of moisture and the dried substance melted at about 170° C. A fragment placed on the tongue quickly produces a sensation of numbness as caused by cocaine; a solution in water gives precipitates with the usual alkaloidal reagents, and with ammonia and caustic or carbonated fixed alkali; with particular reagents (chromic acid, cobalt nitrate) it shows very similar behaviour to cocaine and eucaine, but is distinguished by the different melting point.

MEDICAL AND SURGICAL APPLIANCES.

Modified Artery Forceps.—Captain F. F. Carroll, R.A.M.C., writes: The forceps shown in the accompanying block has been devised to facilitate the tying of arteries situated at a depth from the surface of the body, and particularly in those cases where, owing to want of space, great difficulty is experienced in slipping a loop of ligature along the forceps already *in situ*. The writer has found them of great assistance in cranial surgery. The method of using is extremely simple. The ligature material, whether silk or catgut, is first looped over the notch in the lower blade and both ends crossed under the spring catch on the handle, where they are held tightly. The forceps can now be applied to an artery. When the vessel has been clipped, the ends of the ligature should be released and tied in a surgical knot. If the knot is tightened the ligature will be found to slip by itself off the nose of the forceps on to the artery. The forceps has been made for me by Down Brothers.



A Modified Clamp for Gastro-intestinal Operations.—Mr. R. Charles B. Maunsell, M.B., F.R.C.S. (Surgeon to Mercer's Hospital, Dublin), writes: I have designed a clamp, which has been made for me by Messrs. J. Weiss and Sons, Limited, 287, Oxford Street, London, W., and I have used it in my last few operations. I think it will prove useful to others as well as to myself. It is what might be called a twin clamp, and at first sight appears to be an enlarged Carwardine's intestinal clamp, but it has peculiar interlocking points which keep the blades true when grasping a mass of tissue, the single slot which joins the two clamps together thus enabling the surgeon to separate them during the operation without unduly stretching the posterior row of the suture; further, the forceps designed to grasp the stomach is almost twice as powerful as that designed to grasp the more delicate jejunum. The length of the blades is 5 in., and that of the entire forceps 9 in. When these forceps are applied and locked together the parts are firmly held in the most exact position during the process of suturing the viscera. I find it better either to separate the two forceps or, indeed, to remove them altogether, as soon as the three posterior layers and the first anterior layer of sutures have been introduced, as this allows the parts to be unfolded without tension, and a clamp at this period of the operation has ceased to be of any assistance. These forceps may be used either with or without thin rubber tubing drawn over the blades. Personally I have not found rubber necessary.



Nova et Vetera.

SMALL-POX AND INOCULATION IN CHINA.

The various encyclopædias and English medical works make very positive statements about small-pox in Asia, and particularly in ancient China. Thus:

"There is a record of disease identified as small-pox before [illegible] B.C.

"The Greeks and the Romans make no mention of it, but it existed in China and India from 1,500 years B.C.

"It [India] existed no doubt at a remote date, and in China before [illegible].

"In Assam it was known from antiquity.

This may be so, vaguely though it be expressed: but, so far as the Chinese official records are concerned, there does not seem to be any evidence of the fact.

"The [illegible]graph or Chinese written character signifying small-pox is written in such a way that we can see it was plainly suggested by the idea "beany disease," that is, "pestilence" having the appearance of peas or small beans or shot, a pock seen in great numbers. The dictionary published in 1716 by the second Emperor of the still reigning Manchu dynasty gives the following definition:

"The words poison of the medical works. Some people go [illegible] the variolous matter [illegible]ting it. The "miraculous pock system" is that when the lymph of the pock is taken into the nose with expiration and inspiration there is a manifestation forthwith.

The imperial author gives a dictionary of the previous dynasty (1573-1645) as the authority for the new ideograph; and, consequently, as the dictionary thus indicated by him belonged to the latter half of the previous dynasty, we must provisionally assume that the very word for "small pox" in China dates from the four centuries ending at the earliest. The current words for "inoculation" now in vogue are "planting the pock," which also all, are almost exactly the same as our "inoculate" or "insert a graft," or "into an eye": but this Chinese expression is not to be found in any official [illegible], ancient or modern, so far as I have been able to ascertain.

When I was in Peking thirty-five years ago, pock-[illegible] people were the rule rather than the exception, and I would be loth to say that the Mongols were much afflicted [illegible] coming to Peking unless they had already had the disease. The usual expression for "have the small-pox" was "emit the flowers," or "emit heaven's (that is, "[illegible] Flowers," the idea evidently being that they were not sent to every human being, and ought, in the course of nature, to come out therefrom pretty early. In one of the Mongol stories we need to read as subsequently [illegible] a marriage go-between was "has the [illegible]." The native teachers used to suppose that many persons objected to contracting marriage with a girl who had had the disease, and the objection was [illegible] to the mother who had not had small-pox. [illegible] and western parts of China so far as I [illegible] pock-marked persons are the exception, [illegible], and I believe from inquiries recently made that small-pox is a matter of fact, comparatively [illegible] the [illegible] where alone, on the other hand, [illegible].

[illegible] spray, known as a Chinese word [illegible] an ideograph [illegible] "beany [illegible] [illegible] [illegible]

the Chinese mind at about the same time, that is, between 400 and 500 years ago. But the records of the Ming dynasty (1368-1643), which succeeded the Mongols, though equally full of particulars touching plagues, diseases, doctors, etc., says nothing whatever about small-pox. Since the introduction of vaccination or "planting cow-pocks," the practice has been readily taken up, and many charitable societies or persons administer it gratis. I have in my possession an official Kiangsi proclamation on the subject, posted a few years ago. The official, whilst extolling the virtues of vaccination, seems to take credit for it as a modified Chinese invention, and proceeds to substantiate his assertion by quoting some gibberish from Chinese medical works. There is, however, one intelligible sentence which partly explains why the dictionaries say it is a "womb poison"; he says "the womb poison secrets itself in the marrow of the bones, and is conducted by the blood to the recondite and essential parts." I strongly suspect that if the medical works of the fourteenth century alleged to treat of small-pox were dragged to light, we should find nothing more definite than this. The annals of the present Manchu dynasty are perfectly clear on the subject, and the assumption is therefore that the Sung (920-1260), Mongol (1260-1367), and Ming annals (1367-1643) would have been equally clear, if there had been anything definite to say. In 1631, before the conquest of China, a young Manchu prince died of small-pox, and so afraid of contagion were the Khan (or "Emperor," as he had begun to call himself) and Princes that they would not go and condole. At last the Emperor, who had not himself had small-pox, but was anxious to condole, "met the father of deceased at a distance of ten *li* (three miles) outside of the small-pox avoiding area." In 1634 the Emperor left this area, but no sooner had he ventured upon this than he heard of the death from small-pox of Lindan Khan of the Chahar Mongols. During the year 1644—when the same Emperor's son had really begun to reign as Emperor of China as well as Manchuria, Mongolia, and Corea—a young Manchu Prince incurred censure for pleading the fact that he had not yet had small-pox as an excuse for not taking part in a certain Chinese campaign.

The next year an edict was issued commanding all people suffering from small-pox to proceed to a distance of 40 *li* away from Peking; but only in cases when spots had succeeded the fever; not if there was only fever without spots. Twenty years later, a decree expresses regret that the latter generation of physicians is so careless, and descants upon the feebleness of the medical works on pock spots; these remarks of the Emperor do not encourage us to suppose that the medical works of the 14th century could have been very practical; and it must be remembered that, as with ourselves, both the appearance and the nomenclature of the disease is more or less mixed up in the minds of the people with other eruptive and contagious diseases. In the year 1698—four years after our own Queen Mary II died of small-pox—the Tashi Lama of Tibet (the spiritual ancestor of the one who recently went to see the Prince of Wales in India) excused himself from visiting Peking on the ground that he had not "emitted the pock eruption"; the dictionary published about that time says with reference to the word "eruption" that it is a popular expression for the pock-sore. In 1722 Mongols who had not had small-pox were exempted from coming to Peking to attend the Emperor's funeral.

The Kalmucks (or Eleuths) of Ili and the Russians now began to intervene in Chinese affairs. Peter II died in Siberia of small-pox in the year 1730. In 1739 the Emperor suggested that the Kalmuck mission to Peking should avoid the Suh Chou (Marco Polo's Succiur) route, and keep farther north, if its members had not yet had small-pox; in 1745 the Kalmuck mortality from small-pox was very great in the Khoten-Yarkand region (which was at that time politically subject to them). Two years later the Emperor's seventh son died of small-pox. In 1749 the son of a Tibetan King of a principality west of Sz Ch'wan was unable to do homage at Peking because he had not had small-pox; and for the same reason others of the chiefs declined to go; two years after that again some *lama* priests from the real hierarchical Tibet declined to proceed thither on the same grounds. In 1756 China had a dispute with Russia about the surrender of the Kalmuck pretender Amursana, who was stated (but not believed) to be suffering from small-pox. At last, in 1758, the Russians, alarmed at China's menacing attitude, consented to exhibit Amursana's body at Kiachta, in order to prove that he really was dead; so that either the disease must have run an unusually long course in that particular case, or the corruption of two years must have been carefully embalmed. The Emperor now issued instructions that young Mongol princes destined to marry Manchu princesses must in future be sent to Peking to be "pock-planted" and educated. A young Turbet Mongol prince died of the disease while these events were transpiring, and a number of Mongol prisoners who were on their way to Peking were kept back because they were suffering so severely from small-pox: the Kalmuck or Kirghiz (Kazak) prince Batur Ubasi died of the malady at about the same date.

Small-pox must have been widely spread over North Asia at this time, for in 1763 a decree ordained that the military commandants of the Amur region who had not had small-pox must go for audience to Jeho (outside the Great Wall) instead of to Peking. In 1775—the year after Louis XV died of small-pox—it was explained by the Emperor that the Tibetans, like the Mongols, distinguished between "ripe" and "raw" bodies in reference to small-pox: probably this means "the exposed" and "the immune"; though there is some reason to believe that the idea running in the Chinese mind is rather "immune through having attended with impunity upon patients" than "immune through inoculation." In 1793 the question was discussed whether a "soul" found in a certain body and recognized as spiritual successor to a deceased *lama* should come to Peking, seeing that the avatar in question had not had small-pox. The last Manchu mention of the disease is in 1799—a year after Jenner's discovery—when an ambitious and corrupt Peking statesman was found to have unduly kept away from the Chinese capital even those Mongol personages who *had* had small-pox, of course for political motives of his own. A few years after that Sir George Staunton published in Chinese a translation of Dr. Pearson's article on vaccination. Before alluding shortly to the evidence touching small-pox in Europe, I venture to suggest that the above Chinese testimony (apart from possibilities) points to the following conclusions:

1. So early as the sixth century the Chinese were acquainted with some new contagious disease akin both to variola and the lues venerea, also akin to chicken-pox.

2. No official mention of small-pox or inoculation can be traced further back than the beginning of the seventeenth century, though there seems ground for surmising that both may have been known and described in the fourteenth century.

3. During the seventh century, the Arabs in Java were connected more or less directly with some contagious disease new to China.

As regards the West, small-pox has been connected with the names of Procopius (A.D. 565) and Gregory of Tours (A.D. 595), and with Tabari's account of the Abyssinian expedition against Mecca (542), which was in turn politically connected with Justinian's (565 A.D.) attempt to divert the Chinese silk trade from the Persian land route to the Abyssinian sea route. It is noteworthy that the Chinese Turks first appeared at Constantinople in 568, and a century after that had to contest with the Arabs possession of Transoxiana; meanwhile the Arabs had become known to China both by land and by sea, and had effected settlements in Java, where Chinese pilgrims met them and noticed a peculiar new disease. The Dyaks of Borneo—once a dependency of Java—are stated by Western writers to use the name "Jungle flowers," or "Jungle fruits," for "small-pox"; which fact, if true, forms another link in the chain connecting Arabs, small-pox, and China. At the same time the early Western accounts of this supposed disease are as vague as the Chinese, and may well allude to plague: as to the suggestion that Marcus Aurelius died of small-pox (Galen's *petits magna*) is unsupported by genuine evidence: it is only in the tenth century that the Arab Rhazes (932 A.D.) placed on record unmistakably accurate accounts of small-pox and measles; this fact, singularly enough, coincides with the unsupported statements that the Chinese first practised inoculation in the early part of the same dynasty (960 onwards). Small-pox is loosely said to have invaded England towards the close of the ninth century. It is true there were pestilences in 897-8, and again in 962; but, like the Chinese pestilences of about the same date, and those again which ravaged nearly the

whole of China between 1344 and 1362, more definite evidence is required. During the Crusades it seems to be generally agreed that small-pox spread over Europe, a fact which once more brings us into contact with "Saracens" and Arabs. Chaucer (1400 A. D.) speaks of "Pokkes, and of scabbe, and of every sore"; and amongst the eruptive diseases of the fifteenth century was the *morbus gallicus*. Shakespeare's well known curses upon the throat are believed to refer not to the latter but to small-pox. The Chinese, from the beginning, have never shown the slightest hostility either to inoculation or vaccination, which fact is only another instance of their religious tolerance. In England, when inoculation was introduced from Turkey in 1718, and was first tried on condemned criminals in 1721, the divines were indignant at such interference with Providence. Taking Job's boils for his text, Edward Massey, Lecturer of St. Albans, is said to have preached the following words at St. Andrew's, Holborn, in 1722:

> I shall not scruple to call that a diabolical operation which usurps an authority founded in the laws of *Nature* and *Providence*, which tends in this case to anticipate and banish Providence out of the world and promote the increase of *vice* and immorality.

Manifestly, Mr. Massey was confusing one fell disease with the other. Whilst these clerical anathemas were being launched, it was discovered in 1728 that the southern Welsh had for long quietly practised an inoculation of their own, which they termed "buying small pox." It is interesting to note that "selling leprosy" is a term used by women in Canton for attempting to get rid of that disease. The "poisonous women" of Arab Java may thus be linearly connected with this practice or this expression; and the Spanish traders who used to frequent Galway and the British Channel with their smuggled wine may again have carried the Arab notions with them to Wales. It is almost a certainty that the Turks must have learnt of inoculation from China, or, possibly, from the Arabs in Transoxiana. What we do not know at all is how far back the Arabs knew of it and whether they did not, as a matter of fact, themselves first instruct the Chinese; at least one learned Arab astronomer and mathematician is mentioned as having been at the Mongol Court, and there were Mussulman physicians, too, who may (judging by their names) have been Syrians or Arabs.

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BRITISH MEDICAL BENEVOLENT FUND.

At the December meeting of the Committee, twenty-five applications were considered and sums amounting to £465 were voted in relief to fourteen of the cases. Two applications were passed over, and ten were postponed for further inquiry. An abstract of the cases assisted is appended.

1. Daughter, aged [illegible] of late M.[illegible], who practised in the West [illegible]. Has recently had to borrow [illegible] to pay for medical attendance. Recommended by [illegible]. Voted £[illegible] in one sum.

2. Daughter, aged [illegible] of late M.R.C.S., L.S.A., who practised [illegible]. Has endeavoured to support herself for the latter [illegible] by letting lodgings, but has now been driven to [illegible] and has not private means and could have [illegible] Recommended by Dr. E. L. Beales and Dr. C. K. [illegible]. Voted £[illegible] monthly instalments.

3. [illegible] aged [illegible] H[illegible] practised for many years in [illegible] has recently had to apply up on account of [illegible] Recommended by Dr. C. S. Hunt[illegible]. Voted £15 [illegible] monthly instalments.

4. [illegible] aged [illegible] of late L.R.C.P. [illegible] practised in Kent and [illegible] of M.D. [illegible] practised in [illegible] Has [illegible] and is [illegible] The estate [illegible] to be about to be in the [illegible] and [illegible] by the [illegible] of the town [illegible] of the [illegible] Recommended by [illegible]. Voted £10 to be [illegible] monthly instalments.

5. [illegible] aged [illegible] of late L.F.P.S. Glas., who practised in Scotland. [illegible] from [illegible] belonged to [illegible] The [illegible] has been [illegible] for many years, the [illegible] are [illegible] but recently the applicant [illegible] obliged to [illegible] Recommended by Dr. W. [illegible]. Voted £[illegible] monthly instalments.

6. Daughter, aged [illegible] of late M.R.C.S., L.S.A., who practised in Bucks. Income insufficient for maintenance, and is prevented earning a living by deafness and other infirmities. Recommended by Dr. E. Casey. Voted £5 in one sum.

7. Daughter, aged 46, of late M.R.C.S., L.S.A., who practised in London. Used to maintain herself as a secretary and companion, but has had a long illness and is quite incapacitated. Is a candidate for the U.K.B.A. Recommended by Mr. Henry Stear, Honorary Local Secretary. Voted £10 in two instalments.

8. Widow, aged 59, of L.R.C.P., L.R.C.S.Edin., who practised in London and Liverpool. Quite unprovided for at husband's death: health now very bad. One son, aged 30, self-supporting, but not able to help. Relieved eight times, £81. Recommended by Dr. C. E. Underhill. Voted £12 in twelve monthly instalments.

9. Daughter, aged 59, of late M.D.Edin., who practised in Herts. Has maintained herself until recently, but is now obliged to nurse an invalid sister, an annuitant of this fund. Recommended by Dr. T. Orme Dudfield. Voted £12 in twelve monthly instalments.

10. Widow, aged 65, of M.R.C.S., L.S.A., who practised in Essex. Only income a small pension; children unable to help; health indifferent. Relieved four times, £44. Recommended by Dr. J. E. Nevins, Honorary Local Secretary. Voted £5 in one sum.

11. Daughter, aged 48, of late M.R.C.S., who practised in Yorkshire. Has nursed her mother for the last ten years, and has now entirely broken down in health. No income. Relieved once, £12. Recommended by Mr. H. B. Maingay. Voted £12 in twelve monthly instalments.

12. Daughter, aged 62, of late L.S.A., who practised in Norfolk. Permanently incapacitated, and only income £20 a year from the Royal Hospital for Incurables. Relieved five times, £42. Recommended by Dr. S. Barton. Voted £6 in two instalments.

13. Widow, aged 39, of M.R.C.S., L.S.A., who practised in Leicestershire. No income; lets lodgings, and is at present in great and unavoidable distress. Five children, aged 18 to 10. Relieved six times, £32. Recommended by Dr. W. M. Renton. Voted £20 in twelve monthly instalments.

14. Widow, aged 66, of M.R.C.S., L.S.A., who practised in Staffordshire. Income only £6 a year; children unable to help. Is a candidate for Epsom College. Relieved three times, £32. Recommended by Mr. H. W. Kiallmark. Voted £12 in twelve monthly instalments.

15. Daughter, aged 52, of late L.S.A., who practised in Staffordshire. Maintained herself as a governess for many years, but is now incapacitated for any permanent work and dependent on a relation. Relieved five times, £56. Recommended by Dr. A. Boswell. Voted £6 in six instalments.

16. Widow, aged 61, of M.R.C.S. Eng., L.R.C.P.Edin., who practised in London. Income £24 a year from the rent of a house, but has been obliged to borrow to pay for necessary repairs. Relieved seven times, £78. Recommended by Dr. William Ewart. Voted £12 in twelve monthly instalments.

17. Daughter, aged 55, of late F.R.C.S., who practised in Cheshire. Maintains herself as a companion, etc., but at present has no engagement. Relieved once, £5. Recommended by Dr. W. Rigden. Voted £5 in one sum.

18. Widow, aged 40, of L.S.A., who practised in Cheshire. Supports herself as a lady help, but the salary is insufficient for the maintenance of her only child, a son of 11, who is a candidate for Epsom College. Relieved once, £12. Recommended by Mr. H. W. Kiallmark. Voted £12 in twelve monthly instalments.

19. Widow, aged 61, of M.R.C.S., L.S.A., who practised in Staffordshire. Only income a pension of £20 a year. No children. Health indifferent. Relieved eight times, £51. Recommended by Mr. H. Parsons Smith. Voted £6 in six instalments.

THE MIDWIVES ACT.

SOMERSET.

At a recent meeting of the Somerset County Council the Sanitary Committee reported that the Midwives Act Subcommittee had appointed Miss Cathlin Cicely du Santoy, of Southwell, Notts, inspector of midwives for the county, at a salary of £120 per annum, with an allowance not exceeding £30 per annum for expenses. The Committee recommended the Council to pass the following resolution, which had also been passed by the Executive Council of the County Councils Association:

> That legislation should be introduced to enable county councils to charge any sum for the training of midwives on the county fund, and to extend the powers of the county councils for this purpose.

The inspectors reported that since October 4th, 1906, they had paid 77 visits of inspection, of which 59 were satisfactory, 30 fairly satisfactory, 16 unsatisfactory, and 2 were not at home. On the whole the report of the work is encouraging, though a few midwives still fail to carry out the rules, or are lacking in cleanliness and right methods.

LITERARY NOTES.

FRANCE proposes to erect a statue to Lamarck, one of the greatest of her scientific men, who was allowed to live obscure and neglected, and to die in poverty made more wretched by blindness. It is suggested that in addition to the statue, Lamarck might well be commemorated by a grander monument in the form of a complete edition of his works.

The term *Stegomyia fasciata* has been discarded by the United States Bureau of Entomology for that of *Stegomyia calopus*, as it has been found that the epithet "fasciatus" had previously been appropriated to another insect of the same family.

We have received the first number of the *Gazeta dos Hospitaes do Porto*, a new periodical which has appeared in Portugal. As its name shows, it is published at Oporto, and it is described on the title page as a fortnightly review of the medical sciences. The number before us contains an original paper by Professor Dias d'Almeida, Clinical Director of the Hospital de Santo Antonio, Oporto, on foreign bodies in the bladder, and one on paratyphoid fevers by Professor Souza Jr., head of the bacteriological laboratory in the medico-chirurgical school of that city. The remainder of the contents comprise reviews, abstracts, etc.

The *Gynaekologische Rundschau* is the title of a new periodical devoted, as its title imports, to diseases of women, which has made its appearance at Vienna. The editor is Dr. Oskar Frankl; the publishers Urban and Schwarzenberg. Among the collaborators are Professors Chrobak and Schauta of Vienna, Ehrendorfer of Innsbruck, Duehrssen of Berlin, Freund of Strassburg, Leopold of Dresden, von Winckel of Munich, L. Meyer of Copenhaven, Jacob of Brussels, and Bossi of Genoa.

The *Business Man's Magazine* for December-January contains an article on the collection of overdue accounts which may be useful to medical practitioners at this season. There is also an article on accounting records for hospitals which may be useful to secretaries.

In a paper on the therapeutic properties of the waters of Baden in the treatment of gout, which appears in the *Journal of Balneology and Climatology*, Dr. Paul Roethlisberger refers to the history of the sulphur waters in particular and of sulphur treatment in general. During the fifteenth and sixteenth centuries, he says, the drinking of hot Baden waters was strongly recommended by many authors, especially by Sitz in 1516, by Conrad Gessner in 1553, and somewhat later in the century by Montaigne, that fine old crusted sceptic in matters medical. In the eighteenth century, by one of those changes in fashion of which medical history is full, there was a reaction against sulphur waters and their internal use was banned by professional orthodoxy. At the beginning of the nineteenth century the weathercock turned again in the opposite direction. "It is," says Dr. Roethlisberger, "a curious and illustrative fact that before the seventeenth century the greater number of authorities place gout, gravel, and stone in the kidney first among the diseases benefited by treatment at Baden. Whereas, during the eighteenth century, when the drinking of this water was considered inefficacious and even harmful, these maladies disappear from the list of the disorders treated at Baden. In the last century again gout, gravel, and similar complaints reappear in the front rank of diseases suitable for the Baden treatment." With regard to sulphur baths generally, Rufus of Ephesus nineteen hundred years ago recommended them for gout. Throughout the Middle Ages sulphur baths were largely used in the treatment of the disease. The Baden springs were so celebrated that in 1417 the Florentine Poggio, who as Papal Legate took part in the Council of Constance, visited Baden in the hope of obtaining relief from gout in his hands. Heinrich Gundel (1489), in a treatise on the Helvetian thermal springs, describes their curative virtues as follows: "Phlegmate et malis humoribus repletos alleviant; epilepticos furiant; item arthritim, chiragram, podagram, et ischiadem ex causa frigida."

According to the *Chemist and Druggist* the oldest medical document in the ancient Norse language is the *Icelandic Pharmacopoeia* of the thirteenth century. The original document, according to the *Tidsskrift for Kemi og Farmaci*, forms part of the Arnamagnae collection of manuscripts in the Royal Library in Copenhagen. It consists of five octavo pages; the contents are written in language understanded of the people. It was intended as a book of counsel which they could consult in times of illness or accident, and belongs, in fact, to the class of literature termed "old wives' books." It contains fifty-one prescriptions for all kinds of ailments enumerated without any attempt at order. The remedies were drawn mostly from plants, some from the animal, and but few from the mineral kingdom. The following are specimens of the prescriptions contained in the book:

For sleeplessness, take of the herb called mecon, pound with sour wine, and rub therewith the whole body, and eat of sorrel.

For wounds, lay thereon the excrement of a dog day and night, then take pig or ox gall, which rub with salt and pepper. This doeth good.

For a broken leg, take a cock with its feathers on and bind it on to the leg.

For a fat stomach, take rye bread, break it into wine or beer, letting it stand for seven days; drink thereof twelve months morn and even. Thou shalt get thin.

For a boil on the hand, take a cat, kill it, and lay thy hand within it whilst warm; bind it up until next day. Repeat, if necessary, four times, using a fresh cat each time.

For bad sight, take a living eel: take therefrom the blood and gall, mix and rub on the eyes. It doth strengthen man's sight.

For headache, take rue, pound with oil and eggs, rub therewith the forehead. It removeth the pain.

Mention is made of the following plants: *Centaurea cyanus, Verbena officinalis, Foeniculum vulgare, Mentha pulegium, Mentha piperita, Artemisia absinthium, Isatis tinctoria, Veratrum album, Pimpinella saxifraga, and Salvia officinalis.* As in the period when this document was written the art of healing was exclusively in the hands of the monks, it was in their cloister gardens that most of the plants for medicinal use were cultivated, as scarcely any of those enumerated grow wild on the island. The "mecon" mentioned in the document can only, says our contemporary, refer to *Paparer somniferum*, especially cultivated, as only the yellow *Paparer nudicaule* is to be found growing wild in Iceland. To the present day the finest gardens are to be found on the sites of former monastery gardens, and it is in great measure to English monks that Iceland owes the introduction of fruit trees and cultivated plants.

A few years ago there was some discussion in the BRITISH MEDICAL JOURNAL about the word "Mugwump," which certain of our readers without cause construed as having an offensive meaning. It was shown that there was no ground for such an interpretation, but we cannot flatter ourselves that we convinced our critics that the word, so far from conveying an insult, was intended as a compliment. We have no wish to revive a fruitless controversy, but we think it may be interesting to some to have a definition of "mugwump" from Mark Twain. In the most recent chapter from his autobiography, which appeared in the *North American Review* of December 15th, he relates that he was once asked to exert his influence with the President of the United States on behalf of a useful official who, in the redistribution of loaves and fishes that follows a Presidential election in America, was threatened with eviction from his post. Mark Twain says he could not think how he was to be of help in the circumstances as he was a Mugwump. He goes on:

We, the mugwumps, a little company made up of the unenslaved of both parties, the very best men to be found in the two great parties—that was our idea of it—voted sixty thousand strong for Mr. Cleveland in New York, and elected Him. Our principles were very high and very definite. We were not a party; we had no candidates; we had no axes to grind. Our vote laid upon the man we cast it for no obligation of any kind. By our rule we could not ask for office; we could not accept office. When voting, it was our duty to vote for the best man regardless of his party names. We had no other creed. Vote for the best man—that was creed enough.

This will show that, however the mugwump may be regarded by those who to party resign what is meant for mankind, the designation is regarded by those to whom it is applied as one to be proud of.

The *Gazette Hebdomadaire des Sciences Médicales* announces the death of Dr. J. Garat, Physician to the Bordeaux Hospitals. Born in that city in 1821 he took his doctor's degree at Paris in 1845. He was devoted to his profession, but still more to the Muse, whom he wooed assiduously. Like Oliver Wendell Holmes, it was his custom to read

verses of his own composition at banquets and professional gatherings. He was famous for his quatrains and sonnets.

SCHOOL HYGIENE.

LONDON.

The report of the Medical Officer (Education) of the London County Council for the year ending March 31st, 1906, contains a great deal of information, dealing as it does with the various aspects of school children from a medical point of view.

Among the subjects discussed are: General medical inspection, infants' schools, physical conditions, the physically defective, personal cleanliness, infectious diseases, and special schools. The report is long, and must necessarily be dealt with by degrees.

There has been no departure involving the application of any new principle or fresh doctrine in the work, although the importance of medical oversight in the schools daily becomes more evident.

The general scope of duties is still widely extending. Non-provided schools are now included, and arrangements have been made for extending the medical supervision to secondary schools and training colleges.

General Medical Inspection.

The twenty local assistant medical officers (medical inspectors) appointed the year before last began their duties on September 1st, 1905. Each of these officers has to visit the schools of one district, spending three school sessions weekly in such work, and making a weekly report on the schools visited. This report is returned on a printed form. The head teachers were instructed to make lists of all the children known to them as being in any way defective, and present them for medical inspection. Children suffering merely from defective vision were not included in the lists.

The general routine is for the medical inspector to visit the school department, go round the premises, and see the classes at work; take note of all hygienic matters, and then inspect the children whose names appear on the teachers' lists. The first selection of cases to be seen was made by the teachers. Between 20 and 30 per cent. of the cases submitted by them were not suffering in any way.

The following-up of cases is very imperfect, and much advice given is wasted. Many of the cases seen, and neglected or refused treatment by the parents, are either attending school or are excluded for months or years through parental ignorance or indifference.

In some cases where hygienic conditions are at fault the medical officer of health is informed and action taken; in others the school managers are informed and something done in this way; but where the teachers choose to exert themselves these difficulties seldom arise, and the physical and mental conditions in any school are to a large extent an index of the teachers' point of view in respect of their professional work.

Routine Medical Examinations of Scholars in the Three Months January to March, 1906.



Observations of the Conditions of the Buildings and Surroundings.

Schools.	Departments Reported on.	Nature of Special Reports.	Reports on Matters of				
			Lighting.	Ventilation.	Heating.	Sanitation.	Furniture.
Provided	276	Good	86	73	64	61	55
		Fair	34	20	17	10	21
		Bad	34	25	17	5	5
Non-provided	372	Good	68	48	49	44	29
		Fair	63	49	23	25	19
		Bad	132	94	31	34	127

These reports, Dr. Kerr states, have been made in a perfectly impartial manner by the twenty local assistant medical officers. They serve to show the lack of hygienic ideas still prevailing in some schools, also incidentally what a low standard in regard especially to lighting, ventilation, and furniture has been satisfactory to inspectors, and compatible with earning the Government grants.

By setting out the table in the corresponding proportions for reports on 1,000 departments, the conditions of the provided and non-provided schools are rendered more comparable.

Schools.	Nature of Reports.	Reports on Matters of				
		Lighting.	Ventilation.	Heating.	Sanitation.	Furniture.
Provided (1,000 reports)	Good	311	265	229	219	198
	Fair	123	73	62	36	75
	Bad	123	90	62	18	18
Non-provided (1,000 reports) ..	Good	183	132	132	118	77
	Fair	169	132	61	67	51
	Bad	354	286	86	91	341

Medical Inspection of Secondary Schools and Training Colleges.

At present all that is being attempted is to examine each pupil carefully, noting the result in a case book, which will be continued, and will thus contain the whole life history as known to the doctor. All routine inspection and examination of the girls will be done by women doctors, unless these deem further consultation desirable. Matters of importance to educational hygiene will be noted, especially important functional matters, headaches, sleepiness, mental fag, and so on.

It is proposed, in addition, to institute a regular consultation hour, when any pupils with trouble or worry about their work may put down their names to see the doctor, and have their minds relieved by suitable general advice, or when the teachers may consult with the doctor as to the facts noticed or educational treatment to be followed with particular pupils.

Already the examination of the junior scholars shows the usefulness of such work in that one third are referred to medical or dental advisers. In examining the candidates for admission to the training colleges the need of a carefully drawn standard of physical requirements has become very evident.

LIVERPOOL.

The Physical Condition of Children Attending Elementary Schools.

The influence of nutrition and environment on the growth and development of children has formed the subject of an elaborate investigation, carried out by Dr. A. S. Atkin in three typical council schools in Liverpool, and communicated by him in a paper read at the North of

England Educational Conference at Bradford. Dr. Arkle's observations, which were made at the request of the Liverpool Education Committee, extended over a period of twelve months. He thoroughly examined all the children in the three schools, taking their height, weight, chest measurement and expansion, the state of their eyes, nose, and throat, and noting their clothing, their intelligence, and their general nutrition. For comparative purposes he also examined all the boys in the principal secondary schools in Liverpool and Birkenhead. Amongst the conclusions Dr. Arkle arrived at the following are some of the most striking:

There is a remarkable deterioration in the physique of the children in the poorer council schools as compared with the children in the secondary schools, and this deterioration becomes more marked as the children grow older. It is clearly not due to heredity or to constitutional conditions, since it is not found, at least to anything like the same degree, in children of the same class who have been properly cared for in the industrial schools. The total number of children examined was 2,477, 366 from secondary schools, and 2,111 from elementary schools. The boys in the secondary schools were for the most part such as had had every possible advantage in their upbringing, but those attending the council schools naturally presented great diversity in this respect. The three council schools taken were types of the elementary schools, and were classified as follows:

Type A.—Where the parents are well-to-do and the children have mostly comfortable homes.

Type B—Where the parents are mostly of the labouring class or small shopkeepers, and have constant employment.

Type C.—Where the parents belong almost entirely to the unemployed or casual labour classes.

The figures show a uniform deterioration, increasing as the social state of the school descends.

Taking the heights of the boys at 7 years of age he finds they average—

	Ft.	In.
Secondary schools	3	11 80
Council school A	3	9 30
Council school B	3	8 35
Council school C	3	8 00

the total difference between the secondary schools and C being 3.8 in.

At 11 years of age we find—

	Ft.	In.
Secondary schools	4	7.5
Council school A	4	5.1
Council school B	4	3.8
Council school C	4	1.7

showing a total difference of 5.75 in.

While at 14 years of age we get—

	Ft.	In.
Secondary schools	5	1.75
Council school A	4	10 20
Council school B	4	8 25
Council school C	4	7.25

showing that the total difference has increased to 6.5 in., or more than half a foot.

Taking the weights of the boys, the difference is even more marked.

We find that at 7 years old the boys weigh—

	St.	Lb.
Secondary schools	3	7.3
Council school A	3	2.1
Council school B	3	1.0
Council school C	3	1.0

showing a total difference from the secondary to C of 6.3 lb.

At 11 years of age—

	St.	Lb.
Secondary schools	5	0 26
Council school A	4	5.45
Council school B	4	3 05
Council school C	3	13.50

showing a difference of 1 st. 0.75 lb.

While at 14 years of age we get

	St.	Lb.
Secondary schools	6	10 50
Council school A	5	5.82
Council school B	5	5.87
Council school C	5	1.14

showing that the total difference has reached the magnitude of 1 st. 9.25 lb.

The degree of deterioration as indicated by these figures is better realized by observing that a boy of 9 in the worst council (C) schools is as small as a boy of 6½ in the secondary schools, and that at the ages of 11, 13, and 14 a boy in the council (C) schools is equal in size to a boy three years younger in the secondary schools. In chest measurement the boys in the secondary schools are still ahead, but it is a curious fact that the boys in the C schools are in this respect mostly better than those in B schools, and frequently better than those in A schools. This is probably due to their doing a good deal of hard work in the open air.

As regards clothing, some of the poorest children were found to be unsuitably clad, and in some cases being much underclad, and very dirty. None, however, could be described as verminous. The girls' hair was as a rule well tended. Many of the poorest children bore traces of absolute slow starvation. They were dwarfed and stunted, but with few exceptions were straight and free from constitutional disease, and with better chances would grow up to be a fine race of men. A curious fact is that as regards actual illness the C schools come out more healthy than the schools A and B. This is probably due to the open-air life led by the children of the very poor. Another explanation may be that only children physically sound are likely to survive the hardships they have to encounter. As regards the eyes and the teeth—organs so essential for all who are to become useful members of a community—the poorer schools show a very serious deterioration. In the C schools only 25 per cent. had teeth which were described as good. As regards intelligence, the teachers reported as follows:

	Intelligence.		
	Normal.	Above Normal.	Below Normal.
A and B schools ...	60 per cent.	25 per cent.	15 per cent.
C school	22 per cent.	33 per cent.	45 per cent.

Dr. Arkle considers that the abnormally high intelligences in the poorest schools are due to starvation, acting on a nervous temperament, and producing a sort of acute precocious cleverness.

The results of Dr. Arkle's investigation have forced him to conclude that degeneration has reached an alarming degree. He says that before educating the children they must be taught how to live, and helped to get food to enable them to do so. He considers that they are a fine healthy lot, and he has seen none to equal them in Germany, France, or Italy. He is sure he saw more deformed children in one day in Genoa than in a year's work in the schools in Liverpool, and he has seen more lateral curvature in the streets of Berlin than in all the schools he has examined. The children in Liverpool only need proper food and a healthy environment to enable them to grow up a vigorous race.

RONCEGNO.

DR. JOHN J. EYRE (Salsomaggiore) sends us the following particulars with regard to Roncegno, which he visited last July:

Roncegno is a village of 1,400 inhabitants, situated in the Valsugana, one of the most beautiful valleys in Southern Tyrol, about an hour by rail from Trent and forty-six hours from London. It is built on a declivity at the foot of Mount Tesobbo, 1,800 ft. above sea level, and is sheltered from the north by the mountains. The valley is here about 2 miles broad, and is surrounded by mountains, some of which rise to a height of over 7,000 ft.

Accommodation.—The Grand Hôtel des Bains, which contains on the ground floor the bath establishment, and the annexed Park Hotel, opened in 1906, are near the west end of the village, beside their splendid park of 17 acres, which has several shady avenues of fine trees. The establishment, which is very complete, contains 70 bathrooms, rooms for hydrotherapy, electrotherapy, mechanotherapy, a chemical laboratory, etc.

Season.—The season lasts from April 15th to the end of October. The climate is fairly bracing, the air is pure and dry, and the rainfall not excessive.

Composition of the Mineral Water.—The Roncegno water is clear, of a golden yellow colour and astringent taste. As is shown by the analysis made in 1889 by Professor Spica of Padua, each litre contains 0.109 gram of sodium arsenate, 0.115 gram of arsenic anhydride, 3.12 grams of ferric sulphate, 0.03 gram of ferric phosphate, besides sulphates of copper, magnesium, nickel, and cobalt. The

Roncegno water is, therefore, the richest known in arsenic.

The Baths are taken either in the early morning fasting or some hours after a meal. The strength begins at about 50 per cent., and is gradually increased. The temperature is from 94° to 93° F., and the duration is from ten to thirty minutes. The number of baths for the course is from twenty to thirty.

Internal Use.—This is the chief method of cure at Roncegno. Clinical observations carried out by Professors de Giovanni and Vila both in Padua and Roncegno have convinced them that the dose tolerated by invalids is much larger than has been supposed, and that the best time to take the water is, as a rule, half an hour *before*, and not after meals.

Dosage.—For the majority of adults the average dose is four tablespoonfuls three times a day, corresponding to 4·5 cg. of arsenic. When intolerance (rarely met with) does not exist, larger doses are to be advised, owing to their more rapid reconstituent action, and the astringent action of the small doses. Before commencing the cure a dose of castor oil should be given. An adult begins with half a tablespoonful or a tablespoonful of the arsenic water in half a glass of plain water; this is slowly ingested half an hour before meals. When small doses only can be taken, they are better tolerated when diluted, whereas in the case of big doses, in order not to overload the stomach with an excessive quantity of liquid, the dilution should be diminished in proportion. The dose is augmented daily by half a tablespoonful till the maximum dose tolerated is reached. In an ordinary cure in cases of anaemia, protracted convalescence from acute and chronic diseases, neurasthenia, etc., good effects can be expected rapidly from a daily dose of half a bottle. In Graves's disease, lymphadenoma, pernicious anaemia, leukaemia, scrofuloderma, and chronic enteritis with diarrhoea the maximum doses can be taken till the first symptoms of intolerance present themselves.

Duration.—Internal treatment should last not less than two months. Towards the end, if the dose reached be large, it is advisable to diminish it daily till suspension. With regard to the slow elimination of the arsenic, experience at Roncegno teaches that the cure can be continued for months and even a year, provided that in the case of the big doses, it be interrupted for fifteen days after each month of cure, and after every two months in that of average doses. During the treatment the abundant use of acids and raw fruit are forbidden.

Therapeutic Indications.—The Roncegno treatment is beneficial in anaemia due to different causes, chlorosis and malarial cachexia. In those suffering from pernicious anaemia, leukaemia, etc., however, little permanent improvement has been met with, and none in cases of renal anaemia. Excellent results have been obtained in protracted convalescence from acute and chronic diseases, in neurasthenia, convalescence, hysteria, and neuralgic affections in general. Patients suffering from Graves's disease derive much benefit from the Roncegno water, and present with rare exceptions the greatest tolerance for it. In chronic ulcerative and dysenteric intestinal affections the Roncegno water is very useful when administered as follows: Half a tumblerful to a tumblerful is diluted in a litre of fresh water and is ingested throughout the day in very small doses. The patient consumes daily from one to two litres of the mixture. At the same time one or two cupfuls or carafes (1 litre) of the mixture are given daily. The skin diseases which respond best to the cure are scrofuloderma, psoriasis, eczema, chronic urticaria, lichen acne, and lupus.

Honours and Appointments.—Dr. Roderick Reid MacNeal of Tarbolton and Dr. Lochlan Grant of Pitlochry have been added to the Commission of the Peace for Argyllshire.

Dr. Giovanni Ruge, Professor of Anatomy in the University of Naples, was recently murdered in the open street by an ex-pupil. Dr. Ruge of Philosophy named Lucchi. It appears that Lucchi drove a brisk trade by selling to students copies of the lectures of many of the professors who gave him the manuscripts gratuitously for the purpose. Professor Ruge, however, refused to do this, preferring to distribute copies of his lectures among his pupils. After repeated applications for the lectures had been refused Lucchi revenged himself on the unaccommodating professor with the dagger.

THE PLAGUE.

Prevalence of the Disease.

India.

During the weeks ended November 24th, December 1st, 8th, and 15th, 1906, the number of deaths from plague in India amounted to 5,300, 5,992, 6,098, and 4,934 respectively, and the fresh seizures during these weeks numbered 6,941, 8,286, 7,765, and 8,859 respectively.

The deaths caused by plague in the principal centres of the disease during the weeks in question were: in Bombay Presidency the deaths numbered 2,086, 2,000, 1,716, and 1,662; Bengal, 184, 261, 316, and 1,197; United Provinces, 898, 1,536, 1,454, and 1,641; Punjab, 1,235, 1,125, 1,697, and 2,180; Central Provinces, 313, 350, 315, and 426; Central India, 319, 327, 288, and 244; Mysore, 141, 94, 112, and 64; Burma, 64, 83, 126, and 177. A few cases were notified in Kashmir, in Hyderabad, and in Madras. No mortality from plague occurred during the period in Rajputana, the North-West Frontier Province, nor in Beluchistan.

Persia.

Although no fresh cases of plague were returned by the Persian authorities up to September 23rd, 1906, it appears that an epidemic fatal to man and animals broke out on September 29th, and was officially reported at Araz and the immediate neighbourhood. The nature of the epidemic is not stated, but plague is suspected.

Australia.

During the weeks ennded November 10th, 17th, 24th, and December 1st, 1906, the plague report from Queensland is as follows:

Brisbane.—Cases, 0, 0, 2, 0; deaths from the disease, 0, 0, 2, 0.

Cairns.—No cases of plague.

The outbreak at Brisbane occurred after an interval of 151 days—June 20th to December 16th, 1906. An infected rat was found on October 27th on premises opposite to the house in which one of the patients lived. Subsequent search has failed to find plague-infected rats anywhere around either patient's dwellings.

Mauritius.

During the week ended December 13th, 20th, 27th, 1906, and January 3rd, 1907, the fresh cases of plague in Mauritius numbered 23, 21, 12, and 9, and the deaths from the disease 13, 15, 8, and 7.

Egypt.

During the five weeks ended November 9th, 1906, the fresh cases of plague numbered 36, and the deaths from the disease 19. The majority of the cases occurred in the three principal seaports.

MEDICAL NEWS.

Dr. Alfred S. Gubb, of Mustapha Supérieur, Algiers, has been appointed Honorary Physician to the British Consulate at that city.

Mary Cornelia Marchioness of Londonderry, whose will has now been proved, bequeathed £1,000 to Machynlleth Cottage Hospital for the maintenance of a nurse.

The next course of lectures and demonstrations at the Hospital for Sick Children, Great Ormond Street, will be opened on January 17th, when Dr. Voelcker will lecture on pericarditis and endocarditis.

The annual meeting of the Scottish Poor law Medical Officers' Association will be held at the St. Enoch Hotel, Glasgow, on January 18th, at 4.30 p.m., when the annual report and balance-sheet will be presented.

Mr. R. Henslowe Wellington M.R.C.S., L.R.C.P., Barrister, Lecturer on Forensic Medicine at the Westminster Hospital School of Medicine and Senior Secretary of the Medico-Legal Society, etc., has been elected a Corresponding Member of the Société de Médecine Légale de France, Paris.

The Portuguese members of the Fifteenth International Medical Congress held in April last spring, have presented Professor Miguel Bombarda with a gold medal and an address expressing their appreciation of the great services rendered by him as Organizing Secretary of the Congress.

The King has granted to Sir Rubert William Boyce, Major Ronald Ross, C.B., and Dr. John Lancelot Todd Hon. Majesty's Royal licence and authority that they may respectively accept and wear the Cross of Commander of the Order of Leopold II, which decoration has been conferred upon them by the King of the Belgians, Sovereign of the Independent State of the Congo, in recognition of their valuable services to the cause of medical science.

A RESOLUTION was recently passed by the French Chamber of Deputies urging on the Government the expediency of providing in the Budget of 1908 for the creation in the University of Paris of a special chair of clinical instruction for midwives.

THE Board of Education has issued a circular to education authorities in England and Wales calling attention to the fact that the Education (Provision of Meals) Act came into operation on December 21st, 1906. The circular points out that the Act is permissive, and that its object is to ensure that children attending public elementary schools shall, so far as possible, be no longer prevented by insufficiency of suitable food from profiting by the education offered by the schools; it aims at securing that for this purpose suitable meals shall be available just as much for those whose parents are in a position to pay as for those to whom food must be given free of cost.

MALARIA IN TUNIS.—The French Government has asked the Pasteur Institute to undertake an inquiry as to the distribution of malaria in various centres of colonization in Tunis, especially the Béja, Mateur and Goubellat regions, and as to the means of checking the prevalence of the disease.

VAGRANTS IN EDINBURGH.—The half-yearly census of vagrants, taken on the evening of Sunday, December 23rd, 1906, by the Edinburgh police showed that there were 476 vagrants in the city, 17 more than on the corresponding day of 1905. Of that number 312 were males, 142 females, and 22 children; 104 were found in prison and police cells, 209 in houses of refuge, hospitals, etc., 161 in lodging-houses, etc., and 2 in public gardens and parks. The nationalities of the vagrants were: Scottish 328, Irish 97, English 40, and foreign 11.

BARBERS' SHOPS.—A correspondent writing on this subject suggests that it would not be fair to demand of barbers that they should boil their face sponges, inasmuch as boiling soon renders sponges useless. It would be better, he thinks, that following the practice of surgery, they should use swabs of absorbent cotton wool. With this suggestion we agree; there are, indeed, a few barbers' shops in which the practice is already adopted. Absorbent cotton wool is not expensive, and a little goes a very long way.

THE RAISING OF FEES IN GERMANY.—On December 18th, 1906, a meeting of the medical profession was held in Berlin at which representatives of thirty-four medical associations with a collective membership of 2,647 were present. It was unanimously agreed that from January 1st the fees in private practice should be raised. The decision applies equally to single fees and to payment for longer or shorter periods of attendance, as in the case of family doctors.

A CITY OF THE BLIND.—The Queen of Roumania has founded in that kingdom a city for the blind, intended for reception of those afflicted with loss of sight, together with their families. It is called Vatra Luminosa, or the Lightgiving Hearth. The number of blind persons in Roumania is estimated at 20,000, and the Queen's intention is to collect funds that will enable her to give shelter in her city of the blind to all sufferers in need of help. A sum of £120,000 has been collected, but this is but a fraction of that which will be required if the Queen's benevolent intention is to be fulfilled. Her Majesty, as is well known, is distinguished in literature under the name of "Carmen Sylva." For the benefit of the charity she allows photographs of herself, with a thought written and signed by herself at the bottom, to be sold. The *Journal des Débats* recently announced that it had a few of these photographs at its disposal, which it was prepared to sell for £4 each.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society, was held at 429, Strand, London, W.C., on December 28th, 1906. Dr. de Havilland Hall in the chair. Since the early part of November a considerable number of claims have been caused by the epidemic of influenza, and the total result will be that the sickness account for 1906 will show only a small margin on the right side. A notable feature of the year's working has been the increase in the number of members drawing half-pay. No less than thirty-two cases of this kind were on the list at the close of the year, and will draw sick pay till age 65, should they live so long. This list has been steadily growing for many years, and at present there are about two dozen members who are drawing an annuity, usually 104 guineas a year. One member has for some years been drawing 156 guineas annually. Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

THE Société contre l'Abus du Tabac is promoting a Bill for the prevention of juvenile smoking in France. Persons convicted of selling cigarettes to children under the age of 16 are under the terms of the Bill to be fined 50 francs (£2) for a first offence, and 125 francs (£5) for each subsequent breach of the law. Juvenile smokers are liable to a penalty of 50 francs each time they are convicted of smoking.

CONGRESS OF FRENCH PRACTITIONERS.—Steps are being taken to organize a congress of the medical practitioners of France to be held in April, 1907, under the auspices of a large number of scientific and professional societies, notably the Union des Syndicats Médicaux de France, the Fédération du Nord, the French Medical Association, the Concours Médical, the Sou Médical, the Syndicat Général des Oculistes, the Conseil Général d'Arrondissement de Paris et du Département de la Seine, the Paris Medical Society, the Medical Syndicates of the Seine, the Rhône, the Puy-de-Dôme, the Deux-Sèvres and the Valley of the Rhône and several others, among which we note the Corporate Association of Paris students of medicine. Among the objects of the Congress are the promotion of reform of the medical curriculum in a practical and professional sense; organized opposition to the proposal to create a new diploma (Certificat d'Études Médicales Supérieures); the opening up of professorships without the preliminary ordeal of the *agrégation;* and the appointment of a committee of representatives of general practitioners as well as professors and consultants to study the means of making medical education more practical. The Chairman of the Organizing Committee is Dr. Dubuisson, member of the Chamber of Deputies; among the vice-presidents are Drs. Huchard, Lereboullet, and Reymond of Paris; the General Secretary is Dr. Leredde of Paris.

PRIZES OF THE ACADÉMIE DE MÉDECINE.—The Paris Academy of Medicine recently made the formal award of prizes in its gift for the year 1906. They are very numerous, and we can only mention some of the more important among them. The Alvarenga de Piauhy Prize, of the value of £32, for the best unpublished work on any branch of medicine, was awarded to Dr. Paul Gauchery, of Paris, for a contribution to the study of the gaseous exchanges realized by the respiration of bacteria. The François-Joseph Audiffred (£960) offered to any person of any nationality or any profession for the discovery of a remedy, curative or preventive, for tuberculosis, was not awarded. Various sums were, however, given by way of encouragement; Professor Calmette, of Lille, and the head of his laboratory, M. C. Guérin, received £60, and Professor H. Vallée, of Alfort, a like amount; while Dr. P. Halbron, of Paris, and M. Paul Juillerat, each received £20. The Barbier Prize (£80) offered for the discovery of a cure for any of the diseases recognized as incurable—"hydrophobia, cancer, epilepsy, scrofula, typhus, cholera, etc." was not awarded, but "honourable mentions," each carrying with it a sum of £20, were accorded to M. J. V. Detroye, veterinary surgeon, of Limoges, for an essay on cancer and tumours in animals; to Drs. L. Bérard and Palet of Lyons for a monograph on the surgical forms of tuberculosis; and to Professor B. Galli-Valerio, of Lausanne, for experimental researches on the rabies of rats. The Boullard Prize (£48) for the best work on the treatment of mental diseases was awarded to Drs. R. Mignot, E. Schrameck and L. Parrot, of Paris, for a contribution to the study of general paralysis. The Campbell Dupierris Prize (£102) for the best work on anaesthesia or on urinary diseases, was awarded to Drs. J. Castaigue, and F. Rathery, of Paris, for a monograph on lesions of the convoluted tubules of the kidney. The Marie Chevallier Prize (£240) for the best work on tuberculosis was awarded to Dr. L. Rénon, *agrégé* Professor in the Paris Faculty of Medicine, for his studies on tuberculosis, 1903-06. The Chevillon Prize (£60) for the best work on the treatment of cancerous affections was awarded to Dr. P. Cavaillon, of Lyons, for an essay on the surgical treatment of cancer of the large intestine (excluding the rectum). The Daudet Prize (£40) for an essay on the results of the *x*-ray treatment in cancer was awarded to Drs. A. Béclère, J. Belot, and G. Haret, of Paris. The Theodore Herpin Prize (£120) for the best work on epilepsy and nervous diseases was awarded to Dr. Maurice de Fleury for his textbook on diseases of the nervous system and his work on neurasthenia. The Itard Prize (£92) for the best book on practical medicine or therapeutics was awarded to Dr. J. Vires, *agrégé* Professor in the University of Montpellier, for his work on nervous disease. The Adolphe Monbinne Prize (£60) was awarded to Dr. E. Brumpt for his report of a scientific mission for the study of sleeping sickness (1903). The Saintour Prize (£1,616) was awarded to Dr. A. Rémy, of Dijon, for a monograph on the diploscope and its applications.

British Medical Journal.

SATURDAY, JANUARY 12TH, 1907.

MEDICAL ASPECTS OF THE PARLIAMENTARY SESSION.

THE New Parliament of 1906 has closed its first session, and although it was prolonged by an autumn sitting almost to the eve of the Christmas holidays, the results achieved have hardly been commensurate with the labour expended. The whole country had expected that an original and creative era would have opened under the new Government in the new House of Commons. The products, we regret to say, have not realized these anticipations. From a medical point of view the session has been disappointing so far as legislation is concerned, and we must confess to a misgiving that, for the advancement of public health interests, this Parliament is by no means an improvement on its predecessors. The strong Labour element in the Commons has, however, shown itself quite vigorously alive to everything affecting the health of workmen as regards the conditions of labour, and this spirit may in time extend in other directions.

In the summary of the work of the session given this week at page 103 there is ground for satisfaction in the frequency with which medical and public health questions have been asked and in the care with which the medical aspects of certain Bills have been discussed. The real difficulty of the sessional work in Parliament was centred in the Education Bill. It occupied a vast amount of time, and, in the end, the loss of the measure deprived the country of one most valuable provision for national well-being. We refer to the clause—much strengthened after the second reading of the Bill—which made it the statutory duty of the local education authority to inspect medically and to attend to the health and physical condition of children educated in public elementary schools. This was declared authoritatively in both Houses, and by leaders on both sides, to be one of the most important clauses of the Bill. Regarded from a national standpoint as a means of conserving and improving the physique of the nation, we unhesitatingly confirm this opinion of its importance, and we urge the necessity of seeing that it is provided for at the earliest possible date. Local authorities will, we believe, in many districts provide for this medical inspection but it must not be optional, it must be a statutory duty. A systematic anthropometrical survey of the population would thus be secured; but what is more important the early beginnings of disease would be detected and remedied and the country would much more than save the cost of the inspection by the prevention of epidemics and the increased efficiency of future generations. Last in the House of Lords, where the Bill was most severely criticized, a proposal to leave the duty optional was successfully opposed; but it has to be withdrawn. Now that the Government has passed the Act to provide meals for children in elementary schools medical attendance is more than ever necessary. Under the third [illegible] children who are unable from lack of food to take full advantage of the education may be fed by rate aid. It will be almost impossible to do this with regard to efficient administration without a medical officer to inspect and examine the children and advise the local authority.

The Workmen's Compensation Act in the course of its stages in the House of Commons presented several points of medical interest. The main question raised and debated was the inclusion of industrial diseases. This was asked for as a matter of justice by the Labour members, and was granted in the original Bill, but the effect of the grant was greatly extended before the Bill passed. The eighth section of the Act, which deals with the matter, is quite a small statute in itself, occupying nearly four pages of the measure. Although only six diseases are specified in the schedule, the Secretary of State, when pressed on the report stage, introduced a subsection which gives the widest discretion to the Home Office in adding other diseases. The certifying factory surgeons and the medical referees appointed under the Act will find much increase of work, and very much greater responsibility in connexion with the origin and duration of those maladies due to occupation. The medical referees, too, will have some very delicate and important problems to solve. By the fifth subsection, the Secretary of State is given power to appoint a medical practitioner for these cases with the powers of a certifying surgeon. This is, we presume, only a precaution to enable the Home Office to meet any special pressure of work. At the close of the report stage the Act was extended to domestic servants, and an entirely new region for medical responsibility and litigation was thus added to the ordinary cares of domestic ways and means. Other effects of the Act are discussed in an article in the SUPPLEMENT.

The crusade which the late Lord Russell of Killowen started against corrupt commissions in commerce has now reached its legislative triumph in the enactment of the Prevention of Corruption Act. The late Lord Chancellor tried to pass the measure many times during former parliaments, and this session, having secured the help of his successor in office, he has at last succeeded. The measure received remarkably little attention in either Chamber. In the Lords, it had been amply discussed in former years, and in the Commons in this new Parliament the Bill was referred to the Standing Committee without a division. It had a smooth passage to the end. There has been much fear expressed as to the far reaching effects of the Act, and insurance companies who pay their agents (some of whom are medical men) commission are much exercised as to the legality of such payments. While much care must be exercised both in the legal and medical professions, as well as in other callings, in accepting commissions of any kind, it may be pointed out that the words "corruptly accepts" in the first line of the first section practically govern the application of the Act, and further, that no prosecution can be instituted except with the consent of the Attorney-General or Solicitor-General. This proviso was considered necessary to prevent the enactment being used for the purposes of blackmail. It is to be hoped that it will not, in preventing one evil, create another by reducing the Act to a dead letter.

A marked characteristic of the session has been the number of Commissions and Committees appointed to consider knotty problems. There are still several first-class Commissions appointed by the late Government at work, notably three which deal with tuberculosis and Poor Law. Some of these recently constituted have boldly plunged into their work amid general approval, but the Royal Commission on Vivisection is repudiated by a section of the anti-vivisectors, who are not satisfied

with the composition of the body. It was at one time urged very strongly that a Royal Commission or a Committee should be appointed to consider the administration of the Lunacy Acts, but the whole question was ingeniously referred to an existing Commission appointed by the late Government to report on the treatment of the feeble-minded. This expedient was resorted to, no doubt, in order to save time, but it may be questioned whether the *personnel* of the Commission nominated to investigate a different though cognate subject will give its recommendations sufficient authority to ensure the carrying out of the necessary reforms. The present system under which the Lunacy Commissioners act is full of anomalies. The Home Office passes the plans and approves the estimates for asylums, the county councils build them, and the Local Government Board sanctions the loan for the money, while the Lord Chancellor appoints the Commissioners. The whole system of inspection is antiquated and needs to be reformed, strengthened, and systematized under a regularly constituted Lunacy Board, responsible to and controlled by one Department of the Government.

It is impossible to close these remarks without referring to the great activity of new members in using the privilege of questions to push certain views to the front. The antivaccinationists and the antivivisectors have both been most indefatigable in this direction. Fortunately they have not succeeded in making any serious impression on the House, but their activity is ominous of troubles to come. The value of questions cannot be too highly esteemed as a means of exposing bad or erroneous administration. The medical profession should use them through local representatives in the House on all legitimate occasions. While we say this we feel that the youthful energy of this new House of Commons has flowed out somewhat too largely in this direction, but age will no doubt correct this pardonable fault without impairing the efficiency of the legislative machine.

GENERAL MEDICAL INSPECTION OF SCHOOLS.

THE question of medical inspection of schools has lately been so much before the public in connexion with the Education Bill that the portion of Dr. Kerr's report[1] which refers to it is necessarily of special interest. That officer describes a tentative experiment made by the London Education Committee, who appointed in September, 1905, twenty assistant medical officers to examine and report upon children in the elementary schools in certain districts. To the ordinary observer this experiment may seem paltry when the area of the work is compared with the vast field eventually to be covered; but it is in reality a most important departure, and the report of the work done by these officers, limited though it was, gives much food for reflection. We are told that the first selection of cases was made by the teachers, and that between 20 and 30 per cent. of the children thus submitted were not suffering in any way. Other points noted with regard to the teachers' lists were that in some schools no children were pointed out as requiring examination, while in others long strings of healthy dunces were presented.

Apparently some teachers regard the medical officer's work as inquisitorial, and a few of the non-provided school teachers have even objected to his visits altogether, while others seem to have considered them useless. What does this point to? To the general ignorance of teachers with regard to hygiene, and to the urgency of teaching that subject in all training colleges. "Where the teachers choose to exert themselves," Dr. Kerr writes, "these difficulties seldom arise, and the "physical and mental conditions in any school are to a "large extent an index of the teachers' point of view in "respect of their professional work." While believing that the keeping of individual records of each child is an ideal to be attained, Dr. Kerr considers that teachers and parents have not reached a sufficiently high intellectual level to make this worth doing at present. Much of the advice given by doctors with regard to the children is wasted, because parents cannot be induced to get them treated. The sick children either continue to attend school, or are excluded for months or years through parental ignorance or indifference which it is impossible to combat. Something is to be done with regard to the mothers of to-day through the agency of health visitors and lectures on health subjects; but here again it is clearly seen that the urgent need at present is for a proper hygienic grounding at school for the mothers of the future.

There is no doubt that intelligent teachers and intelligent mothers are absolutely essential to the success of any scheme of medical supervision, and that these two elements must be reckoned with before medical inspection can do much real good. If doctors are constantly to have their hands tied by the ignorance or the opposition of the women who have charge of the children much enthusiasm and a great deal of public money will be wasted. In Germany, where, Dr. Kerr says, the whole intellectual level of both teachers and parents is considerably above that in this country, a card system (the Wiesbaden system) is worked with good results. Every child is submitted to medical inspection in its first, third, and fifth year of school life, and those requiring it are kept under more frequent observation. It is significant that two-thirds of the children in Mannheim were submitted to their own medical man within eight days, and in Leipzig 75 per cent. before the school doctor's next visit.

It will be seen that there are two very important factors to be considered in this question of medical inspection of school children if the work of the doctor is to be efficient—first, the instruction of the teacher in hygiene, and, secondly, the instruction of present and future mothers in hygiene and health subjects. The first step towards bringing this about is the introduction of hygiene as a compulsory subject in the curriculum of training colleges. At present we are in a vicious circle. To get out of it we must take example from the old woman in the nursery rhyme: "Water quenches fire, fire burns stick, stick beats dog, dog bites pig, pig gets over stile," and the old woman finally reaches home. Teacher learns hygiene, teacher teaches hygiene, child learns hygiene, and having become a woman practises hygiene in her home, and in her turn teaches hygiene to her children from their infancy onwards.

> 'Tis education forms the vulgar mind:
> Just as the twig is bent the tree's inclined.

To teach the present mother is a much harder task. To begin with, few of the would-be teachers know very much about the subject, and to make an impression on a confirmed slattern is almost hopeless. Still, a good deal may be accomplished during the period which must necessarily elapse before the rising generation is hygienically educated. Health visitors can possibly do most at present. The greatest influence for good is that which can be exerted through the teachers in the elementary schools, who have valuable opportunities if

[1] See page 92.

only they understand how to seize them. But here, again, we are in a vicious circle; they cannot pass on what they do not know themselves.

With regard to medical inspection it will be seen that to be entirely successful the co-operation of teachers and mothers must be secured, and except for the fear of checking or discouraging so important a movement one would be almost tempted to say it was premature, and that the teaching of hygiene should first have been legally established and in full swing. The ground is well prepared, and with the strong public backing now obtained the Board of Education could not refuse to make hygiene a compulsory subject in all training colleges. Perhaps the most valuable point in this tentative scheme of medical examination in London is the impression made upon the medical inspectors themselves. Each of these officers had to visit the schools of one district, spending three school sessions weekly in such work and making a weekly report on the schools visited. The general routine was for the medical inspector to visit the school department; go round the premises and see the classes at work; take note of all hygienic matters, and then inspect the children whose names appeared on the teachers' lists. We read, "To the doctors themselves the school work has proved of such interest that on an average they have taken very much more time and trouble over this service than the conditions of their appointment either demanded or expected."

This is very noteworthy, because, as a correspondent remarked in an interesting letter bearing on medical inspection published last week, it seems to be assumed by many that the medical profession would not undertake this work on any terms that the ratepayers could afford. He pointed out that the Interdepartmental Committee on the Medical Inspection and Feeding of School Children of 1905 reported that the experience of those authorities which had so far instituted medical inspection was to prove that the cost is extremely small, and does not generally amount to one-tenth of a penny in the £. In London we find on inquiry that there are 750,000 children attending 941 elementary day schools; a rate of one-tenth of a penny in London is estimated to yield about £18,000, or very nearly £20 a school. Moreover, as our correspondent observes, the inspections are made during school hours, when the salaries of the teachers are running, so that there is some justification for his contention that teachers are paid for this. However this may be, the facts brought forward by the Interdepartmental Committee of 1905 prove that the cost of medical supervision of schools would not be extravagant when regarded merely from the point of view of the expenditure of ratepayers' money. When we set on the other hand the advantages which flow from the institution of medical inspection, the cost is seen to be utterly insignificant. The Committee pointed out that among these advantages are the prevention of the spread of infectious disease, the great physical gain to the children resulting from greater cleanliness, from the recognition and remedying of minor physical defects, from attention to defective eyesight and hearing, and lastly by creating in teachers a more intelligent and more sympathetic interest in the welfare of the children. It is, of course, necessary that teachers should co-operate, and the Committee stated that "the school medical officer gives teachers valuable support in any effort they may make to arouse the better feelings of the apathetic or negligent parent. We believe that teachers who have attended a course of simple physiology and straightforward hygiene will be found quite capable of assisting admirably in pointing out urgent cases to the medical man, who in his daily rounds will visit the school just as he would the house of an ordinary patient, where it is no uncommon thing for several people to be ill on the same day. No system of medical inspection which means a visit at intervals of weeks or months, no matter how conscientious the examination then made, can be adequate, for the first if not the chief aim of medical inspection should be the checking of infectious disorders and their sequelae. It may be predicted that every young doctor worth his salt would share in the enthusiasm displayed by the twenty employed by the London Education Committee, and, in return for the experience gained by this practical work, would be quite willing to give his services for a sum not so large as to alarm the ratepayers, who, alas! are not far-sighted enough to realize the ultimate gain to the nation.

THE HEALTH OF LONDON IN 1905.

The report of the Public Health Committee of the London County Council, submitting the report of the medical officer of health for the county for the year 1905, has just been issued, and bears date December 13th, 1906. Bound up with Sir Shirley Murphy's report is that of Dr. Kerr on the educational side of the Public Health Department, to which we refer more at length elsewhere. Sir Shirley Murphy's report fills nearly 100 large octavo pages, and it is impossible to do more now than announce its publication and give some general indication of its scope. In the first place, it should be said that the general death-rate for London during 1905 was the lowest on record. The Committee points out that the death-rate has fallen from 21.0 to 15.1, or nearly 30 per cent. since the coming into operation of the Public Health (London) Act, 1891. The birth-rate also has fallen; it was 27.1, the lowest rate on record, being practically the same as that for England and Wales in the same year. The infant mortality-rate remains high, although considerably lower than in 1904, and slightly lower than in any previous year. In his remarks upon this subject Sir Shirley Murphy has some observations which will require very careful attention; he gives a table showing that nearly one-third of the deaths of children under 1 year of age occur during the first month of life, and another from which it appears that the rate during the first week amounts to about 23.0, and that neither the rate in the first week nor the first month varies very conspicuously in the several sanitary districts when they are grouped according to the proportion of overcrowding. The difference in the infantile mortality between the least and most overcrowded groups is least marked in the first three months of life, more marked in the second, still more marked in the third, and most marked in the fourth three months of life. Sir Shirley Murphy shows reason for thinking that the continuance of the high rate of mortality under 1 year is, at any rate in some important degree, due to a more complete registration of the death of infants which survive their birth for a brief period only, the maintenance of the high rate being largely accounted for by the increase in the number of deaths registered as due to premature birth, congenital defect, and some other headings. The report also states that the rate of mortality from phthisis during 1905 had been reduced to one half that for the decennial period 1861-1870; voluntary notification of phthisis is in force in nineteen out of twenty-nine sanitary districts, and the Committee states that it will be in a better position later to ascertain how far further steps may be desirable to bring to the knowledge of the borough medical officers of health the

existence of cases of phthisis in their districts. The deaths recorded as being due to cancer, which in London, as in England and Wales generally, underwent marked increase during the last twenty years of the nineteenth century, have remained practically stationary during the last few years, the rate in 1905 being 0.93, the same as in 1902; this appears to indicate that improvement in diagnosis and increased accuracy in certification were in part responsible for the large apparent increase from 0.42 in 1851-1860 to 0.85 in 1891-1900. We propose to deal more fully with this important report in an early issue.

THE STANDARDIZATION OF DISINFECTANTS.

IN a recent paper before the Society of Chemical Industry on the standardization of disinfectants, Dr. Wynter Blyth deals with matters of considerable importance. After pointing out that the chemical analysis of many disinfectants cannot give any information as to their germicidal efficiency, he showed that it was necessary to examine this property directly. The method at present in use is that of Rideal and Walker, in which the disinfecting power of the sample to be tested diluted with distilled water is compared with that of phenol under the same conditions. The result is expressed in the form of a ratio known as the "carbolic coefficient," which is determined in the following manner: Five drops of a 24-hour broth culture of *B. coli* are added to 5 c.cm. of disinfectant diluted to a known degree with distilled water. Samples are withdrawn every two and a half minutes, and inoculated into broth tubes, which are subsequently incubated. By observing which tubes show growth and which do not, it is possible to determine the time taken for the disinfectant to kill the organism dropped into the solution. This having been ascertained, it is only necessary to find by experiment what dilution of phenol will give the same result under precisely similar conditions. The ratio of these dilutions is the carbolic coefficient of the material in question. Dr. Wynter Blyth said that the Rideal-Walker values of disinfectants determined in this manner appeared to be regarded by municipal councils, governing bodies, etc., as indicating their relative efficiency in the performance of the functions expected of them, while manufacturers vied in raising this value as applied to their respective productions. He pointed out that in use these germicides were generally swamped with a large excess of faecal or other organic matter, and he criticized the condition under which the Rideal-Walker method of standardization is carried out, namely, in the presence of distilled water. In his own experiments the conditions under which the test is applied were modified by introducing, together with the disinfectant and the organism, a certain definite amount of organic matter (faeces, blood, urine, milk, etc.). The average maximum dilution of one volume of disinfectant which will just kill the organism *B. coli communis* after a contact of twelve and a half minutes was taken as an indication of the efficiency of the material. The results obtained by the use of the method are instructive. In the presence of organic matter, disinfectants showed far greater similarity in behaviour than would be expected from their "carbolic coefficients" determined in distilled water. The presence of fat was shown to have an effect in prohibiting germicidal action. The choice of a standard organic substance to be used with the method by which disinfectants should be standardized in future is difficult. Dr. Wynter Blyth suggests that the germicidal value of a disinfectant should be determined in the presence of milk. Its uniformity and availability recommend it. Further, he has demonstrated experimentally that milk, or a judicious mixture of whole milk and skimmed milk, behaves very much like faeces in diminishing the germicidal powers of disinfectants. He also expressed the opinion that germicidal value cannot be expressed by the determination of behaviour in one particular set of circumstances. For the true appreciation of the value of a germicide it must be examined under a number of different conditions. Disinfectants are being bought and sold with reference to their germicidal efficiency in distilled water, and they are used in the presence of organic matter. The methods of standardization now in vogue he considers fair neither to the manufacturer nor to the consumer.

THE GREATEST FRENCHMAN OF THE LAST CENTURY.

A PARIS newspaper recently invited its readers to reply to the question, Who are the ten greatest Frenchmen of the nineteenth century? Fifteen million votes were recorded, with the interesting result that Pasteur was at the head of the poll with 1,300,000 votes. His majority over Victor Hugo, who was second, was 100,000. Napoleon was fourth. Among the ten men in the list were the late Professor Curie and Dr. Roux of the Pasteur Institute. The others were, with the exception of one or two men of letters, politicians such as Carnot, Thiers, and Gambetta. The list is interesting as showing the high place which science holds in the popular mind of France. How different would the result of a like appeal to public opinion be in this country! The general composition of such a list of the "greatest men" of Great Britain might easily be foretold. It would include politicians, preachers, two or three soldiers, and one or two popular novelists; science, and particularly that applied to the art of healing, would be nowhere. When the Order of Merit was created there was naturally a good deal of difference of opinion as to the names proposed. There was one name as to which disagreement could scarcely have been expected; yet in more than one of the alternative lists suggested the name of Lister was conspicuous by its absence. This particular form of stupidity scarcely exists in France. It may be, as has been suggested by M. Jules Clarétie, that the choice of Pasteur shows that the gratitude of the French people goes out towards the man who saves life rather than to "the saviour of society" or the "idle singer of an empty "day." We are inclined to think that there is more than this in the pre-eminence accorded to a man of science—that there is appreciation of the value of knowledge for its own sake, and appreciation of the work of those who add to it. But even on the assumption that Pasteur has been pronounced the greatest Frenchman of the last century by the selfish regard of his countrymen for their own well-being, is it not a striking proof of the intelligence of a people that it can perceive the worth of such a man? It is surely a disgrace to us that the name of Pasteur is probably better known in this country as a bogey of obscurantists than as one of the founders of scientific medicine.

QUACKS AND THEIR NOSTRUMS.

THAT some quacks believe in their own nostrums is shown by the fact that Morrison, the founder of the "College of Health," died while taking his own pills. Most quacks, however, have more of the rogue than the fool about them. They trade on human folly, like the famous swindler Robert Macaire, whose immortal maxim *Tout passe, mais les badauds ne passeront pas*, is a summary of the gospel of quackery. However ignorant they may be, they know too much to put faith in their own physic. In Bransby Cooper's *Life* of his famous uncle, the following story is told (vol. ii, p. 177): "Mr. Travers mentions to me, that on one occasion "Mr. Cooper was sent for by Dr. G——, an advertising

"quack in Shoreditch, whose window announced, in "capital letters, 'The Universal Remedy under God.' "Before examining the injury my uncle began to banter "him, suggesting a trial of the 'Universal Remedy.' "'Come, come, Dr. Cooper,' replied G., 'this is a serious "'affair, this is no matter for joking!'" We have recently heard an equally instructive story about the vendor of a well-known nostrum bearing a daintily feminine name which to some extent resembles "suffragette," though it is prettier than that

Word of fear
Unpleasant to policeman's ear.

A lady calling on the wife of the proprietor of the *Vitæ* was told that one of the children of the house was ill. To an innocent inquiry why he was not treated with the paternal nostrum, the reply came crisp and sharp: "We always have a proper doctor for our children!"

MATHEMATICS AND MOSQUITOS.

Supposing all the mosquitos in a given district to have been exterminated, the rapidity with which immigrants from neighbouring parts will restock it is a question of practical importance. In an address published in the BRITISH MEDICAL JOURNAL, May 13th, 1905, Major Ross considered the problem, and suggested an approximate solution. Professor Karl Pearson and Mr. J. Blakeman, in a recent memoir,[1] discuss the subject in detail. The fundamental problem is to determine the distribution of n individuals departing from some given centre after n flights. Having solved this, such centres could be distributed over an area of definite contour, and the redistribution after a number of breeding seasons ascertained. The fundamental problem was solved by means of an elaborate analytical process which incidentally led to the discovery of certain mathematical expressions likely to be of service in other fields. Further, an extremely ingenious graphical method was employed, the accuracy of which was established by comparing its results with those given by the analytical process. We cannot discuss here the necessarily complex reasoning by means of which the authors obtain a solution, but some of their results are of interest to medical men. Major Ross supplied data as to the habits of mosquitos, and using these the authors show: (1) That in an area cleared but not rendered sterile, in twelve months mosquitos will reappear and attain an objectionable frequency within half a mile of the boundary. (2) In a rectangular patch 2 miles long and 1 mile broad cleared but not rendered sterile, the central density at the end of twelve months would be nearly 50 per cent. of that in the uncleared country. (3) At a quarter of a mile from the centre of a square mile cleared and kept sterile the density is 11 per cent., as compared with 67 per cent. in the case of a square cleared and not kept sterile. From these and other examples it follows that practically cells must not only be cleared of mosquitos but kept sterile. Naturally these results depend on data obtained by only rough approximations, and are merely intended to illustrate the value of the method. The feature which distinguishes the work of Professor Pearson and his pupils is a determination to employ methods hitherto restricted to questions of interest to mathematicians alone in solving problems of importance in the affairs of everyday life. The most suitable policy is emphasised in the latest production of the Francis Galton School.

THE DEVELOPMENT OF PIROPLASMA CANIS.

A preliminary note by Captain Christophers, I.M.S., on the development of *Piroplasma canis* in ticks is published this week. It will be remembered that two telegrams were recently received by cable from India about this subject, and commented upon in the JOURNAL. The knowledge of the passage of parasites of the piroplasma group through ticks is, of course, old; Smith and Kilborne many years ago demonstrated experimentally the part those insects play in the dissemination of the disease in cattle. Again, quite recently, Nuttall in Cambridge infected dogs with the disease under discussion after he had allowed infected ticks received from Africa to feed upon them. This clearly demonstrated, if that were required, that the tick played the same part for the dog as it did for cattle. The most curious factor in the passage of these piroplasmata through ticks is that the parasite passes into the eggs, then through the larvae, then through the nymphs, and so into the new generation of ticks, which in turn convey the disease to the animals on which they feed. It is difficult to cut sections of ticks or to dissect them, so that the study of the different phases undergone by the parasites in their sojourn in the different stages of those insects presents great difficulties and has been rather neglected. Koch and Kliene in Africa have recently worked at this subject, and have described developmental forms of the piroplasmata of cattle in ticks, and Christophers now describes from India what he believes to be the complete phase of the development of the *Piroplasma canis* in a tick the *Rhipicephalus sanguineus* (Latreille). His description does not seem to be as clear as might be wished, and he apparently has some doubt himself, as he states that he has reason to think that another cycle leading to similar results exists. From his diagrams there is little doubt that he has seen developmental forms in the tick, but the interpretation of the figures is open to question at several places. The development does not seem to run smoothly, as that of the malarial parasite in the mosquito, and the fact that the salivary glands of the nymph are stocked with one type of body and those of the adult with another requires elucidation. What is now published, however, is a preliminary note, and the choice of this title no doubt means that the author will revise his work and supplement it by further details when he produces his full report. The technique employed, the staining methods used, and many other points will no doubt be stated there. The interesting feature of the present note is that it records the existence of those different developmental forms which are depicted quite clearly in the drawing accompanying the paper.

A PHYSICIAN'S HOBBY.

In his chapter on the Hobby horse Tristram Shandy says: "In good truth my uncle Toby mounted him "with so much pleasure and he carried my uncle Toby "so well—that he troubled his head very little with "what the world either said or thought about it." And indeed there is nothing like a hobby for making a man indifferent to the whims of patients, the moral obliquities of rival practitioners, the backbitings of the General Medical Council, and the innumerable vexations of professional life. Sir Henry Thompson, himself a great collector, said he had often been surprised at the prevalence of the collecting habit among doctors. It would be more surprising if men whose work is so exacting to body and soul, and so full of disappointment, did not turn for relief to a hobby. The late Mr. Poupart among his antiquities, Sir Hermann Weber sorting his medals, others among their old books or their pictures, or their specimens of rare and curious pottery, or their collections of plants, could defy the petty troubles that worry minds empty of extraneous interests till they assume the proportions of formidable phantoms. If we could know all the hobbies ridden by medical men, it would, we think, be found that as a rule they are far as the

poles asunder from their professional work. An excellent example of a physician's hobby is referred to in a recent number of the *Scotsman*. An exhibition of pictures and prints illustrative of the life of Mary Queen of Scots is now on view in the Outlook Tower, Castle Hill, Edinburgh. Most of these have been lent by Dr. Caverhill, with whom the collection of objects illustrating the story of the unfortunate Queen has been a labour of love. Many of the prints are fine examples of old mezzotint, aquatint, and line engravings. They are arranged in groups corresponding to the main periods and events of Mary's life. Thus we see her in her happy childhood and youth in France; we see her arrival in Scotland; her marriage to Darnley and afterwards to Bothwell; we see her on the battlefield at Carberry and Langside; we see her in her flight to England, in prison and on the scaffold. The collection comprises fifteen prints of the portraits of Mary which are generally regarded as having an authentic character. It contains numerous illustrations of places where Mary lived, loved, played, and was imprisoned; of Edinburgh as it was in her day; and of her family connexions, descendants, and ecclesiastical and other contemporaries in Scotland, England, and France. We have there *depicta tabellis* the strange eventful history of the Queen whose subtle charm has led captive the minds of men for more than three centuries. The catalogue of the exhibition, drawn up by Dr. Caverhill, is an abstract and brief chronicle of her life and times. We congratulate Dr. Caverhill on the public spirit which he has shown in opening his treasures to the inspection of his fellow citizens. It would be well if all hobbies made a like appeal to popular interest and could be made to serve an equally useful educational purpose.

MEDICAL TERMS IN THE *NEW ENGLISH DICTIONARY*.

THE last published section of the *New English Dictionary*[1] ends with a medical term (*misbirth* or abortion), and contains a considerable number of words referring to medicine and the allied sciences. There are, for instance, the four great groups of the *meso-*, the *meta-*, the *metro-*, and the *micro-* compounds. The *meso-* group includes many terms, such as *meso-appendix*, *meso-ovarium*, *meso-duodenum*, and *meso-rectum*, which are anatomical rather than medical; but in the *meta-* group we come across several interesting words relating to disease. Thus, *meta-* in the sense of "arising subsequently to," is found in *meta-arthritic* and *meta-pneumonic*. *Metabasis* is given as a non-naturalized word, signifying a transition from one remedy to another; while the word may not be naturalized, we fancy the practice has found a home with many of us. The wonderful richness of the *Dictionary* in illustrative quotations is exhibited in the fact that under "*metallic*" we find a definition and illustrations of the use of the medical expression, "*metallic tinkling*." *Metamorphopsia* is defined as "an affection of the sight characterized by distortion of things seen," and the following illustrative quotation is given: "the patient had noticed some metamorphopsia, for in walking along a street the area railings at a certain distance appeared to have an upward bend." It may be noted parenthetically that the quotation also yields an instance of distortion of things said, being an example of a misrelated participle. *Metastasis* is dealt with in its medical as well as in its rhetorical, physical, biological, and geological senses; but an illustration of its more common modern use in reference to the propagation of neoplasms in the body might not have been out of place. *Metathesis* in its special meaning ["the transposition of a solid morbific substance (that cannot be evacuated) from one part to another where it will be less injurious" suggests some reflections upon the past theories of medical practice. The earliest illustration of the use of *meteorism* as a "flatulent distension of the abdomen with gas in the alimentary canal" is dated 1843, although the corresponding French term *météorisme* was introduced in the sixteenth century by Paré. Both by definition and by illustrative quotation the word *methodic* is fully explained in its medical use. Said Johnson in the *Rambler* in 1751: "Every animal body, according to the methodick physicians is, by the predominance of some exuberant quality, continually declining towards disease and death." In a quotation dated 1659 it is stated that "The Methodick practizing in Physick hath, First, a knowledge of the Disease: next, foretelleth the event of it; and, last, goeth about to cure the same." *Methysis* is a little used word for the excessive use of intoxicants, which might conceivably be occasionally employed in circumstances when it was desired that the excessive consumer of the intoxicants should not find out that his habit had been discovered. The *metro-* compounds contain, as might be expected, a number of obstetrical terms, such as *metrorrhagia* and *metrotome*; and the word *midwife* is itself dealt with in this section of the *New English Dictionary*. As is well known, the etymology of the term *midwife* is far from clear, and Mr. Bradley leaves it uncertain. *Mid* either has an adjectival or a prepositional sense, and *wife* probably has its old meaning of woman. "On the former view, the primary sense would be 'a woman by whose means the delivery is effected'; on the latter view, 'a woman who is *with* the mother at the birth.' The latter seems the more likely, though analogies are wanting for this mode of formation. The Sp. *comadre*," goes on Mr. Bradley, "which is sometimes quoted, is not to the point, as the sense 'midwife' is merely developed from that of 'gossip,' originally 'fellow-(god)mother.' The modern German *beifrau*, midwife's assistant, has also been compared." We must be content, it is evident, for the etymology of midwife to remain uncertain.

[1] *A New English Dictionary on Historical Principles*. Mesne to Mistrial. By Henry Bradley, Honorary M.A.Oxon. Oxford: At the Clarendon Press; London, Edinburgh, Glasgow, New York, and Toronto: Henry Frowde. January 1st, 1907. Double section. Price 5s.

A MEDICAL MILLENNIUM.

ONE of those pundits who, decorated with some such title as "a distinguished West End physician" or "a leading surgeon," supply the cheap press with medical items, has evolved a charming method of ridding the general body politic alike of phthisis and physical deterioration. All we have to do is to get employment in sealing-wax factories and at odd moments eat as much sugar as we can. It appears that the atmosphere of a sealing-wax factory is of the most stimulating character possible and that girls who work therein are invariably strong, robust, and cheerful. The air being charged with resin dust is not very unlike that of the pinewood sanatoriums in Germany. This being the case, it is obvious that either the inspector of factories is to be congratulated on his success in keeping down the carbonic acid ratio of the atmosphere of these factories or else the pinewoods in Germany must differ materially from pinewoods elsewhere. An exhilarating atmosphere is not, however, the sole advantage of life in a sealing-wax factory; one absorbs all day a certain amount of sulphite of antimony a virulent poison but excellent for anaemics. It is true that we are not told what happens when the anaemia is cured; but nevertheless, in view of the cheeriness said to be developed by life under these conditions, the London County Council will doubtless at once start sealing-wax manufacture in all the wards of its asylums devoted to the care of melancholiacs. Sweetmeat factories are also commended, and the news about them will please almost everybody except the ladies who keep complexion-restoring establishments in Bond Street.

All girls in sweetmeat factories have pink and white complexions and look fresh. There is balm even for the temperance advocates, for not only is the saccharine imbiber proof against consumption, but he cannot possibly become a drunkard. After all, however, there is one fly in the ointment for most of us, since we are told that we must train our children to like sugar. It is almost a pity that the experienced West End physician could not have spared us this counsel, for the difficulty of inducing children to eat sugar will add so intensely to the cares of motherhood. The concluding advice is that as a health preserver every one should eat at least twenty pieces of lump sugar daily; in a very few days the difference in health will become apparent This seems quite likely.

THE JAPANESE SANITARY DEPARTMENT.

THE Sanitary Department of the Japanese Government is concerned with matters not immediately connected with the Public Health. The Central Bureau of the department is consulted upon such matters as the inspection of ships during epidemic periods, the prevention of tuberculosis, the regulations relating to the trade in medicines, and the Home Minister refers to the Bureau the decision as to whether physicians are punishable for crimes or offensive conduct. Three hygienic laboratories under the charge of the department conduct examinations of water, foods, drugs, paints, toilet articles, etc. Other institutions connected with the Sanitary Department are the vaccine farm, the serum institute, and the institute for the study of infectious diseases. The report at the Central Bureau for the year 1902 (the 35th year of Meiji) has recently been published. It is a quarto volume of about 200 pages, of which number 116 are devoted to statistical tables and diagrams printed in English and Japanese characters. The remaining portion is printed partly in English and partly in Japanese. The birth-rate in the whole country has risen from 28 per 1,000 persons living in 1893 to 33 per 1,000 in 1902, while the death-rate from all causes fell during the same period from 22 6 to 20.9 per 1,000. The infantile mortality-rate in 1902 was equal to 154 per 1,000 births. An average of about 78 per cent. of the children born appear to have been vaccinated during the ten years 1893 to 1902, and the average death rate from small pox during that decade was 0 072 per 1,000. Only 4 deaths occurred from the disease during each of the years 1900 and 1901, and only 7 in 1902. The cholera death-rate was 0.2 per 1,000 in 1902, the highest rate recorded since the outbreak of 1895, when there were 40,000 deaths, giving a death-rate of 0 9 per 1,000. There was a gradual fall in the number of cases and in the mortality from dysentery during the ten years named. In 1893 the death rate from this disease was 0 9 per 1,000, and in 1902 it was only 0.1 per 1,000. The collection of these statistics and the admirable manner in which they are set out show the same thoughtfulness and care for detail which is so characteristic of the work of the Japanese

LIBEL BY FLATTERY

THERE is nothing more annoying to a self-respecting practitioner who values the goodwill of his brethren than to have his powers extolled by some meddlesome if well-intentioned journalist. The paragraph may be flattering enough but the appearance of any such statement promptly awakens the suspicion that it has been made with the consent or connivance of the party most deeply interested. Unfortunately, our English law of libel does not appear to be sufficiently advanced as to give redress when unauthorized statements are "to a man's credit" but in the United States where the area of [illegible] seems to know no bounds, a wrong of this kind has found a remedy. In a case which was recently heard by the Supreme Court of Louisiana, the plaintiff was a physician of high standing in his profession and a member of a medical society the members of which were opposed to advertising by physicians, and had adopted resolutions condemning the practice. The defendant newspaper, obtaining information that a remarkable cure had been effected by the professional skill of the plaintiff, published a rather glowing account of the case, stating that other physicians had treated the patient without effect, and containing various other laudatory remarks. It was alleged by the plaintiff that this publication, which, although true and obtained from the father of the patient, had not been authorized by the plaintiff, had a tendency to lead the public and his brother practitioners to believe that he was advertising, and thereby caused them to class him in the category of quacks, who alone, it was alleged, resorted to advertising. The trial court held that the complaint stated no cause of action; but this ruling was reversed by the Supreme Court, which declared that the complaint charged was an actionable libel. Under such circumstances the truth of the matter published was not a defence. We have never heard of any such case being tried in an English Court. It would be of great professional interest to hear it discussed.

THE RELATION OF LIVER CELLS TO THE BLOOD AND LYMPH CHANNELS.

IN a communication recently read before the Royal Society, Drs. Herring and Simpson discuss the relationship of the liver cells to the circulation and describe the appearances in the livers of experimental animals after the blood vessels have been injected with carmine gelatine. The liver cells are seen to be permeated by fine anastomosing channels which are filled with the injected material. These channels undoubtedly receive plasma from the blood. In the dog red blood corpuscles are occasionally seen within the liver cells, and crystals which closely resemble haemoglobin are frequently found inside the cell nuclei. There must, therefore, be an intimate connexion between the blood in the intralobular blood vessels and the liver cells. The lymphatics of the liver in the dog and cat are confined to the visible connective tissue of Glisson's capsule and the adventitia of the hepatic veins. The lymphatic vessels accompany the hepatic artery and its branches, forming networks around these vessels, and also round the branches of the portal vein and the bile ducts. The authors deny the existence of lymphatics within the lobules and of the perivascular lymphatics described by MacGillavry, but they state that the endothelium which lines the intralobular blood spaces is incomplete and allows the passage through it both of fluid and of fine solid particles into the liver cells. The concentrated character of the liver lymph is explained by the incomplete nature of the endothelium lining the intralobular blood vessels and the consequent ability of the plasma to pass directly into the liver cells. It is suggested that the cells of the lobule form a syncytium and that the lymph is thus able to pass from cell to cell. At the periphery of the lobules it probably passes into the interstices of the connective tissue which lie between them, and then enters the lymphatics.

SOME BIG FEES.

SOME large fees have lately fallen to the lot of doctors, not, we are sorry to say, in this country. It is stated that an American practitioner who ministered at the deathbed of a millionaire sent into the executors a little bill of £5,000 for a week's attendance without any special operation. This is said to be the biggest fee ever asked or in the United States, where the fees of leading

surgeons are on a scale proportionate to the grandeur of the greatest nation on the earth. It is stated that Professor Damsch of Göttingen received £5,500 for a much longer attendance on the Shah. The *Chronique Médicale* says that the Sultan lately summoned a celebrated German physician from Berlin. He was brought to His Majesty's bedside with an amount of mystery more suggestive of a love intrigue than a medical consultation. The Sultan listened in silence to the opinion of the oracle, but apparently it was not to his taste, for as soon as the physician had left the room he uttered a wish for his future destiny which was not exactly charitable. Nevertheless, he ordered that the man of art should be paid a fee of £4,400; but at the same time expressed a hope that it would not profit him. Probably the physician pocketed the affront as cheerfully as Sir Astley Cooper did the thousand guinea fee which was thrown at his head in a nightcap by a patient whom he had cut for stone. A fee of £6,000 is said to have been offered recently by a wealthy Greek banker, founder of the Bank of Athens, to several physicians. The patient suffered from leukaemia, which the local faculty declared to be incurable. The relatives telegraphed a full account of the symptoms to a famous physician at Vienna, who replied that from the clinical report submitted to him he thought he could do no good by going to Athens. An answer to the same effect was received from a Paris celebrity. Another French physician, said to be a Professor of the Lyons Faculty, who was next applied to, took a less pessimistic view. He went to Athens, a special steamer being placed at his disposal for the purpose. Here, unluckily, the story ends for the present. While paying a due meed of admiration to the conscientiousness of the physicians who declined so tempting an offer, we cannot help hoping, for the credit of our art, that the liberality of the patient was justified by the result.

MEDICAL PROGRESS IN PERSIA.

THE death of the Shah makes some mention of the state of the healing art in his dominions opportune. According to the Emir F. Khan, medical attaché to the Persian Legation in Paris, who some weeks ago contributed to the *Presse Médicale* an article on scientific development in Persia, Mozaffar-Ed-Din did much to promote the spread of knowledge among his people. Under his auspices the study of foreign languages was introduced into the schools, and provision was made for the higher education. Young Persians were encouraged to go abroad to study medicine. Most of them went to Paris and Lyons. On their return they were placed in sanitary charge of provinces; medical posts were created along the frontier and in the seaports of the Persian Gulf, and a Superior Health Council was established at Teheran. At the present time, says Dr. Khan, it is difficult for any Persian without a recognized diploma to carry on private practice, and it is impossible for him to hold a public appointment. The Government prefers to employ foreign doctors rather than unqualified natives. The foreigners are Germans, Englishmen, Russians, and particularly Frenchmen. French influence has long predominated in medical affairs. In 1900, when the Shah visited the Universal Exposition, he telegraphed to his Minister for Foreign Affairs to select twenty new students whose expenses were to be paid out of the Imperial exchequer. Most of these were sent to France, where several of them were attached to military hospitals for special training. It is intended that they shall help in the reorganization of the medical service of the Persian army. To the Dar-El-Founoum, or University of Teheran, special favour was shown by the late Shah. The scheme of medical study is modelled on that of France, and during the past year lectures have been given in French by professors from Paris and Lyons. The new Shah, Mohammed-Ali Mirza, is said by Dr. Khan to be a man of enlightened mind, eager to foster the progress of his people in all directions. In regard to medical science he has an enthusiastic supporter in his physician, His Excellency Logman-Elmamalek, who is a Doctor of Medicine of the University of Paris. One of the earliest acts of the new Shah is not unlikely to be the foundation of a medical school at Tauris.

BREVET-COLONEL F. J. LAMBKIN, R.A.M.C., has been appointed Lecturer in Syphilology at the Royal Army Medical College.

THE Hunterian Oration before the Royal College of Surgeons of England will be delivered in the theatre of the College by Mr. H. T. Butlin, F.R.C.S., on February 14th at 4 p.m.

A NATIONAL society for the suppression of quackery is in process of organization in the United States. The moving spirit in the movement is Mr. C. S. Andrews, Counsel of the Medical Society of the County of New York, and it is receiving the active support of a large number of medical societies and charitable organizations.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Session of 1906.—The first Session of the new Parliament has proved long and laborious. The output has been relatively large. The measures foreshadowed in the King's Speech last February were none of them directly connected with public health, though some of them indirectly touched on health questions. The Session has naturally and necessarily taken its colour from the programme of the Government, and so it has been a Session comparatively barren as regards legislation touching medical needs. Two hundred and eighty-two Bills were introduced altogether; of these 85 were Government Bills and the remainder were introduced by private members. Of the 85 Government Bills 51 were passed into law, and, adding five others originally introduced by private members and afterwards adopted by the Government, a total Government record is made of 56 Acts added to the Statute Book. Of the 185 bills due to the initiative of private members, only three small Bills in addition to the five adopted by the Government passed through the House. From this it would appear that the chances of private members are as poor in the new Parliament as in the preceding ones. The total number of Acts passed is large as compared with recent Sessions, but the majority of the measures are small departmental Bills, useful in their way but not raising questions of wide interest, and only in a few instances relating to public health. The Session was largely occupied by the Education Bill, which was the principal measure of the Government, and which failed to satisfy the House of Lords, and was consequently lost. There was in this Bill a subclause giving powers to the local education authorities to make arrangements for attending to the health and physical condition of the children educated at public elementary schools. The other first-class Bill of the Government which was lost was the Plural Voting Bill, which provided that no man should vote in more than one constituency. This was rejected by the Peers. Seven other first-class Bills were passed, namely, the Trades Disputes Act, the Merchant Shipping Act, the Colonial Marriages Act, the Labourers (Ireland) Act, the Justices of the Peace Act, the Prevention of Corruption Act, and the Workmen's Compensation Act. It is worth while to refer to some of these.

The Justices of the Peace Act abolishes the property qualification hitherto required of county magistrates, and in this way opens the Bench to some professional men and many others hitherto excluded. The Workmen's Compensation Act, to certain aspects of which reference is

made at length elsewhere, extends the principle of the Act of 1897, and improves the law by the inclusion of certain industrial diseases, with power vested in the Home Secretary to add other diseases as experience may warrant. The position of medical referees and certifying surgeons is also dealt with in the Act.

The Prevention of Corruption Act is an old acquaintance, and was more than once brought in by the late Lord Chancellor, after the death of its original author, Lord Russell of Killowen. Indeed, Lord Halsbury introduced the Bill this year in the House of Lords, and the Lord Chancellor (Lord Loreburn) took it up and made it a Government measure. It had a very easy time in the House of Commons, although some members protested against its passage as an unnecessary and dangerous piece of legislation. Its provisions were discussed in our last issue, pp. 38 and 56.

The Merchant Shipping Act is of medical interest, because it establishes for the first time a compulsory food scale on board ship, and requires all foreign-going ships to carry a certificated cook. The cubic space given to the accommodation of the crew is also increased.

Of the minor Acts passed by the Government the Notice of Accidents Act simplifies and improves the system of reporting accidents in mines, quarries, factories, and workshops. The Fatal Accidents (Scotland) Act remedies defects in the law relating to inquests in Scotland.

Two measures bear more directly on the public health: The Act for providing meals for underfed children in elementary schools, which assists voluntary efforts by providing buildings, furniture, and apparatus, and, in certain cases, by allowing a halfpenny rate to be used for providing food; and the Removal of Offensive Matter Act, which facilitates the removal of noxious matter in the county of London and in certain parts outside the county for sanitary purposes.

There are two consolidating Acts worthy of mention, one of which consolidates and amends the Alkali Acts of 1881 and 1892, and the other which modifies the law in relation to open spaces. The question of the unemployed was considered of such importance at the beginning of the session that it was named in the King's speech, but instead of introducing a Bill to amend the Act of 1905, a vote of £200,000 was voted to facilitate the working of the measure of the late Government.

Among the Bills dropped by the Government was the Lunacy (Consent) Bill, the Infectious Disease (Ireland) Bill, and the Poisons and Pharmacy Bill, which, after a difficult passage in the Lords, was finally dropped in December in the Commons. A measure dignified with the title of Public Health (Regulations as to Food) Bill, introduced by the President of the Local Government Board, was kept on the order book to the last day of the session, but it was drafted in such general terms, and gave such large powers to the Local Government Board without providing adequate means for carrying them into effect, that it is probably better to the public advantage to have a more complete protection in another session.

The procedure of private members as usual covered many subjects of interest, but of the three small Bills passed only one had direct medical interest, and that dealt with the treatment of defective children in Scotland. The two Bills dealt among other things with vivisection (a Bill to extend the protection, coroners, juvenile smoking, nurses registration, gambling by news, pure beer, licensing, old age pensions, and many other matters too numerous to mention). The Housing Bill, which was drafted and introduced two years ago by Sir Walter Foster, was passed by the House this year in the hands of Mr. Ma[illegible] was read a second time, and referred to a Select Committee. The report of the Committee will most probably form the basis for legislation by the Government next session. The Public Health (Officers) Bill was once more introduced by Sir Francis Powell, but it had no chance of making any progress. Mr. Cochrane Wason also introduced his Bill to amend the Local Government (Scotland) Act by giving medical officers the protection of the Local Government Board as regards emoluments and tenure, but it never passed a second reading.

In addition to public bills some forty provisional order bills dealing with drainage, water supply, lighting, and other local matters were passed for England and Ireland, and fifteen under the Scotch system for Scotland.

The preceding summary gives, however, a very inadequate idea of the frequency with which medical topics engaged the attention of the House. By the Standing Orders the first three-quarters of an hour of the sittings on the first four days of the week are given up to questions to Ministers, and on an average some seventy questions a day appear upon the paper, and scarcely a day passed in 1906 without some of these being connected with public health. In addition to these oral questions a somewhat smaller number are put each day for answer in writing. These questions and the answers given to them have appeared in the BRITISH MEDICAL JOURNAL of last year in this column, and have kept readers well acquainted with the topics considered in Parliament. Among others the following subjects were thus raised: The University of London, Thames pollution, child insurance, juvenile smoking, the cost of old age pensions, vivisection repeatedly, vaccination very frequently, the sale of quack medicines, Poor-law children, mortality in the Transvaal mines, the adulteration of food, the physique of recruits, the notification of births, cancer research and the post office, dispensary doctors in Ireland, the treatment of sick prisoners and the mortality in prisons, anthrax, diachylon as a poison, tuberculous pork, sleeping sickness, rural water supplies, East London water supply, the notification of phthisis in Scotland, antityphoid inoculation, Christian Scientists, the Richmond Lunatic Asylum, the death-rate of Belfast, American meat imports, sanitation in Lewis, physical health in elementary schools, medical relief on loan in Ireland, the increase of consumption in Ireland, the military nursing service, the notification of cerebro-spinal fever, female postal medical officers, ophthalmia at Rugby, the Metropolitan Asylums Board, the inspection of food factories, Ireland and the Central Midwives Board, the increase of the Lunacy Commissioners, the General Medical Council, motor driving and defective vision, cancer in India, the rating of hospitals, aliens and trachoma, the training of midwives, infant insurance, industrial poisoning, death certification, fees for factory surgeons, the treatment of inebriates, etc. This long list by no means exhausts the variety of medical topics brought before the House of Commons and gives no idea of the number of questions on each subject. Questions put in the interests of antivaccination easily held the first place as regards numbers, and those put by antivivisectionists were easily next in frequency.

In Committee of Supply some debates of much interest occurred. That on the army estimates in April elicited a long statement from Mr. Haldane on a civilian medical reserve and the general changes in the R.A.M.C., and in June and July the same estimates led to a discussion on insanitary barracks and sanitary reforms for the army. Mr. Lupton raised the question of the vaccination of postal employés on the Post Office vote, and on two other occasions—first on a special motion for the abolition of compulsory vaccination and again on the Expiring Laws Continuance Bill—he endeavoured vainly to rally the members to the side of antivaccination. The Home Office vote gave rise in March to a debate on vivisection, and in August to a discussion on industrial diseases and factory inspection. The Local Government Board vote this session was only discussed at length on one occasion, and the time was then occupied by the treatment of the unemployed. The session has been fruitful in Royal Commissions and Departmental Committees of Inquiry. Of Royal Commissions, that appointed on vivisection is the most important, but it has not at all satisfied the antivivisectionists. It was thought a Commission would have been appointed to consider the work of the Lunacy Commissioners, but this matter was by special reference handed over to the Commission sitting on the care and control of the feeble-minded. A Select Committee on Housing was appointed and has issued a report which has been analysed in the BRITISH MEDICAL JOURNAL. A Departmental Committee is expected to report shortly on industrial diseases for the Home Office, and many departments questions more or less connected with public health have received attention. The session, which has not proved in its legislative products of much medical interest, may yet be regarded as one in which the foundations have been laid for much work connected with public health.

Since the will of the late Mr. John Bennett, of Leicester, the Leicester Infirmary receives a sum of £300.

Scotland.

MEDICAL EDUCATION IN SCOTLAND.

THE *Scottish Medical and Surgical Journal* has published recently a series of articles on medical education in Scotland which are of very considerable interest. The names of the writers are not given, and we shall not attempt to penetrate the veil of anonymity. It is necessary, however, in order that the value of the contributions may be understood, to state that the first article in which present conditions are outlined, was by a general practitioner and the remainder mainly by teachers, who were asked to say how they thought their own subjects ought to be taught, and what, if they had an absolutely free hand, would be their ideal? The interest of the series, therefore, to a large extent, lies in the circumstance that we have in it criticisms by teachers of their own methods.

I. *General.*

The critic here states:

All turns on brains, education, and character. The material is good in the rough; it requires more careful early nurture, and the problem of special professional training will have been simplified. The position and authority of the medical profession do not depend alone on the immense importance of its duties to the commonwealth, but upon the intellectual and moral capacity of the individual to discharge them.

The rough material is good! Is it possible that here we have a weak spot in the fabric of our profession? Good rough material is obviously essential. No thin veneer of knowledge, of scholastic accomplishment or of social adaptability, superimposed upon an unsatisfactory basis, will produce a physician intellectually and morally worthy. What is the standard for our medical undergraduates, and is there sufficient promise of that standard being retained or improved in the future? Are undesirable and unsuitable candidates for admission to the profession going to be encouraged or deterred? To admit *a priori* that the material is good in the rough, appears very largely to be begging the whole question.

The critic states that an adequate general education is essential for the medical student. "Let him have this, and, as opportunities offer, all else will be added to him." A thorough, liberal, general education, and an increased breadth of intellectual outlook are here considered the great desiderata in the general training.

As regards the strictly technical curriculum, the value of the study of the preliminary scientific subjects ought to be in their enabling the student "to grasp the conception of the scientific method, while his later work should above all be practical."

II. *Anatomy.*

The writer says:

The real object of teacher and student should be to give and get at the general principles of the science without hampering the memory too much with such detail as has neither a practical application nor a place in a reasoned morphological system. . . . The more men are encouraged in the dissecting room to consider the practical aspects of their works, and the more their attention is focussed on what is of special value from this point of view, the better. That all anatomical facts are not of equal importance is, of course, admitted, but there seems room for a considerably freer interpretation of what a medical student must know in the way of detail than anatomical textbooks afford any warrant for. That histology will be transferred to the anatomical department at some future time may be hoped in the interest of concentration and condensation of the curriculum.

III. *Physiology.*

The writer on this subject demands a minimum of 200 hours for the adequate teaching of his subject; and here, again, the hope is expressed that histology will in future be taught along with anatomy and as preliminary to physiology.

My great aim would be to make lectures and textbook supplement practical teaching, and not practical teaching supplement lectures. . . .

A long experience as a teacher, tied down by the regulations of the school to which I have belonged, and a very wide experience as an examiner, have convinced me that what the student does not at present get is *real* knowledge.

A fairly frank and somewhat damning avowal! The regulations of a school have much to answer for, but can it in all fairness be said that these regulations are such as actually to prohibit the inculcation of *real* knowledge? Doubtless they may be such as do not encourage it, but that surely is a very different thing.

In Edinburgh the average student has his 250 hours of physiology, although histology is included in these. Has the personality of the teacher, have his convictions and his ideals no effect in inculcating some real knowledge during this time? Surely experience proves that the true answer is that they have a very great effect.

. . . The present system is not scientific, and the student goes from the study of anatomy and physiology to the study of medicine with a mind untrained to resist the empirical methods of diagnosis and treatment which too often satisfy his clinical teachers. . . .

I am convinced that it is the business of those of us engaged in teaching the preliminary sciences to develop a real curiosity, to break down the respect for authority, to instil a love of actual facts, and to train the powers of observation and investigation in the student, so that, as a practitioner of the coming generation, he may take his part in making medicine an art based upon science.

It is to be hoped that all teachers of physiology have convictions such as these, and at the same time are strong enough to carry them into effect, in part if not in whole.

IV. *Surgery.*

Several articles appear under this heading, included in which are systematic surgery, clinical surgery, and operative surgery. A study of the present arrangements shows that

the student is advised to begin his surgery and clinical surgery at the same time, and in the case of one university he begins clinical work before he has had surgery lectures. In all he has presumably passed his first professional, and in all he is working for his "second" when he begins his systematic and clinical work.

All the writers agree that there should be two courses in surgery of fifty lectures each. One course for juniors, to be taken after anatomy and physiology have been passed, and the other course for seniors in the final winter session. No clinical surgery work should be done until the junior course of systematic surgery has been attended.

There is no doubt that a thorough grounding in the science of his profession is an absolute necessity for the man who is to be successful in the future. It can never be attained after graduation. I would rather have the man who has the good foundation in anatomy and pathology with a smattering of clinical work than the reverse.

The first clinical work done should be in the out-patient room.

Our views on the teaching of surgery may thus be briefly defined as follows: When the student has a knowledge of anatomy and physiology he ought to attend a junior course of surgery; he then begins his clinical work, preferably in the out-patient department, when such an arrangement can be carried out; he next proceeds to clinical teaching in the wards as a junior, he dresses, and clerks, and receives bedside instruction daily; in the final winter he attends lectures upon a serious course of surgery and clinical surgery. Operative surgery ought not to be left until the last summer session, unless at least fifty working days are allowed for the course. It had better be taken in the last summer but one.

All the writers unite in requiring smaller classes and more practical work.

V. *Medicine.*

In discussing this subject considerable stress is laid on the inefficient knowledge of anatomy and physiology shown by students who have passed their professional examination in these subjects.

"Speaking broadly, one must gather . . . that the tendency of the purely scientific teachers is to teach their subjects too much as pure sciences, and not to bear in mind sufficiently the relation of the scientific facts to the use which is ultimately to be made of them by the man who is learning them." As regards anatomy, "the relation which organs bear to the surface" is inadequately taught; while, as regards physiology, "many of the results of experimental physiology are not of primary importance, and it seems a pity to waste the time of the heavily-burdened student by making him learn them, or repeat them experimentally for himself—except in so far as the experiments may give him neatness of manipulation. The broad facts of the great functions of the body, which are all that most practitioners ultimately keep in their minds, are apt to be lost sight of in the multiplicity of detail."

The clinical material in hospitals is ample, but might in certain directions be better utilized; for instance, more

attention should be directed to teaching in the out-patient departments.

Our teachers, and our students following in their wake, do not seem to me sufficiently to realize that the lives of practitioners are not spent in seeing interesting and rare cases, but largely in treating minor ailments, which are seldom seen in hospital cases.

In the teaching of systematic medicine, a great deal would be gained by co-operation between teachers, whereby the scope of work of each individual teacher would be restricted and the student would have the benefit of being taught by each man in his strongest subject.

As an adjunct to the teaching of clinical medicine the dispensaries are said to be invaluable.

In the teaching of clinical medical work, the cry, as in surgery, is for small clinics and the separation of seniors and juniors,

Tutorial classes are indispensable of course: without them it would be quite impossible to convey a thorough systematic knowledge of clinical methods.

VI. *Midwifery.*

On this head it is said:

A comparison with the clinical instruction required in the two other branches of practical medicine shows that there is truth as well as epigrammatic exaggeration in the assertion of Japp Sinclair that our students "learn surgery which they will never practise, and they will practise midwifery which they have never learned."

More particularly in the practical instruction do present requirements come short of the ideal. Gradual reorganization of maternity institutions is requisite in order to make it possible to utilize more fully the outdoor practice.

In summing up, the following recommendations are advanced:

1. That every student should be required to attend for three months the indoor practice of a lying-in hospital.
2. That every student must produce evidence that he has attended at least 12 cases of labour, the first 6 of which have been under the direct supervision of a member of the staff of a maternity hospital. To secure adequate supervision, a physician should be appointed, whose sole duty will be to give clinical instruction to students in their attendance on out-door cases. His whole time should be given to this work.
3. Certificates of attendance on cases should only be accepted from a member of the staff of a lying-in hospital.
4. Before the student is allowed to attend his cases, he should be required to produce evidence (*a*) that he has attended a course of lectures on midwifery (this need not be the full systematic course; a short preparatory course would be sufficient); (*b*) that he has attended for at least one month the indoor practice of a maternity hospital.

VII. *Medical Jurisprudence.*

Here, at last, we find a teacher ready to lighten the student's load of lectures!

The student can educate himself far more satisfactorily from a textbook than he can possibly do by listening to the formal lecture.

. . . Only a few systematic lectures are required, and those should deal mainly with the legal aspects of medicine and those branches of criminal law with which a medical man should be conversant. Practical instruction should be the aim of the teacher, as for example, the best methods of resuscitation.

Lastly, one or two lectures should be given on the important subject of medical ethics, not because it is specially related to legal medicine, but because it is specially not treated by any other lecturer. It might quite appropriately find a place in the comprehensive course of medical jurisprudence.

VIII. *Pathology.*

This subject, it is maintained, should not be taken up until the professional examinations in anatomy and physiology have been passed, and the course should consist of a junior and a senior section.

Concurrently with the junior systematic course of three months' duration, started in the January of the third winter session, there should be a practical course.

The second part of the course would be started at the beginning of the fourth winter session and would consist, as in the junior section, of lectures and practical work running concurrently. It is urged that compulsory attendance at *post mortem* examinations should be encouraged.

The subject of morbid anatomy is the branch of pathology in which improvement of teaching is most urgently required.

I should like to see more systematic instruction, on the class of demonstrations in general pathology, for senior students. There is plenty of room in the University for a lectureship on surgical pathology, on the lines of the present course of surgical anatomy.

IX. *The Specialities.*

The remarks under this heading are to the following effect:

The special subjects are each taught by one or more experts, whose tendency, at least sometimes, is to endeavour to impart to their students too much of their own learning, forgetting that the student's brain has only a limited power of absorption and that it is already overtaxed with the greater matters of medicine and surgery. In the writer's opinion, it is the common diseases on which the teacher should spend his time. . . . It is in the small classes, where the student comes into intimate relations with his teacher, that he learns most, and these should—nay, must—be increased.

Summary.

The main desiderata, as put forward by the various critics, appear to be:

1. Greater general culture.
2. More intelligent co-operation between teachers of various subjects.
3. Smaller classes.
4. The separation of senior and junior students in a subject.
5. More practical work.
6. Which is included in No. 2—that greater care be taken in the teaching of the elementary medical subjects, and more especially in physiology, in order to give to the student that knowledge which will prove of the greatest value to him in the study of his later subjects, and in his life as a medical man.

Edinburgh Post-graduate Courses.

At a recent meeting of the Executive Committee and of the lecturers and demonstrators who took part in the recent Edinburgh post-graduate course it was decided to hold a similar course next autumn during the month of September. The course will extend to four weeks, and the chief classes will meet daily. Classes will be repeated in many of the subjects during the second fortnight. All the practical classes will be strictly limited, duplicate classes being held if necessary. Special advanced classes will be conducted upon bacteriology and diseases of the blood. A composite fee of 5 guineas for the month, or 3 guineas for either the first or second fortnight, has been decided on, with a special additional fee of 1 guinea for each of several of the practical classes in which the accommodation is limited. The question of post-graduate instruction throughout the year is at present engaging the attention of the Executive Committee.

The Royal Infirmary, Edinburgh.

The report by the managers of the Royal Infirmary for the past year affords evidence of the very large amount of work which this institute continues to perform. The number of patients treated in the wards has increased, the facilities for treatment of every kind are greatly improved, and as a natural consequence the expense of maintenance has risen somewhat. Several changes in the medical and surgical staff have taken place during the year, and new posts have been created. A maximum age limit has for some time now been agreed upon by the managers, and for junior appointments seniority appears to be still the *sine qua non*. By the increase in the number of staff appointments, facilities for hospital work are offered to a larger number of junior men, although the position of the senior members of the junior staff remains as anomalous as before. The bridging over of the gulf between senior and junior staff seems still undreamt of, the facilities for independent work by members of the junior staff remain now, as ever, decidedly scanty, and naturally much experience and practice is gained by them in other institutions.

Ireland.

Sir John Byers.

At the usual quarterly meeting of the Irish Committee of the British Medical Association, held in the Royal College of Physicians, Dublin, on January 5th, the following resolution was passed with acclamation:

That the Irish Committee of the British Medical Association desire to offer to Sir John Byers their heartiest congratulations on the distinction which has recently been conferred upon him by His Majesty the King. The Committee recognize that this distinction has been richly deserved.

REPORT OF REGISTRAR-GENERAL FOR IRELAND, 1905.

The forty-second annual report of the Registrar-General for Ireland relates to the year 1905, and on the whole the picture which it reveals of Ireland is no more encouraging than that of any of its predecessors. The population continues to fall, the estimated number at the middle of the year—4,391,565—being some 90,000 under the average of the preceding ten years; the loss by emigration suffices more than to wipe out the excess of births over deaths. Emigrants numbered during the year 30,676, rather more than half being males. Out of the total 84 per cent. were persons between the ages of 15 and 35 years, only 7 per cent. were over 35 years of age.

Births.

The birth-rate for the year was 23.4 per 1,000 of the estimated population, a rate which exceeds the average for the preceding ten years by 0.2 per 1,000. There were more boys born than girls in the proportion of 104 to 100. As to legitimacy, 97.4 per cent. of all the children were found to have been born in wedlock, a result which compares favourably with the returns of most other countries. As in previous years, Connaught figured very favourably in this respect, showing only 0.7 per cent. of illegitimate births against Ulster with 3.5 per cent. The highest birth-rate—32.6—was in Dublin county borough, Belfast county borough coming next with 31.8, and co. Roscommon lowest with 18.3.

Marriages.

The marriage-rate for the year was equal to 5.26 per 1,000 of the estimated population, or 0.2 above the average for the previous decade, and higher than the rate in any of the years included. The rate corresponds to 4.95 per 1,000 of the estimated number of Roman Catholics, the marriage-rate amongst the latter being 1.19 lower than amongst persons belonging to other religious denominations. Of those who entered into matrimony, 9.1 per cent. were widowers and 4.3 per cent. widows, while in 12 out of every 100 marriages one or both of the contracting parties had been married before. No precise record appears to be kept of the ages of the persons married, but only 1.39 per cent. of the men married and 5.93 of the women had not reached their majority. These rates are considerably below the corresponding percentages for England and Scotland. The practice of signing the marriage register throws some light upon the progress of education in Ireland. Last year 83 out of every 100 husbands and 84.3 out of every 100 wives wrote their names instead of making a mark, as against 61 per cent. of the men and 50 per cent. of the women 40 years ago.

Deaths.

The general death-rate for the year shows an improvement, standing at 17.1 per 1,000, or 1.0 below that in the preceding year, and nearly as much below the average of the preceding decade. The lowest rate, 12.9, was registered in co. Kerry, and the highest rate, 23.1, in Dublin county borough. Of all the deaths, the greater number—55.2 per cent.—occurred in the first six months of the year, and nearly 14 per cent. of all the deaths took place either in workhouses or workhouse hospitals. The leading causes of death were tubercle, old age, heart disease, and bronchitis, in the order in which they stand.

Causes of Death.

Small-pox caused 5 deaths in the year, as against 1 in the year 1904, 40 in 1903, and 16 in 1902. In 4 of the cases there appears to be no clear evidence that the patient had ever been vaccinated at all, and the fifth is stated not to have been revaccinated.

Measles.—The death-rate from measles was 0 18 per 1,000 of the population; this is above the average for the previous ten years, but below many of the rates attained in some of those years. Nearly 84 per cent. of those who died were children under the age of 5 years. There was a marked difference in the rates of Dublin and Belfast; the former showing 0 25 per 1,000, and the latter 0.71 per 1,000, of the estimated population.

Scarlet Fever.—The mortality was both absolutely and relatively less than any of the previous ten years; and in ten counties no death was ascribed to this disease all.

Typhus.—There were altogether 60 deaths from typhus, or 15 more than in the previous year.

Influenza.—The deaths ascribed to this disease equalled 0 28 per 1,000 of the estimated population, 590 of those who died being males and 629 females.

Whooping cough.—The death rate for the year—0.13 per 1,000—was considerably lower than any recorded in the previous ten years: the average for that period being 0 27 per 1 000. In three counties no deaths were ascribed to this disease.

Diphtheria.—The figures under this heading include all deaths certified as from membranous croup; more than one-sixth of the total occurred in Dublin and Belfast. The precise rate is not given, but is stated to be slightly higher than in 1895, a result which is attributed to the decrease in the population.

Enteric Fever.—The mortality-rate from this disease—0.114 per 1,000—is slightly higher than the previous two years, but considerably below the average for the previous decade. The rates for the province of Ulster seem much higher than in any other county part of Ireland.

Hydrophobia.—There were no deaths from this disease in 1905, nor have any been recorded since the year 1898.

Tuberculosis.—Nothing in the report is so striking as the figures, tables, and diagrams relating to tuberculosis. The mortality-rate from this disease for the year was 2.71 per 1,000 of the population, which means that out of every 100 deaths from all diseases and all causes throughout the country, 16 were due to tuberculous disease. The rate, in short, at the present moment is even higher than it was forty years ago; while during the same period in England and elsewhere it has considerably fallen. The highest death-rate in Ireland occurred amongst those living at the 25 to 35 age-period, being 4.5 per 1,000, as against 2.0 per 1,000 in England and Wales, and 2 7 per 1,000 in Scotland, of persons at this age-period. The highest rate among adults in England and Scotland is in the following decade, or in the 35 to 45 age-period. The highest rate at any age in England and Wales—3 2 per 1,000—occurs in the population under 5 years of age, at which period the rate in Ireland is 2.7 per 1,000. Amongst Poor-law unions, Tulla showed the lowest death-rate from this disease—0 92 per 1,000—Waterford, Belfast, and Dublin all being high on the list; Dublin North, with 4.70 per 1,000, being highest of all.

Malignant Disease.—The figures under this heading in the report include all deaths described as being due to any variety of carcinoma, sarcoma, or cancer, or "malignant disease." The rate for the year—0 75 per 1,000—is somewhat higher than that recorded in 1904. As divided between males and females, the deaths show that the propertion is higher in the case of the latter than of the former, the exact figures being 0.66 and 0 84 per 1,000 respectively of the estimated populations. Comparatively very few of these deaths took place under the age of 35, the highest rate occurring in the 65 to 75 age period.

Septic Puerperal Diseases.—Altogether 656 deaths are ascribed to causes associated with pregnancy and childbirth, the total being equal to a maternal death-rate of 6.38 per 1,000 registered births. The proportion due to septic puerperal diseases was 2.2 per 1,000.

General Considerations.

The statement in the report most favourable to Ireland relates to infant mortality. Out of every 1,000 registered births, only 95 children died before they had reached the age of 1 year. Cases of longevity appear to be relatively common. Thus, out of the total number of persons who died during the year, 152 were returned as having been aged 100 years or upwards, and reasons are given for regarding these ages as correct.

A few details supplied in regard to pauperism are not encouraging; they show an increase in the number both of workhouse inmates and of persons in receipt of outdoor relief. It is not large in actual numbers, but considerable when the drop in the population is considered.

The volume concludes with some details as to meteorological conditions prevalent during the year, devised from the observations made by Sir John W. Moore; and the thanks of the Registrar-General are expressed to Dr. Ninian M. Falkiner, Superintendent of Statistics, for the assistance afforded by him in the preparation of the annual report.

HEALTH OF BELFAST.

The report of the medical officer of health of Belfast to the monthly meeting of the City Council on January 1st is most valuable, and gives evidence that the new officer is recognizing the difficulties of the task before him. He has given his Committee and the Council a new year's greeting which should act as a tonic to these bodies, which have been either too amblyopic or too invertebrate in the past. In this report, Dr. Bailie warns both authorities and the public of the dangers of contaminated milk, and gives the details of his inspection, and the measures which were being taken to have the defects remedied. As regards consumption, he enlarges on the ignorance of the public, and the best way to remedy it. Belfast is low-lying, with a high ground water, and in a great number of old houses, he says, no precautions were taken during their erection to secure the exclusion of damp and impure ground air by subsoil drainage and impervious ground floors. The town is also surrounded by hills, which tend further to increase the dampness, and so necessitate the

extra precautions of drainage to minimize this condition. Reference is also made to the small, ill-ventilated, badly-lighted, overcrowded schools, and the perennial danger to the health of the city from such institutions is pointed out. A number of recommendations in regard to consumption are made, which mostly follow the lines of the Scottish Local Government Board. The scheme put forward will altogether probably cost £3,000 a year, and so will no doubt meet with considerable opposition, but the medical officer of health will have the support of the profession in its entirety, and of the great mass of the educated public if he persists in a useful and broad scheme to better the health of the city. It is to be hoped that he will bring his reforms before the medical societies, and carry the profession with him in his endeavours. The Public Health Department and the local medical societies have in the past most unfortunately been too far separated, and a union in the future would be of the greatest public service, as well as most conducive to professional dignity. It is no little satisfaction to see for the first time some of the many defects that have been reiterated by outsiders time and again during the last few years, now publicly and boldly acknowledged by the responsible medical head of the Public Health Department.

Liverpool.

The Royal Infirmary.

The annual meeting of the Royal Infirmary is fixed for January 30th. Owing to the incorporation of the Infirmary by Royal Charter it has been necessary to codify and modify the by-laws of the institution, which the trustees will be asked to ratify. A new law provides that all the assistant staff and the officers to the special departments shall be members of the Medical Board. This is a concession for which the members of the staff concerned have been agitating at intervals for the past fifteen years.

Manchester.

Salford Poor-law Hospital.

On October 9th, 1906, by the instruction of the Local Government Board, two inspectors of the Board, Mr. Jenner Fust and Dr. Fuller, paid a surprise visit to the Salford Poor-law Hospital at Hope. The investigation, which extended over four days, was undertaken because from time to time criticisms of the administration of the hospital had been heard. The report of the inspectors describes the state of affairs in the male imbecile ward as follows:

> The cupboards on the landing were untidy, and articles of clothing, medical stores, etc. were kept anyhow and anywhere, without regard to methodical arrangement.
>
> The male imbecile sick ward was not as clean as it should have been. Some of the bedding and sheets were dirty, and had not apparently been changed for more than a week.
>
> Some of the bedsteads were in a state of disrepair.
>
> The padded rooms were not kept as clean as they should be.

The report finds fault with the manner in which the medical stores are kept, and in particular condemns the practice of keeping hypodermic tablets, such as those containing opium and morphine, which have been sent up to be given to patients and not used. This practice renders it easy for attendants or nurses to administer an opiate to a patient or to themselves on their own initiative. Comment is made on the lack of method in the storage of articles. The report continues:

> We found the milk kept in a store badly fitted for such a purpose and on inquiry as to what we done with milk which was over or which we saw in quantity we were informed that the contractor was paid only for milk returned to him in good condition. It appeared that milk was frequently sold [illegible].
>
> We consider the amount of alcohol consumed in this infirmary to be unreasonably large and consequent that in order to [illegible] to be allowed to [illegible] than three days without a requisition from one of the medical officers.
>
> The inadequacy of the laundry arrangements is referred to and it is urged that the drainage should be tested. The report says:
>
> The most serious accident met with in the laundry was [illegible] among the nurses and probably due to the faulty condition of some of the drains. . . . In many wards rat runs were observable, and rat holes were seen outside.

In a large nursing staff such as exists at the Hope Infirmary the rate of sickness should be a low one. . . . We found that at Hope from October 1st, 1905, to October 1st, 1906, 24 nurses were off duty for 532 days. This, on the total staff of 42 nurses, gives a rate of 10 per cent. of nurses off duty, whereas in a properly-organized staff, working and living, etc., under hygienic conditions, the rate of sickness should not be more than 2 per cent., unless an epidemic arose.

The inspectors recommend that the dietary for the sick should be revised, and point out that though butter is ordered in the sick diets, margarine has been given instead for many years past. The return indicating what is said to be an "unnecessarily large" use of stimulants shows a substantial increase. For the year ending October, 1905, the "pintage" used was compared with 1906, as follows:

Quarter ending	Port.	Brandy.	Gin.	Whisky.
Christmas, 1905 ...	52 ...	41 ...	2 ...	676
Lady Day, 1906 ...	100 ...	61 ...	— ...	442
Midsummer, 1906 ...	55 ...	91 ...	1 ...	473
Michaelmas, 1906 ...	84 ...	84 ...	— ...	368

The inspectors state that they have formed a decided opinion that the Infirmary is materially understaffed in every sense of the word, and that with the present constitution of the staff it is impossible there can be that proper supervision over the infirmary as a whole which is necessary to ensure the comfort and welfare of the patients, together with an economical and efficient administration.

In the appendices observations are made on the cost of food, drugs, alcohol, and other matters, such as the following:

> Whereas on Lady Day, 1903, the nurses equalled 1 for 17.25 occupied beds, at the same date in the year just closed the proportion was 1 for 18 31 beds. The cost of food per occupied bed had increased from £7 8s. in 1903 to £7 13s. 4d. in 1906.

Birmingham.

The Hospital Sunday Collection.

The Hospital Sunday Fund in 1906 yielded £5,321, which is about £600 less than the previous year. The church collections, exclusive of allocated donations, amounted to £1,437, allocated donations realized £841, and subscriptions 6 guineas. The total expenses were £347. Grants have been made to eighteen hospitals and institutions in the city. The General Hospital receives £1,473, the Queen's Hospital £1,391, the Orthopaedic and Spinal Hospital £240, and the Children's Hospital £229, while nine other institutions receive over £100 each, and five under this amount.

Diphtheria and Scarlet Fever.

A great number of cases of scarlet fever and diphtheria have been notified in Birmingham during the last few months, but both diseases are of a very mild type and only a few deaths have been recorded. During the week ending September 29th, 1906, there were 49 cases of diphtheria in the city hospitals; the numbers gradually advanced until in the middle of November they reached 103. Since this date the number has gradually declined, although quite recently there were 100 cases in the hospitals. There were 771 patients suffering from scarlet fever in hospital at the end of September, and this number rose to 982 on November 24th, while last week there were 537 under treatment. It was found necessary to close the in-patient department of the Children's Hospital completely for three weeks, on account of an outbreak of infectious disease in the hospital.

Canada.

Physical Examination at the University of Toronto.

For some years there has been a movement among friends of the University to bring about an arrangement for the physical examination of the individual students to afford data on which advice could be tendered them as to the form of exercise most suitable to the individual case. It has been apparent not alone to members of the medical profession, but to other thoughtful observers also, that many students were seriously injured physically, and

really more unfitted than fitted for the struggle of life by their years at the University. Cases have not been infrequent in which a brilliant college career has culminated in death from tuberculosis or other disease the result of overwork, faulty hygiene and habits. Students, too, have been seriously injured by indulgence in some of the more violent forms of athletics, for which, unknown to themselves, they were physically unfit.

During the last few months two deaths have followed injuries on the football field—one from fracture of the skull, the other apparently from thrombosis—and, while neither was preventable, they so emphasized the possibility of preventable injury that a plan was instituted by which all who wished to compete in the more violent games were required to undergo a physical examination and show a certificate that they were physically fit; the examination was optional with other students. Already upwards of 500 have been examined and records made of their condition, and the evidence proves the value of such an examination; many students were found who were sufferers from the effects of overstrain in the past, and therefore required careful and graduated exercise; in others exertion readily induced dilatation of the heart, and they therefore needed advice as to the amount of exertion they could safely undertake.

With the reorganization of the University and the appointment of a new President there will be, doubtless, a department formed for the physical oversight of the students in which such work as has been described will be undertaken more completely.

Medico-legal Cases.

An Appeal from the Medical Council.

We have already referred in this column to the case of Dr. Crichton of Castleton, Ontario, whose name was struck off the roll of practitioners of the province for what was, according to the Medical Council, "disgraceful and infamous conduct in a professional sense." The offence consisted in offering for sale a secret preparation, the ingredients of which he refused to make known, and which he advertised extensively, printing testimonials from prominent persons who had used his nostrum with satisfaction. The advertisement gave a list of diseases which it was claimed that the preparation would cure, including consumption.

The Council of the College of Physicians and Surgeons of Ontario have, by the Medical Act, certain powers as to the discipline of their members, and Dr. Crichton's case was investigated by the Discipline Committee, evidence being taken which, in the opinion of the College, showed that he had been guilty of "disgraceful and infamous conduct in a professional sense," and that he had endeavoured to impose upon the credulity of the public for the purpose of gain by attempting to deceive. He urged in defence that the remedy would do what was claimed for it, as the testimonials showed, and offered to make a public trial of its properties.

Dr. Crichton appealed to the Division Court against the action of the Council, and Chancellor Boyd, Mr. Justice Mabee and Mr. Justice Magee, who formed the court, unanimously declared the Council entirely unjustified in erasing the appellant's name. The court also finds that his name should be restored to the *Register*. The court, in allowing the appeal and directing that the appellant's name be restored, does so without prejudice to the question as to whether on subsequent inquiry there may not appear sufficient cause for erasing his name.

The Chancellor, in his judgement, said that the Council might have disciplinary powers in such case as where the right to practise was granted upon an engagement to conform to certain explicit conditions—as, for example, a promise not to advertise in any offensive way; but in this case, as there was no Ontario code of ethics until after 1878—which was subsequent to Dr. Crichton's registration—such a rule could not apply. With regard to the question of costs, he said: The conduct of the appellant has been such as to provoke complaint and invite investigation. He has offended against the provisions of the Ontario code of ethics, which declares it to be derogatory to the dignity and prestige of the profession to resort to the practice of secrecy on the one hand and of publicity on the other, which, though not in force when he was registered, yet declares the professional standard of conduct which he has disregarded to set up a trade standard for himself; so that in the result, while he may be right legally, he is wrong professionally. Having regard to this and other considerations, I do not think that the Council, which is performing a quasi-public duty, should be called on to pay the costs of the investigation or this appeal.

Mr. Justice Mabee called attention to the fact that the charge was advertising, and the conviction was fraud on insufficient evidence.

Liability of Tramway Companies.

In a suit brought by Dr. H. W. B. Aikins against the Toronto Street Railway to recover $25 charges for attendance on a person fatally injured by a car, which attendance was undertaken at the request of the motorman and conductor of the car, the plaintiff was non-suited, Judge Morrison giving the ruling that the railway must be consulted and agree to the liability in advance, and that the employés have no right to bind the company.

India.

Proposed Parsi General Hospital, Bombay.

A proposal has been made by Mr. Jehangir Bomanjee Petit, a prominent and wealthy Parsi citizen of Bombay, to establish a charitable general hospital for the benefit of the poorer members of the Parsi community in that city. Mr. J. B. Petit belongs to a family famed for the numerous munificent benefactions which its members have made for philanthropic purposes and institutions. He offers to contribute a very handsome sum of money towards the endowment of the proposed hospital, and suggests the appointment of a large and influential committee to collect sufficient funds for its establishment on a generous and stable basis. The hospital would eventually be under the control of a public body, and its funds vested in reputable trustees. A proposal appears to have been made to Mr. H. M. Masina, regarding whose private hospital some remarks were recently made in the British Medical Journal, to associate or absorb that institution in the new and larger and more purely charitable scheme; but after a long and somewhat unpleasant correspondence, Mr. Masina's consent to this offer could not be obtained, seemingly on account of some difficulty connected with the naming and control of the hospital, and the status of its staff. Mr. Petit has now resolved to carry out his original intentions without regard to the other institution, and we have no doubt that he will succeed.

The Plague Research Laboratory, Bombay.

This laboratory was originally established in 1897 by M. Haffkine for the preparation of plague vaccine and the investigation of plague problems. Other work has been added, and by the resolution of June, 1905, the Government of India has recognized it as a provincial laboratory for general diagnostic and research purposes. Its arrangements and staff have been extended accordingly. The report of Lieutenant-Colonel W. R. Bannerman, I.M.S., director of the laboratory, concerns the year ending March 31st, 1906. Plague work is still the main occupation of the institution, and its accommodation and appliances have been placed at the disposal of the Plague Research Commission. The manufacture of antiplague vaccine has undergone considerable increase. The number of doses issued during the year was 316,639, against 129,507 in the preceding year. They were sent to all parts of British India and the native States where plague is prevalent, to Goa, and to countries outside of India. Altogether 6,202,371 doses of Haffkine's prophylactic have been sent out since the laboratory was started. Stringent precautions are being taken to ensure sterility and uniformity. The report contains a large body of evidence regarding the safety and success of the inoculations. Some interesting facts are set forth regarding surra, and the probabilities of the introduction of sleeping sickness into India are intelligently discussed. Arrangements have been made for the instruction of hospital assistants in pathological bacteriology and for the accommodation of outside workers desirous of conducting special researches. A considerable amount of pathological and sanitary investigation was accomplished, and executive medical officers serving in the Bombay presidency have largely availed themselves of the aid afforded by the laboratory in clinical studies. The conclusion of the Plague Research Commission that "plague spread among rats and from rats to man by means of the rat flea, and by this means only," enhances the value of preventive inoculation as the chief plague prophylactic.

Successful Vaccination.—Dr. Horace J. Palmer, Public Vaccinator for the Gamlingay District of the Caxton and Arrington Union, has been awarded the Government grant for efficient vaccination.

SPECIAL CORRESPONDENCE.

VIENNA.

Regulations as to Disinfection of Dress Material and Books.—Jubilee of the Street Ambulance Corps.—Antialcohol Movement in Parliament.

THE Austrian Board of Health for Austria has issued regulations dealing with the prevention of infectious diseases as regards hospitals, libraries, and theatres. Hospitals are in future compelled to disinfect the belongings of patients suffering from or dying of diphtheria, scarlet fever, measles, typhoid, cholera, small-pox, rubeola, epidemic cerebro-spinal meningitis, mumps, whooping-cough, puerperal sepsis, and all other septicaemic diseases, before returning them to the patients on their discharge, or to their friends on their death. The disinfection is to extend to the wearing apparel of "contacts." Theatres must provide for the disinfection of all costumes worn by more than one actor within the week, especially the material that comes in contact with the skin. Lent books and music must be disinfected after use; but as no satisfactory mode of disinfection of such articles is at present available, printed notices are to be inserted into each volume lent by circulating libraries, warning readers not to wet their fingers with their saliva on turning the leaves, and requesting them to cover the book with paper while reading it. Infectious diseases occurring in a reader's family must be brought to the notice of the proprietor of the library, who is bound to withdraw infection-bearing volumes from circulation for a fortnight, and have them disinfected with formalin gas.

The twenty-fifth anniversary of the foundation of the Vienna Volunteer Street Ambulance Corps was celebrated on December 8th. The corps was founded under the impression of the fearful disaster in 1881, when upwards of three hundred lives were lost in a fire at the Metropolitan Theatre. The provisions for first aid at that emergency were so inadequate, and the great loss of life was so visibly due to lack of trained assistance, that on the morning following the publication of the appeal, sufficient funds and sufficient men were available to start the corps at once. The originators and propagandists of the movement were not medical men—indeed, the institution was at first viewed with rather hostile eyes by the majority of the practitioners for several reasons. Within a year or two, however, it gained the support of the profession, and medical students were encouraged by the university to enter the corps. From the beginning the corps refused all work other than first aid in accidents, suicides, and the transport of emergency cases to hospitals. It served as a model for a large number of similar corps in many cities of the Continent, and its economical management found many admirers. Recently, the Government ordered fifty army surgeons to enlist in the corps for a period of six months, in order to obtain practical experience in first aid intervention. The amount of the work done can be easily estimated from the fact that, whilst the number of "calls" in 1882 was 3,809, it reached 28,000 for the first ten months in 1906, averaging 90 calls a day. The term "volunteer" is no longer exactly correct, because all officers are paid, whilst formerly they had nothing but their meals in return for their services; but the funds are still entirely raised by voluntary contribution. The expenditure for this year reached £10,000. There are two stations, and the staff consists of fifteen surgeons, several juniors, well-equipped ambulances, horse and motor cars, and a number of instructors for the Samaritan school, which is open to all adults.

The Austrian Parliament has now under consideration a Bill dealing with a reform of the universal suffrage in this country. The fraction of abstainers has brought in an amendment to exclude all persons known as habitual drunkards or persons coming to the polling station in a state of intoxication or otherwise under the influence of alcoholic beverage. The amendment was defeated; still it is a sign of the times that such a proposition could be discussed seriously in Parliament. The Vienna "Club der Abstinenten" proposes to nominate a candidate for Vienna who would be obliged to vote in the sense of the club. A proposal to exclude habitual alcoholism among the causes which make a man unfit for nomination to public positions was defeated on the ground that such a condition need not be specially mentioned by law.

CORRESPONDENCE.

THE PUBLIC HEALTH SERVICE OF ENGLAND AND WALES.

SIR,—I cannot agree with you that there need be any difference of opinion as to whether the administration of the Public Health Acts should be transferred from rural district councils to county councils. The county council is, without doubt, the proper body to carry out these Acts, and all that is necessary is to make it compulsory upon county councils to appoint a medical officer of health. If this is done there would very soon be an improvement in the sanitary state of country districts. Why cannot the same arrangements be made in England as have been in force for some years in Scotland?—I am, etc.,

January 7th. M. H.

KING EDWARD'S HOSPITAL FUND BILL.

SIR,—I notice in last week's BRITISH MEDICAL JOURNAL that one of your correspondents makes reference to an inaccurate report of certain remarks I made at a meeting of the Council of King Edward's Hospital Fund at Marlborough House on December 17th in reference to the above Bill. A condensed but substantially accurate account of what I said was reported in the *Hospital* of December 22nd, p. 217, as follows:

Sir William Collins said he welcomed the proposed incorporation of the Fund, because, as His Royal Highness had foreshadowed, it would be followed by regularizing and defining the duties of the various Committees of the Fund. He had not been able to read the Bill through since he entered the room, but it occurred to him that Clauses 5 and 8 might give rise to discussion in the House of Commons, and might necessitate some give and take. As a member of the Lower House, while voting for the approval of the Bill at that meeting, he desired to reserve some liberty of action when the matter got into Committee in the Commons.

On noticing the incorrect report which appeared in several papers I at once wrote to Sir Savile Crossley, Honorary Secretary of the Fund, and he kindly undertook that the report should be revised in any further notice and in the minutes.—I am, etc.,

London, N.W., Jan. 7th. W. J. COLLINS.

SURGERY PATIENTS.

SIR,—The letter of Mr. Daniel in the BRITISH MEDICAL JOURNAL of December 29th, 1906, raises a rather important question of ethics. Most medical men of any lengthy experience in general practice will, I think, agree that the first rule to which he refers is pretty universally observed, but as to the other it is not quite so easy always to distinguish between *meum* and *tuum*. Suppose, for example, one is attending a person who has been a recognized patient for some considerable period. For some possibly trivial reason the man is dissatisfied and goes to another doctor's surgery, just by way, it may be, of "trying" him. Of course, this second practitioner is rarely, if ever, told of the patient's previous career, and unless he takes the precaution of inquiring is quite unaware of any other medical man being in actual attendance. The only feasible plan, so far as I can see, is for the wayfarer to be directly questioned on the point, but in the hurry of surgery work I believe this is very seldom done. It must, I should say, be pretty generally agreed that the same rule should be applied to all cases of this kind. I am, etc.,

Swinton, Jan. 2nd. SAMUEL HOSKGOOD.

EARLY DIAGNOSIS OF EXANTHEMATOUS FEVERS.

SIR,—With reference to Dr. MacCombie's lecture about the exanthem, which appeared in the BRITISH MEDICAL JOURNAL of December 22nd, 1906, p. 1757, I should like to remark that there is one point of diagnostic importance about small-pox which was not noticed, doubtless from inadvertence, namely, the early appearance of shot-like nodules under the skin, which can be felt by passing the hand over the surface but are not visible.

Also about the rash of scarlatina, the erythematous condition of skin after belladonna has been taken presents very similar appearance.—I am, etc.,

Llandrindod, Dec. 31st, 1906. FREDERICK T. FAGGE.

THE INFLUENCE OF FEEDING IN THE TREATMENT OF TYPHOID FEVER.

SIR,—For the last five years, since I have been in charge of a hospital for infectious diseases, I have applied physiological principles in the feeding of my typhoid fever patients.

In the first two and a half years of my incumbency I had a considerable amount of clinical material for observation, but owing to the extraordinary diminution of typhoid fever in this borough during the last three years, my later experience has been more limited.

Briefly, I argue that when a patient is in the typical typhoid state, with dry mouth and parched tongue, it is practically certain that all the natural digestive ferments are at a low ebb. The dry mouth excludes starchy food. The diminution in amount and activity of the gastric and intestinal juices indicates that only liquid articles capable of rapid absorption should be given. This, in my opinion, should exclude ordinary milk, which we know by analogy, from our experience with infantile diarrhoea, is not properly digested in acute bacterial intestinal intoxications, but leaves the stomach and enters the intestinal tract in a partially solid, acid, irritating form.

In short, it is of the utmost importance to remember that, even under normal physiological processes, milk becomes in part a solid food in the healthy stomach, and must therefore necessarily be rather an irritative food in acute bacterial intestinal inflammation. This objection does not apply to whey, which is suitable alike for infantile diarrhoea and typhoid fever. On the other hand, when the mouth and tongue are moist, the teeth in good condition, and the salivary function not in abeyance, there can be no sound physiological objection to allowing a little stale, well-boiled bread crumbs, or even stale bread and butter, provided mastication is enforced, because the solid bread is rapidly converted into sugar in a state of solution, and does not enter the intestines in a solid form at all. In fact, very little of it even reaches the intestines, and none would remain unconverted long before the usual seat of typhoidal lesions was reached.

It will be seen that I am in strong agreement with Mr. Prideaux Selby and others as to the general inadmissibility of milk and the clear indications for whey in the treatment of the early and middle stages of typhoid fever, while, on the other hand, I cordially support Dr. A. G. Barrs and Dr. F. J. Smith in allowing bread or fish, etc., before the temperature has definitely settled, directly there is sufficient saliva being secreted to convert the bread starch into dissolved sugar, or sufficient gastric juice to deal satisfactorily wish small quantities of fish, etc.

During the years 1901 to 1905 I treated 123 cases of typhoid fever with 10 deaths. Six of these deaths were unavoidable, the patients being moribund on admission to hospital under my care; four admitted with perforative peritonitis; one with uncontrollable vomiting; one with severe pulmonary complications. One further death occurred long after defervescence from malnutrition after fifty days in hospital, very extensive sloughing having taken place during the febrile stages, the loss of large portions of intestinal mucous membrane, involving death from starvation; one died from haemorrhage, and the remaining two deaths occurred while I was on a holiday.

Omitting the six unavoidable deaths which were quite independent of any question of feeding I treated 117 cases with four deaths between August, 1901 and December, 1905. These figures, though rather small, will at any rate justify the inference that the methods of feeding employed could not have acted detrimentally for the patients, seeing that the death-rate was very low as compared with that for typhoid fever generally, even if the mortality be reckoned on the 10 deaths among 123 patients treated. For instance during the same period 70 other cases were by permission treated in the same hospital by other doctors, with 13 deaths, making a total for the hospital of 193 cases with 23 deaths. The case-mortality among the patients under my care (including all deaths, even those of patients who did not survive admission to hospital more than a few hours) was only 8.1 per cent. as compared with the average mortality of 18.5 per cent. under ordinary methods of treatment, this latter mortality, as well as the causes of death in my own cases, proving that we were dealing with typhoid fever of average severity and fatality.

Unfortunately the textbooks in general almost universally name milk as the staple diet for typhoid fever. In my own opinion and experience it is an inappropriate food for typhoid fever because of the large, firm, cheesy curds formed in the intestines. I can recall more than one case coming under my care, most seriously ill with high temperature, and distended abdomen, and with all the symptoms of malignancy of attack. My first treatment on learning that the diet hitherto has been milk is to administer a few grains (2 to 4) of calomel followed up by 2 drachms of castor oil, at the same time administering a copious simple or oil enema. These methods generally result in the excretion of large quantities of irritating casein matters, and the general symptoms of acute poisoning immediately abate. The routine diet I prescribe as a rule during the height of the disease is whey, one beaten-up egg, and beef tea, including under the latter term all strained meat and vegetable soups.

The effect of calomel is many-sided. It is partly expurgative and partly antiseptic, not only through its own intrinsic qualities, but by stimulating that natural intestinal antiseptic and secretion stimulator, the bile.

Though it is impossible to sterilize the intestinal tract, antisepsis can be carried out to a considerable extent by virtue of such drugs as hydrarg. cum creta, gr. ½ t.d.s., the chlorine mixture of Burney Yeo, acetozone, etc. The last mentioned can be given *ad libitum* if 20 gr. is freely diluted in a quart of water, thus securing also the enormous therapeutic value of large quantities of water.

The question of feeding in typhoid fever may be summed up in a sentence: "Judicious application of physiological principles." This involves the remembrance of the fact that milk becomes partly solid and bread liquid in the course of digestion.—I am, etc.,

J. T. C. NASH, M.D.Edin., D.P.H.Camb.,
Physician and Medical Superintendent, Borough of Southend-on-Sea Infectious Diseases Hospitals.

COMPRESSED DRUGS AND SELF-DRUGGING.

SIR,—I should like to call the attention of the profession to the abuse of compressed drugs sold under various names. On principle I never order any pill or powder that can be obtained by the public in the form of compressed drugs. The profession loses thousands of pounds yearly by carelessness in this matter. To-day, a servant girl, who is a good patient of mine, called with two bottles of compressed drugs, asking me how many of these she ought to take. One bottle contained remedies whose ingredients were arsenic and strychnine and on the bottle the word poison was written in small letters.

All drugs can be obtained in the form of pills and capsules and the profession should taboo all firms who cater in this way for the public who often are led to the use of poisonous and harmful drugs because So-and so says a friend was ordered them by her doctor. Surely medical men are right in protecting their own interests and those of their patients. Many medical men will keenly unite to resist some grievance which does only a little of the harm done by the wholesale spread of compressed drug treatment by amateurs. Compounds containing nux vomica, arsenic, sulphonal, opium, etc., are daily seen in the rooms of our patients, and medical men ought to warn their patients against taking these on their own responsibility, and in this way discountenance one of the evils of our times. There is no doubt that certain firms cater almost entirely for this public taste.—I am, etc.,

"COMMON SENSE."

THE INFLUENCE OF RAINY WINDS ON PHTHISIS.

SIR,—It is unfortunate that Dr. Milton has raised the question of my personal opinion of any particular sanatorium. No good purpose can be served by discussing it here, and I must decline to do so, except so far as to say that his information has been incorrect.

Dr. Milton's comment on the figures for Exeter streets constitutes not an objection, but an explanation which seems to amount to an acceptance of my conclusions.

But the backbone of his letter is his reference to Dr. Pearse's paper. Any one who wishes to read this paper will find it in the *Journal of Balneology and Climatology*, October, 1904. The statistics contained in it relate to the ten years 1861 to 1870. I am fortunately able to check

part of them from the figures collected by Dr. Harper for our joint paper. Our figures were taken with great care from the death registers, together with details of each case, and were carefully revised before our paper was compiled. The following table speaks for itself:

Female Deaths from Phthisis 1861 to 1870.

	Dr. Pearse's Figures.	Our Figures.
Bittadon	5	0
Countisbury	0	0
Martinhoe	0	1
Trentishoe	0	1
Kentisbury	0	3
East Down	0	3
Berrynarbor	1	3
Martlhoe	2	3
Brendon		4
Parracombe	2	5
Georgeham —	6	9
Combe Martin	0	14
Total	9	46

Dr. Pearse's statements regarding shelter and exposure, as well as geology, on which he rightly lays stress, are almost as inaccurate as his statistics for North Devon. He describes Bittadon, Brendon, and East Down as exposed to west and north-west winds. A few minutes' careful examination of the Ordnance Survey maps will convince any one that the houses in these parishes are remarkably sheltered from those winds. In the table quoted by Dr. Milton of parishes receiving "the full burst of Atlantic winds" Meavy is included. Now, Meavy is rather well sheltered from westerly winds. As an example of the geology of the paper I submit this table:

	Dr. Pearse's Geology.	Ordnance Survey Geology of Sites of Houses.
Harford	Granite	Granite, a few houses on Devonian.
Sheepstor ...	.	Granite, a few houses on Devonian.
Walkhampton ..	.	Houses partly on granite, partly on Devonian
Sampford Spiney	..	Some houses on granite, most on Devonian
Meavy ..	..	Devonian, very few houses on granite
Cornwood	.	Devonian, scarcely a house on granite
Shaugh	..	Devonian, scarcely a house on granite
Peter Tavy ..	.	Mostly on granite, a few houses on dolerite.

Into this quaint collection of inaccuracies Dr. Milton has further introduced one or two of his own. In the passage of his letter, "Shaugh, with a mean population of 425, etc., the word "male" is omitted, which occurs in the original; the female phthisis death rate of Shaugh is given by Dr. Pearse as 1.59 per 1,000—not that I attach the least importance to that. Again, Ermington is described by Dr. Milton as an "exposed village"; Dr. Pearse does not so describe it, and for once I think he is right. Again, in the list quoted of Lustleigh, etc., Dr. Milton has omitted Moreton.

I do not think that Dr. Milton's letter has helped his case. I am, etc.,

[illegible] W. COMPTON.

THE VENOUS PULSE.

SIR,—In the BRITISH MEDICAL JOURNAL for December 22nd, 1906, Dr. Morrow in discussing the interpretation of the venous pulse, condemns the views I have given of certain waves obtained from the human pulse. As a goodly number of my papers have been published in the JOURNAL, and as the subject is beginning to be studied in this country, and as many of those who have studied it have accepted my interpretation, I feel obliged to reply to some of Dr. Morrow's statements.

The manner in which I take tracings is somewhat simple. Thus, I place a cup over the lower part of the neck covering a part of the carotid artery and internal jugular vein. The tracing thus obtained shows evidence of the movements in both artery and vein; and in my analysis of the tracing, I was able to separate the movement due to the carotid from that due to the jugular. In my book on the pulse, I publish such an abundance of facts proving this statement that it has become generally accepted. Dr. Morrow, on the other hand, says I have called a wave a carotid wave when that wave has absolutely nothing to do with the carotid. I was interested to see how he would explain away the reasons I had given for my view, and was somewhat surprised to find that he simply ignored all my facts. I think it a pity that in discussing a scientific subject writers should shut their eyes to all the facts that tell against their argument. I had taken such pains and had gone into such detail to prove my statements, that I certainly thought that Dr. Morrow would at least have given them some consideration. He, however, brushes them aside, and to prove me wrong merely gives a tracing where he has clamped the carotid artery and still found the carotid wave to persist. I had already asked Professor Cushny to investigate this subject, and he took tracings from a dog, with the artery and vein lying side by side, and obtained tracings with the carotid wave well marked. He then dissected the vein away from the carotid, and obtained a tracing of the jugular pulse with absolutely no sign of a carotid wave in the tracing. I can only conclude that in Dr. Morrow's experiment he had neglected to consider the fact that there might be a recurrent pulsation in the carotid. He states further that I found no arterial wave in tracings from the femoral vein; I am not aware that I ever said this. I have said I have never found it present in the many tracings I have taken from the liver. I have shown simultaneous tracings from jugular and liver, identical in all particulars with the exception that the carotid wave which is present in the jugular is absent from the liver. But this is an observation which Dr. Morrow ignores.

Dr. Morrow finds a rise in his tracing of the auricular pressure at the beginning of ventricular systole. I have examined a large number of auricular curves by many observers, and find an extraordinary confusion amongst them. It has seemed to me that the forcible contraction of the ventricle would very likely affect the manometer in the auricle, and thus convey an artificial movement to the tracing. At all events, careful observers have been able to get tracings without this movement. Hering introduced a cannula into the jugular vein, by this means using the jugular vein as a portion of the manometer, and obtained excellent tracings of the pressure in the auricle. In eleven tracings which he gives, there is not a sign of any rise of pressure at the time of the beginning of the ventricular systole.

While the ventricle is in systole the blood returning from the veins is stored up in the auricle. If this blood is large in amount it will overfill the auricle and extend back into the superior vena cava, and, it may be, into the jugular. If it extends into the jugular it will appear as a wave in the tracing at the end of ventricular systole. When I considered the source from which this blood came, I concluded that it could only come from the great veins, but as I found this wave in cases of tricuspid regurgitation, I reasoned that another source of the increase of blood would be from the ventricle. I watched cases for years carefully, taking tracings of them and examining the heart *post mortem*, and found distinct evidence of dilatation of the tricuspid orifice, or of damaged tricuspid valves. No doubt could be raised against the view that in these hearts tricuspid regurgitation had taken place during life. By watching other cases for years I was able to demonstrate that this wave, which I had called ventricular, increased in size until finally it occupied the whole period of ventricular systole. Every observer recognized the fact that when this wave had attained this size it was due to tricuspid regurgitation; and it was to emphasize the fact that there was a connexion between the small wave appearing at the end of ventricular systole and the wave

during the whole of ventricular systole that I called the wave in its rudimental form the ventricular wave. I produced such evidence again in evidence of this fact that many people accepted my interpretation, but here again Dr. Morrow simply ignores all the facts I have produced. That the wave may appear in a great many people in whom one can find no evidence of tricuspid regurgitation I readily admit, for the only requisite for its appearance is simply a sufficient engorgement of the right heart and veins with blood, and if the quantity from the periphery is sufficient, one does not need to assume, in the absence of other evidence, any addition back from the ventricle. It may be that I have unduly emphasized the importance of the regurgitant factor, but my reason for this was that previous observers had altogether failed to recognize the effect a slight or moderate tricuspid regurgitation would have upon the venous pulse.—I am, etc.,

Burnley, Dec. 23rd, 1906. J. MACKENZIE.

TRYPSIN IN CANCER.

SIR,—With reference to Dr. Barling's letter in your issue of December 22nd, 1906, may I be permitted to point out that much of the trypsin put on the market for cancer injections is absolutely devoid of digestive properties—that is, is not trypsin at all, but only glycerine and water? Enterprising drug firms have risen to the occasion and are producing "trypsin" with no previous knowledge or experience of the preparation of ferments or how to preserve the same. Perhaps this may have been the cause of Dr. Barling's unsatisfactory results. A few simple test-tube experiments will easily confirm the above statement, and perhaps, if Dr. Barling had the opportunity of seeing in slides in my possession the histological changes produced in cancer cells by undoubted trypsin, he might be induced to make further trial.—I am, etc.,

F. W. LAMBELLE,
Edinburgh, Dec. 22nd, 1906. Captain R.A.M.C.

FASHION IN MEDICINE.

SIR,—There is a fashion in most things, and medicine during the last ten years has appeared to me to be as much under its sway as dress or charity.

We have seen the influence of fashion in the prevalence of sluggish livers, gouty tendencies, uric acid excess, fresh-air hunger, and now the reign of arterio-sclerosis is upon us. Half one's duties as a medical man is devoted to explaining away the diagnosis of the fashionable physician, which, however creditable to the diagnostician, is particularly unfortunate for the patient, who readily makes a pet of the *maladie à la mode*.

For the moment the Riviera would appear to be out of fashion in a medical sense. Here, again, the physician may have theoretical reasons in his favour; but the number of visitors who defy current advice and come to the Riviera notwithstanding, with benefit to themselves, suggests there is a mistake somewhere, and it is just possible that the error is with their advisers.

A glance at the map shows that the Riviera is by the sea. It is usually described, therefore, as having a marine climate, and patients whom a seaside residence does not suit are ordered elsewhere. The Riviera, however, while by the sea as regards position, is remote from the sea as regards climate. Every evening the air sets seaward, coming down through the coast towns from the high mountains behind them. The sleeping population at night time are as much in the mountains as if they were in Switzerland. During five-sevenths of the days the air also passes seaward from the land, and even when it drifts in from the sea it is commonly not a sea breeze, but merely the night air drawn back again as the land is warmed by the sun. It does not resemble sea air, being cool, crisp and dry—a simple land lubber returning to port. True sea winds usually bring rain here, and as rain is the exception so is the sea climate.

The so-called "treachery" of the Riviera climate is a second stumbling-block. It is, however, merely the treachery of a strong and useful medicine ignorantly used. The penalty of folly is not paid by the invalid, who is duly instructed; but by the healthy visitor, who, mistaking sunshine for summer, drives about without overcoat or wrap, and cools down after exertion in a refreshing draught. Not a few of these unfortunates belong to the medical profession, who, in the first and only week they visit the Riviera, acquire a prejudice which lasts them a lifetime for consulting-room purposes.

Probably the value of the Riviera for lung troubles is due to the same causes which operate in the Engadine: mountain air, dry atmosphere, and abundant sunshine, with the additional advantage to many invalids of decreased elevation and increased warmth. Though it is necessary for invalids to take certain precautions, even as it is in health stations generally, these precautions present no difficulty, and in practice it is found, as pointed out years ago by Dr. Bennet, that when the weather is most unstable and trying patients do best. Just as Oertel and Schott have shown for the heart that graduated exercises are better for many sufferers than calm repose, so the climate of the Riviera appears to tax the adaptation powers of the lung just sufficiently to exercise them, and, in spite of complaints, progress is better than when the atmospheric conditions are more soothing, sedative, and equable, and so apparently more favourable. Any relief afforded the lung reacts upon the heart, and many patients now come out for relief with heart affections.

Catarrhal troubles, whether of the ear, the bronchi, or the alimentary tract, do excellently on the Riviera. A striking example of the effect of the climate on suppuration of the middle ear occurred in the case of a sister of the writer, who, after five months' treatment in England, was sent by Dr. Laidlaw Purves to Mentone to gain strength prior to mastoid operation. Within a week pain and suppuration ceased, and hearing, absent even through the bone, commenced to return. Ten years' residence in England since has caused no relapse, and a watch can now be heard several inches from the ear.

Many visitors make the Riviera their winter home because of rheumatism, gout, or renal troubles, and find it more satisfactory than elsewhere.

For sleeplessness the Riviera is not a specific; on the contrary many people sleep badly, as they do in mountain air elsewhere. By closing their windows, however, they can usually sleep well. Often people prefer, as being the correct thing, to risk being driven into an asylum through insomnia rather than use a little common-sense, and remember that their mouths and noses would have been larger had the one condition and purpose of their existence been to breathe an excess of cold fresh air, and neglect all other body wants.

One great merit of the Riviera is its effect on the appetite: almost every one eats well. There is no difficulty with regard to food, except how to procure it, and for invalids and convalescents appetite is an item of no mean moment. "The fashion of this world passeth away" and it is to be hoped that before long a more correct appreciation of the Riviera climate may make it as popular with the medical profession as it is with their patients.—I am, etc.,

Mentone, Jan. 1st. D. W. SAMWAYS.

YELLOW FEVER IN BELIZE.

SIR,—In a letter signed R. Ross, A. Breinl, and J. L. Todd, in your issue of December 1st, 1906, the authors fear lest my "many errors" may "obtain even a temporary acceptance." Their method of proving me to be in error is peculiar. They assert that I am "evidently ignorant" of certain matters of common knowledge. This is the *argumentum ad hominem*. "This fallacy is, in fact, the great resource of those who have to support a weak case."[1] It is out of place in a discussion of this sort.

Heartily in sympathy though I am with Major Ross and his colleagues in the matter of mosquito extermination, I am not blind to the fact that the requisite measures are costly, and that they have not proved as successful as one could wish. The results in some cases are sufficiently encouraging to justify further experiment; but costly experiments are out of the question when the purse is small.

The Liverpool School of Tropical Medicine adopts the hypothesis that with an epidemic of yellow fever in progress no measures can be successful unless they include mosquito extermination. If this dictum be accepted it will effectually stop action being taken in small communities, which cannot afford to exterminate mosquitos during the short period that an epidemic is in progress. Happily this hypothesis cannot be sustained.

[1] Jevons, *Elementary Lessons in Logic*, 1880, p. 178.

"A single absolute conflict between fact and hypothesis is fatal to the hypothesis."[2] Our facts are in conflict with the hypothesis. Professor Boyce tried to explain away these facts by setting up a theory which I have shown to be untenable.

His colleagues now suggest that our measures could not have been successful, because, in their opinion, they fail to reach mosquitos infected *ab ovo*. I see no difficulty in this. Our measures were directed to protect mosquitos from infection and to destroy infected mosquitos. The laying of infected eggs was thus prevented, or, if such eggs were laid, their development into mosquitos was arrested by the oiling of the water containing them.

Thus far we are the only British community to test the mosquito theory with an epidemic of yellow fever in progress. Setting aside the problem of mosquito extermination as being beyond our immediate capacity, we adopted the procedure which proved of service in eradicating foci of infection in Havana in May, 1903.[3] The result was we stamped out our epidemic in Midsummer week, within six weeks of the recognition of the first case, without coercion, with little loss of life, and with trifling cost. The Liverpool School of Tropical Medicine see nothing in this, beyond that the facts conflict with their hypothesis. It is interesting, therefore, to cite the opinion of an unbiassed outsider, an American expert of twenty years' experience on yellow fever work, and with practical knowledge of Belize. "No better piece of yellow fever epidemic work is on record," says Dr. Thomas of the New Orleans Quarantine Service.[4]

Where the finances are small and it is desired to exterminate mosquitos, the period between epidemics is the proper time to act. With an epidemic in progress it is foolish to fritter away one's limited resources by undertaking to solve a problem of this magnitude within the limited time.

Major Ross and his colleagues have misread my letter. I nowhere admit that the whole population was probably immune in 1891. Writing with the avowed object of proving Professor Boyce's theory to be absurd, I granted him all his premisses. The more I granted the worse for his theory. Hence, I granted that the whole population of 1891 was immune; but, even after making this preposterous concession, I proved that in 1905 there were 5,000 non-immunes—that is, one-half of the population. This shattered Professor Boyce's theory. His colleagues now plead that among the 5,000 non-immunes there may be some immigrants from "fever-ridden territories" and who were immunes. To meet this, I shall make what every one who knows Belize will know to be another preposterous concession. I shall grant we had 1,000 such. Even now the result is the same. Professor Boyce's theory is demolished. A theory which can be so easily demolished, in spite of such preposterous concessions, is of no value.

The extremist hypothesis that yellow fever can be stamped out in any place only provided *Stegomyia* is exterminated is not 'absolute conflict,' not only with our facts, but with the history of yellow fever. In the Old World, Spain and Sierra Leone are examples of places where yellow fever gained a foothold and disappeared; but *Stegomyia* remains. The detailed history of our West Indian colonies furnishes other examples. New Orleans has paid a severe penalty for blindly accepting this dogma and its corollaries. After Havana had been cleared in 1901 all quarantine restrictions were removed. Yellow fever reappeared in Havana in 1905, and Dr. Thomas expresses it as his 'unshaken belief that yellow fever was imported into New Orleans from Havana in 1905' by means of persons who travelled during the period of incubation, and developed the disease after arrival at New Orleans.[5] It is idle to turn a blind eye to such facts.—I am, etc.,

C. H. Eyles,
Colonial Surgeon.

Belize, Dec. 17th.

THE PROPOSED UNION OF MEDICAL SOCIETIES.

Sir,—In the British Medical Journal of December 15th, 1906, you kindly published an appeal from me against this union and, feeling deeply interested in the joint letter of Messrs. Latham and Pendlebury in the

[illegible]

[illegible]

[illegible] forty-eight hours.

Journal of December 22nd, 1906, I now ask you to give me space for the following few comments thereon.

In my humble opinion the grave fact of the Medical Society refusing to join the union (at which I rejoice) ought to be ample reason to stop further action, but beyond this, the Honorary Secretaries' letter is sufficiently conclusive to the same effect.

Of twenty-five societies only twelve have decided to join the union; whilst of the other thirteen, five definitely refuse, four will only join under certain conditions, and with the remaining four peculiar difficulties are stated to exist.

Surely, by the Honorary Secretaries' own showing, the term disunion is more applicable to the case than union. With such want of harmony, how can the Royal Medical and Chirurgical Society continue to support this scheme, considering, also, all this old and powerful Society must lose thereby.

I regret that the Honorary Secretaries have not told us the "certain conditions" under which alone four societies will join, or how the difficulties raised by some societies about medical women becoming Fellows have been surmounted.—I am, etc.,

A. B. R. Myers,
Brigade Surgeon-Lieutenant-Colonel.

London, S.W., Jan. 5th.

MEDICINE AND THE LAY PRESS: A PROTEST.

Sir,—I should like, if I may, to add my protest to that of Dr. J. Hopkins Walters against the action of the *Practitioner* in allowing the contents of its January issue to be published and advertised in the lay press. I have before me the following extract from the *Daily Mail*:

Those who desire to obtain the special Influenza Number of the medical journal the *Practitioner* (from whose advance proofs the *Daily Mail* recently made a number of extracts on the aspects and treatment of this malady) will now find it on sale.

As the humble contributor of a letter to the January *Practitioner* on a non-technical subject I should like to say that nothing would have induced me to write it had I had the slightest idea that it was likely to be read by the public. I should, indeed, have considered it an act of professional indecency to do so; and that, I think, is how the action of the *Practitioner* is regarded by the profession, if I may judge from the private letters I have received on the subject from other medical men.

I am sending a copy of this letter to the editor of the *Practitioner*.—I am, etc.,

J. D. Rawlings.

Dorking, Jan. 8th.

OBITUARY.

EDWARD ASHBY FARDON, M.R.C.S., L.R.C.P.,

RESIDENT MEDICAL OFFICER, MIDDLESEX HOSPITAL.

The death occurred on Wednesday, January 2nd, at St. Lawrence, Ventnor, Isle of Wight, of Mr. E. A. Fardon, who for nearly thirty years had held the appointment of Resident Medical Officer at the Middlesex Hospital.

Mr. Fardon came of a Quaker stock, his mother being a Bell of Alton, a descendant of one of the original Quakers, who up to the time of her death in 1895, at the age of 84 years, regularly wore the Quaker bonnet and grey dress peculiar to that Society. She was related by marriage to Elizabeth Fry and the Gurneys of Earlham.

One of a family of six, Edward Ashby Fardon was born in 1846, and after receiving his education at the Quaker School at Sidcot in Somersetshire entered the salt works owned by his father, Joseph Ashby Fardon, at Droitwich, remaining there until he was 27 years of age, during which time he acquired business habits and knowledge which were of great value to him in after life. Finding business life uncongenial, he decided to enter the medical profession, and defrayed the cost of his medical training by means of his accumulated savings, subsidized by money earned in the form of scholarships and prizes.

It was thus he came to enter the Middlesex Hospital as a student in 1873; he obtained the diploma of M.R.C.S. in 1878, and that of L.R.C.P. in 1879. He filled the offices of House Physician, Junior and Senior House Surgeon, and then of Resident Obstetric Assistant. During his tenure of the last-named post that of Resident Medical Officer

became vacant, and he was selected to fill it. Here he found his life-work, and although he had many tempting offers to engage in private practice, for which he was eminently fitted, he refused to avail himself of these, preferring, with singular whole-heartedness, to devote himself to the interests of the Middlesex Hospital. Throughout his long term of office he enjoyed the complete confidence of the Board of Management, the staff, resident staff, officials, and nurses, to all of whom he was ever willing to render sympathetic assistance.

At his initiation to a great extent, and always guided by his counsel and careful supervision, many alterations and reforms were effected in the hospital, the nursing department, and in the school. Amongst these mention may be made of the Resident College for Students, the Trained Nurses Institute, the Convalescent Home at Clacton, the laundry at Hendon, the removal of the kitchens from the basement to the upper floor of the hospital, additional wards, the operating theatres and sterilizing apparatus, the New Cancer Wing and Cancer Research Laboratories. It may with truth be said that in every department of the hospital there are distinct and lasting evidences of Mr. Fardon's administrative energy and ability.

For several years he acted as Honorary Secretary to the Royal British Nurses Association, and was of great service in guiding the affairs of that body during a troubled period of its history.

It was close upon two years ago that it was discovered that Mr. Fardon had glycosuria, and in spite of careful dieting and treatment, signs of ageing and lessened vigour became increasingly apparent. In the summer of last year signs of pulmonary tuberculosis developed, and in spite of all that the best advice could suggest and careful attention provide the disease rapidly progressed. He was laid to rest in the churchyard of the old church of St. Lawrence on January 5th, and at the same time a memorial service was held in the Chapel of the Middlesex Hospital which was filled by a large and sorrowing congregation. Noticeable amongst these were His Excellency the Greek Minister, Lord Cheylesmore, and Lord Sandhurst, many members of the Weekly Board of Governors of the hospital, and of the staff and a large number of past and present students and nurses.

WILLIAM TRAVERS, M.D.Dur., M.R.C.P.Edin., F.R.C.S.Eng.

WE regret to record the death, on December 17th, 1906, of Dr. Travers of Kensington, at the age of 68. He was the second son of the late Frederic Travers of Poole, Dorset; was privately educated, and was a pupil of the late Dr. Salter of Poole. He studied medicine at Charing Cross Medical School, and became L.S.A. in 1859, M.R.C.S.Eng. in 1860, L.R.C.P.Lond. in 1861, F.R.C.S.Eng. in 1864, M.R.C.P.Edin. in 1876, and M.D.Durham in 1879. After serving as House-Surgeon at Charing Cross Hospital in 1859, he succeeded the Founder as Resident Medical Officer, and held the post for six years. He commenced private practice in Kensington in 1866, and remained at work there until his death. He was Physician to the Chelsea Hospital for Women from 1883 to 1894. He was a member of the British Medical Association and a Fellow of the Medical Society of London, the Obstetrical, and Gynaecological Societies. Of the last of these he was one of the founders; he was a member of its Council from its inauguration, and for a few years Honorary Treasurer, being compelled by failing health to decline the Presidency. He was also a member of the Clinical Society and the West London Medico-Chirurgical Society (of which he had been President), and was one of the founders of the Anthropological Society. He had been a Freemason since 1865, was a Past Master and Father of St. Mary's Lodge, one of the founders of the Durham University Lodge, and of the Cavendish Chapter. Altogether he was a man of wide sympathies and keen activity, a charming companion, and was held in the highest repute by a large circle of patients and by his fellow practitioners.

Dr. Travers married, in 1869, Annie, daughter of the late Thomas Pocock, solicitor, of Bartholomew Close, E.C., and he leaves a widow, six sons, and a daughter. Of the sons, the eldest, Dr. F. T. Travers of Maidstone and Dr. E. F. Travers, who was his father's assistant, are in the medical profession.

The first part of the funeral service was held at St. Mary Abbott's Church, Kensington, where was a large congregation, including several medical friends of the deceased, amongst them being the President and several Past Presidents of the West London Medico-Chirurgical Society; the interment took place at Kensal Green Cemetery.

THE death took place on December 2nd, 1906, of Dr. ROBERT TRAVERS LEWIS, of Willingham, Cambridgeshire, at the comparatively early age of 47. Ever a lover and encourager of healthy outdoor pastimes, Dr. Lewis went to watch the football match at Cambridge between the University and the West of Scotland teams, and on his return home complained of feeling unwell. Shortly afterwards he developed acute pneumonia, and, in spite of the assistance rendered by specialists both from Cambridge and London, succumbed after a brief illness. Dr. Lewis, a Trinity College student, obtained his M.B. in Dublin in 1885, and in the year following became also B.S.; after a few years spent in practice in Ireland he settled at Willingham. There he was Medical Officer and Public Vaccinator of the First District of the Chesterton Union. He played such an active part in the general life of the village that his death leaves a gap which will not easily be filled. Gifted with no small share of humour and many other pleasant qualities he enjoyed much popularity among his patients and neighbours of all denominations, and he had long been a recognized leader both in the outdoor life and business affairs of the locality. The funeral took place on December 5th, the coffin being carried to the graveside by eighteen members of the local cricket club in relays and preceded by representatives of various local enterprises and the officials of several friendly societies. Dr. Lewis was a member of the Cambridge and Huntingdon Branch of the British Medical Association, and leaves a widow and four children.

MAJOR MAURICE O'CONNOR DRURY, Royal Army Medical Corps (retired), died at Cynghordy, Carmarthenshire, on December 18th, 1906, aged 49, from a gun accident. He joined the Army Medical Service as Surgeon, July 31st, 1880, and became Surgeon-Major, July 31st, 1892. He was at Suakin during the Soudan expedition in 1885, receiving a medal with clasp and the Khedive's bronze star; in the Burmese campaign in 1886-7, for which he was mentioned in dispatches; and in the South African war in 1899-1900, receiving the Queen's medal with two clasps.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Alexander E. Macdonald, Professor of Psychological Medicine in the University of New York, and President of the American Medico-Psychological Association, aged 61; Dr. Alonzo Garcelon, a former President of the American Medical Association, and some time Governor of the State of Maine, aged 93; Dr. Henrotin, a leading gynaecologist of Chicago, aged 59; Dr. Alexei Jerojeff, Ordinator of the Moscow University Clinic, aged 43; Professor A. Buchwald, Lecturer on Materia Medica and Internal Medicine in the University of Breslau, aged 61; Dr. W. J. Herdman, Professor of Diseases of the Nervous System in the University of Michigan, aged 58; Dr. E. Hayoit de Termicourt, Professor of Forensic Medicine in the University of Louvain, Vice-President of the Belgian Academy of Medicine, author of textbooks of medical pathology and forensic medicine, and of monographs on albuminuric encephalopathy and the cephalic complications of dyspepsia, aged 74; and Dr. Francisco de Paula Fajardo, a leading clinician of Rio de Janeiro, author of numerous writings on bacteriological, epidemiological, and other subjects, aged 42.

WHAT is called an international course of forensic psychology and psychiatry is to be held in the University of Giessen during the week beginning April 15th. It is designed especially for lawyers and medical practitioners, and will include lectures and demonstrations, and every day one hour's free discussion, which may be carried on in German, French, or English. Further particulars can be obtained from Professor Dr. Sommer, Klinik für psychische und nervöse Krankheiten, Giessen.

MEDICO-LEGAL AND MEDICO-ETHICAL.

CORONERS AND INQUESTS.

"Sending for the Doctor."

We have to thank a Yorkshire correspondent for sending newspaper cuttings containing coroners' remarks at inquests. In the course of an inquest at Sheffield on a child aged 2 years, the son of a Darnall collier, the child's mother said it had recently had bronchitis and measles. On the Wednesday it became worse and she sent for a doctor, who did not attend. A servant who answered the door, said the doctor had been ill himself and could not come, but he drove past her house next day. She did not call another doctor, and on Friday pneumonia supervened, and the child died. After the death her sister went to the doctor for a certificate, but he refused to give one, and told her to call in a policeman. The Coroner: That was good advice. Witness: Advice! My children are as dear to me as his are to him, only we are not in the same circumstances. The Coroner: Did you owe him anything? Witness: Only 3s. since the end of summer. The Coroner said medical men were not bound to attend. They sold their skill in the same way as shopkeepers sold their goods. They were not bound to sell their goods. The jury returned a verdict of "Died from pneumonia and measles." The evidence of the mother illustrates the apparently incorrigible belief that anybody who chooses to send for a doctor has a grievance against him if he does not go. Assertions of this kind are, we believe, often made in order to cover or excuse parental dilatoriness or neglect, and in an annotation on pp. 37-8 of our last issue the manner in which the difficulty is met in Paris was pointed out.

No Inquest.

R. E. L. writes questioning the action of the coroner in declining to hold an inquest on the body of a child 3½ years old who died suddenly on Christmas Day without previous illness or medical attendance. He was called in to see the body of the deceased, but declined to certify the cause of the death, and referred the parents to the police, stating, in his opinion, that an inquest would be held. Two days after he received an intimation that the coroner declined to hold an inquest, and that he had sent the necessary notification to the registrar to that effect to enable the death to be registered and the funeral to take place. The father of the child would much have preferred that an inquest should have been held, as many unkind remarks had been made by neighbours.

*** It is to be presumed that the coroner must have made preliminary inquiries and satisfied himself that the death was from natural causes. By the Coroners Act, 1887, the coroner is directed to hold inquests in cases in which he is informed that there is reasonable cause to suspect that such person has died a violent or unnatural death, or has died a sudden death of which the cause is unknown. Under these circumstances we should have thought an inquest should have been held to ascertain the cause of death and to satisfy all concerned in the matter. If our correspondent and the relatives of the deceased still remain dissatisfied and believe that the death may not have arisen from some natural cause, they can lay the facts before the Lord Chancellor, who would probably communicate with the coroner on the matter.

Amateur Prescribing.

The Scarborough Borough Coroner, Mr. George Taylor, held an inquest at Scarborough last week on Mr. Arthur Booth, aged 41, who died at Scarborough as the result of an overdose of chlorate of potash, taken for sore throat and influenza. The coroner, in opening the inquiry, said deceased had been advised by a friend to take tablets or lozenges containing chlorate of potash. The friend's father had, he said, taken a considerable quantity of these tablets, and had derived great benefit from them. He had taken as many as half an ounce at a time. Deceased acted on the advice of his friend and took a quantity of the tablets. He had half an ounce on Thursday morning and half an ounce on Thursday evening. The method of taking them was to dissolve them in water and sip the water. Mr. Booth was taken seriously ill after consuming the tablets and was apparently suffering from caustic poisoning. These tablets were sold in large quantities by chemists, and though chlorate of potash was really a poison, yet it was not listed among the poisons to which chemists had to draw special attention when selling to customers. Taken in small quantities the tablets might have a beneficial effect. A tablet contained about 5 gr. There were about sixty tablets in the ounce, so that if an appeared deceased had taken that quantity, he must have consumed about 400 gr. According to the authorities 5 gr. was the maximum quantity that should be taken. He (the coroner) was not suggesting any criticism on the part of any one, but this case showed the fool's and danger of any one recommending a drug of which he could have little or no knowledge whatever.

Evidence having been given of the purchase of the tablets and of their having been recommended to the deceased for influenza and quinsy from which he was suffering, by a friend of his, a photographer, Dr. Thornley gave it as his definite opinion that the cause of death was an overdose of chlorate of potash. He would consider anything over 20 gr. an overdose. The minimum fatal dose, in his knowledge of such cases, was 225 gr., taken during five days at the rate of 45 gr. a day. Probably the first dose had not taken full effect when deceased took the second dose. Chlorate of potash showed no symptoms until it was absorbed.

The coroner had suggested an adjournment for the purpose of a *post-mortem* examination, but the jury, after hearing Dr. Thornley's evidence, returned a verdict of death from misadventure.

The coroner said that if the inquiry had the effect of drawing attention to the desirability of care in taking drugs of that nature, then they would have done good service. He also wished that chemists might recognize the desirability of giving advice to people as to the quantity of chlorate of potash to take, as some people treated the lozenges as sweetmeats. He further commented upon people recommending drugs of the effect of which they had very little knowledge.

The Workmen's Compensation Act.

At the close of an inquest at Bury, Mr. S. F. Butcher, Bolton District Coroner, and ex-President of the Coroners' Society of England and Wales, referred to the latest amendment of the Workmen's Compensation Act. He expressed his regret as a coroner that Parliament had not thought fit to adopt the proposal made by the House of Lords, under which men of advanced age and indifferent health might have been permitted to contract out of the Act. It was a matter of the experience of all coroners that there was a growing disinclination on the part of employers to employ men of advanced age and indifferent health. Consequently the difficulty of such men finding employment became greater every day.

PRESCRIBING CHEMISTS.

An inquest was held in Westminster on January 7th on the body of a woman, aged 58, in respect of whose death no medical certificate seems to have been forthcoming. Throughout her last illness she had been under the treatment of a chemist. The latter had not seen the deceased, but had had her symptoms described to him by a customer. The chemist implicated in the affair said that he was manager to a company trading as chemists. He had said from the first that the deceased ought to have a doctor, but as he had known the lady who had asked him for medicine for her friend for a long time, though he did not know her name, he thought he would give her a simple mixture. He knew what to give the deceased because he had had the same symptoms himself in an exaggerated form, and he judged partly from what his doctor gave him. He did not believe it would be possible for a chemist to keep open a shop if he did not prescribe. People often asked for expensive proprietary articles, and insisted on having them, although he could supply them with something much better. Chemists were in an awkward position, and they did not look upon prescribing as a wrongful act. As a fact, the deceased improved after his medicine.

Medical evidence was given to the effect that the cause of death was heart failure, brought about by cystitis and chronic Bright's disease. The medicine prescribed was suitable to the complaint, but the case was a very serious one.

In summing up, the coroner said that the case raised a very old question as to how far chemists were entitled to go when people went to them for medicine. He could only trust that the discussion of the case might induce the public to take a more reasonable view of the matter and not to ask chemists to do what they did not seem able to resist. It was obvious that the public were very much to blame in the matter.

The jury returned a verdict in accordance with the medical evidence.

LIABILITY FOR ATTENDANCE ON DOMESTIC SERVANT.

The words, "arising from accident," were inadvertently omitted from the concluding sentence in the reply under this head published in the Journal of January 5th, p. 57.

SECRET COMMISSIONS.

The *Times* in a recent issue has thought fit to extract from a report on secret commissions issued some years ago by the London Chamber of Commerce certain statements reflecting upon the medical profession, and several correspondents have drawn our attention to one made by a person described as "an optician, jeweller, and silversmith," who stated that "it is an open secret that hospital doctors receive commissions from makers of surgical instruments." Our correspondents indignantly allege that this statement is not true; we, however, are in the more elementary stage of not understanding what it means. Does it mean that hospital doctors receive commissions for instruments supplied to the hospital, or does it mean that they receive commissions for instruments, such as orthopaedic appliances supplied to their private patients? If the former interpretation is that intended the statement is absurd and untrue; if the second, it is simply untrue. In our judgement the London Chamber of Commerce acted improperly in circulating a statement of this kind; being anonymous it could not be tested, and could only be met by a general

denial; the mere fact that the statement was made by a person not engaged in the trade of a surgical instrument maker ought to have aroused a suspicion in the minds of any business men that the information was untrustworthy.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

ANNUAL REPORT FOR 1906.

Numbers of Students.

THE annual report states that during the past year the total number of matriculated students (including 463 women) was 3,199, being the highest number for thirteen years. Of this number, 1,500 (including 35 women) were enrolled in the Faculty of Medicine. Of the students of medicine, 681, or over 45 per cent., belonged to Scotland; 301, or 20 per cent., were from England and Wales; 136 from Ireland; 82 from India; 272, or over 18 per cent., from British colonies; and 28 from foreign countries. These figures show that the proportion of non-Scottish students of medicine is well maintained. The number of women attending extra-academical lectures, with a view to graduation in medicine in the University, was 71.

Degrees Conferred.

The following degrees were conferred during 1906: Bachelor of Medicine and Master of Surgery (M.B., C.M.), 1; Bachelor of Medicine and Bachelor of Surgery (M.B., Ch.B.), 186 (including 17 women); Doctor of Medicine (M.D.), 90 (including 2 women); Master of Surgery (Ch.M.), 1; Mus.B., 1. The General Council of the University now numbers 10,086. The diploma in tropical medicine and hygiene was conferred on 5 candidates. The special certificate in diseases of tropical climates was conferred on 60 candidates (including 8 women).

Fellowships, etc.

The total annual value of the University fellowships, scholarships, bursaries, and prizes now amounts to about £18,520, namely, in the Faculty of Arts, £11,005; in the Faculty of Science, £1,545; in the Faculty of Medicine, £3,630. A number of bursaries are in the gift of private patrons, but the great majority of the University bursaries, prizes, etc., are awarded by the Senatus after competitive examination. In addition to the above, a sum of upwards of £600, being the income of the Earl of Moray Endowment Fund, is annually available for the encouragement of original research.

The Carnegie Foundation.

Although the Carnegie Foundation has not so far effected a manifest increase in the number of students, it continues to be noticeable that many who avail themselves of the section of the scheme which provides for the payment of class fees take out a larger number of classes than they would probably otherwise have done. Of those who have been appointed to Carnegie post-graduate fellowships and scholarships, and who have received grants in aid of research, a considerable proportion are graduates of the University of Edinburgh.

Lectureships, etc.

A Lectureship in Systematic and Clinical Gynaecology was instituted by the University Court early in the year, and Dr. A. H. Freeland Barbour has been appointed Lecturer. The Court has also instituted a lectureship, to be called the George Coombe Lectureship on Psychology (General and Experimental), towards which a handsome endowment has been contributed by the trustees of the late George Combe, and Mr. W. G. Smith, M.A., Ph.D., has been appointed Lecturer.

Benefactions.

Among the benefactions gratefully acknowledged, in addition to those noted above, are a gift by Lord Leith of Fyvie of a bust of Dr. James Gregory, formerly Professor of Practice of Physic in this University, and a further gift by the Rev. Professor Gwatkin, D.D., Cambridge, of a collection of molluscan radulae for the microscope.

Additions to the Library.

Additions to the University Library for 1906 numbered 6,389, being an increase from the previous year. Among them was a valuable collection of medical books and surgical instruments from Mrs. Charles Flushing.

Cataloguing of the Library, etc.

The cataloguing of the library having been completed in the early months of 1906, the remaining part of the year has been occupied by the cataloguing staff in the alphabetical arrangement of the entries and insertion of cross-references—an operation which is expected to come to an end in the course of the present year. The number of volumes dealt with so far in the general library is about 210,000; but in addition to these several departmental libraries have been catalogued, notably the theological and the physiological libraries, as have also been the medical books in the reading-room of the new buildings. The cataloguing has brought to light a considerable number of incomplete works and the want of others which, it is thought, a university library ought to possess, and the filling up of such gaps is being steadily kept in view, a grant made by the Carnegie Trustees for this purpose having placed the Library Committee in a more favourable position for doing so than was formerly the case. The question as to the printing of the catalogue will have to be considered as soon as the alphabetical arrangement of the entries is complete, but so far no funds seem to be available for this purpose. A short catalogue of some 25,000 books in the library for the use of students was completed and issued early in the year, and has already proved of considerable service, both to the library staff and to borrowers generally.

University Union.

The extension of the University Union is almost complete, and all the rooms are now occupied. The additional accommodation provided consists of a large library, a reading and writing room, several new committee rooms, cloak rooms, etc.; the enlargement of the entrance hall, a large new kitchen, and other service accommodation, etc., together with two fives courts. Sir Donald Currie and Dr. Andrew Carnegie have each promised £6,000 towards the extension scheme if the Union and its friends raised the remaining £6,050, making in all £18,000. Of this £6,000 there has already been subscribed £5,000, and the Committee of Management is trusting to friends of the Union and of the University to help it to raise the remaining £3,000 as quickly as possible, so that the £12,000 offered may be secured.

CONJOINT BOARD IN IRELAND.

THE following candidates have been granted the diploma in Public Health:

*C. S. Davis, *A. W. Tuke, Captain R.A.M.C., T. Barry, R. J. Cahill, R.A.M.C., J. Coffey, P. E. Hayden, P. J. O'Farrell, F. W. S. Stone.

* With honours.

HOSPITAL AND DISPENSARY MANAGEMENT.

LOCAL AUTHORITIES AND CONSUMPTIVES.

A CONFERENCE of Middlesex Councils was recently held at the Guildhall, Westminster, to consider a proposal made at the general meeting of the Middlesex District Councils Association not long ago, that the local authorities in the county should combine for the purpose of providing hospital accommodation for persons suffering from consumption. Mr. A. W. W. King (Acton), the Chairman of the Association, said it was the duty of public health authorities to take measures to check the mortality from consumption and the lowering and weakening of efficiency caused by that disease. They had the power of spending the ratepayers' money to try to counteract the effects of the disease; but, at the same time, they had to consider questions of finance, and that made it difficult to take the necessary steps unless the cost was kept down as much as possible. Colonel Gerard Clark (Honorary Secretary of the Executive Committee of proposed Middlesex Open-air Sanatorium) said it was estimated that the capital cost of furnishing the house and providing everything to deal with fifty patients at a time would be £2,500, which sum might possibly be provided by private persons. The rent of the house would be about £160 a year, and the full maintenance charges would not be more than 25s. a bed per week, a total cost annually of about £3,500. He felt it was necessary to make a beginning, that, although the taking of a house with about 2½ acres of ground was by no means an ideal scheme, it would start the movement, which could later on be further developed. The fifty beds would deal with only about 100 patients a year, but at the present time that would be a step in the right direction. It was decided to form a subcommittee to go into the matter fully, obtain information as to action (if any) taken by various districts, to communicate with the Mount Vernon Hospital authorities, and prepare and circulate full reports, to be considered at an adjourned meeting of the Association.

ROXBURGH, BERWICK, AND SELKIRK DISTRICT ASYLUM.

THE serious overcrowding which has existed for some years at this asylum was relieved in September, 1905, by the opening of the new male hospital buildings for occupation by patients. It has been built to accommodate 95 patients and 12 attendants, besides furnishing a general bath-room for the whole male side. It has been erected at a total cost of £216 per bed, which is more than £80 less than the average for Scottish asylums.

The Medical Superintendent, Dr. J. Carlyle Johnstone, says that the male infirmary section of the new building has been placed under the care of female nurses, and that the patients in this part will be nursed and attended to by women day and night, the whole section being under the charge of a trained hospital nurse. Up to the time of writing his report, Dr. Johnstone had found this method of distinct benefit to the patients and free from objection. Commissioner Fraser also speaks in his report in praise of female nursing, and congratulates warmly the District Board and Dr. Johnstone on the admirable arrangements made for the treatment of the sick, acute, and recent cases.

The Medical Superintendent's report is for the year ending May 15th, 1906, and from this we see that on May 15th,

1905, there were on the asylum register 321 patients, of whom 10 were absent on probation. On May 15th, 1906, there were 331 patients on the register, of whom 9 were absent on probation. The average daily number resident was 314, and the total number under care during the year 387. During the year 66 cases were admitted, 51 of whom were first admissions.

In 23 the attacks were first attacks within three and in 12 more within twelve months of admission; in 18 the attacks were not first attacks within twelve months of admission and the remainder were of more than twelve months' duration (9) or congenital cases (4).

The admissions were classified as to the forms of mental disorder into: Mania of all kinds 24, melancholia of all kinds 32, secondary dementia 2, general paralysis 2, acquired epilepsy 2, and congenital or infantile defect 4. As to the probable causes of the insanities amongst the admissions, alcoholic intemperance was assigned in 8, or 12 per cent., previous attacks in 20, moral and mental causes in 24, puberty and the menopause in 18, and the remainder were distributed over other usually cited causes. Hereditary influences were ascertained in 33 or 50 per cent., and congenital defect existed in a further 6.

During the year 18 were discharged as recovered, giving a recovery-rate on admissions of 27.2 per cent., which is considerably lower than the average for this asylum, namely, 33.3 per cent. There were also 10 discharged as relieved, 1 as not improved, and there were 27 deaths.

The deaths, giving a percentage death-rate on the average numbers resident of 8.3, were due in 7 cases to cerebro-spinal diseases, with only 2 deaths from general paralysis, in 9 cases to chest diseases, in 1 case to suicide by hanging, and the remainder to abdominal and general diseases, including 4 from old age. Pulmonary consumption appears as the sole cause in 3 cases, but as contributory factor in 7 more, or in a proportion to the total deaths of 11 per cent. as sole cause, or 37 per cent. as sole and contributory cause combined. Dr. Johnstone, however, states that pulmonary tuberculosis was present in an active form in 40.7 per cent. of the total deaths. This high proportion of cases of tuberculous diseases is attributed by Commissioner J. Macpherson to the overcrowding which existed for so long in this asylum. Major casualties were few in number and no mention is made of the occurrence of any zymotic disease.

SUFFOLK COUNTY ASYLUM.

ON January 1st, 1905, there were 828 patients in this asylum, and on the last day of the year there were 860, giving an increase of 32 on the previous year. Of this number 30 belonged to the county, which is a considerably larger figure, Dr. J. R. Whitwell, the medical superintendent, says, than the average. Altogether there were 1,032 cases under care during the year, the average daily number resident being 850. During the year 204 were admitted, of whom 167 were first admissions. In 78 cases the attacks were first attacks within three, and in 17 more within twelve months of admission; in 60 the attacks were not first attacks within twelve months of admission; in 26 the attacks were of more than twelve months' duration, and the remainder were either congenital cases (15) or of unknown duration (5). The admissions were classified as to the forms of mental disorder into mania of all kinds 76, melancholia of all kinds 84, dementia of all kinds 13, general paralysis 4, acquired epilepsy 9, and congenital or infantile defect 15.

As to the probable causes of insanity amongst the admissions intemperance in drink was assigned in 22 or 10.7 per cent., venereal disease in 1, accident or injury in 11, puberty, old age and the menopause in 19, various bodily diseases in 33, previous attacks in 61, and moral causes in 50. Hereditary influences were ascertained in 82 or over 40 per cent., and congenital defect in a further 16. With regard to the causation of insanity Dr. Whitwell makes some exceedingly interesting observations in the course of his report, which would well bear careful perusal. Intemperance in drink at this asylum, as is shown by the percentage of 10.7 of the admissions in which it could be alleged, does not, he says, figure largely as a direct causative agent in individual cases; "in so many cases in which it is put down as a cause it is easy to ascertain that it really was a sequence and in that way rather a symptom." Again in "General Conclusions" he refers to this point. "It is unfortunately a fact that the public at large persist in the deadly error of delusion that the main causes of mental disease are drink, love and religion, and of this there is no authority to say these being more frequently comparatively trivial causes but distantly related to the main cause, they also practically fail to recognise that the allied neuroses such as chorea, hysteria, somnambulism, migraine, neurasthenia, imbecility, and poverty, and a hundred other hereditary antecedents, are most important evidences of instability of the nervous system, are in fact the ready recognisable disease expressions of heredity. And just so long as this mental attitude of the public exists it is hopeless to believe that the cases here admitted can have any controlling influence of mental disease in the community."

We could quote with advantage much more of what Dr. Whitwell says, but for this we must refer readers to the report itself.

A further point to be dwelt upon was the large number of the admissions who had had previous attacks, and the possibility of their propagating during their period of liberty from their neurotic stock. Dr. Whitwell shows how this is unavoidable under the existing laws, and does not see, supposing the law were altered in the direction of further detention of such cases after apparent recovery, from whence the funds would be forthcoming for their maintenance. Even legal restriction in marriage might not lead to the desired result, as it is, he maintains, an unproved assumption that the progeny of an insane person is necessarily liable to insanity.

During the year 50 were discharged as recovered, giving a recovery rate on admissions of 27.32 per cent., 24 as relieved, 10 as not improved, and there were 88 deaths. The deaths, which give a death-rate on the average numbers resident of 10.35 per cent. were due in 17 cases to cerebro spinal diseases, including seven deaths from general paralysis; in 16 cases to chest diseases; in 23 cases to abdominal diseases with 18 deaths from nephritis, subacute and chronic, and in 32 cases from general diseases, including 18 deaths, or 19 per cent., from tuberculosis. The casualties during the year were remarkably few in number, no major accident having to be recorded and no inquest was held.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

AMERICAN PUBLIC HEALTH ASSOCIATION.

WE learn from *Science* of December 28th, 1906, that the American Public Health Association, at its thirty-fourth annual meeting, held last month in Mexico City, passed the following resolutions:

Whereas a correct registration of births, marriages, and deaths is necessary to indicate not only the natural increase of population, but also the measure of the health conditions and the effectiveness of sanitary operations in any country. Whereas with the increase in numbers, wealth, and age of the populations of the several States and provinces, the necessity for evidence of births, marriages, and deaths in cases of wills, pensions, insurance, crimes, etc., becomes daily of increasing urgency. Whereas comparisons of the health conditions of different countries and districts and climates is only possible through the existence and study of such records. Whereas international comity and treaty stipulations not infrequently involve agreements touching the transmission of records relating to the births, marriages, or deaths of individuals travelling or residing in foreign countries; and whereas such registration is imperfect or wholly wanting in some of the States of the countries registered in this Association. Therefore be it

Resolved: That the Secretary of this Association be instructed to transmit a copy of this resolution to the Governors and Boards of Health of such States and Provinces urging the desirability of effective legislation on this subject.

Whereas, the American Public Health Association is of the opinion, and has heretofore so expressed itself, that public health matters confronting the four countries embraced in this Association can only be adequately administered by extending the powers and duties of their several chief executive and administrative health officers, and, whereas, this Association believes that such questions can only be satisfactorily dealt with by the establishment of a national department of health, with a Cabinet Minister at its head, in each country.

Therefore, this Association, with a view to prosecute so desirable an end, creates a committee consisting of three members from each of the four countries represented in the Association, and to be nominated by the President, the first-named member for each country to be chairman of that subcommittee, and the chairman of the subcommittee of the United States to be its general chairman. This committee shall formulate what in the opinion of the Association should be the extent of the work, powers, and duties of a national department of health, and the subcommittee of any of the four countries shall take any steps deemed practicable by it to carry out the purpose of this resolution, and to this end be empowered to enlarge its committee as it may deem proper.

HEALTH OF EDINBURGH DURING 1906.

SIR HENRY LITTLEJOHN, M.O.H. Edinburgh, reports that during 1906 the number of deaths registered was 4,868, giving a death rate of 14.26 per 1,000. Of this total, 360 were under the age of 1 year, 486 between 1 and 5 years, 570 between 5 and 20 years, 1,401 between 20 and 60 years, and 1,616 over 60 years, including 78 who were over 90 years. Diseases of the chest accounted for 1,074 deaths, while 391 were due to phthisis and 217 to other forms of tuberculosis. Old age and debility caused 477 deaths. The deaths from zymotic causes numbered 295, of which 129 were due to measles, 15 to diphtheria, 36 to whooping-cough, 24 to scarlet fever, 25 to erysipelas, 11 to typhoid fever, 9 to puerperal fever, and 1 to relapsing fever.

Births.—The number registed during 1906 was 7,042, giving a birth-rate of 22.41 per 1,000. The males numbered 3,944, and the females 3,775, while 617 were illegitimate.

Notifications.—During the past year 2,147 cases of infectious disease were notified in terms of the Infectious Diseases (Notification) Act, 1889, comprising 967 scarlet fever, 667 diphtheria and croup, 351 erysipelas, 141 typhoid, 11 puerperal, and 1 relapsing fever.

The City Hospital.—1,079 cases were admitted to the City Hospital, of which 1,044 were measles, 880 scarlet fever, 489 diphtheria and croup, 148 erysipelas, 146 typhoid,

75 whooping-cough, 38 chicken-pox, 7 puerperal fever, and 48 for observation; 333 patients derived benefit from residence at the Convalescent Home at Musselburgh.

VACCINATION.

The Duty of a Public Vaccinator when Four Marks are Refused

A CORRESPONDENT writes: I am public vaccinator of a very large district, and the bulk of the population is essentially working-class—in fact, it is a dockyard town. I have held the appointment for four years, but contrary to most of your correspondents have never experienced any difficulty whatever with parents refusing to have more than one or two marks. I trust therefore that if "Sigma" adopts the same methods as I do he will find his difficulty minimized to a very great extent. My guide as to the number and size of the "marks" I should make is Instruction No. 7, under "Instructions to Vaccinators under Contract," reprinted from the third schedule of the Vaccination Order, 1898, to be found at the commencement of the Vaccination Register. It runs: ". . . The public vaccinator must aim at producing four separate good-sized vesicles or groups of vesicles not less than half an inch from one another. The total area of vesiculation resulting from the vaccination should not be less than half a square inch." Now I take that to mean that I must do my utmost endeavour to vaccinate in four places; but where this is refused I am at liberty to vaccinate in a less number, "provided the total area of vesiculation is not less than half a square inch." When I am asked to vaccinate in less than four places I do not refuse—on the contrary, I willingly acquiesce—but I tell them at the same time that the smaller the number of spots the larger they will have to be, and I should not advise them to have less than four, as four smaller spots will heal quicker than one very much larger one. The answer almost invariably is, "Oh, please put four, then." I have just been through my register, and I find on only about a dozen occasions out of about 2,500 vaccinations have the parents insisted on having three spots, and on not a single occasion have they insisted on having a less number, as the idea of having larger spots seems to convert them instantly. I see no reason, therefore, why, if "Sigma" follows the same rule as I have done, he should have any more trouble. I take it that we are quite at liberty (if a parent insists) to vaccinate in one place, provided the area of vesiculation is not less than half a square inch, but that we must always use our best endeavours to vaccinate in four places—which I do with the success already mentioned. I may add that if the very unlikely occurrence ever happened to me of a parent insisting on only having one or two small places, I should decline to vaccinate and mark the case "refused" on the H form, and they would very soon get a notice from the vaccination officer to have their child vaccinated within a fortnight, failing which a prosecution would follow.

MEDICAL OFFICERS OF HEALTH TO RURAL DISTRICTS.

L. H.—As long ago as 1893 a letter signed by 250 medical practitioners in England and Wales, all of whom held public health diplomas, was addressed to Sir Walter Foster, who was then Parliamentary Secretary to the Local Government Board, urging that the Board should issue a circular to sanitary authorities of districts having a population under 50,000 suggesting to such authorities that they elect to the post of medical officer of health, *whenever possible*, a medical man having a diploma in sanitary science, public health, or State medicine. Sir Walter Foster replied that as authorities of districts with a population less than 50,000 were excepted by statute from the obligation to appoint a specially qualified medical officer of health the Board could not properly carry out the request made to it. Since this letter was written many advances in public health administration have been made and there would be no harm in our correspondent detailing to the Board the facts connected with the election of a medical officer of health to the rural district in question and stating that one applicant for the office held a diploma in public health and the others did not.

WE understand that the Departmental Committee on the London Ambulance Service has not yet held its first meeting. The question whether the meetings are to be open to the public will, we presume, then be settled. We venture to express the hope that this course will be taken, inasmuch as one of the most important results of the labours of the committee will be the education of public opinion upon this subject. If the evidence is reported in the press from time to time after each meeting it will undoubtedly attract much more attention than it could receive were it buried in a Blue Book which may not be issued for many months; even when issued it would not be possible for the newspapers to give to the evidence and report on a single day the amount of space which would undoubtedly be allotted if the material were received in instalments.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National):—
EDITOR, 2631, Gerrard. GENERAL SECRETARY AND MANAGER, 2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

EXTRACTER asks how best to produce anaesthesia of the gums for tooth extraction. He has tried eucaine and an American preparation for the purpose, but cannot insert sufficient to have the desired effect.

HASTINGS would like advice *re* the following case: E. S., aged 52, in the summer of 1905 was severely bitten by ants about the legs. There was great inflammation followed by deep gangrenous ulcers, excessive pain and distress. The patient, who was passing through the menopause, was kept in bed for three weeks, and was on the sofa three more before the return of anything like health. There is now a large patch of pigmented skin, slightly raised, presenting the appearance of a map, purplish in centre, venetian red at the edges; in fact, exactly like the representation of naevus telangiectodes in Jacobi's *Atlas*. The patient is a nervous haemophilic woman, and if the patch could be made less pronounced she would be happier.

TREATMENT OF PARTIAL PTOSIS.

C. M. R. asks for suggestions in the treatment of weakness of one upper eyelid in a lady aged 63 years. The lid drops down and sometimes completely shuts. She dates it from a bite of an insect on the inner upper side of the lid about a year ago. There is nothing wrong with the lid. The other eye and lids are normal.

STEAM MOTOR CARS FOR MEDICAL MEN.

A COLONIAL MEMBER asks for information about the Turner-Miesse steam car, with special reference to working reliability, hill climbing, power, and durability. Experience of other steam cars would be also welcomed. Petrol cars present many difficulties in a distant colony far from expert repairers. Is the impression correct that steam cars require less constant supervision and "tuning up?"

MACCONKEY'S MEDIUM.

M.O.H. asks for "the formula of MacConkey's medium for the detection of *Bacillus coli* in water."

*** We presume that our correspondent refers to MacConkey's bile salt broth medium, which is used in the preliminary tests for the identification of this organism. The following instructions for the preparation of this medium are taken from Eyre's *Bacteriological Technique*, a book which our correspondent would find useful: (1) Emulsify 20 grams of Witte's peptone with 200 c.cm. of distilled water previously warmed to 60° C.; (2) dissolve in the peptone emulsion 5 grams of commercial sodium taurocholate and 5 grams of glucose; (3) wash the peptone emulsion into a flask with 800 c.cm. of distilled water, and heat in the steamer at 100° C. for twenty minutes; (4) filter through Swedish filter paper into a sterile flask; (5) add sterile litmus solution sufficient to colour the medium a deep purple; (6) fill, in quantities of 10 c.cm., into tubes containing small gas tubes, and sterilize in the steamer at 100° C. for twenty minutes on each of three consecutive days. We

advise our correspondent to read a letter from Dr. MacConkey which was published in the BRITISH MEDICAL JOURNAL on November 24th, 1906, p. 1521.

ANSWERS.

W. E. H.—As far as we can learn, the experience of Jewish practitioners tends to show that circumcision does not prevent masturbation or exert any influence in that direction.

DIABETIC FOODS.

C. E. H.—We may refer our correspondent to an article on diabetic foods published in the BRITISH MEDICAL JOURNAL of December 16th, 1905, p. 1599. Samples of Farwell and Rhines's gluten flour and special diabetic foods were obtained from their agents, Messrs. H. H. Warner and Co., Limited, who are also the vendors of Warner's Safe Cure, and it may be well to reproduce the following table showing the results of the analyses of these articles, placed by the side of the figures of the official analyses of wheaten flour published by the United States Department of Agriculture:

	Department of Agriculture, U.S.A.		Messrs. Farwell and Rhines.	
	Spring Wheat.	Winter Wheat.	Gluten Flour.	Special Diabetic Food.
Water	10.4	10.5	12.65	11.06
Protein	12.5	11.8	10.60	12.40
Fat	2.2	2.1	—	3.00
Convertible carbohydrates ...	71.2	72.0	70.30	71.06
Mineral matter	1.9	1.8	0.44	1.52
Fibre	1.8	1.8	—	—

LETTERS, NOTES, Etc.

THE BEST WAY TO REMOVE TONSILS.

DR. ALEXANDER DUKE (London, W.) writes: Reading the interesting and common-sense letter on above subject in the BRITISH MEDICAL JOURNAL of December 29th, 1906, reminded me that years ago I had suggested this plan to a friend who made a speciality of the throat and nose, but was only laughed at for mooting "such a dangerous proceeding." Surely "there is nothing new under the sun," and the operation, as carried out by Mr. Hey Groves, must have been foreshadowed by the immortal Thomas Hood, who, in his "Tale of a Trumpet," describes the operation thus:

> "You may go to surgical chaps if you choose
> Who will blow up your tubes like copper flues,
> Or cut your tonsils right away
> As you'd shell out your almonds on Christmas day,
> And after all it's a matter of doubt
> Whether you ever would hear the shout
> Of the little blackguards that bawl about
> 'There you go with your tonsils out!'"

*** The saying of the Wise Man is quoted by our correspondent with singular appropriateness, for enucleation of the tonsils was recommended in the first century of the Christian era by Celsus, who says: "Tonsils which remain indurated after inflammation, if covered by a thin membrane, should be loosened by working the finger round them and then torn out." The method was largely practised by an Italian surgeon named Borelli in the middle of the last century (*Gaz. Med. Ital. Prov. Sard.*, December 30th, 1851).

THE LATE BARONESS BURDETT COUTTS.

A [illegible] There is a graceful act in the career of this distinguished lady who has been well described as "the last great woman of the Victorian era," which deserves to be kept specially in remembrance by the members of the medical profession. When the Association held its annual meeting in London last the President of the Association announced at the second general meeting held on August 8th that on the previous evening's meeting at the Mansion House he had received a letter from a noble lady who was present at that entertainment gathering. Lady Burdett-Coutts wished to show her esteem for the profession and her [illegible] to all humanity had written to say that she would be happy to receive members at Holly Lodge, Highgate (see BRITISH MEDICAL JOURNAL, August 10th, 1895, p. 334). As one of the large number of [illegible] who availed themselves of this kind invitation I will remember the gracious reception and the cordial hospitality that [illegible] the lovely and grounds [illegible] refreshments provided. Probably [illegible] will refer later to report the genealogical treasures, and the guests were received by the Baroness in person. The extensive views from the grounds including the greater part of London, the windings of the Thames, the noble dome of St. Paul's and the stately palace of Windsor in the distance, will never fade from the memory of those who were fortunate enough to be present.

THE CASE OF MR. PEERS: A MISCARRIAGE OF JUSTICE.

MR. T. H. PARKES PEERS (London, S.E.) writes: Please permit me to offer my sincere thanks to all who have expressed their disapproval of the county court judgement, and their sympathy with me in such a kind and acceptable manner. The amount I have received (£35 6s.) will practically reimburse me, but I value far more the generous feeling displayed towards me by my fellow practitioners and by the distinguished men who have joined with them in their expression of sympathy. To them all, and to you, Sir, for placing your columns at my service, I once more tender my grateful thanks.

COST OF MOTOR AND CARRIAGE.

DR. ALEXANDER DON (Dundee) writes: The following note of my expenses may be of interest to your readers. My car is a 6-h.p. De Dion, geared low for hills, with a maximum speed of 18 miles per hour. It is fitted with English body, hood, and screen, and even in this weather is as comfortable as a hansom. I use it daily from five to eight hours, summer and winter, town and country. I drive myself mostly, and keep a boy for cleaning, etc., and he is also able and licensed to drive. Formerly, I kept three horses, and the cost averaged £270 a year. The last year I hired carriage and pair at £5 a week for day use only, which came to £260 a year. The cost here for carriage and one horse for day use only is £3 15s. a week, or £195 yearly, so that a comparison is quite easy:

	£ s. d.
Cost of car, with spares ...	260 6 4
Tyre bill }	47 17 5
Petrol and oils } for two years	38 12 4
Repairs }	56 12 7
	403 8 8
Present value of car, say ...	103 8 8
Cost for two years	300 0 0
Cost for one year	150 0 0
Stable, rent, light, etc.	15 0 0
Wages of boy, taxes, etc. ...	30 0 0
	£195 0 0 a year.

MEDICAL "DIPLOMACIES."

AT the annual meeting of the Flint Female Friendly Society, Dr. W. A. F. Twemlow was appointed medical officer. The election would have been unanimous but for one sapient person, who insisted that the election should be deferred for a month, in order that the doctor might show his "diplomacies." Diplomacy is a valuable part of a doctor's equipment; indeed, in some of the higher spheres of practice it may sometimes take the place of professional knowledge. The same quality is useful in dealing with Friendly Societies, and Dr. Twemlow may have occasion to show his "diplomacies" in a way not intended by the dissentient elector.

ERRATA.

IN a reply given in the BRITISH MEDICAL JOURNAL of January 5th under the head of Income Tax (p. 59), the words "*duly* paid accordingly" should be "*duty* paid accordingly."

DR. NICOLLE (Pasteur Institute, Paris), writes: In reading my report of the communication I made at the Congress of Toronto, in my name and in the name of my colleague, Professor Mesnil (on the treatment of trypanosomiasis . . .), I perceived the following errors, repeated several times:

do' H instead of So'H
f " f
Tr " Tr

I shall be much obliged to you if you will publish a correction in your next number.

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[illegible] arrangements can be made with the Post Office to receive letters at [illegible] addressed to initials or numbers.

A Clinical Lecture

ON

FRACTURES OF THE BASE OF THE SKULL.

DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL.

BY ANTHONY BOWLBY, C.M.G., F.R.C.S.,

SURGEON TO THE HOSPITAL.

GENTLEMEN,—Some of you remember the case of a woman who was in Stanley Ward two or three weeks ago, and whom we believed to have fracture of the base of the skull. She had met with an injury, a blow which knocked her backwards so that she fell against the kerbstone, and was admitted more or less collapsed, though not unconscious. She had been bleeding from the ear, and subsequently she had slight facial paralysis. She never became unconscious, nor at any time was she maniacal or lost control of her actions. The facial paresis—for it was not an actual paralysis—gradually improved, until practically it had all disappeared. She had no deafness, or any discharge of cerebro-spinal fluid, or of any other fluid, from her ear. She gradually got quite well. That was an instance of fracture of the base of the skull, uncomplicated except by slight facial paresis. A little before that date there was admitted into the hospital a man who had met with an injury. When he was admitted he was also conscious. He had a discharge of blood from his ear, and examination of the ear showed that his membrana tympani was torn. His condition became worse; he got gradually stupid and heavy, and then, as I understand, because I did not see him at this time, he became slowly more and more unconscious, took his food badly, was more and more difficult to arouse from his state of stupor, and ultimately he passed into a state of coma, in which he died. Examination showed that he had fracture of the left side of the skull at its base, across the temporal bone. There was some haemorrhage between the dura mater and the bone, and there was a tear of his temporo-sphenoidal lobe, which happened to be on the side opposite to the injury. There was also a haemorrhage underneath the pia mater, so that there was an extravasation of blood over the surface of his brain. That, you see, was a case of fracture of the base of the skull complicated by definite severe injury to the brain.

Now in all fractures of the base it may be said in general terms that the diagnosis of a breaking of a particular portion of bone depends on three things—the escape of blood, the escape of cerebro-spinal fluid, and injuries to nerves; and where there is any part of the base of the skull broken it is to those three conditions you look for evidence as to the injury. When the middle fossa is broken it is ordinarily fractured across the petrous portion of the temporal bone, and whether there are complications or not depends very much on the line of this fracture. Supposing that the line of fracture does not involve any part of the bony canal to the seventh pair of nerves, then under those circumstances there is ordinarily no escape of cerebro-spinal fluid, no evidence of nerve injury. So the bone may be broken and the only evidence of that break may be an escape of blood through the external auditory meatus. But there may not be even that evidence, because unless the membrana tympani is torn the blood cannot escape. So you see it is quite possible for a person to have fracture of the middle fossa of the base of the skull and for all these three symptoms—the escape of blood, the escape of cerebro-spinal fluid, and injuries of nerves—to be absent; and it is very difficult to say positively that a person has *not* a fracture of the base of the skull. We will go a step further and ask, under what circumstances does the cerebro-spinal fluid escape? It can only escape when the dura mater or arachnoid are torn. Where are they torn? They are practically always torn where they are reflected around the seventh pair of nerves as they pass into the internal auditory meatus. And if the dura mater and arachnoid are torn and the bone is broken and the membrana tympani is torn, there is of course a communication opened up between the subarachnoid space on one side and the external auditory meatus on the other. And in proportion as that is a wide tear, the fluid can easily filter out through the damaged portion of the skull.

The next thing to consider is, what sort of escape of fluid is it that is suggestive or characteristic of fracture of the base of the skull? All discharges of fluid from the external ear are not suggestive or indicative of fracture of the middle fossa and the escape of cerebro-spinal fluid. You must remember that the ear itself contains a mucous cavity, and that mucous cavity may secrete a considerable amount of fluid after injury. Fluid can be also poured out from the tympanic cavity or the semicircular canals, and the fluid may pass out through the fracture into the meatus. The result is that the mere escape of a small quantity of fluid, perhaps mucus and of a sticky consistency, does not indicate fracture of the middle fossa. The characteristic discharge which points to escape of cerebro-spinal fluid is this: the discharge comes on very soon after the accident, and it either accompanies the flow of blood which is caused by the accident, or it immediately follows the cessation of that flow of blood. And the flow is copious. The discharge of mucous fluid from the tympanum or from some place inside the ear is never copious. What do I mean by copious? Because that, after all, is a relative term. A man was admitted into casualty ward some years ago with a fracture of the base of his skull. I saw him the next morning, and his pillow was wet, his bandages were wet, and the mattress was wet. If you had put a test tube underneath his ear you could have half-filled it in four or five minutes. He probably had soaked his bandages and his pillow and mattress with not less than a pint or two of fluid. That is what I should call a characteristically copious discharge of fluid, which could come from nowhere else but the subarachnoid space. In character the appearance of the fluid is not mucous, but quite clear; it is of low specific gravity, and, if you had enough of it to test, you could probably find traces of sugar, and possibly small quantities of chloride of sodium. It would have a specific gravity of about 1001. That is the kind of escape which you meet with after an injury to the dura mater and arachnoid. Then, as regards injury to nerves. The nerves which are injured, or which may be injured in fractures of the middle fossa, are the facial and the auditory. In the woman of whom I have spoken the nerve injured was the one which usually escapes—namely, the facial. It is not often that the facial nerve is affected in fractures of the base of the skull. The auditory nerve, however, is frequently involved under these circumstances. This is softer and more easily torn, and another thing which is noticeable about it is that, when it is injured, it is much more difficult to get it to mend. On the other hand, in the majority of cases when the facial nerve is hurt, as it was in this woman, the facial paresis rapidly passes off: whereas the deafness which follows injury of the auditory nerve and the middle ear and the tinnitus which also follows it are liable to continue even for years after the accident. A man came into this hospital with a fracture of the middle fossa of his skull, and with deafness and tinnitus. He recovered from his injury, but he never recovered his hearing, and he always had, for the rest of his life, as far as I know, certainly during the five years that I followed him up, constant tinnitus, with a humming or whistling noise in the affected ear. This did not seem to get any better, though, as time went on, he took less notice of it than at first.

If all these symptoms which I have mentioned have been observed—the escape of blood, followed by an escape of clear fluid in large quantities and associated with evidence of injury to the auditory or facial nerve—you can say exactly what has happened. There is a fracture across the petrous bone, which on the one side involves the tympanum, the membrana tympani being torn, and on the other side it extends inwards to some part of the canal of the seventh pair of nerves, and is associated with a tear in the dura mater and arachnoid. Thus you can diagnose exactly what portion of bone has been injured.

Now with regard to the anterior fossa. That may be broken in various ways. It may be by direct violence from the front, by blows upon the frontal or naso-frontal region, and it may be broken by something being thrust into the orbit, such as the end of an umbrella or a walking-stick, and passing into the brain. But ordinarily the fossa is broken by falls upon the forehead or upon the top

of the head. A man falls from a height or is pitched out of a cab or off an omnibus, and lands on his frontal region and fractures the anterior fossa. There are, again, the same symptoms to look for: the escape of blood and of cerebro-spinal fluid and the injury to nerves.

First, with regard to the escape of blood. Blood ordinarily escapes in these cases in large quantities from the nose and from the back of the nose into the pharynx, and possibly into the stomach, and this blood which passes into the stomach may afterwards be vomited. And it is much more difficult to say in a case of a blow on the naso-frontal region that the blood comes from the injury to the base of the skull than it is when there is bleeding into the ear, because in the case of injury following a blow on the nose it is difficult to say whether the bleeding is from the nose or from the pharynx. It is only when the haemorrhage is very copious and continuous that you can say that it is the sort of haemorrhage which is likely to result not merely from a broken nose, but from fracture of some part of the ethmoid or sphenoid or both. Blood may collect in the orbit, and it is very difficult to say for certain that escape of blood into the orbit is certainly due to fracture of the bone of the anterior part of the fossa. But when the blood accumulates underneath the conjunctiva posteriorly, that is very suggestive of percolation of blood from the back of the orbit, and is unlike the ordinary extravasation causing a black eye. As regards an escape of cerebro-spinal fluid, I have only seen one case in which there has been a considerable quantity of clear fluid discharged into the nose. You will readily see the difficulty. When a man is lying down any fluid tends to pass down through the back of the nose into the pharynx, and nobody knows of it. Cerebro-spinal fluid may be discharged in these cases without anybody knowing that it is being discharged, and, as it mixes with the secretions of the nose, it mostly passes into the pharynx. So it has not the same importance as a discharge of fluid from the ear.

Lastly, there are the injuries to nerves. Any one of the first six nerves may be injured. In a case of fracture of the anterior fossa at the base of the skull a man may have a tear of his optic nerve and blindness, but if he has an injury to his olfactory nerve no one knows of it at the time of the accident because it cannot be tested. He may also have a squint, due to injury to the motor nerves of the eye, so there may be evidence of implication of nerves suggesting fracture of the anterior fossa of the skull. Therefore, in a case of such fracture the diagnosis to some extent depends upon the evidence of injury of nerves. But here, as in the case of the facial, the injury to nerves is usually not so serious as to prevent quick recovery. So that these patients, as a rule, have rapid restoration of function where the nerves have been more or less seriously injured.

I want to mention one other fossa before we pass on to speak of various complications, namely, the posterior fossa. The posterior fossa of the base of the skull is much less frequently injured than the others, and when it is injured it is usually broken by very great violence. This part of the bone is exceedingly thick and dense, and generally speaking a fracture of the posterior fossa is discovered rather at the *post mortem* examination than by any clinical examination at the bedside, and the diagnosis of it is more difficult, because there is no external place from which the blood can discharge, and there is no external aperture through which the cerebro-spinal fluid can escape. Consequently, if a man has a fracture of the posterior fossa the blood accumulates in the tissues of the neck and fracture may be suspected if there is a large collection of blood amongst the tissues attached to the occipital bone. But that might occur without fracture, so that the evidence which it affords of fracture having occurred is small. Injuries of nerves in fracture of the posterior fossa are rare, but in one case a patient was admitted here who had an injury to his head due to a fall out of a window. He had a large extravasation of blood into the tissues at the back of the neck and experienced great difficulty in swallowing food, though he could masticate it, because the pharyngeal muscles refused to act. He had considerable difficulty of respiration, and had attacks of interference with the heart's action. Three days later he died. We found at the autopsy that he had a fracture extending across his jugular foramen and involving the nerves there, and to an injury of the glosso-pharyngeal and the pneumogastric the symptoms were evidently due. But that is not at all a usual complication. So that in fractures of the posterior fossa all characteristic symptoms may be absent. There may be no definite escape of blood or cerebro-spinal fluid and no evident injury of nerves to tell you what portion of the bone of the skull is broken.

Now, think for a moment how it is and why it is that a certain number of these patients die, and a certain number, like the woman I have mentioned, recover. They die in proportion to the occurrence of complications. The breaking of a piece of bone at the base of the skull is not a fatal thing in itself. Why should a person die because he has a fracture across his petrous bone? Or what is there in a fracture of the occipital bone which should cause the person's death? Or why should a fracture of the ethmoid kill? These fractures in themselves are not the cause of death, and if there were no complications, the patients with these injuries would recover. Now the most important early complication is haemorrhage. Haemorrhage may be so severe that the mere loss of blood externally may be enough to kill the patient. You must remember that these fractures may be associated with tears of the large venous sinuses at the base of the skull. It is when these are torn, and occasionally when a large artery such as the carotid is torn, that the quantity of blood that is lost proves rapidly fatal. And that is not a case of a mere fracture itself killing the patient; the patient is killed because the fractured bone has torn a large blood vessel. And when a large quantity of blood is lost in this way death may take place exceedingly rapidly; indeed, a patient may die in a few minutes who has had fracture of the base of the skull.

The next complication is the escape of blood inside the skull. That was present in the case of the man who died fifteen days after the accident, and who had extravasation of blood between his dura mater and the bone. So a patient may die from loss of blood externally, or from blood being poured out of his vessels into the cavity of the cranium, and so compressing the brain, or setting up irritation of the brain.

Still speaking of the complications of the fracture itself, the next thing you have to realize is that these fractures are often compound—that is, fractures in which the bone is exposed to the external air, and in which there is a tear opening up a region which is sometimes very difficult to keep aseptic. For instance, the external meatus is not always very clean, and, if there is a fracture and a tear of the membrana tympani, that fracture is in direct communication with the external ear. Under those circumstances there is a danger of sepsis, and this may spread through to the bone, and from the bone to the torn meninges. And such a patient may have septic meningitis, or he may develop an abscess of the brain, the brain having been, perhaps, also injured at the time of the accident. So here is a compound fracture, and it has to be treated as such. The external auditory meatus has to be rendered as aseptic as possible by washing it and cleaning it out, and it has to be dressed with some antiseptic preparation; and if blood and cerebro-spinal fluid are escaping and soaking the dressings, the dressings will have to be changed, and every care must be devoted to preventing sepsis as far as possible. But think how little you can do when the fracture extends into the upper part of the pharynx or nose. You can do practically nothing; you cannot apply dressings to this part of the body, and the result is that in cases of fracture of the anterior fossa you have really to trust to chance whether there is or is not an infection of the broken bone from the cavity of the nose or the pharynx. Fortunately in a large number of cases there is no infection, but septic infection may spread to the meninges and set up meningitis. In fracture of the posterior fossa this complication does not ordinarily occur, because there is not a communication with the outside and the fracture is not compound.

Apart from these complications, which may cause the man's death very quickly from bleeding or from sepsis, the chief complication of a fractured base is an injury to the brain, and the danger that awaits a large number of patients with fractures of the base of the skull is due not so much to the injury of bone as to the associated injury of the contents of the skull. When a man has so severe an injury to his skull as to break it he is very likely to have as a result of that same injury a laceration of the

brain. And a large number of these patients die, not from the bone trouble, not from the complications of the fracture itself, but from the associated injuries to the brain, which are not necessarily due to the fracture, but to the same cause which produced the fracture. As a rule it is not the broken bone which hurts the brain, it is the injury that broke the bone which also hurts the brain. In the case of a man who died in September, the injury of the bone was on one side, and the tear in the brain was on the other. The injury may be in any part, but is very likely to be somewhere at the base, for the parts of the brain which are most likely to be torn are the parts which lie in contact with the rough bone of the anterior and middle fossae of the skull. Look inside a skull in the *post-mortem* room and see what it is that the brain rests upon, apart from the meningeal fluid which is present. The frontal lobes lie upon the rough, irregular, lumpy, orbital plates of the frontal bone. And there is immediately behind that the sphenoid and ethmoid, with their projecting osseous prominences, and when the brain is thrown violently against this bone it is liable to be torn and contused. The temporo-sphenoidal lobe lies upon the very rough and irregular petrous bone, but the posterior lobes of the brain lie upon the tentorium; consequently, the posterior lobes are much the less likely to be injured. In proportion to the injuries to the brain so the patient exhibits evidence of the disturbance it has caused. He suffers from "concussion," but that is a vague term, which should be used by you merely as a clinical expression to indicate a series of clinical symptoms; it is not at all an accurate pathological term and it does not imply any one definite lesion. Where the patient suffers from "concussion" there is, as a rule, contusion or laceration of the brain, and often its superjacent membranes are damaged. What are the symptoms of concussion? In general terms one may say they commence with a certain amount of shock. You know that when an important part of the body is injured shock results. That is eminently true of the abdominal and thoracic viscera, as well as of the viscus inside the skull. The temperature is liable to be low, the patient becomes cold, and in the case of the woman whom I have several times referred to, her temperature was 95.4°. The man now in the hospital who has probably an injury to his brain had a temperature just over 96°. Very often the skin of a patient suffering from shock is clammy and the vital powers all seem to be at a low level; the pulse is feeble, the blood stream may be slow or irregular and the muscular system is also more or less feeble—the man cannot stand or sit up. Cerebration is also slow. If the patient is not completely unconscious and you ask him quite a simple question, such as his name, the answer will be given only after a definite interval. He may be able to tell you where he lives, or he may not. Every muscular effort is feeble and made with difficulty. Between such a condition and absolute unconsciousness there is every possible gradation. When a man is completely unconscious and cannot be aroused at all you argue that he has had a very severe injury to his brain. The length of time during which a patient may remain unconscious varies enormously. In a case of very slight injury to the brain the unconsciousness may be very transient, in other cases it may be days, weeks, or even months before he regains his ability to explain what he wishes or to express his feelings in proper words.

Let us refer for a moment to another man who was in Abernethy Ward, and who illustrates some of the points I have been speaking of. He illustrates also some of the later complications. This patient was admitted two years ago, after an injury to his skull. We diagnosed that he had a fracture of the anterior fossa, for these reasons: He had an enormous flow of blood externally through his nose, through his mouth, and into his stomach, so that, apart from what he lost externally, he vomited up about 2 pints of blood within a very short time of his accident. After that we found that he had great extravasation all round and in both orbits. There was no evidence of escape of cerebro-spinal fluid nor of injury of nerves. He was absolutely unconscious, and could not be roused in any way at all. He was suffering from extreme shock, his pulse could hardly be felt, he was cold, and appeared to be very nearly dead. It was days before we could feel that he was likely to survive, and for three weeks he was quite unconscious. That does not mean to say that he did not move his limbs, but he was unconscious of his surroundings. It was only by very careful nursing and feeding that he was kept alive. After three weeks he slowly recovered consciousness, and, like all those people who have had concussion and injury to the brain, he had at first headache and giddiness, and these symptoms were aggravated by the slightest effort. He had also no recollection of his accident.

It is a characteristic of all cases of severe injury to the brain in which there is more than momentary insensibility, that a man forgets what happened directly before the accident. Thus, a patient was brought into hospital who had fallen from a staging on a building, and who had the symptoms of concussion of the brain and was quite unconscious. He soon came round after being put to bed, and was able to tell us that he had fallen from a building on which he was working. When we came to question him, we found that the last thing he remembered was going up a ladder, and he believed he had fallen from this ladder. Inquiry showed that this was not so, that he had climbed up to the top of this ladder, that he had got on to the staging, and that afterwards when he was on this staging which had been insecurely fastened, it tilted and precipitated him to the pavement below. So the last portion of time immediately before his accident was quite obliterated from his memory. Take another case which illustrates very well a longer period of loss of memory. A man came into the hospital having been brought from Holborn Viaduct, where he was pitched off a van, the horse having bolted. The wheel of the van came into contact with one of the lamp-posts and he was precipitated into the road on to his head. He remained more or less unconscious for two days. After he had come to himself we began to question him about the occurrence. He told us that the accident must have happened in the Borough, for that was the last place he remembered passing through. But it turned out, from independent evidence, that after being in the Borough he had driven over London Bridge and through the City, and it was while driving westwards on that journey that he met with the accident. All the recollection of what happened after he left the Borough was obliterated, and he lost in time about three-quarters of an hour. In another case a man was brought into hospital with severe injury to his head due to the breaking of a grindstone while it was revolving at a rapid rate. He had a lacerated wound, with fracture of his skull and injury to his brain. When he came to himself we found he was under the impression that the day of the week on which the accident occurred was Monday, when, as a matter of fact, it was Saturday. The only thing which he remembered was going to work on Monday, the remaining days having been completely forgotten. The memory of what has happened immediately before the accident is, as a rule, never restored, and that is an important matter, because a man may quite honestly give you an utterly erroneous history. There is also, in these people, a strange perversion of the perception of what has happened, so that facts, and important facts, may not only have been forgotten, but those which the victim of the accident remembers may be quite perverted or distorted.

Well, the man who had this three weeks' insensibility slowly recovered, and after many weeks he was well enough to leave the hospital. A year afterwards he came back to tell us that he had had an epileptic fit. During that year he had apparently been tolerably well. He had returned to his work, though since the accident his work had been of a lighter character than that to which he had previously been accustomed. Still he had been earning his own livelihood. And then, without any warning, an acute, violent epileptic fit came on. This was a very serious occurrence, and the prognosis was serious also. I put him upon considerable doses of bromide of potassium, and kept him under its influence for weeks and months. But after a few months he had another fit, and after a shorter interval still another, and so on, so that when I last saw him, in the summer, those fits had become increasingly frequent. The prognosis in his case has become extremely grave, because it is quite likely that in the end the man will become insane. And this man's case shows that in injury to the head, when you have seen the patient out of the hospital you have not necessarily seen the last of him, for after a man has had an injury to his brain he is liable to suffer for long from an irregular and easily-upset cerebral circulation. There are two things

which you ought always to warn these people about, and which I do constantly warn them about, and the first is that the least quantity of alcohol will make them completely intoxicated. You know that the effect of alcohol is to cause flushing of the surface of the brain, and this result is brought about by even the smallest quantities of alcohol in many of these people who have had brain injury. So if there is one condition more than another which requires that a man shall be a teetotaler, it is serious injury to the brain, with perhaps prolonged insensibility, from which he has been fortunate enough to recover. The other thing against which I warn patients is violent over-exertion, and especially exposure to a hot sun. A man who has once had sunstroke is very liable to have headache and a return of his symptoms if he again exposes himself to the sun or over-exerts himself.

And the man with an injured brain is in a similar condition. The state of his cerebral circulation makes him very liable to have headache of a severe type, with giddiness, nausea, and impaired mental ability and control. And remember that these sequelae often last many years.

Now, you will naturally ask me, What is there inside the head of this man with traumatic epilepsy which has brought about this serious condition? If you could look inside the head, what would you see? Let me remind you of what I told you we saw in the case of the man who died a fortnight after his fracture of the base of his skull. I told you he had haemorrhage between the dura mater and the bone, and that he had extravasation of blood underneath the pia mater and tearing of the temporo-sphenoidal lobe. Well, either of these conditions may result in some permanent irritation of the cortex of the brain, and you may be sure that the man who has developed epilepsy, and who was so long unconscious, had an extensive tear of his brain and that he had extravasation of blood in large quantities. He probably had extensive scarring of the torn tissues and a hardening and thickening of the membrane called pachymeningitis which has caused irritation of the surface convolutions resulting in the epileptiform fits. Unfortunately for the patient there is not the least evidence to help us as to where he has this trouble for there is no localizing evidence. In some cases the evidence is clear. Sometimes the epilepsy is of the "Jacksonian" type, in which the fit begins always by a convulsion or spasm in some part, as portion of the body, and spreads from thence until it becomes generalized. So that a man with Jacksonian epilepsy may have a fit commencing by spasmodic movements in the thumb which may spread to his fingers and then to the forearm, then to the arm, and so to his body. In that case he has what is called a local lesion, for there is a point in the brain from which this trouble spreads and the part affected in such a case as I have suggested is the cortical centre for the thumb and the hand. In that locality there may be a piece of displaced or jagged bone or there may be a blood cyst, or some thickening of the membranes or some scarring of the brain. If there are any of these indications you may accept them as the reason for a mode of treatment which may save the patient. You may operate at the place which is indicated by the position and character of these spasms, and you may remove a portion of the bone which may be pressing on the brain, or you may evacuate blood which has accumulated and is exerting similar pressure. I will close this by mentioning one more case to illustrate this condition. A man had an injury to his skull and to an extent which he was admitted into another hospital, and there he received some concussion or unconsciousness for nearly three months. He recovered from this injury completely, and afterwards, as people say, he was never the same man as before. Instead of being steadfast and good tempered he was morose and unreasonable, and became liable to violent fits of passion, which were purposeless and apparently causeless. These attacks continued and even increased at the end of more than a year of epilepsy, and the epileptic attacks appeared in frequency that he was brought to this hospital in a condition of what is called post-epileptic coma. In this condition he died. We examined his post-mortem and found that on one side of his brain there was a large blood cyst. There had been extravasation into the arachnoid space of the brain, and a thin layer of clot had formed, and the blood had become encysted, and caused irritation to the cortex of his brain. I think if he could have been operated upon that man's life might have been completely altered, for it is likely that the whole of his symptoms were due to the pressure and irritation of this blood cyst.

INTRAPERITONEAL IMPLANTATION OF THE URETERS INTO THE COLON.*

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FEW conditions are more distressing than the constant escape of the whole of the urine above the pubes with practically no efficient means of control. Most of the patients who suffer from this misery are the subjects of extroversion of the bladder, and though life to some of them may be made more or less tolerable, yet the results of the various plastic operations are, on the whole, so unsatisfactory, that I am sure most surgeons dread having such cases committed to their charge.

In recent times, for the relief of extroversion, there has been a tendency to divert the urine into the large bowel as an alternative to direct plastic operations, with their disappointing results. This is the revival of a proeedure first imperfectly carried out by Sir John Simon, and later, on a sounder plan, by Sir Thomas Smith. The latter surgeon formulated the extraperitoneal method of implantation of the ureters each into the colon of its own side through a lumbar incision; this in 1878. The final result of this operation, however, was discouraging, and, as far as I am aware, several years elapsed before the method was revived, and with it others on similar lines. At the present time, in addition to the extraperitoneal method of operation, we have two others—(1) intraperitoneal implantation of each ureter separately into the colon of its own side; and (2) implantation of the separated trigonal area with both ureteral orifices into either rectum or sigmoid.

Diversion of urine into the bowel may be resorted to for other conditions than extroversion of the bladder. In cancer of the bladder encroaching, as it is apt to do, on the trigonal region, excision of the growth may be feasible if provision can be made for the collection and storage of the urine after removal of the lower ends of the ureters in the resection.

In accidental division of ureters in abdominal operations, when re-implantation into the bladder is impossible, grafting into the colon is worth consideration as an alternative to nephrectomy.

Another extension may be found in unfortunate patients such as the one I exhibit to you to-day—the victim of an injury:

This young man, aged 20 years, was, five years ago, admitted to a hospital suffering from fractured pelvis with ruptured urethra and laceration of the neck of his bladder. Exit for the urine was given by a perpubic drainage, and when I saw the patient on June 11th, 1903, the whole of the urine escaped above the pubes, where there was, in addition, a suppurating sinus leading down to the back of the fractured pubic bone. A marked effect on the sexual development of the patient appears to have resulted from the injury, for though the age of puberty has been attained, the penis and testicles are quite undeveloped, as are the other sexual characters.

As no effort had hitherto been made to restore the urethra, I thought this should be attempted, but the final result was in some degree an exaggeration of the patient's miseries, for a recto-vesical fistula was formed, and the treatment was abandoned. At the time of this operation the suprapubic wound was opened up, and the densest of scar tissue was found under the pubic arch and encroaching upon the neck of the bladder.

The failure to secure patency of the urethra led me to adopt ureteral implantation for the patient's relief. The three methods which I have already mentioned were open to me. Maydl's operation, implantation of the trigonal area with both ureters into the rectum, which has much to recommend it in cases of extroversion, was here quite unsuitable owing to the dense matting of parts already referred to. For each of the remaining alternatives there were arguments. The extraperitoneal operation avoids

* A paper read before the Surgical and Pathological Section of the [illegible] Meeting on October 24th, 1906.

almost entirely, though not completely, the risk of peritonitis, but I regard it as more difficult to perform, as inflicting a more severe traumatism on the patient, and as more likely to fail from want of speedy union between ureter and bowel.

With these thoughts in my mind, I determined to adopt the intraperitoneal method. One other point had to be considered: Should both ureters be implanted at one operation? Argument seemed to me to be strongly in favour of dividing the proceeding into two separate operations. The patient was a feeble subject; if both ureters were simultaneously implanted and infection spread up both sides, a successful result could hardly be hoped for, whereas, if one ureter only were implanted, should its kidney become infected, the other kidney would be carrying on excretion. When the first organ dealt with had settled down, the second operation could be performed with less anxiety.

Operation.

The method of operation was as follows: An incision was made through the sheath of the rectus over the line of the ureter, where it crosses the bifurcation of the common iliac artery; the layer of peritoneum over the artery was divided and the ureter sought. (If there is any doubt or difficulty in recognizing the ureter, useful assistance may be gained by lightly prodding the tube with forceps or dissector; if it be the ureter which is touched, a wave of peristalsis will be seen to pass along it where it is stimulated.) The ureter was found with little difficulty, and was lifted out of its bed for about an inch and a half, was divided low down, the lower end ligatured and pushed under the peritoneum, whilst the upper end was held lightly between finger and thumb to prevent leaking. The portion of bowel to be used was selected, and a puncture barely one-third of an inch long made on its inner side, the utmost care being observed to prevent any faecal soiling. The upper end of the ureter was threaded with a fine catgut suture, the needle attached to which was passed into the opening in the colon, across the bowel and through its opposite wall. By means of this suture the ureter was drawn inside the bowel, and held in position whilst a first row of interrupted sutures fixed the outer coats of the ureter to the margins of the incision in the intestine, and narrowed this opening up to the walls of the ureter, but without constriction. A second row of sutures approximated the peritoneal covering of the bowel to the outer coat of the ureter, and so secured rapid adhesion and seclusion. The suture through the wall of the colon to retain the ureter, whilst suturing fixed it, was now cut short and its point of exit secured by a single mattress suture. The colon was displaced somewhat towards the middle line, which relieved the ureter from tension and tended to return it to the bed of subperitoneal fat from which it had been disturbed, whilst finally the inner edge of the divided posterior peritoneum was sutured to the inner margin of the colon, thus giving further security against leaking. The wound was closed except for a small gauze drain.

The operation on the right side was rather more difficult than that on the left, as the small intestine was not so easily pushed out of the way and the common iliac vein obtruded a good deal into the wound when the posterior peritoneum was divided. On the whole, however, neither operation can be described as really difficult.

If I have occasion to again perform this operation I shall adopt a small device to prevent what is certainly a possible contingency, namely, the cicatrization of the ureteral opening. This, I believe, can best be met by slitting the opening of the ureter into two small flaps of equal size, folding the flaps backwards and suturing them in that position. If union were thus secured it would be an absolute bar to future stricture of the ureteral orifice.

To return to the patient, the first operation on the left side was performed on July 23rd, 1906, the ureter being implanted into the sigmoid, and though well borne was followed by vomiting which persisted for several days and a quick pulse which remained over 100 for ten days, but there was no local pain or tenderness suggesting infection of the left kidney, and the temperature after the first three days was normal. The second operation, on the right side, was performed on October 1st and was well borne, though again vomiting was troublesome for two days and the pulse remained quick for a week.

Since the second operation the patient has improved greatly in his general condition, and now looks fit and well. His bowels act almost every four hours when he is up, but at somewhat longer intervals when he is in bed. Above the pubes a sinus from the bladder discharges about a drachm of fluid daily. The temperature is normal; there is no complaint of pain over the kidney; neither kidney can be palpated. The patient's future is, of course, one of great uncertainty, owing to the ever-present risk of an ascending nephritis by infection from the bowel, and because of the possibility that either or both, ureteral orifices may become partly or completely closed by scar tissue.

Whatever his future, his present state is an enormous improvement on his past, for he not only lives in comfort now but is capable of earning his living.

The method employed for this boy's relief was suggested to my mind by two interesting papers in the BRITISH MEDICAL JOURNAL of April 28th, 1906.[1] The extraperitoneal operation was adopted in the cases described in these papers, and any one contemplating the relief of extroverted bladder by ureteral implantation would do well to study the methods described in that issue of the JOURNAL.

REFERENCE

[1] On Extroversion of the Bladder, with Special Reference to Extraperitoneal Transplantation of the Ureters into the Rectum, by Alfred Lendon, M.D. Extroversion of the Bladder: Its Treatment by Extraperitoneal Implantation of the Ureters into the Rectum, by H. Simpson Newland, M.B., M.S.

TRANSPLANTATION OF THE URETER INTO THE BLADDER FOR URETERO-VAGINAL FISTULA.

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DAMAGE of one of the ureters in the course of an operation is always an unfortunate accident. In cases in which a ureteral fistula has resulted, a not unusual method of treatment in the past has been the removal of the kidney to which the damaged ureter belongs. There are clearly very great objections to such a procedure, and in a case such as that described below there would in addition have been a very considerable risk, owing to the fact that the opposite kidney does not seem to have been doing its work very efficiently, as indicated by the small average quantity of urine passed per diem, though it is true that no estimate of the urea was made. The mode of operating adopted was that described by Hammerschlag,[1] and which he has successfully carried out in a case in which a uretero-cervical fistula had resulted from prolonged pressure, during parturition, in a case of protracted transverse presentation.

E. S., a married woman aged 37, was admitted into the Mildmay Hospital on October 25th, 1905, suffering from carcinoma of the cervix uteri.

Vaginal Hysterectomy.

The growth was of the ulcerating variety, and had extended somewhat on to the vaginal wall; but as the broad ligaments did not appear to be involved to any appreciable extent and the uterus could be well drawn down, vaginal hysterectomy was performed on October 26th. Three pairs of forceps were placed on each broad ligament and left on. Except for the fact that, owing to some involvement of the vaginal wall, these forceps were placed rather more laterally than might have been wished, especially at the lower part of the broad ligaments, there was nothing special to note about the operation. The forceps were removed on the 28th, and, apart from some pain and a little rise of temperature, the progress of the patient was perfectly satisfactory.

After-history.

A day or two later it was noticed that some urine was being passed involuntarily, but it was thought to come from the urethra and not from the vagina. On November 6th a small slough came away per vaginam, and on November 9th a much larger slough—evidently the part of one of the broad ligaments which had been compressed by the forceps—was passed. Urine still continued to come away involuntarily, and it now was noted to come from the vagina and not from the urethra.

As the incontinence still continued, an anaesthetic was given on November 30th, and a careful examination made. The bladder was found to be perfectly watertight, but the vagina was continually wet with urine, which came from a raw surface occupying the whole of its vault; it could not be determined from which side the leakage occurred, but it was quite clear that one of the ureters had been damaged, either by being included in one of the forceps at the time of the operation, or by subsequent extension of sloughing. Owing to a large area in the vagina still remaining unhealed, it was decided to postpone the consideration of any further operation until this raw surface should be covered in.

In the early part of December the patient complained of some pain in the right loin, and it was found possible to feel the right kidney, which was a little enlarged and somewhat tender; this trouble, however, soon passed off. The amount of urine passed per vaginam continued to be very considerable, and the average amount passed per diem from the bladder was

13 oz.; that passed per vaginam could not be satisfactorily collected for testing purposes, but the bladder urine was normal. On December 22nd a fresh examination was made under anaesthesia to endeavour to determine from which ureter the leakage was occurring: it was found that the raw area at the vaginal vault was much smaller, though not yet healed, but it was not possible to determine from which side the urine escaped. A Luys urinary separator was then passed, and urine was obtained from the left side of the bladder only, but in *very* small quantity, and this in spite of the fact that the patient had been given about a pint of water to drink an hour before the observation, which was therefore not considered conclusive that it was the right ureter which had been injured. As the patient was anxious to go out, she was sent home for a time until the vaginal wound should be quite healed.

She was readmitted to the hospital on February 10th, 1906, and on the 12th an examination showed that the vaginal wound was now reduced to a small sinus from which urine flowed almost continuously; a probe could be passed along this sinus for about an inch, but it could not be made to enter either ureter. A Luys separator was again passed, and as before urine flowed from the left side only, but, as before also, in *very* small quantity. It now seemed quite certain that it was the right ureter which had been damaged, and it was decided to attempt to transplant it into a new spot in the bladder wall.

Operation for Transplantation of Ureter.

On February 15th, the patient being in the Trendelenburg position, the abdomen was opened by a median incision, and the intestines packed out of the pelvis by sponges, the right ureter was found without difficulty, after incising the peritoneum immediately below the pelvic brim. In order to ensure that the right ureter was the affected one, a small incision was made into it, and a probe passed downwards could not be made to enter the bladder, nor would it go into the vagina; it was thought that the latter fact was due to the tortuous course of the sinus, and the operation was proceeded with after the small lateral opening in the ureter had been closed by a couple of fine silk stitches. The duct was now isolated for a distance of about 3 in., a silk ligature was tied round it as low down as it was found possible to free it; on the kidney side a piece of fine drainage tube was tied round it to prevent leakage when it should be cut across, it was then divided just above the silk ligature.

A sound had previously been passed into the bladder, and manipulated in such a way as to determine if the length of the ureter which remained would be sufficient to enable one to fix it into the bladder without undue tension. Two silk sutures were now fixed, one on either side of the orifice of the divided ureter, to which they were tied, their ends being left long. A spot was chosen by manipulation of the sound in the bladder, as near as possible to the cut end of the ureter, and at this spot a small oblique incision was made into the viscus, through which, opening the end of a pair of long fine-bladed forceps, which had been passed into the bladder above the urethra, was made to protrude; the ends of the sutures which were attached to the ureter were grasped in these forceps, and drawn out by them through the urethra: traction on the sutures caused the end of the ureter to pass into the bladder, about a quarter of an inch being thus drawn through the open[illegible] wall. Sutures in two rows were then passed Lembert-wise, fixing the ureter into the bladder; one or two [illegible] placed in such a manner as to fix the bladder to the [illegible] and so prevent its [illegible] from causing too great tension on the sutures between it and the ureter. The piece of [illegible] was removed from the ureter, which was then sutured to the edges of the peritoneum over it. [illegible] some enlarged glands were felt in the pelvis which it was not possible to remove, though there [illegible] not [illegible] were evident. The two silks which were attached to the ureter were fixed by a stitch to the [illegible] in such a way as to relieve the tension on the [illegible] to the ureter.

After-history.

[illegible] at first satisfactory, [illegible] for the first day or two at least intermittent [illegible] the wound the patient suffered a good deal of pain, which was relieved by morphia and [illegible] the ninth, tenth and [illegible] were [illegible] the temperature on each [illegible] 100°, but [illegible] day a little fractional [illegible] still [illegible] that there was [illegible] they were [illegible] to be encountered with [illegible] only a slight rise of temperature to [illegible] next day, after which it fell permanently to normal. A considerable amount of pain still continued [illegible] the wound, which was occupied or [illegible] frequently. It was found that the bladder failed to [illegible] more than 4 oz. into the bladder, and [illegible] cases in which [illegible] on these occasions the urethra was dilated and a digital examination made, the interior of the [illegible] at which the ureter had been implanted could not be identified. Subsequent to this examination the pain gradually improved, and when seen on April 20th the patient expressed herself as being perfectly well.

The procedure followed in this case is much facilitated by the fact that, as the ureter receives its blood supply almost entirely from the renal and spermatic or ovarian arteries, and its vessels run down in the muscular wall of the duct, there is little danger of sloughing occurring even when a considerable length of it is isolated from the subperitoneal bed in which it lies.

Should it be found impossible to obtain a sufficient length of ureter to reach the bladder, the same method might have been adopted for transplanting the duct into the rectum, as was proposed in my case if necessity had arisen. The wisdom of leaving the silk sutures attached to the ureter and hanging out of the urethra after the operation, when they might easily have been removed by dilating the urethra may perhaps be questioned, and it seems not improbable that the rigors and rise of temperature at the commencement of the second week after the operation were due to the contamination occurring along these sutures; on the other hand, there was no doubt at the time of the operation that they very materially assisted in preventing dragging on the sutures between the bladder and ureter.

REFERENCE.

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TRAUMATIC RECTO-VESICAL FISTULA.

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RECTO-VESICAL fistula of inflammatory, neoplastic or specific-infective origin is comparatively common, but the recorded traumatic cases are relatively rare. The following case may therefore be of some interest:

Condition on Admission.

A Kaffir "boy," aged about 30, was admitted to hospital with the history that two months before he had sat upon a spike. This was his own statement, and was not corroborated in any way by any witness of the occurrence. He had great pain and difficulty in micturition, the urine being extremely foul and full of muco-pus. More than half his urine was passed per rectum.

He was anaesthetized, and a cystoscopic examination made. The trigone was covered with muco-pus, and at one point a large trembling slough covered with phosphates could be seen occluding the opening into the rectum. The condition of the bladder generally, and of the trigone particularly, was one of acute cystitis. The local and general condition negatived any immediate operation. The bladder was washed out daily for a few days, the patient carefully fed, with a view to improving his miserable general condition, and urotropin, .5 gr., given thrice daily.

Operation.

He was again anaesthetized, the sphincter dilated, and a probe passed through the rectal opening into the bladder. This opening was situated at a point 1 in. from the anus in the middle line, and was about ½ in. in diameter. A steel bougie was passed by the urethra into the bladder. With the patient in an elevated lithotomy position, a horseshoe incision was made through the central point of the perineum, and careful dissection made between the urethra and rectum, till the probe could be reached at a point well above the prostate in the middle line. The rectum was now everted through the anus, and a purse-string suture of catgut made to close the rectal mucous membrane. The muscular wall of the rectum was closed in a similar manner from the wound surface.

The bladder opening just admitted the tip of the index finger. The phosphate covered slough previously seen with the cystoscope was removed and proved to be the size of a small marble. A hard rubber tube was now felt and on introducing an artery forceps three pieces of stone covered with phosphates were removed. Owing to their being covered with a thick layer of mucus pus they had not been detected with the cysto-scope. They resembled fragments of ordinary firewood as used in England. Two of them were splintered and broken, showing that much force must have been exercised at the time of their introduction. Four measured ¾ in. by ½ in., 1½ in., and 1 in. respectively. The bladder wound was closed by a purse-string catgut suture, and the small two perineal wound, drained by two tubes, was closed. A soft catheter was tied into the bladder. Recovery was uncomplicated, and the patient left hospital well [illegible] days after [illegible] passing perfectly clear urine without pain.

The probability is that the stick was accidentally inserted by some one, though I could obtain no history of this. I

am informed that the forcing of a stick into the rectum is a not unknown form of native punishment for certain offences.

THE IMMEDIATE MICROSCOPICAL DIAGNOSIS OF TUMOURS DURING THE COURSE OF OPERATIONS.*

BY C. B. LOCKWOOD, F.R.C.S.,
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IN June, 1904, I gave a lecture at St. Bartholomew's Hospital entitled, The Early Microscopical Examination of Tumours.[1] Perhaps this short title did not express my meaning as clearly as could be wished. It does not make clear that the early microscopical diagnosis is made whilst the patient is anaesthetized and ready for the operation to proceed, should that be necessary. Mr. Ernest Shaw is present to-night to demonstrate to you how easily and quickly a perfect section of a tumour can be placed under the microscope, and how certain that makes the diagnosis. A larger experience of the method has shown us how exceedingly valuable it is. Indeed, in my own surgical work it has become part of the organization of all operations in which any question of tumour diagnosis might possibly arise.

Many of the clinical rules laid down for the diagnosis of tumours are rules for the diagnosis of tumours which have grown until almost beyond the possibility of scientific surgery. By scientific I mean certain—absolutely certain. At first a cancer of the breast is a small, hard, painless, movable nodule, which no one can tell from a little fibroma, an adeno-fibroma, a little cyst, or an inflamed lobule. But left alone that little nodule soon—much sooner than is thought—spreads its cancer cells or juices far and wide into the lymphatic system.[2] An early microscopical examination—and no one can tell what that little tumour is without one—puts all doubt at rest. If the tumour be harmless the operation is quite trifling; but if it be malignant an efficient one can be done.

The diagnosis of tumours rests upon (*a*) clinical, (*b*) naked eye, and (*c*) microscopical characters. Even when based upon such solid foundations as these it may be profoundly modified by the ultimate fate of the patient. Of late several occurrences have shaken my belief in even the axioms of clinical surgery. What would any one think if he were told that an ossifying enchondroma had been removed from the front of the left thigh bone by sawing and chiselling through the bony pedicle? I venture to opine that few would think that the patient would come back in six years with a large growth of the upper third of the femur and enlarged glands in Scarpa's triangle, and for which I had to amputate at the hip-joint. Such a fact as this makes me wonder what will be the fate of a boy who had a similar ossifying enchondroma of the lower end of the thigh bone taken away by chiselling through its bony stalk, and then, after less than a year had elapsed, another from the same spot. Had nothing been known about what happened to these patients after the first operation, I myself, being, perhaps, still imbued with some of the "idols of the market and of the theatre," should have applied the term "innocent" to their tumours, and theorized that they would not grow again. Nay, some would have gone further and said that if they did grow again they would not have grown into the lymphatic glands. I suspect that in these cases the capsule is the source of the fresh growth. If this be a correct guess, its bearing upon the method of removal is obvious.

The truth seems to be that the time has come when most of us ought to pass in review and revise our notions about tumours. Should our ancient beliefs prove to be right no harm will be done; faith will be fortified. But should our beliefs prove to be wrong, then it is to be hoped that suffering humanity may ultimately benefit by their recantation.

Now, as regards the clinical diagnosis of tumours: It is difficult for a clinical and pathological sceptic to treat current beliefs with due reverence. My own faith has been shattered by many errors. A small, hard, movable nodule in the breast of a young woman has been diagnosed *secundum artem* to be a fibro-adenoma, and has proved to be a carcinoma; and I am far from being the only one who has been deceived. A hard, solid mass in the full breast of a florid, middle-aged woman was surely a carcinoma, but was in reality chronically-inflamed breast with a cyst in its centre. A cyst in the mammary gland, when cut into, looked like a thick-walled cyst with walls of fibrous tissue. Its walls were cancer. A large adherent tumour of the breast, with retraction and ulceration of the nipple and enlargement of the axillary glands, was thought by many to be inoperable carcinoma. It was tuberculosis of the breast and easily taken away. An encapsuled tumour in the breast of a middle-aged woman ought to have been innocent, to use the current phrase, but it was cancerous.

A small indurated nodule in the epididymis was diagnosed by surgeons of great experience to be tuberculous. It was a small malignant adenoma. Five years afterwards a tumour grew in the other testicle. A similar nodule met with in the epididymis, and which was associated with hydrocele of the tunica vaginalis, proved forthwith to be inflammatory, not tuberculous. But on another occasion an inflamed testicle was punctured to find out the nature of some fluid. None was found, but a piece of tissue came away in the cannula. This was part of a malignant growth. To me this discovery was a complete surprise. The testicle was removed, and the diagnosis fully confirmed. I can adduce two other instances in which a swelling of the testicle was thought to be inflammatory, and treated as such, and ultimately found to be sarcomatous. Oddly enough, both occurred in cases in which the testicles had not undergone complete transition. In one, the left testicle had stopped just outside the external abdominal ring; and in the other both testicles were retained, the right in the abdomen and the left in the inguinal canal. The latter was the one which I removed, but some months afterwards an abdominal tumour appeared and carried off the patient. It was supposed to have originated in the right retained testicle. I could continue to give instances of erroneous clinical diagnosis of tumours, but surely enough have been mentioned to explain my own mental attitude towards the ordinary clinical diagnosis. It is, however, to be noted that all the examples that have been given are ones of recognized difficulty. Fortunately there are instances in which the clinical diagnosis is unerring; as, for example, when we find a hard nodule in the epididymis, together with similar ones in the prostate and vesiculae seminales; and perhaps pus and tubercle bacilli in the urine. But I have been speaking of tumours in which corroborative evidence is lacking, and the tumour has to be considered alone, and upon its own merits or demerits. But how often there is no corroborative evidence!

Now as regards the naked-eye diagnosis of tumours after they have been cut into. Probably it is not wise to cut into tumours. Infective particles or juices may escape from them and bring about a further growth in the severed tissues. At all events the way in which nodules of cancer sometimes appear in the scar and in the stitch holes after a cancer has been cut into suggests that this is possible. Therefore it is better that whenever possible the suspicious tumour should be removed whole, and then cut into and examined. Inasmuch as tumours are now, I am glad to say, often examined before they have had time to grow big and dangerous, they can oftener be taken away whole with an abundant margin. And now as to the value of the naked-eye examination of the exterior of the tumour and of its cut surface. Some years ago I made an error which sank deeply into my mind. A large and rapidly-growing tumour of the testicle was cut into and then removed because it was thought to be malignant. Soon afterwards fresh growth appeared in the wound, and ulcerated in the manner characteristic of gumma. Iodide of potassium brought about a speedy cure; very likely it would have cured the original tumour. Again, a surgeon, who was a good pathologist, cut into a tumour growing in the subcutaneous tissue of the arm. To the naked eye it might have been a sarcoma or an inflammatory swelling. On the whole, it was most like a sarcoma. Excision of the tumour and even amputation of the arm were talked about, but the wound was closed pending a microscopical examination. Ultimately the tumour sloughed, and the slough was exactly like a piece of wet washleather. Obviously it, too, was a gumma.

* An address delivered to the Hampstead Division of the British Medical Association.

Many intra-abdominal tumours cannot be diagnosed with the naked eye. I have mentioned elsewhere a growth which implicated the intestine, and was thought to be malignant in spite of a microscopical section which had shown that it was inflammatory. Then I had a lingering confidence in my powers of making a naked-eye diagnosis of tumours. But the microscope was vindicated when the tumour departed and left no trace of its presence, for the patient ultimately died of septicaemia derived from a small abscess along the right ureter. On another occasion a large tumour of the great omentum had the naked-eye appearances of malignant growth, but the microscope revealed nothing but inflammatory deposit. The omentum was removed, otherwise the case might have got included amongst abdominal tumours, supposed to be malignant, but which disappear after laparotomy. The naked-eye diagnosis of such abdominal tumours unsupported by microscopical evidence is mere food for the credulous. Again, tumours which to the naked eye seem to be inflammatory are oftentimes malignant. Gall stones were removed from a very thick gall bladder. The thickening was assumed to be the result of inflammation, but a piece was cut off for microscopical examination. The thickening was, as is not by any means rare, caused by cancerous growth. A second operation was performed and the gall bladder excised. This brought to light a strange thing. At the first operation the cystic duct had been very thoroughly explored with the finger. Nevertheless, at the second operation it had a large gall stone in it. However, I have almost ceased to wonder at anything that occurs in this mysterious region, in spite of the infallibility with which its diseases are diagnosed, and the astounding certainty with which they are said to be cured.

Clearly the patient with the thick gall bladder might have been spared a second operation had I taken, as I do now, the precaution to have an immediate microscopical examination. In another instance this was done, and disclosed that a projecting piece of a curious mass near a slightly distended gall bladder was inflammatory; although the tumour itself was very hard and did not fluctuate, encouraged by the result of the microscopical examination, a further search was made, and a little pus was found in its interior. Two years afterwards the patient was well. Recently a gall bladder which looked malignant was forthwith shown to be quite innocent.

In other regions the naked-eye examination of a tumour may lead one to suppose that it is inflammatory when, as a matter of fact, it is not. For instance, a tumour at the inner side of the left nipple was cut into, and some cysts brought into view, and then a little pus. The pathologist, who was in attendance, looking at the cut surface of the tumour, and having also seen the pus, without hesitation said the tumour was inflammatory. It will be agreed that on ordinary clinical grounds he had ample justification. But the immediate microscopical examination brought to light a carcinoma—a so-called duct carcinoma.

Many enlargements of the lymphatic glands cannot be diagnosed by ordinary clinical methods. Fortunately, they are usually situated in accessible places, and can easily be removed for immediate microscopical examination. This method has brought to light things which to me have oftentimes been rather surprising. I know that the philosophical historian has said that we wonder because we are ignorant, but I also know that the recognition of ignorance is the beginning of knowledge.

A dustman had enlargement of the cervical glands which was thought to be tuberculous but was removed and contained squamous-celled carcinoma. The glands had probably been infected from an ulcer in the pharynx. Another man was supposed to be suffering from lymphoma (I confess that that term conjures up no clear image in my mind), but the microscope showed that the enlargement was myxosarcoma. On the other hand, enlarged lymphatic glands in a child's neck which were thought tuberculous proved to be tuberculous, and were removed on both sides with a reasonable prospect of success.

The naked eye and also the microscopical diagnosis of enlarged glands is sometimes exceedingly difficult, perhaps impossible. A labourer had enlarged glands along both carotid sheaths. There was much difference of opinion when the microscopical sections were looked at as to whether the appearances were those of inflammation or of malignant disease. Acting upon my own opinion I removed the glands, for I thought they were inflamed, which proved to be the case. The cause of the inflammation or the kind of inflammation was never known. But the case shows how important it is that the operator should himself be able to interpret for himself the appearances seen in microscopical sections, for otherwise the operation would, on this and other occasions, have been abandoned.

Another case illustrated very well the difficulties by which the clinical diagnosis of enlarged lymphatic glands is enmeshed. A man had a mass of enlarged and obviously inflamed lymphatic glands beneath the right sterno-cleido-mastoideus. One of the largest of the glands fluctuated and was presumably suppurating. When exposed they looked like inflamed glands and the fluid which escaped looked like pus; but the microscope brought to light squamous-celled carcinoma. A clean sweep was made of the growth, but it speedily grew again. Fortunately the efforts of surgery are not always so unavailing.

The immediate microscopical examination is applicable to dubious ulcerations of mucous membranes. An ulcer of the cervix uteri was shown to be carcinomatous, and a growth which appeared in the roof of the vagina after the whole uterus had been removed was also carcinoma, and singularly like the growth which was removed from the cervix in the other case. It had originated in the cervix, and it is to be inferred that, although the whole uterus had been removed, a particle of growth had been left behind and had gone on growing. Some might be contented to say that the growth had "recurred," whatever that may mean; but to me it seems better to face the fact that when the tumour grows again it has not been effectually removed. Ulcers of the tongue often present difficulties. A small hard circular ulcer of one of the foliate papillae was removed and found to be inflammatory; and yet another with similar characters was epithelioma. A papilloma of the penis was epitheliomatous, although no growth could be felt in its base. This microscopical diagnosis enabled amputation to be done at an early stage of the disease.

The immediate microscopical examination of tumours and of tissues has another very important use. It has fallen to my lot to operate for the removal of some very large connective-tissue tumours. A cartilaginous tumour of the scapula weighed more than 12 lb. after about a pint of fluid had run out of a cavity in its interior; but within nine months a second operation had to be done for growths in the remains of the scapular muscles and in the axillary glands. Now, these large chondromata of the scapula and pelvis usually contain sarcomatous elements, and we may surmise that these latter had grown along the muscles and fascial planes. Now, the extent of these prolongations cannot be seen with the naked eye. So, in another similar case, besides removing the suspected muscles very widely, as I went along, I gave a scrap of every doubtful tissue to Mr. Shaw, who at once reported upon it. Thus one had reasonable certainty at each step of this very extensive operation. In removing numerous and extensive epitheliomatous glands from the neck, too, it was of essential service to know what was being removed, because in addition to the growth, there was much inflammatory thickening. What is the meaning of this association of inflammation with carcinoma? Or, again, the front half of both upper jaws had to be removed for epithelioma. This had grown for an indefinite distance into the upper lip. After the lip had been separated from the tumour, a piece of its deeper part was examined microscopically. It had some carcinoma in it, so a larger piece of lip was cut away. This case exemplified another point. The cancer had grown along the palate, and it was quite impossible to tell with the naked eye where it ended. Some tissue in the roof of the mouth looked exactly like growth, and most of the palate would undoubtedly have been removed had not Mr. Lost made an immediate microscopical section, and reported that we were looking at palatal glands.

Again, an immediate microscopical examination was useful when amputating at the hip joint for a tumour of the upper third of the femur. In Scarpa's triangle, by the side of the tumour, some enlarged lymphatic glands were felt. Others could be felt along the crural arch and within the abdomen along the external iliac vessels. The question, therefore, arose as to whether at the time of the amputation or afterwards these intra-abdominal glands

ought or ought not to be removed. The microscope there and then showed that only the large glands upon the capsule of the tumour contained growth, and that those nearer the crural arch contained none, so that it was deemed unnecessary to open the abdomen.

Mr. Shaw will now demonstrate how quickly sections of growth can be cut with a freezing microtome, and how clear and good the sections are. In my opinion the apparatus he is using is an essential part of the equipment of an operating theatre.

DEMONSTRATION BY ERNEST H. SHAW.

Method of Cutting Frozen Sections of Fresh Tissues for Immediate Microscopic Diagnosis During Operations.

The method may be divided into two parts:

1. *The Arranging and Fixing-up of the Apparatus Required.*

The microtome must be fixed on a firm table, and all the instruments arranged in a convenient manner. A mental survey of the cutting, mounting, and staining of a section is then made, in order to make sure that everything is present and in its proper place. This ensures that no time will be wasted when once the process is begun.

2. *Preparation of the Microscopic Section.*

(*a*) The selected piece of tissue received from the surgeon is placed directly on to the brass disc of an ether-freezing microtome, and is surrounded by gum solution.

(*b*) The tissue and gum are frozen, and sections made by a razor on a carrier.

(*c*) The sections are transferred to a dish of cold water, and, after separating them with a glass rod, a suitable section is lifted out.

(*d*) It is dipped for a moment into pure methylated spirit, and

(*e*) Then placed in another larger dish of cold water; the currents set up by the spirit in the water cause the section to spread out flat.

(*f*) A glass slide is dipped in the water under the section, and the latter is lifted out as the slide is slowly drawn up out of the water again.

(*g*) The water is drained off the slide, and a drop or two of stain (Löffler's methylene blue) is allowed to fall directly on to the section.

(*h*) A thin cover-glass is placed on the stain and section after three to five seconds; it is lightly pressed down so as to drive out excess of stain; this is then blotted off, and the specimen is ready for examination under the microscope.

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THE ETIOLOGY AND PROPHYLAXIS OF DRACONTIASIS.

BY R. T. LEIPER, M.B., F.Z.S.,

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DRACONTIASIS is very common and widely disseminated throughout the native races of our West African possessions. During the last five years it has twice assumed epidemic proportions amongst the black troops stationed there, and on the more recent occasion severely hampered military operations in Nigeria.[1] These outbreaks indicate how, by aggravating the difficulty of maintaining the necessary supplies of labour, the disease may materially retard the commercial development of these colonies in the future. The authorities are at present deterred from initiating any active prophylactic measures by the varied and conflicting nature of the theories now in vogue as to the life-history of the parasite, and the manner in which it gains access to the human body.

In order to investigate these points in more detail, and, if possible, to determine the means by which the disease might be mitigated or controlled, I was sent to West Africa in August, 1905, by the Committee of the London School of Tropical Medicine.

The aim of the present paper is, first, to record the results of experiments undertaken to test the truth of previous theories; secondly, to define the conditions essential to the complete development of the parasite; and, thirdly, to base upon the facts ascertained some suggestions for the prevention of the spread of the disease.

The hypotheses of infection that have been advocated from time to time may be classified as follows:

I. Those in which the development of the embryo is supposed to occur without the intervention of any intermediate host, human infection being caused by:

a. The embryo, as discharged from the parent worm; or

b. The mature larva, evolved from the embryo in water or marshy soil; or

c. The young adult, the product of the continued growth of the larva in water.

II. Those in which an intermediate host is considered essential for the development of the larva in order that it may become fitted to reinfect man:

d. The only, and in itself sufficient, host being cyclops.

e. A second, and at present unknown, intermediate host being necessary to continue and complete the changes begun in cyclops.

Further, there remains to be considered under each heading a still more controversial and important question: By what route does the parasite enter the human body? Does it do so passively with the ingestion of fluid or actively by penetrating the skin?

The theories comprised in Section I have been strongly advocated by many writers on dracontiasis in the past. They are still to be found in some of our modern textbooks of pathology, though they have become discredited. Plehn[2] is the most recent investigator to support the theory (*a*) of direct infection by the embryo. In a tumour of the right thigh of a monkey which had been fed eight months previously on bananas containing freshly discharged embryos he found a filaria "indistinguishable from the Medina-worm." This experiment I repeated in Accra, but though the monkey swallowed thousands of living embryos, not a sign of infection could be discovered *post mortem* six months afterwards. Busk[3] has maintained on clinical evidence that the embryos directly penetrate the skin, but I am unable to support this view. The application of living embryos in water to the dorsum of my own hand always failed to produce the erythema and itching noted by Looss to accompany skin infection by nematode larvae, and there have as yet been no other indications of infection.

The remaining hypotheses (*b* and *c*) of this section may be rejected from a critical examination of their literature. It is obvious both from the descriptions and illustrations that the larvae and adults of certain free-living nematodes have been very generally mistaken for the developing Guinea-worm. The same explanation disposes of the statement (Carter) that *Urolabes palustris* is the free form of the *Filaria medinensis*.[4]

It has frequently been shown that the embryos discharged from the parent can only live in water for quite a short time, and that they undergo no metamorphosis. In my observations on the vitality of these embryos in water the vast majority died on the third day, though some survived until the sixth. In mud they lived a day or two longer, probably because in this they move more slowly, and are consequently less quickly exhausted. Although provided with a mouth and digestive tract they are still unable to obtain food for themselves.

This inability on the part of the embryo to infect man by the skin or by the mouth, to undergo any further development, or even to remain alive in water, points to an intermediate host as an *essential* factor in its life-cycle.

This conclusion brings us to the consideration of the theories in Section II. The conditions under which the embryo becomes a larva were discovered by Fedschenko about 1870.[5] He observed that the embryo made its way into the body cavity of a small crustacean of the genus Cyclops, and there, after a period of twelve days, underwent metamorphosis. Having followed the growth of the larva until the fourth week, he then endeavoured to complete the life-cycle of the parasite by feeding cats and dogs upon the infected cyclops. These experiments were unsuccessful. Nevertheless, Fedschenko concluded that

cyclops was undoubtedly the efficient intermediate host of the Guinea-worm, and that probably the larvae were taken into the alimentary canal of man whilst still within this host, and there set free. His view was that in the intestine they then attained sexual maturity, and the females when fertilized made their way into the connective tissues, whilst the males died and were discharged in the faeces.[2]

The failure of Fedschenko's efforts to produce infection artificially led many to doubt the accuracy of his conclusions. It has been urged that "possibly cyclops is not the real host of the *Filaria medinensis*, notwithstanding that the nematode might attain a certain stage of development in its body" (Sambon[6]). Others maintain, upon the analogy of the behaviour of the ankylostome larva, that the larvae by becoming free-living later, may infect man through the skin. They are thus able to offer an explanation for the remarkable fact that the parasite occurs in the lower limbs in 90 per cent. of all the cases of dracontiasis. While my own experience does not confirm Fedschenko's observations and conclusions in their entirety it brings no support to these later views.

I obtained the materials for experimental purposes most satisfactorily by the following means. Cases of dracontiasis were selected in which the vesicle caused by the worm was still whole or had only recently burst, and a damp compress was bound over the sore. When this was taken off, a few hours later, there would be found upon it an almost solid mass of embryos. With material obtained in this way one had complete control over the degree of infection of water containing the cyclops. The worm discharged its young by a prolapse of the uterus, as described by Manson,[10] though this extrusion never occurred through the mouth but by an opening just outside the circumoral ring of papillae.[12]

Cases in which there was considerable suppuration or abscess formation were useless for our purpose, the accessible part of the worm being filled by white cells, which had destroyed the embryos. To secure a supply of cyclops, likely pools were swept with a fine silk net (60 meshes to the linear inch) into the apex of which had been fitted a wide-mouthed bottle of about 10 oz. capacity. When this bottle was filled with creatures of various sorts it was emptied into large jars, which were then corked and transferred to the temporary laboratory. After a time, possibly because the oxygen became exhausted, the cyclops collected near the surface. The upper layer was then decanted into a large Petri capsule and gently "swirled" round until the solid contents gathered in a vortex in the centre. By means of a large syringe with a fine nozzle all the dirt and the innumerable small creatures could now be got rid of except the cyclops, which always darted away from the current into the clean water at the sides. In this way it was easy to get a large and fairly pure supply from the most miscellaneous catch.

Although most of the animals that prey upon cyclops were excluded by this method, there was some difficulty still owing to the evaporation and concentration of the water, and the growth in it of paramecia which destroyed large numbers. The bulk of the water had consequently to be drawn off and replaced by fresh every third day. Moreover, the cyclops themselves are carnivorous, and in absence of their usual food supply commence their fellows, so that it became necessary to add some organism that was suitable as food and yet harmless. The best results followed the use of rain water, which contained numerous nauplii and cercariae to refill the tanks.

Of all the other species found in the ponds none was capable of infection with Guinea-worm embryos. In a few instances they were swallowed, especially by nauplii or larvae, but they were invariably digested and their cuticles examined. Cyclops on the other hand, was very receptive to infection being met with even in adult forms carrying larval nematodes. This fact provides a strong argument in favour of the supposition that the greater prevalence of the disease in May and June is due to the prevalence at those months of young forms of cyclops, which for that reason are much more liable to infection.

I do not propose to give any account in this paper of the changes undergone by the larva in becoming mature, until embryological details may be more entirely considered later in connexion with the anatomy of the adult worm.

There are, however, two episodes in the embryo's life that are of sufficient practical interest to be dealt with here, and regarding which I find myself at variance with previous observers, namely, the mode of its entry into cyclops, and the time required for the completion of metamorphosis. The teaching of the present day is that the embryo bores its way through the integument at the intervals between the "ventral plates," and so directly reaches the body cavity. I was never able, in spite of repeated endeavours, to observe this process, and there are several considerations which make it somewhat improbable. The cuticle of cyclops is continuous and almost uniform. There are no distinct "ventral" plates or intervals between them. In fact, as may be seen after the soft parts of a dead cyclops have been completely cleared away by paramecia, the cuticle is a rigid and uninterrupted exoskeleton. The Guinea-worm embryo possesses no boring apparatus with which to pierce this resistant layer. Its movements, moreover, intermit regularly, and are insufficiently powerful to maintain its own weight against gravity. For it, the presence of a cyclops in its neighbourhood is a matter of indifference—a strong contrast to the swarming of the miracidia of trematodes around their special hosts. If by chance an embryo does come in contact with one of the cyclops's appendages it loops round it in the form of a Greek *a*, but it has no means of firmly affixing itself and quickly relaxes again. The coiling appears to me to be essentially spasmodic. It may be produced by salt solution and other chemical irritants. This peculiar flexion followed by sudden straightening, while useless for penetrating a resisting object from without, seems very well calculated to help the embryo to explode one or other of its extremities through the walls of a soft containing tube like the cyclops's intestine. Further, where more than half a dozen embryos gained access to the body cavity, the infection generally resulted in the death of the host. In these cases it could be seen that the intestinal wall at one part was severely lacerated. Lastly, we have the analogy of *Cucullanus elegans*, the similarity of the embryos of which to those of the Guinea-worm suggested to Leuckart[8] the possibility that the cyclops was an efficient host for both. Although the *Cucullanus* embryo is provided with a special "perforating tooth" (Blanchard[9]), it is an accepted fact that it infects cyclops through the intestine. The question can only be settled finally by serial sections of recently-infected specimens, and these I have hitherto had no opportunity of making. Meanwhile it is, I venture to submit, at least an open one.

As regards the time necessary for the completion of metamorphosis, Fedschenko, who continued his observations into the fourth week after infection, states that it occurs on the twelfth day. Manson, working in London with English cyclops, found that ecdysis was postponed until the sixth week, owing, doubtless, to the cold. In Africa I found that the striated cuticle of the embryo was cast generally on the eighth day. The larva which emerged lost two days later a very delicate enveloping pellicle, and from that time onwards underwent *no* further ecdysis. The subsequent changes were confined to the differentiation of internal structures, the larva apparently becoming mature in the fifth week.

The next point to be considered is the way in which the mature larvae quit the cyclops. If infection of man is to occur by the skin, it is clear that they must leave the cyclops and become free-swimming. If, on the other hand, infection occurs by the mouth, there is no necessity for them to do so till they arrive in the human stomach. Now, in the six weeks during which I was able to observe them developed, the larvae showed no inclination to leave the cyclops. On the contrary, as time went on they became more quiescent, and even when, as happened only too often in the later stages of the experiments, the cyclops died, they did not escape, but were found dead in its interior.

The manner in which they can be set free I have already described in a previous communication.[1] When an infected cyclops was transferred to a 0·1 per cent. solution of hydrochloric acid it was immediately killed, but the larvae, far from being destroyed were awakened to great activity, and eventually escaped into the fluid, in which they swam about freely. This experiment points directly to the probable way in which the larvae are released in nature, for

if such a cyclops were swallowed the action of the gastric juice would give the same result.

In order to clinch the argument, I fed a monkey on bananas containing cyclops which had been infected for five weeks and which had in them larvae which appeared mature. Six months later a careful *post-mortem* examination was made for me by Dr. Daniels, and in the connective tissues five filariae were found which, as I have stated elsewhere, possessed the anatomical characteristics of *Filaria medinensis*.[12] There were three unimpregnated and obviously immature females about 30 cm. long, and two remarkable small males (22 mm.), which were obtained one from the psoas muscle and the other from the connective tissue behind the oesophagus.

These results point strongly to the truth of the theory that infection of man takes place from the drinking of water containing infected cyclops.

The suggestion[6] that a second intermediary host is necessary for the complete development of the Guinea-worm larva is disposed of by the fact that this is actually attained in cyclops.

The finding of both male and immature female forms in the connective tissues relieves us of the more improbable alternatives previously open to us,[9] namely, that either the filaria was hermaphrodite or that the larvae became sexually mature in the intestines, and the fertilized females only migrated into the body. The view that the larvae at once make their way through the gut wall and become sexually differentiated later in the tissues of their host, brings the after-development of the parasite much more into line with that of other filariae.

We have already referred to the extraordinary frequency of the parasite in the lower limbs in human cases, and discussed the possibility of the larva directly reaching its final position in the connective tissue by piercing the overlying skin. Those who reject this explanation suppose that the pregnant worm is attracted to these parts by a maternal "instinct" which bids her seek to discharge her young into water.[1] In the case of our monkey, however, the three female worms, although immature and unfertilized, had already made their way into the limbs, being found *post mortem* in the forearm, the axilla, and the popliteal space. I venture to suggest that in these wanderings of the Guinea-worm we have an example of one of those "-tropisms" that, as Loeb has recently shown,[14] dominate the movements of many lowly-organized creatures. Geotropism[13] seems to me to afford a rational explanation of the remarkable distribution of the parasite in man.

Two further statements must be briefly dealt with before we can proceed to summarize the circumstances controlling the complete development of the parasite. It has been repeatedly affirmed that the embryos as they come from the patient are able to withstand desiccation,[10] and thus be spread widecast by the wind, or in the dry season await a favourable rain to carry them to a cyclops-infested pool. Were this true it would present an almost insuperable difficulty to the prevention of the spread of dracontiasis. The embryos are, however, immediately killed if dried by natural evaporation, and they cannot be revived by the readdition of water.

The presence of numerous large lagoons along the Guinea coast has been thought to explain the great prevalence of the disease in that part of Africa. At Accra there are two lagoons, but neither contains cyclops. The water was distinctly saltish. This excludes them as a source of infection, for on the one hand the species of Cyclopidae are, with one or two rare exceptions, fresh-water forms, and, on the other, water taken from these sources was found to kill the Guinea-worm embryos in half an hour. Sea water had the same effect.

We are now in a position to define with some accuracy the conditions essential for the completion of the life cycle of the parasite.

The young must be discharged directly into fresh water soon after the parent worm has succeeded in creating a break in the overlying skin and before the wound has become markedly septic. The embryos must find a cyclops within a few days. They must, moreover, succeed in entering its body cavity. Five weeks later they will have developed into mature larvae. These must, thereafter, be taken into the human stomach, and having been set free from its host by the gastric juice, reach the connective tissues by penetrating the gut wall.

The life-cycle of the parasite will necessarily be broken: (1) By the death of the embryos, either from sepsis while still within the parent worm, or after their discharge, by saltish water or drying. (2) If cyclops are not present in the water, or if the infected cyclops die or are not taken into the human stomach. (3) If the larvae, ingested by the final host, are immature or fail to escape from the chitinous sheath of the cyclops. Though they do gain their final habitat, the cycle will still be incomplete if (4) there are not both males and females among the matured adults, and if in their wanderings the females are not impregnated.

It will at once be seen from the above summary that the isolation of infective man from healthy cyclops and of infected cyclops from man must be the object of any organized effort to stamp out dracontiasis.

It is with diffidence that I offer any suggestions on the practical application of this conclusion. We must look rather to those who are intimately acquainted with the customs of the people and the physical conditions in the affected areas for proper guidance as to the means by which it can be most successfully achieved. My remarks are based on what I saw of the water supplies of the villages in the eastern half of the Gold Coast Colony during a journey from the coast at Accra to Kpong on the Volta river. The observations, necessarily somewhat limited, were made at a time of severe drought, and it may well be that measures which then seemed best adapted to the requirements may prove unsuitable or impracticable elsewhere and under other climatic conditions.

From the nature of the disease it is evident that dracontiasis will disappear from the Coast towns when the provision of a properly-controlled water supply, obtained either from artesian wells or through pipes from some rapidly-flowing stream, permits the filling-in of the surface collections of rain water and the shallow wells upon which the natives now depend for their supplies. Care would have to be taken that any artificial reservoirs constructed were efficiently protected by their isolated situation from the possibilities of infection.

We have to adapt our prophylactic measures in the meanwhile, however, to the conditions as they now are in the towns, and as they will probably always remain in the inland villages. The simpler and less costly these are the likelier they are to be put into practice.

The native, more concerned with quantity than purity, takes his drinking water wherever it is most accessible—from rivers or rain tanks, from shallow wells, or the large ponds usually found at each village.

The question of the infectivity of these sources depends primarily on the presence of cyclops. It is said that cyclops does not occur in swiftly running waters, and this I found true of the Volta and the Sekum, the only rivers I had an opportunity of examining owing to the drought. It is noteworthy that in the village Oblogo, which depends solely on the latter stream for supplies, I could get no information of the occurrence of dracontiasis amongst the inhabitants. If, therefore, the scheme for providing Accra with this water becomes a reality it is to be expected that dracontiasis will disappear from the town. An examination of the rain tanks and the wells in and around Accra, Christiansborg, and Labadie was likewise negative. The reverse was the case with the village pools. Those at Akuse and Christiansborg were found to contain vast numbers of cyclops and other forms of crustacean life. In the latter village the evidence seemed irrefutable that the disease is endemic, and a small pond situated centrally, which supplied a proportion of the small population at least during the dry season, appeared the likely centre of infection. In cyclops obtained there I frequently found a nematode larva differing only from that of the Guinea-worm in its greater size and the sharp chitinous tips of its triradiate tail. Probably it belongs to the genus Cucullanus, but it deserves mention as a possible source of error in the examination of suspected water.

At Akuse, numerous cyclops were found where the natives drew their drinking water, and where at another spot they could be seen washing.

In most of the villages of the plains I was able, while passing through, to procure cases of dracontiasis, and the histories were suggestive that the infection had been locally acquired. Unfortunately the ponds at most of

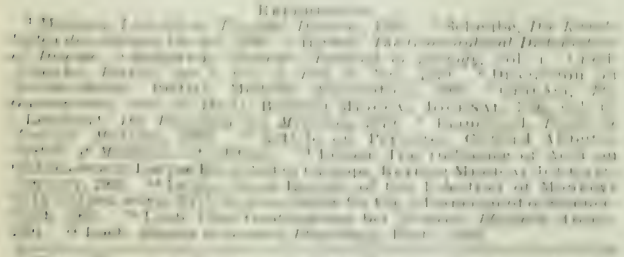
these places had become dry, and consequently the presence of cyclops could not be determined.

The village pond seems to me undoubtedly the most likely source of the vast majority of the infections. Attention must, therefore, be mainly directed, on the Gold Coast at least, to their protection. My negative results seem to show that the wells are relatively less important. The wells should be surrounded by a stone parapet of about 2 ft. in height and the village pools stoutly fenced around in order to prevent the natives from bathing there or from wading into the water when filling their storage vessels. Each pool would have to be provided with a sufficient number of "drawing" wells dug at a short distance from the pool and connected with it by underground pipes in such a way as to ensure a constant supply of water. The openings of these would be protected by a stone or cement wall. In this way by preventing water in contact with the legs of the drawers returning into the pool the chances of infection would be reduced nearly 90 per cent. The "drawing" wells would most likely be used freely by the natives, as less labour is involved in obtaining water by draw-bucket or pump than by collecting it with a calabash. Nor would the prevention of the use of the pools for washing prove as great a difficulty as might be supposed, for at several places the natives have already learnt to do this at a place apart from where the drinking water is drawn. At Accra, the filling of the large reservoir by a thunderstorm a few days before I left gave me the opportunity of observing that there those using the water for washing purposes carried it over the embankment to the lower ground. These precautions were, however, rendered unavailing, as far as dracontiasis was concerned, for those drawing the water for home use frequently entered it for some distance in order to secure a more copious supply than that obtainable at the margin.

If by these or other and more practical methods the infection of the open ponds in the villages could be prevented there is little doubt that a considerable diminution in the disease would soon result.

There still remain for careful investigation in relation to the prophylaxis of dracontiasis many details regarding the life of the intermediate host. We have still to determine more accurately the conditions under which it lives and multiplies in these tropical countries, what are its natural enemies, and upon what other forms of life it depends for its food supply; whether it can survive the drought of the summer, buried beneath the sun-caked mud, or if, when once a pool has dried, it must be restocked from another source; lastly, if, by the addition of chemicals, we can destroy the cyclops in suspected waters without rendering these useless or dangerous to man.

No account of my investigations on the Gold Coast would be complete were I to leave unacknowledged the kindly interest with which Sir John P. Rodger and Major Bryan encouraged my work, the generous way in which the Principal Medical Officer and his deputy aided me with every facility the medical department could have provided, and the daily help and forbearance of Dr. Ennis, who had charge of the Government hospital, and Dr. C. H. D. Ralph, the Medical Officer of Health for Accra.



ATOXYL IN THE TREATMENT OF TRYPANOSOMIASIS.

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SINCE a number of statements concerning the use of atoxyl in human trypanosomiasis have recently appeared in various journals, lay and medical, it seems opportune briefly to recapitulate what is known concerning the action of this drug on trypanosomes and to indicate what seems to be the best method of administering it.

"Atoxyl," a preparation of arsenic (meta-arsenic-anilid; $C_6H_8NAsO_4$) which contains about 37.6 per cent. of arsenic, was first used in the treatment of various skin diseases and of anaemia.[1,2,3] The beneficial action of arsenic in trypanosomiasis (nagana) was first reported by Livingstone. Succeeding experimenters (Bruce, Lingard, Laveran and Mesnil, Thomas and Breinl, and others) also noted the marked action of arsenic, administered in various forms, on the parasites in the blood stream of animals infected with trypanosomes, of several different species. All these observers recognized, however, that, as a rule, the protective effect of the usual forms of arsenic was only temporary, and that, in the end, the parasites reappeared in spite of steadily increasing doses of arsenic, until a point was reached at which the animal died, either of its disease or through poisoning by the arsenic given to cure it.

Thomas and Breinl[4,5,6] thought that it might be possible to find in some of the compounds of arsenic with organic bases a form of the drug which would still retain its deleterious effect on trypanosomes, but would be less toxic to the animal treated. A number of preparations were tried without result, until atoxyl was found to possess both of the desired qualities in a marked degree. A large series of experiments on animals infected by various trypanosomes was carried out at the Runcorn Laboratory,[6] and it was found that when very severely infected animals were thoroughly and persistently treated with atoxyl a very marked improvement immediately followed. The parasites obviously degenerated, and totally disappeared from the blood in a very few hours. The animals gained weight, lost their symptoms, and seemed in apparent health. In some of them the amelioration was permanent. In others, if the treatment were stopped, the parasites reappeared in the peripheral circulation after a varying period, or, if the drug were given continuously, the parasites eventually reappeared in spite of treatment, and increased in numbers until the animal died, as in the ordinary course of an untreated trypanosome infection. Laveran, Mesnil and Nicolle[7] have had a similar experience. Thomas and Breinl were much impressed with the effect of atoxyl, and advised that the drug should be given in as high doses and as continuously as possible in cases of human trypanosomiasis. They stated that, "at the same time, all aids in building up the physical condition of the individual should be used." In their opinion, "if such a régime be carried out and treatment be begun at an early period, the prognosis (based on the experience of animals treated) will be good." As a result of the work of these authors, the Liverpool School of Tropical Medicine has ever since consistently advised that this drug should be given a more careful trial in the treatment of sleeping sickness.

Since October, 1905, the Liverpool School of Tropical Medicine has sent large quantities of atoxyl (2,800 grams), with careful instructions for use, to various medical men and missionaries in West Africa, who have signified their readiness to give the drug a careful trial. Reports have as yet been received from some of them.

In the meantime, atoxyl has been used in Europe in the treatment of several Europeans and negroes, from both the east and west coasts of Africa, who were infected with *Trypanosoma gambiense*. In some of them the results have so far been most encouraging; in others, unfortunately, the drug has had but little action.

Kopke is quoted as having treated cases by atoxyl with results encouraging at first, but later followed by

relapses. These are to be explained, according to Magalhaes[10], by the impermeability of the meninges, which prevents drugs (potassium iodide and methylene blue) from reaching the cerebro-spinal fluid, and so protect the trypanosomes there present from harm. We regret we have not been able to obtain Professor Kopke's publication.[11]

Broden and Rodhain,[15 12] have between them treated by atoxyl four Europeans infected with trypanosomiasis. In three cases their results were very encouraging, in the fourth the drug is not well supported, and it has had but little beneficial action. At the London School of Tropical Medicine Dr. Daniels informs us in a private communication that in two cases treated respectively for fourteen and ten months not only can parasites no longer be found, but there are now none of the symptoms of the disease. The patients appear to be in excellent health, and injection of their blood into monkeys and rats does not cause trypanosomiasis in these animals. Small doses, 10 minims or less, of a 10 per cent. solution were given intramuscularly, and the dose increased to the limit of tolerance without symptoms—that is, in these cases, 25 to 30 minims of the 10 per cent. solution on alternate days. The administration of these doses has been continued with short intervals throughout the whole period the cases have been observed.

Van Campenhout informs us in a private communication that he has employed, in conjunction with atoxyl, strychnine and cold baths—the latter for their tonic and stimulating effects. He has had three European cases in the third stage of the disease under his care. All have reacted immediately to the treatment, have gained weight, and are at present apparently well. As a precautionary measure, the treatment is being repeated in two of these cases. The third has not returned for further treatment. Dr. Van Campenhout has also had good results from atoxyl in the treatment of a European in the first stages of trypanosomiasis. He prefers solutions of 5 per cent. to 10 per cent. of atoxyl, and regulates his doses in the following manner. He commences with a dose of 0.2 to 0.25 gram of atoxyl, and increases it daily by 0.05 gram until a dose of 0.8 gram or more is reached. If there are then no signs of poisoning, the daily dose remains at this point during a fortnight or three weeks, according to the gravity of the case. The dosage is then gradually lessened by 0.05 gram daily until a dose of 0.2 gram is reached, and the treatment is then interrupted for one or two months. Three or more such courses of treatment are given as required.

Most of these observers have given the drug subcutaneously; some, however, have given it by the mouth. This is a mistake, since atoxyl is certainly broken up by the acid contents of the stomach, and the untoward effects of over-treatment by arsenic are thus more easily produced [1(a)]. We believe that the intravenous injection of a solution of atoxyl in distilled water is the method to be preferred. Its difficulties are apparent, and in routine treatment it will probably be usually replaced by subcutaneous injections. As in the ordinary administration of arsenic, the organism should be gradually accustomed to the drug [1(a)]. We believe that this can best be done by [13] making a 20 per cent. solution of atoxyl in sterile normal saline. The solution should be warmed to blood heat just before use. In this way the drug is completely dissolved, and the pain at the site of injection, which occasionally follows atoxyl, is obviated. Give subcutaneously daily for four days 0.6 c.cm. On each of the four succeeding days give 0.8 c.cm., then raise the dose for a week to 1 c.cm. of the solution each day.* Now give 1 c.cm. every two days for a fortnight. Then reduce to 1 c.cm. twice a week until all symptoms have disappeared and the patient's blood is negative to subinoculation into susceptible animals. Afterwards 1 c.cm. should be given weekly for as long a period as possible. Should signs of poisoning arise, the same doses should be given, but less frequently. Although we have indicated a definite treatment it is impossible to give a general rule for every case, since idiosyncrasies are bound to occur; but, as a guide, it may be said that the dosage should be brought to the limit of the patient's tolerance (no signs of poisoning) and continued at that point. It is at present impossible to say for how long the treatment should be kept up; it is well known that no symptoms may be present for several years in cases of human trypanosomiasis which ultimately end fatally. We are, therefore, in complete agreement with Broden and Rodhain,[12] who have likened the treatment of trypanosomiasis to that of syphilis.

Van Campenhout, in his directions to the medical officers of the Congo Free State,[16] points out that the syringes used for injecting atoxyl should be sterilized by heat, since acids (carbolic) decompose atoxyl. He also points out that solutions of atoxyl break down and become yellowish if exposed to the light. All solutions should therefore be kept in dark (brown) bottles and made up afresh each week. Dr. Nierenstein, working independently at this school, had also found it necessary to follow these rules, since he had found that pure aniline is present in solutions of atoxyl which have been exposed to diffuse daylight for five days.

The signs of poisoning by atoxyl do not seem to be those usually associated with arsenic, and its administration has never been followed by albuminuria.[1(a)] Schild describes them as "chilly feelings, vertigo, headache, and ticklings in the throat." Broden and Rodhain[12] saw severe abdominal cramps radiating to the hypochondria, slowing of the heart, and cold extremities, in cases to whom comparatively large doses of atoxyl had been given (to 4.10 grams of atoxyl in one week at the beginning of treatment). In none of these cases was there intestinal pain or diarrhoea.

Daniels, in a private communication, states that "burning on micturition, general dryness of the mucous membranes and skin, with the formation of pruriginous vesicles," followed the administration of 0.2 gram of atoxyl twice weekly for fourteen months in one case. In another case, early in the course of treatment, there was vomiting and diarrhoea. When these symptoms occurred the dose was reduced and subsequently very gradually increased. Other patients have been able to stand twice the doses mentioned, but in one 25 minims of a 10 per cent. solution given on alternate days produced abdominal cramps.

Van Campenhout, in a private communication, states that untoward effects followed the administration of from 0.2 to 0.5 gram of atoxyl given by the mouth daily for several days. He also found in one case that they regularly followed the administration of 0.8 gram of atoxyl given hypodermically in one dose. He describes the signs of poisoning as slowing of the pulse, cold extremities, and pectoral cramps.

In conclusion, although we earnestly advise the use of atoxyl in human trypanosomiasis, we cannot forbear uttering a word of warning lest the immediate amelioration which usually follows the administration of this drug should be thought to be always permanent. In some cases a cure may be effected; in others, from the experiments made at this laboratory, we are forced to believe that the improvement will prove to be merely transitory. Atoxyl is a great advance on previous methods of treatment, but it is not an absolute specific. What its actual therapeutic value in human trypanosomiasis really is can only be determined by the systematic treatment and subsequent observation, over a period of several years, of a large number of cases. It is therefore absolutely necessary that those who have an opportunity of treating cases of sleeping sickness should use every effort to keep a careful record of the after-history of their patients.

In the meantime, at Liverpool as elsewhere, the search for a treatment more efficacious than atoxyl is still being continued.

Our thanks are due to Dr. Daniels and to Dr. Van Campenhout for permission to publish those of their observations mentioned in this communication.

* This dosage is based on the personal experience of one of us (A. B.), who made fruitless attempts to influence the course of an infection by *Spirochaeta duttoni* in himself and a laboratory servant by injections of atoxyl.[13] Both patients remained under treatment for fifteen days.

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THE TREATMENT OF PARALYTIC TALIPES VALGUS BY TENDON TRANSPLANTATION.

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A MODERATE degree of this deformity is very suitable for treatment by tendon transplantation. The very severe forms where, in addition to the tibials, the muscles of the calf are very weak or completely paralysed, are unsuitable for this procedure. Stability of the foot can in these only be obtained by producing ankylosis at the ankle-joint. The three following cases which recently came under my care at the Children's Hospital illustrate many points in the treatment:

1. E. C., aged 4½ years, was attacked by infantile paralysis three years previously. The loss of power was at first complete in both legs. Some recovery took place, and when first seen by me the condition was as follows:—In the left leg, the only healthy muscle present below the knee was the extensor longus hallucis. The others were not completely paralysed, and reacted feebly to the faradic current. The limb, though not strong, was distinctly useful, but an extra amount of work was thrown on the opposite member. Fortunately the ligaments about the ankle-joint were not unduly lax, and there was no indication for any operative interference on this side. On the right side there was a well-marked valgoid position. The following muscles were involved, and did not react to faradism—tibialis anticus, tibialis posticus and extensor longus hallucis. The flexor longus hallucis and communis digitorum were feeble. The internal lateral ligament of the ankle was stretched and well marked flat foot was present, partly due to the want of support of the tibialis posticus muscle.

Tendon transplantation was performed on May 16th, 1906. The skin incision extended from 4 in. above the outer malleolus across the front of the ankle, and more than half way up to the popliteal space along the middle of the calf behind. The peroneus longus was cut as long as possible and brought across the front of the ankle and fixed to the inner and under surface of the navicular bone. About one third of the tendo Achillis was split in the middle, and the separation extended well up into the calf muscle as opposed by Drobnick. An additional incision was then formed which was placed behind the inner malleolus in the sheath of the tibialis posticus. The tendon itself was accurately sutured over the base tendon. The separated piece was fixed to the under surface of the navicular bone. It was impossible to get it actually on to the bone itself on account of the internal wedge-shaped piece of the bone which is embedded in ligament. The slip of tendon which was split off the tendo Achillis was fixed on to the tendon of the tibialis posticus. Possibly a few fibres of this tendon were united to the calf muscle, but I am not sure about this. The limb was then put up in plaster of paris.

Massage was performed daily and the child allowed to get about. The boot and leg iron used to support the weakness of the relaxed internal lateral ligament. This was to ensure that the tendon of the transplanted tibialis posticus should not be overstretched and the ankle kept in a proper position. Massage and faradism had to be carefully taught to the mother, as I was not quite satisfied. It was decided to wait for a year to give greater stability to the foot, as the ankle was not materially strengthened by the operation. I intended to fix the ankle-joint by arthrodesis if the foot remained unstable. However, the result of the operation was so satisfactory that I did not think it necessary to perform this operation. In looking back on this case it would have been better to have fixed the tendon before transplanting. On the whole it was interesting to note the form of gait

ment of the peroneus longus and the split part of the tendo Achillis to their new position. A dense mass of firm fibrous tissue had formed round the silk sutures joining the latter tendon to the bone. Thus the satisfactory result obtained by bridging an interval by silk stands was demonstrated. The limb is still in plaster-of-paris, where it will have to remain for at least three months to allow of the ankylosis becoming firm.

2. C. D., aged 3½ years. The paralysis in this case was of two years' duration: it affected the right leg, which was ¾ in. shorter than the left. The following was the distribution of the paralysis: The tibialis anticus and posticus were quite useless, the inner head of the gastrocnemius was feeble, but the outer head reacted vigorously to the faradic current. The inner part of the extensor communis digitorum reacted very weakly to the interrupted current though the extensor longus hallucis was unimpaired. Of the thigh muscles the inner hamstrings and adductors were weak. There was not the same flattening of the arch of the foot as in the last case.

Tendon transplantation was done on May 25th, 1906. The tendo Achillis was not made use of as the calf muscles were partly paralysed. The extensor longus hallucis was divided and fixed to the inner and under surface of the navicular bone. The peroneus longus was brought across the ankle and fixed to the peripheral end of the divided extensor of the great toe. If I had a similar case in future I should cause the peroneus longus to support the joint behind by passing it underneath the tendo Achillis to the navicular bone.

3. K. P., aged 4½ years. The paralysis was of three years' duration and affected the left leg, which was ¾ in. shorter than its fellow. A very marked valgoid deformity was present, the child walking on the inner border of the foot. The peronei on the outer side of the ankle were markedly contracted. The following muscles were found not to react to faradic stimulation: Tibialis anticus and posticus, flexor and extensor longus hallucis. The inner part of the extensor communis digitorum and the inner head of the gastrocnemius were very feeble. In the left hand the interossei, the third and fourth intercarpal spaces were paralysed, resulting in a characteristic deformity.

On May 16th, 1906, tendon transplantation was performed. The peroneus longus was displaced out of its sheath and cut as far as possible in the sole of the foot. The tendon was then brought across the front of the ankle superficial to the deep fascia, and was fixed to the inner and under surface of the navicular bone. Much improvement resulted, though the deformity was not altogether corrected. After recovery there was considerable eversion of the foot, owing to lack of any support behind the inner malleolus. Apparently it would have been preferable in this case, too, to have brought the peroneus longus behind the inner malleolus, passing it beneath the tendo Achillis. The main support necessary in talipes valgus seems to be one bracing up the inner side of the ankle from behind.

Technique of the Operations.

1. A tourniquet applied above the knee makes the operation much shorter and easier. It prevents bleeding from a large number of small veins which are divided on the front of the ankle and foot.

2. The transplanted tendons, when possible, were fixed directly to the bone by silk sutures. A periosteal flap was raised from the navicular bone, and was sutured over the tendon when that structure had been fixed in position. No doubt the immediate result is better if the transposed tendons be fixed to the peripheral ends of the paralysed ones. The denervated structures, however, subsequently stretch and the operation is nullified.

3. When the split tendo Achillis was used the separated portion was given the sheath of the tibialis posticus. It afterwards moved in this very satisfactorily. The separation of the tendon was continued some distance into the muscle. Tubby[1] does not advise this plan, but it is probable that not many muscular nerves are destroyed by it, as they run on the whole vertically down in the gastrocnemius. If this be done, it may be possible to some extent to get independent movement in the separated tendo Achillis. If the splitting be not carried up beyond the tendon this is obviously impossible. It is important, also, to put the right amount of tension on the transplanted tendons when fixing them. If this be insufficient, the muscle may gain of its contraction in making the slack tendon taut. If the tension, on the contrary, be too great the sutures fixing the tendon to its new insertion are likely to give way. As Tubby has pointed out, the tendons acting on the toes can be utilized to give stability to the ankle joint. Loss of power in the toes is of small moment compared to weakness of the ankle or mediotarsal articulation. After the sheath of the peronei is opened up to allow of using of one of them, it is subsequently united by continuous fine silk suture. After the operation the leg and foot are put up in plaster of paris for six

weeks, till the tendons have become firmly fixed in their new position. When the plaster is removed massage is actively performed, and the patient encouraged to gradually use the limb. This allows of the muscle undergoing the necessary hypertrophy. At this time there is considerable tendency for the foot to evert; this is owing to the previous stretching of the ligaments about the inner side of the joint, and in many cases to some alteration in the articular face of the astragalus. To obviate this, I used for some time a boot which stiffened sides. It is probably true that the patient cannot use the transposed muscles to advantage without much practice.

The decision of the operation to be performed in talipes valgus obviously depends on the muscles affected; in severe cases a stable ankle joint will only be obtained by ankylosis of that joint, or the subastragaloid articulation. Case 3 was on the borderland of this group, and a better function might have been obtained by using this method. When the tibialis posticus is paralysed, there is usually a certain amount of flattening of the arch of the foot. In some cases, indeed, the flat foot is very marked. It is impossible to remedy this by any form of tendon transplantation, and an appliance to raise the instep must be subsequently worn. When the muscles in front and behind the inner malleolus are affected, it is best to bring a reinforcer in both these situations. When it is possible to use only one reinforcing muscle, it is preferable to bring it behind the ankle, as it is here that most of the strain of evertion comes. Case 3 illustrates this. It is somewhat doubtful which of the peronei should be made use of. The peroneus longus is the more powerful muscle and its tendon can be got much longer than the brevis. It undoubtedly cripples the power of the foot to transfer the peroneus longus, but in any form of tendon transplantation the function of the limb does not come up to the normal standard. The peroneus brevis, when it is brought across the front of the ankle, can only be fixed to the under surface of the navicular bone when it is lengthened by strands of silk; it is also a comparatively feeble structure. For these reasons, I have always made use of the longus. Slight degrees of talipes valgus, where only one or other of the tibials is affected, give very satisfactory results after tendon transplanting. Where the anterior tibial is the only muscle paralysed, the extensor longus hallucis may be fixed to the navicular. The loss of power in the great toe is of little moment. Where the tibialis posticus alone is powerless it is probably best to use a slip off the tendo Achillis to strengthen the ankle. The peroneus brevis has been selected and brought behind the joint, but it is a feeble muscle compared to the one it is intended to replace, and probably would not counteract the evertion. The peroneus longus is the more suitable muscle to use, if we decide not to interfere with the tendo Achillis.

Nerve anastomosis is the more rational plan of treatment in infantile paralysis, which is essentially a nerve lesion. After nerve crossing there is some power in all the muscles. Recently, where it has been possible I have always selected this operation in treating such cases. If the anterior tibial muscle be the only one involved it is easy to fix its nerve into a gap in the peroneal nerve, or, if preferred, it may be split off the latter nerve for some distance and then fixed into a gap in the internal popliteal. The nerve supplying the tibialis posticus is deep in the calf, and a very difficult dissection is necessary to expose it, with a considerable chance of wounding big vessels. When, in addition to these two, other muscles are paralysed belonging to opposite groups, nerve crossing is out of the question. Thus talipes valgus does not offer the same field for nerve surgery as do paralyses involving the peronei or extensor muscles.

REFERENCES.

[1] *Zeitschr. für Chirurgie*, Band 43. [2] *Münch. med. Woch.*, 1898 1902. [3] *American Journal of Orthopedic Surgery*, August, 1905. [4] Tubby and Jones, *Surgery of Paralysis*.

A BELGIAN SCHOOL OF TROPICAL MEDICINE. The Belgian Ministers of Agriculture and of the Interior have presented a joint report to the King relative to the establishment of a school of tropical hygiene and medicine at Antwerp. A Committee has been appointed to study the question and prepare a scheme to be submitted to the Government. The Chairman of the Committee is Dr. G. Verriest, Professor of Clinical Medicine in the University of Louvain, and President of the Belgian Academy of Medicine.

PAPAIN IN MALIGNANT GROWTHS.

By C. W. BRANCH, M.B., C.M.EDIN.,

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THE treatment of malignant neoplasms by the interstitial injection of papain has been restricted up to now to inoperable cases. The supply of these is, of course, scanty in a small community. It has, consequently, been necessary to let some months elapse before supplementing the letter on this subject published in the BRITISH MEDICAL JOURNAL of June 16th.

Opportunities for studying the action of papain on cancer would be still rarer were it not for two circumstances. One is, that the people of all parts of St. Kitts, as well as of many of the neighbouring islands, foreign as well as British, are accustomed to resort to Basseterre, when practicable, whenever they need surgical assistance of any importance. The other circumstance is, that, unfortunately, it is also the custom of the coloured peasantry of the Lesser Antilles to put off application for medical aid in chronic ailments till these have nearly or quite reached a hopeless stage. It would not be easy for a doctor practising among Europeans to realize the anomalous features and monstrous developments which some diseases—for example, syphilis and cancer—have acquired from neglect and preposterous home treatment before they are brought to the notice of a West Indian practitioner.

Only five cases of cancer that were desperate, and, therefore, suitable for the trial of a new method of palliative treatment, have as yet been obtainable. All of these, however, had more than one nodule or tumour; several of these growths had to be injected more than once, and each injection afforded an additional opportunity for observation. The dosage and manipulation mentioned in this paper should be regarded only as a cautious technique, as there has not yet been time for the collection of data for establishing the safest and most efficient method of procedure. The details of treatment and results, which were common to all the injections, are recorded together. One case has been described separately, because its treatment differed from that of the others in one material point.

The site of puncture was cleansed with a 2 per cent. solution of lysol. Local anaesthesia was effected either by partial freezing with ethyl chloride or by the insertion of ½ gr. of cocaine hydrochlorate dissolved in distilled water twenty minutes before the little operation itself. The papain emulsion was made just as it was about to be used, and contained 1 gr. in every 5 minims of cold distilled water. From 5 to 20 minims of this emulsion were introduced at one time, according to the size of the nodule or tumour; ½ gr. was the smallest dose given. This destroyed a hard nodule about the size of the kernel of an almond. The instrument used in all the injections was a Gee's hypodermic syringe fitted with its largest needle. This was sterilized and a drop of emulsion made to appear at its point before its insertion. If the tumour was large, the needle was made to pause two or three times while some of the emulsion was ejected, so as to establish two or three foci of action along the one line of insertion. Only a slight puncture was made. The operations were repeated at intervals of from two to four weeks. They were all performed by Dr. Edmund Branch.

Should the treatment just described ever come into vogue, it will, no doubt, undergo modifications in many directions. Questions as to dosage, number of separate punctures at one time, and interval of time between injections cannot be definitely answered at present. It may be found expedient to exhibit, a little before or after the papain or to combine with it, compatible antiseptics, anaesthetics, or styptics. As papain is simply papayotin—the entire juice of the papaw fruit *minus* colloid substances—it contains all that is absolutely necessary for the efficient disintegration of flesh. It is said that papayotin is also antiseptic. It is curious that, though flesh wrapped in papaw leaf is soon disintegrated, it does not at the same time become putrid. But adjuvants or excitants of prompt action may be found which would enable the dose to be diminished when that might seem advisable. According to many authorities, the water in the pitcher of nepenthes will not act as a digestive till it has been imbued with some unknown acidulous principle. So, too, the pedicellate

glands on the leaves of the sundew contain a fluid which is not charged with full insectivorous powers till the victims have been caught. The secretion is then not only increased, but changed from neutral to acid.

Nearly all of the following phenomena have been observed after every injection: A burning sensation comes on soon and lasts for about half an hour. Curious but scarcely painful feelings, as if some small animal were nibbling at the flesh, begin some hours after and wear away in a day or two. Nausea is sometimes complained of in association with the burning or nibbling sensations. The tumour softens round the site of puncture in two or three days; there is then a slight rise of temperature. In about ten days, on an average, the tumour begins to discharge copiously through a small hole a thick greyish or greenish stuff, having much the appearance of the emulsion itself. This has happened eventually in every case, but not always after the first or even the second injection. The discharge ceases after one or more weeks. The temperature subsides on its appearance, and remains normal, or nearly so, during its continuance. When the discharge stops, the tumour is found to have entirely disappeared or to have become notably smaller. If there be no discharge after a first or second injection, the tumour is still more or less diminished in size by it. Cancer pains cease after the first injection. Nothing analogous to "serum sickness" or a "negative phase" has been noticed in connexion with the injection of papain into cancer.

In one patient "stormy symptoms" occurred, though the doses were only half as large as those given at shorter intervals in some other cases. This old lady had hysterical excitement, vomiting lasting for a day, and rise of temperature to 102°, or near it, after each of the first three injections. Immediately after the fourth her breathing became oppressed, and the skin was suffused with a livid flush. These symptoms wore off in half an hour. As it is said that a toxic dose of papain paralyses the heart she may have been intolerant of the drug, for she was suffering from valvular disease in a far advanced stage. Under these circumstances, it was reluctantly decided to abandon the effort to eradicate the cancer. She had already undergone amputation of the breast and the cutting out of a large recurrent scirrhous growth. From the condition of her heart it had been decided that it would be inadvisable and hopeless to resort for a third time to the knife. When she last applied for medical aid, it was on account of two large, rapidly-growing, and hard tumours under the skin of the chest. One of these had already disappeared entirely from papain injection, when this mode of attack on the disease had to be discontinued. She died two months after in a paroxysm of palpitation and dyspnoea. The lancinating pains never returned, not even in a new scirrhus that formed on the back of the chest.

An important divergence from the general programme of treatment was necessitated by the circumstances of the following case.

M. S., a black woman 6[illegible] years old, and the mother of many children, was admitted into the Cunningham Hospital with cancer of the right breast. It was very large, hard, and the site of frequent and severe lancinating pains. The skin from the nipple to the axilla was thickened and brawny. The pectoral fascia, up to the shoulder, was indurated, and the glands in the axilla were agglomerated into a mass of rocky hardness. She said that she wanted the breast taken off because the pain kept her from eating. Though the disease was present in an operable region, nothing could be hoped for from the ordinary operation. Dr. Edward Bland amputated the breast by a wide, elliptical, transverse incision, [illegible] of skin had to be taken. Though cancer cells were found in the axillary glands, the operation was not attempted. It was decided to inject papain, 1 drachm to 1 oz. of lysozol and water, twice a day, with a 5 per cent. solution of [illegible]. The wound in the axilla was completely healed eighteen days after the operation, and the patient was discharged. This was followed by [illegible] two or three times among the out-patients, but as soon as the wound had cicatrized entirely she could no longer be found, though she had been warned that the disease would probably come back soon, and that the appearance of the smallest lump would necessitate her immediate return to the hospital. Search was made for her without success, but she presented herself for examination two or three days ago. A ring of nodules had formed round the cicatrix. People of her class and race are fatalists. She positively refuses to let anything more be done.

It seems possible that papain injections may be admissible in the treatment of some cases of primary cancer and other tumours. I have lately come across a statement that papain has been applied, I suppose externally, to epithelioma; but there was no mention of the result. It is very likely that it was satisfactory. I rubbed the fresh juice of the root of the papaw tree on two small growths, neither of which was malignant. They were both entirely eradicated by a few applications. The little operations were perfectly painless, surpassing in this respect similar ones done with sodium ethylate. Perhaps leprous tubercles might be removed in this way with less pain and disfigurement than by the acrid juice of the cashew.

Dr. Shaw Mackenzie points out, in an instructive little note in the BRITISH MEDICAL JOURNAL of July 7th, that temporary improvement in the local manifestations of cancer do not justify the conclusion that the medicinal agent employed can cure cancer. This is corroborated by the preceding paragraphs. There is no hint in them that any case was cured. There has not, indeed, been time as yet to justify such a claim, nor is it likely ever to be justifiable with respect to such of these patients as are still under observation; but it must be remembered that these 5 cases were selected for the very reason that their condition was hopeless. Their record demonstrates, however, that papain can remove recurrent manifestations of scirrhus, in an operable region, as effectually as if they had been cut out with a scalpel. With the help, therefore, of this drug, the external development of recurring cancer can be controlled if the sufferers apply for help at the first appearance of each fresh nodule.

But the local antagonism between the medicinal agent and the neoplasm suggests a correlated antidotal relation of the former to systemic cancer. This, however, is far too important a subject to be broached at the foot of so long a paper.

HYDATID CYST OF THE NECK, WITH CELLULITIS CAUSED BY RUPTURE AND ESCAPE OF HYDATID FLUID.

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RECORDS of hydatid cysts about the cervical region are not numerous; in addition this case presents several points of a rather unusual nature.

History and Condition on Admission.

The patient was a gardener, a strong and active man, aged 52. When he was 18 a small lump made its appearance on the left side of his neck. It had continued to grow ever since, until it had reached the size of a large cricket ball, but it had never given him any pain or inconvenience.

The day before I saw him he had been put to some extra exertion by cycling and had been doing some rather heavy work in the garden. During the evening he felt feverish, and was awakened in the night by an aching pain in the neck. When he got up in the morning he found that his neck had swollen to a tremendous size. He was seen by Dr. Hayward, of Abergavenny, who sent him to the Radcliffe Infirmary, where he came under my care. He then had a large swelling on the left side of his neck, which he complained ached a little and felt hot to him. The swelling extended from just below the horizontal ramus of the jaw to below the left clavicle, and from the middle line in front to the saddle line behind, the skin over it being red, inflamed and oedematous, the oedema extending to the right across the middle line, below on to the chest wall as far as the nipple and behind to the middle line and down over the scapular region. The tumour itself was the size of a foetal head, tense and fluctuating but not painful; the patient said it was twice the size it had been on the previous day. There was so much oedema that it was difficult to make out the relationship of parts; neither the lower part of the left sterno-mastoid nor the sternal end of the left clavicle could be defined. There was no constitutional disturbance; temperature, pulse-rate and respirations being normal, and there was

no difficulty in swallowing. The following day the tumour had decreased considerably in size, and it was possible to see that it was rounded and as big as two fists, occupying most of the posterior and supraclavicular triangles; it was then soft, elastic, fluctuating, and movable, but not with deglutition; the oedema had diminished considerably, and it was possible to define the sternal head of the sterno-mastoid, and the left clavicle could be felt throughout its extent. Examination by transmitted light proved the tumour to be translucent. At the end of ten days the tumour was somewhat smaller than is shown in the photographs, and the oedema had entirely disappeared. These photographs were kindly taken by Dr. Richard Sankey twenty-four hours after the admission of the patient to the hospital, at a time when the oedema had much diminished.

Operation.

As the patient was anxious to be rid of the tumour an operation was decided upon.

An incision was made along the whole length of the upper border of the left clavicle, a second incision was made at right angles to the mid-point of this, and two triangular flaps of skin and fascia raised and turned inwards and outwards. The fibres of the clavicular portion of the sterno-mastoid were found spread out over a portion of the tumour, also the descending cutaneous branches of the third and fourth cervical



nerves. The tumour itself was protruding from behind the sterno-mastoid, and occupying the posterior and supraclavicular triangles. As it was impossible to get down between the tumour and the clavicle it was attacked on the inner side, the sterno-mastoid being turned off it, when it was found to be firmly adherent to the internal jugular vein, and to pass backwards and inwards behind the carotid sheath. The cyst was now opened, and typical hydatid fluid evacuated, together with some gelatinous material and the endocyst, which had separated from the ectocyst and floated out with the fluid. On looking into the cyst its wall could be seen covering the floor of the posterior and supraclavicular triangles, and to be passing down behind the carotid artery and internal jugular vein, which were clearly outlined on its walls in the direction of the œsophagus; after a tedious dissection the whole of the cyst wall was removed; the chief difficulty was in the direction of the internal jugular vein; many large blood vessels were found connected with the cyst wall. The margins of the incision were united, and the extensive cavity drained by gauze through a small hole made in the posterior portion of the external flap. The patient made an excellent recovery, and was back at his work in a short time.

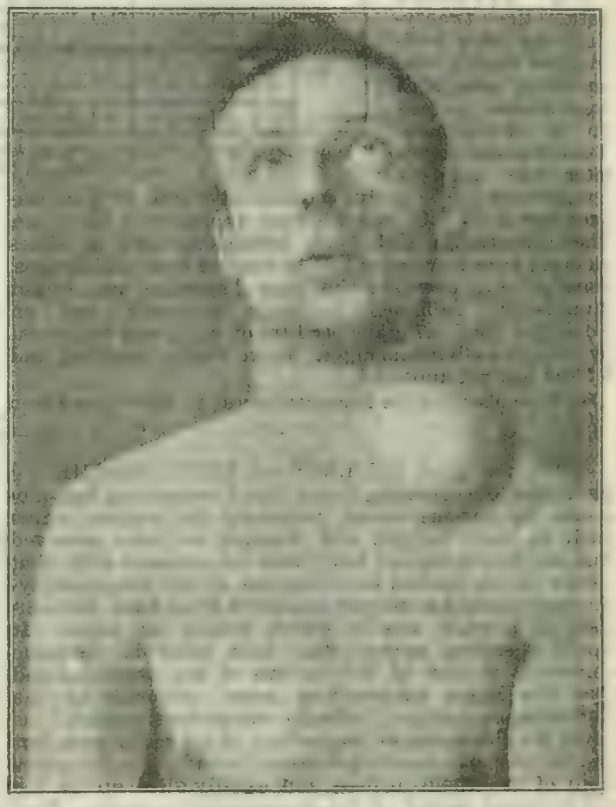
The fluid evacuated from the cyst was examined by Dr. Gibson at the University Pathological Department, and found to contain scoleces and hooklets.

The diagnosis in this case was a difficult one, and was not made before operation. The tumour was obviously a cystic one, and the two conditions chiefly considered were that of a branchial cyst or a cyst arising in connexion with thyroid tissue.

It was at first thought that the rapid increase of size might have been produced by hæmorrhage into the cavity of a cyst, but this was put out of court when it was found that the cyst was translucent. The cellulitis and oedema was without doubt caused by the extravasation of hydatid fluid into the subcutaneous tissues, which would account to a great extent for the apparent increase in the size of the tumour. At the same time there may have been some exudation into the cavity of the cyst.

Attacks of urticaria, herpes, and localized cellulitis have from time to time followed the rupture and subsequent escape of hydatid fluid into the tissues of the body; such results were not at all uncommon when the old treatment of tapping these cysts was in vogue. A poisonous ptomaine has been isolated from the fluid, and experimental injection of hydatid fluid into the subcutaneous tissues has produced these various conditions.

In this case it would appear that the extra exertion indulged in by the patient had caused a slight rupture of the cyst wall, so allowing some of the fluid to escape.



The triangles of the neck are rather an unusual situation for the parasite. I have found records of few such cases. Dr. Davies Thomas, in his excellent work on hydatid disease, points out that the cysts are generally found on those sides of the limbs where the principal blood vessels course, and that in the neck they generally affect the neighbourhood of the carotid artery, as in this case.

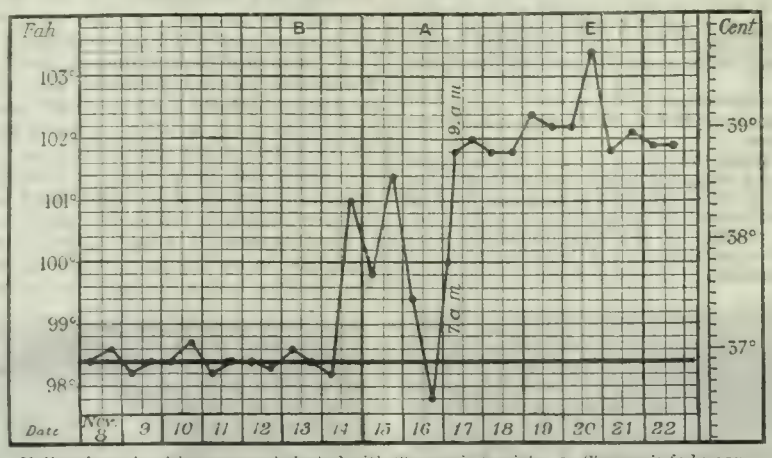
INTERNATIONAL LARYNGO-RHINOLOGICAL CONGRESS. An International Laryngo-Rhinological Congress will be held in Vienna from April 21st to the 25th, 1908, on the occasion of the fiftieth anniversary of the application of the laryngoscope to medicine, with which the names of Czermak and Türck are intimately associated. The Congress, which will be under the honorary presidency of Hofrat Professor von Schrötter, will be purely scientific in character. Communications in German, English, and French will be received. They should be in the hands of the Secretary, Professor M. Grossmann, IX., Garnisonsgasse No. 10, Wien, not later than December 21st, 1907, and they will be placed on the programme in the order in which they are received. A short summary in each of the three official languages should be supplied at the same time. Each member of the Congress will be presented with a medal inscribed with portraits of Turck and Czermak. The President of the Organizing Committee is Professor Chiari.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

YELLOW FEVER IN THE CHIMPANZEE.

On October 23rd fifty-seven *Stegomyia fasciata* which had been raised in the laboratory, were allowed to feed on two cases of yellow fever. The cases were placed at the disposal of the expedition by Dr. Th. Beltrao and were of two and two and a-half days' duration. Both cases were of the virulent and fatal type and exhibited the typical symptoms of yellow fever.

On November 13th, the twenty-first day after feeding, the twenty-nine surviving mosquitos were allowed to feed on a chimpanzee. Twenty-seven hours later the animal's temperature rose slightly. On November 16th the temperature rose to 38·8° C., and albumen appeared in the urine. The chimpanzee had been intractable and at times vicious; from November 16th he became tame and listless, usually lying down in the cage; appetite and weight diminished. Albumen gradually increased, and on November 22nd 0·7 gram per litre of urine was registered by Esbach's albumenometer. There was no vomiting, and icterus had not appeared.



Yellow fever in chimpanzees infected with *Stegomyia fasciata*. B, *Stegomyia* fed noon. A, Albumen. E, Excited by visitors.

On November 23rd the temperature rose to 39.6° C., and then fell gradually until it became normal on November 27th, and has since remained so. Albumen was not detected in the urine on November 26th. Bilirubin appeared on November 23rd, and was well-marked for two days; it then decreased, and was absent on November 28th. Microscopically, granular casts with some blood cells were seen in the urine from November 17th to 23rd. The animal is recovering, regaining its spirits, and putting on weight. The haemoglobin, which had fallen to 77 per cent., is now 81 per cent.

It will be seen that the chimpanzee developed a benign attack of yellow fever and recovered. The record of his temperature and the symptoms correspond with those of mild cases of yellow fever.

Mosquitos were allowed to feed on him during the infective period, and these will be in due course applied to a "non-immune" individual to complete the cycle of "man - chimpanzee-man." The chimpanzee has been kept since arrival in Manaos.

Its urine had been regularly examined since April and never contained albumen until November 16th.

The temperature in April was slightly raised as the animal had bad bronchitis; since June it had always been normal.

H. WOLFERSTAN THOMAS.

Liverpool.

NOTE ON THE NUCLEUS OF TRYPANOSOMES.

RECENTLY, on colouring liquid blood containing trypanosomes by various stains, especially the nuclear stains such as basic fuchsin and thionine, we have observed that the deeply-stained body does not coincide with that shown by the various modifications of the Romanowsky-Ziemann method as usually applied to dried films, but consists of a much smaller sphere within the latter. It would therefore appear that this latter is the true chromatin portion of the nucleus of the organism, and that the larger surrounding mass coloured by the Romanowsky method, hitherto everywhere accepted as being the chromatin of the nucleus, is not really such, but is more properly speaking a vesicle bounded by the outer limit of the whole nucleus, and usually filled up by the red colouring matter of the Romanowsky reagents. That this stain does not select only the chromosomes is rendered obvious by the fact that it affects the centrosome and flagellum of parasites. We think that the observation is of interest because it tends to reopen the cytology of these and allied organisms. Our observations were made on *T. brucei* and *T. equiperdum*.

I. c. s.

RONALD ROSS,
J. E. S. MOORE.

OBSTRUCTION OF THE OESOPHAGUS.

I was summoned on November 4th, 1906, to visit a patient reported to have "something sticking in her throat, probably a bone." I found the patient to be a woman, aged 70, who, while partaking of a dish of stewed mutton, some three and a half hours before my arrival, had inadvertently bolted an imperfectly-chewed bolus of meat.

On digital examination, I could feel that a firm mass was impacted in the oesophagus at the extreme limit of my reach, and that the lumen of the gullet was so entirely filled up that the umbrella probang, with which I was provided, could not be used as an extractor without running great risk of damaging the oesophageal walls. I had no forceps with me by which the obstructing body could be reached; and as I was precluded from administering an emetic by the mouth by the fact that the patient was unable to swallow anything, even her own saliva, I injected $\frac{1}{15}$ gr. of apomorphine hypodermically, with the result that in three minutes vomiting ensued, and the foreign body was ejected. On examination, it proved to be a piece of mutton moulded by the pressure of the oesophagus into a cylindrical mass, measuring 1½ in. in length and 2 in. in circumference. It remains to be noted, however, that the patient had a fibro-adenoma of the thyroid isthmus about the size of a tennis ball. It had existed for some forty-five years, and for long past the patient had had difficulty in swallowing solid food unless very carefully masticated. This was the primary cause of the arrest of the bolus of meat; and, as it is rare for a goitre to so act, the case seems worth recording.

H. E. DAVISON, M.D., D.P.H.

Whitley Bay, Northumberland.

ATRESIA VAGINAE IN A MARRIED WOMAN.

THE patient in this case, aged 30, consulted me on March 13th, 1906, complaining of a bearing-down pain in the pelvic region and of dyspareunia. On inspection of the abdomen, a pear shaped tumour with its long axis vertical was noted in the middle line. It extended to 1 in. above the umbilicus; it did not move with respiration, and was tender on deep palpation, and the percussion note was dull. It was found that a finger could not be inserted into the vagina for more than 1 to 1½ in., and per rectum a large fluctuating tumour could be felt bulging through the anterior wall.

She had had five children; all were born at full time, all were healthy, and all had been suckled by her. In none of her confinements were instruments used, and in most, including the last, she had been attended by a midwife. Her last confinement was on March 23rd, 1905, and it differed from those preceding only in that severe pains lasted five hours instead of twenty minutes, that the child was "big," and that, though the mother was out in a week's time, she was longer than usual in picking up. Dyspareunia was noted when coitus was

first attempted three months after this confinement. She suckled her baby until the beginning of February, or for ten months, but there was no return of the menstrual flow before weaning as on previous occasions.

One month later pelvic pain was felt, and lasted a week. She felt "as if something were to come away."

On March 21st she was sent to the Aberdeen Royal Infirmary, and after examination under chloroform, which showed that the vagina was occluded by cicatricial tissue, it was concluded that the lower end of the tumour consisted of retained menses, distending the vagina into a cyst, while the harder pear-shaped upper end represented the uterus, and that the atresia was due to lacerations produced during the last labour.

The next day a large quantity of reddish-brown fluid escaped per vaginam. The flow continued for several days, unaccompanied by pain or rise of temperature. Simultaneously the upper limit of the tumour slowly descended, reaching only to 3 in. above the pubes on the third day. Three weeks later normal menstruation set in, the uterine tumour having disappeared.

About seven weeks after admission the operation was undertaken to restore the vagina. A small opening, not bigger than a pin's head, was seen at the apex of the cicatrix, and on free incision of the latter grumous matter escaped. No abnormality of any sort was detected above this level. A large-sized drainage tube was stitched in, and removed after ten days. The patient then left the infirmary well, and has since remained so.

I have to express my indebtedness to Dr. Edmond and Mr. Marnoch, of the Royal Infirmary staff, for the privilege of following up and keeping in touch with the case while in the wards, and also for the use of the clinical notes.

Aberdeen. ALBERT HENDERSON, M.D.Aberd.

SPRAINS AND THEIR CONSEQUENCES.

IN connexion with Sir William Bennett's paper on Sprains and their Consequences in the BRITISH MEDICAL JOURNAL of December 8th, 1906, the following notes may be of interest:

T. A., 8 years of age, when running, tripped and fell violently to the ground. He fell with his arm outstretched, and the radial side of the left palm was the part which chiefly came in contact with the ground. He was quite positive his elbow did not strike the ground.

When seen, about half an hour afterwards, the elbow was found to be greatly swollen and exquisitely tender. The effused fluid was almost entirely limited to the internal aspect of the joint over the internal condyle of the humerus. As the x rays were not available at the time, the elbow was examined carefully under an anaesthetic, and it was ascertained that the bony points were in normal relation. There appeared to be undue lateral mobility, and there was a sensation of crepitus when the elbow was flexed and extended; but whether this was due to effused fluid or to a fracture was not easy to decide. The movements were quite free.

It was decided to look upon it as a fracture, and treat it accordingly. Two days afterwards an x-ray photograph was taken. The bony points were in normal relation, there was no separation of the epiphyses, but a small piece had been chipped off the internal condyle of the humerus. The splint which had been applied was removed daily to allow massage of and passive movements at the elbow, and it was left off altogether at the end of eight days. The effusion had then practically disappeared, and the boy was encouraged to move the elbow. He is now able to move the joint fairly freely without pain, and only has pain when firm pressure is applied over the internal condyle.

REMARKS.—This is a case in which, with the ordinary routine examination, it would have been impossible to diagnose the fracture, though probably no bad effects would have resulted had it been diagnosed and treated as a sprain. It would seem well to regard a doubtful case as a fracture rather than as a sprain; for, indeed, a sprain treated by rest and a splint for a few days would not have any bad result.

Alexandra Hospital, Brighton. JOHN ALLAN, M.B., Ch.B.

CANCER OF THE CERVIX IN A NULLIPAROUS WOMAN.

As malignant disease of the cervix uteri in a virgin is so rare, I should like to record the following case—one under the care of Mr. Brewis, of the Royal Infirmary, Edinburgh—while I was his resident there.

Miss T., unmarried, aged 57, was admitted to Ward 36, Royal Infirmary, Edinburgh, in November, 1905, complaining of severe haemorrhage and foul discharge from the vagina. She had never borne a child, had had no miscarriage, had never had any operation performed on the uterus, and gave no history of any previous trouble with her genitalia.

On admission the patient had secondary anaemia and cachexia. On vaginal examination a large cauliflower mass was found growing from the cervix and filling the upper third of the vagina. The uterus was firmly fixed, and the disease had spread so far that a radical operation was impossible.

Mr. Brewis removed as much of the actual growth as possible with the curette, and applied chloride of zinc to the raw surface of the cervix thus left.

Microscopic examination of the growth proved it to be an epithelioma. In the EPITOME of the BRITISH MEDICAL JOURNAL, November 24th, 1906, there is a summary of a dissertation by Auguste Polloson,[1] where it is stated that he had seen no case in a virgin.

The case now recorded is of interest, not only because of its rarity, but also on account of the age of the patient. At 57 years of age and the patient being nulliparous, cancer of the body of the uterus was the more likely condition. It proved, however, to be cancer of the cervix uteri.

ARCHIBALD MCKENDRICK,
Demonstrator in Anatomy, Royal College of Surgeons, Edinburgh.

PRIMARY DIPHTHERIA OF THE EXTERNAL AUDITORY CANAL.

THE patient in this case, a boy aged 12 years, came to the hospital with a purulent otitis media dating from infancy. On examination, a perforation of the left tympanic membrane in the postero-superior segment was found. The discharge was slightly offensive in smell. On the posterior wall and partly on the floor of the external auditory canal there was a whitish membrane with an appearance strongly suggestive of the membrane of diphtheria. A specimen of this was sent to the Corporation Bacteriological Department, and was reported on as "positive," while swabs taken from the nose, the naso-pharynx, pharynx, and larynx were reported "negative." The patient was pale, his temperature 101.2°, the pulse 120, the urine normal.

The ear was syringed twice daily with boracic solution, and cotton plugs smeared with carbolized glycerine inserted into it. A fortnight later the swabs were reported "negative."

A period of weeks elapsed before he could be taken into the hospital, and during this time, whenever his temperature was taken, it ranged from 99.8° to 100.8°. A diagnosis of ambulatory enteric fever was suggested; but there were no rose spots, no enlargement of spleen, no diarrhoea, the tongue was clean and moist, and Widal's reaction—tried three times—was negative, while the heart and lungs showed nothing abnormal.

Owing to the temperatures and the slightly fetid purulent discharge the mastoid was explored. A carious area was found and the radical operation performed.

The temperature rose on the second day after the operation to 102° F., pulse 115, and on the third to 103.8° F., and complaint made of pain in the right elbow and left shoulder. The mastoid wound appeared healthy, and after a few days of salicylate of soda the temperature became normal and the pains in the joints gradually subsided, while the mastoid wound healed nicely.

REMARKS.—Of course diphtheria of the external auditory canal secondary to diphtheria of the nose or nasopharynx is not uncommon, the infection taking place along the Eustachian tube to the middle ear, but primary diphtheria of the ear is rare. The persistent pyrexia during the period before operation is of interest, as also the exacerbation after the operation associated with pain in the joints, which yielded to treatment by salicylate of soda.

J. GALBRAITH CONNAL,
Lecturer on Aural Surgery, Anderson's College Medical School
Glasgow.

[1] *Prov. Méd.*, July 7th, 1906.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

WREXHAM INFIRMARY.

A CASE OF ARTIFICIAL ANUS: RESECTION: RECOVERY.

(Reported by E. M. Watkins, late House-Surgeon.)

In view of the high mortality which attends the operation of resection and suture, the following case will be read with interest.

The patient, a man of 51 years of age, had a history of having suffered from hernia for a period of seven years. He wore a truss for some time, but when it became worn out he discarded it, saying that he found he could get on all right at his work (that of a collier) without one. For two years he had gone on in this way, not wearing a truss, until the onset of symptoms of strangulation precipitated his entrance into the infirmary, where he was admitted, under the care of Mr. E. D. Evans, on July 4th, 1904. Relief of the symptoms was got by the immediate performance of the operation of herniotomy, when the gangrenous condition of the strangulated portion of gut and the presence of adhesions rendered it necessary to incise the bowel and form an artificial anus.

The opening was high up in the small intestine, on the right side. In consequence of the irritating action of the liquid faeces in this situation it became necessary before long to deal with the eczematous condition of the skin surrounding, and for this purpose Unna's jelly was found to be the most efficacious dressing; this was applied at regular intervals, day and night.

In due course efforts were made to encourage the closing of the artificial anus and restore the natural passage onwards of the faeces into the lower bowel, amongst them being the insertion of a rubber tube into the line of the bowel. These efforts proving unavailing, and the patient's state of mind having become one of much misery owing to the distressful local condition, an operation to restore the lumen of the bowel was determined upon, the patient having expressed his willingness to submit to such a course.

Preparation.—Salol, 5 gr. every four hours, was ordered to be given for three days prior to the operation, in order to get the interior of the bowel into as aseptic a condition as possible, and directions were given for the lower bowel to be washed, above and below, on the morning of the operation, and again two hours before its commencement on June 2nd, 1905.

At the operation, performed under chloroform by Mr. J. Taylor, Consulting Surgeon to the infirmary, an incision was made in the middle line, from half an inch below the umbilicus to the pubes, the peritoneum being opened. A strip of gauze was passed down through the artificial anus, the size of the opening being such as would admit of the entrance of the tip of the little finger. The portion of bowel involved in the formation of the artificial anus was reached through the wound in the middle line, detached from its adhesions, and brought out to the surface. The offending piece of tissue was cut away after the bowel had been clamped on either side, and the two ends of healthy gut were united all round by fine silk sutures, the knots being tied so as to appear [illegible] in the lumen.

Lembert sutures were now applied and after the peritoneal cavity was washed out with saline solution the peritoneum was sutured, then the layer above, and finally the skin. A gauze drain was put into the old sinus.

The administration of the anæsthetic lasted from 5 p.m. to 6.7 p.m., and the pulse and respiration were good throughout. Directions were given that nothing but water be introduced into the patient's stomach for the next forty-eight hours, and that a rectal tube be passed every three hours to remain in for ten minutes.

Progress.—For the next three days progress was fairly satisfactory, flatus was passed through the tube and several splashes were evacuated by its means; the pulse and temperature were good, but there was some hiccough and a little vomiting.

On the fifth day the sutures were removed and looked well, but the patient had several attacks of an anginoid character. He felt a pain in his chest and described the paroxysm thus: "I can't get on, I can't get my breath, and feel as if I was going to die." Even in one of these attacks shortly after midnight he had a good, steady grip, he gasped for breath, [illegible] and he moved his arms about, as if to [illegible] the impression which would not come. The pulse was but little disturbed. The temperature rose, and at night was 101°. There was also some delirium. An enema, following upon an injection of olive oil as before, was attended with a good result. The following day, June 10th, he was better, though not free from anginoid attacks. The temperature fell again. Improvement continued the next day; there were still some spasms of breathlessness, but the patient had a natural motion and slept well.

June 15th. This improvement was uninterrupted for three more days, during which the hiccough and breathlessness disappeared and the mesial wound healed, and a formed motion was passed naturally.

On the twentieth day from operation the patient had a severe attack of abdominal pain, the pains being referred to the lower segment. The temperature rose to 101°, and later to 102.2°, pulse 120; there was pallor. Patient slept well, however, and his condition was satisfactory until twenty-four hours later, when an orchitis on the right side was found. The enlargement was considerable and the swelling tense, red, and painful. This complication quickly gave way, and improvement continued uninterruptedly.

On July 15th the patient was allowed to get up for the first time, and on August 3rd—just two months from the date of resection—the patient was fitted with an abdominal belt and a pad over the old wound.

Result.—On August 19th he was discharged. His general health was very good. The bowels acted regularly once daily, helped by a small dose of pulv. glycyrrh. co. at bedtime. There was still a small area (about the size of a threepenny-piece) of the old wound not covered over, and a month later he was readmitted in order that this might be attended to. Its edges were refreshed and brought together by two sutures of silkworm gut. He was finally discharged entirely cured on November 11th.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.

A CASE OF CONGENITAL SYPHILIS: UNUSUAL SYMPTOMS.

[Under the care of J. Lionel Stretton, Senior Surgeon.]

(Reported by Wilson Smith, House-Surgeon.)

The patient in this case, a female child, aged 16 months, was admitted on March 8th, 1906. The parents complained that she was not thriving satisfactorily, and that the abdomen was large. She had been a full-term child, and had seemed healthy for some months after birth; had had no illness; had been bottle-fed. The parents looked healthy; the father had been in the army, but denied having had syphilis. There was one other child, about 5 years old, which was healthy; the mother gave no history of abortions.

State on Admission.—An ill-nourished child, weighing 20 lb.; skin of a dark colour, and jaundice; abdomen enlarged, 17 in. circumference at umbilicus; superficial veins distinct; no free fluid in abdomen; the liver greatly enlarged, extending from its normal upper limit down to within an inch of the iliac crest, its surface smooth, and its consistence firm. The spleen seemed enlarged on percussion, but could not be felt until the child was placed under chloroform. Some bronchitis was noted and offensive diarrhœa, which yielded in a short time to hydrarg. creta, 1 gr., given thrice daily.

Progress.—A week after admission a blood film showed a large leucocytosis, no nucleated red corpuscles nor poikilocytosis being present but nearly equal numbers of lymphocytes and polymorphonuclear leucocytes. She was ordered 1 minim of liq. arsenicalis thrice daily and one bone marrow tablet ($\frac{2}{8}$ gr.) a day.

On March 17th a blood count showed that the red corpuscles numbered 7,300,000, the white corpuscles 80,000 per c.mm.

On March 25rd the child seemed better in health and the enumeration of the blood gave 6,400,000 red and 62,000 white corpuscles per c.mm.

On March 28th the temperature was 100.4° at morning and 100.6° in the evening, which probably accounted for the rise in the number of leucocytes to 104,000 per c.mm. on the 29th, the polymorphonucleosis being increased relatively to the lymphocytes, the red corpuscles on that day numbered 6,200,000 per c.mm.

Result.—As the child was not making progress and the parents were desirous to take it home it left hospital on March 31st. At the stage the diagnosis was uncertain, as the original diagnosis of syphilitic cirrhosis of the liver had been abandoned as a result of the condition of the blood and spleen, and the case was regarded as probably a disease of the blood, possibly lymphatic leukæmia, though there was no sign of lymphadenoma, though the glandular enlargement was not present to any extent, the lymphatic being only slightly so. The child became rapidly worse at home, developed jaundice and died on April 6th, a week after leaving hospital.

Autopsy.—A *post mortem* examination was granted and

performed on April 7th. There was considerable wasting; the abdomen was distended and contained a little fluid. The liver was large, soft and yellow, surface smooth; weight 1 lb. 7¼ oz. The gall bladder contained an almost colourless glairy fluid. The spleen was enlarged, firm, smooth, darker red than usual, no infarcts nor haemorrhages; weight 8¼ oz. The kidneys appeared normal but for yellowish staining with bile. The left weighed 3 oz., the right 2 oz. 6 dr. No enlarged glands in mesentery. The heart was contracted and contained no clot; weight 2 oz. Vessels bile-stained; thymus not enlarged. Portions of the organs were sent to the Clinical Research Association for examination. It reported that the appearances were those of congenital syphilis.

The liver shows extreme pericellular cirrhosis. The liver lobules are no longer distinguishable, the liver cells form small islands containing from two to half a dozen cells each, and these islands are set in a matrix of fine fibrous tissue. There is no small-celled infiltration, nor evidence of leukaemia. The individual liver cells are very degenerate, the protoplasm staining poorly, and being filled with innumerable fine granules many of which are pigmented. The pigment resembles that which arises from the disintegration of haemoglobin. There is little or no change.

It reports upon the blood as follows:

Polymorphonuclear neutrophiles, 50·2 per cent.; small lymphocytes, 45.8 per cent.; large lymphocytes, 3.6 per cent.; eosinophile leucocytes, 0·4 per cent. This is not the blood of lymphatic leukaemia, the adult leucocytes or polymorphonuclear neutrophiles being much too abundant. We quote the following from Cabot because it appears to fit the case exactly: "When we remember that in early infancy the leucocytes differ from those of adults, not only in number but in that the lymphocytes are relatively more numerous—lymphocytosis of infancy—we shall understand that any influence like rickets or syphilis which retards development will show lymphocytosis together with increased leucocyte count. Qualitatively as well as quantitatively the blood reverts to a more infantile condition."

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

H. H. CLUTTON, M.A., M.C., F.R.C.S., President, in the Chair.

Friday, January 11th, 1907.

ABSCESS OF LUNG AND ACUTE ENDOCARDITIS IN ACUTE PNEUMONIA.

DR. FRANCIS H. HAWKINS (Reading) read notes of this case.

A man, aged 51, had pneumonia of the right upper lobe which ended by lysis. After temperature had been normal a few days it gradually rose for ten days, then suddenly went up to 105° F. and fell to 102° F., when the patient perspired profusely. Next day he had a rigor, temperature rose to 104° F., then fell to 96° F., and he again perspired. Two days later he became comatose and died. No pus was expectorated. At the necropsy the right upper lobe was in a state of grey hepatization and contained three abscesses varying in size from a walnut to a hen's egg. All had a distinct lining membrane. At the base of the aortic cusp was a recent fibrous deposit over an ulcerated surface. Dr. Hawkins pointed out the rarity of abscess in acute pneumonia, more especially an abscess with distinct lining membrane. He thought acute endocarditis not so common in acute pneumonia as some writers supposed. He described his case as one of endocarditis pneumoniae, mentioning that Weichselbaum and Netter had demonstrated the *Diplococcus pneumoniae* upon the growth of the valve in similar cases.

Dr. C. T. WILLIAMS had seen four cases of lung abscess in acute pneumonia, two being of influenzal origin. He had also met with abscess and endocarditis combined in pneumonia. The surgical prospect was not good in these cases, as other abscesses rapidly formed. The odour of the sputum, at first foul, became later that of the cowslip, and almost pleasant. The death from coma suggested brain abscess; had this been verified?

Dr. HAWKINS said the brain had not been examined.

FATAL CASE OF MYXOEDEMA WITH CHANGES IN THE PARATHYROID GLANDS.

Dr. DAVID FORSYTH read this paper:

A woman, aged 58, had gradually developed symptoms of myxoedema during four years, and when she came under observation had lost much hair; also all her teeth had fallen out. She showed marked dullness and apathy, her mind wandered, and she was noisy. The skin was dry and harsh; the hands were spade-like. A fortnight later she died in spite of the administration of dried thyroid gland. *Post mortem* the thyroid presented sclerotic changes typical of the disease, and the six parathyroid glands which were found all showed certain departures from their wonted structure—namely, a marked tendency for their cells to form vesicles lined by cubical epithelium, an exceptionally profuse secretion of colloid which filled the follicles and lay among the masses of cells and distended the lymphatic channels, an abnormal increase in the connective tissue which formed coarse trabeculae and penetrated between the cells, and a thickening of the tunics of the arterial walls.

The two former changes represented excessive activity of the glands, and an attempt to supply the deficiency of colloid left by atrophy of the thyroid, while the alterations in the stroma and arteries were probably pathological, being allied to the fibroid changes in the thyroid. The case was the first of the kind in which the condition of the parathyroids had been observed.

Dr. W. L. HARNETT had examined many parathyroids, and agreed with Dr. Forsyth that the presence of colloid indicated undue activity.

Mr. WALTER EDMUNDS said their knowledge of the subject was imperfect, the results of experiments on the lower animals being very contradictory. A small percentage of those from whom thyroid and parathyroid were removed recovered, without subsequent discovery of traces of any gland that might have escaped removal. Work on the secretory nerves might possibly yield useful information. What was the cause of the thyroid fibrosis in the present case? also, was there any evidence of tuberculosis?

Dr. FORSYTH, in reply, said the oxophile cells showed changes, and were scattered uniformly, not in clumps as in the normal gland. There was no tuberculosis beyond a calcified focus at the apex of one lung. Experiments showed that no effects followed section of the secretory nerves.

ASSOCIATION OF TETANY WITH DILATATION OF LARGE INTESTINE IN CHILDREN.

Dr. LANGMEAD read notes of three cases.

Case I was a boy, aged 6, admitted five times in seventeen months into the Hospital for Sick Children, Great Ormond Street, under Dr. Garrod, suffering each time from tetany, evacuation of yeasty pultaceous stools, distension of abdomen, and a large hollow viscus on the left side. Treatment was ineffectual until lavage of the large intestine by a rectal tube was adopted, when on each occasion improvement leading to recovery was initiated. The last attack was complicated by fatal diphtheria. *Post mortem* the hollow viscus was the sigmoid flexure very dilated. It held about 13 oz. of fluid. Case II was a boy, aged 3, admitted also under Dr. Garrod, for his fourth attack of tetany, and, as in Case I, pultaceous motions, and a large hollow viscus. Lavage was temporarily successful, but a month later diarrhoea and rapid wasting began, and Mr. Lane removed 10 in. of dilated sigmoid flexure. At first the child became better. Death, however, occurred twelve days after. *Post mortem* the remaining large intestine was found to be enormously dilated, the walls being thin and atrophic, and no obstruction present. Case III was a girl, aged 2½, admitted under the late Dr. Sturges, in 1884, for repeated attacks, associated with abdominal distension, and offensive undigested motions. She continued to waste, and died from a terminal bronchopneumonia. *Post mortem* the only lesion found besides bronchopneumonia was a dilated transverse colon. He referred also to a case reported by Dr. Batty Shaw and Mr. Mant in *Clin. Soc. Trans.*, vol. xxxix. A girl for 4 years suffered from gastro-intestinal disorder, for 18 months had abdominal distension, and for 7 months repeated tetany. Thyroid substance proved effectual when other measures failed. By operation general dilatation of the large intestine was found.

These cases formed a definite and apparently hitherto unrecognized group, to which four attributes were common: (1) Obstinate relapsing tetany; (2) abdominal distension; (3) offensive unhealthy motions; (4) dilated large intestine. The disappearance of the tetany after the bowel was irrigated and its reappearance when accumulation of the characteristic faeces was allowed showed that it was due in these cases to toxic absorption from the bowel, and so favoured the toxaemic theory of tetany in general. Malnutrition, which was present in these, as in most described cases, probably acted by producing an unduly irritable nervous system.

Dr. TURNEY discussed the possibility of diagnosing whether the sigmoid or whole colon were dilated, and asked whether the tetany was produced by dilatation of the sigmoid only or might be caused by dilatation of any part of the large intestine.

The President had operated on two cases in adults in which tetany was not present. Discussing operative measures, he was in favour of preliminary drainage of the colon for a month or so before attempting resection.

Dr. Garrod thought it impossible to distinguish between huge dilatations of the sigmoid or other regions of the colon in either child or adult.

Dr. Langmead, in reply, said that of the 4 cases only 1 was confined to the sigmoid flexure, and he thought any part of the large intestine might be the source of the tetany.

EDINBURGH OBSTETRICAL SOCIETY.

Dr. J. W. Ballantyne, President, in the Chair.

Wednesday, January 9th, 1907.

Uterine Haemorrhage and Arterio-Sclerosis.

In a paper on this subject Dr. Elizabeth McDonald pointed out that in recent years much attention had been directed to cases of severe uterine haemorrhage occurring near the menopause without obvious cause. Many observers had regarded the changes occurring in the vessel walls as the causal factors. To herself the causes seemed to fall into three groups: (1) Abnormalities in the periodic ovarian stimulation; (2) conditions giving rise to muscular insufficiency, either from (*a*) deficiency of muscular tissue, or (*b*) loss of tone and consequent deficient response to vaso-motor stimulation; (3) conditions giving rise primarily to continued congestion of the endometrium, either from increased arterial supply or from venous obstruction. The first group had possibly more significance than was generally accorded, but the majority of cases of haemorrhage occurring at the menopause without obvious cause were to be included under the third heading. In the pregnant uterus there was a definite increase in elastic tissue in the vessel walls and throughout the uterus generally, together with periarterial and perivenous degeneration, the degenerated areas showing deposits of elastic tissue. Westphalen and Thoma had endeavoured to show that the peculiar vessel changes in the uterus were essentially due to the changes in blood pressure consequent on activity in function of the uterus. The periodic increase in blood pressure at the menstrual periods, and still more the pressure changes incident to pregnancy and the puerperium caused alterations in pressure to which no other vessels in the body were subject. Consequently the uterine vessels were shorter-lived, so to speak, than any others. If now it be supposed that changes in blood pressure occurred in those arteries from some pathological cause haemorrhage might easily follow. The paper was illustrated by a lantern demonstration showing the results of syphilis, alcoholism, etc., on the uterine vessels.

Pressure and Acute Albuminuria.

Dr. Porter described a case of acute albuminuria caused by the pressure of a cystic tumour on both ureters.

The patient, a multipara, of 34 years, complained of general weakness with backache and pain in the right hypochondrium and lumbar regions for five years. On examination the diagnosis of a movable hydronephrotic kidney was made. Seven months later the patient developed acute albuminuria with severe oedema of the whole body. Pain was now referred to the right iliac region and on examination a tumour was discovered in this part. The conclusion reached was that the kidney had become displaced into the pouch of Douglas, and the ureter had become twisted in the process.

Hence the abdomen was opened and a multilocular cyst attached to the broad ligament and pressing on the ureters was discovered. Nine weeks after the operation the urine was free from albumen and had remained so.

OBSTETRICAL SOCIETY OF LONDON.

W. R. Dakin, M.D., President, in the Chair.

Wednesday, January 2nd, 1907.

Chronic Metritis.

Dr. Archibald Donald read a paper on Chronic Septic Infection of the Uterus and its Appendages. He objected to the use of pessaries and the performance of suspension operations for cases of mobile retroversion on the ground that these methods could never cure the chronic metritis, which was at the root of most of the symptoms.

The Pathology of Chronic Metritis.

Dr. W. Fletcher Shaw read a paper, illustrated by lantern slides, on the Pathology of Chronic Metritis, based on the examination of 45 uteri extirpated for chronic metritis, 38 being uncomplicated cases, while 7 occurred with some concurrent pathological condition. For the purpose of comparison 23 normal uteri were also examined. The condition was simple hypertrophy of the mesometrium and not a connective-tissue hyperplasia. It was a slowly progressing affection, never primary; usually it was secondary to chronic endometritis, but might be associated with any pelvic or uterine disease leading to increased uterine contraction or vascularity, fibroids, tubo-ovarian disease, etc. It might occur at a much earlier age than the menopause, so the climacteric was not a principal causal factor. At an early stage it was indistinguishable clinically from chronic endometritis. Diagnosis must be largely dependent on the result of treatment.

The President said the author had carefully controlled his observations on the diseased uteri by examining the uteri of normal subjects, so his resulting opinion on so-called metritis was on a safe foundation. He used this term because, so far as he could see, there was nothing indicating inflammation in any of the sections shown or descriptions given of them. In fact, both "metritis" and "endometritis," as used at present by many, did not necessarily mean anything connected with inflammation. Such terms, however, led students and others astray, and ought to be reserved for inflammatory processes. He would appeal to both Dr. Donald and Dr. Shaw, as among the pioneers in this research, not to countenance such misuse of terms.

Dr. Cullingworth pointed to the interest of the fact that the authors of the two papers, working independently, and approaching the subject, the one from a clinical, the other from a pathological, standpoint, had reached conclusions which were practically the same.

Dr. Amand Routh said some patients with large, hard uteri would suffer from menorrhagia and no local pain, whilst others, with apparently a similar uterus, would have no haemorrhage, but considerable pelvic discomfort. Curetting frequently relieved such patients, even when the scrapings were insignificant in quantity, when, in fact, an atrophic "endometritis" had succeeded to the hypertrophic "endometritis" with which the authors appeared to have mainly dealt. Did the authors consider all their cases to be "septic" in origin? Were not some of them really of the type usually known as arterio-fibrosis of the uterus?

Dr. Russell Andrews thought the demonstration by Dr. Fletcher Shaw that there were no characteristic histological changes in "chronic metritis" was important.

Dr. Cuthbert Lockyer thought Dr. Shaw's paper and demonstration constituted the first really scientific attempt at evolving order out of the chaotic views on chronic metritis. It was interesting to note the uniform finding of concomitant mucosal hypertrophy with similar changes in the mesometrium. The series of cases, although so extensive, did not seem to include one type of uterus in which he himself was especially interested, and to which attention had been drawn by Dr. Goodall at the meeting of the British Medical Association at Toronto in August, 1906 namely, the arterio sclerotic uterus. He would like to hear whether Dr. Shaw regarded every case of so called chronic metritis as of infective origin, or if he would admit the entity of a primarily arterio-sclerotic uterus occurring independently of any source of infection from without.

Dr. Frank E. Taylor said that both Dr. Donald and Dr. Shaw had laid great stress on the importance of infection as a causative factor in the etiology of chronic metritis, and had mentioned the frequency with which the symptoms dated from a confinement or miscarriage presumably septic. Now, gonococcal was probably as frequent as puerperal infection of the pelvic viscera. Hence, it might have been expected, if infection were really an important factor, that a history of gonococcal infection would have been present in a certain proportion of the cases, but of such a possible origin neither Dr. Donald nor Dr. Shaw made any mention.

Dr. Donald and Dr. Fletcher Shaw replied.

MEDICAL SOCIETY OF LONDON.

C. A. BALLANCE, M.V.O., M.S., F.R.C.S., President, in the Chair.

Monday, January 14th, 1907.

SOME AFFECTIONS OF THE PANCREAS.

DR. SIDNEY P. PHILLIPS pointed out the increasing number of deaths certified from cancer of the pancreas since attention had been drawn to the frequency of pancreatic disease, the accompanying fall in the number of deaths registered from cancer of liver indicating that many cases of cancer of pancreas had been regarded as cancer of liver. Although it was said biliary calculi did not predispose to cancer of pancreas, Dr. Phillips's cases failed to support this, thus affording an additional reason for operative removal of gall stones. Cancer of pancreas mainly showed itself by pressure symptoms, the chief of which was jaundice; ascites rarely resulted from uncomplicated cancer of the pancreas; the observations of Robson and others indicated the importance of the presence of fat and undigested muscular fibre in the faeces. Chronic interstitial pancreatitis involving the head of the gland produced almost similar symptoms to malignant disease, the presence of jaundice without ascites served to distinguish pancreatic disease from cancer of the liver, though secondary nodules usually developed in the liver before the close of the case. Cancer of the biliary canals most closely simulated pancreatic disease. The diagnosis between simple and malignant disease of the head of the pancreas was so difficult that, even after handling the gland, the operator was frequently unable to decide the question. Enlargement of the cervical glands was one important point of distinction when present; obstruction of the bile duct became more rapidly complete in malignant disease; glycosuria was rare in malignant disease. He thought the "salol test" quite valueless in the diagnosis of pancreatic disease. He preferred the view that catarrhal jaundice was more often due to inflammatory swelling of the head of the pancreas, to the commonly received view that it originated in duodenal catarrh, of which there was little evidence. The treatment of the various pancreatic affections was discussed; drainage of the gall bladder for jaundice might be performed too early, many cases of "catarrhal jaundice" subsiding spontaneously after eight weeks' duration. Dr. Phillips's paper was accompanied by tabulated notes of 20 cases of cancer of pancreas and 6 cases of chronic interstitial pancreatitis, the nature of which had been verified by operation or necropsy.

MR. MAYO ROBSON said that in cases of carcinoma of the pancreas where it was possible to make, from clinical observations and chemical examination of the excreta, a definite diagnosis of malignant disease he did not advise surgical interference; beyond the relief of the jaundice and of the irritation of the skin no material good could follow from such an operation. Exceptions to the above statements occurred in cases where a carcinoma affected the tail or the body of the pancreas. In cancer of the head of the pancreas the obstruction to the flow of bile was absolute, and chemical examination of the faeces failed to detect any constituent of bile. That contrasted with the obstruction to the flow of bile from gall stones, in which case the faeces contained some constituents of the bile.

DR. P. J. CAMMIDGE mentioned in regard to the pancreatic reaction known by his name that, if the reaction was carefully performed, the indications given by it, although, taken alone, not pathognomonic of the diseases of the pancreas, would, taken in conjunction with the clinical symptoms, enable a correct diagnosis to be formed in the majority of cases.

PATHOLOGICAL SOCIETY OF LONDON.

Sir ALMROTH E. WRIGHT, Vice-President, in the Chair.

Tuesday, January 15th, 1907.

OBSERVATIONS ON MCCONKEY'S BILE-SALT NEUTRAL RED MEDIUM.

DR. F. W. ANDREWES made a communication upon bile-salt medium as a means of differentiation between the members of the coli group. The observations were made with the object of seeing whether the result upon the medium was attributable solely to acid formation. In some instances the two phenomena exactly corresponded, as in the case of the proper colon bacillus: in other cases it was not so. An organism might produce an acid reaction in litmus broth and produce no change of colour in the taurocholate of soda medium.

THE INCIDENCE OF SPONTANEOUS CARCINOMA IN MICE.

MR. F. W. TWORT read a paper on the above subject. Amongst a stock of mice at no time exceeding 150, the speaker had come across quite an unusual number of cases of carcinoma. Most of the tumours affected the female breast, two the pylorus, one the lung. In the tissues around many of the lesions the ordinary sarcosporidia of the mouse (Miescher's cylinders) were found. Attempts to communicate the lesion by inoculation had failed. The disease occurred in the older animals.

A CASE OF INFLUENZAL ENDOCARDITIS.

DR. T. J. HORDER recounted an example of the above—the third which he had observed. The bacillus was grown by adding blood, obtained by bleeding from the elbow, to a blood-broth medium. The blood contained large numbers of the organism. No autopsy was obtained.

THE DIAGNOSIS OF TYPHOID IN THE ABSENCE OF AGGLUTINATION.

The same author recorded a case in which the diagnosis was made on the sixth day, by growing the bacillus from the blood, although there was nothing specific clinically in the patient's fever. Suspicion was aroused from the leucopenia found on blood examination. Spots appeared on the eleventh day of the disease. Death occurred from heart failure. Whether the agglutination test was obtainable late in the disease the speaker could not say.

THE CHAIRMAN observed that the explanation of such anomalies was doubtless that agglutination was not a test of infection, but a test of immunity; and if it failed to come off in a case of typhoid, the prognosis was highly unfavourable, as the patient was not immunizing himself.

THE RATIONALE OF BIER'S METHOD.

DR. PATCH and DR. J. H. WELLS recorded a series of observations upon the above method, which consists in compressing a part above the seat of an infective lesion, with the object of producing slight venous obstruction. In the cases observed, which were those of tuberculosis of joints, the opsonic index in respect to the tubercle bacillus was taken before and after treatment, with the discovery that it was found to rise. The explanation of this fact apparently was that the exuded serum, passing through the focus of disease, carried with it back into the circulation a certain amount of toxic substance. The result, in short, was one due to autoinoculation, and was of the same kind as that due to the injection of tuberculin. Similar results followed massage of the diseased part, or use of the diseased limb.

THE DIGESTIVE POWERS OF LEUCOCYTES.

THE CHAIRMAN exhibited a means of testing the above action, which was first shown by Opie. The digestive process could be studied *in vitro* upon blood clot; it was hindered by the blood serum. The ferment seemed identical with trypsin. The Chairman exhibited, also, a method of estimating, *in vitro*, the amount of a ferment in the blood. If trypsin was tested in a capillary tube upon egg albumen, little digestion occurred in the presence of blood serum.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a clinical meeting on January 4th, Dr. LEONARD MARK (President) in the chair, the following were among the cases shown:—Mr. DONALD ARMOUR: (1) A man, aged 70, with an epithelioma on the alveolar border of his upper jaw. His teeth were in a very bad condition, and a jagged stump on the lower jaw exactly fitted into the excavation formed by the growth on the upper jaw. (2) A young man from whom had been removed a large endothelioma from the left frontal lobe weighing 3½ oz. It was apparently growing from the falx cerebri, and was enucleated without much difficulty, and the patient made a perfect recovery. —Mr. ASLETT BALDWIN: Two sisters, one aged 3½ and the other 11 years, with bilateral congenital dorsal dislocation of the hip, and the typical waddling gait. The trochanters could be drawn down a considerable distance in the

younger child but only to a slight extent in the elder one. Mr. Baldwin thought the younger patient could be greatly benefited by a combination of Lorenz's operation and opening the joint from the front to make sure that the front part of the capsule is freed from the floor of the acetabulum.—Mr. PATON: A man with multiple perforating ulcers, and marked signs of locomotor ataxy.—Mr. PARDOE: A growth in the neck treated by *x* rays. A microscopic examination showed it to be typically tuberculous, with many giant cells.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on December 19th, 1906, Dr. E. POWELL, President, in the chair, Dr. F. H. JACOB read a paper on the diagnosis of *Mediastinal tumours*, showing a case and describing eight others. The most important diagnostic points were: (1) The sputum, which in a typical case might be termed "catarrhal," and consisted of pearly granules suspended in a clear mucus; microscopically it contained numerous spherical cells with eccentric nucleus and no tubercle bacilli; (2) dullness of the chest with pleurisy; and (3) a normal temperature. The last was inconstant, and so were loss of flesh and the occurrence of secondary growths. Other symptoms commented on were facial congestion, venous dilatation, collapsed lung, with retraction of chest wall, paroxysmal cough, orthopnoea, and occasionally interference with the pulse during inspiration. Invasion of the cardiac region accounted for attacks of faintness, which might occur at any stage of the disease. In reply to the discussion, Dr. Jacob said the only definite proof of aneurysm was pulsation, and this was best demonstrated by *x* rays. Dr. C. H. CATTLE showed a mediastinal tumour from a man whose case he had watched during life. In addition to orthopnoea and inspiratory stridor there was dullness at the bases of both lungs. Dilated veins were obvious on the left side of the chest. There were no cardiac or aneurysmal symptoms. The left vocal cord was paralysed, and 3½ pints of blood-stained fluid were aspirated from the left pleural cavity. Microscopically the tumour proved a squamous-celled epithelioma, though there was no evidence of its origin in the œsophagus. Dr. A. J. SHARP read a paper on *Measles, its mortality, complications, and sequelæ*. A review of 65 cases showed a death rate of 23.44. The average age of 13 fatal cases worked out at 1.36 years. Of 48 recovered cases (including 2 adults) the average age was 4.49 years. Of 46 recovered cases (all being under 11 years and excluding 2 adults) the average age was 3.51 years. There was no case in the series of the disease occurring in a child of less than 6 months and the susceptibility to infection appeared to be very slight up to this age. The Registrar-General's returns for 1903 showed that 94.46 per cent. of the deaths occurred under 5 years of age, and 23.2 per cent. were under 1 year. In children under 6 months, although for more numerous and less able to battle with the disease, there was only 1 death from measles, as compared with 3.5 amongst children between 6 months and 1 year. Measles shared with whooping-cough the fourth or fifth place in children's diseases in point of annual loss of life. Laryngitis appeared in 11 cases, of which 8, or 72.7 per cent., were fatal, proving it to be by far the most dangerous complication which may occur in the earlier stages of the disease. Convulsions certainly occurred in 4 cases, all of which died. In the discussion which followed Dr. J. S. BOLTON and A. R. DOBSON suggested that mortality bore a definite relation to the status of the family in which the cases occurred. At a further meeting, on January 3rd, 1907, Mr. F. GERVAIS in the chair, Dr. J. S. BOLTON read a paper on the treatment of prostatic enlargement by electrical methods. Although the functions of the prostate and its secretion were still imperfectly understood it might be taken as established that (1) urgent symptoms in cases of this sort were attributable to congestion in and about the prostatic urethra, and (2) that, apart from actual enlargement, whether glandular or fibrous, most cases in late middle life, the ultimate failure to properly empty the bladder depended on the loss of tone in the muscle fibres common in old age. In the case of a man aged 63 who had suffered from retention with a good deal of local congestion, and a foul and ureal condition of the urine treatment over several weeks with high frequency currents applied to the prostate per rectum led to a marked relief of all the urgent symptoms as well as a return of the urine to a healthy state. Later on *x*-rays were on three occasions applied to the perineum and scrotum, and this produced a considerable shrinkage in size of a large hydrocele which had been in evidence for some years. In a second case a man, aged 54, the same conditions obtained, while the pain and frequent micturition had led to a thorough nervous breakdown. Treatment by high frequency currents was followed by a complete restoration of health and vigour, so that the patient was able to return to his work in a tropical climate. The benefit conferred by such treatment appeared to be directly connected with the marked improvement of the pelvic circulation induced thereby.

CHELSEA CLINICAL SOCIETY.—At a meeting on December 16th, 1906, Dr. J. FOSTER PALMER (Editorial Secretary) in the chair, Dr. VINCENT DICKINSON read a paper on some pathological aspects of old age. Old age, he said, is characterized by certain physiological changes in the bones, cartilages, and other tissues and organs. The term "senility" is usually employed to denote those more distinctly pathological changes which sometimes take place in the circulatory, urinary, and nervous systems. These two conditions are not necessarily synchronous: but of 100 male subjects between the ages of 60 and 70, Létienne found 70 normal and only 30 showing the pathological signs of senility. All these changes have their origin in that condition of the vascular system which we call arterio-sclerosis, the effects of which are chiefly manifested in the heart, the brain and the kidney. This was formerly supposed to be a necessary accompaniment of old age, but Humphrey has shown from the returns of the Collective Investigation Committee that in the majority of cases the arteries present a healthy condition in old age. In 262 persons above 80 years of age, the pulse was compressible in 208 and incompressible in only 55. The condition being thus shown to be morbid, what is its cause? Brault considers endocarditis to be the primary lesion, while Loeper thinks this is secondary, and due to some previous calcification and sclerosis. Errors in metabolism and nutrition play, no doubt, an important part, and many conditions, such as gout, rheumatism, diabetes, and syphilis, have been supposed to contribute to it. The experiments of Barazzoni appear to show that tobacco has a distinct effect in raising the blood pressure and increasing tension. Its prevalence among herbivorous animals seems to negative the suggestion that it may be the result of a meat diet. The attempts to produce arterio-sclerosis by the inoculation of toxins and microbes have been practically negative in their results, the only exception being a limited lesion with a paracolon bacillus. Arterial calcification has been produced by the injection of adrenalin, but not genuine arterio-sclerosis. There are, therefore, three problems which still remain to be solved: (1) Are atheroma and arterio-sclerosis the result of prolonged direct irritation by poisons of arterial tissue apart from hypertension? (2) is calcification caused by different poisons to those which produce arterio-sclerosis? and (3) what are those poisons which come in old age to reign in our blood and bring about these lesions? Mr. J. HOWELL EVANS also read a paper, one on operable and inoperable pelvic cancer.

ON Friday, December 21st, 1906, in the Board Room at King's College Hospital, Mr. Watson Cheyne, C.B., was presented with his portrait by his old house surgeons and dressers as a permanent token of their esteem for his teaching and their regard for his scientific work. The presentation was made by Mr. Keyton Beale, as Mr. Cheyne's first house surgeon, on behalf of the subscribers. Professor Howell moved a vote of thanks to the artist, Mr. W. C. Penn, for having produced such an excellent likeness, which, he said, had been greatly admired by all who had seen it. Mr. Cheyne expressed his thanks to the subscribers, saying that he should never forget how fortunate he had been in having such excellent workers in his wards.

THE SALE OF NARCOTICS TO SAVAGE RACES. Negotiations are said to be proceeding with the object of securing the co-operation of Great Britain and the United States in submitting to the Powers a treaty prohibiting the sale of intoxicants and opium among half uncivilized races. The United States Senate has already three times passed a resolution in favour of such a treaty.

REVIEWS.

BACTERIOLOGICAL EXAMINATION OF WATER SUPPLIES.

The Bacteriological Examination of Water Supplies,[1] by Dr. WILLIAM G. SAVAGE, Medical Officer of Health and Public Analyst of Colchester, is not only a really excellent epitome of up-to-date knowledge, but contains, besides original results, a terse and accurate definition of the scope and limitations of bacteriology as an aid in the examination of water supplies. The book also comprises in Part II a handy treatise on the technique of the bacteriological examination of water. In Part I, consisting of twelve chapters, we have a complete study of the influences affecting microbic life in water, the relation of the bacteria of excreta, sewage and soil, together with an exposition of the characteristics of specific organisms, and their occurrence in different classes of water supplies. Then follows a most useful discussion on the value of bacterial evidence as indicative of pollution, and for this purpose the *Bacillus coli*, *Bacillus enteritidis sporogenes*, and streptococci are selected and carefully reviewed in turn. The author comes to the conclusion that the *Bacillus coli* most nearly fulfils the conditions necessary for a bacterial indicator, even though here, as elsewhere, there are several limitations. While stress is laid on the necessity of having due regard to the numbers of the organism present, Dr. Savage is rightly averse to any fixed arbitrary standards in the interpretation of bacteriological results, though he admits that some flexible guiding lines are essential. The chapter in which he reviews this difficult question will be found of great practical value. He discusses fully the significance of the results yielded by the chief bacteriological estimations, and points out the limitations and weaknesses of each; subject to these modifications, he presents a useful table of standards to serve as a rough convenient guide for practical working purposes. In this table the surface water standards are just ten times as relaxed as those for deep waters. Altogether the book is one which will be welcomed not only by students, but by bacteriologists, medical officers of health, and others who are called upon to give opinions as to the safety of water supplies. The author does not shirk controversial matters, but, without laying down dogmatic views, he attempts to deal fairly and fully with the complex problems associated with his subject. As a result we have a handy guide to practical conclusions on the bacterial evidence concerning waters. As Dr. Savage says in his preface, bacteriology was first hailed as a direct and certain method by which to test the purity of a water; then it lost credit as limitations to its use were met with, and now it is taking its rightful place. Valuable as are the results of bacteriological examinations when interpreted in the manner here explained, they require also to be considered in relation to the topographical surroundings—a qualification which, of course, is almost equally applicable to chemical results. The part dealing with bacteriological technique is clear and concise, with suitable illustrations, and a useful and up-to-date bibliography is included in the book. It may be mentioned that the work is dedicated to Dr. A. C. Houston, Director of Water Examinations for the Metropolitan Water Board.

HEART DISEASE AND AORTIC ANEURYSM.

Six years have nearly elapsed since the appearance of the last edition of *Heart Disease and Aneurysm of the Aorta*, by Sir WILLIAM and Dr. J. F. H. BROADBENT,[2] and a good deal of new knowledge has been established in that interval. Useful and instructive as the book has always been, we may congratulate its authors on having added still more to its value as a clinical manual by the careful consideration given to the work of modern investigators and the skill with which they have sifted the evidence afforded by recent observation and experiment. The book appeals essentially to the clinical reader who has to do with heart disease in practice. Such subjects as clinical examination, high tension, and the so-called "functional disorders" are discussed by the light of large clinical experience and sound common sense, and should be of real assistance to the practical worker. The ever-present liability to error in physical diagnosis might, perhaps, have been more emphatically pointed out. No one of large clinical and pathological experience can fail to have met with a considerable proportion of cases in which the most careful diagnosis has been proved to be at fault. The subject of ulcerative—or, as the authors prefer to name it, "pernicious"—endocarditis has of late years attracted much attention, and a good description of the work of recent observers as to its causation will be found in the chapter devoted to it. While emphasizing the grave need for greater caution in dealing with early endocarditis in young persons, the authors do not lay much stress upon the need for similar caution in the case of patients, already the subject of heart disease, who may become infected with specific organisms, and more especially that of influenza. It is probable that the frequency of pernicious endocarditis from this cause is on the increase. The present edition, although for the most part the work of Dr. John Broadbent, has been carefully revised by Sir William Broadbent, and may be cordially recommended as an interesting and comprehensive account of all that is really known on the subject.

SURGERY.

IN their *Atlas of Typical Surgical Operations*[3] Dr. BOCKENHEIMER and Dr. FROHSE depict the steps of some thirty-three different procedures. This is not a student's atlas; no amputations or excisions are illustrated, nor the other operations included in a student's course of operative surgery. Most of the plates are based on the methods of Professor von Bergmann; many of them are life-size, and while some are of necessity partly diagrammatic, their anatomical accuracy and clearness leave nothing to be desired. For refreshing the memory on the steps of important operations the work will no doubt prove serviceable to many surgeons. The text accompanying the plates is commendably full, in many cases giving the indications for and the particular advantages of the operation described. Most of the operations described call for no remark; they are well-recognized procedures, which all surgeons practise on much the same lines. Five plates are devoted to von Bergmann's method of excision of the tongue, the important points of which are lateral section of the jaw combined with splitting of the cheek and a long vertical incision into the anterior triangle of the neck. This method gives a free exposure of the primary disease; but the tendency now is to go further afield in removing lymphatic glands than is here recommended. Excision of the larynx is also very fully illustrated, and the text gives a complete description of this difficult operation. The operation for breast cancer is not sufficiently radical to satisfy the majority of English surgeons. A shaving is taken off the pectoralis major, otherwise the muscles are left alone, and the description of how to deal with the regional glands is lacking in precision. Among the best of the plates are those illustrating operations on the gall bladder and bile ducts; here Kehr's long undulating incision is recommended, and this surgeon's methods are followed in the text. The plates are a real help to the understanding of this somewhat awkward corner of the abdomen. Professor Lexer is associated with the authors in the description of operations on the trigeminal nerve, which includes the Hartley-Krause method of removal of the Gasserian ganglion. From an artistic point of view the plates compare very favourably with those of other atlases. The colours are of the vivid order, but this is necessary if anatomical details are to be clearly shown. The translator is to be commended for undertaking the introduction of the work to English surgeons, and it is unfortunate that his version is marred by many errors in spelling and some in construction.

In the notice of the first edition of *Abdominal Pain* the opinion was expressed that the author for the most part

[1] *The Bacteriological Examination of Water Supplies*. By William G. Savage, B.Sc., M.D.Lond., D.P.H. London: H. K. Lewis. 1906. (Demy 8vo, pp. 297. 6s. 6d.)

[2] *Heart Disease and Aneurysm of the Aorta*. By Sir William Broadbent, Bart., K.C.V.O., M.D., F.R.S., and J. F. H. Broadbent, M.A., M.D., F.R.C.P. Fourth edition. London: Baillière, Tindall, and Cox. 1906. (Demy 8vo, pp. 479. 12s. 6d.)

[3] *Atlas of Typical Operations in Surgery*. By Dr. [illegible] Bockenheimer and Dr. Fritz Frohse. Adapted English [illegible] by J. Howell Evans, M.A., M.D., F.R.C.S. Sixty illustrations [illegible] by Franz Frohse, artist, Berlin. London: Rebman Company. 1906. (Demy 4to, pp. 252. 60s.)

followed the principles of Hilton, an ideal clinical surgeon. On the other hand, we pointed out that certain chapters on ligatures, sutures, and the after-treatment and results of operations were quite out of place in a treatise on pain. Dr. MAYLARD[4] gracefully admits in the preface to this edition that he is indebted for the criticisms, and consequently has replaced the purely surgical chapters by others devoted to post-operative pains. By this alteration the entire work is now uniform as an original publication and as a treatise devoted to one clinical subject, as professed by its title. We have lacked works of this class for some time, whilst we have more than enough books on operations and personal experiences. Dr. Maylard's old edition was certainly good; his second is as certainly better. Of the new chapters, perhaps the best is the nineteenth, on post-operative pains caused by flatulence, peritonitis, and adhesions. It will give rise to reflection, for the experienced are not unanimous nor even satisfied with themselves about many questions in respect to the after-treatment of even the simpler operations for the removal of abdominal tumours. Septic infection after ovariotomy is now very rare in the practice of experienced surgeons. Yet questions about anodynes, promotion of the passage of flatus, and purgation are by no means settled. The patient recovers, but her comfort is not always considered, and it is not clear how far remote complications, especially obstruction, are most readily anticipated and prevented. The careful study of post-operative pain is obligatory on those who undertake abdominal sections and desire to carry out everything that may ensure not only the immediate and future safety of the patient, but also his or her comfort. Dr. Maylard's teaching should therefore be carefully studied by the inexperienced. The author writes about post-operative pains caused by incisions, ligatures, and sutures—a subject unavoidable in a work on abdominal pain—but he omits a discussion on the relative merits of transverse, curvilinear, and median incisions, notifying the omission. In our opinion, he has acted wisely. Still more judicious is Dr. Maylard is penning clear sentences of this type: "It is an abuse . . . so to tighten a suture that it strangulates the tissues which form the margins of an incised wound"; for there is one essential factor always to be reckoned with in respect to a real and not an abstract operation, and that factor is the skill of the operator. If the beginner fails to bear this truth in mind, he may unwarrantably throw the blame for bad results on his teacher, which would be most unjust to so good a teacher as Dr. Maylard.

Dr. F. KLAUSSNER,[5] in an essay on the psychic effect of surgical operations, discusses with much common sense and wisdom the relationships of surgeon and patient before, during, and after operative procedures. He points out how the necessity for gauging a patient's mental state begins when the surgeon is called upon to suggest an operation, and the difference in effect which the proposal has on different individuals. Every patient needs special consideration from the point of view of his mental condition throughout the whole course of his surgical treatment, the arrangements specially suited to the individual case should always be a matter for careful thought, and some peculiar psychical condition may even make it necessary to modify the surgical procedure. Dr. Klaussner remarks that in the older textbooks a considerable amount of space was devoted to the question of the mental preparation of the patient, but that little attention is given to it in modern treatises; he urges that the subject should be restored to its former position of importance.

MR. WARRINGTON HAWARD has published in a small volume, entitled *Post-operative Thrombosis*, the Hunterian lectures he delivered before the Royal College of Surgeons of England. They contain much that is of interest, and direct attention to some frequently neglected points in treatment. The [illegible] dealing with the process of coagulation is the most controversial; he attributes to the platelets a predominant part, for which there is no warrant in unanimity of opinion amongst physiologists. The causes of intravascular clotting have still to be described in terms which serve to cloak uncertainty. Discussing the anomalous results of thrombosis in the great venous channels, Mr. Haward, whilst emphasizing the importance of the inflammation factor, tacitly admits the obscurity of the issues. Touching similar peculiarities attending thrombosis of the aorta, he might have referred to an even more remarkable case than those he quotes. In 189[illegible] Hebb published an instance in which 4½ in. of the aorta from the diaphragm upwards was completely occluded by old clot, yet there was "no evidence of disturbances of circulation or of collateral channels. The cause of death was sarcoma of the innominate bone and cells of sarcomatous type were present in the clot. Besides the obvious admonition as to rest, the author gives many hints as to little details of treatment, such for instance, as the avoidance of flatulence on account of the circulatory embarrassment entailed. As agents tending to diminish coagulability he mentions oxygen, alcohol, ammonia, restriction of food, citric acid (which should be added to the milk), much fluid, rhubarb, acid fruits, wines, and tobacco smoking. The time-honoured belladonna applications are rejected, and bran bags heated in the oven preferred. Limitation of dilatation of superficial veins is strongly advised, to compel enlargement of collateral intermuscular channels, in the limbs. Mr. Haward gives six weeks as the earliest date for safely beginning gentle movements of a limb after venous thrombosis.

In a new edition of the Arris and Gale Lectures delivered in 1899, Mr. MOYNIHAN, with the able assistance of his colleague, Mr. J. F. DOBSON, has, by addition as well as by judicious revision, increased the value of this standard work on the difficult and yet attractive subject of retroperitoneal hernia. While giving the results of recent anatomical research and clinical observation, the authors have done much to facilitate the study of the abstruse and complex details of their subject, and to overcome the difficulty caused by its chaotic nomenclature. Less attention is given to certain peritoneal fossae that are extremely rare and of little practical importance; the diagnosis and treatment of the different forms of retroperitoneal hernia are more fully considered; and reference to the extensive bibliography of the subject are given at the end of each chapter, and not, as in the first edition, in a somewhat confusing alphabetical list at the end of the volume. The utility of the book has also been much enhanced by the addition of a full index.

The guidance of this well-known treatise,[7] to which for many years the late Mr. Walsham devoted so much work, has certainly fallen into very capable hands. Mr. SPENCER, who took a large share in the preparation of the eighth edition, published in 1903, has in this latest issue succeeded in maintaining to a full degree the efficiency of what may be fairly regarded as one of the best English textbooks on modern surgery. Alterations and additions have been made in the text throughout, fresh illustrations have been added, and descriptions of obsolete methods have been omitted. With much able help, which is freely acknowledged in the preface, Mr. Spencer, we believe, has ensured still further success for this work, already so widely used by surgical students.

Mr. FREYER, in the preface to a new edition of his *Clinical Lectures on Enlargement of the Prostate*, states that he had intended them to appear as part of a comprehensive work on the surgery of the urinary organs, but has

[illegible]

been led by a somewhat pressing demand to publish them again in a separate form. In this edition of his work Mr. Freyer has included, in addition to many fresh clinical records, the substance of an address, hitherto unpublished, on the scope and limits of total enucleation of the prostate; and in a final lecture, which, unfortunately, contains much polemical matter, deals with the results of this operation in his own practice. The indications for operative intervention in cases of enlarged prostate, given in the fifth lecture, though somewhat indefinite, are certainly very comprehensive, and include cases that many might prefer to deal with by simpler methods. The results of the method of prostatectomy as developed and practised by Mr. Freyer certainly support his advocacy; and, as, in his own words, "there are no half measures about the operation," and as it is often practised under faulty conditions, both general and local, and on subjects of advanced age, the operative mortality may be fairly regarded as slight. It remains to be seen whether the operation described in these lectures will ever gain general favour and fulfil the optimistic views of the author. These lectures, however, do much to demonstrate the value of surgical methods in the treatment of enlarged prostate, and to establish the claims of the high or transvesical operation as a simpler, safer, and more thorough procedure than perineal prostatectomy.

OPHTHALMOLOGICAL TEXTBOOKS.

WE welcome very warmly the seventh edition of *Refraction of the Eye*,[10] by Mr. A. STANFORD MORTON. When the first edition was published, twenty-five years ago, it was almost, if not actually, the only book of its kind entirely devoted to this subject. From the first it aimed at being a practical guide, and each succeeding edition has been used by a large number of students. Considering the fact that this edition contains but 96 pages, it is obvious that it has retained its characteristics, and has not grown out of all recognition, like so many books which have commenced on similar lines. In spite of the large number of works on this subject of recent origin, this one is unique in the clearness of its language, and in the extremely practical nature of the methods and rules given. The whole work has been revised and largely rewritten, while a chapter has been added on the use of prisms. Prisms are always a source of trouble to the beginner, but if he were to read this chapter, short though it is, he would find the ground cleared of many of the difficulties which beset his way. Mr. Morton's book has borne the test of time, and we feel sure that the present edition will be welcomed by a large body of practitioners and students. We heartily recommend it.

Quite a large book, consisting of 500 pages, has been published by Dr. GEORGE STEVENS, of Philadelphia, on the *Motor Apparatus of the Eye*.[11] It commences with historical notes, which are very interesting, showing how the practice of operating on the muscles for squint originated, and giving an account of some of those who were the first to advocate such operations. Part I goes into the anatomy of the motor muscles of the eye and of the parts accessory to them. Some very excellent coloured drawings illustrate the arrangements of the muscles in man and in various animals. The capsule of Tenon is described, and so also is the origin and course of the cranial nerves destined to supply the eye. Part II is occupied with physiology; the different terms used to describe errors of the motor apparatus are explained; the exact action of all the muscles about the eye is carefully tabulated; and numerous other physiological conditions, including the horopter, are discussed. Part III deals with anomalous conditions of the motor muscles of the eye consistent with a physiological state. Here we find the heterophorias described, and a detailed account of the tropometer, which is an instrument designed by the author to measure the various movements of the eye about the centre of rotation. All sorts of tests are given for the detection and measurement of heterophoria, after which the various operations devised or used by the author are given in detail. Finally, the question of squint is entered into. The book cannot be looked upon quite as an unbiassed treatise on the subject, and one finds but scant reference to the work of others in this field of research. It is the author's own views which are set forth. The book is profusely illustrated, and represents the opinions of one who has been a pioneer in this branch of study, but it is not quite impartial, and much stronger views are expressed than would be accepted by most ophthalmologists.

The Ophthalmoscope and How to Use It[12] is an attractive-looking book, printed in good large type, and intended for students and practitioners who desire to obtain a working knowledge of the ophthalmoscope without entering very deeply into the study of ophthalmology. There are 73 illustrations and 12 beautiful coloured plates. Dr. THORINGTON has divided his book into ten chapters. Chapter I deals with the ophthalmoscope, and the principles on which it acts; the author recommends either the modified Loring or else the Morton instrument. Chapter II is on light, refraction, and lenses. After that comes a description of the anatomy and of the anomalies of the eye, and the various normal and abnormal appearances seen by means of the oblique illumination and ophthalmoscope. The coloured illustrations are beautifully executed, and are among the best we have seen. The work well fulfils the objects with which it has been written.

THE TREATMENT OF YELLOW FEVER.

WE have received two works on yellow fever by Dr. DAGNINO.[13] The first, a large octavo of some 70 pages, is mainly devoted to the exposition of the author's ideas on the treatment of the disease; the second, a stout volume of nearly four times the size of its fellow, is a counterblast to the criticisms of all those who have ventured to disagree with the views advanced in his first effusion. We have used the word "effusion" advisedly in regard to these two books. Time in Caracas, like silver in the days of King Solomon, must be little accounted of, for the clouds of verbiage which obscure Dr. Dagnino's arguments through three hundred and odd pages could not but have necessitated a considerable expenditure of that article. Yet it would not be too much to say that the gist of the message that the author feels called upon to deliver might have been expressed with quite sufficient fullness within the limits of a couple of our columns. It is unnecessary here to discuss the larger of the two volumes; for, as we have said, it is merely a diatribe against his critics combined with a reiteration of the methods of Vol. I. It is in the latter that we get a summary of treatment. Dr. Dagnino seems rather to avoid the question of the etiology of the disease, and may be suspected of unsound views as to the part played by *Stegomyia*. But, after all, this is of minor importance when it comes to the treatment of a person already in the grasp of yellow fever, and it is to treatment that Dr. Dagnino mainly, if not entirely, confines himself. His method is very simple, and consists in the administration of strong purgatives of calomel followed by diuretics, and a special attention to his *dieta hídrica*, which for the first two or three days of the disease forbids everything but tea, *eau sucrée*, and as much water as the patient can be got to drink. This sounds somewhat as if Dr. Dagnino had learnt in the school of which Bachelierus in the "Malade Imaginaire" was so shining a light, and the reader might ask whether it is worth while to take our author seriously. The answer is that he desires to be judged by results, and boldly claims that out of 225 cases he has lost but 3. If his figures be correct it is certainly more than one can expect of a disease that in Havana has claimed 82 per cent. as victims, and in Gibraltar in 1804 only left 28 persons alive out of 9,000 attacked. The main point Dr. Dagnino insists upon is that these measures should be taken from the very onset of the disease. He regards

[10] *Refraction of the Eye: its Diagnosis and the Correction of its Errors, with a Chapter on the Use of Prisms.* By A. Stanford Morton, M.B., F.R.C.S. Seventh Edition. London: H. K. Lewis. 1906. (Cr. 8vo, pp. 96. 3s. 6d.)

[11] *A Treatise on the Motor Apparatus of the Eyes.* By George T. Stevens, M.D., Ph.D. 184 engravings, some in colours. Philadelphia: F. A. Davis Company. 1906. (Roy. 8vo, pp. 496. Dols.4 50.)

[12] *The Ophthalmoscope and How to Use It.* By James Thorington, A.M., M.D. London: Rebman, Limited. (Demy 8vo, pp. 230, 80 illustrations. 11s.)

[13] *Sobre Fiebre Amarilla.* Relacion sobre el Tratamiento . . . por el Metodo de Defensa, y sobre sus Formas Clinicas observadas en Maracaibo y Caracas. Por Dr. M. A. Dagnino. Caracas: T. Guttenberg. 1905. (Demy 8vo, pp. 72.) *Sobre Fiebre Amarilla.* Ratificacion de mi Metodo de Defensa. Caracas: T. Guttenberg. 1906. With numerous charts and diagrams. (Demy 8vo, pp. 284.)

yellow fever as incurable so far as treatment is concerned if it has been left to itself beyond the second day. A good deal of interest lies buried beneath the author's exuberant verbosity, as, indeed, might be expected from the large experience he has had of his subject. He records, among other things, that in his Maracaibo cases almost all (*casi la totalidad*) were foreigners—Germans, Italians or Spanish—while in Caracas the majority of the cases were Venezuelan born.

NOTES ON BOOKS.

Medical Diary and Visiting List.

The *Medical Diary and Visiting List*,[1] published by Messrs. Langley and Sons, contains calendars for 1906, 1907, and 1908, a list for obstetric engagements, a general visiting list for 60 patients in every week of the year, blank pages for memoranda, nurses' addresses, patients' and general addresses, lists for vaccinations, and an obstetrical table: together with a refill duplicate prescription book of 50 leaves and 50 duplicates, numbered and perforated, and a sheet of black paper for the copying of the prescription or message. One list and one prescription book is supplied in a morocco wallet or imitation morocco wallet, and each wallet holds a lead pencil and has an inside pocket. The prescription book can be replaced as often as may be required. The diary with visiting list lasts the year. Containing no advertisements nor extraneous matter, this diary is of convenient size for a breast pocket and of small weight; it should prove particularly serviceable to any practitioner who wishes to have the visiting list in his pocket whilst he is "on his rounds." The price of the morocco wallet and a list and a prescription book is 7s. 6d.; for similar contents in an imitation morocco wallet the price is 5s.; a refill visiting list lasting a year costs 3s. 6d.; and the refill prescription books cost 6d. each or 5s. 6d. a dozen.

Illustrated Medical Dictionary.

According to the title page the *Illustrated Medical Dictionary*[2] includes the terms used in medicine, surgery, dentistry, pharmacy, chemistry and the kindred branches, with their pronunciation, derivation and definition. It also contains anatomical tables and other tabulated matter. Since so able a professional authority as Dr. Dorland has compiled it the lexicon is of real value. It is also published in a convenient form. Some of the coloured plates are finely executed. The dictionary, which includes 2,000 new terms, is well up to date and is very strong in respect to bacteriology. The list of stains and staining methods will be of great utility for post-graduate study.

Yearbooks and Transactions.

We have before us the first number of a new yearbook of diseases of the urogenital apparatus.[3] It was projected by Professor Nitze and Dr. Jacoby of Berlin. After Nitze's death he was replaced by Professor Kollmann of Leipzig. It is divided into six sections—anatomy, physiology, pathological anatomy, pathology and treatment, the chemistry of the urine, and bacteriology. Each section contains abstracts of papers published during the year 1905, with a bibliographical appendix; there are also general indexes of subjects and names. Prefixed to the volume is the biography of Max Nitze by Professor Kollmann, and the frontispiece is a portrait of the deceased surgeon. It is difficult to express any opinion upon the value of a production of this kind as it must depend upon the answer to the question whether any important sources of information are overlooked. A cursory examination gives the impression that the writers have endeavoured to be eclectic.

The twenty-first volume of the *Transactions of the Association of American Physicians*[4] which reached us on the last day of 1906, contains the report of the meeting held in May of that year: the papers read are for the most part given in full, and appended to them are brief notes of discussions. The volume contains a leaflet addressed to the members of the Association of American Physicians, pointing out that only if manuscripts are handed to the recorder at the meeting or soon after, and reports of discussions corrected and returned promptly, can the *Transactions* be issued without undue delay; and it is added that when a paper forms a part of what is here called a "symposium," a delay in delivery may hold the volume back for months. The leaflet concludes with the following words: "In thanking the many authors who have kindly responded to his request for promptitude, the recorder begs to express the hope that such thanks may hereafter be due to all who have taken part in the Association's work."

The *Reports of the Society for the Study of Disease in Children*[5] have now reached their sixth volume. The work of the Society during the session 1905-6 was reported from time to time in our columns, but the volume will be a valuable addition to the library of any practitioner interested in diseases of children. It is well illustrated and printed, and has been carefully edited by Dr. George Carpenter.

The issue of the *Classified Directory of Metropolitan Charities for 1907*[6] is the thirty-second of its race, the last, as well as the first and all its fellows, having been edited by Mr. W. F. Howe. The book gives in very compact form the chief points about nearly 1,000 charities—medical, educational, reformatory, and preventive—which carry on their work in or from London, and a list of corresponding institutions in the provinces. Search for a suitable society of any particular class is greatly facilitated by the grouping method employed, and in an editorial note some interesting information as to the income of the various institutions is given. Between them they enjoy an income of over seven millions, nearly one-third of which is absorbed by home and foreign missions, and about one-seventh by medical charities. There has been an increase of nearly half a million since the year 1904-5, but much the greater part of this, again, is to the credit of the missionary societies.

The oldest of London charity annual directories is *Fry's Royal Guide to the London Charities*,[7] of which the forty-third edition, that for 1907, has now been issued. The societies are shown in alphabetical order, a plan which has many obvious advantages. The object of the book is not to give complete information about the societies mentioned, but to state clearly in each case the date of foundation, the address, its general objects, its income, the number of persons benefited by it, and the names of the chief officials, more especially that of the person to whom those in search of the aid of the society or of information concerning it should address themselves. These points are all very easily ascertained in this decidedly useful publication.

In its 400 double-columned closely-printed pages, *The Englishwoman's Yearbook*[8] for 1907 contains a veritable mine of information on every subject connected with the hobbies, amusements, ambitions, work, and occupations of women. The subject matter is divided into fourteen sections, and ends with a list of the events for the year which mainly affect women, with obituary notices of those women whose work has come to an end during the past twelve months, and a directory of several hundred names of women who are still playing their part. The publication has once more been produced by Miss Emily Janes, the Organizing Secretary of the National Union of Women Workers, with the assistance of certain colleagues. It is in itself an excellent sample of woman's work; the indexing and cross-referencing and other points which make or mar a book of the sort having received the most careful attention.

[1] *The Medical Diary and Visiting List.* Langley and Sons, Limited, 21, Wellington Street, London, S.W.

[2] *The Illustrated Medical Dictionary.* By W. A. Newman Dorland, A.M., M.D. (Univ. Penn.), Assistant to the University of Pennsylvania Hospital. Fifth Edition, revised and enlarged. London and Philadelphia: W. B. Saunders and Company. 1906. (Demy 8vo, 832 pp. Not Thumb Indexed.)

[3] *Jahresbericht über die Leistungen und Fortschritte auf dem Gebiete der Krankheiten des Urogenitalapparates.* Redigiert von Geh. Med. Prof. Dr. Max Nitze † und Privat-Docent Dr. Hans Kollmann. Unter Mitwirkung von Prof. Dr. A. Kollmann. I. Jahrgang, 1905. Berlin: S. Karger. London: Williams and Norgate. 1906. (Roy. 8vo, pp. 342. M. 9.)

[4] *Transactions of the American Physicians.* Twenty-first Session held at Atlantic City, May 22nd and 23rd, 1906. Vol. xxi. Philadelphia: Published for the Association. 1906. (Demy 8vo, pp. 623.)

[5] *Reports of the Society for the Study of Disease in Children.* Vol. vi. Session of 1905-6. Edited by George Carpenter, M.D. London: J. and A. Churchill. (Demy 8vo, pp. 321. 12s. 6d.)

[6] *The Classified Directory to the Metropolitan Charities.* Edited by W. F. Howe. London: Longmans, Green, and Co. 1907. (Price 1s.)

[7] *Fry's Royal Guide to the London Charities.* Edited by John Lane. London: Charles and Windus. 1907. (1s. 6d.)

[8] *The Englishwoman's Yearbook and Directory.* Edited by E. Janes. London: Adam and Charles Black. 1907. (2s. 6d.)

Under the will of the late Mr. Henry Burley Smith, of Birkenhead, the East London Hospital for Children at Shadwell, the West London Hospital for Children, the Clinical Hospital Manchester, the Abraham Ormerod Convalescent Home, St. Annes-on-the-Sea, and the Hospital for Incurables, Liverpool, each receive a sum of £100.

MEDICAL AND SURGICAL APPLIANCES.

Pelvic Pedicle Needles.

Mr. Sampson Handley, Wimpole Street, W., writes: The long-handled pelvic pedicle needle, though it still survives, is in the same category as the heavy-jawed forceps formerly considered essential for pelvic surgery, and should be regarded rather as an impressive weapon than as a simple and rational tool. Its point is difficult to control, and its long handle is continually getting in the way and interfering with free movement of the point of the needle. On the other hand, loose needles gripped in holders, the best type of which is Bonney's—a needle which is largely superseding Hagedorn's—are never entirely free from a tendency to slip, nor can the driving force be applied directly behind the point of the needle. The needles illustrated have been made for me by Messrs. Mayer and Meltzer. Each needle has practically two handles, one of which is grasped during the stabbing or pushing movement which takes up the tissues, while the other, aided by a lever action on the first ring, serves to make the point of the needle present in the wound to be threaded or unthreaded (Fig. 1). The grip is convenient, the force is applied directly behind the point, control is perfect, and the ring handle is so small that it never gets in the way. I have found the needles especially handy in dealing with the stump in hysterectomy, in ovariotomy, and in cystotomy to pass the guide sutures through the bladder wall; but there are few abdominal operations where they may not be found convenient. The short, nearly straight pattern is the most generally

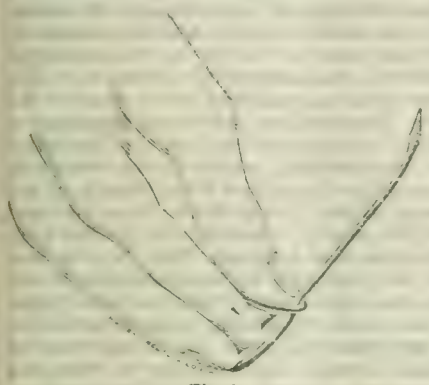


Fig. 1.

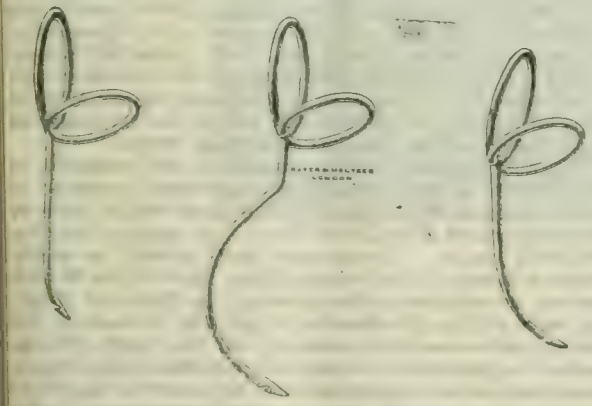


Fig. 2.

useful, and the slot type is preferable to an eyed needle if a deft assistant is available to thread the needle after it has been passed through the tissues and made to present in the wound.

The War against Absinthe.—The war against absinthe is extending. Some time ago the sale of it was forbidden in Belgium. Now M. Breton has introduced into the French Chamber of Deputies a Bill forbidding the manufacture and sale of essences and liqueurs having absinthe as a basis. The penalties imposed for breaches of the law are imprisonment for three months to two years, and fines from 50 to 10,000 francs (£2 to £400). The term of imprisonment and the fines may be imposed together or separately. In Switzerland the Committee appointed to consider a petition asking that the sale of absinthe should be prohibited in the Canton of Geneva has after careful examination of reports of medical, economic, and legal subcommittees, unanimously decided to propose to the Grand Council a scheme of preventing the retail sale of absinthe or any similar product.

THE PROFESSION AND THE BRITISH MEDICAL ASSOCIATION IN SOUTH AFRICA.

[FROM A CORRESPONDENT.]

The South African Medical Congress.

The Medical Congress was held this year at Bloemfontein, the capital of the Orange River Colony, a locale possessing the advantage—a notable one in this country of magnificent distances—of being the most central and generally accessible of all the important towns of South Africa. Further, being the capital of a small colony, the local element did not preponderate over the visitors from a distance to such an extent as is generally the case, and the consequence of these two factors was that the Congress this year was more evenly representative than any of its predecessors. The President was Dr. A. E. W. Ramsbottom, the President of the Orange River Colony Medical Council, and a much respected local practitioner. He is a born Cape Colonist, but has practised in the erstwhile Free State a goodly number of years, and was Principal Medical Officer of the State forces during the Boer war. Apart from medical activity, he is a man of much influence in the local community and a keen politician, clearly destined, when the Orange River Colony obtains responsible government, to be another example of the capacity of the medical mind to compass the problems of statesmanship.

The work of the Congress, apart from business, was divided into six sections: Medicine, Surgery, Gynaecology and Obstetrics, Public Health, Ophthalmology, and special subjects. The last section, although intended to cover all subjects of a special nature not fittingly coming under the other sections, was, in fact, entirely devoted to Mental Diseases. This was the first Congress at which Ophthalmology had a section of its own. Another new feature, and a very commendable one, was the holding of a discussion on some fixed subject in each section. This arrangement brought forth some very interesting matter, but its success was marred somewhat by the fact that in more than one case the gentlemen entrusted with the duty of opening the discussions entirely misconceived the scope of their functions, and gave reviews of the subject so lengthy and exhaustive as practically to cover the whole ground and leave very little for the speakers following to say.

Summer Diarrhoea.

Perhaps the most interesting discussion was that in the Medical Section on infantile summer diarrhoea, a subject of perennial interest in South Africa, where it accounts for a large proportion of our appalling infant mortality. The opener of the discussion, Dr. W. G. Rogers of Johannesburg, put forward the theory that this disease is due to organisms—notably the pneumococcus and *Streptococcus pyogenes*—which, finding a suitable nidus in the buccal mucous membrane during the period of dentition, acquire a particular virulence, and become an infective agency to the whole alimentary tract. This view was vigorously combated by Dr. E. P. Bauman of Johannesburg. It appears that the only South African observations available—those made by the Medical Officer of Health of the City of Capetown—lend no support to the generally accepted theory that elevation of ground temperature has an influence on the disease. The general consensus of opinion was in favour of contaminated milk being regarded as the *fons et origo mali*, and in this connexion it is noticeable that most of the speakers seemed to lean rather to the plan of securing comparatively pure milk by means of regulated dairies than to any process of sterilization or pasteurization.

Sanitary Difficulties.

The Section of Public Health was opened by an address by the President, Dr. A. J. Gregory, M.O.H. for the Cape Colony, in which he very ably reviewed the history of sanitary progress in South Africa—a very recent history for the most part—and then discussed the immensely interesting subject of the many ways in which the problem of sanitary administration in South Africa differs from that in Great Britain. One curious historical fact he brought out—that in the early part of last century the autocratic Governors of the Cape had anticipated the modern and too often futile movements in favour of compulsory vaccination by rigidly enforcing it on the lieges

by their own fiat. This address was full of suggestive matter, particularly the portion in which he discussed that complication of the sanitary problem which is presented by the dwelling side by side of widely different races.

Leprosy in Basutoland.

An extremely important paper was read by Dr. McFarlane, District Surgeon of Leribe, Basutoland, on Leprosy in Northern Basutoland. It was a carefully-compiled record of facts and a striking example of the value of research carried on within an area sufficiently limited to allow of all the links in the chain being accurately fitted together. His facts seem crushing as regards their refutation of Mr. Hutchinson's fish-eating theory, and overwhelmingly in favour of commensal contagion, but also lent a good deal of support to the theory of heredity. The reader's views were uniformly supported by subsequent speakers.

Disposal of Sewage.

A discussion in the Public Health Section on the disposal of sewage brought out the somewhat puzzling fact that, for some reason or other, installations for the artificial disposal of sewage seem nowhere in this country to give the results attained in Europe. One speaker, in despair as to any other solution of this discrepancy, put forward the rather startling theory that there might be some climatic conditions unfavourable to nitrification processes; but the opener of the discussion, Dr. Boyd, Medical Officer of Health of Pretoria, was rather inclined to attribute the failure to sewage being too concentrated. In this connexion it must be remembered that the torrential character of the rains in South Africa render it absolutely necessary to exclude from the sewers all rain water, and that generally municipalities have gone further, and exclude bath water as well.

Children's Eyesight.

A discussion in the Ophthalmological Section on errors of refraction in children brought out a refutation of the very generally-accepted idea that the eyesight of the Dutch is better than that of the English. Dr. Symonds, of Kimberley, who had made some careful observations on this point, said that errors of refraction were as common amongst the members of the one race as those of the other, and he attributed any Dutch visual superiority rather to the fact of a brain trained to observe being behind the eyes than to the eyes themselves.

The Organization of the Profession in South Africa.

The main interest of the Congress, however, centred round the burning question as to whether a South African Medical Association should be formed or not. This has been warmly debated throughout South Africa for the last two or three years. In order to understand the position, it is necessary for your readers to be informed that this country is provided out between Branches of the British Medical Association and local societies. The former organization covers the two coast Colonies, there being three Branches in the Cape and one in Natal, the Eastern Cape and Natal Branches each having two Divisions, and the Western Cape and Griqualand West Branches being consolidated. The Transvaal and Orange River Colony are local societies, there being two, at Johannesburg and Pretoria respectively, in the former Colony, and one in the latter. Of course there is an entire absence of any combination of effort.

Proposed South African Association.

With a view to remedying this condition of things, a scheme for the formation of a medical guild, to take over all work of the three societies, was brought forward at last year's Congress, but, although the principle was adopted, it was defeated on details. This year the Bloemfontein Congress Local Organizing Committee drafted a complete scheme for the formation of a South African Medical Association. While the gentlemen responsible for this draft scheme disavowed any idea of interfering with the Branches of the British Medical Association, it was obvious to all concerned that it would have the effect of either amalgamating control over these Branches or of establishing competing organizations side by side with them. The British Medical Association Branches, except that of Griqualand West, regarded the question in this light, and decided to accept nothing short of absorption than a mere permanent Congressional Committee restricted to the work of organizing congresses, until the results of the application for a Royal Charter showed whether the British Medical Association could or could not be made responsive to the needs of the South African practitioner. An arrangement had been come to whereby the decision on this South African Medical Association was to be entrusted to a body of representative delegates from the various Societies and Branches, plus a representative of the Basutoland practitioners and one of those in Rhodesia. After considerable discussion an amendment in favour of establishing for the present merely a Congressional Organizing Committee, was carried by 8 votes to 7, the delegates in favour of the amendment being those of the Western Cape, the Eastern Cape, and Natal Branches of the British Medical Association, and of the Transvaal Medical Society (Johannesburg), whilst on the other side were cast the votes of the Griqualand West Branch, of the Pretoria and Orange River Colony Medical Societies and of Basutoland. Subsequently a constitution for the Congressional Organization was adopted. This is of a very simple character, and suitable to South African needs, providing that a local committee at the place fixed upon for congress shall act as an Organizing Committee for the year previous to any given congress, and at the close of that congress shall become automatically a Standing Committee for the purpose of giving effect to its decisions.

The Future of the British Medical Association in South Africa.

In this connexion it is very important for people on your side of the water to grasp two facts. The first is that the increasingly hard conditions of medical life here, due to the continued financial depression, have impressed upon every man the paramount necessity of some effective machinery in the way of defence, parliamentary action, and benevolence. The second is the deep conviction in the minds of even the men most attached to the British Medical Association, that the existing machinery of that Association cannot provide what is wanted, but that the said machinery expanded by a Royal Charter and liberally made us of, would be adequate to all needs. Consequently, the attitude of the Branches is simply this, that they are suspending judgement. If the Charter goes through, and its powers are utilized to meet South African needs, the Association will not only be assured of a permanent existence in South Africa, but will probably largely extend. If the contrary, the Branches are almost certain to withdraw their opposition to the South African Medical Association scheme, and the end will be the extinction of the British Medical Association in South Africa.

The most pressing of all necessities is the formation of some South African council or committee, composed of representatives from the Divisions, and with a more or less autonomous control over them. At present they are powerless units. Co-ordinated they would be really effective agents in the two colonies wherein the British Medical Association exists—namely, the Cape and Natal; and, after all, in the absence of political federation, the administrative medical union of all the South African medical organizations is not of immediate importance. Once given some autonomous local organization capable of speaking to a particular Government or parliament in the name of the whole profession within the jurisdiction of that Government or parliament, other things would follow in natural sequence.

CONTRACT PRACTICE.

Surgical Treatment of Club Patients.

G. S. W. writes to ask whether the members of friendly societies can claim to have operations done by the court surgeons under his contract to furnish medical attendance.

*** It is not usual for the court surgeon to perform operations of any magnitude, but under his contract he is bound to furnish both medical and surgical attendance. Most members of friendly societies requiring an operation go into a general hospital to avoid expenses which must necessarily be incurred if the operation is done at home. For although the club surgeon might be required to do the operation without charge, he can insist on having proper assistance—for example, another practitioner to give an anæsthetic, a trained nurse etc., and for all this the patient would have to pay.

INNSBRUCK.

Of late years the Northern Tyrol has begun to attract winter visitors bent purely on holiday and winter sports, for it affords a large choice of places, within easy reach of one another, at which skating, sledging, tobogganning, and ski-running can all be pursued under exceptionally favourable circumstances.

Northern Tyrol, however, has attractions of a much more serious character than those of a convenient winter playground; but to these neither the inhabitants nor the world at large seem to have awakened until recently. This is somewhat curious, because the merits of Northern Tyrol, and especially of Innsbruck, were strongly emphasized some twelve years ago by Professor Jaccoud. Writing in March, 1894, in the *La Semaine Médicale*, he reviewed minutely the various factors which go to make up a desirable residence for persons predisposed to tubercle, and discussed the extent to which they existed at various places—Davos, St. Moritz, Samaden, Arosa, Caux, Glion, and others—and finally plumped for Innsbruck, as combining the greatest number of essentials. Physiographically, meteorologically, and otherwise, the circumstances of the place seemed to him so exceedingly favourable to the preventive treatment of phthisis that he expresses surprise that it had not long before become noted in this connexion.



The Main Street at Innsbruck.

The place of which he specially approves, Innsbruck, lies at the head of an elevated valley running east and west, and varying between two and four miles in width. It is closed in on the north by the Bavarian Alps, which, just where Innsbruck lies at their foot, rise very abruptly to a height of some 6,000 ft. The western barrier is formed by the Swiss Alps, which are penetrated by the railway which crosses the Arlberg Pass; to the east the valley after six or seven miles is shut in by the Jenbach and Sellenthal Mountains, while to the south lie the endless mountains which divide Austria from Italy, and through which creeps the ancient high road from Northern Europe to the Mediterranean, the Brenner, now traversed by a railway.

Innsbruck, therefore, lies in a mountain cup, but a cup so large and broad that there is no sense of being shut in. Its height above the sea level is some 1,800 ft., an elevation sufficient to reduce the barometric pressure very considerably without bringing about such a degree of rarefaction in the air as can be harmful to any one. The climate throughout the winter is dry and cold, the mean in December being — 2·4° C., in January — 3·9° C., in February — 0.2° C., and in March + 3.3° C. These are the averages of fifteen years. During the same period the average number of cloudy days from October to March has been four to six a month. The air is always exhilarating and usually very still. In spite, therefore, of the fact that the elevation of the place is comparatively slight, the meteorologic conditions are those of a high alpine resort, the actinic rays of the sun having full play and there being little subjective recognition of the fact that it is cold, whatever the thermometer may register.

The town lies between two small rivers, and with its three suburbs has a population of between forty and fifty thousand persons. As most of its streets are wide, and open spaces are numerous, the area covered by it is quite out of proportion to that of towns with an equivalent population elsewhere. It has a well-arranged modern drainage system, and is supplied by water from the mountains.

The fact that it is the seat of a university, of a medical school, and of an army corps, and has a theatre and numerous schools, and is a not unimportant capital, may, when taken in conjunction with its elevation and climate, offer special inducements to certain classes. The majority of winter resorts elsewhere have nothing to offer to a person who lacks either sufficient energy or sufficient strength to spend his whole time skating, tobogganing, or ski-running.

At Innsbruck there is the fullest opportunity for all of these, but in addition there are the intellectual occupations of a large town, with the facilities for study of languages, music, and other matters. There are also many walks available in the well-kept paths along the mountain sides; for the mountains on each side of the valley, though not very close, are readily accessible by tramways to their base. The Brenner Pass puts it into easy communication with a number of places comparable with the better known health resorts of Switzerland. Gossensass, a station on the southern side of the Brenner Pass, lies at an elevation of close on 4,000 feet, and makes a strong point of its winter season; as a winter residence of purely alpine type it could not be bettered. The whole village devotes itself to the entertainment of its visitors, and there is ample occupation both for the strong and the weak. It is happily situated for expeditions, which are undertaken by the lazy or infirm in sledges, and by the active on the *rodeln*, a species of toboggan on which the Tyrolese have performed their winter journeys from time immemorial. Other places which have a winter season and, though further off, can easily be reached from Innsbruck, are St. Anton, on the Arlberg line, at an elevation of some 4,300 feet. It is famous for its ski running slopes, but as a stopping place should be commended to the active rather than to the infirm; Kitzbuhel also is easily reached on the Gisella line. Here again the climate is alpine, though the elevation is not great—2,000 feet. Somewhat less accessible are St. Valentine, St. Ulrich, and Cortina; the former is nearly 5,000 feet above sea level, and the latter two lie amongst the Dolomite mountains at an elevation of over 4,000 feet. They are reached by short sledge journeys from the stations which serve them, and in point of still, cold, climate, and facilities for sport are excellent.

Though the Tyrol in winter is empty as compared with Switzerland, access to it is quite as easy as to the Engadine, and life there on the whole is decidedly less expensive. Jaccoud considers that Innsbruck is beneficial for patients suffering from anaemia or neurasthenia, and of late years a good deal has been done locally in the way of the graduated-exercise treatment of heart disease, a number of walks near the town having been selected and graded for this purpose. It would be an ideal place in which to complete the education of a delicate boy or girl.

PROFESSOR KOCH ON SLEEPING SICKNESS.

IN a recent supplement[1] the *Deutsche medizinische Wochenschrift* publishes the official reports of Professor Koch on the progress of the German expedition for the investigation of sleeping sickness in East Africa.

The first report was sent from Amani, in German East Africa, and is dated June 10th, 1906. Professor Koch made only a short stay at this station, but records some interesting experiments made with the view of ascertaining whether other varieties of *Glossina*, in addition to *Glossina palpalis*, could be infected with the organism of sleeping sickness, *Trypanosoma gambiense*. The investigators had succeeded in keeping alive in captivity many specimens of *Glossina fusca*, *G. pallidipes*, and *G. tachinoides*. Some of these insects were kept alive for a month or more, and new generations were bred from them. Young flies which had been bred in captivity were used for the experiments. Forty-two specimens of *G. fusca* and eleven of *G. tachinoides* were fed on rats infected with the *Trypanosoma gambiense*. On examining the flies ten or twelve days later it was found that eight specimens of *fusca* and three of *tachinoides* had been infected with the trypanosome. Similar results have been obtained by other investigators, but Professor Koch attaches special importance to the fact that in his own observations the flies could be guaranteed free from spontaneous infection before the experiments commenced. Another useful observation recorded in this report is that in localities where *Glossinae* have been abundant the flies disappear after the brushwood has been cleared away. This suggests a method of prophylaxis against infection-bearing insects.

From Amani Professor Koch travelled to Muansa, also in German territory, and from this place dispatched his second report on July 31st. On their arrival at Muansa Professor Koch and his assistants at once proceeded to ascertain whether, as had been reported, sleeping sickness had broken out in this district. For the purpose of this inquiry they utilized the experience of English investigators, who had found that in districts where the disease is epidemic more than 60 per cent. of the population have marked swellings of the cervical lymphatic glands, and that in about 80 per cent. of such glands the presence of *T. gambiense* can be demonstrated in material withdrawn by puncture. A thorough investigation was made, involving the examination of more than 2,000 persons, but only one case of sleeping sickness was found, and this, it was ascertained, had come from Uganda. A careful search was also made for the *G. palpalis* both in Muansa and in the neighbouring districts. The insect was found to be widely distributed, but occurred less frequently on the mainland than on the islands. It was found to be particularly abundant on small, uninhabited islands which were the haunts of crocodiles, hippopotami, and water fowl. Here, again, the flies seemed to have a special predilection for the brushwood. Professor Koch was able to confirm the popular belief, about which he was at first highly sceptical, that the *Glossina* can draw blood from the crocodile, in spite of the toughness of this animal's hide. On inspecting crocodiles which he shot during his expeditions to these islands, he found many specimens of *Glossina palpalis* on their bodies, and when these flies were removed others came and settled down, apparently being attracted by the animal's odour. On examining the insects he was able to demonstrate in their stomachs the presence of fresh crocodile blood, which was easily identified by the characteristics of the blood corpuscles. The fact that *Glossina palpalis* occurred abundantly in a locality where there was no sleeping sickness provided an excellent opportunity for utilizing observations on these insects as controls. In 30 insects, out of 243 specimens examined, that is, in 17 per cent. trypanosomes were found in greater or smaller numbers. These trypanosomes belonged mainly to two distinct types, and had obviously nothing to do with the *Trypanosoma gambiense*, but these discovery emphasizes the important fact that the mere presence of trypanosomes in a *Glossina palpalis* is not enough to justify the opinion that the fly is the actual agent of sleeping sickness. Investigations must first be established to determine the morphology of the *Trypanosoma gambiense* within the *Glossina* before a differential diagnosis can be made.

As the district of Muansa provided no opportunities for the investigation of sleeping sickness, Professor Koch went to Entebbe, in British East Africa, where he arrived on August 8th. Thence he proceeded to the Sese Islands, on the north-west portion of Victoria Nyanza, and from this region sent off his third report on October 15th. Here he was in the centre of a district where the ravages of sleeping sickness had been extremely severe. In four years the population had been reduced from 30 000 to 12,000, and in one village which formerly contained over 200 inhabitants only 55 had survived; 22 of these persons were examined, and in 17 of them the *Trypanosoma gambiense* was found. After the investigators had established their station, work was commenced by a study of the earlier phases of the disease, where microscopic examination was necessary in order to make the diagnosis. As it was said that the natives strongly objected to lumbar puncture or the puncture of enlarged cervical glands, examination of the blood alone was at first undertaken. The result was that trypanosomes were only found three times in 180 investigations. But a very large number of these cases presented enlarged cervical glands, and some also exhibited other manifestations of trypanosomiasis. It was therefore clear that the method of blood examination was quite inadequate, and puncture of the glands was consequently undertaken. The consent of the patients was obtained without any difficulty, and the value of this diagnostic test was very thoroughly established. Out of 163 examinations made up to October 1st, trypanosomes were found in 160 cases. This result strongly confirms the observations of the English investigators Gray and Greig, who discovered this method of diagnosis and insisted on its high value. Owing to the enormous extent to which the disease had already spread, it was too late to consider prophylactic measures; the endeavour to cure those already infected was naturally the most urgent problem which confronted the investigators. For this purpose they made an extensive trial of atoxyl, the arsenical compound the value of which in trypanosomiasis is discussed elsewhere in this issue (p. 132) by Drs. Breinl and Todd of the Liverpool School of Tropical Medicine. Professor Koch gave subcutaneous injections of the drug, using the small dose of 0·06 gram to begin with. But as no marked effect followed, the dose was cautiously increased and finally a dose of 0.5 gram was adopted. After this amount, repeated on two successive days, manifestation of arsenic poisoning was observed. It was not considered necessary to proceed to still larger doses because it was discovered by puncture of the glands that the treatment had succeeded in causing the disappearance of the trypanosomes in a relatively short period. It had been ascertained at the time of writing that the parasites disappeared from the glands for at least ten days after atoxyl treatment. Later on they occasionally reappeared, but such cases were exceptional. Out of 20 patients examined after the twentieth day trypanosomata were only found in one instance. In order to determine precisely the time taken by the parasites to disappear from the glands a number of patients were given a full dose of atoxyl and then were punctured at short intervals. It was then found that up to the sixth hour after injection the organisms appeared unaltered, from the sixth to the eighth hour their occurrence was irregular, and after the eighth hour they were no longer demonstrable. In these experiments the injections were made sometimes in the back and in other cases in the neighbourhood of the inguinal glands, but in every instance the cervical glands were punctured to determine the presence or absence of parasites. As it was invariably found that the organisms disappeared, Professor Koch concludes that atoxyl acts upon all the lymphatic glands of the body alike, irrespective of the site in which it is inoculated. A marked improvement in the condition of the patients was noted after the administration of atoxyl, though, at the time of writing, they had not been under observation long enough to justify a definite opinion as to the permanent efficacy of the drug.

In his latest report, dispatched from the same station on November 5th, 1906, Professor Koch writes enthusiastically of the value of atoxyl, which he considers to be as definitely specific for sleeping sickness as quinine is for malaria. During the last three weeks, he says, his

[1] Abdruck aus No. 2 der *Deutschen medizinischen Wochenschrift*, 1907.

severe cases, most of which would have already succumbed without atoxyl treatment, have made such marked progress that "no doubt can any longer exist as to the specific action of the drug." At the time of writing 900 patients were under treatment, and the anticipation is expressed that in two or three months' time the majority of them will have been cured. They will then be kept under observation for two or three months longer to see if any relapse takes place; for, as Professor Koch points out, the problem cannot be regarded as solved until it is definitely established that the curative effects of atoxyl are permanent.

SCHOOL HYGIENE.

LONDON.

PHYSICAL CONDITIONS OF THE CHILDREN.

UNDER the heading "Physical Conditions," Dr. Kerr's report to the Education Committee of the London County Council gives a great deal of attention to the analysis of the measurements of children.

Curves derived from the measurements of about 3,500 children were given in the previous year's report, and the importance of considering "out-of-school conditions" was shown by a study of the boys attending the Chaucer School.

Some measurements were taken during the year in connexion with the school dinners scheme. All the children in several schools were examined, and also in neighbouring schools as controls, and for contrast children in some schools more remotely situated. The measurements taken represented about 20,000 children, and as some of the weighing machines in use were for English standards, two series of measurements were obtained. The results of last year's work give a third series. The comparisons of these three series are interesting as showing the variations in different groups of schools, and also for comparison with groups of measurements taken elsewhere. Only children between the ages of 7 and 14 inclusive at the last birthday were taken.

Group A (English measures originally, chiefly poorer class schools, includes 3,038 boys and 3,064 girls.

Group B, 1906 (measurements taken on metric system). With two exceptions these might be described as good suburban schools. The numbers in the age groups being dealt with are 4,677 boys and 4,174 girls.

Group C, 1905 (measurements made last year), includes 2,119 boys and 1,594 girls at the ages considered.

The sum of the three groups gives 9,834 boys and 8,852 girls, a total of 18,686 children aged 7 to 14 at their last birthdays. From these approximately correct averages may be obtained. Tables are given showing the average height and average weight of boys and girls in each year of age, and the numbers in each group.

The records were made on cards, each of which had a small portion snipped from the top right-hand corner when the card was turned so that the child's name was upwards. This added much to the convenience of orientation in handling them for analysis.

The records were noted on the cards by a system of marks:

- Child's name.
- Teacher's estimate of mental capacity.
- Date of birth.
- Standard.
- School.
- Date.
- Age in years and months
- Height to nearest centimetre without shoes.
- Weight to nearest tenth of kilogram without shoes.
- Condition of—
  - Cleanliness.
  - Clothes.
  - Eyes.
  - Teeth.
  - Throat.
  - Ears.

Table Showing Height and Weight of Boys and Girls in London Schools at Various Ages.

9,834 Boys.

Age Last Birthday.	Average Heights in Centimetres. Series A. Numbers.	Series A. Average Heights.	Series B. Numbers.	Series B. Average Heights.	Series C. Numbers.	Series C. Average Heights.	Totals. Numbers.	Totals. Average Heights.	Average Weights in Kilograms. Series A.	Series B.	Series C.	Totals.
7	181	115 7	328	115 2	35	116 0	544	115 4	21 27	21.11	21 03	21.20
8	494	118.7	580	121.3	246	120.5	1,320	120.2	22.43	23.35	22.89	22.92
9	540	123.5	647	125.8	232	124 5	1,419	124.7	24 81	25 37	24.32	25.00
10	546	128.7	643	129 3	256	130 8	1,445	129.9	26.73	27.55	27 07	27.16
11	451	133.5	645	136.5	268	134.4	1.364	135 0	30 09	30 29	29.35	29 87
12	420	139 3	574	141.3	256	140.0	1,250	140.6	33 04	33 97	32.37	33 32
13	409	145.3	591	148.1	255	146.3	1,255	146.8	36.83	38.49	37 33	37.71
14	43	148 5	166	153 8	46	151.3	255	152.4	40 12	42 49	40.91	41.80
Totals ..	3,084		4,174		1,594		8,852					

8,852 GIRLS.

Age Last Birthday.	Average Heights in Centimetres. Series A. Numbers.	Series A. Average Heights.	Series B. Numbers.	Series B. Average Heights.	Series C. Numbers.	Series C. Average Heights.	Totals. Numbers.	Totals. Average Heights.	Average Weights in Kilograms. Series A	Series B	Series C	Totals.
7	159	115.9	417	116.3	86	114.7	662	116.0	21.34	22 26	21.30	22.02
8	460	119 5	674	121.8	251	119 1	1.385	120.5	23 25	23.90	22.71	23 47
9	563	124.7	760	126.2	285	123.2	1,608	125 2	25 43	25 46	24.20	25 36
10	436	129.1	710	131.1	346	127 7	1,492	129 8	27 48	27 81	26 73	27 59
11	440	133.6	635	135 9	386	132 4	1,461	134 3	29.48	30 60	29 34	29 95
12	506	137 2	704	140 1	364	137.6	1,574	138 7	32.00	33 30	31 51	32.46
13	438	141.9	642	145 4	307	141 2	1.387	143 1	34 60	36 96	34.43	36 40
14	36	144.3	135	151.9	94	144.5	265	148.3	37.02	41 00	38 82	39.23
Totals ...	3,038		4,677		2,119		9,834					

The mean height of the group of children belonging to Series B (representing a considerably higher average level in the social surroundings of the children than in Groups A and C), was 131.5 cm., about 1.6 cm. higher than the average height; further, the 12 per cent. of dullards were nearly all below the mean height, while the 2 or 3 per cent. exceptionally clever or precocious children were generally above the mean. In the other groups, also, the taller children at any given age were found in the higher standards, so that apparently mental efficiency, as measured by educational progress in school, is associated with physical efficiency as determined by growth—a conclusion in accordance with Dr. Porter's observations at St. Louis, and those of later investigators elsewhere.

The average heights of 4,164 girls and 4,677 boys belonging to Series B at various ages and in the various school standards is shown in the following table:

Table showing Average Heights in Centimetres.

4,164 Girls, Series B.

Age.	I.	II.	III.	IV.	V.	VI.	VII.
14–15	—	—	—	—	151·4	153·1	154·2
13–14	—	—	126·8	142·8	146·2	148·5	150·8
12–13	—	132·4	135·7	139·7	140·8	145·1	145·4
11–12	—	132·6	131·1	135·8	138·7	138·9	145·0
10–11	125·4	128·6	129·2	132·4	133·5	135·1	—
9–10	124·2	122·3	126·3	129·5	130·7	132·0	—
8–9	115·9	121·4	123·1	125·2	—	127·0	—
7–8	116·1	117·0	117·3	120·0	—	—	—

4,677 Boys, Series B.

Age last Birthday.	I.	II.	III.	IV.	V.	VI.	VII.
14	—	—	—	141·5	148·9	151·2	152·5
13	—	—	139·1	140·2	142·6	146·2	147·1
12	—	130·3	134·7	136·0	139·3	141·6	142·7
11	—	125·6	132·7	135·0	137·6	138·0	143·3
10	127·3	126·0	130·0	131·2	134·0	134·4	—
9	124·2	123·2	126·9	127·6	129·5	—	—
8	117·9	121·4	123·9	127·0	—	—	—
7	114·1	114·7	123·1	—	—	—	—

A diagram founded on the figures for the girls is given, from which it is evident that at any particular age, the higher the standard in which any group of girls at that age are the greater the average height of the group. A group of children at any age and in any standard generally averages less height than the groups of children in higher standards, but one or more years younger. Thus the 10 year olds of Standard II are not only smaller than the 10 years of any higher standard, but are also less than the 9 year olds in those higher standards.

The data for following up this inquiry are not available. Some estimate of the home environment would have to be made.

This inter-relation of hereditary and social conditions with educational results suggests the further necessity of obtaining not merely impressions, but data of a somewhat scientific order concerning the individual children, and some of the conditions of feeding, sleeping, housing, and heredity, as suggested by Dr. Kerr in his report for 1904. He also points out that unless the physical measurements taken can be made applicable to individual scholars any great educational benefit is not likely to accrue from a regularly maintained series of anthropometric observations in schools generally. In London, where such great masses of children are being handled, measurements from time to time will be useful for purposes of comparison, but the tabulation and estimation of error (which has not yet been done with the figures in this report) makes the task one of the very great troubles. The systematic comparison at repeated intervals of individual measurements with standard records may be of value in determining the condition of health of particular children, but regular anthropometric measurements must, he thinks, be looked on as of the nature of special scientific inquiries from which knowledge may be gained, but which at present are not a routine necessity for all children in school work where so much that is useful and beneficial still remains to be done.

LITERARY NOTES.

An Institute for the Study of the History of Medicine is about to be established in the University of Vienna. It will be under the direction of Professors Neuburger and von Töply.

We learn from the *Boston Medical and Surgical Journal* that Dr. Howard A. Kelly, of Baltimore, is preparing an illustrated cyclopaedia of American medical biography, to be issued in several volumes. The work will include sketches of the careers of all the medical worthies of the United States and Canada from the earliest times to our own day.

A new review of medicine and surgery, issued under the auspices of the Medical Faculty of Madrid, bears the name *Cajal*, in honour of the distinguished anatomist who recently divided the Nobel Prize in medicine with Professor Golgi of Pavia.

The *Journal of the Association of Military Surgeons of the United States* has changed its somewhat unwieldy title, and will in future be known as *The Military Surgeon*.

Progress, the quarterly organ of the British Institute of Social Service, has now entered on the second year of its journalistic life. Among the leading articles in the January issue are "A School Dental Surgery," "The Barnardo Homes," and "Fighting Consumption." There is a bibliography of books on social subjects.

A correspondent of the *Midland Medical Journal* (January) points out, with reference to certain eccentricities of spelling in that excellent periodical to which attention was recently called in this column, that we ourselves are not "an immaculate authority on matters orthographical." In the very number in which we took our contemporary to task for allowing a contributor to speak of the *Spiroketa pallida*, we ourselves allowed a writer to use *punctae* as the plural of *punctum*, and this several times. A hit! a very palpable hit! We can only, like Mrs. Malaprop, own the soft impeachment. For many years we have striven for accuracy in these matters, and, unless we flatter ourselves vilely, such lacerations of the venerable scalp of Priscian, as *per orem*, *meati*, *feti*, *labium majorum*, *smegma praeputialis*, are a good deal rarer in medical journals than they used to be. We are always glad to have our own slips pointed out and to have the opportunity of correcting them.

Messrs. Methuen will publish in a few weeks a little book by Sir Oliver Lodge entitled, *The Substance of Faith*. This is an attempt to draw up a statement of creed which shall be on the one hand acceptable to Christians, and on the other shall be able to stand the strain of scientific scrutiny. The book is an elaboration and expansion of the Catechism which Sir Oliver Lodge recently issued.

The gospel according to Mother Eddy is contained in a book called *Science and Health*, which, it is said, the faithful are compelled by moral suasion to buy for a great price. It is a choice mixture of blasphemy and balderdash, of which an account was given in the British Medical Journal of November 12th, 1898. There is nothing in it that a half educated person who had been to some feasts of pseudo philosophy and stolen the scraps could not have put together; of the book as a whole it may be said that where it is not absurd or foolish it is meaningless. Dickens, with the prophetic soul of genius, dreaming of things to come, foresaw the author of *Science and Health*: she speaks just like the American "lady in the wig" in *Martin Chuzzlewit* who says, "Mind and Matter glide swift into the vortex of immensity." Yet there is a dispute as to the authenticity of this farrago of nonsense. Mark Twain is reported to be bringing out a book showing that Mrs. Eddy is not the author. That distinction is claimed for the late Rev. J. Henry Wiggin, who entrusted the secret to Mr. Livington Wright as his literary executor, with instructions to make it public at the proper time. We gather that Mr Wiggin was given a manuscript to revise, and that he performed this task in so thoroughgoing a fashion that he made of it a new book. The facts, we learn from the *Literary Digest*, were communicated by

Mr. Wright in 1903 to Mark Twain, who wrote of the evidence adduced:

But it is convincingly strong—strong enough, in my belief, to prove to every intelligent non-Scientist that Mrs. Eddy and God did not write *Science and Health*. All the world and God added could not convince a Scientist (intelligent or otherwise) that Mrs. Eddy's claim to the authorship is a lie and a swindle.

In replying on behalf of the disciples of Mrs. Eddy, Mr. Alfred Farlow admits that it is well known to all Christian Scientists that the Rev. J. Henry Wiggin was for some years a literary critic for the Rev. Mary Baker G. Eddy. He proceeds:

He was employed for the purpose of improving her diction, and Mrs. Eddy gratefully acknowledged the fact that he had not disappointed her, but faithfully performed the duties for which he was employed. It should be borne in mind, however, that something besides paragraphing and punctuation, something more than mere grammatical and rhetorical constructions are needed to constitute such a book as *Science and Health, with Key to the Scriptures*. . . . . She alone decided whether or not Mr. Wiggin's suggestions were to be adopted, and she always took care not to let his interlineations or changes affect her meanings. I have heard Mrs. Eddy speak very highly of Mr. Wiggin and of his work for her. He seemed quick to grasp her ideas and able in the art of making whatever reconstructions were necessary to place them in a condition acceptable to Mrs. Eddy.

The fact cannot be emphasized too much, writes Mr. Farlow, "that Mr. Wiggin was not employed to change or reconstruct Mrs. Eddy's ideas, nor was he permitted to do this. He was simply her proof-reader." To our mind the most remarkable feature about this controversy is that any person of average intelligence should trouble himself at all about the authorship of *Science and Health*. Mrs. Eddy herself has lately stated that when she wrote *Science and Health, with Key to the Scriptures*, she little understood all that she indited. Most of her readers, if they were to be honest with themselves, might go so far as to say they do not understand any of it.

In the *Manchester Guardian* of December 28th, 1906, there appeared an interesting article by Mr. William E. A. Axon on the plague in Manchester in 1605. A thousand persons died during that epidemic. Among the archives is a bundle of memoranda by Geoffrey Danyell and William Sorocold, who were constables of the town in that year. Some of the infected persons were detained in the Pesthouse; later on cabins for the sick were built on six acres of Collyhurst Common, where, too, the dead were buried. The Constables had many disbursements to make for coal and clothes and other necessaries for the sick, and also for coffins. A special rate was levied for the relief of the plague-stricken and of those suspected of infection. The Rev. William Bourne, one of the Fellows of the Collegiate Church, remained at his post and preached in the town until prevented by "the unruliness of the infected persons and want of government." There were rumours of a plot for the "bornieng of the toune with wyelld fire." A glimpse of the methods of enforcing isolation is given by a warrant for the arrest of one Philip Fitton, of Moston. Smitten by the pestilence, the said Philip went in and out among the infected folk, brought clothing from their quarters and wore it, and slept in outhouses. The Constables of Moston had caused him to be chained in his cabin, but he escaped and wandered about to the terror of his fellow-citizens. Wherefore the Constables of Manchester were ordered in the King's name to lay the contumacious Philip by the heels in the prison of Manchester.

The first number of the *Annals of Tropical Medicine and Hygiene*, a new periodical issued by the Incorporated Liverpool School of Tropical Medicine, will appear shortly. It is intended to replace the series of separate memoirs of the Liverpool School of Tropical Medicine, twenty-one of which have hitherto been published by the School. Ten memoirs with 640 pages and 49 plates and figures have appeared within the last two years. The *Annals* will be edited by Professor Ross in collaboration with Drs. Stephens, Todd, Thomas, and Breinl, Mr. Newstead, and Sir Rubert Boyce.

AN "interparliamentary" group of members of the French Senate and Chamber of Deputies has been formed to organize a campaign against alcoholism. Already it numbers more than 100 members.

THE ARMY MEDICAL ADVISORY BOARD.

IT is officially announced that the Secretary of State for War has approved of the amalgamation of the Army Medical Advisory Board and the Army Hospital and Sanitary Committee. The following are the members of the Advisory Board as now reconstituted:

Chairman.

The Director-General, Army Medical Service.

Vice-Chairman.

The Deputy Director-General, Army Medical Service.

Members.

Lieutenant-Colonel D. Bruce, C.B., F.R.S., M.B., R.A.M.C. (as Expert in Tropical Diseases).

Colonel G. K. Scott Moncrieff, C.I.E., R.E., Assistant Director of Fortifications and Works.

Lieutenant-Colonel C. H. Melville, M.B., R.A.M.C. (as Expert in Sanitation).

Civilian Members.

Sir F. Treves, Bart., G.C.V.O., C.B.

Dr. J. Rose Bradford, F.R.S., Professor of Medicine, University College, London, and Physician to University College Hospital.

Dr. Louis Parkes, Consulting Sanitary Adviser to H.M. Office of Works.

Dr. S. Pembrey, M.A.Oxon., Lecturer in Physiology, Guy's Hospital.

Sir Charles A. Cameron, C.B., M.D., Professor of Chemistry and Hygiene, Royal College of Surgeons, Ireland (for sanitation in Ireland).

Representative of the India Office.

Surgeon-General A. M. Branfoot, C.I.E., M.B. (retired Indian Medical Service).

Secretary.

Lieutenant-Colonel C. H. Melville, M.B., R.A.M.C.

MEDICAL NEWS.

MR. EDWARD CARNELL, D.P.H., of Harrogate, has been elected a Member of the Livery of the Apothecaries Society.

IT has been notified that army medical officers on retired pay are not eligible for attendance on army patients at contract rates, except in special circumstances and with the approval of the War Office.

A SOCIETY for the Prevention of Tuberculosis has recently been formed in Venice. The President is Dr. Picchini, Physician to the Ospedale Civile in that city.

MAJOR-GENERAL LORD CHEYLESMORE, C.V.O., will distribute the annual prizes to the R.A.M.C. Vols. (London Companies) at the head quarters, 51, Calthorpe Street, W.C., on Saturday, February 9th, at 8 p.m.; the ceremony will be followed by a dance.

THE late Mr. John Thomas Crampton of Portsmouth, who died on November 4th, 1906, left 150 guineas to the Royal Portsmouth, Portsea, and Gosport Hospital; and 100 guineas to the Portsmouth and South Hants Eye and Ear Infirmary.

SUBJECT to the approval of the Local Government Board, the Shepton Mallet Urban Council has appointed Miss Annie Wainwright Hyatt, M.B., B.S.(Lond.) to be Deputy Medical Officer of Health to her father, Dr. James Taylor Hyatt. Dr. Hyatt is also M.O.H. for the Rural District of Shepton Mallet, the combined population being some 15,000.

DR. SINCLAIR BLACK, late Resident Medical Officer on Robben Island, Cape of Good Hope, will read a paper on Friday next, at 5 o'clock, at the Polyclinic, 22, Chenies Street, W.C., on the present state of the leprosy question in South Africa. Discussion will be invited after the paper. Dr. Black's long familiarity with the facts will make the occasion one of considerable interest.

A NEW serumtherapeutic institute was opened at Milan on December 23rd, 1906. It is a two-storied building and comprises two blocks. One of these is intended for the preparation of serums and the work of the institute generally; in the other are housed the animals which furnish the blood required for the purpose. At the opening of the institute addresses were delivered by Professor Mangiagalli and Signor Belfanti, Senators of the Kingdom of Italy, and Professor Menozzi.

ACCORDING to the journal of the Pirogoff Society, the number of members of the medical profession punished for alleged political offences during the present troubles in Russia has been, up to November, 972. Quite lately thirteen students of the Army Medical Academy in St. Petersburg have been imprisoned for having taken part in political agitations.

The State Director of Railways in Italy is preparing a scheme for a sanitary service on trains to be submitted to the Council of Railway Administration. It is proposed to supply all through trains with medical appliances and the necessary materials for first aid.

According to an official return recently issued to members of the Italian Chamber of Deputies, the number of public hospitals in Italy is 1,304. These collectively possess property amounting to a little over £25,000,000, of which about £13,000,000 is real estate; over £8,000,000 is invested in public funds, and a little more than £4,000,000 represents personal or movable property.

A quarterly court of the Society for Relief of Widows and Orphans of Medical Men was held on January 9th, Dr. Blandford, President, in the chair. Fifteen directors were present. The deaths of two members were reported, and the resignation of one accepted. Three new members were elected. The deaths of two widows were also reported; one, whose husband had paid a life subscription fee of £26 5s., had received in grants £1,217, and the other £857, her husband having paid £21 in subscriptions. The sum of £536 had been distributed as a Christmas present amongst the annuitants of the charity. The sum of £1,275 10s. was voted for the half-yearly grants to the 48 widows and 21 orphans at present in receipt of grants. During the past quarter six letters had been received from widows of medical men asking for relief, but this had to be refused as their husbands had not been members of the Society. An application for relief was received from the widow of a member and a grant at the rate of £40 per annum made. Membership of the Society is open to any registered practitioner residing within a radius of 20 miles from Charing Cross. Full particulars may be obtained from the Secretary at 11, Chandos Street, Cavendish Square, W.

Medical Magistrates.—Dr. A. Vaughan Bernays, of Solihull, and Dr. R. Eardley-Wilmot, of Leamington, have been appointed Justices of the Peace for the County of Warwickshire.

German Congress of Internal Medicine.—The twenty-fourth German Congress of Internal Medicine will be held at Wiesbaden, April 15th to 18th, under the presidency of Professor von Leyden. The General Secretary is Geh. Sanitätsrat Dr. Emil Pfeiffer, Parkstrasse 13, Wiesbaden.

Tuberculosis Congress in Portugal.—The fourth Congress of the National (Portuguese) League against Tuberculosis will be held at Oporto, April 4th to 9th, under the presidency of Dr. Arantes Pereira. An exposition of hygiene, with special relation to the means of repressing tuberculosis, will be held in connexion with the Congress.

International Medical Excursions.—The tour arranged by the organizers of the International Medical Excursions for August, 1907, will be to Austria-Hungary, returning through Southern Germany. The founder of the "E.M.I." (Excursions Médicales Internationales) offers a travelling bursary for 1907. The conditions under which it will be awarded will be published later. For information as to the tour, application should be made to the Administrateur of the Excursions Médicales Internationales, 183 Rue de Rivoli, Paris, 1er.

The Noise Nuisance in New York.—A "Society for the Suppression of Unnecessary Noise" has been founded in New York. Its main object is the protection of hospital patients from street noises, but a general campaign will be carried on against the vast concourse of sounds, not sweet but necessary clattering, that make life in large towns almost unbearable by persons of delicate organization. The affairs of the Society will be managed by an Advisory Board and a Board of Directors.

A Medical Centenarian.—We learn from the *Chronique Médicale* that Dr. Apostolos Mavroyeni, a hero of the Greek war of independence, has recently died at Athens at the patriarchal age of 111. He was completing his medical studies at Pisa when the Greek revolution broke out in 1821. He returned at once to his native country, organized the medical service of Colokotronis's army, took part in all the events of the revolution, and was wounded at the battle of Dervenaki in 1824. Four years later he founded the first civil hospital in the island of Aegina, the temporary seat of government. On the constitution of the Hellenic kingdom he was appointed Sanitary Commandant of the port of the Piræus, a post which he held for forty-five years. He was for a time physician to the Sultan Abdul Hamid with the title of Pacha. Abdul Hamid was very fond of his doctor whom he called *pater* (papa) and to whom he gave a magnificent furnished villa of the estimated value of £4,000. The Sultan was equally liberal in his fees often giving the lucky physician amounts equivalent to about £100, and showering upon him diamonds and other jewels. One day, however, it came to the Sultan's knowledge that Mavroyeni kept a book in which was recorded the course of the various affections from which His Majesty suffered. A domiciliary visit was paid by the police, whose search, however, was unrewarded; the treasonable notebook had been removed to a place of safety. But the physician fell from his royal master's favour, to rise no more.

The Incorporated Society of Medical Officers of Health.—The annual dinner of the Incorporated Society of Medical Officers of Health was held at the Holborn Restaurant on January 11th. The chair was occupied by the President, Dr. D. S. Davies, Medical Officer of Health for the City of Bristol, and among the guests were Dr. Colston Wintle, Chairman of the Health Committee of the Bristol Corporation, Mr. T. H. Yabbicom, M.Inst.C.E., the Bristol City Engineer, and Dr. Tatham. In proposing the toast of the Society, Dr. Colston Wintle referred to the important part which the Society played in bringing together a body of expert administrators who were working for the common good of mankind. He spoke in the highest terms of the excellent public health work which had been carried out in Bristol during the past twenty years by the President of the Society. The toast was responded to by the President, and Drs. Caldwell Smith, H. Meredith Richards, and E. M. Smith, Presidents of Branches. The last-named discussed the position of a medical officer of health when the chairman of a health committee was a medical practitioner; and in proposing the toast to the Visitors, Sir Shirley Murphy, in referring to the presence of the Chairman of the Health Committee of Bristol, spoke of the happy relations which existed between himself and the chairman of his committee, Dr. Beaton, who would but for other engagements have been with them that evening. "Kindred Societies" was responded to by Colonel Lane Notter, R.A.M.C., Chairman of Council of the Royal Sanitary Institute; and "The Press" was proposed by Dr. B. A. Whitelegge, C.B., and responded to by Dr. Dawson Williams. The enjoyment of the evening was enhanced by the musical and other entertainers whose services Dr. Joseph Priestley, one of the Honorary Secretaries of the Society, had been fortunate in securing.

Two very interesting articles upon tuberculosis among the negroes and the Oglala Sioux Indians appear in the October number of the *American Journal of Medical Sciences*. In the first, Dr. Jones indicates the importance of the study and prevention of tuberculosis among the negroes of the United States viewed from the threefold aspect of (1) extent of the disease within the race itself; (2) the proportion of the race to the total population; and (3) the proximity of the race to other races. In a series of very closely-compiled charts it is shown that the mortality from consumption among negroes exceeds that of any other people, as the proportion of negroes in the United States is greater than that of any other special class, and as this race is intimately related in occupation with the other races, the vital importance of prevention among negroes becomes evident. The extent to which the racial element enters into the cause of the disease among negroes is unknown, and may be regarded as a negligible quantity, for it is pointed out that the influence of environment and ignorance favour tuberculosis among them and mask any estimate of the racial factor. In the second article Dr. Walker deals with the disease as it affects the Oglala Sioux Indians, and points out that the prevalence of tuberculosis in South Dakota is due to the fact that a large proportion of the population consists of Indians who are affected with tuberculosis to much greater extent than the white residents. There is no inherent peculiarity rendering the Indian more liable to infection than a white man, and a comparison of physical growth and development shows that the Indians are in these respects as well equipped as the whites. The disease has increased among these Indians since their introduction to civilization, when they changed the nomadic for the settled life in houses and congregated together, with greater facilities for the spread of infection. During five years experimental attempts to educate them as to the importance of preventing the uninfected from mixing with the infected, treating the infected ones in tents, and destroying sputa, resulted in a reduction of the disease by one third, and the mortality by one half. It is suggested that a sanitary camp should be established for the isolation of affected cases as a means of suppressing the disease among this race. The importance of attacking the disease primarily among these races for the benefit of others with whom they mix is clearly brought out by both writers. That its prevalence is no longer to be regarded as a racial peculiarity is a distinct step towards the better understanding and more efficient handling of the disease among them.

British Medical Journal.

SATURDAY, JANUARY 19TH, 1907.

RESEARCH IN TROPICAL MEDICINE.

IN July, 1904, the then Secretary of State for the Colonies appointed an Advisory Committee for the Tropical Diseases Research Fund, to which the Imperial Government, the Government of India, and numerous Colonial Governments and the Rhodes Trustees contribute. The report of this Committee for the year 1906 has been issued this week as a parliamentary paper. The revenue of the Fund for the year 1906 was £3,000, the contributions from Colonial Governments amounting to £1,800, from the Imperial Government and from the Government of India £500 each, and from the Rhodes Trustees £200. The sum of £1,000 was granted to the London School of Tropical Medicine, and devoted to the payment of the salaries of a combined teacher and investigator of protozoology and a combined teacher and investigator of helminthology, and to the provision of suitable laboratories. A grant of £500 to the Liverpool School of Tropical Medicine was expended in paying the salaries of lecturers in economic entomology and parasitology, and in tropical medicine, both officers being required to devote their spare time to research. By means of a grant of £750 the University of London was enabled to establish a Professorship of Protozoology, the first incumbent being Mr. E. A. Minchin, formerly Jodrell Professor of Zoology at University College, and recently employed in Uganda in the investigation of sleeping sickness. The sum of £500, granted to the Royal Society, was employed in a research into sleeping sickness.

The ends which the Advisory Committee endeavoured to obtain by this allocation of the money at its disposal were on the one hand to provide instruction in regard to tropical diseases for medical officers employed in the colonies and protectorates, and on the other to further research work and investigation as to the nature and causes of such diseases. Medical officers appointed to posts in the Crown colonies or protectorates are under ordinary circumstances required to undergo a course of three months' training at one of the schools of tropical medicine, and the Committee had before it a suggestion from the Liverpool School that the period of three months is insufficient and should be extended to six months. The Committee, however, expresses the opinion that the extra cost and delay entailed by insisting upon attendance at a six months' course in the case of medical officers on first appointment would be serious, and that it would be better to arrange that those medical officers considered by the Colonial Government under which they serve to show exceptional promise should attend a more advanced course of instruction on the first occasion of their being on leave of absence in England.

With regard to research in tropical colonies and protectorates, the report states that in April last the Secretary of State for the Colonies addressed a circular letter to the Governors insisting on the necessity for scientific research by specially trained officers in tropical colonies. It was pointed out that a step in this direction had already been taken by the establishment of a research institute at Kuala Lumpor in the Federated Malay States, and by the creation of bacteriological posts in Hong Kong, the Straits Settlements, Ceylon, Mauritius, and British Guiana. These seven or eight appointments, however, Lord Elgin stated, were insignificant in number when compared with the work to be done. As a difficulty had under present conditions been experienced in filling them, he suggested that when a colony or protectorate had any adequate medical staff and was in a position to vote funds to scientific purposes, a sum might be voted for the express purpose of detailing one or more of its medical officers to study the latest phases of modern scientific research in the best known centres, and afterwards to carry out further researches in the colonies before reverting to ordinary professional work. Lord Elgin also observed that it would be necessary to provide that the medical officer, after his special course, should not be diverted to some other colony, and that care should be taken in the selection of a medical officer for this privilege; he should be granted full pay and free passages, and it should be recognized that leave of this kind would be a great boon to the officer, not only as affording leisure for scientific research, but also as qualifying him for higher posts in the future should he take proper advantages of his opportunities.

Upon the value of two of the most important researches, carried out with the aid of the Tropical Disease Research Fund, readers of the BRITISH MEDICAL JOURNAL have excellent opportunities of forming an opinion. Dr. Leiper, who about a year ago reported in our columns the significant observation that if a cyclops containing guinea-worm larvae were placed in a 0·2 per cent. solution of hydrochloric acid it was killed, but the larvae were awakened to great activity, eventually escaped, and swam freely about, now gives us in a paper published at p. 129 a careful report on his recent investigation in West Africa. Dracontiasis is not confined to West Africa, but occurs also in other parts of that continent, and in certain districts in India, in Persia, and in Arabia; it appears, however, to be particularly troublesome in Nigeria, and has twice attacked the black troops in epidemic fashion.

The fact that the larvae of the guinea-worm (*Dracunculus medinensis*) undergo no metamorphosis in water, but soon die, has long been known, and more than thirty years ago Fedschenko showed that the embryo made its way into the body of a small crustacean of the genus cyclops it which it underwent metamorphosis, and he suggested that the larvae were taken into the alimentary canal of man while still within the host cyclops and there set free. He failed, however, to produce infection artificially by means of infected cyclops, and doubt was therefore cast upon his hypothesis. The fact that the adult guinea-worm is usually found in the legs, led to the promulgation of the theory that the embryos entered through the skin while the person was bathing or drawing water. There appears, however, to be little doubt that this theory is incorrect, the fact being the embryos are set free in the stomach of the host during digestion, the worm finding its way to the lower limbs owing to what has been called geotropism, a term which, however, does not explain very much. Dr. Leiper points out that prophylactic measures must be founded upon the recognition of the facts that the embryo cannot withstand desiccation, that cyclops is the intermediate host, and that infection of man takes place by the mouth. When once the mature guinea-worm has made an aperture through the skin the contact of water causes it to extrude its embryos, and

Dr. Leiper suggests that the prophylactic measure most immediately available would be the railing in of village ponds so that persons drawing water and possibly suffering from dracontiasis in this stage should not be able to enter the ponds. With regard to larger places it seems pretty clear that the establishment of a municipal water supply with proper safeguards would at once enormously reduce if not altogether abolish the disease.

The other research to which we refer is that with regard to the treatment of sleeping sickness, which, as is well known, is due to infection by a trypanosome, the intermediate host being a biting fly, *Glossina palpalis*. The great explorer, Livingstone, found that arsenic was of some value in the treatment of nagana, the tsetse-fly disease of horses, which is due to another trypanosome; but recent experiments have shown that though arsenic when first administered produced marked degeneration of the parasites in the blood of infected animals, this effect was only temporary, the parasites reappearing in spite of steadily increasing doses of arsenic. In so intractable a disease, however, such a clue seemed to be well worth following up, and experiments were made by the Liverpool School of Tropical Medicine with various organic compounds of arsenic, and eventually a drug called atoxyl (meta-arsenic-anilid), which contains 37·6 per cent. of arsenic, was found most nearly to fulfil the desired conditions. Large quantities of the drug have been sent out to the West Coast of Africa, but reports of the results obtained have not yet been received. Meanwhile, Drs. Breinl and Todd have contributed to the JOURNAL this week, page 132, a paper in which they review very impartially the probable merits of atoxyl and the mode in which it is best administered. They speak with much caution, inasmuch as they recognize that the immediate improvement which usually follows the administration of the drug may not be permanent. Experiments in the laboratories seem to show that while in some cases cure is effected, in others the improvement is merely transitory. A warning to this effect from Professor Ronald Ross was published in the JOURNAL on September 29th, 1906, in consequence of sanguine reports from Belgium, and in an editorial comment on the matter in the same issue the danger of forming a premature opinion as to the curative value of atoxyl was insisted on.

As many statements have lately appeared in the lay press to the effect that Professor Koch has at length "discovered" atoxyl as a cure for sleeping sickness, Professor Ross addressed a letter to the *Times*, in which he corrects this doubly misleading statement. But it ought in fairness to be pointed out that Professor Koch can hardly be held responsible for all the misleading statements which popular journalism attributes to him. In his own report he states explicitly that he knew before the expedition started that atoxyl had been found useful for trypanosome infection, and he also makes it quite clear that, though he confidently expects great things from atoxyl, his investigations have not been continued for a long enough period to justify the statement that this drug can effect a permanent cure.

THE TRYPSIN TREATMENT OF CANCER.

In this week's Lancet a full abstract is given of Dr. William B. Morton's report of a series of experiments made to determine the value of trypsin in the treatment of cancer. We have already pointed out that the sensational statements that have appeared in certain newspapers rest on a very slender basis of fact, but we think it right to give our readers an opportunity of estimating for themselves the value of the evidence so far available. It may not be irrelevant to mention, in the first place, that Dr. Morton is not a surgeon, but is described as "Professor of Diseases of the Mind and Nervous System, and Electro-Therapeutics" in the Post-graduate Medical School and Hospital of New York. He is, we should judge, a man of open mind, with perhaps a slight tinge of optimism in regard to the value of a new remedy. In 1902 he reported to the Harvard Medical Society of New York City[1] a series of cases of "malignant growths treated with the *x* rays," with results which seem to us as good as those now claimed for trypsin. He said then that by means of the *x* rays there seemed to be no doubt that epithelioma of the skin can be cured, and that broken-down carcinomata of deeper tissue, with the portions of new growth exposed because of cutaneous sloughing, could be favourably influenced by the same treatment. Three years later[2] he recommended "*x* and radium radiations" as preliminaries to surgical operation. He said that radiation treatment exerted a retarding effect on the growth of some cancers and cured some, and he predicted that preoperative radiation would increase the ratio of cures by operation. Dr. Morton states that his experiments with trypsin arose in connexion with a series of cases which he had under treatment by other measures, mainly *x* ray, radium, and fluorescence. Would it be rash to conjecture that some at least of the cases now reported as illustrating the therapeutic effect of trypsin are examples of the ultimate failure of methods of treatment the first effects of which had seemed to warrant hopes that were not justified by the event?

Dr. Morton says that he has tried the trypsin treatment in "about 30 cases." To speak by the card, the number is 29. Among these, however, there are 3 of sarcoma and 2 of lupus; these should be excluded from a report on the treatment of cancer. It will be noted that among the remaining cases there were 11 of epithelioma of the face, the parts affected being the nose, the cheek, the eyelid, and the inner canthus. It is not stated that in any of these cases the disease was rodent ulcer, but the sites suggest that in some of them at least it was of this relatively benign type. Except in 1 case nothing is said about microscopic examination of the growths. Without insisting on these points, however, and taking the results in the 24 cases of "cancer" as given by Dr. Morton, we find that 3 patients died; in 14 great improvement took place, in 3 little or no good effect was produced; in one case, described as "uninstructive as regards trypsin," the patient, who had become pregnant, was advised to undergo a surgical operation; 3 were "cured."

We give these results crudely without inquiring too closely as to the exact nature or degree of improvement, or speculating as to its duration. It must in fairness be borne in mind that Dr. Morton says most of the cases were hopeless and inoperable, so that any improvement must be accounted a gain. On the other hand, it must be pointed out that in some of the cases other treatment was employed in addition to the trypsin and amylopsin injections. Of the "cures" one must be set aside, for the patient, after suffering many things from trypsin, had finally to submit to the knife. Dr. Morton claims this case as a cure, because the trypsin seemed on the evidence of the microscope to have destroyed the tumour. It need scarcely be said, however, that de-

[1] Errors Appended, p. 9.

[2] [illegible] Errors of June 1st, 1903.

struction of the tumour by no means implies cure of the disease. In this case, as in the other two which were "cured" for less than four and two months respectively, it remains to be seen whether the arrest of the cancerous process will be more lasting than that produced by other agents. None of these so far has yielded results at all comparable in point of permanency to those of the knife.

Dr. Morton himself, it will be observed, is a good deal less enthusiastic than those who have proclaimed his results as proving that the "conquest of cancer" has been achieved. He contents himself with saying that trypsin deserves a fair trial, but he will not commit himself to an opinion as to its therapeutic value until he can speak from a larger experience. We certainly think that he has made out a case for a trial on a larger scale, and such a trial we understand is now being made, or is about to be made, in some London hospitals. The results of these experiments will be awaited with interest. In the meantime, our own attitude in regard to the matter is expressed in the *Medical Record* in a leading article which appears in its issue of December 22nd, 1906. "The results of the trypsin treatment in "this country," says our New York contemporary, "are "not sufficient to carry conviction, and further trials "may yet result in another disappointment and lead to "the abandonment of the method, but we believe such "trials are fully justified by the apparent success "already obtained."

We cannot conclude without referring to a strange misconception which exists in the minds of those whose function is supposed to be the enlightenment of public opinion. It seems to be assumed that doctors are indifferent about the discovery of a cure for cancer, and inclined, as a matter of professional principle, to reject anything which is offered as a remedy. The newspaper in which the vision of trypsin as the sign in which cancer was to be conquered was first made manifest, has said that its object was to awaken the medical profession to a sense of its duty in regard to cancer. This may be dismissed as merely an impertinence intended to cover retreat from an untenable position. But the *Westminster Gazette* in all seriousness says it is a mystery why the proclamation from the housetops of the triumph of trypsin should prove offensive to professional ideas. The mystery is one of our contemporary's own making, and it had already supplied a solution in a previous part of the very article from which we quote where it is said that "it seems cruelty incarnate to give to thousands a glimpse of hope in the midst of their misery by the untimely announcement of a new 'cure' for this ghastly disease." This is exactly the opinion we have ventured, in less violent language, to express, and it is just for such an untimely announcement that we have felt bound to censure the trumpeters of trypsin.

The public need not have the slightest fear that the medical profession is not alive to the importance of the cancer question. Research is being organized more and more thoroughly every year, and investigators in different countries are striving with each other for the honour of discovery that will deliver mankind from one of the worst of the many ills to which it is still a prey. It is nonsense to suggest that doctors are jealous of discoveries made by those not of their own household. By whom is Pasteur held in greater reverence than by the medical profession? What we do object to is the announcement as "discoveries" of hypotheses which are at the unsubstantial fabric of a vision, and the publication of exaggerated statements, especially those made to patients, in whom naturally the wish is father to the thought. Premature jubilation about questionable cures is "offensive to professional ideas," for the sound reasons that it tends to discredit scientific research, and is detrimental to the public welfare.

THE NEW ADVISORY BOARD.

THE reconstruction of the Army Medical Advisory Board, which we announced in the BRITISH MEDICAL JOURNAL of December 29th, 1906, as impending, is now an accomplished fact, and the names of the new members will be found at page 155. On the whole, we think it a fairly strong Board, though it might not be difficult to suggest certain improvements. An especially satisfactory feature is the presence of Sir Frederick Treves; it is not too much to say that by his withdrawal from the Board the country would have lost one of the best guarantees of the efficiency of the medical service of the army.

On the general constitution of the Board, and the enlarged functions assigned to it, we have already expressed our opinion; the machinery is good, and it only remains to be seen whether the War Office will allow it to be used in a workmanlike manner. In other words, as it is to be "more distinctly "advisory in its functions," will its advice carry greater weight with the military authorities? The range of its activity covers the whole professional life of the soldier and everything relating to the health and physical efficiency of the army. Its duties are to advise on medical and surgical questions affecting the military services on all matters of military hygiene, and on the provision of hospitals and their equipment. It will also advise as to the admission of candidates, courses of study for officers, the appointment of examiners for examinations for promotion, the appointment of professors and teachers in the Royal Army Medical College, and the government of the College.

We have received certain criticisms of the changes in the constitution of the Board to which we have given careful consideration. It is said that the meetings of the Board are not to be periodic as hitherto, the summoning of them being left to the discretion of the Director-General, and it is suggested that a reactionary Director-General might "squash out "the civilian element entirely." This would seem to be an unwarranted assumption; we understand that it is intended that meetings shall be held periodically, and so far from there being any likelihood of the civilian element being "squashed," the association of the civilian members of the Board with the medical administration of the army will be closer than it has hitherto been. Again, it is alleged that the Board is only to make an annual report, and "otherwise only on ques- "tions submitted by the Director-General." As a matter of fact the new Board will report as often as may be necessary. It will take an active part in drawing up the annual report of the medical department of the army; this is a great improvement on the methods of the old Board, and will give Parliament and the country an opportunity of gauging the work done by the service. Another criticism is that selection for promotion and posts is entirely removed from the Board and placed in the hands of surgeon-generals "who are of the old stamp and will reintroduce "militarism in excess." As to this it may be said, in the first place, that the old Board had nothing to do with selection for posts. As to pro-

motion and the allegation that the surgeon-generals are men of the "old stamp" the critic seems to be misinformed. If he had taken the trouble to look at the Army List he would have seen that of the ten surgeon-generals nine were selected by the old Board. This fact should be sufficient to reassure the critic, who is an admirer of that Board, as to the modernity of the present type of surgeon-general. Another criticism—that the Board will no longer inspect hospitals—we do not understand; this will be, in fact, one of its most important duties. We are equally unable to follow the objection that "this (the non-inspection of hospitals) "will be a death blow to the promised efficiency of "military hospitals and to the 'centralization' scheme, "which was well on the road to being fulfilled." What is this scheme? We do not know, but we feel sure that if the old Board were elaborating any important scheme it will be quite safe in the hands of the new Board. There are points of less importance on which we need not touch here beyond saying in general terms that the critic appears to have formed a hasty opinion based on insufficient information. We should advise him to suspend his judgement till the full details of the new scheme are before the public.

HOSPITAL FINANCE.

EARLY in 1905 a series of articles was published in this JOURNAL on the expenditure of hospitals, and in their course it became necessary to consider the methods by which hospital accounts are commonly kept. It was shown that the prevalent system was full of pitfalls, and that any conclusions based upon accounts so kept must be full of fallacies, and especially misleading when it was attempted to compare the administration of one hospital with another. Very shortly afterwards it was made known that King Edward's Hospital Fund for London had decided to take the matter in hand, and work on the subject was commenced by it almost at once. We now have the net outcome in the shape of a red book entitled *The Uniform System of Hospital Accounts*,[1] which is issued under the joint authority of King Edward's Hospital Fund for London, the Metropolitan Hospital Sunday Fund, and the Hospital Saturday Fund. This fully describes what from the present time must be regarded as the authoritative system of hospital account keeping. Apart from the fact that the three funds, and probably all funds throughout the kingdom, will insist upon medical charities keeping their accounts in the manner now prescribed, the methods recommended are the outcome, first of a report and recommendations made by a chartered accountant, Mr. J. G. Griffiths, and, secondly, of a consideration of those recommendations by a number of hospital secretaries who were elected for the purpose at a meeting of hospital secretaries convened by the three funds on March 1st, 1906. Naturally this red book, dealing as it does chiefly with forms of account keeping, does not lend itself to summary, and it will be sufficient to say that the objections to which we drew attention in the old system appear on examination to have been remedied. Hence, it will now be possible, not only to ascertain the true expenditure and true income of any institution during any one year but also to compare the efficiency of administration of one hospital with another, so far as the latter can be discerned by an exact comparison of their respective outlay on each bed occupied throughout the year and on each out-patient treated. The report contains however, some matter of wider interest, thus, the precise meaning of certain terms in common use when hospital administration is under consideration is clearly defined. It is laid down that an in-patient is a person who is recorded in a book kept for that purpose, as having been an inmate of the hospital at a fixed hour of the day, which hour when fixed shall not be changed throughout the year, and that an out-patient is a person attending continuously for the same ailment, for however long a period, between January 1st and December 31st inclusive. A casualty patient must be regarded either as an in-patient or an out-patient; if taken in, he must count as an in-patient; if treated and sent home, he must go to the out-patient account. The intention is to prevent, as far as may be, any person figuring more than once in the year in the statistics of any hospital. On the whole, it seems likely that the general result will be an apparent fall in the amount of out-patient work done by the London hospitals, and as a number of agencies are now at work with a view to reducing hospital abuse, and therefore the extent of the work carried on in the out-patient departments, it will be necessary in the future, in considering what success they have had, to keep in mind the introduction of this new rule. Another interesting document recently issued by the King's Fund relates to the expenditure of sixteen large general hospitals in London during 1905. This is the first complete year that has elapsed since hospitals have been in possession of the facts brought to their notice by the King's Fund with reference to the very different rates paid by different institutions to contractors for the same articles. The net result is that there has been a saving during the year of over £20,000 on such expenditure as the authorities can be expected to control. A short calculation shows that the greater part of the saving has been effected on provisions, and the rest on surgery and dispensary outlay and on wages.

[1] To be had at 37 Red Lion Street, Holborn, price 1s. post paid.

PHYSICAL DEVELOPMENT AND SCHOOL LIFE.

IN commenting last week upon the paragraphs on medical inspection of school children contained in Dr. Kerr's annual report to the London Education Committee, it was stated that the report contained so much valuable matter that it would not be possible to deal with the whole in a single issue, and a note upon the results of the physical examination of some 20 000 children in London elementary schools is published this week (p. 153). The statistics deal with height and weight, which are found to correspond in the various school standards and in the various classes of children to a rather surprising extent, and fully justify the stress which Dr. Kerr lays upon the importance of home conditions in influencing height and general physical and mental development. The different schools selected varied very markedly as regards the stamp of children who attended them, some being extremely poor, while others came from comfortable homes where they were well nourished and looked after. Periodical weighing and measuring gives a very good idea as to whether the child is making fair growth and increasing sufficiently in weight. The home conditions may be guessed pretty accurately from the child provided it is not kept back by some physical defect or illness. In any anthropological survey made on broad lines of collective groups of children, the district from which they come would naturally matter very much. An interesting fact brought out in the report is that the children who are tallest and strongest physically have evidently the better mental development also, the taller children being in higher standards than the short of similar age; so pronounced is this difference that a group of children of a given age in a given school standard are on the average shorter than groups of children in higher standards but one or more years younger. The difference is probably an expression in part of the

influence of heredity, and in part of the power of the environment in the home and at school. Dr. Kerr regards the influence of the home conditions as pre-eminent, but, as he admits, a true appreciation of the inter-relation of hereditary and social conditions on the one hand, and educational results on the other, must be founded not merely on impressions—useful though they may be as guide posts—but on scientific data as to individual children, permitting a comparison between physical and mental development, and home conditions as to feeding, sleeping, and housing, as well as to heredity. Dr. Kerr goes no further than to assert that the school is to the home "an auxiliary, sometimes an ameliorating influence." But we venture to suggest that the school must have, and ought to have, directly and indirectly, a very far-reaching influence. If the head teacher of a school has the wisdom and the tact to point out to the parents the necessity of co-operating by allowing their children wholesome food, proper sleep, and herself watches the health and cleanliness of the children in the school, the effect must be so considerable that it would not be surprising if inquiry showed that the children physically and mentally the best developed were those attending schools under the charge of such head teachers. There is room for simple and clear lectures, at which mothers and teachers could meet and after the lecture talk matters over rationally. Meanwhile, these inquiries are most useful, inasmuch as they help us to realize what is and what is not immediately practicable in this very important part of public health administration.

THE TORONTO MEETING.

WE learn from the *Canadian Journal of Medicine and Surgery* that the various Committees of the Toronto Meeting have wound up their business. In every case they have had good reason to congratulate themselves on the result of their labours. The Committee on Exhibits turned over the splendid sum of $3,714.03 (about £743) to the Treasurer, Dr. J. F. W. Ross—a surplus which it is claimed holds the record of any annual meeting of the Association up to date. It is stated that any surplus which may remain in the hands of the Executive, after paying all accounts, will be presented to the Ontario Medical Library Association for further improvements to the building and the purchase of new books. To the *Liverpool Medico-Chirurgical Journal* for January Sir James Barr contributes some interesting reminiscences of the meeting. He says it will long be remembered by those who took part in it as one of the largest and most enjoyable ever held in connexion with the Association. The organization was perfect, every detail had been thoroughly thought out beforehand, and there was no hitch from beginning to end. The Toronto members were determined to make the meeting a great success, and to see that every one attending should have cause to retain a pleasant recollection not only of their great city, but of the Dominion of Canada, and in this they were completely successful. After giving a summary of the work of the meeting, Sir James proceeds to give his impressions of Canada. Of Toronto he says, among other things, that it is the largest city in the leading Empire of the world; it is the leading agricultural centre in the Empire, and there is held annually the largest agricultural and arts fair; it is the greatest fresh-water city in the Empire; it is the most temperate city in the English-speaking world; it has the finest choir on the American continent; and it is the educational centre of Canada. Ontario, he says, has more fresh water for power purposes than any country in the world. The Niagara Peninsula, Ontario, is one of the greatest fruit districts in the world. In the English-speaking world Canada, per caput of population, does the greatest import and export trade. Canada is larger than the United States, and in Sir James Barr's opinion will in another half century be as great a country. When, he asks, will Englishmen awake to the opportunity of taking part in the colonization of this great country? The province of Ontario is largely Scottish, and the American farmers are coming over every year in their thousands to cultivate the fertile lands of the West. The more barren province of Quebec is chiefly occupied by the French, and in their territory Sir James Barr did not notice much progress since his visit nine years previously. They are chiefly remarkable for their large families; and at their present rate of multiplication they might soon overrun Canada and the whole of America were it not for their high death-rate. The Canadians, so far as he came across them, are a vigorous, active, stalwart, generous, hospitable race. They are exceedingly temperate, but they do not go about with blue ribbons in their coats. While the Canadians are very temperate both in meat and drink, the Americans, according to Sir James Barr, are temperate only in their drink, because the struggle for existence is so keen that they cannot afford to be otherwise. On the other hand, it seemed to him that the Americans are very intemperate in their food, and that Professor Chittenden is merely the voice of one crying in the wilderness. The Canadian and American women are well made, handsome, and well fitted to become fruitful mothers, if Nature had full swing. Sir James did not come across any miserable degenerates of either sex. He also visited the States, and was very favourably impressed, not only with the grandeur and magnitude of the country, but with the people themselves, their enterprise, their great hospitality and kindness.

THE HISTORY OF SPECTACLES.

AT a recent meeting of the Berlin Society of the History of the Natural Sciences and Medicine, Professor Julius Hirschberg presented a communication dealing with the history of the discovery of spectacles. He said that lenses for the improvement of the visual power were unknown among ancient peoples, whether Egyptians, Greeks, or Romans. They knew and used the art of polishing glass and rock crystal, but they were unacquainted with the use of these substances as aids to the eye. This is shown by many passages in Pliny and Seneca. The Emperor Nero had a smaragdus which he used as an eyeglass, but it is not clear whether or not it was a concave lens. The Chinese and Arabs had no earlier knowledge of spectacles than Europeans. The Chinese, indeed, long before the Christian era, had various kinds of concave mirrors, but they did not use them as spectacles. The statement of a French investigator that spectacles are an ancient discovery of the Chinese is erroneous, and according to Professor Hirschberg it is certain that spectacles were introduced into China from Europe in the fifteenth century. In the Talmud there is no mention of spectacles. The first certain reference dates from the year 1270. The Englishman, Roger Bacon, seems to have been the first who did anything towards the discovery of spectacles. He lived from 1214 to 1294, studied at Oxford and Paris, and taught at Oxford, where his learning gained for him the name of Doctor Mirabilis. He determined the position of the focal point in spherical concave reflectors, and gave directions for the making of parabolic burning glasses. In 1267 he had to clear himself from a charge of being a magician. He did this in his *Opus Majus*, in which he set forth his numerous optical experiments and discoveries. In it he speaks of magnifying glasses, which he said were useful to old people by making them see better. We hear in

this book for the first time of the magnifying glass and its use. The actual discoverer of spectacles was probably Salvino degli Armati, a Florentine nobleman who died in 1317. Much was done for the popularization of spectacles by the Dominican friar, Alexander von Spina, who died in 1338. The spectacles first constructed were convex, and there is proof of their use since the middle of the fourteenth century. We hear first of concave glasses for short-sighted persons about the middle of the sixteenth century. Cylindrical spectacles first came into use in the nineteenth century. The first spectacles were hung from the cap; later the bridge of the nose was utilized as a support for the frame. The German word *Brille*, for spectacles, comes from the Latin *beryllium*, which in the Middle Ages was equivalent to glass, and may be traced back to an Indian root. Professor Hirschberg points out that some painters of the sixteenth century who represent persons of early Christian times as wearing spectacles on their noses, were guilty of an anachronism. He adds that the notion which prevailed so long that St. Jerome, who lived in the fourth century, was the discoverer of spectacles is altogether unfounded.

THE "REVIVAL" OF HOMOEOPATHY.

In the *Monthly Homoeopathic Review* of December 1st Dr. George Burford takes rather a gloomy view of homoeopathy in this country. The state of things, we gather, is different in America, but in England it is not satisfactory. Look, we are told, at the chemists: "*Eight homoeopathic pharmacies in London have closed their doors within the last few years.*" (The italics are the author's.) In the provinces "a parallel state of "suspended animation is demonstrable." This is significant in itself; but it becomes doubly significant when it is considered that, as we learn from Dr. Burford, the chemist is one of the best propagandist forces of homoeopathy. In the face of this fact it is somewhat surprising to be told that while homoeopathic chemists are diminishing, the homoeopathic laity is increasing. Although the hungry sheep look up and are not fed, nevertheless they increase and multiply! This is all the more strange, since "touch "has been lost in some way between the chemists "and much of the homoeopathically-inclined laity." Twenty years ago "innumerable households" were supplied with homoeopathic weapons against the ordinary minor ailments of the home. The pocket case and medicine chest were well to the fore in many households not "fully homoeopathic." Even homoeopaths have some elements of human weakness in them, and it is scarcely surprising that the disciples of Hahnemann did not altogether approve of the way in which the chemist tended to displace the doctor. Dr. Burford, however, pleads that in consideration of their value as propagators of the faith some latitude should be left them. We think it not unlikely that they will take this latitude, whether or not it is allowed them by the doctors, for after all under a system in which the be all and the end all is the administration of drugs in such doses that they can never produce injurious effects, it is the chemist only that is necessary; the doctor is a superfluity. Dr. Burford asks where in the present revival of homoeopathy the homoeopathic chemist comes in? It would perhaps be more to the purpose to inquire where in the face of Dr. Burford's own statements, the "present general revival" comes in? He tells us that ten years ago the members of the British Homoeopathic Society resident in the British Islands numbered 205; "to-day they total some 190." The proportion to population a decade back was 1 to 150,000; in 1906 it was 1 to 180,000. If this be a sign of a general revival, we are curious to know what Dr. Burford would regard as decay. "In the earlier days of homoeopathy," he says, "converts were not infrequent among "professional men in good practice. Of late years this "method of accession to the homoeopathic ranks has "fallen into desuetude." Why? Because "the introduction of antiseptic surgery has turned the attack "and saved the allopathic situation." Antiseptic surgery, we are asked to believe, "by diverting "attention from the parlous state of orthodox "medicine, has staved off for a few decades "the dominance of homoeopathy all along the "line." Moreover, medicine is becoming "homoeopathized." Assuming this to be true, we should have thought our separated brethren would have hailed with pleasure their coming absorption into the unity of scientific medicine. As they themselves admit, however, they regard the possible predominance of the "truth" with dismay, for they know their occupation would be gone. The strength of their position lies in its being outside the fold of orthodoxy; this appeals to the popular instinct, which is always "agin the government." Dr. Burford charges the body of which he is an ornament with "supineness." They do not proselytize; they even throw cold water on the aspirations of young men to enter the homoeopathic body. Dr. Burford advocates a more forward policy. If the medical donkey will not go to the Hahnemannian well, he must be taken to it, or rather it must be taken to him. The "allopath" must be bombarded with samples of homoeopathic drugs; he must be deluged with statistics, "permeative" pamphlets, and other literature setting forth the sweet simplicity and other charms of homoeopathy; "these must be crowded on "his unwilling notice." Dr. Burford seems to forget the maxim:

> Convince a man against his will,
> He's of the same opinion still.

He calls on John Bull to "wake up." Notwithstanding the "general revival" there would seem to be much need of this. The British Homoeopathic Association, "recognizing the importance of the crisis," has sketched out a plan of campaign for the propagation of its doctrines. All the homoeopathic bodies and forces in the country are to be co-ordinated, and the machinery of education created. A school of homoeopathic medicine is to be founded; professors are to be appointed; and last, but not least, students are to be found. This does not seem to be altogether an easy matter. "We are com-"mitted for many reasons and for many years to come "to post-graduate work." Even post-graduates desirous of knowing what homoeopathy is and does "do not as "a class exist." The desire has to be created. Evidently homoeopathy needs a deal of reviving.

THE STANDARDIZATION OF CURATIVE SERUMS.

Dr. Otto has published[1] a concise account of the methods employed at the Frankfort Institute for the official testing of samples of curative serums. In order to ascertain if the serum is free from noxious contents it is first subjected to a naked-eye inspection, and if it is turbid it is rejected. The sterility of the serum which appears clear is tested by inoculating agar, grape sugar bouillon, and grape sugar agar culture media, each with 5 drops of the sample. The absence of an excessive amount (that is, over 0.5 per cent.) of an antiseptic such as phenol is determined by subsequently inoculating a mouse with 0.5 c.cm. of the liquid, which ought not to produce in the animal any marked symptoms of intoxication. As a further precaution, in order to avoid all risks of such unfortunate accidents as have occurred in America and Italy, the absence of tetanus toxin or tetanus spores is ascertained by inoculating 10 c.cm. of the serum into a guinea pig. For the standardization of diphtheria

[1] Abstracted and translated in Lubarsch-Ostertag's *Ergebnisse der Pathologie und Therapie*. Published by W. Heinemann, Berlin. Vol. II. *Die Serumtherapie*. Vol. II. R. Otto, Jena. Gustav Fischer. [Price 16s. net. pp. 8, 1,015. Illustrations. M.]

antitoxin Ehrlich's method is adopted, according to which a standard of antitoxin instead of toxin is employed. This method, now followed in most countries, differs in some respects from the procedure observed in the Pasteur Institute, and, Dr. Otto thinks, compares favourably with it. In the examination of tetanus antitoxin von Behring's method is closely followed. This is a more complicated piece of work than in the case of diphtheria, and one of the difficulties which have to be contended with is the unstable character of the toxin of tetanus. It is not, therefore, to be expected that manufacturers will be able to standardize their tetanus antitoxin with absolute precision. The standardization of antibacterial serums is beset with difficulties. Various methods have been proposed, and the attempt has been made to measure the potency of these serums by means of the substances which are termed by Wright "opsonins" and by Neufeld "bacteriotropins." But, as Dr. Otto points out, tests like these, which depend on reactions brought about outside the living body, cannot be regarded as commensurate with all the factors which determine the value of a serum as an actual curative agent. It is therefore necessary to rely upon animal experiments, and Dr. Otto has in many instances found it particularly useful to employ mice for this purpose, owing to the uniformity of their resisting powers. In addition to testing many serums for which antibacterial properties are claimed, including an antidysentery serum and an antistreptococcus serum, the Frankfort Institute has dealt with the standardization of tuberculin and "tauruman," the latter being an emulsion of living tubercle bacilli of the "typus humanus" intended for the purpose of immunizing cattle.

A SURGICAL SHOWMAN.

In a recent number of the *Deutsche medizinische Wochenschrift*, Dr. Torkel gives an account of a cinematographic exhibition of surgical operations which he had an opportunity of witnessing in a "bioscope theatre" at Freiburg in Baden some weeks before. The various "turns" were introduced with the usual blatant announcements. The show comprised views of the operating table; of the table with a naked woman lying on it; of excision of the knee-joint; of incision of the brain through a large opening in the skull; of an operation on the bladder; and of an abdominal operation. The showman named as the operator a well-known surgeon, and Dr. Torkel says this statement was confirmed by the startling technique and, as far as he could judge from portraits, the striking likeness. The rapidity of the performance appeared to be increased by the quick working of the mechanism. The impression made by the operation was that of a man whose main object was to display his dexterity, and to whom the mood of the patient was a secondary consideration. This impression was shared by members of the general public, as Dr. Torkel gathered from what he heard from those sitting near him. The abdominal operation, which was performed on a woman, was, owing to the profuse bleeding, so ghastly that many people left the theatre. No doctor with any regard for the dignity of his profession could, says Dr. Torkel, fail to be disgusted at the manner in which the medical art was profaned in this case. He lays stress on the evil influence which such spectacles in such cases must have on adolescents, who were present in large numbers, and calls on the authorities to put them down. He does not mention the name of the operator who prostituted his art to such base uses for the satisfaction of his vanity. It may, however, be surmised that it was a certain famous Paris surgeon who is known to have allowed himself to be photographed while operating. These exhibitions of cinematographic surgery have before now figured among entertainments of the music hall order, and it is said that he was hissed at Brussels, where he gave a surgical address illustrated by such pictures. The cinematograph has its place in scientific demonstration, but displays such as those here referred to are, owing to the lightning rapidity of the procedure, useless for such a purpose. As public spectacles they are degrading to the operator and demoralizing to the spectators.

TORSION OF A HYDROSALPINX.

Torsion of the pedicle of a hydrosalpinx may now be reckoned as a well-established new disease. It was first noted by Mr. Henry Morris and Mr. Bland-Sutton in 1891, then several cases were recorded by French and German authors, and in 1904 an excellent monograph on the subject by Dr. Hamilton Bell was read at a meeting of the Obstetrical Society of London. Dr. Bell found that already 50 cases had been reported. The chief point of interest to the physician and practitioner is the acuteness of the attack, in many cases simulating appendicitis, for more often torsion of the pedicle of an ovarian tumour. Another frequent experience is the co-existence of pregnancy with twisting of the hydrosalpinx. On the other hand, Albert Martin[1] has reported an instance of torsion of a hydrosalpinx in a non-gravid subject being taken by the patient herself for threatened abortion. The history was remarkable: the patient, 34 years old, had suffered nine years previously from a violent attack of pain in the hypogastrium, chiefly towards the right side, with abdominal distension. She kept her bed for a month, and recovered spontaneously; no diagnosis being made. The illness which led her to consult Dr. Martin was a return of the abdominal distension, with diminution of the catamenial flow. On this occasion the acute attack followed instead of preceding the distension. It came on when the patient was finishing her lunch, and was very severe, chiefly in the right iliac fossa, radiating down the lower extremity. As she had suspected pregnancy, the acute attack was taken by the patient for threatened abortion. On examining the pelvis Martin detected a tender swelling in the right fornix, reaching into Douglas's pouch. It suggested torsion of the pedicle of a small ovarian cyst. Abdominal section was performed, and a large hydrosalpinx of the right tube was discovered. It resembled superficially a coil of distended strangulated intestine, and was twisted two turns on its pedicle. It is significant that there were no adhesions, and as dilated tube is very common but not often twisted, yet usually more or less adherent to adjacent structures, the cause of the relative rarity of torsion is clear. Ovarian cysts often rotate on their pedicles, but they are much heavier than tubes and therefore not so readily fixed by adhesions. An instructive discussion followed the reading of Dr. Martin's monograph. Siredey related a case where a lady was attacked suddenly with "enteritis" when at a watering place. A tumour was detected; it proved to be a large hydrosalpinx with twisted pedicle.

SANITATION IN EL SALVADOR.

Of all the Central American Republics, El Salvador, which we in England almost invariably misname San Salvador, is certainly one of the least known. To the seaman navigating the Pacific, and perhaps to the pharmacologist also, if he should chance to interest himself in matters geographical, the Republic is known as the Balsam Coast, for here is grown, and not in the country to which it is accredited, the so-called balsam of Peru of our *Pharmacopoeia*. Though so far from the

[1] Torsion du pédicule d'un hydrosalpinx droit. *Comptes rendus de la Soc. d'Obstét. de Gynéc. et de Paéd. de Paris*, July, 1906, p. 147.

great centres, the country is rather thickly populated the vast majority of the inhabitants being Indians The capital, San Salvador, nevertheless boasts a "Consejo Superior de Salubridad," and in its Bulletin, which we have now for the first time received, some interesting details are given of the malarial and other insanitary conditions prevalent in Santa Ana, an interior town of some 53,000 inhabitants. A Commission was appointed a short time ago to investigate the causes to which these were due, and the results are now published. The most common maladies were found to be bilious remittent, tertian, and quartan fevers, and infectious dysentery. From an analysis of 7,200 cases of paludism, it appears that only about 1·5 per cent. were fatal, but it was found that the total proportion of persons affected with malaria to the entire population of the town was 69 per cent.; in other words, that practically two out of every three persons in the place were fever-stricken. The disease was most prevalent in the neighbourhood of slaughterhouses, tan yards, and coffee factories, where abundance of larvae of various kinds of mosquitos and of sarcophaga were discovered to exist. The tertian and quartan forms were found to correspond in a remarkable manner to the two seasons, dry and wet, into which the climatic year of El Salvador is divided.

SECRETION OF MILK IN THE AXILLA.

The existence of supernumerary nipples and of axillary mammae in some women has long been known. A good monograph on the subject was read by Dr. F. H Champneys twenty years ago at a meeting of the Royal Medical and Chirurgical Society.[1] Dr. Seitz, of Munich has quite recently reported two cases of secretion of milk from the axilla.[2] In both subjects a painful swelling quite distinct from the mammary gland, developed on the fourth day of the puerperium. It grew larger for two or three days, until it filled the axilla; on palpation glandular tissue could readily be defined. The mass could be moved over the subjacent tissues, and the integuments were not reddened, although some dilated veins could be seen as in a normal breast during lactation. In one patient there were two or three minute nipples of the size of a pin's head in the other no trace of a single supernumerary nipple could be detected. By gentle pressure large drops of a white secretion could be pressed out of the pores of the skin in both subjects and out of the nipples in the case where they existed. This process gave great relief, and the secretion proved to be milk. Our readers may remember Cameron's case, where the patient when pregnant became aware of a swelling in the left axilla after physical fatigue caused by carrying several buckets of water during a fire. In the puerperium milk could be pressed from this swelling as in Seitz's cases. There was some discussion when Dr. Seitz read his report before a society. Supernumerary nipples and aberrant mammary glandular tissue are not quite homologous. Dr. Mitchell Bruce's writings on nipples are still well known; they often appear along the line of the normal nipples in the lower mammals, but purely morphological theories will not always account for the appearance of nipples in very abnormal positions. Mammary gland tissue has been detected by Amann in the subcutaneous tissue of the groin in the human subject, in the lower animals this condition is yet more frequent. He associates the inguinal mammary tissue with certain solid tumours of the round ligament occupying the inguinal canal. Dr. Seitz noted how his two cases had been under observation in the same hospital almost at the same time the first turning attention to the second. It is therefore probable that the condition in question is not so rare as is supposed, cases where pain is absent being overlooked.

[illegible]

[illegible] Gesellschaft, August, 1906, p. 486.

TRICHOCEPHALUS DISPAR.

The general opinion of the profession, as was observed in a paragraph on the association of trichocephalus and appendicitis in the British Medical Journal of August 4th, 1906, would seem to be that this intestinal worm is not common in the British Isles. Our attention has been turned to a communication made recently by Drs. H. S. French and A. E. Boycott, the result of work in the Gordon Laboratory, Guy's Hospital.[1] They examined microscopically the stools of 500 in-patients at the hospital, without selection of any class of disease. A small portion of faeces was shaken up with normal saline solution in a test tube; half an hour later the supernatant fluid was poured off, and the deposit shaken up with fresh saline. This process was repeated about five times, so that all the finer sediment was removed; one drop of the final deposit, presumably containing the eggs in a concentrated form, was mounted fresh; then any eggs that happened to be present were readily detected under a low power. Eggs of parasites were found in 40 out of the 500 cases. In no less than 39 they were the ova of *Trichocephalus dispar*. In the remaining case the eggs of *Ascaris* were discovered, with difficulty, in the faeces of a boy aged 6 admitted as a case of ascaris infection. The eggs of trichocephalus were never detected where the patient was under 4 years old, although 42 infants under 5 came within the series. Males and females proved, according to these researches, to be equally liable to the parasite. The trichocephalus was not associated with any particular disease. Of 24 cases of appendicitis, 2, or 8·3 per cent., had the parasite; yet the average incidence was 9·4 per cent. Thus, the authors remark, referring to Metchnikoff as well as to their own results: "No support is afforded to the notion "that trichocephalus has any etiological relationship "to appendicitis." The egg is very tenacious of life, and infection arises from the ingestion of material contaminated with stale human faeces. Uncooked vegetables are the readiest agents of infection. Drs. French and Boycott believe that watercress is specially dangerous. It is much consumed by the poorer classes in London, and is often obtained from sources open to the gravest suspicion of sewage contamination. The profession would be interested in a monograph of a similar character enlightening it about the adult trichocephalus in subjects living in this country. Let those who would make researches bear in mind that the authorities whom we have quoted warn us that the presence of the common oxyuris is often missed by the ordinary methods of examination of faeces. On the administration of thymol the worm and its ova were nearly always detected after almost uniform failure before that drug was administered.

THE MOTOR AS A DISINFECTING MACHINE.

While the motor will in time altogether replace the horse in medical practice, there can, we think, be no doubt that it has come to stay. Readers of the British Medical Journal have from time to time the opportunity of learning the experiences of some of their professional brethren with motors of various types. We do not propose here to discuss either the general question of the usefulness of the motor in practice or the relative advantages of the products of different makers. We wish to call attention to an indictment against the motor in respect of its effect on the cleanliness, and what is still more important, the cleanliness, of the surgeon's hand, which has recently been made in France. It is said that if a surgeon or obstetrician

[illegible] "Trichocephalus dispar," Journal of Hygiene, July, 1906, p. 314.

drives his own motor he is liable to become the subject of trembling of the hands, which must be a serious drawback in the practice of his art. It is further alleged that the manipulation of the machine must contaminate a practitioner's hand. The motor has found a defender in Dr. Fieux, *agrégé* professor of obstetrics in the Medical Faculty of Bordeaux. He points out that trembling of the hands is not likely to occur except in men of highstrung nervous temperament, who by that very fact are unfitted for the habitual performance of surgical operations. On this count, we think this indictment breaks down. The second charge is more serious, but appears to be no better founded. Dr. Fieux asked his colleague, Dr. Sabrazès, to examine dust and oily particles carefully collected by means of sterilized pipettes from under the hood of a motor. The microscope failed to reveal any micro-organisms whatever, and cultivations gave absolutely negative results. This would seem to show that, so far from being an agent of contamination, the motor, by the heat which it generates, actually disinfects the dust and other foreign matter which comes in contact with it as it rushes along. If this can be shown to be true, the motor would cease to be the nuisance it too often is to all but those whom it carries, and people half suffocated by the clouds of dust which it raises could, at any rate, have the comfort of believing that the matter which chokes their lungs is aseptic.

STREETS NAMED AFTER DOCTORS.

Is there in the whole of our island a street named after a doctor? We know of none. In other countries such recognition of medicine is common enough. This is particularly the case in France, where, for instance, in the small town of Ax. no fewer than four streets bear the names of doctors. We lately had occasion to mention that the name of the famous Spanish anatomist, Professor Ramon y Cajal, has been given to a street in Madrid. Quite recently two thoroughfares in Lisbon have been named respectively after Professor Manuel Bento and Professor Serrano. The boulevard which the City of Boston is to build in front of the new Harvard Medical School buildings is to be called the Avenue Louis Pasteur. All the names which bulk large in the medical history of the United States had been considered; and as it was found that nearly all prominent Americans had received recognition of some sort from Boston, it was decided to recognize the great French discoverer, who, though not a member of the medical profession, was one of the master builders of the Temple of Medicine. Our own city Aediles are often perplexed about the naming of streets, and if the innumerable King and Queen Streets show a spirit of loyalty they also display a sad poverty of invention. We suggest to the London County Council that by choosing such names as Jenner, Lister, and Simpson for their streets they would vary the monotony of their nomenclature and perhaps do something to impress the importance of medical research on the public mind.

MEDICAL CHARITY AND SICKNESS ASSURANCE.

As already announced in the BRITISH MEDICAL JOURNAL of January 5th, a special meeting of the Marylebone Division will be held in the rooms of the Medical Society, 11, Chandos Street, Cavendish Square, W., on Thursday, January 24th, at 8.30 p.m., when the second of a series of discussions on economic problems in relation to medicine will be held. The following resolution will be submitted: "That the development of properly-organized systems of mutual assurance for the cost of illness offers the most readily available method of reducing the admitted evils of excessive medical charity and the misuse of hospitals." The debate will be opened by Dr. R. C. Buist, Mr. H. W. Armit, Mrs. Scharlieb, Dr. L. S. McManus, and Dr. J. H. Keay. A summary of the points with which Dr. Buist and Mr. Armit propose to deal will be found in this week's SUPPLEMENT, at p. 28.

THE EDALJI CASE.

WE publish elsewhere in this issue an appeal from Sir Arthur Conan Doyle to ophthalmic surgeons for an expression of their expert opinion as to the useful vision possessed by eyes presenting the degree of myopic astigmatism ascertained to be present in the case of Mr. George Edalji. The motive of this appeal will, of course, be generally understood, for Sir Conan Doyle's cogent articles in the *Daily Telegraph* have been generally quoted in the daily press. He believes that Mr. Edalji was wrongfully convicted, and the sentence has already been reviewed by the Home Secretary, for Mr. Edalji was liberated after serving three of the seven years to which he was condemned. The evidence against him was circumstantial throughout, and it must therefore be rebutted by evidence of the same character. To reach the field in which was the pony Mr. Edalji was convicted of maiming, he must, on a dark night, have walked rapidly across fields, over fences, and across a broad railway line, and have returned with equal speed. The degree of myopia found to be present is high and complicated by astigmatism in one eye, and it is astonishing that spectacles to correct it had not long before been obtained, but Mr. Edalji had been a law student and had subsequently practised as a solicitor, so that as the refraction error would not seriously interfere with reading it may be that he felt comparatively little inconvenience from the defect. At any rate there seems no doubt that he did not wear glasses. Communications may be addressed direct to Sir A. Conan Doyle at the address given, or if sent to us will be forwarded.

THE question of the *de novo* origin of bacteria, bacilli, vibriones, micrococci, torulae, and moulds in certain previously superheated saline solutions contained within hermetically-sealed tubes, will form the subject of a paper to be read by Dr. H. Charlton Bastian at the meeting of the Royal Medical and Chirurgical Society on Tuesday next, January 22nd.

THE Governor of Jamaica, in a telegram dated January 14th, informed the War Office that the Camp Hospital was destroyed by the earthquake on that day, that 30 inmates were killed, and that the medical officer, who is apparently Lieutenant H. C. Sidgwick, M.B., R.A.M.C., was so seriously injured that he must be immediately replaced. The hospital is no doubt that at Up Park Camp, used for men of the West India Regiment. In a communication to the Colonial Office, apparently dispatched at a later date, the Governor adds that the Myrtle Bank Hospital has been destroyed, that the number of killed and wounded in the town had not been ascertained, but that the Town Hospital was crowded with some 300 persons. There is no Myrtle Bank Hospital, and the building referred to is no doubt the hotel of that name.

ON the occasion of his recent visit to Chatsworth the King conferred the decoration of the Cross of the Victorian Order (M.V.O.) upon Mr. E. M. Wrench, F.R.C.S., of Baslow. Mr. Wrench, who has been Surgeon to the Dukes of Devonshire since 1862, served as Assistant-Surgeon to the 34th Regiment in the Crimea, and with the 12th Royal Lancers during the Indian mutiny. Mr. Wrench was President of the Midland Branch of the British Medical Association in 1899, and his address, published in the BRITISH MEDICAL JOURNAL of July 22nd of that year, dealt with the lessons of the Crimean war. Mr. Wrench was formerly Surgeon-Lieutenant-Colonel in the 2nd V.B. Derbyshire Regiment, and already possesses the Volunteer Decoration.



General View of the Hamidie Hospital for Children.

THE HAMIDIÉ HOSPITAL FOR CHILDREN AT CONSTANTINOPLE.

More than a century ago Samuel Johnson wrote: "Among those actions which the mind can most securely review with unabated pleasure, is that of having contributed to a hospital for the sick. Of some kinds of charity the consequences are dubious; some evils which beneficence has been busy to remedy, are not certainly known to be very grievous to the sufferer, or detrimental to the community; but no man can question whether wounds and sickness are not really painful; whether it be not worthy of a good man's care to restore those to ease and usefulness from whose labour infants and women expect their bread, and who, by a casual hurt or lingering disease, lie pining in want and anguish, burthensome to others, and weary of themselves."

In establishing and maintaining the Hamidié Hospital for Children at Constantinople, the seventh annual report of which is before us, H.I.M. the Sultan of Turkey might almost be supposed to have had this wise utterance of the British sage in mind. It will be remembered that the hospital was founded in 1903 by H.I.M. the Sultan in memory of his daughter, the Princess Hamidé Hadidje, whose death touched a chord of sympathy in the heart for the sick children of his Empire. The hospital was built on the model of the Emperor and Empress Frederick Hospital at Berlin, under the able direction of Dr. Ibrahim Pasha, Physician in Chief to H.I.M. the Sultan, who chose the site and assisted to carry out the plans. The original pavilions were finished in a year, large sums of money being expended on the building and equipment, in accordance with the traditional magnificence and generosity displayed by the sovereigns of Turkey in their philanthropic works.



One remembers the stress laid upon the hospital established by Mahomet II, a model of luxury and comfort. It contained a harem and swimming bath, and no means was believed to accelerate more rapidly elevating the mental faculties a band was provided for the use of the patients. Mahomet II also decreed that the sick should be served with the rarest and most delicate foods. In the *Vakfnameh*, written entirely by his hand, he orders the flesh of nightingales to be given to those who fancied it, and, in default of this, pigeon, as the next rarest delicacy.

Abdul Hamid does not order nightingales and music, but through his generosity the patients in his hospitals are nursed back to health under admirable conditions.

The hospital has grown in size and importance, and in the year dealt with in this report two notable additions were made: the one a large and luxurious pavilion for women, and the other a sanatorium to combat tuberculosis in childhood.

The hospital was mainly intended for children, and it was really for their benefit that the women's pavilion was suggested by the Sultan. Care during the first days and weeks of infancy plays a very important part in the after-life of a child, and in this pavilion the mothers are carefully treated and are put in the way of giving their infants a good start, so that the chances are they will continue to look after them properly when they leave the hospital. Moreover, they are likely to bring them back promptly for advice if anything goes wrong afterwards; and so the women's pavilion is a very important feature of the Children's Hospital. The general view of the hospital shows that it stands on high ground, and the women's pavilion dominates the hill upon which are dotted the various other buildings of the hospital. From its large bay windows there is a magnificent view of the heights of Chelebi, the whole sweep of the Bosphorus, and the distant Sea of Marmora.

The total area covered by this pavilion is 597 square metres and comprises two separate buildings, one of one story and the other raised on a foundation of masonry. The first and largest is divided by a long passage, on either side of which are rooms for the staff. Next to them are two large wards, containing twelve beds each, splendidly lighted by large bay windows opening into two open air galleries which are protected from sun and rain. Next to the principal wards are two smaller rooms, each containing six beds, one of these being for women during

labour, the other when labour is over. A further ward with six beds is built over the south side of the pavilion, and there are also two private single-bedded rooms for privileged patients. The bath-rooms are of a modern type, fitted with hot and cold water. Throughout the pavilion the corners are rounded and the walls washable, while the ventilation is regulated so that each patient has constantly a renewal of air. There is also a perfected system of heating and a lift. In an entirely separate building, reached by a covered passage, is the operating theatre, equipped, like the operating rooms of the other pavilions, with every scientific requirement, the instruments having been selected from the best manufacturers in Europe. The operating theatre is lighted on every side by large windows, while smaller ones near the roof give extra light.

Perhaps the most interesting feature of the hospital, as showing the progress of Turkey, is the new sanatorium for children threatened with tuberculosis. It is justly described as an act of *prévoyance sociale*, which many nations professedly more progressive would do well to copy. The pavilion is perched on the summit of the hill already mentioned. It occupies an area of 307 square metres, and is divided into two dormitories of 108 square metres, which contain 22 beds each. Between the wards are four spacious rooms, three for the staff and one which will be fitted as an operating room. In addition there are two bath-rooms, and the general equipment is all that can be desired. The rooms, as may be seen in the illustration, open into a wide balcony facing south, built on a raised masonry foundation running the whole length of the building. Here, under protecting eaves, the children can do the air and light cure so essential to their condition.



H.E. Ibrahim Pasha, Physician to H.I.M. the Sultan and Physician-in-Chief to the Hamidie Hospital.

A last and badly-needed improvement must be mentioned. The Chichli road was impassable during the winter periods of snow and rain. This caused great inconvenience to the in-patients, but the 32,000 out-patients who yearly attend the polyclinic to receive free advice and medicine suffered even more. Now a wide road, bordered with trees and paved with cubes of granite, has been opened, and makes the hospital easily accessible. His Imperial Majesty the Sultan may be congratulated on the success of his scheme, so admirably planned and carried out. He can justly claim that which is implored by the Mohammedans in their most ardent benediction, the prayer of the poor.

Liverpool.

University Clinical Hospitals' Dinner.

The various hospitals recognized by the University, now amalgamated for teaching purposes, will hold a dinner on January 23rd at the Adelphi Hotel, and it is expected that the dinner will become an annual event. This year the chair will be taken by Sir James Barr, and the guests will include the Earl of Derby, Chancellor of the University, and Sir John W. Moore, late President of the Royal College of Physicians in Ireland.

The Royal Infirmary.

The post of Assistant Physician to the Royal Infirmary, rendered vacant by the resignation of Dr. E. E. Glynn, appointed Deputy Professor of Pathology in the University, has been filled by the election of Dr. John Hay, Physician to the Stanley Hospital. Dr. Hay is an old student of the Liverpool Medical School and of the Royal Infirmary, where he held the position of medical tutor.

The Infirmary for Children.

The new building of the Infirmary for Children was formally opened by H.R.H. the Duchess of Albany on January 10th. This hospital was founded in the year 1851. It was first located in a small house in Upper Hill Street, and for the first five years its work was confined to out patients, but in 1856 larger premises were rented and provision was made for a few in-patients. The work continued to grow, and in 1866 the present site in Myrtle Street was purchased; in June of that year the foundation stone of the old infirmary was laid by the late Duke of Saxe-Coburg. In the first year in Myrtle Street the attendances in the out-patient department only numbered 1,700, but for some years past they have exceeded 50,000 a year. The old infirmary contained 80 cots. The accommodation for out-patients was not only inadequate, but the department, being actually within the main building, was a constant menace to the health of the inmates. The building was designed and erected at a time when sanitary science, as now understood, was in its infancy and the true principles of hospital construction were not understood. Hence it was found in the course of time that there were fatal defects, not only in the drainage system, but in the general construction of the building, and, after considerable sums had been spent in the attempt to improve matters, the Committee were advised by sanitary experts that nothing short of large structural alterations, amounting almost to rebuilding, would bring the institution up to a proper sanitary standard. It was estimated that the cost for such alterations would be £30,000. These alterations would curtail the number of beds, and the Committee decided that the better plan would be to appeal for funds to pull down the old building and construct an entirely new one. The first part of the work undertaken was the erection of the out-patient department, which was opened in 1902, and has proved very satisfactory. The plans for the new building opened on January 10th provide for the following blocks: An administrative block, two pavilions, an observation block, a laundry, and a nurses' home. The last two will be separated from the hospital by the width of Mulberry Street, but will communicate with it by an underground passage. The hospital, when finished, will accommodate 106 patients, but at present only one of the two pavilions is finished, and only 60 patients can be received. The total cost of the buildings enumerated amounts to £68,000, including the purchase of some additional land.

Judging from the silence on the subject of all the speakers at the opening ceremony, it would seem to be generally forgotten that the inception of the Infirmary for Children was due to a former medical practitioner in Liverpool, the late Dr. Alfred Stephens. Dr. Stephens conceived the idea of starting a dispensary for children in Liverpool as the result of a visit he paid to a similar institution in Dublin. He became the first medical officer to the institution, and was for many years its senior physician. It would be a graceful act on the part of the Committee and supporters of the hospital if they were to perpetuate the memory of the founder by placing an inscription or other suitable memorial in the new building, as has been done at the Stanley Hospital, where the memory of the founders, D. Dunlop Costine, M.D., and E. Mason Sheldon, M.R.C.S., has been commemorated by the erection of a tablet in the hall.

Leeds.

Low Death-rates.

Leeds stands to-day in the proud position of having the lowest death-rate for 1906 of the nine largest towns of the United Kingdom. This rate is 15.6, London and Edinburgh following with rates respectively of 15.7 and 15.9. The death-rate for the four weeks ending December 29th was 16.1, as compared with a rate for a similar period in 1905 of 18, and as compared with the average death-rate of 18 for the same period of seventy-six large towns. In the four weeks ending December 29th, 1906, there were 26 deaths from the seven principal zymotic diseases, 38 deaths were attributed to phthisis, and 6 to influenza. There is a great deal of influenza in the city at present, but the cases appear to be chiefly of a mild character, and in many cases with gastro-intestinal symptoms. The increase in deaths from croupous and catarrhal pneumonia during the latter weeks of the year must doubtless be in some measure attributed to the prevalence of influenza. For the weeks ending November 3rd, 10th, and 17th the deaths from these diseases were 6, 3, and 4 respectively, but for the subsequent and remaining week of the year they varied from 11 to 17.

Adulteration of Food.

From the report of the city analyst we learn that during the last quarter 202 samples of foodstuffs were examined. Of these, 167 were samples of milk, and in 15 cases adulteration was made out. In no case was any preservative found. This percentage of about 9½ compares favourably with the percentage of 23½ for the corresponding period of 1905.

The Snowfall and the Unemployed.

There are many things that the long-suffering citizen of Leeds complains of; the smoke nuisance, for example, like the poor, is always with us, but credit must be given for the promptness with which the authorities cope with a heavy fall of snow. Large numbers of men, mainly recruited from the unemployed class, were engaged from Boxing Day till New Year's Eve. The daily average of men employed amounted to 1,078, horses to the number of 469 were required, and 2,942 loads of snow were removed from 6,345 streets, and in the more important thoroughfares of the city traffic was carried on under favourable conditions in a surprisingly short space of time. A recent return of the number of the unemployed showed that by the end of the year 4,645 names had been registered and at the time of the return 1,037 of these had resumed work, 315 had not accepted the relief work offered to them, 655 could not be traced, 53 had emigrated, and 672 were regarded as totally undeserving. The number left on the list at the end of the year, amounting to 1,913, had already considerably increased.

University Court Dinner.

It has been arranged by the Council of the University that the next Court dinner shall be held in the hall of the University on Tuesday, January 21st. Among the guests of the University on that occasion will be present His Excellency Baron Hayashi, Japanese Ambassador to Great Britain, and it is believed that the dinner will be largely attended.

The Work of the West Riding County Council.

Mr. Charles Wilson Grabell, Chairman of the West Riding County Council, in laying before that body a review of its work during the last three years, delivered an address of unusual interest and among other topics touched on the question of the treatment of lunacy and on the question of health and housing. He mentioned that the West Riding "had a large building in lunacy," a phrase which, taken out as being both novel and quaint, has become in this connection the recognised. He recognised the opening of [illegible] acres of land, which had cost £[illegible], and on which the buildings had involved them in an expenditure of £[illegible]. The ratio of pauper lunacy per 10,000 of the population of England and Wales for 1905 was 7.76, which indicated an increase on former years. The West Riding ratio for the year 1905 was [illegible] for 1904 it was 8.15, and for 1905 it was [illegible]. Within the administrative area of the West Riding the ratio per 10,000 was only 18.68. During the year there had been 6[illegible]7 patients in the various asylums. He commented on the lavish and somewhat unnecessary expenditure in the building and equipment of the asylums. "Let us in the future," he said, "build dwellings for the insane, not palaces." The lunatic had been recently treated as though he were some priceless asset of the State, a queen bee whose luxurious surroundings no expense should be spared. Doubtless this was a reaction from the bondage and darkness and cruelty of the past, but it was to be hoped that in the future some sense of proportion would be observed. He discussed possible methods of prophylaxis. Like produced like, and though one might come to the conclusion that insanity was due to the invasion of the brain by bacteria, it was sound practice to try to strengthen the brain, and to do this alcoholism and other evils must be stamped out. Should lunacy be made a notifiable disease? he asked. Could we bring home to man and woman the danger run by contracting marriage with those whose mental balance had given way, and were we prepared to secure indirectly the sterilization of the unfit?

Dealing with the work of the Sanitary Committee he pointed out that the average death-rate for the three years ending in 1902 was 17, and that for the three years ending in 1905 it was 15.8, while the infantile mortality had fallen from 158 to 140. The housing problem would very soon have to be seriously grappled with. An immense number of the cottages were beyond the condition in which they being made satisfactory as dwelling-places dependent on mere questions of new gullies, pipes, taps, sinks, and drains; they required new roofs, new walls, new foundations. He considered that in the future private enterprise would not be sufficient to ensure an adequate supply of suitable dwellings, and that the erection of houses would soon become part of the duty of the local authority. He would like to see the Sanitary Committee entrusted with a sum of £10,000 or £15,000 to build 30 cottages, so that they might gain experience for the larger task in store for them.

North Staffordshire.

An Unhealthy Town.

Darlaston is a prosperous town in South Staffordshire with a population of about 16,000 persons, the principal industry being the manufacture of iron nuts and bolts. The water supply is plentiful and of good quality, and the drainage of the district is satisfactory. In spite of the existence of these two essentials to a well-ordered community, the death-rate of Darlaston has been continuously high, and for some years one-fifth of the total number of deaths has been due to the principal zymotic diseases. The zymotic death-rate during the five years ending 1905 was as high as 4.5 per 1,000. After an inspection of the district on behalf of the Local Government Board, Dr. Reginald Farrar has come to the conclusion that the great loss of life from preventable diseases is due partly to social and industrial conditions and partly to insanitary surroundings. In the former category he includes intemperance, ignorance on the part of mothers of the simplest rules of infant feeding, and the employment in factories of a large number of women—the last condition leading to neglect of homes and children whether legitimate or illegitimate, but particularly of the latter class. In connection it would have been of interest if we had been told what proportion the illegitimate death-rate in Darlaston bears to the legitimate rate, and also whether the coroner holds an inquest upon every illegitimate infant the cause of whose death is not certified by a registered medical practitioner. The insanitary conditions which contribute largely to the high death-rate, more especially as regards diarrhœa and enteritis, include the method of excrement and refuse disposal which prevails in the district. Although nearly the whole of the town is sewered, barely one-fourth of the total number of houses are provided with water-closets, the remainder having privy middens. These are not of quite the same type as those to be found in Lancashire or Yorkshire, provision

ng made at the back of the structures for mixing ashes
h the excrement. The contents are only moved when
e pit becomes inconveniently full, and even then only
e upper portion is taken away, leaving an ever-increasing
ss of putrefying material always ready to play its part
disseminating disease. Dr. Farrar very properly advises
e district council to aim at progressively reducing the
mber of privy-middens and inducing property owners to
ostitute water-closets. It is only fair to the Council to
te that all the new houses erected in 1904 and 1905
re provided with water-closets.

Bristol.

University College Colston Society.

E eighth annual dinner of the University College
lston Society was held on January 11th, under the
esidency of Sir William Church, M.D., K.C.B. The
endance was not quite so great as in previous years,
t the interest in the movement is still kept up, and is
idenced by the subscriptions, which reached £489, the
ond largest yet collected.

Sir William Church, in proposing "The Pious Memory
Edward Colston," referred to his own connexion with
Bartholomew's Hospital, a foundation that had
nefited by the munificent generosity of the great
istol philanthropist, after whom a ward was named.
d Colston been alive now he would doubtless have been
sent at their gathering, for his interest in educational
tters was well known. The Bristol Medical School was
r seventy years old, and had made a wide and excellent
ute as a provincial school.

The Lord Mayor of Bristol proposed the toast of "The
d Mayor of London" in a few felicitous words, and the
er replied in humorous vein.

ir William Anson, in responding for the Visitors, said
. Birrell when discussing the Act of 1902, declared
t the municipal authorities hoped for complete control
r all the machinery of education from the infant school
he university. Though this was a lofty ambition it was
quite possible of achievement, as the Board of Educa-
n and the Treasury must have a voice in the matter.
complete municipalization of education must be
ayed, though this delay was a disadvantage. They
st, too, be as hopefully interested in the moral progress
he race as the educational, and a little more time
uld make it easier to avoid the rough and ready
eralizations which had been observed in the adminis-
ion of the Act. The analogy of the ladder led to errors,
people said, let us put up higher education and every-
y can go everywhere; but the ladder must be adapted
he people who had to climb. The future career must
tudied in framing the course of instruction. Methods,
ss founded on these principles, were useless, and it
in right directing that a university was a useful aid.
ody of cultivated education opinion would be formed,
ntually spreading and permeating through the local
itutions of the country. Universities could set an
nple in economizing their resources and co-operating
existing institutions. In the history of education
e had been too much competition and not enough
peration.

he Vice-Chancellor of Oxford University, Mr. T.
bert Warren, also spoke, and referred to the prospect
university in Bristol.

. Shingleton Smith submitted the toast of "Our City,"
instanced the fine buildings and ancient University of
deen as what a city smaller than Bristol could do for
ation. The Principal of University College, Professor
d Morgan, in replying for the College, said that all
looking forward to a university—one with its own
e of study, its own standard of education, and able to
r its own degrees. Bristol was geographically
ted differently from other towns in which univer-
s existed, and the main feature of the surrounding
try was agriculture. He hoped they would soon
ble to formulate a definite scheme of agricultural
ation.

. G. A. Wills was introduced as the new President.

Scotland.

Complimentary Dinner to Dr. William Bruce.

Dr. Bruce, of Dingwall, was entertained at dinner on December 12th, 1906, at the North British Hotel, Edinburgh, by his old colleagues in the Scottish Branch Council of the General Medical Council. Only two of those who had been associated with Dr. Bruce during the last twenty years were absent, being unavoidably prevented by urgent professional engagements. Sir William Turner, K.C.B., took the chair, and proposed the toast of the evening in eloquent terms, giving expression to the high esteem in which Dr. Bruce had been held by all members of the Council. Dr. Bruce replied, and a very pleasant evening was passed; many reminiscences were indulged in, and many old battles refought.

Preliminary Examinations of the Scottish Universities.

The Joint Board of Examiners of the Scottish universities have just published statistics relative to the preliminary examination in Arts, in Science, and in Medicine, held in September and October, 1906. A fair impression of the statistics will be gained from a few instances. English, Lower Latin, French, and German—as regards the Arts and Science preliminary examination:

University of St. Andrews.			
English	43 entered,	22 failed,	21 passed.
Lower Latin ...	17 ,,	12 ,,	5 ,,
French	61 ,,	37 ,,	24 ,,
German	6 ,,	3 ,,	3 ,,
University of Glasgow.			
English	188 entered,	88 failed,	100 passed.
Lower Latin ...	129 ,,	68 ,,	61 ,,
French	153 ,,	93 ,,	65 ,,
German	23 ,,	20 ,,	3 ,,
University of Aberdeen.			
English	28 entered,	10 failed,	18 passed.
Lower Latin ...	12 ,,	10 ,,	2 ,,
French	43 ,,	28 ,,	15 ,,
German	5 ,,	2 ,,	3 ,,
University of Edinburgh.			
English	120 entered,	70 failed,	50 passed.
Lower Latin ...	98 ,,	63 ,,	35 ,,
French	104 ,,	76 ,,	28 ,,
German	23 ,,	21 ,,	2 ,,

In attempting to draw a conclusion from these figures we seem to be left with only two alternatives: either the teaching in the schools is poor or the papers set and the mode of marking are unreasonable. That only 2 candidates out of 23 in German at the University of Edinburgh should pass is a striking fact. Similarly 28 passes out of 104 in French at the same University speaks eloquently of some fault somewhere. We have no means of fixing on the weak point.

The statistics of the medical preliminary examinations are not very much more encouraging. In the University of St. Andrews 21 entered, 9 passed in all subjects, 2 in two subjects, 3 in one, and 7 failed in all. In the University of Glasgow 107 entered, 30 passed in all subjects, 4 in three, 11 in two, 29 in one, and 33 failed in all. In the University of Aberdeen 31 entered, 10 passed in all subjects, 4 in two, 8 in one, and 9 failed in all. In the University of Edinburgh 147 entered, 51 passed in all subjects, 2 in three, 19 in two, 43 in one, and 32 failed in all. Many hold that the standard of the medical preliminary examination ought to be raised, if the medical profession is to hold its own place. Yet here we are compelled to read that only 9 out of 21, 30 out of 107, 10 out of 31, and 51 out of 147 candidates are able to pass in all the subjects of the now existing preliminary examination.

The late Principal Story.

The death of Dr. Story, Principal of Glasgow University, was not wholly unexpected, as it was well known that for some months his health had been very poor. During the years that he held the post of Principal he maintained a very sympathetic attitude towards the scientific side of the university. Recognizing that the accommodation of several of the departments was inadequate he set about collecting funds to rebuild the departments of physiology, materia medica, and forensic medicine on the medical side and of natural philosophy on the arts side. His

efforts met with a measure of success, and close on £100,000 had been obtained when Mr. Carnegie gave his munificent contribution to the Scottish universities, and for the time being checked all other private munificence. The handsome buildings of the natural philosophy department are already in use, and it is expected that in the coming spring the new medical science buildings will be opened by the Prince of Wales. It is unfortunate that Principal [illegible] never succeeded in getting upon good terms with the students. Even to the end it was always uncertain how the students would behave on any given occasion. With his professorial colleagues Principal Story was, however, on the best of terms. A scrupulously fair man, of high ideals, he kept himself entirely aloof from all petty jealousies and wire-pulling, and in the councils of the university his opinions ever carried great weight.

Girgenti Home for Inebriates.

In a recent minute of the Glasgow Corporation Committee on the Inebriates Act the recommendation was made to discontinue the Girgenti Home as a reformatory for inebriates. We understand that no final decision has yet been come to by the Corporation as an important communication is expected from the Scottish Office. The Girgenti experiment commenced in 1900, when a committee of the corporation, under the terms of the Inebriates Act, 1898, acquired by purchase the estate and house of Girgenti in Ayrshire for the sum of £7,000. The mansion house consisted of three stories, and the outside offices included a farmsteading. At the cost of a further sum of £2,000, the place was made suitable for accommodating and treating the class of persons to be committed to the home—that is, habitual drunkards who had been convicted three times within the preceding twelve months. From the very commencement the scheme was ill-conceived. It was proposed originally to house both male and female inebriates, but in a few months the original certificate was cancelled, and the home was licensed for fifty-eight female inmates. The early experiences were by no means satisfactory. The inmates consisted largely of women who in addition to being intemperate were vicious in their habits, and known to be of the criminal classes. The original rule of not admitting prostitutes was soon abandoned. The means employed for overcoming the craving for drink consisted chiefly in providing good food with healthy outdoor work. Under these conditions the general health of inmates rapidly improved, but it is questionable whether the moral effect of the training was of any value. We understand that a very large number of those treated relapsed soon after a short time of their discharge. Escapes from the house were numerous; in one year 28 escapes occurred, involving 20 patients. In time it was found impossible to deal with the women, and they had to be transferred to the state asylum at Carstairs. The expenses of the home were heavy, and though we are sorry that the results of the experiment were unsatisfactory, it is to be regretted that it was not given a good trial.

Ireland.

The Effect of Mitral Obstruction on the Heart.

At a meeting of the Royal Academy of Medicine in Ireland, Dr. Gilbert of Edinburgh read an interesting paper on the effect of mitral obstruction on the chambers of the heart. As far back as 1772 McBride, in his *Practice of Physic*, showed the association between a slow pulse and a fatty heart. Bellingham had undoubtedly conceived the modern treatment of aneurysm by dietetic and physical means; while in 1835 it was stated by the Dublin Committee of the British Association that the auricles could produce sound. This observation had escaped notice until, nearly half a century later, a distinguished graduate of Trinity College and the speaker had together studied a case of cleft sternum, and had been able to hear the movement of the auricles. Finally, in recent years it had occurred simultaneously to Professor Finny, President of the Royal Academy of Medicine, and Professor Ritchie to turn *x* rays to use in the study of heart disease.

The Trinity College Commission.

We understand that the Commission which has been inquiring into the management of Trinity College in relation to university education in Ireland has practically arrived at the end of its labours. The report of the majority has been agreed upon and will shortly be formally presented. There are rumours that considerable changes will be recommended. The solution which it is hoped will satisfy the Roman Catholic hierarchy will be in the shape of a new college in the University of Dublin. The present mode of appointment to fellowships would be modified, and the relations of the medical school to Sir Patrick Dun's Hospital and to the Royal College of Physicians revised.

Insanitary Dwellings in Belfast.

An emergency meeting of the Public Health Committee was summoned by its Chairman on January 12th, to consider a paragraph that had appeared in one of the morning newspapers. The article in question stated:

> We do not exaggerate when we say that within twenty minutes' walk of the centre of the city there are to be found inhabited houses which are a disgrace to Belfast. They are a standing menace to the health of the city. These dilapidated areas produce disease, vice, and crime, and they ought therefore to be wiped out. Not only have they a demoralizing and unhealthy effect upon those who live in them, but the evil influence they create is felt all over the city. The Public Health Committee cannot be acquitted of negligence in these matters, and it must now be brought home to the members that the public expect that insanitary houses will be closed without any unnecessary delay.

Every sanitary officer in the city, male or female, had been summoned to attend the meeting, so that the matter might be threshed out. They were called before the Committee in rotation, were subjected to a most searching examination and cross-examination, and were asked to express their opinions freely and fully; it is understood they all denied the allegations. It is also stated in the public press that all the members of the Committee promised not to reveal what passed at the meeting.

The report of this meeting has given rise to no little wonder among those who take an interest in matters of public health. The unusual course of specially summoning a meeting, the secrecy maintained, the apparent insinuation of complicity of some of the sanitary officers, all form a mystery which may turn out to be a mare's nest, but have given rise to an uneasy feeling. The sanitary officers have, in the past, escaped all fault finding on the part of the public; indeed, they have uniformly gained praise; and, unless some serious matter has come to light, more caution should have been used in framing a report for the public press.

Epidemic Cerebro-spinal Fever in Belfast.

Some cases of undoubted epidemic cerebro-spinal fever have occurred in Belfast. They have been removed to the new fever hospital at Purdysburn, and the diagnosis verified by lumbar puncture and cultivation of the meningococcus. The mortality has been high.

South Africa.

The Robben Island Lepers.

In view of certain more or less sensational statements as to the wretched condition of the patients segregated in the leper establishment at Robben Island which have at

ious times appeared in the newspapers of this ntry, we are glad to learn that now, at any , there is little with which the most emotional lanthropist or the most fervid advocate of a theory ld reasonably find fault. In *South Africa* of January it is stated that when the Conference of principal lical officers of health for the various South African nies was held in Capetown recently, the opportunity taken of paying a visit to Robben Island. The visitors e so favourably impressed by what they saw that they odied their satisfaction in the following resolution, ch was passed unanimously:

at, after visiting the Leper Asylum on Robben Island, the members of this Conference wish to put on record their appreciation of the good work performed in that institution. Generally speaking, the asylum is a model of discipline, cleanliness, and comfort. The patients are well looked after, medically and otherwise. Considering that this institution is the oldest of the kind in South Africa, it is surprising that so few ancient defects remain, and its condition and management reflect the highest credit on the Cape Government and all those concerned.

Canada.

Canadian Army Medical Services.

TENANT-COLONEL GUY CARLETON JONES, Permanent y Medical Corps, has been appointed Director-General y Medical Services, Canada, vice Colonel Fiset, D.S.O., has been appointed Deputy Minister of Militia and nce. The new Director-General was educated at 's College Hospital, London. He served in South a with the 10th Canadian Field Hospital, and received medal and three clasps, the brevet of Lieutenant- nel. He is Honorary Surgeon to the Governor-General nada.

The College of Physicians and Surgeons of Quebec.

the semi-annual meeting of the College of Physicians Surgeons of the Province of Quebec the question of nsurance fees was discussed. For a number of years um of 5 dollars was invariably paid for an examina- of this nature, but of late there has been a reduction dollars, and a number of medical societies through- he province have decided to combine to force a n to the old rates. The Governors passed a motion effect that the College of Physicians and Surgeons all its moral support to the general demand for an ase in the tariff for mutual societies to 2 dollars and ance companies to five dollars for each examination. motion proposing the reduction of the Board of nors to 28 was lost by 20 votes.

question of reciprocity, both interprovincial and Great Britain, was next taken up. Dr. Laurendean ed that Quebec had nothing to gain by a free inter- e of medical men with Great Britain, as it was well that the current of migration was from England to a, and not vice versa. This point, however, he did ish to emphasize, as it mattered little to French ians. There was a much more important point of in his eyes—namely, the much-desired reciprocity Ontario. This would certainly be a way to obtain ocity, but he feared that Ontario would not enter he movement until Quebec agreed to her terms. He it, therefore, that Quebec should let Ontario precede fore adventuring into "such a hornets' nest." Thus, on account of reasons and arguments of equal sness, the project was held over for six months. wonder whether reciprocity of any sort will ever be it about by such progressive methods, as it was nilar arguments that Dr. Roddick's Dominion cation Bill was blocked.

formation of a Central Board of Examiners was next ed, and the proposal was rejected after a spirited .

proposal to amend the present law for admission to e was passed with but little debate. For years the with which registered physicians could be made has been a disgrace to the province. In 1900 there 8 regular candidates who passed all the examina- nd 39 irregulars who slipped through by flaws in vincial regulations. In 1901 there were 69 regulars and 28 irregulars, the year 1902 gave 49 regulars and 26 irregulars, and something of the same kind happened each year to 1906, when there were 29 regulars and 25 irregulars. In all 29 per cent. of the candidates who have appeared since the present law has been in force are irregulars, and have not passed the tests required by the College of Physicians and Surgeons. This does not include persons who have passed by means of a private Bill. This state of things is positively alarming, and it is hoped that the unanimity of the Board will speedily bring about a more rational state of affairs.

The most important of the remaining motions was that which extended the course of study from four to five years before the granting of a licence to practise. This move has been anticipated by McGill University, which proposes next year to inaugurate a five-year course. McGill was the first in Canada to institute a nine-month session extending over four years, and still leads in that respect, and now, with an additional year, it will again be an example to the other Canadian colleges.

Health of Montreal.

The annual report of the Medical Officer of Health for the year 1905 has appeared after an unusual delay. It is explained that in the statistics illegitimate and premature births have been excluded from calculations, "in order to make more logical comparison with other cities," because the greater portion of the illegitimate children do not belong to the city. It is not mentioned particularly why other cities do not labour under the same disadvantage. The mortality calculated on this basis is 20.6 per 1,000, which is 0.2 less than 1904, and a lower rate than that at Breslau, Prague, Milan, New Orleans, St. Petersburg, and Moscow, and identical with Rome. Including the illegitimate and premature births the death-rate would be 22.96 per 1,000. The death-rate of children under 6 months of age was 30.42 per cent., and for those under 5 years it reached the appalling figure of 56.31 per cent. The birth-rate was 37.92 per 1,000. The births were divided as follows: French Canadians, 44.19; other Catholics, 25.45; Protestants, 21.77. The death statistics were shown thus: French Canadians, 27.05 per 1,000; other Catholics, 20.42 per 1,000; Protestants, 14.30 per 1,000. The highest death-rate was in St. Denis Ward, where the figures reached 38.40 per 1,000. Marriages were recorded as 10.31 per 1,000, or 0.5 per 1,000 more than 1904. They were divided as follows: French Canadians, 9.99 per 1,000; other Catholics, 8.30 per 1,000; Protestants, 14.30 per 1,000.

Hong Kong.

Antimalarial Work.

In an address this year to the Hong Kong and China Branch of the British Medical Association, of which he is President, Dr. Francis Clark, Medical Officer of Health for the colony, gave a detailed account of what has been done in the way of combating malaria and the results which have been obtained. Steps upon modern lines seem to have been taken in the matter as far back as 1899, but at first were not of a very active character, for the *Anopheles* at that time had not been identified in the colony. In the following year it was shown that the true malaria-bearing mosquito could be found throughout the island, as well as in Kowloon and the New Territory; and since then, year by year, work has been done in the way of draining nullahs, filling in of pools, subsoil drainage of marshy ground. The result has been that the mortality from malarial fever in the colony has dropped greatly, the diminution not being merely relative, but actual, or, in other words, the number of deaths recorded of late years has been far smaller than it used to be, although the population has grown. All species of malarial parasites are found—simple tertian, quartan, and malignant, the latter being the commonest among those who seek admission to the Government Hospital. In such admissions, however, the fall during the past two years has been so great that Dr. Clark estimates that in hospital expenditure alone it represents a saving to Government of a sum equal to 8 per cent. on the whole cost of the work done in the way of endeavouring to keep down the number of *Anopheles* by engineering methods. The police force, too

has been a great gainer: the number of men constantly on the sick list from malarial fever has fallen of late years so considerably as to be equivalent to an addition of at least two men a day to the effective strength. A striking feature of the address is the statement that in all Government and grant-aided schools in the colony hygiene now forms part of the curriculum, special care being taken to ensure that the theory of malarial infection and prevention shall be well understood by those who attend these schools.

PLAGUE AND FLEAS.

From information which has reached us from Hong Kong it would appear that some additions have been made this winter to the cleansing operations which Dr. J. Mitford Atkinson described at the Toronto meeting in his paper on Plague Procedure in Hong Kong (BRITISH MEDICAL JOURNAL, December 15th, 1906, p. 1715). The fresh departure consists in special treatment of the corners of all rooms and of crevices in the floors with a view to destroying any fleas or eggs of fleas which they may harbour. It is found that crude phenyl is particularly well adapted to this purpose, and it is used freely in a strength of 1 in 500. This addition to the other house-cleansing methods in use is understood to be based upon a recent report of the Indian Plague Commission, which supports the idea, previously not accepted, that fleas are a common intermediary between plague-stricken rats and man.

India.

BLOOD PARASITES OF MAMMALS.

CHRISTOPHERS, in the Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India, No. 26, contributes a paper on the *Leucocytozoon canis*, a new haemogregarine like parasite of dogs, first discovered by Bentley in Assam. Until quite recently, such parasites were supposed to be confined to cold-blooded animals like frogs, snakes, and lizards; but, following up Bentley's work, a more careful search of the blood of certain small mammals has revealed the presence of at least five more. In his monograph Christophers gives a list of these, and as the subject is one of the greatest interest to protozoologists generally, it may not be out of place to enumerate them in the order of their discovery. We have then (1) the *Leucocytozoon canis* (Bentley and James), a parasite inhabiting the leucocytes of dogs in Assam and India. (2) The *Haemogregarina* (Balfour) a parasite inhabiting the red cells of the [illegible] on the Sudan and also according to Laveran in Algeria. (3) The *Haemogregarina gerbilli* (Christophers), a parasite inhabiting the red cells of the [illegible] (4) A *Leucocytozoon*, found in the white cells of *Meriones* in Khartoum (Balfour). (5) The *Leucocytozoon fossatum* (Patton), a parasite attacking the white corpuscles of Kathiawar squirrels in India. (6) A leucocytozoon found in the house-rat (*Mus rattus*) in Madras (Patton). Of this group four of the different parasites are found in the [illegible] and may therefore be termed *leucocytozoon* proper, while the [illegible] to which the term *Leucocytozoon* has been applied [illegible] Bentley and Laveig did not go further than the study of the forms of the *Leucocytozoon* found in the peripheral blood, but Christophers [illegible] the schizogony in the parasite in the liver, and also in the peripheral blood at least a week [illegible] It would seem that the parasite passes through two hosts, the development in the dog [illegible] by the transfer of the cysts to the [illegible] Christophers [illegible] that its [illegible] takes place in a [illegible] Conjugation takes place in the stomach of the [illegible] and the formation of oocysts [illegible] The flea gets rid of the [illegible] in the [illegible] and it is probable that [illegible] This is a point of great importance, as one of the most [illegible] of the [illegible] of protozoology just quoted is that it has been done by medical men, and this emphasizes again—if that were required—the part medicine has played in pure science in the past.

SPECIAL CORRESPONDENCE.

PARIS.

The Vital Statistics of France for 1905.—Agglutination Test at the Commencement of Typhoid Fever.

THE *Journal Officiel* has recently published the report for the vital statistics of France for the year 1905. The excess of births over deaths was only 37,120, about one-third lower than the excess of births over deaths in the preceding year, when it was 57,026. The diminished excess is due partly to the fact that the number of births were 10,938 fewer in 1905 than in 1904, and partly to a slight increase in the number of deaths, 8,968 more deaths having been registered in 1905 than in 1904.

Births, Deaths, and Marriages.

During 1905 the number of births of living children registered reached 807,291; there were in addition 37,941 infants stillborn or who died before the declaration of birth was made. The 807,291 living infants consisted of 411,895 boys and 395,396 girls, giving a proportion of 1,042 boys to 1,000 girls. Of the living infants, 735,791 were legitimate, and 71,500 illegitimate. The total number of living infants in 1905 was 35,240 less than the annual average for the decennial period 1895-1904. The proportion of living infants registered per 1,000 of the population was 20.7 in 1905 instead of 21 in 1904, 21.2 in 1903, 21.7 in 1902, and 22 in 1901.

The departments with the highest birth-rate per 1,000 of the population were Finistère, 31.1; Pas-de-Calais, 30.6; Morbihan, 27.4; Côtes du Nord, 26.4; Seine Inférieure, 26.1; Lozère, 25.3; Nord, 24.6; Vosges, 24.3, etc. The departments with the lowest birth-rate were Gers, 13.7; Lot, 14.8; Yonne, 14.9; Tarn et Garonne, 15.3; Haute-Garonne, 15.9; Côte d'Or, 16.3, etc.

The total number of deaths in 1905 was 770,171—males, 399,797; and females, 370,374.

The proportional increase in the population, calculated by comparing the excess of births to the total population, was 1 per 1,000 in 1905; 1.5 in 1904; 1.9 in 1903; 2.2 in 1902.

Forty-four departments in 1905 showed an excess of deaths over births; in 1904 and 1903 thirty-six departments showed an excess of deaths over births. In comparison with 1904 the diminution in the number of births is fairly general throughout the country, existing in sixty-four departments.

In twenty-three departments there were more births in 1905 than in 1904; the departments with the greatest increase were Finistère, 319 more births than in 1904; La Dordogne, 272; l'Aude, 233; Var, 213; Lozère, 192.

The increase in the number of deaths over that in 1904 was found in fifty-six departments.

The only departments which have a birth-rate analogous to that of the other European countries are the departments inhabited by people of Celtic or Flemish origin.

The number of marriages in France in 1905 was slightly higher than during the three preceding years, the total number being 291,675. In France, however, the number of births per marriage is less than 3, whereas in England the figure is 3.7, and in Germany 4.4 children for each marriage. If each family in France increased by 1 or 2 children, the demographic state of the country would be normal, but the present diminution in natality in France constitutes an urgent danger.

Recently two hospital patients in the wards of Professor Widal contracted typhoid fever, one being convalescent from acute articular rheumatism and the other suffering from syphilis. Neither had any fever, but, being in the wards, their temperature was taken regularly morning and evening, and thus the very onset of the typhoid fever could be rigorously observed. Drs. Widal and Digne communicated their observations on these cases to the Société Médicale des Hôpitaux. In the first case the temperature rose gradually, reaching 40° C. on the fourth day; in the second case this temperature was reached on the third day. In the first patient the agglutination test was only tried for the first time on the fourth day; it was already present 1 per 10, the diazo reaction was at 0, and the blood cultures gave pure cultures of Eberth's bacillus. The agglutination increased gradually to 1 per 100 on the 9th day, 1 per 500 on the fourteenth day, and 1 per 1,000 on the eighteenth day. In the second patient these examinations were made from the second day, when the diazo reaction was negative, but the agglutination test was positive at 1 per 10, and the blood gave positive

ltures. The diazo reaction did not appear till the fourth y, and was very intense from the first reading R². The glutination rose progressively to 1 per 30 on the third y, 1 per 400 on the fifth day, 1 per 800 on the sixth day, per 1,200 on the seventh day, 1 per 9,000 on the eighth y, and 1 per 12,000 on the tenth day. These cases show at, although in some cases the serum reaction may be arded, yet it is very often present from the earliest days typhoid fever.

CORRESPONDENCE.

SIR VICTOR HORSLEY.

SIR,—Every member of the Association must feel that me recognition of the splendid services rendered to it Sir Victor Horsley should be made. I suggest that the nual meeting of the Association should be held in ndon, and that Sir Victor Horsley should be nominated President.—I am, etc.,

ardiff, Jan. 14th. T. GARRETT HORDER.

THE EDALJI CASE.

SIR,—Might I ask you in the cause of justice to permit to put the following question to those of your readers o are engaged in eye practice?

'Do you consider it physically possible for Mr. George alji, whose degree of myopic astigmatism as deter-ned by retinoscopy under homatropine is

Right eye — 8.75 diop. spher.
— 1.75 diop. cylind. axis 90°.
Left eye — 8.25 diop. spher.

have set forth without glasses on a pitch dark night h neither moon nor stars; to have crossed country for f a mile, climbing fences, finding gaps in hedges, and sing over a broad railway line; to have found and tilated a pony which was loose in a large field, to have rned half a mile, and to have accomplished it all ler thirty-five minutes, the limit of the possible time is disposal?"

consensus of scientific opinion upon this point would atly aid me in getting justice for this young profes-al man, condemned for an offence which in my nion he could not possibly have committed.—I am,

indhead, Surrey, Jan. 13th. ARTHUR CONAN DOYLE.

THE BEST WAY TO REMOVE TONSILS.

IR,—I am in thorough agreement with Mr. Hey Groves o the value of the operation of digital separation and ioval of tonsils as recommended by Celsus, A.D. 10.[1] elli later[2] revived it, and it has been frequently prac-d by surgeons since (and doubtless before), but I must test against its being described as the best way for all es and in all circumstances.

igital separation, enucleation, or avulsion is simple efficient when the very considerable knack, delicacy, certainty of touch have been acquired by experience. unpractised hands the faucial pillars may be over-tched or torn, or even a hole made in the soft palate ling to a possibly permanent alteration in the quality the voice and impaired deglutition. Neither is it ays easy. Dr. Watson Williams says[3]:

(enucleation) has been described as an easy proceeding, I have never found it so, and now never attempt it.

nother serious disadvantage is that in children it olutely demands a general anaesthetic, the dangers which in such operations is by no means a theoretical . Minor disadvantages are that in my experience e is in children more bleeding and more subsequent ness after enucleation than after tonsillotomy with guillotine. If the enlarged tonsil is deeply packed buried in the deep tissues of the neck, or firmly erent to the faucial pillars or to the base of tongue, or o soft and pulpy that it will not enter the ring of the lotine, or too large and hard to adequately become aged in the same (previously properly selected as to), the above disadvantages should not be allowed to weigh, and enucleation should be performed, being necessary for efficiency. There is no doubt, however, in my mind, after twenty years' charge of and work in the Throat Department of St. Mary's Hospital, that for the majority of cases in young children with tonsils enlarged and projecting well into the throat, well-defined and limited attachment between the faucial pillars, and no abnormal adhesions, ordinary tonsillotomy with the guillotine is the method of election. I base my opinion on the fact of its being quite efficient in appropriate cases, and not necessitating the risks of general anaesthesia. With a little tact on the part of the surgeon, any tendency to alarm on the part of the child is usually allayed without difficulty, and the little patient being properly nursed and his head steadied by assistants, his eyes shut, and his mouth wide open, both tonsils will often be found in the sawdust pail within five seconds. The patient hardly suffers at all, the bleeding stops in a few minutes, and the patient can walk out of the room. If the child has been frightened by indiscreet relatives, or previously hurt by examinations or paintings, or if naturally unruly, or if adenoids are also present, general anaesthesia (involving previous preparation) will be needed, and enucleation will be more to be considered; but, even so, I should prefer tonsillotomy if properly done.

I have every sympathy with Mr. Hey Groves in the unpleasant sequels of his subjective experience of tonsillotomy by the guillotine. Quite apart from the fact that guillotine operations in adults are to be less urged than in children, on account of the often greatly-increased haemorrhage, it appears that in Mr. Hey Groves's own cases the surgeon either misjudged the suitability of the case for that operation, or failed to carry out what he desired. For removing tonsils in adults, I consider enucleation a better operation as a rule than tonsillotomy, chiefly because of lessened risks of haemorrhage, even when the guillotine would be efficient. But the former demands a general anaesthetic, a risk not to be despised or ignored in any bleeding operation in the throat. Personal considerations, convenience, and these risks have to be balanced against each other.

But in the adult, and more especially in the case of the professional voice user, who requires removal of enlarged or diseased or adherent tonsils on account of recurrent inflammations, or retention of septic secretion, there is the much better method of the cold steel wire écraseur, the recent paper on which at Toronto has elicited Mr. Hey Groves's criticism. It can do no harm to adjacent structures; it removes completely the diseased part. The loss of blood often does not exceed a teaspoonful; it can be performed in the sitting posture, in full illumination, and it can be done under cocaine anaesthesia. The disadvantages are small relatively. Owing to the slow tightening of the wire noose necessary to prevent bleeding, the patient's discomfort is prolonged, though without any real pain. Some amount of practice is needed to detach and draw out the affected part from its bed, and adjust the wire noose at its base.

The method has been in common use in suitable cases ever since I have been in practice, and has given excellent results; but I must confess that since two years ago, when Dr. Fletcher Ingalls of Chicago devised a hook for liberating the tonsil from its adherent structures, and his special tonsil clamp for grasping and holding secure the whole of the tonsil and helping the passage and retention of the wire noose to the attached base, the whole procedure has been immensely facilitated. The clamp to draw out and secure the tonsil properly has always been the great difficulty, for that function was imperfectly fulfilled by hawksbill vulsella, or by fenestrated tongue, sponge, or ovum forceps, and to that extent justifies Mr. Hey Groves's criticism. I think if he and other surgeons will try Fletcher Ingalls's hook and clamp, they will soon have as high an opinion of the snaring operation as I have. Meyer and Meltzer procured mine from Chicago, but are prepared to supply similar ones of the same pattern of their own manufacture.

I acknowledge that in the hands of the expert the chance of doing any harm by enucleation is small, but on the whole I should recommend in preference the snare for operations in adults, and still more strongly so in the case of professional voice users. The galvano-caustic snare, in my experience, has no advantage over the cold wire, and leads to very much greater throat pain after.

[1] *De Medicina*, Cap. vii, Section 12.
[2] *Gaz. Med. Ital. Prov. Sard.*, December 30th, 1861.
[3] *Diseases of the Upper Respiratory Tract*, p. 104, Fourth Edition, 1901.

In the literature of the subject one finds the use of the bistoury and vulsellum have been followed so many times by the opening of the internal carotid artery—and I have personal information of more than one fatal result—and that when least expected, that I mention it rather by way of warning and caution than as a method of everyday use. It should rarely be adopted. I am, etc.,

HUBERT HY. SCANES SPICER, M.D.Lond.

[illegible], W. [illegible], Jan. [illegible].

SIR,—I was not surprised to read Mr. Mayo Collier's remarks at contemptuous dismissal of the idea of enucleating tonsils as being superior to their removal by the guillotine. But I must say that it is rather astonishing if he and those who advocate the guillotine have so strong a case that they find it necessary to resort to such irrelevant and inaccurate statements for its support.

The arrangement of Peyer's patches and their relation to enteric or tuberculous disease may be a subject in which we need enlightenment, but what has it to do with the best way of removing tonsils? He speaks of the removal of diseased tonsils as "killing the cow to cure it," his solicitude evidently being rather for the tonsils than for the patient. If he had deprecated killing the goose that laid the golden egg, then his argument would have been clear. It is admitted that the guillotine only removes those parts of the tonsils which are internal to the pillars of the fauces, but without the shade of justification it is stated that these superficial portions contain the greater part of the lymphatic tissue of the tonsil. May I ask of what does the deep part of the tonsil consist? Then it is stated that the recesses of the tonsil are arranged for the most part on the pharyngeal aspect of this body. For the most part it may be, but what about the crypts which open into the supratonsillar fossa? How can these be removed by the guillotine?

Whatever the function of the normal pharyngeal tonsils may be—and it is a matter of conjecture—surely no one believes that diseased tonsils are of any benefit to the individual. If the normal tonsil is a filter to catch infective germs, then the diseased tonsil is a foul filter whose function is perverted into that of a disseminator of poison. In exactly the same way we may argue as to the possible function of the great intestinal tonsil—that is, the appendix; but when it is diseased, and its tissues teeming with micro-organisms, then the only proper treatment is one which removes the whole appendix, and when a stump of the appendix was left in order to fulfil certain textbook requirements about "turning back a peritoneal cuff," etc., then in a certain proportion of cases relapses occurred, and the patient had to submit to a second illness and operation.

Lastly, we are [illegible] told that "the tonsil is a barrier between the cavity of the mouth and the internal carotid artery," and that "the fossa for the tonsil is separated only by the thinnest tissue from the actual coats of the artery." There is pretty good room for one who professes to clear away "misconceptions about the nature and anatomy of the tonsils." As a matter of fact, the internal carotid artery is 1.5 cm., or [illegible] inch, from the outer surface of the tonsil. The two structures are separated by the superior constrictor muscle, the pharyngeal aponeurosis and a considerable quantity of loose areolar tissue. It would be practically impossible to reach the internal carotid artery from the tonsillar bed with the curved finger. As to the "stump of tissue" left by the guillotine serving as a protection and shield to the carotid artery, this is, of course, the reason why people can swallow swords without cutting their carotid arteries; whereas, if their tonsils had been enucleated, they would probably bleed to death if they were to perform this feat. [illegible] to all pleas for the retention of the tonsil is the incontrovertible fact that in several [illegible] the tonsils atrophy, so that to enucleate diseased tonsils from an adult is only to produce in them the normal condition.

It seems to me that anatomy, pathology, and every sound surgical principle lead us:

1. That if a diseased tonsil requires removal it should be thoroughly removed, and not merely cut into two pieces.

2. The easiest way of effecting this is by enucleating the tonsil in the fossa.

3. Many cases occur in which tonsillar enlargement is superficial to the pillars of the fauces, and these are the only cases in which the guillotine should be used.

4. When a large portion of a diseased tonsil is left between the pillars of the fauces after the guillotine, this in many cases causes a relapsing tonsillitis, and the condition of the patient is worse than if they had never been touched.—I am, etc.

ERNEST W. HEY GROVES, M.S., F.R.C.S.,
Assistant Surgeon to the Bristol General Hospital; Demonstrator of Anatomy at the Bristol Medical School.

January 6th.

THE INFLUENCE OF RAINY WINDS ON PHTHISIS

SIR,—Dr. Gordon challenges the statement made by me in the BRITISH MEDICAL JOURNAL of December 29th, 1906 [illegible]

Dr. Gordon condemned the Devon and Cornwall Sanatorium, South Brent, to the Devon County Council, who were asked to subscribe, because it had a south-westerly exposure, although sheltered by high surrounding hills, and therefore under the influence of his rainy-wind theory. As far as I remember, he told one of the sanatorium officials that if the sanatorium was on the other side of the valley, which would give it a north and east exposure, he might support the place.

Dr. Gordon says that my information is incorrect. Allow me to inform him that I took good care to assure myself of its truthfulness before making the statement. Moreover my connexion with the sanatorium in question as medical superintendent showed me very clearly that his condemnation of it was unreasonable, unmerited, and quite wrong. Why Dr. Gordon should refuse to discuss the practical application of his theory, which he made with regard to the above sanatorium, I can only guess. This is not a side question, and, as far as I am concerned, Dr. Gordon's "rainy-wind theory" can die the natural death which awaits it, but when such a theory is applied without reason to a sanatorium for the working class—which was at the time struggling for its very existence and has since been able to prove its value—with the result that a public body like the Devon County Council, having Dr. Gordon's report before them, are apparently influenced by it and do not subscribe, then surely it is high time that a protest should be raised.

There is one other matter I should like to mention. Dr. Gordon says that Dr. Pearse's figures are wrong. They are only wrong in so far that they disprove Dr. Gordon's theory. Also Dr. Gordon's reference to the village of Meavy shows that he has no knowledge of the locality.

I have no intention of continuing this discussion. I can only hope that my protest and contradiction of Dr. Gordon's theory may bear fruit, and that some one who is as capable at figures as Dr. Gordon may investigate the south-western border of Dartmoor, the district most exposed to Dr. Gordon's "rainy-wind theory," and the results they obtain may even convince Dr. Gordon that there are two sides to every question.—I am, etc.,

Yelverton, Jan. 12th. J. PENN MILTON.

SIR,—Dr. J. Penn Milton writes with ripe experience on the relationship, if any, of wet winds to phthisis, as exemplified in Devonshire. Apart from the special evidence afforded by well-conducted sanatoriums that open air from any quarter is an active factor in the healing of tuberculous foci, especially those situated in the lungs, there are general grounds for believing that an elementary force, such as the wind, cannot favour the tuberculous process. Thus, if wet winds played such a malignant part in Nature, their effect—so constant and acting over countless ages—would have been found *universally* highly detrimental to consumptives exposed to them.

One would also certainly expect to find a very much higher mortality from phthisis in those living on islands and coasts, where moist winds prevail, than in those Continental countries not so exposed. Indeed, as Dr. Penn Milton says, it is lack of air rather than exposure to air which the bulk of evidence clearly condemns as raising the death rate in phthisis.

In any case, it is to be deprecated that this theory of the influence of wet winds on phthisis—which has, to say the least, not yet been accepted by the medical profession as a body—should have been, to my knowledge, definitely placed several years ago before a body of laymen—namely, the Devon County Council—as condemning a public sanatorium on Dartmoor. It is rather in the pages of medical journals that discussions which bear directly on such institutions should have been and still be recorded

artmoor can rely on its past records for a great future
r the treatment of phthisis by modern sanatorium
ethods.—I am, etc.,

F. G. BUSHNELL,
Former Member of "Sites" Committee, Devon and Cornwall Sanatoria for Consumptives; Pathologist, Stephen Ralli Memorial.

PRELIMINARY LARYNGOTOMY.

SIR,—I was pleased to read the two articles by Dr. Bond d Mr. Butlin in the BRITISH MEDICAL JOURNAL of nuary 5th, p. 7, on the above procedure as being a very luable factor in operations about the region of the outh where free bleeding is to be expected.

In several cases I have adopted the preliminary yngotomy in such operations as excision of the tongue the Whitehead method, excision of the upper jaw, and the removal of growths from the floor of the mouth. In these cases I have found the preliminary operation st advantageous.

The method I adopt is to administer the anaesthetic by usual method, then perform laryngotomy (which only es a few seconds), and, after introducing the tube, to minister the anaesthetic on a piece of sponge or lint ough it. I then introduce a pad firmly in the pharynx; s prevents any blood entering the throat.

I have never found any ill-effects after this preliminary yngotomy; the field for operation is left free, it dis-ses with the constant swabbing of the throat and ghing, and the anaesthetist is out of the way.

The tube I generally take out about the second day, and wound heals without any trouble.—I am, etc.,

E. HODKINSON MONKS, L.R.C.P., L.R.C.S.,
Honorary Surgeon, Royal Albert Edward Infirmary, Wigan.
igan, Jan. 7th.

HOSPITAL REFORM.

IR,—I had looked forward with great interest to read-the reports of the United Hospitals Conference and Division meetings. The resolutions to be submitted med to be so eminently just and matter of fact as to be lebatable, and it seemed a foregone conclusion that y would be passed unanimously. Now the impression by a perusal of the Conference report is one of con-on and impatience, a feeling reflected in your leading cle (December 15th) in these words: "The long-looked-deliverer was not forthcoming at the meeting, nor, ed, was there much in the proceedings to encourage hope that he has yet made his appearance among n." I trust that all those who are moving in the matter remember that there are hundreds of us small fry who reciate their efforts, and who, though lacking oppor-ity of making our voices heard, yet follow anxiously movement that is taking place. One of the speakers at Westminster Division meeting brought out a most in-ating point when he alluded to the fact that the very who suffer most from unfair conditions of practice by reason of their consequent overwork deprived of the e required to agitate for redress. It is all very well for men who have "arrived," as the French say, to took n on the mass of their discontented brethren and talk e nobility of medical work. We also appreciate this, e should even now sell our practices, and with the tal obtained, make a small fortune in grocering or some r trade. I think it is just this that will always keep ranks of the medical profession well filled, namely, the ng that grows stronger in the doctor's breast day by that there is no other work he could find a life-interest On the other hand, absorbing interest, honour, and gratitude cannot completely oust the worry and ety due to an uncertain and inadequate income. Now, pital handicapping, as Dr. Dauber aptly calls it, is only of our trials, but it seems to me such an easily-edied abuse that it should be put right within a few ks.

note in this week's *Lancet* that one body of men has ped the solution, and perceives that it lies plainly in hands of the the hospital staffs. We outside men are sufferers, and we suffer by reason of the action of our pital colleagues. First and last it is they who take the d out of our mouths. At Whitby on December 15th, the medical staff of the Cottage Hospital moved no out-patients, except those who had been treated as tients or who were recommended as suitable by a ical practitioner (who of all men, including even the parson, knows best the merits of a case, as well from the financial as the pathological point of view) should be treated at the hospital. The management demurring, the medical staff left the meeting, and subsequently eleven of them resigned. This had the immediate effect of causing the meeting to be postponed for a week to allow the hospital committee to have a conference with the medical staff, and if the latter stand firm and are supported, as they surely will be, by their *confrères* in the town, the result is certain. Now, is not this the way to go to work? Instead of *entreating* hospital managers and the public, let us use a little of the unlimited power we possess to call the tune, and hospital abuse will soon be a thing of the past.

May I thank Dr. Dauber for his admirable exposition of our views on the matter? It is not a pleasant picture he draws, but, he says rightly, a true one. It is needless to multiply instances, but any general practitioner can furnish ample proof from his own experience of how the hospital competes unfairly with him. Therefore I call on the hospital medical staffs to say to the hospital managers: "The patients we treat here shall be those who cannot pay even the small fee for which they can obtain outside the services of an expensively-trained and duly-qualified medical man."—I am, etc.,

Bristol. HARRY GREY, M.D.

THE INFLUENCE OF A MILK DIET ON ARTERIAL SCLEROSIS.

SIR,—In his admirable address on arterial sclerosis delivered before the West Somerset Branch of the British Medical Association, and published in the BRITISH MEDICAL JOURNAL of January 12th, Dr. Herringham points out that in some cases of arterial sclerosis the administration of a hospital milk diet relieves the patient's symptoms effectively and quickly, while in other cases, apparently similar, no apparent benefit is derived from a similar course of treatment. In discussing the possible explanation of the therapeutic value of a milk diet in these cases Dr. Herringham suggests that the reduction of the blood pressure observed in favourable cases may be explained as being due to either a reduction in the total proteids or to an alteration in the kind of proteid taken in the food. May I be allowed to supplement this suggestion by referring to a view which has presented itself to me from the consideration of my clinical experience of this disease in the light of some results recently obtained in an experimental investigation into the effects of varying diets on the organs and tissues?

Stated briefly, this view is as follows: In certain patients in whom arterial degeneration is a prominent feature the chief symptoms of which the patient complains are, in great part, dependent on a disturbance of the function of the thyroid gland, as a result of which there is, *inter alia*, a raising of the blood pressure, due to the absence from the circulation of the normal amount of healthy thyroid secretion, a defect which allows the well-known pressor effect of the active principle of the suprarenal gland to unduly assert itself. I believe that it is this class of case which derives the striking benefit from a milk diet to which Dr. Herringham refers, and I venture to think that the explanation is to be found in the special influence which diet exerts on the structure and functions of the thyroid gland to which I have recently drawn attention.

In a recent paper read before the Pathological Society of London I have submitted facts which prove that diet exercises a profound influence on the structure of the thyroid gland. Among the points mentioned and illustrated in that paper is the fact that the histological appearances of this gland in animals fed on a diet of bread and milk, in which the milk is given in excess, differ from those seen in the glands of animals on a similar diet in which the milk is given in restricted amount, the appearances indicating that a diet into which milk enters largely throws a smaller strain on the functional activity of the gland than other forms of dietary. This observation has, I may add, been independently confirmed by Dr. Dingwall Fordyce, who has found from observation on a large number of animals that the use of an exclusive milk diet induces this distinctiye appearance of the gland in a marked degree. Herein lies, I believe, the explanation of the good results

obtained by a milk diet in the cases described by Dr. Herringham. The therapeutic effect is in all probability indirect, the thyroid gland spontaneously recovering under the favouring influence of lessened strain on its functional activity.

The views expressed in this letter are in no way antagonistic to those given by Dr. Herringham in his instructive address. My object in writing is to draw the attention of practitioners to what is, perhaps, a new and, I believe, likely to be a fruitful line of clinical inquiry in the study of arterial sclerosis and other allied diseases.—I am, etc.,

[illegible] CHALMERS WATSON.

ODD MAN OUT.

SIR,—Since a benevolent Government stretched out the hand of fellowship to the working man, laid low by disease or injured by accident during or caused by his work, and gave him the Employers' Liability Act, this game has gone on. It is played in this manner. The players are three: the working man or patient, the employer, and last, and most often least, the doctor. The man falls, let us say, from a stage or scaffold and breaks his thigh; some one runs for the nearest doctor, who nine times out of ten is on his rounds; he has to be summoned by special messenger or telephone; he comes hot foot, [illegible] the comfort of the patient, puts him comfortably in bed at home, as the nearest hospital is miles away or full up; sets the limb, supplying all apparatus, [illegible] him for months. The man is probably in a club, and the doctor gets 2s. for a half year's attendance.

The patient applies to his employer at once for compensation; he gets weekly, after fourteen days, half his average weekly wage for the previous twelve months. His convalescence is perhaps slow, so the insurance company, who cover the employer, wish to compound for the compensation. They write for a survey to the doctor, who, if he is experienced, refuses to give any opinion without a [illegible]; this is usually 10s. 6d. This is often the first and last payment the doctor gets. Suppose the man gets £50 to settle all claims for ever due to this particular accident, what should the doctor do? If the patient is in a club, he has no legal claim, except in the National Deposit Friendly Society, which allows the Poor-law fees with some additions; if he tries gently to rouse feelings of gratitude in the man, as likely as not he will hear soon from others that he is greedy, grasping, and no gentleman. If he appeals to the employer, he is referred to the man, and often besides told that the club pay him; [illegible] if the man is not in a club, he gets a fee, but [illegible] the game ends thus—old man out of pocket, the doctor.

Where the man has been afraid to ask his employer for compensation for fear of losing his job, and it is [illegible] that men are never employed again in some [illegible] who have once received compensation, the [illegible] draws the sympathy of every one, the poor. If he is in a club, then his pay, and the doctor is again odd man out.

One remedy is the third and not a quick form of combination, to oblige every worker under a stated weekly sum or insist that they pay per them to the National Deposit Friendly Society. Another is to, [illegible] the employers and say, [illegible] without a chance of recovery, let us join with you and pay part of the [illegible] to cover the medical and surgical work, and [illegible] to meet a compromise between us. [illegible] are attended to that this could be done. Another way is to get the men in clubs, to pay at least [illegible] per cent. of their compensation money to the club [illegible].

It would be interesting if some other readers [illegible] could give their views on this matter to one who is sorely [illegible] by compliance with the [illegible] Amend the Medical [illegible] make it [illegible] to cut down, and [illegible] the doctor [illegible].

ODD MAN OUT.

THE APPRENTICESHIP SYSTEM.

SIR,—It is to be hoped that the [illegible] that the [illegible] should be the outcome of the [illegible] Medical Council on its last sitting should have [illegible] in advance by the profession [illegible] concerned [illegible] the [illegible] [illegible] the allegation that they are unfit to take any share in the training of the neophytes of their own profession. The fact that the old system of apprenticeship was overdone is no argument against a modified apprenticeship. The columns of the weekly medical papers are full of complaints from time to time of the shocking practical ignorance of the great majority of the products of the present system. To any body acquainted with the inner working of the clinical hospitals, this ignorance is not surprising. When the six months system of apprenticeship was first introduced by the General Medical Council, I pointed out in your columns that if it were to succeed it should be made compulsory, and placed at the beginning and not at the end of the curriculum. The doctrinaires hold that no practice should precede theory, but to this, in the words of Mr. Burchell, I cry "Fudge!"

The fact is, the profession must get rid of the oligarchs and acquire self-government. To accomplish this we must have a Royal Commission to inquire into the relations between the medical profession and the State, and between the various elements of the medical profession among themselves.—I am, etc.,

Cashel, Jan. 7th. THOMAS LAFFAN.

MEDICINE AND THE LAY PRESS.

SIR,—In consequence of questions recently put to me by several medical acquaintances, I should be much obliged if you would allow me space to point out that I ceased to act as editor of *The Practitioner* at the end of 1904, and have not since had any connexion with that periodical.—I am, etc.,

London, W., Jan. 14th. WM. CECIL BOSANQUET.

OBITUARY.

DAVID McKEOWN, M.A., M.D., M.CH.,

HONORARY SURGEON, MANCHESTER EYE AND EAR HOSPITAL.

WE regret to record the death, on December 9th, 1906, of Dr. David McKeown, of Manchester, in his 56th year. He was the third son of Dr. McKeown, of Ballyclare, Ireland, and brother of the late Dr. W. A. McKeown, the well-known ophthalmic surgeon of Belfast. Dr. David McKeown was educated at Queen's College, Belfast, where he had a most brilliant career, graduating with first class honours and the gold medal in Arts in 1877 and later obtaining first class honours and a gold medal in Medicine and Surgery in 1880. Originally he had intended to become a barrister and studied law for some time, but various circumstances and, perhaps, family tradition, turned him to the medical profession. After graduating in medicine he went through a course of study at several Continental hospitals before commencing practice in Manchester as an aural and ophthalmic surgeon. He soon became connected with the Manchester Eye and Ear Hospital and this connexion continued for nearly twenty years until his death. His work there was extremely laborious and he brought to it an amount of energy and enthusiasm which certainly told on his general health. His interest in the poorest patients was unwearied. Many a time has he journeyed specially from Buxton to Manchester on Sundays to see a hospital patient with a slight rise of temperature, though he knew another medical man would see the case. On first meeting him many patients rather feared than liked him, owing to a natural curtness of manner, but invariably on further acquaintance his kindness and skill aroused confidence and respect.

As an operator Dr. McKeown was almost painfully careful and thorough in every detail. He had not the slightest sympathy with that sort of brilliant surgery which consists in getting through an operation in the least possible time; and nothing aroused his scorn so much as those articles, not uncommon in the medical press in which the writers draw wide and general conclusions from insufficient data. He was remarkably successful in the large number of radical mastoid operations which he had done, and very enthusiastic as to the results of skin grafting in many of these cases. He was also very successful in a considerable number of radical operations for sphenoidal sinus disease, accounts of which he had intended to publish. His papers on post nasal [illegible] to read at the annual meetings of the British Medical Association in 1900 and 1901, traversed many

reviously accepted ideas, and though his theoretical deductions were not altogether accepted, his papers owed that to a most extensive experience he had ded most careful and accurate powers of observation. In private life he was extremely retiring and took no tive part in public affairs, being most happy when he uld spend his spare time in the fields or rambling er the Derbyshire moors. On December 5th he was parently in good health and did several operations, t towards evening pleurisy and pneumonia suddenly veloped and ran a most rapid course. The scenes at hospital with which he was connected when his death came known will long be remembered, and showed how idely he was esteemed and how sincere was the feeling irreparable loss among his numerous patients and ends.

EBENEZER TOLLER, M.R.C.S.Eng., L.S.A.Lond.,

MERLY MEDICAL SUPERINTENDENT, GLOUCESTER COUNTY ASYLUM.

E. TOLLER, who died at his residence, Scarborough, on ember 20th, 1906, was a member of a remarkable lfordshire family. His grandfather and three great-les were each between 7 ft. and 8 ft. in height, and his r great-aunts are described in an old engraving as the ur beauties of Bedfordshire." Mr. Toller's father died denly whilst speaking at a public Whig meeting at the e of the first Reform Bill, and shortly afterwards his her died also. Young Toller studied medicine at g's College Hospital, where he had as associates mas Buzzard, George Lawson, and Robert Liveing. became M.R.C.S. in 1857 and L.S.A. in 1858, and at e began work in lunacy as Resident Surgeon to Andrew's Castle private asylum, Bury St. Edmunds; next went to Middlesex County Asylum, Colney ch; then served as Medical Superintendent of Luke's Hospital for Lunatics, London; and, lastly, a similar post at Gloucester County Asylum from to 1882. This asylum had been gradually built up small beginnings to a structure holding rather less 600 patients, and the constant demand for increased mmodation was first met by boarding some patients other asylums and by placing others in suitable age homes. After some years, however, a branch am on the pavilion system was erected a mile further the city to accommodate 400 more patients. The work and anxiety connected with this extension ed Mr. Toller so complete a breakdown in health he was compelled to retire.

was the pioneer in providing in asylums those tainments which are now held in every asylum. His cal ability helped him in organizing concerts for the nts when he was at Colney Hatch Asylum in 1862, hese and other entertainments received the recogni- of the Commissioners in Lunacy. He strongly ated the treatment of the insane in surroundings as like as possible, and deprecated their being kept in numbers in great buildings. These views he brought e the Association of Medical Officers of Asylums in in a paper which was published in the *Journal of al Science* in 1865, with plans of cottage asylums. Mr. r made the welfare of the patients, especially in d to their clothing and their surroundings in the , gardens, and fields, his constant care; but he also dered the ratepayers, by keeping down, as far as iable, the number of lunatics chargeable, so that in neteen years of office the patients in the Gloucester y asylums increased from 573 to 692 only; in the ing nineteen years the number ran up to 1,060. He Fellow of the Royal Meteorological Society and a nt recorder of atmospheric conditions. He was in the hunting field, and was a good cricketer. Of ve sons, only one, the oldest, survives him; the s of the other four cast a great gloom over his life and f his wife. His second son, Dr. Seymour Graves , was Assistant Physician to St. Thomas's Hospital, n, but, his health failing, he was appointed cian to the Government Hospital, Cairo, and er on Medicine. He died there suddenly, and his l was attended by Lord Cromer, as principal ner. A children's ward and an annual prize in ine at St. Thomas's Hospital, bearing his name, are rials to his worth. As a student he had won an tion and a scholarship, the Mead Medal at St. as's, a gold medal at the Apothecaries' Hall, and three gold medals at the University of London; he was, further, a brilliant violinist, and a member of the Royal Amateur Orchestral Society. The loss of such a son was a great blow to the father.

At Scarborough Mr. Toller interested himself in public affairs, and he there died after a prolonged and painful illness. The funeral service was held at Holy Trinity Church, being conducted by the Venerable Archdeacon Mackarness, the Rev. C. W. A. Clarke (Vicar), and the Rev. C. D. Fothergill, and was attended by a large number of the inhabitants.

WE regret to announce the sudden death of Dr. PAUL JULIUS MOEBIUS, Extraordinary Professor of Neurology in the University of Leipzig in the 54th year of his age. He was born at Leipzig in 1853, took his doctor's degree in the university of his native city in 1876, qualified there as *Privat-docent* in 1883, and was appointed Extraordinary Professor in 1893. He was the author of a manual of the diagnosis of nervous diseases, and of a monograph on Basedow's disease which made his name well-known to the whole profession. He also published a number of neuro-psychological studies of poets and authors, written in a semi-popular style.

DEPUTY SURGEON-GENERAL JOHN ANDERSON COX, M.D., late of the Madras Medical Department, died in London on January 6th in the 80th year of his age. He joined the department as Assistant Surgeon, February 10th, 1851, and became Deputy Surgeon-General, June 9th, 1877, in which year he retired from the service.

SURGEON-GENERAL JOHN LYSTER JAMESON, retired, Army Medical Department, died in London on November 24th, 1906. He was appointed Assistant Surgeon, January 2nd, 1852; Surgeon, December 31st, 1858; Surgeon-Major, December 15th, 1871; Brigade Surgeon, November 27th, 1879; Deputy Surgeon-General, April 4th, 1880; and Honorary Surgeon-General on retirement from the service, May 2nd, 1883. He served in Bengal with the 87th Fusiliers during the Indian Mutiny in 1857-8, receiving the medal granted for that campaign.

LIEUTENANT NORCOTT D'ESTERRE HARVEY, M.B., Royal Army Medical Corps, died at Osborne on December 21st, 1906, at the early age of 26. He was appointed Lieutenant, August 31st, 1903.

DEATHS IN THE PROFESSION ABROAD. — Among the members of the medical profession in foreign countries who have recently died are Dr. Ferraz de Macedo, Professor of Clinical Medicine in the Medico-Chirurgical School of Lisbon, and one of the founders of the *Correio Medico de Lisboa*: Dr. Baltasar Unterholzner, of Vienna, a leading authority on children's diseases, aged 71; Dr. J. Borlée, Emeritus Professor of the University of Liége, and a past President of the Belgian Academy of Medicine, aged 90; Dr. Frank E. Beckwith, sometime Professor of Obstetrics in the University of Yale, aged 58; and Dr. Henry W. Dudley, one of the oldest and best-known physicians of Massachutetts, and sometime Professor of Pathology and Lecturer on Legal Medicine in the Tufts Medical School, aged 75.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.

A UNIVERSITY Lecturer in Hygiene and Pathology, with a stipend of £100 annually, has been appointed in connexion with the Special Board for Medicine.

Mr. F. Darwin, M.A., of Christ College, has been appointed a member of the Board of Biology and Geology.

Diplomas.

The following have been approved for the diploma in Tropical Medicine and Hygiene:

S. L. Cummins, A. Fenton, S. A. Harriss, H. B. G. Newham, J. B. Smith, A. E. Horn, W. C. B. Orme, F. M. Suckling.

UNIVERSITY OF EDINBURGH.

RECTORIAL ADDRESS.

ON January 10th, in the McEwan Hall, the Lord Rector (Mr. Haldane) gave his Rectorial Address to the students of the University of Edinburgh, his subject being The

Dedicated Life, an earnest and eloquent appeal to all to strive for their own and for the intellectual and moral development of the country. The Chancellor (Mr. A. J. Balfour) occupied the chair. After the address Mr. Haldane inspected the university volunteer corps, and later lunched in the students' Union. In the evening there was the usual torch light procession.

CONJOINT BOARD IN ENGLAND.

The following candidates have been approved in the subjects indicated:

FIRST EXAMINATION.

[illegible] P. L. F. B[illegible], H. J. Beresford-Heel[illegible], [illegible] J[illegible] W. H. Bond, S. A. B[illegible], C. A. Cam[illegible], R. G. E. Pl[illegible] W. H. Bond, S. A. B[illegible], C. A. Cam[illegible], A. C. C[illegible], E. C. C[illegible], H. F. Cockerell, C. F. Constable, I. M. Crocker, A. C. I[illegible], [illegible] H. Ev[illegible], W. E. S. Dighton, [illegible] G. G. F. Ey[illegible], M. A. Farr, C. E. Freeman, A. A. Fyfe, E. Hall[illegible], A. S. Hoole, C. N. Hall, W. S. Hyde, C. L. J[illegible] D. V. M[illegible], D. M. Ross, A. F. C. Martyn, D. L. Mo[illegible], H. I. Patton, [illegible] L. Percival, A. S. Pera, [illegible] E. R[illegible], H. Robinson, L. L. Salow, T. S. [illegible], [illegible] B. Sc[illegible], F. Tooth, H. A. Turner, F. Wel[illegible], A. T. Wilkie.

[illegible] -C. V. Anderson, J. C. Beddard, N. S. Carr[illegible], C. A. Claxton, C. F. C[illegible], H. G. Crawford, H. H. [illegible], C. A. Cr[illegible], J. D[illegible], C. R. Dr[illegible], D. C. Evans, J. G. [illegible], W. G. Herbe[illegible], H. G. Hewitt, C. A. Hodgson, [illegible], W. G. Herbe[illegible], H. G. Hewitt, C. A. Hodgson, [illegible], R. S. G[illegible], Hu[illegible], [illegible] Low, A. W. Lewis, M. Lindsey, E. [illegible], [illegible] H. L. Pegg[illegible], L. Perceval, J. A. Prendergast, [illegible], E. H. R[illegible], [illegible] L. Pegg[illegible], L. Perceval, J. A. Prendergast, [illegible], H. L. R[illegible], S. Shepley, C. H. Smith, F. Tooth, S. E. [illegible], W. [illegible], O. L. Williams.

[illegible] E. M. Adam, I. B. Bernstein, H. B. Coo[illegible], [illegible], W. M. C[illegible], B. Dale, T. R. Davey, A. Davidson, E. [illegible], [illegible], A. S. Gr[illegible], T. A. Jones, J. L. Joyce, E. A. Saunders, [illegible], R. C. Step[illegible], C. F. Sy[illegible], G. D. H. Wallace.

SECOND EXAMINATION.

[illegible] C. C. Chalmers, J. J. Clarke, W. T. Clarke, [illegible], H. W. [illegible], H. H. D[illegible], F. Dampier, E. C. F. [illegible], [illegible], C. R. Heard, C. P. Humphry, R. P. Jones, F. Kühlenkampff, [illegible], A. Lee, L. Lowe, A. L. McKenzie, J. C. Mackwood, J. M. [illegible], D. A. Mac[illegible], L. W. Mortimer, H. Neame, R. A. [illegible], R. F. Pl[illegible], F. H. Ran[illegible], H. Thwaite, F. C. Tibb[illegible], [illegible], J. G. Watson, C. F. Willes, S. Williams, C. S. [illegible], C. R. Woodward.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A [illegible] Council was held on January 10th, Mr. Henry Morris, President in the chair.

The Library.

[illegible] from the Library Committee were accepted [illegible] enlargement of the Library by utilizing [illegible] looking to [illegible].

The Liverpool School of Tropical Medicine.

[illegible] from the Liverpool School of Tropical [illegible] the views of the College upon a scheme for [illegible] of the course of instruction at the Liverpool [illegible] Medicine the Council expressed the opinion [illegible] relation to the subjects of Tropical [illegible], Hospital Surgery and Tropical Hygiene, it deserves [illegible] exception that it is [illegible] for clinical observation [illegible].

The Examinations of the Council of Surgeons.

[illegible] Moseley Young, F.S.A., [illegible] Collegiate Council [illegible] Mr. Young [illegible] Court of Chancery [illegible] Court of Common Council [illegible] Council to bring [illegible] The best thanks of [illegible] Mr. Young [illegible] the Illustrated [illegible].

[illegible] Council [illegible] on the Court [illegible] would be [illegible].

[illegible] BOARD IN [illegible] [illegible] at the [illegible].

[illegible] OF [illegible] OF LONDON.

[illegible] Medical Society of London [illegible] Medical Society [illegible] Medical Society [illegible].

MEDICO-LEGAL AND MEDICO-ETHICAL.

ARRANGEMENTS ON DEATH OF PARTNER.

H. R.—Every deed of partnership has, or should have, a clause directing what is to be done in event of the death of either partner, and the survivor would have to be entirely guided by it. If there were no such clause, the survivor would have to look after his own interests, while the executors saw to those of the deceased's family.

NEWSPAPER REPORTS OF SURGICAL OPERATIONS.

FACILIS DESCENSUS sends us a cutting from the *Dunfermline Express* of Tuesday, November 27th, which gives an account of what is called a "remarkable operation" performed in the Dunfermline Hospital. It would certainly seem that part of the information in the paragraph could only have been supplied by some one connected with the hospital, but we do not agree with our correspondent that the only possible conclusion is that the operator was the person responsible for the announcement. We call attention to the matter as such notices in newspapers are the subject of frequent complaints, and could be prevented if it were distinctly understood that details of operations should not be supplied as reports by any of the officers of the hospital, and if the publication in the lay press were clearly resented by the surgeons whose doings are thus made matters for newspaper comment.

PROFESSIONAL SECRECY:

THE CASE OF THE RAILWAY SIGNALMAN.

M.D. writes: The case of a signalman reported in the BRITISH MEDICAL JOURNAL of December 15th, p. 1753, reminds me of a somewhat similar case which occurred many years ago when I was a student at one of the London hospitals. The Clapham Junction signalman, subject to epileptic fits, attended the out-patient department, and was seen by one of the physicians to the hospital. On questioning the man as to what would happen were he seized with a fit in the signal box, he replied that he had a boy who stayed with him when on duty. So impressed was the physician, who the patient this man was, with the risk to the travelling public such a state of affairs, that he immediately reported the matter to the railway company, who without delay had the man removed from the signal box, and I believe gave him other employment. According to your ruling, the action of this physician was not ethically correct, unless we are to assume that the fact of his patient being in receipt of gratuitous medical attendance at a public institution disposed of any claim for secrecy. The man whose case was recently reported in the JOURNAL seems to have been a private patient. The signalman whose letter is published in the Journal of January 5th is, doubtless, correct in his description of the working of railway signals; but, notwithstanding all these precautions, travellers may, I think, be pardoned if they prefer to have signals attended to by men not liable to attacks of sudden and prolonged unconsciousness.

*** The question whether a patient is seen gratuitously or for a fee does not affect the principle.

APPORTIONMENT OF PARTNERSHIP CHARGES.

A. Z. writes, with reference to the essay to "C. J. E. E.," published in the BRITISH MEDICAL JOURNAL of December 2nd, p. 1616, made by [illegible], to inquire whether, if [illegible] partnership only for two years when B has to buy [illegible] A then would be the same.

Yes. So long as A and B are in partnership, [illegible] on the firm must be borne by the partners in proportion to their interests in the same.

[illegible] EXEMPTION CERTIFICATES IN SCOTLAND.

[illegible] inquires as to what constitutes a student [illegible] certificate from [illegible] attendance can only be [illegible] entitled to a [illegible] but we are of opinion that the words "[illegible] and [illegible]" do not [illegible] are part of a competent certificate, and that a [illegible] would fail in any legal proceedings they might institute to enforce the attendance at school of a child whose parent possessed a medical certificate, otherwise satisfactory, [illegible] were omitted.

LIABILITY FOR ATTENDANCE ON EMPLOYE.

[illegible] was called in by a foreman [illegible] employed by the [illegible] foreman stated that [illegible] application [illegible] made the [illegible] liability and that the employer [illegible] full allowance under the Workmen's Compensation Act. He wishes to know whether the [illegible] liable for the fees.

*** Apparently the [illegible] denies that the foreman [illegible] authority to pledge his credit, and it is probable that [illegible] could be unable to recover his fees from [illegible] only person liable is the patient himself.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES

A PRIMITIVE WATER SUPPLY.

The arrangements for the supply of water to many of the inhabitants of the village of Coggeshall in the Braintree (Union) rural district recall the conditions existing in many parts of England and Wales as related by the Health of Towns Commission sixty years ago. The water is distributed daily, except Sundays, by means of a water cart. The inhabitants bring out their pails, and these are filled on six days of the week, an extra bucketful being left on Saturday for use on Sunday. For this service a payment of one halfpenny a week is made, and for an additional halfpenny a week an additional bucketful is supplied. This is at the rate of about 3s. per 1000 gallons. Dr. Wilfred Fletcher, who describes this method of distribution in a report to the Local Government Board, very properly describes it as unsatisfactory, for it involves not only a very limited supply but constant risk of contamination, for buckets may not only be used for many other purposes, but may be left standing either awaiting fillers or after they have been filled for indefinite periods during which dust may collect in them if empty or on the surface of the water if full, or they may be fouled by passing animals.

FORTNIGHTLY RETURNS TO GUARDIANS BY DISTRICT MEDICAL OFFICERS.

A DISTRICT MEDICAL OFFICER writes as follows: In addition to our "medical relief book" our guardians call on us to keep a register of "extra medical fees." Now they send us the enclosed fortnightly return. Are we bound to make it out? I do not keep a clerk, and do not know how to spare the time. I shall be glad to see your observations on this.

*** The return asked for is for information to be given under seven different headings as to the total number of cases attended during the fortnight by the district medical officer. It would appear that the information required by the guardians can all, or nearly all, be obtained from the usual fortnightly return as made in the medical relief book if the book is carefully kept and all cases attended are entered therein. Should this be the case it would be for the guardians to procure the information they are now asking for by some other means than by calling on their medical officers to make a duplicate report. We should recommend the medical officers of the districts to ask the guardians (by communication made in writing) to be good enough to inform them under what order of the Local Government Board they (the guardians) are authorized to call upon their medical officers for this additional fortnightly report of their cases.

MEDICAL OFFICERS OF HEALTH TO RURAL DISTRICTS.

W. writes: Your correspondent "L. H." in the BRITISH MEDICAL JOURNAL of January 12th, has apparently a grievance similar to myself and others. My experience at a recent election of medical officer of health in my district at a salary of £120 per annum was to gain two votes out of a possible thirty-five. Amongst the many applicants I was the only one who possed a D.P.H. diploma, besides being the best experienced M.O.H., and was the first candidate elected. I learnt from one of the councillors that previous to voting the question was asked if it were necessary for the candidate to possess a D.P.H. diploma, and the clerk's reply was "No"; then I was quickly disposed of. One would naturally think that for such a good appointment as the Local Government Board would have required the District Council to have secured, if possible, a D.P.H. candidate, as the appointment was subject to the former's approval. In your reply you state that many advances in public health administration have been made since 1893, but your correspondent's, mine, and others' experience does not fully bear out your statement, at any rate, so far as rural districts are concerned. If "L. H." is still desirous of securing a public health appointment, my advice to her or him is to bear out to the Colonies, where the D.P.H. is properly appreciated and candidates in possession of such for public health appointments are eagerly sought after.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ALLOWANCES FOR THE USE OF PRIVATE MOTOR VEHICLES.

A Royal Order has been issued detailing the allowances that may be made to officers using their own motor vehicles in the interests of the public service.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR.	GENERAL SECRETARY AND MANAGER.
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

DR. WM. GOWANS (Victoria Terrace, South Shields) desires to hear of a home suitable for a young woman mentally unstable and unsettled, but not violent. The father could pay £15 per year.

INCOME TAX.

PERPLEXED writes: My income is derived from several sources in different districts, teaching appointments, examinerships, and occasional fees. It seems that the surveyor of taxes in each district in which a portion of my income is earned can legally call upon me to pay the income tax on such portion to him, and need only allow such expenses as seem to belong to such portion. . . . Is there any method by which I can declare all sources of income to *one* authority from which I can similarly claim expenses, thus involving only one payment?

*** The principle of the Income Tax Acts is to charge the income at the place where it arises, and our correspondent is liable to be assessed on the emoluments of the various offices held by him, less a proportion of the total expenses in each case, at the respective places where those emoluments are earned.

COMMENTARIES.

X. writes: A doctor's son wishes to know names of any books treating on commentaries upon medical and surgical cases such as are required for the R.A.M.C. and other examinations.

*** We are not acquainted with any book dealing with commentaries on cases such as are set for the R.A.M.C. Entrance Examination. The commentaries for this examination have been published in the Corps News of the *R.A.M.C. Journal* (see September, 1906, for the last examination).

ANSWERS.

LL.—A candidate with the defects mentioned would not be passed for Admiralty service, and it is not likely that he would be accepted by the Civil Service Commission.

MOTOR TYRES.

DR. F. T. TALBOT (Stockton-on-Tees) writes: In reply to "Novice," I have run my 6-h.p. De Dion for two and a half years on Palmer tyre (700 × 90), and have used three tyres for the back wheels in that time. One tyre, just used up, has run the whole time with one retreading, its fellow gave out after fourteen months' use, as I had run it flat for about 10 miles and so ruined it. The third, which has run fourteen months, is being retreaded. "Novice" will find that if he keeps his tyres inflated to between 70 and 80 lb. pressure, according to the make, he will have a small tyre bill. He must also use his brakes with caution and gently. I use a Lucas pump and pressure gauge, and test my tyres each morning. My car has done about 7,000 miles per annum in town and country, chiefly town.

TREATMENT OF PARTIAL PTOSIS.

BRIGHTON writes, in reply to "C.M.R.": It is somewhat difficult from the data given to make suggestions as to treatment. I presume iodides have been tried, because even in cases of a non-specitic nature their use is sometimes followed by improvement. Has "C. M. R." tried the effect of general tonic treatment and electricity? As a last resource I might suggest that a simple plastic operation should be done on the upper eyelid—namely, cutting out an elliptical piece of skin and suturing the adjacent cut surfaces. Of course, with this treatment, a scar is bound to result, but if the site is well chosen, and the necessary manipulations are delicately and carefully performed, the cicatrix which results is hardly noticeable. I have seen one case of intractable unilateral ptosis, which had resisted all medical treatment, in which such an operation was done with much benefit. Though a perfect cure did not follow the condition was so much improved that the treatment was greatly appreciated by the patients. Berry, of Edinburgh, has found Hess's operation to be the most satisfactory, a full description of the operation being given in Berry's *Manual of Practical Ophthalmology*, pp. 69 and 70.

LETTERS, NOTES, Etc.

RADICAL CURE OF HERNIA.

MAJOR J. J. W. PORTER, R.A.M.C. (Colchester) writes: May I point out the desirability of always removing the genital branch of the genito-crural and the ilio-inguinal nerves as they appear in the operation for radical cure of inguinal hernia? I have within the last few days seen a case of neuralgia of a hernial operation scar, and there seems to be no doubt that these nerves are being nipped in the contracting fibrous tissue which is present in the area of operation.

ABDOMINAL PRESSURE.

DR. HAMMOND T. HINTON (Heytesbury, Wilts) writes: I think the following case may be of some interest as showing what very great pressure the abdominal and other organs will put up with when that pressure is of a gradually-increasing character: I first saw M. F., a widow, aged 76, a multipara, fourteen years ago, and diagnosed fairly large cystic ovarian tumour without many adhesions. She flatly refused to be operated upon, and would not be tapped. The tumour gradually grew, and just before she died the circumference of the abdomen was just short of 6 ft. There was some general dropsy before she died, and heart failure from pressure was the immediate cause of death. No *post-mortem* examination was allowed, but in order to get the body into a moderate coffin, I tapped the ovarian cyst and drew off from it alone (no ascitic fluid) 7 gallons 2 quarts 21 ounces, and there was perhaps a couple of pints still left in the cyst.

CHEMISTS TO DOCTORS AND SELF-DISPENSERS.

PRESCRIBER writes: The admirable letter in the BRITISH MEDICAL JOURNAL of January 11th, signed "Common Sense," I entirely endorse, but the public are not altogether to blame, as I regret to say every ordinary chemist will state that prescriptions are now seldom written that do not contain "tabs." If the firms who issue the variety of compounded specialities would agree to the trade-note monetary loss to the profession by the public obtaining a fresh supply of any compounded drugs ordered by the medical man each time they went to prescribe such, they would cease to supply such to private persons, and it would be impossible for the public to procure such articles without seeing the prescriber more than the most frequent patient could afford. Then doctors would not be bothered to write prescriptions or obtain their hints of what to prescribe from the firms' "own compounded drugs" and would give a list of the constituents and the remedy in writing, thus avoiding errors. Surely these things ought not to be. Any observant medical man on looking round a patient's bedroom will be certain to find bottles bearing labels of the commonest every-day medicines or phials containing the familiarly known compounded drugs, which, if found of any use, are recommended on to any friend complaining of similar symptoms, who will also do likewise, and so this continuous loss to the profession is perpetuated.

BRITISH WATER FOR THE INDIANS.

It is announced that Captain [illegible] and Sailmaker of Covington, Kentucky, have formed a company for the supply of water from the Thames. [illegible] Agent of the International River Indian Water Company are at Constantinople, and there is an agency at Jerusalem. The water from the sacred stream will be sent to the United States in barrels each containing 60 gallons. Experts report that after the water and all the barrels after careful disinfection. The water is bottled in Arundel and distributed about the world. The Ottoman Government is said to have granted the company a concession giving it exclusive [illegible] rights to the water. The Indians [illegible] the stamp of the Turkish Government and part of the [illegible] Consul at Jerusalem. Duty is paid on the water to the Turkish Government and to a fairly large amount the Governor of Jerusalem. We do not know whether the natives are used for baptismal purposes or not, having [illegible] properties, but we presume that the Sultan at present in power [illegible] that the Act of Parliament to prevent adulteration will be enforced.

COST OF MOTOR CAR.

ECONOMY writes: The following notes may be of interest t your readers. Two years ago I bought one of Allday's 8-h.p. three-seaters, shod with De Nevers' solid tyres on all fou wheels. I have now done over 6,000 miles, and the cost ha been as follows:

	£	s.	d.
1905.—Petrol, oil, repairs, sundries	9	2	6
1906.—Petrol, oil, repairs, licences, sundries...	12	8	5
Total, two years	21	10	11

The tyres are good enough for another six months. M groom cleans and greases the car, and I drive myself. I ca climb any hill, and average anything between fifteen an twenty miles an hour, depending on condition of the roads

OBSTETRIC NOTES.

DR. J. REID (London, E.C.) sends the following:

Placenta Praevia.—A multipara, with a history of m carriages and full-time children, suffered on July 22nd fro haemorrhage, which persisted all day, in spite of ergot an rest in bed. The placenta, symmetrically attached round t os, was raised at one side by the hand, and the feet of t dead 6-month child were seized, an act followed by spee delivery. Although the patient was blanched from loss blood and clots, there was no subsequent haemorrhage. T placenta followed the child, and recovery was uneventfu The haemorrhage was attributed to lifting a bedstead fortnight previously, but the patient had done her hous hold work without trouble up to that date.

Unusual Abortion.—The patient had slight haemorrha on two successive days, and on the evening of the third s went out and had a free escape of amniotic fluid. On exam nation I found the end of the cord extending for some inch through a contracted os into the vagina. With ergot, a fet of between 4 or 5 months, with haemorrhage along the spi and unclosed neurenteric canal, came away. The os w then closed, no sign of after-products was found at 7 a 9 p.m. I thought the placenta must have passed with t amniotic fluid, and parted from its funicular attachme At 4 a.m. I was called and found haemorrhage, clots an patulous os, but no sign of placenta. I gave sodium s cylate, as the patient had signs of rheumatism. The placen which had signs of chorionic degeneration, came away bef 9 a.m. There were no other symptoms of interest. It m be rare to find the broken end of a cord with child a placenta in the uterus. I regret that I cannot accept Pye-Smith's teaching on rheumatism. An *x*-ray photogra will show deposits on fibrous structures with no active jo mischief. It seems to me that science points to rheumati as a chronic constitutional disease, like syphilis, with qu as many varied attacks on organs. The *ulcerative* appe ances are very doubtfully rheumatic. *When* collected, m diseased entities will be described as rheumatic manif tations.

A USE FOR VACCINATION.

DR R. H. ASHWIN, of Market Weighton, E. Yorks, has sent the *Guy's Hospital Gazette* a copy of the following let lately received by him:

"Mr. Dr. A.,—Will you come and vaccination baby n week, as I do not want her to get any older? Yours stra Mrs. F. M."

As Dr Ashwin points out, the writer seems to go further than Mr. Lupton in the estimated effect of v cination.

A HORSE DOCTOR AND AN ASS.

THE following story, which is told by Professor Wilki Jackson in his *Persia, Past and Present*, has a moral t might easily find an application in countries nearer ho A man suffering from inflamed eyes consulted a h doctor, who gave him some of the salve which he used his four-footed patients. The result of the treatment that the man lost his eyesight. He brought an action damages against the horse-doctor. The judge, after weighi the evidence, decided that no damages could be recove for the man would never have gone to a veterinarian if had not been an ass. Oh, learned judge! A sec Daniel.

SCALE OF CHARGES FOR ADVERTISEMENTS IN TH BRITISH MEDICAL JOURNAL.

Eight lines and under	£0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page ...	8	0	0

An average line contains six words.

Advertisements should be delivered, addressed to the Ma at the Office, not later than first post on Wednesday morn preceding publication, and if not paid for at the time, should be accompanied by a reference.

Postal Orders should be made payable to the Publishing Ma Annual Subscription, at the General Post Office, London, Stamps and Cheques must be paid in postage.

NOTICE.—It is against the rules of the Post Office to receive letters Private Boxes addressed either in full in Italic or Numbers.

A Clinical Lecture

ON

SOME COMMON ERRORS IN THE DIET AND GENERAL HYGIENE OF CHILDREN.

Delivered at the Hospital for Sick Children, Great Ormond Street.

By A. F. VOELCKER, M.D., F.R.C.P.,

Physician to Out-Patients, Middlesex Hospital; and Physician, Hospital for Sick Children, Great Ormond Street.

The out-patient department and the wards of a large children's hospital are the places to study the results of many of the errors of management of children, but what is wanted is a more careful study of disease in the making rather than when fully developed. How much distress, pain, time, and expense could we save children and parents if we would only investigate for ourselves the conditions under which children live, not only in the poorer classes, from which our hospital patients are drawn, but also in the upper classes, in which too often the hygienic management of children is left in the hands of that too-often ignorant and self-satisfied curse—the "experienced nurse"! I often urge students to use their eyes as they walk up to the hospital, and to observe how disease is being made under their very eyes, and many a salutary lesson might be learnt by medical men if they would only contrast the advice they give and the manner in which this advice is followed. It is discouraging, after some ten minutes spent in the careful instruction of a parent in the way in which a child should be dieted, to see the reward of good behaviour, or the bribes for quietness, being bestowed with an absolute disregard to what has just been advised. It is because I feel very strongly that unless we recognize what actually takes place in our patients when they are not under the doctor's eye, we run a great risk not only of doing our patients little or no good but we bring discredit on our art and fail, often quite deservedly, in our treatment. I am led to make these remarks because I think that at the present time attention to these details is considered beneath a doctor's notice and because almost the last thing that troubles the student is the question of treatment.

Diet and Feeding.

At the risk of a charge of flogging a dead horse, I urge what we as medical men cannot insist on too strongly—the necessity for mothers to nurse their own infants. The objections which are raised to this are, the unwillingness of the mother to be tied down and the necessity for foregoing many social pleasures and duties. Such reasons are unmaternal and should not weigh with us, but we must also remember that in addition to the temptation not to be tied too closely to the nursery there is often very considerable pressure exerted on both mother and doctor by the husband; we should remember this when we are endeavouring to get a mother to do her duty to her offspring. In these cases, instead of directing our arguments to the mother, we should do much better if we boldly tackled the head of the house and pointed out to him how much safer it was for both mother and child if the child were breast-fed. An immense amount of evil is done by monthly nurses by the persistent efforts some of them make to induce the mothers not to suckle their infants. I may perhaps be asked why it is that this should be the case. Well, there are three reasons which I can think of. First, it is a popular suggestion with the parents in too many cases; secondly, it saves the nurse, or, as she would say, the mother, trouble. If an infant is breast-fed it has to be brought to its mother every two to three hours, and while it is being fed it has to be waited for, and then put back into its cot, and this we can well imagine is not a popular proceeding with the nurse. In the third place, too often the monthly nurse's ideal is to leave a fat and heavy baby when "her month is up." Smithfield dead meat market is her ideal, and provided the babe puts on weight as long as she is in charge all is well. I wish that there was some way by which those who start mischief through artificial feeding could be made to suffer for the later results of their actions. It is surprising how much wrong feeding some children will put up with, but most of these results of artificial feeding only show themselves some time after the monthly nurse has taken her departure, with the promise of her re-engagement for the next "if it ever should come."

The mention of the increase in weight, which is so commonly urged as a defence of the practice of artificial feeding of infants, reminds me of another danger to the happiness of a home into which "number one" has arrived. This danger is the weighing machine. I have called it a danger, not a curse, though it may become the latter. I have known the whole household upset because in a certain few days baby has not gained any weight. There are times when the weighing of infants may give us most valuable information and guidance in treatment, but there are times when much the best course is to send the scales to be cleaned or to get them broken. As a rule, numbers five, six, seven, and eight in a family are not weighed.

As you probably know, there is a widespread belief that cow's milk and mother's milk do not agree, and that a child cannot be brought up on a combination of feeding from these two sources. This, I am glad to say, is combated by the advice we at this hospital give on the pamphlet which we issue on the bringing up of infants. Here you will find it urged that if the mother's milk be insufficient the child should be given cow's milk, suitably diluted, in addition to the breast milk. This heresy that the two do not agree is to be strongly condemned, for it will often be found that, whereas the mother's milk may have been insufficient at first, yet, after a short time, it suffices as the sole form of nourishment for the child. To speak of the endeavours of some mothers to nurse their children as half-hearted is an abuse of terms. Many of these mothers never mean to be bothered with nursing their children, and will seize on any excuse which enables them to pose as unwilling victims of natural defects.

Before you agree to the discontinuance of breast feeding satisfy yourself that the dilution and preparation of the substitute for breast milk has been properly and fairly tried. It is almost laughable to hear what a number of food preparations are in some cases said to have been tried within a short limit of time, and to have been found wanting. It is often thought that because a preparation is not at once retained by a child it is not suitable, and I think that this is one of the reasons why we hear of so many cases which are said to be unable to take cow's milk. Since I have been connected with this hospital—and that is nearly eighteen years—I have hardly come across a single case in which cow's milk, when properly modified, could not be retained. It is a common error to assume that cow's milk does not suit a child because the child happens occasionally to reject some of it. This leads me to mention another error—that it is a good sign for an infant to throw up a little at the end of each feed. The monthly nurse has this as an *idée fixe*, but we should regard it either as a proof that the child has had too much, or, what is more often the case, that the child has taken its food too rapidly. Want of attention to this point of the rapidity with which children take their food leads to discredit being attached to the food rather than to the feeder.

In older children the time taken over the consumption of a meal is a point to which far too little attention has been paid. Individual children vary much in the time they require for a meal, but the variations should be kept within reasonable limits. While the too common habit of bolting food, which I am sure needs no condemnation from me, as it offends all principles whether of physiology or propriety, is, it is true, often inveighed against, far too little attention is paid to the dawdling over meals which leads to so much fancifulness and fastidiousness in children in the matter of likes and dislikes of this and that article of food and encourages moral as well as physical weaknesses. It is quite true that these dawdling ways are met with in the subjects of dyspepsia, but it is to my mind a very important question how far the habits are a cause of the condition which they certainly aggravate. Meal times should be taken seriously, and there is need for greater discipline at table than is generally exercised. Conversation between the courses should be allowed, were it only in the hope of stemming the tide of modern dining-out hospitality, where the intellectual factor of conversation has been annihilated by the necessity of securing for internal consumption what is placed before you before it

is whisked off by the waiter to make room for another glimpse at some culinary triumph. Conversation may be used by a careful parent as the means of regulating the pace with which food is being taken. Encouraged when food is being bolted, forbidden when food is being played with, affording an opportunity for unconventionally conveying instruction, or, rather, information, to children, as well as affording a school of manners, I look upon the banishment entirely to the nursery, away from a parent or properly educated governess, as a grave defect in the present-day way of bringing up children.

The choice of food for a child seems to be influenced by the two considerations of its nutritive value and its effects on the bowels, and it is this latter factor which leads to the abuse of certain articles of diet which, excellent in themselves, may bring about the very conditions they are employed to counteract. There are two very common errors which I should class under this head, and they are the fruit and the porridge shibboleths. I have seen more constipation produced by the administration of these two things than I have seen cases of constipation cured by their employment.

Fruit is an excellent addition to the dietary of children provided that it is recognized that all fruits are not equally useful and that several are not suited for children. I cannot see that the administration of grapes to infants is ever called for, unless from bad feeding there is a scorbutic element in the case, and then there are many more efficacious remedies to be used. Fruits, such as oranges, cherries, plums, while containing sugars and that "something fresh" of which we as yet know so little except its importance, contain a large amount of cellulose, and leave so much undigested residue that the digestion is often upset by their employment; and when we come to the employment of tinned and otherwise preserved fruits, which in the fresh state might have been pardonable, their use becomes absolutely injurious. I once had a child brought to me with a diagnosis of membranous colitis, but an examination of the suspected membrane showed the undigested remains of tinned pineapple.

The great reason urged by those who are victims of the fruit heresy is that fruit prevents constipation. It is perfectly true that the acid tartrates and malates do act as laxatives, as is seen by the aperient effects of fruit juice, but a great deal of the aperient action of fruit is due to the mechanical effects on the mucous membrane and muscular coats of the intestine. The small seeds which do not undergo digestion irritate the bowel, and so cause it to evacuate its contents. But, as we well know, any irritant when repeatedly applied loses its effect. And just as a bad driver will spoil a horse by constantly touching it up with a whip, and a well-meaning parent will secure an almost complete indifference to his admonitions by reason of their repetition, so the bowel learns to take no notice of such recurrent stimuli as seeds and undigested particles of food. It is from this reason that the remarks which I have just made about the fruit question apply equally to the great porridge heresy. Porridge, like some other things coming from the north of the Tweed, is excellent if you do not get too much of it. An occasional dish of porridge will be found a most useful addition to the child's dietary; but if given, at any rate to the Saxon mind, every day, generally has the result of causing more constipation than existed before it was employed to cure this condition. The value of both fruit and porridge is frequently impaired through the amount of sugar, either in the form of syrup or of sugar, taken with these articles. This leads to fermentative processes in the stomach and bowels, and the result is flatulent distension, with accompanying motor palsy of the colon. I do not advise the daily administration of either fruit or porridge, but I know that, when given, say three or four times a week, their use is most satisfactory.

While on this subject I should like to point out to you what an advantage it is not to have too routine a diet in the nursery. In the adult there is the excuse that one cannot be bothered. I am speaking of men, for women I believe live on mutton cutlets and eggs with tea. A lady friend of mine having ordered a fried mackerel and some gooseberry tart for her dinner one day, being asked next day what he would have expressed his satisfaction with the meal of the previous day and asked that it should be repeated, but when the third day arrived and with it the recurring question, "What would you like for dinner to-day?" he irately told the landlady to go on just the same till he told her to stop. He told me afterwards that after about six weeks this diet begins to pall on the average man. I tell you this anecdote that you may remember the bitterness of *toujours perdrix*, and avoid similar errors in the dietary of children. I believe that variation and the element of surprise in children's food is beneficial. I do not refer to the surprises the average cook inflicts on her victims, but the absence of certainty that it is cold meat and rice pudding day; this element of the unknown adds an interest to a child's meals which is, within limits, as beneficial as it is natural. I trust you will not imagine, from my reference to rice pudding, that I wish to hold it up to scorn. At the risk of earning the contempt of my own children I repeatedly proclaim that I prefer a rice pudding to any other. Unfortunately, it seems one of the hardest things to get the modern cook to make a good rice pudding; so conscious does she seem of her weakness in this direction that she tries to mask the nastiness of her bad cooking by the addition of butter, eggs, cocoanut, and other abominations. Good wine needs no bush, and a good rice pudding wants nothing but rice, milk, and sugar. All material in excess of this is unnecessary, but there is one factor which it seems so difficult to get attended to, and that is the time required for cooking. No rice pudding is worth eating which has not had at least three hours' cooking. You will perhaps pardon me if I tell you how a rice pudding should be prepared:

Just cover the bottom of the pudding dish with rice, which may, but need not be, previously washed in cold water and subsequently dried: nearly fill up the dish with whole milk, add a little sugar, place this in a slow oven for at least three hours, and in the last ten to fifteen minutes bring it to the hotter part of the oven, so that the skin on the top may get nice and brown. Thus cooked the grains of rice will be found quite soft, thoroughly impregnated with milk, and the starch will have undergone partial conversion to sugar.

A constant difficulty which confronts us in the dietary of a child is the aversion children very frequently show to green vegetables. These are said, like many other nasty things, to be good for them. I am quite prepared to admit that they may be good, but I am also convinced that any benefit is largely neutralized by the dislike children evince to taking them, and the consequent upset to their digestion and even taking of food. It will be found that the domestic bubble and squeak is a very successful mode of getting children to take green vegetable food. I do not think it is advisable to insist on green vegetables being taken if it in any way puts the child off its food.

It is difficult with some children to get a sufficient amount of fat taken. This aversion should be overcome by gradually accustoming the child to take increasing quantities of fat with the meals. At first the fat should be cut up finely and hidden with the lean or among the potatoes, but it must be finely cut up so that it cannot be picked out. A not inconsiderable amount of fat can be taken by a child in the form of the gravy which runs from the meat when it is cut into, I do not mean the usual washy coloured fluid handed round in the sauce tureen. This gravy which runs from the meat is very useful as an addition to the diet of an infant after six or seven months of age. When used for the smaller children it can be added to milk or it can be soaked into bread or potato for children who have cut their teeth and who are capable of digesting starchy food. In giving this gravy to infants it will often be found that it is too rich, that is, that it contains too much fat. It will be found then that the best thing to do is to let the gravy cool, remove the greater part of the solidified fat from the top, and then heat the gravy before giving it. One incidental advantage of this plan is that the solidified fat forms a crust over the meat juice and prevents contamination and decomposition, a point to be remembered when we order gravy for children in hot weather. Dripping is a welcome and useful manner of administering fat to children. In the artificial feeding of infants one of the commonest errors is to give an insufficient supply of fat. This we try to obviate by the addition of cream, and if the cream is fresh we shall do well. Cream, however, is a costly article, and, when purchased separately, introduces a fresh element of possible danger into the food of an infant. I think it safer to buy the whole milk, to separate the cream from a part, and to add this cream to the rest of the whole

milk. This little operation you will sometimes find has been already performed for you by the nurse. It is very easy to see that those who get the first look in at the milk after it has stood will have a very considerably higher percentage of fat in the milk they take than in the milk they leave. Attention should be drawn to this, for it is quite possible to send a very good milk up to the nursery and for the child either to get an excess of cream in its early and a deficiency of cream in its later feeds, or for the child to get deprived of the proper amount of cream altogether. When milk is delivered in bottles, as is so often the case, it is well to see that the milk is mixed up before it is used for the children. It is best poured out into jugs. One other point I would urge on you is the necessity of seeing where the milk is kept. Of course, when delivered in bottles, as long as the bottles are not opened it does not matter where they are put, provided that it is in a cool place; but when open or when the milk is sent up in cans or jugs it is of vital importance to see that contamination is as far as possible avoided. A bathroom or lavatory may be a cool place and a cupboard may be a place where the milk is safe from the children, but it is not so certain that the children are safe from the milk. Quite recently I saw in a case of feeding difficulty in an infant the milk carefully sterilized in the Soxhlet's apparatus, poured out into a jug, and covered over by a piece of a well known and widely-read halfpenny morning journal.

The question of boiled *versus* unboiled milk in towns is one in which I would discriminate between the older and the younger children. The younger should have all their milk boiled, but in the case of the older, when there is a distinct aversion to the taste of boiled milk—and this is far from infrequent—it is better to get the child to take a sufficiency of milk and run the very small risk which is incurred with unboiled milk rather than deprive the child of an excellent article of diet.

Clothing.

One of the commonest errors in the clothing of children lies in the exaltation of the decorative at the expense of the protective function of clothes. If we would only remember how much heat a child loses from exposed surfaces, we shall have no difficulty in setting our face strongly against those forms of outdoor clothing which appear to ape the ballet-dancer's sketchy costume. In healthy children there may, perhaps, be some question as to whether any portion of the lower limbs should be left bare, but in the case of delicate children, and especially those who are subject to bronchial or intestinal catarrh, as well as those of rheumatic stock, there ought to be no hesitation in forbidding such exposure. It is urged that this style of—shall I say clothing or unclothing?—hardens the child; but because a child can emerge from risks without injury, it does not follow that the running of the risk—for such it is—is justified. Whenever you have a case of bronchitis to treat, do not be content to order the customary stimulant expectorant and the liniment, but satisfy yourself that the child is being properly protected from exposure to cold from insufficient clothing. It is only too common to see the chest of a child so cluttered up with clothing that the act of respiration involves the movement of a heavy and often constricting mass of clothes, while the limbs in their pathetic blueness are begging for even a scrap to fall from the overladen chest. Some years ago, when I was seeing out-patients, I was in the habit of ordering the parents to cover up the limbs with stockings, and we had a Sister who used to enable the mothers to secure such garments for the patients; if these children were brought up without such stockings I would not prescribe for them. This may seem to you rather drastic, but I believe that protection without ipecacuanha is better than ipecacuanha without protection. At the present time the primitive school of clothing seems to have the upper hand, but this is but a passing fancy; next year it will be different. The no-hat, no-stockings, and no-boot brigade seems to be victorious at present. While last year the children's hats were of a size and weight and decorative splendour which would have satisfied both a savage and a milliner, to-day I see two rosettes united by a piece of ribband regarded as the appropriate protection from weather in which it is deemed inhuman not to provide both the chauffeur and the bus horse with protective straw hats. I cannot believe that it is a good thing for children to walk about in hot weather without some adequate protection from the sun, especially when such a tendency to cerebral congestion is favoured by such acts as paddling in the water. I know of one doctor at the seaside who looks on the practice of paddling as a never-failing source of professional income, it being a proceeding which he absolutely forbids to his own children. It is quite true that our climate only occasionally renders precautions against insolation at all called for.

In the last two or three years there has been a boom in sandals—they are so classical, so good for the feet, allow full play to the muscles, and so on. Yes, some of this is true, but why, if they are so useful in the morning and afternoon, why are they replaced by the conventional shoe for the dancing lesson or for the evening party? I cannot think that sandals, either in town or in country, are sufficient protection to the feet; and the risks of the accidental inoculation with septic organisms, tubercle from expectorated material, or even with tetanus, should be borne in mind. Sandals may be economical in the matter of repairs, they may be classic, but I do not see my way to recommend them for outdoor use. In Scotland, as you know, children, and many of the bigger girls, go about without stockings, but I think Donald would have been a little startled had he met, as I did the other morning, a boy about 8 or 9 years of age, clad partly in a green silk jacket and vest, a kilt—tartan unrecognizable—and a pair of sandals. He was a victim, also, of the no-hat fad. Hygienic clothing for children need not insult one's sense of the beautiful, nor should a parent either sacrifice health and comfort to fashion or a sense of the beautiful to a passing so-called hygienic whim.

As we are all human, and as we are and shall be the slaves of fashion, if not of fad, let us insist on having every child protected from neck to knee, if not to ankle, with a suitable undergarment. Once this is conceded, provided that there be no mechanical interference with respiration and locomotion, we may let fancy, folly, and fashion amuse themselves with the unimportant superstructures. We should strive to obtain an equal distribution of heat over the external surface, and with this object we should prevent the too unequal distribution of the clothing. This unequal distribution of clothing is very common, and is to be discountenanced.

Ventilation.

One of the cheering signs of an approach to more common-sense views as to the processes of respiration is to be found in the distinct advance which the public, as well as the profession, has made in taking advantage of the benefits consequent upon the utilization of fresh air. It is being gradually recognized that children do not catch their death of cold because the bedroom window is left open day and night. Doctors are even learning that the atmosphere contains quite an appreciable amount of the same gas which they purchase at no small cost in bottles, and that fresh air, provided that the body is kept sufficiently warm, acts as a great sleep producer and restorer of strength. While we are gradually waking to these facts, I think we still err in the very insufficient way in which we provide for the ventilation of the cots and perambulators in which infants pass so much of their time asleep. In the usual cot or bassinette the infant will be found lying at the bottom of an unventilated hollow, something like the Grotto del Cane at Naples. I do not think it is a good plan to have the sides of the cot completely shut in by impervious textures; some shelter from draughts is necessary in the case of infants, but along with this there should be small spaces left for the outflow of the respired air. I have recently seen a form of lethal chamber posing as a perambulator with a double hood meeting over the top to protect the finery of the unfortunate inmates from passing showers. Such a device must exercise a very injurious influence on the health of children, even though they be shut up in these hooded perambulators for a short time only. Quite apart from the question of these hooded perambulators, I am sure that there is often very insufficient ventilation in many perambulators, where, in addition to the child being sunk into a sleepy hollow, its face is covered up in a beautiful specimen of the lacemaker's art.

I cannot leave the subject of perambulators without trying to elicit your disapproval of the mail-cart, which at present seems to be popular. It may be cheap, it may be

compact, and it may be taken without extra cost by train but that is no reason why a child should be carried along with its nose, eyes, and mouth only about 2 ft. above the level of the road, meeting much more dirt and dust of all kinds than it would at a higher level, and certainly exposed to more perils from accidents in the way of collisions with things animate and inanimate than would be the case in the older form of mail-cart. If we remember that in these low carts the child takes the place of the cowcatcher of the transatlantic locomotive we shall have a difficult task to convince ourselves or anyone else that their use is advisable.

Exercise.

In the first place there is the question of walking. How often are we told that children should be kept off their feet, and how often do we ourselves order it! I do not think we need ever keep a healthy child off its feet. If a child wishes to walk I let it, even if it be the subject of active rickets, but please note that I make the very essential proviso that it should want to walk. For the last fifteen years I have not ordered a single child to wear a splint to keep it off its legs, and I have never had occasion to regret this advice. The evils—and they are undoubted—that arise from walking are due to walking a child, and not to the child walking. Children are very frequently walked too far. I often wish that fond parents would ascertain how far their young hopeful goes when he is sent out for a walk. So much depends where the nurse's friend lives or walks, or where other attractions are situated. If the shops are far off, woe betide the child. The nurse's desires should not dictate the distance or duration of the walk. What good can a walk taken in a crowded thoroughfare such as Oxford Street or Regent Street do a child who has continually to be dragged out of the way of every eager bargain hunter? and we know how utterly absorbed they are, and we also must remember that the nurses are very human, and can hardly look after children and alarming sacrifices at the same time. I do not wish you to think that I believe all nurses devoid of a proper sense of their duty to their charges, but I do think that parents certainly do not exercise sufficient control and supervision over the places to which their children are taken for exercise. If you will only think medically the next time you are in a hurry to get along Oxford Street, you will, I am convinced, allow the truth of my assertion that insufficient control is exercised.

Distance and locality, however, are not the only points which need concern us. The old sporting maxim that it is the "pace which kills" holds painfully true with regard to children. It may seem superfluous to say that sick children should not be hurried, but it is not. If any of you will come along in the neighbourhood of this hospital at about five minutes to ten o'clock and see the poor little children being dragged along to arrive by ten, at which time the doors of our out-patient department are closed, you will see why it is that, in spite of the most careful medication and in spite of careful injunctions against such things as hurrying, any good you may have done to a case is being more than undone by the carelessness of a mother who, leaving it to the last, endeavours to be in time at the expense of her child's welfare. As I said in an earlier part of my lecture, it would be a useful thing if we medical men would make a point of seeing to what extent our advice was being followed.

Evil truly is often wrought more by want of thought than by want of heart. But healthy children are not exempt from the evils that attend too rapid walking. Watch the nurse-girl as she hurries along wheeling a perambulator and leading another child by the hand. How often is what we might call the medical limit exceeded. I have noted that in these cases the nurse often has a perambulator, because there is no doubt that the pace is greater when a perambulator is being wheeled than when there is none. It is difficult to regulate one's pace to that of a child, but it is essential unless we would do the child harm.

Among the poor the mother, unable to leave her children at home, is forced to take them with her while she does her shopping, and as she has to get back as soon as possible there is not much chance of the pace being limited by anything but the forced draught of the hungriest days of the week. Among the better classes there is no such excuse, and I am sure that we ought to direct more attention to this evil than we do. It is this that too often makes the walk a thing hated of the children, and it is this too that accounts for many of the cases of curved legs and yielding ankles which come under our professional notice.

When I spoke of the increased pace which a nurse was apt to put on when wheeling a perambulator I did not mean to infer that a nurse should not wheel a perambulator and take care of another child or children at the same time; far from it, for nothing is so good for little ones who are able to get about as a judicious mixing of walking and being wheeled, neither being for any prolonged period. It is often well to have the child carried through the streets and then allowed to run about in the gardens, squares, or parks. After a child has been playing about and probably got tired, it has too often to hurry home to be in time for dinner; this is a very common error, and we should insist that a child has time for a rest before its meal and does not come in hot and tired to its meal. Those of you who have any knowledge of the open-air treatment of tuberculosis, in which we wish to raise the resistance of the body to as high a degree as possible, will remember the importance which is attached to the necessity of rest before meals.

Sleep.

We are often asked whether a child should be allowed to sleep out of doors. I do not propose to answer this question with a Yes or a No; but of this I am sure, that the idea of getting children to sleep while they are being bumped or joggled in a perambulator is not good, for the rest is not as great as when the child is lying quietly in its bed or cot. A sleeping child out of doors may save the nurse much trouble while out of doors, but most children are best awake when out and put quietly to bed indoors. When there is only one infant in the house there is often an awful hush pervading the whole house because baby is asleep. It is a mistake to foster the idea of this necessity for silence. Children do not require all this quiet; when once asleep they will be oblivious to most noises, and it is as well that they should be accustomed to sleeping in spite of reasonable noises. Of course there are very nervous children who will wake at the slightest sound, but these are not found in large families. It may be advisable to darken a room for a few minutes when a child is put into bed to sleep, but it is a mistake to keep the room darkened, because the ventilation of the room is interfered with by the blind being drawn. With bigger children the terror of darkness and of isolation must be borne in mind, and the use of a night-light temporarily will make all the difference to a child's getting rest, mental as well as physical.

There is one point in connexion with sleep to which I wish to call your attention. There is a very natural fear that if we wake a child up and make him pass his water he will not go to sleep again. It will, however, be found that this fear is groundless, and, consequently, a child should be got up and made to pass its water during the night. The whole question of micturition is one which is too often neglected. Many children are allowed to go for far too long periods without emptying the bladder. This may arise from shyness, or much more often from the child not wanting to be interrupted in its play. In hospital the children pass their water every three hours. I do not, of course, refer to infants, who will wet themselves, when bottle-fed, nearly every half-hour. A child between 3 and 6 years of age should pass his water every three hours during the daytime.

Baths.

Baths for children are essential, but a great deal more care should be exercised in the drying of children after the bath. Children are often put to bed after baths with their hair almost dripping wet, with the flexures of their joints undried, and, as this process of being put to bed is far too often a most undesirable training in the gentle art of dawdling, the evening bath and its accompanying circumstances are most undesirable. After a child has had his bath he should be put to bed, and have his supper in bed, and not be allowed to potter about in the nurseries. Bed-time is bed time, and the bath, supper, and tooth-brush should terminate the day temporal.

There is much that I have left unsaid and much that

ght have been better said, but, at the risk of being con-
ered trivial and unmedical, I have ventured to bring
ore you certain observations about the occurrence of
ors which exist in the management of children, and
ich I trust may prove of use to us as we medical men
e our right place as the instructors of the community.

Remarks
ON
'OST-PARTUM HAEMORRHAGE.

BEING AN EXTRACT FROM AN ADDRESS ON UTERINE HAEMORRHAGE DELIVERED BEFORE THE CLINICAL SOCIETY OF MANCHESTER.

BY JOHN F. LE PAGE, M.D.,
PRESIDENT OF THE SOCIETY.

post-partum haemorrhage it may justly be said that in whole range of surgery there is no exigency which e imperatively demands instant action. There is olutely no time for deliberation. No time for calling mind the innumerable things which the authorities you should be done; for remembering the particular er in which you should proceed; the time you may nd on each attempt; for ascertaining the precise cause ne haemorrhage. There is no time for any one of these ngs. Time there is only for instant, as it were intuitive, on. Every man who has seen a really severe case of *-partum* haemorrhage knows only too well that if he s not do something then and there his patient will, in ery few minutes, be past all that human skill can do ngenuity devise. Something. Yes; not waste his eless time in the framing of a line of treatment likely nost accord with conventional teaching based on olutely false premisses.

will not enumerate all the measures which, according textbooks and many authoritative pronouncements, uld be tried, and I could not if I would. But here are e:

essure on the fundus uteri and manipulations of the us.
troduction of the hand to excite contraction.
ld water applied with cloths to the abdomen or poured some height.
ot and cold water alternately, used in the same way.
got by the mouth or ergotine subcutaneously.
jection of ether over the abdomen.
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rnes's or other bag introduced into the uterus and nded with cold water.
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e faradic current.
jection of, or swabbing the uterus with, perchloride of

ese and many other measures, equally unscientific delusive, constitute the munitions of war of the rtunate practitioner who with them has to combat h. I do not mean to say that not one, or not all, of e measures is ever followed by a cessation of haemor- é. Syncope is a very effective haemostatic. And a large number of cases of so-called *post-partum* morrhage are cases in which the haemorrhage is the lt of the prevalent, but unmitigatedly bad, practice rcibly following down the uterus at the end of and ediately after the second stage, and thus detaching extruding the placenta before the uterine pause h normally follows its supreme efforts. If retrac- of the tired muscle had not taken place the gaping es naturally poured out blood, but with, or entirely out, any stimulative interference the uterus, after its al rest, contracts and the haemorrhage ceases. This ling is of course *post partum*, but it is not what is t by *post-partum* haemorrhage. In the same category be placed cases of traumatic haemorrhage, of bleed- from retention of a portion of placenta, etc. These ases which seem to favour a wrong and impotent ment, and bring confusion on statistics.

define *post-partum* haemorrhage as a haemorrhage h is the result of an atonic state of the uterine le, accidental, acquired, or constitutional.

this—assuredly one of the most appalling and un-nerving conditions we have to confront—it is absolutely necessary that we should have the very clearest conception both of what is going on and of what we should instantly do.

All the more is this so seeing that any man, one perhaps who has never seen a severe case before, may at any moment be called upon to face impending death. His patient has perhaps just thanked him with a grateful smile for all his kindness and help. He turns to her in a few moments to see a ghastly countenance and to hear a whisper imploring for more air. A moment more, he can find no pulse at the wrist, she gasps for air, her skin is livid, cold, and bathed in profuse perspiration; her eyes are half-closed and upturned; vision has completely gone, and respiration is evidenced only by short irregular gasps; he realizes that she is dying. Yes, it is so, *if* he does not instantly do something.

But all the textbooks, all the authorities, tell him what to do. They tell him he must bring to mind all the dozen or more possible causes, for they may influence him as to which of the innumerable things he has to try he will begin with. Will he inject ergot? Will he begin by kneading the uterus, and follow this up with cold water and hot water? Will he—what will he not do? Many years ago a practitioner, bewildered by the multitude of his resources, by their failure one by one, and by the consequent peril, knelt by the bedside and prayed for his unfortunate patient. She died, and—well, his name was struck off the *Register*. All this because he accepted the absurd, the altogether irrational dictum of the textbooks, that the one thing he must do was to get—to *make*—the uterus to contract.

Here is what some authors, whose teaching is still taught in our colleges, reproduced in our current textbooks, and required of students in their examination, say:

PLAYFAIR says: There are only two measures—"those which act by the production of uterine contraction, and those which act by producing thrombosis in the vessels." "It is satisfactory to know that recovery often takes place." "*If* we can check the haemorrhage while there is still some power of reaction left, however slight, we may not unreasonably hope for eventual recovery." "The prolonged use of all these remedies, . . . if they fail to excite contraction rapidly, will certainly prove injurious."

FOTHERGILL says: "Contraction of the uterus, and, if that fails, thrombosis."

GALABIN says: "The essential point in treatment is to secure contraction of the uterus, and by far the greater part of the value of all means used for the arrest of haemorrhage consists in their efficacy in producing this effect."

DAKIN says: "In following this treatment the various manœuvres must succeed one another rapidly."

BARNES says: "If the nervous exhaustion is so great that irritability is lost these agents are useless or injurious. The patient may, indeed, rally after syncope, but it may be truly said that at this point the art of the physician fails." "It fails unless he has the courage to try perchloride or persulphate of iron."

Is it not abundantly evident that not one of the measures, iterated *ad nauseam*, can by any possibility be effective unless there is nervous force present capable of responding to irritation? A bolder spirit has even suggested recently, after following the same lines, and as a very *dernier ressort*, that we try the removal of the uterus. History, however, does not relate whether he has yet found opportunity for putting this heroic measure into practice. Short of this climax, you are told that thrombosis with iron is the very last thing that can be done. If it does not succeed, at this point, "the art of the physician fails." Very far from it. It is here that art and a juster conception of the truth which underlies much error, dawns.

But, Playfair says, "Recovery often takes place." Yes; in some cases Nature comes to her aid, and by syncope and thrombosis arrests haemorrhage, and the rested uterus eventually responds to the nerve call. In others, in which the actual loss of blood has been relatively small, the uterine muscle, wearied by prolonged labour, prolongs its normal pause until waked up, as it were, by the nervous energy still remaining after the haemorrhage caused by denusion, and probably extrusion, of the placenta by ill-advised manual interference. The result, however, often is incomplete retraction, pronounced anaemia, and subinvolution. The fact that some slighter cases—cases in which there is really no atony of the uterus, but simply rest after toil—do respond to stimulation, is no justification whatever for allowing a critical condition to develop

rapidly, whilst innumerable and unsuccessful efforts are made to obtain contraction.

I have before me a letter from the Registrar-General, in which he informs me that the deaths registered last year in England and Wales from "flooding" numbered 619. On the average, then, nearly two women on every week-day throughout the year 1905 died from "flooding" in England and Wales alone. This is a striking tribute to the insufficiency and the futility of the strenuous efforts made by our profession on lines which are supported alone by tradition and are wholly innocent of reason. It will be said that the word "flooding" probably comprises several forms; a further communication from the Registrar-General explains that all the 619 deaths are certified as from placenta praevia, "flooding," or *post-partum* haemorrhage, and that other haemorrhages are not included. The main principles of treatment, therefore, apply to all the cases. If, as I aver, these haemorrhages should never be fatal, then not one of those of the 619 who were attended by qualified practitioners should have died.

If after the third stage the uterus did not contract before there was any haemorrhage, why in the name of common sense should we, when the system is drained of vital fluid and the whole nervous system is paralysed, hope for a miracle? Hope that the impotent uterus will, in response to equally impotent castigations, take as it were an independent life, and rhythmically contract and retract itself into a firm and vital organ, whilst all around it is practically dead?

It is verily past understanding that whilst every one, without the slightest hesitation, accepts and fully endorses as absolutely sound the rules of surgery anent the arrest of haemorrhage, those rules are entirely ignored when from flooding the life of a woman is in the balance.

It is now just twenty-five years since I published my protest against the treatment of *post-partum* haemorrhage. It then was, as it is now, the taught and accepted dogma, as unalterable as the laws of the Medes and Persians.

What should we say of a water-department engineer who, when a water main burst, immediately sent for every servant in his employ to attempt to plug the broken pipe? I think a child would say: "Turn off the main." I have said, "Turn it off at the main" for the last quarter of a century. And I say now that this is the one thing which should be immediately done, the one rational initial treatment in all cases of *post-partum* haemorrhage. Shut off the current along the uterine arteries by compressing the abdominal aorta. Everything is in favour of this procedure. It is done in a moment; it is done without the smallest difficulty; it is absolutely and instantly effective. Effective in what? In causing the uterus to contract? Certainly not; that is impossible. Effective in immediately restraining the pouring out of blood, which is the one primary indication.

But Playfair says compressing the aorta is a "momentary resource to give time to apply other measures," such as kneading the uterus, friction, ice in the uterus, injection of cold water into the rectum, etc. Barnes says: "Compression kept up for a minute will often give time for the contraction of the uterus—a momentary resource." A perfectly fair inference is that, had these authorities been surgeons, they would, in the case of a severed limb, have applied a tourniquet *just for a minute*, to give a moment's time to use ice, styptics, and what not to the spouting arteries. It is too absurd.

What have we before us? The uterus is atonic. Its vessels gaping are, or were, so long as any blood tension remained, pouring out blood. There is marked collapse. The nerve centres which control uterine contractions, and the higher centres, which control cardiac action and respiration, are devitalized.

The first indication is to prevent any further haemorrhage.

The second is to revitalize the nerve centres, which can only be done by increasing the volume and current of the blood.

And the third indication is, having restored blood tension and nervous energy, to assist, now possible, uterine contraction.

A typical and very extreme case will best illustrate these principles of treatment.

E. M., aged 29, multipara, had been delivered half an ho when I received an urgent request to attend. On entering t house I was told she was dead. In the bedroom I found Dr. and Dr. Y. There was much blood on the floor. The patie was livid: the radial pulse could not be felt, and respirati could not be observed. The eyes were upturned, and did n respond to touch, the pupils dilated. I instantly thrust a ha sofa pillow under the loins. Compressed the aorta with t left hand. Had both legs raised perpendicularly to the be and held so by the ankles; and both arms raised and held in same way. A sheet was torn up for bandages, which Dr. ran firmly up both legs and both arms; 2 oz. of brandy, wi 2 oz. of hot water were injected into the rectum, and the arr were then lowered. Pulsation of the aorta rapidly increase My right hand, rendered aseptic, was cautiously passed in the uterus and blood clots were cleared away. Dr. X. the with both hands, firmly grasped my closed hand. The ao was now partly released, and there was no haemorrhage. T patient looked about and wished to speak. The uterus co tracting firmly, I withdrew my hand, lowered the legs, releas the aorta, and injected ergotine. Brandy and water was tak eagerly, the sofa pillow was removed, and a tight bandage wi hard lateral pads put on. The pulse at the wrist was goo the temperature of the surface increasing, the respiration The removal of bandages was commenced, but on unwindi the right arm and slowly loosening the left there was slig pallor, but she was quite safe. Nutriment taken freely. desired that one of her medical attendants should constant remain through the night, and directed that the leg bandag be very slowly loosened at intervals, depending on the effect a on the amount of liquid nutriment taken. She slept two hou and three and a half hours. The bandages were entirely moved in three hours. Notwithstanding anaemia, she made good recovery, and was up on the twentieth day for a sho time.

This was unquestionably a very severe case, and as suc serves well for illustrating and elucidating the line treatment and the mode of carrying it out. Having re dered any further serious haemorrhage impossible, t next step was not to try to make the uterus contra which would have been absolutely futile, but to resto vitality—active vitality—so that the uterus might ha power to contract.

A very elementary school physiology will teach that muscle cannot contract without innervation, any mo than can an electric motor work without current.

Taking the steps in their order: I raise the pelvis cause blood to gravitate towards the heart and brain, a to prevent bleeding from the uterine and ovarian veir The aorta is compressed to immediately arrest arteri haemorrhage. The spinal column beneath and below t umbilicus is very prominent and broad, and for the leng of 3 or 4 in. forms an admirable *point de resistance*, for t aorta lies immediately over it. Compression is best ma by the outer, the ulnar, portion of the left clenched han than which nothing could be more convenient and effe tive. Pressure should at short intervals be made to sli from one part to another of the available 3 or 4 in., th no injury be done to the sympathetic system of nerv which forms a network around the vessel, and should continued until uterine contraction is secured, even if th be delayed for one or two hours. Its release must alwa be very gradual; the greatest care in this particular essential. An important fact is that, although no blood allowed to pass the compressing hand, there is still sufficient, but very limited, flow through the ovari arteries to maintain uterine vitality.

I raise the legs and arms to transmit their blood in the trunk, and then bandage them firmly to prevent t return of blood when they are lowered. The effect of th manœuvre is that in many cases a tension of whole blo approaching the normal is attained in one or two minute Ergot and other remedial means are at once available.

The hand, rendered aseptic, is then very careful passed into the uterus—first, to detect any possi laceration of the body or cervix or any remaining porti of placenta; and, secondly, to afford a *point d'appui* grasping and compressing the uterus from outsi having elevated the pelvis and limbs, it may be thoug by some that it is unnecessary to firmly bandage. T is not so, for it would be impossible to keep the patient that position for any considerable time, and to lower the would be to endanger her from syncope; nor is t tourniquet advisable, for it is altogether necessary observe great caution in restoring the circulation—that in allowing blood to be taken from the trunk slowly and a ratio with the increase of its volume by absorption a assimilation.

The vast advantages of this intrafusion of whole blo

e: In extreme cases tension in the vessels is immedi-ely restored, and the heart and lungs are filled with ıole normal blood. The paramount importance of this ust be evident. Contrasted with the intravenous injec-ın of saline fluid or the intercellular injection of other uids, it should be obvious that, whilst the latter, com-ratively slowly, increase the bulk of fluid, blood both pplies resistance for the heart to act upon and is that ne through which a normal vital condition can be stored, and the nerve centres develop that energy thout which the uterine muscle cannot contract and ract.

This treatment—which I submit is rational, always acticable, and, so far as my experience goes, unfailing—based on the propositions: That no work can be done thout energy; that there is no energy inherent in erine muscle; that contraction of the uterus is wholly pendent on energy derived from the uterine nerve ntres; that, deprived of blood, nerve centres do not, and not, develop energy; and that, in the collapse of fuse haemorrhage, there is practically stasis in the scular system which supplies the nerve centres. There-e, as depletion of blood is rapidly going on, instantly est the flow; as nerve centres are paralysed, restore ir vitality; and, *last*, as the uterine muscle is uncon-cted, now that the patient is safe and innervation is established, use such measures as may be necessary to ure normal firm contraction.

My personal experience, derived from the responsibility about 5,000 parturitions, has, so far, attested the sound-ss of this theory and afforded proof of its practicability, that I have never seen a death from *post-partum* morrhage.

NOTES ON THE TREATMENT OF MYOMA OF THE UTERUS.*

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now full well that papers innumerable have been tten upon the subject of myoma of the uterus. If the word had been said upon this important matter, it ld be foolish of me to refer to it. We are, however, a g way off hearing the last word, and I want to record opinions I have come to from my own experience. learn far more from our own cases than from any nber of books or papers, valuable as these may be.

he main result of my experience is that it is still essary to run atilt against the idea that uterine oids are usually harmless growths and had therefore ter be left alone. You might think that in this ad-ced stage of surgery every one would have given up idea of the harmlessness of fibroids. It is not so. n to-day a large number of men—and some of them in h places—preach the doctrine that fibroids are only ly dangerous, and that in the majority of cases the rative remedy is worse than the disease.

re there many women going about to-day unconscious sessors of uterine fibroids, or, if conscious, suffering so htly that their lives are little impeded? It is possible there are some, but I do not believe the number to great; still less do I believe that they will go on for considerable length of time without troublesome ptoms and complications supervening. We have only ook at the serious condition to which some patients e been brought by the simplest of fibroids to be otical of any long period of immunity from suffering by unfortunate possessor of one.

ow often is a patient with a small fibroid—we will say arger than an egg or an apple, with symptoms con-d to excessive loss at the menstrual period, and ht but frequent bearing-down pain—advised to go on ing at the periods, lying down in the afternoons inually and taking medicine?

here is no doubt that this treatment will give the ent some relief, will enable her to go on, perhaps only ing slowly worse, but the number of times it will y a patient over the menopause, carry her to a cure, is emely few. Suppose she is between 40 and 45, the at which fibroid is most frequent, for how many years are you going to confine her to semi-invalidism? How soon can you say that the menopause will come? You cannot say. It is well known that the menopause is usually put off indefinitely, and in fact if the patient does not have the fibroid removed it will never come. We must never forget that more and more as the years go by women have more and more work to do; in the poorer classes it is the woman who is the hard worker; it is upon her shoulders that the main brunt of the battle of life falls, and invalidism or semi-invalidism is disastrous. It is not fair to her, her husband, her family, or her circle of friends and dependants not to give to her the most complete and rapid method of relief. Her actual existence may not be in immediate danger, but the good that she does, the work that she does, and the influence she exerts are all jeopardized.

If a fibroid causes no symptoms no one would dream of interfering with it. If, however, in the course of its growth it causes symptoms that call for medical relief, then I believe that, unless you advise removal of the fibroid, you run a serious risk of condemning your patient to a life of invalidism or to an operation when her condition has become worse, or even to a fatal ending.

After going carefully through the notes of my cases I find that the symptom most frequently met with is haemorrhage; only a little less frequent is pain. The frequent occurrence of pain, often severe but intermittent, is, I think, due to the large number of cases in which the fibroid is complicated by inflammatory disease of the appendages with adhesions, often to omentum and bowel. A very common symptom is the gradual deterioration in the general health, a thing of great importance. We have, too, special symptoms due to the special pathological conditions.

Haemorrhages, as is well known, may vary from a slight increase in the quantity lost at each period to a continuous loss, a loss so great and so lasting that it is impossible to differentiate the periods. How often has it happened that a patient comes to us for operation, above all things, when she is absolutely blanched from haemorrhage! I have seen them sometimes in such a condition that fainting follows the assumption of the upright position. An operation when they are like this is out of the question. They want rest in bed first, with good feeding and plenty of milk. Now, what I can never understand is why the patient has been allowed to get into this condition. Sometimes it is her own fault; she has refused treatment time after time. At other times it is not her fault. I do not say this light-heartedly. I would not say it at all were I not convinced of its accuracy. I have already referred to the causes that contribute to this state of affairs. I would only add that those who think the remedy worse than the disease cannot possibly have watched many cases of fibroids, and must have founded their opinion of operative treatment upon their own experience. The very men who decry the operation as dangerous are those who make it so by delaying operation until the patient is *in extremis*.

As regards the special symptoms, it is impossible to refer to them all. I will briefly recall one or two.

I was called in some years ago by her medical attendant to see a woman suffering from persistent vomiting, which he rightly thought might be due to an abdominal tumour. The vomiting was the only symptom complained of. Its complete relief followed the removal of a large fibroid uterus.

In another case—the specimen from which I showed at the time at the Midland Medical Society—her chief symptom for a long time was haemorrhoids, which were only finally relieved by the removal of a fibroid which had completely blocked the pelvis.

Yet another and very interesting case: A lady suffered from severe headaches, from easily getting tired, from pain in the back, and from that most awkward of symptoms, a very frequent desire to pass water; her life was miserable. Four years previously I had operated upon her in the night for a primary rupture of a tubal pregnancy. The uterus then felt perfectly normal. From her symptoms and from a distinctly neurotic history it was thought that her trouble was all a question of nerves. Since it continued I was asked to see her, and on examination found what felt like a fundus thickened from front to back and pressing down upon the bladder. I felt certain that there was a small fibroid, with probably adhesions

* ead at a meeting of the Birmingham Branch of the British cal Association.

to the bladder. Operation showed that the fibroid, about the size of a large walnut, was in the anterior uterine wall, and that the bladder passed up over the front of it, to be adherent to the fundus of the uterus. Hysterectomy has restored that lady to good health. She is free from headaches, from easily getting tired, and from backache, and, needless to say, she has no trouble with her bladder.

The whole question as to whether a patient with an increasing fibroid of the uterus (by an increasing fibroid I mean one that is giving rise more and more to symptoms) should have that fibroid removed or not depends entirely upon the facts as to the mortality of the disease and the mortality of the operation done for its relief. The statement that fibroids do not kill is not merely a "terminological inexactitude," it is absolutely untrue from beginning to end. In my own experience I know of two cases that have bled to death before I could admit them for operation, in both cases within a few days of being seen. I know of two cases of fibroid polypi that have died from haemorrhage. It may not be generally admitted, but I am sure that those who have had experience will agree with me that a certain proportion of the deaths after operation are not due in any way to the operation, but to the disease for which the operation has been done. I know, too, of a case not dying directly of haemorrhage, but from the effects of the fibroid. It is as follows, and it has impressed itself very strongly on me. Twelve years ago I saw a lady in consultation with Dr. Ware, then of King's Heath. I had known her socially for some time. She was one of the brightest and most capable of women. It appeared that she had had profuse loss and pain lasting about ten days at every period for two or three years. The pain was very intense. She had a fibroid rising above the pubes, and almost blocking up the pelvis. I advised its removal. She and her husband had a great dread of operations, and she, an American lady, went "home" as she called it to see if she could get some relief from an American gynaecologist, an old friend of her family. He advised her to wait for the menopause. Her age was 32. Fatal advice. She struggled on year after year, becoming a complete invalid, bearing her pain without a grumble, and doing what she could at times of her household duties. The losses fortunately became less, but the tumour grew and the pain increased. I did not see her again professionally until two years ago. I found then the tumour nearly up to the ribs; albumen in the water, oedema of feet and legs, a quick small pulse, and great weakness. She wanted me to operate. I was bound to tell her that it meant a more serious operation than it would have been originally. I advised resting in a home for a time first. Her husband said, No; he would not have her run the risk nor would he have her laid up for the necessary time unless I could say for an absolute certainty that it would cure her. The result was it was postponed. I never saw her again, and she died three months ago, worn out by a so called simple tumour of the uterus. That American gynaecologist has been for some time an ardent hysterectomist.

Then, too, how many of those operated upon would die if they were left alone? This, of course, is difficult to answer with absolute certainty. I believe that a large proportion would die, and I will give my reasons for this belief.

First, I will take my own cases of abdominal hysterectomy—76 in number.

1. Of these there are a certain number that were suffering from persistent and increasing haemorrhage, from profound anaemia due thereto, and from a steadily increasing depression of all the functions of the body—obviously going to die if allowed to go on. The number of these is no fewer than 17.

2. Again, there are those complicated by the presence of malignant disease in addition to the fibroid and certain to die if left alone. Of these there are 5 cases.

3. There are, too, those cases in which the fibroid is wearing out the patient from its very bulk or is seriously interfering with her general health by pressure upon other viscera. Of these there are 24 cases.

4. Finally, I may add those cases complicated by the presence of pyosalpinx or of cystoma of one or both ovaries. Of these there are 5 cases.

One in Class 4 also figures in Class 3, therefore we have 44 cases out of 76 that I believe would sooner or later have died if left alone. Of the 32 other cases how many, I wonder, would in the course of another year or two have compelled me to put them in one of the four classes I have tabulated? Probably a good proportion.

Having briefly reviewed my own cases I would draw attention to a table of degenerations and complications in a series of 1,398 cases of fibroids of the uterus operated upon by Noble, Scharlieb, Cullingworth, Ellice McDonald, August Martin, and others. The conditions found at the operations have been examined and reported upon. At a very conservative estimate 37 per cent. would have died from existing complications had no operation been done.

In my own cases I have not mentioned any complications except those that I consider would have led to a fatal result. A prominent feature, and one that I think accounts for so much pain that is present, is the large number accompanied by inflammatory diseases of the appendages with adhesions that often involve the bowel wall. I have not included these unless the inflammation had reached the stage of pyosalpinx. We may take it, then, that at the very least 30 to 40 per cent. of cases of fibroids would end fatally if left alone. Personally I believe this percentage to be below the mark, and the more I see of these cases the more I am coming to the conclusion that we ought to put them on the same footing as ovarian cysts. Given a cyst, remove it. Given a fibroid, remove it.

Now let us see if the mortality of hysterectomy is anything like as great. I suppose, if you take all the leading operators, the average mortality works out at anything from 1 or 2 to 5 per cent. In my own 76 cases I have had 2 deaths. One was a long way off in the country; I did not see her again after operation. The doctor wrote to me on the sixth day after operation to say that she had died suddenly of pulmonary embolism. The other, a few weeks ago, died on the ninth day of pneumonia. The latter death was due really to the utter inability of the patient to fight the disease, because she was absolutely blanched (waxy in appearance) from long-continued haemorrhage. This mortality of 2.6 compares favourably with the mortality due to the disease.

But I think it is only right to compare the morbidity as well as the mortality. We know that nearly all cases of fibroids cause painful and disabling symptoms. Are all the cases operated upon quite well and free from trouble? Not quite all. This, however, is the fault of the operator and not of the operation. Amongst my earlier cases, cases in which my asepsis was less perfect than it is now, I had two very disastrous results. One, apparently, got perfectly well and remained so for about nine months, and then developed an abscess behind and to the right of the cervix, due to suppuration round one of the buried ligatures. This I opened and drained, but ultimately it spread and finally it passed up behind the peritoneum into the loin; this long-continued suppuration, on the top of years of suffering from her tumour, wore the patient out and she died twelve months after the operation. Another case developed a stone in the bladder, due to ulceration in that viscus of a silk ligature. Two of my cases of myoma plus carcinoma have since died from a return of the malignant disease. With these exceptions all are in good health. I have dwelt somewhat upon treatment by abdominal hysterectomy. As a rule, this means the supravaginal operation, leaving the cervix behind. Where there has been malignant disease and in a few of my early cases the cervix also has been removed.

A few words now as to other methods of treatment. In a small number of cases, with a small myoma and with no complications, vaginal hysterectomy can be performed and should be performed in preference to abdominal.

Myomectomy is, of course, a recognized form of treatment. It can be done if the patient is under 40 years of age, that is, if she is of the child-bearing age, if pregnancy is co-existing, if a tube and ovary capable of performing their functions can be preserved, and if it can be done so as to leave a uterus practically sound. The great drawback to this operation is that when it is done and you go downstairs and face the anxious relatives you are certain to have fired at you, "Will it come again, doctor?" What can you say except, "I don't know." Probably it will. In the last few months I have had to perform hysterectomy after previous myomectomy twice. One lady had had a fibroid removed in London twelve months earlier, and from the other patient a young lady—I had myself previously removed a large pedunculated subperitoneal fibroid.

Minor measures, such as curetting and electrical treatment, are, I believe, absolutely useless. As regards the latter, I confess frankly I have had no personal experience, but that conditions I am constantly meeting on the operating table can be cured by electrolysis I absolutely refuse to believe.

We come now to the much-vexed question of oöphorectomy. We used to get fairly good results from it. Even now, given a small fibroid with appendages so inflamed, so diseased as to demand removal, I would remove the appendages and leave the uterus. As a routine treatment of fibroids it is not to be compared with hysterectomy.

1. The operation of oöphorectomy is attended by quite as large, if not a larger, mortality than hysterectomy.

2. It is quite as difficult an operation to perform, and takes very nearly as long.

3. The immediate post-operative condition is much more distressing, there being much more pain after oöphorectomy than after hysterectomy.

4. The general convalescence is longer and much less easy.

5. The ultimate cure cannot, on the face of it, be as certain. Four times have I had to do hysterectomy for fibroids in cases from which the appendages had been previously removed.

One of the good points about abdominal hysterectomy is the easy convalescence, the freedom from pain on the part of the patient, the freedom from anxiety on the part of the surgeon. If you think of the anatomy of the parts, you will realize that when there is a fibroid in the uterus the broad ligaments will be more or less on the stretch. If you remove the appendages there must be a strain on the ligature, a force constantly tending to push it off, and this keeps the surgeon in a condition of anxiety for the first twenty-four hours. If you do a hysterectomy, you reduce rather than increase the stretching of the broad ligaments; in fact, you do away with it altogether. In the Trendelenburg position, with all the bowels and omentum tucked up in the abdomen away from the pelvis, one can fashion the peritoneal flaps, tie the vessels so that the stumps drop under and can be easily buried under the peritoneum. I may say that I never suture the cervix. I simply bring the anterior and posterior flaps of peritoneum together with a continuous fine silk suture. At the end of the operation you can look down into the pelvis, and there is between the bladder in front and the rectum behind nothing but the line of suture visible, lying on the pelvic floor with no strain whatever upon it. If the appendages are not diseased I do not remove them.

In conclusion, I would say that I hope I have not spoken too strongly on this matter, but I want every one to recognize that the sooner these cases are seen to the better. I know perfectly well that others, knowing quite as much, perhaps more than I do, about it, may not agree with all that I have said. No one is free from errors of judgement as well as of practice; and, holding as I do that no man could believe implicitly that he *must* be right, I am open to conviction on many points, but I certainly hold to the opinions I have expressed. I believe in them, for I have come to them from a good many years' experience.

CAESAREAN SECTION IN A CASE OF CONTRACTED PELVIS WITH TWIN PREGNANCY.

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On March 4th, 1906, I was asked by Dr. Gerald Child of Bitterne, Southampton, to see a woman daily expecting confinement, who had consulted him complaining of headache and vomiting. He found that she had albuminuria, and noticing her small size, made a careful examination of the pelvis. As there seemed to be such contraction that delivery would probably entail the sacrifice of the child, he asked me to see the patient, in view of the possibility of Caesarean section. Her circumstances being poor, she was removed the same day to the Royal South Hants and Southampton Hospital.

The patient was 35 years of age, and had been married one year. Her height was 4 ft. 9 in., and she had marked rickety deformity of the thighs and legs. The abdomen was very prominent, with the uterus extending above the ensiform cartilage. The fetal head was felt in the right iliac fossa, the legs apparently above and to the left, with the back to the front; the fetal heart could be heard on the right side about the level of the umbilicus. Twins were not suspected. There was no oedema. The urine contained ¼ albumen, granular casts being present. She had a little dyspnoea and cough, but the physical examination of the heart and lungs was negative. My colleague, Dr. Keele, kindly examined her with me under anaesthesia. The promontory was higher than usual, while the diagonal conjugate measured a little under 4 in. The upper part of the sacrum felt convex from side to side, projecting forwards into the pelvic cavity; the side walls of the inlet were contracted, being easily felt by the fingers all round. The greatest diameter of the fetal head could not be made to enter the brim by pressure from above. Though the true conjugate was about 3½ in., it was thought that, with the general contraction, the birth of a living child would be improbable; the patient was therefore offered the alternative of Caesarean section. This, after consultation with her husband, she accepted.

Operation.

Labour commenced on March 6th, and when the os was dilated enough to admit two fingers the operation was performed.

The incision, made about 1 in. to the right of the middle line, was some 6 or 7 in. in length, the upper end being about 2 in. above the navel. The fibres of the rectus were separated with the finger, and the posterior sheath and peritoneum divided. A small incision in the uterus was made, the placenta being met with at once on the anterior wall; the opening was rapidly enlarged both upwards and downwards, and the hand introduced at one side of the placenta, which was pushed aside; the child was extracted by the head, and the cord divided between pressure forceps. As the uterus was still large, the hand was again inserted, and a second child found enclosed in a separate bag of membranes; this was removed by the feet; the second placenta was attached to the posterior wall. The two placentae and membranes were peeled off and removed, and the uterus brought outside the abdomen. The uterine wall was closed by deep interrupted sutures of silk, including everything except the mucous membrane; a continuous suture of fine silk closed the peritoneum over the wound. A small piece of Fallopian tube was removed on each side to prevent future conception. The uterus was very flabby for a long time, in spite of compression and hot cloths, and only began to contract properly when the deep sutures were tied. No liquor amnii escaped into the abdomen, and a very little sponging sufficed to remove two or three small clots.

As she was somewhat collapsed the abdomen was closed quickly by interrupted through and through silkworm gut stitches and about two pints of saline fluid injected into a vein in the arm. The elder child was the smaller, and both required some assistance before proper respiration was secured.

After-history.

The patient soon recovered from the collapse, but during the first twelve hours she passed only 6 oz. of chocolate-coloured urine, which was highly albuminous; it seemed as if suppression were taking place; however, during the next twelve hours she passed 32 oz., which was clear, and afterwards about 60 oz. a day. Albumen and casts persisted for about four weeks and then disappeared. At the end of the first week she had some pain in the breasts with a rise of temperature, both babies vomiting after being suckled; breast feeding was therefore stopped and the trouble soon subsided. The wound healed by first intention. At the end of the third week a slight attack of phlebitis occurred in the left leg and necessitated another fortnight in bed. She was discharged perfectly well with her babies on April 19th.

Diagnosis.

No notice was taken of external measurements, these being rarely of any practical value in estimating the size of the brim or room in the cavity of the pelvis. Reliance was placed entirely on examination under anaesthesia. The position of the promontory, the convexity of the sacrum and the contraction of the side walls combined with the signs of rickets, all tended to show that the pelvis was of the small rickety type. It is true that the diagonal conjugate was something under 4 in., making the true conjugate about 3½ in. and therefore larger than the size usually considered an indication for Caesarean section. Perhaps the most important fact was that the largest diameter of the fetal head could not be made to enter the brim by pressure in various directions from above. Twins were not suspected, being only found out when the uterus was open, and this must be confessed as an error in diagnosis.

The elder child was small and might have been dragged through by the forceps, but the second was of ordinary size and would have required craniotomy for delivery.

Another thing which complicated matters was the nephritis with threatening of uraemia. If left to instrumental delivery the labour was certain to have been protracted, as, in addition to the pelvic deformity, the vulvar orifice was small and anterior in situation with a long and rigid perineum.

Operation.

The operation was carried out according to the description of Dr. Herman, and as I have seen him do it. No pessary was used for the incision into the uterus. The amount of blood lost was not great. One interesting feature was that the womb would not contract properly till the deep sutures were tied, but remained very flaccid, so that it could be indented easily by the fingers. It seemed as if the uterine muscle was paralysed and incoordinated by the cut, and it was only when this was closed that tone was recovered and hardening secured. The indentation by slight pressure showed how easily an inversion could be started by incautious force in expressing the placenta with a flabby uterus. Sterilization was effected at the wish of the patient.

The stretched abdominal wall retracted considerably during convalescence, and the scar of the incision measured but 4¼ in. when the patient left the hospital.

ON THE CAUSE OF ACUTE ILLNESS SUPERVENING DURING MENSTRUATION.

By THOMAS HOLMES, M.S., M.D.LOND.,
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FOR some years I have been looking for cases that bear upon the subject forming the heading of my paper, as the ordinary explanation of such cases has not seemed to me to be satisfactory, and the following seem to give me some clue:

CASE I.

I saw, in 1894, a private patient, aged 33, unmarried, who had been taken ill very suddenly during menstruation, the symptoms being frequent vomiting, accompanied by intense pain in the left iliac region. It was, I was informed, her first attack.

Condition on Examination.—Temperature 102°, furred tongue, quickened hard pulse, abdomen slightly distended, moving little with respiration, most rigid over the left iliac region; there was some general tenderness over the whole of the abdomen, much more pronounced over the left iliac region, but no abnormal swelling could be felt. Heart, lungs, and urine were normal, and the breasts and hymeneal orifice were virginal. On rectal examination there was tenderness in the left posterior quadrant of the pelvis, and bimanually this was found to be due to a small, tender swelling occupying the position of the left ovary; menstruation had ceased, and the pain was described as coming on suddenly and becoming of great intensity soon after. There was no sign of urethritis or vaginitis so far as external appearances went.

CASE II.

An unmarried girl, seen in 1895. The symptoms were very similar. She had all the appearances of a virgin.

CASE III.

Seen in 1899, very similar to above.

CASE IV.

Seen in 1901. The patient was virginal as far as could possibly be ascertained, and had been in good health up to the time of being seized with a sudden pain in the right side during her menstrual period, she was at the moment engaged in helping with the family washing. Intense pain then set in in the lower part of the abdomen on the right side.

Condition on Examination.—When I saw her, vomiting was very troublesome indeed, the temperature was 102°, and the pulse above 100. Menstruation had been quite regular up to the present time. The breasts and vulva were virginal and there was no sign of any abnormal discharge from the vagina or urethra. The heart and lungs were normal. There was slight distension of the abdomen, which moved little with respiration. There was pain on pressure over the right iliac region, and some dulness on percussion in the same area. On rectal examination the uterus was found to be small, and in the situation of the right ovary there was marked tenderness, but such pain was caused that further examination was abandoned. There was no pain or swelling over the sacral region and the lesion was evidently limited to the pelvic cavity. The vomiting was very persistent for several days, the temperature and pulse-rate both remaining high; the temperature then began to subside, and at the end of five days her condition was much better, the vomiting having stopped; soon after this the temperature fell to practically normal.

A much more satisfactory examination of the abdomen was now possible, and the following state of things was found. Above Poupart's ligament on the right side, and extending upwards into the right iliac fossa, was a soft, doughy, ch[illegible] swelling, with a rounded surface, dull on percussion, fixed, [illegible] not particularly tender; it was below the caecum, and [illegible] dently rising out of the pelvic cavity. On examination by [illegible] rectum this swelling was found to be continuous with a [illegible] mass filling up the right half of the recto-uterine fossa and [illegible] pouch of Douglas, and bulging into the posterior vaginal [illegible] fornix; so far as clinical evidence went there was no doubt [illegible] the swelling was blood clot. Under treatment, after [illegible] weeks the swelling all subsided, and the patient [illegible] recovered, and I have heard since she has kept quite well, [illegible] married, and borne a child.

In all these cases the patients had been quite [illegible] previously, had been taken suddenly ill during apparently [illegible] a normal menstrual period, and in one case at least had been engaged at the onset of the attack in fairly arduous physical labour. Could the swelling that appeared in Case IV have been of any other nature than blood, and if it were blood how is its appearance explained? These seem to me to be the crucial questions. A swelling of this nature conceivably might be due to a collection of pus in an encysted collection of fluid, "pericystoma," or, lastly, a new growth.

New growth may definitely be put on one side by the after-history of the case, as when I last examined her the swelling had gone; as regards a "pericystoma," the physical characters were unlike this, there was no real fluctuation or thrill in the mass, and no history of preceding obscure abdominal symptoms and feverishness. These points were against it being a collection of pus. There were also the following: It was evidently superficial to the psoas muscle, there were no signs of any spinal or hip disease, or disease of the ilium, and the patient got entirely well again, without any discharge of pus from anywhere.

Appendicular trouble, or inflammatory trouble in connexion with the caecum, were also excluded by the consistency of the mass, by the absence of tenderness, by the absence of involvement of the parietes, as well as by the other features mentioned.

If blood, the following sources of origin may occur: the ovary, the tube, the broad ligament, and the vessels. The possibility of some blood condition such as scurvy might also be considered; but this in this case I think could be put out at once by the woman's general condition. There might also the question of a diffusion of blood from a ruptured aneurysm.

All the accompanying features of an extrauterine gestation of any kind were missing, and the suggestion that a clot had been produced by rupture of a varicose vein in a broad ligament seems to be more theoretical than practical; moreover, in that case some effusion into one or other broad ligament would be expected, but this was not present.

There are left for consideration, therefore, the tube considered apart from tubal pregnancy, and the ovary. I am led to the conclusion that the ovary was the source for the following reasons:

1. Normally, during menstruation the ovary is engorged with blood, and after the rupture of a Graafian follicle and the escape of the contents, the cavity left is obliterated by a blood clot, produced by haemorrhage into the interior of the follicle.

2. The character of the pain when the tender lump was discovered by recto-abdominal examination was pressed upon; it was described as sickening, and increased the nausea of the patient.

3. The discovery of a definite small tumour; so far as I know where efflux of blood through a normal tube has been considered possible the tube has simply acted as a channel of communication, the only abnormality supposed to exist being an abnormally patent condition of the abdominale, and a tube under these circumstances would neither be tender nor palpable.

4. I found in the Royal College of Surgeons Museum an ovary somewhat enlarged, filled with blood clot which infiltrated the stroma, and seemed to have disorganized the gland.

5. A Graafian follicle if ripe and cut into at the time of an operation may give rise to very severe haemorrhage. Granted that the ovary is the source of the haemorrhage, what are the conditions under which this may take place

In these cases a general cause could be put out at once, as also any question of any of the infectious diseases, and we are left with :

1. The bursting of a small ovarian cyst, causing haemorrhage into its interior and subsequent rupture in one case.

2. Ovarian gestation.

3. New growth ; which latter two do not, I think, need further discussion owing to the concomitant circumstances.

4. Haemorrhage from a ruptured Graafian follicle, engorged with blood at the menstrual period, in some of the cases (I, II, and III), the blood effusing into the stroma of the ovary in a similar way to that shown in the specimen referred to above, and in the other case bursting its way through to the surface, and then pouring into the recto-uterine fossa, and thus forming a haematocele. Vomiting in these cases would be pronounced, both on account of the damage done to the ovary itself, and also of the irritation of the peritoneum set up by the effusion.

As to the possibility of there having been present small ovarian cysts in each case, I do not see the necessity of the hypothesis. There was no previous history of any discomfort—not in itself, it is true, a point of much value ; there was no recurrence of the trouble in two cases at all events to my personal knowledge, nor was there any sign of free fluid in the abdomen at any time.

I have therefore come to look upon haemorrhage from a Graafian follicle engorged with blood at the menstrual period as being the starting point of one set of cases, and it is possible that undue exertion, by increasing the intra-abdominal pressure, as might happen in washing clothes, might be the last factor in determining the rupture.

Of the next class of case I have only seen one example so far.

A patient, whilst still in bed during her convalescence from an attack of acute double lobar pneumonia, began menstruating, and in its course was seized with acute pain in the left iliac region, accompanied by feverishness and vomiting. Bimanual examination revealed an enlarged, prolapsed, and very tender ovary. This was the first attack of anything of the kind, her last child having been born some eight years before, and her health having been very good up to the time of the attack of pneumonia.

This attack occurred about seven years ago, and the patient still suffers slightly from chronic pain in the left iliac region, especially before the periods. When I examined her a few months ago I could feel that the left ovary was enlarged and bound down by adhesions to the back of the broad ligament, so that it could easily be reached from the lateral fornix. For several other reasons the patient has hitherto refused any operative measures.

Here, doubtless, blood infection by the pneumococcus has to be considered, as either attacking a healthy ovary and setting up an ovaritis, or attacking an ovary in the substance of which blood had been effused owing to the rupture of an engorged Graafian follicle at the menstrual period, and causing an infection of it, and so setting up an inflammation, as in this case ; there was very much more than mere-effect, and very much more perioöphoritis, as was shown by the chronic pelvic pain, which was not present afterwards in Case IV, and also by the displacement and fixing of the ovary in an abnormal position, due to the adhesions forming between the epithelium covering the ovary and the peritoneum of the broad ligament. Other causes may originate, I think, in sepsis, and the following figures this out :

A multipara, aged 42, whilst menstruating, was taken suddenly ill with pain in the left side, accompanied by vomiting, feverishness, and obstinate constipation. She went to bed, and after a couple of days I was sent for. I found her in great pain, temperature 103°, pulse 110, hard and full ; vomiting persistant but not faecal ; the bowels had not been open for three days ; a mass could be felt in the left iliac fossa, and bimanually part of the swelling was found to be situated in the left broad ligament, to be fixed, and to be very tender, and was evidently a cellulitic mass.

On rectal examination the cellulitic mass could be felt to be pressing on the bowel, so that the whole tumour was formed of impacted faeces and a cellulitic mass. The cervix was deviated on the left side, was in a condition of ectropion, and showed well-marked erosion. The patient had been quite well before the attack.

She was still menstruating slightly, and there was a foul vaginal discharge, and, as was to be expected, I found on inquiry that she had suffered from leucorrhoea for some time past. She had never had it attended to : external and internal haemorrhoids were present, and were painful and inflamed, and the external genitals and thighs were in such a dirty state, being smeared with faecal and blood stains, that I remonstrated with her. She then told me that owing to the piles she had never been able to wear diapers at her periods for years. Taking this condition in conjunction with her illness and the foul vaginal discharge, I came to the conclusion, rightly or wrongly, some slight injury to the cervix, probably marital, had exposed her to septic absorption, and so set up cellulitis, the menstrual fluid affording a better chance of life to septic germs than the mixed cultures ordinarily present in the vaginal canal in her case.

Acting on this opinion I had her thoroughly cleansed, internally as well as externally, by mercurial douches and washes, ordering antiseptic douches regularly. The obstruction of the bowels was relieved finally by enemata, though at one time I thought I should have to do colotomy ; and she made a very quick recovery, the cellulitic mass absorbing rapidly.

CASE OF OBSTRUCTED LABOUR DUE TO OSTEO-SARCOMA OF PELVIS.*

BY M. B. RAY, M.D., C.M., L.R.C.P., L.R.C.S.EDIN.,
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THE following case, which I have attempted to illustrate by means of a rough diagram, is one of somewhat rare occurrence in obstetric practice.

It is by no means uncommon to find labour obstructed by uterine myomata or ovarian cystomata, but in this instance the new growth had no connexion with either uterus or adnexa. The tumour, which was found later to be a mixed-celled sarcoma, probably dated from the commencement of the patient's second pregnancy, as it was at that time she first began to feel marked pelvic discomfort. Her eldest child was then 9 months old.

I had no opportunity of seeing her before her admission to the infirmary under my care, but I have been able, through the kindness of her medical attendant, to gather the following facts as to the previous history.

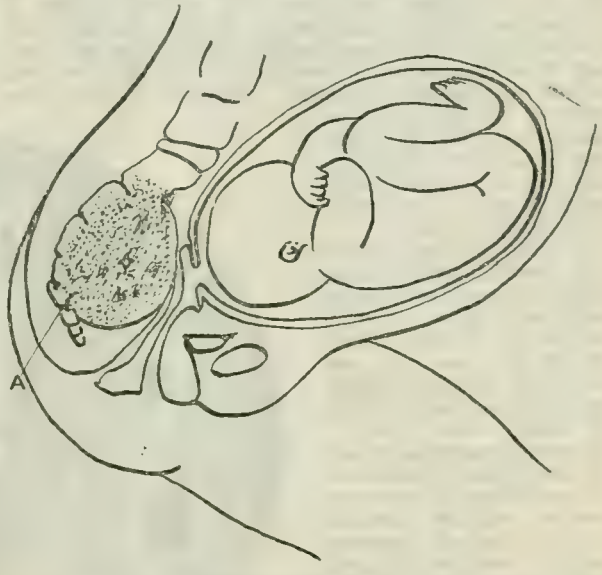


Fig. 1.—A, Tumour.

The patient was a young married woman, aged 20. She was one of seventeen children, and one brother, aged 15, suffers from hip-joint disease. She had had one child, now about 18 months old. Her last labour was completed naturally and she made a good recovery. Her menstrual history was normal and she had had no miscarriages. With the exception of a little transient anaemia she had always been healthy.

During the early months of her second pregnancy she noticed a little pain and stiffness in the region of the hips when walking, and there was some alteration in gait attributed by her friends to over-exertion from carrying her growing infant. These symptoms gradually increased, until at the end of the third month she was unable to stand, sit, or lie on her back without great pelvic pain. She never had any actual paralysis of the lower limbs, but was always able to move them about in

* A paper read before the Yorkshire Branch of the British Medical Association.

bed. She became very constipated, lost flesh rapidly, and had severe night sweats.

Any attempt at a vaginal examination caused, I am informed, such intense pain that she could not be prevailed upon to submit to a thorough investigation during the earlier stages of the disease. Matters continued much in this way until labour commenced at term. When her medical attendant was summoned he found a mass blocking up the vagina, and at once ordered her removal to hospital.

I saw her on admission. She was having frequent labour pains accompanied by severe cramps down both thighs and legs; she was very pale and exhausted, and the pulse (116) was feeble and irregular. She could not continue for any length of time on her back, but lay on her side. The legs could be moved and sensation appeared normal. The patellar reflexes seemed a little exaggerated. On vaginal examination a tense globular tumour about the size of a fœtal head could be distinguished, pushing forward the posterior vaginal wall in advance of the presenting vertex. The os, which was then about the size of a shilling, could only be felt by passing the finger forward and over the upper surface of the swelling. Rectal examination revealed the fact that the obstruction arose from the hollow of the sacrum and had close bony relations pushing forward the bowel and almost obliterating its lumen. The growth, which was slightly movable, had a tense elastic feel and gave the idea either of a cyst, possibly a hydatid, or a large abscess in connexion with diseased bone.

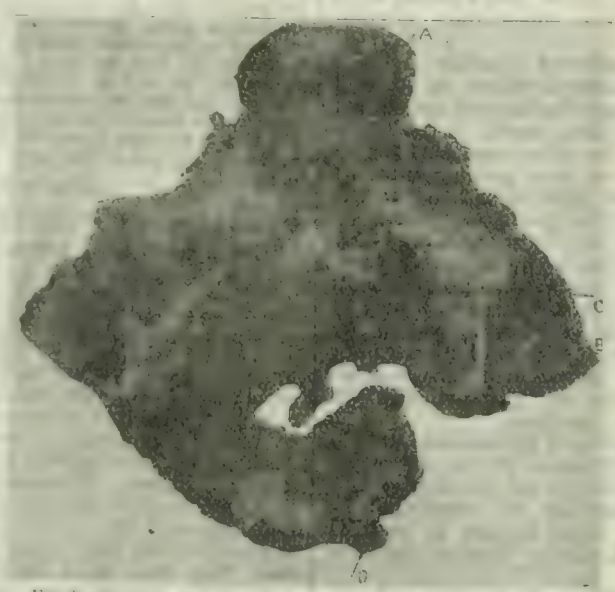


Fig. 2.—Sacrum and coccyx. A, sacral promontory; B, sacro-iliac synchondrosis; C, bone eroded by growth; D, tip of coccyx. (Photograph by Mr. C. G. F. Tymon, Harrogate.)

As the patient's condition was hourly becoming more serious, operative interference was urgently indicated. It was agreed, by all who saw the case with me, that the tumour probably contained fluid of some kind, and I therefore decided to explore by the perineal route and, by evacuating its contents, render delivery possible. The question of Cæsarean section was carefully gone into; when however, a less serious and certainly much quicker procedure seemed available, it did not appear justifiable to expose the patient, already worn out with continued suffering, to the increased risk of the more serious operation.

Ether was administered by Dr. Garrod and the patient placed in the lithotomy position. I made a curved incision about 3 in. long an inch behind the anal margin. With a finger in the rectum careful dissection between bowel and coccyx soon exposed the tumour. It was found to be distinctly cystic in tension and elastic. A pair of closed sinus forceps were thrust through the wall and withdrawn with opened blades. On introducing the finger the contents appeared to consist of cancerous debris, and posteriorly large areas of denuded bone with sharp spicules could be made out; the lower part of the sacrum and upper part of the coccyx were quite bare and only connected by a slender bridge of bone.



Fig. 3.—Drawing of [illegible] appearance of growth. [illegible]

My first impression was that I had tapped an abscess cavity, probably in connexion with diseased bone, but closer examination of the contents demonstrated soft friable growth interming[led] with blood clots. Evidently the onset of labour and the pressure of the advancing head had caused haemorrhage into the interior. The bleeding was very free, and only with great difficulty controlled by pressure and subsequent gauze packing. The patient's condition was at this time extremely critical, and transfusion was at once resorted to, my colleague, Mr. Solly, injecting a pint and a half of saline solution into the median basilic vein. This was followed by marked improvement in the pulse and she rallied temporarily. The os had not dilated appreciably since the last examination, and her state did not seem to warrant any attempt at forcible dilatation and delivery.

She was removed to bed, and as the effects of the anaesthetic wore off the pains began again, and the os slowly widened. About two hours after the operation, with the advance of labour, she had a smart haemorrhage from the wound, which I controlled with great difficulty. She was now rapidly sinking. Transfusion was again resorted to, but without avail, and she quickly became practically moribund. In the hope of extracting a living child after a vain attempt to apply the forceps through the still narrow os I introduced my hand into the uterus, turned and delivered. Pulsation had ceased in the cord, and all attempts to restore animation failed. The patient died just as the head was being born.

At the *post-mortem* examination on the following day the uterus, tubes, and ovaries were found to be quite normal. There was no extension of the growth so far as could be made out to any of the surrounding viscera, the mischief being confined to the sacrum and coccyx, which were almost separated. The cartilage had resisted the process to a greater extent than the bone. The accompanying photograph of the sacrum and coccyx, from which I have removed all of the soft parts, shows well the extent of the invasion. I also append a drawing of the microscopical appearance of the tumour, taken from a section kindly cut for me by my friend, Dr. Frederick Johns. It will be seen to be a mixed-cell sarcoma, spindle and myeloid, probably of periosteal origin.

THE INFLUENCE OF AN EXCESSIVE MEAT DIET ON FERTILITY AND LACTATION.

By B. P. WATSON, M.D., F.R.C.S.E.,

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(From the Physiological Laboratory, Edinburgh University.)

THE problem of the falling birth-rate has for some time occupied the attention of medical men and social workers, and various causes have been assigned to account for it. Chief among these may be mentioned the artificial prevention of conception and the later age of marriage, and these, no doubt, play an important part. The results of the present investigation, however, would seem to open up another line of inquiry, and lead me to ask whether the altered conditions of living, and especially the alteration in the constituents of the daily dietary of the people in the form of the increased consumption of meat, may not have an important rôle.

It has been shown by Chalmers Watson[1] that the consumption of meat in this country has risen from 3 lb. a head per annum in 1850 to 50 lb. a head per annum in 1902. It is within this period that the decrease in the birth-rate has arrested attention. It is chiefly the middle and artisan classes of the population which are responsible for our increased meat consumption, and it is noteworthy that the decrease in the birth-rate chiefly affects them, and that there appears to be no diminution in the size of the families of the poorest classes among whom meat is still only a very occasional article of diet. This class evidence, of course, also supports the preventive and late marriage theories, so too much stress must not be laid upon it as an argument in favour of a dietetic cause.

Along with the decline in the birth-rate there has been a notable decrease in the number of mothers who nurse their infants on the breast. While the majority of these mothers wilfully shirk their duty for social or other reasons, it is a matter of common clinical experience, and a fact brought out by the report of the Departmental Committee on the subject, that a large and increasing number of women are physically incapable of nursing their children because of the poorness of their mammary development and inadequacy of their supply of milk. Here again my results raise the question as to the possibility of this being due to a dietetic cause.

The idea of testing the effect of an exclusive meat diet on the functions of reproduction and lactation was suggested by Chalmers Watson. In a paper on the Influence of Diet on Growth and Nutrition,[2] he showed that in rats a diet of ox-flesh begun when the animals were weaned interfered with the development of pregnancy, none of the ox-flesh fed animals having young, whereas all the control animals from the same litter became pregnant. On the other hand it is stated of three families fed on horse flesh from the age of 2½ months approximately that all became pregnant, from which he concludes that "the use of this diet in animals of this age appears not to affect the prevention of pregnancy." He also noted in the meat-fed animals which became pregnant that the mammary tissue was less developed than in control bread and milk-fed rats.

These observations I have extended, and with a larger amount of material at my disposal am able to amplify his statements and, as regards the question of fertility, to modify them.

The method of conducting the investigation was as follows: Twelve female rats and several males were put upon a bread and milk diet, and the females were confined on this throughout pregnancy and lactation. These served as the controls. Seventeen females and five males were put upon an ox-flesh diet, but were otherwise under exactly the same conditions as the animals given bread and milk. The animals were begun on a meat diet at various ages, from the second up to the fourth month, and some of them were kept on the diet for as long as five months.

Of the 17 animals fed upon a meat diet only 8 became pregnant, and of these 4 bore young within twenty-one days (the usual gestation period in the rat) of being put on the diet, so that only 4 actually conceived while on meat feeding. Of these latter 1 had been twenty-four, 1 twenty-five, 1 twenty-seven, and 1 thirty days on an exclusive ox-flesh regimen. The other 9 animals, although kept for several months, did not conceive, and this in spite of the fact that they were seen to copulate freely right up to the end of the experiment. This reservation must, however, be made, that one of these 9 animals probably had young which were eaten, and it is possible that this happened in other cases. It is not at all probable, however, as the animals were frequently carefully examined, and if there was any indication of their being pregnant were at once transferred to separate cages.

Of the twelve animals fed on a bread and milk diet all became pregnant and had young; so that we may conclude that a meat diet is decidedly prejudicial to the occurrence of pregnancy in rats when the diet is begun when the animals are from two to four months old.

In order to determine whether the fault resided in both sexes or in only one a fresh male which had been fed on bread and milk was put beside the sterile females which had been on meat for several months. When the animals were killed some days after, one of them was found to be in an early stage of pregnancy and must have been impregnated by the male fed on bread and milk. This would appear to indicate that the cause of the sterility is partly due to the male, but we have not had sufficient material to form any more definite conclusion regarding this.

For the second part of the investigation—the effect of a meat diet on lactation—the same animals were used: the twelve controls fed on bread and milk and the eight meat-fed animals which became pregnant. The point specially attended to was the weight of the mammary tissue of the animals killed after suckling their young for varying periods.

In the nursing rat the mammary tissue forms a continuous sheet spread under the skin of the abdomen on each side of the middle line. In addition there are extensions of it into the axillae, up along the neck and into the groins, while in some cases it spreads out so much laterally as almost to reach the back. The nipples are in a double row extending from thorax to the groins.

The animals were killed at different periods during lactation. The weight of the mother and the number and weight of the young at the time of death were ascertained. The skin and subcutaneous tissue of the mother's abdomen was immediately removed down to the muscle, care being taken that no mammary tissue was left behind in the axillae or in the groins. The skin was put into 5 per cent. formalin for a few days, when it was quite easy to separate the mammary tissue from the skin on one hand and from the areolar tissue on the other. If an attempt were made to strip the mammae before first fixing in formalin, it was found that a great deal of milk was squeezed out. The immersion in formalin prevented this, although it extracted a small quantity of milk, as shown by its cloudy appearance at the end of twelve hours. It is to be understood, then, that the mammae were weighed out of formalin.

The basis of comparison between the meat and the bread and milk fed rats is the percentage weight of the mammary tissue to that of the mother. By a reference to

Table Giving the Lactation History of Twelve Rats Fed on an Exclusive Bread and Milk Dietary.

Weight of Animal at Death.	Weight of Mammae.	Per Cent.	Time During Lactation when Killed	Number of Young.	Weight of Young.
Grams.	Grams.				Grams.
147	12·5	8·0	1st day	7	32
140	10·0	7·1	3rd day	7	45
180	18·0	10·0	6th day	7	70
225	18·5	8·2	10th day	7	115
120	17·0	14·1	21st day	5	150
140	19·0	13·5	21st day	7	220
115	7·5	6·5	21st day	3	120
130	11·5	8·8	22nd day	4	100
160	19·0	11·2	25th day	7	145
150	13·5	9·0	30th day	—	—
160	15·0	9·3	27th day	6	175
130	13·0	10·0	—	6	—

Average percentage = 9·6

Table Giving the Lactation History of Eight Rats Fed on an Exclusive Ox Flesh Dietary.

Number of Days on Meat before Parturition.	Weight of Animal at Death.	Weight of Mammae.	Per Cent.	Time of Lactation when Killed.	Number of Young.	Weight of Young.
	Grams.	Grams.				Grams.
30	180	13·0	7.2	1st day	10	50
9	140	8.5	6·0	1st day	10	49
27	230	19.5	8.4	1st day	—	—
26	150	13.0	8.6	7th day	5	48
12	115	10·5	9.1	20th day	6	120
15	130	12·0	9.2	21st day	7	185
21	110	10.1	9.1	21st day	6	11
24	140	11.5	8.2	22nd day	4	82

Average percentage = 8.2.

the table it will be seen that there are wide individual variations in this percentage among the bread and milk fed animals. This is explained by the different times during the course of lactation at which the animals were killed, and also by the varying numbers of young which they suckled. Thus there is a fairly uniform rise in the percentage from the first up to the twenty-first day, after which there is again a fall; and taking animals killed at the same lactation period the percentage is higher in those which nursed the larger number of young. We may therefore take it that the mammary gland in the rat is most actively functioning about the twenty-first day of lactation, and that after this, as the young begin to feed themselves it undergoes atrophy.

It will be seen that the average percentage weight of the mammae of all the animals fed on bread and milk was 9·6, while that of the meat fed ones was only 8.2. This difference would in all probability have been greater but for the fact that the average number of young suckled by the bread and milk fed animals was only 4.6, by the meat fed animals 6·3.

As before stated, the longest period before the birth of the young during which the mother had been on a meat diet was 30 days. Taking this into consideration the difference is sufficiently marked to point to the conclusion that the result of a meat diet is to diminish the amount of mammary tissue in nursing mothers.

The effect of this relatively poor mammary development on the young of the meat fed rats is shown by a comparison of their weights with those of the young of the control animals towards the end of the lactation period. Thus the average weight of each of the young of the rats fed on meat at the twentieth to the twenty-first day was 21.6 grams, in contrast to 29·4 grams, the average weight of each of the young of the bread and milk fed rats. It is thus evident that the young of the animals fed on meat suffered in general nutrition and growth as compared with those whose mothers are on a bread and milk diet.

Whether this is due to a mere deficiency in the amount of milk available for their use or to some alteration in its constituents has not been determined, but the probability is that the former plays a large part.

No marked differences were observed on microscopical examination in the histological characters of the mammary tissues. The character of the glandular tissue varies according as the acini are full of secretion or empty; and while the mammae of the meat fed animals showed a preponderance of closely packed empty lobules, this may only have been due to the fact that the mother had been killed shortly after the gland had been emptied by suckling.

There can thus be no doubt that a meat diet in rats affects prejudicially their powers of reproduction and lactation and these results suggest to me that the increasing consumption of animal food in this country may be an important factor in the causation of the decrease in the birth rate and the diminished powers of lactation. At any rate, the results are suggestive, and call for more extended observations along similar lines.

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THE FOOD FACTOR IN THE TWENTIETH CENTURY.*

BY GEORGE J. SEALY, M.D.,
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THOUGH it is universally recognized that man should know how to feed himself rationally to preserve his youth and his strength, and though it is also expected that the physician should know how to prescribe for him the most efficacious diet if he falls ill, yet no method of treating disease is generally used with less confidence and precision than dietetics. This is doubtless largely due to the lack of any proper system of instruction in the subject in medical schools. It seems to me the time has fully come when we, as practitioners of medicine and guardians of the public health, are called upon to give to the question of dietetics the same precision and care that we give to the ordering of drugs. There can be little doubt that the future of medicine lies in the direction of hygiene rather than of therapeutics.

Most of us are employed in the ordering of patients' lives from the cradle to the grave, and in so doing have greater opportunities for following such a subject out and forming correct conclusions than usually fall to the lot of many more conspicuously placed. We are in a better position for dealing with what is called the personal factor, more often than not itself an outcome of defective methods of nutrition, individual or hereditary.

One cannot be in close observation of, in many instances, the same people for thirty years and more, as I have been, without getting a considerable insight into the influences at work in connexion with their fitness in health and their resisting and recuperative powers when assailed by disease. When one indulges in anything in the nature of a professional retrospect, the first thing that strikes one is the increased frequency and seriousness of abdominal troubles in the present day; appendicitis, perityphlitis, gouty colitis appear to have taken the place of flatulent colic and troubles of similar calibre with which we were prone to be occupied thirty years ago.

The simpler ailments of the earlier period were due apparently to simple causes, whilst those of the later period are traceable to microbic influences and are of more serious import. I vividly remember cases of appendix trouble with which I had to deal in the early period; but they were few, and occurred in subjects in whom this rudimentary structure was sufficiently patent to admit a cherry-stone or some similar foreign substance. Nowadays undue patency is not necessary.

In looking about for a cause for such changes we naturally consider the food factor, and we see that great facilities have been afforded for augmenting the carnivorous tendencies of the English people. The importation into this country of large consignments of live, frozen, and tinned meat has aggravated the tendency, which seems to have existed from a very early period in the English people, to regard the butcher's shop as the source of all real nourishment, and of all the most highly appreciated flavours. In the last quarter of a century the consumption of meat per head of population has, I believe, quadrupled. Doubtless this national failing is largely conduced to by our climate. Our raw and ofttimes sunless atmospheres favour the consumption of stimulants, and that meat is much more of a stimulant than is generally supposed should be strongly insisted upon. Stimulants necessarily demand frequent repetition, and one stimulant begets another, consequently the best friend of the publican and tea merchant is the butcher.

The fact that the people who eat the most meat are those who want the most meals, though not in accordance with most persons' ideas, is absolutely correct. The stimulating property of meat is largely responsible for the fact that those who have for a length of time abandoned the use of meat at breakfast and luncheon, confining their

* Read at the meeting of the Windsor Medical Society, November 28th, 1906.

indulgence in it to once in the day, find that what they were disposed to regard as a mere apology for a meal, sustains them better and for a longer time than what they wrongly thought was the more substantial and valuable material. Such people seldom fail to remark that they have no desire to anticipate the luncheon hour, and have no keenness for afternoon tea. What to them, however, was the greatest discovery was the fact that after they had to this extent given up the use of articles of food hitherto most prized they found more enjoyment in their meals than previously, the explanation being that under a simple dietary the palate acquires a new sensitiveness. People who commit evident excesses and are known to their friends as "good trenchermen" are expected to pay the penalty, but in my opinion very undesirable excesses are committed by the great majority of well-to-do people in a less conspicuous way, and the practice fails to attract the attention it deserves because it is so universal. Cookery in this country, though still at a very low ebb, has altered to this extent, that solid foods are made mechanically more digestible—not an unmixed gain, perhaps, as excesses are simplified and the indiscreet indulgers are not warned by the epigastric storm signals which formerly brought them to book.

Certain classes of the community, of course, find their dietaries restricted by pecuniary reasons, but amongst those who are not so restrained taste and internal capacity appear to be the only guides. What is spoken of as an appetite is the outcome of habit, and is in no sense an index of the body's needs.

Most people's breakfast contains considerable nitrogenous elements. At luncheon these figure still more largely, and reach a climax when what to many is the event of the day is arrived at.

Unfortunately the data laid down by physiologists long ago, and still relied upon by most people who discuss dietaries in this country, appear to have been founded on human instinct and custom rather than on scientific investigation. Most of us learn before we have been many years in practice, from the number of extraordinary things that find their way down the throats of young children, that instinct at an early age is not to be trusted, and when we come to more advanced years we find that adults are all creatures of habit, whose palates are apt to be pleasantly tickled by animal foods with their high proteid contents. When we take into consideration also the prevalent opinion that all bodily ills and weaknesses are to be met and combated by an increased intake of foods, it is easy to see that our dietetic habits are more likely to be based on these grounds than upon scientific reasoning or true physiological needs. There is a constant temptation to increase the daily ration, and there is almost universal belief in the efficacy of a rich and abundant diet to strengthen the body and to increase bodily and mental vigour.

Having come to the conclusion that the daily food of most of us was in excess of what is either necessary or desirable, though always a very moderate consumer, seven years ago I reduced my intake of proteid food to one-third of the quantity I had been in the habit of taking, and subsequently induced a few other people to adopt a similar alteration. The system aimed at curtailment rather than prohibition, and practically resolved itself into taking meat only once a day, simplicity being regarded as the other essential. The publication last year of Chittenden's researches afforded me very lively satisfaction, for the conclusions I had arrived at by ordinary clinical observation were thoroughly borne out and confirmed by his careful and elaborate physiological investigations. That his data will be fully substantiated in the future there is, I think, be no doubt whatever.

Time will not allow me to describe the great general benefits which accrued to all, irrespective of age, sex, or occupation, as a result of the change of living, but I will pass on to the more important developments in connexion with the circulation and the nervous system. I say without hesitation that the change produced in the circulation of the blood by an altered diet, was the most astonishing revelation I have ever encountered in medicine. The effects are most noticeable in connexion with the peripheral circulation, and find expression in the feeling of increased warmth of body, and sense of general well-being.

In this way the important part played by the capillaries, through which the interchange of nutritive pabulum takes place between the blood and the tissues, is brought home to one very forcibly, and one recognizes that their condition may be regarded as furnishing most valuable information respecting the state of the secretions, and the well-being of the economy generally. As a result of these observations I am able to endorse the remark made by Sir James Barr in his excellent address in medicine at Toronto, "that the man who only studies the circulation with the aid of a stethoscope is a positive danger to society."

In connexion with the nervous system, the results have sufficed to convince me that the much-bewailed nerves of the twentieth century, and the restless excitability so largely displayed, are outcomes of the dietaries in vogue, and are not caused by the strenuous lives the people of the present day are supposed to lead. I see persons in the course of most mornings whose nerve force has been utterly used up by fruitless efforts to assimilate material which Nature did not want. They yawn constantly, are excessively tremulous, and exhibit an amount of fatigue which might reasonably have resulted from a walk of several miles, when, as a matter of fact, they have scarcely moved from their chairs. Very often the symptoms of delayed digestion displayed by these subjects are mistaken for indications of exhaustion, so that their anxious belongings ply them with beef-tea or some other equally mischievous concoction. A large amount of energy is used up in passing on nitrogenous waste products from organ to organ, or from tissue to tissue, on the way to elimination, and that liver and kidneys ultimately rebel at the excessive labour is not to be wondered at, and when the products that result from the breaking down of nitrogenous waste fail to go through the processes in the hepatic cells and elsewhere that Nature intended, very serious symptoms inevitably result.

I see these conditions constantly in a very marked form in men who have ceased to be harassed by business cares, but who continue "to do themselves well" as the saying is, though they have relinquished most of the muscular exercise that formerly conduced to their well-being. I see it less often in younger men leading what ought to be ideal lives as country gentlemen. They are often unable to follow up their favourite sports for want of "nerve"; though they imbibe little alcohol their condition is almost suggestive of it. I am convinced that the preservation of what is called "nerve" is very largely dependent on the adaptation of food to the requirements of individual nutrition.

For many years I have regarded the large bowel as the fountain head of the mischief, but it was difficult to account for much with which one was familiar till the bacteriologists came to our aid. To Professor Metchnikoff in his very interesting work on the *Nature of Man*, and his more recent Harben Lectures, I have been much indebted. He tells us that in the intestinal canal no less than 28 billions of bacteria are formed daily, and that the greater portion inhabit the large bowel. Being anaërobic they are able to dispense with free oxygen, and all their wants are met by the decomposing material with which that portion of the body is so largely furnished in the present day. This bacterial flora constitutes one-third part of the human excreta.

Man was intended to draw on both the animal and vegetable kingdoms for his sustenance, but was not intended to be the carnivorous animal he has become. Excess of proteid or carbohydrate material beyond the physiological needs of the organism must be detrimental to it. Superabundance of the latter is attended with very evident disadvantages, the more obvious of which are dilatation, fermentation, and the sequlae thereof. Too much of the former entails still more serious and far-reaching consequences. When the large bowel is not entirely devoted to the purposes of a cesspool, and encumbered with the putrefactive débris which an excessive importation of proteid material entails, it is much more capable of dealing with cellulose, and vegetable constituents generally. This is the explanation of the fact so often forced on one's notice, that the dejecta of patients on a small proteid diet, combined with what would be considered a large quantity of fruit and vegetable, including, *inter alia*, six or eight apples a day, will be 50 per cent. smaller in volume than that of patients partaking of the ordinary proteid fare, with little or no vegetable element.

Metchnikoff, after pointing out that man, in common with mammals, appears to have acquired the convenience to be derived from a large bowel as a retainer of dejecta at a risk to health, and at the expense of longevity, goes on to propose that, in the interests of its owner, it should be removed by surgical operation. As it is not at all likely that such a step as this will be generally adopted in the immediate future, it behoves us to take care that it shall not be allowed to be habitually overcharged with dangerous material. Such a prolific originating centre must otherwise be productive of a great variety of bodily ills. My experience has convinced me that it has to do with most of the diseases in the Registrar-General's category, organic and functional.

When it becomes the seat of malignant disease (in 1895-6 out of 1,148 cases of cancer in the German hospitals, 89 per cent. affected the large bowel) the part it plays is recognized; or when reabsorption of the intestinal contents takes place on a large scale, there is not much doubt felt as to what is going on. But when the state of affairs in that region originates a general malaise, a catarrh of one or other portion of the mucous lining, a heightened temperature, or a great deal of the so-called influenza; when we fail, in spite of the exhortations of our friends, "to keep our hair on," or when it insists on changing its colour prematurely, all kinds of causes are suggested and sought after, when too frequently the true cause, the state of the large bowel and its flora, is lost sight of.

Each of the conditions just named is, of course, the direct outcome of its particular bacterium, and these various bacteria are not likely to be annihilated however considerable the manufacture and use of antiseptics may be. Safety can only be attained by taking the utmost care that suitable media are not furnished more largely than can be helped. Bacteriology leaves us in no doubt as to the completeness of the vicious circle. From this source the quality of the blood of the individual becomes impaired, and in consequence its circulation is impeded. Then the macrophages go forth to bring about the destruction of the higher elements of the organism, or, more properly speaking, to accomplish the removal of these elements after the vitality of the tissues has become impaired or destroyed in consequence of this failure in the blood supply just alluded to. It is in this way that arterio-sclerosis, which is accountable for more deaths in people over 50 than any other disease, is brought about.

MULTIPLE MYELOMA.

by

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THE following case of multiple myeloma which recently came under our observation appears to us to be worthy of record on account of the rarity of the complaint. The disease occurred at a very advanced age, and although the symptoms and signs were very similar to those which have been described in other cases, no myelopathic albumoseuria was present on the occasions when the urine was examined for this purpose. Possibly, however, it existed earlier in the course of the disease at a time when the precise nature of the complaint was not suspected, for during that period certain symptoms arose which might bear this interpretation.

The patient was a man, aged 72. He had always been of a particularly nervous disposition, subject to frequent nervous breakdowns necessitating prolonged rests and change of air. This point is mentioned because at first the vague pains from which he complained in his terminal illness were regarded as symptoms of his neurotic diathesis, especially as no organic lesion could be discovered to account for them. A few years previously he is said to have suffered from some form of "sunstroke."

In September, 1905, he was ordered Fellows' syrup and strychnine which had improved his health in previous attacks of depression, for at this time he was very much inclined to weep without any obvious cause. No abnormal physical signs could be detected. On December 29th, 1905, he complained of pains in the sides of his chest. There were no signs of pleurisy or disease of the lungs, and the pains were attributed to intercostal rheumatism.

In February, 1906, he developed an attack of what was regarded as "cystitis," without any obvious cause. He was away from home the greater part of the time, and the attack subsided in about three weeks. The symptoms of this attack were painful and frequent micturition, with the passage of turbid urine. No further note could be obtained as to the condition of the urine at this time, but subsequent events threw much suspicion on the exact nature of this attack. It may have been a true cystitis, it may have been an attack of phosphaturia, or it may possibly have been an example of precipitation of the Bence Jones proteid within the bladder associated with painful and frequent micturition, for it is known that this proteid may be deposited in an insoluble form. In a few similar cases attacks of painful and frequent micturition have occurred in which the urine was acid, and the turbidity was shown to be due to the albumose, and not to phosphaturia in connexion with the bone disease. Whether or not it was so in this case, unfortunately, was not recorded.

During March, 1906, he suffered a good deal from dyspepsia, with coated tongue, but towards the end of the month he was able to get about and go out. On April 8th he had a febrile attack, with pains in his sides and limbs, which was regarded as influenza. A febrile state continued throughout the month, with intercostal pains so severe as to make movement in bed, to which he was confined, difficult, and indeed almost impossible without help; when at complete rest he had little or no pain.

Up to the end of June he continued to suffer from a good deal of pain, which was variable in position, and to account for which no organic disease could be detected. At this time he was massaged daily with beneficial results, in the opinion of all connected with him. Lateral curvature of the dorsal spine was noticed, but it was said by his relatives to have been of very long duration. At this time, while under the care of a nurse and practically in the absence of relatives, he seemed to improve, putting on weight slightly. On the arrival of his family at the end of July he again lost ground; he became very feeble when rising from a chair would climb up his legs (in the same way as a patient suffering from pseudo-hypertrophic paralysis); he could not feed himself, and finally had such difficulty in masticating solids that he would keep food in his mouth five minutes or more, and then perhaps have to spit it out. He complained of much pain in his sides and legs, and became extremely emaciated. He very much objected to being moved about. Towards the end of August he was kept in bed, his pulse became unequal and he was much worried by a cough.

In the middle of September slight enlargements were noted at the costo chondral junctions of the upper three ribs. It was noticed also that the ribs on the right side were less resistant to pressure than those on the left, and on further examination one of them was felt to snap under the examining fingers, without, however, causing apparently any extra pain. The three ribs below the angle of the right scapula were slightly, but distinctly enlarged and very tender on pressure. The tips of the fingers at this spot could not be inserted between the individual ribs as on the other side. In the spine column two slight lateral curvatures were noted, while in the lower dorsal region there was a distinct prominence with a considerable amount of rigidity, but as all movements were carried out with considerable pain and difficulty it was quite impossible accurately to determine the amount. There was no enlargement or tenderness of the bones of the arms or legs. No sign of any other organ disease could be detected in any of the viscera. There was no glandular enlargement. The disease, therefore, appeared to be limited to the vertebrae, ribs, and costal cartilages, and since caries, osteomalacia, secondary carcinomatous deposits, spondylitis deformans, osteitis deformans, all appeared to be out of court, the diagnosis of probable multiple myeloma was made. The urine was therefore carefully examined, but no albumose, albumen or sugar was found. A differential count of the white cells of the blood yielded:

Neutrophiles	... ...	58.0 per cent.
Large mononuclears	... ...	6.5 ,,
Lymphocytes	... ...	30.5 ,,
Eosinophiles	... ...	2.0 ,,
Transitional forms	... ...	2.0 ,,

No myelocytes or nucleated red cells were seen.

On September 25th the urine was again examined for albumose, but with entirely negative results. This absence of albumose was kindly confirmed by Professor Walker Hall.

On October 2nd a semi-fluctuating swelling appeared over the first and second costal cartilages and intervening interspace on the right side, some discoloration of the skin over it giving the swelling the appearance of a bruise. The temperature, which had previously been irregular, went up to 100.6° F. The costo-chondral articulations had in the meanwhile been increasing in size, and that of the fourth right rib was semi-fluctuating. The patient had for days complained of such pains and soreness all over him that a cradle had to be obtained to keep off the pressure of the bedclothes.

By October 15th the swelling over the first intercostal space had almost disappeared. The tendency to mental wandering, from which he had suffered for some days, was now so great that he only at rare intervals recognized any one, and death, which was preceded by a rigor and a temperature of 102.6° F., took place on October 17th.

At the autopsy the body was extremely emaciated. On reflecting the skin from the thorax, some enlargement of the sternum was obvious near the sterno-clavicular articulations. There were also definite swellings about the size of small hazel nuts over the costo-chondral articulations, especially on the right side, and over the four upper ribs. There was much weakness of the ribs on the right side, which were easily fractured. The heart was enlarged, myocardium very soft and friable, and the valves all somewhat thickened, but there was no recent endocarditis. Atheromatous changes were advanced in the large vessels. The lungs were congested at the bases. There were no growths and no enlarged glands at the roots of the lungs. There was no pleural or pericardial effusion. The stomach was dilated, but there was no growth. There were two simple cysts in the left kidney. No calcareous nodules like those described by Parkes Weber in a similar case were found. The liver was fatty; the spleen very small, with some thickening of its capsule. There were no growths in any of these organs, or in the pancreas, suprarenals, intestines, or rectum. All the ribs appeared to be infiltrated with growth, while those on the right side were extremely friable. The growth was red and soft, and apparently confined to the medulla. The compact outer bone had in many places become extremely thin, and in some parts expanded, so that the bones appeared to be much enlarged. The periosteum covering the bodies of the vertebrae was markedly bulged in the lower part of the thorax, where the vertebral bodies were about one and a half times their normal size. In no place did the growth extend through the periosteum. In the bodies of the vertebrae could be felt a soft growth, which was easily displaced on pressure with the finger, which then encountered sharpish spicules of bone, feeling very much like soft white coral. A similar condition was found in the upper part of the lumbar vertebrae, where a marked lateral dislocation of the bodies of the vertebrae had taken place. The long bones of the body could not be examined, but there was no evidence to indicate that these were in any way implicated.

Over the common iliac artery on the right side a few enlarged glands about the size of filberts were discovered. Subsequent microscopical examination of these showed that they had the same structure as the growth in the bones. Similar involvement of a few of the glands of the body has been observed in a few other cases. It would appear to occur very late in the disease, and no other organs have been found to be involved.

The sections of the growth have been submitted to Professor Walker Hall, and we are much indebted to him for the following observations on them:

The cells of the growth are of three types:

1. Round cells, uniform in size, with a large, pale nucleus and large protoplasmic contents, which is granular in character.
2. Round or polyhedral cells with a small, deeply-staining nucleus and finely granular protoplasmic contents.
3. Large round cells with large round, deeply-staining nuclei; finely granular protoplasmic contents.

A reticulum occurs in fine fibrous strands. The blood vessels are very thin-walled. This tenuity of the vessels will account for the haemorrhage which took place into the growth at the upper part of the sternum. No abnormal quantity of nucleated red cells, lymphocytes, or plasma cells are seen. The granules met with in the cells are fine, and do not show any regular arrangement. They are not brought out distinctly by Leishman's stain, but by a modified eosin and methylene-blue method they are found in some, but not in every cell. They appear to be neutrophilic rather than oxyphilic in character. The arrangement of the cells conveys the idea of sarcomatosis, but this is not borne out by the other characters of the tissue, except that of the vascular channels.

The following forms of myelomatosis are ruled out of court:

1. The erythrocytoma of Ribbert, which consists of a hyperplasia of the nucleated red cells of the marrow.
2. The mixed form, which consists of nucleated red cells, lymphocytes, and myelocytes.
3. The lymphocytoma, in which the growth consists of lymphocytes only.

The conclusion, therefore, reached is that the growth consists of cells which evidence the characters of the cells which occur in the marrow, and which are regarded by many as the predecessors of the myelocytes.

As this case proved eventually to be one of multiple myeloma, it is unfortunate that we were unable either to demonstrate the existence of albumosuria, or that we are unable to state that it had never been present, for we feel that it may have existed earlier in the course of the disease, at a time when the possibility of its presence was not suspected.

A CASE OF SCURVY OCCURRING IN A DIABETIC.

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CASES of land scurvy in adults are sufficiently rare in this country to justify the publication of the following:

The patient was a man aged 44, a bootmaker. Had never resided abroad, was in comfortable circumstances, and had had no previous illness until about two years ago, when he was discovered to be suffering from diabetes. He had great thirst and a voracious appetite, with great loss of flesh. The specific gravity of the urine was 1060, and contained much sugar. He was placed on a not very strict diabetic diet and given some form of opium.

He gradually went from bad to worse, and a friend advised him to try the following modified Salisbury diet: To drink 2 quarts of water a day, and eat 2 to 4 eggs and 2 lb. of beef, fried and minced. He tried this diet for twelve months and improved greatly; he increased in weight and strength, and the sugar vanished entirely from the urine. As time went on he became tired of the diet, and added a little fish, and sometimes toast or diabetic bread; he gradually became pale and very weak; his urine, as tested by himself, was still free from sugar, and his confidence in the diet was so great that he still persevered with it, fearing a return to his previous condition.

I now saw him for the first time after twenty-one months of the diet; he had had absolutely no vegetables of any kind, but fresh cooked meat in abundance. I found him pale, his face was puffy and of a yellowish tinge. He was thin, and complained of intense weakness and dizziness; he had pains all over his body, especially in the legs. There was no rise in temperature. The gums though not swollen were maroon coloured, and mastication caused them to bleed. The other mucous membranes were blanched. His left leg was semi-flexed, and could not be straightened or bent because of a very painful diffuse swelling in the ham, which extended nearly half way up the thigh; the skin in this region was black and blue, and hard as a board, and intensely tender. The leg was dotted over with larger and smaller patches of punctiform haemorrhages, many of them at the base of hair follicles. There was oedema on the front of the leg, the tibia being very tender. The posterior surface of the leg was free from oedema. In addition there were several subcutaneous haemorrhages on the dorsum of the left foot and in the right popliteal space. There was no injury to account for the haemorrhages, his heart was normal, as were his arteries. The urine, specific gravity 1020, contained a trace of sugar, but no albumen. There was no night blindness. On one occasion he had had a severe attack of syncope.

Treatment consisted in letting him have as plentiful a supply of such fresh vegetables as a diabetic can have—for example, watercress, lettuce (portions of), small onions, tomatoes made into a salad with vinegar, cabbage, brussels sprouts, fresh lemon juice sweetened with saccharine, 4 oz. of lime juice daily. He had also a liberal diet of fish and meat. The limbs were wrapped in cotton-wool and bandaged, and he was kept at rest; no drugs were administered. The effect was very

remarkable. His general condition and anaemia improved within a few days. His tongue became clear; there were no fresh haemorrhages, and in ten or fourteen days the effused blood was absorbed. The induration of fascia in the ham was absorbed more slowly, and the tenderness and oedema over the tibia was the last to vanish.

The character of the lesions, the history and rapid recovery on an antiscorbutic diet alone point conclusively to the disease being scurvy, and not purpura, a primary anaemia, or beri-beri. Diabetes does not appear to produce similar symptoms, and the addition of fresh vegetables alone would hardly produce such a rapid improvement. He is now in good health, has put on flesh, is taking an ordinary diabetic diet, and is passing no sugar; he is only able to take a very small quantity of ordinary bread without excreting sugar.

The case upholds the generally-accepted theory that absence of fresh vegetables alone is sufficient to produce scurvy, and that fresh-cooked meat alone has no antiscorbutic properties. No preserved or salted meat was used, all the beef was English, and fresh, so that the theory of scurvy being produced by the presence of a toxic material formed by putrefaction, or due to slow ptomaine poisoning alone, finds no support from this case. The long time required to produce a definite scorbutic symptom (twenty-one months) is also worthy of note.

VACCINATION OF THE CORNEA.

BY

J. ACWORTH MENZIES, M.B. EDIN. and W. E. JAMESON, M.B., C.M. EDIN.

ACCIDENTAL inoculation of some part of the conjunctiva with vaccine is occasionally reported, but we have been unable, in the literature at our command, to find a definite description of such an accident affecting the cornea. There is a short report in the *Lancet* (1906, i, p. 999) of a case of accidental vaccination of "the eye," in which it is stated that the resulting impairment of vision would have been worse but for the fact that the patient had been vaccinated two years before. Aron[1] has reported a case in which the cornea was so seriously affected that permanent opacity could not be avoided. In both of these cases the cornea may have been the site of inoculation, but whether that be so or not, the condition is so rare that it seems desirable to record the following case.

On February 27th, 1906, one of us (W. E. J.) was breaking a tube of Chambers' lymph, when a fragment of the tube flew into his right eye. The eye was promptly washed out, and there was no further discomfort till March 4th, when there was some indistinctness of vision due to monocular diplopia. Vision, nevertheless, was ⅚, and nothing abnormal appeared on examination. On the following day there was a small, circular area, the size of an ordinary pin's head, bare of epithelium in the lower outer quadrant of the cornea. For three days this area gradually increased in extent, till it occupied one fourth of the total area of the cornea. There was no infiltration of the corneal substance, but considerable conjunctival injection. On March 9th chemosis and oedema of the lids became marked, and about this time and for several days the preauricular gland was enlarged and tender. The chemosis and oedema remained at their maximum till March 15th, and then during the following ten days slowly diminished, but during all this time the denuded area of the cornea remained bare of epithelium. Finally, on March 25th, the epithelium began to spread over the exposed corneal surface. Gradual tech-piece clearly from above and below, and more slowly from the sides of the patch. As compared with ordinary ulcers after injury, the rate of progress was very slow. It was March 29th when the process was complete. Although the cellular elements of the corneal substance had been exposed, the regenerated epithelium had a perfect surface. Unfortunately, recovery was retarded by the occurrence of a secondary ulceration of the affected area. On April 6th the eye was re-inspected, and in spite of daily [illegible] healing for three days, and [illegible] for the repair remained [illegible]. On May 14th, however, the ulcer was healing satisfactorily, and the patient was ultimately able to resume work on June 13th, although the eye continued weak, and dark glasses had still to be worn for a time. During the acute stage the pupil never dilated fully with atropine, and there was a considerable amount of iritic pain, but there was no exudation or synechia. On June 29th vision was J. 14 (letters), on September 7th it had improved to $\frac{6}{9}$, on September 25th $\frac{6}{6}$ (one letter), and now (December 13th) it is $\frac{6}{5}$.

The accompanying symptoms were chiefly photophobia, epiphora, and pain. The epiphora was one of the earliest symptoms, and persisted to the end. It was continuous and very troublesome. The pain was twofold: (1) a superficial burning and smarting, which often kept the patient awake at night, even after healing had taken place; and (2) iritic pain, which had to be controlled by very free use of atropine.

As regards treatment there is not much to be said. The eye was kept clean throughout by means of frequent ablutions with warm boric lotion. Atropine was essential to control the iritic pain. At one time it produced a considerable rash, and duboisin was substituted, but proved ineffectual. On Dr. Glascott's suggestion the atropine was resumed in the form of ointment, and this proved less irritating. At an early stage argyrol was used as a possible means of destroying the vaccinal poison, and it was continued throughout the acute stage, but for no better reason than that when it was discontinued progress did not seem to be so favourable. The ulceration took place while the patient was at Colwyn Bay, and we wish to express our thanks to Dr. Nuttall for taking charge of the case during this period. Dr. Nuttall prescribed drops of atropine and quinine, which seemed to expedite healing. We are also indebted to Dr. C. E. Glascott, who kindly saw the patient several times.

REFERENCE.

[1] Abstract in *Ophthalmoscope*, 1904, p. 277.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

NEGLECTED CONSTIPATION AND PERICOLIC INFLAMMATION.

THE complaint of the patient in the following case, a woman, aged 55, was one of lassitude and constipation. Such constipation, ascribed by her to a change of climate, was in her case very unusual. As a rule, her bowels were very regular, but for some six weeks they had been opened only at intervals of three or four days, and this with difficulty and by the aid of purgatives and enemata.

Beyond this constipation and the lassitude nothing particular was noticed by her until the end of six weeks. Then she had pain in the left groin, extending from the anterior superior spine of the ilium downwards and inwards. Associated with it was a brawny, indurated swelling, with indefinite edges, in the left iliac region. Anteriorly this was apparently quite superficial, but posteriorly its limits and exact situation could not be determined. Superiorly it extended 2 or 3 in. above the superior spine.

Her temperature was raised to 103°, and her pulse to 120, and the tongue furred. She did not feel ill, and expressed surprise that so large a swelling should suddenly be noticed by her without more acute and premonitory symptoms. The inflammatory nature of the swelling was obvious, but the cause was somewhat indefinite, and the extent, course, and prognosis uncertain. Vaginal and rectal examination revealed nothing abnormal nor could any disease of bone or neighbouring tissues be discovered.

I treated the constipation vigorously, keeping her on a low diet and applying fomentations locally.

[illegible] day there was a particularly tender area in the centre of the swelling, but palpable suppuration did not occur, and in the course of a week her temperature began to drop, and she experienced considerable relief. Two or three weeks later the swelling subsided, but four or five passed before temperature and pulse became normal and the tongue clear. On more than one occasion she passed mucus but never blood. Her health is now quite satisfactory.

REMARKS.—I think there is very little doubt that the whole of her trouble was caused by obstinate and prolonged constipation, which produced colitis, and inflammation of the surrounding areolar tissue. The case seems to me interesting as an apparent example of the condition described by Mr. D'Arcy Power of one of the sequelæ of neglected constipation, its prolonged and

indefinite onset, and the possibility of extensive invasion of the connective tissue and other structures in immediate vicinity to the lower bowel.

Middlesbrough. HAROLD WALKER, F.R.C.S.

COLUMNAR CARCINOMA OF THE EPIDIDYMIS.

THE patient in this case, aged 32, a late petty officer and diver in the navy, complained on July 10th, 1905, of a swollen testicle. He had no personal history of tubercle, syphilis, or gonorrhoea, and none in his family of cancer or tubercle, and was in appearance healthy and well nourished. The left globus major of the epididymis, only perceptible on handling, was the size of a quarter of a walnut. The swelling gave no pain, and was not tender. It was quite distinct from the body of the testicle, the latter being quite normal, as also the cord. Increasing doses of potassium iodide were given.

Progress.—On August 29th the swelling of the globus major had considerably increased, and the globus minor was enlarged, the testicle itself being still unaffected. September 16th, the parts were considerably larger; two prominent elastic bosses were noticeable in each division of the epididymis. Only the front part of the body could be detected. By October 10th it was impossible to say which part of the testicle was involved. The skin, containing large veins, remained movable, the swelling smooth, and in one or two parts elastic. There was no translucency; the cord remained normal, and no enlarged glands could be detected. Under these circumstances, the testicle was removed four days later. It contained cysts, and on examination by Dr. F. W. Andrewes, of St. Bartholomew's Hospital, was found to be the seat of columnar-celled carcinoma of obscure type. In ten days the patient was sitting up, and was not seen again until nine months later, July 21st, 1906. He showed a swelling (first noticed by himself on the previous day) the size of a fetal head, in the left hypochondriac region extending down to the umbilicus; it was freely movable, descending with respiration, and regular, smooth, and rounded. The patient himself seemed to have lost flesh, and two months afterwards—September 25th—he died, the whole abdomen being then uniformly distended, and measuring 36 in. at the umbilicus.

On *post-mortem* examination, the abdominal cavity was found to be occupied by a single smooth and elastic tumour, cystic and friable, and of the size and shape of an association football. Where it originated could not be determined; probably it was in the left lumbar glands.

REMARKS.—I have recorded the case on account of its apparent rarity; I am inclined to think, however, that the condition is not really very rare, and that if every one were so fortunate as to see cases of carcinoma of the testicle at an early stage, before the individual parts of the testicle have become obscured, many of them would be found to originate in the epididymis.

Woking. FRANCIS COLBY, F.R.C.S.Eng.

THE INCUBATION OF SCARLET FEVER.

ON reference to textbooks and literature on scarlet fever, we generally find the incubation period given as twenty-four hours to seven days, with an average of from two to four days. There are, however, some authorities who believe it to be much longer than this, and I am led to the same conclusion by observations made in the fever hospital of this locality. It consists of two separate blocks of buildings, with accommodation for thirty patients, but no observation ward for the doubtful cases has been provided. Owing to inevitable errors in diagnosis, a certain number of cases are sent in as scarlet fever which are not so. A child, for instance, suffering from sore throat, with a pseudo-rash, and the concomitant signs and symptoms of some fever being present, the case is diagnosed as one of scarlet fever, is consequently notified as such, and is immediately sent for isolation. On the following day, however, we find the little patient, to all intents and purposes, quite well, with an absence of fever and no trace of any rash. This change within twenty-four hours is very marked, while the general appearance of the patient during the next few days will serve to prove that an error of diagnosis has been committed. This being so, we cannot even place such a case among the category of the "simplex" or mildest form of scarlet fever. Nevertheless, owing to the absence of an observation ward, such a child is placed among the genuine cases of scarlet fever, and is from the moment of admission open to infection, and yet cannot be discharged just then. Under such favourable conditions for infection, I find that such a child does not contract the disease within seven days—the limit incubation period as generally given—but on the other hand shows unmistakable signs of infection in from three to four weeks after admission to the scarlet fever wards. The type of fever in these cases is somewhat severe, the signs and symptoms being usually typical of those varieties of scarlet fever recognized as "scarlatina anginosa" and "scarlatina maligna." The number of such cases seen dispels any thought of a pure coincidence, while we cannot in any possible way confound such cases with those of true relapse occasionally witnessed.

Of the last 300 cases admitted to our hospital here, 13 have conformed with the conditions which I have endeavoured to explain: that is, two days after admission they have not presented any of the signs or symptoms of scarlet fever, but when subjected to close contact with genuine cases of this fever they have exhibited all the well-known characteristics of the disease in from three to four weeks after contact. From this experience I am led to believe there to be some discrepancy in the period of incubation from scarlet fever which is generally taught us.

E. LYNN JENKINS, M.B., B.S., M.R.C.S., L.R.C.P.,
Medical Officer to the Isolation Hospital for Thackley and District.

URETHRAL ABSCESS AND CALCULI.

THE case of peri-urethral abscess with the formation of calculi reported in the BRITISH MEDICAL JOURNAL of July 21st, 1906, resembles somewhat closely a case occurring in the Ancoats Hospital, Manchester, last year, the notes of which may be of interest. The patient, aged 34, was operated on for perineal abscess, and a quantity of pus was evacuated and the presence of a large calculus revealed. This was extracted with lithotomy forceps, and afterwards found to weigh over ½ oz. A sound passed into the bladder detected no calculi, nor could any communication betweeen the bladder or urethra and the cavity containing the calculus be discovered, but subsequent to the operation a small quantity of urine escaped from the perineal opening during micturition. When 7 years of age the patient had undergone an operation for stone, apparently by lateral lithotomy, the perineal abscess occupying the site of the old scar. I am indebted to Mr. Stanmore Bishop for permission to mention this case.

Halifax. F. G. HACK, M.B., Ch.B.Vict.

PURPURA AND CALCIUM CHLORIDE.

IN the following cases of purpura, both somewhat unusual, treatment by calcium chloride proved rapidly effective.

CASE I.—A male child, aged 3 years, had previously suffered from oedema of the face whenever he ate white of egg, but otherwise had been healthy. He was brought to me on account of subcutaneous haemorrhage over the gluteal region. The marks were in streaks and spots as though they depended on pressure, and looked like the result of a severe whipping. Except one or two lines all were nearly vertical along the median folds of the buttocks. There were no spots on the legs, and only one—on the outside of the conchus—elsewhere. The child appeared tired, but not ill.

CASE II.—The second patient, a male child of 4, was said to have had a sprain of the leg a fortnight before, and to have suffered from gastric trouble and diarrhoea, one of the motions having been black. His legs were covered with haemorrhagic purple raised blotches, and the region around the ankles was much swollen by deep haemorrhagic effusion and exquisitely tender. He was very ill, and quite unable to walk; his gums were normal.

REMARKS.—This second case was probably one of "Henoch's purpura," and the supposed sprain had no doubt been a spontaneous haemorrhage in or about the ankle-joint, and the vomiting part of the disease. I prescribed for the first case 3-gr. doses of calcium chloride ter die, and the second case 4-gr. doses of the same drug, both being placed on a diet of raw meat and fresh milk. The spots and swelling began to disappear in about twenty-four hours, and to my gratification the second patient was able to run about in less than a week.

I am indebted to Professor Wright's recommendation (Osler's *Medicine*) for the successful result. I could ascertain no cause for the illness in either case. There was no evidence of swollen gums pointing to scorbutus. The distribution of the haemorrhage in the first case is interesting, and the severity and depth of the effusion, followed by such rapid recovery notable in the second case.

Colwyn Bay. W. B. RUSSELL, B.A., M.B.Cantab.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

SUNDERLAND INFIRMARY.

ACUTE YELLOW ATROPHY OF THE LIVER.

(By G. BLACKER MORGAN, jun., M.B., B.Ch., T.C.D., Physician to the Infirmary.)

E. S., aged 18, a ropemaker, was admitted under my care on May 28th, 1906, suffering from jaundice, which had lasted a few days. At this time he had no other symptoms, and the case for the first few days was considered to be one of catarrhal jaundice, although even at this date the liver dullness was slightly diminished. He was slightly drowsy, but his pulse was not at any time subnormal.

He had been struck in the eye with a piece of steel on March 26th, and had attended the Eye Infirmary. He developed purulent choroiditis; he suffered much pain, much more than is usually the case. He was anaesthetized with ether, and the eye was enucleated. He was said to have suffered with headaches since. He had also been unduly anxious as to whether or no he would receive compensation for the loss of his eye.

After admission to the infirmary he gradually became more deeply jaundiced; severe vomiting began, accompanied with haematemesis. The liver dullness nearly disappeared. The pulse became very rapid and compressible; the urine scanty, with a heavy deposit, and contained bile. No leucin or tyrosin were found, although looked for several times. Deeply bile-stained epithelial tube casts were extremely numerous. He became delirious; this was followed by coma, and death took place seven days after admission.

Post mortem Examination.

Forty-eight hours after death. Skin deeply bile-stained; *post-mortem* staining well marked. No external marks of injury, except where right eye had been enucleated. Brain and membranes healthy. Thoracic organs normal. The liver surface was wrinkled, dry, and showed characteristic red and yellow areas. These showed even better on section. The liver weighed only 22 oz. The spleen weighed 5½ oz. The kidneys weighed 5½ oz., were congested, and showed at a few points minute haemorrhages. Microscopic examination of the liver showed great destruction of liver cells; in some places their outline was quite lost, being replaced by a quantity of granular *debris*.

REMARKS.—This case is, I think, of interest, not only on account of the rarity of the disease, but also because it would appear to strengthen the theory that suffering, either mental or bodily, is a direct cause of acute yellow atrophy of the liver. For the careful notes of the case I am indebted to our resident physician and pathologist, Dr. A. Monat.

LADY ALLBUTT'S HOSPITAL, LAHORE.

CAESAREAN SECTION COMPLICATED BY ROUND WORMS.

(Reported by ETHEL LEECH, M.B., Ch.B., Assistant Physician.)

The patient in this case was admitted at 2 p.m. on May 23rd, 1906, having been in labour since early morning. She was a [illegible] dwarf of very small build and entirely hopeless [illegible] being drawn up and the knees bent to a right angle. Emaciated, dirty, and apparently [illegible] very little history could be obtained. She had one boy, aged 9 years, and was now in labour for the third time. Date of birth of last child [illegible]. Pains were strong and frequent, but her complaint was of "diarrhoea" for the previous ten days.

On examination there was a small amount of yellowish [illegible] from the rectum, the sacrum projected [illegible], the [illegible] spines were 7 in. apart, and the [illegible] 9½ in. and the legs were bent and [illegible].

Per vaginam [illegible] could just be inserted between the pubic rami, and a second finger could just be squeezed between the ischial bones by pressing back the perineum. The cavity of the pelvis was very contracted laterally, but the c. v. was normal. The os could barely be touched, and the presenting part was out of reach.

Per rectum, the sphincter was very lax, and the rectum, flabby and ballooned, contained some pus; no ulcer or tumour could be discovered.

On the abdomen, below the umbilicus, was seen the scar of an operation performed in this hospital three years earlier—namely, the removal of the left ovary—of which the particulars cannot be found.

Operation. It was decided to do Caesarean section immediately, and in the absence of the physician-in-charge on furlough, and of any assistant, the Civil Surgeon of Lahore, Lieutenant-Colonel Hendley, I.M.S., very kindly acceded to my request that he should come and operate. The operation was performed under chloroform and in the usual manner, the right Fallopian tube being divided between ligatures to prevent further conception. The left ovary had been removed at the earlier date mentioned.

Progress.—The patient returned to bed with a good pulse, but at midnight her temperature rose to 102.6° F., and remained up all the next day. No tenderness or distension was found in the abdomen, while the vaginal discharge was free and sweet. Quinine was therefore given, gr. v, t.d.s., and vaginal douches administered, and the rectum was washed out, but pus continued to exude from the rectum, while the patient passed frequent small quantities of semi-faecal semi-purulent matter. So things continued for four days, the temperature not dropping below 101° F., although no cause could be found on careful examination either by Dr. Hendley or myself. Next day I ordered a long irrigation of the bowel, $HgCl_2$ 1 in 10,000, and on the return of the lotion a large round worm, alive, was passed out. Santonin was accordingly administered, followed by a purge at night, and next morning two more worms, dead, were passed. This day, 29th, patient's temperature fell to 99.4°, but rose again two degrees at night. The santonin was repeated on the 30th and another worm was passed, a fifth following the next day. Thereafter, though for a few days the temperature fluctuated between 99° and 103°, it never remained high all day, and on June 10th it became and remained normal, the purulent discharge having also gradually ceased, no more worms being passed, and natural stools evacuated. The wound was dressed on May 31st, and the stitches removed; the uterus was firmly contracted.

Result.—On June 13th, or three weeks after section, the patient began to menstruate, all previous discharge having ceased about a fortnight before; it was a normal period, lasting four days. She remained very well until June 19th, when a rise of temperature took place, lasting only a short time; she has had two similar rises since, and again on the 22nd had a slight haemorrhagic discharge lasting one day. At the date of writing, June 30th, the uterus is quite contracted, but has not been able to sink below the contracted brim. A small bedsore developed over the sacrum, but quickly yielded to treatment, and had no effect on the temperature. The lower limbs are exactly as they were on admission. The child was living, but was feeble and had to be spoon-fed, and in spite of all care it died after four days.

REMARKS.—The interest of this case lies in the difficulty there was in accounting for the presence of a high temperature, accompanied by diarrhoea, pointing to a septic condition; but as far as could be judged without any infective centre connected with the seat of operation. The uterus was so prominently placed, and the patient so emaciated, that every part of the peritoneal cavity could be explored, almost as though there were no intervening tissues, and this case of examination gave unusual confidence in our decision not to reopen the wound and seek a cause for the symptoms present. One symptom, present all through, of persistent and gnawing pain over the sacrum, coupled with the discharge of an apparently sterile pus from the rectum, seemed to point to bone trouble, and for some time tuberculous disease of the sacrum was suspected. Malarial fever was suspected, and quinine was given both by the mouth and by hypodermic injection, without any effect upon the temperature. There can, we think, be no doubt that the pyrexia, diarrhoea, and discharge of pus were directly due to irritation caused by the presence of round worms in the intestine; and as this is, as presented in this case, an unusual condition it was thought worth recording. My grateful thanks are due to Colonel Hendley for his advice and help throughout the case.

[illegible] the will of the late Mr. Charles Leche Melville, of Penrose, Co. Wexford, whose will has now been proved, Dublin County Hospital receives £500.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. WARRINGTON HAWARD, F.R.C.S., President, in the Chair.

Tuesday, January 22nd, 1907.

THE DE NOVO ORIGIN OF BACTERIA, TORULAE, AND MOULDS.

DR. H. CHARLTON BASTIAN presented this communication. He had begun his experiments with various saline solutions containing ammoniacal salts, but after a time had found the best results were to be obtained with one or other of two solutions, one of which contained small quantities of sodium silicate, ammonium phosphate, and dilute phosphoric acid in distilled water, and the other a simple solution of sodium silicate with liquor ferri pernitratis in distilled water. The solutions were placed in previously superheated tubes, which, after being hermetically sealed, were heated again in a calcium chloride bath to 239° F. (115° C.), 248°, 257°, or 266° F. (130° C.), for ten to twenty minutes. The tubes were subsequently exposed, either to diffuse daylight or else in the incubator, and mostly for periods varying from five weeks to four months. No carbon was ostensibly contained in the solutions. On examination of the contents of the tubes organisms were found always on or within the substance of the flakes of silica, while the fluid above remained perfectly clear. The fluid would remain in this condition, and quite free from micro-organisms, even for months after organisms were known to be swarming in the silica itself. It was contended that there was good prima-facie evidence tending to show that silicon was capable of entering into the composition of protoplasm itself—that was, wholly or in part taking the place of carbon. It was concluded that the bacteria, bacilli, vibriones, micrococci, torulae, and moulds which had been taken from hermetically-sealed tubes previously heated to 115°, 120°, 125°, and 130° C. for ten to twenty minutes must have been engendered *de novo* within these vessels.

Professor STARLING believed that Dr. Bastian in his main thesis would have the sympathetic agreement of physiologists. They were acquainted with the continual creation of living substance from the inorganic in the animal body; but between this assimilation and the new creation of life there was a great gap. If the continual evolution of higher forms from the lower were accepted, it seemed a logical necessity that it should not cease at the lowest forms of life—there must be some bridge between the living and non-living. In the fortuitous concourse of atoms a substance might well be produced which had the power of growth and with the acquirement of stability might become living and have the power of adaptation. If a protoplasm were newly formed, however, it seemed inevitable that it would become the pabulum for higher organisms. Such newly-formed protoplasm, too, would be highly unstable. The practical point was whether the organisms Dr. Bastian had found were really alive. Had they been cultivated? But such cultivation should be under conditions similar to those in which they developed.

Dr. E. GOODALL was not convinced that the tubes had been really sterilized. Had control experiments been made? How was it recognized that the motionless bodies were living? Had subcultures been made?

Dr. BASTIAN, in reply, said that as to whether the organisms were living or not, control experiments showed that if the tubes were examined only a few days after sterilization no organism would be found, but weeks or months later thousands in each drop. Some of the organisms were not like any described in any bacteriological books. As to whether the tubes were really sterilized, they were first of all made red hot in process of manufacture, but the subsequent heating of the tube to 115° C. for twenty minutes was in itself sufficient sterilization.

CASE.

DR. SAMUEL WEST and DR. THOMAS WOOD CLARKE described a case of *Idiopathic Cyanosis due to Sulph-haemoglobinaemia*. It was that of a woman aged 37, in whom the cyanosis had commenced somewhat suddenly about eighteen months ago, and had continued with little change up to the present time. The only symptoms of which the patient complained were weakness, headache, and constipation. Spectroscopic examination of the blood showed the band of sulphhaemoglobin.

The paper was discussed by DR. A. E. GARROD, and DR. WEST replied.

LIVERPOOL MEDICAL INSTITUTION.

FRANK T. PAUL, F.R.C.S., President, in the Chair.

Thursday, January 17th, 1907.

ACUTE HAEMORRHAGIC PANCREATITIS.

MR. W. THELWALL THOMAS read a short note on three cases of acute pancreatitis operated upon, with two recoveries. In the first case the patient was a woman aged 56. She was *in extremis* thirty-six hours after the onset of acute abdominal pain, with vomiting, quickly becoming faecal. On incision, under eucaine, blood-stained effusion escaped from the abdomen, and the omentum was in a condition of fat necrosis. The patient succumbed a few hours later. On *post-mortem* examination haemorrhagic pancreatitis was found. The second case occurred in a girl aged 21, in whom the symptoms resembled perforation of a gastric ulcer, but with temperature. The condition became rapidly worse, and on operation fat necrosis of the omentum was found, with copious effusion of blood-stained material into the peritoneal cavity. The lesser peritoneal sac was drained by a loin drain and an anterior tube, as well as a tube into the pelvis. Thirty-five gall stones were removed from the gall bladder, and the latter drained. The pancreas was much enlarged without haemorrhages. The patient made an uneventful recovery. The third case was that of a man aged 40. The onset was acute, and a diagnosis of intestinal obstruction was made. The temperature rose, there was slight vomiting, and the abdomen became rigid and tender. On incision, thirty-six hours after onset, fatty necrosis in the extraperitoneal tissue, omentum, and mesentery was found. The gall bladder, which was full of inspissated bile, and the peritoneal sac were drained as in the previous case. The pancreas, which was very much enlarged and haemorrhagic, was incised. The patient made a good recovery, but with a pancreatic fistula which remained open for six weeks. Mr. Thomas discussed the etiology and treatment of the disease.

Remarks were made by MR. R. W. MURRAY, DR. STANSFIELD, and DR. A. G. GULLAN.

THE ETIOLOGY OF INGUINAL AND FEMORAL HERNIA.

MR. R. W. MURRAY read a note on this subject based on a series of *post-mortem* observations made upon 200 persons in whom, during life, there was no evidence or history of hernia. Amongst the 200 bodies examined 68 peritoneal diverticula were found, 52 in the femoral and 13 in the inguinal region. Arguments were advanced in favour of the saccular theory of hernia, and it was contended that all the evidence at present available was in favour of the belief that a preformed sac was the essential cause of inguinal and femoral hernia at all periods of life.

DR. T. R. BRADSHAW said that granting that an oblique hernia came down the inguinal canal, a direct inguinal hernia could not have such an origin. One important clinical fact made it difficult for him to accept the view that the tunica vaginalis was frequently found communicating with the peritoneum in persons who were not the subjects of herniae, namely, the extreme rarity with which the fluid of ascites was found in the tunica vaginalis. He had only once seen such a case, more than twenty years ago, and in that case the fluid could easily be made to pass from the tunica vaginalis into the abdomen, or vice versa, by changing the patient's position.

VENTRIFIXATION IN BACKWARD DISPLACEMENT OF UTERUS.

DR. BRIGGS read a paper on ventrifixation in the treatment of backward displacement of the uterus. The exemption of the "blooming, happy, and fertile" woman from any treatment whatever was claimed. During the child-bearing period of life he advocated the limitation of pessary treatment to recent cases of retroversion or retroflexion after manual reduction of the displacement, and for chronic backward displacement of the uterus with complications he urged the superior position of ventrifixation, and founded his opinion upon the clinical records and the after-histories of 203 cases treated by him during the past seven years. In all the 203 cases the

patients recovered. The after-histories of all the patients, with the exception of the nine unobtainable and a few too recent to be of value, were added. An analysis of the cases in the five groups, A, B, C, D, E, illustrated the extent and character of the complications of backward displacements of the uterus:

TABLE A. Ninety-eight cases of backward displacement before operation were characterized by:
(*a*) Uterine descent in a minor degree in all of them;
(*b*) Ovarian prolapse or fixation 15, on both sides 26;
(*c*) Inflammatory cystic changes in the ovary 3;
(*d*) Apoplexy and thickened capsule of ovary 6,
and were treated by ventrifixation of the mobile uterus; the relief afforded was complete in 64, partial in 22, and disappointing in 7 patients; one single woman, aged 25, who had suffered from distressing dysmenorrhœa since puberty, was totally unrelieved by ventrifixation performed after a previous dilatation, and section of the cervix had also failed to relieve her.

TABLE B.—Twenty-one cases: ventrifixation, with perineorrhaphy, colporrhaphy, trachelorrhaphy, dilatation, and curettage, or the combination of two or more operations, of which one was ventrifixation showed relief complete in 24, partial in 9, and disappointing in 5 patients.

TABLE C.—Twenty-four cases: ventrifixation, with separation of adhesions and in 7 instances salpingostomy (conservative operations); recorded relief complete in 13, partial in 7, and disappointing in 1 patient.

TABLE D.—Thirty-one cases: ventrifixation, with removal of one tube and ovary; relief complete in 20 and partial in 7 patients.

TABLE E.—Nine cases; ventrifixation, with removal of both appendages; relief complete in 7 and partial in 1 patient.

Complete relief after ventrifixation persisted throughout all the groups in almost the same proportion of cases—that is substantial evidence of a pathological element in the aggregate of the backward displacements in Table A. The lowest proportion of complete relief followed the totally conservative treatment of pelvic peritonitis due probably to obscure active or latent germ infection (Table C); in 24 cases pregnancy is unknown after operation, except in one instance. Dr. Briggs then explained his preference for purely parietal peritoneal fixation at the summit of the empty bladder at the lower end of a 2-in. abdominal incision ending 1 in. above the pubic symphysis. The Trendelenburg position enabled the operator to suture closely this central lowest portion of the parietal peritoneum to the middle two-fourths of the lower half of the anterior surface of the uterine body, in which the sutures were planted through muscle; in deep No. 2 Chinese silk was used for the fixation. Dr. Briggs said he had discontinued since 1905 catgut for this purpose only. The abdominal wound was closed in three layers by catgut sutures; the finest catgut always for the skin. The advantages of peritoneal fixation were the slight uterine mobility it ensured in the latter advantage Dr. Briggs agreed with Kroemer and the further advantages of less inconvenience to the bladder and the ease and safety of subsequent labour and pregnancy were realized. Dr. Russell Andrews, in his digest in 1905 of all ventrifixations then published, had found the least interference with labour after peritoneal fixation. Amongst Dr. Briggs's cases in Table A alone, ninety-two women had borne thirty-two children; normal labour was the rule, and easy forceps delivery the exception. In one patient who had had five children (twins once) since the operation, uterine inertia during the third stage had been observed and was not noted before operation by Dr. Mawson, of St. Helens. Dr. Briggs said that cervical and intrauterine, vaginal, and perineal complications were always treated, if necessary, before the abdomen was opened; that abdominal section dealt with the pelvic bands and their causes, and ventrifixation completed a safe and satisfactory operation for retroversion or retroflexion during the child-bearing period of life.

Dr. T. E. Gemmell remarked that the title of the paper was misleading, as it exaggerated the importance of the backward displacement of the uterus. It seemed to imply that all the symptoms were due to this, whereas all the cases referred to showed other pathological conditions, which were in all probability responsible for the symptoms, the backward displacement being merely an incident in the case. As to the operation of ventrifixation itself, it was safe and effective if properly performed, though the bladder capacity of the healthy person seemed to be slightly diminished by it.

Dr. W. Blair Bell thought that the pathology of retroversion and retroflexion was not always the same. He had applied his own views to Dr. Briggs's statistics, and found there much to support those views—for instance, he found that of the total failures 75 per cent. were in single women; and, further, that of the cases, whether single or married, complaining of menorrhagia, 85 per cent. were completely cured, while only 62 per cent. of the total number of cases were cured. These facts he considered important, as were some others to be deduced from the figures. He thought all forms of ventrifixation unsurgical and dangerous, particularly the operation of peritoneal attachment described. He much preferred Gillian's operation, which he had now performed in a modified form for over a year, or one of his own, first performed in March last, in which a loop of round ligament on each side was brought through the broad ligament and fixed behind the uterus—an operation which had been recently independently described.

Dr. Arthur Wallace remarked that ventrifixation was not a scientific procedure, but, in default of a better, it was satisfactory in that it relieved the patient. The principal drawback was that between the utero-parietal attachment, the abdominal parietes, and the bladder there existed a potential opening or tunnel through which a loop of intestine might pass and become strangulated. A perfect procedure should bring about the formation of a complete peritoneal septum between the uterus, bladder, and abdominal wall. When the direct utero-parietal attachment stretched a little, as it appeared to do usually, there would result a kind of anterior mesometrium dividing the utero-vesical pouch into two halves, without any opening through which intestine might pass.

Dr. J. E. Gemmell, Dr. E. T. Davies, and Dr. Bennett also took part in the discussion.

Glasgow Medico Chirurgical Society.—At a meeting on January 11th, Dr. John Brown in the chair, Dr. Leslie Buchanan (*a*) showed 2 cases of birth-injury of the cornea, illustrating the typical results in adults of rupture of the posterior surface of the cornea from extreme pressure on the head by instrumental delivery. On careful examination, two or more faintly marked curved lines, usually vertical and enclosing a space shaped like a broad barrel-stave, could be seen crossing the cornea. Those lines should be looked for in any case where a high degree of astigmatism (usually myopic) occurred in one eye only and the history of the birth inquired into. He had met with 5 such cases in three years. (*b*) Dr. Buchanan read notes of a case of metastatic ophthalmitis which occurred on the fifteenth day of a pneumonia, and after the crisis the temperature again rose and became remittent. The eye was totally destroyed. No cardiac murmurs were heard, but, *post mortem*, malignant endocarditis was found. The pneumococcus was recovered from both the eye and the spleen pulp.—Dr. W. F. Somerville read a paper on the treatment of neurasthenia, emphasizing the necessity of complete isolation in a neurasthenic home. The first three weeks were spent in bed; patients were then allowed to get up for gradually-increasing intervals. A full diet, including from 20 to 80 oz. of milk, was given per diem. General massage, medical exercises, and the high-frequency current were also prescribed. The daily routine was so arranged that there was always something to occupy the patients and during the last two or three weeks they were allowed pay calls and do shopping. So that the change when they returned to their own homes was not so great.—Dr. W. S. Syme showed (*a*) two patients in whom the operation of ossiculectomy (or otectomy) had been performed. He advocated this operation where the disease was limited to the tympanum, attic, or ossicles. The amount of the discharge, the presence, seat and amount of granulations, the position of the perforation and information obtained by probing were the chief points in the diagnosis. (*b*) A patient with right recurrent laryngeal paralysis thought to be due to a tuberculous lesion of the right apex.

Glasgow Pathological and Clinical Society.—At a meeting held on January 14th, Dr. J. Lindsay Steven, President, in the chair, Mr. George H. Edington showed a specimen of perforated peptic ulcer of the jejunum occurring after gastro-enterostomy. The patient, a man, aged 46,

had anterior gastro-jejunostomy performed on him seven years previously by Dr. Dalziel for pyloric obstruction with symptoms of six years' duration. Five years later Dr. Dalziel removed a gall stone from the cystic duct. The patient remained free of all stomach symptoms after the first operation. Early in November, 1906, he was admitted to the Western Infirmary with symptoms of perforated ulcer of twenty-five hours' duration. Mr. Edington opened the abdomen, and found a perforated ulcer of the jejunum just beyond the gastro-jejunal communication. He closed the ulcer with Lembert sutures, and covered over the part with a flap of omentum. The patient, who was collapsed on admission, did not rally, and death took place three hours later. The *post-mortem* examination showed a healed ulcer at the commencement of the duodenum with constriction of pylorus. The gastro-jejunal opening admitted the cone to diameter of 1½ in. The perforation in the jejunum had occurred in a portion of an ulcer whose margin reached to gastro-jejunal orifice.—Dr. A. N. McGregor showed a woman, aged 63, who had a rupture of the vagina with protrusion of bowel, which he had successfully treated by replacement and suture. While carrying coals into her house she experienced pain and discomfort internally. Feeling ill, she took some stimulant on going to bed; she woke up in the small hours of the morning, and in getting out of bed fell across a chair and sustained a blow on the perineum. Immediately after blood issued from the vaginal orifice, and the bowel prolapsed through same. Three days later she called in medical assistance, and the doctor sent her into hospital. On admission a large mass of bowel was seen in front of the vulva protruding from the vagina about the size of two closed fists. The coils of the intestine were matted together with fibrinous exudate, and pus was present in the sulci. The loops of bowel were separated and an opening on the posterior wall at the upper end of the vagina was found on examination. An inch or so of bowel was pulled out through the opening and found not to be strangulated. The whole mass was carefully cleansed and replaced into the pouch of Douglas; the vaginal opening was stitched up, a gauze drain inserted, and the vagina packed with gauze. The packing was changed daily and the gauze drain was removed on the seventh day. On the fourteenth day she was allowed up, and at the end of three weeks was dismissed well. The immediate cause might have been a procidentia on the first occasion, and a perineal concussion in the second instance determining a rupture; or at the second accident a part of the chair might have penetrated through the vagina, but no further injury of vulva, perineum, or vagina was noted. A vaginal examination six weeks later by Dr. J. K. Kelly revealed no abnormality save the scar. The uterus and appendages were normal but senile in character, and no uterine or ovarian tumour was present. There was no history of previous vaginal or uterine disorder, and the patient had had ten children normally.—Dr. McGregor showed (for Dr. Jas. A. Adams) a fibromyoma of the ovary removed from a patient suffering from acute intestinal obstruction. The patient was operated on five years previously on account of strangulated femoral hernia of the right side. On the present occasion a Littre's hernia of the left side and the tumour of the ovary were found; the former was relieved and the latter removed.

North of England Obstetrical and Gynaecological Society.—At a meeting held at Manchester on January 18th, Mr. R. Favell (Sheffield) in the chair, the following were elected officers for 1907: *President*, Dr. E. O. Croft (Leeds); *Secretary*, Dr. J. H. Willett (Liverpool); *Treasurer*, Dr. W. K. Walls (Manchester).—Mr. Favell showed a large hypernephroma of the left kidney which occupied the pelvis and lower portion of the abdomen and was successfully removed by the abdominal route.—Dr. J. B. Hellier (Leeds) showed a fibroid polypus of the cervical canal which completely filled the vagina, and was so irregular in form that it closely simulated "cauliflower excrescence" of the cervix.—Dr. A. J. Wallace (Liverpool) showed a uterus removed for cancer of the cervix by the abdominal route with extensive dissection of the pelvic glands and connective tissue. The obturator gland was shown to be much enlarged by secondary deposits, as were glands dissected off the iliac vessels. Dr. Wallace regarded vaginal hysterectomy as merely palliative. He had done the extensive abdominal operation in nearly 20 cases with a mortality of under 30 per cent. In fat subjects the operation was dangerous and prolonged, but in thin patients it did not appear to be attended by undue risk.—Dr. Lloyd Roberts (Manchester) showed a fibroid 13 in. in diameter and weighing over 32 lb. It was removed from a multiparous widow, aged 44, who had been aware of its presence for fourteen years. It finally produced pressure symptoms, menorrhagia, and metrorrhagia. The capsule was incised and the growth enucleated preliminary to the removal of the uterus at the level of the internal os. Recovery was uneventful.—Mr. E. S. Bishop (Manchester) showed a specimen illustrating the advantages of anterior vaginal hysterectomy for the removal of certain submucous fibroids; also an example of ectopic gestation, in which the symptoms and history suggested gonorrhoeal pyosalpinx more than tubal pregnancy.

Manchester Pathological Society. — A laboratory meeting was held in the Pathological Laboratory of the University on January 16th. The following demonstrations took place—Dr. Anderton: Some naked-eye specimens. Dr. Brockbank: Blood plates. Dr. Bythell: Photomicrographs in natural colours. Professor Delépine and Dr. Sellers: (1) Hydatid cyst of the brain of a child; (2) bacterial necrosis of the liver of a calf; (3) botryomycosis in the horse; (4) specimens illustrating the bacteriology of plague; (5) specimens illustrating the comparative pathology of tuberculosis; (6) method of cutting sections by the Delépine freezing microtome. Dr. Fennell: Traumatic affections of the cervical vertebrae. Mr. F. R. Howson: Specimens of physiological interest. Dr. Loveday and Dr. Ramsbottom: Determination of the opsonic index. Dr. Mair and Dr. Powell White: Primary carcinoma of the liver of suprarenal origin. Dr. Craven Moore: Endothelioma of the stomach. Dr. Orr and Dr. Rows: Lesions of the central nervous system. Dr. Parker: Pathological lesions of the eye. Mr. Savatard: Microscopical specimens of skin diseases. Dr. Shaw: Chronic metritis. Professor Lorrain Smith: Fat-staining by aniline dyes. Mr. Southam: Cystine calculi. Dr. Powell White: Fat crystals and fat emboli. Dr. Powell White and Mr. Roberts: Intracystic fibro-adenoma of the breast.

Ulster Medical Society.—At a meeting held at Belfast on January 10th, Dr. D. P. Gaussen, President, in the chair, Mr. Fullerton showed: (1) A case of Dupuytren's contraction treated by complete excision; (2) a case of bony ankylosis treated by complete excision; (3) a specimen of an adeno-carcinoma, attached to, but outside, the sigmoid division of the colon; the left testicle was enlarged, but as a *post-mortem* examination was not allowed the nature of the enlargement could not be ascertained; the patient was 27 years old, and died suddenly from haemorrhage into the peritoneal cavity.—Mr. Cunningham showed: (1) A case of amaurosis secondary to encephalitis; (2) a case of probable double glioma; (3) a case of slight ptosis, associated with very slight atrophy of the same side of the face.—Dr. Killen showed a case of tumour growing on the front of the iris; this was probably tuberculous.—Dr. Cecil Shaw read notes of a case of acute gonorrhoeal ophthalmia in a man who had gonorrhoea sixteen years before, but not since; the gonococcus was demonstrated under the microscope. Several members thought the infection was a new one, perhaps through the fingers or towel.—Mr. Robert Campbell read a paper on *Acid intoxication* following chloroform anaesthesia. The attention of the profession in this country had first been directed to the subject by Dr. Leonard Guthrie in the *Lancet* (1894). It was only during the past two years, however, that it had begun to receive the notice which it deserved. He gave details of three fatal cases in his own practice during the past year, in which *post mortem* examination had revealed the complete fatty degeneration of the liver characteristic of the affection. The symptoms varied somewhat in different cases. In one convulsions occurred, in another cyanosis was observed, and in two the odour of acetone in the breath was distinct; but in all three vomiting, restlessness, rapid pulse, drowsiness, coma, and Cheyne-Stokes respiration were noted. The symptoms remarkably resembled those of acute yellow

atrophy of the liver, but jaundice was very slight, and there were no haemorrhages. He also mentioned some cases in which marked initial symptoms gradually passed off. He had no evidence to show that impurity of the chloroform was the cause. He had, however, reason to believe that the percentage of chloroform vapour administered was an important factor. The condition of the patient was, however, the most important predisposing cause. He mentioned how fatal chloroform might be to herbivorous animals, and pointed out that the most dangerous age in children seemed to be between 4 and 5 years, at which age the children of the poor were practically herbivorous. This fitted in with the connexion observed between delayed chloroform poisoning and rickets. Although most common in children the condition was not confined to them. He had noticed in the journals of the past year two cases of so-called acute yellow atrophy of the liver after confinement, during which chloroform had been freely used, and Ballin had recorded a number of cases in adults. The frequency of this condition was greater than had hitherto been suspected. He had collected thirteen fatal cases from the records of the Children's Hospital which, in the light of present experience, might reasonably be regarded as due to this cause. It had been suggested that the poisonous symptoms were due to accumulation of acetone and diacetic acid in the blood, but there were difficulties in regard to this view. The only treatment that could be advised consisted in the administration of a purgative, the introduction into the circulation, either per rectum or through a vein, of an alkaloid solution, such as bicarbonate or, better still, lactate of soda, and hypodermic injections of strychnine.

British Laryngological, Rhinological, and Otological Association.—At a meeting held on January 4th Dr. R. H. Woods (Dublin) in the chair, Mr. Charles Heath showed a further series of cases illustrating the cure of chronic suppuration of the middle ear without removal of the drum or ossicles, or loss of hearing. After remarks from Mr. Chichele Nourse, Dr. Fred. Spicer, and the President, Mr. Clayton Fox asked wherein Mr. Heath's operation was superior to that method of Schwartze which consisted in clearing out the antrum and its environs, and syringing through into the tympanum, without the disadvantage of having to remove the posterior meatal wall. He expressed a fear that the adhesions left after Heath's operation would induce tinnitus at some future date, and necessitate ossiculectomy. In reply, Mr. Heath said that reliable information as to the state of the tympanic cavity could not be obtained through the intact meatus. Only at the operation and only after removal of the posterior meatal wall could satisfactory investigation of the tympanum be carried out. Herein lay the superiority of his operation to that modification of Schwartze's mentioned by Mr. Clayton Fox. From the information thus obtained, the surgeon could decide whether the case was one which called for the complete radical operation, or one where the modification suggested by himself would suffice to cure the disease. The cases he exhibited on the present occasion included, besides instances of ordinary suppuration of the middle ear, two cases of attic suppuration with perforation in Shrapnell's membrane, one case of facial paralysis and one case in which ossiculectomy had previously been performed without curing the suppuration. He concluded from the cases shown that the antrum was the key to the position in nearly every case of suppurative ear disease and if the disease in that cavity were cured the mental changes in the attic and tympanum would disappear spontaneously. Mr. Mayo Collier showed (1) a case of an extensive *Epithelioma of the floor of the mouth* beginning in the fourth quarter, which he had removed along with the submaxillary glands by a new method of operation. (2) A case of *Bilateral abductor paresis* shown at a previous meeting. After diverse operations had been suggested he said he regarded the paresis as due to the preceding laryngeal catarrh. The position of the vocal processes of the arytenoid cartilages upon the cricoid cartilage, and curves of the vocal cords. The prognosis as to cure was good. Mr. Harold Barwell showed a case of external ulceration of the pharynx in a male aged 17. The patient was the subject of early phthisis pulmonalis of long standing. He also exhibited (1) [illegible] (2) a case of [illegible] flat, smooth, pale floor, with edges not infiltrated. The larynx was healthy. Mr. Nourse had recently seen a case of tuberculous pharyngeal ulcer which differed from the case exhibited in presenting a deep ulcer, with raised edges, exuberant granulations, and marked scarring, quite like a gummatous ulcer. There was no personal history of syphilis, however, and a scraping from the ulcer contained tubercle bacilli.—Mr. Harold Barwell showed a case of (?) *Gumma of the larynx*, in which a rounded soft swelling over the right thyroid ala had been opened and the cavity curetted. On laryngoscopic examination little change was to be detected in the tumour. The external wound had healed. The microscopic appearances of the tissue removed were suggestive of carcinoma, according to Dr. Trevor of St. George's Hospital, and Dr. Wyatt Wingrave. Mr. Mayo Collier contended that the microscopical evidence was unreliable, and that nothing had occurred to induce him to alter his opinion that the case was one of perichondrial abscess. The President had seen similar appearances in other cases, all of which had proved to be epithelioma.—Mr. Chichele Nourse showed a case of *Multiple sinusitis showing the result of radical operation*. The disease had begun, probably, in the left ethmoidal region, and had led to symptoms of left frontal sinusitis. On opening the frontal sinus the cavity was found to be very small and packed with greyish mucus. At a later date the left antrum was radically dealt with through an opening in the canine fossa, and at this operation the ethmoidal region was cleared through the inner wall of the antrum. The result was excellent. After remarks from Mr. Mayo Collier, Mr. Harold Barwell, and Mr. Clayton Fox, the President drew attention to the rule sometimes laid down that a complete and entire removal of the anterior frontal sinus was necessary to ensure the success of the operation. With this statement he was in agreement only to a certain extent. The point of importance was that as much and no more of the anterior wall should be removed as would give complete access to the cavity, so that the whole of the diseased lining membrane could be removed. Mr. Nourse, in reply, agreed with the President as regards the removal of the anterior sinusal wall, but differed from him in regard to the external wound, which he was in the habit of closing.—Dr. Wyatt Wingrave read a paper giving the results of the microscopical examination of 18 cases of *Endothelioma and other tumours of the neck*.—Mr. Mayo Collier read a communication dealing with a case in which a hard mass in the floor of the mouth, consisting of a large tuberculous gland with nodules of hard fibrous tissue, had been mistaken for a salivary calculus.

South-West London Medical Society.—At the monthly meeting on January 9th, an address was given by Mr. Charters Symonds on the diagnosis and treatment of malignant disease of the caecum. The lecturer related a series of cases, illustrated by preparations, drawings, and lantern slides, showing the varieties of clinical history presented, and the difficulties which lay in the way of accurate diagnosis. In most cases colic was a predominant feature, and the recurrence of colic indicated the necessity of a careful abdominal palpation as a matter of routine; colic was not, however, invariably present, as shown by a patient who came for treatment for a tumour in the right iliac region discovered by herself, but not giving rise to any symptoms. The differential diagnosis from chronic appendicitis was of the greatest importance, as an error that might involve the postponement of operation was fatal. The pathognomonic distinction lay in the mobility of the tumour in early stages, whereas the appendicular masses, being inflammatory, were always fixed. More rarely, tuberculous ulceration of the caecum, or enlargement of the glands in the ileo-caecal angle, might give rise to difficulty in diagnosis. Age was of no value in forming an opinion; he had operated on persons as young as 21 and as old as 75. The treatment that could alone be effective was by operation, and the method adopted was the removal of a portion of the ileum and the ascending colon and the lateral anastomosis of the former into the latter. The glands of the mesentery were removed as far as possible, rendering in some cases a difficult and protracted procedure. The results had been on the whole most successful. The conditions under which an operation should be undertaken were considered; it was a

question whether the presence of serum in the peritoneal cavity was not a bar to successful operation, as it appeared possible that serious symptoms had followed in one case, attributed to the collection of serum in the cavity left after operation; in this case a rapid infection of the wound by the growth had taken place. The involvement of other coils of intestine did not necessarily require the abandonment of the operation; the involved coil might be separated or even resected. The condition of the patient as to pallor and wasting had to be taken into consideration, and much judgement was needed in forming an opinion, as they might proceed from small and repeated haemorrhages, or from septic absorption, or from the cachexia of malignancy. In the two former, an operation might be performed without hesitation. Mr. Symonds urged the importance of early operation and the good results which ensued, pointing out the dangers of estimating too lightly the nature of a movable growth even of long duration and in a person otherwise apparently in good health. He held that at present no limits could be set to the extent of an operation, provided that all diseased structures could be removed.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on January 16th, Dr. E. POWELL, President, in the chair, Mr. A. R. ANDERSON showed (1) the uterus, with contained fetus and placenta, of a primipara, aged 35, the subject of fibromyoma, necessitating hysterectomy at 4 to 4½ months. Recovery had been rapid and uneventful. (2) A true papilloma removed from the posterior part of the bladder floor in a man of 36. It was a large mushroom growth, pedunculated, and had several times caused retention, there being also cystitis and haematuria. To prevent an undue enlargement of the suprapubic incision the growth had been removed with scissors in four pieces, and the patient had made a complete recovery in every way.—Dr. F. H. JACOB read a paper on the *Diagnosis and treatment of some diseases of the skin.* In tracing the diagnostic points of lupus special stress was laid on the daylight appearance of the yellowish, translucent, apple-jelly-like nodules, which did not disappear on pressure with glass. On the hands and in similar regions the typical nodules might be masked by the occurrence of a chronic inflammatory thickening. A case of tertiary syphilis was related in a man who had been under treatment for lupus for five years at many hands without success. In the later stages the appearance of a large V-shaped ulcer dividing the whole thickness of the upper lip, as well as some plaques with ill-defined margins on the face, made a correct diagnosis easier, and suitable antisyphilitic treatment brought about a cure. In regard to treatment, it was pointed out that *x* rays gave good results with the least expenditure of time. The resulting scar was not always sightly, and was apt to produce telangiectases, for which pure carbolic acid was often the most efficient application. Referring to the typical appearance of lupus on the gums and the punched-out ulcers to which it gave rise on the hard palate, its behaviour in the latter position was contrasted with similar ulcers due to syphilis, in that lupus, although tuberculosis, never ulcerated bone. What were known as tuberculous gummata of the skin were a serious affection, and of 3 such cases in children under his care all had subsequently succumbed to meningitis. The erythematous variety of lupus was often readily cured by the full doses of quinine recommended by Payne. The tubercular variety was more troublesome, but would yield to a single burning with *x* rays. The framboesial variety of syphilis was next described; it was amenable to antisyphilitic treatment if pushed. The distinctions between psoriasis, syphilitic psoriasis, and seborrhoea were then touched on, and attention drawn to Whitfield's observations as to the frequent presence of the bottle bacillus in the last mentioned. Photographs were then shown and described of several interesting skin conditions, such as a tuberculous warty condition successfully treated by *x* rays; recurring raised vaccination marks; an old lady with papules at the nose-tip diagnosed as acne necroticans pustulosa; a baby with well-marked urticaria pigmentosa; ringworm of the nails; an epileptic girl of deficient intelligence, with adenoma sebaceum on the face and pendulous adenomata on the back. The paper was discussed by the PRESIDENT, Drs. A. R. TWEEDIE, H. S. BOLTON, and W. HUNTER; and Dr. JACOB replied.

REVIEWS.

THE DIAGNOSIS OF NERVOUS DISEASES.

DIAGNOSIS in nervous diseases is inherently more difficult than in any other branch of medicine. This is due to several causes, one of which is the fact that the clinical manifestations of morbid processes in nervous tissues are more varied and complex than in any other; another, that the tissues of the brain and cord are so extraordinarily intricate and involved, that a mastery of their ramifications can itself only be attained by years of study; and thirdly, that the indications met with in individual cases so seldom conform entirely to clinical types, so that, owing to the frequent overlapping of signs and symptoms, their accurate differential diagnosis must in many cases be handed over to the neurological specialist. A sound general knowledge of the diseases of the master tissue of the body, however, is to-day essential for every medical practitioner, and a recognition of this fact has called forth a large number of small books, handbooks, epitomes of the larger textbooks and cram books for the student, all purporting to make diagnosis an easier matter for the man in a hurry or unwilling to devote the necessary time to this study.

All of these books, however, are devoid of practical worth to the serious student. What up to now has been required is a book which, taking the various signs and symptoms of nervous diseases in order—motor, sensory and reflex disturbances, aphasia, inco-ordination, and so on—should thoroughly explain their underlying mechanism and state to which clinical type they, or their combinations, belong. To do all this is no easy task, but this Dr. PURVES STEWART[1] has done with notable success in *Diagnosis of Nervous Diseases.* Many of the chapters have already been delivered as lectures at the Westminster Hospital and to post-graduate classes in London and elsewhere, and their didactic value, depending on their methodical attention to fundamental points and their admirable clarity of expression, is already recognized. In the present book, Dr. Stewart addresses a larger audience, and has added a good deal of fresh material, the whole copiously illustrated with explanatory diagrams, and numerous photographs of typical cases.

The first two chapters are devoted to a clear and succinct account, greatly aided by the author's diagrams, of the anatomy and physiology of the nervous system. The methods of case-taking are next outlined, and then, following the order in which they can be most conveniently investigated in practice, the major phenomena of nervous diseases, beginning with coma and ending with an account of the cerebro-spinal fluid and its value in diagnosis, are described and explained. The author has wisely avoided all abstruse details of purely theoretical interest, and does not discuss treatment except incidentally here and there, the whole aim of the book being directed to diagnosis, a purpose it admirably fulfils. The information on a subject which is continually receiving fresh additions has been carefully brought up to date, and will be found thoroughly comprehensive, every means of clinical investigation receiving due attention. To practitioners unable to profit by post-graduate study, the careful descriptions, illustrated by the author's photographs, of the various methods of clinical investigation, the correct methods of eliciting the many superficial and deep reflexes, of performing lumbar puncture, of making an electro-diagnosis, and so on, and the significance of these phenomena in disease will be simply invaluable. In a book of such uniform excellence it would be unfair to make any invidious distinctions, but the chapters on "anatomy and physiology," "aphasia," "cranial nerves," and "postures and gaits" may perhaps be singled out as models of lucid expression which make much more easily comprehensible somewhat difficult subjects. The whole book, which is beautifully illustrated and most carefully indexed, though in no way intended to replace the larger textbooks already in use, will be found to be a most valuable supplement, which we cannot too strongly commend to practitioners and students.

[1] *The Diagnosis of Nervous Diseases.* By Purves Stewart, M.D., M.A., F.R.C.P., Physician to Out-patients, Westminster Hospital; Joint Lecturer on Medicine, Westminster Medical School; Physician, National Orthopaedic Hospital, etc. London: Edward Arnold. 1906. (Demy 8vo, pp. 580. Numerously illustrated with photographs, diagrams, and plates. Price 15s.)

THE ROENTGEN RAYS IN THE DIAGNOSIS OF THORACIC DISEASE.

The *Roentgen Rays in the Diagnosis of Diseases of the Chest*,[1] by Drs. Hugh Walsham and G. H. Orton is concise and readable. Though only the expert can properly interpret all the shadows which may be seen by the *x* rays on examining the chest, the aid of this method of examination is becoming more and more sought in cases of chest disease. In certain doubtful cases a diagnosis may by the Roentgen rays be arrived at with certainty, and in the more numerous cases where the rays will discover nothing which was not appreciable by the more usual methods of physical examination, it is satisfactory to have the condition of the internal organs confirmed by sight. In this book the subject is very fully discussed and even the practitioner who has no opportunities of himself using the Roentgen rays will find much to interest him. The apparatus required and the proper methods of examination are first fully described and the illustrations materially help the description. Next comes a description of the appearances seen on examination of the healthy chest from various positions, and then follow chapters dealing with the appearances to be noted in pulmonary tuberculosis, pleural effusions, pneumonia, new growths, and, finally, thoracic aneurysm. Numerous reproductions of actual skiagrams add much to the interest and value of the book. Speaking of pulmonary tuberculosis, the authors, though confessing that we are not able at present to detect with certainty by means of the Roentgen rays the very earliest stages of the disease, are convinced by their own experience that in many cases a distinct mottled shadowing can be detected before any definite physical signs can be made out. They are careful, however, to point out that it is not contended that a diagnosis can be made in all cases by the *x* rays alone. In the case of pleural effusions, though the appearances are not particularly striking in ordinary serous effusions or in empyema, very characteristic appearances are seen in pyopneumothorax. It is in cases of thoracic aneurysm that the value of the Roentgen rays in diagnosis seems to us to be most clearly demonstrated, and some of the cases quoted by the authors furnish convincing evidence of this. Altogether this book is good, and should be widely studied. No one can afford to disregard the use of the Roentgen rays in the examination of the chest, and we know of no other work which gives so clear and complete a survey of the subject.

TEXTBOOKS OF GYNAECOLOGY.

The popularity of *Diseases of Women* remains unimpaired, and Mr. Bland-Sutton and his collaborator, Dr. Arthur Giles, both still in the prime of life, have not been averse to making a thorough revision of this useful manual. As before, they have not made the new issue inconveniently bulky, a fact which is one of the best proofs of good editing. As before, the authors observe in their preface that when surgical writers are able to restrain their vanity and refrain from publishing notes of successful cases in textbooks, the established facts of the art can be presented in a very convenient compass. This is true; the student above all should never be instructed by the light of triumphant statistics alone, for he is sure to come across yet more triumphant statistics which completely contradict them. The authors have one great advantage over the almost forgotten authorities of the last generation: gynaecology has of late become really a science. It has long ceased to signify the art of evolving new pessaries, dilators, and canula holders, and it is now understood to mean more than hysterectomy and ovariotomy. Its surgery is steadily growing more clearly surgical rather than merely operative; but, above all, its opposite pole—pathology—is becoming more and comprehensible. Subdivisions of varieties of menstruation of the ovary are of little true interest, but of course epithelioma is a very serious fact. There is no hiding at this question

[illegible]

from an opposite point of view, nothing to be gained by the gynaecologist, not a pathological student or authority, when he chooses to cut sections of inflamed ovaries, but it is extremely important that he should know that a highly-malignant degeneration of the products of conception is now a well-recognized disease. Hence the authors have very judiciously revised the chapter on chorion-epithelioma, and the clinical relation of carcinoma of the ovary to malignant disease elsewhere is fully discussed. The most successful ovariotomy may be followed by quite unexpected recurrence—a most distressing after-result; and it is most important that the prognosis after operation on malignant or suspicious tumours of the ovary should be guarded. The fact that a primary focus in the stomach has been frequently overlooked even during and after the removal of large bilateral ovarian growths has been established by Schlagenhaufer, whose researches are quoted in the new edition.

In our notice of the third edition of Dr. Phillips's *Outlines of the Diseases of Women*[4] five years ago, we expressed our opinion that a little more might have been said on recent experiences relating to deciduoma malignum, and in the fourth edition we find a very good and succinct account of the pathology and clinical characters of that disorder, which, unfortunately, has become something far from a great rarity. Dr. Phillips teaches that "a satisfactory permanent cure for prolapsus uteri has still to be discovered"; and, though an authority on plastic operations, he does not obtrude their manifold varieties in this educational work. He has given up his scepticism about primary ovarian pregnancy, admitting that recent research has proved its undoubted existence. He further shows as much judgement in teaching radical measures in the treatment of uterine disease as in his advocacy of the various "raphys" and "pexys" with which the reader of standard works by specialists is beginning to grow weary. In all respects the volume maintains its reputation as one of the best manuals for the use of the student.

American writers take great pains in the preparation of medical textbooks and spend much money on illustrations, whilst the publishers insist upon elegant and durable binding and first-class paper and print. Hence *The Practice of Gynaecology* is of a type well-known to us, and we must admit that Dr. Bovée[5] has produced a treatise worthy of many homologues issued by his countrymen. It shows all that is good and some of what is less commendable in a publication of its class. Thus, each article is almost exhaustive in respect to its subject, and well suited for instructing gynaecologists or surgeons who are not experienced in operations on women. There has been more judgement than usual exercised in the choice of drawings demonstrating Sims's and the genu-pectoral positions and other attitudes needed for the examination of patients. The plates are of unequal merit, though none fall below the average; they are for the most part original, but many good illustrations from Dudley's and Cullen's works have been borrowed. The illustrations representing perineal lacerations and the operations employed for their cure are very good indeed, among the best we have seen. Plate 56, representing suture of the broad ligament continued to the uterine cornu, is a model of clearness. Some of the drawings printed with the text have a familiar wooden look; but that is rather the fault of the modern method of printing than of the artist. The contributors number seven: Goffe, Miller, Schenck, Watkins, Werder, George Noble of Atalanta, and the editor. The references are relatively scanty, and there are very few footnotes. Dr. G. Noble's chapter on lacerations of the perineum deserves special mention, for, as already observed, it is intelligibly illustrated, whilst as a rule drawings explaining perineorrhaphy are the despair of the readers of text

[illegible]

books. Dr. Noble describes a large series of different methods, very naturally preferring his own. He does not approve of Tait's operation, considering that it is only applicable either in cases of slight median laceration that do not cause much discomfort, or, on the other hand, in instances where there has been a great loss of tissue and the two sides of the perineum cannot be drawn together so that complete restoration of the normal anatomical relations is impracticable. Dr. Brown Miller contributes an article on lacerations of the cervix, subinvolution and hyperinvolution of the uterus. The drawings are very familiar to students of gynaecology, but Dr. Miller is, we rejoice to note, no extreme advocate of operative interference in cases of neglected laceration. "Often the operative treatment may be avoided by thorough preparatory treatment, all of the symptoms disappearing, the eversion and the associated lesions clearing up and leaving merely a laceration that in itself does not warrant operation." Dr. G. Noble is the author of a somewhat original chapter on faecal fistulae connecting (*sic*) with the female generative organs. One procedure which he describes and illustrates is somewhat more radical than most gynaecologists would care to practise, but his account of operations for small and medium recto-vaginal fistulae will be of real service to those who study his directions in earnest. On certain stock subjects, such as hysterectomy for fibroids and cancer and plastic operations for displacement and prolapse, we need not dwell, as no two authorities are agreed about them; the writers, we may observe, treat their themes ridiculously. The editor, Dr. Bovée, has rightly included in this work diseases of the rectum and urinary tract in women, the articles being written by himself.

CLINICAL LABORATORY METHODS.

It is necessary to point out at once that Dr. EMERSON[6] does not use the title *Clinical Diagnosis* in its usual sense. The reader must not expect a treatise discussing bedside manifestations of disease and their interpretation. The writer has set before himself the task of compiling a volume in which is set forth the technical, or perhaps it would be better to say the laboratory, methods of investigating the reaction of the body to various morbid processes and agents—in other words, he has aimed at giving a contemporary review of the investigations which are carried out in clinical laboratories. To stop at such an estimate of the volume's purpose and value would, however, be unjust, for Dr. Emerson says expressly, in his admirable preface, this would be an unpardonable waste of energy. With an insight into the state of mind of many physicians who with pardonable suspicion look upon much laboratory work as "learned trifling," Dr. Emerson distinctly states that his object in writing the volume is to place before the reader a consideration of clinical laboratory work from the point of view of the clinician rather than from that of the chief of a clinical laboratory. To succeed in such a laudable purpose would stamp the writer as a true benefactor at once to the medical student, the laboratory worker, and the medical practitioner.

The book is not a continuous treatise, it is a dictionary and review, and as such will prove itself invaluable as a reference book on special methods, and will soon find a place in every clinical laboratory in this country. If we take but one of the subjects dealt with in the urine—it is soon evident that Dr. Emerson, with a mastery of the subject which leaves little to be desired, has brought together all the methods of investigation which have been used in the past and advocated in more recent times. So extensive is his experience, and so catholic his reading, that he is often able to give valuable testimony as to the reliability of this or that process of testing. As he has said in his preface, this is not the sole purpose of his book, for the same is done in numerous works, more especially those written by Continental chemical pathologists, and in matters dealing with the morphology of the blood corpuscles by none more carefully than by his fellow-countrymen.

How has he succeeded in pointing out the real value to the clinician of this or that investigation? We do not wish to be captious, but suspect that occasionally Dr. Emerson is more intent upon finding laboratory exercises for his small army of medical students than of providing the reader with what would be absolutely invaluable, coming from a worker whose devotion to his subject is so complete as is that of Dr. Emerson. To show that we are not making an unfair charge, we will ask the reader to extract from the passage dealing with creatinine one fragment of practical utility to the clinician. Further, why did not Dr. Emerson describe one method of separation of the various bodies he deals with, the one, say, which he personally found the best? We should then have had as a real guide, and have been thankful for, the help derived from his own personal experience. Then again, if the conclusions derived from a study of the electrical conductivity and freezing point of the blood and urine give nothing definite, and Dr. Emerson does not know how to interpret the results, why devote several pages to the discussion of such subjects?

As Professor Osler says in the introduction, which though too optimistic, contains valuable generalizations, "in medical education, the all-important problem is to give a man the knowledge he can use." We must therefore be forgiven if we insist that if this book is to become a guide to the medical student and the practitioner, the next edition should be much smaller and be written down to the level of its prospective readers. That this, however, would be a calamity is obvious, for the book as it stands is very useful from the point of view of supplying a great want in the way of a textbook in English of special laboratory methods, and our most serious criticisms would be met by an alteration of title, by a still closer adhesion to the objects set out in the preface, and by the introduction into the text of still more of Dr. Emerson's own impressions. Have not the methods of estimating and differentiating the protective powers of the blood to specific infections yet reached Dr. Emerson?

HASLAR HOSPITAL.

A History of Haslar Hospital, by Fleet Surgeon W. TAIT,[7] M.B., R.N., is a very interesting compilation of facts concerning the oldest naval hospital in the country. The record extends from 1745, when the land was purchased through the "earnest solicitations" of the fourth Earl of Sandwich, then First Lord of the Admiralty, down to the present year of grace, and the various vicissitudes through which the hospital has passed are very well told.

The architect was Mr. John Turner, who designed the hospital after the model of Greenwich Palace, built for Charles II by Inigo Jones. The walls in the lower stories are 4 ft. thick, decreasing as they go up to 2½ ft. in the attics, and as a result the building has stood the test of time well.

It is interesting to read of the administration of the hospital as it passed through various hands, from the "Physician and Council," "Governor and Lieutenants," and "Captain Superintendent," until this last office was abolished in 1870, and the control vested in the medical officers. Most amusing is it to read of the trouble caused between the medical officers and the lieutenants by an order of the Governor that the latter were "to attend particularly to the medical care of the patients by asking them when they visited the wards if they are carefully, properly, and regularly attended by these gentlemen" (the medical officers).

Good examples of the crass stupidity of the executive officer in charge, which caused so much friction between the medical and executive branches, are given on page 93, where the order given was "That every medical officer should touch his hat to him every time he saw his Excellency, however often that might be"; and, on page 95, that he also wished the Commissioners "so to direct the medical officers as no doubt shall remain in their minds of our relative situations." In another case the executive officer, when soldiers were allowed to use the hospital, insisted that the military guard of the hospital should, besides turning out to him, also greet him with a march by beat of drums. He got his march; the Irish officer in command ordered the "Rogue's

[6] *Clinical Diagnosis:* A Textbook of Clinical Microscopy and Clinical Chemistry for Medical Students, Laboratory Workers, and Practitioners in Medicine. By Charles Phillips Emerson, A.M., M.D., Resident Physician to the Johns Hopkins Hospital. Philadelphia and London: J. B. Lippincott Company. 1906. (Demy 8vo, pp. 641; illustrated by 126 figures, some coloured, and 5 coloured plates. 21s.)

[7] *A History of Haslar Hospital.* By William Tait, M.B., Fleet Surgeon R.N. Portsmouth: Griffin and Co. (Crown 8vo, pp. 170. 2s. 6d.)

March" to be beaten, which quite satisfied and delighted his Excellency until the joke was explained. As may be imagined, the treatment of the sick was at a discount; the medical officers were badly paid and worse treated; the patients were more or less starved, and things generally were in a bad way.

Since 1870 the hospital has steadily progressed towards efficiency, although it took some time to shake off the bad old ways. In 1880 the school for training medical officers on joining the navy was formed. In 1881 nursing sisters were introduced to train and superintend the nursing of the sick Berth staff, and in 1882 a qualified dental surgeon was appointed. Now the results of the treatment of patients will compare favourably with that of many large civil hospitals.

It is most devoutly to be hoped that for the sake of appointing incompetent executive officers to sinecure billets the old system will not be reverted to, for it would be just as wise to appoint a medical officer to command a man of war as it would be to appoint an executive officer to the charge of a hospital, and the results in the latter case would probably be more disastrous.

The book should appeal to all naval medical officers who have served at Haslar as well as to a general public interested in naval matters.

There are various faults, showing somewhat careless editing, which might be rectified in a new edition.

POPULAR DIETETICS.

Mr. Higgins, in his book on *Humanic Race*, urges the need for more systematic care for the body on scientific principles, and expresses the belief that a department of human culture is becoming more and more necessary for the conduct of modern government. Such a department, in his opinion, should include a well-equipped research laboratory presided over by competent physiologists who would investigate all questions relating to the health and sanitary development of the people. But the major part of his book is devoted to preaching the gospel of thorough mastication, according to Mr. Horace Fletcher, the general adoption of which would produce, he believes, a practical regeneration of the human race. Mr. Higgins appears to think meanly of medical physiologists, whom he blames for having allowed themselves to be misled by experiments on animals, and to be set right by one who is merely a clear-headed man of business going straight to the point. He also blames them for having been so slow to recognize the truth of Mr. Fletcher's theory. He quotes with approval the work of Professor Chittenden, but ignores the important fact that in all his experiments no attention whatever was paid to the question of proper mastication, and that the result, whatever they are worth, only go to support Mr. Horace Fletcher's conclusion that vigorous work can be performed on a much smaller quantity of food than had previously been assumed. As the book is probably intended to be read by the public, it is saddening to write as if the ordinary laboring people of the necessary amount of food had been obtained from circulatory experiments, even if it is well known that physiologists had thought themselves safe in resorting to the general experience of mankind, and had taken no experiments to show whether the amount of food usually taken by laborers was [illegible] work was really in excess of their requirements, but had accepted these figures as a standard. We think Professor Chittenden has produced a considerable amount of evidence to show that they are excessive, and no credit is due to Mr. Fletcher for having, in his characteristic fashion, attributed Professor Chittenden's valuable series of experiments, having a long way from admitting that the whole question is likely to be cleared within the course of Mr. Horace Fletcher's book or even of that of Mr. Higgins.

Dr. Leonard Keene's book, which he calls *Eating to Live*, and which has for its motto that many people dig their graves with their teeth, [illegible] to the public, and is for the most part a useful compilation from trustworthy sources of the anatomy and physiology of the organs concerned in digestion, of diet, and the composition of food, including an abstract of Professor Chittenden's book, which extends over twenty-three pages! By these means, a book of some size has been produced which contains little that is due to its author, who, however, deserves credit for preaching the gospel of moderation in the use of food, alcohol, and tobacco. He expatiates at some length on the evils of adulteration, of patent foods, and quack medicines; he may be congratulated on expressing opinions which are generally shared at the present time by the medical profession, and which deserve to be impressed upon the public.

NOTES ON BOOKS.

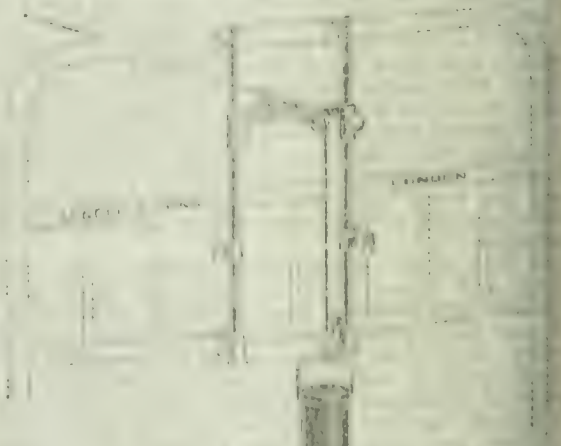
Dr. Mark Robinson's *Guide to Urine Testing* should prove very useful to nurses and students, giving, as it does, information as to the ordinary clinical methods of testing urine. A few words as to the general significance of albumen and of sugar in the urine, such as are given in the sections relating to pus and some of the other abnormal constituents, would add to the interest as well as to the value of the guide.

The Nurses' Empire Within is a pocket encyclopaedia of diseases, their symptoms, nursing treatment, and other information likely to be useful to nurses, arranged alphabetically. It is, in fact, a small dictionary of nursing in which each subject is, of necessity, reviewed in as short a space as possible. Thus, though not in itself sufficiently complete to form a textbook of nursing, it should prove useful to nurses to refresh their knowledge in case of need.

MEDICAL AND SURGICAL APPLIANCES.

The Norledge Improved Extension Apparatus.

Dr. Charles D. Mussehart, F.R.C.S., (Royal Victoria Hospital, Bournemouth) writes: The annexed engraving shows an improved extension apparatus (patented by Messrs. Arnold and Sons, London) which, among other advantages over those in common use, is free from vibration, simple in construction, easily fixed, portable, sightly, and aseptic. It consists of a frame with adjustable hooks, by which it can be fixed to the foot rails. To the frame is adjustably attached a tube through which runs a cord, having at one end means of attaching it to the leg of the patient and at



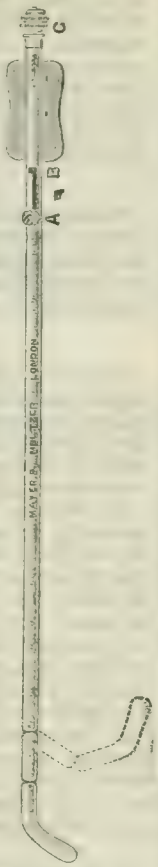
the other end a weight or shot bag, a pulley being provided for the cord to pass over. A convenient form of the apparatus is two bars, each having a round hook at the upper end and a [illegible] one at the lower end. On these bars slide a cross bar obtainable in any required position, and carrying a tube having a pulley at one end through which tube passes the above mentioned cord.

[illegible] By Mark Robinson [illegible] Bristol: John Wright and Co. [illegible]

[illegible] By C. O. M. London: The Scientific [illegible]

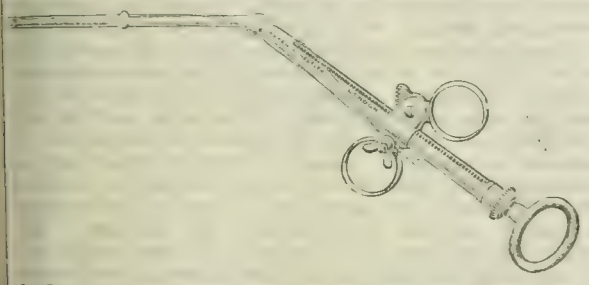
A Urethral Sound.

Dr. A. OGIER WARD (London, E.C.) writes: The sound depicted in the woodcut is one devised by me with the aid of Messrs. Mayer and Meltzer. The screw at C being slackened, a sliding button is pushed to A and locked. The sound is then straight but has some flexibility which renders it unusually easy to introduce. When the point is well in the bladder the screw at C is tightened, and the sound acts like any other, and is free from all jar. Where an enlarged prostate renders it almost impossible to search the base with an ordinary sound this instrument gives complete facility. The screw at C is slackened, the button slid from A to B, and locked, the screw is tightened, and the end of the sound sweeps round in a curve as shown in the drawing, but when screwed up is quite free from all jar, as all the joints are well braced together. To remove the instrument the screw at C is loosened and the button pushed from B to A, when the sound straightens out but remains flexible. Of course, it is so constructed as to admit of thorough boiling and disinfection.



A Nasal Snare.

Dr. A. OGIER WARD also writes: But for the fact that nasal surgery depends for its success very much upon the perfect adaptation of instruments to each special purpose, a new snare would demand a humble apology. The snare which is here described has, in my opinion, several points which should commend it. It has only one original feature; in other respects it is a blend of Dr. Lambert Lack's well-known snare with others. Instead of a tube, so difficult to keep clean and so troublesome if required for renewed snaring, it has the open rod with guiding eyelets, but these guides are placed vertically, thus avoiding the objection that the wires rub the passages and obscure the view; the loop is also vertical—a considerable advantage. Dr. Lack's helical handle has an eccentric cam actuated by the middle finger. In practice I have found this rather awkward, and I have observed that there is a slackening of the loop at the critical moment of applying the screw. In the snare here described the cam is



worked by the index finger, which has more power of compension. I think it will be found that these features combined make a very complete snare for rapid and repeated use or for slow compression.

A Simple Electrical Centrifuge.

Dr. FRANK C. EVE (Hull) writes: An electrical centrifuge is an essential in opsonic index work, and a great convenience in working with urines and other fluids. The price, however, is prohibitive. I have found during the last six months that an ordinary electrical ventilating fan works just as well at about one-sixth of the cost. Wire clips are placed at the centre and elastic bands at the periphery of the fan blades, and into these a Wright's tube may quickly be slipped into position. I use straight coarse capillary tubes for blood serums, and several turns of elastic band provide the necessary protuberance to fix them on to the fan blades. With a file the corpuscle portion of the tube is rejected and the serum retained. I have found this little makeshift silent, rapid, and efficient in centrifuging urine, blood, cerebro-spinal fluid, emulsions of bacilli, and washing white corpuscles. It may prove equally useful to others who need a cheap centrifuge. Mr. Parsons, electrical engineer, Hull, supplied them for the Children's Hospital and my own laboratory.

PATENT MEDICINES.

THE Inland Revenue returns show that during the last ten years the amount received by the State from stamps on patent medicines, so-called, has in round numbers increased from 2½ millions in the year ending March 31st, 1897, to 3¼ millions in the year ending March 31st, 1906. The net receipts are the gross receipts after deducting repayments and allowances, but the aggregates of these deductions are small. The following table shows the net receipts in each of the ten years, and the average for the two quinquennial periods 1897-1901 and 1902-6:

Table showing Net Receipts from Stamps on "Patent Medicines" for the Ten Years 1897-1906.

Year.	Yearly.	Quinquennial Average.
	£ s. d.	
1897	254,725 13 11	
1898	260,852 7 5	
1899	266,403 10 3	£ s. d. 273,657 16 10
1900	288,827 8 1½	
1901	297,479 19 6	
1902	306,337 5 9	
1903	333,371 7 9	
1904	323,445 14 0	£ s. d. 323,740 19 10
1905	331,438 17 6½	
1906	324,111 14 2	

The value of the stamp which the vendor must affix to the bottle or package varies according to the price charged for the medicine, and the returns show the number of articles for which the several rates are paid. The following table gives the amount of the stamp duty on the several prices, the number of articles stamped in the fiscal year 1906, and the amount of the stamp. An attempt is also made to estimate the total amount paid by the public for the articles stamped.

Table showing Rates of Duty, Number of Articles Stamped and Approximate Sum Paid by the Public in the Year ending March 31st, 1906.

Price of Article without Stamp.	Stamp.	Number of Articles Stamped.	Price Paid by Public.
£ s. d.	s. d.		£ s. d.
0 1 0	0 1½	31,322,832	1,761,909 6 0
0 2 6	0 3	7,222,432	993,084 8 0
0 4 0	0 6	1,154,092	259,670 14 0
0 10 0	1 0	134,357	73,896 7 0
1 0 0	2 0	14,808	16,288 16 0
1 10 0	3 0	12,625	20,331 5 0
		39,861,146	3,125,680 16 0

This estimate of the total amount paid by the public must be too high. In the first place, it will be seen that the stamp duty does not rise by regular increments *ad valorem*. An article the nominal price of which is 1s. must bear a stamp for 1½d., but, if the nominal price were 1s. 6d., the stamp would be 3d., and for an article of the nominal price of 2s. 6d. it would be the same. In the second place, a large proportion of all the articles, probably the great majority of those at 1s., are sold at a discount—"store prices." In the above table the maximum price for each rate of stamp duty and the full nominal prices are assumed. If a deduction of 25 per cent. is made to meet these sources of error, we have a sum of £2,344,260 as an estimate of the amount spent by the public on patent medicines in the last financial year.

UNDER the will of the late Mr. James Shaw, of Staffordshire, which has now been proved, the North Staffordshire Infirmary at Hartshill, the Staffordshire General Infirmary at Stafford, the Cottage Hospital at Longton, and the Convalescent Fund of the North Staffordshire Infirmary at Hartshill, each receive a bequest of the estimated value of £1,600.

THE PUBLIC HEALTH REPORT FOR THE COUNTY OF LONDON (1905).*

THE annual report of Sir Shirley Murphy to the London County Council is of far-reaching importance. Although it concerns primarily the inhabitants in the metropolis it cannot fail to be of considerable interest to that large and increasing body of persons who are engaged in all parts of the civilized world in the improvement of the sanitary surroundings of the people. A study of the administrative methods adopted to safeguard the health and to increase the comfort of 4,684,794 persons—the estimated population of the administrative county in the middle of 1905—is bound to be instructive, and of not less importance are the results of those methods which have been so carefully and skilfully tabulated by Sir Shirley Murphy during the past fourteen years.

The report for 1905, to which brief reference was made a fortnight ago, is upon much the same lines as its predecessors. The Public Health Committee in submitting the report to the County Council deals very briefly with its principal features in a prefatory memorandum. The body of the report is divided into two parts. Part I is devoted to vital statistics and Part II is concerned with administrative detail. An appendix deals with variations in the age incidence of measles, whooping-cough, scarlet fever and diphtheria. Other appendices include the report of Dr. James Kerr, the medical officer (Education), for the year ending March 31st, 1906, and reports by Sir Shirley Murphy upon the methods adopted for the conduct of businesses of fried fish selling, fish curer and marine store dealer and upon the resolutions of the Inter-Departmental Committee on Physical Deterioration.

MARRIAGES.

The marriage-rate in 1905 was 16.9 per 1,000 persons living, lower than the rate recorded in any previous year, but only very slightly below that recorded in 1904. Among the males, 3.6 per cent. married were under 21 years of age, and among females 13 per cent. A comparison with the whole of England and Wales shows that the number of minors married in London in proportion to the total marriages is not so great as in the whole country.

BIRTHS.

The steady decline in the birth-rate recorded in previous years continued in 1905, when the rate was 27.1 per 1,000 of the population living, or lower than has ever previously been recorded. But when comparing the birth-rates in the various sanitary areas of the metropolis, Sir Shirley Murphy very wisely states the number of births per 100 married females at conceptive ages, that is to say, between 15 and 45 years. The fallacies attending the usual method of stating the birth-rate as per 1,000 persons living are well shown in several instances. For example, in Fulham and in Wandsworth the number of births per 100 married females between 15 and 45 years was 21.4, showing an equal birth-rate in these two places; but the rate per 1,000 persons living was in Fulham 29.1 and in Wandsworth 28, showing an apparent higher rate in Fulham. An attempt has been made to show the relation of the birth-rate to the social condition of the population. Broadly speaking, the birth-rate is highest in the most overcrowded districts.

DEATHS.

The death-rate—15.1 per 1,000, as when corrected for sex and age 15.3—was the lowest that has been recorded in London since the registration of deaths has been made compulsory. When compared with the thirteen English towns which in the census of 1901 had a population exceeding 400,000, London is found to have had a lower death-rate in 1905 than that recorded in any of these towns, except Bristol (from which Hull (15.3) and Salford (15.5). And when compared with the principal European cities and with New York, the London death-rate is 1.6 less than that of any except Brussels (13.5) and Amsterdam (13.8). There was considerable variation in the death-rate recorded in the different metropolitan boroughs. The lowest, 13.1 per 1,000, being in Hampstead and the highest, 20.7, in Shoreditch. Sir Shirley Murphy has calculated for each age-period and for each sex the number of deaths which would have occurred if the death-rate of the period 1891-1900 had been maintained in 1905, with the result that there is found to be a saving of 19,584 lives, and of this number 5,361 were between the ages of 20 and 55 years. When these 19,584 lives are multiplied at each age-period by the mean expectation of life calculated from the London life table constructed in 1901, there is found to be a gain to the community of 757,016 years of life capital.

INFANTILE MORTALITY.

The infantile mortality rate in the whole of London was 129 per 1,000 births, the Hampstead rate being 94 and the Shoreditch 167 per 1,000 births. We shall return to Sir Shirley Murphy's interesting discussion of this subject in an early number.

EPIDEMIC DISEASES.

From the principal epidemic diseases the death-rate in London in 1905 was only 1.7 per 1,000. Among the metropolitan boroughs the Hampstead death-rate was 0.53 and the Shoreditch 2.96 per 1,000. Only 74 cases of small-pox, with 10 deaths, occurred in London in 1905, and all but one were notified during the first six months of the year.

Sir Shirley Murphy discusses the relation of the mortality from measles to overcrowded conditions. He shows that where the largest proportion of the population is overcrowded the highest death-rate from measles prevails. The standard of overcrowding adopted is where in tenements of less than five rooms there are more than two persons per room. He further shows that there is a shifting of measles mortality on to the first two years of life, the result, he considers, of increased aggregation of population in London and increased opportunity of infection the result of aggregation of children in schools. Measles in greater degree than scarlet fever or diphtheria spreads in the homes to the children of pre-school age if the disease be introduced into the home by a school-attending child.

PHTHISIS.

It is satisfactory to find a declining death-rate from phthisis, which in the whole of London was 1.42 per 1,000, and varied in the boroughs from 0.82 in Hampstead to 2.50 in Holborn. A voluntary system of notification of cases of phthisis is in force in 19 of the 29 sanitary areas, but it does not appear at present to have given very good results. "In cases," says Sir Shirley Murphy "brought to the knowledge of medical officers of health advice is given as to the precautionary measures which should be adopted in dealing with the sputum, as to the maintenance of cleanliness in the home, and as to the ventilation of the rooms occupied by the patient. In cases in which death occurs or in which there has been removal of the patient the sanitary authority undertakes the disinfection of the rooms which he had occupied whenever consent is given for the purpose." It is gratifying to learn that the public is more than before recognizing the desirableness of following the directions which are generally deemed to be necessary in cases of this disease. As might be expected, phthisis was found to be distinctly more prevalent in the overcrowded areas than elsewhere. Where the percentage of overcrowding was 7.5 the phthisis death-rate was 1.12 per 1,000, and where the percentage was 2.5 the death-rate was 2.1 per 1,000.

(To be continued.)

* Report of the Medical Officer of Health for the year 1905. London: P. S. King & Son, Ltd. Pp. 1xxxvi + 284. Price 2s. 6d.

QUACKERY IN ITALY. The Turin Order of Medical Practitioners has called the attention of the Italian Minister of the Interior to the increasing development of "latent quackery" in the form of commercial associations, calling themselves American, which, with the help of certain doctors and pharmacists, sell at high prices substances of doubtful therapeutic value. The powers of the sanitary authorities are, it is pointed out, insufficient to protect the public, and the associations, waxing ever bolder, threaten not only the journals which expose their practices, but public functionaries who seek to interfere with them, with actions for damages. The Minister is requested to empower prefects and subordinate authorities to deal with those associations which "impose on the credulity of the public and impugn the professional integrity of medical practitioners."

Nova et Vetera.

THE LECTURERS ON SURGERY AT ST. BARTHOLOMEW'S HOSPITAL, 1731-1906.*

IT appears that I am the fifteenth surgeon whom it has pleased the Governors of our ancient charity to entrust with the responsible and highly honourable duty of lecturing upon the Principles and Practice of Surgery in this medical school. I enter upon my task with the utmost diffidence, because the short account of my predecessors which I shall give to-day will show you how great an influence the successive occupants of this chair have exercised in directing the progress of surgery throughout the world during the last 165 years.

The complete list of Lecturers on Surgery at St. Bartholomew's is as follows:

1731-1761.	Edward Nourse.
1761-1787.	Percivall Pott.
1787-1829.	John Abernethy.
1829-1862.	(Sir) William Lawrence, who was assisted in his later years by Mr. Holmes Coote.
1862-1865.	Mr. Holmes Coote.
1865-1869.	Mr. Holmes Coote. (Sir) James Paget.
1869-1872.	Mr. Holmes Coote. Mr. Savory.
1872-1879.	Mr. Savory. Mr. Callender.
1879-1889.	(Sir) William Savory.
1889-1895.	Mr. Willett. Mr. Howard Marsh.
1895-1897.	Mr. Howard Marsh. Mr. Butlin.
1897-1902.	Mr. Howard Marsh. Mr. Walsham.
1902-1903.	Mr. Walsham. Mr. Bowlby.
1903-1906.	Mr. Bowlby. Mr. Bruce Clarke.
1906.	Mr. Bruce Clarke. Mr. D'Arcy Power.

Nine of these fifteen lecturers are dead and of the nine no less than six are deemed worthy to have their names included in the *Dictionary of National Biography*.

Edward Nourse.

History does not tell us much about Mr. Edward Nourse. He was born at Oxford in 1701, where his father was in practice as a surgeon, and he was apprenticed on December 6th, 1717, to John Dobyns, one of our assistant surgeons. He determined from the beginning of his career to become a hospital surgeon, for he took the Great Diploma of the United Company of Barbers and Surgeons on December 10th, 1725, and the Great Diploma held somewhat the position of the Fellowship of the College of Surgeons at the present time. It was not often granted, and then only after a more difficult examination. Nourse was elected a Fellow of the Royal Society in 1728, and in 1729 he was acting as Demonstrator of Anatomy at the Barber Surgeons' Hall, though he does not appear to have been formally elected until 1731. He resigned this office in 1734, having been appointed Assistant Surgeon to St. Bartholomew's Hospital, January 22nd, 1731. He became surgeon on March 29th, 1745, and he died on May 13th, 1761.

We believe that Nourse was the first person to teach surgery at St. Bartholomew's Hospital, and some evidence of the scope of his teaching—at any rate in his earliest days—still exists in the Library at the British Museum. It is a "*Syllabus totam rem Anatomicam humanam complectens et praelectionibus . . . habendis Authore E. Nourse, huic accedit syllabus chirurgicus quo exhibentur operationes earum modus peragendarum demonstrandus. Londini, 1729.*" The syllabus provides for a course of 27 lectures, of which deal with general anatomy, 20 with systematic anatomy, 1 with physiology, and the remaining 4 with surgery. The surgical lectures include a certain amount of ophthalmic surgery and a little gynaecology.

London was so small a place when Nourse began to lecture upon surgery that the United Company of Barbers and Surgeons had a teaching monopoly, and were able to enforce the attendance of their members at lecture under the penalty of a fine. The monopoly was so strict that it was impossible for a private person to teach anatomy except as one of the Company's officers. The teaching, too, was almost entirely anatomical, but in 1719 Mr. John Douglas had begun to add a little surgery to his lectures. He says in the preface to his syllabus:

> My design in the second part of my course is to inculcate such an idea of the chirurgical operations and the various ways of performing them, that the student is thereby rendered capable to distinguish judiciously between the different methods proposed by authors.
>
> In order thereto I shall show what's to be observed about instruments and operations in general; then before each operation describe the instruments that either have been, are, or ought to be used in performing it; and for their sakes whose memories or attention may have failed them, recapitulate the anatomical structures of the parts concerned that they may the better apprehend their practical uses.
>
> At the operations I shall show the various methods of performing it and the advantages of one and the inconveniences of the rest from the structure of the parts, instruments used, methods of using them, etc. After the operation I shall demonstrate and describe the dressings and the method of applying them; then give a short account of what's most material to be observed in the case.

If these suggestions were followed out—and we know that they were by Samuel Sharp at Guy's and in all probability by Edward Nourse in this school—the teaching of surgery from 1730 to 1745, when Pott began to lecture, was on the same lines as that of our present class of operative surgery. There was no systematic teaching, because as yet there were no general principles, for surgery in England had hardly yet emerged from the status of a handicraft except for a few individuals.

Percivall Pott.

Percivall Pott, our second lecturer, is as real a personage as Nourse is shadowy. The beautiful portrait by Sir Joshua Reynolds which hangs in the Great Hall reveals him to us as he was late in life. I like to look at it and to think that he carried on the traditions of Woodall and Wiseman, that it was mainly by his work and by his blameless life that surgery became a profession and that English surgeons became gentlemen.

Pott was born, a Londoner, in 1714, and was apprenticed to Edward Nourse in 1729. He took the Great Diploma of the United Company of Barbers and Surgeons in 1736, and was appointed Assistant Surgeon to this hospital on March 14th, 1744, becoming full Surgeon on November 30th, 1749. He died in 1788—a little more than a year after he had resigned the office of Surgeon.

Pott introduced many improvements into the art of surgery during his long tenure of office in this hospital, rendering the practice more humane both to the patient and the surgeon. When he became surgeon in 1774 the cauteries were heated as soon as he entered the ward because they were in constant use for stopping bleeding, for searing wounds and to produce issues. Pott advocated less brutal measures, but he was only successful after a long struggle.

Pott's world-renowned teaching began quite humbly. He used to invite his dressers to come round to his house in Watling Street and talk over the cases they had just seen in the wards. The pupils liked it and brought their friends to listen, and thus his reputation grew steadily, but it was not until Nourse died in 1761 that the lectures which had been delivered privately and at his own house were first delivered in public at the hospital. They were given at the beginning with hesitation and some difficulty, like the lectures of John Hunter and Abernethy in the early days, but later with more complete ease and with the applause of the whole medical world. They soon became the fashion and were attended not only by the medical students of London but by those from Edinburgh and Dublin, as well as by such foreign surgeons as happened to be staying in England from time to time. The name and teaching of Percivall Pott exercised, therefore, an unusual influence on the progress of surgery throughout Europe and the United States during the latter half of the eighteenth century. Indeed, the names of Pott, Hunter, and Lister still represent English surgery in the mind of the average foreign practitioner.

Several sets of the notes of Pott's lectures taken by students are treasured in the various medical libraries. I have lately read through transcripts taken at different times, and they present a general similitude. The course in 1781 consisted of twenty-nine lectures which form a careful exposition of the surgery of the time, with refer-

* Part of an Inaugural Lecture delivered January 9th, 1907.

ences to French surgeons and their work. The lectures are illustrated by cases which had been under Pott's care, and now and again there is an apposite classical quotation.

Pott had always in view that his pupils "should practise as honest and judicious surgeons," but he did more than this for surgery. He introduced a wholesome scepticism. With a full knowledge of what his predecessors had done or thought, Pott thought and observed for himself, drew his own conclusions, and acted upon them. Thus in his treatise on fractures he writes:

I am very willing to allow that many parts of surgery are still capable of considerable improvement, and this part perhaps as much as, if not more than, any; it being one of those in which a due observance of and rigid adherence to prescribed rules have prevented the majority of practitioners from venturing to think for themselves, and have induced them to go on in the beaten track from which they might not only safely but advantageously deviate.

Pott always expressed the utmost respect for the early writers on surgery and read their voluminous works diligently and with sagacity, yet in his practice he relied entirely upon his own observations and was largely guided by his common sense. He thus broke through the trammels of authority and may be regarded as the earliest surgeon of the modern type. He cannot be compared with any of his contemporaries: his great predecessor was Richard Wiseman, his greater successor was his own pupil John Hunter. Like Wiseman he was a practical rather than a scientific surgeon, for pathology as yet had no existence. The descriptions of his cases are so clear and the facts are so well stated that it is generally possible to recognize the diseases from which his patients suffered, and to draw conclusions from them by the light of modern knowledge whilst the cases narrated by his contemporaries and many of his successors are incomprehensible from the mingling of theories with facts. But Pott was as far in advance of Wiseman as that surgeon was in advance of Gale and Clowes, the chief surgeons of Elizabeth's reign. He ranks in front of his pupil, John Hunter, in practical surgery, but as a scientific surgeon the pupil was far greater than his master. Pott was Hunter's superior in power of expression and in literary style, though Hunter alone deals worthily with the science of surgery and the exposition of its principles.

John Abernethy.

Pott resigned the office of Surgeon to the hospital in 1787, after he had served the institution, as he used to say, "man and boy for half a century." He was immediately succeeded by John Abernethy, who was entrusted with the duty of lecturing on anatomy and surgery when he was only 22 years of age. Abernethy's lectures, like those of Pott, soon became world-renowned. Contemporary accounts from different sources tell us of the effects they produced upon his audiences. Sir Benjamin Brodie says of his lectures on anatomy:

He was an admirable lecturer. He kept our attention so completely that it was impossible that he could ever be forgotten. He did not lecture so much as some other lecturers, but what he did he did well. His lectures were full of original views, and he illustrated them by almost poetical illustrations, so that the mind of the pupil [was led] to look up to him as a being of a superior order. And I could conceive nothing better than his lectures in order to fascinate and to lead to regard the department of the profession to which he belonged as that to which I should like to give myself.

Sir Robert Christison of Edinburgh gives a similar account. He says:

Abernethy's lectures were given in an evening, like all the medical lectures in London, whilst the anatomical lectures were given early in the day. His position was always easy and natural, sometimes a little too much so. In the anatomical lecture he always sat [on the table] and either leant against the wall with his hands folded behind his back or rested one hand on the table [for the other purposes he never used]. In the surgical lecture he always sat and very commonly threw one leg resting over the other. The expression of his countenance was in the highest degree clear, penetrating, and intellectual, and his long but not ungraceful person [was tall, while] a cast in both eyes gave [a peculiarity] to his whole expression that [was very striking]. His voice was a sort of treble which [rendered] what he said [hurried it up with more] vivacity than was agreeable, and [was] a compound of [shrillness and hoarseness]. He used neither [copious] nor exact language. They were delivered spontaneously.

Mr. Macilwain says of him:

He was particularly happy in a kind of cosiness or friendliness of manner which seemed to identify him with his audience, as if we were all about to investigate something together, and not as if we were going to be "lectured at" at all. He spoke as if addressing each individual, and his voice seldom rose above what may be termed the conversational either in pitch or tone. The range of pitch was very limited, the expression of the eye and a slight modulation being the media by which he infused through the lecture an agreeable variety or gave to particular sentiments the requisite expression. There was nothing like declamation. He had no offensive tricks, for he had acquired the most difficult of all arts for a lecturer to acquire the appearance of perfect ease without the slightest presumption.

Yet this art was only acquired by constant practice, for as late as 1795 there were many occasions on which before beginning a lecture he was obliged to leave the theatre for a time to collect himself sufficiently to begin his discourse, though when he had once begun to talk his embarassment left him. This was due to an unconquerable shyness, which seems to have been inherent, and was in all probability the cause of many of the eccentricities and of the brusqueness which made him the centre of numberless good stories. It is the great merit of Abernethy that he recognized the greatness of John Hunter, and took the trouble to expound and amplify his teaching, very much in the same way as Huxley a hundred years later reduced the work of T. K. Parker to the level of the ordinary understanding. In anatomy Abernethy was emphatic in advocating the advantages of comparative anatomy, whilst in surgery he put Hunter's work to the test of practice.

William Lawrence.

Abernethy continued to lecture with ever-increasing éclat until he resigned his office of surgeon in 1828, when he was succeeded in the office of Lecturer on Surgery by William Lawrence, in some respects the most remarkable product of our medical school.

Bred a teacher, by nature a surgeon and an orator, Lawrence added lustre even to the chair held by Pott and Abernethy. Of his lectures Sir James Paget says:

They were the best, I think, of all those given in London—admirable in their order, in perfect clearness of language, and quietly attractive manner. They were given on three evenings in each week, at seven o'clock, after dinner. He used to come to the hospital in the omnibus, and after a few minutes in the museum, as the clock struck, he entered the theatre, then always full. He came in with a strange vague outlook, as if with uncertain sight. The expression of his eyes was always inferior to that of his other features. These were impressive, beautiful and grand, significant of vast mental power, well trained and well sustained. He came in quietly, and after sitting for about half a minute, as if gathering his thoughts, he began in a clear, rather high, tone, speaking quite deliberately, in faultless words as if telling judiciously that which he was just now thinking. There was no hurry, no delay, no repetition, no revision; every word, I believe, had been learnt by heart. The lectures were already in print in the *Lancet*, and yet there was not the least sign that one word was being remembered. It was the best method of scientific speaking that I have heard, and there was no one at that time in England, even if there were one in Europe, who had more completely studied the whole principles and practice of surgery.

Lawrence, like Abernethy, was a disciple of John Hunter, but throughout his long life Lawrence remained a surgeon, whilst Abernethy would have been a pathologist had such a science then existed.

James Paget.

Sir William Lawrence lectured for the long period of thirty-three years, and it was only during the last few years of his life that he delegated some of the lectures to Holmes Coote, who died of general paralysis in 1872. During Coote's illness Sir James Paget was appointed to lecture conjointly with him, and he delivered courses on surgery during the years 1865-68, as much to his own satisfaction as to that of the students, for he brought to the Chair of Surgery the same qualities which had made his lectures on physiology so markedly successful. Writing to Sir William Turner soon after his appointment as Professor of Anatomy at Edinburgh, Paget says:

I am very happy to be one of your large class. I can feel with and for you the [anxiety] of lecturing to full benches of [attentive] men. My second year would have been the pleasantest I have [experienced] in my profession, none has been so great as this. And now after [seventeen] years' hope I leave it again for [a] surgical chair [in] London and larger than

it has been at St. Bartholomew's Hospital for fully twenty years.

Mr. Fairbank of Windsor writes of these lectures:

I was one of the fortunate ones to hear his last course of lectures on surgery: not a student ever missed them; he never had a note and was never at a loss for a word, and every word he said was sweet to listen to.

The memory of Paget is still green amongst us, and it is unnecessary here to say more about him than that he was a surgeon who strove to advance the art of surgery by showing how pathology may be applied successfully to elucidate clinical problems. Paget may fairly be considered, therefore, as the link in our school which connected Hunterian surgery with those later developments rendered possible by the recognition of the part played by micro-organisms in the production of disease.

William Savory.

Increasing professional work and a serious attack of illness too soon warned Paget to husband his strength. He resigned his appointment to the hospital, and in 1869 Savory succeeded him as Lecturer on Surgery in the medical school. For twenty years Savory maintained the splendid traditions of our surgical lectureship. His lectures were reckoned amongst the remarkable surgical efforts of the latter part of the nineteenth century. None of us who were his pupils can ever forget his mobile features whilst in magnificent periods, emphasized by his uplifted finger, he laid down to us the principles of surgery as he had received them and as he intended that they should be transmitted to his successors. The principles, indeed, remain unchanged, but from his practice we are further removed than he was from Pott.

Savory lectured in conjunction with Holmes Coote from 1869-1872, and with Callender from 1872 until 1879, when Callender died of Bright's disease; thereafter he lectured alone until 1889, when he was succeeded by Mr. Willett and Mr. Howard Marsh, who are both fortunately still with us.

D'ARCY POWER, F.R.C.S.Eng.,
Surgeon to, and Lecturer on Surgery at, St. Bartholomew's Hospital.

THE COMPOSITION OF CERTAIN SECRET REMEDIES.

IV.—KIDNEY MEDICINES.

(Continued from vol. ii. 1906, p. 1877.)

WARNER'S "SAFE" CURE.

Put up by H. H. Warner and Co., Limited, 86, Clerkenwell Road, London, E.C. Price 2s. 9d. a bottle, holding 3 fl. oz. 'Dose for adults, one tablespoonful 5 or 6 times a day."

The label bears the words, "For Kidney and Liver and Bright's disease and jaundice, gravel, stone"—and a long list of other complaints.

A "medical pamphlet" of 34 pages accompanies each bottle, from which the following extracts are taken: 'Warner's 'Safe' Cure is a purely vegetable compound, and contains no narcotic or harmful drugs; it is free from sediment and is pleasant to take; it is a most valuable and effective tonic; it stimulates digestion, awakens the torpid liver, and puts the entire system in the very best receptive state for the work of restoring the kidneys. It does its work with absolute method, preparing the tissues, soothing and stimulating the enfeebled organs, healing at the same time. It builds up the body, gives it strength, and restores the energy which is or has been wasting under the baneful suffering of kidney disease. Warner's Safe' Cure was discovered about thirty years ago by one of the most eminent specialists in diseases of the kidneys, who had made a life-study of kidney and kindred diseases."

"How to test your kidneys. Put some morning urine in a glass or bottle; let it stand for twenty-four hours; if there is a reddish sediment in the bottom of the glass, or the urine is cloudy or milky, or if you see particles or forms floating about in it, your kidneys are diseased and you should lose no time, but get a bottle of Warner's Safe' Cure, as it is dangerous to neglect your kidneys for even one day. Bright's disease, gravel, liver complaint, pains in the back, rheumatism, rheumatic gout, inflammation of bladder, stone in the bladder, uric acid poison, dropsy, eczema, scrofula, blood disease, offensive odour from sweating, so-called 'female weakness,' painful periods, too frequent desire to urinate, and painful passing of urine are all caused by diseased kidneys, and can be speedily cured by Warner's 'Safe' Cure, which has been prescribed for twenty-five years." Of Bright's disease it is remarked: "It is one of the harassing complaints which physicians in family practice seldom have the patience to investigate and manage with sufficient care"!

The predilection on the part of the gullible public for vegetable remedies is no doubt answerable for potassium nitrate being classed as "purely vegetable" in so many of these medicines. In the present case analysis shows the presence of potassium nitrate, alcohol, glycerine, a trace of oil of wintergreen, and vegetable extractive; there is no alkaloid or similar active principle, and the extract has little distinctive taste or character; all its properties point to its consisting largely of extract of taraxacum, with some other extract containing a small quantity of a tannin; a careful series of comparisons with all the drugs in ordinary use which were not excluded by various tests did not identify it with any of them, and it is probable that it is obtained from some non-medicinal plant.

The following formula gives an almost identical mixture:

Potassium nitrate	50	gr.
Oil of gaultheria	½	minim.
Rectified spirit	5	fl. dr.
Liquid extract of taraxacum	10	fl. dr.
Glycerine	4	fl. dr.
Water to	8	fl. oz.

This contains about 10 per cent. of pure alcohol, which is the proportion found in Warner's Cure; in a mixture of which a tablespoonful is to be taken five or six—or, according to the handbill with it, six to eight—times a day, this proportion of alcohol is by no means negligible.

In such a mixture as this there is no means of determining exactly the amount of liquid extract of taraxacum, especially as the latter preparation is liable to vary considerably in colour and in amount of solid residue; this is by far the most expensive ingredient in the above formula, and it is probable that the amount is here overestimated. Taking the quantity here given, the estimated cost of the drugs for one bottle of the mixture is 5¼d.

VENO'S SEAWEED TONIC.

Manufactured by the Veno Drug Co., 59, Cedar Street, Hulme, Manchester. Price 1s. 1½d. a bottle, holding 2¾ to 3 fl. oz. "Dose.—For an adult, one teaspoonful twice or three times daily."

The label states: "Contains in a pleasant and agreeable form the active principles of seaweed. First introduced into the medical world by Mr. Veno, and now admitted to be a most efficient and valuable medicine. Veno's seaweed tonic is prepared on an entirely new principle, and is free from poisonous or mineral drugs. It cures all ailments arising from a diseased condition of the Stomach, Liver, Kidneys, and Blood, which, when diseased, cause nearly all sickness."

The following extracts are taken from a pamphlet enclosed with the bottle:—"Veno's Seaweed Tonic is a specific remedy; money cannot make it better. If it fails, no other medicine will ever succeed; but sufferers must have patience." "Kidney Diseases, Weak Back, Backache, or Lumbago, Incipient Bright's Disease. If you suffer from a weak back, with pain, soreness, or stiffness; if there is a dragging weakness in the limbs and lack of muscular energy; or if your urine is very clear or high coloured, showing a sediment of white flakes through it, it indicates a weakness or disease of the kidneys. Veno's Seaweed Tonic should be taken for at least two or three months, in teaspoonful doses twice or three times daily, after meals."

The mixture contains a small proportion of undissolved sediment, which, when collected and examined, agrees in all respects with the insoluble portion of leptandrin. Glycerine, a little phosphate, alcohol, and a trace of chloroform are present, and vegetable extractive. Careful examination of the latter gave evidence of the presence of the constituents of cascara sagrada, senna, and rhubarb. Such a mixture as this cannot, of course, be quantitatively resolved into its components, and the proportions given below were arrived at by comparisons of the properties of

various trial mixtures with the properties of the original; no indication was obtained of any substance derived from seaweed. The following formula gives a practically identical mixture:

Leptandrin	10	gr.
Sodium phosphate, crystals	33	gr.
Liquid extract of cascara sagrada	45	minims
Concentrated infusion of rhubarb (1–7)	1	fl. dr.
Concentrated infusion of senna (1–7)	2½	fl. dr.
Glycerine	2	fl. dr.
Chloroform water	1	fl. oz.
Water to	3	fl. oz.

Estimated cost of ingredients, 1½d.

MUNYON'S KIDNEY CURE.

Put up by Munyon's Homœopathic Home Remedy Company, 272, Oxford Circus, London, England. "Manufactured in U.S. of America." Price 1s. a bottle, containing 132 pilules. "Directions: Four pellets every hour."

The label bears the words, "Cures Bright's disease, gravel, all urinary troubles, and pain in the back or groins from kidney diseases." The following extracts are from a circular enclosed with the bottle: "Munyon's Improved Homœopathic Remedies are radically different from those used by the regular school of homœopathy or any other system of medicine. We have the true cure for the most obstinate as well as the most intricate of diseases. The whole secret of Munyon's Remedies is the science of combining and harmonizing all drugs that are known to cure certain diseases, so that by our special combinations we cover every phase of the case, no matter what the complaint. There is no experimenting, no guesswork, but an absolutely fixed law of cure."

"Munyon's Kidney-Cure has no equal. It cures pain in the back, loins, or groins, from kidney disease, puffy and flabby face, dropsy of the feet and limbs, frequent desire to pass water, scanty urine, dark-coloured and turbid urine, sediment in the urine, gravel in the bladder, and too-great a flow of urine."

The pilules were found to vary much in size, the average weight being 0.6 gr. Analysis showed them to consist of ordinary white sugar; no trace could be detected of any alkaloid or other active principle, or of any medication. The sugar was determined quantitatively, and found to be just 100.0 per cent. of the weight of the pilules.

Estimated cost of contents of bottle, one thirty-fifth of a penny.

THE MIDWIVES ACT.

THE TRAINING OF MIDWIVES.

AT the quarterly meeting of the Warwickshire Education Committee the Secondary and Technical Committee reported upon the following request of the County Council:

To consider the possibility of founding scholarships, or of providing in other ways for carrying out the important work of the education and training of suitable women to fill the vacancies in the number of midwives to satisfactorily supply the want of the county.

The report pointed out that under the working of the Midwives Act there is likely to be a deficiency of midwives, especially in the rural districts, and that the training of midwives cannot legally be charged upon any other fund at the disposal of the County Council except the higher education fund. The Committee thought that a grant should be made for the purpose but considered that it was not desirable for the administration of the grant to be under the control of the Education Committee. They recommended that a sum of £150 be appropriated on the higher education estimates for the year 1907-8 for the training of midwives and that the County Council be informed that the Committee would be glad if this sum be expended under the direction of their Sanitary Committee.

A CONGRESS OF PHYSIOTHERAPY. To the long list of medical congresses another is to be added. This is the Congress of Physiotherapy, which will hold its first meeting in Paris August 1st to 8th, 1907. Dr. Gallipe of Paris and Dr. Regler of Lille are Honorary Presidents, the President is Dr. Cruet. Membership of the Congress is open to all legal and foreign doctors interested in the diseases of the mouth and teeth. All communications should be addressed to the General Secretary, Dr. Crompert, 156 rue de Rivoli, Paris.

LITERARY NOTES.

A PRIZE has been founded in memory of the distinguished Italian gynaecologist, Edoardo Porro. It is of the value of £140, and will be awarded triennially to the author of the best paper that appears in the *Annali di Ostetricia et di Ginecologia* in the interval. The author must be a specialist in obstetrics and diseases of women, but university professors are excluded.

Our Hospitals and Charities Illustrated for January 15th is a special "Cancer Number." It gives some account of the present state of cancer research in the laboratories and of the various hospitals and homes that are open to this class of patient. It is abundantly and excellently illustrated.

Messrs. J. and A. Churchill will shortly publish a work entitled, *Some Points in the Surgical Anatomy of the Temporal Bone from Birth to Adult Life*, by Mr. Arthur H. Cheatle, Aural Surgeon to King's College Hospital. The work will be profusely illustrated with photographs of specimens. The same firm will publish a monograph by Dr. A. A. Gray, Aural Surgeon to the Victoria Infirmary, Glasgow, entitled *The Labyrinth of Animals*, which will contain thirty stereoscopic photographs.

"Nabla" writes:

I have read with great interest the paragraph on the "revival" of homoeopathy. The writer, however, does not seem aware that the quotation from *Hudibras* is given by him in its usual corrupt and inaccurate form:

> Convince a man against his will,
> He's of the same opinion still.

Samuel Butler's lines read:

> He that complies against his will
> Is of his own opinion still;
> Which he may adhere to, yet disown
> For reasons to himself best known.
> (*Hudibras*, Part III, Canto iii, lines 547-50)

—the point being that the man is *not* convinced.

We are obliged to our correspondent for the information contained in his note, and still more for the proof it supplies that he discharges so conscientiously the duty—which we look upon as incumbent on every medical man in this country—of carefully reading the BRITISH MEDICAL JOURNAL.

In the third of a series of lectures on medical ethics now appearing in the *Birmingham Medical Review*, Professor Saundby gives a curious illustration of the restrictions put on the publication of papers on medical or surgical subjects by officers in the public services. When he was President of the Council of the British Medical Association he was anxious to award the Stewart Prize, which is given to encourage the study of infectious diseases, to a medical officer of the navy, and he asked the Director General if he could suggest the name of an officer who had done meritorious work in that line of research. He was given the name of one who had written a very valuable paper on scurvy, but on inquiring where the paper had been published he was told it was in a pigeonhole at the Admiralty! As far as Professor Saundby knows, the paper said to be so valuable has never yet seen the light.

The muzzle is applied with equal strictness in the army. Professor Saundby quotes a passage from the farewell address of Surgeon General Maclean to his class at Netley which, as Carlyle would have said, is "significant of much." We quote the greater part of it, as it is a striking illustration of the spirit and ways of officialdom:

As another opportunity may not offer I embrace the present one to give not an apology, but an explanation, which is quite a different thing, in reply to a writer in a professional journal who censured the professors generally, and if I rightly understand him the professor of surgery and medicine in particular, for withholding from the profession the clinical experience gained in this hospital. Speaking on this matter entirely for myself, I must explain that in the early days of my professorship I began to publish from time to time some of the lectures delivered by me here, my object being so far as I could to keep in touch as it were with old friends and pupils who had left the service for duty in the service, and it was my fixed purpose to continue this practice from time to time as interesting material for lectures in military medicine turned up. An untoward event happened which, rightly or wrongly I do not say defeated this intention. An epidemic of yellow fever broke out in an important station in the yellow fever zone, attended with a lamentable mortality. A graphic narrative of

this outbreak and all the circumstances preceding and attending it was published in the following year by the principal medical officer who had been hurriedly sent to the scene of the epidemic. This was published in the Official Department Year Book. In this outbreak 14 officers out of 30—nearly 50 per cent.—died; 4 out of 6 medical officers, 1 of whom had just left this school, lost their lives; and out of 290 men attacked 107 died. That this lamentable loss of life, which took place between September 5th and 15th, 1864, was due to causes distinctly preventable has never been disputed by any competent authority. This epidemic, as it was my duty to show in this lecture room, did not come upon its victims without giving ample notice of its approach and time for providing for the safety of the troops. Warning of the coming danger was given by competent medical authority, which warning was neglected until the day of grace was past. Here was an opportunity of teaching an impressive lesson in military medicine by an example. Accordingly I made the narrative the text, as it were, of a lecture, which, after delivering it here, I published. I did not invent the facts; I took them as I found them in a published official document; I only pointed the moral of a tale told by another—an eye-witness. I do not pretend that the commentary was flattering to those concerned, but it did not go beyond what the case demanded, if any lesson was to be taught from the facts. No sooner did this lecture appear than a great storm arose and burst on my head. So far as I was able to gather, the local authorities did not dispute the facts; they were angry at the publicity given to them. General Peel, then Secretary of War, was appealed to by those who felt themselves aggrieved; mostly, I believe, the municipal authorities of the place. My lecture, by the War Minister's desire, was submitted to his inspection. The judgement of this high authority, to whom alone I was responsible, was that he had no fault to find with it. At the same time, with a view, I presume, to prevent similar disturbances and complaints in the time to come, the Secretary for War was pleased to direct that in future all lectures delivered here should be submitted to him for publication. From that time to the present no lectures delivered in the Army Medical School by any of the professors have been published, with the exception of merely formal addresses delivered at the opening of the session, and then only for private circulation.

It is instructive to compare with this narrative the following, which we take from General Maurice's book *National Defence:*

Twenty years ago there were certain huts on Woolwich Common which were used for the married non-commissioned officers and men of the garrison. They had, from bad drainage and the gradual wear and tear of time, become unfit for human habitation. They were hotbeds of disease. An epidemic, due solely to the defective condition of the quarters, was literally sweeping off the children. The general commanding at Woolwich at the time was a strong man. He pointed out in report after report the condition of things, and their cause. Steadily and persistently he was snubbed. The permanent officials at the Treasury either directly or indirectly had so cut down the estimate for barracks and huts that the only mode of meeting the case was to let the children die and bully the general. But the general was not a man easily bullied. He knew his duty, and he stuck to his point. In the teeth of express orders to discontinue the correspondence, addressed to him by those who represented not real military authority but political convenience, he returned again and again to the charge; and, in direct disobedience of the disgraceful orders he had received, one of his last letters expressed the hope that he would yet see the last stone of those huts removed. Suddenly the whole scene was changed. By some means or other—how it was never known, certainly not by the general's action—a hint was given to the *Daily News*. That paper sent down a correspondent, who furnished a full report of the facts. *The following day* several of the highest authorities at the Horse Guards were sent down to clear every soul out of the huts, and find accommodation for them elsewhere.

Now observe, in this instance at all events, not one new fact had been brought to the knowledge of the Government then in power by the newspaper report. Every fact had been duly recorded in official documents and in the strongest language by the man whose duty it was to draw attention to them. The mere facts produced no effect whatever. The only thing that produced any effect was the fear of the results of the publicity of such a scandal upon voting in the House of Commons. To complete the story, when the newspapers commented upon the scandal, censure was passed upon the gross dereliction of duty of the general, who had not drawn attention to such a state of things. . . . The general was never employed again.

Comment is superfluous.

Folia Therapeutica is the title of a new medical journal devoted to the latest pharmacological and clinical investigations in the field of therapeutics. It will appear quarterly. The publishers are Messrs. John Bale, Sons and Danielsson. The first number now before us contains the following original communications: Dr. N. Tirard, the Hope of digitalis, with special reference to chronic kidney disease; Dr. F. J. Wethered, observations on the therapeutics of chronic heart disease; Professor C. A. Ewald, the treatment of gastric ulcer and its complications; Dr. Handfield-Jones, uterine haemorrhage treated by styptol; Professor Adolph Baginsky, subcutaneous injection of physiological saline solution in the treatment of diseases of children; Professor E. Roos, yeast therapy. There are besides abstracts, reviews, etc.

We learn from the *East African Standard* that Dr. A. D. P. Hodges, Medical Officer in charge of the Sleeping Sickness Extended Investigations and Acting Senior Medical Officer of the Uganda Protectorate, has written a treatise on sleeping sickness for the instruction of the natives. It is written both in English and in the Luganda language, and is issued by the Government printing office, Entebbe. Mr. Albert Cook, who translated the treatise into Luganda, says:

I have read the advice that our friend, Dr. Hodges, has given the Baganda about sleeping sickness, and I want to tell you that I think his words are very wise, and that if the Baganda Chiefs and people follow his advice, this terrible disease will certainly become much less, and in many places entirely die away. You Baganda have a proverb: "*Lubale mbera, ngotadcko nembiro*;"—now God has put it into the heart of our friend to give you sound advice, and it is your part to carry out his instructions with great diligence.

THE MILK SUPPLY.

A DEPUTATION representing the Infants' Health Society waited upon the President of the Local Government Board last week with reference to the report that he intended to introduce a Bill to legalize the action of local authorities in establishing dépôts for the supply of sterilized milk for infants. Sir Thomas Barlow said that sterilization was only a second best process; once sterilized it was no longer possible to testify as to the goodness of the source of supply. Children fed on sterilized milk developed scurvy and rickets, and serious cases of zymotic diarrhoea had occurred in districts even where the milk supply was so treated. Experience had shown that if fresh milk was cooled down immediately after it was drawn, and put into vessels properly sterilized, and kept cool in transit, the problem would be solved. He hoped that Mr. Burns would consider the appointment of an expert committee to investigate the conditions of the milk supply. Sir Lauder Brunton urged the same proposal. A Joint Committee of the National League for Physical Improvement, the National Health Society, and the Infants' Health Society would shortly be able to lay its practical conclusions before the Local Government Board. Mr. Mayo Robson expressed the view that sterilization destroyed in a great measure the nutritive value of milk, and advocated refrigeration. Mr. Burns, in reply, said that at present it was held to be illegal for municipalities to maintain sterilized milk dépôts, and as seven or eight such dépôts had been established, it seemed right to extricate the local authorities from that position. He knew that sterilization was not the last word, and he was not sure that refrigeration was. The milk supply must be put on a safe system. He would be glad to have the results of the investigation by the Joint Committee; meanwhile, he thought that local authorities should have the choice between sterilization and refrigeration.

CONGRESS OF CLIMATOTHERAPY.—The third French Congress of Climatotherapy and Urban Hygiene will be held at Cannes, Monaco, Mentone, and Ajaccio from Monday, April 1st, to Wednesday, April 10th. The opening meeting will take place at Cannes on April 2nd. Full information may be obtained from the General Secretary, Dr. Verdalle, 1, Boulevard d'Alsace, Cannes. The *Transactions* of the second Congress, held at Arcachon and Pau in April, 1905, has just appeared. Inquiries on the subject should be addressed to Dr. Festal, Villa David, Arcachon (Gironde), before January 31st.

UNDER the will of the late Mrs. Arabella Vernon, of Weston-super-Mare, who died on December 4th, the Royal Hospital for Incurables, Putney, the Hospital for Paralysis and Epilepsy, the London Fever Hospital, the Central London Ophthalmic Hospital, the Central London Throat and Ear Hospital, the Royal Hospital for Diseases of the Chest, the Hospital for Consumption, Ventnor, the Brompton Cancer Hospital, the Royal United Hospital, Bath, Guy's Hospital, and the Ophthalmic Hospital in Marylebone Road each receives a sum of £2,000.

MEDICAL NEWS.

Mr. A. W. Mayo Robson has been elected an Associate Member of the French Surgical Society.

Mr. J. Furneaux Jordan has been appointed to the Commission of the Peace for the city of Birmingham.

A grand prix has been awarded to Apollinaris water at the Marseilles Colonial Exhibition.

Mr. Marmaduke Sheild has been appointed Consulting Surgeon to St. George's Hospital, on his leaving active practice through ill-health.

It is proposed by the *Corriere Sanitario* of Milan, which is edited by Professor L. Devoto, that a great institute for cancer research should be established in Italy. Milan is suggested as the best place for the purpose.

We are asked to state that the Anglo-American Medical Society of Berlin has established new reading rooms in the house of Mr. Oscar Rothacker, medical bookseller, Friedrichstrasse 105b, Berlin.

The city ambulance service of Chicago, formerly in charge of the police, has been transferred to the health department, and two medical officers are now attached to each of the fourteen ambulances, one for day and one for night service.

The prize of £50 annually given by Sir John Craggs to the London School of Tropical Medicine for presentation to the author of the most valuable contribution on tropical medicine made during the year, has been awarded to Fleet Surgeon P. W. Bassett Smith, R.N.

At a meeting held at Temesvar on January 6th the South Hungarian League against Tuberculosis was formally constituted. The President is Count Gregor Kabbebo; the Vice-Presidents, Dr. Karl Telbisz, Bela Fülöpp, and Armin Breuer. The League has 485 members.

The members of the Wigan Medical Society have presented Dr. Blair with a silver cradle in the form of a sugar-basin on the occasion of the birth of a son during his presidency in 1906. The inscription was as follows: "Presented to J. Blair, Esq., M.D., J.P., in commemoration of the birth of a son during his presidency in 1906."

The Childhood Society and the British Child-Study Association have jointly arranged for a series of lectures and discussions at the Parkes Museum, Margaret Street, W. The first lecture will be given at 8 p.m. on Thursday, January 31st, when Mr. R. Denison Pedley, F.R.C.S.Ed., L.D.S., will give a lecture on the teeth, illustrated by lantern slides.

At the January examinations of the Institute of Chemistry of Great Britain and Ireland eight out of ten candidates who entered for the final examination for the Associateship in the branch of analysis of food and drugs and of water, including an examination in therapeutics, pharmacology, and toxicology, passed, and of three who presented themselves in the branch of organic chemistry one passed. Of eleven candidates who entered for the intermediate examination eight passed.

Cremation in Massachusetts. At the annual meeting of the Massachusetts Cremation Society held recently the report for the year past was presented. It recorded the largest number of cremations in any single year since the foundation of the society. The number was 754, being an increase of eight as compared with 1729, when the previous highest number was recorded.

Central London Ophthalmic Hospital. New pathological, bacteriological, and many other laboratories have now been fitted up in the Central London Ophthalmic Hospital, Gray's Inn Road. They will be open to students for research work in the pathology of the eye. Classes have been arranged with [illegible] demonstrations which begin next month. Special attention will be paid to the bacteriology of the eye.

The Penny Bequest to Cambridge. According to Science, Mr. John D. Rockefeller has given the University of Chicago $400,000 for the permanent endowment and $400,000 for current expenditure and general purposes. Among the special provisions of the latter gift are: To provide permanent income to the salaries of professors, $150,000; for additional cost of [illegible] $100,000; for the improvement of the campus [illegible] for the Ahlborn Library, $50,000; for [illegible] for the Mandel Library, $50,000; for [illegible] for the Hull Physiological Laboratory, $50,000; for [illegible] for the Kent Chemical Laboratory, $50,000; for [illegible] for the Ryerson Physical Laboratory, $50,000; for [illegible] for the Walker Museum, $50,000; for [illegible] for the Snell-Hitchcock Hall of Mathematics, $50,000; for [illegible] for the Haskell Oriental Museum, $50,000; for [illegible] for the Law School, $50,000; for [illegible] for the Divinity School, $50,000; for [illegible] for the Classical Museum, $50,000; for [illegible] for the Zoological Laboratory, $50,000; for [illegible] for the Botanical Laboratory, $50,000; for [illegible] for the Geological Laboratory, $50,000; for [illegible] for the Astronomical Observatory, $50,000; for [illegible] for the Bacteriological Laboratory, $50,000; for [illegible] for the Anatomical Laboratory, $50,000; for [illegible] for the Pharmacological Laboratory, $50,000; for [illegible] for the Physiological Laboratory, $50,000; for [illegible] for the Psychological Laboratory, $50,000; for [illegible] for the Path

British Medical Journal.

SATURDAY, JANUARY 26TH, 1907.

CANCER PROBLEMS.

THE many hypotheses which have in recent years been advanced to account for the prevalence of cancer, and to explain its etiology, seem all to fall into one of two categories. Either they are based on the view that the disease is due to a parasitic invasion, or they involve the assumption that it is caused by some habit of the individual, usually some excess or error in diet, which is much the same thing as saying that it is a disease of civilization.

With regard to the parasitic theory or theories, it is not unfair to say that the wish was father to the thought. Having grown familiar with the idea that the prevalence of a disease due to a parasite can be controlled, and having learnt much about the rules which must be followed to attain this end, men hoped that similar rules could be made applicable to cancer. The hope was strengthened by the behaviour of cancer when once established in an individual, more especially by its mode of spread from organ to organ, which presents an obvious analogy to tuberculosis. Sufficient importance was not attached by those who avowedly or implicitly held this view to the fact that the mode of spread was conditioned by anatomical facts, and chiefly by the anatomy of the lymphatic system. The only value of the analogy was to suggest a direction in which researches might be fruitful, and a great deal of time, enthusiasm, and skill have been given to their prosecution. The most ardent adherent of the parasitic hypothesis must admit that it seems no nearer confirmation than ten years ago, and that it is rendered the less probable by the very fact that so much labour has been expended without result.

An address given by Dr. Bashford, General Superintendent of the Imperial Cancer Research Fund, to the Epidemiological Society last week, on real and apparent differences in the incidence of cancer, was in effect mainly a destructive criticism of hypotheses in the latter category. On the assumption that cancer is a disease of civilization, the study of the comparative statistics of different races and nations and of peoples in different stages of civilization might be expected to yield interesting and perhaps illuminating results. At present the results are rather of negative than of positive value. It has been shown that some part of the apparent increase in the number of deaths from cancer in England and Wales is due to more accurate certification, and that some differences in rates in various districts are due to differences in the age distribution of the population, for cancer is a disease of later middle life and commencing old age. Dr. Bashford asserted that the number of deaths assigned to cancer increases from one European country to another in a manner parallel with the increasing accuracy of the vital statistics of the several countries. He pointed out, for instance, that in Switzerland, where the mortality-rate is the largest in Europe (1.26), medical inspection of the dead body is customary, and necropsies are made in less than a quarter of the total deaths in the large towns. In England and Wales increased care in certification has led to an increase in the number of deaths returned as due to cancer, and in Germany a like change in methods seems to be producing a like result. The study of the death-rates from cancer in European countries leaves the general impression that the apparent differences in the incidence are not so great that they are incapable of explanation by (1) the varying difficulties in the way of obtaining accurate records of the numbers of deaths from the disease—that is, of making them approximate to the absolute number; (2) the divergences in the methods of utilizing the data for statistics; (3) the varying extent to which actuarial correction is made for the age constitutions of the respective populations; (4) the different age constitutions of the populations themselves. It cannot be asserted that absolute differences do not exist between European countries, and Dr. Newsholme's corrected rates for various districts in England and Wales render it not unlikely that such differences may be proved to exist, but at present the variations are within the possible statistical errors.

Upon one point, to which Dr. William Ogle first, we believe, drew attention, some interesting information is now available through the co-operation of members of the staffs of the large London hospitals in supplying succinct records of the cases of cancer, as well of those regarded clinically as malignant disease but found on pathological examination not to be so. The diagnosis of cancer was confirmed by pathological investigation in 3,576 cases; 319 cases similarly diagnosed, or nearly 10 per cent., were found not to be malignant new growths, and 726, or 16 per cent., of the cases in which diagnoses other than that of malignant new growth had been made, were discovered on pathological examination to be malignant new growths.

An analysis of the cases into those in accessible, inaccessible, or intermediate situations is instructive; of the accessible cases 8.4 per cent. were not diagnosed, of the intermediate 13.4 per cent., and of the inaccessible 46.2. The number of instances in which the diagnosis of cancer was wrongly made is fewer, but sufficiently numerous to show that it is a source of fallacy in the general statistics of death. Thus of the instances in which the diagnosis of cancer was made but the disease was proved not to be cancer, 7.4 per cent. were in accessible situations, 9.9 per cent. in inaccessible, and 9.7 in intermediate. It cannot be said that these errors in diagnosis neutralize each other for statistical purposes; they ought rather to be regarded as two sources of fallacy varying to an unknown extent for different organs and under varying circumstances of practice.

When it is asked what indications the statistics at present available afford with respect to the influence of habits, dietetic and other, on the prevalence of cancer, the only answer can be that they are exceedingly uncertain and once more of the negative order. Very positive assertions as to the relative infrequency of cancer among vegetarians have been supported by appeals to India, but the statistics from that huge and populous land are far too incomplete to justify any such conclusion. During the last two years 1,288 cases have been reported from hospitals in India, and in more than 90 per cent. the sites were very accessible. The difficulty of diagnosing cancer of internal organs is acknowledged, and in India, where so many die without being seen by any trained medical man, it is highly probable that the majority of persons suffering from internal cancer never apply for treatment at hospitals at all. The information available is, however, sufficient

to prove that the sufferers belong to vegetarian as well as other castes, and that they are so distributed throughout India as to dispel any hope of discovering races exempt from the disease in that country. Finally, comparative pathology helps to discredit diet theories, for cancer has been proved to occur in all the classes of vertebrates except reptiles, in mammals tame and wild, in birds tame and wild, in amphibia, in fresh-water fish, and in sea-water fish in a state of nature. Although attention has only recently been directed to the question of the frequency of cancer in domestic animals, the data already accumulated appear to indicate that when the full facts are known the frequency of cancer in some of them, at any rate, will approximate very closely to the frequency in man. When Dr. Bashford said that cancer was a rare disease he made a statement which was not perhaps happily expressed; it is nevertheless true, so true as to be a mere commonplace, but one of those commonplaces apt to be forgotten. If we compare cancer with the whole range in the *Nomenclature*, from actinomycosis to whitlow, cancer is a rare disease; and, what is more important, if we compare the number of cases of cancer with the number of cases of, say, common cold existing at this moment in Great Britain, cancer is a rare disease. But cancer is not a rare cause of death. Dr. Tatham reports that of the total deaths registered in England and Wales in the four years ended 1904 not fewer than 5.3 per cent. were caused by malignant disease.

The result, therefore, of statistical inquiry is mainly this: that while the differences observable in different countries may be only apparent, those associated with the relative proportion of aged individuals in a population are more constant, and are therefore real. This conclusion, as has been said, probably applies also to animals. The differences are paralleled by the differences between the frequency of cancer in the several organs of the human body, and Dr. Bashford's final suggestion is that the senescence of individual tissues plays an important part in determining the initiation of cancerous proliferation in those tissues, and indicates a line of inquiry at once biological and statistical, which promises the most valuable results. The words "old age" and "senescence of tissues" are not quite interchangeable terms, for the latter is extended to include the obsolescence of tissues and organs immediately after birth, a period of life at which certain forms of malignant disease occur with much greater frequency than during the following quinquennia. The question then arises whether sarcoma and carcinoma ought to be lumped together for the purposes of this inquiry, a question to which we are not prepared to return any answer.

A STAR CHAMBER OF SURGERY.

Dr. [illegible], Consulting Physician to the Preston and County of Lancaster Victoria Royal Infirmary, has recently come forward to lead testimony on the *Independent Review* against the light-hearted irresponsibility with which, he implies, surgical operations are often undertaken nowadays. He complains that the issues of life and death are placed in the hands of inexperienced young men, to whom, in recognition of their having obtained the right to append certain alphabetical adornments to their names, the law in the words of Mr. [illegible], gives a licence *pro quâ, sellout, impunity to murder*. As all these points, Dr. Rigby, has practically no safeguard whatever; for if the patient dies after an operation the operator has merely to fill up a form of certificate, furnished by the State, stating the disease for which the operation was performed, the nature of the procedure, "more or less explicitly expressed," and the result. No inquiry is made as to the correctness of the diagnosis on which the operation was founded—and Dr. Rigby by way of aside tells his readers it frequently is not correct; as to the fitness of the patient to undergo it with a prospect of a favourable result; as to the skill and experience of the operator; or as to the chances of improvement in the patient's condition offered by the operation. Everything is left to the professional integrity of the operator, and Dr. Rigby admits that this can generally be depended on. But his good opinion of their integrity does not prevent his dealing faithfully with the surgeons. He says that the expansion of the sphere of surgery which has followed the introduction of anaesthetics and asepsis has led to abuse. "Just "as in all other human affairs there is nothing good "or useful that has not its fraudulent imitations "so in surgery there has arisen a class of sur- "geons, mostly young, often inexperienced in other "safer and more rational methods of treatment, and "above all quite callous and indifferent to the true "welfare of their patients, whom they look upon merely "in the light of subjects to be experimented and "operated upon. These surgeons, regardless of age or "any other deterring considerations, have no hesitation "in embittering the last moments of their patients by "submitting them to what are practically hopeless "operations, often under the specious plea of giving "them a chance; thus what should be a peaceful "deathbed scene becomes converted into a *séance* of "operating surgeons, nurses, *et hoc genus omne*" (why is the physician left out of the cast?), "to whom the "suffering patient is merely an interesting case. His "obituary notice is another record in the casebook of "the operating surgeon, who rightly, from his point of "view, has, by constant repetition, quite obliterated the "acute sense of humanity he once possessed." Here Dr. Rigby is too plainly appealing to the easily-stirred emotions of the "gods." There are, of course, callous surgeons, just as there are uncharitable physicians and criminous clerks: but they are few in number, and it is not their profession, as Dr. Rigby seems to suggest, that brutalizes them.

The burden of Dr. Rigby's complaint is that, more fortunate than the naval officer who loses his ship, or the military officer to whom a "regrettable incident" occurs, "the surgeon may proceed on his happy-go- "lucky way from one unsuccessful operation to another "secure in the consciousness that no inquiry into his "conduct will be instituted, and that his profession- "conduct will not be in any way impugned." We need not follow him through his discussion of operations "legitimate and defensible" and "illegitimate and in- "defensible." As to these, there is practical unanimity in the profession. It is with regard to the operations on the borderland between the two that difficulty arises. Here we do not get much light from Dr. Rigby, who says that in cases likely to prove fatal unless some operative procedure is carried out, the surgeon must bear in mind the possibility that he may be wrong in his diagnosis, and should let Nature have a chance— "that Nature which often performs what seems miracu- "lous." But Nature, as Sir William Gull said, is often trying to kill the patient. We think that if there is a chance to be given, it should be given to the patient rather than to Nature. Much here depends on the personality of the surgeon. There are men who would

do well to bear ever present to their minds Cromwell's hint to his officers: "For God's sake, gentlemen, con- "ceive it possible that you may be mistaken." On the other hand, the surgical Fabius is not unknown who, if now and again he may be praised as *Unus qui nobis cunctando restituit rem*, loses by delay cases that might have been saved by timely action.

The most serious problem of all that may confront the surgeon is what to do when there is no hope of life and the patient suffers constant and intolerable pain. Dr Rigby asks: "In these cases is the surgeon to blame 'if, urged on to do it by the patient, urged on by the 'patient's friends—yea, urged on by his own humanity, 'he attempt some heroic operation which inwardly he 'knows has no chance of success, but which he also 'knows will in all probability relieve the patient not 'only of his sufferings but of life itself, and on whom, 'in fact, the surgeon acts the part of the friendly 'executioner?" Had Dr. Rigby been able to give any uidance in this most distressing situation he would ave done his profession a useful service. But he merely ays that the question is not for him to answer. Why, ien, did he raise it?

Dr. Rigby proposes that, "in the interests of the people at large, it is time the power of life and death" hich he attributes to surgeons "should be seriously inquired into." He suggests that every case in which ı operation has been performed—at any rate, when a tal termination ensues—should be investigated by an ıthorized court of inquiry—"either a new court of inquiry to be established for the purpose, or some modification of the present coroner's court." If the rgeon were liable to be called upon to vindicate his nduct "in case of dire failure," he would, Dr. Rigby inks, be stimulated "by a grave sense of respon- ibility not to enter upon or undertake any such peration in a flippant, uncertain manner." Now, it uld be absurd to deny that surgeons sometimes make stakes; even physicians, sharing the common lot of manity, have been known to err. It may be said of healing art, as Napoleon said of the art of war, that is the best practitioner who makes fewest mistakes. en if it be admitted that there is some truth in Dr. gby's indictment, is a whole profession to be punished the faults of a few? For it would be a punishment, l a very severe one, for a man whose livelihood pends on his reputation for professional skill, to be ed before a court of inquiry whenever an operation— l the issue of the simplest surgical procedure can er be absolutely certain—turns out unhappily. And w is the court of inquiry to be constituted? And o are to be the judges? Surgeons have occasionally ppear before the Coroner's Court, which Dr. Rigby gests as the type of what he wants, and the result is always edifying. Is a jury of small tradesmen or ountry gentlemen to pass judgement in questions require the highest degree of expert knowledge their decision? It would be scarcely more satisfac- if the surgeon were tried by his peers. The public so deep-rooted a belief in the solidarity of the ession, that it would always look upon an acquittal jury of surgeons as "whitewashing." It must be d that professional brethren would not always be petent judges; the hostility to new things which es to most of us with increasing length of days d tend to make the men who represent the surgery esterday unsympathetic, and perhaps unduly al, judges of the work of the men who are tising the surgery of to-day, and making the ery of to-morrow. Even a surgeon with nerves of could scarcely operate at his best with the fear of a trial—for that is what it would amount to—before him.

If Dr. Rigby were to succeed in getting a Star Chamber of Surgery established, he would not only prevent all progress in the art, but throw it back to the condition in which it was in the Middle Ages, when surgeons left to wandering empirics all operations that might have serious consequences. Throughout mediaeval surgical literature there runs the counsel to the surgeon who values his reputation and his personal safety to have nothing to do with desperate or even difficult cases. Henri de Mondeville, surgeon to Philip the Fair, says a surgeon should never undertake an operation, however justifiable it may be according to the rules of art, if public opinion is against it, or even if he fears to incur obloquy, however unjustly, by failure. Avicenna recommends the surgeon never to attempt to remove an arrow from a limb lest he should become the object of foolish criticism. It is related that Roland, being asked to treat a patient given up by all the best surgeons of Bologna, would not operate till he had obtained formal permission from the Bishop, and a deed of indemnity from the patient himself, his lord, and nearly thirty friends who were present. This is the state of things that Dr. Rigby would apparently like to see restored. Leaving the profession out of account, would it be for the good of the people?

We acquit Dr. Rigby of a desire to make the public's flesh creep, but we think it unfortunate that he should have discussed a question of this nature in a popular magazine. The public need have no fear that surgical enterprise is uncontrolled. A surgeon's colleagues may be trusted to keep a vigilant eye on his performance; there is also that sternest of critics, the medical student, to be reckoned with—not to mention the trained nurse, who is not likely to err on the side of leniency of judgement. In the fierce light that beats on every detail of hospital work lies the best guarantee that surgery will not be degraded into sacrilegious murder which in the name of science breaks open the Lord's anointed temple, and steals thence the life of the building—to grace an operator's "triumph."

THE EARTHQUAKE IN JAMAICA.

The news of the appalling calamity at Kingston was received by the whole of the civilized world with sympathy and dismay. The island of Jamaica, as fair a spot as can be found upon the earth, has been the sport of repeated disaster. In 1692 Port Royal, then the flourishing commercial capital of the island, was totally destroyed by earthquake, and was newly rebuilt only to be again destroyed, this time by fire, in the beginning of the eighteenth century. After this double stroke of fate, the commercial centre was transferred to its present position of the town of Kingston, on ground rising from the sea-shore to the foot of the Liguanea Mountains. The new city grew and prospered until the emancipation of the negroes, a necessary act of justice and humanity, brought ruin to the planters, and reduced an opulent community to a condition of semi-poverty and discontent. A rebellion on the part of the blacks in 1865 and the destruction of Kingston by fire in 1882 made matters still worse. Affairs remained in an unsatisfactory condition until a more than ordinary fit of commercial depression towards the end of the last century called the attention of the home authorities to the grievances of the island. Through the energy of Sir Alfred Jones, of the Elder Dempster Company, with the assistance and approval of Mr. Joseph Chamberlain, then Colonial Secretary, a

new direct steamship service was established in the beginning of 1901 between this country and Jamaica. With special apparatus and arrangements on the steamers for storage and conveyance, it was found possible to introduce West Indian fruits and other produce into the home markets in a condition previously unobtainable. The impetus thus giving to fruit growing and planting was gradually bringing back prosperity to the island when a check was given to the industry by a violent hurricane that levelled the banana plantations to the ground, and wrought havoc and destruction to buildings and other properties. Scarcely had this blow been recovered from when the crowning disaster of a combination of earthquake and fire has laid the city of Kingston in the dust. It is the very irony of chance, moreover, that the earthquake should have selected this one small spot, the most populous and busiest in the island, for its special powers of destruction, whilst other and less important places escaped comparatively untouched. Owing to the interference with telegraphic communication from Kingston itself, the information so far received is meagre, unreliable, and in many respects contradictory. It is certain, however, that the loss of life has been great, and that Kingston, as a city, exists no longer. Some sensational announcements, such as that the ruined city is sinking into the sea, may be disregarded, as there is reliable information that the railway, which runs for a long way close to the shore, is intact. The horrors of the situation are real enough in themselves without the addition of any imaginary ones. As was to be expected, the medical profession has been in the front rank of those performing the duty of relieving the suffering and distress of the survivors. We read that the general hospital in Kingston suffered severely from the shock, but that in the damaged building the wounded were crowded to excess, and the medical staff, totally inadequate in numbers for the task, worked incessantly throughout the night in performing amputations and other serious operations. Working in such a damaged building, and in the presence of repeated earthquake shocks, where one more severe might have brought down the walls upon them to their own destruction, one cannot but admire the courage and devotion to duty displayed by our professional brothers. The *Port Kingston*, too, which was lying in the harbour, was transformed into a temporary hospital, where Dr. Arthur Evans, the surgeon of the ship, worked incessantly in aiding the injured. Lady Swettenham, the wife of the Governor, and other ladies ably assisted by acting as cooks and in other capacities at the hospital. In fact, almost the only bright reading in the face of much that is ghastly and distressing is the part played by the doctors and their kindly assistants. Apart from all considerations of sympathy with distress, the Kingston disaster has a direct concern for the medical profession on other grounds. In the early part of 1901 Dr. Coutts went out as a special correspondent for this JOURNAL to inspect Jamaica, and to report on its suitability and capabilities as a health and pleasure resort. His report was so favourable, and has been so fully confirmed by others that the number of tourists from this country who went to Jamaica each winter in search of health and pleasure was becoming a not inconsiderable source of prosperity to the island. Now, unfortunately, this has come to practically cease, if for no other reason than that the accommodation for tourists has been largely destroyed. The nearness of such a calamity as an earthquake would under any circumstances have deterred many from visiting the island. Experience proves, however, that when an earthquake has once exerted its fury on any spot, that place is generally free from future visitations for many years, usually centuries. So far as earthquakes are concerned, then, Jamaica at the present time is perhaps the safest place within the volcanic zone. Sir James Crichton-Browne has pointed out that the earthquake may have done good in one way by the destruction of numerous insanitary hovels in the neighbourhood of Kingston, and may thus be the means of removing many a source of contagious disease. With the rebuilding of Kingston the resumption of the invalid and tourist traffic may confidently be anticipated, and with it increased prosperity to Jamaica.

THE REPRESSION OF LEPROSY.

DR. SINCLAIR BLACK, Government medical officer, Cape Colony, and formerly medical officer of Robben Island, gave an interesting address, on the present state of the leprosy question in South Africa, at the Polyclinic last week. He began by saying that the question was at least a century old, and that many attempts had been made to check the prevalence of the disease. The measures now in force were based upon the Lepros Repression Act of 1892. A person could only be committed to a leper asylum on two medical certificates, and the diagnosis was subject to revision by the Examining Leprosy Board. The first leper asylum was established at Caledon, and that district was still the chief focus of the disease. The asylum at Robben Island was first established in 1840, and now contains about 600 lepers from various parts of South Africa. There was another asylum chiefly for natives, the majority of whom were true kaffirs, which also contained about 600 lepers, and there were probably as many more lepers in various parts of South Africa who were not segregated. The Government of Cape Colony had to face the facts that the disease had not been checked. There was in fact an apparent increase in leprosy not only in Cape Colony, but in the Transvaal, the Orange River Colony and Natal, although it was possible that the cases now coming under observation had acquired the disease some years ago. Voluntary segregation was permissible under the Act, but inspection being practically impossible the proviso was almost inoperative. The efforts made to check leprosy in South Africa depended upon the view that the disease was communicable, an opinion he believed held universally by the medical profession in South Africa. The country was full of trails of leprosy, across frontiers and mountains, and a native who went to another district to get work often returned to his own kraal and there developed the disease, giving rise to a new focus. The variations in the severity of the disease were very marked, and ought to be taken into account in considering means for its repression. Very many mild cases were found among natives in the elevated dry lands of the interior; they were of the macular anaesthetic type, and infection in such cases was probably at its minimum. On the other hand, at Robben Island the death rate from tuberculosis among leprosy patients was formerly excessive, and was still as high as about 15 per cent. Without being able to rely upon entirely trustworthy statistics, Dr. Black expressed the opinion that the number of cases of leprosy in persons of pure British descent was increasing. With regard to treatment, he had seen benefit from creosote, but had had the best results from chaulmoogra oil. He had administered it by the mouth in doses of 1 drachm, either in capsules mixed with an equal part of olive oil, in cases in which it was not well tolerated by the mouth he had administered it by injection into the subcutaneous tissue generally about the shoulder blade. He drew particular attention to the occurrence of early primary rhinitis in leprosy, and suggested that it was the primary lesion. He argued that the difference between the macular anaesthetic and nodular cases was to be attributed to the extent and duration of the secondary infection.

the patient recovered quickly from the primary rhinitis, the case took the maculo-anaesthetic form, whereas in active cases of mixed and nodular leprosy the rhinitis continued and the nasal discharges contained the bacilli in large numbers. These bacilli in an active state were carried by the leucocytes to other parts of the body, and there set up the nodular lesions. Whatever the value of this theory, Dr. Black contended that it was one that ought to be thoroughly tested, but systematized scientific research in leprosy had not yet been instituted by the Cape Government. In the brief discussion which followed, Dr. Sandwith, Dr. Radcliffe Crocker, Dr. P. S. Abraham, and Dr. Fletcher Little, while supporting the view that leprosy was communicated from patient to patient, did not seem entirely prepared to accept the theory as to a primary nasal ulcer. Mr. Jonathan Hutchinson, who presided, said that while he agreed with Dr. Black with regard to many of the details he disagreed entirely on the fundamental point of the contagiousness of leprosy. Robben Island was a model leper asylum, but still it was a leper asylum, or rather a leper prison, and the main influence in bringing on the phthisis that was so fatal was the despair induced by imprisonment. For twelve years the Cape Government had enforced a law for the segregation of lepers, and nowhere else had such a law been carried out with such vigour and consistency; but he would take his share of whatever responsibility there might be in saying that this experiment of segregation had been an utter failure.

THE NOMENCLATURE OF DISEASES.

THE fourth edition of the *Nomenclature of Diseases*,[1] drawn up by a Committee instituted by the Royal College of Physicians of London, has recently been issued. The work is subject to decennial revision, and the new edition represents the third of such periodical revisions. A brief history of the previous editions is given in the Preface. The preparation of the first edition was begun in 1859, during the Presidency of J. Mayo, and was completed in 1869. Sir Thomas Watson was Chairman of the Commiitee, Dr. Sibson, Secretary and Editor. The second edition was begun in 1880, when Sir Risdon Bennett was President; Dr. Barclay was Chairman of the Subcommittee on Classification; Dr. Ord was Secretary and Editor. The third edition was begun in 1892, during the presidency of Sir Andrew Clark, and was published in 1896; Dr. Bristowe was Chairman of the Subcommittee on Classification: Dr. Payne was Secretary and Editor. The new edition was begun in 1902 during the presidency of Sir William Church. The General Committee appointed to carry out the work comprised all the official heads of the profession in the United Kingdom, and those of the medical departments of the various public services, besides representatives of special branches of medical science. A number of subcommittees were appointed to revise the classification of diseases. Dr. Pye-Smith was Chairman of the Subcommittee on Classification, and the entire work has been edited by Dr. Ormerod. The Latin translation was undertaken by Mr. Shattock, the French by Mr. George Pernet, and the German by Dr. Bertram Abrahams. In regard to classification, some changes in the plan of the present edition have been introduced. The "Enumeration of Morbid States and Processes" has been placed in an Appendix instead of at the beginning of the book, as it is not intended to be used for the purpose of making returns. The heterogeneous section of "General Diseases" has been broken up into groups with the following headings: "Infective Diseases," "Intoxications," "General Diseases "not included in the two preceding groups," and "Certain Morbid Conditions incident to various parts." The last group comprises certain conditions, such as new growths, injuries, etc., not necessarily affecting the whole organism, which it is nevertheless desirable, for purposes of registration, to return under a general heading rather than as local affections. In regard to the Latin synonyms, Mr. Shattock explains that a certain number of new terms have been introduced into the new edition in correspondence with the addition of certain newly-described diseases. Some expressions in the previous edition devised apparently in order to avoid the use of terms not found in classical authors, have been simplified; no words, however, we are told, have been newly-formed to effect this simplification. He adds that one object kept in view has been to select, as far as possible, Latin equivalents that will be generally and readily understood, should that language again be used as a medium for international communication. "Lastly," says Mr. Shattock, "in the case of diseases which have "received names after the authors who have first, or "more particularly, described them, no attempt has "been made to Latinize the author's names, although "when this has already been done the Latinized "name has been sometimes retained as a synonym. "The purpose of this new departure is to obviate "any obscuration of an author's name that might "arise from giving it a Latin termination; the "name, in short, has been treated as indeclinable." It is obvious that, except in points of verbal detail, a work of this character published under such auspices is scarcely open to criticism. It is the official embodiment of the best expert opinion of the day in respect of the classification of diseases. From a linguistic point of view, the most interesting part is the Latin translation. Mr. Shattock has discharged a task of special difficulty with remarkable success. We are inclined, however, to think it a pity that, when no classical name for a disease was available, he did not boldly fashion one more or less after the likeness of a Latin word. If we are to have *beriberia* and *denguis*, why are we asked to accept Kala-Azar naked and unadorned even with the semblance of a Latin termination? Here and there the ingenuity with which a difficulty is overcome by a periphrasis compels admiration. On coming across *Ex tormentorum pilis vulnus* for gunshot wound, however, we were painfully reminded of our distant school days, when we had to celebrate a hero who had found an unclassical death on the battlefield from a cannon ball. On having recourse to Ainsworth, the refuge of the verbally destitute in those primitive days, we were offered *Globus ferreus e tormento pulvere ignito explodendus* as an equivalent! Our faith in vocabularies was rudely shaken, and we felt like the little girl in *Punch* when she discovered that her doll was stuffed with sawdust.

[1] London: Printed for His Majesty's Stationery Office, by Darling and Son, Limited, 34-40, Bacon Street, E. And to be purchased, either directly or through any bookseller, from Wyman and Sons, Limited, Fetter Lane, E.C., or Oliver and Boyd, Edinburgh, or E. Ponsonby, 116, Grafton Street, Dublin. (1906. Price 1s.)

WORKERS' SANATORIUMS AND MEDICAL REFEREES.

IT is not clear on what grounds the National Association for the Establishment and Maintenance of Sanatoriums for Workers Suffering from Tuberculosis consider themselves entitled to expect the medical referees whom they propose to appoint to do the work gratuitously. In a letter addressed recently by the honorary secretary to some members of the medical profession they are invited to act as medical referees, and so to co-operate in carrying out the object of establishing "self-main- "taining sanatoriums." To ask that one of the most important portions of the work should be done gratuitously does not exactly carry out this

intention. If the sanatoriums are to be charitable institutions, or partly dependent on charity, no doubt many medical men would willingly assist, but if this is the intention it should be so stated, and the scheme should not be put forward as being carried out entirely by the workers themselves. Already the public has been asked to provide the money for the purchase of a site and for the erection of a sanatorium, and now it appears that the promoters expect some of the most important medical work in connexion with the efficient working of the scheme to be done gratuitously. Apparently the friendly societies, which will benefit largely by the work of the sanatorium, consider that they need do no more than defray the cost of keeping their members whilst they are in residence at the institution. The large friendly societies have enormous funds and could well afford to build as well as to maintain their own sanatoriums. There certainly does not appear to be any sufficient reason why they should not pay—and pay adequately—the medical men whom they ask to work for them. If and when charity is needed medical men have never shown themselves backward, but they do not care that advantage should be taken of this generosity by those who can well afford to pay them for their services. There are, of course, appointments to public institutions which confer a certain dignity and honour on the holders and which, though they may entail certain duties, are gladly accepted without remuneration. We cannot, however, think that the appointments under consideration will come within this category. These appointments as medical referees to examine and select candidates for admission to the sanatorium resemble those of the medical referees of assurance societies, and the examinations should be paid for in similar fashion.

SOME QUACKS OF BYGONE DAYS.

In his promotion address to the Edinburgh graduates of 1906, which was published in the *Scottish Medical and Surgical Journal* for September, Professor Annandale dealt, among other things, with quackery. He attributed the prevalence of this evil partly to the credulity which [illegible] people to believe the statements of unscrupulous persons of strong determination and unlimited self-assertion, partly to another cause, as to which he says: "[illegible] explanation which, I think, all have a little sympathy with, namely, that when a diseased or painful condition is not relieved by ordinary [illegible], or when it is very chronic or incurable, it is [illegible] for a patient or friends to seek a cure "from any source or from many sources. There are, of course persons, like Mr. W. T. Stead, who have a natural sympathy with quackery of every kind. To people of this peculiar temper of mind every rational physician is a hindrance and a pretender to Divine power. A prophet, like the average man, if he were convinced that he could be cured by the orthodox practitioner, would not go to Mecca. It is not always medicine itself but its profession that is at fault, for, though there are still [illegible] which are beyond the reach of medical art, there are also some of which many practitioners are disposed to say, with Iago

> I cannot say 'whereby' to avoid proface
> If I would time expend with such a snipe

It is by [illegible] that the territory of rational medicine [illegible] hunting ground. The advance of knowledge will bring about the extinction of many forms of quackery. Others will disappear when the profession adopts the attitude of the Roman practor and concerns itself [illegible] and reclaims the various good methods of treatment which have drifted, or have drifted, into the hands of quacks. Professor Annandale touches on some of the forms of quackery which prevailed in the olden time. He mentions that Queen Anne, who suffered from weak eyes, had a passion for quack oculists. One of these, Sir William Read, was a tailor who could not read; another, Roger Gran[illegible] was a cobbler and an Anabaptist preacher. A famous eighteenth-century quack was Graham, who kept the Temple of Health in Pall Mall, and sold to a confiding public "Imperial Pills," "Imperial Amber," "Pea[illegible] Essence," "Aetherial Ambrosial Quintessence of Gol[illegible] and Sundew," and even an "Elixir of Life," for which he charged £1,000, payable in advance. Professor Annandale does not refer to Graham's "Electric Bed" which couples desirous of offspring, or wishing to renew their youth, were allowed to use for a consideration. Then there was Mrs. Mapp, the bonesetter, who attracted so many people to Epsom that the town offered her £100 to remain there for a year. To the Chevalier Taylor, the "Ophthalmiater, Imperial Pontific and Royal," as he styled himself, Professor Annandale only gives a scornful glance in passing, but he was a great celebrity in his day. One of the most amazing careers was that of St. John Long, son of an Irish basketmaker, and himself an obscure drawing master till it was borne in upon him that he had the gift of healing. He took a large house in Harley Street, whither people of the highest rank soon flocked to be cured by his wonder-working liniment and by inhaling a mixture through a tube connected with what looked like a mahogany piano-case. The street was frequently blocked by the carriages of his patients, and though he was imperfectly educated, he was received with open arms by the most exclusive society. He is said to have made £13,400 in one year. The death of a patient led to his being charged with manslaughter, but owing to influence he escaped with a fine. Crowds of his patients, among them persons of high rank, gave evidence in his favour. Of the intellectual quality of Long's devotees a notion may be formed from the fact that Sir Francis Burdett is said to have asked him if his liniment would cause the leg which Lord Anglesey had left at Waterloo to grow again. Long gave an encouraging answer, and the liniment was applied, with the result, duly testified to, that one great toe was reproduced. The force of Nature, aided by the liniment, could no further go. Perhaps only the limitation of human credulity stopped the process of restoration at so early a stage.

ECONOMIC BIOLOGY.

A GENERAL meeting of the Association of Economic Biologists was held in the Pathological Department of the University of Cambridge early this month, when the second annual report was presented. It appeared that the total number of members had risen during the year from 68 to 80, and that 34 candidates awaited election. Professor A. E. Shipley, F.R.S., who succeeded Mr. F. V. Theobald as president, delivered an address on sea fisheries, deploring the fact that the British Government did so little for marine research in Great Britain. Professor Nuttall, F.R.S., read a paper on various types of piroplasmas, mentioning that parasites of this nature had been found in cattle, deer, sheep, horses, donkeys, and rats. Redwater fever, in which the piroplasma was transmitted by ticks, caused an annual destruction of cattle in the United States calculated to be worth over eight millions sterling. Several other interesting papers were read, including one by Mr. T. S. P. Strangeways on a disease affecting hens. The disease broke out a few years ago on an estate in Lancashire. In some parts 75 per cent. of all hens were diseased. The disease was characterized by ulceration around the external genitals and was associated with great wasting and weakness. In advanced cases the animal presented a most pitiful sight. The disease might terminate in either death or recovery. Death occurred in a large number of

instances, dead animals being picked up by the keepers. These were always extremely wasted, and had doubtless died from exhaustion. A large number of animals, both living and dead, suffering from the disease were sent to Cambridge, and in all cases examined a diplococcus was found present in the inflamed parts. Rabbits and guinea-pigs inoculated with the organism showed changes similar to those found in diseased hares. The Chairman explained the origin of the investigation. A friend mentioned to him an apparently inexplicable disease among hares, and he told that friend to send specimens to Cambridge. Some months after his servant informed him that two hares had arrived and that he had sent them to the kitchen. Luckily a letter arrived by the same post stating that two diseased hares had been forwarded. He ran to the kitchen, and was in time to rescue them and to hand them over to Mr. Strangeways.

THE PREVENTION OF SYPHILITIC INFECTION.

THE experimental inoculation of a medical man with syphilitic virus carried out by Metchnikoff and Roux can now be read at large in the Paris Thesis[1] of Dr. Maisonneuve, who was the subject of the experiment. In the first part of his monograph the author reviews the various lesions by means of which the infection may be conveyed from person to person, and from man to apes, the upshot being that syphilitic lesions, whether primary, early (including congenital syphilis), or late, contain the virus, but that gummata are rarely, experimentally at any rate, the source of infection. Further, for infection to occur there must be a solution of continuity. This open door being usually superficial, is it possible to attack the virus *in loco*, and thus prevent the infection? After touching on various points germane to the subject, the author goes into minute details of the inoculation experiments on monkeys and on himself, which are familiar to the readers of the BRITISH MEDICAL JOURNAL, in which the good results obtained by Metchnikoff and Roux by means of the use of a calomel and lanoline ointment have been recorded. Dr. Maisonneuve considers that these experiments have decisively proved that syphilis can be prevented in this way, and has indeed been prevented in his case. With regard to this, it must be pointed out that doubt has been thrown on the value of this single experiment in man. Various disturbing factors suggest themselves. Moreover, Neisser's experiments on monkeys do not confirm the efficacy of the ointment in every case; he failed in 100 out of 200 cases.[2] Moreover, cases have been placed on record in which the calomel ointment failed, even when applied immediately.[3] Notwithstanding these failures, however, medical men, students, and midwifery nurses, among the hospital class of patients especially, should have some of this ointment handy to apply to any suspicious crack about the fingers, etc.

[1] *Expérimentation sur la Prophylaxie de la Syphilis.* [The Experimental Prophylaxis of Syphilis.] Par le Docteur Paul Maisonneuve. Paris: G. Steinheil. 1906. (Demy 8vo. pp. 78. Fr. 2·50.)
[2] Lévy-Bing, *Ann. des Mal. Vén.*, No. 2, September, 1906, p. 120.
[3] Gaucher, *Ann. des Mal. Vén.*, No. 3, October, 1906, p. 219.

AN ANTIMALARIA CAMPAIGN IN GREECE.

LAST year Professor Ross was sent by the Liverpool School of Tropical Medicine to investigate the prevalence of malaria in that country. One outcome of that visit has been the formation of a Greek Antimalaria League, which is collecting funds for the prosecution of a campaign against malaria in Greece. The School has, we learn from the *Liverpool Daily Post*, transmitted to Sir Francis Elliot, the British Ambassador at Athens, the sum of £200, being the amount of the first donations received for the purpose. Sir Alfred Jones has received a letter from Mr. M. Hadjimichalis, President, and Dr. J. Cardamatis, Secretary of the League, in which, after expressing their gratitude for the great interest shown by the Liverpool School in the cause which they represent, they state that the Committee of the League is about to publish an appeal to the Greek Government and to the Chamber of Deputies, showing the ravages of the malarial infection, and indicating the means of combating it. They ask the School for advice as to how this is to be done in an effective manner and on a large scale.

STREETS NAMED AFTER DOCTORS.

WE stated last week that we did not know of a street in any British town named after a doctor. We have received several communications on the subject. From one of these we learn that in Guildford there are eight or nine streets whose names commemorate distinguished men who have shed lustre on the medical profession. These are Jenner Road, Cheselden Road, Cooper Road, Sydenham Road, Cline Road, Harvey Road, Addison Road, Brodie Road, and Hunter Road; there is, besides, Bright Hill. This list is quite outside the range of the ordinary Bumble, provincial or metropolitan; it must owe its origin, or at any rate its inspiration, to some one specially interested in medicine. Dr. Lloyd Edwards informs us that in Barry there are several streets named after doctors; Jenner Street, Harvey Street, Holmes Street, Foster Street are close to each other. The credit of giving these names to the streets is attributed to Dr. Milward of Cardiff, the ground landlord. Dr. W. A. Hollis of Hove states that when the slums of Brighton to the north of Edward Street were cleared, and a fresh set of streets laid out and built on the site, one of them was named after Sir Joseph Ewart. He had taken a very active part in the public life of the town, and had been a popular mayor. It is possible, therefore, that the honour was paid him in recognition of his municipal services rather than his medical distinction. Dr. Stanley B. Atkinson, J.P., who is a member of the Stepney Borough Council, writes that eighteen months ago that council assented to the suggestion of the London County Council that Collingwood Street, Ratcliffe, should be renamed Heckford Street in memory of the founder of the East London Hospital for Children, Shadwell, who was a surgeon. It may be mentioned that there is a delightful account by Charles Dickens of Heckford, with the young wife whom he had met as a nurse at the London Hospital, in the little house which was the embryo of the present fine hospital; it may be found in the *Uncommercial Traveller*. Dr. Atkinson goes on to say that on the St. Bartholomew's Estate in St. Luke's are to be found Rahere Street, Gee Street, and Langton Street. None of these, we fear, comes within the category of streets named after doctors. Prior Rahere was not a doctor; Gee Street is a great deal more ancient than the physician from whom it might be supposed to have derived its name; and we have ascertained that of Langton Street nothing is known by its reputed godfather. We may add—although, strictly speaking, the fact does not come within the terms of reference—that there is in Aix-les-Bains a street or avenue named after Sir Alfred Garrod. This appropriate honour was paid to the great English authority on the diseases for which Aix provides a remedy at the instigation of Dr. Brachet.

SLEEPING SICKNESS IN UGANDA.

THE Government of Uganda is, we learn from the *East African Standard* of December 15th, making vigorous efforts to deal with sleeping sickness. All persons suffering from the disease are being removed from the fly-infested districts along the Lake shore, and placed in specially-organized camps or settlements inland,

where they will be under medical care. Although the disease appears to be decreasing the mortality is still appalling, and the number of persons to be dealt with is very large. It is proposed to create ten sleeping-sickness settlements in the Kingdom of Uganda, and it is expected that in each provision will be made for at least 1,000 sufferers with their families. Only the destitute will be maintained at the cost of the Government, but the expense under this head will, in any case, be considerable. It is estimated that an expenditure of nearly £30,000, spread over three years, will be required. Even persons who do not so far show signs of infection are being removed from the vicinity of the Lake shore. The chiefs are being required to transfer their tenants from the neighbourhood of the Lake to estates which they possess inland, and which are free from tsetse flies. The regents and chiefs of Uganda are loyally assisting the Government in its efforts to stamp out the terrible disease which has so long afflicted Uganda and Usoka. Special arrangements are being made to remove all sources of danger from the European settlements at Entebbe and Jinja. All vegetation capable of harbouring tsetse flies is being removed, and the measures already taken for that purpose have proved so efficacious that it is now impossible to find a single fly in Entebbe. The great cost of clearing, however, prevents the wholesale denudation of the Lake shore.

PAEDIATRIC CONGRESS IN ITALY.

AT the fifth Italian Paediatric Congress in 1905 Padua was chosen as the place of the sixth meeting, which is to be held this year. The choice was particularly appropriate, as the famous University of Padua was the first in Italy to establish an independent Chair of Clinical Paediatrics, and the twenty-fifth anniversary of the foundation of that Chair falls in 1907. It is considered fitting that the occasion should be honoured by some special celebration, as it is largely due to the pioneer work of Dante Cervesato, for many years Professor of Padua, that paediatrics from being practically ignored in Italy has now a recognized place in the teaching of all medical faculties in that country. A considerable impulse in the same direction was given by Professor Francesco Fede, the first President of the Italian Paediatric Society. His successor in the Presidential Chair, Professor Giuseppe Mya, of Florence, has issued an appeal to all members of the Society to attend the Congress, and he urges that instead of a number of communications on subjects of limited interest, questions of general importance should be discussed with the object of enlightening public opinion in the profession, and of arriving at some new and interesting conclusion "that may leave a track of light in the history of [illegible]." The President points out that it will be well if those who take part in the Congress "scrupulously avoid" presenting communications which, without having a genuine scientific value, merely serve to advertise special foods or medicines. The appeal is countersigned by Dr. Luigi Concetti, Extraordinary Professor of Paediatrics in the University of [illegible]. The President of the Organizing Committee of the Congress is Professor Vitale Lecaldi.

LECTURES AT THE LONDON COLLEGES.

At the Royal College of Physicians the Milroy Lectures on [illegible] its differentiation and its epidemiology, will be delivered by Dr. Leonard Rogers, on February 4th, 6th, and 8th. The Goulstonian Lectures by Dr. J. Farquhar Buzzard, on certain acute infective or toxic conditions of the nervous system, on March 5th, 7th, and 12th, and the Lumleian Lectures by Dr. C. H. Savage, on [illegible], its causes and increase, on March 14th, 19th, and 21st. At the Royal College of Surgeons of England the Erasmus Wilson Lectures will be delivered by Mr. Willmott Evans on February 4th, Mr. R. C. Elmslie on February 6th, and Mr. K. W. Goadby on February 8th. The Arris and Gale Lectures will be delivered: Two by Mr. J. F. Dobson on February 18th and 20th, on the lymphatic system of certain portions of the alimentary canal; and one on February 22nd by Dr. B. Abrahams, on some clinical applications of physiology. The Hunterian lecturers are Messrs. W. Sampson Handley, J. W. Thomson Walker, J. Howell Evans, William Wright, and C. F. Beadles.

THE EBBW VALE DISPUTE.

THE *South Wales Daily News* of January 22nd, referring to the dispute between the Ebbw Vale Workmen's Doctors' Fund Committee and the British Medical Association, states: "A section of the payees at Cwm "Victoria, and Waunlwyd have formed a committee o "their own in the interests of the old doctors of thos "districts. A series of meetings has been held betwee "this Committee and Mr. Mills, general manager of th "Ebbw Vale Company, with a view of making arrange "ments whereby these districts could have their ow "doctors and pay for their services separate from th "doctors' fund. In consequence of this two mass meet "ings were arranged to take place at Ebbw Vale o "Monday." From the reports of these meeting published by our contemporary it appears tha arrangements had been made for representatives o the workmen to meet representatives of the Britis Medical Association on Thursday, January 24th.

HIS EXCELLENCY PROFESSOR VON ESMARCH, of Kie the Nestor of German surgery, celebrated his eighty fourth birthday on January 9th.

A FEW weeks ago the twenty-fifth anniversary of th death of Pirogoff was made the occasion in several citie of Russia of a solemn commemoration of the distin guished surgeon. It is proposed to found an invali home for doctors and a medical library both to b called after Pirogoff.

WE regret to announce the death of Dr. Alexand Peddie, the oldest medical practitioner in Edinburgh which took place on January 19th. Dr. Peddie, who wa in his 97th year, had retired from practice. He was th author of some reminiscences of Dr. John Brow famous as the writer of *Rab and his Friends*, and contributions to medical literature on the patholog and treatment of delirium tremens, the treatment dipsomania, and other subjects. We hope to publish detailed obituary notice in a later issue.

THE Army Medical Report for 1905 was issued th week. Both the rate of admission to hospital and th death rate showed an improvement as compared wit 1904, the admission rate being 590.9 per 1,000 of streng compared with 6[illegible]1, and the death rate 5.61 per 1,0 as compared with 6.19. Comparison with the decenn period 1895-1904 is still more favourable, the decenn rates being 652.4 and 8.10 respectively. Enteric fev hence the list of the diseases causing death. The tot number of men finally discharged from the service c account of disease and injury was 5,700, circulato diseases being responsible for the discharge of a larg number of men than those of any other system. Th decrease in the admission rates, it is stated, is part due to the practice of treating in barracks cases sou of which under the old rule would have been admitte to hospital.

Scotland.

Scottish Poor-law Medical Officers' Association.

The annual meeting of the Scottish Poor-law Medical Officers' Association was held at the St. Enoch's Hotel, Glasgow, on January 18th, under the chairmanship of Dr. Gilbert Campbell, when there was a good attendance of members.

Annual Report.

The report stated with regard to vacant appointments that in all cases the outgoing medical officer was applied to for information with regard to the vacancy, and this information had in no case been withheld. The Committee was thus able to furnish accurate information to all intending applicants for vacant posts. The system of contra-advertising in the medical journals had been continued, but showed a decrease, which went to prove that the action taken was bearing fruit. The advice and assistance of the association was requested in the case of a medical officer who had been dismissed by his parish council, but, after looking into the facts, the Committee decided that they could not interfere in the matter. Several instances of intimation of reduction in the medical officer's salary had been brought before the association, who had recommended the officers affected to appeal to the Local Government Board, and it was satisfactory to note that the Local Government Board had refused to sanction the reductions. The Committee had also given advice on a variety of subjects to members who had applied for the same. The report referred to the sympathetic hearing which the Secretary of State for Scotland had given to a deputation which waited upon him with regard to security of tenure of Poor-law medical officers in Scotland.[1] It further stated that the Local Government (Scotland) Act failed to get a second reading in the last session of Parliament; it was, however, proposed to introduce the Bill again in the next session. The report stated that it was expected that the Royal Commission on the Poor Laws would be prepared to hear evidence, so far as it related to Scotland, some time about June or July, and the chairman and secretary together with the Scottish Committee of the British Medical Association, had formulated a series of questions which had been circulated, and it was hoped that every member of the Poor-law medical service in Scotland would answer them to the best of his ability. It is also recorded that a joint meeting of inspectors of poor, Poor-law medical officers, and governors of poorhouses in Scotland has been held in Glasgow to formulate a series of questions relating to matters as affecting the Poor Law in Scotland, when the following two important points were unanimously agreed upon:

1. That every Poor-law medical officer become a statutory official, only dismissible by or with the consent of the Local Government Board, as recommended by the Departmental Committee of the Local Government Board.

2. That Scottish Poor-law officials be granted superannuation on similar lines to the Poor-law Superannuation Act in England.

These points would be brought before the Royal Commission, along with others. The report congratulated Dr. Norman Walker on his election as Direct Representative for Scotland, and stated that his views on the question of the grievances of Scottish Poor-law medical officers were sound. The financial statement for 1906 showed a satisfactory balance in favour of the association.

After some discussion the report was adopted. The members of the Committee were re-elected, and the meeting terminated with votes of thanks to the officers and to the Chairman for presiding. The Secretary of the association is Dr. W. L. Muir, 1, Seton Terrace, Glasgow.

The Future Work of Medical Students.

Under the auspices of the Aberdeen Medical Society a lecture was delivered on January 11th by Mr. John Marnoch, Surgeon to the Infirmary, who took for his subject "Some considerations, mainly surgical, in regard to the future work of the medical student." After graduation, he said, the bulk of them would enter general practice. A five years' course was far too short to enable a man to gain a knowledge of medical or clinical work. No doubt a keen man would get plenty of material if he took full advantage of it. A resident post was not prized as it ought to be. In the infirmary at Aberdeen it had been rare to have more than one application for a post. Why was that? Were they frightened at work? He hardly thought so, for if the Scots students had a reputation for anything, it was for hard work. Even a month or two spent in some of the laboratories was of great use. If they wished to undertake laboratory work, let them get it done early in their career, for if once they got into general practice they would find they had not time for it. They should go to work with some definite object in view, and map out for themselves a definite course. If they went abroad, not immediately after graduation, but a few years later, they would learn a great deal more. Mr. Marnoch then alluded to some features of general practice. While condemning the giving of bottles of medicine without thorough examination and inquiry, he said that general practice might be made one of the best and most useful professions, providing a human interest which would be a permanent source of pleasure. The powers of accurate reasoning were put to the test, and conclusions must be founded on the premisses. Young men were often advised when they went into practice to take notes of their cases. If they did that with every trivial case, life would not be worth living. It was only in important cases that there was any necessity for taking notes. In conclusion, Mr. Marnoch advised them not to relinquish surgery in their practice. They would not always be within the call of the surgeon or within reach of a modern operating theatre. With plenty of fire and water and antiseptic tabloids and the necessary promptitude in action and care, success would be obtained.

Cancer Research at Aberdeen.

At a meeting of the Aberdeen University Court held on January 15th, Professor Reid announced that he had for some time been in communication with the Hon. A. McRobert, a native of Woodside, now resident at Cawnpore, India, relative to a foundation to be called, in memory of his deceased wife, the "Georgina McRobert Fellowship," which he wished to establish in connexion with Aberdeen University. Mr. McRobert was anxious to promote cancer research in the University of his native city, and had provided that on his death a sum of £10,000 should be available for the purpose. In order that work might begin without delay, however, he was prepared to provide £400 a year until such time as the principal sum should be paid over to the University, either by his executors at his death or earlier. He stipulated that the income should be disbursed at the absolute discretion of the Medical Faculty of the University of Aberdeen by the appointment, under such conditions as it might determine, of one or more holders of the Fellowship, and the payment of other necessary experiments in connexion with the inquiry. In the event of any epoch-making discovery in connexion with the subject of cancer research, the Medical Faculty of the University of Aberdeen should have authority to allot all or any portion of the capital of the fund as a reward to the discoverer, and also to the investigator or investigators whose work had, in the unanimous opinion of the medical faculty, contributed to the discovery. If for any reason the fund and the income thereof should cease to be useful (or become unnecessary) for the original purpose, the Medical Faculty of the University of Aberdeen will have the power to devote them to the furthering of inquiry in like manner into the causes of prevention and treatment of any other so-called incurable disease afflicting the human race. Mr. McRobert expressed the opinion that the appointment should be held from year to year, but that a retiring Fellow or Fellows should be eligible for reappointment.

[1] British Medical Journal, 1906, vol. ii, p. 209.

Ireland.

The Royal Commission on Trinity College.

The final report of the Royal Commission on Trinity College and the University of Dublin was issued on January 21st. The Commissioners state that Trinity College has been and is a satisfactory organ for the higher education of the Protestant Episcopalian population of Ireland, but that it has never been, and is not now, to an extent adequate to the reasonable requirements of the

country, an organ for the higher education of the Roman Catholic population. They are, however, unanimous that it is impossible to recommend any such changes in the constitution of Trinity College as would render it acceptable to the Roman Catholic Episcopate. They also object to the proposal to erect a new university, and, with one exception, recommend the establishment of a new college in Dublin acceptable to Roman Catholics. As to how this college should be formed there is great difference of opinion. Four Commissioners consider that the University of Dublin should be remodelled so as to contain five colleges — Trinity College, a college acceptable to Roman Catholic students in Dublin, and the three Queen's Colleges. Three Commissioners recommend the reconstruction of the Royal University so as to become a teaching university comprising four constituent colleges, namely, a new college in Dublin acceptable to Roman Catholics, and the three Queen's Colleges. The Commissioners unanimously recommend that, as regards the medical school, effect shall be given to the agreement embodied in the joint statement of the Board of Trinity College and the President and Fellows of the College of Physicians, as submitted to the Commission.

Sad Death of a Medical Student, Belfast.

It is with much sorrow that the Medical School heard of the death of Mr. Samuel Acheson, a medical student attending the College and Hospital. Mr. Acheson was taking out his midwifery, and was lodging in the Mountpottinger district to enable him to get his cases. He was seen to be ill on January 12th, and was found to have become suddenly worse on the day following, when he had a temperature of 106° F.; in a short time he became unconscious and was removed to hospital. Lumbar puncture on January 14th made certain the suspicion of a fulminant type of cerebro-spinal fever, of which some cases had already occurred in the neighbourhood, and to the great sorrow of every one he died the same day. He was a very promising and hard-working student, and much sympathy is felt with his parents and relatives.

The Debt of Medicine to Ireland.

Dr. J. McNamara (Kensington, W.) writes: In your note on the "Debt of Medicine to Ireland" you have omitted to mention the most important part of the debt—namely, the introduction of iodide of potassium in the treatment of tertiary syphilis. This was due to a humble Irish practitioner named Welch. Considering the tremendous importance of the discovery, it is no exaggeration to say that the name of Dr. Welch, instead of being forgotten, as it is, should stand high on the roll of fame, well within view of the honoured names of Lister and Pasteur.

Election of Resident Medical Superintendent, Cork Lunatic Asylum.

Much interest was manifested in the recent election of a resident medical superintendent for Cork Lunatic Asylum. It may be remembered that some two months ago an election was held, the candidates being Drs. Cashman and Fitzgerald of Cork Asylum and Dr. Fitzgerald, R.M.S., Carlow Asylum, the result being that Dr. Cashman was elected by the casting vote of the Chairman. This proved to be illegal, and last week the Committee met again to make a fresh appointment. The same three candidates were in the field, and it was generally known that the chances of the local candidates were almost evenly divided, a vote turning the scale in favour of one or the other. Both were assistant medical officers in the institution, and during the canvass there had been a good deal of friction. The Most Rev. Dr. Brown proposed a way out of the difficulty by pressing the claims of Dr. Fitzgerald of Carlow, whose success as an administrator had been attested by his Committee and by those gentlemen from Dublin who visited the asylum and whose duty it was to report thereon. His efficiency as an accountant was attested to by the auditors in language of great admiration. A better feeling had been stirred up not only in the asylum itself, but amongst the members of Committee, and they ought to have the interest of the house and its peace, its harmony, and its quiet administration at heart. If they elected Dr. Fitzgerald of Carlow they would have a gentleman there who represented peace in the Committee, peace in the house, and who would bring to the administration a trained mind and trained methods. Dr. Fitzgerald, Third Assistant Medical Officer of Cork Asylum, was duly proposed and seconded, as also was Dr. Cashman, First Assistant Medical Officer and Acting Resident Medical Officer since the lamented death of Dr. Woods. Much was said in favour of the local candidates by their respective friends on the committee, and it was felt by the supporters of Dr. Cashman that should Dr. Fitzgerald of Cork win on going to the poll it would be impossible for Dr. Cashman to live within the walls of the asylum. Accordingly they withdrew Dr. Cashman's name in favour of Dr. Fitzgerald of Carlow. They believed Dr. Cashman the man entitled to the position. The Most Rev. Dr. Brown said his course was clear; he would not let Dr. Fitzgerald of Carlow go forward if he had to go to a poll. If they were all of one mind they would be well advised. After some further discussion the Most Rev. Dr. Brown proposed and Mr. Broderick seconded the election of Dr. Fitzgerald of Carlow, and this was unanimously agreed to. The Most Rev. Dr. Kelly said he had no doubt that whatever ill-feeling was created by the election would pass away; it was the desire of the committee that the medical men should act together for the good of the institution, and he handed in notice that the salary of Dr. Cashman be increased by £100 per annum, that the increment of £50 a year granted to the assistant medical officers at the end of eight years be granted to Dr.. J. J. Fitzgerald, and that his salary be increased by £25 annually; also that the salary of Dr. Lucia Fitzgerald be increased by a sum of £25 annually. Dr. Fitzgerald of Carlow then returned thanks for his appointment, and the meeting ended.

South Wales

Improper Feeding of Cardiff Children.

Dr. Walford, M.O.H., Cardiff, presented an interesting report on physical deterioration to the Cardiff Public Health Committee on January 17th, in the course of which he pointed out that the training of teachers in the laws of health was receiving more and more attention by the Board of Education, and that in any new Education Act the medical inspection of school children would, in all probability, be a duty imposed upon education authorities throughout the country. The question of the feeding of elementary school children was one for the consideration of the education authority. It was, he believed, the opinion of the teachers of Cardiff that a small proportion of the children in the poorer districts attended school with insufficient food. From personal observation he was inclined to the belief that improper feeding in Cardiff, especially among very young children, was a more pressing evil than underfeeding. Dépôts should be provided from which milk should be distributed, and the municipality should take the place of the ordinary retail purveyor. Liverpool, Glasgow, Bradford, St. Helens, and Battersea had their municipal milk dépôts. They were not a financial success, but it was stated that a reduction in the infant mortality had been effected by them. There could be no doubt that much of the infant mortality which occurred in connexion with summer diarrhœa was due to the unwholesome conditions under which milk was supplied to large towns, and a municipal dépot might, by improving these conditions, have the effect of reducing this mortality. Unless the sanitary authority controlled the whole process of production from the cow to the consumer, there could be no guarantee that the milk brought to the dépôt had not been subject to injurious conditions during the transit, storage, or delivery. A municipal depot should not be an institution for the distribution of stale sterilized milk, but one for the distribution of clean, fresh milk, produced under good sanitary conditions. Further, the milk from such a depôt should not be indiscriminately supplied to all comers, but primarily, with a view to the reduction of infant mortality, to those mothers living in the poorer districts who, after inquiry by women health visitors, or on the recommendation of medical practitioners, were found to be in need of such assistance. The amount of control over the dairy farms supplying the depots might, in some cases, fall short of actual ownership on the part of the municipality. In Glasgow, for instance, the farmers supplying the milk depot were required to comply with certain stringent sanitary regulations, and then contracts were

subject to these conditions, which included an inspection at any time by the officers of the Glasgow sanitary authority. The consideration of the report was deferred, and it was decided to furnish copies to the Education Committee.

AN INSANITARY WORKHOUSE INFIRMARY.

Dr. Corbett Owen, medical officer to the Bangor Workhouse Infirmary, in his report, states that the infirmary is in an insanitary situation and badly lighted and heated, and the structure and fittings are generally in a bad state. The medical facilities are most inadequate. The ward scullery and kitchen is described as a dirty, dark, unventilated place, with no proper hot water supply, and a likely spot where fire might start, cutting off all means of escape by the two staircases provided. Spare food is now kept on the windows, underneath the beds, in the lockers, and sometimes under the pillows in the wards. As to ablution rooms, the report states: "One small basin is provided for each sex on each floor, no mirror or hair brushes, and uncertain hot-water supply." The wards are heated by open fireplaces during the day, a system which is a source of danger from fire, and encourages tea-making at all hours of the day, which probably explains why most of the women are suffering from a catarrhal condition of the stomach. There is always some washing and drying of bits of rags going on in the wards. All the woodwork is badly out of repair. Rat and other holes afford receptacles for accumulating dirt, stale food, expectorated material, and other things, regular forcing beds for germs of every description. The majority of cases are chronic rheumatism and tuberculosis. The bedclothes are in many instances patchy, old, and of very poor material. The supply of clean clothes is very inadequate. There are no means of escape from the upstairs male or female wards, or from the nursery wards in case of fire.

MEDICAL CERTIFICATES FOR SCHOOL CHILDREN.

The Cardiganshire Education Committee, at its meeting on January 7th, at Lampeter, considered a reference from the Aberystwith committee deprecating "the wholesale manner in which medical certificates were granted in trivial instances as having a tendency to defeat the administration of the Education Act," and a member observed, "We all approve that." In the Llandyssil district, he said, there were several children who went out to service, but who were certified by the medical officer as unfit to attend school. Professor Bebb (Lampeter) said he favoured Alderman C. M. Williams's proposal to appeal to the medical officers in the county, by circular, to assist the committee in maintaining good attendance at the schools. The wholesale manner in which medical certificates were granted in the county at present reduced the matter of education to a farce. Alderman Williams said that after this appeal the medical officers would doubtless respond splendidly. Comment was also made upon the leniency of magistrates in cases of irregular attendance brought to their notice from time to time by the attendance officers. It was decided to seek the co-operation of the Standing Joint Committee in pressing this matter home to the magistrates.

Birmingham.

DEATH OF DR. THOMAS SAVAGE.

THE news that Dr. Thomas Savage has been killed in the recent earthquake in Jamaica came as a great shock to his many friends in Birmingham. This true-hearted gentleman, whose personal attractions and kindly nature made him beloved by many, and whose ability and skill in the performance of his professional duties won him the admiration of all, is greatly mourned by the medical profession of Birmingham and the Midland Counties.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.

The Children's Hospital was founded in 1861 by the late Dr. T. P. Heslop and the late Mr. C. E. Mathews, and was opened in the house in Steelhouse Lane once occupied by Samuel Galton. Four years later a new out-patient department on the opposite side of the road was built, and in 1869 the in-patient department was removed to the present buildings in Broad Street. Since this date the population of Birmingham has greatly increased, and although the hospital contains 64 beds, yet they are not nearly enough. The present building is unsuitable in many ways for the needs of a modern hospital; the wards are badly lighted and cannot be properly ventilated without making them cold and draughty; the floors are old and cannot be kept thoroughly clean, while the means of isolating infectious cases are far from efficacious. There is no playroom for the convalescent children; accommodation for the resident staff is very inadequate, and many nurses have to live out in boarding houses. The Committee recently requested the Medical Officer of Health, Dr. Robertson, to inspect the hospital, and the tenor of his report has led the Committee seriously to consider the question of rebuilding the hospital. Nothing of a definite nature has been settled yet, but a subcommittee has been appointed to propose a scheme, and there is little doubt that an appeal for money will be made to the public. The site of the present hospital is most excellent for many reasons, and if it could be enlarged a little it would be the most suitable that could be obtained in the city.

Australia.

CIGARETTE SMOKING AMONG BOYS.

VARIOUS countries are endeavouring to deprive boys of the chance of snatching a fearful joy in smoking cigarettes. So far the legislative thunders have rolled with little practical result. The question is being approached from a different side in Victoria. We learn from the *Australasian Medical Gazette* that a conference of delegates from district friendly societies was held not long ago at Bendigo to consider the expediency of taking united action to prohibit cigarette smoking among boys. The object of the societies appears to be to safeguard lodge funds, which are considered to be endangered by the constitutional weakness caused by the habit. The following resolution was carried:

> That this meeting uses its best endeavours to have the evils of cigarette smoking among juveniles brought under the notice of the executive bodies of the societies represented. As we recognize the danger to friendly societies resulting from such practices, we urge our societies to take united action to meet and combat the evil.

A further resolution was adopted, urging that a circular setting forth the evils of cigarette smoking should be distributed.

THE SPITTING NUISANCE IN NEW SOUTH WALES.

In November, 1905, the Sydney Board of Health addressed a circular letter to all municipal councils suggesting that they should pass a by-law forbidding expectoration on footpaths, and pointing out that spitting in public places was now recognized as an important cause of the dissemination of consumption. We learn from the *Australasian Medical Gazette* that at a recent meeting of the Board a return was laid on the table showing that the municipalities addressed number 192; in 16 of them the by-law is already in force, 20 had made such a by-law in response to the circular, while 7 were considering the expediency of making a similar regulation. Ten rural municipalities replied that they did not think it necessary. No reply was received from 139. Some of the 139 are no doubt also strictly rural, in which possibly the by-law would not have much useful scope, but that does not apply to all of them. The Board directed that, in the first place, municipalities in the metropolitan district which had not made the by-law should be addressed again.

PLAGUE IN NEW SOUTH WALES.

We have received the report (Sydney: William Applegate Gullick, Government Printer, 1906, 3s.) of the Board of Health on plague in New South Wales during the year 1905. Dr. Ashburton Thompson, Chief Medical Officer of Government, deals with the outbreak at Sydney and states that the total number of cases reported amount to 18.

The majority of these cases recovered. Every endeavour was made to trace the source of infection, and special attention was paid to the possible association of the disease with the presence of plague-infected rats. The first plague-infected rat was discovered on January 18th, and from that date down to December 5th, the Intelligence Staff brought in 14,897 rats and 15,549 mice. All these were carefully examined and plague was identified in 123 rats and 18 mice. From December 6th down to the end of the year 956 rats and 552 mice were examined, and were all found to be free from plague. Outbreaks of plague on the Clarence and Richmond Rivers are reported by Dr. R. J. Millard, Assistant Medical Officer of Government. Thirteen cases were discovered at Ulmarra, on the Clarence River; 4 at Ballina, a seaport at the mouth of the Richmond River; and 8 at Lismore, which is situated on the north arm of the Richmond River. As at Sydney, special attention was paid to the dangers of transmitting the disease by means of rats. Dr. Robert Dick, Medical Officer of Health, reports 14 cases from Newcastle; in 10 of these Yersin's antipest serum was administered, the method of inoculation being in all instances subcutaneous. The quantity injected in individual cases varied considerably, the amount and frequency of dosage being determined by the gravity of the case. The maximum amount used in one case was 944 c.cm., and the minimum 50 c.cm. Urticarial eruptions and joint pains followed the use of the serum, and were very marked in those cases where the dosage was high. The serum treatment appeared to be of considerable value, and in two cases with axillary buboes, both very severe attacks, it probably helped very largely in averting a fatal issue. After considering the possible circumstances which may have given rise to the outbreak, Dr. Dick concludes:

that the infection was transported to Newcastle either by produce infected by means of plague rats, and conveyed from it to the local rats, or, what is much more probable, that rats were transported and landed at Newcastle, and in turn communicated the disease to the local rodents, and from them it was conveyed in some as yet imperfectly explained manner to human beings.

India.

LARVAL CHARACTERS IN THE CLASSIFICATION OF MOSQUITOS.

CHRISTOPHERS draws attention to the importance of larval characters in the classification of mosquitos in a monograph published in the New Series of the *Scientific Memoirs* by officers of the Medical and Sanitary Departments of the Government of India. All interested in this special branch of entomology will readily admit this, especially when it is understood that these characters have clearly borne out Mr. Theobald's scale classification, a classification which was largely accomplished before the larvae of the great majority of the mosquitos had ever been seen. The difficulty has always been to procure the larvae of the rarer breeds of mosquitos, and time and much labour only will remedy this defect. Christophers goes into the subject in some detail, giving a list of the various anatomical structures which he considers most important, and in which variations may be most easily noted. As we have already said, the description and delineation is not the difficulty; it is to obtain specimens. His attempts at a revision of the classification, in the state of our present knowledge, are premature; but still they are a step in the right direction.

THE ASYLUMS OF THE MISSION TO LEPERS.

In a district, 900 miles square, of the Central Provinces of India the Mission to Lepers is maintaining (with limited help from Government) seven asylums for destitute lepers. The asylum at Chanda now has upwards of 400 inmates and additional houses to provide for new comers and to replace the temporary sheds now in use are needed. Towards the £700 required £460 has been received, and a further gift of £190 is promised conditionally on the balance being raised early this year. The society hopes to erect three new asylums in 1907 at Poona, Allahabad, and Rawal Pindi, in which the many destitute lepers of these districts will be segregated, medically treated, and cared for generally. The London office of the mission is at Exeter Hall, Strand, and the Organizing Secretary is Mr. John Jackson, F.R.G.S.

SANITARY REPORT.

Bengal.

Captain Clemesha's report for the year 1905 gives a very interesting account of sanitary matters in the province of Bengal. The districts transferred to the new province of Eastern Bengal and Assam are excluded, the population dealt with being 49,891,164. The meteorology for the year was somewhat abnormal. In the early months there was excessive rainfall and low temperature; the south-west monsoon was rather late in setting in and ceased unusually soon. Crops were deficient in most districts, and there was a slight rise in the prices of food grains. These conditions were unfavourable to health. The birth-rate (39.55) was lower and the death-rate (38.53) higher than in the preceding year, which was a comparatively healthy one. The registration of births and deaths is still defective. Infantile mortality was very high—208.6 per 1,000 births. This is attributed to ill-health of mothers and improper care of infants. Efforts are being made to instruct the people as to the proper management of children. Trismus neonatorum and diarrhoea are the chief causes of infantile mortality, due to bad hygiene and feeding. Malarial fevers were in excess. Mosquito destruction and the prophylactic use of quinine were resorted to in some places, but not systematically or extensively. A Committee has been appointed to investigate the question of drainage in relation to malaria. Cholera prevailed severely throughout the province, except on the Chota Nagpur plateau. Bowel complaints were also in excess. A special inquiry is being conducted regarding their prevalence and causation. The deaths from plague amounted to 126,084, the highest aggregate reached since the introduction of the disease into the province in 1898. Urban mortality was as usual higher than rural, and female than male. The evidence regarding the instrumentality of the rat in diffusing the disease is growing stronger, and extermination of rodents is being increasingly practised; 1,544 inoculations were performed with success. Small-pox mortality was higher than in 1904, but considerably below the average. The outturn of vaccination was larger. The record of sanitary work is satisfactory. Municipalities and rural authorities are devoting increased attention to cleansing, water supply, and drainage. Captain Clemesha gives some interesting information regarding the septic tank system, in which he takes an active interest, and which he hopes will in time supersede hand-removal and trenching. The Sanitary Board met twice, and by correspondence dealt with a great number of sanitary questions and projects.

INSPECTION OF FOOD IMPORTS.

WE recently gave an account of a report by Dr. Hamer on the inspection of food imported into the Port of London. We are now able to print the following extracts from a paper by Dr. W. F. Dearden, M.O.H. for the Port of Manchester, read by him before the Association of Port Sanitary Authorities:

"The considerations which induced the Manchester Port Sanitary Authority to obtain powers for the inspection of food imports may fitly be described as running in two main channels.

"The first group is of general application, and the principal factor is the recognition of the present dependence of the nation on foreign food supply, a dependence which is increasing year by year. The annual value of the foodstuffs imported into Great Britain is almost staggering and the steady increase in quantity and value is equally so. Without taking into account the whole of the Board of Trade returns, but taking the thirteen principal ports concerned with these classes of goods, I find that in 1905 the total value of imported food reached £201,722,057. The value of imports of all kinds into these same ports for the same period is fixed at £484,320,251, so that we are

faced with the fact that very nearly half the money spent on imported goods is paid for food. The extent of the increase in food imports during the last quinquennial period presents a feature which is well calculated to create thought with the level-headed ones. The total imports at these ports for 1905 show an increase of £33,031,532 over those for 1901. On the face of it, this might be taken as a normal general increase, and satisfactory, but the startling feature lies in the fact that the enormous proportion of £25,655,318 of this increase is to be placed to the account of food.

Our principal supplies come from:

The United States (£42,347,658).
South and Central America (£24,018,073).
Russia (£20,418,718).
Canada (£19,427,773).
British India (£16,379,133).
Denmark (£14,920,903).
Australia and New Zealand (£14,076,046).
Germany (£13,060,417).
Netherlands (£10,896,443).
France (£8,881,196).
Belgium (£4,023,940).
Total value, £188,450,300.

"The necessity for inspection of our food supplies is an established principle against which no one can argue. Municipalities and district councils exercise already powers in this direction in their markets and shops, and for home supply nothing more is required in principle. When circumstances have, however, combined to change so completely the source of supply, it seems somewhat extraordinary that the methods of dealing with this supply should not keep pace with the alteration. It is true that all food imports must be landed within the jurisdiction of a local authority possessing powers of inspection; but when one has often so many separate authorities with jurisdiction in one port, for all to employ trained inspectors for their own areas would be far from economical. The employment of such a staff, however, would be the only course for local authorities to adopt to secure efficiency, but it is a course that the ratepayer could not universally be asked to put up with. When food is landed, or is being landed, it can be inspected systematically in bulk; but if this work is to be done efficiently and without delaying discharge and distribution, the food inspector must be well qualified, and put in his whole time at the port.

"A port sanitary authority is conversant with the usages of the port and the movements of vessels entering and departing, and a supervision exercised at present over ordinary port sanitary work could be readily and easily extended to cover food inspection. One administration and one set of inspectors for a port area is the most likely means of securing efficiency, and, from an economical point of view, it is the only practicable system fit for universal adoption. It should therefore naturally fall to the lot of the port sanitary authorities to take charge of the inspection of food imported into this country. Such a system of inspection would not minimize the importance of existing methods in operation within local areas proper, or in any way interfere with them, it would simply mean the establishment of a first line of defence.

"Recognizing, therefore, the general arguments in favour of port sanitary authorities undertaking this duty, the Manchester authorities had to consider the existing means by which the necessary powers could be obtained. We had a good example before us in the Port of London, and the only way other port authorities could, apart from a general Act of Parliament, have similar powers transferred to them was by obtaining a provisional order. Looking at the matter, therefore, from a local standpoint, we were able to evolve our second series of arguments in favour of seeking the powers for ourselves. Our peculiar local conditions enabled us to provide a very good case for a trial of the principles at stake. The port authority is constituted from fifteen different local authorities abutting on a port of thirty-five miles in length, though for the present the only authorities concerned with food imports are Salford, Stretford, Manchester, and Runcorn.

"The importance of inspection was realized, but when the necessity for acting became evident it was recognized that the only practical means for exercising the function was through the conjoint port authority. Manchester is a new port, and the trade through it is increasing by leaps and bounds. Imports have steadily increased from £14,901,401 in value for the year 1901 to £23,290,796 for 1905. Although this increase is undoubtedly very great, the proportionate increase due to food importation is much above the average, the values being £2,919,825 for 1901 and £5,024,119 for 1905. Roughly, therefore, whilst the total imports have increased one-third, the food imports have nearly doubled themselves. Manchester is now the fourth port in the kingdom, and this progress is a natural result of the facilities afforded by the Canal. Manchester is a great distributing centre, and it is calculated that the area served by the waterway is equal to 10,000 square miles, and contains a population of 10,500,000. The trade of the port, therefore, must be a long way from its limit, and, as half the country's imports are eatables, we shall require to multiply many times our present food imports before we shall be able to feed this population through Manchester. We were therefore able to prove that there is no inspection at all of the large amount of food at present imported, that such an inspection is a necessity, that any system instituted must be one which could easily be accommodated to the increasing trade in foodstuffs, and, above all, that the only economical and efficient means of getting this work done was by placing the control in the hands of the port sanitary authority.

"Leaving Runcorn out of the question as of small import, the whole of our docks are concentrated within a comparatively small area, and therefore every part can be readily and quickly got at for inspection purposes. The warehousing is excellent, and provides plenty of room for inspecting and sorting. The inspection of fresh meat will be rendered comparatively simple, owing to the recent addition of cold storage at No. 9 Dock. We have an up-to-date foreign animals' wharf, with lairages and abattoirs, and past experience of these has taught us that none but sound food need pass from them to the public. There is also a fine grain elevator where this class of food can be inspected without trouble.

"Taking it for granted, therefore, that the facilities for inspection are all that could be desired, the main point for consideration is the type of inspector best fitted for this class of work. There are, of course, plenty of competent food inspectors at present doing excellent service for the municipalities of the country. Though his acquaintance with sound and unsound food might be everything to be desired, the disadvantage, however, under which an official with this class of experience would labour would arise from his want of knowledge of how to get at the food to inspect, and the most suitable conditions under which to carry out his inspection. It is therefore not surprising that the experience in the Port of London should point to the advantages to be gained from employing food inspectors who have had a seafaring experience. An intelligent ship's officer, with several years' experience of dealing with cargoes, would have good knowledge of when, where, and how to get at the requisite packages for examination, and to do this with the least hindrance to the other work going on. His practical acquaintance with checking and tallying will also have given him a facility for recognizing packages containing particular foodstuffs. Again, one who has had experience of carrying fresh meat, fruit and wheat in bulk knows exactly how damage is brought about and where to look for it. As a rule, also, a ship's officer is fairly conversant with the broad differences between sound and unsound food. Another important feature which we cannot afford to neglect is the fact that a seafaring man, possessing a Board of Trade certificate, commands a great deal more respect when knocking about amongst seamen than an outsider.

"For inspection of fish there can, of course, be no doubt that the proper person is a man with practical experience of deep sea-fishing. This should be considered as outside general inspection, as should also inspection of fresh fruit where this arrives in sufficiently large quantities and varieties to occupy a man his whole time in dealing with it."

THE Pope has made Dr. Thomas Addis Emmet, the well-known gynaecologist of New York, a Knight Commander of the Order of St. Gregory the Great. The decoration, which carries with it the title of Count, was conferred upon Dr. Emmet in appreciation of his professional distinction and his charitable work.

SPECIAL CORRESPONDENCE.

BERLIN.

Prohibition of White Phosphorus in the Manufacture of Matches.—The Alleged Increase of Appendicitis.—The Medical Profession in Germany.—Female Students at Berlin.

A Government rescript has been issued which prohibits the use of white phosphorus in the manufacture and sale of matches within the German Empire from January 1st, 1907. The only exception permitted is the manufacture and sale of igniting bands for Davy lamps, as in their case no efficient substitute for white phosphorus has yet been discovered. The Federal Governments, recognizing that the vested interests of match manufacturers and traders must necessarily suffer through the above prohibition, offer gratis the receipt of a harmless substitute for white phosphorus, the igniting substance known as "Schwiennig's substance."

On the invitation of the Minister of the Interior a meeting of medical experts from all the German Federal States was held on January 4th in the Imperial Health Department for the purpose of discussing appendicitis and the question of its alleged increase. The majority were of opinion that no scientific evidence for an increase of appendicitis during the last few years had been adduced; that very probably many cases of true appendicitis had formerly either been classified as "peritonitis" or "abdominal inflammation," or some similar appellation, or had been imperfectly recognized, or had not come under medical treatment at all. The meeting passed a resolution recommending that a special subdivision exclusively reserved for appendicitis should be inserted in the death tables and hospital statistics of the German Empire. It further laid down the lines on which a statistical inquiry into the spread of appendicitis within the German Empire should be conducted.

Dr. Prinzing, the well-known medical statistician, has published in the *Deutsche medizinische Wochenschrift* some interesting figures as to the medical profession in Germany. The number of medical practitioners in 1906 was 30,931. Berlin, with its suburbs, numbered 3,196 doctors in 1906—that is, 12.1 per 1,000. In Breslau, Frankfort-on-Main, Danzig, Koenigsberg, and other large German towns the proportion of doctors to the number of the population differs only by small fractions from that in Berlin. Munich and Strasburg have 15.4 doctors per 1,000. But the record is held by Wiesbaden, the town of invalids, where the proportion has reached 25.1 per 1,000. Prinzing's figures show the great increase of "specialists," and above all of "gynaecologists," an increase brought about by the widespread notion that the specialist makes a better income than the general practitioner. At present there is hardly a town in Germany that does not swarm with so-called specialists, and fierce competition has only served to make the struggle for an income keener even than it formerly was.

Seven hundred and eighty-three women among them 182 foreigners are at present studying in the Berlin University, where they are admitted as *Gasthörerinnen*, or visitors, to whom special permission to attend must be granted by each of their professors. This means that every Berlin professor has the right to exclude female students from his lectures and practical instruction, and among the medical professors who exclude them are von Bergmann, Orth, Waldeyer, Pagel, Senator, while Leyden admits them to all his lectures except the public course on the dangers of sexual disease.

The twelfth annual report of the Society of Women Journalists is a satisfactory record in all respects. The number of members nearly doubled during the year, and much interest was aroused in the periodical lectures and debates. Among the advantages enjoyed by members are the use of the offices of the Society in Clifford's Inn, sound legal and medical advice, and pecuniary assistance in emergency from the benevolent fund. With Mrs. Burnett Smith, as President, Mrs. Watt-Smyth as Treasurer, and Mrs. Bulstrode and Miss Fraser as Honorary Secretaries the Society has very capable officers, and will certainly continue to grow in importance.

CORRESPONDENCE.

THE PUBLIC HEALTH SERVICE IN ENGLAND AND WALES.

Sir,—One reads with pleasure and with surprise the recommendations of Sir John Dickson-Poynder's Committee on the Housing of the Working Classes Bill.

"M. H.," whose letter on this subject, in the British Medical Journal of January 12th, gives us an infallible remedy for the condition of affairs South of the Tweed, by assimilating to England the law in Scotland to appoint county medical officers of health, must be a Scotsman of the first water, and a very innocent one.

In his estimation, all that is required is to make it compulsory in England, as in Scotland, to appoint a county medical officer of health. Have these appointments in Scotland swept away insanitary houses in rural Scotland? If so, why does Mr. Weir, that prince of querists, continually draw the attention of Parliament to the terrible condition of the houses in the Lewis and in the islands and the Highlands of Scotland? But this state of affairs holds good elsewhere in rural Scotland. In the *Scotsman* ("M. H.'s" own newspaper) of January 18th one reads, as one of the causes of rural depopulation in Scotland, the following in the counties named:

Forfarshire.—"I put down the decrease in numbers employed to the want in some districts of improved housing."

Kincardine.—"The want of improved cottages for farm labourers."

Peebles.—"The decline is attributable . . . to a lack of cottages. . . . Cottages where families have been reared for generations are allowed to go to ruin; no new ones are built."

Perthshire.—"There is a want of proper housing accommodation."

Roxburgh.—"A want of cottage accommodation on some farms."

Selkirk.—"There are holdings of all sizes in the district, but the buildings are mostly of old date, . . . and in cases where natural decay sets in new dwellings are not erected."

This is the record in rural Scotland of county councils who must appoint medical officers of health, and these councils have had sixteen years in which to show their mettle, but surely England should not emulate this laxity.

Now, Sir John's Committee, appointed to consider primarily a Housing Bill, ballasts its ship, and cures all the evils and shortcomings of Rural District Councils by transferring the administration of the Public Health Acts to county councils.

First, a county medical officer of health must be appointed, and one supposes from the tenor of the recommendations that following this appointment a magnificent step in insuring the proper administration of the sanitary laws is accomplished. Have the actions of county councils during their eighteen years' life in any way given an earnest of their eagerness to further sanitary improvements? The medical officer of health can only take legal action on the instruction of his council. So far as I know only one county (Durham) has put the Housing of the Working Classes Acts in operation and insured the closing of insanitary houses, and I think it is too much for human credulity to believe that the mere appointment of a county medical officer of health will cause a county council to change its spots.

Even Sir John's Committee do not think so, because they recommend that the Local Government Board be empowered to appoint inspectors to goad on the county councils, and to supervise their administration of the Acts in question. One is astonished that this same new machinery could not be employed for the stirring up of district councils in rural parts. Disbelief in their own remedy is further shown by their magnanimity in giving delinquent rural councils power to complain to the Local Government Board of the failure of county councils to properly do their duty. I suppose this is acting on the old adage, "Set a thief to catch a thief."

If willing, can a county council properly administer the Public Health Acts, the councils being constituted in the future as at present, or even if the councils appoint one or more committees to which the full powers of the council would be delegated? After twelve years' experience of the sanitary work of a rural council, I am perfectly sure that in populous counties a county council could not find the time to give to the work. County councils are even now overburdened with work.

It may be that the Committee's ideal of a rural district was one in which the density is not greater than probably one house per square mile. In such a district it may be possible that a county council could easily be able to administer the Public Health Acts. There would be no population to look after, few nuisances to abate, no sewers to make, no water pipes to burst; but this is not the type of all rural districts. Let me mention four rural districts, practically contiguous, having the following areas and populations:

1. Area, 57,334 acres; population, 52,419.
2. Area, 40,950 acres; population, 30,000.
3. Area, 37,000 acres; population, 44,000.
4. Area, 35,000 acres; population, 71,000.

To administer the Public Health Acts in such a county it would be necessary for the county council or one or more committees to meet weekly.

Again, the adoption of the Committee's recommendation to abolish rural councils so far as the administration of the Public Health Acts is concerned would be a hardship to many deserving officers who in the past have accomplished much good work. These displaced men would be compensated to some extent, but not to the extent of their loss, after having devoted probably half a life time to this work, during which they have not made themselves popular with many of the moneyed people in their neighbourhood.

I freely admit there are many excellent recommendations in the report, such as security of tenure to officers, and above all the recommendation to appoint Local Government Board inspectors, who would supervise and become thoroughly acquainted with a district. These men would have time to inspect the work of councils and their officers. The Board would have frequent knowledge of areas from the reports of these inspectors.

In addition there is the recommendation to give the Board power to enforce improvements which it considered necessary. In many cases rural councils only require such leverage as would be exercised by the Board to carry out work which at present is not touched.

The requisites for the better sanitary administration of urban as well as rural England are, chiefly, power of the Local Government Board to enforce on unwilling councils the carrying out of such improvements as the Board consider reasonable and necessary; the appointment of Government medical inspectors to supervise the work of the councils and their officers, and the security of tenure of the sanitary staff.

In my opinion the handing to one council the duties of another will not *per se* do much, if any good, for those councils who in the future are expected to work wonders have, generally speaking, in the past shown no disposition to inaugurate even minor sanitary reforms.—I am, etc.,

January 19th. D.P.H.

*** Our correspondent is mistaken in assuming that "M. H." is a Scotsman.

THE WEST AFRICAN MEDICAL SERVICE.

SIR,—In the BRITISH MEDICAL JOURNAL of September 29th, 1906, I read with interest and sympathy the letter from two of my colleagues in Southern Nigeria concerning the unfair treatment of the Medical Department there after the amalgamation of the colonies formerly known as Lagos and Southern Nigeria.

Unfortunately, Southern Nigeria is not singular in its grievances, as already the system of reducing allowances has been inaugurated in Northern Nigeria.

These allowances were instituted to recompense officers for the lack of permanent quarters and the high cost of living. Medical officers still live in temporary quarters, and the cost of living has become greater.

Most of us have to live in mud huts with grass roofs of the poorest description. These frequently collapse, and always leak during the rainy season, thus not only endangering one's health but causing loss or deterioration of one's personal effects. During this season, owing to the difficulties of transport, medical officers have to exist on the bare necessities of life, as the limited amount of food supplies they are allowed to take up country with them is exhausted months before their stores can be replenished, unless they are prepared to pay for extra carriers, and these are generally unavailable. The result is that during the unhealthiest seasons we are deprived of those little comforts of civilization the lack of which frequently spells ill-health in the tropics. The cost of locally-purchased provisions is considerably enhanced by the gradually-increasing number of European officials to be provided for.

I would also bring to your notice that in a recent number of the JOURNAL the local allowance of Northern Nigeria was stated to be 5s. a day, whereas it has been only 4s. since last April, and is, it is rumoured, to be still further reduced.

This question of allowance is a very sore point with us. We joined largely owing to the extra inducement offered by the local allowance of Northern Nigeria, which it was specifically laid down in our agreements with the Colonial Office we should receive. Now we find that these agreements are rudely set aside, although the conditions of service are in the majority of instances more trying. We are worse off than our friends in Southern Nigeria, because we have not private practice to rely on, Lokoja and Qungeru being the only town in which anything approaching practice exists. In the latter town the only scope for practice consists of Niger Company Store with a staff of some three or four Europeans. Through the rest of Northern Nigeria a medical man's private fees consist of an occasional "dash" of eggs or fowls. We have to depend, therefore, on our pay and allowances, and, considering the expense of our professional education, are by no means overpaid. If this policy of curtailment is insisted upon, it is only fair to prospective candidates for the W.A.M.S. that they should be warned against entering the Medical Department here, where they may find themselves after years of service poorer than on appointment.—I am, etc.,

November 12th. NIGERIA.

THE BEST WAY TO REMOVE TONSILS.

SIR,—As to the thoroughness of the method of enucleation I think all will agree, but many, I venture to say, prefer the guillotine, probably for its greater simplicity.

Some critics have denounced the practice of excising more tonsil than presents itself internal to the faucial pillars. No doubt the current system of excising as much as a guillotine will allow confers benefit in many cases, but one very important reason in favour of total extirpation has not, I think, been noticed, and that is its absolute prevention of peritonsillitis and troubles originating in the retention of secretions in the supratonsillar recess and its downward prolongation outside the tonsil.

A very large number of adolescents and adults seek relief for recurrent attacks of quinsy, which in the majority of cases means peritonsillitis—a suppurative inflammation of the cellular tissue around the tonsil, or more rarely an abscess in the downward extension of the supratonsillar fossa, the latter occasionally leading to the gravest disaster by perforation of the pharyngeal wall, involving the large vessels, or even burrowing into the mediastinum.

I think that, for these reasons at least, it cannot but be considered a wise procedure to enucleate tonsils whenever possible; by so doing that most painful of throat affections—peritonsillitis—would become extinct.—I am, etc.,

H. CLAYTON FOX, F.R.C.S.I.,
Assistant Surgeon, Metropolitan Nose, Ear, and Throat Hospital.

London, W., Jan. 18th.

SIR,—I quite agree that it is impossible to remove the whole of an enlarged tonsil with the guillotine; but quite frequently total ablation is not needed. It must be noted that a hypertrophy of the tonsil does not necessarily mean an actual increase of the tissue elements, but a great increase of the connective tissue, causing a hard, dense enlargement. In this case it would be very injudicious to attempt digital evulsion, as the amount of force needed would certainly have a great tendency to damage surrounding structures. The removal of even a small portion by the guillotine will, owing to the contraction of the scar tissue, greatly reduce the size and relieve the symptoms. When the enlarged tonsil is soft and spongy, the increase in structure being of the glandular type, digital evulsion can be relied upon as safe and easy.

As enlargement of the faucial tonsil is a very frequent concomitant of adenoid growths it is necessary, when operative interference is decided upon for removal of the tonsil, to consider a method which will be equally efficient for removing the adenoids. Here a general anaesthetic is a necessity. Dr. Spicer writes as though this were not necessary when the guillotine is employed and uses this as an argument in favour of operating with the guillotine as against the finger. In the large majority of cases a general anaesthetic is needed, owing to the presence of adenoids which also call for removal at the same time if possible.

Sometimes it happens that part of an enlarged tonsil may block up the orifice of the Eustachian tube and cause deafness. In this case enucleation is not called for. If the offending piece of tonsil is removed with punch forceps the symptoms will be relieved.—I am, etc.,

Forest Gate, Jan. 21st. ROBERT HUGH ALLEN, M.D.

THE MEDICAL CARE OF THE VOLUNTEER FORCES.

SIR,—It is generally recognized that something more needs to be done by the nation to encourage the national volunteer service. Most betterment schemes cost money, and the suggestion I now put forward will certainly do so, nevertheless I think it would in the end be a paying investment of national funds.

I propose to treat every volunteer unit as if it was a State medical aid club, and to give every member of the corps the right to free medical attendance while borne on the active list of the corps. The State to pay the cost of this professional attendance.

The argument for this proposal is that we want above all things fit and healthy men in the volunteer service, throwing back on the local rifle clubs now being formed throughout the country such men physically handicapped as are only fit for work in their own immediate neighbourhood.

To-day the physique of the volunteer leaves much to be desired, and the volunteer medical officers are but gradually tightening the effectiveness of the physical examination of volunteer recruits. I maintain that for this recruit inspection duty the volunteer medical officer should be paid by the State. This would at once give a real official status to the examination which may now be perfunctory.

But if we ensure that fit men alone are to benefit by new booms to be given to the volunteers, so we should ensure that throughout their service they should be in good physical condition. This can best be ensured by strengthening the official relation of the volunteer to his medical officer, and seems to me to lead up logically to the formation by the State of a "sick club" in every battalion, the State paying the medical officer for this duty.

No one has yet logically studied the present relations of the volunteer medical officer to the volunteer service. It is not the same relation as the combatant volunteer officer has to his men: it is practically a professional and technical relation which has not the charm of a change of work or duties such as the combatant officer enjoys. It is simply a combination of purely professional and routine labours with all the mental and physical drawbacks such absence of change implies. It seems to me that if the volunteer adjutant is paid by the State so should the medical officer be paid, as both continue to do purely professional work without change all the year round.

I understand that certain volunteer medical men now holding combatant volunteer commissions do at present give medical advice to their men, to keep them together and help to build up their companies. This shows that medical aid would be a consideration to men to induce them to volunteer. The medical officer in touch with all classes of the people would have every inducement to encourage volunteering, and could become a valuable bond within the unit.

The nation would gain in this way. The physical condition of some 2,000,000 civilian young men would come within the scope of scientific investigation, and no one can doubt that good would result. A mass of facts as to hours of labour, housing, intemperance, feeding conditions would gradually accumulate and would contribute much to the study of physical development or deterioration in the State. I do not think the money so expended would be wasted, but would rather be a sound national investment. If we began at the ordinary sick-club payment the cost would not be alarming, and it largely depends on the opinion of the medical profession how long they are to do recruiting work under present conditions and without definite salary. This letter merely opens up the question, and may, I hope, develop opinion on this matter. The whole subject of the relation of the medical profession to the State is daily coming within the region of practical politics; and no one can doubt that if once the medical profession combined to ask payment for recruiting inspection of volunteers, an amount of actuality would be given to the question which would lead to further developments. We have as medical men to annex new territories of professional State duties, and I suggest a study of my proposal of volunteer medical aid paid for by the State.—I am, etc.,

GEORGE J. H. EVATT,
London, W., Jan. 7th. Surgeon-General, late A.M.S.

PRIMARY DIPHTHERIA OF THE EXTERNAL AUDITORY CANAL.

SIR,—The notes on a case which Dr. Galbraith Connal reports on page 139 of the BRITISH MEDICAL JOURNAL of January 19th as primary diphtheria raise questions of such importance that one may ask for fuller details of the evidence of diphtheria in this patient.

A radical mastoid operation was successfully performed on the patient during the acute and active period of the presumed diphtheria, and yet although no antidiphtherial treatment was adopted, the wound healed without complication!

Even if the culture from the swabs yielded morphologically typical diphtheria organisms, one must hesitate to accept that alone as sufficient evidence of a diphtherial element in the case, while atypical forms in this case could scarcely be reckoned as evidence at all.—I am, etc.,

Clifton, Bristol, Jan. 21st. P. WATSON WILLIAMS, M.D.

SIR,—In view of the frequency with which bacilli, indistinguishable morphologically from the true diphtheria bacillus, are present in the external auditory meatus, both of scarlet fever patients with aural discharge and of healthy persons, it would be interesting to know if the bacilli found in the case reported by Dr. J. Galbraith Connal were subjected to cultural tests. This matter was gone into at some length by Dr. G. S. Graham-Smith in vol. iv of the *Journal of Hygiene* (page 309).

I recently had a swab to examine from the ear of a patient, aged 6, in the scarlet-fever ward of the isolation hospital here. The discharge is said to have been present since birth, and the swab gave rise to a number of bacilli indistinguishable from the Klebs-Loeffler bacilli when stained by methylene blue and by Neisser's method. They are probably not diphtheria bacilli.—I am, etc.,

Reigate, Jan. 21st. A. E. PORTER.

PUBLIC VACCINATION.

SIR,—At a special meeting of the Bramley Board of Guardians, held at Armley, on January 14th, to consider a communication from the Royal Commission on the Poor Laws, the following resolution was passed:

> That the provisions of the Vaccination Order prescribing minimum fees to the public vaccinator and vaccination officers should be rescinded and amended so as to enable guardians to fix the fees suitable in each particular case, the minimum fees being considered excessive for most districts in this union, and *that any properly qualified medical practitioner be recognized as a public vaccinator.*

I desire to call the attention of those general practitioners who are not public vaccinators to the desirability of using their influence with the Board of Guardians in their union, in order to terminate the unfair monopoly of vaccination, so that every registered medical practitioner should become a public vaccinator and be paid by the State.

Whether is it worse for the parish doctor to accept half-guinea midwifery fees or for the public vaccinator to go

round from door to door hawking vaccination, and extolling the virtues of Government lymph, and his own skill as a vaccinator?

It is not considered correct for the hospital surgeon or the medical officer of a hydropathic establishment to have his name advertised in front of the institution, but it is quite proper for the name, address, and surgery hours of the public vaccinator to be given to the parent of every newborn infant, and at certain periods for bills to be published broadcast.

It is time that this state of affairs should end, and every medical man enjoy equal privileges as well as responsibilities.—I am, etc.,

Armley, Jan. 21st. A. A. MCNAB, M.B.

YELLOW FEVER IN BELIZE.

SIR,—In the BRITISH MEDICAL JOURNAL of January 12th Mr. Eyles complains that we have used against him an *argumentum ad hominem* by accusing him of being "evidently ignorant" of the results of recent antimosquito measures in various places, and then annihilates us with a crushing quotation from a book of elementary logic.

But we venture to submit that our contention was not at all an *argumentum ad hominem*, but, on the contrary, a perfectly permissible one. We were discussing whether general antimosquito measures should necessarily be used against yellow fever. He argued that they are not absolutely necessary, and repeats in his last letter that he is "not blind to the fact that the requisite measures are costly, and that they have not proved as successful as one could wish." But we deny that this is a fact, and on our part repeat that he could not have thought it to be one if he had mastered the literature. It is not an *argumentum ad hominem* to question whether a disputant is fully acquainted with his case, and even if it were we fancy the busy world will still continue to see the point of it.

There is no doubt that mere emergency measures are insufficient against yellow fever. The general and continuous antimosquito campaign must be made a part of the daily sanitary curriculum, otherwise there can be no security against the sudden spread of infection from ambulant or unreported cases. We may rest secure that if it were unnecessary such experts as Colonel Gorgas and his colleagues would not use it, as they are now doing, in their gigantic work at Panama.

The simple truth is that antimosquito measures are unpopular among officials owing to the trouble they give. They are far from costly in comparison with the benefits they confer, and they are uncertain only when improperly or perfunctorily carried out.—I am, etc.,

R. ROSS,
J. L. TODD,
A. BREINL,

January 16th. School of Tropical Medicine, Liverpool.

THE INFLUENCE OF RAINY WINDS ON PHTHISIS.

SIR,—Annoyance at my criticism of his figures is no excuse for Dr. Milton's letter in your issue of to-day, which, valueless for argument, impugns my good faith on a point which does not belong to the discussion. Dr. Bushnell's echo indicates that he has not read my former papers. These two gentlemen make the following statements:

> Dr. Gordon condemned the Devon and Cornwall Sanatorium, South Brent, to the Devon County Council, who were asked to subscribe, because it had a south-westerly exposure, although sheltered by high surrounding hills, and therefore under the influence of his rainy-wind theory.

So says Dr. Milton, and he goes on to add:

> When such a theory is applied without reason to a sanatorium for the working class—which was at the time struggling for its very existence and has since been able to prove its value—with the result that a public body like the Devon County Council, having Dr. Gordon's report before them, are apparently influenced by it and do not subscribe, then surely it is high time that a protest should be raised.

Dr. Bushnell makes the following remarkable statement:

> In any case, it is to be deprecated that this theory of the influence of wet winds on phthisis—which has, to say the least, not yet been accepted by the medical profession as a body—should have *been, to my knowledge, definitely placed several years ago before a body of laymen—namely, the Devon County Council—as condemning a sanatorium on Dartmoor.*
>
> (The italics are mine).

Now, what are the facts?

1. I was one of the first to move in the matter of a sanatorium for the working classes in Devonshire.

2. I was asked, on one occasion only, to furnish a report to the General Purposes Committee of the County Council, of which copies can be obtained if desired. Not a syllable was said about Didworthy in that report. The report was dated May 9th, 1902, when Didworthy was not under discussion. My recommendation ran as follows:

> I would venture to suggest that, before a site is chosen, returns should be obtained from the medical officers of health, in all the districts of the county, of the female phthisis death-rates in the parishes for ten years, and that the site should be chosen in an area of low or no phthisis mortality, where the absence of the disease may reasonably be attributed, not to chance, but to local climatic advantages, especially dry soil and shelter from westerly winds. Also that the site should be in a sunny situation, with a south-eastern aspect, remote from a town or the immediate sea front, in pure, dustless, bracing air, with cheerful surroundings and sheltered walks.

3. It was not until the following July 12th that I visited Didworthy, not for the purpose of making any report, but in order to make up my own mind about it apart from any mere theory. I made most careful inquiry about it, locally and otherwise. I found:

(*a*) That the rainfall was very high. Symons's *British Rainfall* for 1897 gives the fall at South Brent (Great Aish), close to Didworthy, as 63.57 in., with 222 rainy days in the year.

(*b*) That the south-west wind sometimes blew with such violence against the house itself that the rain was driven between the slates. Apart from any theory, it should be remembered that the south-west is the most prevalent wind in Devonshire.

(*c*) That the valley was not infrequently full of thick fog in winter.

On the ground of these facts, which, taken together, I think will be generally thought sufficient, I disapproved of the site. I made no report, nor did the County Council ask for one. The Clerk to the County Council knew my opinion unofficially. Whether it influenced the Council is for those who know its proceedings to say. At the time I visited Didworthy, so far from "struggling" to exist, it was not even prepared for patients.

Two things will probably strike a reader as curious—namely, why this occurrence of "several years ago" has only now been brought forward, and why, if this sanatorium "has since been able to prove its value," its Committee has not again approached the County Council. Results, with all sensible people, over-ride any theory.

So far from objecting to suitable sites on Dartmoor, I believe I was the first to draw attention, through statistics, to the low phthisis death-rates prevailing on its north-eastern slopes, where two admirable private sanatoriums have since been erected. I, too, trust that this correspondence may induce others to investigate the influence of rainy winds; but I would point out to these two gentlemen that argument seldom gains from personalities or from irrelevant statements which cannot be substantiated.—I am, etc.,

Exeter, Jan. 19th. W. GORDON.

METEOROLOGICAL CONDITIONS AND ENTERIC FEVER.

SIR,—Colonel Simpson's letter dealing with this subject (BRITISH MEDICAL JOURNAL, September 29th, p. 807), is of much interest. Since the reading of my paper at the South African Medical Congress, 1905, a notice of which appeared in the JOURNAL for September 8th, 1906, p. 594, several such opinions have been received generally confirming the observation that the prevalence of enteric fever is increased a few weeks after heavy rainfall.

The arguments of my essay were that the enteric season in Natal, as probably also in all countries, seems to be due to the pollution of the sources of water supply with infected soil washings, and that the characteristic seasonal prevalence should disappear when the water supply is protected—as by efficient filtration or protection of catchment area—from the effects of this pollution.

With regard to the characteristic seasonal prevalence of enteric fever, the fact that the season in the home countries and in the United States is in the autumn and winter, exactly the reverse of that in Natal and the

Transvaal, is a fact which to my mind relegates the factor of temperature to an altogether secondary place.

The factors which determine the degree to which any disease becomes epidemic are not only different for each disease, community and locality, but doubtless assume different values in different epidemics. Whilst admitting that the agents which determine an epidemic are often numerous and complex in their relations, yet it seems but reasonable to think that the factors which are concerned in the production of a definite periodical prevalence of a disease must be comparatively simple.

If it be admitted that the enteric season is the consequence of the onset of the rainy season, it should follow, among other things, that

1. Rainless countries should have no enteric season.

2. Countries without a definitely marked rainy season should have no definite enteric season.

3. Countries with a heavy rainfall confined to a well-marked season should have a well-defined enteric season.

The instance of Capetown is apparently in favour of my argument. The water of Capetown, excluding the suburban municipalities, is collected from the top of Table Mountain, a catchment area which is unusually free from the chances of specific contamination. If in this community, enjoying an almost unpollutable water supply, it is found that there is no definitely marked enteric season and no co-relation between the prevalence of the disease and the rainfall, the facts would seem to justify the deductions of my essay.

The number of cases of the disease present in the country at the time of the commencement of the heavy rains seems, as might be expected, a factor of great importance. Since the withdrawal of the troops from South Africa began the enteric seasons have rapidly declined in severity.

I cannot but endorse the view of Colonel Simpson that the causes of the enteric season should be primarily studied in small communities. At the same time I am inclined to consider the smallness of the areas selected for observation as not so important as their simplicity from a sanitarian's point of view. A homogeneous population, as free as possible from the disturbing influences of intercourse with other communities and possessing but one water supply and one method of sewage disposal, would doubtless be the ideal field for observation.—I am, etc.,

WILFRED WATKINS PITCHFORD, M.D.

Public Analyst's Laboratory

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Degree Days.—The following are the degree days in the present term: Thursday, January 24th, at 10 a.m.; Saturday, February 16th, at 2.30 p.m.; Thursday, March 14th, at 10 a.m.

B.M. Examinations.—The days fixed for the commencement of the B.M. examinations in 1907 are Thursday, June 20th, and Thursday, December 5th. Names must be entered not later than 10.30 a.m. on Tuesday, June 4th, and Tuesday, November 19th, respectively.

Degree of M.Ch.—The day fixed for receiving names for the examination for the degree of Master in Surgery is June 7th.

Radcliffe Travelling Fellowship.—The examinations already announced will commence on Tuesday, February 26th. Names are to be sent in to the Regius Professor of Medicine on or before Saturday, February 9th. Full details are given in the University Gazette of January 18th, 1907.

Romanes Lecturer, 1907.—The Vice-Chancellor has appointed the Right Honourable Lord Curzon of Kedleston, M.A., Hon. D.C.L., of All Souls' College, G.C.S.I., G.C.I.E., F.R.S., who was appointed last year, but was prevented from delivering the lecture, to be the Romanes Lecturer for 1907.

Natural Science Scholarships.—Examinations for scholarships in Natural Science are announced as follows: March 12th, Keble College; March 19th, Merton College and New College.

University College.—Mr. C. M. Burrell of the Merchant Taylors' School has been elected to a scholarship in Natural Science.

UNIVERSITY OF CAMBRIDGE.

The following degrees were conferred on January 17th:

M.D.—G. S. [illegible], Gonv. and Caius.

M.B.—F. C. H[illegible].

M.B. and B.C.—C. M[illegible], P. B. P[illegible], Corp. and Cai.

LL.B.—W. G. Bl[illegible], Emm.; R. F. Sa[illegible], P. P. Lyndhow, Trin.; E. P. V[illegible], Cai.; J. W. L[illegible], P. A. Porter, Emm.; C. G. P[illegible], Pemb.; T. B. Hu[illegible], S. Wilson, Pemb.; [illegible] W[illegible], Selw.; G. F. [illegible], Corp., and Cai.; [illegible] H. Ba[illegible], Down; J. H. Du[illegible], Trin.

UNIVERSITY OF LONDON.

CONVOCATION.

A GENERAL Meeting of Convocation was appointed to be held at the University on Friday, January 18th, but did not take place as an insufficient number of members was present to form a quorum. Had the meeting been held Dr. Lambert Mears would have presented the interim report of the Special Committee on Athletics, and moved its adoption. The report described the formation of the "University of London Athletic Union," of which the Chancellor, the Earl of Rosebery, was President for the first year, and the Vice-Chancellor, Sir E. H. Busk, Vice-President. The details of the sports, held on June 27th, 1906, were managed by an Undergraduates Committee. Mr. B. Whitehead was Treasurer. Nine events were contested, and the prizes distributed by Lady Busk, B.Sc.Lond., the wife of the Vice-Chancellor, who kindly presented a challenge cup for undergraduates. It is proposed to have sports again in the course of the coming summer. The Clerk of Convocation informed the members present that both the Chairman of Convocation (Sir E. H. Busk) and the lady who holds the post of Vice-Chairman (Mrs. Bryant, D.Sc.) were unable to attend in consequence of illness.

UNIVERSITY COLLEGE.

A COURSE of eight lectures on Certain Fundamental Problems in Physiology common to Animals and Plants, by Dr. W. M. Bayliss, F.R.S., to be given on Wednesdays at 5 p.m., were commenced on January 23rd. The lectures are open to all students of the University of London and to qualified medical men.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE HEALTH OF THE NAVY.

THE *Statistical Report of the Health of the Navy for the Year 1905* has just been issued.[1] It is pointed out in an introduction that, owing to the reorganization of the fleet, there have been considerable changes in several of the stations, necessitating various alterations in this year's report as compared with the reports of previous years. As a result of these changes, no comparisons with previous years are made in dealing with Home, Channel, Atlantic, and North American stations. The statistical tables having reference to the incidence of diseases, invaliding, and deaths between certain ages have been omitted, as it is considered that the value of the conclusions to be gained from these tables is not of sufficient importance to warrant their continuance.

Summary of Returns for Total Force.

The returns for the total force for the year 1905 are considered as very satisfactory. As compared with the averages of the last eight years, there are decreases in the ratios of cases, invaliding, and deaths, and this year's case and death ratios are the lowest recorded since 1856. The ratio of cases per 1,000 of force shows a reduction of 119.29 as compared with the last eight years' ratio.

Invalidings.

The invaliding ratio—namely, 23.89 per 1,000—shows a decrease of 4.98 in comparison with the average for the last eight years. The Mediterranean Station shows the highest invaliding ratio, the East Indies the highest death rate. The total number of persons invalided was 2,653, which is in the ratio of 23.89 per 1,000, and shows a decrease of 4.98 in comparison with the average of the last eight years. Of the above total, 1,719 were finally invalided from the service (121 of these refused surgical operation), giving a ratio of 15.48 per 1,000 for the whole force, or 64.79 per cent. of the number invalided, thus showing a decrease of 0.4 per 1,000 when contrasted with 1904. Including the marines invalided at head quarters, the total number invalided out of the service was 1,931 (as shown in the table at pages 12 and 13). The invalids from marine head quarters appear for the first time in this table.

Deaths.

As regards the death-rate, the ratio per 1,000 was 3.9, showing a decrease of 1.42 when compared with the last eight years' ratio. The total number of deaths was 433, of which 305 were from disease, 128 from injuries. The death-rate due to disease alone was 2.74, and that due to injuries was 1.15 per 1,000. Compared with 1904, the stations showing an increased death-rate are the Mediterranean and the Irregular Force; the remainder of those for which comparisons are made show a decreased rate.

[1] London: Printed for His Majesty's Stationery Office by Eyre and Spottiswoode, Printers to the King's Most Excellent Majesty. And to be purchased either directly or through any bookseller, from Wyman and Sons, Limited, Fetter Lane, E.C., and 32 Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, Ltd., Grafton Street, Dublin.

General Diseases.

The following is a summary of the returns under the head of General Diseases:

Small-pox.—2 cases; 1 from East Indies, 1 from Irregular Force. In the latter case the patient, a Krooman, died.

Cow-pox.—218 cases.

Chicken-pox. 11 cases.

Measles.—88 cases; 1 fatal case (from China).

Rubella.—55 cases.

Scarlet Fever.—104 cases; 4 fatal from Home station, 1 from Channel.

Dengue.—68 cases; 41 from China, 27 from Australia. It is stated that the case-ratio for eruptive fevers shows a marked decline as compared with that of the last eight years.

Influenza.—2,637 cases, being an increase of 2·00 per 1,000 as compared with the average case-ratio for the last eight years. The home station returns 2 invalidings and 1 death under this heading.

Mumps.—79 cases.

Diphtheria.—25 cases, with 4 invalidings and 2 deaths.

Cerebro-spinal Fever.—4 cases, with 2 invalidings and 1 death, all from the Home station.

Simple Continued Fever.—707 cases, with 3 invalidings and 1 death.

Enteric Fever.—191 cases, with 33 invalidings and 25 deaths. The ratio of entries for this disease per 1,000 of strength shows a decrease of 0·82; a decrease of invalidings of 0·12, and of deaths of 0·27 as compared with the corresponding ratios for the last eight years. The opinion is expressed that these figures are very satisfactory.

Mediterranean Fever.—370 cases, with 271 invalidings and 10 deaths. The case ratio shows a decrease of 0·80 per 1,000; on the other hand, the invaliding ratio shows an increase of 0·59 and the deaths an increase of 0·03, as compared with the average ratio for the previous eight years. It is said that the Mediterranean may almost certainly be considered as the station of origin of all these cases.

Dysentery.—75 cases, with 7 invandings and 5 deaths.

Malarial Fevers.—527 cases, with 18 invalidings and 2 deaths, showing a decrease of 10·26 per 1,000 as regards cases, of 0·55 as regards invalidings, and of 0·07 as regards deaths, in comparison with the last eight years' ratio. The only station returning a ratio of cases above the average is the East Indies, other stations showing a marked reduction.

Septic Diseases.—49 cases, with 7 deaths.

Tubercle.—389, with 338 invalidings and 41 deaths. The ratios for admissions and invalidings show a slight increase, that of deaths a slight decrease as compared with the last eight years' ratio. There is, however, a considerable decrease under all these headings in comparison with 1904.

Venereal Diseases.—Total number of cases, 13,490, subdivided under the following headings: *Chancroid*, 1,174; *syphilis primary*, 2,729; *syphilis secondary*, 2,703; *gonorrhœa and its sequels*, 6,884. Primary syphilis gives 8 invalidings; secondary, 126 invalidings and 3 deaths; gonorrhœa and sequels, 75 invalidings—a total of 209 invalidings and 3 deaths. The average number of men daily ineffective from these diseases was 913·16. It is pointed out that this is the first year diseases have been tabulated under this heading; this has materially reduced the entries under primary syphilis.

Parasitic Diseases.—4,151, of which 3,934 were cases of scabies. Of other parasitic diseases there were 217 cases.

Poisons.—103. Poisoning by lead gave 34 cases and 4 invalidings; the remaining 67 were due to various poisons, 6 of which proved fatal.

Alcoholism.—188, with 2 deaths.

Rheumatism.—2,212, with 100 invalidings and 4 deaths. The ratio of cases shows a decrease of 9·51 per 1,000, and of invalidings of 0·33 per 1,000 as compared with the last eight years' ratio. The average duration was 18·96 days, and the average number of men daily ineffective from the disease was 114·92.

Gout.—141, with 8 invalidings.

New Growths.—195 of "non-maliguant" and 15 of "maliguant." Of the former 7 were invalided, and 8 of the latter proved fatal.

Diabetes.—7, with 2 deaths.

Beri-beri.—15, all from the East Indies; 7 were invalided, and 5 died.

Other General Diseases.—83, with 19 invalidings and 5 deaths. Included under this head were 4 cases of osteo-arthritis, 3 of Hodgkin's disease, 4 of purpura, 1 of haemophilia, 1 of myxœdema, 1 of splenic anæmia, and 1 of pernicious anæmia (fatal).

Local Diseases.

The following is a summary of the returns under this head:

Diseases of the Nervous System.—913, with 296 invalidings and 18 deaths. The case ratio shows a decrease of 2·43 per 1,000; the invaliding one of 0·67 and the death one of 0·08, as compared with that of the last eight years. Of the 913 cases, 92 with 1 death are classified as mental diseases.

Diseases of the Eye.—949, with 117 invalidings.

Other Organs of Special Sense.—659, with 86 invalidings and 7 deaths, all due to middle-ear disease.

Diseases of the Circulatory System.—663, with 266 invalidings and 35 deaths; the case ratio shows a decrease of 0·18 per 1,000, that of invalidings of 0·57, and that of deaths of 0·02 compared with the average ratios for the last eight years. Of the invalidings, 196 were for organic heart disease, and 31 for functional heart trouble.

Diseases of the Respiratory System.—8,577, with 126 invalidings and 67 deaths. The case ratio shows a decrease of 22·92, the invaliding ratio of 1·27, and the death ratio of 0·18 per 1,000 as compared with those for the last eight years. The steady decline of the ratios under this heading is marked and satisfactory. *Catarrh* is responsible for 6,838 cases, or 79·72 per cent. of the whole number, *bronchitis* for 527, or 6·14 per cent., and *pneumonia* for 520, or 6·06 per cent. *Phthisis* accounts for 99 cases, with 53 invalidings and 4 deaths.

Pneumonia accounts for 2 invalidings and 7 deaths, *pleurisy* for 2 invalidings and 1 death, *phthisis* for 4, and *bronchitis* for 2 invalidings.

Diseases of the Digestive System.—12,065 cases, with 273 invalidings and 30 deaths. The case ratio shows a decrease of 20·26 per 1,000 and the invaliding of 0·77, but the death ratio shows an increase of 0·04 per 1,000 as compared with the last eight years' ratios. *Sore throat and tonsilitis* account for 5,663 cases. *Diseases of the stomach and intestines* for 4,675. *Hernia* accounts for 92 final invalidings, of which number 63 refused operative treatment.

Diseases of Intestines account for 20 deaths, chiefly cases of appendicitis.

Diseases of the Lymphatic and Glandular System.—699 cases with 19 invalidings. As usual, *bubo non-venereal* accounts for the great majority—530—of the cases.

Diseases of the Urinary and Generative System.—920 cases, with 204 invalidings and 8 deaths. The ratios as regards cases, invalidings, and deaths all show a slight decrease as compared with the last eight years' ratios. All the deaths were due to *diseases of the kidneys.*

Diseases of the Organs of Locomotion.—739 cases, with 70 invalidings, are recorded. *Diseases of the joints* gave 335 cases with 22 invalidings.

Diseases of the bursæ, 174 cases.

Diseases of the Connective Tissue and Skin.—12,195 cases, with 38 invalidings and 5 deaths. The case and invaliding ratios show a decrease, the death-ratio a fractional increase in comparison with the ratios for the last eight years.

Wounds and Injuries.

A. *General.* 331 cases, with 20 invalidings and 96 deaths. The case and death ratios show a slight decrease, the invaliding ratio an increase as compared with the last eight years' ratios. The deaths under this heading were reported as under: *Burns and scalds*, 13; *heat-stroke*, 3; *multiple injuries*, 25; *suffocation from submersion*, 41; while 14 deaths were returned as the result of an accident to Submarine A 1 on the Home Station.

B. *Local.* 16,723 cases, with 118 invalidings and 19 deaths. The case ratio shows a decrease of 11.18 per 1,000, and the death ratio of 0.03, while the invaliding ratio shows an increase of 0.09 per 1,000 in comparison with the average ratios for the last eight years. *Wounds in action* account for 1 invaliding, the result of injuries received at Illig in 1904.

Suicide.

Suicide.—13 persons committed suicide during the year.

Appendix.

The Appendix contains notes on the distribution of Mediterranean fever in the fleet during 1905, with other facts relating to its etiology, by Fleet Surgeon P. W. Bassett Smith; a report of work done in the laboratory at the Royal Naval Hospital, Malta, by Surgeon H. C. Whiteside; a statistical report of Mediterranean fever cases occurring among the nursing staff and patients under treatment in hospital for other diseases during the year 1905; a paper on "physical culture" and its pitfalls, with a critical analysis of Swedish drill, by Staff Surgeon A. Gaskell, F.R.C.S.; and reports of some cases of appendicitis treated at Haulbowline, 1904 to 1906, by Fleet Surgeon J. L. Barrington.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ACTION AS TO SALE OF PRACTICE.

ON January 15th, 16th, and 17th, before Mr. Justice Lawrance and a special jury, Dr. Francis Whitaker sued Dr. C. H. W. McCullagh for £325, the balance unpaid of £650, the price of a practice sold by the plaintiff to the defendant. Mr. Hugo Young, K.C., and Mr. A. Neilson appeared for the plaintiff, and Mr. H. E. Duke, K.C., and Mr. R. W. Cracroft for the defendant.

The contract of sale contained the usual clause that the vendor would use all and every means in his power generally to secure to the purchaser the full enjoyment and benefit of the practice. This the defendant alleged the plaintiff had broken, and further alleged that he had uttered serious slanders against him in his profession, for which he claimed damages.

Evidence was given of the plaintiff having said that the defendant knew nothing of midwifery; that he did not know how to use forceps; that he was not competent to make up the most simple mixture; that he was simply a doctor by reading and books, and in no way experienced; that on one occasion he mistook scarlet fever for measles, and on another occasion when administering an anæsthetic thought the patient was dead and threw down the apparatus; and that the defendant himself was a religious maniac, and, instead of medicine, stuffed religion down his patients' throats. Some of these alleged slanders were uttered to a midwife whose patients constituted an important item in the practice sold. The plaintiff admitted saying, "If he doesn't know how to put on forceps, why didn't he tell me so, and I would have shown him."

The principal appointment of Dr. Whitaker's which Dr. McCullagh thought he ought to get was that of medical officer to St. Pelagia's Convent. After attending there some time he was requested to do so no more, on the ground of being a "proclaimed enemy of our holy religion" and "speaking against our priests." The defendant had been medical officer under the Irish Church Missions. It was argued that in the matter of this appointment particularly the plaintiff had not carried out the agreement; and further, that being a Catholic, from the moment he heard that the defendant had been connected with the Irish Church Mission, he had systematically belittled him.

The plaintiff denied having uttered slanderous words, and called evidence to explain the falling off in the practice from other causes, including (1) the defendant moving house, (2) going to live in a house formerly occupied by a doctor with a bad name, (3) a new doctor setting up near, and (4) the

inevitable falling off which accompanies a change of *personnel*.

The jury gave a verdict for the plaintiff on the claim and counterclaim. Judgement was given on January 22nd with costs, Mr. Duke's application for stay of execution being refused.

It may be pointed out that in most cases of defamation not in writing, it is necessary for the complaining party to point to particular or special damage which he has suffered as a result, but slander of a man in his profession is one of those cases in which the law will assume damage to have resulted without special proof thereof. So a doctor need not show, for example, that he has lost particular patients A., B., or C., as a result of a slander uttered of him in his profession. We may also observe that a medical man undertaking to use all and every means in his power to secure a practice to successor does not, on the sale of the practice, guarantee to his successor any appointment or patient contributing to the practice.

RECEIPT STAMPS.

A CASE recently decided in the King's Bench Division, though of direct interest to members of the Bar, is also of interest to Fellows of the Royal College of Physicians. Just as a Fellow of the College is prevented by the rules of the College from suing for his fees, so the barrister is prevented by immemorial custom from pursuing any remedy in the courts. But in the case of counsel's fees custom has robbed the transaction of another formality, namely, the giving of a receipt stamp. Although it was provided by a Stamp Act, passed in the year 1870, that a memorandum "whereby any sum of money (over £2) shall be expressed or acknowledged to have been paid," should bear a receipt stamp, this duty has never been enforced in the case of counsel's fees, although before such fees are allowed on taxation a voucher must be produced showing that they have been paid by the solicitor. In December of last year, however the Inland Revenue authorities decided to test the matter, and upon a case being stated for the opinion of the Court, Mr. Justice Bray has decided that a receipt stamp must be given in accordance with the Stamp Act, 1891, which is a virtual re-enactment of the Act of 1871. In future, therefore, all barristers receiving fees which exceed £2 must use a penny stamp. In other words, he must give a formal receipt for what is a mere voluntary payment. It would appear, then, that for the last thirty years gentlemen of the long robe have been immune from this peculiar tax on the ground that their fees are mere *honoraria*. Has the same immunity been conceded to Fellows of the College? If the Attorney-General takes some step in Parliament for the protection of himself and his learned brethren, physicians who hold themselves aloof from courts of law should also assert their right to be relieved of the trouble of giving receipt stamps.

AN UNREGISTERED PRACTITIONER.

THE Liverpool city coroner on January 7th held an inquest on the body of a child who, according to the medical evidence then tendered after *post-mortem* examination, died of convulsions during teething. It had been treated at a surgery by an unregistered practitioner, who, when the child became worse, advised that it should be taken elsewhere. This person a Mr. McKay on being asked by the coroner if he had any explanation to offer, admitted, according to the Liverpool *Evening Express*, that he was not a registered medical man and that he had been in that court before. He was not responsible for the name on the lamp at his surgery, as there had been six doctors there within two years; his own name was on the door outside, and he had paid a man 1s. 6d. to paint out the name on the lamp. He held medical degrees from the Baltimore Medical College. The coroner remarked that it did matter whether he had held himself out as a registered medical man or not, for the effect of what he did was to give people the impression that he was a duly qualified medical man. In addressing the jury, the coroner added that if the child had been attended by a duly qualified registered medical practitioner the parents would not have been put to the pain of having to attend an inquest and of knowing that a *post-mortem* examination had been made. The city had also been put to expense, and the matter tended to bring the medical profession generally into disrepute. If people went to a surgery they, of course, presumed the doctor to be duly registered and qualified and these poor people should not be led away when they took themselves or their children to a person who was apparently a registered doctor, but who turned out not to be so. The jury found that death was due to natural causes, but requested the coroner to censure the so called doctor, as they thought the public should be protected from such people. The coroner said he felt bound to say he agreed with every word the jury had said. He warned Mr. McKay against anything like this occurring again.

HEPATIC CIRRHOSIS AND LOSS OF SIGHT.

THE *Northern Daily Mail* reports that the coroner recently held an inquiry at West Hartlepool with reference to the death of a man who lost his right eye in a colliery on January 31st, 1899, owing to a piece of stone flying from the pick, whilst following his employment as a stone man. According to the report in the newspaper Dr. William Brough Arthur, in giving evidence, said that *post-mortem* examination revealed cirrhosis of the liver, possibly arising from degeneration of the heart, followed by congestion of the lungs, all following mental and physical depression due to enforced idleness resulting from the loss of eyesight. The jury returned a verdict in accordance with the medical evidence.

THE TRANSATLANTIC QUACK.

THE *Times* Book Club and the Soap Trust have been the cause of many hard things being said about American business ways, but nothing puts these in a more despicable light than the letters addressed by so-called companies carrying on a medical business in this country in the name of American quacks. One of the most repulsive of these purports to be sent by the Theo. Noel Company, Limited, dating from 29, Ludgate Hill, London, E.C., whose vice-chairman is said to be J. R. Noel, M.D., and is addressed to clergymen. The merits of the company's nostrum, called Vitae-Ore, are heralded in this style: "Is it not a fact that sickness amongst the members of your congregation is a great hindrance to your plans and work. Do you not often wish that, like the Great Physician, you could heal the body as well as minister to the soul? You may be tempted to throw this letter down, and conclude we are talking cant for business purposes. We admit we are talking business; but what is the use of preaching that Christianity is applicable to all conditions of business life, if as soon as a Christian business man refers to Divine things he is set down as a charlatan talking cant? Being Christian men, why should we not write in such a style to a Christian minister, and endeavour to secure his attention and interest along these lines?" Then follows an offer to supply gratis packets of "Nature's tonic and healer" to be paid for one month from receipt only if benefit has been derived from them, in the hope to "benefit some of these poor persons, and thus set them talking about Vitae-Ore." The writer boasts of the number of "church ministers who have availed themselves of this offer," and of "the Editors of the leading Medical and Religious newspapers" who have endorsed the claims of the company's remedy. The letter concludes with a P.S.: "We have just received a letter with order from a well-known minister in which he writes: 'I have often wished when visiting the sick that I knew of some reliable, and at least harmless, medicine to give or recommend to them. Your remedy makes me believe I have found this.'" Let us hope the remedy is harmless, but what a fool the "well-known minister" must be to go to a quack for a "harmless" remedy: his grandmother could have told him of something as "harmless" and infinitely cheaper.

The other letter is from a body calling itself the J. W. Kidd Company, and is written from Saracen Buildings, Snow Hill, London, E.C. It seems to be incorporated for the promotion of the business of a "Dr. James W. Kidd," of Fort Wayne, Indiana, U.S.A. The letter was addressed to a person suffering from Bright's disease who was tempted by a specious advertisement to apply to the London agent. In return he received first a typewritten letter from London with a free supply of a "twenty day course" of treatment said to be "a powerful general tonic and are intended to prepare your system for the special course of treatment which will be necessary to effect your cure;" and this was followed by a letter from "Dr." James W. Kidd to assure his correspondent that his case is "by no means incurable"; that it "has now been carefully examined and a complete diagnosis made"; that he is "afflicted with Kidney Trouble" but "curable," which will yield quickly to the "proper scientific treatment," given "time," a "very important factor in treating any disease." What is needed is a "complete course of treatment selected especially" by Dr. Kidd after most careful consideration of the patient's condition. This course of treatment, the patient is assured, has cured many similar cases and will cure him, but "a number of special and expensive remedies" are needed; yet these are generously included in the terms quoted—only "two guineas," said to be "very low," but offered in the hope that the patient "will send me other patients when you are cured," and so Dr. Kidd expects "to profit." The patient is urged not to allow this golden opportunity to pass, for, as Dr. Kidd remarks, "It means much more to you than to me." He has "treated hundreds of thousands of people," and has "benefited over 80 per cent.," but a few lines lower he drops from this tremendous figure to the modest assertion that he has cured hundreds "in every civilized country in the world." While these "cures seemed almost miraculous" they are really not so, but are only the result of "modern methods, skilful and careful treatment, the best remedies, close attention, and a vast unlimited experience." The final paragraph is significant, for, after asking for a remittance, he begs that the patient will fill up the blank with a description of his condition, as this will make doubly sure the diagnosis of the case, and "enable us to select the exact remedies necessary to cure you." As the patient has already been assured that his case has undergone most careful consideration, the proper remedies selected especially for him,

and only await his remittance, it may have occurred to him that it was strange to ask him to fill up the blank form again. But thus are foolish people gulled by the most transparent and clumsy pretenders, the old but always true explanation being that they desire to be deceived, and gladly swallow all statements made in a sufficiently impudent manner.

PROFESSIONAL SECRECY.

DR. WILLIAM HARDMAN (Blackpool) writes: I do not remember ever to have had a case similar to that of the now notorious signalman, but I have been placed in a position of ethical difficulty several times by such cases as those of servants, nurses, and other domestic employés suffering from venereal disease. Such a case, for instance, as a nurse girl suffering from primary syphilis, with sore throat, and mucous patches on inside of lips or mouth, where "a wet kiss" might mean syphilis to the young children under her care. Sometimes such cases consult one on their own account, and sometimes they are sent by their mistresses, who naturally ask what is the matter with them. Now, I invite an expression of opinions as to what one ought to do in such cases?

I admit candidly that I have always warned the patients of the highly contagious character of the disease, and what precautions they ought to take to avoid infection, and beyond treating them energetically I have done nothing more. I have preserved their secret and trusted to Providence. Fortunately, no harm has ever resulted in my own practice as far as I am aware, but it is decidedly risky. What is the practitioner's duty?

The case is made more difficult by the fact that sometimes, though rarely, the manifestations of venereal disease are not unequivocal, and the violation of a patient's confidence, such as would be the disclosure to her employers of the nature of her indisposition, might easily form the basis of an action for damages. Such action would be less probable in this class of cases, as sufferers would naturally not seek to publish their afflictions; but cases of syphilis arise in non-sexual ways oftener than is recognized, and such a person whose confidence was betrayed by her medical adviser would deserve double sympathy, and would undoubtedly receive it, and in a substantial form, from any British jury. This is not a nice subject, but it will bear a little discussion. It is desirable to extinguish the debatability of all these unsettled contingencies of practice.

INFECTIOUS CASES AND MIDWIFERY PRACTICE.

"HANDCUFF" asks what is the law with respect to attendance at confinements after visiting a case of puerperal fever, scarlet fever, or erysipelas. Is it illegal to do so within a stated time?

*** There is no law forbidding attendance at confinements for a stated time after visiting cases of infectious disease; but a practitioner is bound to take all precautions necessary to protect a lying-in patient from infection. What these precautions are will depend upon circumstances, but if proper care be not taken the practitioner might be found guilty of negligence.

CONTRACTS NOT TO PRACTISE.

sells his practice to B., undertaking not to practise within a certain radius within a certain time. Shortly after B. sells the practice to C. Does this, we are asked, nullify the agreement, as B. is now practising considerably outside the stipulated radius?

*** We are advised that unless the agreement was made, as it should have been, between A. and B., and B.'s assignees, it would only be an agreement between A. and B., and C. could not avail himself of it. If B. covenanted with C. to protect him from disturbance, and made himself liable to C. in event of A. breaking his undertaking, B. would be entitled to restrain A., even after leaving the practice, but this would probably not be the case if B. had ceased to have any interest in the matter.

RESTORING NAMES TO THE *MEDICAL REGISTER*.

F. D. C.—The Council is always willing to consider applications for the restoration of names to the *Medical Register*, even of those practitioners whose names have been removed for "infamous conduct in a professional respect." Such applications are received at almost every session of the Council, and in May, 1906, an application of this sort succeeded; it is reported in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL for June 2nd, 1906, page 305.

SUPERSESSION.

COURTESY.—Assuming the facts to be fully and correctly stated, A. was, we think, entitled to see the patient.

CIRCULARS TO PATIENTS.

M.R.C.S., ETC.—We do not think such a circular as is suggested would be considered advertising or contrary to professional etiquette, provided due care is taken to prevent it reaching any one not actually a bona-fide patient of our correspondent or his predecessor.

THE OBLIGATIONS OF AN ANAESTHETIST.

PRACTITIONER writes: A. and B. are neighbouring practitioners on friendly terms. B. gave chloroform for A. to the niece of a lady who was a patient of A.'s. He asks whether B. acted properly in shortly afterwards attending the lady without communicating with A.

*** We recognize the rule that it is improper for a practitioner who has been introduced to a family by assisting a colleague to take advantage of that introduction to his prejudice: and, judged by this rule, B. seems to have acted wrongly.

THE OBLIGATIONS OF A SUBSITUTE.

PINEHURST writes: Dr. A. having attended as a substitute for Dr. X. should not take over the patient as his own, but he might arrange with Dr. X. to act as his substitute until the end of the illness.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

VITAL STATISTICS IN ENGLAND AND WALES (1906).

WE are indebted to the Registrar-General for the following rates compiled and published for the convenience of medical officers of health. They have been forwarded to us by Dr. Tatham, who informs us that the table has been prepared for the quarterly return which will be issued shortly, and that the figures are subject to revision.

ENGLAND AND WALES, 1906.

Annual Birth-rates and Death-rates from the Seven Chief Epidemic Diseases.

	Annual Rates per 1,000 Living			
	Births.	Deaths from all Causes.	Deaths from Seven Chief Epidemic Diseases.	Infant Mortality: Annual Death-rate of Infants under 1 Year per 1,000 Births.
England and Wales ...	27.0	15.4	1.73	133
76 great towns	27 9	16 0	2.24	146
142 smaller towns ...	26.5	14.4	1.70	138
England and Wales less the 218 towns	26 3	15.0	1 13	115

ROYAL COMMISSION ON THE CARE AND CONTROL OF THE FEEBLE-MINDED.

MR. J. S. DAVY, C.B., Chief General Inspector and Assistant Secretary to the Local Government Board, gave evidence at a sitting of this Commission on January 14th, and drew attention to some important points in the existing administration of that part of the Poor Law concerned with the relief of lunatic paupers. Mr. Davy's evidence turned chiefly on three points: First, the growth and expenditure and the steadily-increasing proportion of the poor rate so expended; secondly, the want of classification of paupers of unsound mind; and thirdly, the want of co-ordination between the various local and central authorities. With regard to the first and second points, and after referring to the numerical and proportional increase of pauper lunacy, Mr. Davy showed that whilst workhouses had remained practically stationary since 1869, the number of lunatics chargeable to the poor rate in asylums had increased from 27,000 to 86,000, or more than threefold. At the same time the yearly cost of maintenance per head had risen from £24 14s. in 1861 to £27 1s. in 1906. This important change in the relative distribution of pauper lunatics as between workhouses and lunatic asylums in Mr. Davy's opinion has been largely affected by the four-shilling grant made to Boards of Guardians in respect of each lunatic maintained at their expense in an asylum. The effect of this grant, which he afterwards in cross-examination by Dr. Dunlop, stigmatized as wholly mischievous, had been to divert the whole increment of lunacy from workhouses to asylums, filling up the latter institutions with patients who might be treated in a cheaper form of building and resulting in an actual loss to the ratepayers whom it was instituted to benefit. The view of his department was that the grant should either be abolished or

only paid under stringent conditions as to classification. Proper classification should ensure that chronic and incurable cases, senile dements and so on were not treated in costly institutions such as county asylums. It was understood at the Local Government Board that the Lunacy Commissioners did not object to the retention of lunatics in well managed workhouses, but many of the Board's inspectors strongly protested against the association of persons of unsound mind with ordinary inmates.

Questioned by Dr. Needham as to the means of preventing the sweeping-out of workhouses into asylums of cases unable to benefit by the change, Mr. Davy advocated the adopted of the Cottage Homes Committee's recommendation as to the formation of intermediate homes for workhouse cases. With regard to the third point, the lack of co-ordination between the various local and central authorities who had to deal with lunacy administration, this appeared to the Board to involve a large amount of unnecessary expenditure. Of recent years the policy of Parliament had been to entrust to the Board the control of local loans and local finances and the supervision of local administration generally. The Board, he said, would strenuously oppose any change which would tend to diminish their power of carrying out these duties effectively.

Mr. Davy further referred in cross-examination to the unsatisfactory position as to the Metropolitan Board's Asylums and the London County Asylums; as an evidence of this he stated that in June last there were 400 empty beds in the Metropolitan Asylums, and yet at the same time the London County Asylums were crowded. In conclusion he gave it as his opinion that as the Board had to do with the classes that produced lunacy it should follow the pauper up.

MEDICAL OFFICERS OF HEALTH TO RURAL DISTRICTS.

TOWN COUNCILLOR writes: There is another side to the question which "L. M." raises as to the appointment of M.O.H., and that is that it would unduly and unwisely limit the choice of the district councillors in their selection to one man. This is evidently the point which weighed the most heavily in the mind of the Legislature. It must be pointed out that D.P.H. does not make the man; that there are other qualities besides special diplomas (which may have been obtained ten or fifteen years previously, and been sterile for that period); other candidates may have shown practical interest and knowledge in sanitary matters in their private and public life. Some such valid reason must have determined the voting, almost unanimous, in the instances mentioned, and justifies the Local Government Board in confirming the appointments.

ISOLATION HOSPITALS.

Z. Y. X. The position of superintendent of an isolation hospital is quite distinct from that of a medical officer of health. There is no regulation requiring that the two posts shall be held by the same person.

OBITUARY.

THERE has recently passed away in the person of Mr. JOHN FARMER, of Brackley, a member of the British Medical Association, a fine example of the old fashioned general practitioner. He was born at Hereford in 1824, and apprenticed to the Hereford Infirmary. Subsequently he proceeded to King's College, being admitted M.R.C.S. and L.S.A. in 1843. After several voyages as Surgeon-Superintendent under the Colonial Emigration Committee he started general practice in 1855 at Silverstone, in Northamptonshire, whence he moved in 1861 to Brackley, and practised in that town till within a year of his death, on January 16th, at the ripe age of 82. A man of unswerving rectitude, an earnest Churchman, a kindly and courteous gentleman, he was greatly esteemed in the town of which he was Mayor on two occasions, and where he had taken a prominent part in public life. His funeral was the occasion of a very remarkable and spontaneous demonstration on the part of all classes of the respect and esteem his public and private qualities had secured for his memory.

THE death occurred on January 17th at Newport, Mon., after a brief illness from pneumonia and pleurisy, of Dr. T. G. MACONOCHIE. He settled in Newport about twelve years ago and took up the practice of the late Dr. Jennings, also succeeding the latter as Medical Officer of the union, an appointment which he held till the time of his death. He was a Scotsman and a graduate of Edinburgh University, where he took the degrees of M.A. and M.B., C.M. In his student days he took a prominent interest in the life of the University, and was President of the Liberal organization. At that time he contributed to the *Edinburgh Journal*, and in later life articles from his pen were frequently accepted, particularly on medical subjects. He was a strong advocate of the open-air treatment of phthisis, and in consequence of his advice the Newport guardians decided upon Springfields as a centre for treating consumptives. He had been President of the Newport Medical Society, and was a member of the British Electro-Therapeutic Society. He was Instructor and Lecturer in Physiology for the Technical Instruction Committee, and for many years he had been one of the Honorary Surgeons of the outdoor department of Newport Hospital—an office which he held till his death. He leaves a widow, with whom much sympathy is felt.

DR. EMILE JAVAL, who died a few days ago in the 68th year of his age, was known throughout the world as an ophthalmologist. To his own countrymen he was also known as a hygienist, a politician, and a social reformer. Born in 1839, he had already begun to give special attention to diseases of the eye when the Franco-Prussian war broke out in 1870. He at once offered his services, and later continued to work as a military surgeon till the end of the war. He then went back to his chosen field of practice while at the same time he worked as a journalist in diffusing Liberal ideas. He was elected a General Councillor of the Yonne in 1875, and afterwards gained a seat in the Chamber of Deputies, where he made his mark both in the Tribune and in committees. He was a persistent advocate of reform in the hygiene of schools. Meanwhile he did not neglect his professional work. In 1885, by a sad irony of fate, he lost an eye from glaucoma, and fifteen years later he lost the other. This terrible affliction did not daunt his spirit. It was in the later period of his life that he produced his well-known work, *Entre Aveugles*, which was translated into several languages. In 1905 appeared his *Physiologie de la lecture, de l'écriture et des signes en général*, of which the first edition was exhausted in three months. He took a keen interest in many things—in Esperanto, in spelling reform, and particularly in the means of improving the condition of the blind. Dr. Javal was a member of the Académie de Médecine.

DEPUTY-SURGEON-GENERAL RICHARD CHAPMAN LOUSHOUSE, M.D., died at Harrogate on January 7th, aged [illegible]. He entered the Army Medical Department as Assistant Surgeon, July 14th, 1854, becoming Surgeon, March 9th, 1867; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, November 27th, 1879; and Honorary Deputy-Surgeon-General, on retirement, August 6th, 1884. His war record is as follows:

Crimean Campaign, 1855, including the siege and fall of Sevastopol, battle of Tchernaya, affair at Kertch (medal with clasp, and Turkish medal). Indian Mutiny, 1857-9, including the siege of Rahutghur, action of Barodia, relief of Saugor, siege and capture of Garracotta, forcing the pass of Muddenpore, battle of Betwa, siege and fall of Jhansi, action of Koonch, battle of Golowlie, capture of town and fort of Calpee, action of Morar, recapture of Gwalior, operations in Bundelcund, affairs of Carotha and Jachlone, pursuit of Tantia Topee (mentioned in dispatches, medal with clasp).

DEPUTY-INSPECTOR GENERAL ROBERT WHICHELO BEAUMONT, R.N. (retired), died at Maidstone on December 22nd, aged 78. He entered the Royal Navy as Surgeon, July 28th, 1848; became Staff Surgeon, August 26th, 18[illegible]; Fleet Surgeon, December 25th, 1869; and Deputy-Inspector General on retirement, June 6th, 1883. According to the *Royal Navy List* he served in *Castor* during a severe outbreak of dysentery at Zanzibar, 1850, also during the Kaffir war, 1850-2 (Kaffir medal); in *Naiad*, at Callao during an epidemic of yellow fever, 1853-4; in *Trincomalee* at Petropaulovski, and bloccade of Sitka, 1855, and subsequently with an expedition against Indian tribes on Vancouver's Island; in *Lapwing*, on coast of Syria during the Christian massacres and French occupation, 1859; in *Jason*, at Bermuda, during an epidemic of yellow fever, 1864; in *Constance*, at Port Royal, during an epidemic of yellow fever, 1867; and Senior Medical Officer of *Minotaur* (flag), at the occupation of Cyprus, 1878.

HOSPITAL AND DISPENSARY MANAGEMENT.

STAFFORDSHIRE COUNTY ASYLUM, CHEDDLETON, NEAR LEEK.

ON January 1st, 1905, there were 648 patients resident in this asylum, and at the end of the year there remained practically the same number—namely, 649. During the year 178 were admitted, which is a smaller number than that of any seven years since the opening of the asylum. Of the admissions, the attacks were first attacks within three months of admission in 86 and within twelve months in a further 18; in 26 the attacks were not-first attacks within twelve months of admission, and the remainder were either of more than twelve months' duration on admission (36), congenital cases (10), or not insane (2). They were classified as to the forms of mental disorder into: Mania of all kinds, 80; melancholia of all kinds, 41; dementia of all kinds, 12; general paralysis, 18; acquired epilepsy, 16; congenital or infantile defect, 9; and not insane, 2. They were divided as to recoverability by the Medical Superintendent, Dr. W. F. Menzies, into: "Persons already in a chronic state," 80, and "recoverable persons," 98, the percentage of those in whom recovery was possible being 55.05, which is a considerable improvement on the percentage of the previous year—namely, 40.48. As to the probable causes of the insanities in these cases, alcoholic intemperance was assigned in 35, or 19.6 per cent. of the total admissions; syphilis in 27, or 15.1 per cent.; periodic causes in 38; previous attacks in 31; mental stress in 47; and a heredity of insanity in 52, or 29.2 per cent. Alcohol and syphilis, therefore, were assigned as cause in 62 cases, or 34.7 per cent. of the total admissions.

Such a high percentage of cases in which the insanities were ascribed to some form of social vice is sufficiently serious, but Dr. Menzies, in his report preceding the statistical tables, gives an even higher percentage. It is true that the figures he gives in the former do not tally with those in the statistical tables; for example, the tables, as above stated, show 35 as caused by alcohol and 27 by syphilis, whereas Dr. Menzies gives 34 as caused by drink, 17 by syphilis, and 6 by both causes combined, making a total of 57, as opposed to 62 of the tables. However, to the 57 Dr. Menzies adds 37 "non-alcoholic cases influenced by heredity" (alcoholic and syphilitic heredity?), making a grand total of 94. From these Dr. Menzies deducts "alcoholic cases apparently produced by neurosis," leaving 57, or 49.4 per cent. of the total admissions for the year, as due to social vice. Last year the proportion was even higher, namely, 55.4 per cent. Thus, according to these returns during the last two years, over one-half of the cases brought to this asylum have become insane as the result of their own vicious courses. During the year, 79 were discharged as recovered, giving a recovery-rate on the admissions of 45.5 per cent., 10 as relieved, 5 as not improved, and 2 as not insane. During the year there were 81 deaths, giving a death-rate on the average numbers resident of 12 39 per cent. They were due in 23 cases to cerebro-spinal diseases, including 11 deaths from general paralysis; in 31 cases to chest diseases, including 16 deaths from phthisis pulmonalis; in 11 cases to abdominal diseases, of which were fatal cases of dysentery; in 15 cases to general diseases, and in 1 case to asphyxia by suffocation. Four inquests were held during the year, 2 of these being of some interest. One of them was a general paralytic, whose death was made the occasion of an attempt to settle the question whether a surgical operation may be made upon a patient in opposition to the wishes of the next of kin. The Commissioners held that this was justifiable in cases of imperative urgency in order to save life. The other was a patient who died from shock after amputation of the thigh. Adrenalin and eucaine were used as anaesthetics, and the question arose whether these contributed to the death. The resulting opinion was that they did not.

Dysentery and epidemic diarrhoea were present throughout the year, the female side, which was the more overcrowded, being particularly affected. In all, 26 patients were attacked by dysentery and 35 by diarrhoea. Of the 3 cases which died, only slight ulceration was found *post mortem* in 1 case, but none at all in the other 2. Dr. Menzies was unable to account for these deaths, and thought they might have been partially due to some impurity in the sulphate of magnesium employed, but analysis revealed its exceptional purity.

During the year a systematic attempt was made to determine the percentage of cases in the asylum suffering from tuberculosis, Koch's old tuberculin being used in addition to the ordinary clinical methods. Only 8.8 per cent. of the nervous cases injected failed to give a positive reaction, thus supporting the contention that nearly all the cases whose tuberculous affection comes to light in asylums have become infected prior to admission.

The asylum was commented upon most favourably by the Commissioners as to its condition and management, particular mention being made of the fact that in no case of death were bedsores present, notwithstanding the number who died from general paralysis.

THE annual chemists' exhibition organized by the *British and Colonial Druggist* will be held this year in the week beginning May 6th.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—
EDITOR, 2631, Gerrard. GENERAL SECRETARY AND MANAGER, 2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

J. B. asks for experience as to the most efficient and safe vaporiser suitable for a room about 12 ft. square.

DR. ERIC M. WILKINS (Manchester Fever Hospital) would be very glad to hear of a good candle lamp for ophthalmoscopic work. It should be portable if possible.

EXPERIMENTER asks for references to publications giving practical information of the methods of canning fish, meat, and lobster, especially the best temperatures to work with, time of exposure, number of "processes," and the relative economy of steam and the chloride of calcium bath.

STARTING A COTTAGE HOSPITAL.

T. writes: Will any member who has lately had experience advise me as to the best means of starting a cottage hospital to serve a population of about 12,000, especially giving information as to (1) cost of erection; (2) cost of maintenance; (3) cost of furnishing; (4) means of obtaining model plans.

A NERVOUS CASE FOR DIAGNOSIS.

DR. G. AINSWORTH (Farnworth, Bolton) writes: T. G., aged 58, first complained of weakness and slight stiffness in both limbs in July, 1906. He was able to walk about with difficulty after a few months, and ataxia was noticed. He could not stand on closing his eyes without swaying and falling. There was no anaesthesia of either arms or legs, but he complained of tightness round the abdomen corresponding to the girdle pain of myelitis. There was no tenderness of the spine and no prominence. Micturition and defaecation were both affected. His grip was rather weak for a man of his stature. His knee-jerks were both lost; there was no ankle clonus, and no Babinski's sign. Nystagmus was slightly present, but not Argyll-Robertson pupil. Latterly he complained of slight pains down the back of the thighs, which he takes for sciatica. There are no signs or history of specific trouble. The man has been a collier all his life, but has, owing to the weakness, had to abandon his work. He has in earlier days worked a great deal in water, and has always been temperate. The symptoms show a curious combination, and the diagnosis seems to rest between myelitis and locomotor ataxy, but the absence of Argyll-Robertson pupil and the presence of nystagmus and intention tremor makes the diagnosis uncertain. It is interesting to note that, in spite of the absence of syphilitic history or signs, the patient has improved considerably under potassium iodide, at least for a time.

ANSWERS.

AJAX.—Our correspondent's requirements would probably be supplied by H. de Méric's *Dictionnaire des Termes de Médecine (Français-Anglais).* The book is published by Baillière, Tindall, and Cox, London.

LAEVULOSE IN DIABETES.

NEMO.—According to various observers, laevulose may be given with safety to diabetics in quantities not exceeding 1 to 1½ oz. daily. The extent to which it is assimilated differs with individual patients. It is much less sweet than ordinary sugar. The most familiar preparation is that of Schering and Glatz, Berlin.

STEAM CARS FOR MEDICAL MEN.

COUNTRY MEMBER writes: The Turner-Miesse steam car is started on petrol. The troubles with it are chiefly connected with the burner, which needs great care. My experience of the car is that it needs the constant supervision of an expert engineer, and this is the experience of others to whom I have talked on the subject. It takes from fifteen to twenty minutes to get up steam, with continual attention and some hard work in pumping during this time. The petrol and paraffin reservoirs are awkwardly placed.

LOCAL ANAESTHESIA FOR EXTRACTION OF TEETH.

MR. CYRIL HOWKINS (Birmingham) writes: The probable reason why "Extracter" has not had success is because the syringe is not powerful enough. The most satisfactory one I have used—and I have used six kinds—is one known as the Imperial No. 2, which can be obtained from any dental dépôt. Great patience must be exercised in injecting, and if eucaine is used five to ten minutes must be allowed to elapse before the extraction is attempted. I have had very great success with eucaine, and use a 2 per cent. solution, with a small amount of adrenalin, and do not inject more than 1 drachm at one sitting. It must be remembered that some cases are not suitable for local anaesthesia, but as far as my statistics go I think that 90 per cent. of extractions are.

LETTERS, NOTES, Etc.

A NOSTRUM FOR DIABETES.

A CORRESPONDENT draws our attention to the advertisements of a system of treatment for diabetes which have been issued by the firm of McDonald and Co., manufacturing chemists, of 12, Albert Street, Manchester. In a letter addressed by them to an inquirer, they write "the treatment was recently discovered by a Lancashire doctor who had himself suffered from diabetes for a great number of years, and used all the recognized medical treatments without effect. His own discovery cured him entirely. The formulas have been entrusted to us, and we are manufacturing and offering the preparation to the suffering public. We have satisfied ourselves that the treatment is an absolute and permanent cure. . . . We have, therefore, every confidence in recommending it to you." These statements are supported by a batch of testimonials which are not so strong as is usual in such cases. For example, one is headed in black type, "Completely cured a gentleman and his two friends," and runs as follows: "Dear Sir,—I received the treatment yesterday. A friend of mine, a London gentleman, has told me your treatment and the Gluten Bread has (sic) completely cured him and two friends of his of sugar diabetes." The medicines supplied consist of (1) tablets, of which four are to be taken each morning, and (2) a mixture. A month's supply is forwarded for 10s. 6d., from two to four months' treatment being said to be sufficient. A booklet is also sent giving the usual directions for a diet free from carbohydrates, and enjoining the use of warm clothing, with occasional hot or Turkish baths. The tablets (1) are 5 grain tablets of aspirin, the mixture (2) is composed of unsweetened lime-juice containing 6 per cent. of free citric acid. A pink powder, described as an aperient, consists of dried sodium sulphate, flavoured with oil of peppermint, and tinted with phenolphthalein. These remedies are not new, and we do not see why they should give better results when supplied by Messrs. McDonald and Co. than when ordered in the usual way by the medical profession, unless we attribute something to the suggestive power of bold assertions and public advertisement.

FASHION IN MEDICINE.

DR. STUART TILLEY of Montreux has addressed to us a long letter in reference to that from Dr. D. W. Samways published in the BRITISH MEDICAL JOURNAL of January 12th. Dr. Tilley says that the Riviera is not peculiar among Continental resorts in suffering from a relative desertion by British invalids, he attributes this change to many concomitant factors, prominent among which is the attitude of the public towards the tuberculous patient, in deference to which the hotel-keeper has closed his doors against him. The future, Dr. Tilley considers, will depend in a great measure on the manner in which hotel interests are affected by the present abrupt change. He points out that it must result in the loss to the hotels not only of the invalids themselves but of those relatives or friends who are led to visit the place owing to the presence of the invalids, and he estimates that every pulmonary patient resident in a hotel provides that hotel throughout his sojourn with two additional healthy visitors.

A REMEDY FOR HOSPITAL ABUSE.

DR. [illegible] Pope (Liverpool, Queen Victoria Hospital for Women) writes: There is one system by which hospital abuse can be prevented and that is to refuse to see any patients at the hospitals unless they are certified to be in need of charity. A certificate to this effect should be signed by a local practitioner or a local minister of religion who lives in the patient's district and knows their style of living and social position. The certificate could be so worded that it would necessitate adequate investigation. We must as a liberal profession recognize the right of the public to have an independent opinion, and for that reason only the signature of a minister of religion would be accepted, but in all such cases the hospital physician or surgeon should communicate with the local practitioner. At present the almoner is almost useless, and also expensive. The patients who would cheat us of our fees would also lie about their means. It is practically impossible for any almoner to make local inquiries about twenty to fifty patients in one day, living in different neighbourhoods. The remedy is entirely in our own hands. If the majority of us agree to do this, and refuse to see any patients without a certificate, the minority would have to come into the fold, and we should stop hospital abuse at once. Let the British Medical Association concentrate its energy on this one point, and leave out all side-issues and extraneous ideas, and the reform will soon be carried out.

CONDITIONS OF PRACTICE IN TROPICAL AND SUBTROPICAL COUNTRIES.

AXE GRINDER writes: In the Student's Number of the BRITISH MEDICAL JOURNAL of September 1st, 1906, on p. 51, with reference to Tropical Medicine, is said that "the importance of the subject has been grasped alike by the medical profession, by commercial firms engaged in tropical enterprise, and by local and home governments," but no mention is made of the conditions of life and work pertaining thereto. I venture to suggest that valuable and interesting information can be obtained, if medical men practising in the tropics (and subtropics) will be good enough to publish their experiences, and state whether they have done better physically and financially by going there, instead of remaining at home. Many students are apt too long to regard the possession of a medical qualification as the end, instead of the beginning of life's work, and the experience of others should be helpful to prevent some of them embarking on a career which might prove to be unsuitable or distasteful. Having had some years' experience of "commercial firms" and "merchant princes," I have found that the number of billets at their disposal is comparatively few, and most of them are not decently paid, or are unsatisfactory in other respects. In many cases an applicant for an appointment receives insufficient, inaccurate, and in some instances misleading, information as to the climate, rainfall, duties, amount of work, mileage, state of roads, number of horses needed, cost of living and horsekeep, upon which a one-sided agreement is entered into. It is not uncommon after catching a medical man to try to force extra work on him without extra payment. The question of a suitable residence (and other buildings) for him is the last consideration of the employer, in some cases there is not one, and when there is it is generally the worst in the district, incommodious, and sometimes at an unsuitable spot for the most satisfactory performance of his duties; repairs are either totally neglected or carried out grudgingly and parsimoniously after interminable wrangling and delays. A good digestion and sound health in a reasonable climate are the best assets of life.

SALARIES OF LADY ASSISTANT M.O.H.

MRS. MARY HAMILTON WILLIAMS, M.B., B.S.Lond. (Ombersley, Droitwich), writes: In the BRITISH MEDICAL JOURNAL of January 19th an advertisement appeared for two lady assistant M.O.H.'s for the borough of Huddersfield, at a salary of £105 per annum. It was not stated whether it was a whole time appointment. I have now been informed that it is whole time, and the salary is the same as that now paid to the nurses acting as lady health visitors in many parts of the country. For qualified medical practitioners to accept this salary is to admit that, from a financial point of view, their whole expenditure on education was wasted; and from another point of view is to encourage the rankest sweating, and to further reduce the remuneration in a profession that is already underpaid.

A DEATH-BED ADVERTISEMENT.

IN a recent issue of the *St. James's Gazette* the following paragraph appeared. "Lady ——, who last year was very ill is now much better. She was for some time under the care of Dr. Doyen of Paris, and speaks most highly of his treatment." A day or two later the name of Lady [illegible] appeared in the obituary column of the *Times*. The poor lady might have said, with Alexander Pope, that she was dying of favourable symptoms. But even a dying patient has a chance for the cancer cure, for he continues to "get better to the very last.

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SOME POINTS IN THE DIAGNOSIS AND TREATMENT OF LARYNGEAL CANCER.

Being an Introduction to a Discussion held in the Medical Society on January 28th, 1907.

By SIR FELIX SEMON, K.C.V.O.,

physician extraordinary to his majesty the king.

Mr. President and Gentlemen,—When in 1881, on the occasion of the International Medical Congress of London, a discussion took place in the Subsection for Laryngology on Malignant Disease of the Larynx,[1] the outlook with regard to the treatment of this formidable disease appeared very dark indeed. Intralaryngeal operation had been universally abandoned on account of its want of success; thyrotomy had been completely given up after the anathema pronounced upon this operation for the cure of malignant disease of the larynx three years previously by Professor Paul von Bruns,[2] and the results of partial and of total extirpation of the larynx—operations then only recently introduced—had so far been anything but encouraging.

To-day, just about a quarter of a century after that discussion, I shall be able to unfold a very different tale before you. If, in accordance with the now general custom, we divide all cases of cancer of the larynx into two large groups—the extrinsic, which comprises those cases in which the disease starts from the epiglottis, the aryepiglottic folds, or the oesophageal aspect of the larynx, and the intrinsic, amongst which are included the cancers originating within the laryngeal cavity proper—it will be seen that nowadays the latter category, if only early enough diagnosed and thoroughly operated upon, gives a better chance for recovery and freedom from recurrence than cancer in almost any other part of the body, whilst the extrinsic variety, although vastly different from the intrinsic with regard to the extent of the operation, the mortality from the surgical interference itself, the prospect of recurrence, and the amenity of life afterwards, still shows distinct progress over the results obtained twenty-five years ago.

In a paper merely intended to serve as an introduction to a discussion it will, of course, be quite impossible to travel over the whole vast field of cancer of the larynx and to do full justice to the work of all those who have helped to bring about a better state of things. To-night I merely conceive it to be my duty to take stock, as it were, of the present state of the question and to dwell more particularly on some points concerning the diagnosis and treatment of cancer of the larynx on which no consensus of opinion has yet been obtained.[3]

Let me briefly repeat, then, what I stated in 1897,[4] and what has recently been acknowledged by Professor Paul von Bruns,[5] namely, that the improved state of matters is not so much due to the progress of our surgical technique, great and undeniable as this has been, as to the progress made with regard to the early diagnosis of malignant disease of the larynx.

If any one will take the trouble to look up the chapters devoted to cancer of the larynx in the textbooks of medicine, surgery, and laryngology published prior to 1888, he will find that the information given with regard to the symptomatology and the laryngoscopic signs of the early stages of malignant disease is extremely scanty, often inaccurate, and in not a few instances obviously more the result of theoretical construction than of actual observation. When, during the illness of the then German Crown Prince, the deplorable doctrine was promulgated that benign growths of the larynx showed a special proclivity to malignant degeneration after intralaryngeal instrumentation, I devoted, in the collective investigation which demolished that doctrine,[6] a special chapter to the description of the early signs of malignant disease of the larynx. It is the less necessary for me to enumerate these signs to-night, as after a period of initial doubt and scepticism they are now generally acknowledged to be true and trustworthy, and have found their way into practically all modern textbooks. There is, however, one of them, the most important one, which has, as I know from practical experience, given rise to an equally curious and serious misunderstanding, which ought to be corrected on an occasion of this character.

Amongst other laryngoscopic signs which ought already at an early period of the existence of the new growth to draw attention to the possibility of its being malignant, I stated that none was more important than defective mobility of the affected vocal cord. This defective mobility, I particularly emphasized, manifested itself in some cases early, in others at a later period. Although this description seems plain and unambiguous enough, the curious misconception has arisen in some quarters that if this sign was absent in an otherwise suspicious new growth, the contingency of malignancy could be excluded. It seems hardly necessary to say that this inversion of my statement is absolutely inadmissible. Nowadays one gets to see a good many cases of laryngeal cancer at a very early stage—that is, when an otherwise inexplicable hoarseness forms the only noticeable symptom, and at that time the infiltration of the mother soil need not be advanced enough to cause troubles of mobility; and, secondly, seeing that in the larynx, as in any other part of the body, some cancers for a long time are of a more surface character than others, and begin to infiltrate the tissue from which they spring only at a comparatively late period, it is, of course, quite inadmissible to exclude malignancy in an otherwise suspected laryngeal growth for no other reason than that the affected cord showed no signs of defective mobility when the case came under observation. However, to prevent any further misunderstanding, I now wish to formulate the rule as follows:

"If the vocal cord from which a suspected laryngeal growth springs shows at an early period of the disease a defect of mobility other than due to mechanical impaction of the growth in the glottis on phonation, this sign is almost pathognomonic for the malignant character of the tumour. If, however, this sign should yet be absent when the case comes under observation, such negative evidence does by no means exclude possible malignancy."

It will have been observed that in the last sentence I stated that the presence of the defective mobility under such circumstances was "almost" pathognomonic. It is with good reason I express myself thus cautiously. For it must be sorrowfully admitted that, whilst the signs stated by me in 1888, which so far as I know practically form the last word upon the question of early laryngoscopic diagnosis, will be found sufficient in the very large majority of cases to arrive at an early time at the correct diagnosis of malignant disease, they by no means do so invariably.

In fact, Mr. Butlin's dictum, pronounced about twelve years ago—[7]

> There are three classes of cases: the first in which any one and every one can make the diagnosis; the second, in which only the better instructed and more experienced make it, and others do not; and the third class, in which the conditions are so obscure that no one can make the diagnosis unless the larynx is opened, and in some of which it is even then difficult to make sure of the nature of the disease—

is as true to-day as when it was first enunciated. It is not only benign growths, tuberculous and syphilitic tumours and ulceration, perichondritis from different causes, the differential diagnosis between which and malignant disease of the larynx is occasionally excessively difficult or even almost impossible by mere naked-eye inspection, but there are some weird and outlandish conditions, which may simulate cancer or sarcoma, which are not described in any textbook, and which really cannot be expected to come within the thoughts of the observer. Thus I have described a case in which a globular blood clot completely enveloped what ultimately turned out to be an epithelioma; in another case seen with Mr. Butlin the tumour was found to be a leucoma instead of the suspected epithelioma; in a third instance seen with the same experienced observer an effusion of blood into a vocal cord closely simulated the appearances of malignant disease. In a case demonstrated before the Laryngological Society[8] not only the laryngeal tumefaction but also the general infiltration of the cervical lymphatics, which by four experienced observers had been considered as malignant, spontaneously disappeared after simply tracheotomy. In yet another case, which I repeatedly demonstrated before the Laryngological Society of London,[9] an obscure chronic

ulceration occupying almost the whole left vocal cord of a gentleman aged 60, which had been suspected to be either tuberculous or malignant, and concerning the nature of which the views at the meeting of the Society considerably differed, ultimately disappeared spontaneously after having been in existence for two years; and to-night again I have to bring before you another extremely obscure case of laryngeal tumefaction—the second of the kind in my experience—in a recent thyrotomy case of mine, which I regret to say ended fatally on the day after the operation from acute oedema of the lungs.

The naked-eye appearances of the tumour, which from its smooth surface was not suitable for the removal of a fragment for microscopic examination, neither on laryngoscopic examination nor when the larynx had been opened, left the least doubt in the minds of those present at the radical operation (Dr. Watson Williams, Mr. Stabb, Mr. Tyrrell, a medical friend of the patient's, and myself) as to the malignant nature of the growth, particularly since the left half of the larynx was almost completely fixed. Yet when the specimen had been forwarded to Mr. Shattock I received to my greatest surprise a report from him in which he stated that there was no carcinoma nor other form of malignant growth, but merely small celled infiltration of the mucosa, nowhere extending into muscle or even to the glands, which were very numerous in one piece. The glands in all three pieces were quite normal, as was the tissue in which they lay; so was the muscle. A papillary upgrowth was present in a few spots, but there was no indication in any of the processes of malignancy. Tuberculosis could also be excluded. Here and there there was a small area of necrosis in the inflammatory tissue of the mucosa. Mr. Shattock therefore supposed that the whole disease was a chronic inflammation attended with swelling and some papillary upgrowth, and due to some infective process of no particular specific kind.

On my observing that the description thus given did not account in my humble opinion for the clinical appearances and course of the disease, there having been a very distinct tumour projecting into the interior of the larynx with a mammillated surface, and slight ulceration on various parts, causing not only complete aphonia, but also pain shooting into the ears, Mr. Shattock suggested that the growth might have been at first a simple papilloma, which had run an unusual course; that without being malignant it had become the seat of an infective process; that this had in turn been followed by ulceration and swelling, which had exaggerated the clinical signs of a tumour swelling, and led to the fixation of the parts.

I can, of course, not say that this suggestion might not correspond to the actual facts of the case, but seeing our complete want of knowledge of the existence of such processes in the larynx as those sketched by him in this and in my previous case, I frankly confess that the explanation does not seem very satisfactory, and I shall be very much interested to hear whether any of those present are able, after inspection of the specimen here shown under the microscope to shed some light on the subject.

Cases like the seven just mentioned of course reopen the vexed and perennial question of the value of the microscopic examination previous to radical operation of intralaryngeally removed fragments of the suspected tumour. The elder generation will remember how fiercely that question was debated about twenty years ago on the occasion of the fatal illness of the late German Emperor. The views then expressed diametrically differed. In the opinion of some clinical and naked eye observation was like nothing compared with the evidence gained by an expert's microscopic examination. The other side looked almost with contempt upon the help of the microscope, and stated that it was only in exceptional cases that it was of any use.

When the sad case was over I endeavoured to strike the balance between these conflicting views and summarized the results of the collective experience of the then most prominent laryngologists of the world in the following conclusions:

Microscopic investigation of intralaryngeally removed fragments is always of great importance, and is a valuable but not infallible help in clinical diagnosis. It ought to be used in all cases in which it is practicable. This is by no means always the case, because as in cases of cancerous infiltrating extension a special removal of fragments is impossible. If such a removal is available one must never forget: (1) that it may not always certainly be possible by examination to find specific elements of any definite form of tumour, (2) that even when the microscopic findings clearly establish the existence of a malignant growth, its results must be kept in close touch with the clinical form of new growth. This is particularly important in cases in which the tumour is clinically suspicious and in which the microscopic appearance proves its benignancy. But the reverse is also possible, as shown by a case of Schmiegelow's. It will, therefore, be always desirable to transfer the microscopic examination, if it be possible, to an expert pathologist. The pathologist, however, can only give an opinion on the fragment submitted to him, and not on the disease itself from which the patient suffers, except when he finds in this fragment *positive* characteristics of malignant new growth. Examination must not be limited to the investigation of one single section, but must be extended over the whole fragment, which accordingly has to be cut up into sections, unless already previously the diagnosis of malignancy can be established with certainty. If necessary, cautious intralaryngeal removal and microscopic investigation of fragments of suspected growth must be repeated several times, unless meanwhile *clinical symptoms which are incompatible with our present knowledge of the symptomatology of benign growths establish with certainty the malignant character of the suspected growth.* In such cases radical operation, if otherwise indicated, is *not* to be postponed until the diagnosis has been confirmed by the microscope.

This proposition, I think I may venture to say, met with general acceptance, and is, I believe, up to the present moment followed by most of those whose work brings them in contact with cancer of the larynx. But it has not been allowed to pass unchallenged. Some years ago Dr. John N. Mackenzie of Baltimore passionately opposed the probatory intralaryngeal removal of suspicious laryngeal growths for the purposes of microscopic examination.[11] In his opinion such removal "subjects the patient at once to the dangers of autoinfection at the point of incision and to metastasis elsewhere; it stimulates the local growth of cancer, and the method is often inconclusive, sometimes misleading, and practically impossible."

I have fully answered, and I think refuted, Dr. Mackenzie's contentions some years ago,[12] and would not have returned to the point now were it not for a surprising statement recently made in the excellent paper read by Dr. Chevalier Jackson[13] at last year's meeting of the British Medical Association at Toronto. He says:

> Of twenty cases of malignant disease operated upon by me, negative preliminary microscopical reports of removed fragments were made in fourteen. That this was due not to the pathologist's error but to the inadequate specimens goes without saying. In each of the fourteen cases, operation, in the face of the microscopist's negative report, was advised, on the strength of the age of the patient and laryngoscopic appearances, coupled with failure of benefit from mercurial inunctions and 180 gr. daily of potassium iodide continued for three weeks.

I confess that this statement amazes me. To judge from my own experience Dr. Jackson has certainly been exceptionally unfortunate. If in my own practice from whatever cause I had found the microscopist's report at fault in anything like a proportion such as 14 out of 20 cases, I have no hesitation in stating that I should have long since joined Dr John Mackenzie, and instead of recommending microscopic examination of intralaryngeally-removed fragments as a valuable, though by no means infallible method, have rejected it not only as inconclusive, but, what is much more important, as directly misleading. But my own experience has been widely different. Whilst again fully admitting that in a large percentage of the cases in question it is impossible, without unduly irritating the new growth, to intralaryngeally remove a piece for microscopic examination sufficiently large to enable the microscopist to arrive at a reliable conclusion; and whilst further admitting, as I have done in the above-quoted rule, that the piece removed may in a good many instances not show characteristic evidence of malignant disease, I can remember but one case within my own practice in which the microscopic examination yielded directly misleading results. This was the case of the late Mr. Montagu Williams, which I fully described in the *Clinical Society's Transactions*[14] and in which the microscopic examination of the first fragment seemed to show that we had to deal with an innocent papilloma. But the mistake was corrected already five days afterwards, when examination of the second fragment gave definite evidence of the existence of epithelioma.

In many cases of my own, on the other hand, the microscopic examination of an intralaryngeally removed piece of the new growth has not merely fully corroborated the clinical diagnosis, but has materially strengthened my hands in proposing immediate thorough

peration. I therefore see no reason to withdraw from he attitude I recommended in 1888.

Two points, however, demand a moment's consideration t this juncture. In the first place, after two positive xperiences of Dr. David Newman of Glasgow,[15] fears ere expressed twenty-two years ago lest the probatory ntralaryngeal removal of a piece of growth might hasten he local progress, and lead to infection of the cervical lands. Dr. John Mackenzie has more recently reiterated his fear in lurid colours, and now I find that Dr. Chevalier ackson also expresses his conviction that we subject our atient to some risk in the removal of a specimen "a week r more" before radical operation. In reply to this I enture to say that, with our perfected microscopic ethods, no week or more need elapse before we receive he verdict of the microscopist; and whilst quite agreeing hat the local growth of cancer may be stimulated by local nterference, I cannot from my own experience bring yself to believe that the few days which must elapse etween the intralaryngeal removal and the report of the icroscopist are likely to bring about any important eterioration of the local conditions, whilst the fear of cal autoinfection of previously healthy parts in the rynx or of metastasis elsewhere certainly is equally ttle justified by practical experience gained hitherto.

In saying this it is presumed, of course, first that the tralaryngeal removal of a fragment is always to be rried out by expert hands, and that undue irritation of e growth and unintentional wounding of previously althy parts are being avoided, and, further, that the le laid down by Dr. Newman twenty years ago is strictly hered to—namely, that the probatory intralaryngeal moval of a part of a suspected growth ought only to be dertaken after the patient has formally consented to mediate radical operation in the event of the microscope oving the malignancy of the tumour. Both these eliminary conditions are most essential.

The second point on which I wish to speak in connexion th this question is one of much greater practical dif- ulty than the one just mentioned. Supposing that one d to deal with a suspicious growth, situated either near e anterior commissure and threatening to invade the ier side of the larynx, or, worse still, situated near arytenoid cartilage, in dangerous proximity to the sterior wall of the larynx, and supposing, further, that microscopic evidence after examination of an intra- yngeally-removed fragment was of a negative character, at ought one to do? In accordance with my own rule oted above most operators nowadays would, I think, vertheless proceed at once to radical operation, con- ering it the smaller evil of the two to perform a rotomy, where such was possibly not required, than wait too long and thereby to expose their patients ner to the removal of both vocal cords, with subse- nt complete loss of voice for the rest of their lives— nely, if the suspected growth in the anterior com- ssure should after all have turned out malignant, and uld meanwhile have passed over to the as yet healthy er vocal cord; or, worse still, to total extirpation of larynx—namely, if the growth, which ultimately ved to be malignant, had passed on to the posterior l of the larynx.

gainst this practice, however, it may be argued—not hout some show of reason—that it was hardly fair to il oneself of the testimony of the microscope if it ke in favour of one's own contentions, and to brush it le if it differed from them.

loreover, if after all the growth should prove to be ocent when removed by thyrotomy and microscopic mination of its whole structure, the surgeon would loubtedly have exposed himself to the accusation that ad not only performed an unnecessary operation, but . he had done so in the face of the evidence of the roscope.

upposing, on the other hand, that he had removed a growth on the strength of naked-eye examination , and that subsequent microscopic examination had ved it to be benign, he would not only have laid him- open to the first part of the same reproach—namely, . he had performed an unnecessary operation; but he ht be charged, and, indeed, very likely would be, with ng omitted an important method of investigation re undertaking a more or less serious operation.

upposing, finally, that, strong as his clinical appre- hensions were, he had yielded to the negative evidence of the microscopic examination of an intralaryngeally-removed fragment, and had waited too long for confirmatory evidence, he certainly when in the course of events the growth turned out to be malignant after all, and now too much advanced to be dealt with by simple thyrotomy, would have to reproach himself that he had not had the courage of his opinions, and had thereby exposed his patient to the risks of a much bigger mutilating operation, the final results of which are not nearly so satisfactory as those of thyrotomy.

You see, gentlemen, from my enumerating these contingencies, that whatever course you may follow there are drawbacks attached to each of them, and that whatever you may do or may not do you are apt to expose yourself, whilst acting with the best of intentions, to serious recriminations.

Nor must you believe that the contingencies I have just enumerated are merely theoretical, and not likely to come within range of practical politics. Twice within recent years have I myself experienced their unpleasant reality, and the irony of fate has willed it that fault should have been found with me for diametrically opposite reasons. In the first case, which I communicated so far as it was then in existence at the meeting of the British Medical Association at Swansea,[16] I was denounced because, firmly convinced as I was that the histologist's favourable report of a growth removed by thyrotomy was erroneous, I had in order to spare the patient harassing doubts given an evasive answer to his question anent the microscopic finding.* The second case was that of a subglottic, apparently malignant, rounded smooth tumefaction, from which it would have been impossible to remove intralaryngeally a fragment sufficiently large for microscopic examination without causing severe local irritation. After the performance of thyrotomy it was found that the tumefaction was due to an obscure infective inflammation. I, of course, informed the patient of this fact. The result has been, I am told, that I am now accused of having performed a perfectly unnecessary operation!

Whilst there are thus great and undeniable difficulties, the course one ought to follow seems to me clear enough.

Seeing the fact that errors in diagnosis are occasionally made by those who have had the largest experience, and this sometimes even in cases in which there did not appear to be any particular diagnostic difficulties, I think it is our plain duty not to omit the employment, whenever possible, of *any* recognized method that may be helpful in securing the diagnosis. Such a method certainly is the microscopic examination of intralaryngeally-removed fragments, provided that it is not approached with an exaggerated sense of its infallibility. Considering the fortuitous character of the intralaryngeal removal, and the fact that neoplasms are not by any means always uniform in their structure, the result of the examination may certainly be inconclusive, and sometimes even directly misleading. In addition it must not be overlooked that the interpretation of the appearances seen in a microscopic slide is, after all, a matter of individual judgement, and liable in not a few cases to the same errors to which clinical examination is exposed. In proof of this I need only remind you that often enough the opinions of various microscopists to whom one and the same slide is submitted, diametrically differ from one another. The patient ought, therefore, to be in all cases given a brief and fully intelligible explanation of the state of matters, and ought to be plainly told that the evidence of the microscope was only conclusive if proof of a distinctly malignant histological type, such as squamous carcinoma, was found; but that if the evidence were negative this did not by any means dispose of the clinical fears which were entertained in his case. It

*The further history of this case is as curious as was its beginning. The patient after leaving me put himself under the care of Dr. Greville MacDonald, who has kindly informed me that he removed with forceps large masses of the recurrent growth. This was pronounced by Mr. Shattock, who had declared the original growth an innocent papilloma, to be a papilloma in which a carcinomatous change was beginning. Mr. Watson Cheyne, however, to whom the microscopic preparations were also submitted, considered the diagnosis of carcinoma not proven. The patient then for a time refused to submit to any further treatment. Ultimately Mr. Cheyne had to perform tracheotomy in a great hurry, because the growth nearly filled the larynx and almost choked the patient. The tracheotomy was followed by another thyrotomy, also performed by Mr. Cheyne last March. Neither macroscopically nor microscopically was any evidence of malignancy found. Since then no recurrence seems appears to have taken place.

ought also, as already mentioned, to be made a *sine qua non* that in the event of the microscopic examination corroborating the clinical fears, the patient should consent to immediate radical operation.

Such a course in those cases in which the probatory removal of a fragment is possible at all without gravely irritating the growth—which is, I repeat, in a large proportion of cases coming under observation not possible—will satisfy the surgeon's conscience, and will protect him against unjustified recriminations made afterwards with regard to his mode of procedure. In not a few instances, to conclude from my own experience, the patient will, after such an explanation, declare himself satisfied with the clinical evidence, particularly if a second independent opinion should have been taken and should have agreed with that of the first adviser. Anyhow, it will not be possible for the operator to be charged with the omission of the employment of a valuable diagnostic method of which he should have availed himself.

Such is my present attitude in this truly important question, and I shall look forward with great interest to the opinions thereon which will no doubt be expressed in the subsequent discussion.

With this hope I leave the question of diagnosis and come to that of therapeutics. During recent years attempts have been made to combat laryngeal cancer by other means than surgical, and such widely different methods as injections of a preparation of the *Bacillus neoformans* (Doyen), the *x* rays, and trypsin injections have been laid under contribution for that purpose.

The injections with Doyen's serum, which Dr. Scanes Spicer has recently employed in several cases of malignant disease of the throat, mouth, and larynx,[17] appear in that observer's opinion to favourably modify the symptoms and apparently retard the progress in certain instances, without, however, effecting a cure, whilst in other cases no benefit was received. Scheppegrell[18] states that in a case of laryngeal cancer treated by himself with the *x* rays a cure was obtained. In this case, however, it is not stated that a histological examination of the growth has been made, and it is therefore impossible to say whether the growth was really of a cancerous character. One isolated cure is claimed in a case treated with trypsin injections by Dr. Clarence Rice,[19] although the author is careful to state in the subtitle of his paper that the case thus treated was "supposed" to be carcinoma.

In the interest of our patients it seems but right to express a hope that the further study of the alleged influence of trypsin upon the cancerous process will be allowed to remain in the hands of the medical profession instead of such uncertain cases being sensationally claimed—as Clarence Rice's has been—as "cancer of the larynx cured by trypsin." We shall all most heartily welcome any method by which the scourge of cancer may be successfully combated otherwise than by operation, but the millennium has not yet come to pass, and there cannot be the slightest doubt that at the present moment our only justifiable hope of curing the disease in any given case consists in the growth being eradicated by surgical means at the time when it is still purely local.

Of the operations which come into question for that purpose I shall more particularly dwell upon thyrotomy and total extirpation of the larynx, whilst the intralaryngeal method, subhyoid pharyngotomy, and partial extirpation will on this occasion be dismissed with very few words.

With regard to the intralaryngeal method, instead of repeating the arguments which I have on many occasions brought forward against it, I prefer telling you what has quite recently been stated on this point by a man equally distinguished as a general surgeon and as a laryngologist, Professor Paul von Bruns of Tübingen. He says:

> The intralaryngeal operation is recommended by some laryngologists [illegible] Bruns] keeps as the least dangerous interference with regard to life and voice in suitable cases of malignant disease situated in accessible positions. Baginsky quite recently goes so far as to state that the external operation is not to be employed "in the majority of laryngeal cancers." If Bruns has collected from his own practice and that of others a number of cases in which after laryngoscopic operation the cure has lasted at least the triennium generally accepted for carcinoma. Thus it is true the possibility of cure by the intralaryngeal method has been proven, but this is an extremely rare exception which demands the concurrence of numerous favourable circumstances, for the large number of unsuccessful attempts is of course nowhere registered. By such attempts, however, a more rapid growth of the neoplasm may be promoted, a favourable time for external operation missed, and its chances materially deteriorated. From this point of view, which is shared by well-known laryngologists such as Schrötter, O. Chiari, Moure, and Semon, I consider the employment of the intralaryngeal method in laryngeal carcinoma as insufficient, and one to be rejected, because, as a rule it only damages the patient. I have seen sad examples of this. Kocher point-blank declares that intralaryngeal attempts at operation in suspicious laryngeal tumours are "faults of art."

With this opinion I thoroughly agree.

The next operation to be considered is thyrotomy, of which it may truly be said that not only men and books but also operations have their fates. At first employed in unsuitable, because much too far advanced, cases; then as a natural consequence, rejected and absolutely condemned; then remaining in abeyance for a number of years; then resuscitated through the perspicuity and courage of Mr. Butlin; then quickly gaining the upper hand in this country, and justly considered as the standard operation for early cases of intrinsic laryngeal cancer, whilst still, with few exceptions, looked at askance by surgeons and specialists abroad; and only quite recently and slowly gaining its proper position on the European Continent and in the United States—such has been in briefest possible outline the history of thyrotomy during the last quarter of a century. Even now I regret to say that I learn from a paper read only last spring at the meeting of the South German laryngologists at Heidelberg that, "in order to obtain a lasting cure," number of German surgeons remove the whole larynx even in unilateral cancer of the larynx and reject thyrotomy for cancerous new growth as an "insufficient interference."

It is an ungrateful and, indeed, impossible task to convince people who will not be convinced; and, with regard to such, one's only consolation is that truth will prevail over their theoretical objections. Those, however, who approach this, as other questions, without bias will, I venture to hope, be convinced of the efficiency and sufficiency of thyrotomy by the following facts derived from my own personal experiences:

From October 10th, 1878, until December 31st, 1906 I have seen in private practice 212 cases of malignant disease of the larynx. Of these, 136 were intrinsic and 76 extrinsic or mixed. No less than 177 occurred in men and 35 only in women. Of the latter, again, in 12 cases only was the disease situated inside the larynx, whilst in 23 it was extrinsic, occupying in 18 cases the pharyngeal aspect of the cricoid cartilage.

I have already, in 1894, drawn attention to the startling proportions, which have not changed in my subsequent experiences; and I need not repeat what I said on that occasion, except that the question of the disparity between the sexes and of the localization of the disease in women certainly deserves serious consideration on the part of those engaged in the study of the etiology of cancer. Apart from the bare facts just mentioned I regret that my own experience does not assist in elucidating these mysteries. Neither syphilis, nor abuse of alcohol or tobacco, nor hereditary taint, nor excessive voice use could be accused in the large majority of my male patients as having played a rôle in the production of the disease. It remains equally inexplicable why in a series the proportion of extrinsic and intrinsic cases should have been practically the reverse in the two sexes, there having been 124 of intrinsic and 53 extrinsic in men, against 12 cases of intrinsic and 23 of extrinsic in women.

My experience since 1894 with regard to age again confirms my statement made in that year, namely, that the thirty years of life between 40 and 70 furnish the overwhelming majority of all cases of malignant disease of the larynx coming under observation, but I have seen in the twelve years past since then more cases occurring in the decade between 60 and 70 than in that between 50 and 60. Three patients seen between 1894 and 1906 were 80 years of age, none were younger than 30.

Whilst I have thus seen 136 cases of intrinsic laryngeal cancer, I have only performed thyrotomy—which is, in my opinion, *the* operation for this class of cases—in 55 cases of real or supposed malignant disease of the larynx. No conclusion must, however, be drawn from

hese numbers as to the proportion of cases of intrinsic aryngeal cancer suitable for thyrotomy. First of all, a arge proportion of these cases were sent to me before hyrotomy had been reintroduced by Mr. Butlin; secondly, very considerable number of my cases only came under bservation in the course of consultations with other urgeons and specialists, who wished to have my opinion s to diagnosis and operation, and who, when these uestions had been settled in favour of operative inter-erence, performed the latter themselves. In the light of ıy present experience, I should certainly say that in *all* ases of cancer, still limited to the interior of the larynx, not o extensive, not too near the posterior wall, not yet infil-ating the laryngeal cartilages, thyrotomy ought to be erformed unless there are urgent contraindications ising out of the general health of the patient. Advanced ge is in itself by no means a contraindication if the atient is otherwise vigorous and free from serious ganic complications. I have in nine cases performed yrotomy in men between 60 and 70, and in three in men er 70 with excellent results, and my very last case is at of a gentleman, aged 75, who nine days after yrotomy for epithelioma of the larynx left the home in e best of health.

On the other hand, general debility, chronic bronchitis, vanced Bright's disease, diabetes, and similar serious ganic mischief, of course gravely affect the prognosis.

Out of my 34 thyrotomies—in one of them the operation d to be repeated almost immediately after the first eration—undertaken in 33 cases for what seemed to be rtain or very probable malignant disease of the larynx, 8 the diagnosis was shown either to have been at fault remained doubtful. Twice the disease turned out to ve been tuberculous. Twice the tumefaction was stated Mr. Shattock to have been of the nature of an infective lammation. In 2 cases the diagnosis remained doubtful ween fibro-sarcoma and innocent growth. In one case, eady referred to in this paper, it is, in my opinion, still ite an open question whether the disease is of an theliomatous or papillomatous character, and in one e the subsequent history showed that the nature of tumour had been that of an innocent papilloma. ree out of these 34 ended fatally, giving a percentage 8.8 fatal results.

n one of the 3 fatal cases—reported before 1904—death ulted from an aggravation of a pre-existing bronchial arrh in a very old man six days after operation; in second case death eleven days after the operation was result of secondary bleeding and subsequent exhaus-n in a very feeble old man of 76; the third case, in ch death resulted twenty-seven hours after the opera-n from oedema of the lungs, has already been alluded n a previous part of this paper. It is a particularly ancholy circumstance that out of these 3 deaths 2 uld have occurred in cases in which, according to the sequent microscopic examination, the disease was not malignant character, but of the nature of an infective ammation, and this fact adds, I should think, further ght to the view that microscopic examination of an alaryngeally-removed fragment should whenever pos-e precede radical operation.

f the cases of undoubtedly, that is, microscopically fied, malignant disease of the larynx, which were 25 gether, 1, as just mentioned, died, and 24 recovered. ne of them the operation had evidently been incom-e. A second thyrotomy was performed at once, with e radical removal of the neighbourhood round the rrent growth, and the patient has since (more than years ago) remained perfectly well. In 4 cases recur-e took place. In 1 of these the patient died from er of the *liver* five years after the operation, *the larynx the cervical glands remaining free.* This leaves, there-a percentage of 3 to 24 of cases of genuine *local* re-ence. In the first case recurrence took place nine ths after the operation, and the patient, having re-further surgical treatment, died eighteen months the operation. In the second case the first recur-took place four months after the operation, when laryngectomy was performed. A year afterwards had to be followed by total extirpation of the larynx count of metastasis in the cervical lymphatic glands, h were inseparably bound up with the larynx, the ior of which, however, this time had remained per-healthy. Death ensued from coma twenty-four hours after the operation, which was performed by Professor Gluck. The patient had been suffering from advanced chronic nephritis. In the third case recurrence took place eleven months after the operation, and hemilaryngectomy has been performed too recently to say anything about the final result.

Deducting, then, from these 24 cases one too recently operated upon to be of any value for statistical purposes concerning freedom from recurrence, and one in which, five years after the operation, the patient died from cancer of the liver, the larynx and cervical glands remaining free, we find that out of 22 cases of undoubted malignant disease of the larynx, a genuine local recurrence took place in 3 cases. This gives a percentage of 13.6 recurrences. If the case in which death from cancer of the liver took place five years after the operation be included amongst the recurrences, we find 4 recurrences in 23 cases, or 17.4 per cent. recurrences.

With regard to the case just referred to, however, I wish to observe that, whether that occurrence ought to be looked upon as a genuine metastasis, or whether the same obscure agencies which caused the malignant disease in the first instance produced it again anew and independently of the first manifestation, must remain an open question in the absence of a *post-mortem* examination. The possibility just named is not so far-fetched as might be thought. A case has been reported by Gluck[21] in which, after extirpation of a squamous-celled laryngeal carcinoma, a cylinder-celled carcinoma, from which the patient died, developed two and a half years afterwards in the transverse colon. In this case, at any rate, the idea of a genuine recurrence is excluded, and one cannot think of anything else but of a genuine fresh production of another form of malignant new growth.

The last category to be considered under this head, that is, the cases in which *no* recurrence took place, or in which, either after incomplete operation or after recurrence, lasting freedom was obtained after further operation, demand some special consideration before their ultimate result can be expressed in figures.

The determination, in cases of operation in any part of the body for cancer, of the exact period after the lapse of which the patient may be considered as "cured," is, of course, purely conventional. However late a date within the bounds of reason may be chosen, it will always be easy to point to some isolated cases recorded in literature in which recurrence, local or metastatic, took place after an even longer interval. All that can be said, therefore, is that when speaking of a "cure" in cases of operation for cancer, one means that the period has been passed within which, according to general experience, recurrence, if at all, usually takes place, and that the patient might now be reasonably expected to enjoy lasting freedom from the disease. In accordance with this ratiocination, by common consent the period of three years is now considered to cover the time of danger of recurrence, and statistics of operations for cancer are usually constructed upon this principle. Ten years ago, however, I pointed out that, owing to the peculiarities of the lymphatic supply of the larynx, intrinsic cancers of that part occupy an exceptionally favourable position with regard to the question of recurrence after radical operation, and that when *one* year has passed without recurrence, the patient may be justly regarded as having passed the critical period. At present, after ten years' further experience, I stoutly maintain the position then taken. It has been shown that in not a single one of the cases in which I performed thyrotomy recurrence took place after the lapse of the first year, and I shall therefore make that period the basis of the following calculations. I do so, not for the purpose of including a few more cases of cure in my tables, but because I know from practical experience how happy the patients are when they are told after the lapse of one year after the operation that they may now, humanly speaking, be considered out of danger of recurrence, and because I think it is right to give them that comfort. Subtracting, therefore, from my 25 cases of operation by thyrotomy for undoubted malignant disease of the larynx, 1 case in which death occurred from the operation, 3 cases in which local recurrence occurred within the first year after the operation, and 1 case too recently operated upon to be included in this list, but including on the other hand 1 of incomplete operation in which after the second thyrotomy a lasting

cure was effected, we have 20 cases of lasting cure remaining, that is, exactly *80* per cent. If, however, the case be further deducted in which five years after the operation the patient died from cancer of the liver, 19 out of 25 cases, that is, *76 per cent. of lasting cures* would be obtained. Truly an extremely pleasing result, which I think favourably compares with the results of radical operations for cancer in any part of the body.

The duration of the cure in each individual case from the date of the operation to December 31st, 1906, has been as follows:

1 case	... ...	over	15 years
4 cases	... ...	between	10 and 15 years
4 ,,	... ...	between	5 and 10 years
2 ,,	... ...	over	4 years
3 ,,	... ...	over	3 years
2 ,,	... ...	over	2 years
1 case	... ...	just	2 years
1 ,,	... ...		1 year and 10 months

1 patient died 5 years after operation from pulmonary embolism.*

1 patient died 4 years after operation from pneumonia*

20

* In both these cases recurrence was absolutely excluded.

The vocal results are equally satisfactory; voice surprisingly good in 11 cases, good or fair in 5, weak or reduced to a whisper in 4. In not a few instances both vocal cords had to be removed.

Finally, in this connexion, I wish to mention as an additional advantage of thyrotomy that even in the cases in which either the operation has not been complete, or in which unfortunately genuine recurrence has taken place, the operation does not bring us to the end of our resources, but that, on the contrary, by a repetition of the operation, or by hemilaryngectomy, or by total extirpation of the larynx, a lasting cure may still be obtained, where the minor operation has failed.

With regard to the technique of the operation, I still adhere entirely to that described by me in 1894 in the *Lancet*, and only wish to recommend anew on this occasion the excellent shears for splitting the thyroid cartilage invented by my friend, Mr. Waggett. Various modifications of the technique, however, have been suggested, and Professor Paul von Bruns, who now, in accordance with the view generally held in this country, considers thyrotomy as the "normal" operation for the early stages of laryngeal cancer, describes the following as his own method.

Instead of general narcosis, half an hour to an hour before the operation an injection of scopolamin and morphine is given, and a solution of novo-cain is injected into the line in which afterwards the external excision is to be made, whilst after the larynx has been opened, the mucous membrane is painted with a solution of novo-cain and adrenalin, in order to abolish reflex cough and deglutitory movements, and to limit bleeding from the mucous membrane. If no graver haemorrhage is to be feared previous tracheotomy and introduction of a cannula is avoided. With Kocher I prefer the oblique position of the body, with the head hanging down, in order to more surely prevent the aspiration of blood; this position also protects against the invasion of the pharyngeal phlegm, which is often secreted in large quantities, into the larynx, and which otherwise is to be prevented by plugging of the lower parts of the pharynx. The division of the cartilages extends throughout the larynx into the trachea, in order to give sufficient space. When the cartilaginous halves have been severed an incision, if necessary under artificial illumination by means of a small electric lamp, is made all round the tumour down to the perichondrium and close to the cartilage. The bared surfaces are, if necessary, burnt with the galvano-cautery, and iodoform is rubbed into them. The introduction of an iodoform gauze tampon is omitted. Finally the halves of the thyroid cartilage are brought together, and the upper part of the external wound is closed, whilst the lower part in the region of the trachea remains open, and is only loosely plugged. No cannula is introduced.

This method differs in various essential points from that in general use in this country, particularly in the avoidance of general narcosis and of the use of Hahn's or some other form of tampon cannula. Seeing that Professor von Bruns speaks from practical experience and has obtained good results by the method he describes, it would seem captious to object to it from a theoretical point of view. I fully see the advantages of placing the patient in an oblique position with the head hanging down, and thereby avoiding the introduction of a cannula, even during the operation, and shall give this method a trial.

I cannot help doubting, however, the advisability of employing adrenalin in painting the mucous membrane after splitting the larynx. Cocaine fully suffices for that purpose, and the employment of adrenalin, as I have personally experienced in one case, increases the risk of secondary parenchymatous haemorrhage. Altogether, I must say that the results obtained by the old method certainly are satisfactory enough not to necessitate modifications, although I by no means wish to imply that the technique generally followed in this country must necessarily be final.

I have only to add one word about the question of rectal etherization, which I see from the discussion following Dr. Chevalier Jackson's paper has again been proposed as a convenient mode of administration of the anaesthetic in cases of thyrotomy, as it dispensed with the anaesthetist's encroaching upon the narrow field of operation. That it does so is no doubt true, but it seems to have been forgotten that I fully described in my paper in the *Lancet* in 1894 a very lamentable case of death after hemilaryngectomy, in which the fatal issue was beyond a shadow of doubt due to ether poisoning after rectal administration of that anaesthetic. Not only the intestines and the stomach, but the bronchi large and small, were intensely congested, and showed numerous large and small ecchymoses and free haemorrhages on their surfaces. For further description of the details I must refer to that paper, but I wish to say that nothing would induce me, after this extremely sad experience of my own, to give that method a fresh trial.

Of the next operation on our list—namely, hemilaryngectomy, or partial extirpation—I have to say but few words. It is obvious that this operation will become rarer in proportion to the diagnosis of intrinsic cancer being more generally made at an early stage of the disease. In fact, it is likely that ultimately it will be limited to those cases of intrinsic cancer which come under observation only at a period when the disease has already invaded the cartilaginous framework, and to a few exceptionally favourable cases of extrinsic cancer. Quite in conformity with these general considerations I have only had occasion to perform the operation in five cases. In one of them—just referred to—death occurred from ether poisoning. The other four patients recovered. In one of them, in whom thyrotomy had been performed previously, the operation is of quite recent date. The results of the three remaining ones were not satisfactory; in one it is doubtful whether recurrence took place, although this is not probable. The patient died suddenly ten months after the operation from the bursting of an abscess in front of the trachea. In the second case recurrence took place in the cervical glands, the larynx remaining free, and death ensued fifteen months after the operation, the patient refusing further operative interference. The growth has been pronounced by Mr. Shattock to have been highly malignant, and the prognosis was bad from the first. At the time of the operation the thyroid cartilage was already invaded. The cervical glands were apparently not involved at the time of the operation. In the last case—already referred to—in which the patient was at first operated by thyrotomy, and afterwards by hemilaryngectomy, recurrence took place, about ten months after the last operation, in the cervical glands. Professor Gluck removed not only the cervical glands, but the larynx *in toto*, as its outside was inseparably connected with the affected glands. The patient never regained consciousness, and died about twenty hours after the operation had been completed.

My results of hemilaryngectomy are, therefore, far from satisfactory, and, as the outcome of my experience I should certainly recommend removal of the corresponding cervical lymphatic glands, even if they are apparently not invaded, in cases in which infiltration of the thyroid cartilage renders hemilaryngectomy necessary. I have nothing to add to my previous description of the technique of the operation, except that in some cases it may be possible to safely leave a zone of the affected cartilage either in its upper or in its lower region, behind. This materially assists in the prevention of stenosis.

With regard to subhyoid pharyngotomy, I have equally little to add to my previous description. I see from Professor Paul von Bruns's latest statistics of all subhyoid pharyngotomies performed for laryngeal cancer since 1868

that in 16 per cent. only a cure lasting from one to three or more years had been obtained, that in 20 per cent. recurrence took place, and that the mortality of the operation was no less than 40 per cent. Quite apart from the fact that it can be employed only in a very limited number of cases, namely, in those in which the disease is situated near the upper aperture of the larynx, the danger of the operation is so great as to give little encouragement for its adoption, particularly in view of the fact that equally good access to the growth can be obtained by laryngotomy.

I myself have performed subhyoid pharyngotomy but once for malignant disease of the larynx,[23] and have met with the same disappointing experiences as others have done, namely, that the patient died on the fourth day after the operation, probably from sepsis.

The last part of my task, namely, the discussion of total laryngectomy, I approach, I do not mind confessing, with some trepidation. Experience has taught me[24] that thoroughgoing laryngectomists, with some exceptions, of which Professor Gluck is the most praiseworthy example, are apt to regard everyone who does not go to the entire length of their own convictions, as an enemy, and to treat him accordingly. Nevertheless, this shall not deter me from reiterating on this occasion the views, which I have consistently upheld since first total laryngectomy was discussed in public, and which may briefly be defined as being about equidistant from prejudiced antagonism to, and from injudicious adulation of, this operation. Like every sane person I unconditionally admit the legitimacy of any operation which saves, or even only appreciably prolongs a fraction, however small, of lives otherwise irretrievably lost, and I thus unreservedly recognize the justifiability of total laryngectomy. I gladly register that the formerly terrible mortality of the operation has through the progress of the technique been very much reduced of late years, and, finally, I do not doubt that a few of the patients who have survived the operation for any length of time have been and are quite content with their lot. But when thus much has been stated, I honestly believe that all has been said that could possibly be adduced in favour of total laryngectomy, and I cannot bring myself to regard the question of the kind of life the patients have to lead after a successful operation, and the question of the frequency of recurrences, as so secondary and comparatively unimportant as is certainly being done by the more militant faction of the enthusiastic advocates of the operation.

Total laryngectomy is beyond the shadow of a doubt one of the most mutilating operations in surgery. It does away with speech in its ordinary sense, for of the many ingenious phonatory contrivances which have been invented and recommended, I have never seen a patient avail himself for any length of time. He rather puts up with the pharyngeal whisper, which in some cases is audible at a distance, or communicates with the outside world in writing. In not a few cases to this loss of speech is added permanent difficulty in swallowing, which compels the patient to take his meals by himself or even to be fed artificially. All this more or less shuts out the patient from the company of his fellow men, partly from instincts of his own, partly from being driven to observe that he is an object of pity mixed with horror to others. He, therefore, usually shuns society and becomes a recluse. I do not wish to be accused of exaggeration, and I therefore emphatically repeat that no doubt *some* patients may lead a more amenable existence. Personally, however, whilst often enough meeting in society and in public places persons who have been successfully thyrotomized by others as well as by myself, I have never seen a patient whose larynx has been removed, elsewhere than in the meeting room of a Society, in which his case was demonstrated as a success; or in my own consulting room, when a recurrence has taken place. This, I believe, is also the general experience of others, and, in view of this fact alone, the lightheartedness with which by some total laryngectomy is recommended and practised when less serious interference would have fully sufficed, appears to me not only regrettable, but directly reprehensible.

In addition, there is that extremely serious question of recurrence after total laryngectomy, of which I am fully convinced we have not yet sufficient modern data to build a reliable opinion upon, and which yet is so extremely important when the question as to whether total laryngectomy ought to be undertaken or not in a given case comes to be considered.

The only modern reliable statistics, so far as I know, of any single operator who has had considerable experience of his own are those of Dr. Chevalier Jackson. He states[25] that out of 8 total laryngectomies performed by him 3 were hemilaryngectomies followed by recurrence and total removal. One of the patients lived seven years after, when he died from cancer of the stomach; another lived three years without recurrence, dying of cerebral haemorrhage; and the third died eight months after from alcoholism. Of the remaining 5, 3 had recurrence within the year, 1 apparent cure was lost to observation after a year, and 1 is too recent to record. Out of the 3 prompt recurrences there was 1 metastasis in the lungs, liver, and pancreas. Thus out of 8 laryngectomies no absolute ultimate cures could be claimed in the author's own opinion, although 3 were apparently cured at the end of one year. I entirely agree with Dr. Chevalier Jackson when further on he states, with regard to the case in which seven years after removal of the larynx cancer of the stomach occurred, that such a recurrence indicates a vulnerable soil more than repullulation of the primary process.

I have for the purposes of this paper applied to Professor Gluck, and requested him to give me if he could a summary of all his experiences with regard to total laryngectomy. In reply he regrets being unable to comply with my wish, on account of the difficulty of obtaining replies from the very large number of patients from a distance upon whom he has operated. He at the same time states that, whilst formerly his material had mostly consisted of cases in which the disease was limited to the larynx, more recently, in consequence of the progress of technique, the cases in which the pharynx, oesophagus, and tongue were affected together with the larynx had considerably increased, the operation being thereby, of course, made more serious still. All the same, remarkable results had been obtained, and he could assure me that quite a number of patients in whom not only total extirpation of the larynx but also resection of the pharynx had been performed, had survived the operation for many years in a good state of health. He also promises to try and ascertain for a future occasion the total results of his experiences.

Professor Paul von Bruns apportions, in a statistic of all total laryngectomies performed since 1890, the proportion as follows:

Cure lasting more than three years ...	10 per cent.
Cure lasting one to three years ...	16.6 per cent.
Cure lasting less than one year ...	28.9 per cent.
Recurrence	24.5 per cent.
Death owing to operation... ...	19 per cent.

Personally, I can only say that what I have seen of total extirpation of the larynx has been anything but encouraging. I have never performed the operation myself, but have confided those few of my patients who, after full exposition of the situation, decided upon submitting to the operation to most experienced hands. One of my patients died from the operation itself, as already stated; none of the other three has survived the first year after operation. Not wishing to make sensational statements, I will only say that in all these cases the life the patients had to lead from the operation until their release by death was extremely sad. Indeed, whenever I have seen these patients a few months after operation, with recurrence fully established, the question has forced itself upon me with ever-increasing emphasis whether such a result was worth the mental anxiety, the physical suffering, the heavy expense, and the blighted hopes necessarily connected with the course that had been taken. All the same, I have kept before my mind that probably my personal experience has not only been small but exceptionally unfortunate, and that after all there remained the one stern fact that those patients' lives would have anyhow been irretrievably lost if no operation had been performed at all. I have, therefore, never dissuaded a patient, whose case seemed to offer a reasonable chance, from undergoing the operation, but have considered it my duty to lay an impartial statement of the alternatives of letting matters take their course and of having total laryngectomy performed before the patient, and in no way to influence his decision. Such a line of action appears to me the more

required in view of the unfortunate fact that in a certain proportion of cases so-called cured patients have committed suicide.

Unfortunately, until a specific has been discovered which cures malignant disease without having recourse to the knife, total laryngectomy will remain a cruel necessity in cases of extrinsic cancer of the larynx. From my own statistics above quoted, however, it will have been seen that fortunately the extrinsic variety is by far the rarer of the two by which the larynx may be attacked; and I feel sure that I shall have the sense of this meeting with me when, in conclusion, I express an ardent hope that every practitioner should endeavour to diagnose the intrinsic variety at so early a time that thyrotomy will suffice, not only to save the patient, but also to help him to an amenable existence afterwards. Fortunately I can say that, to conclude from my own experiences, this desirable improvement in early diagnosis has made material progress during the last few years. Still much remains to be done in this respect, and I cannot better end my introductory remarks than by the expression of a fervent hope that this discussion may give a fresh impetus to early diagnosis and immediate thorough removal of the disease by thyrotomy in cases of intrinsic cancer of the larynx.

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INTERNATIONAL DERMATOLOGICAL CONGRESS.—The sixth International Dermatological Congress will be held at New York in the autumn of 1907. The date of opening will be September 9th and the Congress will remain in session for a week. The President is Dr. James C. White of Boston; the Secretary General, Dr. John A. Fordyce of New York. Papers may be presented in writing in the English, French, German, Spanish or Italian languages, and may be discussed in the language most familiar to the speaker. Members desiring to present papers must communicate the title to the Secretary General before May 1st, 1907, and send an abstract to him before that date. The themes selected for formal consideration are: 1. The Etiological Relationship of Organisms Found in the Skin in Exanthemata: to be presented by Professor W. T. Councilman of Boston. 2. Tropical Diseases of the Skin; to be presented by Dr. H. Radcliffe Crocker of London, Professor G. Riehl of Vienna, Dr. William Dubreuilh of Bordeaux, Dr. W. R. Brinckerhoff of Honolulu, and Dr. J. H. Wright of Boston. 3. (a) The Possibility of Immunization against Syphilis: to be presented by Professor A. Neisser of Breslau, Professor Ernst Finger of Vienna, and Dr. L. E. Lenoble of Paris. (b) The Present Status of our Knowledge of the Parasitology of Syphilis: to be presented by Professor Erich Hoffmann of Berlin.

Under the will of the late Miss Helen Halyburton Symers of Dundee who died on 8th July, 1906, the Royal Infirmary Dundee receives a sum of £1,000.

The Hunterian Lecture
ON
DUODENAL ULCER AND IT TREATMENT.

DELIVERED BEFORE THE HUNTERIAN SOCIETY OF LONDON.

BY A. W. MAYO ROBSON, D.Sc., F.R.C.S.

THE serious character of ulceration of the duodenum a the frequency with which it is overlooked until dangero complications have supervened, would afford a sufficie excuse for taking it as my subject this evening, bu would also mention as other reasons, the facts that I v requested to take up a practical subject, and that it h fallen to my lot to have had considerable experience duodenal ulcers and their complications.

Until quite recently peptic ulcer of the stomach w its various complications quite overshadowed the simi condi'ions in the first portion of the duodenum, a though we now know how common ulcers of the duoden are and that they not infrequently prove fatal as result of haemorrhage, perforation, or other complicatio our increased knowledge of their frequency and imp tance has chiefly been the result of investigations m during surgical operations.

This subject is one of many in which pathology ba on autopsy has been corrected and simplified by biopsy the study of disease in the living body, by actual obser tions made during the performance of abdominal sectio for instance, in some of the most recent works on me cine, observations based on *post-mortem* pathology give proportion of duodenal to gastric ulcers as from 1 in 5 to 1 in 10, yet operative experience shows that in a la proportion of cases duodenal and gastric ulcers co-exist that the real proportion of duodenal to gastric ulcers i to 2 or thereabout.

The statistics of Drs. W. J. and C. H. Mayo show t in their last 200 cases of operations for peptic u 86 were duodenal; of these, 27 involved the pylorus, 9 had a separate and distinct ulcer of the stomach duodenum.

It is a curious and as yet unexplained fact that, w gastric ulcer is common in women, duodenal ulcer is m frequently found in men. At the Rochester Clinic, of total cases of duodenal ulcer operated on, 73 per cent. w males and 27 per cent. females; but in my own prac the proportion has been even larger—86 per cent. of m to 14 per cent. of females.

It is not so very long since the surgeon, when dea with an acute abdominal lesion, often deliberately igno the duodenum, just as formerly the pancreas; and i fact, it may be said that perforated duodenal ulcer i the surgeon almost the rarest of the many poss causes of acute peritonitis now capable of being tre rationally with a reasonable prospect of success.

Now that the importance of duodenal ulcer has b grasped, we have no cause to complain of want of re nition, as shown by the number of cases of perfora ulcer reported—unfortunately, however, for the most unrecognized before the catastrophe of perforation occurred. Fortunately, however, the reports of l numbers of cases of duodenal ulcer that have b treated before rupture or other complication show ignorance and want of appreciation of the importanc the condition is gradually passing away.

It is in some respects unfortunate, both from the pa logical and surgical point of view, that the duodenum considered by the older anatomists as simply one of essential divisions of the intestine and that the erro still perpetuated; for the portion of the duodenum a as the point where Dr. Ochsner has shown the presenc a sphincter, just below the entrance of the bile and creatic ducts, has quite as much to do with digestio has the stomach itself; and both physiologically pathologically that portion partakes more of the chara of the stomach than of the intestines, the small bo proper, in fact, only starting below the sphincter mentioned. Developmentally also, this point is ma out as the place of junction of the foregut and the gut, so that the portion of duodenum from an inch bo

the entrance of the bile ducts ought to be considered as part of the jejunum.

It has hitherto been the custom to classify together ulcerations of the stomach and duodenum, and as they frequently coexist and probably own a common cause, hyperchlorhydria, there is apparent justification for that arrangement.

The symptoms of the one and of the other differ, however, materially, for while gastric ulcer is usually diagnosed early, the ambiguous character of the symptoms of duodenal ulcer often makes its diagnosis difficult; and while gastric ulcer is distinctly amenable to medical treatment in the earlier stages, it is questionable if, when once peptic duodenal ulcer has passed to the stage of being recognized by definite symptoms, it is ever really permanently cured by medical treatment alone.

Moreover, the chief complications of duodenal ulcer, though similar to those of gastric ulcer, are as a rule much more serious in their results, haemorrhage from duodenal ulcer being much more often rapidly fatal, and perforation occurring in a more insidious manner and with a greater tendency to a lethal ending, even when surgically treated.

On these accounts, therefore, I think we may with advantage describe diseases of the stomach and duodenum separately.

The clinical history of duodenal ulcer is in my experience much more indefinite than is the history of peptic gastric ulcer, and though I am inclined to think that definitely characteristic symptoms may be elicited by exact questioning in by far the greater number of cases before serious complications supervene, yet the fact remains that mistakes in diagnosis do occur, and that in many cases, beyond a certain amount of so-called dyspepsia, often put down to excessive acidity, the first signs demanding serious attention are those of severe haemorrhage in the shape of haematemesis or melaena, or the equally or perhaps more serious symptoms of perforative peritonitis.

In looking through the notes of my cases, it is astonishing to find how long in many of the cases the symptoms had persisted and been treated medically under the designation of acid dyspepsia, gout, neurosis, gastro-duodenal catarrh, biliary colic, chronic appendicitis, or catarrh of the appendix, colitis, etc. In some of the cases a ten, fifteen, twenty, or even thirty years' story of dyspepsia had been given, with characteristic symptoms throughout and with irregular intervals of relief by treatment and of relapses every few weeks or months.

Many cases of duodenal ulcer have been diagnosed and treated throughout as gastric or pyloric ulcer; first, because the two frequently coexist; secondly, because in about 90 per cent. of all cases the ulcer is situated within an inch of the pylorus; and thirdly, because the complications in both resemble one another very closely.

Symptomatology.

Although duodenal ulcer as usually diagnosed is seen for the most part in the middle-aged, it may occur at any period of life, from the newly-born infant to extreme old age; and from the history given me by many patients reaching back to youth, I am inclined to think that it is much commoner in early age than is generally recognized. Several pathologists have reported cases of ruptured duodenal ulcer between the ages of 10 and 20, and others have been recorded so late as the ninth decade. I have operated for duodenal ulcer at the age of 16, and in a patient over 70.

There is no disease in which for diagnostic purposes it is more important to have the history carefully ascertained, for in many cases it gives a typical picture enabling a diagnosis to be surmised without even seeing the patient, though, of course, a physical examination is necessary to confirm it, and occasionally further help may be obtained by laboratory investigations in completing the diagnosis.

Pain.

Pain is the most important symptom. As a rule it has decided relations to meals, though unless there is associated gastric ulcer, the patient will say that he has pain after food, the fact being that the pain usually starts from two to three or even four hours after a meal, that is, when the stomach is pouring into the duodenum its irritating acid contents, which come into contact with the ulcerated surface. The fact that the pain is relieved by food is easy of explanation, for when more food is introduced into the stomach the acid becomes absorbed by it, and the pyloric orifice closes for a time; moreover, the acid that has already passed into the duodenum then becomes mixed with the alkaline bile and pancreatic fluid, and relief is obtained for a short period, so that it is common to find these patients complaining of pain about 11.30 to 12 in the morning, about 5 or later in the afternoon, and in many cases either just before retiring to rest, or later when they have been asleep for a short time. This night pain has been a marked symptom of many of my cases, and is explained by the patient going to bed with the evening meal still in the stomach; and only when digestion has been completed and when the acid stomach contents pass into the duodenum is the patient awakened if he has gone to sleep, or kept awake if he has retired late. Such patients usually have a biscuit or some milk by their bedside for the relief of pain in the night, while others will take carbonate of soda and water, and others, again, will obtain relief by inducing vomiting should that not occur spontaneously. The pain is due almost wholly to the irritating effect of the acid on the opened ulcer, but it is also partly due to spasm of the pylorus and to dragging on the adhesions which are often present.

That pain is chiefly due to the acid is shown by the relief obtained by taking anything that will dilute or neutralize it, or by the relief obtained by vomiting or by lavage of the stomach.

The pain usually starts a little above and to the right of the umbilicus, and may be paroxysmal and agonizing in character, or in others merely a dull ache. In some cases it is continuous for a day or two or longer, and then passes off to recur at longer or shorter intervals, but it is only in the later stages that it gives no respite. At first the respite may be so long, from three to six or even twelve months, that the patients think themselves well, and are apt to disconnect the former from the present seizures, until repeated recurrences force into prominence the relationship.

Radiation of Pain.

There is much less tendency for the pain in duodenal ulcer to radiate than is found in gastric ulcer or in biliary colic, though, if radiation takes place, the pain usually passes round to the right side, simulating to a certain extent gall bladder trouble; but a careful inquiry will usually elicit the fact that the pain does not radiate to the right subscapular region, but in a direction towards the right loin. It may radiate across the epigastrium, simulating stomach trouble, or into the caecal region, simulating appendix pain, or very occasionally along the right genito-crural nerve, resembling renal trouble.

Intermittency of Attack.

The presence of duodenal ulcer is usually characterized by periods of comparative good health intervening between the acute seizures; these intervals may extend to weeks, or in some cases even to two, three, six, or twelve months, and, beyond a little flatulency or discomfort, there is nothing to be complained of, the patient usually considering himself well until a recurrence of pain reminds him of his trouble.

Tenderness.

Tenderness can generally be elicited to the right of the middle line, usually just above and to the right of the umbilicus, in the same situation that tenderness is found in cholelithiasis; but the tenderness is often more diffuse than in gall bladder trouble and extends downwards further on the right side of the umbilicus, this being more marked when ulcers are on the anterior or outer wall of the duodenum, especially if there are peritoneal adhesions. When an ulcer is situated on the inner or posterior part of the duodenum, tenderness is much less distinct, and may be only elicited, if at all, on deep pressure.

Rigidity.

Rigidity of the right rectus is usually well marked during the exacerbation, and may be constant if the ulcer is on the anterior or outer part of the duodenum and if there are peritoneal adhesions, but the symptom is not so marked when the ulcer is on the posterior or inner wall.

Flatulence.

Flatulency is an important symptom, and is most marked at the time when the pain is present; in fact, by exercising tension it tends to intensify the pain. It has seemed to me that gas formation is more marked in duodenal than in gastric ulcer.

Dilatation of the Stomach.

Spasm of the pylorus generally accompanies ulcer in its vicinity, and as the most common site of duodenal ulcer is just beyond the pylorus, there is usually a tendency to pyloric spasm, which in its turn leads to dilatation of the stomach. During the exacerbations the stomach may be ballooned, and its outline can then usually be distinctly made out, when it will be seen to be dilated down to or beyond the umbilicus.

Hyperchlorhydria.

Excessive acidity of the gastric juice usually accompanies peptic ulcer of the stomach or duodenum, and leads to spasm of the pylorus and to so-called heartburn—a common symptom in this condition.

Tumour.

When the rectus is not too rigid to prevent deep palpation, a distinct feeling of fullness may sometimes be felt, and if the adhesions are extensive the swelling may give rise to the suspicion of tumour, but this is exceptional.

Vomiting.

Vomiting has been given by some authorities as a prominent symptom. It certainly does occur in duodenal ulcer, but I think it will be found that acid eructations and heartburn are more frequent symptoms than vomiting, and that where vomiting occurs gastric ulcer is a frequent complication. In some cases vomiting is self-induced in order to give relief, and to this end the patient will drink quantities of hot water so as to produce emesis. The vomit is usually very acid, but generally does not contain blood unless the retching is so violent that the duodenal contents are vomited. It may, however, in advanced cases be coffee-ground in character, and may assume the form of profuse haematemesis.

Haematemesis and melaena must be mentioned as symptoms, but should not be waited for in order to complete the diagnosis, as they more properly come under the serious complications.

Appetite.

In many cases there is a good appetite and a keen desire for food, which gives relief for a time, and it is usually only when the fact is grasped of the food leading to pain some hours later, that the patient voluntarily limits his intake, which then interferes with his nutrition.

Constipation.

Constipation is a very common symptom, and as the patient usually finds himself better when the bowels are open, it is usual to find the subject of duodenal ulcer addicted to taking a saline aperient almost every morning.

Loss of Weight.

It is astonishing for how many years a patient will go on with symptoms of duodenal ulcer, having exacerbations alternating with relief for a few weeks, and yet nutrition may not be seriously interfered with, though interference with rest the recurrence of pain, the flatulency, and the general distress, may lead to mental depression and to inability to carry on the ordinary duties of life satisfactorily.

Icterus and Pancreatic Catarrh.

Seeing that the bile and pancreatic ducts open into what one may term the gastric portion of duodenum, one cannot wonder that duodenal ulcer should often be directly associated with catarrh of the bile ducts and of the pancreatic duct, hence it is not uncommon to find a slight icteric tinge almost constantly present in these patients, and on making a chemical examination of the urine and faeces to find evidences of altered metabolism and impaired digestion of fat characteristic of interference with the functions of the pancreas, symptoms that have their significance when a diagnosis is being considered. It is also usual to find indican in the urine, pointing to the presence of intestinal catarrh. A more serious form of interstitial or even suppurative pancreatitis may also arise from an extension of the ulcer directly into the pancreas.

Latency of Symptoms.

There can be no doubt that in a certain proportion of cases duodenal ulcer may be present without symptoms until haemorrhage or perforation reveals its presence. This latency is probably usually associated with low acidity, with absence of spasm of the pyloric sphincter and with absence of adhesions, but I think it will be found on strict inquiry that real latency of symptoms is much rarer than is usually taught.

Chemical Findings.

Excess of free HCl in the gastric contents after a test meal may be the only test worth noting in ordinary duodenal ulcer, unless there is marked dilatation of the stomach with stasis, as occurs in more advanced cases, when lactic or other organic acids may be present and yeast cells or sarcinae be found. Blood may be found in the stomach contents or in the faeces, and is an important sign. The presence of indican in the urine is significant of intestinal catarrh. The presence of an excess of urobilin may indicate catarrh extending to the bile ducts, and the presence of pancreatic crystals, as shown by Cammidge's test, may point to catarrh extending up the pancreatic duct.

COMPLICATIONS.

The most serious complications occurring in duodenal ulcer are those of haemorrhage and perforation; but there are also other serious complications, such as anaemia sometimes so severe as to resemble the pernicious type, cicatricial contraction, leading to stenosis and to secondary dilatation of the stomach; jaundice, due to chronic catarrh of the bile ducts, to pancreatic trouble, to stenosis of the papilla, or to adhesions compressing the duct; pancreatic catarrh due to extension of inflammation along the duct of Wirsung, or interstitial pancreatitis due to persistent catarrh or to extension of the ulcer into the substance of the pancreas; subphrenic or other abscess; and disabling adhesions.

Haemorrhage.

Haemorrhage, which may appear in the form of haematemesis or melaena, is sometimes the first symptom to attract attention to duodenal ulcer, the patient having taken no notice previously of the dyspeptic symptoms that I have related.

In all probability there are few ulcers of the duodenum which do not bleed during some period of their existence, though in many cases bleeding is not noticed unless the blood is vomited; for it must be remembered that slight vomiting of blood always attracts the attention of the patient, but the presence of blood passed by the bowel is frequently overlooked. I have seen and operated on several patients in a state of profound anaemia who said they had never vomited blood or noticed any bleeding from the bowel, yet on strict inquiry I have been able to elicit the fact that on several occasions they have been seized with faintness, and afterwards the motions have been noticed to be black, though in other cases the loss of blood may have been constant, but so slight on any one occasion that free blood had really never been noticed in the motions.

Bleeding in the shape of slight oozing may persist for a long period in some of these cases, in such minute quantities that it is only discoverable by a careful microscopic or chemical examination of the motions, and this for may lead to such bloodlessness as to give rise to the suspicion of pernicious anaemia, which, however, a careful examination of the blood will refute.

The situation of the ulcer has doubtless much to do with the presence or absence of severe haemorrhage, and it is interesting to note, as has been pointed out by Dr. Soltau Fenwick, that in almost every instance of fatal bleeding the ulcer is situated on the posterior or inner wall of the bowel within 4 in. of the pylorus. I have noticed in operating on ulcers situated on the upper anterior part of the first portion of the duodenum that bleeding has not been a prominent symptom.

The haemorrhage occurring in duodenal ulcer, if moderate in amount, is seldom revealed as haematemesis, as it usually passes downwards; but in the fulminating variety the blood will usually be vomited as well as passed by the bowel, though in one case of fatal haemo-

rhage from duodenal ulcer that I saw immediately after death, the patient died within a quarter of an hour of the first onset of faintness, and the whole of the blood had passed into the bowel, and had caused neither haematemesis nor melaena.

Although haemorrhage probably occurs in all cases of duodenal ulcer at one time or another, yet it is interesting to note that of the cases observed by Dr. Soltau Fenwick, bleeding was only recorded in 40 per cent., while it was observed by Dr. Graham in only 16 out of 46 cases, or 32.6 per cent.

Perforation.

Perforation of the duodenum constitutes one of the most serious and frequent complications. Its occurrence means to the patients the danger of sudden death from shock, or later from collapse due to toxaemia, or at the best it means a local peritonitis often ending in abscess. Dr. Fenwick recorded perforation in 53.5 per cent. of his cases, Chvostek in 42 per cent., Collin in 69 per cent., and Oppenheimer in 48 per cent; but these percentages are all probably far too high if the less acute cases which are now more frequently diagnosed be included, as they should be, in the statistics. In my own experience of cases actually operated on the percentage of perforations has only been 10, though had none of the cases operated on and cured by gastro-enterostomy been allowed to pursue their course, the percentage of perforations would almost to a certainty have been very much larger. Weir gives an analysis of Collin's statistics as to the site of perforating ulcer of the duodenum as follows: The lesion was in the first portion in 119 cases; of these, 68 were in the anterior wall, 39 in the posterior, 10 in the superior, and 1 in the inferior. Of 8 cases involving the second portion, 3 were on the internal wall, 2 on the posterior, and 1 on the external. Of 4 cases affecting the third portion, 3 were on the anterior and superior walls and 1 on the posterior.

Duodenal ulcers may be acute or chronic, and either form may perforate. An acute duodenal ulcer resembles the ordinary acute peptic gastric ulcer, and, as in gastric cases, the perforation may take place acutely through a small or large opening before adhesions have formed, giving rise to flooding of the peritoneal cavity in one case or mere trickling of fluid into it in the other.

A chronic ulcer, which is the form usually encountered by the surgeon in dealing with non-perforated cases, resembles the ordinary chronic gastric ulcer, having thickened edges and a smooth, indurated base devoid of granulation tissue; this form less frequently causes acute perforation, as, on account of its progress being slower, time is given for adhesions to form, which adhesions limit extravasation.

If the perforation occurs through a large opening in some portion of the duodenum covered by peritoneum, such as the whole of the first portion and the anterior or outer wall of the second portion, and if there are no protective adhesions, the larger peritoneal cavity will be flooded with the duodenal contents, passing first into the right renal region, then flowing into the pelvic cavity, and later flooding the whole of the viscera, rapidly setting up general peritonitis.

If the perforation is, as may be the case, only a minute aperture, the extravasation occurs more gradually, and the effusion may at first be limited to the renal pouch, and only gradually extend to the rest of the peritoneal cavity.

The catastrophe of an acute perforation is one of the most serious accidents that the surgeon can be called on to deal with, and unless an early operation can be carried out death is almost inevitable. A diagnosis of the actual cause of the peritonitis has in the past seldom been made —I think because the diagnosis of duodenal ulcer has not until recently received sufficient attention, for the previous history ought in most cases to afford a clue to the condition. The fact, however, remains that out of 71 cases of perforated duodenal ulcer collected from various sources by Mr. Moynihan only 2 were correctly diagnosed, and no less than 18 had been operated on under the impression that the cause of the peritonitis was appendicitis.

Fortunately the gastric and duodenal contents are usually at the time of perforation only slightly septic, so that an operation undertaken within twelve or even twenty-four hours of rupture should offer a good chance of success, if at the same time that the abdominal cavity is drained the ruptured intestine is closed.

The closure of the rupture at the time of operation is essential, for practically all the cases of perforated ulcer of the duodenum treated by simple drainage without repair of the ulcer have been fatal. In my first case, operated on some years ago, because of the extreme illness of the patient, I tried simple drainage with gauze packing, as, on account of extensive adhesions, a long time must have been spent had I attempted repair of the large perforation; the patient rallied, and lived for forty-eight hours. Had I been able to close the opening, I think he would have recovered, as did my second case, operated on under quite as unfavourable conditions, but in which I inverted the edges of the ulcer and covered the line of suture by an omental graft.

Any other treatment than operation is useless and not worth discussing; moreover it has been distinctly proved that after repair of the rupture, simple drainage of the area of operation and, if needful, drainage of the pelvis by a long tube inserted through an incision over the pubes, the drainage being assisted by the semi-recumbent posture, is all that should be done, for the extensive operation of evisceration with thorough cleansing does more than is necessary, and leads to death from shock and from toxaemia in a large proportion of cases.

The mortality is still far too high, and, like operations for perforated gastric ulcer, varies with the time of operation after rupture. It will be brought down, I feel sure, to from 5 to 10 per cent. in cases operated on judiciously within twelve hours of rupture, as ought to be the case in all civilized centres where skilled surgery is available.

Perforation of the duodenum, when adhesions have already formed, so that extravasation is prevented, gives an entirely different history, and has altogether a different course, the condition being one of localized peritonitis, usually ending in abscess that may gradually increase in size and reach the surface beneath the right costal margin, or at the umbilicus, or over the caecal region, thus simulating gall bladder or appendix inflammations. In cases where adhesions to neighbouring organs are very firm an ulcer may slowly advance and produce an excavated visceral ulcer. I have in such conditions seen a smooth ulcerated cavity formed in the liver, in the pancreas, and even on the anterior abdominal wall.

After an abscess has fully formed, if neglected or not diagnosed and treated, it may by secondary rupture into the peritoneal cavity lead to a virulent general peritonitis, or by rupture into the colon, duodenum, stomach, kidney, or gall bladder, it may lead to an intervisceral fistula and to death from septicaemia, or rarely to recovery after a long and tedious illness.

Perforation of an ulcer through a part of the duodenum uncovered by peritoneum, as, for instance, the back or inner parts of the second portion of the duodenum or the back of the third portion, leads again to a widely different train of symptoms, for the pus may burrow upwards, leading to subphrenic abscess that may pass still further, and burst into the pleura or lung, or it may pass backward and produce a perirenal abscess, or downwards and simulate a perityphlitis. I have even seen it to simulate an iliac abscess, as if from spinal disease, and have also seen it to form a pelvic abscess simulating disease of the pelvic organs. I will relate a case to show the difficulty of diagnosis in this condition:

I was asked early last year by a medical friend to see a gentleman, aged 53, who was supposed to be dying from a malignant tumour in the region of the liver, with secondary effusion into the right pleura, and it was only after a hopeless prognosis had been given that I was asked to see him. I elicited the history that twenty years previously he had had a severe attack of indigestion with pain some hours after food, and at that time he remembered that the illness was accompanied by dark motions, which his medical attendant told him were due to altered blood. From that time onwards he had been subject to what he termed weak digestion, characterized by pain three to four hours after a meal, usually relieved by taking food. He was not, however, prevented attending to his work until December, 1905, though in August he consulted a medical man because of the pain after meals and of a pain which awakened him every night from 1 to 3 a.m. In December he became worse, and in January a swelling was first noticed beneath the right costal margin, which was supposed to be an inflamed gall bladder, though in January the diagnosis was again altered, as the urine was noticed to be red and to contain blood, when kidney trouble was diagnosed.

In February the right side of the chest was found to be dull, evidently due to some effusion in the pleura, and at that time the chest was aspirated by a surgeon and 2 pints of clear fluid withdrawn. The diagnosis was then changed to malignant tumour with secondary pleuritic effusion. The patient was then coughing up a quantity of muco-purulent sputum and was rapidly becoming weaker.

When I saw him on February 22nd, 1906, he was very ill and emaciated to an extreme degree. He was suffering from irregular fever with profuse sweats, and his pulse was rapid and feeble. I found well-marked dullness in front as high as the nipple line and rather higher behind, and there was a hard, tender mass below the right costal margin, which did not move during respiration. The right side of the abdomen was absolutely still and rigid during respiration, though the left side moved moderately. The outline of the stomach could be seen down to the level of the umbilicus, and while I was examining the abdomen there was visible gastric contraction, followed by a gurgle as if air and fluid were passing through some stricture. On auscultating the dull area on the right side of the thorax, the gurgle I felt on palpating the stomach could be distinctly heard in the chest, and on percussing with two coins in the epigastrium and over the first part of the duodenum the marked percussion note was distinctly conveyed through the stethoscope applied over the area of dullness. With the history that I had just elicited to guide me and with the well marked physical signs I have mentioned, I had no hesitation in diagnosing subphrenic abscess due to perforation of a duodenal ulcer, and it became clear that the abscess had burst into the lung and was giving rise to the purulent expectoration, while the pleurisy was a secondary and superficial condition.

The patient was moved to a nursing home, and on March 3rd I made an incision between the seventh and eighth ribs in the axillary line over the centre of the area of amphoric resonance. An exploring syringe was passed, and offensive pus was at once obtained. The incision was then extended into the abscess cavity, and over a pint of very fetid pus was evacuated and a large tube inserted. So far as could be made out, the pus was situated between the liver and diaphragm. He forthwith began to improve and the temperature at once became normal.

After the discharge had lessened to a certain extent, it did not tend to diminish further; and, as he began to take more food, the discharge increased, and with the increase of food the digestive symptoms reappeared. It was therefore decided to attack the abdominal disease, and on April 7th, about a month after the first operation, I opened the abdomen a little to the right of the mid-line, and found a large ulcer of the pyloric end of the stomach extending through the pylorus into the duodenum. The pylorus and duodenum were firmly fixed to the under surface of the liver and to the front of the kidney by such firm adhesions that it was felt advisable not to disturb them as they were doubtless bounding the abscess cavity. The cardiac end of the stomach, though dilated, seemed to be healthy, and there was no great difficulty in performing a posterior gastro-enterostomy, from which he made an uninterrupted recovery. He was able to take food by the mouth on the day of operation and by the end of the week he was taking a large quantity of pork, fish, meats, and other foods without discomfort. The discharge from the chest immediately began to lessen and within a week the drainage tube was removed. Within a month from the time of the gastro-enterostomy he was able to leave the nursing home with both wounds thoroughly healed and the tumour that had been felt below the right costal margin had entirely disappeared. When I saw him on May 1st last he had gained 1 lb. in the month, and I have since heard that he is in perfect health.

It will be seen that in this case the difficulties in diagnosis were very great, but that they were at once simplified by obtaining a clear antecedent history.

Cicatricial Contraction.

The method of cure of duodenal and any other peptic ulcer is by cicatricial contraction, and on the site of the ulcer will depend any complications that may follow. For instance, if the ulcer is just beyond the pylorus it may lead to stenosis resulting in gastric dilatation with the well-known symptoms. If the ulcer be lower down it may cause obstruction to the bile and pancreatic ducts, leading to persistent jaundice and to cystic or other disease of the pancreas. If situated lower, where the gastric and intestinal portions of the duodenum join, it may lead to complete obliteration of the first portion of the duodenum. In one case of this kind that I saw in which the obstruction was in the second portion of the duodenum an hour-glass stomach had been established, the fundus being actually formed by a dilated stomach and dilated first portion of the duodenum connected by the pyloric ring, which was widely dilated, the condition was most likely relieved by a gastro-enterostomy.

In consequence of the bile passages by cicatricial contraction a cholecystenterostomy will give relief to the jaundice, but the obstruction of the pancreatic duct may lead to atrophy of the pancreas and to secondary glycosuria. This sequence of events I experienced in an analogous case in which both ducts were obstructed, and, although the obstructive jaundice was relieved by operation, and the patient lived for nearly a year in comfort, death ultimately occurred from glycosuria and acetonaemia.

Adhesions.

If the ulcer advances slowly towards the surface, a local peritonitis will occur, leading to adhesions to adjacent organs or to parietal peritoneum. Thus embarrassing adhesions may be found between the duodenum, gall bladder, liver, stomach, or colon, giving rise to various symptoms according to the part affected, and leading readily to errors in diagnosis. Thus I have seen intestinal obstruction due to adhesions around the colon set up by a local peritonitis from duodenal ulcer; adhesions around the bile ducts setting up jaundice or producing attacks of pain simulating gall stones in the cystic or common ducts; kinking of the pylorus from adhesions to the liver or to the abdominal wall, as well as other conditions leading to a suspicion of recurrent appendicitis, renal calculus, ovarian disease, etc.

Cancer.

Though it is difficult to prove, it seems possible that duodenal cancer may supervene as the result of the irritation of duodenal ulcer, just as the sequence has apparently been so directly proved between gastric ulcer and cancer. Duodenal cancer is, however, rare, whereas duodenal ulcer is common, and as yet the observations pointing to a direct connexion between the two diseases are too few to generalize on. Dr. Mayo has stated that he has only twice seen primary cancer of the duodenum, once developing on an ulcer base.

I have operated on three occasions for primary cancer of the duodenum producing intestinal obstruction, the symptoms resembling those of obstruction at the pylorus. In all, gastro-enterostomy gave relief for a time, in one for a year. In none of the cases could I trace any connexion between ulcer and cancer.

Chronic Pancreatitis.

When subacute or chronic pancreatitis is associated with duodenal ulcer—a condition which it is possible to diagnose by the rapid loss of weight and jaundice, associated with the presence of large quantities of neutral fat in the motions and of the characteristic reaction in the urine—the need for operative treatment becomes additionally urgent, otherwise the pancreatic disease will progress and lead to glycosuria, if the patient survives a sufficient length of time. Another and more acute danger would also be the advent of infective cholangitis, leading to septicaemia.

A gastro-enterostomy is the first indication; but if the jaundice is well marked it may have to be supplemented by a cholecystenterostomy in order to relieve the jaundice and to take pressure off the pancreas. I have performed this double operation with complete success, both as regards the duodenal ulcer, the interstitial pancreatitis, and the jaundice.

Treatment of Duodenal Ulcer.

If duodenal ulcer could be diagnosed early and with certainty, the importance of a thorough course of treatment by diet and rest might be the means of bringing about a cure of the condition. But the facts that the symptoms are often comparatively slight or even absent in a certain proportion of cases at the inception of the disease, and that it is frequently difficult to say at first that the case is not one of simple gastro-duodenal catarrh, result in the trouble being seldom treated seriously until the symptoms have persisted off and on for a long time, sometimes for many years, or until some more severe attack or one of the serious complications leads to a diagnosis being made. Then, perhaps, the patient will submit to restraint in diet and to a course of medical treatment, which is as a rule left off as soon as he is relieved, to be resumed again in a half hearted manner at each recurrence of symptoms until the time comes that the disease can no longer be dallied with, and if complications do not prove it, the patient grasps the fact that he is seriously ill and must have true remedial treatment. I have seen so many cases that have been treated medi-

cally off and on for years and which ultimately had to submit to surgical treatment, either for the disease or for complications resulting from it, before obtaining real relief, that I sometimes wonder whether a patient with chronic duodenal ulcer is ever cured by medical treatment alone.

Lapeyre says that very few completely cicatrized ulcers have been observed, but Perry and Shaw found evidence of repair, more or less complete, in 50 per cent. of cases coming to autopsy, and in several the cicatrix had produced stricture of the duodenum.

Fortunately surgical treatment offers not only a means of relief but of cure in this otherwise troublesome and dangerous disease.

Surgical treatment may be either direct or indirect. By direct treatment I mean excision of the ulcer or an infolding of the duodenal wall at the site of the disease. By indirect treatment I mean a gastro-enterostomy with or without occlusion of the pylorus.

Except in some of my very early cases in which a duodenal ulcer was associated with ulceration and thickening of the pylorus and in which I excised the ulcerated area, or while performing pyloroplasty took the opportunity of excising the ulcer, I have not attempted the direct treatment of duodenal ulcer; moreover, in these cases, though temporary relief was given, subsequent operative treatment was required, so that my experience does not lead me to favour in any way the direct treatment of this condition.

My results after the indirect method have been so satisfactory, whether looked at from the immediate or ultimate results, that I can see no need to consider the direct operation further, especially as there seems to be no evidence to prove that carcinoma develops in the healed scars of duodenal ulcers, since cancer of the duodenum is so very uncommon, while ulcer is by no means rare.

Operation.

My experience leads me to express a very decided opinion that the operation of posterior gastro-enterostomy is *the* treatment for duodenal ulcer. It acts by diverting the food from the ulcerated region and so relieving the ulcer from the irritating effects of the acid stomach contents, thus enabling it to heal smoothly, but it also at the same time relieves the associated conditions, hyperchlorhydria, spasm of the pylorus and dilatation of the stomach.

The relief is immediate, and within a very short time the patient can, as a rule, take his food without pain or discomfort, and without the subsequent flatulency and other distressing symptoms usually associated with duodenal ulcer.

Apart from the complication of perforation, I have operated on 66 cases of duodenal ulcer by the operation of posterior gastro-enterostomy, and, I am happy to say, without having lost a single case as the result of operation.

Not only are the immediate results good, but the ultimate issue is very satisfactory, as I know by the communications I have had subsequently from my patients or from the medical men with whom I have been associated in their cases. But my information of the after-progress of some of these cases has been even more direct, for in quite a number of cases the operations have been on medical or other professional men, whom I have had the opportunity of seeing subsequently and knowing in their ordinary social life.

The method I always adopt in performing gastro-jejunostomy is the posterior operation, in which the lower border of the stomach is united to the jejunum as near to the duodeno-jejunal flexure as can be conveniently managed; clamps are always used; the opening is made sufficiently large, about 2 in.; the margins of the opening are united by two continuous sutures, an outer of Pagenstecher's thread taking up the serous coats a little way from the margin, an inner of chromic catgut taking up the whole thickness of the cut walls of the stomach and intestine. Mucous membrane is, as a rule, not excised, neither is the pylorus occluded nor the ulcer infolded, unless the duodenal wall is showing signs of being thinned. Subsequent to operation the patient is always placed in bed well propped up, in fact, almost in the sitting posture, a position which I have found by long experience is not only the most comfortable to the patient, but is one that avoids chest complications. It assists thoracic breathing, takes off pressure from the heart, assists drainage from the stomach into the jejunum, as a rule prevents vomiting subsequent to operation, and by giving the patient a sense of well-being, it hastens convalescence, and enables him to be moved on to the sofa within a fortnight of operation.

In peritonitis from ruptured duodenal ulcer this position serves another purpose, that of draining septic fluids from the diaphragmatic area, where absorption is more dangerous, to the pelvic area, where septic fluids can be more easily drained away, or if not removed, can be more safely disposed of by the efforts of nature.

During operation the patient is enveloped in a cotton-wool suit made by the nurse of gamgee tissue, thus preventing chilling of the extremities, and avoiding shock; this suit is of use subsequently by keeping the patient warm when propped up in a position in which it is difficult to keep him covered by the bedclothes.

I think the value of this care to avoid chill during operation is shown by the almost total absence of chest complications in my cases as compared with their frequency in many of the Continental clinics, in some of which, to my knowledge, the patient suffers much exposure before and even during operation.

The administration of saline fluid per rectum subsequent to operation in large quantities is of great service in relieving thirst, and in supplying fluid to keep the blood vessels full until the patient can take sufficient fluid and food by the mouth. Feeding by the mouth is begun as soon as the nauseating effect of the anaesthetic has passed off, so that by the evening of the day of operation the patient is taking 1 oz. of albumen water or other bland fluid every hour, and on the day following 2 oz. at hourly intervals.

The administration of food at frequent intervals is advisable for some time after operation in order to absorb and neutralize the irritating acid of the gastric juice.

For some time only soft food is allowed, such as fish, mashed potatoes and gravy, jellies, pounded meats, etc., and between each meal I usually advise that some milk and lime water should be given to take up the excess of acid; this saves discomfort, and prevents harm should any of the stomach contents pass through the pylorus. If the pulse is feeble during or after operation, injections of liq. strychninae in 5-minim doses are useful, and, if needful, they are repeated every four or six hours for a time.

I have thus far spoken of gastro-enterostomy as an operation for the relief and cure of uncomplicated duodenal ulcer, but the same operation is the one indicated in many of its complications, such as haemorrhage, obstruction from adhesions, or from contraction of the lumen due to cicatrization of the ulcer, and for dilatation of the stomach secondary to ulcer; it may also be called for as a primary or secondary procedure in perforation of duodenal ulcer and as a secondary measure in abscess or in extensive adhesions following on perforation.

Treatment of Haematemesis or Melaena.

Bleeding from duodenal ulcer may be so profuse as to terminate fatally within a few minutes, and yet there may be no external sign of haemorrhage, though usually, even in fulminating haemorrhage, the end is longer delayed and the cause rendered evident by haematemesis or melaena; or the first bleeding may be severe for a time and cease, to recur at longer or shorter intervals; or, again, it may be slight but persistent, leading to profound anaemia.

I think it may be taken for granted that when once a duodenal ulcer has given rise to haemorrhage, whether that be shown as haematemesis or as melaena, the bleeding will be repeated and the recurrence of the bleeding may be severe or even fatal.

The conditions in duodenal haemorrhage are quite different from those attending the bleeding from gastric erosions or even from acute gastric ulcer, but they resemble in severity and in importance those occurring from chronic ulcer of the stomach when a large vessel is eroded.

My conviction is that a second haemorrhage ought not to be waited for, but that operation ought to be undertaken as soon as the first bleeding has ceased and before the second attack comes on.

In the quiescent interval a gastro-enterostomy is a very successful operation, which may be relied on in a very large percentage of cases to prevent any recurrence of the bleeding, and at the same time to lead to a cure of the ulcer. I have operated on a considerable number of cases and know the statement to be correct.

The direct treatment of the bleeding area can only rarely be necessary or desirable, but I know of a case in which a colleague felt it desirable to operate during the course of violent haemorrhage, in which the life of the patient was threatened, and finding the small intestines filled with blood he saw that the only chance was to open the duodenum and find the bleeding-point, which he was fortunately able to do, and to ligature the vessel, after which the patient made a complete recovery.

In two cases of severe haematemesis and melaena arising from duodenal ulcers, I have had to operate during the haemorrhage, which in each case recurred shortly before the patient was to be operated on, in one case just before and in the other two or three hours before. In both a posterior gastro-jejunostomy was performed; in neither was there any repetition of the bleeding, and in both a complete recovery followed. In neither of these cases would it have been practicable to explore the duodenum, either on account of the critical condition of the patients or from the presence of an inflammatory tumour surrounded by numerous adhesions.

In cases operated on in the quiescent interval between the bleeding attacks, the direct operation is, I think, undesirable, as it involves a dangerous operation when a safe one would answer equally well or better. Moreover, after the local operation a gastro-enterostomy would also be required for the cure of the ulcer, hence for both these reasons I would emphatically advise the indirect operation as the one to be performed with very few exceptions in case of haemorrhage from duodenal ulcer.

The Treatment of Perforation.

It is universally accepted that early operation is as desirable in case of perforation of a duodenal as of a gastric ulcer, and that time has more to do with success or failure than has any other element, if ordinary skill is used. If the extravasation occurs through a small leak, the peritoneal soiling will be localized to the right side of the abdomen, and as at first the effusion is only slightly septic, a vertical incision through the right rectus about 1 in. to the right of the mid-line, which will enable the right kidney pouch to be cleansed and the opening in the duodenum to be sutured, is only necessary. Drainage in such a favourable case is not absolutely necessary, though personally I think it is safer to drain; irrigation of the peritoneal cavity under these circumstances is undesirable, and excision of the ulcer is not called for. The edges of the perforation should be turned inwards and a Lembert continuous suture, or several interrupted peritoneal sutures, or a purse-string suture, according to the size of the opening, must be applied, and if possible an adjoining piece of omentum should be stitched lightly over the line of suture.

If the perforation is a large one and the abdomen has been flooded with the stomach and duodenal contents, the incision over the right rectus will still be called for to remedy the rupture; but, in addition, a small incision should be made over the pelvis just large enough to admit a tube that will reach to the bottom of Douglas's pouch in the female and to the bottom of the pouch between the rectum and bladder in the male.

Now comes the question of irrigation with hot saline fluid. Many surgeons dread using it, and say that they get better results without it; Murphy is very emphatic on this point. I must confess that I have only seen good to result from saline irrigation if applied injudiciously in such cases for with the patient in the half-sitting posture, all the fluid gravitates to the pelvis and escapes through the tube bringing with it any faeces or matter that has entered the peritoneum. The viscera should not be handled, and any rough sponging or wiping out of the abdomen should on no account be done.

If the patient is in fair condition at the time of operation and the peritoneum has not lost its polish, the prognosis is good.

If the endothelium of the peritoneal sac has been destroyed and the intestines are distended from paralysis of the muscular coat, the duodenal opening should be rapidly repaired, irrigation with hot normal saline solution be thoroughly but quickly performed, and free pelvic drainage adopted.

In exceptional cases seen late, after distension has supervened, it may be advisable to bring out a loop of distended small gut and incise it transversely so as to get rid of flatus and fluid faeces in order to relieve the distension, afterwards suturing and returning it; and while the patient is under the anaesthetic the stomach tube should be passed and gastric lavage effected.

The patient must afterwards be well propped up in bed so as to favour drainage, and must have saline fluid administered by the rectum in large quantity after the manner recommended by Murphy, and he will be benefited by strychnine given subcutaneously.

Although the prognosis in such a late case is not good, it is not hopeless; the danger will have been due to the delay and to the absorption of toxins, and if the patient can be kept going for a time until the poison is washed out of the blood he may recover.

In case of perforation leading to localized suppuration, it is important not to delay operation lest the abscess burst secondarily into the peritoneum, or if extending upwards burst into the pleura or pericardium.

In such cases the abscess must be opened and drained, but it is neither necessary nor wise to look for the perforation, which is often very small, and may give no further trouble; moreover, to search for a perforation under such conditions would involve danger of separating adhesions and spreading infection.

The question of performing gastro-enterostomy in perforated duodenal ulcer is important, and not always easy to decide. In some cases, when the patient is seen shortly after perforation and is in good condition, a gastro-enterostomy will lead to a more rapid repair of the ulcer, and may not seriously add to the shock; but, as a rule, the added shock of an extended operation is not advisable, and I prefer to do the gastro-enterostomy as a subsequent operation if necessary. In abscess following on perforation I think this course ought always to be followed, and, in my experience, this has proved satisfactory.

Dr. W. J. Mayo, in speaking of the subject, says: "In 3 out of 10 cases of acute perforation we made a gastro-jejunostomy at the same time, but, generally speaking, it is safer to do this as a second operation if necessary." Out of the 10 cases 4 died.

During the past two or three years a considerable number of cases of operation for perforated duodenal ulcers have been recorded by individual surgeons, but the limited number of cases coming under the notice of any one surgeon renders a statistical estimate in most cases almost useless unless a considerable number of cases from various sources can be collected and analysed together.

I have collected all the cases of operations for acute perforating duodenal ulcer that I could find recorded, and find that of 155 cases of which 52 recovered and 103 died, a mortality of 66 per cent.—61 were operated on within twenty-four hours of rupture, with 39 recoveries and 23 deaths—a mortality of 37·7 per cent.—whereas of 63 cases operated on later than twenty-four hours after rupture there were 11 recoveries and 52 deaths, a mortality of 82·5 per cent. Of the remaining 31 cases, in which the time of operation was not stated, but in which the time was probably over twenty-four hours after rupture, 3 recovered and 28 died—a mortality of 90·3 per cent.

One point is clearly brought out on analysis, and that is, the earlier operation is performed after rupture the better the result.

DR. F. C. DE MARY, who died recently in Paris at the age of 76, gave up the practice of his profession when he was elected a member of the Chamber of Deputies in 1871. He was Minister of Agriculture in the Freycinet Cabinet (1882) and afterwards in the Duclerc and Fallières Ministries. In the latter administration he exchanged the portfolio of Agriculture for that of Minister of Marine, an office which he also held in the Tirard Cabinet (1887). During one session he was Vice-President of the Chamber of Deputies.

THE late MRS. ELIZABETH CARDWELL of Harrogate, who died on October 11th, left £5,000 to the Dewsbury and District General Infirmary, £3,000 to the Harrogate Infirmary, £3,000 to the Yorkshire Home and Hospital for Chronic and Incurable Diseases at Harrogate, and £2,000 to the Leeds General Infirmary.

A CASE OF REPEATED ABDOMINAL SECTION FOR PERFORATION OF GASTRIC ULCERS.

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OPERATION in cases of perforation of gastric ulcer is nowadays so common, and is usually attended with such successful results, that only the unusual sequence of events in the following case makes me think it of sufficient interest to place on record.

R. M., aged 27, was admitted into hospital on April 24th, 1906, with the following history: Since the age of 10 he had had almost constant trouble with his stomach, severe attacks of pain in the epigastrium coming on, as a rule, two to four hours after every meal, and lasting until the next. After taking food he always had total relief from pain for at least an hour. The kind of food taken did not appear to influence the amount of pain, but the patient noticed that after pork pie he always had a much longer period of relief than after other kinds of food. The patient had practically no vomiting and never any haematemesis. Pressure over the stomach did not increase or decrease the pain. At times there would be freedom from attacks for about a month, and then they would return and last two or three months. During freedom from pain he felt perfectly well and had a good appetite, though he had a dislike for butter and all greasy substances, and did not eat much butchers' meat. As the patient got older the attacks of pain remained about the same, until five years ago, when they increased in severity. About the end of January, 1902, the pains in the epigastrium became very bad, but seemed to be relieved by vomiting, which was induced by taking Seidlitz powders.

On the night of February 10th, 1902, he was awakened by a sharp stabbing pain in the epigastrium, different to anything he had had before. His medical attendant, Dr. W. S. Kerr, saw him and diagnosed perforation of a gastric ulcer, and had him transferred to the Royal Infirmary, where my colleague, Mr. Arthur Connell, performed laparotomy. At the operation an ulcer which had perforated was found at the upper and posterior surface of the first part of the duodenum, there was also pyloric obstruction with considerable dilatation of the stomach and gastroptosis. The ulcer was sutured, the peritoneal cavity cleansed, and the wound closed. The patient made an excellent recovery, and six weeks later Mr. Connell performed an anterior gastro-enterostomy. After the latter operation there was some suppuration about the wound, but the patient left the hospital perfectly well after a total stay of ten weeks.

For seven months he had perfect freedom from pain or discomfort, but about Christmas he began again to have attacks of discomfort and a sense of fullness in the epigastrium. Attacks of this sort came on about every six months, and would last one or two weeks, being relieved by vomiting, which he induced by tickling the fauces. With these attacks of discomfort there was always a pain in the left hypochondrium; in fact, this pain always seemed to be the precursor of any stomach trouble.

At Christmas, 1904, he had a sudden attack of severe pain, first all over the abdomen, later becoming more localized in the left side, and worse on inspiration. There was no vomiting. The pain eased somewhat on his going to bed, but lasted for two weeks. He was on light diet at the time, but food did not appear to influence the pain. Occasional attacks of pain occurred after this until Easter, 1905. From then he ceased to eat butchers' meat, living almost entirely on a vegetable diet. The next twelve months he describes as the best he remembers, as he was almost free from pain and gained in weight.

On April 24th, 1906, the patient was again seized with extreme pain in the epigastrium while writing at his desk; he did not vomit but sweated profusely. After being taken home in a cab, and put to bed, the pain being intense, Dr. Kerr saw him, and diagnosing a perforated gastric ulcer, again sent him to the infirmary, where he was admitted under my care. I saw the man about six hours after the onset of the pain. He was in bed with his legs drawn up, and with a slight expression of pain on his face, but not a typical abdominal facies. He complained of moderately severe abdominal pain, most acute under the lower two or three ribs on the left side; the pain was much less than it had been, but he had had morphine administered before admission. The abdomen was not distended. The abdominal muscles were rigid, especially the left rectus. There was slight movement of the abdominal wall on respiration. Palpation was painful; the liver dullness was not diminished, and the resonance over the left hypochondrium was more tympanitic than usual. The tongue was dry, the pulse 80, and the temperature 100° F. There had been no vomiting.

On a consideration of the history of the case, the mode of onset, the physical signs present, paying due regard to the fact that the patient had had morphine, I felt reasonably certain that the diagnosis of perforated gastric ulcer was correct, and decided to operate.

An incision into the abdomen, made somewhat to the left side of the middle line, revealed considerable adhesions about the anterior surface of the stomach, especially to the right and about the gastro-enterostomy. The cardia of the stomach was comparatively free from adhesions; here bubbles of gas and the welling up of turbid fluid led to the discovery of a perforated ulcer on the extreme left limit of the stomach about the size of sixpence. Although the general peritoneal cavity was perfectly open to infection at this spot, the area of this infection was small, principally between the stomach and spleen and slightly towards the region of the kidney. The stomach, as far as could be made out, was not very much dilated; the condition of the pylorus could not be determined. The gastro-enterostomy appeared to be patent, but whether it could be active with such extensive adhesions around it was open to doubt. The perforation was closed, the infected area cleansed with sponges, and the wound closed in the usual manner. For the first twenty-four hours the patient vomited very often; as he had vomited for many days after his previous operations and only putting him in the upright position checked it, this was done now with equal success. After this he made an uninterrupted recovery and left hospital on the twentieth day. When seen some little time afterwards he was in fair health, but still at times had discomfort after meals.

There are several points of interest about this case. In the first place, it must rarely happen that a person is called upon to twice undergo laparotomy for the perforation of two totally distinct ulcers. I have been unable to find mention of any similar experience in any of the literature bearing on the subject at my command (Nothnagel, Mayo Robson, Treves, von Bergmann). The early age at which this unfortunate man commenced to suffer from symptoms referable to serious trouble in his stomach is again of interest. For thirteen years there had been symptoms pointing to mischief in the neighbourhood of the pylorus, or more probably of the duodenum. The onset of the pain a few hours after the taking of food, when, the digestion of the meal nearing completion, the beginning relaxation of the pyloric sphincter allows the contents of the stomach to flow into the duodenum, and hence over any hyperaesthetic spot in that organ, is very suggestive of duodenal ulcer. The interesting fact related by the patient that indigestible articles of food like pork pie delayed the onset of the pain is in strict accordance with this theory, pork requiring four or five hours for its digestion, while mutton only requires two or three hours. This fact of the possibility of retarding the onset of the pain in cases of duodenal ulcer by the administration of indigestible food, or by eating during the digestion of a previous meal, has been noted clinically by Chvostek.[1] The same thing is borne out experimentally by Cannon,[2] who has shown in the course of his investigations on the movements of the stomach during digestion, by means of the x rays, in cats, that if towards the completion of the digestion of a meal (the movement of which, owing to its admixture with a bismuth salt, was visible on the screen) a hard tablet or button made principally of bismuth was administered, its impact on the pyloric orifice immediately caused the sphincter to contract, and stopped the onward flow of chyme from the stomach to the duodenum for some little time.

The dilatation of the stomach to which many of his later symptoms were due may have been produced by actual ulceration of the pylorus, or may have been produced by the spasmodic closure of the sphincter induced by the irritation of the neighbouring ulcer in the duodenum.

The condition of the gastro-enterostomy in this patient was such that no deduction of any value as to the influence of this operation either in preventing the recurrence of ulcers or on their healing or progress could be made. That the drainage of the stomach by its means might still be effectual seemed to be shown by the state of contraction of the stomach found at the second operation compared to that present in 1902.

While ulcer of the cardiac end of the stomach is very uncommon, the presence of the referred pain over the lower ribs in the epigastric region—that is, along the sixth, seventh, and eighth left intercostal nerves—is in accordance with our knowledge that the cardia receives its innervation from twigs from those same dorsal nerves—the sixth, seventh, and eighth nerves.

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1 *Vienna Medical Year Book*, 1883. 2 *Amer. Journ. Physiol.* vol. i., 1898.

MULTIPLE INTERNAL DIVERTICULA (INVAGINATIONS?) OF THE SMALL INTESTINE.

BY A. A. SCOT SKIRVING, M.B., C.M.EDIN., F.R.C.S.EDIN., C.M.G.,
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THE following case seems of sufficient interest to place on record, and I have not been able to find a reference to a similar condition. A little more than a year ago (November 9th, 1905), while operating in the Royal Infirmary on a case of right-sided acquired strangulated inguinal hernia in a man aged 33 years, and while about to return the congested but viable intestine, I noticed several peculiar depressions on the convexity of the loop. The amount of bowel involved was about 9 in., and the depressions (six in number) were situated at about equal distances from one another. On exploration with a probe it was found that these depressions represented the mouths of hollow finger-like processes which projected obliquely into the lumen of the gut for distances varying from 1 in. (the shortest) to 2 in. (the longest). The largest process was of sufficient diameter just to permit the insertion of a Kocher's dissector. All ended blindly, and were apparently localized invaginations of the whole thickness of the wall of the gut. The condition will best be understood if one imagines a number of slender Meckel's diverticula pulled (inside out) into the interior of the bowel. It is easier, however, to describe the condition than to suggest an explanation for it.

That these localized invaginations (?) were of recent origin, due to some irregular peristalsis of the bowel, it is impossible to believe. Their length, their number, and the absence of any constrictions in the bowel at their sites preclude this supposition. Moreover, repeated gentle attempts in various ways to "reduce" one of them failed. The bowel was accordingly replaced in the abdomen, leaving them exactly as they were. It is interesting, however, to note that they were apparently confined to the portion of intestine involved in the hernia, since examination of several inches of bowel above and below the strangulated loop revealed no indication of a similar condition. Further, on close inspection of the loop, certain slight thickenings of its wall, apparently of a chronic inflammatory character, could be seen in the intervals between the openings of the diverticula. These thickenings (they could not be called bands) were situated at right angles to the long axis of the bowel. It may be mentioned, also, that a few, but not very strong, adhesions existed near the neck of the sac.

Since these appearances seemed to suggest, at any rate, a causal connexion between the hernia and the diverticula, special care was taken on the patient's recovery to obtain a full history of his case.

The more important points were as follows:

No history of enteric fever, or indeed of any illness of any sort. Bowels have always been regular. Patient first noticed the hernia as a small swelling, three years ago, which disappeared when he lay down. He does not think it [illegible] patient is a carpenter. The hernia gradually [illegible] and a year ago it had become [illegible] size of a duck's egg. At this time, [illegible] found he could not put it back, and [illegible] Reduction was successfully accomplished by Dr. Miller of New Mains, under chloroform. [illegible] frequently descended into [illegible] patient is always able to put it back until the present [illegible] strangulation [illegible] 9th, 1905. On this occasion Dr. Kay of [illegible] found it irreducible, and accordingly sent him [illegible]. After [illegible] patient ever went to bed.

I have delayed publishing this case until now, as I wished to see whether the after-history might throw any further light on the question.

I saw the patient lately (December 15th, 1906), when he told me that he has been in good health since the operation, and able to work. His bowels had been regular. The cicatrix is sound (radical cure was done at the time of the herniotomy). The only thing that he complains of is that for the last six months he has felt "slight aching pains" in the right inguinal region in the evenings after he work is over. He also volunteered the interesting information that for some four or five years before he noticed the hernia he suffered from somewhat similar pains in the same situation. These, however, were more severe than the present ones, and of a "prickling" character. It would be interesting to know whether either of these pains is associated or not with the diverticula.

I am indebted to Dr. William Robertson, late House-Surgeon Edinburgh Royal Infirmary, who assisted me at the operation, for reading over the notes of this case, in the description of which he concurs.

An Address
ON
OPSONINS AND THEIR UTILITY IN PRACTICAL MEDICINE.

READ BEFORE THE MEETING OF THE TUNBRIDGE WELLS AND NEIGHBOURING DIVISIONS OF THE BRITISH MEDICAL ASSOCIATION.

BY HERBERT FRENCH, M.A., M.D.OXON.,
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I DO not wish it to be supposed that what I have here to say about opsonins and the question of vaccine treatment of certain diseases is any original work of my own; the credit of the work belongs to Koch, Behring, Wright, Bulloch, Eyre, Louisson, and a host of other workers. It is to Sir A. E. Wright that our present knowledge of opsonins is mainly due.

WHAT OPSONINS ARE.

The white corpuscles of the blood can be kept alive outside the body; experiments can therefore be made with living leucocyes in test tubes and so on. Under the microscope the great Professor Metchnikoff watched such leucocytes engulfing or swallowing up bacteria by a process which we all know by the name "phagocytosis." Phagocytosis is at the bottom of all estimations of the opsonic index.

Let me confine myself for the present to the phagocytosis of tubercle bacilli. If living leucocytes in a test tube be incubated at body temperature along with a number of tubercle bacilli obtained from a cultivation of these organisms, a film can be made of the leucocytes upon a microscope slide, stained appropriately by the Ziehl-Nielsen method for tubercle bacilli, and examined under a microscope with a $\frac{1}{12}$ in. oil-immersion lens. It will be found that many of the tubercle bacilli are now inside the leucocytes, having been, so to speak, eaten by them. The number thus eaten up by 100 leucocytes can be counted. We shall all agree that the larger the number of tubercle bacilli taken up by 100 leucocytes in this way in a given time, the greater is the phagocytic power of those leucocytes for the tubercle bacilli in question. For instance, granted that the same cultivation of tubercle bacilli be used in each case, and that the time and temperature of incubation be the same, if it be found that one set of leucocytes engulf 100 tubercle bacilli per 100 leucocytes, and another set engulf 200 tubercle bacilli per 100 leucocytes, then the phagocytic power in the latter case is twice that in the former.

The next question is, what are the factors which cause variations in the phagocytic power of leucocytes? There are, of course, many factors—such as the temperature of the incubator, the freshness of the leucocytes, the virulence of the tubercle bacilli, and so on. We do not need to consider all these.

I.

If I were to obtain one set of quite fresh leucocytes from my own blood and another set of quite fresh leucocytes from a phthisical patient's blood, and some blood serum from a healthy third person, and were then to prepare two test tubes, putting into each the same amount of the same culture of tubercle bacilli, and the same quantities of the serum, and then added my leucocytes to the one, and the phthisical patient's leucocytes to the other, and if after incubating the two for the same length of time I prepared films, and counted the tubercle bacilli taken up by 100 of each of our leucocytes, I should find that the phthisical patient's leucocytes and my leucocytes would have taken up almost exactly equal numbers of bacilli—that is to say, leucocytes from different human

sources, mixed with the same blood serum, have approximately equal phagocytic powers for a given microbe.

II.

The next step is almost the converse of the preceding. If I were to prepare some quite fresh leucocytes from the blood of the healthy third person, and some serum from my own blood and some serum from the phthisical patient's blood, and were then to prepare two test tubes, putting into each the same amount of the same culture of tubercle bacilli, and the same quantity of the third person's leucocytes to each, and then added my serum to the one and the phthisical patient's serum to the other; and if, after incubating the two for the same length of time, I should again prepare films, and count the tubercle bacilli taken up by 100 of the third person's leucocytes in each tube, then if the phthisical patient were fairly ill, I should find that though the leucocytes were in each case from the same healthy source, they would have taken up far more tubercle bacilli when mixed with my serum than when mixed with the phthisical patient's serum.

It will be seen from the two series of experiments that the phagocytic power of human leucocytes depends very little upon the leucocytes themselves, but very much upon the blood serum in which those leucocytes are. The something in the serum which influences the phagocytic power of the leucocytes has not been isolated, and how it influences phagocytosis is uncertain. It is thought that the serum contains substances which act upon the bacteria, rendering them more easily eaten by the leucocytes. These substances are the opsonins, a name derived from Greek words which mean "prepared for being eaten."

The Opsonic Index.

My next duty is to explain what is meant by the opsonic index. Indirectly I have already done so, but I will describe an imaginary case. Suppose I wished to estimate my own opsonic index to tubercle bacilli. I should prepare blood serum from myself, obtain some blood serum from another person known to be healthy, some fresh leucocytes no matter from whom, and a culture of tubercle bacilli. I should prepare two test tubes—

Putting into the first:
- Leucocytes,
- Some of the tubercle bacilli,
- And my serum.

And into the second:
- An equal quantity of the leucocytes,
- An equal quantity of the tubercle bacilli,
- The serum of a healthy person.

I should then incubate both test tubes at the same temperature, preferably body heat, and each for the same length of time. It does not much matter how long the incubation is, provided it be the same for my test tube as for the control. I should then make films from each test tube, and count the bacteria engulfed by an equal number of leucocytes in each. If in what I call "my" tube 100 leucocytes had taken up 150 tubercle bacilli, and in the control tube 100 leucocytes had taken up, say, 300, my opsonic index to tubercle bacilli would be $\frac{150}{300}$, or 0.5. The opsonic index is, in other words, the ratio of the bacilli engulfed by leucocytes incubated in the patient's serum to those engulfed by an equal number of leucocytes incubated under similar circumstances in healthy serum.

The estimation of an opsonic index takes time, three to four hours even in a bacteriological laboratory; but when many can be carried on simultaneously it does not take a great deal longer to do several. I will explain all that is necessary to be done by the medical man himself. He needs a small glass bulb, with open capillary ends. A simple Widal tube is as good as any, and the method of getting the small quantity of blood required is precisely similar to that we are constantly using for the Widal test in typhoid fever. The lobule of the ear is reddened by rapid friction; it is then sharply pricked with a surgical needle. The capillary end of the Widal tube is held to the drop of blood that comes, and by simple gravity and capillary attraction, without suction, the tube is filled at the one end, care being taken not to let the blood run down to the other. Both ends are sealed off in a flame, the clear end first, and the tube left horizontal for about twenty minutes. The blood will then have completely clotted, and serum from the clot, almost free from corpuscles, will run down into the free end when the tube is inverted. The tube is put back into its case, placed in an envelope, and posted to the laboratory. The medical man has finished his share of the work. The next day or the day after the report comes back saying that the opsonic index to such-and-such an organism is so-and-so.

Various Opsonins.

Each blood serum contains many different opsonins—one variety for each sort of microbe. For example, the opsonic index of a given serum may be estimated against tubercle bacilli, staphylococci, gonococci, streptococci, and so on, by incubation with these different organisms respectively, and it does not follow that the opsonic index of a given serum will be high to staphylococci because it happens to be high to tubercle bacilli, and so on. It is necessary to specify the particular organism against which the opsonic index is to be estimated in each individual case.

Diagnostic Value of Opsonic Index (1).

In the case of tubercle bacilli, the opsonic indices of a series of healthy individuals may vary from 0.8 to 1.2, or thereabouts, but in tuberculous patients the index may be as low as 0.3 or as high as 1.8, or even higher. The estimation, therefore, may be of considerable diagnostic value in cases where there is doubt as to whether the lesion is tuberculous or not. If the index is below 0.7 or above 1.3, the argument will be in favour of tubercle, the resisting power of the patient being low in the first case, high in the second.

The Effects of Vaccines upon the Opsonic Index and the Principles of Vaccine Treatment in Disease.

It is known that living organisms, during their growth, produce waste products inimical to the organisms themselves. Yeast is one of the simplest examples of this. Yeast lives upon grape sugar, decomposing it and producing alcohol; alcohol is inimical to yeast; when the percentage of alcohol in a fermenting sugar solution reaches a certain point, further fermentation ceases because the yeast can no longer grow. Microbes in culture media produce antibodies in a similar way.

Ever since Koch's earlier discoveries there have been repeated attempts to turn these facts to therapeutic account. Koch himself hoped to cure phthisis and other tuberculous lesions by injecting patients with extracts of tubercle bacilli. The results were bad, death often being even accelerated. The method of treatment fell into disrepute. It is now reviving, and with good results.

The amount of tuberculin injected by Koch was far too large, and there was no method of checking its effects. It is owing to Wright's investigations upon opsonic indices that we have now learned what quantity of tuberculin should be given, when it should be given, and when the dose should be repeated.

Vaccine treatment, with or without estimations of the opsonic indices, is not a means of working absolute miracles, and it must not be supposed that all other forms of treatment at once become unnecessary. It is a method of very real benefit to many patients, but it is to be used in addition to, not in place of, other well-recognized procedures.

Diagnostic Value of Opsonic Index (2).

It has been found that, after injecting $\frac{1}{1000}$ mg. of tuberculin R. into a healthy man, the opsonic index falls slightly for about two days, then rises to slightly above normal, and then returns to what it was originally. A similar injection into a tuberculous patient is followed by a considerable fall in the opsonic index, the latter remaining below what it originally was for a week or more, by which time it has begun to rise again, until in between two and three weeks it has risen above what it was before. The initial fall after the injection is called the negative phase. This negative phase is quite short in healthy people, long in tuberculous subjects, so that we have here an additional means of diagnosis. Formerly, when tuberculin was used as a diagnostic test, it was given in large doses, as it is still in cattle; the test was not positive unless there was both local reddening and pain, and a general reaction with increased pyrexia and illness. With the dose now used, $\frac{1}{1000}$ mg., there is no such gross reaction: the patient does not feel the least ill effects, and need not interrupt his work; but, if the opsonic index be

taken every other day, and the negative phase extends to a week or more, the suspected lesion is most probably tuberculous.

With larger doses of tuberculin the negative phase becomes more marked; a second injection during the negative phase of the first increases the fall, and postpones the subsequent rise. This explains the bad results originally obtained by Koch and others. Much too large a dose of tuberculin was given to start with; the doses were repeated at much too short intervals; the patient's opsonic index was lowered and kept low, diminishing his resisting power and enabling the tubercle bacilli to make fresh inroads, and perhaps kill him from general tuberculosis.

In treating a patient now, the opsonic index of his serum to tubercle bacilli must first be taken. If it is already high, tuberculin treatment will probably effect little, because the patient's tissues are already reacting well, and can probably not be made to react much better by tuberculin. If, on the other hand, the opsonic index be low, or at any rate not high, a dose of $\frac{1}{5000}$ mg. of tuberculin R., obtained in a tiny glass bulb ready sterilized, is taken up in a hypodermic syringe and injected under the skin of the arm or elsewhere, just as in giving a hypodermic injection of morphine. Aseptic precautions in regard to the syringe and the skin are, of course, observed. The opsonic index is estimated at intervals—say upon the third, seventh, fourteenth, and seventeenth days; if it shows no appreciable change, either the patient is not tuberculous or the dose requires to be increased. In most tuberculous cases the $\frac{1}{5000}$ mg. will be sufficient: the negative phase will be over within a fortnight, and in about three weeks from the first injection the positive phase will be well marked. There is no need then to increase the dose, but at the height of the positive phase the next injection of $\frac{1}{5000}$ mg. may be given. The opsonic indices need not necessarily be taken any more, though it might be safer to take them. The great probability is that the third injection will be required at the same time after the second that the second was after the first; so that, having used the opsonic indices to find out how the patient reacts and what time should elapse between the doses in his particular case, the further treatment by tuberculin can be carried on by injections at regular intervals without any necessity for the expense of further opsonic index estimations.

The value of this method of treatment has been proved in many cases of local tuberculous affections—particularly lupus, ulcers of the skin, and tuberculosis of the bladder. Cure does not come about as by a miracle; the lupus cases need light or other form of treatment as well as tuberculin; the tuberculous bladder cases require urotropin and so on as well as tuberculin; but if you could see the relief that has been given in some of the cases by the addition of tuberculin injections to other remedies I am sure you would give them a trial.

Staphylococcal Vaccines.

Vaccines have been made from cultivations of staphylococci, gonococci, and so on, and used as injections similar to those of tuberculin, controlled, both as to dose and as to interval between doses by opsonic index estimations precisely as above. I have had little or no experience of this treatment in gonococcal, streptococcal, or pneumococcal affections, but I have used it many times for staphylococcal troubles.

Acne Vulgaris.

We all know how difficult it is sometimes even to relieve acne; any additional means of combating this common complaint must be welcome. Though the vaccine treatment be not a panacea, I have found it of the greatest service in making other methods of treatment successful. I have seen complexions enormously improved by it after years of disfigurement from constant blains and boils. The cases treated so far have naturally been the worst, but I believe it possible to save every complexion by adopting the vaccine treatment early.

The organism is the staphylococcus but there seem to be different brands in different cases or possibly different mixtures of the three varieties albus, aureus, and citreus. The results obtained with vaccines from one culture of staphylococci may be very different from the results obtained from another. It is necessary therefore, to make the vaccine in each case from the patient's own microbes. All one has to do is to break the top of a pustule in the absence of all antiseptics; collect a little of the pus on a swab; smear it upon the surface of the culture medium in a test tube, which can be obtained from the laboratory; replace the wool stopper; put it into a metal case, and post it back to the laboratory. There they incubate the culture, make an emulsion of it, calculate the number of organisms present, sterilize it, filter it, measure off such quantities as contain the products of 250,000,000 staphylococci, seal each quantity in a glass bulb, sterilize the bulbs once more, and post them ready for use. The dose is the content of one bulb. It is injected by means of a hypodermic syringe. No feeling of illness results, and the patient's daily work is not interfered with. For one or two days there is no result; the patient then experiences a feeling of being better, the spots and blains grow less, until, about the seventeenth day or a little earlier, the patient begins to feel he is going back again. This is the time for a second dose.

The effect does not last indefinitely; after half a dozen doses at similar intervals the pimples and boils can usually be kept under with very little trouble by means of the usual local applications; but in my experience it is necessary to go on with the injections at intervals of about three weeks for a long time. In the case of ladies especially this is well worth while, in order to preserve the complexion until such time as the acne will spontaneously cease of itself.

Opsonic Index Estimations not necessary in the Vaccine Treatment of Acne.

I have made no mention of the opsonic index in connexion with this treatment by staphylococcal vaccine. The reason is that I do not think estimations of the opsonic index necessary, unless, perhaps, at the very beginning of the treatment. The opsonic indices have been worked out in so many cases of acne treated in this way, and the results have been so constant that their repetition in each individual case is not needed. The negative phase follows the injection just as it does after tuberculin; the positive phase follows the negative, and reaches its maximum very constantly on or about the seventeenth day, so that we know exactly when the second injection should be given, and so on. We could not have learned this without the assistance of opsonic indices in the first instance; but now that we do know it, opsonic indices in cases of acne are no longer necessary in practical medicine. In this respect acne is very different to tuberculosis; in the latter, the best time for the second dose of tuberculin varies greatly in different patients, and can only be determined by taking the opsonic index at intervals after the first dose.

Other Vaccines.

It is not improbable that similar methods of vaccine treatment will be devised against gonococcal and other local microbial infections, now that dosage and effects can be gauged by so definite a means as the opsonic index. Experiments have already been made in this direction, but I am not yet in a position to give you an account of the results.

Illustrative Cases.

I will now give some definite instances in which the tuberculin and staphylococcine injections have done good.[1]

Tuberculous Caries and Dactylitis.

A small girl was sent by Dr. Reynolds of Wycombe, for tuberculin treatment at Guy's Hospital. She had tuberculous dactylitis of the right thumb and tuberculous caries of one os calcis, both accompanied by discharging sinuses and much swelling. Local and constitutional treatment had been tried in vain for many months, the trouble persisted and was increasing in severity. The opsonic index to tubercle was found to be low. Tuberculin R $\frac{1}{5000}$ mg. was injected. The opsonic indices showed that between three and four weeks was the proper interval between injections in her case. There was little change in the lesions until after the second dose. Improvement then set in rapidly. After the third dose the swelling of the foot had entirely subsided, and the sinus over the os calcis was healed, the dactylitis was very much better. After the fourth dose the sinus over the thumb had ceased to discharge, there was still some local swelling, but the condition, previously chronic and persisting, has become practically well in four months.

Acne of Face and Back.

Two students at Guy's Hospital, each of whom had suffered for many years from severe and disfiguring acne, were treated

by staphylococcine injections in the manner I have described above. The opsonic index in one case rose from 0.8 to 1.8 after the first injection, and after three injections he states: "My face had by then almost cleared up, and my back was greatly improved; also some hard, indurated glands in my axillae were very much smaller." The other student experienced even greater relief, and thereafter found it much more easy to keep the boils in check.

Multiple Staphylococcal Abscesses.

An infant at Guy's Hospital, under the care of Mr. F. J. Steward, was suffering from multiple subcutaneous abscesses which very nearly killed it. Altogether seventy-five abscesses developed, and others threatened. As fast as some were opened others appeared. The case seemed hopeless. It was found that the abscesses were staphylococcal. A vaccine was prepared and injected at intervals, with immediate cessation of the formation of fresh abscesses, followed by rapid and complete recovery.

I might multiply these examples indefinitely, but I think the above are sufficient to indicate the benefits to be obtained from careful vaccine treatment, particularly in cases of local tuberculous mischief, and in cases of staphylococcal troubles such as acne, boils, and abscesses.

It will be asked whether tuberculin is of any use in the treatment of phthisis. I cannot yet answer definitely. I have not yet tried it myself, but if controlled by opsonic index estimations I think it is worth trying in some cases, in addition to the recognized sanatorium and other hygienic measures.

It is particularly in the localized tuberculous diseases that it does good, effecting great relief or even cure in the case of tuberculous skin troubles and bladder affections. One of the surgeons at Guy's Hospital expresses the view that many tuberculous affections which are at present treated mainly by surgeons will in the near future be treated by physicians, and cured by tuberculin without operation. Whether this is to be so or not it is premature to say. Tuberculin and staphylococcin raise the opsonic index for a time only. When the injections cease the opsonic index will in time fall below par again very likely, so that the patient may become again liable to invasion by the microbes. He is, however, no more liable to their attacks than he was before, and if a lesion can be cured by the vaccines once, a relapse or a recurrence can be cured by them again. It is unwise to stop the injections too soon; and it is unwise to depend upon the injections alone, to the neglect of hygienic, medicinal, surgical, and other general measures.

Hitherto most of the cases treated have been very severely ill; vaccine treatment has often been adopted only when surgical and all other measures have failed, for example, in cases of tuberculous ulcers, cystitis, lupus, acne, and so on. Seeing that, in spite of this, Wright is able to say that "it is not a question of the achievement of success in a certain percentage of cases only; up to the present it has been a question of uniform success," I think it will be agreed that this additional method of antimicrobial treatment well deserves to be tried early, and not merely as a last resort.

REFERENCE.

[1] I might mention that there is a growing literature upon the subject, and I would refer to papers by Wright, Bulloch, and others in the *Royal Medical and Chirurgical Society's Transactions* for 1906; to the *Practitioner* for July, 1906; to the *Guy's Hospital Reports* for 1906; and to the *Lancet* for October 27th, 1906, which contains a most interesting paper by Drs. Turton and Parkin, with detailed accounts of 34 cases.

NOTE ON THE TEMPERATURE OF JAPANESE HOT BATHS.

By LEONARD HILL, M.B., F.R.S.

The Japanese have been noted for indulgence in very hot baths. I recently had the opportunity of finding out whether a Japanese gentleman of my acquaintance could really stand a bath hotter than a European, and to determine whether his body temperature rose in the manner to be expected.

My friend affirmed he could stand very hot baths, but not the hottest baths of all in Japan. I found he could endure a bath of 44.5° C. (114° F.) for only a minute or two while totally immersed except for his face. The bath was raised (from 103° F.) to this temperature in about five minutes. He came out feeling faint, and asked for the window to be opened. His rectal temperature had risen to 39.5° C. (103° F.). He told me that the Japanese usually sit with the head and arms out of water. Under such conditions they may stand a considerably higher temperature; they must habituate their skin to stand a high temperature as we habituate our tongues to hot drink. If totally immersed excepting the face their body temperature must, of course rise, as I found to be the case.

A friend in Japan has sent me the following interesting account of the thermal baths at Kusatsu, which, a Japanese artist tells me, are used particularly for "illness that destroys the nose" (syphilis). The intense derivation of blood to the skin, and the rise of body temperature induced by these baths, must have a powerful effect, and ought to be a most efficient way of increasing both the supply of blood and its opsonin and the activity of the phagocytes in cutaneous affections.

The chief constituents of the Kusatsu springs are mineral acids, sulphur, iron, alum, and arsenic. The temperature of the springs is extremely high, ranging from 100° to 160° F., while the baths are generally 113° to 128°.

The chief public bath, called Netsu-no-yu, has three divisions of increasing degrees of temperature. Even the Japanese, inured as they are to scalding water, find their courage fail them, and the native invalids are therefore taken to bathe in squads under a semi-military discipline, to which they voluntarily submit. This system is known as Jikan-Yu, or "time-bath," because the hours are fixed.

Soon after daylight a horn is blown and the bathers assemble, dressed in white cotton tunics and drawers, as many as can find room taking their first daily bath. After stripping they begin by beating the water with boards in order to cool it—a curious scene; and then most disrobe, while the greatest sufferers swathe themselves in white cotton. Each bather is provided with a wooden dipper, and the "bath master" directs the patients to pour 250 dippers of water over their heads to prevent congestion. Attendants are on the watch, as fainting fits sometimes occur. To keep up their courage a kind of chant takes place between the bathers and their leader on entering the bath and while sitting in it, a trial which, though only lasting from three and a half to four minutes, seems an eternity to their festering bodies. After the lapse of about one minute the bath master cries out, and the others all answer with a hoarse shout. After a little he cries out "three minutes more." After another short interval he cries out "two minutes more," then "one minute more," the chorus answering each time. At last the leader cries "finished," whereupon the whole mass of bodies rises from the water with an alacrity which he who has witnessed their slow, painful entry into the place of torture would scarcely credit. Two more baths are taken during the forenoon and two in the afternoon, making five altogether, at which the same routine is observed. The usual Kusatsu course includes 120 baths.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

AN EXPERIENCE WITH VERONAL.

Mrs. F. sent for me August 18th, 1906, and gave the following history: The day before she awoke with a headache, and, to relieve the pain, was given two powders by a friend about 11 a.m. After sleeping for a couple of hours she awoke feeling dazed and stupid, quite unable to stand or walk, and with distinct double vision. During the evening the symptoms were more marked; she was reeling and tottering, scarcely able to put one foot before the other, even with the assistance of her friends. At 10 p.m. she was seen by my friend, Captain Craig, R.A.M.C., who found her in a semi-paralysed state, with sluggish pupils, diplopia, thready pulse, scanty urine, and normal temperature. In the morning Captain Craig and myself saw the patient together. She was drowsy and complaining of tingling sensations in the arms; pulse, 84, soft and compressible; temperature, normal; pupils, sluggish, though of about normal size; reflexes, superficial and deep, quite gone. I tried to raise her to the sitting posture, and as I did the head fell back, and several jerking movements were made to bring the head into the erect position. This could not be done, owing, as the patient described, to the heaviness felt in the occipital region. There was complete anaesthesia over the entire right lower limb, and on the left complete as far as the knee, and partial over the rest of the limb. There was also some anaesthesia over the trunk, but sensation in the arms was normal. The next day considerable improvement had taken place, sensation was normal over the trunk, left lower limb, and the upper portion of right lower limb. During the next

few days the improvement continued and the reflexes became normal.

The powders were made up in New York according to the prescription of a leading physician; they contained codeia, ¼ gr.; veronal, 10 gr. Direction: One at bedtime. My patient, as will have been seen, took a double dose. The treatment adopted was a dose of calomel and a bella-donna mixture, hot coffee, etc. The case shows that veronal is a drug to be given with care; for after 20 grains the toxic symptoms were rather alarming.

Dunkeld. EDWARD LYONS, M.D.Dub.

CHOREA GRAVIDARUM.

IN the EPITOME for September 29th, 1906, chorea is mentioned as being very dangerous when occurring during pregnancy, and also as being a rarity in consecutive pregnancies. The following case is therefore of interest.

A primipara, aged 17, was attended by me on July 4th, 1902. She had been the subject of chorea at the age of 14, but had been almost well until the week before the onset of labour, when choreic movements appeared and soon became violent. I saw her for the first time after the onset of labour, and then the convulsive movements were severe. Labour progressed well until the os uteri was fully dilated. After that with each pain the twitchings became so violent that it was necessary to administer chloroform and complete delivery. The child was a male and was hydrocephalic. It only lived three days.

The chorea disappeared gradually during the first four days of the puerperium. She remained well until the beginning of May 1903, when she was then in the eighth month of pregnancy. On May 18th the movements were slight, and confined to the face and left arm. Despite treatment they became rapidly worse, and by June 6th affected the whole body, being, however, worse on the left side. She was completely confined to bed from this date. She was absolutely helpless, and had to be fed, as she could not raise the food to the mouth. Feeding was only accomplished with difficulty, owing to the severity of the twitchings of the face.

Labour set in on June 15th, and had a similar course to the one four years previously. The choreic movements were violent all through the labour, but became worse with the onset of each pain, and were not quite so severe during the intervals. As soon as the os was well dilated, the membranes were ruptured, chloroform given, and forceps applied. Delivery was easy. The child, though at full term, was small and weakly, and only lived two days. It was a male. There was no hydrocephalus present. The chorea did not disappear so quickly this time as on the previous occasion, and it was not until after ten days had elapsed that she was free from twitchings.

In neither of this patient's attacks of chorea, complicating pregnancy and delivery, did drugs appear satisfactory. Arsenic, iron, morphine, bromides, chloral and paraldehyde were tried, and had little or no beneficial action. Paraldehyde seemed at first to lessen the movements and induce sleep, but soon lost its effect.

[illegible] H. K. WALLACE, B.Sc., M.D., C.M.

TRANSPOSITION OF CAECUM AND APPENDIX.

ALMOST simultaneously with the receipt of the BRITISH MEDICAL JOURNAL of September 8th, 1906, containing a report of a case of transposed caecum and appendix by Mr. Billington, I happened to meet one of precisely the same character. A male child, aged 5 years, was brought to me, presenting on the left side of the scrotum a swelling of the size of a big lemon, which had appeared some six days before. It was tense and red, and though there were no symptoms of strangulation the child was very uneasy. On opening the sac I found it contained a good deal of fluid and the caecum and appendix. The latter was not more than 1 in. in length, and perfectly healthy. After replacing the whole contents of the sac within the abdomen I closed the canal with two sutures. The hernia was congenital and, as in Mr. Billington's case, there was no transposition of any other viscus. The child made a perfect recovery.

In the same week I operated on three other little children for hernia, in two I again encountered the caecum and appendix, but in none were cases of right inguinal hernia. In one I found the appendix.

[illegible] V. S. CHEVASSE, L.R.C.P., Colon.

[illegible]

The late Mr. William Ecroyd Park of Ollerton Hall, Lancashire, whose will has now been proved, left £5,000 to the Contagious Diseases Hospital at Withnell.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

NORTH LONSDALE HOSPITAL, BARROW-IN-FURNESS.

PERITONITIS WITHOUT ASCERTAINABLE CAUSE.

(Reported by J. T. WILLIAMS, Honorary Surgeon.)

THE patient in this case, a married woman, aged 36, was admitted on April 20th, 1906, and died two days later, a diagnosis of idiopathic peritonitis being made.

Her family history showed that her mother, grandmother and a brother had died of malignant disease. As for her own previous health she had suffered five years before from "nervous debility," and occasionally had slight indigestion and nausea. Her last menstrual period had been marked by menorrhagia and constitutional disturbance. Her three children were healthy. After the birth of the first she had one abortion.

History of Present Illness.—At its onset she was away for Easter, and believed herself perfectly well, but was expecting her menstrual period. The illness began in a railway station four days before her admission with sudden "strange feelings" in her legs. Her brother reported that two fainting fits occurred before they got her by train to a house at Blackburn. Apparently she had great abdominal pain, and a doctor told her friends that she had haemorrhage from the stomach. Against his advice she came back to Barrow, where she was seen by Dr. Alexander. The latter found "coffee ground" stools and severe diarrhoea, and sent her to hospital.

State on Admission.—She lay on her back, legs drawn up, face pinched, mouth drawn, eyes wild-looking. She was deaf and rather incoherent, though she would answer if spoken to. She appeared to be in pain. The temperature was 102·5°, pulse 136, respirations 40. The abdomen was flat, respiratory movement very limited. There was no rigidity but some diffuse tenderness. Per vaginam a split cervix was noted, and the uterine body seemed less mobile than is normal. A rectal examination betrayed no abnormality. The percussion note over the abdomen was natural except over the ascending colon, where it seemed somewhat dull. Diarrhoea had ceased, and simple enema brought away nothing but shreds and mucus. A specimen of urine obtained by a catheter showed a little albumen but no blood or pus. She was menstruating normally. In the chest no abnormality was discernible beyond some friction sounds at the base of the lungs.

Progress.—During the night following admission the diffuse abdominal pain was considerable, and was allayed by morphine. The dullness seemed more central, and the abdomen to be hardening and tending to distend. She was delirious but not noisy. The next day the patient seemed altogether improved mentally, the deafness was gone, and she talked intelligently. There was no pain, but the abdomen was distended, tympanitic and tender. Respiration was characterized by long pauses, but was not of the Cheyne-Stokes variety. On Sunday, the second day after admission, she was weaker, more apathetic, temperature 102°. Stimulant and nutrient enemata were given, and Brand's essence by mouth. The enemata caused no pain. About 1 p.m. this day she had a very acute attack of pain in the back. It was relieved by pressure somewhat, but morphine was also given. Towards night severe pain was felt in the lower chest region, and finally about 9 p.m., she died, after being more or less comatose for several hours.

On *post mortem* examination the whole omentum and alimentary canal were found covered and glued by purulent lymph, while Douglas's pouch contained half a pint of thin pus. There was no gas free in the peritoneum, and no adhesions. The stomach and duodenum were healthy; small intestine and colon as far as sigmoid proved watertight, and on slitting appeared absolutely healthy and practically empty. The appendix, liver and gall bladder, spleen, pancreas, and kidneys all proved to be healthy; so, too, did the uterus and ovaries, the only abnormality being a couple of miliary tubercles on one of the Fallopian tubes, but there were no others anywhere. Examination of the chest showed nothing beyond slight plastic inflammation of the pleura. The spinal vertebrae and the sacro-iliac joints were also found healthy.

We are told that there can be no such thing as idiopathic peritonitis, and yet in this case the examination of the body after death, though carefully carried out, afforded no explanation of the sudden illness by which the woman was seized, or of the inflammation of the peritoneum diagnosed before death and proved to exist.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

C. A. Ballance, M.V.O., M.S., F.R.C.S., President, in the Chair.

Monday, January 28th, 1907.

Some Points in the Diagnosis and Treatment of Laryngeal Cancer.

Sir Felix Semon read a paper on this subject, which is published in this number of the British Medical Journal at page 241.

Mr. H. T. Butlin said that in regard to the general question of diagnosis he entirely concurred with Sir Felix Semon in the desirability of removing a fragment of the disease intralaryngeally for microscopic examination whenever there was reason to do so and it was possible. It had been employed in a large number of cases which had been under his care, or which he (Mr. Butlin) had seen in consultation, and it had certainly enabled him to make the diagnosis in certain cases at a much earlier period than he could have done without it. Of course it had to be used with the same caution as ought to be extended to every expert method of diagnosis, but he had no hesitation in recommending it as a valuable addition to their means of diagnosis in difficult cases. Of the dangers of contagion of the opposite half of the larynx, of dissemination in the lungs, and of almost instantaneous affection of the lymphatic glands, on which so much stress had been laid by some laryngologists, he had no fear, for he had seen none of them, nor was he cognisant of a single case which could be cited of any of them in London where the method had been in frequent use during the last fifteen or more years. Mr. Butlin proceeded to explain why he had until recently confined his operations for malignant disease of the larynx within such narrow limits. In 1883 he wrote a monograph on malignant disease of the larynx, which was not founded on his personal acquaintance with the disease, for he had seen little of it at that time, but was rather an account of the natural history of the disease, as far as he could gather it from a study of published cases. At that time the operative surgery of that disease had fallen so low that the mortality of the operation, which was generally excision of the larynx, was enormous, while the final results were so bad that it was scarcely possible to find any patients who were alive and well three years after the removal of the larynx for carcinoma. His investigations led him to suggest that, if operations were to be practised for that disease in future, they should be restricted almost entirely to cases of intrinsic malignant disease. That suggestion was accepted by Sir Felix Semon, and the first case in which the opportunity occurred for putting it in practice was the well-known case of Mr. Montagu Williams, who was operated on by Hahn of Berlin, the most successful operator for that kind of case in the world at that time. The second case occurred in one of his own patients, and he performed the operation, which consisted, as in Hahn's case, of removal of the half of the larynx. The patient recovered, but died later of recurrence. In spite of the determination to restrict operations to intrinsic cancer, in the course of the years 1886 to 1890 he operated on three patients with extrinsic disease of limited extent, but with disastrous consequences. Two of the three patients died of the operation, and the third suffered from recurrence, for which he performed a second operation. This was again followed by recurrence, of which the patient subsequently died. This limiting of the extent of the operation was not without its disadvantages. It led to the performance of too small operations in certain cases in which a larger operation or no operation ought to have been performed. He was quite sure that, had some of his cases presented themselves to him recently instead of long years ago, he would have removed the entire larynx either at once or on the appearance of recurrence, and might have obtained better results by doing so. But the object was to reduce the mortality of the operations, and to prove that intrinsic cancer could be cut through a thyrotomy wound with a decent prospect of success, so he determined from the year 1890 to devote himself to this task. On the whole he was justified, for since that date he had performed twenty-three thyrotomies with only one death. These results compared favourably with the results of the operative surgery of malignant disease in almost any other part of the body, and they had been obtained by careful attention to the symptoms of the early stages of intrinsic malignant disease, and to the adaptation of the operation to the life-history of the disease. After Professor Gluck had shown some of the successes due to the large operations he had been in the habit of performing, it was suggested to Mr. Butlin that he ought to undertake some of these operations. He felt the justice of the suggestion, and that if they were not performed in this country they would be in danger of the reproach of falling behind in the progress of the surgery of the throat. During the last two years, therefore, in addition to several large operations for malignant disease of the neighbouring parts, he had removed the larynx on five occasions, and so far he had no reason to regret it. The patients, provided that the disease had not spread far into the pharynx or into the oesophagus, and that the neck was in fair condition, could take every kind of food just as other people did. They might or might not need to wear a tracheotomy tube, and they acquired a method of speech which was perfectly intelligible to those persons who were constantly about them, and might even be understood by comparative strangers. Solis Cohen's method of fixing the trachea to the skin rendered the operation much less dangerous than it used to be, and the condition of the patient after recovery was also more satisfactory in consequence of it.

Mr. S. G. Shattock said that in the preliminary histological diagnosis of laryngeal diseases the responsibility lay rather with the operator than the histologist. The positive histological diagnosis of carcinoma presented, with few exceptions, no difficulty; the result practically depended upon whether the piece of tissue removed by exploratory endolaryngeal operations was really a portion of the lesion or not. The histological diagnosis, however, might be difficult or impossible in the case of a papilloma in which a carcinomatous change had supervened, and especially if the latter changes had affected part only of the growth. In regard to the danger of a local inoculation from an endolaryngeal exploratory operation, that was a real one should the cutting instrument pass through healthy tissue after traversing the disease. The danger, however, was of no practical moment, for if a piece of the growth was so removed its return would be diagnosed and a radical operation would be carried out before time elapsed for any inoculation growth to arise.

Dr. McKenzie Johnston, Dr. Scanes Spicer, and Dr. Tilley having continued the discussion, Sir Felix Semon replied.

CLINICAL SOCIETY OF LONDON.

Clinical Evening.

H. H. Clutton, M.A., M.C., F.R.C.S., President, in the Chair.

Friday, January 25th, 1907.

Acromegaly.

Dr. Seymour Taylor showed a domestic servant, aged 32, whose hands and feet had increased in size for five years. The case was typical. Treatment by pituitary extract had afforded negative results.

Congenital Heart Disease with Cyanosis.

Dr. Parkes Weber exhibited a girl, aged 17, in whom cyanosis varied at different times. When she was on her back a harsh systolic murmur was audible all over the heart; when she stood upright the murmur almost disappeared and was markedly influenced by respiratory movements, being loudest during inspiration. Dr. Weber suspected an aperture in the interventricular septum.

Achondroplasia.

Mr. John R. Lunn showed a man, aged 53, stunted from birth; a labourer on the roads. Circumference of head 24 in. Intellect good. Great curvature of tibiae;

little curvature of bones of upper limbs. Large bones of all limbs much shortened.

Dr. Scanes Spicer referred to cases which came to rhinologists with a diagnosis of adenoids, on account of the depressed nose.

Unusual Enlargement of Head.

Dr. Bertram Abrahams showed a boy, aged 3, whose mother had possibly had syphilis. Until he was 8 months old his head was normal; it then swelled for four months, since when it was said not to have increased. The child was intelligent and well developed. The circumference of the head was 25 in., and bulged above and to the back. There was venous dilatation over the glabella and left upper eyelid, simulating a cirsoid aneurysm; also a systolic bruit over the whole precordia.

Dr. W. Ewart said the head was not of hydrocephalic shape, but retained the normal form.

Plastic Operation for Syphilitic Perforation of Hard Palate.

Mr. H. L. Barnard showed a man, aged 28, who had suffered from syphilis four years before. The perforation had been present on the left side six months, and was the size of a sixpence. In August, 1906, an L-shaped flap from the right side was sutured to the freshened edges of the perforation; healing occurred, but as the flap contracted the perforation slightly opened. After a second operation with more ample flap, the perforation was closed, except for a minute opening in the soft palate, which caused little trouble. Mr. Barnard said modern experience controverted the old view that operation in such cases was not successful.

Mr. W. G. Spencer thought the surgeon should wait many years until the case was stationary, carefully select his case, and be very careful in the after-treatment, otherwise he would find the dictum of the older surgeons correct.

Mr. C. J. Symonds considered the results of such operations, especially where the perforation was not very large, most successful. If the alveolar plate was destroyed or the perforation was in the soft palate the results were less promising.

Removal of Calculus from each Ureter for Double Pyonephrosis.

Mr. H. L. Barnard showed a woman, aged 41, who had had renal colic on both sides, with cystitis and pyrexia. Both kidneys were enlarged. Radiography showed a stone the shape and size of an almond in the right ureter opposite the fourth lumbar vertebra; another, smaller, in the pelvis opposite the fourth sacral, which could be felt in the left fornix of the vagina. October, 1904, right calculus removed through a loin incision. Wound in ureter closed with No. 1 catgut drainage; no leakage of urine. Seven weeks afterwards left ureteric calculus removed through an incision in left fornix of vagina. Ureter not sutured. Tube in broad ligament for three days. Urinary fistula closed in ten days. The patient was now well and strong. Left kidney somewhat enlarged and tender. Urine still contained pus.

Mr. W. G. Spencer remarked on the difficulty of closing the ureter through the vagina.

Mr. C. H. Fagge had found the segregator of the greatest use in such cases.

Mr. Barnard, in reply, said the stone on the left side was an inch and a half from the bladder when removed. Mr. Furnivall had in such a case pulled down the ureter through the vaginal wound with a hook retractor, removed the calculus, and sewn up the wound with catgut, and it had healed. If silk were used another calculus is often formed upon the suture. He had not used a separator.

Method of Diminishing the Raw Surface after Removal of Half the Tongue.

Mr. H. L. Barnard showed a woman, aged 55, who had had epithelioma of middle of right edge of tongue due to a sharp carious tooth. No glands felt. In May, 1906, right half of tongue removed by Whitehead's method, submaxillary and deep cervical glands being cleaned out. The half of tongue remaining was doubled back so that the tip was brought in contact with, and fixed to, the posterior third. The advantages of the method were rapid healing and diminished raw surface, smooth and rounded edge to tongue; small scar. The disadvantages were, that local recurrence (if it occurred) would be in middle of tongue; sensation of tip of tongue being at first down the throat. This had now moved round to the front.

The President had used the method for twenty-three years, with satisfactory results; but cases in which it was suitable were rare.

Mr. C. B. Keetley said a fourth advantage was the increased protection against recurrence, as the sooner a wound healed the less was the chance of recurrence.

Mr. Symonds said he usually stitched the edge of the wound to the mucous membrane of the dorsum of the tongue.

Carcinoma of Jejunum: Resection of Jejunum an Colon.

Mr. C. H. Fagge showed a woman, aged 33, admitted with vomiting and a hard lump in the right iliac fossa. At operation a malignant mass was found in the jejunum 18 in. from the duodenum, involving the hepatic flexure. Both jejunum and colon were resected, and double lateral anastomosis established (jejunum to jejunum and ascending to transverse colon) with small and large Murphy buttons respectively. The latter passed four weeks, the former six weeks, after operation. The growth was a columnar-celled carcinoma with an unusually large amount of fibrous tissue.

Other Exhibits.

By Mr. J. R. Lunn: Fracture of tarsus.—Mr. H. L. Barnard: Prostatic knife for incising floor of bladder in total suprapubic enucleation of prostate.—Mr. W. F. Brook: Multiple chondromata of metatarsal bones and first intermetatarsal space.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Pathology.

Joseph O'Carroll, M.D., F.R.C.S.I., President, in the Chair.

Friday, January 4th, 1907.

Uncinaria Duodenalis from St. Vincent, W.I.

Professor McWeeney (through Dr. Farnan) exhibited specimens of *Uncinaria duodenalis* sent to him by Dr. Branch, Government Medical Officer at St. Vincent, where the parasite was a regular plague. The exhibit consisted of the washings of the intestine of a child. Two sorts of worms were present, namely, *Trichocephalus dispar* in large tufted masses, and *Uncinaria (Ankylostoma) duodenalis*. The male and female trichocephalus were very different. The male and female uncinaria were not very unlike each other. The difference was shown by microscopic slides. A new species of uncinaria, called *U. americana*, parasitic in man was described in 1902 by Stiles, and was now made into a new genus called *necator*. It came from the same neighbourhood as *U. duodenalis* and did a fearful amount of mischief, especially to children, causing great retardation of development, anaemia, and cachexia. The specimens shown, however, seemed to be the ordinary *U. duodenalis*. In Europe the worm chiefly attacked miners, and attention was first called to it in connexion with the boring of the St. Gothard tunnel in 1880, when it caused a serious outbreak of a "pernicious" anaemia amongst the workmen. It had recently occurred in England amongst the tin miners of Cornwall, and Boycott and Haldane had written two papers about it in the *Journal of Hygiene*. It caused a marked eosinophilia. A small piece of duodenum, showing exceedingly minute black spots, was also exhibited. These were the bites of the uncinaria, whose organs of attachment and piercing four hooks and two teeth were in the interior of a sort of "mouth capsule."

Suffocative Hydrothorax with Repeated Tapping of Pleurae.

Dr. O'Carroll related a case in which the pleurae were tapped several hundred times. The patient was a robust man, aged 65 who entered hospital in May, 1900, suffering from great distress in breathing and epigastric pain. Swelling and tenderness in the epigastrium led to the belief that there was an epigastric tumour.

The urine, small in quantity and dark, had a fair amount of sugar in it, and it was thought probable that the pancreas was involved. There was a systolic apex murmur, faint and not transmitted very far, together with some dullness in both

pleurae. A month afterwards the right pleural cavity was tapped and 40 oz. of fluid withdrawn. Two days later the left pleural cavity was tapped, 76 oz. being withdrawn. The liver receded under the lower ribs, and from that time there was no further suspicion of any abdominal mischief, although the epigastric distress recurred whenever the pleurae became full. The sugar in the urine diminished at every tapping, and frequently disappeared, and seemed to be more or less referable to the amount of dyspnoea and cyanosis present from time to time. Occasionally there was a trace of albumen in the urine. A slight purplish tinge was visible through the patient's natural ruddiness, and the veins in the neck were slightly prominent. There was also at first some oedema of the legs. Within the first six months sixty tappings were actually recorded, and there were probably some which were not noted. From about the third or fourth month of his residence the conclusion had been arrived at that he had some obstruction of the vena azygos major, and the diagnosis rested there to the end. During the first four or five months the pleurae were tapped almost alternately. Thereafter the right one was tapped about twice for every time the left was tapped, and this proportion was maintained till March, 1902, when the left pleural cavity ceased to secrete as the result of an adhesive pleuritis. He had then to be tapped twice as often on the right side, and this went on, practically every second day, to the amount of 50, 60, and 70 oz., till the beginning of May, 1903, almost three years after his admission. Then the right pleura began to show signs of not yielding as much fluid as formerly, and of being annihilated by adhesive pleuritis of rapid course. He died when this was complete, practically as if he had been garotted in such a way as to stop the venous flow into the heart without obstructing the trachea, the process lasting about two days. He had spent three years all but five days in hospital, had hardly lain down in bed for more than two or three hours nightly all that time, but had retained weight, appearance, and good spirits up to the final closure of the right pleural cavity three days before death. At the necropsy, on examining the heart and slitting up the vena cava superior a distinct prominence was noticed, which appeared to bulge forward the posterior wall of the cava and to turn off with an L shape into the posterior wall of the vena azygos. This was an aggregation of tuberculous glands of no great bulk; but the real mischief was caused by an actual fusion of the gland mass with the azygos wall exactly at its outfall into the cava. At that point the azygos was closely adherent to the gland capsule in a crinkled depressed scar of pale colour corresponding to that of the gland beneath. The calibre of the vein at this point was half that immediately to the right of it.

The total amount of fluid withdrawn during the three years was computed to weigh about three-quarters of a ton.

Dr. Martley instanced a case bearing some similarity to that described.

Specimen after Talma-Morison Operation.

Dr. Moorhead exhibited a specimen from a girl, aged 22, who was admitted to hospital in April, 1906, suffering from ascites, which had developed in a couple of days. After tapping, operation was decided upon. The liver was found to be enlarged, firm, and hard. The surface was scraped, and the great omentum was stitched to the abdominal wall. After the operation the patient was tapped at intervals of ten days, 200 oz. of ordinary ascitic fluid being got. About two months ago she began to lose weight. It was decided to establish a permanent drain to the peritoneum, but no improvement took place, and the patient afterwards died. The interest of the specimen was in showing the results of a Talma-Morison operation six months after its performance. On making the autopsy, adhesions across the anterior abdominal wall were found, and along these could be seen the development of new veins, chiefly between the two peritoneal surfaces. There was no engorgement of the deeper vessels; it was the superficial veins that had increased in size and number. The operation was successful as far as the establishment of new collateral channels was concerned. That it was not more so was probably due to the fact that the patient, in addition to cirrhosis, had a nutmeg liver. At the necropsy they found no valvular lesions to account for the first idea that the heart might be partly the cause of the ascites, but the right ventricle was intensely fattily degenerated. In most cases of cirrhosis some alcoholic history could be obtained; this patient, however, had been a teetotaler all her life. On inquiry, however, it was found that part of her occupation was the putting of photographer's negatives into methylated spirits, which might have something to do with the disease.

Dr. Wheeler instanced a case in which, after finding an enlarged liver roughened on the surface, he performed a Talma-Morison operation. That was two years ago. The patient was tapped once after the operation, but never since. He had been extremely well, and had gained three or four stones in weight. The other day he came to show himself; no tapping was required, but on examination the urine showed a good deal of albumen, giving signs of a cirrhosis of the kidneys. Ninety per cent. of cases in which there were no complications had been cured of ascites by the Talma-Morison operation.

Dr. Earl had been struck with the fact that an alcoholic history was out of the question in many cases of cirrhosis—such as cirrhosis occurring in children. A large number of the patients met with in hospital practice drank all they could get, and if there was any intimate connexion between alcoholic indulgence and cirrhosis of the liver it should be one of the commonest affections, which it was not by any means.

The Chairman thought it hardly possible to be sure of the histological condition of the liver through such an incision as is made in most laparotomies. He was, therefore, somewhat sceptical when he heard the liver accurately described on the basis of an incision for a Talma-Morison operation, and he was not sure that the evidence did not indicate that the ascites would have disappeared eventually without any operation.

Dr. Farnan and Dr. Gunn also spoke, and Dr. Moorhead replied.

Traumatic Rupture of Heart.

Dr. Wheeler showed a heart absolutely torn in two. The case was that of a young actor, who was killed by a motor car in August, 1906.

Section of Surgery.

H. R. Swanzy, P.R.C.S.I., President, in the Chair.

Friday, January 11th, 1907.

The Treatment of Enlarged Prostate.

Mr. L. G. Gunn discussed some points in the treatment of enlarged prostate. Too much attention was, he thought, paid to the operative treatment. Many cases could be greatly benefited though not cured by non-operative treatment. He gave a brief account of work he had seen at Paris, London, and Berlin. In Paris prostatectomy was hardly ever performed; in London it was always advised, while in Berlin palliative measures were often used. He then described the lines on which he tried to carry out the treatment of such cases, giving a short account of 41 cases; of these 11 had required operation, 9 had made good recoveries, 2 had died, 19 cases had been treated by palliative means with more or less relief. None of these had to use a catheter, as Mr. Gunn believed that the risks of catheter life must be always greater than the risk of an operation.

Mr. Walton Browne (Belfast) believed a good deal could be done by washing out the bladder.

Mr. C. A. K. Ball thought that palliative measures should be employed unless there was absolute obstruction to the flow of urine.

Mr. D. Kennedy thought that before recommending either palliative or radical treatment the circumstances of the patient should be considered. A well-to-do patient could afford to avail himself of skilled surgical aid, and might well decide to undergo treatment of a palliative nature; but in the case of a man without means, the proper employment of a catheter or other palliative measures might be attended with difficulty.

Mr. Blayney said many cases which had ended fatally after operation would probably have recovered had radical measures been carried out earlier.

Leontiasis Ossea.

Mr. S. Horace Law described an early case. When first seen, some four years ago, the swelling was much less marked, and he did not think that it was pathological, though he was struck by the bilateral enlargement on each side of the nasal processes of the superior maxillae. The patient then complained of nasal obstruction, and the removal of adenoids gave him relief, though not for long. Mr. Law had seen him once or twice since then, but the peculiar enlargement did not strike him until this last occasion (November, 1906), when the growth had become marked. The condition was as follows:

The patient is a small boy for his age (12), but upright and sturdy. General health good; only complaint, nasal obstruction. On examination, a hard bilateral growth is seen in the infraorbital region, pushing the eyes outwards, and causing

exophthalmos. The lateral walls of the nose are pushed towards the middle line so as to occlude the nostrils though a probe can be passed up to the sphenoid, etc., and air can be blown through the nose. Naso-pharynx not involved. Pharynx and palate normal. The antra of Highmore are dark to trans-illumination, and an ordinary antrum drill passed in through the canine fossa on the right side failed to reach a cavity. The bone was soft and [illegible].

It might, therefore, be concluded that there were two large osseous masses lying on either side in the infra-orbital regions, filling both antra and extending in various directions. Incidentally, he had dacryocystitis on both sides. X-ray photographs showed dense shadows corresponding to the obvious growths.

The President regarded the dacryocystitis as the direct result of the bony growth. He thought the best mode of treatment would be extirpation of the lachrymal sac on each side, as, under existing circumstances, ulceration of the cornea of a very intractable type would be likely to occur.

Mr. Walton Browne alluded to the symmetrical appearance of the two eyes. If the orbits were at all involved they must be involved to an equal extent.

Laryngological Society of London.—At a meeting on January 9th, Dr. J. B. Ball, President, in the chair, the following were among the communications made: Dr. StClair Thomson and Dr. Herbert Tilley exhibited specimens of cartilage and bone removed by means of Killian's submucous resection operation for the correction of deviations of the septum. A discussion followed on the relative merits of local and general anaesthesia for this operation; on this point opinions appeared to be divided.—Dr. W. H. Kelson showed a woman, aged 65, with a circumscribed tumour of the palate of about eight weeks' duration. There was a difference of opinion as to its nature, the diagnosis being a fibro-adenoma or an endothelioma. It was generally agreed that it should be removed. Dr. Kelson also showed a patient with ulceration of the epiglottis and of the base of the tongue which was regarded as a malignant disease and inoperable.—Mr. P. de Santi showed a case of tertiary syphilitic laryngitis for opinion as regards treatment. Dr. A. Lieven recommended tracheotomy to keep the parts at rest: if it were not done now it would have to be done later; to overcome the contraction of the glottis, he advised injections of calomel, using 1 part of calomel in 10 of vasanol, a new preparation of paraffin which was the least irritating vehicle he knew. A very small dose should be given at first, as the patient might be intolerant of mercury.—Dr. C. A. E. Horsford showed a patient with considerable enlargement of the cervical glands following removal of a tonsil. The diagnosis rested between primary cancer of the tonsil, malignant disease, and deep suppuration in the neck. It was advised that anti-syphilitic treatment should be used before opening the neck. Dr. Horsford was asked to report to the Society the subsequent history of the case.—On behalf of Dr. G. C. Catheart, Dr. Johnson Horne showed the specimen from a case of fibroma of the larynx shown at the last meeting of the Society. When the patient was exhibited there was a general consensus of opinion that the tumour, which occupied the left arytenoid region, was a cystoma. It was subsequently found to be a cystic tumour which had to be removed through an external incision.

Hunterian Society.—At a clinical meeting held on January 24th Dr. Stanley Phillips, the President, who was in the chair, showed [illegible] of congenital heart disease in a boy aged 8. There was a loud systolic murmur over the aortic cartilage and vessels. The condition was probably one of narrowing of the aorta.—Mr. Clayton Cattell showed a case of bilateral cystic disease of the kidneys, a condition which had given rise to attacks of haematuria. The possibility of nephrectomy was discussed.—Mr. Cattell also showed a case of [illegible] the location of the glands with [illegible] through the lower half of the gland [illegible] specimens, shingles were shown.—Dr. [illegible] exhibited for Dr. Cathcart a case of aneurysm of the internal carotid artery, and raised the question of surgical treatment. The President thought the case unsuitable for operation owing to the difficulties in the [illegible] and the [illegible] of the arteries.—Mr. Cecil Beaton showed a [illegible], with a large cystic tumour of the breast. This was of twelve years' standing, and had increased rapidly during the past twelve months.—Mr. F. Jaffrey showed a woman, aged 40, with fracture of the lower end of the radius, and wasting of the hand muscles.—The President showed a case of general paralysis of the insane.—Dr. John Broadbent showed a case of paralysis of the third cranial nerve of rapid onset in a woman aged 30. Improvement was occurring under treatment with potassium iodide.

Therapeutical Society.—At a meeting held on January 22nd, Dr. T. E. Burton Brown, President, in the chair, Dr. Bonnefin read short notes on a method for rendering creosote and cannabis indica soluble; and on some little-known medicinal remedies. He showed clear solutions both of creosote and of cannabis indica, which he had prepared by the following formulae:

(*a*) For making creosote soluble.

℞ Decoct. quillaiae conc. (1 in 7) ...	2 parts
Solut. sodii salicylatis pur. (1 in 2) ...	1 part
Creosot. optim. ...	1 part

Shake and warm very gently.

(*b*) For making cannabis indica soluble.

℞ Ext. cannabis indicae (physiologically tested) ...	1 part
Spir. vin. rect. ...	4 parts
Decoct. quillaiae conc. (1 in 7) ...	7 parts
Aq. destil. ...	8 parts

Mix the extract with the alcohol; warm; add warm decoction of quillaia; shake; finally add warm distilled water; shake, and strain after three days.—Dr. Bonnefin showed how each solution remained clear on dilution with water and on acidification, so that no precipitation would take place in the stomach. He further read notes of beneficial results he himself had found from the use of preparations of *Cactus grandiflorus*, *Euchenas angustifolia*, and *Trifolium pratense*.—In the discussion which followed Dr. Sopер, Professor Cushny, and Professor Wild took part; evidence was brought forward to show that these preparations contained no active principle and that after due consideration they had been deliberately omitted from the *U.S. Pharmacopoeia* as inert.—Professor E. B. Wild read a paper entitled, the Proper Scope of the Teaching of Materia Medica, Pharmacology, and Therapeutics in the Medical Curriculum. Its main object was to arouse the interest of medical men in the better teaching of therapeutics, and the author laid stress on the fact that while great changes had taken place in the practice of therapeutics during the past twenty-five years, there had not been corresponding changes in the teaching of the medical student. At the present time the chief obstacle to any reform in the teaching of materia medica and therapeutics lay in the great diversity in the requirements of the various examining bodies, and some general agreement was urgently required as to what should be insisted upon as an essential minimum for qualification, and what had become obsolete and might well be removed from the overcrowded curriculum. Professor Cushny, Dr. Gordon Sharp, and Dr. Herbert French joined in the discussion.

Society for the Study of Disease in Children.—At a meeting held on January 18th, Mr. G. Pernet in the chair, Dr. C. O. Hawthorne read a paper on the *Protection of rheumatic children*. He said the disproportionate frequency of heart disease in children might be due to the absence of arthritis in them, and therefore less tendency to keep the patient at rest. It was necessary to educate the public as to the value of rest, and when this was done there might be some diminution in the incidence of organic heart disease in early life.—Mr. Lockhart Mummery read a paper on *Calculus of the small intestine and a case of mesenteric gland*. The patient was a boy aged [illegible]. Operation showed a complicated volvulus of the ileum close to the caecum which was gangrenous, and on the point of giving way at several points. This was resected, and the ends united with a Murphy button. The case resembled appendicitis, the classical symptoms of acute obstruction of the small intestine being not at all present. Vomiting was a marked feature only after the child came to the hospital. There was no distension of the abdomen.—Dr. Hawthorne showed a boy aged 14 with considerable *Dilatation of the stomach* of doubtful causation.—Dr. E. Cautley

howed a girl, aged 9 years, with *Diabetes insipidus*: or two years she had nocturnal enuresis, and for six ionths enuresis diurna also, with thirst and large ppetite. Urine varied from 46 oz. to 262 oz. daily, as pale, acid, 1005 specific gravity, and contained 0.5 to 9 per cent. of urea. Adrenalin and atropine had effected o improvement, but valerianate of iron and quinine with rychnine caused distinct improvement, the polyuria id thirst improving, and weight being gained. No exciting cause was made out, and there was no indica- on of chronic interstitial nephritis.—A case of *Premature velopment* in a child of 2½ years was shown by Dr. YNTON. The remarkable growth began at a year old, ubic hairs and sexual development being then noted. he weight now is 3 st. 1 lb. Circumference of head in., thorax 22½ in., and abdomen 23 in.; length of whole m 12 in., of leg 17 in. Voice deep, memory good; aspect ther suggestive of acromegaly. There is no abdominal mour to be felt. Parents small and healthy. Dr. ynton also showed a case of *Friedreich's disease (?)* in girl aged 9 years. Five years ago the child had measles th severe cerebral symptoms, and had not been well ce. She had now well-marked ataxy of legs and inco- dination of hands with tremor; doubtful nystagmus; ee-jerks abolished; right plantar reflex extensor, but t flexor; some lordosis of upper dorsal spine; uble pes cavus; speech slow; no optic changes.— . CARPENTER showed an infant, 14 months old, weighing lb., with *Oedema* of the face and limbs, following an ack of diarrhoea. The child was anaemic, and the mperature subnormal. The urine contained no albumen. A case of *Webbed penis* was shown by Mr. LOCKHART MMERY. The penis was enclosed within the scrotal n, right down to the tip. No other abnormality, and history of similar defects in the family.—A case of *Congenital cerebellar ataxy* was shown by Dr. G. A. HERLAND. The boy, aged 3 years, had suffered from eral ataxy for eighteen months. He was healthy at th, but had convulsions at the age of 6 months. At ears he was unable to sit or stand without support, and limbs were tremulous and ataxic. Speech and intelli- ce very backward. Knee-jerks very active. There double internal squint, and the optic discs were pale not definitely atrophic. The condition had remained same for the past nine months, except that now the ld could sit unsupported.—Dr. SUTHERLAND thought case was probably one of birth palsy following ningeal haemorrhage, and probably involving the ebellum. A girl, aged 8 years, with *Congenital rmities of the so-called Mongolian type of amentia* was exhibited by Dr. Sutherland. The shortening and ving of the little fingers and the oblique palpebral ures characteristic of this type of imbecility were ent, but the child was perfectly intelligent and had cranial deformities. She was under treatment for oid phthisis.

ERMATOLOGICAL SOCIETY OF LONDON.—At a meeting anuary 9th, Dr. COLCOTT FOX in the chair, Dr. S. E. E showed (for Dr. J. J. PRINGLE) a case of a bullous ase, with the clinical features of dermatitis herpeti- is, in a man who had been under treatment with nic for five years. The eruption was controlled by s of 6 minims of liquor arsenicalis, but the patient latterly shown very serious symptoms of arsenical oning. He had pigmentation over almost the whole , keratosis of the palms and soles, and increased -jerks.—Dr. J. M. H. MACLEOD showed a case of n planus which had commenced with curious es of hypertrophy of the epidermis of the knees before ppearance of more typical patches of lichen planus e wrists had cleared up the diagnosis. The hyper- ied patches had disappeared under x-ray treatment. . E. GRAHAM LITTLE presented an unusual case of erythematosus, involving the scalp alone, in a al student. The largest patch was of a band shape, had persisted for three years. Dr. Little also showed of what was clinically almost certainly lupus ris of the nose and upper lip, in a young girl; but ted estimations of the opsonic index showed a al figure for tubercle, and only 0.6 for streptococcus clinical diagnosis was supported by the opinion of eeting.

REVIEWS.

THE NATURE AND TREATMENT OF GOUT.

TWENTY years ago the first edition of Professor EBSTEIN's book on gout[1] attracted the favourable notice of Charcot, who got it translated by Dr. E. Chambard, and did it the honour of writing a brief introduction, in which he spoke of it as a work "every page of which contained good material of scientific or practical value." Since that time a generation has passed away, carrying with it the great master whose teaching did so much to render illustrious the French school of medicine during the latter part of the nineteenth century; and now Professor Ebstein comes, none too soon, to publish, out of the abundance of his accumulated stores of clinical experience, a second edition which has expanded to twice its former size, mainly through the development of the parts devoted to clinical matters, and especially to treatment. We regret that the author has not seen fit to include the twelve chromo-lithographic plates of the first edition, but, in compensation, he has given us thirty-five illustrations in black and white of a more or less valuable kind. In his preface Professor Ebstein tells us that his views have undergone no change, but have been confirmed by his subsequent studies and experience, while the discoveries concerning the importance of purin bodies have decided in his favour several points which formerly he was only able to suggest as hypotheses. It is unpleasant to read Professor Ebstein's complaint that an unauthorized translation of his first edition was made by an English medical newspaper in spite of his protests, while the lectures were also issued in book form as an "authorized translation" entirely without his knowledge, so that he only became aware of its existence by seeing its title in the Washington Index Catalogue! Such piratical methods show at least a lamentable lack of good manners, even if we assume that Professor Ebstein suffered no pecuniary loss, and would have given permission in both cases had he been asked to do so.

As is well known, the principal point upon which Professor Ebstein's teaching differs from that of his immediate predecessors is in insisting that the inflammatory changes of gout precede instead of being caused by the deposit of urate of soda. In respect to diet, we notice that he expresses himself very plainly against the use of alcohol, and in general he is convinced that excessive quantities of food and drink lead to an increase of uric acid, and are productive of many gouty symptoms. He says it is the duty of the physician not to irritate but to aid by all means in his power the restoration of the defective body cells; with this end in view alcohol is not permissible in any form, and this the patient should be told; but he admits that in some cases of debility in old persons "a glass of good wine or beer" may be allowed if they are used to it, and it may not be wise to "cut off too suddenly their accustomed stimulant."

The book is one which forms an important contribution to the literature of gout, and should be read by all interested in the subject. It contains a very full bibliography.

THE PREVENTION OF PAIN IN SURGERY.

The Prevention of Pain in Surgery[2] is the title of a little book edited by Professor WITZEL, which deserves to be read both by surgeons and anaesthetists. From the point of view of the patient anaesthesia does perhaps represent little more than a means of preventing pain, but a degree of narcosis sufficient only to avert pain may be by no means all that the surgeon requires. Anaesthetists who aimed at nothing further would stand but little chance of employment at the hands of conscientious operators. Dr. Witzel's style is as happy as his allusions are apposite. His general introduction is conceived in a spirit so frankly altruistic, and couched in terms so

[1] *Die Natur und Behandlung der Gicht.* Von Dr. Wilhelm Ebstein, Geheimer Medizinalrat, O. O. Professor der Medizin und Direktor der medizinischen Klinik und Poliklinik an der Universität Göttingen. Zweite stark vermehrte Auflage. Mit 35 Abbildungen und einer Temperaturkurve. Wiesbaden. The Nature and Treatment of Gout. By Dr. Wilhelm Ebstein, Professor of Medicine in the University of Gottingen. Second, greatly enlarged Edition. Wiesbaden: J. F. Bergmann. 1906. [illegible]

[2] *Die Schmerzverhütung in der Chirurgie.* The Prevention of Pain in Surgery. Von O. Witzel, F. Wenzel, und P. Hackenbruch, mit 20 Abbildungen. Munich: J. F. Lehmann. 1906. (Demy 8vo, pp. 106. M. 3.)

philosophical as to make very pleasant reading. The little work is dedicated to the memory of von Mikulicz, and opens with a quotation of the triumphant words of Diefenbach, who, in 1847 wrote: "The beautiful dream, that we have been delivered from pain, is realized; pain, the supreme effort of consciousness in our earthly existence, the rude awakener of us all to the imperfections of the body, must bow before the might of the human mind." The question which still remains is, which method to choose for the abolition of that pain? Upon this choice Witzel writes with judgement, with lucidity, but, to our thinking, with a little diffidence in regard to generalized anaesthesia. Professor WENZEL, who writes the section upon this branch of the subject, gives a brief summary of methods, and discusses the preparation of the patient, the general management, accidents, difficulties, and dangers attendant. He treats of the various forms of apparatus for graduating or regulating the percentage of vapour with brevity, and favours the simplest "dropping-on" method, even for ether. He employs an extreme dependent position for the patient's head, which, judging from his figures, must be extremely tiresome for the anaesthetist and very inconvenient for all parties. The routine advocated in preparation for any inhalation narcosis is very thorough. Careful cleansing of the mouth and teeth with hydrogen peroxide as a means of avoiding post-operative pneumonitis, has everything to recommend it when possible, but the administration of digitalis and strophanthus in all cases as a precautionary measure is at once unnecessary and impracticable. He affects the ether-chloroform sequence, but does not state how long the induction of anaesthesia requires in his hands. In an extensive bibliography we note the absence of the names of Hewitt and Vernon Harcourt or mention of the Chloroform Commission report. Local anaesthesia is dealt with by Dr. HACKENBRUCH, who naturally has much to say about Schleich's method and various modifications by Braun, Oberst, and others, particularly describing the "circular" method of subcutaneous injection. The author figures a very convenient form of syringe, the nozzle of which is bent almost to a right angle, and has a bayonet catch for the needle. For injecting connective tissue spaces and subfascial planes, he uses a needle *à boule*. The diagrams of injection sites and the details for numerous operations of severity, ranging from circumcision to the radical cure of hernia, are very useful. The use of this method in inflammatory conditions, such as carbuncle and appendix abscess, has not always proved as satisfactory as Hackenbruch would have us believe, but no one who has given the method a trial, whilst appreciating its limitations, denies its usefulness. Of the possibilities of stovaine anaesthesia by Quincke's puncture, the author contrives to draw a very alluring picture. His medal has no obverse, however; he mentions 93 cases, and states that in only 4 of them—and in these due, he thinks, to errors of technique—did he fail to secure quite perfect anaesthesia. He mentions no accidents or fatalities, and seems to consider sepsis as almost the only danger. Sepsis is theoretically preventable, but in practice the anaesthetist's "end" has sometimes to shift for itself, else the operator may be greatly inconvenienced. This is perhaps to beg the question, and certainly the perfect aseptic discipline required of the anaesthetist and his assistants by the authors, might with advantage be emulated in this country.

ASEPTICISM.

MAJOR E. A. R. NEWMAN[1] in his *Manual of Aseptic Surgery* displays a sound grasp of the principles of his subject and a considerable acquaintance with practical details. He points out well the confusion of ideas which has arisen from the use of the terms "antiseptic" and "aseptic" in a manner implying a difference in principle, and he puts the case temperately in support of the limited use of chemical antiseptics in practical surgery. Occasionally he accuses those of the aseptic school of inconsistency when the charge is not quite justified, and advocates the use of chemical antiseptics to a greater extent than is necessary under the usual modern conditions of operating. The first part of the book is devoted to these questions of principle, the second part to the consideration of practical methods. Many of the more modern methods of preparing surgical materials are given in detail and in these matters the book is likely to be useful for reference. In the matter of skin sterilization also the author quotes from the best and most modern authorities and the method he recommends is certainly as sound as any that researchers on the subject have yet discovered. In addition to techniques in the theatre, the methods to be employed in the ward and casualty department are described. A certain reluctance is shown in admitting that moist heat is always to be preferred to any other method of sterilization under all circumstances where it is possible to employ it. The remark on the subject of the use of gloves, that "whatever may be urged to the contrary" they cannot be worn during such delicate manipulations as the suture of intestine, argues a somewhat limited acquaintance with the practice of many distinguished surgeons. A valuable chapter at the end of the book on some special methods is written particularly for medical men in practice in India, and contains suggestions on the treatment of hepatic abscess and other conditions commonly met with in the country. In his preface the author states his conviction that the practicability and essential details of asepsis are not as generally understood as they might be. We are reluctant to think that this is true to the extent which he believes; surely the present educational methods in our hospitals are not so defective that "the immersion of an instrument for a few seconds in boiling water is apt to be looked on as sufficient, and dressings once sterilized are also apt to be considered sterile for an indefinite period, no matter what dirty objects they may have touched in the interval."

Professor E. GERARD, of Lille, has written an excellent manual on the technique of sterilization.[2] It is primarily intended for the use of chemists, but most of the methods described are of interest to the medical practitioner also. The technique recommended is for the most part of a simple and uncomplicated character. It includes the sterilization of instruments and apparatus, water, dressings, ligatures, various medicinal preparations, and milk. The methods approved are such as can be relied upon to give absolute sterility; some which are in common use are not recommended. Simple boiling in water, for example, is not considered a reliable plan for sterilizing instruments, but boiling in a 2 per cent. borax solution is approved, or, still better, sterilization in the autoclave at 130° C. Two valuable chapters are those on the preparation of dressings and of catgut. For dressings, the autoclave is to be used at a temperature of 120° C. to 134°; the means to be employed for obtaining the materials and for preserving them after sterilization are given in full. The author recommends that the temperature to which the dressings are subjected should be checked by the insertion into their midst of tubes containing certain chemicals which give a colour reaction at the desired temperature. A detailed description is given of the preparation of catgut, the method to which most attention is devoted being that of sterilization in absolute alcohol under pressure. There are illustrations of apparatus throughout the book. Medical men and others who are entrusted with the sterilization of materials for surgical work will find it a comprehensive guide to the carrying out of these responsible duties.

THE SUBCONSCIOUS.

THAT man does not live by consciousness alone is becoming more and more realized *pari passu* with the advances made into the penetralia of mind, normal and abnormal, both by psycho-physical experiment and by careful analytical studies of the phenomena of hysteria and allied states. The large share of the mental field occupied by subconscious elements, to use a term still regarded by many with suspicion, in motiving deeds and conduct is common knowledge, but the considerable extent to which these subconscious factors enter into the highest and most formal mental operations is not yet generally recognized. It is particularly to the study of this question of the influence of the submerged part of the mind on normal mental processes, and

[1] *Manual of Aseptic Surgery.* By E. A. R. NEWMAN, M.D., I.M.S. Calcutta: Thacker, Spink and Co. London: W. Thacker and Co. [illegible] 94 Figs. 8s.

[2] *Technique de Stérilisation à l'usage des pharmaciens.* Le Dr E. GERARD. Paris: Vigot Frères. 1906. (Pp. 348. 97 Illustrations. Fr. 6.)

elevation in abnormal states such as hysteria, hypnosis, altered personality, somnambulism, and other dissociations of personality, to a dominant part in apparently waking life—that Professor Jastrow's[5] book is directed.

Naturally, where so much is, from the very nature of things, obscure and, as in the attempt to recall the incidents of a dream, so evanescent and elusive, and, further, where usually credible authorities, who shall be nameless here, relate the emergence from this underworld of strange, mysterious powers and supernatural insight, the widest field is afforded for speculations and theories, no one of which, however absurd and fantastic, is without its devoted adherents. Many of these latter-day revivals of occultism, theosophy, spiritualism, Christian Science, and so on, have been already dealt with by Professor Jastrow in his *Fact and Fable in Psychology*, published in 1901. It was destructively analytical, while his new book is constructively synthetical, and thus, although complete in itself, the complement of the first book. The author's outlook is that of modern sane psychology, and is thus throughout in opposition to the doctrine of what Professor Jastrow calls, from the common use of the term by the adherents of this theory, that of the "subliminal self," according to which a new personality finds independent expression in the exaltations of trance, in hypnosis, in the inspiration of genius and supernaturally gifted souls, who attain thus, as the author says, to "subliminally revealed knowledge that has no origin in the experiences open to the self that responds to the ordinary vicissitudes of life."

In the first part of the book Professor Jastrow treats of normal mentality, and in describing the subconscious featuring of thought gives in a few words the gist of the whole matter of this part:

> The evidence is thus varied and convincing that the processes of perception of the external world—some deliberate when not fully established, others never reflective at all—are the ordinary use of our faculties as typically subconscious conscious in their mode of functioning; and in virtue of this relation does it ensue that we hear and see and feel things that guide our inferences, that enter into associations, that contribute to the training of our minds, that modify our tastes and preferences; and yet all these factors enter but feebly into the realm of conscious knowledge.

Passing to the second part, which concerns the abnormal, Professor Jastrow wisely disregards the entire range of the insanities, and confines his attentions to such deviations as retain a decided measure and type of relation with normal consciousness, such as dream consciousness, natural and induced by drugs and anaesthetics, the dissociated consciousness as in hypnosis and hysteria, and cases of altered and lapsed personality. In discussing subconscious consciousness, the author elucidates the mechanism of post-hypnotic acts which had been suggested to the actor during hypnosis, and which are regarded by him as expressive of his own will, or for which he, at any rate, finds plausible excuses. The author's conclusion is that "actions consciously performed will be regarded as voluntary and spontaneous so long as there is no awareness of the imposed motive." Professor Jastrow does not use this illustration as throwing any light on the feeling of freedom on which the advocates of free will are bound ultimately to ground their convictions, but it is evident that it has a decided bearing on this point.

Probably, however, the most important practical result of the work which has been done by many delvers into the subconscious strata of mind has been the light their investigations have thrown on the mechanism of the protean manifestations of hysteria. For Professor Jastrow's exposition of this subject we must refer readers to the book itself, though we may quote, as summing up his views, his dictum that "fundamentally, hysteria is contracted personality." Professor Jastrow's treatment is throughout illustrated by records of cases with many of which, such as Dr. Morton Prince's Miss Beauchamp, Mr. Ansel Bourne, and Mr. Hanna, the reader will already be familiar. It is lucid throughout, and is an able and comprehensive exposition of a subject which is always of engrossing interest to the student of psychology.

[5] *The Subconscious*. By Joseph Jastrow, Professor of Psychology, University of Wisconsin. London: Archibald Constable and Co. 1906. (Demy 8vo, pp. 549. 10s. net.)

ELECTRICITY AND RADIOGRAPHY.

The first part of the first volume of the communications from the laboratory for *x*-ray diagnosis and therapy,[6] in the Vienna General Hospital, edited by Dr. Holzknecht, contains six articles; of all of them the editor is sole or joint author. The first and longest deals with the essentials of radiographic investigation of the stomach, and gives details, with excellent figures, of the technique of bismuth-coating, of the normal appearances in various positions of the patient, and of the limits of variation compatible with the clinical normal. His advocacy of the upright position for screen work has its echo in generally-accepted practice. He describes and pictures the peculiar forms of shadows produced, where displacements of the stomach, or tumours of its walls, alter its shape; and in a few instances shows drawings of the gastric tumours which have occasioned particular shadow-forms. The bismuth method already plays an important and extensive part, so that this article will prove of great service to radiographers. The second article deals with appearances presented when tumours constricting the pyloric portion are accompanied by extreme dilatation and gastroptosis. The next section treats of peristaltic movements in the antrum pylori; the results of such observations will obviously have physiological value, and afford significant negative evidence in abnormal conditions. The fourth and sixth sections deal with the normal form, "lie" and size of the stomach, and with enteroptosis and dilatation of the stomach respectively. They are here mentioned together because Holzknecht has demonstrated that some degree of anatomical gastroptosis is not only compatible with normal function, but is also of very common occurrence. The remaining paper is concerned with retraction and expansion of the abdomen regarded as a means for testing the mobility of the peritoneal organs.

Dr. A. Zimmern, in his *Elements of Clinical Electrotherapy*,[7] covers almost exactly the same ground as that traversed by Albert Weil in his manual reviewed in these columns a few months back,[8] and is open to very much the same criticism. The usual description of the armamentarium is, of course, to be found in the early chapters, despite a disclaimer in the preface of any intention to teach the elements of electricity. The arrangement is a little involved, but as the aim of the book is avowedly clinical it would be idle to quarrel with the author's choice. The rationale of the various diagnostic methods is carefully described; besides all the usual phenomena and their significance, the author has included a special paragraph in this section on the value of electrodiagnosis in injuries received under circumstances which permit of a claim for compensation. Under the heading "Excito-motor Action" the central and peripheral paralyses are considered, both as to diagnosis and treatment; the study of infantile palsy is particularly well written; but we must again enter a protest against the claim, put forward by Zimmern as it was by Albert Weil, to intervene between the patient and "*l'opération sanglante*" in cases of intestinal obstruction. "Sedative action" introduces the various neuralgias, and we note a reluctant admission that the severe types of trifacial neuralgia do not always yield to electro-therapeutics. Speaking of psychotherapy, Dr. Zimmern scouts Moebius's dictum that the effects of electricity are exclusively the result of suggestion. "Exclusively" is, of course, too strong a term, but even the element of truth in this view makes no detraction from the value of the method. In the treatment of naevi, it is to be noted that the author advocates the bipolar method of electrolysis. In dealing with many disorders of the female genitalia, with such lesions, too, as piles and fissure *in ano*, whilst it may be perfectly true that good results are obtained, it seems to us the inconvenience, the expense, and the uncertainty are all greater than in the "brutal" methods of the surgeon. High-frequency phenomena and effects are described with all the lucidity to which the French language lends itself, and Dr. Zimmern betrays little tendency to exploit them beyond

[6] *Mitteilungen aus dem Laboratorium f. radiologische Diagnostik und Therapie im K.K. allgem. Krankenhause in Wien*. Edited by Dr. Guido Holzknecht. Vol. I. Part I. Jena: Gustav Fischer. 1906. (Demy 8vo, pp. 103. M 3.)

[7] *Eléments d'Electrothérapie Clinique*. Par A. Zimmern. Paris: Masson et Cie. 1906. (Demy 8vo, pp. 383. Fr 8.)

[8] British Medical Journal, 1906, i. p. 1226.

their merits. The illustrations deserve a word of praise, adding materially, as they do, to the usefulness of a good working textbook.

Professor Boruttau has written a short book on electricity in medicine and biology for the use of doctors, naturalists, and others concerned with the application of electrical energy to diagnosis and therapy, or to physiological experiment. It opens with a brief review of fundamentals and an explanation of terms, passes to the description of instruments and at greater length elucidates sinusoidal and high-frequency phenomena. Electrolysis and electro-chemistry are considered specially in reference to biology. The problem of currents of injury, rest, and action is discussed without prejudice, whilst the particular conditions pertaining to their occurrence in tissues of the living body are clearly explained. A chapter is devoted to the direct pathological effects of powerful currents and discharges; another to electro-diagnosis. Under headings "Electrotherapy" and "Electricity as an Auxiliary to Medicine" the author describes the innumerable forms of apparatus in use, but he wisely says very little of their clinical value. Dr. Boruttau's work will serve its purpose as a reference book in the laboratory.

NOTES ON BOOKS.

The object of Dr. Siebert of Munich in publishing a pamphlet addressed to young men is to warn them against the dangers of early and illicit sexual indulgence, and to prevent them from becoming victims to disease by an elaborate description of the sexual apparatus (male and female), of the mode of its physiological application, and by a detailed examination of the different forms of syphilis and gonorrhœa. In addition there are paragraphs on the conditions in which prostitution is allowed, and the writer ends by an exhortation to his young readers to be "true Germans," and to bear in mind that "the *summum bonum* of the man is his people, which in its turn has for its *summum bonum* the State." The very complete exposition of the details to which we have referred is calculated rather to excite the young mind than to act as a caution and a warning; and though attempts are made here and there to make the English text terse, both in the single and the married states, we fear that the effect will be counteracted and nullified by the somewhat highly-flavoured reasoning in which it is served. Frankly, the book is not worth translation and, indeed, we have doubts whether it would be allowed for public circulation with the view to its being read [illegible] in this country.

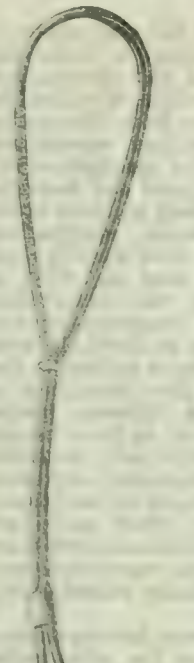
MEDICAL AND SURGICAL APPLIANCES.

A Medical Nurse's Pessary.

Dr. G. Cas[illegible], Leeds, writes: The use of the [illegible] pessary is [illegible] in some cases the [illegible] without operation. The [illegible] to remove the instrument at night [illegible] it [illegible] commends itself to [illegible] the [illegible] favour the all rigid type (for [illegible]), [illegible] somewhat difficult to [illegible] [illegible] disastrous consequences might [illegible] from its [illegible] while *in situ*. The all [illegible] type (for example, Napier's) is apparently free from the [illegible] [illegible] being in use a short time it [illegible] [illegible] and less supporting. It occurred to me that if I had a combination of these two types it would be an advantage, and at my suggestion Messrs. W. H. Bailey and Son, Limited, of Oxford Street, W., carried out my idea with ingenuity and success. On the stem of a Napier pessary is drawn an [illegible] which extends from the cup to the [illegible] [illegible] cup and that of the [illegible] bottle [illegible] [illegible] rigid. I have had two of these [illegible] [illegible]. Experience has shown that the [illegible] [illegible] way of keeping the pessary in position [illegible] the ordinary rubber [illegible] [illegible] [illegible].

Improved Sponge-holder.

Mr. A. de Prenderville, Anaesthetist to the Londo[illegible] Throat Hospital, writes: The advantages claimed for t[illegible] sponge-holder here shown are as follows:



(*a*) The distal or throat end of t[illegible] shank is curved, so as to reach t[illegible] tonsils and pharynx without compl[illegible] manipulations.

(*b*) The handle, with convexity of t[illegible] loop fitting into the hollow of the har[illegible] enables it to be held easily and firmly.

(*c*) The gripping ends are very sm[illegible] and finely serrated hemispheres, qu[illegible] smooth externally, and well buried [illegible] the sponge.

(*d*) Rapid detachment of the spon[illegible] without tearing, is effected, by slipp[illegible] back the controlling ring. The bla[illegible] at once separate widely.

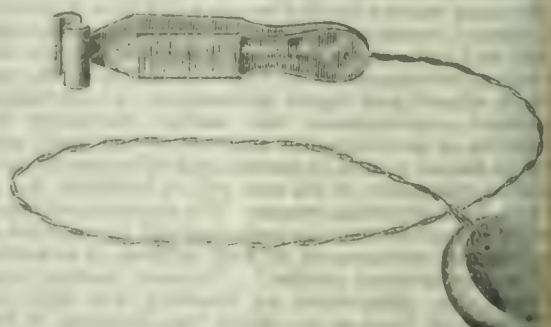
(*e*) Fresh sponges can be quic[illegible] picked up and fixed—a distinct g[illegible] when assistance is not at hand.

(*f*) The metal head is so small [illegible] so little exposed that the danger f[illegible] bruising the soft tissues is reduced t[illegible] a minimum.

Messrs. Arnold and Sons have v[illegible] carefully carried out my views in e[illegible] elaboration of this holder, and I a[illegible] much indebted to them for their sk[illegible]

A Peritoneal Catch and Holder.

Dr. H. Macnaughton-Jones writ[illegible]: Catch forceps for securing and ev[illegible]ing the edges of the peritoneum i[illegible] coeliotomy often get inconvenien[illegible] in the way. I showed at the Brit[illegible] Gynaecological Society some t[illegible] since a clip with a small weig[illegible] attached which I had been in [illegible] habit of using, and the annex[illegible] woodcut shows an appliance m[illegible] for me by Messrs. Arnold and Son[illegible] West Smithfield, on the same pr[illegible]ciple. The edges are very fin[illegible] serrated; it is light but very str[illegible] and maintains a firm hold of t[illegible] peritoneum without any laceration or injury. The sm[illegible] weight is made of lead, and is sufficiently heavy w[illegible] allowed to fall over the side of the abdomen to evert t[illegible] peritoneal edge well. The wire is of bronze-alumini[illegible]



and the whole appliance can be sterilized and can be attached and fixed in a moment, holding the peritoneum well up at either side and out of the way. Of course the instrument can be used if desired for catching structures other than the peritoneum.

The late Mr. George Wills, of Hyde Park Gate, who died on December 16th, left £1,000 to the Adelaide Hospital, Adelaide, South Australia, £500 to the Children's Hospital in the same city, and £1,000 to the Hospital for Incurables.

Cancer's will recently proved how into relief the "[illegible] fortune" [illegible] by patent medicine vendors. The so-called [illegible] G. T. Fulford, the proprietor of Wilson's Pink Pills, has been sworn at £1,511,000; while the estates of two persons connected with Eno's Fruit Salt, [illegible] and [illegible], have been sworn at £[illegible] and £[illegible] respectively. A further instance is supplied by the estate of Mr. J. Brown, managing director of the Mother Seigel Syrup Company. His estate has been sworn at £[illegible], which we estimate at £2,000.

THE PUBLIC HEALTH REPORT FOR THE COUNTY OF LONDON (1905).*

(Continued from page 210.)

In the second part of his report for 1905 Sir Shirley Murphy deals with the public health administration in London, both in the metropolitan boroughs and in the administrative county as a whole.

Dairies, Cowsheds, and Milkshops.

At the end of 1905 there were 253 cowsheds in London, as many as 40 being in Stepney, while only 1 was on the register in each of the boroughs of Paddington, Kensington, and Holborn. Since August, 1904, the County Council has had power to remove and slaughter any cows suspected to be suffering from tuberculous disease of the udder. This power was obtained because it was found that cows certified to be so suffering were sold by their owners to cowkeepers outside the county. An examination of the cows in the London cowsheds was made four times during the year by the County Council's Veterinary Inspector; he took 11 samples of milk from cows suspected of being affected with tuberculous disease of the udder, and in three instances bacteriological examination proved the samples to be tuberculous. In one case the cow at the time of slaughtering was apparently in good condition, but, on a *post-mortem* examination being made, the internal organs were found to be very badly affected with tuberculosis. During 1905, Dr. Houston examined milk taken from premises, (*a*) where known precautions were taken to preserve the milk from contamination; (*b*) from vendors who made claim to take precautions; and (*c*) from vendors who sold milk in the ordinary way. While conditions of temperature and time largely governed the number of bacilli in the samples, the total weight of deposit was found to be in inverse proportion to the precautions taken. The County Council has decided to apply to Parliament for powers which would subject to penalty vendors of milk which is found after examination to be so contaminated as to be dangerous to health.

Nuisance from Stable Manure.

The increasing use of motor vehicles is resulting in the production of less manure than formerly. Difficulties appear to be still arising in connexion with the use of peat moss litter. Nuisance is experienced when this form of manure is disturbed at the time of removal, and the remedy pointed out is to require the manure when removed from the stable to be deposited in the vehicle in which it will subsequently be removed from the premises.

Nuisance from Fried Fish Shops.

When commenting upon the nuisance arising from fried fish shops, Sir Shirley Murphy says that the question must be considered from two points of view. "In the first place, the frying itself, unless it is conducted with due precautions, involves escape of vapour and offence to passers-by. In the second place, the gutting and cleansing of the fish and the methods adopted for dealing with offal and refuse need to be considered." He further states that the conditions under which fish is cleansed and stored are as a rule most unsatisfactory. In many instances floors and walls are found to be soiled with decomposing fish slime and excremental matter. Refuse is stored in leaky and uncovered receptacles, and kept until putrid and offensive in unpaved yards on which stagnant and offensive pools of water are lying. The recommendation is made that powers should be obtained to make by-laws regulating the conduct of the fish-frying business, such by-laws to include clauses directed towards the prevention of nuisance arising from the escape of vapour, and also clauses dealing with conditions which may involve risk of contamination of the fish.

Houses Infested with Vermin.

About 500 rooms which were certified to be infested with vermin were dealt with during 1905. In Paddington such rooms are required to have the wall papers stripped off, defective plaster cut away, and vermin where accessible to be destroyed by blowpipe and by sulphur fumigation, after which the plaster must be made good, the walls repapered, the paint-work washed, etc.

Common Lodging-Houses.

Since 1895 the common lodging-houses in London have been under the care of the County Council. At the end of 1905 there were on the register 413 of such houses with accommodation for 27,571 persons, more than nine-tenths of the accommodation being for men. The largest number of lodging-houses (67) is in Stepney. In Stoke Newington there is only one, in Lewisham one, and in Hampstead there are none. Several censuses have been taken since 1897 with the object of showing how far the registered accommodation in lodging-houses is made use of. The results of these inquiries have shown that there are on an average between five and six thousand vacant beds nightly in London common lodging-houses. Owing to the shifting population of these houses it is difficult to compare their death-rate with that of London generally. An approximate comparison may, however, be arrived at from a table which gives the number of deaths of males at different age periods from certain causes per 1,000 deaths from all causes in London and in the licensed common lodging-houses. In the construction of this table there have been included the deaths of persons removed from lodging-houses to Poor-law infirmaries and other institutions. The age periods selected are 25 to 35, 35 to 45, 45 to 55, 55 to 65, and 65 upwards. When compared in this manner, the amount of phthisis in the lodging-houses is found to be much greater than in London. Broadly speaking, about one-half of the deaths occurring in the lodging-houses between the ages of 25 and 55 years were due to consumption, while in London the proportion was about one-third.

Inland Revenue Act.

The payment of inhabited house duty is remitted with respect to certain premises let in tenements, provided the medical officer of health for the district certifies such premises to be in a good sanitary condition. In 1905 this certificate was refused in the case of 221 tenements in London, or rather more than 4 per cent. of the total number for which certificates of exemption were applied.

Underground Workshops.

The use of basement rooms as workshops is referred to. In Chelsea there are 19 such workrooms occupied by milliners and dressmakers, with accommodation for 167 workers. The Medical Officer of Health (Dr. Louis Parkes) states that these rooms are by no means satisfactory as regards lighting, warming, ventilation, and, in some cases, aërial disconnexion from water-closets. He suggests that regulations should be made by the Secretary of State prohibiting the use of underground rooms as workshops unless they comply with certain conditions.

The Cleansing of Persons Act.

This Act, which was passed in 1897, empowers a sanitary authority to permit any person who applies to them to have the use free of charge of apparatus owned by the authority for the purpose of cleansing his person or his clothing from vermin. Among the metropolitan boroughs, St. Marylebone and St. Pancras appear to be the only two in which the Act has been effectively taken advantage of. In the former borough 9,412 persons and in the latter 3,401 persons made use of the special accommodation provided in these districts.

The Midwives Act.

It is satisfactory to find that of the 2,000 certified midwives in London only 8.7 per cent. were enrolled in view of having been in practice prior to April, 1901. All practising midwives are subject to routine inspection, to ascertain whether they are observing the rules as to cleanliness, the possession of the requisite apparatus and antiseptics, the keeping of case-books and the giving the required notices to the supervising authority. During the year 1,057 visits of inspection were made and in 330 instances the midwives were found to be unsatisfactory.

Prior to being brought under supervision many midwives were unable to use a clinical thermometer. All have not yet learnt to do so, but such midwives use a thermometer which has upon it one red line indicating the normal temperature, and another marking a temperature of 100.4°. The midwife knows that when the mercury reaches the higher mark the patient is feverish and that medical aid should be called in if the temperature is maintained.

At the end of 1905 a scheme of notification of births by

*Report of the Public Health Committee of the London County Council, submitting the Report of the Medical Officer of Health of the County for the year 1905. London: P. S. King and Son. No. 1,010. Price, 3s. 6d. Pp. 91, with four appendices, charts, etc.

midwives was brought into force. About 150 midwives supply voluntarily to the Council weekly lists of the cases attended by them. The lists, when received, are dissected and the names and addresses of the mothers are forwarded to the various medical officers of health concerned. In this way mothers can be visited on an average within eleven days after the birth of the child, or just at the time when the midwife usually ceases her attendance and the mother is left to her own resources. In 1,113 instances midwives called in medical aid, as required by the rules. In this connexion it appears that the same difficulty is being experienced in London as elsewhere, from the fact that no provision is made in the Act for the payment of a fee to the medical man whose aid is sought. This question was under the consideration of the County Council, and the Midwives Act Committee recommended the Council to adopt a scheme for the payment of these fees, and a clause was included in the draft General Power Bill, 1906, before its introduction, but at a later stage the clause was not proceeded with.

LITERARY NOTES.

The December number of the *Annals of Otology, Rhinology and Laryngology*, published at Saint Louis, has the character of a *Festschrift* in honour of Professor Bernhard Fraenkel, of Berlin, whose 70th birthday was not long ago made the occasion of a festal commemoration by his pupils and admirers throughout the world of laryngology. The special number of the *Annals* is an international tribute to the Berlin specialist. No scientific man need crave for a finer or more fitting memorial. Among the contributors are many of the leaders of laryngology, rhinology, and otology in the United States, and representatives of Great Britain, Holland, Italy, France, Germany, and Belgium. The number is abundantly illustrated and excellently printed. We present our warm congratulations to the Editor-in-Chief, Dr. H. W. Loeb, and his staff on a most valuable addition to laryngological literature.

Messrs. Methuen will publish this week a work entitled *The Drink Problem in its Medico-Sociological Aspects*, edited by Dr. T. N. Kelynack, honorary secretary of the Society for the Study of Inebriety. Each section is written by a medical expert in a form appealing to the intelligent layman, as well as meeting the requirements of the medical practitioner.

Mr. Frowde of the Oxford University Press announces some interesting additions to the World's Classics. They include Scott's *Lives of the Novelists*, with introduction by Mr. Austin Dobson; Thackeray's *Pendennis*, with introduction by Mr. Edmund Gosse; Sheridan's *Plays*, with introduction by Mr. Joseph Knight; Oliver Wendell Holmes's *The Poet and the Professor at the Breakfast Table*, with introductions by Dr. W. Robertson Nicoll; and another volume of Burke's complete works.

Dr. John Knott (Dublin) writes: On reading the thoroughly sympathetic and appreciative comment on the life-work and personality of Charles Lever in the current issue (January 5th) of the British Medical Journal, it occurred to me that the perusal of the subjoined letter of the rollicking Irish novelist might interest a large proportion of your readers. The writer of the remarks contained in your Literary Notes seems to me to have estimated the mercurial author of *Charley O'Malley* by a far more accurate standard than does the average reviewer and historian of recent literature. Fancy a *prudent* and *contented* Lever! The suggestion would involve a far more monstrous specimen of an Irish "bull" than was ever created even by the most undisciplined and mentally benighted of his own heroes and members of their respective circles! The survival of the popularity of the creations of this very representative Hibernian Celt into our own century, blighted as it is with the thinly-disguised products of the sub-intellects of our motor-ridden generation, is the best proof that their author cannot be said to have 'lived in vain.' The genial cheerfulness and the riotous laughter which his works have brought to so many thousands of wearied breasts not only in his own country but throughout the limitless area of the *Diaspora* of the Irish race ever since their first (respective) appearances, have indirectly sealed their claims on our undying gratitude. And a [illegible] appreciation of the man and his works has never been confined to his compatriots—nor even to the vast literary audience of the English-speaking section of the inhabitants of our ever-narrowing globe. The personal magnetism of the author secured him the unbounded sympathy of colloquial critics in every locality, and at every stage, of his European peregrinations; and the seed which they sowed did not all perish by the wayside. And when we read of his riotous—ultra Hibernian—hospitality, and his unthrifty declination towards "dash" and display, we are at no loss for etiological data towards explanation of his repeatedly recurrent attacks of acute gout, and his chronic autophagic appetite for that (absent) £50 note! But, as the writings of our great Irish novelist have throughout appealed to the broadest human sympathies, matters medical—whether biographical or clinical—are seldom found to figure in the chains of associated ideas which are called before the mind's eye by the enunciation of their titles or the perusal of their contents. Very many, indeed, of the most delighted readers of *Harry Lorrequer* or of *Charley O'Malley* have never known that the author "was once upon a time" a Dublin medical student, and a very typical one—of the period. But the perusal of the accompanying letter (which now lies before me, and whose contents have, so far as I know, not been hitherto included in any published "Life" or "Life and Letters" of the writer) can hardly fail to win the sympathies and, indeed, call into play all the best feelings, of every medical reader in special, and of every lay reader in general, whose notice it may happen to attract. The document cannot, I venture to think, fail to convince all such that the warm Irish heart of Charles Lever never, even in his hours of wildest frolic, lost hold of the truest feelings of the Christ-like benevolence and sympathy with suffering and distress which most truly elevate man above the brute, our profession above all other professions; and—the patriotic Irishman would fain add, if it could be done without fear "of quarrel and offence"—our Hibernian fellow-countrymen above (the average, at least, of) the members of all other nationalities. It was written to his early friend, Sir William R. W. Wilde, the famous Dublin oculist and archaeologist, the husband of the highly-gifted and patriotic "Speranza," and father of the late poet, dramatist, and novelist, Oscar Wilde. The human—I might almost even say *divine*—interest of the document requires no further introductory comment:

Embassy, Vienna, March 18th, 1867.

My dear Wilde,

I am up here for a few days and have found an old friend—one of the most gallant fellows I ever knew, and one whose princely hospitalities were freely extended to one lonely man travelling in Hungary, bed-ridden and helpless. He had written a sort of memoir of his case with the hope that some Englishman of eminence might chance to read it. I have bethought me of sending it to you, and asking you if you have a similar case in your experience. Is there any such disease? Is it hopeless?

If you thought that there was a chance for the noble fellow, you will give news that will spread joy over half Hungary, for he is even now one of the great and guiding minds of his country.

I look much to Lady Wilde to support the prayer of my present petition. Will you tell her how I treasure the memory of the pleasantest half hour I spent in my late—and, most probably, last visit to Ireland?

I write very hurriedly to catch the messenger, who leaves to-day, and have only to add that if Count Czychony's case be tractable, and that you can tell me whose speciality it lies with to treat such, you will do me a great—the greatest—favour. And with all good wishes for you and yours,

Believe me, most faithfully, your old friend,

CHARLES LEVER.

Address me, "Villa Morelli, Florence," where I shall be in about a fortnight. Salute to all old friends.

The Delegation for the adoption of an international auxiliary language consists of more that two hundred and fifty representatives of scientific societies and professional associations of all countries, and more than a thousand members of academies and universities have intimated their adhesion. Encouraged by this wide support the Delegation intends during 1907 to promote the choice of an auxiliary language by a competent international authority, and with this object it is appealing to all who wish to see such a language adopted. The General Secretary of the Delegation is M. L. Leau, Docteur ès Sciences, 6, rue Vavin, Paris.

The December number of *Treatment* contains an editorial note announcing the demise of that journal.

SCHOOL HYGIENE.

(Continued from page 154.)

LONDON.

Dental Conditions.

In Dr. Kerr's report last year allusion was made to the prevalence of dental troubles among children. The School Dentists' Society, which has carried out careful investigations into the conditions of children in several residential and secondary schools, petitioned the Council in December, 1905, asking for the appointment of properly qualified dental surgeons to all elementary schools, so that dental inspection, advice, and preventive treatment might be regularly given from the earliest school age. The inclusion also in the code of instruction, under the head of General Hygiene, of a short course of dental hygiene was suggested.

Dr. Hanson has attempted in two schools (Vallance Road and the Davenant) to make an estimate of the conditions of the teeth by a simple inspection of the mouths, and gives the following statement:

Ages.	Children examined.	Apparently Healthy.	At least One Carious Tooth.	Three Carious Teeth.	Teeth requiring Treatment.	
					Conservative?	Extraction?
5	123	18	5	27	222	204
6	118	14	6	29	161	292
7	150	1	13	16	273	361
8	49	4	3	8	106	89
9	48	—	4	15	133	64
10	33	2	1	10	99	38
11	76	15	8	23	140	64
12	23	5	4	8	41	18
13	20	7	2	6	13	21

Dr. Niall has noted the condition of the teeth in three good class schools in Dulwich (1,645 boys, 1,461 girls = 3,106 children). Making a simple inspection, he found that at 4 years of age 59 per cent. boys and 55 per cent. girls had apparently no disease present. This proportion decreased up till 9 or 10, when just less than 30 per cent., chiefly through loss of the milk teeth, appeared superficially to be free from caries. In but few cases among the boys was there any evidence that the teeth were ever cleaned; after 9 years of age the incidence of disease appeared somewhat less among the girls.

Dr. Kerr points out that caries has different significance according to whether the temporary or permanent dentition is affected, and the correct recording of this is not always easy without dental experience. Most important with a view to the child's future is the condition of the first permanent teeth, the "six-year-old molars." For this reason the full value of the facts will only be appreciated when they have been collected and analysed by a competent dental examiner.

In continuation of the work of medical inspection done by Dr. C. J. Thomas at the Michael Faraday School, and recorded last year, Mr. C. Edward Wallis, who acts as dental surgeon to the Council's industrial schools, kindly volunteered to examine and record systematically the condition of the mouths and teeth of the children at this school. This examination is a record of actual conditions, in contradistinction to the above statements, which are underestimates, in that only obvious conditions presenting themselves on simple inspection were noted by the medical examiners. The children were examined in groups according to the years of age. Charts were used based on those for the examination of Poor-law schools by the British Dental Association in 1901, but amplified to show any correlation between condition of teeth and physical condition. The examination was very thorough, each tooth being carefully inspected with a dental mirror, and tested with a probe. Time so far has only permitted of 245 children being examined. The 245 children had on an average 3.9 carious temporary and 2.8 carious permanent teeth each; 9.3 per cent. had alveolar abscesses or fistulae discharging pus; 16.3 per cent. chronic pharyngitis; 29 per cent. showed chronic enlargement of tonsils, 61.2 per cent. had enlarged submaxillary lymphatic glands. Anaemia was noted in 37 per cent.

Mr. Wallis notes that at the ages dealt with the permanent dentition is incomplete, so that the incidence of dental caries is really worse than appears here. In most cases the permanent teeth become carious within two years of their eruption, which emphasizes the necessity for dental treatment at an early age to preserve them. The most striking feature observed was the neglect of dental cleanliness, and absence of any evidence of dental treatment beyond a few instances in which teeth had been extracted or broken. Only three of these 245 children possessed toothbrushes and showed signs of having used them regularly, and these three were practically free from caries. Bacterial deposits, tartar, remains of food, and every degree of malodorousness and sepsis were evident. Many children were suffering from undue retention of temporary teeth. Decomposing débris of food and bacterial toxins produced in decaying teeth cavities become a constant source of ill health and debility, and are well recognized as the origin, not only of chronic septic conditions, but also of conditions occasionally having fatal results. Most especially important is cleanliness of the mouth in children, as it has recently been shown by observations at the London Fever Hospital that the serious septic complications of scarlet fever, middle-ear suppuration, septic adenitis, albuminuria, gangrenous stomatitis, septic gastritis, and so on, are all much commoner and more severe where oral sepsis is marked.

Anaemia was commoner among the girls than the boys in this school, but this difference of condition was not ascribed to dental conditions. In most cases with extensive dental disease the physical condition as shown by height and weight measurements fell below the average for their age. Dr. Kerr observes that the out-patients' room of every hospital has large numbers of patients suffering from anaemia and chronic stomach troubles, and expresses the opinion that a certain number of patients in adult life who

The Teeth of Children at Michael Faraday School.

Age, Approximate.	Boys Born in	Number Examined.	Carious Teeth Temporary.	Carious Teeth Permanent.	Average per Child Carious.		Purulent Alveolar Abscess or Dental Fistulae	Chronic Pharyngitis.	Enlarged Tonsils.	Enlarged Submax. Lymphatic Glands.	Anaemia.
					Temporary.	Permanent					
Boys.											
9	1897	45	318	99	7.1	2.2	9	8	3	40	3
10	1896	43	225	107	5.2	2.5	3	1	8	37	8
11	1895	37	141	113	4.0	3.0	3	8	9	35	4
12	1894	39	62	158	1.6	4.0	1	9	22	29	7
Girls.											
9	1897	44	251	112	5.7	2.5	4	7	14	36	39
10	1896	37	155	96	4.2	2.6	3	6	16	31	27
Total ...	—	245	1,152	685	27.8	16.8	23	39	72	218	88

become victims of pulmonary tuberculosis probably reach this through debility the result of chronic gastric disorder, resulting from want of teeth, and continual absorption of putrefying matter. Large numbers of young adults seen as candidates for London teaching appointments have lost the grinding teeth, so that there is an extensive destruction of teeth going on quite early in life, affecting the individual's prospects, seriously damaging his [illegible] capacity and even reducing some to a condition of semi-invalidism. As Dr. Kerr points out, the remedies must be applied in early life, during the period of eruption of the permanent teeth, that is, for practical purposes during the whole of school life. These remedies are preventive, that is, educational, which it is the duty of the educational authority not to neglect, though it is at present practically untouched, and curative, by observation and treatment of the beginnings of disease in the teeth.

Abroad, dental hygiene has a place in the school management. New York has recently started regular dental examinations of the children, and in Brussels dental service has been in force since 1875. In Germany, at Darmstadt Wiesbaden, Mulhausen, and Strassburg, regular inspection of the teeth takes place, and Professor Jensen of Strassburg has described in a series of annual reports the school work done there. At Ulm this year a dentist has been appointed to give his whole time, and in Prague six school dentists have been set to work. The children are inspected and the dental condition recorded on a card; in cases requiring it the parents are notified to bring their children to the school dental institution where regular treatment is carried out. The district inspector, in discussing the report, pointed out that there was a saving in attendance, as the time taken up in examination and treatment at the institution was less than that previously lost through absences from toothache.

Dr. Kerr thinks it improbable that the English public is yet sufficiently educated to appreciate a dental inspection of school children, and to follow it up by treatment, without which it would be in a great measure a waste of time. The measures which can be immediately undertaken are prophylactic and educational, and fall well within the scope of an educational authority. The very great importance of the subject must be impressed on parents and teachers, both in school and evening classes.

The teeth of the child are affected by health in infancy, and even by the mother's health before birth. Their evolution is delayed by rickets, which affects a great proportion of London school children. Food nowadays is too fine, too much milled and machined, and some coarse fibrous material is always required as an element in children's food. If there are to be school meals, tough fibrous vegetable material should occasionally form part of the meals.

The subject of "teeth" would form an admirable object lesson. The influence of the teeth by vinegar and by acid foods such as pickles, the use of chalk to neutralize these things, and to polish the teeth, and finally the necessity for the toothbrush, are subjects to be impressed on the scholars.

The majority of parents either could not or would not purchase toothbrushes. Each child at school should have its own toothbrush numbered and hung on a rack, and might be made to use it twice daily with great advantage.

These suggestions are put forward by Dr. Kerr because he recognizes that it is extremely important that the matter should be followed up in a practical way. It would be a great advantage if the Council now added a dental surgeon to the medical staff, to make observations, and supply suggestions for this branch of hygiene which is so extensive and important, and which requires an amount of expert knowledge which only a qualified dental practitioner can possess.

During the will of the late Mr. Thomas William Tryett, of Hilton Green, the following Orthopædic Hospitals to the Infirmed, Great Portland Street, and the Cancer Hospital, Fulham Road, each receive a sum of £500.

The late Mr. Hugh Parnell, of Ramsgate, who died on October 29th, left £1,000 to King's College Hospital, London, and £500 each to the Leeds Hospital and the General Hospital, Ramsgate.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

VACCINATION.
Public Vaccinators' Visits.

BLACKHEATH.—It is the duty of a public vaccinator to send a notice at least twenty-four hours before visiting a child for the purpose of offering to vaccinate (Vaccination Act, 1898, I. 5), and a form of notice constitutes one of the schedules to the general orders issued under this Act.

THE CALCULATION OF SUPERANNUATION.

MANUS asks if the fees received from vaccination by a union medical officer would be included for purposes of superannuation.

*** Such fees cannot be included. Poor-law officers can only claim superannuation on emoluments derived from their office. Where the Poor-law medical officer is also public vaccinator his remuneration as such is considered to have no relation to his Poor-law office; in his latter capacity he is not an officer of the guardians but a contractor with them.

PRIVATE PRACTITIONERS AND PAUPER PATIENTS.

J. S., who is not a district medical officer, asks whether he can claim a fee from the guardians for attendance on a man with a fractured leg who is in receipt of out-door relief.

*** Under no ordinary circumstances has a private practitioner a legal claim on the guardians for medical or surgical attendance on a pauper in receipt of relief. Even under extraordinary conditions, he must have a written or printed order, signed by some authorized official of the guardians, directing him to give his attendance to any patient specified therein, before he can claim payment for services rendered.

DISTRICT MEDICAL OFFICER'S EXTRA FEES.

J. A., a district medical officer, asks for advice as to the action to be taken in reference to a claim on the guardians for the following fees: (1) £3 for setting and attending a case of fracture of leg, tibia, and fibula; (2) £2 for instrumental delivery of a patient with contracted pelvis, who, on a previous occasion, had to be sent to a local hospital, where delivery was similarly effected. The clerk to the guardians has stated that the first claim was one which the guardians never granted, but that he would lay the second request before the meeting. The following answer has been received from the Board of Guardians: "As a general rule, the guardians only allow an extra fee when another medical man is called to assist, which does not appear to have been done in the case of Mrs. S. The guardians are, therefore, unable to see their way to grant an extra fee in the case." J. A. asks: Have I any legal claim to either fee? If not, in reference to the midwifery case, shall I be right in informing the guardians that in a future similar case I shall advise the patient to send for another doctor, as it is against their wish that I should use instruments, and asking the guardians to accept the responsibility of my action?

*** In reference to the claim for £3 for setting and attending a case of fractured leg, we cannot see that the guardians have any excuse whatever for declining payment, this being one of the cases specified in Art. 177 of the Consolidated Order of the Local Government Board, dated July, 1847, which states that for the treatment of such cases £3 "*shall be paid by the guardians*." As to the claim of £2 for instrumental midwifery and the view of the guardians in reference to it, we cannot see that the right to claim the extra fee depends in any way on the presence or absence of another doctor. The only question is whether there was difficulty in delivery and if so whether instrumental aid was necessary for the proper treatment of the case. As the patient was suffering from contracted pelvis, the treatment adopted must have been that which the case required, and if not adopted life would probably have been seriously endangered. We cannot advise our correspondent to write as he proposes to the guardians, as under no similar circumstances can they discharge responsibility. They have their own duties and he has his, and these duties are not transferable. It will be our correspondent's duty as long as he holds office to take medical charge of all patients who by direction of the guardians are placed under his care, and it then becomes his duty in all cases to adopt and carry out *that line of treatment which in his opinion is best adapted to cope with any difficulties associated with the case*. Any omission to

do this, especially if such omission resulted from doubts as to future payment for services rendered, might, and probably would, land him in a very undesirable position, and this with public opinion not in his favour. We have no hesitation in saying that the claim for these extra fees are strictly in accordance with the Order of the Local Government Board, and should be enforced.

THE L.S.A. AND POOR-LAW APPOINTMENTS.

VACCINE asks whether or not the diploma of L.S.A. would be regarded by a Board of Guardians in the election of parochial medical officer as a double qualification. Could a candidate with this diploma only be elected against a man with a double qualification?

*** The misapprehension as to the diploma of L.S.A. seems to be very prevalent in the minds of Boards of Guardians. The regulations of the Local Government Board require that medical officers in parishes or unions must be registered to practise both medicine and surgery. This, in ordinary language, is often described as a "double qualification," and is very often supposed to refer only to those holding the diplomas of the Conjoint Board. The L.S.A. who has obtained his diploma since the passing of the Medical Act, 1886, is entitled to practise both in medicine and surgery on that one diploma, and is therefore doubly qualified in the sense intended by the Local Government Board regulations.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

N a congregation held on January 24th the following degrees vere conferred:

B.M., B.Ch. degrees:—H. G. F. Spurrell, Merton Coll.; H. A Philpot, New Coll.; H. R. Ramsbotham, Brasenose Coll.; B. E. A. Batt, Trinity College; C. Beards, Jesus Coll.; H. H. Carleton, Keble Coll.

D.Sc. degree:—G. F. H. Smith, New Coll.

UNIVERSITY OF CAMBRIDGE.

HE Examinations for Medical and Surgical degrees, Third f.B., Part II, will begin on Tuesday, April 23rd. The names f candidates should be sent to the Registrar on or before uesday, April 9th.

Dr. Simon has been appointed an Examiner in Medicine, in lace of Dr. Osler, who is unable to examine.

UNIVERSITY OF LEEDS.

VICE-CHANCELLOR'S REPORT.

OME points of interest in regard to medical education are ontained in the Vice-Chancellor's report for the session 905-1906. Referring to the institution of degrees in dentistry e says, "We have to welcome a new branch of study in the niversity through the establishment of a school of dentistry. he establishment of such a school became practicable when a ental department providing facilities for chinical instruction as instituted at the Leeds Public Dispensary; and the niversity at once took advantage of the opportunity and assed ordinances establishing the degrees of B.Ch.D. and .Ch.D."

An interesting table shows the various centres from which udents came to the University. In the case of the medical udents 29 per cent. came from the borough of Leeds and the maining 71 per cent. from other towns in the West Riding, om the county areas of the three ridings of Yorkshire—of urse, mainly from that of the West Riding—and from other nglish counties. It is undoubtedly the case, however, that e school draws its students from a wider area than the table ould seem to indicate, for students from the Colonies may be turned under some of the other headings even when they ve taken up their residence only temporarily in this untry.

Reference is made to the need for increase of accommodation the various departments. Everyone will feel that this is pecially true of the pathological department which, under e excellent management of Professor Grünbaum, has veloped considerably, and it is earnestly to be hoped that e council may shortly see its way to providing a department r pathology worthy of the rest of the medical school, which ll afford Professor Grünbaum the facilities he desires for aching and for the prosecution of research by himself and e encouragement of it in others. As it is, the members of e teaching staff, impressed by the need for an increase of e accommodation, cheerfully gave up, during Professor evelyan's tenure of the post, their large board room, which akes an excellent laboratory, and some assistance and relief of essure undoubtedly results from the excellent pathological partment at the infirmary which the recent alterations have secured. The various sections of the department are, however, separated from one another; and though adequate, or nearly so, for present teaching requirements, they require enlargement and rearrangement if development is to go on. The provision of a new pathological department and the completion of its equipment is surely an altar suitable for the gifts of those old Leeds students—and there must be many of them—to whom "from the golden horn of plenty blessing and abundance has flowed."

APPOINTMENTS.

Mr. Myers Coplans, M.D.Lond., D.P.H.Cantab., has been appointed Demonstrator of Bacteriology, and Charles Porter, M.D.Edin., B.Sc., Honorary Demonstrator of Public Health.

CONJOINT BOARD IN IRELAND.

THE following candidates have passed the Second Professional Examination:

E. A. Gregg (with honours), R. Charles, T. M. Duncan, J. W. Flood, A. E. Moore, W. Mulcahy, T. McDonald, W. P. H. Parker, C. O'B. Ryan, D. K. Seaver, O. H. Woods.

The following candidates have passed the Third Professional Examination:

P. H. Black, R. J. Bonis, F. Bysne, A. Curry, H. E. Davis, M. B. Dooley, P. A. Doyle, J. J. Dwyer, J. A. J. Flannery, G. A. Finegan, P. Harrington, M. J. Hawkshaw, P. Maguire, A. E. S. Martin, P. McCarthy, D. McCormack, P. J. Timoney, E. C. Wallace, J. F. Walsh, A. Warnock.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have passed in the subject indicated:

Surgery.—*H. A. Fenton, †*O. P. N. Pearn, †*D. E. C. Pottinger, †*S. Singh.

Medicine.—†M. L. Ford, *D. E. C. Pottinger, †*C. S. Spencer, *A. R. Wade, †C. J. Wolfe.

Midwifery.—C. F. Curtis, A. C. J. Elwin, J. F. McQueen.

The diploma of the Society was granted to the following gentlemen:

O. P. N. Pearn and D. E. C. Pottinger.

†Section I. *Section II.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ended December 22nd and 29th, 1906, and January 5th, 1907, the deaths from plague numbered 5,196, 9,101, and 10,363 respectively. The principal returns are: Bombay Presidency week ended December 22nd, 1906 (no return received), December 29th, 1906, 2,555, and January 5th, 2,081; Bengal, 430, 393, and 849; United Provinces, 2,058, 2,154, and 2,594; Punjab, 2,336, 2,483, and 3,027; Central Provinces (December 22nd not received), December 29th, 1906, 951, January 5th, 699; Central India, 294, 376, and 520.

During the week ended January 5th, 1907, the following returns are to hand: Madras Presidency, 38; Burmah, 319, Kashmir, 43.

AUSTRALIA.

Queensland, Brisbane.—During the weeks ended December 8th and 15th, no fresh cases reported. During the week ended December 22nd one case of plague, which proved fatal. There were no cases under treatment on December 22nd. The last infected rat was found on December 21st.

MAURITIUS.

During the weeks ended January 10th, 17th, and 24th, the fresh cases of plague numbered 15, 6, and 7, and the deaths from the disease 6, 4, and 6 respectively.

A RATHER interesting experiment is to be tried by Dr. J. E. Chapman at Clacton-on-Sea, who has obtained from a benevolent gentleman the use, at a nominal rent, of a house about a mile and a half from the sea, standing in its own grounds of twenty acres, as an open-air sanatorium at moderate rates. A part of the grounds will be used as a market garden, which will be worked with the advice and assistance of an expert market gardener, and under the immediate charge of a foreman gardener. It will provide a considerable amount of suitable light work for such patients as are fit and anxious to work; they will be paid by the piece, and it is hoped that the garden will also provide selected men with training in the work, and find employment for them subsequent to their discharge from the sanatorium until such time as they are competent to work for themselves. It is hoped also to institute other industries, such as poultry rearing, bee-keeping, etc., which will provide experience and light work for patients. The building is now being altered, and it is hoped that it will be ready for patients at an early date. The patients will pay 25s. weekly, and the institution is intended especially for the benefit of clerks and artisans. Dr. Chapman has had considerable experience in the management of open-air sanatoriums, and we wish his experiment every success. Further particulars can be obtained from him at White Cross Lodge, Clacton-on-Sea.

THE MIDWIVES ACT.

PROSECUTION UNDER THE MIDWIVES ACT.

IT is satisfactory to find that this Act has not been allowed to remain a dead letter and that a public officer is ready to enforce its provisions. It is true that the case selected does not appear to have been a very grave one, but the illegal assumption of a professional title has been followed by prosecution by a public authority. The accused, Ann Munns, appears to have been an old practitioner, and nothing was urged against her by the prosecution except the fact that she, not being on the Midwives' Roll, called herself "certificated midwife." The Mansfield magistrates imposed a fine of half a crown, and Mrs. Munns can scarcely expect sympathy. There was nothing to prevent her getting on the Roll if she had used ordinary diligence, and she might have known that Acts of Parliament cannot be ignored with impunity. It is only to be regretted that there are not everywhere county officers to proceed against similar infringements of the Medical Acts. Far worse cases than that of Mrs. Munns might be found without much difficulty.

MEDICAL NEWS.

THE estate of the late Dr. Symes Thompson has been valued at £22,034.

MR. FAZAN of Epsom College has gained an open classical scholarship at Christ Church, Oxford.

DR. ALFRED COX has been placed on the Commission of the Peace for Gateshead.

DR. B. WALKER of Kirkby Stephen, has been appointed to the Commission of the Peace for the County of Westmorland.

THE Worshipful Company of Ironmongers have subscribed one hundred guineas to the fund for the removal of King's College Hospital to South London.

THE Hungarian Government is said to have under consideration the foundation of a new university at Pressburg. The existing Universities of Hungary are those of Buda Pesth and Klausenburg.

DR. OLIVER AVISON has received the King's licence and authority to accept and wear the Insignia of the Fourth Class of the Order of the Tai-Keuk conferred upon him by the Emperor of Korea in recognition of valuable services rendered by him.

THE sixth Congress of the German Society of Orthopaedic Surgery will be held at Berlin on April 2nd before the meeting of the German Surgical Society under the Presidency of Professor Bernhard Bardenheuer, of Cologne.

THE Home Secretary has stated, in reply to representations from the National Hygiene League and Union for the suppression of Cigarette Smoking by Juveniles, that he does not see his way to introduce a Bill on the subject at present.

THERE is a general movement in the medical profession in Austria for the adoption of a higher scale of fees. It is proposed to raise them 50 per cent. all round, in order to meet the general rise in the cost of living that has taken place in recent years.

THE next meeting of the University College Medical Society will be held in the Medical Library, University College, on Wednesday, February 13th, when Dr. Henry Head, F.R.S., will read a paper entitled The Grouping of Sensory Impulses. The chair will be taken at 8.30 by Dr. J. S. Risien Russell. Visitors are invited to attend.

COLONEL D. BRUCE, C.B., F.R.S., will read a paper on recent researches into the epidemiology of Malta fever at the meeting of the Epidemiological Society, on Friday, February 15th. The meeting will be held in the rooms of the Medical Society of London, 11, Chandos Street, W., at 8.30 p.m.

THE first Lettsomian Lecture before the Medical Society of London will be delivered by Dr. C. L. Reeves on Monday next at 9 p.m. and subsequent lectures on February 18th and March 4th at the same hour. The subject of the lectures, which will be illustrated by lantern slides, is the diagnosis and localization of cerebral tumours.

THE seventh International Congress of Physiology will be held this year at Heidelberg, August 13th to 16th, under the presidency of Professor Vernon Kossel. In connexion with the Congress there will be an exhibition of scientific apparatus. Announcements of communications should be sent to the Physiological Institute, Heidelberg, before June 15th.

DR. H. O. PILKINGTON, Medical Officer of Health for Preston, will read a paper, which will be followed by a discussion, upon the Reduction of Infantile Mortality without Municipal Milk Dépôts, at the meeting of the Incorporated Society of Medical Officers of Health on Friday, February 8th.

THE German Balneological Congress will hold its twenty-eighth annual meeting this year in Berlin under the presidency of Professor Oscar Liebreich from March 7th to the 11th. In connexion with the congress there will be an exhibition of appliances and preparations.

A MEETING of the Royal Sanitary Institute will be held at the County Council Buildings, Stafford, on Saturday, February 16th, when a discussion on the question of the extent to which authorities must purify sewage will be opened by Dr. George Reid at 3 p.m.; in the morning a visit will be made to the Hanley sewage disposal works.

THE course of lectures on hygiene and its bearing on school life will be repeated at the Royal Sanitary Institute, beginning on Monday, February 18th. A course of lectures and demonstrations on sanitary science as applied to buildings and public works will commence on the same day. Further particulars can be obtained from the Secretary, Parkes Museum, Margaret Street, London, W.

THE Royal Mail Steam Packet Company have received cable advice from their Jamaica office to the effect that only hotels in Kingston are affected by the disaster, and that there is ample accommodation in hotels in other parts of the island for tourists. Yachting cruises will therefore take place as advertised, with the sole exception that passengers will be landed and embarked at Port Antonio in Jamaica instead of Kingston.

A CONFERENCE of delegates from Poor-law authorities in the metropolis and other bodies, interested in the question of an ambulance service for London has been organized by representatives of the City of London, Hackney, Holborn and Westminster Unions, and the Parish of Hammersmith; it will be held on Saturday, February 9th, at Gray's Inn. A parade of hand and horse ambulances will take place in Gray's Inn Square on the same afternoon. From information gathered by the Committee organizing the conference it appears that there are in the metropolis approximately 500 ambulances of various kinds; 240 are ambulance litters on wheels provided at police stations; the police have 5 horse ambulances, and metropolitan boards of guardians altogether 43; the St. John Ambulance Association has 6 horse ambulances, and the R.A.M.C. (Vols.) a like number stationed at Highbury. It is stated also that several hospitals have both horse and hand ambulances. The promoters of the conference believe that if the various services were co-ordinated and developed an effective system could be easily and economically established.

A REMARKABLE case of haemorrhage in a centenarian is recorded by Dr. Enrique Brines (*Medicina Valenciana*). The patient, who completed her 101st year last October, began to menstruate at 15, and noticed at the same time that there was a sanguineous discharge from a small swelling near the left tuber ischii. From this time forward this phenomena persisted as a synchronous and constant accompaniment of her menstrual periods. She married at 32, and during her pregnancies, which were eight in number, the abnormal haemorrhage disappeared with the menses. After the eighth confinement she suffered from amenorrhoea, which continued until the menopause, when the ischial flux reappeared and has continued every month with perfect regularity ever since. The patient had a slight cerebral haemorrhage in January last, which first made Dr. Brines acquainted with her case. The place whence the flow proceeds shows a round dark grey spot about a centimetre in diameter, in the centre of which is a small opening. At the period of the haemorrhage this spot becomes tumified, enlarging to about the size of a small nut. The present condition and age of the patient prevent anything in the way of exploration.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS. The Congress of American Physicians and Surgeons will hold its seventh meeting on May 7th, 8th and 9th, under the presidency of Professor Reginald H. Fitz. Sixteen American medical societies will be represented. Among the communications to be presented we note one by Professor Osler on the evolution of the idea of experiment in the study of medicine. There will be a discussion on the comparative value of the medical and surgical treatment of the immediate and remote results of ulcer of the stomach which will be opened by Drs. John H. Musser of Philadelphia, and C. G. Stockton of Buffalo, from the medical side, and by Drs. William J. Mayo of Rochester and John C. Munro of Boston, from the surgical side. Mr. Moynihan of Leeds will take part in the discussion.

British Medical Journal.

SATURDAY, FEBRUARY 2ND, 1907.

THE TEETH OF ELEMENTARY SCHOOL CHILDREN.

THE tables reproduced elsewhere (p. 271) containing sults of examinations made on the condition of ildren's teeth in a few of the elementary schools in ndon are disquieting enough, but the extreme gravity the matter is realized only when it is considered in lation to future recruits for the army. The statistics ven cover only a limited area, but they agree th examinations made by other medical men, and ay be taken as representing a condition which exists re or less throughout the schools.

We learn that among the children and the younger chers toothache and neuralgia are fruitful causes of sences from school, teeth being universally neglected less the pain becomes unbearable. It is also a fact t children rarely use toothbrushes. Dr. Marion nter among 1,000 children found two only who d a toothbrush; Dr. Rowntree says "A few older ldren take credit for using a toothbrush on ndays," and out of 6,000 children he found that y two had taken advantage of the conservative tment offered by hospitals. Dr. Brinker found ies so general that he contented himself with noting y scholars with more than four carious teeth. In e good-class schools at Dulwich Dr. Niall found that y 30 per cent. of the children aged 9 to 10 appeared superficial examination to be free from caries, and at kingham Street School Dr. Rowntree examined 7 children with practically the same results as those ined at Dulwich. All these examinations were hly made merely with a view to getting a general of the state of the children's teeth. But, though mischief is understated, it is sufficient to show what us damage is being caused by neglect.

much more complete record is that of Mr. C. ard Wallis, Dental Surgeon to the L.C.C. Industrial ools. Mr. Wallis carefully inspected every tooth 5 children, using a dental mirror and probe, found, as will be seen, that each of these children on an average 3 9 carious temporary and 2.8 carious anent teeth; 9.3 per cent. had alveolar abscesses, or ae discharging pus; 16.3 per cent. chronic pharyng- 2.9 per cent. showed chronic enlargement of the ls; 61.2 per cent. had enlarged submaxillary glands, anaemia was noted in 37 per cent. Mr. Wallis ves that inasmuch as at the ages dealt with the anent dentition is incomplete, the incidence of l caries is really worse than appears here. In most the permanent teeth become carious within two of their eruption, a fact which emphasizes the sity for conservative dental treatment at an early Beyond a few instances where teeth have been ted or broken there was no evidence of dental nent, and the toothbrush was practically never only three of the above-mentioned children ssed toothbrushes, or showed signs of having them regularly, and these three were practically om caries. It is not surprising, therefore, to hear that bacterial deposits, tartar, remains of food, and every degree of malodorousness and sepsis were evident.

Dr. Kerr, commenting on these facts, very properly draws attention to the effect on the general health of the children; oral sepsis and the consequent absorption of bacterial toxins being cause not only of chronic septic conditions, but also of conditions occasionally having fatal results. As was explained by Dr. William Hunter in our columns last year,[1] the experience of the London Fever Hospital goes to show that the serious septic complications of scarlet fever, middle-ear suppuration, septic adenitis, albuminuria, gangrenous stomatitis, and septic gastritis are all much commoner and more severe where oral sepsis is marked. In most cases where extensive dental disease exists the children are below the average in height and weight. Dr. Kerr attributes much of the anaemia and chronic stomach troubles to bad teeth, and believes that pulmonary tuberculosis may arise through debility caused by chronic gastric disorder resulting from a continual absorption of putrefying matter. Attention is drawn to the large numbers of candidates who are prevented from becoming teachers in the London elementary schools owing to the state of their teeth.

It appears evident, therefore, that it is the duty of the educational authority to promote early preventive measures, but at present this duty is practically neglected in this country. In New York regular dental examination of the children in schools has been recently started, while in Brussels such an examination has been in force since 1875. In many places in Germany regular inspection of teeth takes place, and when necessary parents are requested to bring their children to the school dental institution, where regular treatment is carried out.

A curious fact is mentioned in Dr. Kerr's report: Mr. S. Spokes made a detailed examination of 1,300 boys of the average age of 13 at Haileybury College, and only about 3 per cent. were found to be free from caries. Again, in the report of the International Committee on Medical Inspection and Feeding of Children attending public elementary schools, under the heading "Teeth" we read that Dr. Rhys Davies in his memorandum gives statistics as to two schools, one of better class than the other. The teeth of the children in the better class school were more decayed than in the other, while the cleanliness of the teeth were much the same. In an appendix to the same report the result of inquiries made by the British Dental Association into the condition of children's teeth is given; these statistics leave no doubt that an immense proportion of the children suffer from carious teeth, very few being found with perfect sets. The Medical Officer of Halifax thinks that 95 per cent. of the children have carious teeth. Dr. Robertson, M.O.H. for Leith, in his report for 1906, gives the result of an examination by Mr. Hall, L.D.S., of the teeth of 270 children, with the result that only 4 were found to have sound dentition. So that, fragmentary as these statistics are, they are all in such complete agreement that the figures for rejections of recruits for defective teeth will not come as a surprise to those who understand what is going on in the schools. Loss or decay of many teeth is the cause of the greatest number of rejections. That the mischief is progressing instead of diminishing is indicated by the figures for the four years 1902 4, for the ratio rejected per 1,000 recruits was in 1902, 49.26; in 1903, 63.26; in 1904, 70.61; and in 1905, 72.32.

[1] British Medical Journal, 1906, vol. i. p. 421.

It has long been recognized that carious teeth and the loss of teeth from neglect are, owing to interference with proper mastication, fruitful causes of the chronic dyspepsia and anaemia among the patients, especially among the women, who crowd the out-patient departments. Recent investigations, as has been said, tend to prove that oral sepsis is a cause not only of more fatal disorders in adults, but of the septic complications which so seriously increase the mortality from the acute infectious diseases, especially scarlet fever, diphtheria, and measles. The recruiting statistics throw light on the dental condition prevailing among lads, for the great majority of would-be recruits are between 18 and 19 years of age; 4,824 (72.32 per 1,000) were rejected on inspection on account of "loss or decay of "many teeth"; and 403 (6.04 per 1,000) were rejected as unfit within three months of enlistment. What is to become of these 5,227 youths of 19, who probably thought of entering the army because they were too dull to earn good wages, or too unhealthy to stand hard work? It might be an interesting experiment to examine the teeth of the unemployed.

Yet up to the present we have not been wise enough to make hygiene a compulsory subject in our elementary schools. The French have a saying, *Quand les poules auront des dents.* When hens have teeth we may possibly introduce hygiene into the schools, but long before then, at the rate we move in the direction of reforms, we shall be a toothless nation.

THE IRISH UNIVERSITY QUESTION.

On January 26th Mr. James Bryce marked his surrender of office as Chief Secretary for Ireland by a profoundly interesting declaration regarding university education in that country. People were only beginning to master the divided opinions of the Commission and the uncertainties and vaguenesses of their report when Mr. Bryce suddenly made known the decision of the Government as to the scheme which it is their intention to submit to the approaching meeting of Parliament. The communication was made in the course of a reply to two deputations—one of Roman Catholics and one of Presbyterians—who were anxious to elicit the intentions of Government as to their action on the report of the Commission.

Mr. Bryce stated at great length what these intentions are, and he mentioned that they had already been determined before the report had been received. The Government had come to the conclusion that Trinity College could not be so altered as to meet the requirements of Ireland. They proposed to create a new college in Dublin University such as was contemplated by the Commission and to furnish it adequately, and with a sufficient annual income. It should be entirely free from any kind of theological tests for either governors, teachers, or students, or for persons receiving any endowments in it. The Royal University would be dissolved, and the graduates of the Royal University transferred to the new enlarged University of Dublin, which would become a teaching university including as constituent colleges Trinity College, the new College in Dublin, and the Queen's Colleges of Belfast and Cork.

The new University would be governed by a Senate partly nominated by the Crown and partly by election by the University teachers and the whole body of graduates. It would be undenominational and there would be no tests. In the case of Galway College it would be affiliated to the new University, but it would not yet be a constituent college for the purpose of electing representatives to the governing body of the University. He hoped that when the plan in all its details was properly before Trinity College that institution would also see that it contained nothing to its injury.

The Nationalist papers receive the proposals very favourably. The Unionist papers deprecate an intrusion into the University of Dublin. President Hamilton, of Queen's College, Belfast, thinks the new college should be associated with the Royal University, and that Trinity College ought not to be interfered with, but as will be seen from a note published at page 283, there would appear to be a considerable volume of opinion in Belfast in favour of accepting the scheme provided that the autonomy of the College in that city is safeguarded, and that the true principles of education are preserved in the adjustment of all the many details which will arise for settlement. The view in Cork, as expressed by the *Examiner*, is decidedly hostile. That journal describes the scheme as "a deliberate insult "on the country and on its most eminent and most "competent spokesmen of every creed, class, and "province." It must be remembered, however, that Cork is anxious to have an independent university, and will not quietly accept a position in a federal university such as is proposed. On the other hand the Nationalist members of Parliament are described as favourable, and the deputations—Roman Catholic and Presbyterian—which waited upon Mr. Bryce expressed satisfaction with the main features of the scheme. Of course, there is a considerable force of opinion which has yet to be declared. It is hinted that the hierarchy will not be quite ready to approve the severe exclusion of clerical teachers. That one of the ablest of the Trinity College Fellows writes to the papers in strong protest but in language hardly academic. All this goes to show that the Bill will receive opposition from all sorts and conditions of men who imagine that they alone possess the true solution. But there is a very strong middle party willing to make concessions in order to close a wearisome discussion, which is only irritating and serves still more to embitter political and religious feeling in Ireland. They hope that the Bill, modified in certain ways, will pass. They agree with Mr. Balfour that the question ought to be settled outside party considerations, and they hope that his wise precept will be observed when the Bill comes before the House for consideration.

PROFESSIONAL MISCONDUCT AND THE LAW.

The case of Clifford *v.* Timms, which was decided by Mr. Justice Warrington on January 26th, involved the discussion of certain questions of great interest to the medical profession. The parties to the suit were dentists; but the question at issue was of wider interest, for, as members of both professions are amenable to the disciplinary authority of the General Medical Council, any case which illustrates the force and effect of the decisions of that body is of general importance.

The facts of the case, so far as material, may be stated in a few words. The plaintiff and defendant had entered into articles of partnership which contained a clause to the effect that if either partner should be guilty of professional misconduct or of any act which was calculated to bring discredit upon or injure the other partner or the partnership business the other might, by notice, determine the partnership. The plaintiff was brought before the General Medical

Council for employing unregistered assistants and publishing advertising pamphlets of an objectionable character. In the result the Council found it proved that he had been "guilty of conduct which is infamous or disgraceful in a professional respect," and directed his name to be erased from the *Dentists' Register*. The defendant thereupon gave notice to determine the partnership on the ground that the plaintiff had been guilty of professional misconduct within the meaning of the clause above referred to, and the plaintiff then brought an action for a declaration that this notice was invalid. Mr. Justice Warrington found for the plaintiff on two grounds: (*a*) because the decision of the General Medical Council was not binding on him; and (*b*) because even if it was binding, the words "professional misconduct" which appeared in the covenant were different from the words used in the statute. He said: "Without attempting to give an exclusive definition of 'professional misconduct,' I think it is clear that it has a more restricted meaning than the statutory expression, which latter may include and would, on the evidence of the President of the Council, be held by the Council to include certain breaches of professional etiquette which cannot in my judgement be properly described as professional misconduct. 'Misconduct in the exercise of his profession' would, in my judgement, fairly express the meaning of 'professional misconduct,' whereas the statutory phrase would include that misconduct, and also misconduct as a member of the profession, which would be a different thing." His Lordship then reviewed the evidence, found there was no professional misconduct, and eventually gave judgement for the plaintiff, declaring that he was entitled to disregard the notice of dissolution and remain a partner.

The importance of this case becomes apparent when it is realized that—as was made plain by Mr. Justice Warrington in his judgement—the decision of the General Medical Council was completely ignored. It may be, the judge said in effect, that the Council have decided that the plaintiff is guilty of such conduct as renders him unworthy of his profession; his partner must, however, satisfy me that there has been professional misconduct.

It is impossible to resist the impression that the judge took a very narrow view of the matter; it may be answered that as he was called upon to construe a penal enactment he was bound to construe it strictly. We might, however, in our judgement, have adopted a line of reasoning which would have led to a wholly different, and, from the professional point of view, far more satisfactory, result. He had to decide whether a dentist had been guilty of "professional misconduct." What more cogent evidence could he have had on this point than the bare fact that the General Medical Council had declared that it could not allow the plaintiff's name to remain on the *Register*? To such reasoning, which appears to us to be founded upon common sense, a lawyer would reply that the decision of the Council was *res inter alios acta*, and that the court must not take cognizance of what is a mere domestic tribunal. That may be a sufficient answer to the legal mind, but it will afford poor consolation to the medical profession. If the decision of Mr. Justice Warrington is allowed to pass unchallenged it may have serious consequences. Suppose a member of a medical partnership is guilty of some act for which the General Medical Council decided that his name must be erased from the *Register*; suppose that the articles of partnership contain no clause enabling one partner to give notice of dissolution, but merely provide for dissolution in case of professional misconduct. In such circumstances, unless the Court can be persuaded to take the same view of the facts as the Council, a perfectly innocent man may find himself linked for life with one who has been driven out of the profession. The case under notice provides an instance of a partnership deed which the judge held had to be construed by the court unaided by the General Medical Council; it would probably not be too much to say that 90 per cent. of the partnership deeds in use in the United Kingdom contain words not precisely corresponding with those used in the Medical or Dental Acts.

It would appear that unless the statutory words are exactly followed the practitioner who desires to sever his connexion from a man whose name has been erased from the *Register* must go to the trouble and expense of satisfying the Court that the covenant to be of good behaviour has been infringed. In the light of this case those who are about to enter into partnerships should be careful to secure the insertion of a clause which will make erasure from the *Register* a ground for dissolution.

There is one other matter relating to this case which calls for brief comment. In accordance with the procedure at present adopted by the General Medical Council, documents of a highly confidential character are received by it for the purpose of dealing with disciplinary cases. The knowledge that such documents might at some time or another be produced in a court of justice would inevitably deter persons from making communications to the Council. In the course of the proceedings before Mr. Justice Warrington, the Registrar to the Council was called upon a subpoena *duces tecum* to produce a file of documents. Counsel for the Council objected, and even went the length of saying that the Registrar would rather be committed for contempt than have it laid down that all such documents should be produced. In the event, the learned judge simply looked at one document which was produced, and gave no ruling on the point, but the incident shows that the General Medical Council will strenuously resist any attempt to violate the confidential character of documents submitted to it in disciplinary cases.

HAFFKINE'S PLAGUE PROPHYLACTIC.

We publish in another column (p. 285) an abstract of various official communications which have been issued concerning the preparation of Haffkine's plague prophylactic and the means adopted to prevent the possibility of another unfortunate accident such as that which occurred at Malkowal in 1902, when several natives developed tetanus as a consequence of inoculation with this prophylactic. The full text of these documents is lengthy and intricate, and it requires a little patience to sort out what is of essential importance from matter which is redundant and concerned with personal controversies possessing no public interest.

In approaching this subject, the first and by far the most important fact to bear in mind is that Haffkine's prophylactic has been in use since 1897, and has been found to be of decided utility. Numerous statistics, collected from widely different sources, have thoroughly established this point, and, to mention one of the latest pieces of corroborative evidence, we noted only a few weeks ago[1] that in the report for the year ending March 31st, 1906, issued by

[1] British Medical Journal, January 12th, 1907, p. 109.

Lieutenant-Colonel W. R. Bannerman, I.M.S., Director of the Plague Research Laboratory at Bombay, there is a large body of evidence regarding both the safety and the success of inoculations with Haffkine's prophylactic fluid. Of these results Mr. Haffkine may well be proud; to his invention may be attributed the saving of a very large number of human lives and there are probably not many bacteriologists living whose discoveries have proved more effective in the service of humanity.

The second fact which has to be confronted is that in 1902 an accident occurred, involving the lives of nineteen people, owing to the introduction of tetanus germs along with the vaccine. This disaster was promptly and very thoroughly investigated by the Indian Government. The accident occurred at a time when there was an enormous demand for the prophylactic, and when the work in connexion with it had to be done at unusually high pressure and under other circumstances of exceptional difficulty. Steps were taken to prevent a recurrence of the disaster, and in 1904 the Government was able to issue to the people of India an official reassurance as to the safety and utility of the vaccine, and a guarantee that it was being prepared under stringent precautions. If this pronouncement were intended to stereotype the method of production and to hinder the introduction of improvement we should be the first to protest, but we do not interpret it in that sense.

At this point, so far as all important interests are concerned, the questions arising out of the unfortunate incident were brought to a satisfactory termination. Mr. Haffkine, however, was not satisfied with the findings of the Commission about certain technical points concerning the bacteriological investigations and the inferences deducible therefrom. To these matters Mr. Haffkine has devoted voluminous letters of controversial discussion. We see from the documents before us that the controversy was still raging as late as May of last year, and, in the absence of any knowledge to the contrary, we suppose that it is still going on and that its vehemence is likely to continue, unabated, as long as the patience of the Indian Government holds out.

We sympathize with Mr. Haffkine, but we regret that a scientist endowed with such exceptional ability should spend his time over a controversy the continuation of which cannot advance medical science. But with the attitude of resentment and dissatisfaction towards his critics in India which he has adopted we find ourselves unable to sympathize. The yoke of officialdom may sometimes be hard to bear, and even a Government Commission is not invariably a reasonable body. But in this instance the findings of the Commission, over which the Chief Justice of Bombay presided, are clearly argued; and the entire procedure of the Commission was characterized by the strict observance of judicial impartiality. It could not have found a more reliable man than Major Semple, who has distinguished himself by his splendid work at Kasauli, for the conduct of the bacteriological part of the inquiry, and in order to make certainty doubly sure, the Government of India invited the Lister Institute to express an independent opinion on the matters dealt with by the Malkowal Commission. The findings of the Institute concede to Mr. Haffkine "the benefit of the doubt" with regard to the possibility that the contamination was introduced at the time the bottle was opened at Malkowal, and in this respect differ from the Commission; this difference, however, does not invalidate the essential unanimity, on the issues of real importance, between the findings of the two investigating bodies. It is difficult to conceive how the matter could have been investigated more thoroughly or more impartially, and we think that Mr. Haffkine would be well advised to allow the incident to be forgotten.

THE RIGHT OF PRIVATE ACTION.

In the British Medical Journal of December 1st, 19[illegible] appeared an account of the history of the action of the majority of the Council of Coventry in refusing to accept the recommendation of its Sanitary Committee to the effect that, as Dr. Snell, medical officer of health for Coventry, in serving as Honorary Secretary of the Coventry Division of the British Medical Association was discharging an honorary office and acting purely within his private capacity, the Committee considered that the matter did not concern them. The minute was twice referred back to the Sanitary Committee, and eventually the opinion of the Local Government Board was asked. The matter, it will be remembered, was originally raised by a letter from the Committee of the Coventry Provident Dispensary, inquiring whether the continuance of Dr. Snell in the office of honorary secretary of the local Division was in accordance with the wishes and desires of the City Council and the right discharge of the duties of his office. The reply of the Local Government Board was that "although it appears that the medical officer of health "is required by the terms of his appointment to devote "his whole time to the service of the Town Council, the "Board would not raise any objection to his holding an "honorary appointment such as that in question, pro-"vided that the duties attaching thereto were not "incompatible with those of his office of medical "officer of health, and that the Town Council "were satisfied that the discharge of them did not "prejudicially affect the due discharge of his official "duties, or bring him into inconvenient conflict "with the Council or their constituents." Upon the receipt of this reply Dr. Snell wrote a [illegible]able report to his Committee, in which he rehearsed the history of the matter, and pointed out that the real question at issue was whether the occupant of an whole-time appointment was thereby precluded from devoting some part of his leisure to the work of an honorary office, and that this was a question which affected a large number of public servants. The ambiguity of the Board's reply is sufficiently obvious, and Dr. Snell dwelt at some length on the concluding statement to the effect that the discharge of such honorary duties should not bring the officer "into inconvenient conflict with the "Council or their constituents." The statutory duties of a medical officer of health may at any time bring him into conflict with the Council or with its individual members; and Dr. Snell states that he had recently to report to the Local Government Board the death of about seventy children last summer due to the neglect of the Council, against advice repeated for over twenty years, to discontinue the injurious practice of disposing of house refuse by tipping; he referred also to a number of instances in which it had been necessary to call upon individual members of the Council to expend money in house repairs required in the interests of the public health. To avoid conflict or to bid for a favour often, as he truly says, means inefficiency. Dr. Snell then proceeds to reiterate his conviction that because he has become an employé of the Corporation he has not thereby forfeited his rights as a citizen in his own leisure time, no more than any other employé of any other employer, and to insist that the important principle involved in the controversy is that how he employs his leisure time must be left to the officer's own discretion so long as that employment does not interfere with the no

lfilment of his duties. Having thus vindicated his sition and the rights of his colleagues in other parts the country and in other employments, he states at in accordance with a communication he made to the ventry Division at the time of his re-election last year, proposes at the end of the current year to resign the sition of Honorary Secretary to the Division after a nure of office extending over nearly four years. He ds that, through being Honorary Secretary, he has en brought into closer and more amicable relationship ith all the medical men of the city than would have en possible in any other way, and that it is from them at he may expect and has received the greatest assist-ce in his work as medical officer of health.

THE MEDICAL EDUCATION OF THE PUBLIC.

the opening of the new buildings of the Harvard edical School some months ago, President Eliot livered an address in which he dwelt on the impor-nce of the educative function of the medical pro-sion. This function, of teaching people how diseases caused and communicated, and how they are pre-nted, was, he thought, sure to be amplified and made re effective in the near future. The medical school the future must, therefore, he urged, provide means popular exposition concerning water supplies, foods, nks, drugs, the parasitic causes of disease and their sequences in men, animals, and plants, and the way which communicable diseases are spread. Medical seums should, he added, be arranged, in part for the ruction of the people, and, with certain reserva-ns, should be open to the public. The medical schools uld also provide popular lectures on medical sub-s, and these lectures should be given without charge days and at hours when working people could nd. In response to this suggestion the Harvard lical School has instituted a course of free public ures, which are given on Saturday evenings and day afternoons. The first was delivered on nary 12th, and they will be continued till May 12th. y cover a large extent of ground, comprising diverse subjects as the unfavourable con-ns of modern school life; deformities of the eet caused by shoes; round shoulders and lateral ature; costume deformities in growing children; eria in health and disease; public milk supplies; circumstances in which the doctor should be sent the adulteration of food and drugs; the ways in h the common infectious diseases are spread; the of the sick-room; public and individual water sup-; antitoxins and vaccines; what surgery can and ot do; the hygiene of the ear; facts about "rheum-m"; the care of healthy infants and the prevention sease in early life; points concerning nursing in et fever and measles; tuberculosis in early life; the ng of infants; the significance in infancy and life of disturbances of the stomach and bowels; culosis, methods of invasion and dissemination; ght and school life; Florence Nightingale and the ning of surgical nursing; food in health and e; the growth of children; the history of the nent of disease; the care of the skin; the hygiene e mouth and teeth; the physical and mental opment of children. In the list of lecturers are well-known names as those of Drs. Theobald , W. T. Councilman, T. M. Rotch, and Clarence J. . A noteworthy feature in the programme is the place that is given to the care of the child. Tuber-s is also prominent. There is no cheap science o unwholesome sensationalism. It appears to us othing but good can come of such teaching, if the people for whom it is intended can t to attend. There can be no doubt that telligent co-operation of the laity with the sion, not only in public movements but in the treatment of disease, would be of the greatest use. In this country a step in the medical education of the public has been taken by the British Medical Association, and the popular lecture at the Annual Meeting instituted two or three years ago has attracted large audiences. We should like to see this beginning developed into a fully-organized system. The lectures should be limited to plain statements of facts without excursions into the region of speculation. The lecturers should aim at impressing the aims and methods of rational medicine on the public mind. But, as President Eliot points out, to discharge this function properly requires in medical men the power of interesting exposition with telling illustration and moving exhortation. The lecturers would have to be selected for their natural gifts, and would, further, have to be thoroughly trained for this mission. Although the suggestion may at first blush startle the more conservative minds of the profession, it is nothing more than adopting the methods used by the enemies of science. The case for rational medicine is allowed to go by default, and the people not unnaturally run after false prophets.

THE CHURCH COUGH.

The Muse of history has not felt it beneath her dignity to record the fact that in 1427 Paris was visited by an epidemic of influenza of such severity that sermons had to be given up because the preacher's voice was drowned by the coughing of the congregation. The point in this statement which strikes us as most remarkable is not the fact itself but the explanation. It might almost be inferred that in the "ages of faith" coughing during a sermon was sufficiently exceptional to deserve special mention. We do not know whether the modern church-goer has a respiratory mucous membrane of greater sensitiveness than his mediaeval homologue, but it is certain that he often drowns the voice of the speaker without the excuse of influenza. Persons who will sit out a play or listen to an interesting conversation without coughing seem to be seized, as soon as they compose themselves to hear a sermon, with distressing irritation of the windpipe that can be relieved only by violent and continued coughing. The affection is contagious, spreading from seat to seat, cough answering unto cough, till the church is as full of noises as Prospero's island. As far as we know, the etiology of this strange disease has not received attention from the scientific investigator. Is it due to sudden changes of temperature in the sacred edifice, or to the sudden inroad of malign draughts? It may be granted that the eloquence of some preachers has a chilling effect, while that of others is of a windy character; neither of these things, however, can be accepted as a *vera causa*. We note with interest that the problem has been attacked from another side by an American scientist, who has studied the epidemic as it occurs in theatres. He has satisfied himself that there, at least, the coughing which sometimes goes far to spoil the performance is due to reflex irritation propagated from the ear to the larynx. The source of the irritation, according to him, is to be found in the strain on the auditory apparatus induced by the effort to hear what is said on the stage. This suggests that actors of the present day do not know how to use their voices. It would be a comfort to preachers if the church cough could also be explained by overstrenuous listening. We fear, however, that a solution of the riddle is rather to be found in what Falstaff calls "the disease of not "listening, the malady of not marking." It is related that once upon a time when an author was reading a new play before the members of the Comédie Française, an actress fell asleep. When the company were expressing their various opinions, the author maliciously insisted on having that of the sleeping beauty

on the ground that the attention she had given to it would make her opinion especially valuable. The reply was disconcertingly to the point:—"*Monsieur, le sommeil est une opinion.*" In like manner it may be said that coughing is an opinion. At a full-dress rehearsal of a new play by Sardou, the audience, which had applauded the first act, began to cough in the middle of the second. The author at once exclaimed: "They cough; I always thought that scene was too long." Preachers might sometimes at least draw the same moral from the coughing of a congregation.

THE DANGERS OF CAUSTICS IN GYNAECOLOGY.

LAWSON TAIT used to condemn what he called "gynaecological tinkering," a term which he applied to a too liberal and unintelligent use of the curette and caustic holder. A case showing the evil results of the application of caustics to the cervix has recently been published.[1] The authors of the report are three—MM. Pinard, Segond, and Couvelaire—a fine array of talent the first being a great teacher of obstetrics, the second a distinguished gynaecologist, and the third the author of the best current monograph on the histology of tubal gestation. A woman, aged 39, had given birth to a healthy child, still living, and 18 years of age when the report was published. The puerperium was, it would appear, normal, but the patient for some reason became subject to chronic pelvic inflammation. At length, after she had undergone all kinds of treatment under several medical advisers, Professor Pinard took her case in hand. After a course of hot baths, twice daily, the patient's condition so much improved that she conceived. Pregnancy continued normal to term, but labour went on badly, the membranes ruptured early, meconium escaped, and the fetal heart sounds ceased. The pains grew very irregular. Then when, after over two days had elapsed, the patient was carefully examined by the experts, extreme stenosis of the cervical canal above (not *at*) the os externum was detected. According to the report it is stated in italics that at the beginning of the labour no vaginal exploration had been made; this statement probably signifies that the attendant refrained from digital exploration lest septic germs might be introduced into the genital tract. Whether this omission was intentional or otherwise, the stenosis, as has been already stated, was not detected until over sixty hours had passed. The patient was a foreigner, and had never been able to explain clearly the nature of the different methods of treatment to which she had been subjected. When the stenosis was detected it transpired that caustic had been freely applied to the cervix several years previously. The nature of the caustic could not be ascertained. The patient's condition became grave, incipient infection began to manifest itself, and physometra was detected on percussion. Professor Pinard urged immediate total hysterectomy, which M. Segond, assisted by M. Couvelaire, performed, taking away the uterus with its contents entire, so as to avoid the dangers attendant on extraction of the fetus. The patient made a good recovery. Under less experienced hands her fate would have been very different.

BOYS AND BEAGLES.

For some years past there has been an agitation on foot against the continuance of hare hunting, a sport long practised at certain public schools. We have not hitherto referred to the matter, for the reason, among others, that it did not appear to have any special medical bearings. We have, however, recently received a copy of the organ of a new journal, *The Leander Log*, to which we believe readers will be glad to have their attention directed.[2] It gives the extreme sportsman's point of view with a breezy directness and candour to which this circumspect age has grown unaccustomed, and, though "conducted by Old Etonians," is quite free from any evidences of senility. From the first article, entitled "Our Mission," we learn that our contemporary comes into the field "to cry 'hands off!' to the faddists and busybodies who for years past have carried on a persistent and malignant agitation against the keeping of school beagles." The editors challenge the argument that because Dr. Arnold put down the Rugby beagles this example ought to be followed by other head masters. "We entirely refuse," they write, "to acquiesce in this monstrous assumption. We intend to prove that hare-hunting is the very best form of exercise that can be provided for British boys, and that it is scriptural sport, and a sport which (even more than rifle shooting) ought to form an integral part of the public school curriculum." The manner in which Dr. Warre, the late Head Master of Eton, met the attack on the school beagles is then criticized, and it is urged that there must be "no more faltering, no more sitting on the fence, but a straightforward, manly claim for the general adoption of beagling at all our great public schools as a perfectly sane, safe, healthy, moral, and indeed religious recreation." After protesting that the late Mr. Herbert Spencer's opinion should be allowed no weight because he was neither a sportsman nor an Etonian, and repudiating the suggestion that a drag hunt should be substituted for the hare hunt, on the ground that spirited lads don't care to hunt an old stocking dipped in aniseed or some other stinking substance," the editors go on to discuss "the scriptural sanction for beagling." The Eton boy, we are told, when "exhorted by certain neurotic and hyperaesthetic persons . . . to relinquish the manly and invigorating sport of beagling, or to substitute for the healthy excitement of the living hare the flabby puerilities of anaemic aniseed, naturally turns to the inspired volume to see what warrant there be found by these bilious busybodies for their new-fangled doctrines, so opposed to the faith and practice of his ancestors." The sanction is found in the history of Nimrod, and of Esau, and in the statement in Proverbs that it is only the slothful man who roasteth not that which he took in hunting. Then follows a suggestion that one of the purposes for which the hare "was created and delivered over unto the dominion of man" was that it might be "hunted." "The hare," they say, "has every quality and aptitude necessary to fit it for the chase. It carries a fine scent, which the *odora canum vis* will readily and delightedly follow. It is made for flight, and yet is not capable of running at top speed for any great distance, more especially as, being by nature one of the most timid of animals, terror seems at times to exercise an almost paralysing effect upon it. It has a convenient habit of running in ruts, so that the panting school boy is not obliged to pursue the direct line of its course, but has a good chance of being in at the death if he only follows the chord of the arc. And, finally, it does not, like the elusive coney, dig inconvenient holes in the ground, wherein it may take refuge from its pursuers." Most of the accusations brought against beagling as practised at Eton, that sometimes pregnant hares have been hunted and killed, is declared to be illogical and unpatriotic. "We are sorry for the fact," they write, "but it is nature, not the Eton College Hunt, that is responsible for it. It is only during the Lent term that beagling can be carried on at Eton (found determined on all the exercises of the boy before Chapel

"mas) consequently the season available for hunting is "very short." With this quotation we take leave of the editors who apparently sincerely hold the opinions they so vigorously express.

THE TREATMENT OF SLEEPING SICKNESS BY ATOXYL.

Professor Ayres Kopke, Professor of Bacteriology and Parasitology in the Lisbon School of Tropical Medicine, has republished in French an interesting article on the treatment of sleeping sickness by atoxyl and the benzidine colours, which first appeared in *Medicina Contemporanea*. In the light of the somewhat startling statements recently made by Professor Koch as to the success of atoxyl in this malady a perusal of this little memoir will prove instructive. Professor Kopke finds that if the patients are followed up long enough death s the eventual result, all that can be said being that heir lives may have been somewhat prolonged. Professor Kopke began the use of this remedy in 1905, and aving kept careful records since that date, is, of course, ntitled to speak with some authority on the use of the rug in human medicine. His most striking case was hat of an individual who died a year after his first njection with atoxyl, though during that period he had ad at different times no fewer than thirty-three njections. At first the symptoms disappeared or, at east, were very greatly ameliorated, but very quickly n discontinuing the treatment they reappeared, and rypansomes could again be found by lumbar puncture. ther cases followed the same course, one patient dying year and three months after, another a year and one nonth after, and so on. This bears out the results of homas and Breinl at Liverpool in their original xperiments on animals. It is to be feared that the pecific cure for this disease has not yet been found.

HE COMPULSORY NOTIFICATION OF DISEASE IN FRANCE.

HE Federation of the Medical Syndicates of the Nord nd Pas de Calais Departments at a recent meeting assed resolutions renewing former protests against the olation of professional secrecy imposed on medical actitioners by the French law relating to the notifica- on of diseases. The meeting expressed approval in inciple of the notification of contagious and epidemic seases, but considered that the obligation to notify ould rest on the patient's relatives or friends, or, in fault of these, on the persons living in the same use, and it urged members of the Senate and Chamber Deputies to ask for an amendment in this sense of e Public Health Bill which is now under discussion. was also resolved that disinfection ought to be made mpulsory in all cases of contagious disease, and ould be carried out by the administration only at the quest of the medical practitioner in charge of the se, or when the practitioner has failed to make a claration that he has caused all necessary measures be carried out. A further resolution was passed that the list of notifiable diseases only such should be luded as can certainly be checked by administrative asures, and it was strongly urged that tuberculosis ould not be included in the list.

THE ROYAL COMMISSION ON THE POOR LAW.

ETINGS of the Royal Commission on the Poor Law d the Relief of Distress were held on January 28th d 29th, under the presidency of the chairman, Lord orge Hamilton. Evidence was given on behalf of the tish Medical Association by Dr. J. A. Macdonald, airman of Representative Meetings; Dr. H. Langley owne, Chairman of Council; Dr. Ford Anderson, one the Representatives of the Metropolitan Counties anch on the Central Council; and Mr. J. Smith itaker, Medical Secretary. The witnesses handed in the memorandum which is printed in the appendix, and were subsequently examined at length, but as the proceedings of the Committee are private, we are not in a position to publish a report of the evidence. The Royal Commission also heard the evidence of Dr. James Niven, Medical Officer of Health, Manchester; Dr. W. N. Barlow, Medical Officer of Health, Bootle; Dr. Meredith Young, Medical Officer of Health, Stockport; and Dr. J. Milson Rhodes, member of the Chorlton Board of Guardians and Chairman of the Manchester and Chorlton Joint Committee for dealing with idiots and sane epileptics.

The Emperor of Austria has conferred on Duke Karl Theodor of Bavaria the Order for Art and Science in recognition of his distinction as an ophthalmologist.

The corrected cancer death-rates for the several districts of England and Wales, mentioned in the British Medical Journal of January 26th, p. 217, should have been referred to as given in the decennial supplement to the 55th annual report of the Registrar-General, pp. lv and lvi. These statistics by Dr. Tatham are of great importance, because for the first time they enable correct comparisons to be made between the different counties of England and Wales.

Dr. Schorstein, whose early death deprived the London Hospital of one of the ablest members of its medical staff, has bequeathed £500 to that hospital. He has also bequeathed £500 to the Regius Professor of Medicine at Oxford, and the residue of his estate to the university chest at Oxford, subject to trusts to pay the income to his mother and sister for their lives, with ultimate remainder for such purposes as the Hebdomadal Council may decide. He expressed the hope that the bequest would be used for something in connexion with the medical school at Oxford. The Oxford medical school will probably eventually benefit by a capital sum of between seven and eight thousand pounds.

We regret to announce the death on January 29th of Sir Michael Foster, after a few days' illness. He was the son of Mr. Michael Foster, a medical practitioner in Huntingdon, and was himself engaged in general practice in that town for six years, after completing his medical curriculum at University College, London. He was appointed Demonstrator of Practical Physiology in the College in 1867, but three years later his long connexion with the University of Cambridge began. He was Professor of Physiology in the University from 1883 to 1903, and was Secretary of the Royal Society from 1881 to 1903. He sat as M.P. for the University of London from 1900 to 1905. We hope to publish a full obituary notice in an early issue.

The recent changes in the Government affect two offices with which the medical profession has more or less intimate relations. Mr. M'Kenna, who succeeds Mr. Birrell as President of the Board of Education, entered Parliament as member for North Monmouthshire in 1895, and quickly gained a reputation mainly as an authority on financial questions. He has been succeeded as Financial Secretary to the Treasury by Mr. Walter Runciman, Parliamentary Secretary to the Local Government Board, and Mr. Runciman has been replaced by Dr. T. J. Macnamara, who has been member for North Camberwell since 1900. He was educated as an elementary school teacher, has been editor of *The Schoolmaster* since 1892, was president of the National Union of Teachers in 1896, and became a member of the School Board for London in 1894; he received the honorary degree of LL.D. from the University of St. Andrews in 1898.

Liverpool.

DINNER OF THE CLINICAL SCHOOL OF THE UNIVERSITY.

THE first dinner of the United Clinical Hospitals, now known as the Clinical School of the University, was held at the Adelphi Hotel on January 24th. Covers were laid for about 120, Sir James Barr presided, and the company included Sir J. W. Moore, Sir William Japp Sinclair, the Rev. John Watson (Ian Maclaren), Professor Paterson, and the Chairmen of various hospitals entering into the Union. Letters of apology were received from Lord Derby, the Lord Bishop and the Lord Mayor.

The toast of "The Clinical School" was proposed by the Rev. John Watson, who said that the Clinical School suggested to him that connexion between theory and practice upon which the success of their profession and of every other practical profession rested. If a man was engaged entirely with the principles of the knowledge of his department he would become academic, and if he was occupied only with the practical, without the application of the principles of knowledge, he would become mechanical. He rejoiced to learn that Liverpool had an extensive system which embraced the great hospitals, and gave students advantages which he supposed they could not obtain in any other city in the country.

Sir James Barr, replying on behalf of the Clinical School, said that it was a large medical trust in the sense that no rival clinical school could be started in the city, but there was nothing to prevent competition between the different hospitals. He hoped the union might be an example to the non-medical managers of the hospitals, and he would like to see some central control over all the hospitals, so that there might be co-operation in the work and an avoidance of overlapping. The school was an integral part of the university, a part which the university could not afford to overlook; but still the hospitals had managed to maintain their independence, and intended to continue to do so. They did not propose to allow themselves to be submerged, as the medical faculty had been, and to have all their actions supervised and controlled by a senate and council. They had an unrivalled field for work and a small army of teachers, and gave the students the final touch before they obtained their qualifications to practise; but a medical man's education could never be finished—he should be an ardent student all the days of his life. Their work was the technical part of the students' training, and there was no useless cramming which would soon be forgotten. He considered that a great deal more knowledge was required for clinical teaching—which is an applied science—than for the preliminary so-called scientific teaching in the university. He hoped the next chair endowed in the university would be a chair of pharmacology. As regards the prospects of the medical profession, he strongly urged that no one should enter it unless he had a real love for the work. He believed there was a bright future for general practitioners, but they must alter their tactics, and not consider every patient as an asset, and think that he had no right to consult any one else without permission. They must teach the public that prevention is better than cure, and that it is better to pay for the maintenance of health than for the cure of disease. This implied work of a high order, as practitioners must thus become skilled physiologists, and should be thoroughly well remunerated. The work of the physician of the future would be more and more in the line of preventive medicine. He would be an exalted general practitioner. An enormous number of diseases from which surgeons were reaping a harvest were preventable; therefore, with the education of the public the surgeon must disappear. The public never knew the value of health until it had lost it, and then it was amazed that it could not buy it back in the same way as it bought the comforts or necessities of life. Consequently, it became a prey to every quack who professed to sell them what they wanted.

Professor A. M. Paterson proposed "The Hospitals." Those who belonged to the hospitals regarded the Clinical School as a most valuable possession. The fame of a school depended not on the abundance of teachers or students, but on the quality of the teaching. He thought the co-ordination of the hospitals could be carried further. The amount of work done within the hospitals was enormous. In 1904 there were in the Poor-law hospitals 3,000 beds, in the fever hospitals 900 beds, in the general hospitals 850 beds, and in the special hospitals 400 beds—a total of over 5,000 beds at the disposal of the sick poor of Liverpool. There were treated during the year 290,000 people, or 39.5 per cent. of the population. It appeared to him that in some respects the poor were better off than the middle classes; a poor man had all the costly appliances of the hospitals at his disposal, but the speaker or one of his hearers would have to be content with an operation in a back bedroom on a kitchen table. There was something anomalous in that respect, and in America they ordered things differently. In a New York hospital one-third of the beds were for the casual stranger, one third for those who paid for their maintenance, and one third for the well-to-do. As regards hospital abuse, every doctor knew how the hospitals were exploited by people able to pay for their medical attendance. As a remedy he would suggest the establishment of one central authority for the management of all the medical institutions in the town. Let there be a combination of all institutions for the treatment of the sick—Poor-law, civil and voluntary. Such a system would promote economy and prevent waste and overlapping; it would check abuse; it would exact from the patients such payment as they could make. Such a system would pay the doctors, whose position as compared with other people in a business sense was ludicrous. In conclusion, he said he failed to see any great disadvantages in a central authority such as he proposed. He believed the benevolence which characterized the Liverpool public would still exist if the Board was established; that the public spirit which animated the men who managed the hospitals would remain; and that they would still have the same skill and devotion with which the doctors and nurses in the hospitals were at the present time carrying on the work of medical assistance to the poor and deserving of the city.

Mr. Ralph Brocklebank, Chairman of the Royal Infirmary, referred to the anomaly that the voluntary hospitals took in patients for nothing, while the Poor-law hospitals charged the patients. At the same time he believed it would be a misfortune if hospitals became rate-aided institutions. An investigation at present being carried out at the infirmary tended to show that no great abuse of that charity existed.

Mr. Walter Holland (Northern Hospital) assured those present that the hospitals would do all they could to foster and encourage the views and aspirations of the Clinical School.

Sir Robert Hampson (Chairman of the Stanley Hospital) denied that there was any jealousy whatever between the hospitals. On the contrary, every good feeling existed, as shown by their being able to meet together and assist the University in forming this Clinical School. He could not endorse Professor Paterson's suggestion to establish a central authority for the hospitals. A central authority meant control, central control often meant officialism, and that, again, might easily be turned into rates, and there was a revulsion against rates and officialdom. He favoured conferences between the hospitals with a view to ascertaining what advantages could be given to these institutions, which would at the same time be of a beneficial character to the community.

CANCER RESEARCH.

An interesting evening is arranged at the Medical Institution for February 7th, when Mr. C. E. Walker, F.L.S., Assistant Director of the Cancer Research Laboratories, will deliver an address with demonstrations upon the recent advances in the cytological investigation of cancer.

South Wales.

WEST WALES SANATORIUM.

THE West Wales Branch of the National Society for the Prevention of Consumption held its annual meeting at Carmarthen Guildhall on January 22nd. Sir James Drummond, Bart., Lord Lieutenant of Carmarthenshire, who presided, said he was afraid that a great deal more money would be required before they could complete the building or pay off the contractor, and therefore the

must still go on begging; but it was most gratifying to feel that they had been helped so materially and generously by Mr. Davies of Llandudno, who, he was pleased to tell them, had most generously promised to give £500, his letter being as follows:

Llandinam Hall, Llandinam,
Montgomeryshire.
January 15th, 1907.

Dear Mr. Wheldon,—I have given very careful consideration to your appeal for funds towards the Sanatorium for Consumptives at Allt-y-Mynydd, Carmarthenshire. I observe from the documents at my disposal that the building is quite ready for furnishing, and could be opened in a few weeks for the reception of patients if funds for furnishing were forthcoming. I therefore assume that if we made a contribution for this purpose there would be no obstacle in the way of the immediate opening of the institution. On this assumption, I have pleasure in offering, on behalf of my mother, my sisters, and myself the sum of £500 to be used for the sole purpose of furnishing the building. The only other condition which we impose is that referred to in the following paragraph:

I quite agree with you that the ignorance which exists on the subject of "tuberculosis" is very appalling, and, from what I am informed, it seems perfectly clear that a great deal could be done to disseminate information which would go far towards stamping out this disease. I imagine that there is no other complaint of which cure is so difficult and the prevention so simple. The question is, therefore, what are the best means that can be adopted for the education of the masses on this question which has become one of national importance, and I cannot but feel that the most effective steps can be taken through our schools. In the hope that teachers may acquire a knowledge of this subject, we make it a condition of our offer that the managers of the sanatorium will pledge themselves to do all in their power to encourage normal students and teachers to visit and inspect the institution, and will provide every facility, opportunity, and convenience for the instruction and enlightenment of such persons in the prevention, cure, causes, and treatment of tuberculosis. I shall be glad to learn that our conditions meet with the approval of the Committee.

Believe me to be,
Yours faithfully,
David Davies.

The Chairman felt that the conditions which Mr. Davies imposed were very sensible and such as they would be glad to carry out.

Dr. Reid (Tenby) proposed that Mr. Davies's offer be accepted with most hearty thanks, with an undertaking that his wishes would be carried out. Mr. Trubshaw seconded. Mr. Wheldon described Mr. Davies as a patriot who looked at the whole question of Wales in a broadminded way. The resolution was carried unanimously.

In answer to Sir Lewis Morris, the Chairman said the building was quite fit for occupation. They were preparing to open, but it was a question of £ s. d.

Birmingham.

The Health of Birmingham.

The report of Dr. Robertson, M.O.H., for the fourth quarter of 1906 states that the birth-rate for the quarter was very low, being only 26.9 per 1,000; the actual number of births registered was 3,678. The death-rate was only 15 per 1,000, and this is the lowest on record for this quarter; the number of deaths was 2,152. There were 220 deaths from tuberculous diseases, and of this number 179 were due to phthisis. The chief causes of death were diseases of the respiratory system—bronchitis, pneumonia, and pleurisy being responsible for 453 deaths. Measles has been very prevalent, and 60 deaths were registered from this cause. There were 548 cases of scarlet fever, and of these only 14 died. Diphtheria has been particularly prevalent; 348 cases were reported in the last quarter, 196 in the third quarter, 124 in the second quarter, and 149 in the first quarter of 1906. A large number of cases were of a mild type, and among the more severe cases antitoxin was more freely used than ever before, with a result that the mortality has been greatly reduced. More cases of diphtheria have been treated in the hospitals, and this again has certainly helped to lower the mortality. Only 71 cases of typhoid have been reported during this quarter, and this number is the lowest ever recorded, for as many as 417 have been notified during a single fourth quarter. Dr. Robertson says that the reduction in the amount of typhoid fever which has been apparent in Birmingham within the last few years is largely due to the quicker removal of filth from the precincts of dwelling houses, to the substitution of the water-closet system for pan closets, and the better removal of refuse. The type of the disease would seem to have been severe, as the 20 deaths represent the high mortality of 28 per cent.

New Hostel for Birmingham Women Students.

Considerable progress has been made with regard to the scheme for building a hostel which will accommodate fifty women students. It has been estimated that a sum of £15,000 is required for building equipment, and it is considered that if this amount can be collected the institution ought to be self-supporting. Already donations to the amount of £10,000 have been promised or received, and negotiations have been entered into for a suitable site near the new university buildings at Bournbrook.

Ireland.

Royal College of Surgeons, Ireland.

The annual dinner of the Fellows of the Royal College of Surgeons, Ireland, took place in the Examination Hall on January 26th, when His Excellency the Earl of Aberdeen was present. A short time before the function the Honorary Fellowship of the College was conferred upon Mr. Priestley Smith of Birmingham. The President, Mr. R. H. Swanzy, in a very felicitous speech, described Mr. Smith's contributions to ophthalmology, and bore testimony to the very high position which he holds in his profession.

At the dinner there was a very large attendance. Mr. Swanzy presided, and in addition to the Lord Lieutenant there were present the new Fellow, Mr. Lentaigne, V.P., Sir C. Cameron, C.B., Lord Grenfell, the Attorney-General, the Master of the Rolls, Dr. Redmond, the President of the Royal College of Physicians, the President of the Royal Academy of Medicine, the President of the Ulster Medical Society, Sir C. Nixon, Bart, Sir T. Myles, Sir A. Chance, and Sir L. Ormsby. The "Health of His Excellency" was proposed by the President, and Lord Aberdeen responded. Other speakers were Sir A. Chance, Mr. Priestley Smith, Lord Grenfell, the Attorney-General, and the President of the College of Physicians.

Belfast Opinion of the New University Scheme.

The new university scheme for Ireland recently outlined by Mr. Bryce has excited much interest and debate in Belfast. For some time general feeling has been that the present state of continual wrangling is intolerable and deleterious to the interests of higher, indeed of all, education. There is a strong and growing opinion that sectarianism does not make for true education, and a demand is arising that education must be first and parties second. Belfast will never be satisfied with any scheme that involves the risk of its being swamped by Dublin, but there is no unreasoning opposition to the scheme as outlined. Until sufficient details are given, especially as to amount of autonomy to be granted to the constituent colleges, opinion is suspended. The reception the scheme will receive in Belfast will depend on whether true educational principles are embodied in it, on the diminution of sectarian influence, and on the amount of local autonomy granted.

In the Belfast Slums.

A series of articles have lately appeared in one of the leading Belfast morning papers on this subject. The inhabitants generally have, in the past, congratulated themselves that the city has been comparatively free from these plague-spots, but in the future they cannot lay that flattering unction to their souls. Some of the statements are vary unsavoury, and raise a feeling of disgust, horror, dread, and anger. The City Council are called on to act promptly in the matter.

Health of Belfast.

An important meeting of the Public Health Committee was held on January 24th. The Chairman introduced the subject of a public dispensary for tuberculosis; the duties of this institution would be the examination of patients, advising and prescribing for them, supplying them with medicines and disinfectants when unable to procure such themselves, the bacteriological examination of the sputum,

and instruction of patients as to prevention of the spread of the disease, and how best to minimize the risk of infection. In addition, investigations would be carried on with a view of ascertaining the distribution of tuberculosis throughout the city. The Lord Mayor (Lord Shaftesbury) cordially supported the proposal, and hoped the matter would be discussed thoroughly by the Committee, and brought before the Council at an early date. It was agreed to summon a special meeting for January 29th.

Reference was made to the large number of insanitary houses and to the bad condition of the streets in the Falls and Smithfield Wards. The acting executive sanitary officer said that eight years ago there were 26,000 houses in the city having only the ashpit and privy accommodation; at present there were only 3,000 such houses, and these were being dealt with monthly.

The Epidemic of Cerebro-spinal Fever in Belfast.

Some more cases of epidemic cerebro-spinal fever have occurred in Belfast; in one family of six children four have been carried off, two with dreadful suddenness that must have been crushing to the parents, who are respectable working people, with whom much sympathy is felt. The Coroner (Dr. Graham) thought it wise to hold an inquest on those two who died in a night without medical attendance. Professor Symmers attended and explained the nature of the disease. The health authorities are doing everything to prevent the further spread of the epidemic.

Cork Guardians and the Poor-Law Commission.

A special meeting of the Cork Board of Guardians was held on January 22nd to consider the report of the Poor-law Commission. The Chairman said that the subject was very large and required very careful consideration. He remembered the time when there was no Poor Law and he remembered well the agitation in favour of it, and he knew also that it was carried on against the advice of the great Irish leader of the day, Mr. O'Connell. With regard to the first recommendation of the Commissioners:

> The poverty of Ireland cannot be adequately dealt with by any poor relief law such as that of 1838, but by the development of the country's resources, which is therefore most strongly urged,

it was agreed that the Government be asked to give money at a cheap rate for reclamation, reafforestation, and general improvements in land. With regard to the more medical aspect of the various paragraphs discussed, the Board made the following recommendations:

1. That the sick be kept in the house.
2. That the aged and infirm be also retained and not removed to almshouses.
3. That the infants be boarded out as far as possible, and that mothers be not relieved of their responsibility except in cases of depraved parents, from whom children should be taken compulsorily.
4. All other classes to be dealt with as suggested by the Commission.

Scotland.

Dr. Finlayson Memorial.

A numerously attended meeting of the medical profession and others interested was held in the hall of the Faculty of Physicians and Surgeons, Glasgow, on January 24th, to consider a proposal to perpetuate the memory of the late Dr. James Finlayson. In the absence of the President of the Faculty, Dr. W. G. Dun, Honorary Treasurer of the Faculty of Physicians and Surgeons, was called to the chair. Amongst those present were the Lord Provost, Mr. John Wordie, Sir Hector Cameron, Professor Stockman, Professor J. Cossar Ewart, Dr. Yellowlees, Dr. Alexander Robertson, Dr. Renton, Mr. H. E. Clark, and Mr. Freeland Fergus. The Lord Provost moved and Dr. Yellowlees seconded a resolution to the effect that a fund be raised to perpetuate in some suitable manner the memory of Dr. James Finlayson, which was unanimously agreed to. Mr. Freeland Fergus stated that at a meeting of a few of Dr. Finlayson's professional friends held some little time ago it had been resolved to recommend the founding of a lectureship. The scheme recommended was briefly as follows: That a sum of money be gathered and a trust formed, and that the trustees whenever the accumulated interest permitted, should appoint a lecturer to give one or more lectures in the West of Scotland, and that the lectureship be called the Finlayson Memorial Lectureship. In this way it would be possible to bring original workers and men of distinction from other places to give the practitioners in the West of Scotland an account of their researches and work. The lecturer would not be chosen from any particular school or locality, but might be from abroad, or from London, or from Cambridge, or from elsewhere, the essential requisite being that he was a man of first-rate rank as an investigator, and that he was in a position to say something of practical value to practitioners. After some discussion, it was moved by Mr. H. E. Clark, and seconded by Dr. Renton that the memorial to Dr. Finlayson take the form of a lectureship. This was unanimously agreed to; and by a large majority it was further agreed to that the lectureship be on medicine and cognate subjects. Thereafter the meeting resolved itself into a general committee to carry out the scheme, and an executive committee was elected with Sir Hector Cameron as Convener; Mr. Robert Gourlay, LL.D., 124, St. Vincent Street, Glasgow, as Honorary Treasurer; and Dr. Alexander Duncan, Faculty of Physicians and Surgeons, Glasgow; Mr. Freeland Fergus, 22, Blythswood Square, Glasgow; Mr. Wm. D. Macfarlane, jun., 17, Woodside Crescent, Glasgow, as Honorary Secretaries.

Glasgow Royal Infirmary.

The Superintendent's report, presented to the annual meeting held at the Merchant's House, showed that the number of admissions was less by 74 than in the previous year. The mortality was at the rate of 10.8 per cent. against 10.6 in 1905, but if those who died within 48 hours of their admission were deducted the mortality rate fell to 6.8, as against 6.6 in the previous year. The average residence of those cases which were treated to a conclusion was 26.9 days as against 26.2 in the previous year, while the daily number resident averaged 580 in 1906 against 567.5 in 1905. An increase is also seen in the outdoor departments, when the enormous number of 27,845 first attendances was recorded, as against 26,7[illegible] in 1905. In addition to these dispensary cases 7,573 accident and urgent cases were treated as out-patients, showing an increase of nearly 2,000 upon the previous year. The ophthalmic department is not included in these figures; 10,000 patients attended there for the first time, and the total number of attendances was 40,500. Despite these figures, the Lord Provost in proposing the adoption of the report, expressed his opinion that there was no ground for the statement that there was abuse of medical charities. We are not quite so sure of this point. In another similar institution in Glasgow the number of patients who travel from country districts to obtain free attendance and medicine at the dispensaries is considerable, and in a fair proportion of these cases the train fare alone would more than pay for the medicine if it were bought at a chemist's. The Honorary Treasurer's report showed that the ordinary income fell some £400 short of that of the previous year, while the ordinary expenditure exceeded the revenue by nearly £11,000. On the other hand, the extraordinary revenue amounted to £22,883 (£8,000 more than in 1[illegible]), so that, after meeting the deficiency, the directors were able to carry to the credit of the stock account a balance of £11,933 16s. 9d. The contributions from employés amounted to £8,815, against £9,310 from ordinary subscribers, showing that the class who most benefit from the infirmary are contributing largely to its support. The reconstruction of the Royal Infirmary is proving much more costly than was expected, and the sum required will probably amount to £500,000, of which only £200,000 has been obtained.

Aberdeen.

Annual Report of Medical Officer of Health.

In his report on the health of the city during the year 1906, issued at the end of December, Dr. Matthew Hay supplies very interesting and instructive information in his usual masterly and lucid style. He considers that the estimate of the population as formed by the Registrar-General's method of calculation—167,537—is too high, and thinks that, owing to commercial depression and other causes, such as emigration, etc., 165,000 is nearer the truth, but for statistical purposes he, of course, gives

gures for birth-rate and death-rate, etc., on the Registrar-General's estimate.

Birth-rate.

The total births in the city in 1905 numbered 4,892, or 9·2 per 1,000, as compared with 4,885, or 29.8 per 1,000, in 1904. The rate in 1905 was the lowest recorded since civil registration came into full operation and is 7 per 000 less than the average rate of thirty or forty years ago. his large decrease in births is more than compensated for by ie decline in deaths. The fall in the birth-rate is confined the St. Machar district of the city—in the St. Nicholas istrict the rate was higher than the previous year—and this idicates that the birth-rate is declining more rapidly among ie upper classes in the city than among the working classes.

Marriage-rate.

The marriages for the year numbered 1,374, or 8.2 per 1,000. n 1904 there were 1,510, or 9.2 per thousand—a decrease counted for by the prevailing industrial depression.

Death-rate.

The total deaths recorded in 1905 were 2,618, a rate of 15.63 r 1,000. In 1904 there were 2,876, or 17.2 per 1,000. This so constitutes a record, even allowing for the over-estimation the population. If we compare the rate for 1905 with that thirty or forty years ago, we find that the death-rate is now out two-thirds of what it was at that time. The infantile rtality, while showing a decrease, is still much too high. nder 1 year the rate was 151.6 per 1,000, the lowest recorded at least twenty years. Dr. Hay discusses the infantile rtality question at some length, and divides the deaths into ree classes. One-third he thinks unavoidable—those born maturely or with developmental defect, etc.; one-third he sses as not easily avoidable, owing to varied domestic and ial circumstances, such as working mothers, influence of nk, etc.; and one-third preventable, when the deaths are stly due to ignorance on the part of mothers in regard to proper feeding and hygiene of infants. Dr. Hay indicates amount of good work done by the female sanitary inspector l female health visitor in this particular recently.

Leeds.

The General Infirmary.

was mentioned in this column on January 5th, Mr. H. Brown had found it necessary, on account of a ure of health which it is hoped will only be temporary, esign his position as honorary surgeon to the Infirmary, r holding that position for sixteen years. The rule of institution is that, at the end of twenty years' service the full staff, or on the attainment of the age of 60 rs, members of the honorary staff are transferred to consulting staff, with the privilege of using a certain mber of beds. In the event of any member of the staff gning prior to the date of either of these events, it is petent for a meeting of the governors to elect him a mber of the consulting staff, with the same privileges f he had served the institution for his full period. the recommendation of the Weekly Board, this course followed in the case of Mr. Brown at a meeting of the rnors, presided over by Mr. Charles Lupton, on ary 22nd.

n the same day a meeting of the Special Election mittee was held to fill up the vacancy on the tant staff which resulted from the promotions fol- ng on Mr. Brown's resignation, and the Committee inted as assistant surgeon Mr. Joseph F. Dobson, Lond., F.R.C.S. Mr. Dobson was a Leeds student ughout his curriculum, and filled in succession the ion of house-surgeon, resident casualty officer, and ent surgical officer. For the last two years he has assistant surgeon in charge of the Ida and Robert ington Semi-convalescent Hospital at Cookridge.

India.

Haffkine's Antiplague Prophylactic.

RIES of official documents has recently been pub- d dealing with the efficacy and reliability of Haff- s prophylactic against plague. Consideration of matters has occupied the Indian authorities for g time, and the recently-issued reports relate to s which occurred several years ago. The following rief outline of the earlier part of the inquiry:

rly in 1897 Mr. Haffkine introduced the system of inoculation against plague with a fluid prepared from the sterilized virus of the disease. The composition of this liquid was very thoroughly investigated by the Indian Plague Commissioners, and they decided that its employment was free from danger. It was used on a large scale in various parts of India; no injurious effects were produced, and the results were distinctly beneficial. This prophylactic was prepared by what the authorities term the "standard method," and involved the use of broth cultures which took several weeks to prepare. But in September, 1902, owing to the heavy demand for prophylactic then being made by the Punjab Government, Mr. Haffkine found it necessary to expedite the process of manufacture, and with this object used agar cultures of the bacilli. To his new fluid, prepared by what is termed the "water-agar process," no carbolic acid was added, other methods being relied on to ensure its sterility; whereas, in the fluid prepared by the "standard method," 0.5 per cent. carbolic acid had been present, and was regarded by most authorities as being an additional safeguard against contamination. On November 6th, 1902, nineteen persons who had been inoculated on October 30th in the village of Malkowal from a single bottle (labelled 53 N) of the new fluid were found to be suffering from tetanus, and all of them subsequently died. A Commission, consisting of Sir Lawrence Jenkins, K.C.I.E., Chief Justice of Bombay, Lieutenant-Colonel Bomford, M.D., C.I.E., Principal of the Medical College, Calcutta, and Major Semple, M.D., R.A.M.C., Director of the Pasteur Institute, Kasauli, was appointed to inquire into the accident and to consider the efficacy of the new prophylactic.

This Commission, in a report dated April 16th, 1903, state that: "If sterile, we see no reason to believe that the new prophylactic is less efficacious than the old." In criticizing the method of its manufacture, they object to the omission of 0.5 per cent. carbolic acid. Being aware that some bacteria are not much influenced by the presence of so small a quantity of disinfectant, they considered it important to ascertain by experiment the precise influence of the carbolic acid on the growth of the tetanus organism. Lieutenant-Colonel Semple conducted this investigation, and found that:

(*a*) Tetanus bacilli, when planted in a bottle of uncarbolized water-agar plague prophylactic, grow freely, whether strict anaërobic precautions are observed or not; (*b*) tetanus bacilli, when planted in a bottle of water-agar plague prophylactic, to which 0.5 per cent. carbolic acid has been added, failed to grow, and at the end of six weeks the fluid failed to convey the disease to animals; (*c*) tetanus bacilli failed to grow in ordinary peptone broth and in glucose broth (one of the most favourable media for tetanus growth) when 0.5 per cent. carbolic acid had been added thereto.

Guided by these results, the Commission decided that

Carbolic acid is a valuable agent in restraining tetanus growth when added to plague prophylactic, and we therefore think that its omission was a grave mistake.

With regard to the fatal accident at Malkowal, the Commissioners first considered whether or no the tetanus organisms were present in the bottle containing the prophylactic. Their inquiries satisfied them that the infective germs were neither (*a*) on the needle used for inoculation, nor (*b*) on the arms of the persons inoculated, nor (*c*) introduced in the process of washing those arms; and they state as their final conclusion that "after full consideration we think the contamination was in the fluid." Their next step was to consider whether the tetanus germs found their way into the bottle before or after it was opened at Malkowal. The Commissioners admitted, as a theory demanding consideration, that the germs might have effected an entrance at Malkowal. They say:

Thus, by way of illustration, the stopper or the forceps might have been dropped on the ground and applied to the mouth of the bottle with contamination adhering, or spores, settled between the rubber stopper and the rim of the bottle, might have dropped in as the stopper was pulled out.

After careful analysis of the evidence for and against this theory, they held that the theory could not be substantiated. They therefore reject it, and conclude that "in our opinion the specific contamination was introduced before the bottle was opened at Malkowal." They then proceed to consider the operations which the bottle passed

through during its preparation in Mr. Haffkine's laboratory. Their conclusions are as follows:

The possibility of contamination at the sampling stage may be excluded, so that limiting ourselves to what is reasonably probable, the source of contamination is narrowed down to a choice between the following possibilities: (*a*) the bottle may have been insufficiently sterilized before it came into the decanter's hands; (*b*) the decanting may have been performed with defective precautions; (*c*) the final sterilization may have loosened the stopper, with the result that the specific contamination entered, either in the cold bath, or afterwards before the bottle was opened at Malkowal. To make an exclusive selection from these possibilities with any show of reason is impossible.

The report of this Commission, together with a record of the data on which it was based, was submitted for examination and further experiment to the Lister Institute in London. The Lister Institute was asked to report on (1) the comparative efficacy of the "standard" and new fluids as a protection against plague, (2) the comparative liability of each fluid to contamination, and (3) the probable origin of the tetanus virus in the Malkowal cases. The director of the institute, Dr. C. J. Martin, furnished the Government of India with an interim report on these matters, which is dated November 24th, 1904. The main conclusions arrived at are summarized as follows:

1. The Institute sees no reason to differ from the conclusions of the Commission that the new prophylactic is not less efficacious than the old.
2. The Institute is of opinion that in the hands of more or less unskilled workers it is easier to ensure freedom from contamination by Mr. Haffkine's "Standard Method" of manufacturing plague vaccine than with the water-agar process as employed by him.
3. The Institute is in entire agreement with the Commission as to the value of 0.5 per cent. carbolic acid in restraining tetanus growth when added to plague prophylactic, and its experiments emphasize still further the importance of this addition in preventing the growth and toxin formation in a vaccine which might be liable to the possibility of contamination with the spores of tetanus.
4. The conclusions of the Institute coincide with those of the Commission that in all probability the tetanus was at the time of the inoculation in the fluid contained in the bottle, but that it is impossible to determine at what stage in its history or in what way bottle 53 N became contaminated.

Prompt and effective measures were taken to guard against the possible recurrence of a similar accident, and in a *communiqué* to the Indian press, dated December 13th, 1904 the Government of India was able to make the following statement:

Some months ago the Government decided, on the advice of the Director, that only the standard fluid should be manufactured at the Plague Institute. This fluid is sterilized by methods approved by the Indian Plague Commission, and contains the requisite proportion of carbolic acid.

In reply to an inquiry from the Under-Secretary of State for India, a further communication was received from the Lister Institute concerning its opinion as to the time when the bottle concerned with the Malkowal incident became contaminated. In this communication, dated November 9th, 1905, Dr. C. J. Martin states that:

the Institute is of opinion that the fluid used at Malkowal probably became contaminated with tetanus before the time of opening the bottle at Malkowal but it also agrees with the Commission that the possibility of the contamination having effected an entrance at Malkowal cannot be excluded.

Mr. Haffkine directed the attention of the Under Secretary of State for India to a certain inconsistency contained in this statement, and the latter official subsequently received a further communication from the Lister Institute. In this letter, dated May 9th, 1906, it is stated that the governing body of the Institute regret that

they inadvertently referred to their conclusion as the same as that of the Commission. The Governing Body overlooked the fact that the Commissioners subsequently considered the possibility of contamination having been effected at Malkowal, as was actually effected by other considerations. But in this respect the Governing Body are bound to say that they cannot fully concur, and while holding to their view of the probability, they think Mr. Haffkine has a right to claim the benefit of the doubt especially in view of the fact elicited that the forceps used for drawing the cork at Malkowal were dropped on the ground, and subsequently rinsed by the operator on the same cork.

All the above mentioned reports, with the exception of the last letter, have been very fully commented upon by Mr. Haffkine, but it is impossible to recapitulate briefly the many lengthy arguments and involved controversial discussions which are embodied in his communications.

Mr. Haffkine's main contentions are two-fold. He insists (1) that undue weight has been attached to the omission of 0.5 per cent. carbolic acid from the prophylactic in question, and (2) that the tetanus germs were introduced at Malkowal and not in his laboratory.

With regard to (1): amongst the many arguments and observations which he brings forward, he points out that "growth of tetanus microbes may take place in a fluid notwithstanding the presence of 0.5 per cent. carbolic" and urges that "methods quite different from carbolization are those which ensure protection from mishaps." Pursuing the same argument, he declares:

Everything indicates that it is not on antisepsis that we can rely in preparing a safe product, but on asepsis. In other words, the admission of germs into such products must be prevented. . . . No antiseptics are used in the preparation of the many millions of doses of antidiphtheritic, antistreptococcic, antitetanic, antiplague and antirabic sera [and of the plague prophylactic] which are prepared and issued at the Pasteur Institute in Paris and in many other institutes throughout the world. These institutes have not registered a single tetanus accident, while the Milan Institute, which used to recur to carbolization, has . . . had a multiple accident of that nature [the accident of 1900, with 0.5 per cent. carbolized antidiphtheria serum, which involved some 20 deaths from tetanus].

With regard to (2): in the course of many lengthy and critical observations Mr. Haffkine expresses himself as follows:

The following facts indicate that the germs of tetanus have not effected an entrance into the Malkowal bottle, even only a few days prior to its opening. The bottle was odourless at the time of using it, whereas in less than three days a tetanus odour becomes unmistakable in a contaminated bottle. Tetanus germs generally and the Malkowal specimen in particular, when growing in a full bottle of prophylactic, give after a few days a rich and extremely active culture, whereas in the sample left in the Malkowal bottle a poor culture was found, a much lesser activity, such as would develop in the remnant of prophylactic fluid, in a bottle emptied of its contents [that is, in aërobic conditions]. The character of the disease exhibited by the 19 patients was that observed in average clinical cases in India of a not very severe description—that is, in cases due to minute accidental doses of virus not multiplied by culture; and that character is incompatible with the supposition that the Malkowal cases were injected with 1½ c.c. of a virus of such potency as was found in infected, full bottles of prophylactic [in anaërobic conditions], after even only a few days' accumulation of virus in them. And, lastly, the fact that contamination could be easily removed from the infected syringe and the latter rendered harmless indicates that it had been in contact with only a small amount of virus, whereas, when brought in contact with a seven days' old culture it has been shown to retain, after rinsing, enough infection to affect [again] 17 animals out of 19—that is, probably 13 out of 15 injected with a first syringeful, and four out of six injected after a further dilution. The Indian Commission reported to have "*found that the germ of tetanus had been introduced into the fluid before the bottle was opened at Malkowal and attributed the accident to one of the laboratory operations.* . . . Not one of the facts of the case contains the slightest indication to this effect; everything brought out by the inquiry points in the opposite direction, and the Commission subordinated all direct indications to a thesis adopted *a priori* and promulgated in the Lister Institute's statement of November last 1905."

Cape Colony.

COLONIAL MEDICAL COUNCIL.

THE four retiring members of the Colonial Medical Council have been re-elected. The result of the poll was declared as follows:

Dr. John Hewat...	302
Dr. David James Wood	274
Sir Edmond Sinclair Stevenson	265
Dr. Wm. Darley Hartley	261
Dr. Alfred Edward Thomson	177
Dr. Frederick Murray	165
Dr. Ludwig Andries Wilhelm Beck ...	137
Dr. Dirk de Vos Hugo	120

The first four named were accordingly elected to serve for three years, dating from January 1st, 1907.

THE first crematorium in Saxony has been established at Chemnitz, with the sanction of the Minister of the Interior.

SPECIAL CORRESPONDENCE.

PARIS.

Death of Professor Budin.—Académie de Médecine: Professor Huchard on the Treatment of Presclerosis.—The Chair of Parasitology.

French obstetrics has suffered a severe loss by the death of Professor Pierre Budin. When the Assistance Publique decided in 1882 to create "accoucheurs" in the Paris hospitals, Budin was the first of the four to be appointed. He may be said to have organized the clinical teaching of obstetrics in France. Professor Budin gave his care as much to the newborn infant as to the mother, and the honour of creating the *consultations* for infants in France is due to him, for it was in 1892, when he was at the head of the maternity at the Charité Hospital, that he was authorized by the Director-General of the Assistance Publique to form the first. In 1902, with the help of the two well-known philanthropists Theophile Roussel and P. Strauss, and under the auspices of Waldeck-Rousseau, Professor Budin founded a league against infant mortality, the principal aim of which is to establish *consultations* for infants, which became veritable schools for mothers, and are now being organized throughout France. The value of these in diminishing infantile mortality and in increasing breast-feeding is shown by the numerous writings and communications of Professor Budin to the Académie de Médecine, analysed in the British Medical Journal. The funeral, which took place at the Montparnasse Cemetery in Paris on January 25th, was largely attended by his colleagues, pupils, and friends.

At a recent meeting of the Académie de Médecine Professor Huchard read an interesting paper entitled, Treatment of Presclerosis. His opinion is that arterial hypertension generally precedes, prepares, and produces the vascular lesions of arterio-sclerosis. Consequently in first premonitory stages, called "préscleros is" by Professor Huchard, there is a more or less pronounced and prolonged state of hypertension, with complete or almost complete absence of changes in the artery, which indicates its curability at this period. This notion of primitive presclerosis, which Professor Huchard has formed after twenty years and from more than 13,000 personal observations, has not been accepted by all, many authors holding that the arterial hypertension is consecutive to the vascular lesions, instead of preceding them. From this view of hypertension and presclerosis has sprung the hypotensive treatment. For if under normal conditions the arteries are the auxiliaries of the heart, when they are in a pathological condition they become its worst enemies. "We become cardiac by our arteries, we do not become arterial by the heart." Hypotensive treatment is realized by hygienic and physical means and by drugs: alimentary régime, muscular exercises, and massage (especially abdominal and precordial massage), baths, and carbonic-acid baths (the waters of Bourbon-Lancy possess radio-active properties which M. Huchard believes exercise a sedative action on the heart and vessels), high-frequency currents. Among the drugs, all the series belonging to the class of nitrites and perhaps also theobromine by its action on renal elimination. Hypotensive medication, produced temporarily by physical and medicinal agents, must be supplemented by two other absolutely indispensable treatments to become permanent—that is, alimentary hygiene and renal elimination. From the dietary must be excluded all foods more or less rich in ptomaines or extractives. Alimentary toxins will be reduced to a minimum by a lacto-vegetarian dietary. The effects of the toxins are antagonized by drugs which have a vaso-dilating and hypotensive action. The dietary reduces the toxins in the organism to a minimum, but their elimination must also be favoured by renal and diuretic treatment. The heart must also be sustained in its incessant struggle against the peripheral obstacles. This curative treatment of presclerosis is the preventive treatment of arterio-sclerosis and the numerous arterial cardiopathies. In discussing the paper, M. Lancereaux denied that hypertension is the cause of arterio sclerosis; when hypertension is present the artery is already affected in its internal coat. M. Chantemesse said that arterio-sclerosis began long before clinical signs appeared; it was due to a slow and continuous intoxication, and M. Hayem was of the same opinion. Professor Albert Robin asserted that when arterial hypertension is found and treated by appropriate measures there was every chance of escaping the accidents of arterio-sclerosis.

By a recent ministerial decree the Chair of Medical Natural History has been transformed into a Chair of Parasitology. This is an official consecration of a new direction given since 1883 to the teaching of natural sciences in the Faculty of Medicine in Paris, when Professor R. Blanchard was appointed *Professeur-agrégé*. Previous to this date the course of lectures consisted of pure botany and zoology. When he became full Professor in 1897, M. Blanchard did for botany what he had already done for zoology, treating of it only in so far as it concerned parasitology. In 1898 Professor R. Blanchard founded the *Archives de Parasitologie*, of which the eleventh volume is in course of publication. In 1902 he founded the Institut de Médecine Coloniale, analogous to the London School of Tropical Medicine, which has already granted 133 special diplomas in Tropical Medicine of the University of Paris, about half of which have been obtained by foreigners.

CORRESPONDENCE.

HOMOEOPATHY.

Sir,—Your interesting article on the "Revival of Homoeopathy" brings to my remembrance that a short time ago its followers commemorated the 100th anniversary of the foundation of the system, and declared with much rejoicing that this was a proof of its truth and vitality. I answered my friends by saying that although the latter proposition might be right, the former was wrong, as it proved to me absolutely the contrary. Errors live as long as truths. The homoeopathic dogma of "similia similibus" has not, in my knowledge, been recognized by a single medical school in the civilized world, and yet we know that it would be perfectly impossible to discard a new theory or law in any branch of science, be it geology, astronomy, or chemistry. On the contrary, the professor would hail with delight anything which furthered the progress of his study. The system of homoeopathy, therefore, stands perfectly isolated, and seems likely to remain so. At the same time, half the world believes that the taking of drugs is all that is required for the medical art, and that for every ache and pain, or other bodily trouble to which humanity is subject, a remedy may be found. Whilst this has a firm hold of the mind homoeopathy will live on; its foundation is that of a law showing the method of giving drugs for every possible symptom to which the body is liable.

All the medical schools, however, throughout the civilized world declare that the art of medicine can only be properly taught by obliging the student to obtain first a thorough knowledge of the anatomy of the human body, then of its functions—as in physiology, which necessarily includes a knowledge of chemistry; afterwards to study the diseases of the body both at the bedside and in the *post-mortem* room. When this is done, he is taught how to set the body straight which has in any way lost its balance or deviated from the normal state; he is taught how exercise, rest, good air, proper food, etc., may be recommended for the cure, and then that certain drugs may be used for the same purpose. The medical schools universally declare that this is the true method, and utterly discard the notion that a remedy can be found for a complaint unless the cause of this is discovered, and which as a rule gives a clue to the treatment. The mere drug-giving for every ache or pain is a popular want, and if it is found that some medical men pronounce that this is the first and only thing to do, it is not remarkable that so many patients flock to them.

I have every reason to believe that homoeopathy has not taken any strong hold of the lower orders, but it has suited the class of people who are unorthodox in every department of life, and also such minds as Disraeli's, who loved mysterious and metaphysical subtlety. The professors of the art have, I suppose, a mind such as I have often met with amongst medical men: a mind which leads them to believe that every symptom should be treated by a drug—as, for example, in a case of pneumonia to stay the high temperature antipyrin must first

be given, then digitalis to slow the heart, also a saline for the skin and kidneys, and so on until the severe symptoms have passed, when strychnine is given to restore tone to his nervous system. In this way many doctors act, and firmly believe that they have cured the disease by their drugs.

Much more might be said against the treatment of symptoms rather than the disease itself. Many cases I could relate of the failure of this mode of proceeding. My principal object in writing this letter was to say amongst all the arguments I ever used against homoeopathy, my chief one was that being founded on a system of drug-giving, it was putting the cart before the horse, and must be absolutely wrong, seeing that the curriculum of all the medical schools in the world adopt an exactly opposite method.—I am, etc.,

London, N.W., Jan. 28th. SAMUEL WILKS.

SURGERY PATIENTS.

SIR, In the BRITISH MEDICAL JOURNAL of December 29th, 1906, Dr. Daniel, Honorary Secretary of the Furness Division, states the recognized rule that on a medical practitioner being called to see a patient, and on becoming aware that the said patient is under, or has been recently under, the care of another practitioner, he should decline to attend unless, and until, he is satisfied that the patient, or his friends, have *already* notified the other medical man of their intention to change doctors. Dr. Daniel asks, Is it necessary to insist on the notifying of the superseded practitioner where attendance at the surgery is concerned? I certainly think, and I am sure every man with good feeling must think, that the answer is a decided "Yes." It is true that surgery cases vary considerably, and with the rush of work, and the information intentionally or unintentionally suppressed by the changing patient, one or two patients may, in times of pressure, slip through undetected, but where practitioners are alert, and when a new patient presents himself for examination, and is asked "How long have you had the ailment?" and "What has been done for it?" the answers soon show whether the patient has been under medical treatment or not. If the patient has been recently under a doctor, either a consultation should be suggested, or proper intimation, verbally or by note, should be sent by the patient to the original doctor, before the new doctor takes charge of the case. Ordinary courtesy, apart from ethics, demands this.

If the principle of notifying be sound and honourable in the case of visits at the patient's house, it is equally sound for attendance at the surgery, and if faithfully carried out would save no end of ill-feeling and complications. One therefore feels that the rule should apply in *all* cases.—I am, etc.,

January 28th. JUSTICE.

CANCER PROBLEMS.

SIR,—The comments on Dr. Bashford's paper on the Real and Apparent Differences in the Incidence of Cancer that appear in the BRITISH MEDICAL JOURNAL of January 26th force me to beg some of your space. I listened to Dr. Bashford's paper with great interest, and I have it now before me, and I cannot find in it anything that in the least affects the position that I hold, namely, that the common forms of the tumours that we call sarcomas and cancers are caused by parasitic protozoa. The matter is one of objective practical study. No one values experimental methods more than I, but in some minds the word "experiment" has a too restricted sense, and it is not out of place to reflect how Schaudinn discovered the spiral phase of the protozoa of syphilis; he first acquired an intimate practical knowledge of the protozoa, and then simply looked for and found them in syphilitic matters under the microscope.

I have lately re-examined some sections of the infective sarcomas[1] of dogs that the late Dr. Washbourn gave me in 1896. They show both the early and the fully developed stages of the growths. Both show that the connective-tissue cells form the basis of the tumour. In the fully-developed stage there are numerous mitotic figures. Do these mitoses belong to the connective-tissue cells? If they did there would be with them nuclear forms—for example, the spireme stage, linking them to the less active cell nuclei. Very careful study of the sections under a power of 800 diameters and upwards, shows that there is no such series of forms, but that what appear to be stellate nucleoli round themselves off,[2] escape from the remaining nuclear membrane and become amoeboid, their previous chromidial condition giving place to one with separate nucleus and cytoplasm. The mitoses belong to these amoeboid nucleus-destroying protozoa. All the details seen in these dogs' tumours are repeated in the alveolar sarcoma from a woman which I described in 1895,[3] with the addition that in the human sarcoma the result of the final division of the parasites into minute bodies, which are again in the chromidial state, is more easily seen than in the sarcoma of the dog. In the latter some of the lesions disappear spontaneously, and in this stage I doubt not scar-tissue formation and connective-tissue mitoses occur, but I have none of the tissue in that stage.—I am, etc.,

London, W., Jan. 26th. J. JACKSON CLARKE.

[1] It has been introduced in the [illegible] Reports of the Imperial Cancer Research Fund, Vol. [illegible], and [illegible] but [illegible] [illegible] made under a [illegible] [illegible] [illegible] all the [illegible]

[2] Similar bodies have been described as the "nuclei stage of a reduction process."

[3] BRITISH MEDICAL JOURNAL, April 6th, 1895; *Cent. für Bakt.*, May 16th, 1895.

WORKERS' SANATORIUMS AND MEDICAL REFEREES.

SIR,—Despite a certain acidity of flavour in your annotation of January 26th on Workers' Sanatoriums and Medical Referees, I was very pleased to see your mention of the subject. It was certainly fitting that the organ of what is the nearest approach to a medical trades-union should draw attention to any act of other organizations of workers which appeared to transgress the high principles of trades-unionism; but the transgression is only apparent, and not real, as a short explanation will abundantly demonstrate.

I will leave the consideration of the question whether connexion with our institution will come within the category of those appointments which "confer dignity and honour on the holders" until I have explained what our institution is. Your readers may then be in a better position to form their own opinions.

The work of the National Association for the Establishment and Maintenance of Sanatoria for Workers suffering from Tuberculosis can be described as an experiment which is being carried out in order to demonstrate to friendly societies and trades-unions, *inter alia:*

1. That cheap and self-maintaining sanatoriums might be erected by the corporate efforts of the workers themselves, if they were stimulated to such effort by a practical example.
2. That the erection and maintenance of such institutions can be made to pay in the sense of proving a financial benefit to the societies.
3. That it would be wise for the societies to endeavour to get the necessary statutory powers to enable them to erect and maintain sanatoriums.

There are many other things we shall seek to demonstrate also, but for the purposes of the present letter this description of some of the aims of our Association will suffice.

At present the friendly societies and trades-unions, regulated in their functions by Acts of Parliament, have no power to vote money from their funds for the erection of a sanatorium, and only on condition that they get a special clause inserted in their rules can they apply money to the maintenance of such an establishment. When you speak of the "enormous funds" of the friendly societies, you seem to overlook their equally enormous liabilities. As a matter of fact, friendly societies have, in the opinion of competent actuarial authorities, barely sufficient funds to meet the liabilities to which they are now legally committed.

When we set out to found a movement which should teach the organized workers to help themselves, and incidentally to help the community in the struggle against industrial tuberculosis, we felt that the best way to do this was to show by a practical experiment that it was "worth while" both in a social and financial sense. What we have been doing during a busy three years of propaganda to interest societies and bring them into co-operation with the movement, we also wished to illustrate by

the object lesson of a practical working institution in which economy and efficiency should be combined. Some recent experiments in sanatorium work have hardly been models of economy either in building or administration. To carry our demonstration to a successful issue we had to build an institution which should show the possibility of self-maintenance and be erected at a cost that was far below anything hitherto attempted for a permanent and efficient structure. The only means of erecting such a sanatorium was by voluntary subscription. In this part of the work we have been nobly assisted by H.R.H. Princess Christian and her Special Appeal Committee, but the workers themselves have also freely contributed according to their means and continue to do so periodically. Now to help us still further we have asked the co-operation of medical men who will act as referees for our first sanatorium, and the reponse which has reached us has been in the best spirit of a great and generous profession. The different spirit of your annotation is possibly due to insufficient information.

When by the aid of this combination of charity and self-help we have brought our experiment to a success, we hope that it will stimulate a series of changes in the statutes, and the demand for self-erected and self-maintained sanatoriums among the friendly societies and trades-unions that will eventually enable us to rank ourselves fairly beside the antituberculosis movement of Germany in the scope of our work among the industrial classes. The resultant organization will pay its medical referees on a proper scale, and the appointment will thus enter the sacred category from which you at present exclude them.

Meanwhile, members of the medical profession who are helping us in our experimental demonstration will perhaps find in this effort to teach the worker to organize against consumption one of those true forms of charity which it is dignified and honourable to assist.—I am, etc.,

W. G. Bunn,
Honorary Secretary and Senior Trustee,
Hammersmith, Jan. 28th. Hearts of Oak Benefit Society.

HOSPITAL REFORM.

Sir,—The correspondence on this subject has hitherto been almost entirely confined to the general practitioner's point of view, and in the British Medical Journal for January 19th a charge is made by Dr. Grey against the honorary staffs of hospitals to the effect that they are either actively or passively the cause of hospital abuse.

I have, in addition to carrying on general practice, been for twenty-four years a member of the honorary staff of a special hospital, and more recently of a general one, and I can vouch for it that all my colleagues are united in an earnest endeavour to check and prevent this evil; and, further, and perhaps more important, that we are loyally and cordially supported by the lay Committees, which are thoroughly impressed with the necessity of protecting the medical profession in this matter.

My experience has led me to form a definite opinion that the general practitioner is one of the chief sinners in abetting hospital abuse. It not infrequently happens that they send cases to the hospitals who could afford to pay, or who have paid a considerable sum, for treatment; and that, when either the patient or the practitioner has become weary of the process, "hospital treatment" is recommended. One sees a considerable number of such cases where a private consultation would have had a most salutary effect upon the relations between the practitioner and his patient. I always think that these men lose sight of the principle that "whatever is good for the profession is good for every member of it," and it is certainly a great ill to the profession that small tradesmen, farmers, and the better class of artisans should be taught that they can obtain through charity what is, in their opinion, higher skill in diagnosis or treatment. Only the general practitioner, who moves among them and is respected by them, can enforce the doctrine that any assistance which he requires should be paid for and not sought or claimed as a charity; and, were he to insist upon this, he would do more than any honorary officer can do to strike at the root of the evil.

I am strongly opposed to the recommendation of the Hospitals Committee that the certificate of a general practitioner shall be a key to open the hospital door. The conscientious man who refused to give the sought-for recommendation to a patient who could afford to pay him a bill of £5, but who would much prefer gratuitous treatment, would frequently find himself in this difficulty: "If I do my duty in this case and refuse this recommendation they will certainly go to some one less scrupulous, or differing from me in his opinion on this matter, and, obtaining what they desire from him, will transfer their practice to that man. Thus I shall lose them as patients altogether."

In any considerable town the less conscientious man would be found, and I believe that the practice would, in the end, tend to the actual bartering of hospital recommendations, in that it would become notorious among the lower middle classes that if they go to Dr. A. and pay a fee, he would give them a recommendation to the hospital. I am afraid that if this part of the Committee's scheme is adopted and brought into anything like general use, it will place a burden on the shoulders of the man whom it is intended to benefit heavier than he can bear.

There can be no doubt, from the discussions and correspondence, that the forms and degrees of hospital abuse vary in different localities, and that it is in large towns, such as London, that it presses most upon the general practitioner. I believe, however, from what I have observed, that he is largely responsible for a considerable amount of gratuitous consulting work which ought to be paid for, and that there is a good deal of abuse of the generosity of the visiting staffs of hospitals in this direction. If any good is to come of this much-needed movement each man must do his part; and, in my view, the general practitioner's is at least as important as that of the consultant.—I am, etc.,

Arthur C. Roper,
Surgeon to the West of England Eye Infirmary,
Jan. 24th. and to the Royal Devon and Exeter Hospital.

REMEDY FOR HOSPITAL ABUSE.

Sir,—Dr. Inglis Parsons's views on the remedy for hospital abuse deserve the most prominent place in your Journal, and I would suggest his letter should be published on the front page of the Supplement every week.

He is absolutely right. The splendid result of the late Medical Charities Committee, after about twenty-five years' work, was the hanging up in several hospitals of a notice indicating to the patients the startling fact that the place was for the poor, and the "circumstances" of the applicant for relief would be inquired into! Why is this? Not a single hospital medical Board has ever done anything to help the Committee or to prevent imposture. I am not ashamed that I was for years on the Committee—we "did what we could."

The present Hospitals Committee has an almost worse record, because it has been a great expense to the Association and its achievement is a resolution at a mixed meeting that it is "advisable" that a joint committee be formed and an annual conference held! Where, I ask, are the medical boards, or even the individual members of hospital staffs?

Should not the Council of the Association promptly insist that every member holding a hospital appointment should see that the recommendations of the Hospitals Committee are forthwith carried into effect? They are surely moderate enough and fair to every one. The time has come to entirely ignore a grasping public. But during the deliberations of the past two or three years it has been made abundantly clear that it is not the lay public who obstruct reform, but the selfishness and feebleness of the "Honorary Medical Staff."—I am, etc.,

Old Trafford, Jan. 29th. James Brassey Brierley.

TREATMENT OF *POST-PARTUM* HAEMORRHAGE.

Sir,—I notice that, in his interesting remarks on *post-partum* haemorrhage (in the British Medical Journal of January 26th), Dr. John F. Le Page cites me, within quotation marks, as saying, "Contraction of the uterus, and, if that fails, thrombosis." These words as they stand convey no meaning to my mind. I cannot remember writing them, and I cannot find them in print. Quoted as above, without context, I certainly disown them.

I have never seen serious bleeding after labour, but am very willing to accept the statements of those competent

observers who have done so. Mr. Stanmore Bishop first called my attention to compression of the aorta as an old method which deserved revival. After full consideration, I wrote as follows in the year 1898:

If, in spite of precautions, bleeding occurs after labour, the treatment must be aimed at causing the uterus to contract firmly enough to stop the bleeding. This result cannot be obtained immediately, and in the meantime the patient may bleed to death. Therefore, the first thing to do is to dress a hand into the abdominal wall just above the umbilicus till the aorta is felt pulsating against it, and then to compress the aorta against the spine till pulsation is abolished. This compression must be kept up until the uterus can be made to contract. If possible, one person should compress the aorta while another stimulates the uterus.[1]

I consider that this method of checking *post-partum* haemorrhage should be taught to midwives. It exposes the patient to no risk of infection; it requires less dexterity than intrauterine douching or bimanual compression; it can be applied without a moment's loss of time, and, so far as I am aware, it has always proved successful.—I am, etc.,

Manchester, Jan. 26th. W. E. FOTHERGILL.

SIR,—The directions given by Dr. Le Page for checking *post-partum* haemorrhage by compression of the aorta he surely cannot claim as original? It is an ancient treatment, and I believe has been relinquished for years past on account of the uncertainty of the procedure *through the abdominal wall*. How can any one adopting this plan be sure he is not compressing the vena cava as well? A better plan by far in my opinion, and I think also in the opinion of Mr. Stanmore Bishop (who has written a valuable paper on the subject) is compression of the abdominal aorta through the uterine wall. A double advantage, as the stimulating influence of a hand in utero, combined with pressure through uterine wall and the better opportunity of applying that pressure *to this large vessel only*, should give it a prior claim for adoption. Should I meet with such a case myself as Mr. Le Page has described, I should place the patient in the Trendelenburg position and introduce the sterilized hand into the uterus, and compress the aorta, while, with the other hand, I should (if unassisted) inject hot saline fluid into the bowel. Heat should also be applied to the head (a very important point, and one not mentioned by Mr. le Page), and I should also perform autotransfusion by bandaging the limbs placed at right angles to the trunk.

This subject, though well worn, is worth bringing forward, and Mr. Le Page deserves the thanks of the general practitioner, if by means of his paper the plan or plans giving the best results are made a hard-and-fast rule for adoption in *all* dangerous cases of *genuine post partum* haemorrhage.—I am, etc.,

ALEXANDER DUKE,
Ex-Assistant Master, Rotunda Hospital, Dublin.

London, W.

THE TREATMENT OF FRACTURES.

SIR,—The recent correspondence regarding the treatment of fractures demonstrates that there are differences of opinion in matters of detail.

The first principle in the treatment of any fracture is to get the fragments into as accurate apposition as possible, and to maintain that apposition until firm union has taken place. I do not believe that slight movements of the fragments will necessarily be followed by a bad result. I indeed, incline to the belief that within limits a certain amount of movement may influence the condition beneficially. That absolute fixation is not essential is proved by the fact that a fractured rib unites well. I have, moreover, recorded a case where a fractured clavicle united without the part being fixed.[2]

Coming next to massage, we have a principle the value of which cannot be assailed but certain details as to its use and application give rise to differences of opinion. I cannot believe that there are any who doubt the usefulness but I do think that in many cases it is imperfectly and improperly employed. In all the best results massage should be employed from the very beginning, and the sooner it is started the better will be the results.

Like many others I was amazed at a recent letter from Professor Wright[3] in which he appeared to condemn passive movements. In a second letter[4] he limits his condemnation to forcible passive movements, the harm of which will be admitted by most. I hold that massage, combined with gentle movements, both active and passive, affords an ideal means of treating fractures. The misunderstanding seems to have arisen from Professor Wright's unfortunate use of the phrase, "as it is employed," and his statement in this respect is too sweeping, because it implies that passive movements as generally carried out are forcible, an opinion with which I cannot concur. Nor do I believe that gentle passive movements will cause pain. Properly carried out, with the assistance of the patient and with all due regard to his feelings, such movements can be executed painlessly, and exert a calming influence on the patient.—I am, etc.,

JOHN ALLAN, M.B.

Brighton, Jan. 23rd.

[1] British Medical Journal, [illegible], vol. ii, p. 1432

[2] [illegible] Wright and Co. [illegible]

[3] [illegible]

[4] British Medical Journal, December 22nd, vol. ii, p. 1430.

PRIMARY DIPHTHERIA OF THE EXTERNAL AUDITORY CANAL.

SIR,—In reply to the request by Dr. Watson Williams and Dr. Porter for further information regarding this patient, I may state that cultures were made from the swabs submitted to the bacteriological department, and that no report was given till after an examination of the cultures. For details of the case, which is pretty fully reported, I must refer Dr. Watson Williams to my paper.

I am well aware of what Dr. Porter draws attention to—that there are bacilli which are difficult to distinguish morphologically from the true diphtheria bacillus; but I am under the impression that bacteriologists can distinguish those varieties. My position in this case is, that the patient had a purulent otitis media with a membranous formation in the external auditory canal; that swabs were taken from this membrane and cultures were made, in which was found a bacillus morphologically identical with the true diphtheria bacillus.—I am, etc.,

Glasgow, Jan. 28th. JAS. GALBRAITH CONNAL.

HOSPITAL AND DISPENSARY MANAGEMENT.

NORTH AND SOUTH WIMBLEDON COTTAGE HOSPITALS.

WE are informed that on January 23rd a meeting of the Committee and subscribers to the North Wimbledon Cottage Hospital was held at the Lecture Hall to discuss the question of amalgamation with the South Wimbledon Cottage Hospital. There was a fairly good attendance, several local medical men being amongst those present. The *pros* and *cons* of amalgamation were discussed at some length, and it was stated that the Hospital Saturday and Sunday Funds favoured the scheme. Eventually a resolution was carried appointing a sub-committee to consider and report upon (1) the feasibility of the formation of a central hospital in place of the two single hospitals; and (2) to take steps in conjunction with the Committee and subscribers of the South Wimbledon Cottage Hospital to ascertain if such a scheme would meet with sufficient public support to justify its inception.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ADMINISTRATIVE OFFICERS.

THE Army Council has decided that administrative medical officers shall in future have administrative medical charge and authority as regards their areas as is now vested in principal medical officers. Administrative medical officers and senior medical officers of the larger stations will before submission to higher authority, bring such questions to the notice of local commanders, in order that the latter may have an opportunity of expressing their opinion thereon.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY. The fourteenth meeting of the International Congress of Hygiene and Demography will be held at Berlin from September 23rd to the 29th. The congress is under the patronage of the German Empress. The arrangements for the congress are in a forward state; the subjects to be proposed for discussion in the various sections are definitely fixed, and "Reporters" to open the debates have been selected. The selection has been made with the object of securing the broadest possible treatment of the questions. All communications relative to the congress should be addressed to the General Secretary, Dr. Nietner, Eichhornstrasse 9, Berlin, W.

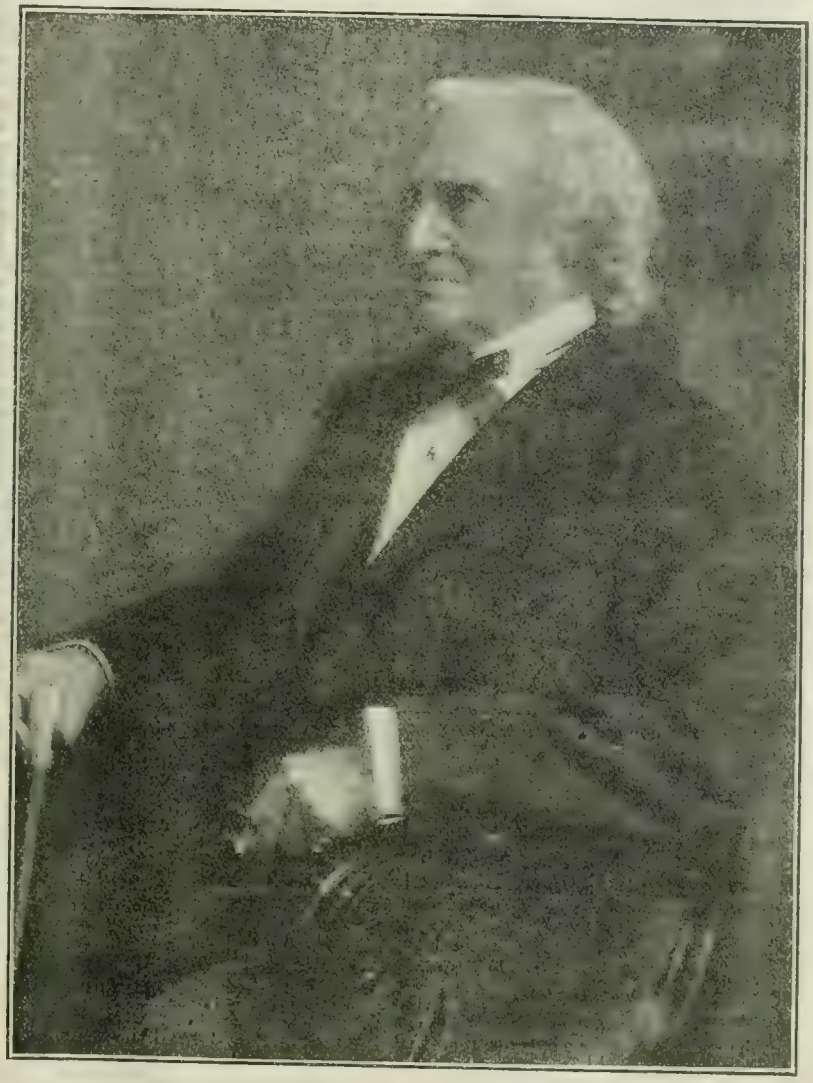
[1] Ibid, December 22nd, vol. ii, p. 1430.

OBITUARY.

ALEXANDER PEDDIE, M.D., F.R.C.P.E., F.R.S.E., etc.; EDINBURGH.

Dr. Alexander Peddie died in Edinburgh on Saturday, January 19th, in his 97th year. His last illness, pneumonia, was short and sharp; he was out driving ten days before his death, he was downstairs four days before. He came of a long-lived race; his father, mother, and several members of their family were octogenarians. His father, the Rev. James Peddie, D.D., and his brother the Rev. William Peddie, D.D., held the incumbency of the same church in succession for the long period of 110 years.

Alexander Peddie was born on June 3rd, 1810. He received his early education at the private school of Mr. Lennie, author of the well-known English grammar; then at the old High School of Edinburgh; and later at the University of Edinburgh. At the High School he had for schoolfellows John Inglis, afterwards Lord Justice-General of Scotland and Lord President of the Court of Session; James Moncrieff, afterwards Lord Moncrieff; Douglas Maclagan; William Blackwood; and James Watson, of the Scottish Provident Institution ("Provident Watson" he was called). For many years the members of the class had an annual dinner; when death reduced the number to three or four the dinner ceased. It was too sad. Peddie was the last survivor of the McKay class, as it was called. He did not at once proceed from the High School to the University. For four years, from the age of 16 to 20, he was a clerk in a banking house, but the work was uncongenial to him, and he decided to enter the medical profession. To this he was encouraged by Dr. John Abercrombie, then the most notable physician of Scotland. On Abercrombie's advice he became an apprentice to the then rising surgeon, James Syme. At that time Syme was being boycotted by a clique who wished to prevent his appointment to the staff of the Royal Infirmary. Syme, therefore, at his own venture, had established a public surgical hospital of 24 beds, and was conducting it, with a staff of 13 apprentices, in Minto House—a fine old mansion, which has now become a part of the extra-academical school of Edinburgh. In connexion with Minto House, Syme carried on a limited class for clinical instruction and a large class for systematic surgery. Alexander Peddie, and John Brown, afterwards the author of *Rab and His Friends*, were two of the apprentices.



When, in 1833, Syme was appointed to the University Chair of Clinical Surgery, with beds in the Royal Infirmary for clinical instruction, he was obliged to give up Minto House, but retained it as a private hospital of 12 beds, at moderate rates of board, mainly for the benefit of his apprentices, one of whom, Alexander Peddie, was made Superintendent. This arrangement, however, as far as Peddie was concerned, came to an end in 1834, he being prostrated by a very severe attack of typhus fever, contracted while attending in a poor district during one of the virulent epidemics then common in Edinburgh.

In the following year, 1835, Peddie obtained the Licence of the Royal College of Surgeons and the degree of M.D. of the University of Edinburgh. Having spent August and September of 1835 in a pedestrian tour in the Netherlands, the Black Forest, and Switzerland, he remained in Paris during the following winter session for the study of some special departments of medicine. In the beginning of 1837 he arranged with Professor Syme to take the Minto House private hospital off his hands during the remaining fifteen years' lease of the building. With Dr. John Brown and Dr. James Cornwall, both former apprentices of Mr. Syme, and with pupils who took the ticket of the institution, which qualified for the University and the two Royal Colleges, it was carried on for ten years—for the last five years by Dr. Peddie alone, assisted by numerous pupils—and so successfully that it had become entirely self-supporting. This was the first medical provident institution of the kind in the country, and it was not till 1864 that the principle was adopted in the case of the Chalmers Hospital in Edinburgh, and in 1878 by the Provident Dispensary in Alison Square. From all this it will be seen that Peddie played a very important part in the development of the extramural school of Edinburgh, as later he did in other departments of his chosen profession.

At an unusually early period of his career Peddie began to make contributions to medical literature. In 1832, while yet an undergraduate, he published a paper On Some Cases of Dropsy and Gangrene, which was copied in full in the *Archives Générales* in 1833. In 1838 we find a paper On Some Cases of Poisonous Fungi, and in 1847 one On Spinal Apoplexy. In 1845 he published his most remarkable and most valuable contribution to medical literature, On the Contagious Nature of Puerperal Fever, and its Intimate Connexion with Erysipelatous and Phlebitic Inflammation. This paper, showing as it did the urgent necessity for careful obstetric precautions, was greatly in advance of the times in regard to infectious (afterwards called septic) action, and was, as far as this country is concerned, the first contribution to this impor-

tant department of medical practice. It is true, of course, that Oliver Wendell Holmes had published his paper on this subject in 1843, but, as literature was not so quickly diffused in those days, Peddie certainly did not know of the existence of the earlier paper when he wrote his. None the less, then, does he deserve an honourable niche in the Temple of Fame, and to be mentioned along with Oliver Wendell Holmes and Semmelweis, whose paper was not published till 1847.

In 1848 we have his paper On the Mammary Secretion and its Pathological Changes; and in 1849 two papers On the Diseases of Infancy and Childhood, strongly urging the necessity for a hospital for sick children in Edinburgh, as well as courses for clinical instruction on the diseases of children. He lived to have the satisfaction in 1867 of being one of the originators of the Royal Edinburgh Hospital for Sick Children. On the subject of inebriety he was again a pioneer worker. In 1854 he published a paper On Delirium Tremens and its Treatment without Stimulants or Opiates, which helped to clear up the pathology of that disease, and was believed to have brought about a great diminution of the annual mortality from it in Scotland, if not throughout the country. This paper was followed in 1858 by one on the Necessity for Legalized Arrangements in the Treatment of Dipsomania, which excited much attention at the time both in his own and in the legal profession. Thus began the agitation on the question for legislation in the case of habitual drunkards. In pamphlets, before various societies and meetings, in letters to the press, and in evidence given by him before a Select Committee of the House of Commons in 1872, and later at a Departmental inquiry held in Edinburgh, Dr. Peddie was in the forefront. In 1876 and 1877 he conducted a controversy on inebriety, with Dr. Bucknill (afterwards Sir John), the great English authority on insanity.

In 1854 Dr. Peddie delivered a series of ten popular lectures in Edinburgh and in the surrounding country towns, on violation of the laws of health, illustrated by physiological diagrams of the circulation of the blood, the functions of respiration, nutrition, digestion, and of the skin. Some of the diagrams were remarkable, one in particular on the circulation of the blood by the late Sir Noël Paton. Such lectures (with such illustrations) were rare in those days, and they were largely attended.

In 1845 Dr. Peddie was elected a Fellow of the Royal College of Physicians of Edinburgh, and in 1876-9 was President of that College. In 1865 he was elected a Fellow of the Royal Society of Edinburgh.

He became a member of the Edinburgh Medico Chirurgical Society in 1840, and at the time of his death was its oldest member. He was also a Fellow of the Obstetric Society. In 1890 he was President of the Harveian Society, and on April 11th of that year he gave his oration on Dr. John Brown: His Life and Work; with Narrative Sketches of Syme in the old Minto House Hospital and Dispensary Days. This oration was extended and published in 1893 under the title of *Recollections of Dr. John Brown, Author of "Rab and His Friends," with Selections from His Correspondence.* A singular accident happened in the transmission of the MSS. to the publisher of the first edition of this book, it being entirely consumed by fire on the morning of November 2nd, 1892, in the postal bag of the train from Edinburgh to London wrecked near Thirsk Junction. Fortunately the rough draft of the work and the illustrations had been preserved, so that with wide marginal proofs and careful revision the publication was delayed for only a short time. He was one of the originators of the Edinburgh Dental Hospital and School in 1878, and presided at its first meeting. In 1878 he represented the Royal College of Physicians at the opening of the new Royal Infirmary, and also at the opening of the New Royal Maternity and Simpson Memorial Hospital in 1879. For nineteen years he was principal medical officer to the Life Association of Scotland, and for fifteen years previously he had been assistant medical officer to Dr. John Brown. When, in 1895, from illness, he was unable to continue his duties, the Board of Directors most generously recognized his thirty-five years' service. For more than a quarter of a century he was medical adviser to the United Presbyterian Mission Board giving his services gratuitously to the church of which he was a member for more than seventy years, and in the history of which he took so profound an interest. For eighty-six years he was an interested spectator in the various unions of the various sections of the Presbyterian Church which occurred during that long period. Till a comparatively recent period, every Sunday morning found him in his church pew.

During the long period of sixty-five years spent in a large general and consulting practice, Dr. Peddie had only two attacks of severe illness—one, typhus fever, in 1834, and the other in 1895, when his professional work ceased. On one occasion he narrowly escaped drowning in the Pitt Street Baths of Edinburgh, when he was rescued by his own son and Mr. (afterwards Sir William) Muir.

A man of strong build and vigorous constitution, he greatly enjoyed his yearly holiday, and ascribed much of his good health to that. He was a keen salmon fisher, plying the gentle art in the Tay, the Tweed, and the Spey.

He landed his last salmon in his 84th year. When the rivers were not favourable to fishing he took to sketching, and filled every minute of his month's holiday. He was an enthusiastic musician, and much of his spare evening time was given to that. For twenty years he was Secretary to the Amateur Vocal Club, and was a member of what was known as the "Doctors' Glee Club," composed of a membership of four: Robert Christison, John Hughes Bennett, Douglas Maclagan, and Alexander Peddie. "The Singing Doctors," as they were called in the Edinburgh life of their day, were the first to perform in public for certain special charitable objects.

In politics Dr. Peddie was essentially Liberal, having early imbibed the principles of the *Edinburgh Review*. He was far, however, from being a narrow party politician, and was always ready to see things in their ever new and changing aspects. He never yieded to mere party prejudice or gave prominence to it in social life.

In 1844 Dr. Peddie married Clara Elizabeth Sibbald, the eldest daughter of the late Dr. Thomas Anderson, surgeon, Selkirk. There were four daughters and four sons of the marriage. Their golden wedding was celebrated in 1894. His wife died in 1903. Two sons and a daughter had gone before, leaving three daughters and two sons to mourn his loss. One of the latter is a highly-appreciated practitioner in Edinburgh, and one of the three daughters was till lately a Sister in King's College Hospital, London. Another died while acting as a Sister in the same hospital.

Such, in brief outline, is the long and varied career of a remarkable man. A man who had lived so long that he could recall the illumination of Edinburgh at the time of the entry of the allied armies into Paris in 1814, after the battle of Leyden; a man who had seen Scott, Jeffrey, Cockburn, and Christopher North walking the streets of Edinburgh; a man who had seen in 1822, from a stand erected at the head of the Lawnmarket for the High School boys, the Royal procession on the occasion of the visit of George IV to Edinburgh; a man who had been the pupil of Knox, of Burke and Hare notoriety; a man who had been the personal friend of Christison, Hughes Bennett, John Brown, William Fergusson, James Begbie, Syme, Lister, and Douglas Maclagan: a man who lived during the reigns of five English Sovereigns—George III, George IV, William IV, Victoria, and Edward VII—was of necessity a most interesting personality from the merely historic point of view. But Alexander Peddie was more than that. While he was dominated by a very retiring nature he was *ultimus Romanorum*. Like his friend, Christison, he had a dignified presence and bien and the same innate refinement. In his presence one felt the intense kindness and human sympathy of the man, one felt that he moved on a higher ethical plane, one felt a better and a truer man in his presence. He was the last of his kind and of the remarkable group among whom he lived his professional life and had his being, and all of whom he outlived. Now he has joined them and Edinburgh is poorer. He rests from his many labours and his works do follow him.

He was carried to his grave on January 23rd, amid wide and sincere marks of sympathy and regret.

A medical friend writes: Dr. Peddie's intimate friends were naturally the men of an earlier generation; they have passed away; and to those who have known him in more recent years he was more of a patriarch than an intimate. A noble link connecting us with a band of men who worked and flourished in the first half of last century, men for the most part of strong and independent character, self-reliant and masterful, who worked hard, and sometimes fought hard for what they believed to be the right. In private life Dr. Peddie was a warm-hearted and kindly man, somewhat reserved and severe of aspect, but ever ready to help any of his younger brethren with wise counsel, and, if necessary, with prompt action. His valuable character was shown by his long and close friendship with Christison, Maclagan, John Brown, and James Syme, a group of the strongest and best of the medical leaders of his day. In every relation of life he was an honest, upright, clear-sighted man, with a horror of anything which savoured in the least of the untrue or the mean. By his patients he was much beloved and implicitly trusted, and he thoroughly deserved their confidence.

THOMAS SAVAGE, M.D., F.R.C.S.,

CONSULTING SURGEON, BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.

According to the accounts received by cablegram from Jamaica, Dr. Thomas Savage, of Birmingham, together with his nephew, Mr. Lewis O'Connell, and a friend, Miss Hall, have lost their lives owing to the earthquake of January 14th at Kingston. Dr. Savage and his friends sailed on December 29th in the *Port Kingston*, which carried a party of distinguished visitors. No details are known as yet regarding those who have been lost, but Dr. Savage and his companions are reported as being among those who have been killed by the earthquake or its consequences.



Dr. Thomas Savage was well known among the medical profession as a specialist in diseases of women. He was born on October 11th, 1839, at Wolverhampton, in which town his ancestors had dwelt for many generations. He was educated at Brewood Grammar School and in Paris; he went to Birmingham in 1856, and served his apprenticeship to the medical profession as an assistant to the late Mr. J. J. Hadley, who had a large practice in the Ashted district. Mr. Savage afterwards became a house pupil at the Birmingham General Hospital, and attended lectures at Sydenham College. He became a Member of the Royal College of Surgeons (England) in 1860 and a Fellow in 1869, a Doctor of Medicine at St. Andrews in 1862, and a Member of the Royal College of Physicians in 1877.

After serving two years as house-surgeon at the Eye Hospital, he commenced practice as a family doctor in Bordesley, and soon made a name for himself. At this period he was lecturer on botany at Sydenham College, and he afterwards became Professor of Comparative Anatomy at Queen's College.

When the Birmingham and Midland Hospital for Women was founded in 1871, Dr. Savage and the late Mr. Lawson Tait were among the first surgeons to be appointed. For several years afterwards most, if not all, of the operative work was done by them, and the success obtained by both marked an epoch in the history of abdominal surgery. Dr. Savage retired from the active work of the hospital in 1897 when he was made Consulting Surgeon. About the same time, while engaged in his professional duties, he contracted blood poisoning and had to have his arm amputated above the elbow. The courage and cheerfulness with which he bore this affliction was a remarkable characteristic of the later years of his life.

Dr. Savage was Consulting Surgeon to the Wolverhampton and District Hospital for Women, Consulting Gynaecologist to the Kidderminster Infirmary, and Consulting Physician to the Magdalen Home. In 1881 he delivered the Ingleby lectures at Queen's College, and in 1893 he was appointed Professor of Gynaecology at Mason College.

The honours conferred upon Dr. Savage by his medical brethren included the Presidency of the Midland Medical Society in 1881 and the Presidency of the Birmingham and Midland Branch of the British Medical Association. He also served as President of the British Gynaecological Society, and President of the Obstetric and Gynaecological Section of the British Medical Association held in Birmingham in 1890. He was the author of several valuable papers and pamphlets on medical and surgical subjects.

In spite of his devotion to an exacting profession, Dr. Savage found time to engage in philanthropic and

other public work. Until quite recently he was President of the Birmingham Medical Mission. As a Churchman he took an active interest in religious work in the parish of Knowle and in the diocese of Birmingham generally. As a collector of books and antiquities he showed taste and culture, while his geniality and broadmindedness made him popular in social circles. During recent years his principal sphere of activity was the Warwickshire County Council, and he was a very useful member of the Sanitary and Education Committees of that body. He was a county magistrate.

In 1864 Dr. Savage married Miss Gosling, of Richmond, Surrey, a sister of Dr. Gosling, who practises in the Birmingham district. Mrs. Savage survives her husband, and one son and three daughters are living. His son, Dr. Smallwood Savage, is well known as a gynaecological surgeon and a Secretary of the British Gynaecological Society.

As an operator the late Dr. Savage was remarkably clean and careful, and many years before scientific asepsis was thoroughly understood and appreciated he was carrying out a surgical technique in abdominal operations which left little to be desired. He was a kind friend, always courteous in his relations to others, and had a high conception of the obligations of professional and public life. He was extremely methodical in all his work, and though his death was unexpected, everything that demanded his attention has been left in perfect order. He was universally respected, and as a familiar figure in Birmingham society, a distinguished surgeon, and a Christian gentleman, his loss will be mourned by all who knew him.

Our Birmingham correspondent writes: In Birmingham and the Midland Counties Dr. Savage was held in great respect by all who came in contact with him; he had many friends who were attached to him on account of his charming nature and sterling qualities. He was a sound, practical surgeon whose opinion was highly valued and whose skill could be thoroughly relied upon. He was beloved by many, and his sudden death came as a great shock to his medical brethren, who realize that they have lost in him a true and valued friend.

PIERRE BUDIN, M.D.,

PROFESSOR OF CLINICAL OBSTETRICS, UNIVERSITY OF PARIS.

WITH deep regret we have to announce the death of Professor Budin, of Paris, who has played so prominent a part in the systematic efforts to reduce infant mortality now being made in France. He had gone to Marseilles to deliver a public lecture on the subject under the auspices of the administrative authorities. He became ill with symptoms of influenza; pneumonia supervened, and death occurred on January 23rd, the tenth day of the illness. A day or two previously, feeling that the end was drawing near, Professor Budin called to his bedside his faithful friend and secretary Dr. Perret, and worked with him for the last time, settling various questions connected with the campaign against infant mortality. He may be said to have died on the battlefield, fighting for the cause he had so much at heart.

Pierre Budin was born at Encuocourt-le-Sec, in the Department of Seine et Oise, in 1846. He studied in Paris, becoming *interne* in 1871. He was a favourite pupil of Tarnier, who entrusted to him the task of editing his *magnum opus* on midwifery. Budin became *agrégé* in 1880 and hospital *accoucheur* in 1882. He was elected a member of the Academy of Medicine, and the way to a university chair seemed clear before him when he was struck down by disease of the liver which threatened his life. He was saved by the operative skill of Lawson Tait. On his recovery he found that the vacancy had been filled by the appointment of Dr. Pinard. Dr. Budin was successively head of the Obstetric Department at the Charité and the Maternité, where he thoroughly reorganized the service. On Tarnier's resignation in 1898, he succeeded him in the Chair of Clinical Obstetrics.

As a teacher Budin was most conscientious and punctual in the discharge of his duties. At his institution, laboratories were attached to the obstetric clinics. He was the author of many valuable contributions to the literature of the special branch of medical science to which he devoted himself. His *Traité d'Accouchements*, written in conjunction with M. Demelin, is a textbook of acknowledged authority, and his book on the suckling is a classic. But his chief glory is the part he took in initiating the struggle against infant mortality, which has already been strikingly successful, and from which results of a far-reaching character may confidently be looked for. He was the founder of the league of which his friend M. Paul Strauss is now President. Of Pierre Budin it may be said with peculiar force that the good he did will not be buried with his bones.

SURGEON RICHARD UNIACKE CASHMAN, M.D., A.M.S. (retired), died at Bournemouth on January 10th, at the advanced age of 96. He entered the Army Medical Department as Assistant Surgeon, May 18th, 1855; became Surgeon, September 30th, 1868; and retired from the service, August 3rd, 1872. He had no war record in the Army Lists.

MEDICO-LEGAL AND MEDICO-ETHICAL.

CLIFFORD *v.* TIMMS.

THIS case, in which Mr. Justice Warrington gave judgement on January 26th, raised certain questions which are of interest to the medical profession in that the court was practically called upon to review the decision of the General Medical Council in relation to a question of professional misconduct. The plaintiff had been a dentist for many years, and was one of the directors of the American Dental Institute. Prior to 1899 Mr. Timms, the defendant, was with Mr. Clifford, and had been for a considerable period an assistant in the service of the Institute. Mr. Clifford had carried on a private practice at 20, Grosvenor Street. He became acquainted with Mr. Timms when the latter was a boy, gave him his technical education, and obtained for him a place in the Institute. In 1899 he proposed a partnership with Mr. Timms, which was agreed to. The latter was to carry on the business in his own name and Mr. Clifford was to be a sleeping partner. The articles of partnership contained the following clause:

"If either partner shall at any time during the continuance of the partnership be *guilty of professional misconduct or of any act which is calculated to bring discredit upon or injure the other partner or the partnership business*, the other partner shall be at liberty to give notice in writing of his intention to determine the partnership, and thereupon the partnership shall be dissolved and wound up under the provisions of these presents in the same manner as if the offending partner had died on the day of the date of such notice."

The important words are printed in italics. On June 28th 1906, the defendant gave to the plaintiff a notice in writing in these terms:

"Whereas you have been guilty of professional misconduct within the meaning of Clause 23 of the deed of partnership entered into between us and dated October 2nd, 1899, I hereby give you notice of my intention to determine the partnership created by the said deed."

After this notice there was some negotiation between the parties which came to nothing, and eventually a second notice to the like effect was served on August 20th, 1906. In the present action the plaintiff claimed a declaration that the notice of August 20th was invalid and the partnership still subsisted, and an injunction to restrain the defendant from acting upon the notice. The facts upon which the defendant relied in justification of his conduct were that the American Dental Institute employed unregistered assistants to attend patients, that it had issued highly objectionable pamphlets, claiming superiority over, and depreciating English practitioners, and that Mr. Clifford was a party to the publication in the *Review of Reviews* of an article referring to an interview with one of the directors of the Institute, and containing scandalous remarks with respect to English dentists and dentistry. The Institute had paid 100 guineas for the article. These matters were reported to the General Medical Council, and the Dental Committee of that body, after due deliberation, found it had been proved that Mr. Clifford had been "guilty of infamous and disgraceful conduct in a professional respect," and the Registrar of the Council was directed to erase his name from the *Dentists' Register*.[1]

In the course of the case Mr. Norton, K.C., who appeared with Mr. E. F. Buckley, for the defendant, submitted that the decision of the Council was binding on the court, and that the judge could not go behind it. The Council had been formed by the Legislature for the express purpose of inquiring into and deciding these matters.

Mr. Farrell, who appeared, with Mr. Houston and Mr. Drake, for the plaintiff, said that he would show that there had been no professional misconduct, and submitted that not only was the Council's decision not binding, but that it could not be brought forward as evidence.

Mr. Justice Warrington said he could not treat the order of a statutory body as having no effect, whether it was binding on him was another matter.

[1] See the SUPPLEMENT to the BRITISH MEDICAL JOURNAL, June 2nd, 1906, p. 270.

In the course of the case, the Registrar of the General edical Council was called by the defendant on a subpoena *ces tecum* to produce certain documents which had been fore the Council when the plaintiff's case was considered by em.

Mr. Lushington, who held a watching brief for the Council, jected to their being produced. He said that if all documents a confidential nature which were brought before the Council disciplinary cases were liable to be brought before the rt in cases of this kind it would be impossible for the uncil to conduct its inquiries.

Mr. Justice Warrington said he would see the document and cide whether it should be produced or not. He would lay wn no general principle.

Eventually one document was produced and admitted in dence.

n giving his considered judgement, Mr. Justice Warrington nted out that the main foundation on which the defendant ted his claim to be entitled to give the notices, was the fact t the General Medical Council, acting under the powers ferred upon it by the Dentists Act of 1878, had made an er directing that the plaintiff's name should be expunged m the *Register*. It was the Council which had to find that person in question had been guilty of the conduct referred n the act; the Committee on whose report the Council was ct only ascertaining the fact on which the Council was to ercise its judgement. The order and report had been tendered evidence. His lordship then continued: I admitted the er on a ground which, on consideration, and having regard to t I now hold to be the real issue to be tried, I do not think icient. The report of the Committee was by arrangement n *de bene esse;* and the question as to the admissibility oth these documents is still open. That question is to be ded by considering the issue which I have to try. The e is not whether the plaintiff's name was removed from the *ister;* if it were, the order would in my view be admissible judgement *in rem*. Nor is the issue whether the plaintiff guilty of conduct which was "infamous or disgraceful in ofessional respect." It seems to me that the question with h I have to deal is not only in form, but in substance, a rent one. Without attempting to give an exclusive defini- of "professional misconduct," I think it is clear that it a more restricted meaning than the statutory expres- which latter may include and would, on the evidence he President of the Council, be held by the Council nclude certain breaches of professional etiquette h cannot in my judgement be properly described ofessional misconduct. "Misconduct in the exercise of profession" would, in my judgement, fairly express the ning of "professional misconduct," whereas the statutory e would include that misconduct and also misconduct as mber of the profession, which would be a different thing. am right in this view, neither of these documents are erly admissible, and the arguments founded on Allinson e General Medical Council (1894), 1 Q B., p. 750, and ey *v.* Rex (1901), A.C., 601, need not further be considered. uld add that, even if the issue had been whether the tiff was guilty of the conduct mentioned in the statute, order would not have been admissible in proof of that it being *res inter alios acta*. Can I, then, on the erly-proved or admitted facts come to the conclusion that plaintiff has been guilty of professional misconduct as d? The only act of his own was his becoming a share- r in, and a director of, the company. It is not contended that amounts to misconduct. But what else is there? mployment of unregistered assistants is not, so far as I e, contrary to any rule of professional conduct. I have all the advertising pamphlets, and can see nothing in except a puffing of American methods in comparison hose of other practitioners. Advertising is admittedly d in the dental profession, and I fail to see any pro- nal misconduct in the publication of these pamphlets. also contended that the plaintiff was guilty of an act ated to bring discredit upon or to injure the defendant partnership business. The order of May 24th would not arily bring discredit upon the defendant, nor injure him business, but, if it did I hold that the defendant has not proper evidence proved that plaintiff was guilty of any culated to have that effect. I therefore make a declara- hat the notice was invalid, and that the plaintiff is d to remain a partner.

AN EMERGENCY CALL.

Sunderland County Court on January 23rd Dr. ngham sued Messrs. T. W. Greenwell, ship repairers, for nea for professional attendance on one of their work- According to a report in the *Newcastle Evening cle*, the foreman of the firm called in Dr. Cunningham d to a man in a fit, telling him to send in the account defendants. The plaintiff was asked by Judge O'Connor as the nature of his attendance. His reply was that sisted to put the man on a stretcher, and superintended noval in a cab." His Honour is reported to have said: is not professional medical attendance; nurses and en could put people on stretchers." He found for the nts, holding that no contract had been proved between intiff and the defendants. As to the decision, it is to be feared, it cannot be challenged with any chance of success. A foreman has not necessarily the power to fix his employers with liability, but the remarks of the judge cannot be passed by without comment. A registered medical practitioner is called to a man in a fit, and superintends his removal to a hospital. He is told that he has done no more than a nurse or a policeman. Such an attack on his professional conduct was as unwarranted as it was unnecessary. The judicial decision was that no contract had been proved, and if the judgement was correct whatever services had been rendered would be immaterial. Dr. Cunningham deserves the sympathies of his professional brethren, and it is a matter for congratulation that such judicial utterances are rare in this country. A correspondent writing on this subject points out the danger brought on the community by such unjust treatment of the medical practitioner. "No wonder," he writes, "medical men decline to attend casual cases without some guarantee as to payment." It is of vital importance to the public that medical aid shall be promptly forthcoming in emergencies. This can never be the case if it is generally understood that "emergency calls" are purely philanthropic.

ADVERTISING BY A CLUB.

Not a Club Doctor writes that for some time the walls of a Congregational church have been placarded with bills announcing the formation of a sick club in connexion with that church. The bills are headed, "No More Doctors' Bills," and, amongst various inducements, it is stated that there are three doctors connected with the club. Our correspondent asks whether such advertising is permitted by the General Medical Council.

*** In our opinion any medical practitioner associating himself with a club so advertising exposes himself to the risk of condemnation under the resolution passed by the General Medical Council on June 6th, 1899, which was as follows: "That the Council strongly disapproves of medical practitioners associating themselves with medical aid associations which systematically practise canvassing and advertising for the purpose of procuring patients."

FEES FROM HOSPITAL PATIENTS.

M.A.—A nurse, as such, has no *right* to gratis medical attendance, but it is quite usual to make no charge when any professional relations exist; a nurse on the staff of a hospital would not, we think, under any circumstances, be charged a fee by a member of the medical staff of the hospital. In the somewhat peculiar circumstances mentioned by our correspondent, where a nurse undergoing training in a hospital comes to her home in another part of the country, and seeks admission to the local hospital as a paying patient, our correspondent is free, if he chooses, to treat her on the same footing as any other paying patient in the hospital.

INTERFERENCE WITH OTHER MEN'S PATIENTS.

D. H. writes: A. is the medical officer of a workhouse in a country town, and certifies an inmate to be capable of performing his task of stonebreaking; the man refused to work and was taken before the magistrates, who asked for an independent opinion, and B. was sent to see him. B. went to the workhouse and examined the man without communicating in any way with the workhouse medical officer. We are asked to say whether B. was guilty of any breach of professional etiquette.

*** B. probably considered that the magistrates' order was a sufficient warrant: the magistrates may have objected to anything in the form of a consultation thinking that in that way they would get a perfectly independent opinion. Old prejudices cannot be at once uprooted, but as the solidarity of the profession increases, the public and magistrates, and magistrate's clerks, will learn that the best way to get a trustworthy opinion is to follow the established rule of the profession and to direct a consultation in doubtful cases.

EX-*LOCUM TENENS* AND POLICE-COURT FEE.

A correspondent writes that a *locum tenens*, while attending to his practice, was called in by the police to examine a drunken man on licensed premises. A fortnight after leaving his service the *locum tenens* was called in by the police to give evidence against the licensee. He wishes to know whether the *locum tenens* can properly retain the fee, or is it legally due to him.

*** The *locum tenens* is entitled to the fee. The principal could only claim such a fee if the evidence had been given while the *locum tenens* was in his service.

The late Mrs. Ann Birch, of Reading, who died on November 22nd, 1906, left £500 for distribution among such hospital or hospitals for diseases connected with the eye as the executors shall select.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Associate, London.*

TELEPHONE (National):—
EDITOR: 2631, Gerrard.
GENERAL SECRETARY AND MANAGER, 2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

E. C. desires to hear of an institution for the treatment of inebriety in South Africa.

X. M., who resides in a hilly district with a round of about twenty miles a day, wishes to know if it is possible to get a thoroughly reliable 6-h.p. car? He finds that when he asks makers about such a car he is invariably advised to get a 8-h.p. car, the difference in cost being over £100. He asks for experience of a 6-h.p. Rover motor and a 7-h.p. Capelle.

THREAD WORMS.

SOUTH-WEST asks for advice in the treatment of a lady who has been the subject of thread worms for two years. Treatment with santonine and prolonged use of salt-water enemata has failed, also a course of Blaud's pill.

ANSWERS.

INCOME TAX.

M. is liable to be assessed on the average annual profits of his practice during the last three years, and the fact that he had a partner for one of the three years referred to does not entitle him to claim that the average shall be disregarded, unless he is able to prove to the satisfaction of the Commissioners that the profits "have fallen short from some specific cause" since the dissolution of partnership took place or by reason thereof. The outlay on enlarging and improving the surgeries is expenditure of a capital nature, and is therefore inadmissible as a deduction from profits for income tax purposes.

CONDITIONS OF ADMISSION TO FRENCH HOSPITALS.

D. S.—The conditions under which patients are admitted to the public hospitals in Paris may be briefly stated as follows: Paris is divided into a number of hospital districts; persons desiring hospital treatment go to the hospital of the district in which they live, with the exception that they may go to special hospitals for special diseases—for example, St. Louis for the skin, Salpêtrière for nervous diseases, etc. They go first to the out-patient department, where their names and addresses are taken, and if they live in the hospital district they are allowed to pass on to be examined by the doctor, and if he judges necessary they are admitted to the wards. A visitor from the hospital then goes to the address each patient has given, and makes inquiries as to rent, method of living, means of existence, etc., and if it is found that the patient is capable of paying 5 francs a day, he is then moved to one of the paying rooms, and the Assistance Publique recovers the money from the patient at the end of the illness. The charge of 5 francs per day is the maximum asked, and in lodges any medical or surgical treatment, dressings, etc. Any person brought into hospital as result of accident, whatever be his social position, or hospital district, or nationality is immediately admitted, and no questions are asked.

LETTERS, NOTES, ETC.

AN APPEAL.

THE Church Army makes a strong appeal for help in the following case and says: The widow of a physician (M.R.C.P. and M.R.C.S.), formerly in excellent practice in the West End of London, finds herself in her old age reduced to less than bare necessaries. All she has to depend upon is an annuity of £20 a year from a medical charity (which is insufficient to pay her rent) and 5s. a week given by her children, which is all they can possibly afford. The husband was compelled to relinquish his practice in consequence of a long and painful illness, unfortunate speculations completed his ruin, and he was unable to provide for his widow and family. The poor old lady, who is 81 years of age, is crippled with rheumatism in both knees and is only able to crawl about a very little. Her sight is very bad, and she is entirely unfit to do any sort of work. It is desired to raise a small fund out of which an allowance can be made to supplement her income. Communications should be addressed to Mr. Colin F. Campbell, Honorary Social Secretary of the Church Army, 55, Bryanston Street, W., who will gladly answer all inquiries.

HOMŒOPATHIC TREATMENT OF HEART AFFECTIONS.

A DISTINGUISHED physician sends us the following story. A doctor told some homœopathic friend that he occasionally adopted the system when the ordinary means failed. He had a young lady patient who was growing pale, nervous, and had palpitation of the heart. He had also a young man in much the same condition. He failed to cure them by ordinary means, when he discovered they were in love with one another, so he thought he would have recourse to "*similia similibus*" and apply one palpitating heart to the other palpitating heart. This he could do only by recommending immediate marriage to the parents. This took place with wonderful success; the cure was prompt, complete, and lasting—a complete triumph for homœopathy.

A MEDICAL INDEMNITY ASSURANCE COMPANY.

THE Medical Indemnity Assurance Corporation, Limited, is a company formed in Manchester with a nominal share capital of £50,000. The prospectus states that the directors are five in number, and that among them are Dr. J. C. Baxter and Dr. W. J. Robertson Dunn, both of Liverpool. The prospectus also states that the "company is formed primarily for the purpose of conducting a novel system of business—namely, the assurance of the public against excess medical bills"; and it goes on to state that, although the average middle-class man may be quite prepared without serious inconvenience to meet the costs incidental to ordinary ailments, he may be seriously affected when either he or members of his family suffer from protracted and expensive illness. The objects are more fully stated in the following paragraph of the Memorandum of Association:

"To guarantee indemnify and insure and to work and develop any scheme for guaranteeing indemnifying or insuring any person or persons either absolutely or subject to any qualifications or conditions against any costs expenses or liability whatsoever incurred by reason of the employment by or on behalf of such person or persons if any physician surgeon doctor or professor of medicine or by reason of the purpose or procuring by or on behalf of any such person or persons of medicine drugs medical appliances or apparatus."

The promoters are, so far as we are aware, correct in stating that the scheme is novel, but there seems to be no radical objection to it on medical grounds. We express no opinion on its actuarial aspects, nor on the financial arrangements mentioned in the prospectus.

A REMEDY FOR HOSPITAL ABUSE.

DR. ALEXANDER DUKE (London, W.) writes: So many remedies have been suggested for the cure of hospital abuse that it is satisfactory to see one of the staff of a London hospital making a sensible proposal, but one, I venture to say, not easily carried out. Dr. Inglis Parsons states: "The certificate (necessary to procure free advice) should be signed by a local practitioner or a local minister of religion, and the certificate could be so worded that it would necessitate adequate investigation." Query, Who is to make the adequate investigation? Why not the one who draws up the certificate and signs it? It is to be hoped Dr. Inglis Parsons has acted, or will act, on his own advice and propulsion, and persuade his colleagues at Chelsea Hospital to do the same. "Example teaches better than precept," and should Dr. Inglis Parsons refuse to see out patients without a certificate, perhaps the staff of other hospitals will do likewise, there being no doubt whatever that it is the hospital staffs who have, in the first instance, permitted and subsequently perpetuated the abuse.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

Eight lines and under	...	...	...	£0 4 0
Each additional line	...	...	...	0 0 6
A whole column	...	...	...	2 13 4
A page	...	...	...	8 0 0

An average line contains six words.

Advertisements should be delivered, addressed to the Manager, at the Office not later than first post on Wednesday morning preceding publication; and if not paid for at the time, should be accompanied by a reference.

Post Office Orders should be made payable to the British Medical Association at the General Post Office, London. Small amounts may be paid in postage stamps.

N.B.—It is against the rules of the Post Office to receive letters for *Postes Restantes* addressed either in initials or numbers.]

THE TORONTO HOSPITAL
FOR
ADVANCED AND FAR-ADVANCED CASES OF CONSUMPTION.

By SIR W. H. BROADBENT, M.D., F.R.S.,
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A small hospital to which I was taken by the Treasurer, Mr. Herbert Hammond, in the course of the meeting at Toronto, is worthy of special notice. It is the Hospital for Advanced and Far-advanced Cases of Consumption.

I do not know what the death-rate from phthisis is in Canada generally, or in the individual States, but it is sufficiently large to have called for an Association for the Prevention of Consumption, which is doing active work, chiefly of an educational character, but also in promoting the erection of sanatoriums.

Tuberculosis in its various forms is often spoken of as a disease of poverty. There is no doubt some relation between poverty and consumption in Canada—poverty relative to the great expense of house accommodation, to the high price of clothing and other necessaries, particularly, perhaps, of coal as a defence against the long, cold winter, even of food which is produced so abundantly. Absolute poverty is almost unknown, except as the result of alcoholism and vice, and there seems to be ample provision against the impoverishing effects of sickness and misfortune. Destitution cannot, therefore, be the main cause of consumption in Canada, or hold the same prominence in its causation as in England and Europe generally.

A factor of very great importance is the method of heating dwelling-houses, which seems to be almost universally employed, at any rate in the towns. The abundance of wood would lead one to look for the large open fireplaces seen in old English houses; coal, too, is found in enormous quantity, but no doubt the distances, the want of means of communication, and the cost of labour make fuel expensive. The defence against cold, therefore, is to shut up houses and keep out the cold air, and to maintain a rather high temperature by means of radiators. Ventilation is reduced to a minimum; there is no compulsory influx of air by doors and windows to replace that which goes up the chimney of an open fireplace—no automatic renewal of air, which is thus rebreathed over and over again, charged with moisture and impurities from the lungs and skin, so that the dwellings are, if not actually culture media for the tubercle bacillus, perfectly adapted to protect it from adverse influences and promote its virulence. Corridors and passages are common, even in the best hotels, into which daylight never penetrates, and in which electric lights are necessary day and night.

Of course, conditions like these, which favour the dissemination of the tubercle bacilli, ought to be banished, but to revolutionize the domestic architecture and arrangements, as would be necessary, appears to be impracticable. There is about as much chance of this in Canada as of the extinction of poverty and the proper housing of the poor in this country.

This consideration gives to measures for preventing the dissemination of the tubercle bacilli primary and predominant importance, and it is the special merit of this little hospital that its purpose is to meet this requirement.

In dealing with consumption there are two distinct objects to be kept in view—the relief and cure of those already affected and the protection of the community generally from the disease.

In order that any sufficient degree of success may attend the first of these objects, the cases must be taken in hand at an early stage. It is on their behalf that sanatoriums have been erected for the open-air treatment, and it has almost come to be thought that these sanatoriums are the chief means to be relied upon for the suppression of consumption. They are, indeed, of very great importance in the combat against tuberculosis, since every case arrested ceases to be a focus of contagion, but the realization of the value and efficiency of the open-air treatment was an accidental coincidence with the discovery of the tubercle bacillus and the general recognition of the part it plays in the spread of the disease.



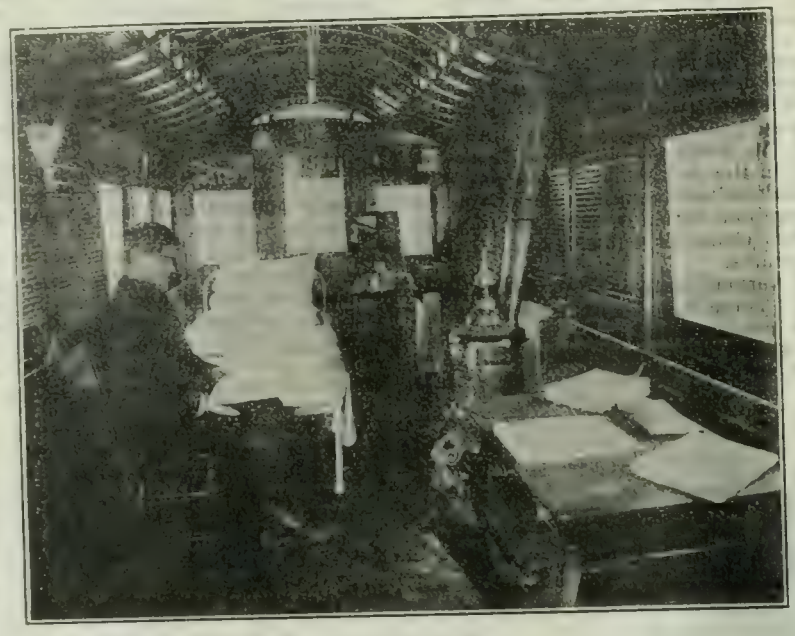
View of main buildings, pavilion, and street-car shacks.

It is in advanced and far-advanced cases that the tuberculous microbes are produced in dangerous amount; the copious expectoration teems with them. For the purpose of prevention the most important measure is the destruction of the sputum. Could this be effected completely the disease would be intercepted at its source, and in proportion as the expectoration is destroyed its spread is hindered and the community is protected from its ravages. If the expectoration is to be at all dealt with, the sufferers must be under efficient supervision and control. In some instances such control might be exercised at home, but in an enormous majority of the cases removal from unfavourable surroundings and segregation in special hospitals will be imperative.

Of the two objects, the treatment of early cases and the isolation of advanced cases, by far the most important in the interests of the public is the latter. The provision for these two objects again falls on different shoulders. Sanatoriums for the treatment of presumably curable cases are a legitimate object for charitable effort. Hospitals for isolation purposes ought to be provided by the health authorities. It is as much the duty of the bodies

charged with the responsibility of guarding the public health to prevent the dissemination of tubercle bacilli in the air as to prevent the contamination of drinking water by typhoid bacilli.

The hospital for advanced and far-advanced consumption in Toronto is the first which, so far as I am aware, has been erected purely and simply with a view to prevention.* I do not know who is to be credited with the idea, whether lay or medical, but I regard it as a fine instance of Canadian common sense and foresight. Its realization is due to Mr. Gage, Chairman of the Board of Management. It is all the more noteworthy as an example from the fact that the duty of municipal and State support has been insisted on. Out of the 8 dollars a week which each patient costs 6 are provided by the State and municipality.



Life in a street car

A few words now about the hospital itself. It is about seven miles out of Toronto, stands in about forty acres of ground, and is pleasantly situated near the edge of a small ravine. A pre-existing house has been converted into an administrative block and residence for the staff. Small wards have been added, and the accommodation thus furnished is supplemented by a number of old tramway cars grouped around the building, each of which makes a comfortable room with a bed and a few simple articles of furniture. In one corner is a small stove for winter weather. The number of beds is 66, and, thanks to the simplicity of the arrangements, the total cost up to the present does not greatly exceed 40,000 dollars, very little over £160 a bed the purchase of the land included. It is contemplated to build small wards for paying patients far advanced in consumption. The hospital is conducted on open air principles, and is bright and cheerful. Three women sleep on a balcony all through last winter. A detail of some interest and importance is that the beds are not close up to the walls. If dust accumulates anywhere in a hospital ward or ordinary bedroom it is under the head of the bed, and a clear space here easily accessible to the moist



Interior of tent cottage.

duster is an excellent idea. The spittoons are small, square, flat tin boxes with a handle, within which is a close-fitting box of stiff moisture-proof paper. They are all numbered, the paper and tin corresponding. The inner paper box is removed at regular intervals, and a note is taken of the amount and character of the contents, perhaps a specimen of the sputum withdrawn for examination, after which the paper box and its contents are burnt. The examination of the expectoration is facilitated and there is no need for an elaborate apparatus for disinfecting the spittoons. The handkerchiefs are made of a soft thin cotton fabric called, I think, butter cloth, and are cut off from the piece in the institution. They cost less than the washing of an ordinary handkerchief, and are burnt. The administration and organization are evidently most efficient.

Spray and pulverized liquids and powders for the various parts of the air passages are administered by means of compressed air, operated, as the Transatlantic term is, by a minute electric motor situated in the corner of the room. The force of the current of air can be regulated, and the spray can be given to several patients at once under the supervision of the resident medical officer, which is a great advantage; they sit in a row on a form, each holding his own particular phial of inhalant into which the compressed air is conveyed.

Another interesting detail in the examination and operation room is that a disc of glass is suspended between the physician and patient during throat examinations. It prevents the disagreeable and dangerous projection of particles of expectoration into the examiner's face, which often gives rise to a suspension of the examination or operation, and does not interfere with manipulations or with a good view of the mirror.

The value of a hospital like this is not measured by statistical results, but surprising improvement often takes place in the worst cases, and many patients have so far recovered as to be fit to return to their homes without danger to their families.

Workhouse infirmaries have to a certain extent taken the place of such hospitals, and exercise their function of segregating and isolating advanced cases but in a

* I.e., I say, these words refer to the Royal Victoria Hospital, Edinburgh, which, under the inspiration of Dr. Philip, a pioneer in the campaign against tuberculosis, was the first set apart for advanced cases.

casual manner only. The protection of the public would be far more efficient were the purpose of this isolation fully recognized.

A Clinical Lecture

ON

A RETROSPECT OF A THOUSAND CONSECUTIVE CASES OF ABDOMINAL SURGERY.

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In the haste of modern life there is a danger of finding little time to read and less to think; yet it behoves us to review periodically our methods, or we may fall behind the progress of the age and deceive ourselves with a false sense of efficiency.

Although abdominal surgery covers a wide field, there is little room for "specialism," for the surgeon who opens an abdomen should be prepared to treat whatever condition he may find present; and you may gather some idea of the nature and frequency of the various conditions more commonly met with when you know that my series of cases includes 101 operations on the ovaries and tubes, 75 on the uterus and broad ligaments, 127 operations for hernia, 229 for appendicitis, 49 operations for diseases of the liver, gall bladder, and bile ducts, 65 operations on the kidney, 126 operations for diseases of the stomach and intestines (excluding hernia and appendicitis), 29 operations on the urinary bladder and prostate, and 24 operations for tuberculous peritonitis and peritoneal adhesions.

We can analyse these figures when speaking of some of these operations later, but there are certain general considerations which must first be discussed, though it should be borne in mind that I am dealing solely with such methods as I have thought it best to adopt, and I do not propose to give you an account of the many ways and means that others may prefer.

It must be remembered that the chief source of infection of wounds is the skin of the operator and his assistants on the one hand and that of the patient on the other; and as all methods of disinfection are easily likely to fail, it is desirable that great attention should be given to this point. The hands should be scrubbed with a sterile nail-brush for five minutes in frequent changes of hot water and soap, and afterwards immersed for at least two minutes in a 1 in 500 solution of biniodide of mercury, with 70 per cent. alcohol, as recommended by Lockwood. This solution can be allowed to dry on the hands, or a dry sterile cloth can be used, and rubber gloves (previously sterilized) are then put on. It is true that rubber gloves diminish tactile sense, but the feeling of security and the additional safeguard against sepsis which they furnish more than counterbalance the slight inconvenience entailed by their use. The skin of the patient is often prepared some hours before operation. After being shaved, it is treated with turpentine, ether, and soap and water, and then covered with a weak antiseptic dressing; but, just before operation, it should be covered with a cloth wet with the alcoholic biniodide solution already referred to. As soon as the incision in the skin is made, a further protection against the possibility of infection from the skin of the patient is afforded by clipping the edge of a large sheet (which covers the patient except for a hole opposite the operation area) to the sides of the wound.

Consistently with freedom of manipulation, all abdominal incisions should be as short as possible—in appendicitis it is rarely necessary for it to extend much above 2 in. in length. In operating on the lateral parts of the abdomen, where the incision goes through a muscular area, the method of McBurney, in which the muscular fibres are separated bluntly and not divided, should always be adopted if possible. If this form of incision is used in cases of appendicitis, ventral hernia can scarcely follow, provided that no suppuration occurs. In operating in the middle line the tissues are best divided by raising them on two pairs of forceps, and cutting between them. The interval between the two recti is sought—one or other sheath being opened—and the peritoneum then incised between two forceps, as already mentioned. McBurney's incision is closed in layers; but incisions in the mid-line are closed by stitches of silkworm gut, taking in all the tissues on either side, and supplemented by a few superficial intervening stitches for the more complete approximation of the skin. I do not believe it to be necessary to adopt any of the more recent complicated incisions for opening the abdomen in or near the mid-line, nor do I think it necessary, as a rule, to suture such wounds in layers. The prevention of ventral hernia following abdominal incisions is best secured by keeping the incision as short as possible, avoiding undue tension on the stitches, and by the attainment of union by "first intention." If these conditions obtain, it matters little what form of incision or suturing is adopted; and in support of the efficiency of the simple methods suggested it may be noted that in the period covered by this series of cases there were only seven operations for ventral herniae of all kinds, including those that followed suppurative appendicitis and other conditions which are known to favour the occurrence of hernia.

Marine sponges have been discarded in favour of swabs of dry sterile gauze, but no swab is placed in the abdominal cavity unless it has a long tape attached to it in order that it may be easily found and removed.

Boiled silk or cellulose thread is used inside the peritoneal cavity, the former for the suture of intestine, the latter for ligatures of vessels, etc. The finest cellulose thread is not fine enough for intestinal work, though it bears boiling better and is less bulky than silk for other purposes. Catgut, though theoretically better, is less reliable.

Irrigation of the abdomen has been practically abandoned except in some cases of ruptured intestine, perforated gastric ulcer, or other condition leading to extensive fouling of the peritoneum. When resorted to, the incisions should be free, so that the process may be thoroughly carried out in all parts of the abdominal cavity; and, if necessary for this purpose, the intestines should be turned out into warm cloths. Unless done with assiduous care, irrigation may be productive of more harm than good, and I well remember cases of suppurative appendicitis that were lost when "flushing the abdomen" was in vogue, that might have been saved by the adoption of the present treatment of dry sponging.

In non-suppurative cases, just before the last stitch is tied at the end of the operation, I frequently put two or three pints of hot normal saline solution into the abdomen, and leave it there to be absorbed. It certainly prevents much of the thirst from which most cases of abdominal operation suffer, and I am inclined to think it diminishes pain.

Superficial (skin) stitches are removed at the end of a week, but deep stitches are left for a fortnight or longer. In all cases where the incision has been more than 2 in. in length, the patient is advised to wear an abdominal belt and pad for six months to a year.

The discussion of the diagnosis of abdominal diseases is too extensive for my present purpose; but before dealing with the different groups of operations I should like to remind you that many acute abdominal conditions commence in much the same way, and thus may lead to some difficulty in diagnosis at the beginning of the mischief. Thus, vomiting in association with pain and collapse is found in almost every case of acute abdominal crisis, whatever the cause of the attack may be—appendicitis, perforated gastric ulcer, a twisted ovarian pedicle, and numerous other conditions, are all characterized in the early stage by this triad of symptoms, for which Treves suggested the term "peritonism." Under such circumstances, however, we have not to wait long, as a rule, before the localization of pain and tenderness lead to a sufficient diagnosis of the case for the purposes of treatment. If the vomiting is produced by one of the many forms of intestinal obstruction, the retracted and rigid abdomen of the commencement of the attack is soon replaced by a gradually increasing abdominal distension; and the same is true of many cases of perforative peritonitis. It is not desirable to wait for this abdominal distension in cases where the diagnosis is clear; and I have always found it to be a safe surgical practice to open the abdomen without delay in cases of doubtful diagnosis where the vomiting is associated with a gradually

increasing tympanites. All rules, however, have their exceptions, and notably in the case of obstruction due to intussusception meteorism is generally absent; but the diagnosis of many of these cases is made sufficiently evident by the existence of a tumour, which hardens under the hand, in association with attacks of pain and the passage of bloody mucus.

OPERATIONS ON THE OVARIES AND FALLOPIAN TUBES.

To turn to the various operations, we take first those on the ovaries and Fallopian tubes. Of these there were 101, namely, 56 cases of ovarian adenocystoma and parovarian cyst, and 45 cases of solid ovarian tumour and disease of the Fallopian tubes requiring salpingo-oöphorectomy. In 6 cases the ovarian adenocystoma was double, once the cyst was ruptured, as the result of a fall, in the case of a young lady in whom no previous disease was suspected, two of the tumours were of the nature of "dermoids" and one of these "dermoids" was associated with an ovarian adenocystoma of the same (left) side. This case was only 15 years of age, and it is remarkable that I had previously removed an ovarian adenocystoma from the sister of this patient at 20 years of age. One case of adenocystoma was associated with a milky fluid in each breast, though there were no other signs of pregnancy, and another produced so much intra-abdominal pressure that the uterus was extruded.[1]

Attacks of pain and vomiting, especially if accompanied by collapse, in association with ovarian cysts are frequently dependent upon twisting of the pedicle. Such symptoms are of serious import, for unless relief is speedily afforded by operation death from peritonitis may follow. In fact, the occurrence of peritonitis in connexion with an ovarian adenocystoma should always be regarded as dangerous, and operative interference should be instituted without delay.

Four of the cases proved to be adenocarcinomata of the ovary, and one was a papilloma which infiltrated the deeper tissues. It is advisable to submit all cases to microscopical examination, for, as Kelly says, it is desirable to regard all ovarian tumours as malignant until removed and proved otherwise. Rapid growth and the presence of a blood-stained peritoneal fluid are always suggestive of malignancy.

Solid tumours (fibromata) of the ovary are usually characterized by free mobility. They often cause an amount of pain which is quite disproportionate to the size of the tumour, and may be associated with some peritoneal effusion, both probably due to the twisting of the pedicle.

On the subject of ovariotomy I merely wish to remind you that it is desirable to put a second ligature on the stump after the tumour has been removed. Though some operators do not consider it necessary, I invariably put a double ligature on all structures in the abdomen and pelvis that have been ligatured before being cut away, the second ligature being applied after the division of the tissues.

The cases treated by salpingo-oöphorectomy include chronic inflammatory conditions of the Fallopian tube and ovary, abscess of tube and ovary, or both, and tuberculous disease. The operation was frequently bilateral, and sometimes associated with appendicectomy.

The performance of salpingo-oöphorectomy in cases of chronic tubal and ovarian inflammation, pyosalpinx and other allied conditions is often one of great difficulty from the complexity of adhesions; and there are few abdominal operations requiring greater judgement in deciding on the need for operation, and in dealing with the difficulties of its performance than those associated with tubo-ovarian inflammation. Many cases of pus formation in tubes and ovaries are due to gonorrhœal infection, or to a streptococcal infection after parturition or abortion; but the bacterial effect of appendicitis upon the female generative organs is perhaps not so fully recognized as its importance deserves. From the appendix the *Bacillus coli communis* may easily travel to the ovary and tube and produce abscesses or chronic inflammatory mischief in these structures, or give rise to inflammatory cysts in the broad ligament. In some acute cases of tubal and ovarian disease the abscess may burst into the vagina, rectum or bladder and the patient may spontaneously recover. In other cases it may burst into the general peritoneal cavity, and is then best treated by abdomino-vaginal drainage, which has a large field of application in "pelvic abscess" in the female, whether the abscess is a result of a burst tubo-ovarian abscess, appendicitis, or other cause; and in cases where an abdominal section discloses the existence of an extensive abscess deeply burrowing among the pelvic viscera, I cannot speak too highly of its value. Whether abdomino-vaginal drainage is adopted or not, the body of the patient should be raised in all cases associated with a widespread septic peritonitis, for by this means there is a tendency for the inflammation to be confined to the pelvis, where its effects are less serious than when the upper part of the peritoneal cavity is affected. I do not wish you to suppose that every case of abscess of the tube and ovary is treated by abdominal section and enucleation. Some are better treated by vaginal incision, but of these I am not now speaking, nor do I wish you to suppose that every case of chronic inflammation of ovary and tube requires the operation of salpingo-oöphorectomy. We must in the more chronic cases be guided by the severity and frequency of the attacks of pelvic inflammation which the condition causes; for though it is not desirable to perform salpingo-oöphorectomy in all cases of chronic inflammation of the tubes, we must remember that, as in appendicitis, the attacks tend to recur as long as the focus of mischief remains in the abdomen.

OPERATIONS ON THE UTERUS AND BROAD LIGAMENTS.

Of the 75 operations on the uterus and broad ligaments, there were 33 hystero-myomectomies and 14 myomectomies for uterine myofibroma, 10 hysterectomies for carcinoma of the uterus, 7 cases of hysteropexy, 3 of ruptured tubal pregnancy, and 7 cases of cystic, and 1 of solid, tumour of the broad ligaments.

Although Noble has shown that about 16 per cent. of women having fibroid tumours would die if not operated on because of the degenerations and complications arising in the tumour or in the uterus, I do not advise the removal of all myo-fibromatous tumours of the uterus, as I think more lives will be saved by a judicious selection of cases for operation.

Before considering the indications for operation it is desirable to point out that a great deal of misunderstanding exists as regards the influence of the menopause on myofibromata; women are so often led to suppose that when once the "change of life" occurs all their troubles will cease, and much valuable time is thus often lost by relying upon a false hope. Not only is the menopause often delayed for some eight or ten years at least, but in many cases the tumour grows more rapidly at the time when it is usually supposed that a diminution in size may be expected.

The mere size of the tumour may, under certain circumstances, afford a sufficient indication for operative interference. A comfortable existence is scarcely possible in many of these cases, and though in the more wealthy classes a life of chronic invalidism may be preferred, in others, where a necessary wage-earning capacity is seriously interfered with, an operation is desirable. Haemorrhage is one of the commonest symptoms of myofibromata, and is also one of the most important indications for operation, on account of the insidious way in which the patient's health and strength are gradually undermined by its repetition. If the haemorrhage is not amenable to curettage, or other simple means, operation should be advised when the patient ceases to regain in the intervals the loss of strength incidental to the excessive flow at the periods. Delay means further prostration, and jeopardizes the successful result of the removal of the tumour. The development of pain in a case which has hitherto caused no trouble, or any marked increase of pain generally indicates the necessity of a radical operation, and a rapid enlargement of the tumour, especially if associated with pain, may almost certainly be regarded as demanding operative treatment, for such symptoms are usually indicative of serious degenerative changes in the tumour itself. Further indications for operation are afforded by pressure effects of the tumour on the bladder, rectum, sacral nerves, and other structures, some of the worst symptoms being produced by the smaller tumours incarcerated in the pelvis, and prevented from expansion upwards by the sacral promontory.

Myomectomy is the operation of choice in young women, provided that the general condition is fairly

factory, that the tumour does not extend much above umbilicus, and that there are no important complications, such as severe inflammatory disease of the tubes ovaries or advanced anaemia. Within proper limits operation of shelling out the tumour should always be ted, as by this means the functional activity of the us is unimpaired. In cases where myomectomy is sirable I prefer the operation of retroperitoneal ero-myomectomy rather than the so-called pan-ero-myomectomy. When the myofibroma is asso-d with malignant disease, nothing short of the val of the whole uterus and tumour would be ad-ole; whereas, in ordinary uncomplicated cases of ero-myomectomy, I can see no reason for the excision y more of the uterus and tumour than is included in supravaginal operation of retroperitoneal hystero-mectomy. Though the last-mentioned operation is ded as the method of election, the complete removal e uterus is sometimes preferable for various reasons ne time of operation, and of the 33 hystero-myo-omies for myofibroma, the whole uterus ("pan-ro-myomectomy") was removed five times.

e operation of hysterectomy for cancer is very unsatis-ry in its remote results. Of the 10 cases here ded 2 are known to be free from recurrence at a d of more than three years since operation, 2 others in free at rather less than two years since operation, known to have recurred, 1 died soon after operation, was lost sight of and the result is unknown. Good s are obtainable in cases that come early, but there great amount of ignorance amongst women as is the early symptoms of carcinoma of the uterus, his, combined with the natural insidiousness of the e, determines the fact that in about 4 cases out of 5 ave to decline a radical operation. For cases sed early, I believe that colpo-hysterectomy is the operation, and 9 of the 10 cases were so treated. minal hysterectomy offers certain advantages—we t more widely of the disease, and the sacral glands e removed, bringing the operation into line with ions for cancer in other parts of the body; but ally the results are not so good as in cases of colpo-ectomy, where the primary mortality and incidence urrence are distinctly lower. We must be selective, ough colpo-hysterectomy is the best for early cases, are others for which abdominal hysterectomy is suitable, though at present it seems undesirable to this latter operation as the routine procedure.

e need be said of the comparatively simple opera-abdominal hysteropexy, which was performed in cases for painful retroflexion uncontrollable by ry means. I prefer the abdominal route, because it s the surgeon to deal with the adhesions that are requently present.

d ligament tumours are fixed, more or less closely to the side of the uterus, and sessile because of tuation between the layers of the broad ligament. were cystic and one was solid (myofibroma). Cysts und in the mesosalpinx—that is, encapsuled n the two layers of the broad ligament which form ntery for the Fallopian tube above the level of the Fibromata and myofibromata have a capsule from the mesometrium—formed by the layers of ad ligament below the level of the ovary. In the nderstanding of the various anatomical forms of lies the secret of conservative surgery of the appendages. The capsule is opened and the is shelled out of its connective tissue bed, and ary and Fallopian tube can be preserved intact. ite wrong to perform salpingo-oöphorectomy in ses.

Operations on Liver and Bile Ducts.

e 49 operations upon the liver, gall bladder, and cts, there were 3 cases of hepatotomy—1 for disease and 3 for abscess; 3 cases of hepatopexy; 3 of cholecystotomy, of which 18 were for gall 9 cases of choledocholithotomy, in one of which necessary to open the duodenum to extract the om the ampulla of Vater; 1 case of cysticotomy stones; 2 cases of cholecystenterostomy; and of cholecystectomy, one of which was for malig-ease of the gall bladder in association with gall

You will see how large a proportion of these cases is associated with the existence of gall stones, and to this subject I must chiefly confine my remarks. It may be helpful to tabulate some of the chief points which are worth noting in association with the gall bladder and its ducts: (1) A painless enlargement of the gall bladder without jaundice suggests catarrhal cholecystitis. (2) A painful enlargement of the gall bladder without jaundice suggests an "empyema" of the gall bladder; but it must be borne in mind that a suppurative cholecystitis may exist without a palpable swelling, as a gall bladder which has been repeatedly inflamed may not be capable of much distension. (3) A painless swelling of the gall bladder with jaundice is in favour of an obstruction of the common duct by a tumour (malignant). (4) Remittent jaundice, generally without an enlarged gall bladder, accompanied by chills and pain, occurs with stone in the common duct. (5) Jaundice is a less common symptom in cholelithiasis than is usually supposed. Kehr says it is absent in 80 per cent. of cases.

The differential diagnosis of three conditions associated with jaundice—stone in the common duct, pressure on the duct from tumours (malignant disease), and chronic pancreatitis—is beset with considerable difficulty, so that it is necessary at times to advocate an exploratory incision for the purpose of clearing up the matter.

When one sees the late results of gall stones—such as empyema, cholangitis, perforation, and impaction of stones in the choledochus, all of which are associated with a high rate of mortality, the surgeon is justified in his anxiety to operate while the gall stones are in the gall bladder, when the mortality is very low. By this suggestion of early operation, it is not to be understood that I am advocating operation in every case of gall stones. In mild and infrequent attacks of cholecystitis, the question of operation would scarcely arise; but if the gall bladder is enlarged, an operation should be recommended, though the case may be otherwise of a mild type. Even with frequent and severe attacks of colic associated with the passage of small calculi, an operation is unnecessary so long as the stones continue to pass. Operation is indicated if the frequent attacks of colic cease to be attended with the expulsion of calculi. In acute obstruction of the common duct, operations should not be performed, as such cases not infrequently get well under expectant treatment. If, however, the jaundice persists for some five or six weeks, or if symptoms of cholangitis—as shown by rigors, intermittent fever, etc.—supervene, operation is desirable. In old patients, and those suffering from organic disease of the heart, lungs, or kidneys, operation is rarely justifiable, and should only be undertaken on account of the development of some grave condition associated with the gall stones. On the other hand, operation should be advocated in cases of severe colic, incapacitating the patient from the necessary duties of life. In all cases of enlarged gall bladder, whether painful or not, and whether accompanied by jaundice or not, operation is the safest course to pursue. The occurrence of acute diffuse peritonitis in the neighbourhood of the gall bladder requires immediate operation, for it may be associated with acute phlegmonous inflammation of the gall bladder, or perforation of the gall bladder or ducts.

I am not persuaded of the desirability of performing cholecystectomy as a routine measure in the operative treatment of cholelithiasis, as advocated by many surgeons in America and elsewhere. Recurrence of gall stones after operation can, I think, rarely occur—I have not yet met with such a case—and if they did recur, it is preferable that they should do so in the gall bladder rather than in the common duct. I do not, therefore, think that the argument in favour of cholecystectomy as a prevention of recurrence of gall stones is a strong one. The wounds, however, heal more rapidly than in ordinary cases of cholecystotomy; and if it can be shown that the mortality is less, it will doubtless be the operation of the future in suitable cases. At present I have not performed cholecystectomy except for carcinoma of the gall bladder, permanent blocking of the cystic duct, and in an atrophic gall bladder which could not easily be dealt with in any other way.

Operations on the Kidney.

Of the 65 operations on the kidney there were 28 cases of nephropexy for movable kidney, 19 cases of nephrotomy, 7 of nephrolithotomy, 10 of nephrectomy, and 1 of

operation for ruptured kidney. I only wish to speak now of nephropexy for movable kidney, for in this I think it possible that the surgical pendulum has swung too far, and a more careful discrimination of cases suitable for operation is necessary. Many cases of pathological mobility of the kidney give rise to no symptoms whatever, and of those that do give rise to symptoms distinctly referable to the renal mobility probably at least two-thirds are better treated by some form of belt than by operative fixation. In all cases, except, perhaps, those associated with some form of kidney degeneration, a belt should be tried, and in many cases of movable kidney, accompanied by hysterical and neurasthenic symptoms, a belt is the only justifiable form of treatment. It is in cases of movable kidney in association with displacement of other organs (splanchnoptosis) that neurasthenic and hysterical symptoms are common, and then there is a double cause of a possible failure of the cure of the symptoms by operative procedure, which is most often very unsatisfactory in these cases.

In general terms, it may be stated that nephropexy is more likely to relieve painful symptoms than nervous phenomena. The need for operation is the urgency of the case. When belts fail operative measures are indicated in healthy adults in whom a freely mobile kidney is associated with symptoms of gastric crises or of torsion of the renal vessels. Under such circumstances operation may be undertaken with every hope of a satisfactory result. The occurrence of hydronephrosis with movable kidney may be regarded as necessitating surgical interference. Hydronephrosis implies kidney degeneration, and the condition tends to get worse the longer operation is delayed. The presence, however, of such degenerative changes renders operation more dangerous.

Operations for Hernia.

Of the 127 operations for hernia, 40 were strangulated and 87 were "radical cures" deliberately undertaken without the presence of strangulation. Of the strangulated hernia 17 were inguinal—1 of which had 18 in. of gangrenous gut; 19 were femoral—2 of which were "Richter's hernia"; and 4 were umbilical. Of the "radical cures" 69 were inguinal 4 of which were double, and 1 contained an ovary; 6 were femoral; 5 were umbilical, and 7 were ventral herniae.

The operation of radical cure of hernia is so safe—not one of the 87 cases died—that I think any sound young adult is entitled to prefer operation to the continued use of a truss. Though there are many excellent operations, I regard a modification of Kocher's method as by far the best for the ordinary run of cases, Bassini's method being reserved for the larger herniae of old standing with a widely dilated external ring.

Operations for Appendicitis.

There were 33 cases of operations for appendicitis during an attack, most of which were suppurative or gangrenous; and 119 cases of appendicectomy in "interval cases." Appendicectomy was also performed in 49 of the cases operated upon during an attack, the rest being treated by drainage only.

There is no need to dilate on so trite a subject as appendicitis; but I should like to state that I have come to the conclusion that the difficulty of gauging the actual pathological condition in a case of severe appendicitis is so great that I think it wiser to operate early—before the third day—in such cases, unless they speedily show signs of improvement after the first twenty-four hours. Another point upon which I have in recent years altered my practice is that I now invariably endeavour to remove the appendix in any case of operation for acute appendicitis, unless I think that by so doing I shall be adding to the patient's risk. If there are no other contra-indications I have no fear of any harm resulting from opening the general peritoneal cavity in cases of suppurative or gangrenous appendicitis, and in many instances my search for the appendix has resulted in its discovery in a disorganized condition. I am convinced that the removal of the focus of mischief is highly desirable in these cases. It hastens the convalescence, prevents any further mischief, and is, I believe, associated with a lower mortality than simple drainage in most instances.

Other Operations on the Intestines.

The rest of the operations on the intestines amount to 99. Of these, there were 43 cases of colotomy and 18 of enterotomy, 12 cases of colectomy and 2 of enterectomy, 14 cases of enterorrhaphy and colorrhaphy, 4 cases of ileo-colostomy, 4 operations for intussusception, and 2 for obstruction due to peritoneal bands.

Nearly all of these cases were associated with intestinal obstruction, which is the bugbear of abdominal surgery. The difficulty of a sufficiently certain diagnosis in the early stage of acute intestinal obstruction, and the nature of the lesion, render all such cases extremely dangerous; yet the only means of reducing the terrible mortality associated with this condition is by early operation—within twenty-four hours of the onset if possible—for it may safely be said that in all cases of complete acute obstruction the chances of recovery rapidly diminish for every hour that operation is delayed after the diagnosis is established. Continuous pain and vomiting for forty-eight hours, accompanied of necessity by the deprivation of food, may so reduce the strength of the patient that the surgeon is unable to make that systematic examination of the contents of the abdomen which these cases frequently necessitate.

In the performance of intestinal resection I always prefer the use of simple suture to that of mechanical appliances, and of all intestinal sutures—and the number is large—I know none better or more generally applicable than Halsted's quilt suture. For direct end-to-end union, however, the O'Connell suture is very good. Only occasionally, where time is of great importance, do I employ apparatus, and of these the O'Hara forceps and Murphy button are the best.

In early cases of malignant disease of the intestine the ideal method of treatment is that of resection and simple suture of the divided ends, but if intestinal obstruction be present the resection must be performed in two stages for the resisting power of the patient is so small under these circumstances that immediate union of the resected gut is attended with a very high mortality. The obstruction should be relieved by bringing a loop of intestine to the surface with the tumour and inserting a Paul's tube in the distended gut above the tumour at the first operation; and enterectomy or colectomy, with immediate union of the divided bowel, should be performed at the second operation a week or ten days later. I have successfully operated in this manner in a patient at the age of 78 years.

Colotomy for irremovable malignant disease of the rectum gut is an unsatisfactory operation at the best. The patient is frequently in the last stage of a mortal disease and operation under the usual conditions is as likely to hasten as to put off the inevitably fatal issue. When the disease cannot be removed completely, a palliative operation like colotomy should be performed before the patient is exhausted by the absorption of toxic products from intestinal accumulation; but, whenever possible, a "short circuit" (ileo-colostomy) should be preferred, as being less distressing to the patient than an artificial anus.

Operations on the Stomach.

Of the 27 operations on the stomach there were 13 cases of gastro-jejunostomy, 5 of gastrostomy, 6 operations for perforating ulcer of the stomach or duodenum, 1 case of pylorectomy, and 1 of gastrectomy (two thirds of the stomach removed). I have always performed the posterior operation of gastro-jejunostomy, and in cases where the stomach is dilated, as frequently happens, it is the best method, because it secures excellent drainage. In healthy cases, provided the duodenum can be freed, lateral gastro-duodenostomy is likely, in the future, to be adopted as a routine measure.

Gastrorrhaphy for perforating ulcer is most successful when performed within twelve hours of the perforation. After this period the mortality rapidly increases, and it is highly desirable to proceed to operation as soon as possible after the diagnosis has been made.

Frank's method of gastrostomy is the one I usually adopt. This operation can be performed quickly, and ensures against leakage of gastric juice. The patient can also be fed at once, and this is of great importance in cases of malignant disease of the oesophagus the operation is too frequently delayed until the vitality of the patient is at a low ebb.

After-treatment.

The time at my disposal has not allowed me to do more than to speak cursorily of the more common affections met with in abdominal surgery, and I have not dealt with any of the rarer conditions which one must be prepared to encounter. We may now consider the after-treatment.

A pillow placed under the knees relieves the strain of the abdominal muscles; and the patient may, with advantage in most cases, be tilted to one or other side by placing pillows behind the shoulders and buttocks. This often gives great relief from the aching in the back which is so common in these cases. The pain of abdominal operations is not usually great, and in most of them no anodyne is necessary; but when pain is severe morphine may be given during the first twenty-four hours. After that period no morphine is allowed, for unless the case is not doing well, pain at this time is nearly always due to flatulence, and the best remedy for this is a turpentine enema. The relief from pain and distension is so marked after the administration of a turpentine enema that it may well be regarded as the "sheet anchor" of the after-treatment of abdominal operations. It may be repeated night and morning if necessary. In any case it is desirable to give an enema on the morning of the third day, and a purgative by the mouth on the third night, after operation, if the bowels have not previously acted. Should there be any suspicion of the onset of peritonitis, a dose of calomel should be given, followed by the administration of 2-drachm doses of sulphate of soda every hour until purgation is effected.

I prefer cases of operation on the stomach to have nothing by the mouth for twenty-four hours at least, if possible; but in other cases hot water may be given by the mouth whether there is vomiting or not. It relieves the thirst which nearly always occurs after abdominal section, and helps to stop vomiting better than any other remedy. It should be given very hot, and in tablespoonful doses, three or four times an hour, if necessary. I consider it a needless cruelty to prolong the sufferings which the patient endures from an intense craving for fluids. In cases of extreme thirst half a pint of water may also be given two or three times a day by the rectum, and retained. If there is vomiting, nothing but hot water should be allowed by the mouth, but when the vomiting continues for a long time this may sometimes be advantageously supplemented by small quantities of dry champagne. Under these circumstances the strength should be supported by the administration of nutrient enemata consisting of half an ounce of brandy, a teaspoonful of Lemco beef essence, and made up to four ounces with peptonized milk. These should be given every four hours, and before each enema is injected (and for this purpose a tube and funnel are best) the rectal tube should be worn for a quarter of an hour to allow of the expulsion of flatus. One of the best signs of recovery from shock is the power of expelling flatus voluntarily, and where this has been gained, cases practically always do well. If the anaesthetic vomiting passes off quickly, water gruel, followed by Benger's food or peptonized cocoa, may be given in small quantities during the first twenty-four hours. No raw milk should be allowed; it forms a coagulated mass which upsets the majority of patients. On the second day tea, bread and butter, toast, custard pudding, junket, and grapes may be allowed, but the quantities should be limited. On the third or fourth day, if the bowels have acted, a little fish may be given, and thereafter the diet may be gradually improved in quantity and quality. The patient's feelings serve as an excellent guide to the amount and character of the food taken, and in the early days it is not wise to force food upon an unwilling patient.

Reference.

1 British Medical Journal, August 14th, 1897.

The late Mr. Simeon Lazarus, of Bournemouth, who died on October 11th, 1906, left £50 each to the London Hospital, the Brompton Consumption Hospital, the City of London Hospital for Diseases of the Chest, and the Jewish Hospital for Incurables, and £25 each to the Royal Hospital for Incurables and the Cancer Hospital.

Under the will of the late Miss Martha Axford of Ealing, who died on October 20th, 1906, St. Mary's Hospital, Paddington, the Friedenheim Home for the Dying, and the Mildmay Mission Hospital, Bethnal Green, each receives a sum of £200.

THE CLAIM OF THE SURGEON TO CONDUCT THE AFTER-TREATMENT OF OPERATION CASES:

WITH SOME REMARKS ON POSITION, AND FLATULENT DISTENSION, AFTER ABDOMINAL OPERATION.*

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I should be very sorry to think that the title of my paper† should suggest to the mind of any one, that I think post-operative treatment should, as a rule, be handed over by the operator to any one else or even shared with another. But there are conditions in which, unfortunately, this must be so, and, therefore, I should like to draw your attention to two important matters in connexion with the treatment of cases after abdominal operations. Before doing so, however, I will spend a few minutes in pleading for the operating surgeon that he shall be allowed to conduct his own after-treatment whenever possible.

The Direction of the Treatment.

I think the only reasonable view we can take of the matter is that the medical practitioner who has been in charge of the case up to the time the operation is performed should hand over the treatment entirely to the surgeon who has taken the responsibility of operating, for the success or failure of an operation may to a large extent depend on the after-treatment.

Let me appeal to you in this way. If you have a very anxious midwifery case, and have perhaps had to turn, and had trouble from haemorrhage, or fear it, would you care to hand over the care of that patient to any other medical man? Suppose, now, you were a practitioner of special experience in that branch of work, and had in consequence been requested to take charge of the labour, would it fair to your patient to hand over the after-treatment to another practitioner with less knowledge and experience of such work? Again, suppose that instead of being a medical practitioner you were a watch repairer, and something had gone wrong with a watch brought to you for repair, which required work of a very special kind you were not accustomed to and had received no special training for, and you passed on that watch to another worker who possessed the special skill, would it be right for you to demand back that watch to regulate it instead of leaving it under the care of the specially-skilled worker until he considers it is going quite well? I need not reply to such a question. And yet sometimes objection is raised if the surgeon conducts the after-treatment of cases he has operated on himself. The practitioner feels a sort of possession in his patient and regards the surgeon as robbing him of his patient if he does more than the actual operation. But surely the surgeon who has undertaken so important and responsible a part of the treatment as an operation may justly regard the patient as his until the after-treatment of the operation is at an end. I do wish we surgeons could only get some of our friends amongst the general practitioners to see that we do not wish to conduct the after-treatment in these cases in order to make larger fees. As a rule we do not make larger fees in this way; it is only in cases in which we have to spend a considerable time in making lengthy journeys to reach our patient that the after-treatment is considered in the fee at all. But supposing it were, I still think that it is as much the surgeon's work as the actual operation, and he would, therefore, be entitled to remuneration for it. It is a well-recognized principle in hospital practice that when a surgeon operates on a case he conducts the after-treatment, and if the patient has been under a physician in a medical ward up to the time of operation, he is transferred to the surgeon's ward after. Unfortunately, some medical men cannot see that this is the right line to adopt in private practice also, though the lay mind, unframmelled by any idea as to the possession of the patient, at once grasps the right principle—that the one

* A paper read at a meeting of the Bath and Bristol Branch of the British Medical Association.

† The original title was "The Treatment of Cases after Abdominal Operations."

who undertakes the operation is the one to carry the treatment through, and they sometimes ask that it may be so. There are, of course, occasions when the surgeon can only carry out the after-treatment very imperfectly—by leaving suggestions, by letter, and by telephone, as when he is called into the country to operate on a patient too ill to be moved; but in all cases in which the patient can travel I think he should come into a nursing home, under the care of the surgeon, unless he lives in his immediate neighbourhood. I have several times refused to go into the country and operate on cases which might quite well have come to a nursing home here, because I do not think that operating under such conditions gives the surgeon the greatest chance of success. I have been told that such patients will not leave home, or must have their own doctor in attendance; but if practitioners would fairly represent the just claim of the operating surgeon to conduct the post-operative treatment himself, and the advantage this would be to the patient, I do not think we should hear of these objections.

We must recognize the fact that sometimes a patient is suffering from a medical ailment—that is, one for which no surgical treatment is required—and at the same time another condition requiring operation. Let me give as an illustration a case of pneumonia with pneumococcal peritonitis, or a case of phthisis with acute suppurative appendicitis. I admit that the divided treatment of such a case between the medical attendant and the surgeon is full of difficulty, but I think the right course to adopt is for each to undertake the treatment of his respective department of the patient (if I may use such an expression), and to conduct that treatment in consultation. Again, if a medical ailment which has nothing to do with the disease for which the operation was performed should supervene—such as an attack of gout in a patient operated on for tumour of the jaw—it seems to me right that the treatment should be conducted jointly by the practitioner previously in charge of the case and the surgeon.

Allow me to suggest that if one of us had an obscure abdominal disease, and some professional friend in whom he had every confidence as a physician, when treating him, discovered that the disease was one which should be dealt with by operation, he would prefer the surgeon to conduct the post-operative treatment rather than the trusted medical friend, and if he would in his own case, why should he not readily fall in with such an arrangement in the case of his patient? If you are well skilled in surgical methods, and thoroughly competent to undertake the after-treatment, will you not let the surgeon who performed the operation follow any special line of after-treatment he may have a particular leaning to, even though you feel that your methods are the best? Is not this what the operator may fairly claim?

It may be objected that post operative treatment is very largely what may be called medical treatment, such as diet, or even the use of drugs, etc. I fear we modern surgeons are still regarded by some as very much like the old barber surgeon, only fit to cut and to manipulate, a mere mechanical worker, who if he has any brains worth considering has no right to use them in directing anything but the cutting and sewing up. But really there is no detail in the post operative treatment which does not concern the operator, from the method of fastening the binder to the management of the feeding and sleeping of his patient.

THE POSITION OF THE PATIENT.

I propose now to consider an important detail of the after treatment of abdominal operations—the position of the patient, and one complication which may be very serious—flatulent distension.

After certain abdominal operations, the position of the patient is one of the most important matters in the after-treatment. In all cases in which drainage of any quantity of fluid from the abdomen is desired the patient should be kept in the half sitting position—that is, with his chest well propped up on pillows. This is of the greatest importance in acute suppuration in the abdomen, especially when diffused, as in peritonitis. It has been strongly advocated in such cases by some of the American surgeons, and is sometimes spoken of as Fowler's position. In suppurating appendicitis not only must the chest and upper abdomen be raised higher than the lower abdomen, but the left side of the abdomen must also be propped up on pillows, so that the right lower abdomen, from which the drainage tube will protrude, is the lowe part of the abdominal cavity, except the true pelvis. order to judge if his patient is at a right slope, it is nec sary to inspect the abdomen (of course covered with t dressing) after or during the adjustment of the pillows bed-rest. We must not be content with the appare position of the abdomen from inspection of the patie covered with the bed-clothes. We should not leave t arrangement of the position of the patient to the nur unless we feel sure she knows exactly how to place t patient, from her experience in other cases.

It is by no means easy to maintain the sloping positi as the patient is always tending to sink down from t pillows or bed-rest. If the patient is inclined to have l legs extended, a box or hassock between the turned- mattress under his feet and the bottom of the bed w keep him up, but this of course fails when he bends l knees. A firm pillow under the bent knees is then some use, but better still is a sling made of cloth, which the patient sits, and which is attached to the he of the bed. The sling comes down one side of the bo under the buttocks and perineum, and up the other si It would of course be useless unless the thighs we flexed, as it would not get enough hold of the patient, b if the lower limbs were extended the patient could supported by the hassock under the feet. The sling wou of course have to be undone from time to time enemata if they were required, unless an opening made it could be kept in the right position.* The tilting up the end of the bed is an entirely inadequate substitute the sloping position of the patient's body. To get t same degree of slope the head of the bed would have be propped up at half a right angle to the floor.

How long should this position be maintained? cases in which it is done to prevent pus running up i the higher part or other side of the abdomen, as in dra ing a localized but not well-shut-off appendix absce twenty-four hours will be long enough, as by that ti protective adhesions will have formed. If, however, su a suppurating area is packed with iodoform gauze as w as simply drained, the position should be maintain for the first twenty-four hours, and for anot twenty-four after the removal of the gauze, in case its removal some of the protective adhesions m have been broken down. In cases of greatly diffus suppuration in the abdomen it may be desirable maintain the sloping position for several days. We mu judge by the condition present in each case. If we th that pus still reaches the drainage tube from distant pa of the abdomen, that peritoneal adhesions have n stopped this process of drainage, then it is best continue the position. The great difficulty is to tell wh such adhesions have formed in any given case. Of cou pus may still flow freely from a drainage tube above t pubes but come entirely from the pelvis and not at from the upper abdomen.

After the removal of abdominal tumours in which mu oozing of blood or serum is expected, either from extens separation of adhesions, or from extravasation of se fluid contents of the tumour of an irritating charac drainage is advisable. If the separation of adhesions, the extravasation of cyst contents, have been confined the pelvis, there is no need for the sloping position af operation, but if the oozing is expected from the wh abdominal cavity, then it is advisable, in addition periodic suction through the drainage tube.

I have spoken of the length of time the sloping positi should be maintained. When should you commence All cases of acute appendicitis should be placed in th position immediately the diagnosis is made, and operat on in this position, for it reduces the risk of extravasati of pus into the general peritoneal cavity before a during operation. And the patient should remain in th position from the time of the operation. But if shock present at or after the operation, until it is recover from it would be unwise to have the shoulders rais There is no position like the Trendelenburg position

* Since writing this I have had a wooden method made to put under the bed-legs and fixed to the head of the bed on castors by an adjustable rod. This is covered with a pillow, and can of course be easily removed when required and adjusted at any leve the bed. It is a simple and more satisfactory arrangement th the sling. I do not think it is a good plan to tilt up the lower end the bed to prevent the patient sinking down on it, for if they slip their pillows or bed-rest they then are not even flat but lope wrong way.

combating shock. If a patient is in a condition of shock I only gradually get him into the sloping position as the pulse improves, and I do not find that this leads to relapse of the shock, though perhaps, theoretically, it ought to do so. The use of the Trendelenburg position in shock, after abdominal operations, is a matter sometimes very difficult to decide. On the one hand we believe it will diminish the shock, on the other hand we may diffuse pus only present in the lower abdomen into the upper, and that is a very serious thing indeed. It seems to me that if we have evacuated the pus present in the lower abdomen and filled the suppurating cavity with gauze, we need not fear to use the Trendelenburg position, but if it is a case of purulent peritonitis, involving the lower half of the abdomen, with pus here and there amongst the coils, even when we have sponged out, it would be better to use the Trendelenburg position only as a last resort when all other methods of combating shock have failed.

After gastro-jejunostomy, persisting vomiting, which may be regurgitant, is sometimes successfully treated by raising the chest and upper abdomen, and keeping the patient on the right side. This position will favour the passage of jejunal contents past the stomach opening.

It seems to be the practice of some surgeons to keep a patient rigidly on his back after an abdominal operation, with his shoulders almost flat. This, I think, is an unnecessary and very trying restriction. He certainly must not contract his sewn-up abdominal muscles—that is, he must not raise his shoulders in bed even to the extent of a few inches, nor turn on either side. But if you can only get him to lie like a log and be rolled on his side or other side, or have his shoulders raised and supported on pillows, I see no objection to that. The important thing is that the patient must lie entirely passive. There is not the same temptation for the patient to help in the turning on the side as in the raising of his shoulders. He must be told that unless he is found to lie like a dead weight the attempt to make him more comfortable in this way will have to be abandoned. A very useful way of raising the patient's shoulders is to have a sling of cloth passed under, and then traction made on this; this will impress on the patient the idea that it is to be an entirely passive business so far as he is concerned.

If, when you are lying flat on your back, with only a pillow or two under your head, you put your hand on your anterior abdominal wall, you will find that the very slightest attempt to raise the shoulders causes the muscles of the abdominal wall to contract vigorously. Now, even though a patient after an abdominal operation may not sit up in bed, yet every time he lifts his shoulders a few inches (it seems like raising his head) to drink, or, still more, to do anything with materials placed in front of him, or even to look around the room, he vigorously calls his anterior abdominal muscles into play, and these are the very muscles stitched together. It is better, then, to raise his shoulders well on pillows or a bed-rest in the daytime, so that he may not be tempted to do so by his own exertions, and to commence this directly the tendency to anaesthetic vomiting is over. If the abdominal incision is median it does not matter (that is, so far as strain on the abdominal wall is affected) which side the patient is turned on. In appendicitis operations it would be best for him to lie on the right side. When you lie on the right side and raise your shoulders, the muscles on the left side of the abdomen contract much more vigorously than on your right. Therefore, if the patient should raise his shoulders he will do less harm in this position than if lying on his back, and most harm if lying on his left side. This advantage of lying on the right side coincides with the advantage of this position for drainage.

I do not agree with one recent writer who says children may be allowed to move about freely in bed after an abdominal operation. They may certainly move their limbs freely, or be turned on the side, but it may be useful to fasten their shoulders down by means of a loop passed over the chest (with holes for the arms to be made through), fastened to the bed on both sides. With regard to raising their shoulders, I should say if it is clear they will try and move themselves when it is done, it must be abandoned, and that in young children it will often not be possible.

I think the surgeon should himself superintend the first raising of the patient's shoulders, and make sure he thoroughly understands he is to be quite passive, and that the nurses have thoroughly grasped the importance of this. If the shoulders are raised by the drawing up of the upright part of a bed-rest, he is more likely to remain passive than if his actual shoulders are raised and more pillows pushed under them.

Although I advocate thus changing the position of the patient quite early after operation, I think it very important he should not turn himself or raise his shoulders until the time he is allowed out of bed, for the latter movement at any rate is just the one to interfere with healing, or to stretch the weak scar.

The Treatment of Flatulent Distension.

The other subject in connexion with the post-operative treatment of abdominal cases, about which I should like to say something this evening, is flatulent distension of the intestines. If it becomes very marked, it is usually associated with vomiting, and the condition of the patient may become a very serious one. It is not possible to say in every case exactly what it is due to. It is often called paralytic distension. Sir Frederick Treves in the last edition of his book on intestinal obstruction suggests that this post-operative distension is really due to peritonitis, even though patients frequently recover from it. He suggests that surgeons do not like to admit that their patients have peritonitis after operation, and as a salve to their surgical consciences, call it intestinal paralysis, or ileus paralyticus. Other writers, however, maintain that they have examined, *post-mortem*, cases in which great distension and vomiting have been present, not due to mechanical obstruction, and have not found signs of peritonitis. They do not, however, always tell us whether they examined carefully for thrombosis of the mesenteric vessels, which is a well recognized cause of great tympanitic distension.

Mr. Lawson Tait used to call all such cases, if severe, peritonitis, and was one of the first to suggest the treatment of peritonitis by purgatives. Mr. Greig Smith, in his last edition of his book on *Abdominal Surgery*, maintained that it was impossible to tell in many cases whether the symptoms were due to primary paralysis of the gut, or to peritonitis, but that the treatment should be the same in either case. A persistent temperature, or marked tenderness, or rigidity of the abdomen would certainly be suggestive of peritonitis; on the other hand, the absence of these signs would by no means exclude peritonitis. I have had to operate on a case of intestinal obstruction due to adhesions, two years after I had performed ovariotomy for a cyst with a twisted pedicle. At the first operation I found only a few soft adhesions to the omentum. There was only slight flatulent distension on the second day, at once removed by a turpentine enema, and she was slightly sick on the fifth day, but with a pulse of only 84. Yet when I came to reopen her abdomen two years later I found extensive adhesions, so that a considerable amount of plastic peritonitis must have been present without any serious symptoms soon after the first operation. This condition some surgeons seem to consider common after abdominal operations, and they hardly call it "peritonitis," or if "peritonitis," then "traumatic peritonitis," to distinguish it from peritonitis due to the introduction of micro-organisms. Whether it is really common it is difficult to say; we seldom see the inside of the abdomen a few days after the operation.

We must remember that we may open the abdomen of a patient suffering from septic peritonitis, spreading widely in the lower abdomen, from appendix disease, and yet the pulse may have been well under 100 and vomiting absent. And surgeons have from time to time called attention to the latency of symptoms in post-operative peritonitis, even of a fatal septic type, and have pointed out that only marked frequency and feebleness of pulse, with an anxious, drawn look on the patient's face, and perhaps some tympanitic distension, may be present. Certainly pain, tenderness, and vomiting may be absent.

I am therefore inclined to think that more often than is generally supposed peritonitis is present in these cases of marked flatulent distension and vomiting, occurring after some abdominal operations in which no peritonitis exists prior to operation, though that peritonitis may be

plastic and not suppurative; and that in cases of diffused septic peritonitis in which great distension and frequent vomiting set in a day or two after operation, but which eventually recover, there is possibly an increase of the peritonitis for a time. But it would be a great mistake to suppose that such symptoms coming on soon after an abdominal operation indicate a fatal termination.

I have already referred to the fact that some surgeons have recorded *post-mortem* observations on some of these cases of flatulent distension and have found no peritonitis, but have regarded the condition as one of primary paralytic distension. In operations on the gall bladder and bile ducts, usually the only parts manipulated, or even seen, are the pylorus, duodenum, and hepatic flexure of the colon, and yet I have seen several times most marked distension of coils in the whole abdomen after these operations. It is true such distension has not been associated with vomiting, or other bad symptoms, but yet it was very marked, and could not have been due to peritonitis, from manipulation of the affected coils or from contamination of the general cavity by septic fluids, nor could it have been due to thrombosis of the mesenteric vessels, as the distension was soon removed by enemata. It is an interesting question as to the nature of this distension when no peritonitis is present. The fact that it may result from traumatism in only one corner of the abdomen, would suggest that it may be a reflex nervous condition, very likely a primary paralytic condition, but not necessarily due to handling of the actual coils which are paralysed. But given excessive gas production within the bowel, the over-distension, and the kinking it will produce, may cause a secondary paresis and an actual obstruction. It is, however, unlikely that the gas production in a distant bowel would be affected by a cholecystotomy, and it is much more likely a primary reflex paresis of bowel, and is probably so in some other cases, in which there is more general manipulation of abdominal viscera. But whatever the cause of flatulent distension and vomiting may be after an abdominal operation, the treatment is the same: you must get expulsion of gas per anum, and faecal contents, too, if you can. I believe that there is nothing like very hot turpentine enemata for this purpose, repeated every few hours, and given with a soft rubber tube, left in the rectum for a short time after, to allow any gas which reaches the rectum to readily escape through the sphincter. No doubt purgatives may be of value, but I would much sooner rely on hot turpentine enemata. They should be as hot at the moment they are given as the nurse can bear her hand in, and the turpentine should be most thoroughly made into an emulsion with soap and a pint of hot water, and, if one pint fails, two or three pints very slowly introduced by a funnel and small rubber tube, with the pelvis elevated, may succeed. We may give a few grains of calomel, followed by a Seidlitz powder, as well, and repeat it. There is no doubt that in many cases in which tympanitic distension is marked and vomiting frequent, and the patient seems really very ill, this line of treatment will, if persisted in, remove the alarming symptoms. Possibly the frequent hypodermic injection of strychnine may help somewhat. Morphine must be avoided. Pain is not usually a marked feature in this condition; and morphine will tend to paralyse the bowel. And it is no use putting nourishment, even though it is liquid and peptonized, into the patient's stomach in such cases. We must so arrange the time of the hot turpentine enemata that nutrients can be retained for some hours.

Suppose the condition does not improve with this treatment, what is to be done?* We must remember that in rare cases true mechanical obstruction may follow abdominal operations from causes which time will not allow me now to describe, and a faecal condition of the vomit would strongly suggest the presence of this condition, though I have seen faecal vomiting in septic peritonitis. The vomiting and distension of mechanical obstruction does not usually set in for some days after the operation, whereas in paralytic distension and peritonitis it starts about the second day or earlier. It would be well to reopen the abdomen if symptoms of obstruction persist in spite of treatment, and to deal with any mechanical cause of obstruction, or open the bowel above it, and in cases in which we suspect the presence of a diffuse suppurative peritonitis, and have not drained the abdomen, the opening up of the cavity and insertion of one or more drains may lead to recovery, especially if combined with suitable position and subcutaneous saline injection, in large quantity. It is absolutely useless to open any given coil of distended small intestine for paralytic distension, whether primary or due to peritonitis; you cannot in that way evacuate the distended, kinked, and paralysed coil above it. You can reopen the abdomen and empty with your fingers coil after coil, but you run great risk of hastening the end from shock. Whether it is right to take this risk, in these almost hopeless cases, is often no easy matter to decide.

* It has been suggested to me since I wrote that it was as well [illegible] should be tried before

THE DISSEMINATION OF INTRA-ABDOMINAL MALIGNANT DISEASE BY MEANS OF THE LYMPHATICS AND THORACIC DUCT.

BY

W. MITCHELL STEVENS, M.D.Lond., M.R.C.P.Lond.

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Preliminary Remarks.

In April, 1905, I published in the British Medical Journal an interesting case of cancer of the thoracic duct and of the left supraclavicular glands secondary to latent carcinoma of the stomach. In January, 190[illegible] I read before the Cardiff Medical Society a paper entitled, The Respective Rôles Played by the Blood Vessels and the Lymphatic Vessels in the Local and General Dissemination of Intra-abdominal Malignant Disease. My present paper is based upon the two above-mentioned contributions, together with several cases which have since come under my personal observation.

It is well known that the lymphatic glands above the left clavicle (rarely those above the right clavicle) are occasionally involved secondary to malignant disease within the abdomen (stomach, intestine, rectum, pancreas, uterus), and it is also recognized that such enlargement may be the first, or, indeed, for a time the only, evidence of serious disease; and, moreover, that the primary mischief is often "latent," especially when it affects the stomach, since the supraclavicular glandular enlargement is most frequent when the growth is in the body of that organ. It has been computed that the glands are diseased in about 5 per cent. of the cases of cancer of the stomach, but this estimate is probably considerably below the mark. I make this statement for the following reasons:

(1) During the last fifteen months I have had under my own care five cases, and my colleague, Mr. William Sheen has shown me two other cases, notes on which I am, by his courtesy, enabled to publish. (2) In some cases although there may be no palpable enlargement of the glands, nevertheless careful percussion over or just below the left clavicle may demonstrate their presence. (3) In many cases there can be no doubt that the glandular enlargement is overlooked or referred to some other cause. (4) Careful necropsies, in cases of intra-abdominal malignant disease, may discover unsuspected glandular affection in this region.

The great rarity, in cases of abdominal cancer, of glandular enlargement above the right clavicle and its not uncommon occurrence on the left side, at once suggests that the infection is conveyed upwards by the thoracic duct, as there is practically no other channel of communication. The thoracic duct may act as a simple carrier of infection or it may be directly involved in the malignant disease, and the latter condition is undoubtedly more frequent than is generally supposed, and it should never be taken for granted that this duct is not involved, unless careful microscopical observations are made: for in the three cases recorded below in which an autopsy was obtained, there was found in all of them, by my colleague Dr. Schäfberg, growth in the duct itself.

It is very remarkable to note to what a degree the thoracic duct is neglected in all medical and pathological

rks, and when one considers that practically the whole the lymph from the abdominal organs travels per this ct it does not require a stretch of imagination to con- ıde that its rôle in the dissemination of malignant ease is very important.

In this connexion the well-known observations of nfick on the spread of tuberculosis by the thoracic ct are extremely suggestive, especially as he has monstrated that the duct itself may exhibit tuberculous ease. When one considers that the cervical glands on ber side of the neck may be equally frequently in- ved through local sources of infection, one cannot help ing the question: Is tuberculous glandular disease mmoner on the left side of the neck than on the right e, on account of there being an additional channel of ection from the abdomen via the thoracic duct?

Objects of this Paper.

ly objects in writing this article may be briefly merated as follows:

. To point out that the lymphatic glands above and ter cover of the left clavicle are much more frequently olved in intra-abdominal malignant disease than is erally recognized, and that this may be demonstrated ome cases (when the glands are not palpable) by per- sion over the clavicle or in the infraclavicular region. other words, the glandular enlargement which can clinically demonstrated is not necessarily only upraclavicular").

To show that the thoracic duct—and to a very much er degree the right lymphatic duct—plays a most portant part in the dissemination of intra-abdominal ignant disease, either by acting as a carrier of ctive material or by being itself directly involved.

To attempt to demonstrate that the secondary ction of different parts in cases of malignant abdo- al disease can be explained on anatomical grounds.

To throw out a few suggestions which may be of e help to future writers on this interesting subject.

or the sake of simplicity I shall confine myself to the emination of malignant disease of the stomach.

Literature on the Subject.

lthough textbooks are somewhat silent on the subject under discussion, nevertheless careful search will v that there are several interesting contributions to ound, which I will now refer to briefly.

eigert[1] gave the first full report of a case of cancer he thoracic duct, describing the *post-mortem* appear- s in a male aged 57. The primary lesion in this was situated in the rectum. The secondary lymphatic tion involved the left inguinal glands and the pelvic retroperitoneal glands along the great vessels, and these by contiguity the thoracic duct was infected completely occluded in one part of its course for stance of 2 cm., although there was no evidence of nsion of the lymphatics of the abdomen except in egion of the cisterna lymphatica at the origin of the acic duct. The glands in the neck are described as nal on both sides. Microscopically the growth was ylindrical-celled carcinoma.

ger[2] states that at the time he wrote 10 cases were on d. In his case of cancer of the uterus there were ndary growths in the thoracic duct and in the left clavicular glands, as well as in several other parts.

isier recorded 3 cases in 1897 and 1898. In the first rimary growth was supposed to be in the left adrenal , while secondary growths occurred in the thoracic and left supraclavicular glands, and in other parts. e second the primary growth was in the uterus, and dary growths occurred in the thoracic duct and left clavicular glands, and in other parts. In the third the primary growth was in the stomach, and dary growths occurred in the thoracic duct and in parts.

T. Hillier[3] in 1903 recorded a case of cancer of the cic duct and of the left supraclavicular gland dary to cancer of the rectum.

April, 1905, I described a case similar to the above. se cases are all interesting from the fact that the cic duct itself was involved.

y other cases have been recorded of disease of the s above the left clavicle in cases of intra-abdominal nant disease, but in most of these the thoracic duct has either not been affected, or its condition has not been mentioned, or it has not been microscopically examined.

In connexion with the literature of this subject the following remarks in Cunningham's *Anatomy* are interesting:

It is well known that the supraclavicular glands sometimes become enlarged subsequent to the appearance of malignant conditions in the abdomen and the mediastinum, and more particularly subsequent to affections of the oesophageal portion of the stomach. The course along which infective material travels in these cases is not yet known, for as yet no afferent vessels have been traced to the supraclavicular glands from the mediastinum.

Case I.

Case reported fully in the British Medical Journal, April, 1905. The primary growth was in the posterior wall of the stomach, and secondary growths were found in the liver, coeliac glands, thoracic duct, and left supraclavicular glands. The gastric symptoms were "latent," and the first evidence of disease was the glandular enlargement.

Microscopical sections showed that all parts of the thoracic duct exhibited growth, and that this involved the supraclavicular glands by direct extension along the walls of the efferent lymphatic trunk of these glands.

Case II.

A man, aged 57. He complained of pain in the epigastrium, flatulence, vomiting, and weakness. There was marked emaciation, there was a hard glandular mass above the left clavicle, and marked dullness in the left infraclavicular region, but no tumour could be discovered in the abdomen. A *post-mortem* examination could not be obtained.

Case III.

A man, aged 48. He complained of slight gastric symptoms (uneasiness, occasional vomiting, loss of appetite, etc.) and weakness. There was marked wasting and anæmia. Abdominal examination showed nothing. No glands could be discovered above the left clavicle, but over the middle of this bone there was well-marked dullness. A few hard subcutaneous nodules were found in the left axilla, one of which was removed and showed columnar-celled carcinoma. In about two months' time a large tumour was felt in connexion with the body of the stomach. At the autopsy was found cancer of the anterior wall of the stomach. The coeliac glands were involved, and a considerable number of glands lying under cover of the left clavicle were affected, and many small nodules of growth were found under the skin in the left axillary region. The walls of the thoracic duct showed on microscopic examination an infiltrating growth identical in appearance with that found in the subcutaneous nodules.

Case IV.

A man aged 51. In this case there were all the signs and symptoms of cancer of the body of the stomach, a large tumour being present. There was marked glandular enlargement above the left clavicle, and this could be felt to extend beneath the bone, and could be demonstrated by percussion for some distance downwards. I was unable to obtain a *post-mortem* examination.

Case V.

A man aged 55. There was evidence of undoubted cancer of the stomach. Secondary growths were found in several situations. There were no evidences of secondary growths in the pleura or lungs. No glands could be felt above the clavicles, but there was very marked dullness in the left infraclavicular region. This patient is still alive, but he is rapidly sinking.

Case VI.

A woman, aged 37, in the Cardiff Infirmary, under the care of my colleague Mr. William Sheen. She has cancerous disease of the rectum, with a large glandular mass above the left clavicle which has rapidly increased in size under observation.

Case VII.

The notes of this interesting case are given at the end of this paper by my colleague Dr. Schölberg.

General Remarks on the Modes of Dissemination of Malignant Disease of the Stomach.

In an analysis of 1,574 cases of cancer of the stomach secondary growths were found as follows (Welch):

Lymphatic glands (abdominal, cervical, inguinal), 551; liver, 475; peritoneum, omentum, and intestines, 357; pancreas, 122; pleura and lung, 98; spleen, 26; brain and meninges, 9; other parts, 92.

Cancer of the stomach may be disseminated in three ways (two or three may be combined), namely:

1. *By Direct Extension.*—It may extend to surrounding parts (peritoneum, omentum, diaphragm, pancreas, spleen, liver, intestine, etc.). Of course, such extension may be further disseminated by the lymphatics or by the portal vein, or by both of these channels.

2. *By the Portal Vein.*—The portal vein would, of course,

convey the infection to the liver. When the liver becomes affected, the malignant disease may be still further disseminated:

(*a*) By the lymphatics. Most of the lymph from the liver travels per the hepatic glands, thence to the coeliac glands, and thence by the thoracic duct. Some of the lymph from certain parts of the liver travels upwards to the glands in the chest, and thence proceeds chiefly via the thoracic duct and partly via the right lymphatic duct. Certain lymphatic anastomoses may be the means of infecting other parts (see Diagram 2).

(*b*) By the hepatic vein, and hence via the pulmonary artery.

(*c*) By direct extension to the diaphragm and pleura or other neighbouring parts.

3. *By the Lymphatics.*—The whole of the lymph of the stomach travels via the gastric glands to the coeliac glands, and thence via the thoracic duct, so that infective material will reach the general circulation through the thoracic duct (unless this be blocked), and it may or may not involve the walls of this duct. On reaching the heart it will proceed via the pulmonary circulation, and it may stop in the lungs, or proceed still further, and be then disseminated in an embolic fashion to distal parts, and may even by this means reach some abdominal organ.

Anatomy of the Lymphatics in so far as it Affects the Dissemination of Cancer of the Stomach.

There are two somewhat popular errors which can be at once corrected by an appeal to anatomy. These are:

(*a*) The supposed infection of the hepatic glands by cancerous material coming direct from the stomach. As a matter of fact, the lymph from the gastric glands travels via the coeliac glands to the thoracic duct, as also does that coming from the liver via the hepatic glands. Consequently if in a case of cancer of the stomach the hepatic glands be involved, this means that the liver has first been infected (probably through the portal vein, or possibly by extension). In this connexion, however, one may state that in some cases of cancer of the stomach growth sometimes extends up along the hepatic lymph vessels against the flow of the stream of lymph.

(*b*) It has been supposed that some of the lymph from the stomach instead of travelling by the thoracic duct may proceed upwards into the chest by other lymphatic vessels, and this idea has been used to explain the not infrequent involvement of the pleura (especially on the right side) and mediastinum in cases of cancer of the stomach. As a matter of fact, however, this supposition is anatomically incorrect; for though lymph comes downwards to the receptaculum chyli by two small descending thoracic vessels (from the lower intercostal spaces), nevertheless none goes upwards, unless, of course, the thoracic duct be blocked, in which case collateral channels may come into play. A consideration of the anatomy of the lymphatic vessels may explain fairly well the seats of election of meta-tatic deposits in cases of the stomach, though many difficulties are encountered for the following reasons: The anatomy of the lymphatic vessels has not been absolutely worked out, lymphatic anastomoses are very numerous and often most difficult to demonstrate, the thoracic duct or any of the smaller lymphatic trunks may be wholly or partially blocked in some part or parts, the lymph stream flows under but slight pressure and "reversal currents" may possibly occur, phenomena may occur comparable to the so called "retrograde embolism," and, lastly, malignant disease may invade the wall of a lymphatic vessel and thence travel in any direction either with or against the stream. Even though the above points must of necessity be borne in mind, thus making dogmatic statements impossible, nevertheless there are certain general anatomical points which are very helpful in the investigation of this subject.

The diagrams here given are, I am afraid, somewhat complicated and open to criticism, but I think they will serve to illustrate roughly the points which I am attempting to bring out.

The Dissemination of Cancerous Disease of the Stomach.

As already pointed out, cancer of the stomach may spread to other parts in three ways: (1) By direct extension to neighbouring parts, and thence by the lymphatics of those parts or by the portal vein by way of the liver; (2) by the portal vein; (3) by the lymphatics of the stomach.

Let us suppose that infective material is carried away by the lymph from the stomach. The lymph from the greater part of the stomach travels by way of the gastric glands, the coeliac glands and the thoracic duct, but a portion of it (coming from the left part of the stomach) travels by way of the splenic glands to the coeliac glands and thoracic duct. This infective material would in its transit probably cause malignant enlargement of the above glands, and be arrested in the glands, or it may travel earlier or later up the thoracic duct (with or without involving its walls), and

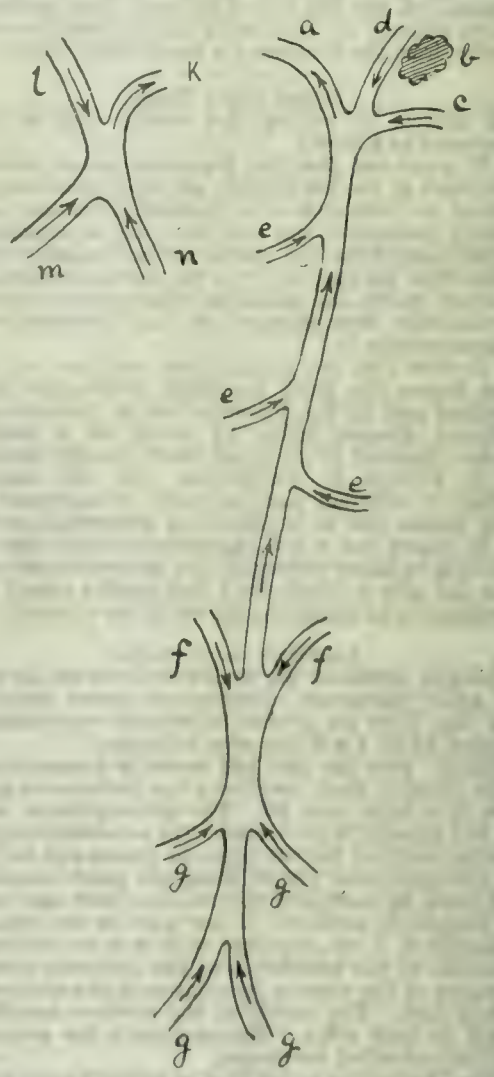


Diagram 1. Thoracic duct and right lymphatic duct. *a*, termination of thoracic duct; *b*, supraclavicular glands; *c*, subclavian lymphatic trunk; *d*, jugular lymphatic trunk; *e*, lymphatic vessels from chest (mediastinum, thoracic viscera, intercostal spaces, etc.); *f*, descending lymphatic trunks from lower intercostal spaces; *g*, lymphatic trunks from abdominal organs and from lower parts of the body; *k*, right lymphatic trunk; *l*, jugular lymphatic trunk (right); *m*, subclavian lymphatic trunk (right); *n*, lymphatic vessels from right upper intercostal spaces and right upper part of mediastinum.

would then reach the general circulation, and it may be arrested in the pulmonary circulation (producing local secondary growths), or it may travel still further and be disseminated in an embolic manner to distal parts. Now if the walls of the thoracic duct become involved, the malignant disease may travel by extension along this either with or against the stream, so that it would be easy to see how distal glands may be affected (pre-aortic, iliac, inguinal, etc.), and also to see how the supraclavicular and bronchial glands may be involved.

Again, suppose that the thoracic duct becomes blocked partially or wholly at its upper end, then, again, the lymph stream may travel in the opposite direction to its normal flow, so that in this way also the lower abdominal glands and even the inguinal glands may become affected

since the lymph will attempt to get an entrance into the great veins by means of anastomotic channels.

Next, let us suppose that the infective material travels by way of the portal vein. In this case it, of course, reaches the liver and sets up secondary cancer in that organ. How now is the disease further disseminated? As already pointed out, it may go still further by direct extension to surrounding parts—diaphragm, etc.—or it may go via the hepatic vein, thus reaching the general circulation. The third method of dissemination is, however, the most important — namely, that by the lymphatics. Now, if infective material gains entrance into the lymphatics of the liver, it may proceed further by various channels, according to the part of the liver involved:

(*a*) It may go to the hepatic glands, thence to the coeliac glands and thoracic duct, and its further course is determined by the conditions already mentioned.

(*b*) It may (see Diagram 2) possibly travel by way of the gastric glands.

(*c*) It may go downwards to the deep glands of the anterior abdominal wall, and from here it may travel (1) to the external iliac glands, and thence via abdominal glands to the thoracic duct; (2) by anastomoses it may go deeply to the sternal glands, or superficially upwards or downwards (see Diagram 2).

(*d*) It may go to various groups of intrathoracic glands (see Diagram 2).

From the above it will be seen that the liver is largely responsible for much of the dissemination of cancerous disease of the stomach.

Another way of putting the above points is as follows: How do the lymphatic glands in different parts become infected?

In over one-third of the cases analysed by Welch secondary growths were found in the lymphatic glands. It is, of course, obvious why the gastric glands and the coeliac glands should be infected, but it is not so easy to understand why other glands should be affected (lower preaortic, iliac, inguinal, glands of deep abdominal wall, glands in the chest, clavicular glands, axillary glands).

(1) How do the deep abdominal glands below the level of the coeliac glands (lower preaortic, iliac, etc.) become involved? These glands must, when diseased, be affected against the normal flow of the lymph stream. Infective material can practically only reach these glands in two ways—either by the lymph stream running downwards to get to the lymphatic circulation by anastomotic channels on account of partial or complete blocking of the thoracic duct or by a direct extension of growth downwards along the walls of the lymphatic vessels. Other possible modes of infection are secondary involvement of the liver followed by infection proceeding downwards along the abdominal wall and hence per external iliac glands upwards (see diagram), or embolic infection of certain organs (kidney, intestine, etc.) with subsequent lymphatic infection.

Infective material may reach the inguinal glands from the deep abdominal glands (see above) either by extension or by backward flow, or it may reach them from the liver and the anastomoses in the anterior abdominal walls. Another possible mode of involvement of these glands and of the deep abdominal walls is per backward flow in the portal vein (due to obstruction).

(2) Infective material travelling upwards in the thoracic duct does not go by way of the supraclavicular glands (see diagram) In order to explain the infection of these glands, we must suppose either that they are involved per extension of growth along the thoracic duct and the lower end of the internal jugular lymphatic trunk, or else that infective material travelling up the thoracic duct may be regurgitated into them either from expiratory efforts or from a condition of more or less blocking of the upper end of the thoracic duct. Both these explanations may be true, but I think that the former is the more probable, since the thoracic duct is far more frequently involved in malignant disease than is generally supposed. Another possible method of infection is by the anastomoses along the abdominal and chest walls by way of the axillary glands (see diagram). Of course the infective material may reach the thoracic duct by way of diseased chest glands (see diagram).

The very rare involvement of the right supraclavicular glands is accounted for by the only possible method of infection being from the mediastinal glands, etc., on the right side, secondary to hepatic cancer (see Diagram 1).

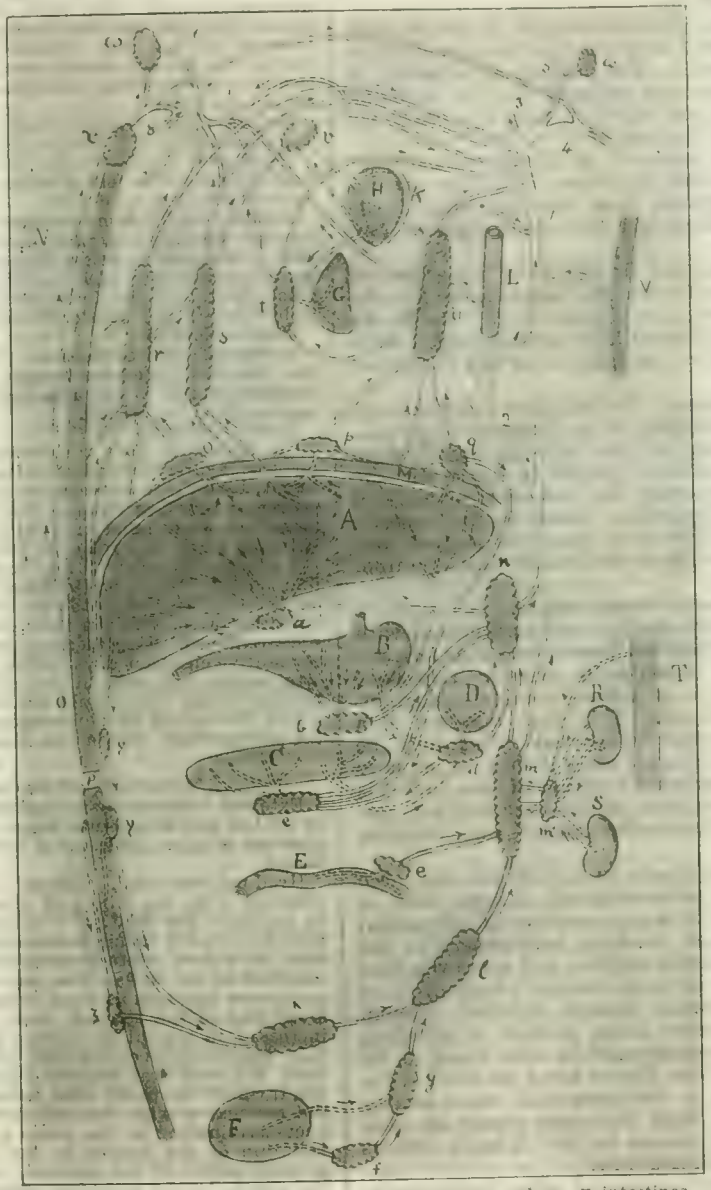


Diagram 2.—A, Liver; B, stomach; C, pancreas; D, spleen; E, intestines (except rectum); F, pelvic viscera (bladder, rectum, uterus); G, lungs; H, heart; K, pericardium; L, oesophagus; M, diaphragm; N, chest wall; O, abdominal wall; P, umbilicus; R, kidney; S, testicle or ovary; T, posterior abdominal wall; V, posterior thoracic wall; *a*, hepatic glands; *b*, gastric glands; *c*, pancreatic glands; *d*, splenic glands; *e*, intestinal glands (superior mesenteric, ileo-caecal, colic, inferior mesenteric); *f*, pelvic glands; *g*, internal iliac glands; *k*, external iliac glands; *l*, common iliac glands; *m*, preaortic glands; *m'*, lateral aortic glands; *n*, coeliac glands; *o*, anterior diaphragmatic glands; *p*, middle diaphragmatic glands; *q*, posterior diaphragmatic glands; *r*, sternal glands; *s*, anterior mediastinal glands; *t*, middle mediastinal glands; *u*, posterior mediastinal glands; *v*, superior mediastinal glands; *w*, supraclavicular glands; *x*, axillary glands; *y*, glands of deep abdominal wall; *z*, inguinal glands; 1, thoracic duct; 2, descending thoracic lymphatic trunk; 3, ending of thoracic duct; 4, subclavian lymphatic trunk (left); 5, jugular lymphatic trunk (left); 6, jugular lymphatic trunk (right); 7, right lymphatic trunk; 8, subclavian lymphatic trunk (right). This diagram also illustrates how the lymphatic glands in the chest empty their lymph into the thoracic duct or into the right lymphatic duct according to whether they are situated on the left or on the right side.

It is fairly obvious that the thoracic duct must, in most cases, carry in one or other way the infection to the supraclavicular glands.

(3) Why are certain abdominal organs so frequently affected—peritoneum, liver, spleen, pancreas?

The peritoneum and omentum are affected by direct extension or by an infection per the subserous lymphatic anastomoses.

The liver (see Diagram 2).

The pancreas: From Welch's analysis it will be seen that this organ is affected in about 8 per cent. of all cases of cancer of the stomach. The anatomical relations of the stomach to the pancreas explains this as occurring from direct extension, and infection may also occur via the splenic glands (see Diagram 2).

The spleen may be infected by direct extension or by arterial embolism, and, moreover, it is to be remembered that the lymphatics from the left end of the stomach empty themselves via the splenic glands (see Diagram 2).

The most obvious manner in which the lungs become involved is by embolic infection, the material reaching the general circulation through the thoracic duct. The pleura or lungs may also be infected from the liver, and thence through the diaphragm or the glands in the chest (see Diagram 2).

The method of infection of the sternal and mediastinal lymphatic glands is illustrated in the diagram.

The mode of infection of the walls of the chest or abdomen and of the axillary glands is shown in the diagram, always remembering that infection may travel along the walls of the lymphatic vessels in the opposite direction to the normal flow of the lymph stream, and also that the flow may probably be diverted in direction from slight causes.

CONCLUDING OBSERVATIONS.

There are certain interesting points in connexion with this subject which may be shortly enumerated as follows:

1. The thoracic duct undoubtedly plays an important rôle in the dissemination of intra-abdominal malignant disease and of tuberculosis. This duct may act as a "simple carrier" of infective material or it may be directly involved, and in some cases it may be actually obstructed. In connexion with blocking of this duct it is very remarkable that chylous ascites is so rare and also that dilatation of other lymphatic channels can so seldom be demonstrated.

2. The supraclavicular glands on the left side are more frequently involved in intra-malignant disease than is generally supposed, and in many cases careful percussion will show the presence of glandular enlargement in the clavicular and infraclavicular regions, and may even thus give a clue to the nature of the abdominal affection. It is possible that these glands become infected through "regurgitation," but a more likely method of infection, and one which can be demonstrated in some cases, is by direct communication of the disease along the walls of the thoracic duct, extending to the lymphatic vessel coming from these glands. The right clavicular glands are very seldom involved, and the reason for this is fairly obvious on studying the lymphatic anatomy.

3. The possible mode of infection of other parts—chest, liver, inguinal glands, abdominal wall, etc. have been discussed.

4. It is probable that many cases of so called primary mediastinal growths may really be of secondary origin, since it is well known that cancerous disease, especially of the stomach, may be very "latent," and, moreover, a small growth of the stomach, though it has been the cause of marked secondary growths, may even be overlooked at the autopsy unless especial care be taken.

Although I am fully aware that this paper is open, in many respects, to considerable criticism, I hope that it will at least stimulate research on the lines which I have indicated. My observations on this subject will, I trust, show the importance of careful percussion of the left clavicular and infraclavicular regions in cases of doubtful intra-abdominal malignant disease, and also the importance of an examination of the thoracic duct at autopsies.

Case Reported by H. A. [illegible], M.B.Lond., [illegible]

[illegible]

D. D., male, aged 41, occupation collier. Admitted to the Cardiff Infirmary on December 23rd, 1905, under the care of Mr. William Sheen.

CLINICAL ABSTRACT OF CASE.

History of the Present Condition.—In February, 1905, the patient began to suffer from pain after food and vomiting; he was treated for indigestion without success, steadily losing flesh up to the time of admission.

On December 17th, a week before he came to the infirmary, he began to suffer from pain over the upper part of the left side of the chest, and over the left shoulder. A vein over the front of the left arm became swollen and cord-like and the region over the left side of the chest and left shoulder became swollen, the swelling subsequently extending down the left arm to the wrist.

On Admission.—Patient looks thin and ill. Tongue furred. Temperature, 98° F. Weight, 8st. 10½lb.

Head and Neck.—Pupils equal. No trace of enlarged or tender glands to be felt on either side. No enlargement of the veins of the neck.

Arms.—The left arm is uniformly swollen down to the wrist, the skin showing here and there purple patches of discoloration. Seven inches below the acromion process the right arm has a circumference of 9½ in., while the left is 11½ in.; at the elbow joint, with the forearms flexed at 35°, the figure for the right side is 9½ in., and for the left 10½ in.

Chest.—Normal.

Abdomen.—No distension. On palpation a tender lump the size of a Tangerine orange can be felt to the left of the epigastrium; it is not attached to the abdominal wall, and appears fixed in position.

Urine.—Normal.

On December 27th the stomach contents were examined for free hydrochloric acid, after a test meal, and this was found absent. On January 5th, 1906, Mr. W. Sheen performed an exploratory laparotomy. The walls of the stomach and the omentum were found infiltrated with a hard growth. An enlarged gland was removed from the gastro-colic omentum for microscopic examination, and the abdominal incision was then closed. Acting on the suggestion of Dr. Mitchell Stevens, an incision was then made over the left supraclavicular fossa, the deep fascia was cut through, and several enlarged glands were removed. This incision healed by first intention. Subsequently, eighteen days before the death of the patient, the area around the scar in the neck became swollen, and was incised; some milky fluid was evacuated, and a sinus formed which discharged large quantities of chyle until a day before the patient died. Death took place on February 23rd, 1906.

Abstract of Post-mortem Examination.

External appearances:—Marked emaciation; sinus situated in the left supraclavicular fossa, which admits a probe for a distance of 2½ in. The scar of the abdominal incision is firmly healed.

Head not examined. Thorax:—The thoracic contents were removed with the whole of the abdominal contents, so as to maintain the relation of parts to the thoracic duct. The duct was readily found extending from the abdomen to the neck as a firm white structure with irregular enlargements attached to its walls. The abdominal lymphatics over the aorta were fused into a mass, enlarged, and were affixed to the lower end of the thoracic duct. The duct was considerably increased in size at its passage through the diaphragm, and then continued its course with variations in its circumference until the neck was reached. Here it ended in an enlargement, which was partly fixed to the lower part of the thyroid. The connexion with the subclavian vein did not exist, the duct terminating in the sinus already mentioned. The distribution of the growth in the abdomen, apart from the primary cancer of the stomach, was mainly lymphatic. All the glands in the abdomen were enlarged, including those extending over the brim of the pelvis. The liver showed no secondary deposits in its substance, but on its surface a few small plaques of growth were visible. The under surface of the diaphragm was covered with a large number of small nodules of cancer.

The lungs showed no secondary deposits.

Microscopically the primary focus in the stomach showed an adeno-carcinomatous type of growth, the enlarged abdominal glands, thoracic duct wall, and supraclavicular glands reproducing the original arrangement, the only difference being that in the thoracic duct wall the stroma was less well developed.

While reporting these cases of cancerous infection of the thoracic duct to which Weigert originally drew attention, it is not without interest to record that recently I found in the *post mortem* examination of a case of tuberculous peritonitis in a child that the only secondary infection discovered was a tuberculous enlargement of the glands in the left supraclavicular region, the lungs and bronchial glands being to all appearances normal.

Other emphasizes the importance of enlarged cervical glands associated with disease of the corresponding apex of the lung with latency of the pulmonary lesions.

REFERENCES.

[illegible] Ibid, 1896. [illegible] *Trans. Path. Soc.* [illegible] *Principles and Practice of Medicine*, p. 522

ON THE TEMPERATURE IN MALIGNANT DISEASE OF THE LIVER AND BILE PASSAGES.

By JAMES W. RUSSELL, M.A., M.D.Cantab., F.R.C.P.Lond.,
ASSISTANT PHYSICIAN TO THE BIRMINGHAM GENERAL HOSPITAL.

This paper is the outcome of an attempt to estimate the clinical value of the temperature chart in the diagnosis of some of the more obscure cases of hepatic and biliary disease, those, namely, in which the diagnosis lies between malignant disease, gall stones, and suppuration, either alone or in various combinations, and in which the decision for or against operation depends upon the exclusion or otherwise of malignant disease. In these cases pyrexia is generally a more or less prominent feature, and, to judge by the records on which the paper is based, as well as by my own experience, its presence not infrequently leads to the performance of operation in cases of malignant disease. The difficulty in diagnosis is, of course, increased by the close connexion of the three named conditions, and by the frequency with which they occur in combination.

The cases here analysed include all the instances of hepatic or biliary malignant disease admitted into the medical wards of the Birmingham General Hospital during the past twenty years, with the exception of those in which some complication has existed which would be likely in itself to give rise to pyrexia. I am indebted to the honorary physicians of the hospital for permission to make use of their case-books.

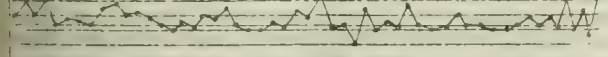
The cases of malignant disease are 52 in number, and in 13 the growth certainly arose from the gall bladder or bile ducts. Five cases were proved by *post-mortem* examination to be sarcomatous, and 4 others were believed to be of the same nature, but there is nothing in the temperature charts to make it necessary to distinguish them from the cases of carcinoma. Twenty-one of the patients left the hospital before death took place, and the diagnosis is here mostly a matter of opinion; but 3 patients previously underwent operation by which the nature of the case was established.

Malignant Disease of the Liver.

Fourteen, or 33.9 per cent., of the cases of uncomplicated malignant disease of the liver showed no abnormality of temperature beyond a tendency to drop below the normal level. This group includes 6 fatal cases.

The remaining 25, or 64.1 per cent., show some degree of pyrexia. In 15 the departure from the normal is not very great, the type being one of slight irregularity with occasional rises to 99°, 100°, or 100.4°, illustrated in Chart II* (Chart I and certain others of the series have

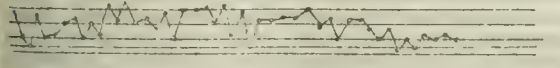
II.



been omitted in order to save space). This group includes 7 fatal cases, and, as a rule, the temperature remained of the same description to the end, only twice becoming subnormal before death.

The third group, illustrated by Chart III, taken from a

III.

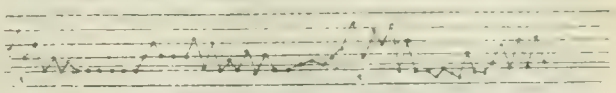


fatal case of carcinoma, contains 3 cases, and shows merely an exaggeration of the preceding type, the evening rise often extending above 101°. The temperature is more or less continuous, though very irregular, and rarely falls below the normal.

The fourth and last group contains 7 cases, and is illustrated in Charts IV to VIII. These cases not only show excursions of considerable magnitude, but most of them also a curious tendency towards alternations of periods of pyrexia and apyrexia, or periods of higher with lower temperature. Chart IV is merely a moderate

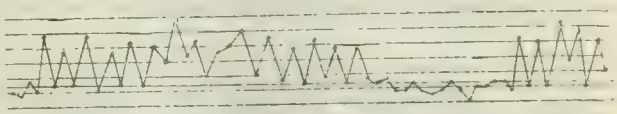
* The normal level is marked by an additional line on each of the charts.

IV.



instance of this type. Chart V shows the same type in a more marked form, with considerable excursions, reaching once to 103°. It is taken from a fatal and uncomplicated

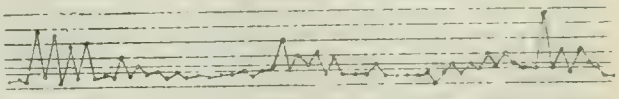
V.



case of sarcoma, in which there was a large growth in the right lobe of the liver. The gall bladder was normal, and contained unaltered bile.

Chart VI shows a series of short periods of pyrexia,

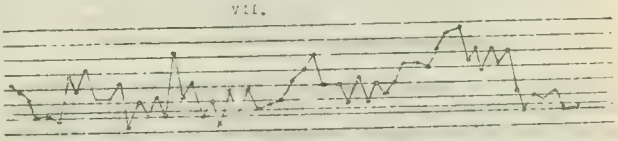
VI.



alternating with more prolonged apyrexial intervals. Only a small part of the chart is reproduced in the diagram, and the longest apyrexial intervals are not represented. The case ended fatally, and death was preceded by a longer period of intermittent temperature with low evening readings, but I have been unable to find the notes of the *post-mortem* examination.

Chart VII shows a very irregular temperature, yet there

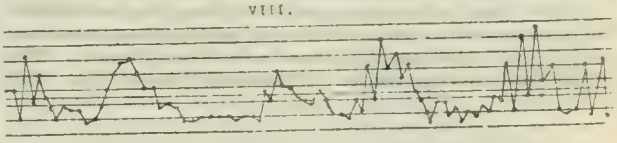
VII.



is some little tendency towards alternations of periods of higher and lower temperature, though the lower periods do not reach the normal level. It is taken from a case in which after death two hydatid cysts were found in the liver, as well as numerous sarcomatous growths in the liver, spleen, pancreas, and kidneys. The case is therefore not an uncomplicated instance of growth, and it is impossible to say to what extent the pyrexia is to be attributed to the presence of the cysts.

Chart VIII is a striking example of the regularity

VIII.



which may be presented in the alternations. It is part of the chart of a fatal case of carcinoma in which the liver was studded with nodules of growth, the primary focus being situated in the sigmoid flexure and presenting a necrotic centre. I may add that in all but one of these cases with alternating temperature, jaundice was absent, whilst in the single exception it was very slightly marked.

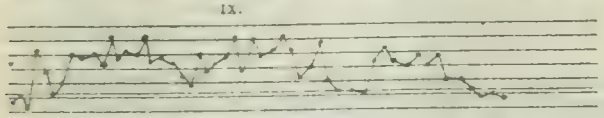
Carcinoma of Gall Bladder and Bile Ducts.

Of the 13 cases in which the growth arose from some part of the bile passages, 3, or 23.1 per cent., presented a normal temperature chart. Two of these ended fatally. In both, the gall bladder was involved in growth, and in 1 three stones were present and a perforation had occurred into a localized cavity.

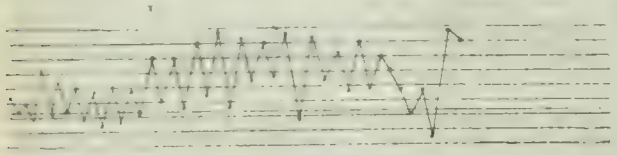
The remaining 10 cases show abnormalities of temperature. Five ended in death, and 2 more were submitted to operation, apparently under the impression that they were cases of suppuration. The chief types are shown in Charts IX to XIII, and, in addition, 1 case presented a slight irregularity of temperature comparable to that depicted in Chart II. Three cases showed a more or less

continuous temperature, of which Chart IX, ranging up to 102°, is an example. In this case perforation of the

IX.



gall bladder had again occurred, with the production of general peritonitis, marked on the chart by the final drop in the temperature. Chart X is of particular interest,



first, because it shows large excursions of temperature, rising as high as 104°, and decidedly suggestive of suppuration; and, secondly, because the final rise at the end of the chart was accompanied by a rigor. *Post mortem*, the position of the gall bladder was occupied by an indurated mass of growth, above and below which was an impacted gall stone, and two other stones were present in the hepatic duct. The bile ducts were dilated, but there was no suppuration. The rigor was probably to be associated with the presence of an impacted stone, rather than with the growth, and it is not improbable that the wide range of temperature may depend upon the same explanation.

XI.

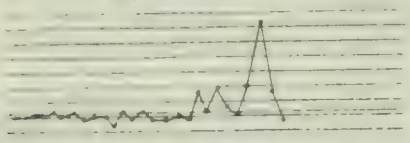
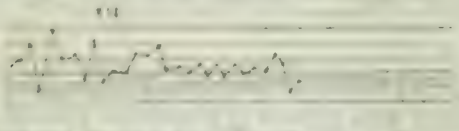


Chart XI is taken from one of two cases which showed a single high excursion. In the case represented by the chart the rise was again accompanied by a rigor; but an exploratory incision showed a liver studded with nodules of growth and no suppuration. The gall bladder was not distended, but it contained a single not impacted stone. The notes are silent as to the occurrence of rigors in the second of the two cases with a single rise of temperature. Here *post mortem* examination showed a mass of growth in the head of the pancreas, dilatation of the gall bladder, and minute secondary growths in the bile ducts, but no stone; and it would therefore appear that the rise of temperature must be attributed to the growth, probably that involving the bile ducts.

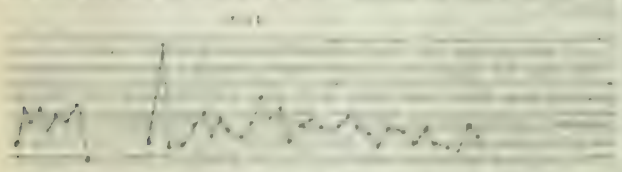
Three cases, either at operation or on the *post-mortem* table, presented a combination of growth and suppuration, and in two instances gall stones were also present. The temperature is represented in Charts XII and XIII. The

XII.



first is taken from a case of gall stones with carcinoma of the gall bladder and pericholecystic abscess. Death occurred five days after operation. The second shown in the former of the two illustrations in Chart XIII is

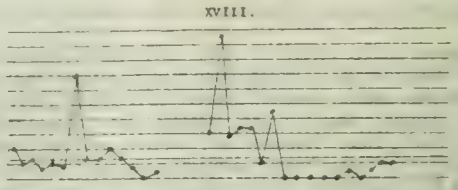
XIII.



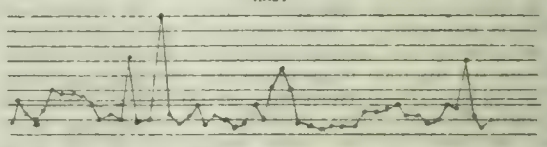
from a case of growth in which the gall bladder contained thick pus, and the temperature is by no means characteristic of suppuration. But in the third case represented in the second of the two illustrations in Chart XIII although there is as a rule but little irregularity, a sudden rise occurred to 103·6°, and this was accompanied by a rigor. The case ended fatally, and *post mortem* the gall bladder contained five large stones and a quantity of thin pus. The cystic duct was obliterated and surrounded by growth.

With the foregoing charts, exhibiting an isolated rise of temperature of considerable range, may be compared those of 3 cases of gall stones depicted in Charts XVIII and XXI. In the two cases represented in Chart XVIII

XVIII.

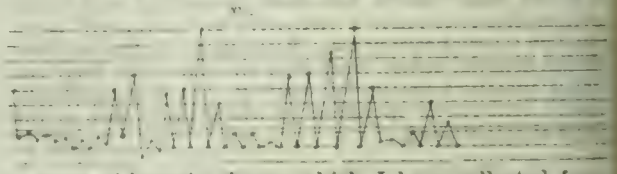


XXI.



the rise was associated with a definite attack of biliary colic, and in Chart XXI the chief excursions were the accompaniments of rigors. This would certainly point to the rise in Chart XI as due to the presence of the stone in the gall bladder; but it must be remembered that a similar rise took place in the second case mentioned in connexion with that chart, in which there were growths in the bile ducts but no calculi. The rise noted in Chart XIII, accompanied by a rigor, might have been due either to the presence of gall stones or to the coexisting suppuration. With these isolated rises of temperature may further be compared the recurrent excursions, often associated with rigors, noted in many cases of hepatic abscess and illustrated in Chart XV; but in none of the

V.



11 cases of hepatic abscess which I have collected from the casebooks was there any example of the single isolated rise observed in connexion with the cases of gall stones and biliary growth.

Conclusions.

The chief results obtained from a study of the charts may be summarized as followed: Nearly two-thirds of the cases of malignant disease of the liver show some degree of pyrexia, at any rate in their later stages. The pyrexia is capable of attaining a considerable height, but rarely shows genuine intermissions, in the sense of subsidence of the morning temperature below the normal level. It is not uncommon to observe successive periods of fever alternating with apyrexial intervals, and sometimes these alternations may occur with great regularity. Rigors do not occur in uncomplicated cases of growth of the liver. Pyrexia seems to occur in a still larger proportion of cases of growth of the gall bladder and bile ducts, being recorded in more than three quarters of the cases investigated. The condition is frequently complicated by the presence of gall stones, and it may be due to this fact that the pyrexia often reaches a greater height, with larger excursions, than is seen in the growth of the liver itself. Rigors apparently only occur when gall stones are present. An isolated high rise of temperature may, however, be observed in growth of the bile ducts in the absence of gall stones, but as a rule such a rise is suggestive of the presence of gall stones. The three cases of combined growth and suppuration do not present anything in the temperature charts to strongly suggest the presence of pus, though one case gave a single high rise of temperature. In hepatic abscess the charts may present little that is characteristic of suppuration, at any rate if observed only for a short time, but where high rises of temperature from a low level are noted these are likely to be repeated at frequent intervals, and thus to contrast with the isolated rises seen in cases of stones or growth. It is possible, however, that the examination of a larger number of cases might not support this statement.

A PAIR OF FORCEPS IN THE ABDOMINAL CAVITY FOR TEN AND A HALF YEARS.

By J. E. FERGUSSON STEWART, M.B., C.M.Glasg.,

MIDLAND JUNCTION, WEST AUSTRALIA.

Mrs. S., aged 40, visiting this town for a change after a long attack of diarrhoea, dating from February, 1906, sent for me on May 4th, as she was not feeling much benefit by the change of air. Her chief complaint was in respect of the condition of her urine, which was ammoniacal. On examination of the abdomen by palpation I detected a very hard substance in the left iliac region, which,



owing to the lax abdominal wall, I could catch between finger and thumb. This procedure caused the patient no discomfort, though pressure on the hard body directly downward (the patient being recumbent) caused acute pain. I succeeded in outlining what I felt no doubt were parts of the rings of the handles of a pair of pressure forceps. The patient stated that she had been operated on [illegible] and a half years previously for an ovarian tumour, and having experienced no benefit from the removal of the tumour had refused all subsequent proposals of operation. The abdominal scar was broad, and suggested that union had not been by first intention, which surmise the patient's statements corroborated.

I told her I believed she had a surgical instrument left in the abdomen, which could not be removed except by operation, and to convince her I suggested the use of the rays.

Dr. P. Seed, of Perth, took sufficient interest to xray the case, and produced a radiograph (taken with the patient standing) which distinctly shows the forceps lying in the pelvis, the handles being directed forwards and upwards.

Operation.—The patient now consented to operation, and on June 6th, 1906, Dr. Seed anaesthetizing her, and Dr. J. M. Stewart, of Guildford, assisting me, I opened the abdomen, raising the scar, to which I found omentum adhering. I found the intestines matted together by adhesions, and the forceps inside the lumen of the bowel. What at first appeared to be a cicatricial band between the rings of the handles kept the forceps in place, and capable only of moving with the portion of the bowel, into which they had got. I incised the gut, and, owing to the patient's condition, had to rather hastily remove the forceps, when I found that the supposed cicatricial band was the point of anastomosis of two loops of bowel which had been caught between the handles of the forceps, and thus caused a "short circuit" between two points, about 12 in. apart. The patient's state being rather unsatisfactory, I only hastily examined the left ovarian region, where I found many adhesions and no trace of an ovary. The uterus had a couple of small fibroids on its posterior aspect. I unfortunately had not time to examine the ureters carefully, but the bladder appeared uninjured. The bowel incision was closed with catgut, the "short circuit" being left alone, and after removing that part of the omentum which had adhered to the wound, I closed the abdomen. Recovery was uneventful, a slight rise in temperature on the fifth day being due apparently to recurrence of cystitis, and easily got rid of by resuming urotropin, and so improving the condition of the urine.

Remarks.

The accompanying photograph of the forceps (actual size) shows their length to be nearly 5 in. and the width across the handles about 2 in. That the forceps should have attained the position in which they were found without causing death is extraordinary.

Though the patient's health had been wretched during these years, and a large part of this time spent in bed, it is worthy of notice that she had occasionally felt well enough to participate in dances! Her chief symptoms during these years were: Sudden acute pain, sometimes causing her to faint; constipation alternating with diarrhoea, and pains in the lower limbs, which prevented her getting about.

She has only been pregnant once, and that ended in miscarriage at five months, and was before the operation on the ovary. After the operation, though menstruation was regular, she never became pregnant.

She suffers from strabismus, the left eye being affected, which she herself associates with the operation ten and a half years ago, but whether it will disappear or not now the forceps have been removed remains to be seen.

No doubt the reason of the forceps having escaped the notice of her previous medical attendants (and she had many) is that formerly she was much stouter than she is now. The last attack of diarrhoea is the most severe she has had, and was accompanied by haemorrhage. I have reason to believe that no record of the former operation can be found in the books of the hospital where it was performed.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

SCARLATINIFORM RASH AFTER BURN.

The following case, which has recently been under my care, is of interest, as Dr. MacCombie, in his address on scarlet fever which appeared in the British Medical Journal of December 22nd, 1906, states that "Punctate scarlatiniform rashes (following burns) without attendant throat and tongue signs of scarlet fever may be, but probably are not, scarlet fever unless they be followed by the typical general pinhole desquamation, which, if it be general, is, I think, characteristic of scarlet fever."

On November 23rd, 1906, a boy received a large superficial burn involving the left shoulder and the whole of the left arm as far as the wrist. Four days later a bright red punctate erythema made its appearance and spread over the whole body; this gradually faded away, but persisted on certain parts of the body for as long as twelve days, at the end of which time it had entirely disappeared.

Six days after the appearance of the rash desquamation, which was typically pinpoint, commenced on the front of the chest and on the limbs, and subsequently became general as the rash disappeared. There was also at this time some slight superficial ulceration of the buccal mucous membrane.

During the whole of this period there were no general symptoms, the child stating that he felt quite well. There was no sore throat, the highest temperature recorded was 101°, and that on the fourteenth day of the illness, the tongue did not peel, and the urine contained no albumen. The patient made an uninterrupted recovery.

In this case the rash and subsequent desquamation were characteristic, but at the same time I do not think that it was a case of scarlet fever for the following reasons:

1. Absence of fever and general initial symptoms.
2. The rash appeared when suppuration had commenced in the area that had been injured, and persisted so long as septic absorption was taking place.
3. During the whole course of the illness no attempt

was made to isolate the child, there were three other children living and sleeping in the same apartments, and none of these have, either at the time or subsequently, become infected.

London Hospital. SIMONDS GOODING, M.B., B.C.Cantab.

THE INCUBATION OF SCARLET FEVER.

DR. LYNN JENKINS'S note on this subject in the BRITISH MEDICAL JOURNAL of January 26th, p. 199, raises a question of great importance to those concerned in matters of quarantine, especially if his observations go to prove that the incubation of scarlet fever may take as long as he says. I think his deduction is not quite proved, but own that the wish is father to the thought. The unconvincing part of his evidence is that his thirteen cases were all continuously exposed to contagion until they sickened. Had they been taken from their infectious environment as soon as the diagnosis of their illness was doubtful, disinfected, placed in a safeguarded observation ward, and then, after a lapse of three or four weeks, developed scarlet fever, there could have been no hesitation in accepting his modification of the generally taught period of ten days. The uniformity with which his thirteen cases took over three weeks to develop is remarkable, but one could not argue from this fact that the incubation period is therefore three weeks, because we know that in the majority of cases it does not often reach ten days. It is conceivable that their resistance may have been due to a transient immunity resulting from the febrile disorder which brought about their admission to the isolation hospital. The severe type of fever which they afterwards developed was probably due to the depressing influence of hospital life.

The diagnosis of scarlet fever in its mildest form is so difficult that one often has to look beyond the patient for corroborative evidence. In private practice I have often trusted to the short, definite incubation period as a reliable guide. For example, A. develops an illness like scarlet fever, B. and C., who have not previously had it, have been exposed to the same conditions as A., and also to the contagion from A. If within ten days B. and C. show no signs of the malady then it is a fair assumption that A.'s illness was not scarlet fever. This rule of thumb has often saved a good deal of trouble in households and I have never found it fallacious, but of course I could not venture to rely upon it where a great school was concerned.

If Dr. Lynn Jenkins is correct in his views the vexatious question of quarantine becomes trebly greater.

Uppingham. H. LYON SMITH, M.D.Durh.

Two sisters, aged 7 and 5 years, were admitted to the West Kirby Children's Convalescent Home from The Shelter, Islington Square, Liverpool, on January 1st, 1907. On January 22nd they both developed scarlet fever. There were no other cases in the Home. The sisters occupied adjoining beds in the ward.

I think we may fairly conclude that the disease was contracted in Liverpool at least three weeks before its development in West Kirby. This would go to support Dr. Lynn Jenkins's conclusions.

West Kirby. ADAM MOSS, M.D., B.Ch., R.U.I.

INFLUENZA AND EPISTAXIS.

ON January 9th last I was asked to see a boy aged 11 years.

The history was that on January 5th the patient and his two sisters were taken to witness the Christmas tree festivities of the local school children, many of whom had suffered from influenza. On January 8th the boy complained of headache, and his temperature was found to be 102.6° F. In the evening it had risen to 103.8°. At the time of my visit next morning the temperature was 99°. There was slight coryza accompanied by injection of the fauces, but I could detect nothing wrong in the chest or elsewhere. The patient had been given half a drachm of tr. quin. ammon. on the previous evening, and I ordered a mixture containing that preparation in half drachm doses every four hours. The same evening the temperature was found the patient feeling quite well, but there was an attack of bleeding from the right nostril; it soon ceased, and I merely saw the child in the next morning.

On January 12th I was asked to see the younger sister aged 8 years. The temperature on the previous evening, when she first complained of headache, was 101.2°. At the time of my visit it was 104°; there was no coryza or sore throat and hardly any constitutional disturbance. Fifteen-minim doses of tr. quin. ammon. were given in a mixture every four hours. When I saw the patient on the following morning the temperature was normal, but whilst I was present she had slight epistaxis from the right nostril. There was no further rise of temperature, and she was allowed up the next day.

On January 22nd I attended the elder sister, aged 9 years. In the morning inability to take breakfast, associated with malaise—chiefly frontal headache—resulted in the thermometer again being brought into action, and a temperature of 102.6° was recorded. When I saw her the same evening there was a fall to 101.2° F., and the next morning at the time of my visit it was 98.8°. Half an hour previously there had been a sharp attack of epistaxis from the left nostril. The temperature was normal by the evening, and remained so. This patient was also given tr. quin. ammon. in 45-minim doses every four hours.

The interest in these cases is that in each a slight attack of influenza was accompanied by epistaxis, varying in direct proportion to the apparent strength of the invasion and occurring at the time of the return of the temperature to normal. Not one of the children remembered a previous attack, and their mother confirmed this.

Does this point to a localized invasion of the nasal mucous membrane, or was it an idosyncrasy manifested by the administration of quinine? Dr. Osler states that epistaxis occasionally occurs during an attack of influenza. Dr. Hale White in his *Materia Medica* mentions that it may be a symptom of cinchonism, but there were no other signs of such a condition in any of the patients, and in no case were more than five doses taken before epistaxis occurred.

Goring-on-Thames. H. SWARBRICK BROWN.

SOME COMPLICATIONS OF OVARIAN CYST.

THE following cases met with in the course of general practice exemplify two of the accidents which may occur in an ovarian cyst, hitherto unsuspected, to make itself known suddenly. In both cases the women believed themselves to be pregnant, neither suspected in the least the presence of a tumour, and in neither instance was the case one of much urgency:

1. A healthy married woman, aged 32, while attempting to lift a heavy box, "felt something give way inside," and was seized with severe pain in the lower part of the abdomen. When seen the following day the pain had moderated and though constant was not severe; the abdomen was distended but soft, and intestinal movements were visible. There was no vomiting, and the condition of the patient was good. There was obvious pregnancy of about four months' standing. Temporary measures were adopted and the patient carefully watched for three days. On the fourth day, as pain persisted, the abdominal distension was increasing, and there was much eructation of offensive gas, the abdomen was opened below the umbilicus. The small intestine was found very distended, and the cause of the trouble—a unilocular cyst of the left ovary, nearly black in colour, with a twisted pedicle—was quickly discovered and removed, the patient making a good recovery.

2. A rather anæmic young woman, aged 28, who had never had any serious illness and had led an active life, was, while hurrying along the street, seized with severe abdominal pain and vomited. She was taken to a friend's house, put to bed and hot fomentations applied. When seen, two hours later, the pain, confined to the lower part of the abdomen and the middle line, was still severe, the lower part of the abdomen was obviously distended and so extremely rigid that nothing definite could be made out. The history was that during the last two months she had noticed the abdomen getting larger and had been obliged to let out her clothes. On examination there was no evidence of pregnancy, but a large hard mass was found blocking up the pelvis. After a few days of rest, fomentations, and enemata, the pain subsided, but there was still much resistance in the lower part of the abdominal wall and an increasing amount of free peritoneal fluid was evident. Finally, after some seventeen days, the patient's consent to exploratory operation was at last obtained. On opening the abdomen more than a gallon of straw-coloured peritoneal fluid escaped, and a large multilocular adenoma of the right ovary was found and removed. It was evidently leakage of cystic contents [illegible] that had given rise to the bulging [illegible]. The patient made an uninterrupted recovery.

G. A. CLARKSON, F.R.C.S.I.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROYAL NAVAL HOSPITAL, CHATHAM.[1]

CHOLECYSTOTOMY: CHOLECYSTECTOMY: CHOLEDOCHOTOMY.

(By Staff Surgeon F. J. A. Dalton.)

The patient, in this case a man aged 33, had during the last three years suffered altogether from four attacks of colic—the first attack three years ago, the second eight months ago, the third ten days ago, and the fourth four days before admission. On admission on October 9th, 1905, his temperature was 100.6° F., and he complained of severe paroxysmal pain in the upper part of the abdomen, which had commenced two hours before. The liver dullness was slightly enlarged downwards; there was no jaundice and no bile in the urine. No distension of the abdomen; some muscle rigidity, and a lightly-furred tongue, and some retching, but no vomiting.

Progress.—The next day (October 10th) the patient felt much better; the pain and retching had gone, and the bowels had opened freely after calomel. There was slight conjunctival jaundice, and the liver was enlarged, about 1 in. upwards and 2 in. downwards, and tender on firm pressure. Bile appeared in the urine next day, but all symptoms cleared up, and nothing happened for a week, when, on October 17th, he had another severe attack. Pain continued, with intermissions, all next day (October 18th), gradually getting worse; bile present in urine; temperature at 5 p.m. 103.6° F., pulse 84, and respirations 40. At 7 p.m. the patient consented to operation, and was transferred to the surgical section.

Cholecystotomy.—The following day cholecystotomy was performed under A.C.E. through a vertical incision from the ninth costal cartilage to the level of the umbilicus, a much-distended gall-bladder being at once found, and a quantity of clear pale green mucus drawn off by cannula; towards the end there came about 3jss of pus, which was found later to contain a pure culture of *B. coli*. Then fifteen faceted gall stones were removed, and the cystic duct and common bile duct were both examined, and no further stones detected.

The patient made an excellent recovery, the wound healing by first intention, and the temperature remaining normal. No further attacks of colic occurred, but during the next two months mucus and bile continued to be discharged through the drain opening, though the gall bladder was washed out with various astringents. From this discharge the *Bacillus coli* could always be grown. So on December 14th, at the request of my colleague, Staff Surgeon Reid, the case was handed over to his care to see if the discharge could be stopped and the sinus closed by inoculating the patient with *Bacillus coli* grown from his own mucus. At first this seemed likely to be successful, but after two more months the sinus still remained open. It was decided to remove the gall bladder.

Cholecystectomy.—On February 13th, 1906, patient being under A.C.E., the old incision was reopened and lengthened by inward curve at its upper end (Mayo Robson's incision). The gall bladder was found very adherent, especially at its neck. In trying to free the enlarged and thickened cystic, hepatic, and common ducts two small stones could be felt, one in the hepatic and the other in the common duct; both of them, on attempts being made to fix them at the junction of the cystic duct, slipped easily down into the duodenum. No others could be felt, and the cholecystectomy was then completed. The patient suffered no shock from the operation, but apparently the very considerable handling of the ducts during the operation must have discharged fresh gall stones, as, forty hours after the operation, the patient had a very typical attack of gall-stone colic again. Pulse were repeated on the three following days. During the attack the temperature would run up to 101° F. or 102° F., but fell back to normal after it was over and an injection of morphine had been given.

Choledochotomy.—On the fourth day, or a week after the preceding operation, the patient was again placed under the influence of A.C.E., and the whole length of wound opened up again. The common and hepatic ducts were carefully freed and brought well up in wound. The common duct was opened at the site of the stump of the cystic duct, and a probe passed up hepatic duct first, and a very thorough and careful examination of this duct made with finger and probe, but no stone found. Probe was next passed down common duct into duodenum and no stone could be felt, but on handling duodenum a hard lump could be felt at the posterior surface of the duodenum, and with some difficulty the probe down the common duct was made to touch a stone. This was removed with a scoop, and then another could be felt in a sort of sacculus, and was removed with much difficulty by means of a pair of fine curved and toothed forceps. Another careful examination of the common and hepatic ducts was made with finger and probe, and no more stones could be felt. A fine rubber drainage tube was next stitched into the hepatic duct, and a large split drainage tube with gauze wick was passed down below the site of the opening in the common duct. The wound was then carefully united throughout, except at site where tubes emerged.

Result.—For five days after the operation a large quantity of very thick bile, which felt between the fingers like brickdust, was passed by the drainage tube in the hepatic duct; then normal bile was passed, and on February 25th the tube in the hepatic duct was removed. The wound was then packed with gauze and slowly closed up, being finally closed up and the patient cured on April 10th. After this last operation the patient had no more signs of colic and put on weight at the rate of from 4 lb. to 6 lb. a week.

Remarks.—The two stones removed at the last operation from the ampulla of Vater were quite different in character to the fifteen stones removed from the gall bladder at the first operation. The latter were the usual soft olive-green gall stones, but the former were whitish-grey in colour, and of very hard consistence. These two I should imagine were of much older origin, and having got wedged in a sort of pouch in the duodenum near the entrance of the common duct, probably had caused no trouble, and had interfered in no way with the passage of bile along the common duct until dislodged by all the handling at the cholecystectomy operation. The common duct was enormously thickened and enlarged, allowing the little finger to pass along it as far as the duodenal wall, and it was very hard to make the probe touch the upper of these two stones, whereas it passed easily into the duodenum, without giving any sensation of the presence of a stone.

The temperature chart of the case was interesting, as it showed how little constitutional disturbance the patient suffered from these rather lengthy operations. The irregularity of the chart between the operations of cholecystectomy and choledochotomy was entirely due to the attacks of colic; jumping up during an attack, the temperature fell two or three hours afterwards to normal, thus negativing any idea of suppuration having taken place. The patient, since his discharge, at the time of reporting has experienced no discomfort whatever, and been perfectly well.

[1] Received from the Medical Director-General of the Royal Navy.

LIVERPOOL WORKHOUSE HOSPITAL.

FOREIGN BODY IN LUNG.

(Reported by J. T. Moore, House-Surgeon.)

The patient in this case, a bookbinder's assistant, aged 16, was admitted under Dr. W. Alexander on April 18th, 1906. His complaint was of pain in the right side and of difficulty in breathing. This was ascribed to the accidental swallowing of a castor oil nut which he had been chewing. Immediately after swallowing the nut he was seized with a fit of coughing, and the pain in his right side became so bad that he had to leave his work and go home to bed. He stayed at home three days and then came into hospital.

State on Admission.—An area of dullness over which there was fine crepitation was found on the right side in the fifth interspace of the anterior axillary line.

Progress.—He was kept in bed, and for the next ten days the temperature ran an irregular course, down in the morning, gradually rising during the day, and reaching in the evening about 103° F. Dyspnoea continued and complaint of pain was made. On April 28th, however, the temperature did not rise as usual and the pain and dyspnoea began to disappear and the dullness to clear up. Hence six days later he was allowed to be out of bed.

Result.—Next day he had a severe attack of coughing and during its progress coughed up the husk of a castor oil nut. It had a little of the kernel attached, and the whole body was macerated and soft and in size resembling a pea. It was accompanied by a small quantity of pus. After this his recovery was rapid, and on May 15th he was discharged perfectly well.

The late Miss Lucy Cohen, of Brighton, whose will has now been proved, left £1,000 to the Middlesex Hospital (for the cancer wards), £500 each to the Hospital for Sick Children, Great Ormond Street, and the Ventnor Cottage Hospital, £250 to the London Hospital, and £200 to the Brompton Hospital for Consumption.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

ULSTER BRANCH.

At a meeting held on January 30th, Dr. ST. GEORGE in the chair, Mr. FULLERTON read notes of a case of severe gastric pain due to extensive perigastric adhesions successfully treated by gastro-enterostomy, and showed the patient. Dr. DARLING (Lurgan) read notes of a case of suppuration of the frontal sinus, and showed an enormous mass of polypi removed from the greatly dilated nasal cavity as well as from the frontal cells. Dr. CECIL SHAW showed a series of patients suffering from perforating wounds of the eyeball, and made some remarks on the comparative risks of sympathetic ophthalmia supervening in the different cases, and on the prognosis as regarded vision. Two of his cases had recovered from apparently almost hopeless wounds of the globe, and he urged the desirability of giving these cases every chance and not enucleating the eye in too great a hurry. Dr. LAWLESS (Armagh) described a case of dislocation of the humerus in a lunatic, which was mistaken for a fracture of the surgical neck, and showed the specimen. Mr. HANNA showed an improved Sachs's lamp, and demonstrated its use. Sir JOHN BYERS read a short communication on the indications for emptying the uterus for the pernicious vomiting of pregnancy. He said of the cases of vomiting of pregnancy that might be called severe or pernicious there were two types: First, the neurotic or hysterical, to which special attention had been drawn in 1890 by Kaltenbach; and secondly, what was now styled the toxaemic, in reference to which Matthews Duncan in 1879 made a very happy suggestion in thinking that some of them were examples of the early stage of acute yellow atrophy of the liver. Recent views seemed to indicate that there were marked pathological changes in the liver in these cases, entirely absent in the neurotic type; and he wished to bring before the members of the Branch a clinical test which might distinguish these cases, which he first saw pointed out by Professor Whitridge Williams of the Johns Hopkins University. It was the marked increase in the percentage of nitrogen put out as ammonia compared with the total nitrogen of the urine, so that instead of being, say, from 3 to 5 per cent. as normal, it might rise to 16, 32, or 45 per cent. Sir John Byers advised that in all cases of severe vomiting of pregnancy the urine should be examined, and if the ammonia coefficient remained normal (say 3 to 5 per cent.) then no interference was necessary, while if the amount of nitrogen put out as ammonia rose to 10 per cent., it was wiser to empty the uterus. The paper was discussed by Drs. CALWELL and DARLING.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: CARDIFF DIVISION. At a meeting held at the Cardiff Infirmary on January 17th, Dr. D. R. PATERSON, who presided, showed: (1) A patient on whom Killian's frontal sinus operation had been performed; (2) a piece of nutshell removed from the left bronchus; (3) described a case of difficult decannulement after injury to the larynx. Mr. RHYS GARETTUS showed specimens from two recent cases. (1) Female, aged 42; well nourished. History of abdominal pain and jaundice of some months' duration. Four large stones were removed from the common bile duct and forty five from the gall bladder, which was of fair capacity, with no evidence of induration of walls the ducts all being free. Cystotomy was performed in preference to cystectomy. Recovery uninterrupted. (2) Female, aged 47, small, thin, emaciated, and deeply jaundiced. Exploratory laparotomy revealed carcinoma of the gall bladder, with infiltration of the liver and bile ducts and a large number of stones in the gall bladder. *On post mortem* examination the growth was found limited to a small oval de ssc in the gall bladder, and imbedded in it was a gall stone; microscopic examination showed it to be a glandular carcinoma. The cases formed the basis of an introduction to a discussion on: (*a*) The indications for cystotomy and cystectomy of the gall bladder. (*b*) the origin of carcinoma of the gall bladder. Drs. R. PATERSON, WILLIAM SHORE, W. R. CRAWFORD TEASDALE, and COURTENEY MILWARD took part in the discussion.—Mr. WILLIAM SHEEN described two cases of *Arteria sutura*. The first was one of excision of the wrist by Kocher's dorso-ulnar incision in a man. The radia artery was accidentally cut right across transversely, an its lumen restored by a single layer of interrupted fin silk sutures penetrating all the coats of the artery. In th second case, a man, aged 24, a large hook tore through th femoral artery and vein and adjacent structures, 3 in below the groin. The man was brought to hospital almos dying from loss of blood, but revived with saline infusion Mr. Sheen under an anaesthetic isolated the two divide ends of the femoral artery, cut away the bruised tissue a each end and reunited the artery by two layers of in terrupted silk sutures, the deeper penetrating the intima Carwardine's intestinal clamps were kept on the arter above and below during the process of suturing. The le had to be flexed to bring the two ends into apposition Pulsation was restored in the posterior tibial and continue for some hours, then disappeared, reappearing in a few days The man was shown at the meeting seventeen month after the operation. There was some wasting of the leg good pulsation in popliteal and tibial arteries. Mr. Shee also showed a man, aged 43, on whom seven months pre viously he had performed intracranial neurectomy by th Hartley-Krause method for severe trigeminal neuralgi Lengths of the second and third divisions of the fift nerve, and part of the Gasserian ganglion were remove The usual area of anaesthesia remained, but during th last two months there had been some dull pain referred t the affected area, which was considered to be cerebral i origin. Mr. Sheen also showed a fresh specimen of caecu and appendix with adjacent portions of large and sma intestine removed for malignant disease from a lady age 72. The bowel ends were closed and lateral anastomos between colon and ileum performed. The patient was s far doing well.—Mr. ALEX. BROWNLEE described an "ope method of the administration of ether as employed Chicago," and made reference to numerous cases in whic he had used this method.—Dr. EWEN J. MACLEAN showe a specimen of a large solid ovarian tumour.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

C. A. BALLANCE, M.V.O., M.S., F.R.C.S., President, in th Chair.

Monday, February 4th, 1907.

DIAGNOSIS AND LOCALIZATION OF CEREBRAL TUMOURS. DR. CHARLES E. BEEVOR delivered the first of the thr Lettsomian Lectures on the diagnosis and localization cerebral tumours. He said that for the diagnosis an localization of cerebral tumours they had to depe almost entirely on the effects of the pressure of th tumour on the brain, effects which showed themselv centrally or peripherally. As these effects were chief in the nature of pain, paralysis of action, and loss sensation, it was evident that a large proportion of th symptoms produced were subjective; in other words, th they had to depend on the word of the patient for th symptoms necessary to make their diagnosis. Fortunate there were also some symptoms which could be obtain independently of the patient, such as optic neuriti paralysis of the ocular muscles producing strabismus, a the condition of the reflexes. Three symptoms were ve frequently present in intracranial tumours, irrespective the situation of the tumour; these were headache, vomi ing, and optic neuritis. Headache, if it was always in th same place, was a useful symptom, but what was of mo importance was headache with tenderness to pressure. I many cases there was a general headache which th patient could not localize; and though it was useful, wh taken in conjunction with vomiting and optic neuritis, make a diagnosis of an intracranial tumour, it did n help them to say in what part of the brain the growt was situated. Persistent pain always in the same pla and with tenderness was in favour of the tumour bei superficial and growing from the membranes rather th in the interior of the brain. Vomiting, to be of di gnostic value, must be frequent, every day, or two or thr times a week, and occur irrespective of food. It ofte attended severe attacks of headache, and might be m taken for migraine. Optic neuritis taken in conjun

tion with headache and vomiting was one of the most reliable signs of tumour, though it must be remembered that a particular form of optic neuritis, headache, and vomiting were frequent symptoms in Bright's disease. The neuritis might vary from slight blurring of the edges of the disc to intense swelling of 7 dioptres with haemorrhages; and the important fact first pointed out by Dr. Hughlings Jackson must be kept in mind—that intense optic neuritis was quite compatible with good vision if optic atrophy had not commenced. It was at the present time of the greatest practical importance to make a diagnosis between those tumours which were on or near the surface and could be reached by operation and those which were too deep to be removed. But even in the case of the latter class much relief could often be obtained by removing a large portion of bone and thereby releasing the compressed brain. The first effect of a tumour growing from the membranes and pressing on the cortex was to stimulate the cortex in the same way as a strong faradic current did, and the result was an epileptiform attack, which began in that part of the body whose movements were represented in the region of the cortex which was pressed upon. Although the preservation of consciousness was a distinguishing feature of fits produced by a local coarse lesion, it must be remembered that a fit so produced might begin locally, and then become general, with loss of consciousness, biting of tongue, and involuntary micturition, and was then not to be distinguished from an attack of idiopathic epilepsy. The second effect of a tumour pressing on the excitable cortex was that of permanent paralysis. This was due to destruction of the cortex, with consequent loss of power in the part which was formerly the seat of the commencing spasm of the fits. Particulars were given of some cases of tumours of the ascending frontal convolution in which the attacks all began with a motor spasm, and he furnished details of other cases of tumours in which the motor spasm was preceded by a sensory aura, of tingling, needles and pins, or pain in the part first affected. Dr. Beevor then described 10 cases in which the ascending parietal convolution was involved, and the question which was most important was whether sensation was more affected in these cases than in those of tumour of the ascending frontal convolution. In the first 2 cases the ascending frontal was also affected, along with the upper end of the ascending parietal, and the attacks were attended with severe pains in the arms, but there was no permanent anaesthesia, and in 1 case there was only loss of the sense of position in the right foot. In 4 cases where the ascending parietal was alone involved, in 3 there was hemianaesthesia to light touches, and in 2 of these there was loss of the sense of position and astereognosis. In 2 cases where the ascending parietal and the lower half of the parietal lobe were involved there was a feeling of pins and needles and numbness in the fits, and there was permanent hemianaesthesia or algesia of the affected hand and forearm with impaired tactile sensibility and sense of position, and in 1 case astereognosis. In 1 sensation could not be ascertained. The question arose whether the symptoms of disturbance of sensation enabled them to more accurately localize the tumour. It was difficult to dogmatize, but as far as the observation of these cases went it tended to show that tumours in the ascending parietal, and specially tumours in the inferior part of the parietal lobe were more likely to have fits, beginning with a sensory aura, and to be followed by more extensive and permanent anaesthesia and analgesia, than tumours in the ascending frontal convolution, where the sensory changes were chiefly defective localization and loss of the sense of position in the part which was first affected by the motor spasm in a fit.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

J. M. Redmond, P.R.C.P.I., President, in the Chair.

Friday, January 18th, 1907.

The Treatment of Gastric Ulcer.

Dr. Little briefly referred to the morbid anatomy, causation, and symptoms of gastric ulcer, and dwelt on the paramount importance of rest in bed, on the value of fluid diet, and of various drugs for the relief of pain, the arrest of haemorrhage, and the cure of persistent vomiting, and on the objections to uniting the stomach to the jejunum, and urged the attempt to cure the ulcer by medical means, though, if it failed, he readily invoked surgical assistance.

Sir Charles Ball discussed briefly the cause of non-malignant gastric ulcer, disowning any belief in the self-digestion theory, and laying great stress on the mechanical effect of food passing over an injured spot in keeping an ulcer from healing. He gave his experiences of some 40 cases of gastro-enterostomy, pointing out the success of this treatment in non-malignant ulceration.

Dr. Lindsay (Belfast) said he thought the disease must be decidedly common in the North of Ireland, as he found from the reports of the Royal Victoria Hospital that they had 110 cases in 1905, 70 the previous year, and 69 the year before that. Gastralgia should be diagnosed with caution, and only when ulcer could be fairly excluded. A period of complete rest was very important, with a restricted diet. They should also employ alkalis, and probably bismuth, as well as various remedies for the relief of pain, such as hot fomentations, poultices, flying blisters, opium, and morphine. For an ordinary case he suggested a period of three weeks as an average, but that period might with advantage often be extended. As regards diet, they must bear in mind the constitutional condition of the patients and the necessity for putting them in a favourable condition for promoting healing of the ulcer. In cases of recent haemorrhage he put the patient for a short time on nutrient injections. It was not usually well tolerated for a period of more than a week or ten days. In other cases he had been in the habit of keeping the patient for three weeks at least on milk and strained soups or beef juices. In recent times there had been a considerable revolt in Germany against too strict a dietary. In view of German advocacy, he had lately given himself more liberty, and he had not yet seen a case where such liberty had led to mischief. He had allowed whipped egg, animal jellies, and butter and cream from an early stage of these cases. The amount of pain was an important guide. He mentioned the use of alkalines and bismuth; he was not inclined to think very highly of nitrate of silver, nor was he inclined to favour the washing out of the stomach. In the treatment of haemorrhage he recommended absolute rest, an icebag to the epigastrium, nutrient enemata, but he felt doubtful as to the ordinary astringents. In his experience recovery in a good many cases was not complete, more or less pain and discomfort remaining after food. It was probable that in such cases they were dealing with a partially-healed ulcer, or that adhesions had taken place. He thought the time had then arrived for invoking the aid of surgery.

The discussion was continued by Mr. Mitchell (Belfast) and Dr. Cox.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Priestley Smith, M.Sc., F.R.C.S., President, in the Chair.

Thursday, January 31st, 1907.

Tubercle of Eyeball.

Mr. Simeon Snell (Sheffield) related a case of tubercle filling the eyeball in a boy, aged 12, in which the opsonic index was regularly taken. Before coming under Mr. Snell's care in April, 1906, the boy had been under surgical treatment for tuberculous abscesses in the arm and leg. When he was seen—the sight of the left eye had begun to fail four months before—the left eye was prominent and apparently slightly larger than normal; the conjunctiva was injected, but there was no pain. Vision was lost. The interior of the eye was occupied by a mass of yellowish-grey material on which retinal vessels were seen. Tubercle of the choroid and vitreous was diagnosed. Immediate enucleation was decided against. A little later the eye became inflamed and painful, its tension was raised and its size increased, and the interior became more filled up. Tuberculin injections of $\frac{1}{100}$ mg. were twice given and the opsonic index was regularly taken. The boy greatly benefited, the eye became smaller and the mass in the interior was thought to be caseating. The eye was removed on September 17th, by which time it was no larger than normal. The boy did perfectly well after the operation. Examination of the globe showed it to be tuberculous, but

bacilli were not found. The choroid was the structure the most affected.

RETINITIS PIGMENTOSA.

Mr. SNELL related particulars of a family, several of whom had suffered from nyctalopia as the result of retinitis pigmentosa. The earliest ancestor who suffered was the patient's grandmother. Information was obtained of sixty-three of her descendants extending to the fourth generation. Of sixty-four, twelve were affected with nyctalopia, nine being males and three females. A peculiar feature was that the males had girls affected and boys healthy, and the females had boys affected and girls healthy.

STREPTOCOCCIC INFECTION OF CONJUNCTIVA.

Mr. ARNOLD LAWSON related 2 cases of acute streptococcic infection of the conjunctiva. Case I occurred in a child sixteen days after birth. At first there was some swelling of the lids and a muco-purulent discharge. After ten days the cornea became infiltrated, and the case ran a rapid and acute course. A tough conjunctival membrane developed, and within thirty-six hours of the first affection of the corneae the sight was hopelessly destroyed. The general health was not affected. Swabs taken from the conjunctiva showed almost pure cultures of *Streptococcus pyogenes*. Mr. Lawson did not see the case until the corneae were infiltrated, and nothing seemed of any avail in allaying the course of the disease. Case II occurred in a child convalescing from scarlet fever, who was then attacked with measles; ten days later the temperature was high and fluctuating as seen in pyaemia, at the same time brawny swelling of the lids commenced. After a few days the discharge increased rapidly, and the corneae suddenly became infiltrated, and within twenty-four hours the condition was hopeless, and palpebral and ocular conjunctivae of both eyes was covered with a dense yellow tenacious membrane. The child was exceedingly ill, and recovery was doubtful. The sloughs eventually separated, but the cicatricial contraction of the conjunctiva was very severe. The infection was a mixed one, due to *Staphylococcus pyogenes aureus* and *Streptococcus pyogenes*. The contraction in both cases was very severe, and in neither case did treatment seem of the slightest avail in arresting the course of the disease.

STEREOSCOPIC VISION.

Mr. BROOKSBANK JAMES read some notes on stereoscopic vision. He remarked that most experiments which had been carried out had been conducted at comparatively short distances. He described an apparatus which he had introduced in order that the same may be estimated at the usual testing distance of, say, 6 metres. The apparatus was simple and at the same time most delicate in the estimation of the third dimension. It consisted of a box in which only the floor and end walls remained, the sides and roof having been removed. In the front wall was an oval aperture in its centre. At each side was an electric lamp which illuminated the interior, the front and back walls were covered with black velvet. The floor was pierced with numerous round holes, each separated by an interval of about an inch. The test objects were white painted sticks of different sizes, and they were long enough for each extremity to be hidden behind the margin of the aperture in the front wall of the instrument when placed upright in the holes. In this way it was found impossible for a person using one eye only to tell whether one stick was in front of the other; they always appeared to be in the same plane. The apparatus could, of course, be used at any distance, and it afforded a convenient way of ascertaining the quality of the stereoscopic vision in cases of partial amblyopia of one eye. Mr. James alluded to the theories held with regard to the estimation of the sense of depth, and also to the importance of recognizing the several grades into which binocular vision can be divided.

LIVERPOOL MEDICAL INSTITUTION.

G. G. Stockford Taylor, M.D., Vice-President, in the Chair.

Thursday, January 31st, 1907.

NEW REFRACTOMETER.

Dr. E. GROSSMANN exhibited a new refractometer similar in principle to Marple's (*Lancet*, p. 1). But comprising all the spherical lenses likely to be required in retinoscopy, without combination, arranged in double rows in fo hand-instruments. The instrument could also be us for ordinary estimation by means of test types.

SYPHILIS OF THE LUNG.

Dr. R. J. M. BUCHANAN, in describing the various forms congenital and acquired syphilis of the lungs, paid spec attention to the so-called "phthisis syphilitica," and co trasted the morbid anatomy and clinical symptoms wi those of pulmonary tuberculosis. He urged the necessi of more careful clinical examination in cases of lung d ease in order that syphilitic affections might not be ov looked. An illustrative case under his care was related which the symptoms resembled those of pulmona phthisis for a year. No tubercle was found in the sputu after repeated examination. Discrete areas of infiltrati were present in both bases—one in the left lung, circu in shape and about the size of a small orange, the one the right lung oval and the size of a hen's egg. The masses resembled hydatids, but a diagnosis of gummata the lungs was made, and subsequently a history syphilis was obtained. On examination with the *x* ra the masses were clearly defined. The expectoration w stained with Giemsa's stain for eighteen hours and spi chaetes were found. Antisyphilitic treatment resulted amelioration of all symptoms and disappearance physical signs; a gain of 16 lb. in weight in thi months was recorded, and the patient had been al to resume work, and expressed himself as perfectly we Radiographs taken by Mr. Thurstan Holland bef treatment were exhibited, showing the original gumm and diffuse mottling of the lungs, and others showing t gradual absorption of the gummata and disappearance mottling after treatment with mercury and potassi iodide.

Mr. A. NIMMO WALKER, referring to Dr. Buchana observation of bodies resembling the *Spirochaeta pallida* the sputum of his case in contradiction of the us statement that they were absent in tertiary lesions, s that he had had the privilege of being shown by Sta Surgeon Bankart, R.N., a section of syphilitic liver stain with silver nitrate, in which the *Spirochaeta pallida* w clearly demonstrated. He also alluded to the difficulty finding the spirochaetes in patients under the influence mercury, and considered that recent observations point to the contagiousness of tertiary lesions and to the val of mercury in their treatment.

Dr. A. G. GULLAN referred to a case of syphilis (I chancre) of ten years' standing in a woman aged For two years she had suffered from cough, haemoptys and loss of flesh. Dr. McDougal had found a gumma the left sterno-mastoid and infiltration of the left vo cord. Under antisyphilitic treatment the laryng symptoms cleared up, but, some lung symptoms remai ing, the patient was transferred to the care of Dr. Gull who found impaired movement, dullness, diminish breath sounds, and a few moist râles over the fir second, and third left intercostal spaces in fro Repeated examination of the sputum for tuber bacilli gave negative results. Syphilitic treatment al was continued, and the patient in the course of a f months made an excellent recovery.

Dr. GRACE CALVERT also spoke.

THE SURGICAL TREATMENT OF FOCAL EPILEPSY.

Mr. DAMER HARRISSON, in dealing with this subject, restricted himself to cases of true focal or Jacksoni epilepsy calling for direct attack upon the brain or membranes, including craniectomy, and deeper work up the parts thus exposed. He attributed the fact that t results of operations in the past had not been mo successful to two causes, namely, (1) the relatively la period at which operations had been performed—yea having elapsed while the family physician had been e perimenting with drugs until the epileptic habit had be thoroughly established; (2) the adhesions resulting fro operations upon the skull, membranes, and brain. In l own experience the use of fresh egg membrane, as recom mended by Leonard Freeman in 1893, had largely met t adhesion difficulty. In speaking of technique he said th he reflected a large osteoplastic flap in almost all case using the chisel in preference to other instruments f work upon the bone. The paper was illustrated by 24 cas (with 31 operations) of whom 6 had died. Of the 6 deat not one was attributable to the operation, but to t

xtremely bad condition of the patient at the time of the peration. Of the 18 recoveries, 12 were successful and 6 were relieved.

Dr. W. Carter thought Mr. Harrisson's paper was most valuable. He mentioned the case of a woman, aged 30 years, who had been epileptic twelve years. The intervals between the attacks became shorter and shorter till at length she passed into the status epilepticus. After consultation it was decided to operate. On the day preceding the consultation there had been eighty seizures, all medicines having been omitted for a day in order that every one might see her as she was when uninfluenced by drugs. The only localizing indications were slight drooping of the right eyelid and a reported commencement of the attacks in the left foot. Dr. Wm. Alexander removed a piece of the calvaria 4½ in. long by 2½ in. broad from over the right Rolandic area, and as the dura mater looked healthy, though it bulged to the level of the scalp, it was agreed not to incise the membrane. The patient became conscious, intelligent, and bright; some time later she married and remained free from attacks for twelve years. The next, and so far as was known the only, attack occurred at her husband's deathbed. Dr. Carter was present and had her removed to a small ward, where she soon recovered consciousness and returned to her home. Nothing had been heard of her for three years. It was the belief of the entire hospital staff that she could not live many days, and that it was due to the operation that she was able to live an active and useful life for many years.

Drs. Stansfield and J. H. Abram also spoke.

Glasgow Obstetrical and Gynaecological Society.—At a meeting held on January 23rd, Dr. Oliphant, President, in the chair, Dr. Scott Macgregor showed a dermoid cyst of the left ovary, and a small cyst of the right ovary, removed from a patient aged 25.—Dr. Jardine showed (1) a fetus with malformation, the head being telescoped on the vertebral column; this specimen was referred to Dr. John Lindsay for further examination; (2) uterus with pregnancy, obtained *post mortem* from a patient who had died of pernicious vomiting; blood was found in the urine.—Dr. Oliphant delivered his inaugural address as President. After a few preliminary remarks on medicine during the time of the Reformation, he gave a sketch of medical science in Scotland about the time of the Union of 1707. The state of religious and social unrest of the end of the seventeenth century throughout Europe was not conducive to scientific progress; freedom of thought was impossible, and medicine was to a large extent controlled by the teaching of the ancients. It was a dark age before the emancipation of the eighteenth century. He illustrated the medical thought of the time by quotations from Pitcairn, Cheyne, Etmüller, and others, and by references to popular medicine, as in the description of Moncrief of Tippermalloch. He maintained throughout his paper that the state of medical knowledge in Scotland was not lower than in the rest of Europe.—On the motion of Dr. J. K. Kelly a vote of thanks was passed to the President.

Glasgow Southern Medical Society.—At a meeting held on January 31st, Dr. T. Forrest, Vice-President, in the chair, Dr. W. B. Inglis Pollock read a paper on the bacteriology of conjunctivitis, and gave a microscopic demonstration of the organisms found on the conjunctiva. Particular stress was laid upon the comparative ease of diagnosis and the great assistance rendered to prognosis and treatment by the bacteriological examination of the conjunctiva. Great care was required in the recognition of the gonococcus, as pseudo-gonococci were sometimes present, and several of these forms were demonstrated. Between 60 and 70 per cent. of all cases of ophthalmia neonatorum were due to the gonococcus, the remainder to the Koch-Weeks bacillus, the pneumococcus, and others. An interesting discussion followed, and, in response to a question, Dr. Pollock suggested that the great difference in severity of the gonorrhoeal conjunctivitis in adults and in infants is due to an attenuation of the virus in the long-continued vaginitis of the mother. Buller's shield ought to be worn in the adult cases.

REVIEWS.

BATHS AND OTHER HEALTH RESORTS.

In their new work on *Climatotherapy and Balneotherapy*,[1] Sir Hermann Weber and Dr. Parkes Weber have brought together in one substantial volume the sum of their previous writings on these subjects, dating from the earlier work of the veteran climatologist in 1881, and including the latest contribution of his son to contemporary literature. By systematic arrangement of the many and varying aspects of the subject, and by a complete and skilfully contrived index, the work as a whole, although of necessity a compilation, is made to present a comprehensive treatise, easy of reference and eminently readable. The authors have divided their subject into three parts, of which the first deals with climatotherapy in general, describing and discussing the various European climates and climatic health resorts; the second part is devoted to balneotherapy and the mineral-water health resorts; and the final section to indications for treatment, with directions as to the selection and use of climates and baths. A very full bibliography is appended.

The value of fresh air as a therapeutic agent is daily becoming more widely recognized, but a study of the opening chapter of the section on climatotherapy will serve to demonstrate to the uninitiated how many other qualities than mere freshness may combine to render it more or less suitable to those who would use it as a means of restoring health. From the employment of fresh air in general the authors pass to a consideration of its use under special conditions, and a full chapter is devoted to the subject of the climate of the ocean and sea voyages as a means of treatment. The disadvantages of the latter are wisely dwelt upon, and the restrictions under which they may be employed are duly emphasized. The manifest drawbacks and the possible risks to which attention is here directed should be carefully weighed before consigning sick persons to the tender mercies of the ocean. From the sea itself the reader is carried to the shores of the Mediterranean and North Africa, and a short description is given of all places of note along the French and Italian Riviera, and in Sicily, Corsica, Corfu, and other islands. The climatic advantages of Ajaccio and Taormina are especially noted. The preference shown for these places of late years goes to prove that they bear out the description given of them.

In their somewhat guarded commendation of Venice as a place of residence, the authors lay but little stress upon the drawback that appeals most prominently to the unacclimatized visitor to that remarkable city. The abominable smells which pollute the air of the lesser canals, genuine drain smells which would not be tolerated by any local authority in an English town, materially detract from the pleasure and advantage of prolonged residence. The climatic conditions of Egypt, Algiers, the Canary Islands, and Madeira are passed in review, and from them the attention of the reader is turned to the inland health resorts of Europe. A very exhaustive list of these is presented, comprising many places little known to English medicine. The resources of Scandinavia in providing sanatoriums are duly recorded, and it may fairly be said that no health resort worthy of the name, from Lapland to Greece, or from Belgium to the east of Russia, is omitted from mention. Lastly, with becoming modesty, comes the turn of the British Isles, and in the fifty pages devoted to them, the student of home amenities may fairly be astonished at the number of places brought under consideration as actual or possible health resorts. The great majority of them will, however, be recognized as available only during the warmer months. By reason of its extreme variability, the English climate, according to Sir Hermann Weber, is one of the most health-giving in the world, calling forth the energy of the vital organs and keeping them in working order—a consoling reflection during the dark days of winter.

In the second part of the book balneotherapy is dealt with, the opening chapters being largely quotation from

[1] *Climatotherapy and Balneotherapy.* Being a third edition of "The Mineral Waters and Health Resorts of Europe," much enlarged in respect to medical climatology. By Sir Hermann Weber, M.D., F.R.C.P., and F. Parkes Weber, M.D., F.R.C.P., Physician to the German Hospital, London, and to the Mount Vernon Hospital for Diseases of the Chest, Hampstead. Edited by F. Parkes Weber. London: Smith, Elder and Co. 1907. (Demy 8vo, pp. 833. 15s. net.

the author's recent contribution to the last edition (1905) of *Allbutt and Rolleston's System*. The modes of application, and the arguments for and against the use of water as a therapeutic agent, are discussed in all their bearings. Mindful of the needs of the "ordinary medical man," the composition of the waters described is expressed in familiar chemical terms and not in "ions," while other recent methods of classification are mercifully defined without being adopted. Dividing mineral waters into simple thermal, salt-containing, alkaline, sulphated, chalybeate, arsenical, and sulphurous, every variety is described, and its internal and external use explained. In like manner, every form of bath as applied in different parts of the Continent is discussed. While they all supply either local warmth or stimulation, the somewhat fantastic forms in which many of them are administered would seem to appeal most strongly to the chronic invalid in search of novelty. No less than 240 pages are allotted to a notice of every known European watering place where balneotherapy is practised, a longer or shorter description being given of each, in proportion to its importance or popularity.

The third part of the book is devoted to the important questions of "selection of climates, mineral waters, and health resorts in chronic diseases and morbid conditions, with hints as to the employment of various physical and dietetic methods." Of this section, too large for detailed examination, it may be said that it is marked by its completeness and by the care with which the authors have brought together the best information derivable from personal observation and contemporary evidence.

The practitioner who has this work upon his shelf need never be at a loss for aid in the decision of difficult questions of climatic or balneotherapic treatment. It is a great work of reference, well arranged and clearly defined, the result of many years of labour and study on the part of its authors, who have impressed their personal experience and judgement upon every page of it.

TEXTBOOKS OF PHYSIOLOGY.

PROFESSOR TIGERSTEDT'S[2] *Textbook of Human Physiology* first appeared in 1897, and since that date has reached a third German edition. Such a fact in itself is a testimony to the merits of the work, and the name of its distinguished author is also a sufficient guarantee of its excellence. It therefore well deserved translation into English. The German language is not, perhaps, the happiest medium for lucidity of expression, but DR. J. K. MORRIS has accomplished the work of translation in an admirable manner, though he is not always successful in lightening the heaviness of the original. The book aims at a high standard, and is written from a plainly clinical standpoint, the influence of Verworn's writings being, for instance, evident in the preliminary chapters on cells and unicellular organisms. Professor Lusk states in an introduction to this edition that Tigerstedt is "the only author of a general textbook on physiology who has any experimental knowledge of metabolism. This is rather too sweeping a statement; but we fully agree with Professor Lusk when he goes on to say that the chapter on metabolism is the most complete account of that subject given in any textbook in any language. In relation to this chapter, the only criticism we would pass is that the views of Voit are given unquestioned credence, and the views of those who differ from Voit hardly receive their due. Professor Lusk himself is an old pupil of Voit's, and there is perhaps no other investigator who has been capable of exciting among his co-workers so much enthusiastic admiration. The chapter on the circulation is another which stands out as a masterpiece. Things here in parts—for instance that on intracardiac pressure—are hardly up to date. Tigerstedt's original work in electrophysiology would have led readers to expect a section of interest on this branch of science, and that expectation will be found completely fulfilled. But it is not only on subjects to which the author has devoted actual personal investigation that the book is so good; for it would be difficult to excel the account given of the central nervous system—a branch of physiology with which Tigerstedt's name is not so intimately associated from the standpoint of research. Without, however, citing other instances, it is sufficient to say that the book, from the physiologist's point of view, stands in the very first rank. When, on the other hand, we consider the work from the student's standpoint, we are obliged to restrict the praise we have to bestow upon it. For those who have already learnt their physiology the book will provide additional information, fresh light on what they knew before, and new and pregnant suggestions for the future. For those who are learning physiology for the first time, for the second year's medical student, to whom the translation is dedicated, we feel sure that the book is for many reasons unsuitable. In the first place, it is incomplete. We can forgive the omission of the histological details which cumber so many physiological textbooks, but it is not so easy to pardon the scant treatment awarded to the chemical side of physiology. The author refers students to special treatises on physiological chemistry to remedy this defect, but this is a great mistake. Special textbooks are obviously necessary for specialists, but the writer of a medical students' handbook should avoid the disintegration of a science into its component parts, and seek to show how all are integral parts of the whole. The few pages devoted, for instance, to blood coagulation form an excellent brief compendium of the results of recent research, but to the student who has never previously touched the subject, the account given will be almost unintelligible. Again, the whole subject of kidney function and the urine is dismissed within 11 pages. Professor Tigerstedt is also from this aspect incorrect in the order in which he treats his subjects. He does not appear to be able to place himself in the student's position. Almost on the opening page we find him describing the kymograph. This piece of machinery is to the author as familiar as the alphabet, but surely for the student the A B C of the circulation should come first. Osmosis, another obscure and to the student difficult subject, also finds an early place long before the student has learnt how it is possible to apply this knowledge to the study of such subjects as lymph formation and absorption. Metabolism, again, is treated before digestion and excretion, its beginning and its end, are studied. This disadvantage of the book cannot be got over by a judicious teacher advising his students to read the chapters in an order different from that in which they are printed, for the same defect appears in nearly every chapter and section. For example, the description of electrical phenomena begins with an account of Bernstein's rheotome, one of the most complicated pieces of apparatus ever invented, and now but seldom seen in physiological laboratories, as it has been superseded by simpler and more efficient methods; and, again, in the scanty chapter devoted to the urine, the first page is devoted to—we had almost said wasted upon—a description of the skatoxyl compounds of that fluid, which, although interesting in themselves, are of little importance to the medical student, and certainly from their complexity can hardly be regarded as a fitting introduction to the study of the renal secretion. The book is well got up, the illustrations, which are more numerous in the translation than in the original, are judiciously selected and well executed. The revision for the press has been most carefully carried out, and we have detected few of those minor errors which are inseparable from the appearance of a new book. Those we have noticed are the following: the occasional use of the word "glutin" for gelatin, a practice that can only cause confusion; whetstone crystals are written "whenstone crystals", the names of the muscle proteids, which we owe to Halliburton, are wrongly attributed to G. N. Stewart; Wollaston is written "Wallasten"; and Dr. Cheyne and Stokes are spoken of as English physicians.

Professor PORTER[3] has very decided views on the reform of physiological teaching, and has to some extent succeeded in introducing his methods into the Harvard

[3] *The Laboratory Course in Physiology*. By William Townsend Porter, A.M., M.D., Professor of Physiology in the Harvard Medical School. London: J. B. Lippincott Co. 1906. Crown 8vo, pp. [illegible]. [illegible].

[edical School. Put briefly, his ideal is that a student ıould learn physiology not by reading about it, or hearing ɔout it, but by doing as much as he can himself, and in ɔnsulting the original memoirs on which textbook state-ents rest. If all medical students had their heart in ıeir work, if they were all French and German scholars, ıd if life were long enough, such a method might be ıccessful. But so long as medical students are what they 're, we fear this ideal will never be realized. American edical students are much the same as English; their andard of preliminary education is not so high as ours, w though that is. They have other subjects equally ıperious in the demands on their time as is physiology. few of the best will doubtless benefit by the method; a w may even aim at becoming physiologists, and for such e method is admirable, though even then six months ll not be sufficient, or even six years, to carry out ofessor Porter's views to the full. Many physiologists ay devote all their busy lives to their science, and not able to confirm by actual experiment what others have scovered in all its numerous branches. We do not decry e importance of practical laboratory work, but we should alize that medical students aim at becoming medical en, and that their physiological training should deavour to give them a general and comprehensive rvey of the whole subject. If the manual before us by ofessor Porter aims at being a laboratory guide to the periments described, we have nothing but praise for it. e descriptions of the experiments to be performed are ar, and the lessons they teach are well explained. But er all, the number of experiments a medical student can is limited to a few corners of physiology, even in erica, where no Vivisection Act is in force. If a stu-nt thinks he has mastered physiology when he has per-med all the experiments in this book, he will be greatly staken. He will know something of bio-chemistry, d he will know his frog pretty well, and have obtained airly thorough knowledge of electro-physiology. The dern tendency of physiological teaching is to make it as ctical and demonstrative as possible. With this we ly agree. We are also convinced that a practical study he laboratory of muscle and nerve has within moderate its an educational value, for it teaches students a rtain amount of manipulative skill, and makes them t in their work; it also serves as a sample of those thods which have done so much to make physiology an et science. But to regard the trivialities of frogs' scles and nerves as the Alpha and Omega of physi-gy is a great mistake, and in those schools where this t of physiological study is carried to excess, the stu-nts generally find when they have to grapple with the blems of pathology and disease, that what they have nt is of little practical value, and that they have neg-ted the more important and larger subjects which they uld have studied, and which would have served as a k-rock on which to found their scientific apprecia-n of the questions which will beset them in their r-life.

TUBERCULOSIS OF JOINTS.

Professor Franz Koenig[4] has published a monograph of pages on tuberculosis of human joints, as well as of chest wall and the skull, which, as he tells us in the face, is intended as a birthday gift to his Excellency Professor Ernst von Bergmann on his 70th birthday (December 16th, 1906). As the subject is one that has had a great attraction for the author from the beginning of his professional career, and he has had very great opportunities of studying it, this work cannot fail to be interesting. Nevertheless, it does not pretend to be a complete survey of the subject, for the joints of the spine and some others are omitted, and the "orthopaedic" treatment of joint affections is hardly touched upon.

The book is of special value because it gives the results of a large personal experience extending over nearly twenty years. Professor Konig has been fortunate in keeping a large majority of his cases in sight for a long time, and the information thus gained is of very great value from the point of view of prognosis. How bad the outlook is for the victim of bone tuberculosis is shown by the fact that out of 615 cases of disease of the knee, 205 died during the eighteen years over which the observations lasted. This mortality is not due only to the local disease, but more to the coexistence of tuberculous disease of other organs, to which over 81 per cent. of this mortality is due. Careful *post-mortem* examinations of cases dying with joint tuberculosis showed that in only 20 per cent. was the joint the only part affected. In four out of five cases there were more than one lesion. Suppurative lesions are almost twice as deadly as the dry forms.

The author describes the pathological anatomy of the disease fully and clearly, and the illustrations leave nothing to be desired. He thinks that he has shown that wedge-shaped sequestra are due to tuberculous infarcts.

As to treatment, next to complete removal of the disease, which is relatively seldom practicable, rest and iodoform or carbolic acid injections give the best results. His experience of Bier's congestion method, which has of late years been so much in vogue in Germany, is not favourable. It is admitted to cause abscess, a complication which immensely increases the gravity of the case. The remarks on the choice of cases for operation and on the choice of operation are valuable. In the hip, in particular, he relies on the *x* rays as a means of deciding whether sequestra exist, and consequently whether excision is advisable. Out of 566 cases of coxitis he has excised the head of the femur 300 times. The mortality was considerable, and most British surgeons would have followed more conservative methods; but it seems likely that the disease is of a more severe type in Germany than in this country.

Leaving those who wish for information on the points not dealt with in this book to consult his other works, the author goes on to consider tuberculosis of the ribs and sternum. This subject is shortly but lucidly handled, and the illustrations are, as usual, good. Tuberculosis of the vault of the skull is a rare complication; about 1 per cent. of the author's cases suffered from it, and he has treated only 25 cases. It occurs most commonly in young people, and is usually set up by injury, but is generally secondary to lesions in other parts. As it often results in penetration of the skull, and extension to the encephalon, the prognosis is necessarily very grave. About half of those operated on recover from the local disease, but most of them die from other forms of tuberculosis.

ARTIFICIAL PARTHENOGENESIS.

In the *Untersuchungen über künstliche Parthenogenese*[5] we have a collection of twenty-five papers by Professor Loeb published at various times during the last fourteen years, including a few as recent as 1906. The papers appeared originally in various American and German scientific journals, and about half of them have come under our review more or less recently, being included in a collection issued in 1905 in two volumes under the title *Studies in General Physiology*. These papers, therefore, are easily accessible in the English language. Professor Loeb, who is well known as an experimental physiologist, belongs to the rapidly enlarging school of those who accept the theory of ions. All or most of the papers in this volume depend upon, or are suggestive in support of, this great theory. The problem of the relationship between the organism and its surroundings is being attacked at the present time by all classes of biologists, but it is in such work as that to which Professor Loeb devotes himself that cause and effect are most easily observed, and there are some striking examples in the various papers.

The earlier papers mostly deal with the effects of different solutions in setting up cleavage in unfertilized ova, certain ions in the solutions being supposed to be stimulating factors. As in most experiments on parthogenesis, a large number of Professor Loeb's observations were made on the eggs of the sea urchins (*Echinoderms*), eggs which are comparatively large and float freely in sea water, so that they are easily kept alive and watched during their segmentation. One of the papers, however —a very long and excellent one—describes experiments

[4] *...e Tuberculose der menschlichen Gelenke, sowie der Brustwand und ...des schädels.* Nach eigenen Beobachtungen und wissenschaftlichen Untersuchungen. Von Professor Dr. Franz Koenig, Berlin. Mit 90 Textfiguren. [Tuberculosis of Human Joints, as well as of the Chest Wall and of the Skull. From personal observations and scientific investigations by Professor Dr. Franz Konig, Berlin.] With 90 figures in the text. Berlin: August Hirschwald. 1906. (Royal 8vo, pp. 166. M.5.)

[5] *Untersuchungen über Künstliche Parthenogenese.* By Professor Loeb. German Edition. Edited by Professor E. Selwelbe. Leipzig: Johann Ambrosius Barth. 1906. (Crown 8vo, pp. 382.)

with the eggs of a marine worm (*Chaetopterus*), and another with those of marine molluscs. There is a paper upon method and sources of errors in experiments on artificial parthenogenesis, and three or four papers deal with improved methods. The order in which the papers are arranged is not easy to understand. The subject is not broken up into sections under separate headings, nor are the papers quite in the order of their original appearance. Why the different papers on technique, for instance, should be scattered through the others is not very obvious. The book would have been improved if some kind of arrangement had been adopted to make it read like a textbook, and we also miss very much a summary chapter. The various papers have been written at different times, and often concern unrelated series of experiments; yet Professor Loeb, in carrying out these series, has always had one aim in view. A summary, therefore, gathering together the various threads, and weaving them into a comprehensive whole, would have given a much truer idea of the subject of artificial parthenogenesis than can be gained by any one, even if he read through every paper, if he is not himself well acquainted with the subject.

HYGIENE FOR TROPICAL RESIDENTS.

Lessons on Elementary Hygiene and Sanitation, with Special Reference to the Tropics[1] is the title of a little book by Dr. PROUT, Principal Medical Officer of Sierra Leone. It is founded on a series of six lectures which have been extended and illustrated so as to form an elementary textbook for the use of schools in West Africa. The text consists of fourteen lessons, and it contains much very valuable and useful information on elementary anatomy, physiology, parasitology, and hygienic subjects, such as water, food, dwellings, clothing, and personal sanitation. It is written in plain, simple language, is very suitably illustrated, and is printed in a good readable type. The author in his introduction is modest as to its possibilities, but after reading it we are certain that the book will appeal to, and be used by, many more than those attending the schools in West Africa. It ought to be in the hands of every layman on the West Coast of Africa, and the young doctor going out there for the first time will find in it many useful practical points which he will do well to follow closely. We cannot remember having read such a useful little book for many a long day, and we prophesy for it a long and successful career.

NOTES ON BOOKS.

WE have received a reprint of an essay on *Traumatic Myositis Ossificans* by Mr. ROBERT JONES and Mr. DAVID MORGAN. It deals with bony formations in the neighbourhood of joints following injuries to soft structures, and is made up of a series of clinical records collected by the authors, of an extensive tabulation of cases observed by them and Continental and American observers; of a series of skiagraphic pictures; and of a few columns of clinical comment. The subject of traumatic osteoma is one of much practical interest, and the records of the author's experience of such cases will doubtless do good service by proving the frequency of these serious sequelae of dislocations and other injuries to joints, and explaining some unexpected results of correct diagnosis and treatment, that are likely to give much trouble to practitioner as well as to patient. The collected tables throw much light on some points connected with these traumatic osteomata, especially in regard to age incidence. It is clearly shown that in a large proportion of cases the subjects are between the ages of 15 and 25 years, a period of life in which the osteogenetic activity of the articular extremities of bones and their investing membranes is very active. The discussion of the origin of the bony masses is rather confused by a tendency to regard these as forms of myositis ossificans, and to classify them with the progressive and non-traumatic types of this affection. The remarks on the surgical treatment of the traumatic osteomata will be found sound and instructive.

[1] *Lessons on Elementary Hygiene and Sanitation, with Special Reference to the Tropics.* By W. J. PROUT, C.B., M.B., C.M. Edin., Principal Medical Officer, Sierra Leone; Member of Legislative Council; Medical Officer of Health, Colony of Sierra Leone. Published on the Recommendation of the Secretary of State for the Colonies. London: Waterlow and Sons Limited, Printers, London Wall. 1906. (Crown 8vo, pp. 130.)

[2] *The Traumatic Osteomata and Traumatic Myositis Ossificans.* By ROBERT JONES, F.R.C.S., Surgeon, Royal Southern Hospital; and DAVID MORGAN, M.B., Ex-Resident Medical Officer, Royal Southern Hospital. Reprinted from the Annals of Surgery, March, 1907. Philadelphia: J. B. Lippincott Company. London: Bailliere, Tindall and Cox. (Royal 8vo, pp. 19; 13 figures.)

Dr. WHITING'S *Aids to Medical Diagnosis*[1] is intended for the use of those who already possess a knowledge of systematic medicine. It aims rather at reminding the practitioner of the various points he must bear in mind in endeavouring to arrive at a diagnosis in any given case than at describing the diagnostic signs and symptoms of any disease. The basis of the arrangement of the subject is clinical, not pathological, and the little book seems to be eminently suited to its purpose. It may be confidently recommended to those who want a convenient reference to the chief points requiring attention in examining patients.

The Yearbook of Pharmacy and Transactions of the British Pharmaceutical Conference[2] for 1906 shows a substantial reduction in size as compared with its predecessors of recent years. This diminution, which is stated in a preFatory note to have been found necessary, is principally in the first part of the book, this occupying 164 pages as against 326 in the 1905 issue; it appears, however, to have been effected with the least possible loss of usefulness, for indeed there is any loss. The volume contains short but sufficient abstracts of all the important papers of the year both English and foreign, under the heads of Chemistry, Materia Medica, and Pharmacy; no attempt, of course, is made to deal with chemical papers of every kind, but only with those that have direct pharmaceutical interest. The abstracts include a large number on the assaying and testing of various drugs and chemicals, on improved methods of urine analysis, and other matters of importance to pharmacists and of some interest to prescribers. Under the head of materia medica useful details are given about the chief synthetic remedies introduced or further reported on during the year, while a large number of formulae for improved preparations and combinations of remedies are to be found in the section devoted to pharmacy. The special section of notes and formulæ which has previously formed a division of the *Yearbook* has been omitted, although the principal part of the matter appears to be given with the other abstracts. Next follows a research list, in which some fifty subjects for research are enumerated; these are of the nature of investigations of the active principles of drugs not yet worked out, methods of assay for various medicinal chemicals, and other questions on which the need for more information has been practically experienced; a research fund is mentioned, and applications are invited for grants to defray the cost of such investigations. The second portion of the volume is occupied with a full report of the proceedings of the Pharmaceutical Conference at Birmingham last summer, including the text of eighteen papers communicated and the discussions thereon, together with lists of members and officers of the Conference.

TOXINS AND ANTITOXINS.

DR. CARL OPPENHEIMER'S book on *Toxines and Antitoxines*[3] translated by Mr. C. AINSWORTH MITCHELL, is a summary of the very widely scattered literature on the subject. It makes an excellent book for reference, and for this purpose the lengthy bibliography at the end, where the articles incorporated in the text are catalogued under the authors' names, will be found particularly valuable. In the first sixty-eight pages, which deal with general theories concerning toxins and antitoxins, a careful and detailed account is given of Ehrlich's work, and there is a good analysis of the points at issue in the long controversy between this authority and Arrhenius and Madsen. The remainder of the volume, devoted to special toxins and antitoxins, is unequal. Some subjects, particularly diphtheria and tetanus, are treated very fully, and a vast amount of information is concentrated into a relatively small bulk, but in many of the other chapters the information is scrappy and too scanty. The book as a whole is too condensed and too highly technical to be read with advantage by students who have not a previous knowledge of the subject, but to those who have and to those engaged in research it will prove useful.

In a volume entitled *New Serumtherapy*[4] Dr. Mor-

[1] *Aids to Medical Diagnosis.* By A. WHITING, M.D., M.R.C.P. London: Bailliere, Tindall and Cox. (Fcap 8vo, pp. 130. 2s. 6d. net.)

[2] *The Year-book of Pharmacy.* Comprising abstracts of papers relating to Pharmacy, Materia Medica, and Chemistry, with the Transactions of the British Pharmaceutical Conference at the Forty-third Annual Meeting held in Birmingham, July, 1906. Editor of the Yearbook, J. O. BRETTLE. Lectures on the Transactions, F. S. PECK, M.A., and E. WHITE, B.Sc., F.I.C. London: J. and A. Churchill. 1906. (Demy 8vo, pp. 520. 10s.)

[3] *Toxines and Antitoxines.* By Carl Oppenheimer, M.D., Ph.D. Translated from the German by C. Ainsworth Mitchell, B.A., F.I.C. London: Charles Griffin and Co. 1906. (Crown 8vo, pp. 273. 7s. 6d. net.)

[4] *New Serumtherapy.* By D. Montgomerie Paton, L.R.C.P.S.E., L.R.C.P. Edin. London: Bailliere, Tindall, and Cox. 1906. (Crown 8vo, pp. 111. 3s. 6d.)

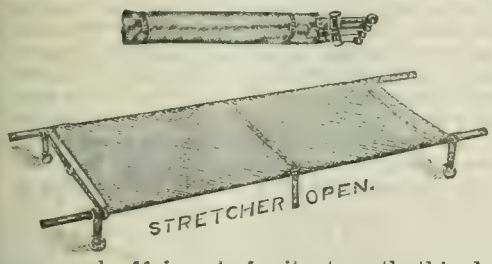
gomerie Paton recommends serums both normal and immune for a host of diseases on empirical grounds. The serum derived from animals immunized against the specific organisms of diphtheria, of plague, etc., are capable, he says, on administration by the mouth, of assisting in restoring to health individuals suffering from such a variety of disorders as "septic infection," tuberculosis, influenza, and even disorders which so far as we know are not due to the direct effect of pathogenic organisms. During the last eight years he has used for various purposes 3.333 oz. of diphtherial serum and 40 gallons of "simple plasma" derived from the horse, sheep, and ox. The author says the trouble has not been so much about the actual results as about a rational explanation of the phenomena observed. We are assured that improvement when it occurs is not due to the bactericidal or antitoxic action of the various serums used.

We have received, by the courtesy of the Registrar of the General Medical Council, the volume of the *Minutes of the General Medical Council for the Year 1906*.[12] The minutes, with the seventeen appendices, form a volume of 694 pages, being 189 pages more than the volume of the previous year.

MEDICAL AND SURGICAL APPLIANCES.

Stretcher with Steel Bearing Rods.

Messrs. Arnold and Son, of West Smithfield, make a portable stretcher which would appear to have considerable advantages over the majority of those in common use. In its general appearance it does not differ materially from its fellows, but is notable for a combination of lightness, portability, and strength. So far as the two former are concerned, it weighs only 15 lb., while when folded up



measures only 44 in. As for its strength, this depends upon the fact that the bearers are made of steel tubing, so there can scarcely be any possibility of the stretcher collapsing under the weight of any patient, however bulky. This is a decidedly good point, for portability and lightness too often spell fragility.

Spirographs or Nasal "Breath Pictures."

Dr. Wyatt Wingrave (Central London Throat and Ear Hospital) writes: The practice of testing nasal patency by breathing upon a prepared surface is by no means new, but its usefulness has been somewhat restricted by the want of a satisfactory material. Slates, glass, and polished metals all have their shortcomings, but I have now found that vulcanite with a medium polish gives a very reliable and faithful image. By placing the plate horizontally on the upper lip, half an inch from the nostrils, and giving the short and steady expiration, a well-defined steam impression results, which, on evaporating, affords reliable evidence of the actual and relative patency of the nostrils. The image may be temporarily fixed, or rendered more conspicuous for demonstration purposes, by lightly powdering it with calcined magnesia or fine starch. Small sheets of vulcanite, with a suitable surface and of a convenient size, are supplied by the Medical Supply Association, 228, Gray's Inn Road, London, W.C.

French Association for the Advancement of Science.

The annual meeting of the French Association for the Advancement of Science will be held at Rheims in August next. Among the sections are several devoted to different branches of medicine. There is a Section of Medical Science, of which Professor Landouzy is President; a Section of Hygiene and State Medicine, which will be presided over by Professor Calmette; a Section of Medical Electricity, of which the President is Dr. Guilloz, Professor in the Medical Faculty of Nancy. There are besides Sections of Zoology, Anatomy, and Physiology, President, Professor Guériot of Nancy; Chemistry, President, M. Hugounenq, Dean of the Medical Faculty of Lyons; and Anthropology, President, Dr. Guelliot, of Rheims.

[12] London: Sl ottiswoode and Co. 1906. 12s.

ROYAL COMMISSION ON HUMAN AND ANIMAL TUBERCULOSIS.

The Second Interim Report.

The second interim report of the Royal Commission on Tuberculosis, appointed on August 23rd, 1901, has now been issued. The Commissioners were the late Sir Michael Foster, K.C.B., F.R.S. (chairman), Professor German Sims Woodhead, Professor Sidney Harris Cox Martin, F.R.S., Sir John McFadyean, and Sir Rubert William Boyce, F.R.S. The Commissioners issue a joint report and append to it a memorandum, prepared by Dr. Sidney Martin, which summarizes the results of the experiments up to November 14th, 1906. The appendix, which will contain full details of these experiments, has not yet been issued. The following is a summary of the Commissioners' report:

Experiments with Bovine Bacilli.

Thirty different viruses, isolated from cases of tuberculosis spontaneously occurring in the bovine, have been used in the investigation. The bacilli were introduced in the animals used for experiment in the form either of an emulsion of tuberculous lesions or of a culture grown on an artificial medium. In five of the viruses both emulsion and culture from the same lesions have been used, and it has been possible to compare the results of the two. When bovines have been used for the experiments, Jersey calves have in the great majority of instances been employed; occasionally adult animals of the same breed have been used, and, in a few instances, shorthorns. The two chief methods of introducing the bacilli have been (1) feeding, (2) injection into the tissues. The methods of injection into the tissues in the case of bovines have been (*a*) subcutaneous, (*b*) intravenous, (*c*) intramammary; and of these three the main reliance has been placed on the subcutaneous method.

Subcutaneous Inoculations upon Calves.

In some cases the effects of inoculating bovine bacilli into calves are very severe, the result being an acute, generalized, progressive tuberculosis, ending fatally within a few weeks. The tuberculous lesions first become obvious in the local lesion; the infection appears to proceed by way of the lymphatics to the nearest lymphatic glands, the prescapular and prepectoral, and to advance thence to the thoracic and mediastinal glands. It has also been shown experimentally that, with large doses given subcutaneously, tubercle bacilli are found at an early period (within twenty-four hours) in the blood stream; they are thus carried to all parts of the body, and set up a widely-distributed disease.

In other cases the effects of injecting the bovine bacillus are different. There is very much less clinical evidence of disease, and when the animals are eventually killed they are apparently in good health. *Post mortem* both the local lesion and the adjacent prescapular gland present lesions which are evidently in a retrogressive condition; evidence of further dissemination may not be found, and, when such evidence is found, it consists merely of minute and obviously retrogressive tubercles present in the lungs or other organs.

Between these two extreme cases, that of the rapidly fatal, widespread, progressive tuberculosis and that of the scantily disseminated and markedly retrogressive disease, various intermediate stages have been observed. Instances have also occurred where bacilli from the same source gave rise to acute and fatal infection in one animal and to no more than a mild retrogressive disease in another animal.

The nature of the result depends, in the first instance, on the dose, that is, on the number of bacilli injected. This is clearly seen when cultures are employed for injection. Of twenty different viruses which were tested on bovine animals, eighteen, in doses of 50 mg. of culture, always produced a fatal generalized progressive tuberculosis. In the case of five out of the twenty viruses doses of 10 mg. were used; the result was in the case of each virus, though not of each animal, a generalized progressive tuberculosis. In two instances much smaller doses were used, namely, 0.02 mg. and 0.01 mg.; in both animals a limited retrogressive tuberculosis was the result. The results obtained with injections of emulsions were much more varied. As a rule emulsions were found to be much

more effective than cultures. Thus, the emulsions employed rarely contained more bacilli than would be present in 0.01 mg. of culture; yet in some cases, though not invariably, these smaller doses gave rise to a generalized progressive tuberculosis equal in intensity to that produced by 50 mg. of culture.

Each of the bovine viruses injected subcutaneously into calves was found, when an adequate dose was given, to exhibit a high degree of virulence. With regard to the question whether they were all equally virulent, the Commissioners reserve their opinion; they state that they are making further observations on this point.

INTRAMAMMARY INJECTIONS.

This method of experiment has been employed on several occasions, both with emulsions and cultures. The material was introduced through the teat canals into two quarters of the udder, the other two quarters being left for comparison. The main results were as follows: (1) A very large amount of disease may be set up in the injected quarters, and yet the infection may not spread to the other quarters, or be disseminated beyond the neighbouring supramammary lymphatic gland. In such cases the disease may after a while retrogress or may lead to the death of the animal, apparently owing to poisonous (toxic) substances being absorbed from the affected udder. (2) In other cases the disease may spread to the uninjected quarters, and over the body generally, causing death by general progressive tuberculosis. The cows thus affected with tuberculosis of the udder were utilized in obtaining tuberculous milk for experiments.

FEEDING EXPERIMENTS ON CALVES.

Six calves were allowed to suck the tuberculous udders of cows. In only one case was general tuberculosis produced. In the other 5 cases the lesions were limited for the most part to the neighbourhood of the intestinal tract, and "had the retrogressive character of being calcareous." In another group of experiments fourteen calves, varying in age from three and a half weeks to two months, were fed with tuberculous milk from various sources, but none of these calves when killed showed anything more than tuberculosis limited to the intestine and to the mesenteric or ileo-colic glands. The Commissioners conclude from their experiments that feeding with the bacillus of bovine tuberculosis does not so readily set up general progressive tuberculosis in the calf as does inoculation.

THE EFFECT OF BOVINE BACILLI ON MONKEYS.

Rhesus monkeys (*Macacus rhesus*), baboons (*Papio porcarius*), and cynomolgus have been used for the experiments. Generalized progressive tuberculosis has been produced by the subcutaneous, and also by intravenous, injection of bacilli, both in the form of emulsion and of culture. In one of these cases a fatal generalized progressive tuberculosis was produced by so small a dose as 0.001 mg. of culture subcutaneously injected. In the feeding experiments not only was a generalized progressive tuberculosis produced in these monkeys by administering large doses of bacilli given as tuberculous milk, but the same result was obtained by feeding with a small single dose—namely, 1 mg. of culture. In baboons, also, generalized progressive tuberculosis has readily been obtained by feeding with 1 mg. of culture, and in two cases the same result followed with the small dose of one million bacilli given as tuberculous milk. In the case of two cynomolgus progressive tuberculosis resulted from feeding with 1 mg. of culture.

THE EFFECTS OF BOVINE BACILLI ON ANTHROPOID APES.

A comparatively small dose—1 mg. of culture—was used in the case of two chimpanzees, and died in fifty-six days of generalized progressive tuberculosis. The result was so exactly identical in the two cases that it did not seem necessary to repeat the experiment. Severe lesions had been produced by feeding. A chimpanzee was fed with a tuberculous udder, the number of bacilli being probably roughly estimated at about two millions. It was killed after very ill one hundred days later, and showed generalized progressive tuberculosis, the mesenteric glands were tuberculous and there were grey tubercles in the lungs, the spleen, kidneys, and liver. Another chimpanzee received ten million bacilli and died one hundred and fifty days after receiving an intravenous inoculation of the bacillus and presented tubercles in the mesenteric and mesocolic glands; the tuberculosis was, therefore, limited. A third chimpanzee was fed with 1 mg. of culture, and died in fifty-six days of generalized progressive tuberculosis with miliary tubercles in the lungs. A fourth chimpanzee was fed with 1.1 mg. of culture, and died in sixty-three days of generalized progressive tuberculosis, the intestines and mesenteric glands being very severely affected.

THE EFFECTS OF BOVINE BACILLI ON OTHER ANIMALS.

In both guinea-pigs and rabbits fatal generalized disease is readily produced. In pigs generalized progressive tuberculosis may readily be set up by the subcutaneous injection of even an exceedingly small dose. Pigs were also very readily made tuberculous by feeding. In goats, subcutaneous inoculation of the bacilli, either as emulsion or as culture, produced generalized progressive tuberculosis, fatal when the dose was large, but not fatal with smaller doses. In the feeding experiments with goats, though a generalized progressive tuberculosis was sometimes produced, the result was at other times a tuberculosis limited for the most part to the mesentery and adjoining glands. Dogs appear to be more susceptive to generalized tuberculosis when the inoculations are intraperitoneal than when they are subcutaneous. When dogs were fed with the bacilli, the disease was generally limited to the mesenteric glands, but with very young animals the result was occasionally a generalized tuberculosis. Cats were found to be more readily infected with severe disease than dogs.

GENERAL RESULTS OF THE ABOVE EXPERIMENTS.

In summarizing their results, the Commissioners conclude with the following statement: "The bacillus of bovine tuberculosis is not so constituted as to act on bovine tissues only, for it can give rise to tuberculosis in many animals other than bovine; it is not even so constituted as to act on bovine tissues with a special energy, for it can give rise to tuberculosis in some other animals as readily as, or even more readily than, in bovine animals themselves. We call it the bacillus of bovine tuberculosis merely because we find it most frequently in the bovine body, it being the cause of bovine tuberculosis. The fact that the bacillus of bovine tuberculosis will readily, by feeding as well as by subcutaneous injection, give rise to generalized tuberculosis in the anthropoid ape—so nearly related to man—and indeed seems, so far as our few experiments go, to produce this result more readily than in the bovine body itself, has an importance so obvious that it need not be dwelt on."

EXPERIMENTS WITH HUMAN BACILLI.

The Commissioners have studied the viruses isolated from 60 cases of the disease in man. Their results have led them to divide these cases into two groups very clearly distinguished from each other by the properties and characters of the bacillus found in each. Nearly all the cases fall readily into the one or the other group, and all the members of each group agree with each other in certain important features. These two groups are consequently referred to as Group I and Group II. But some few cases presented exceptional features of sufficient importance to justify their separation from the above-mentioned classes. They are therefore dealt with separately and are termed Group III.

THE ORIGIN OF THE VIRUSES FORMING GROUP I.

This group comprises fourteen viruses. These were obtained in one case from sputum, in three cases from tuberculous cervical glands removed by operation, and in ten cases from the lesions of primary abdominal tuberculosis or ascitic exudations. In all the abdominal cases the mesenteric glands were used for investigation, but in none of those in which there was generalization of the disease, bacilli remote from the mesenteric glands were used, for example, those occurring in the brain, glands, lungs, and true meninges.

THE EFFECTS OF GROUP I ON ANIMALS.

Like the bacilli of bovine origin, these human viruses were tested on calves by the subcutaneous inoculation of pure cultures derived from cultures. They were also tested by intramammary inoculation into the udder of cows. The results produced, in the case of every virus

ere identical with those produced by the inoculation of ovine bacilli.

These fourteen human viruses were also tested on other nimals, including rabbits, guinea-pigs, pigs, goats, dogs, onkeys, and anthropoids. The results obtained were lentical with those obtained with bovine bacilli. Speakg of these results, the Commissioners state: "We may y definitely and at once that these effects appear to us be absolutely identical with the effects of the bacillus bovine tuberculosis; we have wholly failed to discover y essential differences between the one and the other; th are equally virulent, that is, equally able to set up berculosis in bovine and other animals."

The Origin of the Viruses forming Group II.

This group consists of 40 cases of very different kinds. some cases the human material obtained consisted cervical glands removed by operation. In eight others consisted of mesenteric glands removed after death from ses in which the disease appeared to be of alimentary gin, and was either a generalized tuberculosis or a more alized affection. In ten other cases the material conted of lungs or bronchial glands from cases in which e disease was of respiratory origin. One case was a berculous kidney, another a tuberculous testis; all the t, nine in number, were cases of joint or bone disease.

The Effects of Group II on Bovines.

When inoculated subcutaneously in the form of an ulsion of tuberculous tissue, there are produced, in dition to the local lesion, more or less abundant tuberous deposits, in a distinctly retrogressive condition, in prescapular and prepectoral glands. There were also served, in nearly half the cases, a few scattered tubercles a retrogressive condition in various organs, such as the gs, liver, and distant lymphatic glands. In two exceptnal cases these scattered tubercles were numerous and spicuous. As in the case of bovine bacilli, it has been ertained experimentally that when the human bacilli Group II are injected subcutaneously in the neck, in an quate dose, a certain number enter the blood stream hin two days, and are then distributed all over the dy.

When the bacilli of Group II were inoculated in the n of large doses of culture (50 mg. or more), they in no e produced generalized progressive tuberculosis.

he bacilli of Group II therefore possess a very much er pathogenicity for the bovine than the bacilli of up I.

n rabbits the bacilli of Group II produce a limited ogressive tuberculosis. On guinea-pigs they readily duce generalized progressive tuberculosis. The Comsioners' observations on pigs and goats are not comte, but it appears that these animals are as resistant to Group II bacilli as bovines and rabbits.

n monkeys Group II bacilli readily produce generalized rculosis, and the same result has been obtained on a mpanzee.

Cultural Characters of Human and Bovine Bacilli.

he Commissioners discuss in detail the microscopic cultural characters of the various human and bovine ses which have been used for the animal experiments, summarize their opinions as follows:

The bacillus of tuberculosis is a simple organism with ty microscopical features, growing with varying ease ifficulty on various media. The microscopical features he bacillus itself and the changes which it brings t in the medium on which it is growing are correlated and seem dependent on, the nutritive powers of the llus; in this respect the bacillus of tuberculosis mbles other similar simple organisms. This difference utritive and so in reproductive power is the essential rence between one bacillus of tuberculosis and her, the other differences described above being ndent on it; and this difference enables us to arrange he bacilli which we have studied into two classes; in which the bacillus grows with difficulty on icial media and which we call dysgonic, and her in which the bacillus grows readily on the same ia, and which we call eugonic. In the first class we the bacillus of bovine tuberculosis and the bacillus roup I of human tuberculosis. These exhibit the range of growth on various media, and the same lated variations in microscopical features. They are in all respects one and the same. In the second class we place the bacillus of Group II of human tuberculosis. But the demarcation between these two classes is not a sharp or broad one. The members of the former class are not equally dysgonic, nor are those of the latter equally eugonic. In each of them there is a wide range of growth, so wide in each class that the least dysgonic of the former differs slightly if at all from the least eugonic of the latter class. And there is a similar closeness in the other features correlated to the power of growth. Hence the difference between the two classes—that is, between the bacillus of Group II of human tuberculosis and the bacillus of bovine tuberculosis (or of Group I of human tuberculosis)—is one of degree only, and, moreover, when the extremes of the two classes are compared the one with the other is seen to be a slight one."

Human Viruses Classed as Group III.

Certain of the human viruses investigated differed in important respects from both Group I and Group II. They are therefore classed by themselves in a separate group. One of these viruses, obtained from a case of lupus, produced results which "seem to show that the bacillus of this case was intermediate in virulence; its virulence was greater than that of Group II, but distinctly less than that of Group I." Another case, obtained from the mesenteric glands of a youth aged 18, "shows a virulence not only intermediate but also unstable—its virulence appearing to be diminished by cultivation on an artificial medium, and to be increased by passage through a bovine body." Three other viruses also presented features of special interest. The first of these was obtained from the tuberculous synovial membrane of the knee-joint of an adult; the second was obtained from the bronchial glands and spleen of a child aged 4; and the third was derived from human sputum. In each of these three cases "the bacillus of the tuberculous materials made use of either actually presented, or may be assumed to have possessed, at the beginning the characters of a bacillus of Group II, highly eugonic and of lower virulence; but after 'passage' through bovine bodies presented the characters of a bacillus of bovine tuberculosis, highly dysgonic and very virulent."

The Commissioners discuss these cases comprised in Group III at great length, but reserve for a future report the final expression of opinion as to their significance.

Further Inquiries Necessary.

The Commissioners conclude their report with the following statements:

In all which has been recorded above we have limited our inquiry to the identity of human and bovine tuberculosis. But the results at which we have arrived point very strongly to the necessity of extending our studies to the tuberculosis occurring naturally in animals other than man and the ox; and indeed the terms of our reference direct us to do this.

We have already made observations with this intent, and have especially directed our attention to the tuberculosis so common in pigs, a matter of great practical importance. We propose to report on a future occasion concerning this and other matters entailed by the terms of our reference.

Summary and Practical Conclusions.

The Commissioners summarize the bearings of the results at which they have already arrived as follows:

"There can be no doubt but that in a certain number of cases the tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis; and there also can be no doubt that in the majority at least of these cases the bacillus is introduced through cows' milk. Cows' milk containing bovine tubercle bacilli is clearly a cause of tuberculosis and of fatal tuberculosis in man.

"Of the 60 cases of human tuberculosis investigated by us, 14 of the viruses belonged to Group I—that is to say, contained the bovine bacillus. If, instead of taking all these 60 cases, we confine ourselves to cases of tuberculosis in which the bacilli were apparently introduced into the body by way of the alimentary canal, the proportion of Group I becomes very much larger. Of the total 60 cases investigated by us, 28 possessed clinical histories indicating that in them the bacillus was introduced through the alimentary canal. Of these, 13 belong to Group I. Of the 9 cases in which cervical glands were studied by us, 3, and of the 19 cases in which the lesions

of abdominal tuberculosis were studied by us, 10 belong to Group I.

"These facts indicate that a very large proportion of tuberculosis contracted by ingestion is due to bacilli of bovine source.

"A very considerable amount of disease and loss of life, especially among the young, must be attributed to the consumption of cows' milk containing tubercle bacilli. The presence of tubercle bacilli in cows' milk can be detected, though with some difficulty, if the proper means be adopted, and such milk ought never to be used as food. There is far less difficulty in recognizing clinically that a cow is distinctly suffering from tuberculosis, in which case she may be yielding tuberculous milk. The milk coming from such a cow ought not to form part of human food, and, indeed, ought not to be used as food at all.

"Our results clearly point to the necessity of measures more stringent than those at present enforced being taken to prevent the sale or the consumption of such milk."

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

As already announced in the British Medical Journal, the Fourteenth International Congress of Hygiene and Demography will take place in Berlin from September 23rd to 29th, 1907. The work of the Congress will be distributed among eight sections as follows: (1) Hygienic microbiology and parasitology (President, Professor Flügge); (2) dietetic hygiene, hygienic physiology (President, Professor Rubner); (3) hygiene of childhood and schools (President, Professor Heubner); (4) the hygiene and care of the working classes (President, Professor Renk); (5) the prevention of infectious diseases and care of the sick (President, Professor Gaffky); (6*a*) hygiene of dwellings, townships and waters (President, Professor Gruber); (6*b*) hygiene of traffic: life-saving (President, Dr. Schwechten, Chairman of the German Railway Union); (7) military, colonial and naval hygiene (President, Professor Kern); (8) demography (President, Dr. Van der Borght, Chairman of the Imperial Statistical Bureau, Berlin). The official languages of the Congress are German, French, and English. The subjects proposed for discussion in the several sections are the following:

Section 1.

Etiology of tuberculosis; the bacilli of the typhoid group; the cocci of meningitis and similar bacteria; etiology of cholera; pathogenic protozoa; pathogenic spirochaetes; insects as carriers of disease; report on the methods of testing serums; modern proceedings of immunization.

Section 2.

Report on the present legislative measures concerning foodstuffs and the control of the same in different countries; means used for the preservation of foodstuffs; requirements of the legislation on foodstuffs; the diet of the poor and its effect on social economy; the necessary minimum of proteids; alcoholism, tackling and its effects on health.

Section 3.

Care of infants; the infant homes and their results; extension lectures on infantile hygiene as means of raising the profession of midwifery; production of pure milk for infants; employment of school medical officers; overwork in schools; best regulation of holidays; care of imbeciles.

Section 4.

Fatigue through work; the success of preventive measures against accidents; hygienic instruction for inspectors of factories; dwelling houses for workmen; public baths; baths in factories; industrial lead poisoning; prevention of dust in industries; gas explosions; the dangers of electricity, and assistance in case of accidents caused by strong currents; how to reduce the dangers to health in home industry; the question of wax matches; substitution of a harmless preparation for the laxative, by mercury; the decrease of calling workers; improvement of hygiene for the working classes by means of the Insurance for pensioners.

Section 5.

Uniform regulation of the methods of testing disinfecting apparatus and disinfectants; control of disinfection; insurance against disease and its duties; sputum; combating tuberculosis; care of consumptives; preventive inoculation against typhoid fever, plague, cholera; combating contagious diseases; the spread and combating of plague; modern methods of combating typhoid fever; measures for preventing the spread of infection by vaccinated individuals; compulsory meat inspection with reference to prevention of disease.

Section 6*a*.

Provision of dwellings for the poor; homes for unmarried persons; report on the effect of the mechanical, chemical, biological purification of sewage; up-to-date experiences on the separate system; utilization and removal of sewage upon the condition of rivers; new methods of filtering drinking water; ozonizing of water; experiences on water collected by valley-dikes; modern appliances for lighting and their hygienic importance; importance of artificial ventilation; smoke nuisance in large towns; hygiene of public thoroughfares.

Section 6*b*.

Influence of the vocation in traffic on the general health; supervision of food-supply for travellers; the danger of epidemic diseases and their prevention in the railway service; the dangers resulting from the employment in the railway service of persons affected with nervous affections; injuries incurred in railway travelling and their prevention; first aid and traffic; rescue; co-operation of medical practitioners in the precautionary measures against the dangers of traffic; medical aspects of rescue.

Section 7.

Water-supply for an army in the field; reports on inoculation against typhoid fever in the army; how to judge of the fitness of officers and men for active service in tropical countries; removing waste in military camps and in the field; wholesale poisoning of troops by adulterated food; relations between pulmonary tuberculosis and functional disturbances of the heart's action, especially in soldiers; ships infested with plague rats; sleeping sickness; antimalaria campaign; ventilation and heating on ships of the navy and mercantile marine; vaccination against small-pox in the colonies; sanatoriums in the tropics; the campaign against yellow fever; perpetual sanitary supervision of ports; lavatories, baths, waterclosets on board ships of war; regulations of the bodily temperature and the difficulties which are opposed to it in the naval service and in the tropical countries; sunstroke, convulsions of the stokers, insolation; combating infectious diseases on board.

Section 8.

Demography.

Death tables: (*a*) German empire, (*b*) Prussia, (*c*) large towns; duration of life in the population; infant mortality (*a*) method of statistics on infant mortality, (*b*) food and its influence, control of milk supply, (*c*) mother's nursing; statistics of plural births; statistics of families; statistics of recruiting; inland migration; emigration and immigration; school hygiene and statistics; morbidity and mortality of different professions; form for statistics of the causes of disease and death; mortality and wealth; statistics and supervision of dwellings; comparisons between the registers of popular mortality and the registers of life, revenue, and pension insurance; frequency and sequence of accidents according to the latest researches; retrogression of productiveness.

The sittings will be held within the precincts of the Reichstag. The fee for membership has been fixed at £1. Relatives of members and college or university students may be admitted to the meetings of the Congress on payment of 10s.

Dr. T. A. Starkey, M.D., D.P.H., Professor of Hygiene, McGill University, Montreal, has reprinted from the *Montreal Medical Journal* an interesting paper upon the relation between deficient humidity of the air and hyperæmia of the mucous membrane of the respiratory passages, chiefly of the nose and pharynx. During Dr. Starkey's first winter in Canada he suffered greatly from congestion of the nose and throat and, to a less extent, of the bronchial passages. This condition was noticeably after a prolonged stay indoors, and was relieved by keeping the windows open. Chemical analysis of the air of the rooms occupied by him furnished no explanation, but investigations as to the relative humidity of the air showed unexpected results. Owing to the heated condition of the houses during the cold of the Canadian winter, the relative humidity of the air in the rooms with closed windows was sometimes as much as 50 per cent. less than that of the cold air outside. Tables of the relative humidity of the air indoors and that outside, for the seven months from October to March inclusive, show the average relative humidity out of doors to be fairly constant between 78 and 87 per cent., whilst indoors, with the windows closed, the relative humidity was from 41 to 5 per cent. When it is remembered that the most comfortable condition of relative humidity is 70 to 75 per cent., it will be seen how far below this desirable percentage of saturation is the air in the over-warmed rooms with closed windows. When the windows were opened the relative humidity rose from 5 to 10 per cent. The author suggests that this excessive dryness of the atmosphere in houses is a large factor in the causation of many affections of the nasal pharynx in children, and may have an influence in the causation of pulmonary diseases.

LITERARY NOTES.

Dr. Molenaar, of Munich, has invented a new *lingua franca* which he calls "Universal." We gather that the grammatical structure is extremely simple and that the language is largely Latin in vocabulary.

While waiting for the advent of an international language, a Belgian advertiser has conceived the idea of bringing the innumerable virtues of a patent food before the world—or such part of it as reads the *Journal Médical de Bruxelles*—in Latin. This is the first time, as far as we are aware, that the noble tongue of old Rome has been used for the purpose. It is amusing to read that "alimentum est concentratum valoris maximi"; that it "omnia alimenti perfecti continet elementa optima ratione mixta"; that "saporis suavis causa diu facile sumitur et libenter"; that it is "diateticum exploratum et probatum typho abdominali laborantibus"; that "plurimis in phthisicorum sanatoriis praecipue adhiberi solet"; and last, but not least, that "ab inope quoque modico pretio emitur."

Dr. Achilles Rose of New York writes to the *Medical Record* to say that he has received a letter from Dr. J. Foustanos, editor of the Greek journal "Medical Progress," announcing that the complete edition of the ancient Greek medical writers, which has been in preparation for many years, will go to press within a few months, all the preliminary work being accomplished. The edition, which will be issued at a low price, will include all the works of the ancient Greek physicians—not only those already published, of which some are out of print and difficult to obtain, but also some that exist only in old manuscripts, and will now appear in print for the first time. Dr. Foustanos began the preparation of this edition about ten years ago, and has had the assistance of the leading medical men and philologists in Greece in the work.

The *Western Canada Medical Journal* is the title of a new monthy journal of medicine and the allied sciences, published at Winnipeg. The first number contains notes on the use of a medical journal by Professor Osler, in which he gracefully bids Godspeed to our new contemporary. Professor A. H. Ferguson, of Chicago, contributes a paper on The Typic or Anatomic Operation for the Radical Cure of Oblique Inguinal Hernia; Dr. Robert Jones, of Claybury, writes on the mental degradation resulting from alcohol; while interesting cases are communicated by Dr. J. T. Fotheringham, Dr. Nicholls, Dr. C. G. Mason, and Dr. J. McKee. The new journal is intended to be a medium of communication between the medical men of Western Canada; the want of such a periodical has been greatly felt. The *Western Canada Medical Journal* is excellently printed, and altogether presents an attractive appearance. The contents do not belie the promise of the outside. We congratulate the editor, Dr. George Osborne Hughes, of Winnipeg, on the highly successful beginning he has made in an enterprise that might have made a man of less judicious boldness stagger in the attempt. The excellence of this first result of his editorial labours seems to warrant the hope that the new journal will have a long career of usefulness.

At the Scottish Students' Conference recently held in Edinburgh, Mr. E. Darwin Wilmot moved that the conference consider the establishment of a lectureship in the history of medicine most urgently required at each of the four universities. Such a lectureship, he said, was already in existence in Continental universities, and Great Britain should not be behind them. The class would not be compulsory. Mr. C. P. Williamson (Glasgow) moved the previous question. The medical curriculum, he said, was already overcrowded. He did not think the motion was a serious one; he, at any rate, could not take it seriously. Mr. J. C. Watson (Glasgow), in seconding, said he opposed the motion because it was not a fit subject for a medical curriculum. Mr. A. G. Anderson, M.A. (Aberdeen) thought it a matter of little concern to the student who discovered the stethoscope, or what his history was, so long as the student learned to hear the proper sounds through it, and to be able to do something for his patient. Six voted for the motion, and six for the previous question, the Chairman giving his casting vote in favour of the latter. As the proposed class was not to be compulsory, the argument drawn from the overcrowding of the medical curriculum is irrelevant. A doctor who is not interested in the evolution of his art is scarcely likely to be keenly interested in that art for its own sake. The debate seems to have been marked by a philistinism surely remarkable among Scottish students, who are sometimes by way of holding themselves up as bright exemplars of the benefits of a university education to those who have not had similar advantages.

Il Ramazzini, a new medical journal published at Florence, takes its name from the Bologna physician of the early part of the eighteenth century whose works on the diseases of workpeople entitle him to be regarded as the creator of industrial and sociological medicine. The editor is Dr. G. Y. Giglioli, and there is a Committee of Direction consisting of Professor Biondi, Professor Borri, and Drs. Gasperini and Pieraccini. Among those who have promised their collaboration are Professors Albertoni, Banti, Celli, Devoto, Foà, Gabbi, Grocco, Lombroso, Murri, and Sanarelli. The "platform" of the new periodical will include social hygiene, the conditions of labour, medico-social legislation, the promotion of thrift, and public assistance. The first number of *Il Ramazzini* contains, among other communications, a paper by Professor A. Niceforo, of Lausanne, on the anthropology of the poor; a contribution by Professor Angelo Celli on the economic difficulties of hygiene; and several articles on diseases of occupation, workmen's compensation, and kindred questions.

The number of the *Journal of the Ceylon Branch of the British Medical Association* (January-June, 1906), which has just come into our hands, maintains the high standard which we have learned to expect from the periodical. It is especially interesting as being a record of the scientific work of one of the most important of our Colonial Branches. Among the contents we note a paper by Dr. W. H. De Silva on the therapeutic uses of argyrol; a case of ruptured tubal pregnancy in which a cure was effected by operation, by Dr. M. Sinnetamby, who also deals with the problem of enteric fever in Colombo; a case of labour in which the head presented through a central rupture of the perineum, by Dr. Hinton De Silva; and a review of the various methods of hysterectomy as practised in England and on the Continent, by Dr. H. B. Mylvaganam, Lecturer on Anatomy in the Medical College, Colombo. We are especially pleased to note that considerable attention is given to native remedies. Dr. Emanuel Roberts writes of the therapeutic properties of *Terminalia chebula*, a tree of the natural order Combretaceae. Besides a large proportion of tannin and the fixed oils from the kernels, two organic acids (chebulic and chebulinic) and a green-coloured oleoresin "myrobolanin," have been extracted from the fruit. The part used in medicine is the mesocarp. It is one of the most popular remedies of the native pharmacopoeia, and is used as a lotion in perineal injuries caused during childbirth, eczematous sores, and prolapsus ani; as a gargle and dentifrice in spongy gums; as an injection in chronic diarrhoea and dysentery; and as a collyrium in catarrhal ophthalmia. Its astringent action makes it a valuable styptic. Internally it is used as a stomachic and a cholagogue. Dr. Roberts also gives an account of *Plectranthus zeylanicus* of the natural order Labiatae, which is used by the natives as an application to the head in delirium and coma, and internally as a carminative, antiseptic, and stomachic, and as a hepatic stimulant. Another carminative and stomachic and hepatic stimulant, according to the same writer, is *Cyperus rotundus*, a grasslike plant of the Cyperaceae order; it is one of the most important and popular remedies in the native pharmacopoeia. Dr. W. H. De Silva describes the uses of *Adhatoda vasica*, a local astringent and an antispasmodic and expectorant. All these papers are accompanied by coloured illustrations of the plants dealt with. Dr. A. J. Chalmers, Registrar of the Medical College, contributes some further cases of haemorrhagic pancreatitis. Altogether the *Journal* is a satisfactory proof of the activity of the Branch, and the members are to be congratulated on the result of their labours. A special word of acknowledgement is due to the energetic honorary secretary, Dr. Sinnetamby.

Professor Thoinot of Paris devoted the first lecture of his course of medical jurisprudence to a review of the careers of his predecessors in the chair, Orfila, Tardieu, and Brouardel. The first was dismissed from the post of Dean of the Medical Faculty, and was the object of an unremitting persecution till his death. The second

ended his days by dying, like Swift, "at the top." The third, towards the end of a successful life, witnessed the triumph of enemies of his fame. Orfila's career was sufficiently remarkable to deserve fuller notice. He was a Spanish subject, born in the island of Minorca in 1787, and christened Matthew Joseph Bonaventure. At the age of 14 he had learned from his teacher, a Cordelier, Latin and scholastic philosophy enough to enable him to hold a public dispute on the highly-metaphysical question, "Can a thing be and not be at the same time?" He also learned French, English, German, and mathematics. His father wished to make a sailor of him, and he obediently went to sea. The ship in which he sailed was captured by pirates, who talked of impaling and beheading him. This adventure made him look about for a profession presenting less danger, at any rate to himself. He chose medicine, and went to study at Valencia. Dissatisfied with the teaching, he went to Barcelona, and soon afterwards to Paris, where his interest in chemistry brought him under the notice of Fourcroy and Vauquelin. He took his doctor's degree in 1811. In 1814 he was offered a Chair of Chemistry at Madrid, but having decided to make France his country he declined. In 1819 he was appointed to the Chair of Medical Jurisprudence in the Paris Faculty. In 1823 he exchanged his Chair for that of Chemistry. In 1831 he became Dean of the Faculty, and this post he continued to hold till he was summarily dismissed by the Provisional Government after the Revolution of 1848. He died five years later. Orfila might have made a fortune as a singer had he not preferred to be a pioneer of scientific toxicology. In 1815 he was offered a thousand pounds a year by the director of the Italian Opera, Paris. He preferred to stick to medicine, but his voice made him extremely popular in Parisian society. It is an interesting coincidence that Sir Robert Christison, another pioneer of toxicology, was noted in Edinburgh society for the beauty of his voice. He was one of the famous quartet known as "The Singing Doctors," the others being Professor Hughes Bennett, Sir Douglas Maclagan, and Dr. Alexander Peddie, who has quite recently passed "beyond these voices."

SCHOOL HYGIENE.

(Continued from page 327.)

LONDON.

Physically-defective Children.

Dr. Kerr, in his report on the London Elementary Schools, states that the physically defective still in these schools, omitting squint, harelip, cleft palate, and a few very minor defects—the effects of various troubles seen in the ordinary schools have been studied by Dr. Rowntree. He took 14 schools, representing an attendance of 14,098 children, and found 105 cases with noteworthy defects:

Paralysis of various types	30
Tuberculous diseases	16
Congenital malformations	16
Rickets	31
Accidents and fractures	6
Spinal curvatures (marked)	3
Acute bone inflammations	3
	105

Of the cases of paralysis, 7 (4 boys, 3 girls) were instances of cerebral paralysis, 5 having both limbs on one side affected and 4 having the arm only (in 3 cases the right) affected. In 2 cases the teachers were using great efforts to teach the children to write with deformed and atrophied right hands and neglected the education of the serviceable left hands; 21 (9 girls, 12 boys) were cases of old infantile palsy. In most of these apparatus had been provided (irons), but in several the appliances were so heavy and uncomfortable that they had been discarded; 2 cases in boys were pseudo-hypertrophic paralysis.

Tuberculosis, giving marked physical defects of a marked character, was only noticed in 16 cases, and all were healed or quiescent. The cases included—spine 2, hip 6, knee 3, ankle 3, shoulder 1, elbow 1.

Congenital malformations were of a very varied nature, deformities of the hands being the commonest. Five cases were girls with congenital dislocation of the hip. They were old enough for the maximum effect of the deformity to show, and only one had had any surgical treatment. The shortening of the limb was not great, and by thick soles or raising the boot they could all get about without difficulty; there was no pain, and operation could not have been recommended without considerable hesitation.

Among the fractures were 2 cases of separation of the epiphysis at the lower end of the humerus in which the hand could not be raised to the mouth. Two cases of fracture of the femur walked with a limp. A case of fracture of the base of the skull four months previously was interesting from the symptoms—impairment of memory and change for the worse in the character of the child, who had become inattentive and fidgety.

Marked evidence of rickets was presented by only 31 cases in this series. Mr. R. C. Elmslie has studied the occurrence of rickets so far as the evidence of the bones affords. Between 3 and 8 years of age, 1,240 boys and 1,075 girls were examined, and 158 boys and 170 girls between 10 and 11. The proportions in percentages showing recognizable signs of past rickets were:

Evidence of Past Rickets (Percentages).

Age.	3	4	5	6	7	Very Marked Deformity.	
						Knock-kneed.	Bowed Legs.
Boys	38	40	25	15	4	1.7	1.0
Girls	36	23	18	9	4	1.0	0.7

Between 10 and 11, rickets could only be recognized with certainty in 1 out of 170 girls, and in no one of 158 boys. Only 7 per cent. of the cases of rickets were of such severity that treatment would be advisable for relief of the deformity. One case of what is called in the report "continued rickets," a girl aged 13½ years, was seen.

The effect on the growth was most marked apart from deformities. Where a family has been examined, the younger members being rickety, and the older apparently having escaped, the effect on height is very marked, the older ones approaching the average for their age, whilst the younger fall much short of this.

Height of Non-Rickety and Rickety Children.

Age.	"Normal" Children in Same School Classes.			Rickety, but Without Any Serious Rickety Deformity.		
	No. in Group.	Average Age.	Average Height in Centimetres.	No. in Group.	Average Age.	Average Height in Centimetres.
3–4	21	3–7.6	93.1	31	3–6.9	90.7
4–5	42	4–5	99.7	48	4–4.2	95.0
5–6	66	5–6.4	106.1	39	5–5.3	101.7
6–7	125	6–5.2	109.8	70	6–5.5	106.3
	254			188		

THE LONDON COUNTY COUNCIL ELECTION.

Dr. Atwood Thorne, Honorary Secretary of the Medico-Political Committee of the Council of the Metropolitan Counties Branch, informs us that the following questions, with explanatory observations, are being sent through the Divisions of the Branch to each candidate at the forthcoming election for the London County Council:

A.—Would you support Parliamentary legislation to enable local authorities to make provision for the payment of medical practitioners called under the requirements of the Midwives Act to assist midwives in emergencies?

[Under the provisions of the Midwives Act (1902), which only came into force on April 1st, 1905, women registered as midwives are permitted to undertake for payment cases of labour.

In the event of everything proceeding satisfactorily they remain in full charge, but if there is the slightest complication they are legally obliged to call in a fully qualified medical practitioner.

The patients who engage midwives to attend them are usually not in a position to pay a doctor in addition, and the latter, therefore, frequently gets nothing for work, time, or anxiety (being only called in in cases of complication), and may, in addition, be actually out of pocket by having to supply drugs and the use of instruments.]

B.—Would you support amendments of the law as to death registration, based on the following principles?

1. That no body should be buried except upon production of a Registrar's certificate or a Coroner's order, and that no death should be registered except upon production of medical certificates in statutory form of the fact that death has actually occurred and of its cause, or upon a coroner's order.

[It is a matter of common knowledge that infants and even adults are now at times buried with neither a certificate from a registered medical practitioner nor a coroner's order, and that such action obviously leads to gross abuses and occasional public scandals.

Owing to the absence of a clause in the present form of death certificate, that the medical practitioner certifying has actually seen the body, there is no provision to prevent deaths being certified and registered when no death has actually occurred.]

2. That where medical certificates in compliance with the statute are not received by the Registrar, he shall report the death to the Coroner, and the Coroner shall instruct the practitioner who has been in attendance, if any, or the special district medical officer in conjunction with the medical practitioner in attendance, if any, to investigate, and, if so directed, to make a *post-mortem* examination, and that medical practitioners be paid a statutory fee for preliminary information furnished to a coroner for his assistance in deciding as to the necessity of an inquest.

[At the present time a coroner has no power to obtain from a medical practitioner a detailed report (either with or without a *post-mortem* examination) unless an inquest is held. Owing to this fact many unnecessary inquests are held, and these are expensive to the local authority and repugnant to the relatives.]

The Committee suggests that where possible the questions should be submitted by individual members of the Association acquainted with individual candidates; the Honorary Secretary of each Division is requested to send the replies to Dr. Thorne for tabulation, and to bring the matter before the Division if possible.

MEDICAL NEWS.

Dr. Donald MacAlister of Cambridge has been appointed Principal of the University of Glasgow.

Dr. Wm. Wynn Westcott, His Majesty's Coroner for North-East London, has been sworn in as a Justice of the Peace for the County of London.

The sum collected for the foundation of a prize in memory of Schaudinn now amounts to considerably over £4,000.

The anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms, Hôtel Métropole, on Wednesday, March 13th.

It is expected that under the will of Miss Frederica Crokat St. Mary's Hospital and St. George's Hospital will each benefit to the extent of over £11,000.

Dr. James Taylor will take the chair at the next dinner of the Edinburgh University Club of London, which will be held at the Criterion Restaurant, on Wednesday, February 20th, at 7.30 p.m.

Mr. Godfrey Lowe, M.R.C.S., L.R.C.P., St. Catherine's, Lincoln, was on Saturday last, at the annual general meeting of the Lincolnshire Automobile Club, unanimously re-elected Honorary Secretary of the Club. There are now 36 medical members of the Club.

The Earl of Crewe, Lord President of the Council, has consented to receive a deputation consisting of representatives of the Association for Promoting the Training and Supply of Midwives and of other authorities and persons who will lay before him certain points in connexion with the proposed exemption of Poor-law midwives from the rules of the Central Midwives Board.

Mrs. Dolan, the wife of Dr. T. M. Dolan of Halifax, who died of cerebral haemorrhage on January 30th, was an active helper of her husband during his long tenure of office as Medical Officer of the Halifax Union Workhouse, a post which by a strange coincidence he vacated on the very day of her death. Mrs. Dolan was President of the Brabazon Society at the workhouse, and was an active member of the Cinderella Club, of the Citizens' Guild of Help, and of the Emigration Committee of Shibden Industrial School. She was also one of the two co-opted members of the Education Committee from its formation, and in many other ways showed a practical interest in public work.

An evidence of the increased interest which is taken in making provision for the old age of working people is shown by the late Mr. Whiteley's bequest of a sum of £1,000,000 sterling to found and maintain homes for the aged poor. This was a form of benevolence relatively common a few hundred years ago, but of which not so much has been heard for the last century or more. Mr. Whiteley also made bequests to several London hospitals, to the Royal Hospital at Richmond, and to the Hayes Cottage Hospital.

The West London Medico-Chirurgical Society held its twenty-fifth anniversary dinner on February 6th at the Wharncliffe Rooms, Hotel Great Central, London. The chair was taken by the President, Dr. Leonard Mark. After the usual loyal toasts had been duly honoured, Dr. A. E. Russell submitted the toast of "The Imperial Forces," and observed that the special characteristic of the British army was its flexibility and adaptability. The toast was acknowledged by Sir Alfred Keogh, Director-General, who said that the post-graduate school of the West London Hospital took a more practical interest in the affairs of the medical branch of the army than any other institution in the country. He was glad that the time was fast approaching when it would be possible to make a public pronouncement as to the course proposed to be followed by the Army Medical Service. It was known to all that the Army Medical Service was in point of numbers only sufficient to provide for a very small army, and it was necessary to make such arrangements as would provide for a large army. That could only be done by appealing when the right time came to the patriotism of the members of the medical profession, and he did not think it would be behind the rest of the country. He emphasized the statement that the great feature and virtue of the army lay in its flexibility and adaptability. It was necessary for the civilian members of the medical profession to understand that there was a great deal to learn concerning the Army Medical Service and its work in time of war, for the treatment of the sick and wounded in war time was one of the minor duties. That fact was recognized by the members of the post-graduate school of the West London Hospital, for they had received instructions from the Army Medical Service in regard to those matters. The President, in proposing the toast of "The West London Medico-Chirurgical Society," said that they were all proud of the fact that the Society had existed for over a quarter of a century and was in a most prosperous condition. He then referred to the amalgamation scheme of the London medical societies, and said that the Society had come to the conclusion that it had better remain as it was, and continue the good work it had done during the past. The membership of the Society was 656, and there were still 37 of the original members on the list. Dr. W. C. James then proposed the toast of "The Kindred Societies and Guests," which was responded to by Mr. Warrington Haward, who explained that he spoke in the place of Mr. C. A. Ballance, President of the Medical Society. The toast was also acknowledged by Mr. E. B. Turner. After Mr. Rickard Lloyd had proposed the toast of "The President," and that gentleman had suitably responded, the guests dispersed.

Medical Sickness and Accident Society.—The usual monthly meeting of the executive committee of the Medical Sickness, Annuity, and Life Assurance Society, was held at 429, Strand, London, W.C., on January 25th, Dr. de Havilland Hall in the chair. In accordance with the usual practice at the first meeting of the year special reports on the condition of all those members who belong to what is called the "chronic list," that is, who are considered to be permanently incapacitated, were presented. Thirty-five such special reports were discussed, and very few of them contained any information on which could be based much hope that the members would ever again be able to perform professional work. Most of them are drawing sick pay to the amount of one hundred and four guineas a year, and the annual disbursement of the Society in respect of its permanently-incapacitated members is now about £3,000. A special extra reserve is made for these chronic cases at every valuation of the Society's business. The ordinary claim list was also a long one, for the epidemic of influenza has, as usual, compelled many members of the medical profession to stop work. The total sickness disbursement of 1906 was, however, appreciably less than the amount expected and provided for in the tables of contribution. Prospectuses and all further information on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

British Medical Journal.

SATURDAY, FEBRUARY 9TH, 1907.

THE ROYAL COMMISSION ON TUBERCULOSIS.

In their second interim report the members of the Royal Commission on Tuberculosis have, we suspect, dealt the death blow to a doctrine which, during the last few years, has exercised a mischievous influence upon the interests of public health. At the meeting of the International Congress on Tuberculosis, held in London, in 1901, the startling announcement was made by Koch that human and bovine bacilli are different in kind, and the suggestion was made, and has since been reiterated by some of Koch's followers, that the likelihood of human beings becoming infected to any serious degree with bacilli of bovine origin was so slight that it might be regarded as of little practical moment. Tuberculosis is extremely common amongst cattle, and the infective organisms are very frequently present in cow's milk; there has, therefore, been an obvious temptation, to those who have financial interests at stake, to minimize the dangers arising from the use of such material as human food, on the ground that the most famous of living bacteriologists has declared the bovine bacillus to be relatively innocuous to man. But it will no longer be possible for those concerned with the provision of human food to seek relief from their responsibilities by appealing to a scientific hypothesis which has now been proved to be untrue.

After investigating the subject with a thoroughness which justifies us in saying that they have pronounced the final word, the Tuberculosis Commissioners have decided that the bovine tubercle bacillus undoubtedly is a danger to man, and is a very serious danger. "There "can be no doubt," they say, "that in a certain number of cases the tuberculosis occurring in the human "subject, especially in children, is the direct result "of the introduction into the human body of the "bacillus of bovine tuberculosis; and there also can be no doubt that in the majority at least of these cases "the bacillus is introduced through cow's milk. Cow's "milk containing bovine tubercle bacilli is clearly a "cause of tuberculosis and of fatal tuberculosis in "man." Twenty-eight of the human viruses which they investigated were derived from cases in which the clinical histories indicated that the bacillus was introduced through the alimentary canal, and thirteen out of these viruses were found by exhaustive experimental tests to possess every characteristic feature of bacilli of bovine origin. From these and other considerations the Commissioners regard it as established that "a very large proportion of tuberculosis contracted "by ingestion is due to tubercle bacilli of bovine "source."

Having established in its true light the bacteriological proof that the bovine bacillus is a danger to man, the Commissioners proceed to indicate very clearly the practical bearings of their inquiry. "A very consider"able amount of disease and loss of life, especially "among the young, must be attributed to the con"sumption of cow's milk containing tubercle bacilli. This evil ought to be prevented, and in the opinion of the Commissioners, greater vigilance is requisite in order to secure the exclusion of these dangerous bacteria from the milk supply. "The presence of "tubercle bacilli in cow's milk can be detected, though "with some difficulty, if the proper means be adopted, "and such milk ought never to be used as food. There is "far less difficulty in recognizing clinically that a cow "is distinctly suffering from tuberculosis, in which case "she may be yielding tuberculous milk. The milk "coming from such a cow ought not to form part of "human food, and indeed ought not to be used as food "at all. Our results clearly point to the necessity of "measures more stringent than those at present "enforced being taken to prevent the sale or the "consumption of such milk." This is plain speaking. It conveys in unmistakable language the opinion of the Tuberculosis Commissioners that one important part of the crusade against tuberculosis ought to be directed towards the exclusion of bovine tubercle bacilli from our milk supplies; and it intimates with equal clearness that in order to attain this object public authorities must enforce more stringent regulations than those which at present exist. This attitude of the Commissioners is based on a sound appreciation of the interests of public health, and we hope that their recommendations for the adoption of a more rigorous policy by the responsible authorities will prove effective.

Much impatience has been expressed during the last two years at the delay of the Commissioners in bringing out their report. Other investigations on the same subject have been in progress in all parts of the world; experimental data have been published; more or less conflicting theories and hypotheses have been based on them; and the net result has been more confusion than elucidation. Our Commissioners held aloof. The mystery of silence which veiled their work became a little exasperating, and people not unnaturally began to feel that, if they really had found out anything useful, the sooner they provided us with a few rays of illumination the better. Now that they have published a review of their evidence and a summary of their experiments we see that the delay was justified. They have remained silent longer than other investigators because their work has been conducted on a far more extensive scale and with a more thorough appreciation of the duty to investigate both sides of a question. All experimental investigations on tuberculosis are necessarily slow, because the disease, compared with many other bacterial infections, generally runs a much longer course, and the cultivations of the bacillus on artificial media also require an exceptionally long time. It may take many months before the pathogenic effects of a virus inoculated into a particular animal can be determined, and thoroughly to work out the cultural characters of a particular strain of bacilli is a process which usually takes at least two months, and in many instances a much longer time. In the cases of many important viruses it has been found necessary not only to study the effects of the bacillus upon animals of different species, but to pass the bacillus on from animal to animal, and so to observe the influence upon the micro-organism of prolonged residence in particular animal tissues. Experiments of this sort necessitate a long period of observation, and cannot be abbreviated without losing their value. Medical practitioners will readily understand these difficulties. Tuberculosis in the human body like spontaneous tuberculosis in animals, usually runs a very slow course, and in order that the disease

experimentally set up in animals may throw fresh light on the nature of the morbid processes at work, it is desirable to reproduce as far as possible those chronic or at least not rapidly fatal types of infection which are characteristic of the disease as it naturally exists.

It is a satisfaction to know that the length of time occupied by the Commission has been due to the necessity for making their investigation sufficiently thorough to provide a final settlement of recent controversial issues. The significance of their decision as to the dangers of the bovine bacillus for man is increased by the fact that they have not merely investigated the subject with obvious impartiality but have laid special and clearly intentional emphasis on those experimental features upon which Koch and his supporters rely in their separation of mammalian tubercle bacilli into a *Typus humanus* and a *Typus bovinus*. Here the Commissioners have shown that bacilli identical in every respect with the *Typus bovinus* are responsible for fatal human disease. It would be impossible to prove in a more convincing manner that the distinction, emphasized by some bacteriologists, between a "bovine" and a "human" tubercle bacillus does nothing to invalidate the fact that bacilli of bovine origin may produce disseminated and fatal disease in man.

In many respects the present Commission creates a valuable precedent for the State endowment of scientific research. The whole of the evidence on which the Commission bases its report consists of scientific investigations conducted in its own laboratories and under its own control. The inquiry has been difficult and involved, but the importance of doing it thoroughly has been recognized, and provision has been made for prosecuting research on a scale sufficiently extensive to dispose of those elements of ambiguity in the essential problem which other investigating bodies in various countries, working with more restricted facilities, have failed to elucidate. This undertaking has necessarily cost money; but scientific investigations must be adequate or they will prove both useless and misleading; and in this instance the Treasury has adopted the sound policy of endowing scientific research with sufficient liberality to enable results to be obtained which are not only of value to pathologists, but also of great practical importance in the interests of agriculture and public health. It is eminently desirable that there should be a continuity of this policy. Matters such as these cannot be left to private scientific enterprise. They cannot be dealt with satisfactorily by independent pieces of research conducted in various laboratories; and they cannot be undertaken unless the funds are provided. When the problems requiring investigation have a direct bearing on the welfare of the community and the prevention of disease, it is the natural function of the State to provide the requisite funds, to appoint a responsible directing body which shall co-ordinate the work, and to exercise control over the expenditure, assuring itself that the way in which the money is expended is of direct utility to the public service. The value of the scientific work which has actually been accomplished under Government auspices proves that such undertakings are not merely desirable in theory, but justified by their results.

The work of the present Commission is not yet completed. According to the terms of their reference, the Commissioners are instructed to inquire into the relations of human and animal tuberculosis. This disease is prevalent in other animals than bovines, and is particularly common in pigs; it is, therefore, of practical importance to know how far human infection is or is likely to be produced when material obtained from tuberculous pigs is used as food. The disease as it occurs in pigs is consequently occupying the attention of the Commission, and will be dealt with in a future report.

There are many other matters, of practical concern to the general public, where efforts directed towards the suppression of tuberculosis will require the assistance of scientific investigators. As the Commissioners indicate, more drastic measures must be taken to prevent the conveyance of the disease from bovines to man. The wide prevalence of tuberculosis amongst cattle is an awkward fact which cannot easily be disposed of, and the practical difficulties in the way of completely eradicating the disease are so great that they may seem insuperable. But on one point the public interests are so urgently concerned that there can be no hesitation as to what ought to be done. It is imperative that cow's milk intended for human food should be free from bovine tubercle bacilli. To effect the exclusion of this dangerous source of disease will be a matter of considerable difficulty; it will take time, and scientific investigations will be required in the conduct of the work. The Tuberculosis Commission is instructed by the terms of its reference to ascertain under what conditions the transmission of tuberculosis from animals to man takes place, and to report upon "the circumstances favourable or unfavourable to such transmission." The results which they are obtaining are valuable as a starting-point, but in order to be effective their work must be followed up by active preventive measures. The actual suppression, step by step, of the dangers arising from bovine tuberculosis will be dependent for its success upon precise scientific investigations into the requirements of individual cases as they arise.

TUBERCULOSIS IN SCHOOL CHILDREN.

Dr. Kerr's report to the London Education Committee, to which we have had occasion to refer on several occasions before, contains interesting particulars of the physically-defective children found in fourteen ordinary London elementary schools containing 14,098 children. The first point which will strike the reader of the abstract published elsewhere will probably be that tuberculosis was found to be the cause of marked physical defect in 16 cases only, and that in all these the disease was healed or quiescent. This will at first sight appear a very small proportion among over fourteen thousand children; but it must be remembered that these children were the residue, so to say, of previous examinations, and do not represent the true ratio; they were children physically defective from this cause who still remained in the elementary schools after others had been sent to special schools. Small as the number is, Dr. Kerr considers that it must be accepted as representing the true state of affairs in ordinary schools, since it is excessively rare for tuberculosis of spine, hip, knee, ankle, shoulder, or elbow to get well without leaving traces of its presence. On the other hand, as these are among the commonest cases treated in hospital, it must be concluded that many of the sufferers in whom the disease is active are kept at home, and that others in whom the deformity produced is considerable are at special cripple centres or in benevolent institutions. Even this does not account for all, and it must be concluded that many cases of so-called surgical tuberculosis die of other diseases from which they would probably have recovered had they not a tuberculous taint. From the educational point of

view, the importance of tuberculosis is in the effects that remain after its cure. Apparently there had been treatment in all the cases, but in many after-treatment had not been carried out, with the result that grave deformity had resulted, joints becoming ankylosed and knees acutely bent. After operation children are sent out in splints to their own homes, where the skill and care necessary to their recovery are wanting, and until sanatoriums for surgical tuberculosis are established these cases of deformity will continue. Dr. Kerr suggests a country invalid school, intermediate between the hospital and the special school for physically-defective children, where victims of tuberculosis could be sent for three, six, nine, or twelve months. This would be an economic gain, as these children usually are gifted with brains worth cultivating to the highest degree.

In the "Wald Schule" in Germany the children attend a day school in the pine forests. Only chronic cases of debility and early diseases are admitted, and they do lessons in the open air, sleeping for two hours in the middle of the day. We are gratified to see that Dr. Kerr agrees with us in thinking that special educational treatment is necessary for debilitated children, to prevent the development of tuberculous disease of a fatal or crippling kind. We have constantly urged that the system of sanatoriums for tuberculous children so successfully carried out in France should be adopted in this country, not only for cases of surgical tuberculosis, but also for children either suffering from, or with a predisposition to, pulmonary tuberculosis. It is a curious fact that no cases of pulmonary tuberculosis, or of predisposition to pulmonary tuberculosis are noted in the London elementary schools. In France a large number of children, ranging from 2 years to the end of school age, are received into the Sanatoriums for Children, either predisposed to or suffering acutely from pulmonary tuberculosis. How is it, then, that in England, where such a large number of deaths occur from phthisis, no notice is taken of the disease until after school age. It is in the highest degree improbable that the true condition here differs so essentially from that existing in France, and a careful inquiry into the matter would be of the very greatest interest. It is not easy to diagnose the disease in children; they may appear to have phthisical symptoms when in reality they are suffering from the effects of adenoids or bronchitis. But the conclusions of an authority so experienced as Dr. Granchet, as reported by our Paris correspondent recently, cannot be ignored, and we maintain that the only way to stamp out the disease is to take for granted that children may, at any rate, be predisposed to it, and when suffering from extreme debility and emaciation, a condition which may be noticed, more or less, in every school in the kingdom, they should be sent to the country to live an open air life, with plenty of sleep and nourishing food. There are many observations in this part of Dr. Kerr's report worthy of note which do not directly bear on the tuberculosis question, but we would only refer in passing to the fact that among 1,200 boys and 1,075 girls between the ages of 5 and 8 years a considerable percentage showed signs of past rickets, while in children between 10 and 11, rickets could be definitely recognised only in 1 out of 170 girls and in not one of 183 boys. Apart from deformity, the effect upon growth was most marked, so that where the elder children in families had escaped rickets they equalled the average height for their age, while the younger rickety ones fell far short of it. The fact that mental retardation is commonly associated with rickets must also be considered. Since rickets is a disease intimately associated with improper feeding, the most obvious remedy is, as Dr. Kerr remarks, education in hygiene.

THE WORKMEN'S COMPENSATION ACT, 1906.

THE medical profession is much concerned in the provisions of the Workmen's Compensation Act, 1906, which comes into force next July. The probability is that many of our readers are considering the taking out of new insurance policies designed to meet the comprehensive scope of the Act, while they will have had numerous communications from insurance companies offering to insure them against the extended risks. We suggest that no new policies should be taken out in a hurry. A Subcommittee of the Journal and Finance Committee of the British Medical Association has under discussion the possibility of starting a co-operative plan by which medical men could be insured upon highly favourable terms, and the *Lancet* is prepared to support the movement if it develops on practical lines. In these circumstances we recommend our readers not to close with any of the offers made to them by various insurance companies until they are in a position to judge of the merits of the scheme now under consideration. We would again call attention to the article published in the SUPPLEMENT for January 12th, 1907, in which the liabilities created by the new Act are discussed; it will be observed that it will apply not only to domestic and outdoor servants, but also to dispensers and nurses, and in many, probably in most, instances to medical assistants.

CHILD LABOUR.

THE condition of child labour in the poorest quarters of the city of Birmingham urgently requires attention. The children of the paper box maker, of the wood-chopper, of the washerwomen, of the minor tradesmen, and of the smallest shopkeepers, all have work to do which is a direct or indirect source of profit to their parents. Often do they have to perform a monotonous daily round of work at that period of life when the most important work a child can do, from the point of view of the future welfare of the community, is to play. It is in the wretchedly-paid carding and packeting trades that the greatest sweating occurs, and here the exploitation of cheap child labour is permitted to an enormous extent. When the mother is being paid at the rate of 1d. to 2d. an hour, and sees her children hungry, the temptation to add a few more pennies by setting the children to work becomes overwhelming. The earnings of the button carder are slightly higher than those of the women and children who card hooks and eyes. The button carder may earn 5s. 3d. a week as the result of unremitting toil; the hooks and eyes carder only 3s. 3½d. on an average. Pearl buttons are paid for at rates which fluctuate between 2s. 9d. and 6s. 8d. per 100 gross, which means that 432 buttons have to be sown on for 1d. or 2½d., as the case may be. For the carding of linen buttons still less is paid by the manufacturers, the rate being from 2s. 9d. to 4s. 2d. per 100 gross. The sewing of four gross in an hour, which would be about the speed of a quick worker, brings in only 1d. Very young children even help in this work, and there are many parents who keep their children away from school in order that they may earn for them a few pence by sewing on buttons or hooks and eyes. Many children get no time for play, they go to school by day, and do carding by night. This home carding is often carried on in unwholesome surroundings, and must be a means of carrying infection. Many of the children are in a very poor state of health, not only

produced by the unhealthy conditions under which they live, but also by the terribly long hours during which they have to work. Some of the mothers, and even the children are suffering from consumption, so that by this "sweating" not only is their state of health made worse, but also they may be spreading, by means of their work, the germs of this disease. Many other infectious maladies are probably transmitted in this way. A woman, by getting up early and working nearly all the day and late into the night, may, by carding for twelve hours out of the twenty-four, be able to earn five shillings a week. Great is the need to alter this condition of affairs. A short time ago the Secretary of State communicated with the City Council and suggested the application of the Employment of Children's Act to home carding, and also intimated that he proposed giving the local authorities power to prevent carding being carried on in unwholesome surroundings. But the real cure for the labour of children lies in the adequate payment of the labour of the parents. Under present conditions the payment to the outworker must necessarily be very small when it is remembered that one penny is the average retail price of a card of a dozen buttons. As the result of this sweating the lives of many children are made very monotonous and wretched, great impairment of health occurs among them, and a considerable deterioration in the physique of the children is produced. They grow up stunted in development, both physically and mentally, and incapable of performing work sufficient to make a decent livelihood. Not only his results, but on account of their ill health, and on account of the unwholesome and insanitary surroundings n which much of the work is performed, infection is spread. It is a large question, and one which needs nquiring into, with the view not only of benefiting the hildren, bus also of preserving the public health.

THE MEDICINE OF THE FUTURE.

Sir Almroth Wright, lecturing at the Royal Institution n February 1st on the methods of combating the acteria of disease in the interior of the organism, said hat up to the present time the community had spent ost of its energy in trying to kill the bacilli of disease utside the organism by hygiene and by disinfection. very hygienic measure was, of course, to the good, but erms of disease still lay in wait in countless millions, our food, in the milk we drank, the air we breathed; d they would be always with us. The next vance in civilization was to fight the bacteria thin the organism. Jenner had shown that we uld fight small-pox by preventive inoculations, and e principle had been applied to typhoid fever. t it was not possible to apply immunization to the evention of all the many diseases due to bacteria. A w era in therapeutics had been opened by the discery made by himself and his co-workers, that the lood contained certain substances which rendered acteria, as it were, more palatable to the phagocytes; these substances he had applied the term "opsonins," nd investigation had shown that the proportion in which they were present in the blood could be increased by inoculation. It had, therefore, become the duty of medical men to find out how to bring about this increase after the disease had already declared itself. In this way the bacteria of disease were directly attacked and destroyed, with the result that the patient not only recovered himself, but was not a source of infection to others. It was a new science and a new art, of unbounded potentialities for humanity. This lecture should be comforting to the medical profession, for it seems to show that Sir Almroth Wright is more satisfied with its work than he was some eighteen months ago. In August, 1905, he took the public into his confidence on the subject through the medium of the *Liverpool Daily Post and Mercury*. From that depressing deliverance we gathered that he had surveyed the whole realm of medicine and found no good therein. "It may," he said, "be affirmed with confidence of the healing art, as "at present practised, that it can do practically nothing "to avert death from a virulent bacterial invasion or to "bring about a cure. . . . Fully cognizant of the limits "of his knowledge, conscious also of the risks of "ignorant intervention, the thoughtful physician dismisses from his mind all idea of active intervention "between the organism and the invading germs of "disease. He contents himself with laying aside the "drugs which he feels to be useless, and with looking "after the feeding of the patient." In a word, he is not a healer but a nurse. Nor is it only bacteria that beat the doctor. "If we turn from bacterial infections to "diseases produced by disorders of the chemical "machinery of the body, we are again confronted by "the impotence of the medical art. It cannot honestly "be said that we have any real knowledge of the "morbid chemical processes which are associated "with gout, diabetes, or Bright's disease." Even our boasted sanitary progress was largely an illusion. "Conservancy," it was admitted, "must be credited "with having lightened the burden of disease in the "respect that it has, in towns where it is applied, "diminished the incidence of typhoid fever. It has, "further, practically eradicated dysentery. It is doubtful "whether much more can be claimed for it." When Charles Lamb asked Elliston to dinner he apologized for the scantiness of the menu by explaining that he usually had only one dish. The great actor graciously waved aside the excuse, saying, in his grandest style, "I also have only one dish—counting fish as nothing." With the same lordly disdain for small details, Sir Almroth Wright seemed to count the virtual extinction of small-pox and typhus and the enormous diminution of tuberculosis as nothing! In the sanitarian he saw only one "going about his work with scales of ignorance "over his eyes," and he scoffed at the idea that the world would be purged of the germs of disease by sanitation as a dream. The practitioner and the sanitarian being thus dismissed as equally useless, what, the reader might not unnaturally have asked, is the use of the medical profession? The logical outcome of the argument was that it should either go the way of all shams, or justify its existence by acquiring "that scientific knowledge which alone "can avail in the conflict with disease," and which, it was added, "is—practically all of it—still to seek." With some inconsistency Sir Almroth Wright said that both the busy general practitioner and the hospital physician were too useful in their way—presumably in looking after the feeding of patients whom they could do nothing to cure—to be allowed to devote themselves to research. Yet it was impressed upon the public that "the most urgent need in every civilized community is "the need for medical research." The world's greatest problem was said to be to find means to "attract to the "work of research a proportion of the best ability in every "country." As to this we are in full agreement; it is the duty of the State to encourage research, for it is on the growth of knowledge that the welfare of the people and the progress of civilization mainly depend. We are somewhat doubtful, however, about the necessity of providing for "scientific skilled direction of medical "research." Human nature being what it is, such direction tends to degenerate into obstructiveness and fossilism. The Roman Senate passed a vote of thanks to an unsuccessful general because he had not despaired of the Republic. The medical profession has still greater cause to be grateful to Sir Almroth Wright, inasmuch as, having despaired, he is now hopeful of the

future of medicine. The brilliant work he has already done encourages us to look to him for the realization of his ideal.

A SCHOOL OF ADVANCED MEDICAL STUDIES.

Mr. Godlee has done well to print the introductory address he gave at University College, London, last October, in a separate volume, and to embellish it with illustrations. But the title, *The Past, Present, and Future of the School for Advanced Medical Studies of University College, London*,[1] is not only too long for a title but too long for accuracy. The school has no past, and is only just beginning to have a present. Mr. Godlee, in reviewing the events which led up to the foundation of the School for Advanced Medical Studies could not even confine himself to University College, but had to go back to the beginnings of the great movement for the foundation of a University of London, and we could recommend his volume not only to all old students of University College, who will be interested in the story, even if already known to them, and perhaps even more in the illustrations, but also to those graduates of all other universities who find themselves called upon to mould the reorganized University of London. To many of them that University probably seems founded on a negation and to embody a protest; but a little reflection may convince them that men like Brougham, Thomas Campbell the poet, Grote the historian, David Ricardo, James Mill, and John Stuart Mill were not likely to be inspired with the faith that removes mountains of obstruction and obscurantism by enthusiasm for a negation. Mr. Godlee tells the story very briefly but very clearly; he claims, as we believe justly, that the University, among the many other benefits which it conferred on higher education in England, brought about a complete reform in medical education, infusing into it a spirit of liberality and a love of science for which those of its graduates who still retain a place in its councils must still struggle—perhaps never more desperately than during the present transition period, when some even of their own household appear to think more of vested interests in degrees and schools than of the great principle the University was founded to vindicate. Mr. Godlee relates the whole history of the old hospital from its first erection to its demolition to make way for the striking and original building designed by the late Mr. Alfred Waterhouse, R.A., and paid for by the late Sir J. Blundell Maple. The origin of the school for advanced medical studies is related: how it arose out of the realization of the inexpediency, if not the impossibility, both from the point of view of the University and of the other medical schools in London, of attempting to hand over to the University along with the College the medical school of the hospital. Again the College found a millionaire to come to the rescue and the buildings now rising through the munificence of Sir Donald Currie will be the home of an interesting experiment. "We desire," says Mr. Godlee, "to find out the best way of completing the training of a doctor, and we aim at making pioneering expeditions of scientific discovery." Inspired by his metaphor, and partly because "Sir Donald Currie is himself a sort of Viking" Mr. Godlee gives a sketch of a coat of arms for the school representing a ship in full sail driving before it the snake of Aesculapius transformed into a sea serpent, and a Greek motto from the *Iliad* signifying, "Let not the rower weary of rowing." Among other illustrations in the volume are portraits of Bentham, Priestley, Campbell, Grote, Ricardo, J. S. Mill, Thomas Watson, Charles Bell, Lord Lister, Sir Blundell Maple and Sir Donald Currie, and pictures of the college, the old and the new hospital and the new medical school.

[1] *The Past, Present, and Future of the School for Advanced Medical Studies of University College, London.* By R. J. Godlee. London: John Bale, Sons and Danielsson. 1907.

SYPHILIS PAST AND PRESENT.

Mr. Lowndes has contributed to the *Liverpool Medico-Chirurgical Journal* an interesting review of the treatment of syphilis in hospitals and in private practice during the past forty-five years. He became a student of the Liverpool Royal Infirmary School of Medicine in 1860, and attended the practice there till he went to Edinburgh in 1863. During those years he also attended the Lock Hospital. Mr. Lowndes's experience enables him to state positively that syphilis has decreased in severity. Forty years ago cases of primary, secondary, and tertiary syphilis were to be seen in very severe forms, such as are seldom met with nowadays. This was largely due to neglect, want of proper treatment, impaired constitutions, drink, and exposure. Primary ulcers often assumed a phagedaenic form, and Mr. Lowndes can recall three cases in which the whole penis was destroyed; loss of the whole or part of the glans was common. Mercurial treatment was the rule; the drug was generally given in the form of pill, mixture, or powder. The green iodide was given in doses of ½ gr., combined with the same or a smaller quantity of opium. In spite of this it was apt to cause griping, and was replaced by 2 gr. of grey powder with 3 gr. of Dover's powder given twice daily. Sometimes 3 gr. of blue pill with ½ gr. of opium was given night and morning. In cases of iritis, where a rapid effect was required, 1 gr. of calomel with ½ gr. of opium was given every four hours, and belladonna, atropine, or both, were used locally. The "biniodide "mixture," which contained doses of $\frac{1}{16}$ gr. of what was then called the bichloride of mercury (now the perchloride), with 3 gr. of potassium iodide, was often given with great advantage. On each side of the hospital was a mercurial vapour bath, which was valuable in severe secondary eruptions, where there had been very insufficient treatment or none at all. In some cases the treatment by inunction was tried, blue ointment being usually employed. In 1875, when Mr. Lowndes became surgeon to the Liverpool Lock Hospital, he noticed a marked change in the cases of syphilis as compared with those of his student days. They were much less severe. The tertiary form was rare and of a milder type, cases of iritis were much less frequent, and it was evident that patients were induced to seek medical advice soon after infection, either from medical practitioners before admission to the hospital, or by applying there promptly. Mercury was administered in all cases of chancre in which there had been a period of incubation of from fourteen to twenty-eight days, and even longer, accompanied by inguinal adenopathy and induration, more or less marked. The green iodide of mercury had been given by his colleague, who preferred grey powder, in doses of 1 to 2 gr., combined with an equal quantity of Dover's powder. This can be made into a pill with extract of hyoscyamus, and given twice or thrice daily. Blue pill 3 gr., with ¼ to ½ gr. of opium, was also given; the mercury biniodide mixture was also given with perfect success, and it was very seldom thought desirable to use the inunction treatment. When the primary sore presented a large surface the local application of mercury in the form of black wash or dilute mercurial ointment acted to a certain extent internally. Cases of sloughing sores were very rare, and were at once arrested by prompt treatment—the division of the prepuce if phimosis was present, and then application of the acid nitrate of mercury. Mr. Lowndes expresses his perfect confidence, after more than thirty years' experience in hospital, dispensary, and private practice, in the treat

ment which he learned in the Lock Hospital more than forty years ago. His colleagues and himself have had ample opportunities of seeing the entire success of that treatment in patients who have subsequently married and become fathers and mothers of healthy children. Mr. Lowndes points out, in conclusion, that a medical witness is not bound to answer any question unless required by the judge to do so. As regards the duty of the surgeon in those cases in which there is reason to believe that a man who is still suffering from syphilis and liable to infect his wife is about to marry, Mr. Lowndes advises that after the medical man has fully warned the patient verbally or by letter or both, his duty is ended. Nothing, he holds, can justify a breach of confidence. In 1888 he resigned his office, and in 1889 he was appointed Consulting Surgeon. Although syphilis is so much less severe he thinks its great prevalence is still a cause of physical deterioration, and he deplores the fact that the Government has not yet thought fit to order an inquiry on the subject.

INTERNATIONAL ASSOCIATION OF MEDICAL MUSEUMS.

We have received a circular issued from Dr. James Carroll, Curator, Army Medical Museum, Washington, stating that no fewer than thirty representatives of medical museums have agreed to participate in the organization of an International Association of Medical Museums, and that a meeting for that purpose will be held in Washington next May. The representatives from museums in the United States number fourteen, in Canada three, in Cuba one, in the United Kingdom six, and in the rest of Europe six. The signatories include three who make up the present Committee on Organization, namely, Dr. J. Carroll, Chairman; Dr. McCallum, of the Johns Hopkins Museum, and Dr. Abbott, of the McGill University, Montreal, who is Secretary and Treasurer. England is represented by Professor Osler and Professor J. Ritchie of Oxford, Professor Sims Woodhead of the Humphry Museum, Cambridge, and Professor Leith, of the Pathological Museum of the University of Birmingham. Professors Robert Muir and L. R. Sutherland respectively represent Glasgow and St. Andrews. We do not find in this list any adherent from the famous collection in Lincoln's Inn Fields, where we understand cataloguing is proceeding with great activity, the pathological as well as the physiological catalogues being in process of revision. The main aims of the Association are the promotion of the general efficiency of medical museums, the encouragement of the study of morbid anatomy or naked-eye pathology, the advance and improvement of cataloguing, classification, and the preparation and preservation of specimens, the exchange of specimens and the specialization of certain collections, and lastly the question of our *Index Pathologicus*. All these objects, we need hardly say, deserve study. Medical museums have done much, yet could certainly do more. The storing of material for research work and the teaching of pathology from specimens are things essentially expected, yet few museums are satisfactory in both these respects. The second object is very rightly made prominent. There is nowadays a tendency to lay too much stress on microscopic specimens and drawings as educational instruments. The teacher is well aware that the pupil tends, relying on first impressions gained at his medical school, to think of pathology as the science of microtomes and staining fluids, but the student must be taught how to inspect a specimen. Pathology of this kind is mainly to be learnt in the *post-mortem* room, but for obvious reasons the museum is quite as necessary. Not only must morbid conditions discovered at a necropsy be compared with preparations in museums, but the student may require in after-life to make similar comparisons between mounted museum specimens and fresh organs. Hence it is specially important that the visitor may ascertain quickly and definitely what is and what is not to be seen in a museum, just as in the case of a library men who look in for an important reference desire to find out promptly if the book containing it is in that library, and also if it be immediately available. In other words, good cataloguing and good arrangement of specimens are absolutely essentials in museum management. Specimens—in other words, naked-eye pathology—must be accessible not only to the curator and to a few tutors, but also to any visitor to the museum and for that reason, as well as others of more or less importance, the Association deserves support.

THE HOSPITAL QUESTION IN A NEW LIGHT.

It is remarkable that this England of which it has been said, by poetic licence, that it "never did (nor never "shall) lie at the proud foot of a conqueror" is more the prey of foreign invaders than any other country on earth. The stress of life is made more grievous for our struggling poor by the undesirable alien; German clerks take the bread out of the mouths of our own; in schools universities, museums and laboratories, foreigners secure positions to which natives might be thought to have the first claim. Here the phrase in which Napoleon summed up the work of the Revolution—*La carrière ouverte aux talents*—finds a larger application than anywhere else, for the career is open to talent irrespective of nationality. On the whole the results of our liberality are satisfactory, though occasionally we are reminded of the remark attributed to Professor Mommsen when he heard of the appointment of a fellow countryman to a chair in an English University: "Hef you no hompogs of "your own?" While we may accept the doctrine of free trade in teaching and other spheres of intellectual activity, it is a somewhat strange experience to be instructed in the manners and customs of our own country by a foreigner, however intelligent he may be. The British public has the advantage of such instruction from a learned Hungarian, Dr. Emil Reich, who has been among us taking notes for some time, and has printed them in a book with the alluring title, *Success in Life*.[1] From this we learn that our national failing is "tongue-tiedness"; if the young Englishman wishes to succeed, he "ought to talk to all sorts of people and on "all sorts of subjects." "Gold," we are told, "likes talk "and has at all times preferred flowing into the coffers of "much-talking persons." Hence comes, we suppose, the prosperity of some of the Latin races as compared with us. It is, however, in Dr. Reich's treatment of his theme as it concerns doctors that we are mainly interested. We gather that because patent medicines are largely used by our people, "it is relatively not difficult at all "to be successful as a physician." Thus it would seem that out of the eater cometh forth meat. Unfortunately success makes the London doctor so busy that he "storms in like a whirlwind, to rush out, after a few "hasty feelings of the pulse and casual glancing at the "tongue, like a hurricane." The "few hasty feelings of "the pulse" are as good as Polonius's "mobled queen." We are given to understand that this habit of perfunctory and hasty handling of a case is acquired by doctors in the ordinary routine of hospitals; "in that respect hospitals do them great harm." But this is by no means the worst evil we have to suffer from the hospitals. Here comes Dr. Reich's special discovery, which he now kindly reveals for our edification. If the social status of the profession is not altogether what it should be in this country, the reason is—"expressing it briefly, if offensively, doctors con- "stantly beg money; barristers never do." This cryptic

[1] Published by Eveleigh Nash. London. 1906.

utterance is explained by the fact which we give on Dr. Reich's exclusive authority—that "doctors tell "*urbi et orbi*, or all the world and his wife, that they "will accept 'voluntary contributions' for their "hospitals!" That, says our instructor, is begging. With graceful frankness he adds that "no class that is "constantly 'passing round the plate' will be held in "the esteem that other non-begging classes will "command." If, as Dr. Reich appears to suppose, we stand lower in the social scale than solicitors, it is not only because the average local practitioner in most of the London districts charges five shillings a visit, whereas a solicitor will charge six and eightpence for a letter of four lines, but because the said local practitioner is always begging for the hospitals! This is, indeed, a new light on the hospital question. Dr. Reich jeers at the dislike of committing themselves which he imputes to Englishmen. On his own theory he should be an extraordinarily successful man, for he certainly is not hampered by the dread of committing himself to fatuous statements as to matters of which he evidently knows nothing.

STRANGE STORY OF A PRINCE'S CURE.

Truly has it been said that the world knows nothing of its greatest men. It is by mere chance that we learnt from *The World and His Wife* of the existence of Mr. F. H. M. Blaydes, LL.D., M.A. But for the account of himself which he has been induced to contribute to our contemporary, the people of this country might never have known who it was that saved a life of inestimable importance to the nation, and Mr. Blaydes might have gone to his grave unwept, unhonoured, and unsung. For more than a quarter of a century the world has believed that our gracious sovereign, then Heir Apparent, was saved by the skill of Sir William Jenner, Sir William Gull, and Dr. John Lowe, who fought with such devotion the typhoid bacillus which threatened his life. The illustrious patient himself believes this, if we may judge from the honours showered on those who helped him to escape from the valley of the shadow of death. And all the time, it seems, both the King and his people have been under a delusion. It was Mr. Blaydes who wrought the miracle of cure. And who, it may be asked, is Mr. Blaydes? We gather that he recently celebrated his 88th birthday, and that he lives in retirement, from which, however, he has now come forth to proclaim his belief that in 1871 he was the main instrument under Providence in saving the life of him who now rules over these realms. At the time of the Prince's illness Mr. Blaydes was staying at Brighton, and as soon as he heard that his Royal Highness was in danger he made up his mind to go to Sandringham to recommend the administration of a certain medicine which he thought he had the strongest reason to believe might afford relief, if not effect a perfect cure. On reaching [illegible] Lynn he was told by the [illegible] that the Prince was in a violent state of delirium and was being forcibly held down in bed. It was added that even sheep were being slaughtered continually to be placed around him to keep him alive. On hearing this remarkable news he pushed on to Sandringham and sent his card to the physician in attendance, asking for an interview. The message was that the doctor, worn out with night watching and fatigue, had gone to bed and could not be disturbed. Next morning Mr. Blaydes sent his medicine to the physician, with full particulars as to its nature and the effects that might be expected to follow its administration. The physician's reply is not recorded; it may perhaps be inferred that there was none, as we are next told that Mr. Blaydes wrote to the Prince urging that his medicine should be administered. Again he does not give the exact terms of the reply, if any, which he received. Skipping over this trifling gap in the story, he affirms that "but for Her Royal Highness's "prompt and opportune action in directing that the "remedy so strongly recommended should be sub-"mitted to the attention of the physicians, the issue "might have been of a very different character from "what it proved to be." Mr. Blaydes takes care not to commit himself to a statement that his medicine was administered, but leads the reader to infer that it was from the fact that "on the same day in which "the medicine was sent in, a very sudden and remark-"able improvement in the condition of the Royal "patient set in, all the symptoms abated, and a com-"plete change for the better took place." There is a *hiatus valde deflendus* in the argument; but when did "a master of medicine from the Hahnemannian point "of view," as Mr. Blaydes is said to be, allow such a trifle to prevent his arriving at any conclusion he wished? The medical profession may be interested to know what the remedy was of which a single dose thus turned the scale in the dying prince's favour. It was "the fluid extract of Baptisia Tinctoria, an American "preparation, combined with a minute quantity of "Fowler's solution of arsenic." Mr. Blaydes makes no secret of it now; but why has he left the world so long in the dark? If the remedy has the marvellous properties which he attributes to it, how many lives must have been lost owing to his reticence! We scarcely know which to wonder at most, the absurdity of the story or the simplicity with which it is related. We have it on the authority of Sir William Gull that no medicine was administered to the Prince in his illness. And can any one imagine Jenner, who declined to meet a practitioner suspected of scientific heresy even at the command of Queen Victoria, sanctioning the administration of a homoeopathic medicine sent by an unknown outsider? When royal personages are ill, the doctors in attendance are deluged with suggestions, remedies, and appliances of all kinds. These, of course, are not used, but if recovery takes place it is open to the senders to ascribe the cure to their particular nostrum. We make no imputation on the honesty of the aged gentleman who claims that it is owing to him that we have the happiness to live under the rule of Edward VII. It is related of George IV that he told a story of his having headed a charge at Waterloo so often that at last he came to believe it himself. On one occasion he appealed for confirmation to the Duke of Wellington, who with admirable diplomacy replied, "I have heard your Majesty say so!" We leave those interested in Mr. Blaydes's story to apply the moral.

EPIDEMIC CEREBRO-SPINAL FEVER.

The recurrence of cases of cerebro-spinal fever in Edinburgh and the apparent recrudescence of the disease in Belfast as well as in Glasgow lends a particular interest to a report by Dr. Chalmers (M.O.H. Glasgow) on the deaths attributed to meningitis in that city during the last six years. We regret that it has reached us too late to be reproduced in full. The difficulty of distinguishing epidemic cerebro-spinal fever from cases of meningitis due to other causes is well known. The most prominent feature of the Glasgow statistics is that during 1906 the fatal cases of disease of the nature of meningitis exceeded by 136 the average of the preceding years; 147 cases were contributed to cerebro-spinal fever in 1906, and the disease had not been recognized at all during the previous five years. Contemporaneously there was a reduction of 74 deaths attributed to simple meningitis, and an increase from 2 to 37 in the number of cases attributed to tuberculous meningitis. The increase was practically confined to ages under 20, and affected chiefly ages 4 and 5. Examining the figures more closely, it was found that there was a fairly uniform incidence and season-

distribution of meningitic diseases until the beginning of 1906, but during the first six months of that year there was an increase in the number of deaths attributed to ordinary meningitis; in the second six months the deaths attributed to simple meningitis decreased, while those attributed to tuberculous meningitis increased. Dr. Chalmers raises two questions: whether some of the cases included under the latter head may not have been examples of true cerebro-spinal fever, and what proportion of the apparent increase in both forms must be attributed to the change in nomenclature? He is not able to answer either question at the present time, but the doubt indicates the need of great care in scrutinizing deaths attributed to the epidemic form of the disease. We are, he says, still groping our way towards a true clinical picture of the disease, and bacterial verification is sometimes impossible, but he points out that the statistics show that a peculiarly fatal form of meningitis is prevailing in Glasgow, and that it is recognized with much the same degree of accuracy both in private and in hospital practice. The deaths from cerebro-spinal fever registered during January show a considerable increase, beginning in the second week of the year, and are concentrated in the eastern and north-eastern portions of the city, and in some districts of the south side. With regard to the method by which infection is spread, Dr. Chalmers, after stating that no definite assertion can be made, says: "Multiple cases in households have been observed, but "they have mostly been so closely related in date of "onset as to suggest simultaneous infection. One of the "most suggestive circumstances observed has been the "occurrence of a considerable number of cases among "breast-fed infants who had no known association with "any family suffering from the disease. It was one of "the older theories held concerning cerebro-spinal fever "that infection reached the central nervous system along "the nerve tracts, and the increasing prevalence of "the disease during January may have some relation "through depressed vitality and the natural resistance "to disease to the somewhat exceptionally low temperatures which characterized the weeks ending December 29th and January 26th. Whether any definite relation to this can be finally established remains to be seen but the association suggests that the utmost care, should be taken to guard young children against the variations of temperature, and especially the low temperatures through which we are presently passing. This, together with a rigid observance of absolute cleanliness of everything which may be placed in the mouths of young children, whether for food or other reasons, are suggested by the facts which have come under notice. In households where cases occur, it should be remembered that discharges from the mouth, nose, and ears have been associated with the occurrence of the disease in former outbreaks elsewhere."

THE MADEIRA CONCESSION.

From the Lisbon medical journals of this week we gather some further details of the sanatorium concessions in Madeira concerning which there has been so much political controversy. In the measure brought before the Camara the Government is authorized to ratify the transferring of the Hohenlohe concession to Sr. John Williams and Sr. Manuel Gonçalves. Among several clauses embodied in the document, one which does away with the right of expropriation granted in the original agreement is especially to be noted. Summarized, the clauses are to the following effect: First, as already stated, the right of expropriation is abrogated, but the new concessionaires retain the right of the free importation of building materials, furniture, and other things necessary for the sanatoriums and the buildings in connexion with them. As these latter may comprehend "the recreations, etc., indispensable "to the public in establishments of this nature, "such as theatres, parks and gardens, casinos or *cercles*, "like those existing in Davos, Biarritz, Ostend, Trouville, "Aix-les-Bains, Nice, etc.," it is evident that the concessionaires have a pretty free hand. The concession is to last for a period of thirty years, but *per contra* the concessionaires undertake to open in the course of the next two years sanatoriums not merely for persons of private means, but for poor people, the latter building to be capable of receiving 40 cases under the direction of the national society for aiding consumptives. The concessionaires give a deposit of £10,000, and have the option of handing over their rights for any other undertaking which is permissible under Portuguese law. Any questions arising in future are to be decided by a Board of five persons: two nominated by the concessionaires, two by the Government, and the fifth by the high court of justice. Finally, the Government reserves the right of extending the privilege of exemption from customs dues to hotels already existing on the island. It remains to be seen whether among the "recreations indis-"pensable to the public" the concessionaires may not see fit to include rouge-et-noir. The aim is evidently to restore the popularity of Madeira, but all who have known the beauty of its scenery, its wealth of flowers, and the old-world character of its towns and people, would deplore its conversion into an Atlantic Monte Carlo, however great the resultant prosperity may be.

INTERNATIONAL CONFERENCE OF RED CROSS SOCIETIES.

The eighth International Conference of Red Cross Societies will be held in London on June 10th and the four following days. Such conferences are held every five years, and the last took place at St. Petersburg in 1902. All Red Cross societies in countries whose Governments signed the Geneva Convention have been invited by the British Red Cross Society through the Foreign Office to send official delegates, and many have already made nominations. Field-Marshal Lord Roberts, K.G., V.C., will be president of the conference, which will be held at the Examination Hall, Victoria Embankment, London, W.C., and provided a sufficient number of exhibits are entered, an exhibition of appliances in connexion with Red Cross work will be held at the same time as the Conference. The "Empress Marie Féodorovna Prizes" will be awarded by an international jury for the best inventions tending to lessen the sufferings of sick and wounded soldiers. There are three prizes which will be given out of a sum arising from the interest on an investment of 100,000 roubles, the total amount available for the three prizes in 1907 being about £2,000. Full particulars of these competitions will be forwarded on application. The business arrangements of the Conference are being made by a committee composed of Mr. J. Danvers Power (chairman), Sir Frederick Treves, and Sir Benjamin Franklin, and there is also an influential reception committee which will arrange a suitable programme of social functions for the entertainment of delegates. All communications should be addressed to the Secretary, British Red Cross Society, 9, Victoria Street, London, S.W.

The Hunterian Oration before the Royal College of Surgeons of England will be delivered by Mr. Henry T. Butlin on Thursday next at 4 p.m.

M. Daniel Iffla Osiris, a wealthy Jewish financier, who died in Paris on February 5th, has left the half of his fortune to the Pasteur Institute. The amount is 25 million of francs (£1,000,000), the testator's object, in his own words, being to assure to the Institute a revenue of a million francs (£40,000) to enable it to investigate the diseases that afflict mankind and discover remedies for them.

Scotland.

EPIDEMIC CEREBRO-SPINAL MENINGITIS IN SCOTLAND.

CONSIDERABLE alarm seems to have been produced by various paragraphs regarding the alleged widespread prevalence of epidemic cerebro-spinal meningitis in Scotland. It would appear, however, that the Local Government Board for Scotland does not regard the cases as numerous enough in any one place to constitute a dangerous outbreak, and has not used its powers to have every case reported, as in the case of small-pox; but as a precautionary measure sixteen local authorities have added the disease, with the full approval of the Local Government Board, to the list of notifiable diseases. Edinburgh is not one of the sixteen. At a meeting of the Edinburgh Town Council on Tuesday, February 5th, the Convener of the Public Health Committee (Dr. Matheson Cullen) said that 9 deaths had been certified in Edinburgh since January 12th 3 cases in the Royal Infirmary, 3 in the Sick Children's Hospital, and 3 at home. Some of these were traced to infection in Glasgow. According to the Registrar-General for Scotland, in the week ending February 2nd 16 deaths occurred from this disease in Glasgow, and 3 in Edinburgh, as against 22 and 2 in the preceding week. Dr. Matheson Cullen said that half of the cases in Edinburgh had been children, and the disease was mainly confined to people living in crowded dwellings.

POOR-LAW NURSES IN SCOTLAND.

The Local Government Board for Scotland has, we learn from the *Glasgow Herald*, just issued a memorandum prescribing the training that nurses will in future receive in Poor-law hospitals, and giving details of a scheme under which the Board is periodically to hold examinations and to grant diplomas to those who successfully pass them. The result of this will be that Poor-law nurses will receive a training equal to that given in any other institution. The scheme provides that probationer nurses must be of good character and have received a fair general education. The education is to be specially tested by the Board. The probationer will then serve for three months in the hospital before she is formally engaged. Her training will extend over three years, during which period she will be required to attend regularly lectures by the medical staff. At the end or during the currency of the period of training the Board will examine the probationers in (*a*) elementary anatomy and physiology, (*b*) hygiene and dietetics, (*c*) medical and surgical nursing, (*d*) midwifery, (*e*) oral and practical. Minute details of what is included under these heads, together with information as to textbooks, etc., are contained in the syllabus.

ABERDEEN.

Annual Report of Medical Officer of Health.

Mortality at School age Period (5–15 years).

The mortality rate for this period during 1905 was 2.8 per 1,000 living, lower than in 1904 and the same rate as in 1903 and 1902. No age period shows so great a reduction in recent years as this. It is now little more than one third of what it was thirty or forty years ago. Dr. Hay considers that probably the most potent cause has been the great improvement in the hygienic conditions of school life. The schools in Aberdeen are in a very [illegible], but proper medical inspection of schools is still [illegible] to be desired and the medical officer of health puts in a strong recommendation for the immediate introduction of this.

We understand that recently three medical practitioners have been appointed for this work, but in view of the fact that the posts were not advertised as is the rule with all other public Boards in the city, these posts are at present purely tentative.

The report also contains a strong recommendation that open spaces should be acquired or public playgrounds, with which the city is by no means adequately supplied. The mortality at the "adolescent period (15–25 years)" [illegible], and at the "adolescent period" [illegible] upwards is also discussed, and shows that practically every age period has shared in the fall of the general death-rate.

Acute Infectious Diseases.

The prevalence and mortality of zymotics etc., are then discussed and it is pointed out that Aberdeen has been remarkably free from typhoid fever during the past few years. In 1903 there were only 22 cases and for the past four years 15 cases. In the preceding four years there were 500 cases. In the latter period the cause was chiefly infected milk supplies, but there was no such cause in operation during the past four years. The case mortality, however, has unfortunately increased and was 1 in 6 in 1905 as compared with 1 in 9, the average during the previous ten years. There has been a decline almost everywhere in the typhoid death-rate, but in few places, if any, has the decline been so pronounced as in Aberdeen. The general decline in Scotland began about 1880 and has gone on slowly but steadily till now, the mortality-rate at the present time from typhoid is only about one-fifth to one-fourth of what it was twenty-five to thirty years ago. Various factors may have been at work such as improved water supplies, better regulated dairies (this applies particularly to Aberdeen where an inspection and supervision much in advance of what can be insisted on through the Public Health Acts has been voluntarily agreed to by many of the chief dairymen), improved house drainage, reduction of the number of ashpits, more thorough scavenging and better standard of living.

Typhus Fever.

The report contains a very excellent account of the epidemic of typhus fever which occurred in the end of 1904 and first few months of 1905. The cases throughout the outbreak, omitting certain doubtful cases, were distributed in respect of age as follows:

Age.	No. of Cases.	Deaths.
0–5	9	0
5–10	24	1
10–15	32	0
15–20	19	1
20–25	11	2
25–30	7	0
30–35	5	1
35–40	5	2
40–45	8	6
45–50	4	3
50 upwards	7	6
	131	22

The disease was not found to be infectious in its early stage—say, during the first week. In every instance where the first case in a family was removed before the end of the first week of an illness, no other case followed in the family. Different views are expressed by authorities as to the period of greatest infectiousness, some placing it early and others late, but all appear to be agreed in regarding typhus as one of the most infectious of diseases. For example, Osler, after referring to it as one of the most highly contagious of febrile affections, says that "in epidemics nurses and doctors are almost invariably attacked;" and, further, that "when the sick are aggregated in wards, the poison appears to be concentrated and the danger of infection is much enhanced."

From the experience of the recent epidemic Dr. Hay is led to think that the infectiousness is not so overwhelming as is sometimes believed, and gives many facts to bear this out; for example, the disease had apparently been in the city for two or three months before it was discovered, and therefore before steps were taken to control it, yet it had not produced many cases; and later on, when it came under the notice of the Public Health Department, it was not difficult to control, and yet it had broken out in a community practically unprotected by previous outbreaks, since from 1886 to 1895 there had been a mortality from typhus fever of 1 per 1,000, and from 1895 to 1905 only 10 cases had occurred with 2 deaths.

At the beginning of the epidemic only one member (a nurse) of the hospital and sanitary staff had previously had typhus, yet out of the members of the staff in actual contact with the typhus cases, in all about 46, some being in the most intimate and daily contact for three or four months, only one nurse, one wardmaid, and one ambulance driver were infected during the first eight weeks of actively dealing with the epidemic, although later four other nurses and one ward maid were attacked. All recovered except the ambulance driver. No nurse in convalescent wards was infected, and the two doctors and one of the nurses in the acute wards who were most intimately in touch with the patients during the whole course of the epidemic escaped, although not protected by having previously suffered from the disease. Also, all the ambulance staff escaped after certain precautions began to be taken on account of the fact being observed that all the cases of typhus in the hospital exhibited flea-bites, and the members of the hospital staff who complained most of flea-bites were those who were attacked by typhus. Care was taken to distinguish between flea-bites and petechiæ from rash. Dr. Hay develops his argument in a thorough and convincing manner, though it is not possible by a bacteriological and experimental investigation to test this suggestion that the infection may largely be carried by fleas as the typhus germ has not yet been

definitely isolated by any bacteriologist. After the commencement of the illness of the ambulance driver the ambulance staff was made to wear top-boots, closely-fitting overalls buttoning closely at neck and wrists, and they smeared neck wrists and ankles and tops of boots with a solution of eucalyptus oil in olive oil. After these precautions were taken no member of the ambulance staff took typhus. The incubation period was found to vary from eight to twenty-four days, in one case twenty-six days. The duration of the illness in fatal cases was eight to thirteen days except in one case, when it was twenty-seven days. The rash usually appeared on the fourth or fifth day, rarely so early as the third day. The mulberry character of the rash as described by Jenner was not often made out. Widal's reaction was got in a considerable majority of cases with a dilution of 1 in 20 or 1 in 10 with a time limit of three-quarters of an hour, but in no case was the reaction got when the dilution was 1 in 50.

Ireland.

University Education in Ireland.

The opposition to Mr. Bryce's scheme of university reform in Ireland has already taken shape, and is likely to become still wider and louder. The Protestant Bishops who are graduates of Dublin University have declared their antagonism, and the graduates of Trinity College, at a meeting presided over by the Provost, have followed suit. Then the Senate of the Royal University is incubating, and will in due course produce, a statement which is certain to be hostile to any action which will imperil the existence of that institution. The Queen's Colleges are opposed because their staffs wish them to be converted into independent universities. There has not been any declaration from the general public, but that would perhaps hardly count much.

The Trinity meeting on Monday last was large, and the speakers were generally vehement. The Provost proposed:

> That we are of opinion that the scheme which Mr. Bryce outlined in his speech of January 25th, 1907, would be fatal to the best interests of liberal university education in Ireland, as well as unjust to Trinity College, and we are determined to oppose it by every means in our power.

The scheme, he said, tended towards the ruin of the university and the degradation of the college.

Mr. Campbell, M.P., said that in Ireland the Catholic hierarchy had always to be considered, and he had no doubt that they would not fail under Mr. Bryce's scheme to ask for the control which they have always asked for as absolutely necessary.

The Vice-Chancellor (Mr. Justice Madden) said that the proposal of Mr. Bryce was one that not only dissolved the Royal University, but the destruction of Trinity. They had many Catholics in Trinity; they were proud of them, and only wished that there were more of them in it. The scheme was opposed by the late Monsignor Molloy, by the Rev. Dr. Delany, and by very many of the witnesses who were examined. "This policy," concluded the Vice-Chancellor, "is one of the greatest blows that could be aimed at the cause of education in Ireland."

Professor Dowden proposed:

> That the Senate appeals to all graduates of Dublin and other universities, and to all those, without distinction of party, who value freedom in research, teaching, and publication, to assist in maintaining unimpaired the constitution and position of Trinity College, Dublin, which, in the unanimous opinion of the Commissioners, "as it stands to-day is a noble institution for the maintenance of sound learning, not unworthy of its great traditions and of the affection and veneration with which it is regarded by its children."

The Dean of St. Patrick's pointed out that if the University Court was to be constituted to please the ecclesiastics, it must be constituted with regard to denominational proportion. Trinity College was the one institution in Ireland where there was no political or religious control.

A further resolution was:

> That we protest against Mr. Bryce's scheme, because it provides, and can provide, no adequate safeguards against the introduction of sectarian divisions into the administration of the university.

The Dublin Corporation has passed the following resolution on the motion of Dr. McWalter:

> That as the Town Council of Edinburgh has been for centuries represented on the University of Edinburgh, and with great advantage to that institution, the Corporation of Dublin requests that it shall have adequate representation on the governing body of any reconstituted university in Dublin.
>
> And, furthermore, this Council cannot accept as final any settlement of the university question that does not provide higher education for the sons of the workers of the country.

So Mr. Birrell, in taking up Mr. Bryce's proposals, will be met at the outset by that difficulty which has always been encountered in connexion with reforms in Ireland—religion. If that were set aside, the education problem would be solved at once. Will Mr. Birrell, by direct assault or by strategy, be able to achieve what his distinguished predecessors have failed in gaining? The outlook for him on this question does not seem rosy.

Royal Medical Benevolent Society of Ireland.

The office-bearers of the County Antrim Branch of this society have issued a special appeal to the profession in the County Antrim to increase their subscriptions and help in increasing its usefulness. Its work is well known, and many a doctor, or doctor's widow, or doctor's orphan, who has fallen on evil days, has been befriended and helped, in a quiet and unostentatious manner, in the hour of need. There can be no hesitancy in recommending this Society in the strongest manner to the benevolence of the profession in Ulster. Dr. Richard Purdon, 19, Great Victoria Street, Belfast, the trusted Honorary Secretary of the Antrim Branch, will be glad to receive subscriptions and give any information.

School Hygiene.

At the annual meeting of the Newtownards Nursing Society, held on January 28th, the Marchioness of Londonderry, President, in the chair, Sir John Byers delivered an interesting address on school hygiene. He spoke of the development of the new science of public health and of the great advances that had been made. Such societies and the proposed "Women's National Health Association of Ireland" were all of enormous help in the practical solutions of the problems that were before them. Sir John then enlarged on the prevention of consumption, on infant mortality, and on hygiene in primary schools. He insisted on the necessity of the medical inspection and supervision of children, the teaching of hygiene to the children, and the erection of proper school buildings.

Medical High Sheriff for Belfast.

It is with much pleasure that his professional brethren have heard that His Excellency the Lord Lieutenant of Ireland has appointed Mr. Peter Reilly O'Connell, M.D., J.P., Surgeon to the Mater Infirmorum Hospital, Belfast, High Sheriff for Belfast for the year 1907. Dr. O'Connell has received many congratulations from all sides.

Health of Belfast.

At the monthly meeting of the City Council on February 1st, the Medical Officer of Health reported the notification of 218 cases of zymotic diseases; there was a death-rate of 21.5, and for children under one year 3.9. The Council adopted the minutes of the Committee recommending that the latter be given power to enter into negotiations with some of the already existing institutions for consumptives as to supplying beds for consumptives generally from the city, and as regards opening a dispensary for consumptives.

Up to February 1st there have been 45 cases of cerebro-spinal fever with 19 deaths; the Council has adopted the resolution to include it among the notifiable diseases.

Belfast Hospital for Sick Children.

The annual meeting of this institution was held on January 31st in the hospital. Dr. McCaw read the annual medical report; 837 cases had been admitted to the wards, of which 407 were medical and 437 were surgical cases; there had been 40 deaths, and 330 operations had been performed. There had been over 5,000 attendances in the out-patient department, with 441 operations. Dr. McCaw drew attention to the fact that the work of the hospital had more than doubled in the last ten years, so that the income of 1896 could not suffice for 1906.

FORSTER GREEN HOSPITAL FOR CONSUMPTION, BELFAST.

The annual meeting of this institution was held in the hospital on January 31st. Dr. Howard Sinclair submitted the annual medical report, which showed that there had been 451 new cases in the out-patient department, and 164 new cases had been admitted to the hospital at Fortbreda. The Staff again draw attention to the necessity of early admission if the case is to be "cured," that is, to be enabled to return to work, and continue at it for some time. The results were encouraging, but no treatment, or success, would enable a patient to return to an unhealthy occupation with impunity. The proposal to open negotiations with the City Council was favourably mentioned.

RESUSCITATION OF THE APPARENTLY DEAD.

Dr. Leslie gave a lecture on this subject in the City Technical Institute on January 30th. He described Professor Schäfer's method and showed his slides; practical demonstrations were given and the advantages of the method explained.

SEQUEL TO CAHIRCONLISH DISPENSARY ELECTION.

Dr. Christopher Waters, the unsuccessful candidate for the post of Medical Officer to the Cahirconlish Dispensary, district of Limerick Union, has applied in the King's Bench Division for an order *quo warranto* directed to Dr. John Corboy, requiring him to show cause why he held the office of medical officer for said district. The application arose out of a disputed election, which took place on December 12th, 1906, when Dr. Corboy was selected to the position by 42 votes to 41 of the guardians present, the only other candidate being Dr. Waters the relator, who now impugns the validity of the proceedings on the ground that two of the guardians who voted in the majority were disqualified, one by reason of his being interested in a coal contract to the Union, and the other that he had been an arranging debtor within five years previous to the election and had not paid his creditors in full. Dr. Waters's counsel further asked for a mandamus directed to the Chairman and Clerk of the Union to declare the relator duly elected, on the ground that he had, as he himself alleged, a majority of the qualified voters at the election. The court granted a conditional order.

Liverpool.

ROYAL INFIRMARY ANNUAL REPORT.

THE report presented to the annual meeting of the Royal Infirmary on January 30th showed that the work of the institution had been hampered by want of funds, and that for various reasons it had not been possible to institute the proposed new out-patient department. Meanwhile, plans had been prepared which would be available in the future, whenever it was deemed prudent to undertake the work. The portion of the Banks Memorial Fund which had been allocated to the hospital had been devoted to the acquisition of houses in Brownlow Street, which had secured the frontage and an extended site, the rents being reserved for the augmentation of the fund.

Ward for the Treatment of Summer Diarrhœa.

During the summer, on the invitation of the City authorities, a special ward had been arranged for the treatment of children suffering from summer diarrhœa. The effect of parental neglect and ignorance was too sadly disclosed by the condition of the children admitted, but although the mortality was high many lives were probably saved and some valuable experience in the nursing and treatment of the cases gained. The Corporation met the out-of-pocket expenses.

Hospital Union.

"A movement to draw the hospitals of the city into closer association is in the air," according to the report, "and what is called hospital abuse is being closely watched by the committee. In dealing with this difficult question, which raises so many issues, care and caution are eminently called for, and the committee approach them in full recognition of these facts."

Income and Expenditure.

The total income from sources which might be considered fairly constant was £14,[illegible], and the expenditure £15,786, the deficiency being made up from legacies, donations, and a transfer of £2,619 from the "Maintenance Fund." During the year the cost of maintenance had been slightly reduced, in spite of the fact that the number of patients in the hospital was greater than it ever was before. 3,946 patients were treated in the wards, and 2,687 important operations were performed.

The President's Address.

The President for the year, Mr. Harmood-Banner, M.P., remarked that there had only been one change in the staff during the year, Dr. Ernest E. Glynn having resigned on his appointment to be Deputy Professor of Pathology at the University, and Dr. John Hay having been appointed Assistant Physician in his place. There had been an increase of 174 in the in-patients and a reduction of £300 in the expenses. The number of subscribers was only 1,700 out of a total population of over 700,000. As regards the question of placing the hospitals on the rates, he thought they had a good object lesson in the fact that the other day the City Council reduced its own hospital estimates by £10,000. If they desired to be independent and to carry on their undertaking on the lines they thought most desirable, the less they placed themselves under the control of a body which at times had fits of economy the better it would be for the interests of their institution. It was their constant desire to give the hospital the best of everything, and while that was their ideal it was best not to be under the control of any voting power whatever.

Hospital Abuse.

The Treasurer and Chairman (Mr. Ralph Brocklebank) said that the inquiries which had been conducted had made it clear that the assertions as to hospital abuse were greatly exaggerated, and that few were admitted who could afford to pay. What was hoped was that at some time not far distant the Royal Infirmary would be able to place its experience before the other hospitals, and then take steps which would satisfy hospital managers and be reassuring to the public.

Infantile Diarrhœa.

With regard to the children, a most careful report had been made by the physicians in charge through the Medical Board to the Committee. It was a fact that only cases of extraordinary severity were admitted in the special ward for infantile diarrhœa. Many children had been ill for several days, some for weeks; 5 died within twenty-four hours, 2 within forty-eight hours, and 4 within seventy-two hours. The mortality of the remaining 80 was 43.2 per cent. The disease was mainly attributable to faulty feeding, which might be traced to ignorance and carelessness on the part of the parents, and to the want of constant maternal nursing. Four beds were provided for the use of mothers who were willing to come into the hospital with their babies, but in no instance was advantage taken of this provision.

Election of President.

Mr. Edward Kewley, who has recently resigned the office of chairman which he has held for several years, was elected president for the ensuing twelve months.

New By-laws.

New by-laws, rendered necessary by the granting of Royal Charter to the infirmary, were passed at a special meeting of the trustees. Among the changes introduced, the following are the most important as regards the position of the medical staff:—All the assistant physicians and assistant surgeons are to be members of the Medical Board; the specialists are to be all elected by the Electoral Committee, instead of, as has been the case with three of them, by the General Managing Committee. After seven years' service the assistants are to have the title of physician or surgeon to out patients, and one of the four specialists nominated by the Medical Board is to have a seat on the Committee.

INFIRMARY FOR CHILDREN.

With reference to the paragraph on the Liverpool Infirmary for Children published on January 19th, 1907, p. 167, "One of the Staff" writes to say that "there is already on the wall of the entrance hall of the new building a brass tablet bearing (*inter alia*) the legend 'Alfred Stevens, M.D., Founder of this Institution.'"

Lancashire.

The David Lewis Epileptic Colony.

From the annual report for the year ending August 31st, 1906, we learn that the number of residents at the David Lewis Epileptic Colony for Manchester at Warford was 150, consisting of 61 adult males, 49 adult females, 20 boys and 20 girls. The 40 children, for the most part received under an agreement with the Manchester Education Committee, have suitable school accommodation, under the Act of 1899, in a fenced-off portion of the Colony estate; and the Medical Director (Dr. McDougall) states that "the children in the licensed school have thriven and prove a strong argument against the plan of treating epilepsy by brain-rest." It would have been interesting if some further details had been given as to the special curriculum pursued. The general health of the colonists was excellent and there had been no deaths, in spite of the occasional occurrence of status epilepticus. Five of the patients had taken their discharge as cured, though it would appear prematurely, as an insufficient interval had elapsed since the occurrence of the last fit; and four had been sent away as unsuitable. Several of the colonists had gained in mental character and judgement so as to be able to fill responsible posts. Most of the colonists take daily a 30-gr. dose of potassium bromide; but Dr. McDougall attaches more importance to the therapeutic influence of the occupations and amusements of colony life, stating that whilst "the classical treatment of epilepsy follows the lines of forbidding the patient to do the things that might cause a fit, colony treatment attempts to rid the patient of fits while he is performing the acts of a normal person."

The Lancashire and Cheshire Society for the Permanent Care of the Feeble-minded.

The eighth annual report of this Society furnishes evidence of gratifying progress in the extension and organization of the colony at Sandlebridge. In addition to the Boys' and Girls' Homes erected five years ago for 0 children, a new building for 35 girls and 30 boys has been completed at an expenditure of £74 a bed. The Lancashire Education Committee, having contracted to send 25 of their defective children to the colony, have undertaken to contribute £2,000 to the building fund. An adjoining estate—Warford Hall—with 77 acres of land, and comprising farmhouse, cattle-sheds, and cottage, besides a mansion, was purchased by the Committee at a cost of £9,350; and while the farmhouse affords sleeping accommodation for boys over 16 (for the most part employed in farm and garden work), the cottage and barn adjoining it have been converted into a laundry. The hall itself is available for the training of feeble-minded girls of those unable to pay high fees for their special education, but above the class for whom charitable provision is intended. There are now 86 children and young people living in the colony, ranging from 7 to 18 years of age. One boy had been returned to his parents; "he had ceased to be a feeble-minded boy." One girl had been unwisely removed by her relatives. One boy died during the year from heart disease. Inclusive of these, the colony has lost only 5 of its inmates since its establishment, 2 by death and 3 by removal. "Those who remain become every year more and more amenable, and have settled down happily to considering the schools as their home." This statement bears out the view that, except to protect from injudicious parents, the necessity for legalized lifelong compulsory detention is not urgent in cases received sufficiently young. While a colony containing feeble-minded children of school age cannot be expected to be self-supporting, the experience of Sandlebridge shows that under economical management the annual cost for each inmate, including instruction, may be very moderate, the inclusive charges for maintenance during 1906 having been £14 5s. 3d. per head, a rate which will no doubt diminish year by year as numbers increase and the labour of the older inmates becomes more remunerative. The report (which can be obtained from Miss Dendy, 13 Clarence Road, Withington, Manchester, one of the Honorary Secretaries) is well illustrated, and contains many interesting details relating to the work of the school and the farm.

Infant Life Protection.

Much good and useful work is being done by the inspectors under the Infant Life Protection Act, 1897, in visiting the homes of children placed out with nurses who receive and tend more than one such child.

The report for the past year of Miss Frances Zanetti, Inspector for the Chorlton Union, Manchester, states that in this union, 18 cases, comprising 49 children, were on the register during the year 1906, and all but three of these cases were satisfactory. There is evidence that the Act might with advantage be enlarged and extended. One case reported by Miss Zanetti shows that there is still some trafficking done in infants, for a child was adopted with a premium of £25, and almost immediately passed on to another woman, who accepted £20, thus giving the first woman a gain of £5 on the transaction. The infant died after a few months. This case just missed coming within the Act, and no proceedings were instituted. In the course of her duties an inspector under the Infant Life Protection Act may gather a good deal of information about boarded-out or adopted children who do not come under the Act, and by means of this she is able to do much useful work beyond that which comes immediately within the scope of her duties. The short report of Miss Zanetti's work in the Chorley Union affords several instances in which this is exemplified.

Leeds.

Dinner of the Court of the University.

A very largely attended dinner of the Court of the University of Leeds was held in the University Hall on January 31st. The Pro-Chancellor, Mr. A. G. Lupton, was in the chair, and among the guests was His Excellency Baron Komura, the Japanese Ambassador. In proposing the toast of "The University," His Excellency stated that Japan was under a debt of gratitude to the educational institutions of England, and in finance, in administration, in the navy, and in all branches of industry men who had received their education in England were doing splendid work in Japan. He considered that in education in England great stress was laid on the formation of character and on the training of the mind. Both when proposing this toast and when replying to the toast of his own health Baron Komura was very warmly received, and at the end of the meeting he was escorted to the house of his host, Mr. A. G. Lupton, by the students, who had arranged a torchlight procession, which was carried out with success.

From the academic point of view the most interesting event of the evening was a remarkably eloquent and striking speech from Professor Miall, who replied to the toast of "The University." Professor Miall has been associated with the University of Leeds, with the Yorkshire College, and with its predecessor, the Yorkshire College of Science, since the inception of the latter in 1874, and in harmony with regulations recently drawn up, as to retirement on attaining the age of 60, he now retires from the professorship of biology. Professor Miall recalled the time when there were four professors, four class rooms, and one laboratory, and contrasted these conditions with those now existing. Some people had received the multiplication of universities with distrust lest there should be an unworthy competition for conferring degrees on the lowest possible basis. All such fears he considered had been proved to be groundless, and there was a healthy competition among the northern universities for the maintenance of a high standard. While expressing the greatest admiration for the older universities, and acknowledging to the full the debt they owed to them, he totally repudiated the idea that, as some had maintained, they should regard the mediaeval university as a fair standard for their imitation. Discussing the relationship of the new universities to the old, he said: "First of all, let us not attempt to imitate. We have purposes, privileges, and opportunities of our own; let us study our own resources and needs and work out our own problems, making trial of this and that, and

finding what things prosper and what things answer expectation; let us go on and develop these. Let us not attempt slavishly to imitate the ancient universities. On the other hand, let us be careful not to do anything which threatens to subvert them. Do not let us try to lower their influence. No one who has studied the history of culture and of science during the last two or three centuries will feel at all disposed to underrate the debt we owe to the ancient universities. When I turn from the seventeenth to the twentieth century I see the position of these universities unimpaired. Great leaders continue to go from them. Do not let us make carping remarks and criticisms. Let us ask them to acknowledge our right to exist side by side with them."

The Hospital for Women and Children.

The forty-fifth report, presented at the recent annual meeting of the Leeds Hospital for Women and Children, when the chair was taken by Mr. Henry Barran, the President, showed that 631 in-patients had been admitted during the year. Of these, 111 were children and 520 were women, of whom 68 were admitted to the maternity department. This special department, which has been recently started, is, we understand, showing distinct signs of increase. The number of beds being limited, it will be readily understood that most of the cases are of a kind presenting special difficulties, and are sent in mainly by practitioners. It is confidently hoped that very soon some arrangement may be made whereby the student may have access to the valuable experience afforded by this department. Returning to the report, we find that the out-patients numbered 4,349, of whom 2,492 were women and 1,857 children, and that the total attendances amounted to 25,449. In moving the adoption of the report, the Chairman commented on the value of the hospital not only in the treatment of the patients, but in its educational influence in training the mothers of the working class how to look after their children.

Distribution of the Hospital Sunday Fund.

The Committee which, as was mentioned in this column on February 3rd of last year, was appointed to inquire into, and report on, the distribution of the Hospital Sunday Fund, has decided that this year the division shall be made in the following proportions: The General Infirmary will receive 70 per cent.; the Public Dispensary, 14 per cent.; the Hospital for Women and Children, 10 per cent.; the Association for Nursing the Sick Poor in their Own Homes, 5 per cent. and the New Leeds Maternity Home 1 per cent.

Prosecutions for the Sale of Unlabelled Margarine and Watered Milk.

Two shopkeepers have been recently prosecuted at Leeds and found guilty of exposing for sale margarine without the required label stating what it was, which label, it appears, must be printed in letters of ½ in. square. A fine of 20s. and costs was imposed in one case, and in the other the defendant was bound over and ordered to pay costs. It did not appear that there had been any attempt to dispose of the margarine as butter, but it is urged that prosecutions of this kind should take place in the interest of the public, and especially of its poorer members. We also were pleased to note that a milk dealer, who had exposed watered milk for sale, was convicted at Bradford on an analysis which showed that the milk contained 7 per cent. of added water. The ingenious fat by no means original defence was that the defendant had omitted to stir the milk, and that the more dilute portion would "naturally" sink to the bottom of the can from which the incriminating sample had been taken. Fortunately the learned stipendiary had heard this story which he characterized as an old one before, and fined the defendant 5s.

Birmingham.

Dr. Carter.

Dr. A. H. Carter, Senior Honorary Physician to the Queen's Hospital, having recently resigned that position, the committee passed a resolution accepting the resignation "with feelings of the deepest regret" and recorded Dr. Carter's "grateful thanks for the distinguished services he has rendered to the hospital during the past thirty years." By his indefatigable work as a clinical teacher, and his eminence as a physician, Dr. Carter has splendidly maintained the high reputation of the hospital. Dr. Carter will not, by his resignation, sever his connexion with the medical school, for he will continue to be Professor of Medicine in the University. The committee of the hospital, as a mark of their appreciation of Dr. Carter's work, will recommend his election as Honorary Consulting Physician to the institution.

Bequests to Local Charities.

Under the will of the late Mr. Richard Farmer Todd of Edgbaston the following institutions have benefited: The General and the Queen's Hospitals, £400 each; the Institution for the Deaf and Dumb, and the Institution for the Blind, £300 each; the Children's Hospital, the Moseley Convalescent Home, the Orthopaedic Hospital, the Middlemore Emigration Homes, and the Birmingham Eye Hospital, £200 each; making a total of £2,400.

South Wales.

Epidemic of Anomalous Typhoid Fever.

An epidemic of typhoid fever of an unusual type has, during the last three months, prevailed in Gorseinon, Glamorganshire. Ambulatory and abortive cases are of course well known as occasional occurrences, but in this epidemic almost all of the cases are of these types. The usual symptoms are a rise in temperature for a period of from twelve to seventy-two hours, headache, backache, diarrhoea for two or three days, vomiting in a considerable number of cases, abdominal pain, sometimes well marked at other times very slight, pressure in the right iliac fossa elicits tenderness there and generally slight gurgling. At the end of from two to three days the patient is as a rule apparently convalescent, though possibly weak. If pneumonia, pleurisy, or bronchitis occurred, the temperature did not fall to normal until the fifth or sixth day. A large number of cases showed normal or subnormal temperature throughout the period of medical treatment. Fainting occurred in several cases while in some the only marked symptom was tonsillitis. Mingled with 80 or 90 of these anomalous cases were less than a dozen typical cases of typhoid fever. Four cases terminated fatally, all within five days after coming under medical treatment evidently pointing to the fact that the patients must have suffered earlier from the disease in an indefinite and unrecognized form, and therefore without any precautions having been taken as to suitable dietary. The other severe but non-fatal cases had a similar history out of sorts a little, then at work for a fortnight and then haemorrhage or other complications. Dr. Mitchell, M.O.H., who medically attended the patients, had samples of blood from every patient tested by Widal's serum reaction at the Cardiff and County Laboratory, and the results were positive, those in which negative results were obtained at first giving positive results afterwards on the second or third examination. Several samples of blood from healthy persons in the locality have been taken as control experiments, and proved negative. The similarity of the symptoms of the milder cases to those of influenza was so great that many patients doubtless thought their illness too trivial to require medical treatment, and these ambulatory cases served to disseminate the disease. Dr. Mitchell's investigations led to the discovery of many of these missing cases, and their blood showed positive reactions. Owing to the difficulty of making sure that no unrecognized cases still continued to attend school, the day schools of the locality have been closed and the disease is now abating. It now shows a tendency to spread in the adjoining village of Loughor.

Swansea Valley Sewerage.

An inquiry has been held by the Local Government Board with regard to an application by the Pontardawe District Council to acquire compulsorily certain lands for the construction of septic tanks and contact beds, to dispose of the sewage of the inhabitants, about 3,650, in another village. Dr. Williams, County Medical Officer, gave evidence in support of the necessity of sewering the

places, and called attention to the satisfactory nature of the effluent of the Pontardawe sewerage works. The county council had for several years been urging the Pontardawe council to construct sewerage works in the places mentioned as safeguards for health. The inquiry was closed, and the inspector will report in due course.

Swansea Drainage Scheme.

Mr. Chatterton, C.E., the expert called in by the Swansea Corporation to advise with respect to the new scheme for draining the lower portion of the town and the western district, has submitted his report, which, it is stated, favours the placing of the outlet at the West Pier. The majority of the council have all along opposed this scheme, on the ground that the sewage would be carried back into the harbour and up the river by the tide to Morriston, and have advocated instead an outlet at Brynmill, which property owners in the district have strongly opposed on the ground that a septic tank would injure their property and prove detrimental to the sands as a pleasure resort. There has also been opposition to the Brynmill outlet on the ground that it affects the fisheries on the sands and the oyster beds at the Mumbles. The Local Government Board, the Board of Trade, and the Fisheries Board have held several inquiries on the subject, and all have favoured the scheme Mr. Chatterton is understood to favour. Either of the schemes involves an expenditure of a sum between £70,000 and £80,000.

Gift of a Sanatorium.

Miss Davies of Treborth hes decided to found a sanatorium, with about 30 beds, at Llansadwrn, Anglesey. The site has already been marked out, and Miss Davies is now visiting leading sanatoriums with the object of obtaining latest information to incorporate in the Llansadwrn sanatorium. The land is part of the Anglesey estate of Miss Davies's late uncle, Mr. Robert Davies, of Bodlondeb, Bangor, the Welsh millionaire philanthropist, and the whole cost of the maintenance as well as of the erection and furnishing of the institution will be borne by Miss Davies.

Housing Problem.

A housing conference, under the auspices of the National Housing Reform Council, was held at the Old Town Hall, Cardiff, on February 2nd, the Lord Mayor presiding over the morning, and Alderman E. Thomas after the afternoon, session. Mr. Aldridge moved a resolution expressing general approval of the memorandum on housing policy prepared by the National Housing Reform Council, and submitted to the Prime Minister and President of the Local Government Board in November last, as embodying the greatest common measure of practical proposals for the betterment of housing conditions, and the earnest hope that the Housing Bill promised by the Government would deal specially with the many proposals for rural housing reform, and with the urgent need for better methods of planning all new developments in towns and villages, and the taxation and purchase of land. Alderman Thompson, in seconding, said Welshmen were often the life and soul of spiritual movements, and yet South Wales, although naturally it should be one of the healthiest parts of the United Kingdom, was not so, with all its lovely hills, valleys, and fine air, it yet held the record with four other counties in nearly all the causes of death and disease. Many others present referred to the conditions which obtained in certain districts. In the course of the conference Mr. Aldridge said a proposal was under consideration to hold a model cottage exhibition in South Wales.

Australasia.

The British Medical Association in Victoria.

The many disadvantages under which the medical profession in Melbourne has laboured for many years have now been removed. As has already been stated in the British Medical Journal, a union between the Medical Society of Victoria and the Victorian Branch of the British Medical Association, which amounts practically to an amalgamation, has been accomplished. The new Society will contain the names of most of the medical profession of Victoria, and thus, by consolidating professional influence, will at the same time maintain the honour and respectability of the profession. The successful result of bringing the scientific bodies under one roof has not been easily attained. The negotiations not only required tact, but many technical legal difficulties had to be overcome. It had all along been felt that when once the aims and ideals of the movement were fully stated, and when it was understood that its fundamental object was to promote the sentiment of harmony and co-operation, the rest of the work would resolve itself into a united effort in removing all difficulties. This combination of the two societies will be of invaluable assistance in the struggle towards the realization of higher ideals and towards the attainment of a union of the whole of the medical profession of the Commonwealth of Australia under the banner of the British Medical Association. In this coming solidarity and unification of the medical profession lies the future advancement of the medical and allied sciences and the promotion of the best interests of the profession. As we now combine forces we should do everything to accomplish the noble purposes of a splendid destiny. The following are the names of those gentlemen who have been the chief organizers of the scheme which has been so successful in its results: Professor H. B. Allen, Drs. Stawell, O'Sullivan, Cuscaden, Joske, and Vance.

India.

Haffkine's Antiplague Prophylactic.

We have received from Professor W. J. Simpson, King's College, London, with reference to the article published last week (pp. 285 and 277) a letter in which he contends that it is impossible that the contamination of the contents of the bottle of prophylactic, the use of which caused the cases of tetanus at Malkowal, could have taken place in the laboratory at Bombay. His argument is as follows:

"The sole foundation for the conclusion arrived at as to the contamination having taken place in Bombay and not at Mulkowal was the assumption by the Commission that it was impossible for nineteen persons to have been infected so uniformly unless contamination had been in the fluid and the latter had been contaminated in Bombay. This assumption was made because it was thought impossible that a contaminated syringe could cause the accident, or that germs in a minute portion of dirt falling into the bottle at the time of opening it at Mulkowal could permeate the fluid when drawn into the syringe to such an extent as to produce uniform results in 19 cases. The experiments made by the Indian Commission and the Lister Institute show the contrary, and that a contaminated syringe or a minute portion of dirt *could* cause the accident; so that the only reason given by the Commission for declaring that the contamination took place in Bombay thus fell to the ground.

"On the other hand, the evidence shows that the contamination could not possibly have taken place in the laboratory. This impossibility rests on, first, the absence of smell in the fluid at the time when the bottle was opened; secondly, the result of the examination of the dregs of the bottle fifteen days after; thirdly, the natural course which the disease took, in regard to onset and duration, in those affected; and fourthly, the ease with which the infected syringe was cleansed. Added to the evidence of impossibility of the bottle having become contaminated in Bombay, there is the fact that an accident occurred to the forceps at Mulkowal by which they fell to the ground, then were picked up and used in removing the cork of the bottle without being sterilized.

"1. The absence of smell was established by Dr. Elliot, who inoculated the 19 persons, and who examined the bottle particularly because it was the first bottle to be used, and in order to induce the villagers to be inoculated he had offered to inoculate himself.

"The Commission, in their report, writing of their personal observations, allege that there is a peculiar and not agreeable smell in every bottle of prophylactic, evidently forgetting that the water-agar prophylactic has no smell, and it was this prophylactic which was used at Mulkowal. It was not a matter of Dr. Elliot discriminating between one smell and another, but between no smell and a bad smell. The water-agar had no smell, whereas if it had had a culture of tetanus in it it would have smelt badly.

"2. The water-agar prophylactic was proved by many experiments, both by the Indian Commission and the Lister Institute, to be an excellent medium in which the tetanus bacillus gives a luxuriant culture exceedingly powerful in its action on animals, provided it is grown in bottles full of fluid, that is practically under anaërobic conditions. On the contrary, when air is present, as in the case of a bottle partially emptied, the growth is hindered or altogether prevented. Growth may, however, take place even in a few drops left in a bottle if other microbes are present which use up the air in the fluid. There was at the time of examination of the bottle by Semple, fifteen days after the accident, no rich culture, but a poor one of attenuated toxicity, such as grows when the bacillus is left in the presence of air. This culture was therefore of the kind that would have developed in a few drops of prophylactic, if the fluid in the bottle were contaminated at the time of the accident, and the bottle had been immediately emptied of most of its contents. There was found in the fluid also a saprophytic microbe, whose association evidently helped the tetanus germ to grow a little in the presence of air. If the bottle had been contaminated in Bombay, Semple would have found in the dregs of the bottle a rich instead of a poor culture.

"3. The symptoms of the infected persons and the course of the disease were similar to those in cases of natural infection occurring after an accident where the microbe takes time to multiply and develop its toxins. They in no way represented what would have occurred had there been injected a rich culture of tetanus microbes, together with a considerable dose of a powerful toxin, as would undoubtedly have been the case had the contamination of the prophylactic taken place in the Bombay laboratory. The patients would have been attacked with a tetanus of the fulminating variety.

"4. The fact that the syringe was cleansed merely by filling with carbolic solution, and, after three or four minutes, emptying it, and then used again to inoculate other persons without those persons being infected with tetanus, also shows that the contamination did not take place in Bombay. For it was established by experiments that a syringe slightly contaminated with tetanus germs could be cleansed with carbolic solution in the way done at Mulkowal, but that it was not possible to cleanse in this way a syringe contaminated with a tetanus culture grown in a bottle of prophylactic.

"5. Lastly, there is the most important fact that while the inoculations were done in the outskirts of the village, with a crowd of villagers around, the forceps were dropped on the ground by the compounder in the process of opening bottle 53 N. He picked them up, and instead of sterilizing them in the flame of a lamp according to the instructions issued from the laboratory, he swished them in carbolic lotion according to other instructions, which had been substituted and issued locally, and then he proceeded to remove the cork. The swishing of the forceps in carbolic solution was absolutely useless to sterilize them. The soil in tropical countries and in India in particular is known to be much more infected with tetanus than is the case in temperate climates. The bottle was one out of five issued from the same culture flask in the laboratory, and it was only this bottle, in the opening of which dirty forceps were used, that caused tetanus. The history of the other bottles was traced, and it was proved they had been used for inoculation without any ill effects whatever.

"With these facts before them, supported by experimental evidence, the Commission came to the extraordinary conclusion that the contamination took place in Bombay, and the Lister Institute give countenance to that conclusion.

"What do the conclusion of the Commission and the pronouncements of the Lister Institute, if accepted as correct, mean for Haffkine? He is engaged in a work of vast scientific importance and of the highest public interest. The system of fighting the plague by the prophylactic involves a great complexity of operations. A failure leading to a fatal accident of this magnitude occurs, and instead of tracing out its origin and bringing it to its source, the matter is obscured and pronouncements are made, not only based on no facts, but directly opposed to all evidence in the case. Is this a matter the elucidation of which is unimportant to medical science? or is it not on the contrary of the first interest to men of science? The conclusions, moreover, are a grave injustice to Haffkine. He has been wrongfully held responsible for an accident which originated very far from his laboratory, and was due to the neglect of the laboratory instructions. That blame has been published abroad and tarnished his reputation. Is this the way to encourage a career of public utility? Because he has taken the only course consistent with a man of honour and of a distinguished scientist to establish the truth concerning a very grave matter, his action is represented as futile, unwise, and merely resentful. I on my part believe that when the circumstances of the case are understood by the India Office and the Indian Government, Haffkine will secure what he is fighting for."

CORRESPONDENCE.

THE OFFICE OF PUBLIC VACCINATOR.

SIR,—From time to time attempts have been made to create dislike and mistrust of the public vaccinator. It has been freely alleged that he abuses his position by endeavouring to attract to himself other men's patients. Such allegation is less frequently made than formerly, since it is now pretty generally felt that it has little real foundation, and can only very rarely be substantiated.

The fact is that those really conversant with the conditions of general practice know that all the public offices—whether that of medical officer of health, that of Poor-law medical officer, or that of public vaccinator—militate against, rather than contribute to, the best success of the general practitioner. The first named incurs hostility on the part of property owners by attempting to put into practice the Public Health Acts; the second is handicapped in the district where his work lies, since he is apt to be shunned by the private patients of the locality, who do not care to be attended by the parish doctor; and the third, far from increasing his practice owing to his office, is much more likely to be avoided as the mouthpiece appointed by Government to administer an objectionable Act.

Since, however, the outcry against the public vaccinator as an unfair competitor has become less fashionable, other grievances have come into prominence. Complaint has been made that the general practitioner is obliged to forward gratuitously to the Local Government Board certificates of his successful vaccinations. It was proposed by one of the medical committees that this grievance should be remedied by inducing the Local Government Board to allow a fee for each such certificate received. When this suggestion was made the objection was dropped, and instead the contention arose that every registered medical practitioner should be officially recognized as a public vaccinator, and should receive the same fees as those paid to the public vaccinator in his district.

The varying attitudes thus adopted by a portion of the profession make it increasingly clear that the whole movement owes its origin to envy of the public vaccinator, and to a desire as far as possible to destroy his office, and divide the emoluments amongst the general body of the profession. Probably it has not escaped observation that during the long period of thirty years or more, when all vaccinations were performed at the rooms of the public vaccinator, and for fees which were altogether inadequate, he was allowed to pursue his work undisturbed. No allegations were made against his conduct, nor were the various grievances discovered, of which so much has lately been heard. The fact is that in those days the remuneration was so wretchedly poor that no possible cause for envy existed. It is a matter of common knowledge that at the present time a cheap form of so-called Socialism is rampant, which consists in a process of self-enrichment at some one else's expense, without paying anything for the spoliation. It is much to be regretted that this miserable and baneful creed has found ready acceptance within the ranks of the medical profession.

I suppose, when once the public vaccinator's office has been abolished, the attention of the restless and envious spirits of the profession will be directed to the abolition of the post of medical officer of health, to which end it may be suggested that a separate medical officer should be appointed to each of the wards in a town, so that the health of the public may be adequately safeguarded.

a grievance against the present office holders, it may be enough to suggest that the officer abuses his position by currying favour with property owners, and inducing them to employ him professionally. Following this, the attack should be directed against the Poor-law medical officer, the suggestion being that the town or district be subdivided according to the number of medical practitioners in the neighbourhood, who may urge better care of the suffering poor as a reason for the change. The undue prominence of the existing official as a servant of the guardians, with its resulting gratuitous advertisement, might be adduced as a sufficient grievance to justify the new arrangement. The turn would then come of the factory certifying surgeon, whose office should be correspondingly divided, with a view to the more perfect investigation of accidents, and the more perfect administration of the Act. A grievance sanctioning the departure could be manufactured by supposing that the official's frequent interviews with the managers and heads of works unduly assist him in obtaining patients from amongst their numbers. Certainly I fail to see how, from the logical standpoint, the destruction of any one of these offices is more defensible than that of any of the others.

To return, however, to the question of the public vaccinator and the general scramble now suggested for the fees which he at present receives, I take it that nominally his office would still exist, but that his work and fees would be reduced in proportion to the amount of vaccination done by the general body of practitioners. Since every registered practitioner would be recognized as a public vaccinator, there would be a most undignified rush to vaccinate the children. A large number of people—those, for example, receiving parish medical relief, and many others also—have no regular or recognized family attendant; moreover, nowadays the majority of the infants in the manufacturing centres are brought into the world by midwives, and unknown to the profession. These would be regarded as fair game for any practitioner who cared to hunt them up. The resulting spectacle would be very unedifying; equally so the means resorted to for obtaining the parents' leave to vaccinate.

It may also be allowable to point out that the duties of the unofficial vaccinator, being much fewer than those of the public vaccinator, his fees would by no means be the same as those received at present by the Government official. The following are the main duties, the performance of which is at present paid for:

1. Notifying the parents of the children named in the vaccination officer's weekly list of the intended visit of the public vaccinator upon a given day for the purpose of vaccinating the child.
2. Paying the said visit and, if possible, vaccinating the child.
3. Informing the vaccination officer as to the result of the visit.
4. Postponing the vaccination where necessary, forwarding certificate of postponement, and revisiting child at the expiration of postponement.
5. Inspecting the result of the vaccination seven days after its performance.
6. Keeping a detailed register for Government auditor and Local Government Board inspector.
7. Treating any condition arising in connexion with vaccination and due to dirt or to the neglect of the parent.

Now, the general body of practitioners would not be supplied with any weekly list by the vaccination officer, and so none of the work in connexion with it would call for performance by them. Nor could a detailed register be kept by them, as is at present demanded of the public vaccinator. Consequently the fees paid to him are no guide as to the scale which would be allowed to the profession generally. The fact is that in practice the proposed change would destroy the office for its present holders, without benefiting the profession at large to any appreciable extent. A further result would be, in my opinion, the lessened efficiency of vaccination amongst the community generally; inasmuch as the systematic inspection of vaccination by Local Government Board inspectors and the consequent control of vaccination by the central authority would no longer be a possibility.—I am, etc.,

WALTER GARMAN,
Public Vaccinator, Wednesbury District, West Bromwich Union, Staffs.

January 29th.

CANCER PROBLEMS.

SIR,—In your issue of to-day I find that Mr. J. Jackson Clarke, under the heading of Cancer Problems, refers to infective sarcomas of dogs. It may be of interest to him and to others to learn that I have succeeded in demonstrating the presence of spirochaetes in a tumour of the nature mentioned, obtained from an animal operated upon in the clinic here. I estimate the length of the parasite to be about 17 μ or 18 μ, the thickness 0·3 μ or less in stained preparation. The "undulations" of the parasite average about five. Fusiform bodies are also to be found.

Professor G. H. F. Nuttall, F.R.S., Quick Professor of Biology in Cambridge, to whom I forwarded a specimen, kindly examined it for me, and corroborated my diagnosis as to the presence of spirochaetes which have a close resemblance to those of Vincent's angina, though the parasite from the human source is somewhat coarser.—I am, etc.,

A. E. METTAM,
Principal.

Royal Veterinary College of Ireland, Dublin, Feb. 2nd.

PROFESSIONAL MISCONDUCT AND THE LAW.

SIR,—The decision of Mr. Justice Warrington in the case of Clifford *v.* Timms, on which you comment in last week's issue,[1] appears to lead to a curious state of things which you do not notice. If a medical man or a dentist is thus held to a deed of partnership with a person whose name has been expunged from the *Register*, it would appear that the innocent partner thereby becomes subsequently himself liable to the jurisdiction of the Council for all time for conducting his practice with a person not in the eye of the law qualified to practise his profession. I do not suppose that the Council would be hard upon a man placed in this unfortunate dilemma, but nevertheless it is a *reductio ad absurdum* of the position.—I am, etc.,

M.A.

THE INFLUENCE OF RAINY WINDS ON PHTHISIS.

SIR,—Dr. W. Gordon of Exeter does me the honour in your issue of January 26th of quoting from my letter of January 19th as follows:

"In any case it is to be deprecated that this theory of the influence of wet winds on phthisis—which has, to say the least, not yet been accepted by the medical profession as a body—should have been to my knowledge definitely placed several years ago before a body of laymen—namely, the Devon County Council—as condemning a public sanatorium on Dartmoor."

Dr. Gordon proceeds to controvert the statement, and refers to it as "remarkable," "irrelevant," and not to be substantiated. The statement may well be remarkable, for truth is often stranger than fiction; and it is true, as I will substantiate; that it is "irrelevant," Dr. Gordon himself disproves by his expressed disapproval of the site.

I am writing away from full records of the proceedings for the prevention of tuberculosis and the establishment of a sanatorium (our annual reports of 1900 for 1899, of 1901 and 1903 dealt only with constructive matters of importance). I am clear, however, that I attended a meeting of the Devon County Council at the Castle, Exeter, Sir John Shelley in the chair, to (*a*) ask support to the Devon and Cornwall Sanatorium, proposed at Didworthy, South Brent; and (*b*) as a member of a deputation to advise the appointment of a county medical officer of health. The questions addressed to me in the Council Chamber as to exposure of our site, together with the remarks made by Dr. Gordon, who had preceded me and was present at the meeting, largely determined the issue and condemned the site at the time. Dr. Gordon used his report and coloured maps to illustrate his theory.

A wider basis for calculation of these statistics in Dr. Gordon's papers is advisable before any interpretation of results is attempted. This theory does not explain why a sea voyage or sanatorium treatment on sea coasts is often as beneficial to tuberculosis as is the karoo or the desert, nor the universal instinct in this country to protect a building from the N. and E. rather than the S. and W.

I cannot describe here the solid advantages and magnifi-

[1] BRITISH MEDICAL JOURNAL, February 2nd, 1907, p. 276.

cent scenery of this beautifully-situated sanatorium, or of its excellent system of treatment or management by the resident medical officer, matron, and committee; neither can I give an account of the orthodox methods by which it was established by the medical societies and associations in Plymouth and the Western Counties. But an opportunity will doubtless be given to your readers at the annual meeting at Exeter of the British Medical Association to visit the sanatorium at South Brent and judge its value. Its work has overridden Dr. Gordon's theory, as it is the only public institution of its kind as yet in Devon or Cornwall. My object in writing is mainly to obtain support to the sanatorium.—I am, etc.,

Brighton, Jan. 23th. F. G. BUSHNELL,
Formerly Hon. Secretary and Vice-Chairman Devon and Cornwall Sanatorium Committee; Vice-President and late Governor of the Sanatorium.

*** Dr. Bushnell appends to his letter extracts from published reports, from which it appears that the inaugural meeting of the Devon and Cornwall Branch of the National Association for the Prevention of Tuberculosis was held at the instance of a joint committee of the Plymouth Medical Society and the South-Western Branch of the British Medical Association on February 21st, 1899. From the report of 1901 it appears that the Sanatorium Committee had collected information, and had appointed a Site Subcommittee, which, it was stated, was determining as to a central site easily accessible to the bulk of the population, of moderate elevation, sunny, dry, and sheltered from prevailing winds, with air from sea and moor, walks of easy gradient, good water supply, away from houses, and with room for expansion. At a meeting convened by the Mayor of Plymouth on December 3rd, 1901, a resolution was adopted to the effect that it was desirable to establish a sanatorium in the neighbourhood of the Three Towns for the open-air treatment of consumptive patients in Devon and Cornwall, and a Committee was appointed to carry out this object.

SIR,—Dr. J. Penn Milton, in his letter in the BRITISH MEDICAL JOURNAL of January 19th, writes: "Dr. Pearse's figures are wrong only in so far that they dispute Dr. Gordon's theory."

I do not wish to criticize Dr. Pearse's figures, but I think it only fair to Dr. Gordon to state that the figures made use of in the paper referred to were obtained and carefully revised by me. Dr. Gordon asked me to obtain them for him, not knowing at the time whether, when carried back over such a period as forty-five years, they would support his theory or not. That they do so no one who will take the trouble to read the paper carefully will deny. Of the accuracy of the figures I am confident.

If Dr. Bushnell will refer to Dr. Gordon's paper in the *Lancet* of January 7th and 14th, 1905, he will find it shown that there is "a very much higher mortality from phthisis in those living on islands and coasts, where moist winds prevail, than in those Continental countries not so exposed." I am, etc.,

Barnstaple, January 23rd. JOHN R. HARPER.

SIR, The relationship of wet winds to phthisis is, I think, extremely doubtful, and the cause probably is not any particular wind but the windiness of a locality which causes individuals so exposed to shut themselves up in their homes in a more or less vitiated atmosphere and thus hastening tubercular changes. In a disease, the cause of which is so often complex, there must be sources of fallacy in accounting for its causation on any one hypothesis. Dr. Penn Milton rightly says, "it is the lack of air rather than exposure to air which the bulk of evidence clearly condemns as raising the death rate in phthisis." This is exemplified among the inhabitants of the higher Pyrenees and in parts of the mountainous districts of Wales, where the women and children spend the greater part of the winter months in cowsheds, ill-ventilated tenements often consisting of a one-roomed living and sleeping room, whereas the male population, who spend the greater part of the time in the fresh air, suffer little, beyond an occasional attack of rheumatism. I am, etc.,

A. ERNEST MORGAN, M.D., M.R.C.P., etc.
Bournemouth, Jan. 28th.

SIR,—My practice for sixty years has been in the very stroke of the south-west wind, about twenty miles in length from south-west to north-east. Beside private practice, I have been medical officer for two union districts comprising twelve parishes, so that my practice has been essentially a mixed one, having to treat all kinds of ailments incidental to a country life. I have kept no statistics, believing them not to be at all times reliable; but my memory and experience lead me to conclude that hereditary predisposition to consumption is a greater factor than the south-west wet winds. Heredity, it seems, if not altogether overlooked, is somewhat put in the background. I venture to say that almost every case of genuine tuberculous consumption that has come under my notice had its origin in hereditary taint, in some cases passing over one or two generations. Most practitioners will admit that to form a correct diagnosis of the earliest stage of consumption is not at all times easy. Many cases simulating consumption, but having their origin in common causes, have perfectly recovered after proper if prolonged treatment, and that, too, after having been condemned as consumptive. Although my friend Dr. Gordon's south-west wind is pretty in theory, I cannot agree with him practically in essentials.

As to the utility of convalescent homes which have become so general all over the country, doubtless all diseases simulating consumption will speedily get well under careful treatment; but in cases of genuine tuberculous consumption I fear it will be only temporary, and, like cancer, we have to seek further for a permanent remedy.—I am, etc.,

Hatherleigh, Devon, Jan. 29th. JOHN GOULD.

VACCINATION OF THE CORNEA.

SIR,—Vaccination of the conjunctiva or of the lid border is not so very uncommon, and the cornea seems always to be affected in these cases, but vaccination of the cornea itself is a very rare lesion. I have seen one case in which, as in the case described by Drs. Menzies and Jameson in the BRITISH MEDICAL JOURNAL of January 26th, p. 198, the original lesion was probably corneal.

The case is described in the *System of Diseases of the Eye* (Norris and Oliver), vol. iv, p. 691. The infection occurred through the breaking of a capillary tube. For four days no trouble was felt; then the eye became itchy, painful, and inflamed. Fifteen days after the accident the conjunctiva was congested, and the cornea vascularized along its upper border with a gelatinous haze of its whole tissue. Three weeks later a curved infiltrated marginal ulcer was present above with dense pannus and a small central infiltration; hypopyon was also present. Under cauterization and other treatment the hypopyon finally absorbed and the ulcer healed, but not before it had spontaneously perforated. A dense marginal leucoma was left. None of the concentric rings of opacity described by Schirmer were present in this case, and I observe they seem also to have been absent in the case described by Drs. Menzies and Jameson.—I am, etc.,

Dublin, Jan. 28th. JOHN B. STORY.

HOMŒOPATHY.

SIR,—I am glad to see that Sir Samuel Wilks has lost none of his old-time interest in the affairs of homœopathy. He has done the cause of homœopathy such excellent service in the past by giving homœopaths openings for the exercise of their controversial powers, that he has been badly missed from the arena of late years.

I cannot ask for space to go over all the ground traversed by our kindly and genial critic, but I should like to point out that treating individual symptoms was the very last thing Hahnemann thought of either teaching or practising. Homœopathy is, in fact, a protest against any such thing. Hahnemann valued symptoms as the *language of disease*, just as words are the symbols of thought. Hahnemann taught that in order to apprehend the nature of the morbid condition of any patient it was necessary to take note of *all* the symptoms and changes from the normal present at the time.

Further, he taught that symptoms are also the language of drug action, that to really know the power of any drug it is necessary to note all the changes in tissues, secretions, and sensations it is capable of producing in healthy

persons. No student of Hahnemann's *Organon of Medicine*—which will reach its centenary in 1910—could make the mistake made by Sir Samuel Wilks.

But if Sir Samuel Wilks cannot be accepted as an authority on homoeopathy, I think no one will question his right to speak for allopathy. This is what he once told his students at Guy's Hospital about it:

I deny that we have a scientific use of medicines. To say that I have no principles is a humiliating confession. We have no especial indications whereby we may be certain of the action of medicines in disease. Our remedies are never suggested by any theoretic considerations whatever. I think it is not difficult to see that our art has not a scientific basis, but, on the contrary, is formed out of the fancies of the human mind.

Hahnemann, in spelling out the language of drug action, and in showing its relation to the language of disease as manifested in patients, has provided the "scientific basis" for the art of medicine, and the "especial indications" for the use of drugs which Sir Samuel Wilks so truly says his own school does not possess.—I am, etc.,

London, W., Feb. 4th. JOHN H. CLARKE.

THE SHIPPING FEDERATION AND THE WORKMEN'S COMPENSATION ACT.

SIR,—The Workmen's Compensation Act becomes applicable to seamen after June, 1907, and steps are being taken by the Shipping Federation to appoint medical men to examine seamen before signing on.

I am not surprised to find that the small sum of 1s. a head for small crews and a fixed fee of 2 guineas for large crews has been considered by the Federation sufficient remuneration; but I am surprised to find that the suggestion of a 1s. fee comes from a medical man to whom apparently the company applied for guidance as being "a medical practitioner of wide experience in this class of work" (see Federation circular)—to wit, Dr. Archibald Finlay.

This gentleman in response to an inquiry states, in a letter which is being circulated widely by the Federation, that the examination should be thorough: the chest, abdomen, genitals, and legs to the ankles should be exposed; every form of skin disease, varicose veins, venereal disease, and serious deformity rejected; the deck hands should also be tested for colour-blindness and defective vision. Dr. Finlay concludes with this remarkable sentence: "I think one shilling per head would be a reasonable fee." I am surprised Dr. Finlay does not include an examination of the urine, the examination of the abdomen cannot be so very "thorough" without it.

Now, Sir, I defy any man to carry out an examination of this kind under a quarter of an hour a case, and the fee of 1s. is simply ridiculous. I do not suppose any of us would like to examine any individual seaman for a shipping company under a fee of half a guinea, and I contend that, even at contract rates, 2s. 6d. a head would not be excessive. I should like to hear what other men have to say about it.

In the meantime may I suggest that in every seaport town the local Division of the British Medical Association meet to discuss this question, and decide for themselves what would be a reasonable fee?—I am, etc.,

February 5th. X.

WORKERS' SANATORIUMS AND MEDICAL REFEREES.

SIR,—Mr. Bunn's letter is not calculated to correct the "flavour of acidity" which he finds in your annotation of January 26th on the above subject.

The experiment is "to demonstrate to friendly societies and trades-unions, *inter alia*; . . . (2) that the erection and maintenance of such institutions can be made to pay in the sense of proving a financial benefit to the societies." It would enhance the value of the experiment if the medical referees, *inter alios*, were paid.

When by a "combination of charity and self-help" the experiment has attained success other sanatoriums are to follow; and no doubt Mr. Bunn is sincere when he says that the "resultant organization will pay its referees on a proper scale." With my knowledge of friendly societies I think the "resultant organization" is more likely to consider that, having got the work done for nothing in the past, it will at least try to get it done for nothing in the future as well.

Mr. Bunn talks of charity; but let a "club doctor" so much as faintly suggest to a "clubber" that there is the least eleemosynary flavour about his attendance—well, the patient's remarks will be more than "acid."—I am, etc., A. B.

February 4th.

HOSPITAL REFORM.

SIR,—Dr. Arthur C. Roper's letter, in which he writes, "I am strongly opposed to the recommendation of the Hospitals Committee that the certificate of a general practitioner shall be a key to open the hospital door," contains, according to my experience and observation, an entire misrepresentation of the conduct of the general practitioner which ought not to be allowed to pass unnoticed.

That a certificate from the medical attendant should be the only key to the hospital, except in emergency cases, was my suggested solution of the vexed question of hospital abuse many years ago, when suggestions were solicited through the BRITISH MEDICAL JOURNAL. As a result of the consideration of the suggestions made it was recommended that my suggestion should be put into practice. Had that recommendation been carried out then our hospitals might not have been in such straits as they now are, and as they deserve to be, while they continue to claim support, on account of the large number of patients they annually treat.

To object to the medical attendant's certificate, as the key to the hospital, because he would send cases to hospitals which could afford to pay, shows an unwarrantable assumption on the part of the objector.—I am, etc.,

Hawick, Feb. 3rd. JOHN HADDON, M.D.

MEDICINE AND THE LAY PRESS: A PROTEST.

SIR,—Will you kindly allow me to acquaint your readers, through your columns, that on January 31st the following resolution was unanimously passed:

> That the Reading Pathological Society disapproves of sending to the lay press advanced sheets or notices of signed articles, or abstracts bearing the author's name, about to appear in the medical journals, and desires to call the attention of the respective editors to this breach of professional ethics.

I was requested by the Society to send the above for publication in the JOURNAL.

Since this resolution was passed the February number of the journal alluded to in my letter of January 5th has appeared, and contains an apology from the editor. Accepting his statement "that owing to an unfortunate misunderstanding advance pages of the January number were sent to the press," and inferring therefrom that such a procedure is not likely to be repeated, the matter, so far as I am concerned, is at an end.

In conclusion, I would like to point out to your readers that should such "unfortunate misunderstanding" occur at any time in the case of any medical journal, the profession has the remedy in its own hands by declining to subscribe to the journal so offending.—I am, etc.,

Reading, Feb. 4th. J. HOPKINS WALTERS.

PRIMARY DIPHTHERIA OF THE EXTERNAL AUDITORY CANAL.

SIR,—It was not the clinical details of Dr. Galbraith Connal's interesting case that were obscure—these are pretty fully reported on p. 139—but it was because these pointed to the case not being diphtheria that full details of the bacteriological evidence becomes essential to its acceptance as an example of diphtheria. Dr. Connal's successful operation on this patient might induce others to do a similar operation in a true diphtheria case with disastrous results, hence its importance.

The bacteriologist is placed in an unfair and untenable position when only the morphological characters of bacilli in cultures are accepted as sufficient evidence of diphtheria apart from clinical conditions, and as Dr. Connal is well aware of the difficulties in distinguishing the true diphtheria bacillus from others which are hardly distinguishable morphologically, I still hope that the bacteriological evidence in its fullest details may be furnished.—I am, etc.,

Clifton, Bristol, Feb. 2nd. P. WATSON WILLIAMS.

EXPERIENCES DURING THE RECENT EARTHQUAKE IN JAMAICA.

By Arthur J. Evans, M.R.C.S., L.R.C.P.,

Liverpool.

It may interest your readers to hear some of my experiences during the Kingston disaster now that I have returned and can look back upon the events with a more collected mind.

Sir Alfred Jones had organized a large party of influential political and commercial men to visit the West Indies, and especially to attend the important Agricultural Conference which was to have taken place in Jamaica during the week after arrival. I was asked to join the party, and as there were prospects of a crowded ship I arranged to take on the duties of surgeon to the vessel during the voyage. The outward run was uneventful, except that we lost one of our crew, who fell overboard between Barbados and Jamaica. We entered Kingston Harbour on Friday, January 11th, and disembarked about 9 a.m.

The delegates distributed themselves between Myrtle Bank Hotel and Constant Spring Hotel, a large number also being accommodated at Government House. I stayed at Constant Spring Hotel, some six miles out of Kingston, a delightfully situated modern structure. Saturday and Sunday passed without any unusual phenomena. The days were not unpleasantly hot, and the evenings and early mornings were beautiful.

On Monday morning I accompanied several friends to Spanish Town, the old capital of the island. After seeing the various interesting objects, and having lunch, we returned to Kingston by the 2 o'clock train. At Spanish Town station I met Dr. Savage of Birmingham. We conversed for some twenty minutes before boarding the train. Little did we dream as we parted that he and his relations would be taken and I should be left within such a short space of time.

Arriving at Kingston, I walked down to the ship, some distance away, to see if anything was required, and as I stepped from the gangway on to the deck the earthquake occurred.

I heard a tremendous, rough, long, grating roar accompanied by a disturbance of the air resembling wind. This was followed by a long-continued rumbling, and the ship rose suddenly several feet, something striking her underneath. My first thought was that something had burst in the engine room. As I looked over I saw the wharf sway from side to side, and everybody on it instantly fell. The buildings in Kingston began to rock, and the walls to fall out with a long-drawn crash, clouds of white dust enveloping them.

There followed an ominous silence for about thirty seconds—the most tragic interval of all, to my mind. Then the air was rent by piercing shrieks and cries. Dust-begrimed people rushed out of the débris, some of them dragging their injured companions. I asked no one what had happened. One instinctively knew it was an earthquake, though one had not felt anything like it before.

I rushed down the gangway, up the wharf, and into the town, to find Sir Alfred Jones, whom I knew to be at Myrtle Bank Hotel. I fortunately wore rubber-soled boots, and so did not have much difficulty in running up the streets, which were piled with bricks and masonry, whilst walls were here and there tottering and coming down. The whole place was netted with fallen wires, including those supplying the tramway service, while beneath the débris was a mass of shrieking, praying, groaning humanity. Those of the black population who were not injured were gesticulating and imploring the help of Heaven with such phrases as "Lord have mercy upon us!" "Christ is coming!" evidently in the firm belief that the world was coming to an end. Reaching the hotel, I found the whole place in ruins, and was told by a white faced, begrimed gentleman that he whom I sought was buried alive beneath a mass of masonry. I ran up the shaking stairs in the central portion of the hotel to look in the rooms. Then came the second shock, which brought me outside again without delay. Here I was told that Sir Alfred Jones with some others had miraculously escaped out of the hotel and had gone in a boat to the *Port Kingston*. I therefore thought it best to follow, and at once organize systematic relief.

By this time, the town was ablaze, the flames being driven rapidly in our direction, fanned by a strong land breeze. From that time onwards I know nothing of the events on land. The *Port Kingston* was the only passenger ship in harbour. They brought the wounded to us along the wharf, and after we had cast off they came in boats, dug-outs, lighters, steamers, and every conceivable craft. In an hour's time, the companion ways, alley ways, decks, second-class saloon, smoke room, and hatches were simply littered with the dying and wounded; one could not step between them at times without touching a fractured limb!

An operating table was improvised, first in the main companion way, then in the second saloon, then on the after-deck, and finally on the wharf, and so each section of the ship was dealt with. Such a scene was presented as I have never experienced before. The injuries were terrible, mostly, however, to the lower limbs, spine, and head, all fouled by dust and mortar.

Our antiseptics naturally soon ran out, and we resorted to a lotion made from crude disinfecting carbolic until able to requisition a supply from neighbouring ships. A good supply of modern instruments was on board, and, in addition, I fortunately carried a large number of my own. We also had a good supply of chloroform, one amputation only being performed without an anaesthetic. In this case my stock was getting low, and there were several women to follow. The patient was given a big injection of morphine and did not seem to feel the pain very much (amputation below knee).

There was no lack of water, light, or assistance. The carpenter stood by me with splints, while a steward gave the chloroform. Every man on the ship worked like a Trojan, from the captain downwards. I would specially mention the stewards, who were unremitting in their attentions, and showed a natural aptitude for the work. I was aided for some two hours by a Jamaican doctor, who came out with a lighter full of injured. He worked heroically with me under most depressing circumstances, his home having been wrecked, his parents killed. I know not his name; I had not time to ask it, but I take this opportunity of thanking him for all he did. To Nurse Cross of the Middlesex Hospital I owe an everlasting debt of gratitude. She happened to be a passenger on the ship, and on hearing that the *Port Kingston* was turned into a temporary hospital she hurried down to our assistance. She worked night and day without rest of any kind, and showed such skill, fortitude, and endurance that Jamaica should ever remember her.

As to the actual surgical work, it was nothing but setting fractures of every description; arresting haemorrhage by ligature and tourniquet, cleansing wounds and amputating limbs. Such severe injuries it has never been my lot before to witness in spite of a lengthened experience in military surgery during the South African war. Some 200 cases passed through my hands. Surrounded by leading representatives of the press, and public men, much that is kind and appreciative has been written and said of our work on the *Port Kingston*. I hope I did my duty: I was glad to be there, and glad to be an Englishman, for we received on board that ship wounded and refugees of every colour, nationality, and creed.

Sir Alfred Jones had ordered that stores, stimulants, bedding, and clothing, etc., should be used without stint or charge, both from the ship and from his hotels. To him must be given unstinted praise for all he did. Sheets were torn up for bandages, and blankets and tow used for padding splints. The Countess of Dudley, Mrs. Arnold-Forster, and many other passengers worked devotedly in nursing, feeding, and tending the wounded, both on the ship, on the wharves, and in the hospital through those nerve-racking hours. Lady Dudley gave anaesthetics for me on several occasions with great skill.

The Kingston doctors who survived worked heroically at the hospital. How they got through that awful night in darkness, and with the water supply cut off, I do not know, but they grappled with the emergency in a splendid way. I visited the hospital twice on Wednesday and helped a little. A few injured were still struggling in, but the bulk of the work was already accomplished.

This sketch is written hurriedly, but I venture to hope it will be read with some interest by my professional colleagues.

OBITUARY.

Sir MICHAEL FOSTER, K.C.B., M.D., F.R.S.,

FORMERLY PROFESSOR OF PHYSIOLOGY IN THE UNIVERSITY OF CAMBRIDGE.

Michael Foster was born 71 years ago at Huntingdon. His father and mother both belonged to the Puritan East-Anglian stock, and had relatives scattered through Cambridge, Bedford, and Biggleswade. His father was highly respected as a surgeon in the town, and was one of the first to win the newly-established Fellowship of the College of Surgeons by examination. His mother, with no less force of character, had equal warmth of affection.

Michael, the eldest of the family, was educated in Huntingdon Grammar School, and afterwards in the boys' school attached to University College. After entering the College and taking the degree of B.A. in 1854, he joined the Medical Faculty and became the favourite pupil of Dr. Sharpey. Although he returned to Huntingdon (1859, M.D.) to help his father in his practice, he had become imbued with the love of science, and after six years' work in Huntingdon he obtained Mr. Foster's consent to returning to University College as Demonstrator of Physiology (1867).



From a photograph (1889) lent by Professor J. N. Langley, F.R.S., Sir Michael Foster's successor in the Chair of Physiology, Cambridge.

The years spent in country practice were not lost; they gave him experience, and practical knowledge of medicine, and sympathy with the country doctor. They also gave him the security of knowing that if unsuccessful in scientific pursuits he could at any time fall back upon the practice of his profession.

Before he left Huntingdon he had married a daughter of Mr. C. Edmunds, but after a brief period of domestic happiness she was taken from him, leaving two children who survive their father.

Foster's skill as a teacher, his store of knowledge, his enthusiasm for discovery, and his force of character impressed all his pupils. He succeeded Sharpey as Professor of Physiology in the year 1868. He wrote in the *Quarterly* and other reviews and in medical journals, and soon showed considerable power of composition, combined with purity and distinction of style. He was elected Fellow of the Royal Society in 1872, where he earned the friendship of Huxley and other eminent men, from whom he learnt to recognize his own powers.

In 1870 Trinity College, Cambridge, endowed a Praelectorship in Physiology, and to this office Foster was elected. Leaving University College was at first felt as a sacrifice, but before long he made friends who were colleagues or pupils. Most of all, perhaps, he was indebted to the Rev. Coutts-Trotter, Vice-Master of Trinity, a man of wide erudition, an eminent mathematician and a man of unrivalled judgement. His death in 1887 was a severe loss to Foster, from which in some ways he never recovered. Among the younger men, who began as his pupils and soon became his helpers and friends, were the late Dr. Dew-Smith, Dr. Francis Darwin. Dr. Gaskell, Professor Langley, Dr. Adam Sedgwick, the late Dr. Martin of Baltimore, Dr. Adami, now in Canada, and Francis Balfour, whose lamentable death while climbing in Switzerland was a catastrophe not only for his friends but for the progress of English science. When Foster had been about a year at Cambridge he took for his second wife the daughter of Mr. Rust of Huntingdon, whose intelligent sympathy with Foster's work was of inestimable service.

Soon after his marriage Foster took a picturesque moated house at the foot of the so-called Gog Magog Hills, and while living there made himself a garden first, and then a house. Next the garden produced flowers and shrubs and trees, and at last became a beautifully-planted domain, with a picturesque chalk-pit. Looking north, the pinnacles of King's College were visible three miles off, and gave dignity to the view. Next to his laboratory—if second even to that, as some ventured to pretend—was this garden. Here in a large and well-sheltered veranda were collected on a Sunday afternoon colleagues and promising students, friends from London, and distinguished visitors from abroad or from America.

Soon after he had removed to Cambridge Foster took seriously in hand a textbook of physiology, by far the best that had appeared in England, clear and full, not confusing the student by multiplied details, but laying down in clear and accurate language the essential facts and their mutual relation. So clearly and carefully composed was the volume, that it was only on a second perusal that the reader recognized how admirable was the language, how idiomatic and vigorous the style. Not less excellent was a smaller book on development, written in part by Professor Langley. An appendix to the textbook contributed by Dr. Sheridan Lea gave an excellent account of the chemical side of physiology.

He was associated with Sir J. Burdon-Sanderson, Sir Lauder Brunton, and Dr. Klein in the preparation of the *Handbook of the Physiological Laboratory*, published in 1873, and when the *Journal of Physiology* was founded in 1878 with the co-operation of Professor Arthur Gamgee, then of Manchester, of the late Professor Rutherford of Edinburgh,

and Sir John Burdon-Sanderson, then of University College of London, and of Professors Bowditch, H. N. Martin, and Wood in America, Foster became its first editor, and so continued until 1894, when Mr. Langley was associated with him.

One of the cleverest books that Foster wrote was a little handbook in which a judicious selection of facts in physics and physiology was discussed in language suitable to a very intelligent child.

In the year 1881 Foster had the honour of succeeding his friend and master, Huxley, as Secretary to the Royal Society, representing the biological sciences. In this position he was skilful in getting up a debate, speaking a few critical words when needed, and often doing the best for a successful discussion by saying nothing himself. His power of wise and witty speech-making was exemplified by his almost uniformly happy mixture of grave and gay when he spoke at the Royal Society's annual dinner. When President of the British Association in 1899 he spoke in French so as to be understood by the French visitors. At the annual meeting of the British Medical Association at Cambridge in 1880 he delivered the address in physiology on the relations of physiology and pathology: the professional aspect of physiology.

In his lectures and sometimes in his speeches he spoke slowly and deliberately, with due emphasis on the salient word of a sentence. As he warmed to his work, he brought in what he had to say briefly, clearly, and convincingly. In after-dinner speeches he was short and to the point, often ending with a well-prepared joke or anecdote and a laugh that was most contagious. Few public speakers, however, knew better how to express sympathy or sorrow in dignified and graceful terms. Foster was a good Italian scholar, and he and his wife, with their gondolier, were familiar figures in Venice. He was a frequent visitor at the scientific congresses which have formed so remarkable a feature of modern science. He also visited America, and from a course of lectures delivered at San Francisco reprinted a short *History of Physiology*, which was one of the best literary works he produced.

It remains to say a few words of Sir Michael Foster in Parliament. When the University of London lost Sir John Lubbock by his elevation to the Upper House, Foster's academic position and the personal esteem in which he was held were so great that he might almost have joined either of the two great parties with certainty of success. His sympathies were from his boyhood with the popular party. Free trade, peace, and education were the things he cared about most, but he was strongly opposed to the Home Rule movement and to Protection, and thus reflected the opinions of the great majority of his constituents.

The question of Home Rule did not come decisively before the constituency, and that of Free Trade did. In an evil hour Foster threatened to resign, which was unfortunate, and withdrew his intention, which was more so. In the House Foster's defeat at the last general election was generally regretted, for his ability and personal character had gained the ear of the House, while his valuable services on various Commissions were duly appreciated. The Royal Commissions on Vaccination, on Disposal of Sewage, and on Marine Fisheries, found him useful employment, and he was the chairman of the important Parliamentary Committee on the relation between bovine and human tuberculosis, the report on which he signed only a few days before his death. He never spoke but when he had something important to say, and was rather a scientific adviser than a political partisan. Such a position was as honourable as it was useful. Some of his friends still hoped that he might regain a seat on some future occasion; this, however, was not to be. In spite of his commanding figure, his good walking powers, and energetic gardening, Foster was subject to dyspepsia, and often required the advice of his medical friends. He had, however, been comparatively well for some time before his death, and the end came suddenly at last by pneumothorax from a ruptured oesophageal ulcer.

To those who knew him intimately, Foster was a warm and true friend, an honourable colleague, and a teacher who attracted his pupils, showed them how to work, shared in their success, and warmly supported their just claims. He was one of the many members of the profession who keep it close to the quickening influence of pure science and form a link between the institutes and the practice of medicine.

We are indebted to Professor E. A. Schäfer (University of Edinburgh) for the following interesting note: It is nearly forty years since I first came under the influence of Michael Foster, who had been recently appointed Professor of Practical Physiology in University College. It was largely owing to him that my attention was turned towards the science of physiology and away from the medical career which I had planned out. It was a sufficiently difficult problem he first set me to work at, none other than Pflüger's so-called "law of contraction," which the eminent physiologist of Bonn had not long

previously promulgated. Whether I obtained the classical results I do not remember, but I am very sure that the attempting such a piece of work without the assistance of teacher, textbook, or diagram was no light task, and proved an excellent means of initiation into the methods of physiological investigation. This may be taken as a sample of Michael Foster's method: he would suggest a matter for investigation, and might, if you wished it, give you a sketch of the way in which the subject could best be attacked, but he would then leave you to your own resources, so that if you had any originality in your composition it had an opportunity of displaying itself. And this is surely the secret of his success in establishing the great school of investigators which Cambridge has produced.

When Michael Foster migrated to Cambridge in 1870 he almost persuaded me to accompany him, but I received the offer of the assistantship at University College from Burdon-Sanderson and elected to remain there. Thus my connexion with Michael Foster as a teacher ceased somewhat early; as a friend it lasted until his death. And it was a peculiar pleasure to me on account of my long and intimate relationship with both those masters to be asked by my brother physiologists to preside at the dinner which we gave them in celebration of the honours which had been conferred upon them simultaneously by Queen Victoria.

If I were asked what personal characteristics I would regard as especially belonging to Michael Foster, I would say "geniality" and "loyalty." The one was apparent to the whole world, the other was perhaps only thoroughly appreciated by those who knew him best. But it was exemplified in every action, even in some for which he may have been blamed or criticized. For he would devote his whole energy to further the interests of the subject or the institution with which he might be concerned. Nor would he hesitate to sacrifice both time and labour when a friend or pupil required his assistance, whether in the prosecution of research or in an application for some coveted post. Were Michael Foster fully satisfied of the fitness of the applicant, there was no dubiety about the expression of his opinion, which was always brief and to the point, and carried weight accordingly.

English physiology can never forget what it owes to Michael Foster, and to British physiologists at the present moment his death comes as a directly personal loss. Following so soon upon that of his distinguished contemporary, Burdon-Sanderson, it leaves a gap at the head of our ranks which will not soon or easily be filled. In different ways the two men were pre-eminently representative of physiology in this country, and, directly or indirectly, almost all our working physiologists have passed under their influence. But the influence which Michael Foster exerted was more than personal, and was extended over a wide field by reason of the popularity of his writings, which necessarily brought him into contact with a large public. Until his *Textbook of Physiology* appeared there was no truly scientific account of the subject in the English language; probably no other book of its kind on physiology has had so large a circulation and for so good a reason. And his *History of Physiology* has placed us still further in his debt, for it is difficult to imagine a more fascinating account than that which he there gives us. Thus, through his writings no less than through his personality, Michael Foster has had an unusually large share in directing the course, not only of physiology, but of science in general in this country. His memory will be kept green by all—and their name is legion—who have come directly or indirectly under his influence.

We are indebted to Dr. C. S. Sherrington, Holt Professor of Physiology in the University of Liverpool, for the following note:

Sir Michael Foster's influence upon men and institutions was, it seems to me, probably in nothing seen to better advantage than in developing, and it may be said creating, the scientific studies of physiology and embryology at Cambridge. In a relatively short space of time he brought those studies, comparatively newly introduced into the University, into level line with other older sciences long established there. He achieved this largely by the influence of a high-motived personality and by attracting to himself and his laboratory younger men who remained with him to teach and extend their knowledge of their chosen science by research. It seems almost a commonplace truism to say of his attitude toward medicine that he was an enthusiastic observer of all progress, for his range and depth of interest in all biology was extraordinarily wide and keen. He took genuine interest in younger men and their work, and he rejoiced in their scientific achievements often with an almost paternal delight. One of his eminent gifts was, it has seemed to me, a personality that fascinated by a native dignity utterly free from any tinge of affectation or of ostentation. His nature was brimful of kindliness. Those who knew him well found in him a so-to-say Shakespearian catholicity of touch and sympathy with, and charity toward, people of every description. His range of activities was so varied that at this short distance from his death it is difficult to review them even before one's own mind's eye; and I imagine it has hardly been permitted to any one person to be able to bear witness adequately to them all.

Dr. J. C. McVail (M.O., Stirling and Dumbarton) writes: You ask me to say a word about Sir Michael Foster as a member of the Royal Commission on Vaccination, and this I can say, that it was a great pleasure to give evidence before him. His knowledge of the subject, including its historical side, was very remarkable; he readily appreciated every new point, and by an occasional well-directed question helped to elucidate what was obscure. His defeat at the last general election seemed to me most unfortunate, for in Parliament he would have have been invaluable in any debate on the subject of vaccination; but up till now he certainly has not been so much missed as I feared, because antivaccination in the House of Commons has so faithfully depicted its own character as to make itself the best friend of vaccination. The occasion on which I was most deeply impressed by Sir Michael Foster had to do not with vaccination but with the passing of the present Scottish Public Health Act. Along with a colleague in the Public Health service I was in London at a very critical stage in the history of the Bill. We were particularly anxious to secure amendment of certain very objectionable provisions, and wanted to enlist Sir Michael's aid. It turned out that he had just left London, where he had been attending Parliament, to have two or three days' rest at his home in Cambridge. Thither we followed and found him in the garden at Nine Wells with Lady Foster. Our purpose being explained, he heartily fell in with it, and, regarding the matter as a duty to the medical profession, he sat down with a sheet of paper and a pencil, and took notes like a student grinding for examination. In less than an hour he had mastered the question from beginning to end, and, giving up his hoped-for rest, he returned to the House of Commons and was able to tell us two days afterwards that our object had been attained. Such was Sir Michael Foster as I knew him—energetic, straight, clear-headed, open-minded, and helpful—a man never to be forgotten by those who had been in contact with him.

The funeral took place at Huntingdon on February 2nd, and in addition to his son, Dr. Michael Foster, and other members of the family, was attended by Sir Thomas Barlow, Dr. Pye-Smith, Professor Langley, Dr. Gaskell, and Professor Sherrington, as well as by representatives of the Town Councils of Huntingdon, St. Ives, and Godmanchester. On the same day memorial services were held at St. James's Church, Piccadilly, and in the chapel of Trinity College, Cambridge.

DMITRI IVANOVITCH MENDELÉEF,

ST. PETERSBURG.

The death of Professor Mendeléef, which occurred on February 2nd at St. Petersburg, leaves a very apparent gap in the ranks of the leading chemists of to-day. Since the year 1860, when he started a small research laboratory at Heidelberg, his name has been continually associated with the progress of chemistry. His advancement to the leading position in his own country was exceedingly rapid, but was more than justified by the results. In 1863 he was appointed Professor of Chemistry at the Technological Institute of St. Petersburg, and three years later was promoted to the Chair of the University in the same subject.

Mendeléef's signal achievements on the periodic law have proved of such outstanding value in co-ordinating

the facts of chemistry and in providing leverage for further developments that we are apt to forget the valuable work which he did in other fields. Thus research on solutions led him to the conclusion that they may be regarded as "homogeneous liquid systems of unstable dissociating compounds of the solvent with the substance dissolved." In considering the expansion of gases at low tensions he anticipated by some thirty years the now classic views on critical temperature as expounded by Andrews. A firm believer in the application of theoretical knowledge to practical problems, he rendered great services to commerce on more than one occasion, most notably, perhaps, in his work on *Naphtha Products in America and the Caucasus*, travelling in search of material for it throughout the length and breadth of Pennsylvania.

The last English edition of his *Principles of Chemistry* appeared only recently, and it is of pathetic interest now to recall the special appendix on the constitution of ether which the author added to the book. Pointing out the non-existence of elements to fill the first two places in the zero groups in his tables, he suggested that the first of these might be in the form of matter of which the ether is composed. That it was imponderable he would not admit, but that we were unable, and must expect to be unable, to weigh it he was willing to allow. The ether would, in his view, be a gas so penetrating as to be able to pierce any envelope, so inert as to enter into no form of combination, and so light as to be incomparable to the weight of hydrogen; it would consist of particles moving at enormous velocities. As he started the development of his views, he explained that his object was not so much to put forward his own beliefs or theories, but rather to direct the attention of chemists to the solution of a problem which he felt was of the utmost importance, but of which he could never hope to see the achievement.

Among other recognitions, Mendeléef was awarded the Davy medal of the Royal Society in conjunction with L. Meyer in 1882; in 1889 he was Faraday lecturer to the London Chemical Society, while in 1905 he received the Copley medal, the highest honour which the Royal Society is able to bestow, in recognition of brilliant work brilliantly achieved.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ARMY MEDICAL DEPARTMENT REPORT FOR THE YEAR 1905. VOL. XLVII.[1]

The Army Medical Department Report for 1905 is the forty-seventh volume of the series, and contains much valuable information.

As was pointed out in a review of the report for 1904, the ratios of admissions into hospital are now very considerably affected by the new system of treating slight cases in barracks, the system is being extended and seems to work smoothly, but does not probably materially alter the total amount of inefficiency through sickness.

The health statistics of the army for 1905 do not present any new or marked features, but the ratios all compare favourably with the decennial averages of 1896-1904.

ADMISSIONS.

In a total strength of [illegible] warrant non-commissioned officers and men at home and abroad there were 161,849 admissions to hospital, giving a ratio of 590.9, against a decennial average of [illegible] per 1,000 of strength. This seems a great gain but must be greatly discounted by treatment of cases in barracks now largely practised at all stations. The number so treated in the United Kingdom (Aldershot Division 4,484) and at stations abroad of which we would adopt those enrolled after an abstract 50,747 [illegible] of 9,015.

It is clear a large number of these cases would, under former rules, have been sent to admit to hospital, while it is also obvious that as barrack treatment must lead to the discretion of the medical officers being exercised to uniformity, and the admission rate at different stations will vary according as that discretion is exercised.

Cyprus showed the lowest admission rate 1,256.6 per 1,000, but the strength was only 1,440 men, many of whom [illegible] from recent attacks of malarial fever, but only [illegible] in barracks.

[1] London: Wyman and Sons. Price 5s. 6d. net cloth; and Hugh Rees, Limited, 7s. 6d. net.

MORTALITY.

Unlike the admissions, the death-rate can be little affected by altered regulations; it was only 5.61, against a decennial average of 8.10, representing a large saving of life. Mauritius had the heavy mortality of 20.64 in a strength of 1,357, chiefly from enteric fever; the ratio in Cyprus was 19.42, but that arose from what may be viewed as the accident of 2 deaths in a very small garrison.

About half of the deaths in the whole army occurred in India (737 in a total of 1,396); but it had the comparatively small ratio of 10.38, against the decennial average of 15.4; this is a substantial and gratifying gain compared with even recent years, not to speak of fifty years ago; at that time, it will be within the recollection of old retired medical officers, the Indian death-rate was at the appalling figure of 40 per 1,000, or nearly four times what it now is! One-third of the deaths in India (213 in 1905) were from enteric fever, notwithstanding persistent endeavours to combat that disease. Cholera, on the other hand, only caused 7 deaths, and seems successfully grappled with.

Men Constantly Non-Effective from Sickness.

This shows the large decline of 36.18, against the decennial average of 52.8 per 1,000. But the inefficiency of men treated in barracks must be added to those treated in hospital, and this will put a different complexion on these ratios.

Average Duration of Cases.

This was slightly higher in 1905—being 22.48 against a decade average of 22.40 days.

Specific Diseases.

It is impossible to review this part of the report in detail, but the diseases causing the chief inefficiency and mortality are seen at a glance in excellent charts at the end of the volume. Enteric fever caused the heaviest mortality, but venereal diseases the greatest inefficiency. "Every measure that sanitary and hygienic science can suggest is employed against enteric; and all means, within the law, to control venereal disease; the latter, however, is largely a matter of police in the neighbourhood of camps and garrisons.

Plague, which prevailed in India, Mauritius, Aden, etc., among the civil population, was wonderfully kept away from our soldiers; there were 13 cases and 4 deaths—namely, at Aden 7 and 2; Poona 3 and 1; Lucknow 2 and 1; Burmah 1 and 0.

Various Stations.

The report shows that sanitary work has been unremitting, in all stations at home and abroad, under the advice and direction of expert officers of the Royal Army Medical Corps. The destruction of the larvae of insect disseminators of disease by kerosene, etc., especially those of the malarial mosquito, has gone on; but it is reported from India that "the result of larvicidal measures do not seem so promising as was at one time anticipated." More reliance has been placed in the old administration of prophylactic doses of quinine.

The Malta Fever Commission is still investigating its supposed spread through goat's milk. In South Africa, it is now believed that the most potent and common causes of the spread of enteric fever are "personal contact and soil pollution."

RECRUITING.

This is, perhaps, the most important of all problems in our voluntary army. In 1905, 66,703 recruits were inspected for the regular army, of which 25,609 were rejected on primary examination, and 1,207 subsequently found unfit within three months' service; this yields a ratio of 372.11 unfits per 1,000. The three chief causes of rejection were: "Loss and decay of many teeth" (4,824), "defective vision" (2,310), and "under chest measurement" (3,444).

The teeth disability has, in the opinion of old recruiters, been lately overdone and less stringent rules are now being acted on. It became acute after the war because many men were found unable to masticate the biscuits—hard as bricklats—issued in the field. It has had one good result in the large practice of "conservative dentistry" among recruits elaborated in the report.

A statement was lately made by a public man so obviously inaccurate that it was challenged at the time that less than 1,000 Scotsmen enlisted every year. What are the facts? In 1905 in every 1,000 recruits passed, England supplied 798, Ireland 105, Scotland 90, and the colonies 9. The Scottish recruits for the regular army numbered 6,033, of which 5,663 were enlisted; this was irrespective of a large number joining the militia, yeomanry, and volunteers.

At the end of the report, besides the charts of diseases are very valuable "meteorological observations" taken at home, and in many stations abroad in every quarter of the globe.

ARMY MEDICAL SERVICE.

Royal Warrant (dated February, 1907) is issued, containing e following:

Promotion to the rank of lieutenant-colonel to complete an tablishment shall be made by selection from majors who ve qualified in such manner as may be prescribed by our my Council. If an officer has passed with distinction the amination qualifying for promotion to the rank of major, the riod of service required by Article 350 to render him eligible that rank may be reduced as follows: If he obtained "special certificate," 18 months; if he passed in the 1st ss, 12 months: if he passed in the 2nd class, 6 months; if passed in the 3rd class, 3 months.

A lieutenant in our Royal Army Medical Corps promoted to e rank of captain before March 24th, 1902, on account of dis guished service in the field, shall be eligible for further pro tion to the rank of major when the officer next below him the rank of captain completes twelve years' service.

Promotion to the rank of colonel to complete an establish nt shall be made by selection from lieutenant-colonels. A utenant-colonel or a surgeon-lieutenant-colonel of our House d Troops may also be promoted to the rank of colonel if cially recommended to our Army Council for distinguished vice in the field.

fficers of the substantive rank of colonel (whether pro ted before or after the date of this Warrant) shall be moved from our Royal Army Medical Corps.

n officer so promoted after that date shall, unless retired n our Army, be placed on half-pay on completing a period our years' service in such rank.

he following shall be the rates of pay, additional pay, and rge pay of the officers of our Army Medical Service:

	Inclusive of all allowances, except field and travelling allowances.
At Head Quarters.	Yearly.
ctor-general	£2,000
ty director-general	1,500
tant director-general	850
ty-assistant director-general	750

	Exclusive of allowances. Daily. £ s. d.
At Other Stations.	
on-general	3 0 0
el	2 5 0
enant-colonel	1 10 0
enant-colonel promoted before the date of this Warrant, who has been or may be cially selected for increased pay after at t eight years' service abroad	1 15 0
enant-colonel promoted to the rank on or r the date of this Warrant, after three rs' service as such	1 15 0
	1 3 6
r three years' service as such	1 6 0
r twenty years' total service if promoted that rank before the date of this Warrant, d if considered qualified	1 10 0
in	0 15 6
r seven years' total full pay service	0 17 0
ten " "	1 1 0
nant on probation and lieutenant	0 14 0
nt of our Royal Army Medical Corps (Yeomanry)	The pay of his rank
ermaster	As a quartermaster of infantry

The following shall be substituted for (*e*) of Article 368:

	s. d.
(*e*) he officer, if under the substantive rank of colonel, holding the appointment of senior medical officer in a command abroad, or of an administrative medical officer, if the number of soldiers is 1,500 or upwards	5 0

Rates of Half-Pay.

The following shall be substituted for Article 478:—

	Daily. £ s. d.
on-general	2 0 0
l promoted to the rank before the date of this Warrant	1 15 0
promoted to the rank on, or after, the date of this Warrant, if placed on half-pay on account of ill-health, or on pletion of 4 years' service in the rank as laid down in le 357A	1 9 6
nant-colonel promoted before the date of this Warrant, rgeon-lieutenant-colonel of the Household Troops—	
er 20 years' service	1 0 0
25 "	1 2 6
30 "	1 5 0
nant-colonel promoted before the date of this Warrant, ed for increased pay under Article 365, or brigade-on-lieutenant-colonel of the Household Troops—	
ler 30 years' service	1 7 6
er 30 "	1 10 0
nant-colonel promoted on, or after, the date of this nt	1 0
h 3 years' service as such	1 7
fter 20 years' service, if in receipt of pay at 30s. a day	1 0

	Daily. £ s. d.
Lieutenant-colonel promoted before the date of this Warrant, major, captain, or lieutenant, also surgeon-lieutenant-colonel, surgeon-major, or surgeon-captain of the Household Troops—	
Under 5 years' service	0 6 0
After 5 "	0 8 0
" 10 "	0 10 0
" 15 "	0 13 6
Quartermaster, Royal Army Medical Corps	The half-pay laid down for a quartermaster in Article 307.

Scale of Retired Pay.

The following shall be substituted for Article 556:

	Daily. £ s. d.
Surgeon-general	2 0 0
Colonel promoted before the date of this Warrant	1 15 0
Colonel promoted on, or after, the date of this Warrant—	
Under 4 years' service as such, but with 30 years' total service	1 10 0
After 4 years' service as such	1 15 0
If not qualified as above	the rate for a lieutenant-colonel.
Lieutenant-colonel promoted before the date of this Warrant, or surgeon-lieutenant-colonel of the Household Troops—	
After 20 years' service	1 0 0
" 25 "	1 2 6
" 30 "	1 5 0
Lieutenant-colonel promoted before the date of this Warrant, after having been in receipt of the increased pay allowed by Article 365 for 3 years, or brigade-surgeon-lieutenant-colonel of the Foot Guards—	
Under 30 years' service	1 7 6
After 30 "	1 10
Lieutenant-colonel promoted on, or after, the date of this Warrant—	
After 20 years' service	1 0 0
" 25 "	1 2 6
" 28 "	1 7 6
Major, or surgeon-major of the Household Troops—	
After 20 years' service	1 0 0
Major promoted before the date of this Warrant, after 25 years' service, if in receipt of pay at 30s. a day	1 2 6
Major promoted before the date of this Warrant, after 25 years' service towards retirement, completed before the date of completion of 20 years' service reckoning for promotion	1 2 6

	Gratuity. £
Major, or captain, or surgeon-captain of Household Cavalry—	
After 5 years' service in the rank of captain	1,000
After 10 years' service, if the officer was commissioned before March 24th, 1902	1,250
After 3 years' service in the rank of major, or, if the officer was commissioned before March 24th, 1902, after 15 years' service	1,800
After 6 years' service in the rank of major, or, if the officer was commissioned before March 24th, 1902, after 18 years' service	2,500
Surgeon-lieutenant-colonel or surgeon-major of the Household Troops—	
After 15 years' service	1,800
" 18 "	2,500

Medical Officers of the Royal Malta Artillery.

All ranks—retired pay equal to the half-pay of the officer's rank.

Except in the case of a colonel promoted after the date of this Warrant, or a lieutenant-colonel, an officer of our Army Medical Service, who, on voluntary retirement, has served for less than three years in the rank from which he retires, shall be entitled only to the gratuity or retired pay assigned to the next lower rank.

Conditions of Retirement—Majors.

The following shall be substituted for lines 11 and 12 of Article 557:

A major shall retire on completion of 25 years' service if he has been superseded for promotion; or if he fails to qualify for promotion, on the completion of 20 years' service.

Scale of Retired Pay.

The following words shall be inserted after line 6 of Article 559:

"(or, in the case of colonels, four)."

ROYAL army MEDICAL CORPS.

The War Office notified on February 1st that, consequent on the amendment of the Royal Warrant for Pay in regard to the promotion of Officers of the Royal Army Medical Corps, the surgeon-generals and colonels on the Active List will be shown as removed from the Army Medical Staff and Royal Army Medical Corps respectively, retaining the ranks of surgeon-general (ranking as major-general) and colonel (substantive rank in army) respectively.

INDIAN MEDICAL SERVICE.

THE result of the January examination was announced on February 2nd. There were thirty-six candidates, of whom thirty ultimately entered for the examination; of these twenty-five qualified, the first twenty-three being admitted as Lieutenants on probation. The following is a list of the successful candidates, together with the marks obtained by each out of a possible maximum of 5,100:

Name	Qualifications.	Medical School	Marks.
W. L. Harrison ..	M.A., M.B.Camb., F.R.C.S., L.R.C.P.	Cambridge St. Thomas's Hospital	3,795
W. P. [illegible] W. [illegible]	B.A., M.B.Camb., M.R.C.S., L.R.C.P. Lond.	Cambridge St. Thomas's Hospital	3,709
[illegible] ...	B.A., M.B., Ch.B., B.A.O.	Trinity College, Dublin	3,699
[illegible] ..	F.R.C.S.Edin., L.M. and S.Bombay	Grant Medical College, Bombay Edinburgh University College, London Brompton Hospital	3,686
A. M. Nesbitt ..	M.B., Ch.B.	Glasgow	3,589
C. Holroyd ..	B.A., M.B., B.C.Camb. M.R.C.S., L.R.C.P.	Cambridge St. Bartholomew's Hospital	3,575
A. E. Gr[illegible] ..	M.B., Ch.B.	Liverpool	3,427
J. L. Graham ..	M.B., Ch.B.Edin.	Glasgow	3,431
[illegible] M. [illegible] ..	M.B., Ch.B.Edin.	Edinburgh	3,245
P. K. Tarapore ...	M.R.C.S., L.R.C.P. Lond.	Grant Medical College, Bombay Guy's Hospital	3,232
R. B. Nicholson ...	L.R.C.P., M.R.C.S. Lond.	Owens College	3,134
[illegible] S. H[illegible]	M.B., Ch.B.	Edinburgh	3,057
[illegible] C. C[illegible]	L.R.C.P. and S.Edin., L.F.P. and S.Glasg.	Edinburgh	3,017
J. A. C[illegible]	M.B., Ch.B.	Edinburgh	2,981
J. D[illegible] ...	B.A.Bombay.	Grant Medical College, Bombay	2,963
[illegible]	L.R.C.P., L.R.C.S.Ed., L.F.P. and S.Glasg. L.M. and S.Bombay	Edinburgh	
[illegible] E. Wil[illegible]	M.B., Ch.B.	Edinburgh	2,927
H. D. S[illegible] ..	M.B., Ch.B.Edin.	Edinburgh	2,914
A. S. Pr[illegible] ..	L.R.C.P. and S.Edin., L.F.S.P.Glasg.	Calcutta Royal Colleges, Edinburgh	2,908
A. F. [illegible]	M.B., Ch.B.Edin.	Calcutta Lahore Medical College Edinburgh	2,866
P. M. Rennie ..	M.B., Ch.B.Aberd.	Aberdeen	2,859
[illegible] [illegible] ..	L.R.C.P., L.R.C.S.Ed., L.F.P.S.Glasg., L.M.R.C.P.Ire.	Grant Medical College, Bombay Edinburgh	2,764
H. M. [illegible] ..	B.A., M.R.C.S., L.R.C.P.Lond.	Oxford St. Mary's Hospital	2,758
[illegible] O. D[illegible]	L.R.C.S.I., L.R.C.P.I.	Dr. Steevens' Hospital, Dublin	2,747

MEDICO-LEGAL AND MEDICO-ETHICAL.

ANAESTHESIA BEFORE THE LAW.

In the BRITISH MEDICAL JOURNAL of February 3rd, 1906 (p. 252), an account was given of a case in which a patient had died under chloroform anæsthesia, administered for an injury to the arm, and the doctor was sued for 50,000 francs (£2,000) damages by the representatives of the deceased, on the ground mainly that the patient had not been told of the risk he ran from the use of chloroform. The lower court found for the plaintiff with 5,000 francs (£200) damages, but, as stated in the JOURNAL of June 2nd, 1906 (p. 1410), the Court of Appeal reversed this decision, entering a verdict for the defendant with costs. The reasons on which this decision was based are interesting. The judges declared (1) that it was not supported by medical evidence that habits of alcoholic intemperance constitute a formal contraindication to the use of chloroform, or that the fact that the patient had limited force from the pain of the injury increased the risk of chloroformization, which would abolish the pain; (2) that the use of chloroform should not be restricted to those conditions only where operation life saving as a rule would deprive a large number of patients of the benefits of anæsthesia, and (3) that the failure to impress definitely on the patient the risk of death from the anæsthetic was not a culpable omission; as the risk is small (1 in 2,500), and as the danger of sudden death depends on the unpredictability of the patient, this could be increased by drawing on the peril to which the operation would expose him and the duty of the medical practitioner is rather to reassure the patient and in pure kindness to endeavour to banish all gloomy thoughts from his mind. Certainly the patient, like every one else, must have known and did in fact know, that a risk attended the use of chloroform.

PROFESSIONAL SECRECY.

[illegible] have often had reason to complain that by the [illegible] that may be [illegible] that to divulge the secret of the consulting room. If a medical man appears in the witness box, whether in a civil or criminal court, he can claim legal privilege; unlike the solicitor or the barrister, he may be called upon to disclose his patient's most intimate confidence under pain of committal for contempt if he refuse to answer. The fact that in doing this he would violate a rule of profession ethics affords him no protection. Nor does the law recognise any distinction between statements made to a doctor by his patient, and facts which come to the doctor's knowledge through his own observation. In a recent case which was heard at the Pontefract Police Court the magistrate's clerk appears to have advised his bench that there was such a distinction; but we know of no authority for the proposition. In the case in question, a man charged with assaulting a young girl went to his medical attendant, who was subsequently called as a witness for the prosecution. Upon his being questioned, he asked whether he was bound to give evidence, as he understood that it had been decided that professional confidences must not be revealed. The clerk said that, while there was no privilege in regard to statements made by a patient to his doctor, "anything which a doctor found during an examination was privileged and should not be divulged." The witness replied that the only statement made by the prisoner to him was in his favour. In the event, the case was dismissed, the bench holding that there was no corroborative evidence to substantiate the charge against the accused.

SUPERSESSION.

D. I. E.—(1) A. is a general practitioner who specializes in [illegible] diseases. He is consulted by a patient of B., a neighbouring colleague, for some eye trouble. What should A. do under the circumstances? (2) If after an interval the patient calls in A. as his ordinary medical attendant, should he have any hesitation in taking the case?

*** (1) A. should give the patient a letter to B. stating his opinion and the treatment required. (2) A. should decline to take over the general treatment of the case which has been introduced to him in his capacity as a specialist consultant.

J. R.—C. naturally hesitates to take advantage of a colleague's illness to supersede him, but if the chronic patient mentioned is determined not to consult A. again, as C. did not attend the patient as A.'s substitute but was called in independently, he may continue, provided that the patient writes to A. and informs him that he no longer wishes to be attended by him.

RECOMMENDATIONS BY NURSES.

W. It is undesirable that a nurse employed at a public institution should recommend an individual private medical practitioner to patients applying to an institution. It is unbecoming for a practitioner to have any understanding with a nurse, whether employed by a private or public home, to recommend him to possible patients, and it is contrary to the practice of the profession for a medical man to volunteer his services in any particular illness. But is our correspondent sure of all his facts? Women, as a Scotsman said, are kittle cattle.

MEDICUS.—The patient undoubtedly acted with extraordinary disregard of the courtesy and consideration she should have shown to her medical attendant, and the supersedent medical man should have ascertained that his predecessor had been duly and courteously dismissed before he accepted the case. Although it is impossible to prevent a man recommending a medical man, it is most undesirable that members of the medical profession should allow themselves to be under the patronage of a nurse. If our correspondent and the superseding practitioner both belong to the British Medical Association, he might report the case to the Committee of the Division.

A MIDWIFERY ENGAGEMENT.

A asks the following question: He attended a lady in her confinement. The following day, in consequence of an attack of influenza, he was unable to call. He offered to send a substitute during his illness, but this offer was declined, as the patient preferred to wait for A.'s recovery and to keep him meanwhile informed by telephone how she progressed. This was done, at first twice, and then once daily. The case went on satisfactorily, and A. resumed his attendance after nine days, and continued, as is his custom, for a month from the confinement. Is A. entitled to claim his full fee?

*** The patient might have treated A.'s illness as a partial breach of the contract, and called in another doctor. At the preferred to wait for A., and in the meanwhile to consult him by telephone. It can only be inferred that she wished the original contract to remain, and waived any breach on A.'s part. Even if A. consented to a reduction of the [illegible] legitimate charges for consultations by telephone would probably come to more than any equitable reduction that could be claimed.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Natural Science Scholarship.

In addition to the Scholarships in Natural Science already announced at Keble College, Merton College, and New College, an examination for a Scholarship in Natural Science at Brasenose College is advertised to commence on July 2nd.

UNIVERSITY OF CAMBRIDGE.

Candidates for the University Lectureship in Hygiene are requested to send in their application to the Vice-Chancellor on or before February 21st.

In the voting for the Mathematical Tripos last week the Placets won by a majority of about 140.

The following degrees were conferred on January 31st:

M.B., B.C.—W. H. Newton (Emm.)

B.C.—C. H. Rippmann (King's), A. H. Fardon (Christ's), W. O. Pitt (Emm.).

UNIVERSITY OF LIVERPOOL.

Diploma in Public Health.

At a meeting of the Senate, held on January 30th, the following candidates received the Diploma in Public Health:

W. D. Hugson, M.B., Ch.B., Liverpool; G. J. Keale, M.B., Liverpool; R. Owen Morris, M.A., M.D., Edinburgh.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An ordinary quarterly Comitia was held at the College on January 31st, the President (Sir R. Douglas Powell) in the chair.

Lectures.

The President announced that Dr. Frederick Taylor had been appointed Harveian Orator for 1907; and Dr. J. Eyre Milroy Lecturer for 1908.

Membership.

The following gentlemen were admitted members of the College; Alfred Edward Barnes, M.B.Lond.; Dudley William Carmalt-Jones, M.A., M.B.Oxon., L.R.C.P.; Alfred Charles Coles, M.D., D.Sc.Edin.; George Alexander Finlayson, M.A., M.B.Aberd.; Frederick Lucien Golla, M.A., M.B.Oxon.; George Hall, M.D.Lond., L.R.C.P.; Frederick William Higgs, M.B.Lond.; Walter William Moore, M.B.New Zealand, L.R.C.P., F.R.C.S.; Owen Thomas Williams, M.D.Lond., L.R.C.P.

Licences.

In conjunction with the Royal College of Surgeons, Licences were granted to 85 gentlemen.

Diplomas in Public Health.

Diplomas in Public Health, jointly with the Royal College of Surgeons, were granted to 12 gentlemen.

Communications.

The following communications were received:

1. From the Dean of the Medical Department of the Johns Hopkins University, Baltimore, thanking the College for books presented to their library.

2. From the Secretary of the College of Surgeons (2) reporting proceedings of the Council on December 13th, 1906, and January 10th, 1907.

3. From the Secretary of the Liverpool School of Tropical Medicine, dated December 12th, 1906.

4. From the Organizing Committee of the Second International Congress on School Hygiene, petitioning the College for a grant in aid of the expenses of receiving the Congress in London in August, estimated at more than £3,000. It was resolved that, as the College had never hitherto subscribed to the funds of any congress, even when of a purely medical character, it did not see its way to depart from its usual custom in the present instance.

5. From the Very Rev. J. Marshall Lang, Vice-Chancellor and Principal of the University of Aberdeen, thanking the College for a congratulatory address on the occasion of the celebration of the quatercentenary of that of Aberdeen, and offering certain books for the acceptance of the College.

Councillors.

On the nomination of the Council, Drs. Glynn, C. E. Beevor, G. N. Pitt, and Percy Smith were elected Councillors in the place of Drs. Markham Skerritt, West, Abercrombie, and Fowler, who retired by rotation; and Dr. T. H. Green was elected a fifth Councillor for one year in the place of Dr. Allbutt, now Censor.

A Manuscript of Harvey.

Dr. Norman Moore moved:

That a Committee be appointed to consider the question of the publication of Harvey's manuscript, *De Musculis*, in the same form as his *Prelectiones Anatomiae Universalis*, published by the College in 1886.

The motion was carried, and Drs. Allbutt, Osler, Payne, Allchin, and Norman Moore were elected to serve on the Committee.

Central Midwives Board.

On the nomination of the Council, Dr. Champneys was re-elected representative on the Central Midwives Board for one year from April 1st next.

Reports.

The following reports were received:

1. The quarterly report of the College Finance Committee.

2. From the Committee of Management reporting on the scheme for an extension of the course of instruction at the Liverpool School of Tropical Medicine as follows: "The Committee are of opinion that so far as the scheme relates to the subjects of tropical medicine, tropical surgery, and tropical hygiene, it deserves approval. The Committee note with satisfaction that it is proposed to afford greater opportunities for clinical observation than exist at the present time." The report was adopted.

Library.

Books and other publications presented to the Library during the past quarter were received, and thanks returned to the donors.

Examinations for the Licence.

The annual return by the examiners of the results of the examinations for the Licence in the year 1906 was received.

CONJOINT BOARD IN SCOTLAND.

The following candidates have been approved at the examinations indicated:

First Examination (Five Years' Course).—D. L. Brown (with distinction), Abdul Majid Shah, W. T. Lawrence, C. L. Levers, Shanker Pandurang Gogte, Behram Shapoorji Photographer, Madan Lal Puri, Edith Hufton, H. Hoyland, C. J. Arthur, Shivaram Rozdon, Shridhar Chintaman Jog, Surendra Kumar Sen, H. G. Lamberty, Rajanja Sivasubramanya Aiyar, Cuverji Ruttonji Vevai, Hiralal Keshavlal Nanavati, Framroz Manockji Vajifdar, Shivshankar Ramchandra Soneji.

Second Examination (Four Years' Course).—D. D. McNeill.

Second Examination (Five Years' Course).—A. C. Livingston, D. Hickey, W. Crosse, Shivnarain Rozdon, R. F. Lunn, Abdul Majid Shah, J. A. Irwin, T. B. McKendrick, A. R. H. Harrison, D. Cogan, J. Noonan.

Third Examination (Five Years' Course).—M. F. Anderson (with distinction), E. R. Porter (with distinction), J. McTurk, C. J. Faill, W. C. Doughty, J. McKelvey, Bhairawnath Jumanath Khote, J. D. Jones, Cuverji Ruttonji Vevai, T. S. Johnstone, A. E. Bateman, G. L. Irwin, Shankar Pandurang Gogte, L. W. Bradshaw, Shivshankar Ramchandra Soneji, F. J. de Souza, J. B. Barnes, Hiralal Keshavlal Nanavati, T. Walsh, T. McClure, E. P. Maitland, C. R. Merrillees.

Final Examination.—The following were admitted L.R.C.P.E., L.R.C.S.E., and L.F.P. and S.G.:—W. Rollin, G. E. P. Davis, W. L. Watson, D. Kennedy, H. M. Sturrock, H. C. Orrin, J. P. MacDonald, R. M. Riggall, Tiruvarur Arunachala Ramaswami Aiyar, P. M. O'Dwyer, H. H. Whaite, H. W. Coutts, N. Moxon, C. G. Hurrey, M. H. Howard-Jones, W. C. Mann, Rajanga Sivasubramanya Aiyar, W. S. Carter, W. H. Bennett, W. R. Ellis, T. W. Faulkner, L. J. Patterson-Clavier, W. Henderson, W. L. Watt, G. Coats, L. C. Wijesinha, Byramji Shavakshah Tarapurvalla, E. T. Evans, A. P. Dias, W. H. Curtis, J. S. Peebles, A. C. Mackay, C. A. Lawrence.

On February 5th M. Clemenceau received a deputation representing the groups of members of the French Senate and Chamber of Deputies recently formed to organize a campaign against alcoholism. The Senators were headed by M. Charles Dupuy, the Deputies by M. Ribot. The deputation asked for fresh legislation limiting the number of public-houses, and forbidding the sale of absinthe. They also urged that the existing laws should be strictly enforced. It was suggested that official returns should be procured of the proportion of alcoholic patients in lunatic asylums, and, if possible, of the number who drank absinthe. The Premier expressed sympathy with the views of the deputation, and promised his active help in attaining the objects of the Parliamentary group represented by them.

Christian Science in Massachusetts.—A Bill is now before the State Legislature of Massachusetts which provides for the regulation of medical practice. No mention is made of Christian Science, but it is understood that the Bill is aimed especially at that form of irregular practice.

Medical Students at the German Universities.—The number of students in the medical faculties of the several German universities during the current winter semester are as follows: Berlin, 1,182; Bonn, 227; Breslau, 272; Erlangen, 206, including 1 woman; Freiburg, 462, including 27 women; Giessen, 286; Göttingen, 185; Greifswald, 182; Halle, 200; Heidelberg, 327, including 25 women; Jena, 233; Kiel, 209; Königsberg, 228; Leipzig, 519; Marburg, 222; Munich, 1,292, including 43 women; Münster, 63; Rostock, 99; Strassburg, 253; Tübingen, 215, including 2 women; Würzburg, 457, including 6 women. The total number of medical students in the German Empire at the present time is 7,219; the corresponding number for last year was 6,080.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR.	GENERAL SECRETARY AND MANAGER.
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MOTOR CAR FOR INDIA.

AN ANGLO-INDIAN (India) writes: I shall be glad if any of your readers who have used the Stanley and the Turner-Miesse steam cars in their practice will give me their experience. Amongst other things, perhaps, they would kindly say how long it takes to start the car from cold whether it can be quickly started again after standing for a time; whether there is emission of steam when running; whether car is easy to keep in running order and cheap to maintain; and how far car will run on one filling of water and fuel. If there are weak points I should be glad to know of them, with an expression of opinion as to whether they could be easily remedied.

DRACONTIASIS.

DR. J. N. LEES (Macclesfield, Cheshire) writes: Perusing Dr. Leiper's account of his recent research in West Africa with reference to dracontiasis, and noting especially his experiment of feeding a monkey on bananas containing infected cyclops, and in due course finding *post mortem* five filariae, does the thought not suggest itself that various species of monkeys and possibly other mammals may spread the disease? If a monkey can be so infected artificially, the infection perhaps also exists naturally, and if guinea-worm infection is at all common among monkeys they would probably supply cyclops containing pools with the embryos necessary to infect the cyclops. I should like to know if dracontiasis has been observed to be prevalent in mammals other than man. If so, the problem of eradicating the disease would be rendered more complex.

*** It is not by any means likely that monkeys in a state of nature suffer from dracontiasis. The infection of the pools with embryos takes place from human subjects wading in or washing in the water, and only those near human habitations are likely to contain the infected cyclops. Dracontiasis has been observed in mammals, but its prevalence has never been thoroughly worked out. The complete eradication of the disease, though theoretically possible, will it is to be feared, prove very difficult in practice.

ANSWERS.

W. A. S.—*The Preservation of Health*, published by the National Health Society, 53, Berners Street, London, W., price 3*d.* and *Home Hygiene* by John F. J. Sykes, D.Sc., M.D. (London, St. John Ambulance Association, 1898, 1*s.*) will be found useful for the lectures our correspondent is about to deliver. *First Lessons in Health*, by J. Berners (London: Macmillan and Co., 1901, 1*s.*) is a small elementary book which gives a very good idea of the way in which the subject may be simply put to a village audience. *The Laws of Health* by the late Dr. W. H. Corfield (London: Longmans, Green and Co., 1*s.* 6*d.*) might also be useful.

THREAD WORMS.

A. J. M. writes: "South-West" should try carbolic acid internally given as pellets or in a mixture with glycerine and peppermint water. An ethereal clear such as soy taken would act directly by inhibiting the growth of the worms and indirectly by inhibiting the formation of fermenting masses of undigested or partially-digested food, the presence of which probably encourages the persistence of these mischievous colonies. Each dose of medicine should be given about half an hour before meals.

DR. J. E. POLLOCK (London, S.W.) writes: In answer to "South-West," I have never failed to cure thread worms by inserting a small portion of unguentum hydrargyri into the rectum every night for a few nights.

LETTERS, NOTES, Etc.

SHIP SURGEONS.

IN a paper published recently in the *Middlesex Hospital Journal* Dr. H. A. de Pinna, after twelve months' experience, has given an interesting account of the conditions of service with the P. and O. Company for the benefit of young medical men who may wish to join it. It is less difficult to enter than many students, he thinks, believe. A desire for appointment having been signified, the applicant is supplied with a form, upon which he is required to state his various qualifications, experience, and appointments; this done, he is accorded an interview by the medical superintendent of the company, and finally receives an intimation as to whether his services will be accepted or otherwise. If accepted, he binds himself to serve for a year, at home or abroad, on any ship, though the company habitually releases any one who may desire to leave after a lapse of six months. The outfit seems rather expensive, including as it does clothes for twelve months, costing £25 odd, and a set of instruments of the value of £19. The newly-appointed officer receives £10 a month, travelling expenses, if any, at first-class rates, and a rebate of 25 per cent. on any wines he may consume. The monthly pay is subject to deduction for insurance, and the best mail ships are reserved for those who have been longest in the companies' service. Only one caution is given, namely, that the surgeon should refuse to sail on any ship in which he is assigned an inside berth. It is a point on which the company yields readily, but any objection must be raised before the surgeon signs on. His first duty is to examine the European crew before they in their turn sign on. The Lascar crew signs on at Bombay; the men are particularly prone to tubercle and malarial disease, and require very careful examination. Unlike other officers, the surgeon consorts with the passengers, and his position, in Dr. de Pinna's opinion, is decidedly pleasant.

PARTIAL DISLOCATION OF THE LARYNX.

DR. PHILIP G. BORROWMAN (Crieff) writes: With reference to the case reported by Mr. Harold Walker in the BRITISH MEDICAL JOURNAL of January 12th, p. 78, it may interest him to hear that I had a similar case in October, 1905. In my case the larynx was dislocated to the right. It was easily replaced in its normal position. The crepitation described by Mr. Walker was well marked in my case also. After reducing the displacement, I kept the patient at rest in bed for a couple of days. The larynx remained in its normal position, and there has been no further trouble.

STREETS NAMED AFTER DOCTORS.

A LAY correspondent, writing from Chorlton-cum-Hardy, informs us that at Sale, about a mile and a half from that place, there is a bridge crossing the canal which is called "Dr. White's Bridge," after a formerly well-known doctor of Manchester, who retired to that district early in the last century.

CHRISTIAN SCIENCE.

MANY challenges have been made to Christian Scientists to put their beliefs to the test, but perhaps the most sporting offer yet recorded is one ascribed by a New York paper to a local clergyman. Doubtless his bile had been stirred more by the claims of Christian Science to be regarded as a religion than by its pretensions to the status of a therapeutic system, but nevertheless the test which he proposes is of the physical order. He offers to swallow strychnine pill for pill, against any Christian Scientist who may present himself. It appears that he believes that medical aid would save him from evil consequences, while the Christian Scientist would have to rely upon his religious belief alone.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

Eight lines and under	...	...	£0 4 0
Each additional line	...	...	0 0 6
A whole column	...	...	2 13 4
A page	...	...	8 0 0

An average line contains six words.

Advertisements should be delivered, addressed to the Manager, at the Office, not later than first post on Wednesday morning preceding publication, and if not paid for at the time, should be accompanied by a reference.

Post Office Orders should be made payable to the British Medical Association at the General Post Office, London. Small amounts may be paid in postage stamps.

N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

The Hunterian Oration

ON THE

OBJECTS OF HUNTER'S LIFE,

AND THE MANNER IN WHICH HE ACCOMPLISHED THEM.

Delivered before the Royal College of Surgeons of England.

By HENRY T. BUTLIN, F.R.C.S., D.C.L.,
CONSULTING SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

Human beings may fairly be divided into three classes in their relation to the affairs of this world. First are they who see that a thing is wrong; they are very numerous, especially in their relation to politics, and their opinion is, in these days, frequently referred to as the opinion of "the man in the street." Next are they who see how what is wrong should be put right. They are not so numerous as those of the first class, and for one who sees clearly, there are at least many hundreds who only dimly see. And, of those who see clearly, few are capable of putting the wrong thing right. Few of them, indeed, have the inclination to do so, and, of those few, still fewer are capable of doing so; they are for the most part talkers, not workers. And, third, are they who set to work, diligently and with determination, to correct the wrong. They are not necessarily the persons who first discerned the wrong, or who saw clearly the means by which the wrong might be corrected. Sometimes, indeed, they are merely workers, what are termed "humble instruments," but the work which they accomplish in this world, and for the good of man, is greater than words can tell.

I am going to give a short sketch of the life of a man who saw, long before the men of his time, that there was something seriously wrong with surgery; who saw clearly what was needed to correct the wrong; and who, in the prime of manhood, resolutely set himself the task of doing all that he could to set the wrong right, and continued to pursue that object for the remainder of his life, to the impairment of his health and to the expenditure of his fortune.

In most of the Hunterian orations which I have read, or to which I have listened, it has been taken for granted that Hunter's aims and objects were already familiar to the audience, and particular parts of his work and character have been dealt with. I might have taken a similar course, but a year ago, when my colleagues on the Council of the College did me the honour of appointing me Hunterian Orator for 1907, I found myself so very ignorant of what Hunter wished to do and of what he actually did, that I thought I would be grateful to my audience, as it would have been to me in some past Hunterian Oration, if I dealt rather with the great scheme of Hunter's life and with the means which he took to accomplish it.

I have no doubt I ought to have known better, but I confess I had an impression, which was probably derived from conversation, from desultory reading and from these orations, that surgery before the time of Hunter was in a deplorable condition, and that it was immediately and at once raised from that condition by the influence which Hunter's work effected; particularly by one or two brilliant achievements on which much stress has been laid, and which were the result of the application of principles which had not hitherto been recognized or, at least, applied to surgery. In order to discover how far this impression was correct, I took some pains to make myself acquainted with the condition of surgery in Europe during the latter half of the eighteenth century, and to compare it with the surgery of the first half of the nineteenth century. I was speedily disillusioned in regard to the first part of my impression. There were not only good, but brilliant surgeons in the great European countries—such as Sharp and Pott in England, Desault in France, and Richter in Germany, who treated accidents and surgical diseases, and performed operations of many kinds, with sagacity and skill, and who carried their patients through to recovery in a manner of which the nineteenth century might well have been proud. They thought well and wrote well. Indeed, I was so much impressed by their writings, that I would venture to recommend the perusal of them to all those who, like myself, might be disposed to underrate the surgery of the period. They display considerable knowledge of the diseases with which they deal, a patience and care in treatment which would do credit to any age, and a desire rather to avoid than to rush into operation, which might well serve as an example to the present day. And many of them are admirable for their style and language; indeed, the works of Mr. Pott have seldom been surpassed in surgical literature for purity of language and for excellence of style. These men and other surgeons of their time taught good surgery, and further insisted on the importance of the practical study of anatomy as a basis for surgery; with the result that the general practice of surgery in the capitals and great towns of the European kingdoms was far more advanced than I could have believed possible. So much so, that it is probable there were many persons, medical and lay, who would have been ready to affirm that surgery had reached its zenith, and that little could be done to improve it, beyond what the observation and experience of succeeding generations might provide.

But, when one looks more deeply into the question, it soon becomes evident that there was a lack of knowledge on many matters which we now regard as essential to the proper practice of our art. The structure of organs, their vital relation to one another, their necessity or otherwise in the economy, their functions and the manner in which their functions are performed, were for the most part matters of conjecture. The changes which they undergo in health, and at different periods of life, and the variations which they may exhibit within the limits of health, were held of small account; while the changes which they undergo in disease or as the result of accident were scarcely studied, for few people seem to have thought them worthy of serious study. In truth, the only scientific basis of surgery in that period was anatomy, and anatomy was studied rather for its direct service to the individual surgeon than with the belief that it might prove of great use to the art if it were studied from a wider point of view. Biology, physiology, physics, chemistry, pathology had no place in the education of the surgeon, and those few persons who ventured—as some advanced thinkers did—to maintain that a knowledge of physiology and pathology was desirable in a medical man, were for the most part treated with contempt, or were left to preach unheeded.

In truth, the surgery of that period was composed of a vast unwieldy mass of observation and experience, balanced on a single point, the study of anatomy; it was like some great logan-stone, which even the weakest force might rock, and a violent shock might overthrow. No wonder if, under these circumstances, opinion on vital questions wavered! No wonder if methods of treatment which had been discovered or invented long before, and which have since been employed with the greatest benefit to mankind, such as Ambroise Paré's ligature of vessels, fell into disuse or were discredited from ignorance of the processes by which they were accompanied and on which their success depended! No wonder if surgeons shrank from dealing with organs of the structure and functions of which they knew so little, or feared to apply measures the effect of which they could only dimly imagine! Surgery in the eighteenth century may fitly be compared with navigation before the use of the compass. The mariners of those days went down to the sea in ships, and accomplished voyages, often difficult and dangerous, under the guidance of the stars by night and of well-known marks by day. They carried them through, not once, but again and again successfully, and with a marvellous confidence begotten of experience and observation. So did the surgeon, guided by similar observation and experience, carry his patients through sickness and operation so often and so surely that he may well have felt that there could be no better guides than he and his fathers before him were accustomed to rely on. But as the great open seas and oceans were inaccessible to the sailor until he had acquired the compass, so was surgery restricted within certain narrow limits by the lack of that scientific basis on which it now reposes. And so it might have remained, and we might still be in the condition of our forefathers, had not an event occurred which attracted no attention at the moment and on

which, if it had been noticed, no hope would have been placed.

For, in the year 1748, a young man arrived in London from the North and became assistant in the dissecting-room of his distinguished brother, a post which he seems himself to have solicited. He was just 20 years of age, and his record thus far was certainly not of such a character as to encourage great expectations for his future. His education seems to have been neglected, for he had shown no inclination to studies to which his mother does not appear to have forced him. He had spent most of his time in country sports, and the only attempt at industry which he seems to have made was to help his brother-in-law, the cabinetmaker, out of his difficulties—an attempt which had been a failure. For the rest, he was rough in his manners, rather disposed to coarse than to refined society, and quite as inclined to loose habits as other young men of his age and of his time. I suppose Dr. William Hunter must have recognized that his brother John had good abilities; but how he would use them, or indeed whether he would use them at all, was a matter of conjecture, so that his appointment to the post of assistant in the dissecting-room was quite an experiment. No one of his family or of his friends would have been the least surprised if he had, within a few months or even weeks, broken his engagement and betaken himself back to Long Calderwood, whence he came. And certainly no person at that time would have ventured to predict that "Jack Hunter" would not only display a life-long industry such as has seldom been exceeded, but would leave behind him a reputation which we to-day—114 years after his death—celebrate with that fervour which is born of our conviction of his value to the art of surgery and, as a natural corollary, to the human race.

There are few better examples of the moulding of a man's character and future by external circumstances than the history of Hunter's life affords. This rough and ill-shaped peg found the hole which it exactly fitted. From the moment he took the dissecting scalpel and forceps in his hand he began to work with pleasure. Nor was it the mere manual dexterity which his employment demanded which satisfied his spirit, although there can be no doubt that the use of his hands in skilled labour afforded him a satisfaction which continued to the end of his life. Anatomy itself attracted him, and he threw himself into the study of it with such success that, within a few months, he had acquired sufficient knowledge to enable him to direct the pupils of William Hunter's school. Many a young man might have gone thus far and there remained, content with the occupation for a livelihood and for the pleasure it gave him. Happily, Hunter's ambition urged him to become a surgeon; and, within a year of his arrival in London, he began to attend the Chelsea Hospital. It is not needful to follow his progress closely during the next few years, or to discuss the reasons why he went to Oxford, or why he came away again so speedily. It suffices to tell that, whether he was studying at the Chelsea Hospital, or at St. Bartholomew's, or at St. George's, he seems to have spent all the time he could in the dissecting room. He dissected, injected the vessels by methods which had been recently invented, mounted specimens, and thus acquired skill in anatomy, and quite as important in his case the love of collecting, which, like the love of money, seems to advance with age, and to increase with what it feeds on, until it becomes a greed. His first discovery in anatomy, so far as history has handed it down to us, was in 1751, when he solved the problem of the mode of connexion between the placenta and the uterus. And in 1758 he instituted a set of experiments for the purpose of ascertaining whether veins possess the power of absorbing. So that we find him, at the age of thirty years, a qualified surgeon, with a strong bias towards the scientific side of his profession and with an inquiring and original mind which incited him to discover facts hitherto unknown by careful observation and experiment. He was just beginning to study comparative anatomy in the same way in which he worked at human anatomy when a misfortune occurred which pursued his whole career, if not his life. For he fell ill of inflammation of the lungs, and was threatened with consumption, and by it was forced to leave London. He became a military surgeon, and might have drifted into the condition of the men depicted by Smollett and Lever. But, by this time, he had become a serious man, and the forcing of his attention on sick and wounded men, which his military service imposed upon him, had a great effect upon his mind. It impressed him with an interest in the maladies of human beings which never again left him, and which directed his scientific investigations to the elucidation of the problems of health and disease. Even when heavily occupied in the Peninsula, he found time to conduct certain experiments in physiology; and the experience he gained in gunshot wounds and the observations which he made upon them formed the foundation of his later work on gunshot wounds and inflammation.

On his return to London in 1763, his place in his brother's school was filled, he had no regular employment, no certain means of subsistence, and before him lay a hard struggle, for he settled down to push his way in London as a surgeon. It was no rosy path, and, in his case, there was no sudden jump into success; but a hard fight for everything which he obtained, and a fight which had to be continued during many years. It is always interesting to follow the progress to success of a young man in these circumstances; particularly when, as in the case of Hunter, there were special difficulties to overcome. But to us this period offers a much deeper interest, for it is undoubtedly the period when the great work of his life gradually unfolded itself in his mind. There can be no doubt that he had seen for a long time past that surgery rested on a very frail foundation, and that it would be impossible to carry it much farther forwards or even to practise it with confidence so long as it had no firmer basis. He rightly judged that they who treat diseased bodies should have an intimate acquaintance with the structure and functions of those bodies in health; that they should know, so far as such knowledge is possible, the changes which those bodies undergo in the progress of disease, and the further changes which they undergo in the progress towards recovery. He perceived that each part and organ of the body must be studied, not only by itself, but in its relation to all other parts; and he had already come to the conclusion that great light might be thrown upon these matters by a study of similar parts in animals, from the highest to the lowest. For a knowledge of comparative anatomy would not only suggest the meaning of what might otherwise be regarded as meaningless or useless anomalies in man, but would furnish a much better criterion of the relative value of the various organs and of the parts of organs than could be acquired from their study solely in the human subject. It would be possible, too, to observe on animals the effects of injury and disease which had been deliberately produced, and, perhaps, to obtain a much clearer notion of the effect of treatment than could be obtained in man. But at that time there was no material, either in this country or in any other, from which the information Hunter required could be obtained. And, if he was to acquire the information, he must first provide himself with the material, a labour in itself so costly and gigantic that I can scarce conceive that even his ambitious and determined spirit could, directly upon his return to London, and in the condition in which he then found himself, have seriously entertained it in the manner and to the extent he afterwards succeeded in carrying it through. I can only suppose that the idea gradually took root in his mind, and expanded as he worked, and that his range of observation became wider as each step led him further on, and increased facilities of obtaining material presented themselves. It does, however, seem quite certain that soon after his return to London he began, though probably in a very small way. He collected specimens, dissected and prepared them, and fortunately preserved them. He studied them closely, compared them, recorded his observations on them, formed opinions on them, tested his observations and opinions by experiment, of which he was a master both in the ingenuity with which he designed the experiment and in the skill with which he carried it out. He produced pathological conditions in animals by various means, studied them closely before and after death. He made *post mortem* examinations on persons who died under his care, or whom he had seen in consultation, and kept careful records of them. And for the next thirty years of his life he con-

tinued this work, which was never interrupted, save by illness. His collection grew, slowly at first, then more quickly, until he was obliged to make a place for it at Earl's Court, where he bought land and built a house. At a later period he acquired a site in Leicester Square and built a museum, in which he placed those preparations which could be kept in London.

Many of my predecessors have dwelt on Hunter's industry and capacity, and on the vast amount of work which he accomplished. But mere language is impotent to give even an idea of this. The only means by which I can exhibit to you his labours and the working of his mind is to demonstrate some portion of his work. For that purpose let us take the preparations of the intestinal canal, from the stomach to the end of the large intestine. Here it is in the Articulata, in the Mollusca, in the fish, in the reptile, in the bird, and in the mammal; and, finally, in the highest of all mammals, in man. I have selected a characteristic specimen from each of the great orders which are represented in the museum. But I might have brought here, from the Articulata alone, examples of the intestinal canal of 11 species, all collected by Mr. Hunter. The sea-mouse, the fly, the cicada, the dragon-fly, the termite, the bee, the cockchafer, the cockroach, the locust, the scorpion, and the cirripede are all represented on the shelves. There are specimens from 9 different species of mollusc, from 13 species of fish, from 7 species of reptile, from 8 kinds of bird, and from 14 sorts of mammal. Some of the more interesting species furnish more than one specimen: the sturgeon, amongst fish, furnishes no fewer than 9; and the ostrich, amongst birds, 12 specimens; whilst the intestinal canal of man is of such interest that there are Hunterian specimens taken from white men, from black men, and from the unborn child. Many of these specimens are beautifully prepared and mounted, and the injected specimens are a wonder in themselves. Of course, Mr. Hunter had good assistance, but it is nevertheless certain that a very large number of the specimens were dissected, injected, and set-up by himself. At the end of 120 years most of them are in an admirable state of preservation, and still show quite well what they were designed to show at the time they were put up.

Some collectors are content with the mere pleasure of collecting, with counting their treasures, and with seeing their collections increase. It was not so with Hunter. It is at once apparent that most of these preparations were the objects of long and special study. The description so frequently contains some observation over and above that which would have been sufficient for even an elaborate label. Thus, the note to No. 629, which contains the alimentary canal of a mullet, says: "The intestine, after communicating at its commencement with the caecal appendages, is convoluted in a peculiarly regular and concentric manner, forming a mass of a triangular form, adapted to the shape of the abdominal cavity, and affording an example of proportionately the longest, and in its disposition the most complex, intestinal canal of any of the class." The description contains a comparison, and suggests a wide range of study, and an intimate knowledge on the part of the author not only with the anatomy of this particular fish, but with that of fishes generally.

It is the same with No. 655 (intestine of a lizard) and with No. 712 (a portion of the intestine of a whale). The description of the former tells how "the mesentery in this tribe of animals may be observed to be very simple; the intestine carries it forward immediately beyond the pylorus, and runs along its right edge till it becomes colon or rectum," while the latter specimen is one of those from which Hunter drew up his account of the anatomy of the whale tribe, and is used as an example of the differences which are to be observed in the intestinal canals of the bottle-nose, the piked whale, the porpoise, etc.

Ofttimes his study and observation of a preparation induced him to experiment. This bottle contains the dissected alimentary canal of a large fly. It is an admirable specimen, well prepared, and mounted. The organs of digestion, to quote the words of Hunter, "are attended with a crop." It is possible that other persons were aware of this, and had wondered why. But Hunter is not content with wondering: he must know whether the crop is a receptacle for food, or whether it performs a function in digestion. And he tells us how he proved, to his satisfaction, that it is only a receptacle. He says:

> I kept some of these flies fasting for some time: I then gave them milk, which they drank readily; and when I thought they had filled their bellies, I put them into spirits which assisted in coagulating the milk wherever it might be. On opening the abdomen I found this bag full of curd and whey, as also some in the stomach. That I might be still more certain that this bag was a reservoir only, and that it had no other business in digestion, and that therefore food would be taken into the stomach immediately, if immediately wanted, I repeated the above experiment, with this difference, the milk was now coloured with cochineal; I not only found the bag full, but the stomach and intestines, so that the food, when wanted, was immediately carried into the stomach. I kept a fly for twelve hours without food, and then gave it milk and killed it, and found no milk in the crop, but it had got through almost the whole tract of intestines; here the animal had immediate occasion for food, therefore the milk did not go into the crop. (MSS.)

No fewer than three sets of experiments to discover the use of a tiny receptacle attached to the alimentary canal of a fly, a receptacle so insignificant that it might well have escaped the notice of even a tolerably skilled observer. These are only examples of hundreds, or even thousands, of experiments undertaken on animals and plants at all seasons of the year, under favourable and unfavourable conditions, and at all times of the day and night, if the experiment seemed to be as needful at night as in the daytime. The experiments were repeated, modified, varied, according as doubts arose in the mind of the experimenter of their correctness, and whether they sufficed to prove his case. For no man knew better than Hunter the fallacies to which experiments are liable, and the caution which should be exercised in deducing conclusions from them.

From the structure and functions of the intestines, we come to their diseases. Here are Hunterian specimens, taken for the most part from the human subject, but not necessarily so. For one of these few is taken from an ox, another from an ass. They exhibit the effects of inflammation of the peritoneal covering and of the various coats of the intestines; they show tubercle, hydatids, ulcers, and the effects of accident. Some of them form the material for papers and theses; and there were many pages of manuscript notes upon them. The notes afford a wonderful insight into the incessantly inquiring nature of Mr. Hunter's mind. They abound in "queries." Thus, of this specimen (No. 2,336), he observes that the coagulable lymph which glues the intestines together is extremely vascular, and there immediately occurs the question, "How are these vessels formed? are they elongations of the exhaling vessels forming arteries?" Again, of specimen 2,434, which was taken from the body of an officer who died from a bullet-wound received in a duel in the Ring in Hyde Park, there is a long account of the symptoms which followed on the injury, and of the manner of the patient's death, with a full description of the appearances at the examination. Mr. Hunter adds:

> This case admits of several observations and queries. First, the lowness and gradual sinking, with the vomiting without blood, bespoke wounded intestines, and those pretty high up. It shows how ready Nature is to secure all unnatural passages according to the necessity. Query, What could be the cause of his having no stool, even from a clyster? Were the intestines inclinable to be quiet under such circumstances? Would he not have lived if the immediate mischief had not been too much? I think that if the immediate cause of death had not been so violent Nature would have secured the parts from the secondary—namely, the extravasation of the faeces. What is the best practice where it is supposed an intestine may be wounded? I should suppose the very best practice would be to be quiet and do nothing except bleeding, which in cases of wounded intestines is seldom necessary.

Specimen 2 471 was taken from the body of the Right Honourable the Earl of Bristol. There is a detailed account of the examination, and there occurs a partial answer to a question which had probably been in Hunter's mind for a long time past. He says:

> The gall bladder was very small, containing no bile but a transparent, slimy mucus. A small gall stone lay in the beginning of its duct, which obstructed the passage of bile into it. This would hint as if the gall bladder did not secrete bile.

The few specimens I have shown were not selected on account of their especial value, or because they had apparently been objects of extra solicitude and study on

the part of Mr. Hunter, but almost for the opposite reason. Indeed, I happened to light on this part of the museum first, and they seemed to me to illustrate so well his ordinary daily work and the method of it. They and the notes which are appended to them exhibit aptly the great qualities of Hunter's mind. Observation, comparison, reasoning, infinite patience, reluctance to form too hasty a conclusion, and that best form of curiosity to which we give the name "seeking after knowledge," which *must* receive an answer and will not rest until it is supplied. These few specimens and the work connected with them would suffice to have made the reputation of a man of science. They form but a drop in the ocean of Hunter's work. Multiply them several hundred times. Multiply the observations, the queries, the experiments in the same proportion, and an idea may then be obtained of the vast amount of work accomplished by Mr. Hunter. Almost all the organs of the body are treated in the same fashion, the organs of the circulation, of respiration, of locomotion, of digestion, of secretion and excretion, of the general and special senses, in all kinds of animals, under conditions of health and of disease.

Take the comparative anatomy of the integuments, as it is exhibited in the Hunterian specimens alone, and you will find enough to occupy you for many days, and to interest you for many weeks. The varieties of skin in various animals, the tissues which take the place of skin in some animals, the shedding of the skin in serpents, the shedding of the shell in certain fish, the transitions from nails to claws, from scattered hairs to fur and feathers—all these things are exhibited as if there had never been any other investigation in the collector's mind. And all parts of the body which were dealt with seem to have received a like meed of attention, and to have been the objects of similar study.

To those who are interested in estimating the amount of work which can be accomplished by one man in the course of thirty years I would recommend, in addition to a study of the Hunterian specimens in the Museum, a careful perusal of the descriptions and notes in the catalogues, and to read the published works, and Palmer's *Life of Hunter*, and to take into account how much of his written work depends on hundreds and thousands of observations and experiments, many of which are, so to speak, only casually referred to in the text. And all this was accomplished by a man who was not, by nature, disposed to withdraw himself from the amusements and occupations pleasing to other active men; who was neither a recluse nor an ascetic; whose early life had been a life of idleness, spent for the most part in out-of-door pursuits; and who for thirty years before his death was engaged in active and fatiguing hospital and private practice as a surgeon. As a young man he was vigorous and headstrong, and during his whole life he remained irritable and passionate, and could brook neither interruption nor contradiction. And during the last eight years of his life he suffered from advancing ill health, which caused him much suffering, and increased the natural irritability of his temper. Think, therefore, what restraint he must have put upon himself, and what it must have cost him gradually to withdraw himself from every kind of pleasure save that which he derived from his collection, and to devote himself to his work, summer and winter, from early morning till late at night, in good health and in bad health, year after year, for all those years! Surely there are few more striking examples in the history of human beings of indomitable pluck and perseverance.

From the year 1785 Hunter's health was broken, and he was perfectly aware that his life might be cut short at any moment. Yet there was still so much to be done, and he must still work hard at his profession, for he must find money to spend on maintaining and improving his collection. He suffered from anxiety, too, because he had not completed his great work on Inflammation, which embodied a large part of the experience of his life; and because the catalogue of his museum was very backward, and he was conscious that the collection would lose much of its value if it were not properly catalogued. He gave up a good deal of his time during the last four or five years to these two objects, and was still occupied with them when the end came suddenly, as he had long foreseen. On October 16th, 1793, he was extremely excited and annoyed by certain observations which were made in the course of a meeting in the board room of St. George's Hospital. He was seized with a violent attack of angina, was conveyed into an adjoining room, where within an hour he expired. Not only had he worked while it was day but he had worked up to the last moment of his life. The night had fallen, and John Hunter could work no more. Thus, in a moment of passion, passed the spirit of a great man, and there were as yet few persons who were conscious that he was a great man, and scarcely any one who realized how great a man he was.

Few persons followed him to his tomb. There was no public funeral. No subscription was raised either by his profession or by the public to commemorate his memory, or to relieve the pressing needs of his widow and her two children. Yet they badly wanted help, for, after Hunter's debts had been paid, there remained really nothing for their maintenance. To many persons at this time Hunter's life must have appeared to be a gigantic failure. He had written books and papers which few people cared to read, and fewer still could understand. He had been so poor a teacher that, while Desault in Paris gathered round him 400 students, Hunter's class seldom numbered more than twenty. He had spent all his spare time and ruined his health in making a collection which, he declared, had cost him £70,000, and no one thought it worth the having. Although he was regarded for some years as the first surgeon in London, his position had not been recognized by the State. Indeed, many members of his own profession regarded him with distrust; they thought him too subject to fancies and theories; he was changeable in his methods and ideas, and did not seem to have made up his mind whether to treat an inflamed part with hot applications or cold lotions, and to the last was undecided whether the best treatment for gangrene was wine and bark. He had enjoyed for many years a considerable income, and had left his family in destitution.

Nor was the opinion of his foreign contemporaries more flattering. Richter declared that Hunter had the art of enveloping useful practical subjects in mere theoretical foam, so that they became quite unintelligible, and might easily be regarded as something new. Hebenstreit, who translated his book, regretted his inclination to paradox. And Tode spoke of him as the English theory-smith.

An attempt was made to prevail upon the Government to purchase his museum, and Mr. Pitt was approached for this purpose. But he would not even take the matter into consideration. Nor can he be blamed for this decision. He was surrounded by difficulties, and had no money to spare for science. Even had the funds been available, he was not likely to have applied them to this purpose. For he appears to have consulted no less an authority than Sir Joseph Banks, the President of the Royal Society, on the value of the museum from a scientific point of view; and Sir Joseph Banks had expressed the opinion that the collection was not of sufficient importance to the general study of natural history, or, indeed, to any branch of science except to that of medicine, to warrant its purchase by the State! Happily, Lord Auckland and some other distinguished persons took the matter up and persisted with it until Parliament was persuaded to purchase it at a cost of £15,000. But this did not take place until 1799—six years after Hunter's death—and in the meantime the collection had been in danger of being suffered to fall into decay or of being dispersed. It cost money to maintain, and already some portions of it had been sold to defray current expenses. We are indebted to the timely help of Lord Auckland and his associates for having preserved it to the nation. Whether it was first offered to our sister College, as Palmer suggests, I do not know; but it is certain that in the course of the same year (1799) it was offered to our predecessors, the Corporation of Surgeons, and, to their eternal credit be it said, the trust was accepted on December 23rd by a unanimous vote of its Council. And, to the glory of this College be it further said, that one of the chief objects of generation after generation of our Councils has been not merely to maintain the Hunterian Museum, but to enlarge and perfect it, until at this present moment we, the present Council, can exhibit it proudly as the best museum of its kind in the whole world.

Many years elapsed before Hunter's fame became estab-

lished, and it is not easy to trace the steps or the precise means by which this was effected. That it was accomplished slowly, there can be no question. The opening of the museum to the public must have had much to do with it; for those who visited it, among them foreigners of scientific distinction, soon began to appreciate its value. Hunter's works, particularly that on gunshot wounds and inflammation, were more carefully studied, and those who read them could not fail to appreciate the genius of the author, even if they found them difficult to follow, and were not wholly in accordance with the opinions which were expressed in them. And there was yet another means. Although Mr. Hunter's class was always small, it contained a number of young men who afterwards became distinguished. Those of them who appreciated his teaching valued it so highly that his opinions and his name were ever in their mouths. To whatever cause or combination of causes we choose to attribute it, Hunter's renown rose slowly and steadily until the greatness of the man and his services to science were acknowledged in every civilized country in the world, and, sixty years after his death, the chief fault which Fischer, the German author, could find in his favourite, Richter, was that he was not able to appreciate the worth of Hunter.

There is no machine with which to measure greatness; and, if there were one, it would have to be made in many different forms. For the qualities and actions which go to make up the greatness of one man would so ill befit another, equally great in his own particular sphere, that the same mould could not be applied to both. There is, however, one test which is generally accepted as evidence of a great mind, whether it be the mind of a ruler, of a philosopher, of a poet, or of a man of science. It is that "deep things should be discovered to him out of darkness"; in other words, that he should see clearly truths which are still hidden to ordinary mortals. And, on this test, I venture to class Hunter as one of the greatest men that ever entered our profession. Not for the museum which he made; or for his discoveries in physiology and comparative anatomy; or for the wondrous example of industry and determination which he has bequeathed to us; and certainly not for the improvements which he actually introduced into the practice of surgery; although any of these things would have entitled him to a high place in our esteem, and all of them together would have placed him very high indeed. But, because the true relation of surgery to science was revealed to him nearly a hundred years before it was so clearly recognized by those who followed him that they were forced to act upon it.

For the first two generations after Hunter's death his memory was held in reverence on account of his wonderful collection, of his contributions to the knowledge of the processes of life in health and in disease, and of the manner in which he himself had applied his knowledge to the practice of surgery. His example served to stimulate a few young men to study physiology and pathology, and in consequence progress was made in both those subjects. It was only natural that those young men who had known him personally and had admired him should imitate him. A kind of "cult" of Hunter is said to have sprung up, and I have no doubt that some of his admirers imitated the roughness of his manner and the freedom of his speech more closely than they did his industry and perseverance. The chair in which Hunter had sat and other of his personal belongings were preserved, and still institute the Hunterian relics which we guard with veneration. In 1819 a Hunterian Society, which still flourishes, was founded in this town. All this was as it could be; it was done in admiration and respect for the life of a very distinguished man. But that life had as yet produced no fruit in its effect on medical education. The rank and file of the profession were little better educated than before, and even those men who occupied the higher walks of medicine and surgery were, with certain marked exceptions, for the most part no better than their predecessors in the time of Hunter. To some persons the foundation of surgery on science was not a happy thought; other persons did not greatly favour it. And, to others again, it was positively obnoxious. Within my own recollection, the "practical surgeon," who neither knew or cared for the scientific side of his profession, still existed. And it will scarcely be credited that one of the surgeons of my own school, illustrious at that time by the teaching and example of Sir James Paget, warned me not to devote too much attention to the study of pathology lest it should interfere with my prospects as a surgeon. Happily, during all these years, the views of Hunter had never been lost sight of, and slowly fermented in the minds of the leaders of our profession until they found expression in the reform of medical education on lines which would have been approved by Hunter. It no longer sufficed that the student should be told by the best educated of his teachers that the foundation of medicine and surgery is science. He must himself acquire sufficient scientific knowledge to enable him to practise his profession with safety and success. One by one scientific subjects bearing on the study of disease were introduced into the medical curriculum, until, some ninety years after Hunter's death, those subjects in which he most delighted and which he regarded as the basis of sound surgery—anatomy, physiology, biology and pathology—formed a necessary part of the education of every medical student. Not only in this country and throughout Greater Britain is this the case, but it is the rule of all countries which are advanced in civilization, and is carried so much farther in some of them that I am told that candidates for a degree in medicine in the universities of Scandinavia are expected to graduate first in science. Thus the views of Hunter may be said to have found acceptance in all parts of the civilized world.

I venture to think that the founders of this oration (Dr. Matthew Baillie and Sir Everard Home) made one mistake in the conditions which they laid down. The oration ought to be delivered one time by a naturalist, another time by an anatomist, again by a physiologist, and only from time to time by one of us. By putting together the lectures delivered by these various specialists, and in that way alone, could a just appreciation of the genius of Hunter be obtained. But it has been otherwise ordained, and we act up to the letter of the law. It thus happens that, as is natural, Hunter's fame as a surgeon is largely the theme of these orations. And yet I regard it as the least of his claims to be handed down to posterity. That he was a good and sound surgeon and a sufficiently good operator, I do not doubt. And he introduced several valuable improvements into the practice of surgery. But had his reputation rested on his achievements as a surgeon he would have been handed down to us merely as one of many distinguished surgeons who have helped to advance in some degree the practice of their profession. I scarcely venture to propound such a heresy in this place, but I cannot but feel that, had I been a surgical patient during the latter part of the eighteenth century, I would as lief have been attended by Mr. Sharp of Guy's, or Mr. Pott of St. Bartholomew's, as by Mr. Hunter of St. George's. Not because he would have been likely to be thinking of some favourite research, on which he happened to be engaged, when he was by my bedside—for it was characteristic of him to concentrate all his attention on the matter directly before him, whatever it might be—but because he does not present himself to me as having been a genius in surgery like Paré, or, to come down to later times, like Astley Cooper or Dupuytren. He was such a surgeon as industry and application, with a liking for the work, and great shrewdness and powers of reasoning, might make of many a young man with a good eye and a steady hand. My only astonishment, as I read again and again the story of his life and labours, was that he ever found the time, in all his multifarious pursuits, to carry on the business of a large surgical practice, and to rise to the first place as a surgeon in this town. To me it is only another marvel of his character and a sign of how he towered far above other men. It was the only means by which he could earn money, and money he must have for his scientific needs. So he stood manfully by the practice of surgery, and, by directing all his attention to it while he followed it, he became, as such a man needs must, the leader of it for the time being.

I have done, Sir, and this lecture must stand as my appreciation of the life of him whom I may speak of as our patron saint. And now that I have delivered it, I am ashamed of it, for it seems so poor a tribute to his memory. I accepted the task not too willingly, for I felt that it was beyond my powers. But, as this duty is laid on one or the other of us in turn, according to the terms of the

trust, we strive to acquit ourselves, at least, in such a manner as shall not disgrace the college and the trust.

There is only one Fellow of the College to whom I need refer in the obituary which is associated with this lecture, but I should be very sorry to omit all mention of his name. Christopher Heath was a very active and useful member of the Council of the College for many years, and became its President in 1895. In 1897 he delivered the Hunterian Oration. His books on *Practical Anatomy* and *Minor Surgery* early gained for him a reputation as a teacher, and he retained that reputation throughout his career at University College Hospital. Indeed, he added to it by the directness of his speech and the clearness of his views. I believe he would have attained greater success as a surgeon had he belonged wholly to the pre-antiseptic or the post-antiseptic period. But, coming as he did between the two, he found it difficult to adapt himself to the altered conditions which the vast change of thought and practice imposed on our profession. Even as it was he was justly regarded as a leader of surgery in this town, and as one of the boldest operators of his day. Those of us who knew him well miss his fine presence and his cheery manner, while the vigour of his speech was always pleasing to us, whether he was on our side or in opposition to our views.

Clinical Remarks
ON
ICHTHYOSIS AND ITS TREATMENT.

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Variations in the condition of the human integument as regards unctuosity and dryness are considerable, though in the civilized races, at least, such are not, under normal circumstances, very noticeable. In those persons who bathe regularly, the skin of the trunk does not exhibit any pronounced greasiness such as would manifestly soil tissue paper. The lubricity of the skin is greatest in adolescence and early manhood, diminishing with age. Undoubtedly, however, both inherited qualities and habits of life exert an influence on its proportion. Individuals with thick, coarse skins have likewise the oiliest integument, and alcoholic indulgence, if excessive, and particularly in those who lean to the obese type, is apt to augment this where the tendency already exists, probably in part by so constantly maintaining vascular tension in the peripheral vessels at a low ebb.

Extreme dryness of the skin is less frequent. It is met with in the old, as a portion of that atrophy of the cutaneous envelope with lessened glandular activity which is the heritage of advancing years, while it is sometimes encountered in persons endowed with a very thin cutaneous investment, in whom the physiological separation of the effete keratinous particles is not correspondingly replaced by sufficient growth from beneath. Such stand cold weather badly, their face and hands chap readily, and exposure to currents of air in motion, whether to biting winds, or in rapid transit as in motoring, is followed by pain and smarting in the exposed parts and occasionally even in regions better protected. Should they use much soap, especially the more ordinary forms of toilet soap, aggravation ensues, by too rapidly and unduly etching further attenuating the delicate horny film.

We meet, however, in practice with individuals in whom the aridity of the skin reaches a point verging on, or actually in a state of, disease, and to the general aspect assumed in specially well marked cases the term ichthyosis has been affixed. The commencement of this abnormality is laid in intrauterine life, but is usually in abeyance till some months after birth, when it declares itself if uninterfered with, with ever growing aggressiveness. There is an acute variety, the so-called ichthyosis congenita, admittedly rare, no instance has come directly under my observation. The following example is, however, hardly distinguishable from the intrinsic type.

J. H. Eremtha, was sent to me at the Royal Infirmary on May 12th, 1905, by Dr. James Wilson. There was no history of any similar condition in any known relative. A brother two years older has a peculiarly fine and unusually translucent skin. When born the vernix caseosa was said to have been particularly thick, so that the coating could not be completely washed off. The skin, however, though rough, was thickened at birth. The scalp, when examined, was studded over with partly discrete, partly confluent, large vesico-pustules. These occupy the top but not the sides of the head. The rest of the skin resembles in appearance nothing so closely as a peach, but to the finger it is rough, harsh, and filelike, not velvety and soft. It looks and feels oedematous, and when pinched up produces a thick fold between the fingers. It cannot be moved on the subcutaneous tissue, but gives the impression of a tough, doughy mass. The epidermis of the palms and soles is much thickened, coarse, and dry. There are deep furrows traceable in the skin between the plush-like structure. The child has cut his lower incisors, and the two upper central ones are nearly through the gum. He has been nursed by his mother. Has a tendency to diarrhoea. When the forehead is coated with oil, beads of perspiration can be seen on the layer of oil. The mother was directed to apply twice a day a mixture of resorcin, half a drachm in an ounce of glycerine of starch diluted with an equal quantity of glycerine.

He was brought back on July 6th. The treatment recommended caused slight improvement, which has not been maintained. The scalp, it is true, is now free from scabs and crusts, but the skin in general is rougher and more plush-like, while on the legs, and also elsewhere here and there, it is still further covered with a yellowish investment resembling seborrhoea. The child screams much, and is peevish and restless. He has cut two upper incisor teeth. Washing daily with resorcin salicylic soap was recommended previous to inunction. On October 5th, as the resorcin glycerine of starch did not suit, vaseline was substituted, the soap being persevered with. A considerable improvement was observable. On the head and face there were fewer crusts, though some yet exist on the chin and crown. The skin of the trunk and upper arms is thinner and more pliable. Even the forearms and legs are not so hard, and the skin is somewhat more movable, while still rough and plush-like. He is thinner and his appetite is capricious. Careful directions as to diet were given, which was to consist in the main of milk cooked with various farinaceous substances. He was not again seen, and died on May 15th, 1906. Dr. Wilson, in a letter received from him, says:

"The child, to my mind, seemed to die of a toxic condition, which I could only put down to the state of its epidermis. The skin over the arms and legs was very much thickened by layer upon layer of decomposing scales. The face was not quite so bad, and the rest of the body less so. The child had very rapid respirations for a considerable time, began to waste rapidly, became somewhat comatose, and died. The kidneys were all right; but it had a slight bronchial catarrh, which, however, did not account for the rapid respiration and wasting—hence my conclusion."

This seems, indeed, the most reasonable explanation.

In this case the hyperkeratosis was peculiarly well pronounced and developed at an earlier age than is customary, but there were also inflammatory phenomena associated with the excess of epidermic production, as shown by the vesico-pustules on the head when first seen, and by the decomposing crusts which accumulated towards the end of its life. According to Unna and Tommasoli, there are traces of inflammation in the upper layers of the corium in all cases of ichthyosis; thus there is nothing surprising that the evidences of this morbid condition should have been present here. Thibierge observes that: "The general development of those affected with ichthyosis is subject to no universal rule. If a certain number, as several authors have remarked, are small and sickly, with poorly-developed muscles and bones; if sometimes the genital organs remain infantile throughout life, there are others who reach and exceed the medium height whose locomotor apparatus is remarkably vigorous, who exhibit no other anomaly save of the skin, and that even in the most accentuated forms of the disease." While this is in the main true, it seems to me that heredity, regimen, and environment modify this view materially. The dry, inelastic skin, not always growing commensurately with the internal parts, must militate against the attainment of a thoroughly robust frame. The following example illustrates this among other circumstances.

J. T., aged 15. Railway clerk in the country. Admitted to Royal Infirmary, October 17th, 1905. With exception of two younger brothers, no near relative has any similar complaint. One brother is slightly, the other severely, affected. One brother and sister healthy. He has had measles, but is fairly robust.

Though not born with the disease, he has been subject to it as long as he can remember. The condition was apparently first noticed on his recovery from scarlet fever, when it was observed that he did not desquamate, but the skin grew dry nearly, and rough on the surface. Whenever he takes a sharp walk, or does anything to make himself warm and give rise to

sweating, he feels his whole body very itchy. Sometimes when he takes a bath the skin itches, at other times smarts. He is unable to say where he perspires when heated. He has never been able for very much exercise, since he becomes readily tired. Although tall his development is poor. He is narrow and markedly flat-chested. The muscles everywhere are flabby and soft. His head looks too large for his body. With the exception of the face, the bend of the elbows, the axillae, the hands, and the plantar aspect of the feet, almost the whole surface is involved. While in many parts the condition does not go further than the presence of dry, dirty white or yellow epidermic plates, in certain situations the epidermic hypertrophy assumes the appearance of olive-green, rough, conical or blunt aggregations, which are very firmly attached. Thus, this is the character of the surface of the thighs on their inner side, on the knees, the popliteal spaces, the chest, abdomen, and back over the greater part, the legs, and dorsum of the feet. There is especial thickening on the outer aspects of the anterior and posterior axillary folds. The neck in front is little, but behind is considerably, involved. The scalp is thickly covered with dry flakes and scales, the hair is thin and short. The complexion is ruddy and the face quite plump and full. The temperature ranges between 96.8° and 98.4°. The urine is only fairly copious, is acid, 1015, and contains no abnormal constituents.

The treatment ordered was washing, with friction, once daily, with a 5 per cent. resorcin and salicylic superfatted soap, and the inunction twice daily of dilute glycerine of starch, containing 1 drachm of resorcin in each ounce.

He was discharged home on November 7th with his skin quite soft and smooth. On close inspection it was seen to be marked by very fine, hair-like lines, which enclosed whiter spaces. The lines were atrophic, caused by motion or friction between adjoining ichthyotic plates. The scalp was free from any scales or crusts, but the hair was still scanty. On the body some fine lanugo hairs were here and there discernible. He was directed to wash several times a week with the soap, and to apply daily some of the resorcin cream with a view to obviate recurrence. In reply to a letter addressed to him inquiring as to his state, the following answer was received, dated January 1st, 1907:

"I continued the treatment for some time after I came home, but when I went to work in the factory I had not the same chance, and the roughness came partly on again. About six months ago I went to work in a meal mill. It was hot weather at the time, and the perspiration brought it all off again. Since then I have got stronger and stouter, and am now able to carry a sack of meal without much trouble. My skin is as smooth as can be, and the hair has grown on it."

In this instance treatment was commenced before growth was completed, while the change which he made from a sedentary and indoor life to a more active and open-air one, combined with the start in the right direction which the skin had got during his residence in the Royal Infirmary, and the attention he gave it afterwards, made all the difference. What can be accomplished if the diseased state is tackled early enough, and correct management persisted in intelligently for a sufficient time, is shown in the next example, which, through the kindness of the family medical attendant, I have had the opportunity of seeing at intervals during ten years.

G. C., 2 years, first seen April, 1897. Has a sister and brother older, both with normal skins. She was brought up on the bottle, and to appearance is a rosy and healthy girl. Till she was a year old there was nothing unusual in the state of her skin. Her face then was noticed to be rough; shortly afterwards her legs became so also, and now the diseased condition has extended to the arms, shoulders, back, and chest. The skin over most of these parts is dry and file-like. The palms and soles present a natural aspect. The hair is plentiful, dark, and curly, but the scalp shows a considerable amount of dry dandruff. It is noticed that she never perspires. To commence with, she was washed each second night with resorcin and salicylic soap, and anointed nightly with a salve composed of resorcin half a drachm, lanoline an ounce and a half, and almond oil half an ounce. The head was washed at intervals with yolk of egg and warm water, and almond oil with oil of eucalyptus applied.

In January, 1898, there was some improvement and the skin was smoother, but this was not maintained, since as soon as the treatment was intermitted the skin became again rough and dry, and the legs showed a tendency to hack. The scalp remained scaly. She was then, and has been at times since, liable to feverish attacks, the precise cause of which has never been quite satisfactorily made out. During these, treatment for the skin had to be discontinued, and when convalescence was established the ichthyosis had recurred. The scalp was now directed to be washed frequently with an infusion of quillaia bark in warm water, and a pomade of sulphur and salicylic acid rubbed daily into the roots of the hair, while for the body the same combination of resorcin and glycerine o starch as was employed for the previously related cases was substituted for the salve. In February of the same year the skin was beautifully soft and smooth everywhere, and no trace of disease perceptible. The autumn was spent at the seaside, and it was observed that she perspired freely on warm days, beads of sweat standing on the surface, or clinging to the lanugo hairs which were now growing plentifully, more particularly on the legs. Progress since then has been uninterrupted, till now, December, 1906, she is a remarkably well-grown and strong girl of 12, with specially well-developed muscles. The legs are firm, straight and vigorous. The feverish attacks seem to have wholly ceased. Her skin is watched carefully, but needs little more than normal attention, only on cold frosty days does a slight sign of dryness show itself. There is no trace of scurf on the scalp, and the hair is kept in good condition by washing with the quillaia infusion once in ten days, no oil or pomade being required.

In the following instance the rapidity of improvement under favourable circumstances was remarkable.

J. M., 4 years. Admitted to my ward on December 5th, 1905, at the recommendation of Dr. Calvert, Melrose. Mother states that his skin was soft and smooth till he was 1 year old. Of children's complains he has only had whooping-cough. The disease started on the neck, which presented the appearance of not having been washed clean. There is no member of the family similarly affected.

The hair on the scalp was moderately thick, but showed a good deal of branny dandruff. The skin over the centre of the cheek was thin, and the colour of the face ruddy. On the temples and surface underneath there was some dry seborrhoea. The skin from the neck to half-way down the thighs, and to within 2 in. of the wrist, was dry, wrinkled, and covered over with thick epidermic accumulations, presenting a dirty grey hue. He was fairly well nourished, yet the skin felt thin when pinched up, and there was no great amount of subcutaneous fat. The integument behind the knee, at the bend of the elbow, in the centre of each axilla, and in the fold of the groins was soft and entirely free from trace of ichthyosis. The shins were smooth but hairless, and the hands and feet exhibited no abnormality. Otherwise the child was healthy. The urine was normal.

Washed twice a day with the resorcin and salicylic soap, and subsequently anointed with the same resorcin glycerine of starch as the previous cases, his condition on December 28th was as follows: The skin of the arms showed the rosy mottling of infantile health on exposure. Everywhere the skin was natural to feel, but on the abdomen, loins, and back was brownish in tint. On the flanks it showed fine, hair-like, atrophic lines, including oblong areas of normal skin. The thinning of the integument had largely disappeared, and he looked plump and much better nourished. There were no hairs visible anywhere on the body or limbs, and that on the scalp was still more scanty than is usual at his age. In January, 1907, Dr. Calvert was kind enough to ascertain his condition from his mother, who wrote as follows:

"The treatment has been carried out, and so long as it is used the ichthyosis disappears. It is still used after his bath, but if omitted the roughness would return as before. He is fresher, plumper, stronger, and better in health at present than ever. There are fine hairs on the arms from the elbow to the wrist, and on the legs from the knee to the foot, but none on the rest of the body."

In the following instance the palms and soles were implicated with the rest of the cutaneous surface:

W. S., nearly 4 years. Admitted to my ward from the neighbourhood of Edinburgh on October 25th, 1904. His mother maintained that as a baby he had a healthy and fine skin, and that it was only after an attack of measles in January of that year that anything abnormal was observed. During the summer he had, in addition, whooping-cough, bronchitis, and jaundice, and, concurrently with these, the state of the skin got steadily worse. On admission the skin was universally dry, rough, and unperspiring. On the scalp there were thick, dirty yellowish, firmly-adherent flakes. There was intertrigo of the groins, accompanied with boils. The epidermis of the palms and soles was extremely hard, yellow, and dense, while cracks across the fingers limited their movements. In all other respects the child was healthy.

To the groins were applied at first boric starch poultices for a few days, and then strips of zinc ichthyol salve muslin were interposed between the surfaces. This was persevered in till healing occurred, and subsequently these parts, as the general surface, were treated in the same manner as the previous case. On November 14th the face was plump and quite smooth. The scalp was entirely devoid of crusts or scales, and was becoming closely covered with hair. With exception of the palms and soles, the integument of the body and limbs was perfectly soft and natural, while a fine lanugo hair had appeared on the arms and legs, absent on admission. The skin of the palms and soles was still drier than normal, and felt somewhat harsh to touch, but this did not interfere with free flexion or extension, and there were no cracks visible.

He was sent home shortly after, and the skin of the body and hands remained soft and pliant, requiring little attention, till his death from pneumonia a year later.

In the following instance regions not generally invaded by the ichthyotic process were attacked, while there were also other peculiar features:

M. L., 13, a native of Perthshire, was admitted to my ward on October 27th, 1903. She was a well-grown girl, and had three brothers and one sister, but none of these nor any discoverable relative is or was similarly affected. According to her mother's account, the disease commenced when she was 6 weeks old, her hands and feet breaking out in little blisters. These went away for a time and came back. Next the portions of the skin now implicated became dry and discoloured, especially the palms and soles.

The scalp was free from scales, the hair plentiful and auburn in hue. The face showed nothing abnormal. The palms exhibited elevated areas of enormously thickened epidermis, quite ¼ in. deep and sharply defined. Between these areas were spaces or fissures floored by integument apparently natural. The same condition extended about 1 in. up the front of the wrist, but the backs of the hands presented nothing unusual. At the bend of each elbow there was an oval area, 3 in. long by 2 in. broad, accurately marked off from the surrounding healthy skin. This area was black in tint, and had an aspect like very coarse plush, consisting of epidermic spicules closely set and standing up vertically. To the finger these gave the impression of a coarse, rough, short-haired brush. Fine long hairs were interspersed between the spicules. The same condition was seen at the margins of the axillae and within the axillae, except in the very centre, where the skin was smooth over the space of an inch. The nipples and their areolae, the flanks, the front of the abdomen but avoiding the umbilicus, the groins but not the pubic region, the patellar area, the popliteal space, the ankles and roots of the toes were covered with the same black, filiform, epidermic growth. The soles were overlapped with hard, dry, epidermic plates, more than ¼ in. thick, which broke away in places. Some of the nails were distorted and rough.

The treatment adopted for the body and limbs was the same as in the previous case, and need not be reiterated, but in order to afford every opportunity of thinning down the hypertrophied epidermis of the palms and soles, so far at least as to render it possible that when again at home there might be a reasonable chance of its being kept in a fairly pliant condition, she was retained in the ward till April 17th, 1904. To reduce the tylosis various methods were tried in succession. Thus the parts were enveloped in boric starch poultices for weeks, and attempts made to remove the soddened layers by scraping them with a sharp spoon, or by grinding them down with pumice stone. But no great progress was accomplished in this way. The epidermis, no doubt, was softened and rendered oedematous in this way, but at the same time it grew tender, while it did not become markedly thinner. Next, the continuous application of a resorcin plaster muslin was essayed, but this failed to occasion exfoliation, and after a prolonged test was abandoned. On the whole, the application of emolkeleet as a thick watery paste, under an impervious dressing of jaconet, proved the most successful of all. After six weeks of this, combined with friction with pumice stone, the thickness of the epidermis was very considerably reduced, movement was free, while the troublesome fissures had grown much fewer. On the soles there was now only one distinct crack across the root of the toes, the rest of the surface was fairly soft, smooth, and pliant. The palms were, however, in hardly so satisfactory a condition, there were still many and wide fissures present. Some of these showed at their base an almost normal epithelial surface, others were narrow and painful, apt to bleed if stretched. Yet the hands could now be closed and opened after a fashion, which was quite impossible when she was admitted. For a short time thyroid tablets were given by Dr. Norman Walker during my absence. No perceptible effect was produced on the ichthyosis while there was general discomfort and increased rapidity of the pulse. Its further employment was therefore given up.

Everywhere on the body the ichthyosis was reduced to a minimum. There was no trace remaining on the nipples or their areolae where it had been so pronounced. The groins and the popliteal spaces presented a natural aspect. At the margins of the axillae, in the bend of the elbow, and in front of the neck there was nothing more than a slight yellowish, waxy exfoliation. All the thready, papillary warty growths had disappeared, though the surface still had a pale yellow tint. The hairs seen at the bend of the elbow were still visible. The skin of the backs of the hands was now specially thin and transparent, so that the veins shone conspicuously through. She had become much fatter, and the skin and scalp hair were healthy and well nourished. Though the application of resorcin had been continued throughout, there never was any sign of absorption shown by darkening of the urine. When she was discharged her parents were directed to wash her daily with resorcin and salicylic soap all over, hands and feet included, and to rub the palms and soles with pumice stone, after drying.

Whatever may be the hidden cause of ichthyosis, it is evident that it must be regarded as an exaggerated development of epidermis, or, as Hutchinson well expresses it, "a hyperkeratosis with atrophy of the deep layers of the rete mucosum." It is doubtful if the quasi-inflammatory appearances described by Unna and Tommasoli are not accidental rather than inherent characteristics. Its essence consists, then, in undue retention of the corneous layer, and not, as Brocq, usually so accurate, describes it, "as a disease characterized by incessant epidermic desquamation."[1] In fact exfoliation is in abeyance. As to the cause of this retention we are quite in the dark, antenatal pathology has so far failed to elucidate it, and the attractive epitrichium theory of Dumesnil and Bowen is negatived by the last case related, since in the very situations where according to it separation of the epitrichium occurs earliest, as in the axilla, and hence the ichthyosis should be absent, hyperkeratosis was especially noticeable.

In treatment, therefore, our efforts must be directed to promote and ensure regular systematic exfoliation of the unduly adherent and effete horny cells. There are various substances which have the power of thinning down, artificially, the epidermis. Sulphur is one, but if used it not only adds to the abnormal aridity, but is apt to set up exudative and even inflammatory processes. Salicylic acid, too, in the dilute form in which alone it can be prudently employed over extensive areas and for a length of time, fails to accomplish what is needed. Resorcin, however, not only favours continual desquamation but tends to leave the subjacent surface polished and pliant; hence its use is specially indicated. Combined with an oily base it dries up or is rubbed off. Glycerine from its hygroscopic properties is the excipient *par excellence*, but applied alone is rather irritating. In union with starch it forms a bland, persistent, soothing, and softening medium, and, as has been seen, while in all cases so used it proves eminently beneficial, if its application is begun early enough and steadily persevered in, it can effect what must be regarded as a cure.

At the same time, with all its qualifications, the resorcinized glycerine of starch alone would not enable us to get continuously rid of the ever newly-forming accretions of epidermis. We must therefore have recourse to a medicated soap, and a superfatted one with which resorcin and salicylic acid are incorporated—that which is so valuable in shortening the desquamative stage in scarlet fever—has proved adequate, and prepares the way for the subsequent glycerinization.

Internal remedies are of little use in ichthyosis. The only one which aids us at all is cod-liver oil administered in small doses at night. Pilocarpine is inoperative in early treatment, unnecessary in later.

References

[1] *La Pratique Dermatologique*, Paris, 1901, Tome ii, p. 840. [2] *Traité Élémentaire de Dermatologie Pratique*, Paris, 1901, Tome ii, p. 686.

THE TREATMENT OF RODENT ULCER BY ZINC IONS.

A Lecture delivered at the Medical Graduates' College and Polyclinic.

By H. LEWIS JONES, M.D., F.R.C.P.,

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I have much pleasure in bringing forward the subject of the treatment of rodent ulcer by zinc ions, because it is not only new but good. Of late years the treatment of rodent ulcer has been robbed of many of its difficulties by the discovery of the effects of *x* rays and of radium. Both of these agencies give good results when applied to rodent ulcer, in fact they cure the disease in a large proportion of cases, yet they have certain drawbacks. For instance, in the case of radium, the material is extremely costly; and in the case of the *x* rays, an elaborate apparatus is required, and there is also a certain amount of risk attending both procedures, as their effect upon the tissues is difficult to control. The method which I am about to describe is a simple one, to be carried out with an ordinary portable battery, and the results which it yields are quick and good.

The process is based upon the principle of the introduction of zinc, or rather of ions of zinc, into the tissues of the ulcer by means of a continuous current. The transportation of the zinc ions into the tissue of the affected part seems to exercise a profound influence upon rodent ulcer, causing it to assume the appearence of an ordinary simple sore and, in many instances, to heal up in about a fortnight after a single application.

Before proceeding further, I shall ask you to look at a patient who had a rodent ulcer of the nose for five years. She gave the history that the sore had never healed since its com-

mencement, but had slowly extended, and this is the usual history in these cases. On April 23rd, 1906, she was sent to me by Mr. Bowlby, and I made an application, using a solution of zinc sulphate for a period of twelve minutes. When she was seen on May 15th, three weeks later, the ulcer was found to be completely healed, and it has remained so ever since.

That case represents the ordinary behaviour of a rodent ulcer after its treatment by the introduction of zinc, and here I should state that most of the cases which I have treated by the zinc method have been small rodent ulcers of less than an inch in diameter. The history of the method is as follows:

In 1903, Dr. S. Leduc, Professor of Physics in the Medical School of Nantes, published a note[1] on the cicatrization of a rodent ulcer at the angle of the nose which had lasted five years, after a single application of electrolysis with zinc. In a short paper of about thirty lines he described his treatment of a case of rodent ulcer by means of an application to the ulcer of electrolysis with a 1 per cent. solution of zinc chloride on a pad of absorbent wool, using a zinc rod and the positive pole. The effect was to drive the zinc ions into the tissues of the ulcer, and he states that after a fortnight the ulcer had healed except for a minute spot at one corner, on which he repeated the treatment, with the result that the whole was completely cured.

In the following year I had an opportunity of trying the method in a case of rodent ulcer on the cheek of an elderly woman, and used a solution of zinc chloride with a zinc positive pole, passing a current for ten or twelve minutes, as described by Leduc. A fortnight later the rodent ulcer was completely healed. I have seen that patient from time to time since, and although it is now more than two years since the application there has been no sign of any recurrence.

Naturally, I was very much interested in that result, and have since treated a number of other cases in the same way with success, so that in a lecture given before the Hunterian Society in October, 1905, I was able to record 7 cases. I have now done 19 cases, and with the exception of 5, which I shall shortly relate, the results have been successful. Therefore I feel justified in saying that the method is good.

In regard to the physics of the process, the term "zinc ions" signifies the condition of the atoms of the zinc when one of its salts is dissolved in a solvent like distilled water. For instance, zinc sulphate in solution in water exists in a partially dissociated form, the salt being partly split up into atoms of zinc carrying a positive charge of electricity, zinc ions, and an equal number of molecules of SO_4, or sulphuric ions, having a negative charge. When conduction of electricity takes place in such a solution, or in the tissues of the human body, it takes place only by the conveyance of the electrical charges by an actual movement or migration of the ions.

In the case of zinc sulphate, the zinc ions with their positive charges move towards the negative pole, and conversely the negatively charged sulphuric ions move towards the positive pole, so that the electrolysis of a solution of zinc sulphate tends to cause a concentration of sulphuric acid at the positive pole, and of zinc at the negative. This movement of the ions is made use of to introduce them into the body, and, if at the positive pole there is lint or cotton-wool imbibed with a solution of a zinc salt, and if the negative pole be placed on some other convenient part of the patient, the zinc will begin to move inwards on its way towards the negative pole directly the current begins to flow, and, although in the time of an ordinary application it cannot reach the negative pole, yet at least it starts upon its journey, so that in an application which lasts ten minutes some of the zinc ions will penetrate to a depth of one, two, or more millimetres into the tissues beneath the positive electrode, and that may be enough to enable it to permeate the diseased area if it be a superficial one.

Rodent ulcer, therefore, being superficial, at least in its early stages, and in general not having any great thickness, lends itself well to medication in this way. By the electrolytic process the zinc ions can be driven into the cells of the part in a way which is impossible with lotions or ointments. With these but little of the drug penetrates at all, and that which is absorbed is probably carried off by the lymph channels, and distributed over the system in a short time. But when ions penetrate under electrical action they enter not only into the lymph spaces but also into the protoplasm of each cell which they reach, and their influence is therefore a more intimate one, and it seems as though the introduced drug remained *in situ* for a considerable time. Leduc has noted, for instance, that the local effect of adrenalin introduced electrically can be seen to persist much longer than after an ordinary topical application of that drug.

The sulphuric ions of the zinc sulphate solution do not migrate inwards from the positive pole but move towards the electrode, and if the electrode is made of zinc they combine with the metal to form more zinc sulphate, and thus the supply of fresh ions of the metal is maintained, and the quantity of zinc sulphate present in the moistened pad remains much the same at the end of the application as at the beginning.

As the conduction of electricity in a solution is effected solely by the movement of ions, each carrying its fixed charge of electricity, the current shown by the galvanometer enables one to calculate the amount of zinc or other metal introduced into the patient in a given time. The electro-chemical equivalent of the metal, multiplied by the magnitude of current used and by the duration of the time of the application, gives in the case of zinc the following result for a current of 10 milliampères for ten minutes, namely, a little over 2 mg., and although this does not appear a large quantity it is effective because concentrated at the place where it is wanted.

In using electrolytic medication it is important to remember which ions will move inwards from the positive pole and which from the negative, in order to know which electrode to apply to the affected area. In general, the ions of the metals and of the alkaloids are electro-positive, and can only be introduced by the positive pole; while an acid such as salicylic or chromic acid, must be introduced from the other direction, namely, from a solution of the corresponding salt in contact with the negative pole.

The apparatus required for the treatment of rodent ulcer by zinc ions is extremely simple. An ordinary medical continuous current battery, with a galvanometer, a pair of wires, a flat pad for completing the circuit at the negative pole, and a rod or other electrode of zinc attached to the positive pole, completes the outfit. The zinc must be covered with three or four layers of lint, which serve as a reservoir to hold the zinc solution, a 2 per cent. solution of the sulphate being very suitable. The zinc should be freshly cleaned or amalgamated, and the solution should be made with distilled water. It is as well not to touch the zinc electrode or its covers with the fingers unnecessarily, because every touch imparts a trace of sodium chloride from the skin, and tends to reduce the efficiency of the process a little by bringing in some foreign ions. The circuit is completed through the usual pad electrode applied to any convenient part of the patient, the zinc electrode of suitable size is held upon the rodent ulcer, and the current is slowly turned on until a current of 5, or 8, or 10 milliampères is reached, according to the size of the electrode used. Leduc has advised that a suitable magnitude of current to use is 2 or 3 milliampères of current for each square centimetre of the positive electrode, and, in general, patients can bear this concentration of current without complaining. The sensation produced is a burning one, not unlike that of a mustard plaster. In patients who are sensitive it may be convenient to introduce a little cocaine beforehand. When the surface is raw the cocaine solution can be directly applied on a tuft of cotton-wool left in contact with the ulcer for a few minutes. When there is no raw surface the drug can be helped to penetrate electrolytically from the positive pole if, before using the zinc solution, a tuft of wool moistened with cocaine solution is applied to the surface of the rodent ulcer, and the current passed in with the zinc electrode, exactly as for the introduction of the zinc. The preliminary use of cocaine permits of the use of a somewhat stronger current. It is necessary to use a pure solution of cocaine, and not a solution containing sodium chloride or any other salt. A neutral salt is sometimes present in the tablets of cocaine prepared for hypodermic use, but pure solutions can be obtained in a convenient form in sealed tubes, each containing a few drops, from druggists (for example, "Sterules" of Martindale), and I have found these very convenient.

It is important to mention the difficulties which may be encountered, because one learns more from these than

from the easy cases. The difficulties in connexion with this treatment depend mainly upon the character of the surface presented by the rodent ulcer. They differ a good deal in this respect. Some of them have a moist surface, and some of them are dry and scabbed over. Many have a formation of small pearly nodules round their margin, and there may be a subcutaneous area of infiltration rather larger than the actual ulcer. Owing to these inequalities of surface they may receive the zinc unequally, one part of the rodent ulcer receiving the greater part of the current, and another part not receiving enough. In general, it is rather more difficult to introduce the zinc effectively into the margin than into the centre. Again, some rodent ulcers have a smooth, red, waxlike surface, and are not ulcerated. These require a longer application, and time is gained by using a needle of zinc, and puncturing the surface with it. In that way, too, any semi-solid tubercle or nodule can be attacked successfully, either at the first sitting or after the whole affected area has been treated by means of the zinc rod and the lint moistened with the zinc solution as already described.

Other cases which are difficult are those which have been operated upon by *x* rays or by the knife, and have relapsed, for they have a tendency to recur at several points around the original site, and also to invade the subcutaneous tissue.

If they have a thickness greater than two or three millimetres, it is difficult, in a reasonable time, to drive the zinc ions inwards to a sufficient depth to influence the deeper parts, unless a zinc needle is used. The advantage of using a needle is that time is saved, for if one can push the zinc needle into the depth of the part to be destroyed, the migration of the ions into the surrounding layers is accelerated, and this is a great advantage, because the rate of movement of the zinc ions is slow.

I now have under treatment a patient whose rodent ulcer has proved to be very difficult to treat. It was a recurrent case, and had once been caused to disappear by *x* rays. The central part of it was smooth, raised, pink, and waxlike; it had a number of pearl-like tubercles round it, and it was situated close to the inner canthus of the right eye, which led to difficulties owing to the entry of the solution into the patient's eye causing pain. The nodules were therefore attacked one by one with a zinc needle, each being pierced, and a current of 1 milliampère passed into it for a minute. They have now all disappeared, but there still remains a thickened area on the adjoining part of the nose, which is being attacked in the same way, and is on the high road to recovery.

I will now review the results so far obtained in my cases. I have treated 19 cases in all, and 6 of these have healed completely after one introduction of the zinc ions; 3 have required two applications, and 5 have required three. Five others have not yet been finished, or have been unsuccessful. One other case, lost sight of after a single application, is not included, though I think from its nature that it was probably a success.

In theory, the treatment of rodent ulcer by zinc ions is a treatment by a single application, and when a repetition is needed it is because the operator has failed to introduce the zinc salt to a sufficient depth into the whole area and depth of the affected region. This may be the result of timidity or error of judgement, or it may be by reason of some condition of the individual case, as has already been indicated, as, for instance, where parts of the rodent ulcer receive a full dose while other parts do not. Under these circumstances it may be more advantageous to be content to treat the main part of a rodent ulcer at the first sitting, and to leave certain portions to be attacked subsequently, when the part first done has healed over and become covered by sound skin. The effect of an application continues for some time. A month may be allowed to pass before a repetition, and careful observation will sometimes show a progressive change for the better during the whole of that time, or even longer. Thus, in one of my cases, done on September 13th, 1905, a note was made on November 17th that a small nodule persisted on the lower edge of the healed scar, but when the case was seen again in December this had disappeared spontaneously, and there has been no relapse since.

The 5 cases which are unfinished or unsuccessful may now be considered. One has already been referred to in considering the advantages of using a zinc needle for certain conditions. Another is a case of relapse after *x* ray treatment, and presents an irregular ring of infected points upon the right ala nasi all round the old scar. Under treatment these are being dealt with one by one, and the patient has made progress, though there is still a good deal to do. It has been treated partly by needling and partly by general applications to the whole surface with the moistened pad. The third case is now probably finished, but it has given trouble through the appearance during the treatment of a new subcutaneous nodule at the edge of the scar. Its appearance has been peculiar, suggestive of an ordinary sebaceous cyst, or of a small knot of scar tissue, and it has shown no tendency to ulceration for nearly a year, but the patient is nervous, and is anxious to be rid of all appearance of disease. Recently I needled the nodule with a zinc point, but have not succeeded in obliterating it entirely. The fourth case was one closely resembling the first of this series. It was a relapse after *x*-ray treatment, with several foci of disease, and its situation on the side of the nose, very close to the eye, rendered efficient electrolysis difficult. Two applications were made and each was followed by improvement, though the medical attendant considered that the rodent ulcer subsequently grew worse after the applications, but the treatment was abandoned, as the patient was apprehensive of bad effects upon the vision, owing to the proximity of the electrode to the eye, and to the retinal stimulation by the current.

The fifth case is one of extensive relapsed rodent ulcer of the bridge of the nose, invading both upper eyelids, with much subcutaneous infiltration and rapid destruction of tissue. The rodent ulcer in this case is surrounded by a zone of inflammation in the subcutaneous tissue, and the extent of this makes me fear that the introduction of the zinc may lead to the loss of more tissue, and that it will need very long applications to obtain a penetration of the zinc to a sufficient depth. In view of the gravity of this patient's situation, and the failure of radium to improve it, I am at present making use of half-hour applications, but am not yet able to forecast the probable result. In general, my experience has been with small and early cases of rodent ulcer, and I have not yet sufficient experience of the treatment of extensive, spreading, ulcerated cases.

It is not only in my hands that the treatment of rodent ulcer by zinc ions has proved successful. Dr. David Arthur has recorded[2] four cases which he has treated by this method. Two out of the four healed after one application in fourteen days. The third had two applications, and was also successful. The fourth was described by the writer as doubtful, because, though healed, it appeared unsatisfactory.

Dr. H. P. Tayler has described[1] the treatment of a rodent ulcer measuring more than one inch in length and half an inch in width. Under the zinc treatment—which was much interfered with by various domestic difficulties—the ulcer was reduced very much in size, so that the cure was nearly complete at the time of the writing of the paper.

Leaving the subject of rodent ulcer at this point I should like to go a step further, by saying that I think that this instance of electrolytic medication is really only the beginning of what may prove to be a series of successes in the treatment of disease by electric currents. One can think of numerous conditions for which some such treatment as the introduction of a drug locally and thoroughly might be efficacious, as, for example, the treatment of ringworm by the introduction of some parasiticide. I have made a few experiments in this affection, and have found that the introduction of copper ions into the ringworm patch may be followed by the disappearance of the fungus and the regrowth of healthy hair.

The effect of zinc upon pustular eczema is very suggestive. In a case supposed to be lupus, which turned out to be one of pustular eczema, the patient had two patches of disease upon the face. One of these was treated by zinc and the other not, and at the end of a week the one treated had gone, while the one untreated remained as before. The second patch was then treated, and it also vanished in the course of a week. So also the introduction of magnesium ions from a magnesium sulphate solution has had a startling effect on three cases of multiple warts in which I have used it and has caused their prompt disappearance. It is possible too that we may be able by the introduction of some suitable drug to cure lupus. That is a thing

which I would greatly like to see accomplished. I have been working at the matter for nearly two years, but hitherto, I am sorry to say, without any great success. One would expect that lupus might be readily amenable to some form of electrolytic treatment, but the tubercle bacillus contains from 40 to 50 per cent. of fat, and is probably rendered a non-conductor of electricity thereby; possibly the want of success in my attempts on lupus may be due to this fact. Still, by using such compounds as aniline and its derivatives, it may be hoped that better results may be achieved, and I have already succeeded in arresting the disease in a few slight instances by introducing aniline ions from a solution of the hydrochlorate, though I have failed in many others. Nevertheless, I still consider that the electrolytic method of treating lupus is one which deserves careful study from any one who is willing to devote much time and patience to the task.

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[1] *Archives d'Electricité Médicale*, 1903, p. 734. [2] *Medical Electrology and Radiology*, August, 1906. [3] Ibid.

A Clinical Lecture
ON
A CASE OF SECONDARY SUTURE OF THE GREAT SCIATIC NERVE.

Delivered at the London Hospital.

By JAMES SHERREN, F.R.C.S.Eng.,

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Examples of complete division of the great sciatic nerve verified by operation are rare. Excluding the case I am bringing before you this afternoon, I have had the opportunity of examining 11 patients in whom the nerve was injured, but in only one of these was the nerve lesion demonstrated by operation. This patient suffered division of his great sciatic nerve in a stab wound of the middle third of the thigh, but he did not come under my observation early enough to be of use in determining with the necessary exactitude the loss of sensibility which results from this lesion. When I first saw him sensibility to prick had obviously begun to be restored, but the loss of sensibility to light touch was as extensive and as well defined as in the patient I am showing you.

[Figs. 1, 2, 3, 4, and 5 show the loss of sensibility produced by division of the great sciatic nerve. Within the area bounded by the thick line all forms of sensibility were absent. Within the area between the thick line and the crosses deep touch was appreciated and localized, but there was loss of protopathic and epicritic sensibility. Within the area bounded by the crosses and the thin line, epicritic sensibility only was absent.]

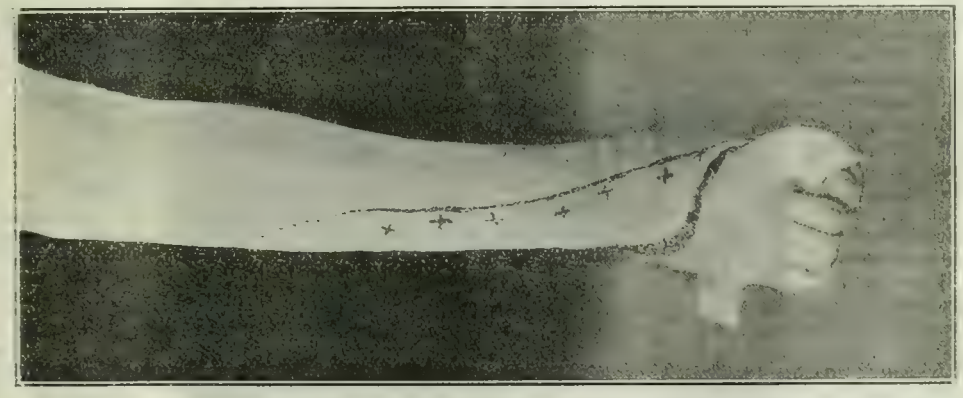


Fig 1.



Fig. 2.

Many cases of injury to the great sciatic nerve have been recorded from time to time, but only one with any degree of accuracy—that worked out by Professor C. S. Sherrington.[1] The present case is therefore of considerable interest; it is the first in which it has been possible to map out the area supplied by the great sciatic nerve exclusively with the three forms of sensibility described by Dr. Head and myself.[2] The small sciatic was also severed; this is the only instance of division of this nerve, verified by operation, that I have been able to find. The history is as follows:

On October 4th, 1901, while on water picket at Witklip, the patient was ambushed, and shot from 20 yards. The bullet passed through the back of the saddle, and entered just above the fold of the nates. He experienced great pain down the back of the leg into the foot, but rode for 20 yards, when his horse stumbled and he fell off, his right foot being useless. He lay where he fell for half an hour, then the wound was dressed, and he was taken to Leidenberg Hospital.

I saw him first with Dr. Head at the Royal Victoria Hospital, Netley, on August 2nd, 1902. The wound of entry was situated 1 in. to the right of the spine of the third piece of the sacrum, it was depressed, adherent to bone, and healed with the exception of a small sinus at its centre. One and a half inches in front of the great trochanter was a healed surgical wound, through which the bullet had been extracted. Midway between these two wounds was an incision discharging pus, made for the purpose of evacuating an abscess. Into the physical signs that were present at that time I do not propose to enter, but will only say that so far as the loss of sensibility and the motor paralysis was concerned they corresponded to those present when he came under my care in April, 1906, three years and nine months later.

He left Netley in November, 1902, and went to work in September of the next year as plate cleaner in an hotel. He managed to perform his duties satisfactorily until six months before I saw him, when "sores" broke out on the heel and great toe. For these he put himself under my care. All wounds had healed before he left Netley. The muscles of the right leg, thigh, and buttock were wasted,

and the foot dropped. On the heel was a sinus surrounded by thickened epithelium, passing down to bare bone. This had evidently started as suppuration beneath a corn, and resulted in the formation of a so-called perforating ulcer. On the inner side of the dorsum of the great toe was a shallow, unhealthy ulcer about an inch in diameter. He was able to flex his leg on the thigh, and a band of muscle was seen to stand out prominently on the inner side. This led some of those who saw him to conclude that the nerve was not completely divided, as he could extend his thigh and flex his leg by a muscle in the position of the inner group of hamstrings. But a little reflection, and tracing the muscle to its origin and insertion, showed that it was the gracilis, hypertrophied from the extra work that it had been performing. All movements of the foot were lost. The muscles supplied by the great sciatic nerve did not react to the interrupted current, but reacted in a sluggish manner to the constant current, A.C.C. being greater than K.C.C. (reaction of degeneration).



Fig. 3.

Sensibility was lost over the area shown in Figs. 1, 2, 3, 4, 5, 6. The thick line bounds the area insensitive to all stimuli deep touch, light touch, prick, all degrees of temperature; the area between the thick line and the crosses was sensitive to deep touch only, that between the crosses and the thin line, sensitive to prick, to temperatures above 45° and below 20° C., but insensitive to light touch and to the intermediate degrees of temperature. You will see from this how easy it may be to overlook the fact of division of the nerve if the patient is sharp and the testing hurriedly carried out, as the patient can feel "touches" over the whole of the area supplied by the nerve except a portion of the foot. I want you to notice the way in which the internal saphenous supplies the inner side of the leg and the inner part of the sole of the foot. The sensitive area left is the full supply of the internal saphenous (vide Figs. 4 and 5).



Fig. 4.

To sum up, over both the great and small sciatic areas, the area insensitive to prick was almost as extensive as the loss of sensibility to light touch, but over the small sciatic area there was no loss of sensibility to deep touch, over the great the loss of sensibility to deep touch, though present, was relatively small in extent.

When you remember the large area to which filaments of the small sciatic nerve may be traced in the dissecting room it may come as a surprise to you to find that the area of loss of sensibility is so small in extent. But you must bear in mind that section of a nerve only reveals the "exclusive" supply of that nerve, the area to which it alone sends fibres; to obtain an area corresponding in extent to that found in dissection the surrounding nerves must be divided, leaving the small sciatic intact.

It was evident in this case that both great and small sciatic nerves were completely divided at the lower part of the sciatic plexus, and that other branches of the plexus, namely, those supplying the glutei, had also been interfered with, either in the original wound, or later, as the result of the operations necessary for the removal of the bullet and sequestra.

The question of treatment had next to be considered. Four years had elapsed since the injury, and although it is probable that up to three years from the time of injury the period after division plays little part in prognosis, after this date no perfectly satisfactory example of recovery after suture has been recorded. Again, affecting the prognosis to a marked degree was the fact that suppuration had been long and severe in the original wound; this was against complete recovery. But the patient was not exacting; he said he would be content if he could be put in a condition in which he would have no more pressure ulcers. I felt that I was justified in giving a good prognosis from this standpoint, for Dr. Head and I have shown that the tendency to the formation of these ulcers ceases with the restoration of sensibility to prick; also that the nerve fibres subserving this form of sensibility regenerate under conditions unfavourable to the restoration of sensibility to light touch and motor power. I therefore undertook the operation, and events seem to have justified my decision.

On April 12th I explored the condition through a long incision, and found that the great sciatic nerve had been divided at its point of origin from the plexus, and that the third sacral nerve had been destroyed in the wound of the sacrum. The distal ends of both great and small sciatic nerves were bulbous, and adherent to the pyriformis muscle. Passing upwards was a dense mass of fibrous tissue into which, after a tiresome dissection, I was able to trace the lumbo-sacral cord and second sacral nerves. I cut with a sharp scalpel above the mass of fibrous tissue and below the bulbs, the amount removed measuring an inch and a half. I sutured the distal end of the great sciatic to the central end of the lumbo-sacral cord and second sacral nerve, enclosing the junction in a decalcified bone tube. The peripheral end of the small sciatic I sutured into a small transverse cut in the great sciatic below the point of union to the lumbo-sacral cord and second sacral

nerves. The wound was closed except for a small drainage opening, and healed by first intention.

I tested sensibility daily for the first week; no change took place, it remained exactly in the condition it had been before operation. In none of the 16 cases of secondary suture that I have watched was the early return of sensibility mentioned by some authorities observed.

On May 22nd, six weeks after operation, a prick was appreciated over nearly the whole of the small sciatic area, and a week later was restored over the whole of this area. On this date the loss of sensibility to prick had begun to diminish in extent on the leg; this is the usual time for the commencement of restoration of sensibility to prick, about six weeks from suture. It is interesting to note that recovery began practically at the same time in both the great and small sciatic areas, although the length of nerve from suture to distribution is much greater in the latter; it is also the same time as is necessary for the commencement of sensory recovery after suture of the median nerve at the wrist, and for the first sign of restoration of sensibility to prick after grafting the whole thickness of the skin. We see, therefore, that the commencement of recovery to prick occurs at about the same time whatever distance from the periphery the nerve is divided.



Fig. 5.

Whilst he was kept at rest the "perforating ulcers" healed in the usual way, and I have no doubt that protopathic recovery will eventually become complete, and prevent further troubles of this kind, but I doubt if recovery will advance beyond this, the first stage.

There are several points raised by this case to which I wish to direct your attention. First with regard to sensation. It is a striking fact that the loss of sensibility remained absolutely unchanged for nearly four years. It is a good example of what has been pointed out by Dr. Head and myself, that restoration of sensibility does not take place apart from regeneration and union with the central nervous system; there is no gradual encroachment on the anaesthetic area by the surrounding sound nerves; in other words, the doctrine of "substitution" is fallacious. You could have no better instance than this; look at the small sciatic area, surrounded by skin well supplied with normal sensibility yet remaining absolutely unchanged.

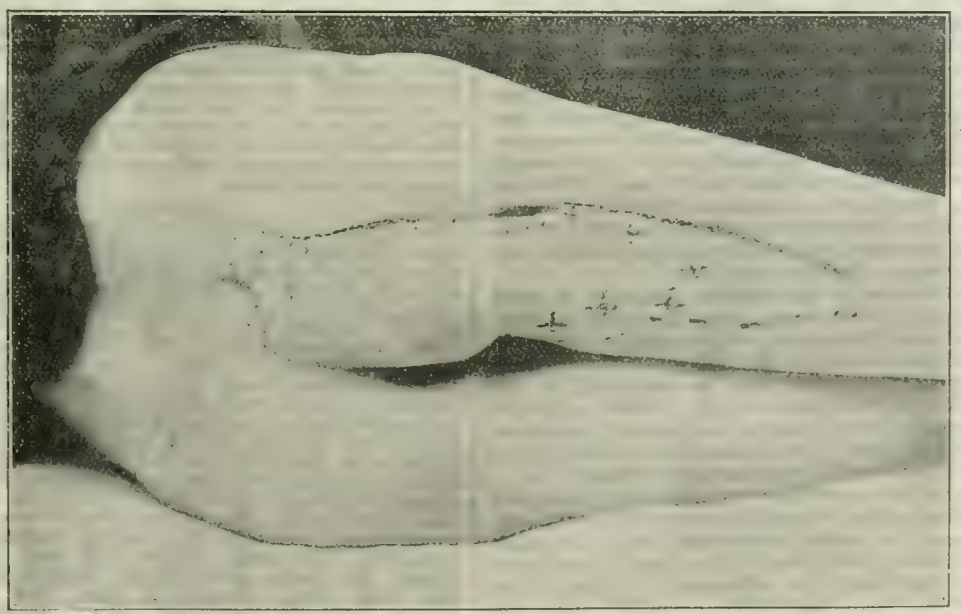


Fig. 6.—Showing loss of sensibility produced by section of the small sciatic nerve. Over the whole of this area deep touch was appreciated and localized. The crosses mark the area within which protopathic and epicritic sensibility was absent; the line, the area of loss of epicritic sensibility.

The rule is plain: whenever improvement in sensibility takes place after division of a whole nerve, it is due to regeneration and re-establishment of communication with the central nervous system. But you must bear in mind that this applies only to division of a whole nerve, and not to one of its branches; for example, the palmar branch of the ulnar, here the loss of sensibility to prick may vary from day to day.

I would again remind you of the nature of the loss of sensibility which takes place after division of a peripheral nerve. It is tested and described under three headings: deep sensibility, protopathic sensibility, and epicritic sensibility.

Deep sensibility is tested by pressing with a blunt object, it can only be investigated over areas insensitive to prick.

Protopathic, that is, sensibility to prick, to ice and water above about 50° C.

Epicritic, that is, sensibility to light touches with cotton-wool and temperatures between about 20° C. and 40° C.

With regard to the method of testing, the patient must not be able to see the part under observation, and should not be asked, "Can you feel this or that?" but told to speak when he feels anything, and say what he thinks it is.

After division of many nerves sensibility to deep touch is unaffected; for instance, after section of the median nerve at the wrist, the patient may be able to appreciate and localize with accuracy touches with the point of a pencil or the finger, so that if testing is carried out hurriedly the fact of the nerve section is often overlooked. Next, as to loss of protopathic sensibility. For clinical work, testing the appreciation of a pin point is sufficient in most cases, but care must be taken that the patient understands that he has only to speak when he feels a prick, not when he feels a touch. If, from the high power of appreciating stimuli which appeal to deep sensibility, doubt exists, the temperature test is useful: for example, if the patient apparently appreciates the point of a pin over a large area, and yet cannot discriminate between ice and water at 50° C., deep touch is being tested. With regard to epicritic sensibility, for ordinary work a piece of cotton-wool is sufficient as a test, but when doubt exists, owing to roughness of the skin or other causes, the minor degrees of temperature are useful as a control test. If the patient is able to

discriminate between water at 25° and 35° C., epicritic sensibility is certainly present.

The last form of sensibility to be restored is that of exact localization, tested by the ability of the patient to appreciate as two the points of a pair of compasses when separated to the normal distance for that part of the body. This power may be regained after primary, but is rarely, if ever, restored after secondary suture.

To sum up, after division of a peripheral nerve there is a large area of loss of light touch, a smaller loss of sensibility to prick, and a still smaller loss of sensibility to deep touch.

Turning now to the motor side, there is one lesson to be learned, and unless it is applied many cases of nerve injury will be missed, and mistakes made in interpreting results. In examining into the functions of the muscles you must remember to investigate the action of individual muscles, not certain movements you believe these muscles produce. For example, in this case the patient has learned to flex his knee by his gracilis alone.

I would draw your attention briefly to other examples of this supplementary motility. After division of the median nerve at the wrist, the abductor and opponens pollicis muscles, together with the outer two lumbricales, are paralysed, but this paralysis is frequently overlooked. The abductor pollicis draws the thumb away from the index finger in a plane at right angles to that of the palm; this is the movement that is lost. The patient can perform what is usually considered to be abduction by means of the extensor ossis metacarpi pollicis. Opposition may be so well performed that it is impossible by inspection only to tell if the opponens pollicis is contracting, palpation over its insertion into the first metacarpal bone is necessary.

When we consider the number and importance of the intrinsic muscles of the hand supplied by the ulnar nerve, it would seem impossible to overlook their paralysis, yet this occurs not infrequently. Adduction of the thumb is often misunderstood; it is the opposite of abduction, and is movement of the thumb toward the index finger in a plane at right angles to that of the palm; this is the movement which cannot be performed if the adductors of the thumb are paralysed. But the long flexor or long extensor muscle is able to produce a good imitation, in the former case flexion of the terminal phalanx and inward rotation of the thumb always occurs, in the latter extension and outward rotation. Abduction of the little and index fingers can be produced to a certain extent by the extensor muscles, and this is commonly mistaken for interosseous action. But care in observation at once shows the nature of the movement.

After section of the anterior primary division of the fifth cervical nerve, Erb Duchenne paralysis results, that is, the deltoid, the biceps, brachialis anticus and supinators, usually the supinati, sometimes the radial extensors of the wrist, and rarely the pronator radii teres. Mistakes occur, for the patient soon learns to flex the forearm, usually by means of the muscles arising from the external condyle of the humerus, and I have known patients say that they were recovering because of this.

Again, after division of the musculo cutaneous or outer cord of the plexus, I have known mistakes to arise from failing to remember the action of the supinator longus, which is an efficient flexor of the elbow in these cases. Again, paralysis of the deltoid may be concealed by the vicarious action of the upper fibres of the pectoralis major, the supraspinatus serratus magnus and trapezius. These movements have to be taken into consideration not only in examining but in considering treatment.

I have brought the case before you this afternoon really to illustrate these points. I want you to remember the care that is necessary in testing sensibility, and the three groups into which the different forms are placed, and what is more important, the wide broad overlap of the fibres subserving deep sensibility. Lastly, that the action of individual muscles must be investigated, for example, we must not conclude that because opposition of the thumb is present, the opponens pollicis muscle cannot be paralysed.

Now, since the lecture was given, steady improvement has taken place. At the present time, nearly six months after the operation, deep touch is appreciated and well localized over the whole of the distal area, sensibility to prick has been restored to the leg, but the foot still remains insensitive to this stimulus. The area of loss of sensibility to light touch remains as extensive and well defined as before the operation.

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A CASE OF IDIOPATHIC DILATATION OF THE RECTUM AND OF THE COLON AS FAR AS THE HEPATIC FLEXURE.*

BY

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At a meeting of the Clinical Society of London held on April 23rd, 1905, we exhibited the patient, who presented the above lesions, as a "clinical case." The boy, who was under our care at the East London Hospital for Children, has since died, and we now give a fuller account of the case, which showed some anatomical features not usually met with in this condition.

P. V., aged 12 years, was admitted on November 15th, 1904.

History.

The mother stated that the boy had always had a "large belly" and been rather constipated, but not markedly so until within the last fortnight; otherwise he had been a healthy lad though not robust. A fortnight before admission she noticed a great increase in the size of the belly, constipation became more marked, and the boy complained of some pain on defaecation; there was no vomiting, nor was there any passage of blood per rectum. This condition with some wasting persisted until admission.

Condition on Admission.

He appeared to be a nervous lad, very sallow, and with a very distended belly. The heart and lungs, pulse and temperature were normal; the abdomen was tense, with a regular rounded outline and no widening of the costal angle; the surface veins were rather full; the percussion note was resonant all over, and in the knee-elbow position a thrill was obtained over a small area round the navel. On palpation irregular masses were felt in the region of the transverse colon. After examination peristalsis was very obvious. On rectal examination, the tone of the sphincter was normal but the rectum was very dilated. The belly measured in circumference at the navel 29 in., from navel to pubes was 5½ in., and from navel to ensiform 7½ in. His weight was 3 st. 4 lb. 14 oz.

On November 25th it was noted that there was a slight increase in girth, and the bowels were obstinately constipated; there was no response to aperient medicines, and only poor results from enemata. The weight had increased 1 lb. At no period was there tetany.

Operation.

On November 29th Mr. Robinson made a mid-line incision below the umbilicus, and on opening the peritoneal cavity about 2 oz. of clear fluid escaped. A large, tense, bluish-coloured tumour presented, with very large distended veins coursing over it, and with a lace-like pattern on its surface due to the hypertrophied and separated muscular bundles. The bladder was attached to the lower part in front. The swelling was proved to be free at the sides and in front, and to extend upwards in the mid line to the ensiform cartilage. To explore this further the incision had to be extended considerably upwards, and the tumour was brought out of the belly. The following was found to be the condition of things. The mid line swelling started from the pelvic floor and expanded immediately like the body of a flask. Above the navel it began to narrow into the neck of the flask, but yet its circumference was as large as a man's arm. Just below the ensiform cartilage there was a somewhat acute bend to the left, and the gut, with almost the same calibre, went straight down into the left iliac fossa, formed a loop, and became continuous with the descending colon. Further exploration showed that the dilatation continued along the descending and transverse colon, with very little diminution in size until the hepatic flexure was reached. The ascending colon was only slightly enlarged, and filled with some hard faecal lumps, and the caecum and appendix were normal. The colon beyond the hepatic flexure contained many pounds of soft, dark, faecal material, which was squeezed out per anum by gradual pressure on the gut from within, with

* A paper read before the Clinical Society of London, February 8th, etc.

dilatation of the anal canal by the assistant's finger. It was remarked at the operation when this had been evacuated that the hypertrophy of the bowel wall was so great as to feel "as thick as the sole of a boot." The finger, after passing through the internal sphincter, entered an enormously dilated cavity whose walls were touched with difficulty. No hard or enlarged glands were felt in the mesentery; there were no signs of peritonitis nor any abnormal band. The rectum before emptying was measured with an aseptic silk ligature at its greatest circumference from mesentery to mesentery, and proved to be 19¾ in. The abdominal wall was closed in layers.

After-History.

After the operation the boy did well, except for slight suppuration in the superficial layers of the wound. He was put on a tonic mixture, and passed one to four motions daily without further medicine. On December 14th he had again constipation, and he was put on aperients, and the lower bowel was washed out every day. On January 18th, 1905, the belly was larger and hard lumps were felt; no motion was passed in spite of strong purgatives, and enemata also gave no result. An enema of castor oil on January 24th brought away nine actions, and after that the belly became soft and a daily enema was effectual. After a few days these were discontinued, and the boy had a daily motion; his weight increased and his abdomen was normal in size and softness.

During the following months the boy remained in excellent health; he steadily gained weight, and had a regular action of the bowels. He was seen at the hospital from time to time when he came to report himself.

On March 17th, 1906, he was readmitted under one of us (H. M. F.), and remained in the hospital for eleven days in order that his condition might be accurately observed. He appeared to be perfectly well, and, except for the scar from the operation, the abdomen seemed to be quite natural and was free from any abnormal distension. The bowels acted regularly and naturally without medicine. Rectal examination showed that there was some ballooning of the gut, but nothing else could be made out.

The boy continued in good health, except that lately the bowels had been confined, till the evening of July 2nd, when he came home from school complaining of abdominal pain. No distension was observed by his mother. The pain was relieved by ginger brandy, but shortly afterwards diarrhoea set in and continued till 6 a.m. the following morning. There was no pain during the night. The motions were dark, not offensive, and did not contain blood. No delirium during the night. Next morning at 8 a.m. his mother started from home to bring him to the hospital. According to her account he was quite conscious then, his breathing was very quick but not distressed. He was conscious when he arrived at the hospital, but became comatose immediately on admission. There was no vomiting. He died in deep coma very shortly after he was admitted. There was no abdominal distension.

Necropsy.

A *post-mortem* examination was made by Dr. Iredell. The body was well nourished, and there was no distension of the abdomen. The thoracic organs were natural. On opening the abdomen an enormously-distended viscus presented; this was the rectum and colon. The appendix was normal. A flat narrow adhesion about ¼ in. wide, formed by a portion of the great omentum, was attached to the upper limit of the swelling, and this was the only adhesion present. The gut was dilated to a circumference about a quarter to a half greater than normal, and the dilatation began 1 in. below the splenic flexure. Both muscular coats were hypertrophied. There was a balloon-like dilatation filling up the whole of the pelvis and the greater part of the abdominal cavity, which was continuous with the sigmoid loop, as described at the operation. The wall was universally thickened and its longitudinal fibres were coarse and prominent, forming an interlacing network most marked on the aspect furthest from the mesentery. A distinct mesentery 1 in. in length was present, uniting it to the posterior abdominal wall and allowing free mobility of the gut. In no place was there any marked contraction or any sign of thickening of the circular muscle coat. The intestines were filled with gas and liquid faeces. All the other abdominal viscera were natural.

Examination of the removed intestine shows that the anal canal is normal, having no unusual fold or stricture. At the upper level of the internal sphincter the bowel opens out immediately into the large cavity before spoken of. The greatest diameter of this cavity is seen in the rectum proper, which appears considerably lengthened as well as dilated; the peritoneum remains still *in situ*, and indicates the region of bowel affected. The walls of the cavity are much thickened, both muscular layers appearing hypertrophied. The lining membrane seems quite healthy, with no signs of present or past ulceration; the longitudinal columns are reduced in size, and separated owing to the dilatation, but they normally converge at the pelvic floor. There is no abnormal fold, sacculus, or constriction which might be a contributory cause of the dilatation. The rest of the bowel examined shows no further abnormality beyond what has been described as seen at the operation—namely, general dilatation, but no obvious great hypertrophy of the walls.

The chief points of clinical interest in this case appear to us to be the following:

1. *The Absence of Symptoms in Early Life.*—Except for the large size of the abdomen and a tendency to constipation nothing was noticed by the parents until about a fortnight before admission to the hospital, although we believe the condition to have existed from a very early date.

2. *The Suddenness of Onset of Symptoms.*—The rapid wasting with great abdominal distension, accompanied by vomiting and obstinate constipation, suggested an acute condition and closely simulated tuberculous peritonitis.

3. *The great improvement* in general health and the practically complete absence of the earlier symptoms which followed the operation. This, as we have stated, consisted only in completely emptying the gut, and was followed by careful dieting and regulation of the bowels.

4. *The Duration of the Improvement.*—In many of the cases described by other writers improvement follows operation; but this has very rarely, if at all, lasted for so prolonged a period and has been so completely successful that the patient has been to all appearance in ordinary health.

5. *The Sudden Termination with Coma.*—The terminal enteritis may have been due to the ingestion of some toxic substance taken in by the mouth, such as tinned meat, or it may have been infective in origin; but the question arises, Was its severity due to the abnormal condition of the gut with its greatly increased absorbing surface? As far as we can gather from published cases, this form of termination would appear to be most unusual, if not unique.

As to the pathology of the condition we can add nothing further. We would agree to the division into two groups—the one due to mechanical obstruction, the other probably congenital in origin, in which no obstruction can be found. In the absence of any kinking, bands, sacculi or diverticula, diaphragms, or other conditions which have been described as causing obstruction, we must include the case in the second group, known by the unsatisfactory term of "congenital or idiopathic dilatation of the colon."

As to the surgical procedure adopted in this case, it may be said that it stopped at the first stage, because of the satisfactory result produced. What we had decided to do if further treatment was necessary was to open the caecum, so as to wash out and give complete rest for a time to the bowel beyond. Should this not have produced the required contraction, the question then to be considered was the performance either of some form of anastomosis or of excision of the dilated bowel. Both these procedures have been adopted, but this case, unlike any other previously described, presented conditions which would have made either of them a very doubtful remedy. As to the resection, it would have been necessary to remove the dilated rectum and the mucous membrane of the anal canal, following the plan adopted by Treves, and to place here healthy intestine which would have been the ascending colon, or the terminal part of the small intestine. In both such considerable difficulty and risk would be encountered in attempting these measures as to almost prohibit its trial.

If an anastomosis had been attempted it would have been between the ileum and the large rectal dilatation. This might have had some success provided the dilated bowel had been thoroughly emptied of its contents at the time of making the anastomosis; but then, again, there would have been a possibility that the intestinal contents might have accumulated in the dilated rectum and made matters much as before. To overcome this liability to accumulation plication of the redundant rectal walls might have been performed.

From the degree of success of our case we would urge that a similar procedure of emptying the bowel by abdominal section be attempted as a routine measure before proceding to more serious operations. The *post-mortem* appearances of the bowel showed that considerable diminution in the calibre of the intestine had taken place, and we know that this improvement had been accompanied by loss of his previous symptoms, constipation, distension and wasting. We assume that but for his somewhat accidental death he might possibly have completely recovered. In most of the cases previously recorded there was ulceration of the bowel, and the fact

that in our case the bowel showed no ulceration but a healthy condition of the mucous membrane may have contributed to the favourable result.

THE SCIENCE COMMITTEE

OF THE

British Medical Association.

REPORT XCVII.

OBSERVATIONS ON THE PARATHYROIDS AND ACCESSORY THYROIDS IN MAN.

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[PRELIMINARY COMMUNICATION.]

SANDSTRÖM, who in 1880 first described the parathyroid glands, concluded from his observations that these bodies were embryonic, their microscopical appearance being similar to that of the thyroid gland in its first stage of development. This view was independently advanced by Baber, and remained unchallenged for over ten years until the experimental work of Gley, Moussu, Vassale and Generali, Kohn, Edmunds and others claimed a greater importance for the glands. Briefly put, the conclusion of these observers is that the parathyroids are not merely embryonic rests of thyroid tissue, but organs with a proper function, the loss of which entails a speedy death. Other workers, however, among whom are Hürthle and Zielinska, adhere to the older view, and more recently Vincent and Jolly have cast serious doubt on the reliability of past experimental work.

At the present time the conflict of opinion is sharp. Our lack of knowledge of the anatomy, distribution, histological variations and pathology of the glands debars us from correctly appraising their value, renders attempts at their complete removal uncertain and the results of the operation inconclusive. It therefore seemed to me that an investigation of these aspects was essential to a settlement of the question, and could not fail to bring to light facts of importance. I have accordingly been working on these lines for the past few years, and have examined the parathyroids in a number of human beings and in over seventy different species of animals. The present preliminary communication is to record some of the facts elicited by an examination of nearly sixty human subjects.

MODE OF INVESTIGATION.

The procedure adopted was the following: The subjects, which were not specially selected, except in so far as to include a variety of diseases, were examined as soon after death as practicable. A median incision was carried from the chin to the sternum; the sterno-hyoid, sterno-thyroid, omo-hyoid, and, if necessary, sterno-mastoid muscles, were reflected, and the thyroid gland exposed. The gland or one of its lobes with the corresponding part of the isthmus was freely removed, together with all the connective tissue, fat, etc., in the neighbourhood, and a search for small pale-looking glandular bodies made in the tissue extending from the jaw to the sternum. The structures excised were at once dissected, and every gland without exception preserved for future microscopical examination. The thyroid itself was carefully cleaned, and all bodies found on its surface retained for another purpose. A sketch having been made of the thyroid to record the position, size, appearance, etc., of the glands, the glands were pared in one of various fixatives, precautions being observed to facilitate the identification of each at later stages. The thyroid itself was fixed entire for twenty-four hours, and then cut into thin slices 2 to 3 mm. thick, and the surface of each slice examined with a magnifying lens. Every section which showed at any point any deviation from the usual vesicular appearance of thyroid tissue was retained for microscopical identification. This detailed examination ensured, I believe, that, with the exception to be mentioned immediately, no parathyroid either embedded in the thyroid or on its surface or in its neighbourhood could escape detection, while few if any lying between the jaw and sternum would be overlooked. The exception referred to is that of the parathyroid which Welsh calls the posterior superior parathyroid, and which he has shown to bear a very constant relation to the oesophagus and pharynx, lying almost invariably on the posterior wall at or near the junction between the two. Accepting this observation, I restricted my attention to parathyroid glands other than this constant one.

NUMBER OF PARATHYROIDS.

The number of the parathyroids in man, as in many animals, is stated to be two on each side. I find the number to be very variable. Excluding the above-mentioned posterior superior parathyroid, I have found on one side of the neck one parathyroid to be present in less than half the cases, two in about one-quarter the cases, in a few cases three, in two cases four, in two cases five, and in one case six parathyroids. In a few subjects no parathyroid at all was found. Other observers have failed to discover any gland in certain individuals, and I am inclined to doubt the conclusion that this result necessarily implies imperfect search.

POSITION.

This is inconstant, and there is rarely symmetry between the two sides. The most frequent site is on the lateral surface of the thyroid gland, at or near its posterior border beneath the inferior thyroid artery (that is, at the junction of the middle and lower thirds of the thyroid); more than one-third the total number of parathyroids found lay in this locality. A corresponding position, but at the junction of the superior and middle thirds of the thyroid, and therefore above the inferior thyroid artery, constituted the next commonest site, for here over a quarter of the number revealed themselves. Another fifth had taken up positions at the inferior pole of the thyroid or in the adjacent connective tissue; others lay buried in the substance of a thyroid lobe, giving no sign of their presence on the surface. Lastly, in a few instances the gland was found at the oral pole of the thyroid, in a few on the tracheal surface of the thyroid, discoverable only after dissecting the latter from the trachea. In one case a parathyroid found shelter behind the upper part of the sternum. In no dissection did I find a glandule at any great distance anterior to the thyroid gland.

APPEARANCE.

The parathyroid cannot be identified with certainty except by microscopical examination. In its more typical appearance and at its commonest sites it may be recognized with a high degree of probability, but many specimens which I believed to be either lymphatic gland, accessory thyroid, or fat, disclosed in the event parathyroid structure, and, per contra, glands whose features suggested a parathyroid nature proved to be lymphatic, thymic, or thyroid. The most characteristic form for the parathyroid to exhibit is that of an elongated, slightly flattened, ovoid body, of a pale pink hue, with a smooth surface, on which ramify a few branching vessels. Part of it has the yellow appearance of ordinary adipose tissue, and there is frequently a distinct line of demarcation between the pink and yellow. Sometimes the gland presents few features save those of a nodule of fat; on other occasions fat is entirely absent, and the appearance is that of a lymphatic gland or thymic residue. In others, again, the gland is dark and brownish, suggesting an accessory thyroid, while rarely it is absolutely black, like many bronchial glands. A few specimens were found to consist of thyroid and parathyroid tissue, of lymphatic and parathyroid tissue, or of thymus and parathyroid tissue. In one instance thyroid, parathyroid and thymus tissue appeared in the same section. In every case, however, the parathyroid tissue was isolated by interposing connective tissue. In size the parathyroid varies from little more than a pinpoint up to nearly 3.5 cm.

AGE.

A reference to the ages of the subjects examined shows that parathyroids occur in greatest number in the first year of life, and that from that period to old age they are found with progressively decreasing frequency. Under

1 year of age as many as four, five, or six parathyroids were discovered; between 1 year and 10 years the greatest numbers found were three and four; above 10 years the number never exceeded two. In subjects beneath the age of 20 I never failed to find parathyroids; above 20 they might be absent.

RELATION TO ACCESSORY THYROIDS.

Accessory thyroids were frequently found. Their three commonest sites are the three commonest sites of occurrence of the parathyroids. They are rarely found in subjects beneath the age of 1 year; thereafter they appear more commonly and attain a maximum between the ages of 30 and 60. The relation between the number of parathyroids and the number of accessory thyroids shows a striking fall with increasing age. Within the first twelve months after birth I found parathyroids to be more than seven times as common as accessory thyroids; between the first and fifth years three and a half times; between the sixth and tenth one and a half times; while between the eleventh and twentieth years equality is established. From the last-mentioned year onwards the preponderance goes to the accessory thyroids, and with every successive decade up to the seventh becomes more marked.

Although the present series of subjects examined is the largest recorded, its number is not great enough to allow statistics drawn from it to be accepted without any reserve. On the other hand, the relationship between the parathyroids and age, between the parathyroids and accessory thyroids, and between accessory thyroids and age, is so clear as in my mind to be strong evidence against admitting for the parathyroids that physiological value attached to them by so many experimenters.

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REPORT XCVIII.

THE INFLUENCE OF INCREASED BAROMETRIC PRESSURE ON MAN—SATURATION OF THE TISSUE FLUIDS WITH NITROGEN.

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In my last report,[1] it was stated that researches were in progress regarding the time relations of the saturation with gas which follows exposure to compressed air. It will be convenient to summarize here the chief results of our investigations relative to this problem.[2]

As stated in my earlier note, the urine secreted after drinking large quantities of warm water was used as a measure of tissue-fluid saturation. The subject of an experiment drank about a quart of warm water and after an interval of ten to fifteen minutes was compressed in a steel cylinder. Directly the desired pressure had been attained, he emptied his bladder; ten minutes later, more urine was passed and a sample collected in a glass bulb with rubber junctions, air and froth being carefully excluded. The junctions were then clamped and the sample preserved for analysis, the dissolved gas being pumped out by means of Hill's blood pump and measured in a finely graduated eudiometer tube. The composition of the gas was then determined by the ordinary potash and pyrogallate method. The accuracy of the process was tested by submitting a sample of boiled water to a vacuum in the Hill pump and proceeding exactly as in the urine analysis. No measurable gas was obtained, so that the error due to leakage may be regarded as inappreciable.

The object of completely emptying the bladder at each stage is to avoid the admixture of urine that had collected in the bladder while under a higher (or lower) pressure, since this would lead to serious errors. I think we have avoided this source of fallacy completely. Thus, if on arriving at a pressure of + 30 lb. the bladder is completely emptied, then any urine passed, say, ten minutes later, must have been separated from the blood while under a pressure of + 30 lb., except the amount present in the renal tubules and pelves. Unless the total quantity passed be very small the error due to urine from the last two sources is negligible.

A necessary preliminary was the determination of the mean quantity of nitrogen in our urine under normal circumstances. Six analyses were made, and the mean volume of dissolved nitrogen per 100 c.cm., reduced to 760 mm. Hg pressure and 0° C., was found to be 1.14 c.cm.

The individual observations, made at different times of day and under different circumstances—1.21, 1.19, 0.97, 1.10, 1.31, 1.07, 1.14—exhibit so small a range of variation that we feel entitled to conclude that in our own cases the coefficient of solubility for atmospheric nitrogen is between 0.11 and 0.12. Naturally, deviations from this value to the extent of ± 0.03 could not be regarded as necessarily significant. As will be seen below, our experiments show deviations for the most part well beyond these limits.

A typical example of our results is the following:

Experiment 31 May 31st, 1906.

M. G., compressed to + 30 lb. in ten minutes (2.50 p.m.). The bladder was then emptied, and at 2.55 emptied again, 135 c.cm. of urine being passed, and Sample 1 was collected.

2.36. Decompression commenced.

3.20. (+ 15 lb.) the bladder was emptied again (320 c.cm.).

3.45. Decompression completed, bladder emptied again (310 c.cm.).

4.1. Another sample taken (135 c.cm. passed).

At 4.55 and 6.10 other samples were taken.

Analysis.

Sample.	Time and Pressure.	Percentage of Nitrogen.	Calculated N per Cent. supposing Urine followed the Pressure.
	Passed after 5 mins. under 30 lb.	2.422	1.1 - 5
2 and 3	Were spoiled	—	—
4	At normal pressure 16 mins. after decompression	2.373	1.1
5	70 mins. after decompression.	1.107	1.1
6	245 mins. later.	1.223	1.1

The mean results of our whole series of experiments are given in the next table.

TABLE I.—*Urine Analysis from Hill and Greenwood's Individual Observations.*

Pressure and Exposure.	Mean Percentage of Nitrogen Found.	Calculated Percentage supposing Urine followed the Pressure
+ 0 (Normal	1.14	1.1
+ 30 lb. for less than 10 mins. ...	2.40	2.3
+ 30 lb. for more than 10 mins....	3.72	3.3
+ 45 lb. for less than 10 mins. ..	4.20	4.4
+ 45 lb. for more than 10 mins....	4.23	4.4
+ 30 lb. during decompression...	3.43	3.3
+ 15 lb. during decompression	2.70	2.2
+ 0 lb. on decompression ..	1.20	1.1
+ 0 lb. 15 mins. after decompression	1.14	1.1
+ 0 lb. more than 15 mins. after decompression	1.17	1.1

A glance at this table makes it clear that although saturation of the tissue fluids with nitrogen up to the theoretical value is rapidly attained, desaturation is a slow process. Even with a decompression rate of twenty minutes for each atmosphere of positive pressure, equilibrium has not been established on leaving the air chamber, nor is it complete fifteen minutes later; that is

to say, the body fluids are in a condition of super-saturation. The explanation of these remarkable results cannot at present be satisfactorily formulated.

Experiments carried out by us on the behaviour of colloidal solutions exposed to increased air pressure, seem to throw light on the phenomenon, but further work is necessary before a definite statement can be made.

In any case, that our results do not depend upon personal idiosyncrasies is shown by the fact that analyses carried out by us on samples obtained from caisson workers, and divers agree with our own observations.

TABLE II.

A. *Rotherhithe Tunnel Workers.*

Source of [illegible]	N_2 per Cent. Found.	N_2 per Cent. Calculated, supposing Urine followed the Pressure.
In tunnel (+ 17 lbs.)	2.3 [illegible]	2.35
After decompression (decompression [illegible] 2 hrs.)	1.60, 1.66, 1.51, 1.41, 1.75, 1.74, 1.31, 1.63	1.1

B. *From Admiralty Diver C.*

Depth.	Time Below and N_2 per Cent. Found.	N_2 per Cent. Calculated.
50 ft.	Below 46 mins. 2 secs. Ascended [illegible] in 35 secs. Sample taken 20 [illegible] 30 secs. after ascent N_2 1.77	1.1
40 ft.	Below 46 mins. Ascended [illegible] mins. Sample taken 11 mins after ascent. N_2 1.60	1.1
70 ft.	Below 44 mins. Ascended in [illegible] mins. Sample taken 5 mins after ascent. N_2 2.11	1.1
	Sample taken 30 mins. after ascent N_2 1.93	1.1
50 ft.	Below 46 mins. Ascended in [illegible] mins. Sample taken 4 mins after ascent. N_2 2.50	1.1
	Sample taken [illegible] mins. after ascent N_2 1.53	1.1

It will be seen that these observations are in essential agreement with our own results.

As there is such a considerable excess of nitrogen dissolved in the tissue fluids, even with so slow a rate of decompression as twenty minutes per atmosphere, it may be asked whether even this rate is slow enough for safety. It is true that, even under these conditions, fatal cases are said to have occurred; but it may well be that a certain steepness of pressure slope between dissolved and free gas is necessary for the formation of bubbles sufficiently large to produce injury; hence, we cannot, without further inquiry, regard the excess of gas present as *necessarily* dangerous.

I may note, finally, that our results agree in principle with those deduced by v. Schrötter[1] from theoretical considerations.

REFERENCES

[illegible] *British Medical Journal*, July 7th, 1906, SUPPLEMENT, p. 7.

[illegible] Effects of Increased Barometric Pressure on Man, No. II. [illegible] and M. Greenwood, jun., *Proc. Royal* [illegible] *Zeitschrift für Hygiene und Infectionskrankheiten*, Band li. 1905, pp. 35-50.

As already announced, a competition will take place in connection with the International Red Cross Conference to be held in London from June 10th to 14th for the Empress Marie Tewdorowna Prizes. The awards will be made by an international jury to the inventions which present "in whole or in part the best solution of the problem of aid to the wounded, the quickest and surest method of discovering and lifting the wounded on the battlefield on land and at sea, the best types of stretchers and of vehicles for conveying the wounded to the bandaging posts with the greatest possible rapidity and with the least suffering, or methods of rescue at sea, the best installations in ambulances, railway carriages, on board ship etc., for the final removal. A sum of about £320 is available for three prizes, at the discretion of the jury. Persons intending to compete can obtain [illegible] from the Secretary British Red Cross Society, 1 Pall Mall East, London, S.W.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

TYPHOID FEVER SIMULATING CEREBRO-SPINAL FEVER.

ON April 2nd, 1906, the case of a coal-miner's labourer who had been ill for about two weeks was brought under my notice as probably being one of cerebro-spinal fever, and, as the house where he lived was very crowded, I had him removed to the isolation hospital, where I saw him the same night. He was then rather delirious, but at intervals was more sensible and could answer questions. He complained of fearful headache, chiefly in the temporal, but also in the occipital, region. There was marked retraction of the head and photophobia, and the posterior cervical muscles were tense and very tender. The abdomen was retracted and both legs drawn up. Kernig's sign was well marked on both sides. No enlargement of the spleen could be made out; there was slight vomiting of bile-stained liquid at intervals. The temperature was 101.5° F., pulse 80, full and strong. There was no diarrhoea and no rash of any sort. Lumbar puncture was performed, but no cerebro-spinal fluid was obtained.

On the following day I again performed lumbar puncture with a longer needle, but again failed to get any fluid. As I suspected the case might be one of typhoid of an anomalous type, a sample of blood was sent to the Lister Institute for Widal's test, and also another sample to be tested for cerebro-spinal fever. Widal's reaction was positive, complete agglutination being obtained in one hour with dilutions of 1 in 2 and 1 in 50. The agglutination test with the para-typhoid A bacillus was slight, and with paratyphoid B partial. It was also reported from the Lister Institute that it was practically impossible to isolate the *Diplococcus intracellularis meningitidis* from the blood, but from the result of recent experiments upon animals the agglutination test was probably of some value. Agglutination tests with a forty-eight-hour agar culture of the diplococcus were negative.

Patient's Serum:
Dilution 1 in 2, partial agglutination in 1 hour.
Dilution 1 in 20, no agglutination.
Dilution 1 in 50, no agglutination.

Control—Normal Serum:
Dilution 1 in 2, partial agglutination in 1 hour.
Dilution 1 in 20, no agglutination.
Dilution 1 in 50, no agglutination.

On making inquiries at the patient's home it was found that several members of the family had been ill with sore throat during the previous four weeks, and that the mother, after three weeks' illness, had died two weeks before the onset of the patient's illness, the death being certified "perityphlitis, gastritis."

The patient died on April 4th, and a *post-mortem* examination was made the same day. The mucous membrane of the last 3 feet of the small bowel was in an inflamed and catarrhal condition, the solitary glands being large and projecting, and one doubtful ulcerated Peyer's patch was seen. The caecum, with 12 in. of the large bowel, was then examined, and a large ulcer, about 1½ in. to 2 in. in diameter, with soft, swollen edges, was found 6 in. from the ileo-caecal valve. The mesenteric glands were enlarged; the spleen slightly enlarged, soft and friable. On opening the skull the membranes showed extreme congestion, and pus was seen on the surface of the brain in the temporal region. At the base of the brain a sero-purulent fluid was found in large quantity, and a specimen of this under the microscope showed pus cells and a number of diplococci, and also diplococci in rows.

A specimen of the cerebro-spinal fluid was sent to the Lister Institute for examination, and the report showed that neither the *Bacillus typhosus* nor the *Diplococcus intracellularis meningitidis* were present, but a Gram positive diplococcus occurring in chains was isolated. Two cc. of a broth culture of this diplococcus were injected intravenously into a rabbit, but as the animal was quite well after two days the diplococcus was proved to be not virulent.

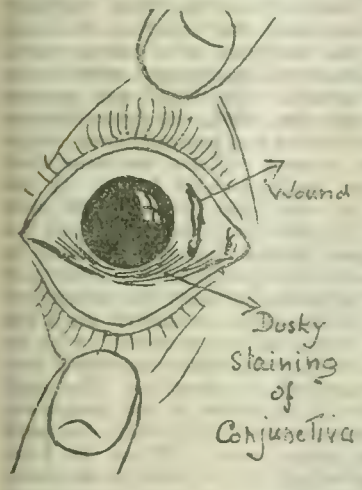
Osler records that meningitis is extremely rare in typhoid, and hence this case is of some interest. It is also worthy of note that the case had all the characteristic symptoms of cerebro-spinal fever, with the exception of the purpuric rash, and that the case had practically none of the usual symptoms of typhoid fever.

James M. Cowie, M.D., D.P.H.,
Medical Officer of Health, Burton upon-Trent.

TRAUMATIC EXPULSION OF LENS AND IRIS, FOLLOWED BY UNEVENTFUL HEALING WITHOUT TREATMENT.

Mr. K., aged 57, was thrown from his bicycle one night during January, 1905, and struck his right eye against a large stone. The pain was considerable at the moment, and the sight of the eye was noticed to be imperfect, but the patient suffered no particular discomfort during the days that followed, and did not think it necessary to consult a doctor. His medical attendant, however, met him by chance on the road four weeks later and advised him to have the eye examined by an ophthalmic surgeon. Mr. K., therefore, consulted me shortly afterwards, when I found the following state of affairs:

A healed wound of the sclerotic, and probably also of the conjunctiva, about 6 mm. long, parallel with the inner margin of the cornea and 3 mm. away from it. Some dusky staining of the lower part of the ocular conjunctiva, owing, no doubt, to absorption of uveal pigment from remains of iris still entangled in the wound. Slight fogginess of vitreous humour, but not enough to prevent a thorough examination of the unaltered fundus. Complete absence of lens and iris from the interior of the eye. Vision with a strong + lens very good. No apparent need for treatment.



I have recently had an opportunity of examining this patient again, and found the eye quite free from irritation, with no damage in the posterior pole, with a clear vitreous humour, and with vision, aided by a pinhole diaphragm and + 11.0 D. spherical + 3.0 D. cylinder axis vertical, $\frac{6}{9}$ partly, + 15.0 D. spherical + 3.0 D. cylinder, J. 1 easily. As when I first saw him, no trace of iris was to be found.

I have little doubt that the blow split the coats of the eyeball and shot the iris and the lens in its capsule clean out of the eye. Although I did not see the patient until five weeks after the accident, it is not likely that a lens which had been dislocated in its capsule to the bottom of the globe in a man of 57 would have become so completely absorbed as to leave no trace of itself by ophthalmoscopic examination. Nor is it likely that the accident was followed by a subconjunctival dislocation of the lens with subsequent absorption, since the patient, who is a shrewd man, states emphatically that there never was any lump on the eyeball at any time after the blow.

The painless and surgically-complete recovery from such an accident is certainly remarkable, and the more so when it is remembered that bathing with warm water was the only treatment he adopted. This simplicity of treatment was due to the patient's freedom from discomfort, and not to any masterly inactivity on the part of a medical adviser.

Michael A. Teale, M.A.Oxon.,
M.R.C.S.Eng., L.R.C.P.Lond.,
Ophthalmic Surgeon, Leeds Public Dispensary.

FATAL CEREBRAL HAEMORRHAGE IN A YOUNG MAN.

A gardener, aged 23, in steady work, and, but for nasal polypi, for the treatment of which he had for some months attended the out-patient department of a London hospital, considered to be in good health, on February 1st had some polypi removed. On his return he told his relatives he had lost more blood than usual. He, however, was well enough to spend the evening with friends, and to make a hearty supper on his return home at 10 p.m.

The following morning he rose at his usual time, breakfasted, and did his morning work. While sitting at table waiting for his mid-day meal at 1.45, he said he felt queer in the head, and asked for a drink. He then commenced striking the right side of his head, and complained of pain, fell forward from his chair, and soon lost consciousness. Convulsions ensued, and he was carried to his bed.

I saw him at 3.45 p.m. He was unconscious, and breathing stertorously; the bladder had emptied itself. The arms were flexed, and held tightly to the chest, with clenched hands under the chin. The legs were extended and rigid and trembling. The right pupil was contracted, the left moderately dilated. At times, for a few seconds, it was possible by steady force to extend the arms and flex the legs, but for a few seconds only, as fresh convulsions drew them back to the original position. The convulsions continued until shortly before his death at 4.50 p.m.

Necropsy.—The membranes and cortex of the brain were normal; the left lateral ventricle was filled with bloody serum, and there was some blood clot in the anterior part, which had been forced through from the right ventricle. The right corpus striatum and optic thalamus were filled with a blood clot as large as a Tangerine orange, and blood clot occupied the whole of the anterior part of the ventricle. There was great hypertrophy of the left cardiac ventricle, and on stripping off the capsules of both kidneys the cortical substance was generally adherent, and the surface torn off with the capsules.

This condition of heart and kidney point to a general state of arterial disease, and account for the rupture of the cerebral artery. The man was a total abstainer, and no evidence of syphilis was seen at the *post-mortem* examination.

W. Habgood, M.D.Brux., L.R.C.P., M.R.C.S.
Farnborough, Kent.

DEAFNESS IN MYXOEDEMA.

The patient in this case, aged 53, the wife of a working man, up to the end of 1905 always enjoyed good health, but in January it was noticed that her speech was growing thick and her hearing defective.

On visiting her, I found the whole body was more or less swollen, which did not pit on pressure, and in both supraclavicular regions a distinct soft swelling. The skin was dry and very rough; the nails were very brittle. There was no loss of hair of the head, and over both malar prominences a slight flush; the face as a whole was puffy and moon-shaped, and the lips thickened; the tongue slightly coated and bowels constipated; her chief complaint was of deafness. When she did hear, questions were not answered at once, there being some few seconds spent in hesitation before a sentence was commenced. She spoke in a dull, apathetic tone, and had a considerable difficulty in articulating long words.

She was placed on a light, nutritious diet, with laxatives at bed-time as required, thyroid extract in tabloids of gr. ijss being given three times a day after each meal during the first fourteen days, after which the dose was doubled. After six weeks some signs of recovery appeared, the swelling of the body decreased, and the hearing and speech improved considerably.

The point which seems to make the case worth reporting is the deafness, which may have been due to the thickness and dryness of both tympanitic membranes. I have looked through several works on medicine, and I find no mention of "deafness" as one of the symptoms of myxoedema.

London, W. W. Rous Kemp, B.A.Camb., L.R.C.P.Lond.

BLINDNESS FROM WOOD-ALCOHOL POISONING.

I was particularly interested in Professor Casey A. Wood's paper in the British Medical Journal of December 29th, 1906, p. 1855, on the above subject, as I have at present under observation (the first case I have met with) a man blind from drinking a large quantity of wood-alcohol in America two years ago.

I think the most remarkable eye symptom produced by this form of intoxication is the more or less complete blindness, followed in a few days by return of vision, and then finally total failure of sight.

Dublin. Robert J. Montgomery, F.R.C.S.I.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

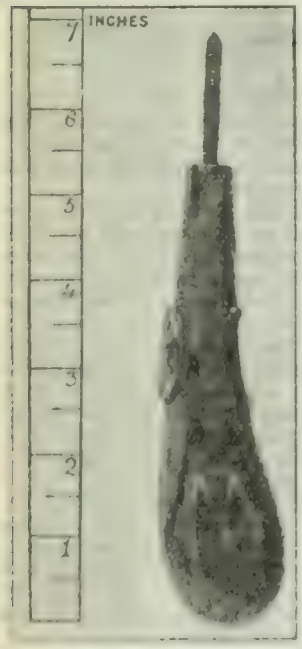
LIVERPOOL WORKHOUSE HOSPITAL.

FOREIGN BODY IN LARGE INTESTINE.

(Reported by Dr. J. T. MOORE, House-Surgeon.)

THE patient in this case, a dock labourer aged 45, was admitted under the care of Dr. W. Alexander, on April 11th, 1906. He stated that four days before, when intoxicated, and clad only in his shirt, he stepped off a chair while winding a clock, and sat down suddenly upon an umbrella which was in a stand beneath the clock. The ivory handle entered his rectum, and during the attempts of his wife to withdraw it, somehow the handle came away and remained inside. He had been given purgatives, which acted without dislodging the foreign body.

State on Admission.—By rectal and abdominal palpation nothing could be felt. Calomel was given and his bowels were well moved. There was no sign of injury or pain about the anus, no disturbance of pulse, tongue, or temperature, and it was concluded that the umbrella handle was a delusion. He was detained in hospital for three days, and, as no symptoms appeared, he was discharged. Nine days later he was readmitted, as a mass with a sharp edge could be distinctly felt through the abdominal wall, 2 in. below and to the left of the umbilicus, palpation of which caused slight pain. During the following four days the mass changed its position to the right and slightly above the umbilicus. An *x*-ray examination afforded no information. The following day he complained of pain, and his temperature rose to 99.8°. On further radiography, with the patient lying upon his right side, the umbrella handle, with the screw protruding from the end, could be distinctly seen.



Operation.—Next morning the abdomen was opened under chloroform, an incision 5 in. long being made in the middle line. Deep congestion of the abdominal muscles and peritoneum was found, and a faecal odour noticed. The screw was found protruding from the transverse colon near the hepatic flexure, lying free and dry in the abdominal cavity, the ivory part lying in the colon with the top of the handle to the right. Where the screw protruded there was inflammation but no pus. The colon was lifted out of the abdominal cavity by pulling on the screw, the intestinal opening enlarged, and the whole handle removed without material difficulty. The opening in the intestine was closed by three rows of fine silk, and omentum fastened over the intestinal incision. After progress was uneventful the patient left less than three weeks later being perfectly well.

REMARKS BY DR. ALEXANDER.—When no bruising about the anus was found, and nothing in his rectum, we naturally came to the conclusion that the man's story of an umbrella handle being in his rectum was a drunken myth. We did not, however, reckon on the travelling power of such a handle. The large rounded end was above and from that point the shaft became narrower, until it terminated in a point. When the handle was accidentally detached from the rest of the umbrella by the man with his fingers we doubt contracted to expel it, but owing to its shape and polished surface of the handle passed it inwards, and whilst we were examining the rectum with the finger the handle was negotiating the working sigmoid flexure. It took nine days to reach the comparatively straight stretch of the descending colon, being found here by palpation on April 20th. From here the feeling of it was very elusive as it slipped away from the finger immediately it was felt and did not give us a satisfactory outline to the palpator. The radiograph gave us the first clear indication of what the foreign body was, the metal screw showing especially well. On the 26th the handle had reached the hepatic flexure, when the pain and temperature warned us that it was time to stop its progress. Probably in stooping, or in some other movement of the body, the screw had been pushed through the bowel, and it is unlikely that it would have made any further progress along the intestinal tube. Gases were evidently escaping along the side of the screw, and fatal peritonitis would soon have followed. The perforation of the colon by the screw must have taken place very recently, as the metal was quite clean and lay quite free in the peritoneal cavity. I suppose this case has its fellow recorded somewhere, but I do not remember to have come across such a story; and, if not unique, it is rare. It shows a power of movement against the stream which in the case of an umbrella handle would not have been thought possible.

THE PUBLIC HOSPITAL, KINGSTON, JAMAICA.

ABDOMINAL PREGNANCY; LAPAROTOMY; A LIVING FETUS.

(Reported by J. ALDRED ALLWOOD, M.S., M.B.)

A. M., aged 33, female, negress, was admitted to the Public Hospital, Kingston, under my care on May 14th, 1906. She stated that she had always been healthy and had never suffered from menstrual or uterine troubles. She had been married twelve years and been pregnant twice. The first pregnancy, soon after marriage, went on to full term, when she was delivered of a female child. The second pregnancy (about nine years ago) ended in an abortion at the third month. Her third and present pregnancy began in September, 1905. Early in October she had severe pains in abdomen and profuse haemorrhage from the uterus lasting a week. It left her somewhat weak but able to perform her household duties. In the last week of November she was again attacked with such severe labour-like pains that she had to remain in bed for two weeks; the pain again abated and she was able to move about—not without some discomfort, however, and great lassitude. In the beginning of April the abdominal pain became very much worse and so remained until the day of her admission. Then, believing herself to be in labour, she sent for a doctor, who, after examining her, advised her to go to hospital for operation. The fetal movements were from the fifth month of the pregnancy very violent, and at times she would faint from the pain and sickening sensation they caused. While the fetal movements were in progress she was unable to lie down and at times would spend a whole night in a chair. She found that if some one pressed on the abdomen and lower part of her chest she was greatly relieved. The fetus always appeared to her to be very high up in the abdomen.

State on Admission.—She was anaemic and weak, with an anxious facies. Pulse 112, small and weak; temperature normal. The abdomen was distended and tender. A fetus could be distinctly felt free in the cavity; its movements, very vigorous, could be seen as well as felt. The fetal heart-sounds were heard best a little below and to the right of the umbilicus. P.V. Uterus enlarged to about size of a two months pregnancy. Position normal. Cervix short and soft. Os just admits tip of index finger. The fetal head can be felt in Douglas's pouch and can be moved about freely.

Operation.—The same day the abdomen was opened in the middle line below the umbilicus by a 4 in. incision, and the fetus removed feet first. The cord was ligatured in two places and divided. The child cried out several times as soon as it was delivered. The placenta, a firm, fleshy, globular mass, was found in the left side of the pelvis attached to the posterior surface of the uterus and adjacent broad ligament by dense vascular adhesions about 2 sq. in. in extent, and by three small adhesions to the omentum; these last adhesions were very little vascular. The uterine adhesions were detached with the finger and the omental ones ligatured and cut through. There was some haemorrhage from the uterine surface, which all attempts by pressure and ligature failed to control. The uterine tissue was so friable that deep sutures cut through and only superficial ones could be used. As the patient was not able to stand more loss of blood and as she was very collapsed, the uterus was quickly removed and the abdominal wound sutured with interrupted catgut for the peritoneum and silkworm gut for skin and muscles. A glass drainage tube was left in at the lower end of the wound, as the peritoneum was coated with a [illegible] material which looked like a mixture of meconium and [illegible] and which could not be removed either by [illegible] with baby

Result. The patient was very collapsed after the operation, but after two saline injections she rallied, and by next morning was decidedly stronger. She stated that she was quite comfortable, and had not been so free from pain during the past seven months. The urine had to be drawn for four days before she was able to pass it herself. The drainage tube was removed on the fifth day. She improved steadily until June 16th, by which time the wound had healed soundly, except a small portion at the lower end, and she was able to sit in a chair.

Remarks.—The fetus was a fully-developed female child. It was quite naked; no trace of any coverings was found. It died three hours after its delivery, although it appeared to be strong and healthy. As the placenta was free in the abdomen except for the adhesions mentioned, it is a matter for speculation how the fetus could have gone on to full term on such a slender blood supply. No rent was found in either of the tubes, nor any scar of an old wound. Both tubes were patent up to the uterus.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. Warrington Haward, F.R.C.S., President, in the Chair.

Tuesday, February 12th, 1907.

The Condition of the Blood Vessels during Shock.

Mr. J. D. Malcolm read a paper on this subject in which he maintained his view previously advanced that the arteries were constricted during shock, as opposed to the older theory that shock was due to a paralysis of the vessels in the splanchnic area, and as opposed to the more recent teaching of Dr. G. W. Crile, that there was a paralysis of the vasomotor centre and consequent relaxation of the vessels throughout the body. The latter theory failed to account for the pallor of the skin in shock; for the fact that the first effect of vaso-dilators was to increase the volume of blood in the radial artery, which was supposed to be paralysed; that fluids would not enter the veins during extreme shock, or, if they did they immediately passed out into the tissues; that the blood-pressure was raised in the portal vein during shock; or the rise of specific gravity, which Cobbett and Roy discovered in the blood of animals in shock. It was maintained that these difficulties were at once and easily explained by, and that the most successful treatment of shock was in harmony with, the theory that the vessels were contracted. The advisability of administering stimulating vaso-dilators and of the application of warmth were hence particularly insisted on.

Mr. P. Lockhart Mummery said that the theory associated with the name of Dr. Crile had been founded on careful experimental work; the theory was that it was due to exhaustion of the vasomotor centres. He was able to assert, from his own experience, that the arteries were not contracted but relaxed in shock. The capillaries were, however, empty, because the arterial pressure was not high enough to fill them. The pallor of the skin in shock depended on this depletion of the capillaries. Fluids very easily entered the circulation in shock. The blood pressure in the portal vein in shock never became higher than that of the arteries, but a slight rise did occur. It was doubtful if there were any loss of heat in shock beyond that to be explained by diminution in metabolism.

Dr. Leonard Williams, in combating the views expressed in the paper, said that the exhaustion of the medulla was only partial, and so relaxation was never complete during life.

Dr. A. Morison thought the main point in shock was cardio-vascular paralysis, of which all degrees of paralysis occurred. The elasticity of the arteries, in the absence of arterial pressure, diminished the calibre of the arteries. Heat stimulated through the central nervous system.

Dr. W. Sheen suggested, from his own observations, that the arteries in shock were neither contracted nor dilated, but retracted, seeing that there was no blood to fill them. In severe injuries before the symptoms of shock appeared the subject seemed to have little the matter with him which could be ascribed to the initial rise in blood pressure. Then followed the accumulation of blood in the abdominal veins.

Dr. Beddard thought the primary thing to explain in shock was the fall in the general blood pressure. Physiologists would admit that the main factor was the peripheral resistance, which depended on the condition of the microscopic arterioles. The pallor of the surface depended on the accumulation of the blood in the abdominal veins; even the volume of a limb diminished in shock. The prime matter was the diminished peripheral resistance in the splanchnic area. The application of heat in shock was a fundamental thing; the muscular tone was reduced, and thus the main source of heat removed. The subject, therefore, became really a cold-blooded animal. Shock, however, was not merely a vascular phenomenon.

Mr. Malcolm replied.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

J. O. Affleck, M.D., President, in the Chair.

Wednesday, February 6th, 1907.

Treatment of some Diseases commonly regarded as of Gouty Origin.

Dr. Chalmers Watson read a paper based on a series of over 150 cases met with in private practice, in which the symptoms were of a nature usually regarded as "gouty." The conditions dealt with included migraine, "rheumatic" pains, recurring catarrh of a mucous membrane, and some vague and ill-defined symptoms often encountered after middle life. While admitting that the terms "gouty" and "goutiness" were unsatisfactory terms, he refrained from defining the words "gouty origin." It is sufficient to say that the cases considered by him belonged to a type which was as a rule, by common consent of the patient, practitioner, and consultant alike, regarded as of gouty origin. Illustrative cases were cited, and, in discussing their treatment, consideration was given to the probable explanation of the value of (1) a restriction in the amount of animal proteid food; (2) measures directed to increase the functional activity of the liver, kidney, and skin; (3) small doses of thyroid gland extract in cases not readily amenable to other forms of treatment. The author pointed out that the benefit which he had observed, and which apparently resulted from the use of thyroid extract, used as a supplementary measure in troublesome cases, lent some support to his view that the good effects obtained by merely restricting the amount of animal proteid food in many cases was due to the favourable influence of such a diet on the thyroid gland. Particular attention was directed to the functions of the thyroid gland in neutralizing toxic substances resulting from faulty digestion and assimilation of food-stuffs. Reference was made to the author's researches, which showed that different diets induced, as a rule, different states of functional activity of the thyroid gland, the histological appearances clearly indicating that this gland was intimately concerned with the metabolism of a highly nitrogenous diet such as meat, and also a diet containing excess of carbohydrates, such as bread. The fact that some cases of the kind discussed were occasionally treated very successfully by means of an excessive meat diet (Salisbury diet) did not negative the author's view. In such cases it was reasonable to suppose that the degrees of rest given to the thyroid gland (and other glands) by cutting off the carbohydrates in the food might enable the thyroid to regain its nutritive equilibrium. The author proceeded to compare the two diathetic conditions—gout and tuberculosis. Some antagonism between the two conditions had long been recognized, and was supported by the relative infrequency of tuberculosis in carnivorous animals. The former was in general a disease of well-grown, vigorous subjects, and in its treatment a restriction in the amount of animal proteid is of special value; the latter was in general a disease of less developed and less robust subjects, and in its treatment special value attached to the use of a great excess of animal food (zomotherapy). In a paper read before the Royal Medical and Chirurgical Society in 1904 the author submitted experimental data obtained from an experimental investigation on gout in fowls which suggested to him that the thyroid gland was more intimately concerned in both diseases than is at present believed. These data, coupled with the clinical observations, had led him to believe that the subjects of inherited or acquired gout had acquired from their environment—which included diet—a type of thyroid gland which was abnormally active and which worked, so

to speak, at high pressure; whereas subjects predisposed to tuberculosis had an inactive thyroid glandular system. Reference was made to a recent paper by Lorand in which that author suggested that thyroid inadequacy was a factor in tuberculosis. Some scientific evidence in favour of the author's views was submitted in the form of a lantern demonstration of the effects of a meat diet in normal and in tuberculous fowls and also in rats. Attention was also directed to the modification in structure of the kidney, bone marrow, and osseous system in the offspring of meat-fed rats. Thereafter it was shown that similar modifications in structure and function were present in the human subject, this being demonstrated by sections of the thyroid gland and osseous system of an infant, aged 16 months, whose mother, a tuberculous subject, had been fed for a prolonged period prior to and during gestation on an excessive meat diet, in which the clinical picture during life indicated to the author that the symptoms, which were otherwise obscure, were the result of exhausted functional activity of certain organs, notably the bone marrow and thyroid gland, this diagnosis being confirmed by *post-mortem* examination. Reference was made to clinical facts, personally observed, which suggested that the diathesis of a tuberculous child can be favourably modified in the course of a few years by a diet containing an excess of animal proteid food. In two children under 3 years of age, in good circumstances, both weakly, anaemic, and typically tuberculous-looking subjects, with very pronounced family history of tuberculosis, the administration of a liberal diet of milk, cream, eggs, fish, bread, vegetables, and fruit, with, in addition, ½ lb. raw meat juice daily over two years, effected a radical change in the general appearance and conformation of the children. They became strong, vigorous subjects, with well-developed muscles and high colour index of blood. After a little over two years' treatment, one of the children was brought to the author with the complaint that of late so-called "bilious attacks" had developed, and also that the child complained of tender feet, these being symptoms that are specially frequent in the children of gouty parentage. The treatment of gout and so-called gouttiness should be prophylactic and begun in early life. The author concluded with some practical observations on the amount of animal proteid food which should be given to children. The following recommendations are made: (1) In the offspring of gouty subjects the amount of meat given should be small in amount, and little or no red meat should be given under 6 years of age. (2) In the children of tuberculous subjects the diet should, from the earliest periods, include a liberal supply of red meat in appropriate form. (3) In cases of mixed diathesis each case has to be treated on its merits. (4) As the neuritic pains seen in tuberculosis may have a striking resemblance to those seen in the arthritic diathesis, special care must be taken in the diagnosis before reducing the amount of meat in the diet.

Dr. William Ewart believed that most of the good results attributed to thyroid gland extract were due to the dietary which Dr. Watson adopted. He had tried thyroid gland extract, with disappointing results.

Acute Cerebro-Spinal Meningitis.

Drs. Jones Thomson and Stuart McDonald contributed notes and a clinical demonstration on two fatal cases of acute cerebro-spinal meningitis in young children. The symptoms did not differ essentially from those of ordinary posterior basic meningitis, but they were far more intense, as if arising from a much more virulent organism. The spinal fluid was so turbid as to look like pus. The duration of the illness was to be measured by days instead of weeks, and the average age of the patients was about [illegible]. In neither case were purpuric spots present. On *post mortem* examination an acute [illegible] of the brain and spinal cord was found. On the pons the exudate was vertical as well as basal. Meningococci were found in the exudate from the brain and spinal cord. The organisms were typically Gram negative. The other organs showed evidence of an acute [illegible]. Films from the cerebro-spinal fluid removed during life showed a great excess of polymorphonuclear leucocytes, together with great numbers of meningococci. Cultures of typical meningococci were also obtained from the cerebro-spinal fluid. Gram positive forms of the organism appeared in the cultures, and in the subcultivations the organism had become strongly Gram-positive. In one culture on serum agar pointed diplococci very like pneumococci appeared. In subsequent cultivations the typical shape of the meningococci returned. Though the organisms were now Gram-positive the authors were of opinion that they were dealing with pure cultures of the meningococci. Observations on a third and recent case which had occurred at the Sick Children's Hospital, Edinburgh, confirmed the above-mentioned alterations in the reaction of the organism to Gram's method. The authors were of opinion that from a bacteriological aspect posterior basal meningitis and acute cerebro-spinal meningitis are identical, only differing in virulence. They suggested that attenuated meningococci might exist in the nasal or other secretions of children, that under certain conditions the meningococci might become virulent and give rise to posterior basal meningitis, and that under other conditions the organism might become more virulent, resulting in the acute epidemic form of the disease.

Dr. William Elder communicated notes on several cases of epidemic cerebro-spinal meningitis which were under his care at Leith Hospital. The main facts were similar to those described by Drs. Thomson and Stuart McDonald. He was of opinion that the disease was due to the pneumococcus and not to a special organism.

Dr. William Ritchie dissented from this view, and pointed out the differences bacteriologically which existed between the pneumococcus and the *Micrococcus intracellularis*.

CLINICAL SOCIETY OF LONDON.

H. H. Clutton, M.A., M.C., F.R.C.S., President, in the Chair.

Friday, February 8th, 1907.

Enteric, Pneumonia, Pericarditis, and Haemorrhagic Pleural Effusion.

Dr. Francis Hawkins (Reading) related the case of a girl, aged 20, whose illness commenced with sore throat and feeling of stiffness in legs. Five days later she had a shivering fit, followed by diarrhoea. During the illness no typhoid spots appeared, but the abdomen was distended; the bowels were moved from twice to seven times daily. Widal's reaction was positive. Early in the third week she expectorated blood; two days later the expectoration was rusty, and there was consolidation of the left base. Pericardial friction was heard during the fifth week, when the patient's condition became critical. The respirations were 42, the pulse 128. Paracentesis withdrew 14½ oz. of haemorrhagic fluid. Afterwards the patient improved, but the temperature was not normal till the seventh week. A systolic murmur was heard at the apex in the third week. Dr. Hawkins remarked on the rarity of these complications in typhoid fever.

Dr. de Havilland Hall suggested that there was a superadded rheumatic infection.

Dr. Hale White suggested that the case was one of pneumococcal infection. Each feature of the illness was rare in typhoid, and the temperature chart unlike that of typhoid. How often had the Widal test been tried?

In reply to questions by Dr. Ewart and Dr. Forsyth,

Dr. Hawkins replied that he had treated the case with hydrochloric acid. The fever fell at first with salicylates, then rose again. The Widal test had been tried once. The patient might have had typhoid previously.

General Paralysis of the Insane in a Boy.

Mr. J. R. Lunn and Dr. Gordon Holmes reported the case of a boy, aged 16, who had been shown to the Society in January 1906. In the following month he had an unconscious fit accompanied by more weakness of left arm and leg. In August he had right facial paralysis and a spastic hemiplegic condition of left arm and leg, with incontinence of urine. On September 15th he had another fit with conjugate deviation of eyes to left and increased knee jerks, and died. *Post mortem* notes: A recent blood clot of about 3 oz. was situated between the dura mater and arachnoid and compressed the brain on the left side. No rupture of a sinus could be found nor other lesions in the body.

Dr. Gordon Holmes demonstrated on the screen a series of microphotographs which showed striking changes in the blood vessels throughout the brain, large

numbers of plasma cells being evident in their sheaths; syphilitic endarteritis in some vessels of the lumbar cord; the tangential fibres of the cortex greatly diminished; advanced granular ependymitis extending even to the fourth ventricle. The meninges were not thickened. The changes were pathognomonic of general paralysis of the insane and confirmed the clinical diagnosis. The tremor of the left hand that the boy had had at times lasting for twenty minutes indicated irritation of the arm area. In reply to questions Dr. Gordon Holmes said the changes indicated a chronic inflammation due to blood toxins. The ependyma showed interruption of its lining cells and increase in the glia, which was not very vascular. The walls of the vessels were hyaline.

Idiopathic Dilatation of Rectum and Colon below the Hepatic Flexure.

Dr. Morley Fletcher and Mr. Betham Robinson communicated a paper on this subject, which is published at page 370.

Dr. A. E. Garrod referred to two similar cases; the patients had repeated attacks of tetany, indicating absorption of toxins. They were relieved by enemata.

Mr. Makins, discussing treatment, thought anastomosis at the base of the dilatation unjustifiable, as a dilated loop tended to form. He instanced three cases, all in elderly people.

The President advised colotomy and prolonged drainage before attempting more extensive operations.

Mr. John Malcolm alluded to the possibility after anastomosis of the hypertrophied lower bowel forcing faeces backwards into the dilated part as well as onwards.

Dr. Hale White thought if this happened dilatation would more frequently exist than it does. Such cases ended rarely in coma.

Dr. D. Forsyth supported Mr. Malcolm's view of such operations.

Dr. H. A. Caley thought the case might have originated in faecal obstruction.

Mr. Mayo Robson also thought there was obstruction, possibly due to pathological changes in the sphincter, such as fibrosis.

Dr. Fletcher, in reply, said the sphincter muscle was normal. The circumference of the gut had diminished by 5 in. between the operation and the autopsy.

OBSTETRICAL SOCIETY OF LONDON.

W. R. Dakin, M.D., President, in the Chair.

Wednesday, February 6th, 1907.

Specimens.

The following specimens were shown: Mr. J. Bland-Sutton: A villous tumour of the uterus in a woman, aged 84 years; hysterectomy, recovery. Mrs. Boyd: (1) A specimen of diffuse fibromyoma of the uterus occupying the whole of the supravaginal portion of the cervix and the greater part of the body, partially intraligamentous and subperitoneal in its development, and complicated by pregnancy in the right cornu of three to four months' duration; (2) a specimen of papilliferous cystic adenocarcinoma of the left ovary removed from a patient, aged 54. Mr. Doran (for the late Dr. G. Bagot Ferguson): Chorion-endothelioma of uterus; intraperitoneal haemorrhage; hysterectomy; death. Dr. Tate: (1) Case of suppuration in fibro-myoma uteri following confinement, treated by abdominal hysterectomy; (2) case of co-existing tubal and uterine pregnancy—tubal pregnancy treated by abdominal section, subsequent delivery of living child at term.

President's Valedictory Address.

After the reports of the Treasurer and the Honorary Librarian had been read and adopted, the President delivered the valedictory address.

Officers and Council.

The following list of officers and Council for the ensuing year was announced, and the proceedings closed with votes of thanks to the retiring President, officers, and members of Council: *President*, Herbert R. Spencer, M.D.; *Vice-Presidents*, Albert C. Butler-Smythe, Montagu Handfield-Jones, M.D., John Phillips, M.D., William Japp Sinclair, Kt., M.D. (Manchester); *Treasurer*, George Ernest Herman, M.B.; *Editor of "Transactions,"* Herbert R. Spencer, M.D.; *Honorary Secretaries*, Robert Boxall, M.D., Arthur H. N. Lewers, M.D.; *Honorary Librarian*, William John Gow, M.D.; *Other Members of Council*, Henry Russell Andrews, M.D., Henry Briggs, M.B., F.R.C.S. (Liverpool), William H. B. Brook, M.D. (Lincoln), Charles James Cullingworth, M.D., George Eastes, M.B., F.R.C.S., Thomas W. Eden, M.D., John Shields Fairbairn, M.D., B.Ch., John Benjamin Hellier, M.D. (Leeds), Henry Thomas Hicks, F.R.C.S., Jamieson Boyd Hurry, M.D. (Reading), John Martin Munro Kerr, M.B., C.M. (Glasgow), Cuthbert Lockyer, M.D., B.S., Charles Hubert Roberts, M.D., Amand Routh, M.D., Mary Ann Dacomb Scharlieb, M.D., James Henry Targett, M.S., F.R.C.S., Herbert Williamson, M.B., Thomas Wilson, M.D. (Birmingham).

Medical Society of London.—At a clinical meeting held on February 11th, with Mr. C. W. Mansell Moullin in the chair, Dr. O. K. Williamson showed a case of morbus cordis; Dr. T. D. Savill one of clonic respiratory spasm (spasmodic tic) in a boy aged 17, treated by systematized exercises resulting in great improvement; Mr. L. B. Rawlin a case of appendicostomy for dysenteric ulceration of the large intestine, and a case of chronic abscess of the frontal lobe in which permanent recovery ensued after several operations, in the last of which the abscess walls were seized and the whole structure removed *en masse*: Mr. A. E. Barker showed a case of fracture of the humerus cured by Bier's passive hyperaemia, and one of non-suppurative absorption of the head of the femur in a boy; Dr. Parkes Weber a case of multiple salivary calculi in a man; Mr. T. H. Kellock a case of multiple fibrous nodules in the hands; Mr. Gordon Watson one of arthrodesis for flail limb; Mr. C. A. R. Nitch two cases of separation of the upper femoral epiphysis; Dr. James Collier a case of syringomyelia; Dr. Wilfred Harris a case of spastic paresis of the left upper extremity with cyanosis of the hand; Dr. Graham Little a case of psoriasis simulating lupus erythematosus; and Dr. Leonard Guthrie a case of a boy, aged 5, exhibiting precocious obesity, with an incipient moustache and downy hair on the chin and cheeks, and presenting the appearance of a burly drayman in miniature.

Ulster Medical Society.—At a meeting on February 7th, Dr. D. P. Gaussen, President, in the chair, a discussion on the epidemic of cerebro-spinal fever at present in Belfast was opened by Dr. Symmers, Professor of Pathology, Queen's College, and Dr. Robb, medical officer to the Fever Hospital. Professor Symmers said that he had had five *post-mortem* examinations; in all there was pericarditis, in none endocarditis; in all there were enlarged solitary glands, some enteritis, and enlarged mesenteric glands; there was some pyelitis, and the bladder was pinkish. From the glands he was able to cultivate a diplococcus similar to the *Diplococcus intracellularis*. He also referred to the different reaction of the diplococcus to Gram's stain according as it was in a vigorous or feeble growth, and to the inherent difficulties of preparing a serum. Dr. Robb gave an analysis of the 37 cases that had been admitted to the hospital; 16 had died; one-third of the total had been of the acute fulminant type. The detailed symptoms showed some variations from the usual percentages. Sir William Whitla wrote drawing attention to the number of cases of basic meningitis that had occurred during November and December. Professor Lindsay and Dr. Calwell read notes of cases that had come under their notice; and Dr. McCaw said that in the Queen Street Hospital for Sick Children they had had each winter always some cases of basic meningitis; he had never seen any infection. He also drew attention to some cases of sudden death, which in all probability were from this disease. The discussion was postponed till Thursday, February 14th.

Glasgow Medico-Chirurgical Society.—At a meeting held on January 25th, Dr. J. Lindsay Steven, President, in the chair, Dr. J. A. Campbell read a paper on the opsonic index, and gave a demonstration on the technique. Normal variations ranged from 0.9 to 1.2. In tuberculous subjects he met with variations between 0.2 and 2.8. In some individual cases the range was from 0.5 to 1.6. Chronic cases were most suitable for treatment with vaccines. Further inoculations were given when the

positive phase was beginning to wane, with the object of in time producing a contrary positive phase. Notes on cases successfully treated by vaccines were read. In a case of cystitis the improvement was remarkable.

Society of Anaesthetists.—At a meeting held on February 1st, Dr. Probyn Williams, the President, in the chair, Dr. Leonard Guthrie read a paper upon poisonous after-effects of chloroform and ether. He attributed the symptoms described in his own and other like cases to acute fatty acid intoxication, and held that as the amount of fatty degeneration present *post mortem* in such cases could not be attributed solely to the often small amount of anaesthetic inhaled, there must be some pre-existing fatty change in the subjects, exposing them to fatality when the effect of the anaesthetic was superimposed upon that faulty state. He referred to conditions clinically resembling these cases, such as the cyclic vomiting of children, diabetic coma, and acute yellow atrophy of the liver. It was probable that many mild cases of vomiting after anaesthesia were of a similar nature to the fatal cases. He described the recent observations upon the occurrence of acetonuria after anaesthesia induced by various agents. Finally, he discussed the possibility of anticipating the likelihood of post-anaesthetic trouble, and indicated the proper line of prophylaxis where such anticipation was possible, and the treatment for the symptoms when they actually arose. Dr. William Hunter said, as regards acute yellow atrophy, although the clinical manifestations were similar, yet he regarded the *post-mortem* changes in the two kinds of cases as being quite distinct. There was an amount of necrobiotic change in the acute yellow atrophy cases both in liver and in kidney that was not in the least paralleled in the post-chloroform deaths. If the post-chloroform changes were caused by a diffusible stimulant poison, there was strong suggestion of some similar diffusible poison being at work also in other instances which were clinically similar but in which there was no question of chloroform influence. He believed that in the case of all poisons the question of idiosyncrasy was no mere refuge of the destitute as an explanation. He was certain that dogs, for instance, displayed such an idiosyncrasy towards chloroform. Dr. H. D. Rolleston admitted that chloroform, like alcohol and iodoform, could produce fatty liver, but he interpreted the sequence of events differently in these cases of poisoning after chloroform. He believed that probably the liver changes were secondary to the fatty acid intoxication caused by the action of chloroform on the fats of the body generally. The action of poisons like those present in acidosis and chloroform so impaired the vitality of the liver cells that pathological fatty infiltration could occur. In favour of the view that the fatty liver was not the cause of the fatty acid intoxication, he drew attention to the case of diabetic coma—the commonest example of acid intoxication—in which the liver was not nearly so excessively fatty as in these chloroform cases. He further laid stress upon the effect of starvation due to the abstinence necessary before operations, and to the further abstinence and sometimes vomiting afterwards. Females were more easily susceptible to acidosis than males, and this point had been remarkably emphasized in observations he had made upon cases of gastric ulcer. Dr. Dudley Buxton referred to the experimental production of fatty changes by chloroform administration which was effected both by giving anæsthetic weak dosage over prolonged periods and by administering one excessive amount. Such changes did not occur as the result of therapeutic doses. He objected to the term "chloroform poisoning" because it was not yet proved that the symptoms were due to chloroform at all. How many very fat people were exposed to long administrations of chloroform without suffering any after effects? Probably the kidney was at least as responsible as the liver in cases that ended fatally. Questions had been raised on the history of cases quoted upon the amount of vapour given, yet all anæsthetists realized the fact that a high percentage vapour had been given for short periods compared with the comparatively low percentage of a long one. The discussion was continued by Dr. J. Ye. MacCardie, Dr. R. T. Brancker, Mrs. Dreschfeld, Dr. Sutherland, Dr. Hawes, Harrison and the President, and Dr. Gutteridge replied.

Liverpool Medical Institution.—At a pathological meeting on February 7th, Mr. Frank Paul, President, in the chair, after the exhibition of numerous specimens, Mr. C. E. Walker, Assistant Director of Cancer Research in the Liverpool University, read a paper on The Gametoid Theory of Cancer. He explained that as living matter existed only in the form of cells, all problems of living phenomena must be ultimately cell problems. As all multicellular organisms, whether plants or animals, originated from a single cell (the fertilized ovum), the potentiality of all the cells subsequently produced from it are contained in the fertilized ovum. This general potentiality was retained to some extent even by the highly differentiated cells of the body, and examples were quoted to illustrate this. The mode of division by which the cells of the body were produced was described, and the essential differences between this mode of cell division and that observed in the production of sexual elements (spermatozoa and ova) were explained. The reduction in the number of chromosomes to one half of the number found in the cells forming the body tissues which was observed to take place in the sexual cells was compared with a similar phenomenon occurring in the cells forming malignant growths. Though a reduction in the number of chromosomes below that found in normal tissue cells had previously been described as occurring among the cells of malignant growths, this reduction had been supposed to be quite irregular. In 1903 Professor Farmer, Mr. Moore, and the author described the occurrence of division figures in cancer which possessed all the peculiar characteristics of the heterotype division—that is, the form of division in which the number of chromosomes was reduced to one half of the normal number found in the cells of the body. A diagram was exhibited which showed the results of an indiscriminate counting of the chromosomes in the dividing cells of malignant growths. This diagram, when compared with one showing the results of a similar counting of the chromosomes in the cells of a testis, proved that the relative proportions of cells containing the full and exactly half the normal numbers of chronosomes was almost identical in malignant growths and in testes. It was shown that "Plimmer's bodies," so frequently decribed by various authors as being the parasite of cancer, were exactly similar in origin, mode of development and in structure, to the archoplasmic vesicles found in the spermatids of certain animals, including all mammals, but never in any other normal cells of the body. Thus there was another direct parallel between the cells of malignant growths and those of normal reproductive tissue. Emphasis was laid upon the fact that cells that had entered upon the reproductive phase lived normally as parasites upon the parent organism, and that all such cells, whether in animals or in plants, were out of co-ordination with the rest of the body. A true fusion between leucocytes and tissue cells was described as being one of the earliest phenomena in the commencement of malignant growths. Reduction in the number of chromosomes to one half of the somatic (body) number was described as taking place normally among the leucocytes, thus making it probable that certain generations of leucocytes went through a sexual phase. The fusion between the tissue cells and leucocytes was elucidated in view of this fact. In any case it was probable that a hybrid race of cells, out of co-ordination with the parent organism, was produced. There were two reasonable deductions that might be made with regard to these observations. The malignancy of certain tumours might be due to the cells forming them entering upon a sexual phase, and then living as a parasite upon the parent organism, as such cells always did. In that case it would be necessary to seek the cause or causes which induced this change. This left the leucocytic fusion in the position of a mere coincidence of no material importance. On the other hand, this fusion itself would equally account for the peculiar qualities possessed by the cells of malignant growths. They would necessarily be out of co-ordination with the parent organism and would live as parasites upon it. Moreover, that some of them should enter upon the sexual phase was exactly what would be likely to happen. Here it would be necessary to find out under what conditions the fusion between the leucocytes and tissue cells was possible. It might be due to some change in either or both of the two kinds of cells.

REVIEWS.

MEDICAL ELECTRICITY.

Dr. Lewis Jones's handbook of *Medical Electricity*[1] is one of the best known, and we believe one of the best books on the subject in the English language; it is not surprising, therefore, that it has recently reached a fifth edition. The first part of the book is occupied to the extent of some 240 pages by the discussion of first principles and the description of apparatus; the discussion on the Roentgen rays occupies about 60 more. These sections are very full, the diagrams are plentiful and clear, and the description of them lucid. It may be doubted whether in the present day the author need have so much laid to heart the aphorism of Faraday to take for granted that the amount of previous knowledge likely to be possessed by his readers was *nil;* for surely a medical student may be presupposed to have learnt something of the physical nature of electricity, and to have a working knowledge of and to have handled and used a Leyden jar, a voltaic cell, and a gold-leaf electroscope. However, given the necessity for the introduction of such matter these preliminary explanations are well done. The illustrations are not so satisfactory. Many of them are obviously reproductions of plates from instrument makers' catalogues, for the maker's name is a prominent feature; this we regard as unfortunate.

The Roentgen rays, as might be expected from the prominence of the subject at the present day, are exhaustively treated, and the preliminary discussion of the nature of this form of radiant energy are suitable. Here, again, however, many of the illustrations are merely photographs of the exterior of apparatus, and we cannot see what use such a picture as Fig. 123 can be to any one. No scale is given, and the object might be 2 in. or 2 yd. high. Fig. 165 (the Davidson localizer) is on far too small a scale to convey any idea of the method of use; and Fig. 146, showing the setting up of an installation, is open to similar criticism. Few practitioners would set about making their own apparatus, and five minutes' consultation with a practical electrician would be more informing than the study of such pictures. However, there is really no harm in these things, though they serve to make the book unnecessarily cumbersome. A short treatise on radium follows, and completes this section. The "physiological considerations" contained in the next section should have been learnt by the modern student in the laboratory, but they will be found useful by older men.

The rest of the work is devoted to the practical treatment of disease by electrical methods, and it is in relation to these that we wish to make a few general remarks. Before doing so, we note the interesting account of the action of *x* rays on the white cells of the blood, but the time does not yet seem ripe for mature consideration of the therapeutic value of the rays in cases of leukaemia. A similar remark applies to the ingenious discussion on ionic medication or kataphoresis, being the direct introduction of drugs into the body by means of electric currents, on p. 304.

With regard to general therapeusis by means of electricity, Dr. Lewis Jones supplies the reader with many opinions as the value of electricity in the treatment of various diseases. His own observations are recorded carefully, and his opinions as to the results guardedly and temperately expressed; but those quoted from other observers are more sweeping, and seem to us to be in many cases open to much destructive criticism. We are willing, however, to concede that this book is as good a one as can be written from the standpoint of a specialist of the highest experience and standing.

There is, however, another point of view from which electrical treatment deserves consideration. The profession is entitled to some explanation of why, when so many experts recommend it for many diseases, it is so largely neglected by those whom we should suppose *a priori* to be the very persons who would frequently employ it. For diagnostic purposes all forms are frequently employed, and *x* rays, both in this direction and in the treatment of certain forms of disease, enjoy considerable and deserved repute. In cases where damage to neurons or their nuclei have cut muscle fibres off from their normal sources of stimulating energy few doubt the value of the electric current in maintaining contractility, but in regard to many cases where in this and other books electricity is praised as a curative agent, the general attitude of the profession is a passive agnosticism, if not an active scepticism. One way of gauging the position of a remedy is to consult a book written some years ago, and consider whether the claims then made have stood the test of time. Pursuing this method, we looked up a standard work of about twenty years ago, and found electricity recommended for such diseases as cerebral congestion, cerebral anaemia, spasmodic asthma, bedsores, vomiting, gastric catarrh, strangulated hernia, and aneurysm. Few of these conditions would be treated by this means at the present day. Another method is to take recognized textbooks on various diseases, medical and surgical, and see if the remedy is recommended in the same terms as by the electrical specialists. We consulted a very well-known textbook on dermatology and found that electricity praised by our author in the treatment of alopecia areata is not mentioned at all by the dermatologist, and that the same is the case with regard to psoriasis and pruritus. It is also true of tinea tonsurans, but it is fair to say that Sabouraud endorses electrical treatment for the last affection. A third method is to inquire of eminent men in practice to what extent they employ the remedy. We asked a distinguished aural and throat specialist the question, and got for an answer, "With the exception of its use as a cauterizing agent I have given it up. I formerly used it for tinnitus aurium but find it useless." The disease mentioned is regarded by many electricians as peculiarly suited for their treatment.

We do not wish to be misunderstood; we are far from stating or implying that electrical treatment has had its day, or that the better class of man who employs it habitually overstates its effect or continues to treat cases by its means which are either unsuited for the treatment or have ceased to be benefited by it, but there is undoubtedly a not ill-grounded impression abroad that such practices are not wholly confined to charlatans. It behoves men of eminence of the stamp of our author to sift the wheat from the chaff, and make it clear to those less expert in their particular branch of treatment, its limitations as well as its possibilities. If specialism in the study of disease has its dangers, how much more has specialism in treatment? In addition to that narrowness of view to which both may lead, the latter may induce the condition of things that obtains with the prescribing chemist—knowledge of his therapeutic material combined with ignorance of the pathological condition with which he is attempting to deal.

INTESTINAL SURGERY.

Professor Henri Hartmann's[2] volume on the surgery of the intestine is the third of a series published with the collaboration of assistants. Dr. P. Lecène and Dr. J. Okinczyc, former pupils and distinguished students, have assisted in the preparation of the present issue. As in the two previous publications, the study of normal and pathological anatomy in relation to problems of "clinical" surgery is the point of view from which the subjects discussed are primarily approached. It may be said at once that this third volume sustains the reputation of its predecessors, and is a most valuable contribution to the literature of intestinal surgery. As a preface to the papers, the statistics of the department in the Lariboisière Hospital, over which Professor Hartmann presides, are given for the year March, 1903, to February, 1904. Included in the operations are 4 gastrostomies with 2 deaths and 27 gastro-enterostomies with 4 deaths. In 23 of the gastro-enterostomies the posterior operation was performed with 2 deaths, in 4 the anterior operation with 2 deaths. The causes of death were: The "vicious" circle, peritonitis, cancerous cachexia, and yellow atrophy of the liver; 2 of the deaths were therefore connected with the operation. The first paper, by Professor Hartmann, is on intestinal and gastro-intestinal anastomosis. In addition to describing

[1] *Medical Electricity: A Practical Handbook for Students and Practitioners.* By H. Lewis Jones, M.A., M.D. London: H. K. Lewis. 1906. Fifth edition. (Demy 8vo. pp. 519, illustrations 185. 12s. 6d.)

[2] *Travaux de Chirurgie Anatomo-clinique.* Par Henri Hartmann. Troisième série. Chirurgie de l'Intestin. [Studies in Surgical Anatomy. By Henri Hartmann. Third series. Surgery of the Intestine.] Paris: Georges Steinheil. 1907. (Demy 4to, pp. 453, Figs. 153. Fr. 16.)

the methods which he prefers, he gives a comprehensive description of the various procedures more or less in vogue. He prefers in all ordinary cases the simple suture in two rows, recommending the Murphy button for special cases only—in colorectostomy, for example. Special apparatus for facilitating anastomosis has, he remarks, served its purpose and had its day. In regard to gastro-jejunostomy, he makes a special point of establishing the junction without a loop as near as convenient to the commencement of the jejunum; to this matter Petersen directed attention in 1901, and it has lately been discussed by several well-known surgeons. In a second paper, Professor Hartmann treats of the subject of intestinal exclusion. He makes the important statement that for inoperable intestinal new growths he prefers entero-anastomosis to intestinal exclusion, but that in chronic inflammatory lesions, where it is desired to give complete rest to bowel and for lesions associated with suppurating fistulae, he looks upon bilateral exclusion as the method of choice. This exclusion is associated with fistulization of the two extremities of the affected bowel. The next three papers are by Dr. J. Okinczyc. The first of these is an exhaustive monograph in three chapters on the anatomy of the colon. The first chapter is on development, the second on surgical anatomy and the third on the vessels; all these three sections of the subject are treated in elaborate detail. Dr. Okinczyc's other two papers are on the pathological anatomy and the clinical study of tumours of the colon. They are in every respect models of what such studies should be and should receive the careful attention of all surgeons who undertake intestinal work. Professor Hartmann supplies the natural complement to these papers in an article on the surgical treatment of cancer of the colon. There are several points in this article worthy of comment. The author emphatically supports the view that immediate anastomosis after removal of colon cancer is only justifiable in exceptional cases, and never where there is already definite obstruction. He advises either exteriorization and resection of the tumour with the establishment of an artificial anus, or a preliminary cæcal artificial anus followed by removal of the growth. While admitting the theoretical superiority of entero-anastomosis over colostomy for the relief of obstruction, he draws attention to the high mortality attendant on the former and the comparative benignity of the latter. In 14 cases of entero-anastomosis he himself records four deaths. In his preference for colostomy over entero-anastomosis in cases in which obstruction is marked Professor Hartmann is certainly supported by the weight of surgical opinion; he would restrict the latter to cases in which obstruction is only moderate in degree and in which purgatives are still capable of producing a free evacuation. The four deaths just referred to occurred in cases in which colon was united to ileum, while in 5 cases of ileo-colostomy a good result was obtained; from these and other figures bearing on the point the author concludes that it is always preferable to unite ileum to colon rather than colon to colon whenever it is a question of the choice of one method or the other. The final paper in the volume is by Dr. P. Lecène on sarcoma of the small intestine, based on 89 recorded cases. The records show that these growths are most common in the ileum, that they encircle the bowel but do not as a rule cause obstruction; and that the common type is the round-celled sarcoma. Three unpublished cases are related. There are many good illustrations throughout the volume, and altogether it is quite a notable addition to surgical literature.

Dr. [illegible] (Baden-Baden) has written a pamphlet of some interest on appendicitis, particularly in relation to the much-debated question of the time for operation. He gives an outline of the anatomy of the appendix and cæcum, and supports the view that anatomical peculiarities have often much to do with the occurrence of inflammatory attacks in this region, illustrating the point with some specimens of his own. He insists on the necessity for recognizing the more serious forms of the disease in the early stages. The acuteness of the initial pain is a fact of considerable importance, and in all cases commencing with acute pain the author recommends immediate operation, and insists that every hou is of importance in these cases. With regard to th "interval" operation, he takes the view that when patient has passed through an attack without operatio the latter is called for immediately on the recurrence symptoms, but is not generally to be recommended as prophylactic measure. Dr. Baumgärtner includes in hi class of "acute" appendicitis all cases commencing wit symptoms of a definitely acute type, so that in his opinio the great majority of all cases call for early oper tion. He gives some interesting clinical historie illustrating the extremely rapid course run by cases gangrene and acute perforation. The interest of the pap chiefly lies in the arguments which the writer bring forward in support of the operation immediately aft onset in all acute cases. This plea is, of course, to b distinguished from that of operation "as soon as th diagnosis is made," which has been promulgated by son surgeons. The statistics of operation within the fir forty-eight hours from onset afford strong support Dr. Baumgärtner's contentions, the mortality during th period being as low as that of the "interval" operatio Another argument is to be found in the large proportio of cases in which an abscess forms, and the great increased risk of ventral hernia when this occurs. Th present surgical habit in England, at any rate, is in th direction of temporizing during an attack of appendiciti and of operating only when confronted with a definitel progressive or an ultra-acute process. It may be sai however, that the arguments in favour of operation the first forty-eight hours in all acute cases have not yet been fairly faced. Dr. Baumgärtner is not particular convincing in his remarks on the interval operation. H considers this not generally to be recommended, becau there is no certainty that the attack will recur; th uncertainty in the question is a double-edged weap which may fairly be turned against the writer, and is, fact, the main contention of those who differ from hi Considering the question as a whole, the following rul appear to be those which have the support of the be surgical opinion: Operate on acute cases during th early stages; do not operate after the first forty-eig hours if the signs and symptoms are stationary or su siding; in all cases where the appendix is not remov in the course of the attack remove it later.

THE CAMBRIDGE NATURAL HISTORY.

WHEN, in 1902, vol. X of *The Cambridge Natural Histo* appeared, a notice at the end of the volume stated th the remaining three volumes—I, IV, and VIII—were "the press or in active preparation." Vol. VII on appeared at the beginning of last year, Vol. IV is still active preparation, and Vol. I[1] is now before us. T series has, so far, taken eleven years to produce, so th the earlier volumes are now well on the way to becomi out of date. It is unfortunate that in a series of this so where the various groups are allotted to experts to wr upon, there should not have been some time limit giv to each author to complete his work. In one case at lea where several groups are dealt with in one volume, e author has been ready long before another, and has con quently had to touch up his work perhaps several tim where new work has been done before his monograph h finally gone to press.

The volume just published deals with four of the low groups of the animal kingdom, and, as is natural, leads with the lowest group of all the protozoa. Profes Hartog is responsible for this section, and to him the fore has fallen the lot of introducing the reader to the and its contents. The first twenty pages are an excelle concise account of the processes of assimilation, mo bolism, reaction to stimuli, and general physiology in t living unit. Cell division, nuclear division, and t various processes of reproduction occupy the next twe pages. The question as to the distinction between t lowest animals and the lowest plants is discussed, but P fessor Hartog adopts Haeckel's group "protista" to incl organisms which "it is impossible to separate into anim

[1] *The Cambridge Natural History*. Vol. I. Protozoa, by Prof. Marcus Hartog, M.A., D.Sc. Fourth to Eighth Sections, by Miss J. R. Sollas, [illegible] Christopher Jackson, M.A., and Hubert Lucas, M.A. [illegible] Prof. A. E. Shipley, M.A., F.R.S. London: Macmillan and Co., Limited. 1906. Demy 8vo, pp. 687. [illegible]

d vegetal so sharply as to treat adequately of either oup without including some of the other." Thus tanists will understand how it comes about that, besides e mycetozoa or myxomycetes—which are usually scribed in both zoological and botanical textbooks—vox and its allies are to be found in this volume. The orozoa, which have more or less recently come into ominence owing to their connexion with certain human seases, and of which types are being introduced into ost modern zoological textbooks, receive very full treatent, and the natural history of the malarial parasite is tailed. Under the flagellata also are given the most ent observations upon the trypanosomata and their ation to that dread disease—sleeping sickness.

The monograph on the sponges was to have been itten by Professor Sollas, but as he found himself unable undertake it this group is described by his daughter. e have lost little or nothing by the change in authorip, as the three chapters devoted to the group are itten in a clear and thoroughly interesting manner. e question of the relationship of the sponges to the ier animal groups is unfortunately very shortly touched on, and there are only a few words upon the interest- question of the possible symbiotic relationships ween sponges and algae.

The chapters, six in number, on the coelenterata and nophores are from the pen of Professor Hickson. There very little to find fault with in this section of the ok barring one or two misprints, as, for instance, on 257, where it is stated that hydra-like zooids with 20 tacles have 16 of these filamentous and 8 club-shaped. p. 269 the statement that cordylophora "has been nd in England in the Victoria Docks of London, in the rfolk Broads, and in the Bridgewater Canal," scarcely veys the fact that this form is a permanent resident in tain, where, for instance, in East Norfolk during last ir it was in exceptional abundance.

Of the six chapters by Professor McBride dealing with starfish and sea-urchins, by far the most readable is last—upon the development of the echinoderms. The up seems to us to have been done too much as one uld expect to find it done in a textbook of zoology, only, ourse, with much greater detail. There is, we submit, much pure morphology and too much use of heavy e. To lay stress upon the names of parts by using vy type is excellent in a textbook but out of place e.

he fossil coelenterates and echinoderms are discussed rtly under the various classes to which they belong. s perhaps open to question whether the whole palaeontgy of each group might not have been treated more ctively in separate chapters, although the arrangement pted has no doubt some advantages. The geographical ribution of the various sections of these groups might have been more readily shown in small maps such as e used in the volumes on reptiles and fishes.

TUBERCULOSIS.

ttempting to survey the relation of consumption to n and his civilization,[5] Dr. Huber has undertaken sk of great magnitude and of enormous impore. When we find such a subject compressed into a me of little over 500 pages we naturally look to see t section of the matter has been selected for ussion. In this work, however, every aspect of subject seems to be presented in turn, but briefly that we hardly have time to focus one ure before it is gone and replaced by another. s no clear and definite idea of any branch of this nense subject is impressed on the mind of the reader, he is left in something of the condition of the student has attempted to grasp a new subject by reading a psis of a course of lectures he has been unable to attend. scope of the work may be inferred from the fact Dr. Huber has divided the subject into 15 parts, ner subdivided into 87 chapters, varying in length a half a page to 11 pages. Every chapter commences fresh page, and is headed with some quotation more ss apt; at a moderate computation there is at least a page wasted for each chapter; then there is a blank sheet at the commencement of each part. With 9 pages of index and 70 pages of appendices, the main subject is compressed into about 400 pages of large type, still further encroached upon by the 130 illustrations. Much that is profoundly interesting to the sociologist is indicated in these pages, and many important facts are to be found scattered throughout the book, but the sources of information are inadequately noted, so that the reader whose appetite for information has been whetted is left without any indication as to where he may find fuller details. Dr. Huber has missed a splendid chance of being the author of a valuable work. There is, however, much in the book that will repay perusal.

Dr. Pickett Turner, like many others, has been impressed with the large death-roll from tuberculosis, and the apparent futility of all attempts hitherto made to stamp out the disease. He accordingly set himself the task "to think about it," with the result, as shown in *Tuberculosis: its Origin and Extinction*,[6] that he soon came to the conclusion that the fault lies with erroneous ideas of tuberculosis and its causation. The result of Dr. Pickett Turner's thinking may be gathered from the "Recapitulation" at the close of his book:

> Tuberculosis is an animal disease, and is primarily in all cases derived from cattle. It belongs to the mycotic group of diseases, bovines obtaining it from timothy and other allied grasses by natural affinity. Man acquires the disease by ingestion or inoculation, never by inhalation. It is not hereditary, neither is there any predisposition to it in the individual. The bacillus in a state of nature is a saprophyte, but becomes pathogenic in cattle when they are deprived of actinism. It is reasonable to assume that by restoring actinism to them the bacillus will again become a saprophyte, in which case we shall have completely extirpated the disease.

There is, unfortunately, reason to fear that the matter is not quite so simple as Dr. Turner would have us believe, and there is hardly evidence enough in this book to convince the reader that he has discovered the key to the origin and extinction of tuberculosis. We fear that even those who are willing to be converted to Dr. Turner's views will be disappointed at the inadequacy of the evidence he brings forward to support them.

NOTES ON BOOKS.

Nursing at Home[7] is a textbook for the course of home nursing given in the evening schools of the London County Council, and the chapters correspond with the syllabus in use in those classes. It is well written, concise, clear, and shows knowledge of nursing requirements and good common sense. The illustrations are helpful and satisfactory, with the exception of that on page 112 showing a bandage which should support the breast, but which appears merely to compress it against the chest wall. This is one of the most readable of the textbooks on home nursing which we have seen.

The Elements of the Practice of Comparative Medicine[8] is the high-sounding title of a little book by Mr. Barton, M.R.C.V.S., and Dr. Gresswell, outlining the principal clinical features of some diseases communicable from animals to man. Criticism has, however, been forestalled by a very modest remark in the preface, to the effect that the authors will be satisfied if their efforts result in the publication of a more advanced work on the subject. The writers have confined themselves very rigorously to "elements," if by elements be implied nothing more than a statement of clinical facts. There is no attempt at generalization in any form justifying the term "comparative." Mr. Barton's style is tinged with colloquialism, and his proof-reader has permitted some rather glaring clerical errors. The case records are almost all culled from the periodicals, and although the source is in every case plainly acknowledged at the end of the quotation, yet in more than one instance it comes as a surprise to the reader to find that acknowledgement at all; it is as well to indicate, at least by a footnote on the same page, the point at which

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[5] *Consumption, its Relation to Man and his Civilization, its Prevention and Cure.* By John Bonner Huber, A.M., M.D. Philadelphia and London: J. B. Lippincott and Company. (Demy 8vo, pp. 536. 15s. net.)

[6] *Tuberculosis: its Origin and Extinction.* By W. Pickett Turner, M.D. London: A. and C. Black. 1906. (Cr. 8vo, pp. 95. 2s. 6d. net.)

[7] *Nursing at Home.* By R. J. Collie, M.D., and J. D. E. Mortimer, M.B., F.R.C.S. London: G. Gill and Sons. 1906. (32mo, pp. 134. 8d.)

[8] *The Elements of the Practice of Comparative Medicine, together with Records of some Cases.* By F. T. Barton, M.R.C.V.S., and George Gresswell, M.A.Oxon, L.R.C.P., etc. London: Everett and Co. (Demy 8vo, pp. 240.)

quoted matter begins. The brief descriptions of anthrax, glanders, tuberculosis, tetanus, actinomycosis, rabies, echinococcus, and other diseases in man, betray very few errors of commission, and will, perhaps, be interesting to veterinary students. There are no pretensions to originality, and we, therefore, can but re-echo the hope expressed by the authors for a more ambitious work upon an interesting and fruitful subject.

Gynaecology belongs to a series of an original type. Drs. DUDLEY[9] and VON BACHELLÉ have written a kind of systematic review of the past year's work. They depreciate satirically some of the ultra-radical operations for uterine cancer with which we have recently become familiar. The advantages of early diagnosis are set forward and the treatment of inoperable malignant disease discussed. Chrobak's fuming nitric-acid cauterizations seem satisfactory when combined with the use of the curette. Ligature of the uterine arteries finds no favour with the editors. Dudley's method of treating incontinence of urine by a plastic operation is described in full, with singularly good drawings after the best American style. The chapter on plastic operations for displacements will lead the reader to much reflexion. Reliable after-histories are needed beyond declarations of good results. In conclusion, we must admit that Dr. Head's system makes his Series as readable as an average textbook or monograph. The same cannot be said of the majority of annual reviews.

Dr. HUGON's book on sterility in women[10] is of little value. He says that he has for a long time exclusively applied the massage treatment of Thure-Brandt to the diseases of the female genital organs; that his large practice is a guarantee of the efficacy of the treatment; and that critics who say that this treatment is not better than any other have only seen cases in which either the treatment has been applied by an inexperienced practitioner or the case has been one not suited for the treatment. Assertions like this do not inspire confidence; but we live and learn, and so we turned over the pages of this pamphlet hoping to get some useful hints. But we get nothing; only general statements that massage, electricity, hygiene, etc., will cure everything; no details as to how the massage, the electricity, etc., are to be used. Therefore, to the practitioner, the book is useless.

The third edition of *A Handbook of Physics and Chemistry*[11] has been revised in accordance with the new Conjoint syllabus in chemistry and physics. Its straightforward simplicity renders it a favourable specimen of books of its class, and the popularity it has enjoyed shows that it really does meet the needs of students. From the examinee's standpoint it is, perhaps, hardly a disqualification that it avoids points of theoretical interest, except where their consideration is absolutely essential. In view of the emphasis which recent examiners have laid on graphical methods we were surprised not to see any treatment of this branch of the subject.

Dr. CONNELL's little book on *Practical Bacteriology*[12] gives directions for the guidance of the student who is taking an elementary course of laboratory work on this subject. It is supplemented by some hints on the methods employed in the analysis of water and milk, and contains instructions for the clinical examination and diagnosis of pathological conditions of the blood, urine, and gastric contents. The book may be found useful when supplemented by verbal instruction in the laboratory; it appears to be based on sound practical experience. Perhaps more emphasis might have been laid on the importance and difficulty of distinguishing the tubercle bacillus from the smegma bacillus and other acid-fast organisms.

[9] *The Practical Medicine Series* [illegible] Year-Book Publishers. Chicago: The Year-Book Publishers. 1906. [illegible] College of Physicians, Philadelphia. [illegible] Medical School. Vol. IV. *Gynaecology*. By J. M. Mac Pherson [illegible] and Co. 1907. [illegible] By Reuben Peterson, M.D. [illegible] Chicago: The Year-Book Publishers. [illegible] and Co. 1907.

[10] *La Stérilité de la Femme*. Par le Docteur [illegible]. Paris: [illegible]. 1906. Pp. [illegible]. Fr. 3.

[11] *A Handbook of Physics and Chemistry*. By [illegible] M.R.C.S., L.R.C.P. [illegible] and A. [illegible] B.Sc., A.I.C. Third edition. [illegible] pp. [illegible].

[12] *Practical Bacteriology*. By W. [illegible] Connell, M.D., M.R.C.S. [illegible] Ontario. Belleville: Ontario Business College Publishing Co. [illegible]

MEDICINAL AND DIETETIC PREPARATIONS.

Vitalia.

OUR attention has been drawn to an article under the name prepared by Vitalia, Limited (5, Albion Place, Blackfriars Bridge, E.C.), from defibrinated ox-blood and stated to be a valuable haematinic. This preparation is a dark liquid of reddish colour, with but little taste but agreeable rather than otherwise in flavour, and containing alcohol and a large proportion of albumen; thus combines the principal characters of a wine and beef-juice. The proportion of albumen, retained in soluble form by avoiding high temperatures in manufacture, is so high that on heating the liquid it becomes entirely changed to a gelatinous coagulum. Determination of the amount of nitrogen present showed it to be 2.45 per cent. corresponding to 15.4 per cent. of proteid, or (the specific gravity being 1065) to 72 gr. of proteid in each fluid ounce. Such a preparation cannot fail to be of value in the numerous cases where a tonic and easily assimilated food and haematinic is required. Vitalia is sold at a lower price than most meat juices.

Haemostasin.

We referred recently to various preparations containing the active principle of the suprarenal gland issued by different firms under distinctive names. We have also submitted to examination a solution of this active principle prepared by Messrs. Burgoyne, Burbidges and Co., 16, Coleman Street, E.C., and to which they have given the name haemostasin. The solution, of a strength of 1 in 1,000, is a bright, almost colourless liquid, giving the various reactions indicative of the presence of the unaltered active principle even after keeping in an unopened bottle for several months.

Scopolamine for General Anaesthesia.

Terrier and others have directed attention to the production of general anaesthesia by means of scopolamine. After employment of the method and studying the results recorded by others, the general conclusions were summed up by Dr. G. B. Buchanan in the BRITISH MEDICAL JOURNAL of December 30th, 1905, p. 1705. He considered scopolamine and morphine together a very useful adjunct to chloroform or ether, small doses being injected before administering the latter; he pointed out the importance of using freshly-prepared solution. We have received from Messrs. Parke, Davis, and Co. specimens of the tablets which they prepare, containing scopolamine hydrobromide $\frac{1}{100}$ gr. with morphine hydrochloride $\frac{1}{4}$ gr.; examination showed them to be of uniform dosage, and readily soluble in the requisite small quantity of water. They furnish a convenient method of freshly preparing the injection as required.

MEDICAL AND SURGICAL APPLIANCES.

Uterine Cotton-wool Holder.

DR. J. CRAWFORD ROBERTSON (Maryborough, Queensland) writes: All medical men, when trying to remove soiled cotton wool from any of the different varieties of uterine probes, must have noticed the difficulty which they have in doing so. For some considerable time I have been using the instrument here illustrated, and have found that it easily overcomes this difficulty. I call it a uterine cotton-wool holder or forceps. By pressure at the neck of the instrument the blades are separated. Then place



piece of cotton wool 2½ in. by 2 in. in size between them. Allow the blades to close on the wool; then roll the wool round the blades. To remove the soiled wool separate the blades two or three times by pressure at the neck of the instrument. Then take a clean piece of wool between the thumb and first finger of the left hand and push the coiled wool off the blades. If there is any difficulty in doing this just separate the blades two or three times again. Messrs. Arnold and Sons, of London, made the instrument for me.

LITERARY NOTES.

FESSOR SAUNDBY is preparing a new and greatly en-ed edition of his *Medical Ethics*, which will be pub-ed by Messrs. Griffin and Son, Limited, in the course he spring.

he lines along which the empire of medicine is ex-ding are shown in the new journals that are founded time to time. Medical sociology has already one, if two, journals devoted to it in France, one in Italy, and east one in Germany. Another has recently come existence in Belgium. It is entitled *Revue Médico-ale*, and is published in Brussels under the editorship rofessor O. Laurent and Dr. Crocq.

he *Nederlandsch Tijdschrift voor Geneeskunde*, the lead-medical journal of Holland, entered on the fifty-first r of its existence with the New Year. In celebration of ubilee our contemporary has issued a commemoration k, the character and contents of which are indicated by title; *Opuscula selecta Neederlandicorum de arte medica iculus primus quem curatores miscellaneorum quae vocantur erlandsch Tijdschrift voor Geneeskunde collegerunt et erunt ad celebrandum seriem quinquagesimam in lucem r editam. Amstelodami apud F. van Rossen MCMVII.* writings of Erasmus, Swammerdam, Leeuwenhoek, rhave, Gaubius and Donders, relating to the art of ing, are here made accessible. They serve to show the place occupied by Dutch medicine during the past e centuries.

he Royal Swedish Academy of Sciences will, we learn *Science*, shortly publish the first three volumes of denborg's scientific works, edited from the original . in the Library of the Royal Academy in Stockholm, a Committee of the Royal Academy, assisted by d H. Stroh, of the Swedenborg Scientific Association merica. The first three volumes will be: Vol. I, ogy, with introduction by A. G. Nathorst; Vol. II, nistry, Physics, Mechanics, with introduction by te Arrhenius; Vol. III, Cosmology, with introduction vante Arrhenius. These volumes will be followed by s on Anatomy, with introductions by Gustav Retzius. text of the volumes is in Latin, the introductions g in English. A new and revised edition of enborg's *Principia Rerum Naturalium* in English, out of print, is now going through the press in and, under the auspices of the Swedenborg Society of on.

sensitive correspondent, whose feelings have been ated by split infinitives and other grammatical sole-in our correspondence columns, writes to suggest "the editorial pencil should occupy itself in correcting infirmities partly for the sake of your readers who nsitive on the subject, and also for the credit of our ssion in the eyes of the public." We confess that an expression as that quoted by our correspondent—nder these circumstances excise the tonsils"—makes udder. In the editorial columns we wage war on the nfinitive; but in the case of correspondents, although e sake of uniformity their spelling is made to con-to a fixed standard, we do not consider ourselves nsible for their grammar. The style, as Buffon said, man, and a writer's grammar may serve as a re of the importance to be attached to his opinions rguments. Besides, correspondents are apt to look the editorial blue pencil as operating with a purely cent activity—like "decay's effacing fingers," sweep-the lines where beauty lingers." The author of one solecisms which our correspondent quotes used to pany the communications with which he favoured h extracts from the Commination Service directed t any one who should profane his text by the st verbal change. We have sometimes thought rpheus was an editor, and that he was torn to by journalists whose "copy" he had corrected too ously.

We have said that we do not like the split infinitive. heless, there is something to be said in its defence. e thing, it is not really split; the "to" is a pre-n originally separable from the verb, though now it ne to be regarded as a part thereof. As Professor ury has shown, the "split infinitive" is found in writers as far back as the fifteenth century. The ng example, which he quotes from the Prologue to 's *Reporter* (*circ.* 1450) is by several degrees worse than the one of which our correspondent complains: "Whanne ever he takith upon him *for to in neighbourli or brotherli manner correpte* his Christen neighbour or brother." As we have hinted, the question is, Will the Christian neighbour or brother who writes to the JOURNAL stand "correption" for a split infinitive? He might plead in justification Professor Lounsbury's prediction that, "in spite of the opposition it encounters, there is little question that it will establish itself permanently in the language."

The *Lyon Médical* of February 10th publishes a curious report taken from the Archives of the Hôtel-Dieu of a strike among the surgeons' apprentices in that hospital about the middle of the eighteenth century. In 1769 the Committee determined to enforce a rule under which the apprentices had to shave the inmates of the hospital. This rule had been allowed to fall into abeyance, and the apprentices protested against its revival. The Committee returned an uncompromising reply to their remonstrances. The apprentices thereupon intimated that if the Committee persisted in that attitude they would leave the hospital in a body. They burst into the committee room "like mad men," and insisted on the rescission of the objectionable rule. The Committee, considering itself insulted, "sought means to make these young men sensible of the fault they had committed, and determined to look for others who might prove more docile." The official report goes on to say that the apprentices should have shown signs of repentance and made humble representations, behaving themselves in a Christian manner in the house. But, so far from being appeased, they had shown themselves more and more furious, wishing to rule the Committee and acknowledging no master but the Chief Surgeon. "The scandals which they caused even in the refectory, the imperious tone in which they spoke, the insulting remarks they made to certain of the governing body, and their threats to leave the house," at last compelled the rectors to take severe measures. They appealed to the military authorities. The commandant sent a sergeant and twelve soldiers to the hospital. Three of the refractory apprentices were put in prison and afterwards dismissed. The other five were gradually replaced by "blacklegs," who undertook to do all the shaving that might be required of them. The report, drawing the moral of what it calls this "tragical story," ends with the assurance that it will have a good effect by preventing similar abuses in future. Our sympathies go back through the intervening century and a half to the young men who had sufficient sense of the dignity of their craft to resent the continuance of its odious association with the shaving brush. How long the rectors of the Lyons hospital were able to enforce the obnoxious rule we do not know, but the time spirit was against them. As late as the beginning of the past century, however, an English surgeon was dismissed from the Danish Navy for refusing to shave the ship's company, and we believe that in the Peninsular war Portuguese military surgeons shaved the men.

If any of our readers happen to be interested in Lombroso's conversion to spiritualism he will find an account of the process by the Professor himself in the *Grand Magazine* for January. Till 1890, he says, spiritualism had no more determined opponent than himself; then his eyes were opened by the case of a hysterical girl of whose symptoms "neither physiology nor pathology could furnish any clear explanation." For instance, the sense of sight would leave her eyes and become lodged on the tip of her ear. In the like bewildering fashion her sense of taste was transplanted to her knee, and that of smell to her toes. It might almost be thought the young lady was trying to realize Bottom's dream as to which he assures us "the eye of man hath not heard, the ear of man hath not seen; man's hand is not able to taste, his tongue to conceive, nor his heart to report." She saw persons and things at a distance, and could prophesy the exact time when she would lose the power of walking or be seized with an irresistible desire to bite. Lombroso at first supposed that the girl's hysteria called into being certain new and peculiar faculties which supplanted the functions of the ordinary senses. Then the great truth suddenly dawned upon him that there might possibly be something in spiritualism which could explain the matter. A few years later he made experiments on Eusapia Palladino, forgetting apparently that, as may

be read in the Journal of November 9th, 1895, she was a convicted impostor. Eusapia fooled him to the top of his bent, making "a small trumpet start from the bed" and a curtain enfold him in so close an embrace that for several seconds he could not disentangle himself. A more formidable manifestation was the sudden movement towards him of a ponderous sideboard, "as if it had been some enormous pachyderm advancing to attack me." At a seance in broad daylight Eusapia was asked to ring a small bell placed about half a yard from her. All at once they noticed her skirt bulge out just as if it had been a bladder filled with gas, which escaped when Lombroso attempted to seize it. In a moment the gaseous arms stretched out towards the bell, seized it, and rang it. Professor Richet and Professor Lombroso put Eusapia on a weighing machine, and made her weight increase or decrease by more than 20 lb. at will. It is not perhaps without significance that "it was necessary in these experiments that a corner of Eusapia's skirt should be in contact with the pedestal of the weighing machine." There could, we are solemnly assured, be no possible suspicion of any fraud, for they kept firm hold of the medium's hands and feet, and on many occasions they tied her feet securely, having first completely removed her clothes and dressed her in their own. Lombroso was at first inclined to believe that these occurrences were, like many hysterical and hypnotic phenomena, due to a motor and even a sensorial projection from the psycho-motor centres of the medium's brain—an effect of the increased energy of some nervous centres, while several other nervous centres were enfeebled by neurosis and the state of trance. Telepathy might, he thought, be explained by psychical transmission from one brain to another analogous to what takes place in wireless telegraphy. His belief in these explanations was, however, destroyed by haunted houses from which mediums were entirely absent: during the last few years he has come across several of these. The conviction was forced upon him that spiritualistic phenomena, if due in great part to the influence of the medium, are likewise attributable to the influence of extra-terrestrial existence, which might, perhaps, be compared to the radio-activity which still persists in tubes after the radium which originated it has disappeared. Professor Lombroso's notions of evidence, as no intelligent reader of his books can fail to see, are peculiar. There can, however, be no doubt as to his honesty. But we are tempted to say with Autolycus "Ha! Ha! What a fool Honesty is! and Trust, his sworn brother, a very simple gentleman!"

SCHOOL HYGIENE.

BERLIN.

(From our Special Correspondent.)

Results of Medical Inspections.

The Berlin Municipal School Department has lately issued a report to be published on the work done by [illegible] Berlin municipal schools during the year 1905-6, which gives evidence of evidence were needed by those who knew something of the poor that medical supervision of schools is an absolute necessity for the health of the children, as well as for their attainment of knowledge.

In all [illegible] children came under medical examination [illegible] first time on entry into school, and of these 5,932 (that is 0·3 per cent.) were "put back"—that is, not allowed to go to school for a certain period of time, for [illegible] and general debility (in 1·6 per cent.), heart troubles, nervous troubles, chronic [illegible] etc. Of the children admitted, 7,555 (that is 0·4 per cent.) required continuous supervision, because of their eyes or ears, or general weakness, or slight [illegible]. The total number of children [illegible] was 1,946.

Each child is examined in presence of the mother or some other responsible member of the family. Gradually the parents [illegible] understand that the school doctor is not merely to be, and [illegible] a medical attendant. As [illegible] they [illegible] more and more interest in the school doctor's work, [illegible] they are glad to further.

Over and above their periodical examinations, the school doctors try by every means in their power to spread some knowledge of hygiene among children and parents. Verbal instruction is given to mothers and the children are taught to read the "Rules of Health" printed on posters hung in the different class-rooms.

The shower-baths provided in the Berlin municipal schools were made use of 334,706 times by boys and 208,928 times by girls during the year. To prevent chills the children afterwards were well rubbed down, and went through gymnastic exercises. In summer, needy children above 10 years of age received tickets for the municipal river and swimming baths gratis; 900 learnt to swim during the summer.

Some, but not all, of the Berlin school doctors have collected figures on the subject of alcohol. In one boys' school, 21 per cent. of the children were in the habit of taking beer repeatedly during the week, 21 per cent. wine, and 2 per cent. spirits. A special leaflet on the danger of alcohol for the young has been printed, and is given to the mothers.

One school doctor, Dr. Bernhard, has made the hour of sleep the subject of a separate inquiry in 6,551 cases, and the conclusion he comes to is that, broadly speaking, all these children get too little sleep. For this sad state of things he makes the parents' careless habits just as responsible as their circumstances.

Many children—in some schools 10 per cent., in others up to 20 per cent.—come to school in the morning insufficiently washed and without having had a warm drink or breakfast. In most cases the cause is not poverty, but carelessness and slovenliness on the part of the mother. A characteristic proof of this is the fact that Monday always brings the largest number of breakfastless children. A small fund at the disposal of the school doctor, together with private charitable contributions, have made the daily distribution of warm milk and bread to delicate and needy children possible, the result being a surprising improvement in attention and mental alertness.

Infectious diseases were not of frequent occurrence during the year. Thirteen classes had to be closed in all, the cause nearly always being either measles or whooping cough; scabies and lice in the hair were comparatively frequent, and there were isolated cases of syphilis.

The children's teeth were terribly neglected as a rule, and only a small minority made use of the toothbrush. One school doctor distributed 100 tickets for free treatment in a dental clinic, but only 2 of them were made use of.

Tuberculosis was found in many cases, but rarely in a stage so advanced as to keep the child from school. The school doctors praise the tuberculosis, advice, and assistance bureaux, which render all the help they can. For spinal curvatures, etc., suitable treatment was provided.

Improvements in the school buildings, as regards ventilation, playgrounds, the number of closets, etc., were introduced in many schools, and the school doctors warmly advocate, though they have not yet been able to carry through, longer intervals between the lessons.

Big Fees in America. An American newspaper gives some instances of big fees paid to surgeons in the United States. It states that Professor Lorenz received £5,000 and travelling expenses for the treatment of Miss Leiter's Armour for congenital hip dislocation. The fee of £4,000 which a New York dentist charged Prince Louis of Battenberg when the Prince visited the United States with the British fleet some time ago, was considered large for a dentist's fee, but, as compared with some of these payments for medical attendance, it looks insignificant. Dr. Walter Browning, of Philadelphia, is said to have sent to the executors of Senator C. L. Magee a bill for £32,000 in explanation of the charge. Dr. Browning said that his ordinary fee for consultation in his office was £4 and £8 if sent out to the office £5 an hour. He stated that Senator Magee had voluntarily agreed to double these rates. Dr. Howard A. Kelly, of Johns Hopkins Hospital, Baltimore, received £309 a day for twenty-one days' treatment of the wife of a mine owner. Professor A. Martin, of Berlin University, was paid £3,000 for performing an operation on a New York patient, and Professor Joseph Chambers received £1,000 for operating on a deaf warden who had been stabbed by a prisoner. Dr. [illegible] Parke of Chicago charged £1,000 for a simple operation. In New York City there probably are four or five physicians, mostly among the wealthy representing annual incomes of £20,000 or more. Five or six others are found to make from £10,000 to £12,000, while some 200 make from £2,000 to £4,000 a year. These statements we give with all proper reservation, but in a land of millionaires there is not much improbable about them.

EPIDEMIC AND SPORADIC MENINGITIS.

HISTORY.

Epidemic cerebro-spinal fever was first recognized as a distinct disorder in Geneva in 1805, but about the same time an epidemic occurred in the New England States, and the disease continued to prevail there for about a quarter of a century. Owing to the almost constant occurrence of an exanthem of the petechial sort in many of these New England outbreaks, the trivial term "spotted fever" was applied to the disease, and has ever since been a source of some confusion. In 1837 an epidemic began in two districts of the south of France, and spread to the north, numerous outbreaks occurring until the year 1842. In 1846 and the three following years many fresh outbreaks occurred in France, and the disease became widely diffused in Southern Italy. In 1854 the disease made its appearance in Sweden and in Germany, where it reached its height in 1864. Epidemics occurred in Dublin and Belfast, and also in Liverpool in 1845, and there was a second outbreak in the winter of 1866. Hirsch[1] stated that at the date he wrote (1886) "hitherto the head quarters of the disease, both as regards wideness of diffusion and severity of outbreak, have been the United States, where its area extends from Canada to the Gulf of Mexico, and from the Atlantic to the prairie states of Minnesota and Iowa." According to Osler, the disease prevailed during 1898-99 in a mild form in twenty-seven States of the Union, and 1,000 deaths occurred in New York City in the year ending February, 1905. Outbreaks also occurred in 1905 in several parts of central Europe, and there was a small outbreak at Irthlingborough, Northamptonshire, during the early part of the same year. Other isolated groups of cases subsequently occurred, and in August and September, 1905, the Local Government Boards of England and Scotland issued circulars to local authorities with reference to the disease. In Glasgow the existence of the disease was first definitely confirmed by bacteriological examination in April, 1906, and the following table (prepared by Dr. Chalmers) of cases in Glasgow during 1906, suspected to be cerebro-spinal fever, will give some idea of the prevalence of the disease:

Cerebro-spinal Fever.

Cases Registered during 1906.	Total.	Bacterially Verified.	Not Verified.	Not Cerebro-spinal Fever.
In fever hospitals	110	65	28	17
At home or elsewhere ..	103	22	77	4
	213	87	105	21
Deaths:				
In fever hospitals	72	47	20	5
At home or elsewhere ...	76	18	56	2
	148	65	76	7

BACTERIOLOGY AND SYMPTOMS.

The outbreaks of cerebro-spinal meningitis in Glasgow and other towns have roused much attention, and an outline of the more important facts which have been established concerning the more obscure varieties of acute meningitis will be read with interest.

The standard work on the subject is an article from the pen of Dr. A. Weichselbaum, the discoverer of the *Diplococcus intracellularis meningitidis*, which was published in 1903.[2] Dr. Weichselbaum thinks that caution must be observed in drawing a distinction between "epidemic" meningitis and other forms of the acute disease, since more than one form of meningitis may be met with in the course of epidemics, and these same forms of the infection may also occur sporadically. It is also impossible to draw an absolute distinction between "primary" and "secondary" meningitis, as it is sometimes found *post mortem*, in cases typical of the "primary" form, that there are inflammatory lesions in the nasal cavities or elsewhere which may possibly be regarded as the primary site of the infection.

[1] *Handbook of Geographical and Historical Pathology.*

[2] Kolle and Wassermann's *Handbuch der pathogenen Mikro-organismen*, vol. iii.

Bacteriology.

In considering the etiology of the disease it is important to remember that, like many other acute inflammations, it may be caused by micro-organisms of various kinds. Dr. Weichselbaum gives the following list of the possible causative agents:

1. *Micrococcus meningitidis cerebrospinalis (Diplococcus intracellularis meningitidis).*
2. *Diplococcus pneumoniae.*
3. *Streptococcus pyogenes.*
4. *Staphylococcus pyogenes.*
5. *Bacillus influenzae.*
6. ,, *pneumoniae.*
7. ,, *typhi abdominalis.*
8. ,, *coli communis.*
9. ,, *mallei.*
10. ,, *pestis.*

And in rare cases the disease has been produced by other varieties of bacteria.

The Diplococcus Meningitidis.

This organism was discovered by Weichselbaum in 1887. He showed that it was clearly distinguishable from the *Diplococcus pneumoniae*, and regarded it as the causal agent of the six cases of cerebro-spinal meningitis in which he had demonstrated its presence.

Morphologically the coccus bears a striking resemblance to the gonococcus. It usually occurs in pairs or tetrads or multiples of such groups, and it is very frequently intracellular, generally being found within leucocytes, though more or less abundant groups of the cocci may also occur outside the bodies of cells. It is readily stained, but is decolorized by Gram's method. It grows at a temperature between 25° C. and 42° C., the optimum being 36° C. to 37° C. On agar plates colonies are formed in twenty-four hours, which are as large as 2 mm. in diameter, are grey or greyish-white in colour, and have smooth or undulating margins. As the colonies grow older, their centres become prominent and may assume a brownish colour. The growth is more vigorous on blood-agar plates, and is still better on serum agar, where colonies from 3 to 4 mm. in diameter are obtained in twenty-four hours. On agar slants a fairly abundant, grey, glistening layer is obtained, the margin of which is very frequently undulatory and translucent; older cultures often exhibit a yellowish-brown pigmentation. The organism grows readily in broth, but with difficulty and only scantily on potato. No growth is obtained under strictly anaërobic conditions. With regard to the difficulty of raising primary cultures, Dr. Weichselbaum makes the following observations:

> In a considerable number of cases the attempts to cultivate the *Micrococcus meningitidis* from meningeal exudates result in failure if serum agar is not used as the medium, and even on this medium growth may occasionally fail. The explanation of such cases may be found in the fact that in the material inoculated the micrococcus was dead or present in a highly degenerate condition; or it is possible that, for reasons unknown, the organism had lost its capacity for growth on our culture media; similar results, as is well known, may be observed with other pathogenic micro-organisms, for example, with the *Diplococcus pneumoniae*.

It is not easy to keep the organism alive on artificial culture media, and often even the first subculture fails to grow, especially if a less suitable medium is employed. As the bacteria readily die out, it is advisable to make subcultures daily or every second day. The organism possesses a very low degree of resistance against desiccation, twenty-four hours' drying at a temperature no higher than 37° C. being enough to kill it. The micrococcus is, on the whole, of only slight virulence for experimental animals, though different strains seem to vary in their degree of pathogenicity. White mice are relatively the most susceptible, though even these animals resist subcutaneous inoculations; after intrapleural or intraperitoneal injection they usually succumb within from twenty-four to forty-eight hours. Guinea-pigs are less susceptible than mice, but in young specimens peritonitis with a plastic exudate may be produced. Rabbits are, as a rule, insusceptible.

The Association of this Diplococcus with Meningitis.

The *Micrococcus meningitidis* is of common occurrence in this disease, and is usually associated with the "primary" or "idiopathic" type of the infection, though in many of these cases inflammatory lesions of the nasal cavities or of the middle ear are also present. The meninges of the cord are usually involved as well as those of the brain. In sporadic cases as well as in epidemics of the disease this organism may be present. The character of the exudate is not distinguishable from that which is produced in other types of acute meningitis; it is usually fibrinous, fibrino-purulent, or distinctly purulent. The course of the disease is not always acute; it may be subacute and even chronic, and under these circumstances exacerbations may occur. The number of cocci present in the exudate is very variable, but as a general rule they are most abundant in the early stages of the process and when the exudate is copious and purulent. In some cases the leucocytes are found crowded with the micrococci; but more frequently the cocci are rare, and several specimens have to be searched before any can be found.

Dr. Weichselbaum enumerates the following as being the more frequent complications associated with meningitis attributable to this micrococcus:

1. Acute catarrhal inflammation of the nasal fossa.
2. Acute catarrhal inflammation of the accessory cavities of the nose.
3. Acute catarrhal inflammation of the middle ear.
4. Acute bronchitis and acute lobular pneumonia.
5. Acute arthritis.
6. Acute inflammation of the bulb (meningeal ophthalmia).

But none of these complications can be regarded as very common. Dr. Weichselbaum reviews the literature of the cases which have been placed on record, and points out that in some instances the bacteriological evidence that these complications were due to the true *Micrococcus meningitidis* is not very convincing.

Various investigators have asserted that they have found the micrococcus in certain diseases which have not been associated with meningitis, namely, acute rhinitis, bronchitis, lobular pneumonia, and acute conjunctivitis. It is also stated that the organism has been found in the nasal cavities of healthy persons and in dust. Dr. Weichselbaum considers that many of these statements must be interpreted with caution; it is not in every case clear that the identity of the alleged micrococcus has been fully established, and, in particular, the difficulty of distinguishing it from the *Micrococcus catarrhalis* must be carefully borne in mind.

The Association of Meningitis with the Diplococcus Pneumoniae.

The *Diplococcus pneumoniae* is a very common cause of "primary" meningitis, as well as of meningitis which is secondary to lobar pneumonia. This diplococcus may assume, in primary cerebro-spinal meningitis, either typical or atypical forms. The abnormality most frequently met with is the formation of very long chains which occur in the exudate particularly in the ventricles of the brain, and also in cultures. In some instances the deviations from the normal type have been so marked that investigators have expressed the opinion that they were dealing with special varieties of the organism.

In cases of meningitis caused by the *Diplococcus pneumoniae* it is not uncommon to find an acute inflammation of the accessory nasal cavities or of the tympanic cavity, and in the exudate from these lesions the diplococcus is demonstrable. Usually this inflammation precedes the meningitis, and the latter arises from the micro-organisms which, starting from the inflamed areas, make their way by the lymphatics to the subarachnoid spaces. This form of meningitis is, however, usually termed "primary." Cases of pneumococcic meningitis may be associated with pneumonia, endocarditis, pleurisy, or peritonitis. Comparing the types of meningitis produced respectively by the *Micrococcus meningitidis* and the *Diplococcus pneumoniae*, Dr. Weichselbaum is of opinion that in the former class of cases there is a much greater tendency to chronicity than in the latter. But as regards the types of exudate which the two organisms produce, he does not think that any distinction can be drawn.

Other Causes of Meningitis.

Observations have been recorded in which a primary meningitis has been attributed to the *Streptococcus pyogenes* in some cases and to the *Staphylococcus pyogenes* in others. Dr. Weichselbaum does not consider that these organisms, though undoubtedly identified, were conclusively proved to be the primary agents, and suggests that possibly the original infective agent (the *Micrococcus meningitidis* or the *Diplococcus pneumoniae*) may have died out. But there can be no doubt that the pyogenic streptococci and staphylococci are fairly frequent causes of secondary meningitis. Both the *Bacillus pneumoniae* and the *Bacillus coli communis* have also been found in secondary meningitis. And instances have also been recorded where cases of meningitis, again of the "secondary" type, have been attributed to the *Bacillus influenzæ*, *Bacillus typhi abdominalis*, *Bacillus mallei*, and *Bacillus pestis*. With regard to the relative frequency of different bacteria in cases of meningitis, Marchal's statistics are quoted. These were collected in 1901, and cannot be regarded as sufficiently extensive to be of more than provisional significance. Marchal found that, taking the sporadic and the epidemic "primary" disease together, the *Micrococcus meningitidis* was responsible for 69.2 per cent. of the cases, the *Diplococcus pneumoniae* for 20.8 per cent., and other organisms for 10 per cent. Taking the primary sporadic disease alone, 50.5 per cent. of the cases are assigned to the *Micrococcus meningitidis*, 42 per cent. to the *Diplococcus pneumoniae*, and the remainder to other organisms; whereas, taking the epidemic disease alone, the percentage assigned to the first organism is 73.4, to the pneumonia diplococcus it is something over 16, and to other bacteria it is 10.5.

Portals of Entry.

It is clear from the above considerations that the two chief bacterial agents which are responsible for "primary" cerebro-spinal meningitis are the *Micrococcus meningitidis* and the *Diplococcus pneumoniae*. It is well known that the latter organism is of frequent or almost constant occurrence in the mouth, pharynx, and nasal cavities, and although the same cannot be definitely affirmed of the *Micrococcus meningitidis*, the possibility that this organism may occasionally occur in the nose and pharynx must be conceded. It is well known that one or other of these bacteria may be present in inflammatory conditions of the nasal cavities or accessary sinuses and in inflammation of the tympanic cavity, and there is strong reason to believe that these organisms may travel thence to the brain and there give rise to a "primary" meningitis. The possibility that the organisms may be transported by the blood stream, as well as by the lymphatics, must also be borne in mind. Connexions exist between the venous network in the mucosa of the frontal sinuses and the veins of the dura mater, and there are also paths of communication between the upper wall of the tympanic cavity and the interior of the skull. In addition to these more direct lines of communication, it is possible that the organisms may be received into the lungs by inhalation and thence travel to the brain by way of the blood stream.

An important point upon which Dr. Weichselbaum insists is that the mere deposition of specifically infective organisms within the membranes of the brain does not necessarily result in meningitis. The disease is rather ascribable, in the majority of cases, to the combined circumstances that (1) the infective organisms are present and (2) predisposing causes favour their development. Of such causes, which may be generally described as conditions of lowered resistance, he mentions traumatism, which may be either severe or slight, insolation, exposure to cold, and alcoholism.

The Transmission of the Disease.

The *Micrococcus meningitidis* may be present in the nasal secretions both of persons suffering from meningitis and of others, and thus may be conveyed to the outer world. But its vitality is poor; it cannot multiply in an external environment, it cannot withstand desiccation, and it cannot remain alive for long except in moist and dark places. The danger of its general dissemination are, therefore, relatively slight. The *Diplococcus pneumoniae* is a more widely distributed organism. It is very commonly met with in the mouth and upper air passages; its

opportunities for dissemination into the outer world are very frequent, and though it cannot multiply under such conditions, it possesses a certain amount of resistance against drying.

Some further light is thrown on the conditions under which transmission takes place by a study of the course followed by the disease when it assumes epidemic proportions. Unlike many other epidemic diseases it does not show a gradual rise in the number of cases up to a maximum point, followed by a correspondingly gradual fall, but the course of the epidemic is usually marked by periods of intermission and recrudescence. The duration of an epidemic is also very variable; it may last for a year or more or may be terminated in a few weeks. Again, it has been found that the disease does not radiate uniformly from a particular centre, but spreads *per saltum* and often appears simultaneously in places which are remote from each other, and not in a direct line of communication. From these considerations Dr. Weichselbaum is inclined to think that the epidemics cannot be explained by supposing that there is a direct transmission from man to man, but are rather due to simultaneous outbreaks not causally connected with each other. He suggests that the determining causes of particular outbreaks may be attributed to, or associated with: (1) An increase in the virulence of the infective organisms, and (2) changes, conducive to increased susceptibility to infection, in the membranes covering the brain. The assumption that both the *Diplococcus pneumoniae* and the *Micrococcus meningitidis* are susceptible to increase of virulence is in accordance with bacteriological experience; and the fact that the epidemics generally arise in the winter or spring, when people are particularly liable both to exposure to cold and to nasal catarrh, indicates that the infection is probably favoured by a lowered resistance of the affected tissues.

Bacteriological Diagnosis.

Important information can often be obtained by examining smears of material withdrawn by lumbar puncture. These smears should be stained by Gram's method and counterstained by dilute watery fuchsin. By this procedure the bacterial agents of meningitis which give positive results with Gram's stain—*Diplococcus pneumoniae*, *Streptococcus* and *Staphylococcus pyogenes*—are coloured violet, whilst the organisms which are decolorized by Gram's method—*Micrococcus meningitidis*, *Bacillus pneumoniae*, *Bacillus coli communis*, *Bacillus typhosus*, *Bacillus influenzae*, *Bacillus pestis*—are stained red. A further point of distinction between the *Diplococcus pneumoniae* and the *Micrococcus meningitidis* is that the latter is generally contained within leucocytes, in pairs or tetrads, whilst the former is very frequently extracellular, may exhibit a capsule, and may occur in chains.

Not infrequently cases occur in which the number of bacteria is so small that the careful examination of many films may yield negative results. Culture tests and animal experiments may then be requisite.

Recent Observations.

Since the appearance of Dr. Weichselbaum's classical article in 1903 numerous investigators have published researches on this subject, and the occurrence of extensive outbreaks both in Europe and America has provided ample material for study. The most important new fact which has been brought to light is that in recent epidemics occurring on a large scale the *Micrococcus meningitidis* appears to have been responsible for the whole, or, at least, for the very great majority of the cases, whilst the *Diplococcus pneumoniae*, though it has been met with in some of these epidemics, has only been found very rarely. Another interesting observation is that the withdrawal of fluid by lumbar puncture, which may have to be repeated several times, relieves pressure, and is considered by some authorities to have a highly beneficial effect. This treatment has also been supplemented by the injection into the spinal canal of a 1 per cent. solution of lysol.

New York has suffered from a very severe outbreak, which began in the early months of 1904, and continued throughout 1905. During 1904 the deaths attributed to it numbered 1,083, and in 1905 they were 1,511. The number of cases reported in 1905 was 2,755. In 33 per cent. umbar puncture was performed to confirm the diagnosis, and in 82 per cent. of these meningococci were found. Death usually took place from coma and exhaustion. About 7 per cent. of the patients succumbed on the first day, less than 34 per cent. during the first five days, and 39 per cent. after ten days. In the case of 84 per cent. of those who recovered the recovery was complete, and the duration of the disease was generally more than four weeks.

Dr. William J. Elser has made some useful bacteriological investigations of the New York outbreak.[1] He examined 130 cases of epidemic cerebro-spinal meningitis which occurred in New York and Hudson Street Hospitals between January, 1903, and April, 1905. In 109 of these the *Diplococcus intracellularis meningitidis* was found either in cultures or in cover-slip examinations of the spinal fluid. In 16 no micro-organisms were found either microscopically or by culture. In 5 cases the bacteriological diagnosis was not established during life, but the *Diplococcus meningitidis* was isolated at the autopsy. Cultures were made from the spinal fluid during life in 105 cases, with positive results in 86. In seven of these the organism could not be demonstrated in cover-slip preparations, but was obtained in cultures. With the exception of three, the *Diplococcus meningitidis* was obtained in cultures in all the cases in which it could be demonstrated in cover-slip examinations. The meningococcus was recovered from the blood in about 25 per cent. of the cases.

Epidemic cerebro-spinal meningitis broke out in Prussian Silesia in 1905, and led Dr. Weichselbaum to review the facts which had been established since 1903 concerning the etiology and pathogenesis of the disease.[2] He arrived at the following conclusions:

1. The cause of this epidemic was exclusively the *Micrococcus meningitidis*.
2. This coccus was very frequently present at the beginning of the disease in the naso-pharyngeal secretion; it is therefore presumable that the nasal cavities or naso-pharynx were, at least in many cases, the portal of entry for the infective organism.
3. In a few cases, though only in a limited number the coccus was demonstrable in the naso-pharyngeal secretion of healthy persons who had been in contact with cases of meningitis; the assumption is therefore justifiable that healthy persons such as these might be the means of transmitting the infective agent to other individuals.

In the course of this epidemic the *Diplococcus pneumoniae* was met with on several occasions, though it was clearly not the organism which was responsible for the epidemic. Dr. Weichselbaum, therefore, points out that false conclusions may be drawn concerning the etiology of an epidemic of meningitis if only a few cases are examined, since some of these may happen to be attributable to an organism other than the true cause of the epidemic. He is now inclined to modify, in some degree, the opinions which he expressed in 1903, and considers that in epidemics of cerebro-spinal fever which are of considerable magnitude or of long duration the *Micrococcus meningitidis* must always be regarded as the causal agent.

Bettencourt and França have described[3] an extensive outbreak which originated in the north of Portugal in 1900. During the course of this epidemic they had the opportunity of making bacteriological investigations into 271 cases, and in every instance except three they found that the *Micrococcus meningitidis*, unaccompanied by any other organism, was present. The coccus was obtained sometimes from the fluid drawn off by lumbar puncture and sometimes from the meningeal exudate or fluid of the ventricles obtained *post mortem*.

Some important papers on epidemic cerebro-spinal meningitis were read at the Fifteenth International Medical Congress held at Lisbon on April 19th to 26th, 1906. We extract the following from our report[4] of a valuable address delivered by França:

After dealing with the pathology of the disease, he summed up his clinical and pathological experience as follows:

1. There are as many types of cerebro-spinal meningitis as there are microbes which are capable of attacking the meninges.
2. The symptomatology of the different meningitides does not vary in the different forms of these diseases in accordance

[1] *Journal of Medical Research*, November, 1905.
[2] *Wien. klin. Woch.*, No. 38, 1905.
[3] *Zeitschrift für Hygiene*, 1904, vol. xlvi.
[4] British Medical Journal, September 29th, 1906, p. 1350.

with their etiological agents, so that one could make a distinct diagnosis for each.

3. Among all these forms of meningitis only that one which is caused by the *Diplococcus intracellularis meningitidis* (Weichselbaum) forms a separate disease.

4. The examination of the cerebro-spinal fluid from a chemical, cytological, and bacteriological point of view is capable of demonstrating the nature of the meningitis.

5. The most rational treatment of the various forms of meningitis—the tuberculous form excepted—was by lumbar puncture and subsequent injections of antiseptic solutions into the spinal cord. The solutions to which he referred were the oxycyanide of mercury and lysol.

Another important paper, which we reported on the same page, was read by Cabral. From this we extract the following:

In speaking of the etiology, he dealt with the meteorological conditions during the various epidemics, and showed that cold periods favoured its development. The mode of entrance of the diplococcus was fully discussed, and the author left the question between a respiratory and an intestinal or gastric infection undecided. He distinguished an acute, a subacute, and a chronic form, and further spoke of a "*forme fruste*" and an abortive type. . . . The mortality from the disease was put down at 40 per cent.; while when recovery took place it took a period up to 5 weeks as a rule, but at times was not complete till after three or even six months. With regard to treatment, he agreed with França in praising the injection of antiseptic fluid into the dural sac.

SYMPTOMS.

Professor Osler[1] distinguishes two main types of the disease—malignant and ordinary—and certain anomalous forms. In the malignant or fulminant form the onset is sudden, with violent chills, headache, somnolence, muscular spasms, great depression, moderate elevation of temperature a feeble pulse which may fall to 50 or 60 a minute, and usually a purpuric rash; cutaneous haemorrhages may be extensive, and recovery seldom occurs. In the ordinary or simple form the patient may suffer from premonitory symptoms, chills, malaise, headache, pains in the back and limbs, and loss of appetite, but the onset is usually sudden, the disease often commencing with a rigor. Headache is an early symptom, and is usually most severe in the occipital region; vomiting is common, and there is often vertigo; the headache is intense, and attended by painful stiffness of the muscles of the neck; the temperature quickly rises to 101° or 103°, and the pulse is full and strong. The eye-symptoms are important: the eyes are suffused, the pupils are often small; strabismus is common and there is marked photophobia. There may be muscular tremors with tonic or clonic spasms in the arms or legs, but the most characteristic symptom in a well developed case is the rigidity in the muscles of the back, so that while the trunk is bent forward the head is drawn far back until the occiput may actually touch the spine. In the early stage the patient is delirious, but this gives place in a few days, if the disease be not arrested, to stupor, which deepens into coma. The temperature curve is not characteristic; in some cases there is very little elevation, in others, especially in children, it may run up to 106° or even higher. In addition to the purpuric rash and petechiae already mentioned, there may be erythema or dusky mottling of the skin, and rose-coloured spots like those of typhoid fever have been observed. Herpes also is common.

Among the anomalous forms perhaps the most important is the ambulant type, which, however, is very rare. In the abortive form the onset is of the usual severe character, but the symptoms subside in a day or two, and convalescence is rapid. An intermittent type has been described in which there are alternate remissions and exacerbations, but when the temperature has been taken regularly it has shown that the remissions are more apparent than real. This form is to be distinguished from the chronic type, which may last for months, and is characterized by a series of recurrences, reducing the patient to a condition of extreme marasmus.

In a memorandum issued by Dr. Chalmers of Glasgow on May 31st, 1906, the symptoms are described as follows:

The malady is characterized by acute symptoms, chiefly referable to the nervous system. The onset is usually sudden, with headache, shivering, and occasional vomiting. Stiffness of the muscles of the neck, with retraction of the head, may follow; and there may be delirium, sometimes alternating with apathy and stupor. There may be tenderness along the cervical or dorsal spine, or it may be more generally distributed. Squint, unequal pupils, and other paralytic symptoms have been noted. Herpes on the lips and a purpuric skin eruption are sometimes present. In the children forming Group II, above noted, a limited number of spots were present on the skin from the third day of their illness. These were few in number, petechial in character, and irregularly distributed. In one child they were present on the abdomen and ankle, in the other on the neck and upper part of the chest, and on the inner aspect of the thigh and ankles. They were more pronounced than a typhus rash, and much more limited in distribution. Pulse and temperature both follow an irregular course, and there is usually no relation between them in the early stages. When death results a purulent or sero-purulent exudation may be found on the under surface of the brain or spinal cord.

The diagnosis of the epidemic disease from tuberculous meningitis, and from acute meningitis due to other causes, is extremely difficult. The assistance which bacteriology may give has already been fully stated, and, of course, the knowledge that an epidemic prevails must raise a suspicion in any case of acute meningitis occurring in the locality. Much importance has been attached to Kernig's sign, which, however, is common to all forms of spinal meningitis; when the hip joint is semiflexed in health the leg can be extended upon the thigh nearly in a straight line, but if spinal meningitis be present the attempt to extend the knee produces painful spasm of the hamstring muscles.



Fig. 1.—Kernig's sign.



Fig. 2.—Retraction of head and strabismus.

Reproduced from a paper on Epidemic Cerebro-spinal Meningitis in Dublin, by Drs. Alfred R. Parsons and H. E. Littledale, published in the BRITISH MEDICAL JOURNAL, 1900, vol. i. p. 1529.]

Although otitis media is a not uncommon complication of cerebro-spinal fever, its existence at the beginning of an attack of acute meningitis will of course suggest the probability that the meningeal inflammation is due to extension from the middle ear. Dr. Ormerod observes[1] that "tuberculous meningitis (in children, at any rate) has generally a more gradual onset, a less violent headache, and a more regular course than the epidemic disease," but, as may be concluded from this statement, diagnosis between the two diseases may be practically impossible, and this conclusion is confirmed by practical experience in Glasgow and elsewhere. It should be noted that there occurred in association with cases of undoubted cerebro-spinal fever at Irthlingborough in 1905 certain groups of cases clinically resembling acute influenza, but nearly all characterized by spinal pains and tenderness, and all terminating in recovery. Most of these cases had been in personal communication either with one or more of the original group of fatal cases or with one another.

The prognosis is uncertain and should always be guarded; it is exceedingly grave when the onset is sudden and severe without prodromal symptoms. In less severe cases a wide distribution of the symptoms, showing that there is a correspondingly wide involvement of local nervous structures, is of serious import; cases in which coma develops, especially if attended by high fever, seldom or never recover. The mortality in different epidemics has varied very much, according to Hirsch from 20 to 75 per cent.

There is no specific for the disease and treatment therefore resolves itself into the adoption of such measures as are found useful to relieve symptoms in acute meningitis due to other causes. Osler states that cold to the head and spine, used in the first epidemic by New England physicians, is of great service applied by means of a bladder of ice, or an ice cap, and a spinal ice bag, the latter being especially valuable. Frequent baths, as often as every three hours, at a temperature of 98° F. are believed to have been useful, and Osler approves the local abstraction of blood by wet cups to the nape of the neck to relieve the intense headache. Mercury has been tried and found useless, or worse than useless. Most writers agree in recommending opium by the mouth, or, better, morphine hypodermically, and Von Ziemmssen looks upon it as an indispensable remedy; to be of use it must be given at an early stage and in full doses. Possible therapeutic benefits to be derived from lumbar puncture have already been mentioned. As soon as the acute symptoms attending the onset subside, careful attention should be given to the feeding of the patient.

NOTE ON THE *POST-MORTEM* APPEARANCES IN EPIDEMIC CEREBRO-SPINAL MENINGITIS IN BELFAST.

By Wm. StClair Symmers, M.B.Aberd.,
Musgrave Professor of Pathology, Queen's College, Belfast.

Since January 26th of this year I have performed autopsies on 5 cases of this disease in Belfast. Certain of the morbid appearances are, I think, deserving of mention, seeing that they are not generally known, or at least not given in accessible literature. The condition of the brain and cord has received notice from numberless writers, and need not be repeated here; suffice it to say that in my cases there was marked suppuration (in 4 cases) implicating the surface of the vertex, sides, base, and cord.

In 2 cases there was suppurative pericarditis; in 2 cases there were petechiae over the surface of the heart, parietal pericardium, and an effusion of clear serum in the pericardial sac, accompanied by capillary congestion to a distinct degree amounting to inflammation; and in the fifth case the pericardial effusion was haemorrhagic.

The lungs showed in 4 cases great congestion, areas of pneumonic consolidation, pronounced capillary bronchitis, with numberless droplets of pus extrusible on pressure, very numerous petechiae and small haemorrhages over the pleural surfaces.

The liver, in all cases, showed a mottled surface, due to irregular patches of pale yellow colour which contrasted with the congested, red appearance of the surrounding parenchyma, moreover the cut surface showed (especially in the Spigelian lobe) areas of dark-red, hyperaemic tissue suggesting an inflammatory reaction.

The spleen was enlarged to a slight degree in one case only.

The kidneys were hyperaemic in 4 cases, and the pelvis was reddened and lined by congested capillaries, and contained a small quantity of turbid, almost puriform, fluid. The remaining case showed an enlarged kidney with congestion of the vessels of the boundary portion of the pyramids, and great pallor of the widened cortex, the capsule stripped easily from the succulent surface, revealing blotches of reddened and acutely inflamed tissue, but in this case there was not any pyelitis.

The urinary bladder showed small haemorrhages scattered over the mucous membrane in petechial and ecchymotic form.

Of especial note were the bowels and mesenteric glands, the latter were, in all cases, enlarged and congested, even in the two fulminating cases (children attacked and dead within one night). These glands were particularly affected in the region of the last few feet of the small intestine. The small intestine was reddened with capillary engorgement, and the solitary follicles were enlarged and in places bright red (psorenteritis), resembling the condition often seen in acute pneumonia and in Asiatic cholera. Peyer's patches were not appreciably tumefied.

In relation to the enlarged mesenteric glands, I venture to mention, with caution, the result of a bacteriological examination of one of the fulminant cases. This was a child who died after a few hours' illness, and from the meningeal pus I was unable to cultivate the *Diplococcus intracellularis*, but from the mesenteric glands I obtained growths of colon bacillus and also a number of transparent, peculiarly grey colonies which microscopically were composed of a Gram-negative coccus, morphologically identical with the meningococcus, but which failed to grow in subcultures. I mention this fact without in any way insisting upon the nature of the coccus, but I believe that the organism found was in all probability the meningococcus.

Since making the above observations on the abdominal condition in this disease a paper has been sent to me by Dr. J. E. McIlwaine in which Radmann[2] publishes some important facts bearing on this neglected aspect of cerebro-spinal meningitis. The writer was led by an observation of Schroeder of Kattowitz in Silesia to pay particular attention to the mesenteric glands and intestines, and he is convinced that they show changes which are regularly present and are probably pathognomonic of epidemic cerebro-spinal meningitis. Radmann, however, makes special mention of changes in Peyer's patches (unchanged in my cases) and the large bowel.

Doubtless the several epidemics now in progress throughout the United Kingdom will increase our knowledge of these points.

[1] Allbutt and Rolleston's *System of Medicine*, vol. i, 1905.

[2] *Deutsche medizinische Wochenschrift*, June 29th, 1905.

On leaving Yardley, Dr. W. Mulligan, Chairman of the Central Division of the Birmingham Branch of the British Medical Association, was entertained at dinner by the Yardley and Stechford Ratepayers' Association, of which he has been President for the last two years. A hall clock was also presented to him by members and friends as a parting gift.

German Surgical Congress.—The German Surgical Society will hold its thirty-sixth annual congress in the Langenbeck House, Berlin, from April 3rd to 6th, under the presidency of Professor Riedel of Jena. The questions proposed for discussion are the following: (1) The surgery of the heart and pericardium, to be opened by Professor Rehn of Frankfort; (2) the operative treatment of diseases of the lung, to be opened by Professor Friedrich; (3) extirpation of the prostate, to be opened by Professor Kümmell: (4) fracture of the femur, especially in the upper and lower thirds, to be opened by Professors Bardenheuer and Konig. An exhibition of instruments and appliances will be held in connexion with the congress.

A quarterly meeting of the Medico-Psychological Association of Great Britain and Ireland will take place at the Notts County Asylum, Radcliffe-on-Trent, on February 22nd, under the presidency of Dr. Robert Jones. Dr. David Orr and Dr. R. G. Rows, pathologists to the Prestwich and Lancaster Asylums, will give a lantern demonstration upon the experimental production of spinal and cranial nerve lesions by toxins. Dr. Jackson has invited the members to lunch at the Asylum, and a dinner will take place at the George Hotel, Nottingham, at 7 p.m.

ROYAL COMMISSION ON VIVISECTION.

The Royal Commission on Vivisection have this week issued a first report, dated January 26th. The report contains the names of the Commissioners and the terms of reference. As an Appendix there is a substantial Blue Book of 158 pages, containing minutes of the evidence taken during the months of October, November, and December, as the Commissioners "think the present publication of these documents is desirable." We propose to give a summary of the more important parts of the evidence.

The Machinery of the Act.

Evidence of Mr. W. P. Byrne, C.B.

At the first meeting of the Commission, on October 31st, 1906, the first witness examined was Mr. W. P. Byrne, C.B., Principal Clerk in the Home Office, to whom has been entrusted the administration of the Act of 1876. Mr. Byrne furnished the Commission with a *précis* of his evidence. The first part dealt with the history of the agitation on the subject of vivisection, the previous Royal Commission, and consequent legislation. In the *précis* it was stated that in 1871 a Committee of the British Medical Association had reported that in their opinion:

1. Anaesthetics should be used whenever possible.
2. No painful experiments should be performed for illustrating laws or facts already demonstrated.
3. In order to ensure success and avoid waste, all painful experiments should be performed by skilled persons with sufficient instruments and assistants, and in laboratories under proper regulations.
4. In veterinary work, operations should not be performed for the purpose of acquiring manual dexterity.

These recommendations in a large measure guided the practice of investigators. The final recommendations of the previous Commission were that:

(*a*) All experiments should be placed under the control of the Secretary of State, who should have power to grant and withdraw licences.
(*b*) Licensees should be bound by conditions framed to ensure that suffering should never be inflicted when it could be avoided, and should be minimized when inevitable.
(*c*) The Secretary of State should be advised by persons of competent knowledge and experience known to the public but selected by himself.
(*d*) All places in which experiments are performed must be registered and be open to inspection.
(*e*) The Secretary of State must have full power of efficient inspection and of obtaining full returns and accurate records of all experiments made.
(*f*) The holder of a licence which the Secretary of State announces that he intends to withdraw should be allowed a public inquiry before a Judge of the Supreme Court, with two competent assessors appointed by the Secretary of State.
(*g*) Magistrates should have power to issue a search warrant in cases of suspected performances of experiments by unlicensed experts.

Mr. Byrne's *précis* then described the provisions of the Act of 1876.

Examined by the Chairman, the Witness stated that fresh licences and certificates were in all cases laid before an Under Secretary of State and were not granted or allowed to come into operation without his authority. Every proposed investigation of a novel, important, or painful character was submitted by the Under Secretary to the Home Secretary personally. The power given by the Act to append conditions to the Act was regularly exercised. One condition in universal use required that no operative procedure more severe than simple inoculation or superficial venesection may be adopted without anaesthetics. Mr. Byrne said this was the standing practice of the Department. He explained that it was not necessary invariably to insert a condition in the licence to that effect, because the terms of the application might show that no more severe procedure was contemplated. Asked as to the condition that an animal inoculated without anaesthetics should be painlessly killed immediately the main result of the experiment had been attained if it was found to be in pain, which was either considerable in degree or likely to endure, Mr. Byrne said the condition did not come in the Act itself. It was devised by the Secretary of State for the purpose of securing that no animal which was made to suffer illness and possibly pain—certainly inconvenience, as the result of inoculation—should be kept alive a moment longer than was absolutely necessary for the investigation. That condition was enforced in practice. Asked as to the condition that all animals operated on under anaesthetics, which were to be kept alive after recovery of consciousness, should be treated with strict antiseptic precautions, and if these failed and pain resulted, killed immediately, Mr. Byrne stated that this also was a condition which did not occur in the Act. The Act merely provided that if it were desired to perform an operation on an animal and keep it alive afterwards, the initial operation must be done under anaesthetics. The condition went a step further, and stated that the operation must be performed with strict antiseptic precautions, as it would be done on a human being. That was in order to minimize the likelihood of pain. These conditions were devised by the Secretary of State under the general power given to him by Section 8 of the Act. They were sometimes typewritten and sometimes printed, but they were attached conspicuously to the licence granted to each individual. No licence or certificate was allowed unless it bore the requisite signatures of the scientific authorities enumerated in Section 11 of the Act. In reply to a further question, the witness stated that the Act was carefully enforced. Complaints had been received that improper persons were licensed. These complaints were made in the interests of the animals; within his recollection there never had been a complaint from a scientific body. No complaint had ever been based on the ground of the want of skill on the part of the experimenters objected to. The witness went on to say that every application for a new licence or certificate was referred by the Secretary of State to the Association for the Advancement of Medicine by Research for their advice. The Home Secretary had the power to disallow or suspend any certificate although submitted and signed by the statutory authorities. Mr. Byrne pointed out that certificates were not recommended by the societies as licences were. It was a very important difference between licences and certificates that a licence was recommended by the learned authority mentioned in Section 11. A certificate was not; it was granted by them, and a certificate was the mere statement of a fact. The Secretary of State might pass it or disallow it as he chose; consequently he had the same responsibility as in the case of licences. In reply to further questions, the witness stated that the Association for the Advancement of Medicine by Research was treated by the Home Office as advisers on these points in all cases. The practice of consulting that Association was initiated by Sir William Harcourt. When further applications were granted, Mr. Thane, the inspector, was consulted in all cases, and Sir James Russell, the assistant inspector, in cases arising in Scotland and the North of England. There had been a few instances in which licences had been revoked on account of irregularities, and many in which they had been revoked for various innocent reasons, such as being no longer required or the investigation being dropped. Asked what he meant by an irregularity, the witness said it meant a contravention of the Act, such as performing an operation that required a certificate without one. The power had been exercised on four occasions as a punishment for such misconduct. Particulars of the cases were given. Since the Act came into operation some 60 cases of contravention had come to the notice of the Secretary of State. The great bulk of them were of a trifling character and called for no steps beyond a warning or rebuke. These irregularities had for the last ten years been set out in the inspector's annual return. No legal proceedings had been instituted by the Secretary of State under the Act. No complaints had been made of persons operating without a licence, but among the contraventions there were a few cases in which, by inadvertence, a person who had held a licence, perhaps for years, had continued to experiment, although his licence had not at the time been renewed. The licences were now renewed annually at a certain date.

In reply to Colonel Lockwood, the witness stated that these contraventions were due to pure carelessness.

In reply to further questions by the Chairman, he said the established practice was that speaking generally all experiments should be made in a place registered under the Act. Before premises were approved of, the Home Office had the report of the inspector who personally visits them. A general register was kept of all these places and it was now published in the annual return. The witness thought there were at present about 76, but the number might be made to be more or less according as five or six places in one block of buildings were counted as one place or as five or six. There were at the most between 50 and 60 separate institutions having registered places. A few private premises are licensed, most of the licensees being members of the medical or veterinary professions, but some being physiologists and research scholars not qualified to practise medicine, but experts in branches of study which concerned doctors also. Mr. Byrne here read a memorandum relating to persons to whom licenses had been occasionally granted and to others to whom they had been refused on the ground of their not having medical or other qualification deemed sufficient. Asked how long it had been the practice of the Secretary of State to refuse to register premises under private control except in very special cases, the witness said that had been substantially the practice for some years; but from the earliest time of the Act there were a few cases in which, on account of scientific eminence or the high position of certain licensees, they were allowed to perform experiments in unregistered places. That was a rule of conduct made by the Home Secretary for himself. The last return showed some number less than half a dozen of licensees, mostly carrying out scientific investigations with regard to the diseases of animals and cattle, the licence enabling them to perform their experiments wherever an outbreak of disease may occur, or in other places notified to and approved of by the inspector. There were no other cases at the present time in which experiments might take place in unregistered places. In reply to further questions, the witness said these places were subject to inspection by the inspector, who had visited a good many of them. He had a list of them, but it was not a definite duty that he should inspect them all, because some of them did not exist. He could not report them until after an outbreak; then it would be too late. If they became a permanent and not temporary importance, they would, where possible, be registered. For instance, the farm where the experiments of the tuberculosis Commission were carried out, was registered. Asked as to the records and reports of experiments which under statute a licensee was obliged to make, Mr. Byrne stated that was enforced by the Home Office. Every year there were some licensees who delayed in carrying out this duty, and this necessitated a good deal of correspondence, but substantially the duty was carried out. If a man, from contumacy or extreme neglect, failed to send in his report for the year, he would be dealt with by refusal to renew his licence; there had been no case, however, beyond extreme negligence. Asked whether the duty imposed on a licensee to forward to the Home Office any description of his experiment which was published in any journal or magazine, or in any report of a lecture printed for publication, or private circulation, was imposed with a view of the Home Office being furnished with the explanation of something that might be treated as an offence, the witness said: "It is partly that, and it is partly from the fact that if the supervision by the Home Office of an investigation going on in the country is to be anything like complete it will involve the examination of all the published investigations—investigations as to which anything is published; and this is simply to secure that the Department shall not have to go hunting about in the various reports in papers in magazines and publications of learned societies, but shall have them all sent direct to them for examination by the inspector with a view to seeing that the laws being carried out." In reply to further questions he said the papers sent to the Home Office are usually not mere descriptions of experiments, but relations by a doctor of the steps of an important investigation which he is carrying out, or the progress he has hitherto made, and the future steps he is going to take, and incidentally he mentions, and occasionally describes, what he has done by way of experiment in connexion with his research. The reports received from the licensee are quite a different thing. In reply to a further question, Mr. Byrne stated that most scientific men who are carrying out interesting investigations publish in the learned papers descriptions of their investigations, with statements as to the progress made and so forth, and no doubt these are eagerly studied. Those, however, would not have to go in his report, because the report sent to the Home Office is a mere list of the experiments which the investigator has performed under various headings. It is in no way a description of the experiment. Asked if it was intended that if he had given a fuller account anywhere of the experiments which he reported, it was his duty to send it, the witness replied in the affirmative. The witness went on to say that he was sure the Secretary of State would welcome an expression of opinion by the Commission on the question whether it would be practicable to call upon experimenters to furnish him with a statement of the results of their previous investigations, or of such investigation as they were proposing to continue. Asked why the increase in the number of licences had been so irregular,[1] Mr. Byrne replied that he could only say that the variations in the increases at different periods had nothing whatever to do with any alteration of the law or change of policy in the Home Office. He had no doubt they had to do with the growth of investigation in the matter of infective diseases, with inoculation, and with the increase of public health work, and with other matters which could be put before them more accurately by the inspectors and other scientific witnesses than they could by him. Asked why the increase under Certificate A, which meant a certificate to dispense with insensibility where insensibility would frustrate the object of the experiment, between 1904 and 1905 was from 8,954 to 35,429, the witness replied that in the annual returns of the inspector it was attributed mostly to the great increase of inoculation for the study of the mitigation and cure of infective diseases and for diagnostic purposes. Asked whether "radium and Roentgen and other ray treatment," was treated as an experiment within the Act, Mr. Byrne replied that if it caused pain it was regarded as an experiment under the Act. Radium treatment, or ray treatment for the purpose of curing disease or an unhealthy state, whether in a man or an animal, would not be an experiment coming within the Act at all.

Questioned by Colonel Lockwood as to what expert opinion guided the Secretary of State for the Home Department in deciding as to the painfulness of an operation, the witness said the Secretary of State had not to decide whether an operation was painful or not. The Secretary of State had often been asked whether a licence was required for certain experiments, and his attitude was that he himself had no power to decide what was pain and what was not, but that he was willing to give every assistance to an experimenter who applied to him under the Act, and he would always give a licence to an applicant who wanted to have one, if he considered it a proper case, even if he thought the absence of pain was so clear that a licence was not required. This he did on the advice of the inspector of the Association for the Advancement of Medicine by Research. Asked how long, in the case of inoculations where anaesthetics were not required, an investigation generally lasted, the witness said he did not think one could say generally. If a certificate, properly asked for and properly given, had been given, the animal would not be under anaesthetics during the time of observation. He should think there were certainly cases in which the period of observation would extend to months. Asked as to complaints made by antivivisectionists of the issue of licences to certain individuals, the witness said he meant that a few very well-known experimenters in this country were markedly unpopular among people who objected to vivisection, on account of the evidence they gave to the previous Royal Commission, or for other reasons. If it got into the newspapers that a certain investigator was carrying out an inquiry which shocked the public mind, many people wrote up: "How dare you give a licence to such a man as that!" But

[1] A table put in by Mr. Byrne showed that between 1880 and 1895 the number of licences increased from 116 to 215; between 1895 and 1900 there was an increase of 54; while in the last five years the number had increased from 247 to 381.

they had had nothing more definite than that. There had been no imputation on his skill, or care, or humanity, or on the humanity of the Secretary of State for the Home Department. Asked who discovered the cases of misconduct under the Act which involved the loss of the licence, Mr. Byrne said they nearly always appeared from the return made by the experimenter himself, which went to show, if further proof were wanted, that they were mostly inadvertencies. The man has really shown himself up in nearly every case. There had been no single case in his experience in which a person had been denounced by any one else, or by the authorities of the place where he experimented, for acting illegally. It was always disclosed by himself, either in his report, or by what he had told the inspector on making inquiries. Asked by Sir William Church to tell the Commission exactly the steps that a man wishing to obtain a licence had to take, the witness replied that in the first instance he had no doubt that a gentleman not used to the work, who was about to commence investigation, would consult an investigator whom he knew as to what the steps were that he had to take. He would then be told that he must begin by buying the forms on which application must be made; he would get those forms for a few pence from the Stationery Office. They were before the Commissioners, who could see what elaborate precautions they set out, including both the requirements of the Act and the warnings as to the various conditions attaching to the licence. Having got the form, he had to set out on it, in clear, unmistakable language, the nature of the investigations he proposed to carry out. If it was for experiments under a licence alone—that is to say, under anaesthetics, he would have to take this form, or send it, to one of the authorities mentioned in Section 11 of the Act, and he had no doubt that before they signed it and recommended it, as they were obliged to do by the form, they would require to be satisfied that he was a competent person. Asked if he could say anything as to the character of the persons who signed the certificates for the licence, the witness said the most obvious thing to say (which seemed to include everything else) was that the position of these gentlemen appeared to include every possible guarantee one could have of their competence. They were all in charge generally of the teaching in a laboratory where physiology was taught. The signature of a private individual was of no avail. Before a certificate was granted it had to be submitted to the Home Office. When it came to the Home Office it was at once submitted to the Association for the Advancement of Medicine by Research, and their report was received and considered and then submitted with the original application to the inspector, who considered the same, and advised the Secretary of State on it, frequently having to make, and making, further inquiries with regard to the proposals made before he finally advised. An alteration was made sometimes in the character of the application after it had been submitted to the Association of Medical Research. It very frequently happened that if the wording of the licence or the certificate was somewhat indefinite and would allow of experiments being carried out which were not really necessary for the purpose of the investigation, the wording would be so altered as to confine it strictly to the inquiry.

Asked by Sir William Collins whether licensees were required to give any undertaking with regard to carrying out the conditions imposed upon them, the witness replied in the negative. The conditions requiring that no operative procedure more severe than simple inoculation or subcutaneous injection might be adopted without anaesthetics was universal, with the reservation that in many cases it was not necessary, because the nature of the information showed that nothing more severe was ever contemplated. No certificate was allowed for a period of an operation more severe than those carried out without anaesthetics. The Secretary of State never allowed any certificate to come into operation which would permit a severe operative procedure to take place on an animal without anaesthetics. Inoculations which might terminate in painful disease were allowed in large numbers. It was considered a painful experiment. There was no classification of experiments in the last report into painful and not painful, but it was regarded as moderately painful by the Home Office. At various stages after 1876, most unsuccessful, were made to divide the experiments returned into painful and painless. That had now been given up, and the last return did not even profess to do so. Asked whether he could give any general notion as to how many of the total applications had been accepted, and how many had been refused, the witness said that he could give an exact list of all the refusals; they were extremely few. Generally speaking, all applications, coming as they did from competent persons, and being recommended by competent persons, were granted. A refusal was the very rarest occurrence. Asked as to the constitution of the Association for the Advancement of Medicine by Research, the witness replied that he knew very little about its constitution. It was a voluntary organization purely, and had no statutory recognition. In every case the Home Office received advice in regard to applicants for licences, and certificates from that Association and from the inspector. The reports from the Association and from the inspector were entirely independent and separate. In three of the four instances in which a licence had been revoked as a punitive measure, the irregularity was disclosed by the licensees themselves. It was always disclosed to the Home Office by the inspector, but generally to the inspector by the licensee himself. Most of the sixty contraventions of the Act had also been discovered by the licensees themselves. Speaking generally, every contravention of the Act had become known to the Home Office by the confession quite unconscious, of the operator mostly. Asked what steps the Home Office took to see that there were not cases, for instance, of vivisection by unlicensed persons, Mr. Byrne replied that the Home Office took no steps to investigate that. Such experiments might take place by unlicensed persons, either on unregistered premises or elsewhere, but he had no doubt whatever that the inspector, by inquiry and warning—as the Office itself had done by circular—reminded the authorities of all registered premises of their duty of seeing that no unlicensed person performed experiments there. But the Home Office took no steps at all to prevent people from performing experiments without a licence in private houses, so that it was not aware of any practical steps that could be taken. Since 1902 the Home Office had dispensed with what they called the Home Office form in making returns of experiments. It had allowed the experimenter to keep a record of his own in the laboratory books, provided that they gave at least as much information as the Home Office return itself would. Asked whether the Home Office was not furnished with a full account of every experiment, Mr. Byrne replied in the affirmative. That had to be produced; that formed the record. That was to save the experimenter the trouble of keeping two records. The Home Office received the publications of a licensee and sent them to the inspector. They were mostly of a highly technical character. Asked if any step was taken with a view to scrutinize the publications of other than licensees, from the side of physiology or pathology, the witness answered in the affirmative. He could remember instances in which the inspector had spoken and written to him of matters appearing in learned journals which were not sent to him by the experimenters. As to whether that had brought any contravention of the Act to the notice of the Home Office, he replied that he did not remember any case. Asked whether the effect of the Act of 1876 had been to reduce the number of scientific experiments, he replied that it was obviously not so. Asked whether much complaint was made to the Home Office of difficulty in legitimate investigators having the necessary certificates, he replied in the negative. Such complaints, which used to be made very many years ago before the system was understood, had entirely disappeared, and no one alleged now (although that was of more recent occurrence) that the Home Office interfered with research, or even that it gave much trouble. They were not even accused of red tape very often now.

In reply to Mr. (now Sir Mackenzie) Chalmers, Mr. Byrne stated that, as a matter of fact, every certificate or licence went through him. Very often it went to the Assistant Secretary before it came to the Under Secretary; so that it went through three sets of eyes in the Home Office. Then the Under Secretary determined whether it was of a novel character or important enough to go on to the Secretary of State. The practice was at present, and in the past had been, that very often the Under-Secretary sent the case back for some further inquiry or

investigation, asking, for instance, how the experiments bore, not merely on purely scientific knowledge, but on therapeutics or indications of human disease. In reply to further questions, the witness said the Home Office granted licences freely where probably they would think that no licence was necessary if the applicant wished to be protected. Mr. Chalmers gave the following as an example: The other day an experimenter wished to have an experiment without anaesthetics. In this case he wished to feed kittens on cow's milk instead of cat's, and a certificate was granted that the experiment might be performed without anaesthetics. Mr. Byrne said such an application would be granted by the Home Office. In reply to a further statement by Mr. Chalmers that they did grant one the other day, and again, for instance, fish-feeding experiments they granted licences for, the witness said: "Yes, all sorts." He agreed that every licence applied for had to pass through not only three sets of eyes but four sets of authorities before it was granted—namely, first, one of the authorities mentioned in the Act, the President of the Royal College of Physicians, or the President of the Royal College of Surgeons. Then it had to be sent by the Home Office to the Society of Research. Then it had to go to the inspector. And then, again, it had to run the gauntlet of either two or three officials of the Home Office. The same was the case with a certificate. He agreed, further, that practically under the licence very little was done, because it was a condition, on application for a licence, that if the licence was held alone without a certificate the animal had to be kept in anaesthesia throughout the whole experiment; and if the pain was likely to continue after the effect of the anaesthetic had ceased, or if any serious injury had been inflicted, that animal must be killed after the anaesthesia had passed off. The bulk of investigations required certificates as well as a licence, unless they came under certain conditions. In the ordinary course of official business complaints were issued by the Home Office that people would not send returns due from them, and complaints had been made by them that the Office did not send the licence back as quickly as they thought it might. But there were no serious complaints on either side. Asked by Mr. Ram whether the Home Secretary himself decided whether a proposed investigation was painful, and if so, on what advice, what steps were taken to satisfy him whether it was painful or not, Mr. Byrne said the principal step was the detailed advice given to him by the inspector, and the statement was made by the experimenter himself as to the precise nature of the experiment which he proposed to carry out, supplemented, as it often was, by his replies to further inquiries addressed to him by the Home Secretary, asking him to set out in greater detail the operative procedure he proposed. As far as a non-technical man could judge of pain, the Home Secretary had the fullest information before him. Asked if there was any machinery by which they could detect the failure of a licensed person to adhere to the conditions under which the certificate was granted, the witness said there was no machinery, except the danger that he might, on a surprise visit of the inspector, be found to be leaving out a precaution which he was called upon to take. The chief protection in that, as in all other cases, was the wish of the experimenters themselves to carry out all these conditions, aiming as they did at greater humanity—a feeling which the Home Office was sure was present in the mind of every experimenter. As far as the authorities were concerned, they had to trust to the bona fides of the experimenter, save in so far as one or more surprise visits might detect anything to the contrary. Asked if there was any means of knowing whether an experimenter not holding Certificate B, saw that every animal was killed painlessly before it recovered from the anaesthetic, the witness said there was no other than the propriety of his own feeling—the public opinion of the other gentlemen working in the same laboratory. He was sure that if an animal seriously injured was kept lingering beyond necessity, the experimenter's friends and colleagues would speak to him about it. In reply to a question whether any application to be allowed to prosecute a licensed person had ever been made and refused, the witness replied in the negative. In one instance only had the Secretary of State's consent been asked for, in 1892, when two licensees admitted the representative of a certain newspaper to see them performing experiments on living animals. The London Antivivisection Society held this to be "An exhibition to the public" within the prohibition of the Act, and requested the Secretary of State to institute proceedings, and, failing that, asked for his written consent to a prosecution by the Society. The Secretary of State declined to take any proceedings, as the admission of a reporter to the laboratory was not considered by him to be an exhibition to the public; but he stated that he was quite ready to give his formal assent if the Society decided to bring the matter before a court of justice. There the correspondence ceased, and no prosecution followed. Asked as to publication by licensees of reports of lectures in journals or magazines, the witness said that during eighteen months 103 such reports were received. In many instances these reports gave very much more information than the mere record required by the Act. In some cases, at any rate, they described minutely the whole procedure of the experiment. In reply to a question the witness said it would be possible to call for further details, but he did not think it would be possible to enlarge it considerably without giving very substantial additional trouble to the experimenter. It was proposed by Sir Kenelm Digby, the permanent head of the Home Office, who immediately preceded Mr. Chalmers, that the special matter of calling for a report of experiments might appropriately be the subject of a conference between the Home Office and some of the learned authorities acting under Section 11 of the Act. That proposal was never carried out, it probably being thought that a Royal Commission, or some other mode of inquiry, might presently be instituted. Asked with regard to Certificates A and B—A being the certificate which dispenses with the necessity of anaesthetics, and B being the certificate which dispenses with the killing of the animal under anaesthetics—who decides the necessity, under A or B respectively for the absence of anaesthetics, or the dispensing with the death of the animal, the witness replied that it was exclusively the learned persons empowered by the Act to sign the certificate. The Secretary of State occasionally suggested, for the convenience of experimenters, that in the case proposed the proper certificate was so-and-so, but that was merely friendly advice to save the applicant trouble in getting his papers in due order. In reply to a question, the witness said the Act provided for a special certificate to enable the testing of an alleged former discovery to become the subject of a further investigation. A few of those certificates were given at the beginning of the operation of the Act, but they had substantially entirely died out now. The Secretary of State would grant such a certificate if it were applied for in proper circumstances, but they never were applied for, the reason being, he presumed, that every investigation touched or illustrated, or in some way or other had connexion with, previous investigations, so that it might really be regarded as new, even although it was going over the same ground as had been passed over by the previous experimenters. Asked if any distinction was made, in applying for leave to carry out experiments, whether it was a physiological matter or a pathological matter, the witness said there was no difference in the form of application; it was only in the form of the return. Asked if the Secretary of State was aware when he granted a certificate whether it was for the advance of physiological knowledge or pathological knowledge, he answered that if the certificate was expressed in such vague terms as to leave an essential matter like that doubtful, the Home Office would in the ordinary course return it to the experimenter to have it made more explicit. All certificates, if duly recommended, were granted with the same facility. Asked by Dr. Gaskell if an investigator holding Certificate A made use of it as Certificate B he was guilty of an irregularity, the witness replied that certainly he was. That was not red tape but a necessity under the Act; the Secretary of State was bound to act in that way. It was curious that of the sixty contraventions quite a substantial number were contraventions indicating a keen desire on the part of the operator to provide greater security for the animal not suffering than the Act allowed him to take. If he had a certificate, for instance, allowing him to carry out a certain investiga-

tion without anaesthetics, and he, in an individual case, thinking the anaesthetic would do no harm, applied it to save the animal pain, then he had committed a breach of the Act. The Secretary of State could not help that at present under the existing law. That might be altered with advantage. In reply to a further question, the witness said that as a matter of Office practice the Secretary of State required the animals to be specified, not only under Certificate B, but generally with all certificates. He had never known the case of a gentleman having to make repeated applications for Certificate B, adding different animals to it. There would be no hesitation whatever in granting him Certificate B, including a list of seven or eight animals of the sort they described. He could save himself the whole trouble by putting them down on his original application. The object of specifying the particular animal when Certificate E was already required in order to use cats and dogs, and F to use horses, mules, and asses, was that there was—at any rate, in the popular opinion—a marked difference of sensibility in certain animals which might be used which were not protected by special certificate. The Secretary of State would feel that he ought to be much stricter in allowing operations on monkeys than on frogs or guinea-pigs. With reference to the requirement of the Act that after recovery from the operation the animal should be kept in a licensed place, Dr. Gaskell said one of the things which was more and more likely to occur in the future was keeping animals alive after an operation, for instance, after section of nerves, and it was infinitely better for the animal itself that it should be, not in a cramped place in town, but in a comfortable home in the country, when it had entirely recovered from the operation, but had to remain alive a certain length of time to see the result. So far as he understood, the animal must be kept in the place where the operation was performed. In reply, Mr. Byrne said that was not a requirement of the Act, and it was not a requirement set out expressly in any condition enforced by the Secretary of State; but inspectors had, he understood, advised investigators, with the concurrence of the Home Office, that it might be held that a person who kept an animal which had been operated upon for observation, although he had not operated upon it himself, was himself taking part in the experiment upon it, and therefore it would be safer for the animal experimented upon to be kept in the custody of the licensed operator the whole time. In reply to a suggestion by Dr. Gaskell that such animals should be kept under the supervision of the inspector, the witness said he was sure that the Secretary of State, if he was satisfied that he had the power, would act upon it. In reply to a question by Mr. Tomkinson whether special certificates nullifying the restrictions of the Act might not be granted by the Home Secretary, the witness said they might be granted by certain learned authorities on the authority of the secretary of state. Asked whether practically every restriction as to anaesthesia, and killing, and the manner in which the experiment might be performed, either in illustration or otherwise, was liable to be nullified by special [illegible] Mr. Byrne replied that was the [illegible] of the Act to lay down a number of very strict conditions and then to allow all except those to be removed by certificates. Certificates had been refused, and frequently also. The certificates might be limited by the learned authority which granted them either by the number of experiments allowed, or by time or they might not be limited at all. In the latter case the Secretary of State almost invariably imposed a limit. In every case the Secretary of State imposed a limit of time, because a licence had to be renewed, licences to last only for twelve months, and a certificate without a licence was inoperative. They might be forfeited or limited by the person who granted them. A licence allowed the operator to perform any number of experiments under its conditions, but not without an object. A special certificate was confined to one investigator, or to one class of investigations. For instance, about the widest form of special certificate that could be given to an authority for vivisections and feeding experiments for the study of infective diseases. That was probably in many cases not limited at all, and the person who held such certificate could, if he had immediate [illegible] use, [illegible] or 3,000 animals. Experiments for Government departments had done so. Foreign vivisectors were not allowed to perform experiments in an English laboratory without a licence. Last year, or the year before, some distinguished foreign visitors to England were suddenly licensed and allowed to perform experiments at the Medical Congress, or at a meeting of the British Medical Association, but the Secretary of State had no power to allow any one to perform painful experiments on living animals without a licence. But aliens had frequently received licenses. Where there was any reason to suspect that the applicant might go abroad before the expiration of the licence, a condition was attached to the licence requiring him to report before he left this country the particulars of all the experiments performed. If the visit was a mere flying visit a licence would not be granted. In reply to further questions, the witness said no experimenter was allowed to call it one experiment doing the same thing as to six or seven animals. On the other hand, one animal might be inoculated several times. Asked by Colonel Lockwood if each would count as a separate operation, Mr. Byrne replied it would depend. If an animal was used for a certain investigation—say inoculation with diphtheria antitoxin—and it did not take, and the animal was as good as ever, and was kept alive, and was subsequently used for an entirely different experiment, those would count as different experiments, and would be returned as different experiments. If two wounds were necessary for one experiment that would only appear once as an experiment, or the experiment might consist of inoculation on successive days, and then it would appear as only one experiment, although it might be six inoculations—perhaps not six, but at any rate several.

Asked by Mr. Tomkinson if an inspection of private houses or a surprise visit was ever possible, the witness replied that there were no private houses in the ordinary sense of the word in which experiments were allowed to take place now. There were some private premises, but not dwelling houses—works and places like that—which were the only places where certain conditions could be observed.

In reply to Dr. Wilson, who asked whether the names of eminent men allowed to carry out experiments in private laboratories, were submitted as in the usual course to the Association of Medical Research, Mr. Byrne said that in modern practice every one was. If the President of the Association himself applied, his name would be submitted to them. Asked if it were possible that any student, for example, of medical research or assistants in a laboratory could carry out any experiments without a licence, he replied in the negative; it would be distinctly against the law. The Home Secretary, by a circular issued to persons in charge of laboratories, and by the reminder which formed part of a letter which went to every authority of every separate place that was registered tried to secure that they should keep a sharp look out that no unauthorized experiments took place. Even in regard to assisting another experimenter, the Home Secretary had given most advice that unlicensed assistance must be of a purely subordinate character, and that it must not partake of the nature of a joint experiment at all. Asked with regard to the large number of experiments which had of recent years been carried out under the instructions of the Board of Agriculture for example, were the same precautions taken, so far as the Home Office was concerned, that all the conditions or restrictions imposed by the Act should be carried out? The witness said the only difference was, that as many of these experiments were allowed to take place in farms and fields and other places which had not the advantage of inspection by the inspector for the purpose of registration, they were not registered; it was impossible for the Home Secretary to feel as sure that the animals were as well and properly treated as he knew they would be in a place open to inspection. But, of course, the gentlemen attached to the Board of Agriculture, who carried out these works, would see to that themselves; it was quite as secure as if the Home Office saw to it. In reply to a further question, he said there was no inspection of veterinary surgeons' hospitals or the stables in which they treated sick animals. The Home Office took no

action whatever by detective or other methods of that sort to see what breaches of the Act did not occur in unregistered places. Replying to a further question, he said it was quite certain that, especially in veterinary matters, breaches of the Act could take place frequently and easily without the Home Office knowing anything about it. He said it was certain that they could, because they had so occurred. Only two years ago it came to the knowledge of the Secretary of State that certain experiments of a proper character—experiments which would have been licensed if the gentleman concerned had applied for a licence—had been carried out by two veterinary surgeons in exposing dogs to distemper and using the inoculation of other matters to try to produce immunity or prophylaxis, at any rate. These experiments were done, and they were distinctly breaches of the law. Prosecutions would probably have taken place but for the fact that the period within which proceedings could be taken had already passed. But strict warning was given to the persons concerned by the Secretary of State through the police. He was not aware that any instructions had been given to the Board of Agriculture by the Home Office to protect animals as far as possible against operations by unlicensed veterinary surgeons. He thought they had not. Asked by the Chairman whether the Home Office under any Act that it administered had any occasion to employ people to make experiments, the witness replied that indirectly the Home Office had been the occasion of a good many experiments in connexion with dangerous trades. The investigations of doctors who had advised them on that subject—Dr. Oliver and others—had necessarily involved experiments on animals, and the Home Office had willingly made use of the results of such investigations. In such cases a gentleman would be licensed just in the ordinary way, and he would be under the same restrictions as any one else. In reply to a further question he said the Home Office in granting a licence to an official of the Board of Agriculture treated him just as it treated any one else. The Home Office had never gone so far as to direct any experiment. It had merely asked certain experts for advice on technical questions connected with disease, and had received and acted on that advice. It knew incidentally that before giving that advice the doctors concerned had to make experiments on animals. They were mostly distinguished men who had had a licence for years. Asked whether he had any means of judging whether the number of experiments made before the Act of 1876 was greater than those afterwards, or whether the operation of the Act was to reduce the total number, the witness replied that he would say, as regards experiments in the laboratories of well-known institutions, that the effect of the Act was at first very slight—it neither diminished nor increased them; but if there were, which was a very doubtful point, any considerable number of experiments going on in private houses and other unknown places, he would think the effect the Act had been to abolish them entirely. It was impossible to believe that in thirty years, if unlicensed experiments were taking place, the Home Office and the police would not have heard of one instance of it. As to whether any cases had been brought before the Home Office for inquiry where it was alleged that unauthorized persons were experimenting irrespective of the Act, without any licence, the witness replied, Yes, a few cases of a very vague character leading to nothing—allegations generally based on the person's own rash statements. He knew of no case where, on investigation, it had been discovered that the allegation was well founded.

(To be continued.)

Dr. Fletcher Little has been appointed a Justice of the Peace for the County of London.

Senor Guillermo Mann, Professor of Psychology and Paedagogics in the University of Santiago, has been charged by the Chilian Government with a mission to visit the United States and Europe in order to study the laboratories of experimental psychology already in being. In Europe he will visit the laboratories of Germany and those of St. Petersburg, Budapest, Zurich, and Antwerp; in the United States he will inspect those of Clark University, Harvard, Yale, New York, and Chicago. The object of Professor Mann's mission is to gather information for the guidance of his Government, which intends to found a Laboratory of Experimental Psychology at Santiago.

MEDICAL NEWS.

The appeal in the case of Southern *v.* Thomas and Skyrme has been by leave withdrawn.

St. John's House for Nurses, for many years in Norfolk Street, Strand, has removed to its new house at 12, Queen Square, Bloomsbury.

At a meeting held on February 1st the Paris Municipal Council voted a sum of £152 for the erection in the Municipal School of Physics and Chemistry of a memorial of the late Professor Curie.

The new buildings of the City of London Lying-in Hospital, City Road, E.C., will be ready for occupation early next month, and will be open to inspection after the annual court of governors to be held at 3 p.m. on Wednesday next.

The annual dinner of the past and present students of the University of Durham College of Medicine will be held in the Library of the College on February 22nd, when the chair will be taken by Dr. George Murray at 7.15 p.m. Tickets, 10s. 6d. each, may be obtained on application to the Honorary Secretary, Dinner Committee, College of Medicine, Newcastle.

Dr. Kosta Dinic, Physician in Ordinary to the King of Servia, died of pneumonia at Belgrade on January 31st. Banished from Servia by the Obrenovich Dynasty as an adherent of the Karageorgevich family, he went to the Congo State. On the accession of King Peter to the throne Dr. Dinic returned to his native land.

The Lister Institute, we learn from a correspondent of *Light*, has been cursed by a clergyman whose name we, in mercy, withhold. It appears this amiable divine "went up to London, donned his priestly robes and solemnly cursed the Chelsea Institution from the street." We are not told that the reverend gentleman had his bell, book, and candle with him. Perhaps this ritual omission spoilt the curse. At any rate we believe that the Institute is still standing, and we have not heard that any one within its gates is one penny the worse.

At the end of the year Dr. O. H. Fowler, one of the leading members of the medical profession in Cirencester, retired from practice in which he had been engaged for more than forty years. His numerous friends took advantage of the opportunity to give him a solid proof of their personal regard for him and their high appreciation of his professional work. Earl Bathurst, on behalf of about three hundred and fifty subscribers, asked Dr. Fowler's acceptance of an illuminated address, bound in book form, with the signatures of the contributors, together with a very handsome and massive silver-gilt double-handled cup, of rich workmanship, of the period of George II, the date being 1752. The ebony plinth bore the following inscription: "To Oliver Humphrey Fowler, M.R.C.S., on his retirement after forty years' practice at Cirencester, the gift of many friends, who will always gratefully remember his skill, judgement, unfailing kindness, and attention.—Christmas, 1906." Mr. T. Kingscote added a few words to Lord Bathurst's appreciative speech, and Dr. Fowler made a graceful acknowledgement. We may be allowed to add our own congratulations to Dr. Fowler, and to express a hope that he may have many years before him in which to enjoy his well-earned rest.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

PARKES MEMORIAL PRIZE.

The prize of seventy-five guineas and the bronze medal of the Parkes Memorial Fund for 1906 have been awarded to Major F. Smith, D.S.O., R.A.M.C., for his essay on The Sanitary Requirements of Naval and Military Units in Peace and War, with Suggestions for Complete Schemes of Sanitary Organization Suitable for both the Navy and Army. The subject for the next competition is—The Part Played by Blood-sucking Insects in the Causation and Spread of Disease in Man, and the Measures to be Recommended for the Prevention of such Diseases. The essay must include the results of personal observation and research, and must reach the Secretary of the Prizes Committee, Royal Army Medical College, on or before December 31st, 1909. It must bear a brief motto, and be accompanied by a sealed envelope similarly superscribed, containing the name and address of the author. The competition is open to the medical officers of the Royal Navy, Army, and Indian services, of executive rank on full pay, with the exception of the professors and assistant professors of the Royal Army Medical College and Royal Naval Hospital, Haslar, during their term of office. The successful essay becomes the property of the Prizes Committee. The authors of unsuccessful essays can have them returned on application to the Secretary, The Prizes Committee, under their respective mottoes, giving an address to which they wish the essays sent.

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SATURDAY, FEBRUARY 16TH, 1907.

REPORTS IN THE "SUPPLEMENT."

THE SUPPLEMENT for this week contains several documents of more than ordinary importance, two of which are specifically of the nature of matters referred to Divisions for their consideration. One of these is the report by the Central Ethical Committee with regard to the ethical aspects of medical consultation. The report was prepared in accordance with the instructions of the Annual Representative Meeting at Leicester in July, 1905, and was submitted to the Annual Representative Meeting in London last year, and by it, after amendment, referred to the Divisions. The report embodies a series of propositions which, should they be approved by the Association, will serve as a short code of rules for the guidance of the profession in the conduct of consultations. The Committee has devoted a special section of its report to the discussion of the question whether it is desirable to provide for the formal recognition of a distinctive class of practitioners who do not attend patients except in consultation, and avowedly confine their practice to treating patients in co-operation with the ordinary medical attendant. Upon this the Committee has not felt itself competent to do more than set out the advantages which might obviously flow from the adoption of such a classification. Some hesitation has no doubt been felt for many reasons, among others that the official or [illegible] recognition of such a class would not in any way preclude the necessity for well-understood rules with regard to consultation between two members of the profession neither of whom practises exclusively as a consultant. The report in its other clauses appears to succeed in reducing to writing the best customs of the profession in respect of consultations, but in one section at least, that on "The duty of consultation," it goes beyond what has hitherto been done by enumerating certain classes of cases in which, in the view of the Committee a second opinion should always be obtained whenever practicable. From the experience derived from questions submitted to the Editorial Committee, there are excellent reasons for saying that this section of the report will often be found extremely useful, especially by younger practitioners who have brought [illegible] to face with one of those [illegible] which most especially strike and in other [illegible] involving the duty of the practitioner towards the patient [illegible] circumstances of [illegible] Another important document in the Supplement is a report on the medical inspection of school children prepared by the Medical Committee for the Divisions. After a brief preamble the report sets out the methods which it considers to be necessary to secure thorough and efficient medical inspection of school children, and expresses the opinion that the [illegible] appointed or whether it would be distributed among those medical men in each district prepared to undertake a portion of the duty, is one which very closely concerns general practitioners. We have ventured on many previous occasions to express the opinion that the third course is that which presents the greatest advantages from the point of view both of the public and of the profession. It is of course granted that the larger education authorities ought to have the services of an expert adviser, either a special officer appointed *ad hoc* or the medical officer of health. Probably the system evolved in London, under which the office of the medical officer for schools is a part of the general Public Health Department, is the most logical; but we confess that it is difficult to see how by the appointment of a staff of special medical inspectors the work of school inspection can be adequately carried out, especially with regard to the prevention of epidemic disease. However this may be, we would reiterate the opinion that the matter is one which urgently calls for the attention of the profession.

The third document to which we would specially refer is the statement with regard to the Central Emergency Fund formed to assist members of the profession in various parts of the country in maintaining the interest of the profession against organized bodies of the community. Under the present constitution of the British Medical Association, which is registered as a limited liability company not for profit, no part of its funds can be applied for the benefit of any individual member, except by way of remuneration for services rendered to the Association. In consequence, the Central Emergency Fund is provided by voluntary contribution; it is managed by the Medico-Political Committee, and the money is vested in trustees. The fund has been called into existence in order to make grants to individual members to assist them in maintaining positions in which the Association may have decided to support them, and to compensate individuals for loss incurred through taking action approved by the Association. The Committee has power also to make grants to Divisions or Branches to assist in defraying expenses incidental to the conduct of local disputes, and also to expend money in any way which it may deem necessary in promotion of the general objects of the fund.

THE NOMENCLATURE OF SYNTHETIC MEDICINES.

THE great advance that have been made in chemistry during recent years have resulted in the introduction into medicine of an enormous number of synthetically produced compounds, some few of which have proved to be drugs of very great value, and have established for themselves a secure place among therapeutic agents. The study of the pharmacology of some of these substances and of derivatives closely allied to them chemically has begun to make it possible to forecast within certain limits what the therapeutic effects of [illegible] compounds are likely to be and so to enable the organic chemist to produce a drug to meet specific requirements of the physician. The attractive possibilities that opened up and the commercial success resulting from the manufacture of some of the substances thus evolved, have led to great development of this kind of work on the part of manufacturers, and it is probable that a very large further increase in the number of new synthetic drugs produced yearly is to be looked for.

In order to avoid hopeless confusion among the

names of these substances, some definite agreement on nomenclature appears to be necessary. If a new active principle is isolated from a vegetable drug, it commonly receives a name derived from that of the plant yielding it, and therefore conveying some information as to its character; if a new inorganic salt finds application in medicine its ordinary chemical name is the one under which it becomes known. But in the case of synthetic substances no such simple method prevails. The systematic names by which these compounds are known to chemists are usually of a length that precludes their use for ordinary purposes of commerce or in prescribing; such names, for instance, as diparaanisylmonophenetylguanidine or diethylglycocollparaamidohydroxybenzoylmethylester, however informing to the organic chemist, are clearly impracticable for ordinary use. In these circumstances the manufacturer who first puts such an article forward, usually bestows on it some short and easily-remembered synonym, sometimes indicative of its therapeutic uses, such as antipyrin, or suggesting its chemical nature, as in the case of phenacetin; but in a large number of cases the word selected is entirely without meaning in itself. The Trade Marks Acts allow of the registration of such coined words as trademarks, and the manufacturer naturally avails himself of the privileges thus obtainable, with the result that whenever the drug is ordered under its registered name it is illegal to supply an article produced by any other maker. As a rule, however, if the article proves to have any merits and to be in demand, other makers soon begin to prepare it, and each in turn, being debarred from using the name under which it is already known, invents a new name, and usually secures trade-mark protection for it. The consequence is that a single article is to be found in use under many different names, and confusion inevitably ensues among prescribers and dispensers from the multiplicity of synonyms. To take one or two recent instances, acetylsalicylic acid is known as aspirin, xaxa, and aletodin, in addition to the more suggestive names salacetin, saletin, and salacetic acid; hexamethylene tetramine appears also as urotropine, aminoform, formin, cystamin, cystogen, metramine, uritone, vesalvine, and urisol. Each succeeding maker commonly pushes such an article under his own special name for it, without reference to its employment under any other, and there is thus at least a probability that in a given case a drug which has failed under one name may be inadvertently tried again under another. In an article in the *Pharmaceutical Journal* of December 22nd last, attention was drawn to this redundance of synonyms, and a number of examples were given, in some of which one drug went under as many as fourteen or fifteen disguises. Our contemporary has also made an attempt to provide a remedy for the present confusion; in the *Chemists' Annual*, which is a special yearly issue sent to all members of the Pharmaceutical Society, a long list of short notes on drugs is given, and in this list all articles known under registered names are also furnished with a fancy name in which no proprietary rights exist. The names thus introduced are such as give some indication of the nature and properties of the compounds to which they are applied, while some attempt is made at systematization, as, for instance, by using names ending in "—caine" for all local anaesthetics. While exception might perhaps be taken in some cases to the particular name selected, the general principle appears to be sound that in the case of synthetic drugs having more than an ephemeral career, a convenient trivial name should be fixed on independently of any registered name or names, and made known as widely as possible. It would then be in the power of the prescriber who did not wish to order the preparation of one particular firm to prescribe the drug under its nonproprietary name, leaving it to the chemist to obtain it from any satisfactory manufacturer, just as with a pharmacopoeial article. The first attempt to introduce such names was made in the *British Pharmacopoeia Addendum* of 1890, when official recognition was given to synonyms for antipyrin and some other drugs in place of proprietary names; but the issue of a new *Pharmacopoeia* or an *Addendum* is too rare an occurrence to have any appreciable effect, and it does not appear that a better medium than the official organ of the Pharmaceutical Society could be found for helping to bring such synonyms into general use. We would, however, suggest to our contemporary that a great step would be gained if definite means were taken for bringing these alternative names before the medical profession; the owners of trade-marks are by no means backward in this direction, and if the prescriber becomes familiar with a drug by one name, the possession by the chemist of the knowledge of a better one will scarcely avail to eliminate the use of the former.

MENTAL PROPHYLAXIS IN CHILDHOOD.

A general survey of the trend of medicine would almost justify the assumption that in times to come prophylaxis will entirely supersede therapeutics, that the physician will be required not so much to combat fully-developed disease as to attack it in the germ, and that in prevention medicine will receive its final apotheosis. However this may be, there can be no question that a knowledge of hygiene, including in this term both personal and public health, is of paramount importance.

From the time of Moses to the present day, however, hygiene has been regarded almost entirely as coextensive with sanitation, as concerned with such matters as the disposal of excreta, the regulation of the bodily output and intake, and, in its later developments, with the application of laws formulated in the laboratory as to the action and reaction between bacterial flora and the human organism—the great addition to our knowledge in these departments overshadowing the need for the enforcement of preventive principles within the domain of the central nervous system. There are not wanting signs, however, that this day is passing; that, following an increasing knowledge of hereditary influences and of the first symptoms of nervous and mental maladies, a *Codex Salutis* is becoming elaborated, and with it a public recognition of the fact that the transgression of any health law is inevitably followed by its fitting punishment with more immitigable severity than the infraction of any contained in the statutory penal codes.

Of these signs of the times, Professor Clouston's *Mental Hygiene*,[1] lately reviewed in our columns, is an example, and another is furnished by a small but exceedingly able book containing three lectures[2] by Professor Oppenheim of Berlin. The first lecture, on nervous disease and reading, of necessity barely touches the fringe of an exceedingly wide subject, and may perhaps be best summed up in Schopenhauer's apophthegm, quoted by the author, "in order to read "the good it is necessary that one should not read the "bad."

As to what is good and what bad from the point of

[1] British Medical Journal, 1906, ii. p. 1640.

[2] *Nervenkrankheit und Lektüre.* Three Lectures by Professor H. Oppenheim. Berlin: S. Karger. 1905. (Demy 8vo. pp. 119. 2M.)

view of the neurologist Professor Oppenheim has much to say, and it should be premised here that he considers only the medical and not the moral issues of bad literature, although these necessarily overlap. In commenting on the lack of restraint in modern books, whether novels, plays, or verse, evinced by an abandon in the depiction of erotic situations, a subtle permeating indecency which formerly would not have been tolerated, and a widespread public interest in morbid medical details which might at one time have been deemed worthy of incidental reference but now form frequently the sole *motif* of the novel or play, the author touches on a point of professional interest. This is the extensive publication in the daily press of papers of purely technical import contributed to medical societies, congresses, and the like. This custom he heartily condemns, and he gives instances where the publication of such reports in the daily journals, even on such a comparatively innocent matter as arteriosclerosis, had been followed by the appearance in his consulting room of numerous hypochondriacal and neurasthenical persons, who had found there the appropriate pabulum for their morbid fears.

Even if Professor Oppenheim should be wrong in affirming that ours is beyond others an age of "nerves" and in further assuming an actual decline in taste, there is little question that reading of this kind is calculated to react unfavourably on nervously predisposed individuals, and that even in the ordinary uninstructed laity, and particularly in the young, a diet of this kind is apt to result in some form of mental indigestion.

With regard to the young Professor Oppenheim in his second lecture, on nervous affections and education, examines the customary pedagogical methods from the neurological standpoint, and naturally finds considerable room for criticism. As Professor Clouston has said, if mental hygiene is to be entirely successful it must be instituted during the formative period of life. With this opinion Professor Oppenheim is in entire accord and a perusal of his lectures emphasizes the fact that if schools are to take the part they should in the education of character, the emotional qualities of the pupils require as careful study and supervision as their intellectual development. As this, to be thorough, would necessitate individual attention by trained psychologists, it is perhaps as yet a counsel of perfection, but Professor Oppenheim's strictures and conclusions which will be fully endorsed by the medical profession may be commended to educational experts as containing truths which are, as a rule, disregarded.

As the whole value and indeed the possibility of existence of a scheme of mental prophylaxis turns upon the recognition of tendencies and symptoms pointing to incipient nervous disorder, the third lecture on the early symptoms of the neuroses in childhood will prove of greatest practical interest. The symptoms enumerated by the author include [illegible] disorder of sleep, excitability of emotional reaction in a range extending particularly in unfavourable cases to fright, a liability to delusions or delirium in early childhood, a tendency to [illegible] *pavor nocturnus*, and a great number of motor disorders and habits, tics, twitching, and so on. These symptoms, many of which manifest themselves during the first two or three years of life, and all of which are to be appreciated as danger signals are often [illegible] indicating by paths to the City of Destruction which are to be avoided if the pilgrim is ever to reach the Celestial City of Hygieia.

No one has done more to call attention to the nature of the indications which should be looked for, and to their correct interpretation, than Dr. Francis Warner; with the increased interest in the study of the disorders of childhood which impede mental and physical development, it is to be hoped that the lines of investigation he initiated may be energetically followed up.

THE WORKMEN'S COMPENSATION ACT, 1906.

WE stated last week that a Subcommittee of the Journal and Finance Committee of the British Medical Association had under consideration the possibility of starting a co-operative plan by which medical men could be insured under specially favourable terms in respect of risks arising under the Workmen's Compensation Act, 1906, which comes into force next July. The Subcommittee met again on February 13th and made considerable progress. It is hoped that a detailed scheme may be ready for publication very shortly, under which it will be possible not only to make a substantial rebate to members of the medical profession, but also to form the nucleus of a fund for medical benevolent purposes.

A DANGER OF THE SANATORIUM.

IN the early Victorian days, when it was the fashion to "take the waters" at Tunbridge Wells or Bath, the amenities of these and other watering-places led very frequently to matrimonial engagements, some successful and others the reverse. In later times, when the hydropathic establishment came into vogue, it rapidly descended from its high level as a curative agent and became a common meeting ground for healthy young folk of both sexes, and served its turn also as a matrimonial agency. In both these instances, however, the conditions of life were well known to every one, and there was no pretence of supervision on the part of the proprietors, male or female, of the respective establishments. The sanatorium has succeeded to the hydropathic, but those who are familiar with sanatoriums for consumptives abroad are alive to the danger which is becoming manifest, that these institutions are in like manner liable to degenerate into mere hotels for tuberculous guests, and that effective supervision, although prominent in the prospectus, may be but loosely exercised in fact. The close association of young persons suffering from incipient disease, thrown together without the restraining influence of parents or other relatives, can only be expected to lead to mutual attraction. All the more does it become necessary that the influence of directors or matrons should be exercised over other than the tuberculous affections. Dr. Theodore Williams, writing upon this subject, tells us that the "English sanatorium doctors keep a sharp look out, "and if there is too much intimacy they require the "removal of one of the patients to another sanatorium." He adds, "My experience of consumptives marrying is "very gloomy, and I oppose the practice in every way." We think that in these views he would be supported by all English physicians who have special experience of the subject. That this opinion is not held by one, at least, of the proprietors of foreign sanatoriums the following facts will show. The relatives of a young English lady, who had been entrusted to his care, have recently received simultaneous letters from the young lady herself and from the proprietor in question, a well-known personality, stating that she had become engaged to a young man who was also a patient in the home. The doctor, who must have observed the growing intimacy of the parties, had not only given no word of warning to the relatives, but in his letter, after stating

the bare fact of the engagement, he maintained that, though many medical men have objections to lung patients marrying, over eighteen years' experience of thousands of these cases had convinced him that it was good for them mentally, and very often physically, too. . . . There need be no children, he observed, right from the beginning, but numerous cases had been seen in which the effect of pregnancy was most decidedly good in promoting lasting recovery of lung patients—cases in which a cure could not have been expected had the lady not happened to be pregnant at the same time. Our readers will doubtless form their own judgement as to the value of any man's opinion who claims to have had experience of "thousands of cases" of the marriage of consumptives. The question of the effect of pregnancy upon the course of tuberculous disease of the lung is one that may rightly be described, again to quote Dr. Theodore Williams, as "ancient history." Every one with experience of such cases must have noticed the apparent improvement in the health of young tuberculous mothers during pregnancy, but there are very few who could point to tens, much less thousands, of such cases where the subsequent history was otherwise than disastrous. The proprietor of the sanatorium in question evidently does not trouble himself about the future, or he is ignorant of plain facts. His patients are "cured," they are fond of each other, let them marry. It will doubtless come as a shock to British parents and to their medical advisers to learn that such views are held by one who during the past eighteen years has attracted to his sanatorium a large number, not only of patients, but also of medical men. Many of his pupils have set up sanatoriums of their own in various parts of this country, borrowing not only his methods, but even the very name, of his institution. We feel convinced that they would, one and all, join us in condemnation of the course which he has thought it right to pursue in the instance to which we have referred. It is not legally or morally within the province of the doctor to forbid the marriage of consumptives with one another or with healthy persons, but no physician to a sanatorium, however eminent he may be, can be justified in aiding or conniving at the engagement of a consumptive young lady placed under his care, without first communicating either with her relatives or with her own medical adviser.

INFANTILE MORTALITY.

The maintenance of the infantile mortality-rate, while the death-rate of older persons has decreased, is discussed at some length by Sir Shirley Murphy in his last annual report to the London County Council. In 1905 nearly one-third of the deaths of children under 12 months old occurred during the first month of life. The numbers of deaths in each successive month decreased until the ninth month, when there was an increase, due, in Sir Shirley Murphy's opinion, to the change from natural to artificial food. Investigations into the effect of social conditions upon infant mortality disclosed results which experience elsewhere hardly justified us in expecting. When the number of deaths was set out in groups of districts arranged according to the amount of overcrowding, the mortality in the first month of life was not found to be higher in the most overcrowded group than it was in the least overcrowded. The ill-effects of overcrowding was least marked in the first three months of life, more marked in the second, still more marked in the third, and most marked in the fourth three months. The very instructive figures which were drawn up by Dr. J. F. J. Sykes first drew attention to the fact that the infantile mortality-rate in London during the first three months of life in the period 1888-1892 was 69 per 1,000, and in the period 1898-1901 was 75 per 1,000. Sir Shirley Murphy points out that this difference may be due to an increase in the number of deaths from diarrhoeal diseases and an increase in the number registered as due to premature birth owing to more complete registration in the later period. When both these causes of death are eliminated the rate per 1,000 in the earlier period was 49 and in the later 48. Even supposing this to be the correct presentment of the facts, it is not at all satisfactory to find that we have made so little progress in the direction of lessening the mortality among infants. It is still more unsatisfactory when we remember that a principal factor in producing this high mortality is the increasing amount of artificial feeding. In this connexion the results of inquiries made by Dr. W. J. Howarth, the Medical Officer of Health for Derby, may be usefully quoted. He found that among 8,343 infants of those who were breast-fed 8.6 died under twelve months old, of those first breast-fed and then hand-fed 21.6 died, while of those entirely hand-fed as many as 51.7 died.

MALARIA SUPPRESSION IN PANAMA.

There have been so many conflicting reports about the sanitary conditions of the Isthmus of Panama that the American newspapers are calling on the Government to issue at stated intervals a "perfectly harmonious bulletin" dealing with health conditions in the Canal zone. There seems to be no room for doubt that although malaria has not yet been completely killed, it has at least been scotched. This is something, for we have the testimony of Professor Ronald Ross for the statement that Panama is one of the most difficult places in the world to deal with from the point of view of malaria suppression. Nevertheless the work is progressing. The New York *Sun* publishes a communication from Mr. Fullerton L. Waldo, who lately returned from a six days' stay on the isthmus. From the morning of December 28th, 1906, to the evening of January 2nd, 1907, he saw but one mosquito, of the harmless or *Culex* variety, and listened to the singing of two others. With sulphur and pyrethrum, but more especially by the removal of cisterns and vessels of standing water, by the draining of the swamps and by the cutting away of tropical foliage, Dr. Gorgas has practically abolished from the Canal zone both the *Anopheles* mosquito and the *Stegomyia*. The Canal Commission has in the last few months eliminated yellow fever and reduced malaria. Mr. Waldo says, however, that it is of no use to pretend that malaria has been abolished from the isthmus, and no one on the isthmus pretends that such is the case. He had seen men who had been much in the field pale and worn from fighting it and the dreaded Chagres fever. Corazal, however, where the marines from the *Colombia* suffered particularly, is now one of the healthiest spots on the isthmus. The principal fatal disease of the zone at present is pneumonia, which is not peculiar to the tropics. Mr. Waldo met several people who had come to the isthmus in poor health and immediately began to improve in physical condition. A consumptive gained 9 lb. in six weeks, found himself able to take all sorts of exercise denied him in the States, and was made chief of the Fire Department in one of the towns of the zone at a good salary. Mr. Waldo made a thorough inspection of the Ancon Hospital, in company with Dr. Gorgas, and found it amply equipped with every resource of modern medicine. The nurses are of a superior class, and are better paid than anywhere else in the world. Dr. Gorgas reports that, in three months recently, of 6,000 Americans living in the zone not one died of disease, whereas in New York City the number of deaths from disease in that time would have been 30. This statement must be qualified by consideration of the age of the Canal diggers and of the fact that they are a superior lot as to

physique and stamina. The average January temperature for the twenty-four hours is 74°; the average for July is 76°. The heat of the day is counterbalanced by the coolness of the nights.

SLEEPING SICKNESS IN FRENCH EAST AFRICA.

Three years ago, as the outcome of an inquiry instituted by the French Minister for the Colonies, the Inspector-General of the Medical Service of the French Colonial troops was able to map out the geographical distribution of sleeping sickness in the part of East Africa which belongs to France. We learn from the *Semaine Médicale* that he has now presented a further report, bringing the information available down to the end of 1905. In the regions before indicated as infected—Casamance, the largest part of Upper Guinea, the Hinterland of Liberia and of the Ivory Coast, Baol, Sine-Saloum and Cayor in Senegambia, Baouli, Kong, and Lobi on the Ivory Coast, and the Bobo country further to the north—the disease, which nothing has been done to check, has naturally spread. In Senegal, where human trypanosomiasis had already been known to occur sporadically in Gambia, endemic foci were found in the Dakar Gorea district, and the native population of Popougine, Niaming, Joal, and neighbouring villages has been decimated by the disease. Moreover, sporadic cases have been observed at Podor, Tivaoune, and Rufisk, which is at a distance of only 30 kilometres from Dakar. It is feared that a considerable part of that district is infected, and it would not be surprising if this were the case, as the tsetse flies abound there. Sleeping sickness is also prevalent in the south-western part of the Soudan; it is uncertain whether it has existed there for some time or whether it penetrated into the country by way of Guinea where it is rife, particularly in the Fouta region and in certain zones still nearer the Soudan or by way of Upper Gambia, where it is also endemic. On the other hand, the south-west of the Gaoua zone, on the confines of the Soudan and of the higher part of the Ivory Coast, is also infected; it is not known, however, whether the disease has been imported from Lobi or from the Bobo country, or whether it has invaded the last-named regions by spreading from the Soudan. In Loango, one of the most important ports of the French Congo, which is the starting place of caravans for Brazzaville, sleeping sickness causes great ravages; but the disease is not localized there, many villages in the Middle Congo being also contaminated. In the Ivory Coast, in addition to the Baouli and Kong foci, isolated cases have been observed in patients coming from Senegal or the Soudan. In Dahomey only a single case has been reported; it occurred at Porto Novo the capital. But the tsetse fly is found in Dahomey, and sleeping sickness is known to have existed or to exist in the Paouignan region quite near to Abomey. It is, therefore, not unlikely that trypanosomiasis may be more or less prevalent in several parts of the interior of the country.

THE WEAKNESS OF THE "STRONG MAN."

In an interesting paper which is published as an appendix to the recently issued *Statistical Report of the Health of the Navy for the Year 1906*, Staff Surgeon A. Gaskell, F.R.C.S., points out that "physical training" as at present too often carried out to the detriment of constitutional strength. He calls attention to three pitfalls that lie in the way. The most dangerous of these is dilatation of the heart and circulatory system leading to valvular incompetence, atheroma, and aneurysm. Another is straining of the lungs with emphysema and hernia. The third is the direction of the limited time available to brain workers for physical exercise to training muscles individually instead of to useful co-ordinated movements by groups of muscles presided over by groups of brain cells. Staff Surgeon Gaskell's own experience among many thousands of men leads him to believe that the physically strong man as trained by the original "Sandow" or other similar system, withstands the attacks of disease very badly. How often, he says, does one see the functional heart in recruits that are trained on the straining system! How often, also, does the "strong man" show such signs of degeneration as baldness or premature grey hair, tortuous temporal arteries, and flaccid abdominal walls, with deposition of fat! Seldom does the "strong man" reach a happy and healthy old age. The strained air cells of the lungs are developed *pari passu* with the atheroma of the heart and arteries, and owing to the same cause—that is, straining with closed mouth, as in the act of lifting a heavy weight. Emphysema is just as common amongst weight-lifters as amongst players of wind instruments, and the enormous barrel-shaped chests of some of the professional strong men can easily be shown to be due to emphysema of the lungs. The expansion of such chests is very small indeed, while the rigidity of the thoracic walls is remarkable. In short the "strong man" is a giant with muscles of brass, and, in a constitutional sense, feet of clay. Even in regard to muscle, Staff Surgeon Gaskell looks upon the "strong man" as a whited sepulchre. He has known several glaring examples of men who had done Sandow's exercises for years, and who when stripped were admired for their marvellous muscular development, but who were quite unable to apply their strength in any useful way. A thin, wiry man who has never done such exercises may be able to do just as much in feats of physical strength as the man with large muscles. Dealing with the limits of physical culture, Staff Surgeon Gaskell says the man should be taught to avoid strain; he should be slowly trained up to any severe trial, so that the exertion will not be too severe. A good test for this is his ability to continue breathing freely while making the effort. He should be carefully warned against keeping his mouth shut during exertion. Due consideration should always be paid to the age of the pupil. Breathing exercises are most useful, especially to the young. Avoidance of fatigue is an important point. A good brisk walk in the fresh air, with free breathing and good style, is a most useful form of physical exercise. Running and skipping are also useful, but in all these, and in every other everyday exercise, the manner of doing it is, according to Staff Surgeon Gaskell, the important feature. The old-fashioned training in the army by sergeants was anything but good. Numbers of recruits had to be invalided on account of irritable heart after they had passed through the initial course of physical training, and the same thing may be said of the marines and the navy. In conclusion, Staff Surgeon Gaskell suggests that a British system of physical training might be devised that would outstrip all others. He suggests that a good scheme to work on would be the analysis by kinematograms of the movements of champions in each line of useful physical exercise: for instance, Shrubb for fast long distance running, a Japanese rickshaw coolie, or one of the Italian Bersaglieri for long endurance in running, and so forth. From these analyses a set of exercises could be elaborated to make a man useful in any particular pursuit or recreation.

MEDICAL LEGISLATION IN AUSTRIA.

It has long been felt in Austria that new medical legislation has become urgently necessary, especially as the existing laws are in part very antiquated. At present these Acts are still in force. The first of these was

passed in 1770, the second in 1832. The third is described as an unsatisfactory piece of patchwork; it was passed in December of 1891, and bears the title of "Aerztekammergesetz" (Medical Council Act). The new Bill consists of regulations, with explanatory memoranda. At present the examination for the degree of doctor gives the right to practise without any State examination. The student has to pass his matriculation in the eight class classical schools; sometimes it can be passed in the seven class modern schools, provided that an extra classical examination is passed. The curriculum extends over five years, and there are three searching examinations in theoretical and practical work at the close, which entitle the successful candidate to the degree of Doctor of Medicine, without any dissertation or thesis. While the majority of freshly-qualified men remain for a time in hospital before engaging in practice, there is no legal compulsion on them to do this. Under the terms of the proposed Act permission to practise will be given only to those who are domiciled in Austria, who possess an Austrian diploma, and who produce evidence of having spent at least one year in hospital or asylum practice after graduation. The applicant will then be registered in the list of one of the Medical Councils. Foreign practitioners are only allowed to act as consultants or to treat a patient in Austria in special cases, and then only if they hold a legal qualification in their own country. Unless in exceptional circumstances a medical practitioner is bound to attend to an urgent call. Refusal renders him liable to be punished either as an ethical offender or as an offender in common law. If the practitioner can prove that he has been summoned urgently to the same patient before without justification, he will be excused for refusing to attend. In other respects no medical man can be forced to undertake to treat any patient. Every practitioner is bound to treat his patients with assiduity, loyalty, and conscientiousness. If he wishes to terminate his attendance he must give the patient sufficient notice to enable him to procure another doctor. He need not, however, give such notice when he discovers that another doctor is attending without his knowledge, or when his directions are not followed, or when he has been insulted by the patient or his relatives. Medical appointments in clubs, insurance societies, works, etc., can be accepted only after signature of a legal contract which must have the approval of the Medical Council. Professional secrecy must not be violated; the only exception to this is in the notification of infectious diseases. Hitherto no medical practitioner has been allowed to stipulate with the patient for a specified fee in advance; the new Act allows this to be done under certain conditions. The Medical Councils will fix minimum scales of fees. The new Act provides for increased power and authority of the Medical Councils and for the constitution of these bodies. A further authoritative body is called the Ethical Council (Ehrenrat). At present the Medical Council undertakes the work of this body, but in the new provisions there will be a special body for the purpose. The members are to be elected by the Medical Councils from among the medical men in each district. The Ethical Council deals with all cases which do not come under the jurisdiction of the penal law. Military surgeons medical officers of health, police surgeons, etc., are not subjected to the disciplinary jurisdiction of the Ethical Council. The Ethical Council may inflict the following punishments: Calling attention to the offence, warning, written censure, fines up to 1,000 crowns (about £41 12s.), and temporary or permanent removal of the offender's name from the register. The removal of a name from the register has nothing to do with the cancelling of a diploma. The removal can be effected only after the accused has been punished three times before, and in the first instance the removal can only last for one year. The accused may be defended at the Ethical Council by a doctor, but not by a barrister or solicitor. Appeal to the Medical Council, and in cases of expulsion to the "Disciplinary Senate of Doctors," is allowed. This senate consists of three members chosen from the members of the various Medical Councils and two members nominated by the Minister of the Interior, of whom one must be a political official and the other a lawyer. There appears to be little prospect that the Bill will be brought up before the next general election, and it is anticipated that a new Government would have many other subjects of more urgency than a Medical Act to deal with during the early days of its reign. Be this as it may, it seems to the members of the profession in Austria that a new law in some form or other is a matter of urgency, and those who interest themselves in medical politics in Austria are doing their utmost to press matters on.

THE CARNEGIE TRUST FOR THE UNIVERSITIES OF SCOTLAND.

A COMMUNICATION addressed by the Secretary of the Carnegie Trust to the four Scottish universities deals as regards the Faculty of Medicine with the preliminary examination, and intimates that next winter session the regulation of the Trust will be: "In the Faculty of "Medicine a beneficiary must have passed the Arts or "Science Preliminary Examination, or have obtained "the Leaving Certificate of the Scottish Education "Department, and must have satisfied in either case the requirements of the Scottish Universities Joint "Board as to Medical Preliminary Examination." The communication further deals with the proper organization of studies in the Faculty of Medicine, and with the difficulty of co-ordinating the classes and studies on the lines set forth by the Commissioners under the Universities (Scotland) Act. The difficulty lay in insisting that students should have completed the group of subjects necessary to one professional examination—and have passed that professional examination—before going on to those of another group. As the arrangements and regulations now stand it is impossible to insist on this, however logical and reasonable. The hard-and-fast rules set down in the official regulations make such a reasonable scheme unworkable. Therefore, the Trust say, there is no course open but to suggest that in the meantime a note be added to the general regulation in the following terms: "In the Faculty of Medicine the Executive Committee "will make exceptional provision for cases where "observance of this regulation is practically impossible "under the present conditions of the Universities cur-"riculum." It is hinted that the Universities might, either collectively or severally, obtain some amending ordinance or ordinances to put the curriculum on a more practical arrangement.

A CLERICAL PANACEA.

A GLASGOW minister, we learn from the *Daily Record* of that city, has lately put forth the modest claim that he can cure, and does cure, cancer, enteric, and every form of fever or inflammatory disease. The medium, he says, is "a simple property of materia medica applied in a "new way, which you could carry in your vest pocket." Whether it is the property or the materia medica or the new way that can be carried in the waistcoat pocket is not very clear, but, as Mr. Toots said, it is of no consequence. The minister tells us that he has done more than the greatest physicians of the world, for whereas they have only two or three medicines, he has "brought "them down to one." But with that one they should be able to do anything. The stuff, he says, has always been known to mankind, only the way to handle it has not been known. Unlike Columbus, who

showed to an astonished council how an egg could be made to stand on one end, the minister does not reveal how his "stuff" should be handled. He contents himself with the simple statement that it can destroy "every form of microbe that affects the "human body in the disease way." The "stuff" cures all incurable disease. "the dreaded cancer and con- "sumption not excepted." Of course the doctors will not accept this great discovery; do they not always shut their eyes to the truth? The minister has done his best to get the profession to take it up, but has failed. Therefore, he says, "it is time at any rate that "the world should know, and it is for the people "against a profession which is as prejudiced as can be "to get a knowledge of the fact and take their own "measures to see whether it is available for their "maladies." It appears that the minister has already taken his measures to make experiments with his "stuff" on such *corpora vilia* as his spiritual ministrations give him the opportunity of reaching. He says: "In the last four or five years I have been applying it "for the good of the poor, unknown to them, in the "course of my ministry and behind the backs of the "medical profession. While the doctors stood in front, "I simply baffled them and left them in a mystery." We say nothing of the moral aspects of the conduct here confessed with such cheerful impudence, but we may point out to the doubtless well-meaning divine that the practice in which he glories may make it necessary for the civil power to protect his parishioners, and the public to which he is now appealing, against his scientific enterprise. We feel bound to add that a newspaper cannot shuffle off responsibility for the publication of claims to have cured "malignant cases of "consumption, cancer, and Bright's disease to any "extent" by reserving its opinion until it has investigated the cases. In mercy to sufferers ready to grasp at a straw in the hope of relief, the inquiry should surely have preceded the announcement.

METROPOLITAN AMBULANCES.

On February 9th a conference of delegates of metropolitan boards of guardians and other authorities was held in the hall of Gray's Inn to consider whether the existing provision of ambulances in the metropolis might not be so extended as to meet all needs without embarking on the unified scheme proposed by the London County Council. Before the conference began those attending it were given an opportunity of inspecting a number of ambulances belonging to local authorities, and the excellent hand ambulance of the Bischoffesheim Ambulance Service. The City of London showed a very smart motor ambulance not yet in commission, and the Metropolitan Asylums Board a workmanlike motor ambulance, which is used for non-infectious cases. But with these exceptions it must be confessed that the show was not impressive; in fact, assisted, perhaps, by damp ground and a rainy sky, it produced a rather lowering effect on a citizen of the first city of the world, disposing him to think that there are some things they do better in provincial cities to say nothing of America. The London Companies R.A.M.C. (Vols.) had one of their four horse military ambulances on the ground, and a smart display of first aid was given by some of the men under the direction of Colonel Valentine Matthews and Major J. Harper. The police also showed what they could do and interest was excited by a demonstration given by members of a workmen's club with a clothes prop, a curtain rod, and their coats. The conference itself discovered serious differences of opinion; on the one hand it was urged that an effective service of ambulances could be established and maintained without expense to the ratepayers by co-ordinating and developing already existing services, and by empowering the Poor-law authorities to place the ambulances they possess at the disposal of the public, making a charge in cases where it might be thought advisable. On the other hand, Mr. Reginald Harrison, President of the Metropolitan Street Ambulance Association, quoted Sir Cooper Perry's statement that it was very painful to watch the arrival at hospital of sufferers from accidents; some 70 per cent., Mr. Harrison said, arrived in cabs or carts or barrows. He pointed out that a large proportion of the five hundred existing ambulances enumerated by the promoters of the conference, were not available for emergency calls for the streets, and that there were only four rapid and adequately-equipped vehicles available for immediate dispatch to the scene of a casualty in the whole of London. The conference did not, so far as we can see, advance the question very much, but we may feel the less regret when it is remembered that the Home Office Committee consisting of Sir Kenelm Digby, the Earl of Stamford, and Sir William Collins, M.P., is about to commence its sittings and that the whole subject of metropolitan ambulance arrangements can be thoroughly threshed out before it.

THE PRINCIPALSHIP OF GLASGOW UNIVERSITY.

Dr. Donald MacAlister, Linacre Reader of Physic and Chairman of the Special Board for Medicine in the University of Cambridge, and President of the General Medical Council, has, as was briefly mentioned last week, been appointed by the Crown Principal of the University of Glasgow. This is the first time in its history of more than four centuries and a half that the University of Glasgow has had for its principal a member of any other profession than the clerical. We understand that Dr. MacAlister's selection has given great and general satisfaction in Glasgow, and we may congratulate the University on having for its Principal a man thoroughly in sympathy with modern methods in science and education, and one who throughout a distinguished career has shown remarkable genius for administration, unrivalled powers of mastering and marshalling details, and the faculties of rapid and sound judgement. Dr. MacAlister will continue to represent the University of Cambridge on the General Medical Council, and will thus retain his position as president.

At the annual general meeting of the Neurological Society of the United Kingdom, to be held on Thursday next at 11, Chandos Street, Cavendish Square, at 8.30 p.m., the Presidential address on The Distribution of the Arteries supplying the Human Brain will be delivered by Dr. C. E. Beevor.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Parliamentary Session of 1907 opened on Tuesday under adverse atmospheric conditions. The dull sky and the dirty streets, to say nothing of the rain, were sufficient to spoil the brilliancy of the Royal procession; but the crowds were there and the cheering was very hearty. In the House of Lords the scene was most striking. The absence of court mourning gave full freedom to the taste for colour, and the peeresses who filled the red benches of the peers made a gallant show with their many coloured robes and splendid jewels. The Royalties present were more numerous than last year and the general court circle more brilliant. After the pause for the arrival of the Speaker and the faithful Commons, the speech was delivered by the King with perfect elocution, and at its conclusion the King led the Queen by the hand from the chamber, and the procession to the robing room finished

the pageant in the Peers House. The Commons had opened their House at 2 o'clock with prayers, and then the Speaker in his full dress robes shook hands with the members who passed him, till the summons of Black Rod called him and the members to the Upper Chamber to hear the speech from the Throne. Twelve minutes afterwards the Speaker returned, and the adjournment till 4 o'clock took place, when the regular business of the session began.

The King's Speech was awaited this year with unusual interest, for the terms in which the Prime Minister called his followers together touched on grave and serious matters to come before Parliament. This was understood to refer to the relations between the Lords and the Commons, and surely enough the first paragraph of the business part of the Speech referred to the "unfortunate differences between the two Houses" being under consideration by the Ministry with a view to solution. The Bills promised make the unlucky total of thirteen! They deal with licensing, the improvement and reorganization of the army and auxiliary forces, the holding of land and the valuation of land in Scotland, Irish administration, Irish university education, and then follow measures promised for a Court of Criminal Appeal, for regulating the hours of labour in mines, for amending the patent laws, for the valuation of property in England and Wales, for enabling women to serve on local bodies, for small holdings and the better housing of the people. A goodly list; but we miss from it any proposals in connexion with the codification and amendment of the Public Health laws, which have long required the careful attention of Parliament. The Housing Bill, if it follows the lines of the report of the Select Committee, may contain important provisions as regards Public Health administration in rural districts. The President of the Local Government Board gave notice of this Bill first and the Valuation Bill second, Mr. Haldane followed with his Army Bill, Mr. Gladstone with the notice of the Licensing Bill, and the President of the Board of Trade with the Patents Bill. The Criminal Appeals Court Bill was also announced by the Attorney-General. The notices do not, however, necessarily indicate the order in which the Bills will be taken.

The Debate on the Address, in acknowledgement of the gracious Speech from the Throne, was opened by the mover of the Address, Mr. Tomkinson, and the seconder was Dr. Rolland Rainy, the medical member for the Kilmarnock District. Both speeches were excellent and elicited well-merited compliments from Mr. Balfour and the Prime Minister. Dr. Rainy specially referred to the social reforms promised, and gave his blessing to the Bills for placing women on local bodies and for the housing of the poor. When the Prime Minister spoke, he took the opportunity, in referring to the speech of the seconder of the Address, to utter a well-deserved eulogy of his father, the late Principal Rainy, whom he described as "a statesman in a degree which is very seldom reached by those who are passing their lives in the parliamentary field." Mr. Balfour's speech was a very clever criticism of the Government programme, and speech followed speech till the House rose. The debate on the Address will probably extend over next week, as there were no less than twenty-five amendments down on Tuesday night. Of these three relate to vaccination and the penal clauses of the Acts, and stand in the names of Mr. Lupton, Mr Lehman, and Mr. Arthur Black. There are also several amendments expressing regret that no promise was made in the King's Speech with regard to old-age pensions. On Wednesday, on the motion of Mr. Whiteley, the Chief Liberal Whip, it was resolved that the debate on the Address should be taken from day to day. The first amendment, dealing with old-age pensions, was disposed of on Wednesday, after an interesting debate; but as there are now some thirty others, including duplicates, on the paper, the debate must last many more days.

Private Members' Bills are likely to be numerous this session. Only very few have any chance of discussion, but up to Wednesday evening over 400 members had put down their names for the ballot. The procedure is peculiar and somewhat unworthy of a business assembly. There is no guarantee that the most popular or the most useful Bill will have a chance. The 400 names or more written on pieces of paper are put into a basket, and the first dozen or fifteen drawn get all the good chances. It is all a matter of luck. To try and reduce this haphazard method to something like certainty the Irish party some years ago organized itself to ballot as a body, and so get a chance of putting forward the Bills most desired by the party. This method is now generally followed, and groups of members often twenty and thirty strong combine to ballot for some particular Bill. This year the Irish party are going for three Bills dealing with Irish Land, Fisheries, and Local Government. A number of members are combining to ballot for a Female Franchise Bill, another group hopes to draw a good place for a temperance measure. In spite of the promised Government Bill the representatives of the mining constituencies will ballot for their own Eight Hours Bill. Other Labour members are keen on pushing forward a Wages Board Bill, and many will ballot for this measure. The Old Age Pension Bill will attract another syndicate of members; there are some who wish to extend the Act for providing meals for school children to Scotland, and a good number who will try for a place to introduce a Leasehold Enfranchisement Bill. The results of the ballot will not be known till late on Thursday, and the Bills selected will be introduced on Friday too late to be announced in this week's issue.

The Public Health Bill to amend the law relating to the qualification and tenure of office of medical officers of health and sanitary inspectors will be introduced at an early date by Sir Walter Foster.

The Course of Business.—Several Government Bills of which notice has been given will be introduced after the conclusion of the debate on the Address. The Irish Bills for improved Government and an Irish University were given notice of on Wednesday by Mr. Birrell, and it is possible that the Irish University Bill may be introduced before Easter. Mr. John Burns has introduced and put down formally for second reading on Monday a minor measure for enabling the Local Government Board to make regulations for the prevention of danger to the public health from the importation, preparation, storage, and distribution of articles of food. This will no doubt prove to be the Bill, or a modification of it, which was dropped last December. The relatively short time till Easter precludes the possibility of doing much legislative work in March, for there is much to do in connexion with finance before the end of the Treasury year. There are, too, some reforms in procedure and the constitution of Grand Committees which the Prime Minister referred to in his opening speech as likely to engage the early attention of the House. It is, moreover, to be an Irish session to a large extent, and this means much controversy and does not promise well for a large legislative output. The next few weeks will most probably be devoted to the less contentious business, and the more exciting work will come on after Easter.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Grempler of Breslau, well known as an antiquarian, aged 81; Dr. Dupuy, Mayor of Vervius, formerly a member of the Chamber of Deputies and the first President of the Union of the Medical Syndicates of France; Dr. L. J. Willems of Hasselt, the oldest member of the profession in Belgium, and some time President of the Belgian Academy of Medicine, regarded by many as a precursor of Pasteur, aged 85; Dr. J. A. Killian of Worms, a well-known laryngologist, brother of the professor of the same subject in the University of Freiburg in Baden, and author of many contributions to medical literature, aged 53; Dr. Katz, Vice-President of the Union of the Medical Syndicates of France; Geheimsanitatsrat Dr. Pissin of Berlin, who did much for the improvement of methods of obtaining vaccine lymph in Germany, aged 77; Dr. Franz Ritter von Arneth, some time private physician to the Grand Duchess Helena Pawlowna in Russia, and afterwards a moving spirit of the Red Cross Organization in Vienna, aged 89; and Dr. Jeutzer, Professor of Gynaecology in the University of Geneva.

Scotland.

Epidemic Cerebro-spinal Meningitis in Scotland.

Practitioners in the Edinburgh district, as in so many other parts of the country at the present time, are being called upon to face an outbreak of this dire disease. With rare exceptions the cases have been those of young children, and the mortality has been extremely high. A marked feature of many cases has been the comparative absence of symptoms, malaise and stiffness of the neck and spine being frequently the only symptoms in cases where lumbar puncture discloses copious pus within the spinal membranes. The *Micrococcus intracellularis meningitidis* has been found in practically all cases, but has apparently shown considerable variability in its reactions to stains and in its cultural characteristics.

In view of the increasing prevalence in Scotland of epidemic cerebro-spinal meningitis, the Local Government Board issued on Tuesday, February 12th, a further circular on the subject. The Board desires medical officers of health, in addition to reporting to their local authorities, to report forthwith to them the occurrence of any case, and to send them full particulars of the steps taken in connexion therewith. The Board offers its advice or assistance, where that may be necessary. The Board further recommends local authorities to extend the provisions of the Infectious Disease (Notification) Act, 1889, to cerebro-spinal fever *for a limited period*.

No figures are yet available as to the actual number of cases of epidemic cerebro-spinal meningitis that have occurred in Scotland since its first appearance in the month of May, 1906, but the number of deaths in the eight principal towns are as follows:

Age	0	[illegible]	20–60	60 etc.	Total
Glasgow ...	79	[illegible]	12	[illegible]	117
Edinburgh ...	3	[illegible]	–	–	3
Dundee ...	1	[illegible]	[illegible]	–	1
Aberdeen	1	–	–	–	1
Paisley	[illegible]	1	[illegible]	–	1
Leith	[illegible]	[illegible]	[illegible]	–	[illegible]
Greenock	[illegible]	[illegible]	–	[illegible]	–
Perth ...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

During the month of January, 1907, these are the deaths in those eight towns:

Age	[illegible]	[illegible]	20–60	60 etc.	Total
Glasgow	[illegible]	54	6	[illegible]	60
Edinburgh	[illegible]	[illegible]	2	[illegible]	[illegible]
Dundee	[illegible]	[illegible]	–	[illegible]	[illegible]
Aberdeen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Paisley	[illegible]	1	[illegible]	[illegible]	1
Leith ...	[illegible]	1	1	[illegible]	2
Greenock	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Perth ...	[illegible]	[illegible]	–	[illegible]	[illegible]

It should be stated that the Superintendent of the Statistical Department (Dr. J. C. Dunlop) has used every endeavour to eliminate doubtful cases by corresponding with the various doctors who certified the deaths.

It remains to be added that 3 cases are known to have occurred in Edinburgh in the week ending mid-day, February 9th, and 2 of these have died—1 in the City Hospital, 1 in the Royal Hospital for Sick Children, and 1 at home. A patient admitted to the City Hospital with the provisional diagnosis of cerebro-spinal fever, and who subsequently died, has since been proved not to have died from that disease, and there is some doubt as to the diagnosis in some of the other cases. Two further cases have been reported to the authorities this week, 1 in the Children's Hospital and the other a young man of 25 who was removed to the City Hospital on Sunday.

On Friday, February 8th, Professor Osler of Oxford delivered a lecture in the McEwan Hall to the Edinburgh students, on the subject of epidemic cerebro-spinal meningitis. He gave a rapid survey of its history, its epidemic character (it was never pandemic), its high mortality, and its low degree of contagiousness (in this respect resembling pneumonia). He deprecated alarm and panic, said there was no widespread epidemic in Great Britain, and no reason to believe we should have it. It was not likely to prevail longer than this winter season. Not much could be said as to treatment. Yet the outlook was hopeful, as the disease had been cured in monkeys, and they had been rendered immune.

The Laboratory of the Royal Colleges, Edinburgh.

Professor James Ritchie, of Oxford, has been appointed Superintendent of the Laboratory of the Royal Colleges. The appointment is one of extreme importance, and occurs at a most critical time; it is fraught with great possibilities, the more so as it is understood that a very considerable amount of money is to be expended in fitting up the laboratory according to the most modern requirements. The medical profession in Edinburgh will greet Professor Ritchie with the most cordial good wishes, and with the confident expectation that under his direction the laboratory will form a most important centre for the development of scientific work.

Royal Edinburgh Medical Society.

The annual dinner of the Royal Edinburgh Medical Society was held in the Hall of the Society, Melbourne Place, Edinburgh, on Thursday, February 7th. The guest of the evening was Professor Osler. Dr. Drennan presided, and the company included the Lord Advocate for Scotland, the Solicitor-General for Scotland, the Very Rev. Dr. Cameron Lees, Professors Sir Halliday Croom, Schäfer, Annandale, Cunningham, Chiene, and Greenfield, Sir John Batty Tuke, M.P., the President of the Royal College of Physicians (Dr. Underhill), the President of the Royal College of Surgeons (Dr. C. W. McGillivray), Professors Kirkpatrick, Chrystal, and Geikie. After the loyal toasts, the Solicitor-General gave "The Imperial Forces," to which Lieutenant-Colonel Dick and Dr. Claude B. Ker responded. The Chairman gave "The Guest." Dr. Osler, in reply, said he was a pure Celt. There were two types of Celt, the Celt who was born under Saturn, who was a most unfortunate person who had no option in this world between Scots whisky and some form of Presbyterianism. He himself was born under Mercury, and he therefore had an optimistic temperament. To that he attributed a great part of whatever success he might have had. Another element was a love of work. None of them naturally loved work. Man was born idle. There was no question about that. How it was he got into the habit of working he did not know. Perhaps it was that he early got into a kind of work he liked, and that was work in the medical profession. There was something in the medical profession through which, if a man once got inoculated with it, he had a love of work, and with it he had, or should have, a love of their fellow-creatures.

Professor Osler next proposed the toast of "The Royal Medical Society." It was not, he said, in great antiquity, in beautiful buildings, in a long line of successful residents such as they had that the glory lay; it was the men who had adorned the society and the profession of medicine. He could say with confidence that perhaps with the single exception of the Royal Society of England, there was no society to-day in the world which had so distinguished a list of men on its roll. He had looked over the list of former members, and it had been a revelation to him. Amongst other names of the eighteenth century Professor Osler mentioned William Cullen, William Saunders, a professional son of William Cullen, who taught the Londoners how to teach clinical medicine; Whytt, and Currie who taught them how to use cold water, and the Scots how to reverence Robert Burns. But it was not the names of these men who touched him so closely in that place. He had lived and practised for many years on the other side of the Atlantic, first in Canada and then in the United States. He had seen the work of the profession there from the Atlantic to the Pacific. Naturally, he had been interested in the work of the profession there, and

how it was that these men got their inspiration, where they got their ideals, and how it was that the profession there had grown up under trials and difficulties, not realizing their ideals as was the case with many, but at any rate having ideals. To his astonishment, he found that the very men whom he had learned to love and revere, and whose memory was cherished in the United States and in Canada, were members of this Royal Medical Society. Benjamin Franklin was a member of this Society. He took back to Philadelphia the Edinburgh traditions and associations, mental and moral, received in that Society.

Dr. T. Graham Brown replied for the Society. Dr. Wilkie gave the toast of "The Sister Professions," coupling it with the names of the Very Rev. Dr. Cameron Lees and the Lord Advocate for Scotland. As Dr. Lees had to leave earlier in the evening, the Lord Advocate replied.

The Principal of Glasgow University.

No recent university appointment in Scotland has given such satisfaction as that of Dr. Donald MacAlister to the Principalship of Glasgow University. Not only are his academic attainments of the highest order both in medicine and in science, but his experience of affairs and his administrative ability secure him the respect alike of the university and the city. In the present position of Scottish university politics it is a matter for congratulation that the official head of Glasgow University should be a man of the independent judgement and wide administrative experience his services on the General Medical Council and in the Medical Faculty of Cambridge University have amply proved Dr. MacAlister to possess. There is a unanimous demand in Scotland that its universities should be granted the same kind of autonomy which is the enviable characteristic of the constitution of the more recent universities in England, for on the medical side these universities may prove formidable competitors with the older Scottish universities. It is extremely satisfactory, therefore, that in Dr. MacAlister Glasgow has a Principal who is familiar with the working of the constitution of the newer academic bodies in England. One of the first duties of the new Principal will be to receive the Prince of Wales when he comes to Glasgow on April 23rd to open the new laboratory for natural philosophy, and for physiology, materia medica, and public health.

The Glasgow Clinical and Pathological Society.

The future of this society has been occupying the attention of the members during the greater part of the session. It has been felt by the Council that the best plan would be to amalgamate with the Medico-Chirurgical Society. The chief reasons which led the Council to recommend this step were the overlapping of the work of the two societies owing to the Medico-Chirurgical Society having come more into line with the Pathological and Clinical Society. As the attendance at the latter society is much smaller than at the Medico-Chirurgical, and as the vast majority of members belong also to the larger body, it has been found that the members mostly preferred to show their patients and specimens to the larger audience of the Medico-Chirurgical Society. The final step in the proceedings was taken when the members of the Pathological and Clinical Society were asked to express their opinion on the advisability of the proposed amalgamation. The great majority of the members were in favour of amalgamation, but a few were strongly against it. As it was necessary that the finding should be unanimous considerable pressure was brought to bear upon the minority, and eventually they consented to come into line with the majority. It was, therefore, agreed that the Council approach the Medico-Chirurgical Society with a view to amalgamation on the following lines: That the name of the Society be perpetuated by calling the present pathological section of the Medico-Chirurgical Society the pathological and clinical, and that two or three meetings of the Medico-Chirurgical Society be held each year on the lines of the Pathological and Clinical Society. The financial position of the Pathological and Clinical Society is very satisfactory, and it is proposed to utilize the surplus funds in buying appropriate apparatus for pathological demonstration, for example, lantern, microscopes, table lights, etc. It is expected that the Medico-Chirurgical Society will be ready to welcome the Society on these terms.

Ireland.

The University Question in Ireland.

The excitement caused by Mr. Bryce's declaration on university reform in Ireland has subsided to a considerable degree, and the newspapers now only contain odd letters of no great importance. The only interesting incident has been a meeting in Galway in defence of the local Queen's College, whose supporters claim, with a good deal of reason, that it shall stand in the same position as any other member of the group in its relation to the new Dublin University. Strangely enough, the Chairman of the meeting was the Roman Catholic Archbishop of Tuam (Dr. Healy). It was strange, because the Queen's Colleges, being "Godless," are banned by the hierarchy; but Dr. Healy hopes for better things in the future which will permit the ban to be removed.

Trinity College sent a deputation to Mr. Birrell and Mr. Balfour early in the week. The proceedings were private, but it is said that the Provost and his colleagues were not so encouraged by Mr. Birrell's reply as by Mr. Balfour's.

The Royal University will meet on February 20th, to consider the whole question, and a resolution in opposition to the scheme will be proposed. Meantime, the Literary Society of (Catholic) University College, Stephen's Green, has carried a resolution of approval. The Education Committee of the Presbyterian Church has appointed a subcommittee to report on the proposals; but there has been no declaration from the Roman Catholic bishops as to their views. It may be said, however, that the Catholics desire to see the Bill carried, and that on that side will also be found the bulk of Presbyterian opinion. The Irish parliamentary party are satisfied with the scheme, and will support the Bill. Of course, when it is printed, it may be found to contain details which will alter opinion as it now stands; but we must wait until there is further information before being able to gauge the prospects of success or failure.

Newcastle-upon-Tyne.

Royal Victoria Infirmary.

At the annual meeting of the Royal Victoria Infirmary, the Lord Mayor of Newcastle-upon-Tyne in the chair, the financial report showed that the total ordinary income for the year had been £16,527 14s. 1d., an increase of £1,931. Of this amount the working men of the district had contributed £7,219, or an increase of £1,572 on the previous year. The expenditure was £20,460. There is, therefore, an adverse balance of £4,007. To meet this and other requirements fresh appeals for subscriptions are being made. It is pleasing to note that many of the well-to-do classes have agreed to double their annual subscriptions. Of the 400 beds in the infirmary only 300 are as yet occupied.

Considerable discussion took place at the meeting on the subject of the consecration of St. Luke's Chapel. The consecration has never been approved by the Nonconformists, and the Free Church Council applied to the committee some time ago for permission to conduct services in the infirmary. The lecture theatre was readily granted for this purpose and was gladly accepted. The representatives of the Nonconformists now ask for permission to conduct services in St. Luke's Chapel. The matter is not yet ended. Hitherto part of the chaplain's salary has been paid out of the infirmary funds, but this has now ceased—a few gentlemen having undertaken to guarantee the £60 hitherto granted from this source. No religious service for the patients as a body is conducted in the wards.

Proposed New Charter for the University of Durham.

It is more than probable that in a short time an application will be made for a new charter for the University of Durham. There is need for certain alterations in the constitution of the governing body of the University. These and other changes, when effected, will place the various Faculties—and especially those of medicine and science—on a more permanent footing and broader basis than hitherto. The University, being very largely an ecclesiastical foundation, has always had in the Senate a

preponderance of clerical over lay representation. It is proposed to enlarge the governing body and to alter its constitution so as to bring the management and direction of the University more into line with modern thought and requirements.

The Lying-in Hospital.

In a previous letter it was stated that, owing to proposed street improvements, it was thought the Lying-in Hospital in New Bridge Street might have to be removed to another quarter of the city. What is known as the Market Street scheme, introduced by certain members of the corporation, has fallen through. For the present, therefore, the Lying-in Hospital will remain where it is.

Glasgow University Club.

The North of England Glasgow University Club holds its annual dinner at Tilley's, Blackett Street, on February 22nd, the President of the Club, Dr. James Farquharson, in the chair. Sir Thomas McCall Anderson is the guest of the evening. A good attendance of the graduates scattered throughout the district is anticipated.

Rescue Work in Coal Mines after Explosions.

An important discussion took place on February 9th at a meeting of the Mining Institute in connexion with the subject of rescue work in mines after an explosion. Mr. Otto Simonis exhibited and demonstrated the use of his rescue apparatus, by means of which the wearer could penetrate into and remain in poisonous gas for a considerable period. The apparatus, which is knapsack-shaped, weighs a little over 14 lb., and can be put on and taken off by the wearer quite easily. No helmet is worn, but the face is protected by a mask and the eyes by goggles. The apparatus is filled with liquid air. This the inventor claims is much cooler than oxygen for respiratory purposes. Some of the mine managers were not much in favour of the apparatus. Among the principal speakers were Professor Merivale, the President; Professor Louis, of the Armstrong College; and Professor T. Oliver, of the College of Medicine. Dr. Oliver was not disposed to take a desponding view of the question. He thought that as legislation had made coal mining a healthy occupation, science would find means whereby entombed miners would be rescued on the lines suggested by Mr. Simonis. Reference was made to the experiments upon guinea-pigs with carbon monoxide, and their acclimatization to the gas. If this could be shown to be applicable to man the bearing of the experiments of Nasmyth and Graham would have further reaching consequences than at present appeared.

Sheffield.

Vaccines.

Sir Almroth E. Wright delivered an address on the treatment of bacterial diseases by their corresponding vaccines before the Medico-Chirurgical Society on February 7th. The meeting was very largely attended by practitioners in Sheffield and the neighbourhood and the lucid way in which he explained his recent researches was much appreciated. Before his address was delivered he was entertained at dinner and the Council of the Society by the President, Dr. E. Cowton.

Edinburgh Medical Graduates' Club.

The annual dinner of the Edinburgh Medical Graduates' Club was held on February 8th. The principal guest was Sir William Turner, the other two guests being Sir Charles Eliot, Vice-Chancellor of the University, and Mr. Simon Snell. The company at the dinner numbered 112, a considerable increase on the successful entertainment of the previous year. The club has only been two years or less in existence, but at the present time it is in a flourishing condition. In the Professor, President of the Club, was on the chair, and after the loyal toasts, Dr. Lauder proposed "Alma Mater" in a short speech, replying to which Professor W. Turner. Sir William in a happy speech proposed the graduates on the extension of the Club to Edinburgh graduates. He referred to the London, Manchester, and Birmingham Clubs, and read telegrams of greeting from the latter two. In the course of his remarks allusion was made to the gratifying fact that the University was about to be endowed with a new medical school, and reference was made to the fact that both Dr. and Dr. Donald MacAlister recently appointed at Glasgow, had secured some, at any rate, of their experience as Chairmen of the General Medical Council.

The Professorship of Pathology.

Dr. Cobbett, who was not long since appointed Professor of Pathology at the University, has accepted a post at Cambridge as Lecturer on Bacteriology. During his short residence in Sheffield he has made himself popular among his colleagues, and his departure is much regretted. There are several excellent candidates for the Professorship of Pathology which Dr. Cobbett has vacated.

Birmingham.

Presentation to Dr. Whitcombe.

Dr. E. B. Whitcombe, who has been connected with the institution since 1870, has just completed twenty-five successful years as the Medical Superintendent of the City Asylum, Birmingham. In appreciative commemoration of his services the staff and patients of the City Asylum have presented him with a hand-wrought silver inkstand. A dinner was also given to Dr. Whitcombe to celebrate the occasion by the members of the Lunatic Asylum Committee, at which he was presented with a handsomely-illuminated address bound in morocco.

The Royal Midland Counties Home for Incurables.

In the annual report the Committee congratulated the governors and subscribers on the honour conferred upon the home by the King, who had signified that in the future the institution shall be known as "The Royal Midland Counties Home for Incurables," and they announced that Princess Christian and Princess Louise Augusta of Schleswig-Holstein had consented to act as patrons. The extensions, which had been in progress for ten years, had been carried a great step forward by the opening of the new Radcliffe Memorial east wing on June 26th. The subscriptions last year amounted to £2,763, small donations to £195, patients' payments to £2,671, collections in churches to £72, and from other sources £979, making a total of £6,682. The legacies received during the year included £1,500 from the late Mr. Arthur Briscoe of Wolverhampton, and £100 from the late Sir Henry Wiggin of Birmingham. There are in the home 62 males and 36 females.

Lancashire.

A Gratuitous Attack on Poor-law Medical Officers.

At a recent meeting of the Board of Guardians of the Prestwich Union the Chairman of the Board, the Rev. Father Sassen, moved the following resolution in accordance with notice:

> That the relieving officers be directed to forward the names and addresses of persons obtaining notes requiring the attendance of medical officers of the union to the guardians representing the district in which the person resides.

This resolution, after considerable discussion, and after several guardians had spoken pointedly in opposition, one frankly stating that he declined to take upon himself the responsibility which the passing of the motion involved, was eventually adopted by 10 votes to 6. The Chairman, in moving it, did not bring forward any specific case, but allowed himself to make general statements, which, to say the least, could only be regarded as uncomplimentary to the district medical officers of his own and other unions. Under these circumstances, it is perhaps satisfactory to read that the Reverend Chairman admitted that he had little experience of the matter, and we are ready to assume that if this experience had been greater he would have been much less disposed to find fault. He said that as the cases of people to whom he referred could not speak for themselves, he felt called upon to be their spokesman; but his statements that in some districts the medical officers "did not do what was expected of them"; that some of these poor patients were forced into the workhouse, especially when the medical officer saw the case was going to be a long one, that the patients were given medicine which would not bear analysis and that he (the speaker) knew of cases where

the medical officers had refused to give notes for extra nourishment, will not bear examination. It is very possibly true that neither in the Prestwich Union nor in any other union in the United Kingdom are the district medical officers able to do "all that is expected of them," for they are often by some people expected to accomplish impossibilities. It is well known in the Poor-law service that paupers habitually complain to their non-medical and friendly visitors that their medical attendants are not sufficiently helpful, while to the medical officers their constant complaint is that the rich are not sufficiently charitable. These and other similar complaints are perhaps the natural outcome of their pitiable condition. The statement that patients are forced into the workhouse must be imaginary, as no official, either medical or non-medical, has power to force anybody into the workhouse. If in any serious prolonged case of illness the district medical officer for special reasons forms the opinion that a patient ought to be removed to the workhouse, he can only recommend this course for adoption by others. The recommendation is made in the interest of the patient, and it would be a far greater hardship if there were no workhouse available. The statement that medicine supplied to paupers will not bear analysis may mean anything or nothing, and its vagueness leads to the belief that the Chairman was himself quite unable to form a correct opinion on the subject; he may, therefore, be excused for having expressed himself so inadequately. As to the further statement that medical officers often refused to give notes (we suppose "recommendations" were meant) for extra nourishment, we may point out that this is really one of their principal duties, and it is for them and them only to decide what extras are necessary from a medical point of view for the proper treatment of the case, and to leave the supply of all else to the discretion of the relieving officer and the guardians, the power of the latter to deal with such matters being apparently unlimited. We hope that the Chairman of the Prestwich Board will remember this when next he takes his seat at the meeting of the guardians.

We much question whether it is possible for the resolution in question to be carried into effect, as we know of no Poor-law rule or regulation by which the additional duty entailed by it could be imposed on the relieving officers; and, should they decline to meet its requirements, we do not suppose the Local Government Board will direct them to do so, as by regulation their reports are to be made to the Board and not to individual guardians.

It may be asked why the Chairman of the Prestwich Board of Guardians happens to have become so publicly philanthropic just at the present time, and the suspicion arises that perhaps the near approach of the election of guardians has caused him to be more active than usual in ventilating his theories in the hope of seeing them in print.

The Police, the Public, and the Medical Profession.

Several recent events have given rise to an uncomfortable feeling that the methods of the police in this country are not always characterized by the impartiality, discrimination, and knowledge of their legal powers, the supposed possession of which had led the public to place implicit confidence in their discretion. Another example not involving a charge of any grave failure of justice, but for other reasons grave enough, has recently been investigated in Manchester, and was the subject of discussion at recent meetings of the Manchester North and South Divisions, reported in the Supplement this week, p. 82. On January 12th, Dr. Bagley, of West Gorton, Manchester, was called to attend an old man, aged 65, who had attempted to commit suicide by cutting his throat. The police were also sent for, and when Inspector Tongue arrived he found Dr. Bagley attending the patient; the inspector informed the doctor that, as the patient had committed an indictable offence by attempting to take his own life, he must be placed under arrest, adding, "I shall have to take him to the hospital." Dr. Bagley informed the police that the man was not in a fit state to be removed, and that it would be dangerous to do so. Dr. Bagley recognized the arrest and suggested that a constable should be left in constant charge of the patient in his own house. The inspector then communicated with Superintendent Gilmour, who, apparently without any further consideration, directed that the patient should be taken to the hospital. Four additional police officers arrived; the police proceeded to remove the patient forcibly against the wishes of his sons and the advice of Dr. Bagley who, according to the evidence of the inspector, committed a technical assault upon him by pushing him. Eventually the patient was removed to hospital in an ambulance, and the police summoned Dr. Bagley and two sons of the patient for obstructing the police in the execution of their duty; there was a further summons against Dr. Bagley for assaulting Inspector Tongue. Mr. Wharton, who appeared for Dr. Bagley, raised the legal point that as the offence by the patient, if there were any, was a misdemeanour, the police having no warrant for his arrest had no right to arrest him. The case at this point was adjourned until February 6th. At the adjourned hearing Mr. Wharton contended that what Dr. Bagley had done was within the law, and that the police were not justified in apprehending a person whom they knew or suspected to have committed a misdemeanour. He admitted that a local Act appeared to give the police power to take a man to the station, but it was absolutely illegal for them to take him to a hospital, and Dr. Bagley had a perfect right to resist them. Mr. Bell, who appeared for the police, argued on the other side. Eventually the bench, after consulting in private, announced their decision to the effect that the arrest was not strictly legal, and that although the police officers might have been rightly in the house they had no authority without a warrant to make an arrest for a misdemeanour, consequently the police were not acting in the execution of their duty as police officers, and it therefore followed that there could be no obstruction or assault against them as police officers. The summonses were therefore dismissed, but the bench consented to state a case with a view to an appeal, whereupon Mr. Wharton said that if an appeal were proceeded with he might raise a further point as to the right of a constable to arrest or remove a man to the detriment of his health.

Owing to the fact that the bench dismissed the summons against Dr. Bagley on the legal point that the police had acted *ultra vires*, the evidence for the defence on the medical aspects of the case was not heard. We have, therefore, only the police side before us, and as the Manchester Watch Committee may decide to appeal we are debarred from discussing it fully at present. We believe, however, that the British Medical Association, as represented by the Divisions in Manchester and Salford, will not be disposed to allow the matter to rest where it does. The most serious question is that raised by a statement made by the police inspector in evidence to the effect that he acted simply on instructions from the Superintendent. He appears to have assumed that the opinion of the Superintendent was to override the opinion of the medical practitioner in attendance. This is contrary to common sense, and we have no doubt that the Manchester Watch Committee, whether it proceeds with its appeal or not, will recognize the necessity of instructing the police to be guided by the medical attendant before insisting upon removing a patient, technically under arrest, to the danger of his life. The conduct of the police in this instance seems to have been determined, not by considerations of humanity, but by a blind resolve to be bound by red tape.

Liverpool.

Royal Southern Hospital.

The annual meeting of the Royal Southern Hospital took place on February 11th. The report showed that the number of in-patients during the year was 2,502, and of out-patients 12,055. The patients treated in the Tropical Ward numbered 120, and only 3 deaths occurred among them, 1 due to malaria, 1 to Indian sprue, and 1 to dysentery with hepatic abscess. The diseases treated comprised malaria, beri-beri, dysentery, sprue, ankylostomiasis and leprosy. Cases of enteric fever, scurvy, and pneumonia were also treated in the ward, the diseases having presumably been contracted in tropical countries or the patients being in some way affected by residence there. Several nurses from the Colonial Office underwent a course of training in the ward, and a considerable

number of students of the Tropical School attended the practice.

Owing to a special effort being made, the debt of £7,527 at the beginning of 1906 had been reduced to little over one-half. The permanent income of the hospital was about £8,700, and the annual expenditure about £11 600. Some £3,000 had therefore to be raised every year from special sources. The formation of a new out-patient department was in contemplation, the *x*-ray department was being enlarged, and the formation of a Samaritan fund for the supply of instruments and surgical appliances to needy patients was in contemplation.

The President, Mr. W. Adamson, in the course of his remarks, expressed the wish that the workhouse hospitals could be made more popular, when they might be a relief to the voluntary hospitals as well as another adjunct to the University. To effect this all that was wanted was a more congenial name. He deprecated the idea of the voluntary hospitals being placed on the rates, but he thought that public bodies like the Corporation should voluntarily contribute to charities like the Southern Hospital, in which many of their officials were treated. He sincerely trusted that no central authority to govern the charities would ever come into existence. It would mean most expensive officialism, and at present the Committees were able to govern each individual charity on its own merits without any jealousy. With regard to the Tropical Ward, he pointed out that there was no distinction of race, colour, or nationality observed in admitting patients, who came from almost every region in the tropics.

HONOURS AT THE ROYAL COLLEGE OF PHYSICIANS.

Much satisfaction has been expressed in professional circles at the honours conferred by the Royal College of Physicians on two of its Fellows practising in this city, Dr. T. R. Glynn, Professor of Medicine in the University, has been elected a member of the Council, and Sir James Barr has been appointed Bradshaw Lecturer for the year. As far as can be ascertained, Dr. Glynn is the first Fellow practising in Liverpool who has served on the Council. Dr. William Carter was Bradshaw Lecturer in 1888. Among other honours from the College lately bestowed on Liverpool it will be remembered that Dr. Glynn gave the Lumleian Lectures in 1903, and Dr. Caton the Harveian Oration in 1904. Dr. Grünbaum, now of Leeds, was resident in Liverpool when he gave the Goulstonian Lecture in 1903.

The Somaliland Protectorate.

SOMALILAND is peculiar among British possessions, owing to the completely nomadic character of the natives, the Somali being constantly on the move in search of pasture and water for his flocks. An exact census is thus impossible, but the population is probably about 300,000, and, owing to a recent severe epidemic of small-pox, did not increase during the fiscal year of 1905-6, the period with which the recently published Colonial Office Report deals. So extensive is the nomadic movement, that Berbera, which has some 40,000 inhabitants during the cold season, is reduced to 20,000 during the Kharif (from May to September), when at least a quarter of the whole population of the country has migrated across the border into the Abyssinian Haud and elsewhere. There are hospitals with about forty beds each at Berbera and Zeila, and the general public health is good. This latter condition, however, is entirely due to the intense dryness of the climate, for the sanitary state of the coast towns is extremely bad. This dryness (the total rainfall at Berbera was only 1·71 in. and 1·30 of this fell on a single day) happily militates against malaria, for the virulence of the anopheline is too much for the mosquitos, and rapidly dies up their breeding places. No deaths occurred from remittent fever during the year, and there were only 177 cases, but intermittent are more common (1,007 cases). Dysentery is not prevalent, and the cases have been of mild type. Only one case of cancer (epithelioma of the lip) was recorded, but a largely increasing number of natives are becoming phthisical. Delicate organic disease among Europeans is rare, but it appears that the climate has a marked effect in inducing neurasthenic conditions. The worst sandstorms, connected with the great heat, undoubtedly bring this about and complete recovery is only to be obtained by change of climate. It is noteworthy that the natives also suffer more or less in this way, and anaemia and general debility are common, partly caused, perhaps, by lack of vegetables and fresh food during the dry season, though this deficiency is to a certain extent made good by the extensive use of camel's milk.

British Guiana.

PUBLIC HEALTH.

Increase of Leprosy.

LEPROSY, it is stated in the Colonial Office report on British Guiana, is greatly on the increase in the Colony, though the system of segregation is enforced as much as possible. A new Ordinance provides that wandering lepers and those that cannot be properly isolated in their own houses shall be sent to the leper hospital, which building is to be also capable of use as prison or lunatic asylum should any criminal or lunatic prove to be affected with the disease. Cases of leprosy are to be declared by all medical officers, and various trades are forbidden to lepers. There were 420 patients in the leper hospital at the end of the fiscal year, and 71 had died during the twelvemonth, but no statement is made of the estimated total number of lepers in the Colony. Malaria was, as usual, prevalent throughout the whole Colony, and caused 16 per cent. of the deaths. Ankylostomiasis was also very prevalent on the sugar estates, and in consequence more energetic measures were taken to combat the spread of the parasite. There were no epidemics of any kind. The entire population is estimated at 303,000. The birth-rate for the Colony was 33 per mille, and the death-rate 27; but the death-rate for the capital, Georgetown, remains, as it always has been, very high, being 42.6 per mille. The excessive infant mortality—which for children under 1 year was 284 per mille in Georgetown—was the cause of the appointment of a Commission last June to inquire into the subject. At the close of the year, the Commissioners had not finished their work, but the question has aroused great interest in the Colony.

SPECIAL CORRESPONDENCE.

VICTORIA.

The Amalgamation of the Medical Society and the Victorian Branch of the British Medical Association.

THE annual meeting of the Victorian Branch of the British Medical Association and that of the Medical Society of Victoria were held conjointly for the first time under the new rules in the Hall of the Medical Society on January 4th. The accommodation of the hall was taxed to its utmost by the attendance of members of both societies. The retiring President of the Medical Society of Victoria, Dr. M. U. O'Sullivan, occupied the chair. After the confirmation of the minutes, the annual reports of the Committee, the Treasurer and the Librarian, Dr. O'Sullivan vacated the chair, which was then taken by the retiring President of the Victorian Branch of the British Medical Association, Dr. George Cusenden. The minutes and reports of the Branch having been confirmed, he also vacated the chair in favour of Professor H. B. Allen, who had been unanimously elected the President of the amalgamated societies, which in future will meet as one society.

Professor Allen expressed his keen appreciation of the honour which had been conferred upon him as the first President of the combined societies. He hoped that during the coming year many of the problems which had to be dealt with in connexion with this amalgamation would be happily solved. All the members would almost immediately be supplied with regular copies of the BRITISH MEDICAL JOURNAL; nothing definitely had so far been decided as to which of the two local journals was to be their official journal. The central organization of the British Medical Association had the new rules of this society now under consideration, and he thought that there would be no difficulty in arranging matters to the

satisfaction of both parties. The roll of members would now amount to between 400 and 500, which would make it one of the largest Branches of the British Medical Association. At the present subscription a roll of at least 500 members would be required to obtain good financial results. Judging from the attendance, he thought it would be necessary to add to the present building, and thus furnish to the members a hall large enough to accommodate the full society. The new Committee would very shortly proceed to appoint Representatives on the Central Council of the Association. He hoped to see sectional work established, and looked forward without any doubt to very good work being accomplished under the new régime. He would also use his best endeavours to promote the cultivation of friendly feelings among members.

The following office-bearers were elected for 1907: *President*, Professor Allen; *Vice-Presidents*, Mr. G. A. Syme and Dr. George Cuscaden; *Honorary Treasurer*, Mr. C. H. Mollison; *Honorary Secretary*, Mr. J. L. Balfour; *Librarians*, Mr. A. W. F. Noyes and Dr. H. D. Stephens; *Council*, Dr. W. R. Boyd, Dr. G. T. Howard, Dr. Felix Meyer, Dr. W. Moore, Mr. F. W. W. Morton, Mr. W. Beattie Smith, Dr. J. F. Wilkinson, and Dr. A. J. Wood.

The remarkable progress of the British Medical Association in Australia is a wonderful proof not only of the appreciation of the objects of the Association, but also of the desire of every loyal medical man to preserve the unity of purpose which is a guarantee to the progress and strength of our profession. The recent amalgamation of the medical profession in Victoria under the aegis of the British Medical Association completes the unification of the profession in the Commonwealth of Australia. As jurisdiction in local matters is granted, it may be a considerable period before the growth of national inspiration would insist on the surrender of their adhesion to the British Medical Association and the establishment of an Australian Medical Association. The present vital ties of unity, and the fact of being in touch with the centres of investigation and thought in Europe by means of the British Medical Journal, can but cement and strengthen the bond of union.

CORRESPONDENCE.

HUMAN AND BOVINE TUBERCULOSIS.

Sir,—The report just issued by the Royal Commissioners is a splendid example of true scientific research, and a lasting monument to the untiring patience and industry of the researchers. The two chief facts which have been established are: (1) The difference (whatever the degree may be) between bacilli of the *Typus humanus* and the *Typus bovinus*, and (2) that bacilli of the *Typus bovinus* on entering the human body may set up active and fatal tuberculosis.

My researches during the last nine years, coupled with an exceptional clinical experience, led me to come to the same conclusion, and in the British Medical Journal of August 29th, 1903, I published a paper based on bacteriological work, in which I succeeded in isolating bovine bacilli from the mesenteric glands of a child suffering from primary abdominal tuberculosis.

As far as I know, this was the first occasion in this country in which such bacilli were isolated, and demonstrated as corresponding with the bacilli found in *Perlsucht*. The conclusions come to by me in 1903 correspond very closely with those arrived at by the Commission, and I have for the last four years read a paper at each annual meeting of the British Medical Association, urging the necessity of stamping out tuberculosis in dairy cattle as a means of preventing the disease in children. I believe that practically all surgical tuberculosis is the result of ingestion of bovine bacilli in food, and more especially milk in children.

There is only one point in the report on which I disagree, and that is in reference to the question of the identity of human and bovine bacilli. They say: "It is well known that in the case of many diseases caused, like tuberculosis, by a micro-organism, immunity against the disease may be secured by introducing into the body the micro-organism causing the disease, in such a way and in such a small dose that the disease thereby set up is slight and transient. The results obtained in this way have been so striking as to lead to a general acceptance of the view that a micro-organism which can thus be used to produce immunity against a particular disease may be regarded as identical with the micro-organism causing that disease. Hence if the bacillus of human tuberculosis can be used to confer immunity against bovine tuberculosis, or vice versa, we are supplied with a further proof of the identity of the two diseases."

I venture to submit that tuberculosis cannot be classed with the ordinary diseases caused by pathogenic organisms either in its mode of onset or the course which it takes. It is now established that cattle can only be rendered immune from bovine tuberculosis by injecting small and repeated doses of *human* tubercle, and that all efforts to immunize them by injections of *bovine* tuberculosis have signally failed.

This clearly shows to my mind a difference (whatever it may be) between human and bovine bacilli, supported in a great measure by the fairly uniform cultural appearances observed between the two bacilli. I believe Koch to be right in asserting that bovine bacilli cannot set up human tuberculosis; but they *can* set up serious and fatal bovine tuberculosis in man, for the simple reason that the human body is susceptible to attack by both human and bovine bacilli, as proved by the Commission—hence the enormous importance of safeguarding our milk and meat supply.

I sincerely hope that this excellent report will be immediately followed by legislative measures which will ensure as far as possible the purity of milk.—I am, etc.,

Liverpool, Feb. 10th. Nathan Raw.

THE MEDICINE OF THE FUTURE.

Sir,—The tone of your remarks[1] on Sir Almroth Wright's mental attitude to some highly important medical problems is, I think, open to criticism. If, instead of the pessimistic attitude which he adopted in reference to our means of combating bacterial invasions he had regarded them with that species of smug satisfaction which is not without its commercial advantages, perhaps, to some members of the profession, is it not probable that scientific medicine in the first decade of the twentieth century would be minus his brilliant contributions? You complain that "the enormous diminution of tuberculosis counts for nothing." It is open to question, however, whether insistence on the importance of cleanliness, sunlight, and fresh air has been the only, or even the most important, factor in this diminution; is it not possible that the diminished incidence of tuberculosis is due largely to the gradual evolution of a higher natural immunity? "*Felix qui potuit rerum cognoscere causas!*"

Be that as it may, however, I suggest that dissatisfaction with things as they exist is the first important step to reconstruction. It is possible, of course, that now and again such a feeling may slightly exaggerate defects; but is it not safer for scientific medicine to err in that direction than in the direction of satisfied self-complacency? But, as a general practitioner, I feel that Professor Wright's remarks do not exaggerate our impotence in dealing with germs which have already established themselves in the body. We all with any practical experience know perfectly well that in virulent bacterial invasions, with one or two notable exceptions, we rely on the resisting power of the patient for a satisfactory termination; we know equally well that reliance on this drug or on that is, in cases of the kind, futile. It would, I suggest, be in the interest of progress if more so called specialists had the insight and scientific training necessary to pull aside the veil of respectable and orthodox routine, and look Nature in the face. In one class of dangerous infective disease a specialist, whom I used to call in, invariably advised me to give digitalis when I was giving strychnine, and strychnine when I was giving digitalis! He then assured the patient's friends that all had been done which could be done. He took his fee with apparently a genuine belief that he had actually done something of value beyond making my position easier. It is doubtful whether, in the medicine of the future, men of that type, however estimable, will find a place. General practitioners are brought face to face with realities every day. What they require is real assistance either in diagnosis or treatment. Professor Wright has given real

[1] British Medical Journal, February 9th, 1907, p. 333.

assistance in both directions. This is a fact which goes far to justify any mental attitude on his part, or, at all events, goes far to secure for it the most friendly and good-humoured indulgence from all men who know how to appreciate genuine work of the highest order.

We cannot, even if we would, compete successfully with quacks and patent-medicine vendors on their ground; it will be a good thing for the profession as well as for the public when we banish the last trace of their fraudulent methods from our work. To deceive our patients is immoral; to deceive ourselves on a scientific matter is worse than immoral—it is stupid. But we have no need to do either: we have already got a sufficiently broad and stable foundation of real knowledge and real power on which to take our stand for the present; and it is to be hoped that other builders in the medicine of the future may now and again succeed in adding a granite block to the edifice, of similar pattern to the corner-stone so recently laid by Sir Almroth Wright.—I am, etc.,

Manchester, Feb 10th J. Staveley Dick, M.B.(R.U.I.).

*** Sir Almroth Wright in his lecture at the Royal Institution himself used the simile of invasion to explain his position. Shortly, the methods he has discovered may be compared to those which the nation would put forth if a hostile force had actually effected a landing, and was about to overrun the country; if our memory serves, for we have not the text of the lecture before us, he used the phrase *levée en masse*. On this simile the public health service is in the place of the navy, the aim of which is to render invasion difficult or impossible. It is our appreciation of the great importance of Sir Almroth Wright's methods which makes us regret that he should indulge in any depreciation of the blue water school.

THE PULSUS PARADOXUS.

Sir,—Amongst so much that is interesting in Professor Weuckebach's remarks on the pathology and treatment of adherent pericardium, there is one point to which I venture to draw attention namely, his explanation of the occurrence of pulsus paradoxus. He shows that the explanation of pulsus paradoxus by Sir James Barr and the majority of clinicians that it is induced by the sudden emptying of the veins in forced inspiration to fill up the vacuum of the chest—does not hold good in adherent pericardium for the exactly opposite conditions obtain. There is not an increased fall of venous pressure in the chest, there is not an increased suction of the chest, and there is not a sudden emptying of the veins, 'so we have to adopt the explanation of an increased hindrance to circulation during inspiration.' Barr is quoted as stating that the pulsus paradoxus "is due to a certain fall in pressure affecting the veins capillaries, and arteries, and is most marked in cases of low arterial tension.

Now, it is difficult to accept two such absolutely opposed explanations of the phenomenon.

I would suggest that the dominant factor in the production of pulsus paradoxus is the physiological rhythmical variation in the activity of the cardio-inhibitory centre, corresponding to the rhythmical variation in and activity of the respiratory centre. We have in Traube-Hering curves experimental evidence that while the respiratory centre is rhythmically sending the impulses of inspiration and expiration, the neighbouring vasomotor and cardio-inhibitory centres are acting in unison, so that their influence on the arterial tension and the heart respectively waxes and wanes rhythmically with each respiratory movement. Hence, especially in children, in whom these centre reflex centres are particularly active forced inspiratory impulses are attended with quickened pulse and rise in arterial tension while during forced expiration the pulse slows for the cardio-inhibitory centre is in its more active phase. Thus when a pulsus paradoxus can be detected its appearance is only an exaggeration of what is constantly present in health in a minor degree, and is brought about by the increased activity of the medullary respiratory centres, for example, in laryngeal obstruction.—I am, etc.,

P. Watson Williams, M.D.,
Laryngologist and Rhinologist, Queen's Royal Infirmary
[illegible]

[illegible] Physical Condition of the Pericardial Membranes [illegible] Pericardium Adhesivum. Weiner Klinische Wochenschrift, March 1907.

THE BEST WAY TO REMOVE TONSILS.

Sir,—I have been much interested in the discussion in the British Medical Journal on the above subject introduced by Mr. Hey Groves's advocacy of the ancient operation of enucleation. At the British Medical Association meeting in London in 1895 I advocated the operation of *morcellement* of the tonsils by means of punches as practised by Rualt. Since that time I have invariably in adult cases used this method, which practically enucleates the tonsil and clears the supratonsillar fossa. In some hundreds of patients, ranging from 15 years of age and upwards, this has been done with very little pain or discomfort under cocaine anaesthesia, and with trivial haemorrhage.

In every case I have requested the patient to report to me any recurrent tonsillitis. No patient has reported a recurrence so far, so one can fairly presume that the operation has been perfectly satisfactory.

I agree with Dr. Scanes Spicer that the danger of a general anaesthetic, especially chloroform, is by no means theoretical.

In young children with adenoids in addition, I still use the guillotine, under a short anaesthesia, gas and oxygen. In these patients the tonsils are usually softer and less adherent, and therefore can easily be "dug out" in their entirety by the guillotine, especially if the instrument used fits the tonsil. I use punches of various sizes; the most useful one I have yet had was made for me by Meyer and Meltzer about three months ago.

Removal of the tonsil by *morcellement* is, in my opinion, whenever practicable, the safest and most efficacious method.—I am, etc.,

John Bark,
Ex President, British Laryngological, Rhinological, and Otological Association.

Liverpool, Jan. 22nd.

PRIMARY DIPHTHERIA OF THE EXTERNAL AUDITORY CANAL.

Sir,—I fully appreciate Dr. Watson Williams's objection to deciding the diagnosis on bacteriological grounds alone, but as an otologist I would on general and clinical evidence have diagnosed the case as diphtheria of the external auditory canal. I consider that this diagnosis was confirmed by the expert opinion of the bacteriologist.

I do not understand Dr. Williams's reference to the "disastrous results" which might follow "a similar operation in a true diphtheria case." I performed the mastoid operation because the patient, in addition to the diphtheria of the external auditory canal, had a purulent otitis media, and the persistent febrile temperatures might indicate an intracranial extension of the disease or an involvement of the sigmoid sinus. I have no hesitancy in saying that I would do the same again in similar conditions; and even granting what Dr. Williams in this case does not admit that there was an undoubted diphtheria of the external auditory canal it seems to me an analogous proceeding to opening the trachea in diphtheria of the respiratory tract if the patient is cyanosed.—I am, etc.,

Glasgow, Feb 11th. Jas. Galbraith Connal.

THE LONDON COUNTY COUNCIL ELECTION.

Sir, I should like to remind the Secretaries of the Divisions of the Metropolitan Counties Branch that I wish to have the replies of the candidates as early as possible, in order that they may be tabulated and circulated. So far I have received the replies of only a few candidates, but in every single case the reply has been favourable.—I am, etc.,

Atwood Thorne,
Honorary Secretary Medico-Political Committee of the Branch Council Metropolitan Counties Branch.

[illegible] Harley Street W. Feb 12th.

PROPOSED AMALGAMATION OF MEDICAL SOCIETIES.

Sir, We should be much obliged if you would permit us to call the attention of your readers to the fact that by the kind permission of the President of the Royal College of Physicians, a general meeting of the societies which are taking part in the amalgamation will be held at the Royal College of Physicians on Tuesday next, February 19th, at

5 p.m. The chief object of this meeting is to determine the name of the new society. The Committee of Representatives hopes that all members of the societies taking part in the amalgamation who desire to become members of the new society or of any of its sections will make an effort to attend.—I am, etc.,

Arthur Latham, } Honorary
Herbert S. Pendlebury, } Secretaries.

London, S.W., Feb. 13th.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Election of Delegate of the Common University Fund.

William Osler, D.M., Hon. D.Sc., F.R.S., Student of Christ Church, Regius Professor of Medicine, has been elected a delegate of the Common University Fund.

Board of the Faculty of Medicine.

The following have been elected or re-elected members of the Board: Sir William S. Church, Bart., D.M., Christ Church; S. H. West, D.M., Christ Church; W. Ramsden, D.M., Fellow of Pembroke College; E. W. A. Walker, D.M., Fellow of University College; H. M. Vernon, D.M., Fellow of Magdalene College; W. Williams, D.M., D.P.H., Jesus College; W. Bruce Clarke, B.M., Pembroke College; W. W. Fisher, M.A., Corpus Christi College.

Board of the Faculty of Natural Science.

The following have been elected or re-elected members of the Board: C. Lendesdorf, M.A., Fellow of Pembroke College; A. Thomson, M.A., Exeter College, Professor of Human Anatomy; H. M. Vernon, D.M., Fellow of Magdalene College; W. W. Fisher, M.A., Corpus Christi College; D. H. Nagel, M.A., Fellow of Trinity College; J. Walker, M.A., Christ Church; C. E. Haselfoot, M.A., Fellow of Hertford College; M. V. Sidgwick, M.A., Fellow of Lincoln College; P. J. Kirkby, M.A., Fellow of New College; E. S. Goodrich, M.A., Fellow of Merton College; W. Ramsden, D.M., Fellow of Pembroke College; H. B. Hartley, M.A., Fellow of Balliol College.

UNIVERSITY OF CAMBRIDGE.

Mr. F. Darwin, M.A., M.B., Christ College, has been appointed to represent the University at the celebration of the 200th anniversary of the birth of Linnaeus, to be held at Upsala in May, 1907.

The following have been appointed electors to professorships: Professor Marsh for the Professorship of Anatomy; Dr. Vines, Christ College, for the Professorship of Botany; Sir Thomas Barlow, for the Downing Professorship of Medicine; Dr. Gaskell, for the Professorship of Comparative Anatomy; Dr. Sherrington, Caius College, for the Professorship of Physiology; Dr. Humphry, Trinity College, for the Professorship of Surgery; Dr. Nuttall, Christ College, for the Professorship of Pathology.

UNIVERSITY OF LONDON.

Meeting of the Senate.

Meeting of the Senate was held on January 23rd, 1907.

Co-option of Members of the Senate.

The Senate, in view of the incorporation of University College in the University which took effect on January 1st, have co-opted Dr. T. Gregory Foster (Provost of the College), and Lord Reay (Vice-Chairman of the College Committee), who had been nominated by the College Committee to represent the College on the Senate.

Vice-Chairman of the Scholarships Committee.

Dr. Waller, F.R.S., has been elected Vice-Chairman of the Scholarships Committee for the remainder of the period 1906-7.

Federal Conference on Education.

Sir Arthur Rücker, F.R.S., Dr. T. Gregory Foster, and the Rev. Dr. A. C. Headlam have been appointed delegates to the Federal Conference on Education to be held in London in May and June next under the auspices of the League of the Empire.

Invitation to Paris.

The Senate has accepted an invitation from the University of Paris to send eighty representatives of the University to visit Paris at Whitsuntide.

Francis Galton Laboratory for the Study of National Eugenics.

As the result of a further gift of £1,000 by Mr. Francis Galton, F.R.S., the Senate have been enabled to revise and extend the scheme for the study of National Eugenics founded under his previous benefaction; this sum will provide for the carrying on of the work of the Eugenics laboratory for the next three years.

Mr. David Heron, M.A., has been appointed Galton Research Fellow in National Eugenics, in succession to Mr. Edgar Schuster, M.A., resigned. Miss E. M. Elderton has been appointed Galton Research Scholar, and Miss Amy Barrington (Mathematical Tripos, Cambridge), Computer.

The work in this subject will be carried on under the supervision of Professor Karl Pearson, F.R.S., in consultation with Mr. Francis Galton.

It is the intention of the founder that the laboratory shall act (i) as a storehouse for statistical material bearing on the mental and physical conditions in man and the relation of these conditions to inheritance and environment, (ii) as a centre for the publication or other form of distribution of information concerning national eugenics. Provision is made in association with the biometric laboratory at University College for training in statistical method and for assisting research workers in special eugenic problems.

Short courses of instruction will be provided for those engaged in social, anthropometric, or medical work, and desirous of applying modern methods of analysis to the reduction of their observations.

The laboratory, which is in connexion with University College, is temporarily established at 88, Gower Street, W.C.

University of London Freemasons.

Dr. Amand Routh has been appointed steward to represent the Lodge at the forthcoming festival of the Royal Masonic Benevolent Institution.

Exemptions from Matriculation.

During 1906 graduates of other universities to the number of 131 claimed exemption from matriculation under Statute 116, and, in addition, Oxford and Cambridge local examinations supplied 188 registrations, and various other certificates 46.

King's College.

A course of eight advanced lectures to be given on Mondays at 4.30, by Professors T. G. Brodie, F.R.S., and W. D. Halliburton, F.R.S., on the subject of coagulation, was commenced on January 21st. The course is recognized by the University as a special honours course, and is free to all students of medical schools in London and to medical practitioners on presentation of their cards.

Guy's Hospital Medical School.

A course of eight lectures on internal secretions, by Drs. A. P. Beddard and M. S. Pembrey, on Thursdays, at 4 p.m., were commenced on January 17th. The lectures are open without fee to all internal students of the University.

UNIVERSITY OF BIRMINGHAM.

The New Buildings.

Satisfactory progress is being made with the erection of the new buildings of the University at Bournbrook. Blocks A, B, and C have been completed, and the Great Hall and main entrance will be ready for use early in the ensuing summer. The hall is of huge dimensions, being larger than the Town Hall. The Council of the University has approved of the plans for additional buildings to be erected on the Bournbrook site, fronting to University Road. These additional buildings will include the Harding Memorial Library, the department of physics, the department of chemistry, and a central tower, which will rise from the court to a height of about 325 ft. The foundations are already in progress.

To clear off the liabilities on the buildings of the men-students' club-house in Great Charles Street, the Council has decided to provide the sum of £820 from the funds of the University, making their contributions to the buildings amount to £2,820.

Science Scholarships.

Sir Henry A. Wiggin, Bart., on behalf of Messrs. Henry Wiggin and Co., has offered a donation of £2,000 for providing a scholarship or scholarships, tenable in the University, in memory of the late Sir Henry Wiggin. The Council has gratefully accepted the offer, and has requested the Faculty of Science to report as to the conditions which it is desirable should govern the award. Messrs. William Cooke and Co., Limited, of Sheffield, have offered a scholarship for mining students of the value of £21 annually.

Number of Graduates and Undergraduates.

The total number of graduates and undergraduates on the register at the end of the session 1905-6 was 419, distributed as follows: Faculty of Science, 177; Faculty of Arts, 141; Faculty of Commerce, 22; Faculty of Medicine, 79. The number of undergraduates on the register at the commencement of the new session is 365, distributed as follows: Science, 153; arts, 137; medicine, 61; commerce, 14.

Finance.

The total income of the University for the year ending September 30th, 1906, was £45,220. From the endowments £8,532 was received, £11,850 from Government grants, £7,003 from local authorities' grants, £500 from the Guardians of the Standard of Wrought Plate in Birmingham, £10,568 from students' fees, £1,630 from examination fees, £2,733 from the day training college, £813 from the bacteriological department, and £1,340 from the school of brewing. The expenditure came

to £47,904. The balance sheet showed liabilities amounting to £724,040. The assets include £708,228, the balance being made up of cash in hand and at bankers, etc.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

A MEETING of the Council of the University College of South Wales and Monmouthshire was held at Cardiff on February 7th, Sir Alfred Thomas, M.P., presiding. A vote of condolence was passed with the family of the late Dr. Sheen, a member of the Council. Mr. William Sheen, F.R.C.S., wrote stating that it was his intention to continue the annual Alfred Sheen prize, founded by his late father, to the medical school. The Council resolved to undertake to analyse milk for farmers as to the percentage of fat, at the request of the County Council of Glamorgan, and to appoint Dr. Abell, the lecturer in chemistry, to do this work. The Council passed a vote of appreciation of the beautiful statue to the late Principal Viriamu Jones, executed by Mr. Goscombe John, and also expressed its gratitude to the following for services rendered by them as members and officers of the Executive Committee: Sir Alfred Thomas, M.P., Chairman; Mr. H. Woolcott Thompson, Treasurer; Mr. Austin Jenkins, Honorary Secretary; and Mr. Herbert M. Thompson.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN Ordinary Council was held on February 7th, Mr. Henry Morris, President, in the chair.

Issue of Diplomas.

Diplomas were issued to eighty-three candidates found qualified for the Membership of the College at the recent examination.

Diplomas were issued, jointly with the Royal College of Physicians, to twelve candidates found qualified for the Diploma of Public Health.

Election of Examiners in Surgery.

Mr. F. S. Eve was re-elected an Examiner in Surgery. Mr. J. Ernest Lane, Surgeon to St. Mary's Hospital, was elected to the vacancy occasioned by the retirement of Mr. Watson Cheyne.

Proposed Admission of Women.

The Council received a petition from the London School of Medicine for Women, and passed a resolution that the petitioners be informed that the question of admitting women to the examinations of the College is receiving the consideration of the Council.

CONJOINT BOARD IN ENGLAND.

THE following candidates have been approved for the membership of the Royal College of Surgeons and the licence of the Royal College of Physicians:

[redacted]

The Diploma in Public Health has been awarded to the [redacted]

Betenson, L.R.C.P., M.R.C.S., St. Bartholomew's; B. Blacklock, M.B., C.M. Edin., Edinburgh and St. George's; R. B. Ferguson, M.D., B.C.Cantab., L.R.C.P., M.R.C.S., Cambridge, St. Mary's, and University College; J. H. Hugo (Captain I.M.S., D.S.O.), L.R.C.P., M.R.C.S., M.B., B.S.Lond., St. Bartholomew's and University College; S. P. James (Captain I.M.S.), M.D.Lond., L.R.C.P., M.R.C.S., St. Mary's and University College; A. E. C. Keble (Major R.A.M.C.), L.R.C.P. and S.I., Dublin and R.A.M.C.; P. J. Probyn (Captain R.A.M.C., D.S.O.), L.R.C.P., M.R.C.S., M.B., B.S.Lond., Charing Cross and R.A.M.C.; O. L. Robinson (Major R.A.M.C.), L.R.C.P., M.R.C.S., Dublin and R.A.M.C.; A. G. P. Thomson, M.B., C.M.Edin., Edinburgh and Manchester; A. L. A. Webb (Captain R.A.M.C.), L.R.C.P., M.R.C.S., R.A.M.C. and University College.

CONJOINT BOARD IN IRELAND.

FINAL EXAMINATION. The following candidates have passed this examination:

T. McFetridge (with honours), C. M. Burton, W. Carroll, I. Clarke, P. J. Cusack, W. F. St. J. Davis, G. H. Kinmouth, B. C. A. Leeper, F. Lyburn, J. H. Lyne, T. O'Brien, J. M. O'Connell, O'C. J. O'Reilly, P. P. Ryan, W. H. Seady.

OBITUARY.

JOHN GUEST GORNALL, M.A., M.B., B.C.,

D.P.H.CANTAB.,

MEDICAL OFFICER OF HEALTH, WARRINGTON.

WE have to record the death of Dr. J. Guest Gornall at his residence, Ribblesdale, Latchford, on February 4th, 1907, at the early age of 40.

Dr. Guest Gornall was the son of Dr. J. Hankinson Gornall, for many years Medical Officer of Warrington, and was born at the old Warrington Dispensary, where his father was the Resident Surgeon. He was educated at the Boteler Grammar School at Warrington, and later at Cambridge and St. Thomas's Hospital. In 1888 he took the degree of B.A. (2nd Class Nat. Sci. Tripos), and in 1892 that of M.A.; in 1891 he obtained the diplomas of M.R.C.S., L.R.C.P.Lond., and in 1892 the degrees of M.B., B.C., taking the D.P.H. in 1894.

After qualifying he acted for a time as House-Surgeon at the Stanley Hospital, Liverpool; and during the epidemic of small-pox in Warrington, 1892-3, he was Medical Superintendent of the Small-pox Hospital, and thereafter acted as Assistant Medical Officer of Health until the death of his father in 1901, when he succeeded him as Medical Officer of Health, Superintendent of Fever Hospital, and Public Analyst. He was in private practice for several years until his appointment as Medical Officer of Health in 1901, and during this time he held the posts of Visiting Medical Officer to the Lancashire County Asylum at Winwick, and Assistant Medical Officer to the Warrington Infirmary.

His *Report on the Warrington Small-pox Epidemic, 1892-3*, during which he had under his care 674 cases, with 65 deaths, was pretty generally acknowledged to be of much value; he also wrote articles on the same subject in the *Lancet* and *Practitioner*.

Never of robust constitution, the great strain of the the small-pox epidemic, followed by a severe attack of typhoid fever, during which his life was despaired of, laid the foundation of his fatal illness. Although suffering severely—he was by this time nearly blind—he continued his duties to within a short time of his death, which was due to Bright's disease.

As Medical Officer of Health he was greatly respected by his brother practitioners, and the news of his death was received with deep regret by them and the inhabitants generally. He leaves a widow and six young children.

DR. ROBERT THOMAS FORBES of Sandiacre, Nottingham, who died on January 31st, aged 57 years, took the degrees of M.B., C.M.Glasg. (with commendation) in 1871. He first settled in practice at Moffat, Dumfriesshire, but in 1885 established himself in practice at Breaston, removing to Sandiacre thirteen years ago. He was Medical Officer to the Shardlow Union, and in addition to being consulting surgeon to various colliery companies he was Surgeon to the Midland Railway, and to the Oddfellows and Foresters and other friendly societies. Dr. Forbes leaves a widow but no children.

THE German Society for the Repression of Venereal Diseases will hold its third annual meeting at Mannheim on May 20th and 21st. Among the subjects to be discussed is the expediency of instruction of the young in sexual matters.

Medico-Legal.

AN UNREGISTERED PRACTITIONER AND AN UNCERTIFIED MIDWIFE.

On February 1st Mr. F. Llewelyn Jones, Coroner for Flintshire, held an inquest at Coed Talon, near Mold, with regard to the circumstances of the death of a married woman, aged 44. She had been attended in her confinement by Mr. John Jones, chemist, registered as a chemist without examination as being in business before the passing of the Pharmacy Act, 1868; and Elizabeth Humphreys, an uncertified midwife. The child was born at 6.45 a.m., and the mother died at 9.30 a.m. on the same day.

Dr. Bell, Pontblyddyn, stated that he made a *post-mortem* examination together with Dr. Vincent Trubshaw, of Mold. They found a large *ante-mortem* blood clot in the pulmonary artery. This clot was the cause of death. He was satisfied that death was due to natural causes.

The Coroner said that, though death was, according to the medical evidence, due to natural causes, the case disclosed what he regarded as a disgraceful state of affairs. Mrs. Williams, at a most critical period, was left to an unqualified medical practitioner and an unregistered and unqualified midwife, who seemed to know absolutely nothing of their responsibility. While there could not be any suggestion of negligence which would amount to criminal negligence, it seemed clear from the evidence that the placenta had not been removed for fully an hour after the birth of the child, and that the deceased had been weakened by haemorrhage. This had brought about such a condition in her blood vessels as to lead to the formation of the clot of blood which was the cause of death. If deceased had received proper attention by a duly qualified medical man, it seemed more than probable that her life would not have been lost.

A verdict of "death from natural causes" was returned.

THE NEW WORKMEN'S COMPENSATION ACT.

Medicus writes: (1) My surgery is away from my home. I have caretakers looking after it, for which they live rent free. They take messages and keep the house in order, doing all the cleaning, both inside and out. I allow them 3s. 6d. per week to buy cleaning utensils, etc. Do they come under the Act? (2) At the present time I keep my own horses and carriages and my own groom, and it is my intention now to do away with horses and man and to put my carriages into a livery stable to be kept for my sole use, they supplying horses and groom. Should any accident happen in this case, who would be the responsible party—I, or the livery-stable proprietor?

*** (1) It is quite clear that the caretakers would be "workmen" within the meaning of the Act. (2) This point is not quite so simple. Assuming that the relationship of the practitioner to the jobmaster is that of principal and contractor within the meaning of Section 4 (1) of the Act of 1906, it is clear that the practitioner will be liable for any accident which may happen to the groom in the course of his employment. He is, however, by virtue of S. 4 (2), "entitled to be indemnified by any person who would have been liable to pay compensation to the workman independently of this section." This would seem to point to his being indemnified by the jobmaster. Having regard to the peculiar language of S. 4, we hesitate to adopt the view that the relationship of principal and contractor does subsist. Indeed, we are told that the proper construction of Section 4 of the Act is the subject of considerable discussion amongst lawyers at the present time.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

PROFESSIONAL SECRECY.

Nemo.—Our correspondent acted quite rightly in refusing to give any information to the insurance company without previously obtaining the permission of his patient or his representatives.

REMOVAL OF INSANE PATIENT.

Dr. X.—So far as the statement of facts discloses, there were no circumstances to justify Dr. Z. in departing from the course of leaving the question of removal in the hands of Dr. X., who was in attendance, although he may fairly have considered it his duty to urge his opinion upon Dr. X. There is nothing in the case, as submitted to us, that explains why Dr. Z. departed from the intention, expressed in his letter, of leaving Dr. X. to decide the patient's fate.

INTERFERENCE WITH OTHER MEN'S PATIENTS.

M.D., M.S. writes that he has been attending recently for slight hoarseness a young lady belonging to a family the members of which have been patients of his for many years. He complains that the professor of a school of singing at which she was taking lessons insisted upon her seeing the secretary, who advised her to consult a throat specialist, recommending him on the ground that he would see her for half fees if sent from the school, and pressed the introduction upon her although she said that her own doctor was in attendance and her family was satisfied with her progress. Our correspondent says that in the *Medical Directory* the specialist is described as attached to the school, and asks us to express our opinion of his conduct in allowing the secretary to interfere with patients under the care of other medical practitioners. He adds that the patient was able and willing to pay full fees if it had been necessary for her to obtain special advice. We think the best thing our correspondent can do is to write to the specialist and tell him the facts. He is probably not aware of the injudicious conduct of the secretary, who by attempting to persuade patients under the care of other practitioners to consult the specialist is likely to do him infinite harm, and therefore we are unwilling to believe that he has authorized or is responsible for it.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

DEATH-RATE OF ILLEGITIMATE CHILDREN.

In his annual report upon the health of Patrington, in Yorkshire, the medical officer of health, Dr. W. H. Coates, animadverts upon the large proportion of deaths among illegitimate children. Among legitimate children the infantile death-rate was equal to only 81 per 1,000 births, while among illegitimate it was 307 per 1,000. The illegitimate births were 8 per cent. of the total number of births, but it would be interesting to know what was the proportion of these births to the number of unmarried and widowed women living in the district between the ages of 15 and 45 years. It is not very creditable to the Patrington District Council to find that it is the only rural area in the East Riding which has not accepted the offer of the county council to make bacteriological examinations in suspected cases of diphtheria, typhoid fever, and phthisis.

REMOVAL OF PATIENTS FROM INFECTIOUS HOSPITALS.

Klebs asks: In the case of children removed to isolation hospital compulsorily on account of infectious disease by the public health authorities, is it the place of the parent or public health authority to pay for the conveyance of the children from the hospital to their home four miles distant on their recovery? If the children before admission to hospital are being attended as paupers of the parish medical relief, showing that the patients are in poor circumstances and unable to pay for medical attendance, whose duty is it to pay for conveyance of the children from the hospital to their home, four miles distant?

*** There is no statutory provision compelling either the sanitary authority, or the patients, or their guardians to pay for the removal of a patient from an isolation hospital upon his recovery. It is almost inconceivable that the question should arise. As a rule, neither the patients themselves nor their friends are anxious to prolong their stay in hospital. On the other hand, if a patient is left on the hands of the hospital authority it would be cheaper to pay for sending him home than to keep him in the hospital an unlimited time.

The late Mrs. Anne Ramsey, of Pendleton, Lancashire, left £100 to the Salford Royal Hospital, and £50 each to St. Mary's Hospital for Women and Children, Manchester; the Hospital for Sick Children, Pendleton; and the Northern Counties Hospital for Incurables.

The late Signor Enrico Santoro has bequeathed £36,000 to Italian charities in Constantinople. Of that amount the Italian Society of Beneficence will receive £16,000, the maternity department of the Italian Hospital £2,000, the tuberculosis department £600, and the Children's Hospital £600.

The third Congress of the German Roentgen Society will be held in the Langenbeck House, Berlin, on April 3rd, under the presidency of Dr. Albers-Schönberg, of Hamburg. The question proposed for discussion is, What influence has Roentgen-ray diagnosis on the recognition and treatment of fractures of bones? The debate will be opened with reports by Professor Oberst of Halle and Dr. Immelmann of Berlin.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR.	GENERAL SECRETARY AND MANAGER.
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

JOHN BELL OF EDINBURGH.

M. J. inquires as to the probable value of *Letters on professional character and manners on the education of a Surgeon, and the duties and qualifications of a Physician, addressed to James Gregory, M.D., professor of the practice of medicine in the University of Edinburgh.* By John Bell, Surgeon. Edinburgh: Archibald Constable and Co. 1810.

*** A work dealing with a long-forgotten controversy fetches nothing in the open market unless by reason of its rarity, its fine condition, or its binding, and our correspondent's copy does not seem to possess any of these qualities. Nevertheless, these letters of John Bell are extremely interesting as giving a picture of a time when the hospital career of a first-rate surgeon at Edinburgh could be marred by the opposition of a single professor. John Bell was born in 1763 and died in 1820. He was skilled equally as a writer and a surgeon, and was the elder brother of Sir Charles Bell, born in 1774.

THE CAUSES OF BLINDNESS.

The President of the New York State Commission to investigate the condition of the blind asks for the assistance and advice of the medical profession with regard to the causes of [illegible] and the methods by which unnecessary blindness may be prevented. Reprints of articles, pamphlets, or personal communications are asked for on the following subjects:

[illegible]

Communications may be addressed to the President, Dr. Park Lewis, 151, Franklin Street, Buffalo, or the Secretary, Mr. O. H. Burritt, M.D., Batavia, N.Y.

ANSWERS.

IGNARENT.—Terpin hydrate is soluble in fourteen parts of alcohol (90 per cent.), and this solution can be diluted with water without precipitation; it only dissolves in chloroform to the extent of 1 in 200, so that it seems probable that our correspondent is not using true terpin hydrate.

TREATMENT OF TUBERCULOSIS WITH TUBERCULIN.

A CORRESPONDENT asks to be recommended a suitable book dealing with the treatment of phthisis and other tuberculous diseases with tuberculin. We are not acquainted with any book specially devoted to the subject, but in many recent articles, published in various journals, treatment with tuberculin is discussed. It is generally considered desirable that the treatment should be controlled by determinations of the patient's opsonic index, and our correspondent will probably find that some of the articles relating to opsonins furnish the information he requires concerning the use of tuberculin. We advise him to read Dr. Herbert French's address on Opsonins and their Utility in Practical Medicine (BRITISH MEDICAL JOURNAL, February 2nd, 1907, p. 256). Dr. French gives clear, practical directions for the therapeutic use of tuberculin, and at the end of his article adds useful references to other literature on the subject. Our correspondent might also be interested in the article on tuberculosis by Drs. Sidney Martin and Bosanquet in Allbutt and Rolleston (*System of Medicine*, Vol. ii, Part I. Macmillan and Co.).

LETTERS, NOTES, Etc.

A PREMATURE OBITUARY.

WE are requested to state that the Students' Union of St. Bartholomew's Hospital regrets very much that the name and address of E. D. Fitzgerald, M.R.C.S., of Castle Hill Avenue, Folkestone, was included in the "Obituary List of Bartholomew's Men" published in the *Students' Union Year Book* for 1906. Mr. Fitzgerald is alive and well, and the Union hopes to be excused for any pain which has been caused by the mistake made.

A LASTING CURE.

THE following, which the Edinburgh *Student* attributes to a well-known physician, deserves a place among "things one would rather have expressed otherwise": "Pulmonary tuberculosis of long standing tends to heal spontaneously. You can see this for yourselves, gentlemen, by following your cases to the *post-mortem* table."

HOMŒOPATHY.

DR. WM. CASH REED (Liverpool) writes: With reference to Sir Samuel Wilks's remark on the above subject in the BRITISH MEDICAL JOURNAL of February 2nd, p. 287, "I have reason to believe that homœopathy has not taken any strong hold of the lower orders," I should like point out that during the year 1905 the attendances at the two homœopathic dispensaries in this city were 89,528.

THE LADY AND THE LARYNX.

THE highly-developed *flair* with which ladies of a certain age, especially those who have eschewed the perils of matrimony, discover indecency in unsuspected places is comparable only to the keenness of scent with which medicine men "smell out" witches. The following is an instance. A large hospital is privileged to have an unmarried lady on its Board of Management. Wandering in maiden meditation fancy free about the building, she saw hanging in the room of one of the physicians some pictures which severely shocked her modesty. She reported the matter to the Board, urging that, as the room was open to any one who chose to go into it, the objectionable pictures should be removed. The Board appointed a subcommittee, consisting of a doctor and a retired colonel, to inspect the *corpora delicti*. They reported that the pictures were coloured drawings of the larynx!

STREETS NAMED AFTER DOCTORS.

MR. F. SHILLINGTON SCALES (Cambridge) writes: I have not seen Harvey Road, Cambridge, mentioned in your list.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Postal Orders should be made payable to the British Medical Association at the General Post Office, London. Small amounts may be paid in postage stamps.

N.B.—It is against the rules of the Post Office to receive letters addressed either in initials or numbers.

A Clinical Lecture
ON THE
TREATMENT OF LACRYMAL OBSTRUCTION.

Delivered at the Royal London Ophthalmic Hospital, Moorfields.

By J. HERBERT PARSONS, D.Sc., F.R.C.S.,
Assistant Surgeon to the Hospital; Assistant Ophthalmic Surgeon, University College Hospital; Ophthalmic Surgeon, Hospital for Sick Children, Great Ormond Street.

Symptoms and Pathology.

Lacrymal obstruction—omitting those cases due to occlusion of the canaliculi, with which I do not propose to deal on this occasion—is caused by inflammation of the lacrymal sac and nasal duct. The inflammation generally spreads up the nasal duct from the nose, though in rare cases it may start in the conjunctival sac. It is astonishing that conjunctivitis so rarely gives rise to dacryocystitis, whilst, on the other hand, dacryocystitis invariably causes some conjunctivitis, often limited to the neighbouring part of the conjunctival sac. It is to be regretted that ophthalmic surgeons as a rule pay too little attention to the condition of the nose. Many intractable cases of conjunctivitis are associated with rhinitis. Chronic rhinitis, for example, is often present in angular or diplobacillary conjunctivitis, especially in children, and a diplobacillus in all respects similar to the Morax-Axenfeld diplobacillus, is found in the nasal discharge in these cases.

The primary result of spread of inflammation from the nose to the lacrymal sac by way of the nasal duct is swelling of the epithelium lining these structures and of the subepithelial tissues. The lacrymal sac and nasal duct are surrounded by a well-developed venous plexus, and inflammation is accompanied by engorgement of these veins. This engorgement, together with the swelling of the soft structures which form the lacrymal excretory apparatus, prevents the normal passage of fluid from the conjunctival sac into the nose. Like most other ducts in the body, the walls are in contact under normal conditions, unless fluid is passing. The swelling of the tissues leads to an active obliteration of the lumen instead of a passive falling together of the walls, so that more force is required to open it up than is supplied by the physiological mechanism, which has its chief anatomical basis in the fibres of the orbicularis palpebrarum surrounding the lacrymal sac. Fluid, therefore, accumulates in the sac, the walls are forced apart, and the sac is kept dilated. The stagnant fluid contains deleterious material which further irritates the walls. These themselves secrete more fluid than normal. The irritated mucous membrane reacts very much in the same manner as does the conjunctiva. We know that the conjunctiva contains unicellular mucous glands or goblet cells, and that these are enormously increased in number in chronic conjunctivitis. The same applies to the lacrymal sac, and this fact accounts for the excess of mucus which is poured out into the stagnant tears and conjunctival secretion. If the condition persists for a long period, or if, as is often the case, subacute exacerbations of inflammation occur, leucocytes are extruded into the fluid, which becomes muco-purulent. Dacryocystitis, thus developed, manifests itself therefore by dilatation of the lacrymal sac or mucocele. If the dilated sac is pressed upon by the finger the fluid is expelled. It may pass down into the nose, the external pressure being sufficient to overcome the obstruction in the nasal duct. More commonly it regurgitates into the conjunctival sac through the canaliculi, when its nature can be determined, whether mucous or muco-purulent.

The importance of the efficient treatment of lacrymal obstruction cannot be too forcibly insisted upon. A mucocele is a constant menace to the eye. It has been proved by bacteriological research that the mucus or muco-pus almost invariably contains pneumococci, to name only the most important of many varieties of pathogenic organisms. Pneumococci are not uncommon in the conjunctival sac, but they are usually of slight virulence. This is by no means the case in dacryocystitis. Here they are frequently extremely virulent. Now, we know that one of the most dangerous forms of corneal ulcer, the ulcus serpens or hypopyon ulcer, is caused by virulent pneumococci. These ulcers, unless treated quickly and vigorously, rapidly lead to perforation of the cornea and loss of the eye. Moreover, pneumococci are a common cause of panophthalmitis if there is any route whereby they may obtain an entrance into the globe; hence the rule that a mucocele must be cured before any intraocular operation is performed. If these facts are taken into consideration we may well be astonished, not that hypopyon ulcer occasionally occurs in cases of chronic dacryocystitis, but that it occurs so relatively seldom. A less disastrous sequel of mucocele is an acute exacerbation of the dacryocystitis leading to the formation of a lacrymal abscess. This may, indeed, cure the disease by causing the complete obliteration of the lacrymal sac. Enough has been said to show the extreme importance of curing every case of mucocele as quickly and permanently as possible, and the dangers are such that radical measures are fully justified.

Treatment.

A few words must be said as to the line of treatment which has been employed universally up to the last few years, and is still employed by many surgeons. The lower punctum is dilated, and fluid is forced into the sac with a syringe. In some cases it passes into the nose, and the repetition of the syringing cures the condition. Usually, however, the fluid regurgitates into the conjunctival sac, and none passes into the nose. The nasal duct is then probed, either by small probes without slitting up the canaliculus, or with larger probes after the canaliculus has been slit up. What is the effect of passing a probe down an inflamed duct in this manner? No matter how skilfully the operation may be performed, it is almost inconceivable that grave damage will not be done. The swollen and softened epithelium is torn up and the subepithelial tissues are lacerated; very often the venules are torn, and more or less haemorrhage takes place. These abrasions are restored in the usual manner. New fibrous tissue is formed, which is at first elastic and resilient. But it is a universal characteristic of new-formed fibrous tissue that as it organizes it also contracts. Hence the necessity in cases treated in this manner to continue the use of probes and to use relatively large ones. Unfortunately for the patient the nasal duct is supplied, not only with a venous plexus, but also with a very well developed set of sensory nerves. Probing is therefore extremely painful, and the patient shirks the operation as soon as he has derived some benefit. The fibrous tissue, left to itself, gradually contracts, and a very slight inflammatory attack suffices to occlude the duct again. Dreading a repetition of the previous torture the evil day is put off as long as possible. Eventually the regurgitation of pus and the epiphora become an unbearable nuisance. Probing is now a much more serious business. There is a fibrous stricture which must be dilated. The fibrous tissue is now much more elastic in the proper sense of the term, that is, it has a much greater tendency to resist deformation and to regain its original form. The use of the larger probes has become imperative, with a corresponding increase in the amount of pain caused by the operation. And so the weary cycle goes on, epiphora and pus alternating with probes and pain. Or perhaps the surgeon himself gets tired and introduces a style, which usually means for the patient both pus and pain, or at least grave discomfort.

Fortunately a more rational method of treating these cases has been devised, and has been attended with great success. In the majority of cases, syringing, properly carried out, results in complete cure *if the case has never been treated with probes.* If it fails, extirpation of the lacrymal sac offers a really radical cure.

Syringing.

I have here a group of cases which are undergoing treatment by this method. About half of them are practically cured; fluid passes readily down into the nose. It will be found that in the remaining cases there is some good reason why the method has failed. Some have not yet been treated sufficiently long; others have been irregular in their attendance or have not come sufficiently

frequently; in others the disease is of long standing. None have been treated by probing, for it is a rule of my clinic that lacrymal probes are not to be used without special permission. Syringing is useless unless carried out thoroughly and perseveringly, and that involves the active co-operation of the patient. It is most successful in cases seen early—that is, of only a few weeks' duration—as shown by epiphora. The lower punctum is first dilated with a Nettleship's dilator. I use a Luer's all-glass syringe, fitted with a fine probe pointed straight cannula. The syringe is filled with boracic lotion or saline. The cannula is introduced into the lacrymal sac, not into the nasal duct. Several syringefuls of fluid are passed in; probably none passes down into the nose. Syringing is repeated *every day*. In many cases the fluid will pass down the duct in a week or less, for the constant cleansing of the sac restores the normal condition of the epithelium and relieves the congestion. If fluid does not pass in a week a mild astringent should be used, for example, zinc sulphate, gr. j or ij to the ounce, and after several syringefuls have been introduced, a little protargol, 10 to 15 per cent., is passed into the sac and the excess squeezed out. When once a free passage of fluid into the nose has been obtained, syringing is repeated at constantly increasing intervals, otherwise the condition is liable to recur. Indeed, in some cases it is advisable to teach the patient to use the syringe himself.



Fig. 1.—To show position of lacrymal sac and nasal duct.

This method is remarkably successful in cases which apply for treatment at an early stage of the complaint. It is unsuccessful if not carried out thoroughly. It is usually unsuccessful in cases which have previously been probed, in cases of long standing, owing to destruction or irremediable injury to the walls of the sac and duct, or to dilatation of the sac and atrophy of the embracing fibres of the orbicularis (atonic sacs). In all such cases excision of the lacrymal sac is indicated.

Excision of the Lacrymal Sac.

It might well be anticipated that excision of the lacrymal sac would lead to permanent epiphora. It does not. The great success of this operation depends upon the fact that under normal conditions the amount of tears secreted is only sufficient to moisten the conjunctiva, and is lost by evaporation from the surface of the globe. Under conditions of irritation, from cold winds, foreign bodies etc., there is a reflex increased secretion, which is normally carried off by the sac and duct. Under such conditions only will there be epiphora after extirpation of the sac. The extreme degree of epiphora which occurs in the presence of a neoplasm is due to the irritation of the conjunctiva by the hypersecretion of stagnant mucus or sarcoma. As already mentioned, this sets up a conjunctivitis which is sometimes called lacrymal conjunctivitis, a name which has, however, also been applied to Parinaud's conjunctivitis, which is a totally different thing. It must be remembered that this conjunctivitis may be chronic if the dacryocystitis has been of long standing. Some authors have said that in rare cases it is necessary to remove the lacrymal gland, or at least the orbital lacrymal gland, after extirpation of the sac in order to cure epiphora. I am of opinion that this is not the case, and that if this were so the operation is much less drastic than appears upon the surface. I have now done a considerable number of excisions of one or both lacrymal sacs and have not yet met with a case in which this was necessary. I believe that all such cases are due to operating on the gland too soon. Epiphora may persist and be troublesome for several weeks after extirpation of the sac if the dacryocystitis has been of long standing and the resulting conjunctivitis severe. Hence it is essential to treat this conjunctivitis very thoroughly before resorting to other measures. I have always found it yield in reasonable time. Of course it is essential that the sac shall in all cases be completely removed.

The difficulty of completely excising the lacrymal sac varies enormously in different cases. The causes are anatomical and pathological. The former are easily overcome, the latter less so. The anatomical fact which is often forgotten is that the fundus of the sac extends above the level of the internal palpebral ligament (Fig. 1). This part is very likely to be left if the ligament is not divided. Absolutely no harm results from its division.

The pathological factors which interfere with complete removal are more numerous and less easy to combat. First, it must be remembered that the nasal duct is also diseased, and after the sac has been removed the upper end of the duct should be thoroughly curetted with a small sharp spoon. The easiest sac to remove is the atonic, greatly dilated sac; it can readily be dissected out entire. The most difficult are those in which suppuration has destroyed the walls and made them extremely friable; it may be impossible to remove these whole; they have to be dissected out piecemeal, and the wound must be carefully inspected to see that no mucous membrane remains. These are also the cases in which bleeding is most troublesome, though the vicinity of the angular vein and of its many tributaries makes bleeding the bugbear of the operation even in the simplest cases. It can usually be overcome by properly applied pressure, assisted, if necessary, by the use of adrenalin. Axenfeld's retractors also tend greatly to diminish bleeding by keeping the veins well stretched.



Fig. 2.—Diagram to show incision and relations to conjunctival sac.

The relations of important structures concerned in the operation and the position of the incision which I employ are shown in Fig. 2. The dotted circle shows the relation of the conjunctival sac. The following instruments are required: A small scalpel, dissecting forceps, two pairs of toothed (fixation) forceps, Müller's and Axenfeld's retractors, small probe pointed (tenotomy) scissors, small Volkmann's spoon, small periosteal elevator, curved needles and skin sutures.

I always employ a general anæsthetic, but the operation can be performed under local anæsthesia. In the latter case it is well to add adrenalin to the cocaine or eucaine solution, which must be injected deeply in every direction around the sac. In easy cases local anæsthesia is doubtless quite sufficient, but it is seldom possible to be certain that any given case will prove easy, and failure completely to remove the sac is liable to bring odium upon the operation.

The lids are held stretched outwards by a finger

applied near the outer canthus. This throws the internal palpebral ligament into prominence. A curved incision is made, commencing just above the ligament, and extending downwards and slightly outwards to the inferior margin of the orbit and for a short distance along it. At the upper end the incision should lie about 5 millimetres internal to the inner canthus. If it be placed too far internally the angular vein will be opened and profuse haemorrhage will occur and prove very troublesome. The internal palpebral ligament is divided and the fibres of the orbicularis are dissected through until the sac is exposed. The dissection is carried backwards and inwards, and the finger is introduced into the wound to determine the position of the crest of the lacrymal bone, which forms an admirable guide to the exact position of the sac. The sac is then thoroughly separated from the bone on the inner side with the scalpel. There will probably be a considerable amount of bleeding. The retractors are now introduced—Müller's first and then Axenfeld's—in the manner indicated in Fig. 3. If the bleeding still continues after the venules have been put upon the stretch by the retractors, pressure must be applied. A small swab of cotton-wool is pushed into the wound, and kept firmly pressed back *for one or two minutes*. It is useless simply to dab up the blood; firm pressure must be applied for the time indicated, and in this case it generally proves quite effectual. Dipping the swabs in adrenalin, 1 in 1,000, previous to their introduction undoubtedly increases the haemostatic effect. The sac is now seized with fixation forceps and pulled forwards. The fundus and outer wall are dissected free with blunt-pointed scissors. Care must be taken not to dissect too far outwards, since the internal rectus may be injured, though I have never seen this mishap occur. The sac is pulled well forwards, and the posterior wall is dissected free in the same manner. The sac is now attached only by the duct. It is pulled well up, so as to drag up as much of the mucous lining of the duct as possible, and is removed by a snip of the scissors, applied as closely as possible to the bone. The wound is carefully inspected to see that all the mucous tissue is excised. The upper part of the nasal duct is then thoroughly scraped out with the sharp spoon. The wound is completely sutured. A small spherical pad is applied, and over this an ordinary pressure pad and bandage. Care should be taken to see that the lids are quite closed when the pad is applied.

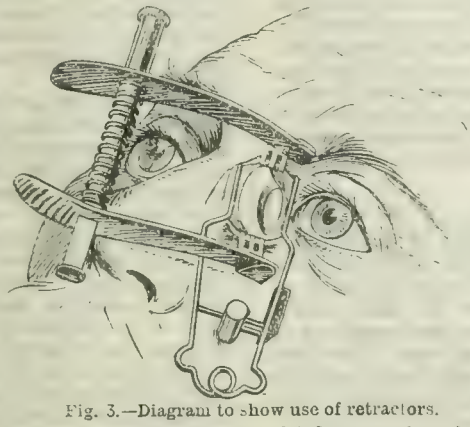


Fig. 3.—Diagram to show use of retractors.

The wound generally heals by first intention. It should not be pressed upon with the finger to see if there is any regurgitation during the first few days, as it is easily reopened. There is no objection to removing both lacrymal sacs at the same operation if both are affected. When the operation is satisfactorily performed there is no regurgitation on pressure over the scar. If after a week or two there is still some regurgitation, part of the mucous membrane has been left, and the operation must be repeated. Usually it is the fundus of the sac or the upper part of the nasal duct which has been left. The scar becomes quite unnoticeable, since it lies in the natural folds of the skin.

In all cases of cataract in which there is a mucocele the lacrymal sac should be excised as a preliminary to extraction. Only some weeks after this operation, when there is no trace of regurgitation, is it permissible to proceed with the extraction. A more difficult problem is the presence of mucocele in a case of acute glaucoma. Here immediate iridectomy is indicated, and admits of no delay. In these cases the sac must be completely isolated from the conjunctival sac. This is best effected by passing a ligature round each canaliculus and tying it firmly. Some surgeons cauterize the punctum, thus sealing it up with a cicatrix. Either procedure may be followed by the development of a lacrymal abscess, but in the meantime the iridectomy wound has probably healed, and in any case the pus is evacuated through the skin and not into the conjunctival sac.

Lacrymal Obstruction in Children.

The remarks already made refer to adults. Mucocele is not uncommon in very young infants. It is usually extremely easily cured, for it is due to delay in the proper canalization of the nasal duct. The duct is developed as a solid cord of epithelium, the central cells degenerating and being cast off. Sometimes the cells accumulate in the lower end of the duct and block it at the orifice into the nose. These cases should be treated by a simple conjunctival lotion, the mother being directed to squeeze out the sac very frequently each day. This treatment often cures the complaint. If it does not succeed in a week or two, the baby should be put under an anaesthetic and the sac and duct syringed out. If the surgeon is quite confident of his ability to pass a probe properly, the punctum and canaliculus may be dilated with a Nettleship's dilator and a small probe passed *once* down the duct into the nose. It must not be forgotten that the duct is very short in young babies, and no force must be used. Above all, it must be remembered that permanent damage may be done to the walls of the duct if the utmost skill is not exercised. This is almost the only condition which I know of when probing is indicated.

There is a small group of cases of mucocele in children in which simple treatment proves ineffectual. In these the lacrymal sac must be extirpated. The operation is much more difficult in children, owing to the smallness of the parts. In my experience most of these cases are due to extensive disease of the sac and often of the surrounding structures. Some are probably caused by primary tubercle of the sac; more commonly there is caries or syphilitic disease of the neighbouring bones. Often the bone disease is extensive, and complete removal of the diseased parts involves opening up the ethmoidal sinuses or even the nasal cavity. I have been surprised at the favourable course of these cases, since one might well anticipate trouble from direct communication between the wound and the septic nasal cavities and sinuses.

THE LACRYMAL SAC IN THE ECONOMY OF VISION.*

By J. JAMESON EVANS, M.B.Edin., F.R.C.S.Eng.,

HONORARY SURGEON TO THE BIRMINGHAM AND MIDLAND EYE HOSPITAL.

Physiology of Lacrymation.

The lacrymal apparatus comprises the lacrymal gland, the puncta lacrymalia, the canaliculi, the lacrymal sac, and the nasal duct. The tears, excreted by the gland at the upper and outer angle of the orbit, pass downwards and inwards over the eyeball, and are discharged, through the canaliculi and the lacrymo-nasal duct, into the nose. Ordinarily the gland secretes scarcely any more liquid than is lost by evaporation from the surface of the eyeball. Excessive secretion of tears results from psychical or reflex stimulation of the gland, the latter generally taking place through the terminal fibres of the fifth nerve in the conjunctiva, lachrymal sac, or nose.

The mechanism by which the tears are removed from the eye into the nose is somewhat complicated, and is still a contentious question. For the satisfactory removal of the tears the following conditions seem necessary:

1. The edges of the lids should be lubricated by the fatty secretion of the tarsal glands, which prevents the overflow of tears when their secretion is not excessive.

2. The edges of the lids, at any rate in the region of the puncta lachrymalia, must be closely applied to the eyeball, that is, there must be no paralysis or paresis of the orbicularis

* Read before the Birmingham Branch of the British Medical Association

palpebrarum, particularly of that inner part of it which includes Horner's muscle or tensor tarsi.

5. The elastic fibres so abundantly distributed in the walls of the lacrymal sac and canaliculi must have their elasticity unimpaired.

The outflow of tears appears to be brought about as follows: By the contraction of the orbicularis palpebrarum, which takes place in the act of winking and blinking, the internal palpebral ligament and the anterior wall of the lacrymal sac, to which it is closely attached, are drawn up and away from the lacrymal bone. In this way a dilatation of the lacrymal sac occurs, and the fluid tears from the conjunctiva are sucked in rather than the thick mucus at the nasal opening of the duct. The sac being thus distended, its own elasticity and the pressure of surrounding tissues force out the contents, which escape through the broader nasal duct rather than through the narrow canaliculi.

But tears are not essential to the performance of the proper functions of the eye, and excision of the lacrymal gland and pathological suppression of lacrymal secretion give rise to no particular discomfort or interference with visual functions. That neither the canaliculi, lacrymal sac, nor nasal duct are essential elements in the function of vision is shown by the fact that all visual functions are comfortably performed in cases of congenital absence of these excretory passages, and after excision or obliteration of the lacrymal sac and canaliculi.

Pathology of Lacrymation.

The harmlessness of congenital absence of the excretory passages stands out in striking contrast to the dangers and discomfort of pathological obstruction of the nasal duct and lacrymal sac. The reason for this marked difference is that stricture of the nasal duct results in an accumulation of tears in the lacrymal sac. The fluid thus accumulated soon decomposes, and forms a suitable nidus for the growth of micro-organisms, which easily reach it from the nose or conjunctival sac. These set up a catarrhal inflammation of the sac walls, which are weakened thereby and gradually give way to the pressure of the accumulating fluid. The irritation of the sac and conjunctiva sets up an excessive reflex secretion of tears, and thus is established a vicious circle which perpetuates the inflammation and distension of the sac. The sac soon loses its elasticity, and a condition of atony of the walls results, so that the tears are no longer forced down into the nose even when the nasal duct is rendered patent. It is unfortunate that patients seldom present themselves for treatment before this condition of atony of the sac has been established. It is to this circumstance, in the main, that the failure of the treatment of dacryocystitis by dilatation of the stricture is to be attributed.

But the persistence of epiphora is merely a matter of discomfort, and were this the only consideration, one might feel tolerably satisfied by simply maintaining a free passage into the nose and asking the patient to supplement or replace the lost action of the lacrymal sac by frequent pressure with the finger over the sac.

Unfortunately, a great danger to sight lurks in the apparently harmless collection of fluid in the sac. Bacteriological examination of such fluid, even when it appears mucoid, shows that micro-organisms abound in it. The most common pathogenic organism found is the pneumococcus; occasionally the xerosis bacillus, ozæna bacillus, or staphylococcus may be the predominant organism; and when the catarrhal inflammation assumes an acute phlegmonous form, as may happen at any time, the streptococcus, *bacterium coli*, or *Bacillus pyocyaneus*, etc., may be found in the pus.

At present, however, we are considering the effect of the discharge from a chronic catarrhal dacryocystitis on ocular conditions. It has long been recognized that it is a highly dangerous proceeding to operate on the eye of a patient with a mucocele. The majority of post-operative suppurations which I have seen have been in patients who were suffering from dacryocystitis, often so slight that it had been overlooked. An examination of the pus in such cases will show that the causative organism is the same as that of the pre-existing dacryocystitis, generally the pneumococcus. The conjunctival secretion ought to be bacteriologically examined as a matter of routine in all cases of operation involving penetration of the globe.

In cases of epiphora and ozæna, which are always suggestive of dacryocystitis, such an operation should on no account be performed until the conjunctival secretion can be shown to be free from pathogenic organisms. If this happy state of things cannot be brought about by the ordinary methods of treatment—that is, by antiseptic washing of the conjunctival sac and lacrymal passages—the communications between the conjunctival sac and the lacrymal passages and nose must be obliterated either by ligature or cauterization of the canaliculi, or, better and more effectually, by excision of the lacrymal sac. I very much question whether ligature can ever be effectual in preventing the passage of organisms along a mucous canal such as the canaliculus.

Hypopyon ulcer of the cornea is the most common cause of loss of sight in adult working men. Something like 100 cases come under treatment yearly at the Birmingham and Midland Eye Hospital. These cases consist largely of working *men*—the proportion of men to women being 5 to 1—and their average age is about 44 years. In no less than 85 per cent. of these cases the vision of the affected eye is reduced below the standard necessary for the maintenance of binocular vision, and these patients, therefore, are rendered one-eyed for all practical working purposes.

It is a striking fact that in at least 50 per cent. of these cases in which binocular vision was lost some dacryocystitis or lacrymal obstruction was noted, whilst in all the cases in which the patient retained binocular vision no such lacrymal affection was recorded.

A bacteriological examination of hypopyon ulcers will show that in most cases—95 per cent. of the cases, according to Römer the causative organism is the pneumococcus. There can be little doubt that the pneumococcus, at any rate in those cases in which there is a definite dacryocystitis, is derived from the lacrymal sac. On the basis of the pneumococcic origin of hypopyon ulcer it has been treated by subcutaneous and subconjunctival injections and local instillations of pneumococcus serum, and the treatment seems to have been effectual in the hands of Römer, Zeller, and others.

At the present time we are not in a position to say that we can, with certainty, check the destructive career of an infected ulcer of the cornea. Even should we be fortunate enough to stem its progress before vision has been seriously compromised, the damaged cornea is very liable to become reinfected, by the lacrymal discharge, on the slightest provocation, whether from disease or injury of the cornea, or deterioration of general health. As the *fons et origo mali* in these serious cases is in the lacrymal sac, it stands to reason that the lacrymal disease must be removed before the corneal condition can be treated effectually. Unless this is done, recurrences are almost certain to occur sooner or later. Further, a chronic dacryocystitis is a trouble and a danger in itself, constantly giving rise to an annoying and unsightly epiphora, and now and again becoming acutely inflamed with all the pain and general disturbance of acute suppuration.

Excision of the Lacrymal Sac.

The usual form of treatment of chronic dacryocystitis is by probing and injection of the lacrymal sac and duct with antiseptic and astringent solutions, wearing of styles, etc. That this form of treatment is not satisfactory is shown by the fact that it has often to be carried on for ten or fifteen years without any very material benefit to the patient.

A study of the mechanism of the excretion of tears and of the pathological changes in chronic dacryocystitis will explain the failure of this form of treatment. We have seen that elastic and muscular fibres enclosing the sac and canaliculi play a most important part in the mechanism of excretion. These elastic fibres, and probably also some of muscular fibres, are degenerated and inactive in chronic dacryocystitis. Consequently the tears will not flow into the nose, even though the nasal duct be so dilated that some of the largest probes practically drop down it and the air whistles up it when the patient blows his nose.

In our present state of knowledge, the only effective method of treating chronic dacryocystitis, and so removing a prolific source of blindness, is by removal or obliteration of the lacrymal sac. For this purpose, excision of the sac appears to be infinitely preferable to obliteration by caustics or cautery. The lacrymal sac can be excised through an incision extending from the lower border of the internal palpebral ligament, at its insertion into the

bone, downwards and slightly outwards along the lower margin of the orbit for about 3 cm. Such an incision will be on the inner side of the sac, and should go right down to the bone. The skin and subjacent structures are now reflected off the bone outwards until the lacrymal sac comes into view in the lacrymal groove. It may be recognized by its greyish-blue glistening appearance, but by adopting the above method of procedure it can hardly be missed. The sac is separated from the groove—first on the inner side, then on the outer side—by means of curved scissors and blunt dissector. Care must be taken to dissect the fundus carefully, so as not to injure the internal palpebral ligament under which the sac extends for a little distance. When the upper part of the sac has been freed, it is drawn out with forceps and its lower attachments are divided with scissors, which are eventually passed down along the duct as far as possible and made to cut across the duct. A free communication is established with the nose, and the mucous membrane of the duct is scraped with a sharp curette, or cauterized with the electro-cautery. The bleeding during the operation is often troublesome, and it is well to inject some adrenalin and cocaine even when the operation is being performed under general anaesthesia. The use of efficient retractors, such as Axenfeld's, adds materially to the comfort of operating. After flushing the wound or duct into the nose, the incision is sewn up, and healing is almost certain to take place by first intention. The stitches are removed on the third or fourth day. The line of the incision is hardly perceptible after a month or two.

In my experience, there is practically no epiphora after excision of the sac except under some exceptional physical or psychical stimulation. The reason for this is that the previous epiphora being largely the result of excessive secretion due to reflex irritation from the sac and conjunctiva, the normal glandular secretion is not more than can be removed by evaporation. Such being the case, I have never found it necessary to resort to excision of the lacrymal gland after excision of the sac.

Should the epiphora exist, it would not be a menace to the function of the eye as is the epiphora of dacryocystitis; and should the epiphora be distressing to the patient, the lacrymal gland can be removed without in any way endangering the eye, whose surface will still be kept moist by the secretion of the accessory lacrymal glands, and by the mucous secretion of the conjunctiva.

Indications for the Operation.

Excision of the lacrymal sac is indicated in:

1. Cases of dacryocystitis which have resisted conservative treatment by probing, etc., for three months or more. The radical treatment is more urgently called for where probing causes acute suffering, when the patient has already suffered from corneal complications, and where there is disease of the bony walls of the lacrymal canal.

2. Cases where the dacryocystitis is bilateral and the patient has already lost one eye from hypopyon ulcer, the removal of the sac on the side of the healthy eye is a matter of extreme economic necessity. At the present time insurance companies are loth to insure a workman who has lost one eye, but if the danger of a double dacryocystitis became common knowledge, I think all such cases would be absolutely refused.

3. As a preliminary to operations on the eyeball in cases of dacryocystitis. Here again the necessity for the operation becomes absolute if the fellow eye has already been lost through post-operative infection from the lacrymal sac.

4. Diseases of the sac which endanger general health—for example, tubercle, malignant growths, etc.

5. Lacrymal fistula.

As the outcome of a meeting held at Düsseldorf on February 6th, under the presidency of the President of the Rhine Province, Baron von Schorlemer, a society for the prevention of infant mortality has been formed. It is proposed that the society should co-operate with similar societies in other districts.

A Bill providing for the registration of nurses and for the licensing of persons as registered nurses is about to be introduced into the Minnesota State Legislature. There is (we learn from the *St. Paul Medical Journal*) nothing in the Bill that interferes with the liberty of any one to nurse the sick for hire, so long as the person does not claim to be a registered nurse.

MERYCISM OR RUMINATION IN MAN.

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Rumination in man, or merycism, has been known to medical writers since early modern times, Fabricius ab Aquapendente[1] being the first to describe instances of it in 1618. Rumination in man, as in the group of lower mammals, the ruminants, means the return of food, after completion of a meal, in limited and definite amounts into the mouth, where it is chewed again and swallowed, the whole process appearing perfectly natural, and taking a sufficient time, as a rule, for all the food taken at the meal to be remasticated. Certain variations in the process occur, and will be dealt with later. This curious abnormality in the alimentary habits of man is by no means common, but I have under observation several members of one family in which rumination has occurred, or is occurring in at least three generations, probably four, and there are signs of its onset in the fifth generation. I have also an instance of the phenomenon in another subject, of no connexion whatever to this family group.

As my cases are individually interesting from a medical point of view, and as the family history will appeal to students of heredity, I venture to record what facts I have been able to make out from an examination of the cases and from a somewhat extensive inquiry into the whole subject of rumination in man.

The following are brief notes of the cases, taking the family group first:

No. 6 (see family tree).—R. B., aged 36, tinplate worker, first came under my observation in October, 1905, complaining of regurgitation of acid matters into the mouth after meals, and some discomfort in the epigastrium coming on about half to one hour after meals; otherwise he was quite well. At first sight the complaint seemed to be one of ordinary acid dyspepsia or pyrosis, and it was only by close inquiry into the time of day that the sour eructations came on that the fact that the man was a ruminant, and had been so as long as he remembered, was brought out. He remembers very well how as a boy he used frequently to get into trouble for eating in school hours.

It was difficult at first to get an account of his rumination, because he looked upon it as a perfectly natural phenomenon, descending from his grandfather and father to himself, and to all of his sisters and brothers and to many of their children. What he wanted advice about was the sourness of the matters which came back into the mouth.

His account of his rumination is that whatever food he takes for dinner, whether solid or liquid, but especially meat, comes back to his mouth beginning either immediately after his meal or at any time within an interval of a quarter of an hour. It is immaterial how well or ill he masticates his food in the first instance, regurgitation comes on with unfailing regularity, but meat, and certain forms, as tripe, always made the process more marked. The food returns in mouthfuls, without any unpleasant taste, appearing at two to three minutes' interval, and each bolus of food as it regurgitates makes a visible movement in the neck. Each mouthful is chewed again and then swallowed. This process continues for about an hour. The successive mouthfuls become more fluid, until finally the regurgitated material is of almost watery consistency. No difference in taste between the earlier and later mouthfuls that regurgitate can be appreciated.

If he were to reswallow the food without chewing it again he would get indigestion or discomfort over the stomach. The rumination comes on only after his dinner in the middle of the day. There is no distaste about the process, which seems perfectly natural to him.

It was the patient's custom when "well" to smoke immediately after his meals to try and prevent regurgitation, in order that his peculiar condition might not be noticed by his companions. He was, however, never able to effect this successfully and any attempt would invariably give him indigestion or "a lump in his chest." Bolting his food did not seem to have any marked effect either way on his habit. About sixteen months ago he began to suffer from "heartburn" and he found that when his food returned to his mouth it tasted sour. This condition gradually grew worse and he was to be admitted into the Infirmary with a view to studying the rumination, but whilst waiting for admission he entered a convalescent home, which he left after a month's treatment with his dyspeptic symptoms entirely relieved. He attributed his acidity to taking an excessive amount of alcohol, mostly in the form of beer. After he had recovered from his first attack he abstained until Whit week of 1906, when, on indulging again in alcohol, his previous symptoms returned, though with less severity than on the former occasion. He was then treated at home by his doctor up to within five weeks

of entering the Infirmary, but was not benefited in any way. Whilst under observation in the wards, the food brought up within a few minutes of the end of his dinner, also that brought up half an hour later was examined by Dr. E. B. Reeve, Director of the Clinical Laboratory, to whom I am much indebted for this assistance. The first mouthful examined was well masticated, the meat and bread being thoroughly mixed. Fluid from this showed no free HCl and 0·057 per cent. of combined acid. The later mouthful was pink in colour from the tinctura cocci which was given as a placebo mixture, more fluid and more thoroughly mixed than the former. The HCl was the same, and pepsin was also present.

Besides sourness in the mouth, the only symptom that the patient complained of was a rather troublesome cough, probably pharyngeal, with considerable secretion of mucus. After eating rather freely, patient complained that his breathing was somewhat difficult about an hour and a half after his meal. His other systems appeared to be practically normal in every way. Previous to his present trouble, patient has always enjoyed good health, and has never suffered from any serious illness. Now that he has indigestion, he occasionally vomits about two hours after taking his food. The vomit is watery and of salty taste. He used to weigh 214 lb. eighteen months ago, but when admitted to hospital he was only 144 lb. He gained 6 lb. in two weeks whilst an in patient. No treatment other than tinctura cocci as a placebo was ordered at first, but after observing the nature of the regurgitated food he was given bismuth lozenges and an alkaline bitter stomachic.

The six following cases (Nos. 15 to 20) are the children of R. B.:

No. 15.—Girl, aged 12. Food comes back with her after every meal when she has had meat, especially tripe, cowheel, or bacon. Some of the food she spits out, but she chews again the "biggest part" and likes the process. I saw her as a patient with cough and some mild gastric disturbance, and then she told me that she spat out the food because it had a salty taste. The regurgitation of food begins about a quarter of an hour after a meal, and the mother says that only three or four mouthfuls come up. She is a well-developed, bright child. The bowels are regular.

No. 16.—Girl, aged 10. Bright, intelligent girl. The history is much the same as with No. 15 (sister). The rumination with her is worst after breakfast, because she often has bacon with it. Then the food comes up in school time, and the teacher and other scholars want to know what she is eating. Her bowels are obstinate at times, and the food that comes up then is sour. Her mother calls this "biliousness," but there is no vomiting. She tells me that the rumination is distasteful after she has had bacon, and the mother says this is because bacon upsets her stomach. After food that she likes she enjoys the rumination. Well-nourished child.

No. 17.—Girl, aged 8. Does not ruminate quite as much as older sisters, but otherwise under similar conditions. Her bowels also are obstinate at times. Bright, intelligent, well-nourished child.

No. 18.—Girl, aged 4. Beginning to ruminate. Bread and butter and porridge, as well as meat, come up, and sometimes she spits the food out, but if she has had meat she chews this again. Bowels regular. She is a very fine, bright child.

No. 19.—Boy, aged 2 years 6 months. Mother states that he is beginning to ruminate, food coming back into his mouth, especially after taking meat; some he spits out. The mother, a bright intelligent woman who does not ruminate, states very decidedly that as soon as the children began to walk they used to bring up mouthfuls of food, which at first they spat out, later they began to re-chew it, especially after a meal of food which they liked. She can see the movement of the neck as the bolus comes up. Some of the children can do it voluntarily, though No. 16 was quite sure she could bring up food during the ruminating period. As far as the mother can tell, imitation plays no part in the development of the phenomenon. The youngest child (No. 20) is 5 months old, and at the breast only, but the mother has noticed that it possetted much, and the nurse said she had seen all of the children when "meat fed" did. But whether more than other babies she could not say. I am quite satisfied as to the genuineness of the history of regurgitation of food in the four older members of the family, and believe the mother's statements about the boy, which are confirmed by similar remarks regarding case No. 21. The statements as to possetting must be taken for what they are worth.

No. 1.—M. A. B., aged 47, stout healthy looking woman, who has enjoyed good health until recently, when she began to be troubled with a ventral hernia. States very definitely that her father and two of his three brothers ruminated. She has ruminated herself "ever since she can remember," which was before ten years. With her the rumination is after every meal, and worse when she has had meat especially pork, bacon, or tripe or after partaking over-hearty. There is nothing distasteful about the regurgitated food which she chews again or swallows a little over. Ten or three to eight when the food is sour and she spits it out. The rumination begins a few minutes after a meal and may go on for one, two, or three hours, or up to the next meal. Much fluid with a meal or flatulence makes the regurgitation more marked. Until she had the ventral hernia she felt nothing of the muscular action which produces the rumination, but now she has pain over the seat of the hernia with each act of regurgitation. No constipation. She has seven children, ages 27 to 10 years. Six of these ruminate, some worse than others, but the second child, a girl, aged 25, does not, as she "favours" her father. All the children began at out the age of 5 years, and as far as she can tell it came on naturally and not as the result of imitation. Children not all healthy. Their histories are as follows:

No. 9.—T. B., aged 27; eldest child; clerk. Began to ruminate as long ago as he can remember. Used to be after every meal, but more so after meat, and especially after tripe. With him the rumination was limited in amount, not coming on for about an hour after a meal, and then only two or three mouthfuls came back, consisting mostly of meat, and not bread or potatoes. He chewed the food again, which tasted perfectly sweet, and not at all unpleasantly. Porridge would come back with him. He had no control over the process; he often wished he had, for his companions used to notice it and remark, "What! eating again," and if he swallowed the food without rechewing it he felt very uncomfortable. The amount of chewing the food had at a meal had no effect on the extent of the rumination. No constipation, but teeth were bad, and he now has only five of his own. He continued in this way until 1903, when from March to August he had indigestion, with acidity, for which he was treated. During this time the rumination practically ceased, and after he got well never returned to anything like its original extent. He was married in September, 1904. At the present time the rumination seldom comes on, but always does after tripe for a meal. He does not feel so well as when he regularly ruminated, and wishes he could go back to it. He has flatulence, and feeling of stomach discomfort. Nothing ever stopped the process when he was well. He has a girl, aged 2 years (No. 21), and says that he believes she is beginning to have food regurgitate into her mouth. He can see her making movements as if it were coming up, but she does not chew anything again. His own mother, who ruminates (No. 1) confirms this, and is most emphatic about the returned food not being due to vomiting. Solid food comes up into the child's throat, and she, not knowing what to do with it, is liable to choke.

M., girl, aged 25, has never ruminated.

No. 10.—Girl, aged 22. Has ruminated since she was about 5 years old; has no control whatever over process, which comes on after all meals, and especially when tripe, bacon, or pork has been eaten. The rumination commences directly after the meal is over and lasts for an hour or an hour and a half. The regurgitated food tastes quite natural, unless the process goes on over a couple of hours, when it is sour. Is dull and heavy-looking, very listless and apathetic, and subject to epileptic fits, for which she is under treatment; troubled with constipation.

No. 11.—Boy, aged 19. Has ruminated since he was about 5 years old, and does so very markedly now after all meals, and especially when tripe, cow-heel, bacon, or pork has been eaten. He is similar to No. 10 in other ruminating characteristics. Is a well-made youth and an athlete, having won prizes for running; enjoys very good health; no constipation.

No. 12.—Girl, aged 16. Began to ruminate when about 5 years of age, but only does so slightly, some days not at all. Affected by similar food to brothers and sisters; has a large head and is mentally dull and stupid-looking. Two days after birth the anterior fontanelle swelled to the size of an egg, but soon went down, and the head swelled. Had "water on the brain," and did not walk until 5 years of age.

No. 13.—Girl, aged 13. Ruminates much as her brothers and sisters, and from about the same age, is a bright, intelligent child; quite healthy; no constipation.

No. 14.—Boy, aged 10. Ruminates more than any of the others, but otherwise much as older brothers and sisters; gets into trouble and is teased by playfellows at school, where his habit is noticed; began when about 5 years of age; is well nourished and quite healthy; no constipation.

No. 5.—M. J., aged 42. Stout, healthy looking woman, and never ailed anything. Bowels regular. Does not look a nervous type. Has ruminated "ever since she can remember," which was probably before the age of 10. With her the rumination comes on after every meal, no matter what food she has eaten. It is always, however, more marked after eating meat. Fluids increase the amount of regurgitated matters, but, as a rule, she takes little drink with meals as she never wants fluid then. A cup of tea with no food would not come back. The rumination is worst after a hurried meal, and she has "nearly choked a time or two" by the lump of solid food which came up after she had not chewed them properly in the first instance. She chews the food before re-swallowing it, and says there is nothing disagreeable about the phenomenon unless the food continues to come up some time after the meal. The first mouthfuls come up "at once," or two to three minutes after the meal, and may go on for two to three hours. When I saw her the process just stopped at 5.30; she had had dinner at 12.30. Anything that comes back after about two hours is "sour," and she spits it out. Nothing stops the rumination with her. She is not often troubled with indigestion, but has bilious attacks at times, and then the rumination is distasteful, the food being sour. Some of her children (four boys, age 15, 12,

6, and 2 years) ruminate. She is doubtful about her grandfather and uncles being ruminants.

No. 2.—T., male, aged 46. Not seen. Reported by brothers and sisters to ruminate very slightly and to spit out the food. Has four children, none of whom ruminate.

No. 4.—J. W., male, aged 40. Not seen. Reported by brothers and sisters to ruminate slightly. Said to have one son only, who does not ruminate.

No. 5.—L., aged 38. Ruminates, but not every day, and spits out the food which comes back, although it tastes natural. Fatty food and cow-heels especially affect her. Is a stout woman, subject to rheumatism, and very deaf. Also rather dull mentally. Has five children, two boys and three girls, ages from 16 years to 1 year. All extremely bright, healthy, intelligent children. None ruminate.

No. 7.—F. B., aged 34. Brings back his food after swallowing; masticates it and swallows it again. Has done so as long as he can remember. His swallowed food tastes quite naturally when received into the mouth again. The act of rumination is not voluntary, he cannot return the food at will, neither can he check the return. Rumination is most marked after certain kinds of food, of which tripe is the most effective. He does not do it as much as his eldest sister does. The action appears to be quite visible to onlookers, the bolus of food being readily detected as it passes up the oesophagus. General health excellent. Both R. and F. state that the habit is acquired after the age of 11 years, but the mothers emphatically say at an earlier age. Otherwise this man confirms everything that R. B. says. He knows very little about his father and his uncles. Has two children, a boy aged 5 and a girl aged 2½.

No. 7a.—Boy, aged 5. His aunt says that he began to ruminate about twelve months ago.

No. 8.—S., aged 30. Ruminates only slightly, and after same foods as her sisters. Some days free from it. With her the regurgitation usually comes on about half an hour after a meal. Has not noticed how long it continues. Has no control over it. The food tastes naturally. Is a stout, healthy-looking woman, intelligent, though rather deaf. Has a baby, a girl aged 1 year and 5 months. Somewhat delicate looking child. No signs of rumination.

This family history of rumination is very interesting, there being evidence that it has occurred, or is occurring, in five generations. The eldest woman tells me most emphatically that her father and two of his three brothers ruminated, and that their father did also. There were three aunts, but nothing is known about them. Then eight brothers and sisters, and at least ten of their thirty children ruminate more or less. Finally, the father and grandmother of the only child in the fifth generation are decidedly of the opinion that rumination is beginning in this little girl aged 2 years. The family is healthy as a whole. The father of my adult subjects died aged 52; one of his brothers who ruminated was older and the other younger than this. Their father lived to over 80.

M., died, aged 82.

M. M., died, aged 52 M. 3 sisters (?...

(1) F?, 47 (2) M., 46 (3) F., 42 (4) M., 40 (5) F., 38 (6) M.?, 36 (7) M.?, 34 (8) F., 32

(9) M.?, 27 F., 26 (10) F.?, 22 (11) M.?, 19 (12) F., 16 (13) F., 13 (14) M.?, 10 M., 25 F., 17 M., 15 F., 10 M., 15 M., 12 M., 6 M., 2 M., 22 M., 16 M., 14 F., 7 F., 3 F., 1 (15) F., 12 (16) F., 10 (17) F., 8 (18) F., 4 (19) M., 2 (20) M., ½ (7a) M., 5 F., ...

(21) F., 2 ...

Italic letters signify ruminants—M. for male, F. for female. Roman type, non-ruminants. Age in years, when known, given after the letters. M.? or F.? signifies marked rumination. Numbers before letters for reference to case notes.

An Account written by a Professional Gentleman of his own Experiences of Rumination.

A. B., a man, aged 27 years, first noticed the occurrence at about the age of 9 years. The condition comes on at varying times after taking food, sometimes immediately, and at other times varying from a few minutes to an hour or an hour and a half afterwards. Most frequently it may be said to come on within half an hour of taking food. The principal conditions which seem to affect or modify the act are as follows:

1. *The Composition of the Meal.*—The condition seems to be most marked if a fairly large quantity of liquid be taken along with the food. If solid food alone be taken regurgitation does not occur. If, however, a quantity of liquid, say a pint of water, be drunk immediately after consuming a fairly large mixed meal, a great part of the water alone is almost at once brought back into the mouth, then at intervals varying from one to five minutes, portions of the solid food are regurgitated. As a general rule the condition is much more pronounced when the food taken has been agreeable to the palate. In this respect it almost appears as if there were some attempt at selection (if such a possibility could exist), as it has been noticed, not in one instance only, but very frequently, that where a large mixed meal has been taken—that is, where a full dinner menu has been gone through—certain articles of the meal, or at least certain portions of the contents of the stomach consisting chiefly of one article, have been solely and repeatedly brought back, say, for half an hour after partaking of the meal.

2. *The Mastication of the Food.*—The condition seems to be affected in a marked degree by the amount of mastication the food is subjected to before being swallowed, food incompletely or slightly masticated being brought back to the mouth much more frequently than the same food which has been subjected to prolonged mastication. This is especially noticeable if a fair amount of liquid has been taken at the same time.

3. *The Effect of Tobacco.*—If smoking be indulged in immediately after a meal rumination seldom occurs.

Time of Occurrence.—Although the condition may come on after any meal, it has been definitely noticed to occur much more frequently after some than others. Thus it does not often occur after breakfast, though meat is taken then, but chiefly after lunch (noon) or after dinner (about 6 p.m.). Although patient has always been in the habit of taking a fairly substantial supper about 10 p.m., the condition has never occurred after this meal, although he seldom retires before two or three hours afterwards. Perhaps it ought to be mentioned that he always smokes after this meal.

Frequency of Occurrence.—This varies very greatly. It sometimes occurs on successive days, or at intervals of several days or even weeks. The process is never accompanied by any feeling of nausea or unpleasantness. The general health has been good, with only slight dyspeptic trouble, chiefly in the direction of flatulence. About two and a half years ago suffered from mucous colitis, a complete cast of the colon about 8 in. long being passed on one occasion.

History.

Merycismus (μηρυκίζειν, to chew the cud) and *ruminatio humana* were the terms applied to the phenomenon by those who first described it.

It is a strange fact that such a striking departure from the normal habits of man should not have been described before the seventeenth century, a careful search through the works of the earliest anatomists and physicians who described rumination in animals, by Peyer,[2] writing in the seventeenth century, being unsuccessful in finding any references to it. It is hardly probable that the condition developed suddenly in the time of Fabricius ab Aquapendente; it is more likely that the unique circumstances of his two cases attracted the attention of contemporary physicians to rumination in man, and led to the publication of further instances of it.

The first of the cases recorded by Fabricius was a Paduan nobleman whose father had a horn the size of a small Spanish olive growing from the middle of his forehead. The other case, seen by John Burgower,[3] who wrote a thesis on rumination in man (Basel, 1626), was a monk with two small horns growing on his forehead. This monk's brother, who did not ruminate, also had two horns on his forehead. The history of horns and rumination in these two men, which apparently is authentic, led Bartholinus[4] and others to believe that all ruminating men had, in addition to these peculiarities, multiple stomachs like ruminating quadrupeds, and other contemporary writers believed they all had either horns or a parental history of horns. Sachs,[5] however, collected notes of 100 cases of men with rudimentary horns, and only one of these, namely, the above-mentioned monk, was a ruminant, and none of the cases recorded since those of Fabricius have had any similar history. Other writers (Schurig[6]) wove even more fantastic theories as to the parentage of human ruminants, but I need hardly say that the act of going over a meal again is the only one of the several characteristics in which ruminants differ from other mammals which a man with merycismus possesses, and the latter no more has bovine ancestry, horns, or a multiple stomach, than he is an ungulate, polygamous, or devoid of upper incisor teeth.

John Conrad Peyer in his *Merycologia*, or comm[illegible] on rumination in general, refers to nine cases of rum[illegible]tion in man, eight of which had been published by ot[illegible] writers before the date of his book (1685).

The cases he describes are all unusually curious and interesting. The first and second are those already referred to as recorded by Fabricius ab Aquapendente and Burgower. Next is Sennert's case, a man of 40, who as a child lost his mother, and was fed during infancy and early life with warm milk from a cow, a diet on which both the child and his habit were coincidently nurtured.

Salmuth's case was without special interest. Windthier's was a Swede—a *bon vivant*—who after food was obliged to retire to a corner, where he went over his meal again as quickly as he could. When asked whether the rumination afforded him any pleasure he replied "that it was sweeter than honey, and had a more delightful relish." This man had been troubled with acid eructations in his boyhood, and the rumination developed at the age of 30. His son, aged 24, also ruminated, but he could control it, and did so in public for shame and from modesty.

The case of a London man, described by Velsch, was not one of true rumination, but an hour or two after a meal the contents of the stomach came up into the mouth by ruminating movements, and the man spat out the fat and other materials which disagreed with the stomach. An interesting history is that by Ludvig of a girl (juvencula) of about 15, who, in contradistinction to many ruminating men who are gross eaters, ate but little. It was not every day, but frequently, that the food which she had taken the night before came back. This she swallowed again with displeasure, as the taste of it was unpleasant.

Wild's case was an idiot son of an idiot mother, who, after passing his first years—as, indeed, he did the whole of his life—amongst ruminating animals, developed the habit himself. And another case of imitation is recorded by Peyer himself, this time a healthy Swiss whose family possessions were in cows, and amongst which he lived most of his life. The wife of this man also developed the habit from watching her husband.

The last case is taken from Reissel, and was a man who ruminated when at home and enjoyed it, but not in public, because he was too much laughed at for his peculiarity. He evidently had control over the process, which is unusual.

The earliest reference to rumination that I have been able to find in the work of an English observer is in the appendix to the *Thesaurus Medicinae Practicae*, written by Thomas Burnet, M.D.,[7] and published in London, 1673. But there is nothing of interest in this, cases published by the earlier writers alone being referred to very briefly. In 1691 Slare[8] communicated to the Royal Society an "account of a ruminating man" in which he described a typical case. A much fuller paper is that by Copland[9] in 1821. In this is an interesting account of previously recorded cases, and also of a patient under Copland's observation who began to ruminate gradually after pre-existing dyspepsia. Next year Hill[10] gave a short note of the result of a *post mortem* examination on a subject of rumination in which the stomach was found to be quite normal in appearance. There are also notes of odd cases in the *Lancet* by Elliotson, 1835; Wilson, 1839-40,[11] Read, 1845, and MacIntosh, 1876.[12]

Little information is to be found in modern textbooks, but concise and practical accounts of the phenomenon are given under the heading Rumination or Merycismus in some monographs on diseases of the stomach, such as those by Hemmeter,[13] by Riegel[14] in Nothnagel's *Practice of Medicine*, and by Ewald.[15]

There are very full and interesting papers by Bourneville and Seglas, Koerner, Singer[16] and by Lemoine and Lancereaux.[17] As far as I have been able to trace, no paper on the subject has appeared in recent English journals, though I believe that the condition is by no means rare in England. Several papers have appeared in American journals.

DISCUSSION.

Rumination differs from regurgitation of food in the fact that the matters brought up from the stomach in the former are swallowed again, either after or without further mastication, whilst in the latter condition they are more frequently spat out. Regurgitation of small amounts of food is commonly met with in dyspeptic troubles, especially those associated with flatulence and ceases with the stomach condition. Rumination, on the other hand, may be totally unaccompanied by any stomach disturbance, and even if it be temporarily associated with a gastric abnormality is also quite distinct from the power which some people have of being able to produce an emesis and empty their stomachs voluntarily. I have only met with one instance of this, in a medical student many years ago. He was able to empty his stomach after drinking a glass of beer, and to be within a few minutes of taking the beer, however to produce the emesis failed. In such a case there must be an undue laxity of the cardia to allow the contents of the stomach to be pumped up by the action of the abdominal muscles, aided, probably, by a movement of the respiratory muscles with the glottis closed. MacIntosh's ruminating man could, however, empty his stomach without any pain or inconvenience at any time of the day, and had been able to do this from his earliest infancy.

The rumination comes varying times after all meals, or after a special such as dinner. In a typical case it will begin a few minutes after the meal is finished, continue for an hour, and then cease. It may, however, continue for a longer time, as in some of my cases, where it goes on for two to three hours. Several, or very many, mouthfuls usually come up, or only two or three, as in my case No. [illegible].

As a rule, it occurs independently of the amount of solid food eaten or of the chewing the food may have undergone before being swallowed in the first instance, but in some subjects it is certainly more after a hurried meal. Thus Halliday[21]—a medical man describing his own case, states that the act was most marked with him after a hurried meal of solid food, and looked upon it as reserve force in the mastication of his food. MacIntosh's case ruminated from early infancy. He used to be a slow eater, and, when an apprentice, found that this was against his getting his fair share of a meal with his fellow-apprentices. So he deliberately omitted his food at the meal, and then went over it at his leisure, chewing it properly the second time. My last case (A. B.) also found the rumination worked after a hurried meal. In some instances it occurs more readily if too much liquid is taken with the meal. Some of my cases state that meat always emphasizes the rumination, make it and some forms of meat, as tripe, bacon, or pork, are specially marked. The material which is regurgitated is, as a rule, composed of a uniform mixture of the various foods taken at the meal, but in some cases only certain articles of food return. Some ruminants (Elliotson,[22] first, state distinctly that the foods first eaten come back, but this is hard to believe. My last case also states that there is a certain selective action on the part of the stomach during the rumination, and I have heard of another similar instance where the fat of bacon alone ruminated.

The food brought up into the mouth may be [illegible] masticated or immediately reswallowed. Riegel states that the former process is not general in subjects other than inmates of asylums, but my own observations do not agree with this. On the contrary, my cases state that unless they do remasticate the food before swallowing it again they have much discomfort. When it is [illegible] masticated there is absolutely nothing distasteful in the act; it seems to the subjects to be a perfectly natural thing to do. In fact, they wonder why all other people do not do the same, and it has been described by Halliday as being accompanied by no discomfort; in fact, it was "rather palatable."

Salmuth's Swede said of the regurgitated food: "It is sweeter than honey, and accompanied by a more delightful relish." My cases also gave me similar information as to the natural and "sweet" taste of the food, and it is only when the food comes up over a prolonged period of time after a meal, or when the stomach is out of order that it tastes "sour," "salty," or "acid," and is distasteful. Some of the children spit out the food now and then because it tastes "salty" from the beginning, but this is only when they are out of health, or "bilious" as their mother says. When they are well they eagerly ruminate, especially after a meal which they have enjoyed.

All a patient had remarkable regurgitant powers.

One day after having his stomach washed out the man swallowed, with ½ litre of spring water, two gold-fish, 5½ and 6½ cm. long. The ear applied to the epigastrium could hear the fish splashing about in their novel aquarium. In twenty minutes the patient quickly said, "Now!" when up came the larger gold fish without any accompanying water, and eight minutes later the other one followed. They were lively and well and none the worse for their unusual experience.

Mode of Onset and Power of Control.

Hemmeter states that the rumination first arises as a voluntary act, and then becomes involuntary. This was certainly not the case in the subjects under my own observation; with them the onset was gradual and quite involuntary. Halliday had power to ruminate at will from boyhood, and he used to ruminate regularly, especially after dinner. It is possible to control the act—perhaps more readily in the intellectual classes—by an act of will—Singer says by a voluntary reverse action of its mechanism—but none of my cases had any control whatever over the process. Cambay,[24] a medical man, had apparently full control over his own rumination, though, as a rule, it went on without his paying any attention to it. Blanchard,[25] also a medical man, had less control over the process in himself. Sometimes he could bring up the food immediately after an involuntary regurgitation if he tried, but would fail after a few seconds' interval. At other times he was quite powerless to control the process, but he never could tell why his power varied so much.

In some cases smoking effectively checks the rumination, as in my last case, and Halliday says that when he began to smoke at 18 he largely gave up the habit, but odd mouthfuls would even then frequently return, though never against his will.

The General Health.

In all my cases the general health is good, with the exception of passing attacks, more or less severe, of indigestion, and in one subject of mucous colitis, and the nutrition is good. Halliday was quite healthy, except for attacks of migraine. Constipation may, however, be present. If dyspeptic symptoms be associated with the rumination and the food be spat out considerably, the general health and nutrition will necessarily suffer. Constipation is said to be frequently severe, and it was certainly troublesome in some of my cases, though I could not see that it was more marked than in non-ruminants.

Apart from dyspepsia, habitual spitting out of the food will, if prolonged, lead to distinct emaciation, as in a case met with by Sauvage,[26] where a man, after ruminating for thirty years, was ordered by his father confessor to spit out the food. The weight was regained when the man, on the advice of a physician, returned to his old habit. Vincent[27] also recorded the case of a man who began to regurgitate food on a sea voyage, but he spat out most of it, and became so emaciated that he consulted a doctor, who thought he would die. On being advised to chew the food again and swallow it, he did so, and lived to 83.

Etiology.

Social Position.

It is met with in all classes of society, and Einhorn[28] would have it that the professional and educated classes are frequently affected. My last case is a professional gentleman, and I know of other cases in the well-to-do middle classes.

Heredity.

Judging from the family history of my patients, and from cases of other observers, heredity undoubtedly plays a decided part in the development of the phenomenon, and this is not to be wondered at if physiological rumination be a neurosis, for nervous symptoms are decidedly hereditary.

Runge[29] met with a subject of rumination in the professional class whose father ruminated, or rather spat out the food which came up into his mouth, and whose boy also had the habit. In the boy's case the process was first noticed when on a transatlantic voyage. There was no neuropathic element in the family. Other observers have met with more than one case in a family (Elliotson, etc.).

Imitation.

At the same time the question of imitation must be considered, for some children born with a predisposition to the abnormality, who might not otherwise develop it, might be jealous of the achievements of their brothers and sisters, and successfully cultivate their latent powers. That it can be developed by imitation from apparently virgin soil is shown by the cases recorded by Koerner.[30]

A boy of 6, and a girl of 3 years, had a governess who was a ruminator and hysterical. The mother first noticed that they kept in their cheek pouches food, which they ate unwillingly, until they were able, when unobserved, to spit it out. She broke them off this and thought they were cured of their bad habits, until one day, when they thought they were unobserved, she saw them bending forward and by means of movements of the abdominal muscles bring up the greater part of a meal and spit it out, so she watched them closely and inspected their cheek pouches after each meal. It thus came to light that the children could voluntarily bring up from the stomach food which they had eaten seven hours previously, which they either spat out or chewed again and reswallowed. The services of the governess were then dispensed with and by resolute treatment the children were cured of their bad habit.

Peyer refers to a Swiss who, living among cows all his life, developed the habit and taught it to his wife, and Perinetti[43] recorded the case of a boy, 7 years old, who, having been for two years in early life suckled at the udder of a goat, acquired by imitation his foster-mother's ruminating habits.

Age.

As a rule other observers state that the rumination develops between 10 and 20 years of age, but in my cases it came on much earlier; in fact, as one mother said, as soon as the children began to walk and to have more meat to eat. At this early age the phenomenon is not complete and the children spit out a good deal of the food. Whether the babies at the breast posset more than usual I cannot say. The children who were taught by their governess were 3 and 6 years old, and Somers[31] met with a mentally-defective child who ruminated at 5 years of age. Blanchard, himself a medical man, ruminated from his earliest infancy. As an instance of the phenomenon developing after adult life Blanchard mentions the experiences of Brown-Séquard,[32] who brought it on by irritating his stomach through his investigations on gastric chemistry. Repeating Réaumur's and Spallanzani's experiments, he used to swallow sponges, containing in the centre various foods, tied to pieces of string by which they were pulled up when saturated with the gastric juice. After doing this for some time his stomach rebelled, and rejected the sponges on its own initiative. Then Brown-Séquard found that he had induced an irritable stomach which regurgitated its contents and eventually developed permanently ruminating characteristics. The rumination went on regularly as a rule, but he could prevent it by a strong act of will.

Two interesting instances of merycismus occurring in extreme old age are recorded by Elliotson—an old lady, aged 89, who had ruminated regularly from early childhood, and Ducasse,[33] a man of 70, who had also ruminated all his life. These cases suggest that the habit has no deleterious effects on the health when it is physiological.

Sex.

In my series males and females are affected with equal frequency, but the majority of cases previously recorded were in males, a fact which led some observers to believe that males are the more liable, and others to suggest that probably females are equally affected but will not acknowledge a habit of which they may be ashamed.

Predisposing or Exciting Causes.

Merycismus may develop after an infectious fever, as small-pox (Filhol and Tarbès[34]), or varicella (Ducasse), or at sea (Vincent), or from a severe blow on the stomach (Boucher[35]). But stomach troubles are also said to be frequent precursors of it, as indigestion (Copland), bolting of food (Singer, Salmuth), and a surfeit of food (Percy[36]). Constipation is not uncommonly a marked coincident symptom. Affections of the nervous system are also looked upon as being important in the causation of the condition. It is frequently met with in asylum patients, and also in neurotic and hysterical people (Koerner), in epileptics (Bourneville and Séglas), neurasthenics, and in anaemic subjects.

Mental strain may bring it on, or may check the habit in one subject to it. Thus, Ducasse refers to one case in which getting married stopped in a few days the habit which the man had had for many years, and Koerner reports another case in which rumination developed just after marriage and passed off in six months.

It may also disappear when a subject passes through an illness—as, for instance, that attending cancer of the pylorus, from which one case ultimately died (Ducasse), or gout (Percy), or spontaneously (Bourneville and Séglas, Koerner).

Chemistry.

The nature of the gastric juice varies, and apparently has no definite causal effect. My case when free from his pyrosis had normal gastric juice, according to Dr. Leech's analyses; and I believe all the other members of the family, when well and in normal ruminating condition, have healthy stomach secretions, and there is no chemical defect which requires the aid of a second mastication of food. Other observers have similarly found normal gastric juice, whilst others (Boas,[37] Jurgensen,[38] Minassian,[39] Riesman[40]) found hypochlorhydria, and yet others (Alt) hyperchlorhydria.

Alt made observations on a man who could repress at will his ruminating habits. He examined the matters brought up from the stomach under different conditions, and found that when the rumination went on without being interfered with they were normal, and that the various foodstuffs were well digested. When, however, the rumination was stopped for a time, the stomach contents were found to contain an excess of hydrochloric acid, with the amylaceous matter very incompletely acted on. In this case, then, rumination appeared to be a corrective for hyperchlorhydria, at each remastication of the food so much more saliva being brought into contact with the starches, and more alkaline matters taken into the stomach. But whatever might have been the case with this man, as Lemoine points out, it does not follow that the same explanation holds good for rumination as a whole, for although hyperchlorhydria is very common, merycism is not, and also hypochlorhydria is as often met with in ruminants as is an excess of acid.

Minassian had a female under his care, a hasty and hearty eater, who gradually developed rumination in consequence of dyspeptic troubles. With her the hydrochloric acid was almost entirely absent, and treatment with this drug in a few weeks cured her of the habit.

Varieties of Merycism.

Most writers agree that there are simple or physiological and secondary or pathological forms of rumination.

In Koerner's experience, simple rumination follows a heavy meal, and commences half an hour after ingestion of food. The regurgitated matters keep their normal taste, they are reswallowed, and the subject maintains his weight. On the other hand, dyspeptic rumination follows a very small meal, and commences almost immediately. The regurgitated matters are acid and disagreeable, and are spat out, and there is loss of flesh. This arrangement of symptoms by no means agrees with my own observations, for I found that simple rumination may begin immediately after a light meal.

Lemoine and Linossier also divide all cases into simple and pathological rumination, and of the latter they describe three varieties: (*a*) neuropathic, with or without dyspepsia, (*b*) directly related to dyspepsia; (*c*) of dyspeptic origin, but persisting after relief of the dyspepsia.

All my cases are of the simple or physiological variety, and I have had no experience of rumination as secondary to, or symptomatic of, disease.

Pathology.

The pathology of merycism is a matter of great uncertainty and debate. Whilst the act of reverse peristalsis may be reflex, and the result of a unique special susceptibility of the gastric mucous membrane, it is difficult to specify the anatomical or functional causes which provoke the reflex act. The atavistic theory is not acceptable as man has no ruminator in his developmental genealogical tree. Lemoine and Linossier think that merycism is a gastric neurosis, and that the act of regurgitation is reflex, and due to an exaggerated sensibility of the gastric mucous membrane, either congenital or acquired.

Singer looks upon rumination and regurgitation as similar processes and the expression of a nervous constitution. The most important cause of rumination is a relative insufficiency of the cardiac orifice of the stomach which temporarily comes into play.

Ewald confesses that he is quite ignorant of the proper cause of the affection and is content to agree with Dehio in describing it vaguely as a perverse combination of motor processes or a reflex functional neurosis. I have myself no better suggestion to make than this last one.

Morbid Anatomy.

Several *post-mortem* examinations have been made on subjects of rumination and in the majority of cases the stomach was apparently perfectly normal. But the cardiac orifice and lowest portion of the oesophagus have been found dilated and forming an ante-stomach, a condition known as *antrum cardiacum*. In one case of an old man, the whole stomach was enormously dilated, and the cardiac orifice admitted five fingers. Arnold[41] described three other cases with a circumscribed dilatation of the oesophagus above the cardia. In the first two cases of rumination in man recorded by Fabricius ab Aquapendente *post-mortem* examinations were made, and instead of finding multiple stomachs, as they expected in those days; they saw nothing but great dilatation of the stomach in the first case, and thickening of the wall of the oesophagus in the other, a man who in life had a voracious appetite and who died early (28) of marasmus.

Some observers hold that, although the stomach is apparently normal, its musculature is abnormally developed, a condition which is quite conceivable, though there is no macroscopic evidence of this in the majority of cases.

Mechanism.

Cambay, a medical man who ruminated, stated that when the merycism was about to commence he felt a sense of fullness, and then a sensation of bending and a kind of contraction of the stomach, which seemed to act on the contents which distended it; then, with slight assistance from the diaphragm and abdominal muscles, a small amount of the stomach contents was pressed towards the cardia, on relaxation of which the bolus passed into the oesophagus and up the pharynx. After the first bolus had been remasticated and swallowed again the succeeding movements of regurgitation were carried out by slight action of the stomach, without assistance from the diaphragm or abdominal muscles. Blanchard thought that each return of food was due, in his own case, to slight movements of the diaphragm and abdominal muscles, which could be seen if observed with the abdomen bare before a looking-glass. Cambay, Blanchard, and Bérard[42] also stated that the bolus of food halted for a while in the pharynx before being passed into the mouth, from which position it can either be reswallowed if bitter, as sometimes is the case, without passing into the mouth, or be carried to the mouth for remastication. The mechanism of the act consists, according to Lemoine and Linossier, essentially of a spasm of the diaphragm and of the inspiratory muscles, which diminish the intrathoracic pressure, and dilatation of the oesophagus, whilst the abdominal muscles compress the stomach.

Singer describes it as aspiration of the contents of the stomach through the relaxed cardia, the diminished air pressure in the thorax being due to an act of inspiration with a closed glottis which can be suppressed by an act of expiration. He believes that the dilatation of the cardia arises from gulping down large mouthfuls of food.

Diagnosis.

Eructation is the simplest form of regurgitation of the contents of the stomach. This is invariably associated with gases or air in the stomach, the latter being generally previously swallowed, as in the condition met with in hysterical patients, known as aerophagy. The eructations in these cases are almost entirely of air and no food, and are accompanied by much noise. There is no difficulty in the diagnosis of these cases.

By regurgitation is understood the return of more of the food matters from the stomach along with some air. Such a condition is met with very frequently, the regurgitated matters, small in amount, coming into the pharynx and back of the mouth, and generally having a distinct acid reaction—heartburn or pyrosis.

Oesophageal Diverticulum.—In addition to regurgitation from the stomach, the matters may come up from an oesophageal pouch and diverticulum. In this latter case the regurgitated matters must necessarily be limited in amount, and if the question of diagnosis arose, a chemical examination would show the absence of hydrochloric acid and pepsin in food from an oesophageal diverticulum.

TREATMENT.

As to treatment, in many cases, especially in the poorer classes, it is probably useless trying to control the ruminating act when the phenomenon may be called physiological. In the more intelligent classes, by practice, an expiratory effort, at the time of the development of the negative pressure in the thorax, might have some good effect, and cases have been published in which by an act of will the process could be brought on or warded off. The subjects of rumination should be advised to eat their meals slowly, taking considerable pains to chew the solid food well before it is swallowed, and to avoid all specially predisposing foods. They should also take very little fluid with their meals. No simple stomachic drugs were of any use, in the case I had in hospital, in controlling the rumination.

Smoking acts as a deterrent in some instances.

Where there are any concomitant dyspeptic symptoms these should be relieved, and should they have been the exciting cause of the rumination, their relief would probably benefit the merycismus (Minassian, etc.). My last patient found that the rumination did not come on if one of certain stomachic medicines were taken immediately after a meal; of these the best were potassium bromide, compound solution of bismuth, aromatic spirits of ammonia, compound tincture of gentian, and sodium bicarbonate. If any of these drugs were taken when the rumination was present the process was stopped or greatly diminished.

If the subjects of rumination feel ill after suppression of what is to them a natural process, they must on no account interfere with Nature's demands.

In conclusion, I wish to thank my house-physician, Mr. Donald Core, for kindly visiting and taking notes of Cases Nos. 5, 7, 8, and 10 to 14; and my clinical clerk, Mr. Douglas Rodger, for his assistance with notes on Case No. 6.

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The Milroy Lectures
ON
KALA-AZAR,

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

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LECTURE I.
THE ORIGIN AND COURSE OF THE EPIDEMIC.

[ABSTRACT.]

I REGARD my good fortune in being appointed to deliver the Milroy Lecture this year as being due to a desire on the part of this College to recognize the work now being done in the investigation of tropical diseases. As my subject is one which must be unfamiliar to most of my audience, I will commence with an extended definition of the disease, embracing the main points I shall have to deal with much in the order in which they will be taken up.

Kala-azar, then, is the epidemic manifestation of a fever, endemic in extensive areas of India, which has spread slowly for thirty years up the Assam valley as a wave of greatly-increased mortality, dying out largely as it passes on, after causing a decrease in the population of the affected tracts and the falling out of cultivation of much land, travelling along lines of communication, and checked by high elevations and extensive areas of unpopulated jungle, and now happily largely on the decrease. It is precisely similar in nature to a previous epidemic in Bengal known as "Burdwan fever." Cases of the epidemic disease, individually considered, are identical with the sporadic form known for centuries as "malarial cachexia," and is characterized by very persistent fever, of an alternating, remittent, and intermittent type, commonly mistaken for typhoid in the earlier remittent stage, but rapidly leading to a cachectic condition, with great enlargement of the spleen and later of the liver, and extreme wasting, the fever lasting from a few months to several years, and commonly terminated by some complicating affection; the mortality being from 98 per cent. at the height of the epidemic down to 75 per cent. at its end. The disease in its progressive stages is constantly associated with, and pretty certainly caused by, a minute protozoal organism, which has been shown by a remarkable cultivation outside the human body to be one stage of a flagellated parasite, while a study of the conditions most favourable to this development of its extracorporeal stage strongly indicate some biting insect as the carrier of the infection—a view which is also in accordance with a number of facts regarding the spread of the disease and the success which has attended efforts to check its further extension and to stamp it out of infected places, made before the discovery of the parasite, and also recently confirmed by certain feeding experiments.

To-day I propose to deal solely with the subject in its epidemiological aspect; taking it up as a disease, individually considered, in the second; and describing the life-history of the parasite and its bearing on the mode of infection in my third lecture.

THE ORIGIN OF THE EPIDEMIC.

Kala-azar first attracted public attention in 1882, when Dr. Clarke, the Sanitary Commissioner with the Government of Assam, in his annual report, gave an account of the disease based on the notes of 120 cases compiled by Mr. McNaught, the Civil Medical Officer of the Garo Hills. He described it as a very severe form of malarial cachexia, which was depopulating certain areas at the foot of the Garo Hills, and believed by the Garos to be infectious, and obtaining its name from a peculiar dusky hue which the sufferers presented, the term meaning "black fever." The disease had been known there in its sporadic form since 1869, when the country was occupied by the British, but the exact date of origin of the epidemic was obscure when I went to Assam in 1896. I therefore visited the Garo Hills to examine all the medical and administrative records, and ascertained that the Government land rent was paid in full up to 1875, when it was recorded that a

DIAGRAM I.



deficiency occurred in some of the villages at the south-west corner of the district owing to several families having died of kala-azar, and from this time onwards it was regularly referred to year by year as causing the deaths of a large proportion of the people of various villages, thus occasioning a loss of revenue and depopulating certain areas at the foot of the hills just to the east of the Brahmaputra River. In 1881 numerous villages had quite disappeared, and the epidemic travelled towards the centre of the hills, and then by a bridle path out again to the foot of the hills on the north side to reach Damra, in the south of the Goalpara district. It is clear, then, that although the disease had doubtless long been present in a sporadic form at the western foot of the Garo Hills, just as it is known to have been in the Rungpore district on the west of the Brahmaputra River, yet it was not until 1875 that it assumed the epidemic spreading form, depopulating tracts of country, and immediately causing a marked loss of revenue—characteristics which it maintained during its subsequent spread up the Assam Valley during the succeeding three decades.

Moreover, about 1875, the disease also appeared in an epidemic form in a village to the south of Dubri, some fifty miles north of the above-mentioned place of origin, a distance which it subsequently took about five years to traverse, and it is worthy of note that these two places were each situated close to where a ferry crossed the Brahmaputra River from Rungpore; while in two of the earlier reports on the disease it is stated that the Garos themselves asserted that the epidemic came from Rungpore. Now, between 1871 and 1876 there was a terrible outbreak of fever in the Rungpore and the neighbouring, more westerly, Dinajpur districts, which was noted as especially affecting the low banks and islands of the Brahmaputra River in 1875 (and consequently doubtless involving the foot of the Garo Hills) and causing a decrease in the population of Rungpore between the two censuses of 1872 and 1881, against a marked increase in Bengal generally. This fever epidemic was coincident with an unprecedented series of five out of six years of deficient rainfall, while to this dry short rains are always accompanied by excessive fever mortality in this part of Bengal; so that there can be little doubt that the epidemic was caused by this extraordinary succession of unhealthy seasons, which I suggested in my original report intensified the ordinary endemic fever of the district until it assumed a spreading epidemic form. The explanation of the phenomenon in accordance with the now known pathology of the disease I must leave until other [illegible] been discussed.

THE SPREAD OF THE EPIDEMIC.

The details of the spread of the disease have been embodied in the accompanying map of Assam, the large figures, such as 75-83 in the Garo Hills, showing the years during which there was a marked increase in the fever death-rate in each of the affected districts, while the smaller separate ones illustrate the exact year in which the disease was noted to have commenced in that particular place. It is noteworthy that the southern higher portion of the Garo Hills largely escaped the epidemic, while, although the disease first appeared at the extreme south-west of the hills, yet it never spread along the southern border into the thickly-populated tracts of Mymensingh and Sylhet; the explanation of which will appear later.

Coming next to the Goalpara district, we find that the large, sparsely-populated portion to the north of the Brahmaputra River was very little affected. On the other hand, the narrow southern Terai tract between the river and the low Garo and Khasia Hills, and traversed by the grand trunk road from opposite Dubri to the head quarters of Goalpara, and on through the southern portion of the Kamrup district to the large town of Gauhati, suffered very severely. Goalpara was at its worst between 1882 and 1887, relief works being started there in 1884, the disease being still reported to be only malarial in nature and certainly not contagious, while as early as this it was stated that "the epidemic is extending, counterbalanced by the fact that it is now absent where it has been severe." Moreover, in 1886 it was recorded of a tract of the Garo Hills some seventy miles in extent, which had suffered most severely from the disease, "It would be hard to find one single case of the real disease, kala-azar." It is clear from this that the decline of the epidemic is just as marked a feature as its rapid rise in any district.

In the meanwhile the southern part of Kamrup was invaded, and some of the villages on the north bank of the great river gradually became infected, about ten miles of new country being invaded each year where communications were good, while the disease leapt on into the town of Gauhati in 1883 in accordance with the more active intercourse between that place and the infected villages, than with some of the intervening and later affected hamlets. On the north bank the spread was less rapid, on account of the slighter active communication between the more scattered villages of that tract, there being no much frequented main road through it. Once Gauhati became severely infected, the disease spread across the river by a main road into the westerly Mangaldai sub-

division of the Darrang district, and at the same time it continued its steady eastward course along the trunk road into the Nowgong district, leaping on once more into the town of that name in 1890.

In the meantime attention had been called in Ceylon to the amount of anaemia produced in coolies by the *Ankylostoma duodenale*, and Dr. Ruddock had also found ankylostomiasis to be common in Assam, where it was readily cured by thymol. Dr. Giles, I.M.S., was therefore sent to Assam late in 1889 to investigate both kala-azar and anaemia of coolies, and rapidly came to the conclusion that they were one and the same disease, and caused by the ankylostomes, and he reported to this effect in 1890. He found, indeed, that many of the cases showed symptoms of malarial poisoning, but as enlarged spleen was very common in healthy people in Assam, he considered that "it is obviously absurd to attach any pathognomonic importance to the symptom in connexion with the etiology of kala-azar," and after studying anaemia of coolies in the eastern part of the valley—where there has never been any kala-azar to the present day—he wrote: "Nothing here struck me so strongly as the absolute identity of the clinical pictures presented by these cases of acknowledged ankylostomiasis with those I had been seeing so much of under the name of kala-azar," and he concluded that, although malaria causes much death-rate in Assam, there had been no change in the country which could intensify it, and "it is entirely inadequate to serve as the efficient cause of the terrible death-rate of kala-azar stricken villages, and the true cause of this will be found to be neither more nor less than ankylostomiasis." This identity of clinical pictures can only be explained by Dr. Giles having rejected typical cases of kala-azar as being merely "the common malarial cachexia of Assam," and only regarded cases of ankylostomiasis as the true cause of the increased mortality, that is, kala-azar as he saw it. Unfortunately he did not examine the healthy people for the intestinal parasite, so when soon after Dr. Dobson showed that 80 per cent. of healthy coolies imported from various parts of India, and who had passed two medical examinations, harboured this worm, Dr. Giles's theory received a fatal blow, and in 1896, a fresh investigation was ordered, which I was fortunate enough to be selected to carry out.

In the course of a year's study I found that ankylostomes were no more common in any stage of kala-azar than in the uninfected people, while the anaemia produced by this worm was of the chlorotic type, thus differing so widely from the pernicious form met with in kala-azar as to alone serve for the complete differentiation of the two diseases, which finally disproved Dr. Giles's theory. Moreover, I found malarial parasites frequently present in all stages of the disease—a complication now easily explained by the then unknown fact that in very malarious places a larger proportion of the healthy persons show malarial parasites in their blood, for on revisiting the Nowgong district in 1904 I found the endemic index, or percentage of healthy children with malarial parasites in their blood, no less than 80 on some of the very tea gardens where I had studied kala-azar in 1896. Further, I was unable to find any differences between kala-azar and malarial fever in any stage; malarial pigment was almost constantly found in the organs after death, while the typical cachectic later stage of kala-azar was identical with what had always been known as "malarial cachexia" for centuries in Lower Bengal—but which we now know to be not malarial but for the most part the sporadic form of kala-azar—so I was compelled to conclude: "The disease, then, is a very intense form of malarial fever," adding: "It is, however, open for any one to say that there is something in the disease in addition to malaria which I have not discovered but which accounts for the spread of the infection." The mode of spread of the disease was also carefully studied, and I was enabled to make some practical suggestions, the success of which has exceeded my most sanguine expectations, as will be seen later. My view was largely accepted in Assam, although some still thought it was a new disease; but the main difficulty in regarding malaria as an infectious disease largely vanished when Ronald Ross's classical researches on the communication of malaria through the mosquito were published, and still more when this great authority on malaria, after a personal investigation of kala-azar in 1899, endorsed my opinion, and concluded after a careful discussion: "I think then, with Rogers, that kala-azar is malarial fever."

To return to the progress of the epidemic, we now arrive at a critical point, for the disease had reached the beginning of a narrow tract with but few inhabitants between the low Mikir Hills and the Brahmaputra River, which stretches for some 40 miles before opening out again into the broader plain of the Golaghat subdivision of the Sibsagar district. I travelled through this country, and found it to be still free from the dreaded kala-azar; but people from the affected tracts of Nowgong were already beginning to move towards Golaghat, and if nothing was done it could only be a matter of time before the open, more populated Upper Assam Valley became infected, and the most favourable opportunity which had yet occurred of staying the epidemic would be lost for ever. I, therefore, strongly urged in my report that infected persons should be prevented from traversing this area, and gave directions for dealing with any villages which might be attacked, and these measures were promptly sanctioned and put into operation by Sir Henry Cotton.

The subsequent history shows a steady decline in the prevalence of the disease, with the exception of slow extension in the already-infected Darrang district north of the Brahmaputra River, although, owing to the population being much scattered in this, as in all the northern districts of the Assam Valley, its ravages have been less here than in Nowgong and other earlier infected parts. In 1898 the fever death-rate began to decrease in the Nowgong district, while an inquiry showed that it had not yet advanced into Sibsagar, and "precautions had been taken to treat all suspicious cases on the frontier, and check the further advance at the outset." These measures have proved eminently successful, for, although a small outbreak did actually occur in 1899 on the borders of Golaghat, the cases were promptly isolated, and the epidemic never gained a firm foothold in this district, and no increased fever mortality has appeared there, while the marked decline of the epidemic in Nowgong during the next three years has now largely removed the danger of its further spread eastward. In 1901 the epidemic is said to have almost died out of the Goalpara and Kamrup, while parts of Nowgong were quite free, and only chronic cases were to be seen in the rest of the district. In the following year very little of the disease remained even in Nowgong, although it still continued in scattered villages in Darrang, but showed little of its original powers of extension.

In 1902 the medical profession in India were startled by yet another theory concerning the nature of the disease, for Dr. Bentley of the Darrang district announced that kala-azar was nothing but an "epidemic Malta fever," on the strength of serum reactions in 75 per cent. of a small series of cases, in dilutions of only 1 in 10 to 1 in 40, obtained at the Kasauli Institute, although in a previous series he had sent to me as cases resembling Malta fever I had not been able to obtain any positive reactions. Further observations which I made with the Malta fever organism, kindly supplied me by D. Semple, R.A.M.C., of Kasauli, showed that reactions in the low dilutions mentioned could occasionally be obtained with the blood of other diseases than Malta fever, and it has been since acknowledged officially that such low dilutions as had been employed in the kala-azar tests were of no diagnostic value, while Dr. Bentley has now recanted his theory.

In 1897, the year of the great earthquake, the fever death-rate in Sylhet, to the south of the Khasia Hills, rose to 30.89 per mille, or over double the normal rate, and was 19.14 the following year, declining again to 15.38 in 1900, and falling steadily during the succeeding lustrum to only 8.73 in 1905, showing clearly that the increase was a temporary one due to the marked physical changes produced by the earthquake, and not a prolonged wave such as was always caused by epidemic kala-azar. Nevertheless, the temporary increased fever mortality naturally led to careful inquiries, and in 1900 kala-azar was reported to be widely prevalent in the Sylhet district, while in 1904 the civil surgeon stated that "kala-azar occurs, though not epidemically, throughout the valley, and that malaria is very prevalent"; and he also found in some of the cases the protozoal parasite of the disease, which had by this time been discovered by Leishman and Donovan.

DIAGRAM II.—*Assam District Fever Death-rates 1882-1905.*

Total Annual District Fever Death-rates.

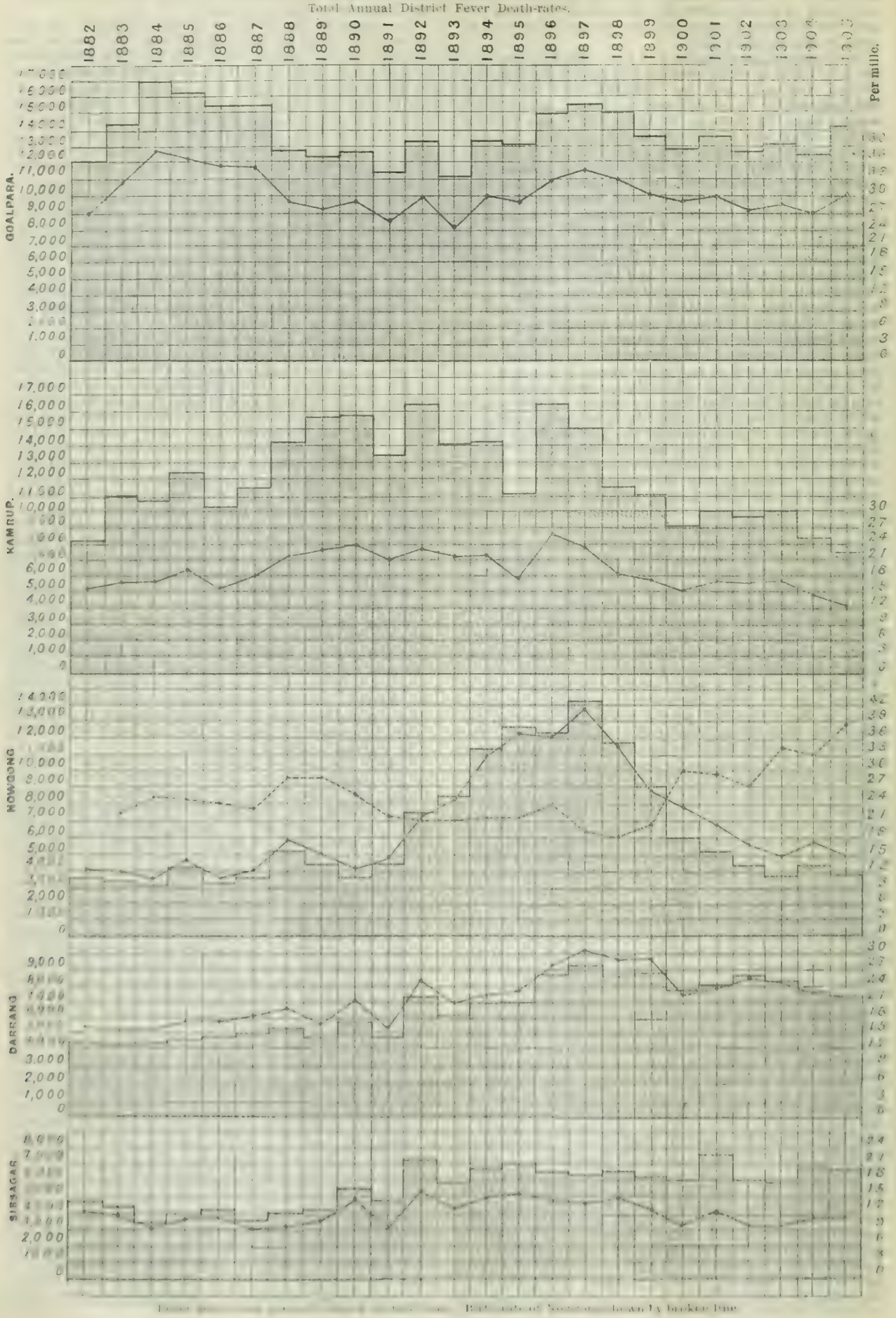
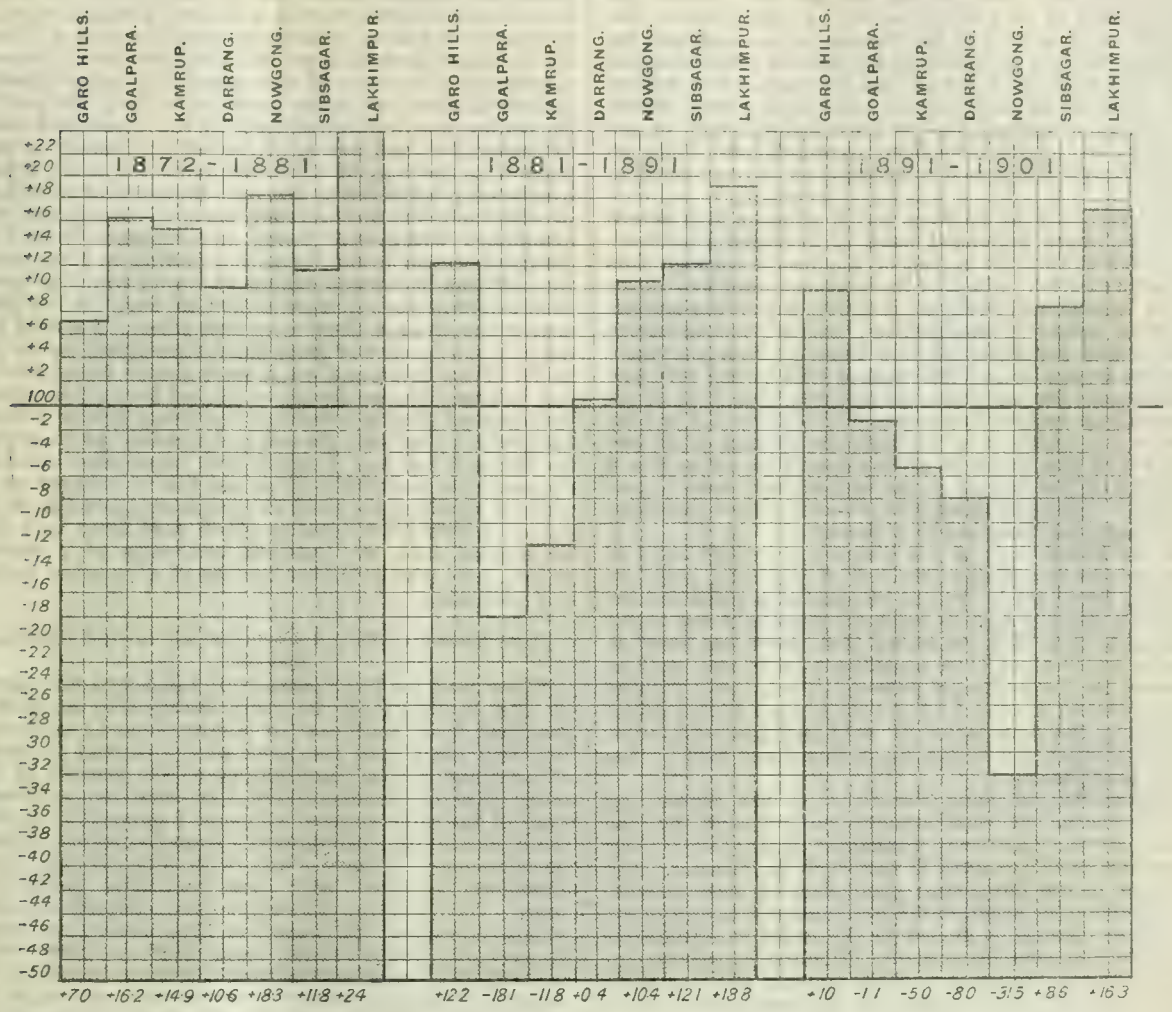


Diagram III.—*Census Increase or Decrease of District Populations.*



A careful study of these reports and of the district death-rates has convinced me that kala-azar is only present in the Sylhet district in the sporadic form, just as it is in the neighbouring districts of Eastern Bengal, and as I had found it to be in 1897, when I visited Sylhet for the purpose of seeing "malarial cachexia" in a district free from the epidemic kala-azar. Indeed, it was the very close resemblance between the sporadic cases always known as "malarial cachexia" in Sylhet and Lower Bengal, with those of the Assam epidemic, which forced me to the conclusion that the more serious spreading affection was but an intensified form of the sporadic "malarial cachexia"; and this view is now seen to be correct, with the all-important modification introduced by the epoch-making discovery of the parasite of kala-azar—namely, that the great majority of the cases hitherto known as malarial cachexia in Lower Bengal, as well as in Madras, are not malarial at all, but due to the recently-discovered parasite of kala-azar.

This occurrence of the sporadic form of the disease in the Sylhet district, as well as in Mymensingh in Eastern Bengal, also serves to explain why the epidemic form did not spread into those districts, but passed round the north side of the Garo Hills into the virgin soil of the Brahmaputra Valley, previously free from the sporadic disease, and, finding there a population fully susceptible to its deadly influences, it worked the most terrible havoc. It thus becomes clear that unceasing vigilance must continue to be exercised against the insidious extension of the disease into the still unaffected eastern portion of Brahmaputra Valley as long as the disease lingers in Darrang, while a careful watch must be kept to enable prompt measures to be adopted should further unhealthy seasons originate a fresh outbreak in the same way that the epidemic was started at the foot of the Garo Hills in 1875.

The Effect of the Epidemic on the Fever Death-rate and on the Population.

I have now traced the course of the epidemic, but in order to give some more definite idea of the disastrous effects of the fever wave, which has spread through some 300 miles of the Assam Valley during the last thirty years, I have prepared a diagram (Diagram II) showing in elevation the annual number of deaths returned as due to fever in each of the districts traversed. The death-rates per mille of population are also shown in the dark lines, but present some irregularities due to their being calculated on fresh census figures in 1890 and 1900. As the death-rates for the Garo Hills are not available, the first district to be dealt with is Goalpara, the smaller southern part of which alone was severely affected by the disease. Only the figures for the whole district are available; but, nevertheless, they show a marked increase of the fever death-rate from 1883 to 1888, followed by a steady decline, only broken by increases due to influenza in 1891, and to famine and earthquake respectively in 1896 and 1897.

Coming next to the Kamrup district, we find again a marked fever mortality wave a little later than that in Goalpara, namely, from 1888 to 1894, followed once more by a steady fall, except for the later unhealthy years already mentioned, to reach much the same rate as before the outbreak, clearly showing how definite is the decline of the epidemic disease, although it doubtless leaves behind it some sporadic cases of kala azar.

It is not, however, until we come to the Nowgong district, the whole of which was swept through by this deadly fever, that the full magnitude of the disaster to such a thinly-populated country as Assam is clearly seen. Beginning to suffer in 1892, when Kamrup was past its worst, the fever death-rate rose by leaps and bounds from an average of about 4,000 a year previously to 1892 up to over 14,000 in 1897, and then declining still

more rapidly to under 6,000 in 1900, and an average of about 4,000 once more during the last five years. The completeness of this fall, however, is partly due to the frightful depopulation of the district by the epidemic, for the death-rate per mille during the last few years averaged about 15.5 against 13 before the outbreak. The broken line indicates the birth-rate per mille of Nowgong, which also shows a marked decline during the height of the epidemic, as might have been expected, and helps to explain the great decrease of population to be referred to presently.

Next we come to Darrang, which shows a less accentuated and more prolonged wave of increased fever mortality, due to the slow spread of the disease through this extensive district. Much of the increased number of fever deaths here shown, however, is due to the rising population from extensive immigration; and on turning to the fever deaths per mille, we find that the kala-azar wave extended from 1894 to 1899—that of 1892 having been due to influenza—during which the rate rose from 20 to 30 per mille, falling again to an average of 23 during the last six years, a rate which is still above the average of 18 per mille before the invasion of kala-azar, thus indicating a lingering of the disease in the last affected eastern portion of the district, which still to some extent threatens the Sibsagar and Lakhimpur divisions.

In the lowest part of the diagram the fever rates of Sibsagar are given, the increase of the total numbers returned being solely due to increase of population; for the death-rate per mille is much the same as it was thirty years ago, thus demonstrating that there has been no in-wave of increased fever mortality in this area, such as occurred in the kala-azar infected tracts, and proving beyond doubt the success of the measures I advocated for preventing the devastation of this and the Lakhimpur districts, which contain a most important part of the Assam tea industry.

Diagram III, showing the effect of the disease on the population of each district, as revealed by the figures of the last four censuses, speaks still more eloquently as to the terrible nature of the disaster. The variation in the indigenous population of each district, after allowing for immigration and emigration during the last three decades is shown in the order in which they were attacked from left to right. The first part shows but a slight increase in the Garo Hills between 1872 and 1881, during part of which period the epidemic was present there. On the other hand, the remaining districts revealed a marked increase in the population varying from 10 to 34 per cent.

The second part of the diagram illustrates the variations in the population of the same districts between 1881 and 1891, during which kala-azar overran the southern parts of the Goalpara and Kamrup districts, and began to invade the eastern Mangaldai division of Darrang. The unshaded portion below the line marked 100 shows the decrease in the population of the Goalpara subdivision in this decade to have amounted to no less than 18.08 per cent., against an increase during the same time in the northern unaffected part of the district of 19.36 per cent., which Mr. A. E. Gait, the Census Commissioner, estimated to mean that the "ravages of kala-azar are chiefly responsible for a reduction of 29,000 persons" in this subdivision. Again there was a decrease of 1.6 per cent. in the population of Kamrup in the same decade, against an increase of 11.9 per cent. in the previous nine years, which Mr. Gait calculated meant a loss of 75,000 persons from the disease. Here, again, the decrease on the south, or badly affected part of the district was 13 per cent., against an increase of only 2 per cent. on the north bank of the river. Darrang shows a stationary population in this period due to the invasion of Mangaldai, against an increase of 15 per cent. in the previous one.

The third part of the diagram shows similar figures, for from 1891 to 1901, during which the population of the Goalpara district was practically stationary, Kamrup showed a loss of 5 per cent., and Darrang of 8 per cent. of its people. During this decade Nowgong felt the full force of the epidemic, and its truly appalling nature is revealed by the fact that in these ten years, instead of an increase of 16 per cent. as between 1881 and 1891, there was actually a decrease of 24 per cent. of the total population of the district, or if the indigenous Assamese are alone considered, the loss was no less than 31.5 per cent., or almost one-third of the people—a death-rate which far exceeds that of recent plague, and for which it would be difficult to find a modern parallel, unless it be that of the closely-allied sleeping sickness of Africa. On the other hand, Sibsagar and Lakimpur again showed a substantial increase of the population, after allowing for immigration, indicating once more that this part of the valley was still unaffected by the disastrous fever. Moreover, the land has fallen out of cultivation in proportion to the loss of the inhabitants, for some figures kindly supplied to me by Mr. Gait showed that one-fourth of the land in the affected parts of Mangaldai was abandoned within five years, and one-fifth of that of Nowgong within a similar period ending in 1895, before the outbreak had nearly exhausted itself; while no fewer than 54,179 persons were estimated to have died of kala-azar alone in this district in nine years. I myself frequently saw patches of grass jungle springing up in the midst of rice fields, and on inquiry always found that it had belonged to some family which had been exterminated by kala-azar shortly before, no one being left to till the land, which also lost its value completely as there was no demand for it. Happily this particular outbreak appears to be practically at an end, but it behoves us to study it carefully so as to be prepared to check at its outset any future epidemics which may arise, and also to inquire into any previous outbreaks of a similar nature, from which further lessons of a practical nature can be learnt.

THE BURDWAN FEVER EPIDEMIC OF LOWER BENGAL, 1856-73.

When studying the literature of kala-azar I was struck by the similarity of its main features to those of a previous fever outbreak in Lower Bengal, known as Burdwan fever, from the name of the district it chiefly affected, and a close examination of the records of the latter disease convinced me that the two epidemics were of the same nature, although independent of each other, so that the kala-azar of Assam is not an isolated phenomenon. I have dealt with this Bengal fever elsewhere, so need only now recall its main features. It began in Jessore, to the east of Calcutta, where it reached its height in 1854-5, and then began to spread through Nadia from 1857 to 1864, while in 1862-3 it invaded Burdwan division, in which its course was carefully traced in a very excellent report by Dr. Jackson, the Sanitary Commissioner of Bengal, in 1872. He pointed out that it spread along roads and lines of communication, and was checked by the absence of ready intercourse between different villages. Further, ultimately stopped when it reached the edge of the alluvial soil, as it failed to gain a firm footing on the drier laterite, and in the hill tracts of Chotta Nagpur, just as kala-azar was limited by the higher hills surrounding the Brahmaputra valley. Owing to the density of the population of the affected parts it is said to have carried off no less than one quarter of a million people in the Burdwan division alone, and it converted this previously very healthy district into a still notoriously feverish part. The exact nature of the disease gave rise to almost as much controversy as its Assam prototype, the question of its contagiousness especially being warmly debated. Dr. Jackson concluded: "While I believe the fever to be malarious in its origin, and to have some malarious characteristics, I believe it to be not a simple, but a contagious, malarious fever; that is, probably typho-malarial, and that it was not produced in Burdwan but imported." I have recently found the parasites of kala-azar in some sporadic cases of the disease from Burdwan, so this outbreak seems to have permanently left behind it the endemic form of the disease.

KALA DUKH.

Another smaller outbreak of a similar nature, described under the name of kala-dukh by E. B. Brown, I.M.S., in 1893, occurred in the north-east corner of the Purneah district, immediately adjoining Dinajpur, and no-doubt was an offshoot of the great Rungpore-Dinajpur fever outbreak which gave rise to kala-azar in Assam. kala-dukh depopulated a number of villages in the Nepal terai, but when I visited the place in 1904 it had nearly completely died out, only a few chronic cases remaining, while in the neighbouring part of the Dinajpur

district there were fairly numerous sporadic cases of the disease, in some of which I found the parasites of kala-azar, thus establishing the identity of this small outbreak with the more extensive ones already described.

I have now completed my survey of the subject from the epidemiological point of view, having treated it in considerable detail, because I think the vast economic importance of these terrible spreading fevers is not yet fully realized out of India, and that the necessity of clearly distinguishing between the epidemic and the sporadic forms of the disease cannot be too strongly insisted on. The two disastrous outbreaks I have described both occurred within the last half century, their spread being conceivably assisted by improved communications in the affected tracts; and, as it is impossible to say when a fresh epidemic may be started, we must be on our guard against them, for in no disease is it so true that knowledge is power, as I shall hope to show you in the course of my remaining lectures.

A CASE OF CEREBRO-SPINAL MENINGITIS,

WITH OBSERVATIONS ON A PLEOMORPHIC DIPLOCOCCUS OBTAINED BY LUMBAR PUNCTURE.

BY

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LURGAN;

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The micrococcus described in this paper was obtained in pure culture from three different samples of cerebro-spinal fluid taken by lumbar puncture from a case of sporadic cerebro-spinal meningitis. The coccus assumed bacillary form on Conradi-Drigalski medium; was Gram-positive; grew well on ordinary media; did not liquefy gelatine; clotted milk; produced no indol; produced no gas in sugar-containing media; was pathogenic for rabbits.

The patient—J. C., male, aged 40, married—was first seen by one of us (J. S. D.) on August 11th, 1906.

History.—His health had always been good. He had been a hard drinker up to eighteen months earlier but since then had been a total abstainer. Five weeks before his present illness he had been away from work for two weeks suffering from muscular pains, headache, and shivering fits. He went back to work for three weeks, but on August 11th there was a return of the pains in the limbs, headache, and anorexia, and towards night he became delirious.

Condition on Admission to Hospital.—August 13th. Temperature 101.7° F., pulse 102, delirious, neck retracted, pupils irregular; he vomited for the one and only time; there was retention of urine. He slept fitfully after the administration of bromides and chloral.

August 14th. No change; bowels moved, calomel having been given for the second time. The catheter was still required; urine contained no albumen. There was no sign at this or any other time of heart trouble.

August 15th to 21st. Some improvement; took milk in quantity; passed urine naturally; complained greatly of stiffness and pain in the back and limbs; marked headache; but never any pain in the joints. Towards night became very restless, and at times delirious.

August 21st. Kernig's sign well marked.

August 24th. Six drachms of clear fluid were removed from the spinal canal, the needle being introduced immediately below the fourth lumbar vertebra (with thorough aseptic precautions); this seemed to give relief.

August 29th. Lumbar puncture was again performed, 5 drachms being withdrawn, and considerable relief was afforded.

August 30th. The patient was much worse; refused all nourishment; and had incontinence of faeces; temperature subnormal; pulse 130.

September 2nd. Nine drachms of clear fluid withdrawn from the spinal canal, the puncture being practised below the second lumbar vertebra, as no fluid came on puncturing below the fourth lumbar.

September 3rd. The patient was moribund. A small quantity of blood was taken for purposes of agglutination. He died at 8.45 p.m.

Bacteriological Examination of the Cerebro-spinal Fluid.

As stated above, the spinal cavity was punctured on three occasions, and the fluid so obtained was immediately put into sterilized bottles and forwarded to the laboratory for examination. The three samples were identical in all respects, and each sample was found to contain in pure culture the organism about to be described. The fluid was limpid; on centrifugalizing, there was a slight deposit consisting of polymorphonuclear leucocytes and a number of cocci; the latter were invariably extracellular, Gram-positive, measured 0.8 μ in diameter, were spherical diplococci in most instances, but occasionally there was slight flattening of the apposed surfaces. For the purposes of this paper the coccus will be spoken of as the "meningeal diplococcus." This organism grew well on the usual laboratory media—peptone water excepted—and furnished an abundant growth after eighteen hours. The cultures showed considerable vitality, being alive after two months at room temperature.

Cultural Characteristics.

Gelatin Stab.—Along the stab there is a dagger-like line of growth having a finely-notched edge. There is no surface growth and no liquefaction of the medium.

Gelatin Plates.—The surface colonies are similar to those on agar, but are smaller. The deep colonies are perfectly circular, and are of a uniform yellowish-brown colour. The edge of the colonies is smooth.

Agar.—In stroke cultures there is a spreading grey film of growth with a finely-indented margin. The growth, which appears bluish by transmitted light, and which somewhat closely resembles that of the *Bacillus typhosus*, presents a uniform appearance, having very little tendency to form isolated colonies.

Agar Plates.—At the end of forty-eight hours the surface colonies, which are circular in outline, measure 0.5 mm. in diameter. The centre of the colony is yellowish, the periphery is translucent, the edge is crenated. The deep colonies, which are much smaller, are of a uniform yellowish-brown colour, and have the shape of a whetstone.

Alkali-Albumen Jelly (Lorrain Smith).—Greyish spreading growth.

Potato.—Greyish, raised moist growth.

Conradi-Drigalski Medium.—Stroke cultures present an appearance identical with that of *B. coli communis*—that is, greyish lines of vigorous growth on a bright red background.

Bouillon.—Copious growth both aërobically and anaërobically. No indol was formed in sugar-free bouillon.

Peptone Water.—Practically no growth.

Milk.—In twenty-four hours, acidity; in forty-eight hours, clotting.

The effect of the micrococcus on certain sugars and alcohols is shown in the following table. No gas was evolved in any case.

Table I.

	Glucose.	Lævulose.	Galactose.	Maltose.	Arabinose.	Dextrin.	Dulcit.	Sorbit.
Meningeal diplococcus..	+	+	+	+	−	+	−	+

The + signifies formation of acid.

Further study of the meningeal diplococcus demonstrated its relationship to the *Streptococcus faecalis* group. In this connexion I have followed Gordon[1] in his attempt to differentiate the streptococci by using the nine tests shown on the accompanying table. The + signifies acid production; no gas formed in any instance. I have included for comparison the changes produced by the type form of the *Streptococcus faecalis* group as given by Andrewes and Horder.[2]

Table II.

	Reactions with Gordon's Nine Tests.										
	Milk Clot.	Neutral Red.	Saccharose.	Lactose	Raffinose.	Inulin.	Salicin.	Coniferin.	Mannite.	Growth on Gelatin at 20° C.	Morphology.
Meningeal diplococcus	+	Fluorescence	+	+	−	−	−	Not tried	+	Good growth	Brevis.
Type form of *Streptococcus faecalis*	+	Fluorescence	+	+	−	−	+	+	+	Good growth	Brevis.

It will be seen that the changes produced by the two organisms are identical, so that this meningeal diplococcus evidently belongs to the *Streptococcus faecalis* group. It is interesting in this connexion to note that Andrewes and Horder[3] have shown that an organism sent by Beattie as

a typical *Diplococcus rheumaticus* also belongs to this group.

The presence of the meningeal diplococcus in the cerebro-spinal fluid was not due to a mere terminal infection, as it was isolated shortly after the onset of the illness, many days before the fatal issue.

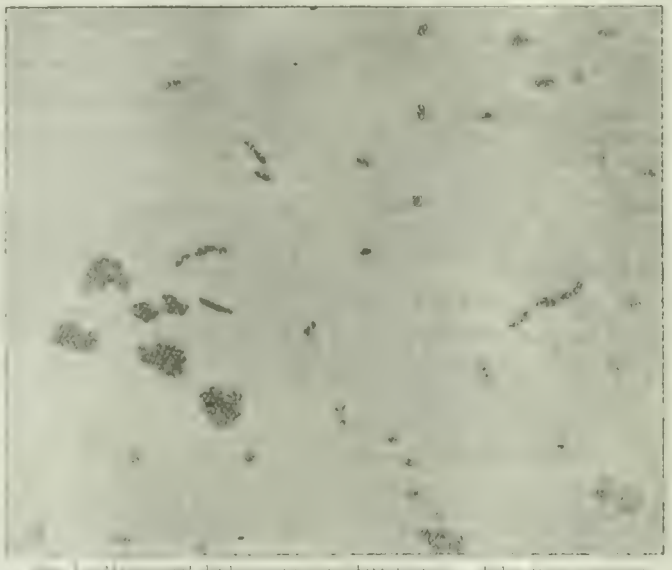
MORPHOLOGY.

On agar, gelatin, blood serum, potato, the organism appears as a very minute micrococcus, 0.6 μ to 1.0 μ in diameter, for the most part presenting a grouping similar to that of a streptococcus, but a few occur in pairs, and singly and in short chains.

In bouillon the organism appears as a diplococcus, having the oval shape of Fraenkel's pneumococcus, and measuring 1.2 μ in its longest diameter. But the interesting point connected with this organism is the fact that after a few hours on the Conradi-Drigalski medium it assumes a bacillary or spindle shape. The individual microbes are much larger than on other media. The large swollen spindles average 1.7 μ in their longest diameter, whilst there are many rods measuring 3.4 μ by 1.2 μ, and some as much as 5 μ by 1.7 μ (see photomicrograph).

On transplanting back from the Drigalski medium on to agar or blood serum the organism reverts to the micrococcus form. The purity of the culture was demonstrated by plating out and by inoculating the sugar-containing media both from the agar and from the Drigalski plates when the same changes in reaction occurred in the two sets.

On mixing a loopful of growth from the Drigalski medium with water a uniform emulsion, as in the case of the growth on agar, is not obtained, but clumps appear very similar to those in a positive agglutinative reaction. Staining with dilute carbol-fuchsin shows the presence of a mucilaginous substance in which the cocci lie embedded, and which gives them the appearance of being surrounded by a capsule.



Meningeal diplococcus (secondary to 24 hours' growth on Conradi-Drigalski medium; stained with carbol-fuchsin). Magnification 1,000.

THE ASSUMPTION OF THE BACILLARY FORM BY COCCI.

Arloing and Chantre[2] observed a streptococcus, under conditions the nature of which they could not determine, assume a bacillary form. Durham[3] has shown that a bacillary form occurs in cultures of the *Micrococcus melitensis* which have been started for a few days at body temperature and then kept for a few weeks (for example, four at room temperature). Muir and Ritchie[4] have also noticed this phenomenon in young cultures of the *Micrococcus catarrhalis*. Grad[5] demonstrated that a streptococcus occurring in the throat in cases of scarlet fever, and called by him "*Streptococcus scarlatinae*," had a tendency, especially in solid media, to assume a bacillary form. W. W. Shaw observed that Wassermann's "*Streptococcus conglomeratus*" after forty-eight hours at 5° C. assumed a bacillary form.

Through the kindness of Dr. Andrewes in forwarding me specimens, I was able to test the effect of growth on the Conradi-Drigalski medium on different types of streptococci, including a specimen of the *Diplococcus rheumaticus* obtained by Beattie from Paine. It was found that a typical *Streptococcus faecalis* and the *Diplococcus rheumaticus* grew normally on the Drigalski medium, and that the bacillary form was very marked; in fact, filamentous chains were observed. A *Streptococcus faecalis* which, differed from the type form in that it did not clot milk, grew vigorously on the Conradi-Drigalski medium, but had little tendency to assume a bacillary form. A specimen of the *salivarius* type failed to grow on the Conradi-Drigalski medium, though by subcultures on other media it was proved to be living. A typical *Streptococcus pyogenes* grew fairly well on the Conradi-Drigalski medium, but did not depart from the coccus form. These results add further proof that the "meningeal diplococcus" and the *Diplococcus rheumaticus* are members of the *Streptococcus faecalis* group. I then tried to find out what constituent of the Conradi-Drigalski medium brought about the pleomorphism.

On a medium identical with the Drigalski medium, but containing no crystal violet, all the different groups, including the *salivarius* type, grew vigorously and produced much acid. The different types had much the same morphology as on the Drigalski medium, but the assumption of the bacillary form was not so marked, so that the crystal violet contributes something to the conditions inducing the plemorphism. The *salivarius* type grew actively on this medium, and assumed a bacillary form. On nutrose agar all the types appeared as minute cocci. On lactose agar the *Streptococcus pyogenes* maintained its circular form, whilst all the others were oval.

It would appear, then, that the crystal violet and the lactose are the active constituents in inducing the change of form, but probably all the different elements in the medium contribute to the result, and it may be that the acid produced in the medium is not without its effect. These observations may be of some use in the classification and recognition of the different types of streptococci.

PATHOGENESIS.

The results of the second of the two following experiments are very similar to some of those obtained by Beattie[1] with the "*Diplococcus rheumaticus*."

First Experiment.—A mouse, inoculated subcutaneously with an agar culture, remained lively up to a few days before its death, which occurred eighteen days after the inoculation. The meningeal diplococcus was not recovered from its tissues, and there was no evidence to show that it caused the death of the animal.

Second Experiment.—On January 21st (six months since isolation of coccus) a rabbit was inoculated intravenously with the contents of four agar tubes subcultures from the original cultivation.

January 24th.—Rabbit lame in right fore limb, which it holds up when hopping about. No suppuration at point of inoculation. No evidence of endocarditis on auscultation. Rabbit quite lively, and takes food freely.

January 30th. Condition of the rabbit the same as on January 24th. On this day the rabbit was killed. There was found slight swelling of the elbow joint of the right fore limb, and a wedge-shaped pale infarct of the right kidney; in other respects the animal's body appeared to be normal. The meningeal diplococcus was recovered in pure culture from the urine, brain, spinal cord and right elbow joint. It was not recovered from the heart's blood or the right wrist joint. In the right elbow joint there was a small amount of turbid fluid. There was no evidence of suppuration in any part of the body.

Andrewes and Horder[6] observed that many of the cocci in cases of malignant endocarditis were of the *Streptococcus faecalis* and *Streptococcus salivarius* classes, and were very slightly pathogenic to animals. Why these feebly pathogenic organisms should cause a fatal disease in man is strange. Andrewes and Horder say: "It may be that the very presence of the virulence of these habitual saprophytes of the alimentary canal accounts for the lack of efficient resistance on the part of the patient, there being no adequate stimulus to call forth the defensive mechanisms necessary for the destruction of the cocci."

AGGLUTINATION.

The patient's blood serum in dilutions of 1 in 10 and 1 in 50 yielded negative results. The effect of inoculation is to increase the agglutinins in the blood of the

Table III.

Blood Serum.	1 in 14.	1 in 40.	1 in 80.	1 in 160.	1 in 320.	1 in 640.	1 in 1,280.	1 in 2,560.
Control rabbit	Clumps in 15 mins.	Clumps 30 mins.	No clumps 1 hour	No clumps	—	—	—	—
Inoculated rabbit	Clumps at once.	Clumps 10 mins.	Clumps 10 mins.	Clumps 10 mins.	Clumps 15 mins.	Clumps 15 mins.	Clumps 50 mins.	None 1 hour.

Opsonin.—The blood of inoculated rabbit compared with that of a control rabbit had an opsonic index of 1.2.

rabbit, as shown in Table III. An emulsion of an 18 hours' agar culture in 0.75 saline was used in performing the test.

Conclusion.

The "meningeal diplococcus" belongs to the *Streptococcus faecalis* group, and is identical with the "*Micrococcus rheumaticus*."

We wish to thank Mr. Andrew and Dr. Kirkhope, to whose kindness and skill we are indebted for the photomicrograph, and Professor Symmers for 'performing the inoculations.

References.

[1] Gordon, *Lancet*, November 11th, 1905, p. 1400. [2] Andrewes and Horder, *Lancet*, September 15th, 22nd, and 29th, 1906. [3] Arloing and Chantre, vide Rodet, *De la variabilité dans les microbes*, p. 21; Baillière, Paris, 1894. [4] Durham, *Journ. Path. and Bacteriol.*, v, p. 377. [5] Muir and Ritchie, *Manual of Bacteriology*, 3rd edition, p. 434. [6] Gordon, Report of the Medical Officer to the Local Government Board for 1900-1, p. 353. [7] W. V. Shaw, *Journ. Path. and Bacteriol.*, ix, p. 160. [8] Beattie, *Journ. Path. and Bacteriol.*, vol. ix, p. 275.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

RUPTURE OF DILATED AORTA: LEAKAGE BRUIT.

The following case may be of interest on account of the rarity with which a leakage bruit is ever experienced in rapidly-fatal internal haemorrhage.

A few days ago I was called urgently to an old man—a pauper patient, aged 71, who had suddenly become collapsed while sitting on the water-closet. Before my arrival he had been lifted on to a bed near at hand. I found the man pale, collapsed, and quite unconscious—pupils moderately wide, lips blue. The pulse was not perceptible at the wrists, and he was only taking short breaths at intervals. On auscultation over the precordial region the cardiac sounds could be heard feebly, but distinct from a continuous adventitious sound which may be described as "gurgling" or "lapping," as of a cat lapping milk. The bruit, which altered in character, the successive laps becoming more rapid and finally lost, was quite different from any sounds I have ever heard in the chest, and suggested at once the leakage of blood. I thought the man had ruptured his heart muscle. He rapidly succumbed.

At the *post-mortem* examination the pericardium was greatly distended with dark fluid and clotted blood. The heart was hypertrophied but no rent in it could be found. In the external wall of the aorta were seen large dark-bluish areas almost encircling the vessel. They looked like gangrenous patches but were really blood-clot infiltrations. The first part of the aorta was somewhat dilated and very atheromatous in parts, and in the inner coats of the wall near to the pulmonary artery was an irregular longitudinal valvular slit quite 1½ in. in length, through which the blood had leaked. From this it had travelled in the coats of the vessel, and escaped into the pericardium posteriorly. The valves of the heart were in good condition. The rectum was found loaded.

The man had not had any symptoms, his only trouble being a chronic bronchitis. A point to remark about the bruit heard was its total independence of the cardiac sounds. Presumably in rupture of the ventricle the sound of leakage if ever heard would be intimately related to the cardiac systole.

London, S.E. F. B. Skerrett, M.B., B.Sc., D.P.H.

ACUTE INTUSSUSCEPTION.

On October 10th, 1906, I had a telephone message to see a patient, W. A. P., aged 3 years.

The history was as follows: When going upstairs carrying some toys he slipped and fell down four steps. He did not cry at the time, but continued his way up to the bedroom; as soon as he arrived there he began to cry, complaining of severe pain in the region of the umbilicus; this pain soon disappeared, but returned in about five minutes.

I saw him half an hour after the accident, when his general condition was rather alarming. The forehead was covered with cold sweats, the face pinched, the pulse 130 and irregular, and the temperature normal. Pains were coming on frequently, but there was no vomiting. The abdomen was not distended, but there was a distinct swelling in the right iliac fossa, and extending rather higher up than the usual ileo-caecal variety, and this was more pronounced during the attacks of pain. Vomiting commenced in about an hour after the accident happened.

The patient was at once placed under the influence of morphine, and three hours after the accident an injection of sterilized warm water was given by means of a catheter connected with an indiarubber tubing and funnel. After injecting about a pint into the bowel, I placed my right hand over the swelling, while with my left hand I grasped the abdominal wall and small intestines and pulled gently downwards and towards the left side; suddenly, to my satisfaction, the swelling disappeared from under my right hand.

He was kept in bed for four days, and had only small quantities of liquid nourishment. Then I ordered some castor oil, the bowels acted normally, and the little patient has been perfectly well ever since.

In acute intussusception it is of the utmost importance that the case should be seen and diagnosed early, and at once put under the influence of morphine. An attempt at reduction should also be made as soon as possible, as in this way a good many lives can be saved. In this particular case an injection only was not sufficient, but a little traction applied worked admirably.

Cardiff. W. G. Williams, M.B., Ch.B.

RUPTURE OF GASTRIC ULCER INTO THE POSTERIOR MEDIASTINUM.

J. K., male, aged 52 years, has suffered from gastric dilatation for about six years, during which many forms of treatment have been adopted with more or less success. About eighteen months ago symptoms of ulceration showed themselves, but with suitable treatment these abated, only to recur from time to time. Last November he was sent to Manchester Infirmary, with a view to having gastro-enterostomy performed, but his condition was so good while there that it was not considered necessary.

He returned home, and after about a fortnight began with the old symptoms, and was admitted to the Cottage Hospital at Penrith on January 10th, 1907. He was emaciated and complaining of pain in the epigastrium; the stomach was only moderately distended; he vomited at intervals a large amount of brown-coloured fluid; his bowels were constipated; there was also a considerable degree of anaemia. He was put on a liquid and predigested diet, and the stomach washed out for a few days, when pain and vomiting ceased; thereafter he was given increasing quantities of food, and steadily gained weight and condition (7 lb. during ten days).

At midnight on February 4th he had a sudden pain in the back, at the level of the sixth dorsal spine, and a little to the left side of the middle line; this increased in severity until it was agonizing; it was accompanied by the vomiting of a large quantity of brown grumous fluid, but the vomiting gave no relief to the pain; the abdominal

muscles were rigid, but there was no pain on pressure. As he was suffering considerably from shock, and the symptoms did not point to rupture of ulcer into the general cavity of the peritoneum, it was decided to wait, and morphine was given, and he was fed per rectum. At 5 p.m. his neck was noticed to be swelling, and in a short time a large amount of emphysema appeared on both sides; this did not seem to interfere with his respiration, but there was great weakness of the pulse, which gradually increased until he died at 3 a.m. next day.

The rupture of gastric ulcer into the posterior mediastinum is, I think, sufficiently rare to warrant its record.

Penrith. FRANCIS HASWELL, M.D.

MONSTER: LABOUR IMPEDED BY BULKY FETAL BODY.

ON Sunday, December 23rd, 1906, a message was received from a midwife to attend an urgent case in which she had difficulty in diagnosing the presentation. On arrival the patient was found to have been in labour twenty-four hours, the liquor amnii having drained away twelve hours previously. From that time the pains had almost entirely ceased. The patient, a small, thin, pale, anaemic woman, aged 28 years (this being the third pregnancy), was very exhausted. On vaginal examination I found complete dilatation of the os, the head high up in the right occipito-posterior position. The presenting part was most difficult to ascertain, owing to the fact that there appeared to be some abnormality. Chloroform was given, long forceps applied, and with a great amount of care the head was delivered. The difficulty of diagnosis was found to be due to the fact that though the child's head was perfectly normal about the face, ears, nose, etc., there was entire absence of parietal bones, and of part of the temporal, frontal and occipital bones, a thin skin only covering the dura mater and brain. After extraction of the head great difficulty was met with in delivering the remainder of the child, from its enormous size; the shoulders were impacted behind the pubes, and it was not until the blunt hook had been worked into the child's left armpit and got well round the left shoulder that any progress was made. The patient being kept well under chloroform, traction upon the blunt hook was kept up by the nurse and myself, whilst my principal made steady traction upon the child's neck. After one hour's hard work the delivery was completely effected. No *post partum* haemorrhage occurred, nor tear of any kind. Notwithstanding all the pressure and rough usage required the patient had no after-complication of any kind. Urine was passed naturally, the boric were quite normal, there was no rise of temperature, no abdominal tenderness, and no swelling of the vulva.

The patient made an uninterrupted recovery. The child weighed 16 lb., was of the male sex, and perfectly formed except the vault of the cranium.

[illegible] J. MACLEAN, M.B., Ch.B.Glasg.

ANTISTAPHYLOCOCCIC VACCINE IN THE TREATMENT OF LUPUS VULGARIS.

IN November, 1905, a lady, aged 45, consulted me for furunculosis of the face and body, from which she had been suffering for three years and had been treated by three other medical men. I tried every ordinary known method of treatment until July, 1906, without any effect. I therefore, in July, 1905, I persuaded her to allow me to inject Wright's antistaphylococcic vaccine. I had the pus from a mature furuncle examined by the Lister Institute. I then made six injections of the vaccine, commencing with 0.5 c.c. and increasing up to 2 c.c., leaving ten days between each injection. These caused no discomfort whatever, and from the date of the first injection to the present time (six months) no fresh furuncles have appeared and the patient is in perfect health.

Worthing. R. THOMAS THOMAS, M.D., B.S., etc.

At a meeting of the Royal Sanitary Institute at the Parkes Museum, on Saturday, March 2nd at 11 a.m., Mr. W. D. Scott-Moncrieff will open a discussion on the bacterial treatment of sewage with special reference to the analyses of organic nitrogen. In the afternoon a visit will be paid to the Staines Sewage Outfall Works at Ashford.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE HOSPITAL, GYMPIE, QUEENSLAND.

(By F. HAMILTON-KENNY, Medical Superintendent.)

THE following two cases came in within twenty-four hours of each other. Both accidents occurred while the patient was bathing; both cases seemed to me desperate; both are walking about, and say they feel as well as ever.

On November 12th, 1906, G. Y., aged 13, was sent in for "sunstroke." He was picked up insensible at 5 p.m. on November 11th in a paddock. He remained insensible all night, and was sent on to hospital in the morning, and arrived at 3 p.m., still comatose. On shaving his head a pulpy patch was found some 2 in. in diameter. On inquiry I made out that he had been bathing; diving in Australian creeks is very dangerous by reason of sunken trees, and I had little doubt what had happened.

I trephined at once, and the pressure of the clot underneath forced out the trephine disc when I was just through. I removed a small teacupful of clot, scraped the dura mater with a blunt curette all round for 3 in. to 4 in., douched, and then covered everything up with cyanide gauze. The dura mater and brain were dinted in like a rubber ball. He was put to bed and watched. He remained unconscious for two days, and then gradually regained consciousness.

I literally starved him, and acted on the bowels with castor oil. At the end of a week I put him under chloroform and adjusted the flaps. Everything healed by first intention, and recovery was uneventful. As I suspected, he struck a snag with his head.

A. G., married, aged 33. On the afternoon of November 12th bathed in a creek; her health was in every way perfect; she was not pregnant, and was not at the time menstruating. She had her swim, but felt faint while dressing, and on the way to the house fell down twice. That evening and night she got much worse, and the abdomen swelled. In the morning death seemed near, but she was put in a buggy and driven in six miles to the tram, then taken 50 miles in the train, and brought on the ambulance to the hospital, arriving some twenty-two hours after the accident. When admitted she was blanched, the abdomen was tympanitic, the pulse was 150, there was dyspnoea, and an uncontrollable thirst and restlessness. Her condition was so desperately bad that I contented myself with hot bottles, saline, ergotine, and strychnine. Night came on, and abdominal operations at night in a Queensland town are difficult. At daybreak she seemed to me to have rallied. My diagnosis was haemorrhage, and I operated, and the intestines floated up, and two or three pints of clot were washed out. The right Fallopian tube was bleeding, and was promptly ligatured. I cleaned out the lower pelvic zone and mopped the renal region, and picked clots out from the intestines. My main difficulty was getting back the distended intestines; enterostomy would have taken time. I sewed up the peritoneum, and could see how the tension tore the stitch holes; muscle, fascia, and skin were sewn up in one with silkworm gut without drainage; abdomen was full of saline. She was put back to bed more dead than alive. Elevation of the bed at the foot end did good. Next morning I purged with calomel, and then gave a turpentine enema. The bowels acted and distension vanished. She made an uninterrupted recovery. Why the tube ruptured I cannot say, and the haemorrhage and collapsed condition precluded any inquiry.

I owe a debt of gratitude to my colleagues, Drs. Nicoll and Ahearn, for their efficient aid. Administering an anaesthetic was a very ticklish procedure.

The annual general meeting of the Association of Certificated Dispensers will be held in the Apothecaries' Hall, London, on Thursday, February 28th, at 7.30 p.m., when an address will be given by T. S. Toogood, M.D.Lond., barrister-at-law.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

C. A. Ballance, M.V.O., M.S., F.R.C.S., President, in the Chair.

Monday, February 18th, 1907.

Diagnosis and Localization of Cerebral Tumours.

Dr. Charles E. Beevor delivered the second of the three Lettsomian Lectures on the diagnosis and localization of cerebral tumours. He described a tumour which grew from the left orbital plate and compressed the brain upwards and outwards. It did not grow into the brain substance, and there was no destruction of brain tissue. The general diagnosis of tumour was made from the symptoms of headache, vomiting, and double optic neuritis. The localization to the left frontal region was made by the following symptoms: The pain in the head was in the frontal region; there was a mental condition of stupidity and dullness; there were attacks of coma from which the patient could not be awakened, and there was a condition of want of interest in the interval between these attacks; there was incontinence of urine. There was impairment of smell on the left side as compared with the right; there was weakness of the right side of the face and slight paresis of right arm and leg; there was increase of the deep reflexes (wrist tap, knee-jerk) in the arm and leg on the right side, as compared with the left, and diminution of the superficial reflexes, abdominal and epigastric; on the right side the plantar reflex gave a doubtful extension of the big toe as compared with the definite flexion of the left toe. There was a fine rapid tremor of the left hand, when both arms were extended in front. Dr. Beevor then described six cases of tumour involving the second or middle frontal convolution, and in all of them there were attacks of some kind which differed according to whether the tumour was situated close to the ascending frontal convolution, or nearer towards the frontal pole of the brain. In three of these cases, where the tumour was near to the ascending frontal convolution, the fits affected first either the fingers, or the conjugate movement of the eyes, or the angle of the mouth, while in two cases where the tumours were in the anterior part of the second frontal gyrus, there were attacks of giddiness or fainting without convulsions, more like *petit mal*. In one case the attack was merely transient aphasia. In all six cases the mental condition was described as dull, stupid, slow, inattentive, with bad memory, except one case, but in none of these cases were the sphincters affected. In all of the cases there was slight weakness, either defective movement of the eyes to one side or upwards or some weakness of the opposite face, arm, or leg, with, in some cases, increase of the deep reflexes and diminution of the superficial on that side. These symptoms were probably due to pressure on the ascending frontal convolution. Sensation was either not affected, or there was temporary anaesthesia to slight touches after the fits, but stereognosis—the recognition of objects by the touch—was not affected. Affections of the sense of smell did not assist the diagnosis. In four cases of the six in which it was looked for, fine tremor in the fingers was observed in all on the same side as the tumour. It therefore appeared that the presence of fits, either faints or attacks beginning with spasm of conjugate movement of the eyes, or of the hand or face, followed by weakness but not by permanent anaesthesia, and also of mental symptoms and fine tremor on the side opposite to that affected by the fits and the weakness, were the diagnostic signs of tumour of the outer surface of the cortex of the frontal lobe anterior to the ascending frontal convolution. The lecturer then detailed six cases of tumour of the interior of the frontal lobe in which there was severe headache, vomiting (except one case), double optic neuritis, mental obtuseness, want of memory and attention, and with incontinence of urine in most of the cases, but no difference in the sense of smell on the two sides: a gradual hemiplegia without any anaesthesia, but with increase of the deep reflexes, diminution of the superficial reflexes with extensor plantar response on the paralysed side. In three of the cases there was a fine rapid tremor of the hand on the same side as the tumour, and also a tendency to fall backwards in one case. Those cases of tumour of the interior of the frontal lobe were exceedingly difficult to diagnose, and especially before there was any hemiplegia from the growth having extended backwards. The headache was often frontal, but it might be on both sides. Smell was not affected on one side as it was in extramedullary tumours. The deep and superficial reflexes might not be altered, though they were usually diminished, and in the cases where the tumour had not extended backwards there was no hemiplegia. Mental dullness was often a prominent symptom, and also involuntary micturition, but that did not help them as to which frontal lobe was involved. They must rely on the tremor occurring on the same side as the tumour. In two of the cases where the tumour was on the left side the patient was not able to speak properly, and there was some aphasia. When the tumour extended backwards, so as to compress the motor fibres of the corona radiata or internal capsule, gradual weakness of the face and limbs on the side opposite to the tumour came on with increased deep reflexes and diminished abdominal and epigastric reflexes with extensor plantar reflex, but without any affection of sensation. As soon as those symptoms appeared they pointed to which side of the brain was affected, and that taken with the mental symptoms and involuntary micturition and the fine tremor on the same side as the tumour would enable a diagnosis of a frontal tumour to be made. It must be remembered that a gradual hemiplegia might be caused by a tumour in the corpus striatum pressing on the internal capsule, but in those cases there was probably not so much mental change, and the tremor on the same side as the lesion was not observed. Dr. Beevor concluded by considering tumours of the temporo-sphenoidal lobe.

EDINBURGH OBSTETRICAL SOCIETY.

J. W. Ballantyne, M.D., President, in the Chair.

Wednesday, February 13th, 1907.

Hysterectomy for Cervical Fibroids.

Dr. Haultain communicated a clinical and anatomical study of 30 cervical fibroid tumours removed by abdominal hysterectomy. Of his total number of cases the cervix alone was involved in 22. Cervical and corporeal fibroid tumours occurred in 7 cases, and in 1 the cervical tumour was complicated by pregnancy. Of the 22 cases in which the cervix alone was involved, in 4 the supravaginal portion was the seat of tumour formation, 3 developing on the posterior, and 1 on the anterior wall; 6 were found on the supra- and inter-vaginal portions, 4 on the posterior, and 2 on the anterior walls; 12 were found to involve supra-, inter-, and intra-vaginal portions of the cervix; of those, 8 occurred posteriorly, and 4 anteriorly. The supravaginal tumours were of the subperitoneal type, and embedded themselves in the recto-vaginal septum. The free portion of the cervix was not affected, except that it was displaced upwards, and was difficult to reach. In the 6 cases where both supravaginal and intervaginal portions were involved, the os externum was in no way affected, and was found as a small projection on the base of the tumour. This resulted from non-involvement of the intravaginal portion of the cervix. All those tumours filled the brim of the pelvis, and grew upwards and downwards, assuming an ovoid shape. In all cases the bladder was displaced upwards into the abdomen, and all gave rise to well-marked pressure symptoms. In the cases where the entire cervical wall, anterior or posterior, was involved the os externum was much dilated, and easily admitted a finger. This was due to the stretching and thinning out of the uninvolved wall. Dr. Haultain described the changes in the disposition of the pelvic peritoneum which resulted from those cervical growths. When situated on the anterior wall, the retro-uterine pouch was not interfered with, and the peritoneum extended downwards over the upper third of the posterior vaginal wall. Tumours of the posterior wall, on the other hand, lifted the peritoneum upwards, and lay in close apposition to the rectum. This was a point of considerable importance in relation to operative interference. In all Dr. Haultain's cases except one the tumours were uninodular. Cervical fibroid tumours, in his experience, manifested themselves by symptoms arising from pressure on the bladder and rectum, and not by pain. Haemorrhage occurred in 10 of the 22 cases

where the cervix was alone involved. In two cases the tumours were oedematous and gangrenous. Dr. Haultain then described the methods which he employed in removing those tumours. Absence of the usual landmarks, the relations of the ureters to the tumours, and the elongation of the uterine arteries rendered hysterectomy difficult. When the fibroid tumour was situated on the posterior wall of the cervix in close relation to the rectum, infection of the bed of the tumour by the *Bacteria coli communis* might follow enucleation. If a distinct capsule surrounded the growth, it was therefore safer to enucleate the latter and leave the capsule.

The PRESIDENT was of opinion that Dr. Haultain's paper would be of great value in establishing the true topography of cervical fibroid tumours, which up to now was in a chaotic state.

Dr. BARBOUR commented on the fact that notwithstanding the great pressure on the ureters which existed in those cases, the urine remained free from albumen.

Dr. BREWIS had found that in such cases the only symptom which might be present was repression of urine. Haemorrhage occurred in the submucous type of his cases. He had found that frequently panhysterectomy performed for such growths was much simplified by splitting the uterus.

FORCEPS DELIVERY IN OCCIPITO-POSTERIOR PRESENTATION.

Dr. ROBERTSON DOBIE (Crieff) described a method of delivery by forceps in some difficult occipito posterior cases. He had found that by reversing the forceps, so that when applied the sacral curve looked forward, flexion was promoted, and the head was delivered with less difficulty than when the instrument was employed in the usual method.

HYSTERECTOMY FOR FIBROIDS IN PREGNANCY.

Dr. BARBOUR commented on two cases where he had performed hysterectomy for fibroid tumours associated with pregnancy: (1) After five normal pregnancies and labours the patient became pregnant, and had repeated haemorrhages during pregnancy, followed by natural labour at term. Eighteen months later she had an abortion at the sixth month; haemorrhage, from which she suffered, prevented her from recognizing her condition. A year later, after four months' amenorrhoea, a tumour the size of a fetal head was discovered in the pelvis, growing from the posterior lip of the cervix, and displacing the uterus upwards. Panhysterectomy was performed, and the patient made a good recovery. (2) A year after marriage a three-month abortion occurred. Eight months later pregnancy again occurred, and after four and a half months' amenorrhoea a fibroid tumour measuring 4 in. in diameter was discovered. The tumour grew from the posterior wall of the uterus, had a broad base of attachment, and rotated the uterus so that the right appendages lay anteriorly. Subtotal hysterectomy was performed, and the patient made a good recovery. Immediate operation was decided on in the first case, as part of the tumour presented at the vulva, and was undergoing infection. In the second case Dr. Barbour was influenced by the strongly expressed wish of the patient and her husband for immediate operative interference.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Clinical Meeting.

R. W. DOYNE, F.R.C.S., Vice-President, in the Chair.

Thursday, February 14th, 1907.

PARALYSIS OF VERTICAL MOVEMENTS OF EYES.

Mr. LEONARD CORNER showed a case of paralysis of the vertical movements of both eyes. The patient was a man in whom there was complete paralysis of the vertical movements of both eyes, which had come on suddenly, and for which no explanation could be found.

Mr. J. H. FISHER had seen two similar cases, one in a girl who was found one morning unconscious with this paralysis. She recovered consciousness rapidly, but the paralysis persisted for a long time. The explanation he then gave was an embolism of one of the small arteries of the corpora quadrigemina. The other case showed hemianopic pupil reaction, without a hemianopic field, a condition never before recorded, and *post mortem* a diffuse growth of the lamina quadrigemina was found.

EFFECTS OF STEEL FOREIGN BODY IN EYE.

Mr. A. STANFORD MORTON showed a case of a man, aged 54, who two years previously received a steel foreign body in his right eye. The sight of this was immediately affected. About a month later the sight of the left eye began to fail, and within three months was almost completely blind. Now the right eye showed typical siderosis, with atrophy of the nerve. The left eye showed a similar condition of the disc, the atrophy being of the post-neuritic type. There was marked arterial sclerosis in both eyes. The left pupil showed the Argyll-Robertson reaction. No other sign of central nervous disease could be found.

POLYCORIA WITH CHRONIC GLAUCOMA.

Mr. MALCOLM L. HEPBURN showed a case of a man, aged 61, with polycoria associated with chronic glaucoma. The sight of the right eye had become dim recently, though for the last three years he had noticed coloured rings around the lamps. He had had no pain. The left eye was normal in every respect. The right eye showed an unusual appearance of the iris, which he stated had been present from birth. There was a complete pupil placed down and in, which reacted to light, while the part between the pupil and the periphery was made up of five triangular-shaped bands of pigmented iris tissue, with their bases towards the angle. These bands enclosed clear spaces, through any of which the details of the fundus could be plainly seen. In addition to these bands, an almost complete circular stump of pigmented tissue was visible at the angle of the anterior chamber, in which the bases of the different bands were lost. The patient stated that the pupil used to be in the centre of the eyeball, but of late years it had gradually come to occupy its present position. The fundus showed glaucomatous cupping of the disc. The case was interesting from a developmental point of view, and two explanations were possible: one that the iris was originally complete, and by subsequent atrophy, as the result of inflammatory action or otherwise, had partially disappeared; the other was a faulty development, which was difficult to understand, since the pupil was perfectly formed.

Mr. TREACHER COLLINS suggested as a possible explanation the failure of the formation of some of the loops of vessels which go to form the iris.

TUBERCULOSIS OF EYE.

Mr. WARREN TAY showed a drawing of an eye from a case of tuberculosis which was only diagnosed after an ophthalmoscopic examination had been made. This occurred 22 years ago. He showed this in order to disprove the statement of an eminent physician, who stated that this had never been done.

CASES, ETC.

Mr. J. H. TOMLINSON showed a retinoscopy longarm to facilitate the practice of retinoscopy in children. Mr. HALLIBURTON MCMULLEN showed a case of detachment of the retina cured by two scleral punctures. Other cases were shown by Messrs. G. W. THOMPSON and G. H. POOLEY.

PATHOLOGICAL SOCIETY OF LONDON.

DR. P. H. PYE-SMITH, F.R.S., President, in the Chair.

Tuesday, February 19th, 1907.

THE PARATHYROID GLANDS IN MAN.

Dr. DAVID FORSYTH discussed the anatomy of these glands, in the first place referring to the original observations of Sandström and others, up to those of Welch. Although the glands were commonly two on each side, they might reach a total of twelve. They never lay upon the superficial aspect of the muscles. Furthermore, they might occur within the thyroid itself. For identification, microscopic examination was essential. With the parathyroid tissue there might be bound up thymus, or accessory thyroidal. In infancy the parathyroid glands were small; in the adult their bulk varied. Arguing from the fact that the number of parathyroids was greater in infancy, and the number of accessory thyroids greater in adults, the speaker thought that the one class became transformed into the other. The presence of colloid in parathyroid tissue had been noticed by Sandström. Welch described eosinophile or oxyphile cells amongst clear, "principal" cells. The author's observations showed that the oxyphile granules

were discharged and could be found in the lymph capillaries as granules, or coalesced into droplets of colloid. The colloid in parathyroid and thyroid appeared identical; it was oxyphile as a rule in both. In the infant the cells were usually in the resting stage; colloid appeared later.

Mr. W. L. Harnett read a communication upon the same subject. After describing the two types of cell met with, he advanced the view that they were merely phases of the same, the "oxyphile" cell representing the resting, the "principal," the discharged stage. The frequent occurrence of colloid in the gland was remarked upon, as was also the fact that these colloid-containing glands showed evidence of great activity in the large numbers of oxyphile cells present. Fat was normally present in the parathyroids, more especially in the more active glands. After describing the appearances of sections of the glands at various periods of life, the speaker inferred that the tissue began to show signs of activity in early childhood, and became steadily more active as age advanced, reaching the height of its activity late in life. As a result of the examination of a series of parathyroids from subjects dead from various diseases it was found that there was no feature in which these differed from normal glands at the corresponding period of life. The parathyroid from a case of parenchymatous goître in a girl aged 18, showed signs of activity unusual at that age, and contained a considerable quantity of colloid. There were no grounds for supposing that the parathyroids were affected in Graves's disease or in tetany.

Dr. H. Bayon did not hold that colloid was formed in true parathyroid tissue; the presence of colloid would show, he thought, that the tissue was thyroidal—that is, an isolated lobule of the proper thyroid. He did not think that the parathyroids took on the function of the thyroid, and he exhibited a section through the goître of a cretin, showing the parathyroid; in the latter there was no trace of colloid.

MANCHESTER MEDICAL SOCIETY.

S. Moritz, M.D., President, in the Chair.

Wednesday, February 6th, 1907.

Congenital Pyloric Stenosis.

Dr. H. Ashby showed nine specimens illustrating congenital pyloric stenosis in infants. The ages of the infants at death varied from 32 days to 4 months. The times at which the vomiting commenced varied from seven days to twenty days. They all showed hypertrophy of the circular fibres of the pyloric sphincter, hypertrophy of the walls of the stomach, dilatation, and marked gastric catarrh. They were treated during life with stomach washing, with either whey or peptonized milk and small doses of tr. opii. In only one case was operation performed (by Mr. Telford)—a posterior gastro-enterostomy; death occurred in twelve days. A septic abscess had formed between the spleen and the stomach, and there was also a septic pneumonia. Death occurred suddenly and unexpectedly in two cases which were apparently doing well.

Acute Infective Bone Disease without Necrosis.

Mr. W. Thorburn communicated two cases of acute infective bone disease unassociated with necrosis. The first, which was an example of serous or albuminous periostitis involving the whole of a metacarpal bone, and appearing as a sequel to active suppurative osteomyelitis of the femur, was brought forward as an example of attenuation. The second was a case of acute suppurative periostitis of the femur in a boy aged 11, in which the periosteum was stripped off almost the whole of the shaft by a large collection of pus. The shaft remained bare and exposed at the bottom of the large incision made for drainage for a period of many weeks, but eventually the wound healed without the formation of any sequestrum. In the latter case convalescence was complicated by the development of suppurative epiphysitis at the lower end of each tibia, small abscesses being there formed, and small sequestra being produced. It was suggested that the original infection of the femur was probably an example of true periostitis in which there had been no interference with the intraosseous blood supply, whereas in the subsequent and less active foci inflammation had commenced in the usual position (the ossifying plane), and had thus more seriously affected the bone.

Treatment of Vesical Calculus.

Mr. E. Stanmore Bishop read a paper on vesical calculus and the methods in use for its removal. He remarked that although litholapaxy had many advantages the choice of this method must always depend upon the absolute certainty or otherwise of total removal of all fragments, however small; it was no wonder, therefore, that surgeons were once more reverting in some cases to cutting operations; of these, he professed a preference for the perineal route if septic cystitis were present; otherwise for the suprapubic operation. For purposes of diagnosis he claimed that the time had arrived for total abandonment of the sound; skiagraphy was extremely useful, but the cystoscope had two great advantages over even this method; stones impacted in the vesical end of the ureter, or embedded in a diverticulum would be shown by a skiagraph, but not their relation to the vesical cavity; besides this, small growths at or near the internal urethral opening might give rise to symptoms which could only be satisfactorily differentiated from those of calculus by the aid of sight. In describing the technique of suprapubic cystotomy he showed certain forceps for securing the edges of the divided bladder, which gripped without crushing them; others for the removal of the stone, the blades of which protected the raw surfaces through which the calculus had to be withdrawn; Cathcart's instrument, by which the vesical interior might be more clearly examined, and a bougie with bulbous tip for lifting up the anterior wall previous to its division. He spoke strongly in favour of immediate suture of the bladder in all clean cases, as avoiding the well-known drawbacks of the old suprapubic operation: the dribbling of urine over the skin, possible secondary abscesses behind the pubic bone, urinary fistulae, the avoidance of an open wound, especially in children, and similar sources of disgust and disappointment. He pointed out that it is not now so necessary to insist upon asepsis, since that may be taken as a matter of course, but that the obstacles to the primary union of such a wound would now be found to be, first, the escape of fluid from the bladder over the wound when that viscus had been distended with boric solution before division; secondly, the opening up of the cavum Retzii and the formation there of a haematoma; and, thirdly, the bruising of the edges of the wound, either in the bladder or the tissues of the abdominal wall. He showed several calculi, ureteric and vesical, also a patient with his temperature chart, to demonstrate the small amount of local or constitutional disturbance produced.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

E. O. Croft (Leeds), M.D., President, in the Chair.

Liverpool, Friday, February 15th, 1907.

Card Specimen.

Dr. A. Stookes (Liverpool) showed a mixed adenoma and dermoid of the ovary, weighing 9 lb., co-existing with a small dermoid of the opposite ovary.

Specimens.

Drs. Briggs and Emrys-Roberts exhibited (1) the Fallopian tubes and ovaries from a case of acute gonorrhoeal salpingitis occurring in a woman aged 25 years, who had suffered from repeated attacks of pelvic pain since marriage five years ago; (2) cancer of the cervix uteri coincident with unilocular cyst of one ovary and fibroma of the opposite ovary, removed from a patient aged 67 years, 4-para, who had suffered from a sanious vaginal discharge for two years. Abdominal hysterectomy was performed. Microscopically the growth was an epithelioma.

Dr. Gemmell showed a double pyosalpinx. The tubes were each 4 in. long and 1 in. in diameter. There were only a few peritoneal adhesions. The ovaries were unaffected.

Dr. A. Stookes (Liverpool) exhibited an ovarian cyst with the adherent vermiform appendix successfully removed by abdominal section from a nulliparous woman, aged 41, who had suffered from pain in the right side and menorrhagia for six to seven years. The Fallopian tube was thickened by chronic salpingitis, and was stretched over a thin-walled cyst of apparently inflammatory origin. Beneath this lay the cystic ovary, the size of an orange. The adherent vermiform appendix was also removed.

Dr. F. W. Baker Young (Liverpool) showed a safety-pin removed from the vagina of a girl aged 3 years. It had been there for two years, and had caused continuous haemorrhage.

Drs. Cuthbell and Leith Murray showed a tumour of the right ovarian ligament weighing 2 lb. and the size and shape of a cocoanut. There was a double twist of the pedicle, and the surface and substance of the tumour was deeply mottled with haemorrhage. Microscopic section proved it to be a pure fibroma.

Ectopic coexisting with Uterine Pregnancy.

Dr. Donaldson (Manchester) described a case of ectopic pregnancy coexisting with uterine pregnancy in a woman aged 40, 4-para. Previous to this pregnancy menstruation had been regular every four weeks, lasting one to fourteen days. She was delivered of a seven-months living child eight weeks prior to admission to hospital. Three days after the confinement her doctor noticed an abdominal swelling which increased in size and was accompanied by intermittent cutting pain in the left side. During the eight weeks following delivery there were two menstrual periods lasting seven and fourteen days respectively, the latter accompanied by the passage of two large, stringy lumps. There were no symptoms of severe pain, fainting, or other signs of haemorrhage. An irregular swelling occupied the hypogastric and both iliac regions, and per vaginam was found to be distinct from the uterus. Abdominal section revealed a sac composed of the left Fallopian tube containing a decomposing fetus measuring 13 in. and weighing nearly 3 lb. The sac was adherent to intestine, and was therefore stitched to the edges of the abdominal wound and packed with gauze. The patient was discharged convalescent at the end of six weeks. The extrauterine was probably synchronous with the uterine pregnancy, death of the fetus occurring when the uterine fetus was born.

Fatal Vomiting in Pregnancy.

Dr. Stookes (Liverpool) also described a case of fatal vomiting in a woman, 2 para, who was seven months pregnant. From the second to the sixth month the vomiting was not excessive, but for the fortnight preceding admission to hospital it was continuous and "coffee-ground" in character. She was so ill that induction of premature labour was deemed inadvisable. Rectal salines were administered. Death occurred on the second day after admission, from cardiac failure. At the autopsy partly-digested blood was found in the stomach and small intestine; the kidneys were congested; the other organs were normal.

Royal Academy of Medicine in Ireland. At a meeting of the Section of Anatomy and Physiology, held on January 25th, Professor A. F. Dixon, President, in the chair, Mr. F. O'B. Ellison (introduced by the President) presented a note on the musculature of the villi. A number of microscopic sections of villi were shown in illustration of the points treated, and one of the specimens showed cumulus and villi. Professor W. H. Thompson said that the appearance of round spaces with transverse sections of muscle in the first section shown would come to some of them as a revelation of the amount of muscle that could be present in villi. Further facts that Mr. Ellison had brought out made it exceedingly probable that there was far more muscle in the villi than came up from the muscularis mucosæ. If so, it would make the working of the villi a mechanical process about which there would not be very much mystery. The investigation, however, was not complete. The President expressed the hope that research in the same direction would be continued. Mr. Wm. Cuthbell (introduced by the President) read a paper on the estimation of urea in urine, and the estimation of hydrochloric acid in urine. The latter exhibited a series of sections and x-ray photographs of the upper end of the femur to illustrate the arrangement of the cancellous bonelike and of the structure known as the ossar triangle. Professor E. F. McCarthy said that the communication threw a new light on the significance of the calcar, and the sections showed that structure to be very much more extensive than had been generally described. Professor Fawcett exhibited a model of the brain in the long median plane. He referred to the varying relations of the ventral aorta to the sternum, to the presence of the embryonic cranial flexure in the adult, which did not cease with the bony dorsum sellae, but extended as soft supporting tissue to the roof of the fossa interpeduncularis, a point which had great significance in the numerous measurements of the skull. He also drew attention to the variations in the distance between the perineal skin covering and the posterior extension of the body cavity in both male and female, and more particularly in the young.

Leeds and West Riding Medico-Chirurgical Society. —At a meeting held on January 18th, Dr. Bampton in the chair, Dr. W. Edgecombe read a paper on metastatic pancreatitis in mumps. Mr. Lawford Knaggs read a paper on punctured fractures of the base of the skull. Dr. A. F. Dimmock gave a demonstration of the uricmeter, designed for a rapid process for estimating uric acid in urine. The following are the details of the method: 100 c.cm. of urine are taken and placed in a conical flask (Erlenmeyer) of about 400 c.cm. capacity; to this is added 1 gram of lithium carbonate, and the whole boiled for three minutes. By this means practically the whole of the phosphates are precipitated, and free carbonic acid is eliminated. If frothing occurs it can be checked by simply blowing with the mouth on the upper portion of the outside of the flask. The liquid is filtered while hot, to remove precipitated earthy salts, etc., which are washed with a little distilled water until the filtrate measures 100 c.cm. This is now cooled down to 60° F., and to 50 c.cm. of the filtrate, which contains the uric acid as lithium urate, 5 gr. of ammonium chloride is added, shaking the flask until dissolved. After three minutes the contents of the flask are warmed to 120° F., so as to secure a uniform aggregation of the precipitated urate of ammonium. The whole is now poured into a tube graduated in parts per 100 of uric acid, and deposition allowed to take place, the reading being taken after twenty-four hours have elapsed. If the urine does not contain a high percentage of uric acid, the reading can be taken in four to six hours. Dr. Dimmock claimed that this rapid method proved sufficiently accurate for most clinical purposes. He had made a large number of estimations with it, controlled by estimations made by the more exact processes, and the close agreement between the two sets of results obtained had demonstrated that this method was useful for all ordinary clinical purposes where rapidity was desirable. The following cases and specimens were shown: Mr. W. Thomson: A specimen of intussusception of the vermiform appendix, removed by operation. Mr. H. Littlewood: A case of fracture of both patellae, wired December 13th, 1905. Mr. Secker Walker: A case of Mules's operation after perforating wound of the eye. Mr. J. F. Dobson: A case of bilateral congenital dislocation of the hip, treated by Lorenz's method. There had been an entirely successful result on one side, and he proposed to repeat the operation on the other side. Dr. Maxwell Telling and Mr. Dobson: A case of hydrocephalus treated by ligature of both internal carotid arteries, with considerable improvement. Dr. E. F. Trevelyan: A case of Graves's disease in a man, aged 20, whose sister also suffered from the disease. Dr. Telling: A case of framboesioid syphilis of the face. Cases and specimens were also shown by Mr. A. L. Whitehead, Mr. O. Gruner, Dr. J. B. Hellier, Dr. Wardrop Griffith, Mr. L. Rogers, Mr. R. G. Hann, Dr. T. Churton, and Mr. Lawford Knaggs.

Bickley and District Medico-Ethical Association. —At a meeting held on January 24th, A. S. Wilson, M.B., in the chair, Mr. A. Macgregor Sinclair, M.B., showed four tumours of ectopic gestation which he had recently removed from patients. He gave histories of each of the cases, and laid especial stress upon each woman having been sterile for several years and having had no offensive leucorrhoeal discharge during the period of sterility. He deduced from these facts that ectopic gestation was probably due to disease, either of the uterus or of the tubes. Each case was marked by the usual symptoms of abdominal pain and bloodlessness before operation and a well-marked pulsation in the fornix of the side upon which the tumour was situated. The fourth case differed from the first three, inasmuch as it was complicated by an inflamed adherent appendix, and the earlier abdominal symptoms were obscure. On operating, the right tube,

which contained a three to four months fetus, was twisted round behind the uterus and attached to the appendix, and, though it was ruptured, only a small amount of haemorrhage had taken place, because the tear in the tumour was filled by the protruding head of the fetus. The cases were all treated in the ordinary aseptic manner, and made uneventful recoveries. The discussion was introduced by Mr. H. J. Shane, M.B., Dr. R. C. Holt, followed by Mr. J. H. Carter, F.R.C.V.S., who related a case which he had discovered of ectopic gestation in a Newfoundland bitch.

British Balneological and Climatological Society.—At a meeting held on January 30th, Mr. H. Shirley Jones, President (Droitwich), in the chair, Dr. C. W. Buckley (Buxton) introduced a discussion on the influence of climate on gout and rheumatism. He said gout was affected by climate, so far as the functions of the liver and excretory system, comprising both kidneys and skin, were concerned. In patients who were fairly robust and without high arterial tension or arterio-sclerosis a bracing climate was desirable; humidity should be low and temperature fairly equable. Where there was high tension a more relaxing climate was best, and inland were generally better than marine climates. The south-eastern counties showed a remarkable excess of gout in comparison with other parts of the country, partly explained by the class of population, and perhaps partly by the chalky character of the water. Acute rheumatism was not affected by climate, except so far as unfavourable climatic conditions might lower the resistance of the system to infection. Muscular rheumatism and kindred conditions, which were best described as fibrositis, were unfavourably influenced by a high humidity and especially by a damp soil, but temperature was of less importance, equability being more essential than warmth. Free air access was important, and stuffy hollows to be avoided. For the foregoing diseases there did not appear to be any advantage in sending the patient abroad. In rheumatoid arthritis, however, the desirable combination of warmth, equability, and low humidity was hardly attainable in this country, though low humidity was still the most important factor. Probably the best climates in this disease were those of Grand Canary, Teneriffe, and Bermuda. Dr. Groves (Isle of Wight) expressed general agreement with Dr. Buckley's views, and pointed out the unreliabilty of statistics in determining the effect of climate upon the diseases in question. For those of early middle and later life suffering from or having a tendency to rheumatic and gouty affections, an equable climate with a marine atmosphere, not too humid to admit of free diaphoresis in connexion with exercise in a locality sheltered from cold winds, was most suited. Dr. Percy Lewis (Folkestone) held strongly that chalk in drinking-water had nothing to do with the causation of gout. Gout and rheumatism were considerably more a matter of the habits of individuals than of the climate in which they happened to reside. Dr. Begg (Bath) thought of climates as divided for clinical purposes into two classes—(1) the bracing, (2) the relaxing or sedative—and his principle of applying them to cases was that which governed his administration of stimulants. When he would use malt liquors and nourishing port, he advised a sedative climate to build up a reserve force; and when champagne and spirits, he recommended a bracing one to influence metabolism. Dr. Leonard Williams did not believe in the existence of a disease which could be properly called chronic rheumatism. Most of the cases so described were chronic gout or some septic form of arthritis. Goutily-disposed people were better in bracing climates; those with definite gouty manifestations in kidneys or arteries ought never to be sent to bracing climates, but always to relaxing ones. The discussion was continued by Dr. Tyson (Folkestone), Dr. John Leon (Southsea), Dr. F. Thompson (Bath) Dr. George Thompson (Buxton), and Dr. Heaney (Blackpool); and Dr. Buckley replied.

Dermatological Society of Great Britain and Ireland.—At a meeting on January 23rd, Dr. Leslie Roberts, President, in the chair, Dr. A. Eddowes showed a case of *Acrodermatitis hiemalis* in a young woman, aged 24, in whom the condition had lasted for nine years. The hands were somewhat swollen and congested, and here and there were small scars, the result of previous nodules which had appeared deeply, come towards the surface, and had ruptured. The patient also had a chronic swelling of the left knee-joint. The case was discussed by many of the members, and the resemblance of the condition to *folliclis* (Barthélemy) and also to *chilblain-lupus* (Hutchinson) was pointed out. Dr. J. H. Stowers showed a boy, aged 9, with a small nodule upon the right cheek which was alleged to have resulted from a mosquito bite seven months before. The tuberculous nature of the lesion was regarded as "not proven."—Mr. G. W. Dawson exhibited (1) a boy of 11 with *Tinea tonsurans* in order to demonstrate what a complete and rapid defluvium of the hair had occurred from only four exposures to the *x* rays; (2) a case of *Acute lichen planus* in a woman aged 45, in whom the eruption had appeared suddenly five months previously. The lesions were annular, widely distributed, and the irritation very severe. The patient's general health was much impaired at the onset of the disease. Dr. Graham Little showed, for diagnosis, a woman, aged 33, in whom a scaly, papular eruption had appeared three weeks previously. The skin was very dry and irritable. Among the suggestions offered were lichen planus, a drug eruption, and dermatitis exfoliativa.

Hunterian Society.—At a meeting held on February 13th, Mr. John Poland, President, in the chair, Mr. Langdon Brown read a paper on acetonuria, its clinical significance and treatment. The presence of diacetic acid in the urine was more important than that of acetone, but this acid was unstable and broke down into acetone if not excreted very rapidly. It was found not only in diabetes, but in recurrent vomiting in children, pernicious vomiting of pregnancy, mountain sickness, delayed chloroform poisoning, and starvation. Acetonuria was a symptom of tissue degeneration, of acidosis with insufficiency of oxygen. It was possible that biliousness and migraine were both due to acetonuria. The most successful treatment consisted in the administration of large doses of sodium bicarbonate. Dr. Langdon Brown dwelt at some length on the question of delayed chloroform poisoning. Dr. Lewis Smith insisted on the importance of acetonuria in the differential diagnosis between diabetes and elementary glycosuria. He demonstrated the fact that the urine of a patient who in taking salicylates gave a reaction with a solution of perchloride of iron similar to that given by urine containing diacetic acid. He spoke of the marked changes seen in the epithelium of the renal tubules in some cases of diabetes. Dr. Russell Andrews remarked on the fact that acetone was found sometimes in the urine after labour, particularly in cases where the labour had been prolonged and difficult, and asked whether prolonged administration of chloroform could be held responsible. The theory that acetonuria could be looked on as a sign of intrauterine death of the fetus had been disproved. In some cases of necrobiosis of uterine fibroids acetone was found in the urine. Dr. F. R. Humphreys exhibited charts which he had compiled from the monograph of Dr. Schumann Leclercq on the variations brought about by dieting in the amount of acetone in his own urine. Dr. Theodore Fisher spoke of recurrent vomiting in children, which seemed to be due sometimes to a recurrent febrile attack. He doubted whether the fatty condition of the liver found after chloroform poisoning was due so much to the administration of cod-liver oil as to prolonged sepsis. Dr. Fortescue Fox asked whether acetonuria occurred after administration of anaesthetics other than chloroform.

Glasgow Pathological and Clinical Society.—At a meeting held on February 11th, Dr. J. Lindsay Steven, President, in the chair, in addition to other business of a private character, the following card specimens were shown: Professor Muir: (*a*) Spinal cords from cases of cerebro-spinal meningitis; (*b*) specimens from a case of generalized melanotic sarcoma (primary tumour in the eye). Dr. John Anderson: (*a*) Kidney with tumour invasion of the adrenal type; (*b*) brain with basal meningitis from a case of pneumonia. Dr. John H. Teacher: Specimens from two cases of abscesses in the liver secondary to septic cholangitis.

REVIEWS.

HYPERAEMIA AS A REMEDY.

The interest felt by a large section of the profession in Professor Bier's methods of treatment described in his book, *Hyperaemia as a Remedy*, is quite sufficient to justify the appearance of a second edition, and we regret that it has not appeared in an English translation, as much that he has to say is highly suggestive, and would direct the attention of practitioners to methods which are often overlooked in this country. As is probably well known, Professor Bier advocates the treatment of disease by the production of active and passive hyperaemia; both methods have, in his opinion, extensive but quite distinct spheres of action, and, of course, necessitate different means for their production, each requiring a special technique. Of all means for producing active hyperaemia, which may be induced by rubbing, massage, and revulsives, including heat, he prefers the use of various forms of hot-air chambers into which the part to be treated is introduced.

The reddening of the skin which follows the local action of hot air is not to be regarded as indicating a derivation of blood from the deeper parts to the skin with consequent relative anaemia beneath. This is, he contends, a fundamental error; the entire limb, or the entire thickness of the abdominal wall, for example, is made hyperaemic, as has been shown by experiments on animals, and the active arterial hyperaemia of the limb is so great that the returning blood may be seen to pulsate in the veins and to have preserved its red colour. This active hyperaemia renders the heat more bearable, so that anything which prevents it lowers the temperature that can be borne. For example, most people can support a local temperature applied, say, to the arm of 95° to 100° C.; but if a tourniquet is put on the arm, not so tightly as to obliterate the radial pulse but sufficiently to constrict the veins, the limit of heat which can be tolerated is reached at 78° C., while, on the other hand, if an active hyperaemia be induced before putting the limb into the chamber, as by applying an Esmarch tourniquet and then relaxing the band—a procedure which is followed by a great reaction of the circulation—a temperature of 145° C. can be reached without discomfort. Owing to this diminution of sensibility to heat great caution is required in the use of the apparatus, as slight burns may occur without giving rise to pain. Some patients get burnt because they suppose that the heat must necessarily be somewhat painful and therefore do not complain. It is necessary to insist upon the fact that the heat should not be painful or unpleasant, and if it be either the application should be stopped. Some of the evil effects—such as headache, giddiness, palpitation and faintness—may be due to the products of combustion when the apparatus is used in a small or badly ventilated room; moreover, it is desirable to limit the duration of the sittings to not more than an hour at a time. The value of active hyperaemia is chiefly for non-infectious diseases, especially for chronic rheumatic arthritis.

Passive hyperaemia is believed by Bier to possess powerful bactericidal action, this being especially seen in connexion with the growth of tubercle. He says his attention was drawn to the question of tubercle in the state of the circulation by the observations of Farre, Travers and Lewis on the one hand, who noticed the frequent association of stenosis of the pulmonary artery with pulmonary phthisis, the obstruction to the flow of blood to the lungs apparently favouring the development of tubercle; on the other hand Rokitansky, insisted upon the immunity from tuberculosis enjoyed by the lungs of persons suffering from various affections of the left side of the heart causing passive congestion of the lungs. He recommends the treatment of various localised tuberculous lesions such as diseased joints by damming up the circulation by the application of rubber bands sufficiently tight to obstruct the venous return. He recommends that there be no pain associated with the method as already mentioned, and in particular he insists upon the importance of using soft and loose bandages, not leaving them on for long at a time and changing their position from day to day, or even allowing the interval of a day to elapse in order to prevent any local injury from pressure. He recommends a number of different forms of cupping glasses, all exhausted by indiarubber balls, which are made by C. Eschbaum of Bonn. He has also invented a series of glass exhausting chambers—for treating the arm, the knee, and so on—which are made by the same firm. The results he claims to have obtained in the treatment of tuberculous joints are striking. Thus he says he has cured disease of the wrist in 88 per cent.; of the elbow, in 72.7 per cent.; of the ankle, in 61.5 per cent. The effects in the treatment of boils and carbuncles seem to be good also, as Dr. Carl Grube has recently published several cases of rapid healing of carbuncles in diabetic patients under his care at Neuenahr, who were treated with the assistance of Bier's cupping glasses. Bier also speaks highly of the results obtained in whitlows, breast abscesses, and suppurating lymphatic glands. Another interesting portion of the chapter dealing with the uses of passive hyperaemia is that concerned with its effects on the growth of callus and the cure of false joints, which seem to have been known to Ambroise Paré, and were utilized by the late Hugh Owen Thomas of Liverpool.

We do not doubt the utility of Bier's method within certain limits, as active hyperaemia produced by the agency of hot air is recognized to be a valuable means of treating chronic rheumatic joints, while the author's statistics and statements indicate that local tuberculous lesions may be successfully treated by damming the circulation, although the method calls for caution in its application. Finally, a more extensive trial of dry cupping in the treatment of local infectious diseases, such as boils and carbuncles, seems desirable.

THE TREATMENT OF POTT'S DISEASE.

"The correction of a gibbosity ought to be made, not in one sitting, but in several—five, ten, fifteen sittings." "Nothing is to be gained by trying to do it more quickly."

On reading these words in Dr. F. Calot's[2] pamphlet on the rational treatment of Pott's disease for the use of practitioners, we were inclined to rub our eyes and exclaim, "Is Saul also among the Prophets?" "Can this be the Dr. Calot who a few years ago was the uncompromising advocate of forcible and immediate correction?" Yet so it would seem, and we can only congratulate Dr. Calot on the fact that time has led him to adopt more moderate views. But if the author has abandoned one of the positions which were assailed when some years ago forcible correction was revived by him and taken up by a few surgeons in this country with perhaps more ardour than discretion, he still maintains the position that the kyphosis may be completely obliterated and a straight and strong spine with ankylosis of the diseased vertebral bodies result.

A priori considerations are against the probability of this, and the evidence afforded by the few autopsies that have been recorded has confirmed the sceptics in their doubts of the permanence of the cures. Dr. Calot, however, now publishes photographs and a drawing after a radiograph, which certainly are strong evidence that in one case at least he has secured the result above-mentioned. He gives no statistics such as would enable us to judge whether this result is very exceptional, or whether it may reasonably be expected in a good proportion of cases treated by his methods. It is very difficult to understand how the vertebral column of a young person in which some of the anterior growth centres have been destroyed, while all the posterior remain intact, as very often happens in a case of Pott's disease, can fail to become more curved as growth proceeds, no matter how stringent the means taken to keep it straight. The pamphlet before us, however, is a reprint of papers published in *La Clinique*, and it is, perhaps, not to be expected that in these the author would go into statistics and matters of controversy. They profess only to enable the general practitioner to treat cases of slight and medium deformity by the application of plaster of paris pockets and gradual correction. The

method of applying pressure is ingenious, and if it will not straighten the spine should at least give it good support. Forty-three pages are devoted to a description of the method of making and using the corset recommended by the author, and the description is so full and the illustrations so many and so clear that the practitioner who will follow them carefully ought to succeed in making a corset. As we understand Dr. Calot, he intends that for the first year or two, at least during the acute stage, the case should be treated recumbent in the jacket. This is sound advice, but it might with advantage be a little more emphasized. Twenty pages are devoted to the treatment of abscesses. In this the writer is a strong conservative. He recommends aspiration and injection of antiseptic solutions, and even in retropharyngeal abscess he condemns incision through the neck. He claims to have devised a way of aspirating these from the outside, even when there is no external sign of their presence. He mentions two cases as having been thus successfully treated, but he does not go into details. Upon paper the method seems a risky one, and a full report of actual cases is desirable before its feasibility can be admitted.

We hope that before long Dr. Calot will publish a full statistical report of his large experience at Berck-sur-Mer and in Paris.

MELANCHOLIA.

Dr. R. Masselon, of the asylum at Clermont de l'Oise, has written an essay in which he gives a detailed account of the various clinical aspects of melancholics,[3] and including an analysis—done in the rigorous method of which French writers are such clear exponents—of the mental troubles which these patients exhibit. The main conclusion is that there is no such morbid entity as melancholia, but that it is a psychological condition which may be noticed in very different forms of disease. After sketching the history of some of the chief hypotheses which have led to present views, and after indicating the different forms under which cases of melancholia present themselves, the author devotes many pages to the discussion of the psychical elements which constitute "depression" and "moral grief or pain"—in what way these two classes of symptoms are joined, and how they influence one another. Since the delirium of melancholics presents clearly-defined characters of its own, he endeavours to show that it is derived directly from the mental basis on which it is developed. There is a good chapter on affective or "essential" melancholia. Several authors are quoted, but we regret to notice that no mention is made of workers in the English school, some of whom, notably Bevan Lewis, have devoted much time to studies of the causation of the melancholic condition. After reading the book, we are left with the feeling that we are no further on the road to a conception of what melancholia really is. We have an elaborate picture of the details of the morbid signature placed before us without any key as to their real origin or meaning. We had hoped for a clue as to the nature of an affective or emotional state, but none is vouchsafed to us, and we are just as far off as ever from that great crux of psychological processes—the true interpretation of the emotional state. One of the most practical chapters is that on treatment, in which the value of rest, and the use of opium, hypnotics, extract of kola, and the serum of Trunecek are discussed. The continuous warm bath is highly spoken of, and the necessity of paying attention to the morbid alterations of the alimentary tract is insisted on. The most important chapters are those dealing with the various forms of intellectual trouble, such as those of calling up ideas, of attention, of sensation and perception, trouble of volition, and the origin of moral anguish. In Chapter V is a description of the melancholic state in neurasthenia, dementia praecox, in general paralysis, etc. The second part of the same chapter is devoted to "affective melancholy."

GYNAECOLOGY.

Drs. Wertheim and Micholitsch's book on the teaching of vaginal-abdominal operations[4] is really an atlas with descriptive text, being mainly composed of its 138 plates. It recalls illustrated works on operative procedures familiar in the past history of medical literature, when surgery was not so generalized and travelling not so cheap, safe, and rapid as at the present day. In order to make illustrative art truly serviceable to the modern student of surgery it must be of the highest class. Drs. Wertheim and Micholitsch have succeeded in supplying the student and the specialist with artistic drawings which are really instructive. The resources of photography have been employed on the cadaver, so as to demonstrate every stage and every step in every stage of each operation. One qualification must be made in respect to the authors' method for ensuring a full view of the vulval structures, and the parts between and above them in course of ligature and removal. In order to widen the vulva, the symphysis pubis has been divided and the pubic bones parted. This has been done from above, without any division of the integuments, and the widening of the vulva allows of better photography; still the parts do not appear perfectly natural. Thus, for instance, in Plate 44 the vestibule, an undilatable portion of the vulva, is represented as far wider than it really could be in any subject. The exigencies of photography, especially as to light and shade, rendered this artificial broadening necessary. It must be allowed, on the other hand, that the plates illustrate the relations to instruments and sutures of the parts undergoing removal very well; indeed they equal if they do not exceed in merit the world-famed illustrations adorning the medical treatises issued by the Johns Hopkins University Press. The letterpress under the plates is short and descriptive. The text is relatively less important than the illustrations in this work, nor can it demand such close criticism. We have given our opinion that the plates fulfil their design of demonstrating the steps of certain operations; such is the aim of the authors, and this aim is not missed. The merits of some of these surgical procedures, such as vaginal fixation of the uterus, is a question beyond the scope of the work, and of the critics of the work. Some gynaecologists may hold that the drawings teach very plainly much that should be avoided. The highest praise must be granted to the descriptions of vaginal operations on the uterus, the necessity for which is universally admitted by authorities, and the authors follow the best traditions of general surgical literature by dwelling at some length on certain steps common to many operations, such as anterior and posterior vaginal coeliotomy. A translation of this important illustrated treatise into English is much to be desired.

Dr. Batuand[5] has discovered that gynaecology has since 1886 become a department of surgery rather than one of medicine. He learnt gynaecology from Dr. Jules Chéron, "an excellent physician, who taught his pupils that they should always treat the patient as well as the local disease." He has observed that neurasthenia is very frequently found along with diseases of the genital organs. Neurasthenia comes from overstrain; disease of the genital organs usually from local infection. Neurasthenia influences diseases of the genital organs by making them chronic; for diseases of the uterus and its adnexa cannot be cured while the general health is bad. In the treatment the author attaches importance to observing the arterial tension; if this is lowered, local treatment will only exhaust the patient; but, if it is raised, local treatment will do good. The author strongly advises against morphine in neurasthenic patients. The best calmative is rest in bed. Good as this is in acute cases, it is a real danger in chronic cases, producing a condition which the author terms "*clinomanie*," a habit of lying in bed, almost as difficult to cure as morphinomania. The author thinks that far too often neurasthenic patients are operated upon who would have been much better treated medically. He discusses post-operative psychoses, and finds that gynaecological operations are not more dangerous from this point of view than others, but small operations are as dangerous, if not more so, than great ones; and it is a remarkable thing that the more important the lesion, the more urgent the operation, the less grave it is from the mental point of view. We have seen something like this

[3] *La Mélancolie Étude Médicale et Psychologique.* [A Medico-Psychological Study of Melancholia.] Par René Masselon, Médecin-adjoint de l'Asile de Clermont de l'Oise. Paris: Felix Alcan. 1906. (Crown 8vo, pp. 294. Fr 4.)

[4] *Die Technik der vaginalen-bauchhöhlen Operationen.* The Technique of Vaginal-Abdominal Operations. Von E. Wertheim und Th. Micholitsch. Leipzig: S. Hirzel. 1906. (Roy. 8vo, pp. 319. M 20.)

[5] *Bibliothèque de Médecine. La Neurasthénie Génitale Neurasthénie Sexuelle.* Par le Dr. Jules Batuand. Paris: A. Maloine. 1906. (Crown 8vo, pp. 280. Fr 4.)

stated in an English work. The author enlarges upon the benefits to be gained from massage, hydropathy, and electricity. He says neuropathologists give only a few lines to the subject. There is a big book by Müller called *Handbuch der Neurasthenie*, in which Dr. Batuand will find many thousands of lines on the subject; and there are other works.

NOTES ON BOOKS.

We have received the tenth volume (July to December, 1906) of the *Journal of Obstetrics and Gynaecology*.[1] It is, of course, not a volume which lends itself to review, but we may refer in passing to the excellence of its illustrations. A paper of interest to the medical archaeologist is that by Dr. J. W. Ballantyne, of Edinburgh, on the *Byrth of Mankynde*, to which reference has already been made. The article is illustrated by reproductions of title-pages of various editions and of some of the illustrations.

Lessons on Massage,[2] by Margaret D. Palmer, formerly manager of the massage department of the London Hospital, has reached its third edition. It appears to us to be the best of the multitude of books on this subject; it is, perhaps, rather overloaded with anatomical details, but it is, we admit, difficult to draw the line. The instructions for applying massage in various situations are clearly expressed, and ought to be as helpful as verbal descriptions of an art so essentially practical can be. The book is well illustrated, and the claims made on behalf of the manœuvres recommended appear to be free from the exaggeration to be observed in the works of some writers on the subject.

Dr. Bergouignan divides his monograph on arterio-sclerosis and Evian treatment[3] into two parts. In the first he gives a summary of the prevalent opinions concerning the pathology, symptoms, and therapeutic indications of arterio-sclerosis, especially the early stages before the onset of chronic uraemia and chronic cardiac insufficiency. In the main he follows Huchard's teaching, and concludes that arterial hypertension from vaso-constriction causes or, at all events, precedes organic vascular lesions, and that this hypertension is induced or maintained by toxic substances in the blood abnormally retained in the circulation owing to deficiency in the excretory functions of the kidneys. In the second part he explains the value of the treatment at Evian-les-Bains (on the Lake of Geneva). This treatment consists chiefly in drinking daily a certain amount of water from the Evian springs, of which the Source Cachat may be accepted as the type. According to the author's experiments with Conte, the diuretic effect of moderate doses is very striking, and is much greater than that obtained by drinking equal quantities of distilled water. The author has taken great pains to explain clearly how Evian can assist general treatment by diet, etc., in early stages of the disease; in the late stages of the disease it is clear it is not right to send patients there.

Hudson's Pocket Vocabulary of Medical Terms[4] has been considerably enlarged, the new fourth edition exceeding the third by exactly five pages. A number of new words have been introduced. The alphabetical list of diseases caused by parasites or connected with parasites, at the end of the book, is useful and fairly complete. Some [illegible] have been made good, such as "sleeping sickness," a term more often used than "African lethargy." Some avowedly obsolete words such as "[illegible]" are still retained perhaps for good reasons known to the compiler who, like the compiler, intend that the vocabulary shall be at the service of officers unacquainted with medical institutions. So both this pocketable book essentially deals with old medical documents. We fail to understand why the compiler omitted "general paralysis," with some clear explanation to the effect that the word signifies a form of insanity rather than a variety of paralysis. Under "Paralysis" we find "paralysis of the insane: a form of palsy affecting persons of unsound mind," and further on "paralysis general spinal; progressive muscular atrophy." The word "general" might easily mislead a non-professional owner of the vocabulary, giving him the erroneous idea that general paralysis means progressive muscular atrophy. On the whole, however, this vocabulary deserves the popularity which it evidently enjoys amongst registrars and Poor-law officials, and we admit that the compiler and revisers, though they have undertaken a task which can never reach ideal perfection, have yet succeeded in making their little lexicon both useful and popular.

MEDICAL AND SURGICAL APPLIANCES.

The Field Stretcher as a Hammock.

Mr. E. A. Chartres, F.R.C.S.I., D.P.H., Senior Medical Officer, West African Medical Staff, Northern Nigeria, writes: The photograph will show how the ordinary field service stretcher may be utilized as a hammock, and serve the double purpose both as a stretcher for conveying wounded from the line of fire, and afterwards carrying them through a country where there are no roads, only a path of some 18 in. wide. The



photograph represents the stretcher with superstructure detached; four hooks at four corners of the hammock are substituted for the four ordinary bolts, there being two at each corner, and do not in the least weaken the stretcher, as each hook has a screw nut. These were locally made, also the four suspending ropes with hooks attached. The superstructure is itself a very simple affair, as can be seen, and gives complete shelter from the sun. I am indebted to Staff Sergeant Woodall, R.A.M.C., for carrying out my suggestions, which have been put to severe tests during recent expeditions through different parts of the country, and were found eminently satisfactory. The ordinary hammock in use for severely injured cases is extremely unsatisfactory. I have had opportunities of witnessing the comparative comfort in which patients have been carried in this hammock; particularly in one case, where an officer was severely injured by a buffalo, and suffering from a broken leg, a deep jagged wound on the thigh from the buffalo's horns, fractured ribs, and a dislocated shoulder. With the ordinary hammock in use his removal over a distance of twenty miles would have been almost impossible. This photograph may be of interest to medical men practising in a country where transport is difficult.

'Ethol.'

Under the name "Ethol" Messrs. Parke, Davis, and Co. have placed on the market a new fluid soap, a sample of which we have submitted to examination. It is claimed that it is free from caustic alkali, and that it has a special solvent action on grease, enabling it to be rapidly and completely removed from the skin without injury to the latter. We find these claims to be justified; no caustic alkali is present, the soap is pleasant to use, and quite effectual in removing either vegetable oil or mineral grease from the skin. Nearly all mechanics, engineers or motors, and most medical men use one or both; most on occasion personally attend to the repair or cleaning of the working parts, usually with the result that the hands become begrimed with grease and dirt which ordinary soap and hot water will but imperfectly remove. In all such cases 'ethol' will prove useful.

SCHOOL HYGIENE.

LEITH.

Results of Systematic Medical Examination.

Dr. William Robertson, M.O.H. Leith, has presented an interesting report on the results of the physical examination of 806 school children, carried out with the assistance of Dr. Glegg and a number of volunteers, the girls being examined by lady doctors. As far as possible, to secure uniformity in results, each doctor undertook the examination of certain systems.

The children were first measured and weighed in groups, according to age. Observations were also made on their appearance, their general nutrition, their carriage, general intelligence, and their condition as regards cleanliness.

Teeth.

A special examination of the teeth of 149 girls and 121 boys was made by Mr. Hall, L.D.S.

	Number Examined.	Temporary Teeth requiring		Permanent Teeth requiring		Temporary Total.	Permanent Total.	Unsound Teeth.	Teeth Extracted.	Sound Dentition.	
		Filling.	Extracting.	Filling.	Extracting.					Number.	Ratio per 1,000.
Boys ...	121	360	342	128	91	702	219	921	46	3	2.47
Girls ...	149	390	410	184	172	800	336	1,136	52	1	0.67
Total ..	270	750	752	312	263	1,502	555	2,057	98	4	1.10

Examined for cleanliness, it was found that 94.8 per cent. had no toothbrush, 5 had one but did not use it, and out of the 270 examined only 9, or 3.3 per cent., possessed and used a toothbrush; 7.4 per cent. had clean teeth, 35.9 per cent. were fairly clean, while 33 per cent. were dirty and 1.4 per cent. were in a foul state; 69, or 2.5 per cent., had stained teeth.

Defects and Morbid Conditions.

It was found that out of the 806 children only 218 were without defect of any kind. The remaining 675 had one or other of the conditions mentioned in the following table, and each had an average of two morbid conditions.

I. Deformities and Defects of Development—			
Rickets	110 cases,	or 13.64	per cent.
Spinal curvature	61 ,,	,, 7.56	,,
Badly-shaped chest	7 ,,	,, 0.86	,,
Harrison's sulcus	3 ,,	,, 0.37	,,
Hydrocele	2 ,,	,, 0.24	,,
Amputated hand and arm	2 ,,	,, 0.24	,,
Infantile paralysis	1 ,,	,, 0.12	,,
Cleft palate	1 ,,	,, 0.12	,,
High palate	3 ,,	,, 0.37	,,
Undescended testicles	8 ,,	,, 0.99	,,
Phimosis	1 ,,	,, 0.12	,,
Corneal staphyloma	1 ,,	,, 0.12	,,
Very round shoulders	8 ,,	,, 0.29	,,
Microcephalus	1 ,,	,, 0.12	,,
Impediment in speech	1 ,,	,, 0.12	,,
II. Constitutional Disease—			
Anaemia	16 cases.		
Congenital specific disease	8 ,,		
Chorea	3 cases,	or 0.37	,,
Ankylosed joint	1 ,,	,, 0.12	,,
Cyanosis	3 ,,	,, 0.37	,,
III. Affections of the skin	119 ,,	,, 9.67	,,
IV. Glandular enlargements	165 ,,	,, 20.47	,,
V. Unvaccinated	31 ,,	,, 3.84	,,
VI. Eye disease or refractive error	361 ,,	,, 44.78	,,
VII. Ear disease or deafness	91 ,,	,, 11.17	,,
VIII. Affections of the nose and throat	426 ,,	,, 52.85	,,
IX. Consumption of the lungs	14 ,,	,, 1.73	,,
X. Other lung diseases	47 ,,	,, 5.80	,,
XI. Heart weakness	78 ,,	,, 9.67	,,
XII. Heart disease	7 ,,	,, 0.86	,,
XIII. Abdominal complaint	5 ,,	,, 0.62	,,

Affections of the Skin and Glands.

It was found that 121 children suffered from pediculosis, 165 from enlarged cervical glands, 36 from eczema, and 19 from impetigo. Other different skin and gland affections were noted in small groups of children only.

Vaccination.

Seven hundred and eighty-nine children were examined as to the number of their vaccination marks, with the following results:

31, or 3.93 per cent. had no marks.
34, or 4.31 ,, ,, 4 ,,
66, or 8.37 ,, ,, 3 ,,
419, or 53.08 ,, ,, 2 ,,
239, or 30.29 ,, ,, 1 mark.

Eyes.

A subjective examination of the eyes was first made, using Snellen's types, in a good light, at a distance of 6 metres. The vision of each eye was tested separately, and thereafter both eyes together. The result was expressed as good when $\frac{6}{6}$ or $\frac{6}{9}$ vision was obtained, as fair if $\frac{6}{12}$ could be read, and as bad when only $\frac{6}{18}$ or less was read. If the children could read $\frac{6}{6}$, and failed to read it when looking through a convex lens of low power, they were recorded as emmetropic. If they could read $\frac{6}{6}$, and could still read that line when they looked through a *plus* lens, they were recorded as hypermetropic. Those who could not read $\frac{6}{9}$, were examined in the dark room by the shadow test. In the table showing the acuity of vision many of those entered as having full vision had, nevertheless, an error of refraction (hypermetropia). Five hundred and twenty-three children, or 74.5 per cent., had full vision; 51, or 7.26 per cent., had only fair vision; while 128, or 18.2 per cent., had very bad vision, urgently requiring correction. None had received any attention.

Number of Cases of Refractive Error and of Eye Disease.

	Boys.	Girls.	Total No.	Per Cent.
Number examined	379	323	702	—
Normal vision	283	240	523	74.50
V. = $\frac{6}{12}$	28	23	51	7.26
V. = $\frac{6}{18}$ or less	63	60	123	18.23
Emmetropic	176	165	341	48.57
Hypermetropic	103	69	172	24.5
Myopic	12	9	21	2.99
Astigmatic	87	79	166	23.64
Blind of an Eye	1	1	2	0.28
Strabismus	12	3	15	2.13
Inflammation of eyelids or conjunctiva	13	8	21	2.99

The other eye conditions found were:
Congenital defect or coloboma of the iris ... 2 cases.
Corneal opacity ... ... 2 ,,
Corneal protrusion, or staphyloma ... ... 1 case.
Ptosis ... ... 1 ,,

Nose and Throat.

All the children were examined as to the condition of the nose and throat:

Results of Examination of Nose and Throat.

Age.		Enlarged Tonsils.	Adenoids.	Nasal Discharge.	Tonsillitis	Granular Pharyngitis.
4-8	B	63	25	46	—	—
	G	74	29	23	1	1
9-11	B	67	23	23	2	
	G	47	21	7	1	1
12-14	B	40	14	15	—	—
	G	27	12	1	2	
Totals		318	124	115	6	2
Per cent.		39.48	15.38	14.26	0.75	0.25

A bacteriological examination was made of the fauces of 104 children; swabs were taken on sterile wool and inoculated on blood serum, and then incubated at 37° C. for

eighteen to twenty-four hours. Three cases showed organisms morphologically indistinguishable from Klebs-Loeffler (diphtheria) bacilli; staining being by Neisser's method and by toluidin blue. Pure cultures were got from the throat of 34 children, as follows:

Pure cultures of mouth bacilli	4
,, ,, diplococci	4
,, ,, staphylococci	25
,, ,, Hoffmann's bacillus ...	1

In the remaining, 68 different organisms occurred together, as follows:

Staphylococci in ...	64	Diplococci in	23
Hoffmann in	14	Streptococci in	13
Spore-bearing germs in	2	Moulds in	2
Mouth bacilli in ...	38		

Ears.

Seven hundred and ninety-nine children were examined as to their state of hearing, at the same time ear disease being looked for. It was not possible to get absolute quietness in the room where the examination was conducted, and the whispered voice was therefore the method adopted to test the acuteness of hearing. Probably the proportion of both fair and bad hearing is underestimated; 675, or 84·48 per cent., were noted as having good hearing; 60, or 7·50 per cent., as fairly acute, and 64, or 8·01 per cent., as being deaf. Of those deaf children, 18 were only deaf in one ear; 11, or 1·50 per cent., had otorrhoea; 2 had perforated tympanic membranes without discharge; 3 had retracted membranes; and 16 had large accumulations of wax in the ears.

Lungs.

The examination of the lungs, heart, and abdomen was very complete. The children were stripped to the waist to make the inspection efficient. Bronchitis was found in 41 of the children examined. The weather at the time of examination being cold, but fairly dry. Seven cases of consumption, or phthisis pulmonalis, were diagnosed, with the ordinary physical signs of dullness usually at the apices, and harsh or bronchial breathing, with at times crepitations. Seven other cases were very suspicious, and were probably also early consumption. Two cases showed very shallow breathing, and in two there was drooping of the left shoulder. There was one case of old empyema, two cases of asthma, and two cases with catarrh of the lung bases.

Heart.

Cases of heart disease were not common, but 7 were noted; 4, of whom 3 were girls, suffered from stenosis of the mitral orifice; and the other 3, all girls, from mitral incompetence. There were, however, 78 cases of heart weakness, only 7 of which occurred among the boys. These are grouped thus:

Mitral [illegible] and impure	11
,, [illegible] to the mitral [illegible]	25
,, reduplicated first or second sound...	7
,, [illegible] to the mitral [illegible] ...	6
Mixed [illegible]	29
	78

Abdomen.

A number of the children (66 in all) had marked prominence of the abdomen, many with dilated superficial veins, but in no case could enlarged mesenteric glands be satisfactorily made out; 4 cases were markedly constipated, having only about two motions a week; 3 cases had enlargement of the liver; 1 case had colic; hernia was present in 5 cases, 3 boys and 2 girls, and only 1 were a truss. These cases all required careful operation, especially in the direction of regulating gymnastics and exercises. Of the boys, 2 had hydrocele of the spermatic cord, 1 had phimosis, and 8 had undescended testicles.

Feeding.

An inquiry was specially made regarding the quality and character of the feeding of 534 children. Most of the children partook of fat bacon each day, and the diet of 194, or 19·63 per cent., was found to be very inadequate in the case the children's hunger at all meal times was appeased with tea and bread and butter or jam.

[illegible] members of the medical profession have seats in the new German Reichstag. Dr. Haenel belongs to the Imperial party, Dr. Fuchsberger the Centre, Staff-Surgeon Lehmann the National Liberal party, Dr. Lennhoff Magdeburg, and Dr. Mugdan one of the Progressive party.

CONGRESS OF THE INTERNATIONAL SURGICAL SOCIETY.

The second congress of the International Surgical Society will be held in Brussels in September, 1908, under the patronage of His Majesty Leopold II, King of the Belgians, and under the Presidency of His Excellency Professor Czerny of Heidelberg.

At the first congress, held in Brussels in September, 1905, it was decided to organize an exhibition illustrative of cancer and its treatment for the second congress to be held at the same place in 1908.

With the view of securing a systematized method of procedure in the construction of reports relating to specimens some suggestions have been prepared by Dr. Jules Dollinger, Professor of Clinical Surgery in the Royal University of Buda-Pesth, and President of the International Cancer Museum. Specimens for exhibition will be received by Professor Depage, General Secretary of the Society, 75, Avenue Louise, Brussels, from September 1st to 8th, 1908. This exhibition is not necessarily confined to members of the Society. The congress will be so arranged as to allow exhibitors to make such demonstrations as may appear desirable by the Society during the meeting. The International Surgical Society consists of over 600 members, and includes 23 national committees co-operating in various parts of the world. By the statutes of the Society the number of members is limited. The official languages of the Congress are English, French, and German. The subscription is a triennial one only of 40 francs (£1 13s. 4d.), payable on election, and includes a copy of the *Transactions* of the Congress. The members of the Society elect in Congress the National Committees and other office-bearers.

Application for membership should in the first instance be forwarded to the Honorary Secretary of the National Committee (Iles Britanniques) for transmission to the International Committee which meets at Brussels. The subjects selected for discussion at the Congress in 1908 and the names of the nominated reporters will be announced later on. Copies of the statutes of the Society and other information may be obtained from the Honorary Secretary, Mr. Reginald Harrison.

CONTRACT PRACTICE.

Attendance by other Practitioners on Club Patients.

J. C. writes: A. is doctor to B., many of whose workpeople are in C.'s club. It is A.'s habit to visit and treat these patients when they are ill without consulting C., or giving any notice of his visit, although C. has been attending in the beginning of the illness. Would C. be within his right in refusing further attendance in any subsequent illness on giving notice to the club secretary, and would it benefit C. to bring A.'s conduct before the local Committee of the British Medical Association?

*** It is to be presumed that A. was unaware at the time of C.'s attendance. C., as club surgeon, can always refuse to attend a member while under the care of another doctor, but on the latter ceasing to attend, he is bound under his contract to take professional charge of the member, if required to do. C.'s proper course is to bring the matter before the local Division of the Association.

Sixteenth International Medical Congress. Preparations for the next International Medical Congress, which is to be held at Buda-Pesth in 1909, are already in active progress. It has been decided that there shall be twenty sections, namely, Anatomy, Physiology, General Pathology, Therapeutics, Internal Medicine, Surgery, Obstetric Medicine, Ophthalmology, Children's Diseases, Neurology, Psychological Medicine, Dermatology, Urology, Laryngology, Otology, Stomatology, Hygiene, Forensic Medicine, Military Hygiene, and Industrial Hygiene.

The German Urological Society will hold its first congress in Vienna under the patronage of the Archduke Rainer from October 2nd to the 5th. The subjects proposed for discussion are: (1) Diagnosis and treatment of tuberculosis of the kidney, to be introduced by Professors Casper of Marburg, and von Lichtenberg of Vienna. (2) diagnosis and treatment of nephrolithiasis, to be introduced by Professor Kümmell of Hamburg and Drs. Holzknecht and Lichtenberg of Vienna. (3) albuminuria, to be introduced by Professors von Noorden of Vienna and Posner of Berlin.

ROYAL COMMISSION ON VIVISECTION.

(Continued from page 385.)

Inspection in Great Britain.

Evidence of Professor Thane, LL.D.

On November 7th Professor Thane gave evidence. He said he had been Inspector under the Act for Great Britain since June 28th, 1888. Sir James Russell, who acted as Inspector under him for Scotland and the northern counties of England, made his reports to the Home Office through him, and the witness was responsible for them. He presented an annual report to Parliament for the whole of Great Britain. Asked to describe his duties, Professor Thane said the Act only mentioned that the inspector must visit from time to time all registered places for the purpose of securing compliance with the provisions of the Act. In addition to paying visits of inspection to the places where experiments were desired to be, or were, performed, all papers relating to registration of places, applications for licences, certificates granted and questions, whether in Parliament or by private communications, and other matters arising out of the administration of the Act, were referred to him, and he advised upon them. He or his colleague read the publications containing accounts of experiments sent in by the licensees, and reported as to the due observance of the provisions of the Act and of the conditions under which the licences were granted or the certificates allowed to come into operation. He received reports of experiments from the licensees, and from them he prepared the return presented to Parliament each year. No important step was taken in the administration of the Act without his being consulted. No private houses, but some private premises—that is, premises not belonging to a public institution—were registered. All those premises he visited. When an application for the registration of premises for the performance of experiments came to him, he ascertained in the first place what was proposed to be done, what kind of experiments, and with what object; he considered, also, whether there were any circumstances as to ownership, control, or the like, which would make it undesirable to grant registration. These being found satisfactory, he visited the place and saw if the premises were suitable for the proposed experiments, that no danger or inconvenience to the public were likely to arise, and that there was proper accommodation for the animals. When he was satisfied as to all these things he recommended registration. The registered places were mostly laboratories, often with outbuildings, such as animal houses and stables, and perhaps paddocks or yards attached. These laboratories were generally connected with universities, colleges, and hospitals, but some were independent of any teaching institution, being municipal laboratories where public health work was done. Examples of these were Aberdeen, Cardiff, Colchester, Glasgow, and Hamilton. Although Walton Sewage Farm and West Derby Sewage Farm were public property, he found that official experiments were not done there. The investigators performed their own research experiments there, and the Corporation work of Liverpool, which he thought was done in those farms, was done in the University buildings. Then there were Shuttlefast Farm, Malvern Wells, Worcester, Wakefield, and stables at Balham in the occupation of the Metropolitan Asylums Board. Such premises might also be Government laboratories. The Board of Agriculture had two places, a laboratory at 4, Whitehall Place, and the Poplars, Sudbury, Harrow. Then there were the two farms, Blythwood and Walpole, at Stansted, occupied by the Royal Commission on Tuberculosis. There were also research institutions, such as the Lister Institute of Preventive Medicine at Chelsea and Aldenham, and Gatty Marine Laboratory, St. Andrews, and the Imperial Cancer Research Fund at Ponsfall's Farm, Hatfield, and laboratories of manufacturing chemists, such as Wellcome's at Brockwell Hall, and Brady and Martin's at Newcastle-on-Tyne. Recently a tract of heather at Frimley, in Surrey, had been registered to allow of experiments being carried out on behalf of the Committee appointed by the President of the Board of Agriculture and Fisheries to investigate grouse disease. Generally speaking, the municipal establishments were for doing the public health work of the district, diagnosis of disease, testing diphtheria, tuberculosis, and anthrax in the district. There might be a little research in some of these places as well, but they were not primarily for that, but for diagnosis. It was always officials of the Corporation or public body concerned that did the work. In the case of the Royal Commission on Tuberculosis, working on the two farms at Stansted, the licensees were all employed and paid a salary by the Commission. The Lister Institute and all the others had salaried licensees attached to them, but there were places, like the Lister Institute, where there were also other unsalaried licensees who were making scientific investigations and researches. Private premises were inquired into in just the same way. In his experience it had been the practice of the Home Office to refuse registration to private premises unless very strong reason was shown. He considered it a great safeguard against abuses that a public institution was under the control of a council, or committee, or governing body of some kind, composed of persons of more or less distinction, and occupying responsible positions, and that the laboratory was directed by a scientific head responsible for what went on in it. The only cases in which private premises were registered for the performance of experiments were the pharmaceutical laboratories of Messrs. Wellcome and Co., and of Messrs. Brady and Martin, Limited, and the tract of heather at Frimley. The pharmaceutical laboratories were registered by reason of the necessity of testing by experiments on animals the efficacy of certain drugs which could not be standardized by means of chemical processes, after prolonged consideration and inquiry had shown that there was no possibility of getting such standardization done in an official laboratory. Antitoxin was the chief thing standardized in that way in these experiments. The Frimley heather was registered because grouse would not live in confinement, and it was necessary to keep them in their natural surroundings; to have refused registration in that case would have rendered it impossible for the Grouse Disease Committee to carry out the investigation to find out the nature of the disease and its cause, for which they were appointed by the President of the Board of Agriculture and Fisheries. In reply to Mr. Tomkinson, the witness said he was told it was a very good thing that grouse did not live at Frimley, because there could be no grouse disease there, and they were sure they had a place that was not affected. The licensee was Dr. Seligmann. The Grouse Disease Committee chose the place. The witness visited it and saw that there was no objection to the experiments being made there. There were at present six licensees authorized to perform experiments outside registered places. The number of licensees in Great Britain at the present moment was 353. In his district there were 209; in the Northern District, 133. There were also 11 who were authorized to perform experiments in both districts. With regard to the licensees authorized to perform experiments outside registered places, the witness explained that the permission had been granted in order to allow them to study on the spot outbreaks of disease in animals which could not be dealt with in a laboratory. In three other cases, within the last few years, licensees had been allowed to perform experiments in connexion with "caisson disease"—or the effects following exposure to the influence of compressed air—at places that were not registered. These were the premises of a firm of diving engineers, and the bridge works at Newcastle-on-Tyne; they were open to inspection, and the former were visited by him several times. The latter were not visited, as the works were removed about a week after the permission had been given. As an instance of what he meant by the necessity for studying outbreaks of disease on the spot, the witness said that braxy in Scotland broke out on farms a long way from any laboratory or registered place, and it was necessary to examine a large number of sheep, and also to inoculate guinea-pigs from them. The animals could not be brought to a laboratory. Blackwater or blackquarter was another disease that broke out in the same way and affected the whole flock. The experiments allowed under these circumstances were only inoculations. As to caisson disease, men had to work under water at a considerable depth in the diving-bell, and, according to the greater depth to which this was let down, the greater was the atmospheric pressure; and it was found that people exposed to this great

atmospheric pressure suffered very much afterwards, and even were killed. The witness read a memorandum given him by Dr. Leonard Hill, who had made the experiments. It stated that the disease might come on in very various places. The exposure to the high pressure caused the fluids of the body, especially the blood, to take up a much larger quantity of atmospheric air than it could usually absorb, and especially nitrogen; when the pressure was withdrawn this gas was given off again just as the gas was given off by a soda-water bottle when the cork was taken out. A little bubbling of the blood went on inside the body, and the little bubbles of air might block up vessels and so cause very great injury. The tissues could not carry on their functions properly unless they were supplied with blood. This might happen in a limb, or in any organ of the body; it might happen in the brain. Sometimes there was pain in the limbs, or there might be interference with the functions of the nervous system; then it would appear as brain disease —as paralysis, perhaps. If it affected the vital centre of the brain it would be sudden death. The experiments were made by exposing animals in a chamber to compressed air. The witness showed a representation of such an experimental chamber in which the experimenters had been exposing them to a pressure of seven atmospheres—an immense pressure—to see if this could be done safely, after they had done it on the animals. In that chamber they got a higher pressure than in any of the caissons, representing a depth of 210 ft., or seven atmospheres. What they found was that, in order to prevent ill-effects from exposure to increased pressure, the return to normal pressure must be carried out very slowly; if they allowed it to go on very slowly, the air which was dissolved in the blood was given off very gradually. In reply to a question as to applications for licences, the witness said every application made in proper form and duly signed was referred to him. The application was made to the Home Secretary, and after being examined in the Home Office, it was sent to the Association for the Advancement of Medicine by Research, which advised the Home Office independently before it came to him. In one or two cases where there had been special reference to the Association—a second reference—he had communicated with them in order to explain to the secretary what the point was. Otherwise he had no communication with the Association. Asked how he satisfied himself as to the qualifications of the operator, the witness said he must have had a proper training to do the work, and he must have sufficient knowledge to be able to arrange the work and carry it out. He did not inquire about humanity. He would not regard any one who had previously been found breaking the law as a suitable person. Several licensees did not possess a medical qualification; some of them were graduates in science. Three of these held appointments in municipal laboratories. The licence would entitle such a person to perform operations under anaesthetics, killing the animal off, under a licence alone. As a matter of fact they did not do that. In reply to the Chairman, who said he did not understand why in a case of this sort a condition not put on the licence, if it were given to a chemist, that he was not to experiment with the knife, the witness said it was difficult to do that. Some of the inoculations he had to perform would require a small incision. Perhaps he had to do an inoculation for rabies, and there he had to make a small cut in order to trephine the rabbit's skull. The three licensees referred to were competent to do such an operation. He could not remember now whether they had done any rabies work. In reply to further questions he said they had applications from students at times, and in such cases if the licence was granted it was usually with the condition that experiments should be performed only under the supervision of the director of the laboratory concerned. The witness would not sanction the granting of a licence to a person *in statu pupillari* under the supervision of somebody who was not licensed. He did not think it possible that that could happen. All certificates submitted by licensees being duly signed were referred to the inspector. That was done by the Home Office directly after consulting the Association for the Advancement of Medicine by Research again. Asked what guided him in advising them, the witness said he had to consider whether the experiments were of a useful character, likely to add to our stock of knowledge, which was of service in dealing with disease either in man or animal, or to advance physiological and pathological science; whether the experiments were likely to entail much pain or suffering on the animals, what number of experiments it was desirable to allow, and what conditions should be imposed with respect to the experiments. Where there were licences to operate on dogs or cats special certificates were required; E or EE for dogs or cats, or F for horses, asses, or mules; and in that case he had further to consider whether the experiments were of such a kind that they must be performed on cats or dogs, or on the horse, ass, or mule respectively. The consideration which guided him there was that such experiments could not be done on other animals. For instance, distemper could not be given to a rabbit or guinea-pig. There were also a good many experiments for which the other animals were too small, and they would not react in the way desired. Owing to physiological differences, the results perhaps could not be obtained on a rabbit or a guinea pig. They would not sanction an experiment on a cat or a dog which could be done on any other animal. In reply to Dr. Gaskell, the witness said that only applied to a certificate, because under a licence there was no restriction as to animals except a horse, ass, or a mule. In reply to the Chairman, he said that was a matter the Association advised the Home Secretary upon. When an application for a certificate was referred to him, he had before him the advice sent by the Association, and that helped to guide him. The Association gave written reports in each case. Asked if he obtained expert opinions in particular cases, Professor Thane said he frequently inquired of persons who had knowledge of special subjects for information as to the nature of the experiments and whether they were likely to be useful, or whether it was the case that they could not be carried out in such and such an animal. The witness went on to say that certificates dispensing with the use of anaesthetics were submitted to him. As far as he knew, since he had been inspector, they had only been allowed for such proceedings as injections, simple inoculations, vaccinations, inunctions, and feeding experiments, or the abstraction of small quantities of blood—all performed without anything that could properly be called an "operation," and all proceedings for which an anaesthetic would not be administered to the human subject. In no instance had a certificate dispensing with the use of anaesthetics been allowed for an experiment involving a serious operation. Certain experiments made on drowning dogs, and the compressed air experiments, were performed without anaesthetics. Asked as to his practice in regard to inspections, the witness said he paid visits almost always without notice. If he particularly wanted to meet a licensee, he made an appointment, but that happened infrequently. When he visited a place at a distance, where but little experimental work was done, he sometimes, but not always, sent word that he was coming, as otherwise he might not meet anybody, and possibly might not be able to get into the premises. These several places were visited on an average about three times a year. A few, where there was not much experimental work going on, were not visited so frequently; some were visited more frequently, but most of the educational institutions were visited at least once in each of the three terms of the academic year. In reply to Sir William Collins, he said that applied to medical schools, which were generally at hospitals and universities. He went on to say that when making an inspection he went round the laboratory, generally accompanied by a licensee, and discussed with the licensees what kind of experiments they were doing. He explained to them the requirements of the Act and of the Secretary of State. He often inspected their registers and made a careful examination of the animals in the laboratory, or in the animal houses, both those "in stock" and those under experiment. The condition of the latter especially was noted and recorded. By those "in stock" he meant animals which had not yet been used for experiment. If he found an experiment going on he proceeded to witness it. He ascertained what was being done, and whether the conditions laid down were being duly observed. All this, together with a full account of his visit, was reported to the Secretary of State. Asked as to the number of experiments he personally witnessed, Professor Thane said the number was necessarily dependent on accident, as his

visits were made without notice, and he had no stated time for making inspections. He tried, as far as possible, to vary the times of his visits. From the time he took up the duties of the office until the close of 1905, that was six and a half years, he had witnessed 97 experiments, and Mr. Trotter, while he was acting for him last year for three months while he was ill, witnessed 3. Asked what irregularities, if any, he had found in the course of his inspections, he said he had not found any irregularities in this respect. The animals were always effectively anaesthetized. He had not seen, nor had he ever heard of, any procedure that was seriously painful being performed without anaesthesia. In his experience, anaesthesia was practised in an experimental laboratory as an essential part of the procedure, a matter of course. In fact, anaesthesia and asepsis were carried out in the laboratory, to the best of his knowledge and belief, as strictly as in the operating theatre of a hospital. Asked as to the condition of the animals which were the subjects of experiment, he said he had seen habitually large numbers of animals that were being experimented on under Certificate A, a few under Certificates A and E (cats and dogs), very few under A and F (horse, ass, or mule), that is, without the use of anaesthetics. The animals were mostly guinea-pigs; there were a good many rabbits, mice, and rats, a few monkeys, cattle, goats, and pigs; and a few birds—fowls and pigeons. The general impression one got from seeing the animals was that they had little or nothing the matter with them. It was a constant experience that one could not tell by inspection whether anything had been done to them or not. The same thing was experienced by the licensees, and even at times by the attendants, who were naturally the most familiar with the animals, unless there was a systematic separation of the experimental from the normal animals; without that separation everyone was dependent on the labels, or perhaps on markings on the animals. A large number of those experiments were negative; nothing followed the injection or inoculation; the animal remained in perfect health. Secondly, in infection with tuberculosis, and in testing antidiphtheritic serum, which together made up a considerable proportion of the experiments in question, the animals did not appear to be in pain, or show any indications of suffering, for at all events a considerable time if at all, unless a very large dose of diphtheritic toxin had been administered, and that was not common. They had to inject toxin as well as antitoxin, and sometimes if they introduced a large dose of toxin the animal would be struck down very quickly. Generally it was some days before the effect was felt. They administered mixtures, and in one case there was a larger amount of toxin to antitoxin, and in the other case less. The period of suffering was not prolonged, as the poisoned animals died soon. The tuberculous animals might generally be killed as soon as the infection was definitely established. Asked if there were any experiments that he could describe as being really painful, the witness said it was certain that in some experiments performed under Certificate A, the infection was followed by great pain and suffering. He might mention the injection of tetanus toxin and the infection with plague; also the insertion of certain drugs. Tetanus toxin would produce tetanus, which was known to be a painful disease in man, and was manifested by convulsions of a painful nature; therefore, one feared that the animals were suffering pain similarly. Injection with plague made the animals very ill and made them look miserable. He did not know whether there was much active pain in bubonic plague. In reply to Sir William Collins, he said animals which had plague seemed to be very ill, and he assumed that they were suffering. One of the drugs which caused painful symptoms was strychnine, which might be used sometimes. These formed but a very small proportion of the experiments in question. The investigations on the plague were very limited, and he very seldom saw animals that had been injected with tetanus toxin. In regard to pain after inoculation, Professor Thane referred to his report for the year 1900. in which he explained fully the position with regard to those experiments. Asked as to cancer research, he said that because cancer was, though not in all cases, a painful affection in man, the view seemed to be held that those experiments on animals were necessarily attended with great pain and suffering. That did not follow. He believed that attempts to inoculate animals with cancer growths had failed, except in the case of certain tumours in mice and rats. It was obviously impossible to say to what extent mice in which such tumours were growing were suffering pain; but observation of their behaviour and habits did not justify the assumption that, so long, at all events, as the tumour was of moderate size, they were suffering acutely or severely. He did not think it would be right to speak of these animals as being "tortured." He went on to say that animals experimented on under Certificate B or B, EE (cats and dogs) or BF (horse, ass, or mule) were generally the subjects of operations performed under an anaesthetic, from the effects of which the animal was allowed to recover. In some cases the experiment required a second operation; and it might be that stimulation of a part of the brain or spinal cord or of the nerves, had to be carried out. In no case had such proceedings been allowed without anaesthetics, and where there was reason to think that anything of the kind was contemplated, or might be required in the course of the experiment, a special condition was affixed to the licence that all operative procedures should be carried out under anaesthetics. It was further required that all operations should be performed with antiseptic precautions, so that the wounds should be in the most favourable condition for healing quickly and without pain. It was obvious that if a licensee desired to make experiments upon the production and cure of sepsis and septicaemia the antiseptic condition could not be imposed; but he could recall only one instance in which this had been the case. A licensee presented a certificate asking permission to perform certain experiments to produce sepsis, and to find a preventive for sepsis; that was how they knew it. The witness went on to say that when in operations under these certificates the operation had been performed and the wound healed, it did not follow that the animal remained in a state of pain or suffering. In a large number of cases its health was not disturbed, as the affection produced was strictly local, and not of a painful character. In a large class of experiments, those having for their object the elucidation of the structure and functions of the nervous system, such proceedings as section of the brain or spinal cord, excision of a part of the brain, and division of nerves, did not in themselves give rise to pain; their effect was to prevent sensation being transmitted or perceived, so that they could not produce pain in the affected or paralysed parts. Again, excisions of organs were not necessarily followed by suffering. He had seen many animals in which operations of this kind had been performed, and the animals seemed none the worse for it. There were more severe cases. Excision of both suprarenals caused severe shock, and was probably speedily followed by the death of the animal; removal of a large portion of the second kidney or excision of the thyroid gland made the animal very ill, and probably led to a fatal termination, although it did not cause acute pain. Operations on the stomach, intestine, and pancreas varied greatly in intensity; some, such as the formation of an ordinary gastric or intestinal fistula, were, from the surgical point of view, comparatively simple, and could be performed without great danger to life or subsequent inconvenience. The same was the case with regard to operations on vessels, ligature of arteries and veins, for example. Painful irritation of cutaneous and mucous surfaces were cases in which there was pain after the operation had gone off, although they may not be very severe operations. In reply to Sir W. Collins, the witness said that, apart from the cases mentioned, and from cases of mucous and cutaneous irritation, the great majority of experiments carried out under Certificates B, B, EE, and BF did not result in considerable pain. In reply to further questions, the witness said the most frequent irregularity, of which there were one or two instances every year, was that a licensee holding only Certificate A (or A E), which allowed of inoculations being performed without anaesthetics, administered an anaesthetic to the animal while making the injection. There was no cruelty, or even infliction of pain, in this; nevertheless it was an irregularity, because the Act required a different form of certificate (that known as B, or B, EE, if the experiment was upon a dog or cat) when an anaesthetic was used and the animal was allowed to recover therefrom, from that which authorized experiments to be performed

entirely without anaesthetics. Next in frequency was the performance of a larger number of experiments (practically always inoculations) than the certificate was given for, or performing experiments which required the authority of a certificate after the period for which the certificate was given had expired. A few cases had occurred of injections being made into cats or dogs without the licensee obtaining a Certificate E to accompany the A which he held; of experiments being performed on animals not specified in the certificates; and of a licensee performing experiments at a place for which his licence was not available. In a very few instances experiments requiring Certificate B—in one case B. EE had been performed without the certificate having been submitted by the licensee, and some experiments had been performed by persons not holding licences. These irregularities had arisen from misunderstanding, ignorance, and at times want of attention and care. He had not met with any deliberate opposition or wilful disregard of the Act. The witness went on to say that at the close of each year he obtained returns from all licensees of the number and nature of the experiments they had performed during the year, and from these his report—and especially Table IV—was made up. He then had to compare the returns with the licences and certificates of the licensees, to see that the terms of the Act and the conditions imposed by the Secretary of State had been complied with. At the same time the licences—which were all made to expire on the last day of February—and the certificates held by licensees were reviewed, and the removal of the one and the continuance of the other for the coming year were dealt with. As to the detection of irregularities, this was generally through the reports and returns made by the licensees. There were not many cases in which he had succeeded in detecting irregularities, but when he began to inspect, two or three cases occurred of experiments being performed by persons who were not licensees, that is to say, that the licensee had delegated his authority, so to say, to somebody who did not hold a licence, and allowed him to perform one or two experiments. That was dealt with in his first report, in the year 1899, printed in 1900. The licences were not revoked in those cases. One of the unlicensed persons applied for a licence, and was refused. He was licensed now. There had been no such cases since that time. To show what had been done by the Home Office to prevent these cases occurring, the witness presented copies of three letters which were sent whenever premises were registered or licences granted. The following letter was sent with the registration

I am directed by the Secretary of State to inform you that [illegible] has been registered as a place at which experiments on living animals may be performed. I am at the same time to say that the Secretary of State relies upon the co-operation of the laboratory authorities in requiring the [illegible] within the registered premises, of all the provisions of the Act [illegible] and 40 Vict., cap. 77. He desires that their attention should be particularly drawn to the fact that it is only the person to whom a licence has been granted who is entitled to perform experiments under the Act, and that the holder of a licence cannot delegate any of the powers conferred upon him by his licence or certificate to any other person whatever, or to each person to [illegible] under the Act.

That was when the premises were registered. That was first sent very soon after 1899; he supposed it was drawn up about 1902. It was the result of his report. The next step was the following letter, which went to a licensee when a licence was granted

I am directed by the Secretary of State to transmit to you herewith, with reference to your application of the [illegible] licence to perform experiments on living animals within the [illegible] granted to you on the [illegible] day of [illegible] 1876, and 49 Vict., cap. 77. I am at the same time to point out that you are required to keep a record of all experiments performed by you in pursuance of your licence or of any certificate granted with your licence. Such record may be kept in the annexed form, or in such other form as the member in the [illegible] of the Secretary of State, or a copy of the entries in the book of the laboratory should be supplied to [illegible] Under the Act [illegible] whenever it may be required by him. I am [illegible] to call your attention to the fact that [illegible] Secretary of State does not [illegible] delegate to [illegible] any of the powers [illegible] to perform, in whole or in part, such experiments as are covered by the licence or by a certificate under the Act.

The third was essentially the same. The foregoing was sent when a licence was granted alone. This was when a licence and certificate were granted—when there were certificates accompanying the licence. It ended in just the same way:

The Secretary of State would warn you that a licensee under the Act may not delegate his authority to another person to perform, in whole or in part, such experiments as are covered by the licence, or by a certificate under the Act.

So that in all cases persons were warned that they must not delegate their authority. Since then they had not found any irregularities of this kind. Asked how the irregularities in 1899 were discovered, the witness said he saw animals there, and asked who was operating on them. He was told, and then he reported the matter. In reply to Sir William Collins, he said the licensee was not asked to give any undertaking as to carrying out the conditions attached to the licence, but he supposed there was a tacit undertaking. He signed only the application form. Another minor offence was that a licensee was performing experiments at a place for which his licence was not available, and that he found out because he found certain animals there which were said to belong to him. He was a licensee, but not in premises for which he was licensed. The witness inquired about this, and it came out that the experimenter had moved his animals from the place for which he was licensed to this other place, and he said he was doing work for this public body, and had injected some milks for some public body to test whether the milk was free from tubercle. In reply to Mr. Tomkinson he said the licence specified the premises. When a person was licensed he was authorized to perform experiments at a particular place or places, and nowhere else.

Evidence of Sir James Russell, LL.D., F.R.C.P.

Examined by Sir William Collins, Sir James Russell said he served for twenty years on the Town Council of Edinburgh. He was a magistrate and bailie for several years and took his turn as judge in the police court and burgh court, and was Lord Provost and Lord Lieutenant for three years. He had not himself performed experiments upon living animals. He was appointed Assistant-Inspector under the Cruelty to Animals Act in August, 1890. He was Inspector of Anatomy for Scotland. He thought the Vivisection Act had been worked with extreme care and with a strictness greatly surpassing that used in the administration of any other Act with which he had been concerned. With reference to the interpretation of the word 'pain' in regard to the Vivisection Act, he said the word had been taken not in the popular sense, but in a much wider sense; whatever was supposed to cause the slightest discomfort or uneasiness had been taken to be calculated to give pain. In regard to the granting of licences, he took very much the same steps as those described by Professor Thane. Asked if he had sometimes witnessed the first of a series of experiments, he said he was ordered to do so by the Home Office in the early days several times. He very seldom did so now. In the area for which he was more immediately responsible, certificates had often been modified or refused altogether on the ground sometimes that the certificate was irregular in form, sometimes that the experiments seemed to be too severe; sometimes that they did not seem to promise any [illegible] object. His practice generally concurred with that of Professor Thane in regard to inspection of premises for registration. When he took office first, the late Dr. Penny, then Chief Inspector, wrote to tell him that he was bound to inspect places about three times a year, but expressly said he was not expected to act as a detective. In practice, some registered places had been visited much more frequently. Last year he sent in reports of 146 visits. The number of registered places within his purview was 56. He very rarely gave notice of his intention to visit. He had never had the least difficulty in making his observations in laboratories. He simply walked into them and had always found the doors open. Last week he found no one in a laboratory, and he walked all through the place, and went to the animal house to examine the animals there, when he was on the point of going away, he met an attendant, and went back and visited the animals with him to get information. He often

visited in the absence of the licensee. He had constant difficulty in distinguishing between the animals which had been experimented upon and those which had not. It was sometimes difficult to find a trace of use when a particular animal was caught and put on the table, even after a surgical operation. In reply to Sir William Collins, the witness said recovery from anaesthesia in such animals as were operated upon was generally very rapid. In reply to further questions, he said he had found animals which had been the subject of experiment suffering what he considered pain. Asked to specify any class of cases which were painful, he said, first of all there were cases following the administration of certain drugs. A licensee told him that when he put small quantities of chromic acid into certain animals they indicated pain. He saw the animals afterwards, sometimes often afterwards. Another licensee spoke of giving a New Zealand cattle poison, called toot, found in plants (coriaria), to rabbits, causing convulsions, and he said this indicated to him that the animals suffered much pain, but he added that men who had been poisoned by the same plants in New Zealand had no recollection of pain or convulsions. He saw a great many rats and some guinea-pigs infected with plague during the last plague outburst in this country in at least three places, and one or two of those were wild rats, which seemed to him miserable and dying, evidently in suffering. Another animal poison, of which he heard as causing pain, was snake venom. He had not seen any indication of pain in the behaviour of an animal from cobra venom, but he had been told that daboya venom put into a cat caused indications of severe pain. As to thyroid glands and parathyroid glands, he happened to have seen a great number of cases of excision of the thyroid gland from the year 1890 onwards, and most of the animals, the great majority of them, did not seem to suffer at all; but in a few rather recent cases, when these glands were removed from carnivorous animals, the removal gave rise to nervous symptoms in some of them, which he thought indicated pain. He saw two cases himself. The first monkeys he saw with the thyroid removed were treated for a couple of years, under his observation from time to time, with injection of thyroid extract, and that might have accounted for their not showing any symptoms. In reply to a further question, the witness said an ordinary surgical operation on an animal under Certificate B would take from five to twenty minutes. An experiment under licence alone meant an experiment under anaesthesia where the animal was killed before it recovered from the anaesthesia. Those experiments were mostly blood pressures for testing the effects of drugs with tubes attached to the arteries, and artificial respiration in some cases. Those were generally very prolonged—from one to three or four hours. He always tested the anaesthesia by testing the reflexes. Asked if he generally found that the tendency of licensees was to administer anaesthesia in excess or otherwise, he said he did not think the licensees would dare to do in a hospital what they did in laboratories in the way of giving anaesthesia. He had frequently seen animals they had killed before beginning the operation owing to pushing the anaesthesia too far. On several occasions he had found licensees with dead animals in their hands before they had begun experimenting, owing to over-dosing with chloroform or ether. His own private opinion was that whatever would affect the appetite or raise the temperature of an animal must be held to give some degree of pain, or of uneasiness amounting officially to pain. In some cases practically the only indication that the animal was suffering from anything was that the temperature was somewhat raised or that the animal was losing flesh. He thought want of appetite and loss of flesh were even better guides in the lower animals than they were in man. He did not mean to say that in every case of that sort there was severe pain; it was a pain comparable to that felt by a human being suffering from diseases which would cause similar effects. He had seen dogs after considerable surgical operations had been performed on them, and they sometimes gave him a great deal of trouble. There was one laboratory in which they had a number of operated-upon dogs, and they let them turn out in the yard after a day's rest following the operation. When he appeared there and entered the animals' houses there was always a crowd of them, as many as half a dozen, rushing upon him and wishing to chase the rabbits and catch the guinea-pigs, and he had had to get several servants to rescue the other animals. He had made it his practice to examine the laboratory books of licensees, and he found that licensees had great difficulty in understanding the Act and the powers conferred by their certificate. He felt persuaded that, unless they had an inspector going round and keeping them right from time to time, they would commit many irregularities, especially that of giving anaesthesia when they only held Certificate A. He thought it would be a good thing, but he did not see how it could be worked out, if cocaine or some local anaesthetic were allowable along with Certificate A. There was another difference between Certificate A and Certificate B which depended upon the Act of Parliament. A man was not bound to kill an animal used under Certificate A when he had finished the experiment, but the Act expressly said that when an animal was used under Certificate B it must be killed at the conclusion of the experiment. This might be a month or two after, but it must die the death legally. That seemed to him a great hardship. If an animal happened to be injected by the licensee under Certificate A, it need not lose its life; but if the licensee was afraid of hurting the animal by the prick of the needle, and spread cocaine on the spot, or gave ether to the animal, the animal was bound to lose its life, as it would under Certificate B. He had seen animals which had been under Certificate B, and turned into pets, and he supposed his legal duty was to tell the people, "Now, you must kill that animal." In reply to Sir William Collins the witness said that in 1899 he made 80 inspections, and only saw two experiments on animals except frogs—there were some frogs besides. In 1900 he made 96 inspections, and only saw two experiments. He did not call inoculations experiments, but he meant real surgical proceedings. In 1901 he made 98 inspections, and saw three experiments. In 1903 he made 143 visits and saw eight experiments. In 1904 he made 132 visits and saw nine experiments; and in 1905 he made 145 visits and saw eight experiments. He very frequently saw animals which had been subjected to experiments within an hour of his visit. From his experience during the last sixteen years he did not think the administration of the Cruelty to Animals Act had operated in the direction of preventing legitimate physiological and pathological research. Some licensees had complained to him, but he thought without any serious cause, of delay in handling their papers. Sometimes that delay occurred from their own stupidity in the way in which they filled them up. Then there was sometimes delay from the Association to which the applications were sent in the first instance, because the Association only met at certain intervals, and occasionally he believed there had been delay through the Secretary of State not being available to sign the papers, but that was only a matter of a few days. On the whole, he was quite satisfied, from that point of view, that the Act had worked with substantial smoothness. Asked whether he had any experience of experiments under Certificate C—that is to say, demonstration experiments—he said he had seen Certificate C experiments prepared on several occasions just before they went in before the students. He thought it was beyond his province to express any opinion upon the necessity and desirabilily of such experiments. Asked as to the reduplication of experiments already made, he said that was a very difficult point, because second experiments sometimes brought out points which were overlooked and corrected erroneous ideas which were formed from the first ones. His own ideas about the consequences of the removal of the thyroid gland had been completely upset by the more recent experiments he had seen, as compared with the ideas he had formed from the earlier ones in 1890 and 1891. There were a certain number of experiments which could be described made practically for testing or re-testing results or alleged results from previous experiments. It was impossible to speak of finality in matters of science. In reply to Sir John McFadyean, he said only a minority of animals experimented upon felt any pain at all, and only a very small minority suffered serious pain. He had not seen anything indicating pain so acute as the severity, say, of colic. Asked whether he really thought his surprise visits exercised any real restraining effect upon the licensees in the direction of keeping

them from wilfully violating the provisions of the Act, he said he had never had any reason to believe that any licensee with whom he had to do wilfully violated the Act. If he thought a man was likely to violate the Act wilfully, he would never recommend his papers to be passed. He had no reason to believe that unlicensed experiments went on. He did not think it would be possible for any considerable number of experiments to be performed by unlicensed persons without the fact coming out—certainly not in registered places. He had never heard of anything of the kind in unlicensed places, but one would not be so certain to find it out. In England, under the Act, anybody who heard of an operation could prosecute; in Scotland it was the Procurator-Fiscal who instituted proceedings. Under the Vivisection Act, however, it required the consent of the Secretary of State for a prosecution, even in England. In reply to Mr. Ram, he said there were thirty-eight registered places in his district. The number of inspections had been growing. The number of licensees had been growing, and the number of experiments had been growing. And municipalities were now doing a good many experiments. He went on to say there was great safeguard in inspection. Inspection was essential to secure for the Home Office knowledge of what went on, and it kept licensees informed as to what they should do. If the character of the people was not such that they would not do wrong, he did not think that any amount of inspection would secure that they would behave themselves. He was quite satisfied with the amount of inspection. In reply to a question whether dogs, cats, and monkeys had the same susceptibility to pain which was found in other animals, he said his impression was that the more intelligent the animal was the more susceptible it was to pain. In reply to Sir William Collins, the witness said it would be quite impossible under any licence or certificate to demonstrate a painful experiment to a class. The animal must be under anaesthesia when it was being shown. In reply to Dr. Gaskell, he said the great majority of the places he had inspected were in towns; and there were really only a few places where there was accommodation for large animals. That was one reason why dogs and cats were much more convenient for such purposes than goats, and so on. He had never seen any sign of frivolity or wantonness in connexion with experimentation in scientific laboratories. In reply to Mr. Tomkinson, the witness said he was quite satisfied that the animals he had seen under long and severe observations had a very full dose of anaesthetics. He would not say it was very difficult to keep a dog just on the borderland between life and death. He had no reason to believe that dogs were more easily killed than, say, rabbits by over dosing with anaesthetics. They were generally more completely anaesthetized than a human being would be, and as carefully. The dog was generally tied up on a warm trough when it was a demonstration that went on for a long time, but for an ordinary minor operation that lasted a few minutes he would not be tied. He had never seen an experiment under a licence which was to last for hours without the dog being tied up and profoundly under anaesthesia. The tying was necessary to keep it steady in position and to guard against it struggling on regaining partial consciousness. When they put a number of delicate glass tubes into the carotid artery and the trachea or the veins of the dog were touched during the experiment and were to roll the least degree to one side or the other and break the tubes, it would lose some hours' work. Then the recording drum had to be adjusted to the hundredth of an inch or less. Therefore the very faintest movement, even a fraction of an inch, by the animal, or people working about it, would cause trouble. He believed curare was allowed to be used. He had not seen it used for years. He did see it once used in a blood-pressure experiment about fifteen years ago. In that case the anaesthetic was a very heavy dose of methane administered before the experiment began, and the animal was heavily narcotized. Curare was not, by the Act, considered an anaesthetic. It rendered both movement and voice impossible. He had never seen the smallest evidence of callousness to suffering. Experimentation was always looked upon as a very serious business to be undertaken with the greatest possible care, and several licensees had told him that they had refrained from doing experiments because they were afraid the animals might suffer. Asked if the Wellcome Research Laboratory at the Gordon College, Khartoum, was under the Home Office, the witness said he thought they had no jurisdiction in Khartoum. In reply to Dr. Wilson, he said that for class experiments frogs and rabbits chiefly, and some dogs, were used. The great majority of the frogs were pithed. These experiments were carried out in all the university schools. He did not know how the dogs were obtained, but licensees had told him what they paid for them. They might have been stolen and sold to the dealer who supplied them. He was not aware that the police ever disposed of dogs in that way in his part of the country. They had a raid every now and then under the Rabies Order, and got 500 or 600 stray dogs and drowned them; but he had never heard that the police sold them for vivisection purposes. A certain number of guinea-pigs were bred in laboratories, but the great majority were bought from the outside. Guinea-pigs were used on such a large scale that he had found it was actually a branch of farming. A farmer near Liverpool showed him 450 guinea-pigs which he was breeding for sale to laboratories. Dogs, if it was thought necessary, could be bred in the same way. He had never seen or heard of pet dogs being brought to a laboratory. He did not see why they should want them when they could so easily get dogs that nobody cared about from the regular dealers. The witness added that when he had asked about the provision of animals licensees had told him that one of their troubles was the care they had to exercise that they only bought dogs which had come in a proper and lawful way, because they felt it would be a disastrous thing if they bought and used a dog which belonged to some person who valued it. He did not know anything about the supply in London. He happened to know the administration of Edinburgh and Glasgow extremely well—and he knew the northern English towns that he visited fairly well—and he did not think there was any risk as regards that part of the country. In regard to the granting of licences, if he had any reason to go against the recommendation of the Association for the Advancement of Medicine by Research, he would do so at once. The only question he had to decide in sending his recommendations to Professor Thane was: "Will this cause any substantial pain to this animal?" Asked as to some experiments on resuscitation after drowning performed by Professor Schäfer on dogs, he said he did not know that they were going to take place, and did not see them. But Professor Schäfer, he thought, had made an improvement in the treatment of the apparently drowned in consequence. In reply to a question whether he thought it possible to keep a dog under complete anaesthesia for an hour and a half or longer, the witness said he saw no difficulty in it. In these cases the anaesthetic was almost always given mechanically by means of a pump or tube arrangement; it very seldom had to be given by hand. The consequence was that if the apparatus were once properly set it went on automatically. He had never seen the animals struggle; they were far too deeply under for that. Asked if he really had no doubt that the experimenter believed honestly that the animal operated on was thoroughly under an anaesthetic of some sort while even a prolonged operation was going on or a severe operation, the witness replied that was so. He added that if it was an operation before a class say in the Edinburgh University, where the professor had two hundred or three hundred critics in front of him—he thought he would be a very bold man, even if he had the heart to do such a thing, who would venture to show an experiment where the anaesthesia was not complete. Asked if these severe experiments were absolutely necessary for the proper teaching of physiology, the witness said he would rather leave the physiologists to speak about that. Since he was a student the objective teaching of all sciences had practically undergone a revolution. Asked whether almost all young medical men who went in for research studied on the Continent, the witness said a certain number of them did afterwards, but many could not afford to go on the Continent. He was not aware of any scholarship that made it a condition to go to the Continent for physiological or pathological research. With regard to inoculations in animals, he believed that the hypodermic needle caused very little pain. He knew of no places in Scotland registered for the manufacture of antitoxins. There were

in the North of England. In reply to Mr. Chalmers, the witness said the animals experimented upon by Professor Schäfer would not suffer more than the animals drowned by the police. In reply to further questions, he said much improvement had taken place since 1875 in the administration of anaesthetics. Precautions were taken now which were not taken then. He thought that under Certificate A an experimenter making a very slight incision might be allowed to administer a local anaesthetic like cocaine. Animals, like human beings, suffered to a certain extent from the anaesthetic. In reply to Dr. Gaskell, he said the difference in time between when the anaesthetic removed pain and when it caused death was of very considerable length, and there was a large difference in the length according to the amount of the anaesthetic given. Pain was the first thing to go and the last thing to come back. He had never seen any practical difficulty in keeping an animal under anaesthesia without pain, even although the time was long. In reply to Mr. Tomkinson, he said he did not think there was special difficulty in the case of dogs. Asked by Mr. Ram whether in Professor Schäfer's experiments it was essential that a dog should be used, the witness said it seemed to him there were several reasons why dogs were selected. One was that the animal was convenient in size; a second, that it was an intelligent animal, which aided some experiments very much; and a third reason probably was that it more resembled a human being than some other animals, so that there would be a nearer approximation to the actual condition of a drowning man. In reply to Sir John McFadyean, he said the thoracic region of the dog resembled that of man more than that of any other animal. Asked by Mr. Tomkinson if it would not be a natural conclusion that inasmuch as those senses of which we did know in the dog—namely, its sense of sight, hearing, and smell, of which men availed themselves so largely in the use of the animal—were so very sensitive and so very highly developed, the sense of touch and of pain must also be very highly developed, the witness said he drew the opposite conclusion. In the first place, it was not every kind of dog that was good at smelling, and it was not every kind of dog that was good at seeing. There were different breeds of dogs for hearing and for seeing, like the greyhound, and for smelling, like the bloodhound. He rather thought that when one quality was highly developed it was at the expense of other qualities. Asked by Dr. Wilson if there would be no pain upon resuscitation, the witness said he thought the dog was very pleased to be resuscitated. In reply to Sir John McFadyean, he said he thought that every one who had been nearly drowned said that the drowning process was painless; it was suffocation by carbonic acid gas. But it was no less true that in certain bad cases of resuscitation they had felt pain and discomfort. That was not so in all cases. He thought one animal suffered as much as another; and, speaking for himself, he did not like the suggestion that the difficulties of one animal should be rolled on to another. Allowing it to be possible that the dog was rather more sensitive than some other animals, owing to its higher intelligence, that had no bearing at all upon experiments during the whole course of which the dog was anaesthetized. The statements of Mr. Pritchard that dogs could not be chloroformed safely, and that they had a constantly intermittent pulse, were not at all consistent with his personal experience and his observation of experiments upon dogs. The Edinburgh Veterinary College was a licensed place, and operations on dogs under complete anaesthesia were now everyday occurrences there.

(To be continued.)

A Medico-Political Congress in Belgium.—At a meeting of the Council of the Belgian Medical Federation held at Brussels on February 7th, it was decided that the third congress of professional medicine, or, as we should call it, medical politics, should be held at Antwerp on July 13th and 14th, 1907. Two questions are to be discussed. One of these is the law relating to the compensation of workmen injured in accidents, with special reference to provision for the free choice of a doctor by the workman; the other is the expediency of creating special diplomas in medicine, especially in hygiene and medical jurisprudence.

LITERARY NOTES.

Dr. Charlton Bastian's recently-published book, *The Evolution of Life*, is, we are informed, to be translated into French and published by Félix Alcan in the International Scientific Series.

All unsuccessful suitors doubtless agree with Mr. Bumble in his opinion of the law. Without going so far, it may be said with all respect that the law makes some strange pronouncements. It used, we believe, to be held in this country that a mother was no relation to her own child. In France, we learn from the *Chronique Médicale*, it was once solemnly decided by the legal authorities—aided and abetted, it must be admitted, by the official oracles of medicine—that a child may have two fathers. The case is that of a former Bishop of Lucon, the penultimate incumbent of that see before the Revolution. The details of the case have been extracted from some unpublished memoirs by one André Collinet. It is there stated that in 1773 Mgr. Jacquemet Gaultier d'Ancyse, Bishop of Lucon, was declared by decree of the Parliament of Montpellier, and by the medical faculties of Paris and Montpellier, to be the son of two fathers. The Bishop's mother married first Messire Aimé Jacmet, a gentleman of Berry. The lady was apparently of opinion, like a character in Mr. Bernard Shaw's play, *The Doctor's Dilemma*, that the greatest proof man or woman can give that their married life has been happy is to marry again as soon as they have the chance. Three months after the death of her first husband she married François Gautier, and seven months later she gave birth to the future bishop. The bishop being anxious to know which of his mother's two husbands was his father, consulted the two faculties aforesaid. These learned bodies replied that he might be the progeny of both! On their report the parliament authorized him to take the names of Jacmet and Gautier, and to share with the children his mother had had by her two husbands in the paternal estates. The fact is confirmed by the two historians of the diocese, La Fontenelle de Vaudoré (*Histoire du Monastère et des Evêques de Lucon*) and du Tressay (*Histoire des Moines et des Evêques de Lucon*). The latter says:

> Claude Jacquemet-Gautier d'Ancyse was of a rich and honourable family of the bourgeoisie of Berry. His mother was twice married. The name of her first husband was Jacquemet, that of the second, Gaultier d'Ancyse. Her period of widowhood, between the two alliances, was so short that it could not be determined with certainty which was the father of young Claude. He was given the names of both, and inherited property from each of them.

Du Tressay adds that among the ordinances made by the bishop was one that priests should do their best to prevent widows marrying again within ten months of their first husband's decease. The bishop was probably thinking of his own confused paternity, though he might have found comfort in his two inheritances. The most curious point in the affair is that the two great medical faculties of France should have pronounced that a child might have two fathers. Was it partly with the object of preventing the raising of such problems in future that in the Code Napoléon *La recherche de la paternité est interdite?*

In an interesting paper read at the annual meeting of the Public Dispensers' Association and published in the *Pharmaceutical Journal* of February 9th, Mr. R. W. Lindsey, F.C.S., reviews the history of pharmacy in the olden time. The art was fairly advanced in ancient Egypt. A papyrus of the twelfth dynasty, about 2500 B.C., contains formulae for the preparation of remedies for various diseases, the substances used being cow's milk, beer, honey, onions, herbs and dates. In B.C. 1550 salt, alum, sulphate of copper and nitre were in use. Certain priests of Isis were probably the first pharmacists; they made up medicines to the prescription of the priest-physicians. Of vegetable remedies known to the Greeks and Romans the names of 150 have been preserved; among them were rye, cabbage, garlic, anise, rose, and lily. Myrrh, cardamoms, linseed, and cobwebs were used as astringents; and pennyroyal, sulphur, scammony, rue, and opium were known. From the animal kingdom numerous remedies were obtained, amongst which figured blood, hair, saliva, and different parts of man and beast. During the Middle Ages pharmacy was to a great extent under the control of Arabian

physicians, and was mainly in the hands of religious orders. The development of pharmacy was greatly influenced by the alchemists and by the search for the philosopher's stone and the elixir of life. The first apothecary's shop in London is mentioned in 1345. A prominent apothecary, Bulleyn, a cousin of the unfortunate Queen of that name, laid down the following rules for the practice of pharmacy:

The apothecary must first serve God, foresee the end, be cleanly, and pity the poor.

His place of dwelling and shop must be cleanly, to please the senses withal. His garden must be at hand with plenty of herbs, seeds, and roots. He must read Dioscorides. He must have his mortars, stills, pots, filters, glasses, boxes clean and sweet. He must have two places in his shop: one most clean for physic, and the base place for chirurgic stuff. He is neither to decrease nor diminish the physician's prescription: he is neither to buy nor sell rotten drugs. He must be able to open well a vein, for to help pleurisy. He is to meddle only in his own vocation, and to remember that his office is to be only the physician's cook.

Of the substances sold and the prices of drugs, an idea may be formed from the fact that borax was sold at 4s. per lb., mummy at 5s. 4d. per lb., jalap at 3s. 4d. per lb., ol. vitrioli at 5s. 4d. per lb., squills at 6d. per lb. Boar's teeth were sold at 1s. each; dead men's skulls, according to size, fetched 8s. to 11s. each; the price of sea-horse pizzle was 4d. per oz.; of sea horse tooth 4d. per oz. The financial condition of the mediaeval pharmacist and the environment in which he plied his trade may be gathered from the description given by Shakespeare in *Romeo and Juliet*. Romeo says:

> I do remember an apothecary,
> And hereabouts he dwells, whom late I noted
> In tatter'd weeds with overwhelming brows
> Culling of simples; meagre were his looks,
> Sharp misery had worn him to the bones,
> And in his needy shop a tortoise hung,
> An alligator stuff'd, and other skins
> Of ill-shaped fishes; and about his shelves
> A beggarly account of empty boxes,
> Green earthen pots, bladders and musty seeds,
> Remnants of packthread and old cakes of roses
> Were thinly scattered to make up a show.

MOTOR CARS FOR MEDICAL MEN.

TWELVE MONTHS WITH A MOTOR CAR.

By W. H. L. Marriner, M.B.,

A Detailed Account of Expenses.

The following notes are not intended for motorists, as I am only a beginner myself, but for those who are half inclined to purchase a car.

I sold my horses and bought a motor car in July, 1905. I had never driven a car, but had taken every opportunity of peering under the bonnets of cars belonging to friends and of listening to their motor talks; so I knew something about petrol engines but it was necessary to have some lessons. After four or five I went on a motor tour to Durham, with no assistant except my son, who knew less than I did. We had a most enjoyable and amusing month, and arrived home safely having travelled about 1,700 miles.

The car is a Coventry Humber, 8-10 h.p., 1905 model, with seats for four people. It has four cylinders and pneumatic tyres. On January 1st, 1906, it had been running nearly six months and had given no trouble except tyre accidents and slight electrical eccentricities.

The total cost, including horn, oil, side and tail lamps, two acetylene head lamps, Cape cart hood, Stepney wheel, spare tyre and inner tube, and test station was £294 2s. 1d. I had to get a new pair of outer covers in November, 1905, and these, I am happy to say, *last* almost as good as new.

I have carefully put down every penny of outlay during the year ending December 31st, 1906.

It will be noticed that there is in the detailed account no mention of motor coat and cap, livery, etc., nor of rent of motor house; both these items are common to both cars and horse vehicles; the horse owner, however, pays stable rent also.

The figures in the left-hand column refer to the explanatory notes which follow.

Total Expenses for the Year ending December 31st, 1906.

			£ s. d.	£ s. d.	£ s. d.
		Repairs and Renewals, Overhauling, etc.			
	Jan.	New ball-bearing cup for front wheel	0 5 0		
	March.	Three new platinum points for tremblers	0 10 6		
1.	April.	New hind axle and fittings £5 8 0	—		
2.	Aug. 3.	Repairs to radiator, new pinions for pump (10s. 6d.), and fitting	1 7 3		
2.	Aug. 28.	Repairs to radiator, adjusting steering, fitting new coil	1 14 0		
3.	Sept.	Overhauling carburetter, and new spindle	0 3 9		
		New pipe for end of exhaust	0 4 0		
		New brake bands and fitting	0 6 6		
4.	Dec.	Taking down engine, adjusting big end bearing brasses, cleaning piston rings, returning commutator and contact roller, drilling, tapping, and refitting screws in universal joint, making asbestos washers, reassembling and retiming engine, taking down and repacking glands, altering tapping pieces, setting valves and compression taps, making all connexions, fitting new studs where required, testing and fitting radiator, adjusting steering gear, altering water pipe to clear compression taps, testing, overhauling, and oiling. (Engineer's time 107 hours, assistant's time 21½ hours; washers, ⅜, new compression tap, ⅛)	11 9 8		
	Dec.	Repairs to radiator by the makers at Coventry	1 10 0		
		Renewals during the year: 4 fan belts, 4s.; 6 washers, 2s.; 2 glasses for oil tank, 1s. 6d.	0 7 6		
					17 18 2
		Tyre expenses:			
5.	Jan.	Retreading 2 outer covers with non-skid treads	5 15 0		
5.	April.	Retreading 2 outer covers with non-skid treads	5 15 0		
5.	June.	Retreading 1 outer cover with non-skid tread	2 17 6		
6.	June.	2 new inner tubes	3 15 2		
7.	June. to Aug.	3 Dunlop inner tubes exchanged for new ones	3 0 0		
8.	Aug.	2 Dunlop non-skid outer covers	12 17 10		
8.		8 new studs for rims	0 8 0		
		New tyre lifters	0 3 0		
	Dec.	Tyre repairs for the year, including patches, 5s., and French chalk, 1s.	1 7 6		
					35 19 0
9		Petrol for the year—241 gal.	15 16 10		
		Grease and oil	3 5 11		
					19 2 9
		Accumulators charging for the year			2 4 6
10	Dec.	4 plugs			0 18 0
		Sundries:			
		New petrol funnel	0 3 8		
		Spoke brush, sponges, leathers, etc.	0 11 6		
		Hose pipe	0 7 11		
		Brass polish 2s., enamel varnish etc.	0 10 6		
		Valve parts 6d., horn bulb, 3s.	0 3 6		
		Sheet of [illegible] 1s., brass [illegible]	0 1 3		
					1 18 4
		Canvas wheel [illegible]	0 15 6		
		Canvas Cover for Stepney wheel	0 3 6		
					0 19 0
		Carriage of tyres radiator, etc.	0 12 8		0 12 8
		Motor licence, annual	2 2 0		
		Motor Union subscription, annual	1 1 0		
		2 driving licences, annual	0 10 0		
		[illegible] for [illegible] year	0 15 0		
					4 8 0
11.		[illegible]			11 0 0
					95 0 5

1. This item was paid by the insurance company. Fortunately I was going very slowly when the axle broke; there must have been a flaw in the steel.

2. The radiator began to leak during the holiday tour, and was repaired twice in Yorkshire by a tinsmith, and was leaky when we got home again. My man patched it up with plenty of solder, and although it was not a pretty job, it kept the radiator watertight.

3. The coil had not been working well for some time; I thought there was a short circuit in it, and after some correspondence with the Humber people they very kindly sent me a new one. It arrived while the car was in dock on account of the radiator.

4. The engine had not been running well for a few days; the diagnosis was dirty cylinders and loose "big ends," and the treatment a general overhaul. It will be noticed that the repairer has put down in the bill the amount of time occupied over the job; 107 hours seems excessive; there is nothing, however, for renewal of parts, and I shall not grumble if the next overhaul costs no more. I may mention that my man acted as assistant most of the time. I do not think many motor engineers would allow this.

5. The new pair of outer covers was purchased in November, 1905, not because the original tyres were worn out, but because they were smooth and very "skiddy" on the wet wood pavements. I was so pleased with the Lovelace treads, that I had all the partly-worn tyres retreaded on the same principle.

6. About this time we had much trouble with punctures, so bought two new inner tubes. The "punctures" had always looked like "pinches."

7. On more careful examination of the old tubes we thought they looked suspiciously old and rotten; so I got a local agent to send them to the makers, who promptly offered new ones in exchange for £1 each. Consequently I have now a good stock of tubes. Two of them have not yet been used.

8. During the holiday tour in the hot weather the retreaded tyres "gave out" one after the other, so that on the way home from Scotland we ran fifty miles on the Stepney wheel, and I bought a pair of Dunlop non-skids in Yorkshire.

9. Unfortunately I have no "mileometer," and cannot, therefore, give an accurate mileage. It is certainly more than 5,000 miles in the twelve months.

10. The original plugs supplied with the car were showing signs of old age; they must have been very good plugs.

11. The car is insured for £200 against accident and fire. Accident includes fracture of crank-shaft, crank-chamber, fly-wheel, front and rear axles, wheels and springs, not due to wear and tear. The policy also covers third-party risks and damage to the motor man.

The car has been *hors de combat* thirty-four days in the twelve months—nineteen days in March, waiting for a new axle from Coventry; six days in August, for radiator repairs; it was taken down twice; and nine days in December, for the overhaul and the repair of the radiator at Coventry.

Since the thorough cleaning it is running, if possible, better than ever. It is by no means "shabby" yet, but will require a coat or two of varnish some time when convenient.

I should be sorry to go back to horses again, but there is no getting over the fact that a motor cannot be expected to run every day in the year. There must be a reserve vehicle of some sort: a bicycle or a hired trap answers very well. But, if possible, a second car should be kept. It is annoying to find, when you wish to start on your morning round, that there is a punctured tyre or some other small mishap.

A SMALL MOTOR CAR IN LONDON.

By Harvey Hilliard, M.R.C.S., L.R.C.P.,
Anaesthetist, Royal Dental Hospital, London; Assistant Anaesthetist, London Hospital.

From time to time there have been numerous inquiries in your columns as to the general advantages of motor over horse traction for medical men of moderate means. I therefore venture to give my experiences of ten months' constant use in all weathers of my 8 to 10 h.p. Rover car, in the hope that it may be of value to those who contemplate making a modest plunge into motoring. I may say that after long and careful inquiry I decided that the Rover car had superior merits for medical use, and that I have found my "plunge" both economical and refreshing.

The 8 to 10 h.p. Rover is extraordinarily quiet and free from vibration, much more so than many multiple cylinder cars on the road, and it is so flexible of manipulation that I have frequently been able to drive from my house, through the city, to the London Hospital without once changing speed after the start.

The three point suspension gives extremely easy riding and freedom from jolts, and the body is roomy and comfortable. On a two- or three-seater car there is ample reserve of power, and the engine picks up speed very rapidly after slowing down in traffic. My car took three passengers and luggage over Hindhead last August easily on second speed, without overheating, and then did a month's touring without any adjustment of any kind, and this after a previous four months' daily running. In the ten months it has only failed me three times, on each occasion through ignition faults, which with more careful supervision would have been avoidable.

The Dunlop tyres have suffered only three punctures, these on flinty roads while on tour; and although after 1,800 miles they had to be retreaded the Dunlop company allowed a substantial discount, as they were not satisfied with the manner in which the tyres had worn.

The petrol consumption is low. My car has done 2,800 miles at an average of 24 miles to a gallon, and this chiefly in town, where, of course, consumption of petrol is greater; in the country I can do 30 miles to a gallon. The cost for ignition is negligible. My present sparking plug has been in nine months and is as good as ever. The cost of lubrication is moderate—about thirty miles to half a pint of oil for one halfpenny.

All working parts are completely encased in aluminium, and are thus protected from dust and dirt, and, in consequence, cleaning the car is a comparatively simple matter. I drive myself, and only keep an unskilled boy to clean the car and look after it under my supervision. A hood and screen give complete protection in the wettest weather.

After 2,800 miles it was necessary to send the car to the makers' repair shop in London to have the wear in the big end of the connecting rod bearing "taken up." So, at the same time, on the principle that a "stitch in time saves nine," I had the whole engine and working parts dismantled and thoroughly overhauled, and was pleased to find no permanent signs of wear. This cost £6 5s., and has been the only large item for repairs, and, now that the adjustments have been made, the car runs as well as when new.

I shall be pleased to give any inquirer as complete a statement of expenses as I have been able to keep, but so far I have found the total cost much less than that for which a horse and carriage could be kept or jobbed.

THE PLAGUE.

Prevalence of the Disease.

India.

During the weeks ended January 12th, 19th, and 26th the deaths from plague in India numbered 10,343, 11,975, and 15,559 respectively. During the same weeks the corresponding seizures amounted to 12,945, 14,449, and 19,452. The principal centres of plague infection and the deaths recorded during the weeks in question are: Bombay Presidency, 2,114, 2,019, and 2,182; Bengal, 790, 697, and 1,336; United Provinces, 2,863, 3,840, and 4,432; Punjab, 3,085, 3,405, and 5,303; Central Provinces, 765, 1,420, and 1,200; Central India, 236, 214, and 241; Madras Presidency, 12, 13, and 25; Mysore, 101, 138, and 108; Burmah, 359, 345, and 394.

During the weeks ended January 12th and 19th the deaths from plague reported from Rajputana amounted to 46 and 49; and from Kashmir 22 and 51 respectively. The North-West Frontier Province, Baluchistan, and East Bengal remain free of plague.

In the City of Bombay (included in the general returns for Bombay Presidency) during the week ended January 31st the plague seizures numbered 22, and the deaths from the disease 15 only.

Haffkine's prophylactic has been used at Kirkee (four miles and a half from Poona) with the following results: (1) Out of 1,312 followers, men, women, and children, 1,300 presented themselves for inoculation. Of these 1,300 people who were inoculated, 5 subsequently contracted the disease, of whom 4 recovered and only 1 person died; of the remaining 12 uninoculated, 6 contracted plague, of whom 3 recovered and 3 died. (2) Of the civilian population, 45 volunteered out of 5,640 people for inoculation; none of the 45 inoculated persons contracted the disease; of the 5,595 uninoculated persons, 383 contracted plague, of whom 260 died. The incidence of the disease amongst the inoculated and the uninoculated was as follows: Amongst the uninoculated the incidence amounted to 6.8 per cent., whereas amongst the inoculated the incidence amounted to only 0.38 per cent.

Arabia.

A case of plague was reported from Jeddah, the port of Mecca on the Red Sea.

Mauritius.

During the weeks ended January 31st and February 7th and 14th the fresh cases of plague numbered 8, 9, and 10, and the deaths from the disease 5, 6, and 7 respectively.

MEDICAL NEWS.

DR. H. LANGLEY BROWNE, Chairman of Council of the British Medical Association, has been appointed a Justice of the Peace for the County of Staffordshire.

THE memorial stone of the new south-east wing of the Leicester Infirmary will be laid by the Duke and Duchess of Rutland on Wednesday next at noon.

AT the invitation of the Marchioness of Londonderry a meeting to promote the objects of the National League for Physical Improvement will be held at Londonderry House on Thursday afternoon, March 7th.

WITH the January number the *Edinburgh Medical Journal* entered on a new phase of its existence. The former proprietor, Mr. Young J. Pentland, has relinquished his property in the *Journal*, and it has been acquired by sixteen members of the medical profession in Edinburgh. The Editors under the new arrangement are Professor Harvey Littlejohn and Mr. Alexis Thomson.

THE Committee of the Children's Sanatorium for the treatment of phthisis to be established at Holt, Norfolk, has recently received the following gifts from Livery Companies: Drapers, £30; Mercers, £25; Skinners, 10 guineas; Merchant Taylors, 5 guineas. One of the trustees has promised a further gift of £500, making £1,000 in all for endowment.

AT a largely attended meeting of the Durham Committee of the North of England Branch, held at Gateshead on February 15th, the questions of fees payable to public vaccinators and the relations of public vaccinators generally with Boards of Guardians were fully considered, and it was unanimously resolved to support the public vaccinators throughout the country in resisting a reduction of fees disproportionate to any reduction of the amount of work required to be done by them.

THE annual dinner of the Association of Scottish Medical Diplomates will be held at the Trocadero Restaurant, Piccadilly Circus, on March 1st, at 7.30 p.m., when Sir J. R. Andrew Clark, Bart., C.B., will take the chair, and distinguished representatives of the profession will be present. All those holding qualifications from the Universities and Royal Colleges of Scotland are invited to be present. Tickets, 10s. 6d. each (exclusive of wine) can be obtained from the Honorary Secretary, Dr. E. N. Ferè, 11, Chandos Street, Cavendish Square, W.

WE published a short time ago some statistics on the policy pursued in Liverpool for the extinction of public-house licences. A committee of the London County Council has recently prepared statistics of the result of a similar policy in the County of London excluding the City; under the Licensing Act of 1904, 124 on-licences have been extinguished; and 194 have been referred to quarter sessions. The number extinguished last year was 106 and the amount of compensation paid in that year was £[illegible]. In the City of London no licences have so far been extinguished.

AT the Trocadero Restaurant, on February 15th, a dinner was held in honour of Mr. Pedro Michelli, Secretary of the Seamen's Hospital Society. Mr. Michelli has held that appointment since 1885. When His Majesty, in recognition of Mr. Michelli's good work, recently conferred upon him the Companionship of St. Michael and St. George, it was felt by many of his colleagues and friends that the occasion offered a suitable opportunity for giving expression to their appreciation of his long and successful labours as hospital secretary. The chair was occupied by Mr. Percival Lewis, Chairman of the governing Board of the Seamen's Hospital Society, and among the eighty guests who supported him were Sir Patrick Manson, Sir William Bennett, Sir Henry Burdett, Sir Anderson Critchett, Sir Francis Laking, Mr. William Treacher, the Consul-General for Albania, Mr. John Craggs, and Mr. Malcolm Morris. In a happy and eloquent speech the Chairman proposed the health of the guest of the evening, and alluded to the faithfulness and regard he had unfailingly displayed in the discharge of his multifarious and difficult duties. Mr. Lewis pointed out that during Mr. Michelli's term of office the income had increased from £[illegible] to £[illegible], and the Society had [illegible] Branch Hospital at the Albert Dock was established and in 1900 the School of Tropical Medicine was founded. At that time [illegible] Hospital and Dreadnought Seamen's Hospital were opened, and in 1905 the Hospital of Clinical Medicine was established at the Dreadnought Hospital. He was pleased to think that the Committee had shown much judgment and [illegible] of the success of the Society. Mr. Michelli had brought cheerfully the ungrudging assistance of his experience and the stimulating influence of his enthusiasm. Finally, the Chairman begged Mr. Michelli's acceptance of a piece of silver plate for himself and of a diamond ornament for Mrs. Michelli as a souvenir from many friends. Mr. Michelli, in acknowledging the compliment, spoke gratefully of the cordial relations which had always existed between himself and the members of the Board of Management on the one hand and of the medical staff on the other. He sketched the history of the Society during the time of his connexion with it, and declared that never had it been in a more prosperous condition than at the present moment. "Success to the Seamen's Hospital Society" was proposed by Sir Henry Burdett and responded to by Sir Patrick Manson and Sir William Bennett. A pleasant and successful evening was brought to a conclusion by drinking to the health of the Chairman, proposed by Sir William Treacher.

AN International Congress of Psychiatry, Neurology, Psychology, and the Nursing of the Insane will be held at Amsterdam from September 2nd to 7th, 1907. The Congress, which has been organized by the Dutch Society of Psychiatry and Neurology, is under the patronage of Queen Wilhelmina and of His Royal Highness Prince Hendrik of the Netherlands. Among the Honorary Presidents are the Minister for Home Affairs, Dr. P. Rink, and His Excellency the Minister of Justice, Dr. E. E. van Raalte. Professor G. Jelgersma, of Leyden, is President of the General Organization and Direction Committee. The General Secretaries are Dr. J. van Deventer, sen., Inspector of Lunatic Asylums, and Dr. G. A. M. van Wayenburg, *Privatdocent* in the University of Amsterdam. The work of the Congress will be distributed among four sections. (1) Psychiatry and Neurology: Presidents, Professor Dr. C. Winkler, and Professor Dr. J. K. A. Wertheim Salomonson, of Amsterdam. (2) Psychology and Psycho-Physics: President, Professor Dr. G. Heijmans, of Groningen. (3) The Nursing of the Insane: President, Dr. W. P. Ruysch, Chief-Inspector of Public Health, The Hague. (4) Exhibition; President, J. van Deventer, sen., of Amsterdam. The official languages will be English, French, and German. Members intending to present communications are requested to send an abstract before May 1st, 1907, to the General Secretary's Office, Prinsengracht 717, Amsterdam. The Secretary will see to the printing and translation, and will hold copies at the disposal of each member of the Congress. Any further information may be obtained from the General Secretary.

AFTER-CARE OF THE INSANE.—The annual meeting of the After-Care Association "for poor persons discharged recovered from asylums for the insane" was held on February 5th at Apothecaries' Hall, Mr. E. Parker Young, Master of the Company, presiding, supported by Dr. Wilkes and Dr. Gordon Brown, the Wardens. The annual report stated that during the past year the applications numbered 308 (134 women and 174 men), and that the number helped had been in advance of any previous year. Many had been boarded out, with a view of more assured convalescence, in country homes or given grants of money, tools, or clothing, while suitable occupations had been found for a large number. The income for the year had amounted to £973 4s. 7d. The Master described in considerable detail the work of the officers of the Association, pointing out that each case required a large amount of personal attention. He knew of no charity doing a larger amount of good work on limited funds in an unobtrusive but efficient fashion. The Bishop of Barking, in moving the adoption of the report, bore witness to the excellence of the methods pursued, and to the large scope which existed for its operations were its funds larger. Dr. Savage, in seconding, laid stress upon the fact that the work of the Association was largely preventive in its character. When insanity recurred in persons discharged from asylums, it usually did so within a short time of their discharge, and often in consequence of their having been ordered to return to their ordinary avocations and surroundings before they were fit to do so. Dr. Blandford took a similar view, and Dr. Amsden, Medical Superintendent of the Essex County Asylum, related instances within his knowledge of the benefits many of his patients had received from the Association after leaving the asylum. The re-election of the officers and Council having been moved and seconded by the Wardens, and Dr. Robert Jones, of Claybury, and Dr. H. Rayner having addressed the meeting in moving the customary votes of thanks, the company present were hospitably entertained to tea in the Court Room. The offices of the Association are at Church House, Dean's Yard, Westminster.

British Medical Journal.

SATURDAY, FEBRUARY 23rd, 1907.

ANTIVACCINATION IN THE COMMONS.

In the House of Commons last week there was an animated discussion on vaccination. Mr. Lupton moved an amendment to the Address in favour of the abolition of the penal clauses of the Vaccination Acts, and if the debate had ended with the reply of the President of the Local Government Board on the same evening the incident would not have called for comment. Mr. Lupton's speech presented the usual features of orators of this class dealing with a scientific subject, and after Mr. John Burns had promised to improve the position of the conscientious objector by devising a simple method by which he could obtain his exemption certificate, Mr. Cave, the member for the Kingston Division of Surrey, carried the debate over till Friday, and opened the proceedings on that day with a careful defence of vaccination. This gave Sir William Collins his opportunity, as one of the few survivors of the Royal Commission on Vaccination and one of the dissentient minority of the Commission, to make a very able defence of the antivaccinationists' position. He gently alluded to Mr. Lupton's peculiarities by dissociating himself from his colleague's "lurid pathology," and his speech impressed the House by its moderation and judicial tone; for the first time in recent years it gave to a cause which has been characterized by wild statistics and imaginary pathology a respectable and serious presentment. He intimated, moreover, that when Mr. Burns introduced his Bill to relieve the honest objector the opportunity would be used by himself and his friends further to modify the existing law. This may lead to a serious attempt to abolish compulsion altogether and make revaccination, which was promised in 1898, an impossibility. Sir Walter Foster, who led the members who created the conscientious objector in 1898, said, in the course of the debate, that he believed that the agitation against vaccination since that Act was passed had been largely due to the irritation caused by the manner in which honest objectors had been treated by magistrates in many parts of the country. His position then and since was that, if the objector to vaccination had not been persecuted, the whole agitation would have died a natural death and compulsion would be needless. It certainly has not died out under the system embodied in the last Act, and in this House of Commons the antivaccination party is very strong. It is, therefore, important for the profession to be alive to the present position.

The exemption clause of the Act of 1898 requires that the applicant shall "satisfy" the Bench that he has a really conscientious objection to the operation, and in a number of instances magistrates have definitely refused to be "satisfied," and have refused certificates. The result has been that some objectors thus dealt with have subsequently been subjected to prosecution for failure to have their children vaccinated and to produce an exemption certificate, and occasional refusal to pay the penalties imposed has resulted in imprisonment. No doubt a well-founded belief in vaccination was the reason for refusal of a certificate, but unwittingly such magistrates were doing their best to make vaccination unpopular, and to continue in the hands of the Antivaccination League the weapon which has always been found most useful for its purpose—the weapon which the Royal Commission in 1898 hoped to wrest from its hand when it recommended an exemption clause.

But the bad administration of the clause has not been wholly in one direction, though unfortunately the attention of Parliament in the recent debate was entirely confined to one side of the question. The idea of the exemption clause was that it should provide a rough-and-ready test to distinguish between those who are merely indifferent to vaccination and those who are genuinely and strenuously opposed to it. The test was to consist in giving an applicant for exemption as much trouble to obtain his certificate as would be required to procure the vaccination of his child, and it was understood that the necessity for a father losing a few hours' work to go before a Bench to state his objection, would in some measure meet this requirement. But while certain magistrates have most improperly erred on the side of too great severity in the administration of the Act, others have erred in the opposite direction, and have reduced the trouble required to obtain a certificate to the proportions of a farce. In some places courts have been held at hours specially fixed to make exemption easy. Mothers, as well as fathers, have been accepted as applicants, and no serious attempt has been made to test the reality of objection. The natural result is that afterwards, usually in presence of smallpox, children have been subjected to vaccination by parents who had previously been conscientious objectors.

While we sympathize, therefore, with the President of the Local Government Board in his determination to make the method for obtaining exemption uniform throughout the whole country and to secure that the following of this method shall in no case fail to produce a certificate, we shall await with some concern the exact details of his proposal, lest it be found that he has unwittingly erred on the side of undue laxity. The Parliamentary Secretary to the Local Government Board (Dr. Macnamara), replying for the Department at the close of the debate, said that the new system would enable a conscientious objector to secure exemption upon making an ordinary statutory declaration under conditions as little onerous as possible. If this means that a parent has simply to sign a form declaring his objection to vaccination, and get it witnessed by any one he pleases, and then hand it to the registrar or other such official, the test as originally designed will be practically abolished. Mr. Burns should know enough of the methods of antivaccination propagandism to warn him that the League will take care to print as many forms of declaration as will suffice for the whole country, and that its local branches will see that the parent of every child in the district is immediately supplied with a form, and is urged to sign it, and hand it to the local league, which will transmit it to the proper official. There will, indeed, be substituted for pressure towards vaccination the strongest local pressure against vaccination. Mr. Burns, we are certain, does not contemplate that; but if it is to be the outcome of his proposed procedure, then the full force of Sir William Collins's suggestion that vaccination of infants should definitely be made entirely optional and the whole scheme of obligation be given up, will be perceived. The result of a sham test would be gross neglect of infantile vaccination except in presence of

small-pox, and the existing enormous excess of our small-pox fatality-rates over those of Germany would be increased. When epidemics came there would be a rush of conscientious objectors to the public vaccinators; but the whole system of public vaccination would already have been thrown out of gear by the practical absence of any obligation towards infantile vaccination, and before any local organization could be arranged to meet emergencies, small-pox would already have got an extensive hold and secured many victims.

The present position of vaccination in its legislative aspect is absurd and illogical. It must be assumed that Parliament either believes or disbelieves in vaccination. If the latter, then it should act on its disbelief and abolish the entire system, central and local. From the point of view of the epidemiologist that would be an interesting experiment, but from that of the humanitarian it would be equivalent to wholesale infanticide by omission. It would mean also that Parliament had discarded the teachings of all the Parliamentary Committees and Royal Commissions which it has ever appointed to inquire into the subject. It would mean that the strong opinions expressed in favour of vaccination by Lord Herschell, the late Liberal Lord Chancellor of England, as a result of his seven years' chairmanship of the Royal Commission, would be entirely set aside by the present Parliament, whose members it may safely be assumed have never given to the subject one-thousandth part of the time and attention devoted to it by Lord Herschell. And in that connexion the attitude of the Parliamentary Secretary to the Local Government Board, who describes vaccination as "one "of the most controversial questions in the whole range "of public affairs," is most disappointing. It is true that about compulsion there is the same infinite opportunity for differences of opinion as exists with regard to the liberty of the subject and the rights of the State throughout the whole range of human government, but as concerns the question whether vaccination itself is useful against small-pox, there never was any scientific subject regarding which there is less real controversy. If Dr. Macnamara takes the trouble to study vaccination (and we shall be glad to supply him with materials, letting him also obtain whatever the Antivaccination League can furnish him with), then we have no doubt that his conclusions will not differ from those of Lord Herschell and the Royal Commission.

But if Parliament does believe in vaccination, its attitude is no less absurd. We are not here referring to compulsion; many good things in this world are not compulsory, and it is for Parliament to decide which shall be so, the responsibility for the result lying also with Parliament. But no one in the present day who believes in vaccination does not also believe in revaccination, and if Parliament believes in the one it cannot but also believe in the other. Primary vaccination and revaccination should stand or fall together and any system which promotes one and neglects the other is farcical and that, we take it, is what Mr. Walter Long meant in his speech to a deputation of the Imperial Vaccination League several years ago though the Government of which he was a member never did anything to alter the law. The time is opportune for revision of the vaccination law, but such legislation should be reasonably complete. It should frankly determine what is to be the exact degree of obligation to submit primary vaccination, and the same obligation should apply to revaccination. It should carefully settle in what way exemption is to be granted. Those persons who are conscientiously free from revaccination. It should deal with the whole arrangements for public vaccination in this country, settling whether public vaccinators should be whole-time officials or should also be engaged in private practice, whether they should be appointed locally or by the central Government, whether private practitioners should not be authorized to vaccinate for the State and to be remunerated by it, and whether the Acts themselves should be administered locally or centrally. If exemption is to be freely allowed, the Government should consider what means are to be taken to meet epidemics, and what facilities are to be given for the vaccination of children whose parents are conscientious objectors only so long as there is no small-pox. All these subjects provide ample material for a comprehensive Act, and the Government will be making a serious blunder if they potter at the question by Bills dealing with individual points and do not grapple with it as a whole. No doubt they have many legislative projects on hand, and Mr. John Burns is probably one of the busiest members of the Cabinet, but if he enters on the question in the right spirit and devotes to it the proper amount of attention, he can, we believe, produce an Act which would reduce the cost of vaccination and improve its efficiency and be satisfactory alike to the medical profession and the public—always excluding such people as are well represented by Mr. Arnold Lupton, who asked Parliament whether Moses and David, and Alexander and Caesar, and Demosthenes and Cicero, and Nelson and Wellington and Napoleon, and Spenser and Shakespeare and Milton, had been vaccinated, and who imagines that vaccination consists in "opening a vein, cutting through the skin, and "putting into it pus from a diseased cow."

Meanwhile it should be clearly recognized that in the present temper of the House of Commons there is, danger of the whole compulsory basis on which the present system rests being abrogated, and that there is, judging from the tone of the debate last week, a very strong feeling against any system of revaccination, which is essential if the population is to be efficiently protected against one of the most dangerous and loathsome of maladies.

THE SANITARY EDUCATION OF THE ARMY.

Napoleon said that Providence was always on the side of the big battalions. To this saying we would add the gloss that battalions will not long remain big in a campaign without hygiene. Time and again we have preached from this text, with no result but to illustrate the truth of the maxim that wisdom cries out in the streets and no man regards it. The terrible consequences of indifference to sanitation are writ large in the history of the South African war. The same lesson had not long before been taught by the experience of the United States army in the war with Spain, and on a more extensive scale in the French invasion of Madagascar. Then came the experience of the Japanese army, as if to point still more sharply by contrast the moral of the sad tale of official blindness.

For a long time, with a dismal misapplication of Nelson's example, the War Office persisted in turning a deaf ear to all warnings. Then came what looked like the dawn of a better day. At the instigation of the Advisory Board courses of lectures on hygiene were given to cadets and young officers. The value of this instruction was keenly appreciated, but for no better reason apparently, than military pedantry, the courses were first curtailed and then stopped. More than once we protested strongly against this display of official perversity. We therefore note with great satisfaction

that the War Office has at last determined to move in the direction of reform in this matter. Indeed we may own that it is bettering our instruction, for it is organizing a thorough system of sanitary education for the whole army. Sanitation henceforth will be an integral part of military training. Army Orders for February, as may be seen by reference to the document which will be found at p. 473, make ample provision for the instruction in sanitation not only of officers, but of non-commissioned officers and men. Annual courses of lectures are to be given by the command sanitary officer or by a selected officer of the Royal Army Medical Corps. An official textbook of military sanitation has been prepared, and will be issued to the army. After March 1st, 1908, all lieutenants, except those who have qualified otherwise, will be required to pass an examination in sanitation before they can become captains. Officers of companies, squadrons, etc., are to give instruction to their non-commissioned officers and men in sanitation. Classes are to be formed at the Aldershot School of Army Sanitation for officers. There will be other classes for regimental non-commissioned officers and men. Instruction will be given to fit them for the performance of sanitary police duties, the sterilization of water, etc., on active service. At the Staff College and at the Royal Military Academy and Royal Military College, courses of lectures on sanitation will be given annually by medical officers. An examination in sanitation, based upon the official manual, will be included, after March 1st, 1908, in the final examinations of cadets in the senior division.

In addition to these educational measures, we welcome with pleasure a further sign that the War Office is at last awake to the danger of sanitary unreadiness. On mobilization being ordered, a sanitary inspection committee is to be formed for service in the field. Its duties will be to ascertain that sanitary appliances and materials of all kinds required are available, and that an adequate reserve is maintained; to assist general officers and the medical service in their efforts to maintain the health of the army; to initiate schemes of general sanitation, and to serve as a Board of Reference for the solution of sanitary questions; to visit and inspect stations occupied by troops, to advise local authorities regarding necessary sanitary measures, and to further in every way the maintenance of satisfactory sanitary conditions.

In this large measure of reform we recognize the enlightened spirit of which Mr. Haldane has in his short tenure of office given many proofs. That spirit has found a sympathetic interpreter in the Director-General. We congratulate them, the army, and the nation, on the initiation of what will be, if the reforms are intelligently and loyally carried out, the commencement of a new era in the history of an army whose magnificent fighting power has so often, as in Walcheren, in the Crimea, and South Africa, been palsied by preventable disease and the want of the most rudimentary provision for the preservation of health and physical efficiency.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

Mr. Walter Rae's Bill "to make provision for vaca-"tion schools and for the medical inspection and "treatment of school children" consists of one clause identical with Clause 24 of the Government Education Bill of last session after the subclause providing for medical inspection had been amended at the instance of Mr. Tennant, who now backs Mr. Rae's Bill. Though that clause marked a great advance on any proposal which had previously received the serious consideration of Parliament, it fell short of what those within and without the medical profession who have taken special interest in this subject think necessary. Therefore, while gratified to learn that the second reading of Mr. Rea's Bill is likely to receive very general approval, we trust that opportunity may be found in the Committee stage for securing even further progress. The matter is, we are informed, receiving the close attention of the Medico-Political Committee, who may at a later stage find it necessary to ask the Divisions to make representations to their Parliamentary representatives on the subject. In the meantime, suggestions from any members of the Association who take a special interest in the subject, if forwarded to the Medical Secretary, will be carefully considered by the Medico-Political Committee.

PULMONARY TUBERCULOSIS IN SCHOOL CHILDREN.

The report by Dr. Robertson, M.O.H. for Leith, on the medical inspection of over 800 school children in that borough—some account of which is given at page 445—serves once more to prove the pressing need there is for systematic medical inspection of school children. The statistics are alarming, for they show that the percentage of really robust and healthy children is comparatively small. A large number of the children examined were found to be suffering from defects of eyes, ears, throat, teeth, heart, or lungs; a great many had skin diseases, while others had physical deformities. Then if all these conditions required treatment it is certain that only some of the children would receive it. Special examinations of this kind, carried out, as they now are, under difficulties greater or less, due to interference with the school routine, objections raised by parents, and lack of assistance, must be looked upon as evidence proving the necessity of medical examination rather than medical supervision pure and simple. Dr. Robertson emphasizes the fact that no medical officer of health could undertake such a task, and in the case of the Leith school children the examination was conducted by Dr. Robertson, assisted by Dr. Glegg, and helped by a number of voluntary workers, lady doctors giving their services for the examination of the girls. We have to begin at the beginning, and it must be assumed that, once compulsory medical inspection is established, every child will be examined before entering school, so that if it were found unfit to benefit by education it would be singled out for a special school, or for special care, before being admitted to an ordinary school. Once in the school, the chief point would be to guard against the spread of infectious diseases, and this would best be done by the visit of the general practitioner to the schools in his neighbourhood every morning, when suspicious cases could be at once sent home before mixing with the other children. Of course, it is conceivable that cases of deformity, skin disease, and other ailments would develop, but after the first weeding-out the task of dealing with them would be comparatively easy. It is customary in many large secondary schools for a medical practitioner to attend every morning in order to see if there are any cases requiring attention; owing to the immediate isolation of infectious cases thus rendered possible, this system results in stopping the spread of epidemics. This is practically what would result from medical inspection carried out in the way we have suggested in the elementary schools. Besides this, special attention would be paid to children who were debilitated and seemed to be flagging and losing flesh. It is interesting to note that Dr. Robertson had realized the necessity of looking out for pulmonary tuberculosis in the children. He says that 7 cases of consumption

were diagnosed with the ordinary physical signs of dullness, usually of the apices, and hard bronchial breathing, with at times crepitations; 7 other cases were regarded as very suspicious, and were probably also early consumption. Early consolidation of the lungs, he adds, is often regarded as a trivial matter—"just a "cold"—and neglected until there is a breaking down of the lung substance, with all the symptoms of advanced disease. Then treatment, which is of such benefit in the early stages, becomes useless. Here, if anywhere, medical inspection is imperatively called for, to ensure the active treatment of all cases of lung weakness, whether of bronchitis or of those cases of consumption in the earliest stage which is usually unrecognized. Three or four typical cases are cited, and in each there was inability to expand the chest more than half an inch or an inch, while the diet was tea and bread, or tea and "pieces." Had these children been noticed in time, had they been built up by a course of wholesome food, fresh air, and breathing exercises, they need never have reached the serious condition in which they were found. The conditions found in Leith are not peculiar, and it may be assumed that pulmonary tuberculosis exists in a greater or lesser degree in all elementary schools, and will continue to increase unless prophylactic measures are adopted. To teach all children proper breathing, always remembering that fresh air is essential to the proper carrying out of breathing, should be made a compulsory feature of education.

"THE ROYAL SOCIETY OF MEDICINE."

Sir W. S. Church presided on February 19th at the Royal College of Physicians, London, over a meeting called to consider the name to be adopted by the new society formed by the union of the medical societies of London. The Library of the Royal College of Physicians was filled with the members of the various medical societies interested in the amalgamation scheme. Sir William Church explained that in order to obtain a Royal Charter in time for the new society to be able to commence work by the beginning of next October it was important that the petition should be sent in before the end of this month, and to enable that petition to be sent in a name must be chosen for the new society. Sir Richard Douglas Powell proposed that the name of the new society should be the Royal Society of Medicine; it was a simple title, and the word "society" was commonly used in London for associations of various kinds and in his opinion seemed to meet the case. Mr. J. Warrington Haward, in seconding the proposal, quoted Johnson's definition of "society"—"union of many more general interest" as exactly corresponding with what was wanted. Sir Felix Semon then proposed that the name of the new Society should be "The Royal Academy of Medicine." He said that all over the world the expression "academy" was nowadays used to designate a society of men joined together for some scientific purpose. Dr. J. J. Macan seconded this proposition, which was supported by Dr. Cresswell Baber and by Dr. H. W. Fitzgerald Powell. The proposal that the new Society should retain the name of the Royal Medical and Chirurgical Society was put forward by Dr. Seymour Taylor, and seconded by Brigade-Surgeon-Lieutenant-Colonel A. E. Myers but was not carried on being put to the vote. The suggestion made by Dr. Maitland that the name should be "The Imperial Academy of Medicine" was seconded by Dr. W. H. Corfe, but was rejected. The Chairman then asked the meeting to vote on the name of "The Royal Academy of Medicine" when it was found that 75 were in favour and 36 against. The meeting then agreed that the name of the new society should be "The Royal Society of Medicine."

BANANAS AND SPOTTED FEVER.

We fear there is a tendency at times for certain members of the profession to take a malicious pleasure in making the lay fresh creep. When the public mind is perturbed by the presence of some unwonted epidemic, or when some unwise person has created a panic by alleging dangers in some everyday practice or article in common use, then we are fairly certain to read in the lay press sensational views, purporting to come from some eminent person vaguely described as "a West End "consultant," "a celebrated surgeon," or "a well-known "physician." As might be expected, the outbreak of epidemic cerebro-spinal meningitis has afforded an opportunity for lucubrations of this type, and in a recent number of the *Glasgow Daily Record and Mail* we read a communication from "a Lanarkshire "doctor," in which he solemnly cautions the public against the use of bananas ripened in this country, as, in his opinion, there is possibly some connexion between the use of that fruit and the outbreak of spotted fever. "I have noticed with keen interest," he writes, "the reports you have published anent the new "disease which was quite unknown in my student "days." Now, coming from one who takes upon himself to "solemnly caution" the public in the lay press, the last sentence contains more than one extraordinary statement. The disease is certainly not new, having been recognized for at least a hundred years, and during the last century there have been frequent epidemics of the complaint, and sporadic cases too numerous for computation. Most of these epidemics, it may be said here, took place in countries where the banana is unknown, or in times prior to its introduction into them, and the sporadic cases occurred, with few exceptions, in infants, and the fruit was certainly not at fault. The statement, too, that the disease was "quite "unknown" in his student days is a somewhat cruel reflection on the teachers at the medical school from which he graduated. His personal experience, he confesses, does not extend to a single case, but he puts forward the observations of a medical friend, practising in the State of New York, on the late epidemic there, and it will be best to let "a Lanarkshire doctor" tell the story in his own words. "My friend says he "attributes the disease in great measure to the "excessive eating of bananas which prevails there. "He says they are consumed in millions (in many "cases half decayed) by children and adults "too. They are easily eaten, hence the prefer-"ence (*sic*). It is to the eating of these half-decayed "bananas that he attributes the origin of the disease, "by setting up a kind of ptomaine poisoning in the "system, the germs having a malignant action on the "brain and spinal cord. He asserts that in some cases "he has clearly traced the source of the disease to "these same bananas." If there be any substance in the last assertion, it is a remarkable fact that a discovery of such surpassing interest should not have been communicated at once to some recognized medical society or professional journal of the State of New York rather than have seen the light at second hand in the columns of a Glasgow lay paper. If it be true, then, it would seem to us a cruel anomaly that such a discovery should have fallen to the lot of one who would appear to have so small an appreciation of its high interest and importance. Before accepting it as a fact however, the medical profession will require ample evidence of its truth. We are not acquainted with the germs of malignant action in ptomaine poisoning and would have considered any form of ptomaine poisoning itself as an extremely rare occurrence from the use of bananas. Some further remarks regarding the coincidence of spotted fever with the landing and consumption of bananas at seaports appear neither

relevant nor strictly accurate. Some years back a stupid scare connecting tomatos and cancer led for some time to a diminished use of that vegetable. It would be a vast pity if an ill-considered letter interfered in any way with the consumption of the banana, a fruit that is a welcome addition to the diet of both the rich and the poor.

THE ACTION OF PITUITARY EXTRACTS UPON THE KIDNEY.

From recent experiments on the physiological action of pituitary extracts[1] Professor Schäfer and Dr. P. T. Herring find that, in addition to other properties, extracts of the infundibular part of the pituitary body yield a substance, soluble in water and not destroyed by boiling, which acts specifically upon the kidney, producing along with dilatation of the renal vessels an increase of secretion from the tubules, and even causing a flow, if the secretion from the operative procedures or the anaesthetic, happens to be suppressed. Intravenous injection of only 1 c.cm. of a 1 per cent. extract of the dried glandular substance may produce as much effect as would be caused by such an actively diuretic substance as caffeine citrate. But the one or two grains of caffeine citrate which are required to produce active diuresis represent a vastly greater amount of material than that of the diuretic constituent in 1 c.cm. of a 1 per cent. extract of the gland. The diuretic activity of this latter substance is therefore far greater than that possessed by any diuretic in the *Pharmacopoeia*. It appears probable that the main purpose of the internal secretion of the pituitary gland is subservient to the function of the renal organs; and there is experimental evidence that the diuretic action is associated with a specific stimulation of the renal epithelium. Discussing certain resemblances which exist between the pituitary body and the suprarenal capsule, the authors observe that in neither organ do extracts from the epithelial, and more obviously glandular, portion produce any physiological effect, "whereas the "parts of neuro-ectodermic origin yield highly active "substances, which in both cases exert a remarkable "influence upon the heart and arteries." But the parallelism ceases here. Extract of suprarenal medulla has an excitatory influence upon the terminal mechanism of sympathetic fibres in general, but this is not the case with extract of the medullary part of the pituitary body. The blood vessels of the kidney are influenced by pituitary extract differently from those of the rest of the body, and the renal cells appear to be specifically stimulated to secretion. The authors conclude with the following observation: "It is not easy to under-"stand, in view of the entire absence of activity in "extracts of the epithelium, why so close an anatomical "relationship should be found between glandular "epithelium and secretory neuro-ectoderm, both in "the pituitary and in the suprarenal capsules of most "vertebrates, unless the two kinds of tissue possess "also some physiological connexion. It may, how-"ever, be conjectured that in the epithelial part of "each organ the material which is to furnish the active "agent of the secretion passes through certain stages of "formation, and that its production is merely com-"pleted in the neuro-ectodermic part, in which part "alone the full activity of the secretion is acquired."

[1] *Philosophical Transactions of the Royal Society of London.* Series B. Vol. cxcix, pp. 1-29.

THE LONGEVITY OF ATHLETES.

In the *Medical Record* of January 12th reference is made to a paper dealing with this subject by Dr. W. G. Anderson, head of the Yale Gymnasium. He states that the athletic records of Yale show that between the years 1855 and 1905 the number of men who gained positions in the crew or in the baseball, football, or track teams, was 807. Of this number 58 have died. Of these 18 were rowing men, 16 were football men, 13 track, and 11 baseball men. If an estimate be made on the basis of the average of years of life it is found that the greatest mortality has occurred among the football men. Rowing men were second, track men third, and baseball men fourth, with an extremely low average. Compared with the select mortality tables of the Actuarial Society, made up from mortality averages all over the United States, the athletes show a remarkable longevity. As contrasted with these figures are others collected by Dr. Anderson as to the mortality of the general graduates, who have not won team positions, though many of them have doubtless done more or less systematic athletic work. During the same period of fifty years 10,922 men have graduated from the academic and scientific departments. Of this number 1,406 have died; that is 12·9 per cent., as against 7.2 per cent. of the athletes. Consumption carried off 12 of the 58 deceased athletes, but this percentage is not greater than might be expected among non-athletes from a similar cause, as is proved by reference to the records of the large insurance companies. "Deaths from heart "disease," says Dr. Anderson, "in the list of 58 men "were 4, at the ages of 35, 57, 68 and 70. The average is "very low. Pneumonia carried off 6, typhoid fever 5, "and typhoid pneumonia 2. Those who wish to push "their argument that high athletics are bad for the "lungs and heart might find some ground for that "argument in the fact that 24 of the 58 deaths were "caused by lung trouble of various kinds, and heart "failure. The table of deaths further shows that 9 of "the 58 athletes met violent deaths, of which 2 were "suicides. One died of dissipation, which was not "traceable to participation in athletics." He holds that the "inevitable conclusion from the figures "gathered is that the Yale man who came to high "honours in the major sports of the last half-century "has more than the ordinary man's share of long life." But he freely admits that "whether this is due to his "high development as an athlete or to the original "strength of the man himself is still unproven, and "seems likely to remain so unless some more perfect "means of comparison can be found."

CEREBRO-SPINAL FEVER.

Several fresh cases of cerebro-spinal fever have occurred in Glasgow. At Paisley there have been since January 1st 11 cases and 6 deaths. During the week ending mid-day, February 16th, 8 cases of supposed epidemic cerebro-spinal meningitis were notified to the medical officer of health for Edinburgh. Of these 6 died—2 adults and 4 children. Further investigation showed that only 2 of the 6 deaths were due to cerebro-spinal fever, while the other 4 died from other well-defined causes. Of the 2 fatal cases 1 death took place in the Hospital for Sick Children, and the other in the City Hospital. In the north of Ireland cases have been recorded not only in Belfast but also in Lurgan, Larne, and in the county Monaghan; several cases have also been reported in Dublin. The Local Government Board in Ireland has suggested to sanitary authorities that cerebro-spinal meningitis should be made notifiable; and Dr. Donovan, Medical Officer of Health for Cork, has pointed out that the disease has been notifiable in that city since 1900, during the first six months of which year there was an outbreak involving 100 cases and 25 deaths. A fatal sporadic case has been observed at Pilsley in the Chesterfield Rural District. With regard to the mode of the spread of the disease of cerebro-spinal fever, it will be interesting to recall that Westenhoeffer and Kirchner, as a result of investigations of an epidemic in the Upper Silesian manu-

facturing districts,[1] arrived at the conclusion that the points of entrance of the infection are the pharynx, naso-pharynx, and, particularly, the pharyngeal tonsils, and it was observed that those children and young adults who were affected showed the signs of the so-called lymphatic constitution. Never, or only most exceptionally, did the extension of the disease process from the nasal passages into the cavity of the cranium take place by way of the ethmoidal cells, but, as the first signs of cerebral meningitis are to be found in the neighbourhood of the hypophysis, the likelihood of infection from the throat through the posterior nasal sinuses is obvious. Kirchner, examining the nasal and pharyngeal secretions in 635 cases of the disease, found the *Diplococcus intracellularis* in 146 (23 per cent.). An examination of the nasal and pharyngeal mucus of 213 healthy people who had been exposed to the infection showed the presence of the same organism in 26 (9 per cent.). It would seem, therefore, that the infection finds a resting place in the tonsils and pharyngeal space, and, in susceptible people, spreads therefrom to infect the meninges. Prophylaxis is chiefly a matter of personal and domestic cleanliness. The Local Government Board in England has issued a circular to sanitary authorities calling attention to the existence of cerebro-spinal fever in Ireland and Scotland, and expressing the opinion that, while there is not at present any ground for apprehension, it is desirable that sanitary authorities should be on the alert to detect the presence of the disease in their districts, or to satisfy themselves as to its absence. The circular points out that should groups of cases of illness, which might possibly be of the nature of cerebro-spinal fever, be observed in any district, it is important that the fact should be made the subject of a special report to the sanitary authority by the medical officer of health, and that a copy of such report should be forwarded to the Board, which will be prepared to render such advice or assistance as may appear to be necessary. It is added that a report by Dr. M. H. Gordon on the micrococcus of epidemic cerebro-spinal meningitis, with special reference to its identification in the upper respiratory passages, will be published in the course of a few days. Accompanying the circular is a copy of the memorandum on cerebro-spinal fever drawn up by Mr. W. H. Power, F.R.S., in 1905.

METROPOLITAN AMBULANCE COMMITTEE.

The Home Office Committee appointed to report on the question of the provision of ambulances for cases of accident and sudden illness in the streets of London held its first meeting on February 14th, when it was decided that the inquiry should be conducted in private. It is stated that among the earliest witnesses called will be Sir John Furley, Chairman of the Ambulance Department of the Order of St. John of Jerusalem, and Sir Edward Henry, Chief Commissioner of Metropolitan Police, so that it may be anticipated that the views of those who do not consider any radical change necessary will be fully before the Commissioners. It is understood that the police authorities are disposed to take the view that some addition to the number of stretchers or hand-litters at present available would be sufficient, but we may point out that medical opinion is strongly in favour of the establishment of an adequate service of rapid transit vehicles. This is we think, sufficiently shown by the support obtained by the Metropolitan Street Ambulance Association. It is therefore to be hoped that the Commissioners will take evidence from experts who have experience of the working of horse or motor ambulances in other cities. The names of two such witnesses at once occur inasmuch as the President of the Metropolitan Street Ambulance Association, Mr. Reginald Harrison, and Captain Nott-Bower, Commissioner of Police of the City of London, have both had practical experience in the working of the Liverpool ambulances. Mr. Harrison has also experience of systems in American cities, while Captain Nott-Bower has during the past five-and-twenty years been practically engaged in the development of street ambulance organization. Public opinion will not be satisfied unless the evidence of experts in the management of rapid transit systems is placed fully before the Committee, and receives full consideration from it.

A CURE FOR THE TOBACCO HABIT.

All who for one reason or another have striven to free themselves from the sweet bondage of the "herb nicotian" have gone through struggles of the kind so vividly described by Charles Lamb. What reader of *Elia* does not remember his recital of how, when he had resolved to quit it, a feeling as of ingratitude started up; how it put on personal claims and made the demands of a friend upon him. "How the reading of it "casually in a book, as where Adams takes his whiff in "the chimney corner of some inn in *Joseph Andrews*, or "Piscator in the *Compleat Angler* breaks his fast upon "a morning pipe in that delicate room *Piscatoribus* "*sacrum*, has in a moment broken down the resistance "of weeks. How a pipe was ever in my midnight path "before me, till the vision forced me to realise it,— "how then its ascending vapours curled, its fragrance "lulled, and the thousand delicious ministerings con- "versant about it, employing every faculty, extracted "the sense of pain." Then comes the gloomy part of the story: "How from illuminating it came to "darken, from a quick solace it turned to a negative "relief, thence to a restlessness and dissatisfaction, "thence to a positive misery." But how is the chain of slavery to be broken? The spirit is willing but the flesh is weak. We throw away the pipe and tobacco—and buy a fresh supply the first time we pass a shop where the instruments of evil are temptingly displayed. Those who seriously wish for deliverance may try the method recommended by a Russian practitioner, Dr. Kolomeitzeff, Assistant Physician to the Military Hospital, Kasan. It consists in rinsing out the mouth with 25 per cent. solution of silver nitrate after each indulgence in tobacco. He says the taste thus produced will create a disgust that will effectually cure the habit. A fellow countryman of his, Dr. Skoulsky, had previously recommended brushing the throat with a similar solution, but this, we are told, is not so effective. The method, at any rate, is easy. The fierce struggles of the smoker striving for deliverance may, if Dr. Kolomeitzeff's plan answers, be calmed as easily as a battle among bees is suppressed:

> Hi motus animorum atque haec certamina tanta
> Pulveris exigui jactu compressa quiescent.

A MONUMENT TO THEODOR SCHWANN.

It is somewhat remarkable that so great a pioneer in biology as Theodor Schwann is still without a monument, though his teacher Johannes Müller is commemorated in bronze in his native town of Coblentz, and his collaborator Schleiden has been similarly honoured in Jena where he worked. This omission is about to be repaired. His native town Neuss on the Rhine has resolved to raise a monument to his memory to be unveiled on December 7th, 1910, the centenary of Schwann's birth. A considerable sum has already been subscribed for the purpose by the inhabitants of Neuss and by the medical profession of the Rhineland and Westphalia. An international committee has been formed to raise a sufficient fund, among its members are most of the leaders in biology and medical science in Germany, Australia, and Switzerland. England is

represented by Professor Schäfer. It may be recalled that, in addition to the leading part which Schwann took in the establishment of the cell doctrine, he did much valuable work on the processes of fermentation, decomposition, and digestion; to him science owes the discovery of pepsin.

THE HUNTERIAN FESTIVAL IN LONDON.

The Hunterian Festival of the Royal College of Surgeons of England was celebrated on February 14th. The Hunterian oration, published in the British Medical Journal of last week, was delivered by Mr. Butlin in the afternoon, and in the evening the President and Council entertained at dinner a distinguished company in the library of the College. After the usual loyal toasts had been duly honoured, the president, Mr. Henry Morris, gave "The Memory of John Hunter," which was drunk in silence. Mr. Edmund Owen, one of the vice-presidents, then gave in a very ingenious and humorous speech the toast of "The Visitors," which was acknowledged by the Earl of Onslow, Sir Herbert Maxwell, Bart., F.R.S., and Mr. Justice Bargrave Deane. The toast of "The Hunterian Orator" was proposed by the Principal of the University of London, who paid a well deserved compliment to the eloquence and public spirit of the orator; the toast was briefly acknowledged by Mr. Butlin. Among others present at the dinner were H.S.H. Prince Francis of Teck, Lord Reay, Lord Cheylesmore, the President of the Royal College of Physicians, the President of the Institute of Civil Engineers, the Vice-Chancellor of the University of Cambridge, Sir Schomberg McDonnell, K.C.B., the Deputy Master of the Mint, the Director-General, R.N., the Director-General, A.M.S., Mr. Alderman and Sheriff Crosby, F.R.C.S., Mr. Sheriff Dunn, the Provost of University College, London, the Master of the Merchant Taylors' Company, the Master of the Society of Apothecaries, the Master of the Barbers' Company, and the Treasurers of Gray's Inn and the Inner Temple.

THE COLONIAL CONFERENCE.

The Colonial Office has not yet issued papers with regard to the conference of Colonial Premiers to be held in London next April, but dispatches from the Colonial Secretary have been published in Australia and Canada. From the abstracts telegraphed home, it appears that the main subjects for discussion will have reference to the proposed formation of an Imperial Council, to preferential trade, to defence, naturalization, and immigration, and to judicial appeals, but among the subsidiary subjects mentioned is reciprocity in professions. One of the telegrams limits this to barristers and surveyors, but we hope it may be assumed that this is an error, as the desirability of assuring uniformity in the conditions of medical qualification, or at least reciprocity in the recognition of diplomas, has been fully brought to the notice of the Colonial Office by the British Medical Association, and the Colonial Committee in its last report[1] was able to state that the Association had been instrumental in obtaining medical legislation with regard to reciprocity and registration, and to the repression or restriction of unqualified practice in a number of colonies. Another matter of medical interest which it is hoped will be considered by the Conference is the establishment of a system of imperial notification of infectious disease. It is understood that Sir Joseph Ward, Premier of New Zealand, and Minister of Public Health in Mr. Seddon's last Cabinet, is willing to bring the matter forward. It will be remembered that the Convention drawn up by the Paris Sanitary Conference of 1903 contained an article approving the creation of an international health office in Paris, but leaving its initiation to the French Government, which so far has taken no steps in this direction. The establishment of a system of notification within the British Empire would be a practical step in the desired direction, and might encourage France to make use of the authority given to her by the Paris Conference.

[1] Supplement, February 6th, 1907, p. 61.

We regret to read of the sudden death, on February 19th, of Sir William Hingston, Surgeon-in-Chief to the Hôtel-Dieu, Montreal. He was President of the Montreal Branch of the British Medical Association for five years, and gave the address in surgery at the annual meeting of the Association at Nottingham in 1892.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

Vaccination.—Somewhat unexpectedly, Mr. Lupton caught the Speaker's eye on Thursday night after 10 o'clock and moved his amendment to the Address regretting the non-repeal of the penal clauses of the Vaccination Acts. He began in a serious line enough, pointing out that compulsion was still enforced by the obstacles placed in the way of the conscientious objector by a hostile magistracy. He pleaded for a relaxation of the clause now so capriciously administered, and then went on to denounce vaccination as a poisoning of the manhood and womanhood of the nation by law while yet in the cradle. "The most wicked invention was that of opening a vein, cutting through the skin, and putting into it pus from a diseased cow." He asserted that the most horrible diseases might be caused by it, and then, in a flight of wild fancy, referred to the history of mankind, speaking of Moses and David, Alexander and Caesar, Demosthenes and Cicero, Nelson, Wellington, and Napoleon, and finished up with Spenser, Milton, and Shakespeare, and asked, Had any of these men been vaccinated? The House roared with laughter, and the hon. member went on to say that the Government had not sufficiently studied the question, and finished by asserting that not a single life has been saved by vaccination. Mr. Lehmann, the seconder, took a more grave and moderate line, and argued that the evidence in favour of the preventive power of vaccination was not sufficient to justify compulsion. He pointed out that the law allowed exemption not on account of the physical capacity of the child but on account of the mental habit of the father. He regarded the law as it stood at present as an absurdity. Mr. Burns next rose and made a brave attempt to bring the debate to an end. He referred to the withdrawal of a similar motion last year on account of a sympathetic reply on his part. He had, in accordance with his promises then given, taken steps to diminish the cost of vaccination, and in a few days he would introduce a Bill which would substitute a simple and effective form of statutory declaration for the existing form of exemption certificate, and thus avoid for applicants much trouble and irritation. He therefore hoped the amendment would be withdrawn. Here, however, Mr. Cave intervened, and after a few minutes the sitting closed and the debate was carried over to Friday. Mr. Cave resumed his speech on Friday and made a vigorous defence of vaccination, citing the experience of the Sheffield epidemic and the success of a vigorous policy in Germany. He disliked the exemption clause of the Act of 1898, and contended that any weakening of it would be dangerous, and he hoped the amendment would be negatived and not withdrawn. Sir William Collins followed, and said that as one of the few survivors of the Royal Commission of 1889 to 1896, he wished to state his position, and first of all dissociate himself from the rather lurid pathology of Mr. Lupton. He pointed out that the immediate question was what was to be done with the honest objector. He regretted that legislation had not followed the recommendation of the Royal Commission, as seven members of it favoured the view of a simple statutory declaration, while only two favoured the plan adopted of bringing the honest objector before a magistrate. He thought whatever the President of the Local Government Board did now, it would lead up to the larger policy of the abolition of compulsion. As a medical man he would rather that their prescriptions

were accompanied by moral suasion than associated with threats of the law. There were two methods of meeting small-pox scientifically, the one by insisting that every one should be vaccinated, and the other by separating the sick from the healthy by complete isolation. The legislation had largely broken down the first method by not insisting on revaccination, which was essential to secure the maximum of protection. As the practice existed even in a well-vaccinated community like Sheffield, isolation was shown to be necessary. He, therefore, said that although perfect vaccination might be efficient, primary vaccination must be accompanied with isolation and notification. This brought them to the scientific way of dealing with the disease, the stamping-out process rather than the stamping-in process. He admitted that although medical men of reputation and standing were sceptics in regard to vaccination they were a minority. On the other hand, the profession did not now claim unanimously, as in 1853, that vaccination was a preventive and a perfectly harmless operation. After referring to the lymph now used, the sources of it, and the difficulty of standardizing it, he concluded a very excellent speech by saying the concession promised could not be considered final, and that when the Bill was introduced some of them would seek to extend its scope. Mr. Walter Long complimented Sir William Collins on his speech, and proceeded to show that he had never said, as had been stated in the debate, that primary vaccination alone was a farce. He had only contended that no one now regarded primary vaccination as a comple safeguard for the whole of life. He went on to show that his experience at the Local Government Board had convinced him that it was impracticable to create at present a system of complete sanitary administration on account of the expense. It was impossible at present to have a system of isolation and notification on which one could rely all over the country. He quoted the cases of Germany and India in favour of vaccination, and said he would await with interest the proposals to be made by the Local Government Board. Sir Walter Foster followed, saying that as he was responsible for the creation of the conscientious objector in the Act of 1898, he was glad that the cumbrous and stupid method adopted for giving certificates of exemption was about to be modified. When the Act passed he had struggled hard to make a statutory declaration sufficient, and most of the trouble and irritation about vaccination since that time had been due to the tyranny which compelled a working man to pay a fee and lose half a day's work to try and get a certificate to which the law said he was entitled. The Government would also have to face the question of revaccination, which was necessary for complete protection. He himself believed firmly in vaccination from the experience of several severe small-pox epidemics and the observation of the terrible difference of the malady in the unvaccinated as compared with the vaccinated. As to compulsion, he thought that it might safely be abandoned if an adequate fee were given for every successful vaccination to the medical practitioner. Peaceful persuasion in the hands of the profession would be more efficient than compulsion. Moreover, as regards expenditure it would, he believed, be less costly than the present system. Isolation was not a practical policy on account of the cost, and people were even more sensitive about rates than about vaccination. In answer to Mr. J. Wilson, the Secretary for Scotland promised that any further recognition of the rights of conscience should be recognized in Scotland. Mr. Richards denounced and praised the Leicester system. Mr. [illegible] expressed his alarm at the strength of the anti-vaccinators from whom he differed. It was impracticable persons with whom one might as well argue as with a brick wall. Dr. M'Namara, replying for the Government, strongly condemned the underhand and evasive action of many in getting in reading it difficult, especially for the poor, to obtain the right of exemption, and repeated the promise of Mr. John Burns that the new procedure, which would be framed to enable a conscientious objector to secure exemption upon making an ordinary statutory declaration, and that it was intended to make it as little onerous as possible. The amendment was shortly after withdrawn.

Cerebro-spinal Fever.—In answer to Sir Francis Channing, Mr. John Burns stated last [illegible] that there had been thirteen local authorities who, since the issue of the circular of August, 1905, had, with the approval of the Local Government Board, made cerebro-spinal fever a notifiable disease for a limited period. Under the Act of 1899 the local authority, in the case of an emergency, can at any meeting, held after three days' notice, make an order to the effect that the disease shall be compulsorily notifiable. The order had to be advertised forthwith, and came into force at the expiration of a week from the date of the advertisement. The order would not remain in force for more than a month except with the approval of the Local Government Board; but he was quite prepared to give approval in any case in which it might appear to be necessary that the disease should be made notifiable. His honourable friend would see that the proceedings under the Act involved as little loss of time as was possible, and it did not seem necessary to bring in a Bill on the subject.

Bovine Tuberculosis.—In answer to Mr. Field, the President of the Local Government Board stated that the cost of the recent report of the Royal Commission was £136 15s. 11d. This was exclusive of the cost of the Appendix, which had not at present been issued. He had not received any information as to the flesh of a tuberculous bull slaughtered by order of the Argentine Republic having been publicly partaken of by a number of gentlemen interested in live stock, except that contained in a newspaper cutting which his honourable friend was good enough to send him, but he was advised that it would be unsafe to draw any general inference from a single meal such as that referred to.

Private Members' Bills.—The ballot, in which 400 members took part, was duly drawn on Thursday in last week, and resulted somewhat unexpectedly, as none of the great groups drew high places. Mr. Dickinson, who drew the first place, finally decided to introduce a Bill to enable women to vote at Parliamentary elections, and fixed Friday, March 8th, for the second reading. Mr. Lambton, who was second, selected railway contracts as his subject, and fixed the second reading for Friday, March 15th. Mr. Everett, who was third on the list, preferred to move on Wednesday, February 27th, a motion for the Disestablishment of the Church of England. Sir Brampton Gurdon, who was next, brings on the Deceased Wife's Sister's Marriage Bill on Friday, February 22nd. Mr. Strauss has chosen March 22nd for his Metric System Bill; and Mr. Hogan, the successful member of the Irish Party, has fixed Friday, April 19th, for his Land Bill for Ireland. The Miners' Eight Hours Bill has been fathered by Mr. Walsh, who drew seventh place, and will be brought on for discussion on Friday, April 12th. The Provision of Meals (Scotland) Bill of Mr. Ramsay Macdonald is put down for March 1st. The ninth place, won by Mr. R. Balfour, was utilized to put down a Scottish Local Option Bill for April 26th; while the next to take advantage of his chance was Mr. G. Roberts, who has chosen May 3rd for his Compulsory Weighing and Measurements Bill, which concerns manufacturers and not school children as might at first be supposed. There is a Bill for the Medical Inspection and Treatment of School Children presented by Mr. Walter Rea, and put down as second order on March 1st, when it may come on, as the Provision of Meals Scotland Bill ought not to occupy the whole sitting. An Old Age Pensions Bill is down as first order on May 10th in the name of Mr. Scott, who drew thirteenth place, while Mr. George Hardy, who came next, will move the second reading for Small Holdings Bill on May 17th. The Labour Party, which is pushing the Wages Boards Bill, has fixed the second reading for April 5th, when the Bill has first place, and is followed by Sir F. Channing's Coroners Inquest Bill, which has little chance of being reached. Other Bills will be introduced now almost daily, but will not have much chance of passing unless adopted by the Government.

The Course of Business.—On Wednesday the Government brought the debate on the Address to a close in order to get on with necessary financial business: Thursday was allotted to Supplementary Estimates, Friday was devoted to the Deceased Wife's Sister Bill, and next Monday was fixed for Mr. Haldane's statement on the proposed Army changes.

Scotland.

Arbitrary Dismissal of a Poor law Medical Officer.

Arbitrary dismissal of a Poor-law medical officer in the crofting counties of the Highlands appears to be a comparatively frequent occurrence. Various parish councils have terminated the employment of their outdoor medical officers on sixteen occasions within seven years, and in ten instances no cause for the dismissal was given. A very striking instance of this capricious behaviour is offered in the case of Dr. George Duncan, who was dismissed by the parish councils of Kintail, Glenshiel, and Lochalsh, in the County of Ross-shire, on December 24th, 1906. It appears that, without any notice having been put on the agenda, Dr. Duncan was dismissed on account of advanced age, on the motion of a minister of the Established Church (Rev. D. Macrae), seconded by a farmer (Mr. Matheson), and supported by a banker (Mr. Mackean). Six months' notice was given. Dr. Duncan has held the post for 50 years, and, to quote the *Northern Times*, has "discharged his duties with great skill and conscientious integrity. He has been a total abstainer all his life, and a man of great activity and powerful physique. That the inhabitants of the three parishes valued his services was demonstrated in the autumn of last year, when they presented Dr. Duncan with a testimonial of over one hundred sovereigns." There can be no doubt that the ground given for the dismissal is inapplicable, and that in spite of his 75 years Dr. Duncan is perfectly capable of performing his duties to his patients' advantage. What the real motive which inspired the three gentlemen mentioned to urge the dismissal may be is not at present ascertainable, but there is very little doubt that some subtle incentive was working beneath the surface.

The law in Scotland is peculiar in respect of the conditions of the Poor-law outdoor medical officers. While the medical officers of health, unlike their English comrades, are protected from summary dismissal by local bodies, and while the poor-house medical officers and inspectors of the poor are similarly protected, the parish medical officer and the governor of the poor-house may be discharged by the parish councils. Dr. Duncan, however, was appointed under the Poor-law Act of 1845, and by this Act the parish medical officers were handed over to the parish councils from the parochial Boards without any alteration of the conditions of service. It seems somewhat doubtful whether the councils would have any power of dismissal of any officers appointed under the older Act. The Local Government Act (Scotland) of 1894 provides for this transference.

It has long been felt that the law regulating the office of parish medical officers in Scotland requires readjusting. The Scottish Poor-law Medical Officers' Association have furthered a scheme providing for the compulsory appointment of outdoor medical officers, and requiring the sanction of the Local Government Board before such an officer could be removed. This scheme was put forward in evidence before the Departmental Committee of the Local Government Board of Scotland, inquiring into the conditions of Poor-law medical relief, and the Committee adopted the recommendation. It may, therefore, be anticipated that the security of tenure of office desired will be extended to the outdoor medical officers in Scotland in some future legislation. But at present the law does not interfere with any action, however arbitrary, on the part of the parish councils, and the Local Government Board has hitherto refused to attempt to intervene.

The sympathies of the members of the medical profession will be extended to Dr. Duncan, and if any pressure can be brought to bear on the council Dr. Duncan can be confident that the Association will lend its most active support. At present we are informed that a protest signed by some 700 ratepayers is being presented to the Local Government Board, protesting against the dismissal. We can only express the hope that the parish councils of Kintail, Glenshiel, and Lochalsh will receive from the Local Government Board in Scotland the severe reprimand which they have so well merited.

Edinburgh Royal Infirmary.

Miss Spencer, Lady Superintendent of Nurses in the Royal Infirmary of Edinburgh, has intimated her intention of resigning office on June 30th, at which date she will have completed 30 years of service. She entered the Infirmary as assistant matron in 1877, and in 1887 succeeded Miss Pringle as matron. The managers have minuted their high appreciation of her long and valuable services and their regret at her resignation.

Public Health Authorities and the Prevention of Phthisis.

In reply to a letter addressed to him by the President of the Edinburgh Medico-Chirurgical Society, the Vice-President of the Local Government Board for Scotland has written as follows:

Local Government Board,
Edinburgh, February 2nd, 1907.

Dear Sir,—I have received your letter of January 29th, in which you suggest that, besides the circular of March last, the Board might furnish your Society with more definite information as to what is actually contemplated in any plan they may sanction for carrying into effect the administrative control of phthisis here or elsewhere. The Board welcome the opportunity which you have kindly given them of endeavouring to remove the doubts existing in the minds of some members of the medical profession, whose views are, I need hardly say, regarded by the Board with the greatest respect.

You do not indicate in your letter what your precise difficulties are in relation to the application of the Public Health (Scotland) Act, 1897, to pulmonary phthisis. It seems to the Board, as is pointed out in their circular, of which I enclose a copy for reference, that the great majority of the sections of the Act are as well suited to the administrative control of phthisis as to that of the other infectious diseases—each disease being treated in the way most appropriate to its nature, danger, and duration. But in two or three of the sections, the discretion of the local authority and its officers is too much fettered. These sections are 57, 58, and 59, which relate respectively to school attendance, to food, and to public conveyances.

It is desirable in our view so to amend these sections as to bring them into line with the other provisions of the Act, in all of which the discretion allowed to the local authority and its officers obviates any difficulty or danger of unnecessary hardship in the management of phthisis. The Board have prepared a short Bill embodying amendments with that object. If the Bill should become law, the control of phthisis may be developed on lines adapted in every respect to the peculiar nature and the multiform varieties of the disease.

At the present stage the Board feel that it is impossible, even if it were desirable, to lay down any hard and fast plan for the management of phthisis. The nature of the steps taken in different localities must, to a great extent, depend upon the circumstances and resources of each locality. The Board are satisfied to leave the details to the local authorities and their officers, who have all had considerable experience in controlling the various forms of infectious disease. We have no fear that their statutory powers, which have not hitherto been abused, will be applied in any unreasonable or oppressive way in dealing with phthisis.

I have to add that our circular was issued only because we felt that the time had come when some strong measures should be taken to endeavour to cope with this terrible disease. It has for a long time been recognized as an infectious disease. The Public Health Act lays on this Board and on local authorities the duty of taking measures for preventing the spread of infectious disease, but little or nothing had been done by local authorities to deal with phthisis. The Board felt that this inaction could not be permitted to continue, and that it was incumbent on them to direct the attention of local authorities to their duty under the Act. But we were fully alive to the difficulties, and clearly recognized that the methods of dealing with phthisis must be adapted to its peculiar character.

Our circular was therefore not expressed in peremptory or imperative terms, but designedly left it to each local authority to determine what measures could most suitably and efficiently be taken to carry out the provisions of the statute.

The Board trust that these explanations, especially the expression of their intentions regarding the proposed Bill to which I have alluded, may succeed in removing any apprehension felt by your Society in regard to any action that may be taken by local authorities as the result of our circular of March last.

(Signed) J. Patten MacDougall, Vice-President,
Local Government Board for Scotland.

The President of the Medico-Chirurgical Society,
Edinburgh.

Medical Officer to the Edinburgh School Board.

At a meeting of the Edinburgh School Board held on February 18th, John Hally Meikle, M.A., B.Sc., M.D.Edin. and D.P.H.Edin., was unanimously appointed medical officer to that Board at a salary of £400 a year.

The Western Infirmary, Glasgow.

The annual dinner of the Western Infirmary Residents' Club was held in St. Enoch's Hotel, Glasgow, on

February 14 h. Dr. W. K. Peden was in the chair, and there was a large gathering of the old residents. Dr. James H. Nicoll and Dr. Lindsay Steven were the guests of the Club, in recognition of the fact that both, who had been resident assistants in the Western Infirmary, had recently been promoted to the full charge of wards. The toast of "The Club" was proposed from the Chair, that of "The Guests" by Dr. Walker Downie. "The Old Institution" was proposed by Dr. Tomkinson, and responded to by Dr. D. MacDonald; "Absent Friends" was given by Dr. A. Wilson. Dr. Marsh, at present home from China, spoke of the Glasgow graduates who had settled near him, and reported them as all doing well. The Secretary of the Club, Dr. Jas. Galbraith Connal (4, Burnbank Terrace), would be glad if members would keep him apprised of any change in their address.

A Glasgow Vigilance Committee.

The Glasgow Southern Medical Society has appointed a Vigilance Committee, and any practitioner in the district can bring matters coming to his knowledge under the notice of the Committee by writing to the Secretary of the Southern Medical Society, 22, Carlton Place, Glasgow.

Ireland.

Health of Belfast.

Special Local Government Board Commission.

The Local Government Board, Ireland, has appointed a Commission to make inquiry and report on the following points connected with the health of Belfast:

1. The cause or causes of the high death-rate in Belfast.

2. The administration by the several authorities charged therewith of all general Acts and Orders relating to the public health, the prevention of disease, and of all provisions of local Acts conversant with the same or similar matters, and of all other Acts or Orders, whether general or local, which directly or indirectly affect the public health of the city.

3. The measures they recommend for adoption with a view to the improvement of the health of the city.

The Commission will consist of Colonel Thomas W. Harding, formerly Lord Mayor of Leeds, Chairman; Dr. Archibald Kerr Chalmers, medical officer of health for the City of Glasgow; Dr. Ludovic W. D. Mair, a medical inspector of the Local Government Board (England); Mr. Peter C. Cowan, M.Inst.C.E., Chief Engineering Inspector of Local Government Board, Ireland; and Surgeon-Colonel David E. Flinn, F.R.C.S.I., one of the Medical Inspectors of the Local Government Board, Ireland.

It will be remembered that in the autumn of last year a strong and representative deputation waited on Mr Bryce, and laid before him all the circumstances of the health of Belfast and the uneasiness felt amongst the public generally. The appointment of this Commission is received in Belfast with satisfaction, alloyed by a feeling of regret that such a proceeding is necessary. It is hoped that the inquiry will prove a turning point in the Local Administration not only of Belfast, but of all large cities, and that antiquated rules and methods of procedure will be swept away.

Typhoid Fever.

Dr. Symmers, Professor of Pathology in the Queen's College, Belfast, sent the following letter to the weekly meeting of the Public Health Committee held on February 14th:

Queen's College,
February 14th, 1907.

Dear Sir,—I beg to report that samples of tap-water from No. — Grosvenor Road, and from No. — Fall Road have been examined in the laboratory during the past ten days. I have to inform you that they contain in each case a number of bacilli in every particular identical with the bacillus of typhoid fever (B. typhosus). I have been able to investigate the cases. In view of the importance of the finding I am proceeding to re-examine [illegible] in order to establish its identity, but in the meantime I consider that the water in question ought to be regarded with the very gravest suspicion. I am, Sir, your obedient servant,

(Signed) William [illegible] Symmers.

Dr. H. W. Baillie.

Professor Symmers attended the meeting of the Committee, and after considerable discussion it was considered advisable by the Committee to wait on the meeting of the Water Commissioners, which was being held that day; accordingly a deputation, including Professor Symmers and the Medical Officer of Health of the City (Dr. Bailie), was appointed, and met the Water Board. The proceedings were kept strictly private; but after the City Council deputation had held a private discussion, it was announced that Professor Frankland of Birmingham was to be brought over to consult with Dr. Symmers.

It is needless to say that the public are much disquieted. Several years ago an immense sum of money was spent in promoting the Mourne water scheme, which was to give Belfast an unrivalled water supply. This scheme has not been completed yet. More money was then spent on buying up farms around the Woodburn and Stoneyford supplies to procure a pure catchment area. After all this expenditure of treasure, and after the loss of more lives from typhoid fever than has probably happened in proportion in any of the large towns in England, an epidemic, so far small but virulent, of the disease springs again on the public, and one of the most promising of young medical men of the city is cut off in his full usefulness. Of the three water supplies, no one appears to know where they ultimately are delivered; there is either the most unhappy confusion or the most desperate ignorance.

The method by which the bacillus was discovered is new, and was discovered by Dr. Wilson, Riddell Demonstrator of Pathology in the Queen's College, Belfast; large quantities of water are put in chambers and the air partially exhausted, and then at a very low temperature, which does not affect the bacillus, the water is slowly evaporated down and the residue examined.

The University Question in Cork.

Dr. Windle, President of Queen's College, Cork, and also President this year of the Cork Literary and Scientific Society, delivered his presidential address before the members of the latter body some days ago. In his address, which was entitled the City and its University, he described a city university as one which, in contradistinction to a national university, such as Oxford and Cambridge, looked to a city and province around for its students—a less extensive but no less useful institution, which considered local wants and tried to supply them; in other words, a university of the type of those which had recently been springing up with such rapidity in different parts of England. The function of a university was to teach a student to be a man, and so to form his character as to meet with fortitude and success the difficulties with which as a man he would have to contend. Dr. Windle would take Dr. Arnold of Rugby's three axioms as his motto for the city university: first, religious and moral principle; secondly, gentlemanly conduct; and thirdly, intellectual ability. In discussing the course of studies in a university, Dr. Windle expressed the opinion that any subject capable of being taught on scientific lines was a proper study for a university, if it were also a subject suitable for large purposes, and with a sufficiently wide scope. He would include commerce, electrical engineering, and applied chemistry—chemistry, as it is a living subject for manufacturers and agriculturists. A university in a city would be a public asset because it would or should be a centre for the diffusion of culture—to use a word which has become abominable by misuse—throughout its district, a place not only of reference for those who desired information on abstruse points, but a centre for usefulness in the city in which it was placed and in the district around. Before closing, Dr. Windle referred to Mr Bryce's recent announcement on the university question. He admitted that the declaration was a disappointment to him, as to others interested in securing a local university, believing that such independence would be the very best thing for the city and for education in the South of Ireland.

But the fact that we are refused that boon in spite of the good reasons which we could urge for obtaining it must not surprise us when we find Belfast, with that beautiful modesty and humility which characterize all its actions, protesting that it is in no way worthy of such a gift nor desirous of it. Cork is not, I regretfully admit, in as strong a position as Belfast as regards its college, and if Belfast is not fit for a university *a fortiori* neither is Cork. But

I would say in the words of logicians, *Negatur minor*. In my opinion Belfast is fully worthy of a university. At the same time, I cannot blame those who, accepting Belfast's unduly humble opinion of its own merits, take that city at its own estimation, and deal with it and with us as they have done. Nor should the fact that we have been refused a university blind us to the fact that if the Government's intentions are as I understand them to be from Mr. Bryce's speech, we in Cork—I am to be understood as solely dealing with the local situation—we in Cork will find ourselves on a very much better footing than we now are. We have not got all that we desired, but we are to get something, perhaps a good deal, and we must for the present content ourselves with that, and devote our energies to improving our position and urging our claims until the day comes when we can secure the full meed of recognition which we consider to be our due.

West Yorkshire.

Annual Meeting of the Bradford Infirmary.

At the annual meeting of the Bradford General Infirmary, which was held on February 12th, under the chairmanship of the Mayor, there was some discussion on certain points of interest in connexion with the welfare of the institution, which imparts an additional importance to the occasion. In reference to finance, it was pointed out that the expenditure was markedly in excess of the regular annual income. It appears that some five or six years ago, by a special effort initiated by the mayor, there was raised a fund of £15,000—or, rather, a guaranteed annual sum of £5,000 for five years; but this is now exhausted. It appears certain that the Bradford Hospital Fund which is being organized will not for some years be adequate to meet the requirements of the institution, and reliance will have to be placed on a continuance of the Mayor's guarantee fund, for which it is hoped that a similar sum of about £15,000 may again be promised. Some of the speakers at the meeting seemed to think the employers of labour in the city did not take a very generous view of their responsibilities and of their indebtedness to the infirmary. It was pointed out by Dr. Horrocks that large firms were formerly in the habit of paying a medical officer £100 or £150 a year for attendance on their hands. That system was now done away with, and, so far as he knew, even the larger firms in the city did not subscribe more than £50 per annum. In connexion with the Bradford Infirmary there has been for many years an out-patient visiting department—that is to say, the patients are attended at their own homes, in the same way, but on a smaller scale, as at the Leeds Dispensary, for example, which is of course under separate management in every way from the infirmary of that city. At Bradford this work has been done by one of the residents as part of his work. A new departure is to be made, whereby the visiting will in future be done by four or five medical men who are in practice in the various districts, and the experiments will be watched with interest by those who are responsible for infirmary administration.

The General Infirmary, Leeds.

At a meeting of the Special Election Committee, held on Friday, February 8th, Mr. Harold Collinson, M.B., B.S.Lond., F.R.C.S., was elected Honorary Assistant Surgeon in charge of the Ida and Robert Arthington Convalescent Hospitals at Cookridge. Mr. Collinson, who was a Leeds student, has held all the resident surgical appointments at the Infirmary, and was recently elected as the first Surgical Registrar of the institution. His promotion causes a vacancy in the post of Surgical Registrar, which falls to be filled by the Board on the recommendation of the Faculty.

Conviction for Selling Watered Milk.

The offence of adding water to milk, which appears to be one of the grossest of offences, must be one which carries with it considerable financial reward, for it continues, in spite of frequent prosecutions. There is in Leeds an institution known as the Provincial Dairies, which is for the supply of pure milk. Under a contract with a farmer, consignments of milk are daily received from the Collingham district. An inspector took a sample of this milk from a churn at the North-Eastern Station, which was consigned to the firm mentioned, and this was found to contain 10 per cent. of added water. Four days after another sample was taken, when the amount of added water was 23 per cent. Samples taken at the farm of the defendant farmer were found to be of excellent quality. When the case came on for trial the learned stipendiary did not seem to be impressed by the defendant's assurance that he could not account for the adulteration, for in fining him £5 with costs on each summons he told him he would not get off so easily if the offence were repeated.

Bristol.

Royal Infirmary.

The annual meeting of the Board of Governors was held, under the presidency of Sir George White, on February 5th. The President, in his address, submitted the report for 1906 for approval, as well as the account of receipts and expenditure, and referred to the appeal he had made for a sum of £50,000 as a special fund. In November last he was able to say that the whole amount had been subscribed, and the Committee congratulated the governors on the successful conclusion of the appeal, and expressed their grateful thanks to the friend who had supplied the final balance of £3,250 as an "In Memoriam" donation. He had never had any anxiety about the fund, but now he had received the money he found it a more difficult matter to decide how to lay it out to the best advantage. Of the amount received, £15,000 had been utilized in paying off a debt, leaving the balance for improvements in buildings and equipment, the object held in view when the fund was started. Further help was required from subscribers and donors, and as a result of the canvass instituted some time ago the number had increased by some three hundred, representing an addition of about £1,000. This, he thought, was most gratifying when it was remembered that the usual falling off in subscribers was about 5 per cent. The receipts of the year had amounted to £16,630, while expenditure was £17,605, leaving an adverse balance of £975. The number of patients, both in the in and out departments have increased, the former being 4,029, the latter 45,508, while not only had the average stay of each in-patient been less than in previous years, that is, 20.13 days, but the death-rate, 4.9, was the lowest for 14 years past. The cost per bed was also the lowest for ten years, £58 13s. 2d.; and that for out-patients for twelve years, £2 19s. 11d. In spite of the fact that last year 748 more in-patients and 7,776 more out-patients had been treated than in 1902, the total ordinary expenditure was lower. He quoted these figures to show the careful manner in which the funds placed in the hands of the Committee were disbursed. Legacies had been received during the year amounting to £3,802 3s. 10d. Two fresh departments had been added—the pathological and bacteriological—under Dr. Walker Hall, and the throat department, under Dr. Watson Williams. In conclusion, the President spoke in generous terms of the services of the staff, the Matron, and the nurses, and Mr. Budgett, the Secretary and House-Governor.

The Medical Club Union.

The Bristol Medical Dramatic Club held its twenty-ninth season during the past week, and on five consecutive nights performed *Home, Sweet Home, with Variations* before large audiences. The proceeds are to be devoted to increasing the funds of the Medical Clubs Union, which is endeavouring to secure an athletic ground in connexion with University College. This year the performance gave general satisfaction, and it is hoped a considerable sum may be obtained.

Liverpool.

Dispute at the Highfield Poor-law Infirmary.

Some prominence has lately been given in the daily press to a regrettable divergence of opinion which has arisen between the resident assistant medical officer of the Highfield Infirmary on the one hand and the two senior medical officers and the nursing staff on the other. The Highfield Infirmary, which is situated at Knotty Ash, and has been in existence a little over a year, is a branch of the Brownlow Hill Parish Hospital for the reception of

the infirm inmates of the latter. The cases are all chronic, and are under the medical care of the two visiting medical officers of the Brownlow Hill Hospital and the resident assistant. Judging from the newspaper reports the questions in dispute are extremely involved, and it is difficult to form a clear opinion either as to the points at issue or as to the rights and wrongs of the case. It seems strange, however, that there should be any possibility of a serious difference of opinion arising between an assistant medical officer and two senior officers of such long experience as those who form the senior staff. It is alleged that friction has existed between the resident and the nurses on the ground that the former did not sufficiently support the nurses in their endeavours to maintain discipline in the wards. Further, it appears that on more than one occasion he has not carried out the instructions of the senior staff. In a speech by one member of the vestry it is suggested that there had been a threat of an action for libel made against one witness who had given evidence before the committee of inquiry appointed by the vestry, and from what follows in the report of the meeting it would appear that the witness in question was one of the senior medical officers who had been asked to give evidence. The Highfield Committee by a majority appears to support the action of the resident assistant, as it has recommended that his salary should be increased from £100 to £125, and this was agreed to; but the chairman showed his disagreement with the recommendation by leaving the room when the minutes of the committee came up for presentation to the vestry. No very definite conclusions were reached beyond the declaration that certain allegations were not proved, and the following resolution was passed by the vestry:

> That it be an instruction to the Highfield Committee to proceed to the reorganization of the staff of the Highfield Infirmary.

International Congress on School Hygiene.

On February 13th, an influential meeting was held at the Medical Institution for the purpose of forming a local committee in connexion with the Second International Congress on School Hygiene to be held in London in August. Mr. Edgar Browne presided. Dr. James Kerr, one of the secretaries, explained the objects of the Congress, and drew attention to the progress which had been made in Germany and other countries in the matter of school hygiene. The Committee chosen included, as Chairman, Dr. Caton; the Chairman of the Housing Committee of the City Council, Sir E. R. Russell; Vice-Chancellor Dale; and Dr. E. W. Hope, M.O.H. The honorary secretaries are Dr. A. G. Gullan and Mr. H. R. Jones.

The Samaritan Hospital.

Miss Mary B. Lee, who has been Honorary Physician to the Samaritan Hospital since the foundation of that institution eleven years ago, has resigned the office, and the Committee has elected Miss Margaret Joyce, M.B., B.S., to the vacant post. Miss Joyce has held several of the most important junior appointments open to women in London during the nine years she has held her qualifications.

The Stanley Hospital.

Last month a new gynæcological department was opened at the Stanley Hospital, the beds having been specially endowed on the condition that they should be in charge of a woman practitioner. The medical officer appointed is Miss Mary Hannah Frances Ivens, M.B., M.S. Lond., Gold Medallist in Obstetric Medicine, who has held various appointments in London.

South Wales.

Pontypool Hospital.

The annual meeting of the governors of the Pontypool and District Hospital was held on February 11th, under the presidency of Mr. A. A. Williams, J.P. The report showed that the income was £[illegible] 16s. 4d., an increase of £[illegible] 5s. 5d. compared with the previous year. In addition to having £250 on deposit and £250 invested in Consols of the face value of £[illegible] there was a credit balance of £[illegible]. During the year 305 cases were admitted for treatment, as against 150 in the previous year. Every available bed was now occupied, and the Board-room was being utilized as a children's ward. It was hoped in the near future to erect a children's ward. The report was adopted, and the officers were re-elected.

Cardiff Health Committee.

At the Health Committee of the Cardiff Corporation held on February 12th a member drew the attention of the Committee to the finding of the Royal Commission regarding tuberculosis. They had upset the theory of Koch, and had expressed the view that there is no doubt that in certain cases tuberculosis in children is the result of the introduction of the disease through milk from cattle affected by bovine tuberculosis. This danger could be obviated by heating milk to 150° F., and he hoped that the Committee would, when it came to deal with the milk supply, go into the matter carefully. The report also pointed to the extreme importance of dealing with the carcasses of animals which were found to be affected. It was stated that extreme care was taken at the Cardiff slaughterhouse. The Chairman said that what was needed in Cardiff was fuller powers for the medical officer in dealing with such meat. They must apply to Parliament for powers as full as had been granted to the medical officer of health in Leeds and some other towns. Dr. Walford said that in Cardiff they always acted up to the full extent of their powers—in accordance with the latest circular of the Local Government Board. He was at present obtaining particulars of special powers possessed in some other towns. Dr. Walford also presented statistics concerning the health of Cardiff during the year 1906. The report showed that there had been 5,001 births and 2,613 deaths, the birth-rate working out at 27.2 and the death-rate 14.2. The latter was the lowest death-rate since 1852. In a short report mention is made of each of the nine cases of small-pox notified between January 12th and February 8th. A large number of persons were found to be in contact with the infected persons, especially in the common lodging-house in Tyndall Street. Most of these were revaccinated by the public vaccinator. The house had been closed to fresh inmates, thoroughly disinfected, and kept under daily observation.

Scabies in the Pembroke Workhouse.

At a meeting of the Pembroke Board of Guardians held on February 14th, attention was drawn to the fact that for six months scabies and eczema had existed among children in the nursery, and had never been reported to the Board. Dr. Williams, house-surgeon, admitted that the diseases had broken out off and on, but he considered the seriousness of the outbreak did not call for any special report from him until a week ago, when the number of cases having increased, he thought it advisable to turn the chapel into an isolation ward—a procedure which in his opinion would enable him to stamp out the disease. After considerable discussion the Board accepted the explanation of the medical officer.

Veteran Medical Officer's Retirement.

At a meeting of the Pontardawe Board of Guardians and District on February 14th, the Clerk read a letter from Dr. David Thomas, of Ystalyfera, stating that it was not his intention to seek re-election as medical officer of health for the Eastern Division, and also tendering his resignation of his other appointments as Poor-law medical officer and public vaccinator, and hoping the Board would arrange for the change to take effect at the end of the present municipal year. "In taking this, to me, very regrettable step," Dr. Thomas added that he wished to express his appreciation of the courteous consideration and, indeed, the kindness he had at all times received from the members of the Council. Dr. Thomas had occupied the position for thirty years. High tribute was paid to his work, and the Board decided to receive the resignation with regret, and to place on record recognition of his invaluable services to the Union.

Swansea Refuse and Aberavon.

The Aberavon Corporation have found it very difficult to convince the Swansea Corporation that the refuse which the latter body have been burning into the sea has been washing back on to the Aberavon beach. It is certain that previous to the burning there was nothing that was washed up on the sands which spoiled its beauty and attraction. Since then, however, the beach

has been repeatedly blackened with all sorts of refuse, and on the occasion of the visit of the Swansea deputation to the Avon beach a few weeks ago it was decided to put the matter to the test. Accordingly on February 4th Sanitary Inspector Evans of Aberavon, under the supervision of a sailor who has had many years' experience in the Bristol Channel, went out in some of the Swansea barges, and deposited some coke, etc., in wire netting and sealed vessels, in the sea with the refuse. On February 15th, during the high tides, the beach was again strewn with black refuse. Between the two piers and for two miles below the north pier the sands were covered with ashes and other rubbish. Amongst this refuse were discovered some of the sealed packages which had been dropped out at sea. It is to be hoped that some definite steps will be taken to prevent the recurrence of such a nuisance.

SPECIAL CORRESPONDENCE.

PARIS.

Professor Netter on Typhoid from Oysters.

At the last meeting of the Académie de Médecine, Professor Netter made a very convincing communication on the danger of certain oysters. In collaboration with Drs. Briau, Latouche, and Ribadeau-Dumas he has collected not less than 120 cases of infectious accidents occurring in less than four months in twelve towns situated in different parts of France, but all having this in common—that they were consecutive to eating oysters from the same locality—Cette on the Mediterranean coast. The cases occurred in thirty-seven families or groups of families living at Autun, Le Creusot, Châlon-sur-Saône Dijon, Agen, Toulouse, Bordeaux, Paris, Montelimar, Lyon, and other places. The symptoms showed great diversity. The greater number of patients had gastro-intestinal symptoms, characterized especially by colic and diarrhoea with or without vomiting. The incubation period was generally at least twenty-four hours, but in 22 cases it was forty-eight hours or more. In some the stools became very frequent, there was somnolence and a marked adynamic condition, and especially among children profuse perspirations with a tendency to syncope occurred. In several cases there was epistaxis. There were 33 cases of typhoid fever, developing ten, twelve, or fifteen days after eating the oysters. In the majority of those cases the fever was preceded by diarrhoea. The type was generally very severe—the liver and spleen enlarged and painful, the urine albuminous; the stools were blackish, very abundant, and fetid. Jaundice was frequently present and intense; vaso-motor disturbance gave a violet tint to the cheeks and edges of the ears; intestinal haemorrhages were frequently noted. The mortality was high, 7 deaths in the 33 cases—that is, 21.1 per cent. Professor Netter suggests that the special nature of the symptoms of typhoid fever after eating oysters can probably be explained by mixed infection not only by the bacillus of Eberth but by other micro-organisms of the same family. The form and gravity of the typhoid fever had no relation to the number of oysters eaten, for in five of the fatal cases the numbers were respectively three, four, nine, ten and twenty-four. The 120 cases observed were all in persons in perfect health, and in many of the localities other causes could be entirely excluded. At Autern, where typhoid fever is almost unknown, 11 cases with 3 deaths and 19 cases of gastro-intestinal affections were observed within a few days. With rare exceptions, all who partook of the oysters became ill, while members of the family who did not touch the oysters escaped. The source from which the oysters were obtained is indisputable; nine times they were eaten at Cette, forty-eight times they were bought at Cette by the person who took them away with him; and sixty-five times they were sent by merchants from Cette to people who ordered them in other parts of France. Cette is a town of 35,000 inhabitants, and the oysters which grow in the Etang de Thau are dredged; they are then placed in the canals of the town, and the retail merchants keep their small supplies submerged near the bridges. All these canals receive the sewage of the town. These oysters thus find conditions for superalimentation, and in one year attain a size that oysters in the open sea only reach in three years. Each year from Cette there are sent away to other parts of France and over Europe no less than 61,000 kilos of oysters. Cette has, however, its defenders, who insist on the rarity of typhoid fever in the town. In 1901 there were 29 cases, in 1902 26 cases, and in 1903 14 cases. But Professor Netter contends that the healthiness of a town with regard to typhoid fever cannot be judged by the inhabitants, but by the visitors insufficiently acclimatized. In 1900 workmen were brought to Cette from Creusot to start a branch of the iron foundry by July, 1901; among these sixty or seventy hands imported there had already been 13 cases of typhoid fever with 2 deaths. In 1896 Professor Cornil, in the name of Professor Chantemesse, made a communication to the Académie de Médecine on the danger of eating such oysters, but his arguments were not considered sufficiently convincing. M. Sabatier, Dean of the Faculty of Science at Montpellier, declared that the experiments were insignificant. Professor Chantemesse, Drs. Chatin, and Vaillard took part in the discussion, and a special commission consisting of these gentlemen, with Drs. Perrier and Netter, was appointed to consider the question.

BERLIN.

Overwork in Primary and Secondary Schools.—The Conscientious Objector.

The German Committee for preparing the Second International School Hygiene Congress, a body numbering among its members such men as Baginsky (Berlin), Von Esmarch (Berlin), Eulenburg (Berlin), Hartmann (Berlin), and Schmidt (Bonn), have memorialized the Prussian Cultus-ministerium on the subject of the excessive burden of work laid on the pupils of German schools, and urging three fundamental reforms in the health interest of the rising generation. These proposed reforms are:

1. Abandonment of all afternoon lessons, to be rendered possible by establishing the so-called *Kurzstande* or short lesson hour of forty or forty-five minutes.

2. Remission of all *written* homework in the lower and middle classes of schools.

3. Introduction of an obligatory weekly play afternoon, with remission of all homework whatever on that one day.

That German pupils, and especially boys in the higher class schools (*Gymnasien*, *Realgymnasien*, and *Oberrealschulen*), are sadly overworked is an undeniable fact, a fact strangely at variance with the hygienic theories and sporting tastes of our day. For the average German boy has literally hardly time for more outdoor life than his daily walks to and from school. Viereck, in his work on American schools, calculates that the pupils of American higher-class schools have an average of 1,450 hours of work a year, while German pupils of gymnasiums, etc., have a yearly average of 2,160 hours of work—that is, almost 50 per cent. more. Some Berlin schools exact from pupils in tertia (that is, boys of from 13 to 15) as much as eleven hours' obligatory daily work, and in some classes attain a proud maximum of more than twelve hours one day a week. No wonder that parents grieve over their boys' listlessness and brain weariness, while teachers complain of laziness and inattention in class. Kraepelin, the eminent psychologist, has aptly defined this inattention as "a safety-valve which protects the youthful organism from over-fatigue." Of late years subject after subject has been added to the German school curriculum and the "Abiturium," or matriculation examination, has grown more and more difficult. At present it has almost attained the character of a university examination in other countries, and boys of average mental capacity grow stale at school before they can attempt to pass it. This state of things cannot continue if the German race is not to degenerate, and already the alarm has spread among medical men and hygienic reformers, and has been taken up by the army authorities. Since strong and healthy recruits are the great desideratum of Germany, the danger once recognized we may hope for swift and thorough reform.

A German "conscientious objector" having been fined by the police year after year for not submitting his children to vaccination, carried his case before the "Oberlandesgericht" (a high court of appeal) in Düsseldorf, which annulled all fines imposed except the first, ruling that the course pursued by the plaintiff constituted one single, continuous action, the outcome of

one single resolve. Curiously enough, a similar appeal was decided in the opposite sense by the Dresden Oberlandesgericht in 1903. Here the Court ruled that as the summons to have the children vaccinated was repeatable yearly, so each yearly non-acquiescence constituted a new illegal action. It seems strange that the courts of the German Federal States should not show uniformity in their decisions as regards such vaccination cases. To avoid similar appeals in future, and especially in order that the vaccination law may be universally carried out (an object which even the heaviest fines can do nothing to further), the medical department of the Prussian Cultus-ministerium now advises the police authorities, when met by stubborn resistance, to use their power of enforcing vaccination.

VIENNA.

A New Medical Organization. Junior Officers in Hospitals.

THE last week of the old year witnessed the first meeting of a new medical organization, which is expected to develop into a very important and influential body, whose influence will be felt by all practitioners, at least in the capital itself, if its aims should prove attainable. The object of the organization, which will be known by the name "Wirtschaftliche Organisation der Aerzte Wiens," is nothing less than the union of all practitioners, without regard to nationality, creed, position, or place of residence, into a solid body pledged to offer, for the first time, an organized resistance against all attacks in material and social respects. In order to eliminate the chief source of discord amongst its members, the first clause of the by-laws excludes politics from its proceedings. Representatives of nearly all medical unions and clubs, amongst them several professors of the University, have seats on the Board of Management. The most important matters to be dealt with by the organization are the question of clubs and contract practice, the abuse of public charities, legislation on medical questions, and the support of the provident funds, such as the widows' and old-age pensions. The programme of the organization has been met with a very hearty response from the profession, and numerous members have joined it from the country. Already the membership is over 1,000, and if it should be able to gather the whole, or nearly the whole, of the profession into one association, the long-needed reforms in the position of the medical man will soon be within the sphere of practical politics. Special stress is laid on the unsatisfactory position of the young practitioner, who is easily led by the hope of a certain income to accept the post of club doctor or similar ill-paid work.

It is impossible, not to say impossible, conditions of the junior officers in the State hospitals, which make the [illegible] work practically for nothing, have at last moved the Union to take steps to show that a radical change is an urgent necessity. In one or two hospitals partial strikes were organized by way of protest. At last, the Union sent a deputation to the Minister of the Interior and to the Governor of Austria, who is the head of the Hospital Boards and handed them a memorandum setting forth the demands of the doctors. The four main points in which reform is asked for are the following: A definite scale of pay, a better system of leave of absence, an increase in the number of assistants, and insurance against liability from charges of malpractice. The deputation remarked that the answer of the Ministry would be expected in February, and unless satisfactory, would cause a general strike in all the Vienna hospitals, as all the junior officers were pledged to this step.

[illegible]

CORRESPONDENCE.

HOSPITAL REFORM AND THE HOSPITALS COMMITTEE.

SIR,—Letters continue to appear in the BRITISH MEDICAL JOURNAL reiterating complaints of hospital abuse, and charging the Association with inertia and indifference towards the subject. May I therefore, for the benefit of members who may be misled by such communications into thinking that the Hospitals Committee is doing nothing in the matter, give a brief statement of the present state of affairs?

Two conferences with lay managers of hospitals have been held, at which an amount of agreement on general principles of hospital management was arrived at unhoped-for a few years ago. As a result, a Committee consisting of members elected by the lay representatives of hospitals at the Conference will sit with the Hospitals Committee of the Association next week, and this meeting will have before it a mass of new material which is now being prepared for the consideration of that meeting at the expense of the Association and at the cost of a great deal of labour to the honorary and salaried officers. The result of this meeting will probably be that systematic action will be taken to strengthen the hands of those hospitals who have signified approval of our general principles—and these are numerous, and include many of the largest, both London and provincial—and also to persuade those who at present have not seen their way to fall in with those principles that, in the public interest and their own, it would be wise to do so.

Those who consider the progress made too slow can best accelerate reform by strengthening the hands of the Hospitals Committee by exerting personal influence with particular hospitals and individual lay managers, and by promoting discussion in the Divisions. In connexion with the last point I may add that the Hospitals Committee hopes to have a full report forwarded to the Divisions in a short time so that Representatives may be instructed and the opinion of the whole Association on the matter authoritatively stated at the next Representative Meeting.—I am, etc.,

FRANK POPE,
Leicester, Feb. 19th. Chairman Hospitals Committee, B.M.A.

TREATMENT OF *POST-PARTUM* HAEMORRHAGE.

SIR,—Your correspondent, Dr. W. E. Fothergill, adverting to my remarks on *post-partum* haemorrhage, in the BRITISH MEDICAL JOURNAL of January 26th, points out the error of what purports to be a quotation from his writings. The words were not intended to be taken as a quotation, and were not within quotation marks in my MS. I very greatly regret that such marks did appear in print. The words "contraction of the uterus, and, if that fails, thrombosis" were intended to convey, in brief, the gist of the treatment of *post-partum* haemorrhage laid down in his *Manual of Midwifery*, 1896, and should be interpreted by reference to the context. It was not within my knowledge that he had subsequently, in his *Golden Rules of Obstetric Practice* accepted and emphasized the treatment by compression of the aorta.

In the interests of the many hundreds who annually pay tribute to irrationalism in practice in this regard, I warmly congratulate Dr. Fothergill, as a teacher of obstetrics, in that he has taken this initiative, and am in entire agreement with him that this method of checking *post partum* haemorrhage should be taught to midwives.

Dr. Alexander Duke asks if the directions I have given for arresting *post partum* haemorrhage are original. As a whole, I believe, they certainly are. If, however, his reference is to compression of the aorta, as certainly they are not original, notwithstanding that this has uniformly been my practice for twenty five years. The aorta has been timidly and momentarily compressed for generations, but the practice was foredoomed, seeing that the one object in view was to gain a few moments, during which some preparation of the innumerable items of the subsequent force, might be made, for they were to succeed one another rapidly. It is very evident that this is essentially different from compression of the aorta as an intelligent treatment, to be maintained until contraction of the uterus is secured.

Dr. Duke suggests that the "treatment" was relinquished on account of the risk of compressing the vena cava also, and he says "a better plan by far" is compression through the uterine wall.

The risk of compressing the vena cava is purely theoretical. In practice there is absolutely no risk of harmful compression of that vessel. A very little lateral sway, before the current is completely cut off, may convince the timid that the vessel is not between the artery and the ulnar pad of the left clenched hand.

Compression through the uterine wall I unhesitatingly denounce as a delusion and a snare: Because (1) it would be physically impossible to exercise equal and constant pressure by the hand, in a cramped position, within the uterus for possibly an hour or more; (2) pressure for a lengthened period on one spot in the attenuated wall of the uterus—very possibly in the placental site—would be fraught with very great danger of serious injury; (3) another cogent argument against such a practice is that it would not be possible, without producing most harmful contusion of the uterine wall, to slide the pressure from one part to another of the available 3 in. or 4 in. of the aortal surface, so that no harm might be done by continuous pressure on any one portion of the entwining sympathetic system of nerves. I most strongly deprecate this suggested practice, and think Dr. Duke has accepted a grave responsibility by recommending a procedure which would be difficult in most cases, impossible in many, in all inadequate and bristling with dangers. In this he thinks he has the support of my friend, Mr. Stanmore Bishop. I have Mr. Bishop's authority for stating that he has never even suggested compression of the aorta through the uterine wall as a practicable or even rational treatment. Dr. Duke is, therefore, under an erroneous impression. Mr. Bishop has for several years very strongly and very ably urged the claims of the treatment of *post-partum* haemorrhage by compression of the aorta from without as in agreement with the soundest principles of practice.

Dr. Duke notes that I omitted to mention heat applied to the head—"a very important point." It has never been my practice to apply heat to the head, nor can I imagine any conceivable advantage to be at all likely to accrue from the attempt in that way to draw blood into the vessels which are external to the cranium.

These cases are matters of life or death, and the issue often rests absolutely with the obstetrician. Grave, indeed, is his responsibility if he is content with trying "everything"—relying on his foibles, instead of boldly meeting imminent danger by resolute treatment on lines which are in agreement with the principles of his profession.—I am, etc.,

Manchester, Feb. 9th. JOHN F. LE PAGE.

THE TREATMENT OF FRACTURES.

SIR,—If Dr. Allan will do me the favour of reading my letters he will find that I do not confine my objections to *forcible* passive movements, though obviously there is more risk in forcible than in gentle movement. Even at the cost of making Dr. Allan "amazed," I am disposed to maintain the views I have expressed. I fear gentle, painless, passive movement is by no means so universal a practice as Dr. Allan believes.—I am, etc.,

Manchester, Feb. 12th. G. A. WRIGHT.

A DANGER OF THE SANATORIUM.

SIR,—As medical director of one of the largest British sanatoriums, may I be allowed to thank you for the timely and valuable expression of opinion upon the subject of the marriage of tuberculous women and the effect of pregnancy upon the course of tuberculous disease, which appears under the above title in your issue of February 16th?

The well-known German physician points to eighteen years' observation and claims to have had experience of marriage on the part of not less than one lung patient every four days throughout the whole of that time. The idyllic influence of the Black Forest atmosphere upon unchaperoned ladies far removed from their homes and undergoing sanatorium treatment appears to be unique. In the light of this experience he commends the marriage of tuberculous persons.

It may prove of interest to your readers to compare with this the experience of one who, if he cannot lay claim to eighteen years' work in Germany, can look back with some satisfaction to a record of close upon eight years' work amongst the subjects of pulmonary tuberculosis in this country. The writer's experience of the effect of pregnancy in connexion with pulmonary tuberculosis may be classed under two heads—first, pregnancy in the multipara, and, secondly, pregnancy in the primipara. Pulmonary tuberculosis occurring in connexion with pregnancy in multiparous women has not often proved of serious import. Indeed, very many of those patients have done well, and ultimately made excellent recoveries. But quite otherwise has it proved in those cases in which the disease has appeared in primiparae. One can recall a large number of instances of the disease manifesting itself within three months of the birth of a first child. The result has proved uniformly deplorable. Some have died within twelve weeks of the disease becoming manifest, some have lived for twelve months, a few have lived for longer periods. But the result has always been the same. In no single case has recovery taken place. Every one has died. The longest period which a patient under such conditions has survived the birth of a first child has been a little over two years. The last case with which the writer had to deal is so interesting that he offers no apology for referring to it:

A recently-married lady, aged 25, passed as sound shortly before her wedding, was discovered three months later to possess a very early lesion at the apex of the right lung. She had become pregnant a few weeks before. This latter consideration was held to bar sanatorium treatment. Possessed of ample means, she was placed in excellent surroundings in Hampshire and put under the charge of an experienced sanatorium nurse. Three months later she was carefully examined by a well-known lung consultant and declared sound. Throughout the term of pregnancy, which ran a normal course, she enjoyed excellent health. Immediately after her confinement had taken place acute caseous pulmonary tuberculosis set in; she became rapidly worse, and died fourteen weeks after the birth of the child.

The writer has had no experience whatever of the "numerous cases which had been seen in which the effect of pregnancy was most decidedly good in promoting lasting recovery of lung patients—cases in which a cure could not have been expected had the lady not happened to be pregnant at the same time," such as is quoted by the German physician referred to. But he has frequently seen it otherwise.

In the light of his experience he regards the marriage of a young lady suffering from pulmonary tuberculosis, and the consequent exposure to the risks of pregnancy, as little better than an act of deliberate suicide.—I am, etc.,

Banchory, Scotland, Feb. 19th. DAVID LAWSON.

THE OFFICE OF PUBLIC VACCINATOR.

SIR,—Having been a Poor-law medical officer and acted as a public vaccinator, I am quite aware of the work that has to be done; and am of opinion that "the systematic inspection and control of vaccination" would be improved and "the efficiency of vaccination generally" greatly increased if every registered medical practitioner acted as a public vaccinator, for then every registered medical practitioner would be required to conform to the rules and regulations of the Local Government Board.

Before the present Act, medical men had no reason to complain of the public vaccinator, and the conditions of practice have altered considerably since the introduction of glycerinated calf lymph.

Envy is the usual reason ascribed by public vaccinators to those who simply demand justice. There are no vested interests attached to the office of the public vaccinator, and there is no attempt to deprive him of his office as such; but why should he unfairly compete with the general practitioner, and compel him to perform the same operation for practically half the fee in addition to supplying his own lymph? There is no reason why every registered medical practitioner should not vaccinate his own cases, and every parent have the right to say what doctor shall perform this operation at the expense of the State. "The process of self-enrichment at some one else's expense" is clearly demonstrated in the present monopoly of free vaccination. Those who are not public vaccinators have to pay twice over: (1) By loss of fee for vaccinating their own patients by so called free vaccination; (2) by paying their share of the fees paid to the public vaccinator.

In large towns the objections to the present system could be speedily and economically removed by appointing a resident medical officer to the workhouse, who would act as the public vaccinator and be debarred from private practice, at the same time recognizing every registered medical practitioner as a public vaccinator.

It is desirable that the medical officer of health, the workhouse medical officer, and the certifying surgeons under the Factory and Lunacy Acts should belong to a public medical service and be debarred from private practice but not from acting as consultants.—I am, etc.,

Armley, Feb. 11th. A. A. MCNAB, M.B.

DOMESTIC SERVANTS UNDER THE WORKMEN'S COMPENSATION ACT.

SIR,—I have read with deep interest your editorials, and the excellent paper in SUPPLEMENT of January 12th.

There is, however, another side to the Workmen's Compensation Act on which I desire further enlightenment.

From the shower of offers from various assurance offices we are all receiving, I gather that three kinds of insurances are being generally offered to employers of domestic servants, at rates almost identical, though the policies may possibly differ as to advantages given by the different offices.

Policy A proposes to indemnify the employer against the action of the Workmen's Compensation Act. I have this day received a pamphlet from a well-known registry office, in which the public is warned that these policies will not, in any case, cover the cost of expenses the employer would be called on to defray were any of his servants to meet with an accident.

Policy B (at 5s. for female servants) gives, among other advantages proffered, "repayment of any reasonable medical expenses in connexion with accidents to his servants, not exceeding £5 in amount," to the employer.

Another Policy, B, offers "free medical attendance by employer's own doctor, at customary charges, up to £10 in one year, in respect of all accidents, or illness through diphtheria, small-pox, typhoid, or scarlet fever, with a limit of £2 for any one accident or illness."

I should object to have to attend and take responsibility of such cases for £2. At the present time, in cases of accident, I advise removing such to a general hospital, where proper appliances and nursing are obtainable, and generally the hospital funds have benefited by a good donation from the employer. It seems to me to be a moot point, now an employer insures all servants against, and even beyond, the penalties of the Workmen's Compensation Act, whether (the assurance companies being responsible for expenses) a servant should now be taken in to a general hospital? The employer having insured against the penalties of the Act, will probably, and reasonably, assume that his responsibility ceases with his insurance, and no longer will donations to hospital funds be given. Hospitals will suffer financially. And servants, if insured (unless the employer undertakes to pay over to the hospital all moneys due to him), may not be considered suitable patients, and therefore may lose the advantages of modern skill and science they have had. Hence the very Act supposed to benefit them as a class, may, in some instances, have the contrary effect.

Policy C covers all above liabilities *plus* (at an advanced rate of premium) all infectious illnesses. Hitherto all cases of such in my practice have been promptly removed to the paying wards of the fever hospitals, at the employers' cost, or when this has not been practicable, the machinery of the local authorities has been set in motion. In how many houses in London could any domestic servant be properly isolated, or nursed, without danger to the community, or with justice to the patient? Under these Policies C it appears to me that the doctor will now have to be responsible to (1) the patient, (2) the employer who sends for him, but whose pecuniary liability is covered apparently by Policy C (3) to the Assurance Company, wherein the said employer has insured the said patient. Will the patient fare as well under the fresh regime? Who employs the doctor? The employer calls him in, but the Assurance Society will have to pay him, at the extremely low figure set forth in the aforesaid policies.

It would be best in the interests of the general public, in the interests of our future patients, in the interests of the great hospitals of London, even, it seems to me, in the interests of the ratepayers, if the medical profession could formulate an authoritative opinion at the present juncture on the Workmen's Compensation Act with regard to domestic servants.—I am, etc.,

London, S.W., Feb. 16th. JAMES E. SINCLAIR.

PRIMARY DIPHTHERIA OF THE EXTERNAL AUDITORY MEATUS.

SIR,—As a working bacteriologist I have followed this correspondence with considerable interest, awaiting, in particular, the details upon which Dr. Connal based his diagnosis. Although repeatedly asked, Dr. Connal does not give any account of the cultural and other characters upon which the Glasgow Corporation Bacteriological Department relied for its "positive" findings. In view of the importance of the "primary" diphtheria from a pathological standpoint, and of the treatment adopted by Dr. Connal, as well also as the subsequent recovery, it would be a distinct advantage if these details were forthcoming. If the cultural characters were not sufficiently ascertained to warrant definite conclusions, surely it were better to say so than to assume an unsupportable conclusion. Isolated bacteriological work has been responsible for many errors in practice, and it is now universally considered that diagnosis should not be formed on morphological characters alone. The case teaches that the clinician should know some bacteriology, and that the bacteriologist should be able to value the relative weight of clinical facts. The relation between the two should be one of mutual, helpful criticism, and not one of "blind" faith.—I am, etc.,

February 18th. PATHOLOG.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Board of the Faculty of Medicine.

A. E. GARROD, D.M., Christ Church, has been co-opted a member of the Board of the Faculty of Medicine.

UNIVERSITY OF LONDON.

THE following candidates have passed the Intermediate Examination in Medicine for Internal and External Students:—

M. M. Adams, Guy's Hospital; E. W. Archer, B.Sc., St. Mary's Hospital; I. L. Atkinson, Guy's Hospital; K. J. Aveling, London Hospital; J. N. Beadles, Westminster Hospital; B. Biggar, Victoria University; W. Blaydes, St. Bartholomew's Hospital; T. K. Boney, St. Bartholomew's Hospital; N. Booth, Victoria University; K. Bremer, St. Bartholomew's Hospital; S. S. Brook, Guy's Hospital; C. H. Broomhead, Victoria University; A. H. G. Burton, University College, Cardiff, and Guy's Hospital; Ethel Mary Conman, London (R. F. H.) School of Medicine for Women; R. L. Crabb, University College; C. H. Crump, Guy's Hospital; G. V. Deshmukh, London Hospital; I. M. Edis, London Hospital; E. L. Elliott, Guy's Hospital; A. L. Fitzmaurice, Guy's Hospital; *A. P. Fry, St. Bartholomew's Hospital; †M. Glider, D.D., University College; A. W. Hassell, University of Leeds; G. F. Haycraft, Guy's Hospital; H. F. L. Hugo, Charing Cross Hospital; J. L. Johnston, Guy's Hospital; R. P. Jones, University College, Cardiff, and University College, Anne Louise Jane Kann, London (R. F. H.) School of Medicine for Women; O. R. Kelly, King's College and Westminster Hospital; D. Kennedy, University College; J. S. H. Lewis, University College; J. C. Lyth, University of Leeds; A. O. Mitchell, Westminster Hospital; Mabel Muncey, London (R. F. H.) School of Medicine for Women; W. J. O'Donovan, London Hospital; H. O. Mesa, University College; *G. H. Peall, Guy's Hospital; R. Pearce, St. Bartholomew's Hospital; J. R. Perdrau, Guy's Hospital; A. P. Phillips, St. Bartholomew's Hospital; A. B. Porteous, St. Mary's Hospital; A. R. P. Scott, London Hospital; N. A. D. Sharp, Guy's Hospital; R. G. Smith, St. Bartholomew's Hospital; †Margaret Grace Thackrah, B.A., London (R. F. H.) School of Medicine for Women; H. Thwaite, University of Birmingham; E. R. Vickers, University of Leeds; J. O. D. Wade, University College, Cardiff, and Charing Cross Hospital; Elsie Warren, London (R. F. H.) School of Medicine for Women; W. Weir, St. Thomas's Hospital; *G. A. Williams, B.A., University College, Cardiff; W. T. Williams, Guy's Hospital; C. S. Wick, St. Thomas's Hospital; R. N. Woodsend, University College; Gladys Mary Joan Wyll, London (R. F. H.) School of Medicine for Women.

* Distinguished in Anatomy. † Distinguished in Physiology.

‡ Distinguished in Pharmacology.

APOTHECARIES' HALL OF IRELAND.

THE annual dinner of the Apothecaries' Company of Ireland was held at the Gresham Hotel, Dublin, on February 9th, under the chairmanship of the Governor, Colonel Adye Curran.

The Chairman, on proposing the toast of "the Visitors," said it was the institution of the governing body to elevate the status and uphold the dignity of the Hall. It would be their business to safeguard its interests at the present crisis in

university education in Ireland. He observed that in the list of successful candidates at the recent examinations for the Army and Indian Medical Services the Irish element was sadly deficient, and he asked whether this was due to the defective medical or university education in Ireland. The toast was acknowledged by the Rev. L. Healy, Sir Lambert Ormsby, and Mr. Gerald Byrne.

The toast of "the Apothecaries' Hall" was given by Sir Charles Cameron, and acknowledged by Dr. Seymour Stritch.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

INSTRUCTION IN SANITATION IN THE ARMY.

ARMY ORDERS for February, 1907, contain an Order (30) making provision for the instruction of officers, non-commissioned officers, and men in sanitation, as follows:

Army Order 30.

1. General officers commanding-in-chief will arrange for at least one annual course of lectures in sanitation for officers. The lectures will be given by the command sanitary officer, or by a selected officer of the Royal Army Medical Corps. All officers who can be spared should attend these lectures.

2. A manual of sanitation has been prepared and will be issued to all concerned. Instructions and examinations will be primarily based upon this manual.

3. After March 1st, 1908, all lieutenants, except those qualified under paragraph 6 (*a*), will be required to pass an examination in sanitation before promotion to the rank of captain. A lieutenant may be examined without having attended a course of lectures.

4. Officers who gain 50 per cent. of the marks will be recorded as "passed." Those who gain 75 per cent. will get a special certificate in sanitation.

5. Officers of companies, squadrons, etc., will give instruction to their non-commissioned officers and men in sanitation.

6. At the School of Army Sanitation, Aldershot, the following classes will be formed:

(*a*) Officers' classes of not more than 25 officers. The course should last four weeks and an examination be held at its termination. The lectures will embrace the whole of the subjects mentioned in the manual of sanitation.

(*b*) Classes for regimental non-commissioned officers and men to form regimental sanitary sections for instruction in the disposal of excreta and refuse, in camp cleanliness, and in sanitary police duties, to fit them to perform these duties on active service. One non-commissioned officer and eight men per regiment, battalion, or brigade of artillery, will be trained. A class will not exceed 40 non-commissioned officers and men.

(*c*) Classes consisting of not more than 25 non-commissioned officers and men, general duty section, Royal Army Medical Corps, to be instructed in practical sanitation in the field and in the duties of water sterilization.

7. (*a*) The examination referred to in paragraph 6 (*a*) will be conducted by the lecturer acting in communication with the Director-General, Army Medical Service. A return, showing the marks obtained and the result of the examination, will be forwarded through the Director-General, Army Medical Service, to the General Officer Commanding-in-Chief, Aldershot, and to Army Head Quarters.

(*b*) With the permission of general officers commanding-in-chief, officers may attend the Aldershot examination, whether they have attended the course of lectures or not.

8. At the Staff College a course of 12 lectures on sanitation will be given annually by a specially selected officer of the Royal Army Medical Corps.

9. (*a*) At the Royal Military Academy and Royal Military College a course of ten lectures will be given annually, either by the resident medical officer, or by a specially deputed officer of the Royal Army Medical Corps. The cadets of the senior division only will attend these lectures.

(*b*) An examination in sanitation, based upon the official manual, will be included, after the 1st March, 1908, in the final examinations of cadets in the senior division.

10. On mobilization being ordered a sanitary inspection committee will be formed for service in the field, consisting of a combatant officer as president, a field officer, Royal Engineers, and a field officer, Royal Army Medical Corps, as members. The committee will act under the orders of the general officer commanding-in-chief.

11. The duties of this committee will be:

(*a*) To ascertain that sanitary appliances and materials of all kinds required for the army are forthcoming, and that an adequate reserve is maintained.

(*b*) To assist general officers and the Medical Service in their efforts to maintain the health of the army by co-ordinating not only the work of the different military branches, but also the military and the civil sanitary organizations of the country or area occupied.

(*c*) To initiate schemes of general sanitation, and to serve as a board of reference for the solution of sanitary questions.

(*d*) To visit and inspect stations occupied by troops, to advise local authorities regarding necessary sanitary measures, and to further in every way the maintenance of satisfactory sanitary conditions. They will report to head quarters any measures they consider necessary, but which they cannot arrange for locally.

12. The detail of sanitary sections and squads of the Royal Army medical Corps for duty on the lines of communication and at the base, also of Royal Army Medical Corps *personnel* to be attached to regimental and other units for water purification, is shown in War Establishments.

ARMY MEDICAL SERVICE.

THE following particulars are added to the Royal Warrant* quoted in the BRITISH MEDICAL JOURNAL of February 9th, p. 353:

Widows' and Families' Pensions, etc.

The following shall be *inserted* after line 27 of Article 642:

	Pension to Widow.	Compassionate Allowance to Each Child.
Major of Our Royal Army Medical Corps, if in receipt of pay at 30s. a day.	£90	£16

Payments for Cadets at Royal Military Academy, etc.

The following shall be *inserted* after (*g*) in Article 674, as amended by Army Order 276, 1906:

	£
(*gg*) An officer on the active list, of the substantive rank of major, in Our Royal Army Medical Corps, if in receipt of pay at 30s. a day, or a retired officer who last served in that rank and at that rate of pay and who retired as stated in (*f*)	60

Definition.

The following shall be *substituted* for Article 1321:

An "Officer of Our Army Medical Service" shall, unless otherwise stated, be held to mean a surgeon-general, a colonel removed from Our Royal Army Medical Corps, an officer of that corps, or a medical officer of Our Household Troops.

* The date of the Royal Warrant on the Army Medical service is January 9th, 1907, not February, 1907, as previously stated.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

FEES FOR CERTIFICATION OF PAUPER LUNATICS.

CAROLUS writes to ask whether he can claim a fee of 21s. for certifying the insanity of a poor person for transfer to an asylum, the guardians of the union having declined to pay more than 10s. 6d. for such certificates.

*** The amount of the fee which our correspondent can claim entirely depends on the magistrate who acted in the case, he being empowered by the Lunacy Act, 1890, Sec. 285, to order reasonable remuneration for certification; this is usually 1 guinea, and for such a responsible duty ought never to be less.

DISTRICT MEDICAL OFFICER'S FEE FOR ATTENDANCE ON PATIENT AT COMMON LODGING-HOUSE.

POOR-LAW M.O. writes: I, a district medical officer, was called to a common lodging-house at 11 p.m. to attend a man with a fractured thigh who had discharged himself from the workhouse a fortnight previously. I set the fracture, and, as the keeper of the house objected to the patient remaining there, I obtained the assistande of the police and superintended his removal to the infirmary. This occupied me till 2 a.m. Am I entitled to my fee from the guardians?

*** We doubt whether our correspondent will be able to establish his right to any fee from the guardians. He does not say by whose direction or order he attended the patient; we, therefore, assume that he had no order to do so from any official of the guardians, and the fact that the patient had recently discharged himself from the workhouse and was then living at a lodging-house might be regarded as presumptive evidence that he was not then destitute. If, however, our correspondent did receive a proper medical order to attend the case from a relieving officer or overseer, he may perhaps be able to claim part of the £3 special fee usually allowed for the treatment of fractured legs. His having set the fracture and then sent the patient to the infirmary for subsequent treatment deprives him of a right to the full fee; this he could only claim if he had continued to treat the case to its end. It was no part of our correspondent's duty, nor was it the duty of the police, to act as they did; it was for the lodging-house keeper to get the man removed from his house.

OBITUARY.

FREDERIC COLLINS, M.D.(R.U.I.).

M.C.H. AND F.R.C.S.I.RE.

Universal regret was expressed amongst the profession in Manchester at the death, on February 12th, of Dr. Collins of Didsbury at the early age of 52. His genial disposition, his courtesy, and his devotion to the interests of his patients had made him the friend of every one in the village. Dr. Collins's death, after a brief illness, nobly borne, was due to pericarditis and angina.

Dr. Collins received his medical education at the Royal College of Surgeons of Ireland and Queen's College, Belfast, and took the degree of M.D. at the Royal University of Ireland in 1876. As a student he was successful in gaining the Hudson Prize at Meath Hospital, Dublin. In the British Medical Association he always took the greatest interest, being strongly of opinion that it should be really representative of the general practitioner. During the last few weeks he had taken an active part in doing all he could to oppose the action of the police in the case of Dr. Bagley, related in the British Medical Journal last week. For the last year or so he had taken much interest in the establishment of a medical benevolent fund for the widows and children of medical practitioners, and only a fortnight ago the South Manchester Division resolved to recommend that a joint meeting of the Manchester and Salford Divisions be held to discuss the propositions contained in his paper.

Dr. Collins was formerly House-Surgeon and for several years Honorary Consulting Physician to the Hulme Dispensary.

Dr. Collins has left a widow and two sons, who, we are sure, have the sympathy of the whole profession at the loss they have sustained by the death of one so universally respected by all classes of the community.

ROBERT A. L. GRAHAM, B.A., M.B.,

ASSISTANT MEDICAL SUPERINTENDENT, BELFAST DISTRICT LUNATIC ASYLUM.

The intelligence of the death of Dr. Robert A. L. Graham has been received with the greatest sorrow amongst the profession in Belfast. Dr. Graham some three weeks ago complained of malaise, which he at first thought was influenza, but the symptoms deepened, and typhoid fever became unmistakable. The attack was severe, and gave considerable anxiety; he was somewhat better on February 12th, but perforation occurred on the following day, and, despite an early and skilful laparotomy, he died on the same day.

Dr. Graham, who was 31 years of age and unmarried, was the eldest son of the Rev. Dr. Graham of Comber, County Down, and nephew of Dr. William Graham, Superintendent of the Belfast Lunatic Asylum, and of Dr. Samuel Graham, Superintendent of the County Antrim Lunatic Asylum. He was a most distinguished student, gained many prizes, scholarships, honours, and a gold medal in his hospital college, and university course, and took M.B. of the Royal University of Ireland in 1893. In 1899 he obtained the diploma in mental science, and the following year he won the Hutchinson-Stewart Scholarship of £200.

His work at the asylum was of the highest order, and gave promise of a career which time would have stretched far beyond his native country. He had studied in both London, Freiburg, and Munich, and his holidays were not infrequently spent in study chiefly in Germany. He was well acquainted with the German and French literature of his specialty. Dr. Graham had erected a small pathological laboratory in the asylum grounds, and few had any idea of the amount or the quality of the work done in it, on more than one occasion it has elicited the high encomiums of the Inspectors of Lunacy in his formal reports. A few years since he was appointed Demonstrator of Pathological Neurology in the Queen's College. Last year he was Medical Inspector for the Royal Commission on the Care and Control of the Feeble-minded for the Belfast District, and his report for this Board was just finished before the commencement of his fatal illness. In the death of Dr. Graham the Belfast Medical School undoubtedly loses one of its most promising and brilliant alumni, and neurology a younger, perhaps, but a most able son.

Dr. Graham was a great favourite amongst his fellow medical men, and more than liked by the general staff at the asylum; he was quiet and reserved in manner, upright in all his dealings, and highly cultured in his general reading. Much sympathy is felt with his family in their bereavement.

Surgeon-Major-General Frederick William Wade, retired Army Medical Staff, died in London on December 26th, 1906. He joined the department as Assistant Surgeon, September 28th, 1857; became Surgeon, October 5th, 1872; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, February 1st, 1883; Surgeon-Colonel, December 31st, 1887; and Surgeon-Major-General, December 15th, 1892. He retired from the service, January 24th, 1894.

Lieutenant-Colonel George Francis Dooley, retired Army Medical Staff, died at Bath on December 20th, 1906. His commissions were dated: Assistant Surgeon, March 31st, 1864; Surgeon, March 1st, 1873; and Surgeon-Major, April 28th, 1876. He retired with the honorary rank of Brigade-Surgeon, April 18th, 1885.

Our attention has been called to an error in the obituary notice of Sir Michael Foster, published in the British Medical Journal of February 9th. It was there stated that Sir Michael Foster succeeded Dr. Sharpey as Professor of Physiology at University College in 1868. It should have been stated that Sir Michael Foster succeeded Dr. George Harley as Professor of Practical Physiology. Professor Sharpey retained the Professorship of Physiology till his retirement in 1874, when he was succeeded by the late Sir John Burdon-Sanderson.

Medico-Legal.

FEES OF MEDICAL WITNESSES.

We have received the following letter for publication:

Whitehall,
February 1st, 1907.

Sir,—In reply to your letter of the 16th instant, I am directed by the Secretary of State to say for the information of the Council of your Association that he does not see his way, at any rate, at present, to receive a deputation on the subject of the allowances payable to medical witnesses in criminal prosecutions, but he will consider any further representations they may make in writing. He will be glad if the Council will supply particulars of the specific cases in which they represent that inadequate allowances have been given, or that the court has refused to exercise the discretion given it by the Regulations of the 14th June, 1904.

I am, Sir,
Your obedient Servant,
(Signed) C. E. Troup.

The Secretary,
United Kingdom Police Surgeons' Association,
Keston House,
Ashton Road,
Birmingham.

MEDICAL WITNESS FEES AT THE CORONER'S COURT IN IRELAND.

A. I. (Belfast) writes to inquire if the fees payable for making a *post mortem* examination, and giving evidence in the coroner's court, are the same in Ireland as in England; and whether, if a second medical man is requested to make a necropsy in conjunction with the first, and give evidence thereon, he is also entitled to receive similar fees. Our correspondent further asks if the medical officer of a workhouse or workhouse infirmary is entitled in the same way to receive fees if the patient die in either.

*** The fees payable to medical men in Ireland are the same as those allowed by law in England, and if more than one medical witness is called each can claim the fixed fee.

With regard to the last question, it has been disputed whether the infirmary of a workhouse came under the Act 9 and 10 Vict., cap. 37, Clause XXXIII, which provides as follows: "And be it enacted, from and after the passing of this Act, that when any inquest shall be holden on the body of any person who has died in any public hospital or infirmary, or in any building or place

belonging thereto, or used for the reception of the patients thereof, or who has died in any county or other lunatic asylum, or in any public infirmary or other public medical institution, whether the same be supported by endowments or by voluntary subscription, then and in such case nothing herein contained shall be construed to entitle the medical officer whose duty it may have been to attend the deceased person as a medical officer of such institution as aforesaid to the fees or remuneration herein provided."

Counsel's opinion was taken by the County Council of London a few years ago, and it was decided that the workhouse infirmaries did not come under the category of public hospitals and infirmaries within the meaning of the Act, as they were not supported by "voluntary subscriptions or donations," and were not open to the general public, paupers only being admitted.

MIDWIFERY FEES.

Wiltshire asks: "Is it the custom in London, or elsewhere, that the ordinary 'inclusive' midwifery fee should cover attendance on the patient during pregnancy, before the confinement?"

*** The ordinary midwifery fee only includes attendance on the patient during the confinement, and at the most for three or four weeks afterwards.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

PROFESSIONAL RELATIONS WITH ADVERTISING OPTICIANS.

Oculus writes to say that one of his colleagues had "expressed his ignorance that in atropinising a patient for an optician he was guilty of unprofessional conduct, and was rendering himself liable to be dealt with by the General Medical Council." He asks for an authoritative opinion upon the point.

*** We are not in a position to express an authoritative opinion upon the point, but so far as we are aware the matter has never been before the General Medical Council, nor has that body made any pronouncement upon it. A good deal of space in the Journal has been devoted to exposing the pretensions of opticians to be expert testers of eyesight, and it has repeatedly been pointed out that tradesmen who do this, and who advertise in the objectionable manner to which the attention of readers has frequently been drawn, should not be assisted by medical practitioners, either by instilling atropine or otherwise.

HOSPITAL AND DISPENSARY MANAGEMENT.

ROYAL EAR HOSPITAL, SOHO.

A special general meeting of the Governors of the Royal Ear Hospital was held at St. Anne's Vestry Hall, Dean Street, Soho, to consider some suggested alterations of the rules of the hospital. By Rule xii the Management Committee appoint all the medical officers, and the alteration suggested was that the medical officers shall go out of office annually and shall be eligible for re-election. Another suggested alteration was that instead of the medical officers selecting five of their number to serve on the Management Committee, they should select three. The meeting spent some time in choosing a Chairman. It was proposed and seconded that Mr. Freeland Pritchard should be Chairman, but an amendment proposed by Mr. Bryce and seconded by Mr. Macleod Yearsley that Mr. E. L. Mocatta should be Chairman was carried. Mr. Mocatta then took the chair, upon which a large number of those present left; and when the suggested amendments to the rules were read out, they failed to secure a proposer, so that the Chairman declared the meeting at an end.

THE LEICESTER INFIRMARY.

The annual report of the Leicester Infirmary for the year 1906 contains the following paragraph:

"The system of inquiry into the means of patients has been continued throughout the year, and it is a pleasure to the Board to report that only in a very few instances have cases of abuse come to the notice of the Board, and these cases have at once been debarred the privilege of the treatment which the institution affords."

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

R. N. asks to be informed of the composition of Bensol's fluid used for soft sores. Careful search in ordinary works of reference has failed to discover any mention of such a preparation.

Intermittent Glycosuria.

B. L. T. asks advice for the treatment of a woman, aged 45, who for three years has had severe intermittent attacks of glycosuria which are becoming more frequent. The urine during the attacks is loaded with sugar and urates, but contains no albumen or casts. The attacks are accompanied by intense headache and vomiting, and nearly total suppression of urine from two to three days. Intense pruritus is present. Diet has no effect on the sugar, and no drug has been found to be of use.

ANSWERS.

Incompatibility.

Dispenser.—Caspari's *Treatise on Pharmacy* (London: H. Kimpton, 19s.) has a useful chapter on the subject of incompatibility, and a fairly complete list of incompatibles is given. A large number of individual cases, and of prescriptions including incompatible ingredients, are discussed more fully in Ruddiman's *Incompatibilities in Prescriptions* (London: Chapman and Hall, 8s. 6d.), but the subject is not dealt with in so general a manner as in the former work.

Local Anaesthetics.

S. H. R.—The following books dealing with local anaesthesia may be mentioned: *Die Lokalanästhesie*, Dr. med. H. Braun (Leipzig, J. A. Barth, 1905); *Notes on Local Anaesthesia*, by J. W. Struthers, M.B. (Edinburgh, W. Green and Sons); *Schmerzlose Operationen*, by Dr. C. L. Schleich (Berlin, J. Springer, 1906); *Anaesthetics*, by Dr. Dudley W. Buxton, fourth edition (London, H. K. Lewis, 1907)—the last two embrace general as well as local anaesthesia; *Anästhesie*, by Dr. Dumont, of Bern, is a less recent but valuable book, which includes general and local anaesthetics.

Garden Friends and Foes.

T. S. D.—We know of no single work on animal and bacterial garden life which would meet our correspondent's requirements, as the subject is very wide. We may, however, mention two or three books which might be of use. Miss Ormerod's *Handbook of Insects Injurious to Orchard and Bush Fruits* (London: Simpkin, Marshall, Hamilton, Kent and Co., 1898) will cover the insect portion of the subject. A small book in the Romance of Science Series, published by the S.P.C.K., *Our Secret Friends and Foes*, by P. F. Frankland, contains chapters upon Useful Micro-organisms and Bacteriology and Agriculture. Then there is an older book by J. G. Wood, *The Common Objects of the Country* (London, Geo. Routledge and Sons, 1886), which might be useful. Perhaps, also, some of the numerous pamphlets issued by the Board of Agriculture upon the various animals and plants injurious to crops, fruit bushes, etc., would assist.

Thread Worms.

Dr. Donald Naesmyth (Ashtead) writes: In answer to a query from "South-West" in the British Medical Journal of February 2nd as to the treatment of a lady who has suffered from thread worms for two years, I fully sympathize with "South-West," as I have in two cases tried every suggested remedy in vain to rid my patient of this horrible torment. Of course, the whole question of the difficulty of ridding a patient or not of these worms rests upon the portion of the bowel which they inhabit. If infesting the rectum only, a few enemata of infusion of quassia will soon get rid of them; but if the caecum is their resting place (as is often the case) it is, indeed, a difficult condition to deal with. There appears to be no drug which acts as a vermifuge (santonin, naphthalin, iron, and purgatives of all sorts seem useless). I have found the injections of quassia to bring away frequently more than a hundred at a time, but still thousands remain, and make the unhappy patient's life a burden, especially towards night. I would suggest using large injections of the infusion (half a pint) injected through a long soft rectum tube passed as high into the bowel as possible, followed, if necessary, by a large simple enema; but, together with "South-West," I would gladly welcome a new suggestion to eradicate these pests in such cases as he and I have met with. I fear Dr. Pollock's "small portion of ung. hyd. introduced into the rectum" would have little effect on the numerous thread worms living six feet higher up in the caecum. Apart from the terrible discomfort caused by the worms there is always a danger of their causing an attack of

acute appendicitis, as was illustrated by a boy operated on for that condition at Great Ormond Street some little time ago: his appendix was full of the worms.

Dr. Theodore Fisher writes: A medical man once asked if I could suggest any remedy for thread worms from which a lady, aged 26, had suffered for several years. Petroleum emulsion was suggested, and was said to have effected a cure in six weeks. Although I have never believed that petroleum emulsion can have any nutritive value, the statement that it possesses antiseptic properties led me to try if it might prove to be useful in the treatment of thread worms. The results have been very satisfactory. I frequently add some preparation of iron such as the syrup of the phosphate. The general condition of the patient may need a tonic, and the iron gives increased vermicidal power. It perhaps should be mentioned that while it was the idea that petroleum emulsion possessed antiseptic properties which led me to try the preparation in the treatment of thread worms, a few experiments seemed to show that it does not restrain the growth of micro-organisms.

Motor Car for Hilly District.

Mr. E. Bernard Harris (London, N.) writes in reply to "X. M.'s" inquiry published on February 2nd, p. 295: As "X. M." has a round of about twenty miles a day he probably has a country practice, and would no doubt be constantly off the main roads, travelling the by-lanes—the gradient of which is often severe—and frequently wading through the mud and crossing the ruts in the track—by courtesy called a road leading to the farmhouse or cottage where he may be visiting, it would not be wise in his hilly district to disregard the advice he has invariably received from all the makers, but should leave the 6-h.p. car severely alone. Indeed, if the gradients are severe, the roads flinty, and the going generally bad, "X. M." may find it advisable to have his tyres extra strong, heavy, and studded, which will need, in combination with the hills, greater horse power even than an 8-h.p., for with a doctor the car would be most wanted when the state of the roads and the weather were at their worst. For summer use probably a 6-h.p. car, kept properly tuned up, would climb the hills; but it must be remembered that a slight loss of compression, a carburettor becoming blocked, or a choked exhaust will bring the horse power down, and there is no reserve then to fall back upon. I have had a 6-h.p. Rover for fourteen months, and am more than pleased with her behaviour. I gave the car a severe test last Whitsuntide by taking my holiday in it, with a brother medico, from London to Pembrokeshire and back. There are some severe gradients *en route*, and more severe gradients in Pembrokeshire, especially in the by-lanes, and the road surfaces are shocking. The car did not fail me, but I should not care to have the experience every day. The longest run I had was 170 miles, with an interval of two hours for dinner, and often we were near (on which side I will not say) the "legal limit." The makers say the car is capable of an average speed, on give and take roads, of twenty miles an hour, and I am not prepared to dispute it. Petrol consumption is low and lubricating arrangement automatic and satisfactory. The district I live in is a distinctly hilly one, but the roads, summer and winter, are good, so I experience no difficulty, and can carry three up our steepest hill *into vito et jucunde*. Most of the hills are negotiated on the second speed, much to the surprise of owners of more powerful cars in the neighbourhood. The daily round is a pleasure, and the work is got through very much more quickly and pleasantly than when walking or driving; and I am writing with the snow on the ground, and I possess neither hood nor glass screen. If "X. M.," or indeed any medico contemplating the purchase of a small cheap car, cares to come and look at the "cheapest car on the market" and have a trial run with me, I shall be delighted, and if he gets a car, he should profit by the experience of others and be shown how to make a "diagnosis" when the car "gets wrong up," and how quickly to apply the suitable remedy.

LETTERS, NOTES, Etc.

Orotava and the Public Health of Teneriffe.

Dr. Frederick Le Brun (Puerto Orotava, Teneriffe) writes under date February 7th: Since correspondence has appeared in both the medical and lay press in the past few weeks with reference to the sanitary affairs of the island of Teneriffe, will you kindly allow me to put before the profession the present state of affairs? An outbreak of infectious disease occurred in the town of Santa Cruz in December which gave rise to much uneasiness. It has been officially described as a form of typhus, and it was limited to the town of Santa Cruz and its immediate radius. From Orotava, which is the principal health resort of the island, Santa Cruz is distant twenty-five miles, and not one of the ten practitioners in this valley has seen a single case of the disease. In Santa Cruz the facts are now as follows: There has been no fresh case for twenty days. The lazaretto has been closed, the doctor and his staff relieved of their duties, communication with the interior of the island is freed from all restrictions. Travellers are not subjected to inspection or disinfection, and their luggage is not interfered with; in fact, the epidemic is at an end. It is certain, therefore, that no one need be deterred from sending patients to Teneriffe by the recent alarms, and I may take this opportunity to call attention to the fact that there remain four of the best months of the season, and this does not include June, which is usually one of the pleasantest of the year, the mean temperature being 69.5°, and the country more beautiful than at any other time. The value of the Canary Islands climate has never been more apparent than lately. In the last six weeks weather of great severity has been general over Europe. The cold has been severe at almost all the reputed resorts of the Mediterranean littoral, while snow and frost are reported from not a few. At Orotava during the same period there has been unbroken brilliant weather, the sunshine averaging eight hours a day, the mean temperature 62°, the actual lowest temperature recorded being 49°. Owing to the enterprise of the hotel companies at Orotava, the accommodation for invalids has recently been brought up to a high pitch of excellence. Neither as regards arrangements for comfort nor amusement is there anything lacking to meet every reasonable requirement.

The Apprenticeship Question.

Dr. Laffan (Cashel), in a communication on this subject, writes: At least three-fourths of our young doctors are turned out with next to no practical training whatever. The merest fraction can alone become residents, and I question the value of a six-months' residency, and maintain that it is very poor contrasted with the practical insight afforded by apprenticeship. The clinical hospitals contain the merest fraction of the nation's sick, and yet because our medical rulers are exclusively interested in them they enjoy a monopoly of medical training. The General Medical Council cannot inspect either schools or hospitals, so therefore knows nothing about the deficiencies of either. A little light has occasionally, however, been thrown on the scene through the medium of the examinational system, and that light has not been in favour of words, words, and little else but words. Formerly each medical practitioner had that property in his profession which went a substantial way towards providing for his sons. At the present moment the Local Government Boards for England and Ireland are so satisfied of the imperfect practical training which students get that they have been obliged to establish special trainers for that stupendous operation known as vaccination! Could there be a more significant comment on the imperfections of the present system? An apprentice would collect crude materials for the publication of cases. He would stimulate by his mere presence the faculties of his master, and would help that master in many minute but useful and legitimate ways. He would learn an immensity about the relations between patient and doctor which are of vital importance to the making of the successful practitioner and which are never acquired either in the lecture room or in the wards of the clinical hospital. The percentage of first-year students who go straight to the bad would be saved, while the larger percentage who pull up but yet spend from one to three years extra at their studies would also be saved. All these benefits are lost because the profession is ruled by an oligarchy who fleece us in every quarter that they can. Bad as is their monopoly of medical training, it pales into comparative insignificance alongside the gratuitous work they do for the well to do public. They do not do this for charity—they only do it to advertise themselves, and the pauperism of the professional masses is the direct outcome. It would not be easy to exaggerate the enormous annual sum of which we are thus robbed. In can, however, be read in the modest incomes of all, and the cruel penury of many. If we had even two or three parliamentary representatives who, after giving their first thoughts to the political parties to which they might respectively belong, would bestow their second on their own unfortunate profession, they could stop all medical legislation until the franchises of the corporations and universities would be extended to all their medical graduates or diplomates and to them alone. The whole question of the relations between Medicine and the State and the inter-relations between the various medical classes themselves would early become the subject of a Royal Commission of inquiry.

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Remarks
ON
IDIOPATHIC DILATATION OF THE COLON.

BY HERBERT P. HAWKINS, M.D.OXON., F.R.C.P.,
PHYSICIAN AND LECTURER ON MEDICINE AT ST. THOMAS'S HOSPITAL.

THE odd term "idiopathic dilatation of the colon" is well understood as applying to cases where the dilatation does not arise from any obvious mechanical obstruction inside or outside the bowel. The origin is mysterious. It is possible that these nine cases from St. Thomas's Hospital and some borrowed cases from other sources, if read together, may justify the belief that the condition at all ages arises through a congenital nervous defect. "Neuropathic dilatation and hypertrophy" becomes then a better name for the disease. But the striking point to my mind is the importance of an early diagnosis, because in every case there is a period, short or long, during which a cure can be effected by surgical treatment. The life, however, in all these cases is precarious, and the final hopeless toxaemic stage sets in so rapidly and unexpectedly that as a matter of fact nearly all published instances are taken from the dead, and very few recoveries are recorded. I doubt if the best method of surgical treatment has yet been worked out, but from what I have seen and read it seems probable that colotomy is useless, that excision of any part of the colon should never be permitted, but that the best result with the greatest safety is given by anastomosis of the iliac and pelvic colon, coupled with fixation of the dilated pelvic loop.

The picture of the condition in the fewest words comprises: (1) A history of constipation from birth or from the earliest recollection, which is compatible, however, with fairly good health, until the final stage is at hand, the first sign of failure being often a loss of weight. (2) A constipation which often alternates with diarrhoea, and which at its worst is unlike that of obstruction, inasmuch as flatus is often passed and faecal matter may be drained away through a rigid rectal tube. (3) Abdominal enlargement, variable or constant, often asymmetrical, with prominence in the left iliac region, the abdomen, though distended, being seldom tense and often surprisingly flaccid, and rarely presenting any impairment of resonance. (4) Slow alterations in shape, especially in the left iliac region, observable only with patience, quite unlike the tense peristalsis seen in real obstruction. (5) The absence or rarity of pain and vomiting. Neither with real intestinal obstruction nor with simple non-dilating constipation should there be any confusion when this condition is far advanced. The difficulty lies in distinguishing its early stage from a simple constipation, and in recognizing the point at which the case must pass from physician to surgeon.

THE ORIGIN OF THE CONDITION.

(*a*) *The Anatomical Factor.*

The old term "sigmoid flexure" may be discarded. The iliac colon lies in the left iliac fossa fixed to the iliacus. The pelvic colon begins at the inner margin of the left psoas, dips into the pelvis, running for a variable distance to the right, then bends backwards and returns along the posterior wall of the pelvis to the third piece of the sacrum, where it joins the rectum. It is a loop provided with a mesentery, and is entirely free (Fig. 1, iliac colon *a* to *b*, pelvic colon *b* to *d*). In the adult it lies in the pelvis on the bladder or uterus. In the child at birth it is proportionately longer than in the adult, and it lies in the abdomen, only the lower end being contained within the pelvis. It varies greatly in length. Cunningham[1] gives the average length as 16 or 17 in., with extremes of 5 and 35 in. If the loop is unusually long, it is variously convoluted, and its butt-end may often be found in the right iliac fossa. In nearly all cases of this disease the dilatation begins below in the lower 3 in. of the pelvic colon, at the spot where the mobile and mesentery-provided bowel begins to lose mobility and mesentery, and merges into the fixed rectum. So constant is the starting point at this place of transition that there is temptation to consider that the anatomical arrangement is alone responsible for the dilatation, and various theories of "valve formation," "folding," and "kinking" have arisen. The valvular theory (Roser) is founded on the undoubted fact that even in advanced stages of the disease, when the bowel no longer responds to purgatives or enemata, the passage of a rigid tube 8 or 10 in. from the anus results in a drainage of faeces and gas, which ceases at once when the tube is withdrawn. On the strength of this, treatment has been attempted in some cases by leaving a long tube in the rectum. But this drainage by tube is easily understood when the parts are examined after death (Figs. 2 and 7) without presupposing the existence of a valvular obstruction, which I think has never been demonstrated. Certainly there is no structural narrowing of the bowel. In fact, the passage right down to the anus is perfectly wide and free, even in cases which have ended fatally, and it is marvellous (Figs. 3 and 7) that the escape of faeces and gas has been so scanty and imperfect. As regards the theory of an obstructive folding or kinking from a superfluity of the pelvic colon, it is met with the fatal objections (1) that in the *post-mortem* room long and much folded, but healthy, pelvic colons are very common, while this peculiar dilatation is rare; (2) that in some fatal cases of this dilatation it is clear that the pelvic loop was short and not folded; (3) that the commencement (that is, the lower end) of the dilatation is gradual and not abrupt, as would have been the case if the bowel had been kinked at this spot; and (4) that the signs and symptoms of the condition are wholly different from those which are met with in any form of intestinal obstruction.

It may be allowed, perhaps, that the anatomical arrangement is in some degree responsible for the dilatation. But it seems to be equally clear that a purely anatomical explanation will not suffice. There must be another factor in its production, and it is difficult to conceive that this missing factor can be anything but a defect on the nervous side, especially if, as I believe, the condition may actually be present *in utero* before ever the bowel has begun to act.

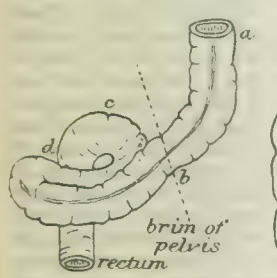


Fig. 1.—Normal.

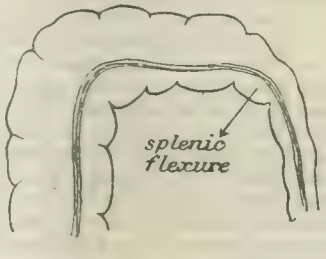


Fig. 5.—Case IV.

(*b*) *The Nervous Factor.*

A neuropathic origin admits of no proof. It is probable that Hale White's[2] expression "congenital inertness of the colon" takes us as far as we can go into the mystery. If by "inertness" we mean a neuro-muscular defect, through which a section of the colon, though it opposes no obstacle, is yet (continuously or from time to time) incapable of forwarding its contents, I believe we have in this the basis of the disease. I think we may realize a difference between a physiological and a physical obstruction of the bowel.

The evidence seems to show that this primary defect in every instance, child or adult, is truly congenital, and that the dilatation is not acquired by faulty habits or abuse of aperients and enemata. I think that these cases should be regarded as extreme and persistent examples of a common form of constipation in children, and not as constituting a separate type of disease. Many children are constipated from the day of birth, at so early a point in their career that no error in diet can be held as the cause, and it is reasonable to consider that this constipation is due to a congenital condition, be it called inertness of the colon, a neuro-muscular defect, or a lack of peristaltic response to normal stimuli. These are the constipated children, in whom the insertion of the finger or a piece of soap into the rectum will often produce a better result than an aperient. As these children grow older, nearly all of them regain, or rather acquire, a normal responsive and expulsive power before any dilatation sets in. A small number of these relapse at later stages,

and here, I think, belong most of the cases described by Cheadle,[3] in some of which evidence of dilatation can certainly be seen, although (perhaps with one exception) they were still within the limits of recovery. In one of his cases puncture of the colon was necessary, and speaking generally they seem to indicate the last stage at which medical treatment can be continued with success. In a few instances, however, out of this multitude of constipated infants dilatation sets in, and, more than that, it persists. Even then a compensatory hypertrophy may carry the child comfortably through some months or years of life, constipated but not ailing, until the final failure brings him before us, generally in a hopeless state, and he is scattered in small numbers through medical literature under the label of idiopathic dilatation of the colon.

Further, I see no reason for considering that the colon-dilatation of the adult differs in origin from that of the child. It is certainly odd that instances of the condition are not uncommon up to the age of 10, are very rare from 10 to 40, but appear again, though still uncommonly, from 50 onwards. There is thus a curious age-gap. It is odd also that at an early age males are almost exclusively affected, while at a later age instances occur in males and females alike. But I do not believe that there is any reason either in this age-gap or in this sex-differentiation for dissociating the child's disease from that of the elderly. My instances of all ages seem to hang together as originating in the same way. History, symptoms, anatomy, and fate are the same. I think it may be said that the primary nervous defect may produce its outward and visible sign of colon-dilatation sometimes even *in utero*, commonly soon after birth, but that if the individual survives the developmental period he usually tides through adolescence and early adult life, only, it may be, to succumb to dilatation in later years when the additional influence of age comes into play.

There are indications that the nervous element in the causation is generally paralytic, but it is (*cf.* Case IX) sometimes spastic. A purely nervous origin is no new theory. About 1880 Hilton Fagge, called to see a child, aged 12 months, suffering with constipation and abdominal distension from birth, gave it as his opinion that the cause was "spasm of rectum." The child died three years later, and the condition was reported by Gee.[4] At the *post-mortem* examination the pelvic colon looked like a stomach. It lay across the hypogastrium, extending into the right iliac fossa. Below this dilated part the rectum, and perhaps the lower end of the pelvic colon, showed a spastic contraction "but not a very tight stricture, easily admitting the index finger."

Morbid Anatomy.

The condition of the parts is best studied from below upwards. The anus is normal in structure, but cases are on record where anal spasm, which is certainly a factor in the constipation of children, has been probably the sole cause of this colon-dilatation. I believe that an instance reported by Fenwick[5] gives us the key to the mechanism of all these cases. Here the dilatation which affected the whole colon extended right down to the anus, and the rectum was funnel-shaped, being 5 in. in circumference at its junction with the pelvic colon, but only 1½ in. round just above the anus. The agency of anal spasm can hardly be limited. This funnel-shape is rarely so pronounced, and I think that the majority of cases differ from Fenwick's case only in the fact that the spasm is found in the pelvic colon and not in the rectum. As to why the spasm is present, but comparatively rarely as it is, one time or another I have had some [illegible]. In these cases the dilatation begins above the pelvis, but the lower part of the pelvic colon is [illegible]. The commencement is [illegible] abruptly. The condition [illegible] often resulted in the formation of a huge faecal [illegible] and this section of the bowel may be [illegible] to the neck and shoulders of a bottle (Figs. 3 and 7). The [illegible] may be [illegible]. A diagram [illegible] is not [illegible] Case III [illegible] in Case IV (Fig. 5) the [illegible] after puncture was 79 in. As a rule the [illegible] at the pelvic colon is preserved and this part runs entirely out of the pelvis, the anterior surface of its mesentery becoming posterior, with the last coil of the loop lying at or above the middle line, and [illegible] usually under the right costal margin. On opening the abdomen it may be found to conceal every other structure, except, perhaps, part of the transverse colon. The two nearly parallel limbs of the loop may sometimes be seen through the abdominal wall, as in Case II (Fig. 4). Sometimes, probably in cases where the pelvic colon was originally short, the dilated bowel is more of a bag than a loop. It may then resemble a stomach lying right across the hypogastrium, with its convexity in the right iliac fossa. In a case recorded by Gee[6] an odd movable lump in the right iliac fossa was found *post mortem* to be a faecal mass in the pelvic colon. Occasionally the lower part of the right limb of the loop sags down into the pelvis, becoming pouch-like, as in Case I (Fig. 2), and in this case an evacuation of the bowel must be of the nature of a passive overflow from a reservoir.

As regards the rest of the colon, the condition varies. Occasionally it is normal in all respects, and the dilatation subsides as the pelvic colon merges into the fixed iliac colon. The upper end of the pelvic loop or bag is then shaped like the lower end. I think this pure pelvic dilatation is uncommon, and occurs only in young children. Langmead[7] records an instance with associated tetany. Far more commonly the rest of the colon is also affected in some degree. Often the dilatation reaches to and fades away in the iliac or descending colon. But in some cases it is continued uniformly onwards up the descending colon, and ceases gradually in the transverse or ascending colon, only in rare instances reaching the caecum. In these extreme cases the abdominal distension is by itself a danger to life. Interference with respiration is the common result. In rare cases hydronephrosis has been noted, and occasionally oedema of the lower extremities due to pressure on iliac veins. Tetany has been known to occur, and, as in the case of dilatation of the stomach, it requires immediate operation.

The condition of the small intestine can be described in absolute terms. It is never dilated. During operation and after death it is found to be small, collapsed, empty, and grey, and it is generally gathered into an inconspicuous central handful lying on the vertebral column buried beneath the colon.

The dilatation of the colon is not a matter of recent distension by gas. It is clearly the work of time, for in nearly every case there is great hypertrophy of muscle. The dilatation and hypertrophy are associated together from end to end of the affected part of the bowel. One cannot doubt that the hypertrophy is a secondary compensatory development, an *Arbeitshypertrophie*. In cases in which life is prolonged for many years, no doubt this hypertrophy is for a time sufficient to counterbalance the paretic or spastic section of bowel below, but a relative insufficiency must set in sooner or later. The circular muscular coat may be three times as thick as the longitudinal taenia, and the whole wall may have a thickness of ¼ in. The bowel is thus rendered abnormally rigid, and on puncture it shows very little tendency to collapse. In Case VII, however, an extreme instance of dilatation of the whole colon, there was certainly no hypertrophy at the time of death, and in Langmead's case the slight thickening of the pelvic colon was found microscopically to be due to hypertrophy of the muscularis mucosae alone.

The mesentery of the pelvic colon in these cases is sometimes described as being thickened. I believe this change is uncommon, but it was present in Case V. There are no adhesions. Ulceration, such as commonly occurs in long-continued obstruction of the colon, is very rare in this disease, but it has been noted in some cases, and one also was present in Case IX. In one recorded case perforation occurred. During life, and in the *post mortem* room, the faecal matter in the dilated colon is nearly always semifluid. It often has a curious deficiency of feculent smell, and I have never found it to be offensive. The colour is usually yellow or green, or greenish-yellow. But the contents of the colon are mainly gaseous, and it is in consequence of this disproportion between the amounts of gas and faeces that the abdomen in these cases is generally resonant all over its surface. The gas pressure must be regarded as the actual dilating force.

The Fully Developed Condition in Children.

The following cases are examples of the fully developed condition in children:

CASE I.—*Defective Action of Colon from Birth, but fairly good Health: Dilatation and Hypertrophy of greater Part of Colon: Colotomy: Death.*

Boy, aged 12 months, admitted under the care of Dr. Sharkey. "From birth" there had been unusual difficulty with the bowels, mainly constipation with occasional bouts of diarrhoea. Purgatives had been in common use; otherwise he had been fairly well. One week before admission into hospital his mother noticed in his abdomen "a lump that seemed to move," presumably peristalsis in the pelvic colon. At that time his bowels had not been open for five days, but there was no vomiting and no appearance of pain. On examination he was well nourished, but extremely ill. The abdomen was greatly distended but resonant everywhere, and indications of a large pelvic colon could be seen. An exploratory incision was made by Mr. Sargent at once, and the nature of the case being recognized, colotomy was performed. No improvement followed and the child died on the next day with a temperature of 106°.

Post mortem it was found that the anus and rectum and lower 3 in. of the pelvic colon were normal. At this point dilatation and hypertrophy began, the greatest diameter (about 6 in.) being reached in a distance of 4 in., the huge resulting pelvic loop filling the lower half of the abdomen. The right-hand part of the loop had sagged down into the pelvis (Fig. 2). The iliac, descending, and transverse colon was also greatly dilated and hypertrophied, but these changes gradually disappeared in the ascending colon, and the

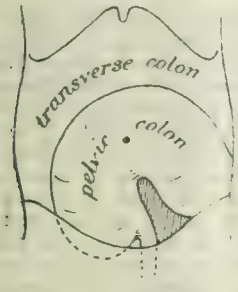


Fig. 2.—Case I.

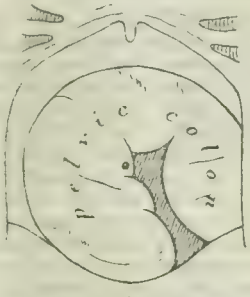


Fig. 8.—Case VII.

caecum was normal. The whole colon contained soft yellow faeces. When this with some pressure was squeezed out through the rectum, a stream of water could be run quite freely from the caecum through the whole length of the bowel out at the anus, and it was difficult to believe that there could have been any impediment to the outflow of the soft contents during life. Fig. 3 shows the appearance after removal and preservation.

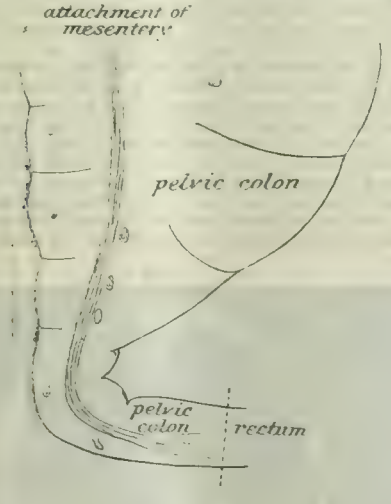


Fig. 3.—Case I.

The history in this case seems scanty but it is probably complete. Constipation there had been from birth, but it had attracted little attention and the general health had been good. We may conclude that hypertrophy had kept pace with the increasing dilatation during the greater part of the twelve months of life. Fairly good health for a variable time, ending in rapid failure of compensation, stagnation, toxaemia, and death, is a common story in these cases. Other points to be noted are the absence of pain and of vomiting. These are rarely present, and their absence serves to distinguish the condition clinically from any form of obstruction. The so-called diarrhoea, which is a passive overflow, is common enough. The terminal pyrexia is noted in other cases.

The same history, symptoms, and signs appear in Case II, though the end was reached more gradually. The usual terminal wasting was present. This case shows the common condition of the abdomen, which is one of distension with flaccidity or doughiness, so that the examining hand sinks in.

CASE II.—*Defective Action of Colon from Birth: Dilatation of Pelvic Colon: Death.*

Boy, aged 10 months. He had always been weakly. "From birth" the bowels had never acted without aperients and their result was not satisfactory; he had been breast-fed but was now weaned. He was now extremely thin, the miserable limbs and wizened face contrasting with an enormous abdomen. The abdominal wall was very thin, and much of the disposition of the intestine could be seen. The whole abdomen was distended, but two large coils were always seen running up from the left iliac fossa, and converging under the right costal margin, sometimes forming a complete oval loop. (Fig. 4.) It can hardly be doubted that this was the pelvic

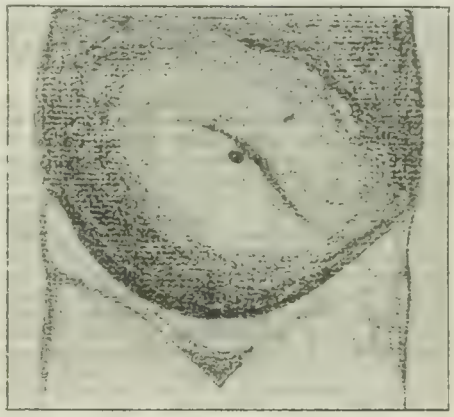


Fig. 4.—Case II.

colon. No peristalsis was observed, the dilated bowel being completely deprived of motor power. The anus and rectum were normal. There was no sign of pain, and no vomiting. For ten days enemata and aperients produced little gushes of thin faecal fluid, the child wasting and losing ground with a rising temperature, which was 104° at death. Surgical treatment did not seem possible. A *post-mortem* examination could not be obtained.

The next case is another example of the same story, but it is of more interest, because the disease was less advanced, and the condition permitted surgical treatment and a relative cure. As in Case I, this boy had enjoyed fairly good health. All his life aperients had been used from time to time, but his mother had not thought that he differed from other boys in this respect. It is likely, however, that there was some want of observation on the part of the mother, for the history shows that a full year before his admission into hospital his distended abdomen had attracted attention, and yet on his admission she was not even then aware of his peculiar appearance in this respect. The abdomen in this case was at first tense, but it subsequently became flaccid, although it retained its former large dimensions. The impairment of resonance found here is unusual.

CASE III.—*Early History of slight Constipation: Dilatation of Pelvic Colon: Anastomosis of Iliac and Pelvic Colon: Recovery.*

Boy, aged 7 years. At the age of 2 he was treated at the Evelina Hospital for rickets. When he was nearly 6 years old he had tonsils and adenoids removed at St. Thomas's Hospital. As he was noticed to be thin, and the abdomen was then so prominent as to attract attention, he was transferred to the medical side for treatment, but the nature of the abdominal enlargement was not recognized, and he ceased to attend. Fourteen months later he was run over by a cart and had three ribs broken, and this was probably a very fortunate accident. On admission into hospital on account of the injury the abdomen was found to be greatly distended; some slow, gentle peristaltic movements could be seen; and it required strong aperients and enemata to get any action of the bowels. There was uniform distension of the abdomen, which measured 27½ in. at the umbilicus, but the flanks especially were bulging. It was resonant everywhere except in the flanks and the left lower quadrant, and in this latter region there was a vague sensation as of a rather tense rounded swelling under the hand. The abdominal skin was tightly stretched and shiny, but showed no veins. The thoracic organs were pushed upwards. The subcostal angle was wide and the costal margins everted. The rectum was large and empty. In the fortnight

after admission only three actions of the bowels were obtained by enemata and large doses of castor-oil and other purgatives. The impairment of resonance and the feeling of an ill-defined rounded swelling in the left lower part of the abdomen remained constant. Moreover, although the whole abdomen was tensely distended, slow peristaltic movements could be seen in the left iliac fossa, and frequent borborygmi could be heard at a considerable distance from his bed. No doubt was felt as to the nature of the case, but the boy remained apparently in good health. He was in no discomfort, was not sick, retained a good appetite, and cared not at all whether his bowels were open or not.

It did not appear to be worth while to embark on a course of medical treatment. My colleague, Mr. Makins, therefore opened the abdomen by a 4 in. incision below the umbilicus to the left of the middle line. As was expected, all the colon that came into view was greatly distended, and the pelvic colon was found to be a bag rather than a loop extending up to the umbilicus. He made a lateral anastomosis between the lower ends of the iliac and the pelvic colon, thus giving a direct passage which obviated any further use of the dilated bag, and this distended part was left in the hope that it might undergo subsequent atrophy. It was felt, however, that a complete cure was not to be expected, because from the physical signs it seemed probable that the greater part of the colon was also in some degree affected.

For some weeks there was little improvement. Aperients were necessary, magnesium sulphate being found to give the best result. There was frequently distension of the short-circuited pelvic bag, for which the passage of a long rectal tube usually gave relief with the discharge of flatus. Perhaps as a consequence of the tension, healing of the wound was delayed, and it eventually suppurated, opened up in its whole length, and was not completely closed till two months had elapsed. But during the latter part of this time the bowels were acting in a much more satisfactory way, aperients were hardly ever necessary, and the rectal tube was discarded. A subsequent course of abdominal massage and electricity did much good. The abdomen, however, as might be expected, remained large (23 in. at umbilicus), but it was always perfectly flaccid.

I have seen him repeatedly since then, and now after the lapse of four years he remains well, and his mother states that an aperient is not necessary more than once or twice a month. But his pelvic bag is still in existence, and the occasional appearance of its outline when partly filled with gas shows that its size has not undergone much diminution. Its contents, however, are apparently purely gaseous, and it gives rise to no discomfort. Judging from Case VIII, there is, perhaps, some risk of volvulus.

EXAMPLES OF A POSSIBLE EARLY STAGE.

I think it is possible that the next case may represent the very earliest stage of the condition. There is evidence here of a varying paralytic distension of parts of the colon, which I think was certainly present *in utero*, producing immediately after birth vomiting, constipation, and diarrhœa. It is conceivable that, if the child had lived, permanent dilatation and hypertrophy would have arisen. The terminal pyrexia may have been of pulmonary origin.

Case [illegible]—*Defective Action of Colon from Birth, but Colon found normal Post Mortem: Constipation, Diarrhœa: Vomiting: Wasting: Death.*

Boy, aged [illegible] weeks. He was born prematurely. It was noted at birth that the abdomen was unusually large, and the grandmother volunteered the statement that "none of the black stock that babies pass" had appeared, compare similar statement in Case [illegible]. During the first week he took the breast [illegible] and frequently vomited. The appetite then improved, but he vomited nearly every feed, as a rule without delay. The bowels had never acted satisfactorily, there being always constipation or, after aperients, the passage of small liquid stools.

On examination. The child was wasted and very feeble, weighing [illegible] lbs. The abdomen was considerably distended, but not tense. The epigastrium was much more prominent than any other part. Abdominal respiratory movement was good, and there appeared to be no pain or tenderness. There was no sign of disease elsewhere. From this history of vomiting and these physical signs it seemed probable that there was a partial stenosis of the pylorus. But on a second examination I was surprised to find palpable and visible signs of considerable distension of the colon. The distension clearly affected the ascending and transverse colon, and to a less degree the part lying in the left iliac fossa, and it seemed not unlikely that the only pyloric prominence already mentioned was in part at least due to a distended transverse colon. No peristaltic movements such as occur in complete intestinal obstruction were seen at any time, but on prolonged observation the prominent parts showed slow alterations in shape. In comparison with the distension, the abdomen was surprisingly quiet. To the eye it was the abdomen of colon obstruction [illegible] the whole abdomen resembled a thin walled, [illegible] bag. The anus and rectum were normal.

Five days after the physical signs remained unaltered. During this period the child continued to vomit occasionally. Calomel was given on the first day, and thereafter three or four times a day a small liquid stool drained away. The stools were by no means offensive. The temperature was rising gradually, and on the fourth evening reached 104°.

With the possibility of some malformation about the junction of colon and rectum before us, Mr. Makins at my request made an exploratory incision into the abdomen, sufficient to show if any condition was present which could be remedied. The caecum, ascending and transverse colon, were greatly distended, the distension ceasing abruptly about the splenic flexure. The change from distended to normal bowel occupied about ½ in., and it was clear that there was no obstructive cause for the distension. The distended part was abnormally hyperaemic, and contrasted with the rest of the colon, which was pale. From the splenic flexure downwards the colon was apparently of normal size. The small intestine was empty, collapsed, and grey. The stomach was of normal size, and the pylorus showed no abnormality. Fig. 5 is a diagram of the colon. On the next day the temperature rose rapidly, and death took place two days later without any change in the condition, the thermometer registering 109°.

Post-mortem examination showed some collapse and broncho-pneumonia in the lower lobes of both lungs, this condition being probably the immediate cause of death. There was no sign of disease of stomach or intestine. There was nothing to account for the distension of the colon, which had resumed its normal dimensions and appearance. There was a very large intussusception high up in the small intestine formed just before death. The abdominal incision was healthy, and there was no peritonitis.

In this case there was no appearance of pain, and the whole picture suggests a pure paralytic condition. A similar case has been reported by Dr. Dodd of Hove,* which takes us a stage further, inasmuch as the dilatation, which was of longer standing than in my case, persisted after death. The child lived for three months. The conditions found *post mortem* are suggestive of a spastic as well as a paralytic state; signs of abdominal pain were seen, and the curious state of the stomach is noteworthy in this connexion, making one reflect on the possible origin of hypertrophic stenosis of the pylorus. Dr. Dodd's case shows evidence of defective action of the colon from birth, of distension and spasm, with straining, constipation, pain, vomiting, and wasting.

In this case, a male infant, there had been noticed by the nurse, "from the time of birth," an unusual straining at stool. At first the bowels were open once or twice every day, and later once every other day. For the first three weeks of life the child throve. At the end of the third week vomiting began, usually occurring five or ten minutes after taking the breast, and in a few days it seemed to be returning the whole feed. There was the appearance of pain, and the child lay curled up, with thighs flexed on abdomen and feet crossed, crying out at short intervals. After temporary improvement the vomiting, pain, and constipation recurred. Examination under chloroform revealed nothing abnormal. Aperients and enemata gradually became useless; anything that was passed looked like yellowish-brown oil-paint. Wasting was rapid and the child died at the age of 12 weeks. At the *post-mortem* examination the ascending and transverse colon were found to be little larger than an ordinary lead pencil. The head of the caecum was normal. The descending colon, iliac, and pelvic colon and rectum were distended, with some partial annular contractions of the pelvic colon. The small intestine was collapsed. It is interesting to



Fig. 6.

note that there was a sort of hour glass constriction of the stomach near the cardiac end, apparently due to spasm. There was no disease elsewhere. The condition of the colon is well shown by the photograph (Fig. 6 which Dr. Dodd has kindly allowed me to use. The constriction seen at the end of the descending colon is artificial.

Another case is recorded by Osler.[10] There is here the same story of colon defect from birth, with vomiting, pain, and constipation. The condition, however, was kept under control by the use of a rectal tube, though there was no real improvement, and the later history is not reported.

A male child, aged 7 months, came before him with the history that it had been noticed from birth that the "napkins were not soiled." Otherwise its health was good. The abdomen soon after birth became swollen and tense, but by means of a catheter some black, tar-like faeces were brought away. From this time up to admission into hospital the child had had only five or six natural evacuations, and injections had been necessary. The child was at first well-nourished, but latterly had been losing weight. If the injections were given regularly, the abdominal distension was kept down and the child did not seem ill. If the injections failed, the abdomen became distended, vomiting began, and there was the appearance of pain. On examination, the abdomen was greatly distended and very tense, the costal margins and ensiform cartilage being everted. Intestinal coils were visible, particularly one very large coil between navel and ensiform cartilage. The mother had noticed peristalsis. The anus and rectum were normal. A catheter was passed without difficulty, and when it reached a distance of 8 in. from the anus much gas escaped, and fluid faeces also if there had been given (as was the mother's custom) a previous injection of water. The abdomen would become flat and soft after this relief. At the age of 14 months the child remained in the same state, the long tube and injections being in constant use. In relation to this case, Osler suggested that "here we may possibly have an illustration of the early condition which leads ultimately to the enormous dilatation and hypertrophy met with in such cases as that of the man reported by Formad," who lived to the age of 23, constipated and distended from birth, with a colon at death from 15 in. to 30 in. in circumference. "From birth there seems to have been an inability in the large bowel to empty itself."

The next case seems to have been of the same nature, but it differs from the preceding instances in that the colon condition, presumably paralytic and consequently painless, was intermittent, and the bowel apparently recovered between the attacks, so that the boy had reached the age of 5 alive.

CASE V.—*Intermittent, patchy Distension of the Colon: Abdominal Exploration: Apparent Recovery.*

Boy, aged 5 years, admitted under the care of Dr. Acland. His early history is not very full, but on two previous occasions he had been very ill with an attack like the present one. His present illness began with vomiting and distension of the abdomen without pain, but the bowels continued to act. With no more urgent symptoms than these he soon became extremely ill, and he was sent up to the hospital as suffering from intestinal obstruction three weeks after the onset. On admission he had the face and sunken eyes which one associates with acute abdominal disease, his pulse-rate was 128, and he was so ill that infusion was necessary before anything else could be done. The abdomen was moderately distended, moving with respiration, resonant everywhere, presenting no other sign of disease than fullness and dullness in the flanks. An exploratory incision was made by Mr. Sargent. The small bowel was found to be shrivelled and collapsed. The upper part of the ascending colon and the hepatic flexure and the pelvic colon were much distended without any apparent cause, while the colon between these parts was of normal size. The condition, in fact, was much the same as in Case IV. Though he remained ill for some time he gradually improved, the vomiting ceased, and he left hospital three weeks later, apparently well, with no sign of abdominal disease. I have been unable to trace his subsequent career.

EXAMPLES OF THE FULLY-DEVELOPED CONDITION IN ADULTS.

The next case gives an example occurring in middle life. Except in these two points of greater age and of the sex, I do not see any reason to suppose that it differs from the preceding cases. The condition of the pelvic colon differed from that found in Case I only in that it was more funnel-shaped and less pouched. It appeared that the trouble with her bowels dated from childhood at any rate. As in Case I, fairly good health had been enjoyed until the final collapse set in. It seems to have been a pure paralytic condition, with considerable hypertrophy.

CASE VI.—*Defective Action of Colon from Infancy: Dilatation of whole Colon, especially the Pelvic Part: Incision of Bowel: Death.*

Woman, aged 39. Her story of constipation went back to her earliest recollection. She was always in trouble in this respect, but she thought that matters had been worse in the last four years. Nevertheless she had had fair health and borne eight children. Latterly, with bowels acting in some degree about once a week, she had begun to fail, and three weeks before admission she had taken to her bed. On examination she was seen to be thin and pinched. Her mental state was curious. She was slow, dazed, and apathetic, as if under the influence of a narcotic. The abdomen was greatly distended, but it was not quite symmetrical, the left side being more prominent than the right. It was resonant everywhere. There was a faint mapping-out of coils of intestine, and slow alterations could be seen in them, with occasional borborygmi. Though the abdomen was so large, it was singularly flaccid, and in this respect it was quite unlike the abdomen of intestinal obstruction. Moreover, there was no pain or tenderness, and she was not sick. The rectum was normal. The abdomen was opened at once, the dilated pelvic colon was incised, and a large quantity of yellowish liquid faeces was removed, but it was not thought advisable to attempt anything further. She died on the next day.

At the *post-mortem* examination the condition was nearly identical with that found in Case I. The normal rectum passed gradually at the upper part of the sacrum into a huge pelvic colon, which even now, though it had been nearly emptied at the operation on the previous day, filled the lower half of the abdomen. It was almost entirely extrapelvic. There seemed to be no reason why its contents should not have poured into the rectum. Fig. 7 is a diagram of the parts. The

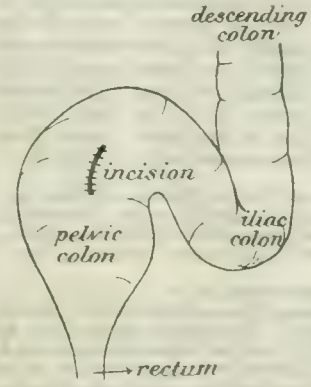


Fig. 7.—Case VI.

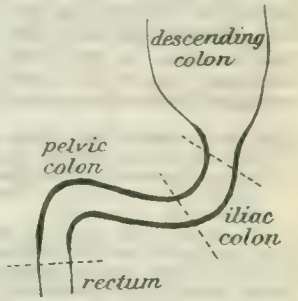


Fig. 9.—Case IX.

mesentery of the pelvic colon was apparently thickened. The whole colon was somewhat dilated, but the change gradually disappeared before the caecum was reached. Its wall was thickened, apparently from true muscular hypertrophy. The small intestine was collapsed and grey. There was no sign of change inside the colon.

The next case is another example of the middle-life condition in a male. It differs only from the preceding case in the absence of any thickening or hypertrophy of the colon wall. I suppose it is possible that a late and final distension of the colon had obliterated all trace of a previous hypertrophy. There is here, as in other cases, a history of good health in spite of the dilatation, with the usual sudden collapse at the end.

CASE VII.—*Defective Action of Colon from an Early Age Fairly Good Health: Dilatation of whole Colon: Death.*

Man, aged 40, admitted under the care of Dr. Sharkey with the history that his bowels had never acted properly within his recollection. He had tided along for forty years, with the help of purgatives and enemata, in recent years relying almost entirely on the latter. He had worked up to a month before admission, and he had enjoyed fairly good health. He had hardly ever been sick, had no abdominal pain, and had had a good appetite, and, in fact, the night before admission he consumed a pint of periwinkles.

On examination the face and limbs showed wasting. The abdomen was greatly distended, its greatest circumference being 43½ in.; some veins were visible, and indications of intestinal coils could be seen. No peristalsis was observed. Percussion gave a tympanitic note everywhere, and the whole vertical extent of hepatic dullness in the nipple line was obliterated. The rectum was large and empty. Enemata and castor oil gave no result, and puncture of the intestine was useless. He slowly sank, and died four days after admission.

At the *post-mortem* examination measurement at the umbilicus was found to be 49 in. On opening the abdomen only the colon was seen, the pelvic loop taking nearly half the space, the rest being occupied by the transverse colon (Fig. 8). The gas in the pelvic colon was at a high pressure, and issued with a whiz on puncture, the bowel collapsing, but only down to about three-quarters of its original size. The gas had no faecal odour. The anus and rectum were normal. The dilatation began, as usual, rather gradually just above the rectum, and in the length of 4 in. the normal lower end of the pelvic colon had passed into a huge loop, of which the right limb measured 19 in. in circumference, even after the bowel had been punctured. It was entirely extrapelvic. There was no manner of obstruction, and there seemed to be no reason whatever why faeces should not have entered the rectum.

The whole colon was dilated, the degree of dilatation diminishing progressively upwards, the caecum being hardly affected. There was certainly no muscular hypertrophy. If there was any change, the colon wall was thinned. There was no appearance of disease of the mucous surface. The colon contained more than 31 lb. of greenish semifluid material like cooked spinach, having hardly any faecal odour. The small intestine was collapsed and empty. The upward thrust upon the diaphragm was extreme.

The next case is an example of the same kind, but she came under my observation at a time when there was a possibility of surgical treatment, and I think that, after a rather hazardous career, she now has a good prospect of living out her days. The story is identical with that of the case recorded by Clutton,[11] in which he excised the sigmoid flexure successfully. This case further illustrates the risk of volvulus that is entailed if, after the making of a short circuit, the pelvic loop is left free in the abdomen. In her case this accident happened twice. It illustrates also the fact that the inherent weakness of the colon and its consequent inability to withstand the distending force of contained gas will still persist even after excision of the greater part of the pelvic loop. Here, without any trace of obstruction, and in spite of the fact that the bowels continued to act fairly well eighteen months after excision of nearly the whole pelvic colon, a new loop some 9 in. in length was developed out of the 3 or 4 in. of the pelvic colon that remained below the point of anastomosis (Fig. 1, *c* to *d*).

CASE VIII.—*Defective Action of Colon from an Early Age: Dilatation of Pelvic Colon: Anastomosis: Recovery. Later Volvulus of Dilated Loop: Operation: Resection. Later Volvulus of Newly-developed Dilated Colon: Fixation: Recovery.*

Woman aged 46. She had been constipated all her life. As a young girl she used to get two or three actions of the bowels in a week, one way or another. From the age of 20 to 40 things were more satisfactory, but the bowels never acted regularly: she used to wait patiently and an action came sooner or later, and this often without an aperient. During the last five years there had been increasing difficulty. Purgatives and enemata were frequently used. Occasionally when things were at their worst there had been some abdominal discomfort, but she had never been sick. The abdomen from time to time had become enlarged, and this condition had tended to become constant during the last year. She had nevertheless had good health, and had worked hard as a dressmaker.

On first admission she was certainly thin. The abdomen was considerably distended, but as in other cases it was curiously soft, so that the examining hand sank in, as into a feather bed. It was resonant everywhere. It was generally more prominent in the left lower quadrant than elsewhere, and sometimes this part stood out and exhibited slow gentle alterations in shape so that the diagnosis admitted of no doubt. The rectum was normal and not large. She was a placid individual and felt no anxiety as to her future. With enemata and aperients and dietin there was some improvement, and she gained 5 lb. in weight in three weeks. But there was no happy mean. She was either completely constipated or she passed eight or ten small liquid stools a day, clearly by overflow from the dilated pelvic colon; and it seemed improbable that anything further was to be gained from medical treatment.

Mr. Makins therefore took her in hand at my request. Incision revealed a pelvic loop of which the upturned butt end was situated above the umbilicus and an anastomosis was made between the iliac colon and some point low down in the pelvic colon below the dilated part as in Case III. The result was quite satisfactory and though the gas-containing loop remained in evidence the bowels acted fairly well. Three months later, however, she was readmitted into hospital with acute signs of volvulus. The twisted pelvic loop was untwisted and completely removed so that the gas now provided with a quite freely straight passage from iliac colon into rectum without any lateral escape.

She now remained well and remained well for eighteen months, having no difficulty in keeping her bowels open with an occasional mild aperient. She was then readmitted with a second volvulus. It was found at this third operation that the small portion of pelvic colon (fig. 1 *cd*) between the anastomosis and the rectum had become dilated into a loop nearly as large as the original loop that had been resected. This had become twisted with one and a half turns from left to right. The position of the loop was rectified and she made a good recovery. Later, at a fourth operation, Mr. Makins fixed the dilated loop so that future twisting might be prevented and she remains in good health.

A similar case is recorded by Richardson:[12]

In this patient a woman, the pelvic colon, which was so dilated as to fill the whole lower abdomen, was resected in 1899 and an anastomosis established between the iliac colon and a point in the pelvic colon below the dilated part. One year later, with recurrence of symptoms, it was found on exploration that a new dilated coil had developed in the place of the excised pelvic colon. Some adhesions which this new loop had contracted were separated without any improvement. Three months later a more complete exploration was made, and it was found that "at the line of suture of the first resection, which made a straight passage from descending colon to rectum, a new coil had appeared, around the central portion of which could be seen the scar of the suture line. Not only had a dilatation begun here, but it had bulged and spread until a new sigmoid flexure had appeared, and one so large that it filled the pelvis and whole lower abdomen. In length the new coil was about 15 in." A series of transverse plications were now made, so that the convexity of the new loop was reduced and its course became a moderate curve from the left pelvic brim to the rectum. No improvement resulted, so that about six months later Richardson resected the new dilated bowel and at the same time fixed the fundus of the uterus to the abdominal wall, in case it should be contributing to the dilatation by its pressure. At the time of writing it appears that the patient was still in trouble, and from the physical signs in the abdomen it seemed probable that a new dilated loop was in process of development for the second time.

My last case differs from the preceding in its anatomical features, but I think it belongs to the same group. Its peculiar character lies in the fact that the iliac and pelvic colon showed great muscular hypertrophy without any dilatation, and this pelvic part was short—in fact, nearly a straight passage from pelvic brim to rectum, and it was exceedingly rigid, and probably slightly narrowed. The whole of the rest of the colon was dilated without any hypertrophy. Still adhering to the supposition that all these colonic conditions have a nervous basis, I suppose that the explanation of this short hypertrophied portion is to be found in long-continued spasm. This case illustrates also the sudden collapse that often sets in on slight cause, and the generally precarious life of these patients.

CASE IX.—*Defective Action of Colon from an early Age: Hypertrophy and Narrowing of Lower End: Dilatation without Hypertrophy above: Death.*

Man, aged 48. He slipped and fractured his left patella. On admission into hospital it was noticed that he presented an odd appearance owing to the enormous size of the abdomen. On inquiry it was found that he had had difficulty in getting his bowels to act as far back as his memory went. In recent years, however, constipation had alternated with periods during which he passed five or six small liquid stools a day, as in Case VIII, and his statement was that he found no remedy so efficient as beer.

There were some slight indications of intestinal coils to be seen through the abdominal wall, and slow alterations of shape were observed. Aperients and enemata produced no result, though flatus was passed. He was sick once. He sank rapidly, and died unrelieved six days after admission.

At the *post mortem* examination it was found that there was great dilatation of the caecum, ascending transverse and descending parts of the colon. On opening the abdomen nothing but colon could be seen. The lower end of the descending colon, as it reached the iliac crest, was funnel-shaped, and at this point the dilatation gradually ceased. To the naked eye there was no sign of muscular hypertrophy. The iliac and pelvic parts of the colon, however, were curiously short, lacking the usual curve, with great hypertrophy of the circular muscular coat, extreme rigidity, and, I think, distinct narrowing of the lumen. This part would just contain the index finger. (Fig. 9.) Microscopically no change was found anywhere in the colon, except the pure hypertrophy of muscle of the lower part. There was one shallow ulcer in the caecum. At one spot in the pelvic colon the wall was ¾ in. in thickness. The hypertrophy subsided at the lower end of the pelvic colon, and the rectum and anus were normal. The narrowed part of the colon was grey, the dilated part was reddish-grey, and the contrast in colour was distinct.

A case which has the same characters was recorded by Sir Frederick Treves:[13]

A girl, aged 6, presented a history of colon defect from birth. "Two days after birth" vomiting began and continued off and on for several days, the bowels ceased to act, and the abdomen became distended, the story bearing an irresistible resemblance to that of Case IX, and of Dodd's and Osler's cases. Aperients had no effect, and relief was ultimately obtained by enemata. Similar attacks recurred at intervals, with increasing constipation and abdominal distension, until a permanent condition of dilatation of the colon was reached. Latterly a motion had only been obtained by passing a rigid tube 10 in. from the anus and then giving an injection. It was found on exploration that the ascending and transverse parts of the colon were nearly normal, though they had evidently been somewhat distended, and still showed some hypertrophy. The descending colon, however, was greatly dilated, while the rectum and sigmoid flexure were represented by a straight, solid-looking tube about the size of an adult forefinger, 8 in. or

9 in. long, with no sacculation, but a very marked longitudinal muscular coat. He excised descending colon, sigmoid flexure, and upper part of rectum, effecting a junction between the left end of the transverse colon and the anus, with a perfect result and complete restoration of health.

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NOTES ON A CASE OF ENTEROSPASM.

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The following case seems to be a typical example of "enterospasm," a disease about which very little is known, and of which I personally knew nothing at all, and failed to identify as a definitely recognized pathological condition at the time of the operation. Dr. Briggs, however, our junior house-surgeon, who saw the operation, said at once "that is the condition recently described in the British Medical Journal," and I find in the number for January 13th, 1906, a very careful and thorough account of a series of similar cases by Dr. Hawkins, of St. Thomas's.

The patient, a strong healthy woman, aged 22, a member of a healthy family well known to me, of active habits but inclined to be stout, first consulted me on March 22nd, 1906.

History.

She had been well and strong and had never ailed anything until about December, 1905. She then began to be a little constipated, not always, but now and then, and to suffer from a feeling of discomfort in the left side of the stomach low down, which at times became actual pain, especially on walking far or fast. The pain did not last long and did not come frequently, sometimes staying away for a week. Early in January she got married, and was then apparently in perfect health. Whilst on her honeymoon at Johannesburg the pain and constipation became more troublesome and she had to take aperients regularly, which she had never done before, and on her return home the constipation continued. On February 1st, a few days after returning to her home, she was suddenly seized with most acute abdominal pain accompanied by a feeling of sickness, but she did not actually vomit. Various domestic remedies were tried to ease the pain, but gave no relief, so the nearest doctor was called in, and he gave a hypodermic of morphine which neither eased the pain nor sent her to sleep. Finding that the bowels had not acted satisfactorily for several days the doctor tried castor oil, cascara, Epsom salts, etc., and used enemas thoroughly, but in spite of all three days passed before the bowels were got to act, and during all this time the patient was in pain, fairly acute but not so acute as it had been at its first onset. After the bowels had acted well the pain passed off. The bowels were then kept open with an aperient containing cascara, nux vomica and magnesium sulphate in rather large doses; this had to be continued until I saw the patient at the end of March, though she was carefully dieted, and her manner of living was properly regulated.

Condition while under Observation.

Examination of the abdomen was difficult on account of tenderness and a queer twitching of the muscles to which I shall refer later, but I failed to find any cause for the constipation, and considered the case to be one of atony of the bowel, though this did not account for the acute attack of pain. I prescribed a pill of aloin, belladonna, and nux vomica to be taken at bedtime. As this had no effect, I ordered in addition three-hourly doses of carcara and magnesium sulphate—1 drachm of each—and this opened the bowels, but not at all freely.

On March 27th, the patient was put under chloroform, and a very careful and thorough examination was made—abdominal, rectal, and vaginal—but nothing to account for the constipation could be found.

On March 29th a mixture containing extract of cascara sagrada liq. (*B.P.*) ♏1, and tincture nux vomica ♏x, was substituted three times a day after food; to this, as it failed to act properly, tincture of belladonna ♏x were added on April 2nd, and a daily enema of glycerine was found necessary on April 4th. On April 6th the belladonna was increased, but had no good result.

All this time there had been a good deal of tenderness and abdominal pain, not localized, worse when the bowels acted, and much worse when the enema was used; and though the bowels could only be got to act once a day, there was frequently a feeling that they were going to act, which had no result, no flatus even being passed, though there was rather severe straining.

The tenderness was curious, in that it was very markedly superficial; if the hand was laid ever so lightly on any part of the abdomen, severe pain was felt at once, and an involuntary wincing or spasm of the abdominal muscles resulted, but this did not happen even on firm pressure over the lower ribs. This light pressure also gave rise to deep pain, but my impression was that the superficial pain was the worst; even when the patient was lying still in bed, this involuntary wincing kept happening without any apparent cause.

Belladonna and opium applications to the abdomen not in any way diminishing this excessive irritability, on April 13th the nux vomica was omitted from the medicine on the supposition that part of the irritability might be due to unusual susceptibility to strychnine, but no improvement in this respect could be noticed.

The glycerine enema now began to lose its effect, and a soap and water enema was used. On two occasions I gave this myself, using a long tube (which, however, only could be got to pass about 4 in.) and a large quantity of water. On the second occasion I used about 4 pints of water, and, though given very slowly, this gave rise to most acute, in fact almost unbearable, pain, accompanied with vomiting; ¼ gr. of morphine was given hypodermically, and was repeated in two hours, but did not seem to ease the pain in the least, which, however, subsided in a few hours.

During all this time the temperature was never raised, and there was never any abdominal distension, though the patient was positive that no flatus passed. Till the last week or so the patient was up and about; but when the large enema had to be used, owing to the failure of the glycerine to act, she had so much pain that she preferred to stay in bed. Finding that her condition was getting worse, that no medicine could be relied on to move the bowels, and that enemas were beginning to lose their effect, I decided, after consultation with Dr. Russell, to explore the abdomen.

My own opinion was that there was partial strangulation by a band, but as there was no history of any of the usual causes of band strangulation, such as peritonitis, tuberculous, general or pelvic, this was at best only a guess.

Operation.

The abdomen was accordingly opened below the umbilicus in the usual way on April 23rd. On introducing the hand something abnormal was felt almost immediately, just to the left of the incision. On bringing this out of the abdomen for examination, it proved to be a piece of small intestine very much narrowed. The narrowed portion was about 7 in. long, and as thick as an ordinary finger, whilst the bowel above and below was the size of three fingers. There was no gradual tapering of the wide into the narrow part, or gradual expansion of the narrow into the wide part again, but at one end of the narrow part the natural-sized bowel abruptly became contracted, and at the other resumed its natural calibre just as abruptly. There was no groove, twist, congestion, or sign of peritonitis to suggest that the bowel had been nipped or strangulated in any way. The narrow part was firmly contracted, felt solid and fleshy, and was much paler than the rest of the bowel. It was to some extent pervious, as flatus could be pressed through it from the adjoining bowel, but about a drachm of soft faecal matter was lodged in the normal bowel just at the beginning of the contracted part, and was evidently unable to pass. Not being satisfied that all the symptoms were due to this contraction alone, the contracted part was covered with warm cloths and kept outside the abdomen while I tried to find some other cause for them, but though I spent ten minutes in very carefully examining the rest of the abdominal contents nothing else could be found. On then removing the cloths to look at the contracted part again, I found, to my intense surprise, that it had resumed its normal size, feel, and appearance, and could only be distinguished from the rest of the bowel by a slight difference in colour. The question how to treat the contracted part having thus solved itself, the bowel was returned into the abdomen and the wound stitched up in layers in the usual way.

The recovery after the operation was uneventful; a simple enema (one pint) was given on April 25th, the second morning after the operation, and, as the bowels acted quite well, it was continued every morning. On the evening of April 30th a pill of aloin, extract of belladonna, extract of nux vomica, blue pill, and capsicum was given, and acted so well that it was repeated every night, and the enema was discontinued. On May 6th the twitching and abdominal tenderness which had been absent since the operation again returned, but in a much milder form, and only lasted a few days. On May 7th the pill was reduced in strength, as it was acting quite well; on May 9th the bowels began to act too freely, and for three or four days acted five times a day, blood and mucus passing with the motion, but by May 14th constipation had again set in. Liquorice powder having no effect, the enema was again used. After experimenting with different aperients for a few days, I found that a half-ounce glycerine enema would act, and this was therefore used each day with a good result.

On May 23rd, acting on Dr. Russell's suggestion, I ordered tincture of belladonna ♏x three times a day after food, and this was increased until by May 30th the dose had reached ♏xx, and the full physiological effect had been obtained. The belladonna seemed to have very little effect, except that it allowed the glycerine enema to be reduced from 4 drachms to 2 drachms. The dose was therefore gradually diminished, and

when the patient left the hospital on June 3rd she was instructed to keep on gradually diminishing the dose to the vanishing point.

On July 30th she reported "I am taking 10 drops of belladonna at night only, but I am not taking any opening medicine as the bowels act twice a day." Later she wrote that the bowels were acting perfectly well without either belladonna or the enema. On October 11th she wrote, "Sometimes I get the old pain down the left side again; last week it was rather bad. The bowels are all right, but I have had to use the glycerine enema four or five times since I wrote to you last."

Two points in Dr. Hawkins's summary of the conclusions to be drawn from his observations bear directly on the present case, namely:

1. "Whether the pain is short and sharp, or long and wearing it is usually situated in the right or left iliac fossa or the immediate neighbourhood."
2. "In both these situations it may lead to the idea that more serious disease is present, as affecting chiefly the appendix, and to a less extent the sigmoid flexure."

In the case here reported the worst pain was in the left fossa, and so the question of appendicitis did not arise, but obstruction by a band or intussusception seemed quite possible. Looking at some of the symptoms with the knowledge of what the condition actually was they do not seem very serious. For instance, there was no loss of weight, though the illness had lasted a considerable time, vomiting was a rare occurrence, fever was absent, appetite was good, tongue clean and moist, and the abdomen practically not at all distended; but when it is remembered that constipation was absolute except when the enema was used, and that even flatus failed to pass, and that latterly pain was constantly present, exploration was manifestly the proper course to adopt.

That mere spasmodic contraction of a part of the bowel can cause these symptoms, shows that a new factor has to enter into our calculations when diagnosing abdominal cases; and if this condition can occur in a strong and healthy young woman in easy circumstances, with no worries and not at all neurotic in the ordinary acceptation of the term, the positive diagnosis of "enterospasm" will always be a difficult matter.

One of the symptoms noted—namely, the extreme strychnine-like irritability of the abdominal muscles and the tendency to spasms of pain either in the muscles or the underlying viscera—seems worthy of special attention. It may perhaps be found, with wider experience, that this symptom is pathognomonic; and, if so, it will be of great value in differentiating enterospasm from other abdominal conditions which it so closely simulates.

SIMPLE COLONIC ADHESIONS A CAUSE OF INTERMITTENT ATTACKS OF ABDOMINAL PAINS.

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A case coming recently under my observation, in which the symptoms appeared to be solely due to some simple adhesions hampering the proper action of the colon, recalled another similar case which I operated upon about four years ago, and the two seemed to me sufficiently interesting to place upon record. In neither case was a correct diagnosis made, nor perhaps could have been made. Indeed, in the one the symptoms seemed typically to suggest chronic appendicitis; in the other, mostly from the age of the patient, the possible existence of early cancer of the large bowel. Both patients were comparatively healthy, and in neither case could any antecedent history satisfactorily ascribe a cause for the condition found at operation.

Case I.

Mrs. H., aged 41, was brought to see me by Dr. Bradford of Carluke. About fourteen years ago she was seized with pain in the right iliac fossa, accompanied with vomiting. Since that time she has had ten or eleven similar attacks, the vomiting rarely occurring in a few days, but the pain and discomfort in the iliac fossa would linger sometimes for weeks. They were usually accompanied with any increase of temperature and were also either very slight or practically absent in the intervals. She had always been constipated, requiring to take aperients, and this condition was more marked during the time of her pain attacks. With the exception of very slight pain on deep pressure there were no physical signs to be elicited by digital examination. The genito-urinary system appeared healthy. She complained sometimes when walking or in moving her right leg that pain was felt in the same region.

Operation.—The abdomen was opened as for an appendix operation. The appendix, however, appeared perfectly healthy as did also the uterus and adnexa. On further searching for a cause some adhesions were encountered about the middle of the ascending colon which doubled the bowel on itself (see Fig. 1) and so attached it deeply that it could not be brought out like the caecum below and the bowel above. On examining more closely the adhesion a small knotty structure existed in the middle of those which bound the limbs of the colon together. The colon itself in the neighbourhood of the adhesions presented no indication of constriction, of ulcer, or of growth, the passage from below upwards appearing perfectly free. The adhesions were divided and an attempt made to straighten out the gut, but it was soon seen that this was prevented by the anterior longitudinal band of muscular fibres which stood up like a tense cord. As there seemed some difficulty about liberating the bowel from its deeper attachments it was left undisturbed and short-circuiting performed by creating a fistula bimucosa between the two limbs of the colon, thus establishing a straight tract between the caecum and the upper portion of the ascending colon. This was effected by suturing.

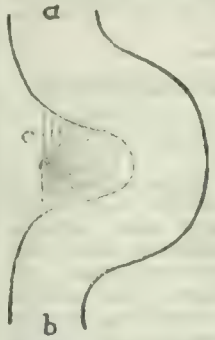


Fig. 1.—*a*, Ascending colon; *b*, caecum; *c*, adhesions binding together two limbs of the colon.

Subsequent microscopic examination of the "knot" showed it to consist merely of what appeared to be a small collection of mesenteric fat.

The special points of interest in this case were two: The contracted condition of the longitudinal muscular band which prevented the bowel straightening out after division of the adhesions, and the attachment of the bowel to the psoas muscle. This latter relationship would seem to explain the cause of the pain when the leg was moved, for every contraction of the muscle would exercise a dragging effect upon the bowel, and so effect a result similar to that evoked by the normal peristaltic movement. The contracted condition of the anterior longitudinal muscle band seemed to suggest that the mischief was of some long standing. For just as one is familiar with the shortening which muscles undergo about chronically contracted joints, so this bent condition of the bowel, by probably old adhesions, had caused the band to become shortened. As an alternative to the operation performed was the transverse division of this muscle, and the execution of coloplasty; but, as the separation of the deep attachments seemed difficult, I thought it advisable to leave the parts in their altered position, and establish a straight course of the canal by a bimucous fistula, colo-colostomy.

Case II.

Miss A., aged 54, I was asked to see by Dr. Alice MacLaren. Her history was that she had suffered from constipation all her life, but more so recently, and had been obliged to take aperients to obtain a movement. Beyond this, her only symptom was more or less pain felt in the course of the descending colon when the bowels were confined. Relief usually followed an evacuation. There was a history of an old injury to the left side, but further than this there was nothing to account for her illness. No history of peritonitis; no tuberculous diathesis. The abdomen was opened in the course of the descending colon. The omentum was discovered attached for a distance of 4 in. along the descending colon, forming a broad band, which held the transverse colon down so that a similar distance of 4 in. existed between these two segments of the bowel (see Fig. 2). This broad membranous attachment was severed and the two portions of the colon freed. The bowel otherwise seemed quite healthy, and no other adhesions were detected in any other part of the abdominal cavity. The patient made an uninterrupted recovery, and now, about four years since her operation, has remained quite well and free from her old pain.


Fig. 2.—*a*, Transverse colon; *b*, descending colon; *c*, omentum, uniting the two portions of the colon.

The special point of interest in this case seems to centre upon the membranous expansion of the great omentum, which was attached to the descending colon. The history of an early injury was almost too indefinite to count as a cause. The extremely regular line of attachment seemed almost to suggest a congenital condition.

Considering the symptoms of these two cases together, it seems as if the pain from which each suffered owed its origin more particularly to the dragging effects produced by the adhesions, which interfered with normal peristaltic action. In both the calibre of the canal was undiminished, so that there was no real cause for obstruction; but, supposing the solid contents of the colon were to some extent inhibited in their progress, the increased peristaltic action thereby evoked, with the consequent additional dragging of the adhesions, would still be sufficient to explain the pain.

SOME OPERATIONS FOR REMOVAL OF MALIGNANT GROWTHS FROM THE NASO-PHARYNX.*

By FREDERIC EVE, F.R.C.S.,
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The surgeon who opens an exhaustive work on operative surgery, and refers to the section on the naso-pharynx and pharynx, becomes lost in a maze of complicated operations, and finds it difficult to select a procedure for any particular case. Many of the operations described are never performed, but are copied from book to book. Other operations for the removal of malignant growths of the naso-pharynx are attended with the great disadvantage that the whole, or the important alveolar portion of the superior maxilla is necessarily sacrificed, although in many cases the operation should really in the first stage be an exploratory one. For it must often happen that a malignant disease of the naso-pharynx when fully exposed proves to be irremovable. It would be tedious, and of little profit, to mention and enter into a detailed criticism of the various procedures indicated. I will therefore at once describe certain operations which were worked out by myself, and which I believe present features of novelty.

On two occasions I have carried out a method of osteoplastic resection of the upper jaw which completely preserves the integrity of the jaw, and at the same time admits of the fullest exposure of the naso-pharynx and upper and back part of the nose. A ligature is placed on the external carotid artery and laryngotomy is performed. An incision resembling Velpeau's is made (Fig. 1, *a*), and

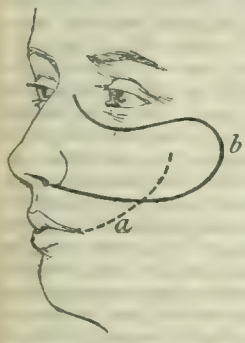


Fig. 1.—*a*, Writer's operation; *b*, Langenbeck's operation.

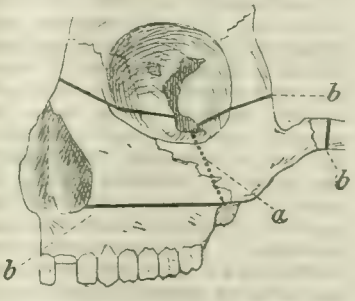


Fig. 2.—*a*, Writer's operation; *b*, Langenbeck's operation.

extends from the angle of the mouth to the lower margin of the malar bone at a point corresponding to the anterior edge of the masseter. The parotid duct is then sought for, traced forward, and separated at its entrance into the mouth by a circular incision through the mucous membrane around its orifice, and is then turned back. The malar bone is divided by introducing a Gigli saw through the spheno-maxillary fissure. (See Fig. 2, *a*.) This is done by passing an aneurysm needle loaded with silk through the upper angle of the incision, above the orbital margin, and then downwards through the fissure so that it protrudes below the malar bone. The silk is caught, and by its means the saw is drawn through the fissure. The muco-periosteum of the hard palate having been divided in the median line the hard palate and alveolus are also severed by a Gigli saw, which has been drawn through from the mouth by an aneurysm needle passed along the inferior meatus and through a puncture at the junction of the hard and soft palates. The soft palate is severed from the hard, from the middle line as far as the posterior margin of the alveolus. A broad and blunt chisel is then driven horizontally between the tuberosity of the upper jaw and the pterygoid processes. By pressing the handle backwards the upper jaw is levered out of its bed and turned upwards and forwards. As the skin incision is only carried as high as the lower level of the malar bone, the fibres of the facial nerve going to the orbicularis oculi are not divided. After removal of the growth the maxilla is replaced and the severed edges of the malar bone united by a wire suture. A piece of thin silver wire may also be passed round the incisor teeth on each side of the incision through the alveolar process anteriorly. The incision between the hard and soft palates and the two halves of muco-periosteum of the hard palate are sutured. The end of the parotid duct is thrust into the mouth and secured in position by a point of catgut suture. Finally the skin incision is closed.

I performed this operation first in October, 1904, on a gentleman aged 48, who was sent to me by Mr. Mark Hovell. During the four previous years he had had polypi removed from the left nostril. There was a growth springing from the roof of the naso pharynx and involving the posterior end of the vomer; the left nostril was blocked with growth, inspissated pus and one small polypus. A portion of the growth from the naso-pharynx, removed for microscopic examination, proved to be a small round-celled or lympho-sarcoma. After preliminary ligature of the external carotid artery and laryngotomy, the muco-periosteum of the upper jaw was incised along the inner sides of the teeth on the left side and reflected towards the middle line, as it seemed not improbable that the upper jaw would have to be sacrificed. The steps of the operation were then carried out as above detailed. The growth was found to involve the roof of the naso-pharynx, the base of the vomer and the posterior part of the floor of the left inferior meatus. At the end of the operation the patient was suffering profoundly from shock, and in spite of intravenous injection of saline and other remedies usually employed, died about three hours after. The next opportunity for performing this operation did not occur until October of last year and was completely successful.

Edward W., aged 15, was admitted to hospital in January, 1906, complaining of blockage of the left nostril and purulent discharge from it of four months' duration. The naso-pharynx was filled with a firm adherent mass, which projected into the back of the left inferior meatus, so that it could be seen from the anterior meatus. The soft palate was depressed, the nose broadened, and the cheek swollen. I proposed to excise the left maxilla and remove the growth. On February 9th I proceeded to tie the left external carotid, but found so many enlarged glands that I thought the case not sufficiently hopeful to warrant me in persevering. I, however, put a ligature on the external carotid with a view of checking the growth of the tumour, and removed the glands.

The patient was readmitted to hospital on September 26th for severe haemorrhage from the nose, which threatened his life. The growth had so much diminished in size that I thought it would be justifiable to attempt its removal. A preliminary laryngotomy was performed. Then the upper jaw was turned forward in the manner above described. The tumour was found to spring from the back part of the naso-pharynx opposite the atlas and axis, and from the basi-sphenoid. Its base was firmly adherent, and it projected forward as a tongue-shaped mass into the left inferior meatus. A rounded mass an inch in diameter occupied the sphenoidal sinus. The tuberosity of the superior maxilla was also invaded. The growth was removed freely without haemorrhage, and the thermo-cautery was applied to the seat of origin. The tuberosity of the superior maxilla was cut away with bone forceps. The upper jaw was then replaced. The later stages of the operation had to be hurried, as the patient was suffering extremely from shock. He made a good recovery, and the jaw is now in good position and quite firmly fixed. (Patient shown.) The power of closing the eye is not impaired, there is no diplopia, and no parotid fistula. I examined his naso-pharynx at the end of January, and found no recurrence. Microscopically the growth was a fibro-sarcoma.

* Read at the Medical Society, February 25th, 1907.

Those who saw this operation expressed surprise at the very free access given to the naso-pharynx and back part and roof of the nose. The extreme shock attending these operations was probably largely contributed to by removal of structures from the base of the skull.

Its obvious disadvantages are, in the first place, that the scar is on the cheek, although it is not a long one; secondly, that some fibres of the facial nerve going to the lower part of the face and angle of the mouth are divided; but these must be put against the alternative of excision of the upper jaw. Lastly, there is some difficulty in dealing with the parotid duct.

Since writing the above, I have carried out on the cadaver an operation of osteoplastic resection of the maxilla which has none of these disadvantages. The operation is much the same as for removal of the maxilla in the ordinary way. The vertical or Fergusson's incision is employed, the horizontal limb being carried as far outwards as the spheno-maxillary fissure. The level of this incision at its outer extremity should not be higher than ¼ in. above the lower margin of the malar bone, or the fibres of the facial nerve to the orbicularis may be divided. The malar bone and the hard palate are divided with a Gigli saw as in the first operation described, and the nasal process with bone forceps. The soft palate is severed from the hard; finally the mouth is opened, and a chisel is driven vertically upwards between the tuberosity of the jaw and the pterygoid processes. With an elevator passed between the cut surfaces of the hard palate, the maxilla is forced outwards and turned outwards on the hinge formed by the soft parts of the cheek. After removal of the growth the maxilla is replaced, and a style passed down the lacrymal duct to preserve its continuity. No important structure has been damaged.

It may be noted that in both the above operations the orbital plate is not severed from the body of the bone, but the periosteum is carefully raised from the floor of the orbit. I have found that the maxilla can be turned more cleanly from its bed if the continuity of the orbital plate is undisturbed. The external carotid artery having been tied in both my cases, there was very little haemorrhage. The first method of osteoplastic resection of the maxilla gives, if anything, the freest exposure of the naso-pharynx.

For extensive malignant growths of the naso-pharynx many procedures have been adopted. Cheyne recommends removal of the upper jaw, the floor of the orbit and the muco-periosteum of the hard palate being preserved. This of course gives plenty of room, but involves the loss of the maxilla. Annandale divides the alveolar process and palatal portions of the upper jaw along the median line from before backwards, severs the bony septum, and then forces the two maxillae asunder. This operation gives so little space that it is quite useless for the removal of any extensive growth. Langenbeck introduced a method of osteoplastic resection of the upper jaw by making two horizontal cuts through the bone. The lower cut passes horizontally through the upper jaw above the alveolar process; the upper cut passes through the frontal process of the malar bone as far as the spheno-maxilla fissure, and then on through the orbital plate and nasal process. The zygoma is also divided (see Fig. 2, *b*, *b*, *b*). The skin incision, in the form of a flap with its base towards the nose, corresponds with the osseous incision (see Fig. 1, *a*). By means of an elevator inserted under the malar bone the portion of the upper jaw outlined by the saw cuts is turned forwards towards the middle line, and, after removal of the growth, replaced. This method gives access only to the upper part of the naso-pharynx by a small window, is difficult to perform, and the scar very unsightly.

I consider Nélaton's operation a good procedure for the removal of limited growths on the roof of the naso-pharynx, and performed it in the following case: A gentleman, aged 45, was seen by Mr Mark Hovell for deafness. A large mass of tissue was found in the upper part of the naso-pharynx which on microscopic examination proved to be a lympho-sarcoma. Preliminary laryngotomy having been done, the soft palate and the posterior half of the hard palate were split along the middle line, the latter reflected from the bone, and a longitudinal opening was made through the posterior half of the bony palate with chisel and bone-cutting forceps. The growth could then be seen with the head lamp. It was freely removed with scissors and punch forceps. Its base and the surrounding tissues were destroyed with the thermo-cautery. The edges of the hard and soft palates were then united by sutures. The operation was performed in June, 1905, and the patient is now free from recurrence.

Such operations as Chalot's and Guérin's, also Kocher's method of temporary resection of the whole alveolar arch, may be relegated to the obscurity of the past.

[Mr. Eve then made some observations on removal of malignant disease of the tonsil. He favoured excision by an external incision in all but the earliest cases, otherwise infected tissue between the tonsil and the glands was not removed. He had excised the tonsil for epithelioma 6 times, with 1 death—4 times by Mikulicz's method and once through the mouth by splitting the cheek; on the last occasion he had carried Mikulicz's incision well forwards beneath the jaw, and found that a free exposure of the pharynx could be obtained by this means without resecting the vertical ramus. The latter procedure was sometimes followed by difficulty in opening the jaw, although it was claimed by some writers that resection of the ramus prevented this sequel. For some years he had performed preliminary laryngotomy, ligature of the external carotid, and removal of the lymphatic glands as a necessary part of all procedures for removal of malignant growths of the regions under consideration. During the last two or three years he had removed the tonsil or soft palate or both together for extensive malignant disease, after preliminary laryngotomy and ligature of the external carotid, in 6 cases with 1 death.]

TRYPSIN IN CANCER: A PRELIMINARY STATEMENT.

By WILLIAM SEAMAN BAINBRIDGE, A.M., M.D.,
NEW YORK.

Huxley has aptly said, "The man of science has learned to believe in justification, not by faith, but by verification." Until such time as verification is complete, the scientific attitude must ever be that of "suspended judgement." "Prove all things, hold fast that which is good," is the tentative watchword of every seeker after truth in whatsoever department of human endeavour he may be labouring. Over-enthusiasm and premature conclusions have always been a menace to scientific investigation, bringing in their wake as much harm, at times, as wilful misrepresentation; the pitiable part of it all being that it reacts upon the unfortunate ones whose sufferings it is our earnest aim to prevent or to alleviate.

The world to-day is watching, with keener interest than ever before, the warfare that is being waged against malignant disease. Thousands of cancer victims are listening with bated breath for the slightest word of hope of amelioration or cure by other means than surgery. How many times in the past, alas, have they been disappointed—the new agent apparently so full of hope has proved a mirage! Despite these many disappointments each new remedy which seems to offer reasonable hope of benefit, without doing harm, should, in suitable inoperable cases, be tried by those who are competent in this field of research. Whatever laboratory experimentation may be necessary in the development of a given method of treatment, in its last analysis the new remedy must be applied to the human being for the final test of its efficacy. In the treatment of cancer ample opportunity is afforded for such test with cases which are no longer amenable to surgical interference; but it should always be borne in mind that between the starting-point, "no evidence," and the hoped for goal, "a cure," there may be many way stations of usefulness.

For some months the pancreatic enzymes in the treatment of cancer have engaged the attention of the medical press, and both here and abroad systematic efforts are being made to determine whether the so called trypsin treatment shall rest at the initial stage of the journey, be advanced to some one of the way stations, or be carried in triumph to the final oft promised land of cure. Dr. Beard, the originator of the method, has made it plain that it is his great desire to have his treatment thoroughly tested, along the exact lines which he himself has laid down, and that he is willing to abide by the consequences.

From May to September, 1906, I employed trypsin in a few cases according to the plan reported in the medical journals. The results were unsatisfactory. Further knowledge on the subject has shown me that in my first efforts I omitted many of the essential details, and that the treatment was not applied in strict accordance with the theory upon which it is based. However, after visiting Dr. Beard in September, 1906, and making myself thoroughly conversant with all the details of the method, I determined to begin *de novo*, and to give the treatment a scientific trial, which would determine absolutely whether it is to be thrown into the junk-heap of cast-off "cancer cures" along with Doyen's serum, Schmidt's serum, Morton's "liquid sunshine," and the rest, or be elevated to a place of distinct usefulness.

Needless it is to say that a few months' trial in a limited number of selected cases cannot suffice to for ever settle the claims of any method of treatment for cancer, with its ever-dangling sword of Damocles, *metastasis*, to shadow our hopes of ultimate cure. In justice to the earnest, truth-seeking element of the profession both here and abroad, in justice to cancer sufferers the world over, in justice to Dr. Beard, and lastly to myself, I find it necessary to write as I do now, in advance of further definite information. To remain silent longer would tacitly give assent, on my part, to much that is misleading. My name has been mentioned repeatedly, and without my will, in the lay press as well as in medical journals on both sides of the Atlantic, in connexion with a reported case claimed to be "a remarkable one clinically, on account of the decisive action of trypsin upon the cancer, and pathologically on account of the opportunity which the operation [performed by me] presented of making a microscopic examination of the actual changes produced by trypsin in cancerous tissue."

The case referred to is No. 1 in Dr. Morton's article, Trypsin for the Cure of Cancer, published in the *Medical Record*, December 8th, 1906, of which he says, "A most remarkable atrophy of an entire cancerous breast ensued," and in his summary, "A remarkable process of retrogression by degeneration and atrophy of a carcinomatous breast gland to final and curative obliteration has been microscopically demonstrated."

Dr. Morton's report, which was published in advance of a thorough study of the entire tumour mass, and against my most emphatic advice, was immediately commented upon widely by the secular press, and a marvellous new "cancer cure" was heralded to the world. Dr. Saleeby, a well-known writer on medical and scientific subjects, became over-enthusiastic in his articles in the *Pall Mall Gazette* of December 10th, 1906, and in *Harper's Weekly* of January 19th, 1907. In the latter paper Dr. Saleeby says:

> The first case of Professor Morton's is the most valuable, because of the completeness of the demonstration. In no other case in America has it been possible to examine, under the microscope, the results of the treatment of a tumour by trypsin.

All this is most unfortunate, since the facts, at least as they pertain to Case 1 (upon which greatest importance seems to be laid by Dr. Morton and those who have commented upon his report), do not warrant the slightest enthusiasm as regards cure.

While this case is full of disappointment, it presents certain features which give sufficient ground for further careful trial of the pancreatic treatment. Many other cases now under treatment at the New York Skin and Cancer Hospital and elsewhere encourage us to go forward in the hope that a valuable agency may be within our reach.

Let it be understood that the present communication is in no respect a report on trypsin. The writer, as has been stated, has been giving the treatment a trial since October, 1906, by means of the enzymes, trypsin and amylopsin, with the adjuvant remedies and the dietetic and hygienic regulations advised by Dr. Beard, but it will be many months before the detailed reports of these experiments will be published in full. In the meantime I wish to give the facts in the case mentioned in order to warn against premature conclusions, and the arousing thereby of false hopes in the minds of cancer victims.

Summary of History.—The patient, K. H., first noticed a lump the size of a small marble in the outer quadrant of the left breast in October, 1903. I saw her at this time in consultation with Dr. E. W. Peet, of New York, to whom I am indebted for careful notes on the subsequent history of the case. Indistinct history of cancer on both sides of family. Sister died of multiple sarcomata. Operation was advised but refused. The growth, which measured 1½ in. ¾ in., increased slightly in size, until removed by Dr. Peet in 1904 (operation No. 1). Radical operation was positively refused. Wound healed by primary union. Convalescence uneventful. The diagnosis of beginning carcinoma was verified by the independent microscopic examination of the tumour by two reputable pathologists.

In the late spring of 1905 a secondary growth appeared in the breast, to the inner side of the site of the first. By the end of June enlarged axillary glands could be made out. Radical operation was again advised and absolutely refused. The patient subsequently consulted Dr. Morton, who, according to his report of the case, gave her thirty-two *x*-ray treatments. Eight months later she again consulted him, at which time he instituted the trypsin treatment, beginning with 5 minims and increasing to 10 minims, the injections being given three times a week (see Dr. Morton's article, to which reference has been made).

On October 9th, 1906, the patient consulted me with reference to operation. Condition at this time was as follows: Typical large scirrhous carcinoma of the left breast, with considerable ulceration around the nipple, enlargements of the lymph nodes well up into the axilla, a certain amount of contraction of the skin, and in spots secondary skin deposits for a short distance around the main mass.

From October 9th to November 3rd, 1906, there had been a distinct increase in the ulceration and in the axillary involvement. The patient complained of increased pain. No treatment was given during this interval.

With the full concurrence of the physicians with whom K. H. had been in professional relations, and with a perfect understanding on the part of the patient and family of the gravity of the case, I operated, November 3rd, 1906, assisted by Dr. Peet.

Operation 2.—The entire breast, with the skin, was excised down to the posterior axillary line, with the removal of both pectoral muscles and the entire lymphatic and connective tissue content of the axilla, up into Mohrenheim's space, as high as could be reached. Even the periosteum covering the ribs directly under the seat of the most marked ulceration was removed. The diseased structures were exsected from the middle line of the chest to the posterior axillary line. Skin flaps from the right and left half of the abdomen and the left side of the back were brought over the denuded surface, which was completely covered, with the exception of a space about 2 in. square in the centre. The sutured wounds united by primary union and the uncovered area gradually healed by granulation.

Shortly after the operation nodules of lymphatic metastasis appeared in the neck posterior to the sterno-cleido-mastoid muscle, and a number of small nodules developed in the skin at the upper part of the wound. This proved conclusively that the malignant process was still active and that the trypsin treatment given by Dr. Morton was inadequate to stop its progress. Realizing this, I commenced the treatment with much larger injections than he had used, and of a double-strength solution which was especially made by Messrs. Fairchild Brothers and Foster. Whether it was coincidental or not, it is interesting to note that no new nodules were observed from the time the patient received full dosage of trypsin to the time of my second operation, nor did those already present materially increase in size.

On November 27th (the twenty-fourth day after the radical operation) the local, dietetic, and hygienic regulations recommended by Dr. Beard were instituted. On November 28th daily injections of trypsin were begun. Fifteen minims of the double strength were injected into the deeper subcutaneous tissues over the buttocks. This dosage was increased to 20 minims and kept at that limit, with the exception of one injection of 25 minims. On December 24th (the twenty-eighth day of trypsin treatment) injections of amylopsin (20 minims) were begun. For the next twenty-eight days trypsin and amylopsin were injected alternately.

Operation 3.—On January 22nd, 1907, assisted by Dr. E. M. Foote, I removed the enlarged nodules and secondary deposits in the skin, to which I have referred. These were immediately placed in jars, which were sealed and sent by special messenger to different pathologists of standing, some of whom were told that *x* ray and trypsin had been used, while to others was given no such information. Their reports are appended.

The wounds healed promptly by primary union. The trypsin treatment was temporarily suspended on account

of it is operation, but has been resumed, with certain modifications.

Before giving the pathological reports concerning the tumour mass and the metastatic growths subsequently removed, I think it but just to say a word concerning the report given to Dr. Morton by Dr. Brooks, pathologist to the New York Post-Graduate Medical School and Hospital. Dr. Morton, who was present at the operation of November 3rd, 1906, asked the privilege of taking a small section of the tumour mass for study. This courtesy was granted, and he himself cut from the tumour a piece from near the nipple. This, it would appear, was given to Dr. Brooks for microscopic study, and upon his report, and upon this alone, Dr. Morton and others have based their conclusions as to the value of trypsin "for the cure of cancer" in this case. So sanguine did Dr. Morton seem to be that he sent microscopic sections from the case to Europe for confirmation of his claims (according to Dr. Saleeby, *Harper's Weekly*, January 19th, 1907). Attaching so much importance to the microscopic findings from so small a section taken from the centre of the tumour, is manifestly unfair to Dr. Brooks, for, as we all know, the entire periphery of a tumour should be studied when it is wished to determine whether the malignant process is still active. The opening sentence of Dr. Brooks's report says that by far the greater portion of the specimen was composed of extremely dense fibrous connective tissue, "strongly resembling the fibrous connective tissue change noted in breast tumours subjected to *x* ray." This connective tissue, he continues, encroached upon the carcinomatous (epithelial) elements, which were scantily present and which were undergoing necrosis. Dr. Brooks says:

The great density of the tissue throughout and the decided degenerative changes in the epithelial cells gave the impression that atrophy of the carcinoma elements had occurred, and been followed by great contraction and condensation of the fibrous connective tissue stroma.

This change, as is well known, and as Dr. Brooks himself suggests, is not at all incompatible with what occurs in scirrhous cancer which has been subjected to *x*-ray treatment. Inasmuch as the section which he examined was but a fragment of the tumour, and the findings nothing more than could be accounted for by the use of the *x* ray, and since the portion examined was not taken from the periphery of the tumour, where proliferation of the malignant process should certainly be looked for, the report carries absolutely none of the weight which Dr. Morton and others have read into it. Dr. Morton says further:

Dr. Brooks assures me that, had the process outlined in his report continued, the result would have been such marked condensation of the fibrous connective tissue as to have made it very difficult to determine the carcinomatous nature of the growth.

The fact that this "process" did not continue, as will be shown hereafter, still further nullifies such hasty pathological conclusions. Dr. Morton, however, with clairvoyant vision, gives a further "reading" in these words:

In fact, the tumour at the time of operation was progressing to a point where its pathological nature would be considered simply as scar tissue. The reality of this process would have been a carcinomatous breast involving inclusively its skin envelope which had entirely disappeared, which had become, in short, *absolutely cured*.

(The italics are my own.)

The pathological reports which follow are quoted verbatim and in full.

REPORTS ON TUMOUR MASS REMOVED NOVEMBER 3RD, 1906.

1. Dr. F. B. Mallory, Associate Professor of Pathology, Harvard Medical School:

Your section shows a typical, rather rapidly growing carcinoma of the breast. It contains a good deal of fibrous tissue stroma, but of the diffuse type, but occasional mitotic figures are present. The deeper parts where the tumour is infiltrating muscle and fat tissue show nothing unusual. In other parts of the tumour however nearer the skin surface, there are extensive areas of necrosis involving tumour cells and stroma, likewise where the stroma of connective tissue is very abundant and the tumour cells very few in number (irritative retentive areas) in which the tumour cells present marked evidence of degeneration. The epithelial cells are large and have large round or oval, or often lobulated nuclei. Still other cells are frequently found in which many nuclei are present, formed by direct division. This process is analogous to that which occurs in the epithelial cells lining the pharynx in the early stages of diphtheria, also in the skin after repeated freezings. These three degenerative processes would indicate some destructive process, but whether they are due to the *x* rays or to trypsin I am unable to say. I should favour the former.

2. Dr. F. S. Mandelbaum, Pathologist to Mount Sinai Hospital:

I have made sections from four different parts of the breast tumour that you sent me. In each of these I find fibrocarcinoma present. There are a good many places where the tumour cells are degenerated and stain very poorly, and it is natural to assume that in such places the process is quiescent, probably due to the various methods of treatment that have been employed. But in other situations, notably at the periphery, many nests of carcinoma cells are seen growing quite actively and infiltrating between the muscle fibres. In such situations quite a number of mitotic cells are seen, showing beyond question that the tumour growth is still active. The tumour cells in these places show no degenerative changes, and stain in the usual manner.

3. Dr. Martha Wollstein, Pathologist to the New York Skin and Cancer Hospital, and Fellow of the Rockefeller Institute:

The specimen as a whole takes the stains badly, and this prevents a positive opinion as to the condition of the individual cells. Many of the cells are in good condition, however, especially at the periphery, where columns of them are extending into the lymph spaces. There is marked inflammatory reaction in some places; in others the alveolar contents have disappeared, but whether this occurred before or after the removal of the breast cannot be determined. The stroma is quite dense in some places, but on the whole it has the typical appearance of a scirrhous carcinoma.

REPORTS ON METASTATIC GROWTHS REMOVED JANUARY 22ND, 1907.

1. Dr. James Ewing, Professor of Pathology, Cornell University Medical College:

Material received consisted of one piece of skin and a nodule 2 × 1 × 1 cm. apparently of subcutaneous tissue. Both specimens contain a diffuse growth of highly malignant tubular carcinoma. The large nodule consists of fat tissue, connective tissue, and one small lymph nodule, all of which are thickly infiltrated by the tumour. In the lymph nodule the carcinomatous growth is diffuse and little of the node remains. The pericapsular lymphatics and several large veins are plugged by solid masses of tumour cells. A considerable increase of fibrous connective tissue accompanies the tumour process. In the skin there are several minute and one larger metastatic nodule, and in some foci only a few isolated tumour cells appear. In these metastases the tumour cells first appear in small isolated groups which increase in size, until, as in the largest nodules, the cords are of considerable thickness, or the growth is almost diffuse. In all portions examined the cells retain the characters of large polygonal epithelia. The characters of the cells, their arrangement, invasion of blood vessels, and numerous mitotic figures, indicate active growth and a high grade of malignancy. A moderate degree of hydropic and fatty degeneration is present in many of the cells of the cutaneous nodules, but in the main subcutaneous tumour and in the lymph node, degenerative changes are very slight or entirely missing. Mitotic figures are abundant in all parts of the tumour. In this case, therefore, there is no indication that the trypsin treatment has exerted any definite influence on the tumour cells. The degenerative changes seen in some portions are commonly present in some portions of all carcinomata.

2. Dr. Wollstein:

Skin epidermis normal. In the subcutaneous tissue there are some smaller and larger columns of epithelial cells which have penetrated the lymph spaces, and evidently show spreading of the carcinomatous process from below. *Lymph nodes* show marked metastases of carcinoma. Only a small amount of adenoid tissue remains.

3. Dr. Mandelbaum:

I have examined the two specimens. The one, supposed to be a gland from the neck, does not show any glandular tissue, but it is entirely infiltrated by carcinoma cells, which are active and do not show any degenerative changes whatever. I look upon this as a metastatic nodule in the superficial muscles. The other specimen shows carcinoma cells, rapidly growing, in the upper layers of the corium, and also extending downwards into the deeper layers of the skin and subcutaneous fat. These cells, likewise, show no evidence of degeneration.

4. Dr. E. M. Jeffries, Director of the Pathological Laboratory of the New York Polyclinic Medical School:

To begin with cancer invades all the tissues received—the skin from cicatrix of previous operation and the tissue from present operation. It is of the *carcinoma malle* type, and, by the abundant karyokinesis, appears to be in a very active state. In fact, it exhibits most extreme malignant characteristics, even the extreme of invading the arteries and veins where

emboli appear to have lodged; and in two such instances I find in my sections that these same emboli have penetrated the endothelium, and dissected the muscular coats of the vessels.

I am wholly unable to appreciate any effects which might be attributed to the treatments to which you say the growth has been submitted, except in the more superficial alveoli of the portion of the skin from old scar, where I recognize the effect of the *x*-ray treatment in a contraction of the alveoli, together with a general atrophic condition, affecting all superficial structures save epidermis, which appears to be entirely normal. The groups of cancer cells in this locality appear to have become markedly shrunken; they fail to react properly to the nuclear and protoplasmic stains, and there is consequently very little differentiation. It exhibits practically no karyokinesis.

The foregoing history, embracing the pathological reports, will, I believe, convince all who may be interested that in the study of cancer, more perhaps than in any other field of research to-day, is there need for "suspended judgement," for "the cultivation of that enthusiasm for truth, that fanaticism of veracity," which should be brought to bear on all questions involving human life.

Whether we accept or reject the theory upon which it is based, let the "trypsin treatment" receive the scientific test; while it is being tested, let there be suspended judgement. When the evidence is correlated and the final verdict rendered, if favourable, let it be accepted; if adverse—then on to the next.

INFLUENZA COMMENCING WITH SUDDEN UNCONSCIOUSNESS, AND EXCESSIVE DYSPNOEA.

By WILFRED HARRIS, M.D., F.R.C.P.,

PHYSICIAN TO OUT-PATIENTS, ST. MARY'S HOSPITAL, AND TO THE HOSPITAL FOR EPILEPSY AND PARALYSIS, MAIDA VALE.

The following account of an unusual case will, I think, be both interesting and instructive from the point of view of diagnosis, and on account of the recent renewal of severity of the scourge of influenza.

A. G., a plasterer, aged 38, was admitted into St. Mary's Hospital in the morning of December 6th in a semi-conscious condition. From the account given by his mates who brought him, and from what he was afterwards able to remember himself, it appears that he was in his usual health when he went to work that morning, and while he was at work he commenced to feel giddy. This lasted for perhaps ten minutes, when he fell down suddenly unconscious. He was slightly convulsed at first, and his fellow-workmen left him on the ground, thinking that he would soon come round. He recovered sufficiently in about twenty minutes to be able to speak, and he was then brought up in a cab to the hospital. He says now that at the time he felt able to walk up, but judging from his condition on admission, that is more than doubtful.

State on Admission.—After being put to bed, he was found to be lying in a semi-conscious condition, just able to answer questions, though very slowly. His temperature was 101° F., the pulse 88, and his respirations 76 per minute and slightly stertorous. The pupils were contracted and equal, and reacted to light. There were no signs of any weakness of the limbs, but his legs seemed somewhat rigid, and the knee-jerks were brisk; the plantar reflexes were flexor, the urine normal, tongue coated, and bowels constipated. He complained of pain in his head, and there was also occasional coughing, which increased the headache, as when he coughed he put his hand across his forehead. On the evening of admission the temperature ran up to 102.4° F., though the pulse fell to 72 and the respirations to 24 per minute. At 2 o'clock the next afternoon, when I saw him for the first time, the temperature had fallen to 99.6° F., but the respirations were again very frequent—60 per minute, while the pulse-rate was only 56, strong, and of full volume. He was now fully conscious, but was still slow in answering questions. He complained of severe frontal headache and of pain in his back in the lumbar region, and he was able to tell us that he had had two similar attacks, one four years and the other fifteen years previously. Examination of the chest showed him to be perspiring freely; both sides of the chest moved well, but on percussion the note over the whole of the right front was distinctly high-pitched, and there were numerous sticky râles to be heard over the right upper lobe. The arteries were somewhat thick-walled and hard, but the urine was of good specific gravity, and contained no albumen. The optic discs and retinae were normal, and examination of the nervous system showed no abnormal physical signs.

The several diagnoses that were at once suggested as possibilities were—epilepsy, cerebral haemorrhage or thrombosis, cerebral tumour, uraemia, and pneumonia. Epilepsy seemed possible on account of the sudden onset of unconsciousness, followed by slight convulsion, and this diagnosis was rendered more probable by the history of two similar attacks previously. However, the dyspnoea, the râles in the chest, and the pyrexia excluded this diagnosis. Apoplexy and cerebral tumour, too, were similarly excluded. Uraemia at first seemed possible, because of the definite arterio-sclerosis present, and the dyspnoea might have been the air-hunger of uraemia, while pyrexia is not uncommon with uraemic convulsions. The breath did not suggest uraemia, though its odour was heavy, and the high specific gravity of the urine, with absence of albumen, excluded this diagnosis too. Pneumonia seemed, perhaps, the most likely of all the above-mentioned possibilities, accounting for the pyrexia, dyspnoea, high-pitched percussion note, and the râles. The dyspnoea was, however, excessive for pneumonia, and the pulse-rate disproportionately slow. Although it is well known that in pneumonia the pulse-respiration ratio is altered from the normal 1 : 4½ to 1 : 2 or even less, I have never known such a disproportionate ratio as was present in this case of 88 : 76 on admission, and when I first saw him on the next day the pulse-rate was even slower than the respirations, being 56 : 60. Such an excessive frequency of the respirations is met with only in asthma, hysterical dyspnoea, or in air-hunger of uraemia, or acid intoxications, as in diabetes or salicylate poisoning. Moreover, although lobar pneumonia may be ushered in with a convulsion in a young child, especially one with a family neuropathic tendency, I do not know of such a commencement of the disease in an adult.

Neither of these possible diagnoses, therefore, seemed to fit the case, and one sign seemed to me particularly suggestive of influenza—namely, the slow pulse, only 56 when I first saw him, though the temperature was then 99.6° F. Looking at the case from this point of view, the other symptoms—the frontal headache and lumbar pain, pyrexia, sticky râles, and cough—all clearly pointed to this disease. Only the curious mode of onset with sudden unconsciousness remained to be explained, but, being familiar with the literature of the disease, particularly of the epidemic of the early nineties, I was aware of several cases having been recorded which started suddenly in this way. The after-course of my case proved this diagnosis to be correct. He was put on an effervescing quinine mixture every four hours; the frontal headache and the backache improved much on the third day, and his temperature, which reached its highest point of 102.8° F. on the third night, fell to normal during the early hours of the fifth day, and he rapidly became convalescent. The high-pitched percussion note and the râles over the right front of the chest disappeared on the third day, and no further signs of pneumonia developed, but that he had an abortive form of pneumonia, of influenzal origin, I have no doubt. We learnt later that the two previous seizures with sudden unconsciousness that he had had, four years and fifteen years ago, ushered in precisely similar attacks of influenza to this illness, being followed on each occasion by fever, severe headache, pains, and bronchitis which was afterwards recognized to be due to influenza. It will be noted that his first attack occurred in 1891, in the comparatively early days of the last invasion of this country with influenza.

TWO CASES OF CYSTINE CALCULI.

By F. A. SOUTHAM, M.B.Oxon., F.R.C.S.Eng.,

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Cystine calculi are of such rare occurrence that a brief account of two cases—one vesical, the other renal—which were recently under my care at the same time in the Manchester Royal Infirmary, may prove of interest.

In a series of 140 cases of vesical calculi which I have removed by operation, Case I, recorded below, is the only instance met with where the calculus has consisted of cystine.

In the British Medical Journal of July 13th, 1878 I recorded details of 4 cases of vesical calculi consisting of cystine, which were operated upon by my father (who was surgeon to the Manchester Royal Infirmary, and Professor of Surgery at Owens College). Of these, 2 occurred in private and 2 in hospital practice.

The last case of the series, which is fully recorded in

the British Medical Journal of December 23rd, 1876, was operated upon in the Manchester Royal Infirmary in 1874, and since that date—as far as I have been able to ascertain—only 2 cases of cystine calculi have been met with in the hospital, one under the care of Mr. Walter Whitehead about twenty years ago, and the other under the late Professor Jones in 1892.

An interesting point in connexion with the latter case, as illustrating the hereditary character of cystine, is the fact that the patient, an unmarried female, aged 20 years, was the daughter of one of the four patients (also a female) operated upon by my father 24 years previously. She was admitted suffering from renal symptoms, and nephrolithotomy was performed by Professor Jones, a small cystine calculus being successfully removed from the left kidney.

I have recently had an opportunity of examining a specimen of the urine of this patient, and find that at the present time (14 years after the operation) it still contains crystals of cystine in small quantity.

It is interesting to note, as illustrating the persistence of cystinuria, that an examination of the urine of her mother, eight years after the operation for the removal of the calculus from her bladder, also showed that cystine was still present. This patient had no further urinary trouble, and recently died of paralysis (34 years after the operation), at the age of 67.

The following are the details of the two cases recently under my care:

Case I.

Cystine Calculus Removed by Suprapubic Lithotomy.

W. S., aged 32, was admitted October 17th, 1906, with the following history: Seven years previously he was suddenly seized with severe pain in the left lumbar region, and shortly afterwards he passed, per urethram, a small calculus, which was not preserved. Fifteen months ago he suffered from a similar attack of renal colic. He was then free from any symptoms until about two months previous to admission, when he began to be troubled with pain and increased frequency in micturition, and occasional sudden stoppage in the flow of urine. Blood had not been noticed in the urine, which was clear and acid, containing a trace of albumen. On sounding the bladder a calculus of large size was readily felt. Suprapubic lithotomy was accordingly performed, and the patient made a good recovery from the operation. The calculus, which is roughly pear-shaped, measuring 1¼in. by 1¼in., consists of cystine and is of a pale yellow colour, with an irregular crystalline surface (Fig. 1). Examination of the urine subsequent to the operation showed that crystals of cystine were present on some days while on other days none could be detected. No further calculi in any other member of the family could be obtained.

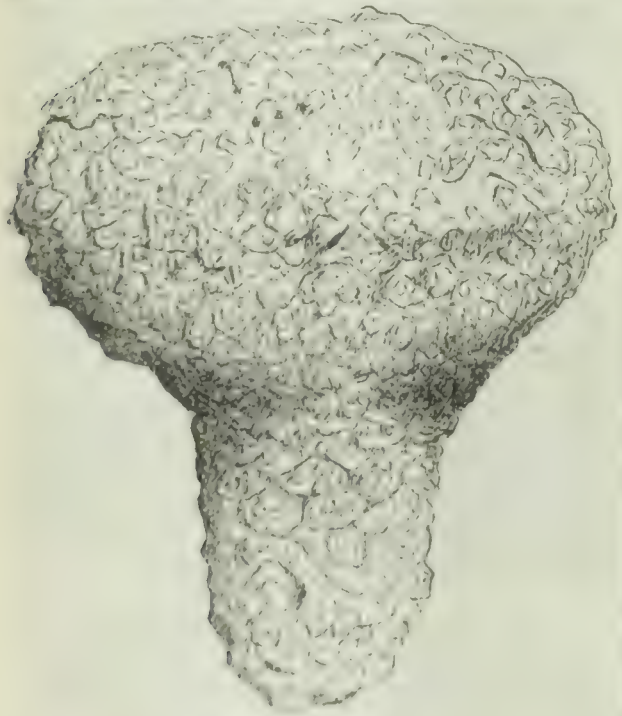


Fig. 1.—× 1 in.

Case II.

Cystine Calculus Passed per Urethram.

C. W., 22, single, was admitted October 19th, 1906, with the following history: For about six months she had suffered from frequent attacks of pain, which commenced in the region of the left kidney, and extended across the abdomen and downwards into the thigh. About a month before admission, after a more severe attack than usual, followed by blood in the urine and increased frequency in micturition, she passed a small calculus. After this the attacks of pain became less frequent and less severe, and when admitted into hospital they had almost ceased, though the region of the left kidney was slightly tender upon pressure, and more resistant than on the opposite side. A radiograph gave a negative result. The urine, 1020, acid, was of a pale amber colour, and, examined microscopically, was found to contain the characteristic crystals of cystine, mixed with a few crystals of oxalate of lime. On some days the cystine crystals were present in such quantities that they could be seen with the naked eye, forming a deposit upon the cloud of mucus, which settled on standing, and glistening brightly if the specimen glass was held and rotated in the sunshine or electric light.

The calculus passed by the patient was pear-shaped, and of a pale yellow colour, with a glistening crystalline surface; it measured one-third of an inch in length (Fig. 2). The patient remained in hospital for three weeks, and as she was free from any attacks of renal colic she was then discharged, with instructions to return and report herself if there was any recurrence of the symptoms. On inquiring into her family history she was not aware that any of her relatives had ever suffered from symptoms of calculus.



Fig. 2.—× 2 lin.

I am indebted to my late house-surgeon, Mr. J. Stirling Young, for the accompanying drawings.

The Milroy Lectures

ON

KALA-AZAR,

Delivered before the Royal College of Physicians of London.

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Lecture II.

KALA-AZAR AS A DISEASE.

[Abstract.]

In my first lecture I dealt with kala-azar as an epidemic, tracing its origin, spread, and decline, and referred to a similar earlier outbreak in Bengal known as Burdwan fever. To-day I pass on to describe the disease itself—its course, complications, and terminations and shall show you that it is not one whit less terrible when considered individually than collectively, for it literally kills by inches after most prolonged sufferings, which we are still powerless to check to any great extent. As the later stages of the disease are much better known than the earlier ones, it will be clearer if I first describe the typical advanced condition, returning to the still rarely recognized commencement of the fever.

The General Appearances in the Characteristic Stages of the Disease Kala-azar.

A number of lantern slides showing groups of cases were shown, and the salient points of each pointed out, the main features being the marked contrast between the tumid bellies due to the very great enlargement of the spleen, and sometimes also of the liver, contrasting with the great wasting of the chest, face, and limbs. Brief notes were given of a group of hospital cases which illustrated the different courses the disease might take, while a village group showed the great frequency of the affection in children, just as in malarial fever, the incidence decreasing steadily in the subsequent decades. Other groups of sporadic cases, then known as "malarial cachexia" in the Sylhet Valley, which was not invaded by the epidemic, showed the clinical identity of the two forms of the disease, which was the principal argument of the speaker in his 1897 report in favour of his view that the epidemic disease in the Brahmaputra Valley was but an intensified form of malarial fever. The extreme wasting in the last stages and the dropsical ascitic form

produced by a peculiar form of intracellular cirrhosis of the liver were also illustrated.

Family Distribution.

Several of the cases already referred to illustrate very well the extraordinary tendency of this disease to attack a number of persons in the same family or household, but the frequency with which this is the case will be better realized from the following figures relating to twenty successive Assamese patients seen in the Nowgong Hospital. Among their near relatives no less than 123 persons had been attacked by kala-azar, only 2 of whom recovered from it, while but 44 of their near relatives had escaped the infection; or to put it another way, no less than four-fifths of these patients had lost half or more than half of their relatives within three to five years, so that it is easy to understand how whole families have been destroyed, and so much land has fallen out of cultivation.

A similar family incidence is seen in the sporadic disease, and is best illustrated by European series of cases, in whom it is easier to follow up the histories. An examination of my notes of the Calcutta European Hospital cases of the last six years shows that the most common relationships between patients actually in hospital for the disease were parent and child in six instances, and brothers and sisters in seven more, nearly always children, while in no less than three of these instances more than two children of the same household were admitted, the series in one family extending over a period of five years. Moreover, just one-third of the whole series of cases had relations actually in hospital during this period, while a good many more gave histories of other members of their families being attacked with fevers of long duration, which were pretty certainly mostly of the same nature. This family incidence clearly points to a house infection, and was the basis of the successful measures I advocated against the disease.

The histories of the rare cases in which Europeans in Assam were attacked by kala-azar throw some further light on this question, for in all the 6 cases, regarding whom Dr. Dodds Price kindly furnished me with information, the affected men were in the habit of cohabiting with native women either in the infected lines or in three instances with one woman, who was subsequently found to be infected with kala-azar, two of them eventually dying of the disease. Two of these last cases of infection were most important, as they occurred in parts then uninfected with kala-azar, but in each case the woman had come from an infected district. Moreover, Dr. Price knows of no instance in which a European cohabited with an infected native woman who escaped kala-azar; and when we bear in mind that it is the usual custom for such women only to come to the bungalow at night and not to eat with the European, then it becomes clear that the most likely mode of infection by a parasite occurring in the peripheral circulation is through some biting insect, in which the parasite may pass its extracorporeal stage of existence. Moreover, such a source of infection may furnish a clue to that of adult Europeans, with no family history to explain it, in large towns such as Calcutta, as well as among soldiers in Bengal cantonments, and is also in accordance with the decreasing age incidence after early adult life. Again, the infection of one child after another in the same house may be also readily explained on the same hypothesis, and indicates the importance of isolating—at least, in a separate room—any person attacked by the disease, or, better, in a hospital where persistent treatment and nursing can be carried out.

Age and Sex Incidence.

Among tea-garden coolies, who furnish the most accurate statistics, there was no difference in the incidence of the disease on the two sexes, nor did occupation affect it. Numberless instances of husband and wife being infected one after the other were met with, it being, in fact, the exception for one of them to escape—another striking instance of house infection. In the sporadic disease in Calcutta an excess of native males are admitted, much in proportion to those of other diseases. In the European hospital there were twice as many males as females above the age of 15, possibly partly due to the source of infection just mentioned; but in children under 15 there were 23 females to 13 males, probably due to a larger proportion of the male children living away from home at schools.

The age incidence is of great importance, the most striking fact being the number of children attacked. In my report I recorded that 25.6 per cent. of my cases occurred in children under 10, while 24.4 per cent. more were between 10 and 20 years old, making 50 per cent. under the latter age. Further, in a more recent report on the sporadic disease in Sylhet, 39 per cent. were under 10, and 30 per cent. more between 10 and 20, making nearly 70 per cent. under 20. Among natives in Calcutta only 8 per cent. were in children under 10, but 40 per cent. between 10 and 20, three-fifths of which were boys from 10 to 15, who are much more readily brought to hospital than girls or younger children. Between the ages of 20 and 30 were 32 per cent., 16 per cent. from 30 to 40, and only 4 per cent. over 40 years of age. Among Europeans, who readily bring their children to hospital, 20 per cent. were under 10, and 22 per cent. more between 10 and 15, making no less than 42 per cent. 15 or under; 22 per cent. from 20 to 30, and 20 per cent. over 30, showing once more a very high rate among the unfortunate children, and a decreasing one with advancing years.

Race Incidence.

It has already been mentioned that epidemic kala azar was rare in Europeans in Assam compared with natives, but is not so very uncommon in Europeans in Calcutta in the sporadic form. The class of Europeans attacked is here of great importance, for out of 87 cases, regarding whom I have a note as to how long they had been in India, I find that no less than 87.34 per cent. were born and bred in that country, and only 12.66 were immigrants from Europe. Moreover, the shortest time after arriving in India that any immigrant was attacked was eight years; a second had been thirteen years, and a third nineteen years in the country; while the remaining eight had all been over twenty years in India, and belonged to the same class as those born in Calcutta, and, like them, were living in parts of the city where their houses were surrounded by those of native inhabitants and under conditions of overcrowding and bad sanitation. In fact, almost all these unfortunate people belonged to the poorest sections of the mixed European and native population, among whom the sanitation and cleanliness of the well-to-do official and commercial European immigrant class is an impossibility—a fact of great importance in connexion with the etiology of the disease. In marked contrast with this is an observation I have recently made to the effect that 80 per cent. of the European immigrants admitted to hospital for typhoid in Calcutta had been three years or less in India, for the totally different incidence of sporadic kala-azar just mentioned in this class will prove a useful point in the differentiation of the later disease in its early remittent stage from typhoid, with which it has been so much confused.

Seasonal Incidence.

Owing to the disease lasting from a few months to several years, cases are admitted to hospital at all seasons, and neither in Calcutta or Madras is there any very marked seasonal incidence, although there is some excess of admissions of Europeans in Calcutta at the end of the cold and beginning of the hot season, especially among those coming in the early stages of the fever.

Of much greater importance is the question whether the fever begins at any special season, as is suggested by the fact that the extra-corporeal stage of the parasite, to be described later, only developed in my cultures below a temperature of 75° F. It is very difficult to obtain accurate histories of the beginning of the disease in many cases, especially when they are seen for the first time at a much later date, but an analysis of my notes of those who stated they had had fever for not more than six months in two series of cases (in the Native Medical College and European hospitals respectively), both showed a marked preponderance commencing during the cold weather, or early in the hot weather, on account of the frequent long incubation period. These results can be summed up by saying that in the six months from November to April there were three times as many cases in the European series and almost four times as many in the native one as in the remaining six months of the year—a sufficiently striking fact when the difficulties of getting accurate data are considered. When in Assam I tried to work out this point from the admission to hospital for fever on tea

estates, and found that most of the patients suffering from typical kala-azar in the cold season had been admitted for short attacks of apparently malarial fever in the previous rainy season from June to October, but few escape malaria at that time. On finding the sporadic cases in Calcutta mostly began in the cold season in Calcutta, I wrote to Dr. Dodds Price for his matured experience on the subject, and he very kindly sent me histories of all his European cases, every one of which had commenced in the cold weather; while an inquiry into his, then comparatively few, native patients also showed that almost all of them had developed kala-azar during the cold weather, and he added, "All this is very instructive, and fits in exactly with your Calcutta experience."

Taking everything into consideration, I think there is sufficient evidence to prove that the great majority of patients become infected in the cold season, and I am inclined to think that infection will ultimately be found to be limited to this time of the year. The importance of this fact in connexion with prophylactic measures is clear, as it will greatly simplify matters if precautions against infection have only to be taken during a few months of the year.

THE TYPES OF FEVER.

I now come to the difficult subject of the diagnostic value of the types of fever in kala-azar, my conclusions being based on four-hour temperature charts of every case in the European Calcutta hospital for several years, and a still larger series in native patients; while as I also possess complete notes and charts of every fever case in the open wards of the European hospital for two years I am now in a position to point out the most important features in the diagnosis of kala-azar in the difficult early stages from other fevers with which they are commonly confused. The lantern slides prepared from the charts, some of which represent the temperature curves for several months, will best serve to illustrate the types met with.

The principal points illustrated by the charts shown were the following: The very long duration of the fever, which shows alternating remittent and intermittent types for many months at a time, even in the case of patients admittedly in a markedly cachectic and anaemic condition, showing the great resisting powers of the patients. When the temperature is of the remittent type there is rapid wasting and impoverishment of the blood, but when it falls to the low intermittent type, both the weight and the blood show steady improvement, while quinine in large doses has a marked effect in reducing the high dangerous type of fever to the low, comparatively harmless one, which may eventually wear itself out and cease entirely, when the weight is soon regained, and once the patient has been free from fever for several months, and fully regained the normal weight, relapses are rare and recovery is permanent and complete. Such cessation of the fever at any time sometimes follows a severe septic complication, such as pneumonia or dysentery, and is then accompanied by a marked rise in the previously very low number of polymorphonuclear leucocytes, which the writer has also been able to produce with good results in a few cases, by injections of sterilized cultures of staphylococci in accordance with the methods of Sir Almroth Wright although it has not been invariably successful. The good effect of large doses of quinine was illustrated by a nine months chart of a child of seven early in the disease and whose fever was only broken by it when 50 gr. of quinine had been taken daily for seven weeks, her weight also steadily rising from the time the large dose was given, and no ill effect being produced by it.

The recognition of this fever in its early stage, which usually begins with a high remittent form of pyrexia, may often be accomplished by noting the certain peculiarities in four-hour temperature charts. The most important of these, which is illustrated by the slides at work, is what I have already described as the double remittent type, namely, a marked daily double or even a triple rise of the temperature, often for several days together in the absence of any treatment by the more powerful sweat-producing antipyretic drugs such as antipyrin. This double type is most frequently seen in the earlier periods of the fever, but may occur at any time in its course, and may also occasionally appear during continued or intermittent pyrexia in kala-azar. The great importance of this type is that, in my experience, it is never seen in typhoid fever, for which the early stage of sporadic kala-azar is so frequently mistaken, as in some of the cases illustrated, and this type is almost diagnostic of the new fever, the first case in a European in Bombay having been first suspected on account of the double remissions taking place. Another type of fever shown in the charts, which is rather characteristic of this fever, is a low continued type of pyrexia, the temperature falling below 101° F., but not varying more than two degrees in the twenty-four hours; a type which is much rarer in typhoid, in which the pulse is also usually slower than in kala azar in proportion to the degree of the pyrexia. Moreover, even when the fever is high for long periods in kala-azar there is a characteristic absence of severe distress or typhoid symptoms, patients often saying they feel quite well, and do not think they have any fever, when the thermometer registers 103° F. or 104° F. Once more, when the remittent temperature falls it commonly assumes a low intermittent type, rising to about 100° F. every afternoon, instead of running a subnormal course, as after typhoid, a feature that will often allow of the more serious kala-azar being suspected at an early date before the cachectic stage has been reached. A consideration of these various types will nearly always allow of the sporadic affection being suspected at an early date, when persistent treatment is most likely to be of avail, while the blood changes will allow of the diagnosis being confirmed.

THE SPLEEN AND LIVER IN KALA-AZAR.

Time will not allow of my giving a full clinical account of this remarkable disease (although I hope to do so shortly in a work on Fevers in India, for which I have been collecting material for a number of years), but a few of the more salient points must be touched on.

The Spleen. The great degree of enlargement of the spleen can best be indicated by the following data. In 70 typical advanced cases of the epidemic disease in Assam of which I have notes, the spleen was enlarged in all, while in 94.5 per cent. it reached to at least 3 in. below the costal margin, in 56.5 per cent. it extended to the navel or beyond, and in 27.7 per cent. to the level of the anterior superior spine of the ilium. In 95 consecutive sporadic cases in the Medical College, Calcutta, all verified by finding the parasite in the spleen blood, in 80 per cent. the organ reached to the navel or beyond, and in 10 per cent. to the anterior superior spine of the ilium. In a series of earlier sporadic cases at the European general hospital the spleen extended to the navel or beyond in 63 per cent., being nearly always of this size in cases of over three months' duration, although the edge was above the navel in three fifths of the cases with under one month's history of fever.

On the other hand, among 200 healthy coolies I examined in Assam on a tea garden when unaffected with kala-azar, I found only 1 per cent. with spleens reaching down to the navel, in only 6 per cent. did it extend 3 in. below the ribs, while in a total of 25 per cent. the organ could be felt below the ribs—figures which suffice to disprove Dr. Giles's statement that it would be absurd to attach any importance to enlargement of the spleen in kala azar in such a malarious country as Assam.

The liver was enlarged in 43 per cent. of my Assam series, in 75 per cent. of the Medical College, and in 59 per cent. of the European cases in Calcutta who came earlier under observation, it having been normal in seven-eighths of the European patients admitted during the first month of the fever. The enlargement of the liver to any marked degree is very uncommon in the earlier stages, although after some months it may occasionally reach down to the navel, and may then be even larger than the spleen, and eventually become cirrhosed, causing ascites.

THE BLOOD CHANGES.

I have elsewhere described the blood changes in kala-azar, and pointed out their great value in differentiating it from other diseases, especially fevers, so need only now summarize them. In the first place, an increase in the percentage of the large mononuclear leucocytes is very common, and of great value as a point in the differentiation of the early stages of sporadic kala-azar from typhoid fever, for in the latter the lymphocytes but very rarely the large mononuclears are increased during the pyrexia. On the other hand, this change is of no help in dis-

tinguishing kala-azar from true chronic malaria, in which a large mononuclear increase is also commonly present. These two last diseases may, however, be distinguished by counting the total red and white corpuscles and working out the proportion between the two; for in malaria both are about equally reduced, so that the ratio of white to red remains normal, namely, about 1 to 750, and very rarely, if ever, falls below 1 to 1,000, while in kala-azar it is the rule for the white corpuscles to be disproportionately reduced, so that the ratio of white to red is—in the absence of any leucocyte-increasing complication—commonly below 1 to 1,500, and not rarely as low as 1 to 2,000, 3 000, or more. This extraordinary reduction of the leucocytes, which not rarely number but from 500 to 1,000 per c cm., is almost diagnostic of kala-azar, as I have never met it in any other fever cases out of some hundreds in which I have done blood counts, and it has often enabled me to diagnose the disease in a comparatively early stage. So much is this the case that I now rarely employ the spleen puncture as a diagnostic measure, several fatal cases, in addition to those published, having come to my knowledge. It should never be done in very anaemic patients, or in those who have suffered from any form of haemorrhage, unless the blood is first proved to be clotting normally, while I always take the further precaution of keeping up digital pressure for several minutes after withdrawing the needle, and immediately administering a dose of calcium chloride by the mouth. With these precautions it may be of value in some difficult comparatively early cases in which the confirmation of the diagnosis is of great importance, in order to allow of continued and adequate treatment being strongly urged on the patient, so many of whom leave hospital during a temporary remission of their fever, and leave off the all-important quinine until a fresh high remittent bout comes to reduce them another step towards the grave.

Complications.

The frequency with which kala-azar is terminated by some inflammatory complication has already been mentioned and may best be illustrated by the data from 40 necropsies made by me at the Medical College Hospital. All but 7 of them showed some serious local disease, and some of them more than one. In 11 pneumonia, in 10 dysentery, in 7 cancrum oris, in 2 each pneumococcus meningitis, purpura, cerebral haemorrhage, and phthisis respectively, and in 1 pericarditis were found, while in several cancrum oris cases staphylococci or streptococci were cultivated from the spleen, revealing a general septic infection. The extreme reduction in the polynuclear leucocytes in this disease, in which they not rarely fall to one-twentieth or less of the normal numbers, easily explains the frequency with which these patients fall victims to the specific organisms of pneumonia, dysentery, phthisis, or the cocci of cancrum oris, in which I have never been able to find the diphtheria bacillus, which has been met with in European cases of this disease.

Haemorrhages deserve special mention among the complications, reduced coagulability having been found by me in some of these cases, while bleeding from sloughing ulcers, or from the stomach or bowel, has also been seen, in addition to several cases of bleeding into the brain or its membranes.

Treatment.

Although much has been done to elucidate the pathology of kala-azar during the last four years, unfortunately the treatment of the disease has made no corresponding progress, and is still in a most unsatisfactory state. In Madras, indeed, I am informed that almost every case is believed to die, the mortality being estimated at 98 per cent., the highest figure reached in the Nowgong tea estates by the epidemic form, while that of several hundred cases treated by Dr. Dodds Price at the height of the epidemic gave an average mortality of 96 per cent. Dr. Price's cases were treated with thymol first, to exclude ankylostomiasis, quinine in moderate doses being generally used during the several periods the patients were in hospital, but it was the common opinion that quinine failed to check the fever in the same way it did malaria, and many thought it quite useless and used it very little, as is also the case in Madras at the present time. In my report I strongly dissented from this view, and urged that quinine does have a definite effect in controlling the severity of fever, even when it did not stop it altogether, and recommended that it should be given in large doses, and persisted with for months together if necessary. Several years' further experience in Calcutta has only served to confirm me in that opinion, for I have repeatedly seen a high remittent fever reduced to a comparatively harmless low intermittent one by increasing the quantity of quinine given, 60 gr., and in some cases 90 gr., a day having been taken for considerable periods with nothing but good effects beyond being sometimes distressing to the patients.

Once the temperature has fallen to the low intermittent type, it can often be kept down to that point for a long time by smaller doses, 20 gr. in the morning being commonly effectual. That this line of treatment gives far better results than those admitted by unbelievers in quinine will be clear from the fact that after the publication of my report, Dr. Dodds Price systematically tried persevering quinine treatment, and when he worked out for me the results of several years' experience, he found that the mortality of 500 consecutive cases was but 75 per cent., the remaining 25 per cent. having permanently recovered, against 4 per cent. in the earlier series quoted above. Now as these patients were indentured coolies, who remained working on the gardens, often for years, after getting over a typical attack of kala-azar (the diagnosis of which in its characteristic stages presents no difficulties to Dr. Price with his fifteen years' daily experience of the disease, while in some of them the parasite was also found by spleen puncture), there can be absolutely no doubt about their absolute recovery, some of them having also been seen by me both during and after their attacks.

Moreover, these unquestionable results of Dr. Price's are confirmed by my smaller experience in Calcutta under less favourable conditions for following up my patients. Thus, out of 65 cases in the European hospital during the last three years of which I have notes, 18 who left the hospital in a doubtful condition I have not been able to get further news of, leaving 47 other cases. Of these, 21 died either in hospital or after leaving it; 9 more, who left in a worse condition than they came, may be counted as having died—leaving 7, or 14 88 per cent., who left hospital after having lost their fever and greatly improved, a fair proportion of them probably recovering, and 10, or 21.27 per cent., have completely recovered and are known to have been well for from several months to upwards of a year after leaving hospital. It should be mentioned that three of the patients who recovered had also been treated with injections of staphylococcus vaccine, which appeared to have some good effect.

These figures are in close accordance with those of Dr. Price, and contrast most favourably with nearly invariably fatal results admitted by those who still deny their patients the benefit of persistent cinchonization, although without any efficient remedy of their own, and I venture to think that, in view of the above data, my line of treatment should never be neglected until we have a better one to replace it, as I hope and expect will be the case in time. Bone marrow tabloids, to repair the blood deterioration, are also of considerable value, while atoxyl, which is now being advocated in the allied protozoal disease, sleeping sickness, is worthy of trial, for my friend, Dr. J. Megaw, I.M.S., has injected it in two cases with at least temporary good effects. Colonel Lukis, I.M.S., Principal of the Medical College, Calcutta, has also tried cinnamate of soda to increase the leucocytes, but without accomplishing the desired result or doing any good; and *x* rays over the spleen have been tried by the same observer, but without effecting any cures. In view of the chronicity of the disease, and the occasional remarkable spontaneous recoveries from an apparently hopeless state, much caution is required in making deductions regarding any line of treatment, but the extraordinary cures which do occur encourages the hope that a better treatment even than the quinine one will be found to rescue these unfortunates from the lingering death which still awaits the great majority of them.

The Distribution of Sporadic Kala-azar in India.

Since it became known that so many cases previously classed as "malarial cachexia" are but the sporadic form of kala-azar, observations on its distribution have been accumulating. Donovan and others have found it to be very common in Madras, while my own observations have

shown it to be widely distributed all over Lower Bengal and Assam, except the eastern part of the Brahmaputra Valley. It also occurs somewhat less frequently in Western Bengal or Bihar, and extends into the neighbouring eastern end of the United Provinces of Agra and Oudh, cases in soldiers having been verified by the officers of the Royal Army Medical Corps at Benares, while I have also seen two who appear to have contracted the disease in Allahabad, and others have been met with among Gurkhas as far west as Dehra Dun. On the other hand, during an examination of the records of all the fever cases admitted to the Lahore Medical College Hospital for three years I failed to find any cases resembling sporadic kala-azar, while it is also specially noteworthy that I met with no double remittent, low continued or other doubtful long fevers among them. The Bombay records also show a similar absence of the disease, except rare importations from Madras, so that the disease appears to be limited to the eastern side of India, although I am informed that Burmah, like Bombay, only has cases contracted at Madras.

In connexion with this distribution it is of interest to note that the areas affected all have a very mild cold season, during which the mean temperature for three or four months remains between 60° to 75° F., for I shall show in my concluding lecture that these are the limits between which I have been able to cultivate the parasite outside the human body. On the other hand, in the unaffected north-west parts of India the mean temperature during the cold months falls lower, while owing to the brevity of spring and autumn in India, the temperature conditions most favourable to the organism outside the human body last a very short time in those areas.

EFFECTS OF SEASONAL VARIATIONS ON THE PREVALENCE AND ORIGIN OF THE DISEASE.

I have already shown that the infection of kala-azar is probably limited to the cold season, so an exceptionally long "cold weather" might be expected to temporarily increase the occurrence of the disease. This is actually so, for two years ago such a cold season occurred, and during it and the following early hot weather months an unusually large number of sporadic kala-azar cases were admitted to both the native and European hospitals of Calcutta—many more than in the following year, with a normal cold season. Now this long "cold weather" followed an early cessation of the previous monsoon rains, for the withdrawal of the south-west monsoon is succeeded by a cold north breeze; and it will be remembered that in my first lecture I pointed out that the Assam epidemic arose as a consequence of four out of five successive years of deficient rainfall in the early Seventies, due to an early cessation of the monsoon current. I have not been able to get complete meteorological data for Rungpore in the Seventies, but those of Calcutta of that period do show that during several of the years of deficient rain the mean temperatures of the ensuing cold season were below the average.

Now, if a single cold year had such a marked influence in increasing the sporadic kala-azar in Calcutta, on account of the longer period which was favourable to the infection, it becomes easy to understand how an unusual succession of such seasons might have increased the number of cases, and so the foci of infection, year by year, until the fever became so widespread that the people began to leave their villages, and thus carried the infection into areas at the foot of the Garo Hills and in the Goalpara subdivision, which had hitherto been almost, or quite, free from it, and so started the spreading disease in Assam in a people who were extremely susceptible to it, owing to not having previously suffered from the sporadic form. Such an origin of the Assam epidemic kala-azar is most in accordance with the known facts, and also with the life-history of the parasite and mode of infection, which I shall deal with in my remaining lecture.

The Sleeping Sickness Commission of the Royal Society has issued a further report (No. VIII) which contains a continuation of the report on the disease in Uganda by Lieutenant Gray, R.A.M.C., and by Lieutenant Tulloch, R.A.M.C., a report on the disease in Unyoro and the Nile Valley, and an account of experiments on the power of [illegible] *Lyperosia exasperans* by Mr. P. H. Ross, M.B.(Oxon.), R.A.M.C.(T.F.), and three papers by Professor Minchin and others.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

THE TREATMENT OF ECZEMA.

IT is now admitted that eczema is not caused by a parasitic organism. The coccus, which appears in mulberry-shaped masses, and which was named morococcus by Unna, is now thought to be a staphylococcus of low virulence frequently found on the skin. Sabouraud has shown that the vesicle of eczema is at first sterile, which quite puts out of court the presence of any specific micro-organism. It follows, therefore, that anti-germicidal applications are not called for, and indeed have often made a pure and simple eczema much worse by irritating it. Care must be taken to exclude seborrhoeic dermatitis, which is only benefited by certain antiseptic remedies.

No doubt various food toxins and the products of imperfect metabolism and malassimilation by circulating in the blood can produce erythemata as well as other conditions of the skin, and if they cannot often produce an eczema, they may aggravate it and possibly produce it in a predisposed subject. To counteract this tendency, diet the patient, and prescribe correctives, of which salicin is one of the best in these cases. Water taken between meals is also helpful. All that is required locally are quieting and protective applications. If for any reason sodium chloride is retained beyond the normal quantity, the excess entails the retention of an additional quantity of water to hold it in solution. The surplus salt and water under certain circulatory conditions passes out of the blood into the tissues, and in this way eczema may be kept up. So that it may be necessary to lessen or cut off the common salt the patient is accustomed to take with food. So many cases of eczema are produced by susceptible individuals handling poisonous plants, such as the *Primula obconica*, as well as many chemical and other substances, that one has to be constantly on the look-out for this cause.

Eczema depending chiefly on a neurotic tendency, and usually occurring in people who are broken down in general health, is difficult to manage, and is not much benefited by ordinary treatment, unless a change into the country is insisted on. If this is not practicable, perhaps cod-liver oil does as much good as any internal remedy. Inquiry as to the amount of sleep the patient gets is also important, as there is no better restorative for nervous conditions.

It is almost unnecessary to mention that cleanliness of the eczematous surface should be carried out with a weak alcohol, as diluted methylated spirits; or, if the eczema is very acute, with weak warm gruel instead of soap and water. As Lionel Beale used to say, few people know what a healing remedy spirit is to the skin.

Where much thickening has occurred, and especially if fissures have formed, eczema rimosum, nothing does so well as local dressings of some reducing agent, as salicylic acid in various strengths. In severe cases of eczema, and when an extensive surface is involved, the good effect of rest should be remembered, and the patient confined to bed.

Although alcohol is valuable externally, it disagrees if given internally in eczema by dilating the peripheral vessels. It is not too much to say that if an adult's eczema is receiving suitable treatment to which it does not favourably respond, the abuse of alcohol should be suspected. If the surface of an eczema does not show much redness, a weak preparation of spirit and tar painted on once or twice in the twenty-four hours, in addition to the ordinary application, at once relieves the itching and cures the eczema if the case selected is found to tolerate this interference.

[illegible] HENRY WALDO.

OBSTRUCTION OF THE OESOPHAGUS.

THE report by Dr. H. L. Davison[1] of a case of oesophageal obstruction due to the presence of a bolus of meat, which he relieved by a timely dose of apomorphine, reminds me of a somewhat similar case I had the opportunity of seeing in the summer of 1906.

I was called to see a woman, aged 52, who had, it was reported, swallowed a hard pea and was choking. On my

[1] *British Medical Journal*, January 19th, 1907, p. 138.

arrival I found the patient not urgently in need of relief. There was no dyspnœa, no cough, and no spasm. Her story was that while she was about some house work she put a dried pea into her mouth, and it suddenly slipped over, giving rise to violent choking. Since the accident the patient had been unable to get anything down. Even water returned. This I was able to confirm by my own observation. I was further informed that the patient frequently suffered from what she termed "choking attacks," but what were really attacks of oesophageal obstruction. Sometimes food, she said, stuck in her throat, and gave rise to irritation and retchings until it was expelled.

On examining the woman's neck externally it was at once seen that she was afflicted with innominate aneurysm. There was a pulsating tumour in the episternal notch, extending outwards under the sternal end of the sterno-mastoid muscle, and the radial pulse on the right side was smaller than on the left.

Under the impression that the pea might be arrested at the place where the aneurysm was pressing on the oesophagus, and after excluding as far as possible the larynx and trachea by careful investigation with the laryngeal mirror, I passed a No. 12 gum-elastic catheter into the oesophagus. About 12 in. from the incisor teeth it met with some obstacle, but by gentle manipulation the instrument was guided past the obstruction and then withdrawn. Thinking I had probably pushed the pea on into the stomach, I gave the patient some water to drink. It was all regurgitated. The catheter was, therefore, re-inserted well past the obstruction, and, as the woman had had nothing to eat or drink for eight hours, a couple of pints of milk were run in. After the withdrawal of the catheter the patient became sick, vomited, and ejected the pea, followed by a few ounces of curdled milk.

The foreign body had evidently been resting at the upper end of the narrowed portion of the gullet, where it lay quite loose, but in such a manner as to act like a ball-valve. By rotating, it had permitted the passage of the catheter, but when impelled from below was at once thrown up. Its small size and spherical shape had prevented the usual oesophageal regurgitant movements from seizing the body and passing it upwards.

After the pea was ejected the woman could swallow liquids and soft solids quite comfortably.

Dan McKenzie, M.D.Glasg., C.M.,
Assistant Surgeon, Central London Throat and Ear Hospital.
London, W.

ANTISTREPTOCOCCIC SERUM IN PUERPERAL FEVER: RECOVERY.

A primipara, aged 23, was not attended by either doctor or registered midwife; the perineum was torn slightly. On the fourth day the temperature was 103°, the pulse 150. An intrauterine douche was given immediately, and in the evening the temperature was 101°, pulse 120. On the following day the temperature was 103°, the pulse 120; the temperature, notwithstanding four more douches, remained at this level for three more days, when I decided to inject polyvalent antistreptococcic serum (Wellcome). Twelve hours after the first injection of 10 c.cm. the temperature was 99°, pulse 108; but in the next twelve hours the temperature rose to 101°, and the pulse 120, when a further 10 c.cm. was injected; next day the temperature was normal and the pulse 98. The temperature continued normal, the pulse gradually returned to normal, and the patient recovered.

Gateshead-on-Tyne. E. W. Smyth, M.B.Edin.

FOREIGN BODY IN THE APPENDIX.

Sergeant E. was admitted to the Military Hospital, Colchester, on January 22nd, at 9 p.m., suffering from an attack of appendicitis. I removed the organ next morning, and found its mucous membrane much inflamed, and also 3 gr. of No. 6 shot in its tip.

He gave a history of a sharp attack of appendicitis three weeks previously while on furlough. He also told me that rabbit pie forms a frequent dish in his mess.

F. J. W. Porter,
Major R.A.M.C.
Colchester.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

KENT COUNTY ASYLUM, CANTERBURY.

ULCER OF THE DUODENUM: PERFORATION: NO LEAKAGE.*

(Reported by W. Everett, M.D.Edin., Senior Assistant Medical Officer.)

The patient in this case was a woman, aged 76, who had been in the asylum for some years.

She was a quiet old woman, suffering from the mental enfeeblement of old age, in weak physical condition, but usually able to be up and look after herself, except at times when she was more lost mentally.

On January 15th, 1905, whilst undressing herself, in stooping to pick up her dress from the floor, she became giddy, and falling, fractured the neck of her left femur. There was little shock, and she was able to say how the accident happened. For a fortnight she made good progress, but then for several days was noted to be dull and stuporose.

Subsequently she became brighter, but was more demented than she had been, and after this was not able to do anything for herself. On March 3rd she again became very drowsy and passed into unconsciousness, the left arm being paralysed and temperature 103°. She recovered consciousness, but remained very dull and lost. Six weeks later she became unconscious again and died.

During the three months she was in bed she was very quiet and free from restlessness, lying still on her back or a little to one side or the other. She did not sit up, and was never raised to the sitting posture. In changing or feeding her the head and shoulders were elevated, or she was gently rolled from one side to the other of the water bed on which she lay. No bedsores formed. A few days before death the skin over the metatarso-phalangeal joint of left big toe was slightly scratched by the big toenail of the other foot, and an ulcer began to form and spread; at the time of her death it was the size of a shilling.

Post-mortem Examination.—There was general atheroma of arteries, a softening of right cerebrum, and evidence of old tubercle in the lungs, and slightly granular kidneys, but interest centred in the duodenum. The first part of the duodenum was lying almost transversely, and on its anterior surface, immediately beyond the pylorus, was a visible opening in the outer coat, rounded in shape, admitting the tip of the middle finger. The edges were cicatrized but not thickened. The upper half of the ulcer (as it appeared to be) was shallow and had only slightly involved the muscular coat, the lower half was deeper, especially towards the edge, which was undermined to a slight extent. The floor was reddish and raised at the centre. No perforation was visible. There were no adhesions round nor sign of them, there was no escape of contents of the bowel, and no peritonitis. Two and a half inches beyond the opening the anterior surface of the duodenum was adherent to the under surface of the gall bladder over a small area, it was firmly attached, but could be separated without much difficulty. In removing the organs from the abdomen the duodenum became altered in position, and the contents escaped freely through what had appeared to be the floor of the ulcer. On taking out the duodenum and examining it the following was found to be the condition: Looked at from the outside there was a loss of tissue in the outer coat, forming an opening ½ in. by ¼ in., and exposing the muscular coat. The edge of the opening was cicatrized, but not thickened; the lower half was undermined. In the muscular coat was a triradiate fissure or slit, not reaching to the edge of the opening in the outer coat, but sufficiently large to admit the tip of the little finger being passed through from the inside. The edges of the fissure were smooth, rounded, and red, and looked like granulation tissue. They overlapped, the lower one covering the other two. Looked at from the inside there appeared a triradiate fissure in the anterior wall, corresponding to that seen on the outside, admitting the tip of the little finger and measuring ½ in. by ⅜ in. Except for this the internal appearance of the duodenum was perfectly healthy. The edges of the slit projected slightly outwards, and all that could be seen from the inside was normal tissue with a fissure in it, without the usual appearances of ulceration. The pylorus was healthy. There were no foreign bodies of any kind in the stomach or intestines.

The case is interesting, first, because with this large perforation there was no escape of intestinal contents. This seems to have been prevented by the overlapping of the granulating edges of the fissure—the quietness of the patient and her bland semifluid diet contributing. Never-

* Case narrated and specimen shown at a meeting of the Canterbury and Faversham Division of the British Medical Association.

theless, it is remarkable that there was no escape, as there was no valve-like action of the edges, only overlapping. During life there would probably be some exudation, which might help to keep them together. The adhesion of the duodenum further along to the under surface of the gall bladder also steadied the parts, and prevented alteration in position.

The other point of interest in the case is the appearance of the lesion. The ulcerated surface was on the outside, and the impression was given that ulceration occurred from without inwards.

There seems no doubt that the lesion, or at any rate the perforation, must have taken place after the patient went to bed, as it is impossible to think that she could have walked about in such a condition without symptoms or escape of intestinal contents.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.

At a meeting of the Division on January 11th, Dr. W. d'Este Emery gave a lecture on Opsonic Indices. He said that in the earlier days of the study of immunity there were two chief theories, the humoral and the cellular. The discovery of the antibodies had given a great impetus to the humoral theory, but further researches had shown that only a very few of the phenomena of immunity could be explained by the action of antitoxins and bacteriolysins. The attempt to do so was mainly favoured by the German pathologists, who, though not denying the action of the phagocytes, attached much importance to the antibodies in question. In France, on the other hand, the influence of Metchnikoff had led to the recognition of the leucocytes as the prime factor in immunity, the antibodies and other substances present in the body fluids playing only a secondary rôle. The researches of Sir Almroth Wright and others led to the conclusion, strongly held by the English school, that the most important agent in combating infection is the phagocyte, but that it only acts, or acts best, in presence of a special antibody to which Wright had given the name opsonin; it had the power of combining with bacteria and rendering them more easily ingested by the leucocytes. The lecturer then described the method of preparing an emulsion ("cream") of leucocytes, the necessary emulsion of bacteria and the collection of the serum to be tested. He explained the fundamental experiments proving the existence and action of an opsonin as follows: (1) A mixture of leucocytes and bacteria incubated for a quarter of an hour showed no phagocytosis; (2) the same mixture *plus* fresh serum showed abundant phagocytosis; (3) bacteria allowed to stand in contact with serum, then removed by centrifugalization and thoroughly washed with normal saline until all trace of serum was removed, and then mixed with leucocytes and incubated, were readily taken up, showing that they had been altered by the serum; (4) leucocytes treated in the same way would not take up normal bacteria showing the serum had not acted on the leucocytes. Reasons were given for thinking that these opsonins were particular similar in nature to the antitoxins etc. but differing from them in some important respects. That opsonins for nearly all organisms occurred in normal blood, whereas the other antibodies were absent or only present in minute traces; their presence in large amounts indicated an attack of the disease in question. Moreover, whereas it was possible to raise the amount of the other antibodies to a very high degree by suitable inoculations, this was not the case with the opsonins, which could only be moderately increased and usually to more than twice the normal level. This fact was of great importance in immunity, and showed the reason for the feebleness of the immunity acquired against organisms which were combated mainly by means of opsonins (staphylococci, tubercle bacilli, etc.) as compared with those combated by means of antitoxins and bacteriolysins. The method of estimating the amount of opsonin in the blood of a patient comparatively to that of a healthy person (the opsonic index) was then described and it was shown that the amount present in health varied but little from day to day, although that of different healthy persons might show considerable differences (in the case of tubercle from about 0.8 to 1.2). As regards the value of the opsonic index in diagnosis, Dr. Emery said that in most acute infections the index was low during the active stage of the disease, rising to normal and then above the normal as the infection was successfully combated, so that a low or a high index was an important clue as to the nature of the infection; but that in some infections, and in debilitating conditions generally, the opsonic index to several organisms might be moderately lowered. Thus, when the nature of an acute infection was under investigation, it was necessary to test the index for several organisms, in which case a low index to one, together with a normal one to others, was practically conclusive. In the case of tubercle the index might be low or high, and figures between 0.8 and 1.2 (the extremes met with in health) showed little or nothing, whereas figures above or below these limits were almost conclusive, except, perhaps, in presence of an acute infection, such as influenza, in which the index (and probably, also, the resistance to tubercle) might be lowered. Another important fact was that in health the index altered but little, whereas in tuberculosis it showed considerable variations, often in a few hours. The use of the opsonic index as a guide to treatment was then explained, and it was shown how an injection of a vaccine of the infecting organism, injected into healthy tissues, caused a fresh production of opsonin, preceded by a transient fall. The aim was to keep the index at as high a level as possible, repeated determinations being necessary in order to find the suitable dose and the time for the injection. The method of preparing these vaccines was then described. In cases of tuberculosis T.R. or T.E. was used in minute amounts. Dr. Emery's results varied somewhat. A case of tuberculous iritis and another of tuberculous keratitis had done extremely well, complete recovery occurring in about six weeks. Tuberculous ulcers had also done well, and in most cases of lupus (all of long standing) a very decided amount of improvement had been recorded: some tuberculous sinuses had also healed rapidly and completely under the treatment, whereas others had proved refractory. The results in tuberculosis of glands and bones had been less satisfactory. In other infections he had found the beneficial effects more constant. Thus staphylococcic infections (acne, boils, etc.) had been cured or greatly benefited in almost every case. A case of gonorrhoeal arthritis of great severity and of three years' duration had been cured in three months. He had treated several cases of empyema of the frontal sinus, in one of which (pneumococcic) a complete cure had been effected after five injections; a case due to the pneumo-bacillus had been greatly benefited, whilst another (streptococci) had failed entirely. Dr. Emery expressed his belief that to get good results the vaccine used must be prepared from organisms isolated from the patient himself, and frequent and careful estimations of the opsonic index made.—Dr. Macevoy, after moving a hearty vote of thanks to the lecturer, asked what dose of tuberculin Dr. Emery would consider safe. Mr. Armit suggested that the diagnostic value of opsonic indices was weakened by the fact that the experimental error was very high. He claimed that the index had been shown to vary between 0.9 and 1.3. Tuberculin treatment had been successfully carried out before Wright's time, and certain clinicians had found the control of physical signs, etc., as safe a guide as the variation of the opsonic index. Some observers believed that opsonin was probably identical with amboceptor. He could not resist the idea that opsonin was not a simple body, but that it was composed of certain groups, of which amboceptor might be one. He called attention to the phenomenon of the eating up of granules, for example, metallic particles by leucocytes where the serum, although active, certainly could not act on the granules. He asked Dr. Emery if he could account for this.—Dr. Bulloch said that the leucocytes were not the only cells which acted as phagocytes under the influence of the opsonin. The mononuclear cells in the peritoneal cavity and certain cells in the lungs and spleen were capable phagocytes. With regard to the phagocytosis of foreign particles, he said that Mr. Armit would find that fewer particles were taken up by leucocytes when these latter were suspended in salt solution than when in serum. Dr.

Briscoe had been treating a number of cases of pulmonary tuberculosis by injections as indicated by observations of the opsonic index. Two cases with a tendency to the fibroid type had improved considerably, and after six months no tubercle bacilli could be found in one case, and they were very few in the other. In this second case the patient was attending his business in the city. The other cases were more acute, and had only been under treatment for three months, which was too short a time in which to form a definite opinion. Two cases of pneumonia, in which resolution was delayed, had cleared up rapidly after injection.—A Member mentioned a case of testicular tumour which had been definitely diagnosed by Wright, on the strength of the opsonic index, as non-tuberculous. On excision it proved to be a dermoid.—Dr. Emery, in reply, said that Sir Almroth Wright used doses of tuberculin as small as $\frac{1}{10\,000}$ mg. He regarded $\frac{1}{100}$ mg. as the maximum dose, and considered the treatment as absolutely safe. He agreed that amboceptor, and probably any factor which injured bacteria, might facilitate phagocytosis, but thought it quite certain that a true opsonin did exist apart from these substances. In support of this, he said that he had found opsonins to the red corpuscles in human serum on several occasions, but that these serums showed no trace of haemolytic action, however they might be tested. Dr. Emery said that the error in the determination of the opsonic index was not great, and by care could be rendered quite small, the important thing being to count a large number of leucocytes.

METROPOLITAN COUNTIES BRANCH: TOTTENHAM DIVISION.

At a meeting held on February 13th, Dr. Hutt in the chair, Dr. Whiting showed: (1) A case of thrombosis of the spinal cord (myelitis) showing the transition of a flaccid into a spastic paraplegia. (2) A case of the Landouzy-Dejerine type of myopathy (facio-scapulo-humeral atrophy). (3) Three cases of tabes dorsalis, one an early case with but slight ataxy, another a late case with great ataxy, and to compare with this a late case with blindness from optic atrophy, but according to rule little if any ataxy. (4) A case of early general paralysis. Dr. T. R. Whipham showed a case of general paralysis of the insane in a man aged 33, who had contracted syphilis some years previously. The symptoms began two years ago with loss of memory and failing sight. The speech was hesitating and slurred, and the tongue was tremulous. The left pupil was slightly larger than the right, but neither reacted to light and only doubtfully to accommodation. Both optic nerves presented definite atrophy. The knee-jerks were absent. The sphincters were under control, but there was a history that a few months ago both micturition and defaecation had for a time been involuntary. The gait was staggering, but not characteristically tabetic. Romberg's sign was present, and the patient complained of giddiness, especially on rising in the morning. Dr. Whipham also showed a girl, 16 years of age, who was the subject of congenital deformities. She was very small in stature, and presented marked asymmetry of the face, all the bones on the left side being ill developed. The left pinna was deformed, and the arch of the palate was high. The left arm was shorter and presented less muscular development than the right. In the bony thorax gaps could be felt in the ribs on the left side. Posteriorly there were lateral curvatures of the spine in the cervical and upper dorsal regions, the latter being to the left. The left shoulder was elevated and the scapula was small and deformed. The muscles of the shoulder girdle were shortened on that side, with the result that the arm could not be raised beyond the horizontal position, and that torticollis was present. Skiagraphs showed, in addition to deformity of the scapula, absence or mere rudiments of the second, fourth, and fifth ribs, while the third took an abnormal course downwards midway between the first and sixth. The lower ribs and viscera were apparently normal. Dr. G. Norman Meachen showed a case of Bazin's disease. Patient is a girl of 16, with several ulcers upon the middle third of the left leg of several months' duration. The lesions began as nodules, which broke down into ulcers with dusky erythematous edges. Special points: (1) Age of patient, (2) absence of evidence or history of syphilis, (3) situation of ulcers, (4) character of edges. Dr. Murray Leslie showed two cases of pernicious anaemia, a case of hemiplegia with aphasia, and a case of Graves's disease treated by *x* rays.

BIRMINGHAM BRANCH.

Pathological and Clinical Section.

Birmingham, January 24th, 1907.

Thomas Nelson, M.D., in the Chair.

Locomotor Ataxia, with Tabetic Foot.

Dr. Arthur Loxton showed this case.

The patient, an engraver by trade, was a single man, aged 42. About twenty years ago he had some kind of venereal sore on the penis, which was believed to have been followed by an eruption on the trunk. He was not seen by a doctor, but treated for a few weeks only by a fellow-workman. Since then he had suffered from various forms of paresis, always of a transient character. In 1900, Mr. Leonard Gamgee operated for perforating ulcer, situated over the insertion of the tendo Achillis. In 1901 he came under the observation of the exhibitor, complaining of perforating ulcer under the head of the first, and another under the head of the fifth, metatarsal bone. At that time he had well-marked, but not advanced, symptoms of locomotor ataxia. The ulcers healed, and the patient was not seen again till November, 1906, when he again sought treatment because one of the ulcers had broken down. On that occasion the tarsus was seen to be broad and unshapen, while the metatarsus appeared to be dislocated towards the dorsum. The disorganization had proceeded without pain, and the patient accidentally became aware of the deformity some months or two previously.

Dr. Loxton considered that the case well illustrated the late results of neglected syphilis, and expressed a very strong opinion that mild and ill-marked cases of early syphilis should be regarded as among the more dangerous examples of the disease, because either a wrong diagnosis was apt to be made, or the patient thought so lightly of his condition that he refused a vigorous line of treatment.

Epithelioma of Lower Lip.

Mr. Gamgee showed a man, aged 53, upon whom he operated in July, 1901, for an extensive epithelioma of the lower lip. Several previous operations had been done. The growth widely infiltrated the lip, the alveolar margin, and was adherent to the inferior maxilla. Enlarged glands were present in both submaxillary spaces. The lip, the alveolar margin, and the centre 2 in. of the lower jaw were excised in one piece, while the submaxillary lymphatic glands were also cleared away. The divided ends of the jaw were not brought together, but the patient was fitted by Mr. Dencer Whittles with a plate to keep the ends of the jaw apart. At the present time, five and a half years after operation, the patient is quite free from recurrence.

Tuberculosis of Caecum and Ascending Colon.

Mr. Gilbert Barling showed a specimen excised from a man, aged 28, admitted to the General Hospital, complaining of pain in the right side of the abdomen, of several months' duration, during which time he had suffered occasional attacks of diarrhoea, accompanied with mucus, but without blood. Two and a half years before admission he suffered from a cough, and was told that he had phthisis, for which he was treated in a sanatorium with considerable improvement. On examining the abdomen a thickened condition of the large intestine could be felt in the right iliac fossa, extending upwards practically to the costal arch, with a rather abrupt margin; it was only slightly, if at all, tender; it was movable, and could be rolled under the fingers, feeling like a large sausage. In view of the patient's history of phthisis the diagnosis made was tubercle of caecum and ascending colon. The caecum, part of the ascending colon, the vermiform appendix, and about an inch of the ileum were excised, the two ends of the bowel closed, and a lateral anastomosis effected between the ileum and the transverse colon. The patient made a good recovery.

Description of Specimen.

Parts removed include 7 in. of the colon (caecum and part of ascending colon), 2 in. of ileum and vermiform appendix.

Macroscopical Appearances.

The peritoneal coat of the colon is thickened, and shows numerous small nodules upon its surface. The muscular coat is hypertrophied, and has a distinctly leathery consistence. When the colon is opened the wall is in many places quite 1 cm. in thickness. The mucous lining of the whole of the caecum and several inches of the ascending colon presents multiple pedunculated masses and sessile nodules of about the size of an apple pip. In many places the mucous membrane is being undermined by large ulcers, which give the appearance of a worm-eaten surface.

The upper 2 in. of the ascending colon appears to be quite healthy.

The ileum is to all appearance healthy.

The appendix is 3 in. long.

The peritoneum covering the proximal half of the appendix is thickened, and towards its mesenteric border shows low nodular elevations. The peritoneum over the distal portion is to all appearances healthy. On opening up its lumen, the walls are found to be thinned, due no doubt to distension of the lumen with thick muco-pus. The mucous membrane shows several low nodules, similar to those seen in the caecum. At one point the mucous lining has been stripped up for a distance of half an inch by a small abscess cavity situated between it and the muscular coat.

The mesentery of the colon contains several enlarged lymphatic glands.

Microscopical Appearances.

Caecum.—The mucous membrane is thickened and raised into small nodules. The surface of the mucosae is everywhere devoid of epithelium, and is covered by a thin fibrinous covering which stains faintly with haematoxylin. Below this covering the mucous coat consists of a rich cellular matrix composed of mononuclear cells, amongst which the fundi of mucous glands are regularly placed. The mucous glands everywhere show marked catarrhal changes and degeneration of the cells lining them. Below the fundi of the mucous glands is a well-marked muscularis mucosae, broken here and there by areas of round-celled infiltration.

In the submucous tissue are extensive areas of round-celled infiltration, mainly of mononuclear cells. Scattered irregularly in this zone are well-marked tuberculous nodules, showing epithelioid cells, giant cells, and early caseation. At one or two points the mucous glands have broken through the muscularis mucosae into the submucous tissue evidently as an attempt at healing. In certain areas the extensive tuberculous infiltration of the subepithelial zone has caused entire stripping of the mucous membrane. The muscular coats of the gut are extensively infiltrated with areas of round-celled formation, showing epithelioid cells and well-formed giant cells. The subperitoneal coat also shows small nodules of tuberculous deposit.

Appendix Vermiformis.—The wall shows similar changes to those seen in the caecum—namely, catarrhal changes in the mucous coat, with small tuberculous nodules in the submucous, muscular, and subperitoneal zones.

Lymphatic gland in the mesentery of the caecum shows many small areas of epithelioid formation and several areas of epithelioid cells and well-marked giant cells in which there is early caseating change.

HYDRONEPHROSIS AND TRIFID URETER.

MR. BARLING also showed a specimen of hydronephrosis and trifid ureter removed from a middle-aged man who had never had any symptoms of trouble until a fortnight before his admission to hospital, when he noticed a swelling on the right side of the abdomen. Physical examination indicated that this was a large hydronephrosis. At the operation the kidney was exposed and found to be hugely dilated, the renal substance almost completely atrophied. Proceeding from the pelvis of the kidney were three ureters, all of them larger in circumference than the index finger; as these were followed downwards two of them were coalesced. The two ureters now exposed were stripped right down into the pelvic cavity, and no obstructive cause was found outside them. Each ureter was then opened, and a bougie passed down each into the bladder, in which the ureters appeared to open separately. No calculus or other obstructive cause was found, and the kidney was removed, the ureters being divided as low down as possible. Although the patient was ignorant of the fact that there was anything the matter with his kidney until a little time before operation, it is highly probable that the hydronephrosis had long existed and was brought about by some congenital defect of the ureteral walls permeating the bladder.

[illegible] A sister of [illegible] from whom [illegible] partial intrauterine development, [illegible] normally in her head [illegible] the [illegible] was connected [illegible] evidences of [illegible] were formed by [illegible] be a [illegible] of [illegible] epithelium and contained [illegible] parts of [illegible] [illegible] A [illegible] [illegible] [illegible]

and human tuberculosis were quite distinct diseases. The Commission reported bacilli of both types from cervical glands. He believed the two were varieties and not types.

Dr. H. H. Tooth asked what precautions were taken with regard to injections; were opsonic observations made? Was it possible for hospital physicians to get bovine tuberculin?

Dr. F. M. Sandwith said that in Egypt all forms of tuberculosis were frequently seen except tuberculous meningitis. His experience had been that tuberculin injections gave bad results in surgical tuberculosis. He had never seen lupus with phthisis pulmonalis. Women in Egypt suckled their children for even two years, and all other milk was boiled, and among the cattle tubercle was rare, yet tuberculosis was common.

The President was in accord as to the rarity of surgical tuberculosis with phthisis.

Dr. Raw replied.

CLINICAL SOCIETY OF LONDON.

W. Hale White, M.D., F.R.C.P., Vice-President, in the Chair.

Friday, February 22nd, 1907.

Spontaneous Rupture of Meningocele.

Mr. Raymond Johnson and Mr. C. E. Reynolds described the case of a woman, aged 22, who for two years had noticed a tumour in the sacral region. It was of the size of a large orange, and after spontaneous rupture of the thin skin covering its summit large quantities of cerebro-spinal fluid continued to escape. An operation was performed. The small opening by which the sac of the meningocele communicated with the theca was ligatured, the rest of the sac removed. On the sixth day after operation cerebro-spinal fluid again escaped from a small opening in the otherwise healed wound. For thirty-seven days the free discharge continued, when a very small opening into the theca was closed by suture. No further leakage occurred, and the wound remained soundly healed. Several months later the woman was in perfect health. It was interesting that the tumour was not noticeable until adult life, although a small dimple in the skin over the coccyx had been present from birth; further, that during more than a month, when cerebro-spinal fluid was constantly escaping in large quantities, the patient presented no symptoms directly attributable to the loss.

The Chairman referred to Dr. StClair Thomson's case, in which the quantity of cerebro-spinal fluid that dripped from the nose was thrice the quantity of fluid passed by the kidneys, and yet the patient was in perfect health.

Dr. W. G. Spencer had operated on a similar case, which was leaking and suppurating. In the present case the amount of fluid might, he suggested, have been due to local sepsis. He also detailed two operations on infants suffering from a like condition which he had performed.

Mr. C. H. Fagge said that to prevent leakage he first sutured the dura transversely, then dissected elliptical flaps from the deep fascia of the erector spinae, which he sutured longitudinally over the dura.

Mr. R. Johnson, in reply to Dr. Alexander Morison, said that no changes in the pulse-rate had been noted as due to the loss of fluid, though it relieved the headache. The cultures from the fluid were sterile until quite late; and the appearance of *Staphylococcus albus* was not accompanied by increase of the escaping fluid.

Carcinoma of Jejunum involving Colon.

Mr. C. H. Fagge described the case of a woman, aged 33, who had had attacks of abdominal pain, relieved by vomiting, for three months. A hard lump was felt in the right iliac fossa. To the left of this was seen a peristaltic wave in a large coil. The patient looked ill. Temperature 96° F., pulse 120; she vomited several times. The abdomen was opened on the day of admission to Guy's, December, 1905. A malignant mass was found in the jejunum 18 in. from the duodenum, involving the hepatic flexure. An area of the jejunum and colon was resected and closed; double lateral anastomosis of jejunum to jejunum and ascending to transverse colon was performed with small and large Murphy buttons; the former was passed about six weeks, the latter four weeks, after operation. Microscopically the growth was a spheroidal-cell carcinoma.

The Chairman commented on the youth of the cases recorded, and described a case in a man of 32, diagnosed as duodenal ulcer, in whom, however, a jejunal growth was found and short-circuited, the patient dying five months later with secondary deposits.

Mr. Kellock asked if any symptoms of stricture had followed the use of Murphy buttons, and said the case itself practically prevented the adoption of the two-stage method of procedure.

Mr. Fagge, in reply, said there had been no vomiting or constipation since the operation. Generally he considered the use of Murphy's button to be deprecated, but in many cases it saved valuable time.

Excision of Shoulder-joint: New Method.

Mr. T. H. Kellock read this paper. In excision at the hip the section of bone was made within the capsule, and no muscular attachments to the femur were disturbed. In excision at the shoulder the humerus was divided through the surgical neck, insertions of important muscles into the tuberosities were sacrificed as well as, in a child, the most important seat of growth of the humerus. The operation described was an endeavour to save these muscles and the epiphysial line whilst preserving a movable joint; it was carried out by removing the necessary amount of bone from the scapular instead of the humeral side of the joint. After opening the joint by a long anterior incision, the muscles attached to the upper end of the humerus were retracted, the coracoid process was broken but not completely separated, and turned a little downwards with the origins of the biceps and coracobrachialis muscles. The neck of the scapula was sawn through and the glenoid cavity completely removed, sacrificing only the long tendon of the biceps and a part of the middle head of the triceps, structures of comparatively little importance. The operation had been performed on a man, aged 41, who had sustained dislocation of the left shoulder complicated by fracture at the surgical neck of the humerus eleven weeks previously. The fracture had united firmly in good position, but the subcoracoid dislocation remained unreduced. Passive movements were commenced early. The result had been fairly satisfactory; flexion and extension were quite good, abduction fair, but rotation of the humerus on its own axis poor, but all these movements were improved by exercise and rubbing. Another time it might be advisable to add a posterior incision and divide the neck of the scapula from behind.

Mr. W. G. Spencer considered the term "excision" unsatisfactory; it might mean much or little. Special care not to injure the circumflex nerve was necessary.

Mr. R. Johnson said, in regard to subsequent passive movements of the arm, he suspected that too vigorous early movement was apt to increase the cicatricial tissue and thus cause stiffening.

Mr. Kellock, in reply to Mr. Watson, said his sacrifice of the long head of the biceps and part of that of the triceps was unimportant, as they had other attachments. The operation he proposed was rarely applicable in cases of tuberculosis, which usually affected the humerus more than the scapula.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

R. D. Purefoy, M.D., President, in the Chair.

Friday, February 1st, 1907.

Obstetrical Chart.

Dr. Thomas Neil exhibited a chart showing a convenient method of keeping a record of obstetrical cases.

Dr. Hastings Tweedy, Sir A. V. Macan, and the President referred to the importance and value of being able to refer to previous records in obstetrical cases.

Sterilization of Catheters.

Dr. Henry Jellett exhibited apparatus for sterilizing ureteral or other forms of gum-elastic catheters by means of formalin vapour. The exhibit consisted of two instruments—one of which had been brought from Germany by Dr. Gunn, who thought that it had been originally devised by a Japanese; the other Dr. Jellett had made for himself from particulars given by Dr. Gunn. Sterilization was effected by the constant passage of coal gas impregnated with formalin vapour through the catheter; the gas was subsequently burnt off in the Bunsen burner, which

supplied the necessary heat for generating the formalin. A series of experiments were undertaken by Dr. Rowlette to determine the efficacy of the sterilizer. He tested the sterilizer with cultures of (1) *B. coli communis*, the most common bladder infection; (2) *Staphylococcus aureus*, another common infection; (3) *B. anthracis*, an organism extremely resistant to disinfectants. An active fluid culture of a couple of days' standing was employed in each case. In that culture an elastic catheter was allowed to stand for ten minutes. The catheter was then placed in the sterilizer for half an hour. It was then dipped and rinsed in melted agar, which was immediately poured out into a Petri dish and incubated at blood heat. In no case did any colonies appear. Controls were employed to establish the vitality of the cultures.

Remarks were made by Dr. HASTINGS TWEEDY, Sir A. V. MACAN, Dr. KIRKPATRICK, and Dr. DONNELLY; and Dr. JELLETT, in reply, said he was not disposed to take the view that formalin in the dry state would not cause sterilization. The larger apparatus would take in a cystoscope, but he had not tried it on metallic instruments. The same objection would, however, stand in regard to them as to the use of the apparatus in disinfecting dressings and sponges—namely, that there would be a certain amount of deposit of formalin left on them which would leave sponges and the like in a too irritating state. This objection did not apply to catheters, as they could be washed in sterilized water, and the formalin thus removed.

TECHNIQUE OF OPERATIONS ON THE APPENDAGES.

Dr. HENRY JELLETT read a paper on this subject. The first part dealt with the methods, which he approved of and adopted, of performing salpingectomy, oöphorectomy, and salpingo-oöphorectomy, as well as plastic operations on the ovaries and tubes. After discussing various practical points connected with the performance of these operations he laid down the following principles: (1) *Never tie the broad ligament with interlocking sutures or with a Staffordshire knot.* The objections to both methods were that, first, they pulled the top of the ligament together and so shortened it, and the contracted ligament in turn tended to drag the uterus backwards; secondly, they necessitated the use of silk, as it was difficult or impossible to include so great a mass tightly in a catgut ligature; thirdly, there was always a certain amount of risk of the slipping of ligatures so applied unless a considerable amount of tissue was left beyond them, and as this tissue was deprived of blood, and possibly contained [illegible] it might subsequently slough and give rise to the formation of adhesions or even to general infection. (2) *Never use silk in the presence of inflammation, as it tends to become a permanent depository of infection.* (3) *Never remove more of the appendages than is necessary.* The retention of even a portion of the ovary added greatly to the future comfort of the patient, and if to this was added even the stump of a patent Fallopian tube, there was present at any rate the possibility of a future pregnancy instead of the certainty of sterility. (4) *Always conclude the operation by performing retrosuspension of the uterus.* Otherwise the uterus was almost certain to fall back and contract firm adhesions, thus often causing the persistence of pain. The second part of the paper dealt with the statistics of [illegible] cases of pelvic disease on which he had operated according to the methods and principles enunciated in the first part. It also contained a table showing the chief details of the operations in each case, the result of the lesion, the immediate result, and the condition of the patient when last seen.

Sir A. V. MACAN said the paper opened up the whole question of operations on the appendages. The feeling on the Continent was in favour of the vaginal route as against the abdominal. The question of infection was of great importance. There were two possible infections, and the deciding of which was present was a very important question. Another question was whether it was better to remove the uterus or keep it up to the abdominal wall. The rule he always followed was [illegible] if possible; next the least operation possible, and always on the assumption of infection where possible. The possibility of a pregnancy occurring in the future had to be considered when objecting to the removal of the tubes, and the question of a sufficiency of ovarian tissue to secure menstruation to continue could not be too highly praised. The feeling abroad in connexion with the danger of silk as a focus of infection was that it was impossible to prevent it; hence catgut was favoured for everything except the abdominal wall and intestines.

Dr. HASTINGS TWEEDY said that Dr. Jellett's treatment in the cases he had cited was almost identical with his own, and they were agreed on the point of saving as much as possible. He considered the Staffordshire knot a quicker method of tying off the broad ligament than any of those suggested, and it was less liable to cause subsequent adhesions. There was not any difference of opinion in regard to the use of silk in an infected case; the burying of it in the midst of septic matter must end in disaster. But it had enormous advantages in other cases. If fine silk was used and was boiled in corrosive sublimate, it was capable of resisting germs for five or six days; and he had absolute proof that silk was absorbed. The value of drainage lay in the causing of irritation and the exudation of serum that might possibly wash out some of the germs; but drainage after twenty-four hours was seldom of any use.

Dr. THOMAS NEIL said that silk, being an animal substance, should be absorbable, but it was necessary that it should be unmixed with vegetable fibre.

The PRESIDENT said he was fully in accord with the value of preserving as much of the organs as they could where there was the least possibility of function continuing afterwards. He had been accustomed to tying the broad ligaments *en masse*, and however more artistic Dr. Jellett's method might be, he was not sure that it had any great advantage over the other. He had no doubt that silk was absorbable. In operations for the removal of the appendages, where a large extent of raw surface was left on the face of the rectum, he had been content to allow the uterus to fall back, hoping thereby to prevent contact with intestines; and he thought that in some cases that was better than lifting the uterus above the appendages and leaving a raw surface as a possible source of subsequent adhesions.

Dr. JELLETT, in reply, said he brought forward his cases as going a certain way to show that there were no bad results attributable to the abdominal operation. The predominant feature of his series of cases was not so much the accumulation of large quantities of pus in the tubes and ovaries as extensive intestinal adhesions. That being so, he could not have got as good after-results by the vaginal route, nor could he have left the genital organs in as satisfactory a condition as appeared on subsequent examination.

MEDICAL SOCIETY OF LONDON.

C. W. MANSELL MOULLIN, M.A., F.R.C.S., in the Chair.

Monday, February 25th, 1907.

MALIGNANT GROWTHS OF THE NASO PHARYNX.

Mr. F. S. EVE read a paper on this subject, which is printed at page 485.

The CHAIRMAN said that the operation specially described gave thorough access to the naso pharynx, but he himself had practised with satisfaction the other operation mentioned, using Fergusson's old incision, and turning the upper jaw outwards.

Dr. PARKES WEBER and Dr. POYNTON asked for further information concerning prognosis, especially in regard to palate cases.

Mr. EVE, in reply, said that as the experience of any one man in such cases was small, he could not give a categorical answer.

BILHARZIAL HAEMATURIA, CAUSING PAPILLOMATA OF THE BLADDER.

Mr. H. J. CURTIS read a paper on a case of bilharzia in a Matabele boy, aged about 10 years. When seen he had suffered for some months from pain over the bladder, frequency and incontinence of urine, and haematuria. The case occurred in Rhodesia, where infection by bilharzia, except in people coming from outside, was practically unknown. The symptoms indicated a villous tumour, and the bladder appeared to contain masses of growth. Suprapubic cystotomy was performed, and the lining membrane of the bladder was found to be congested and studded with massive growths, three or four of which formed papillomata about two-thirds of the length of the little finger. The growths, wherever

possible, were excised, and the nodular condition of the vesical mucous membrane treated by daily irrigation through the wound with a solution of silver nitrate. Two years after the operation the condition of the patient was reported as satisfactory, and there had been no obvious recurrence of symptoms. Microscopic examination of the papillomata removed showed the presence of ova of the *Bilharzia haematobia*. Such definite tumour formation as the result of irritation by an animal parasite was interesting in relation with the more complex question of the origin of cancer. The view formerly held, that infection occurred chiefly through the urethra or rectum when bathing, was contested by recent investigators, who concluded that infection resulted through drinking contaminated water; while Looss, from experimental work on animals, considered that the parasite was able to make its way through unbroken skin. No drug so far had given uniformly satisfactory results, but extract of male fern certainly seemed to effect a prompt cure for the time being.

LIVERPOOL MEDICAL INSTITUTION.

Frank T. Paul, F.R.C.S., President, in the Chair.

Thursday, February 14th, 1907.

Submucous Resection of the Nasal Septum.

Dr. W. Permewan read a paper on this subject. He described in detail, and illustrated by lantern slides reproduced from Dr. StClair Thomson's drawings, the method introduced by Killian of Freiburg, and then briefly indicated the procedure adopted by Freer of Chicago. Dr. Permewan insisted on the advantage of operating under cocaine without a general anaesthetic, and said that there was practically no pain, no shock, and no haemorrhage. He thought that a satisfactory result could always be predicted if the operator had sufficient experience and sufficient patience, but the operation should not be undertaken by any one unskilled in nasal surgery. He then demonstrated the operation on a dissected specimen, and showed the instruments used.

Dr. J. E. McDougall thought the submucous operation had a great future before it. He considered it an interesting speculation whether the efforts which had been made in recent years to establish free nose breathing in children would reduce the frequency of intranasal operations in later life.

Mr. T. Guthrie could corroborate what Dr. Permewan had said as to the great value of the operation. He asked what Dr. Permewan considered to be the earliest age at which the operation should be performed. Freer regarded it as suitable for all ages, but stated that in children a recurrence of the deformity was probable unless the operation was a very thorough one. Was there any risk that in children the operation would involve a subsequent dropping of the bridge of the nose?

Dr. J. Bark and Mr. T. C. Littler Jones also spoke.

Pulsating Exophthalmos.

Mr. A. Nimmo Walker showed a case of pulsating exophthalmos successfully treated by ligature of the common carotid artery.

The patient, a married woman, aged 29, had been admitted into St. Paul's Eye and Ear Hospital in May, 1906, with the history that six weeks previously she had been struck on the left temple by a large piece of wood, and on the following day had noticed a swishing noise in the head which became gradually worse, with increased swelling of the left eye. The left eye was found to be proptosed, with dilated episcleral veins, hazy cornea, and oedematous conjunctivitis, while the right eye also was congested and prominent; pulsation could be felt in both eyes, and, with the murmur, was controlled by pressure on the left common carotid. The artery was tied, and a month afterwards the eyes were about normal. At the present time, eight months later, the only abnormality was enlargement of the episcleral veins of the left eye, the sight of which had recovered from doubtful perception of light to normal vision with the help of a correcting lens; the vision of the right eye had always been normal.

Mr. Walker thought that in this case the artery had leaked into the cavernous sinus, but that this, far from being a contraindication to operation, as had been previously taught, was indicative of its immediate necessity; whether the lesion was aneurysm or aneurysmal varix, early ligature was recognized now as the right treatment, a result largely due to the teaching of his father, Mr. G. E. Walker, who had advocated this operation ever since his first case in 1878.

The Housing of the Working Classes in Liverpool.

Dr. E. W. Hope, Medical Officer of Health, gave an account of the position of the city in regard to insanitary property, and the measures taken by the Corporation to deal with it. He explained the reasons in connexion with the rapid growth of the city which led, during the early part of last century, to its development upon lines resulting in the erection of many thousands of dwellings of an insanitary character. A heavy legacy of insanitation had thus been left for future generations to deal with. In 1883 a special committee was appointed to deal with the masses of insanitary property existing in the city, and from that year onwards, at varying rates of progress, the work had been proceeded with under the provisions of the Liverpool Sanitary Amendment Act. Dr. Hope explained the difficulties which had to be contended against, and stated that upwards of a million sterling had been spent by the Corporation in removing insanitary dwellings and re-erecting suitable habitations upon their sites. The compensation for public-house property constituted a heavy item in the outlay. These premises, however, were not spared, as the Council was well alive to the immense injury done by drunkenness in this city. Apart from the action of the Corporation in removing slums, commercial enterprise has been active; railway companies, warehouse companies, and so forth, had swept away large numbers of insanitary dwellings. In 1833 some 16,000 insanitary dwellings existed. These had now been reduced to between 6,000 and 7,000, and the Corporation had recently decided, pending the sanction of the Local Government Board, to deal with six more areas under the Housing of the Working Classes Act, and to erect suitable dwellings upon them. These schemes were estimated to cost £270,000. The paper was illustrated by a number of slides showing the old and the new buildings, and the various points in connexion with these latter.

Dr. S. H. House exhibited a number of lantern slides illustrating the life of the slum children, made from photographs taken in the course of his work as Medical Officer to the Society for the Prevention of Cruelty to Children.

Dr. G. G. Stopford Taylor said that the demolition of public-house property would not stem the tide of drunkenness. Education, regular employment, and public opinion could alone effect a reformation in the habits of the drunkard, and when these failed his children should be taken from him and brought up at the expense of the State in order to protect them from their vicious surroundings.

Dr. W. Carter thought that the solution of the slum problem would largely depend upon the solution of the drink problem. Every successive medical officer of health for Liverpool had complained that their efforts at improved sanitation in the houses of the poor were rendered largely nugatory by the prevalence of intoxication. Years ago, when the late Professors Parker and Sanderson were invited by the Corporation to inquire into the causes of the insanitary condition of Liverpool, they gave a conspicuous place in their report to drunkenness among the working classes. The facts stated by Dr. Hope that £5,000 a year were taken at three public-houses in one of the lowest districts of the city, and that, in the whole city from 1½ to 2 millions sterling were spent yearly in intoxicating liquors, were alarming. It was a good thing for Liverpool that its great public officers were not merely hard, routine officials, but had the enthusiasm of humanity to aid them in their great work.

Dr. A. G. Gullan, Dr. Whitford, Dr. J. Hill Abram, and Dr. H. Armstrong also spoke.

Harveian Society of London.—At a meeting held on February 14th, Dr. Sidney Phillips, President, in the chair, Mr. Raymond Johnson recorded the case of a man, aged 35, in whom fatal extravasation of urine occurred from ulceration of the ureter by an oxalate calculus weighing only 8 gr. The only symptoms were an attack of vomiting followed by signs of localized inflammation in the left iliac region, which were regarded as due to peritonitis. Operation revealed the presence of an abscess in the retroperitoneal tissue, containing ammoniacal urine and pus. Severe haemorrhage from the abscess on the

following day so weakened the patient as to prevent further interference, and death occurred on the fourth day. The abscess was found to extend along the whole length of the left ureter, and in the cavity the small stone was found. The left ureter, at a point 2 in. below the renal pelvis, presented an ulcerated opening in its wall. The urinary organs were otherwise normal, and no other calculi were present. Mr. CAMPBELL WILLIAMS and Mr. CRISP ENGLISH discussed the case.—Dr. T. B. HYSLOP read a paper on psychorhythm and recurrent psychoses. He dealt with cases characterized by recurrence at fairly constant intervals. The relationship of season and climate to mental disturbances was referred to, although insanity was not more common in hot climates than in cold. The exaggerations of the psychorhythmic process, which tend to cross the borderland of insanity, fall into two large groups, and may be described as perversions of mind due to (1) deprivation of the factors pertaining to complete consciousness, (2) faults in metabolism and toxaemia. In the former class the most interesting cases were those of partial consciousness. In referring to some of the recurring psychoses which are coincidental with or alternating with metabolic processes, Dr. Hyslop discussed the following groups: (1) Alternations, (2) recurring insanities of metabolic origin, (3) recurring insanities of bacterial origin. The commonest forms in the second group were periodical melancholia, periodical mania, and circular insanity (*folie circulaire*). Reference was made to Bruce's work on leucocytosis in insanity. The paper was discussed by Mr. CAMPBELL WILLIAMS, Dr. F. J. POWELL, the PRESIDENT, Dr. JOHN BROADBENT, and Dr. SPILSBURY. Dr. HYSLOP replied.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 1st, Mr. L. A. BIDWELL (in the absence of the President, Dr. L. A. Mark) in the chair, the following pathological specimens were shown: — The PRESIDENT: Drawings from specimens of cancer of the tongue. Dr. COUTTS: (1) Congenital malformation of the heart; (2) purulent pericarditis; (3) tuberculous pneumothorax; (4) sarcoma of the bladder. Mr. J. PARDOE: (1) Calculi in both kidneys and ureters; (2) malignant growth of bladder invading iliac vessels: (3) Malignant hypernephroma. Dr. LIONEL PROVIS: (1) Fibroma of ovary; (2) adenomyoma of uterus with microscopic sections. Dr. CRISHOLM WILLIAMS: *X*-ray photographs, and lantern slides of patients treated by *x* rays. Dr. DAVID ARTHUR: Skiagraphs and orthodiagraphic tracings of cases of aneurysm and heart disease. Mr. CECIL LEAF: (1) Cyst of the breast with intracystic growths; (2) multiple cystic tumour of the breast. Mr. VALETY BALDWIN: (1) Enlarged trabeculated bladder due to enlarged prostate; (2) appendix containing a mulberry calculus; (3) large gall-stone causing intestinal obstruction. Dr. MACNAUGHTON JONES: A collection of specimens of uncommon uterine and ovarian diseases. Dr. E. F. TRAVERS: An early vesicular mole. Dr. J. M. BURNSIDE: (1) Pilonidal sinus post coccyx; (2) chorion-epithelioma of the testis, (3) tissue invaded by bilharzia, and other specimens. Dr. ARTHUR COTTERILL and photomicrographs of ringworm. Dr. SOLOMON MYERSON: Microscopic specimens of *Trichophyton sporoides* (ringed hair). Dr. ERASMUS WILSON: (1) Microscopic specimens of gout of the skin; (2) microscopic specimens of deposits of Deane and Dahnhardt. Mr. PERCY DUNN: (1) Glioma of the retina; (2) sarcoma of the upper jaw; (3) staphyloma of the cornea. Mr. F. D. SHAW: Specimens of testes with secondary deposits in groin and liver. Dr. G. C. LOW: (1) Plasmodium of malaria; (2) filaria; (3) trypanosomiasis; (4) specimens of medical anatomy. Dr. J. H. DAUNT: Specimens of uterine, ovarian and tubal disease.

THE NEWCASTLE-UPON-TYNE CLINICAL SOCIETY.—At a meeting held on February 14th, Dr. G. EMERSON, the President, in the chair, the following cases were exhibited. Dr. G. EMERSON: (1) A man, aged 27, with old standing dislocation of the lens in the left eye, recent haemorrhage in the right; (2) a boy, aged 15, the subject of retinitis pigmentosa; (3) photographs of cases in the special school for defective mental children. Dr. W. E. ARMSTRONG: A case of tertiary syphilitic disease of the tongue in a woman. Mr. H. E. SCOTT: (1) Excision of ulna, followed by irregular growth, resulting in radial deformity; (2) specimen exhibiting a perforated vessel by fracture of femur, followed by gangrene. Malignant growth, probably sarcoma, in neck, tumour in groin, two cases of tuberculous dactylitis, ectopia vesicae in an infant, hypospadias in an infant, chronic tumour, tuberculous abscess of chest wall were shown, with notes, by Mr. J. W. LEECH. Cases of coxa vara, with *x*-ray photograph; specimens—ectopic gestation, syphilitic testicle, Mr. J. CLAY. Villous growths removed from the bladder, a series of four specimens, with illustrative notes, by Mr. G. G. TURNER, who concluded that, as the history of nearly every advanced case of malignant disease of the genito-urinary tract was notable for the occurrence of early neglected haemorrhage, a single attack of urinary bleeding, if not clearly depending on nephritis, demanded cystoscopic examination. Dr. COLLIS contributed a paper on some notes on circumcision, which led to an interesting discussion on the methods of operation and after-treatment of a surgical procedure characterized as one of the very few still left to the general practitioner. The SECRETARY (Mr. J. W. Leech) drew the attention of members to the fact that the annual address would be delivered on April 4th by Dr. Robert Hutchison, of the London Hospital, and that the annual banquet would be held on the evening of the same day.

SOUTH-WEST LONDON MEDICAL SOCIETY.—At a meeting held on February 13th, Dr. M. MACKINTOSH, President, in the chair, an address was given by Mr. A. H. TUBBY on some common deformities of children occurring in general practice. The chief part of the address was devoted to a consideration of various forms of deformity of the spine. Attention was drawn to the importance of early diagnosis in spinal caries before the occurrence of deformity; it was invariably preceded by a stage characterized by failure of the general health and by the "guarded attitude" in which the spine was held. The grunting respiration elicited by placing the child in a prone position across the knees was distinctive, and more reliance should be placed on distal or radiating pains than on local pain. Muscular rigidity, limited to a few vertebrae, preceded the bony rigidity with general contraction of the spinal muscles. It was necessary to be on guard not to confuse lateral curvature with posterior projection of the spinal processes with caries of the spine associated with a lateral curve due to unilateral caries of the vertebral bodies. In the matter of treatment it was pointed out that the cure required a recumbent posture for years rather than months; he had been disappointed with the results of laminectomy for compression paraplegia, finding that recovery followed rest in most cases, and that laminectomy was of little value except where pus could be evacuated. Mr. Tubby was less inclined than formerly to treat all abscesses by incision and drainage, preferring to close the wound and treat it aseptically. The immediate reduction of spinal deformity by successive stretchings was of value, but owing to the great difficulty, especially in out-patient practice, of obtaining prolonged rest, most cases relapsed. The differential diagnosis from rickety kyphosis was given, and models and drawings of apparatus were shown, with photographs of various types of deformity. In dealing with the causes of lateral curvature, attention was drawn to the influence of unequal legs; and the difficulty of diagnosis and treatment in cases of crossed asymmetry was mentioned. The treatment fell under the four headings of rest, exercises, massage, and support. Two schools of treatment had arisen, by exercise and by supports; but in the lecturer's opinion every case could not be adequately treated by either method; discretion must be used in the choice of treatment, and in some both methods might be combined with advantage. Deformed chests, spasmodic wry neck, and coxa vara were briefly referred to; the importance of prolonged support in cases of osteotomy for genu valgum of bony origin was insisted on, while the futility of operation in genu valgum of ligamentous origin was shown. The various forms of flat foot were discussed and explained; splints and supports of different forms were shown, and the good result in some cases of excision of an inch of the peroneal tendon was mentioned.

The appointment of Dr. J. B. Christopherson, Senior Medical Inspector of the Sudan Government, to be Director of the Sudan Medical Department, is announced in the *Sudan Gazette* of January 1st. The appointment dates from January 1st, 1907.

REVIEWS.

NUTRITION AND DIET.

THE volume *Diseases of Metabolism and of the Blood*,[1] in the series entitled *Modern Clinical Medicine*, is an authorized translation from *Die Deutsche Klinik*, published under the general editorial supervision of Dr. SALINGER of Philadelphia; it deals with diseases of metabolism and of the blood, animal parasites, and toxicology, and is edited by Dr. RICHARD CABOT, whose work on haematology is well known on both sides of the Atlantic. The articles are contributed by leading German clinicians, among whom may be mentioned such well-known names as those of Naunyn, Ebstein, C. A. Ewald, Ehrlich, von Leube, Senator, and von Jaksch. The chapter on metabolism, written by Weintraud from the purely German standpoint, does not take into account Chittenden's work, to which attention might have been drawn by an editorial note; notwithstanding this defect, there is much in it which is worth careful study. It contains, for example, a table giving the "rest values" for oxygen consumption and carbonic acid excretion in various diseases, comparing them with the standard of healthy individuals. We may briefly summarize this table by stating that it shows that while in Graves's disease both are greatly increased, in myxoedema both fall to a minimum, but rise again after feeding with thyroid gland; in fever they are, as a rule, moderately high, under certain conditions reaching a maximum; in diabetes, which Bouchard puts into his class of diseases characterized by "slowing of nutrition," the figures correspond very closely with those of health, as they do also in chlorosis and secondary anaemias, the only condition of which it may be said that the consumption of O and the excretion of CO_2 are decidedly reduced, being obesity; hence the difficulty sometimes experienced in reducing the weight of obese persons, even on an exceedingly low diet. We often see the reverse condition in perfectly healthy but lean persons who eat largely without producing any increase of their weight, so that it is not the amount of food which is the really decisive factor in the interchange of energy; there must be some inherent and individual quality of the cells by virtue of which they, on the one hand, consume all the nutriment they receive, or, on the other, store it as fat. Von Noorden, in his article on nutrition, holds that for each individual there is a definite standard, particularly with regard to the amount of fat which must be recognized as the optimum for him, and which it is the duty of the physician to discover. Persons predisposed to tuberculosis are endangered by leanness, and, to a certain degree, corpulence protects them. Neurasthenics also feel better when they have a large amount of adipose tissue, while those suffering from disease of the heart, Bright's disease, and emphysema are injured by superfluous fat. Fat is a hindrance to hard, muscular work; but a certain development of corpulency in those who have passed the prime of life and are not obliged to work hard is well borne. An increased quantity of food causes growth of fat, but not of muscle; but the converse, that a reduction of the quantity of food is followed by waste of both fat and muscle, seems to be contradicted by Chittenden's results. It may be doubted whether the leanness of neurasthenic patients is adequately explained as the consequence of nervous dyspepsia, for many neurasthenics who are entirely free from dyspepsia, and eat largely, remain very lean while they are young. The value of overfeeding combined with rest in the treatment of Graves's disease is rightly emphasized. Naunyn's chapter on diabetes is too short to allow space to deal with the numerous subjects which surround it, and therefore can hardly be regarded as satisfactory. The rapid recoveries sometimes seen from acute diabetes are not, we believe, permanent; the patients later on relapse and die. It is generally supposed that the transitory glycosuria which follows injuries should not be regarded as a transitory diabetes, but as a sudden discharge of the glycogen reservoirs comparable to that produced by Claude Bernard's puncture. It is unfortunate that the author of this article should express opinions at variance with the table already quoted, but he certainly speaks of diminished oxidation in diabetes as a fundamental fact. The section on treatment is good, as he grasps the three great principles of individualizing each case, weighing the diet, and limiting the quantity of albuminous food. The author of the chapter on diabetes insipidus has not studied with care the cases published in this country of secondary renal changes in this disease, or he would not believe that they have been confounded with pyelitis. The second part of the book, dealing with blood and blood diseases, gives a fairly adequate account in the space allowed, but each part is too brief for the subjects to be expanded as they might so well be by the masterly hands to which they have been entrusted, so that the reader feels some disappointment at not getting more from such men as Ehrlich, Lazarus, and Grawitz. On the whole, we must say that, while this is a compendious book of reference, it is hardly equal to the standard of the recent systems and encyclopaedias published in England and America.

As we reviewed the first edition of FRIEDENWALD and RUHRÄH'S *Diet in Health and Disease*[2] so recently as May last year, there is no reason to discuss the second at length. The most interesting addition is the account given of Klemperer's diet for oxaluria. The principle of this is to select those foods which contain a minimum of calcium and a maximum of magnesium salts. In addition to the diet, Klemperer recommends the administration of 30 gr. of magnesium sulphate daily to be given for a long period of time. He allows meat or fish of any kind except glands, but excludes milk and eggs on account of the large amount of lime they contain; fat of any kind may be given, except the yolk of egg. Stale bread and rusk are the best carbohydrates, but rice, barley and hominy may be given, and "all the legumes," by which he means peas, beans and lentils; potatoes are allowed and also apples. As beverages he gives water, beer and weak coffee, and permits spirits such as whisky, alcohol neither increasing nor diminishing the excretion of oxalic acid. The articles of food to be avoided are all glands, such as thymus, pancreas, liver, and the like; anything made from gelatine; all fruits and vegetables, except the Leguminosae; tea, chocolate and cocoa; rich pastries and cakes. Another diet given in detail is that of Prochownick for contracted pelvis—it is very like a diabetic diet containing little carbohydrate—but in addition he absolutely forbids water, soup, potatoes, dessert, sugar, and beer. The quantity of food is also restricted, the object being to reduce the size of the child. It is said that on this diet all the confinements reported were easier than on previous occasions; all the children were born alive, though the majority of the mothers had had previous miscarriages. The children were lean at birth, with the bones of the head unusually mobile, but were all apparently mature in every way. It has been suggested that such a diet would favour eclampsia, but this has not been borne out by experience. There are many diet tables given at the end of the book, but we do not know on what principle some at least are constructed, nor can we express our unqualified approval of any of them. A writer on dietetics goes beyond what is expected of him when he constructs a number of tables of this kind, which, after all, are rather misleading to the general practitioner, as such tables ought to be drawn up with special reference to each particular patient. It is as irrational and unscientific to print a diet table for dilatation of the stomach as it would be to print a prescription for the appropriate medicine for that condition.

The graduation thesis of Dr. HENRI FRANÇAIS on apepsia[3] is a careful compilation in which may be found a good history of the subject since Fenwick (1870) first noted the atrophy of the stomach which occurs in certain cases of pernicious anaemia, and Ewald (1886) recognized the absence of hydrochloric acid in the stomach contents of certain cases, but it adds little to our knowledge except by giving the results of a few experiments on dogs with gastro-cytolysine, obtained by inoculating rabbits with the extract of the gastric mucous membrane of dogs.

[1] *Modern Clinical Medicine. Diseases of Metabolism and of the Blood: Animal Parasites: Toxicology.* Edited by R. C. Cabot, M.D. Authorized translation edited by J. L. Salinger, M.D. London: Sidney Appleton. 1906. (Demy 8vo, pp 650. 21s.)

[2] *Diet in Health and Disease.* By Julius Friedenwald, M.D., and John Ruhräh, M.D. Second edition. Philadelphia and London: W. B. Saunders Co. 1906. (Demy 8vo, pp. 728. 18s.)

[3] *De l'Apepsie.* Par le Docteur Henri Français. Paris: G. Steinheil. 1906. (Demy 8vo, pp. 207.)

These results were diarrhoea, sometimes vomiting, and diminution of the hydrochloric acid of the gastric juice; on histological examination the stomachs showed a certain amount of interstitial gastritis with wasting of the peptic glands. The author follows Professor Hayem in much of his description and most of his opinions. The treatment is not very striking, his chief reliance being placed on kephir.

GASTRIC ULCER.

IT was with considerable interest that we turned to Dr. RÜTIMEYER'S monograph[4] on the geographical distribution and diagnosis of ulcer of the stomach, because of the serious difficulty that every clinician feels attaches to the [illegible] determination of the presence of this condition, and consequently of the importance of any help towards the solution of the problem; but, although the book contains much good and solid work, we cannot say that it throws any light upon the obscurer parts of this subject, nor can the author tell us many things that are new or calculated to modify current beliefs.

His investigation into the geographical distribution of ulcer of the stomach shows that the disease appears to be unknown in South America, comparatively rare in Canada and the United States (although more common in the southern than in the northern States), very rare in the west coast of Africa and in Russia, but about twice as common throughout Europe, as a whole, as in Northern America. In Europe, Denmark stands at the top of the list and Switzerland at the bottom, while Austria, England, and Germany occupy about an equal and moderate position. We do not quote the figures, as we do not attach much importance to them, they having been compiled for the most part from the contributions of various authors who have written on the subject in the countries named, and therefore they seem to us not to be strictly comparable with one another, although broadly the statements made may be correct.

Dr. Rütimeyer gives statistics showing the relative number of cases in the two sexes—one set derived from clinical [illegible] and the other from the *post mortem* room or the registers of deaths. These show the peculiarity which has struck other observers, that whereas, clinically, women seem to suffer at least twice as often as men, the fatal cases of the disease occur about equally in the two sexes. Dr. Hale White would explain this by saying that a large number of cases diagnosed as ulcer of the stomach do not really present this lesion; but Dr. Rütimeyer accepts the view that the disease is more fatal in men than in women, which may be partially due to the undoubted fact that ulcer of the stomach is more often [illegible] in men than in women; so that many of the former do not come under treatment until serious and perhaps necessarily fatal symptoms have supervened. But the facts to which Dr. Hale White has drawn attention cannot be altogether disregarded, and their existence goes far to nullify the value of the tables compiled by Dr. Rütimeyer. For if it be true that young women may suffer from a disease characterised by the three symptoms of pain after food, vomiting and haematemesis without perforation of the stomach, all statistics based upon the examination of cases entered in the category of gastric ulcer become, as they present the above symptoms, must be fallacious. Dr. Rütimeyer expresses a favourable opinion of the value in surgery of the algesimetric method of [illegible], but admits that it must be used in a very guarded manner; but he does not [illegible] any trial to any comparative experiment on the effects of pressure in producing pain on stomach ulcer, who presents no symptoms of ulcer of the stomach. He does not [illegible] to attach much importance to [illegible] in about half the cases of ulcer there was evidence of some affection of the stomach not implying [illegible] lesion, yet he does not explain this very [illegible] that these may not have been pyloric obstruction. He does not think good results can be obtained by the examination of the stomach's contents or the [illegible] of blood, although their presence may help to corroborate [illegible] ulcer.

[illegible]

does he find the estimation of pepsin recommended by Hammerschlag of real value. As bearing upon the relation of anaemia to gastric ulcer, it is worth mentioning that he found the haemoglobin reduced in 82 per cent. of all his cases (200). Dr. Rütimeyer's view of the causation of gastric ulcer is that it depends upon three factors: (1) a lesion of the gastric mucous membrane, (2) hyperacidity, (3) depraved blood condition; but he admits that in addition "alterations of innervation, muscular spasm, injuries," etc., may play their part.

THE OSSIFICATION OF THE SPINAL COLUMN.

DR. ALEXANDER'S[5] account of the ossification of the vertebral column appears as one of the series of atlases, containing records of Roentgen-ray investigations, which are being published under the editorship of Dr. Albers Schönberg. In this case the atlas contains not only a series of reproductions of what must have been beautiful examples of Roentgen-ray photography, but also a critical exposition of the conclusions which the author thinks should be drawn from the phenomena he has observed. No points of very great clinical importance are revealed, except perhaps that ossification of the vertebral column is not always quite regular, and that the comparative size of the fetus is no certain criterion of the stage of ossification.

It is commonly stated in textbooks of anatomy that of the three primary centres of ossification of a vertebra that for the body appears first in the dorsal region, whilst in the cervical region the two centres for the arches precede the body centre. This statement, in the light of Dr. Alexander's investigations, requires modification. The centres for the arches appear first in the atlas, and then in a rapidly descending series. The ossification of the bodies commences in the twelfth dorsal vertebra, and passes slowly downwards, but more rapidly upwards, and the centres from the bodies of the upper dorsal vertebrae do not appear until ossification of their arches has already commenced.

Another point upon which Dr. Alexander lays stress is that the arch centres succeed each other more rapidly than the body centres, and the former extend downwards to the third lumbar vertebra by the time the body centre has appeared in the third dorsal vertebra. One of the particularly interesting points of the research is the demonstration of the slow rate at which the body centres appear below the twelfth dorsal vertebra in comparison with the rate at which they appear at higher levels: the centres for the third dorsal and the fifth lumbar vertebrae appearing simultaneously. It takes, therefore, as long for the ossification to pass through the shorter lumbar region as through the longer dorsal. It has frequently been stated, and perhaps more frequently denied, that two lateral centres appear for each body, particularly in the lower dorsal and lumbar regions. Dr. Alexander finds two centres, but not right and left. The centres he believes he can demonstrate appear at different times, and are primary and secondary, the latter eventually producing the central parts of the body. He describes no paired centres, and therefore provides no explanation of half vertebrae. The book is well worth consultation by all who are interested in the growth and development of the vertebral column.

TROPICAL MEDICINE.

Books on tropical medicine are now becoming numerous, one of the most recent, on the health of Europeans in the tropics, being from the pen of Professor LAVERAN,[6] Professor of Hygiene in the Faculty of Medicine at Bordeaux. The volume is designated the first part, and deals with the climate, the soil and with what are called the living agents of morbid aggression. It contains twenty-two lectures. It is manifest now that what has been termed, rightly or wrongly, tropical medicine cannot be all contained in any one given manual or book, the subjects included in the term being so diverse and numerous.

[illegible]

For example, under it are grouped haematology, protozoology, helminthology, bacteriology, entomology, general medicine (clinical and theoretical), and laboratory technique. Such being the case, the expert who wishes to dip deeply into the subject must have had the ordinary medical training, and then, after a study of protozoology, entomology, etc., must apply his knowledge to the peculiar kinds of cases which may properly be designated tropical. Plague, malaria, Malta fever, enteric fever, and other diseases are as common in the subtropics as the tropics, and to understand them the practitioner must see cases clinically, and know the bacteriology or protozoology, as the case may be. Judged by such a standard, Professor Layet's book fails. It is not full enough, nor does it give sufficient details, to be of much use to any one who knows the subject, or who, knowing it, wishes to look up any special point for reference. Most of the descriptions, it is clear, are second-hand, culled from the papers of those who have worked specially at the different subjects, and errors which have appeared in the originals are thus of course perpetuated. On the other hand, if the work is judged by a different standard—judged simply as a summary of the whole subject, suitable for students to listen to as lectures, not as a textbook—then the case is different, and a run through its pages will repay the reader. It is certainly up to date in all its references, and the author must have spent many a long hour in studying the somewhat abundant and widely-distributed literature. Though there is an alphabetical index at the end of the book, there is no summary of the contents of the chapters either at the beginning or end—a serious fault, and one which, if the book ever reaches a second edition, ought to be remedied. The diagrams are poor, and many incorrect and faulty. A small pen-and-ink sketch of a crithidia (p. 172) is interesting, as it very closely resembles diagrams of Schaudinn's supposed trypanosome stage of the halteridium in mosquitos. On the whole the work is disappointing.

Professor R. WURTZ, of the Institut de Médecine Coloniale at Paris, has sent us a reprint of a paper, entitled, Elementary Ideas of the Prophylaxis of Tropical Maladies,[8] from the *Revue de Médecine et d'Hygiène Tropicales*. It gives a very good synopsis of our knowledge of the prophylaxis of tropical diseases at the present day. It shows, amongst other things, how important is the part insects play as spreaders of disease, and gives the usual procedures adopted for the extermination and destruction of mosquitos. Under the heading of the drainage of stagnant waters mention is made of the interesting fact that intermittent fevers have disappeared from the districts of Amiens and Abbeville, as from the fen districts of England; but something more than mere drainage is required to explain it, as there is plenty of stagnant water round Abbeville still, just as there is in the Norfolk Broads and the fen districts. The little pamphlet will be of use to students and beginners in the interesting study of tropical diseases.

Memoir XVIII[9] of the Liverpool School of Tropical Medicine is taken up with reports of the Sleeping Sickness Expedition to the Congo, and also contains papers on Two New Dermanyssid Acarids and the Anatomy of the Proboscis of Biting Flies. The first part seems to treat of work that has already been published, dealing as it does with what is called gland palpation in human trypanosomiasis and the distribution of the disease on the Congo. In respect to the first question, the authors are somewhat carried away by their zeal. Though enlarged glands are admittedly a symptom often very diagnostic of sleeping sickness, yet so many other diseases may give rise to similar conditions that difficulties at once arise. The author's classification of the different sizes of the glands shows this at once, and a more extended study of enlarged glands in areas where sleeping sickness has never existed—not almost unknown as in their case—would have shown them dozens of natives with enlarged, hard, palpable glands without any obvious cause present to account for them. The statement on page 15, for example, that enlarged cervical glands without obvious cause, do not occur in districts from which trypanomiasis is absent, is not correct. What about natives in Zanzibar, India, and the Malay States? The distribution and spread of the disease in the Congo would tend to show that the disease is by no means quiescent there, as has often been supposed, but is spreading almost as quickly as in Uganda. It is open to serious question whether recommendation 3 on page 38 would do much good. Its application would be difficult certainly for the savage parts of Africa. The chapter on the anatomy of the proboscis of the tsetse fly lies in the province of entomology. It amplifies in some small particulars Dr. Hansen's account in Austen's monograph of the tsetse flies.

Memoir XX[10] of the Liverpool School of Tropical Medicine contains papers, one in French, on the prophylaxis of malaria in the principal stations of the Congo Free State, the others in English, dealing with animal reactions of the spirochaetes of African tick fever, and the specific nature of the spirochaete of African tick fever. The first paper discusses the well-worn theme of the prophylaxis of malaria, but the two papers on "tick fever" are very interesting. To sum them up briefly, the authors believe they have demonstrated that the spirochaete of tick fever is different from that of relapsing fever, and the perusal of their experimental work leaves this impression. The fact of being able to infect so many animals with the former and also the fact that each confers a relatively active immunity against itself but not against the other, are certainly strong points. Some further experiments might be conducted, and a study of the geographical ranges of the two diseases might be useful. One point that might be suggested about the memoirs published by the Liverpool School of Tropical Medicine is that those individual ones published throughout the year might either be dispensed with or at least reduced in number, as the same papers again appear in the general report at the end of the year, a procedure that leads to considerable confusion and expense. The last two papers reviewed are a case in point; their publication in the *Lancet* gave the authors any priority they might wish to claim, and this being so it seems unnecessary that they should now be published in a memoir and then again in an annual volume.

We may mention here, as no opportunity has previously occurred, that the *Thompson Yates and Johnston Laboratories Report*, Vol. VI (New Series), Part II, for 1905,[11] contains the following papers: (1) Trypanosomes, trypanosomiasis, and sleeping sickness; (2) Gland puncture in trypanosomiasis; (3) The nature of human tick fever in the eastern part of the Congo Free State; (4) On the external anatomy of *Ornithodoros moubata* (Murray), and (5) On the habits of the marine mosquito (*Acartomyia zammitii*, Theobald). The first paper consists of two parts, and the chief points of interest in the first part are a long series of experiments on the different trypanosomes, and a good account of treatment with atoxyl and trypan red. The second part deals with the pathological anatomy of the infection in man and animals. There is nothing new brought out in the former, nor, perhaps, in the latter, though the authors believe the changes found in the nervous system are similar to the lesions seen in sleeping sickness. This is open to doubt; certainly, many animals infected with trypanosomes never show such changes, and the section of the brain of the chimpanzee (Fig. 9) is by no means convincing. Here we have what is described as a fair number of leucocytes in a large perivascular space distended with red blood cells, but this is not the same change as the mononuclear infiltration of sleeping sickness, which is non-congestive and free of red cells. The paper on tick fever by Dr. Todd and the late Dr. Dutton is exceedingly interesting. Though a historical summary of the disease as seen on the Congo is given, little or no mention is made of previous descriptions from British Central Africa, and this is strange, as the complaint has been well known for years there, and also correctly associated with the bites of the *ornithodoros*, a bug-like tick. Again, Ross and Milne's discovery that a spirochaete

[8] *Notions Élémentaires de Prophylaxie des Maladies Tropicales.* Par R. Wurtz, Professeur agrégé Chargé de Cours à l'Institut de Médecine Coloniale de Paris. (Extrait de la *Revue de Médecine et d'Hygiène Tropicales.*) Paris: Vigot Frères. 1906. (Demy 8vo, pp. 30. Fr. 1.)

[9] Liverpool School of Tropical Medicine. Memoir XVIII. London: Williams and Norgate. 1906. (Demy 8vo, pp. 74. 7s. 6d.)

[10] Ecole de Médecine Tropical de Liverpool. Memoire XX. London: Williams and Norgate. 1906. (Demy 8vo, pp. 72–88.)

[11] *The Thompson Yates and Johnston Laboratories Report.* Vol. VI (New Series), Part II. London: Williams and Norgate. 1905. (Demy 4to, pp. 135, 4 plates.)

is the causative agent of the malady might have been accorded a little more space than the tiny subnote below the preface. A study of the authors' clinical notes on some of their cases would tend to show that the disease is not so deadly as has generally been supposed. The view that the spirochaete is probably the same as the *Spirochaeta obermeieri*, the parasite of relapsing fever, is doubtful. That a developmental process occurs in the tick is probable, especially in view of the work done on the spirochaete disease of fowls in South America, a disease which is also spread by a tick, the *Argas miniatus*.

A LOCAL METROPOLITAN HEALTH SOCIETY.

The St. Marylebone Health Society has just issued its first annual report. The Society was formed to carry out the following objects:

1. To work in co-operation with the public-health authorities, with the Poor-law medical officers, and with the charitable and social agencies of the borough of St. Marylebone.

2. To utilize the services of local medical institutions and of trained local workers and others in giving general practical instruction and advice in matters of health and sanitation to the people in their homes.

3. To arrange for the training of such local workers, and for popular lectures on health and sanitation; (*a*) for district visitors and others who are working amongst the poor; (*b*) at girls' clubs, mothers' meetings, etc.

4. To endeavour to awaken the interest of people generally in questions affecting the health of the community by the distribution of popular leaflets and pamphlets, and by promoting attention to the laws of health, especially as affecting infants and consumptive patients.

5. To report to the charitable and philanthropic agencies already existing such cases as seem to call for financial aid, but in no way to administer such relief.

It was found advisable to divide Marylebone into two districts—north and south—and a local committee was formed in each representing the various charitable and medical institutions and churches in the neighbourhood. So far these committees have confined their work to visiting mothers of infants and dealing with cases of phthisis. The great majority of the phthisis cases have been pointed out by the Medical Officer of Health, who also sends to the Society notifications of births. With a view to the instruction of visitors before taking up their work, lectures have been given on the management of patients suffering from tuberculosis in their own homes, on infant education, and on various questions affecting the health of children and adults. Lectures and informal talks have also been given with a view to instructing mothers.

Among the most important aids to the work of the Society have been the infant consultations recently instituted at the St. Marylebone General Dispensary. Here healthy infants can be under medical supervision for the first two years of their life. Visitors of the society are allowed to be present at the consultations in order to obtain practical instruction. During the nine months that the society has been in existence 112 babies have been visited by the South Committee. The majority appear to be breast-fed entirely, and where artificial feeding is resorted to, the children are usually given cow's milk and water, but it often happens that, though progressing well at the breast when they reach four or five months of age the mother gives supplementary foods of rusks, Hovis's baked flour, or some such food.

The society has been at work for so short a time that it has been found difficult to say how many infants have really done well. Of 33 infants which have reached 6 months of age, 24 have made good progress, some having begun badly and now being described by the visitor as much improved. Of these, 21 were breast-fed. Some of the mothers, especially those with first babies, seemed most grateful for advice as to how to carry it out. The difficult points appear to be irregularity of feeding, the use of a comforter, and the absence of a cot for the baby.

One important part of the work is getting the mothers to take their infants, well or ailing, to the St. Marylebone General Dispensary with infant consultation letters. The babies are there weighed and thoroughly examined by the doctors, and the mothers advised as to general treatment time and methods of weaning, etc.

South Marylebone is fortunate in that hardly any married women seem to go out to work while their infants are young. No case in which the infant has been entirely weaned from this cause has been met with, though in several a mother has gone to work for the morning only, and a bottle has then been given once a day. At the beginning of the summer a leaflet instructing the mothers on the best way of avoiding infantile diarrhoea was sent round to each one visited.

The total number of births notified to the Northern Committee was 107 up to December 31st; of these 10 are no longer traceable, 5 are dead, in 8 cases the family has moved to a distance, and of the remainder there are a few which seem almost hopeless. Eleven have shown very marked improvement. A marked interest is taken by many mothers in health matters, and it is quite clear that mistakes are almost always due to ignorance and rarely to wilful neglect.

Notifications of phthisis were at first received by the South Committee only when the patients had entered the infirmary, and it was therefore unavoidable that the cases should be for the most part advanced, and that there was little to be done beyond the disinfection of the homes, which is carried out by the health authorities. Out of 81 cases notified, 12 are known to be dead, and 4 have moved, while 15 could not be traced. Apart from the notifications received through the Poor Law, there were 14 children, but in most cases the parents did not consider the illness bad enough to require much attention, and in 2, where the condition was undoubtedly serious, treatment away from home was refused on the ground that the child would fret. In one case a separate bed was supplied through the help of the Charity Organization Society, and in several others of adults convalescent treatment was arranged for through that, or through religious bodies interested in the families. In chronic or doubtful cases this appears to be of undoubted benefit, and the only objection to it is the occasional risk of its taking the place of hospital or sanatorium treatment when the more thorough method would be of permanent and decisive good. Perhaps the most useful work so far has been done in the few cases in which, with the assistance of the Charity Organization Society, it has been possible to give help to the family of the wage earner, on condition that he should enter the infirmary, thus removing a source of danger from the home and relieving the wife of a heavy burden before her strength also breaks down. The effort is only occasionally successful, and it is extremely difficult to induce a man to remain away from home if he gets strong enough to work at all.

The total number of phthisical cases notified to the North Committee during the ten months was 125. Of these, 29 or more are known to have died; about 24 have been lost sight of through removal or because no visit is required; 41 are still being visited from time to time, and the rest (30) are probably still in the infirmary, a good many not likely to come out again. The object of the health visitors with regard to the phthisical cases is briefly to teach them how to live to the best advantage of their own healths and with the least danger to others. This can only be accomplished by frequent friendly visits, by making the patients feel that the Society has his and his family's interest at heart and is not visiting in a spirit of interference. Patients are visited in the infirmary, especially those that pass from the Salvation Army shelters and the common lodging-houses. If the cases visited at home are hopeful they have in several instances been referred to the Charity Organization Society and sent to a sanatorium. Often the only course to be urged is that the patient should leave his family and go into the infirmary. His disease is too far advanced for admission to a sanatorium, and by staying at home he is a source of danger to his relatives and a terrible drain on the family resources.

The Treasurer of Guy's Hospital has received a bequest of £1,000 under the will of the late Dr. Charles James Oldham, L.R.C.P., surgeon to the Sussex and Brighton Hospital for Diseases of the Eye for the purpose of endowing an annual prize in ophthalmology at the medical school. A further anonymous donation of £300 has been received for the fund of the Endowment of Medical Education and Research.

ROYAL COMMISSION ON VIVISECTION.

(Continued from page 458.)

Inspection in Ireland.

Evidence of Sir Thornley Stoker, M.D., F.R.C.S.I.

Sir Thornley Stoker, President of the Royal College of Surgeons in Ireland from 1893 to 1895, Professor of Anatomy in the College from 1876 to 1889, and President of the Royal Academy of Medicine in Ireland for the last three years, said he had been Inspector for Ireland under the 1876 Act since 1879. The Act had been carefully administered in Ireland and properly observed, and exceedingly free from irregularities. With perhaps very rare exceptions, he did not think vivisections were necessary for the illustration of ordinary teaching lectures to students. He read the following memorandum, which he furnished to the Chief Secretary some time ago, when he was asked to give a reason for reporting against the allowance of Certificate C to a teacher who had applied for it:

Sir,—In answer to your minute of April 10th, 1906, I beg to say that I have always taken exception to the performance of experiments on living animals in illustration of lectures. They seem to me unnecessary, as the matters taught at the ordinary lectures in medical schools are almost, if not entirely, ones of established fact, and which can therefore be demonstrated by diagrams, models and such other means. For example, one of the phenomena which lecturers on physiology sometimes demonstrate on living animals is the circulation of the blood, a matter which can be thoroughly taught without any vivisection. If it be also remembered that vivisections for this purpose are conducted on the higher mammals, and that animals suffer in proportion to their elevation in the scale of life, the cruelty of such demonstrations will be evident. Such comprehensive dissection of the living creature, as is required in most demonstrations on animals, is very prolonged and attended by suffering to some extent, even though anaesthetics be used. The struggles of an animal being anaesthetized are evidence of this, although that particular detail is a very minor one in the incidence of events. Farther, I fear that particularly in the cases of dogs, anaesthesia is not always pushed to a sufficient extent, as these animals often die from the effects of the anaesthetic if given to a full extent. I believe that such demonstrations during lectures are used more for the purpose of interesting and attracting a class than for any direct teaching value they possess. I am strongly of opinion that in any legislation which may be undertaken with a view to the revision of the Act 39 and 40 Vict., c. 77, experiments on living animals should be forbidden in illustration of lectures, on the grounds of their uselessness and, perhaps, cruelty also. Although I have taken the demonstration as an illustration, the arguments of want of necessity and cruelty apply to most, or all, of the experiments in illustration of lectures. Such demonstrations cannot but be demoralising to the young men and women who witness their performance. They seem to me to be an offence against humanity. It is unfortunate that the want of continuity in the administration of the Act, owing to the licensing authority being a political minister, subject to change of office, prevents any exact standard of opinion on debatable points, such as the one under consideration. I have found one Chief Secretary accept the views put forward in this matter, and his successors directly reverse his decision, although the same recommendations had been submitted to him.

Sir Thornley Stoker went on to say that the licensing authority in Ireland was the Chief Secretary. According to last year's report 12 licences were in force during the year. Of these, 4 expired and 2 were renewed, and 1 new licence was granted. The number of places registered for purposes of research was 14, and for the purposes of instruction 11, since the Act was passed in 1876. At present there were only 10 places where experiments were carried on. The clerical work of the Act was carried out in Ireland in the Chief Secretary's office, and the witness's functions were those of inspection and of advising and reporting upon certificates and licences, and the licensing of places. Under licence alone there had been performed in the last eight years 543 experiments; under Certificate A, 244; under Certificate B, 673; under Certificate C, 46; under Certificate D, none; under Certificate E, 2; under Certificate EE, 1; and under Certificate F, 3; being a total of 1,512. The animals experimented on were guinea-pigs, 133; birds, 76; rabbits, 769; cattle, 46; mice, 84; rats, 2; dogs, 194; cats, 5; horses, 3; goats, 13; and sheep, 6. Asked if there were any other points he wished to bring before the Commission, the witness said one point was that the Act did not mention monkeys; another was the advisability of making a change in the licensing authority in Ireland; a third was his personal objection to experiments in illustration of lectures. Asked in what direction he would amend the Act in respect of the licensing authority in Ireland, the witness said the Chief Secretary was President of the Local Government Board, but the Vice-President was the acting and working head. The Local Government Board had a number of medical inspectors; it had a medical commissioner, and had medical men at hand, therefore, to advise it; and his idea was that the Local Government Board—that is, the Vice-President—ought to be the licensing authority. In reply to further questions, the witness said applications were made in conformity with the provisions of the Act, as they were in England, to the Chief Secretary, and from the Chief Secretary it was referred to the witness for report. He wrote a minute, stating his views upon the case, and then the Chief Secretary acted as he thought fit. Asked if the Chief Secretary generally acted on his advice, he said he had never known any difference of opinion, except in connexion with the question of the illustration of lectures. He put in a table showing instances in which his advice in this respect had been overruled. Proceeding, he said he had made inspections twice a year at irregular intervals. On these surprise visits he had never found anything irregular. He had never seen any experiments in illustration of lectures (there were very few of them) in his capacity of Inspector of late years. In reply to further questions, witness said he thought experiments on dogs, and particularly on monkeys, ought to be allowed with the greatest possible reserve, because these creatures felt so much. The amount of terror that a dog felt even in being put under chloroform was rather painful to witness. He had never seen monkeys experimented on, but he had been told by reliable observers and physiologists who had that a monkey evidenced the most acute sense of fear when it was brought into the room where it was going to be operated on. In reply to Sir William Church, the witness said that he had no feeling at first about demonstrations for lecture purposes. As he got older and thought more on the subject he came to have it, owing to a growing sense of humanity. He should think it was generally impossible to keep a dog alive for two hours under full anaesthesia, or for one hour. He was led to this opinion by the fact that dogs were so susceptible to death from chloroform. He had given chloroform to dogs dozens of times, and he was never sure, if he gave a dog chloroform, that he would not kill it. A dog was much more susceptible to death by chloroform than a man. His point was that the anaesthesia could not be complete if the dog lived as long as was necessary for some of these experiments. Asked if in any of these demonstration lectures that he attended he thought he saw animals which were not completely anaesthetized at the time, the witness repeated his previous statement that he had not seen these demonstrations done in illustration of lectures himself—these major operations. He thought them undesirable from his reading and conversation, and from what he had seen about the administration of chloroform to dogs under other circumstances. Asked if the experiments to which he alluded, in which the animal was kept too long a time under anaesthesia, were not so much for circulation of the blood, but for showing blood pressures, he replied, "Yes, of late years." But there had been experiments carried on before students for the purpose of demonstration of the circulation. In advising as to the granting of licences he had no official person to assist him. The inspector was assisted in Cork, Galway, and Belfast by the Local Government Board medical inspector's report. Asked as to the condition of the animals when he made an inspection, the witness said he had always found them well cared for, well fed, and clean. Asked by Sir William Collins if he wished to amplify that answer as to the uselessness or as to the cruelty of such demonstrations, he said, in the first place, he did not want to be taken for a moment as opposing research experiments. He was talking simply of the question of illustrating a lecture, and his point was that the ordinary lectures delivered to students were lectures upon established and well-known facts, and that the students could be instructed without introducing vivisection as an illustration. Asked if he thought that many experiments were made upon living animals which were superfluous because they were repeating experiments which had already ascertained knowledge, he said he thought some

were; he was not prepared to say how many. In reply to a further question, he said he had learned only that day from the English inspector that such a body as the Association for the Advancement of Medical Knowledge by Research was referred to in cases of application for a licence. Asked as to the suppression of rabies in Ireland, the witness said it was effected by muzzling and by inoculation—experiments on suspected dogs. When a dog was suspected to have rabies the police were directed to preserve the dog and not allow it to be killed, and an inoculation of rabies was made, and he had no doubt it was largely helpful in wiping out rabies in Ireland. Asked by Sir William Collins as to his statement that if dogs were kept under chloroform for two hours he was sceptical as to the anaesthesia being complete during that period, the witness said he was. He was not an authority on such matters. Asked if he had tested the reflexes of the dog, he replied that he had not experimented on dogs himself at all. He had administered chloroform to dogs for the purpose of removing tumours chiefly, and doing a little veterinary work. Asked if he had experienced difficulty in keeping them satisfactorily under anaesthesia for any lengthy period, he said he had had no actual calamity but once. But dogs were very prone to die under chloroform. Asked if he also meant that the dog might feel when apparently under anaesthesia he said he was referring to the death of a dog under anaesthesia. In reply to Sir John McFadyean he said he was entirely opposed to Certificate C being granted. Applications for Certificate C were almost exclusively on the part of physiologists. Asked if he would go so far as to say that absolutely no assistance in teaching could be afforded by vivisection experiments, the witness said he did not go so far. He believed that a student who saw the thing demonstrated on a living animal would probably have it impressed upon him in a way that diagrams or words would not impress it: but he held that it was immoral and unjustifiable to impress upon him in that way, when it would reasonably be taught in the other way. Pressed on this point, Sir Thornley Stoker repeated that he thought students could be just as well taught without vivisections. He would not go so far as to say that no vivisection experiment that ever was employed had been of any assistance whatever in fixing a fact in the mind of a student. It was possible that it sometimes had been of use as an aid to teaching, but he did not think it ought to be done, even if it were of use. Asked, assuming that a dog was anaesthetized to the same degree as a human patient was for a major operation, where the cruelty came in, or what was the pain experienced by the animal beyond that of mere struggling, the witness said he could not say. On its being put to him that it was not the case that Certificate C involved more pain than many of the operations performed under Certificate A, he said it might or might not, but he believed it to be an unnecessary certificate. He believed that even if there were no pain, and if the animal were killed before recovery, it ought not to be done because it was unnecessary. Asked if he could tell what other pain he thought the animal suffered beyond that due to struggling, he said he could not tell. Asked if he had taken any trouble to keep himself informed with regard to the investigations which had been carried on in recent years as to how dogs might best be anaesthetized, he said no; it was not in his line of work at all. Asked if it would surprise him to know that dogs were anaesthetized by the score for large operations, including abdominal sections, any time during the last four or five years, he said he was aware of that; he had heard of it. Asked if he had any reason to believe that experiments were carried out in Ireland by persons who were not licensed, he said he did not know of them. If such experiments were carried out, he thought he would be likely to hear about it. He watched the medical journals for reports of unlicensed experiments, but he had seen nothing he recollected, except one case of which he gave details. The people who performed these experiments could have been prosecuted by anybody who liked to do so. Asked how many teaching experiments were performed, say, in the year 1905, he said that under Certificate C there was one in the physiological laboratory at Queen's College, Belfast, and there was one in the physiological laboratory of Trinity College, Dublin, which were the two institutions which chiefly sought the use of this method of instruction. There was only one certificate in each case. Under Certificate C eight experiments were performed. Six teaching experiments were performed in Belfast and two in Dublin. Asked as to research experiments, he said there were seventeen licences. The numbers performed were 10 being under licence alone, and 112 being under certificate, giving a total number of 210. Nearly all these experiments were inoculations. They were all, in his judgement, proper experiments and useful ones. Feeding experiments were carried out in Ireland, but he did not know how far they were performed under licence. It was a question whether a feeding experiment came under the Act at all. In his opinion inspection as it stood in Ireland was efficient; he did not think there were any abuses. He did not think experiments ought to be allowed in private houses. Asked if as far as he knew there were any objects of research obtainable only by experiments on dogs, he said he was not competent to answer that question. Asked if he objected to students going to see operations in the hospital, he said that was necessary because they had to learn to do it. The student had to see how chloroform was given; he had to see the surgical toilet of the patient; he had to see how the surgeon stood, and fifty other things besides. He would never get the proper picture of it in his mind from textbooks. In his judgement that did not apply to physiological experiments. The student was not learning to perform physiological experiments. A man was picked out to become a physiological assistant and to learn physiological methods; he did not learn it by looking at it. He saw no parallel in the two things at all from his experience. In reply to further questions, he said the A.C.E. mixture was not much used in Ireland. Asked whether it was the chief anaesthetic given to dogs, he said he had a very large experience of anaesthetics on the human subject. He was not as competent to speak about anaesthetics in the case of the dog as in that of man. Asked if he would make no distinction between the possibility of keeping a animal a longer time under the A.C.E. mixture than under chloroform alone, he said he believed it was safer for animals, and he thought they kept longer anaesthetized than under chloroform alone. If he were sure it was used, he would allow that it was possible for the animal to remain longer under anaesthesia. Asked if it was not the fact that a very small dose of chloroform was given to women in labour, he said, Yes. It alleviated the pain. He did not know enough to say that it removed it. Asked if, after recovery from chloroform or from an anaesthetic, it was not a considerable time before the feeling of pain came back, he said yes, sometimes not a considerable time. Asked why he considered it impossible to keep animals in a condition of painlessness for any length of time, he said he only referred to the dog. That was on account of the peculiar action of the heart. He had seen the terror of the dogs when an endeavour was made to put them under an anaesthetic. He had seen it given to them often, but he had never seen it given to a monkey. Asked if he had any reason to think that callousness on the part of either operators or students witnessing operations was induced by such demonstrations, he said he had no knowledge that would justify him in saying that. He thought that generally, considering the matter from the ordinary ethical or humanitarian point of view, it must be rather demoralizing to students when he recalled how cruel he was to animals himself in his youth. He had been teaching students in one capacity or another since 1866. Asked if he knew what was the general opinion among them about these severe operations which were undertaken to illustrate lectures in physiology, he said he did not. Asked as a surgeon who had given anaesthetics to a large number of patients for very serious operations, whether he would not infer that a struggling animal under a very severe operation was not sufficiently under anaesthesia, he said he could not give a general answer to that, because the struggles were often reflexes and not struggles of volition at all. He could tell with fair accuracy if he were operating upon a man whether his struggles were the result of reflexes, and whether the anaesthetic had not been pressed enough. He could not be sure with a man, so that he did not know how he could be with a dog, even although every step was taken to prevent it from suffering. Asked if he thought it would

be better, if a Vivisection Act were necessary, to put it on the same footing in Ireland as the Act in England and Scotland, he said he was inclined to doubt the wisdom of bringing in an irresponsible society like the society that advised in England. Asked whether a committee of the General Medical Council should not be made generally responsible for all these researches, he said he doubted whether it would work—for two reasons. One was that the Council was a considerably overworked body as it was; the other was that he was not sure that the broad constitution of the Council, in the point of not being altogether composed of scientific men, would lend itself well to the purpose. Many of the men who held positions on it were chiefly eminent as medical politicians, and so on. He did not know how a scientific element could easily be got there.

A Newspaper Fiction.

On November 14th Professor Thane was recalled. Before his further examination began he asked for the protection of the Commission in regard to a false report of his evidence which had appeared in the *Tribune* of November 8th. The following is the report complained of:

Vivisection Inquiry.—Inspector's admissions at the Commission.—Mr. G. D. Thane, M.R.C.S., F.Z.S., gave evidence yesterday before the Royal Commission on Vivisection. Mr. Thane is Professor of Anatomy at University College, Examiner for the University of Wales, and Inspector for England and Scotland under the Cruelty to Animals Act. He is assisted by Sir James Russell, who also gave evidence yesterday. Mr. Thane was questioned about the cat operated upon by Mr. Starling. The scalp was skinned off this cat's head, the skull itself was sawn through, and the bone exposed. Electrical needles were driven into the brain and fixed there by modelling wax. Mr. Starling then thrust a hollow needle through the side of the eyeball into the interior of the eye and fixed it. The ganglion was then "excited" by means of the electrical needles which had been already fixed upon it, and the effect produced on the eye observed and noticed. The cat was, according to Mr. Starling's statement, anaesthetized for the operation, but Mr. Thane admitted that it jumped down off the table. Mr. Thane was also asked about Professor Schäfer's experiments in drowning and resuscitating dogs, and he replied that in Edinburgh the stray dogs are destroyed by drowning, and that therefore this was quite permissible.

Professor Thane said he gave no evidence of that kind. Colonel Lockwood said the attention of the Commission had already been directed to the matter and they had directed a letter to be sent to Professor Starling in the following terms:

Royal Commission on Vivisection,
Chapel Place, Delahay Street,
Westminster, S.W.
November 14th, 1906

Sir,—Your correspondence of the 9th instant was laid before this Commission, and with reference thereto, and to the paragraph contained in the issue of the *Tribune* of the 8th instant, I am directed to inform you that your name was never mentioned in the evidence before the Commission on the 7th instant, and that no evidence in regard to such an experiment as therein described being performed by you was given. I am further to add that you are at liberty to make what use you desire of this letter.—I am, Sir, your obedient servant,
(Signed) C. Bigham, Secretary.

"The Shambles of Science."

In Professor Thane's further examination, the Commissioners to a large extent travelled over the ground covered by the previous interrogatory. Only a few points need be mentioned here. In reply to questions, he said he thought that for the effective teaching of physiology it was necessary to show experiments. Students got most confused ideas from simply hearing and reading about things, and they ought to see a few of the principal things. He was quite satisfied that experiments were carried out as humanely as possible. He had seen dogs put under chloroform, and had no reason to think that they suffered more from being put under chloroform than any other animal. He would say that dogs in a laboratory struggled much less than human beings; the anaesthetic was pushed so much more. A book called the *Shambles of Science* was referred to him, and he made a prolonged inquiry and made a report about every case in the book to the Home Office. Asked as to certain passages, he said they were misrepresentations. He read the observations on the passages contained in his report to the Home Secretary. He said the *Shambles of Science* had been withdrawn from publication. In reply to Dr. Wilson, who said only a particular chapter had been withdrawn, Professor Thane said he believed the whole book was withdrawn. In reply to Dr. Gaskell, who said he had been told the day before that a new edition had just come out and was seen in a shop, he said his recollection was that a letter was sent from the publishers saying that it was withdrawn. He happened to have stuck in the book the following letter from Mr. Bayliss's solicitors:

May we ask you to be good enough to give publicity in the *Standard* to the following undertaking and apology which we have obtained from the publisher of the *Shambles of Science*, a work intimately associated with the above action? We may state that the terms of Mr. Bell's undertaking have been complied with. "To Dr. W. M. Bayliss, St. Cuthbert's, West Heath Road, Hampstead, and to Messrs. Hempson, 35, King Street, Cheapside, E.C. (his solicitors), I, the undersigned, Ernest Bell, of 5, York Street, Covent Garden, London, the printer and publisher of a book entitled the *Shambles of Science*, the authors of which are Lizzy Lind Af Hageby and Leisa K. Shartau, and which book contains therein certain matter libellous upon Dr. Bayliss, hereby acknowledge that I have given instructions for the withdrawal from circulation of all copies of such book, and hereby undertake that no further copies of such book shall be printed or published by me; and that all copies in stock and withdrawn from circulation shall be handed over to Messrs. Hempson, Dr. Bayliss's solicitors, and I hereby express to Dr. Bayliss my sincere regret for having printed and published the book in question. Dated this 25th day of November, 1903.—Ernest Bell. Witness, Henry Rayments."

Animals under Experiment.

He thought that meant that the book was completely withdrawn. In reply to Mr. Tomkinson, he said he did not think great wasting and *malaise* and pain happened much after inoculations. Shown a picture of a dog operated on in the Wellcome Research Laboratories of the Gordon College, Khartoum, he said he had never seen anything like that from inoculation in the Gordon College. They bore the same name because Mr. Wellcome gave the money for the Research Laboratories at Khartoum. Asked if the effect of the curare would be to make it impossible or very difficult to tell whether the animal was anaesthetized or not, he said it would be if one began with curare alone, but it was not difficult if the curare was given afterwards. Asked if he was quite sure that a licensee could not perform any experiments or carry out any experiments without his knowledge, the witness replied that he would not say that he could not: he believed he did not. Asked if he did not think that a student could pass an excellent examination in physiology without having to go through all this course of illustration, he said he was quite sure he could pass an excellent examination, but many persons could pass an excellent examination without much real knowledge of their subject. Asked whether it was permissible under the Act that a dog which had been used for purposes of research could be handed over to a lecturer on physiology for purposes of a demonstration before his class, as this animal was to undergo one of those very severe operations and then finally be killed, he replied Yes. After the first operation the dog recovered and the dog was quite well; then it was anaesthetized and then used for a further experiment. He did not think there was anything in the Act which forbade it, but he was not quite clear. Asked whether the fact that an animal was used for two sets of experiments would have been known to him if an action had not been brought, he said he would not have known. If he had known he should have told them that he thought they should not do it. He did not think he would have interfered from the point of view of the animal but from the point of view of public feeling he would have said they had better not do it. In reply to further questions, he said morphine was very rarely used as an anaesthetic alone. He only knew of one case in which it was done, but whether that was on a dog or not he could not remember. In reply to further questions he said morphine could be administered so as to secure complete anaesthesia, there was no question about it; but one probably would have to give a fatal dose. If a person or animal was poisoned with morphine he was sent into deep coma, and remained liked that for a considerable time before dying. There was a certain period, it might be hours, before death came, in which the individual or animal was absolutely insensitive and could not be oused, and that time could be used for the performance

of the operation without inflicting any pain whatever. It was only in that way that morphine could be used as an anaesthetic. The effect of morphine would last; that was an object in giving it, because its action was so prolonged. Asked as to severe operations under Certificate B carried out for private research, he said he had witnessed some. He said he had seen a great many animals afterwards after the operation. He expected the animals did suffer to some extent, especially immediately after the operation; but they made a perfectly good recovery, and when the wound was healed up and the fistula was established the animals did not suffer pain. Asked as to Dr. Bain's experiment of placing gall stones in the gall bladder of a dog, he said he was quite sure the dogs did not suffer severely. He examined them repeatedly, and they reported on them four times. The wounds healed up perfectly. He was satisfied that they were not suffering. The dogs were kept alive for some months. Some of the stones dissolved and some did not. The experiment had for its object to determine whether gall stones were dissolved or not in the gall bladder, with or without the organism there. In reply to further questions he said he was satisfied that injections under the dura mater of a rabbit were painless. Injections of tuberculin made into the peritoneum were not painful either in the performance or subsequently. With regard to experiments on the transplantation of cancer, he did not think they were justified in saying that they were causing great pain to the mice. The present Act was amply sufficient for the protection of all animals from undue suffering.

RESUSCITATION AFTER DROWNING.

At the request of Sir Mackenzie Chambers, the witness read the following memorandum as to Professor Schäfer's experiments on the resuscitation of partly-drowned dogs.

These experiments are designed to show the best means of resuscitating persons from drowning. For some time past doubts have been felt as to whether the means at present adopted are the best available for the purpose, and whether it is not possible to improve the treatment. The matter has been taken up by the Royal Medical and Chirurgical Society, and a Committee has been appointed to deal with it. Professor Schäfer is a member of this Committee, and he has been charged with the duty of performing the necessary experiments on animals. It is true that, in some experiments on the subject already made by Professor Schäfer, the dogs were placed under anaesthetics, but the effect of the immersion of an anaesthetised animal is not identical with what takes place in ordinary cases of drowning; and when the Committee made their first report to the Society the objection was raised on all sides that these experiments did not give the information required. It is most desirable in the interests of humanity that the matter should be thoroughly investigated. Professor Schäfer accordingly took steps to enable himself to perform some experiments on animals without the use of anaesthetics. He received the sanction of Sir J. Halliday Croom, President of the Royal College of Surgeons of Edinburgh, and Sir Thomas Fraser, Professor of Materia Medica in the University of Edinburgh, who gave the necessary certificates which came before the Home Secretary, with a strong recommendation from the Association for the Advancement of Medicine by Research. Mr. Douglas considered the matter very carefully in all its bearings, and decided to allow the certificates to come into operation with some modifications for the experiments on dogs. So much for the desirability of the experiments themselves. As regards the objections which have been made that they will involve "[illegible]" pain, etc., Mr. Douglas desires to point out that [illegible] are contrary to the best evidence. Without evidence as the least to minimise the seriousness of the experiments, he is advised to [illegible] persons [illegible] that they will not [illegible] either prolonged or repeated suffering. If the animal is to be recovered [illegible] at the end of the experiment, the duration of the anaesthesia cannot exceed two and a half hours, and it is [illegible] that [illegible] in the case of the dog. [illegible] Professor Schäfer [illegible] that [illegible] and [illegible] and [illegible] and [illegible] and they were carefully attended to [illegible]. He is no more likely to inflict unnecessary suffering on an animal than is an [illegible] surgeon to perform a [illegible] operation on a human patient. Mr. Douglas recalls that it is subject to a very [illegible] of [illegible] conditions. To forbid these experiments [illegible] Douglas submits, be to sacrifice man to animals; and he could not feel it consistent with his duty to do so.

That was a memorandum by the Secretary of State.

ANTIVIVISECTION TESTIMONY.

Evidence of Mrs. K. Cook ("Mabel Collins").

Mrs. K. Cook, an authoress and journalist by profession, and Chairman of the Executive Committee of the Parliamentary Association for the Abolition of Vivisection, said she wished to give evidence from the moral aspect, and to speak about cruelty. The Committee she represented desired to see animals protected from scientific torture by the law of the country. They believed that public opinion would long since have demanded this protection for them, were it not that a craven fear of death was fostered in the public mind by the influence of materialists who were medical scientists. She instanced the teaching of Professor Metchnikoff, who, in his book *The Nature of Man*, declared his belief that annihilation followed death, and urged the taking of all means to prolong life. On page 246 he explained what he called a rational method of keeping old age at bay. That method consisted in the injection of a horse or other animal with finely-minced atoms of human organs, such as brain, heart, liver, kidney, etc., when serum could be drawn off in a few weeks capable of acting upon those organs. The difficulty which at present existed in the carrying out of this treatment was that of obtaining the human organs. Professor Victor Horsley had declared that the medical students of the present day could only be effectually trained by means of vivisection demonstrations, and they considered that this method of training would have a most injurious moral effect upon the rising generation of medical men and women. The thirty years during which vivisection had been legalized had shown that such a law only served as a protection to the practice, not to the animals. The total prohibition of the practice was the only means of preserving the race from great moral and ethical degradation and deterioration. As showing that great cruelty had been a feature of the practice of vivisection under a restriction Act, she referred to an account by J. N. Langley, M.A., of Cambridge, of an experimental operation on a dog, in the second volume of the *Journal of Physiology* (p. 267). The dog was narcotized with morphine. The side of the neck was cut open, a tube place in one of the ducts of a saliva gland, one of the nerves in the neck dissected out, tied and cut, and the cut end irritated. The tube was placed in the wound an hour before the irritation of the nerve was begun; during part of this time the nerve was being dissected. The stimulation was continued for nearly three hours, about each third minute. In the fourth volume of the *Journal of Physiology* (p. 231) appeared the description of how, at a meeting of the Physiological Section of the International Medical Congress in 1881, Professors Ferrier and Yeo exhibited a monkey.

> From the brain of the monkey a definite part of the so-called motor area had been removed and a localized paralysis produced,

that is to say, one arm was quite paralysed and one leg partly so. The skull had been opened and part of the left side of the brain "extensively destroyed" seven months previously. The author of the paper remarks:

> We have seen only two of *many* (monkeys) that have been operated upon by the same method, and with the same localization of results.

In the *Journal of Physiology*, volume vi, was an account of how a cat was alternately suffocated, cut, and its nerves exposed and irritated with electric shocks, without intermission, for over two hours and a half. It was stated that chloroform was given at the beginning of the operation; but it was not possible that the animal was kept in a state of insensibility for more than two hours and a half. The operator was Mr. Langley. In the *Proceedings of the Physiological Society*, [illegible], was an account of how Mr. Sherrington exhibited a rabbit in which he had placed a ligature round the optic nerve of the right side nine weeks previously. The ligature was tied so tightly as possible. The eye had become completely blind. This must have been a peculiarly agonizing experiment. There was no mention of any anæsthetic being given. This was in 1896. A number of other experiments were quoted in which, according to the witness, the animal was narcotized with

morphine, or there was no mention of an anaesthetic having been given. In the Act of 1876 the use of curare as an anaesthetic was forbidden. But its use was not forbidden, and if a vivisector held a special certificate to operate without anaesthetics (which he obtained for the asking) such operations as these could be legally performed under the present Act. Referring to Mr. Byrne's statement that the antiseptic treatment of wounds was for the minimizing of the likelihood of pain, Mrs. Cook said the antiseptic treatment did not in any way lessen the pain of a wound. Nor was that the object with which it was used. The idea of the antiseptic treatment preventing pain had never been brought forward with regard to human beings. She instanced the King's operation, when Sir Frederick Treves treated the wound antiseptically, and the daily papers stated, on the authority of his medical attendants, that he suffered greatly from the wound. She wished to draw attention to a moment of intense suffering which all animals so operated upon must undergo—that of the return to consciousness. A human patient who had been subjected to an operation of a severe nature was put under morphine on recovery from the anaesthetic. She was speaking from information and experience; she had nursed. Dr. Sherrington and Dr. Grünbaum made physiological experiments on all the known species of anthropoid apes. These experiments consisted in removing part of the brain, and causing paralysis. The apes were kept alive for observation, and were further experimented upon with currents of electricity which caused epileptic fits. These experiments were made in the University College, Liverpool. Her reference for that was the British Medical Journal of December 28th, 1901. Mott and Hill, after ligaturing all the cerebral arteries in cats, dogs, and monkeys, found that in a period varying from five to twenty-four hours afterwards, movements of the limbs, and even fits, were caused by the application of electricity. That was stated in the British Medical Journal of August 12th, 1899. Anaesthetics were not referred to. In the *Journal of Pathology and Bacteriology* for March, 1904, was described a series of experiments in which ink was injected into the eyes of dogs, cats, rabbits, and monkeys. After the injections the animals were kept alive for periods varying from three to twenty-four hours. These experiments were made by Dr. Paterson in the laboratory of the Royal College of Physicians, Edinburgh. There was nothing whatever about anaesthetics. Mr. Bayliss described experiments on the spinal cord in the *Journal of Physiology* for February 28th, 1901. These consisted of experiments on dogs, in which parts of the spinal cord were cut out or divided, and the roots of the nerves excited by electric shocks. These experiments were of the most cruel character. She wished to call special attention to this operation, because Mr. Bayliss said the operation was done under antiseptic precautions. As he was very careful to mention it when the animals were anaesthetized, and did not say so on this occasion, she had a right to assume that this agonizing operation was performed only with antiseptic precautions which would in no way lessen the pain. After giving details of a number of other experiments, the witness, in reply to Sir William Church, said the open letter sent to the Commissioners was sent out by their Committee and the Committee was responsible for it. It was drawn up by a doctor who was on the Committee. Asked with regard to one paragraph in which it was stated that: "So conflicting are the results of vivisection that one observer has vivisected 2,000 creatures to substantiate a theory, while another has vivisected an equal number to prove the direct opposite"—if she could tell who those experimenters were and what the object of these experiments was, she asked to be allowed to obtain the reference and forward it at another sitting, as she was not an expert. Asked where the information was obtained that Professor Roux "also discredits the specific character of the antitoxins, and, moreover, regards them as products of the living cells exclusively," she said she could not tell. She would obtain the information and forward it. In reply to further questions, she said the expert who had drawn up the letter was Dr. Kenealy. Asked by Sir William Church where the information was obtained that "The cancer research party now declares that cancer is distinctly hereditary in mice," she said she would furnish answers to all these questions. She understood that the references were all right. In reply to the Chairman, she said she was in favour of the repeal of the Act. Leaving matters as they were before the Act would be a far better position than there was now. The Royal Society for the Prevention of Cruelty to Animals worked under Martin's Act, and cases of scientific cruelty would be more likely to be punished if, instead of being protected by this Act, they came under Martin's Act. In reply to Sir William Collins, she said she had witnessed some experiments on living animals at the Imperial Institute, but only baking and freezing. An anaesthetic was used in one case, and it was so difficult to give it successfully that the experiment was given up. Asked when this was, she said she would have to look up her records, because, not having expected to be asked this, she was not prepared. She had not provided herself with the reference. She gave similar replies when asked who the experimenter was. Asked what experience she had with regard to the administration of anaesthetics, or of being present when they were administered, she said the opinion she had given was with regard to morphine. On its being put to her that when she spoke of ether as being only a temporary anaesthetic, she was not speaking from her own knowledge, she said she had been told it by experimenters who said that the animals were continually coming out of it. It was very fleeting in effect. In reply to further questions, she said she had no experience as to the legislation and practice in other countries. If there were no restrictive law, and if there were a law completely abolishing vivisection, she hoped there would be less animal suffering, because then the public would be in a position to prosecute. The six months' law which protected cases made the public quite helpless. In reply to the Chairman, she said the vivisector came under the protection that the prosecution must be instituted within six months. Asked by the Chairman if that would not apply to offences under the previous Act just as much as to offences under the Act of 1876, she said that places having been now registered and protected as they were, the public was not in a position to know what was done by any vivisector until he had reported his proceedings in a scientific journal, and those reports did not appear until after the time had elapsed within which a prosecution could be instituted. The Parliamentary Association was formed on December 18th, 1902, with the object of promoting legislation for the total abolition of vivisection. The number of members was 222. Asked if she thought it justifiable to experiment on animals with a view to test cures for snakebite, she said she had seen some most cruel experiments with snake venom recorded, and therefore she entirely disapproved of it. She had collected the information which she had given the Commission herself by reading the journals. She made no inquiry of the experimenters about anaesthetics, but accepted the printed statements. Asked if within the fifteen years she had been connected with the subject of vivisection she could give any instances where operative experiments had been allowed without anaesthetics, she said she felt sure she could supply them if she was given time to look them up. She would send the answer at another meeting. The vivisectionist anaesthesia she had no confidence in, and her Association had no confidence in. Asked when the experiments at the Imperial Institute took place, she said she was sorry she could not answer any question with regard to them without looking the matter up, because she regarded them as of very little importance. She merely went out of general interest, and she made no notes. That was all she had witnessed. She applied for a ticket, and received one. It was a lecture in the physiological laboratory at South Kensington. It was about three years ago. She saw a black cat used, and two cats and a rabbit. She considered the experiments revolting. Asked if her Association at any time, or any person to her knowledge, ever applied to a magistrate under Section 13 of the Act for a warrant to search persons who might be suspected of carrying on proceedings in unlicensed places, she replied in the negative. She had not in respect of any cases made any representation to the Home Office because they had not considered it within the scope of their work. Asked if to her knowledge any association had ever applied to prosecute any person, she said she was not able to answer that question; there were so many of them. She had no recollection of any such thing. She would object to the infliction of such pain upon any

animal as the prick of a needle subcutaneously, on the ground that the prick of the needle frequently caused a most painful disease. Asked, with respect to the experiment that she saw, if the cats showed any sign of pain, she said she preferred not to answer questions on that experiment until she had looked it up. She considered it a very revolting spectacle. Everything in her statement was her own, with the exception of extracts from journals.

Evidence of Dr. Herbert Snow.

Dr. Snow said he was giving evidence at the instance of the Parliamentary Association for the Abolition of Vivisection. He was not a member of that Association. One subject on which he wished to speak was the reports of the Imperial Cancer Research Fund, with a view to show that the thing which had been reported as cancer in mice was a totally different thing from the cancer of human beings. His opinion was that no remedy was likely to be discovered in that way. Certainly none had been discovered. He did not see that any experiments could lead to a useful result; the investigation of cancer should rest on clinical grounds. Cancer could not be investigated properly in the laboratory, and the gentlemen who were in charge of laboratories generally had no clinical knowledge of cancer. To investigate cancer there must be special provision for clinical study and clinical instruction which was wholly wanting. In this country there were sundry special hospitals, but they were not in any way used for clinical instruction, and hardly for investigation. To know anything about cancer, about its final causes and its laws, research must be begun amongst the lowest animalculae, such as the amoeba; by the investigation of healthy cell growths among these and the organisms a little above them in the scale; by the artificial production of aberration and disease among them; by inquiry into the essential properties of protoplasm and its control by the nervous system. In reply to Sir William Church, he said he did not think any man had had exactly the same opportunity as himself of working at the subject of cancer clinically as well as in the laboratory. His experience was unique. He discovered marrow infection, the only cancer discovery in his time. Asked if the medical profession regarded him as a leader in the pathology of cancer, he said he was afraid not: they had mostly ignored his work. Asked if in his remarks he alluded to all the tumours that the investigators of the Imperial Cancer Research Fund had examined besides Jensen's, he said he did not know anything about the other tumours. He only said that they showed a great uncertainty as to what they were doing. He had investigated no mouse tumours himself; he only knew of it by literature. He had no personal knowledge of the experimental investigation now going on. Asked by Colonel Lockwood if, generally speaking, he looked upon all experiments on living animals as unnecessary and cruel, he said he thought there should only be experiments on animals under rare circumstances and exceptional conditions. Asked to suggest any alteration in the Act, he said he would prohibit curare; he would prohibit all experiments to demonstrate anything that was known already, and he would only allow experiments to be performed on a special licence for each set. That was to say, a man should only be allowed to undertake an experiment who wanted to pursue some particular line of research. In reply to further questions, he said he would not make any distinction between animals used for experiment. He did not find any fault with the present system licensed under the Act. In reply to Sir William Collins, he said he could not point to any valuable conclusion which had resulted from experiments made on animals with a view to investigate the nature and treatment of cancer. In reply to Sir John M'Fadyean, he said he had no personal knowledge of cancer in the lower animals. In reply to further questions, he said no genuine parasite in cancer had ever been found. If a parasite were found the question of experiments on animals might arise. If a new drug were in question he would rather try it on an animal first. Asked by Mr. Bain if in the previous decade of advance with respect to operations for living animals was much better to-day than it was before the Act of 1876 was passed, he said he should rather not like to give a personal answer. He would rather see the Act repealed, with the reservations he had spoken of. He had never read the Act. In reply to Dr. Gaskell, he said the object of curare was to restrain muscular movements. He had no reason to suppose that it was given deliberately to prevent the giving of anaesthetics. If the animal were completely under anaesthesia it would not move, and curare would not be required. If an animal was completely anaesthetized, there might be very slight movement. Asked if very slight movement might not be very important in some matters, he said, Yes; but any amount of muscular movement showed that the patient in the theatre was not completely under the influence of anaesthetics. In reply to further questions, he said he had never had anything to do with curare; his knowledge was rather rusty. He was under the impression that it was given to restrain voluntary muscular movement—not reflex. Asked if it would not restrain both, he said he did not know. In reply to Dr. Gaskell, he said such movements as he spoke of were associated with pain. Asked how long a man could be kept under anaesthesia, he said two or three hours often—perhaps five hours. He thought anaesthesia would be complete. Asked if he saw any reason why the same should not be done with dogs, he said he had no practical knowledge with regard to that. In reply to a question whether, when a man was put under anaesthesia, he had any reason to suppose that the sensation of pain disappeared early in that anaesthesia, he replied in the affirmative. Asked if anaesthesia, which was not absolutely complete, in which a person might show signs of consciousness slightly, or even movement of muscles, would still be in a condition in which he would not feel pain, he replied it might possibly be so. It all depended upon the degree—the amount.

MEDICAL BENEVOLENT SOCIETIES.

RATHER more than a year ago,[1] a series of articles by the Treasurer, Dr. Samuel West, were published, in which a full account was given of the working of the British Medical Benevolent Fund. By the courtesy of the officers of local medical benevolent funds we are now enabled to publish the following particulars of the objects and general position of the following societies.

THE SURREY BENEVOLENT MEDICAL SOCIETY.

The Surrey Benevolent Medical Society was established in 1812, and is rather a provident than a benevolent society. It is registered under the Friendly Societies Act. Established at a period when meanings were less strictly relevant to words, it was called "benevolent," and no wish of its members has been expressed to drop a term which in recent times has been sometimes considered a reproach. The Society consists of "such persons as regularly practise medicine and reside in the county of Surrey, or in those parts of adjoining counties which may be within a convenient distance of the county of Surrey." In the area covered by the Society the number of practitioners is 636: of these, 63 are at present members.

The subscription is £2 per annum, with an entrance fee of £5. At the end of thirty years' subscription, members become life members, and life membership may be obtained at entrance by payment of £35, or may be acquired at any future date by a composition fee varying in proportion to the number of subscriptions paid.

A widow with no provision of the yearly value of £75 is entitled to an annuity of £30; a housekeeper being a relation with no certain provision and entitled to £15 per annum is eligible for assistance; an orphan child with less than £50 per annum is also entitled to receive assistance. Grants of money are also made in cases of sudden need. The capital stock of the Society must never be less than £5,000. The amount of invested funds is £12,397 5s. 5d.; in addition, the sum of £1,000 was in 1905 invested in the purchase of 3 scholarships at Epsom College. At present there are 4 pensioners at £30 per annum, 3 scholars at Epsom College, and 3 girls' scholarships at £50 per annum.

Dr. J. H. Galliers (Cranmore, Sylvan Road, Upper Norwood, S.E.), Treasurer of the Society, to whom we are indebted for these particulars, informs us that at a meeting of the Society some few years back it was

[1] THE BRITISH MEDICAL JOURNAL, 1905, vol. ii, pp. 1535, 1597, 1661.

stated that one member present had received educational advantages in his family to the amount of £600, another similar help to over £300, and a third over £150, in return for contributions to the funds of the Society which could not have exceeded £35 in each case. Since 1868 the daughter of an old member has received a pension of £30 per annum, in all £1,140. Yet less than one-tenth of the practitioners eligible are members of the Society.

The Kent Benevolent Medical Society.

The Kent Benevolent Medical Society was instituted in the year 1787. Members of the profession resident in the county are eligible to become members; any member who removes out of the county, but continues his subscription, remains entitled to all the benefits. The annual subscription is 1 guinea, but no member is entitled to benefit until he has been a member for five years, or has paid a sum of 5 guineas in all.

The Society exists for the benefit of the widow or orphan child of any member of the Society. The amount of relief granted is determined by the general meeting. A person who has become a member of the Society before the age of 35 years may himself receive relief under circumstances of particular distress or incapacity at any period after his admission to the Society. The present number of members on the books of the Society is 109, which must represent only a very small proportion of the total number of medical men practising in the county of Kent. The Society has stewards in various parts of the county, who collect subscriptions and inquire into the circumstances of applicants for relief resident in their district. It has an Assistant Secretary resident at Canterbury, and resident Secretaries in the eastern, middle, and western districts. The invested funds amount, we are informed, to nearly £10,000 (nominal). The amount distributed in relief during the last financial year was £255.

The Sussex Medical Benevolent Society.

The Sussex Medical Benevolent Society was only started about two years ago, and has about 100 subscribers out of some 700 medical men who reside in the area. The annual subscription is 1 guinea a year, or membership may be constituted by one payment of 25 guineas. The objects of the Society are thus stated:

1. To aid the widows and children of members *so qualified* dying in indigent circumstances.
2. To aid the sisters of such members, being single women or widows, who have lived with their brother as his housekeeper for a period of not less than five years preceding his death.
3. To aid such members as are *wholly or partially* incapacitated by age or permanent bodily infirmities, or who are disabled by severe illness or injury from practising for a period of six months.
4. To aid in the education of the children of members thus incapacitated or disabled.
5. To assist any deserving case of necessity not included in the foregoing.

As the rules require that an application can only be obtained on behalf of a member or his family if five annual subscriptions have been paid, the Society has not yet commenced to grant relief.

The Devon and Exeter Benevolent Medical Society.

The Devon and Exeter Benevolent Medical Society was founded in 1806 for the benefit of widows and children of medical men dying in indigent circumstances, and of practitioners in a state of poverty and incapacitated by age or bodily infirmity. It consists of members and governors, and a member must have practised in Exeter or the county of Devon. The annual subscription is 1 guinea; life membership is constituted by the payment of 20 guineas in one sum; any lay subscriber of half a guinea or more per annum, or the donor of 5 guineas or upwards is a governor of the Society, and as such entitled to vote according to the rules. The officers of the Society comprise a president, two vice-presidents, a treasurer, a secretary, and stewards; the stewards act practically as local secretaries in various parts of Devon. A member is only in benefit after having paid at least three yearly subscriptions, but if he continue his subscription he is entitled to the benefits of the Society, even though he should remove to another county. Dr. William Gordon of Exeter is President of the Society, and the Honorary Secretary, Dr. Elgar Down, (Wingfield House, Stoke, Devonport) informs us that the number of subscribers to the Society is only about 25, an absurdly small number in proportion to the size of the area covered by the Society. The invested funds amount to £3,169. Efforts have recently been made to make the Society better known, and it is hoped that it may in the future command more general support from members of the profession residing in Devonshire; it has done much good work in the past, and there are many occasions for extending its benefits.

Society for Relief of Widows and Orphans of Medical Men, London.

The Society for Relief of Widows and Orphans of Medical Men was established in London in 1788, and was incorporated by Royal Charter in 1864. The Secretary's office is at 11, Chandos Street, Cavendish Square, W.

Membership of the Society is open to any person duly registered under the Medical Acts, and residing within a radius of twenty miles of Charing Cross. The annual subscription is 2 guineas, payable in one sum or in two half-yearly instalments of 1 guinea on January 1st and July 1st. A member who has paid an annual subscription of 2 guineas for twenty-five years becomes a life member.

Every member whose age at the time of his election shall not exceed 30 years may become a life member upon payment of the sum of 20 guineas; if his age shall exceed 30 and shall not exceed 40 years, upon payment of the sum of 25 guineas; and if his age shall exceed 40 years, upon payment of the sum of 30 guineas, provided that such payment be made within three months from the date of his election.

If any member shall remove beyond the limits of the Society, or relinquish the practice of his profession, he shall, nevertheless, continue to be a member, subject to the conditions mentioned in the by-laws.

Persons eligible for relief are the widow or orphans of a deceased member who at the time of his death had paid the annual subscription for at least three years, or was a life member.

The widow of a member who has no certain income or provision, exceeding altogether the yearly value of £80, is eligible to receive, half-yearly in advance, such relief from the Society as the Court of Directors shall determine, and in determining the amount of such relief regard shall always be had to the age of the applicant, her ability to maintain herself wholly or partially, and to the amount of subscriptions her deceased husband shall have paid. Whenever the death of the member has been caused by a sudden accident or illness in the pursuit of his professional duties, the Court of Directors may decide to make an additional grant in favour of his widow not exceeding £25.

The widow of a member who is left with a child or children under 16 years of age entirely or in part dependent on her, and whose certain income or provision does not exceed altogether the yearly value of £15 for each child, in addition to the £80 mentioned in By-law LXIX, is eligible to receive such additional assistance, half-yearly in respect of each child under 16 years of age, as the Court of Directors shall determine; but if such child or children have any provision independent of the mother, such provision must be distinctly stated to the directors in the usual half-yearly declaration of the widow.

If a member, after paying a certain number of annual subscriptions, satisfies the Court of Directors that he is unable to continue such subscription, the Court is empowered to remit all future payments, and in the event of his death his widow and orphans are eligible to receive relief approximately in such proportion as the subscriptions paid by him bear to the maximum number required by the by-laws to be paid by any member, namely, 50 guineas. The number of members is 296, but the number of medical practitioners in the London list in Churchill's *Medical Directory* is over 6,500. The invested funds of the Society stood on May 1st, 1906, at £98,810, which yielded an income of £3,087. The Society distributed during the same year £3,241 to 53 widows and 14 orphans.

The business of the Society is conducted by a Court of Directors. The Court consists of a president, twelve vice-presidents, three treasurers, and twenty-four directors, elected at the annual general meeting. The president, vice-presidents, and treasurers are subject to annual election, but are eligible for re-election; six of the directors retire every year, and are not eligible for re-election in the next succeeding year. The Court meets quarterly, and the interest of the Ware Fund of £210 subscribed especially for this purpose, the chief contributor being Mr. James Ware, a former President,

is divided among members present throughout the meeting.

A deceased member, Mr. Thomas Copeland, bequeathed £5,000 to the Society, and out of the income of this Copeland Fund special grants are made to a widow or orphan already in receipt of relief in special circumstances of unusual distress, such as blindness, paralysis, insanity, severe disabling accident, or grave permanent disease; this relief may be continued to such orphans beyond the age of 16 or 18 years, the age at which ordinary relief ceases. The secretary attends at the offices of the Society every Wednesday and Friday from 4 to 5 p.m.

THE BIRMINGHAM MEDICAL BENEVOLENT SOCIETY.

The Birmingham Medical Benevolent Society was established in 1821; any registered medical practitioner regularly practising his profession within fifty miles of Birmingham or within ten miles of the residence of any corresponding member is eligible to be a member of the Society. It has at present just over 400 members, all of whom at the time they joined the Society lived within fifty miles of Birmingham, but 52 have since removed to places outside the district. It is not possible to say how many practitioners there are within fifty miles of Birmingham, but there are over 400 in the city, and it is probable that an estimate of 2,000 within the radius of fifty miles would be under rather than over the mark.

Subscriptions can be paid in one of three ways:

(*a*) £16 16s. down.
(*b*) £17 17s. within seven years of joining.
(*c*) One guinea a year for twenty-one years.

The Society is established to provide by voluntary subscriptions of the members, with the aid of donations, for the relief or maintenance of

(*a*) Such indigent practitioners of medicine or surgery (who shall have been members for not five years) as may be in distressed circumstances.
(*b*) The widows and orphan children of such practitioners.

Applicants for relief, whether practitioners or widows, must be really badly off and urgently in need of help. Last year the Society made grants amounting altogether to £704, in sums varying from £18 to £36. The Society is registered pursuant to the Friendly Societies Act, 1896, and from the return prepared in accordance with the provisions of the Friendly Societies Acts, it appears that the total amount of the benefit fund on December 31st, 1905, was £16,015, which, with the exception of £74 cash at bank, is invested in first-class securities. From the statement of the income and expenditure it appears that the receipts during 1905 from contributions were £277, and from interest on investments £526. A legacy of £250 was brought into account during the year, and donations amounted to 17 guineas. The total expenses of management, including salaries, collector's commission, printing, and stationery, amounted to £48 11s. 6d. It is curious to note that the total number of benefit members at the beginning and the end of the year was the same—404; those admitted during the year numbered 15, but 5 members died, and 8 left the Society. The Honorary Secretary (Mr. W. F. Haslam, L.R.C.S., 11 Newhall Street, Birmingham), to whom we are indebted for these particulars, writes in a covering letter:

> I have been secretary to this Society for nearly sixteen years. I can speak with some knowledge of the question, and I feel sure you will agree with me that it is impossible to get many men to make any sort of provision for a contingency that they believe will never come to them. I have taken a great deal of trouble to get the men in this district to join the society. I have sent out circulars, appeals, and reports. I have written numbers of private letters, and have spoken to many men on the matter, but it is not a popular task, for the response has been very poor. . . . Even those who can often really afford to pay [illegible] refusal from a man on the ground that all practice is decreasing, which is, of course, the principal argument to combat for canvassing a member. I have had a list of all to whom I have sent circulars printed or written [illegible] to date, and I can say that to several cases in which the practice has not even declined or the opportunity of [illegible] and where he has since died and left a wife and family either quite or nearly destitute, who of course could not get any assistance from us.

THE LONDON AND HOME COUNTIES BENEVOLENT MEDICAL SOCIETY.

The Society for the relief of the widows and orphans of medical men in the counties of Essex and Hertford was instituted in 1780, with the primary object of relieving widows, children, or orphans of members of the Society, but also for the relief of members who through sickness, infirmity, or other unavoidable misfortune, may be totally incapacitated from following, superintending, or directing their business. It consists of members and governors, the latter being lay persons subscribing to its funds, and a member on election must reside within the area, but his membership is not voided by subsequent removal. The annual subscription is one guinea; the officers of the Society comprise the president, vice-president, trustees, treasurer, and a salaried secretary. The area is divided into five districts, and the members residing in those districts act as stewards. A member is only in benefit after having paid five annual subscriptions. Dr. Drage of Hatfield, a vice-president of the Society, informs us that it had last year 72 subscribers, and that the number of medical practitioners in the area is about 250. The capital stock of the Society, invested in Consols, amounts to £11,103, and the grants made during 1905 amounted to £340, leaving a balance on current account of about £85.

THE NORFOLK AND NORWICH BENEVOLENT MEDICAL SOCIETY.

The Norfolk and Norwich Benevolent Medical Society was established in 1786 for the purpose of raising and maintaining a fund for the relief of its indigent members who through age and infirmity are incapacitated from continuing practice, and for the relief of their widows and orphans who remain unmarried. There are two classes of members: (1) members by benefaction, who pay 1 guinea a year or make a single payment of 15 guineas; they cannot become claimants for themselves and their widows and orphans; and (2) subscribing members, who pay an admission fee of 1 guinea and an annual subscription of a like amount; they have all the privileges of the Society, including that of becoming claimants for themselves or their widows and orphans. The annual subscription may be compounded for by a payment of one sum of 15 guineas, but a medical practitioner cannot become a subscribing member unless he pays a first subscription of 1 guinea within three years after becoming a resident in the county of Norfolk or city of Norwich or a sum equal to 1 guinea for each year above three that he has so resided. Neither a member nor his widow or orphans are entitled to relief until three years after admission.

The Society has a patron, a president, two vice-presidents, a treasurer, a secretary, and four trustees. Applications for relief must be made to the annual meeting of the Society. Any member is authorized after inquiry to give immediate relief in a case of sudden distress, on account of the Society, to an amount not exceeding 5 guineas. The number of members is at present about 20, and the funds amount to £9,020 6s., invested with the Commissioners for the Reduction of the National Debt. We are informed that the Society has done good work for many years quietly and without ostentation among its members.

THE LINCOLNSHIRE MEDICAL BENEVOLENT SOCIETY.

The Lincolnshire Medical Benevolent Society has 88 subscribers; the number of practitioners in the district is estimated to be at about 290; the subscription is 1 guinea a year, and the Honorary Secretary, Dr. Carline (Lincoln), informs us that the invested funds amount to about £1,500. In the case of application for relief, the member must have paid at least three subscriptions, and his subscription must not be more than one year in arrears.

THE WEST RIDING MEDICAL CHARITABLE SOCIETY.

The Medical Charitable Society for the West Riding of the County of York was founded at a meeting held at Leeds on July 25th, 1822. It was "established for the relief of widows and orphans of medical men dying in exigent circumstances; and for the benefit of practitioners in a state of poverty, being at the same time incapacitated by age or bodily infirmity." Rule V of the Society is as follows:

> V. That the objects of the Society be
> 1st. To aid the Widows and Children of Members *so qualified* (see Rule III.) dying in reduced circumstances.
> 2nd. To aid the Sisters of such Members, being Single Women or Widows, who have lived with their Brother as his Housekeeper for a period of not less than five years preceding his death.

3rd. To aid such Members as are *wholly or partially* incapacitated by age or permanent bodily infirmities, or who are disabled by severe illness from practising for a period of six months.

4th. To aid in the education of the Children of Members thus incapacitated or temporarily disabled.

Any regular practitioner in the West Riding is eligible to be elected a member of the Society save those who have been in practice in the West Riding for twenty years without subscribing to the charity, or who have reached the age of 50 years. Membership is constituted by an annual subscription of one guinea, or by the payment of 25 guineas in one sum. A member who continues his subscription is entitled to benefit, though he may remove beyond the limits of the Riding.

The officers of the Society consist of a president, five vice-presidents, a treasurer, a secretary, and two stewards for each district into which the West Riding has been subdivided.

Applications for relief are considered at the general annual meeting held in September, but the President, Secretaries, and Treasurer, acting with the stewards of the district concerned, may afford temporary relief not exceeding £20 in any instance in case of urgent need, provided that such cases are first applications. No member or his family is qualified to receive benefits unless he has been a member for five consecutive years immediately preceding his death or incapacity. In the seventy-eighth report, presented to the annual meeting on September 27th, 1906, for a copy of which we are indebted to Mr. Herbert Rowe (Lyddon Hall, Leeds), Joint Secretary, it is stated that the list comprises the names of 735 subscribers. The Society possesses funds invested in the names of trustees to the amount (at cost) of £29,464; in addition to subscriptions of members, it has from time to time received benefactions, some of them from persons not members of the medical profession. At the last annual meeting the Treasurer announced the receipt of a legacy, duty free, from the late Mr. W. H. Booth, of Sheffield. In the last financial year the receipts from subscriptions amounted to £723, and from investments to £1,026. The total amount of grants made during the year was £1,540. This Society has been fortunate in its officers, and its present satisfactory condition is to be attributed very largely to the efforts of the late Mr. William Hey, the late Dr. Charles Chadwick, and Mr. C. G. Wheelhouse, its present Treasurer and Joint Secretary, who has written a pamphlet relating the interesting story of the origin and early years of the Society.

THE ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.

The Royal Medical Benevolent Fund Society of Ireland was founded by Dr. William Kingsley in 1842. Membership is constituted by a subscription of 1 guinea a year, and life membership by a single contribution of £10 or upwards in one sum. The object of the Society is the relief of any physician or surgeon resident in Ireland under severe and urgent distress, occasioned by sickness, accident, or other calamity; and also, under circumstances of peculiar emergency, to extend relief to the widows and orphans of physicians and surgeons resident in Ireland. The number of members is about 445, and the number of registered medical practitioners resident in Ireland 2,983.

The invested funds of the Society amount to £10,624, and are vested in trustees; the receipts from these funds during the year ending May 1st, 1906, amounted to £681, the subscriptions to £489, and donations to £30. The amount disbursed in grants was £1,122.

The business of the Society is conducted by a central committee, consisting of 30 members resident in Dublin or its vicinity, and of the branch honorary secretaries, also by local committees in each county in Ireland. The Dublin members of the Central Committee consist of the Presidents of the Royal Colleges of Physicians and Surgeons in Ireland, and of twenty-eight ordinary members elected at the annual meeting of the Society; six ordinary members retire every year, but are eligible for re-election. At the annual meeting on June 5th, 1906, it was reported that the total number of applications considered during the year was 81; of these, 72 were from the widows of medical men, 5 on behalf of their orphans, and 4 from medical men themselves; 5 cases were on investigation found to be ineligible.

LITERARY NOTES.

AMONG the candidates for the *fauteuil* in the French Academy, vacant by the death of M. Ferdinand Brunetière, is Dr. H. Cazalis, known to lovers of poetry under the name of Jean Lahor.

We have received the first numbers of two new medical periodicals. The *Zentralblatt für Chirurgische und Mechanische Orthopädie* appears under the editorship of Professor O. Vulpius of Heidelberg, whose name is a guarantee of its scientific and practical value. It is a monthly, and is published by S. Karger of Berlin. *La Tribuna Sanitaria* is the official organ of the Sanitary Association of Milan and other bodies concerning themselves with public health in that city. The editors are Drs. V. Beduschi and Icilio Boni.

An article in the *Scottish Review* gives a curious account of table manners in North Britain in 1629. Fynes Moryson, describing a dinner at Sir James Pringle's, says that, after the tablecloth was removed, the following things were placed on the table:

> A towel the whole breadth of the table and half the length of it, and basin and ewer to wash, then a green carpet laid on, then one cup of beer set on the carpet, then a little long lawn serviter plaited over the corner of the table, and a glass of hot water set down also on the table; then be there three boys to say grace; the first, the thanksgiving; the second, the pater noster; the third, prayer for a blessing of God's church. The good man of the house, his parents, kinsfolk, and the whole company then do drink hot waters, so at supper, then to bed, the collation which (is) a stoupe of all.

It is to be presumed that the hot water was intended as a corrective of indigestion; and certainly the Gargantuan character of the repast suggests that some assistance was badly needed by the labouring stomachs of the guests.

Passed-Assistant-Surgeon Allan Stuart, of the United States Navy, in an article on tropical hygiene which appears in the February number of the *Military Surgeon*, pays a high compliment to the Britisher as a colonist. Speaking of houses he says that nearly all the houses built by Americans in the tropics are faulty in design and the white people who have to live in them suffer frightfully. It is a pity, he adds, that human beings should be "grilled" in badly built houses when they could be made fairly comfortable under existing conditions by following rational rules in constructing houses suitable to a warm climate. He quotes Woodruff as saying:

> Americans are a queer lot . . . for houses put up in Manila, though suitable as summer cottages in the Adirondacks, are hot and glaring and atrociously bad in the tropics. One place I have in mind on account of the destruction to health sure to occur in the future occupants; it would be cheaper to burn down the expensive building.

Tropical houses should be built so as to exclude the light as much as possible while admitting the breeze freely. The wind should enter at one end and pass out at the other. American architects, we are told, have given scant attention to local conditions when preparing plans for houses, and they resent any suggestions from a medical officer as impertinence. The "Britisher" excels all others in the art of making things comfortable in a warm climate. No exception should be taken to this statement, for they have had troops quartered in the West Indies and India for two or three hundred years. They have been obliged for centuries, on account of the small size of the British islands, to send the surplus population to the colonies. The Britisher on account of his phlegmatic temperament makes the best colonist. Place him, says Dr. Allan Stuart, in the middle of a swamp, give him his bath tub, his pipe, a few good books, and his gun, he will jog along until better times come around. A Frenchman under like conditions would blow his brains out in short order. American naval officers who have visited British colonies will tell you no matter how small the place is, they find comfortable bungalows with ample facilities for bathing, tennis courts, and a good "club." A traveller returning from the Orient a few years ago was asked about what he had seen. He began by saying "the Russians are building a fort at Port Arthur; the Germans are building a parade ground at Kiao-Chow; and the British are laying out a tennis court at Wei-Hai-Wei."

The *Scotsman* has published a letter written by Carlyle to an Edinburgh student in 1871, which has never before seen the light. Evidently the Sage had been asked his opinion on female emancipation. He replies,

as might have been expected, that for twenty-five years the subject had been a mere sorrow to him, "one of the most agitating proofs of the miserable anarchy that prevails in human society." He says the true and noble function of a woman in this world is, and for ever will be, to be wife and helpmate to a worthy man discharging well the duties that devolve on her in consequence as mother of children and mistress of a household—"duties which, if well discharged, constitute woman in a soft, beautiful and almost sacred way, the queen of the world." He goes on to say that probably there are several or many employments in the hands of men for which women might be more or less fit, such as printing, tailoring, weaving, and clerking. His remarks as to women in the profession of medicine are of special interest. He says:

That medicine is intrinsically not unfit for them is proved from the fact that in much more sound and earnest ages than our own the medical profession rose into being, they were virtually the physicians and surgeons as well as sick nurses, all over the world and their form of intellect, their sympathy, their wonderful acuteness of observation, etc., seem to indicate in them peculiar qualities for dealing with disease, and evidently in certain departments (that of female diseases they have quite peculiar opportunities of being useful.

Replying to a specific question which had evidently been put to him, he adds:

Two things are not doubtful to me in this matter. First, that women—any women who deliberately so determines—have a right to study medicine, and that it might be profitable and serviceable to have facilities, or at least possibilities, offered them for so doing; but, second, that for obvious reasons female students of medicine ought to have, if possible, female teachers, or else an extremely select kind of men, and in particular that to have young women present among young men at anatomical classes, clinical lectures, or generally studying medicine in concert is an impropriety of the first magnitude, and shocking to think of to every pure and modest mind.

MEDICAL NEWS.

DR. PETER W. SAGAR, New Mills, Montgomeryshire, was placed on the Commission of the Peace for the county last June.

The annual general meeting of the Royal Medical and Chirurgical Society of London will be held on Friday next, at 8 P.M., when the President, Mr. J. Warrington Haward, will deliver the annual address. The Society at present has 335 ordinary and 29 honorary Fellows.

It has been arranged that the formal opening of the extension building at Tottenham Hospital shall take place on May 7th, when the Prince and Princess of Wales have promised to be present. The new building raises the total accommodation for in-patients to 130 beds.

THE Portuguese Minister of Marine has decided to send a scientific mission to the Ilha do Principe, in the Gulf of Guinea, for the purpose of trying the effect of measures of general prophylaxis against sleeping sickness, the prevalence of which on the island continues to increase.

AT a meeting of the Harveian Society on Thursday next a special discussion on the diagnosis and treatment of fractures to be next to the joint will be opened by Mr. Watson Cheyne. His remarks will be illustrated by diagrams, and a number of well known surgeons have promised to take part in the proceedings. All medical men are invited to attend.

DR. J. EDEN BARNES, of Renfrew, who some time ago gave a lecture at Clayhithe Farm, recently gave another on the journey from Great Britain to Vancouver. The occasion of his visit to Canada was the annual meeting of the British Medical Association at Toronto, and his lecture was illustrated by a number of photographs of the scenery of the St. Lawrence, the great lakes, and the Rocky Mountains.

AT a meeting at Church House, Westminster, on February 28th, it was stated that the new and enlarged premises for the Hospital of St. Luke are already in course of erection. The total estimated expenditure is £40,000, of which sum £15,000 is in hand or has been already expended. Last year the hospital treated 18 patients, of whom 9 were on the free list. The institution, which is at present in Soho Square, W., is practically a nursing home for the poorer clergy and their families, and is now in the fifteenth year of its work.

THE Royal Academy of Sciences of Turin in accordance with the will of the former president, the late senator Thommaso Valerio, will award a prize to the scientific investigator, of Italian or any other nationality who between January 1st, 1907, and December 31st, 1910, shall have published the most important and most celebrated work in the domain of physical science, taking that term in its largest sense. The prize will be of the value of 28,000 francs (£1,240). The money will be paid a year after the date of award. Italian members of the Academy are excluded from competition. Manuscript works will not be accepted, and no work sent in will be returned.

THE NOBEL PRIZE IN MEDICINE.—It has already been stated in the BRITISH MEDICAL JOURNAL that the professional brethren of Professor Ramon y Cajal and Professor Camillo Golgi, to whom was awarded the Nobel Prize for Medicine, intended to mark their appreciation of the honour done their distinguished countrymen. On February 22nd a meeting was held in the Colegio de Medicos, Madrid, at which it was agreed that a public subscription should be opened for a gold medal to be presented to Professor Ramon y Cajal; that a volume containing reports of original researches should be prepared under the direction of a Committee consisting of Professors Calleja, Gomez Ocaña, Oloriz, Jimeno, and San Martin, and that the Government should be asked to confer a life senatorship on Professor Ramon y Cajal. The Committee appointed to make arrangements for doing honour to Professor Golgi has decided that a scholarship bearing his name should be founded in connexion with the University of Pavia. A circular asking for subscriptions for the purpose has been issued.

STREETS NAMED AFTER DOCTORS.—We continue to learn of instances in which streets in various towns have been named after members of the medical profession. Dr. MacDowel Cosgrave (Dublin) informs us that Dominick Street, Dublin, was named after Dr. Christopher Dominick who died in 1692. It was commenced by his son before 1727. He was an ancestor of the Duke of Leinster, who still owns a house in the street. The origin of the name is known to few, as the Dominicans having built a church in Dominick Street many hastily conclude that the street derives its name from the founder of their order. Dr. G. S. Sims states that in Derby there are Erasmus Street and Darwin Terrace, both called after Erasmus Darwin, the grandfather of Charles Darwin, who practised as a physician in Derby in the closing years of the eighteenth century. He was the author of the *Botanic Garden*, a poem satirized in the *Loves of the Triangles*, published in the *Antijacobin* which was mostly written by George Canning and Hookham Frere.

BRITISH MEDICAL BENEVOLENT FUND.—At the annual general meeting on February 19th, the chair was taken in the unavoidable absence of Sir William Broadbent and Sir William Church, by Mr. E. Parker Young, Chairman of Committee. The report of the Committee for the preceding year was read and adopted and ordered to be printed for circulation. It stated that in the Annuity Department the income was £2,465 2s., and that the following legacies had been received and duly invested: Dr. Grieve, £259 10s. 6d.; Dr. W. Burns, £90; Dr. Parsons, £100; Dr. Cameron, £100; Dr. Trollope, £500; total, £1,049 10s. 6d. In the Grant department the amount distributed was £1,619 5s., as against £1,562 in the preceding year. The total amount of money received, however, appeared to be less by £150. In 1905 a special appeal was made which brought in donations to the amount of £641. During the year, without any special appeal, the donations reached the satisfactory sum of £226, while the annual subscriptions showed the remarkable increase of £751. This increase, though the result in part of personal effort, was largely due to the assistance afforded by the BRITISH MEDICAL JOURNAL and the *Lancet* in publishing each month the proceedings of the Committee with an abstract of the cases relieved. It was a simple record of facts, but told in an eloquent and touching way the work and wants of the fund. A special donation of £20 was again received from Miss Flower to enable some of the most deserving cases to get a summer holiday. Other special donations to provide special Christmas gifts were received from Miss Flower of £20, from Dr. Satchell £10 10s., and other sums from Mr. Patmore Sheehy and Miss Breeze—examples worthy of imitation. The accounts were audited as usual by Messrs. Doliotte, Plender, Griffiths, and Co., chartered accountants. The Committee while glad that the favourable anticipations made in the report of last year had been realized, felt only too well how much still remained to be done before the fund was recognized as widely and supported as liberally as it deserved and ought to be, and called upon all interested in its work to continue, and if possible to increase, their efforts on its behalf.

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THE VIVISECTION COMMISSION.

THE Royal Commission on Vivisection has decided to sit on two days in each week till Easter, but there is said to be little hope that it will be able to complete its task till late in the autumn. Many witnesses have still to be examined, and, as may be gathered from the space required for the greatly-abbreviated reports of the evidence so far given that are now appearing in the BRITISH MEDICAL JOURNAL, the Commissioners are very thoroughgoing in their interrogatories. This is exactly what is desired by the supporters of experimental research. It would be improper, even if it were possible, at this early period in the inquiry to forecast its issue. But it may be permissible to say that, on the whole, the case for research has been presented in a satisfactory manner. The evidence of Mr. Byrne and the Inspectors shows with what care the Act is administered, and how it affords sufficient protection to animals. The Inspectors are agreed that, although their work is increasing with the increase of experimentation necessarily entailed by the progress of science, there is no need for more inspection in order to check abuses. As Sir Thornley Stoker, speaking for Ireland, put it, nothing goes on in the laboratories that a dozen more inspectors could find out. If their visits to each registered place of research are relatively few, it must be remembered that they are surprise visits, and they can demand admission at any time. But the occasion for anything in the nature of a demand never arises; the doors of the laboratories are open, and they can walk in whenever they please. What each worker is doing is known to the Home Office, to which he periodically sends reports, and these reports can always be checked by the Inspector from his own knowledge, and by the officials from the papers published by experimenters in scientific journals. There, too, the accounts of their work may be, and are, read by the enemies of experimental research. There is absolutely no concealment.

The Inspectors are agreed that cruelty is practically unknown in the laboratories of the United Kingdom. Even technical irregularities are of the rarest occurrence, and are chiefly due to inadvertence or misunderstanding. It is not, however, by their cleverness in keeping within the four corners of the law that science is justified of her children. It is to their personal character that we must ultimately trust for the prevention of cruelty. The unanimous testimony of the Inspectors to their humanity and to their care for the animals which they use is striking as coming from men who have the best opportunities of knowing the truth, and who, not being themselves engaged in experimental research, are not likely to cherish any strong prejudice in its favour. An interesting feature of Professor Thane's examination was the flat contradiction he gave to certain passages as "lurid" as Mr. Lupton's pathology, from the notorious book entitled *The Shambles of Science*, which it was understood had been withdrawn from circulation. It appears, however, that only one chapter was suppressed, and with this omission the book is still on sale. The Inspector was thanked by the Home Office for the report which he presented on this subject.

We do not propose to comment on the evidence in detail; it may, indeed, safely be left to speak for itself. There is, however, one point as to which, in view of its importance in relation to scientific teaching, we may be allowed to say a few words. Sir Thornley Stoker in his evidence expressed himself as strongly opposed to experiments for purposes of demonstration. He has no objection to experiments on living animals for research, but for teaching he holds that they are unnecessary, as what the ordinary student requires to be taught is established truth. It also appeared from his replies that he is sceptical as to the possibility of keeping dogs for a long time under complete chloroform anaesthesia. He admitted, however, that he had not seen any vivisectional experiment on a dog. This doubtless explains, though it cannot be considered to excuse, his ignorance of the methods by which dogs and other animals are anaesthetized in the laboratory. Had he taken the trouble to inquire he would have learned that, except in very rare instances and for special purposes, the anaesthetic employed in laboratories is not chloroform alone, but either the A.C.E. mixture or a mixture of ether and chloroform in the proportion of two parts to one. It can be confidently asserted that animals in the laboratory suffer less distress from the administration of anaesthetics than patients in a hospital. Nor is there any difficulty in keeping dogs completely anaesthetized, as shown by the state of the conjunctival reflex, for two, three, or even four hours, if proper precautions are taken. Another ground on which Sir Thornley Stoker objects to demonstration experiments is that they are demoralizing to students. He was unable, however, to produce any definite proof of callousness being thus engendered. He somewhat grudgingly admitted that demonstrations might be of use to students, but thought any help they might thus afford was more than counterbalanced by the evil which they did. This is an opinion which may be taken for what it is worth, but in admitting the usefulness of demonstrations Sir Thornley Stoker seems to give away his case. The whole trend of modern scientific education is in the direction of teaching students to see things for themselves. It is in the laboratory only that real knowledge is gained. What is read in a book or heard at a lecture about the structure and functions of the body, however clear it may seem to be, is not readily grasped by the mind. Moreover, it is really accepted on the authority of the teacher. It is, therefore, faith, not knowledge. The acceptance of doctrines on authority hindered the progress of medicine in the past when men did not dare to look at Nature except through the spectacles of the ancients. If we are now coming to know something of things as they are, it is because we are learning to use our own eyes. It may perhaps be said that though demonstrations are necessary for those who aspire to be physiologists, for the ordinary student who only wishes to qualify himself to practise medicine they are superfluities. The answer to this is that in the right training of the ordinary student lies the hope of raising the profession to the full height of its possible efficiency. There is no place in scientific medicine for the rule-of-thumb man, who treats names rather than diseases, and whose stock of therapeutic resources consists in "tips" for this or that ailment. The scientific doctor must lay the foundation of his training in the laboratory,

and the great truths of physiology must not merely be *demissa per aurem*, but *oculis subjecta fidelibus*, if they are to take a lasting hold of his mind. It may be added that callousness is the offspring not of knowledge but of ignorance. Just as medical men are by virtue of their knowledge more actively sympathetic with suffering than other men, so the doctor who best understands the working of the living body most keenly realizes its sufferings when out of order.

THE TERRITORIAL ARMY AND ITS MEDICAL CORPS.

THE Secretary of State for War, in his great speech on the reorganization of the army in the House of Commons on Monday, said, with regard to the arrangements for the medical element of the territorial army which is to be formed, that he had accepted the scheme put forward by the British Medical Association for the organization of the medical officers of the existing auxiliary forces as a part of the Royal Army Medical Corps, and that this new branch of the Corps would provide the medical and sanitary service for the territorial army. Never before, Mr. Haldane said, had the War Office had such a stock-taking as during last year. The soldier had been asked to say what he wanted, but to effect economies by getting rid of mere ornament. The result is a scheme of reorganization of the national forces into two lines, a regular army and a territorial army, and an economy, on paper at least, of two millions. The scheme is, of course, based on the assumption that the country intends to retain the command of the seas. The regular army is to be a small, well-equipped, professional army, always ready to take the field in defence of any part of the Empire, and fit to maintain itself for six months of war; Mr. Haldane's conception of the first line is therefore the same as that of his immediate predecessors. The territorial army is to be the second line, resting on the nation itself, undergoing a degree of military training during peace, provided with modern weapons, capable of taking the place in home garrisons of the regular army sent abroad on the outbreak of a big war, and then undergoing further training and expansion so that it may supply the waste produced in the regular army by war.

The territorial army is based on, and takes the place of, the militia and volunteers, and in its organization is to be closely associated with the counties. In every county there is to be a county association, with the Lord Lieutenant at its head, whose duty it will be to organize the county corps of the territorial army, and to do the administrative work of the forces in the county, that is to say, the finding of supplies, the provision of the necessaries for a campaign, the payment of money, and the furnishing of weapons, the funds being supplied through the War Office. The command and training of the county corps of troops will be given to the officers of the new units corresponding to the officers of the existing militia and volunteers. The fourteen divisions of which the territorial army will consist will be commanded by a regular major-general with general and administrative staff officers both regulars; but it is hoped that the brigadiers will be eventually drawn from the officers of the territorial army itself. The establishment of this army will be 250,000 men ready in the event of mobilization to be called out for six months' training or war, and capable then of reaching a strength of 300,000. It will be the last reserve of the nation in a great emergency.

In place of the regimental depôts there will be established nucleus training battalions. They will train men for drafts in peace, they will train the militia battalions, they will train special civilian recruits who arrange to take their training very much as the militia do now, and on the outbreak of war they will expand and take in the recruits who flow in under any great national stress to make up the number of drafts to supply the wastage of war.

The question which particularly interests the medical profession is the nature and extent of the provision of medical and sanitary officers for the two lines, and we are glad to observe that Mr. Haldane recognized throughout his speech the essential importance to a modern army of its scientific branches.

The regular army is to consist of six divisions and four cavalry brigades with the proper proportion of artillery, army service corps, and army medical corps and it is hoped that the scheme will provide an army of 150,000 men properly equipped and thoroughly trained and will maintain such a force in the field for six months. The regular Royal Army Medical Corps will be the medical and sanitary branch of the regular army which is to be ready at once for the field. Mr Haldane stated that there was a deficiency for the expeditionary force, not allowing for wastage, of 321 medical officers, 30 quartermasters, and 4,400 other ranks.

With regard to the medical department of the territorial army, the Secretary of State for War, as has been said, accepts the scheme suggested by the British Medical Association. This, which it will be remembered was drawn up by a special committee consisting of medical officers of the auxiliary forces, proposed that in future all commissions to medical men in the volunteers should be to the R.A.M.C.(Vol.). Mr. Haldane proposes to organize a large territorial army medical corps under the Director-General of Army Medical Services, and in that way hopes and expects to get both officers and men who will go out on mobilization. Its establishment will, it may be assumed, be fixed on the same scale as the war establishment of the R.A.M.C. for the regular army, and there is reason to believe that the deficiency in the territorial branch will be much less serious than that which seems to exist in the regular branch. The territorial army is to have fourteen divisions, and we calculate that the R.A.M.C. establishment required for such a force would be approximately 1,200 medical officers, between 70 and 80 quartermasters, and about 12,000 non-commissioned officers and men. We believe that it will be found that existing establishments of the auxiliary forces if organized as part of the R.A.M.C. would suffice for the territorial army, but it would be necessary to develop the sanitary side, and to provide for the services of medical officers experienced in sanitation and of men especially trained in such duties. It would also be necessary to organize among the men a nursing section, a clerical section, and a cookery section, each with its proper proportion of non-commissioned officers, and to make arrangements for the special training of these men and N.C.O.'s in each command.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

THE Local Government Board has issued a report by Dr. M. H. Gordon on the micrococcus of epidemic cerebro-spinal meningitis, with special reference to its identification in the upper respiratory passages.

A considerable portion of Dr. Gordon's report is occupied with a general historical account of what

as been ascertained concerning the bacteriology of ne disease, and is, as he states at the conclusion, rgely based upon Weichselbaum's article published n 1903. This aspect of the subject has already been ealt with at considerable length in our columns;[1] but feature of special interest in Dr. Gordon's report is is description of the method for identifying the *Micrococcus meningitidis* by means of the fermentation est. A lemco broth medium, tinted with litmus and ontaining one or other of various carbohydrates, is sed, and the capacity or incapacity of the organism ntroduced to attack the carbohydrate is indicated by ne presence or absence of an acid reaction. For the urpose of growing such a delicate organism as the eningococcus in the lemco medium Dr. Gordon has ound it advisable to add a little sterile raw ascitic uid. This addition does not interfere with the reaction st; it also possesses the advantage of promoting the rowth of the gonococcus—another delicate micro-rganism which it is sometimes necessary to differen-ate from the meningococcus. The four carbohydrates hich are of especial value in distinguishing the rganism of cerebro-spinal meningitis from other icrococci which are negative to the Gram test are ucose, galactose, maltose, and saccharose. The eningococcus produces an acid reaction with the first ree, but not with the last; whilst the *Micrococcus tarrhalis*, which it is especially important to distin-uish, gives a negative reaction with all four carbo-ydrates. The gonococcus gives positive reactions with ucose and galactose, but fails to form acid out of ther maltose or saccharose.

Dr. Gordon has paid special attention to the differentia-on of the meningococcus from other Gram-negative occi which occur in normal saliva, and may therefore use difficulty in demonstrating the presence of the eningococcus in the upper respiratory passages. Out 127 examples of these normal salivary cocci, he has und that no less than 114 were distinguished from the eningococcus by their sugar reactions; 80 of them oduced a *positive* reaction with saccharose; 54 gave a *gative* reaction with galactose; and 9 gave a *negative* action with glucose. Moreover, though 13 of the am-negative salivary cocci responded to the sugar sts in the same way as the meningococcus, they could be distinguished from this organism by means other characters. Thus the meningococcus, when ltivated in mannose, produces no definite ange of reaction in the direction of acid, whereas ven of these exceptional salivary streptococci oduced a strongly acid reaction with this carbo-drate. A more strongly marked distinction, how-er, between these salivary cocci and the meningo-ccus lay in their growth on solid media. All the mer organisms grew profusely on agar at 37° C., l seven of them produced a yellow pigmentation this medium. In some of the non-pigmented es the appearance of the growth upon agar was te different from that of the meningococcus, ng more opaque, more granular, or more coherent. t the chief distinction of all, Dr. Gordon found, s that the Gram-negative salivary cocci all grew n "nasgar" at 23° to 25° C., whereas the meningo-cus tested at the same time and under the same ditions failed to grow at all at this temperature, ugh control cultures of it grew well at 37° C. An itional observation made by Dr. Gordon was that 4 of his 13 exceptional Gram-negative salivary cocci ng the same sugar reactions as the meningococcus, e found to grow on gelatine at 22° C.

[1] British Medical Journal, February 16th, 1907, p. 387.

At the conclusion of his report Dr. Gordon enters into a critical examination of the value of the agglutination test for differentiating the meningococcus. He expresses his opinion as follows: "The positive value of "the agglutination test for the purpose of distinguish-"ing the meningococcus from Gram-negative cocci of "normal saliva is in my opinion small; and from my "present experience of the difficulties and sources of "error involved in attempts to usefully employ that "test in this connexion I am quite unable to re-"commend it. Fortunately, however, the meningo-"coccus can be differentiated from these normal throat "cocci without the agglutination test."

LORD LISTER'S EIGHTIETH BIRTHDAY.

April 4th, 1907, will be the eightieth anniversary of Lord Lister's birth, and it seems proper that the occasion should be taken to convey to him in some appropriate way the admiration and affectionate esteem with which his work and his character have inspired his contemporaries. From Dr. C. J. Martin, the Director of the Lister Institute, has come the happy suggestion that the best form which this expression could take would be the republication of all his scientific papers, prefaced by a biography which would contain an account of the part played by the genius of Lister in the development of our knowledge of infectious processes and the history of his efforts to obviate wound infection, the successful result of which initiated a new era in surgery. As Lord Lister's original papers are scattered throughout the medical and scientific publications of this country it is thought that a very large number of professional and scientific men in Great Britain and the British colonies and dependencies, in America, and also on the continent of Europe, might be glad to have the collected works of one whose contribution to medical science during the last forty years has made him pre-eminent amongst his countrymen. A number of Lord Lister's friends and admirers have expressed their warm approval of this means of celebrating his birthday, and a committee representative of medicine and science is being formed to determine how the above object can best be attained. Dr. C. J. Martin will be glad to receive at the Lister Institute, Chelsea Gardens, S.W., the names of those who desire to take part in this tribute.

THE TRYPSIN TREATMENT OF CANCER.

The interesting paper by Dr. Bainbridge, of New York, which appears in this week's issue at p. 486, may be called the epilogue of what Quince might in good sooth have called "the most lamentable comedy" of the latest cancer cure. Our readers will doubtless remember that some two months ago it was announced in the lay press that certain cases of malignant disease had been cured by injections of trypsin, and the "approaching "conquest of cancer" was proclaimed. The statement thus confidently made was mainly based on a case reported by Dr. W. J. Morton of New York in the *Medical Record* of December 8th, 1906, in which it was said that trypsin injections had caused shrinkage of a cancerous breast into a mass of extremely dense fibrous tissue. It was added that "the finality "of this process would have been a carcinomatous "breast (involving inclusively its skin envelope) "which had entirely disappeared—which had become, "in short, absolutely cured." On this case Dr. Morton built the conclusion that "if, by the judicious manage-"ment of trypsin and amylopsin, such changes as this "can be repeated in the cancerous tumour, we shall be "obliged to admit that a new era has opened in cancer "treatment." How far off the "new era" still is may be sorrowfully gathered from Dr. Bainbridge's account

of the subsequent history of the case. A full abstract of Dr. Morton's report was given in the EPITOME of January 19th, par. 33; it will be seen that there are certain discrepancies as to date, but they do not affect the essential features of the case. It is only necessary to recall here that the patient was an unmarried woman of uncertain age, who had a small lump in the left breast for which operation was refused. After a time, as the growth increased in size, she allowed it to be removed by Dr. E. W. Peet, but would not consent to a radical procedure. This was in 1904. In the spring of the following year a second nodule appeared in the neighbourhood of the first. A radical operation was again refused. In July, 1905, the patient consulted Dr. Morton, who treated her with *x* rays for seven weeks, when, it is said, the gland was reduced in size by one-third, the tumour was freer, and "absolutely every sign "of lymphatic infection had disappeared." Eight months later she again consulted Dr. Morton, when it was found that the disease had involved the entire skin over the gland and the neighbouring skin lymphatics. Operation being again declined, the trypsin and amylopsin treatment was employed throughout June, July, August, September, and the first half of October. Reaction, both local and constitutional, was severe. The patient at last consented to an operation, which was performed by Dr. Bainbridge on November 3rd. At that time there was a typical large scirrhus of the breast, with considerable ulceration around the nipple, enlargement of the lymph nodes extending into the axilla, a certain amount of contraction of the skin, and in spots secondary skin deposits for a short distance around the principal mass. Dr. Morton's account of the microscopic examination presents some striking contrasts with those of the experts quoted by Dr. Bainbridge. Thus Dr. F. B. Mallory says the sections showed a typical, rather rapidly growing carcinoma of the breast. There were evidences of degenerative changes indicative of some destructive process; whether they were due to *x*-rays or to trypsin he was unable to say, but he favoured the former hypothesis. Dr. L. S. Mandelbaum also found indications that the tumour was still active in parts, while presenting degenerative changes in others. Dr. Martha Wollstein said that on the whole the growth had the typical appearance of a scirrhous carcinoma. After the operation on November 3rd, the trypsin and amylopsin treatment was again carried out. The continued activity of the malignant process proved that the trypsin treatment employed by Dr. Morton had been inadequate to stop its progress; Dr. Bainbridge therefore used much larger injections of a solution of double strength. On January 22nd, a further operation was performed for the removal of nodules of lymphatic metastasis which appeared in the neck behind the ear to be excised, and a number of small nodules which developed in the skin at the upper part of the wound soon after the previous operation. It is worthy of note, though, as Dr. Bainbridge points out, it may be nothing more than a coincidence that no new nodules were observed from the time the patient received these large doses of trypsin to the time of his second operation, and that those already existing increased materially in size. The microscopic examination of the nodules, however, showed that the cancer was still active, and Dr. Bainbridge justly points out that there was no indication that the trypsin treatment had exerted any curative influence on the tumour cells. Dr. Wollstein says that the lymph nodes showed marked metastasis of carcinoma. Dr. Mandelbaum found no degenerative changes in the specimens which he examined. Dr. J. M. Jeffries says the tissue removed at the second operation exhibited most extreme malignant character-istics. He further declares he is wholly unable to appreciate any effects which might be attributed to the methods of treatment employed, except in the skin from the old scar where he recognized the effects of the *x* rays in a contraction of the alveoli. What is the inference to be drawn from these statements? Are we to reject trypsin without further trial? That would scarcely be scientific, for though its curative properties are "not proven," there is some evidence that in certain cases at least it alleviates some of the worst features of the disease. It would be heartless as well as foolish to deny a sufferer doomed to death the slightest mitigation of his lot, were it only the effect of suggestion. Let the treatment be fairly and fully tried. Only, as John Goodsir said, let us have God's own truth in the reports and let us not allow ourselves to be carried away by the eagerness of a wish which is the father to an all considered thought.

THE CONVEYANCE OF INFECTIOUS DISEASES BY DOMESTIC PETS.

DR. P. REMLINGER, Director of the Pasteur Institute at Constantinople, contributes to the *Revue Scientifique* (p. 801, December 29th, 1906) a somewhat alarming account of the dangers, or possibilities of danger, arising from dogs or cats which are allowed to come into contact with persons suffering from infectious diseases. He recently became acquainted with the case of a girl who was allowed, whilst suffering from scarlatina, to fondle the family cat. Minute precautions were taken to keep the girl in strict isolation, but the possibility of danger arising from the cat was overlooked. Eventually the girl's sister also developed scarlatina, and it appeared that the cat—favourite with both sisters—was in all probability the means of transmitting the disease from the first to the second. The cat has long been under suspicion, and has been accused of disseminating diphtheria, among other diseases; but Dr. Remlinger has made some bacteriological experiments on the retention of infective organisms in the fur of dogs and cats which give greater precision to the charge. He took broth cultures of various micro-organisms and smeared some of the liquid on the hair of the back of the animal. At regular intervals of three or four days a few tufts of hair from the infected region were cut, washed in sterile water, and centrifuged. Cultures were then made from the sediment. Control cultures were also made from the hair of animals which had not been treated. The latter cultures very frequently yielded the *Streptococcus pyogenes*, and constantly showed the presence of *B. coli* and many varieties of staphylococci. All these organisms have therefore, to be eliminated in the experiments for determining the duration of infectivity. The organisms tested were *B. typhosus*, *B. diphtheriæ*, *B. pyocyaneus* and *B. anthracis*. In experiments upon cats it was found that the typhoid bacillus persisted in the hair up to the seventeenth day: on the twentieth day it had disappeared. The diphtheria bacillus persisted until the twenty fourth day, but had disappeared on the twenty seventh. A twenty four hours culture of the bacillus, isolated on the twenty fourth day, was inoculated subcutaneously in a dose of 1 c.c.m. into a guinea pig weighing 4 grams, and killed the animal in thirty hours. There was, therefore, no attenuation of virulence. *B. pyocyaneus* remained alive for at least sixteen days in the hair of the cat, and possibly would have persisted for a longer period, but the experiment was terminated by the death of the animal. The anthrax bacillus retained its vitality for an indefinite period: the organism was recovered after two months, and it was thought useless to prolong the experiments any further. Experiments on dogs gave results very much the same as those obtained with cats. The typhoid bacillus retained its vitality for sixteen days; the diphtheria bacillus was found fully virulent on the eleventh day, but was no

recoverable on the fifteenth day; the anthrax bacillus remained alive indefinitely. Dr. Remlinger appears to be profoundly impressed with the significance of these experimental results and draws a solemn picture of the dangers arising from the presence of dogs or cats in either private houses or hospitals.

MUMMIFICATION IN EGYPT.

THE process of mummification has always been a subject of great interest not only to those peoples whose religious ideas were intimately associated with its performance, but also to others who observed it and commented on it with curiosity and awe. Various modifications of the process, varying from mere desiccation to elaborate preservation, have been adopted in different parts both of the old world and the new, but probably the mummification practised in Egypt has received more attention than that resorted to in other countries. This is partly due to the fact that Egypt is so closely associated with Biblical history and partly to the lavish distribution to all civilized countries of the mummies gathered in Egypt from pyramids and tombs. Yet, notwithstanding the numerous specimens and the comparative freedom with which they have been handled, little accurate knowledge was gained regarding the processes adopted and how they differed at different periods of history until Dr. Elliot Smith, the Professor of Anatomy in Cairo, commenced an elaborate investigation, the results of which he has published in a monograph entitled *A Contribution to the Study of Mummification in Egypt.*[1] It is true, as Professor Elliot Smith points out, that the late Professor Pettigrew published, over sixty years ago, a *History of Egyptian Mummies*, which contained as much information as could be gathered at that time, and which included an account of the extraction of the brain from the cranial cavity through the roof of the nose; but during the period which has elapsed since then practically no new facts of importance have been recorded. To-day, however, thanks to Dr. Elliot Smith's work, we have before us a fairly clear history of mummification as practised in Egypt at various periods, and it is a history of great interest. It appears that during the period extending from the seventeenth to the end of the twentieth dynasty (about 1800 to 1133 B.C.) the main object was to preserve the tissues of the body. The viscera were removed through an opening made in the left flank—either because they were particularly prone to undergo and set up disintegration, or for some other as yet unexplained reason. The body was then soaked in a bath which probably consisted chiefly or entirely of a solution of common salt, and the viscera, having been similarly treated, were sprinkled with the sawdust of various aromatic woods, wrapped in linen, and enclosed in four distinct parcels in four jars, which were placed in the tomb with the mummy. The jars in which the viscera were placed are known as Canopic jars, and, apparently, they were never used for any other purpose but the reception of the viscera of the dead. Therefore, their presence in tombs may be looked on as an indication that the practice of embalming or mummification was in vogue at the period to which they belong. They have been found in tombs which are believed to date as far back as the fifth dynasty (3566-3333 B.C.). But, since it must be admitted that no viscera have been found in the Canopic jars of that remote period—and no other definite indications of the practice of mummification are evident—it is clear that the evidence in favour of the practice in the earlier dynasties is slight. When the twelfth dynasty (2466-2266 B.C.) is reached the evidence becomes stronger, for there are indications that at that time the surface of the body, and perhaps the nose and mouth, "were covered with a resinous paste, and linen-wrapped parcels are found in Canopic jars," but there is no evidence that the practice of removing the brain had yet commenced. The mummies produced by the removal of the viscera and the salt bath employed from the seventeenth to the twentieth dynasties were not satisfactory; for, though the bath sufficed to preserve the skin, the tissues beneath became soft and spongy, and finally shrank to such an extent that little was left inside the swathing wrappings but bones covered with wrinkled skin. In the nineteenth dynasty the appearance of the face was improved by stuffing the cheeks with linen. Subsequently the body walls, the back, and the limbs were also stuffed with mud, pebbly sand, or linen, either by incisions prolonged into them from the body cavity or by incisions made through the skin. The parcels of viscera were no longer placed in Canopic jars, but were deposited in the thorax and abdomen, and in each parcel was wrapped an effigy of one of the four sons of Horus, to whom the four Canopic jars of previous dynasties had been dedicated. Most commonly the human-headed *Amset* was associated with the liver, the baboon-headed *Hapi* with the lungs, the jackal-headed *Tuamâutef* with the stomach, and the hawk-headed *Kebhsenuf* with the intestines. At still later periods, with which the monograph does not deal in detail, the embalmers ceased to stuff and attempted to reproduce the form by complicated wrappings, and with the advent of this change the method of preserving rapidly deteriorated. In the Roman period the use of bitumen replaced the art of bandaging, and, still later, pitch was abandoned, and salt was again used as a preservative. It appears that in the earlier dynasties it was customary to place in the tomb a statue representing the deceased so that his *Ka*, or double, should be provided with a dwelling place when the body had lost all similitude of the living person, and Dr. Elliot Smith suggests that the practice of stuffing the body originated with the idea of making the body itself the permanent *Ka*.

[1] *Mémoires présentés à l'Institut Egyptien et publiés sous les auspices de S. A. Abbas II, Khédive d'Egypte.* Tome V, Fascicule I.

POST-MORTEM CAESAREAN SECTION.

THE saving of a life should always be attempted, but in the case of a woman dying in labour the friends of the deceased are in a position to forbid any attempt to save the child, even though the obstetrician can hear the fetal heart sounds. Hence successful *post-mortem* Caesarean section is more frequent in hospital than in private practice. Everke[1] reports three Caesarean operations where the child was saved in two cases; the mother was already dead in all three. In one instance the uterus contained two fetuses, although apparently twin pregnancy had not been diagnosed. The mother at the beginning of labour was suffering from myocarditis, dyspnoea, advanced general anasarca, and albuminuria. When the os was fully dilated the membranes were ruptured to hasten delivery. The cord prolapsed and turning was practised, the foot being brought down. The patient died suddenly shortly afterwards. Caesarean section was at once performed; the incision involved the placenta. Two children were extracted from the uterus; the first, a female, was made to breathe normally after nearly two hours' careful attention; the second, a male, was not saved, although the heart sounds were audible for two hours after birth. In Everke's second successful case the mother was, as in the first, suffering from general anasarca and dyspnoea; the renal symptoms were well marked. She died just as Dr. Everke was about to examine her; he immediately performed Caesarean section and saved the child. In the last case the infant was not saved, and the cause of maternal

[1] Ueber Kaiserschnitt an der Toten, resp. an der Sterbenden, *Monatsschr. f. Geb. u. Gyn.*, August, 1906, p. 269.

death was a local accident incident to labour, not a general malady. The mother was suddenly seized with violent abdominal pains at term, and her doctor gave opium. Then a consultation was arranged with Dr. Everke at the patient's home, but just as he reached it he was informed that the patient had expired about a minute previously. He was permitted to open the abdomen immediately, and found 3½ pints of fresh and old blood free in the peritoneum. The uterus was laid open and the child delivered, but it was already dead. A fissure was detected in the serous coat of the uterus; the source of the bleeding—apparently some old adhesions—had been torn through when labour pains set in. It is worth remembering that the haemorrhage in the third case proved deadly to the child, though the mother was in good health at the time of the complication; whilst in the case of twin labour, where one child was saved, the mother had died of an old-standing constitutional malady.

TENNIS ELBOW.

The keen devotion to sport and active pastimes in recent times has led to the recognition by surgeons of several special injuries of which the best known are probably the malleolar fracture of the footballer, the radial fracture of the chauffeur, the calf sprain of the lawn tennis player, the wrist sprain of the fencer, and the shoulder luxation of the wrestler. Another recognized lesion belonging to this category is "tennis elbow," caused, it is believed, by playing to a low ball with the arm fully extended, and characterized by sudden and sharp pain in front of the joint, felt at the time of the injury, speedily followed by the formation of a distinct soft swelling over the head of the radius and resulting in prolonged inability to use the arm and in hindrance to extreme flexion of the forearm and to its extension beyond 165 degrees, due mainly to increased pain which such efforts cause. The injury is by no means trivial, and, indeed, is likely to give much trouble to the ardent tennis player, as, in spite of a treatment lasting for several months, the symptoms will, it is probable, often recur. Bahr,[1] who, in 1900, brought this subject of tennis elbow before the notice of German surgeons, gave from personal observation a good description of its cause and symptoms, but acknowledged that he was in absolute darkness as to its pathology. Two years later Clado,[2] by a somewhat extensive experience of the injury in France, was led to the conclusion that the seat and the closely-circumscribed area of the sharp pain and the swelling pointed to tearing of some of some of the fibres of the supinator brevis muscle. Dr. G. Preiser of Hamburg, who has lately had two opportunities of studying this injury, is convinced that Clado's explanation is unsatisfactory, and that the symptoms of tennis elbow are caused, not by muscular rupture, but by tearing of the humero-radial ligamentous capsule, as a result of simultaneous forcible contraction of the brachialis anticus and supinator brevis muscles, and that this tearing leads to localized chronic synovitis and effusion. Preiser points out that these two muscles are not made to work together in striking a high ball, as in that movement the flexed arm is usually pronated. On the other hand, if the ball be near the ground and below the armpit, the stroke is effected by associated movements of the flexor and supinator muscles. In order that the ball may be properly attacked, the ulnar side of the hand must be carried forwards and outwards, and at the elbow both flexion and supination take place, and the brachialis anticus and the supinator brevis act together and stretch the wall of the articular capsule, to which some of the fibres of both these muscles are attached. Preiser holds that Clado's theory is opposed by some of the clinical signs, and he attaches importance to the observation that the movements of pronation and supination are quite painless when the forearm is flexed. The symptoms, however, especially those consisting in the first incidence, and the severity of the pain seem to vary in different cases. Probably the mechanism is not always the same, and in the severe cases in which the limb remains useless for several weeks, and the treatment is much prolonged, it may be more complicated than has hitherto been assumed. Skiagraphy has not yet given any help beyond demonstrating in such few cases as have been fully studied the absence of any injury to bone.

A MEDICAL VIEW OF THE AMERICAN GIRL.

The American girl who used to be taught to look upon herself as the very cream of civilized maidenhood, has lately been the object of somewhat severe criticism on the part of candid friends of her own nation. Mr. Henry James and others have described her as empty-headed, selfish, and useless. Now comes an American physician, Dr. Ralph Wait Parsons, who, dealing with her from the medical point of view (in the *New York Medical Journal*), says she is an unhealthy creature suffering from anaemia, indigestion, and multiform neuroses, whereby her whole nature is warped, and becomes "like sweet bells jangled, out of "tune and harsh." It is all, we are told, the fault of what is called the "higher education." The belief, says Dr. Parsons, is coming to be more and more strongly held by those who can speak with authority on the subject, that parents and educators in general have set up a wrong ideal for the American girl: instead of aiming at making her "a womanly woman," they are forming her into one whose chief function in life appears to be to compete with men in the struggle for academic distinctions. It may here be pointed out that more than thirty years ago Professor Clarke of Harvard, in a booklet entitled *The Building of a Brain*, raised a note of warning on this subject which seems to have been unheeded. The consequence of the attempt to ignore the limitations imposed by Nature is that large numbers of the future wives and mothers of America are on the very threshold of life disabled by ill-health for the fulfilment of their destiny. How formidable is the course of study required in the average American high school for girls at the present day is shown by the following list quoted by Dr. Parsons: "Latin, Greek, French, German, English, "mathematics, physics, chemistry, astronomy, history, "sociology, economics, logic, psychology, philosophy, "literature, fine arts, biology, physiology, physical "training." Is it surprising, he asks, that many of the victims of such a system of intellectual forcing become the prey of hysteria, neurasthenia, and of every form of nervous disorder, and that their constitution is undermined? Is it to be wondered at that on the mental side they are discontented, introspective, selfish, critical, and exacting, or that they often lose their reason? The annual report of the New York State Commission in Lunacy for 1902 shows that, of the 35,006 women admitted to the State hospitals for the insane during the preceding eight years, 15,059, or 42 per cent., had been well educated, whereas, of the men admitted during the same period, only 16 per cent. were so described. The American girl who knows a thousand things naturally despises her more womanly sister, who knows but matters of the house. As a wife, even if she succeeds in getting married, she is not, Dr. Parsons contends, the companion and helpmate that her great grandmother was to her husband. But then

men, in the days before the advent of the high school, married women to grace the hearth and soothe and support the spirit wounded in the rough battle of life. They were not attracted by girls who were pale, thin, and plain-looking, with a peevish temper caused by ill-health, and a cold nature, because they could read Plato in Greek and could grapple with the higher mathematics. The remedies suggested by Dr. Parsons for the evils which he describes may be summed up as less study and more life in the open air. We, too, have the women educated beyond their physical strength; and we have the girls who ape the ways, and dress, and speech of men. The "sweet girl graduate with her golden hair" is not so conspicuous at Oxford to-day as the robustly-independent person whose fairy footsteps are easily traced through the snow. We get the impression that the girl athlete is not so common in America as she is here. Hockey and tennis help to save our maidens from anaemia and neurasthenia. Dr. Parsons does not touch on what seems to us the most serious result of intellectual overpressure in woman. It is not merely her mind that is unsexed, but her body loses much of the special charm that attracts men. The "bachelor girl" cares nothing about that, for she prefers freedom to the bonds of matrimony, but it is a serious thing for the future of the race. In America the college woman when she does marry is often barren, or when she has children she is incapable of rearing them. The gradual attenuation of the Anglo-Saxon element in the American people is not wholly to be explained by race suicide; it is in an increasing degree due to the growing unfitness for motherhood of the highly-educated woman.

THE PREVENTION OF DISEASE IN AN INDIAN TEA DISTRICT.

The Western Duars is the name of a narrow sub-montane tract between the Teesta and Sunkos rivers in the north-east of Bengal, south of Sikkim. The elevation varies from 200 to nearly 2,000 ft., and the country is intersected by numerous watercourses and gorges, mostly dry in the cold weather. The annual rainfall is very high, reaching in places 250 in., and practically the whole fall takes place between May and October. Over 200 Europeans are engaged in the tea industry in the district, and the native population consists largely of immigrants from many widely separated districts. The Western Duars has always been regarded as particularly unhealthy, and Stephens, Christophers, and James have all referred to it as a deadly tract of country. Malarial fevers are common and blackwater fever seems to be increasing not only in frequency but also in the intensity of its attacks. The experience of the medical practitioners of the district tends, moreover, to show that there exist other fevers which are difficult to differentiate clinically from malaria, whose nature, causes, and treatment are still imperfectly understood. Early in January the Dooars Planters' Association, through its chairman, addressed a memorial to the Lieutenant-Governor of Eastern Bengal and Assam, calling his attention to the unhealthiness of the district, and asking that his Government should bear the expense of appointing a scientific commission from the Liverpool School of Tropical Medicine to carry out bacteriological, pathological, and clinical investigations, with the view of devising means for the prevention of the diseases which now exact so heavy a toll from Europeans and natives. The Planters' Association and the Tea Associations of Calcutta and London are prepared to bear their share of the expense of carrying out the recommendations of the experts if such a Commission is authorized. It is satisfactory—and it must be specially gratifying to Professor Ross—to find this fresh evidence that members of the commercial community appreciate the importance of the part they are called upon to play in the fight against malaria. This was bound to come about in time, and that it has come so quickly is largely due to the energy of Professor Ross and the Liverpool School of Medicine. That the latter body should have been asked to carry out this important piece of research shows that their work is being appreciated in India, and that they are rapidly acquiring the leading position in matters connected with tropical hygiene and preventive medicine.

TRYPANOSOMIASIS IN SIERRA LEONE.

Captains H. W. Brattan and E. W. Cochrane, of the Army Medical Corps, point out in the *Journal of the Royal Army Medical Corps* that trypanosomiasis is comparatively common in Sierra Leone. This is distinctly important, as it has generally been supposed that this special part of the West Coast was free from sleeping sickness—Prout, for example, who has had an extensive experience of those parts, never having regarded the disease as endemic. The discovery of trypanosomes in a private of the West African Regiment by Captain Forrest, and the subsequent death of this individual of sleeping sickness, has rudely dissipated this false idea of security. The two authors already mentioned found that the method of gland palpation and puncture was the most valuable means of quickly diagnosing their cases. It is perhaps not generally known that we owe the introduction of this procedure to Dr. Mott, who advised Greig and Gray in Uganda to examine the juices of the enlarged glands for trypanosomes. It has been shown in different places that one cannot infer that every one with enlarged glands has trypanosomiasis, and the figures in this paper—nineteen men with enlarged glands, three only infected—bear this out. The papers just quoted, as we have already said, are important, as they extend our knowledge of the geographical distribution of sleeping sickness.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

The number of cases of cerebro-spinal meningitis reported seems to be increasing both in Ireland and in Scotland, and some cases believed to be of the epidemic variety have occurred in London and in other parts of England. In Belfast there had been, down to February 27th, 123 cases with 72 deaths; 8 other cases have been reported from various towns in the north of Ireland, and in Dublin there had been 11 cases with 8 deaths down to February 26th. At a meeting of Edinburgh Town Council on February 26th, Dr. Cullen, the Convener of the Public Health Committee, stated that since January 1st 27 cases had been reported. Of these, 7 were under 1 year, 7 between 1 and 5 years, 3 between 6 and 10, 4 between 10 and 20, and 6 above 20 years of age. Of the 23 fatal cases, 8 had been found to be due to other causes, and one patient removed quite recently to the hospital as a case of cerebro-spinal meningitis had been found to be suffering from malignant scarlet fever. On the motion of Dr. Cullen, the Council, acting on the suggestion of the Local Government Board, agreed to make the disease notifiable for the next six months. In London, according to a statement made by the President of the Local Government Board on February 27th, there have been 3 cases with 2 deaths. Fatal cases are also reported from Chelmsford (2) and from Hull, and cases of the disease have occurred at Handsworth and Eccles. The London County Council has placed cerebro-spinal fever on the list of notifiable infectious diseases for a period of six months, and set aside a sum of £200 against any expenditure on precautionary measures in respect of the disease which may be deemed necessary.

The authorities of the Port of London likewise have now included the disease in the list of infectious disorders.

THE DANGERS OF IMMIGRATION.

In a recent issue of the *North American Review*, there was an interesting article upon the immigration laws of the United States by Dr. T. Darlington, President of the Board of Health, New York, who holds that they constitute a grave menace to the future well-being of the country. Every alien on arrival is examined for mental abnormality, for physical defects, and for evidence of trachoma by three medical inspectors in succession, and so far as the majority of scheduled conditions is concerned, Dr. Darlington appears to be on the whole not ill-satisfied, in spite of the existence of a power of appeal against exclusion solely on medical grounds. What he objects to is laxity in the admission of persons who, without having any definite defect or disease, are yet of poor physique, ill-fitted for the battle of life, poorly developed, with feeble hearts and undersized arteries, unlikely to prove desirable self-supporting citizens, and very likely to become the parents of still less desirable offspring. Nevertheless such persons, much more often than not, are on appeal allowed to enter, provided some one gives a verbal or written, and usually worthless, guarantee that they shall not become a public charge. Dr. Darlington considers that these persons are dragging down the standards of life and health in the great cities, and class by class he deals with the various constituents of the population, asylum residents, prison populations, hospital patients, defective school children, tuberculous persons, and slum dwellers; he states that in all undesirable connexions foreign-born persons preponderate to an extent quite out of keeping with the relative numbers of American and foreign-born inhabitants. Dr. Darlington's cry is by no means the first to the same effect, for other persons in America in a very good position to watch the operation of the immigration laws and who know the conditions of life in the States have in recent years made a similar complaint. The thought, therefore, suggests itself that if these things can be said with truth—and of this there is little room for doubt—of the United States, where the fences in the path of the immigrant are comparatively high, how much more true must they be of the United Kingdom, where the net designed to keep out the medically undesirable alien is of the loosest possible tissue? Dr. Darlington's proposed remedies are an educational test, insistence on the possession of not less than twenty-five dollars by each immigrant, the inspection of every immigrant at the port of departure by an American surgeon, and entire abolition of the right of the Appeal Board to admit an alien in the face of a declaration of his physical deficiency by an examining surgeon. He would allow no such declaration to be impeachable except by a board of professional men and then only on the ground of an erroneous diagnosis of some specified condition.

THE LONDON COUNTY COUNCIL ELECTION.

There will be found in the Supplement for this week a communication from Dr. Atwood Thorne, Honorary Secretary of the Medico-Political Committee of the Branch Council of the Metropolitan Branch, stating that favourable replies have been received from many of the candidates at the coming election of the London County Council to the questions addressed to them on behalf of the Committee. It will be seen from the list that the names are fairly evenly distributed between the two parties represented in this contest. The questions referred to fell into two categories, the one asking whether the candidate would support parliamentary legislation to enable local authorities to make provision for the payment of medical practitioners called in under the Midwives Act to assist midwives in emergencies, and the other having reference to the amendment of the law as to death registration.

We are informed that Dr. J. Kingston Fowler and Dr. J. Rose Bradford have consented to stand for re-election as representatives of the Faculty of Medicine upon the Senate of the University of London.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The New Army Scheme. On Monday last Mr. Haldane unfolded to a listening House of Commons his great scheme of army reform. It occupied some three hours in delivering, and was received with great interest on both sides. There were some special paragraphs dealing with the R.A.M.C. which ran as follows, and were noteworthy as an official recognition of the work of the British Medical Association. He said: "In the case of the army medical element there again we have to have our special bridge between the two lines. The special service contingent we want for the field force is some 331 medical officers, 30 quartermasters, and 4,400 men. That will provide for wastage and give us enough to make up the deficiency on mobilization of the first line. We propose to organize, and the negotiations for it are in progress, a large territorial Army Medical Corps, analogous to the Regular Army Medical Corps. The British Medical Association is taking a great interest in it, and has suggested that we should organize our corps, not merely as a local, but a great corps like the engineers and the artillery—one great corps, organized under the Director-General of the Army Medical Service. We accept that suggestion, and we hope to get a much larger number of people connected with the medical profession to take an interest in the medical branch of the service, both Regular and second line. By giving a retaining fee we hope to get both officers and men who will go out on mobilization." The debate which followed was broken by a motion for the adjournment of the House, and when resumed was relatively brief. The proposals will necessarily be debated at length later on.

The Ventilation of the House of Commons.—Last week, when the Supplementary Estimates were taken, the old question of the ventilation of the Chamber was the subject of an amusing discussion. Mr. Harcourt, as First Commissioner of Works, said he could hold out no hope of changing the system radically, but he would do what he could to regulate the temperature and pressure of the fresh-air current, especially when the House sat late. He had carried out practically all the recommendations in Dr. Gordon's report. Mr. W. Rutherford complained of the expenditure on ventilation, warming, and lighting the Houses, which he said cost some £30,000 a year. In spite of this, the comfort and ventilation of rooms for members was unsatisfactory. Mr. Morton followed on the same lines, and pointed out that the vote had doubled in amount in recent years. Colonel Lockwood then criticized the library accommodation and the absence of rooms for receiving deputations, which had recently been a trouble to him in connexion with female suffragists. Mr. Harcourt pointed out his difficulties in reconciling luxury with economy, and said that the New Parliament was very much in the mood of being just to others and generous to itself. The new members had not yet learned to put up with the discomforts which former Parliaments endured. Sir F. Banbury admitted the difficulty of satisfying every one, but specially condemned the ventilation, which he did not think had been improved, as his feet were always cold, and his head was generally hot. As this physical condition seemed inconsistent with the cool and deliberate method of speech characteristic of the Member for the City, the House laughed heartily. He further advocated the freer use of the windows to let in fresh air as preferable to the present methods. Mr. Harcourt explained that the lighting of the Chamber from the roof was necessary to get heat to extract the used air, and the light from above might account for the sensation of hot

heads. The windows were high up, and if opened very little air came down to the members, as it was rapidly carried upwards. The entry of fresh air by the floor was a necessary contrivance. The vote was then taken, and the estimate carried by a majority of 207.

Pulmonary Tuberculosis in Soldiers.—Major Seely asked the Secretary of State for War how many men were discharged from the army during the past year suffering from tubercle of the lung; how many of these men were sent to their homes, with a notification to the local medical officer of health; and how many were sent direct to hospitals or sanatoriums, stating the particular hospitals or sanatoriums and the numbers sent to each. Mr. Haldane replied that the statistics available at the War Office did not contain the required information. It would be necessary to call for returns from all army hospitals at home. When the information had been collected he would have it forwarded. In answer to Mr. Summerbell, Mr. Secretary Haldane stated that a notification was sent in accordance with the medical regulations, to the medical officer of health of the town in which the soldier discharged on account of tubercle of the lung intended to reside. This notice was sent in the public interest, and was not intended to be a request to keep the man under supervision. The question of the provision of a sanatorium for soldiers invalided out of the service for consumption had been very fully considered and the scheme had been found impracticable.

The Local Government Board and Cerebro-spinal Fever.—In answer to Sir Francis Channing, Mr. Burns stated last week that he was issuing a circular to the sanitary authorities relative to this disease, and was forwarding to them a memorandum on the subject which had been prepared by the Medical Officer of the Local Government Board. A report had recently been made by Dr. M. H. Gordon on the micrococcus of epidemic cerebro-spinal meningitis, with special reference to its identification in the upper respiratory passages. This report was in the press, and would be published in the course of a few days. If further medical investigation was found necessary in connexion with this matter he should not hesitate to take steps to procure it. Sir Howard Vincent tried, by a question on Monday, to make out that cerebro-spinal meningitis was due to alien immigrants, but Mr. Burns answered that cerebro-spinal fever was not necessarily a disease imported from abroad, and at the present time he was not aware that there was any exceptional prevalence of it on the Continent. The circumstances in relation to this disease were different from those affecting an outbreak of cholera. As regards alien immigrants on immigrant ships which came within the Aliens Act, 1905, the hon. member was aware that they were inspected under the Act, and that the Act required that leave to land should be withheld in the case of any such alien if, owing to any disease, he appeared likely to become a detriment to the public.

Vaccination and Cerebro-spinal Fever.—Mr. Lupton, who is anxious that each tube of vaccine should be free from the contagion of cerebro-spinal meningitis, questioned the President of the Local Government Board on the subject last week. Mr. Burns assured him that the microbe could be detected, and that the process of examination to which each quantity of lymph is subjected would ensure the detection of the micrococcus, and so prevent any lymph being used which was capable of conveying the contagion.

The Death-rate of Belfast.—Mr. McKillop called attention to this subject last week, and asked whether on the Commission appointed to inquire into the matter an unofficial member of the medical profession would be included. Mr. Birrell replied that he understood that his predecessor had given the most careful consideration to the constitution of the Departmental Committee which had been appointed to inquire into the sanitary condition of Belfast, and there appeared to be no sufficient reason for adding to the number. In addition to the expert knowledge possessed by the official medical members who had been appointed, the Committee would doubtless have the advantage of hearing the views of a number of eminent members of the medical profession who were fully acquainted with the sanitary condition of Belfast, and with the laws of sanitation generally. In answer to a further question, Mr. Birrell said the Medical Officer of Health for Glasgow had been asked to report on the subject, but he made no answer when asked if he knew of any case in which an Irish medical officer of health had been asked to report on the sanitary conditions of a Scotch town.

Infant Mortality.—Mr. Rogers asked a question on Monday with reference to the high death-rate of children under 5 years of age, and the President of the Local Government Board said in reply that he was giving attention to this subject, and hoped it would be practicable during the present session to introduce legislation bearing upon it. He was impressing on local authorities and their officers by circulars and otherwise the importance of collecting data and studying the problems connected with it. The hon. member would be pleased to notice a substantial diminution in infantile mortality this year.

Phosphorus Necrosis.—Sir Charles Dilke called the attention of the Home Secretary to a death from necrosis in the match trade, and Mr. Gladstone replied that when he heard of the occurrence he at once directed a visit to be paid to the factory by the Chief Inspector of Factories and Mr. Cunynghame, one of the Assistant Under Secretaries of State. They discovered no breach of the rules. The case was a very exceptional one, the deceased being a man with one leg, who had to work in a sitting posture and had also an inveterate habit of chewing tobacco. For both these reasons he was exposed to danger which his fellow workers escaped. He had, moreover, worked in yellow phosphorus for years before special rules were established, and had, it is known, long had the seeds of necrosis in his system. He should propose an amendment of the special rules to prohibit the chewing of tobacco. The report made by Mr. Cunynghame and the Chief Inspector would be laid upon the table of the House.

X-ray Apparatus.—Mr. Weir referred on Tuesday to the foreign source of the *x*-ray apparatus used in the Army Medical Department, and suggested that in time of war the supply might be cut off. Mr. Haldane replied that the *x*-ray tubes required for military hospitals were purchased from contractors in this country who obtained many of their supplies from Continental manufacturers. The few glass-blowers in this country who made *x*-ray tubes were unable at the present time to produce tubes in sufficient number to meet the demand or to equal in quality and price those manufactured abroad. As these articles would be used for the relief of the wounded, he did not anticipate that they would be considered as contraband in the event of a war with a Continental Power.

The Typhoid Outbreak at Fleetwood Camp.—Dr. Rutherford asked the Secretary for War whether the report upon the deaths of militia officers at Fleetwood Camp was ready yet. Mr. Secretary Haldane replied that the report was complete, but that it was not proposed to circulate it as a Parliamentary paper. He would, however, be glad to show it to his hon. friend.

The Cost of Poor Relief.—In answer to Mr. Pike Pease, Mr. Burns stated last week that the aggregate expenditure, ordinarily classed as relating to the relief of the poor, of the guardians of the poor and other local authorities in England and Wales during the period of seventy-two years, 1834 to 1906, was approximately £554,000,000.

The Cost of the Tuberculosis Commission.—In answer to Mr. O'Grady, the Financial Secretary to the Treasury stated last week that the expenditure on this Commission, out of the vote for temporary Commissions up to January 31st, 1907, had been £46,193. He understood that liabilities had also been incurred to the amount of £2,700 for stationery and printing.

UNDER the will of the late Mr. Morris Joseph of Maida Vale, the London Hospital and the Middlesex Hospital each receive a sum of £100.

PROFESSOR BECHTEREW, of St. Petersburg, has examined the brain of the late Professor Mendeléeff. It is said to weigh more than 1,500 grams, and to be remarkable for the number of its convolutions.

Ireland.

The University Question in Ireland.

The Royal University.

At a meeting of the Senate of the Royal University on February 20th the following resolutions were proposed by Sir Christopher Nixon, Bart., Vice-Chancellor, and seconded by the Rev. Dr. Hamilton, President, Queen's College, Belfast:

That while the Senate feels that it was its right and duty, as long as the various plans for the settlement of the question of University education in Ireland were under consideration, to express its views clearly and strongly on the undesirability of establishing a single rigid system of University education, shaping the whole intellectual culture of the country in one mould, now that the outlines of a scheme have been put forward in the name of the Government, with whom the responsibility rests, the Senate does not deem it proper to take any course which might prevent or obstruct the immediate removal of one of the greatest and most crying grievances under which the Irish people labour. The Senate, by its own action in asking for a Royal Commission, had already shown how keenly alive it was to the urgent need of having this question dealt with; and they, therefore, cordially welcomed the announcement that the Government will take it in hand during the present session of Parliament.

That whilst the Senate is prepared to give the most careful and friendly consideration to the scheme of the Government when published in full detail, it submits the expression of its conviction that in any scheme which would involve the establishment of one or more federal universities it is essential, in order to avoid the evils of one stereotyped system of higher education, that there should be granted to the federal colleges the largest possible amount of autonomy on the lines recommended unanimously by the Robertson Commission, and with practical unanimity by the recent Commission.

The resolution was carried, but not unanimously, the voting, it is said, being 11 to 6, while one did not vote.

Mr. Bryce, in his statement, made the observation that the Royal University had not been a success, and described it as an examining body only. In reply to this the Senate, on the motion of Dr. Leslie, seconded by Dr. Windle, President, Queen's College, Cork, adopted the following statement:

That, in justice to this University, the Senate feels it a duty to enter a protest against certain statements regarding it which Mr. Bryce is reported to have made in his speech on January 25th.

The Senate believe that, if he had been correctly informed of the actual working of the University, and if he had borne in mind the limitations imposed on it by its constitution, Mr. Bryce could not have said, as he is reported, that "the Royal University has not been, so far, a success," that "it has in no sense prospered," seeing that in the twenty-five years of its existence the number of candidates presenting themselves yearly at its examinations has been steadily growing larger, until in the last session 1906 it reached the huge number of close upon 4,000 or nearly four times the number of students on the rolls of the University of Dublin, and that it has many of its students holding distinguished positions in all parts of the British Empire. Nor was it accurate to describe the Royal University as a "mere examining board," unless it be understood that the University of Dublin—which also gives its degrees to non-resident students on mere examination—may also on that account be called a "mere examining Board", especially bearing in mind (1) the fact that independently of the large number of student on the rolls of the Royal University who present themselves from teaching colleges like Maynooth, Blackrock, Clongowes, and Clonliffe, and from women's colleges like the Alexandra, Victoria, Loreto and Dominican Colleges, independently of all these the six teaching colleges which are officially connected with the Royal University more closely in regard to many of their degree courses than Trinity College and Dublin are connected with their respective Universities have on their joint rolls a larger number of students receiving college instruction than can be counted on the roll of Trinity College.

And (2) the fact, which is generally overlooked, that, whilst the University of Dublin or Queen's Universities—which are spoken of as teaching Universities, though neither of them ever spent a penny of its income for teaching purposes—the Royal University has from the very first spent a considerable portion of its yearly income in paying the salaries of its Professors, whose duties are expressly with the duty of teaching in one of its recognised colleges.

The opposition newspapers are hilarious over the *volte face* of the Royal University, and they demand to know what were the circumstances which made the Senate alter its attitude. It will be remembered that at a meeting on October 25th the Senate passed a resolution declaring in favour of multiple universities and stating that to place the control of higher education in one university would be "disastrous" to higher education in Ireland. The *Irish Times* points out that Dr. Hamilton said before the Commission that it would be a pity "to establish in Ireland a system that had been discredited elsewhere"; and he was supported by other members of the Senate in like spirit. Now they are prepared to give most careful and friendly consideration to the scheme of the Government. If it is a scheme that if passed would be "disastrous" to Ireland, why consider it at all, not to speak of its being done in a "friendly" instead of a hostile way? The *Irish Times* says:

Surely the public is entitled to know the reason of this mysterious pacification. If the Senate of the Royal University desires its conversion to have weight as an argument in favour of the four-college scheme it is bound to tell us the causes by which that conversion was brought about.

Roman Catholic Opinion.

A meeting of Catholic young men's societies has been held in the Mansion House in support of Mr. Bryce's scheme, and it was agreed to ask all the branches in Ireland to send forward resolutions of approval.

Mr. Bodkin, K.C., described the proposals as practical and reasonable.

Mr. McArdle, F.R.C.S., said that everything that had occurred since he told Mr. Bryce that he accepted, on behalf of the people of Ireland, the scheme of university education propounded by Mr. Bryce, had confirmed him in the belief that he acted the part of an Irishman in accepting that scheme. The only alteration he would make if he had the power was this. If in Belfast they said they wanted the Royal University, and if Cork said they wanted a university, and if Galway College was satisfied to retain its emoluments and satisfied with the Royal University system, then, he said, in God's name give Catholics a college equal to Trinity College, fully equipped, and let them work out their own salvation.

Trinity College.

There was a rumour that the Government would be willing to modify the scheme so as only to include the new college with Trinity in the new university. The secretaries of the Trinity Defence Union hasten to declare that such a proposal would meet with equal opposition. On the other side there was actually a rumour that Trinity would be willing to yield on an additional one college, but not on four. The feeling slowly grows, however, that the Government will have a fair chance of passing their Bill. The Lords, it is argued, will defer their rejecting power for a more important measure, and they do not wish to appear as hostile to every suggestion that is made in legislation for Ireland; and if people grumble that such considerations should sacrifice their interests, why that, it is said, is only "politics."

Ulster Medical Society.

The adjourned meeting of the Society was held in the Medical Institute on February 14th. The President (Dr. Gaussen) occupied the chair. Dr. Dempsey resumed the discussion on cerebro-spinal fever. He referred especially to the differential diagnosis and to treatment. He related a case in which the diagnosis lay between meningitis, typhoid, and pneumonia. He considered the hot bath useful. Dr. Austin also gave notes of a case seen in the middle of 1906, in which there was a definite history of eating a large amount of tinned salmon. There was a well marked petechial rash present. He considered the case ptomaine poisoning, and that the cases in the present epidemic were largely of that type. Dr. O'Neill, Dr. Darling, and Dr. Burns also spoke; the latter compared the convulsions with those of strychnine poisoning, and considered the alimentary tract was the probable source of infection. Mr. Mitchell referred to the diagnosis from cerebral abscess. The Secretary read a communication from Dr. Cecil Shaw on the eye and ear symptoms. Dr. Robb replied.

A resolution of sympathy on the death of Dr. R. A. L. Graham was passed.

Certificates of Vaccination.

Sir Arthur Chance and Dr. Donnelly, on behalf of the Irish Medical Association, have had an interview with Mr. Birrell, the Chief Secretary, in reference to the arrangement made by the Local Government Board, who has appointed a Board of four gentlemen experienced in vaccination to test the proficiency of candidates in that operation. The change is objected to, and the Chief Secretary has promised to look into the matter.

Royal Victoria Eye and Ear Hospital, Dublin.

Mr. Justice Andrews presided at the annual meeting of the supporters of the Victoria Eye and Ear Hospital, Dublin, on February 21st. The report showed that 82 beds were occupied during the year out of 120, a daily average of 71. The number of intern patients treated was 1,335 and of extern 10,546, a daily average of 135.4. The whole annual cost of each bed, including establishment and management, was only £41 5s. 7d. Resolutions approving of the report and expressing confidence in the management were proposed and seconded by Mr. Justice Andrews, Sir Arthur Chance, Mr. MacDermott, Mr. F. C. Earle Bland, Sir George Roche, and Mr. H. R. Swanzy, President of the Royal College of Surgeons (one of the surgical staff of the hospital), who expressed the gratitude of his colleagues to those who so generously supported the institution.

An Impure Water Supply.

A public meeting of the inhabitants of Hillsborough, co. Down, was held on February 22nd to protest against the impurity of the water supply, which was drawn from two wells. An analysis of the water three years ago showed that it was "swarming with bacteria," "containing infusoria," "containing vegetable matter." A resolution was unanimously passed calling upon the Rural District Council to take steps to provide an adequate and sufficient supply of wholesome drinking water.

Belfast Water Supply.

The Water Commissioners of the city have summoned Professor Frankland, F.R.S. (Birmingham), Dr. A. C. Houston (Bacteriologist to the Metropolitan Water Board, London), and Dr. Mervyn Gordon (St. Bartholomew's Hospital), to investigate and report on the water supply. The visitors were met by Professor Symmers, and a thorough and elaborate examination is being made.

Scotland.

The Multiplication of Health Congresses.

A conference of delegates from different corporations was, on the invitation of the Public Health Committee of Edinburgh Town Council, held in the City Chambers on Monday, February 25th, for the purpose of considering whether steps could not be taken with the view of reducing the number of sanitary and public health congresses which take place annually in different parts of the country, there being a feeling that there was a risk of overlapping in their work, or at any rate that the same subjects would be frequently discussed by different bodies. The action of the Edinburgh Committee in initiating the conference was prompted by invitations having been received to send delegates to the Congress of the Royal Sanitary Institute, which meets in Dublin next summer, and to the Congress of the Royal Institute of Public Health, which holds its annual gathering in Douglas, Isle of Man, about the same period. The following resolutions were unanimously adopted:

That, in the opinion of this Conference it is very undesirable that the Royal Sanitary Institute and the Royal Institute of Public Health should hold separate Congresses each year.

That a representation be sent by this Conference to the Royal Sanitary Institute and the Royal Institute of Public Health urging these bodies to make an arrangement in future for holding a combined Congress, or holding their respective Congresses in alternate years.

That those Corporations which have agreed, or may agree, to send delegates either to the Royal Sanitary Congress or the Royal Institute of Public Health be requested to ask their delegates to support the representation of this Conference when it comes up for consideration at their respective Congresses.

Aberdeen Medico-Chirurgical Society.

A meeting of this Society was held in the rooms, King Street, Aberdeen, on the evening of February 21st, Dr. Galloway, president, in the chair. Three cases of unusual skin diseases were shown by Dr. J. F. Christie; two cases of aneurysm of aorta by Dr. Howie; and a case of abdominal tumour (? malignant) by Dr. W. R. Pirie. Dr. McKenna read a short paper on the induction of labour in prolonged pregnancy; and Dr. Lister a paper on a case of cerebro-spinal meningitis.

The Alleged Increase of Insanity.

In his annual report to the directors of the Crichton Royal Institution at Dumfries, Dr. Rutherford, the medical superintendent, says that Lord Rosebery, at the opening of Bangour Asylum, commented on the enormous increase of insanity, and regretted the great expenditure on the housing and care of the insane. He referred to asylums as being the tombs of the intellectually dead, and thought that the money which they cost would be better spent in improving the dwellings of the working classes. Dr. Rutherford emphatically asserts that there is no increase of insanity amongst the wealthier classes beyond what is proportional to the increase of the population, and that the same is true of the well-to-do artisan. In Orkney, Shetland, Caithness, Sutherland, Dumfries, and Galloway there had been no increase of lunacy. The great increase in the population of asylums was not from the middle and upper classes. It was entirely from the lowest class of society, a class which was increasing in all large towns. It was a class which neither in town nor country displayed much mental activity, but which in towns lived in crowded insanitary dwellings, breathed impure air, and was exposed to exhausting labour, improper diet, the abuse of stimulants, and contagious diseases. The tendency of those whose brains were abnormally constituted was to sink step by step through the various grades of society until they reached the final sedimentary deposit of pauper lunacy. As regards Lord Rosebery's objection to the expenditure on the insane, it must be remembered that asylums were hospitals, and in all civilized countries there was a strong desire to do the best for the relief of human suffering. The state of hospitals and asylums was a good test of civilization. Far from being tombs of the intellectually dead, asylums were largely curative institutions. It was a comfort to think that no curable patient could enter an asylum and not be cured. As it was, even with the drawback that more than half the cases were incurable on admission, our statistics showed a recovery-rate of 40 per cent. Such results were at once an encouragement and a justification for continuing in the paths hitherto followed. In Scotland what was now being spent by legislative authority was merely supplementary to what had been done by private effort, and no one would gainsay that the Crichton and other royal asylums had been a great blessing to the community, and that the results amply justified all the money that had been expended by former generations upon them.

The Cancer Pavilion of the Dundee Royal Infirmary.

On January 3rd and 4th, the six wards forming the Cancer Pavilion of the Dundee Royal Infirmary, erected from the designs of Mr. James Finlay, of Dundee, were opened in the simple and effective manner of inviting the public to inspect the wards. The visitors were drawn from all classes of the community, and afternoon tea was provided by two anonymous ladies, whose kindness was much appreciated. The donor of the building is Mr. J. K. Caird, LL.D., of Dundee, to whom the infirmary is already indebted for many valuable gifts, including the Maternity Department and Nurses' Home. In the new building, which has cost over £18,000, inclusive of surgical instruments and medical and surgical electric appliances, accommodation will be found for the carrying on of the work to be done in research into the cause of cancer, for which Mr. Caird has offered £1,000 a year for five years to the Directors of the Infirmary.

The idea which underlies the plan of the structure is to isolate the wards and give the patients ample fresh air without covering more ground than is necessary. The building has a central block in which are the staircase, an electric lift, and sufficient lobby spaces. From these lobbies, on each floor, bridges are thrown across to otherwise detached pavilions, one on the the east and one on the west side, and the wards and their annexes are in these pavilions. There are six wards, each similar to others in detail. The lobbies of the central portion, the bridges, and the corridors are fireproof, and the floors covered with red tiles. From one side of each corridor adjoining the wards there projects a cross-ventilated corridor opening into a sanitary tower containing bathrooms, sinks and lavatories, and between the sanitary tower and the main building there is an iron outside fire escape stair connected with each floor. Opening off the corridor from the bridge to the ward are the ward kitchen and pantry, a convalescent room, a room for the medical officer in charge, and two small wards for paying patients or for patients whom it may be necessary to isolate. Each large ward contains 18 beds; the area for each bed is 166 sq. ft., the cubic space 1,320 ft., and the distance between the beds 8 ft. Each ward measures 76 ft. by 25 ft., and is painted white. The woodwork is of the finest selected pitch pine, all treated similarly, with the exception of the floors, which have been wax-polished. Ventilation is secured by fanlights opening inwards above the windows, by the windows themselves, of the casement type opening inwards, and by a circular ventilator below each bed fitted with an adjustable plug.

In the basement are storerooms and space for access to the heating, electric, gas, and water pipes, while the upper part of the building has been fitted up as nurses' bedrooms. One of the wards has been fitted up at Mr. Caird's expense with electrical instruments of the most modern kind for the treatment of disease. The two operation theatres, for which Mr. Caird is providing the equipment, are in the middle block. The equipment includes a sterilizing apparatus by the Brimhall Deane Co. of New York, consisting of a spherical dressings sterilizer, and hot-water and instrument sterilizers, all of nickel-plated copper, heat being supplied by gas. The building, of brick with red tiled roof, is heated by steam on the atmospheric system. Electric lighting is used throughout. In the finishing of the building inside all corners have been avoided. The walls of the operation theatres and the sanitary towers are finished with Keene's cement enamelled white, and the floors are covered with red tiles.

Leeds.

AFFORESTATION IN THE WASHBURN AREA.

THE question of the utilization, for the purposes of growing timber, of the lands in the possession of the Corporation, which are used as collecting areas in connexion with the water supply of the city, is one which has frequently been discussed in the local press. It was mentioned in this column last year (January 13th, 1906) that a start had been made with the work at Swinsty Moor, on the Washburn Valley estate. Employment was offered to members of the unemployed class whose names were registered at the bureau and there is no doubt that it was decided to undertake the work, not only on account of its intrinsic desirability but as a means of lessening distress by providing employment for those out of work. It certainly appears that in respect of the second of these inducements the scheme has up to now not been attended with much success. Some few months ago the Local Government Board was approached on the matter, and on condition that 50 men were kept employed at the work on the Washburn Valley estate till the end of March a sum of £2,000 was voted by the Board. 246 men were offered employment, 150 accepted but of these only 112 commenced work. It is said that many of the men have only worked for a few days; that there does not appear to have been a readiness on the part of those offered employment to undertake anything like honest continuous work, and that even on the part of those on the spot, there was an absurd unwillingness as to work if the weather was at all inclement, and, finally, that many of the men turned their faces homeward in a few days, so that on the average not more that twenty or thirty men have been engaged on the work. This is very discouraging, but not perhaps entirely unexpected. The average specimen of the unemployed class is not a trained navvy nor an expert digger, and for these occupations, as for all forms of labour, training is required. It is interesting to note that Mr. John Burns, speaking in the House of Commons on February 20th, referred to this experiment of making a grant of £1,000 as sad and melancholy in its results, but expressed his conviction that in principle the scheme was sound, and stated that he was desirous of continuing to make similar grants in suitable cases. As it has not been found possible to expend the whole of the grant of £1,000 in the way indicated, the Local Government Board have consented to the diversion of £500, which will be supplemented by a further grant of £300, making a sum of £800, which will go towards the payment of wages to members of the unemployed class who will be offered work in the construction of a swimming bath, which it has been arranged to provide at Roundhay Park.

THE WORKPEOPLE'S HOSPITAL FUND.

The twentieth report of the Workpeople's Hospital Fund, presented at the annual meeting held in Leeds last week stated that from all the main sources of income there had been an increase; in the case of the collections in the workshops of the city the increase amounted to £1,028, the amount standing at £9,137, as compared with £8,109 for the previous year. The total income from all sources has amounted to £12,926, an increase of £1,811, as compared with last year. With the balance carried over from 1905 the funds at the disposal of the organization are represented by the substantial sum of £15,536. The two convalescent hospitals which are now the property of the fund have been well occupied during the year. At the home at Horsforth, where male patients are admitted, 561 convalescents have been treated; and at Ilkley the female patients have amounted to 114. Suitable patients to the number of 146, including 32 children, have been sent, at the expense of the fund, to various convalescent hospitals. The pressure on the convalescent hospitals has determined the Committee to enlarge the Horsforth home, and it is hoped that the increased accommodation will be available by about the middle of the current year. The following grants were voted to the different charitable institutions of the city:

	£	Increase on 1905 £
Leeds General Infirmary	5,250	 250
Leeds Public Dispensary	800	 50
Hospital for Women and Children ...	800	 50
Tuberculosis Association	315	 35
Leeds District Nursing Institution ...	250	 25
Maternity Hospital	125	 25
Bramley District Nursing Association ...	50	..... —
Stanningley District Nursing Association	50	..... —

Birmingham.

THE CHILDREN'S HOSPITAL.

THE forty sixth annual meeting of the Governors of the Birmingham and Midland Free Hospital for Sick Children was held on February 25th, Sir Walter Fisher being in the chair. Although admission to the in-patient department was stopped for the whole of December, the number of in patients increased from 847 in 1905 to 895 in 1906. During the latter part of the year there was a serious outbreak of scarlet fever and diphtheria in the in-patient department. The spread of the infection among the nurses was so alarming that, acting on the advice of the medical staff, it was decided to close the department entirely; and Dr. Robertson, M.O.H., was requested to inspect the hospital, and to report generally as to its condition. As a result of Dr Robertson's most exhaustive report, and the recommendation of the medical staff, a Committee has been appointed to consider the question of building a new and thoroughly up to date hospital on a more extensive scale. During the year 200 children were sent to the Moseley Hall Convalescent Home, 62 to Lady Grey's Convalescent Home at Enville and 8 to Mr. William Morton's bed at West Kirby. The number of out patients was 15,023; the regulation restricting the number of new cases admitted as out patients every day to 65 continues to work satis-

factorily, and is certainly to the advantage of both the patients and the medical officers. In no authentic case does this regulation seem to have caused suffering or hardship to a patient.

Health of Birmingham in 1906.

The birth-rate of Birmingham during 1906 was 29.3 per 1,000 as compared with 29.2 in the previous year; the mean for the ten years ending 1905 was 32.3. The death-race was 16.8 per 1,000 as compared with 16.1 in the preceding year. This death-rate is the lowest, with the exception of that of 1905, ever recorded in the city. The chief cause of the lower mortality is the considerable reduction in the number of deaths from phthisis, and also from other pulmonary diseases. The rate of infant mortality was 168 per 1,000 births as compared with 155 in 1905, and an average of 185 for the last ten years. The long warm summer was the indirect cause of a large increase in the number of deaths from infantile diarrhoea. The seven principal zymotic diseases caused a mortality of 2.78 per 1,000. There were 1,814 cases of scarlet fever with a mortality of 2.9 per cent., and 817 cases of diphtheria with a mortality of 11 per cent. The number of cases of enteric fever, 191, was the lowest on record, but they were of a severe type, and caused a mortality of 21 per cent. Tuberculosis caused 884 deaths as compared with 999 in the previous year. This is a great reduction, as the average number of deaths from this group of diseases during the last ten years was 1,039.

Tuberculous Milk.

During 1906 the work of examining the milk supply of Birmingham was commenced with the view of preventing the distribution of milk containing tubercle bacilli. Up to the present time a sufficient number of samples have not been examined to justify any general conclusions, but there is evidence that some of the milk received from farms outside Birmingham contain the living micro-organisms of tuberculosis. The Health Committee and the medical officer of health are paying careful attention to this matter. At the end of 1906 there were 23 cow-keepers in the city, using 64 cowsheds, registered to contain 580 cows. The veterinary inspectors have paid 555 visits to these sheds, and a number of cows were found to be suffering from mastitis and vesicular eruptions on the teats, but none from tuberculosis of the udder. All the affected animals were temporarily removed from the dairy stock, and a few were permanently removed or destroyed. Verbal or written orders have been given in several instances to the cowkeepers, pointing out to them the necessity of greater cleanliness with regard to the cows and their sheds. The great majority of the cowsheds visited were found to be kept in a good sanitary condition

South Wales.

Cardiff Infirmary.

A supplementary report of the Cardiff Infirmary makes a forcible appeal for £30,000 to defray the cost of erecting the following new buildings: Pavilion for 64 beds, and 6 beds for isolation purposes, including the nurses' and servants' bedrooms, £22,500; new gynaecological operating room, £2,500; corridor and lifts to connect the wards on the first floor, £2,000; clinical laboratory, museum, and new *post-mortem* room, £3,000; total, including lighting, heating, and furniture, £30,000. The report continues:

To those of us who have a practical knowledge of hospital work, the fact that 570 patients are waiting admission is sufficient evidence that the hospital must be enlarged. The ever-increasing number of those seeking relief in the out-patient department (last year over 20,000) furnishes alone a reason. For out of this number the cases requiring indoor treatment cannot possibly be adequately treated in 184 beds. . . It is deplorable to think of the distress and suffering of the 570 patients who at any given time are waiting for admission.

The report concludes:

Such an appeal if made in Newcastle would be responded to in a day. Is it therefore too much to hope that some one will seize this opportunity for the signal act of munificence which this appeal affords—an act such as would lend lustre to the annals of our commerce? We would fain hope and believe for the fair fame of the city of Cardiff, and for the teeming district which this hospital serves, that some one capable of achieving it will be found among ourselves.

Lancashire.

A Gratuitous Attack on Poor-law Medical Officers.

A fortnight ago we gave a short account of an attack made upon Poor-law medical officers by the Rev. Father Sassen, Chairman of the Prestwich Union Board of Guardians. On February 15th the district medical officers addressed the following letter to the Board through the clerk:

Gentlemen,

We the undersigned district medical officers of the Prestwich Union having seen the report in the *Manchester Guardian* on Friday, the 8th inst., of a speech delivered by the Chairman of your Board, in which he passes certain strictures on the manner in which district medical officers perform their duties, feel that it is necessary for us to ascertain whether such strictures apply in this Union and to any of your present staff of district medical officers.

No complaint of neglect of duty having reached any of us, we feel that in the eyes of the public our honour has been impugned, and an unfair aspersion cast on the character of the work done by us.

We therefore respectfully request that your Chairman should definitely state any charge he may have against us, and so afford an opportunity to those implicated of appearing before the Board and answering for themselves.

We are,

Obediently yours,

John Hudson,	E. Johnstone,
C. G. L. Skinner,	B. W. Conway,
T. T. Whittington,	J. W. Moore,
John Bowes,	A. B. Steward.

The letter was read at the next meeting of the Board, when the Chairman said that the strictures he had uttered did not apply to that union or to any of the present staff or district medical officers. He therefore denied that the honour of the medical officers had been impugned, or that unfair aspersions had been cast upon the character of the work done. Mr. Todd said that was practically a withdrawal of the statement made at the last meeting, against which he had protested at the time. The apology of the reverend chairman seems a little lame.

Leicester.

New Ward Block at the Infirmary.

Description of the Block.

The erection of a new out-patient department, which visitors to the annual meeting of the Association in Leicester in 1905 had the opportunity of inspecting, left the ground floor of the south-east wing of the infirmary vacant. The construction of the block was unsatisfactory, and the Board of Management found that it would be difficult, if not impossible, to adapt it so as to provide all the space required for the constantly-increasing number of cases requiring admission. They therefore determined to pull it down, and rebuild the entire wing. In its new form it will consist of three floors of identical construction, giving accommodation for ninety-nine patients, or seventy-three more than in the old building.

The block now being erected from plans prepared by Mr. S. P. Pick, F.R.I.B.A., of Messrs. Everard and Pick, Leicester, is of red brick, in correspondence with the rest of the Infirmary buildings. An electric lift, large enough to take a full-sized wheeled stretcher, gives access to all floors, and these can also be reached from the east staircase of the main building. Adjoining the lift is a small sanitary tower semi-detached, for the use of nurses and for the small accessory wards. Of these, there are two on each floor, one for two and the other for one patient. They are for use in cases of possible infectious disease and for noisy patients. On either side of the central corridor leading to the ward are the administrative rooms, namely, sisters' room, bathroom, ward kitchen, clothes store and linen room, and urine-testing room. Each main ward has accommodation for thirty beds, so arranged that each bed occupies a space between two windows, thus avoiding down draughts due to convection. At the free end of the ward, facing south, are two semi-detached towers, one containing bathroom and lavatories and the other sanitary offices. Between these, and supported on iron pillars, is

an open balcony. Large doors give access to this from the ward, and patients either up and about or in their beds can be there treated in the open air. The ground floor has in addition a verandah running the whole length of its western side, and doors are provided leading directly from the ward. The floors are of concrete and iron and fire-resisting. The surface will be finished with marble terazzo. Heating is by steam vapour coils, and ventilation mainly by openings in the wall at the back of the coils and by hopper shutters at the top of the windows. Sir Edward Wood, the chairman of the Board of Management, who has already done much to convert what was an out-of-date building into a convenient and sanitary modern hospital, has been indefatigable in pressing the claims of the institution on the charitable public of the surrounding district, and he has met with deserved and gratifying success. Not only has the amount required for the wing been subscribed, but a substantial sum has also been promised which will enable the Board to commence forthwith a block of new buildings to accommodate the nursing staff. This has been much needed for some years, and the want of it has seriously hampered the work of the nurses. The cost of the block will be about £17,000, and that of the nursing home nearly £20,000. Two of the wards will be entirely paid for from two respective sources. Mr. S. Odames gives £6,000 for one and the family of the late Mr. G. Oliver a similar sum for the other, and the wards will bear the names of these benefactors. When it is remembered that the above work is in addition to others carried out continuously during the past few years at the cost of over £45,000, it is clear that the hospital needs of the district are being looked after by generous and capable administrators.

Laying the Memorial Stone.

The Mayor of Leicester, who is Chairman of the Board of Governors of the Leicester Infirmary, was unfortunately, owing to slight indisposition, unable to be present at the ceremony of laying the memorial stone of the above block by the Duke of Rutland on February 27th.

Mr. G. Murray Smith, the Vice-Chairman, opened the proceedings in a brief speech, in which he detailed the circumstances which had led up to the erection of the new buildings. The architects and the builder respectively presented a very artistic silver trowel and an ebony mallet to the Duke for the purpose of laying the memorial stone. This he proceeded to do. It is a large block of granite and bears the inscription:

This memorial stone was laid on February 27th, 1907, by His Grace the eighth Duke of Rutland, Lord-Lieutenant of the County.

The Duke, after expressing regret at the absence of the Mayor and chairman of the infirmary, said that it was due to Sir E. Wood's efforts that the erection of the new block had been made possible. He paid a compliment to the medical staff, whose work had made the Leicester Infirmary well known, and observed that it was the desire of the working classes to avail themselves of their services that had led to the demand for more ward space in the Infirmary. It was difficult to overestimate the enormous value of hospital facilities to all urban and county districts. In this cause all classes and men of all political and religious views could co-operate, and the work had a humanizing and refining influence on those who took part in it and those who received its benefits. He had every confidence in the future of the Infirmary, and believed that the public of Leicester would continue to support it in the future as in the past.

The Luncheon.

Sir E. Wood subsequently entertained the Duke and Duchess and a large company numbering about 250 at luncheon. After the toast of "The King" had been honoured, Sir E. Wood read a telegram from Colonel Bence Vaughan, Chairman of Cardiff Infirmary, congratulating him on the inception of the work inaugurated that day and stating that Cardiff hoped to follow in the footsteps of Leicester. Sir E. Wood then proposed the health of Their Graces the Duke and Duchess of Rutland. The services rendered to the borough of Leicester and the Infirmary by members of Their Graces's house had been very numerous, and they would always hold an honoured place in the estimation of the inhabitants.

The Duke of Rutland said that he and the Duchess had always taken a deep interest in hospital work in the borough and county. He had been able to watch with pleasure the continued growth of the Infirmary. He considered Sir E. Wood the most sturdy beggar he knew. On a former occasion he had rather doubted the possibility of raising funds enough to build such great additions to the infirmary, but was agreeably disappointed. He was in the presence of political friends and political enemies, but did not suppose any of the latter would wish to put a veto on his work in the direction of hospital charity. He then paid a touching tribute to the benevolence and public spirit of the late duke his father, saying that while it was impossible to equal him he wished in all ways to follow in his footsteps.

Mr. Ramsay Macdonald, senior M.P. for Leicester, in proposing the toast of "The Leicester Infirmary," said that, owing to the advance of medical science and with the complexity of the modern methods of investigation, the only possible place of treatment for the working man was the hospital, as only by collective effort could these benefits be brought to the individual. In no department of public work was it possible for a man to build up a better name for himself than in such a field as that covered by the Leicester Infirmary, and that the Chairman had done. Almost half the income of the hospital was provided by the working classes, and he implored the middle classes to follow their example. He expressed the hope that co-operation between general hospitals, cottage hospitals, and provident institutions in the same district would become the rule in the near future.

Newcastle-upon-Tyne.

NORTH OF ENGLAND GLASGOW UNIVERSITY CLUB.

THE annual dinner of the Club was held at Tilley's Rooms in Newcastle-upon-Tyne on February 22nd, Dr. James Farquharson, the President, in the chair. Upwards of sixty gentlemen sat down to dinner. The guest of the evening was Sir Thomas McCall Anderson, whose health was proposed by Dr. Johnston Weir in the toast of "Alma Mater." In responding, the Professor of Medicine gave an interesting account of the progress of Glasgow University, especially of the Medical Faculty. Dr. Hay submitted the toast of "The Lord Mayor and Corporation of Newcastle-upon-Tyne," which was responded to by the Lord Mayor. "Other Universities and Seats of Learning" was proposed by Dr. Inglis and replied to by Dr. Hume. The health of "The Chairman" was proposed by Professor Duff. A most agreeable evening was spent.

South Africa.

SOUTH AFRICAN MEDICAL CONGRESS.

THE South African Medical Congress, at its meeting held at Bloemfontein in 1906, some account of which was given in the JOURNAL of January 19th (p. 149), passed a number of resolutions, of which the following are the most important.

The Medical Services of South Africa.

It was resolved by the full Congress that, with the view of inducing highly qualified medical men to enter the medical services of the South African Colonies, and to remain therein, the services should as far as possible be treated as a whole as regards appointments, and that in the event of any important vacancy occurring in the Government service of any of the Colonies, the claims of medical officers holding appointments in similar branches of the services of the other Colonies should be considered before an appointment is made. It was decided that this resolution should be conveyed to the South African Colonial Governments with a request that they should take the matter into favourable consideration.

The Eyesight of School Children.

The Section of Ophthalmology passed a resolution, which was confirmed by the full Congress, that compulsory

medical inspection should be adopted in all Government schools, and that the Colonial Secretary be approached on the subject.

Defective Children.

The Section of Special Subjects passed resolutions pointing out the necessity for dealing specially with children with weak intellectual development or backward mentally (without being actually imbecile), and urging that this subject should be brought to the notice of the educational departments. Attention was also called to the necessity for a periodical medical inspection of all schools directly under the educational departments; and to the necessity for the teaching of hygiene, temperance, and the simpler laws of physiology in all our public schools. These resolutions were confirmed by the full Congress and the Secretary was instructed to send copies of them to the Ministers in the Orange River Colony, the Transvaal, Natal, and Cape Colony.

Notification of Tuberculosis.

The Public Health Section passed a number of resolutions in regard to the prevention of tuberculosis which were confirmed by the full Congress. It was recommended that the notification of tuberculosis should be made compulsory throughout South Africa, and that all sufferers from phthisis, and any other form of tuberculosis accompanied by a discharge of tuberculous pus, should be obliged to notify any change of address to the medical officer of health of the district; in the event of such a patient migrating from one colony to another, the medical officer of health of the first colony should notify the medical officer of health of the second. It was urged that the elements of hygiene, and especially the principles governing the communication of tuberculosis, should be taught in elementary schools, and should be made the subject of compulsory examination. Another recommendation was that the Standing Committee of Congress, consisting of representatives from each colony and protectorate, should be appointed to act as an advisory body on the subject of tuberculosis, and that an antituberculosis society, composed of lay as well as medical members, should be formed in each of the colonies of South Africa except where such are already existent. The Transvaal, Pretoria, the Orange River Colony medical societies were requested to take the initiative in the formation of these associations. The Congress expressed the opinion that all prospective laws applicable to tuberculosis and its prevention should be uniform in principle throughout South Africa, the legislative details being adapted to the conditions in each colony, and that any movement in that direction should, if possible, be made simultaneously by all the countries.

Restrictions on Consumptive Immigrants.

It was recommended that the following restrictions should be imposed on consumptives arriving in South Africa: Those without means of support should be excluded altogether, the shipping companies being made responsible for their return conveyance. Consumptive immigrants with means of support to the satisfaction of the Governments concerned should be allowed to land on condition that they carry out reasonable precautions to the satisfaction of the medical officer of health of the district to which they are proceeding, and that suitable regulations be promulgated by the respective Governments dealing with persons failing to carrying out these precautions and insisting on notification of any change of address. Attention was directed to the necessity of obliging the master of a passenger ship, which has conveyed a consumptive, to have the cabin used by the patient efficiently cleansed and disinfected; and of prohibiting the use of any cabin as a sleeping place by a consumptive and healthy people in common. It was recommended that sanatoriums of the simplest possible construction compatible with efficiency for European patients and similar institutions for coloured patients should be established in the different colonies under the control of public bodies. It was pointed out that the expense of the maintenance of such institutions would be decreased by the suitable employment of inmates, and also by the provision of outdoor employments; for example, market gardening, viticulture, tobacco growing, silkworm industry, basket weaving and straw plaiting, which would make it possible for patients to remain in such establishments until the disease was sufficiently arrested to permit of their returning to their usual vocations. It was suggested that the expenditure entailed by the measures taken by the coastal Governments in respect of dealing with phthisical immigrants should be provided in equitable proportion by the several Governments of South Africa.

Tasmania.

SCHOOL HYGIENE.

DR. J. S. C. ELKINGTON, the chief health officer and permanent head of the department of public health of Tasmania, speaking at a meeting of the Australian Association for the Advancement of Science in Adelaide in January, 1907, laid before the members of the Association a narrative of the work done and attempted within recent years in Tasmania in connexion with the introduction of school hygiene.

Early in 1904, the Government of Tasmania decided to institute an inquiry into the working of the State Education Department. The writer was instructed to inquire into the hygienic condition of the State schools, and his investigations revealed a number of serious defects. The structure and equipment of the schools were severely criticized in his report, and remedies were suggested. He states that hygienic management of schools by teachers was practically non-existent. Cleanliness was almost entirely neglected, and the most elementary features of school health-protection were unrecognized. Infectious diseases were regarded as unavoidable accidents, and schools were only closed on this account if more than a few cases occurred. Lighting, ventilation, the enforcement of a proper altitude, sanitary conditions, the recognition of gross eye or ear defects as factors in producing artificial dullness, etc., were all left untouched by the teachers.

In January, 1905, a reform of the Education Department began to be introduced under the directorship of Mr. Neale. The improvements introduced during the two years since this date include the following: (1) Instruction of teachers in the general hygienic management of schools; (2) instruction of children in methods and principles of physical self-preservation and physical self-respect; (3) hygienic construction and equipment of school premises and systematic removal of existing defects; (4) medical inspection and supervision of school children. Dr. Elkington himself delivered a course of lectures on school hygiene to teachers, and found that his audience was both numerous and appreciative. He visited the schools situated outside Hobart, and also discussed the question with the teachers, gave some addresses on the same subject in 1906, and instituted at the Teachers' Training College a course of hygiene, terminating in an examination, which on the whole elicited intelligent and appreciative replies.

Certain interdepartmental arrangements satisfactorily settled the difficulties as to structural defects in school buildings. A new class of school building was devised in 1905 and several examples were erected and proved valuable, and the important point was established that the model buildings are not more expensive than the old-fashioned buildings of similar size. Closet and urinal arrangements, systems of ventilating and perflating, modern seating accommodation, and methods of school cleaning each received special attention.

The inspection of the children was undertaken in 1906, and the examination of some 1,200 children proved that the state of the children's physical condition was even more serious than was anticipated. The results completely justified the additional expenditure. Dr. Elkington points out that children do not attend school as a privilege, but under compulsion. As the law compels them to attend, it is only common justice that the law should attempt to mitigate or improve any condition which might act deleteriously on the children. This argument, he states, applies with equal force to private schools as to State schools, but it is obviously the duty of the State to set the earliest example in such matters. He has therefore recommended the appointment of a whole-time woman medical officer for general and special work in schools throughout the State and of part-time services of local practitioners, one of whom should reside in Hobart and the other in Launces-

town. The recommendation was accepted, and special arrangements were made for the guarding against any dual control.

Nigeria.

Public Heath.

Sir F. Lugard's report on Northern Nigeria to the Colonial Office, just issued, forms a solid little volume, extending to 130 pages and being furnished with a map and plans. It contains a considerable amount of information on medical and public health matters, chiefly from the report of the principal medical officer, Dr. Thompstone, but these cannot be said to be of a very satisfactory nature. The average number of Europeans in the country was 342, all but 11 of whom were males. Ten died during the year, but both the death-rate and the invaliding-rate have slightly decreased. There were 20 cases of blackwater fever with 4 deaths as against 31 cases with 5 deaths in the previous year. Malaria cases numbered 445, considerably over 1 case per head of the population, but there were no deaths, nor did any of the 34 cases of dysentery prove fatal.

On the whole the sanitary condition of the European stations is good. The establishment of small condensers at out-stations has been the cause of a large reduction in the number of cases of dysentery. The are some signs of improvement also in the sanitation of the native towns. In consequence of the frequency of small-pox considerable efforts were made in vaccination, but the lymph rarely reaches the distant stations, such as Sokoto, in an active state, and it has accordingly been found necessary to establish small vaccine stations at intermediate points. It is a remarkable fact that the Fulani herdsmen of their own accord practise inoculation of cow-pox virus, having discovered that this renders them immune from small-pox.

The prevalence of epidemic cerebro spinal meningitis was one of the most serious matters with which the officials had to deal. The natives look upon it as a disease of the dry season, which disappears with the rains, and occurs periodically in epidemic form. The report states that the disease broke out during the first three months of the year in all except the four northern provinces. The epidemic seems to have been of great severity. In Kano the mortality was over a hundred a day, and the case mortality was estimated at about 50 per cent. At Zaria the Resident reports that at the commencement of the epidemic "the case mortality was appalling, many of those attacked practically falling dead at their work, though later its violence became attenuated." In Sokoto about 50 deaths occurred daily, and the mortality among children was very great. The epidemic raged in Kano during February and March, and hundreds of natives died in the city; only 2 Europeans succumbed to the disease, but it is not stated how many were attacked.

Dispensaries have now been established in all the provinces, and 16,587 natives received treatment during the year. At Lokoja and Zungeru isolation hospitals have rendered good service. Tsetse fly occurs on the Niger and Benue in various parts, and the true *Glossina palpalis* has been found—the species which carries the trypanosome of sleeping sickness, so that there is unfortunately no doubt that Northern Nigeria is at any moment liable to the ravages of this formidable disease. The health of the European population cannot be looked upon as entirely satisfactory, though much of the sickness is considered to be due to bad housing, overwork, and the difficulty of obtaining proper food. But great progress is being made *pari passu* with the opening up of the Protectorate, and perhaps no better example of it can be given than the fact that a course of weekly lectures on elementary hygiene was started in Lokoja and Zungeru for educated natives, and that the attendance and the interest evoked were most gratifying.

A Bureau of medical information has been established in the Eulenburg Studio, Lützowplatz, Berlin, where foreign doctors visiting that city can obtain without charge all particulars as to courses of instruction, meetings of societies, admission to hospital clinics, and to polyclinics and other matters of professional interest.

THE CYTOLOGICAL INVESTIGATION OF CANCER.

In their *First Report on the Cytological Investigation of Cancer* (the Priory Publishing Company, Liverpool, 1906) Messrs. Moore and Walker, of the Liverpool Cancer Research Laboratories, attach importance to the fact, now clearly established, that during the growth of cancer cytological phenomena are exhibited which run closely parallel with those encountered in the formation of normal sexual elements. If examples of malignant growth be selected at random, cytological examinations will show that these maiotic phenomena occur much more abundantly in some cases than in others. In young growths, reduced cells and cells exhibiting the first maiotic mitosis are relatively common. But even in the same growths the relative proportion of the cells which exhibit these phases is subject to very wide variations. This is an indication, in the opinion of the authors, that the maiotic phenomenon in cancer cells occurs periodically and alternates with other periods of activity. They say:

> It appears to be indicated that in groups of long standing there arise successive crops of maiotic divisions and their progeny, but along with these and giving rise to them there exists a numerous class of cells dividing premaiotically.

Their study of the influence which leucocytes exert upon cancer cells is of particular interest. It is well known that an epithelium may be stimulated to attract leucocytes by the application of a variety of irritants; then, after the inflammation which has been produced subsides, the leucocytes disperse, and the normal condition of the epithelium is restored. But in the formation of cancerous tissue the process involving the attraction of leucocytes goes much further, and cannot be adequately explained as a normal phagocytic action of the malignant cells towards the leucocytes, or vice versa. The authors have frequently observed cells in young malignant growths in which there existed one or more leucocytes, whilst either the nuclei of the cells, of the leucocyte, or of both were in active division.

> In these cases the spindle figures may be independent, or they may become mixed. In the latter case it is clear that there must be an intimate blending of the substance of the leucocyte nucleus and that of the cancer cell, and in any future generations that may arise from such cells these cannot be regarded as either somatic or leucocytic in nature, but are in the strictest sense of the term a hybrid product of both.

When a leucocyte enters a cancer cell the nuclei of the two often become closely applied to each other, and sometimes there is a tendency to the formation of a common capsule which encloses both nuclei. This blending of leucocytes and tissue cells "does not necessarily result in the destruction of either participant in the association." The phenomena described by the authors have been encountered in several examples of carcinoma of the lip, in rectal carcinoma, in epithelioma of the penis, and in scirrhus of the breast. All these cases were very young examples of cancer, and the cell fusions were found nearly always in the growing edge. In the older portions of the growth they were rarely met with, and in metastatic developments they have not been observed.

Discussing the theory originally suggested by Klebs that these interactions between leucocytes and cells on the road to malignancy are to be regarded as a process analogous to fertilization, the authors admit that such an explanation would help to solve many of the difficulties involved in cancer problems, such as the anaplasy of malignant tissues and the chromosome numbers peculiar to cancer cells; but they do not consider that the cytological facts at present ascertained are sufficient to establish the fertilization theory on an indisputable basis. With regard to the parasitic theory of cancer formation, they consider that it is difficult to imagine how a parasite can have anything more than a transitory connexion with the formation of a gametoid tumour such as cancer. Moreover, it has been repeatedly found that cancer cells are destroyed by grinding them up, and that the material thus produced will not initiate new growths when introduced into the body of the same animal. But if there is a parasite permanently associated with cancer, it must be of very minute size; and it is by no means easy to understand how mere mechanical breaking up of the cancer cells could destroy it or incapacitate it from producing further losses.

Nova et Vetera.

EX-VOTOS IN CONSTANTINOPLE.

The presentation of votive offerings to altars and shrines as tokens of gratitude for recovery from illness is still common in the South of Europe. Among the Christians of Constantinople and the provinces of the Ottoman Empire they are employed as instruments of healing. In an article contributed to the *France Médicale*, Dr. V. Torkomian, of Constantinople, states that he has made a collection of these objects which represent different parts of the body. He divides them into three groups: (1) Those representing limbs or parts of limbs; (2) those representing special external organs (eye, ear, tongue, jaw, breasts); (3) those representing viscera. Representations of the head, face, back, nose, lungs, uterus, shoulder, genitals, etc., have long ceased to be used as ex-votos in any of the churches of Constantinople. The ex-votos are always hung on an image of the Blessed Virgin, which is enclosed in a special glass frame. This is kept carefully locked, the key being in the hands of one of the priests of the church. The time when the ex-voto is, so to speak, indicated is when the disease has entered on a phase of chronicity; application is made to the priest, and one or two are borrowed, according to the part affected. A receipt is required. The ex-voto is attached to the seat of the disease, where it is left day and night till the patient is cured. When he gets well he must carry the ex-voto which has cured him back to the church, to which he must further present a similar ex-voto he has had made for the purpose. The ex-votos of Constantinople are generally made of silver; they seldom have inscriptions, but are marked with a cross. All must bear the Government stamp as a guarantee of the genuineness of the silver.

Besides the silver ex-votos, there are others of greater price—diamonds and other precious stones, necklaces, golden caskets, etc. These, we gather, are merely offerings of hope or gratitude, and are not fashioned after the likeness of limbs or organs. In course of time the number of ex-votos increases to such an extent as to mask completely the image of the Blessed Virgin. Then the Church feels it necessary to relieve the situation by removing a good many of them; but the most ancient are always respected. The ex-votos removed are weighed and sent to the jeweller to be melted down and converted into other objects of devotion, such as lamps, lampstands, candelabra, crosses, goblets, chalices, etc. The ex-votos show no artistic merit in their design or execution; they are made faithfully in the likeness of primitive models, from which it is deemed wrong to depart.

Dr. Torkomian gives some particulars of the mode of use. In eye diseases (conjunctivitis, blepharitis, ophthalmia neonatorum, purulent ophthalmia, etc.) an artificial eye is hung on the right or left side of the forehead; it is sometimes employed after an operation on the eye; and also, as if by an anticipation of the theory of eye-strain, for headache and migraine. In the stammering of children, in lingual paralysis, dumbness, ranula, and aphasia, a tongue is hung on the neck. In troubles of dentition, dental and facial neuralgia, alveolar periostitis, and aphthae, a jaw is attached to the neck. Otitis, internal as well as external, and deafness, are treated by hanging an ear on the lobe of the affected side. Breasts are worn by nurses and young mothers with the object of stimulating the secretion of milk and safeguarding the mamma from inflammation. Palpitations and emotional disturbances of all kinds are treated by the application of a heart, which is also credited with sovereign virtue in consolidating the union of hearts in newly-married couples. Fractures, diseases of joints, etc., are treated by application of the corresponding limb. An ex-voto representing a baby boy or girl is supposed to be useful in eruptive fevers and in convulsions; it is also placed upon the abdomen of women in labour, either to hasten delivery or influence the sex of the offspring. When the ex-voto is used, no other treatment must be employed or its healing influence will be interfered with.

Dr. Torkomian says there is no record of the date when the use of the ex-voto was introduced among the Armenian and other Christian races in Turkey; but he thinks it cannot be earlier than the Crusades, when the Western peoples left a good many of their religious customs and practices among those of the East.

MEDICAL FEES IN BERLIN.

Reference was made in the British Medical Journal of January 12th to a decision arrived at by the medical profession to raise the scale of fees. The tariff agreed upon is as follows:

1. For a first visit at the patient's house, 3 marks (the mark for practical purposes may be taken as equivalent to a shilling).
2. For each subsequent visit in the course of the same illness, 2 marks.
3. For an emergency call, 5 marks.
4. For a night visit, between 9 p.m. and 6 a.m., 6 marks.
5. For every half hour spent at the patient's bedside, and for every subsequent part of a half hour, 2 marks in addition to the ordinary fee for a visit; at night (between 9 p.m. and 7 a.m.) the corresponding additional fee is 5 marks.
6. For each visit at the doctor's house, 2 marks.
7. For each visit at the doctor's house, outside his usual hours during the day, 3 marks.
8. For each visit at the doctor's house between 9 p.m. and 7 a.m., 4 marks.
9. For each laryngoscopic examination, 3 marks.

In special cases the charges may be at higher rates.

SPECIAL CORRESPONDENCE.

PARIS.

M. Bardet on the Nature and Preparation of Metallic Ferments.—"Punch d'Honneur" given by the General Association of Students.

At a recent meeting of the Société de Thérapeutique M. Bardet read a paper on the nature and the preparation of metallic ferments. They were not to be confounded with colloidal metals—for example, collargol, in which the silver molecule seemed to be combined in the form of an acid molecule to a base, and was probably a collargolate of ammonia. The metallic ferments could be prepared chemically or electrically. The artificial oxydases of Trillet were prepared by precipitating weak solutions of metallic salts by an alkali in the presence of traces of albumen. The precipitate redissolved in a few hours, and gave weak solutions with remarkable properties, rapidly reducing H_2O_2, rapidly oxidizing pyrogallol and the quinones. The solutions of Trillat being alkaline, their injection caused necrosis in the tissues and had to be abandoned. The solutions of Bredig, obtained by electricity, are easy to obtain but not stable. In a porcelain capsule in a small quantity of chemically-pure H_2O an electric spark is struck between two electrodes of the metal it is wished to render soluble. The solution obtained contains 30 mg. of the pure metal per litre. The firm metallic corpuscles present Brownian movements, which may perhaps be related to the biological activity and the fermentative action of the particles. The strength of a solution is measured by means of H_2O_2; 1 c.cm. of the metallic solution can set free 20, 25, 30 c.cm. of oxygen in a given time from a 1 in 10 dilution of H_2O_2. These metallic ferments act like organized ferments—for example, yeasts when they are submitted to the action of morphine, chloroform, arsenic, or simply in contact with electrolytes or innocuous salts (potassium chloride). In considering their catalytic power the metal employed has no importance, nor has the quantity dissolved, but their activity depends especially on the small size of the particles in the solution.

On the evening of February 9th the General Association of Students gave a *punch d'honneur* in the Sorbonne to celebrate the fact that five weeks earlier Parliament had voted a sum of £8,000 to enable them to fit up as their new home the ancient building of the medical school in the Rue de la Bûcherie, dating from 1472, to which a circular amphitheatre was added, called after Winslow, the celebrated anatomist, who inaugurated it on February 18th, 1745. Among the guests were M. Emile Loubet (ex-President of the Republic), Prince Roland

Bonaparte, and the deans of the different faculties. M. Campbichi, the President of the Students' Association, thanked the Parliament, the Cabinet, the Municipal Councils, M. Casimir-Perier, the Prefect of the Seine, and all who had co-operated. M. Loubet replied, recalling that while he was President he had had the pleasure of inaugurating their first dwelling, when he received from them a card of "Honorary Student." He looked forward in that capacity and as a neighbour to the pleasure of assisting at the inauguration of the new home and of returning often.

VIENNA.

Jubilee of Professor von Schrötter. — Tonsillitis and Appendicitis.

THE 70th birthday of the famous clinician, Professor von Schrötter was celebrated on February 5th. Hundreds of former pupils with the representatives of medical corporations and of the Government assembled early in the morning in his clinic. Speeches were delivered, and the foreign delegates, amongst them Professor Fraenkel of Berlin and Dr. Thost of Hamburg, spoke of the esteem and appreciation in which the Professor was held in Germany. Dr. Thost said that a map of the whole world was required to show all the places whence students flocked to Schrötter's clinic. The announcement was made that the London Laryngological Society and the French Société de Thérapeutique had elected him an honorary member. In responding, Schrötter spoke of the new ideas which had lately gained the upper hand in medicine, and the progress made in laryngology and internal medicine in the forty years he had been Director of his clinic. The opening of the medical profession to women he did not approve of because women were not always capable of giving all their time to a calling which required unbroken health and the full amount of intellectual force, if it was to be beneficial to the patient.

The position of tonsillar angina was again illustrated in a paper read before the Vienna Medical Society some time ago, when the results of numerous *post-mortem* examinations were given. Professor Krej had found that in many cases of septic appendicitis the tonsils were also the seat of septic infection, and that the adenoid tissue of tonsils, appendix, and of Peyer's patches in the intestine was the localization of what ought to be called "bacteriaemia." In numerous cases of mild appendicitis, endocarditis, and pleuritis, particular attention was paid to the condition of the tonsils, and pains were taken to elicit from the patient or his friends the nature of the diseases from which he had previously suffered, and it was found that more than 50 per cent. of such patients had been suffering from angina. The etiological connexion was thus established, and due stress is laid on the uniform results obtained by several independent observers. A further confirmation of the importance of tonsillar angina is found in the increased prevalence of appendicitis a few weeks after the changeable seasons, when angina and throat troubles are rife.

CORRESPONDENCE.

THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

SIR,—Communications have been received by the Central Ethical Committee which show that some members of the Association suffer from misconception as to the present constitutional position of the report upon the ethical aspects of medical consultation which was published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL on February 16th, 1907, p. 79. Indeed, in one instance a medical practitioner has, it appears, accused another practitioner of a grave breach of medical ethics because the former regarded some act of the latter as contrary to an opinion put forward in the first part of that report.

On behalf of the Central Ethical Committee, therefore, I think it well in the interests of the Association to point out that the report stands at the moment in the position merely of proposals which, in obedience to instructions received from the Annual Representative Meeting at Leicester, the Committee have drawn up for the consideration of the Association. They have accordingly been placed before the Divisions for this purpose and will have no constitutional authority until they have been approved by an Annual Representative Meeting.—I am, etc.,

R. H. KINSEY,
February 27th. Chairman of the Central Ethical Committee.

SIR,—I have learnt with some concern the interpretation which may be put upon the following words, taken from the paragraph headed "Cases Seen at Consultants' Houses," in the report of Central Ethical Committee (page 76 of the SUPPLEMENT for February 16th):

> If a patient seeks an opinion from a practitioner other than his ordinary attendant, and without any introduction, it is in general the duty of the practitioner consulted to ascertain the facts as to previous attendance, and if he finds that the patient is already under medical treatment he should refuse to see the case until he has communicated with the ordinary attendant.

If by this it is intended to mean that no consultant may see a patient whom he knows to be under treatment by another practitioner, I fear that, if carried, it can only do harm. When I first read it I supposed that the Committee had in their minds at the time the case of a patient consulting another practitioner, not occupying the position of consultant, where such a rule might work without inconvenience, but I do not think that it could be enforced for consultants, who often live at long distances from the practitioner who is attending the case. For some years I have been struggling to get the rule accepted that under such circumstances it is the duty of the consultant, having obtained the patient's permission, to write to the practitioner in attendance, but I have found even this objected to by some of the most respected consultants, on the ground that such letters often expose them to acrimonious and insulting replies, and that on the whole it is better *not to know* anything about who is in attendance when the patient is not ostensibly sent by a practitioner. I think it will be admitted that the rule I have proposed is greatly in the interests of both practitioner and patient, but if the words quoted above are adopted by the Divisions, and are intended to prevent any consultant seeing a case which he knows to be under the treatment of another practitioner, all consultants would in self-defence take good care *not to know* in all cases, and the very salutary rule of communicating with the practitioner in attendance would be rendered a dead letter. No doubt the Committee in the succeedsentence recognize that there are circumstances under which it might be imperative for the consultant to see the case, but this would be always open to difference of opinion, and he would be so liable to find himself involved in disagreeable disputes that he would range himself with those cautious consultants—and they are many—who at present decline to enter into any correspondence with the medical attendants of patients who have consulted them on their own initiative. As one who earnestly desires to see all causes of friction between consultants and practitioners reduced as far as possible to a minimum, I would ask the Divisions to consider carefully before accepting this paragraph as it is worded.—I am, etc.,

Birmingham, Feb. 25rd. ROBERT SAUNDBY.

SIR,—In the BRITISH MEDICAL JOURNAL of February 9th, p. 354, A., a general practitioner who "specializes in eye diseases," asks whether he may attend a patient of a neighbouring colleague, B., for eye trouble, and the answer given is in the affirmative, provided he gives the patient a letter to B. stating his opinion and the treatment required; but I can see nothing in A.'s question to prove that B. was willing for his patient to be seen by A. Possibly B. may be a much older and more experienced man and may consider he knows more about eye work than A., although he does not pretend to specialize; or possibly he may prefer his patient to be seen by a pure specialist in consultation. In either case A.'s letter would be intensely irritating and lay him open to a severe snub.

I hold very strongly that no specialist or consultant, however eminent, should see a patient who is under the care of another medical man unless in consultation sought by the latter. Patients are too fond of going behind the back of the general practitioner, and getting what they

term the independent opinion of a consultant, implying thereby that the latter, if called in consultation, will give an opinion to please the general practitioner rather than tell the truth. The "independent opinion," however, being given without the knowledge of the facts noticed by the man in charge, is frequently quite wrong; nevertheless the patient publishes it far and wide that his own doctor did not know what was the matter, and was treating him wrongly. If the general practitioner is a man of spirit, he refuses to go on with the case unless he receives an apology from both consultant and patient.

It is a pity we have not more pure consultants—men who will see no case except in consultation with a general practitioner, and who will give no prescription to a patient, prescriptions so given being used on all possible occasions for all sorts of ailments of the patient, his family, and friends. We have quite a plethora of "consultoids"—and by this term I mean men holding hospital appointments who wish to be considered consultants or specialists, but at the same time will attend any medical, surgical, or obstetric case just like any other general practitioner, and these are the worst offenders against medical ethics. They have no hesitation in examining another man's case and prescribing without his knowledge or consent, and often add insult to injury and lay themselves open to a snub by writing to the man in charge and suggesting treatment, when he, perhaps, has the poorest opinion of their ability and would never dream of taking their advice. There is no excuse for such conduct, as most of these men have ample means, and are among the first to throw stones at any unfortunate general practitioner who through poverty is tempted to use unethical means to get a bare living.

Some time ago you answered a question I sent, and agreed with me that no medical man, either consultant or otherwise, had a right to see for an insurance company any case under treatment by another medical man without his presence or consent, and that the smallness of the fee offered by the company was no excuse for such conduct, but rather a reason for declining to act for the company. I hope you will agree with me in the present case, as there is a disposition among "consultoids" to consider themselves above the reach of medical ethics. There is nothing in my argument to prevent a patient getting the opinion of any man he chooses provided he does so with the consent or after the dismissal of his usual medical attendant.—I am, etc.,

North Shields, Feb. 12th. F. C. MEARS.

NEW PATIENTS.

SIR,—In answer to "Justice" (BRITISH MEDICAL JOURNAL, February 2nd, 1907, p. 288) *re* new patients generally, I should like to ask him what is a medical man to do who is working up a new practice on a new estate in London who has been booking new patients since October 1st last nearly at the rate of one a day?—121 so far altogether. Many, of course, come from a distance; but many others from older parts near at hand who have had other doctors residing within the same, or an adjoining district, and who simply change their doctor for the greater convenience of having one nearer at hand. What an intolerable as well as useless burden it would be to find out whether they have come from the immediate neighbourhood or not, and what doctor they had before, and then to get them to write to their former medical attendant before you take them on!

As long as they come to one *honestly*, why should one have qualms about accepting them, or even, peradventure, turn them over to some other new comer, also near at hand, because they want immediate treatment, and cannot afford the time to trudge to their former doctor? Why should a new comer who has been 'cute enough to pick out a favourable pitch where new doctors will be needed, pay rent, rates and taxes and lighting bills, etc., solely in order to keep older doctors supplied with their old patients free gratis and for nothing! No, charity begins at home when you are working up a new practice, and people seem to think you good enough!—I am, etc.,

February 15th. L.E.A.C.

PS.—I might add that I have had the courage and faith to wait under disheartening circumstances for nearly two years for the boom to really begin, as in 1905 I only had 92 patients; the first half of 1906, 51 new ones; but the last three months, 89 new ones.

THE LATE DR. SCHORSTEIN AND MEDICAL EDUCATION.

SIR,—We shall be grateful if you will spare us space to advocate simultaneously the claims of medical education at the London Hospital Medical College and a memorial to one of the most prominent physicians at that College.

The colleagues and friends of the late Dr. Schorstein are anxious to perpetuate his memory by the endowment of an advanced course of lectures in clinical medicine, which, it has long been recognized, is one of the greatest needs of the medical school. It is not intended to create by this a course to form part of the ordinary school curriculum, but rather something on the lines of the endowed lectureships at the Royal College of Physicians, such as the Goulstonian.

It is proposed that a course or courses of three or four lectures be given by a physician to be elected by the governing body of the school. The number of lectures and the remuneration will be determined by the amount of the money raised, but we wish to make clear (1) that the election to the lectureship will be regarded as a professional distinction, (2) that due notice will be given so as to afford the lecturer ample time to prepare a discourse worthy of the subject and of the man in whose memory it is given.

Subscriptions, large or small, may be sent to the Honorary Secretaries of the fund: Dr. Cholmeley, 11, Portland Place, W., and Dr. Cecil Wall, 6, Cavendish Place, W., or to the Manager, Barclay's Bank, 27, Cavendish Square, W. They will be acknowledged on a numbered receipt form, but no list of either donors or amounts will be published, as this, it is felt, would have been in accordance with Dr. Schorstein's wish.

Dr. Cecil Wall will be pleased to supply further details of the scheme on application.—We remain, etc.,

SAMUEL MONTAGU.
LEWIS McIVER.
C. H. DORKING.
STEPHEN MACKENZIE.
WILLIAM OSLER.
PERCY KIDD.

February 24th.

AFTER-TREATMENT OF OPERATION CASES.

SIR,—Mr. C. A. Morton's paper in the BRITISH MEDICAL JOURNAL of February 9th on the "Claim of the surgeon to conduct the after-treatment of operation cases," seems open to much criticism from a general practitioner's point of view. It would seem that the author puts no confidence whatever in any one but himself for post-operation treatment of abdominal operations.

Would Mr. Morton extend this lack of confidence to a student who had been taught and trained by him? If he does so, it seems a poor compliment to his teaching.

He says that he has several times refused to operate in the country where a patient has refused to come into his surgical home. Can the general public be blamed for refusing to come to a surgical home, when they hear of the experiences of others who have been treated in them? One instance of many will prove my meaning. I know of a patient who went to a surgical home of great repute for the very serious operation of gastro-jejunostomy; the patient was operated on by one of the greatest surgeons at present practising. The surgeon performed the operation, and the patient never saw him again, but the sister removed his stitches and generally treated him afterwards. But what of his nursing? This poor patient was left to the tender care of one nurse at night, and this nurse was expected to look after sixteen or seventeen other patients as well. Now, I ask is this the kind of attention which is likely to inspire the public with confidence in surgical homes?

How much better this patient would have done in a country house with two nurses in constant attendance by day as well as by night?

Does Mr. Morton propose, for instance, when his patient cannot be moved to his surgical home, to remain in the patient's house until he has recovered? I think Mr. Morton would have considerably to increase his fees to make such a case pay him. How many patients would consent to this unnecessary increase of expense? I trust

that no general practitioner of any standing would advise his patient to add to the already enormous expense now entailed by the employment of the very "modern" consulting surgeon.

Mr. Morton speaks of various positions for patients to be placed in after operations; does he claim any originality in this treatment? Has not any general practitioner with good hospital training carried out this treatment very many times? If the practitioner has been a house-surgeon, has he not had many such cases left in his charge? Is it not a fact that the after-treatment of abdominal or any other cases in hospitals is left to the house-surgeons?

Has Mr. Morton suffered so much from the hands of the ordinary intelligent practitioners that he cannot trust them? If he has, he must have been singularly unfortunate.

I presume that Mr. Morton claims that it is also the duty of the consulting surgeon to administer the turpentine enemata he speaks of! But here, again, surely the ordinary third or fourth year student must have seen this treatment as well as the calomel and seidlitz powders.

I can only regard his paper as an attempt on the part of a consulting surgeon to claim still further fees from the public, and as showing a lack of appreciation of the practitioner's brains and resources, for the practitioner has very often to deal with cases of emergency under conditions which many an operating surgeon would gladly escape from for his reputation's sake.—I am, etc.,

Wotton-under-Edge, Feb. 12th. Ernest F. Clowes.

A POSSIBLE SOURCE OF DIPHTHERIA IN SCHOOLS.

Sir,—In accounting for the unquestionable influence of schools in diffusing the infection of diphtheria, and possibly also of other forms of infection, there is one cause which is very obvious, though I do not remember to have seen it mentioned. It is that of dry-sweeping the floors of school rooms, which is so generally practised. The effect of this is to raise a cloud of fine dust which, even if it have precipitated before the children enter the rooms, must settle on forms and desks, to be easily dislodged and lifted again into the atmosphere of the rooms by every movement of the children, and especially by the stamping with which it is their custom to accentuate their march in and out of them. When one considers the probability of the diphtheria bacillus being an earthborn germ, or at any rate a germ that harbours in the earth, and also the amount of miscellaneous filth that children may carry into school on their shoes from the roads and streets, especially at such a time as this, it does not require a very lively imagination to see how this as well as other germs, probably that of scarlet fever, may thus find their way into the atmosphere of schoolrooms and thence into the noses of the children, there to germinate quietly until an attack of coryza calls them into pathological activity.

As sweeping cannot be dispensed with, the practical remedy seems to be the use of sawdust damped with an appropriate disinfectant as a means of reducing the evil to a minimum. In of carpet sweepers, by which the dust can be removed from the floors without being lifted into the air. I am, etc.,

Leicester, Feb. 14th. Francis T. Bond, M.D.

THE COLONIAL CONFERENCE.

Sir,—Since you last [illegible] the programme of the conference has been issued and is found to contain no reference to Public Health. Yet the question is not unlikely to be brought forward and the way thus laid open for imperial co-operation in the science and administration of preventive medicine. To this end I beg to appeal for the earnest interest and active support of our profession. Arising from papers by Dr. Washbourn, M.O.H., Cardiff, and myself at the Bristol Congress last July seconded by Dr. Valentine Assistant M.O.H. for New Zealand, the Royal Sanitary Institute, and the Port Sanitary Authorities Association have already expressed, and the Society of Medical Officers of Health have decided to express to His Majesty's Government their view that [illegible] consideration of the subject at the Colonial Conference is desirable. It is hoped that the matter will be brought forward by the first Minister of Public Health, historically speaking, in the British Empire, Sir Joseph Ward, now Premier of New Zealand, and be supported by Dr. Jameson and the other Premiers. Three essential objects are in view:

1. Imperial notification of infectious disease as the most practicable step towards a standing, world-wide, epidemiologic survey; as a definite assistance to port sanitary authorities in warding off imported disease; as a security to trade against unexpected quarantine and consequent loss.

2. An Imperial census and registration of births, deaths, and marriages, with its results, a matter chiefly of importance as affecting the public health.

3. An Imperial Board of Health, to exercise advisory powers, with a special staff of large experience, to do and extend the work now done by experts borrowed from civil life, or from the Local Government Board and other Government offices and services; to do, in fact, for the empire what is at present so admirably done for this country by the existing Board.

The possibilities are great, demanding the largest views and the highest statesmanship of which our profession is capable. I hope our Association may add its influence to this movement by forwarding a resolution on these lines to His Majesty's Government.—I am, etc.,

London, S.E., Feb. 27th. Francis Fremantle.

THE MEDICINE OF THE FUTURE.

Sir,—The pessimistic utterances of notable members of the profession, to which you have given prominence in your columns, on the uselessness of drugs in the treatment of disease, must give all thoughtful, conscientious medical practitioners pause whilst they ask themselves the question whether these strictures are justified by the facts; for, if justified, we are convicted out of the mouths of members of our own household of masquerading as healers of the sick when we really are nothing more than a brotherhood of nurses, and are certainly not justified in taking from the public anything like the consultation fees in vogue. But the withers of the general practitioner may remain unwrung as they with easy conscience accept the modest fee with which they are occasionally remunerated even as nurses-in-ordinary to the household.

It is a common observation that the most successful physicians are those who have the most intimate knowledge of the physiological action of remedies. By successful I mean from the point of view of the patient; and I would mention as a case in point the late Dr. C. D. F. Phillips—the many eminent living pharmacologists for obvious reasons I forbear to name—whilst the most pronounced agnostics in therapeutics are those who have an intimate knowledge of macroscopical morbid anatomy combined with a microscopical knowledge of the art of administering drugs.

Does not scepticism in therapeutics arise from faulty reasoning? Arguing that because we do not know everything about the action of remedies that therefore we know nothing! In what department of knowledge do we know everything? We know that bread and cheese satisfies the cravings of hunger, but if we probe down to the root of things we know not the explanation of the feeling of hunger, nor, in the language of organic chemistry, the how or why of bread and cheese stilling the cries and soothing the pangs of the cells in question. Are we, as reasonable beings, therefore to deny ourselves bread and cheese until we know the ultimate causation of things? I trow not.

Whilst straining with all our energies towards the goal of perfection, let us not falter in the common task, in the daily round of applying our partial knowledge of the chemistry of life to the needs of the sick. In this puzzle world we have in medicine our share of comparative certainties. Have we not mercury in syphilis, the salicylates in acute rheumatism, opium in pain, quinine in malaria potassium iodide in actinomycosis and guaiacum sulphur in scabies, digitalis in mitral insufficiency, colchicum in gout, calcium and suprarenal extract in haemorrhage, thyroid extract in myxoedema and cretinism, morphine in eclampsia, saline infusions and strychnine in collapse, not to mention the uses of ether and chloroform, of cow vaccine and diphtheria antitoxin?

May it not be found that the active principles of many

of these drugs are akin to the hypothetical antibodies produced by the cellular elements in the diseases in which these drugs have been demonstrated to be useful? The study of medicine is the study of life, and its foundation stone is the unit of life, the living cell. If the mystery of life and the action of remedies is to be solved, it will be by the experimental examination of the simplest form of life.

We must realize in practice what we have long known in theory, that man is an organized collection of differentiated and highly specialized cells, and that cellular action is governed by physical laws and chemical processes profoundly influenced by slight causes, and that nine-tenths of disease are due to the interaction of cells and their products, and germs and their products, chemistry being the interpreter of these phenomena—the life and health of the individual being the sum total of the activities of his constituent cells.—I am, etc.,

Ilkley, Feb. 17th. AUGUSTUS H. BAMPTON.

THE WORKING OF THE MIDWIVES ACT.

SIR,—Within the last ten days I have been called in by a midwife on no less than six occasions to abnormal cases. I have not as yet got a cent for one of them, and the probability is that except, perhaps, in one instance, I will never do so. To the general practitioner the result of this absurd Act therefore is: (1) His midwifery practice is reduced by about 20 per cent., because, where formerly there were perhaps two or three certified midwives in a district, in nearly every street one can now see a brass plate with the legend "Nurse So and So, L.O.S., or C.M.B. (as the case may be), certified midwife." (2) Besides his own midwifery practice he is now compelled to act as an unpaid assistant to a person whom the law proclaims to be his equal in the eyes of the ignorant. I venture to say that very few of the general public will be able to discriminate between a string of figures such as C.M.B. and M.B., C.M.

One of the cases I was called in to was one of puerperal fever. I told the nurse that I could not attend the case regularly, so simply gave her instructions as to what to do; but suppose the case was a critical one, and I was compelled to attend regularly: I would have to give up my own midwifery practice; in other words, I would have to sacrifice several pounds a week to attend a case for which probably I would never get paid, and in order to assist a person who is a rival, and already takes some of the bread out of my mouth. The situation has really a spice of Gilbertian humour about it, if it were not so serious. Yet this is the Act that many medical men hailed with delight and enthusiasm. Can we wonder that the general public taunt us with being the most unbusinesslike body of men in the world? I wonder what other class of men would hail with delight a weapon which can be used to cut their own and their colleagues' throats? The measure may commend itself to consultants who can lie abed of nights, but to the poor general practitioner, who has already too much to put up with in the way of defaulting patients, it constitutes a grave injustice.—I am, etc.,

February 5th. ARGUS.

THE INADEQUATE SALARIES OFFERED TO WOMEN MEDICAL INSPECTORS OF SCHOOL CHILDREN.

SIR,—In common with many other qualified practitioners I am sorry to see an advertisement of the Borough of Ilkeston asking for a qualified woman to discharge the duties connected with physical examination of school children and prevention of infantile mortality for the over-modest salary of £100 per annum.

It is evident that the duties of the appointment would consume the entire time of the officer, and that she could look for no further income. A salary of £100 a year is an absolutely inadequate return for the time and capital consumed in passing the necessary examinations for qualification. We cannot be astonished that borough councils should attempt to get women to discharge these duties for an inadequate remuneration, but it ought to be possible to bring sufficient professional opinion to bear on our junior medical women to prevent them from accepting so ridiculous a return for their labour.—I am, etc.,

London, W., Feb. 26th. MARY SCHARLIEB.

OBITUARY.

SIR WILLIAM HINGSTON, M.D., LL.D., F.R.C.S.

SIR WILLIAM HINGSTON, whose sudden death in Montreal, on February 19th, we briefly mentioned in our last issue, had long shown a great interest in the British Medical Association. He was President of the Montreal Branch from its first recognition in 1891 to 1895, he delivered the address in surgery at the annual meeting in 1892 at Nottingham, was President of the Reception Committee when the Association met in Montreal in 1897, and was Vice-President of the Section of Surgery on the same occasion.

William Hales Hingston was the son of the late Lieutenant Colonel S. J. Hingston of the 109th Regiment, and was born at Hinchinbrook in the Province of Quebec in 1829. He received his early education at Montreal College, and subsequently studied medicine at McGill University, taking the degree of M.D. in 1851. He then went to Edinburgh where he took the licence of the Royal College of Surgeons, and subsequently visited medical centres in France, Prussia, Austria, and Bavaria. On his return to Canada he settled in Montreal, and eventually won a leading place as a Surgeon in that city, he became Surgeon and eventually Surgeon-in-Chief to the Hôtel-Dieu Hospital in Montreal, and was also Professor of Clinical Surgery in the Laval University. He was at one time Mayor of Montreal, and was President of the Provincial Board of Health in 1876-7. The interest which he took in public affairs was also shown by the fact that he was a Senator of the Dominion of Canada. In the address in surgery which he delivered at the annual meeting of the British Medical Association at Nottingham in 1892 he spoke on surgical diseases in Canada and on surgery among the aborigines of the Dominion, and gave a sketch of the hospitals and medical colleges in Canada. In concluding he dwelt upon the necessity for a liberal education as a preliminary to medical studies. His eminence as a surgeon was recognized by the Royal College of Surgeons at its jubilee in 1900, when he was among the distinguished men then elected to be Honorary Fellows. He married in 1876 a daughter of the Hon. D. A. Macdonald, and his house in Montreal was a centre of social interest. Sir William Hingston was a man of fine presence and genial manner, and though himself a native of a new Continent, possessed some of that old-world stately courtesy of manner which distinguished the best members of the vanishing generation to which he belonged.

DR. DENIS DAVIOT, of Saint-Léger-sur-Dheune, near Chalon-sur-Saône, the oldest practitioner in France, died recently, at the age of 99. He was, according to the *Chronique Médicale*, formerly Mayor of the town where he lived, and a member of the General Council. For more than seventy years he had exercised his art gratuitously among the poor, and he continued to practise till within a few days of the end. He was to have received the Cross of the Legion of Honour on January 1st, but at the last moment his nomination was postponed. The old gentleman was a stalwart Republican, but perhaps in his later days he had been seen at church or speaking to a priest—grievous offences, sufficient to deprive him of the decoration so long waited for.

ON February 1st Dr. G. DAREMBERG, well known by his writings on tuberculosis and alcoholism, was found dead in his bed at Cannes. Nothing had led those about him to fear such an event, although his health had for years compelled him to live in retirement. He spent the greater part of each year at Cannes. He was a son of Dr. Ch. V. Daremberg, a distinguished physician and philologist who was Professor of the History of Medecine in the Medical Faculty of Paris. Dr. G. Daremberg was a Corresponding Member of the Académie de Médecine, and had been a contributor to the *Journal des Débats* since 1871. At the funeral service which was held in the Church of Notre Dame, Cannes, on February 4th, the Academy of Medicine was represented by Professor Bouchard, and the *Journal des Débats* by the editor, M. de Nalèche.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Degrees in Medicine.

In a congregation held on Saturday, February 16th, the following degrees in Medicine were conferred:

Doctor of Medicine.—A. M. Gossage, Magdalen College.

Bachelor of Medicine and Surgery.—L. T. Burra, University College.

Board of the Faculty of Medicine.

On Tuesday, February 19th, a statute was passed in Convocation empowering the Board of the Faculty of Medicine to send two representatives as members of the Board of Studies for Responsions.

UNIVERSITY OF CAMBRIDGE.

DEGREES.

THE following degrees were conferred on February 14th:

M.C.—H. M. [illegible], Trin.

M.B.—C. M. [illegible]son, Joh. E. E. Atkin, Gonv. and Ch.

APPOINTMENTS.

The following have been appointed members of Board of Electors to Professorships: A. Thomson, M.A.Oxon., Elector to the Professorship of Anatomy; Sir E. C. Perry, M.D.Cantab., Elector to the Downing Professorship of Medicine; Dr. Langley, Elector to the Downing Professorship of Botany; J. Graham Kerr, M.A. (Christ Ch.), Elector to the Downing Professorship of Zoology; Dr. Anderson, Elector to the Downing Professorship of Physiology.

Dr. Humphry has been co-opted a member of the Degree Committee of the Special Board of Medicine.

UNIVERSITY OF LONDON.

THE following candidates have been approved in Part II of the Preliminary Scientific Examination:

Margaret M. [illegible]ton, M. B. Bayly, R. F. Bolt, T. D. Bowen, F. L. Brewer, G. P. Buckley, E. S. Calthrop, J. H. Campain, A. B. Clark, E. G. H. Cowell, V. G. Dessa, J. A. Edmond, W. H. Eggar, W. E. Fox, G. H. Gerlick, P. Hirschbein, A. H. Hudson, D. W. Jones, F. N. H. Maidment, E. S. Miller, A. Owen, W. W. Pratt, A. A. Ross, C. G. K[illegible]rdson, P. Smith, E. N. Snowden, A. H. Todd, J. A. Tozer, H. A. Treadgold, J. W. Travers, A. D. Vasquez, W. S. Weidman, F. S. Wollaston, D. H. Wood, R. M. Wright.

WEST LONDON POST-GRADUATE COLLEGE.

The Post-graduate College attached to the West London Hospital has now been recognized by the University of London as a place where candidates for the M.D. degree can spend the necessary year of hospital study after passing the M.B. degree. Full information as to the College can be obtained on application to Mr. L. A. Bidwell, F.R.C.S., Dean, at the West London Hospital, Hammersmith Road, London, W.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary comitia was held at the College on Friday, February 22nd, the President (Sir R. Douglas Powell) in the chair.

Communications.

The following communications were received:

1. From Mr. Cowell, reporting proceedings of the Council of the Royal College of Surgeons on February 7th.

2. From the Mayor of Douglas, inviting the College to send representatives to the Congress of the Royal Institute of Public Health, to be held in that town from June 29th to July 5th next. It was unanimously resolved that the communication be on the table.

Resignation of Membership.

A letter was received from Dr. John Shaw, resigning his membership of the College and returning his diploma. On the motion of the Senior Censor the resignation was accepted.

Restoration of Licence.

The Registrar moved the enactment, for the second time, of the following temporary by-law:

"That the Licence of the College withdrawn from Mr. Hugh [illegible] on January 31st, 1907, under the provisions of [illegible] be restored to him any by-law to the contrary notwithstanding."

The motion was carried, with the result that the licence of the College was restored to Mr. Revell.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

The following candidates have been approved at the examinations indicated:

[illegible]: E. P. Ross, P. E. Hayden, H. Stokes, R. [illegible], L. M. Cooke, F. C. D[illegible], F. S. Hervey, N. M. [illegible], J. M. [illegible], A. P. Seale, G. C. Sneyd, [illegible], W. P[illegible]n, O. W. J[illegible]e, [illegible], J. A[illegible], C. Cooke, R. A. Khalkar, [illegible], A. A. W. Merrick, F. J. Pelton, Captain R.A.M.C.

CONJOINT BOARD IN IRELAND.

The Diploma in Public Health.—The following candidates have been approved for the diploma in Public Health:

E. G. [illegible], M.B., R.A.M.C.; J. J. [illegible], *A. Lovedon, Captain, I.M.S.; J. Scott, M.D.; [illegible], W. Lyle, Major, R.A.M.C.; A. A. W. [illegible].

* Distinction.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved in the subjects indicated:

SURGERY.—†*M. B. S. Button, †C. C. Morrell, *W. V. Pegler, †*E. W. Squire, †*J. S. Ward.

MEDICINE.—†*M. B. S. Button, †*E. S. Cooke, †*S. F. Fouracre, *S. Singh, †*G. L. Walker.

FORENSIC MEDICINE.—M. B. S. Button, J. C. Fletcher, S. F. Fouracre, G. Rollason, R. Spears.

MIDWIFERY.—H. J. W. Barlee, M. B. S. Button, S. F. Fouracre, S. Singh, R. P. Wylde.

† Section I. * Section II.

The diploma of the Society has been granted to Messrs. M. B. S. Button, W. V. Pegler, and S. Singh.

The Gillson Scholarship in Pathology for 1907 has been awarded to Mr. Francis Arthur Bainbridge, M.A., M.D.Camb., D.Sc.Lond., M.R.C.P.Lond., of Guy's Hospital.

Medico-Legal.

SMALL-POX AND A CHEMIST.

WE learn from a report in the *Hull Daily Mail* that Mr. W. L. Loten, chemist, Mytongate, appeared on February 21st at a meeting of the Hull Sanitary Committe and made a statement with regard to the death of a woman from small-pox. He admitted that he had failed to make a report of the character of the disease and did not call in a medical man until it was too late. He admitted that he had given her a mixture for a severe cold, but did not observe spots until the Saturday, and the woman died on the Monday. The medical officer stated that six cases of small-pox were traceable to this case, and that four of the patients had died. The Chairman of the Committee strongly reprimanded Mr. Loten.

MEDICAL CERTIFICATES UNDER THE WORKMEN'S COMPENSATION ACT, 1897.

INQUIRER.—The practitioner who grants a medical certificate under the Workmen's Compensation Act, 1897—the Act still in force—must look for his remuneration to the person who employs him. By Schedule 1 (3) of that Act, a workman who has given notice of an accident must, if so required by the employer, submit himself for examination by a duly-qualified medical practitioner provided and paid by the employer. In that case the practitioner would certainly look to the employer for his fee. If an agricultural labourer goes to get a certificate on his own account, it is clear that he, and not his employer, is liable to pay the fee.

SALARY OF SICK ASSISTANT.

G. H. writes that his assistant was disabled by sickness for five weeks. G. H. was put to expenses amounting to £17 10s. for a *locum tenens*. He wishes to know whether his assistant is entitled to his full salary during his illness, or whether he ought to contribute out of it something to help to reimburse the principal for the above expenses.

*** A principal might contract with his assistant for the latter to find a substitute in his place in event of illness, but this is not usual. We are advised that in the absence of such an agreement an assistant is entitled to his full salary so long as he remains in the principal's service.

ENGAGEMENT OF MIDWIFERY NURSE.

W. S. asks whether a nurse who was engaged for a confinement at an approximate date, but was not required till a week later, can claim a retaining fee for the first week.

*** It is usual to pay a nurse from the date when she was engaged. In this case it is obvious that she could not have taken any engagement during the first week, and the loss ought not to fall on her.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POWER OF LOCAL AUTHORITY TO CLOSE A SHOP.

ANOTHER.—Section 308 of the Public Health Act, 1875, provides that "where any person sustains any damage by reason of the exercise of any of the powers of this Act, in relation to any matter as to which he is not himself in default, full compensation shall be made to such person by the local authority exercising such powers." As far as we are aware a local authority has no power to close a shop under the circumstances related, and would not be liable under the above section. A solicitor would advise as to whether any action could be taken under common law.

HOSPITAL AND DISPENSARY MANAGEMENT.

ROYAL FREE HOSPITAL, LONDON.

THE report presented to the annual meeting of the Royal Free Hospital on February 25th, under the chairmanship of the Earl of Sandwich, stated that the average number of patients in the wards during the year 1906 was 149, their average stay being twenty-two days, while 16,525 persons received treatment in the various out-patient departments, in addition to 417 maternity cases and 27,623 casualty patients. A census had again been taken on the second Sunday in January, and showed, as usual, that considerably more than half the in-patients were residents in neighbouring parishes. Their average cost was estimated at £1 9s., a week, as against £1 11s. in the previous year.

GLAMORGAN COUNTY ASYLUM.

IN the annual report of this institution for 1905 the Committee record their warm appreciation of the able manner in which Dr. Robert S. Stewart, the Medical Superintendent, has carried out his duties, and express their very great regret for his serious illness, which had necessitated a complete rest and change of air for several months. In his absence Dr. David Finlay, the Acting Medical Superintendent, reports upon the management and medical direction of the asylum. On January 1st, 1905, there were 1,636 patients in the asylum, and at the end of the year there were 1,695. The total cases under care during the year numbered 1,982, and the average numbers daily resident 1,664. Dr. Finlay points out that the total bed space provided is for 1,793 patients. This, however, includes three temporary blocks which the Lunacy Commissioners have repeatedly condemned as dangerous. The Committee have taken steps to reconstruct in brick work two of these, and this, during their reconstruction, will involve a considerable deficiency of beds. In consequence of this Dr. Finlay says the provision of a new permanent block is a matter of urgency. During the year 346 patients were admitted, of whom 306 were first admissions. This is a lower number of admissions than that of any year since 1896. In 120 cases the attacks were first attacks within three and in 53 more within twelve months of admission: in 46 the attacks were not-first attacks within twelve months of admission; in 106 the attacks were of more than twelve months of admission, and 21 were congenital cases. The admissions were classified as to the forms of mental disorder into: mania of all kinds, 196; melancholia of all kinds, 73; dementia, secondary, senile, and organic, 8; general paralysis, 40; acquired epilepsy, 8; and congenital or infantile defect, 21.

Of the total admissions, Dr. Finlay says, 27 per cent. were suffering from incurable forms of brain disorder, and, excluding congenital cases, 106, or 32 per cent., had been insane for over twelve months on admission. At the time of writing the report 25 had recovered, 11 had been otherwise discharged, 36 had died, and of the 274 who remained there were, so far as Dr. Finlay could judge, a possible hope of recovery in only 16 4 per cent. These figures justify Dr. Finlay in maintaining that the much needed vacant accommodation need not be expected from the discharge of recovered patients. As to the probable causes of the insanities in the admissions, alcoholic intemperance was assigned in 42, or 12 per cent.; venereal disease in 5, or one-eighth of the general paralytics admitted; accident or injury in 17; puberty, old age, and the menopause in 29; previous attacks in 51; and "moral" causes in 78, or 22.5 per cent. Hereditary influences were ascertained in 82, or 23.7 per cent., and congenital defect existed in a further 21. In 100 no cause could be assigned. During the year 82 were discharged as recovered, giving a recovery-rate on the admissions of 25 per cent.; 32 as relieved, 7 as not improved, and 166 died. The deaths, giving a death-rate on the average numbers resident of 8.3 per cent., were due in 62 cases to cerebro-spinal diseases, including 46 deaths from general paralysis; in 59 cases to chest diseases, including 36 deaths from pulmonary tuberculosis; in 16 cases to abdominal diseases; and in 29 to general diseases, including 22 from senile decay. No deaths from asylum dysentery were recorded, but we note that 21 6 per cent. of the total deaths were due to pulmonary tuberculosis, this high rate of tuberculous deaths being attributed by Dr. Finlay to overcrowding. The general health was good on the whole, zymotic diseases being represented by 2 cases of erysipelas and 1 of measles. Inquests were held in 4 cases, in all of which death was found due to natural causes.

Note.—Since this was written, we very much regret to learn of the death of Dr. Stewart at Angelton, Bridgend, on September 28th, 1906.

THE City of Munich has voted a grant of £5 000 to be applied towards the diminution of infant mortality.

UNDER the will of the late Lieutenant-Colonel George Edward Baynes of Hayward's Heath, Guy's Hospital and the Royal Hospital for Incurables each receive a sum of £1.000.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Associate, London.*

TELEPHONE (National):—

EDITOR.	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

VERAT asks which is the best and simplest quantitative saccharometer, and the address of maker?

H. J. asks for advice as to the desirability or otherwise of recommending marriage to a lady, aged 21, whose father died of pulmonary tuberculosis twelve years ago? This is the only known family history of tuberculous disease.

DYSPHAGIA.

A. B. seeks suggestions as to a male patient, aged 74, who can swallow bacon without difficulty, but has dysphagia with butcher's meat and fish. A full-sized bougie passes easily. The patient's weight after a considerable drop beginning over a year ago now tends to increase. The dysphagia dates back to some ten months ago, when the patient lost his wife, and has been unaccompanied by other symptoms. Possible malignancy has been considered and negatived by three consultants. Both bromide and chloretone were beneficial for a time, but are no longer effective.

PERIODIC BRONCHITIS.

CORYZA would welcome suggestions as to a female child now aged 8 years. Ever since her eighth month she has suffered from attacks of bronchitis, recurring at intervals of about a fortnight. They begin with coryza and sneezing, are accompanied by fever, incessant cough, and some gastro-intestinal disturbance, and last about a week. In the intervals the child's condition is entirely normal, the attacks recommencing without ascertainable cause. Enlarged tonsils and adenoids existed when the child first came under observation four months ago, but their removal has not affected the attacks. What is (1) the prognosis; (2) the best treatment (*a*) of the incipient coryza, (*b*) of the irritant cough when the attacks are established, (*c*) of the case in general?

ANSWERS.

"NORTH."—There appears to be no reason why county councils should not pay the lecturers on first aid and nursing as they pay the lecturers on other subjects. Several—if not most—of the county councils do pay the lecturers on these subjects fees from 10s. 6d. to 1 guinea a lecture.

M.D. BRUX.—The M.D. Brux. can only be registered in this country, if acquired by examination before June, 1886. There is a Brussels Medical Graduates' Association, and the address of the Honorary Secretary is Dr. Edwards, Camberwell House, Camberwell, S.E. He will doubtless be able to inform our correspondent about the publication in question.

INTERMITTENT GLYCOSURIA.

DR L. A. CLUTTERBUCK (London, W.) writes: If "B. L. T." has not tried it, may I suggest a trial of trypsin, gr. ij t.d.s., taken two or three hours after a meal—that is, on a more or less empty stomach? I have lately proved its efficacy in a case of glycosuria in a female patient of between 40 and 50.

A SUFFERER writes: Perhaps reduction of the diet to 12 oz. of solid food in the four and twenty hours, in three, or better in two meals, would be of service in "B. L. T.'s" case. The urates suggest over-feeding.

Thread Worms.

Mr. J. M. Cotterill, F.R.C.S. (Edinburgh) writes: Dr. Donald Naesmyth reports (British Medical Journal, February 23rd) that he has two intractable cases of thread worms, and he thinks that his difficulty in curing his patients lies in the fact that the worms are probably not in the rectum, but higher up, and possibly in the caecum. Might I suggest to him a means which, so far as I know, has not been used for this end, but which, I believe, would be almost certainly effective, and that is appendicostomy? By this device the parasites could be attacked *in situ* by quassia or other suitable large injections. I have performed this operation on several cases of mucous colitis with very marked success. The operation is a very simple one, and in the hands of any competent surgeon is practically devoid of risk.

H. D. J. writes, in reply to "South-West": I have been a sufferer myself from these pests, and have found the following treatment efficacious: Take, on an empty stomach, about 6 a.m., half an ounce of vinum aloes freshly prepared; as this may cause some griping, a carminative should be added. After the bowels have been evacuated an enema of salt and water, warmed, should be given. The amount of salt is rather important. I use 3 tablespoonfuls of common salt to 1½ pints of water. This should be used about three times during the week, and the aloes wine taken every third or fourth morning for about ten days, when the cure ought to be complete. Great cleanliness is also necessary, and the hands and the nates should be washed to prevent re-infection. Salads, watercress, etc., should not be indulged in if possible, for in my experience they cause the disease more than anything else that I am acquainted with.

Fenning's Children's Cooling Powders.

A. S. M.—These powders, which are said to have a large sale, are recommended for most of the ailments to which children are liable, from "wind" to "typhus fever" and "watery brain." They are pale yellow powders, varying in weight from 3 to 4 gr., and are composed of potassium nitrate and chlorate, with finely powdered liquorice root. After glancing over the pamphlet entitled "Every Mother's Book," issued by the proprietor, one is inclined to ask how long the Legislature will consider it consistent with the public health and well-being to allow the owners of "patent medicines" to foist their wares upon the community by such absurd and misleading statements.

LETTERS, NOTES, Etc.

Multiple Internal Diverticula of the Small Intestine.

Fleet Surgeon C. Marsh Bradnell, R.N., writes from Lagos, Portugal, as follows: All who read the interesting description of the case of multiple internal diverticula of the small intestine, by A. A. Scot Skirving, M.B., C.M., in the British Medical Journal for February 2nd, must agree with the author that the abnormal peristalsis, culminating in a strangulated hernia, was the effect and not the cause of the "hollow finger-like processes which projected into the lumen of the gut." How, then, can the presence of these [illegible] processes be explained? The human intestine, the oldest of all the organs, is homologous to that of other animals. During the course of its evolution, both ontogenetic and phylogenetic, it passes through, step by step, the various stages that link together the simple archenteron of the early embryo or of the *Gastraea* and the complex convoluted organ of the adult mammal. In one of these stages it resembles a true fish-gut: there, at the oral extremity interpenetrial cells differentiate into teeth just as the scales of sharks differentiate into enamel teeth. In the branchial gut, gill or gullet slits open to the exterior and two dorsal outgrowths resembling those of the double air-bladder of that [illegible] in lungfishes. *Polypterus* of the Nile represent the future lungs; nearer the aboral end the vitelline duct is given off to the relatively enormous yolk sac, so characteristic of amphibians and teleostean fishes. The intestinal mucosa and glands are of various *Teleostei* is [illegible] developed into papillaeform folds projecting into the lumen of the bowel. The [illegible] coat of these animals was partially the seat of increased area of absorption, and corresponded in a striking manner with the appearances of the pathological specimen. It is [illegible] that the condition described by Mr. A. A. Scot Skirving is one of stasis, and that the so-called internal "diverticula" are [illegible] of gut appendages which were functional in [illegible] but which are [illegible] to man and *Teleostei*, but which in the former, under normal conditions, are entirely [illegible].

A Danger to Smokers.

A [illegible] to Dr. F. Wirkmann (*Boston Medical and Surgical Journal*, December 20th) [illegible] a source of danger to pipe-smoking which is [illegible] known and of which habitual smokers should take note. It is a danger to which only smokers of pipes are exposed and even these are exempt provided they always use the same pipe and are moderately careful to clean it from time to time. The danger exists where the smoker possesses a series of pipes which he uses in turn, for if without previously cleaning it he resumes the use of a pipe which he has let alone for several weeks, and in which the tobacco juice has become completely dried, he may imbibe a sufficient dose of the poison to cause vertigo accompanied by nausea, sometimes with diarrhoea, cold sweats, palpitation, headache, and, above all, by a sense of burning and dryness in the mouth and throat. Such symptoms, Dr. Wikulill says, may suggest at first sight gastritis following poisoning by ptomaines; but if the patient possesses a collection of pipes it is worth asking whether shortly before the appearance of these symptoms he had not changed his pipe and how long it had remained out of use.

"The Weakness of the 'Strong Man.'"

Dr. W. Smith (Gateshead-on-Tyne) writes: I am pleased to see the article, "The Weakness of the 'Strong Man,'" on page 402 of the British Medical Journal of February 16th. Some time ago I wrote to you on this subject (physical training), and pointed out what I considered to be its bad effects. Of course, my letter was principally theory, but Staff Surgeon Gaskell more than bears out my theory. This practical experience might be a strong warning of how not to carry out physical training. I quite agree with him that a British system of physical training might be devised that would outstrip all others.

Post-partum Haemorrhage.

Dr. Dabbs (London, E.C.) writes: My father, who was surgeon to the English Legion in the first Carlist war, told me that the treatment among the gipsies of Northern Spain for *post-partum* haemorrhage was to rely upon an emetic. He was, further, so impressed by the efficacy of this treatment that he always adopted it as one means of procedure in his subsequent and considerable English practice. I suppose the phrase "a sick labour a safe labour," which one has often heard, is a verbal contribution to the observation of a century or so as to a similar and oft-recurring experience. I believe I am right in saying that in some of the very old volumes of authors who wrote on the obstetric art a similar treatment has been commended and recommended. I hope that before this very interesting correspondence ceases we may be privileged to hear the opinions of some practitioners as to their view of how to *prevent* true *post-partum* haemorrhage.

A Remedy for Hospital Abuse.

Dr. J. Inglis Parsons (London, W.) writes, in answer to Dr. Alexander Duke's letter (British Medical Journal, February 2nd, p. 296): I do not see out-patients, nor have I done so for many years. Whatever steps are taken to prevent hospital abuse, the means adopted by the Association must be applied to *all* hospitals, without distinction.

An Inappropriate Quotation.

Among things that on reflection one would rather have expressed otherwise, a high place must be accorded to a quotation used (we learn from the *Medical Record*) by a well-known preacher of New York. He was appealing to the people to repose in their pastors the same degree of trust with which they followed the advice of their lawyers and their doctors. "If," he is reported to have said, "you get a prescription from your doctor, you take the medicine trustfully," adding—

> Yours not to reason why,
> *Yours but to do and die!*

We have no doubt the clerical orator meant well, but we think it likely that in cold blood he would not himself regard his paraphrase of Tennyson felicitous.

"A Cure for the Tobacco Habit."

In a paragraph which appeared under this heading in the British Medical Journal of February 23rd, p. 462, it was stated that a Russian physician had suggested rinsing out the mouth with a 25 per cent. solution of silver nitrate after smoking. The dose should have been given as 0·25, that is, ¼ per cent. While regretting the obvious error, we may be allowed to point out that it illustrates a disadvantage of the decimal notation, in which the accidental omission of a point may make an extremely serious difference in dosage.

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Post-Office orders should be made payable to the British Medical Association at the General Post Office, London. Small amounts may be paid in postage stamps.

It is against the rules of the Post Office to receive letters at *Public Offices* addressed either in initials or numbers.

A Clinical Lecture

ON A SERIES OF

FIVE CASES OF FRIEDREICH'S ATAXY OCCURRING IN TWO FAMILIES.

DELIVERED AT THE GENERAL INFIRMARY, LEEDS.

BY T. WARDROP GRIFFITH, M.D.ABERD., M.R.C.P.LOND.,

HONORARY PHYSICIAN TO THE INFIRMARY; PROFESSOR OF ANATOMY IN THE UNIVERSITY OF LEEDS.

AMONG the rarer diseases of the nervous system there are few more interesting or more striking in their symptoms than the hereditary form of ataxy which is usually designated Friedreich's ataxy after the distinguished physician who in 1861 first described the affection and gave us some information about its morbid anatomy.

The cases which I wish to bring to your notice have been under my observation for some time, and many of you have had the opportunity of seeing them in the wards during the last few days. Most of the symptoms lend themselves readily to demonstration, and I shall in the first place exhibit and describe the cases to you, and then make some general remarks arising from their consideration.

FIRST SERIES.

Case I.

Blanche S., aged 17½ years, was admitted complaining of complete inability to walk without assistance. The difficulty in walking began when she was about 12 years old. She says she used to stagger about as if she were intoxicated, and at first her parents considered she was affected with St. Vitus's dance. The disability has increased, and since January, 1906, she has spent most of her time in bed.

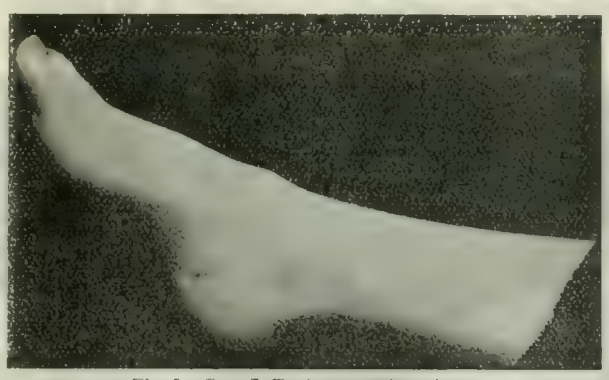


Fig. 1.—Case I. Foot in position of rest.

You observe that she is a girl of healthy aspect, though not robust, and the routine examination of the various organs of supply, of elaboration, of respiration, circulation and elimination shows that these are free from disease. The menstrual function is fully established and is normal.

When she is lying at rest there is a slight tendency to inversion of the right foot, with some degree of plantar flexion at the ankle-joints on both sides. This is, of course, the attitude of rest in the normal foot of any one lying in the supine position; and to the inversion and the slight extension of the foot alone I attach no importance. You will notice, however, that the arch of the foot is decidedly accentuated, the foot appears shortened, and there is dorsal flexion of the metatarso-phalangeal articulations and plantar flexion of the interphalangeal joints (Fig. 1). The abnormal position of these joints can be rectified by a little pressure, but dorsal flexion of the ankle-joint cannot in this way be carried beyond the position in which the foot is at right angles to the leg, and some time before the amount of force necessary to effect this degree of flexion is employed, the muscles on the back of the leg appear to me to become unduly hard. Indeed, when the legs are at rest, the muscles of the calf are, I think, firmer than usual for a girl of the physical development of our patient, for though there is no wasting the muscular development is below rather than above the average. This limitation of dorsal flexion of the ankle-joint is, I think, important, and I shall have to call your attention to it in two of the other cases. The knee-jerk you observe cannot be elicited, but the vastus internus responds to a direct blow by a momentary contraction. Ankle-clonus which, of course, is an abnormal phenomenon, is not present, and the plantar reflex though sometimes ill-marked, is of the extensor type first described by Babinski in 1898. The movement is carried out deliberately and the altered position of the great toe remains for some seconds, so that without using very rapid plates we have been able to preserve a photograph of it. (See Figs. 1 and 2.) There is some static ataxia in the lower limb and when she raises one leg from the bed it sways about in an irregular manner, sometimes, as one can see from her expression of amused surprise, in a manner totally unexpected by her. There is no hypotonicity of the muscles as there often is in true tabes, and considerable flexion of the hip-joint can only be effected when the knee-joint is bent at the same time. There is some inco-ordination in the movements of the hands and arms. She can thread a needle, but does so slowly and with difficulty. She can sew like a learner and writes with considerable difficulty. There is some tremor, especially developed when she tries to approximate the forefingers of her two hands; and when with her eyes shut she tries to touch her nose she usually misses it by about an inch or more. There is no tremor of the tongue, and no abnormal movements of the face or neck. Muscular power generally is fair. The sphincters are normal. Her speech is slow and slurring. There is nystagmus, which in her case is always lateral, and usually elicited by getting her to move her eyes from side to side, but of late this lateral nystagmus has been very noticeable when she suddenly brings her eyes to bear on any object straight in front of her. The pupils are normal in size and contract to light, and with active accommodation. The fundus of the eye is normal and the sight good.

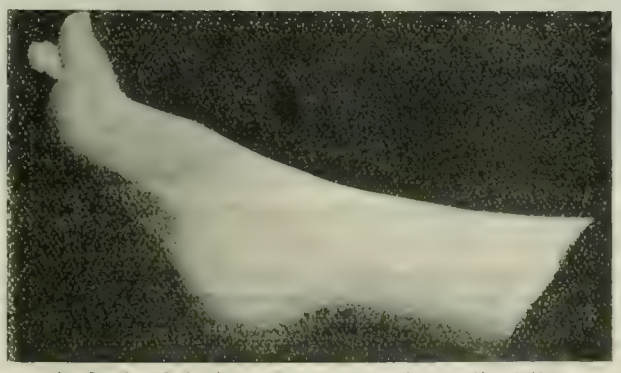


Fig. 2.—Case I. Position of great toe on plantar stimulation.

The position in which the nurse has now placed her—sitting on a chair with her back directed towards you—shows that she is the subject of a mild degree of spinal curvature. The general weakness of the spinal muscles causes her to lean forward, and so there is a certain amount of increase of the normal dorsal and lessening of the normal lumbar curve; but, in addition, you will note a lateral curve beginning about the sixth cervical vertebra, attaining its maximum deviation to the right at the level of the fourth dorsal, and extending as far down as the lowest part of the dorsal region. So far as we can make out there is no compensatory curve either in the cervical or lumbar regions. This curvature of the spine was detected by her mother about four years ago. She requires, as you see, a great deal of assistance from the nurse when she attempts to walk, and it is clear that she would fall at once if this assistance were withdrawn, but you will agree with me that the movements of her legs in this greatly assisted locomotion are distinctly ataxic.

Case II.

The next patient is Lilian S., sister of Blanche. She is 10½ years old, and until two years ago she had always been strong and healthy, but about this time she was found to be getting thinner, and not walking so well.

She was unsteady in her gait, and it was noticed that she was especially bad at getting up and down stairs. The condition was recognized by the parents as being of the same nature as that existing in the case of the elder sister.

She is, as you see, a sharp, intelligent little girl. She is in the fourth standard, and says that most of the children in the class at school are older than herself. She is very cheerful, and says she can play on equal terms with her companions, but herein she is unduly optimistic, for her father says this is not the case. Her feet are, as you see, thin and rather elegantly formed. There may be some increase in the arch, but there is not any shortening of the foot, nor any undue flexion of the metatarso-phalangeal joint of the great toe. When she stands and rests the weight of her body almost entirely on one foot the arch flattens out unduly. Dorsal flexion of the ankle-joint can be carried beyond the right angle, and there is little or no limitation in this respect. The knee-jerks are gone. Babinski's sign is present but is not well marked. The back is straight. The pupils and the fundi of the eyes are normal and speech is natural. You will notice that her gait on walking is unsteady, and that when she runs across the area of the theatre the unsteadiness is especially marked. She turns badly and staggers when she does so, and the slight unsteadiness noticed when she is standing at rest is a little increased when she shuts her eyes. We now place the girl on her back on the floor, and I particularly wish you to notice how she gets up, as I shall have to comment on a peculiarity in this respect in the case of two of the remaining patients. You observe she gets up slowly, but without turning round on to her face. She gives a slight push on her knees when she is straightening these joints, but we find that there is not any distinct weakness of the quadriceps extensor, as she can raise herself from the crouching posture without using her hands to supplement the action of that muscular mass.

In spite of the absence of distinct pes cavus, of scoliosis, of nystagmus, or of speech disorder, the diagnosis of Friedreich's ataxy might, even if the case were isolated be ventured upon from the combination of slight ataxia with some weakness of the muscles, from the absence of the knee jerk, and the presence of the extensor toe reflex. The diagnosis, however, in the case of the patient's elder sister rests upon such certain data that we can with greater indeed, with perfect—confidence commit ourselves to the view that here also we have to do with a case of hereditary ataxia.

The father of these two girls is 45 years of age, is in excellent health, and does not present any signs of the disease. His back is straight, his feet well formed, and his knee-jerks present. The mother I have not seen; she is said to be neurotic and to suffer from dyspepsia. There are four children. Our two patients are the eldest and the youngest, the second is a boy of 16, and the third a girl of 14. I have not seen either of these two children, but Dr. Horsfall of Bedale has kindly visited them at their home and examined them for me, and it is clear that they are both free from the disease. The maternal grandparents were healthy, and, so far as is known, there has not been any similar disease in any of the mother's relations. The paternal grandmother died of dropsy at the age of 60, but nothing is known of the paternal grandfather.

SECOND SERIES.

Case III.

We now pass to our second series of cases. These occur in a family of the name of T., and the patient I show you is one of three who present the signs of the disease in a characteristic form. I may on some subsequent occasion have the opportunity of demonstrating the other two cases to you.



FIG. 1. Case III. Stereoscopic view of the spinal curvature. (See note at end of paper.)

The patient, J. T., who is 29 years of age, is the second of a family of thirteen, and has been under my observation since September, 1902. From his parents I learn that he was an unusually fine child, well developed, muscular and athletic, and in their opinion the finest child of their large family. The symptoms have developed gradually, and were first noticed about ten years ago. At that time there was tremor on prehension; "his eyes," as his father said, "did not seem to guide his hand," and he finished up the act with a sudden clumsy grasp. This symptom seems to have impressed his parents a good deal, and was observed by them for some time before any alteration of gait. About eight and a half years ago the patient became conscious that he was walking clumsily; he "thumped with his heels, but it was not for two or three years subsequent to this that his gait could be described as in any way staggering, and this staggering was worse in the dark. His speech was affected slightly when I saw him in September, 1902, though he was not aware of it himself.

The curvature of the spine has been noticed for about five years. The condition of pes cavus which has been noticed by the parents was, they are quite confident, not present during childhood. During the last six months there has been occasional slight incontinence of urine. His parents are of opinion that since he gave over work the symptoms have developed with greater rapidity.

You will observe that the patient, whom I present stripped before you, is a man of healthy aspect. You will not fail to observe that when he is sitting, irregular shaky movements of the head are constantly present, and when he stands these movements extend to many of the other muscles of the body; the tendons on the dorsa of the feet are continually in jerky action, and he seems to be, as it were, grasping the ground with his feet. Even when he plants himself in the position of greatest stability, which is with his feet well apart and his shoulders thrown back, there is some swaying, and this is increased when he looks up to the ceiling, and still more so when he shuts his eyes. Romberg's symptom is therefore present, but not in a marked form. There is very great difficulty in walking. You see I hardly dare leave him to himself, and that even his assisted gait is unsteady and ataxic. The "thumping with the heel" is not now apparent; he puts his foot down almost flat, but there is a tendency for the whole of the outer margin to reach the ground first. His condition in 1902 in respect of these symptoms is described in my notes as follows:

When patient stands there is slight coarse tremor of all the muscles of the body, he sways markedly when he shuts his eyes, he cannot walk well along a line on the floor, nor can he turn promptly without staggering.

The spinal curvature is very marked (Fig. 3, stereoscopic). In the lumbar and lower dorsal regions, as you see, the convexity of the curve is directed towards the right, in the mid-dorsal region to the left, and in the extreme upper dorsal and lower cervical regions again to the right. If I again get him to assume his position of greatest stability in the erect posture, and drop a vertical from the most prominent part of the left scapula you see that it clears the buttock by about 3 in. and the heel by about 1½ in. I am aware, of course, that we cannot set up any absolutely normal standard for comparison in this respect, for the relationship of such a line to the buttock and heel varies considerably in well-built men, and even from time to time in the same individual. We now test the movements of his upper limbs by asking him to approximate the tips of his two forefingers and keep them about ¼ in. apart. He has difficulty in doing this; the action is slow and uncertain, and there is necessity for constant readjustment to keep the fingers in anything like the position directed. His attempts to touch the tip of his nose with one forefinger, or to bring his two forefingers in contact when his eyes are shut—actions which normally can be carried out with surprising accuracy—meet with signal failure, and in either case he may miss the mark by a couple of inches. There is much uncertainty of movement in pouring water from one vessel into another. He cannot tie a bow deftly. When asked to sign his name, it takes him some time to fix the pencil in the position he desires, the act of writing is slow and laborious, for he requires three-quarters of a minute to trace the characters on the paper, and the result, though legible, shows some slight tremor.

If we now place him on the sofa, we find, on the application of the usual tests, that there is some slight weakness and a certain amount of inco-ordination of movement in the lower limbs. His power of raising the limbs against resistance is lessened, and movements of the legs, especially when his eyes are shut, are carried out with lack of precision. There is, for instance, an undue and unnecessary elevation of one leg when he is requested to cross the limbs. The knee-jerks cannot be elicited, but idiomuscular contractility in the vastus internus is readily demonstrated by tapping the muscle. The appearance of the feet is very striking (Fig. 4, stereoscopic). There is a slight degree of inversion in each case, the whole foot appears shortened, and the antero-posterior arch is increased. There is marked dorsal flexion of the metatarso-phalangeal joints with plantar flexion of all the interphalangeal, and the tendons on the dorsum of the foot are prominent, especially those of the extensor longus hallucis. You see that I cannot flex the ankle beyond the position in which the foot is at right angles with the leg, and, as in our first patient, when the joint is put in this position, the muscles of the calf are unduly firm. Even when the limb is at rest, it appears to me that there is a degree of firmness or hardness in the muscles of the calf which is not usual. The plantar reflex is of the extensor variety, the movement being well-marked and slowly carried out.

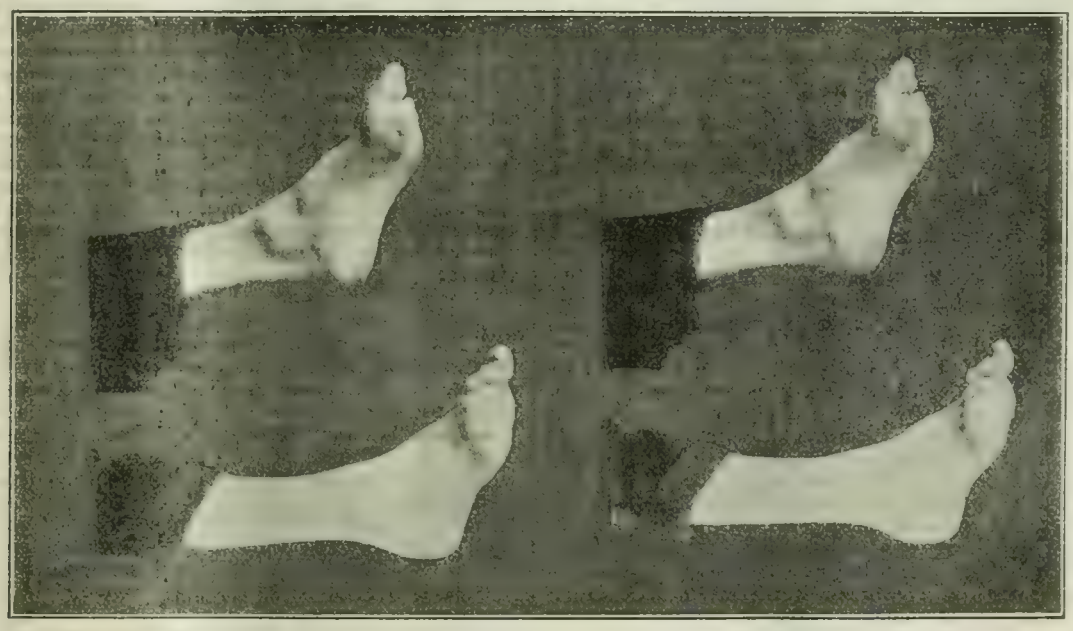


Fig. 4.—Case III. Stereoscopic view of the deformity of the feet. (See note at end of paper.)

I now call your attention to his movements when he is directed to lie down on the floor and then to get up to the standing position. Now that he has done this, I trust that most of you have been reminded of the efforts of patients affected with pseudo-hypertrophic muscular palsy, but I am also not without hope that some of you may have noticed and appreciated certain minor differences. As what he does now may in a small measure be

the result of that unavoidable education of hospital patients which results from a frequent examination into special symptoms, I cannot do better than read the account I dictated to my clinical clerk the first time I examined him in this manner in the wards:

When asked to lie on the ground he had considerable difficulty in getting down, and evidently was afraid of an unduly sudden descent. In getting up from the supine position he first raised himself to a sitting posture, with his knees bent and his extended arms on the floor behind him. From this attitude he was unable to get up any further. He was asked to try again, and without any suggestion being made he turned round on to his knees and hands, then extended his knees one after the other so that he rested upon the anterior part of his feet and his hands, and raised himself rather in the manner of a child with pseudo-hypertrophic muscular palsy, but with the following differences: his head was not bent down, nor was the trunk thrown forward so as to bring the centre of gravity more over the arms than over the legs; his knees were not completely extended as occurs in Duchenne's palsy, and he was able to complete his getting up without resting his hands upon his knees, although he appreciated the advantages of taking this assistance when it was pointed out to him.

At the time this was dictated I demonstrated to my class that the pectoralis major was well developed, and especially that there was no wasting of its sternal portion—a condition which is remarkably constant in pseudo-hypertrophic muscular palsy.

There is slight lateral nystagmus when the eyes are directed to one side. This is not constant, and is not so marked as in our first patient. The pupils are equal and circular and they react to light and with accommodation. The ophthalmoscopic appearances are normal and the sight is good. His speech is much the same as when I saw him four years ago. It is not staccato, but slow and slurring, and some words, such as "artillery," are pronounced with difficulty. Sensation is unaffected, and there have been no shooting pains nor visceral crises.

The family history in this case is very interesting. The parents are Westmorland folk, have both enjoyed excellent health, and until coming to Leeds some sixteen years ago have lived much in the open air. The stock is prolific on both sides, for the father is one of a family of ten, and the mother, who is a twin, is the youngest of eleven. They have had thirteen children, all of whom are alive and vary in age from 30 to 5 years. I have examined all the thirteen members of the family and the two parents, noting in each case the condition of the knee-jerk, the presence or absence of nystagmus on lateral movement, the contour of the spine and the shape of the feet, the condition of the pupils and their response to light and accommodation. Both the parents and eight of the children passed through these tests with a clean record; three were found to present marked signs of the affection, one of these being the patient you have just seen, and two girls were found to have no knee-jerks. I shall now read to you abstracts of my notes in the cases of the remaining four of these five members of the family.

Case IV.

Mary E. T., aged 27, the third member of the family, was examined by me in August, 1906. When about 17 or 18 years of age she was carrying some plates, and, in consequence she thinks of feeling giddy, she let them all fall to the ground. Next day her mother noticed tremulous movements, which after discussion with her neighbours she attributed to St. Vitus's dance. The onset was therefore sudden, but she has got steadily worse since then. Her previous health had been good, and menstruation was fully established and normal. Subsequently she had chlorosis and partial amenorrhœa, and she is said to have had ulceration of the stomach three years ago, though there was no hæmatemesis. She has worked as a presser since she was 16 years of age, and has stuck bravely to her work till the present time, saying she is better when she is actively employed and earning full wages on piecework. She is now amœnnic, and menstruation is scanty but regular. She walks with a staggering gait, and sways markedly on turning round, or when, if standing, she closes her eyes. She is especially bad at going up and down stairs, but says that, if she can get hold of the banister or even of the hand of a child so small that no physical support can be given, she can go up and down with ease and with a feeling of security. The only way she can get up from the lying posture is by following the method adopted by those the subject of pseudo-hypertrophic muscular palsy, or by laying hold of some support, such as a table, but she can raise herself from sitting on a chair 15 in. high without supplementing the action of the quadriceps extensor muscles by pressure on the knees. It is to be noted that the pectoral muscles are well developed, and that their lower parts do not present any signs of wasting. She can assume and raise herself from the crouching attitude without the use of her hands if she is careful not to go down too far. She writes laboriously and slowly, but says that she has not had much practice, and that she was backward at school. There is some static ataxia to be elicited by the ordinary tests. She cannot approximate her fingers with accuracy when the eyes are shut. She says she can use her hands fairly well, but cannot carry anything steadily. Her father never sees her about to take the kettle off the fire without getting well out of the way, as she has a tendency to jerk it off suddenly, to the danger of onlookers. There is not much tremor of the hands when they are held out. There is well-marked curvature of the spine in the upper and mid-dorsal region, with a throwing-back of the shoulders, especially of the right, so that a vertical line dropped from the most prominent part falls 3 in. behind the buttock. The knee-jerks are absent. Idiomuscular contractility in the vastus internus is present, as in health. The feet are ill-formed, the left being the more so. The arch is increased, the metatarso-phalangeal joints are hyperextended, and the remaining joints of the toes flexed. Dorsal flexion of the ankle is limited, and the muscles of the calf become, in my opinion, unduly firm on moderate attempts at passive movements in this direction. The plantar reflex is of the extensor type, and here also, as in Case I, we have been able to preserve a photographic record showing its character (Figs. 5 and 6). The speech is markedly slow and slurring—a peculiarity that has been noticed for two years. The pupils are normal; there is very slight nystagmus on looking upwards. There are no paraesthesiae nor shooting pains; no alteration of tactile sensibility; no visceral symptoms nor crises.

Case V.

William T., aged 18, the seventh member of the family, was first noticed to have an affection of the gait about two years ago. The unsteadiness has never attained to the degree present in the case of his brother or sister, but is of the same character. During the last six months he has been conscious of the peculiarity, and says it is always worse when he thinks any one is looking at him. He has had a slight stoop for about twelve months, and on examination his shoulders are found to be rounded and thrown back, so that a vertical line dropped from the most prominent part of the scapula clears the buttock by about 3 in., and the heel by about 1 in. There is some lordosis in the lumbar region, which is lessened but not abolished by his sitting down. Some lateral curvature also exists, the convexity being directed to the left in the lower cervical and upper dorsal regions, and to the right in the lumbar region. The chest is ill-formed, the lower end of the sternum being prominent. The significance of these spinal changes is partially lessened by the fact that he has suffered from adenoids, for which he was operated on about six years ago, though not, it would appear, with permanent improvement, for the voice is still somewhat nasal in character. There is also some slurring of the words on speaking. There are some irregular, jerky movements of the head, and the movements of the hands are uncertain, especially when he shuts his eyes. There is no static ataxia. The feet are normal in every respect. He can flex his ankle-joint easily beyond the right angle. The knee-jerks are absent, but idiomuscular contractility persists in the vastus internus. The plantar reflex is ill-marked, but is extensor in character. The pupils are normal and there is not any nystagmus. When he is directed to get up from the lying position, he raises himself easily to the sitting posture, turns round on to his hands and one or both knees, and then gets up somewhat in the same manner as his brother. He can, however, when asked to do so, complete the act of getting up, when he has got as far as the sitting posture, by drawing one or both legs below him and giving a push on the ground with one or both hands as most young people of ordinary activity would naturally do, but the difficulty is considerable, and there is much uncertainty and staggering. He

is strongly of opinion that the more exercise he takes the better he is. He tells me he walked sixteen miles without fatigue the other day and was not at all tired, and he contrasted the suppleness of his limbs after the exercise with the stiffness which he always notices after forced inactivity.

My notes on the two little girls who are found to have absence of the knee-jerks are as follows:

1. Jane Ellen T., aged 10, the eleventh member of the family, is a bright intelligent girl, whose general health and vigour are of the best. It is questionable if the right scapula is higher than the left. The plantar reflex is flexor in character. There is no knee-jerk, but idio-muscular contractility is present in the vastus internus as in health.

2. Alice T., aged 8, the twelfth member of the family. Back quite straight. Plantar reflex flexor in type. Knee-jerk absent; idio-muscular contractility in vastus internus normal.

In the case of these two little girls, every care was taken in trying to obtain the knee-jerk. Jendrazzig's intensifying method was employed, and the series of observations was repeated at the end of a fortnight, with results which again were negative. It has been noted that members of a family of which some are affected with Friedreich's ataxy may be found to have absence of the knee-jerk without the presence of any other indication of the disease, and I shall certainly keep these two children under my very special observation, lest the absence of the knee-jerk should prove to be an early indication of the fully-developed affection.

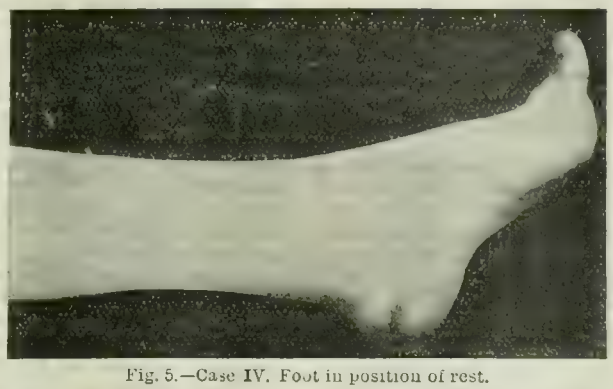


Fig. 5.—Case IV. Foot in position of rest.

In the second family, therefore, we have two members, John and Mary, in each of whom the diagnosis could be readily and certainly made without reference to the other. In the case of William, the normal appearance of the feet, the absence of nystagmus, and the contributing factor to the existence of spinal curvature afforded by the presence of adenoids, might make one hesitate if the case were an isolated one, but as the matter stands there can, of course, be no doubt.



Fig. 6.—Case IV. Position of great toe on plantar stimulation.

Morbid Anatomy.

Before discussing with you the differential diagnosis of this remarkable affection, I should like briefly to refer to the morbid anatomical changes which have been found in those who are the subjects of it. These consist of sclerosis or degeneration in certain regions of the spinal cord, together with changes elsewhere which are less constant and probably less important. Now these terms "sclerosis" and "degeneration" are constantly being used when diseases of the nervous system are under discussion, and you are familiar with them in connexion with locomotor ataxia, spastic paraplegia, and the later stages of hemiplegia. You also know that opinions differ as to the primary seat of the changes, whether it is in the nerve fibrils, in the neuroglia, or in the connective and vascular tissues, and no less as to the nature of these changes—whether they are inflammatory, toxic, or purely degenerative, or in different cases due to various causes or combinations of causes. In Friedreich's ataxy the changes are probably of purely degenerative character or due to certain imperfections of development. Their distribution will best be appreciated if I refer to the more familiar appearances found in ordinary tabes or locomotor ataxia, in idiopathic lateral sclerosis, and in that form of combined sclerosis which is met with in cases of ataxic paraplegia. In true tabes the essential lesion is in the peripheral sensory neurons, which have their cell bodies in the ganglia of the posterior nerve roots, their cellulipetal processes (dendrons and dendrites) forming the afferent fibres of the peripheral nerves, and their cellulifugal processes (axons) forming the posterior, afferent, or entering roots of the spinal nerves. These latter pass upwards at first in the column of Burdach or zone of the posterior nerve roots, but each bundle is pushed inwards by the nerve which enters immediately above, so that at any particular level of the cord the inner fibres seen in a transverse section of the posterior column come from lower nerve roots than the outer. Now, the most striking change in the cord in tabes is a degeneration of the posterior column. In the lower part this affects mostly the outer part and the adjacent tract of Lissauer; higher up the degeneration is found chiefly in the middle portion, and higher still mainly, if not entirely, in the inner part close to the posterior median fissure. It is true that in some severe cases the degeneration may be found both in the outer, middle, and inner parts of the column at the same level especially in the lumbar region, but unless a great many nerve roots are affected this cannot be the case, and the changes will be found as above described.

In idiopathic lateral sclerosis, which is the lesion found in a certain number of cases of spastic paraplegia, there is degeneration of the motor tract in the lateral column of the cord. Sometimes the direct pyramidal tract is affected as well, and it indeed rarely happens that the lesion is strictly limited to these two tracts alone.

In cases of ataxic paraplegia we get a combination of these two sets of changes—a combined posterior and lateral sclerosis; but the changes in the posterior columns are less marked in the lumbar part of the cord than in the dorsal, and they do not especially affect the column of Burdach as they do in tabes, nor are the posterior nerve roots commonly involved; and there is even less tendency for the degeneration of the other parts of the cord to limit itself to the pyramidal tract than there is in idiopathic lateral sclerosis. In Friedreich's disease we have also a combined posterior and lateral sclerosis, but the sclerosis of the posterior column is much more of the tabetic type in its distribution, though the lesion is usually more extensive in the cervical region than in true tabes, and there is a greater tendency to involvement of the posterior nerve roots than in ataxic paraplegia, though the peripheral nerves are less affected than they are in true tabes.

Differential Diagnosis.

Friedreich's ataxy in some of its symptoms presents resemblances to several other affections. Thus it resembles true tabes in the presence of ataxy and in the absence of the knee-jerk. The ataxy, it is true, is not usually so great, but it may also be slight in true tabes, and we must not be unmindful of the pre-ataxic stage of this affection. The coexistence of actual muscular weakness, the presence of nystagmus and of speech defects, the curvature of the spine, the deformity of the feet, and the extensor character of the plantar reflex would all be positive signs in favour of the case being one of Friedreich's ataxy. The tendency for the disease to affect several members of the same family, the early age of onset,

the absence of shooting pains or profound sensory phenomena, of visceral crises and trophic lesions, and the comparative immunity of the sphincters would all tell in the same direction, as would also the absence of optic nerve atrophy and of the Argyll-Robertson pupil, which latter is said always to be a syphilitic manifestation, and no one has ever traced any connexion between Friedreich's ataxy and syphilis.

The mention of syphilis leads me to say it has been pointed out that the form of true tabes which raises a real difficulty in the diagnosis of Friedreich's ataxy is that which occurs in young people as the result of a congenital syphilitic taint, for in these there may be weakness of the muscles combined with the ataxia, and there may be some speech defect. The general aspect of the patient if indicative of congenital syphilis, the presence of Hutchinson's pegged teeth in those who have attained to the time of the second dentition, the condition of the corneae if indicative of former diffuse inflammation, and above all the presence of reflex iridoplegia, would lead us to diagnose true tabes.

There is a form of hereditary ataxia associated with a congenital defect in the cerebellum, and described by Marie, which tends to affect several members of the same family, but in this the gait is reeling rather than ataxic, the deep reflexes are increased, the Argyll-Robertson pupil is sometimes present, there is frequently optic atrophy, and the affection usually comes on earlier in life. When, however, we consider that occasionally retention or even exaggeration of the knee-jerk has been noted in cases conforming in other respects to Friedreich's type of the disease, and that in this condition also atrophic changes have been noted in the cerebellum, we must feel that a sharp distinction between the two conditions is either a matter for future elucidation or does not in truth exist.

Dr. Trevelyan has called my attention to the fact that at a meeting of the Neurological Society held on July 14th, Dr. James Taylor exhibited a patient presenting the cardinal features of Friedreich's ataxy, who was also the subject of double optic atrophy. If cases of this kind should occur with sufficient frequency definitely to put the explanation of mere coincidence on one side we shall have to attach less importance to the presence or absence of optic atrophy as a sign of diagnostic value in doubtful cases.

Gross disease, such as tumour of the cerebellum, may be associated with ataxy and absence of the knee-jerk, but the presence of pain, vomiting, and optic neuritis, as well as the reeling character of the gait, would probably prevent its being confounded either with true tabes or with the hereditary form.

In ataxic paraplegia there is, as in Friedreich's disease, a combination of ataxia with weakness, and the plantar reflex is of the extensor character, but the knee-jerk is increased and there may be ankle clonus; there is no tendency for the disease to affect several members of the same family, and it usually begins at a later age.

I have under my care in No. 1 ward at the present time a female patient with well-marked signs of disseminated sclerosis. In her case the early symptoms were, as they frequently are, those of spastic paraplegia, and at no time has there been any resemblance to Friedreich's ataxy, but there is inco-ordination, nystagmus, speech defect, and the extensor variety of plantar reflex, and in the absence of marked spasticity such a combination must always raise the possibility of a case being one of Friedreich's ataxy. The tremor is, however, usually more irregular and bizarre, the speech is staccato rather than slurring; early and transient diplopia is common, and there is a great tendency to the occurrence of optic atrophy. On the other hand, the characteristic deformities are not present.

The superficial resemblance of this affection of certain cases of chorea especially if muscular weakness and absence of the knee-jerk exists from the use of arsenical treatment, could not, I think, deceive any one exercising ordinary care, though I may remind you that two of our patients were thought by their parents to be the subjects of St. Vitus's dance.

In presenting my cases with you I have called attention to an undue hardness of the muscles of the calf in some of them and have shown you that in these particular patients the limit of dorsal flexion of the ankle joint is soon reached, and that there is some tendency to a drawing up of the heel when this is not counteracted by the weight of the body. Were I, as an isolated but I admit highly prejudicing demonstration of the patients, John T. or Mary Eliz. T., to call your attention to these points and then direct them to get up from the lying posture, you would at once admit that pseudo-hypertrophic muscular palsy must be added to the number of diseases from which Friedreich's ataxy may have to be distinguished. The resemblance is at best but a superficial one, and additional distinctions to those I have mentioned earlier will be found in the character of the spinal and foot deformities, in the nystagmus and speech defects, in the absence of any wasting of the lower part of the pectoralis major, and in the plantar reflex being of the extensor variety.

Friedreich's ataxy is a family disease, and in this respect it resembles pseudo-hypertrophic muscular palsy and the other muscular dystrophies, cerebellar ataxy of the family type, and that form of lateral sclerosis which occurs in members of the same family, and of which I had the opportunity of showing you two examples some twelve months ago. Its essential nature is shrouded by an obscurity as great as that which envelops these other affections, and of its actual causation we know as little as we do of theirs. Imperfect development of those parts of the nervous system which are affected is accepted by some as the explanation, but others regard their premature decay as the essential factor. Both theories remind one of Professor Osler's expression, when he is trying to account for the incidence of premature arterio-sclerosis in certain families, that "in the make-up of the machine bad material was used for the tubing." If the explanation is of this character, you will not be surprised that treatment should prove quite ineffectual. Beyond encouraging the patient to take exercise and continue his work, employing massage and passive movement, and using measures to maintain a high standard of general health and ward off complications, we are powerless to do anything to check its progress, which, however, may be very slow.

Note.

To obtain the full stereoscopic effect of Figs. 3 and 4 they must be viewed through a stereoscope, or, if the observer possesses the power of obtaining stereoscopic vision by altering the axes of his eyes, superposition must be obtained by relative *divergence* and not by *convergence* of the eyes.

An Address

ON

THE TREATMENT OF INCIPIENT AND BORDERLAND CASES OF INSANITY IN GENERAL PRACTICE.

Delivered before the Sevenoaks and Tonbridge Division of the British Medical Association.

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The strenuous life to which in this latter-day civilization our race is subjected has brought into prominence as a sequel many states of mental unsoundness which are not definite insanities in the legal sense, but which demand none the less more than ordinary care in management and definite lines of treatment. For convenience sake I shall classify these under the three epochs—early life, adult life, and old age.

Forms Met with in Early Life.

The backward or Dement.

Parents blind themselves to anything abnormal in their offspring, and hence it is only when this abnormality is continued that the medical attendant is consulted. Head measurements may show the infant to be microcephalic and the skull ill-shapen. This condition was formerly attributed to premature closing of the sutures, an explanation no longer accepted. It is an original defect. Or there may be a tendency to hydrocephalus, with the transverse and antero-posterior diameters of the skull nearly equal, and the fontanelles raised and widely patent, or there may be simple congenital defect with no abnormality of skull,

but an animal expression—thick lips, pug nose, and small forehead—what we term a Mongolian type of face, having broad features and an upward slant of the outer arch of the eyebrows. The last-named class may be fairly educable.

Often, however, professional advice is only sought when the child fails to begin to talk at the proper age, or does not take interest in its environment. Little can be done in these early developmental failures. They represent states of amentia. The faculty of observation can be alone encouraged. It is generally, however, some time after education has commenced that advice is sought for backward children. You are told the lesson is not learnt, or if learnt is quickly forgotten, and has to be repeated the next day; that after a fair exhibition of intelligence for an hour or so, the child becomes suddenly irritable or dull and dense—apparently quite incapable of reception—and in consequence is far behind those of a similar age. The course of treatment is definite. The higher education (the Classics, German, French, and all but elementary mathematics) must be discarded once and for all. The powers of observation must be utilized as far as possible, and a special scheme of instruction adopted, such as is carried out by Drs. Beach, Shuttleworth, and Langdon Down in their establishments. Boys can be taught the handicrafts, girls the ordinary domestic duties and music, at which they often excel, while intellectual efforts must be restricted to that knowledge which is essential in life. Physical exercises, cycling, sports, and outdoor games should be encouraged with daily regularity; and constipation, which is often habitual in these cases, guarded against, for we must remember a sluggish circulation always accompanies a dull intellect.

The Epileptic.

Epilepsy is both an accompaniment and cause of mental unsoundness in the young. As you know, many imbeciles have fits in very early life. These cases are not improvable. In those cases, however, in which the fits occur before puberty, and have a definite cause, such as local irritation of teething, worms, etc., if the cause can be removed and the fits kept under by medicinal treatment, normal mental development may ensue. If epilepsy occurs with puberty, the previous mental state having been apparently normal, the outlook is not good. It is the outward expression of original defect. The fits are not easily controlled, and slow but certain progressive mental deterioration results. The boy, if at school, must be removed at once and educated privately with only two or three others. His hours of study must be limited. He must live as much as possible out of doors, and have abundance of exercise, and must not sleep alone at night. Many epileptics are borderland cases. In the intervals between the fits, apart from a little irritability, they are normal mentally, but shortly before or occasionally after the fits they are quite unreliable; they lie, take violent dislikes, are irritable, act impulsively and even criminally. Curiously enough, their minds often have a religious bent with moral deterioration. In some cases these symptoms of mental aberration replace the fits. What, then, is to be done with the youthful epileptic who is a borderland case and incipiently insane? He must lead a country life, with outdoor employment and exercise, and follow some handicraft in preference to brain work. For the lower classes the epileptic colony offers a suitable residence. The upper and middle classes can be treated as single patients under medical supervision in the country; or in twos, threes, or more, up to half a dozen, in villas. It must ever be remembered that the periods of mental unsoundness in the epileptic occur either before or after the fits, or when unsoundness replaces the fits in masked epilepsy. Youthful epileptics are much addicted to masturbation. For this they must be watched and corrected; cold baths in the morning, plenty of exercise during the day, a minimum of animal food, a hard mattress, and cool bed tend to overcome this moral defect.

The Nervous.

The children of neurotic, ill-balanced parents require careful management in the upbringing. Often we have on one or both sides in the parents a history of drink, epilepsy, paralysis, or insanity. The child is highly-strung, restless, excitable, thin, and delicate, with a weak digestion and tendency to diarrhoea and similar ailments. In these cases the educational strain must be carefully adjusted. Such patients are often very receptive and intelligent. They must have short lessons, reside or go to school preferably at the seaside, where the climate is bracing and they can get salt-water baths, etc., and they must have abundance of outdoor air and recreation, but no unnatural excitement. Chorea, hysteria, and such ailments often fall to their lot, and if overtaxed mentally they may ultimately become the victims of premature dementia.

The Moral Imbecile.

The child with this failing is the greatest anxiety to parents and medical practitioner. Many would say, "What is a moral imbecile?" I would define him as one with a morbid defect in the feelings, affections, inclinations, temper, habits and moral dispositions. Intellectually there is but little if any abnormality. The parents have not observed any backwardness in talking, early receptiveness, or any difficulty of education. But as he grows up it is noticed that his moral sense is defective. He is unkind to his brothers and sisters, cruel to animals, irritable and hasty in temper, sulks when corrected, and becomes sullen and morose; tends to associate with those beneath him in the social scale, tells lies, and does not fully grasp the difference between right and wrong. As he gets older he is addicted to petty thefts, which are often concealed with much cunning. When found out he does not appreciate the enormity of his offence, and exhibits no sense of shame. He cannot estimate the value of money, and is reckless and extravagant in his expenditure. He is often addicted to bad habits, sexual immorality, masturbation, and sexual perversion. This is especially a source of anxiety in the female, who loses her chastity and gets into trouble, thereby bringing disgrace upon her family. The more advanced cases swell the ranks of the criminal insane.

What, then, can be done with the moral imbecile? As soon as the defect is observed the boy or girl must be placed under strict discipline. They are ineligible for school life. They must be educated with at most one or two others, under a strong guiding hand, and made to feel, if possible, that wrong-doing has its quick punishment. Some country clergymen who have been schoolmasters deal well with these boys, and the girls can be treated in nunneries (Church of England or Roman Catholic). Some are capable of improvement; many are not. They are generally of strong frames and robust constitutions, so need abundance of physical exercise, and when grown up are qualified for employment demanding this.

The Incipient Melancholic and Maniacal.

Mania is very rare before puberty is fully established. Melancholia is rare also, but less so than mania. Mental unsoundness is, however, frequently associated with developing manhood and womanhood, especially in the upper and middle classes. Luxury, indolence, and defective education have much to do with this, which is the outcome of the unnatural life of modern civilization. The girl at home after leaving school leads a life of self-indulgence, has no definite occupation, and becomes self-centred and morbid. She has many imaginary ailments, lies in bed, eats too much, and takes too little exercise. Often she has acquired at school the vicious habit of self-abuse. Next she becomes very religious, and imagines she is unworthy, and has no part to fill in life. These delusions of unworthiness develop rapidly. She shuns society, seeks solitude in her bedroom, and becomes irritable, impulsive, and melancholic. Her manner has changed; she is abnormally shy and evasive, her complexion is muddy, her bowels are confined, and her menses irregular. The family medical attendant is consulted. What must he advise? In the first place he must at once be on his guard against accident. All these patients are liable to act impulsively and without warning. They may become impulsively violent, and suddenly attack those nearest and dearest. I have known one sister attempt to strangle another asleep in bed beside her. Frequently they attempt suicide by precipitation, drowning, hanging, strangulation, or otherwise, in consequence of their sense of unworthiness. Removal from home and change of surroundings are essential. They can be well treated as single cases, even without certification. A well-trained, certificated mental nurse to sleep in the same room, eight hours' rest, early rising, morning bath (cold or shower), a light

diet with but little animal food, regular exercise, plenty of cycling and outdoor games, free aperients, attention to the disordered menses (avoid iron, if possible), and pleasant and variable social surroundings, will generally ensure recovery. For medicines, if impulsively excited, the bromides and valerian; if much depressed, the morphine preparations, with sulphuric ether, should be given, and rest at night must be ensured by hypnotics. When mania occurs in the young there is generally some insane inheritance and definite exciting cause, such as sudden grief or shock, overstudy, and overwork generally. The mania is usually preceded by an incipient stage of depression. If this be recognized, the cause, if possible, removed, the liver and bowels acted freely upon, and sleep ensured at night by veronal, trional, or paraldehyde, the attack may be cut short in its initial stage. What I have said for females applies also for males. A sea voyage should never be recommended in cases of incipient or borderland melancholia; the risk of suicide by drowning is too great.

The Borderland Delusional.

Many hypochondriacal cases come under this heading. Hundreds of people with hallucinations and delusions are uncertified and lead fairly natural lives. They are classified as eccentrics, and can often conceal their mental defects from the unskilled. As long as their actions, the outcome of these delusions, are not of such a nature as to be a source of danger to themselves or others, the State does not interfere with them. I have noticed that the mental unsoundness associated with self-abuse in the young adolescent is often characterized by hallucinations of ordinary sensation. The men complain that they suffer from electric shocks down the spine, and that batteries are turned on them at night. The women say that they are annoyed by machines, of course meaning electric machines. For the borderland delusional case, correction of bad habits, employment, change of mode of life, scene and surroundings are the desiderata.

The Premature Dement.

These are the cases of so-called "dementia praecox," a most unfortunate term, and which we trust may soon disappear. Premature dementia depicts the mental decadence occurring between puberty and adolescence. It affects the better educated and highly strung. Amongst the poorer and agricultural classes it is comparatively rare. It is a disease of civilization in which the original nerve vitality of the individual is limited, and the powers of resistance prove unequal to the strain to which the brain is subjected before development is fully completed. The patient in early youth may have been exceptionally bright and clever, have passed difficult examinations, excelled in music and other ways, yet more or less suddenly and often without definite cause, breaks down and becomes demented. The predisposing cause I believe to be a neurotic inheritance in town dwellers where hyper-civilization obtains, and the exciting causes over-education, febrile disorders, influenza, and stress. If you suspect this disease from failure of memory, loss of attention or interest in environment, you must at once endeavour to remove as far as possible the causes indicated, give nervine tonics and ensure mental rest with change of scene and mode of life.

Forms Met with in Asylum Life.

Incipient Mania and Melancholia.

The early symptoms of mania and melancholia should be recognized and treated by the medical attendant in order to cut short the attack if possible, and to guard against accidents, violence, homicide, suicide and the like. The chief premonitory symptoms of mania are restlessness, incapability of concentrating the attention, loss of coherence in conversation, garrulity, irritability, loss of self-control, boastfulness and extravagance of ideas, change of feelings and affection, loss of moral tone, increased mental activity and insomnia. If to this condition is added an insane inheritance, the diagnosis is confirmed. Mania is often preceded by a short period of depression without febrile symptoms but with abnormal rapidity of pulse, faint breath, and a muddy complexion, white furred tongue and constipated bowels. It is unnecessary for me to detail the early symptoms of melancholia. I have already alluded to many of them under my Early Life section. Now what is to be done in cases of incipient mania and melancholia in adult life in the upper and middle ranks of society? First, the patient and those around him must be safeguarded. He must never be lost sight of. All sources of danger must be removed, such as razors, knives, glass and unnecessary furniture. He must, if possible, sleep at night and live by day on the ground floor. If that be not practicable, the lower sash of the window at least must be fastened by screws. The friends must be informed of his mental state, and early arrangements made for institution treatment should such be necessary. In early mania it is well to commence the medical treatment with a free aperient—calomel and colocynth or some other hydragogue. Pot. brom. ʒss, chloral hyd. gr. xv, syr. tolut. ʒj, aq. ʒj, three times a day, and veronal gr. viii to x or trional gr. xv to xx at night—a light dietary of eggs, fish, fowl and farinaceous foods, no stimulants, absolute freedom from excitement, and daily exercise for an hour or so morning and afternoon in a quiet garden. You are never justified in employing restraint by strait waistcoat or otherwise. The patient only frets under bodily restraint and struggles to exhaustion. Many a life has been lost thereby from cardiac failure. During thirty-three years of public asylum service I never saw a strait waistcoat. I have had patients brought for admission in them, but have always had the waistcoats removed before examination. They are an abomination! In incipient melancholia you must also clear out the bowels, but with enemata or saline aperients, not the mercurial preparations, for you must not add to the already disordered digestion. The stomach and mucous membranes generally require careful attention, and autointoxication must be guarded against. For medicines give liq. morph. acet. ɱxx to ɱxxv, sp. aether. sulph. ɱxv, aq. camph. ʒj, three times a day, to allay distress, and paraldehyde ʒss to ʒjss, or even ʒij, at night. A prolonged hot bath is good in mania, and a warm bath of short duration in melancholia before retiring to rest. In melancholia the outdoor exercise must be limited. More rest must be taken, and sun baths do good. The dietary also must be more liberal and contain red meats and stimulants. You must ever remember that the melancholic patient who most dreads injury at the hands of others, and who, in consequence, you would think least likely to commit suicide, is in reality most prone to self-destruction. He seeks relief by death at his own hands to escape the injury with which he believes he is threatened at the hands of others.

Borderland Delusional Insanity.

Delusions of persecution are common. Many refer to the nerves, viscera, and sexual organs. Many people with these delusions are harmless and can be treated at home. Others are highly dangerous and ought to be certified. How are you to distinguish these cases? Each case has to be judged on its merits. Where the delusion refers to a single individual, has no basis of existence, and is often repeated with threats of bodily harm, action must be taken or a criminal assault will undoubtedly ensue. These patients nurture their imaginary grievances for years, and can never be trusted. You must never try to argue a patient out of his delusions, for you will only irritate him. Let him talk; listen, and then change the conversation. These borderland delusional cases are always chronic. When the delusions are of the melancholic type, continued treatment by morphine and sulphuric ether with aperients will ameliorate and occasionally cure the disease.

Incipient General Paralysis of the Insane.

The early symptoms of this disease are change of feelings, affection, inclinations, temper, habits, and moral disposition in persons from 35 to 50 years of age—generally males (four fifths males and one fifth females). Then excitement or depression (the former much more common, but during recent years the latter has been observed with increasing frequency). Ordinarily we have restlessness (the patient is ever on the move), irritability, insomnia (he wakes very early in the morning), great sense of well-being, boastfulness, and self-assertion, extravagance of conduct, facile manner, loss of facial expression when the face is in repose, fibrillary tremors of tongue and facial muscles, blurred speech, often unequal or contracted pinhole pupils acting abnormally to light, some incoordination in motion increased rapidity of pulse, altered tendon reflexes, knee-jerks exaggerated or unequal, and

there is at times slight elevation of temperature at night. He now begins scattering his money broadcast, and has delusions of grandeur and importance with benevolence. The general paralytic will always give you freely of his imaginary fortune. What is to be done in these cases? Get the management of his affairs away from him as quickly as possible by power of attorney, or if necessary by application to the Masters in Lunacy, ascertain the cause (syphilis, sexual excess, drink, overwork, or injury), counteract same as far as can be done, treat syphilis with large doses of pot. iod., attend to the primae viae, allay excitement or distress, and safeguard against accident or public annoyance. Treat if possible in single care uncertified, or if imperative certified. These patients get into trouble with others owing to their self-assertion. Their bones also become very brittle from nutritive changes, therefore fractures and injuries are common when treated with others.

Borderland Alcoholic Insanity.

Of delirium tremens it is unnecessary to speak, save to caution you against accidents, and against giving the opium preparations in this disease. The bromides, with chloral, sulphonal, trional, or veronal, are the staple medicinal remedies. In incipient alcoholic insanity proper, the outcome of chronic abuse of stimulants, the patient is suspicious, restless, even sleepless, impulsive, untidy in person, with lack of moral tone, and he may have hallucinations of hearing and delusions more or less fixed. The muscular tremors, motor inco-ordination, slight ataxic symptoms, and neuritis, are distinctive features. The treatment is to remove the cause, build up the muscular and nervous systems, and divert the mind by change of scene and surroundings.

Associated Mental Unsoundness.

(1) Where mental symptoms occur with and underlie certain other diseases—syphilis, phthisis, rheumatism, heart disease, influenza, myxoedema, anaemia. Also (2) where associated with child-bearing (pregnancy, puerperal, and lactational), and change of life (climacteric). In (1) you must treat the coexisting disease. The mental symptoms are generally of the melancholic type, so safeguard the patient against suicide. In (2) during pregnancy we may have either mania or melancholia, generally the latter; these cases usually recover soon after childbirth. You may suspect and recognize true puerperal insanity coming on by change in the manner of the patient, aversion to husband or child, irritability, restlessness, sleeplessness, garrulity, suspiciousness; by her muddy complexion, clammy skin, haggard look, rapid, small pulse, slight elevation of temperature, especially at night, cessation of milk secretion, and diminished lochia. Then we get obscene language, erotic tendency, hallucinations, delusions often of poison, impulsiveness, tendency to suicide and infanticide. These cases are always difficult to treat at home, from lack of moral control and from the frequent necessity of artificial feeding. If home treatment be attempted, the patient must reside on the ground floor; there must be a competent staff of trained, certificated mental nurses, and outdoor exercise must be obtainable. In puerperal mania give trional, paraldehyde, sulphonal, and the bromides with chloral; a very liberal diet is also necessary. Climacteric insanity is generally insidious in onset and of the melancholic type. The treatment is by morphine with sulphuric ether, strychnine, iron, quinine, change of scene, salt-water baths, fresh air, and exercise carefully regulated.

Forms Met with in Old Age.

Incipient Senile Mania and Melancholia.

The expression, manner, and gait all reveal increasing years. Next the memory is at fault, especially for recent events, and tales are oft repeated. Irritability, excitability, restlessness, and mania may follow. These patients are especially noisy at night—or melancholia with rapid loss of flesh takes the place of excitement. These cases are better treated privately; they require skilled nursing, a liberal diet, stimulants, and suitable sedatives; the opium preparations are good. In some cases of mania the hydrobromate of hyoscine, veronal and trional, may be given.

Borderland Paralytic Insanity.

The mental symptoms here are of the emotional type, with failing memory, irritability, and occasional excitement or depression; at times, however, these cases are very troublesome and noisy, and such sedatives as veronal, trional, sulphonal, and paraldehyde must be resorted to at night.

Incipient Senile Dementia.

The early symptoms of the old man nearing his dotage are well known to you. You must safeguard his property by impressing upon him the necessity of attending to his testamentary duties and by his giving to his next of kin legal power to act for him, or by application to the Masters in Lunacy. You must also safeguard the patient against indecent exposure of the person and other acts, the outcome of forgetfulness or senile imbecility, and you must deprive him as far as possible of all individual action and manage him as in the days of childhood.

General Care and Treatment.

At last the State is recognizing its duty to protect the incipient and borderland insane in England. A Bill was introduced in the last Parliament and will be reintroduced shortly, containing clauses to regulate the care and treatment of the incipient insane, and to render necessary their notification and supervision without the stigma of official insanity. To be complete, any Bill must have provisions to ensure that all houses into which such patients are received are registered as suitable, and inspected by the Commissioners in Lunacy or their deputies as properly staffed and managed, and furthermore to ensure that all custodians of these patients are upon a register as properly qualified to receive, take care of, and, if medical men, to treat them.

There should be similar clauses for the chronic borderland insane. The voluntary boarder system existing for registered hospitals and licensed houses must be extended to county and borough asylums receiving paying patients, to be used for patients of this class. Thus additional means will be obtained for skilled treatment in the early stages of mental disease. Since contact with certified insane persons undoubtedly has a demoralizing and injurious effect upon many of the incipient insane, individual treatment in single care, uncertified, with all the surroundings and comforts of home, is much to be commended. The tendency very rightly is at the present time to this decentralization and segregation, and I believe the best results will be obtained thereby.

A CASE OF CEREBELLAR ABSCESS: EVACUATION: RECOVERY.

By LOUIS BATHE RAWLING, F.R.C.S.,
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Cerebral and cerebellar abscesses may give rise to such localizing symptoms that the diagnosis as to the site of the lesion is fairly obvious. Such definite symptoms are unfortunately often either conspicuous by their absence or fallacious as to their significance, whilst the general condition of the patient may be such that the main localizing symptoms are incapable of demonstration. An exact diagnosis as to the site of the abscess may therefore be impossible, and more than one operation may be needed before the desired result is arrived at. The following case exemplifies this statement:

H. C., male, aged 21, was admitted into the hospital on December 1st, 1905. For four months he had suffered from a purulent discharge from the left ear. Three weeks previous to admission pain was experienced in the ear, associated two weeks later with chronic frontal headache. During this period he complained also of feeling ill, of inability to fully close the left eye, and that the face was drawn over to the right side.

Condition on Admission.

A delicate youth. Complains of pain over the frontal region and in the left ear. Complete paralysis of the left facial nerve. Pupils equal and react. No nystagmus or paresis. Discs normal. Motor power, sensation, and reflexes all normal. Some slight unsteadiness of gait, and sways to the left side when standing with the eyes shut. Faculties unimpaired. All questions answered promptly and to the point. Temperature 101°, and pulse 80. During the next few days the temperature varied between 101° and 103°, but the pulse was relatively slow—80 to 90 to the minute. Optic neuritis first became evident on December 5th, developing rapidly, and showing 5 D. of swelling on December 8th. The papillitis was slightly more marked and more rapid in onset on the left side.

Palpation of the skull revealed no area of oedema or tenderness, and all localizing signs and symptoms were absent. The patient, however, became daily more drowsy, sleeping the greater part of the day whilst lying on the right side.

Operations.

The presence of marked optic neuritis, the relatively slow pulse, the increasing mental lethargy, and a leucocytosis of 20,000 all pointed strongly to some intracranial collection of pus. On December 7th the mastoid antrum was exposed and found full of cholesteatoma. The bone was then chiselled away in an upward direction, in order to fully expose the suprategmental extradural space and the temporo-sphenoidal region, both of which were fully examined without result.

On the following day the patient was much better, and the temperature fell to 97.6°. During the next few days the conditions remained practically unaltered. The mental condition was much the same, lethargic but not markedly drowsy, the temperature remained constantly subnormal, whilst the pulse-rate varied between 64 and 88. The optic neuritis rather increased than otherwise, and vomiting of the cerebral type occurred on December 13th. On December 14th a flap was turned down over the left cerebellar fossa, and the bone trephined so as to expose the antero-lateral aspect of the cerebellum. During trephination the patient three times stopped breathing, and the operation had to be discontinued pending the performance of artificial respiration. After incision of the underlying dura mater, the cerebellum was explored with trocar and cannula, and an abscess cavity found lying about 1 in. away from the surface of the cerebellum. One ounce of greenish pus was evacuated and the cavity adequately drained.

After-History.

The beneficial effects of the operation were very evident on the next day. All headache had vanished, the patient was bright and cheerful, and the temperature normal.

December 28th. Continued improvement. Papillitis diminishing. Right eye, 3 D. of swelling; left eye, 3.5 D. of swelling. Both visual fields complete. Slight weakness of the external rectus of the left eye.

January 1st. Right eye, 2.5 D. of swelling; left eye, 2.5 D. of swelling.

January 13th. Walking power only slightly impaired. A tendency still to fall towards the left or affected side when standing with the eyes shut. Right eye, 1.5 D. of swelling; left eye, 1.5 D. of swelling.

On January 30th the patient left the hospital for the convalescent home, returning to report himself again on March 1st. He then appeared in excellent general health, but complained of pain over the left parieto-occipital region and of inability to see objects in the right visual field. The gait was also slightly staggering in nature and there was a decided tendency to fall towards the left side when standing with the eyes shut. He also stated that, two or three days after leaving the hospital, some weakness was experienced in the left upper and lower extremities.

The general condition was now as follows:

Attitude. Head held slightly on one side, occiput to left, chin to right.

Intelligence and Memory. Good.

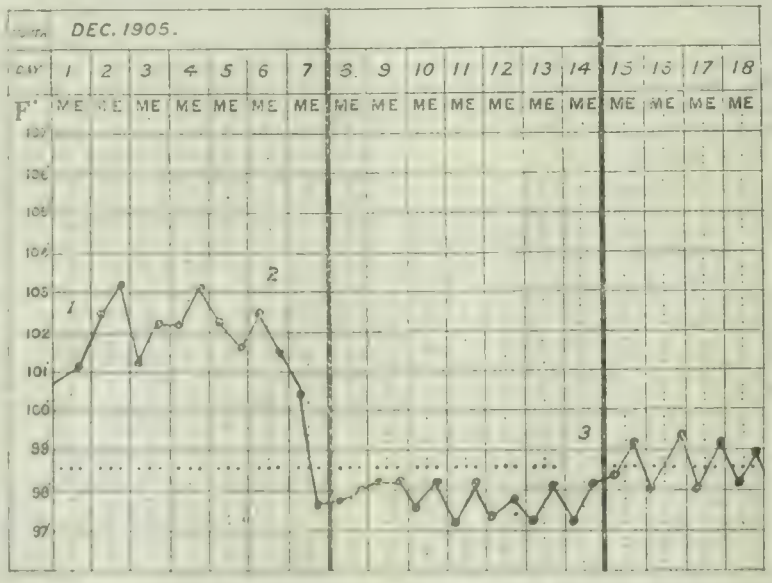
Cranial Nerves. Second, third, fourth and fifth nerves, normal; sixth nerve, slight paresis on left side; seventh nerve, complete paralysis on left side; eighth nerve, markedly impaired on left side.

Eyes. Slight nystagmus on left lateral deviation, not sustained and rather coarse in character. Disks slightly blurred on left side, and about 1 D. of swelling. Visual fields normal.

Motor and Sensory System. Normal.

Reflexes, Superficial and Deep. Normal.

The examination completely negatived any further complications, and the patient was therefore discharged. He returned to work, and remained perfectly well till December, 1905, when he was admitted for further aural treatment, as slight discharge from the ear still persisted. The general condition was all that could be desired, the discs were clear, and there was no evidence of optic atrophy.



1. Temperature on admission. 2. Clearing out of mastoid antrum and exposure of temporo-sphenoidal lobe. 3. Evacuation of cerebellar abscess.

In this case there are some features of clinical interest which merit further mention, and for the purpose of estimating their value the records of five other cases of cerebellar abscess have been examined.

Optic neuritis was observed in 4 cases, equally marked on the two sides. In one case the condition of the patient was so desperate that no examination could be made, whilst in the case of H. C. both discs were affected. On admission no papillitis was visible; five days later optic neuritis first became evident, and rapidly increased up to 6 D. of swelling. The cleaning out of the mastoid antrum exercised no effect on the degree of swelling, but the inflammation began to subside immediately after the evacuation of the abscess. Seven weeks elapsed before the discs returned to the normal condition, and at the present date (thirteen months after operation) the discs are clear and vision excellent. Throughout the acute stages of the illness the disc on the left or affected side showed a slightly higher degree of inflammation, and the subsidence of the swelling on that side was rather more protracted.

Temperature Changes.—In 3 cases the temperature remained subnormal throughout; in 2 cases, both of which were associated with lateral sinus thrombosis, pyrexia and rigors were present, whilst in the case here recorded the temperature varied between 101° and 103° until the mastoid antrum had been cleared out. This source of infection being removed, the temperature at once fell to the subnormal type so suggestive of cerebral or cerebellar abscess, rising again to normal immediately after the evacuation of the abscess. It is obvious, therefore, that too much attention must not be paid to the temperature chart by itself, since septic absorption from the antrum and middle ear may upset the typical subnormal temperature of an otherwise uncomplicated case. In such cases the relation between the pulse-rate and the temperature is of far greater clinical value.

The Abscess Cavity.—In five cases the cerebellum was infected from the middle ear, whilst in the sixth no cause could be found. In all, the abscess occupied the lateral lobe of the cerebellum, and was so situated that no direct pressure could possibly have been exercised on the pyramidal fibres. In two cases the abscess was double, the cavities being superimposed and communicating with one another in front by a narrow channel, so narrow, indeed, that the evacuation of the lower of the two cavities would in no wise have afforded a means of efficient drainage of the upper. Mr. Ballance, in the Lettsomian lectures of 1906, laid stress on the not infrequent presence of two such cavities. The abscesses contained from a half to two ounces of greenish pus, sometimes sterile, but usually yielding abundant cultivations of *Staphylococcus pyogenes aureus*.

Respiratory Failure during Trephination. This phenomenon has been alluded to on several previous occasions. Artificial respiration should be resorted to whenever necessary, but no effort should be spared to remove the disc of bone as speedily as possible in order to relieve the intracranial pressure, when the condition of the patient will at once improve. In most fatal head cases death results primarily from respiratory failure, the heart beating for many minutes after the cessation of respiration. The respiratory failure

during trephination must, therefore, be regarded as the danger signal indicating the urgent necessity of relieving the intracranial pressure.

TOTAL ENUCLEATION OF THE PROSTATE FOR RADICAL CURE OF ENLARGEMENT OF THAT ORGAN.

A FURTHER SERIES OF 119 CASES OF THE OPERATION.

By P. J. FREYER, M.A., M.D., M.Ch.,

SURGEON TO KING EDWARD VII'S HOSPITAL FOR OFFICERS, AND TO ST. PETER'S HOSPITAL.

In my last paper on the subject of total enucleation of the prostate, published in the British Medical Journal of October 7th, 1905, I dealt with a series of 96 cases of the operation performed by me during the year ending July 20th, 1905, and concluded with a brief review of the results obtained in 206 cases of my operation performed by me down to that date. During the period that has elapsed since my return from my holiday on September 6th, 1905, to the end of July, 1906, I have operated on a further series of 119 cases, of which 30 were in hospital and 89 in private practice. The object of this paper is to place before the profession at large the results obtained from these operations. In my earlier series I gave full details of every individual case, and in my last two papers details of many of the cases, adding tables giving the date of operation, age of the patient, and medical man with whom seen or by whom sent, of each individual case. The present series is, however, such a large one that it is impossible within reasonable space to give in detail more than a few of the cases, illustrative of some important features of the operation. Where almost every case is replete with interest it is difficult to make a selection.

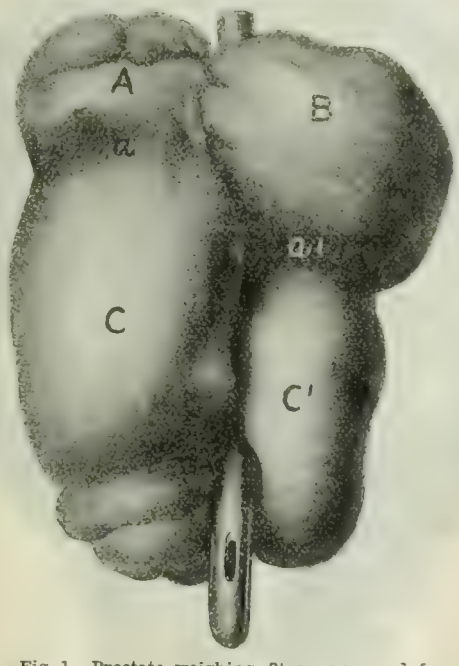


Fig. 1.—Prostate weighing 2½ oz. removed from patient aged 65 (Case ccxliv): B, Right lobe: A, left lobe; C C', outgrowth in bladder; a a¹, contracted neck, indicates boundary between intravesical and extravesical portions.

Case ccvii.

L., aged 60, seen with Dr. H. Murray Norris (London), September 8th, 1905. Prostatic symptoms for three years; latterly intense frequency of urination and much pain. Catheter passed September 6th by Dr. Norris, and a large quantity of residual urine, which was alkaline, drawn off. Passed no urine subsequently except by catheter. I drew off 9 oz. residual urine, thick with pus and phosphates. Prostate enlarged to the size of a Tangerine orange, round, soft, movable. Patient very stout; intensely nervous. Next day there was much difficulty in introducing the catheter, which had to be tied in. Patient in great distress.

On September 11th, Dr. Norris assisting, I enucleated the prostate, which weighed 1¾ oz., entire, with some difficulty, owing to adhesions caused by cystitis. Several small calculi were imbedded in the substance of the prostate and removed therewith. There were about a dozen calculi in the bladder the size of peas.

The patient passed several ounces of urine per urethram on October 5th, and wholly in this way after October 11th. He left for home October 18th in excellent health and spirits, able to pass and retain his urine as well as he ever did. I saw this gentleman recently in perfect health.

I have noticed that prostates containing calculi embedded in their substance are more liable than others to be attended by severe cystitis, and that they are more difficult of enucleation owing to adhesions contracted with the sheath and mucous membrane of the bladder.

Case ccxliv.

On May 15th, 1905, an American gentleman, aged 65, resident of New York, consulted me on the advice of Dr. Kraus of Carlsbad. Prostatic symptoms had existed eight years. Catheter employed for six years, during which time patient was practically dependent thereon. Prostate much enlarged, bilobed, smooth, movable, and bimanually felt prominent in the bladder. Urgent business required his presence in America, so operation was postponed till his return in November, when there was much difficulty in introducing the catheter and the urine was putrid.

On November 29th, 1905, I enucleated the prostate entire, Mr. C. Braine being the anaesthetist. The time occupied from commencing the suprapubic cystotomy till the prostate was delivered from the bladder was 5 minutes. The recovery was uninterrupted. Some urine passed naturally December 15th, and next day the suprapubic wound was dry. On January 2nd, 1906, he left the surgical home in excellent health, able to pass and retain urine, which was normal, as well as he ever did.

The prostate (Fig. 1), which weighs 2½ oz., is of peculiar shape, presenting a gutter-shaped outgrowth in the bladder 2 in. long resembling an epispadian penis. This is the second prostate of this shape that I have removed.

Case ccliv.

This gentleman, aged 75, consulted me, September 12th, 1905, on the advice of Dr. McAfee, West Kirby. Twenty years previously he had retention of urine whilst travelling in Italy. Catheter employed for three days, after which the urine was passed naturally till two years ago, when the catheter was resumed. Has had cystitis, orchitis, and haemorrhage occasionally. Residual urine 11 oz., containing much pus and mucus, though the bladder was washed out daily. Prostate enormously enlarged, bilobed, soft, movable. General health fair; patient very stout, with tendency to chronic bronchitis. Operation advised but postponed at patient's wish.

On December 15th I was summoned to Crowborough to see the patient with Dr. Basden. He had been confined to bed for nearly three months with cystitis, attended by rigors, high temperature (105° F.) and delirium from time to time. Condition very feeble: pulse irregular and intermittent, so that I did not consider it advisable to undertake the operation at that distance. On December 29th he was conveyed to London by ambulance. Health somewhat improved, but still feeble and flabby. On January 2nd, 1906, I enucleated the prostate entire, Dr. Basden, Dr. Adam Simpson, Liverpool, and Dr. L. E. Schmidt, Chicago, being present. The prostate (Fig. 2) was the size and shape of an enormous pear, two-thirds of which projected in the bladder. The right lobe had several nodular outgrowths. Weight 9½ oz. The enucleation was easy considering the size of the prostate and the stoutness of the patient, the time being seven minutes. There was little haemorrhage, and the operation was well borne.

Progress was on the whole satisfactory, though slow during the early days after operation, but the urine was foul and there was nightly delirium. Had slight orchitis during the third week. When sitting up and convalescent, on February 16th, a sharp attack of bronchitis set in, for which I had the advantage of Sir Thomas Barlow's care of the patient. By March 2nd the patient was again out of bed. A small fistula remaining, I tied in a catheter for a week; after its removal the urine was passed naturally. By March 14th the wound was firmly healed and the patient walking about, able to pass and retain his urine, which was quite clear, as well as he ever did. The patient is now in excellent health. The case gave Sir Thomas Barlow and myself much anxiety. Considering the patient's condition his complete recovery was remarkable.

Case cclxi.

Gentleman, aged 75, seen with Dr. R. S. Roche, London, January 3rd, 1906. Prostatic symptoms had existed two years. Had retention in June, 1905; relieved by catheter, which had been irregularly employed ever since. Residual urine, 8 oz., contained much pus. Latterly there had been much difficulty in introducing the catheter. For several days he had suffered from pyrexia, the temperature during the last two being 104° F., with mental symptoms amounting almost to acute mania, the result evidently of blood poisoning and uraemia. The prostate was enlarged to the size and shape of a small pear, being bilobed, smooth, dense, and very tender on examination per rectum.

Owing to the pyrexia and mental symptoms I considered it advisable in the first instance to drain the bladder suprapubically, and later on, if these symptoms subsided, to complete the operation of removal of the prostate. Accordingly on January 4th I opened the bladder and inserted a large drainage tube.

On January 18th, the acute symptoms having subsided and the patient's general health having improved, I enucleated the prostate, which was pear-shaped with a plum-like outgrowth in the bladder from the right lobe; weight 2½ oz. Rapid recovery. Passed 16 oz. of urine naturally January 31st; wound dry February 3rd.

On February 13th he went home in good health. On July 21st he wrote that he was perfectly well, able to pass and retain his urine as well as he ever did.

Amongst this series of 119 cases there were three instances in which, owing to the existence of certain conditions, I considered it advisable to drain the bladder temporarily before enucleating the prostate. Details of another of these cases will be given later on, to illustrate the varied conditions under which I regard this procedure as advisable.

Case cclxxx.

Gentleman, aged 84, seen in consultation with Dr. P. L. Read, South Kensington, March 16th, 1906. Prostatic symptoms dated from seventeen years ago, when he was advised by a surgeon to use a catheter. He dispensed with this till a year ago, when cystitis, accompanied by rigors and pyrexia, set in, and another surgeon was consulted. Catheter employed four or five times daily till three weeks previously, when he had to give it up owing to the pain and difficulty in its introduction. Condition very distressful; great frequency of micturition day and night; bladder much distended. General health good. I passed a bicoudée catheter with difficulty, and drew off 15 oz. residual urine, thick with pus and mucus. Prostate greatly enlarged, bilobed, dense, movable; felt bimanually the size of a large orange.

On March 20th, Dr Read assisting, I enucleated the prostate (Fig. 3) entire, with a thin layer of the sheath adherent thereto, easily and rapidly, the time occupied being five minutes. The patient scarcely felt any inconvenience from the operation, and read the newspapers daily after the first day. Some urine passed naturally on April 8th, and the wound was closed on April 11th. He was sitting up out of bed on April 9th, and went for a drive April 15th. Within four weeks from the date of operation he resumed business in the City, and is now in excellent health, quite freed by any urinary symptoms. The prostate (Fig. 3) weighed 2½ oz. A thin layer of the sheath (A) came away with the prostate, being very adherent thereto. The latter is placed over the line of the anterior commissure marking the separation of the lateral lobes, which are continued as triangular projections (B, C) in the bladder, covered by the true capsule of the prostate.

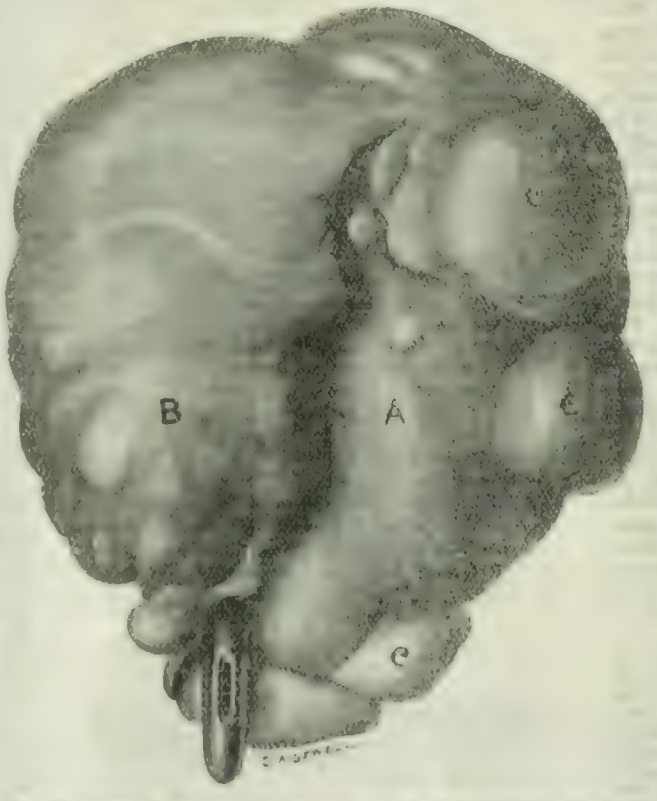


Fig. 3.—Prostate weighing 2½ oz., removed from patient aged 78 (Case cclxx). A, Right lobe, showing several nodular outgrowths; B, left lobe.

Case ccxxxiii.

On March 2nd 1906, a gentleman, aged 66, resident of Faversham, consulted me on the advice of Dr. Heywood Smith, London. Prostatic symptoms had existed for ten years, during which he had consulted various Spanish doctors. I found his bladder enormously distended with urine. He had not employed a catheter, but had almost incessant micturition day and night. He suffered much from thirst, dry tongue, bitter taste, nausea and vomiting, symptoms more or less constant I find with chronic over distension of the bladder, and which, no doubt, are toxæmic in origin. I drew off four of pale urine of low specific gravity (1010), and could not get it quite empty. The prostate was about the size of a large orange.

On March 5th I opened the bladder suprapubically, and inserted a large drainage tube; but I did not consider it advisable to remove the prostate till the anæmic symptoms should have passed off.

By March 21st the patient's health had markedly improved, and all the uraemic symptoms had disappeared, so on March 23rd I enucleated the prostate, which weighed 1¾ oz., entire in its capsule. On April 2nd some urine was passed naturally, and entirely in this way on and after April 6th. On April 27th he left the surgical home in perfect health, able to pass and retain his urine, which was normal, as well as he ever did. I have heard from him recently. He keeps quite well.

Case ccxcvii.

A gentleman, aged 62, resident of Durban, came to England to consult me with a view to operation, on the advice of Dr. A. McKenzie of that town. Prostatic symptoms had existed for four years. Catheter employed for three and a half years; entirely dependent thereon for ten months. Prostate greatly enlarged, bilobed, dense, movable. On May 18th, 1906, I enucleated the prostate, which weighed 3¼ oz., entire in its capsule, in five and a half minutes. More bleeding than usual, but pulse kept slow and full. Uninterrupted recovery. Passed some urine per urethram June 1st; wound dry June 3rd. Left the surgical home June 22nd, passing and retaining urine naturally as well as he ever did. He is now in perfect health.

Case ccxcviii.

W. L., aged 74, has been a patient at St. Peter's Hospital on and off for eight years, suffering from enlarged prostate and vesical calculus. During that period he has had calculi removed by me by lithotlapaxy no less than fourteen times. Catheter employed for five years; entirely dependent thereon for eighteen months. The urine during the last three or four years has been fetid, with a heavy deposit of pus, mucus, and blood. Two years ago I removed the right testicle for sloughing orchitis, but with no relief to the prostatic symptoms. Patient suffering from chronic bronchitis and asthma; has mitral systolic and diastolic murmurs, with pronounced oedema of the lower limbs; very stout and flabby. Prostate greatly enlarged per rectum, the right lobe being more pronounced than the left, rather hard, and not very movable. During the past two or three years I had thought of enucleating the prostate, but the patient's condition rendered him a particularly unpromising subject for the operation. Latterly, however, his condition was so distressing, owing to difficulty in introducing the catheter, that I decided on operating, the risks being fully placed before the patient.

On May 22nd, 1906, I opened the bladder suprapubically, and removed two phosphatic calculi the size of kidney beans. The prostate was then enucleated entire in two and a half minutes. It presented a broad, tongue shaped outgrowth in the bladder, and weighed 4½ oz. There was more haemorrhage than usual, as I almost invariably find in patients in whom calculi occur in connexion with enlarged prostate. The anaesthetic was badly borne, as on previous occasions with him during the lithotlapaxy operations, and he was much collapsed after the operation. He soon rallied, however, and was quite cheerful next day. The suprapubic wound was [illegible]. Some urine passed per urethram June 27th; wound dry July 5th, went home July 12th. He is now in good health, the oedema having entirely disappeared, and can pass and retain urine, which is clear, as well as he ever did.

The patient's recovery is, I submit, truly remarkable, considering the unfavourable state of his health at the time of operation and indicates that patients should not be allowed to die of uraemia unoperated on even under the most desperate conditions.

Case ccci.

An American gentleman, from Washington, aged 68, consulted me on May 23rd 1906, on the advice of Dr. Gilchrist, of Nice. Prostatic symptoms had existed for fourteen years. Catheter employed for twelve years, latterly five or six times daily; severe haemorrhage from time to time. Prostate

enormously enlarged per rectum, bilobed, smooth, soft, movable; felt bimanually.

On May 26th, Mr. Thomas Nunn, London, and Dr. G. Clarke, London, Canada, being present, I enucleated the prostate entire in six minutes. Scarcely any bleeding. The prostate, a fine, pear-shaped specimen, weighs 9¼ oz.

Recovery uninterrupted. Some urine passed naturally on June 13th, and wholly in this way on and after June 14th. He left the surgical home June 30th, able to pass and retain urine normally. I saw the patient on July 17th on his way home to America. He was in perfect health, able to retain urine from four to eight hours, and pass it as well as he ever did.

Case cccvii.

A distinguished physician from the North of Ireland, aged 80, consulted me on June 5th, 1906, on the advice of Sir James Dick, R.N. Prostatic symptoms for fifteen years. Catheter, employed two years. In great distress from pain and constant desire to micturate, due to cystitis. Residual urine, 8 oz., contained much mucopus. Prostate greatly enlarged, bilobed, movable, and felt bimanually. Patient thin and in very feeble health owing to constant distress; suffering from chronic bronchitis.

On June 7th, Mr. Sherman Bigg being present, I enucleated the prostate entire with great ease, in four minutes. The prostate was trefoil and weighed 3 oz. Next day the patient was so well that with difficulty I dissuaded him from writing letters. Some urine passed naturally June 28th; wound dry July 3rd. On July 7th he was walking about quite well, and able to pass and retain his urine, which was normal, as well as he ever did. On July 17th he wrote: "Since my prostate was removed I am a new man. I am not only free from pain and torture of frequent urination, but the normal functions of the bladder are completely restored."

Case cccxi.

An eminent French physician came from Paris to consult me June 12th, 1906, with a view to removal of his prostate. Suffered from the usual prostatic symptoms for six years. Retention of urine two years ago; entirely dependent on catheter since then. Has had cystitis for months, orchitis several times, and he has been unable to walk or drive owing to the pain and haemorrhage brought on by exercise. Prostate greatly enlarged, bilobed, soft, rounded, movable. As I decided on removal of the prostate, I did not put him to the pain of sounding him, but the presence of calculi was almost certain.

On June 12th, 1906, Surgeon-Generals J. Cleghorn and W. R. Browne, I.M.S., and Dr. Emery of Toronto being present, I removed 11 calculi, weighing 915 gr., suprapubically, and then enucleated the prostate, which weighed 2½ oz. entire in its capsule. Fourteen minutes elapsed from commencing the operation till the prostate was delivered from the bladder, ten minutes being occupied in removal of the calculi.

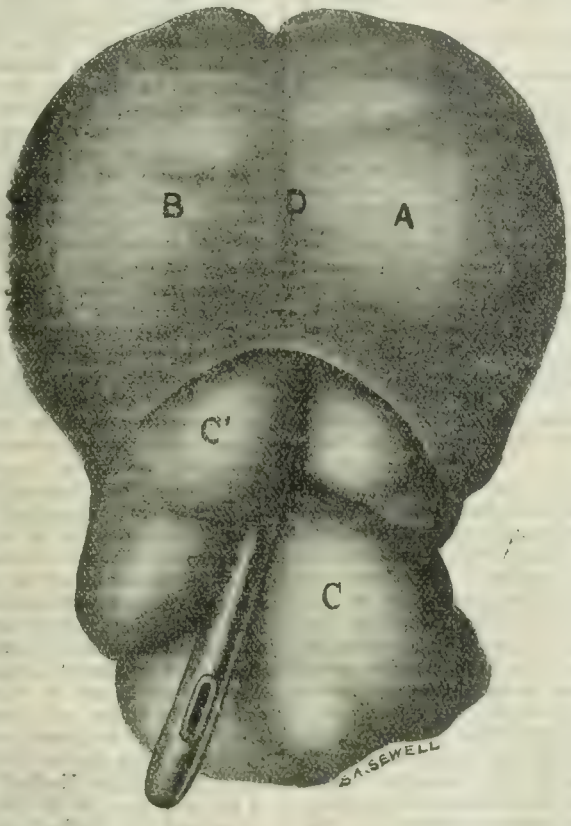


Fig. 3.—Prostate weighing 7¼ oz., removed from patient aged 84 (Case cclxxx). A, Right lobe; B, left lobe; D, placed over anterior commissure, which is faintly seen through a thin band of the sheath removed with prostate; C C', outgrowth in bladder covered by true capsule.

Uninterrupted recovery. Some urine passed naturally June 30th. On July 1st he passed 16 oz. at once in full stream and with great ease. The suprapubic wound being slow in entirely closing, a soft catheter was tied in from July 18th till July 24th. On its removal, the whole of the urine was passed naturally. He walked and drove out July 26th, and on August 4th he returned to France in excellent health, able to pass and retain his urine, which was normal, as well as he ever did.

The ages of the patients varied from 50 to 86 years, the average age being 68¼ years. The prostates weighed from ½ oz. to 9¼ oz., the average being a little over 2½ oz. In connexion with these 119 operations there were 9 deaths, or 7½ per cent., the remaining 110 cases having been completely successful. The causes of death were:

1. One from jaundice on the fifteenth day, the case having been complicated with malignant disease of the liver.

2. One from pulmonary embolism on the fifth day. I saw the patient an hour before his death, and he had had no unfavourable symptom up to that time.

3. One from shock seven hours after operation.

4. Six from uraemic symptoms, from three to thirty-nine days after operation, in all of which the kidneys were extensively diseased before operation. One was found to be suffering from cancer of the bladder at the time of operation; and in one case the bladder was literally full of phosphatic calculi.

Though all these deaths are accepted as occurring in connexion with the operation, the fatal result in most of the cases occurred from diseased conditions previously existing rather than from the operation. With the exception of the patient that died from pulmonary embolism—an accident liable to occur from any operation—they were all desperate cases, in which operative interference was postponed till catheterism could no longer be employed, and when the patients were practically moribund. But to refuse to operate in such instances would mean the sacrifice of many lives, as the details of cases in this and previous papers of mine fully testify. Amongst these 119 cases I had a consecutive series of 39 operations without a death. Taking the advanced ages of the patients the subjects of this disease into consideration, I venture to say that there is no more successful operation in surgery in experienced hands, provided it be undertaken before the kidneys become seriously diseased.

In the April number of the *Annals of Surgery* for 1905, Dr. Eugene Fuller, of New York, lays claim to having been the originator of the operation which I have described as my own. A similar claim was advanced by him during the controversy that ensued on the publication of my first lecture on the subject in the British Medical Journal of July 20th, 1901, and its absurdity demonstrated in the issue of that Journal of August 17th, 1901. I should not, therefore, consider it necessary to refer to the subject again, only that Dr. Fuller now publishes in support of his contention a somewhat belated letter, dated February 5th, 1905, written him by Dr. Ramon Guiteras of New York, in which this latter gentleman alleges that when passing through London in 1900 he explained to me Fuller's method of operating and his own modification thereof; and then I am accused of having published their combined method as my own without any reference to either of them.

It is true that I did not allude to the work of either of these gentlemen, for the simple fact that, as I shall presently show, there is no similarity between my operation and that described by Dr. Fuller, and that the "instruction" alleged to have been given me by Dr. Guiteras exists only in the imagination of that gentleman.

Dr. Fuller bases his claim to having originated the operation which I regard as my own on an article published in the *Journal of Cutaneous and Genito-Urinary Diseases* of June, 1895, entitled "Six Successful and Successive Cases of Prostatectomy." Turning to this article we find that not alone was the technique employed by Dr. Fuller radically different from mine, but that his operation was purely a partial prostatectomy of the McGill type, bearing no resemblance to mine.

In the operation described by Dr. Fuller—(1) a perineal section is made in addition to the suprapubic cystotomy; (2) the suprapubic wound is closed by deep and superficial

sutures; (3) an attempt is made to render the prostate prominent in the bladder by pressure of the fist on the perineum; and (4) cutting and crushing instruments are employed to attack the prostate, prominent amongst which are, to use Dr. Fuller's own words, "Rough serrated-edged scissors with a long handle," which are used "to cut through the bladder wall" in the region of the urethral opening, "the cut extending from the lower margin of the internal vesical opening of the urethra backward for an inch and a half," all of which proceedings and accessories are, it will have been observed, foreign to my operation.

Let us now examine Dr. Fuller's 6 cases in detail to ascertain the extent and nature of the prostatic substance removed in each instance, and see if this bears any resemblance to that removed by me as already described and figured. The description of what was removed will be given in Dr. Fuller's own words:

CASE A.—I removed a large right lateral hypertrophy and the median hypertrophy, which last was moderate. Owing to the bad condition of the patient I did not wait to remove a small left lateral hypertrophy.

CASE B.—I enucleated in the way described a large collar-like hypertrophy of the prostate.

CASE C.—I found two large lateral hypertrophies. The median hypertrophy was not marked. These hypertrophies were all thoroughly enucleated without difficulty.

CASE D.—Owing to the age (48 years) of the patient and the small size of the prostate as felt per rectum, it was not thought necessary to make a suprapubic incision, the perineal route being employed. As the result of the operation a very hard fibrous mass, similar in shape but smaller than a hen's egg, was found lying transversely across the floor of the bladder just at the vesical neck. This was cut through by the knife in making the perineal incision. It was, however, so fibrous and so firmly attached to the capsule of the prostate that it was found impossible to enucleate it, and it consequently had to be cut away by the use of both the serrated scissors and of prostatectomy cutting forceps.

CASE E.—I enucleated two large lateral hypertrophies, together with a small median one, the whole mass coming away in one piece.

CASE F.—I enucleated two large lateral hypertrophies, together with a collar-like median hypertrophy, partially surrounding the urethra.

It is simply ludicrous to claim that these were total prostatectomies resembling that described and practised by me. One (Case D) is a perineal operation pure and simple. In one (Case A) Dr. Fuller "did not wait to remove a small left lateral hypertrophy"! They were one and all obviously partial prostatectomies, in which nodular lumps of enlarged prostate ("hypertrophies" Dr. Fuller calls them) were removed from within the capsule, as in McGill's operation; whereas the essential feature of my operation is that the prostate is enucleated entire in and with its capsule out of the enveloping sheath of recto-vesical fascia. It was the discovery that this could be accomplished contrary to the then accepted teachings of the anatomists that constituted the essential novel feature in my operation. We can in consequence approach our task—that of removing the prostate entire, and the prostate only—by a simple and scientific plan of campaign instead of the crude and unscientific methods previously practised by McGill and his imitators, in which scissors, cutting forceps, and scoops of all kinds were employed to cut and tear away portions of prostate, leaving others behind, and frequently removing portions of the bladder and other tissues beyond the limits of the prostate, with such fatal results that for some years before 1901, when my operation was placed before the profession, these operations had been practically abandoned.

The objects figured as removed in cases E and F in Dr. Fuller's series are obviously mangled masses of prostate, and bear no resemblance to the cleanly enucleated entire prostates figured by me, which to the number of over 300 have been preserved in my private collection or presented to public museums, and which have been seen and examined by scores of Dr. Fuller's countrymen. I challenge again, as I have repeatedly challenged, the production of a single authentic specimen of entire prostate from any museum in the world, placed there before the publication of my first series of cases in July, 1901, with any published illustration thereof, or description of its having been removed entire in its capsule. There was no such specimen in the great Hunterian Museum of the London College of Surgeons till, at the request of the Curator, I presented a dozen specimens thereto.

Dr. Fuller's idea of what constitutes a total prostatectomy is not less strange than his conception of what constitutes a successful operation. Describing the condition of Case E he writes: "Four weeks after the operation the patient sat up, and now, six weeks after, he walks about the ward with the help of an attendant. The urine, now clear, still comes through the granulating suprapubic wound, which the slough made quite extensive. There is good expansive force in the bladder, and with the suprapubic wound closed I feel that urination will be accomplished without difficulty. The uraemic symptoms have not all disappeared, and at times he is drowsy or excitable. It is probable that in time he will succumb to his nephritis, and such is to be expected, especially since, owing to his poverty, comparatively little can be done for him."

Let the reader imagine himself in the position of this patient, and say if, under the circumstances, he would regard the operation as successful. But what matters it what the reader thinks, since Dr. Fuller adduces the irreproachable testimony of Mr. Mayo Robson to the effect that it was entirely successful? In his article in the *Annals* Dr. Fuller writes: "Mr. Robson concludes his reference to me with the remark, 'Moreover, Dr. Fuller's cases referred to above were completely cured.'" I scarcely think that even the testimony of Mr. Robson will convince the reader that this case was either "successful" or "completely cured." Mr. Robson is evidently willing to extend to Dr. Fuller that elasticity as to the meaning of the word "success" which he employs in his own statistics, for in the BRITISH MEDICAL JOURNAL of September 7th, 1901, p. 627, I pointed out that Mr. Robson had returned a case as "successful both immediate and remote" which had obviously died from operation. I have referred to this matter merely to show that Dr. Fuller's statements and statistics have to be taken with a certain amount of reserve.

Dr. Fuller quotes freely from the letters of my opponents in the controversy that ensued in the BRITISH MEDICAL JOURNAL on the publication of the first four cases of my operation, and adds, "any one interested can read them." Yes, indeed, and interesting literature they will prove in the light of subsequent events. But considering the triumphant success of my operation, and vindication of the views I then enunciated, I would venture to suggest that, for the credit of the profession, a veil might be drawn over the misrepresentations, misstatements, and sophistry with which I was then assailed, when I stood practically alone—a fate which I have enjoyed in common with every pioneer of any great advance in surgery or medicine.

With reference to the statement contained in Dr. Guiteras's letter of February 5th, 1905, published by Dr. Fuller in his *Annals*, to the effect that when in London in 1900, on his way to Paris, where he read a paper before the International Medical Congress on the present status of the treatment of prostatic hypertrophy, he met me and explained Dr. Fuller's method of operating, and his own modification thereof, I was not previously aware that I had had the honour of this gentleman's acquaintance. He does not state in his letter where the interview took place, but Dr. Fuller supplies the omission by locating it at St. Peter's Hospital, a fact that would indicate that this letter was not the only communication that passed between these gentlemen on the subject! I presume that, like scores of his countrymen—who are always welcome—he honoured me with his presence in the operating theatre. But I have no recollection of having ever conversed with him on prostatectomy or any other subject; and certainly if any such conversation did take place it left no impression on my mind.

It is fortunate, under the circumstances, that the paper read by Dr. Guiteras in Paris is published *in extenso* in the *New York Medical Journal* of December 8th, 1900, so that we are in possession of his views as to the nature and scope of Dr. Fuller's operation. After describing this operation, he writes:

In this way the bulk of the prostate can often be shelled out in three large pieces, while at other times it must be removed piecemeal. Enucleation cannot always be performed by this means, and frequently the operator has to be content with the removal of a piece forming the principal part of the barrier.

This, then, would have been the gist of the imaginary "instruction conveyed to me"! I need scarcely say that

the operation described, whether in its technique or in its scope, bears no resemblance whatever to that which bears my name.

Dr. Fuller published the description of his operation with 6 cases in June, 1895, but his teachings seem to have fallen on deaf ears. No one ever seems to have thought it worth while to point out the resemblance it bore to McGill's operation, which had then fallen into disfavour. So far as I am aware, his name was never referred to on this side of the Atlantic for more than six years after—till it was unearthed from the dusty archives of the Medico-Chirurgical Society by Mr. Mayo Robson during the controversy that ensued on the publication of my first lecture on my operation in July, 1901, and then only after the attempt by Mr. Robson to father my operation on himself had been exposed and refuted. I am not aware that in his own country it fared much better. Contrast with this the profound interest elicited by the publication of my first 4 cases of my operation; the extraordinary rapidity with which it has been adopted by surgeons all the world over; the irresistible conviction carried to the profession and public by the details of the several series, gradually increasing in number, since published.

CASES OF TETANUS TREATED WITH ANTITETANIC SERUM: RECOVERY.

I.—By W. WINSLOW HALL, M.D., M.R.C.S., LONDON.

THE following case affords an example of the value of antitetanic serum:

A. B., aged 8 years, previously healthy, of a family prone to rheumatism and otitis media, was brought to me on August 15th, 1906. It was said that his breath was offensive, and that he screamed at nights. The tongue, and the mouth generally, were swollen and sore.

On August 18th I saw him at his own home. He had stiffness about the neck, and a slight risus sardonicus; but his father maintained that this painful smile was his natural expression; the pulse was good, and the temperature was normal. I could find no physical signs of disease other than the foul mouth. The bowels were cleared out with calomel, and potassium bromide gr. 5 was given every four hours. On August 19th the condition was unchanged. On August 20th the risus was more marked, and the parents volunteered an account of opisthotonos occurring during the night; the pulse was 72, the temperature 99.6°. I took the boy into St. Monica's Home Hospital; there the mouth was carefully treated with boric acid, and afterwards with hydrogen peroxide. He was given chloral hydrate gr. 5, and potassium bromide gr. 7½, every two hours.

On August 21st it was reported that he had slept, but that spasms had occurred every ten minutes during the night. Risus sardonicus was unmistakable, as a spasm occurred in my presence, opisthotonos was equally unmistakable. He could swallow slowly, but with pain. Grey, pultaceous ulcers were visible over the tongue and cheeks, but full examination of the mouth was impossible, owing to rigidity of the jaws. The pupils were small and equal, and the eyeballs rotated down. There was no otorrhoea, but the right membrana tympani was thickened and opaque. The skin reflexes in the abdomen and the lower extremities continued unduly brisk.

At 3 p.m. 60 c.cm. of antitetanic serum were injected in the iliac regions. The chloral and bromide mixture was given four-hourly.

On August 22nd the boy's condition had improved. There had been only 23 spasms in twenty-four hours, against some 96 in the preceding day and night. The temperature was 98.6°; the pulse remained strong, and was 100 to 108; the respirations were 22 to 28. The tongue was cleaner. Nourishment was taken better. Reflexes were less brisk. At 11 a.m. 30 c.cm. of antitetanic serum were injected. The chloral and bromide mixture was given two-hourly again.

On August 23rd improvement continued. There had been twenty-two spasms in twenty-four hours. The temperature was normal; the pulse and respiration the same as on the preceding day. The tongue was rather cleaner; the mind clear; the cremasteric and abdominal reflexes absent, the patellar and plantar reflexes were only moderate. An injection of 30 c.cm. was given again. On August 24th the patient looked brighter; only eight spasms had occurred in twenty-four hours; the tongue was still cleaner, and he had swallowed two pints of milk since the preceding morning. On August 25th only seven spasms had occurred. On the morning of August 26th there had been no spasms for over twenty-four hours. The sloughs were cleaning off the tongue. On August 27th the reflexes had reappeared up to the level of the epigastrium. The chloral and bromide mixture was given thrice daily. Spasms were still absent, nor, with the exception of one spasm at 2.30 a.m. on August 31st, did they recur. The tongue cleaned gradually, but was not free from ulceration till September 10th. His convalescence was chequered by a rise of temperature to 102° and 103° on September 3rd and 18th, and 21st, along with an urticarial and erythematous rash. On September 14th he was allowed up. On October 10th he was sent to a convalescent home. He is now at school, and is perfectly well.

The interesting points about this case are: First, the absence of any apparent inlet, except the foul mouth, for the germ; secondly, the slow development, and this bears on the happy issue of the case; thirdly, the loss of weight (3 lb. 14 oz.) while the spasms continued, and the steady gain after they ceased; fourthly, the almost normal temperature while the convulsions were at their worst, and the high temperatures occurring later with antitoxin rashes; fifthly, the treatment. Here it is noteworthy that, though the chloral and bromide made him sleep, they had no apparent action on the spasms; while diminution in number and intensity and length of spasm was evident at once after the use of antitetanic serum. The dose of serum given is also noteworthy. In all, 120 c.cm. were given; this required twelve separate punctures, and cost £2 8s. The authorities recommend 400 c.cm. in all, which would mean forty punctures, and a cost of £8; but surely few patients could stand this. It seems desirable that both the cost and the bulk of the remedy should be somehow lessened. Yet my conclusion is that in a case of tetanus, whatever the pain and whatever the cost, antitetanic serum should be fairly tried, and with as little delay as possible.

II.—By EUSTACE G. CARTER, M.R.C.S.Eng., CHAPEL-ALLERTON, LEEDS.

PROFESSOR SIMS WOODHEAD, in *Allbutt's System of Medicine*, states: "Of those cases where the incubation period is under ten days not more than 3 to 4.5 per cent. recover; when the incubation period is still longer, about half the patients attacked throw off the disease." In the case described below the incubation period was seven to eight days, and belongs, therefore, to the more serious group. I think, therefore, to the antitetanus serum must be given the credit for the favourable termination of the case.

On the evening of July 24th, 1906, I was sent for to a young farmer aged 22, who had fallen from a wall astride a dahlia stick, causing a lacerated wound of the scrotum, and exposing both testicles, which were otherwise uninjured. As is frequently the case in those that work on the land, the skin in the neighbourhood of the wound was extremely dirty, and it took a considerable time to cleanse it even comparatively; the wound itself was freely douched with a mercury biniodide solution, and the edges drawn together with catgut sutures. The wound suppurated, and at least a square inch of the scrotum sloughed, but there was no elevation of temperature or any other symptom of constitutional disturbance till the morning of August 1st, eight days after the accident, when he complained of stiffness about the angles of the jaws and difficulty in opening his mouth. Within four hours I injected 10 c.cm. of antitetanus serum, prepared by the Lister Institute, under the skin of the abdomen. The general condition of the patient was good, temperature normal, pulse 72, respirations 16.

When I saw him on the following morning he had passed a restless night, the rigidity of the jaws was more marked, and accompanied by stiffness in the muscles of the abdominal wall and lower extremities. I injected 10 c.cm. of serum, and ordered 20-gr. doses of chloral hydrate and potassium bromide every four hours, to be discontinued if the patient became too somnolent; the same evening 10 c.cm. of serum were injected as before.

On the morning of August 3rd the nurse reported that the patient had passed a restless night, and that he had had several tetanic spasms. I found the general rigidity of the muscles of the jaws, abdomen, and thighs more marked, so I injected 20 c.cm. of serum, which as I inserted the needle produced a violent spasm, the patient being thrown into a condition of pronounced opisthotonos. There being no change for the better in the condition of the patient, I again injected 20 c.cm. of serum twelve hours subsequently. On August 4th the nurse reported that for two or three hours after each injection of the serum the patient had fewer attacks of spasm, otherwise he remained much the same. This I found to be the case after every subsequent injection.

It is not necessary to give a detailed account of the progress of the case from day to day: the patient was now in the midst of an attack of acute tetanus, which lasted for twenty-eight days; that is to say, the last spasmodic seizure occurred on the twenty-eighth day after the onset of the trismus. For some days longer, however, there remained some stiffness about the

jaws and much general muscular rigidity, and the patient was not fully convalescent till September 28th, two months and four days from the date of the accident.

During the course of the illness the most prominent symptoms were rigidity of the muscles of the jaws, back, abdomen, and upper part of the thighs, accompanied by frequent clonic spasms at irregular intervals; the muscles of the upper extremities were but little affected. Swallowing was accomplished with great difficulty, but fortunately the act of deglutition never failed completely. Tenacious mucus accumulated in the pharynx, causing much trouble and distress. The bowels were constipated; urine passed without difficulty. Temperature varied between 101° and 102°, and on one occasion reached 103°. Pulse became very rapid, sometimes almost uncountable, and even when convalescence was fully established remained well over 80.

From the third day and for seventeen subsequent days 20 c.cm. antitetanus serum were injected every twelve hours, till on August 20th the patient was able to open his mouth a little way, the spasms being also less frequent, so the dose of serum was reduced to 10 c.cm. twice in twenty-four hours; the improvement being maintained, the dose of serum was reduced still further, to 10 c.cm. once in twenty-four hours for the next five days; on the twenty-seventh day the serum was omitted altogether for twenty-four hours; the rigidity of the muscles was much less marked, and there was only one spasmodic seizure, which proved to be last, on the twenty-eighth day; as a precaution 10 c.cm. of serum was administered for the last time. Though the patient had the large number of 83 injections under the skin of the abdomen and flank, not one caused more than the temporary discomfort due to the insertion of the needle. Ten days from the commencement of the serum treatment the patient was covered with a profuse scarlatinoid rash, which caused him a good deal of discomfort, and which was followed by general desquamation. The bromide and chloral mixture was given as occasion required. As it was impossible to clear out the tenacious mucus that accumulated in the pharnyx the patient was frequently turned on to his side with his shoulders projecting over the edge of the bed, and his head hanging down, supported sometimes for an hour or more by his mother or the nurse; this position was assumed by the patient of his own accord, as in this way the mucus escaped out of his mouth and cleared his throat.

A turpentine enema was administered every third day, producing evacuation of the bowels. The wound caused no anxiety; it was treated with boric acid fomentations, and eventually granulated up.

The diet consisted of two to four pints of milk every twenty-four hours, the patient preferring this to any other form of liquid food.

In reviewing the case I think I ought to have injected a larger dose of antitetanus serum on the first occasion, but my want of knowledge of the treatment made "I dare not wait upon I would!" If in the future I should have another case of acute tetanus I should begin by injecting at least 20 c.cm., and preferably by the intravenous method.

III.—By C. R. HOWARD, M.B., B.C.Cantab.,

WOOLSTON HANTS.

On November 26th, 1906, J. E. grazed his hand when working on a troopship. Two days later he began to complain of aching and stiffness in the jaws, and on the fourth day had marked risus sardonicus. On the fifth day after the injury spasms appeared and treatment was commenced; it consisted in keeping the patient quiet by means of silence, darkness, and drugs, feeding him, excising the wound, and injecting antitetanic serum. Of the latter 110 c.cm. in all were administered on the following dates—December 1st, 5th, 9th, 11th, 12th. The injections were given subcutaneously in the back, and seem to have exercised a most beneficial influence, but they apparently caused an intensely irritative erythematous rash to develop.

The rigidity of the body decreased about December 9th, but the spasms continued till December 11th. They were severe on several occasions, and had to be controlled by chloroform, chloral and bromide, or morphine, of which during December 3rd and 4th about gr. iij were given.

The bowels were at first very confined and croton oil had to be given on two occasions, but subsequently they were regulated by means of magnesium sulphate 3 ij every four hours. The motions were most offensive, greatly increasing the labour and discomfort of nursing. This was overcome by 5 gr. doses of calol given occasionally. During the first day or two of the illness much anxiety was caused by persistent vomiting, but a mixture containing bismuth comp. and tincture of cardamoms, chloroform, morphine, and hydrocyanic acid, relieved this symptom, which subsided as soon as the bowels were well opened. After this the patient took nourishment very well, the total amount being sometimes as much as eight pints of various liquids, such as milk tea, milk coffee, milk cocoa, Benger's food, broths, etc., in twenty-four hours.

The patient began to sit up during the first week in January, and since then has made steady progress.

The notable points in this case appear to be:

1. The short incubation period, combined with recovery.
2. The beneficial effect of the antitoxic serum given subcutaneously. This was obtained through Messrs. Burroughs and Wellcome.

THE STAINING OF ANIMAL PARASITES.

By I. WALKER HALL, M.D.,

PROFESSOR OF PATHOLOGY, UNIVERSITY COLLEGE, BRISTOL; PATHOLOGIST TO THE BRISTOL ROYAL INFIRMARY.

While many of the higher parasites do not require any special staining in order to demonstrate their anatomical structure, their ova and embryos may sometimes escape detection when unstained, especially if they are present in small numbers. This is particularly the case when it is necessary to examine secretions such as the urine or faeces, or the contents of parasitic cysts. Staining is also an advantage in demonstrating embryos, ova, or sections of the entire animal, either by the aid of the microscope or by the lantern microscope.

These facts were brought home to the writer while endeavouring to project preparations of filaria on to a screen, and while examining specimens of faeces in which the ova were difficult to find.

Under such circumstances the following device was employed, and as in its entirety the procedure does not appear in the available literature, it is here described in the hope that it may obtain further application.

Method.

1. Prepare a film of the blood, faeces, or sediment of the secretion. Fix by heat, or, less preferably, by formalin vapour.
2. Treat the film with the following solution, ½ to 2 minutes: Watery methylene blue, 1 per cent., 100 c.cm.; glacial acetic acid, 5 c.cm. (Neisser's methylene blue solution may be equally well used if at hand. Methyl violet, Nile blue, etc., are not so good.)
3. Wash in water.
4. Cover the film with saturated alcoholic eosin solution. Allow to stain for 5 to 10 minutes, or (following Muir's excellent method described in the *Journal of Pathology*, 1906) heat over the flame, blowing out the alcohol each time it catches fire, until the film is almost dry.
5. Wash in water.
6. Fix in potash alum solution, ½ to 2 minutes.
7. Decolourize in 90 per cent. alcohol until a uniformly pink colour obtains.
8. Wash in water; allow to dry; mount in Canada balsam.

It is the treatment with acetic acid which affects the outer coverings of the ova, embryos, and parasites, and allows the stain to permeate the entire structure.

Application.

Faeces.—Spread a film of the faeces on a large slide. A quarter photographic plate from which the film has been removed may be utilized. The acid solution decolourizes the faecal material and softens the membranes of the ova. After stage 6 the decolourization is continued until the ground stain is a light pink. Using a Zeiss A lens the ova are then seen as small deep red spherules or ovoids. Their detailed structure is well defined under the high power.

Sediments from Secretions and Cyst Contents.—By these means the proteid constituents are stained a uniform light eosin shade. Hooklets and ova are stained red, and stand out sharply against the pink background.

Filaria.—For the demonstration of these and other organisms infesting the blood stream Leishman's method gives results far superior to those obtained by using Jenner's dye eosin and methylene blue, haematoxylin and eosin, iron alum haematoxylin, fuchsin, or resorcin fuchsin. It stains the sheath a delicate pink, the granular material a deep blue, and both of pale, as well as the muscular cutaneous layers, are well cleared. An advantage possessed by this acid eosin method over that of Leishman is that the sheath stands out sharply in light red, the body is a bright, deep red, and the granular material purple, and a better lantern picture can be obtained. With Leishman's stain the red corpuscles are formalized and the white corpuscles present the usual colouring of the granules. With this staining method the red corpuscles are only outlined, but the coarsely eosinophilous granules

stain deeply and are easy to count. The total result is very effective.

Adult Parasites.—When segments are stained in this way the internal structures, particularly the reproductive organs and the ova, are well brought out. It is best to allow the parasites or the segments to remain in the acid solution for about one hour, and in the eosin solution over a night. After thorough drying with absorbent paper they are cleared in clove oil or xylol for twenty-four hours and then mounted in balsam.

Spores.—My colleague, Dr. J. A. Nixon, working with certain fungi of the skin and hair, informs me that he finds this device gives very satisfactory results with those spores which are only stained with difficulty by the methods usually employed for this purpose.

The Milroy Lectures

ON

KALA-AZAR,

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

BY LEONARD ROGERS, M.D., F.R.C.P., I.M.S.,

PROFESSOR OF PATHOLOGY, CALCUTTA.

LECTURE III.

THE LIFE-HISTORY OF THE PARASITE, MODE OF INFECTION, AND PROPHYLAXIS.

[ABSTRACT.]

I HAVE now dealt with kala-azar both collectively as an epidemic and individually as a disease, but have still to discuss the evidence I obtained in Assam regarding its infectiousness before describing the life-history of the parasite which produces it.

When I went to Assam in 1896 there was much difference of opinion as to whether kala-azar was infectious or not, the majority holding that as it was certainly malarial it therefore could not be infectious, while a few contended that it was certainly a communicable disease, and therefore it could not be simply malarial in nature, but no one had found time to inquire into the exact way in which it spread. In order to settle this important point I travelled over 150 miles on foot from village to village, and obtained the histories of the introduction of the disease into them from the head men, who return all the deaths, and who were always able to give me detailed information on the subject. Very similar stories were constantly related to the effect that some one suffering from the disease had come to live in the village, usually with relatives, and then others, who resided in the same house, were shortly afterwards attacked, and on the survivors of the first infected household being taken into other families they in turn suffered, while after a year or two the disease became widespread, and frequently from one to two thirds of the people eventually died of it before it began to decrease. Wherever the infection had spread a similar kind of history was obtained, while whenever a village had escaped, although surrounded by infected ones, it was found that for some reason or other they had no communication with each other, even if only a few hundred yards apart. Thus a small village of Brahmins, who had no intercourse with the infected low caste people around them, escaped, although all the surrounding villages had been attacked for several years. Again, one part of a village, which was separated from the rest by only a few small rice-fields, remained free for years owing to their head man not allowing them to have any intercourse, even with their relations in the infected portion. On the other hand, on visiting a village which was reported to be infected, although all those around it were free, I found that it belonged to people who had recently moved there from a badly-infected part of the district, bringing the disease with them. The extreme steps which the people themselves sometimes took to prevent the spread of the disease is also strong evidence of its infectiousness in their eyes. For example, a girl, who had married a man in a healthy village, but soon after was found to be suffering from kala-azar, was turned out, while her own father, in a neighbouring uninfected village, was prevented from taking her into his house, so she was living in a hut erected in the open rice-fields at the time of my visit. The same plan of isolating cases of the disease was adopted by the Garos, who are reported to have gone so far as to render the patients comatose with drink and then burn them in their huts. All the evidence goes to show that the infection is, as a rule, obtained by sleeping in a house with infected persons for a longer or shorter time, in some cases only for a day or two. Moreover, the plan of moving the village to a new site appeared to have a distinctly good effect in lessening the disease when occasionally resorted to by the people themselves, so that I thought the infection might possibly pass through the soil. It was on the knowledge of the infection being largely a house one that I based the prophylactic measures which proved so successful long before the parasite of kala-azar was discovered, but now that we possess much more definite information regarding the true pathology of the disease it will be best to describe the life-history of the protozoal organism of kala-azar before taking up the important practical question of prophylaxis, as the latter will thus be rendered more definite.

THE PARASITE OF KALA-AZAR AND ITS DISTRIBUTION IN THE HUMAN BODY.

The parasite of kala-azar was independently found by more than one observer, but to W. B. Leishman, R.A.M.C., belongs the credit of having had the courage to first describe it, two and a half years after he had seen it, as probably a degenerate stage of a human trypanosome, not very long after that organism had been found in a fever in Africa by the late Dr. Dutton, while Rose Bradford and Plimmer had previously described a form of the *Trypanosoma brucei* similar to the bodies Leishman found. As soon as Leishman's paper reached India, C. Donovan, I.M.S., recorded that he had independently observed the same bodies in the spleens of patients dying of prolonged fever in Madras one month before Leishman's note was published, and as he was also able to find them in fresh spleen blood obtained by puncture of the organ during life, he was able to disprove Leishman's suggestion that they were degenerate trypanosomes, for the flagellate form of the organism has never been found in the human system. Laveran and Mesnil, after examining specimens sent by Donovan, concluded that the organism was a piroplasma, while J. H. Wright of Boston, at the end of 1903, described similar bodies to those of Leishman and Donovan in a form of chronic ulceration met with in the Punjab known as Delhi boil, in which D. D. Cunningham had, as early as 1885, described the aggregations of these peculiar bodies. As kala-azar is unknown in the Punjab there is good reason to believe that the parasite of Delhi boil is quite a distinct species from that of the Assam fever.

In 1896 I had stained smears of kala-azar spleens with aniline dyes without being able to distinguish these bodies, which are not well shown by them, while Romanowsky's stain and its numerous modifications had not then come into common use, and I mainly used fresh unstained blood films, as then advised by Sir Patrick Manson and others, for searching for malarial or other protozoal parasites. The papers just referred to appeared while I was on leave in England, and I quickly realized, as was also suggested by Donovan, Ross, and others, that if many of the cases previously known as "malarial cachexia" were really caused by the new parasites, then kala-azar of Assam must be also produced by it, for I had shown in my report that the Assam outbreak was but an epidemic form of the so-called "malarial cachexia." On returning to India at the end of 1903 I obtained some slides of spleen blood of kala-azar patients from my friend, Dr. Dodds Price, and readily found the new parasites in them, as well as in several cases of chronic spleen fever in the Dinajpur district, which were evidently the sporadic form of the same disease. At about the same time Dr. Bentley independently found the same parasites in kala-azar cases, and published his observations shortly before my own appeared in print. Other cases in Dinajpur with large spleens following chronic fever showed only malarial parasites in their spleen blood; and I found it impossible at a single examination to differentiate between the two forms clinically, although subsequently able to do so by the blood changes, as described in my last lecture. It is not, therefore, surprising that kala-azar has been so long confounded with chronic forms of malarial fever; and the discovery of the new parasite has done more towards clearing up the fevers of Bengal

and some other parts of India than anything since Laveran's description of the parasites of malaria. Over a year later, in 1905, S. P. James, I.M.S., also recorded having found the Leishman-Donovan parasites in 67 out of 68 cases of kala-azar, and gave some valuable clinical information regarding the differentiation of this disease from chronic malaria, the discovery of the new parasite having now furnished the key to the problem which a century of clinical observation has been unable to unlock.

Distribution of the Parasite in the Human Body.

It soon became apparent from the observations of Manson, Low, Ross, and especially of S. R. Christophers, I.M.S. (who had been placed in special duty by the Government of India to work at the subject in Madras), that the organism may be found in practically every organ of the body in variable numbers, although most numerous in the spleen, bone-marrow, and liver. They were also occasionally observed in the mesenteric glands, and more rarely in ulcers in the intestines, and both Manson and Christophers suggested that they might escape in the faeces, and so reach water through which reinfection of others might take place. When a little later I discovered the flagellated form of the parasite, Dr. Bentley announced that he found trypanosomes more commonly in fish from near kala-azar-infected lines than elsewhere, and suggested that they might be a stage of the human parasite. I made some observations in Nowgong to test this hypothesis the same year, but was unable to confirm the correctness of his statement as far as that district was concerned.

Now Christophers's microscopical studies showed that the parasites multiplied mainly in the large endothelial or macrophagic cells of the spleen and bone-marrow especially, until the invaded cells bulge into the lumen of the vessels. During the operation of spleen puncture those containing the largest parasites rupture most readily, and the organisms thus obtained are nearly all the larger capsulated ones in contrast with the many minute ones seen in a spleen smear made *post mortem*. A similar rupture of the distended endothelial cells must also frequently take place naturally in the body, and so allow of the entrance of the parasite into the circulating blood and its distribution to all parts of the body, a hypothesis which also explains the large number of the organisms found in just those organs where the malarial parasites also accumulate—namely, the spleen, bone-marrow, and liver, while I have also several times found them in the brain.

This leads me on to the consideration of the frequency of the parasite in the peripheral blood, for it was the supposed great rarity of such incidence which gave rise to the theory of its escape from the large bowel as the source of infection, which was so generally held before my discovery of the flagellated stage of the parasite. Yet Donovan, Christophers, and James have all met with the parasites within the leucocytes, chiefly in the polynuclears, although no one has confirmed the statements of Donovan, Laveran, and Mesnil, that they may be seen within the red corpuscles, other workers considering that they are only rarely seen lying on the surfaces of the red discs. Recently Donovan has reported that he has found the parasites in the peripheral blood of 7% per cent. of his cases, while W. S. Patton, I.M.S., now on special duty in Madras, informs me that he detected them in a still larger proportion of specially selected advanced cases. Donovan stated that they are most easily found during high fever, but I have been unable to confirm this, while it is also contrary to Patton's experience, who finds they are commonest in the later stages of the disease, so that it is doubtful if a microscopical examination of the finger blood for the parasites will prove of much diagnostic value in the difficult early cases of the disease. In a few cases I have tried the plan of quickly centrifuging for one minute 2 or 3 c.cm. of vein blood to separate the majority of the red corpuscles, and then making slides of the blood plasma and leucocytes after a second longer centrifugation; there was little success, but I think it is worthy of further trial as it may prove preferable to the sometimes dangerous spleen puncture as a diagnostic method. However this may be, it is now quite clear that the parasites are at least present in the circulating blood in large numbers in most advanced cases, quite sufficiently to readily allow of their entering the stomach of any blood sucking insect which might form a suitable host for its further development.

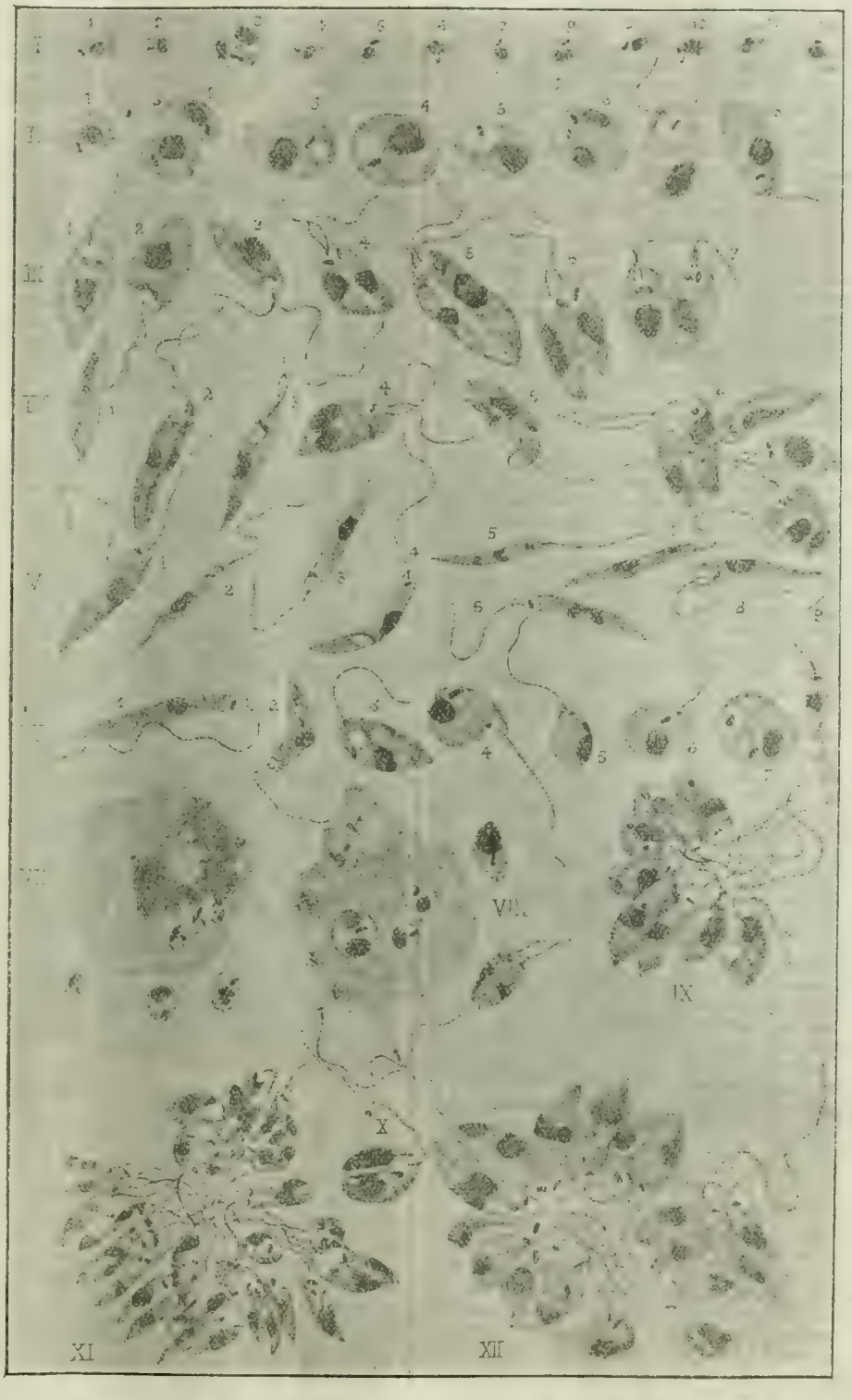
The Cultivation and Development of the Flagellated Stage of the Parasite.

Up to July, 1904, the only stage of the parasite known was the small oval body, about the size of a blood plate, with a rounded macronucleus and a smaller rod-shaped micronucleus or centrosome, such as are shown in the first line of the diagram. These multiplied by division, so that in spleen smears a number of very small bodies may be seen in a single cell with no very definite capsule to them, but recognizable by the double nucleus; or a number of them might be found in a hazy material, first taken for a zoogloea mass, but now known to be but the protoplasm of the cell in which they were growing. It is not surprising, then, that there was much speculation as to the precise class of protozoa to which this organism belonged, suggestions varying from degenerated trypanosomes of Leishman, piroplasma of Donovan and Laveran, spores of a microsporidian of Christophers and an entirely new genus which Ross proposed to call Leishmania donovani, in honour of the two observers who first described the parasite, being put forward.

As it was clear that we could not expect to gain much further knowledge of the exact nature of the parasite until we learnt something of the extra corporeal stages, and the discovery of such further portions of its life history was alone likely to throw valuable light on the mode of infection of the disease it produces, I set to work on these lines as soon as possible after my return to India, and was fortunate enough to obtain important results. The method employed was to obtain human blood containing the organism by means of spleen puncture and to add it to about 1 c.cm. of sterile salt solution containing a little citrate of soda to prevent the blood clotting, and to examine it frequently to see what became of the parasites. My first attempts were made at blood heat, with the result that they all died out in a day or two, as other workers had also found. Being struck with the resemblance of the macro- and micro-nucleus of the parasite to those of trypanosomes, just as Leishman had been, and remembering that Laveran and Mesnil had succeeded in keeping the later organism alive for a much longer time at a low temperature than at blood heat, I next tried incubating the citrated blood at about 27° C., and found that in this way they lived for several days, and what is more they appeared to multiply considerably, many dividing forms being present, but as yet without any other material alteration. On next reducing the temperature to about 22° C. (an ice incubator having to be used during most of the year in Calcutta for this purpose), I was soon rewarded by finding that not only did the parasites unquestionably multiply rapidly, but they also increased in size and developed a blue-staining protoplasm, and after a time the further development of flagellated forms took place, which were actively motile.

The different stages of this remarkable development are shown in the diagram, which has been made from a plate published in a paper in the *Proceedings* of the Royal Society last year, all the forms in which have been accurately drawn to the same scale with a camera lucida, thus illustrating the extraordinary increase in the size of the parasite as well as in its numbers. Whereas the human stage of the parasite appears to be no larger than a blood plate, and requires careful search with an oil immersion lens for its detection, yet the large rosettes shown in the lower part of the diagram can readily be seen as a stained mass, or in unstained specimens as a lighter circular area, among the red corpuscles with a ⅔ in. lens. The form in which the parasite is found in the human body is shown in the first line of the plate. The earliest stages of the development, which are shown in the second line of the plate, consist in an enlargement of the macronucleus, without any corresponding change in the micronucleus, which remains a small rod throughout the whole process. At the same time the protoplasm, which is clear in the spleen form of the parasite, now becomes much increased in quantity, and takes on a blue coloration with Romanowsky stains, Leishman's modification of which was used throughout this inquiry. The next change is a curious one, namely, the appearance in the protoplasm of a rounded mass which takes on the red

element of the stain, so may well be termed the eosin body, and the micronucleus is always found to be closely attached to it, while the flagellum arises from it. This form is seen in Nos. 3 to 6 of Line II, while the last two forms of that line show the flagellum arising from it, and apparently separated from the micronucleus by a narrow unstained space, although a study of degenerating flagellate forms proves that the flagellum is really organically connected with the micronucleus, for it comes away from the body with it, as shown in Form X. This flagellated stage rarely appears before the third day in successful cultures, and when the development is carried on under the most favourable conditions (to be described presently), they are found in enormous numbers, and showing all the stages of subdivision, which are illustrated in the third line of the diagram. In this process of multiplication of the flagellated forms the first change is the division of the micronucleus and flagellum into two, next the macronucleus also divides, and then a line appears down the centre of the body splitting it into two, the process being quickly commenced again by both the new forms. In this manner the rapidly dividing forms push each other round, as shown in Fig. IX, until they form a complete rosette of No. XII, the flagella all pointing in towards the centre, and in this stage such groups can readily be seen in fresh specimens by low powers with the flagella actively waving in the middle of the mass. Lastly, the individual forms, which up to now are mostly only two or three times as long as they are broad, gradually elongate out and begin to break away as shown in No. XI, to form single exceedingly active organisms, which when stained have the appearance shown in Line V, the eosin-staining micronucleus and flagellum being both situated at the anterior end of the organism, while the macronucleus still remains about the centre. The forms in Line VI are the retrogressive stages of degeneration resulting from contamination of the culture with staphylococci. Forms VII and VIII show early development within a polynuclear leucocyte.



Development of hepatomonas of kala-azar. × 1,500.

For a long time I was in doubt whether this flageliated form was but a stage in the development of a trypanosome, similar to some of the culture forms of bird trypanosomes obtained by Novy and McNeal on blood-agar medium — a method of culture with which I have failed to obtain success in any stage of the kala-azar parasites. Now that extremely numerous, very active, and apparently fully-developed flagellate forms have been obtained, without any tendency for the micronucleus to even approach the macronucleus being seen, much less any sign of an undulating membrane, I have come to the conclusion that the parasite is not a partially developed trypanosome, but another kind of flagellated organism.

Nature of the Parasite.

The discovery of the flagellated stage of the parasite

affords much help in classifying it, for now that the life-history of the *Piroplasma canis* has been worked out, and it is known that it has no flagellated stage, the suggestion of Laveran and Mesnil that the kala azar parasite belongs to that genus may be put out of court. It also appears from what has just been said that it is not a trypanosome, and it appeared to me to be more closely allied to the hepatomonas than to any other known flagellate protozoon. As repeatedly sending specimens to English zoologists failed to elicit any opinion on the point, I forwarded some to the late Professor Schaudinn, unfortunately too late to obtain an answer before his lamented death; but I received an early reply from Dr. Hartmann, of the Hamburg School of Tropical Medicine, which was to the effect that the organism differs from all hitherto known flagellates, so may most conveniently be called the Leishmania-donovani, as suggested by Professor Ross, while as he informed me that this was also the opinion of Dr. Schaudinn, it may safely be adopted.

Such a startling discovery as that just related necessarily needed confirmation before being generally accepted, but this was soon supplied by Assistant Surgeon G. C. Chatterjee, working in my own laboratory, and some three months later independently by S. R. Christophers in Madras (the publication of whose observations was much delayed by the Government regulations applying to him), while several months later still J. Statham, R.A.M.C., and Leishman also confirmed my work in England.

Conditions Affecting the Development of the Flagellate Stage.

In my earlier cultures the amount of development obtained was extremely variable, for although in nearly all cultures the earlier stages were seen, yet only about in one in six was the flagellate stage reached, and then usually it was very scantily present as compared with the enormous numbers of slightly developed bodies. This variability and incompleteness of the development pointed to the experimental conditions being still far from the most favourable ones for the extra-corporeal stage of the parasite, and led me to carry out a long series of observations extending over a year, in order to try to ascertain the optimum conditions for its development; this might be expected to furnish a clue to those under which the flagellate forms exist in Nature, and so to the probable mode of infection of the disease it causes. Over one hundred cultures were made before success was obtained, in the course of which a number of negative conclusions were arrived at, which are not without some practical bearing on the problem.

Temperature Limitations.—It was early found that a temperature far below that of the human body is essential to success, from 20° to 22° C. being the optimum one, while I have never got very marked development above 25° C. or 26° C., exposures to higher temperatures than this for but a few minutes causing rapid death and degeneration of all the developing forms—a point of the greatest importance in connexion with the season of the year when the infection of the disease takes place, as pointed out in my last lecture. The minimum temperature below which the change will not take place has not yet been absolutely settled, owing to the short cold season in Calcutta, but as far as my observations go they point to from 15° to 17° C., or about 60° F., as the lower temperature limit, which is in accordance with the seasonal prevalence of the disease given.

Sepsis.—Another point of crucial importance is the sterility of the culture tubes, especially as regards micro-cocci, contamination with bacteria during the frequent examinations of the tubes having been always followed by rapid death and disintegration of these protozoal parasites. Experiments carried out in this direction, to test the effects of a possible explanation of the occasional favourable effect on the fever of kala-azar following septic complications already referred to in my last lecture, with the object of partially explaining why the parasites have never been found in the faeces in those occasional cases in which they are present in the lumen of ulcers in the intestine, while it renders this mode of escape from the body and the ordinary source of infection extremely improbable. As I was also unable to obtain any development in sterile water, this agency, which is probably rarely effective in Nature when at a temperature suitable to the development of the parasite, may also be put out of court as the common vehicle of infection, especially as all clinical experience is also against it. Different strengths of salt solution were tried, and only showed that somewhere about that of the blood or slightly higher degrees were most favourable to the process.

Anaerobic Conditions.—An atmosphere of hydrogen or nitrogen gas prevented the development without killing the organism, which might develop well on the cultures being again placed under ordinary atmospherical conditions, once more pointing to the intestinal canal as unfavourable for the process. On the other hand, an atmosphere of oxygen gas did not appear to affect the development.

Acid Medium.—All the negative results just mentioned, taken together with a number of facts regarding the conditions influencing the spread of the disease ascertained during its study in Assam, led me to the conclusion that the mode of the infection must be through some biting insect. As the mosquito seemed to be an unlikely agency on account of the strictness with which the infection appeared to be limited to houses containing cases of the disease, I strongly suspected that pest of Indian life, the homely bedbug, to be the culprit. During some earlier unpublished examinations of the contents of the stomachs of bugs from the beds of plague patients for bacteria I had been struck by the frequency with which the contents were absolutely sterile—a somewhat unexpected result. I therefore tested the reaction of the fluid in the stomachs of these insects after sucking human blood, and found it to be distinctly acid, the secretions of the organ being evidently sufficient to neutralize the natural alkalinity of the imbibed blood. This fact led me to try the addition of a drop or two of weak sterile citric acid solution to the infected citrated human spleen blood, so as to neutralize or faintly acidify the medium, and at last my patience was rewarded by obtaining a far more abundant and uniformly complete development of active flagellated forms than I had ever seen before in scores of cultures, the rosette-like groups being especially abundant and active. What was most striking and important was the fact that, instead of the vast majority of the organisms showing little or no development (but very few reached the flagellate stage in the previous alkaline blood cultures) in the acidified medium all the organisms appeared to develop uniformly, so that when, about the third day, the flagella began to be seen it was found that the vast majority of the organisms, which were multiplying with extreme rapidity, had already reached this advanced degree, and a day or two later few or none remained in the original small undeveloped stage. It was clear, then, that this acidified sterile fluid blood medium kept at a temperature of about 20° C. to 22° C. was extremely favourable to the growth of the extra-corporeal stage of the organism, and might with a very great degree of probability be relied on to furnish the long-wanted key to the most likely intermediate host of the parasite. All the developmental forms in the diagram have been drawn from one of these acid cultures.

Feeding Experiments.

The success of the acidified blood as a culture medium having now greatly strengthened my suspicion that the bedbug is the carrier of the infection of kala-azar, I next tried a variety of methods to induce these insects to swallow infected human blood placed in sterile capsules of different kinds, but without success, as they refused to be tempted to suck the blood. In order to ascertain if the stomachs of these particular insects was likely to prove suitable for the development the plan was next adopted of mixing human spleen blood containing the organisms with about an equal quantity of the fluid contained in the stomachs of these insects after feeding on human blood, in sterile capillary tubes, and I thus also succeeded in obtaining the development of fully flagellated forms at the suitable temperature, so that it only remained to find similar forms in these insects after feeding on kala-azar subjects to complete the proof that they may actually be the carriers of the infection, as far as it is possible to do so as long as no animal is known which takes it, for it would not be justifiable to try to infect human subjects with such a deadly disease, and hitherto all attempts to inoculate the ordinary laboratory animals or even monkeys have failed. As far as I know the

anthropoid apes have not been experimented upon owing to the difficulty and expense of obtaining them, one orang-outang which I got for the purpose having died too soon to enable this point to be settled.

As sufficiently numerous feeding experiments with such insects to be of any value require much time, I spent in Assam all the leave I could obtain last year when the temperature conditions were favourable for this purpose; but, although I examined blood from the stomachs of over 200 bugs fed on kala azar patients with low powers in a fresh condition for active flagellate forms, I had met with no success when I had to stop on account of my eyes, and have only been able to find time since to examine a few of the stained slides then made. This failure was disappointing, but the time available for the work was so short that I did not regard the negative result as in any way invalidating my theory; I was therefore much pleased to learn several months later that W. S. Patton, I.M.S., had been placed on special duty to work on similar lines, and still more when it was announced in the *Indian Medical Gazette* that he had obtained some development of the kala-azar parasites in the stomachs of bedbugs, but not in those of mosquitos, ticks (with which S. R. Christophers had previously obtained negative results) or lice. While on a visit to Madras last Christmas holidays Dr. Patton kindly showed me his specimens, which clearly contained the early stages of the development with the appearance of the eosin body, and in one of his drawings a short flagellum was also apparent. They struck me as being very similar to the scanty development I obtained before using acidified media, and gave me the impression that the conditions were not those most favourable to the process; and on inquiry I found that attention had not been paid to the obtaining the most favourable temperature for the development, so I urged him to do as many feeding experiments as possible during the then more favourable cold season, when the optimum temperature could be obtained. The result has fully substantiated my opinion, for within three weeks Patton wrote to me: "I have got the complete cycle of the parasite up to completely-developed flagellates"; and added, "There is no shadow of doubt that the bedbug transmits the disease."

Much doubtless remains to be done in this direction in order to ascertain exactly in what form the parasite is again inoculated into the human subject, for the long time during which the infection clings to houses points to the possibility of it being transmitted through the progeny of the first affected bugs, just as occurs in the case of the piroplasma of cattle and dogs; hence that the ovaries and salivary glands should be carefully examined in fed insects for further stages of the parasite. Nevertheless, our knowledge of the life-history of the kala-azar organism is now sufficiently known to enable the facts to be made practical use of in the prophylaxis of the disease, which is the last portion of my subject remaining to be considered.

THE PROPHYLAXIS OF KALA-AZAR.

I have already mentioned the partial success of moving infected villages to new sites but a short distance away, which, taken with the strong evidence I collected in 1897 as to the infection being a house one, appeared to me to afford the most promising basis for preventive measures. Finding also that over a year before I went to Assam Dr. Dodds Price, suspecting the disease to be infectious, had placed 150 out of 200 freshly-imported coolies in newly-built lines of houses, while the remaining 50 had to be accommodated in infected lines for want of room, I got him to work out the results of this measure. It was thus ascertained that although none of the 150 in the new lines had suffered from kala-azar during two years they had been on this badly-infected tea garden, yet no less than 8, or 16 per cent., of those placed in the old lines were already dead of the disease, and that, too, in spite of the fact that the new lines were but 300 yards from the old ones, a distance insufficient to prevent the spread of malaria through the agency of mosquitos.

This very important result obtained by Dr. Price encouraged me to suggest the further step of moving all the healthy people out of infected lines to houses on a new site, no person, however, being taken from an infected hut in consequence of the impossibility at that time of differentiating the early stages of kala-azar from ordinary malarial fever. This plan was carried out by Dr. Price in the case of a coolie line which was so badly infected that no less than 144 out of 240 souls were either actually suffering from kala-azar or had cases in their households, leaving only 96 who could be moved to the new site, 5 of whom were very shortly afterwards sent back on account of their developing fever. A large number of fresh coolies were also drafted into these new lines, so that eighteen months later it contained 416 souls, among whom not a single case of kala azar had occurred, a statement which happily remains true at the present time, ten years after they were occupied.

In marked contrast with this result is the fact that of 60 coolies who refused to move out of the infected lines no less than 20, or one-third, were attacked within the eighteen months, and a year ago they had nearly all been carried off by the disease, although their houses were only 400 yards from the new ones which remained healthy. This experiment was so conclusive that it has since been often repeated with uniformly good results, so that the disease is no longer as dreaded as it used to be by tea planters in the Nowgong district. In slightly-infected lines only the affected households were segregated and their houses burnt, this measure being also of value, although less effective than the former one. It is only in the few remaining old lines that the infection lingers at the present time, and I am glad of this opportunity of saying that Dr. Dodds Price deserves the greatest possible credit for initiating and successfully carrying out these measures, especially as he has been too modest to claim it himself. It is not too much to say that it is now certain that this awful scourge can be robbed of most of its terrors whenever it is possible fully to carry out segregation measures, as on tea estates, while their success has encouraged the application of the same principles in dealing with the spread in villages, as far as they are practicable in that case.

MEASURES TO CHECK THE SPREAD OF KALA-AZAR IN THE VILLAGES.

It was not possible to carry out such complete measures as the above in the infected villages, but the following recommendations of mine proved successful in preventing the spread of the disease into the eastern half of the Brahmaputra Valley, as already described. In the first place, a pamphlet in the vernacular was widely distributed, explaining, in simple language, the manner in which the infection was spread and the precautions necessary to prevent its introduction into unaffected places, and by thus putting the people on their guard against the insidious invasion of the disease they were often enabled to keep it at bay without having to learn the lesson by bitter experience. In the second place, assistance was given by the Government to already infected villages to remove to a new site, the infected persons being, as far as possible, accommodated in a separate place.

It may, then, be fairly claimed that much practical good resulted from my inquiries of 1896-7, both in the prevention of the further spread of the disease up the Assam Valley and also in its being practically stamped out of the Nowgong tea gardens, and it is worthy of note that all this was accomplished before the exact nature of the disease was ascertained by the discovery of the parasite in 1903. Moreover, the success of the measures based on the theory that the disease was essentially a house one is readily accounted for by the bug theory of infection, which has now received such strong experimental support.

THE DESTRUCTION OF BEDBUGS AS A PROPHYLACTIC MEASURE.

Just a year ago, several months before Dr. Patton's successful feeding experiments, I arranged with Dr. Dodds Price for him to try the effect of repeated attempts to destroy all forms of insect life in the infected houses and those immediately around them in a coolie line in which kala-azar cases continued to arise each cold weather, leaving a second slightly-infected one as a control. The houses were fumigated with burning sulphur, the beds thoroughly washed with strong boiling carbolic lotion, the clothes either boiled in the same solution or destroyed, while the blankets were all burnt as being most likely to harbour bugs, new clothes and blankets being supplied. In the line which was thus treated 6 cases had occurred during

the cold season of 1905-6, all in adjoining houses, and the disease seemed to be slowly extending, so that Dr. Price considered this spot to be "a regular hotbed of kala-azar."

I have just received the results of this experiment up to the beginning of February, thus including three-fifths of the cold season, when fresh cases of kala-azar mostly appear, and so far no coolie has been attacked in the disinfected lines of houses. Satisfactory as this result is, it must be admitted that it is not quite conclusive, because in the control slightly-infected line, which was not disinfected, there have also been no fresh cases of the disease, although this is not altogether surprising, as since last year all the cases in this control line have either died or recovered, leaving no foci in it from which infection was likely to take place, so that, as Dr. Price remarks in his letter, new cases would have been much more likely to have occurred in the disinfected than in the untreated lines.

The result of this effort to destroy bedbugs in the houses infected with kala-azar is, at any rate, most encouraging, and in view of Dr. Patton having now proved that the parasite can develop into the flagellate stage in the stomachs of bedbugs fed on kala-azar patients and kept at the right temperature, it may safely be laid down that somewhat similar disinfecting operations to those just mentioned should be carried out in all houses from which kala-azar patients are received, for this measure may be expected to do much towards preventing the disease running through the families of poor Europeans in the way I have described, and the terrible mortality in children in particular may be greatly lessened. In this way it is not too much to hope that as much may be done to reduce the present terrible loss of life due to the sporadic form of kala-azar in Bengal and Madras—at any rate among Europeans—as has already been accomplished in limiting the spread of the epidemic in Assam, and stamping it out in coolie lines; and thus the knowledge regarding the life-history of the parasite obtained by the investigations of the last four years may supplement and extend the scope of the prophylactic measures previously put into successful operation to stem the progress of the Assam epidemic kala-azar.

I have now completed my task, and although I have necessarily had to dwell a good deal on my own work, especially when treating of the epidemiological and clinical side of the subject, on account of the very exceptional opportunities I have enjoyed of studying these aspects of the question, I have also endeavoured to do full justice to the invaluable work of the numerous observers who have added so much to our knowledge; and in concluding I wish to emphasize the fact that the great advances made during the last few years in our knowledge of the most terrible of all tropical diseases is a pleasing instance of the recent increased interest in tropical affections, leading to combined work in different places by a number of medical men, all, happily, of British nationality.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

INFLUENZA AND EPISTAXIS.

REFERRING to Dr. Brown's memorandum on the above in the BRITISH MEDICAL JOURNAL of February 9th, p. 314, during a recent influenzal epidemic I had a corresponding case to that described by Dr. Brown. On January 26th I was called to a case. The patient, a man aged 30 years, had a temperature of 105° F., a rapid pulse, and some headache, not very severe; there was no coryza, nor any constitutional symptoms beyond a feeling of prostration. The previous evening he had taken a dose of quinine tincture, but there was no evidence of cinchonism. I prescribed sodium salicylate and an aperient. The following day his temperature remained high—morning temperature 103° F., evening temperature 104° F.—but there was no fresh symptom. The third day the temperature was still elevated, although he had had several attacks of epistaxis during the night, and for another four days the temperature continued to range between 101° and 104° F., the patient meantime having two more attacks of severe epistaxis. After the seventh day the temperature gradually became normal. Throughout there was no evidence of chest affection nor of nasal and throat complications, nor any history of such in the past.

Barmouth. J. PUGH-JONES.

THE following case, which occurred a short time ago, resembles that described in the BRITISH MEDICAL JOURNAL of February 9th, p. 314. The patient was a labourer, and previously healthy, who had what appeared to be an ordinary attack of influenza, with a temperature on January 10th of 102° F. He had violent headache and pains in the limbs, but no cough and nothing abnormal in the lungs. He was ordered sodium salicylate 15 gr. every four hours. On the 11th he was not much better, but on January 12th he had epistaxis, losing about 2 oz. of blood. On the 13th he complained of stuffiness in his nose, but the frontal sinuses were not tender to percussion. In the evening he had another attack of epistaxis, losing this time some 3 oz., while a good deal of purulent mucus escaped with the blood; the temperature was still 102° F. On the following day, January 14th, epistaxis again occurred, and more thick mucus escaped, so the salicylate was discontinued and he was given pinus sylvestris and creosote in boiling water for inhalation and was much relieved. The temperature then became normal and epistaxis ceased. Whether the epistaxis was the accompaniment of an ordinary sinus suppuration of short duration due to the influenza bacillus, or was due to the sodium salicylate, I have never quite decided.

Chesham, Bucks. J. E. TURNLY.

RECURRING EPISTAXIS IN A GIRL.

I WAS recently asked to attend a girl, aged 11, suffering from a slight attack of influenza; she had had a severe attack of bleeding from the nose, and on examining the blood I found what appeared to be a cast of the mucous membrane of the nose. The next day she had two more attacks, and I found another cast. She was very intelligent and healthy-looking, with a very fine and smooth skin, and it appeared that she had bleedings from her nose every second or third month.

The child's grandmother informed me that her husband's family were very subject to bleedings, especially from the nose. The grandfather has frequent attacks of epistaxis, and also suffers from bleeding piles; his brother and nephew also suffer from epistaxis. His sister had suffered from epistaxis, bleeding piles, and metrorrhagia, and died in childbirth, aged 27. His daughter, my patient's mother, suffered from epistaxis and metrorrhagia, and died in childbirth, aged 29. In all the females of this family the menstrual periods commenced at an early age. All the family, the females in particular, bruise after the slightest knock.

The case seems to be one of haemophilia chiefly affecting the females of a family, the disease being transmitted by both males and females, the males being affected in a minor degree.

I am prescribing tr. ferri perchlor., and have been advised to try suprarenal extract. The child has had no more attacks so far, but as they usually come on again after an interval of two or three months, the result of this treatment is uncertain.

Congleton. R. BARING DAVIDSON, L.R.C.P. and S.Edin.

DEFECTIVE DEVELOPMENT OF LEFT CANALICULUS.

T. P. was sent to me recently for conjunctivitis and epiphora. His left lower canaliculus looked as if it had been slit up and had imperfectly united. Over the canaliculus extending from a point ⅛ in. from the punctum to the inner canthus was a shallow groove, its base formed by a thin translucent impermeable membrane. He informed me that he had never had an operation performed upon his eyelid. Apparently this was a congenital condition due to imperfect closure of the walls of the canaliculus.

ARCHD. STANLEY PERCIVAL, M.A., M.B.Cantab.

DEAFNESS IN MYXOEDEMA.

I was interested in reading the case of Mr. Rous Kemp in the BRITISH MEDICAL JOURNAL of February 16th, for a patient of mine, a man aged 56, has had attacks of myxoedema off and on for the last four years. The

condition always yields to the thyroid treatment. Previous to the first attack four years ago his hearing was unimpaired. But on each occasion, in addition to the usual symptoms, he invariably becomes so deaf that he has to be shouted at loudly to hear anything at all.

Derby. Jas. W. King, M.B., B.S.Dunelm.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

C. A. Ballance, M.V.O., M.S., F.R.C.S., President, in the Chair.

Monday, March 4th, 1907.

Diagnosis and Localization of Cerebral Tumours.

Dr. Charles E. Beevor delivered the third of the three Lettsomian lectures on the diagnosis and localization of cerebral tumours. In tumours of the parietal lobe posterior to the ascending parietal convolution, the general symptoms, headache, vomiting, and optic neuritis tended to be absent or to appear late in the disease; the fits were general or began with a sensory aura; paralysis of the side opposite to the tumour, with the accompanying alteration of the reflexes, was absent, slight, or occurred late, unless the tumour extended deeply, and involved the internal capsule; hemianaesthesia and hemianopia on the opposite side occurred frequently, and if they were permanent it would show that the sensory fibres and the optic radiations were destroyed. If the tumour were in the *left* parietal region, word-blindness, either transient or permanent, was present. Tumours of the pituitary body were then discussed by Dr. Beevor. From its proximity to the chiasma the optic fibres, which came from the inner or nasal half of each retina, were liable to be pressed upon by a tumour growing in the pituitary body, and thus produced blindness of the inner half of each retina. Therefore, in tumours of the pituitary body patients suffered from the loss of vision for the outer half of the field of vision of each eye or bitemporal hemianopia. In a certain number of cases of acromegaly enlargement of the pituitary body had been found, and in those cases bitemporal hemianopia had been present. The chief symptoms of tumours of the posterior part of the optic thalamus were that involuntary movements were not much affected unless the internal capsule were involved, but involuntary movements and ataxia of the opposite limbs occurred; the tendon or deep reflexes were slightly increased or were normal; the superficial reflexes were normal or absent. Sensation was affected both objectively and subjectively; in the former all forms of sensation were involved but not absolutely, and it was more marked at the periphery. Subjectively, in some cases there were severe pains in the limbs and hyperaesthesia, which was sometimes so severe as to prevent use of the limb. Hemianopia occurred if the postero-inferior part of the thalamus was involved. The other special senses were not affected. The majority of extracerebellar tumours grew from the flocculus or the auditory nerve in the anterior part of the posterior fossa in the angle between the cerebellum and the pons close up to the petrous part of the temporal bone, and compressed those structures without actually involving them. Occasionally they met with cases in which the tumour lay more posteriorly in the cerebellar fossa of the posterior fossa, and that would compress the lateral lobe of the cerebellum and would give probably the same symptoms as an intramedullary tumour of the lateral lobe. In both extracerebellar and intracerebellar growths the headache was severe and vomiting was nearly always present, and optic neuritis was more early in its appearance in intramedullary than extramedullary tumours. Of the localizing symptoms, vertigo or giddiness was a frequent symptom in both forms of tumour. True vertigo was either a feeling, which the patient had, that objects were revolving round him, or the feeling that he himself was revolving round his own axis. In both forms of tumour the patient thought that objects were going in the direction away from the side of his lesion. Taking first extracerebellar tumours, compression of the auditory and facial nerves was a very common symptom, and as a result they had loss of hearing to sounds heard through the air as well as those conducted by bone; also tinnitus, buzzing, or switching, and facial paralysis involving all parts of the face; occasionally the fifth nerve was pressed upon, and especially the sensory part causing numbness, tingling, or loss of sensation of the face on the same side as the tumour; also, in many cases paralysis of the sixth nerve with weakness of the external rectus; rarely the ninth, tenth, and twelfth nerves. This compression of the cranial nerves did not occur in intracerebellar tumours. Motor symptoms occurred on the same side as the lesion. That showed itself in the conjugate movements of the eyes, so that there was difficulty in turning both eyes towards the side of the lesion, and that was attended by nystagmus, slow jerking movements, when the patient looked towards the side of the lesion. That occurred in both forms of tumour, perhaps more in extracerebellar. In the limbs on the same side as the lesion in intracerebellar lesions there was diminished power, and in a few cases it was observed that the muscles of the spinal column, the erector spinae of the same side, were weak. That paresis was more common in intracerebellar cases. Associated with the hemiparesis there was loss of tone, so that the muscles of the limbs on the same side as the lesion were flaccid and flail-like, and though in locomotor ataxy that flaccid condition was associated with absent knee-jerk, in cerebellar tumour it was often combined with an increase of that reflex. If a normal person executed a movement against a resistance which was suddenly removed, he was able to prevent the movement being carried on by bringing into action the antagonist muscles, but in cerebellar tumours that power appeared to be lost. Also ataxy of the paretic limbs, which was not increased when the patient closed his eyes, showed that its origin was central, and was not due to peripheral sensory changes, as in locomotor ataxy. Associated with inco-ordination was the condition in the paretic limbs of the same side; the patient could not rapidly pronate and supinate. In extracerebellar tumours there were irregular tremors in both arms when they were horizontally extended, while in intracerebellar tumours they were absent. The peculiar reeling, staggering gait had been known for some time. It was best likened to that of a person trying to walk on a rolling ship at sea, but with a tendency to go to one side more than the other. The difficulty had always been to determine to which way the patient tended to fall. The patient tended to stagger and deviate towards the side of the lesion. He would thus walk in a circle; but he knew his weakness, and tried to counteract it by bringing forward the shoulder on the same side as the lesion. Another way of testing which side was affected was to make the patient stand on one leg and then on the other, and it would be found that he was more unsteady on the leg of the same side. That walk occurred in both forms of tumour. In tumours affecting the vermis in the middle of the cerebellum the reeling was more uniform, and the patients tended to fall backwards or forwards. In extracerebellar tumours the knee-jerk was not altered, while in intracerebellar tumours of one side the knee-jerk on that side was, if anything, diminished; but that was very uncertain, and Dr. Beevor did not consider that any definite conclusion could be drawn. The diagnosis of cerebellar tumours from cerebral was made by a comparison of the symptoms given above with those which were found to exist in tumours of the cerebrum. The absence of mental symptoms, of sphincter troubles, of epileptiform attacks; the presence of a reeling gait, associated with deviation—say to the left—with weakness of movements of the eyes to the left, and paresis of the left limbs without alteration of the reflexes would be in favour of an intracerebellar tumour of the left lateral lobe; whereas deafness and facial paralysis of the left side, with the weakness of the eye and limb movements of the left side, and with weakness and rigidity of the right limbs, together with increased knee-jerk and extensor plantar reflex, would be due to an extracerebellar tumour of the left side.

PATHOLOGICAL SOCIETY OF LONDON.

Dr. F. G. Hopkins, F.R.S., Vice-President, in the Chair.

Tuesday, March 5th, 1907.

Two Cases of Cystinuria, with Excretion of Diamines.

Dr. F. H. Thiele recorded the above. The first was fully investigated. In addition to the cystine present in the urine, there was an excretion of cadaverine. An examina-

tion of the faeces showed the presence of the same diamine, but, in addition to this, putrescine was present, and in chief amount. Under carbohydrate diet, the cadaverine in the urine diminished. The cystine remained as before. The result of a meat diet was to increase the cystine to a slight extent, as well as the cadaverine. When tyrosin was given by the mouth it was not recovered from the urine. The patient's own cystine (extracted from the urine) was administered to him, but as no increase appeared in the urine excreted it was evident that it had been broken up in the alimentary canal. No amido acids other than cystine were present. In the second case the diamine found in the urine, with the cystine, was cadaverine.

The Excretion of Creatinin in Pseudo-hypertrophic Muscular Dystrophy.

Dr. E. I. Spriggs recorded some observations upon a case of the above. The patient was a man aged 29, who weighed 7 st. 12 lb., and who had suffered from the disease for eight years. The wasting of muscles was very pronounced. The patient was placed upon a diet of starch and cream, and the creatinin in the urine regularly estimated. The result was in accord with the view commonly held, namely, that it was diminished. It was diminished not only relatively but absolutely. The conclusion was that the appearance of creatinin in the urine must be connected with muscle work. This, nevertheless, had been challenged. The speaker did not deny that other substances, such as lecithin, might furnish creatinine, but he thought that muscle was the chief source.

The Chairman drew attention to the fact—which was of importance in setting a standard of excretion—that the amount of creatinin excreted by children was less than in the adult, and that in the adult it declined as age advanced.

A Case of Sulphaemoglobinaemia.

Dr. A. E. Russell and Dr. J. B. Leathes reported this. The patient was a woman, 30 years of age, suffering from chlorosis, which diminished under the use of iron. She was subject to fits of dyspnoea accompanied with extremely rapid breathing. The respirations would then become very slow; cyanosis was extreme and of a peculiar blue tint. The pulse remained unaffected. The patient's blood on spectroscopic examination gave the spectrum characteristic of sulphaemoglobin. Great improvement took place under a diet of carbohydrates and fruit. As the blood condition consists in an abnormal amount of sulphuretted hydrogen in the blood, the urine was examined, as it was thought that the condition might be due to some interference with the oxidation of sulphur in the body-metabolism. In the urine there was a diminution of organic sulphate and an increase of the inorganic. The observation supported the theory though it did not prove it.

Dr. S. West and Dr. Wood Clarke referred to a case studied by them, and already recorded. The patient had been the subject of long standing anaemia before the onset of the proper symptoms. The cyanosis was extreme, though the dyspnoea did not take the form described in the preceding example.

An Apparatus for Estimating the Electric Conductivity of Small Quantities of Liquids.

Dr. O. Gulbenkian exhibited the above apparatus. He was not prepared without a long trial to state how far it might be reliable as an aid to diagnosis.

Dermatological Society of Great Britain and Ireland.—At a meeting on February 27th, Dr. Leslie Roberts, President, in the chair, Dr. V. H. Kettle showed a young man, aged 18, with a large pigmented area over the right scapular region, extending outwards over the shoulder joint and back of the arm. It was said to have been present for only a twelvemonth. Microscopically, there was marked thickening of the rete mucosum, with an increased deposit of pigment. Mr. A. Sutton showed a case of *Para psoriasis* (Brocq) in a girl of 16, who had been treated for syphilis to no effect. The trunk and limbs were covered by a fawn-coloured, slightly scaly eruption, which was non-infiltrated. Dr. A. Eddowes exhibited microscopic specimens from a case of *Actinomycosis* (?) in a man, aged 62, with severe *lichen planus*. A case of this disease was also exhibited by Dr. T. Mearns Tracey, in which the condition was of long duration, the buccal mucous membrane being also affected. Dr. J. H. Stowers showed a little girl of 8 with *Multiple warts* approaching to the "hystrix" type. The growths were found to be more or less symmetrically distributed over the entire body and limbs, being especially grouped upon the borders of the axillae, the buttocks, groins, inner side of the arms, and backs of the hands. Many of them were surmounted by hairs. The condition was congenital, but no other members of the family were similarly affected. Mr. G. W. Dawson showed a young woman with *Acute lupus erythematosus* affecting the face and the dorsum of the hands and fingers of eighteen months' duration. Dr. G. Norman Meachen exhibited a man, aged 67, with *Syphilitic leucoderma* affecting the dorsum and sides of the penis and scrotum. There was also present an infiltrated eruption in the hypogastric region and perineum. The primary infection had occurred forty-nine years previously.

Aberdeen Medico-Chirurgical Society.—At a meeting on February 7th, Dr. Galloway, President, in the chair, Dr. A. W. MacIntosh read notes of a case of *Myasthenia gravis* in a woman aged 31, with no family or personal nervous history. Bulbar symptoms first appeared—difficulties of articulation, swallowing, and mastication, and diplopia, ptosis, and external ophthalmoplegia; great general weakness of the limbs and ready exhaustion of muscles on exertion soon followed. Under treatment nutrition markedly improved, but the limbs remained weak and easily tired; no sensory disturbances; no trophic signs; no fibrillary tremors; no rigidity appeared at any time, and the sphincters were quite intact. Apart from occasional head pain, none of the general symptoms of cerebral tumour were present. The involvement of cranial nerves was very marked. There was double ptosis and external ophthalmoplegia, profound paralysis of the upper facial muscles and of the elevators of the lower jaw; great weakness of the facial muscles, with the "nasal smile of Gowers," great difficulty of articulation, mastication, and swallowing. The lips, tongue, palate were markedly involved; weakness of the respiratory muscles, with weak and useless cough. The tongue appeared to become smaller and somewhat wrinkled. The orbicularis palpebrarum gave the myasthenic reaction; many of the symptoms varied greatly in severity from time to time, and most of them were aggravated by continued use of the muscles involved. An alarming attack of syncope occurred, followed by a tendency to attacks of dyspnoea, and death ten days later from collapse of lung and aspiration pneumonia. The duration of illness was about eleven months; no autopsy was permitted. Special attention was drawn to the difficulty of distinguishing myasthenia gravis from hysteria and chronic bulbar paralysis. At present one could only agree with Gowers in regarding myasthenia as a nutritional disorder, impairing the vital processes in the muscle, although Farquhar Buzzard's observations on the constancy of slight changes in a limited number of muscular fibres in every one of his cases was suggestive.—Dr. Petrikkin read a paper on the treatment of *Acute otitis media*. In the first stage, relief of pain was the most urgent indication, one of the best remedies for this being a solution of carbolic acid in glycerine, 10 to 20 gr. to the ½ oz., with or without the addition of 10 gr. of cocaine hydrochlorate. A few drops of this solution warmed and instilled into the ear every hour or two generally brought relief. Where it failed, ear baths might be used, the meatus being filled with hot boracic solution, which should be allowed to remain for a few minutes, hot boracic fomentations being applied between the baths. Poultices encouraged sloughing of the drum. An analgesic antipyretic was frequently useful, and an aperient was often necessary in the evening. If the remedies failed to give relief in twenty-four hours, incision of the membrane should be practised. In the milder cases a vertical incision in the posterior inferior quadrant was sufficient, but in the more severe cases the incision ought to be carried up the whole extent of the drum and on to the postero-superior wall of the meatus. Under some circumstances incision was indicated earlier, and ought not to be postponed—the indications being a bulging membrane, high temperature, vomiting, convulsions, or any sign of cerebral irritation, and also any mastoid tenderness. The drum should be incised at

once in otitis media occurring in the course of the zymotics. The most useful local anaesthetic was one composed of equal parts of menthol, cocaine hydrochlorate and carbolic acid. After the membrane had ruptured or been incised treatment must be directed to the promotion of drainage. Frequently syringing with a warm mild antiseptic such as boracic acid was enough to bring about healing, but if discharge continued, after some days peroxide of hydrogen might be used. This was best done before syringing so as to prevent irritation of the meatus. In the few cases where even this was not enough to effect a cure boracic spirit drops, used after syringing, frequently gave benefit, but should not be used until all acute inflammation had subsided. It was advisable in using the drops that tragal massage should be practised until the spirit was felt in the throat. Insufflation of boracic powder was not good as routine treatment; it might lead to the blocking up of discharge, and even cause mastoid abscess. As to mechanical aids to drainage, middle-ear inflation ought not to be done while there was much pain, but otherwise was useful. The application of suction to the middle ear was complementary to inflation and did not replace it, as stated by some opponents of inflation. Treatment of any concurrent lesion of the throat and nose was of the utmost importance, and where it was of non-operative character it ought to be undertaken at once. Operative treatment, such as the removal of adenoids, ought to be undertaken as soon as the temperature had become normal; it ought not to be put off until the otitis was cured. If discharge continued from the ear at the end of six weeks the mastoid antrum ought to be opened. It was a mistake to wait for the classical symptoms of mastoid disease, as the patient might be very deaf before these appeared.

Leeds and West Riding Medico-Chirurgical Society.—At a meeting on February 15th, Dr. Bampton in the chair, Dr. Telling and Mr. Gruner read a paper on actinomycosis, narrating some unusual cases. In one the disease had affected the back of the hand of a girl of 24. It was regarded as tuberculous, and had resisted surgical and *x*-ray treatment for two years; it readily cleared up under large doses of iodide of potassium (reaching 6 drachms a day at one time) combined with immersion in baths of hot biniodide of mercury lotion (1 in 2,000) daily. In another case the disease had affected the external and middle ears and the mastoid cells. A radical mastoid operation was performed by Mr. Constable Hayes, and this, combined with the administration of iodide of potassium, had effected a rapid cure. Three cases of the disease affecting the abdomen were also described, and the clinical and diagnostic features of the disease as it affects the abdominal viscera were discussed.

Clinical Society of Manchester.—At a meeting on February 19th, Dr. J. F. Le Page, President, in the chair, Mr. Knyvett Gordon, Medical Superintendent of Monsall Hospital, read a paper on the treatment of enteric fever. While he had nothing new to say, it seemed well to emphasize the importance of certain measures which, though adopted for some time in most fever hospitals, deserved somewhat more attention in private practice than they usually received. Among these was a thorough cleansing of the mouth in all cases, with removal of carious teeth when present; the so-called characteristic dry and brown tongue was more often due to oral sepsis than to typhoid fever alone. A diet of milk exclusively was not desirable even if digested, the typical typhoid stools being in the majority of instances due to milk dyspepsia, and not to enteric fever alone. The cold bath should not be used as a routine measure, but was of great value in selected instances, chiefly when toxaemia was present though without consequent degenerative cardiac changes. Similarly neither alcohol in small doses nor intestinal antiseptics should be employed as routine treatment, the latter producing or increasing diarrhoea. There were disadvantages in giving opium for every variety of abdominal pain, the chief being that it prevented an accurate diagnosis of perforation if such occurred. But if haemorrhage from the bowels supervened, it was necessary to give opium in large doses, and take this risk. In perforation, the patient's only chance lay in prompt laparotomy, with suture of the intestine; it was not advisable to wash out the abdominal cavity. Dr. Marsden, while agreeing with the outlines (including early feeding in selected cases) of the treatment of typhoid fever described by Dr. Gordon, expressed the opinion that some form of hydrotherapy should be used as a routine measure in the management of the disease. He stated that he was averse to the withholding of such treatment until a certain temperature had been attained, and recommended rather that, for their tonic effect and for their ability to increase the excretion of toxins, one of the various forms of hydrotherapeutic measures should be adopted and regularly applied during the acute stage, the exact form chosen being adapted to the patient's condition, age, and to the severity of the attack. Dr. J. N. Williams emphasized the necessity of carefully watching for distension of the bladder, as, even in moderately severe cases, distension might occur without pronounced symptoms of retention, and the timely use of the catheter would occasionally vastly improve the general condition of a case which appeared to be doing badly.

Midland Medical Society.—At a meeting of the Midland Medical Society held on February 13th, the President, Dr. Arthur Foxwell, in the chair, Mr. R. H. Rollinson-Whitaker showed a case of Graves's disease in which he had tied the two superior thyroid arteries. The patient was a woman of 46 who had suffered from Graves's disease for fifteen years, and who for the last four years had practically been bedridden, unable to walk more than a few steps and those with great difficulty, and often unable to feed herself from weakness and tremor. The operation, undertaken after three months' treatment in a nursing home, was performed under a local anaesthetic. After forty-eight extremely anxious hours, during which the patient showed signs of commencing acute thyroidism—great restlessness, vomiting, delirium, temperature 102°, pulse 180, respirations 44—she commenced to improve rapidly. Sixteen days after the operation pulsation in the thyroid had almost disappeared, the gland had diminished in size by 4 in., and the pulse had fallen to 100. The general condition had gradually improved up to the present time, when the patient was able to attend to her household and social duties and to walk considerable distances in all weathers. Mr. W. Billington showed a case of leontiasis ossea. A girl, aged 19, presented symmetrical bony outgrowths on each side of the nose. The nasal processes of the superior maxillae were chiefly involved. Her facial appearance was typically leonine. The nasal ducts were obliterated, and there was commencing nasal obstruction. The girl was a congenital syphilitic. The disease began six months ago, and had progressed steadily and painlessly. Mr. Lucas and Mr. Hall-Edwards showed a case of lymphadenoma treated with marked improvement by the *x* rays. The patient was a middle-aged man, with large masses of glands in the neck on the left side, in the left axilla, and in the left groin. He was exceedingly emaciated, cachectic, and so feeble that he could hardly stand, his breathing becoming laboured on the slightest exertion. The patient had not responded to ordinary therapeutical measures, but after a fortnight of *x*-ray exposures he commenced to improve, and at the end of two months all the glands had disappeared, and this disappearance of the glands was associated with a very marked improvement in the general condition, so that at the present time the patient was able to take long walks without undue fatigue. Dr. Emanuel showed a case of hyperidrosis. The patient was a man of 53, who had been troubled with a profuse sweating after any exertion, affecting the left half of the face, head and neck, and upper part of trunk as low down as the intermammary line, an area corresponding to the distribution of the sweat fibres in the cervical sympathetic. The condition followed a severe attack of influenza, and had persisted unchanged for two and a half years. The pupils were equal, and reacted equally to light, accommodation, shade, and cocaine. There was no exophthalmos, and no retraction of either lid. The question raised was whether this was due to partial paralysis of the right cervical sympathetic, with anidrosis of the right side of the face and a compensatory hyperidrosis of the left side, or to irritation of the left cervical sympathetic, or to a neurosis of central origin. Mr.

J. FURNEAUX JORDAN showed two specimens, the first a large, soft, oedematous fibroid of the uterus removed from a woman aged 48. She had suffered so severely from haemorrhage that she could not sit up without fainting, and, since it continued under treatment and rest in bed, operation was imperative. Her convalescence was prolonged. The second was a large, pure fibromyoma of the right ovary removed from a woman aged 59. It was associated with great hydroperitoneum and an umbilical hernia. The recovery was good. Dr. MILLER showed blood films from a case of leukaemia. The patient was a man of 46, who died after an illness of some three or four months, in which breathlessness, lassitude, haemorrhages from mucous surfaces, irregular temperature, and an enlarged spleen and liver were prominent features. Three weeks before death the blood count was as follows: Red corpuscles, 1,500,000; white corpuscles, 30,000; haemoglobin, 22 per cent.; colour index, 0.73. There was marked poikilocytosis with macrocytes and microcytes, numerous nucleated reds, of which a large proportion were megaloblasts. Of the leucocytes a considerable proportion were myelocytes, both finely and coarsely granular, and there were many basophiles and large lymphocytes. The spleen weighed 40 oz., and microscopically showed a typical leukaemic condition, with multiplication of the endothelial cells and some fibrosis. The liver gave the iron reaction. Dr. PURSLOW showed: (1) An ovarian cyst which had undergone spontaneous rupture. The patient had noticed a gradually-increasing swelling of the abdomen for five months, and two weeks before admission had been seized with sudden severe abdominal pain and vomiting lasting three days. The abdomen was opened, and a gallon of free fluid escaped from the peritoneal cavity. The cyst was removed after tying its pedicle; it contained a small quantity of similar fluid, and there was a free opening on its upper aspect. It proved to be a multilocular papillomatous cystoma. The patient made a good recovery. (2) A cystic kidney which, before removal, had exactly simulated an ovarian cyst. The specimen was from a single woman of 37, who had noticed a gradually-increasing tumour in the abdomen for two years. There were no other symptoms, and it was not till the abdomen was opened that the true nature of the tumour was ascertained. The peritoneal investment was divided, the tumour emptied by means of a trocar and then enucleated, and the pedicle tied. No drainage was employed. The patient made an uninterrupted recovery.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 6th, Dr. E. POWELL, President, in the chair, Mr. J. MACKIE showed a patient whom he had treated by operation and *x* rays for sarcoma of the pharynx. When first seen, sixteen months ago, the left tonsil, pharyngeal pillars, soft palate, and posterior third of the tongue were involved in growth, practically the whole area of which was ulcerating. The cervical glands on the left side were involved, one standing out larger than a walnut. Treatment by *x* rays was at once begun, and a rapid improvement immediately followed. In less than two months the pharynx was healed, but there was no improvement in the glands and an extensive operation was performed for their removal. There was a slight return in the pharynx some two months after, and *x*-ray treatment was again carried out with satisfactory results, since then there had been no further return, and the pharynx had now been healthy for six months. Dr. W. R. SMITH (Beeston) showed a specimen of soft, rapidly-growing carcinoma of the breast from a woman aged 50, and forming a dense, semi-encysting mass before removal. The pectoral muscles and axillary glands were removed in one large mass; this was not difficult, as the growth was practically encapsuled. Dr. Smith also showed a specimen of ovarian dermoid cyst removed from a patient aged 36 and containing teeth, hair, and skin. The uterus was removed at the same time for fibroma, and in removing the cyst, which was the size of a child's head, an abscess connected with it was accidentally ruptured. Drainage had, therefore, to be provided, and this proving insufficient a month later further facilities for drainage had to be made. The patient then made an excellent recovery.—Dr. C. H. CURTIS read a paper entitled "Some Remarks on Typhoid Fever. He first related the case of a woman, aged 27, who in the third week of the fever suffered from suppurative parotitis and double optic neuritis. The rarity of the latter affection in typhoid fever was commented upon, and a report on the condition of the eyes by Mr. W. G. Laws was read. There was much effusion with haemorrhages on both discs, the papilla being raised at least one millimetre. For some days vision was almost if not quite abolished. The swelling was massive and had the "choked disc" appearance. Although this was suggestive of increased intracranial pressure the symptoms did not indicate the existence of meningitis. The patient made a good recovery with $\frac{6}{6}$ of vision in the left (the better) eye. She could see to do her house-work and find her way in the streets in the daytime. Altogether 40 patients had been treated during the past twelve months, with 6 deaths, equal to 15 per cent., but of these 4 lived less than five days in hospital and were moribund when admitted. Of the two other fatal cases, one was in a healthy young man of 18, who, after a mild primary attack, died of exhaustion during a relapse occurring after the temperature had been normal for over a fortnight and the patient had been up and dressed. The other fatal case was in a woman of 30, who died of perforation in the third week. No operation was done, as her condition seemed too bad for surgical interference to offer any hope. Nevertheless, the opinion was expressed that operation ought, as a rule, to be performed as offering the only chance of recovery, which occurs in 30 per cent. of such cases. Allusion was made to the practice of giving far less alcoholic stimulant in typhoid fever than was the case twenty or even fifteen years ago. In bygone days it was a common practice to order twenty or more ounces of brandy in the twenty-four hours. Nowadays 6 oz. is a maximum for the great majority of cases, 2 oz. or 3 oz. being frequently quite sufficient. In the above series of cases more than three-fourths of them received no stimulant at all. The paper was discussed by the PRESIDENT, Drs. T. HENDERSON, A. B. DUNNE, F. H. JACOB, J. H. THOMPSON, and others, and Dr. CATTLE replied.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At a meeting on February 13th, Dr. A. HILL GRIFFITH, President, in the chair, Dr. SOUTHAM showed two specimens of *Cystine calculi*, one removed from the bladder of a male, aged 32 years, by suprapubic lithotomy, the other passed per urethram by a female aged 22 years. In both instances the urine presented evidences of cystinuria. This paper was published in full in the JOURNAL of March 2nd, p. 489. Drs. ORR and ROWS gave a lantern demonstration of lesions of the cranial nerves in *General paralysis of the insane*, and of those produced experimentally in animals by the action of toxins. It was pointed out that the lesions always commenced in the intramedullary part of the nerve, exactly at the point where the neurilemma sheath was lost, leaving the extramedullary part unaffected. The change in the nerve was described as a primary degeneration of the myelin, leading to a variety of appearances namely, round or oval globules, long moniliform filaments, and short or elongated fusiform masses. Dr. EUGENE YONGE read a paper on *Obstruction of the periglandular vessels* of the nasal mucous membrane in relation to the production of mucous polypi. It was generally admitted that a mucous polypus of the nose was, essentially and in its earliest stage, a patch of mucous membrane which had become oedematous, and that the pedunculated appearance which polypi commonly exhibited was the result of physical causes acting on the primary patch of swollen oedematous mucous membrane. Various theories had been advanced to account for the primary oedema which represented the first stage of a mucous polypus, but no one of them had been considered to be a sufficient explanation of the process. The theory which the reader of the paper presented for consideration was that the initial oedema, which occurred in the mucous membrane, and was the first stage in the process of polypus formation, was a serous infiltration of the tissues, the result of the obstruction of certain definite capillaries and veins. Pathological and experimental evidence was advanced in support of this contention, and a number of specimens, illustrating the point were exhibited. Other specimens were exhibited as card specimens.

REVIEWS.

THE INTEGRATIVE ACTION OF THE NERVOUS SYSTEM.

The important contribution to natural knowledge which Professor Sherrington, Holt Professor of Physiology in the University of Liverpool, has published in a volume entitled *The Integrative Action of the Nervous System*[1] consists of ten lectures given at Yale College, and constitutes the second of the series of the Silliman Memorial Lectures. The first in the series was *Electricity and Matter*, by Professor J. J. Thomson, of Cambridge University.

English science may feel proud that two men so pre-eminent were chosen, for both have contributed in their respective domains of science—physical and biological—to the advancement of natural knowledge in a degree unsurpassed by any of their contemporaries.

This work of Sherrington admirably fulfils the aims and methods of physiology laid down by the late Sir John Burdon-Sanderson, for it exhibits

> a definite and well-understood purpose, that purpose being to acquire an exact knowledge of the chemical and physical processes of animal life, and of *the self-acting machinery by which they are regulated for the general good of the organism.*

These lectures are an abstract of a long series of most valuable researches upon the functions of the nervous system, and will be of great value to the physiologist, the neurologist, and the psychologist, embodying, as they do, researches bearing upon all these branches of biological science, and illustrating in a demonstrative manner that a simple reflex is the first term of a series of which the most complex volition, involving deliberation and judgement, is the last.

The study of neural action, as the author shows, can only be accomplished by successive passages from the simple to the complex, and that, underlying all these reflex actions, whether simple or complex, are the two fundamental principles of biological evolution, adaptation to environment and natural selection, as shown by the fact that all neural action has at its root the preservation of the individual and the preservation of the species. The study of reflex action, therefore, includes not merely the *how*, but the *why* and the *wherefore*.

This work, if it only contained Professor Sherrington's own researches, would be of itself a most illuminating study, but, besides being an abstract of his own work, it is a brief chronicle of the work of others to whom the author refers with studious care and respect. Where he differs, polemical discussion is avoided. One is particularly struck by the vast labour and accurate knowledge shown in his references to the work of others, embracing as it does a bibliography of 314 publications. To include such a vast amount of material in such a small space necessarily involves very close writing, and each paragraph and sometimes each sentence will require careful reflection on the part of the reader.

The lectures deal with a comparatively new subject, and, to be concise and scientifically accurate, the author has found it necessary to introduce many new terms, which add considerably to the difficulties of reading the book, except by the light of expert knowledge.

The author in an introductory chapter points out that the physiology of nervous reactions can be studied from three main points of view. Nerve cells, like all other cells in the body, lead individual lives, and problems of *nutrition* affect each nerve cell, therefore the nervous system as a whole.

The special functions of nerve cells is "to spatially transmit states of excitement" (nervous impulses generated in them). The field of study of *nerve cell conduction* is coextensive with the existence of nerve cells and enters into every question regarding the specific reactions of the nervous system.

A third function of the nervous system is integration, "which works through living lines of stationary cells, along which it dispatches waves of physico-chemical disturbance, and these act as releasing forces in distant organs where they finally impinge."

What is understood by the term "reflex action"? It is brought about by *stimulus*, which is some change in the environment, which acts on the organism as an exciting agent. The energy imparted to the organism by the stimulus is usually far less than the energy liberated by the organism itself. This excess of energy must be referred to potential energy generated in the organism itself. The conception of a reflex action implies three separate structures: (1) a receptor or initiating organ, (2) a conductor, and (3) an effector.

Every reflex is an integrative action, and no nervous action short of a reflex is a complete act of integration. A simple reflex is probably a purely abstract conception, because all parts of the nervous system are connected together. It is, however, a convenient, if not a probable, fiction.

Sherrington further points out that co-ordination is the orderly coadjustment and sequence of reflex reactions, and absence of these is inco-ordination.

In the simple reflex, receptor, conductor, and effector, each plays its part, and Sherrington gives a number of facts and experiments which show that adaptation of the organism to environment for the preservation of the individual and the species has evolved a reflex mechanism for each of which some particular kind of stimulus is appropriate. The receptor, by virtue of special structure, acquires selective excitability, and plays a very important part in nervous reactions; for, while providing increase of responsiveness to changes of environment, at the same time it limits its excitability to particular stimuli, which give rise to particular reactions, and thus tend to prevent confusion of reflex responses and inco-ordination. We shall later give some striking experimental examples demonstrating these points.

The author next discusses *conduction* in the reflex arc, and naturally with this the question of the *neurone doctrine*. He is evidently a believer in it for the higher animals, as he expresses himself in terms which show that he desires to avoid the prefix "con" as applied to systems of neurones; for example, he writes, "the field of nexus between neurone and neurone." Again, he speaks of "a surface of separation between neurone and neuone," which he terms a "synapse." If the chain of neurones, which we know are trophically independent, are linked together by a fibrillary continuum, such as occurs in the lower forms of animal life—for example, medusa—then certain conditions of conduction would exist through these chains of neurones akin to conduction in nerve fibres. The characteristic differences between conduction in reflex arcs and nerve trunks respectively, as defined by the author, are: (1) Slower speed as measured by the latent period between application of stimulus and appearance of end-effect, this difference being greater for weak stimuli than for strong. (2) Less close correspondence between the moment of cessation of stimulus and the moment of cessation of end-effect—that is, there is a marked after-discharge. (3) Less close correspondence between rhythm of stimulus and rhythm of end-effect. (4) Less close correspondence between the grading of the intensity of the stimulus and the grading of the intensity of the end-effect. (5) Considerable resistance to passage of a single nerve impulse, but a resistance easily forced by a succession of impulses—temporal summation. (6) Irreversibility of direction instead of reversibility as in nerve trunks. (7) Fatiguability in contrast with the comparative infatiguability of nerve trunks. (8) Much greater variability of the threshold value of stimulus than in nerve trunks. (9) Refractory period, "*Bahnung*," inhibition and shock in degrees unknown for nerve trunks. (10) Much greater dependence on blood circulation—oxygen. (11) Much greater susceptibility to various drugs—anaesthetics.

These differences are referable to the grey matter, which consists of neuroglia and neurones; they cannot depend upon the former, which has nothing to do with conduction.

It is hardly justifiable to suppose that conduction along nerve fibres assumes in the grey matter characters different from those it possesses elsewhere, and there is evidence to show that the nerve-cell branches, dendrons, axons, and collaterals are histologically continuous with the nerve fibres outside; without going into further details, Sherrington argues strongly in favour of a surface of separation between neurone and neurone, and he points

[1] *The Integrative Action of the Nervous System.* By Charles S. Sherrington, D.Sc., M.D., Hon. LL.D Tor., F.R.S. London: Archibald Constable and Co., Limited. 1906. (Pp. 428. 16s. net.)

out how the existence of such a surface could physically or chemically explain the facts above related; he inclines to the physical explanation: Thus the intercalation of a transverse surface of separation into the conductor must modify the conduction, and it would do so with results just such as we find differentiating reflex arc conduction from nerve-trunk conduction. Moreover, the vertebrate histology furnishes on the whole evidence that a surface of separation does exist between neurone and neurone, and the evidence of Wallerian secondary degeneration and pathological processes, causing system degeneration, are strong arguments in favour of an intercellular or interneuronic conduction as distinct from intracellular or intraneuronic; and the characters distinguishing reflex arc conduction from nerve-trunk conduction are largely due to this interneuronic conduction. The convenient term of "synapse" has been applied to this *alterable conductor*, upon which so much of the functions of the central nervous system depends, and the study of which will probably prove to be the key to unlock the mysterious problems of neuroses and psychoses and so-called functional diseases of the nervous system which have received no adequate explanation hitherto by the histological studies of such diseases. The works of Sherrington and Pawlow on the reflexes especially those reflexes which he terms "condition reflexes"—are therefore of fundamental importance in the science of medicine and in psychology.

The synapse, as we have said, shows a variability under different conditions of conductivity, and a resistance to the passage of impulses, which Sherrington terms the "refractory phase," the importance of which in purposive reflex mechanisms cannot be overestimated. It may be defined as the period of time during which stimuli adequate to produce contraction cease to pass. A beautiful example of this refractory phase is afforded by the rhythmical contraction and relaxation of the swimming bell of the medusa, and the beating of the heart.

The scratch reflex of the dog, which by Sherrington's experiments has proved to be so illuminating, must exhibit two successive phases of contraction and relaxation in one group of flexor muscles, consequently the muscle groups or their reflex arcs must show phases of refractory state during which stimuli cannot excite, alternating with phases in which such stimuli easily excite. The swimming bell of the medusa is only capable of one type of reflex, and the reflex mechanism of sensory receptor, neuro-fibrillar conductor, and neuromuscular effector is accordingly of quite simple construction. The nervous apparatus is a nerve-net, a diffuse system in which the current can pass in all directions as shown by Romanes, but the hind limb of the dog is a complex sensory motor mechanism capable of effecting many different purposive reflex actions necessary for the preservation of the individual and the species—for example, to scratch, to walk, to run, to gallop, to squat in defaecation, to abduct or flex in micturition, etc. However, the same muscles enter into the effector and are innervated directly by the same spinal motor neurones, which accordingly form a *final common path* for a number of such reflexes. But these activities would be liable to confusion were it not for the special selective possibilities of receptors and the integrative co-ordinate adaptation necessary to fulfil a purposive action in response to a particular stimulus. Thus the character of the reflex evoked depends upon the location of the stimulus, its quality and intensity, and to a limited extent on its duration. Sherrington's experiments, which will now be given, show that the characters of a reflex may—as in the medusa and the beating heart—depend upon conditions of refractory phase. But they show more: they locate, in the grey matter, the seat of the refractory phase and the path by which the terminals of the afferent neurones of the reflex are are associated with distant effector neurones which form the final common path for other reflexes.

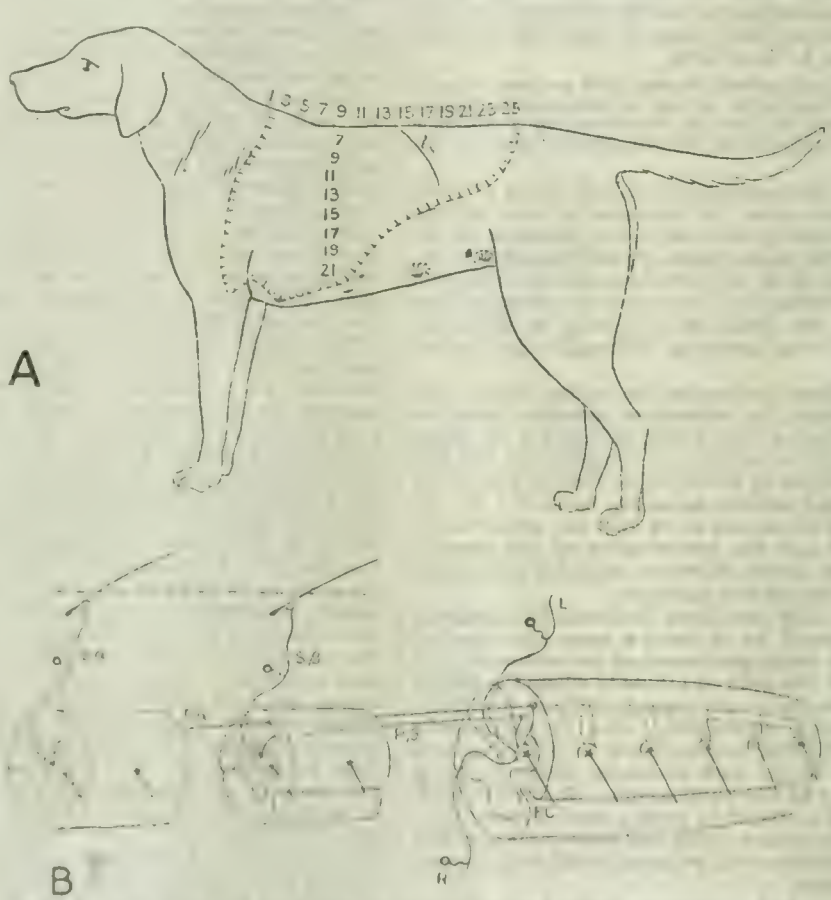


Fig. 15.—A, the "receptive field," as revealed after low cervical transection, a saddle-shaped area on dorsal skin, whence the scratch reflex of the left hind limb can be evoked. The figures indicate position of the last rib. B, diagram of the spinal arc involved. L, flexor or abductor muscle. S.B, path from the left foot. R, receptive nerve path from the opposite foot. P.S, receptive nerve path from the dorsal skin of the last side. F.L, the final common path—the cell the motor neurone to a flexor muscle of the hip, knee, and ankle joints respectively.

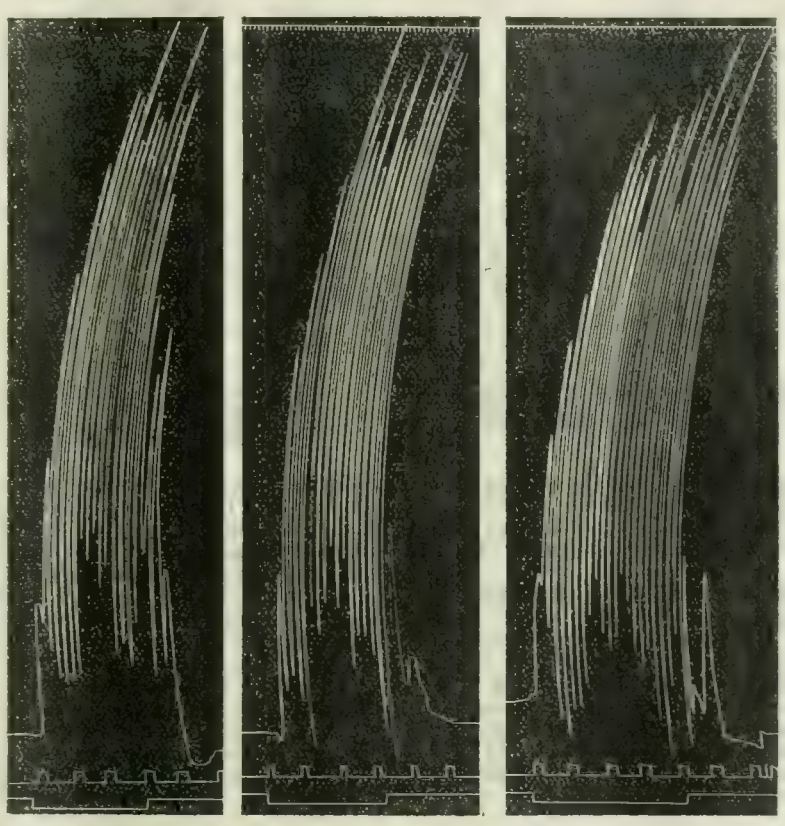
The experiments are as follows: The spinal cord of a dog is transected in the neck region; the scratch or scalp-tor reflex in a few months' time becomes very easily elicited by appropriate stimulation in a certain defined large saddle-shaped area of skin indicated in the subjoined figure (Fig. 15, A). It is interesting to note that the quality of the stimulus which may be applied to evoke the rhythmic alternate flexion and extension at hip, knee, and ankle, occurring at a frequency of about four times a second, is just such as would be produced by a flea biting or moving on the skin between the hairs, for Sherrington observes that the stimuli provocative of it are mechanical, such as tickling the skin or pulling lightly on the hairs. An electrical stimulus is most convenient for experimental purposes, but it must be applied in such a way as to stimulate the receptive nerve endings which lie in the surface of the skin about the hairs. Consequently he adopted the following method of obtaining the appropriate stimulus to call forth the reflex. A thread that electrode is placed on any part of the body surface outside the saddle-shaped receptive area indicated in the figure; the other electrode consists of a fine gilt entomological pin so lightly inserted under the skin that its point lies among the hair bulbs. If, however, it be pushed deeper, other reflexes may be produced and the scratch reflex inhibited. Clearly, then, the specialized receptor for the reflex is the superficial skin and the hair bulbs with their nerve endings.

Many graphic records are given demonstrating the fact that the succession of brief flexor contractions succeed one another at a rate the frequency of which is independent of that of the stimulation. Under a number of varied methods of stimulation—for example, a heat beam, constant current, double and single induction, shocks, high-frequency currents, and mechanical stimuli—*the rhythm* (four per second) of the flexor response remains the same so long as the internal conditions of the reflex arc remain unaltered (Fig. 14).

And the reflex maintains the same rhythm under the strongest stimuli as under the weak—these experiments show the existence of a selective receptor in the area indicated, which transmits stimuli through the posterior roots of the spinal cord between sα and sβ, but the motor spinal neurones which respond to the stimulus are situated in the anterior horn of the spinal cord far behind the region of grey matter into which the exciting impulses pass. Consequently there must be a connecting link between the grey matter at the two levels (vide B, Fig. 13). The scratch reflex is in a sense unilateral—stimulation of the left shoulder evokes the scratching action by the left leg; if the cord of the spinal dog (animal in which the cord has been previously transected in the cervical region) be semisected in the thoracic region so as to leave intact only the right lateral column, the scratch reflex can no longer be elicited by a stimulation of the left shoulder, whereas it can by stimulation of the right shoulder. The path of connexion, therefore, between receptor and effector lies in the lateral column of the same side. Sherrington speaks of this as a proprio-spinal path. He demonstrates its existence histologically by the following experiment: A transection of the spinal cord of the dog is made between the second and third thoracic segments, then there ensues a degeneration of all the fibres that enter the cord from the brain and the grey matter of the spinal cord above the lesion. If the dog be allowed to live a year, all the products of degeneration will have completely disappeared, and "a clean slate" below the lesion exists, on which a new degeneration can be written. If, then, another transection be made between the fifth and sixth thoracic segments, the proprio-spinal descending fibres which have their cells of origin in the grey matter of the spinal cord between the first and second lesions—that is, in the third and fourth thoracic segments—degenerate and can be easily demonstrated by the Marchi method.

As shown by the heavy degeneration, these proprio-spinal fibres are very numerous and can be traced from the shoulder segments to the hind-limb segments. We have then by this method of successive degeneration, clearly indicated, that the afferent neurones of the shoulder region are linked up with efferent neurones of the hind-limb lumbo-sacral region, which neurones form a final common path to many reflexes of the hind limb. The refractory phase, which we have seen, is an essential condition for the scratch reflex, has its site in the central grey matter; it is a state of inhibition or rhythmical absence of passage of stimulus from afferent terminals to efferent discharge. It must be dependent upon alternate phases of conduction and non-conduction by this proprio-spinal path.

A very interesting comparison is made by the study of the extensor thrust or stepping reflex; this is elicited by mechanical stimuli applied to the plantar surface of the foot, and the response is followed by a relatively long refractory phase; it forms thus an important reflex mechanism of locomotion, providing much of the propulsive power; its repetition is required only at intervals considerably longer than the duration of the thrust itself, for after the thrust of the foot against the ground the limb has to execute a series of movements without touching the ground, in preparation for the next step, and this occupies a longer time than the thrust. It is reasonable to suppose that part of the means by which selective adaptation has secured this result is the evolution of the long refractory phase following the activity in the reflex arc of the extensor thrust.



A. B. C.

Fig. 14 (p. 47).—Tracing of the flexion of the hip in the "scratch reflex" of a "spinal dog. In A the reflex is evoked by lightly rubbing the skin at a point behind the shoulder, in B and C by unipolar faradization with weak double induction shocks applied to the same point of skin through a needle point lightly inserted among the hair roots. Time marked in seconds below. At the top in B and C an electric signal marks the double induction shocks delivered, and at the bottom an electric signal marks the time of application of the stimulation.

One reflex seems to be precluded from acting on the motor neurones of the final common path when another and a different reflex is employing it. This is the result of a process of inhibition, the seat of which lies neither in the afferent neurone proper nor in the efferent neurone proper, but in an internuncial mechanism, synapse or neurone, between them.

There may be antagonism between reflexes employing the same final common path, and competition, as it were, between the excitatory stimulus used for the one reflex and the excitatory stimulus for the other. Thus, if while stimulation of the skin of the shoulder is evoking the scratch reflex the skin of the hind foot of the same side is appropriately stimulated, then a protective flexor-withdrawal reflex displaces the scratch reflex and instead of alternate contraction and relaxation of the flexors the foot is drawn up by steady and maintained contraction of the flexors of the ankle, knee, and hip. Graphic records are given to illustrate these and many other facts concerning reflex interference.

Lecture V deals with compound reflexes and simultaneous combination. A very interesting part of it is where Sherrington has shown that his experience in the mammal is far from being in accordance with the four laws laid down by Pflüger and so widely accepted, as regards the course of irradiation in long spinal reflexes. The author thinks that in the majority of instances irradiation is spread more easily down than up the cord; it is easy to obtain reflex movements of the limbs and tail by excitation of the skin of the pinna, whereas the reverse

is rare. He cites a number of other instances, and finally says: "It seems here less profitable to attempt to adopt these so-called laws of reflex irradiation than to briefly describe the salient features of the long spinal reflexes as exhibited in an ordinary experiment on the spinal mammal." In the reflex figure—that is, when a decerebrate animal is suspended with its spine horizontal and its limbs pendent—the observer can note ten areas whence bulbar spinal reflexes employing skeletal muscles can be obtained with facility. These areas are the soles, the palms, the pinnae, the mouth, the snout, the tail, and cloacal region. Stimulation of any one of these areas causes a particular attitude, a reflex figure, to be struck. The accompanying diagrams show three of these reflex figures. These figures indicate a purposive action of withdrawal of the part stimulated combined with the attitude of running away (Figs. 47 and 48).

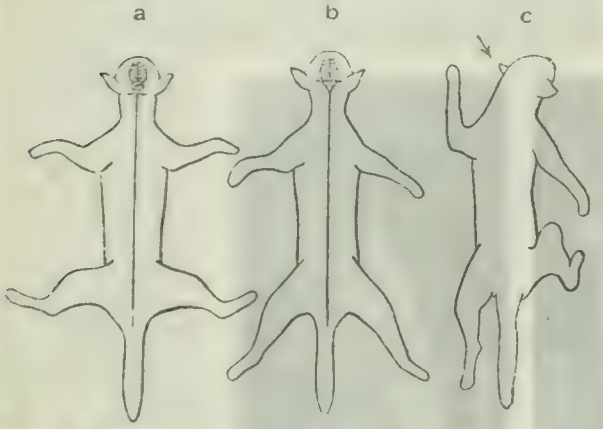


Fig. 47 (p. 164).—*a*, Position of animal after transection at calamus scriptorius; *b*, position under decerebrate rigidity; *c*, change of attitude from *b* evoked by stimulation of left pinna.

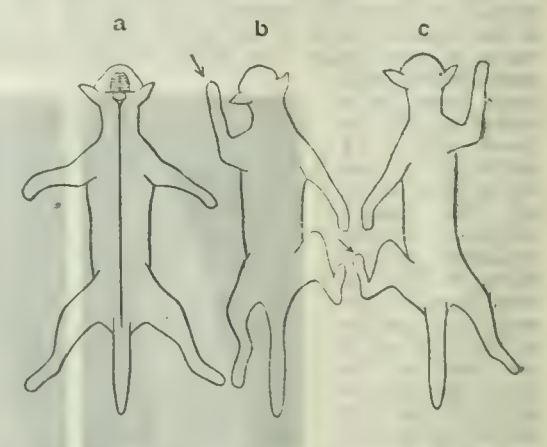


Fig. 48 (p. 165).—*a*, Position under decerebrate rigidity; *b*, change of attitude from *a* evoked by stimulation of left fore foot; *c*, change of attitude from *a* evoked by stimulation of left hind foot.

The stimulus affects only one small part of the skin, and the inflow of stimulus into the grey matter of two or three segments of the spinal cord nevertheless produces alterations in the innervation currents flowing to all the muscles of the head, trunk, and limbs, causing inhibition along certain tracts of neurones and impulsion along others. Here, then, exists an integrative action, which must depend upon proprio-spinal neurones linking up the grey matter of all the segments of the spinal cord, and bringing about a co-ordinate reflex action.

The position of the limbs in the suspended animal where decerebrate rigidity has been produced is that of slight active extension such as would exist if the animal stood on the ground. The muscular tonus exerted against the force of gravitation is in part due to impulses descending the cord mainly of labyrinthine origin, and any attitude which is assumed by the decerebrate animal as a result of stimulus applied to reflex areas that is to say a cataleptoid condition is produced. Sherrington has shown, however, that if in such an animal the posterior roots supplying a limb be cut, the tonus in it is immediately lost; presumably, therefore, the labyrinthine impulses tend to reinforce and maintain the discharge of innervation currents along established lines of least resistance in the spinal reflex arcs, especially those concerned with gait and station.

In Lecture VI the author discusses many interesting problems concerning compound reflexes and successive combinations—among others, the rôle and nature of inhibition; and he gives the different views of the nature of inhibition of Rosenthal, Wundt, Gaskell, Verworn, and Macdonald. He remarks that alternating reflexes—for example, the stepping reflex—exhibit alternately excitation and inhibition in the flexor neurones, while synchronously with that, inhibition and excitation alternately ensue in the extensor neurones, and these alternating reflexes form an excellent field for the study of the reciprocal innervation of antagonistic muscles.

MacDougall has hypothecated a drainage theory as the outcome of the study of the behaviour of visual images, and has applied it more specifically to the case of reciprocal innervation of muscles; the subjoined figure helps to explain the theory. "Let us imagine each arc in a simple schematic form as a chain of three neurones afferent (a^1), central (a^2), efferent (a^3), to the group of flexors, and afferent (b^1), central (b^2), efferent (b^3), to the group of extensors. When a stimulus is applied to a^1, it generates neuro-potential rapidly,* so that it becomes very rapidly charged and the resistance of the synapse between a^1 and a^2 is lowered until a series of discharges takes place from a^1 to a^2, and again from a^2 to a^3; but a^2 is connected with b^1 as well as with a^1, and b^2 with a^3 as well as with b^3. Before the stimulus was applied, the two muscles were in a state of tonic equilibrium, brought about by a steady flow of innervation currents through the reflex arcs; but the stimulus to a^1 so raises the generation of neuro-potential at the synapse between a^2 and a^3, and consequently between b^2 and a^3, that the resistance through this synapse is so lowered that there is a drainage through from b^2 to a^3, and the tone of the muscle-group supplied by b^3 is proportionally lowered, and relaxation occurs." (Vide text.)

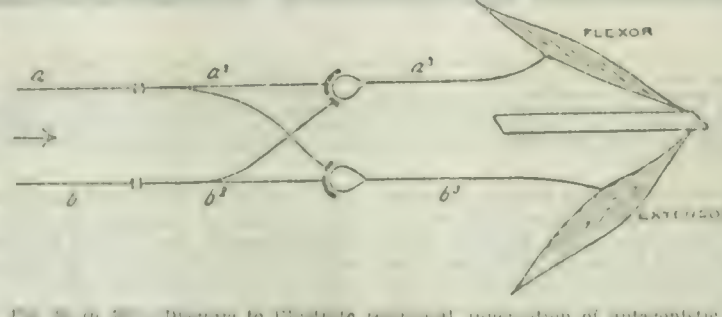


Fig. 5 (p. 3).—Diagram to illustrate reciprocal innervation of antagonistic muscles (W. MacDougall).

Sherrington remarks in reference to this ingenious theory that it fits in with many facts; against its acceptance he urges that it seems to sever central nervous inhibition from other forms of peripheral inhibition in the heart, blood vessels, and viscera, and he inclines to the view that all forms of inhibition are of the same nature.

An important and interesting subject is that of spinal shock. The author finds that in the monkey, as in man, spinal shock is not only peculiarly intense, but particularly long and lasting, thus he confirms experimentally Bastian's observation of absence of the knee-jerk in crush of the spinal cord. Whereas in the rabbit, section of the spinal cord in the mid-thoracic region seldom abolishes the knee-

* Macdougall's term is neuron. The term is, however, already applied to a tissue substance which can under certain conditions arise from nerve degeneration.

jerk for more than ten minutes to a quarter of an hour, the same lesion in the monkey is followed by the knee-jerk being sometimes abolished for quite a month. This seems to show that in the higher animals the great cerebral senses in the higher types actuate more than in the lower the motor organs and impel the movements of the individual.

From experiments with Woodworth, Sherrington concludes: (1) That the lateral column furnishes the headward path in the spinal cord for noci-ceptive (painful) arcs; (2) that each lateral column conveys such impulses from both lateral halves of the body, and somewhat preponderantly those from the crossed half; and (3) that this is true for these arcs whether they be traced from skin, muscles, or viscera.

Decerebrate cats and dogs and infant monstrosities with total absence of the cerebrum and mid-brain react to painful stimuli; and the author believes that pain centres lie lower than pleasure centres, possibly in the thalamic region. No region of the cortex has been assigned to pain.

We have not the space here to deal with the learned and interesting discussion of the views of James, Lange, and Sergi concerning the emotions. These authors have this in common—that the psychical process of emotion is secondary to discharge of nervous impulses into the vascular and visceral organs of the body, suddenly excited by certain particular stimuli, and that *it*—emotion—depends upon the reaction of those organs.

Sherrington has put their theories to an experimental test on the dog. By appropriate spinal and vagal transection all sensations from the viscera, including the circulatory apparatus, and all of the skin and muscles behind the shoulders were completely and immediately cut off from the sensorium. The animal's anger, joy, or disgust, and when provocation arose, fear, remained as evident as before in all those parts which still remained under the control of the brain. Thus it snarled, growled, showed its teeth; moreover, it exhibited evidence of pleasure when its attendant came to it.

A striking test, upon which Sherrington lays considerable stress, is the animal's disgust and refusal under any circumstances to eat dog flesh; this occurred in one animal only 9 weeks old, and he considers that the disgust for the dog's flesh could hardly arise from its own past experience in the kennel; he thus attempts to confute the hypothesis that the emotion thus generated had resulted from representative after-effects of previous association of visceral and cerebral activities. We have, however, to remember that in the long procession of ages an instinctive inborn repulsion of "dog eating dog" may have been fast graved into the whole associative neural mechanism of viscera and brain.

Lecture VIII is of especial interest, because it deals with the reactions of the motor cortex. It is unnecessary here to relate the well-known experiments of Sherrington and Grünbaum concerning the functional topography of the motor cortex in the anthropoid apes; nor to point out their important application to human cerebral localization. In this part of the work the author also describes his well-known experiments on inhibition, as first demonstrated in the eye muscles; also the experiments which he conducted with Hering on antagonistic muscles of the limbs. Moreover, he has more recently shown that inhibitory results obtainable from stimulation of the internal capsule were as striking as those obtained from the cortex itself. It is therefore probable that the inhibition elicitable from the cortex cerebri is not in these cases chiefly or at all due to interaction of cortical neurones one with another.

The fact that it is much easier to get flexor movements from cortical stimulation than extensor movements, does not mean that this cortex is in touch with the flexors alone, and not with the extensors; it means that the usual effect of the cortex on these latter is inhibition. It does not mean that the extensors and the jaw-closers are unrepresented cortically, but that their normal representation in the cortex under the ordinary conditions of experiment has the form of inhibition, not of excitation; and this, unless specially sought, escapes observation.

After administration of strychnine or tetanus toxin extension of the knee can be regularly excited from the cortex and from the very points of it that yielded flexion previously. Similarly when the face area of the monkey's cortex is tested by faradization after exhibition of strychnine, the points of surface that previously yielded regularly the free opening of the jaw, yield strong closure of the jaw instead.

There is here much valuable and interesting new work on this subject of special importance to the physiologist and the neurologist; but to all medical men certain practical applications of these experiments will especially appeal, for they give an insight into at least a part of the essential nature of the condition brought about by tetanus and strychnine poisoning. "These disorders work havoc with the co-ordinating mechanisms of the central nervous system, because in regard to certain groups of musculature, they change their reciprocal inhibitions normally assured by the central nervous mechanisms into excitations; the sufferer is subjected to a disorder of co-ordination which, though not necessarily of itself accompanied by physical pain, inflicts on the mind which still remains clear a disability inexpressibly distressing. Each attempt to execute certain muscular acts of vital importance, such as the taking of food, is defeated because from the attempt results an act exactly the opposite to that intended. The endeavour to open the jaw to take food or drink induces closure of the jaw, because the normal inhibition of the stronger sets of muscles, the closing muscles, is by the agent converted into excitation of them." Sherrington considers that the virus of rabies may similarly upset reciprocal innervation, though its field of operation, at least in man, does not lie in the same group of mechanisms. Sherrington does not consider that these results are due to the action of these agents on the cortex itself, and he gives reasons and experiments showing that the poison acts on the lower centres, spinal and bulbar.

In Lecture IX the author sums up the physiological position and dominance of the brain, and he puts together in a new light some of the considerations in the previous part of the book, and the study of this chapter will give the reader a general conception of the neural architecture of an animal as a whole, though mainly as a motor mechanism.

The last lecture (X) deals with sensual fusion, and nervous integration in relation to bodily movement and sensation is compared. The author in this chapter gives a description of his important and interesting experiments relating to sensual fusion in binocular vision. These experiments are remarkably ingenious and noteworthy for their scientific accuracy; they show the incorrectness of the generally-accepted views, held since the time of Newton, of sensual fusion by community of nerve structure, which has recently been elaborated by Cajal, who has explained binocular vision by hypothecated isodynamic cells in the visual cortex, which receive sensory visual impressions from the corresponding points of the two retinae.

Now, Sherrington's experiments conclusively prove that this is not so; it is impossible to describe adequately in a review the apparatus. The rotating lantern used is, however, constructed for the binocular regard of discoid patches of moderate, even, and uncoloured brightness, small enough to lie wholly on the central area of each retina. These discoid patches of light by an ingenious arrangement could be made to flicker (that is alternate phases of brightness and darkness) simultaneously, so that the bright and the dark phases coincide, or alternately, in such a way that the bright phases in one eye corresponded with the dark phases in the other eye; the broad outcome of the observations is that when the bright phases coincide the brightness is not appreciably increased, and so far from bright phases at one eye effacing dark phases at the corresponding spot of the other eye, there is hardly a trace of any such interference. Thus, the effect does not accord with the effect which would be produced by doubling the light brightness on one retina, which would be in accordance with Talbot's law. The two corresponding points are therefore in this respect not integrated to a single retinal surface, and Sherrington explains binocular perception as a psychical synthesis of right and left uniocular sensations independently elaborated. His views with regard to the semidecussation of the optic tracts in the higher animals is of considerable interest; he considers that the confluence of conductors from the two retinae to the same cortical

field, though not uniting their retinal impressions, gives them access to a common efferent path which both must use. The bilateral single sensory image, which lies in the median sagittal plane of the head, is the sensory directive agent for a common motor efferent path of associated eye muscles, right external rectus with the left internal rectus and the converse. This accords with the fact that in animals with an overlapping visual field the horizontal movement of the eyes to one side should for both eyeballs be represented in one and the same hemisphere. A very wise suggestion of the author is made in this lecture: it is that physiology and psychology, instead of prosecuting their studies as some now recommend more strictly apart from one another, should each profit by reciprocal instruction.

This work of Sherrington is a striking example of the clear and accurate experimental observer illuminating by his researches the complex problems of mental processes by observations on the simpler nervous mechanisms which lead to the integration of the whole nervous system. Another notable instance of a physiologist illuminating the problems of psychology is Pawlow. He, in the Huxley Lecture on the recent advances in science and their bearing on medicine and surgery, relates how there was in his laboratory a young medical man who understood the joys and the triumph of the spirit of research, who nevertheless manifested great displeasure and prophesied failure in every direction when Pawlow was making arrangements for his remarkable investigations on the psychical processes in the dog, as shown by his novel experiments on the condition reflexes. This has been the attitude in which many students of psychology have regarded the teachings of physiology; but a new era is now forthcoming, in which the application of the simpler psychical processes, correlated with the simpler structure and the evolution of the same, to the more complex, as studied by biologists in the wide acceptation of the term, will, in conjunction with the introspective method of the philosopher, serve to throw light upon the most complex mechanism of the universe—the brain as an organ of mind.

F. W. Mott.

NOTES ON BOOKS.

The Health of Our Children in the Colonies, written by Dr. Lilian Alvin Robinson, is a sensible little book which may be confidently placed in the hands of mothers with the assurance that they will have little or nothing to unlearn. Dr. Robinson resides in Natal, and the book is perhaps better adapted to the needs of persons residing in a temperate or sub-tropical country than to those whose lot takes them within the tropics. The book is commendably free from technicalities, and as the second edition issued recently is provided with an index, the work is likely to be very useful in places where medical advice cannot be speedily obtained.

Mr. Lawrence Owen has reprinted in a pamphlet his suggestive Bradshaw Lecture on *Cancer, its Treatment by Modern Methods*, which was published in full in the British Medical Journal of December 15th, 1906. We have so recently had an opportunity of commenting upon the lecture that we may be excused any formal review, but we have no doubt that many readers will be glad to possess the lecture in a separate form.

The Public Schools Year Book is the eighteenth annual volume of a publication which will commend itself to those who have boys approaching the age when they must be sent to a secondary school. The first section of the book contains an alphabetical list of schools, then follow special articles on naval cadetships, army entrance examinations, and notes upon preparation for the professions, including an article on the medical profession with a list of medical scholarships. The editors have not interpreted the popular phrase "public school" in any contracted sense, and the compilation will therefore be found useful by fathers of very different length of purse.

The Chemist's Annual, 1907, edited by Mr. J. Humphrey, is published at the *Pharmaceutical Journal* office, and the price is 7s. 6d. In addition to blank diary pages and a good deal of information of use specially to chemists, it contains a dictionary of new and old remedies, which will be of use to the prescriber as well as the chemist, for in addition to notes upon solubility, compatibility, etc., it gives trade-protected names for proprietary preparations, and a note referring to their chemical equivalents.

The papers published by workers in the Bender Hygienic Laboratory, Albany, N.Y., during 1906, have been reprinted in a volume which will be valuable for reference.[4] The papers are concerned to a large extent with experimental pathology, and less with bacteriology than might have been expected from the title of the laboratory. A curious and unusual case is that of tuberculosis of an adenomyoma of the uterus occurring in a phthisical patient.

The *Gardening Year Book*,[5] issued at the *Gardeners' Magazine* office by the editor of that periodical, contains a series of short notes on garden work during each month in the year, an illustrated and classified list of the new garden plants and flowers of 1906, and notes on seeds and seedlings, on vegetable growing, on common insect pests, and other similar subjects. We may add that the *Gardeners' Magazine*,[6] which was established some seventy years ago, has recently been improved in its get-up. The first issue of the new series—that of March 2nd—is printed on art paper, and contains much of seasonable interest for lovers of the garden.

[4] *Studies from the Bender Hygienic Laboratory, Albany, N.Y.* Vol. iii. 1906. Albany, N.Y.: Fort Orange Press. (Med. 8vo, pp. 188.)

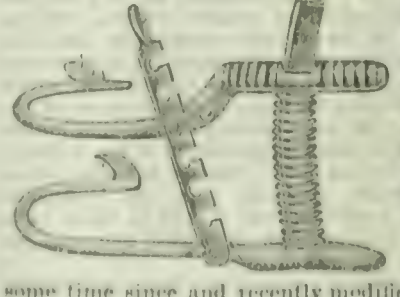
[5] *The Gardening Year Book and Garden Oracle*, 1907. By G. Gordon, V.M.H. Forty-ninth year of publication. London: The *Gardeners' Magazine* Office. (Cr. 8vo, pp. 279. 1s.)

[6] The *Gardeners' Magazine*. 2d.

MEDICAL AND SURGICAL APPLIANCES.

An Improved Gag.

John Ward Cousins, F.R.C.S., M.D.Lond., Senior Surgeon of the Royal Portsmouth Hospital and of the South Hants Eye and Ear Infirmary, writes: Gags form a class of instruments which require careful adjustment and are made in all sorts of shapes and sizes; but I do not know of any gag which is sufficient for every purpose and can be easily adapted to every mouth. The instrument illustrated is very convenient and simple, but I do not claim that its qualities render it superior to every other device of the kind. It has, however, in my hands, proved very serviceable in staphylorrhaphy, and also in many surgical operations on the mouth, pharynx, and tongue. In the British Medical Journal of February, 1903, I ventured to suggest a gag in which the bars were expanded by a strong spiral spring and fitted with a rack and screw adjustment. It was especially designed for minor operations, and also for dental surgery. The improved gag which I now propose consists of only one strong stem surrounded by a central spring similar to the instrument introduced by Mr. Annandale some time since and recently modified by Mr. Arbuthnot Lane. The upper bar slides over a round stem and is attached to the end of the spring; the lower bar is fixed, and both of them are furnished with projecting finger-plates so as to facilitate rapid adjustment and removal. When introduced into the mouth the dental surfaces are expanded by the spring, which is at once compressed and jammed on the stem by the tilting of the bar. The gag can then be securely fixed in any position by a steel lever fitted with a series of notches for receiving a tooth attached to the upper bar. The dental plates can be introduced into the mouth with or without an indiarubber cover, according to the condition of the gums and teeth. Messrs. Arnold have made for me a right and left gag, but I have used the same instrument on both sides of the mouth.



ROYAL COMMISSION ON VIVISECTION.

(Concluded from page 512.)

Vivisection and Diseases of Animals.

Evidence of Mr. Stewart Stockman, M.R.C.V.S.

Mr. Stockman, Chief Veterinary Officer of the Board of Agriculture and Fisheries, said his general duties were to advise the Board of Agriculture in connexion with the prevention of the spread of contagious diseases among animals in the country. It was a part of his duty to perform and to supervise experiments. They had one small laboratory at Whitehall Place and an experimental farm at Sudbury. Asked to give some general information as to the advances in veterinary medicine and hygiene resulting from experiments, the witness said there were two kinds of directly or indirectly contagious diseases in animals which caused serious ill health and loss of life—bacterial and parasitic. In both classes were to be found diseases communicable to human beings, such as anthrax, glanders, rabies, and tuberculosis. These came in the first category. Then there were echinococcosis and trichinosis, which came in the second. In addition to those there were many others intercommunicable to animals of the same species, and also to those of other species. It was only by experiment that it had been possible that they had arrived at an understanding regarding the life-history of the parasites; without that, measures for prevention would have been impossible. Thus, two tapeworms of man *Taenia solium* and *Taenia saginata*, had been shown to pass an intermediate stage in the form of bladder worms respectively in the flesh and organs of pigs and oxen. Human beings became infected by eating the flesh of such animals. The eggs of these tapeworms, which were excreted from the intestines, were fed to pigs and oxen, with the result that the bladder worms developed in their muscles and organs. On this knowledge were based our ideas regarding the hygienic conditions necessary to prevent animals becoming infected with those bladder worms, which might become tapeworms in the intestines of human beings, and the laws for dealing with flesh found to be so infected in the abattoirs were also based on the same knowledge. Similarly it had been shown by experiment that if the eggs of the *Taenia echinococcus*—a parasite of dog's intestine from which the eggs were excreted—were fed to animals, echinococcus cysts or bladders developed in their organs, and if the bladders were fed to dogs, tapeworms of the type *Taenia echinococcus* appeared in their intestines. Moreover, the internal organs of human beings were sometimes invaded by these cysts, and the inference was that the infected individual had eaten vegetables or drunk water soiled by the excreta of tapeworm-infested dogs. They had also learned by experiment that other destructive diseases due to bladder worms, such as "sturdy" in cattle and sheep, were due to the animals swallowing the eggs of tapeworms in their food and water. The practical outcome of this knowledge was that they knew that these affections could be prevented in man and animals by removing diseased flesh from consumption by keeping dogs away from pastures and vegetable gardens, and by freeing their intestines of tapeworms. The methods of preventive inoculation had in every case been arrived at and proved by experiments on animals, and most of the substances employed to produce immunity could only be prepared by inoculation operations on animals. When rinderpest invaded Great Britain and raged off and on between 1865 and 1869, it was estimated that in compensation for cattle slaughtered to prevent disease spreading, and in administrative expenses, it cost the country £1,119,994. In 1897 the appearance of rinderpest in South Africa resulted in the disease being studied with a view to discovering a method of preventive inoculation. The investigations were successful, and the benefits obtained from anti-rinderpest serum were recognized in every country where the disease had appeared since the method was introduced. The discovery of the serum method had been an enormous boon to South Africa. The witness further instanced tetanus, black-quarter, and swine erysipelas as diseases from which animals could be protected by inoculation. In reply to a question as to tropical diseases, the witness said that already it had been found possible to give mules a high degree of immunity against South African horse sickness, a seasonal disease which in some parts of Africa annihilated practically every horse in a district, and made the settlement of these districts almost impossible. Advances had also been made in the prevention of red water, heart water, and blue tongue. Many tropical diseases were insect-borne, and he had been able to convince himself that some of them could be imported into this country by the insect carriers on hides and in forage. It was of the greatest importance to discover whether the home insects could act as carriers of these diseases, and so establish them in this country provided they were once directly or indirectly introduced. In reply to Sir Mackenzie Chalmers as to the proportion of horses gelded in England, he said practically breeders gelded everything not good enough for stud purposes. The operation of gelding was sometimes performed under anaesthetics sometimes not. It very much depended whether the owner would pay for the anaesthetic and take the risk. He thought the majority of animals were not gelded under anaesthetics. Antiseptic precautions were used. The operation was not an experiment under the Act. Experiments under the Act were much more carefully guarded than operations done outside. In reply to further questions, he said anaesthetics were generally used in spaying bitches, but not in sows. Asked about horses used for the preparation of antitoxin, he said that in none of those he had done had he seen any material pain. He had seen a little swelling. He had never seen any of them waste away. They sometimes died.

A Physiologist's Testimony.

Evidence of Professor Starling.

Professor Starling, speaking with regard to the scope and aims of physiology, said the medical sciences had as their ultimate aim the acquisition of control over the functions of man's body. The study of these functions formed the science of physiology. Physiology must be the foundation of medicine, and any advance in it must ultimately advance medical science and treatment. It had been seriously proposed that experimentation on animals should be allowed only when there was a direct utilitarian object in view, experiments for the advance of knowledge only being prohibited. But the result of experiments of the latter kind was an addition to knowledge as a whole, and its effects might be to change the whole of the applications of that knowledge to man's needs. As instances he cited Galvani's researches on animal electricity, those of Oersted on the movements of a magnet, those of Faraday on interaction of electric currents, and those of Clarke Maxwell and Hertz on electric waves. The prohibition of experiments for the advancement of knowledge would rapidly dry up the sources of inspiration of so-called utilitarian experiments, and would result in a total cessation of scientific progress. Practically the whole fabric of physiology was the resultant of experiment upon animals. Since physiology represented the basis on which medicine, with the aid of observation on man and on cases of disease, must be built up, it was evident that in most cases it would be impossible to quote such and such an improvement in treatment as the result of any given research. In a considerable number of cases, however, it had happened that physiological fact had been capable of immediate utilization in treatment. Thus the investigation of the effects of the suprarenal capsules of the blood pressure by Oliver and Schäfer led to the discovery of adrenalin, a substance extracted from these glands, and used everywhere by surgeons as a means of controlling haemorrhage. Haldane's work on the compounds of the colouring matter of the blood with gases had led to the saving of life in mines, and had shown the proper method of treating poisoning by coal gas and charcoal fumes. Hill's work on the influence of variations in the pressure of the air breathed had shown how all loss of life by caisson disease should be prevented, and had extended the limit of safe diving from 120 to 210 ft. The experiment on localization of central functions had been of direct value in enabling surgeons to localize and excise brain tumours. The treatment of diabetic coma at the present time was the direct outcome of physiological experiments. It was through physiological experiments that surgeons learnt the possibility of excising organs, or parts of organs, and of resecting parts of the alimentary canal. The next point on which he wished to give evidence was on the places where physiological investigation was carried out. The pursuit of a pure science such as

physiology by investigation was not directly remunerative; hence the majority of those who were advancing physiology by research must gain their living as teachers. This arrangement had the further advantage that the same plant and instruments used for the imparting of a knowledge of the science to students could be employed in experimental researches. Hence it came about that practically all physiological investigations were carried out in laboratories attached to medical or scientific schools. Therefore, since physiological investigations involved experiments on animals, the animals must be such as could be kept in a healthy and normal condition, either in the laboratory itself or in buildings in close proximity to the laboratory, limited in their area and in the nature of their surroundings by the fact that in most cases they had to be placed in the middle of populous centres. The following animals came within that category—namely, the frog, mouse, rat, guinea-pig, rabbit, dog, cat, and monkey. Of these, the frog owed its value to the fact that, being a cold-blooded animal, its isolated tissues survived a considerable time after removal from the body, and could therefore be used for the study of fundamental phenomena common to all animals, such as muscular contraction, the function of nerves, etc. The guinea-pig, rat, and mouse were of chief value for inoculation experiments, such as those of diphtheria and tubercle, where large numbers of experiments had to be made, and the operation in each case was relatively simple, the answer required being generally given by the survival or the death of the animal. These animals were too small for experiments requiring complicated operative proceedings. The only animals left were the cat, dog, and monkey. The latter animal was useful, especially for experiments on the brain and central nervous system. In a sense, it had the most highly-developed nervous system, and was in that respect nearest to man. For this very reason, they would be loth to use it for experiments where animals lower in the scale would suffice. The cat and the dog were both carnivorous, and both had digestive systems presenting marked analogies to that of man. The dog, moreover, could thrive on a diet as omnivorous as that of man himself. A number of experiments could only be performed on dogs, because the corresponding organs in the cat were too small to permit of experimental interference. Examples of these were given. The results obtained on the dog could be transferred almost without alteration to the phenomena presented by the digestion in man. It was probable that the advance of knowledge on these subjects would not have taken place if the experiments involved the infliction of severe pain. The introduction of anaesthetics and new narcotics, and of the aseptic method of operation into physiology had wellnigh abolished pain from physiological laboratories, as it had from the surgical wards of hospitals. Records of classical experiments such as those made by Magendie before anaesthetics were invented or had come into general use in laboratories, were too apt to be taken as typical as those of the present day. Though he had been engaged in the experimental pursuit of physiology for the last seventeen years, on no occasion had he ever seen pain inflicted in any experiment on a dog or cat, or a rabbit, in a physiological laboratory in this country, and his testimony would be borne out by that of any one engaged in experimental work in this country. A storm of pain playing on the different functions of the body would make it impossible to judge how far any result obtained was due to experimental interference, and how much to the regular actions of the pain inflicted. It was true that the anaesthetized condition might be regarded as more or less abnormal. They were able, however, by using different anaesthetics, to vary this abnormality from one experiment to another, and thus to allow for it in interpreting the results of experiments. A physiological experiment which was painful was thereby a bad experiment. They wanted everything to be as normal as possible for a physiological experiment. The very small amount of pain inflicted in physiological experiments would be rendered clearer if they considered the condition under which they were carried out. More dogs were probably used in his laboratory than in any other laboratory in this country. They might take one year's record of experiments as an example. He would take the year 1903, given at the request of the Inspector he separated the experiments made in that year on dogs from those made on other animals. In that year 155 experiments were performed on dogs in the physiological laboratory at University College. Of these, 151 were performed under licence alone, when the animal must, in the words of the Act, "be under the influence of some anaesthetic of sufficient power to prevent the animal feeling pain; and the animal must, if the pain is likely to continue after the effect of the anaesthetic has ceased, or if any serious injury has been inflicted on the animal, be killed before it recovers from the influence of the anaesthetic which has been administered." In all these experiments the dog was first chloroformed. The experiment was then performed while it was fully anaesthetized, and at the conclusion of the experiment the animal was killed without recovering consciousness. With common care it was easy to keep animals for hours under the influence either of chloroform or ether, or of a mixture of these two drugs, in a state of complete insensibility. In 1902 four experiments were performed under Certificates B and EE. Such certificates would be necessary for the establishment of a gastric fistula. The animal being fully chloroformed, an opening into the stomach was made with exactly the same precautions as the same operation was carried out on man in cases of irremediable stricture of the gullet. The wound was dressed with all aseptic precautions, and the animal was then allowed to recover from the anaesthetic. Experience on man showed that the healing of a wound made in healthy tissues was practically painless, and there was no reason to suppose that dogs were more sensitive to pain than man. In a week's time the wound was healed, and they had a dog, normal in every respect, except that there was a direct opening between the exterior of the body and the interior of the stomach. Probably there were a thousand people in London at the present time with fistulas opening into their large bowel who would be in the same condition. There were others with a fistula in the stomach purposely made so that they could be fed. In a small proportion of cases, although they could not speak of actual pain, the effect of their operations might be to cause illness, followed by the death of the animal. Such experiments did not, however, form 1 per cent. of the total number of experiments on dogs. Any legal prohibition of the use of dogs for experimental purposes would deal an irremediable blow to the advance of physiology and medical science in this country, while the only practical result to the dog would be that a few hundreds more would be killed in the lethal chamber at the Battersea Dogs' Home, instead of obtaining euthanasia at the hands of the physiologist. Equal precautions to prevent pain were taken in the case of all the other animals used. Proceeding to speak of the importance of experimental demonstrations in teaching, Professor Starling said that in the student's future work in the treatment of disease it was necessary that he should be able to form a definite conception of the processes going on inside the body, that he might, so to speak, see the heart labouring under its overload, and form a mental image of the state of every organ in the body in the case which was the object of his care. This real image could by most men not be acquired simply through words, by a study of books, or by listening to a teacher. On the other hand, a few demonstrations would suffice to enable him to transfer his word images into images of three dimensions, and to give reality to his physiological knowledge. That aim was, as far as possible, like that of the anatomist, to make the body transparent. As examples of such fundamental demonstrations might be mentioned the demonstration of the blood pressure and its variation under different conditions; the action of the heart and its alteration with lack of oxygen, and its reaction to increased strain thrown upon it by contraction of the arteries; the influence of nerves on the secretion of saliva, the influence of the normal chemical stimulus on the secretion of pancreatic juice and bile, the nervous regulation of the respiratory movements, etc. These were almost all experiments which would be highly painful without anaesthetics. The animal was fully anaesthetized throughout, and was killed while still under the influence of the anaesthetic at the end of the experiment. The student thereby not only gained a knowledge of physiology to serve as the basis of his future medical studies, but he acquired some idea of the methods of

administering anaesthetics and of the dangers connected therewith. A dog was rather more dangerous to anaesthetize than a man; therefore one more often got a chance of showing the dangers in a dog than in the case of a man. It was more easy to kill a dog with an anaesthetic than it was to kill a man. In reply to Mr. Tomkinson, who asked if the animal would be killed by an excessive dose of the anaesthetic, he said various means were employed. Sometimes an overdose of chloroform was given; sometimes air was blown into the veins; sometimes a cut was made into its heart. It was killed, of course, under anaesthetics. Under the present law experiments were never performed by students for the sake of acquiring knowledge, and even surgeons were expressly forbidden to perform operations on animals in order to acquire surgical skill. That regulation was most immoral, for it meant his acquiring skill by experiments on human patients. If any alteration of the law resulted from the present inquiry, the question of the continuation of these restrictions should be seriously considered. In reply to further questions, he said he gave from eight to twelve demonstrations in the course of the year. Taking ten as the number, five or six would be dogs; there would be two or three cats, and two or three rabbits. Asked if a stranger could get a ticket to attend the classes, he said they would not put many difficulties in the way of such a person if they thought his previous training would allow him to profit by the instruction. They would not admit a man who had had no preliminary scientific training who came merely from curiosity. The two ladies who published *Shambles of Science* took a course at a school of medicine for women, and stated that they had already had an elementary training in their native country, and that they wished to take up medicine as a serious pursuit. Then they were recommended, and went round to the different advanced lectures in London; among those were two or three at University College, and others at King's College, and the University of London at South Kensington. Hitherto there had been no regulation which prevented a medical man, whatever his views might be, from attending these advanced lectures. Asked how animals were anaesthetized, he said the usual thing was to give the animal, half an hour before the experiment, a hypodermic injection of morphine, of about a quarter of a grain—from a quarter to a third. The effect was that the dog became sleepy and stupid, and then sometimes it would lie down quietly, and if it was very sleepy a mask could be put over its nose containing the chloroform, alcohol, and ether mixture, which it took very quietly. If at the time one wanted to begin the operation the animal was not fully under the influence of morphine, if it still seemed restless, it was put in a box, and there it had some wool saturated with the A.C.E. mixture put in the box. The air gradually got saturated, the dog got more and more sleepy, and finally subsided in the bottom of the box. Then it was taken out, fixed up on the table, and the administration of the A.C.E. mixture was continued through the mask. It had to be fixed, because one could not have two or three assistants to hold it in a given position. For instance, a dog would not lie steady on its back, and in many cases one wanted it on its back. If one was going to fix to its arteries tubes connected by a rubber tube with the mercurial manometer to register the blood pressure, if the animal fell away from them it would simply tear an artery across, and would die of bleeding. When an ordinary observation was going on, one would expect no other movements than the respiratory movements. If, however, there was any interference with respiration or with the proper supply of oxygen to the brain, these respiratory movements at once became increased and spasmodic, and there might be movements similar to struggling movements—that is to say, there were contractions of the abdomen which were really exaggerations of the respiratory movements or what were spoken of as convulsive movements. The recovery of sensitiveness to pain would be considerably later than the recovery of movement. Asked how the Act so far as it related to anaesthetics was carried out, he said the only cases he knew in which it had not been properly carried out were where a man had given an anaesthetic when he had not a licence to do so—a technical offence. Nobody ever thought of doing any cutting operation without maintaining thorough anaesthesia. Sometimes a narcotic was used where one desired a very continuous anaesthesia without giving a volatile, and, therefore, somewhat changeable anaesthetic, such as chloroform or ether. Urethane was used in man as a simple narcotic to produce sleep. It was given intravenously. They first gave what would induce anaesthesia in the ordinary way—namely, morphine and chloroform; then, if for some reason or other they did not want to go on with chloroform, they would inject into the veins a very large dose of urethane. In other cases chloral hydrate might be used, which was given by the mouth previously, or the animal could first be anaesthetized with ether or chloroform, and then chloral injected into a vein in a dose of ½ gram per kilo—fifty times as much as was given to man—then they got complete anaesthesia. Morphine was generally used as an adjunct to chloroform and ether. If one gave a small dose, such as ¼ gr., to an animal, not only did it make the induction of anaesthesia easier, and diminish any fear that the animal might have of the anaesthetic box, but it very much prolonged the anaesthesia. When morphine was given as an anaesthetic it was given in a dose that was practically fatal. Morphine had been given as an anaesthetic, especially in cases where it had been wanted to combine it with curare. But it was not usual, and in his laboratory they adhered to the small dose of morphine, and carried on the anaesthesia by means of A.C.E. Morphine was a complete anaesthetic if it was given in large enough doses. He could not see any difference between the insensibility induced by chloroform and that by morphine. It was now becoming extremely difficult to get curare, and it was getting more and more impure, more and more poisonous in its effects, so that it was being used as little as possible. Asked whether, if curare were given without adequate anaesthetics, the animal would suffer all the pain consequent upon an operation, and not be able to show it, he said the evidence before them really was not sufficient to his mind to demonstrate conclusively that curare did or did not abolish sensation. On general considerations he would think that it probably abolished the functions of the higher part of the brain—that is to say, consciousness; but they had not sufficient evidence for that. That did not matter, however, because they never used curare as an anaesthetic. He had never seen curare used in this country without simultaneous and adequate anaesthetization. The witness then replied in detail to the misstatements contained in Mrs. Cook's evidence, especially in regard to experiments performed by himself. He went on to say that if it were made illegal to operate on dogs whether anaesthetized or not anaesthetized, it would almost kill physiology in England. He could not suggest further restrictions, but it seemed to him that the whole machinery of the Act was rather complex. Instead of the complicated list of different certificates and licences, there might be simply two classes of licence—a first-class licence, which should cover all licences and certificates, which should be given to people in a responsible position; and a second limited licence or certificate, which should be given on the recommendation of the head of the laboratory, and which should apply to a certain research, and should be given to people (whether medically qualified or not) who, so far as experimentation on living animals was concerned, were still *in statu pupillari*. He would not be averse to any further inspection of the work done in the laboratory beyond what existed at present. Asked whether it was not the case that what physiologists called profound anaesthesia was seldom required, or attempted, in the case of man, he said that was so. It was a dangerous condition. The ordinary state of anaesthesia, when an operation took place, was not what was called profound. Asked if he knew whether the Home Secretary ever acted contrary to the advice of the Association for the Advancement of Medicine by Research, he said he had in two cases during the last three weeks refused to allow certificates. The Inspector came to his laboratory very frequently, because he was professor of anatomy in the same building, and he was constantly having to discuss some matters with him connected with the college or with the students. Any experiment might be going on when he arrived. More work went on in his than in any other laboratory. He had never seen any carelessness or recklessness in the operations carried on there, nor any omission to kill the animal. He knew that, for the future, stray dogs taken up in London would have to be registered, and would not be allowed to be sold or given for purposes of experiment. He thought

it was a very foolish and irrelevant clause to put into the Dogs Act. If physiologists could buy dogs from the Dogs' Home, every dog in London would be taken to the Dogs' Home by the police. There could be no chance of a pet dog then getting into the physiological laboratories; they would confine their purchase to dogs under sentence of death. They obtained their dogs from dealers, and, as long as he remembered, had done so. So that really the Act confirmed the existing practice. He thought the Commission might take that into consideration with a view to making a recommendation on that point. Asked if physiology would be really damaged if curare were absolutely prohibited, he said that it would seriously interfere with some of the most important classes of experiments. Asked how many times curare had been used in his laboratory in the last year or two years, he said twenty papers had been issued from his laboratory during 1906. Two of these included some experiments in which curare was used. During the previous two years twenty-two original papers were issued, of which, again, only two contained certain experiments involving the use of curare. Asked whether, if he found an animal in a state of serious suffering, he would order it to be killed, he said certainly. Asked if there were any cases of intentional partial anaesthesia when animals were operated upon, he said partial anaesthesia was a misleading expression. They spoke of a light or a profound anaesthesia. For instance, with a slight operation, where complete muscular relaxation was not necessary, the anaesthesia was a light anaesthesia. On the other hand, when complete muscular relaxation was wanted, there was profound anaesthesia. Asked if there were any operations performed under circumstances in which the animal was necessarily and intentionally sensitive to some pain, he said, No, never. He had never come across a laboratory where there were any closed doors. Asked as to the statement that the effect of the present Act was to protect vivisectors and not to protect animals, he said he was not aware of any protection given to vivisectors. The Act would prevent the infliction of pain on animals if there were any physiologists who desired to inflict pain. He would not wish to see the present Act abrogated, or altered to any very marked extent. Asked in what way aseptic treatment prevented pain, he said that when a wound was made, say, in the skin, and was exposed to infection by micro-organisms, there was injury of the vessels and tissues surrounding the wound. That injury caused swelling of the tissues and, therefore, pressure on the nerves running through these tissues, and hence sensations of tenderness and pain. If, by proper cleansing of the skin, and of the instruments used, they prevented the access of micro-organisms to the wound, the only result of the incisions was that the processes of repair followed, unaccompanied by any marks of inflammation. The fact that the aseptic treatment of wounds had abolished pain could be demonstrated simply by taking a walk round the surgical wards, and asking each patient that one came across who had had an incision of the healthy tissue what pain he had had. Surgical wards in the hospitals were merry places now because the patients were well. There was no question of pain at all in the wards, and that furnished the best possible proof that asepsis had abolished pain. Asked if he was quite satisfied that, in the case of a dog, it was possible to keep it for a long time under perfect anaesthesia between sensibility and death, he said, Perfectly. The dangerous part in anaesthetizing a dog was at the beginning. There was no serious difficulty in anaesthetizing any kind of animal and keeping it perfectly anaesthetized. He thought it would be a good thing if some of the Commissioners who were doubtful as to the completeness of anaesthesia would go and see an actual experiment. Then they could convince themselves of the reality of the measures taken to prevent sensation, and of the general nature of the experiments performed. He would be only too pleased to see any Member of Parliament or any layman who had any doubt about the experiments if he presented his card, but he would have to be satisfied of his bona fides. Prohibition of the inoculation of dogs might stop experiments absolutely essential to our knowledge of some of the very important medical diseases. Asked if almost all the chief results of physiological research in this country and abroad were published in the *Journal of Physiology*, he said, The greater part of them. Some important papers would also be found in the *Proceedings of the Royal Society*, and a *précis* of them in the British Medical Journal. Asked if he thought these publications were read much by the medical profession, he was sorry to say that they were not, but their practical applications would be brought before the notice of the medical profession in the British Medical Journal. Asked in regard to Dr. Crile's experiments on shock, he said they were not experiments which he would have done himself. Asked in regard to an experiment described in the *Shambles of Science* under the heading "The Dog that Escaped," he said the whole thing was a wilful deception. The writers said: "*If* the dog was under curare"—"*if* it had artificial respiration." The dog was being subjected to artificial respiration from the next room, and the anaesthetic was being pumped in with air, and if they had had any bona-fides they could have gone down and smelt the anaesthetic at the tube. That was not the brown dog experiment, but it was the same style throughout, and it was all query. The authors did not dare to make an assertion that there was no anaesthesia, but the question was raised, "Is it anaesthetized?" "Can we be sure it is anaesthetized?" He certainly believed they wrote with a wrong intention.

LITERARY NOTES.

Mark Twain's long-promised book on Christian Science is announced by Messrs. Harper and Brothers for publication this day (March 8th). It is described as a serious examination of the tenets and constitution of the Christian Science Church, and contains an account of the foundress, Mrs. Mary Baker G. Eddy. The book was written in 1903, and some parts were published that year as articles in the *North American Review*.

In 1889 the Belgian Royal Society of State Medicine was ordered by the Government to prepare a medical topography of the kingdom. The Society parcelled out the work among a number of experts, who dealt respectively with the physical, demographic, intellectual, social, and medical history of the twelve natural zones which constitute the territory of Belgium. The Society decided to print the reports as they were ready, after they had been passed by a special jury to which that duty was entrusted. The first result of the labours of the experts has just been issued, in the shape of two fasciculi of an octavo volume of 1,000 to 1,100 pages illustrated with maps and plates. It is published by Messrs. Vaillant-Carmanne of Liége. The first of these fasciculi contains a general historical and geographical introduction; the second is a monograph on La Campine, the third zone of Belgium. The author is Dr. L. Goffin of Turnhout. It is expected that the issue of the whole work will—thanks to the energizing inspiration of Dr. Kuborn, President of the Society, be completed at no very distant date.

Messrs. W. B. Saunders Company have in the press a new work on gynaecology and abdominal surgery edited by Drs. Howard A. Kelly and Charles P. Noble. The operations and procedures described in the text are illustrated by some 650 original illustrations by Messrs. Max Brodel and Hermann Becker, of the Johns Hopkins Hospital, Baltimore. It is expected that the first volume of this important publication will be ready in about a month.

The *Annals of Tropical Medicine and Parasitology* is a new publication of the Liverpool School of Tropical Medicine, intended to replace the series of separate *Memoirs of the Liverpool School of Tropical Medicine*, twenty-one of which have been published by the School. Ten of these, comprising 640 pages and forty-nine plates and figures, have been issued within the last two years. The editor is Professor Ronald Ross, who has as collaborators Dr. J. W. W. Stephens, Mr. R. Newstead, Dr. J. L. Todd, Dr. H. Wolferstan Thomas, Dr. Anton Breinl, and Sir Rubert Boyce. The first number contains an account of mosquitoes and other *Arthropoda* collected in the Congo Free State, being the seventh Interim Report of the Expedition of the Liverpool School of Medicine to the Congo, 1903-5, by Mr. Newstead, the late Dr. Everett Dutton, and Dr. Todd; a paper on some parasites in the Museum of the school, by Dr. A. Looss, Professor of Parasitology in the Congo School of Medicine, with a contribution on a case

of distomiasis of the liver and rectum, by Dr. Edward Cuffey, Physician to the British Hospital, Port Said, and other communications. The new periodical is well and abundantly illustrated, and altogether presents a handsome appearance. It contains on a separate page an excellent portrait of Laveran.

In the January number of *Janus*, Dr. J. A. Nixon, of Bristol, gives an account of a new MS. of Guy de Chauliac, including the *Practica Astrolabii*. Among the manuscripts of the Bristol City Library is one which formed part of the collection of Matthew, Archbishop of York, who in 1615 bequeathed a portion of his books and manuscripts to the city. This manuscript is a work on surgery in Latin by Guy de Chauliac (1300—1368), and the Bristol copy was made by John Tourtier for John, Duke of Bedford, between 1420 and 1435. The book is complete and includes a preliminary treatise on astrology, while to the end of the surgery is appended a Latin-English glossary. The first five double pages are occupied by the "astrology," which deals with methods of determining the position and influence of the planets, stars, etc. After this are ten double blank pages, as though, perhaps, the copyist had intended to include at some later date the treatises on "Cataract" and "Hernia." Then comes *La Grande Chirurgie* in full. It begins:

In dei nomine incipit inventarium seu collectarium in parte cirurgicali medicinae compilatum et completum anno Domini Millesimo tricentesimo sexagesimo tercio per Guidonem de Caulhiaco Cirurgicum Magistrum in medicina in preclaro studio Montispessulani. Quodquid inventarium seu collectarium fecit scribi et taliter ordinari venerabilis vir magister Johannes Tourtier Magister in Cirurgia ad requestam altissimi excellentissimique et potentis principis Domini Johannis ducis de bedford Regentis regni Francie et Protectoris regni Angliae.

After this follows in black the usual prologue:

Postquam primo gratias egero deo omnipotenti.

At the beginning of each of the seven books are miniatures representing various surgical or anatomical subjects; the costumes are of an earlier date than those reproduced in Nicaise's edition published in 1890. The manuscript is not mentioned by Nicaize, nor was its existence then recognized. Dr. Nixon thinks it may be assumed that the MS. dates from between the "perpetual peace" of Troyes and the battle of Verneuil (that is, 1420-24). A name remarkably like that of "Johannes Tourtier Magister in Cirurgia," namely, Jehan Fourtier, has been found among the surgeons of Paris in 1424. Serving with the Duke, and acting as Principal Surgeons to the English army of Henry V were Thomas Morstede and Nicholas Colnet; the latter being a Frenchman was naturally acquainted with Guy de Chauliac's writings, and Thomas Morstede, Surgeon to the King, was a man who took the greatest share in organizing the education of surgeons in London. Dr. Nixon thinks it was probably at the instance of one or both of his surgeons-in-chief that the Duke ordered a copy to be made, perhaps enjoining its use upon the surgeons of his army. In a subordinate capacity served also Richard Ferris, afterwards Sergeant-Surgeon to Queen Elizabeth, one of the surgeons depicted by Holbein in his picture of Henry VIII presenting a charter to the Barber Surgeons of London; and a pupil of Ferris, Thomas Gale, wrote in 1563 the first book on surgery in the English tongue, in which he quotes freely from Guy de Chauliac.

MOTOR CARS FOR MEDICAL MEN.

ANOTHER TWELVE MONTHS WITH A MOTOR CAR.

By H. P. Barlow, M.B.,
Parkstone, Dorset.

In the summer of 1903 I bought a second-hand Argyll car, but must draw a veil over the six months I laboured with it. Nevertheless, I learnt to drive on it, and acquired some skill in diagnosing the causes why a car will not go. In April, 1904, I bought a new 10-12-h.p. two-cylinder Argyll car for £350, and from that day to this the car has been an unfailing source of profit and pleasure.

My man who cleans the car has had no previous experience of motor cars, and I myself am not in the least mechanically inclined. But at the same time I must in fairness state that at the Parkstone Motor and Cycle Co. we have a skilled engineer at our very doors whose charges are reasonable. On January 1st, 1906, the car had been in almost daily use for twenty months practically without giving any trouble, and to-day, after just on three years' similar use, after running close on 15,000 miles, the car is going, and looking, too, as well as ever.

The following are the total expenses for the year ending December 31st, 1906, excluding man's wages and rent of motor house:

	Repairs Renewals and Overhauling.					
February.	Examining and adjusting coil, taking carburettor to pieces, and cleaning ditto, overhauling ignition	0	12	6		
	Repairing starting gear... ...	0	2	6		
	Taking coil to pieces, adjusting stray connexions, new H.T. wire, etc., ...	0	6	3		
	Examining for weak firing, taking out pistons, scraping and cleaning ditto and rings	0	8	8		
	Taking up play in brake parts and cardan shaft and adjusting...	0	3	4		
March.	Adjusting switch	0	2	0		
April.	Dismantling rear brake and fitting new links, etc. ...	0	12	2		
May.	Reseating valve	0	5	6		
	Fitting new H.T. wire	0	1	10		
June.	Grinding in valves, examining gear box, and minor adjustments	0	12	8		
July.	New brake rod, and fitting ...	0	3	9		
	Rewiring car and supplying L.T. wire...	0	10	10½		
	Overhauling car, cleaning carburettor and exhaust pipe, and adjusting coil	0	7	6		
August.	Fitting new rubber water connexions	0	3	0		
	Fitting new double coil, etc. ...	0	9	6		
September.	Dismantling clutch and parts, dress and re-erect ditto, examining gears, parts taken down and overhauled, differential half taken apart, examined, cleaned, and refitted, enlarging water outlets for tubing, new bands for brake, stearing gear taken down and refitted and various adjustments, making and fitting new steering rod ...	3	13	10		
					8	16 3½
	Tyre expenses:					
March.	Outer cover retreaded	2	2	0		
June.	1 Dunlop inner tube	1	19	2		
July.	1 Dunlop inner tube	1	19	2		
August.	2 Collier 810 × 90 outer covers	12	17	6		
December.	Tyre repairs for the year ...	1	18	6		
					20	16 4
	Petrol for the year—260 gallons	15	8	6		
	Grease and oil, do.	2	7	9		
					17	16 3
	Accumulators charging for the year				1	14 6
	Sundries during the year:					
	10 plugs	1	6	10		
	Voltmeter	0	8	9		
	Prested double coil	3	12	6		
	Spanner, 3s; grease bags, 5s., pump tubing, 1s. 3d.; radiator cap, 5s.; sponges, leathers, waste, etc., 15s.; polish, 8s. 10d.: carbide and paraffin, 20s.	2	18	1		
					8	6 2
	Motor licence, annual	2	2	0		
	Dorset Automobile Club sub., annual	0	10	6		
	Driving licence, annual... ...	0	5	0		
	Licence for manservant.. ...	0	15	0		
					3	12 6
	Motor insurance				11	10 0
					72	12 0½

Remarks.—It will be observed, on referring to the number of sparking plugs bought and to the number of times the ignition system was overhauled or parts renewed, that ignition troubles were a constant feature up till August. I then bought a Prested double coil and two Darop sparking plugs, and from that date to this—February 23rd—no misfiring in either cylinder has occurred. The reliability of the car is such that any

day, without previous overhauling, it is just as ready for a 100-mile run as for, say, the 3-mile run into Bournemouth. I must add that I always drive myself.

Nineteen Months with a Motor Car.

Dr. A. Howard Pirie (London, W.) writes: I began as an absolute novice with a Speedwell 9-h.p. car a year and seven months ago, and my expenses for repairs have been as follows:

	£	s.	d.
(1) Repairing pump	0	0	11
(2) New grease cap	0	2	6
(3) Varnishing	0	11	0
(4) Four sparking plugs at 6d. ...	0	2	2
(5) Rubber tubing for circulation ...	0	0	11
	0	17	6

This, of course, does not include tyres and ignition expenses. I drive myself, and have a lad to clean the car. I have the car out almost every day, and have been to Land's End and back with it, and had it with me on two other holiday tours. For reliability and freedom from repairs I think it will be difficult to beat the record of this Speedwell car. It climbed into and out of Lynmouth last year, and any one who knows these hills knows how often a horse is required to help a car there. It has never failed to climb a hill or any road so far.

MEDICAL EDUCATION AND THE EXAMINATION FETISH.

Dr. Lauriston E. Shaw, Physician to Guy's Hospital, and a member of the Senate of the University of London, devoted his annual address before the Hunterian Society to a discussion of the true aim of medical education and the evil of the examination fetish. After a brief reference to the standard of preliminary education demanded before admission to technical instruction, in the course of which he expressed the opinion that it would be undesirable to add to the existing difficulties of the schoolmaster by requiring an intending medical student to specialize during his school days, he proceeded to dwell on the blighting influence of the examination system upon the whole work of teachers and pupils from the beginning to the end of the modern curriculum. On this point Dr. Shaw said:

The harmful influence of examinations upon learning has long been clearly recognized by educational experts, and is daily gaining more general acceptance. In many departments of education the fact that examinations still hold a prominent place is not due to any lack of hatred of their results, but to the difficulty of finding an alternative. Amongst the official teachers of medicine, however, it does not appear that these evils are so widely recognized as by other bodies of teachers. This is the more to be regretted because it is possible in medicine to set up without great difficulty alternative methods of securing what are supposed to be the objects of examinations.

The external examination—that is to say, an examination conducted by an examiner to whom the candidate is entirely unknown—was the ideal of those who worshipped the examination fetish. Such an examination tested only one power of the mind—the ability to keep a store of facts on the surface and to pour them out speedily in the presence of a stranger. The power of passing examinations, essentially created and promoted by the crammer, was a mixture of memory and cheek. On this point Dr. Shaw said:

This knack is truly an attribute of mind just as bulk is an attribute of muscle. It is just as illogical, however, to constantly worry a man who is trying to develop higher faculties of his mind with examinations as to his memory as it would be to periodically test the lifting power of a man who is learning to play the fiddle. The comparison between these two absurd processes is very real for the sort of work that would increase the violinist's muscular force would actually lessen the subtle powers of co-ordination essential to his art. In like manner does the cramming of a student's memory exercise a deteriorating effect upon his intellectual faculties.

The competitive examination acquired popularity not as the final act in a course of education, but as a preliminary step before conferring on the candidate a position of honour or remuneration, and was designed to prevent and replace nepotism. The external examination as an instrument of education was introduced as a test of the work of state-aided schools, constituting the system long known as "payment by results." This system had been abolished in elementary schools, but a system almost identical but for the absence of any direct money payment from the State existed in regard to medical education especially in London. The following are extracts from Dr. Shaw's further remarks:—

The teaching in our hospitals is being constantly interrupted by tests conducted by external examiners. For many of our students, who are of average ability, and, while aspiring to the higher college diplomas, as well as university degrees, do not fail to pass any examination, such interruptions may occur as many as a dozen times in the course of six years. And these interruptions are permitted to a series of courses of study which without them present almost an ideal opportunity for improving the powers of the pupils' minds. In almost every department of medical study—and, with proper organization, it should be so in every department—the chief teacher, and each of his subordinates, is engaged in increasing the sum of knowledge of his special subject, and in making, or assisting others to make, wise application of ascertained facts to actual problems before him. To associate the student as closely as possible in this double work of investigation and practice is to promote his education in the truest sense. The closest living contact between teacher and taught in mutual work is the surest way of developing the pupil's mental powers. But no sooner in the medical school do we introduce the student to his teacher than there is brought between them with chilling effect the spectre of the examiner. The absolutely fair person who, with no knowledge of the candidate's work beyond a bare recital of satisfactory attendance at so many lectures and so many hours' laboratory work, will proceed at the end of three, six, or twelve months, as the case may be, to test just those unimportant things that can be tested by examination.

Never can teacher or pupil forget the examiner's existence. Each is handicapped at every step by the question, Will this work pay? At the end of this hour's study shall I be a better answering machine? I have taught in a medical school for over twenty years, and I know, alas, only too well, the sort of teaching that will "pay" in this sense. In a desperate desire to get my pupils through their examinations so that they could begin to work for work's sake—the only sort of work that's worth doing, I have deliberately crammed them. Often my conscience has revolted against it, and I have taken advantage of their faith in my powers to get them through their examinations by engaging them in work that would improve the powers of their minds. After a time my subterfuge would be found out. As I adopted one or other of these methods, the method of cramming or of attempted mental development, I could fill or almost empty my out-patient room with certainty. For with the best intentions, none but the highest class of student can afford to seek true learning until he is through his examinations.

Too often when this time comes the student is obliged to separate himself from his hospital, and if he still has a desire for learning, he is handicapped by the isolation of private practice. But in many cases, whether thus handicapped or more fortunately placed, the student finds that his crammed brain is no longer capable of rational development. His desire for knowledge, his powers of observation, his capacity for reflection, his judgement and his reasoning faculties, have all been crushed, some perhaps out of existence, by the fifteen or twenty years of systematic education that he has suffered under the domination of the examination fetish.

Is there any profession in which the highest mental faculties are more necessary for even its humblest members than in that of medicine? What is the use of developing only the power of a man's mind to contain facts who is destined to practise in our profession? In such a progressive science the fact of to-day is the antiquated superstition of to-morrow. What we must aim at turning out of our schools is not the man primed with a complete knowledge of all possible beliefs held by his various examiners at the date of his qualification, but a man capable of criticizing these beliefs with sound judgement even if he has never heard of them before. We must turn out men sufficiently interested in their science to watch with an even mind the shattering of these beliefs by its progress, and able to estimate the value of others intended to take their places. Every medical man should be capable of such accurate observation and true deduction that he may, however humble his practice, be able to make distinct contributions to the advancement of learning.

Nothing has been more depressing in recent years than the progress of the idea that a special race of researchers must be bred to advance medical knowledge. Men who are to be freed from the routine of education or practice, safely shut away in their laboratories from students and patients, and prepared for their incarceration by a period of special study, preferably in Germany. To encourage men's power of research or, as I should prefer to call it, the power of learning from every day facts, must be our constant aim. This power exists in every sane human being at birth, and it is the chief condemnation of most modern education that it tends to strangle instead of to cultivate it. If we could stop the strangling process so far as medical education is concerned, and turn out all our students

able to learn from what they see, the result on the progress of medical knowledge would, indeed, be satisfactory. For the diagnosis of any case, no amount of mere fact knowledge will avail the man who has not trained his eyes, ears, and fingers as well as his brains in a way not demanded in the pursuit of examinational success.

One of the worst features of examinations is the tendency they have to be so conducted as to require the knowledge of an increasing number of facts from succeeding batches of victims. This raising of the standard, as it is called, is the only defence of the examiner against the crammer. Leave the number of facts required stationary and the percentage of successful candidates would steadily increase. By a careful study of examination papers and of the ways of particular examiners, a teacher gradually learns to pack his pupils' brains with facts with so much regard to the case of unpacking that the success of the dullest can be almost assured. To avoid this the conductors of every well-constituted examination are constantly adding to the number and variety of the facts that may be dealt with in the questions. Thus is the time that has to be given to preparing for the examination increased.

It is impossible, in a subject like medicine, to lengthen the curriculum, which therefore becomes more and more crowded with courses of didactic teaching.

While examinations are thus seen to be a distinct impediment to attaining the true aims of medical education, the evil effect is greater in some systems of examination than in others. The evil is greater the more "external" the examination; it is less the more "internal." The external examination is carried on by one who knows the candidate only as a number, and who has no knowledge of the course of the education he nas pursued. The internal examination is conducted by the principal teacher responsible for the course of education the result of which the examination is designed to test. In internal examinations, which are part of a course of instruction at the end of which diplomas or degrees are granted, an assessor or external examiner is usually associated with the teacher.

Wherever the teacher is the principal examiner, the relationship between him and his pupils becomes at once more intimate. Each can afford to look into the other's mind. The teacher employing the experimental instead of the didactic method of instruction, can lead his pupil into the paths of learning he is himself exploring regardless of whether they will lead to conclusions acceptable to the average examiner. Provided the powers of the assessor are not too great, the teacher can devote himself to the business of improving his pupil's mind without anxiety as to the number of facts and theories that are being stored up. Nevertheless there is always a risk that both teacher and pupil may allow their work to be subordinated to the interests of the fact-eliciting final examination, and may even under this system forget the truth of one of Mr. Birrell's recent *obiter dicta*, "We tell whether a man has been well educated, not by what he knows, but by what he can understand."

Unfortunately in medical education the external examination is a much commoner test than the internal. To a large extent the curse of the external examination is the price we pay for the public neglect of medical education. Competition between unendowed schools prevents those in authority from trusting the teachers The proper endowment of medical education by private munificence, as in America, or by the State, as in most civilized countries on the Continent of Europe, would at once remove the chief obstacle to the institution of internal examinations. But even without adequate endowment it is possible to some extent to lessen the distrust of the teachers. By voluntary co-operation between the schools the spirit of rivalry may be eliminated, and the staff may be brought to believe that mutual help may be as productive of good to education as the competitive methods of modern commercialism. By a fusion of the pecuniary interests of the schools it becomes possible to allow a free hand to the competent teacher in securing the development of his pupils' minds.

Fortunately, there are indications that the public is beginning to appreciate the responsibility with regard to medical education, and to recognize that endowment is as essential to the efficiency of medical schools as it is to all other institutions for higher education. Reform by this means will come slowly, and it is fortunate that meanwhile other measures can be adapted to lessen the incubus of examinations, whether external or internal. It is because the study of all subjects in the medical curriculum is so essentially practical that this relief is at once possible. It has long been agreed that in all subjects in which it can be carried out the best education consists in the actual performance by the student of a properly thought-out course of observations, manipulations, and experiments, including, when feasible, real original work. I doubt if there is any subject in the medical curriculum which could not be treated in this manner, and I am sure that every subject would be the better from the educational point of view for being so treated. I need not go into details, two subjects at either end of the curriculum will illustrate the point—biology and clinical medicine—in both of which I have had practical experience as a teacher. What would I not have given as a demonstrator of biology if I could have insisted on such a careful preparation of dissected specimens, diagrams, and drawings as would be entailed by the introduction of a system of daily marking for observations made and practical work done, accompanied by periodic inspection? How much more thorough and instructive would have been our work than that which we did in definite preparation for a single external examination at the end of the course? It is true there was what was called a practical examination, but the possible practical tests were exceedingly few and well known beforehand, so that success really depended on the student's memory of things described by the demonstrator, and the men who passed were generally those who had not spent too much time on dissection.

What would I not give now as a teacher of clinical medicine if it could be arranged that the work that the men do at the bedside, in the *post-mortem* room, and in the laboratories could be given in their eyes its proper relative value as compared with the facts they are told at lectures and read in textbooks? There should be no difficulty in providing for all the tangible results of each student's practical work, his clinical records, his charts, his bacteriological, chemical, and haematological reports, together with duly attested microscopical slides, heart and pulse tracings, photographs and drawings to be kept available for surprise visits of the inspector, who should satisfy himself that the work is being properly done as well as fairly marked. How much more valuable would all these records be than those prepared under existing conditions, when every ward clerk knows that it pays better to learn what the appearances of optic neuritis are said to be than to "waste" time as he would call it in seeing and making a diagram of a particular example. A physician or surgeon surrounded by his small army of students working on these lines, instead of by his present flock hungering for examination tips, might hope to prove false the statement that advances in our science can only be secured by a special class of researchers. Our wards might once more become centres of learning in place of centres of teaching. Already inspection has entirely replaced examination in some branches of scientific studies carried on under the control of the Board of Education. In other branches of study, particularly in Engineering, the records of work none during the instruction courses are allowed to count materially towards the marks for the qualifying examination. Even in medicine a pious opinion has been officially expressed in favour of the principle of registration and inspection. The Faculty of Medicine of the University of London has recently reported as follows to the Senate:

"The Faculty is of opinion that a great educational advantage would be secured if the University were to extend its inspection to all practical work done by its undergraduates in each school, with the object of allowing the report of its inspectors to carry some weight in the examinations for which the students are preparing. Though conscious of many difficulties, the Faculty believes that such a scheme is possible, and would urge the Senate and governing bodies of the schools to prepare for it."

Many difficulties are recognized in securing this limited use of inspection in conjunction with examination; but they will assuredly be overcome, and once the system obtains a footing it can hardly be doubted that it will ultimately be generally acclaimed as a highly satisfactory means of removing the evil of the examination fetish, and of allowing us to attain the true aim of medical education.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

During the past week references to spotted fever in the public press throughout Great Britain and Ireland have been frequent, and reports of the occurrence of suspected cases very numerous. When, however, these are sifted and analysed, it is found that the same cases figure over and over again, and that other alleged cases prove to be instances of ordinary meningeal disease. Practically the position remains much as it was, or in other words, the principal seats of the disease are still Belfast in Ireland and Glasgow in Scotland.

Medical Officers in Council.

The medical officers of health of the Administrative County of Surrey met by invitation of the county medical officer at the Westminster Palace Hotel on March 1st to consider what precautionary measures might be desirable in the event of extension of the disease south of the metropolis. Dr. Seaton was in the chair.

Dr. Franklin Parsons of the Local Government Board gave an excellent review of existing knowledge of the subject, and of Dr. M. H. Gordon's report to the Local Government Board. He especially dwelt on the difficulty of identification of the meningococcus, and outlined the etiology of the disease, explaining how, so far as our knowledge went, its infectivity and the limitations thereof might be accounted for. He concluded by referring to the low resistance of the coccus—as proved by laboratory experiments—to the destructive effects of light and air, thus drawing attention to the striking analogy afforded by experience between typhus and cerebro-spinal fever in respect of their causation. Dr. Seaton informed the meeting that a week before he had the honour of a call from

Dr. Horace Jeaffreson, who, as the resident medical officer of the London Fever Hospital, "at the beginning of the Sixties and after," had probably seen more of the two above-mentioned diseases than any other living authority in this country. In those days, Dr. Jeaffreson said, typhus was commonly called "spotted fever," and the term was not applied to "epidemic cerebro-spinal meningitis." In the early Sixties epidemics of the two diseases were concurrent, but their clinical manifestations were markedly distinct. Dr. Tatham (formerly Medical Officer of Health for Manchester), President of the Epidemiological Society, followed with an account of the position assigned to "cerebro-spinal fever," or its synonym "epidemic cerebro-spinal meningitis" in the *Nomenclature* of the Royal College of Physicians, 1906. Dr. Owen Coleman (Surbiton) raised the question of the acceptance by public authorities of the unconfirmed diagnosis of any practitioner who might declare or certify a case as one of "epidemic cerebro-spinal meningitis." The feeling of the meeting was that the medical officer of health of the district concerned and other medical authorities should be consulted, if necessary, with reference to certification or registration. As to diagnosis Dr. Pierce (Guildford), Dr. Porter (Reigate), and others who have had considerable laboratory experience, were decidedly of opinion that in the examination of nasal and pharyngeal discharges special pathological assistance should be provided for purposes of diagnosis. Dr. Richards (Croydon), Dr. Crooksbank (Barnes), and Dr. Fegan (all of them in charge of hospitals) spoke of lumbar puncture not only as an aid to diagnosis but as of therapeutic value. Dr. Tatham, however, uttered a timely word of caution against indiscriminate performance of the operation, especially where the conditions were insanitary and otherwise unfavourable. With regard to the policy of official notification of the disease some of those present were in favour of its being made statutory; one district, that of Richmond-on-Thames, had indeed taken steps for the purpose under the advice of Dr. Crocker, Medical Officer of Health, who had cases of the disease under his notice two or three years ago. But most of the medical officers of health in the county preferred at present to rely on voluntary notification. In this connexion the Chairman mentioned that Sir Shirley Murphy was engaged in a special investigation of the extent of the disease in the County of London, and that they would be sure to have timely notice of any extension that might occur. It was fully agreed that the occasion would not at present justify any general alarm. With regard to hospital removal of duly certified cases there was some divergence of opinion. There are fifteen isolation hospitals in the county, but, as Dr. Brind pointed out, not all of them have adequate separate ward accommodation. Dr. Franklin Parsons observed that patients did not as a rule bear removal well. Dr. Fegen narrated some experiences of his at Vienna, and contended that with improved ambulance provision removal might be possible and even desirable in the interests both of the patients and the public. All present, however, agreed that whatever advantages hospitals might afford it was the sanitation of the home and attention to the surroundings of the patient that was of most essential importance.

England.

A third case seems to have occurred in Leicester, making, if the diagnoses be correct, three in all, and reports are to hand of cases likewise in the village of Reddings in Derbyshire, and at Gravesend. Throughout the country sanitary authorities in increasing numbers are obtaining permission of the Local Government Board to place the disease on the list of notifiable diseases for longer or shorter periods.

Scotland.

In Scotland, Glasgow, as already stated, still remains the only place in which anything in the nature of an extensive epidemic prevails, and even here there appear to be quarters quite free from it. The total number of cases on March 3rd in hospital or under observation in Glasgow was 113; during the week ending March 2nd 37 deaths were ascribed to the disease. In other of the principal eight Scottish towns 5 deaths were similarly registered in the same period, 3 in Edinburgh, 1 in Paisley, and 1 in Leith. Cases have also been reported in some of the rural districts. The position in Glasgow at the present moment is perhaps best gauged by examination of all the infectious disease returns. Thus there were on March 1st, either in the city hospitals or under observation at home, 66 cases of cerebro-spinal fever, as against 242 of scarlet fever, 181 diphtheria, 154 measles, 437 whooping cough, 95 typhoid fever, and 50 erysipelas.

Ireland.

In Ireland a considerable number of fresh cases have been identified in Belfast, the number under treatment at the Purdysburn Hospital on March 3rd being 33, while 25 deaths during the week were returned by the Registrar-General for Ireland as having been due to cerebro-spinal meningitis. The Dublin hospitals during the same week admitted 2 cases. Reports were also received of a few scattered cases in other towns.

Wales.

No cases appear to have been observed at present in Wales, but the sanitary authority of Cardiff has, on the recommendation of its medical officer, Dr. Edward Walford, placed the disease on its notification list.

MEDICAL NEWS.

At the meeting of the Medical Society of University College, London, on Wednesday next, Sir Felix Semon will read a paper on the relation of laryngology and rhinology to general practice. The chair will be taken at 8.30 by Professor Rose Bradford, F.R.S.

On Thursday next, March 14th, at 3 p.m., Dr. C. W. Saleeby will give the first of two lectures at the Royal Institution on Biology and Progress. The Friday evening discourse on March 15th will be delivered by Professor Lunge on Problems of Applied Chemistry, and on March 22nd by Professor J. J. Thomson on Rays of Positive Electricity.

As already announced, the one hundred and thirty-fourth annual dinner of the Medical Society of London will be held at the Whitehall Rooms, Hotel Métropole, on Wednesday next. Among the guests will be the Bishop of Ripon, the Hon. Sydney Buxton, M.P., Dr. Chipault of Paris, Sir Thomas Smith, Sir Thomas Barlow, and Mr. Alderman Sheriff Crosby, F.R.C.S.

Among the successful candidates at the London County Council election on March 2nd are the following members of the medical profession: Dr. A. Salter (Bermondsey), Dr. E. B. Forman (Kensington, South), Dr. Beaton (St. Pancras, North), Dr. J. Davies (Hoxton), and Dr. P. Vosper (St. Pancras, West). The three first-named gentlemen served on the last Council.

The British Balneological and Climatological Society meets on Saturday next, March 16th, at Hastings. Among other arrangements for the first day are a formal discussion, a dinner, and an evening entertainment provided by local Fellows. On the following day there will be golf and an expedition to Battle Abbey.

At a meeting of the Medico-Legal Society, at 22, Albemarle Street, W., on Tuesday next, at 8.15 p.m., Mr. J. Theodore Dodd will open a discussion on the working of the Midwives Act; several members of the Central Midwives Board intend to be present.

A ball in aid of the funds of the Royal Army Medical Corps (Volunteers, London Companies) will be held at the Royal Palace Hotel, Kensington, on Wednesday next, under the patronage of Her Highness Princess Louise Augusta of Schleswig-Holstein. The tickets (15s.) and further particulars can be obtained from Sergeant Ernest A. May, Elmhurst, East Sheen, S.W.

The Royal Mail Steam Packet Company announce a special spring tour to Spain in connexion with the sailing of the Royal Mail steam packet *Sabor* (twin-screw) from Southampton on March 20th, calling at Bilbao, Coruna, and Vigo. The return voyage is to be made in the Royal Mail steam packet *Aragon* on March 28th, calling at Cherbourg *en route* for Southampton, where she is due on March 30th. The first saloon fare is £9 15s. return.

A meeting of those interested in the formation of a Society of Tropical Medicine and Hygiene is to be held at the Royal College of Physicians, on Friday, March 15th, at 5.30 p.m. The society was constituted at a meeting held at the Colonial Office on January 4th, 1907, under the Chairmanship of Sir Patrick Manson. Although medical societies have multiplied to an alarming extent, it is believed that there is justification for the existence of a society of tropical medicine to serve as a focus for medical men scattered throughout the length and breadth of the empire. Considering the rapid advances in tropical medicine and the importance and variety of the many diseases met with in tropical climates, it is thought that there will be ample work for the society. Further particulars can be obtained from Mr. James Cantlie, 11b Harley Street, W.

Mr. Charles Oldham, F.R.C.S., of Brighton, in addition to the bequest to found an ophthalmological prize at Guy's Hospital, mentioned last week, bequeathed £5,000 to Epsom College, £1,000 each to the Sussex Eye Hospital and the Brighton, Hove, and Preston Dispensary, £10,000 to Corpus Christi College, Oxford, £5,000 to the Universities of Oxford and Cambridge for scholarships in classics and in Shakespeare, and £3,000 to the Manchester

Grammar School founded by his kinsman, Hugh Oldham, formerly Bishop of Exeter. The residue of his estate, which it is believed will amount to over £15,000, he left to Corpus and the Manchester Grammar School in equal parts. He also bequeathed two violins and a viola, all by Antonius Stradivarius, to the British Museum. A third violin by the same renowned maker is also to go to the Museum unless a purchaser is found for it at 3,000 guineas.

MR. REGINALD HARRISON, President, and Dr. Arthur James, Honorary Secretary of the Metropolitan Street Ambulance Association, have been invited to give evidence before the Home Office Committee appointed to report on the question of the provision of ambulances for cases of accident and sudden illness in the streets of London. Last month the Metropolitan Ambulance Association sent a circular letter to all candidates at the recent election for the London County Council, pointing out the urgent necessity of establishing a thoroughly efficient street ambulance service, inasmuch as at the present time not a single rapid transit ambulance was available for dealing promptly with severe street accidents, although 20,000 such accidents occurred every year. We are informed that 51 out of 79 Municipal Reform candidates and 14 of the 38 Progressives and Socialists elected last week promised to interest themselves in the provision of an efficient street ambulance service; 65 members of the new County Council have therefore given a pledge, while a number of others are well known to hold similar views.

A BILL to prohibit experiments on dogs, presented by Mr. Ellis Griffith and backed by Sir F. A Channing, Sir F. Banbury, Colonel Lockwood, Colonel Sandys, Mr. Field, Mr. Tomkinson, Mr. Weir, Mr. Sloan, Mr. Crooks, Mr. Clement Edwards, and Mr. Swift MacNeill, was ordered to be printed on February 26th. It provides that it shall be unlawful to perform any experiment of a nature causing or likely to cause pain or disease to any dog for any purpose whatsoever, either with or without anaesthetics, and that no person or place shall be licensed for the purpose of performing any such experiments. It further provides that any person performing or assisting or taking part in performing any such experiment on any dog shall, for a first offence, be liable to a penalty not exceeding £10, and for a second offence, in the discretion of the court, to a penalty not exceeding £50 or to imprisonment for a period not exceeding three months. For any subsequent offence he will be liable, at the like discretion, to a penalty not exceeding £100 or to imprisonment for a period not exceeding one year. It will be a disaster to science in this country if this Bill, inspired by what we can only call foolish sentimentalism, is allowed to become law. Professor Starling's evidence before the Royal Commission on Vivisection made it abundantly clear that such an enactment would not only go far towards stopping the study of physiology in this country, but would also most seriously interfere with pathological research. The dog does not need any special protection, for, to quote Professor Starling, dogs are not ill-treated in laboratories, and do not suffer in the vast majority of the experiments made upon them. Investigators take precautions to prevent not only pain, but also fright, and even discomfort. In any case we think Parliament, before taking any action in the direction of restricting experimental research, should wait till the Vivisection Commission has presented its report.

ON March 5th the Prime Minister received a deputation introduced by Mr. R. C. Lehmann, M.P., to urge the importance of establishing a national anthropometric survey. Professor D. J. Cunningham of Edinburgh said that the only sources of information now available on this important question were the statistical records of men applying to enlist in the army, which had been proved to be misleading, and certain data collected by anthropologists, by educationists, and by others who had resorted to the anthropometric method to test the effect of factory life on the physical condition of the young. These data, he said, were very incomplete—a view which was supported by Mr. J. Gray, Secretary of the Anthropometric Committee of the British Association; by the Head Master of Westminster School; by Sir Lauder Brunton, representing the British Science Guild; and Dr. A. C. Haddon of Cambridge. Sir Henry Campbell-Bannerman, in reply, said that he recognized the importance of having an impartial record as a guide to administrative and legislative action, but the Government must move warily; it would have to carry public opinion with it and not offend the susceptibilities of parents. What was done to the poor ought also to be done to the rich, and he had himself no doubt that the authorities of the great public schools would readily consent to the universal application of the system. He suggested that important data might be obtained from the classes over whom the Government and the authorities already had certain powers of control—recruits, lunatics, and criminals; but this, of course, would not give the information with regard to the whole population which would afford means of comparison between different districts and different occupations The clauses in last year's Education Bill dealing with hygiene and sanitation had been universally approved, and it was hoped would be passed as an independent measure; whether the Government could graft upon that a more definite organization for an anthropometric survey was a matter for serious consideration, in the course of which financial questions would arise. If, after the full consideration which he promised should be given to the matter, the Government were satisfied that the organization ought to be established, the question of expense would not be allowed to stand in the way. Personally he would be glad if it was found possible to grant the request of the deputation.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—The annual general meeting was held on Friday, March 1st. The report of Council set forth the steady progress made by the Society, there being now 864 Fellows on the roll. Since the last annual meeting, a debenture redemption fund had been formed. According to a recent valuation, the freehold and leasehold property was worth considerably more than the sum at which it stood in the Society's accounts, and the property was reported to be in good and substantial repair. The Honorary Treasurer's audited accounts were presented and approved The President, Mr. J. Warrington Haward, in his address gave obituary notices of Fellows who had died during the year, including Sir Michael Foster, Dr. Lionel Beale, Dr. J. H. Bryant, Mr. D. H. Goodsall, Dr. Symes Thompson, and Dr. G. Bagot Ferguson. After reference to the satisfactory financial position of the Society, he alluded to the forthcoming amalgamation of medical societies in London, and stated that a petition for a supplementary Charter had been sent to the Privy Council. The address was concluded with an anticipation of the future usefulness of the Society as a part of the new Royal Society of Medicine.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on February 22nd, Dr. de Havilland Hall in the chair. The accounts presented showed that, owing to the recent epidemic of influenza, the amount of sickness pay disbursed during the month of January was the largest ever paid by the society during a similar period. The attacks have mostly been mild and of short duration, and the payments will have no appreciable effect on the financial position of the society; its reserves now amount to over £200,000. One of the most marked features of the claim list is the rapid increase in the number of members on half-pay. The society has been in operation for twenty-three years, and many of those who first joined it have reached the age when illness is not quickly thrown off. Many of these half-pay members will never be able to resume professional work, and will draw their half-pay—generally 100 guineas a year—until they reach 65, should they live so long. On attaining that age they receive a cash bonus. Prospectuses and all particulars can be obtained on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

ASSOCIATION OF SCOTTISH MEDICAL DIPLOMATES.—The members and friends of the Association of Scottish Medical Diplomates dined together on March 1st at the Trocadero Restaurant, London, under the chairmanship of the President, Dr. Claude St. Aubyn-Farrer. The toast of "The Association" was proposed by Dr. J. G. Fitzgerald, ex-M.P. for Longford, and was responded to by the Chairman, who gave a satisfactory account of the progress of the Association; during the short time it had been in existence it had increased in numbers until it had reached the present total of over 300, and more members were joining. This gratifying progress was a sure sign that the Association was firmly established and must be recognized in the medical world as a powerful force. This was borne out by the fact that representations to the governing committees of certain English hospitals had resulted in the appointments on the staffs of those hospitals being thrown open to the candidature of those holding the fellowships of one or other of the Scottish colleges. Mr. Sydney Stephenson and Dr. C. O. Hawthorne also replied to this toast. Sir Anderson Critchett submitted "The Guests," which was acknowledged by Dr. Moffat, Major Moore, and Mr. Wake. "The Chairman," proposed by Mr. Heather Bigg, concluded the toast list.

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MEDICAL SUPERVISION OF SCHOOLS.

THE Bill relating to the medical inspection of school children has been read a second time in the House of Commons, and will almost certainly become law this session. The provision regarding medical inspection is compulsory. Every education authority, if the Bill is passed, will at once have to make arrangements for carrying it into effect. The success or failure of medical inspection will depend a great deal upon whether a right direction is given at the start, and the medical profession should therefore lose no time in expressing its opinion as to the best way of carrying it out. That it is impossible for medical inspection to be generally and efficiently performed by special officers has been repeatedly set forth in these columns. In Germany generally and in those towns in America where medical inspection exists the actual work of weighing, measuring, and special examination is done by general medical practitioners, who visit the schools in their daily rounds, the number appointed depending upon how close together or how scattered are the schools. If every school child has to be examined at the time of admission to school, there is no better way of doing it. There must, of course, be some organization for analysing and collating the information collected by the individual medical examiners. In big cities the Education Committee ought to have a medical officer to perform these duties, and also to advise as to the proper sanitary construction, ventilation, etc., of new school buildings, and on the improvement of old in these respects, but the Committee could, and should, employ general practitioners for the actual work of measuring and inspecting the children. Every education committee should clearly understand that proper education is impossible without health, and should, therefore, take a deep interest in the question of medical inspection.

The Education Committees of county councils must also have medical officers. Where the county council has already appointed a medical officer for the county he would be the natural person to supervise the proper carrying out of medical inspection and to receive and analyse the reports of the local medical inspectors, except perhaps in the very populous counties where the work is very heavy and where it might be necessary that the Education Committee should employ a medical officer of its own. The new Bill when it becomes an Act will be an additional reason why those county councils which have not yet appointed medical officers should do so at once. It is, indeed, surprising to see how little has hitherto been done. From the report of the Interdepartmental Committee on Medical Inspection and Feeding of Children attending Public Elementary Schools, it appears that in 1905 only 2 county councils out of 48 had approved any kind of organized scheme of medical inspection. In the county boroughs arrangements of a more or less systematic kind had been made in 27 out of 71, while in boroughs and urban districts there were respectively only 14 out of 136 and 12 out of 56 authorities by whom action had been taken. Although this record shows an astounding slackness and want of real intelligence on the part of those who look upon the intellectual progress of the children as their special province, it is not altogether to be regretted, as it is better that nothing should have been done than that a system worked upon bad lines should have been established. It is very difficult to undo mischief, and therefore it is all-important that the matter should at once be given the most serious consideration. There is a good deal of diversity of opinion on the question of medical inspection, some maintaining that it should be entirely in the hands of the medical officer of health, and that the assistance of the general practitioner is unnecessary. As information of a practical nature is generally more convincing than generalities, we will refer those who hold this view to the most interesting report of Dr. T. Henry Jones, Medical Officer to the Surrey Education Committee, which was published in full in the JOURNAL of February 17th, 1906, and to a leading article of the same date.

In the case of the smaller towns, which have in some cases whole-time and in others half-time medical officers of health, the same people are on the Education Committee and on the borough council, and there will probably be a disposition to appoint the medical officer of health to do the school inspection. He is already known to the members by his work, and his appointment would save them a great deal of trouble; but we venture to assert that it will be impossible for him to do the work of detailed inspection personally in addition to his other duties, and that the plan will fail unless his responsibilities are limited to a general supervision of medical inspection in the borough.

The value of an examination of the child at the time of its admission to school is undoubted. It is the beginning of a sort of life-history which should follow the child through its school career, and be sent on to any fresh school to which it is moved. Hardly less important is the examination on leaving school, and advice as to a suitable calling. Much suffering and disappointment might thus be saved to children who at present are placed, through the ignorance of their parents, in trades which are ruinous to their health and happiness. Perhaps most important of all, considering the prominent part the teacher is expected to take in this, is the compulsory introduction of hygiene as a subject into all training colleges. Until the teachers are intelligently grounded in the simple laws of health, the attempt to place upon their shoulders the duty of picking out children suffering from defects of bones, eyes, ears, teeth, and symptoms of infectious diseases, is unfair both to teachers and children, and a mere burlesque of what is surely a most serious duty. The general medical practitioner is the man best qualified to do the work, and to make a selection of cases needing the attention of specialists—oculists, aurists, or dentists. The Committee on Medical Inspection and Feeding of Children already referred to made the following statement: "We have not "sufficient data upon which to base any estimate of the "percentage of cases not receiving treatment; such "percentage probably varies greatly from area to area, "but we fear there is no doubt that it is a large one. "The poverty of the parent, and more often his apathy "and indifference, if not positive negligence, are formidable obstacles to the cure of the child. Poverty "may be partly met by charity but the apathy and "negligence will only decrease as the parent is slowly

"brought to see the material gain which results from "giving due attention to his children's ailments." If the State is going to the expense of providing medical inspection, it must take care to find a means by which parental neglect will not be allowed to stand in the way of the children's progress.

KALA-AZAR.

To many, especially to practitioners and others in England, the term "kala-azar" (black fever) means little or nothing, but to the Government of India and its medical officers, and to those who have had opportunities of seeing and studying cases in this country in Europeans who have contracted the disease abroad, the disease is one of the greatest importance. The Royal College of Physicians of London, recognizing this and the importance of encouraging the study of tropical diseases generally, this year deputed Major Leonard Rogers, I.M.S., Professor of Pathology, Calcutta, to deliver the Milroy Lectures on this subject, and such a departure should certainly do much to popularize the further investigations of diseases limited to or specially prevalent in the hotter zones of the earth.

A knowledge of the existence of kala-azar dates back at least to 1869, but the disease first attracted especial attention in 1882, when it seemed to take on an epidemic form in Assam, depopulating certain areas at the foot of the Garo Hills, and spreading widely in different directions. Commissions were sent out to study it, but its symptoms, pathology, and epidemiology baffled more or less completely the competent observers who took part in the inquiries. By some, for example, it was supposed to be a form of ankylostomiasis, by others a severe form of malarial poisoning (malarial cachexia), while various epidemics, of what we now know to have been the same thing, occurring in other parts of India than Assam were variously designated Dum-dum fever, Burdwan fever, and kala-dukh. Though Crombie on clinical grounds held that there was a distinct form of fever in Calcutta in no way connected with malaria, to which he gave the name "non-malarial remittent fever," chaos reigned more or less supreme till Leishman by a brilliant discovery solved the problem by finding a peculiar form of protozoal parasite in the juice from the spleen of some of the Dum-dum cases. Once this discovery was announced a search for the parasite in cases of kala-azar in Assam, and in sporadic cases throughout India resisting quinine and variously designated tropical cachexia or tropical splenomegaly, revealed its presence, and the trend of opinion now is to term all cases kala-azar in which Leishman's parasite may be demonstrated. This, of course, has simplified the subject enormously, and geographical application of the test has shown that the disease is more widely spread than was formerly supposed, cases having been demonstrated in China, Egypt, and other countries, and the further discovery of apparently similar or at least closely allied bodies in chronic sores (Delhi boils) has raised the very interesting question—at present unanswered—whether this is a stage or phase of the same disease. Though some years have elapsed now since Leishman's discovery, we have not advanced much further in the knowledge of what this interesting parasite really is, and protozoologists have not yet classified it into its proper family, genus, or species. Laveran's view that it is a piroplasma has little to support it, and has rightly, we think, been dropped, whereas the hypothesis that the protozoon is a stage or phase of a flagellate organism would seem to be correct. The trend of opinion is certainly in favour of this view, and it is strengthened by the work on its development into a flagellate outside the human body in citrated blood at low temperatures recorded by Dr. Rogers in his lectures. This original observation, an observation of the greatest importance, led the author to the hypothesis that the citrated blood at low temperatures used in the experiments might in nature be replaced by the juices of some insect's stomach, and he found that the sterile and acid contents of the bug's gastric tract formed a very suitable medium for the development. Feeding experiments were next tried, but in the author's case gave negative results, though he is now able to state that experiments made by Patton have been successful. This requires confirmation, as flagellates of different kinds are common parasites of insects, and it would be desirable to know whether the bugs were reared from the egg before sucking the cases. One thing against this theory of the method of the spread of the disease founded on the experiments is the extreme rarity of the protozoa in the peripheral blood of persons affected by the disease; and it is not at present easy to accept Donovan's statement to the contrary effect referred to in the lectures, especially as so many competent observers, including the lecturer himself, have repeatedly failed to find the parasites there. The possibility that the parasite escapes from ulcers of the intestines or skin cannot as yet be altogether put aside. The question of how the parasite leaves the body is of course the crux of the whole situation, and this must be cleared up even to the smallest details, and an answer obtained before adequate prophylactic measures against the spread of the disease can be devised. The segregation experiments of Price prove almost conclusively that the disease is infectious, and the tendency to linger in special houses is certainly suggestive of an insect intermediary; but, as far as the work has gone, the chain of evidence is not complete if we apply to it the most rigid scientific tests.

The disease is a terrible scourge, and, as is the case with regard to so many other tropical scourges, prevention is the great aim to keep in view, the various lines of treatment at present hitherto tried being of little avail. Bentley's figures for Assam, for instance, give the extraordinarily high death-rate of 96 per cent. Arsenic seems to be the only drug that does any good, and its effects are only temporary; quinine has been considered useless by most of those who have used it, though the lecturer states that he has found it of benefit. Atoxyl is, as he suggests, worthy of trial.

On the whole, then, the results of the researches into kala-azar, as far as they have gone, are satisfactory; a very strong working hypothesis has been established, and this success may be used as another argument in support of the view that the duty of the Government of India and other tropical countries is to encourage scientific research into the cause of disease, expenditure for this purpose being in the long run a true economy.

THE LATEST ANTIVIVISECTIONIST INVENTION.

The antivivisectionist is an enemy of research, but he has a genius for discovery—at least in one field of natural history. In the finding of mares' nests he is unequalled; he finds enough to provide an unlimited supply of remounts for those credulous warriors, the Horse Marines. But competition in the antivivisection market is desperately keen, and as Death said to Dr. Hornbook, "Folk maun something for their bread." Therefore, in his eagerness to show the soft-hearted but

silly people who support the cause that "Codlin's the friend, not Short," the professional agitator is often driven to sheer invention. Some one has said that there are only thirty-three stories—"distinct and several" like the stinks of Cologne, according to Coleridge (the great, not the little)—and that of these only three can be told to ladies. The author of the saying evidently did not know the power of the antivivisectionist imagination which invents stories without number, all especially adapted to the "eternal feminine," whether it is clothed in petticoats or in breeches.

The National Antivivisection Society has hitherto supplied us with the most delectable examples of inventiveness. But Mr. Coleridge must now hide his diminished head; for the moment, at any rate, he has been thrown into the shade by Mr. Sidney Trist, Secretary of the London Antivivisection Society. In a letter headed, "What Vivisection Costs the Public," which he has managed to palm off on one or two confiding editors, that gentleman makes the following grotesquely absurd statement: "Every year the British Medical "Association receives from the Treasury several thou- "sands of pounds for 'scientific grants,' mainly vivisec- "tion. The taxpayer pays." The statement is absolute and categorical, with none of the crafty qualification to which we are accustomed in antivivisectionist charges. There is here no possible confusion between one body and another, nor are there any of those traps in which presumptuous but innocent ignorance not infrequently allows itself to be caught. The statement is a pure invention, false in every sentence, every clause, and every word, without a shadow of the very flimsiest foundation to be pleaded in excuse. There is therefore no escape for Mr. Trist from the dilemma that he has either displayed crass stupidity or shameless audacity in lying. If he accepts the former alternative, we can only say, as Johnson said of Thomas Sheridan, that it must have taken the Secretary of the London Antivivisection Society a good deal of pains to become what we now see him, for such an excess of stupidity is not in Nature. If he chooses the second horn of the dilemma, he should be advised by his friends to temper his valour in mendacity with some degree of discretion. If a lie is to be successful, it should not be open to immediate exposure. In this respect Mr. Trist's invention is singularly unhappy. Yet we are grateful to him, for he gives us the opportunity of stating the truth, which, as the good deeds of the British Medical Association shine, we fear, but dimly in a naughty world, may not be fully known, even to many of its members.

The Association has never received one farthing from the Treasury, either for "scientific grants" or for any other purpose whatever. All the money it has expended, and continues to expend, on the furtherance of knowledge to be applied to the relief of suffering and the welfare of mankind, comes directly or indirectly from the medical profession itself. The Association has given, in scientific grants and research scholarships, no less than £20,000. It has also given nearly £2,000 to various societies in aid of scientific research. In addition to these sums the Association has spent between £5,000 and £6,000 on collective investigations on such matters as the communicability of phthisis, acute pneumonia, chorea, acute rheumatism, diphtheria, cancer of the breast, old age and the changes incidental thereto etc. It has spent more than £1,000 in researches on anæsthetics, an almost equal amount on investigations as to new drugs; between £600 and £700 in the collection of data relative to feeble-minded children, and further sums in inquiries as to the eyesight of railway servants and sailors, and the decay of teeth. It will be noted that all these researches are on subjects of the highest practical importance to the health, safety, and welfare of the people. The Association has further encouraged research work in ophthalmology and public medicine by the bestowal of prizes.

All this, as we have said, has been done without State aid of any kind. In view of these facts, we cannot help asking if there is any other profession that would not only work steadily and strenuously for the destruction of its own *raison d'être*, but give largely of its hard-earned money for the accomplishment of that purpose? And what is to be thought of men who try to stir up prejudice against such a profession by a wilfully and maliciously false appeal to the taxpayer? We say the statement of the Secretary of the London Antivivisection Society is wilfully and maliciously untrue, because he could have learned the truth of the matter without the slightest difficulty. We have heard much from representatives of the cause he professes to champion of the ethical aspects of the question and of the demoralizing effects of experiments on those who make and those who witness them. Is it not time that Mr. Trist and his fellow agitators gave some thought to the ethical aspects of a campaign whose sole strength lies in calumny, and to the demoralizing effects of a method of controversy whose very essence is the deliberate concoction and systematic conveyance of falsehood?

TEACHING AND EXAMINATION.

DISSATISFACTION with the existing system of medical education appears to be very general among teachers and among practitioners, and probably, if they spoke their minds, the taught would be ready to join the chorus of disapprobation; many of them will find in Dr. Lauriston Shaw's vigorous condemnation of the examination system an echo of their own thoughts and experience. Two famous professors of physiology, both now dead, used in their lectures to divide the subject into two parts—that which was informing and stimulating, and that which was useful for examinational purposes. Dr. Shaw will not perhaps quarrel with us if we sum up the argument of his address to the Hunterian Society by saying that it is directed to proving that the system thus ironically defined has during the last ten or twenty years tightened its deadening grip on medical education, especially in London. External examinations, in which the candidate is known to the examiner only as an arithmetical expression, or at best as an individual who sits for ten minutes or a quarter of an hour at the other side of a table and answers questions with more or less nervousness and inaccuracy, were invented to check nepotism, once general in Government departments, and not unknown to medical corporations. The universities of Scotland have never accepted this particular remedy, though it has been swallowed with the greatest intrepidity in London both by the University and by the Royal Colleges. It must in fairness be admitted that the application of the system of so-called internal examinations—that is to say, examination by the teacher assisted by an external coadjutor with more or less limited control—would be very difficult, if not impossible, of application in London under existing circumstances.

The late Mr. Robert Lowe's opprobrious description of the internal examination system as a branding of one's own herrings no doubt embodies and emphasizes a prejudice, but, as Dr. Shaw admits, so long as an unendowed professor's living depends upon the number of students he can attract to his class,

it is not remarkable that his impartiality should be suspect. The truth is that efficient medical education—that is, education which trains a man to understand and think for himself—cannot be given on a commercial basis. Adam Smith thought that in common with education of all kinds it could, and, as Sir Arthur Rücker has recently reminded us, the great economist's opinion was founded on the doctrine that the best teaching is that which most directly meets the desires of the student or, if he be of tender years, his parents, and that the best way to secure such instruction was to make the teachers immediately dependent on the students' fees. If it was ever true that an institution for higher education could find in students' fees a revenue sufficient to defray its expenses, it is true no longer, and it is not less but more false of medical colleges than of others, as Sir Victor Horsley pointed out in his forcible way some years ago. The truth is being slowly understood, and, when it has been completely realized, the fears of those who look with suspicion on the internal system of examinations will be removed or very much diminished.

Meanwhile, if we are to believe the half of the complaints of teachers and practitioners, there is urgent need for some immediate reform to obviate the grosser defects of the present system. Dr. Shaw suggests a system of combined examination and inspection, the inspector to convince himself by study, at surprise visits, of the tangible results of each student's practical work, his clinical records, his charts, his bacteriological, chemical, and haematological reports, his duly attested microscopical slides, heart and pulse tracings, photographs and drawings, that the work is being properly done and fairly marked by his teachers. The Faculty of Medicine of the University of London has expressed an opinion in favour of the introduction of this principle, but so far it has not been put in practice, although it may gratefully be admitted that this university, which has so many defects almost peculiar to itself, has not fallen into the error committed by one of the older universities of worrying its undergraduates by unnumbered examinations, producing a kind of intermittent fever of cramming.

Adam Smith held that the system of payment by results was not only natural and just in itself, but good because it gave the students a desirable control over the subjects taught and the method of teaching. In the general discredit which has overtaken his theory the rights of students have been perhaps unduly depreciated. The original idea of a university was that of a number of men who formed themselves into an association for the purpose of obtaining an efficient education, and in Bologna they had a short and easy way of bringing to reason a teacher who neglected or misunderstood his duties. Nobody wishes to go back to this primitive stage, but it may seriously be asked whether there ought not to be created in London some organization, recognized by the university and the colleges, through which students should be able to bring to notice the difficulties they are themselves experiencing, and the obstacles to their education which they conceive to be removable. It does not seem to have occurred to Dr. Shaw—and in this he is by no means peculiar among teachers—that the student, especially the senior student, who has recently suffered many things from unsympathetic teachers and examiners, may have some things to say which might be worth listening to. It is rather characteristic of London that when a University Union was formed the other day, all the principal officers nominated were graduates, many of them officials, and that the Vice-Chancellor was made President. The Vice-Chancellor is also Chairman of Convocation, and has inspired that body with so little enthusiasm that for some years past it has been the exception rather than the rule to get a quorum. This may be Sir Edward Busk's misfortune only, but it does not seem to augur well for the future of the Union.

A university ought to be a democracy of learning, but if undergraduates are to be dragooned and patronized and treated as though they were lower-form school boys whose needs and wishes are to be discovered for them out of the memories of the teachers, it cannot attain to full development.

MEDICINE AND MILK.

The British public is phlegmatic, but about the milk question it shows a callousness which can only come from wilful ignorance. The publication of the report of the Royal Commission on Tuberculosis has been a convenient event to look forward to; no proper steps could be taken until it was certain whether bovine tuberculosis was transmissible to man. Now the oracle has spoken, yet the fatalist policy seems likely to be continued, for it may be said that the attitude of the British public with regard to the milk question amounts to fatalism or trusting to luck. "What did our grandmothers do?" and "I would rather not know" are the usual remarks made by fathers and mothers of families, while very many medical men, perhaps the majority, go on prescribing milk diet as if nothing had happened. The point was clearly raised at a meeting over which she presided at Brighton last week by Mrs. Watt Smyth, who has earned the right to be heard on the subject. Speaking as a member of the public she urged that it would be wise for those responsible for the care of young infants or invalids to consult their doctors with regard to the best place to get milk. It may be said that it is not within the province of a medical man to hunt out shops supplying healthy milk, but, if he is physician to a hospital or infirmary, he does not hesitate to show his interest in the matter, and to insist on the contract being let only on an undertaking to fulfil certain conditions, and for the future it will be necessary to see that these conditions are made much more stringent. If this be true, then we believe that, if the private practitioner will look into the question, he will be disposed to agree that the new facts brought to light in recent years have imposed a new duty upon him also. Milk has long been an important element in the treatment of many cases, and when a patient is no longer able to take an ordinary mixed diet he is still very often put upon milk. Now, while a patient who is not very ill may be able to resist disease-producing microbes in milk, the powers of resistance of a patient weakened by a serious illness are reduced, and the risks become greater. If, then, a milk diet is an important part of the treatment of many cases both acute and chronic, the freedom of the milk from contaminations capable of producing injurious effects even in health becomes as important as the purity of drugs or the sterilization of instruments. Having succeeded in showing that the milk supply is liable to injurious microbial contamination, there remains for the medical profession the further duty of insisting that milk ordered in the course of treatment shall be free from danger. The position of the doctor and anxious mother too often reminds one of the story of the affectionate magpie which developed so deep an interest in the newly-arrived baby that it constituted itself the infant's guardian, and was always happiest when perched on its cradle; one day a com-

motion was heard, and the mother rushed in to find the magpie trying to put a wriggling centipede into the infant's mouth, thus endeavouring to prove its interest. The moral of this fable is that sympathy and devotion are not enough, they must be guided by knowledge, and it is an obligation on medical men to afford this guidance. We cannot any longer rest content with ordering so many ounces or pints of milk, we must direct that the milk shall be obtained from a well-conducted dairy supplied by dairy farms where the elementary principles of sanitation are not violated at every stage, as is now usually or almost invariably the case. Physicians used to have the right and the duty to inspect chemists' shops in the public interest, in order to test the purity of the drugs sold there; this has long ceased to be necessary, because the chemists themselves have become alive to their duty. We are now very much in the same position with regard to the milkman; he has not been aroused to a proper sense of his responsibilities, and until the sanitary conscience becomes much stronger in rural sanitary authorities and their officers milk supplied in the ordinary way of trade must lie under grave suspicion; and the doctor, who is pledged to cure his patient *into, citò, et jucundè*, may be forced in place of prescribing milk to forbid it altogether, unless he has, by personal inquiry and if need be by a visit to the farm, ascertained that it is free from dangerous sources of contamination. No doubt it is sometimes very difficult to trace a milk supply, notably in the case of large towns, dairies in which may be served by farms situated a long way off in the country. It may not be practicable to visit the distant farms in order to see how they are conducted, but the nearer farms would be a good criterion as to general management on the part of the dairy companies. The milk from one dirty farm can contaminate a whole supply, inasmuch as the milk is mixed at the factories. An appeal to the sanitary committee will seldom be in vain, and will certainly have the support of the Medical Officer of Health, for these officers in the large towns, and probably also in most health resorts, are fully alive to the importance of the matter, and only require the active support of local practitioners to bring about a great reform. The dairy shops in towns are generally ostentatiously clean, but a hint may be sometimes got from them by a man who will keep his eyes open. The story told by Dr. Eccles at the meeting reported elsewhere in this issue, of finding in a very clean-looking dairy in Hove a tuberculous dairyman, who kept his sputum receptacle, half filled with expectoration, alongside the open pans of milk on the counter, shows that nothing can be taken for granted. It is certainly a disquieting story to come from a place to which people are recommended to go for the good of their health, a place possessing its own Medical Officer of Health, and it is to be presumed, an adequate staff of sanitary inspectors. It must be realized that the milk question is one literally of life and death. The policy of *Khoda jaan* (God knows) is fascinating enough in the people of the East, but in a civilized country such as ours claims to be, it is criminal by omission.

INFANTS IN PUBLIC-HOUSES.

A CROWDED attended meeting was held at the offices of the *Tribune* in Bouverie Street, London, E.C., on March 4th, to consider the question of children in public-houses in relation to infant mortality. The chair was taken by Sir Thomas Barlow, Bart., M.D., and Mr. Franklin Thomasson, M.P., the Director of the *Tribune*, in opening the proceedings, said that there were many quarters in London, as in other great cities, where the public houses were invaded by women who brought their babies and small children with them, not only did the mothers there poison themselves with cheap alcohol, destroying or vitiating their power to provide the natural food of their offspring, but they also dosed their newborn infants and young children with gin to keep them quiet. The evil being admitted, it was hoped that a resolution would be adopted by the conference suggesting a remedy. The chairman said that the fact that the birth-rate of the country was declining while the infant mortality was not lessened was a serious matter; much, he believed, could be done with the next generation by improved methods of education, especially by teaching the teachers with regard to hygiene and temperance, but the Legislature had accepted the principle that young children ought to have the protection of the State; such protection had been afforded by factory legislation, and it ought not to be beyond the wit of man to protect infants from the risks to which Mr. Thomasson had referred. Sir Lauder Brunton, who followed, said that mothers did not go to public-houses merely for the sake of the pennyworth of gin, but for the light and warmth they could not get in their own homes. While he recognized that it was necessary to supply their wants in this direction, legislation to deal with the particular point before the meeting was pressing. Mrs. Scharlieb, M.D., speaking for the National League for Physical Education and Improvement, said that that body thoroughly sympathized with the efforts being made by the *Tribune* to stop the admission of young children into public-houses. Mr. Eustace Fiennes, M.P., said that a debt of gratitude was owing to that newspaper for having raised the question, and Mr. Arthur Sherwell, M.P., moved a resolution that no child under 14 years of age shall be allowed into any licensed house other than a residential hotel. This resolution was supported by Dr. Sandwith, who said that every one, whether a teetotaler or not, must agree that it was horrible to think of babies in arms and children under 2 years old, being fed with sups of gin. Sir Victor Horsley urged those present to consider what practical steps they could take to forward the proposition made by Mr. Sherwell; it meant not merely the prevention of the taking of alcohol by children, but the prevention of the establishment of the alcoholic habit. Dr. Robert Jones, medical superintendent of Claybury Asylum, told the meeting that Wales had become more sober and industrious since the law was passed which forbad the sale of alcohol on Sundays, but he was prepared to accept the resolution as an immediate instalment of reform. Mr. Macnamara, M.P., Parliamentary Under Secretary to the Local Government Board, dwelt on the necessity of more prompt registration of births. At the present time in a large proportion of cases the only record of existence was the record of death; he was in favour of the establishment of milk dépôts, of the revision of the Dairy Order, and of the raising the age at which children might go to work. The Bishop of Hereford, Canon Hensley Henson, Commissioner Nicol of the Salvation Army, Professor Sims Woodhead, Miss Harriet Johnson of Liverpool, and Mr. Charles Wakeley, of the Band of Hope Union, supported the resolution, which was carried unanimously. Subsequently a resolution was adopted converting the conference into a committee for supporting the legislation suggested in the resolution.

THE SLEEPING SICKNESS COMMISSION.

FURTHER reports of the Sleeping Sickness Commission of the Royal Society have just appeared. They consist of a continuation report on Sleeping Sickness in Uganda, by Lieutenant A. C. H. Gray and the late

[1] Reports of the Sleeping Sickness Commission of the Royal Society. No. VIII. London: Printed for His Majesty's Stationery Office by Darling and Son, Limited, 340, Bacon Street, E., and to be purchased either directly or through any bookseller from Wyman and Sons, Limited, Fetter Lane, E.C., or Oliver and Boyd, Edinburgh, or E. Ponsonby, 116, Grafton Street, Dublin. February, 1907. Price 2s. 6d.

Lieutenant F. M. G. Tulloch; a report on experiments to ascertain the ability of the tsetse flies to convey *Trypanosoma gambiense*, by P. H. Ross; a report on sleeping sickness in Unyoro and Nile Valley, by Dr. A. Hodges; an account of a tour, by Mr. A. G. Speke and Dr. E. B. Adams, in Northern Unyoro and on the Victoria Nile; a report on the anatomy of the tsetse fly, by Professor E. A. Minchin; *Glossina palpalis* in its relation to *Trypanosoma gambiense* and other trypanosomes, by Professor E. A. Minchin, Lieutenant A. C. H. Gray, and the late Lieutenant F. M. G. Tulloch; and a report on the occurrence of encystation in *Trypanosoma grayi* (Novy), with remarks on the method of infection in trypanosomes generally, by E. A. Minchin. In glancing at the conclusions of the continuation report one is struck specially by the fact that little has been added or changed as regards the data which Colonel Bruce and his co-workers formulated in their earlier reports, and the accuracy of that work is thereby very much emphasized. For example, the present workers state again "that trypanosomes are not present in the "cerebro-spinal fluid of very early cases of trypanosome "infection, but that these parasites can always be found "there in late stages of the disease," "that sleeping "sickness is the last stage of trypanosome infection, "and is always fatal," "that there is but one human "trypanosome in Uganda, and that it is identical with "*Trypanosoma gambiense*," and "that the treatment of "trypanosome infection with drugs does not hold out "much hope of success even in early cases." Of the other papers, Professor Minchin's on the anatomy of the tsetse fly and that written in co-operation with Gray and Tulloch are the most interesting. The position of the salivary glands in the abdominal cavity of the tsetse fly is certainly very peculiar, but then in other ways those flies are also peculiar; for example, in giving birth to fully-developed larvae instead of eggs. The problem of what the *Trypanosoma grayi* and the *Trypanosoma tullochii* may be is very interesting, and the route of infection is certainly puzzling. Professor Minchin's recent observation on the occurrence of encystation in the former may have solved the problem, and what he terms his contaminative method of infection, though it does not seem probable, seems certainly to deserve further investigation. Although so much elaborate research work has now been applied to sleeping sickness, little has so far been done in the way of prophylaxis, and this perhaps is not to be wondered at when we consider how long the disease may go on, how difficult it is to avoid being bitten by tsetse flies, and further, how little can be done to destroy these pests. The one essential point of importance brought out is that they do not go very far from water, and this therefore might be made use of in the future, and will no doubt be one of the guiding considerations in the efforts now to be made.

URTICARIA OF MUCOUS MEMBRANES.

It is sometimes forgotten that urticaria may involve the visible mucous membranes. Oedema of the lips, tongue, prepuce, or vulva, coming on suddenly and subsiding quickly, whether accompanied by wheals about the skin or not, should always lead to a suspicion of urticaria. To give instances, the swelling of the tongue may be so great as to give rise to fears of serious complications. It has also been observed, either concurrently or alternately with undoubted nettle-rash of the skin, that nasal, laryngeal, bronchial, gastro-intestinal symptoms and manifestations have occurred. Guéneau de Mussy, indeed, referred to some of these as internal urticaria. Urticarial oedema of the lips, tongue, and prepuce developing suddenly is well exemplified in the following case, to which our attention has been drawn by a correspondent. An elderly man, aged 76, went to bed quite well, but in the morning there was oedema of the prepuce. The urine was found to be normal. Two days later swelling of the lower lip came on, and this was followed next morning by marked swelling of the left side of the tongue. On inquiry it was elicited that the patient had partaken of larks stuffed with pâté de foie gras out of a tin, but so had several other members of the family, with no ill result in their case. The swellings were very evanescent, and subsided in a few hours, and in three or four days all symptoms had passed away. The question arose as to ptomaine poisoning, but this can certainly be put on one side, especially as no one else suffered. Moreover, it must be added, that although the patient was asked to omit fish from his dietary, some fifteen days later he had some fresh sole for dinner, and next morning his tongue was again much swollen. The patient is gouty, it is added, and one is not surprised at this, for, with little imagination, this might be inferred from the stuffed larks. An explosion of some kind was almost bound to follow the fortuitous concourse of circumstances which brought together a gouty old gentleman of 76, with renal inadequacy no doubt, and larks stuffed with such excellent purin foundation as pâté de foie out of a tin. The best treatment in such cases is clearing out the primae viae with a saline aperient.

THE AFTER-CARE OF THE PAUPER INSANE.

As all readers of lunacy statistics are aware, a very large proportion of patients discharged from asylums as recovered find their way back to the asylum within a few years. This proportion certainly exceeds 25 per cent., and as in considerable numbers of these the almost extinct embers of the disease have again been stirred into flame by actually preventable causes—it may be by alcoholic excess, the repeated strain of childbirth, faulty personal hygiene, or other causes too numerous to mention—the question arises whether more should not be done than is done at present to prevent as far as may be these recurrences. After-care organizations are therefore required, and their work should include the instruction of discharged patients and their guardians as to the dangers to be avoided and some modified form of supervision for some period after discharge. Professor C. Moeli of Berlin[1] has recently published an interesting commentary on the working of the provisions made in the *Bürgerliches Gesetzbuch* as to the discharge of patients from asylums in Prussia. German lunacy law differs fundamentally from our own, so that his criticisms of it have little interest for us; but he discusses two points of general importance. These are, first, the responsibility which rests on the medical superintendent of an asylum of discharging patients whose relapse seems to be inevitable, but whose recovery, presumably temporary, leaves him no option; and, secondly, the supervision and after-care of patients having no legal guardians. These two questions appear to be, from the administrative point of view, virtually but one and the same—that is, the same organization could serve both ends. In this country there is only one organisation of this kind, the "After-Care Association for Friendless Patients Discharged from Asylums." This philanthropic society, little known and entirely supported by voluntary subscriptions, has for many years carried on in unostentatious fashion its good work, but its sphere of usefulness is necessarily limited, in the first place, by the funds at its disposal, and, secondly, by its limitation to recovered patients having no resources or friends, in accordance with the terms of its constitution. Even within its own bounds this society is only able to afford assistance to a few

[1] *Die in Preussen geltenden Bestimmungen über die Entlassung der Anstalten für Geisteskranke.* ("Regulations as to the Discharge of Patients from Asylums in Prussia. By Professor C. Moeli of Berlin. Halle a. S.: Carl Marhold. 1906. Pp. 44.)

hundreds yearly out of the thousands who might be benefited; but were it able, by finding employment and by pecuniary assistance, to help the whole number of destitute and friendless patients, a larger question would be still untouched. This is the question: whether after-care should be limited to the destitute. There seems to be no inherent reason why the whole number of pauper insane discharged as recovered or relieved should not receive, wherever possible, the benefits of instruction and after-care. This might seem at first sight a great and expensive enterprise, but when it is considered that if a widely inclusive and efficient organization of this kind were in existence, the medical superintendents of asylums could more freely discharge patients to the care of their friends, and that in all probability a substantial reduction in the number of readmissions would ensue, it may very well be that it would prove not only a blessing to the patients but an actual gain to the tax-paying public. At the annual general meeting of the After-Care Association in February last Drs. Savage and Robert Jones and others instanced the need for the furtherance of its work, and alluded to it as a pioneer society. We believe it is, and, further, that it only requires to be more widely known to be better supported. But the instruction of patients and their relatives, and their periodic visitation, if extended as indicated above, is a task which should not be left to private philanthropy, but is a duty which devolves upon the State. The point will doubtless be considered by the Royal Commission now sitting, but, should a system of this kind be inaugurated by the State, it will still leave to this much-deserving Society its own sphere of usefulness—the relief of the poor and needy who have recovered from the most incapacitating of all diseases.

INFANT LIFE PROTECTION.

WE are glad to learn that the Infant Life Protection Bill, which has again been introduced this session, has a brighter prospect of being placed on the statute book than on previous occasions. The amendment of the Act of 1897 would not have been necessary had it not been for the mistaken opposition of certain societies, which unfortunately succeeded in restricting the protection afforded by the Act to cases in which two or more children under the age of 5 years are received or maintained for hire or reward apart from their parents, and to cases in which children of less than 2 years of age are adopted for a lump sum, not exceeding £20. The result has been that not more than one-sixth of these unfortunate infants came under the protection of the Act; the other five-sixths remain in the state in which they were before, and a worse state it would hardly be possible to imagine. The matter was brought before the Chorlton Board of Guardians and the Poor Law Union Association by Dr. Rhodes some years ago, and these bodies have every year since 1900 promoted the Bill now before Parliament. It was to a great extent founded on the law of the State of Massachusetts which compels notification within forty-eight hours of the reception of an infant; on receipt of the notice the State Board of Charities "may investigate the case and make such recommendations as it deems expedient"; by this provision the frivolous objection raised against the inclusion of one child cases, that the parents of children sent from India would object to inspection is adequately met. If, as there seems reason to hope, the Bill passes, it will have the effect not only of protecting infants from deliberate cruelty, but from the deplorable ignorance of some of those commercial foster mothers with regard to the feeding of infants. Only the other day two well substantiated cases of almost incredible folly were reported from the north of England, in one case an infant under 1 year of age was given beer and black pudding for dinner, and in the other rabbit pie! In working-class districts the long tube feeding-bottle is still used in the vast majority of cases, usually through ignorance of the proper method. A woman inspector could in such cases do an enormous amount of good. We have good reason to believe that the President of the Local Government Board fully realizes the necessity for the amendment of the Act, and knows that England is in this respect behind most other European countries and the United States. Though the Bill does not go as far as it ought, yet half a loaf is better than no bread, and we hope that this session the Government will give the measure its official support, and so place us in a position at least not inferior to that of other civilized nations as regards the welfare of these unfortunate children.

THE PREVENTION OF SLEEPING SICKNESS.

PROFESSOR RONALD ROSS, in the course of an address on tropical sanitation delivered before the Royal Sanitary Institute on March 1st, discussed the question of the prevention of sleeping sickness. The disease was spread, he said, by the large caravans which nowadays traversed immense areas in Africa, whereas formerly amongst the indigenous population the disease used to spread slowly from village to village. The proposal was to exercise control over the infection by quarantining the principal trade routes, which was not so difficult at the present time as might appear at first sight. The early stages of sleeping sickness could be diagnosed promptly by observing the enlargement of the glands at the back of the neck, and this condition could be detected by any adult. The proposal was that no one should employ in a caravan any man with enlarged glands at the back of the neck. An expedition to Africa was being organized, and was expected to start in a few months, which had for its object the carrying out of this method of prevention in those parts where the disease was rife. It was hoped that the effort would meet with a large measure of success, for the loss of life from sleeping sickness was very great; though it did not cause so much obvious sickness as dysentery and malaria the mortality was terrible, the disease killing nearly every patient afflicted with it, and causing the depopulation of considerable parts of Africa.

SIR CHARLES TUPPER.

A FEW days ago the Hon. Sir Charles Tupper, M.D., G.C.M.G., was presented at the Westminster Palace Hotel with a portrait of himself, painted by the late Mr. A. G. Turner, and subscribed for by friends of different political views, as a mark of their appreciation of his services to Canada. Among those present were the Agents-General for Nova Scotia, New Brunswick, and Prince Edward's Island, and Mr. Henniker Heaton, M.P. The presentation was made by Lord Strathcona, who read an address setting forth the services which Sir C. Tupper had rendered to Canada during the past sixty years, first in his native province of Nova Scotia, and later in the wider sphere of the Dominion. As Premier of Nova Scotia, Prime Minister of the Dominion and the High Commissioner in London, he had rendered valuable service, and his name would pass down to posterity as one who had done much to place Canada in the high position she now occupied in the Empire and among the nations of the world. Sir Charles Tupper, in returning thanks, mentioned that he was the sole survivor of the sixteen representatives of Canada who met in the same room forty years ago in connexion with the British North America Act. Sir Charles Tupper is one of the many men who, beginning their career as members of the medical profession, have

achieved distinction as statesmen and administrators. Born in 1821, he studied medicine at the University of Edinburgh. He represented his native county in the Canadian Parliament for thirty-one years, and at one time or another held nearly every office in the Government of Canada. He has been President of the Privy Council, Minister of Inland Revenue, Minister of Customs, Minister of Public Works, Minister of Railways and Canals, Minister of Finance, and Prime Minister. He has been twice High Commissioner for Canada in England, and was one of His Majesty's Plenipotentiaries on the Fishery Commission at Washington in 1887-8, and to negotiate a treaty between France and Canada in 1893. He was created a K.C.M.G. in 1879, a G.C.M.G. in 1886, and a Baronet in 1888.

MEDICAL REFEREES UNDER THE WORKMEN'S COMPENSATION ACT.

A medical referee recently addressed a letter to the Home Secretary asking him to arrange for the payment of a small annual retaining fee to medical referees under the Workmen's Compensation Act, so as in some way to compensate those, who like himself, resigned fairly valuable appointments when they accepted the position in 1898. The reply of the Secretary of State was to the effect that he had had the question of the method of remunerating medical referees under careful consideration, but did not see his way at present to recommend to the Treasury any change in the existing system. Our correspondent believes that it was generally expected that something would be done under the new Act, and suggests that as nothing has been done all medical referees should resign their appointments. He believes that in this action they would have the support of the profession generally; he adds that if any good is to be done the resignation must be combined.

At the Council held at Buckingham Palace on March 1st, the King signified his approval by pricking the name of Mr. J. Lynn Thomas, C.B., F.R.C.S., to serve as High Sheriff of Cardiganshire.

The Commissioners for the 1851 Exhibition have appropriated a site on their estate at South Kensington for the Institute of Medical Sciences. It is understood that the site will be reserved for one year, during which it is hoped that the additional sum of about £30,000 required to build and equip the institute may be obtained. The address of the honorary treasurers is 35, Clarges Street, W.

In order to test the feeling of the Faculty of Medicine of the University of London on the present phase of the concentration movement, Dr. H. A. Caley and Dr. Leonard Hill have consented to be nominated as candidates for the representation of the Faculty on the Senate, in opposition to Dr. Kingston Fowler and Dr. Rose Bradford. Drs. Caley and Hill are opposed to the establishment of an Institute of Medical Sciences at South Kensington.

Dr. R. W. Philip, whose address on the public aspects of the prevention of consumption was published in the British Medical Journal of December 1st, 1906, has accepted an invitation to deliver an address on the organization and co-ordination of preventive measures against tuberculosis, and the rôle of the tuberculosis dispensary, before the Verein für innere Medizin und Heilkunde in Vienna on March 21st. The chair will be taken by Professor von Schrötter, who has done so much to organize work for the prevention of consumption in Austria.

Among those who will take part in the discussion on hospital reform, to be opened by Dr. W. Knowsley Sibley at the meeting of the Westminster Division at St. James's Vestry Hall, Piccadilly, on Wednesday next, at 8.30 p.m., are Colonel Montefiore, Dr. Dauber, Dr. Haslip, Dr. A. C. E. Gray, and Mr. Harvey Hilliard. Dr. Sibley, after discussing the mismanagement of hospitals due to competition, and their abuse by in-patients and out-patients, will consider the results of this mismanagement as they affect the interests of the public and of the profession; he will then urge the establishment of a central hospital board for London, and the amalgamation of the King Edward's Fund and the Hospitals Sunday and Saturday Funds with the assistance of the Charity Organization Society.

Among the candidates selected last week by the Council of the Royal Society to be recommended for election into the Society are Dr. Hugh Anderson, University Lecturer in Physiology, Cambridge, and Dr. Arthur Cushny, Professor of Pharmacology, University College, London. Other names on the list are those of Dr. W. B. Benham, Professor of Biology and Palaeontology in the University of New Zealand; Mr. Arthur Crossley, Professor of Chemistry in the School of Pharmacy of the Pharmaceutical Society of London; Dr. Frederick Gamble, Lecturer on Zoology in the Victoria University of Manchester; Mr. H. N. Ridley, Director of the Botanic Gardens, Singapore; and Mr. Frank Adams, Professor of Geology and Palaeontology in McGill University, Montreal.

Medical Notes in Parliament.

The Medical Inspection and Feeding of School Children.—Last Friday was a good example of the useful ends to which a private members' day can be put when the House of Commons is in a serious business mood. Soon after midday the Bill for Feeding Scholars in the Elementary Schools in Scotland, on the same lines as the Act passed last year for England, was considered on second reading. It will be remembered that last session the House of Lords excluded Scotland from the Provision of Meals Act mainly on the ground that this legislation was not needed in the north, and that many leading philanthropic organizations in Scotch cities objected to it. The fortunes of the ballot, however, gave the Labour party in the Commons the chance of knocking at the legislation door again with a new Scottish Bill, which Mr. Ramsay Macdonald moved. Sir H. Craik, the member for Glasgow University, opposed the second reading, and was supported by Mr. Harold Cox, who consistently and courageously fights against all socialistic proposals. The debate went on for more than four hours, but the tone of it was decidedly favourable to the principle of more care being taken of the children as regards food and sanitary inspection, and the Bill was finally carried by a majority of 179. Then a record was made with the next Bill, which embodied the clauses of the Government Education Bill of last year empowering local authorites to supply playgrounds and made it their duty to medically inspect the children. Only twenty-five minutes remained to get the Bill through, and the consequence was speeches were commendably short. Mr. Walter Rea took about three minutes to move the second reading, his seconder, Mr. Parker, the Labour member for Halifax, took even less for his speech, and Mr. Lough, in a sentence or two, supported the second reading on behalf of the Government. Mr. Balfour, speaking next, said he did not oppose the Bill and had supported its provisions last year, but he warned the House of the burden on the rates likely to be caused by the Bill and urged that the Government should provide for this expenditure in a Bill of their own. Sir Walter Foster replied to the Leader of the Opposition by pointing out that experience had shown, where the work of medical inspection had been undertaken, that the cost was not very great, but he supported the view that the Government should provide for the necessary expenditure in their Bill. Other speakers followed; then the

closure was granted at half a minute to 5, was accepted without a division, and the Bill was read a second time. The second stage of this Bill thus occupied only some twenty-four minutes, as compared with nearly four hours and a half occupied by the second reading debate of the Provision of Meals Bill. During the debate on the second Bill it became very apparent that the principle of medical inspection is now generally accepted, and that the principle is certain to be adopted at an early date. There was one moment when the fate of Mr. Rea's little Bill hung in the balance. Mr. Lupton was observed to be preparing a protest against school doctors, from the point of view of antivaccination. Fortunately he was persuaded not to intervene, and so the second reading was won.

Infant Mortality and the Poor Law.—Last week Mr. Morrell in a question quoted Dr. Danford Thomas, the coroner, to the effect that much of the infant mortality was due to the failure to call in medical advice early, and he also asked for the abolition of the custom of giving medical relief on loan, and requiring a parent of an infant receiving medical relief to appear before the Board. Mr. John Burns said that he had not seen the statement attributed to Dr. Danford Thomas. As he had stated on a previous occasion, he had no reason to suppose that guardians were unwilling to afford medical relief for infants whose parents were unable to provide it, nor had he any evidence to show that persons properly entitled to receive relief were deterred from applying for it by the considerations referred to. It did not at present appear to him to be necessary to send a circular to all Boards of Guardians as suggested.

The Cost of Vaccination. Mr. Summerbell asked the President of the Local Government Board whether the Vaccination Order, promised on the 14th instant to be circulated in a few days, was now ready for publication; whether such Order would take effect from the beginning of the next half year, March 25th; and whether, if such Order were to come into force on that date, he would cause it to be issued in good time for the Boards of Guardians throughout the country to consider its provisions and make the necessary arrangements. Mr. John Burns replied that the Order was in an advanced state of preparation, and would be issued as soon as practicable. He would take care that there should be a suitable interval between the date of its issue and that on which it came into operation.

Salaries of Medical Officers, Poplar Union.—Mr. Kenyon-Slaney asked the President of the Local Government Board whether inquiries had been made into the proposed increases of salaries to the out door medical officers of the Poplar Union; if so, what were the reasons advanced for refusing such increases; was a salary of £150 paid in one division of the union in 1900, though the number of persons entered on the medical register was only 1,500, and was a salary of £140 now being paid in the same division, while the number for the past twelve months was 3,152, showing a decrease of £10 in the salary, while the work had increased by more than 300 per cent. Mr. John Burns said that the Local Government Board had considered the application made to it in this matter, but it appeared to it undesirable that a permanent increase should be made in the salaries of the officers referred to. He presumed that the particular case mentioned in the question was that of the Bromley district of the union, the medical officer of which received a salary of £150 in 1900. According to statements supplied by the guardians, the number of orders for medical attendance in this district (excluding paupers on the permanent list) was 1,944 in 1900 and 2,246 in 1906. A new officer was appointed for the district in 1901 at £130 per annum, and his salary was increased in 1903 to £140 per annum.

The Public Health Officers Bill. Sir Walter Foster introduced this Bill on Friday, March 1st, and it was read a first time. It is described as a Bill to amend the law relating to the qualification and tenure of office of medical officers of health and sanitary inspectors and for other purposes, and provides for security of tenure. It is backed by Sir Lawrence J. Powell, Sir John Tuke, and Mr. [illegible].

The Metropolitan Water Board (Charges) Bill gave rise to an animated debate last week, the opposition coming mainly from those districts which may be adversely affected by the attempt of the Bill to make the charges uniform throughout the limits of the supply. The Board, when created, had the duty of presenting such a Bill imposed upon it in order to equalize the charges made under the old system. The second reading was carried by a majority of 175.

New Bills.—Among the Government Bills recently introduced without discussion are the Poisons and Pharmacy Bill which last year began its course in the House of Lords. This year it is in the charge of the representatives of the Home Office in the Commons, and has to face the Bill called the Pharmacy Bill, which has been introduced by Mr. Winfrey. The Butter and Margarine Bill is another Government measure in charge of the Board of Agriculture. Sir Edward Strachey has introduced it. It deals with the registration and inspection of butter factories, the limit of moisture in butter and butter substitutes, the importation of butter, margarine, and butter substitutes, the curd in butter, the marking of wrappers, and the sale of butter mixtures. The Bill is sure to require detailed consideration. The Dogs Protection Bill is the Antivivisection Bill of Mr. Ellis Griffith, who has put it down for second reading on March 12th. Sir Walter Foster's Bill for Rural Housing was introduced last week, and is backed by Sir F. Channing, Mr. Soames, Mr. Eve, Mr. Hart-Davies, and Mr. Nicholls; it will be put down for second reading on March 18th, but the discussion will necessarily be postponed till the Government measure is before the House. Mr. Staveley Hill's Infant Life Protection Bill seeks to amend the Infant Life Protection Act of 1897, and is down for second reading on Monday, April 15th.

Second-hand Bottles.—Mr. Clynes called the attention of the President of the Local Government Board to the possible dangers to health from the use of second-hand and discarded jars and bottles, and Mr. Burns said that he had received some representations on the subject. So far as the use of second-hand bottles in the sale of poisons was concerned he had brought the matter under the notice of the Privy Council. It did not appear that there were any existing regulations which could well be applied to meet the complaints made.

The Course of Business.—Most of the time this week has been used by the Government to push on financial business. On Monday Mr. Haldane introduced his Army Bill after the debate on the army estimates. On Tuesday Mr. Robertson introduced the navy estimates in an admirably clear and concise speech, while in the evening Sunday closing was discussed on a private member's motion. Just before the House rose Mr. Walter Rea had an unusual piece of luck in getting his Medical Inspection of School Children Bill referred to the Grand Committee on Trade. The Opposition suggested the Committee on Trade instead of that on Law, and Mr. Rea accepted the suggestion. Afterwards this was discovered to be an adroit manœuvre on the part of Lord Robert Cecil to impede the Deceased Wife's Sister Bill. The Medical Inspection Bill will now probably get first place among private Bills after Easter, and so can be used to impede the progress of the other contentious Bill. Lord Hugh Cecil on one occasion utilized the Cremation Bill to obstruct the Deceased Wife's Sister Bill with temporary success. It remains to be seen if the brother in a Radical House of Commons will have similar success. On Wednesday the Army Supplementary Estimates were taken, and the Report of Supply voted on three days last month. Thursday was devoted to Civil Service Estimates, and Friday fixed for the Women's Enfranchisement Bill.

At the annual meeting of the Society of Anæsthetists on March 1st the following officers were elected: President, Dr. R. J. Prosser Williams; Vice Presidents, Mr. C. Carter Braine; Treasurer, Dr. J. W. Silk; Secretaries, Messrs. W. Foster Cross and Llewellyn Powell. Members of Council: Messrs. J. Hamilton, Ash Browne, and G. Foy; Auditors: Messrs. [illegible] and R. W. Collum.

Liverpool.

The School of Tropical Medicine.

Proposed Dutton Memorial Professorship.

A proposal is on foot to institute a Research Professorship in Tropical Medicine in the University as a memorial to the late Dr. Joseph Everett Dutton. It will be remembered that Dr. Dutton, who had been a student and house-physician in the Royal Infirmary, turned his attention to tropical medicine, and served on four successive expeditions sent out by the Liverpool School to Nigeria, the Gambia, Senegambia, and the Congo Free State. During the years spent in Africa he did much valuable work, and by describing the *Trypanosoma gambiense*—the parasite since recognized as the cause of sleeping sickness—gained the highest distinction for himself and for the school great renown. He died at the early age of 29 at Kasongo, in Central Africa, when engaged on an expedition sent out to study tropical diseases. He was investigating the previously little-known "tick fever," when he contracted that disease and died from its effects.

The desire is widely felt to commemorate his life of self-sacrifice and single-purposed endeavour, and all who knew him agree that the most fitting form which a memorial to him can take is one which will help to continue those researches in tropical medicine for which he gave his life. A Dutton Memorial Research Professorship in Tropical Medicine is therefore to be established. To realize this object a sum of £10,000 is required, of which more than £4,000 has already been promised. The preliminary subscription includes the names of the Countess of Derby; Sir A. L. Jones, Mr. W. P. Hartley, Dr. J. L. Todd (who have each given £1,000); Professor Osler, Professor Carter, Dr. Caton, Professor Ronald Ross, and many others.

An eloquent appeal, issued by the Incorporated School of Tropical Medicine, for funds to found the professorship, sets forth in a striking manner the benefits which have accrued in places where, under the auspices of the school, systematic measures have been taken for the prevention of malaria. Thus, in Ismailia the cases of malaria, which were 2,250 in the year 1900, had fallen to 37 in 1905. In Havana, where antimosquito measures were adopted in 1901, there were 302 cases of yellow fever in 1900, and none in 1902 and 1903. A most pressing problem in tropical medicine now is to deal with the terrible sleeping sickness, which is estimated to have caused some 600,000 deaths of natives in Africa during the past ten years. The hope is expressed that by applying quarantine measures it will be possible to check its advances, and that a cure may be found and also a method of destroying the tsetse fly which transmits the parasite. There can be little doubt that an appeal such as this will not fall on deaf ears, and that the sum required will speedily be forthcoming.

West Yorkshire.

The Support of Medical Charities in Bradford.

The second annual meeting of the Bradford Hospital Fund held recently showed a gratifying increase in the receipts from the various sources from which it is raised. The amount received from the collections at the mills and workshops constituted a record, amounting to £3,386 against £2,803 in 1905. There were slight increases in the collections from places of worship and from donation boxes in licensed houses. A new feature was the receipt of £114 from a collection made on what is called "scholar's day" in the schools under the local education authority. The object of the scholar's day is stated to be twofold—to instil into the minds of the young their duty towards the sick poor, and to enlist their sympathies for them. The proceeds from the garden parties, galas, etc., was a little below the previous year. There is no doubt that through the means adopted to supply this fund nearly all the extraneous methods to assist the charities, possible, are being got at. As one of the speakers remarked, "they were tapping even the public-houses." So far, so good. This fund is distributed on equitable terms amongst the four hospitals of the town according to the work done. But the amount, after all, is quite inadequate to supply the wants of the charities. The Bradford Royal Infirmary and the Children's Hospital seem to be always in a state of marked impecuniosity. The institution that appears to be best able to pay its way, is St. Catherine's Home for Cancer and Incurables. This is an excellent institution in a modern building with twenty-five beds, mostly occupied by cancer cases, and had an actual balance in hand last year. Possibly the fact that the Committee of Management, with the exception of the medical staff, consists entirely of ladies may have something to do with this result. The great need of the hospitals is for increased subscriptions. Especially is this so in the case of the Royal Infirmary. The great defaulters are undoubtedly the large employers of labour. What is their position in connexion with the infirmary? It is nothing less than a public scandal to think of the inadequate subscriptions of many of these firms to the infirmary funds. Before the days when the infirmary was so much in request, it was the custom of the large employers of labour to retain the services of a medical man near at hand to attend to accidents occurring to the workpeople. This might cost them anything from £20 up to £200 a year. Now the employer frequently gives a small subscription of a few guineas a year to the charity, sends a great number of workpeople to it for medical or surgical attendance, and then poses as a generous and philanthropic individual. These employers are actually saving money out of the charity. They are getting the really charitable to help them to pay for the upkeep of an institution which is largely used to further their own interests. During the past five years a large part of the expenses of the infirmary have been paid out of a special fund of £15,000 raised by a former Mayor for this purpose. The present Mayor (Alderman Godwin) is about to make an appeal for the ensuing five years on similar lines. His kindly action will be duly appreciated. But it is high time that the employers of labour largely increased their permanent subscriptions for the benefit of the people injured whilst in their employ.

Death of the Marchioness of Ripon.

The sympathy of everyone who is connected with the University of Leeds will go out in a very special manner to the Chancellor, the Marquess of Ripon, in the great loss he has sustained by the death of his wife. On the celebration of his golden wedding in 1901 Lord Ripon, in replying to addresses of congratulation, said: "We have lived and worked together for fifty long and happy years." For the University of Leeds, and for the Yorkshire College on which it was founded, Lord Ripon has been an unwearying worker, and it is a source of sorrow to all that this loss has come to him.

Sanatorium Treatment of Phthisis.

The seventh annual report of the Leeds Association for the Prevention and Cure of Tuberculosis was presented at a general meeting which was held at the hospital at Armley under the chairmanship of the President, Sir James Kitson, M.P. It will be remembered that in connexion with this Association there are, in addition to the offices in a central part of Leeds, a sanatorium at Gateforth, near Selby, for the more favourable cases, and a hospital at Armley for cases of a more advanced or of a more acute character. The number of patients treated at Gateforth was 135 during the year 1906, as compared with 82 during the previous year, and the average number of days spent in the sanatorium was 96, as against 122½ for 1905. The report states that 55 were discharged as practically cured, 52 as greatly improved, and 28 as slightly or not at all improved. At the Armley Hospital the number of patients treated was 143, an increase of 59. The average number of days spent at the hospital by each patient was 97¼, as against 94 for the previous year. To Gateforth 16 mild cases were transferred, and there were 14 deaths. During the past year there has been erected in the grounds at Armley Hospital, at an expenditure of about £390, a Doerker barrack for the accommodation of 8 patients. This was opened in September, and is intended for the treatment of consumptives who may be regarded as intermediate between the mild or early cases which it is desired should be treated at Gateforth, and the more severe or advanced cases which are dealt with at Armley in the hospital already existing

there. An increase in the day-room accommodation has become imperatively necessary to guard against overcrowding. This scheme will necessitate an expenditure of about £300. In other respects the last year has been one involving extra expenditure amounting to £540. An interesting paragraph in the report dealing with the employment of the patients runs as follows:

Since the last report distinct progress has been made in the employment of patients at Gateforth, both in the garden and grounds, and also in the poultry run. The work is carried out under strict medical supervision. The work is light, and the hours limited to five in the day. The average working hours have been two per patient per day. The expenditure caused by the employment of a skilled man to supervise and direct the work has not been met by the products of the patients' work, but the financial loss has not been great, and the gain in *morale* and to the physical condition of the patients has been considerable. The question of employment of patients will continue to receive the careful attention of the Committee.

The average cost per patient per day at Gateforth was 3s. 0¾d. as against 3s. 8d. last year. At Armley it was 2s. 11d. as against 4s. 2d. This, of course, stands in relationship, or at least partly so, with the increase in the number of patients dealt with. The balance sheet shows a deficit on the year's working of £41, but as the Association began the year with a surplus of nearly £900, it is clear that, even making allowance for £540 being regarded as expenditure of an extraordinary nature, the income of the Association will have to be increased materially if the work is to go on satisfactorily in the future. The Association is doing good work not only directly, but also, it is felt, by disseminating knowledge of a useful character for the prevention of one of the greatest scourges to which the inhabitants of Britain are especially exposed, and it deserves every encouragement and support.

APPOINTMENT OF SURGICAL REGISTRAR AT THE LEEDS INFIRMARY.

At a meeting of the Faculty of the General Infirmary held on Friday, March 1st, the vacancy in the position of Surgical Registrar occasioned by the appointment of Mr. Collinson as Honorary Assistant Surgeon in charge of the Convalescent Hospital, was filled by the election of Mr. J. A. Coupland, M.B., B.S.Lond., F.R.C.S.Eng. Mr. Coupland was a Leeds student throughout his curriculum, and filled in succession the positions of House Surgeon, Resident Casualty Officer, and Resident Surgical Officer.

Brighton.

DAIRY FARMS, DAIRIES, AND MILK.

"A CHAT ABOUT MILK" was the title of an address given by Dr. Benham, at Brighton, on February 27th, MRS. WATT SMYTH in the chair. Dr. Benham dealt with the different aspects of the milk question, touching upon milk as a medium of such diseases in infants as summer diarrhœa, tuberculosis, scarlet fever, etc. Excellent photographs of bacteria, and various tables dealing with infant mortality, and showing how from a contaminated source milk may spread disease from house to house, were exhibited on the screen. With regard to pasteurization of milk as a safeguard the lecturer advised taking it to a high temperature, but maintained that pasteurizing was quite unnecessary when the milk is produced under proper sanitary conditions. Dr Benham gave a warning about dairies, they usually looked very spotless and safe, but this meant nothing: he had, for instance, gone into such a dairy in Hove quite lately, the manager looked very ill, he had a bad cough, and on the counter beside the open milk cans was a spittoon receptacle half full of expectoration. The man did not try to conceal it, and evidently was quite ignorant of what this meant. Dr. Benham read a description of the usual conditions which prevailed in farms and horrible in its own way was the callous exclamation of the youth who milked the cows when manure which had fallen on the pail was pointed out to him: "That won't hurt; that's only off the cow." Condensed milk and infants foods were dealt with, and Dr. Benham touched upon the report of the Royal Commission on Tuberculosis and spoke of the work accomplished by Professor Bang and Dr. H. de Schweinitz in Paris. Mrs. WATT SMYTH expressed the hope that something practical would be the result of Dr. Benham's admirable lecture, and suggested that all householders should inspect the farms which supplied the dairies they dealt at. She thought that householders would also do well to consult their physicians with regard to the milk they used. While drugs seemed to be less and less prescribed in modern treatment milk was more and more employed, and it was very important that the milk should not be poisonous. A spirited discussion followed, showing that the public is becoming interested in this important question and that such lectures must do good.

Birmingham.

THE BIRMINGHAM GENERAL DISPENSARY.

THE 113th annual report presented to the meeting of the Governors of the Birmingham General Dispensary, on February 27th, showed that during the year the total number of patients treated at all the branches was 63,801; of these 56,683 were admitted by tickets, showing an increase of 4,396. A new branch is to be opened in Smethwick, and it is hoped to commence the building estimated to cost £6,000 in the spring. The revenue account for the year was satisfactory, as it enabled the Committee to transfer the whole of the legacies received in 1906 to the investment deposit account, and so form a nucleus for the Smethwick branch building fund.

NURSING.

The Birmingham District Nursing Society now employs eighteen nurses, who during last year paid 32,000 visits from the Moseley Road Branch and 42,000 from the Newhall Street Home, where the accommodation is taxed to its utmost. The Committee is considering the question of building a new home, and has decided to secure some land in Summer Hill Road for this purpose. Plans have been prepared for a building, which is estimated to cost about £4,000.

At the annual meeting of the governors of the Birmingham and Midland Counties Institution for Trained Nurses on March 1st, it was reported that the number of cases nursed was 638. The number on the staff at the end of the year was 71, an increase of 8 over the previous year. The thanks of the Committee were expressed to Dr. Rickards, Dr. Malins, Mr. Gilbert Barling, and Dr. T. Nelson, the Medical Officers.

Scotland.

MILK SUPPLY AND MEAT INSPECTION IN SCOTLAND.

A DEPUTATION from the Convention of Royal Burghs waited upon the Local Government Board for Scotland on February 20th with reference to the milk supply and meat inspection. The Local Government Board was represented by Mr. J. Patten MacDougall, C.B.; the Vice-President, Mr. Ewan F. Macpherson, Dr. W. Leslie Mackenzie, and Mr. Falconar Stewart, Secretary.

Professor Keith (Hamilton) submitted certain proposals for amendment of the rules at present in force relating to the supervision of the milk supply of burghs. These were:

That the definition of disease be extended to include all diseases of the udder, chronic wasting diseases, and diseases necessitating medicinal treatment.

That every person registered as a dairyman be required to report in writing the existence of disease in any cow in his dairy, and that such written notice be forthwith given to every local authority by which he has been registered.

That power be provided whereby the slaughter of cows certified as affected with tuberculosis of the udder shall be carried out, and that power should be given to inspect the cattle in the byre.

That all animals from which milk is supplied for public use shall be inspected at least twice a year by a veterinary surgeon, and that animals coming in between terms shall also be immediately inspected.

That persons and premises be registered conjointly.

That if a person occupying a dairy in the district of one local authority consigns or conveys milk into the district of another local authority, it shall be necessary to become registered by the two or more local authorities.

That registration be renewed annually.

That a local authority shall have power to refuse registration

in cases where the premises sought to be registered do not conform to the requirements of the Dairy Regulations in force within the area of the said local authority.

That a local authority be empowered to inspect by its officers premises outwith its own area in respect of which registration has been requested.

It was also agreed to add a provision that the word "dairy" shall have the same meaning as in the Public Health (Scotland) Act, 1897, so as to make it include "any farm, farmhouse, cowshed, milk store, milk shop, or other place from which milk is supplied, or in which milk is kept for purposes of sale."

Provost Keith thereafter submitted the following recommendations of the Convention with reference to meat inspection:

(1) The appointment by the Local Government Board of a veterinary surgeon, with practical experience in meat inspection, to promote uniformity in the system and standard of meat inspection throughout the country. (2) The abolition of private slaughter-houses and the substitution of public abattoirs. (3) The appointment of inspectors with practical experience. (4) All carcasses examined and passed by the inspectors as fit for human food to be marked with an official stamp for the purpose of identification. (5) The compulsory appointment of "a place" to which all carcasses, including rabbits and ground game, not marked with the official stamp of a local authority, shall be brought for inspection by the inspector of the local authority of the district.

The Vice-President said the first proposal would involve the whole time of veterinary inspectors, and cause considerable expense. Dr. Dittmar, the Medical Inspector of the Board, was making a thorough investigation into the question of the meat supply of the country. His report, which it was hoped would be very full, would be dealt with before very long.

After considerable discussion, the Vice-President said the members of the Local Government Board were indebted to the deputation, and were pleased that the Convention of Burghs should have thought fit to approach them.

Royal Edinburgh Asylum.

The statutory annual meeting of the Corporation of the Royal Edinburgh Asylum for the Insane was held on February 25th in the City Chambers. Lord Provost Gibson presided.

Dr. Clouston's Annual Report.

Dr. Clouston, in his report for the year 1906, said the admissions were 385 (169 men and 216 women), which gave a total number under treatment of 1,269; 292 were discharged; 140 (55 men and 85 women) died. The number of admissions was 47 fewer than the average of the previous five years. The number of private patients was 7 more than that average, and the rate-paid patients were 54 less. All the patients sent to asylums from the Edinburgh Parish Council, save 6, were received at the asylum, and their number was 28 fewer than the average number sent from that parish for the past five years. The fact was a gratifying one.

Mental Disease and Bodily Health.

Only 35 of the 385 patients admitted were in really good bodily health, and 25 of them died within a month of admission. Unsoundness of mind was *of* the unsoundness of body, and not merely *in* it. The number of old, frail, and paralysed people among the rate-paid patients had very seriously increased during the past twenty years. The number of such was greater in proportion in the Edinburgh Asylum than in similar institutions in Scotland. This meant increased nursing, and a steadily increasing mortality. The hospital accommodated 60 patients, but of late years it had frequently had 80 inmates.

General Paralysis.

Fifty-five cases of general paralysis—9 less than last year—were admitted. Its percentage on the whole number of admissions was 14.2, being 1 per cent. more than the average for the previous five years. Of the 55 cases, 35 were men and 20 women. This far exceeds the proportion of female general paralytics in any institution in Scotland. The proportion of general paralysis to the admissions of private patients was 11.1 per cent., and to the rate-paid patients 22.7 per cent. This meant that better-off people lived more cleanly. Reference was then made to the work of Drs. Ford Robertson and McRae on the elucidation of this terrible disease, and to the progress they were making towards a knowledge of its true nature, its definite diagnosis, and, they think, of its treatment with a view to cure. The first thing to be done was to diagnose it definitely in its early stages, so that treatment might be applied before the brain was seriously damaged.

Alcoholic Insanity.

Alcohol was, as usual, the commonest of all the outward causes of the disease in those admitted. As a general assigned cause it was put down in the returns at 29.5 per cent. of the male admissions, and 16.2 per cent. of the women. Taking the definite form of mental disturbance called "alcoholic insanity," characterized by tremors, or paralysis, or hallucinations, or a marked loss of memory, or gross brain disease, the percentage was 18 among the male admissions and 10.8 among the females.

Discharged: Low Recovery Rate.

Of the 292 discharged, 88 had recovered; a percentage of 23 to the numbers admitted, the lowest ever recorded in the history of the asylum, the average previously having been 39.2. This resulted from the unfavourable character of the admissions from a curative point of view, the numbers of the senile, the paralysed and the broken-down never having been so numerous.

Deaths: High Rate.

The number of deaths (140) had never before been so many in any one year. It meant a percentage of 16.2 on the average number resident, and 11.1 on the total number under treatment. The large number of cases of general paralysis, with other fatal nervous diseases, was largely the cause of the present high death-rate. In the last reports of the Board of Lunacy for Scotland, the proportion of the deaths in Scottish asylums from diseases of the nervous system to every 1,000 of the average numbers resident for the thirty-four years 1870 to 1904 was stated to be 33.4. For the thirty-three years 1873 to 1906 the proportion in the Edinburgh Asylum was 41; during the past five years 65.8, and during 1906 it reached the unprecedented proportion of 85.7 per 1,000 resident, or over two and a half times the mortality of the Scottish asylums from this class of diseases, and more than double the old average. The increase in the general population was small as compared with this.

Tuberculosis.

In the last Scottish Blue Book were published the results of the notification of tuberculosis for the five years 1901 to 1905. The calculation was made on the average numbers resident in each institution. Dr. Clouston was much exercised when he found that the Edinburgh Asylum stood at the top of the list of frequency in regard to rate-paid patients with the figure of 3.5 per cent., whereas the average of the rates for all the other Scottish asylums was 1.58. After a very careful examination of all the facts, Dr. Clouston had come to the following conclusions:

1. There had been no deaths from consumption at Craig House during the twelve years it had been opened, and several cases who came in with its early symptoms had recovered.

2. The consumption-rate among the West House private patients was under the average.

3. The consumption-rate among the rate-paid patients at the West House had been over the average. The cause of this has been the overcrowding of the wards of recent years.

A Century of Existence.

A hundred years ago, in 1807, the institution received its Royal Charter. It was founded to supply a great medical and social need. A man of genius had to do with its beginning. The poet Ferguson, the precursor and to some extent the inspirer of Burns, became insane and died amid squalid surroundings, with no means of right treatment, in 1774. This aroused the special sympathy of Dr. Duncan, senior, the greatest medical philanthropist of Edinburgh at the time. In 1792, when he was president of the Royal College of Physicians, he wrote a proposal for establishing a lunatic asylum in the neighbourhood of the city of Edinburgh. The Lord Provost and Town Council were approached, the matter was brought under the notice of the public, and a body of Trustees consisting of men of high eminence was

formed. Subscriptions were invited. This effort was not successful, but the project was not allowed to die out, and in 1806-7 the Trustees made a new effort to carry it out, and they succeeded. They obtained from the forfeited estates of the unfortunate rebels of 1715 and 1745 the sum of £2,000. Considerable subscriptions from private persons and public bodies also came in. On April 11th, 1807, a Royal Warrant was obtained, followed by a Royal Charter of Incorporation on May 2nd, 1807. Plans were got from a distinguished architect, the foundation stone was laid by Lord Provost Coulter on June 8th, 1809, and the building was opened for patients on July 19th, 1813. In 1837 the managers resolved to extend the Institution to admit paupers and those who could only pay small rates of board. This led to the present West House, opened in 1842. In 1840 Dr. Mackinnon was appointed the first Physician Superintendent. He was a man of advanced ideas and keen enthusiasm. In 1841 it became by Royal authority the "Royal Edinburgh Asylum." In 1844 a contract was entered into between the City of Edinburgh, under which all the rate-paid patients of Edinburgh were to be received, and representatives from it were received on the Board of Managers. In 1846 Dr. Skae succeeded Dr. Mackinnon as Physician-Superintendent, and held office for twenty-seven years. In 1857 a special Act of Parliament was obtained by the managers, whereby the corporation was reincorporated, and its constitution more definitely settled. In 1857 the Lunacy Act for Scotland was passed, and the Commissioners appointed to take the charge and treatment of the insane. That Act has worked admirably and to the great advantage of Scotland, whose system for the care and treatment of the insane, under the direction of able and zealous Commissioners, has become one of the best in the world. In 1873, on the death of Dr. Skae, Dr. Clouston was appointed Physician-Superintendent. The buildings and grounds of the first part of the Institution, the East House, were a great step in 1807, but they were quite insufficient for the wants of the end of the century. The Craig House Estate was bought in 1877. The West House, however, had first to be almost entirely reconstructed, and the East House had also to be temporarily added to, and made fit for a better class of patients before the new hospital on Craig House Estate was begun. Dr. Clouston visited the best institutions in this country, on the Continent of Europe, and in America. The general principles of construction for New Craig House were decided to be that half the patients should live in villa residences and half in wards constructed on the newest principles, so that it might be a true "hospital home." It has been a success. Its whole accommodation for patients is now fully occupied. The hundred years have been years of incessant change—a necessity in any medical institution that keeps up to modern requirements. The medical sciences steadily advance, philanthropy demands more and more for the weak, helpless, and diseased. Sanitary science demands more space, better ventilation, more perfect drainage. Modern medicine requires a larger nursing staff by night and day, and more individual attention to the patients. Work in the wards has to be supplemented by work in the laboratory. Finality is not now allowed to be written on anything for more than twelve months. During the last ninety years £570,000 has been spent. The income from private patients has increased from £12,500 to £38,000. The staff has gone up from 128 to 269 persons.

The study of insanity was one of the original objects of the Institution as stated by Dr. Duncan, and provided for in the rules. The institution was in the beginning, and always has been, a great public charity, with no private profit accruing to any one except the official salaries. Of recent years, the legacies and subscriptions that have come to it have been accumulated as a charity fund, now amounting to £9,600, the interest of which is applied to the reduction of the board of poor patients, and the placing of educated rate-paid patients into the private wards, so that their associations may be more congenial and helpful to their recovery. In 1836, Mrs. Elizabeth Bevan, a granddaughter of its founder, left to the institution the sum of about £15,000 for the purpose of supplementing the boards of patients of the educated classes. Through it and the charity fund about eighty patients in reduced circumstances year by year have received a benefit which largely conduces to their recovery and their comfort.

Ireland.

Health of Belfast.

The Medical Superintendent Officer of Health of the City reported to the monthly meeting of the Council on March 1st an annual death-rate of 24.8 for the month. There was a considerable increase in the number of infectious cases; 71 cases of cerebro-spinal fever had been notified, and there had been 41 deaths. The report also mentions a large increase of typhoid fever, and the Medical Officer adds:

> In my opinion the increase in the number of epidemic diseases is largely due to the prejudice which exists in the minds of a large number of the people of Belfast, who object to send infectious cases into hospital, and, not having accommodation for proper isolation in their homes, the infection is spread broadcast. Before the Infectious Diseases Hospital was erected there was some excuse, but none now, seeing that we have one of the finest and most up-to-date hospitals in the kingdom.

He further recommends that all back passages be paved and drained, the work being completed without delay.

It has been arranged that the first witness to be examined by the Special Board of Inquiry on the Health of Belfast appointed by the Local Government Board shall be Mr. Robert E. Matheson, Registrar-General for Ireland. Subsequently, evidence will be tendered on behalf of the various public Boards. The Commission will inspect the various slums, waterworks, catchment areas, main drainage scheme, etc. The Health Committee and Corporation are to be represented by counsel.

A reprint of the report of the "Harrison Committee" of 1896 on the causes of the death-rate at that date, is being made by the Citizens' Health Committee; and Dr. W. Calwell has issued a reprint, with introduction, of some of the articles written in the British Medical Journal, and of extracts from the local press; these latter deal with various questions of interest as affecting the health of the town for the last seven years. The above extract from the Medical Superintendent Officer of Health, regarding the disinclination of patients suffering from infectious disease to go to hospital, will prove curious reading to the many members of the profession who waited on the City Council some years ago to protest against the site of the then proposed (now completed) fever hospital. The opinion was expressed at the time by nearly all the leading medical men that there was great danger of the site defeating the objects of the hospital, as parents would refuse to let their children be so far removed. As regards typhoid fever patients, their excreta is all brought back through the town, so the advantage of a distant site is not so evident. The customs of England are not those of Ireland, and undoubtedly the Irish parent is never happy or contented if his child is out of reach. The city seems to be on the horns of the dilemma: whether it is better to have an infectious hospital more centrally situated, to which the poor will bring their children, or to have one far out with no means of approach, railway or tram, to which the poor will not send children or cases of typhoid in adolescents till it is too late. A central hospital for the acute stage, with a distant convalescent home, may yet prove the most practical solution of the difficulty. The Health Committee has minimized the danger by removing the patients themselves by a system of motor ambulances. But the general hospitals, both for children and adults, are all over crowded, and there never has been any complaint as regards persuading patients to go to the Union Fever Hospital, which is comparatively central, and is one of the best in Ireland.

The Salaries of Dispensary Doctors.

The chronic state of discontent of the Irish dispensary doctors continues unabated, for, though in some twenty or thirty unions graded salaries have been grudgingly adopted, in few of them does the maximum salary after thirty years' service exceed £180, and the great majority have flatly and often with ignominy refused them anything.

The Union of Castlebar in the co. Mayo is somewhat peculiar, not alone for its great extent—one of the medical officers having to drive some twenty-five miles from his

residence to the other end of his district—but also from the fact that, though the guardians have admitted that the doctors are insufficiently paid, they have persistently refused to give them any increase.

It appears there are in this union five dispensary doctors whose combined salaries amount to £510 a year of which sum a paternal Government contributes £400, leaving £110 to be raised from the local rates; the result of this is that subsidized cheap medical attendance is provided for farmers and others who are perfectly well able to pay. Whether this system of pauperizing the Irish peasant is good for the country is an open question.

The medical officers of this union have again and again asked the guardians to give them an increase. The Local Government Board held an inquiry last year, at which it was fully admitted by the guardians that the doctors were underpaid, but they declined to give any increase unless they got another subsidy from the Government. Recently the doctors again asked for bare justice in most temperate language, but the reply was to consign their request to the waste-paper basket.

In most of the Irish unions the medical officers have recognized the futility of asking their peasant masters for anything, and unless legislation on the basis of the Vice-regal Commission's report is adopted, we fancy most of the existing officers will have gone over to the majority before the sweating system is abolished. One thing seems certain: the Irish peasant will never give the Poor-law medical officers adequate salaries while they can obtain doctors, of a sort, at starvation wages. The lack of *esprit de corps* is the real cause of all their troubles.

Canada.

The late Professor Graham of Toronto.

During his recent visit to Toronto Dr. Osler unveiled a portrait, painted by Mr. J. W. L. Forster, of the late Dr. J. E. Graham, Professor of Medicine in the University of Toronto, which had been presented to the Ontario Library Association by Mrs. Graham and Dr. Joseph Graham. Dr. Osler referred to his early association with the late Dr. Graham, and to the noble work which Dr. Graham did for the college and the profession in Toronto. Dr. J. W. F. Ross, in accepting the portrait on behalf of the Library Association, traced the history of the formation of this very valuable institution from the appointment of the first committee, of which Dr. Graham was chairman, to the present time, when the Association is comfortably housed in its own building.

Proposed Union of Medical Societies in Toronto.

It is proposed to form in the city of Toronto an Academy of Medicine which shall incorporate the three medical societies now in existence—the Clinical, the Medical, and the Pathological. Committees have been appointed to consider ways and means of bringing it about, and the profession generally seems to support the movement.

India.

Haffkine's Antiplague Prophylactic.

We have received the following note from Major Ronald Ross, Professor of Tropical Medicine (Liverpool School of Tropical Medicine):

"I should like to support Professor Simpson's letter on this subject, published in your issue of February 9th. On studying the evidence (given very fully in the *Journal of Tropical Medicine*, February 1st, and in abstract in the British Medical Journal, February 2nd), I cannot help feeling with him that the Indian Commission was much too hasty in attributing the Mulkowal disaster to Mr. Haffkine's laboratory, and that, on the contrary, the bottle of prophylactic could scarcely have become polluted there, but was much more probably soiled when it was opened. It is difficult to imagine why Mr. Haffkine himself was blamed, because the director of a laboratory cannot possibly superintend the preparation of each bottle that issues from it. As for the omission of the carbolic acid under stress of circumstances, the inventor of the prophylactic was surely himself the best judge of how it was to be made.

"The apparently erroneous verdict of the Commission may not only have caused much loss of life by the discredit which it threw upon Haffkine's invaluable prophylactic, but seems also to have made India appear grossly ungrateful to one of her greatest benefactors. Those who know the great story of Haffkine's labours cannot but feel most indignant at the way he has been treated. Not only did he elaborate the dead-culture method of immunization, but, not content with a mere academical success, he immediately sought to apply it on a large scale for the direct saving of human life. I remember well when he first arrived in India with his cholera vaccine, and by his energy and enthusiasm forced it upon the authorities and the people. When the frightful calamity of the plague overtook the country in 1896, when measure after measure failed and the people were dying by hundreds of thousands, then it was he alone who made any effective stand against the storm. The fact that more than six million doses of his prophylactic have been issued in India alone attests its value. I suppose that no one, living or dead, except Jenner, has saved so much life as he has. Yet this is the man who is actually punished because—not for any fault of his own—nineteen out of all these millions of doses of his prophylactic went wrong. The ignorant and unscientific public often behaves with singular ingratitude towards its great men of science, but this appears to be the worst case on record. One would have thought that as Mr. Haffkine is a foreigner the British nation would have felt doubly bound to honour and reward him. Instead of that we have vilified and persecuted him. I hope that the India Office will speedily rectify the great injustice which has been done."

SPECIAL CORRESPONDENCE.

BERLIN.

Child Suicide. Pass and Pluck at the State Medical Examination.

Suicides of juvenile persons in Germany go by the general name of "*Schüler-selbstmorde*," or school-children's suicides, the general impression being, rightly or wrongly, that the school alone is responsible for these acts of despair. But of late years the education department of the Prussian Cultusministerium has taken the greatest pains not only to register each case of juvenile suicide, but also by the most careful inquiries into the circumstances to throw light upon the motives that led up to it. Professor Eulenburg of Berlin has been permitted to study these registers, which extend from 1880 to 1903 inclusive, and at the last meeting of the Society for school hygiene, he gave a full account of the conclusions they lead to. The average yearly number of juvenile suicides in Prussia is about 54; of these about 42 are above 15 years of age. The proportion of boys to girls is as 4.16 to 1. The suicides above 15 years of age are naturally almost all pupils of higher-grade schools. The sad motive in many cases was dread of punishment, and if dread of an examination, shame or despair at not having been moved up to a higher class be included, these cases amount to more than a third of the total number. In about 10 per cent. of the suicides, mental aberration, nervous debility, and nervous excitement are given as an explanation. It is difficult to resist the conclusion that in many of these cases lack of home influence or of careful medical supervision must be held responsible. Many were the cases of dull children, who had found it impossible, in spite of unceasing effort, to assimilate the teaching at the higher school; other pupils again, though sufficiently gifted, had neglected their school duties, led away by temptation, or poisoned in mind by reading clap-trap pessimistic literature. Somewhere about 20 per cent. of the cases could not be grouped under headings. Domestic unhappiness, for example, drinking habits of the parents, their marital infidelity, or their cruelty was responsible for many a child-suicide; numerous others could not be accounted for, the motive remaining a mystery.

The statistical year-book for the Prussian State contains statistics of State examinations during the last years, from

which it appears that the number of medical aspirants for examination has materially decreased of late. In the year 1904-5 the number of candidates who presented themselves for examination was 633, as compared with 905 in the year 1901-2. Unfortunately this smaller number does not seem to mean more select, for, whereas in the year 1903-4 the percentage of candidates who failed to pass the examination was 23.7, the percentage in the year 1904-5 amounted to 24.3.

CORRESPONDENCE.

DEMONSTRATION EXPERIMENTS ON LIVING ANIMALS.

Sir,—In the evidence given by Sir Thornley Stoker before the Royal Commission on Vivisection, he expressed his objection to experiments on animals for purposes of demonstration.[1] He said they were unnecessary because used for the purpose of teaching established fact, which could be done by the aid of diagrams and models. They were also, he believed, used more for the purpose of interesting and attracting a class than for any direct teaching value they possess. The circulation of the blood could, in his opinion, be thoroughly taught without any vivisection. He had never seen any experiments as a student in illustration of physiological lectures and he was well taught. The exposure of the viscera to demonstrate the circulation in large vessels in a dog would require complete anaesthesia; and he was sceptical about the anaesthesia being complete. He had, however, never seen an operation for vivisection in dogs. He had seen some research work, but he had never seen any experiment performed under the Vivisection Act beyond a mere injection by a needle.

In reply to this, it may be pointed out that it is hardly appropriate for a surgeon to say what is or is not necessary for the teaching of physiology at the present time, even though he may have been taught the subject well five-and-thirty or forty years ago. The attitude in this respect, observed by his brother inspectors in England and Scotland, might well be commended to Sir Thornley Stoker. Further, if he had seen a demonstration of the circulation, he would have known that the viscera of a dog are not exposed or used at all for this purpose.

The allegation that demonstrations on living animals are done more for the purpose of interesting and attracting a class than for any direct teaching value, should never have been made. It is wholly without foundation, and will be indignantly repudiated by every holder of Certificate C.

The second ground on which Sir Thornley Stoker bases his objections is that the experiments are cruel and attended with suffering. The amount of terror that a dog feels in being put under chloroform is painful to witness. He had given chloroform to dogs dozens of times for surgical purposes, and had often seen it. Professor Purser had also told him that a monkey evidences the most acute sense of fear when it is brought into the operation room. The very prolonged dissections necessary for demonstrations must be attended with some suffering. The anaesthesia was not always deep enough, because the animals would die. Generally speaking it was impossible to keep a dog alive for two hours under full anaesthesia, or for one hour. He believed that chloroform was usually employed, but he had not taken any trouble to ascertain of late years. He did not know of the use of A.C.E. mixture for animals, but would admit the possibility of keeping them longer anaesthetized with it. He would not say that the experiments were cruel if it were satisfactorily established that dogs could be kept completely anaesthetized for an hour, but it would not alter his opposition to Certificate C being granted. He could not say what pain the animals suffered beyond struggling.

It is to be regretted that Sir Thornley Stoker had not availed himself of the opportunities within his reach of ascertaining how dogs and other animals are anaesthetized. He would have learned that, except in very rare instances and for particular purposes, chloroform alone is not used. The volatile anaesthetic employed in laboratories is either the A.C.E. mixture or a mixture of ether and chloroform in the proportion of 2 parts to 1. He would also have learned that investigators are more sensitive to the manifestation of distress by animals when being anaesthetized than he supposes. They do not, as he does, consider the detail a minor one, and means have been found of obviating the distress by administering a hypodermic injection of morphine beforehand, or (where that would interfere with the object of the experiment) by quietly introducing pieces of cotton-wool soaked with the anaesthetic into a box in which the animal has been placed. It can be confidently asserted that animals in the laboratory suffer less distress from the administration of anaesthetics than do patients in hospital. Nor is there any difficulty in keeping dogs completely anaesthetized, as shown by the state of the conjunctival reflex, for two, three, or even four hours, if proper precautions are taken.

The third ground on which objection to demonstration experiments is based by Sir Thornley Stoker is that they are demoralizing and seem an offence against humanity. Sir Thornley Stoker does not deny that demonstrations are of some assistance to students, but holds that it is immoral and unjustifiable to impress facts upon them in that way. It is, of course, true that experiments on living animals would unquestionably be demoralizing if they were accompanied by pain, which they are not. But how, in the absence of pain, a demonstration of the marvellous regulatory control of cardiac activity, or of gland secretion—to take but two instances—could have a demoralizing influence is difficult to see. The moral effect of such demonstrations, I am convinced, is quite the converse, namely, the production of a deeper feeling of veneration for the inimitable mechanisms of the animal body than would otherwise be acquired. Even Sir Thornley Stoker admits that he has no knowledge to justify him in thinking that callousness is induced by these demonstrations either on the part of the operator or students. He simply concludes that they must be demoralizing when he recalls how cruel he himself was to animals in his youth. Later in his evidence he said that he did not know the opinion of students on this point, but he shuddered to think of the cruelty he was guilty of as a boy and a young man, and how little he thought about the sufferings of animals. In the end, Sir Thornley Stoker admitted that the alleged demoralizing effect of the experiments was merely a pious opinion of his own, to be taken for what it was worth; and as such it might have been left had not his convictions led him to adopt an attitude of opposition to the granting of Certificate C for the purpose of illustrating physiological and other teaching. Fortunately, the Irish inspector's recommendations to disallow have not often been acted upon. Is it because of this that he recommends a change in the licensing authority in Ireland? If any change is made, it is to be hoped it will involve a reference of future applications for licences and certificates to some body such as the Association for the Advancement of Medicine by Research in England. Inspectors in England and Scotland have no recommendatory functions, and there is no adequate reason why this principle should be departed from in Ireland.

Sir Thornley Stoker is also unfortunate in quoting Professor Purser as an authority for one of his statements, as the following verbatim extract from a letter written to me by Professor Purser will show. Professor Purser says:

> So far as I am concerned, he (Sir Thornley Stoker) has fallen into two errors: (1) It is not the case that up to the death of Dr. Haughton vivisections were forbidden in Trinity College. For many years before his connexion with the School of Physic terminated permission was given to perform experiments on animals, the laboratory was licensed, and a considerable sum was granted by the Board for the purchase of physiological instruments, which, as you know, are now in the department. The only restriction was that vivisectional experiments should not be shown at lectures. (2) I can confidently state that I never told Sir Thornley Stoker that monkeys showed terror when brought into the operating room. I never noticed anything of the kind, and it is absolutely impossible that I could have made such a statement as is attributed to me. The only explanation I can offer of Sir Thornley Stoker's error is that I may have described to him a demonstration which I saw Professor Ferrier give at King's College in 1881 on the occasion of the meeting in London of the International Medical Congress. The monkey shown was believed to be deaf in consequence of bilateral removal of the auditory centres. To demonstrate this, amongst other observations, a pistol was fired off behind the animal who did not even turn his head or take any notice,

[1] An abstract of Sir Thornley Stoker's evidence was published in the British Medical Journal of March 2nd, 1907.

while some other monkeys who were in a cage at the other side of the room were manifestly startled—or, I may say, frightened—by the report. The experiment was so striking that I spoke of it to several persons at the time and since, and I *may* have mentioned it to Sir Thornley Stoker, although I have no recollection of doing so. But I can confidently say I never said that monkeys showed terror previous to or while taking an anaesthetic.

—I am, etc.,

W. H. Thompson,
Physiological Laboratory, Trinity College, Dublin.

March 2nd.

THE INADEQUATE SALARIES OFFERED TO WOMEN MEDICAL INSPECTORS OF SCHOOL CHILDREN.

Sir,—Through the medium of your columns I beg to draw serious attention to a species of sweating which at present threatens lady graduates in medicine. To-day my notice was drawn to an advertisement with the following attractive title: "Infantile Mortality and Physical Examination of School Children." Under this heading the particulars of the appointment are given in brief as follows:

Wanted a qualified LADY [the capitals are in the advertisement, and not mine] capable of performing the duties in connexion with the above, who must be a duly registered medical practitioner. Preference will be given to those experienced in nursing, infant feeding, diseases of children, and in sight testing. Salary £100 per annum.

When the details of work are asked for a pamphlet is sent to the applicant. It is headed, "Duties of Lady Health Visitor." The remainder of the four-page leaflet [printed on one side of the paper, it is true] sets out the duties of this Lady High Everything. Let me summarize the LADY'S duties [this time the capitals are mine].

1. To visit houses where births have been reported to the registrar, and to give instructions regarding the feeding of infants.
2. [Mark the next duty. I give it as it stands.] To visit, keep in touch, and advise with expectant mothers, especially young women, on the duties of motherhood and infant rearing.
3. To make house-to-house visitations in insanitary areas, and give orders for a free supply of lime and the loan of brushes for limewashing.
4. To visit all cases of measles (and, if requested, other diseases), and to give personal directions as to nursing, isolation, and subsequent disinfection.
5. To report cases to Society for the Prevention of Cruelty to Children.
6. To report upon nuisances to medical officer of health.
7. To visit workshops where females are employed.
8. To visit every house where a death has been reported to the medical officer of health by the registrar, and obtain and collate information in the case of deaths of children under 1.
9. To examine children reported physically unfit to attend school.
10. To report upon children suffering from throat, nose, and ear affections, also defects in vision, and to test and advise on such cases, and make out certificates.
11. To report in detail in writing on sanitary conditions of schools, the general health of scholars and teachers, and any special points she may consider desirable.
12. To attend any meeting concerning her own work on written notice from the Clerk.
13. To make a detailed report upon eyesight, hearing, and special defects and general health of scholars and teachers, and to make a similar report on any department at the request of the School Management Committee.
14. To visit, examine, and report on any child suffering from an infectious disease when requested by the Clerk (School Authority). [Just fancy that! It is quite Gilbertian!]
15. To examine and certify as to children to be dealt with under the Elementary Education (Defective and Epileptic Children) Act, 1899.

I am perfectly convinced there will be a fierce contest and a keen struggle for such a prize among the ladies—I should have written their appellation in capitals. A lady (lay) inspector is often paid £120 a year, and is called upon to fulfil only three or, at most, four of the duties laid down by this far-sighted and prodigal local authority. If either of my lady inspectors attempted to do half the work required by this experienced and qualified lady doctor I should be under the necessity of sending one or other off for holidays every three or four months. Among my pupils at present are several lady graduates who are devoting time and spending money in order to render themselves proficient for their increasing sphere of usefulness. And this is the plum that is dangled before them. A salary of £100 and sufficient work to tax the energies of a large staff.

I think I have said enough. I have, I hope, attracted attention to a matter that calls for serious action. "United we stand, divided we fall," must of necessity be the motto of those lady graduates whose work is just as valuable in its particular sphere as that of any man. I cannot over-estimate the value of an intelligent and tactful lay woman inspector. How much more valuable a legally-qualified lady graduate would be goes without saying. If I were the fortunate possessor of a lady assistant I should be proud. I should certainly request my local authority to pay her a respectable salary, and I should not expect her to do what is impossible.—I am, etc.,

Wm. Robertson,
Medical Officer of Health.

Leith, March 4th.

AFTER-TREATMENT OF OPERATION CASES.

Sir,—Mr. Clowes, in his letter of March 2nd, says it would seem that I put no confidence whatever in anyone but myself for post-operative treatment of abdominal operations, and he further asks if I have suffered so much from the hands of the ordinary intelligent practitioners that I cannot trust them. I should be very sorry to lead anyone to think, from reading my paper, that I undervalue the capability of the ordinary practitioner. The ability of the average general practitioner needs no comment from me. But how can the general practitioner be as competent as the operating surgeon to undertake the post-operative management of cases? It is a question of relative experience in this particular branch of work. I might as well claim that I am as well able to undertake the after-treatment of labour cases, or to deal with their complications, as the general practitioner is, as for him to claim that he has as much experience in the management of post-operative conditions as I have. But even in cases in which the general practitioner has had special experience in this work, is it not right (as I asked in my paper) that he should leave the operating surgeon to carry out any line of after-treatment he may have a preference for?

In reply to the second part of Mr. Clowes's question, I may say I have not suffered at the hands of general practitioners in the after-treatment of my operation cases, for I have almost invariably found them willing and even anxious to carry out the suggestions as to after-treatment which I have made, but when I have had to undertake an operation far away from Bristol, and could not see the case again, it has been almost impossible to have much to do with the after-treatment, and such a condition of matters, though inevitable in cases in which the patient is too ill to travel to Bristol, is unsatisfactory to my mind, for the reasons which I have fully given in my paper.

Mr. Clowes further asks if I would have confidence in a student I had taught and trained undertaking the post-operative treatment of my cases. I should naturally have more confidence that what I regarded as most important in the after-treatment would be carried out by a practitioner I had trained than by another, but I should not feel inclined to leave the after-treatment in his hands. When my dressers become my house-surgeons I do not leave to them the after-treatment of my abdominal operations, for I do not consider that the experience of a student working with me as a dresser can by any means equal my own experience in the management of such cases; and, moreover, my own practice alters. I should be sorry to think it did not. We are always learning, always trying to improve our methods, both from the teaching of our own experience and the published experience of others, and a dresser of mine of ten years ago would not be acquainted with all my present methods. This leads me to refer to another question asked by Mr. Clowes. He says, "Is it not a fact that the after-treatment of abdominal or any other cases in hospital is left to the house-surgeon?" I sincerely hope it is not a fact. Perhaps Mr. Clowes will tell us the hospitals where it is done. If a surgeon is really interested in the welfare of his hospital cases, and does not wish simply to gain experience in operating, or to collect statistics of a great number of cases operated on, he will certainly see to the important matters in the after-treatment himself. Of course, if he has confidence that the house-surgeon will carry out exactly the treatment he would himself, and is well able to recognize all conditions calling for such treatment, he may, to a very large extent, leave the after-treatment with him. But this depends on the individual house-surgeon. Mr. Clowes thinks that if I cannot trust a student I have

myself trained to carry out post-operative treatment it is a poor compliment to my teaching. Does he expect six months' work with me as a dresser to impart to any student the same ability to treat post-operative conditions which an experience of twelve years as a hospital operating surgeon has given me? It is not a question as to whether the practitioner is capable of carrying out post-operative treatment, but as to who is the most capable, he or I?

In order to act consistently with my views, Mr. Clowes seems to think I ought to remain in the patient's house after the operation until he has recovered. This is almost too absurd to need reply (as also his remarks about administering enemata myself). There is no more need for the operating surgeon, anxious to carry out the after-treatment, to remain in the patient's house, if he has capable nurses, than for Mr. Clowes to sit by the bedside of any patient he is treating with pneumonia the whole day long. But, as a matter of fact, when some of my patients have been desperately bad after operation, I have been in and out of the nursing home all day long sometimes.

And now I come to the question of fees which Mr. Clowes has raised. He says the object of my paper is to make larger fees from the public. I have already stated that unless the patient lives at a considerable distance, we do not charge larger fees because we conduct the after-treatment. Indeed, when I refuse to go into the country and operate on cases that can quite well come into a nursing home here, I know that if they come I shall not charge as large a fee as I should for going down into the country to operate on them, and in one case I remember writing to the doctor and explaining that the fee would be considerably less if the patient came here for operation. The public do not suffer from the extortion of extra fees for after-treatment charged by the surgeon: they suffer, inasmuch as some surgeons return home with a large fee in their pockets and take no further trouble about a case which could quite easily be seen by them after the operation. It is all very well for Mr. Clowes to say my object is to make larger fees. I might as well say that the reason why he is so opposed to the surgeon conducting the post-operative treatment is because he will lose his fees for after-attendance if his case comes into Bristol for operation. But I do not attribute such a motive to the general practitioner. I feel that they do not realize how important it is to the surgeon that he shall be able to conduct the after-treatment.

Mr. Clowes seems to think that what I have written about the position of the patient is only what is familiar to any general practitioner with good hospital training. Perhaps he does not realize that the importance of position, in acute suppurative conditions within the abdomen, has been much insisted on by Murphy and other American surgeons of late years. Though my remarks on the subject are not original, I venture to think they may be a somewhat useful summary of our present knowledge as to value of position after abdominal operations. Because Mr. Clowes was once a house-surgeon he seems to think he is for all time qualified to carry out post-operative treatment in the best possible way, regardless of the fact that he has now very few opportunities of carrying out such treatment, and, as a busy country practitioner, must have little time to learn from the writings of others. He forgets that the practice of surgery is always changing, and that the methods when he was house-surgeon may not be considered the best now.

There is only one more matter in Mr. Clowes's letter requiring attention. It is that of the nursing home. Now, I do not hold a brief for nursing homes, nor have I ever had a financial interest in any; nor do I say that one might nurse for sixteen patients (if in separate rooms) is sufficient. There may, no doubt, be nursing homes where the nursing staff is inadequate. But why it should be brought up against nursing homes that some surgeon never saw his patient again after the operation, and the sister was left to remove the stitches, I fail to see. It is only an illustration of what I have already referred to—that some surgeons take no trouble whatever about their cases after the operation. To be able to operate in a nursing home, where everything is arranged for sterilization, where there is a powerful electric light so placed over the operating table that it will illuminate the interior of the abdomen by day or night, with nurses well accustomed to your methods, and a telephonic communication to your house, is an advantage to the patient not lightly to be put aside.—I am, etc.,

Clifton, Bristol, March 2nd. C. A. MORTON.

HOSPITAL ABUSE.

SIR,—At the Royal Infirmary meeting held recently, the Lord Provost stated that after inquiry duly made he had come to the conclusion that there was no hospital abuse in Glasgow. I have every respect for Mr. Bilsland, and regard him as a thoroughly upright and well-meaning man, and therefore would like to call attention to the following facts.

A gentleman who is an elder in the kirk was out yachting, and had the misfortune to tumble on the deck and to receive a cut on the face. On his return to town on the Monday morning he attended to his business letters, and then telephoned along to one of the hospitals that the house-surgeon was to be in readiness to see him. It is to be observed that he did not ask for a member of the staff. Before going to the hospital he procured from the society with which he was insured a schedule to be filled up. On his arrival, he was duly attended to, and then got the house-surgeon to fill up the schedule. For these services he paid not one penny, and did not present the house-surgeon even with a box of cigarettes. Yet this man is very public in Glasgow life. He is well-to-do; in fact so prominent is he, that a publication known as *Who's Who* devotes more space to him than it does to the Sheriff of Lanarkshire.

After such an incident it is useless to say that there is no hospital abuse in Glasgow. When such a case occurs the directors responsible for the hospital involved should make the transgressor pay a substantial sum to their hospital or else expose him.—I am, etc.,

A GLASGOW HOSPITAL SURGEON.

PULMONARY TUBERCULOSIS IN SOLDIERS.

SIR,—The recent reference in the House of Commons to pulmonary tuberculosis in soldiers recalls to mind important questions that have come before me during my official career.

Two classes of men exhibit pulmonary tuberculosis in the army. One class manifests symptoms of the disease soon after enlistment—and most probably contracted it before entering the army. Another, and by no means a small section, according to my experience contract the disease in a crowded barrack room from some comrade, whose state has not attracted attention. Such cases are often invalided from the army in an advanced stage of the disease, and find their way to healthy friends, whom they duly infect. Now, here are men who contract their disease "in and by the service," and, surely it ought, in ordinary justice, to be the duty of the Government to find suitable sanatoriums in which these men could be detained. According to the report in the BRITISH MEDICAL JOURNAL of March 2nd, Mr. Haldane states this would be impracticable. Why? Would not a sanatorium in each division of the United Kingdom meet the difficulty?—I am, etc.,

March 4th. SURGEON-GENERAL (retired).

TRYPSIN IN CANCER.

SIR,—Dr. W. S. Bainbridge's communication in the BRITISH MEDICAL JOURNAL of March 2nd, p. 486, shows how little importance can be attributed to the recent reports of cases treated by trypsin in New York, even under asserted "essential details" of treatment, and the slender foundation upon which sensational articles for the lay press have been built up. Ever since December, 1905, sporadic outbreaks of the same kind have occurred in the public press, the result of which has only proved detrimental to the treatment no less than to the methods suggested by myself.

It must appear surprising to your readers that in view of the numerous publications of my methods and treatment communicated to the medical press in this country, to say nothing of my work on *The Nature and Treatment of Cancer*, that no reference in any respect to any of my work should have been made by Dr. Bainbridge in his article.

This is, after all, only a small matter to me; nevertheless, I must demur to Dr. Bainbridge's reference to anyone but myself as "the originator of the method." He is evidently unaware that I was the first, on clinical, physiological, and chemical grounds, to introduce and practise this trypsin method, details of which were communicated to Dr. Bainbridge's coadjutor. I feel, therefore, that I have some ground for protest against the unlimited use which has been made of my work and methods of treatment without acknowledgement.

Moreover, had Dr. Bainbridge perused my publications on this subject, he would have found that I myself have never made any claim in a curative sense for the trypsin treatment of cancer, nor could I conceive of any medical man conversant with the realities of this disease putting forward, at the present time, such a suggestion. It might be expedient for me to point out here that in my book (fourth edition) I have recorded a case similar to that which Dr. Bainbridge publishes in your last issue—a case of recurrent carcinoma of the breast in which trypsin was employed, and local degenerative changes observed and confirmed on subsequent operation. Despite these, however, recurrence took place, and I noted that "local atrophy and degeneration are far from the successful treatment of the general conditions underlying the manifestation . . . ."

Personally, my experience is limited to inoperable and far advanced cases, and I have done my best to keep the profession informed as to the progress and results in cases under my care.

Apart from these, I have reason to think that many hundreds of cases of inoperable cancer have been treated, to some extent, with trypsin during the last two years in this country. I can, therefore, only ask, in the interests of truth, that all those members of the profession who have made a trial of this method should put on record brief notes of their cases, with an adequate description of the methods followed and results noted.—I am, etc.,

JOHN A. SHAW-MACKENZIE, M.D.Lond.

London, W., March 2nd.

"OPERATIONS ON THE KIDNEY."

SIR,—Mr. Swain, in an article in the BRITISH MEDICAL JOURNAL of February 9th on "A Retrospect of a Thousand Cases of Abdominal Surgery," includes 28 nephropexies. One would scarcely expect this operation to come under such a heading. The statement made:

> In all cases, except perhaps those associated with some form of kidney degeneration, a belt should be tried, and in many cases of movable kidney accompanied by hysterical and neurasthenic symptoms a belt is the only justifiable form of treatment,

requires, I think, further explanation on the following points:

1. In how many of the 28 cases were hysterical and neurasthenic symptoms present?

2. Was the fixation permanent and high up in all cases?

3. What length of time was allowed for results after the operation?

Some cases take months to recover nerve and brain tone and to throw off the toxaemia. Statistics and experiences of other eminent surgeons on the subjects of nephroptosis and nephropexy are the opposite of Mr. Swain's—notably, Henry Morris, London; Goelet, New York (197 nephropexies); Fiori, Italy (synopsis of 301 successful nephropexies); Justin Lucas-Championnière (43 successful nephropexies). Goelet's methods is employed daily in Birmingham, both in all the public hospitals (vide reports) and private hospitals, with satisfactory enduring results. The following case was recently under my care:

> Woman, single, aged 32, dressmaker, had been in bad health ten years; never wore corsets; both kidneys down; flatulence, pains in stomach, backache, severe headache, exhaustion, great mental depression. I called in Dr. Suckling, who agreed that both kidneys were down. The right one was fixed by Mr. Lloyd in the Queen's Hospital. Three months later she came to my surgery in splendid condition both physically and mentally, and told me then, for the first time, "that before operation she was so wretched from long suffering that on three separate occasions she was on the point of suicide, and was only prevented by unforseen trifles, one of which was missing a train."

The fixing of the organ too low or by a method from which it again prolapses may account for the lack of satisfactory results in the cases quoted by Mr. Swain.—I am, etc.,

February 18th BIRMINGHAM SURGEON.

THE SHIPPING FEDERATION AND THE WORKMEN'S COMPENSATION ACT.

SIR,—In the BRITISH MEDICAL JOURNAL of February 9th last you published a letter signed "X.," in which the writer criticizes my charges for the examination of seamen, which he designates as "simply ridiculous."

Now, as Dr. X. has stated the terms he requires to perform the same work, namely, half a guinea for each seaman examined and fifteen minutes for each case, let us see whether they are open to the same designation. I will cite three examples.

1. Take an Orient liner with a crew of 120 men. Dr. X.'s fee would be 60 guineas—satisfactory, no doubt, but "simply ridiculous." He requires fifteen minutes to examine each man, so that working continuously from 10 a.m. to 4 p.m. he would finish in five days—satisfactory to himself, but "simply ridiculous."

2. Suppose the ship was an Atlantic liner with a crew of 400 men (many have more), Dr. X.'s fee would be 200 guineas—a respectable sum, but "simply ridiculous," while the time consumed in examining this crew would admit of the liner, with a scratch crew, proceeding at leisure to New York and back again before Dr. X. had finished his work. Surely this would be "simply ridiculous."

3. With a small ship with a crew of twelve men (some hundreds of such leave London every week) Dr. X. would require three hours to examine the twelve men, and his fee would be 6 guineas. From the owners' point of view I fear this would be "simply ridiculous."—I am, etc.,

London, E., Feb. 16th. ARCHIBALD FINLAY.

THE PROSPECTS OF MEDICAL LAW REFORM.

SIR,—The following question is suggested editorially in the BRITISH MEDICAL JOURNAL of March 2nd:

> One is inclined to ask how long the Legislature will consider it consistent with the public health and well being to allow the owners of "patent medicines" to foist their wares upon the community by such absurd and misleading statements.

I should like to be allowed to answer this question with the increased emphasis which extending experience provokes. The Legislature will continue to disregard demands for medical law reform, whether as to fraudulent practice or the traffic in fraudulent nostrums, until the evils complained of are brought forcibly home to the minds of the politicians and statesmen who compose the Legislature, and the public who put them in power. The newspaper press, with rare exceptions, having been captured or suborned by quackery, the case for legislation can be established through the medium of a Royal Commission, and in no other way. The necessity of medical law reform for the welfare of the people could there be demonstrated beyond dispute; until this is done no other step approaching the desired goal is possible.—I am, etc.,

London, W., March 2nd. HENRY SEWILL.

TENNIS ELBOW.

SIR,—As a sufferer from the above complaint, may I be allowed to make a few comments on the annotation in the BRITISH MEDICAL JOURNAL of March 2nd? It may be true that the lesions mentioned in the article sometimes occur during the practice of lawn tennis, but I do not think that any of them constitute the real "lawn-tennis arm," which appears to be a paresis of the muscles attached to the external condyle of the humerus (supinator longus, extensor carpi radialis longus, anconeus, etc.). In fact, "lawn-tennis elbow" seems to be similar to the blacksmith's paralysis, which follows excessive use of certain muscles. It may be a neuritis affecting chiefly the musculo-spiral nerve. At any rate, the objective result, apart from a certain amount of pain on movement, is a distinct wasting and flabbiness of the muscles mentioned.—I am, etc.,

London, W., March 3rd. C. F. MARSHALL, F.R.C.S.

SIR,—I have read with interest your article on tennis elbow in the current issue of the BRITISH MEDICAL

Journal, as I have suffered from the affection myself on two occasions. In my case the pain was behind the head of the radius, and was brought on by hard overhand service and backhand play. There was tenderness, but no swelling, and the joint could be freely flexed and extended. Pain was caused when the extensors of the forearm were brought into active use. For instance, pressure on the back of the extended fingers immediately caused pain over the tender area. The injury was evidently a strain of the tendinous insertion of the superficial extensors into the external epicondyle, followed by a rheumatic fibrositis, which soon cleared up under antirheumatic treatment.—I am, etc.,

March 4th. A. M.

TREATMENT OF *POST-PARTUM* HAEMORRHAGE.

Sir,—As a general medical practitioner of twenty-five years' standing, with a fairly large midwifery practice, I have been much interested in Dr. F. Le Page's letter on the treatment of *post-partum* haemorrhage (British Medical Journal, February 23rd, p. 470). I am, however, of opinion that in nearly all cases flooding is preventable and, in the absence of other complications, mostly due to kidney trouble. I would therefore recommend the following rules to general medical practitioners:

1. To test the urine of all new cases three months before the event becomes due.

2. To give liq. strychninae miij three times daily in a little water without fail for at least one month before the confinement takes place in all cases in which there has been a previous history of flooding. I have found this drug a specific, and have never known a second attack of *post-partum* haemorrhage to take place in the same patient after its use.

It is not for me to criticize the sayings and doings of our learned seniors, but if they could only give the young practitioner more simple advice in the treatment of their midwifery cases, instead of how to compress the abdominal aorta, which I affirm would not be an easy matter for a medical man to do single-handed, especially if his patient happened to be a very fat woman; and in the country the doctor, if he requires help, has generally to send a considerable distance before he is able to obtain it.

I am, etc.,

Bristol, March 4th. W. Howard Cory, M.R.C.S.Eng.

THE TREATMENT OF FRACTURES.

Sir,—My attention has been drawn to Professor Wright's letter in the British Medical Journal of February 23rd. My "amazement" is increased at his wholesale condemnation of passive movements; and all I can say is that we must agree to differ. I still think that gentle, painless, passive movements are possible, and that such movements are carried out in a large number of cases, though I do not say, and have not said, that they are employed in all cases.—I am, etc.,

Brighton, March 2nd. J. Allan.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

APPOINTMENT.

Professor Sims Woodhead has been appointed the Representative of the University on the Council of the Lister Institute of Preventive Medicine.

Dr. G. S. Graham-Smith has been appointed University Lecturer in Hygiene for five years.

The General Board of studies will shortly proceed to the appointment of a University Lecturer in Pathology at a stipend of £100 a year.

DEGREES.

The following degrees were conferred on February 25th:

M.D.—C. Killick, Trin.

UNIVERSITY OF LONDON.

The London Inter-Collegiate Scholarship Board constituted in 1903 with the approval of the governing bodies of University College and the East London College for the purpose of holding a combined annual examination for entrance scholarships and exhibitions tenable at these Colleges, give notice that an examination will be held in London on May 14th and following days. A candidate must have passed the matriculation examination of the University of London or an examination accepted by the University in lieu thereof, or must hold a school-leaving certificate, or be able to furnish evidence of having had a sound general education satisfactory to the Board. Successful candidates will be required to enter the College by which they are elected in the October following the examination, and to pursue a course of study approved by the authorities of the College.

Among the scholarships are the following:

University College.—Three Andrews scholarships, each of the value of £30—one in classics, one in modern languages and English history, and one in the following subjects: Mathematics, physics, chemistry, elementary biology, and botany. One West scholarship, value £30, in English and English history. The above are tenable for one year.

King's College.—Sambrooke exhibition in classics, £50, for males only, tenable for one year. Two Clothworkers' Science Exhibition, tenable for two years, for any four of the following subjects: Mathematics, elementary mechanics, physics, inorganic chemistry, botany, zoology, geology, mineralogy, of the value of £30 and £20 respectively. Two engineering entrance exhibitions of £25 each, for men only, tenable for one year. Skinners' arts scholarship, for men, tenable for three years (for women only of the value of £40), for any four of the following: Latin, Greek, French, German, English language and literature, English history, pure mathematics, elementary mechanics. Merchant Taylors' scholarship of £40, for women only, tenable for three years, for any four of the following: Pure mathematics, elementary mechanics, physics, chemistry, botany. All candidates will be expected to write an English essay.

East London College.—Four Drapers' Company science scholarships, for men only, of the value of £40, for any two of the following subjects: Mathematics, chemistry, physics, geometry, and geometrical drawing. Two Drapers' Company science scholarships, value £40, for women only, for any two of the following: Mathematics, chemistry, physics, botany. Four Drapers' Company arts scholarships—two for men and two for women—of the value of £40 each, for Latin, pure mathematics, or English language and literature, and any one of the following: Greek, French, German, history. The scholarships at the East London College are tenable for three years each.

Further particulars can be obtained on application to the Secretary of the Board (Alfred E. G. Attoe), University College, Gower Street, London, W.C.

UNIVERSITY OF GLASGOW.

B.Sc. in Pharmacy.—The regulations for the institution of the degree of B.Sc. in Pharmacy have received the approval of the Privy Council. Adequate provision for accommodating the pharmacy students was made in building the new laboratories for the Materia Medica Department. Some time must, however, elapse before the B.Sc. Pharmacy course is instituted, as all the funds at present available from the Carnegie Trust are earmarked for other objects, but probably in the course of the next twelve months the necessary money will become available. Every effort is being made to finish the new buildings in time for the formal opening by the Prince of Wales at the end of April. Of the three departments the one which is most nearly completed is that of Public Health, but the Physiology and Materia Medica buildings are also well forward, and there is every reason to expect that all these will be completed in time.

UNIVERSITY OF SHEFFIELD.

Dr. James Martin Beattie, Senior Assistant to the Professor of Pathology, University of Edinburgh, has been elected to the Chair of Pathology in the place of Dr. Cobbett, who has been appointed Lecturer on Bacteriology at Cambridge.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Examination for the Membership

The Censors' Board to receive applications from candidates for admission to the examination for the membership will, owing to the date of the Easter vacation, meet on Friday, March 22nd, instead of April 5th.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

The Gilbert Blane Medal.

The gold medal founded by the late Sir Gilbert Blane, Bart., to be given biennially has been awarded by the Medical Director General of the Navy and the Presidents of the Royal College of Physicians and the Royal College of Surgeons to Staff Surgeon James W. W. Stanton, for his Journal of H.M.S. *Suffolk* 1905, and to Surgeon Bernard Ley, for his Journal of H.M.S. *Alacrity* 1904.

The late Miss Isabella Dyer Heddyman, of Sunninghill, who died on February 3rd left £100 to the British Home for Incurables at Streatham.

OBITUARY.

ALLAN MACFADYEN, M.D., B.Sc.,

FORMERLY SECRETARY AND HEAD OF THE BACTERIOLOGICAL DEPARTMENT, LISTER INSTITUTE.

Universal regret will be felt at the untimely death of Dr. Allan Macfadyen, which occurred on March 1st as a result of accidental infection in the laboratory by typhoid and Malta fever some six weeks ago. His name must therefore be inscribed on the honoured roll of the martyrs of science.

Born forty-six years ago in Glasgow, he received his scientific and medical education at Edinburgh University, of which he was a distinguished student, gaining the gold medal at the M.D. examination in 1886, and taking the B.Sc. degree two years later. He afterwards studied in Berne, Göttengen, and Munich, gaining a consummate knowledge of chemical and bacteriological technique and that command of the German language which served him in such good stead in his subsequent career.

Dr. Macfadyen was a Research Scholar of the Grocers' Company 1889-92, and about this time became Lecturer on Bacteriology at the old College of State Medicine. When this was amalgamated with the British Institute of Preventive Medicine he was appointed Head of the Bacteriological Department, and, on Dr. Ruffer's resignation, also Secretary of the Institute at Great Russell Street, and of the Jenner and Lister Institute, as it successively became, at the new building in Chelsea, in the equipment and organization of which he took a large share. At the Lister Institute not only did he himself conduct many researches, but he had the gift of imparting his enthusiasm to others, and much of the work emanating from the bacteriological department was inspired by him. On resigning his post at the Lister Institute last year, he pursued his researches at King's College and at the Wellcome Laboratories. As Fullerian Professor of Physiology at the Royal Institution, 1901-4, his courses of lectures on cell-problems, antitoxins, etc., attracted much attention, and made him known to a wide circle.

Dr. Macfadyen's contributions to science were numerous. One of his earliest papers was on the behaviour of bacteria in the digestive tract based on work done in the Hygienic Institute, Göttingen, under the direction of Professor Carl Flügge. the main conclusions of which were that the gastric juice and intestinal secretions protect the body but little against the entrance of pathogenic germs, that the intact walls of the intestine are an efficient barrier against the absorption of micro-organisms, and that the acids in the food play a part in the prevention of fermentations in the digestive tract. Another important piece of work was a joint research with Professor Nencki and Dr. Sieber, on the chemical processes occurring in the small intestine of man. Advantage was taken of a patient with faecal fistula to make analyses of the intestinal contents under different conditions of diet, etc., and also to study chemically the changes induced by several species of intestinal micro-organisms in pure culture. The ferment action of bacteria (with Sir Lauder Brunton), action of bacteria on albumins and peptones, thermophilic bacteria (with Dr. Blaxall), pasteurization of milk (with Professor Hewlett), yeast zymase (with Mr. Rowland, the late Dr. Morris, and Dr. Harden), the bacillus of bovine and human tuberculosis, phosphorescent bacteria, and disinfection problems were some of the subjects which from time to time attracted his attention.

But Dr. Macfadyen's chief claim to recognition as one of the later pioneers of bacteriological science will be his work on the intracellular juices, the "endotoxins," of pathogenic micro-organisms. He was early imbued with the idea that the intracellular constituents of bacteria and other cells are of paramount importance, and that the solution of many problems would lie in the possibility of obtaining them in a state unaltered by heat, chemical agents, and the like. The realization of his hopes in this direction was made possible by the low temperature researches of Sir James Dewar and the production of liquid air in quantity. He first showed that at the temperature of liquid air, and even of liquid hydrogen, micro-organisms retain their vitality and functions unimpaired. With the aid of his colleagues, Mr. Rowland and Mr. Barnard, and of his laboratory assistants, Messrs. Burgess and Thompson, apparatus and methods were gradually evolved which ultimately enabled him by means of liquid air to freeze bacteria into hard particles so that they could be triturated in a grinding mill, and the juices obtained apart from the bacterial cells and without the aid of heat and chemical extractives, which alter, more or less, their characters. In this way it was shown that the intracellular juices of virulent pathogenic microbes are intensely toxic and may be regarded as the true endotoxins of the organisms. The comparative failure of attempts to prepare therapeutic serums for tuberculosis, typhoid fever, cholera, pneumonia, and other diseases, the micro-organisms of which produce little or no extra-cellular toxin, suggested that the key to the problem might be found in the preparation of antiendotoxin serums by immunization with the endotoxins obtained by the liquid air grinding method, and to this end Dr. Macfadyen devoted the last years of his life. In a series of papers which has been appearing during the past four or five years, he showed that it was possible to immunize animals by means of the endotoxins of the micro-organisms of typhoid, cholera, pneumonia, plague, Malta fever, and hog-cholera, and that the serums of the immunized animals exhibited preventive and curative properties towards infections of the respective microbes. During the last four months trials on the human subject of some of these antiendotoxic serums have given encouraging results, and it is a sad circumstance that he should be stricken down just as his work seemed to be crowned with success and to be nearing completion.

Dr. Macfadyen was of a shy and retiring disposition, but to those who gained his confidence he was a genial companion and true friend, and it may truthfully be said that he never made an enemy.

He leaves a widow, who we are sure will have the sincere sympathy of all in her tragic bereavement.

THOMAS HATFIELD WALKER, L.R.C.P., L.R.C.S.Edin.,

NEWCASTLE-UPON-TYNE.

At the comparatively early age of 56 Dr. T. Hatfield Walker, a well-known and much-esteemed medical practitioner of Newcastle-upon-Tyne, passed to his rest on February 27th. He was the son of the late Mr. Richard Walker, railway contractor, and was born in York in 1850. He received his medical education in Edinburgh. Twenty-five years ago he went to Newcastle to take over the practice of the late Mr. John Carrick Murray. By his kindly manner and faithful attention to duty Dr. Hatfield Walker considerably enlarged the practice, and succeeded in gathering around him a large circle of friends. By those who knew him intimately he was much beloved, for his nature was generous and his disposition kind and attractive. For the last twelve months he had been an invalid. During this long and trying period, broken often by remissions that gave promise of better health never for long realized, he was attended by his partner Dr. Basham and by Dr. Coley, with the frequent assistance of Professor Oliver and of surgical friends. He bore his illness with patience and without complaint, although at times he must have felt the hardness of the blow, for he had attained to that position in life in which, had he been spared, he could have given time to the prosecution of chemistry, which had always a fascination for him and the literature of which he had considerably enriched. But it was with him in this respect as with so many others who are within sight of the goal. He was not allowed to reach it and enjoy its pleasures.

Dr. Hatfield Walker was a Fellow of several of the learned societies. He held the appointment of Public Analyst to the City of Carlisle, and in Newcastle his opinion and advice were frequently sought in matters of toxicological controversy. As an expert in water analysis he had few equals.

He was buried on March 2nd in the quiet churchyard of Kirkbampton, near Carlisle. Dr. Hatfield Walker leaves a widow and son to mourn their loss, and for them much sympathy is felt. As a mark of the esteem in which he was held several of the medical practitioners of his adopted city followed the body to the railway station.

Sir John McNeale Donnelly, K.C.B., M.D., Surgeon-General Indian Medical Service, retired, died at Bray,

co. Wicklow, on February 18th. He joined the Madras Medical Department as an Assistant-Surgeon, July 3rd, 1856; became Deputy-Surgeon-General, April 5th, 1885; and retired from the service in 1890. He had charge of the Medical Department in the Burmese expedition in 1885-6, was twice mentioned in dispatches, and received the thanks of the Government of India. He was also with the Chin-Lushai expedition in 1889-90, being again mentioned in dispatches. Presumably he had received the Frontier medal with two clasps for these services, but the Army Lists do not credit him with these honours. He was made C.B. in November, 1836, and K.C.B. in June, 1906.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

INDUSTRIAL ACCIDENTS AND DISEASES.

Since 1895 a practice already adopted in regard to mining accidents, the Chief Inspector of Factories has published preliminary tables of cases of industrial poisoning and fatal accidents in factories, workshops, etc., during the year 1906 (Home Office Report [Cd. 3326?]. London: Wyman and Sons. 1907. Price 2d.) in advance of his annual report, which will appear later on in the year. In the tables are included the numbers of cases of industrial poisoning, whether fatal or not, and the number of industrial accidents ending fatally reported to the Factory Department during 1906. All cases of industrial poisoning caused by lead, arsenic, mercury and phosphorus, and of anthrax contracted in a factory or workshop must be reported. The cases of lead poisoning for 1906 numbered 632, with 33 deaths, as against 592 for 1905 with 23 deaths. Of these 632 cases, 531 were in adult males, of whom 31 died, while 76 were in females, of whom 2 died. As heretofore, of all the lead industries the manufacture of white lead is again that which claims the largest number of victims—namely, 105 males with 7 deaths, and 7 females without a death. Next to it comes coach painting, with 84 cases in males and 7 deaths as against 55 males for 1905 with 2 deaths. China and earthenware manufacture is responsible for 44 cases of plumbism in males with 2 deaths, and for 6 in females with 1 death, or a total of 107 cases for 1906, as against 64 for 1905. No case of phosphorus necrosis occurred during 1906, but there were 5 cases of industrial anthrax poisoning. Of anthrax there were 66 cases reported with 24 deaths, as against 59 with 18 deaths for the previous year. The total number of non-fatal accidents for 1906 was 10,755, as against 9,546 for 1905, while the numbers of fatal accidents for the corresponding years were 1,116 and 1,063 respectively. The industries in which the largest numbers of fatal accidents occur are metal founding, 118 deaths, and shipbuilding, 111 deaths; while in docks there were 145 fatal accidents and in the construction of buildings 145, as against 147 fatal accidents for 1905. The tables are issued subject to corrections, but their timely publication places in the hands of members of Parliament and others interested in industrial questions interesting and valuable data.

INFANTILE DIARRHŒA.

The [illegible] which deaths from diarrhœa have upon the rate of infantile mortality is well shown by the Medical Officer of Health for Corton Lancashire (Dr. A. W. Martin), in a special report upon the prevalence of diarrhœa during the summer and autumn of 1906. The infantile mortality rate in Corton during [illegible] was 159 per 1,000 births, but if the diarrhœa deaths were [illegible] the rate was 119 per 1,000; in the six preceding years the average rate was 139 per 1,000, which was reduced to 111 per 1,000 by the exclusion of the diarrhœa deaths. It is not at all surprising to find that, of the 75 deaths from diarrhœa which occurred in 1906, as many as 69 were in houses where there were privy middens, and only 15 where there were water closets. There appear to be about an equal number of houses in Corton supplied with each of these two types. The district council will be well advised if it carries out the advice of its medical officer of health and as speedily as possible does away with the privy middens in their town. Dr. Martin truly remarks that cleanliness, as sanitarians understand it, is quite impossible in privy midden districts, and there cannot be back-to-back cottages where houses are closely packed together and joined by back to back privies. He deplores the action of the ratepayers who do not by every always support the sanitary authorities, who are desirous of converting these privy middens to water closets. But if action is taken under Section 36 of the Public Health Act 1875, the difficulties he complains of are very much lessened.

BACTERIAL TREATMENT OF SEWAGE.

Mr. W. [illegible] Moncrieff: In the course of a paper on the bacterial treatment of sewage read at a meeting of the Royal Sanitary Institute on March 2nd pointed out that the reduction of organic matter in sewage, whether in open tanks or in cultivation tanks, was associated with two characteristic features, a rise in temperature and an evolution of inflammable hydro-carbon gases. It was the latter transformation that accounted for the clearing away of the organic carbon as a cause of secondary putrefaction in good bacterial effluents; when the ratio of the oxidized to the unoxidized organic nitrogen in an effluent was sufficiently high, the organic carbon as a polluting element became practically negligible and had even ceased to be estimated at all in recent analyses. At the same time difficulties might arise from the presence of organic carbon in isolated cases and that estimation should never be disregarded where secondary putrefaction was persistent in any effluent. The work of breaking down organic matter in anaërobic fermentation was done not only by the putrefactive organisms directly but by their enzymes as well. It was unfortunate that no investigations had been made as to the possibility of utilizing the enzymes contained in hydrolized effluents so as to expedite the process of hydrolysis on the incoming sewage. Mr. Scott-Moncrieff then proceeded to discuss what occurred upon the surface of percolating filters. If the filters were to go on working without organic matter accumulating in their interstices some provision was required to prevent this. That introduced the important point that periods of rest must be allowed sufficient to prevent accretions of organic matter from clogging the top surface of filter beds. Mr. Scott-Moncrieff concluded with a description of the changes that occurred in the organ nitrogen as the sewage percolated through the filter beds.

WORKHOUSE MIDWIFE OR MIDWIFERY NURSE.

Domus Industriae.—**Every certified midwife practising as a midwife within the area of any county or county borough throughout England and Wales must give notice in the month of January of every year to the local supervising authority as long as she continues to practise in such area (see Section 10 of the Midwives Act of 1902). Certified midwives, however, acting under registered practitioners as monthly nurses, and also certified midwives attending parturient women in infirmaries or maternity institutions under the control and direction of the medical officer, are not required to give any notice to the local supervising authority. As our correspondent will see from the report in the Supplement this subject was under the consideration of the Central Midwives Board at its last meeting.**

PUBLIC HEALTH DIPLOMAS IN THE COLONIES.

Veritas writes: "N.S.W." (British Medical Journal, January 19th, p. 179) advises your correspondent "I. H." "to clear out to the Colonies, where the D.P.H. is properly appreciated, and candidates in possession of such for public health appointments are eagerly sought after." My experience is decidedly the reverse. I know of a case where among the applicants for the medical officership of health one holding the D.P.H. was not appointed, but the appointment was given to a man holding no public health qualification whatever, utterly ignorant of sanitary matters, and this in a town which aspires to be a health resort, and is extensively advertised as such.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE CENTRAL LONDON OPHTHALMIC HOSPITAL.

The Managing Committee of the Central London Ophthalmic Hospital was able to give a favourable account of the position of the institution to the Governors at the annual meeting on February 28th. By continuance of economical administration it has proved possible again to start the new year free from debt, while a sum of £9,500 has been accumulated towards the rebuilding of the institution. The in patients during the year numbered 705, while 12,190 persons were attended in the out-patient department. The calls upon the hospital continue to increase, and for this reason reconstruction of the premises at an early date is regarded as a pressing need.

The Hornton Board of Guardians received on February 25rd the resignation of Dr. Thomas Henry Stocker Pullin of Abernethy House, Sidmouth, a medical officer with more than one record in the way of service to record. Born and bred in Sidmouth, and educated at the Blue Coat School and St. Bartholomew's Hospital, he has practised in his native town for over fifty six years, serving it as medical officer of health for thirty five years, as public vaccinator ever since the first compulsory Vaccination Act was passed, the poor and the guardians for over fifty years, and the Admiralty as agent and surgeon for an even longer period. The guardians coupled their acceptance of his resignation with a resolution expressive of their appreciation of the value of his services and of great regret at their cessation, and this must doubtless be the feeling of the whole town.

Medico-Legal.

A STONE OF STUMBLING.

To whom does the calculus removed by operation from a man's bladder belong—to the patient or the surgeon? This question is being discussed in Germany with reference to a case in which a patient has declined to pay the fee for an operation unless the *corpus delicti* which was the cause of his sufferings is delivered up to him. It appears that the calculus, which had formed around the end of a broken catheter, had already been put up as a preparation for scientific purposes by the surgeon. It is possible that the case may come before a court of law. In any case it would seem to be advisable that surgeons should make their claim to the possession of the trophies of their skill before the operation. It is probable that it will be easier to negotiate with the patient then than afterwards.

PURCHASE OF A PARTNERSHIP.

A. sells a share of his practice to B., estimating its value at two years' purchase. He also agrees to part with the remainder after the lapse of one and a half years. What price ought B. to pay for the latter?

*** As B. pays for the first portion of the practice at a valuation of two years' purchase, it is to be presumed, in the absence of an agreement to the contrary, that he is to pay for the remainder at the same rate. At the end of one and a half years, therefore, a valuation of the remainder should be made, and B. ought to pay two years' purchase on this valuation. If any other arrangement was contemplated, it ought to have been set out in the original agreement.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

INTEREST.—The procedure is not in accordance with professional usage.

THE COURTESY CALL.

FRATERNITY writes: We are all very anxious to inculcate into the mind of the young practitioner the principles of medical etiquette, forgetting that the older man is quite as guilty in many ways as the younger one. With regard to the custom of the newcomer's duty to call on all the other practitioners, how frequent it is for this call to remain unreturned! Does the older man really appreciate the very great rebuff this is to the newcomer? Does he expect the newcomer to carry out all the duties of strict professional etiquette if he neglects to accord him the ordinary courtesy due from one gentleman to another? I regard this duty of returning the courtesy call as just as imperative as the newcomer's duty of making it. Suppose the call remains unreturned, what line of action should be taken? I think the newcomer would be justified in bringing the facts before the Ethical Committee of the Division. I should like to know your views on the point.

*** We agree with our correspondent that the call ought to be returned as a matter of course. The matter is one which would clearly be well within the province of the Ethical Committee of the Division to consider.

DOORPLATE ON CHEMIST'S SHOP.

A. H. W.—Complaints are constantly made if a practitioner affixes a doorplate to a house where he has no bonâ fide tenancy, and the only exception which custom seems to sanction is in thinly-populated country districts where there is little competition and the distances are great, but even there a chemist's shop is not a desirable place for it. In a suburban district such as that in which our correspondent lives, to do as he proposes would give good ground for adverse comment, and could not be justified on account of special circumstances.

THE annual clinical debate of the Chelsea Clinical Society will commence next Tuesday evening and be continued on March 19th. The subject is the diagnosis of gall stones and the indications for operation. Drs. Hale White and Seymour Taylor and Mr. Mayo Robson are the speakers announced for the first evening; those for the second being Messrs. L. A. Bidwell and H. J. Waring and Dr. H. D. Rolleston. The debates are held at Chelsea Dispensary, close to Chelsea Town Hall, and are open to all medical men.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 2, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2631, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

J. G. A. (Natal) writes that in two cases of what he believed to have been acute febrile influenza enlargement of the lymphatic glands occurred before the disease developed, and asks whether this has been observed in other cases.

CHRONIC SNEEZING.

SOUTH-WEST asks for suggestions as to a case of chronic sneezing and a continuous watery discharge from the nose in a young woman. The paroxysms come on almost daily, and sometimes several times a day, each one lasting from five to fifteen minutes or more. The patient, who is a typewriter, has undergone several nasal operations in special London hospitals, including cauterization, resection of the septum, scraping, etc., but the symptoms described persist. During the three months she has been in the writer's hands she has also had douches of cocaine, menthol, chloride, adrenalin, creolin, hamamelis, zinc sulphas, as also various snuffs and oleaginous sprays, but none has been effective.

R. MAY-GRUENWALD'S SOLUTION.

QUERY wishes to know what R. May Gruenwald's combined fixing and staining solution for bacteria is composed of.

*** The R. May-Gruenwald solution for staining bacteria is, as stated in the BRITISH MEDICAL JOURNAL of December 22nd, 1906, p. 1848, a methylene blue-eosin mixture of somewhat similar composition to Jenner's blood stain. We believe it can be obtained from Grubler of Leipzig, or through Kanthack or any of the London firms which deal with microscopical stains.

ANSWERS.

MOTHER AND CHILD.

DR. R. R. RENTOUL.—The statement that it used to be held in England that a mother was no relation to her own child is rather the expression of an anomalous effect of the ancient law than an actual rule of law. It seems to have arisen out of the ancient canons governing the succession to real property, which were superseded by the Inheritance Act, 1833. Under these rules inheritances could never lineally ascend, hence parents could not succeed to their children. Further, every person inheriting must be of the blood of the first purchaser. If, therefore, on a father's death his son succeeded to the paternal estate and afterwards died leaving no relatives other than his mother, neither the mother, nor any of her descendants who were not of the blood of the ancestor of the father from whom the estate had descended, could succeed; and so in a sense the mother did not appear to be related to her own son. References to the subject will be found in Williams's *Principles of the Law of Real Property*, in the chapter On the Descent of an Estate in Fee

simple, and in Holdsworth and Vickers's book, *The Law of Succession, Testamentary, and Intestate*, p. 110.

THE M.D CAMBRIDGE.

CANTAB.—The proceedings for the M.D Camb. consist of a thesis and an extempore essay. For the latter a choice is given of one of four subjects—general medicine, hygiene, pathology, and physiology. A candidate might read with advantage: *Handbook of Hygiene and Sanitary Science*, by G. Wilson, M.A., M.D., F.R.S., eighth edition (London: J. and A. Churchill, 1906. 12s. 6d.); *The Principles and Practice of Medicine*, by Wm. Osler, M.D., sixth edition (London: Sidney Appleton, 1905. 21s.); and some of the monographs in Allbutt's *System of Medicine* (London: Macmillan and Co.).

MOTOR CAR FOR HILLY DISTRICT.

B. H. S. writes in reply to "X. M.'s" inquiry published on February 2nd: I have had six months' experience of a 6-h.p. Rover car and covered about three thousand miles. The car is reliable and speedy for her size but, in my opinion, not sufficiently powerful. With a strong head wind or very heavy roads it is frequently necessary to drive on the second speed, even on a level road, if there are two persons in the car. Also, this car is a bad hill climber on the top speed, often refusing a very moderate incline. The use of a hood and screen, so important in bad weather in the country, is quite out of the question with a car of this low power. I should strongly recommend "X. M." to invest in an 8-h.p. car, as the extra power does away with most of the inconveniences mentioned, and is worth the additional money.

A NEW MEDICAL SAINT.

THE *Gaceta Medica del Sur de España* states that the "celebrated" Dr. Rizal—of whom we are ashamed to confess we never before heard—has been canonized by the National Church of the Philippine Islands with all the appropriate ritual, and will henceforth be known as San José de Rizal, hero and martyr. His feast will be kept on December 30th. Can any reader tell us a little more about the new saint?

QUANTITATIVE SACCHAROMETER.

DR. J. C. S. BIRCH (Edgbaston, Langley Green, Birmingham) writes: "Verat" will find that the best of the fermentation saccharometers is Lohnstein's, but if he wishes to estimate sugar by means of titration with Fehling's solution, Gerrard's glycosometer will be found reliable. Both may be procured from Baird and Tatlock, 14, Cross Street, Hatton Garden, London, E.C.

MR. JAMES J. HICKS, manufacturer of philosophical instruments (5, Hatton Garden, London), writes to recommend a specific gravity hydrometer divided in grains from 1.000 (or 0) to 1.100, heavier than water. It is very simple and gives you the gravity of the fluid right off. If it is required for testing urine, a similar instrument, graduated from 1,000 to 1.060 or 0 to 60 grains of specific gravity heavier than water, would be more suitable.

LOCAL ANÆSTHESIA FOR EXTRACTION OF TEETH.

DR. J. BERNARD (Sheringham, Norfolk) writes in reply to "Extractor," inquiry published on January 12th, page 119: To produce local anæsthesia for tooth extraction, "Extractor" should use cocaine hydrochloride of good quality in a *freshly made* 10 per cent. solution. It is most important that the cocaine should never have been exposed to a high temperature. For injection, an ordinary syringe with fine needle is necessary. Inject a small minimum of the solution at either end of the tooth in two injections at intervals of about five minutes. Care should be exercised to avoid spilling on mucous membrane. The patient should be kept lying down for an hour after the operation, and if possible to given position, especially if it is better. Occasionally one comes across a patient who is idiosyncratic for cocaine and no amount of precaution will enable of producing anæsthesia, but from personal experience I can testify to absolute anæsthesia from the above in my own cases.

TREATMENT OF WARTS.

B. H. S. writes in reply to "South West's" inquiry published on February 16th: I am able to record a cure in a man aged 47 years, who had been a great sufferer from thread warts for thirteen years, by means of cod liver oil, when all the ordinary remedies had repeatedly failed. The bowels were kept freely moved for three days by means of saline purges, the diet being restricted. The drug was then given in doses of twenty drops, half a dozen gelatine capsules, each containing 10 minims. A few hours later a full dose of castor oil, followed by a large enema after the oil had acted. The first time this was tried the patient was cured for nine months, when the trouble returned as badly as ever. The treatment was repeated, a slightly larger dose of cod's liver oil being given, and there has been no further trouble for the past six years. There appears to be a tendency for people to outgrow the complaint as they approach 50 years of age.

LETTERS, NOTES, ETC.

F.R.C.S.EDIN. writes: A. calls with lengths of cloth for sale, representing himself to be the agent for a tweed manufacturing house in a well-known manufacturing town in Scotland. After selling the cloth, he mentions that a Glasgow firm of tailors are making up the cloth into suits and costumes at a reasonable rate. B., representing the latter, calls, takes the measurement and the cloth. In the course of a few days a letter arrives, intimating that the suit is finished and will be delivered on payment of so much. If the money is sent, as in the case of a gentleman I know, an absolutely unwearable garment is sent. On further communication, the answer was that a new suit would be sent on payment of 10s. more. In my own case I refuse to send the money till the cloth is delivered, and there the matter ends. As it is, I am out of pocket the amount I paid A.

THE APPRENTICESHIP QUESTION.

DR. FREDERICK T. FAGGE (Llanfairfechan) writes: I have long been of the same opinion as the writer on this subject. From what one sees and hears, young men are not nearly so well equipped for practice as they were formerly when apprenticeship existed. Some return to that position or adequate substitute for it is required. Great help was given to men before entering a hospital, and, with the instruction imparted in the wards, gave the young practitioner a great advantage over the modern newly-fledged medico.

CASE OF PLACENTA PREVIA.

DR. DENNESS (Tow Law) writes: I attended a multipara on January 29th who had history of previous miscarrages and two full-time children. She was blanched from severe haemorrhage, which had lasted some days. On examination the os was dilated to the size of a two-shilling piece and rigid, the placenta was symmetrically attached round the os. After dilating more fully with Barnes's bag the os was separated and raised, and the feet brought down. The fetus was left for a short time and then came away easily. The placenta followed about half an hour afterwards. There was no subsequent haemorrhage, and patient made a good recovery. The fetus was at 6 months.

A THERAPEUTIC USE FOR GALL STONES.

DR. G. TRAVERS KEVERN (Rowhedge, near Colchester) sends us the following conversation that he overheard not long ago in a chemist's shop:

Young Lady (to chemist): Have you any gall stones?

Chemist (naturally at a loss, but fencing for time): Would you mind telling me what they are for?

Young Lady: They are good for piles, are they not?

Chemist (a ray of light beginning to dawn on the subject): Perhaps you mean the ointment of galls: that's good for that complaint.

Young Lady (complacently): Oh, yes! I suppose that's the same sort of thing, isn't it?

A DOCTOR AMPUTATES HIS OWN ARM.

WE take the following splendid example of presence of mind, pluck, and fortitude from the *Atlanta Journal Record*: "With his left hand torn to pieces and his forearm crushed, and firmly held between the rolls of a 'fodder shredder,' Dr. Charles McCullough, a well-known young farmer and physician who lives in Buckingham county, forty miles from Lynchburg, Virginia, cut his arm off below the elbow with his pocket knife. After freeing himself he directed the farm hands in taking up the severed arteries, thus saving his life."

THINGS THAT MIGHT HAVE BEEN EXPRESSED DIFFERENTLY.

WE call the following additional example of things one, on thinking over the matter, would rather have expressed differently, from the columns of a highly esteemed contemporary. A gentleman is telling the story of a case of cancer as to which he was asked to supply particulars of treatment to be carried out. He declined, on the ground that it was too late, and, in justification of his refusal, he says that two days after he had given his opinion a cable message was received *announcing* the death of the patient. It would appear that the patient had already taken the advice.

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N.B.—It is against the rules of the Post Office to receive letters at *Public Residences* addressed either in initials or numbers.

An Address
ON
THORACIC ANEURYSM.

Delivered before the Cleveland Division of the British Medical Association at Ormesby Hospital, Middlesbrough.

By THOMAS OLIVER, M.A., M.D., LL.D., F.R.C.P.,
physician, royal victoria infirmary, newcastle-upon-tyne.

When you did me the honour of inviting me to give a lecture, and suggested as a title Thoracic Aneurysm, I felt that this was a subject which we in this particular part, the north-east coast of England, had many opportunities of seeing and treating, and, therefore, of expressing an opinion upon. Thoracic aneurysm may be one of the simplest diseases to diagnose—it may also be one of the most difficult. There is a type of aneurysm which is recognized by physical signs and another mainly by symptoms. Occasionally the disease is present without giving rise to any complaint on the part of a patient. A ruptured aneurysm is occasionally found at the *post-mortem* examination of persons who have died suddenly. Men are more liable to thoracic aneurysm than women. The proportion is given as nine males to one female, but in the Newcastle Infirmary it is probably nearer twelve than nine. It is a malady that affects men in the early part of the prime of life. Taking at random 17 cases of thoracic aneurysm from our infirmary patients I find that 12 were men between the ages of 35 and 45, 4 were between 45 and 55, while 3 of the men affected were between 55 and 60. It is during the strenuous part of a man's life that the diseased wall of the aorta yields before the strain to which it is exposed, the change commencing in the intima but outstripped in the course of time by the middle coat becoming the more affected.

Aneurysms are spoken of as *fusiform* and *sacculated*. In a fusiform aneurysm a segment of an artery is more or less regularly distended throughout its circumference, and it is spindle-shaped; but a sacculated aneurysm, formed as it is by a dilatation of a particular portion of the wall of an artery, is often in appearance not unlike a diverticulum of the intestine. It is in sacculated aneurysms that the middle coat of the vessel is found to have become thinned out in many instances to disappearance, and in which the interior is lined by laminated clotted blood, the layers next the wall of the aneurysm being pale and stratified, while internal to this the blood clot is red and soft. Sometimes, as in the drawing I show you, a crack occurs in the intima of the aorta and penetrates into the middle coat, often separating it into two layers, between which the blood forms a channel for itself which extends over several inches of the aorta, recommencing further on, so that practically speaking the greater part of the abdominal aorta may thus be canalized, and to appear on section as if composed of two vascular tubes, one contained within the other. This is known as the *dissecting* form of aneurysm. It is unattended by any special signs by which we can diagnose it during life. As it is to the sacculated form of thoracic aneurysm that we are going to give our attention to-day, I shall for the present dismiss fusiform aneurysm by saying that when this exists in the ascending and transverse parts of the arch of the aorta the dilatation generally extends into the large vessels arising from the arch, whereas in sacculated aneurysm this is not the case.

There is not the least doubt that in a very large percentage of the cases there is a history of syphilis. In at least 50 per cent. of the patients, probably more, syphilis has been the principal cause; and, when we add to this the influence of strain when at work and of alcohol, we have a triad of causes which when co-operating explain the origin of nearly all cases of thoracic aneurysm. A specific endarteritis or aortitis, therefore, is the most frequent precedent. In nearly all cases there has been some pre-existing disease of the walls of the aorta—of the middle coat in particular. There are, however, other causes than syphilis. Sudden strain and injury, by taking the heart and blood vessels, so to speak, unawares, may induce aneurysm, but whether these *per se* without previous disease of the walls of the aorta can cause aneurysm affords material for discussion.

The fact that a traumatic rupture of the external coat of the aorta may be followed by aneurysm is proof that injury and strain may be followed by protrusion of the remaining walls of the vessel; besides, aneurysm of the smaller arteries is known to be the consequence of embolism of these vessels by a clot rich in micro-organisms carried thither from the heart. We must not close our minds to the operation of other causes than syphilis. Horses occasionally suffer from thoracic aneurysm. I am not referring to the aneurysms met with in these animals in the branches of the mesenteric arteries, and due to the perforation of these vessels by the larvae of the strongylus, but to the rarer forms of aneurysm of the fore part of the aorta, and towards which strain has been the principal cause. It has been experimentally demonstrated by Josué that in even such vegetable feeders as rabbits atheroma of the aorta can be induced by the injection of suprarenal extract. The pathological changes induced in the aorta by means of adrenalin are in all respects similar to those which are observed in man. For the production of thoracic aneurysm there are required a diseased condition of the walls of the aorta, high arterial tension, and strain. Towards the first, toxaemic conditions of the blood other than those due to syphilis can contribute.

Diagnosis.

The diseases that thoracic aneurysm may be mistaken for, and vice versa, are mediastinal tumours, malignant and other growths of the lungs, fibrosis of the lungs, malignant disease of the spine, and pulsating empyema. Thoracic aneurysm generally occurs in persons under 50 years of age, usually with all the appearance of health, whereas while in malignant disease the age may not be greater, there are frequently pallor and a certain amount of emaciation. It is only right to remember that when a thoracic aneurysm presses upon the thoracic duct the emaciation and pallor may be even greater and the loss of flesh much more rapid than in malignant disease of the lungs or mediastinum.

In the short time at my disposal it will be impossible to do more than give a brief review of some of the main points concerning the diagnosis and treatment of thoracic aneurysm, but, as the industries on the banks of the Tees are much the same as on those of the Tyne, and the habits of the workpeople are also practically the same, this is all that is required of me, since we are dealing with a disease that is common to the two districts, and one therefore with which you in Middlesbrough are just as familiar as I am. The labouring classes of the North of England work hard, they drink hard, and they are exposed to the vicissitudes of the weather, circumstances which all tend to induce structural changes in blood vessels.

Symptoms.

If I were asked what I regarded as one of the earliest symptoms of thoracic aneurysm I would say *pain* in the chest—not always well defined or localized, usually worst at night and aggravated by exertion. When to the complaint of precordial pain, there is added a loud ringing accentuated second sound heard on auscultation over the aortic area in a healthy-looking man whose urine is free from albumen, the existence of thoracic aneurysm is extremely probable. There may be neither localized visible pulsation nor dullness detected on percussion, but to the hand placed over the upper part of the sternum there may be conveyed a distinct feeling of vibration which it is important to note. While the second sound of the heart is due to the closure and tension of the segments of the aortic and pulmonary valves there is also as a contributing element the shock that is given to the whole of the arterial tree, and as in aneurysm of the aorta the elasticity of the walls of the aorta is much impaired the shock or thud under these circumstances is much exaggerated.

Only a few patients can recall the particular day and the hour in which after some unusual strain, such as lifting a heavy weight, they were seized with pain in the chest and a sense of difficulty of breathing, symptoms which obliged the individual to rest for a few moments, or these were so slight as to be disregarded and, practically speaking, have been forgotten. In some such instances the sudden strain that dilated the aorta may also have produced aortic regurgitation either through injury of the valves or

by stretching the first part of the aorta. Here, too, the question arises, Is it possible to have traumatic aortic regurgitation without pre-existing disease of the aorta or of the aortic valves? My answer is in the affirmative.

The pain in thoracic aneurysm may be explained in various ways. Apart from pressure upon adjacent parts and coexisting inflammation, increased tension of the walls of the aorta can of itself become a cause of pain either by stretching of the delicate nerves which run in the walls of the aorta or by a neuritis. Since pain is one of the earliest symptoms of thoracic aneurysm, its importance from a diagnostic point of view can be demonstrated by the administration of digitalis. This drug, administered under these circumstances, often augments the pain in the chest, since, by improving the force of the contraction of the left ventricle and by constricting the peripheral arteries, it raises the arterial tension. Increased stretching of the aortic walls or the heightened tension in a saccular aneurysm must therefore be a cause of pain; and just as digitalis aggravates the pain by raising the arterial tension, so vascular depressants, such as iodide of potassium, relieve pain by taking off this pressure. As the aneurysmal sac grows larger it may cause pain by pressing upon sensory nerves, and involving them in the inflammatory exudation. When an aneurysm of the descending aorta presses upon the posterior spinal roots, or has become incorporated with the periosteum of the vertebrae and is eroding the spine, pain of an excruciating character is often complained of, and calls for the hypodermic administration of morphine. On the other hand, it is well to remember that intrathoracic aneurysm may reach a great size without giving rise to pain or any very distressing symptom.

In cases of arterio-sclerosis accompanied by high arterial tension the left ventricle becomes enlarged, and there is heard over the aortic area a loud accentuated second sound. One consequence of the excessive strain imposed upon the ascending part of the arch of the aorta is that the wall of the vessel dilates, having been previously the seat of aortitis—a lesion which may silently extend downwards to the aortic cusps and induce aortic incompetence; or the mouth of the coronary arteries becomes involved, and, as a result of the malnutrition of the heart, the left ventricle dilates, or pain of the nature of angina pectoris is experienced.

Among the physical signs, dullness on percussion and pulsation seen or felt over a limited area are very important. When to these are added vascular bruits, the diagnosis of aneurysm is pretty complete, always barring the existence of such a growth as a very vascular sarcoma. So far as murmurs are concerned, a systolic murmur is the more frequent. It is due to the rush of blood from the aorta through the constricted orifice of the aneurysm throwing the blood in the aneurysm into eddies and inducing vibration of the walls of the sac. That vibration of the walls of the aneurysm contributes largely to the causation of the murmur is shown by the fact that if by any external adhesions the aneurysmal sac is bound down, or if the interior of the aneurysm is lined with thick layers of laminated clot, a systolic murmur may be entirely absent. In many large aneurysms there is no bruit heard at all, and such will sometimes be the case if the orifice between the aorta and the aneurysm is pretty large. If a systolic murmur when heard over an aneurysm is due to the impulse of blood and vibration of the walls of the sac, so a diastolic murmur might likewise be due to the sac of the aneurysm contracting and forcing blood out again into the aorta, but as a matter of experience a diastolic murmur heard under these circumstances is generally due to concurrent aortic regurgitation. It is the concurrence of aortic regurgitation, and not the presence of a thoracic aneurysm, that explains the hypertrophy of the left ventricle observed in these cases. To the hand placed over the seat of an aneurysm in the chest, even in the absence of a systolic murmur, there is frequently conveyed the sense of shock caused by the closure of the aortic valves and vibration of the aorta generally.

For clinical purposes not less than for anatomical, the arch of the aorta is divided into three portions—ascending, transverse, and descending. Aneurysms arising just above the aortic valves may be so small as to escape detection, and not reveal themselves until they rupture into the pericardium, when they cause death. In some of these cases faintness on getting out of bed in the morning has been the only symptom complained of. It is from the convex side of the first part of the arch of the aorta that aneurysms most frequently spring, since this is the part of the aorta that has to bear the main force of the contraction of the left ventricle, and it is from this part of the aorta that aneurysms may reach fairly large size without causing serious distress. The aneurysm may grow forward and show itself as a pulsating tumour in the second and third right interspaces—part of the intercostal cartilages or ribs having become eroded. Large pulsating swellings may thus be found on the right chest with very little but the skin in front of them. These are the aneurysms of physical signs. Instead of coming forward the aneurysm may grow towards the right lung and project into the pleural cavity, compressing the lung and causing the respiratory murmur on this side of the chest to be extremely feeble; or the sac may grow towards the superior vena cava, and subsequently open into it, giving rise to an arterio-venous aneurysm, the distinguishing sign of which is the presence of a continuous souffle; it may grow upwards, and by pressing upon the right subclavian vein cause oedema of the arm; or it may press upon the right recurrent nerve, and cause paresis or paralysis of the right vocal cord. When aneurysms arise from the concave side of the first part of the arch they may present at the left border of the sternum, and cause displacement of the heart.

Aneurysms of the transverse portion of the arch, even when small, will give rise to serious symptoms if they grow from the posterior wall, for, owing to the confined space, the trachea and oesophagus are readily pressed upon, and respiration and deglutition unpleasantly interfered with. It is when an aneurysm arises in this particular position that the sign known as "tracheal tugging" is best marked. Cough is frequently a distressing symptom; it is paroxysmal. Inspiration is attended with stridor. When the aneurysm grows forward there may be dullness over or at one side of the manubrium sterni, or the tumour may grow upwards and appear in the episternal notch. Frequently the left recurrent laryngeal nerve is pressed upon, and there occurs paralysis of the left vocal cord. To this subject I will return. In a female patient recently under my care the right sterno-cleido-mastoid muscle was extremely tender on pressure compared with the left; and in one of my male patients with aneurysm of transverse part of the arch, the right sterno-mastoid muscle was much smaller than the left. Signorelli of Rome states that he too found a distinctly attenuated condition of the left sterno-mastoid muscle in a patient in whom an aneurysm arose from the junction of the transverse and descending portions of the arch of the aorta, and which he attributed to an ascending degeneration of vago-spinal nerve fibres proceeding to the larynx. Aneurysms springing from the transverse part of the aortic arch may press upon the left bronchus, and by diminishing the quantity of air entering the left lung give rise to enfeebled respiratory murmur, or the thoracic duct may be encroached upon and starvation be slowly produced. The close proximity of the sympathetic chain of ganglia renders them liable to pressure, whereby when the pressure is slight, so as only to cause irritation, the pupil of the eye on the same side is dilated, but if the pressure is such as to cause paralysis of the sympathetic the pupil becomes contracted owing to the action of the third cranial nerve.

Aneurysms of the descending thoracic aorta when they pass backwards become incorporated with the periosteum of the vertebrae and cause erosion of the bones. There is induced a rarefying osteitis with absorption of the bone. When the erosion has extended into the spinal canal the cord is pressed upon and there is paralysis of the lower limbs. Pain, often of an excruciating character, is experienced during the process of erosion. Sometimes a pulsating swelling appears to the left of the spinal column.

Let us revert for a minute or two to the distressing symptom of paralysis of the vocal cords due to a thoracic aneurysm pressing upon the recurrent laryngeal nerves. On the right side the nerve winds round the subclavian artery, on the left round the arch of the aorta. With the exception of the tensor muscles of the vocal cords, the crico-thyroids, which are supplied by the superior laryngeal nerves, the motor mechanisms concerned with voice—namely, the abductors and adductors of the vocal

cords—are innervated by the recurrent laryngeal nerves. Risien Russell has shown that the recurrent laryngeal nerve can be split up in its peripheral length into three distinct bundles—one of which supplies the abductors of the vocal cords, another the adductors, whilst from the third no motor effects are obtained. The interesting point, therefore, is that it is the same nerve that goes to the abductors and adductors, only the fibres are differentiated in their course. These fibres come from the vagus and spinal accessory nerves. During inspiration and expiration the vocal cords form an isosceles triangle the sides of which move very little during the two phases of respiration. After death the cords occupy the cadaveric position, that is, only half their previous width. The larger width of the glottis during life is due to the abductor muscles being endowed with greater tonus, a kind of special reflex whereby, as Sir Felix Semon[1] maintains, the glottis is kept open during life throughout both phases of ordinary respiration. When during life the glottis is closed, there is dyspnoea, the breathing is quick and shallow, or there is deep and laboured inspiration, accompanied by audible inspiratory stridor. The narrowest part of the respiratory tube is the larynx, for by the introduction of the phonatory apparatus its width is reduced one-third, so that if the narrowing were not counterbalanced by some compensatory arrangement of nature, there would not be sufficient space for the entrance of air into the lungs when any extra demand was made upon the breathing powers. All this is obviated, Sir Felix Semon states, by the abductor muscles of the larynx being provided with the tonus already mentioned, so that the glottis is always kept sufficiently open for breathing purposes. When the recurrent laryngeal nerves are cut across, all the muscles supplied by them are paralysed, but owing to the removal of the abductor tonus the vocal cords tend to become drawn into the cadaveric position. In disease, when pressure symptoms develop slowly, the abductors always suffer more than the adductors, and tend to undergo atrophy and degeneration much more rapidly. Abduction paralysis represents the initial stages of complete paralysis of the recurrent laryngeal nerves. The abductor nerve twigs are more excitable to electricity than those going to the adductor muscles. In cases of pressure upon the recurrent laryngeal nerves, the function of the vocal cord that is first lost is always that of abduction. Whether this is due to the different manner in which the nerve fibres end in the abductors and adductors is a question we may well leave to laryngologists and others to settle. It is important for us to recognize the greater vulnerability of the abductor muscles, for once the abductor tonus is lost the cords are almost immediately drawn into the cadaveric position, and, as both sets of muscles are impaired, there occurs a paralytic contraction of the adductor fibres owing to the absence of antagonistic influences, and as the adductor shortening becomes permanent the cords are kept closed. The paralysed cord is drawn into the middle line, where it remains immobile, and yet, when only one cord is affected, all this may occur without giving rise to symptoms.

In thoracic aneurysm there is often detected inequality of the radial and temporal pulses—a circumstance that is sometimes of value from a localizing point of view. When an aneurysm springs from a part of the arch of the aorta, either before or after giving origin to the large vessels, there is not usually observed any difference in the pulses, although the pulse wave itself is frequently modified, for in the sphymographic tracing some of the waves are obliterated and the apex of the tracing is lost. When an aneurysm involves the innominate artery, it is the right radial pulse that is weakened and modified in character, although, as in this black-and-white drawing of a case of fusiform dilatation of the innominate artery, from the upper part of which a small sacculated aneurysm arises, the left temporal pulse in the patient could scarcely be felt owing to the displacement of the trachea to the left and compression of the left carotid artery; yet the pulse of the right was readily appreciable. An aneurysm involving the arch of the aorta, and situated between the origins of the innominate and left subclavian artery, is almost sure to render the left radial pulse the weaker of the two, and to modify its character. By means of these drawings of aneurysms of the thoracic aorta of patients that were under my care, I am able to draw your attention to the fact that occasionally the mouth of one or other of the large vessels springing from the aortic arch may become almost entirely blocked by firmly adherent clot, so that by this circumstance, and not the situation of the aneurysm, the weakness of the pulse on the corresponding side is to be explained. The inequality of the pulses, therefore, while in many instances a guide to the localization of the aneurysm, is not always a reliable guide.

The mode of rupture of aneurysms is an interesting study. While in some cases the rupture is sudden and death comes quickly when the haemorrhage is severe, or from asphyxia when the blood has been poured in quantity into the trachea, the sac in many instances simply leaks and only a small amount of blood escapes. The classic case recorded by my old friend and teacher, Sir William Gairdner, of the man whose aneurysm presented in the neck above the episternal notch, and who, when the sac ruptured, held out at arm's length a bowl at the far end of the red arch to catch the blood, and who ultimately died not from aneurysm at all, is probably known to many of you. I have seen a few patients die suddenly from rupture of aneurysm, but in a very large number of cases of aneurysms that come to the surface the skin becomes thin, red and reddish-blue at two or three places, and while the sac seems on the point of bursting, and of giving rise to a fatal haemorrhage, only a few drops of blood escape and continue to do so. This leaking goes on for days or the minute openings become blocked, and then, after a violent fit of coughing, a larger rupture occurs, and, a considerable quantity of blood escaping, the patient faints and recovers, but only to live in constant dread of a final recurrence which, in one sense happily for the sufferer, is not long delayed. What I have said of the mode of rupture of external aneurysms applies equally to those that open internally. Take the case, for example, of an aneurysm that has been pressing upon the trachea and which has opened into it. If you examine the mucous membrane of the trachea over the site of the aneurysm, it will be observed that there are several small openings in the plate of tissue separating the interior of the windpipe from that of the aneurysm, and through this cribriform plate the bleeding that caused death took place. In one of my patients, a woman, whose aneurysm pointed at the upper part of the sternum and which kept oozing for several days, the interior of the sac became septic. She ultimately died from a large rupture of the sac.

Treatment.

As regards the treatment of thoracic aneurysm, rest in bed and quietude are essential, accompanied by a restricted diet. Cases of thoracic aneurysm unaccompanied by aortic incompetence are more amenable to treatment than those arising just above the aortic orifice and accompanied by aortic regurgitation, for in these there cannot be that calmness in the interior of the sac which is necessary for coagulation of the blood. The administration of iodide of potassium gives on the whole the best results. Pain and paroxysmal dyspnoea are frequently relieved by it. I have administered to some of my patients as much as 450 gr. of potassium iodide per diem, but there is nothing to be gained by giving such large doses. In some instances the results will not be so satisfactory, for when pushed beyond a certain limit potassium iodide lowers the blood pressure and quickens the action of the heart that the circulation in the aneurysm is too excited for the deposition of clot to occur. Since calcium salts are known to favour coagulation of the blood I have administered these in various forms, but without obtaining results as satisfactory as those from potassium iodide alone. Even with this potassium salt there are few real cures of thoracic aneurysm, although great relief is obtained. While in distal aneurysms spontaneous clotting of blood may occur that leads to cure, this, owing to the situation, is very seldom the case in thoracic aneurysms. I have had no experience of carrying silver wire into the interior of an aneurysm nor of needling. Several cases of aneurysm I have treated by the subcutaneous injection of gelatine into the tissues in the neighbourhood of the sac. Some of the patients complained of great pain in the part afterwards, while in others there was always a slight rise of temperature and considerable discomfort. In a few of the patients thus treated the pulsations of the aneurysm became less marked and the tumour became harder and shrunk. Several of

the patients left the infirmary much better, but the cure was never complete, for in some of them the sac ruptured weeks or months afterwards. Apart from the pain which the subcutaneous injection of gelatine causes there is another risk that has to be borne in mind. Tetanus followed gelatine injections in one of the London hospitals, and as it is extremely difficult to sterilize gelatine, this risk, although no doubt remote, must be borne in mind. I have had a limited experience of galvanopuncture; I have seen one case of subclavian aneurysm thus treated and in which for several months the result was satisfactory until, after friction caused by the workman carrying his spade on the affected shoulder, the aneurysm redeveloped and burst into the surrounding tissues, causing a haematoma which began to ooze through the skin, but in which the blood subsequently coagulated, and the aneurysm was finally removed. One of the difficulties of treating thoracic aneurysm is in getting the subjects of the disease to be patient under treatment. Rest in bed and the restricted diet in time become irksome to the patients, who, once they feel rather better, long for freedom. If, when the pulsation of the tumour has lessened and the sac has become smaller and harder, patients can be got still to carry out the rest cure, the results are, as might be expected, more satisfactory.

REFERENCE.

1 BRITISH MEDICAL JOURNAL, 1898, vol. i. p. 1. The Diagnostic Significance of Laryngeal Abductor Paralysis, Sir Felix Semon.

A Lecture
ON
AORTIC DISEASE.

DELIVERED AT THE LONDON SCHOOL OF CLINICAL MEDICINE.

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FROM the point of view of etiology, this hospital furnishes an instructive object lesson in cardiac disorders. Its wards are never without cases of aortic disease; whereas mitral lesions, except such as are secondary, are seldom found. As you know, our patients are all seafaring men, who, whether as seamen or firemen, are, by the nature of their work, exposed to the wear and tear of an arduous life which involves irregularity of habits, both as regards food and sleep, hard physical work, and exposure to all varieties of weather and climate. Toilers on the deep are also liable to other dangers which militate strongly against the best interests of their health. They are not more intemperate than other classes of men—perhaps less so than many for, in the nature of their occupation, they are perforce compelled, during the continuance of each voyage, to abstain from alcohol in every form. As a consequence, when they finally get into port, they are apt to rush to the other extreme, and, in the first gladness of being once more ashore, too frequently squander most of the wages they have so hardly earned by over indulgence in alcoholic drinks which, as supplied to them, are potent and impure. The publican knows from experience that his sea going customers like their drinks strong, and, by various methods of adulteration and faking, he succeeds in catering to their tastes. The sailor, therefore, who indulges in alcohol at all—and most of them do—not only takes it from time to time in excessive quantity, but he has also to accept it of villainous quality. The sailor, again, is no exception to the common rule that, under the influence of alcohol, he readily succumbs to the seductive attractions of Eve. His necessary continence throughout a voyage encourages a sudden lapse from virtue when the circumstances become propitious, and the Legislature is so little concerned for the welfare of those who go down to the sea in ships and on whom the commerce of the country so largely depends that it takes no trouble to supervise and regulate this traffic. In every seaport prostitution of the most degraded type is rampant, and of those who give way to temptation few escape without the penalty of venereal disease. It cannot be wondered that, under such loose regulations, syphilis is prevalent among seamen, and unfortunately its early manifestations are usually regarded so nonchalantly that, in most instances, the disease has reached its secondary or tertiary manifestations before its victims come under treatment. Climatic exposure, strenuous toil, alcoholic excesses, and venereal infections combine to undermine the sailor's health and predispose him especially to arterial disease and the many serious consequences thereof. Therefore it is that in a hospital such as this we find unusual opportunities for studying not only all varieties of venereal and alcoholic disease, but also the many secondary disorders for which one, or other, or both are primarily responsible.

It is remarkable that acute rheumatism is not frequently met with among seafaring men. One would expect that the constant exposure to cold and wet which is their almost daily experience would cause rheumatic fever to be a frequent ailment among them; but it is not. Chronic rheumatism is common enough, but the acute manifestations of the disease are comparatively rare. Sailors themselves tell us that they never catch cold or rheumatism from salt water; and though it is difficult to see why this should be, it is at least offered as an explanation of their immunity, and rather fortifies the opinion that acute rheumatism is a different disease entirely from chronic rheumatism, and that its proper position in nosology is among the infective diseases. This immunity from rheumatic fever is further testified by the fact I have already referred to, of the absence from these wards of mitral disease. Rheumatic endocarditis may involve any or all the valves of the heart; but we know that the mitral valves are specially susceptible to its influence, and in severe cases seldom escape some degree of impairment.

Aortic disease, which is the subject with which we are specially concerned to-day, may be a sequela of acute rheumatism or it may be the result of degenerative changes in the arteries or heart. I am able to show you a case of each variety, because, fortuitously, one of the patients before you has suffered recently from rheumatic fever, to which event he refers, and probably rightly, the commencement of the cardiac disturbance which has brought him here. The other man is an example of that form of aortic disease with which we are daily made familiar in this hospital. Time does not enable me to enter minutely into their histories, but it will suffice for our purpose that I should tell you that these two patients resemble one another in their habits and occupation. Both have indulged themselves bountifully in alcohol, both have had syphilis, and both have been exposed to the rigours and vicissitudes of a seafaring life. The main differences between them are that the one man is younger and has suffered from an acute rheumatic attack which lasted over several weeks and involved many of his joints; the other is older by twelve years and, so far as he remembers, has never been seriously ill, though now he complains of stiffness and pains in some of his larger joints, which he attributes to rheumatism. When you come to examine their physical condition, you will find that both patients have a double aortic murmur, and present the usual signs and symptoms by which we are accustomed to recognize this condition. I would specially draw your attention, as you look at the men, to the tortuous and locomotive arteries, the pulsation in the suprasternal notch, the heaving cardiac impulse extending beyond the nipple line, and the absence of cyanosis or dyspnoea. These facts tell us a great deal, because we may infer from them that the vessels are thickened, that the aorta is dilated, that the heart is hypertrophied, and that compensation is well maintained. On palpation the impulse is extensive and vigorous, and you will observe in this patient that two of the intercostal spaces between the nipple line and the sternum are depressed with each cardiac systole. This is usually ascribed to pericardial adhesions, and it is not impossible that such may be the cause in this instance, but it should not be forgotten that where we have as great hypertrophy as exists here, the effect of atmospheric pressure in filling up the space created by systolic contraction of the enlarged ventricle is enough to account for thoracic recession. Percussion shows an increased area of dullness in both cases, which extends, as the apex thrust tells us, mostly down and to the left. When we come to examine the pulse it is found to possess, in both men, the water-hammer characteristics which belong to aortic regurgi-

tation; it is also noticeable that the wave of blood through the radial artery is delayed, so that if a finger of the free hand is placed over the carotid artery, whose pulsations synchronize with those of the heart, it will be found that an appreciable interval occurs between the pulse-wave in the carotid and that in the radial. The length of this interval is in direct ratio to the amount of incompetence, and in these patients it is demonstrable that the delay is greater in the one than the other.

The explanation of the collapsing character of the pulse is the loss of the support of the aortic valves; the greater, therefore, the destruction of the valves, the more sudden is the pulse-wave and the more complete the collapse of the vessel walls after it. To appreciate fully the distinctive features of Corrigan's pulse, the hand should be raised above the level of the heart to allow the ordinary laws of gravity to come into play. The delay in the pulse is due to loss of tone in the arterial walls and to the emptiness of the vessels between the cardiac pulsations. The visible pulsation of all the large vessels, but especially of the carotids, is always a more or less marked feature. In the case of one of our patients it was such a prominent symptom when he first presented himself in the out-patient room that he was suspected of having an aneurysm. Another interesting symptom often observed in cases of aortic regurgitation and well marked in one of these men is capillary pulsation. It is caused by the extension of the arterial relaxation into the capillaries, and is occasionally transmitted through them to the veins. It is best brought out by drawing a line across the skin so as to produce a patch of hyperaemia, the margin of which reddens and pales with each beat of the heart; or it may often be well seen through a microscopic slide, applied against the mucous lining of the lower lip. This capillary pulsation is not pathognomonic of aortic incompetence, but is also met with in other conditions where there is great relaxation of the peripheral arteries. Having learned this much from inspection, palpation, and percussion, we are now in a position to confirm the suspicions which these processes of examination have raised by the crucial test of auscultation. The two chests are not quite alike, but in both the prominent auscultatory fact is a double murmur, which is heard with greatest intensity over the aortic area, and is conveyed downwards along the sternum and upwards into the great vessels of the neck. But when this double murmur is investigated carefully it will be found to present certain important features in the one patient which are absent in the other. In the patient who has suffered from rheumatic fever, and whose lesion therefore falls into the endocarditic group of aortic disease, you will observe that no distinct second sound can be heard over the aortic cartilage; that the first sound at the apex is peculiarly loud and determinate; that it is succeeded by a short, rough, systolic murmur, which is not conveyed any distance into the axilla; and that the double bruit can be distinctly heard in the vessels of the neck. In his neighbour, who is older and presents evidences throughout his tissues of senile changes, the lesion belongs to the arterio-sclerotic type of aortic disease, and in him you will hear a second sound over the aortic cartilage which is loud and ringing; the bruits cannot be traced any distance along the cervical vessels, and the regularity of the cardiac rhythm is occasionally interrupted by a short beat. In both cases the double murmur is doubtless due to changes in the valves, which, in the one instance, are for the most part inflammatory, and in the other degenerative.

If we consider first the inflammatory condition the following points of interest may be noted. In all probability the stenosis is due to actual crumpling of the valve segments and the amount of regurgitation must be considerable. We come to these conclusions because of the absence of the second aortic sound and because of the conveyance of the murmurs into the vessels of the neck. Confirmation of the last fact is found in the marked delay of the radial pulse, in the pronounced collapse of the pulse after each cardiac systole, in the extensive pulsation of the arteries, and in the large extent of the ventricular hypertrophy. The sounds heard at the apex are interesting because when the patient first came under observation he was reported to have a presystolic mitral murmur in addition to the double aortic condition. Now, this presystolic mitral murmur is, as you all know, not uncommon in aortic disease, but in many instances where it has been markedly present and where opportunity has been afforded for *post-mortem* examination, the mitral valve has been found normal. Attention was first called to it by Austin Flint, and to the present day the murmur is constantly called by his name. The most likely explanation of its production ascribes it to the impact on the anterior mitral segment of the regurgitant stream from the aortic orifice preventing its complete retraction and so interfering with the free flow of blood from the left auricle. But a difficulty arises in this case from the fact of the rheumatic antecedents, because during his attack of acute rheumatism the mitral may have been involved as well as the aortic valve, and, therefore, we may have to deal here with a presystolic murmur which is the direct result of organic changes with consequent true stenosis at the mitral orifice. This view is supported by the short systolic murmur heard at the apex which possibly results from slight regurgitation through the mitral orifice such as must inevitably accompany an actual stenosis. What leads to some hesitancy in accepting such a theory is the loud and rasping character of the bruit, and the absence of any convection into the axillary region. It is not impossible that the murmur heard in this case at the apex is the aortic murmur which is so plainly in evidence at the second right costal cartilage. If the mitral valve is structurally altered, we are at least able to assure ourselves that, so far, compensation is well provided for because there is an entire absence of any signs of backward pressure.

In the case of the older patient, the accentuation of the second aortic sound is to be regarded as evidence of dilatation of the aorta and increased arterial tension, and proves that, despite some regurgitation, the valves are still sufficiently preserved to produce a check to the column of blood in the aorta. In order to bring home more emphatically the value of the second sound in aortic disease, I have had two other patients temporarily removed to this ward that you may compare the sounds at the aortic cartilage of the one with the other.

This patient, since a fever of some kind ten years ago, has never been quite well. He has suffered from breathlessness and palpitation on exertion, with occasional attacks of pain in the chest and slight oedema of the ankles. The physical signs to which I wish specially to direct your attention are the situation of his apex-beat in the sixth space well within the nipple line; the heaving nature of the cardiac impulse; the slowness of the pulse, which is not more than 60; the contradictory smallness of the pulse when viewed in the light of the ventricular hypertrophy; and the presence at the aortic cartilage of a thrill and rough systolic murmur which is conveyed into the vesssels of the neck, but is not followed by any definite second sound; indeed, the second sound is replaced by a soft, short, and faint diastolic bruit.

Compare this condition with that presented by our other patient, who has come to hospital on account of a bronchial attack. He is 64 years of age, has marked atheromatous changes in his vessels, and some emphysema. On inspection you will find no evidence of extreme hypertrophy. This may be due partly to the overlapping of the cardiac area by emphysematous lungs, but the apex-beat which can be felt in the fifth space, is diffuse and is not of the thrusting, forcible type we associate with a concentric ventricular hypertrophy. The pulse is of distinctive high tension and numbers 76. On auscultation over the aortic area a systolic murmur very similar to that heard in the other patient is heard and is conveyed into the vessels of the neck and across the manubrium, but here it is followed by a loud ringing second sound; the second pulmonic sound is also excessive, but it is not nearly so loud as its aortic neighbour. In all probability the murmur in this case is due to dilatation accompanied by loss of elasticity in the aorta itself and is independent of any change in the valve segments. A mistake we are all liable to make is to associate every aortic systolic murmur with a picture of stenosis of the orifice, but stenosis in the sense of organic change in the valve curtains is a comparatively rare affection, whereas the relative stenosis that depends upon dilatation of the aortic arch is very common in patients like this man whose vessels are becoming atheromatous, and in whom the aortic arch has undergone some degree of degenerative change. It should be remembered that a murmur in this situation may also be produced by

anaemia or by roughness of the valves without any actual narrowing of the orifice. From examination of these cases we are able, therefore, to make ourselves familiar with most of the characteristic features of aortic disease, and by comparison of one with the other we can bring home to ourselves the value of the second aortic sound as a guide both to diagnosis and prognosis. The existence of a systolic, or of a double systolic and diastolic, murmur is an easy matter to establish, but it is of considerable importance to read into these murmurs their full significance and importance.

Of the two cases in which there is regurgitation, the prognosis is most favourable in that which comes to us with a history of rheumatic fever. Should the patient be fortunate enough to escape future attacks of acute rheumatism, he may continue well over many years, and be capable of a considerable amount of hard and active work. So long as his compensation is fully maintained, he may keep fairly well even until he reaches advanced age. Then the degenerative processes of senility will tend to bring about sclerotic changes in the damaged valves and fatty alterations in the hypertrophied ventricle. In the case of the other patient, the position of affairs is quite different; degeneration has already set in, and is the cause of his lesion. By care he may get along with a fair degree of comfort, for a longer or shorter time, but his disorder is progressive, and, though further developments may be slow, they are sure, and must inevitably be in the downhill direction. The two cases, on the other hand, which present a murmur indicative of obstruction only at the aortic orifice, must be regarded prognostically in a reverse sequence. The life of the man with true stenosis is in greater jeopardy than that of the other, whose stenosis is relative. This would not be the case if we had to deal only with the existence of the murmur; in that event the prognosis, just as in the regurgitant cases, would be most favourable for him whose lesion was presumably inflammatory. But our opinion becomes modified at once when we refer to his history and find that recently he has, on several occasions, been confined to bed on account of pain in the chest, shortness of breath, and oedema of the ankles. In these three symptoms we have indubitable evidence of threatened failure of compensation, and when this begins we have no guarantee of permanent safety in the future.

Whatever the variety of aortic disease, there is no reason for serious anxiety so long as the lesions remain mute. The danger in all of them is of a twofold kind: failure of compensation, with all the consequent risks of backward pressure, and the spread of endarteritis so as to implicate the orifices of the coronary arteries. The compensatory hypertrophy which Nature provides to the walls of the heart in order that they may overtake valvular defects and difficulties may break down, either under the influence of increasing pressure in front, or from degenerative changes in the walls themselves, in consequence of which the vigour of the driving power behind is diminished. In addition, there is the added risk in aortic, as distinguished from mitral, cases, of anginal complications. No case of aortic disease occurring after middle life is free from the possibility of sudden death, which is, in most instances, due to angina pectoris. It is much more likely to happen in regurgitation than in stenosis, and in degenerative than in inflammatory conditions, but it ought never to be lost sight of as a factor to be considered when summing up the prognosis.

It is said that in aortic stenosis is the least dangerous of all valvular affections, but so many cases are called stenoses on probably no other foundation than the existence of a systolic murmur at the aortic cartilage that the generalization is probably too sweeping. At any rate, it is certain that if the risk of sudden death is less in stenosis than in regurgitation, the hopes of improvement after compensatory failure are also smaller, because, since the obstruction at the aortic orifice remains undiminished, and there is no augmentative loop to be got further back than the left ventricle, the chance of recovering when once it has broken down is comparatively slight. The first evidence of failure of compensation in aortic disease is often said to be the establishment of a systolic murmur indicative of regurgitation through the mitral orifice, but I think we ought not to lose sight of certain earlier warnings which are sometimes given. The occurrence, as in one of the patients before us, of shortness of breath, pains in the chest, and palpitations should always lead us to make a physical examination of the chest. If the patient be one whom we know, by previous examination, to be suffering from aortic disease, the subjective symptoms of which he complains will probably have light thrown upon their significance before the mitral valve has become leaky, by some alteration in the quality of the murmur, by some irregularity or intermission of the cardiac rhythm, or by some change in the second sound.

A loud and well-sustained murmur may always be regarded as expressive of a powerfully acting heart, and as indicative of comparative safety, but when it changes its character and becomes weak and short, it proclaims a note of danger. Similarly, regularity of rhythm, when supplanted by a type of cardiac action in which the systolic contractions are of unequal duration, indicates a change from normal to one of abnormal functioning, for which, in such cases, there may be a serious explanation. Finally, where a second aortic sound has been known to exist, its disappearance, or a diminution in its intensity, is to be regarded generally as a harbinger of evil. If a combination of these symptoms and signs be appreciated and their significance understood, rest and proper care immediately adopted and sedulously followed may often avert the further stages of broken compensation. This, as you will remember, passes through the successive phases of left ventricle dilatation, regurgitation through the mitral orifice, pulmonary congestion, dilatation of the right ventricle, and regurgitation through the tricuspid orifice, to dyspnoea, cyanosis, anasarca, and death. It has been frequently stated that regurgitation through the mitral orifice should be regarded, in aortic disease, as an advantage rather than otherwise, because of the relief afforded to the over-distended left ventricle, but it must be obvious that if a ventricle, previously able to overtake the disabilities of aortic disease unaided, finds itself compelled to relieve the pressure of its work by such relaxation as permits of leakage backwards through the mitral orifice into the left auricle, the true meaning is diminution in expulsive power, and in that case the regurgitation marks a downward step.

As regards angina, which is the other great danger of these cases, I would guard against two errors: first, against confusing the true with the false variety; and, second, against estimating what is apparently the pseudo variety too lightly. Whenever anginal attacks occur with physical evidence of aortic disease, there is prima facie evidence that the angina is true, and therefore to be regarded with grave concern. But where the circumstances are such as to make us feel confident that there is no more serious cause for the attack than a functional storm, many of us are apt to conclude that, despite the alarm they create in the patients minds and among their friends, there is really no cause for serious misgiving. This is a dangerous conviction, as I had occasion recently to see exemplified. A lady, at her menopause, 48 years of age, healthy and well to look at, active and vigorous, with no physical signs of disease anywhere except a moderately accentuated second aortic sound, had suffered at varying intervals over three years from anginal attacks. They were not severe in character, but quite distinctive. She was warned to be careful in the avoidance of fatigue and excitement, but was assured that she had no heart disease, and that when she was a little older and had reached the end of her menstrual life the attacks would probably disappear. One day, after walking quickly for a short distance out of doors immediately after luncheon, she developed the usual feeling of tightness in her chest which always ushered in one of her attacks. She got quickly home and went to bed, where under the influence of poultices and nitro-glycerine she seemed to be improving, as she had often done before. Suddenly and without warning she experienced an acute accession of precordial pain, became rapidly and deeply cyanosed, and almost immediately expired. *Post mortem* examination revealed a perfectly healthy state of all her organs, except the aorta, where there were a few scattered patches of recent atheroma. These, however, were too insignificant to account for such sudden death, and further investigation showed that both coronary arteries were contracted at the orifices, and that one was throughout the whole length abnormally small, probably from a congenital defect. It is well, therefore, to bear in mind that all attacks of an anginal type are best spoken of reservedly,

lest, as in this case, the outcome proves the cause to have been, though not organic disease of the valves or vessels, something more definite and dangerous than a mere nerve-storm.

In the treatment of aortic disease the primary object to achieve is the establishment and maintenance of sufficient compensation. In the case of our first patient, who suffered recently from rheumatic fever, the chances are that his compensation never became firmly established—that is to say, that the length of time over which he rested and the amount of care which was taken of him otherwise after his acute illness was not enough to build up his myocardium against the strain of his subsequent life. In addition to this, he has been careless of himself and has indulged in alcohol freely and unwisely. Consequently he comes to us with all the evidences of broken compensation; fortunately for him, it has not gone beyond moderate pulmonary congestion. Already since his admission the improvement in his condition is marked; the mitral murmurs which he then had have almost disappeared; the cardiac rhythm is regular; the locomotive pulsation in the vessels has diminished, and there is a distinct though feeble second aortic sound to be heard in the carotid arteries. There is now no cough and no physical signs in the lungs; the liver dullness has become normal; he is taking food well, and is sleeping comfortably in a normal position the night through. This amelioration has taken place under the influence of complete rest in bed, a simple and moderate diet, regulation of the bowels by means of salines and an occasional small dose of calomel. At first he took a mixture of sodium salicylate, digitalis, strychnine, and ammonium carbonate; this was followed later on by another, which he is still taking, containing dilute phosphoric acid, iron perchloride, nux vomica, and strophanthus.

The only point worthy of comment in the medicinal treatment of a case of this type is the employment of digitalis. The old tradition that digitalis is a dangerous drug in aortic disease clings to many of us so pertinaciously that we hesitate to avail ourselves of its valuable assistance. This is not, I venture to think, good practice. The true action of digitalis is that of a tonic, the best of all we possess, to the myocardium. When compensation is well maintained, its exhibition is never indicated, but whenever this fails, it should be called to the rescue, irrespective of the nature or situation of the valvular lesion. Not only so, but at the outset of its administration the drug may be given advantageously in bolder doses than are customarily employed. Fifteen minims of the tincture every four hours may be ordered with perfect safety, if we are careful to watch its effects and curtail the quantity when we get evidence of saturation. That evidence is forthcoming in an abnormally slow cardiac rhythm, diminished urinary secretion, and disturbance of the digestive organs. In many instances the good effects of the drug are evidenced only after these physiological effects are produced. No harm ever results if, at this stage, the drug is either temporarily withheld or its quantity diminished to 7 or 10 minims every eight hours. Strophanthus and convallaria are recommended as valuable alternatives which are better suited to aortic conditions; but though they are useful remedies, their good effect upon the heart falls far short of digitalis, and it is by no means uncommon to find a speedy improvement under the influence of digitalis, when the others have failed to bring about the least response.

Another point about the administration of digitalis which is not sufficiently recognized is the safety that may be secured by its combination with nitro-glycerine. In all cases where vascular tension is high the 1 per cent. solution of nitro-glycerine given along with digitalis prevents increase of peripheral resistance, and so robs the digitalis of that influence upon the arterioles on account of which its administration is supposed to be contraindicated.

In the case of our second patient, who has likewise improved decidedly since his admission to hospital, the treatment has been somewhat different. His chief complaint, when first brought here, was of pain in the chest on exertion; shortness of breath, which prevented his lying down in bed at night; and recurring anginal attacks of a severe type. This is a combination of symptoms with which we are very familiar here, and which is enough of itself to suggest aortic disease. You have satisfied yourselves, I hope, that his case is one belonging to the degenerative type of this ailment, but, in addition to the knowledge you have gained of his present condition from the physical examination you have made, I must remind you that, when first seen, his pulse was one of very high tension. Here we found a leading indication for treatment, and, in accordance with our usual plan in cases of this description, he was at once put on a mixture of potassium iodide and nitro-glycerine. Both these drugs, and especially the latter, are valuable vaso-dilators, and, under their influence, this man rapidly experienced relief to his breathing and diminution in his precordial discomfort. He was kept closely confined to bed, his diet was simple and mostly sloppy, and every night for a week he was given one grain of calomel, followed in the morning by a moderate dose of ordinary white mixture. After ten days he was so much better that we were able to put him on iodide of iron, strychnine, and strophanthus, and to allow him a greater amount of freedom in regard both to diet and exertion. He has had no recurrence of his anginal attacks since a few days after his admission; he is now able to sleep comfortably in the ordinary recumbent position, and a moderate amount of walking exercise can be indulged in daily without producing either cardiac discomfort or undue physical fatigue. As regards the dosage of the iodide and nitro-glycerine in cases of this description, I am persuaded we often err in making the quantities too small—15 gr. of sodium iodide, protected by 2 minims of Fowler's solution, and combined with 2 minims of the 1 per cent. solution of nitro-glycerine may with perfect safety be given every four hours. Whenever the pulse becomes soft and begins to quicken, longer intervals should be allowed between the doses, and eventually the nitro-glycerine may be wholly withdrawn and the iodide continued in smaller amount, say 5 gr., along with strychnine and one or other of the milder preparations of iron. In regard to calomel, its value is not confined to its aperient effect; it is a useful intestinal antiseptic as well, and also assists in diminishing the tension in the arteries. Obviously the nature of these patients' occupation is inimical to the maintenance of their circulatory balance when they return to work. We always urge them to find a new field for their labours, in which exposure, muscular strain, and dietetic irregularity will enter less into their daily experience, but it is difficult for most men after middle life to embark upon a new calling, and many of our cases ultimately succumb to the circumstances of an environment which is unusually trying and hard even for those who are in the possession of full vigour and healthy organs.

A Clinical Lecture

UPON

THE SURGICAL ASPECTS OF HAEMOPHILIA,

WITH ESPECIAL REFERENCE TO

TWO CASES OF VOLKMANN'S CONTRACTURE RESULTING FROM THIS DISEASE.

BY

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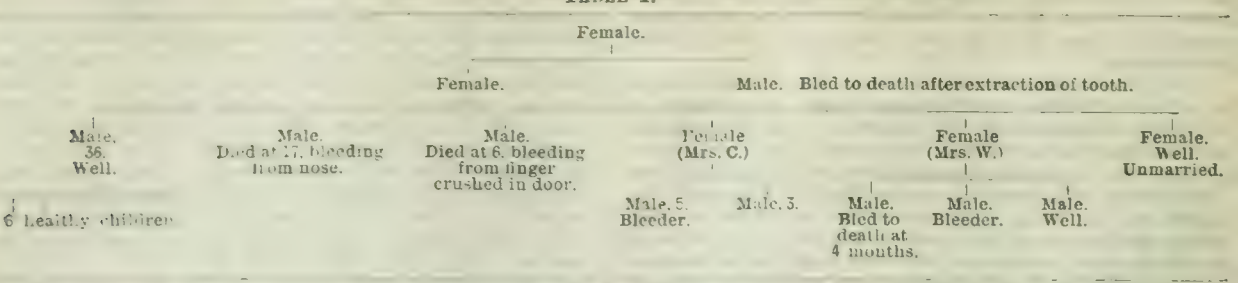
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I WISH to show you three patients to-day who illustrate very well some of the common surgical symptoms of haemophilia, and belong to two families which exhibit in a remarkable way the peculiar hereditary characteristics of this disease.

W. W. is a well-grown, intelligent lad, who has had almost every variety of bleeding. But first let me speak of his family, and for those to whom a tabular representation appeals more than a description I give a diagram of their genealogical tree (Table I).

This boy's great-grandmother had one daughter and one son. The son was a "bruiser and bleeder," and died of bleeding from the extraction of a tooth; the daughter, who was well and healthy, had six children. One son, who is now 36, has six healthy children; one son died at 17 from epistaxis, one son died at 6 from the bleeding of a finger crushed in a door; one daughter (Mrs. C.) is married, and has two children, a daughter of 5 who is normal, and a son of 5 who is a bleeder. The second

TABLE I.



daughter (Mrs. W.) has had three sons, one of whom you see here and one who is quite normal. You will notice that we have considered four generations, and that in each case the females are free from the disease, but that they bear children of whom the great majority of the males suffer from haemophilia. The only male who is without the disease, and married, has begotten healthy children. In other words, the females transmit the disease without suffering from it, and the males are liable to suffer from it, but not so liable to transmit it. It is stated, however, that if a man with haemophilia begets children the boys suffer from a severe form of the disease.

I have only had the opportunity of seeing and examining one of the haemophilic relations of this boy, Harry C., who is now 5 years old, and is the boy's cousin. When three days old he had severe bleeding from the umbilicus, which continued more or less for three weeks. In this respect he is remarkable, because it has been noted by Legge that bleeding from the navel is not found in haemophilia. When he was 2 years old he fell and cut his lip, and the bleeding from this continued for three days: when he was 5 this accident was repeated, with the result that much more severe haemorrhage was caused. Local styptics and the actual cautery applied to the part only made matters worse, as is generally the case in haemophilia, and he was taken to the infirmary and kept in bed for ten days, one deep stitch being used to bring together the wound. A fortnight ago his nose bled for three days without stopping, and at the same time, without any known cause he had pain and swelling in the right knee and ankle-joints.



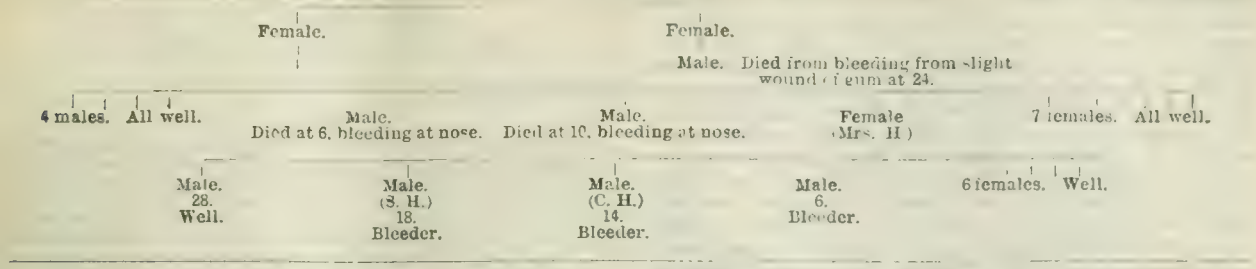
[illegible] W. Right arm. Note the wasted muscles, the slight flexion of the wrist and index finger and the fixed pronation. He cannot supinate it any further than this. The bones of the forearm are 2 in. shorter than those of the opposite side.

And now to come back from his relatives to William W. himself. In childhood his bleedings and bruisings were so many and varied that I need not detain you with an account of them. When he was 11 he fell and cut his lip and this continued to bleed for about a week; at or about the same time he hit his right elbow and a very large swollen bruise appeared in this region and spread down the arm. A few days later he noticed that all his fingers became "clawed," that is to say, bent up into the palm, and at the same time they were all blistered, and you will see presently that his hand retains to this day evidence of the truth of these statements. He consulted a doctor, who bound his arm up in splints for four weeks. At the end of this period he found his forearm was weak and shrivelled, and that he was unable to supinate it at all. He has since regained the power of extending the fingers almost fully, though the index finger recall remains somewhat flexed, but he has never been able to supinate the forearm, and this has been a serious matter to him, as he was thereby forced to abandon a position as tram conductor because he could not put out his hand, palm upwards, for the fares, and it caused his rejection as a candidate for service on a railway, because when he was asked to cover his right eye, he did so with his knuckles, and hence revealed the condition which, together with his haemophilia, had otherwise been overlooked. When I first heard this history I was inclined to think that the pressure of the splint had been accountable for the "paralysis" of his hand, and, indeed, the patient himself was not slow to suggest this explanation. But I have found another instance of this rare combination of two rare conditions, and I will defer any further remarks about the arm until I have shown you the other patient. When this lad was 13 years old he was hit by a stone on the left knee. It became much swollen, and from that time to the present it has never completely recovered itself, but is often, without apparent cause, swollen and painful, and, indeed, the opposite knee has not been free from the same condition. When he was 15, and again when he was 16, he had bad attacks of haematuria, lasting for three weeks and one week at a time. The urine was bright red and acid, the blood being intimately mixed with the urine the whole time. This bleeding stopped spontaneously, or perhaps, I ought to say, as the result of taking drugs, without producing much constitutional disturbance. It is a remarkable fact that visceral haemorrhages in haemophilia are not very frequent and are seldom fatal: it is common enough to hear of haemophilics bleeding to death from the nose, lips, or teeth, but very rare to hear of one who dies from haemoptysis, haematuria, or melaena. The day before yesterday he slipped off his bicycle and produced certain recent evidences of his bleeding capacity, which I am able to show you. He did not actually fall prostrate, but he simply alighted on his feet in such a manner as to give them a slight twist or strain. Over the right thigh in front is a large hard swelling, tender to the touch and of indefinite outline. There is no discoloration of the skin, and I think we may conclude that it represents a haematoma deep in or under the quadriceps extensor muscle. This must have resulted from a violent muscular contraction made in the effort of saving himself from falling, which ruptured some of the fibres of the muscle together with small blood vessels. Both knee-joints can be felt to grate when moved, and in the left is a considerable quantity of fluid, but neither knee is at present at all painful; this condition is, of course, of old standing. In both ankles there is considerable stiffness and pain and by palpating the joints on either side of the tendo Achillis and in front fluid fluctuation is evident. This appears to be the first complaint that he has ever made about the ankle-joints, and you will notice that they are much more painful than the knees; it is usually the case that the first effusion into a haemophilic's joint causes much more pain than the subsequent ones. This may be due to the fact that the first effusion is pure blood, and the later are chronic serous effusions set up by chronic synovitis; or it may be the result of a blunting of sensibility of the joint structures that results from repeated effusions.

We now come to the consideration of the other two patients, who are brothers, and who belong to a very large family of bleeders.

Again we can go back four generations—to these boys'

Table II.



great-grandmother. (Table II.) This woman had two daughters only. One of them had one son, who was a bleeder, and he died only a few weeks ago in the Royal Infirmary. He was a shoemaker, and, as is the habit of these workers, he kept the nails which he was about to drive into the shoe, in his mouth. The point of one of them penetrated his gum, and, after twenty days' bleeding, he died of anaemia at the age of 24. He had often had haemorrhages before, but they had not been so severe; and it is very noteworthy that the severity of the bleeding, even in the same patient, varies very much at different ages and at different times in life without any apparent reason. As a general rule, the severity of the bleeding diminishes with advancing years, but then, as in this case, some trivial wound causes a fatal issue. But to return to the family history. The boys' grandmother is alive and well to-day, and is the mother of fourteen children—six sons and eight daughters. Four sons are well, and seven daughters are well and married. One son died at the age of 6 from epistaxis, and one died at 10 from the same cause. The one married daughter, Mrs. H., is the mother of these boys. She has ten children—six healthy daughters, none of whom are married, and four sons, only one of whom is free from haemophilia. The one brother, aged 6 years, who is a bleeder, I have not shown you, because to-day his disease is quiescent; but his mother gives a long account of bleeding from cuts, large and frequent bruises, and swollen knee-joints.



Fig. 2.—Left arm of C. H. Note the muscular wasting and the fixed pronation. He cannot supinate it any further than this. The radius is ½ in. shorter than on the other side.

The elder of these two lads, Samuel H., is 18 years old, and he has the usual history of inordinate loss of blood from trivial cuts and wounds, together with frequent joint troubles in his knees. I show him because he illustrates very well the condition that results in the joints from repeated haemorrhages. Both knees are normal on inspection and measurement, but round the edges of the articular cartilages some nodular thickening can be felt, and, on moving the joints, cracking can be heard and grating felt. There is nothing in the physical signs in the boy different from an ordinary case of osteo-arthritis, and the condition is, in fact, nothing more or less. If we could examine the inside of his knee-joints we should find the cartilage fibrillated and worn away in channelled grooves, where the bone would be exposed as a dense polished surface. The edges of the cartilage would be thrown out into nodular excrescences, and the whole articular surfaces retained a deep rust colour, which would be the only evidence of the origin of this osteo-arthritis.

And it may not be out of place to warn you that if ever you meet with a patient in the neighbourhood of the Victoria Embankment who has effusion into a joint or marked grating, not to commit yourself to a diagnosis of chronic arthritis or to urge operative treatment without first giving a thought to the possibility of such a condition being due to haemophilia. The apparent spontaneity of the condition, together with the youth of the patient, should be enough to put you on your guard, and a very few questions about bleeding will generally reveal the nature of the case, as these unfortunate people are usually fully aware of the nature of their condition.

The third patient I am showing to-day is Cleophas H., he is 14 years old, and among his many juvenile bleedings and bruisings one only deserves mention. At the age of 9 he bit his lip, and was taken to the Children's Hospital, where, in his own words, he was "strapped down in bed" for three weeks. But it is to his joints that I wish to draw your attention. When he was 7 he became involved in a crowd at the time of the general election. His father, in order to extricate him, pulled him by the left arm. This caused great bruising, swelling, and stiffness of the elbow and wrist, and when the bruise disappeared he was left with a somewhat wasted limb, which he has never been able to supinate. To-day if you examine his joints you will find that there is an effusion of fluid into both elbow-joints, which is most conspicuous on either side of the triceps tendon where distinct fluctuation can be obtained. The left knee gives a distinct grating sensation on movement, and the right knee presents a large tense fluid swelling which apparently came on spontaneously a few days ago. It measures 14½ in. in circumference, as compared with 12½ in. on the left side. The fluctuating enlargement upon which the patella can be felt to ride extends 4 in. above the joint and 2 in. below it. Probably this contains almost pure blood, but, as he has had such a swelling several times before, there is little or no tenderness accompanying the present condition. You can readily understand how such a large and tense effusion of blood into the joint, if often repeated, will stretch and weaken the ligaments; and this event often occurs, and contributes in no small measure to the ultimate weakness of the joint, in addition to the disability caused by osteo-arthritis.

Now let me devote a few moments to the consideration of the condition of the left arm, together with that of the right arm of W. W., the first case I showed you. In both cases the hand is held in a position of almost complete pronation. And yet slight movements, which are free and painless, can be obtained in the radio-ulnar joints, showing that there is no ankylosis. In both cases, also, there is decided muscular wasting. In the first case there is slight flexion of the index finger, but this can be extended when the wrist is flexed. In neither case is there any anaesthesia, nor is the electrical reaction of muscles or nerves altered at all. In the case of the bigger boy the affected right arm is not only ½ in. smaller in circumference than the left, owing to muscular wasting, but the length of the bones is less, the radius measuring only 9 in. as compared with 9¾ in. of the opposite side. In the other boy there is also both wasting and actual shortening of the bones to the extent of ½ in.

These are all symptoms of a somewhat rare condition termed Volkmann's contracture, after the surgeon who first described it in 1875, and it is now generally described as ischaemic paralysis.

A very complete account of this condition, together with

notes of 15 cases, has been given by Dudgeon.[1] In the great majority of cases (13 out of the 15 in the series quoted by Dudgeon) the affection comes on after a fracture of the arm or forearm has been treated by splints and bandages. But in a case of Mr. Wallis it arose after the use of an Esmarch's bandage applied for one hour to the arm; and in a case of Professor Schloffer it resulted from thrombosis of the axillary artery. This contracture is caused by pressure on the muscles of the forearm, depriving them of blood. Some of the fibres of the delicate and highly organized striated muscle then die or undergo rigor mortis, and are replaced by fibrous tissue or, in rare instances, by bone (myositis ossificans). This causes contracture, wasting, and pseudo-paralysis. The feature in which both my cases differ from most of the recorded cases of ischaemic paralysis is that pronation is much more marked than flexion of the fingers and wrist. But this is accounted for by the fact that there has been a constant effort to move the fingers, which has probably overcome the flexor contraction, of which the first case gives a distinct history. The pronation, on the other hand, is the position of rest assumed by the hand when held in a sling, and also is that used in all ordinary acts, such as writing or using a knife or fork. So that there was probably no voluntary or systematic effort made to stretch the contracted pronators, and now you can feel in both these boys a tense, fibrous cord in the position of the pronator radii teres when supination is attempted.

In 6 out of Dudgeon's series of 15 partial or complete pronation of the arm was left as a permanent condition in Volkmann's contracture.

The actual shortening of the bones is difficult to account for. It is present in almost all cases of Volkmann's contracture occurring in children, and therefore its presence in these two cases confirms the idea of the condition being one of this contracture. The most likely explanation seems to be that when the muscles become atrophied and partially functionless, their blood supply is much lessened; and as all the blood vessels which supply the growing ends of the bones are branches of muscular vessels, it is easy to understand how a lessened blood supply will lead to diminished growth.

It seems at first sight a contradiction in terms to speak of ischaemic paralysis as occurring in haemophilia. But this contradiction is only one of words and not of ideas. In both the cases I have described there was a great haemorrhage into the soft tissues of the forearm, and this, confined under the tense skin or fascia, compressed the muscles and brought their circulation to a standstill. There was too much blood outside the muscles and too little in them.

In the case of the younger boy no splints were used at all, and in that of the elder his description leaves no doubt that the typical contracture had developed before the splints were applied. As far as I am aware there is no other instance recorded of the occurrence of this peculiar contracture in haemophilia, and it is very remarkable that I should have come across these two cases at the same time who happen to live in neighbouring streets.

In conclusion I must say a few words about the treatment of haemophilia. From a surgical point of view it may be summarized as rest and pressure. When the joints become swollen they should be firmly bandaged, and kept at rest until the effusion subsides. It is by neglect of this treatment that the ligaments become stretched and weakened and the chances of osteo-arthritis increased. For the actual bleeding do nothing but keep the patient in bed. One of the final cases I have referred to was bleeding from a scratched gum for fourteen days, during which he walked about from doctor to doctor, trying each new remedy and bleeding deadly in spite of all, until at last he found refuge in the infirmary, only to die from the resulting anaemia. No remedies, local or general, have any effect on the haemorrhage, and therefore leave that alone and turn all your attention to treating the patient's general condition. If this rule was always followed from the first onset of the bleeding probably many lives would be saved.

[illegible]

[1] The Hungarian Chamber of Deputies has passed a Bill providing that insurance against sickness and accidents shall be compulsory.

COR TRILOCULARE BIATRIATUM.

BY J. DIXON MANN, M.D., F.R.C.P.,
PHYSICIAN TO THE SALFORD ROYAL HOSPITAL.

THE following case borders on the unique:

History.

On December 22nd, 1905, I saw a man, aged 35, in consultation with Dr. Webb of Gorton. The patient was propped up in bed, and presented the usual appearance of one suffering from chronic heart disease. His breathing was difficult, but he was not cyanosed nor were the fingers clubbed; he had a cough with bronchial expectoration. There was some oedema about the ankles. The area of cardiac dullnes was considerably increased; the cardiac impulse was more extensive than usual, the apex beat being difficult to locate. The centre of the impulse was about the fifth interspace, a little within the nipple line. There was no thrill. On auscultation, the first sound was found to be replaced by a loud, rushing, systolic murmur, which extended over the whole cardiac area. No other murmur could be distinguished. The second sound was mulled. Some amount of oedema was present at the base of the lungs. The liver dullness was slightly increased. There was no ascites.

Subsequently I learned that the patient improved for a time; he then relapsed, and expressed a strong wish to go into hospital. He was so determined that (whilst recognizing his critical condition) Dr. Webb reluctantly consented, and he was admitted under my care on May 28th, 1906, into the Salford Royal Hospital. His condition was most distressing. He was deeply and universally cyanosed and was gasping for breath. The heart beats were tumultuous and irregular; the veins were overfilled, and those in the neck pulsated. There was general oedema, with effusion into the pleural and peritoneal cavities; the lungs were oedematous. The urine was almost suppressed. The surface of the body was cold and clammy. The patient was fully conscious, and earnestly pleaded for something to relieve the breathing; but in spite of all treatment it became worse, and he died on the second day after admission.

Necropsy.

An examination of the body was made by Dr. Mair, pathologist to the hospital, on May 31st, who reported as follows:

General oedema of the body, especially marked in the lower extremities, penis, and scrotum. Cyanosis of face, neck, and arms. There is considerable serous exudate in the pleurae on both sides. The lungs show passive congestion and oedema.

The Heart: The ventricular portion is much enlarged, and there is no difference in thickness of wall indicative of right and left ventricle. On incising the ventricular wall, it is found that there is complete absence of the septum between the two ventricles. Into the common ventricle open the mitral and tricuspid orifices in their normal positions. Two arterial trunks emerge from the ventricle in the relative positions of aorta and pulmonary artery. The anterior of these gives off the two coronary arteries; its wall is thicker, while its lumen is smaller, than that of the posterior trunk. The latter is thin walled, and the valves at its commencement are extensively sclerosed and calcified. Unfortunately, these trunks were not followed to their distribution; but it seems likely that the anterior is the aorta and the posterior the pulmonary artery, there being thus transposition of these vessels. The auricular portion of the heart presents nothing abnormal, except that the foramen ovale is patent. The heart weighs 1¼ lb.

There is a large amount of serous exudate in the peritoneal cavity. The liver shows advanced "nutmeg condition." The spleen is enlarged and firm. The kidneys show passive congestion.

The illustration is reproduced from a photograph, taken after Professor Lorrain Smith had arranged the incised wall of the ventricle, so that the four openings of the arteries and auricles may be seen communicating with the one cavity. The mouth of the aorta, slit open, is seen immediately above a glass rod, there placed to hold the ventricular wall apart. Behind the left end of the rod a cavity is seen, an inch and a quarter in depth and five-eighths of an inch in diameter; this appears to represent a rudimentary right ventricle.

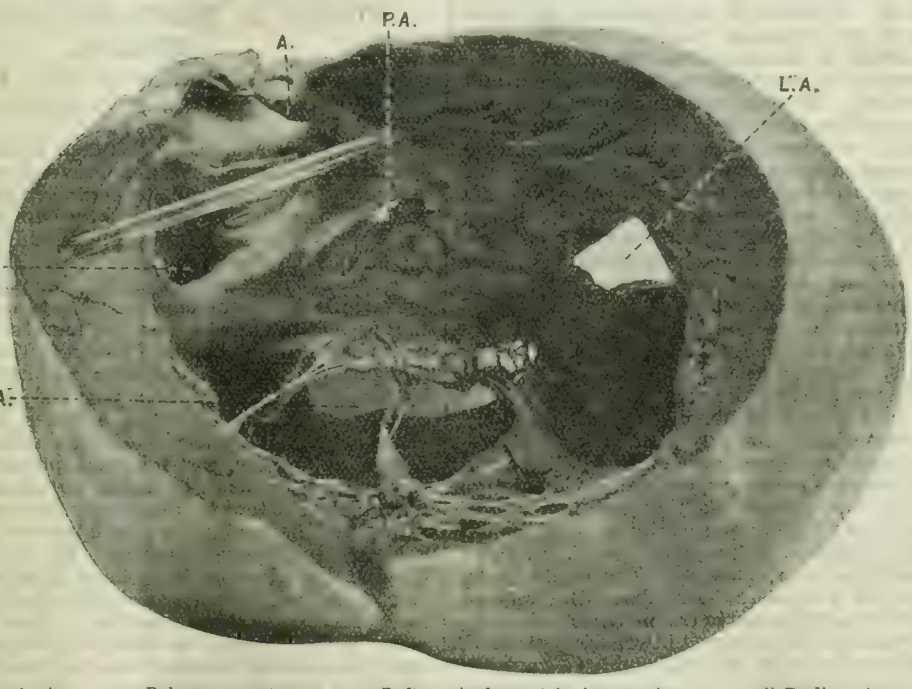
Professor A. H. Young, to whom I am indebted for the photograph from which the illustration is taken, exhibited the heart and described the developmental anomalies connective of the malformation at a recent meeting of the Anatomical Society of Great Britain and Ireland. A description will appear in the *Journal of Anatomy*.

Malformation of the heart as above described is exceedingly rare, and when encountered in adult life it is phenomenally so. W. T. not only lived to the age of 35 years but, with the exception of the last six months, he enjoyed average good health throughout the whole of his life. I am indebted to Dr. Webb for the following

short history furnished by letter after the result of the autopsy had been communicated to him:

"I have known W. T. for six or seven years. As a boy he was not really weakly, but he was unable to join much in boys' sports. On one or two occasions I have attended him for a day or two on account of breathlessness, cough, or headache, with gastric trouble; on each occasion a little medicine soon put him right again. Indeed, till the last long illness of several months, I cannot recollect that I ever saw him in bed. Two or three years ago he took a trip to America, which did him good. From my own personal knowledge, and from what I elicited from his family, he was *never cyanosed* till the last three weeks of his life."

The literature of cardiac malformation reveals only a few instances in which the possessor of a three-chambered heart lived to adult age. Kreyzig[1] records a case seen by Wolf of a man who suffered from cyanosis and died at the age of 23 years, whose heart was found to contain two well-formed auricles, with distinct auriculo-ventricular apertures, and only one ventricle, from which two arteries took their origin. The pulmonary valves were imperfect, and an opening was present in the foramen ovale. Wittcke[2] found, in the body of a man aged 24, that the heart had only one ventricle, with walls three times the usual thickness, and without the least trace of interventricular septum. The vessels of the heart are stated to have been in their normal position, their orifices being dilated. The foramen ovale was closed. This man suffered from dyspnoea and was cyanotic. Max Mann[3] found complete absence of the ventricular septum in the body of a woman aged 22 years. The aorta and the pulmonary artery were transposed; the latter was stenosed at its mouth owing to adhesions of the valves; beyond the valves the artery was very much dilated. Throughout life the face, hands, and feet were cyanosed. Durozier[4] records a remarkable case of a man, who lived to the age of 39 years, whose heart showed absence of the ventricular septum, with transposition of the aorta and the pulmonary artery. The pulmonary artery was contracted, and yet there was no cyanosis. The last two cases bear a close resemblance to that of W. T. In all three there was transposition of the pulmonary artery and aorta, with stenosis of the former. In one of the three there was pronounced cyanosis, whilst in the other two there was no cyanosis. An analysis of cases of congenital malformations of the heart points to a correlation between absence or defect of the interventricular septum and stenosis of the pulmonary artery, which appears to be the commonest of associated cardiac abnormalities. The pulmonary valves in these cases are frequently described as sclerosed or adherent; in W. T. they were also calcified. It is a matter of conjecture whether the defective condition of the pulmonary valves may not be due to the excessive strain to which they are subjected by the forcible propulsion through them of the blood, either entirely or partially, from a ventricle many times more powerful than the normal right ventricle.



A. Aorta. P.A. Pulmonary artery. L.A. Left auriculo-ventricular opening. R.V. (?) Rudimentary right ventricle. R.A. Right auriculo-ventricular opening.

The developmental aspect of the abnormality having been discussed elsewhere, there only remains something to be said from the physiological standpoint. First, as regards the mode in which the circulation was effected. So far as can be seen there was absolutely nothing to direct the blood, preferentially, either to the aortic or the pulmonary orifices. At each systole the powerful ventricle drove the mass of blood which it contained through both channels, with an efficiency that closely rivalled the function performed under normal conditions by two distinct cavities. Second, as regards the absence of cyanosis. The cause of congenital cyanosis is far from clear. Among the assumed causes are: admixture of venous with arterial blood, deficient aëration of the blood, back pressure affecting the veins, general vasomotor paralysis, with imperfect oxygenation of the red corpuscles. The cyanosis due to developmental defect of the heart is usually much more pronounced than the cyanosis of disease; a man with congenital cyanosis is a veritable *homo coeruleus*. As previously stated, the pulmonary valves have frequently been found to be diseased when the interventricular septum is absent or is greatly defective; constriction of the pulmonary artery has also been observed. Stenosis of the pulmonary artery has been reported in other cardiac malformations which were accompanied by cyanosis; this gave rise to the view that the cyanosis was due to impeded access of the blood to the lungs. A considerable number of abnormally-developed hearts have been recorded, however, including Durozier's and my own, in which there was no cyanosis, although the pulmonary artery was stenosed, and others in which cyanosis occurred although the pulmonary artery was of normal calibre throughout. Mere admixture of venous with arterial blood is not sufficient to account for cyanosis, and to many of the cases which demonstrate this that of W. T. is to be added. It is obvious that throughout the patient's life his venous and arterial blood were mingled, yet it was not until his heart began to fail that cyanosis occurred. The cyanosis which then appeared was of the nature of that which occurs in disease apart from cardiac malformation—in capillary bronchitis, for example, when the heart is failing. Under such conditions, imperfect aëration of the blood and back pressure are probably the chief causal factors, which, however, do not come into play in cases of congenital malformation of many years' survival until disease or heart failure is superadded. Recently Variot[5]—who distinguishes congenital from asphyxial cyanosis by the fact that the former cannot be modified by the inhalation of oxygen—attributes congenital cyanosis to general vaso-motor paralysis with numerical increase of the red corpuscles which he assumes have only a feeble affinity for oxygen, and thus cause the blood to be dark in colour.

There is no doubt about the numerical increase of the red corpuscles in congenital cyanosis; this, together with a high haemoglobin percentage, has been ascertained by many observers. It seems probable that the increase is the direct result of the cyanosis or, more exactly, of the condition which gives rise to the cyanosis. If, owing to the admixture of venous with arterial blood, the percentage of oxygen conveyed by the haemoglobin is much below the normal, the internal respiration will be unequal to the demands of the tissues, which will proportionately suffer. This continuing, calls forth the resources of the organism to provide compensation. The only way open is to increase the oxygen capacity of the blood, which is accomplished by multiplying the red corpuscles and raising the percentage of haemoglobin; so that, although the individual corpuscles are still only partially oxygenated, and consequently continue to yield a deficient amount of oxygen to the tissues, their numerical excess counterbalances the deficiency. Apart from congenital malformations of the heart in which venous and arterial blood are mingled, crippling of the heart's movements appears to be capable of causing polycythaemia. Some observations of Lorrain Smith[6] bear on this question. In a case of excessive thickening of the pericardium by which the heart was literally hidebound, and was unable to keep the blood circulating with sufficient rapidity, cyanosis occurred. Repeated examination of the blood showed increase in red corpuscles (nearly 7,000,000), with increased percentage of haemoglobin (103 to 114); the amount of haemoglobin was estimated by Haldane and Smith's[7] CO method. Here there was no question of admixture of venous with arterial blood; but apparently as the internal respiration was insufficient to meet the requirements, the oxygen-carrying power of the blood was increased. Yet, again, chronic cyanosis with polycythaemia occurs independently of heart trouble. Several cases have been investigated by Osler[8] and others, in which enlargement of the spleen was accompanied by chronic cyanosis and by great increase in red corpuscles—from 8 to 12 millions; the haemoglobin was also increased to 120 to 150, and even in one case to 165, per cent. A like condition of the blood, with splenic enlargement, may occur without cyanosis. Weber[9] records such a case, in which the red corpuscles reached 10 millions, and the haemoglobin 135 per cent. In a recently published paper, Senator[10] describes two cases of splenomegaly with dark red coloration of face and mucous membranes, and with the usual increase in erythrocytes and percentage of haemoglobin. The colour index was normal, so that the increase of haemoglobin was due to the numerical increase of the red corpuscles. The O tension of the blood was normal, as was also its molecular concentration. The intake of O_2 and the output of CO_2 were both above the highest normal, and closely corresponded to the increase in haemoglobin. To account for the increased internal respiration, Senator suggests either that the augmented supply of blood and oxygen stimulates the tissues to greater activity, or that a common abnormal stimulus is the cause of the increase in blood cells and of their augmented reception of oxygen, with an equivalent delivery of it to the tissues. In the same class of cases Bence[11] found that splenic cyanosis is not due to increase of CO in the blood, as is the case in the cyanosis of disease; in other words, that the splenic cyanosis is not due to colour change in the haemoglobin. He is disposed to accept the view that dilatation of the superficial vessels is concerned in the production of the cyanosis. Both he and Senator attribute the polycythaemia to increased production, and not to delayed destruction. Bence and also Senator found the viscosity of the blood to be three or four times above the normal, and to this Bence attributes the general condition. He regards the diminished O tension as only relative: it is set aside by the absolute increase of erythrocytes, so that the combination of a normal O quantity with an abnormally low O tension is rendered possible. Bence, Koranyi, and others have assumed, in these cases that the haemoglobin is deficient in O combining power; this view is not corroborated by Senator's case. In Weber's case this point has not yet been investigated, but he quotes observations by Boycott on two other cases of pseudo-splenic polycythaemia in one of which the O capacity was practically normal; and in the other, although the O capacity of the haemoglobin was possibly slightly deficient, the blood as a whole had an O capacity of at least 10 per cent. more than that of a normal man. Senator, Bence, and Koranyi found that the inhalation of oxygen tended to diminish the polycythaemia; in one case in which improvement was in progress, Koranyi considers that the cure was furthered by the inhalation.

It appears that any condition which gives rise to cyanosis, not necessarily of long standing, tends to produce polycythaemia; the blood from a patient suffering from severe bronchitis with dilated heart and a moderate degree of cyanosis, yielded 6,500,000 red corpuscles and 106 per cent. of haemoglobin.

The conditions which give rise to the cyanosis of cardiac malformation remain obscure. In addition, however, to the results which are directly due to the action of the malformed heart on the blood current, it appears probable that a permanently dilated vascular system shares in the production of the cyanosis.

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ON THE USE OF CALCIUM SALTS AS CARDIAC TONICS IN PNEUMONIA AND HEART DISEASE.

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FIFTEEN years ago, in the BRITISH MEDICAL JOURNAL of January 23rd, 1892, Dr. Prickett and I published a paper on the use of oxygen and strychnine in pneumonia. This paper was hurriedly put together, half of it having been written in a country house while watching a case of pneumonia and the other half scribbled in a railway train on my way back. The reason for our hurried publication was the prevalence of pneumonia at the time, and the hope that the treatment which we had found so promising might prove useful in the hands of others. The event has justified our expectation, and the treatment of pneumonia by oxygen and strychnine is now widely and successfully employed. A similar reason induces me to write this short paper on the use of calcium salts, because in the present epidemic of post-influenzal pneumonia there seems to be a great tendency to cardiac failure, and this, I think, may to some extent be averted by the free use of calcium salts which have a tonic action upon the heart.

Nearly twenty-five years ago Dr. Sidney Ringer discovered that when the frog's heart is perfused with a solution of sodium chloride in distilled water the heart soon loses its power of contraction. This result does not occur if the solution is made with tap water. Professor Ringer's scientific acumen soon led him to the important discovery that the maintenance of the contractility of the heart when tap water is used is due to the calcium salts contained in the water. This discovery is constantly utilized in physiological laboratories, but, so far as I know, has not had any practical application in medical treatment. A good many months ago I was called to see a case of pneumonia, and, fearing that the heart would fail, I thought over all the remedies which were likely to avert such an unfortunate result. It then occurred to me that calcium chloride ought to be useful. The only harm it was likely to do was to increase the coagulability of the blood, but any risk of this sort was small in comparison to that from cardiac failure, so I prescribed it. It is not so easy to judge of the usefulness of calcium salts in threatened cardiac failure as it is of the action of oxygen and strychnine, because the results are not so immediately apparent. As the patient for whom I prescribed the calcium made a good recovery I was encouraged to give it again, and have done so in a considerable number of cases. In some of them a fatal result has ensued in spite of everything that could be done, but in a number of them the effects appear to me so encouraging as to deserve a wider trial for the medicine. I usually give it in 5 to 10 gr. doses every four hours, simply dissolved in water. As it is very deliquescent it can only be kept in solution. It has a very disagreeable saline taste, but this is well covered by saccharine, one minim of the elixir of saccharine containing one-twentieth of a grain of

saccharine is sufficient to cover the taste of 10 gr. of calcium chloride. This mixture may be given either in water or in milk, and it does not interfere with the use of any other remedies.

I have also used it in cardiac disease, where the ventricular wall appeared to be losing power, and here also the results have been encouraging. In cases of pneumonia, where one wishes to get rapid action, I think the chloride is the best salt of calcium, but in cardiac disease other salts may be employed, such as the lactophosphate or the glycero-phosphate. It is quite possible that the great benefit one frequently observes from a milk diet in cases of heart disease, may be due, in part at least, to the large quantity of calcium salts which the milk contains.

At the present moment, when there is a good deal of antivivisection agitation, it may be interesting to note that the plan of treatment by oxygen and strychnine recommended by Dr. Prickett and myself fifteen years ago, and the one which I now recommend, both owe their origin to laboratory experiments, and any benefits which may result to patients from either plan must be regarded as the fruits of experiments upon animals.

DELAYED CHLOROFORM POISONING.

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THE following are notes of 2 cases in which symptoms of delayed chloroform poisoning were observed in adults.

CASE I.

A. B., aged 26, was sent to the Western Infirmary by Dr. Thomson on March 2nd, 1906, suffering from acute appendicitis. She was operated on an hour and a half after her arrival and a large diseased appendix removed. The temperature fell to normal the next day, but persistent vomiting continued for two days in spite of washing out the stomach and rectal feeding. On the fourth day after operation she complained of pain in the cardiac region, which was not relieved by strychnine or digitalin, and she died on the fifth day after operation.

I am indebted to Professor Muir for notes of the *post-mortem* examinations in this and the following case.

Post-mortem Examination.—There was no trace of peritonitis, and the site of operation showed normal healing over the point where the appendix had been removed. The stomach contained a considerable quantity of altered blood, but there was no ulceration, and no source of the haemorrhage could be detected. The liver was in a condition of extreme fatty degeneration, the colour being almost a uniform yellow. The organ was not enlarged. The kidneys showed a diffuse fatty degeneration, though rather less marked than was in the liver. The cardiac muscle also showed considerable fatty change, this being pretty generally distributed. The coronary arteries were healthy. The lungs had a distinct acetone-like odour. The spleen was healthy. Microscopic examination gave confirmative results. In the kidneys the convoluted tubules, Henle's tubules, and also many of the straight tubules showed profound fatty degeneration, the cells being practically filled with small fatty globules. The fatty change in the liver was also very advanced and almost uniform in its distribution. In the heart the fatty degeneration was very diffuse, practically all the fibres containing fatty globules, but was not of extreme degree. The changes noted correspond with those in late chloroform poisoning, and point to the action of some toxic substance on the organs mentioned. There was no evidence of septicaemia or of any other condition which might explain the fatal result.

CASE II.

B. C., aged 28, was sent to the Western Infirmary by Dr. Ingram of Helensburgh. She was suffering from pyloric stenosis, and for this a gastro-enterostomy was performed on November 11th. After the operation she was much troubled with sickness and faintness, and died on November 15th. She had as anaesthetic 5 c.cm. ethyl chloride and 3½ oz. of A.C.E. mixture. The anaesthesia lasted for fifty minutes.

Post-mortem Examination.—A posterior gastro-enterostomy had been performed, and the peritoneum was in a healthy condition. The stomach showed signs of chronic catarrh, and its mucous membrane was somewhat rugose. There was no haemorrhage. The liver showed extreme fatty degeneration as in the previous case, and microscopic examination showed the condition to be of similar nature and degree. In the kidneys fatty change was present, but it was much less marked than in the previous case; and it was found on microscopic examination that the fatty globules were only present in the basal portions of the cells. The spleen was normal, and cultures made from it gave only a few colonies of the *Bacillus coli*. The heart muscle was somewhat atrophied, but was not fatty. In the right lung there was an area of chronic grey tubules with evidence of caseation at places, but this was of small extent.

In the second case the changes in the liver and kidneys were somewhat similar to those in the first, but were of less degree. The case is possibly of the same nature, but considerable emaciation was present, and death may have resulted simply from inanition.

I record these cases owing to the importance of cases of delayed chloroform poisoning and the interest that has recently been taken, more especially regarding deaths among children. In the first case the patient had chloroform alone, in the second case ethyl chloride and A.C.E. mixture was given. This latter combination may have accounted for the symptoms in the second case not being quite so pronounced. So many feeble patients have operations done of even a more serious nature than the above and get perfectly well, that it is to a certain extent satisfactory to be able to give a definite cause as to the fatal termination in two such comparatively young patients as the above. The practical question naturally arises, What is to be done in order to prevent the possibility of acetone poisoning taking place?

CHRONIC PERITONITIS CAUSING ELEPHANTIASIS.

BY
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A WOMAN of 43 years of age was admitted to Westminster Hospital under the care of Dr. de Havilland Hall, to whom we are much indebted for permission to publish the case, on September 15th, 1905. She complained of shortness of breath and swelling of the legs and abdomen.

She had been an in-patient at several other London hospitals, and we are much indebted to Dr. Jex-Blake for kindly allowing us to make abstracts of his notes taken during the patient's stay in St. George's Hospital.

HISTORY.

Patient has had five miscarriages and ten children; the menses ceased fifteen months ago. She denies alcoholic excess. In March, 1904, she began to suffer from dyspnoea on exertion, loss of strength and flesh, and languor; in April from vomiting; in June and July from protrusion of the eyeballs; in July, swelling of the thyroid gland; about the same time she complained of nervousness, and the colour of the skin became darker; in August the abdomen became enlarged; in October she suffered from bronchitis and palpitation. A diagnosis of Graves's disease was made. In January, 1905, the following was noted: Abdomen enlarged, walls thick and brawny; no evidences of ascites; lower extremities large, brown stained, and in a condition of hard oedema; no albumen in urine. In February patient suffered from diarrhoea, which continued for two months. On April 9th condition was as follows: Orthopnoea; pulse irregular, small, of low tension; apex beat fourth and fifth spaces, 4 in. to 4½ in. from middle line; mitral systolic bruit conducted toward axilla; jugular veins distended and fill from below; signs of fluid at both bases, and scattered rhonchi; tongue small, red, and raw; abdominal wall hard and irregularly pits; legs much swollen, very tense; skin of body regularly pigmented; moderate exophthalmos; moderate, non-pulsating, bilateral goitre. In June there was oedema up to the level of axilla, evidences of ascites, the legs were of brick-red colour, brawny, and barely pitted.

On admission to Westminster Hospital the patient presented the following condition: Orthopnoea; moderate exophthalmos; movements of eyeballs very quick; thyroid gland moderately enlarged, soft, and elastic, with slight pulsation and thrill; severe palpitation on excitement; pulse 100 per minute, irregular, rather full, low tension; apex beat in fifth interspace, diffuse and feeble; loud, blowing, mitral systolic bruit propagated to axilla; fainter bruit in pulmonary area; carotids pulsating vigorously; jugular veins distended and refill from below; much thirst, tongue dry; abdomen extremely distended, walls in lower part hard and brawny; signs of free fluid in cavity; liver not palpable, upper border at level of fourth rib; external haemorrhoids; lower limbs enormously enlarged and condition well represented by photograph; calf measures 20 in.; skin obviously much thickened, does not pit, hard and brawny, sulci deep, general surface shows closely aggregated minute prominences, colour bronzed, with reddish tint; skin of body bronzed; no pigmentation of mucous membranes; scattered rhonchi over lungs; patient highly nervous and flushes; fine tremors of upper limbs; urine normal.

After-History.—September 25th. Twenty-three pints fluid withdrawn from abdominal cavity and ℥ij adrenalin solution introduced. Microscopical examination of fluid showed red blood corpuscles, large number of lymphocytes, very few polymorpholeucocytes. October 10th. Soft oedema of right upper arm and forearm, to less extent of left arm; volume of left pulse smaller than right; some stridor, mainly expiratory; over right base, vocal fremitus and percussion resonance diminished. October 12th. Eighteen pints of fluid withdrawn from abdominal cavity and adrenalin solution introduced; fluid, specific gravity 1014; no evidence of chylous fluid; liver palpable just below ziphisternum. October 25th. Bronchial breathing over both bases. October 26th. Patient gave a peculiar cough and fell back dead.



Fig. 1.—Photograph taken in life.*

There could, of course, be no doubt that the patient was suffering from Graves's disease. The enlargement of the thyroid gland, the exophthalmos, the palpitation, and the fine tremors clearly pointed to this. This diagnosis was also sufficient to explain the presence of uniform pigmentation over the body. The question was whether the patient was also suffering from cirrhosis of the liver, perihepatitis or chronic peritonitis, and the diagnosis arrived at was that the condition was in all probability hepatic cirrhosis, possibly associated with some chronic peritonitis. The condition of the legs was thought to be due to some pressure on the thoracic duct. Several possible causes of this were considered, but no definite conclusion was come to. Having regard to the nature of the physical signs and to the fact that degeneration of the myocardium is by no means infrequent in cirrhosis of the liver, the mitral systolic bruit was thought to be due to cardiac degeneration rather than to any organic disease of the mitral valve.

PATHOLOGICAL REPORT.

Autopsy Performed Sixteen Hours after Death.—The upper parts of the body and the arms slightly emaciated; the lower extremities and abdominal wall below the umbilicus the seat of extreme brawny oedema, the legs and suprapubic skin being particularly indurated: circumference of calf 19 in., thigh 28 in., abdomen 46 in. The skin over these parts thickened and corrugated: the abdominal wall immediately above the pubes measured 3 in. in thickness, gradually thinning down to ½ in. just above the umbilicus, where it became fairly normal. The thickened tissue on section showed extreme oedema, with a gelatinous appearance. Face cyanosed; thyroid enlarged; cervical veins distended; eyes prominent (proptosis). Dorsal hypostasis, and over the buttocks several prominent dilated lymphatic vessels. Abdominal cavity distended with yellowish serous fluid, a similar fluid occupying the right side of the thorax and compressing the lung. Peritoneum markedly thickened, and posteriorly especially so, with adhesions around the liver, between the transverse colon and duodenum, and around the pancreas. The receptaculum chyli and the origin of the thoracic duct were involved in an extensive prevertebral fibrosis, whilst from the first lumbar vertebra upwards the duct was dilated to the size of a quill pen, until its entrance into the subclavian vein. The inferior vena cava and aorta did not, however, appear to be constricted by this fibrosis, nor did the larger vessels in the groins. Marked perihepatitis; suprarenals involved in the fibrotic tissue which also surrounded the ureters without causing any dilatation. Spleen 10 oz. in weight, surface mottled by white patches of perisplenitis; section normal. Liver 80 oz., surface finely granular, on section yellowish, finely granular and somewhat firm. Gall

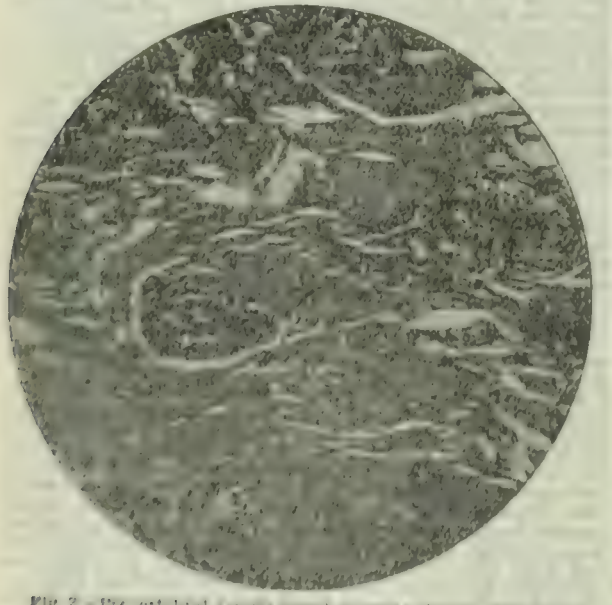


Fig. 2.—



Fig. 3.—

bladder distended with clear mucous fluid and contained several soft calculi. Bile and pancreatic ducts patent, opening normally into the duodenum. Portal vein and its tributaries and intestines normal. Kidneys together weighed 20 oz. Cardiac, hepatic and neighbouring glands large and

soft, but mesenteric glands small and pink. Heart 16 oz., dilated, hypertrophy of left ventricle, no endocarditis, muscle soft and friable. Lungs oedematous, collapse of right. Thyroid enlarged and no typical colloid appearance on cutting. Cause of death cardiac failure.

Microscopical Examination.—The fibrosis in the neighbourhood of the receptaculum chyli (see Fig. 2) contained some lymph glands with markedly dilated varicose spaces lined by endothelium and evidently lymph channels, similar spaces appearing in the adipose and fibrous tissue around the glands. The enlarged soft inguinal glands showed similar dilatation of the channels, together with some thickening of the fibrous trabeculae, but the mesenteric glands were normal. The lymphoid tissue of the affected glands was also more diffuse, and the follicles less distinct. The skin showed typical advanced oedema, marked dilatation of the lymphatics, which often were surrounded by and sometimes filled with small round cells, hyperplasia of the connective tissue elements and thickening of the arterioles (see Fig. 3). Liver capsule thickened, capillaries engorged and dilated, some chronic hepatitis evinced by round-cell infiltration of Glisson's capsule, and especially beneath the capsule in the depressions between the fine granulations mentioned, but no definite cirrhosis, the condition suggesting a spread of inflammation from the perihepatitis. The hepatic cells adjoining the dilated capillaries were atrophied where the engorgement was most marked.

Kidneys: Intense hyperaemia, granular epithelium, wedge-shaped areas of cell infiltration in the cortex such as seen in early interstitial nephritis. Suprarenals fairly normal, though embedded in fibrous tissue, and showing early struma lipomatosa; the enveloping fibrous tissue showed dilatation of the lymphatics. The intestinal mucosa was fairly normal, and no dilatation of the lacteals was evident, though there appeared to be an unusual amount of round-cell infiltration in and around the bases of the glands. Unfortunately the large intestine was not examined histologically, so nothing can be said as to the condition of its lymphatics.

Sections of the mesentery showed thickening of subendothelial fibrous tissue on both sides with evidences of chronic inflammation in the shape of accumulation of round cells around the vessels. No noticeable dilatation of lymphatics.

In the thyroid, coarse structure present in sections with acini of varying size and irregular outline, but the colloid material was practically *nil*, only a very small remnant being found. Acini only in a few instances showed remains of a cuboidal epithelial lining, yet their lumina were filled with spheroidal cells which appeared to have arisen in a proliferation of the epithelium.

The morbid appearances found may be summarized as follows:

Chronic peritonitis, with especially prominent perihepatitis, perisplenitis, and prevertebral fibrosis surrounding the lymphatics at about the level of the receptaculum chyli. Below this a varicose condition of all the lymphatics and an oedematous and hyperplastic condition of the parts drained by these affected vessels, but not of the mesenteric lymphatics or lacteals. Some chronic hepatitis, especially subcapsular, and a slight interstitial nephritis. Thyroid enlargement with diminution of colloid and proliferation of epithelium (comparable with exophthalmic goitre). Cardiac dilatation.

Anatomically the condition is explainable on the view that the fibrosis had interfered with the lymphatic course at about the level of the receptaculum chyli, above the point of entry of the lymphatics draining the lower part of the body, which includes the abdominal wall as far as the umbilicus (and here note the decreasing oedema of the parietes from the pubes up to the umbilicus, where it ceased), but below the junction with the lacteals and vessels from the coeliac glands. These latter are said to enter the first part of the thoracic duct. The rectal lymphatics generally open into the sacral glands, but, as mentioned above, an examination of the rectal mucosa was unfortunately neglected. Oedema and hyperplasia from excess of lymph in the parts would follow a chronic obstruction, and is a well-recognized phenomenon. The ascites might be due in part to this cause and to some extent also to the cardiac failure. It must be remembered also that ascites is commonly associated with chronic peritonitis. The presence of a large number of lymphocytes in the fluid obtained by paracentesis points to some lymphatic obstruction.

Apparently, then, the condition is one of chronic peritonitis of peculiar distribution. Cases of prevertebral fibrosis are occasionally met with on the *post-mortem* table, but the complications here described consequent on implication of the lymphatic system appear to be very rare. The etiology can, however, be merely speculative. Proliferative peritonitis, according to Osler, is found frequently in subjects of chronic alcoholism. Rolleston says, "Cirrhosis of the liver is often associated with a certain degree of chronic peritonitis, but a high degree is comparatively rare in association with well-marked cirrhosis."

It may be that the toxin which causes both conditions has in this case exerted its influence more on the peritoneum than on the liver, which showed merely a cellular interstitial hepatitis of no marked degree.

And, finally, into the realm of unconfirmable speculations may be brought the mechanical factor of the oft-repeated pregnancies with a consequent chronic inflammation—the hepatic and renal conditions being lesions apart and associated with alcoholism. Whether the exophthalmic goitre was merely an accidental complication—which seems probable—or not, is impossible to say.

THE RELATION OF DIET TO THYROID ACTIVITY.

By A. DINGWALL FORDYCE, M.D., F.R.C.P.Edin.,
EXTRA PHYSICIAN TO THE ROYAL HOSPITAL FOR SICK CHILDREN, EDINBURGH.

As the result of a series of experiments conducted with a view to determine the effect of heat upon the nutritive value of milk, I have been led to a particular study of the thyroid glands of the animals experimented upon.

The prevailing custom at the present time of the pasteurization of milk for infant feeding and the very divergent views held regarding the advantages and disadvantages attendant on the custom, were in the first place the reasons which induced me to undertake these experiments. The results obtained as regards the respective value of plain milk, pasteurized milk and sterilized milk, as a food, have proved inconclusive both positively and negatively.

Certain facts, however, concerning the structure of the thyroid gland in these animals would appear to be worthy of being placed on record, the variations in structure obtained being constant within narrow limits and corresponding to the diet employed.

My experiments were conducted in the Physiological Laboratory of the University of Edinburgh, and to Professor Schäfer my warmest thanks are due. In all, the thyroid gland was examined in the case of 94 rats—5 of these being wild rats. The remaining 89 animals of 14 litters were dieted from the date of weaning (usually the twenty-first day) for periods varying up to sixty-seven days. Seventy-three of these rats from 11 litters were fed, thanks to the kindness of Dr. Robertson, Medical Officer of Health for Leith, upon modified milk obtained from the Leith Milk Dépôt, while the remaining 16 rats of 3 litters were fed on ordinary dairy milk.

In the case of those rats reared in the laboratory, animals from the same litter were placed at the time of weaning on (1) bread and milk diet[1]; (2) fresh milk; (3) the same milk pasteurized; (4) the same milk boiled for thirty minutes.

In all cases an unlimited supply was given, no marked difference being noticed in the amount taken by rats on the three milk diets.

Rats of the various litters, when weaned, were weighed and divided as evenly as possible between the four diets, and thereafter were weighed every third day.

As regards increase in weight, practically no difference was noticeable between the various milk-fed animals, but in all milk-fed animals the increase was less than in corresponding bread-and-milk-fed rats. Clinically all rats at the period of death appeared perfectly healthy, milk-fed rats being, however, in the majority of cases, somewhat softer and plumper than those fed on bread and milk.

The rats in all cases were killed with chloroform, and the tissues examined *post mortem*. In all cases of milk-fed rats there was considerable deposition of general body fat. This increase of fat was most marked in the abdominal cavity, and was in some cases very excessive. In all milk-fed rats the thyroid glands were of a markedly paler colour than those of animals fed on bread and milk.

The organs and tissues were fixed in 5 per cent. formalin and stained with haematoxylin and eosin after, in the case of the bones, decalcification with Perenyi's fluid. The bones, spleen, liver, pancreas, kidney, suprarenal, thymus, and thyroid, in each case, were examined microscopically, and, apart from the thyroid gland, no constant

marked differences were observed corresponding to the diets used. In the case of the thyroid gland, however, altogether different conditions were found when the rats were grouped under the three headings of (*a*) wild rats, (*b*) bread-and-milk-fed rats, (*c*) milk-fed rats.

As regards the thyroids of rats on the three varieties of milk food, in 80 per cent. of cases no distinct difference was observable, while in the remaining 20 per cent. of cases the structure of the gland varied constantly according to the form of milk used, yet in all the characteristic features corresponded very closely with the general type of the remaining milk-fed animals.

The glands of all animals fed on bread and milk showed a constant picture, within extremely narrow limits, while those from the wild rats (caught together at the same place at the same time), though showing somewhat wider variations, yet in all cases displayed, in a greater or less degree, the same nature of differences from both the preceding types of gland.

Fig. 1 shows the form of gland in a milk-fed rat. In it the vesicles are large, well filled with colloid material and the lining cells are small with deeply-staining nuclei.

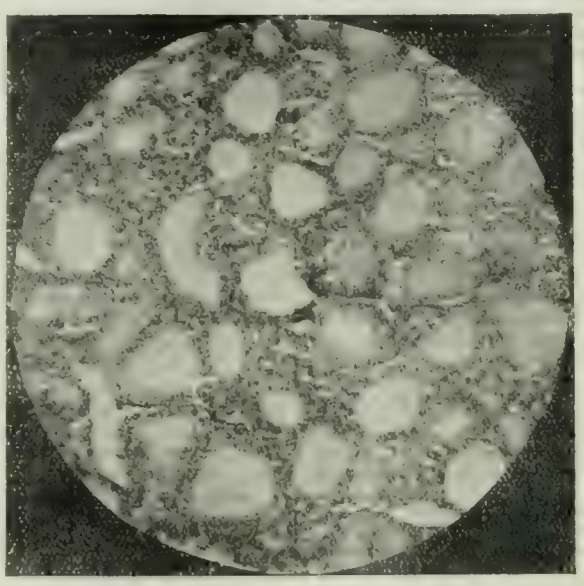


Fig. 1.—Rat, aged 10 weeks, weight 76 grams. *Plain milk.*

In Fig. 2, the gland of a bread-and-milk-fed rat, the vesicles are seen to be very markedly smaller and the amount of colloid present very considerably less. Whereas, in the case of milk-fed rats, each vesicle consists of a large lumen surrounded by a narrow ring of somewhat flattened cells; here it consists of a ring of columnar cells enclosing a minute lumen or lying apparently almost in contact.

Examination of the glands of wild rats (Fig. 3) shows them to be of a more or less intermediate nature between those of milk-fed and those of bread-and-milk-fed animals. Compared with sections from bread and milk-fed animals, the vesicles appear distinctly larger, they contain considerably more colloid material, and the lining cells show a greater variation in shape.

These glands, one and all, it must be remembered, were removed from animals clinically in perfect health; and, while the thyroid gland is an organ well known to be subject to considerable variations in structure, yet the interest in the present note rests in the fact that the variations in the series of glands examined corresponded with the differences in diet.

That the type of gland met with in each of the three classes of cases was one of a variation within the limits compatible with a normal healthy animal seems certain. The thyroid gland of rats is obviously an organ extremely susceptible, and also extremely adaptable, to variations in diet, and in healthy animals the structure of the gland varies within fairly wide limits. But while this is undoubtedly the case, yet it is also equally apparent that along with varying types of sound health and of healthy thyroid glands are associated different degrees of activity of that gland. Normally the gland, within wide limits, responds readily to the diverse calls upon it, and, with a greater or less degree of activity, the normal condition is maintained. Should, however, the potential activity of the gland be, from any cause or in any manner, less than usual, obviously a healthy condition is only to be maintained by restricting the call upon it well within the normal limit; and, consequently, it is important to determine the relation of varying diets to the strain thrown upon the gland.

Swale Vincent and Jolly[2] affirm that no statement universally applicable throughout the animal kingdom can be made as to the importance of the thyroid and parathyroid glands, and the former author[3] states that in rats and guinea-pigs extirpation of both thyroids and parathyroids is never followed by myxoedema. The extreme difficulty of this operation of total extirpation—certainly in the case of rats—seems to warrant some hesitation in arriving at the conclusion that the function of the organs in these animals is so totally different from that found elsewhere throughout the animal kingdom.

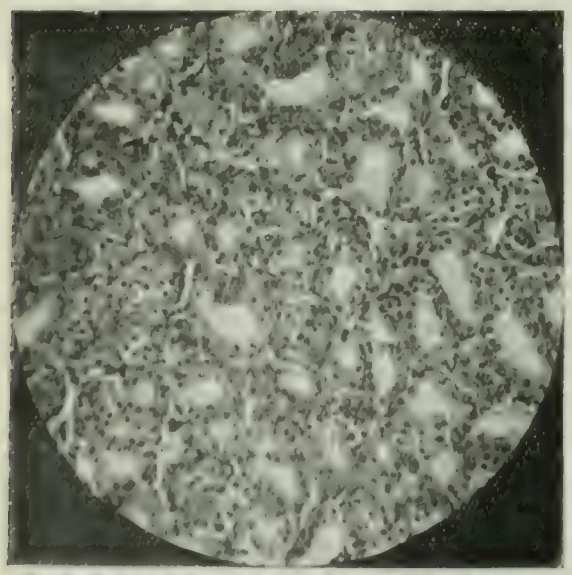


Fig. 2.—Rat, aged 10 weeks, weight 70 grams. *Bread and milk.*

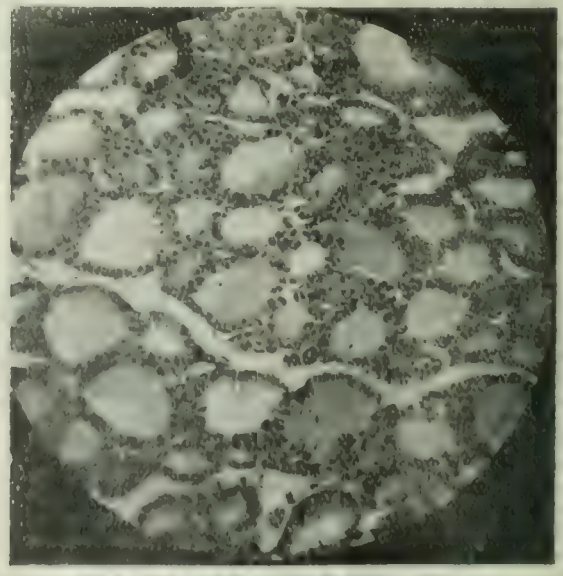


Fig. 3.—Rat aged [illegible], weight 102 grams. *Wild rat.*

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[1] Watson and Hunter, *Journ. of Physiology*, vol. xxxi, Nos. 1 and 2. [2] *Journ. of Physiology*, vol. xxxii, 1905. [3] *Lancet*, August 18th, 1906.

A [illegible] amount of malingering has been discovered in Rome in the course of inquiries made by insurance offices in regard to claims for injuries said to be the result of accident.

NOTE ON CLASS INCIDENCE OF CANCER.

BY DAVID HERON, M.A.,

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IN a memoir[1] on the relationship of fertility in man to social status, recently noticed in the BRITISH MEDICAL JOURNAL (December 15th, 1906), I have dealt briefly with the relation of cancer incidence to social status. I have shown that cancer is the one exception out of the qualities dealt with by me which is associated with a higher social status. The correlations obtained indicate that the cancer-rate is highest amongst both men and women where (1) the birth-rate is lowest, (2) where the proportion of professional men in the population is highest, and (3) where most domestic servants are kept. In other words, cancer appears to be correlated with higher social status. It is perfectly true that these results are only found for the London districts, but it must be remembered that it is in London alone that we are able to trace the cancer deaths to their district of origin, owing to the "corrections for institutions" provided by the Medical Officer for the county of London.

The possibility that cancer may be to some extent a class disease seems of such importance that it is well worth considering further. My investigation of the matter was, of course, preliminary, but possibly it may result in the collection of data bearing more directly on this point. As a matter of fact, the census, combined with the Registrar-General's unpublished returns, should enable much light to be thrown on the question. The census provides the occupational frequency and the age frequency in each occupation. The death certificate gives the age and occupation of each individual dying of cancer, although these particulars are not published. A combination of these data would enable us to determine whether there is any, and, if so, how much, contingency of cancer incidence and social status.

Failing these data, I have endeavoured on the existing material to make some improvement on my preliminary investigation from the material already available. In the first place, I find that the cancer death-rate varies somewhat erratically in the same district from year to year. To give it greater steadiness, I have taken for each district a four year's average (1901-4).

It has also been pointed out to me that a correction is further required for the age distributions in the several districts. It is not an easy matter, however, to make such a correction accurately, for we have not the age distribution of the cancer deaths in each district; but the correction may be made in a rough manner in the following way. Cancer is essentially a disease of middle life, and if an examination be made of the age-frequency curves for cancer[2] it will be found that the bulk of the cases for both sexes fall between 30 and 70. I have accordingly worked out for each district the cancer death-rate on the basis of the population between 30 and 70, obtaining the following results:

A.—*Relation of Birth-rate (calculated throughout on the Number of Possibly Reproductive Wives) to the Cancer Death-rate.*

	Correlation between Cancer Death-rate and Birth-rate.		
	Males.	Females.	Mean.
Cancer-rate on total population	− 0.62 ± 0.09	− 0.60 ± 0.05	− 0.66
Cancer-rate on population aged 30 to 70 ...	− 0.21 ± 0.12	− 0.27 ± 0.12	− 0.28

Thus somewhat more than half the high correction is due to the fact that districts with a high birth-rate have a larger proportion of the population outside the cancer-incidence ages. But enough remains to show that my former conclusion is still valid; there is for both males and females an association between low birth-rate and high cancer death-rate. The fact that it is equally true for males and females serves to indicate that it is a question of social status and method of life rather than that of direct relationship of multiparity to cancer. My previous results were for 1901 alone, and the rates were based on the whole population. I found the correlation between the birth-rate and the cancer death-rate to be:

Males.	Females.	Mean.
− 0.16 ± 0.13	− 0.54 ± 0.09	− 0.35

From this it seemed that the relationship was due to multiparity. The result of averaging the rate over four years indicates that this arose from want of steadiness in the rate.

The direct relation between the cancer death-rate and social status may now be investigated. This has already been done for two measures of social status—the proportion of professional men and the number of female domestic servants—but the rate was for 1901 only, and on the total population. The coefficients have been recalculated with the rate taken over four years and on the population between 30 and 70. The results are as follows:

B. 1.—*Correlation between Cancer Death-rate for 1901 on Total Population and*

	Males.	Females.
Proportion of professional men ...	+ 0.45 ± 0.10	+ 0.55 ± 0.09
Number of female domestic servants per 100 families	+ 0.42 ± 0.11	+ 0.40 ± 0.11

B. 2.—*Correlation between Cancer Death-rate for 1901-4 on Population aged 30 to 70 and*

	Males.	Females.
Proportion of professional men ...	+ 0.42 ± 0.11	+ 0.20 ± 0.12
Number of female domestic servants per 100 families	+ 0.52 ± 0.09	+ 0.07 ± 0.13

The very small correlation with the number of female domestic servants and the female cancer death-rate requires some explanation. It arises from the large negative spurious correlation introduced by the fact that the female population between 30 and 70 contains a large number of female domestic servants (in Hampstead they form 41 per cent. of the adult females). When the rate was calculated on all adult females except domestic servants the correlation was found to be + 0.72 ± 0.06. Unfortunately it was not found possible to deduct the cancer deaths among female domestic servants, so that this coefficient is now probably too large, though certainly positive.

The correlations between the cancer death-rate and various other measures of social status were then found, and are as follows:

C.—*Correlation between the Cancer Death-rate for 1901-4 on Population between 30 and 70 and*

	Males.	Females.
Proportion of general labourers ...	− 0.22 ± 0.12	− 0.42 ± 0.11
Proportion of pawnbrokers, etc. ...	− 0.06 ± 0.13	− 0.31 ± 0.12
Infantile mortality-rate	− 0.35 ± 0.11	− 0.20 ± 0.12

It thus appears from the figures given that there is always a substantial correlation between the cancer death-rate and social status; in other words, the incidence of cancer is most heavy among the well-to-do classes. It is to be hoped that a more extensive investigation on the lines already laid down may be entered on to supplement the present preliminary study.

What is badly needed at the present time is a collection of complete family histories of cancer cases. While such family histories in cases of insanity and pulmonary tuberculosis have been provided for the use of this laboratory in fair numbers, which we hope may go on increasing, we have, and can find, no records of any value bearing on heredity in cancer cases. The statements "a family history" or "no family history" are purely useless for scientific discussion of inheritance, when neither the individual relatives attached nor the sizes of the families are stated. The laboratory is prepared to issue schedules for the family history of special diseases

to any medical man or institute for special disease when a return of 10 to 20 cases can be provided.

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The Lumleian Lectures

ON

INSANITY, ITS CAUSES AND INCREASE.

Delivered before the Royal College of Physicians of London.

By GEORGE H. SAVAGE, M.D., F.R.C.P.,

Consulting Physician and late Lecturer on Mental Diseases, Guy's Hospital

Lecture I.

The Forms of Insanity.

I have approached this lectureship with mixed feelings. I began with pride at my selection; this was followed by doubt as to the subject on which I should lecture, and lastly a feeling, which still exists, of dread lest I should fail in my endeavour.

But the nature of my life's work indicated something connected with insanity, and as at present on every side the question is being raised of the increasing numbers of the insane, I felt that though the field has been partly occupied by both medical and lay writers, yet perhaps I might add something from my own special experience, and I shall depend on this rather than on voluminous statistics.

I admit that there is considerable increase in the insane, but I find no reason from this fact to dread the future of the race. I shall hope to demonstrate that much insanity does not depend on material brain disease, but has reference to the complexity of society and the numerous social efforts which occur. Many people are treated as insane because they are out of harmony with their surroundings.

I purpose dividing the lectures as follows: First, I wish to consider what is really included in the term "insanity"; next, what are the chief conditions leading to this disorder; and lastly the statistics as to its increase. I shall refer largely to the reports of the Commissioners in Lunacy of England, Scotland, and Ireland, and I am fortunate this year in having the Irish appendix to the report which is exclusively concerned with the increase of the insane in Ireland.

I shall therefore first consider the forms of insanity. I do not intend giving any fresh classification, for I still feel with Hughlings Jackson, that we alienists have to be like naturalists rather than botanists—we have no natural orders as yet, only groups for convenience.

First, unsoundness of mind often occurs without anything which can be called casualty arising. The medical man looks for material brain causes, the lawyer looks for responsibility, while society only considers whether a man is dangerous and ought to be restrained. There can therefore be no common professional basis for the various classes. There are many cases of insanity in which I maintain that there is no ground for suspecting any detectable material change in the nervous system.

Several able articles have appeared recently in the *Times* on the increase of insanity, but the writer does not seem to appreciate that insanity is not a definite disease. It is a condition, and hopefully no course of treatment will avail for the various cases. All depends really on the conditions. It is true that treatment must, in many cases, at least, depend on the change of these rather than on curing a disease.

However thorough social reform, supervision in homes or hospitals may be, there must always be insanity, yet too much must not be expected, and the general physician must have no practical fear that the knowledge of the means will increase knowledge much. Statistics prove that the increase has not advanced with the progress of treatment.

To make more clear one of my points, I say the medical standpoint has been medical; the legal, responsibility; and the social, social danger. The vernacular recognizes what many seem to overlook. Thus some are spoken of as being "beside themselves," others "out of their senses," while only some are said to be "out of their minds"—that is, unreasonable.

There is no fixed standard of sanity; a man is sane or insane in relation to himself, so that what is insane conduct in one man may not be insane conduct in another. Some persons are out of place and others out of their time. Thus, a fine strong youth was described by his father as being suitable for the middle ages as a knight, or for America as a cowboy, but quite unsuited for the twentieth century in England. Again, the conduct suitable to youth may connote insanity in old age. Some persons, notwithstanding their education, fail to fit into their surroundings, and are treated as aliens.

Insanity, again, is often a question of degree; a man may be parsimonious and be reasonable, but he may develop into a true miser with the hermit's habits, and become a social danger, but even with such it does not follow that they are all to be treated alike. The liberty of the subject depends on the length of the purse, so that while one recluse may have to be sent to an infirmary or asylum, another with wealth need not be so treated.

Normal habits and healthy feelings may grow into morbid. The miserly habit is one example, but the normal family feeling may by overgrowth produce insane jealousy, and such growths vary in degree, but that they are very common I know, and that they add to the chronic insane in asylums I also know.

Probably many will say there must be something wrong in the quality of brains which so readily get out of order. This may be so, but I fail to believe that any ordinary hospital treatment is going to alter them much. I shall as much expect to have a pathology for religious conversion as for social perversion. We have, so far as insanity is concerned, to judge by the conduct, not by any definite nerve signs.

It is therefore necessary to recognize that similar conduct may depend on various and different mental states. We may have exaltation of ideas occurring in general paralysis, in mania, in toxic states, in delusional insanity, and with certain slowly-growing states which I have called "governess disease." The chief interest of these lectures, I presume, however, will centre on what may be called the common forms of insanity. I shall later point out that I believe strongly in a neurotic type or constitution, and that those who have this are the most likely to produce any increase among the insane; and I shall have to consider what evidence there is of the increase of the neurotics, and what causes may give rise to such increase.

Is it possible for any one to become insane? Are there some persons so constituted that no storms will upset their nervous or mental balance? I say that though any one may become delirious, and, given certain conditions, any one may become a general paralytic, yet I believe that there are very many who could never become subject to delusional insanity or suffer from recurring mania or melancholia. I say here that there is increase among the senile insane and general paralytics. As to alcoholic insanity I shall go into details later; but alcoholism produces neurotic states, and also causes insanity in many forms, but I do not think there is at present any evidence that alcohol is causing increase among the numbers of the insane. Insanities of special types, with particular effects on the nervous system, follow toxic influences other than alcohol and I shall have to study these in my second lecture.

The next part of my subject is more open, I suppose, to debate. I have already said there are many cases in which the insanity depends on the person being out of relationship with his immediate surroundings, I now say there are many who are temporarily out of such relations; they may be said to suffer from functional disorder. I am not maintaining that function is the cause of organization, and to a great extent I maintain that that is true, that morbid habits may lead to distinct morbid results, that bad habits may lead to bad brains. Many social misfits and cases of incompatibility are thus to be classed, and the so-called hysterical cases and cases of sudden cure

after prolonged mental disorder are to my mind to be looked upon as functional.

There are such things as morbid mental growths; in some cases these are easily traced. Take the man who, having early made a fortune, but having no other than money-making instincts, retires only to find all things are vanity; he dwells more and more on his feelings and becomes a confirmed hypochondriac. Such developments may either lead to permanent mental incapacity, or, on the other hand, may leave the rest of the mind as clear as ever, so that there is what used to be called a monomania; I prefer to call such mental growths, for they are neither invading nor destructive to mind generally.

Similarly, that conditions are responsible for some forms of insanity is seen in the cases in which a daughter, devoting her life to an invalid mother, after the death of her mother begins to analyse her conduct and her feelings during her prolonged watching, and in the end comes to the conclusion that she did not do all she might to have saved her mother, and slowly a delusion arises of having killed her mother. The loving wife also may slowly pass into the suspicious one, and end by having delusions as to the honesty or constancy of her husband. I have met doctors' wives who became so jealous of their husbands that they made their lives unbearable while they were attending other women for midwifery.

All these and thousands of others provide material to show how normal feeling may pass into delusions, and I do not ever expect to find a seat in the brain for such ideas. I accept much that Dr. Hughlings Jackson has written in his *Factors of Insanity*. He points out the effects of removal of the higher spheres of control, and the letting loose of the lower, more organized, parts of the nervous system, and he also points out that not only is there loss of control, but there is a morbid demonstration often of these lower parts, what I might call a fresh morbid growth arising from the lower nervous strata.

From these more complex questions I now pass to the consideration of the more typical forms of mental disorder. We have the mental disorder chiefly marked by loss of the higher control. This varies in symptoms according to the degree of the defective control, and may range from hysteria to acute mania, and parallel to this we have to consider similar states depending directly on toxic agents. Anything which will produce delirium may produce mental disorder of a delirious type—that is, with hallucinations of the senses—and may have the general aspect of chronic delirium. I do not find any evidence that there is any material increase in the numbers suffering from mania.

Melancholia, again, ranges from hypochondriacal self-consciousness to profound stupor. This has more frequently a more material nervous basis, which may be primary or secondary to other morbid states in the body, the brain being badly served by one or more of its organic servants. I believe there is an increase in the numbers of melancholic patients admitted into asylums as well as an increase in the numbers of suicides due to mental depression. Many forms of insanity seem nowadays to tend rather to nervous exhaustion and mental depression.

As to dementia and its various grades, there appears also to be an increasing tendency for mental disorders to lead to premature mental weakness; and the fact that a term, "dementia praecox," has become common is looked upon as evidence that in young persons there is an increasing tendency to permanent breakdown after acute attacks of insanity of any form.

As I have already said, there is an increase in the numbers of those suffering from general paralysis of the insane, as well as of those who are affected with senile mental disorders. I believe there is an increase among the simply neurotic and that neurasthenia is increasing in frequency, and that these conditions are at the root of a large number of cases of delusional insanity, chronic recurring insanity, and paranoiac insanity which fill our asylums.

In conclusion, I have to repeat that there is no such disease as insanity, that it is a negation, and depends more on social than on medical conditions. Finally, that certain forms are due to direct brain decay, others to brain intoxication, and others to morbid habit or morbid surrounding, or they are the natural but morbid mental growths occurring in certain unstable individuals.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF PREMATURE BIRTH OF TWINS.

The mother in this case was a primipara, aged 23. Her last menstruation prior to conception commenced on November 3rd and terminated on November 8th, 1905. She first felt fetal movement early in April, 1906, and expected confinement about August 10th. The actual date of birth was June 1st. Both children were females, and the survivor weighed one week after birth 1 lb. 14 oz., and on October 6th 6 lb. 10 oz.

The exciting cause of premature birth was haemorrhage, most probably accidental. The infant first born lived only a few hours. The second child, much smaller, was born without interference, and followed smartly and easily after the first. This freedom from long-continued pressure gave the child a chance which the first had not, and the difference in appearance as regards the chances of life was at once apparent. The second cried spontaneously on delivery; the first lay limp, and could only be got to cry faintly on slapping the back. As regards treatment, the room was kept about 70 degrees, and hot water rubber bottles were used, one on either side and one at the feet. The child was rubbed all over with cod liver oil. It took the breast from the first day, the supply of milk being abundant and of good quality. Since June 30th the weight has steadily increased, but from June 7th to June 30th nothing was gained.

The following table shows the weekly increase. The infant continues to thrive.

Born June 1st, 1906. Weight on June 7th 1 lb. 14 oz.

Date.	Nett Weight.	Increase.	Weeks Old.
1906.	lb. oz.	oz.	
June 30th	1 14	—	4
July 7th	2 0	2	5
July 14th	2 2½	2½	6
July 21st	2 7	4½	7
July 28th	2 12	5	8
August 4th... ..	3 2	6	9
August 11th ..	3 8	6	10
August 18th ..	3 14	6	11
August 25th ..	4 3	5	12
August 31st ...	4 12	9	13
September 8th ...	5 2	6	14
September 15th ...	5 8	6	15
September 22nd ...	5 12	4	16
September 29th ...	6 3	7	17
October 6th ..	6 10	7	18

The case seems worth reporting in view of the weight and age of the child at birth, and the successful issue without incubation treatment. I should like to hear what is the earliest recorded instance of survival after immature birth without incubation treatment.

Cambuslang, N.B. H. S. Marlyn, M.B., Ch.B.

THE ADMINISTRATION OF ETHYL CHLORIDE.

A few months ago[1] I gave my objections to the present commonly-accepted method for the administration of ethyl chloride, and explained my mode of introducing it directly into the bag in a gaseous form. Whilst the method indicated was a great improvement on the old, certain details remained unsatisfactory. Among these were the difficulty of controlling the valve of the container so as to be sure that the vapour and not the fluid was being poured into the bag, and there was also occasionally some difficulty in finding the small slit when an additional dose was required.

To obviate these disadvantages I have had a thick-

[1] British Medical Journal, May 12th, 1906.

walled rubber tube 8 in. long fitted into the side of the bag 2 in. from its neck. The nozzle of the ethyl chloride container is inserted into the free end of the tube, which holds it sufficiently tightly to prevent slipping. The face-piece of the inhaler is carefully applied, and after the first breath has been taken, the valve of the container, held vertically with the nozzle upwards, is pressed upon, and the gas allowed to escape along the tube into the bag. The warmth of the hand holding the container is sufficient in the majority of instances to cause enough vapour to be liberated to secure the requisite anaesthesia, but when the atmospheric temperature is low, or if there is only a small amount of liquid in the container, a little shaking suffices to give a freer evolution of the gas.

My results, so far, have been uniformly good. Induction takes a few seconds longer, but this is more than compensated for by the ease with which the patients become anaesthetized. Formerly, in my experience, struggling occurred in a certain percentage of cases owing to a choking sensation caused by too great a concentration of vapour in the first inhalations. It is now conspicuous by its absence.

As regards the amount of ethyl chloride used, I find in my last 80 cases in adults that 3 c.cm. was the maximum required to produce complete anaesthesia; in 20 of these cases 2 c.cm. and under was found to be quite sufficient.

In advocating the above method of administering ethyl chloride, I wish to make the principle on which it depends quite clear, that is, to give every individual patient the dose necessary to produce anaesthesia, as opposed to the practice of presenting him with a definite quantity, which may, for all we know, be an overdose in his particular case. If this principle were more generally acted upon, the dangers and difficulties attending the use of ethyl chloride would be very much minimized, and we should be bringing the method of administration more into line with that of other more commonly-accepted anaesthetics.

L. KIRKBY THOMAS.
Anaesthetist to the Women's Hospital, Birmingham.

INTESTINAL WORMS IN THE APPENDIX VERMIFORMIS.

DURING an abdominal operation performed by Dr. Amand Routh on February 2nd, on a woman aged 31, the appendix was found to be closely adherent by its antimesenteric border to a mass which proved to be the right Fallopian tube; there was old salpingitis and a lutein abscess of the right ovary.

As the appendix was seen to be elongated, swollen, and adherent, it was removed. After ligature of the stump a thread-worm (*Oxyuris vermicularis*) was seen to wriggle out from the lumen of the appendix. On subsequently opening up the excised portion ten more were seen lying in the mucous membrane for about 1½ in. of its length; some were on the surface, one or two lay deep down in the lining membrane, but none had pierced the other coats of the appendix. On examination microscopically three were found to be male, and the remainder female, with ova in great numbers. The mucous membrane of the appendix was not much inflamed, but there was some congestion. Probably this was due to the pelvic peritonitis having involved the appendix and caused the adhesions. The occurrence of the worms in the appendix was most likely accidental, they having migrated from the caecum, for the patient had had the usual symptoms of the presence of thread-worms for about three and a half months.

The history of the case pointed to old-standing trouble in the pelvis especially on the right side, though at the operation the left Fallopian tube was also found adherent and swollen and was removed. Three weeks before admission the patient had pain in the right iliac region, accompanied by vomiting and the bowels were constipated, but there was no proof that this attack was of appendicular origin. Bacteriological examination of the pus in the lutein abscess proved it to be sterile.

Cases have been recorded in which *Oxyuris vermicularis* and *Trichocephalus dispar* have been found, the whip end of the latter worm being buried in the mucous membrane. Attacks of appendicitis have been directly attributed to them.

Professors Metchnikoff and Blanchard have both stated that intestinal worms do definitely destroy the mucous membrane of the intestine, and that thereby a suitable nidus is created for the growth of those infective organisms which directly cause appendicitis (see BRITISH MEDICAL JOURNAL, December 1st, 1906, page 1596).

Certainly, since the parasites are able to migrate into the appendix, they are also likely to carry infection with them, and therefore they cannot be ignored as one of the many etiological factors in appendicitis.

JOHN W. HEEKES,
Resident Obstetric Officer, Charing Cross Hospital.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

CASE OF STRANGULATED LITTRÉ'S HERNIA WITH GANGRENE AND PERFORATION OF THE MECKEL'S DIVERTICULUM: RESECTION OF THE GUT: RECOVERY.

(By H. BRUNTON ANGUS, M.B., M.S.Durham, F.R.C.S., Honorary Surgeon.)

M. F., a male, aged 14 years, was admitted on February 24th, 1906, suffering from a painful swelling in the right inguinal region.

History.—He had had a right inguinal hernia since childhood, but never wore a truss. On February 21st, as he was getting into bed, he felt a pain in the right side of the scrotum, and commenced to vomit. The vomiting became incessant, and there was absolute constipation. There had been no previous attack of pain or vomiting.

Condition on Admission.—He looked very ill, was dull, and disinclined to talk. The temperature was 100°, the pulse 110; the tongue was coated but moist, and he was vomiting bilious matter. On the right side there was a long sausage-shaped swelling reaching to the bottom of the scrotum, and disappearing in an upward direction through the external abdominal ring. It was dull on percussion, devoid of impulse on coughing, painful on handling, and very tense. The testicle felt at the lower end of the scrotum seemed enlarged. The left scrotum was normal.

Diagnosis.—Strangulated right inguinal hernia.

Operation (February 24th).—The inguinal canal was slit up, and a large hernial sac exposed and opened. Faecal matter was found free in the sac, which was cleansed with hot normal saline. A piece of omentum becoming gangrenous presented, and under it was found a large Meckel's diverticulum, 3 to 4 in. long, together with the portion of small intestine from which it was springing. The diverticulum was nearly as large as the small intestine, and the end was gangrenous and perforated. It was found impossible to pull the loop of bowel further down owing to the shortness of its mesentery and the tight constriction at the internal abdominal ring. After thorough cleansing with normal saline and wrapping the loop in gauze, the arched fibres of the internal oblique and transversalis were divided in an upward direction until the affected bowel was freely exposed. The general peritoneal cavity was carefully packed off with gauze, then it was found that the small intestine was gangrenous also where it had been nipped at the internal ring; 3 in. of small intestine, including the diverticulum and also the affected omentum, were then resected. An end-to-end anastomosis with Murphy's button was performed, the line of union being strengthened by a ring of Lembert sutures (fine silk). The sac was freed, and appeared to be an acquired one, the neck was closed, and the remainder removed. The divided internal oblique and transversalis were sutured with catgut, and an ordinary Bassini's radical cure performed with catgut sutures, the wound was drained, and the skin united with silkworm gut sutures.

Subsequent Progress.—The patient stood the operation well but developed severe bronchitis with purulent sputum, and was exceedingly ill for a few days. On

March 3rd the drainage tube was removed. On March 6th he passed the Murphy button, and from this time quickly improved; the wound discharged very little, and healed well. On March 26th he was made an out-patient, with his wound soundly healed. He came back in a month's time, looking well, with a sound scar, and in excellent health.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH.

PATHOLOGICAL AND CLINICAL SECTION.

Birmingham, Friday, February 22nd, 1907.

THOMAS NELSON, M.D., in the Chair.

MYASTHENIA GRAVIS.

DR. STANLEY BARNES showed a married woman aged 38. In June, 1906, she began to feel difficulty in mastication, especially at the end of each meal. Difficulty in swallowing, development of palatal speech after much talking, and rapid exhaustion on performing any movements were then noticed, and two days before the date of the paper diplopia in the evening was noticed. Examination showed well-marked myasthenic ptosis, worse on the left side, no squint, great weakness of the muscles of the face, jaw, and tongue; no sensory symptoms. The temporal and masseter muscles were very weak and markedly atrophied. There was no sign of enlargement of the thymus.

SPONTANEOUS CURE OF EMPYEMA OF ANTRUM.

Dr. LAMB showed a specimen of spontaneous cure of chronic empyema of the antrum of Highmore. The specimen showed: (*a*) A depressed and pitted atrophic area in the middle meatus, extending downwards from the hiatus, in the position usually occupied by pus from the antrum. (*b*) A carious second molar tooth with a large cavity in the crown, opening into the pulp cavity of the palatal fang. This cavity was partly filled by a pledget of cotton, and on the top of this a filling of platinum amalgam had been firmly fitted. The tooth was quite firm in its socket. (*c*) A little bony tube about 3 mm. long projecting upwards from the floor of the antrum, and communicating below with the socket of the carious tooth. This tube was perfectly healed over and covered by continuous mucous membrane. There was no trace of pus in the antrum or in the nose when the head was first examined, and no trace of operative treatment except the filling of the tooth.

SPECIMENS.

Dr. LAMB also showed the following: (1) A rhinolith, with a metal button as a nucleus. There was a history of ten years' suppuration, and much of the lower turbinal was destroyed. (2) Putty-like material for a case of rhinitis caseosa.

Pedunculated Parovarian Cyst.

Dr. PURSLOW showed a pedunculated parovarian cyst, which he had removed from a married woman aged 25; it had caused difficulty in her last confinement, and craniotomy had been performed by the medical man in charge. The cyst, which was as large as a fetal head, was removed with the Fallopian tube and the ovary of the same side, the latter being somewhat enlarged and cystic. The specimen showed in an unusually clear way the anatomical relationships of the variety of cyst. The cyst lay in the outer half of the mesosalpinx, and on the inner side of it could be clearly seen the unaffected tubes of the parovarium. The Fallopian tube extended over the upper surface of the cyst, and the fimbriated extremity was normal.

Solid Tumour of Ovary.

Dr. PURSLOW also showed a solid tumour of the ovary, which he had removed by abdominal section. The patient, married, aged 33, and mother of one child, came to the Queen's Hospital complaining of prolapse, for which she had been wearing a pessary, and of attacks of retention of urine, which had necessitated a catheter. A densely hard, nodulated tumour could be felt in Douglas's pouch; it appeared to be as large as the fist and to be independent of the uterus. Fibroid tumour of the ovary was diagnosed. At the operation the tumour was found to be growing from the right ovary; the other ovary appeared to be normal, and was not removed. There was no ascites. The tumour, when cut across, presented a whorled appearance. A microscopic section, which was shown to the meeting, was considered to confirm the diagnosis of fibroid tumour. The ovary could not be distinguished by the naked eye as distinct from the tumour, and no ovarian tissue was seen under the microscope.

Hodgkin's Disease.

Dr. MILLER showed specimens from the case of a male, aged 19, who was admitted to the General Hospital under Dr. Short, suffering from pain in right side of chest, general enlargement of the glands, loss of weight, and jaundice; duration of illness, about five weeks. He died after four days in hospital. A *post-mortem* examination was made on January 17th, 1907, the day after death, when the following appearances were found:

A large number of discrete hard glands, varying from the size of a pea to that of a large bean, both sides of neck; similar glands in axillae and groins, most marked on the left side. A large mass of glands in the mediastinum, extending down over surface of pericardium and involving the root of the right lung. There were large masses of glands round the pancreas, similar glands extending down aorta and iliac vessels on both sides. A specially large mass was visible immediately above the right inguinal ring, extending down into the pelvis and groin. The glands everywhere were pale, firm, and on section showed yellow-white surface, with irregular paler and more opaque areas scattered through. The upper lobe of the right lung was infiltrated with growth, showing an opaque grey appearance with whiter, caseous-looking centres; accompanying this was a considerable amount of interstitial change. The spleen was markedly enlarged, of a deep purple colour, with irregular yellow areas shining through the capsule. On section these areas were seen to be fairly numerous through the substance of the organ; they were pale yellow in colour, firm in consistence, and irregular in shape. The liver showed several areas of growth in its substance, exhibiting similar characters. There was nothing special to note about the other organs, except that the stomach was atrophied, and the small intestine measured only 12 ft. 5 in. in length. Microscopic examination of the glands shows as the earliest change multiplication of the endothelial elements of the gland, with disappearance of the lymphoid tissue. At the same time there appear multinucleated cells. This new tissue goes on to the formation of fibrous tissue, which shows a marked tendency to undergo necrosis. Similar appearances can be made out in the lesions of the other organs, that is, cellular infiltration, leading to fibrosis, and ultimately to caseation. In no organ, however, is there any evidence of giant cell formation. Specimens stained for tubercle bacilli fail to reveal any. Cultures were made from the spleen and lymph glands at the *post-mortem* examination. A streptococcus and a bacillus, which proved to be *Bacillus coli communis*, were isolated. Two guinea-pigs were also inoculated from spleen and lymph glands. One of these, killed a month subsequently, shows no lesion either at the point of inoculation or in the organs. The other animal has developed a marked enlargement of the inguinal glands on the side on which it was inoculated. It is at present under observation.

The case, which was clinically, and also to some extent pathologically, one of Hodgkin's disease, presented certain peculiarities. It resembled in some points a tumour condition, in others a tuberculous one. Under the term "Hodgkin's disease" were included various conditions approximating to lympho-sarcoma on the one side, and to a chronic form of tubercle on the other. This case appeared to be on the border line. The development of glandular enlargement in one of the animals was interesting, but one could not say much about it at the present time. The further progress of the disease will be carefully watched. It was not improbable that the result might be to show that the condition was a tuberculous one, in spite of the absence of other positive evidence.

SPONTANEOUS RUPTURE OF HEART.

Dr. H. NEVILLE CROWE showed a specimen of spontaneous rupture of the heart, occurring in a cabdriver aged 62. He was seen to fall whilst climbing on to the box of his cab. He was brought to the General Hospital, Birmingham, but was dead on arrival (he lived about ten minutes). On *post-mortem* examination there was no sign of any external injury. The pericardium was distended with blood clot. A rent about three quarters of an inch long was found in the posterior wall of the left ventricle; it had irregular edges, and involved the whole thickness of the wall. The heart muscle was hypertophied, and appeared fibrous and fatty. The aorta was slightly atheromatous, especially around the orifices of the

coronary arteries. The latter were thickened and atheromatous. The branch which supplied the ruptured portion of the muscle was completely blocked. The arteries of the brain were also atheromatous. Nothing was found in the vertebrae or elsewhere that could have wounded the heart. Microscopic sections of the heart muscle showed that there was extensive fibroid and fatty degeneration of the muscle, while sections of the coronary artery showed extensive calcareous and fatty degeneration of the middle coat, all the coats being thickened.

The specimen was discussed by most of the members present.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. Warrington Haward, F.R.C.S., President, in the Chair.

Tuesday, March 12th, 1907.

Chyluria.

Dr. A. F. Hertz described his observations on a case of chyluria occurring in England, giving a report of the *post-mortem* examination. The patient was a sailor, aged 66, who, when admitted into Guy's Hospital, in October, 1906, had been passing milky urine for nine months. In that period he had lost nearly 2 st. in weight, and had been occasionally troubled with difficulty in micturition due to intravesical clotting of his urine. He had been in India for a short time twenty years before the onset of the disease. Opacity of the urine was due entirely to the presence of fat; proteid was invariably present, but dextrose was never found. A fat-free diet resulted in the complete disappearance of fat and proteid from the urine, if the patient rested after meals. Excess of proteid or carbohydrate had no effect at all on the urine. Fat in the food gave rise to chyluria. The first trace of fat and proteid in the urine occurred as early as thirty-three minutes after the fat had been eaten. With a full diet the maximum amount of fat appeared five hours after the meal, and the last traces disappeared in eight hours. It appeared probable that the fat in the urine came directly from that in the food, and not from the stores of fat in the body. Chylous urine appeared sooner after a meal and more fat was present if exercise were taken than if the meal were followed by rest. Chyluria and lymphuria were both increased by the assumption of the vertical position. The thoracic duct was found to be impermeable at a point 7 cm. above the diaphragm. The abdominal lymphatics were much dilated, and a well-marked anastomosis was traced between the lacteals and the lymphatics on the right side of the bladder. Inside the bladder, at a point exactly corresponding to the dilated lymphatics, was found a minute mass of fibrin adherent to the mucous membrane, probably marking the position where chyle from the intestinal lacteals and lymph from the lymphatics of the legs escaped into the bladder. The obstruction in filarial chyluria appeared to be due to a fibrous stenosis of the thoracic duct, secondary to inflammation brought about by the presence of filariae at some earlier period. As the obstruction, when once produced, would be permanent, it would remain after the filariae had all died out. Hence cases, such as the present one, in which the patient had been abroad twenty years before the onset of the chyluria, might be due to an old infection with filariae, which had completely died out leaving the obstruction in the thoracic duct. In non filarial cases the obstruction was probably due to some other parasite, or more frequently to caseous glands or other tumour pressing on the duct from without.

Dr. G. Hamm had recently had an opportunity of working on chyle obtained from a chylous fistula. The rate of appearance of fat in the chyle depended chiefly on its melting point. No glucose in his case appeared in the chyle. Was it possible to attempt to cure the condition by any operation such as connecting up the part of the thoracic duct above the obstruction with that below?

Mr. Stretch Faber said he had been interested in the subject of the accumulation of chylous fluid in the body cavities, particularly in the thorax, but knew of no recorded operation such as had been alluded to.

Dr. Hertz replied.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

J. O. Affleck, M.D., President, in the Chair.

Wednesday, March 6th, 1907.

The Prognosis and Treatment of Lobar Pneumonia.

In a paper on this subject the President said he thought that the disease was more frequently met with than formerly and had become more fatal. It was impossible to tell at the commencement how a case would terminate; in the very young and very old the outlook was always grave. Alcoholic habits, even in the young, precipitated fatal results. It was very fatal in the insane; when pneumonia supervened on surgical procedures the prognosis, though grave, left grounds for hope. Some cases which presented in the early stages gastric and abdominal symptoms simulating lesions of those parts often proved severe. Where much pleuritic pain was present or where the patients perspired copiously and at the same time had a high temperature the prognosis was bad. Persistent insomnia and marked delirium, whether of the active or low typhoid form, rendered the outlook grave. As a rule not much information was to be derived from the temperature. A low temperature in the old gave no special grounds for hope. Of chief importance was the condition of the heart. When the pulse rate continued at or below 120 beats per minute the outlook was promising; at 130 beats per minute the prognosis was grave; and when 140 was reached or exceeded a fatal termination nearly always ensued. A varying rate and character was ominous. A moderate amount of expectoration was a more favourable sign than when none was present. Cessation of expectoration with increasing cyanosis were evil omens. When about the crisis, where the temperature fell but the pulse rate rose, the prognosis was not good. Purulent pleurisy often showed itself by a rise in the pulse rate and temperature after the crisis. In regard to the treatment, he believed in not interfering too much and in avoiding over-feeding and over-stimulating patients. A small quantity of morphine might be used for pain, but only in the early stages. Digitalis and strychnine by hypodermic injection he had found to be the most useful drugs. Poultices, except when pain is present, were unnecessary. Steam impregnated with tinct. benzoin. co. or menthol was beneficial. The administration of oxygen he had found of little use, but plenty of fresh air was of great value.

Dr. Byrom Bramwell had observed that when jaundice appeared in the early stages of right-sided pneumonia the prognosis was bad. In the old, when a previously regular pulse suddenly became irregular, death often followed in a short time. He believed in the administration of oxygen, especially if strychnine be given at the same time hypodermically. Quinine he had found to be useful in the early stages of the disease.

Professor Greenfield observed that in a large proportion of cases which he had to deal with vomiting was an early symptom. The most efficacious drug was the tinct. strophanthi of the 1885 *British Pharmacopoeia*. Thanks to it he no longer regarded any case of pneumonia as hopeless. In some cases of heart failure he had given as much as 15 minims every half-hour.

Dr. James regarded the appearance of herpes labialis as a good sign. He always gave a purgative at the beginning of his treatment so as to remove toxic bodies from the intestinal canal. Musk was beneficial at the crisis.

Dr. Carnegie Dixon believed that the pneumococci tended to cause thrombosis, and that this tendency was diminished by the administration of strophanthus. He had observed that the bone marrow in fatal cases had become quite exhausted.

Dr. Gulland had found that when at the beginning of an attack leucocytosis was slight, but gradually became more marked, the prognosis was good; when the reverse occurred the outlook was grave. If eosinophile leucocytes were present the termination promised to be favourable. A slight glycogen reaction was a favourable sign, but when marked the prognosis was bad.

Dr. Bennett believed that strychnine acted not on the heart, but on the vasomotor centres, and through those on the blood vessels, which lost tone as a result of the pneumonia toxaemia.

The Therapeutic Ozonic Index.

Drs. Ian Fletcher Stewart and L. C. Peel Ritchie, in a paper on this subject, described a method

by which they thought tuberculosis could be discovered in the very earliest stage. This was the injection of a minute dose of tuberculin R, and observations of the tuberculo-opsonic index of the blood before and after inoculation. The tuberculo-opsonic index alone might give very fallacious results, as in a large number of undoubted tuberculous cases it might lie within a normal limit. When $\frac{1}{500}$ of a milligram of tuberculin R was injected into non-tuberculous subjects the opsonic index rose, but when administered to tuberculous patients it fell. If this "negative phase" appeared after inoculation of any person, the diagnosis of tuberculous disease was in their opinion established. Their investigations were based on a total of 62 cases of tuberculous disease of various forms and on 13 non-tuberculous persons.

CLINICAL SOCIETY OF LONDON.

H. H. CLUTTON, M.A., M.C., F.R.C.S., President, in the Chair.

Friday, March 8th, 1907.

CONGENITAL PYLORIC STENOSIS.

DR. G. A. SUTHERLAND read a paper on the medical treatment of this condition, narrating the details given in connexion with three cases. Its aim should be to remove any source of irritation in the stomach that might maintain pyloric spasm. For this purpose small feeds, frequent feeding, and food capable of being digested in the stomach were necessary. Fat was the most irritating constituent of food. Gastric lavage should be carried out daily at first. Progress was indicated by cessation of vomiting, return of normal intestinal evacuations, diminution in the stomach peristalsis, disappearance of signs of distress and discomfort in the patient, and by improved nutrition. He had not found benefit from treatment by sedatives, such as opium or bromides, but advised the use of saline injections, both subcutaneously and per rectum, to supply the great need of water in the tissues generally.

HYPERTROPHIC PYLORIC STENOSIS IN INFANTS.

Dr. VOELCKER read short abstracts of 7 cases of his own, and gave the results of an analysis in the 39 cases observed in the Great Ormond Street Hospital between 1897 and the present time; 35 of the 39 occurred in males, a preponderance too great to be accidental. No two cases occurred in one family; 9 out of 34 were first children. In 28 cases 10 were difficult and 18 normal labours. In no case of difficult labour did the symptoms come on within fourteen days, and in 1 only at six weeks. This made the possibility of traumatic haemorrhage as a cause of the condition very improbable. Microscopical examination also lent no support to the view of traumatism. In only 4 out of 37 cases did vomiting commence at birth; 3 began at one week, 9 at two weeks, 11 at three weeks, 5 at four weeks, 2 at five weeks, 2 at six weeks, and 1 at eight weeks. These facts tended to disprove the existence of a congenital lesion at the pylorus, and the occurrence of diarrhoea and of curds in the motions showed that the narrowing must be slight or intermittent. The vomiting often ceased though the quantity of food was not diminished and yet the child grew steadily worse. Coexistence of other congenital deformities was conspicuous by its extreme rarity. Out of 31 cases dilatation of the pelvis of one kidney was found twice, cystic kidney once, and slight webbing of the toes once. Fifty-six per cent. of the cases were on the breast when symptoms developed, so the condition could not be due wholly to artificial feeding. Of the author's 7 cases recovery took place in 2 cases and 5 died; but of the 39 cases at Great Ormond Street 34 had died. The author's fatal cases were all in hospital over fourteen days. The prolonged period for which these cases survived made him doubt if the stenosis was the cause of death. After death the stomach walls were hypertrophied, and certainly suggested an ability to empty the gastric contents one way or the other. The vomited material might be free from curds, and yet curds might be present in the stools or in the stomach "wash-out." The vomiting generally occurred five minutes after food at first, but was delayed beyond this later on in several cases. Vomiting was not due to milk food only, but occurred when the patient was fed on albumen water and Valentine's meat juice. Vomiting was the least serious part of the disease. Humanized milk with barley water and cream gave better results than peptonized milk. The condition of the pylorus was not invariably detected during life. Visible peristalsis had been observed in all his own cases. The gastric contents examined in one case showed the presence of HCl, pepsin, peptones, and albumoses. Egg albumin was not readily dissolved by it. The acidity of the contents suggested the spasm as due to an excess of HCl, but the administration of alkalies did not relieve the spasm. He thought that the cause of pyloric spasm would be found in some perversion of gastric secretion which caused spasm, which in turn induced hypertrophy of the pylorus; but that the cause of the malnutrition was a perversion of assimilation, and not a mechanical obstruction to the passage of food. The way in which cases terminated was very similar to that seen in cases of marasmus after gastro-enteritis. In five of the Great Ormond Street cases surgical measures had been unsuccessfully adopted. Lavage, modified milk, or peptonized milk had given the best results. Opium and bromides had done no good. An alkaline carminative mixture with a minim of glycerine of carbolic acid was generally given.

THE SURGICAL TREATMENT.

Mr. F. F. BURGHARD read a paper based upon 16 cases of his own. In former years most cases came under the surgeon at an early date; the tendency at present was to delay operation in the hope that medical measures alone would succeed. This hope was justified in many cases, and the debate would probably do good by enabling surgeons to form some idea of the results likely to follow medical treatment alone, as hitherto no extended experience had been published. His 16 cases had all been operated upon by the same method—dilatation of the pylorus; 11 had recovered satisfactorily from the operation, 10 remaining well, whilst 1 case died of convulsions within three months of the operation. The total mortality, therefore, had been 37.5 per cent. The chief danger was shock, which could be minimized by careful preliminary preparation and operating rapidly in a well-warmed room. Two accidents that had happened in the cases quoted were rupture of pylorus in 2 cases and wound of duodenum in 1. They could be treated by immediate suture, and were not necessarily fatal. Prolapse of omentum and small intestines was a very troublesome complication, as it tended to prolong the operation, and this might quite well cause it to prove fatal. It was best avoided by making the incision high up in the middle line over the liver, which was hooked up to allow the pylorus to be pulled out of the wound and allowed to fall back into place at the end of the operation, so as to keep the omentum and intestines in place. The child was fed per rectum for twelve hours after the operation, after which feeding by the mouth was gradually resumed. He preferred dilatation on account of its simplicity and rapidity. No recurrence of symptoms occurred after any of the cases.

Dr. H. ASHBY (Manchester) had treated 11 cases, all of which had died. After birth the cases usually did well for a week or two; then came probably over-feeding, gastric catarrh, and vomiting. Usually the cases improved for a few days under treatment. A wet nurse provided the best food; in default of this whey was of the greatest service. Even if vomiting ceased the patient's condition might deteriorate. At the autopsies he had noticed two points: first, the presence of gastric catarrh; and, secondly, the absence of complete obstruction, whatever the amount of hypertrophy. Only one of his cases had been operated upon, by gastro-enterostomy; but he was not enamoured of it, and considered operation on the pylorus itself preferable.

Mr. CLINTON DENT said that the mortality after operation was about 50 per cent. He thought pyloroplasty generally the better treatment. Surgeons could not doubt the contraction of the pylorus. In some mild cases medical treatment might cure it; but if they waited for the establishment of all the classical symptoms before operating the percentage of mortality would be even higher than it was now, whereas if operation were done on many cases before the symptoms grew serious the results would be still better. Probably medical treatment when the child was not doing well was rather more dangerous than surgical. He had a specimen from a seven months fetus, showing the stenosis well marked.

Dr. G. F. STILL had seen 24 cases. One was lost sight of; of the remaining 23, 14 recovered, and of the 14 8 had been operated upon by surgeons, 6 had been treated medically. Of the 9 that had died, 3 were moribund on admission, 3 had been operated upon, and 3 treated medically, by lavage, dieting, etc. Treatment by lavage twice a day, for weeks or months, was no simple matter. Surgical procedure might, in fact, be desirable in consequence of the environments of the case alone. His cases had been distributed impartially to the surgeon or physician without any regard to the severity of the cases. An operation, if primarily successful, might not ultimately be so.

Mr. MARINS had operated upon two cases. Both had recovered, but one died later from enteritis.

Dr. E. CAUTLEY thought the views of physicians were far too optimistic. The cases of true hypertrophic pyloric stenosis were incurable except by operation. Some medical treatment, however, seemed justifiable in all cases, but was not very successful. Mr. Dent had operated upon 8 of his cases, and all had more or less recovered. Results were better in private than in hospital cases; in the latter the cases were much run down before admission. The condition was never found at autopsies except in cases recognized during life, so that he would say a mild condition of pyloric hypertrophy did not give rise to symptoms.

Dr. R. HUTCHISON had had 9 cases in private practice; 1 had been operated upon and recovered; of 8 treated medically 1 only had died, and yet all had been severe cases. He therefore looked forward to this disease being treated by medical rather than by surgical measures.

Dr. SUTHERLAND, in reply, pointed out that medical treatment had been carried out only for the last two years.

Dr. VOELCKER, in reply, thought the question was, Should the child be saved by surgery or saved from surgery?

Mr. BURGHARD, replying, said his results of private operations had not been so good as those in hospital cases. He was also convinced that many cases would in future be cured by medical treatment. It might, indeed, be adopted in all cases at first, but by skilled persons who would take infinite pains; and surgery should be tried as soon as medical measures were found to be doing no good.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on February 15th, Dr. J. LINDSAY STEVEN, President, in the chair, Dr. W. S. LAZARUS-BARLOW read a paper on the histological *Diagnosis of the endotheliomata* and their bearing upon modern research work in cancer. The characteristic endothelial cell was round or oval with a large round nucleus. The nucleus had a small amount of chromatin which was accumulated at the centre, giving the section a characteristic brilliancy. Lumen formation was a marked feature. In the endothelioma proliferation was towards the centre of the tube; in the perithelioma, peripherally; in the perienthelioma, in both ways. Haemal and lymphatic varieties were also distinguished. Growths of the breast and cervix, described as spherical cell and squamous cell carcinoma respectively, were often found to be lymphatic perithelioma. The central degenerated material was supposed to be due to necrosis, in which case there should be a gradation, but in these cases there was a sharp differentiation and sometimes an endothelial lining as in the ordinary vessel. Theoretically there could be five varieties of squamous-celled carcinoma, consisting of (*a*) Malpighian cells; (*b*) Malpighian and prickle cells; (*c*) Malpighian, prickle, and keratinous cells; (*d*) prickle cells; (*e*) prickle and keratinous. The pure Malpighian, as also the pure prickle cell carcinoma, was difficult to distinguish from endothelioma. The existence of the space between the cells in which the prickles were normally found, differences in shape of nucleus, the amount of cell body and a certain mistiness, very different from the brilliancy of sections of endothelioma, were important differentiating points. Roughly 10 per cent. of cases of breast cancer and 10 per cent. of cases of uterine cancer were really endotheliomata. In other regions they were less common. Sixty-eight per cent. of these cases were associated with exceptionally wide metastases, but "parotid tumours" and certain tumours of the cerebral meninges did not tend to recur after removal. Thus endotheliomata might be intensely malignant or non-malignant. It was of great importance to determine to what class of tumour mouse cancers should be included, and if they were proved to be endotheliomata, whether they were of the intensely malignant or non-malignant varieties. A large number of sections were shown to illustrate these points.

ULSTER MEDICAL SOCIETY.—At a meeting held on February 28th, Dr. GAUSSEN, President, in the chair, Dr. W. CALWELL showed a case of *Sclerodermia circumscriptum* in a man aged 30. The affection had lasted a year, gave considerable pain, and prevented the patient raising his arm above the level of the shoulder. The part affected was the posterior axial portion of the right arm and forearm, and the distribution pointed more to the involvement of the seventh and eighth segments than to that of any special nerve.—Mr. FULLERTON read a paper on the examination of the urethra and bladder by the electric light, based on a year's work, and included notes of a number of urethroscopies, 111 cases in which the cystoscope was used, and 42 cases in which the ureters were catheterized. The urethroscopes found most convenient were those of Fenwick and Wyndham Powell. The inflating apparatus was considered a most valuable addition to the instrument. The cystoscopies were divided into four groups: (1) Those in patients whose only or chief symptom was haematuria: (2) those in which pyuria was the chief symptom; (3) those who complained chiefly of frequency of micturition; and (4) those who had a combination of symptoms, such as pain, frequency, and blood or pus, or both. The details of the cases showed the great utility of cystoscopic examination in cases of the general nature indicated. The paper was fully illustrated by morbid specimens, microscopical preparations, and apparatus.

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At a meeting held on February 8th, Dr. D. S. DAVIES, in the chair, a paper was read by Dr. H. O. PILKINGTON upon the reduction of infantile mortality without municipal milk depôts. Among the principal causes of a high infantile mortality in the northern towns the high earning power of the women was assigned a prominent place. The wife could earn more money than her husband, and becoming pregnant she continued at her work, with disastrous results to her offspring. Insanitary conditions could be dealt with by the sanitary authority, but the authority could not control the habits of the tenants and additional statutory powers were necessary to deal with bad tenants. An increasing cause of infantile mortality was the use of abortifacients, which, if unsuccessful, must have a disastrous effect upon the child. The ignorance of the first principles of health and adherence to tradition were responsible for many deaths. Dr. Pilkington thought that insurance played but a very unimportant part as an indirect cause of death among young children. The infantile mortality-rate in Preston during the three quinquennial periods ending 1906 was 251, 259, and 176 per 1,000 births respectively. This satisfactory fall appeared to be due in great measure to the employment of three women health visitors. The best type of woman for this work was an active sympathetic person who would not pry into family matters. Her duties should be quite distinct from those of the sanitary inspector, and she should neither serve notices nor take punitive measures. To be of the greatest use, her help should be given as soon as possible, and steps should be taken, with the assistance of midwives or others, to secure early intimation of births. Although Dr. Pilkington did not advocate municipal milk depôts, he considered that to a certain extent they might do good. It was an advantage to know the source of the milk supply; the condition of the health of the child was supervised; the very interest taken in it was good. Finally, he urged that instruction should be given in schools to the girls who would become wives and mothers. The PRESIDENT said that, in connexion with municipal milk depôts, he could not help asking himself whether they reached the right people, whether they might not encourage women not to breast-feed, and whether the milk was always properly used. Dr. SIDNEY

Davies, who had had only three months' experience of a municipal milk dépôt at Woolwich, said that he considered it quite a subsidiary means of reducing infantile mortality. The milk was delivered for 3d. weekly, and he found that the users were mostly persons below the average of wage-earners. Dr. Sykes said that young girls could not be taught the hygiene of motherhood, and he considered that the health visitors should teach maternal duties rather than domestic household hygiene. He gave some statistics tending to show that the infantile mortality had not really decreased in towns where milk dépôts had been established by the municipality. While admitting the extreme difficulty of accurately ascertaining whether breast feeding had increased or not, he said that the health visitors employed in St. Pancras were of opinion from their own observation that it had. Dr. Meredith Richards advocated compulsory notification of diarrhoea and the establishment of infantile dispensaries. Dr. Musgrave Craven and Dr. Beale Collins were of opinion that so long as female labour was utilized, so long would the high rate of infantile mortality remain. Dr. Collins said that if women had their own way they would not go out to work. Dr. William Butler said that from inquiries he had conducted he found that insured infants survived more than uninsured.

Chelsea Clinical Society.—At a meeting on February 19th, Dr. J. D. E. Mortimer, President, in the chair, Mr. Garry Simpson read a paper on *Suppurative disease of the middle ear*. The tympanum was a most unfavourable situation for an abscess to form in, as, owing to the floor being on a lower level than the drum membrane, it was very difficult to get efficient drainage; moreover, there was everything, such as warmth and moisture, to favour the growth of micro-organisms. The prognosis depended on the way the treatment was carried out, on the micro-organism causing the trouble, and on whether the disease followed one of the infectious fevers. About 60 to 70 per cent. of staphylococcal infections got well if properly treated from the onset, but the streptococcal were much more liable to become chronic. If a bulging drum membrane indicated the presence of fluid early incision was advisable. A bath of warm hydrogen peroxide (5 to 10 vols.) was a valuable means of loosening tough masses of discharge in chronic cases, and this treatment should be followed by syringing with warm solution of boracic or carbolic (1 in 80), and, finally, the instillation of three or four drops of rectified spirit of wine. If granulation masses did not recur after removal, and there was no evidence of dead bone, the above treatment properly and thoroughly carried out would cure the most obstinate cases. —Mr. Tribe, in a paper on *Rheumatism and heart disease in children*, drew attention to the difference presented by these conditions in adults and in children. In adults the amount of endocarditis was almost always proportionate to the rheumatic attack; in children the arthritic manifestations were very slight, the history of the illness being usually one of a certain degree of malaise, vague pains, possibly choreic movements, tonsillitis, and erythema nodosum. In 60 per cent. of these cases cardiac complications occurred, but there was a smaller tendency to permanent valvular defect than in adults.

British Gynaecological Society.—At a meeting held on February 14th, Mr. W. D. Spanton, President, in the chair, Dr. S. Jervois Aarons showed specimens of 4 cases of membranous dysmenorrhoea with casts, and read notes. Photomicrographs were exhibited. Three of the specimens were solid. The ages varied between 15 and 45. One patient had four children, while two were single and one was sterile. One cast was 7 cm. in length. There was no evidence of conception in any of the cases.—Dr. J. H. Dauber showed (1) a specimen of fibroma of an ovary fixed in the pelvis, causing extrusion of the uterus; this was removed from a patient aged 77, who made a rapid recovery after the operation. (2) Fibromyoma of the uterus weighing 30 lb., removed from a patient aged 57, who had complained for twelve years previously. On operation about a gallon of ascitic fluid escaped. The tumour burrowed into the left broad ligament, and was adherent to the transverse colon, bladder, and ascending colon. The operation lasted a little over an hour. The patient made a good recovery.—Dr. Macnaughton-Jones showed a specimen of a uterus containing multiple myomata removed through an abdominal incision.—The President delivered the inaugural address on the Gynaecology of To-day and of Fifty Years Ago. He said the tendency of recent years had been specialization, and the gynaecologist directed his attention to the special diseases of women rather than to obstetrics. It might be questioned whether specialization did not tend to lower the dignity of the profession, although it might enhance the reputation of the individual. The broader the range of knowledge which the gynaecologist possessed the more exalted would be his position among his professional brethren and the public. He referred to the teaching of the textbooks of fifty years ago, and compared it with the teaching and practice of the present day. At that time excision of the cervix for carcinoma was stated to be an operation equally cruel and unscientific. This was not surprising when they considered the elaborate mechanical contrivances employed and the high rate of mortality following interference. Vaginal hysterectomy had just begun to be performed for polypus, prolapse, and inversion of the uterus, but the majority of cases died within three days. These serious results induced some of the more advanced gynaecologists to attempt removal of the uterus by the abdominal route, which was declared by some of the writers of that day to be absolutely unjustifiable. The treatment of inflammatory affections of the ovaries with or without suppuration was by antiseptics and chlorides internally, while blisters and camphorated frictions were employed externally, especially when gangrene was feared. In some cases where this treatment failed it had been suggested to cut down on the seat of suppuration, but nobody would be so foolhardy as to carry it out. Those who had taught them to utilize the functions of the peritoneum had done more to advance abdominal surgery than any other workers. The treatment of ovarian cysts consisted in the administration of diuretics, diaphoretics, and purgatives, combined with abdominal friction, gentle percussion, and compression of the tumour. When this failed it was recommended to incise the skin and use a trocar and cannula to draw off the fluid. Ovariotomy found little favour among teachers then, but was now the only recognized method of treatment. Fistulae were common, but were now rarely met with owing to improvement in the teaching of obstetrics. A plea was made for improvement in the teaching of gynaecology in the metropolitan schools. The favourable results now achieved in gynaecology were in no small degree due to the efficiency of nurses.

Society for the Study of Disease in Children.—At a meeting held on February 15th, Mr. Sydney Stephenson in the chair, the following were among the exhibits:—Mr. Stephenson: Case of *Buphthalmos* in a syphilitic infant, aged 10 months. The condition had been observed immediately after birth. The corneae, at first extremely cloudy, had cleared under treatment by physostigmine and mercury internally, and anterior sclerotomy had been performed upon the left eye. The child obtained fair sight. Drs. Spriggs and Higgs: A case of *Cretinism* in a child, aged 2 years and 7 months, which had always been backward. It was 26 in. long, circumference of head 17½ in. She could not walk or stand, and was a typical cretin physically. The mind was about equal to that of a normal infant of 8 months. The complexion had already improved markedly under thyroid treatment begun three weeks previously—1 gr. of the extract was being given three times a day. The weight fell ½ lb., and there was considerable restlessness and fretting, which ceased when the dose of thyroid was lessened. Dr. Cautley: (1) A case of *Cerebral tumour* in a boy aged 10 years, who for six weeks had had periodical attacks of headache lasting twelve hours, and terminating in vomiting. For two weeks there was paralysis of the left external rectus. He had optic neuritis and exaggerated knee-jerks, but no other abnormal signs. Possibly a small quiescent tuberculous focus existed in the superficial portion of the pons. (2) An infant six weeks old with a large *Inguinal hernia* in conjunction with basal meningitis. The condition of rigidity of the abdominal muscles made it doubtful if an operation should be done at present for the cure of the very large inguinal hernia. Mr. Lockhart Mummery: A *Lymphangeioma* of

the left side of the tongue was shown in a patient, a boy aged 5 years. The surface of the tumour showed small clear-walled cysts. It caused no inconvenience. Three cases of *Aortic regurgitation* were shown by Dr. Porter Parkinson, all in girls and of rheumatic origin. In one patient, aged 9 years, there were aortic diastolic and mitral systolic murmurs. In Case 2, aged 12 years, there was only an aortic regurgitant murmur with enlargement of the left ventricle, water-hammer pulse, and well-marked, extensive, visible arterial pulsation. In Case 3, aged 14 years, similar signs were present, but in addition there was a presystolic thrill at the apex of the heart, and presystolic and systolic murmurs in the same situation: the pulse was of moderate size, indicating there could be little, if any, stenosis of the mitral valve. A case of cerebral abscess after operation was shown by Mr. P. Turner. The patient, a girl 7 years old, was operated on for an acute mastoid abscess following disease of the right middle ear on December 4th, 1906. Attacks of *petit mal* had been observed for a year. After operation drowsiness supervened, and a left-sided convulsion followed by hemiparesis. There was no headache, vomiting, nor optic neuritis. Granulations were found blocking the opening from the antrum into the tympanum, and removed, but the dura mater was found healthy. The drowsiness and weakness then disappeared; ten days later headache and drowsiness came on, and a needle inserted into the temporo sphenoidal lobe showed pus; the abscess was drained, and recovery was then uneventful. Dr. Poynton: A girl, aged 3 years, with undue mobility of the right knee-joint. If semiflexed she could voluntarily move the tibia outwards and slightly forwards over the femur, and back again into position. The movement was apparently due to the popliteus muscle. There was considerable laxity of the lateral and crucial ligaments. The movement was accompanied by a clicking sound. When the limb was extended there was no lateral movement, and walking was not interfered with. The articulations of the wrist and fingers were in a lesser degree more mobile than natural. Dr. G. A. Sutherland: A "Punch"-like intestation in a syphilitic child, aged 5 years. It had been blind since birth from post neuritic atrophy and general choroidal atrophy. He could not sit nor stand, and was small and flabby and markedly rickety. There was syphilitic scarring round the mouth. The speech was unintelligible and squeaking, or "Punch"-like. The larynx appeared normal. The exhibitor had seen a similar case in a hydrocephalic infant. Dr. L. A. Clutterbuck: A case of *Infantilism* in a girl aged nearly 14 years. She seemed intelligent, but did not know her letters. Was only at school for a year up to about 8 years of age. Height, 5 ft. [illegible] in.; weight, 2 st. 6 lb. Breasts quite undeveloped. No history of syphilis or consanguinity in the parents.

Manchester Medical Society. At the meeting held March 6th, the President (Dr. Moritz) in the chair, Dr. Moritz, as President of the Medical Society for this year, delivered an address on the diagnosis of pulmonary tuberculosis in its earlier stages. He pointed out that, though the finding of tubercle bacilli in the sputum made the diagnosis of pulmonary phthisis absolutely certain, the diagnosis often had to be made when tubercle bacilli are not found, for there may be no sputum, or it may contain no bacilli or show them only at intervals, this latter condition being of frequent occurrence. Iodide of potassium and a wet pack sometimes favoured the precipitation of characteristic sputa. The serum diagnosis of Arloing and Courmont gave in 12 per cent. of tuberculous cases a negative, and in 5·5 per cent. of clinically non-tuberculous cases a positive, reaction. Injections of tuberculin were not always free from danger, and a positive reaction only proved the presence of a tuberculous focus somewhere, which focus might, moreover, be active or latent. Dr. Moritz then gave the particulars and the results so far obtained by opsonin testing at the Delamere Sanatorium. These led him to the conclusion that the opsonic index formed no reliable diagnostic sign for pulmonary phthisis as it might be normal, high, or low. French's sign also was of no help; after small injections of tuberculin there need not be a long-lasting negative phase in the phthisical; occasionally it was found absent, and frequently it was only of short duration. Dr. Moritz concluded that the diagnosis of early pulmonary tuberculosis must still be made not by bacteriological methods but by the consideration of the symptoms and physical signs. He reviewed the former, laying special emphasis on the significance of persistent rises of temperature, haemoptysis, digestive troubles, etc. In regard to the latter, he recommended careful percussion and auscultation over the posterior apices of the lung, after the patient had been at rest and before he had been made to breathe deeply, as only in this way some abnormalities in the sounds due to temporary obstruction of a bronchus could be heard, which sounds disappeared after several deep inspirations.—Mr. J. E. Platt related the case of a man, aged 60, in whom he had performed the operation of gastro-jejunostomy for a carcinoma of the pylorus causing marked obstruction. On the fourth day after operation the left submaxillary gland had become swollen and painful, and on the sixth day the left parotid gland also. A few days later the glands had been incised and considerable quantities of pus evacuated. After the operation the patient had been greatly distressed by an extremely dry condition of the mouth. The abdominal wound had healed by primary union, and with the exception of the suppuration in the salivary glands the patient had made a good recovery, and had had relief from his symptoms for many months after the operation. The pathology of the condition was discussed, and it was pointed out that the suppuration was the result of a septic condition of the mouth and deficient secretion of saliva allowing organisms to travel upwards along the ducts of the salivary glands. In the majority of cases the suppuration had been preceded by a very dry condition of the mouth, and in many cases the patient had been fed for some time by nutrient enemata. The comparative rarity of this affection in the submaxillary gland was referred to.

Society of Anaesthetists. At a meeting on March 1st, Dr. R. J. Probyn-Williams, President, in the chair, a paper on some *Points in connexion with ethyl chloride* was read by Dr. Z. Mennell. The reader gave his reasons for having largely discontinued the use of this anaesthetic, his deductions being based upon a large number of cases at St. Thomas's Hospital. He brought evidence to show that ethyl chloride increased the coagulability of the blood, and that in consequence of this pulmonary embolism occurred after the use of the ethyl chloride-ether sequence more frequently than when ether was preceded by nitrous oxide. The frequency of such cases at any rate at St. Thomas's had coincided in time with the introduction into common use of ethyl chloride. Dr. Llewellyn Powell was glad to hear a paper which took a pessimistic rather than an optimistic tone in its view of ethyl chloride. He had met instances of embolism after anaesthetics, but not as yet in connexion with the use of ethyl chloride. Dr. Silk thought that ethyl chloride was most useful, provided it was given in an open way. He employed it in large doses with free air dilution, not to obtain anaesthesia, but merely a degree of insensibility sufficient to allow for the rapid and convenient introduction of such an anaesthetic as the A.C.E. mixture. Dr. Kilner Thomas alluded to the peculiar smell attaching to patients just after operation when they had inhaled ethyl chloride. Mr. Clutterbuck Wallace was able from his own observations to confirm the opinions of Dr. Mennell. When the anaesthetic was in the hands of a comparatively inexperienced administrator he was often subjected to anxiety if ethyl chloride was employed. Dr. Bulmer Hobson regretted that the reader of the paper had not brought forward more details as to the cases of pulmonary embolism. He was curious as to the nature of the operation in these cases and as to the extent to which ether had been used after the ethyl chloride. Personally he found ethyl chloride very useful before ether in muscular and in alcoholic individuals. Dr. Kingsford could not corroborate Dr. Mennell's conclusions as to detrimental after-effects from ethyl chloride. Moreover, in 10,000 cases at the Throat Hospital where he worked artificial respiration had been required on only two occasions. Dr. Warren Tyrrell thought that very likely some of the ill effects described were due to the ease with which ether was used to excess in immediate sequence to ethyl chloride.

REVIEWS.

THE PATHOLOGY OF THE BLOOD.

DR. LUDOLPH BRAUER'S physiological and pathological study of the numerical relationships of leucocytes in health and in tuberculosis of the lungs[1] forms a supplemental volume to his *Beiträge zur Klinik der Tuberkulose*, and needs careful consideration—not perhaps so much for the practical value attaching to the exhaustive study of the leucocytic reaction in the mixed infection commonly known as tuberculosis of the lungs, as to the very solid value of the introductory portion of the volume, which deals most critically with our accepted ideas of the leucocyte counts in health. That the study of the leucocytic reaction in tuberculosis of the lungs has little practical value is shown by Dr. Kjer-Petersen's rather rambling conclusions given on page 213 and the summaries given on pages 106 and 212 of the relationship of the alteration of leucocytic counts in various stages of tuberculosis of the lungs using Turban's classification and the alteration in connexion with the temperature. The author finds that in men and women there is no definite relationship between the content of lung disease and the leucocytic count; in non-febrile male cases in the first and second stages of the disease the leucocytic count approaches to the normal, and the more inactive the disease the lower the leucocytic count becomes; the same holds for women, though in some of the cases of more active disease there is a constantly low count of leucocytes. Afebrile male patients who reveal the signs of the third stage of the disease have an inconstant curve, and show leucocytes to the number of 6,000 to 15,000 per cubic millemetre; in the same stage in women, if the disease is active, the leucocytes number less than 10,000, whereas in the quiescent stage they are generally less than 6,000 to 7,000. In men short febrile attacks occurring in the third stage show a complete parallelism between the increase of temperature and the leucocytosis, or the one falls whilst the other rises, or no relationship whatever exists between the two; the more prolonged febrile attacks occurring in the third stage are frequently accompanied by a more or less weak leucocytosis, the exception being a marked leucocytosis in mixed infection, and a low count in the pure cases of tuberculosis. Truly, it may be said the mountain has laboured merely to bring forth a very small mouse, if these are the most important deductions Dr. Kjer-Petersen has to offer us; we already know that the much more important opsonic reaction pursues its course almost regardless of the actual number of leucocytes present. The introduction to the volume is far more valuable; for the writer has made such a close study of the leucocytes in healthy adults, that his deductions are worth consideration, especially as he affirms that our conceptions of the total number present in health are wrong, and based upon investigations which are not scientific or critically sound. Probably, digestion leucocytosis does not exist, for leucocytes increase during the day quite independently of the ingestion of meals. The writer maintains that the normal leucocyte count is that found immediately after waking in the morning; in men, on any average, there are only 4,000 to 5,000, and in women there is no definite count, for all numbers between the limits of 3,000 and 24,000 occur. To show the care with which the author has carried out his investigation, and the need for a greater uniformity in the new shapes and other details of the pipettes, we would refer the reader to the opinions expressed on the value of the different pipettes figured on page 9.

In his book on the pathology of the primary diseases of the lymphatic and haematopoietic apparatus,[2] Dr. CARL STERNBERG, after describing the technique of blood investigations and the morphology and histogenesis of the blood corpuscles, gives a full account of the various forms of leukaemia, pseudo-leukaemia, malignant affections of the lymphatic system, and allied diseases. His work is based on a full and valuable compilation from the very widely-scattered literature on these subjects, and contains useful lists of references to the original articles of importance in each branch of the inquiry. Dr. Sternberg comments and criticizes as he goes along, and proposes a scheme of his own for the classification of the group of diseases with which he deals. The critical part of the work, though interesting, does not appear to be very weighty; but as a book of reference the volume is undoubtedly of great value, and will much facilitate the labours of those who are conducting original investigations upon these diseases.

[1] *Über die numerischen Verhältnisse der Leukocyten bei der Lungentuberkulose.* Mit einer Einleitung über Zählung der Leukocyten und deren Zahl bei Gesunden. Physiologisch klinische Untersuchungen. Von Dr. Med. R. Kjer-Petersen, Privat Docent, Kopenhagen. Würtzburg: A. Stubers Verlag (C. Kabitzsch). 1906. (Demy 8vo, pp. 217. Illustrated 16 plates. Price M.7.)

[2] *Pathologie der Primärerkrankungen des lymphatischen und hämatopoëtischen Apparates.* Von Dr. Carl Sternberg. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1905. (Roy. 8vo, pp. 209; 25 illustrations. 7s. 3d.)

ANEURYSM OF THE ABDOMINAL AORTA.

DR. F. P. NUNNELEY'S dissertation on *Aneurysm of the Abdominal Aorta*[3] is based upon the clinical records of thirty-two cases under treatment in St. George's Hospital between the years 1841 and 1905. The book is divided into two parts; in the first the clinical signs, the diagnosis, and the treatment of the condition are described from a general study of the cases recorded in medical literature; in the second part the histories of the St. George's Hospital cases are related. The most important facts which the author extracts from his general survey of the records are that abdominal aneurysm is a comparatively rare condition, thoracic aneurysm being more common in the proportion of about 5 to 1; that the disease occurs generally at a younger age than thoracic aneurysm; and that relatively it is very uncommon in women. Half of the cases in St. George's Hospital were under the age of 35, and other records show very similar figures. In a collection of 110 cases only ten of the patients belonged to the female sex. The aneurysm is usually of the saccular type, and the commonest site of development is in the neighbourhood of the coeliac axis; the usual direction of extension is lateral and backwards rather than forwards. The pages devoted to the question of diagnosis are interesting. They show the relative rarity of a correct conclusion as to the nature of the disease during life. It is difficult to decide in many cases whether abdominal pulsation is due to the presence of an aneurysm or not, particularly when this pulsation is epigastric in position. Pulsation here may be a transmitted impulse from heart to liver, or it may be due to cardiac dilatation in which the right ventricle reaches the abdominal wall, or the pulsation may be of the abdominal aorta, but due to a neurosis or other functional disorder, particularly extreme anaemia. Some statistics of the results of various methods of treatment are tabulated. Moore's method by the introduction of fine wire into the sac appears to have given results quite as satisfactory as Corriadi's modification, in which a current is passed through the introduced wire. Nine cases treated by Moore's method, with two cures, are quoted, and thirteen treated by Corriadi's modification, also with two cures. All the fourteen collected cases of ligature of the abdominal aorta ended fatally. The author has shown considerable industry in his research into the records of this affection. The publication of a dissertation such as this, containing as it does valuable unpublished cases and a well-arranged review of the subject, needs no apology. The book is distinctly of the useful order, and will interest both surgeons and physicians.

[3] *Aneurysm of the Abdominal Aorta.* A dissertation for the degree of Doctor of Medicine in the University of Oxford. By F. P. Nunneley, D.M., M.A. London: Baillière, Tindall, and Cox. 1906. (Crown 8vo, pp. 129. 3s 6d.)

OPHTHALMOLOGY.

THE third volume of PARSONS'S *Pathology of the Eye*[4] deals with general pathology, and includes congenital abnormalities, ametropia, the circulation of the eye, intraocular pressure, and glaucoma. Inasmuch as pathology is but physiology modified, the author has deemed it essential to give an exhaustive account of the normal circulation and nutrition of the eye. He pays tribute to the researches of Professor Leber, whose work in this line was first brought to notice in 1865, and has since formed the basis of all work upon this subject. Mr. Parsons's volume is divided into eight chapters; that on congenital abnormalities occupies upwards of 130 pages, and is by far the longest. A vast amount of work has been done on this subject, and a most complete bibliography is appended to

[4] *The Pathology of the Eye.* By J. Herbert Parsons, B.Sc., D.Sc., F.R.C.S. Volume 3: General Pathology. Part I. London: Hodder and Stoughton. 1906. (Royal 8vo, pp. 1128. 15s. net.)

each section, as is the case, indeed, with every subject treated. No trouble has been spared in illustrating the book; many of the important cases reported at various societies or published in periodicals are not only referred to, but in many instances the illustrations as given in the original papers are reproduced. It is by no means only the most recent cases which are given in this way, for the excellent series of cases of ectopia lentis described and illustrated by Morton in the year 1879 in the Royal London Ophthalmic Hospital Reports are reproduced. A very large number of illustrations are taken from papers read recently before the Ophthalmological Society, notably one by Mayou showing the centrally-placed eye in cyclops. The original illustrations, which also abound, are excellent. Myopia is discussed from every point of view, and references to the literature are to be found at the end of the chapter. About hypermetropia there is nothing like so much to be said, and this subject, together with astigmatism, occupies but seven pages. The circulation and nutrition of the eye are most carefully described. First of all the anatomy is given, and proper recognition is accorded to the excellent work done on this subject by Henderson, who recorded his work on the ocular circulation, and the distribution of the blood vessels in the dog and rabbit, in a series of papers published in the Royal London Ophthalmic Hospital Reports a few years ago. This chapter gives the most complete description of the physiology of the circulation and nutrition of the eye of any with which we are acquainted. Parsons, among others, has done much work on intraocular pressure, while the work of Priestley Smith is well known. Suffice it to say that this chapter from a physiological point of view is as complete as anything well could be. The final chapter treats of glaucoma, and here we see the manner in which the physiology of intraocular tension assists in elucidating the various intricate problems of the disease. This volume is in every way worthy of the two which have preceded it. Mr. Parsons is raising a monument of good work, not only by his own individual ability as an original worker, but by the extreme industry he has displayed in collecting such a vast mass of work done by others, in all parts of the civilized world. English ophthalmologists will find the book absolutely indispensable.

We are glad to welcome the ninth edition of Swanzy's *Diseases of the Eye*,[6] which has just appeared under the joint authorship of Mr. SWANZY and Mr. LOUIS WERNER. From the first the book has taken its place in the forefront of textbooks on ophthalmology, and during the twenty years or more since it was first published every one of the succeeding editions has added to its value; yet the book, though slightly larger, owing to increase of knowledge, remains in appearance and style just what it was. The most noticeable points in the present edition are the large increase in the illustrations, no less than sixty having been added. Some of the obsolete matter has been expunged, and its place taken by a description of new and important developments. The first chapter on elementary optics is entirely new, while that on refraction and accommodation, and the theory of the ophthalmoscope, has been enlarged and treated more thoroughly. The bacteriology of the conjunctiva—a comparatively new subject—receives, of course, greater attention. A very excellent description of the orbital muscles and their derangements will be found in Chapter 18, which includes a description of heterophoria. We could wish that greater attention had been directed to colour blindness and its tests. Only Holmgren's test is given, and we find no allusion to the work of Edridge Green, which far surpasses the work of any one else in importance; it is impossible, as was shown by a committee of the Ophthalmological Society, by Holmgren's test alone to discover all cases of colour blindness. With this exception, the book is in all respects thoroughly up to date, and we are unacquainted with any other textbook which contains so much. It is a common saying that what one cannot find in "Swanzy" is not worth knowing.

The fifth edition of *Retinoscopy*, by JAMES THORINGTON,

[6] *A Handbook of Diseases of the Eye and their Treatment*. By Henry R. Swanzy, A.M., M.D. President of the Royal College of Surgeons in Ireland, and Louis Werner, M.B., F.R.C.S.I. Ninth Edition. London: H. K. Lewis. 1907. (Demy 8vo, pp. 754, with 181 illustrations. 12s. 6d.)

[7] *Retinoscopy*. By James Thorington, A.M., M.D. Philad. Fifth Edition. London: Bernard, Limited. 1906. (Demy 8vo, pp. 67, 4s. 6d.)

has been carefully revised, but is otherwise almost exactly similar to its predecessors. It gives a lucid description of retinoscopy, but most English students will notice the difference there is between the practice as usually taught in England and that advocated by Dr. Thorington, inasmuch as the latter uses a chimney and screen for the light, which is only admitted to the retinoscopy mirror through a small aperture, while the light is close to the observer and not behind the patient. This is only a small point and is not likely to confuse anyone. The book contains 54 illustrations, of which 10 are coloured, and is a good guide to the theory and practice of retinoscopy.

Dr. DARIER'S *Leçons de Thérapeutique Oculaire*[8] has now reached the third edition, and it will be remembered that in 1903 an English translation of the second French edition was published by Sydney Stephenson, thus bringing the book within reach of all and sundry English speaking practitioners. It is avowedly the most thorough work on ocular therapeutics published, a branch of study constantly changing as new discoveries are made. The new edition follows the characteristics of its predecessors in being divided up into lectures or chapters, of which there are 24. Dr. Darier is such an enthusiastic advocate of therapeutic agents that reading his views inspires one with confidence in the treatment of more or less intractable diseases. He is a great advocate of the administration of drugs, such as dionine, salicylates, and mercury, by means of subcutaneous and intravenous injections, and it is well known what great value he sets on subcutaneous injections in the treatment of inflammatory affections of the eye. The details of administration are carefully given.

Dr. DARIER of Paris has published in a separate volume his views on the value of the new salts of silver in ocular therapeutics.[9] Although such a strong advocate of drugs, Dr. Darier is convinced that the old-fashioned and much-used silver nitrate is not nearly so useful as is generally supposed. He does not deny that it is extremely useful in the treatment of most conjunctival conditions, but it has so many disadvantages that in many cases it is as well not to use it. It is a caustic, the action of which is very local, and its effect is almost at once neutralized by the tears and by the albuminous substances with which it comes in contact when placed in the conjunctival sac. Then, again, it causes considerable pain and reaction, and altogether it is a somewhat crude drug to use. Of late years the organic salts of silver have, to a large extent, taken the place of the nitrate, and every one knows how much less irritating they are, while their beneficial effect is by no means diminished. Dr. Darier first of all discusses the action of the nitrate, and points out its advantages and its disadvantages. He then describes the characteristics and action of argentamin, argonin, largin, itrol, actol, and collargol. A chapter is then devoted to protargol, the oldest and the best known of the organic silver compounds, and that which, in the author's opinion, unites the greatest number of good qualities with the fewest of the objections belonging to nitrate of silver. The methods of application are described, and it is pointed out what great advantages it possesses over the nitrate when used as a prophylactic against ophthalmia neonatorum. Argyrol is next discussed, its advantage, as compared with protargol, being that fresh solutions of the drug cause much less pain. The treatment of conjunctivitis is then described, and certain illustrative cases are given. The entire monograph is given up to the praise of the organic salts of silver, and all that is known concerning them will be found in it.

The aim and object of *The Combined Treatment in Diseases of the Eye*, a small book by Dr. G. HERBERT BURNHAM, can be expressed in a few words. The combined treatment consists of the hypodermic administration of $\frac{1}{4}$ to $\frac{1}{2}$ or even $\frac{1}{1}$ gr. of pilocarpin, whilst at the same time the

[8] *Leçons de Thérapeutique Oculaire*. Par le Dr. A. Darier. Paris: Published at the Office of *La Clinique Ophtalmologique*. 1906. Royal 8vo, pp. 500. Fr. 12.

Lectures on Ocular Therapeutics. By Dr. A. Darier. Paris. Published at the Office of *La Clinique Ophtalmologique*. 1906. (Royal 8vo, pp. 500. Fr. 12.)

[9] *Les Sels d'Argent et leur Emploi en Thérapeutique Oculaire*. [Some New Views on the Use of Silver Salts in Ocular Therapeutics.] By Dr. A. Darier. Paris: Bulletins de la Clinique Ophtalmologique. 1906. (Demy 8vo, pp. 80. Fr. 2.)

[10] *The Combined Treatment in Diseases of the Eye*. By G. Herbert Burnham, M.D., F.R.C.S.E. London: H. K. Lewis. 1906. (Crown 8vo, pp. 100. 3s.)

patient is taking mercury and potassium iodide internally. This treatment must be continued for years, if necessary, before the full effect is produced. One naturally asks for which diseases of the eye it is particularly useful, but one finds that it would be far easier to mention the diseases for which it is not thought useful by the author; not only does he recommend it for almost all the inflammatory eye diseases, but even for the treatment of general diseases, particularly of the central nervous system. There are few more valuable assets for a physician than to have unbounded confidence in his remedies, and certainly Dr. Burnham has this in a very marked degree. The first chapter explains how the treatment is to be applied. Chapters 2 to to 8 give details of cases treated by the author with his remarks thereon, while Chapter 9 is entirely devoted to general remarks. Most people will think that the treatment is pushed to a somewhat extreme degree, but there is no doubt it is useful in many instances, and we shall all welcome anything which may do good in some of the hopeless cases it is our lot to come across.

Dr. Fernand Giraud has published an essay[10] on eye diseases in relation to the general diathesis. It forms one of a series of books dealing with general nutrition. It commences with a summary of the anatomy of the organs of vision, and then goes on to discuss the different diseases to which the various parts of the eye are subject. The two final chapters are devoted to local and general treatment. The book is divided into thirty chapters, and the description of the various conditions met with is accurate and well expressed.

A WATER DOCTOR.

Dr. Emile Gautrelet, of Vichy, has laid before the profession, in a small volume,[11] the results of a method of his own of working out from the examination of the urine a complete diagnosis of the diathetic condition of the patient from whom the specimen was obtained. These results are based upon the observations of thirty years, and Dr. Gautrelet claims that he was the first to point out that a physiological diagnosis may be based upon the physical, chemical, and bacteriological urinary analysis founded upon modern biological science. He believes that he has established a normal standard for each element of the urine, subject to variations in what he calls the biological coefficient of age, height, breadth, body-weight, diet, and exercise, and he draws conclusions from the plus or minus results of these quantitative analyses after the figures have been corrected in accordance with the biological coefficient. He has established a scale which he calls the urological unity, which is the weight of each normal urinary element excreted in twenty-four hours for each kilogram of body-weight by a healthy subject. The healthy subjects upon whom he has based such far-reaching conclusions were French peasants from the neighbourhood of Vichy, who "live in a temperate climate, diet themselves in a rational manner, and expend daily an energy value in relation to their food," but it is quite plain that this is a purely arbitrary selection, and few will accept it as the basis for conclusions applicable to classes whose diet and conditions of life differ so essentially from them as do those of the patients most of us are called upon to treat.

Dr. Gautrelet attaches great importance to peptones in the urine; he says their presence may be due to "organic hyperacidity or gout or disease due to retardation of nutrition or to herpetism or to the congested diathesis or to disorder of nutrition, all which terms are pathologically synonymous." If, on the other hand, there are no peptones, the patient may be "healthy or suffering from the tuberculous or cancerous diathesis, or it is a case of organic hypoacidity"! The author's physiology is quite his own, for he holds the liver to be the sole organ which normally forms acids during repose, while he repudiates all recent teaching that the absorption of nutriment from the stomach is practically *nil*; he adopts Glénard's views respecting the specific functions of each lobe of the liver, and attributes to each the production of some special urinary element!

He deduces from his investigations that "the rational and fundamental treatment of tuberculosis is to give a diet containing an excessive quantity of common salt;" he thinks that epithelial casts ought not to be considered abnormal elements of the urine; he regards sugar as the chief cause of oxaluria, and he professes to be able, by studying the pigments of the urine, to say whether a cancerous growth is situated in the pancreas, intestine, or liver. He thinks that diabetes is due to defective combustion, which should be treated by facilitating the access of "air to the tissues" in order to effect the "complete combustion of the circulating glucose"! He sees no difference except one of degree between glycosuria and diabetes, and asserts that fundamentally the etymology of the words "diabetes" and "glycosuria" is the same, which we do not understand.

At the end is a *résumé* which extends to thirty-four pages of text, so that it may be understood we have not found it easy to give in the space at our disposal anything like an adequate summary of the author's doctrines, for which we must refer those who feel interested to the book itself. The publisher has failed to provide an index.

NOTES ON BOOKS.

Every one must admire the enthusiasm and perseverance with which Dr. Bourneville, the physician for the department for nervous and imbecile children at the Bicêtre Hospice, Paris, has pursued the study of the best means of treating these unfortunates. For more than thirty years, by his example and by his writings, he has inculcated the duty of the profession and of the public in this respect. Twelve years ago he published a volume in which certain reports and essays by Edouard Séguin on the education of normal and abnormal children were represented. He has recently laid all students of the subject under a fresh obligation by republishing in two handy volumes some of Séguin's most important works. The first volume contains the earlier essays on idiocy; the second is a reprint of the larger work on the moral treatment, hygiene, and education of idiots and other backward children, first published in 1846. The reprint which it is interesting to note has been set into type and printed by inmates of the Bicêtre, is one which ought to find a place in every medical reference library. It marks an epoch, and every subsequent writer on the subject has acknowledged his indebtedness to it. The two volumes here mentioned form part of a series edited by Dr. Bourneville under the general title *Bibliothèque d'Education Speciale*,[12] and we may take this opportunity of mentioning another volume containing a long essay on the medico-pedagogic treatment of the graver forms of idiocy, by Dr. Bourneville himself, embodying the reports of numerous cases, and illustrated by many photographs.

The *Medical Register* for 1907[13] was issued last week; it contains 39,620 names, an increase of 560 as compared with the preceding year; the Colonial List now contains 182 names, and the Foreign List 19. The number of new names added to the *Register* in 1906 was 1,197; this is below the average for the last five years (1,222) and for the last twenty-four years (1,336). The largest number of names registered in any one year was 1,579 in 1893; since then there has been, with some fluctuations, a fairly steady decline, although the number registered in 1906 is slightly in excess of the number in 1904, when it was 1,168. In spite of all warnings it appears that the names of no fewer than 83 practitioners were removed from the *Register* in 1906 under the provisions of Section XIV of the Medical Act, which directs the Registrar to erase a name if a reply is not received after due inquiry at the address last registered. The number of names removed from the *Register* for all causes during 1906 was 700. Part II of the Medical Act of 1886 was extended to Japan in December, 1905, but so far no holder of a Japanese degree has applied for registration; all those whose names appear in the Foreign List are graduates of Italian universities, and the majority of them reside in London.

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[10] *L'Oeil Diathesique. Relations de la diathese avec les affections des organes de la vision.* [The Eye and the General System.] By Dr. Fernand Giraud. Paris: A. Maloine. 1907. (Crown 8vo, pp. 266; Fr. 4.)

[11] *Physiologic Urosemeiologique.* Par Emile Gautrelet. Paris: A. Maloine. 1906. (Cr. 8vo, pp. 290. Fr.4.)

[12] *Premier- memoires de Séguin* (Fr.4), *Traitement Moral, etc., des Idiots*, by Séguin (Fr.10), *Traitement medico-pedagogique de l'Idiotie*, par Bourneville (price not stated). Paris: *Progrès Medical*, and Felix Alcan.

[13] London: Spottiswoode and Co. 1907. 10s. 6d.

We have received the third volume of the *Archives of the Middlesex Hospital*, containing the third report from the Cancer Research Laboratories, edited by Dr. Lazarus-Barlow. Details are given of all cases of malignant disease admitted into the hospital during 1903 with a number of papers by workers in the laboratories and others. Among the contents are tabulated synopses of the *post-mortem* examinations and operations in cases of malignant disease performed during 1903 by Drs. Lazarus-Barlow and W. T. Hillier: statistics of malignant disease admitted to the Mayo Hospital, Lahore, by Dr. D. W. Sutherland, with a commentary by Dr. Lazarus-Barlow; statistics of carcinoma based on the records of the Middlesex and St. George's Hospitals, by Drs. Lazarus-Barlow and Gordon Taylor: a contribution to the study of the blood in malignant disease, with reference to its specific gravity, by Dr. J. J. Douglas; and a report on the Otto Schmidt treatment of cancer, by Dr. J. W. Clinton Myler. Dr. Lazarus-Barlow contributes an illustrated paper of special interest based on four cases of endothelioma of the tongue. We hope later to give fuller consideration to one or two of the papers. The authorities of the Middlesex Hospital, and in particular the Cancer Investigation Committee, are to be congratulated on the issue of this admirably-printed volume, which is a valuable addition to the rapidly-growing body of literature relating to malignant disease.

Dr. Ashburton Thompson, President of the Sanitary, Maritime, and Quarantine Council of Egypt, has edited a volume of *Scientific Reports* by members of the medical staff. The laboratories of the Council were established primarily for purposes of diagnosis, but the members of the Council were not slow to recognize the necessity, as Dr. Ruffer says, "of keeping these workshops sweet by the salt of investigation." The result has been the publication in various periodicals of a number of valuable papers having to do mainly with bacteriology and parasitology. All the papers in the volume now issued refer more or less to immunity, and the opinion expressed by the President that no advance in the world's knowledge of the methods of prevention or in the cure of plague and cholera could be made until some of the more problems of immunity have been solved will be generally accepted. On the complexity of the questions which arise for solution a glance at these reports will convince any reader.

The second and third volumes of the seventh series of *International Clinics*, being two of the quarterly volumes for 1906, show a similar plan of contents. Each commences with four of the ever-welcome articles on treatment, which are followed by eight on medicine, nearly the same number on surgery, but the number on obstetrics and gynæcology, and single papers on paediatrics, neurology, laryngology, rhinology, and other special subjects. The papers on treatment, which have to do with valvular disease, pleurisy, bronchitis, syphilis, and nervous disease in general, are all full of practical suggestions of varying degrees of attractiveness, but containing among them many which are quite new to us, of real value. Among the more interesting of the purely medical papers are two on pernicious anæmia, one which by Dr. I. M. Anders and Dr. G. L. Peabody contains a study of the condition by means of the Einhorn tube; a paper on the use of digestive ferments in the general treatment of infectious diseases, as exemplified by dental caries in 200 consecutive cases of typhoid fever. Among others of special interest in the surgical section are one on the hypodermic treatment of swelling following one on the surgical complications of pneumonia, and three dealing with the clinical significance of gastric achylia, and one on the Lorenz hip-joint dislocation operation, employing unbloody work. In the obstetrical section there is a valuable paper by M. A. Pinard of Paris on the pelvis of little women, and more than one on ectopic pregnancy. There is nothing of outstanding interest in the section devoted to paediatrics.

MEDICINAL AND DIETETIC PREPARATIONS.

Acetozone.

This is the name which has been given to a synthetic organic compound recently introduced for medicinal use as a germicide. It is stated to be acetyl-benzoyl-peroxide, represented by the formula $CH_3CO.O_2.COC_6H_5$, and belongs therefore to a new class of bodies. It is put on the market by Messrs. Parke, Davis and Co. (111, Queen Victoria Street, London, E.C.), in the form of acetozone powder, and acetozone inhalant, samples of which we have examined. The former is a mixture of equal weights of acetozone, itself a crystalline substance, and an inert powder which proved to be an infusorial earth; the latter is added to enable the compound to be handled with safety, as a body so highly oxygenated is naturally rather unstable. On exposure to the air, the odours of benzoic and acetic acids can be observed, and on shaking up a little of the powder in water, the latter rapidly liberates iodine from an iodide in the same way as hydrogen peroxide. When administered internally, acetozone is said to produce no constitutional effects except copious diuresis; according, however, to the experiments of Professor Novy of Michigan University, it is an efficient germicide, rendering cultures of diphtheria, typhoid and other bacilli, perfectly sterile, and exerting a similar effect in the intestines of animals to which it was administered. It is recommended for internal use in small doses in typhoid, dysentery, cholera, etc., and for local application in tonsillitis and rhinitis, as well as in gonorrhœa, and for the irrigation of wounds. It is very slightly soluble in water and most ordinary liquids; an aqueous solution of the strength recommended for administration is prepared by well shaking 10 gr. of the powder in 20 oz. of water and setting aside for the insoluble earth to subside. Acetozone inhalant contains 1 per cent. of acetozone, and ½ per cent. of chloretone in liquid paraffin; it is intended for application with an atomizer to the nose, mouth, ears, and throat. On shaking a little with solution of potassium iodide, the presence of the peroxide is readily observed.

MEDICAL AND SURGICAL APPLIANCES.

Frontal Sinus Probe Calipers.

Dr. S. Horace Law, Surgeon to the Dublin Throat and Ear Hospital, and Throat Surgeon to the Adelaide Hospital, writes: When probing the frontal cavity it is often advantageous to know for certain where the end of the probe actually stopped; and the most useful point with which to compare it is the surface of the forehead over the anterior wall of the sinus. With this end in view I have designed the following calipers, and their method of application is as follows: After probing with an ordinary probe to find the fronto-nasal duct, the lower of the two arms of the calipers is bent to the same curve as that which has been found by trial with the ordinary probe to be best. The second, or outer, probe is then bent so as to make its point meet that of the other, and then the first is introduced as far as possible; the second, or outer, is swung round to touch the forehead, and the scale is read. Then the outer probe is swung back, and the instrument is removed, the probes replaced so that the reading on the scale is the same, and the distance between the two ends of the probes measured. The scale is necessarily arbitrary, as the radius length of the probes varies. The distance between the ends of probe, even when properly inserted into the cavity, naturally varies; and I have not sufficient experience to lay down actual measurements, but anything under 2·5 cm. may be considered as in the cavity. As will be obvious, the instrument is applicable to any measurement with reference to the surface within its reach. It has been made for me with great care by Messrs. Meyer and Meltzer.



SCHOOL HYGIENE: A COMPARISON OF CHILDREN IN SECONDARY AND ELEMENTARY SCHOOLS.

A PAPER on the medical examination of school children was read by Dr. A. S. Arkle before the recent meeting of the North of England Education Conference at Bradford. He gave an account of a very thorough examination made by him in Liverpool of a number of school children, selected as representative of the various classes of children with which the education authorities have to deal.

Dr. Arkle resolved to find his own average of heights and weights of what well-cared-for children should be in the same locality by examining a number of secondary schools where the scholars have an opportunity of developing under the most favourable conditions. In examining them every boy was stripped to the waist, and weighed with only trousers and stockings. This also afforded the opportunity for correct chest measurement, expanded and contracted; for the rapid examination of heart and lungs, and for the discovery of any skin disease or deformity, and enabled a general impression of their condition to be formed. Then the eyes, ears, noses and throats, and teeth were examined and the vision tested; all particulars were then entered on a card, a space being left for the school master to note the children's intelligence and the nature of his home surroundings. Such an examination occupied about three minutes to each child.

The total number of children examined was 2,477, being 366 from secondary and 2,111 from elementary schools respectively.

The secondary schools were those where the sons of the leading citizens of Liverpool are educated, and represent the type of boy who has every advantage possible in his upbringing. For the purposes of comparison these schools were grouped together, as the results obtained were very nearly identical in all, and a large group of boys in this class was wanted in order to make the averages yield a fair test when compared with the other schools, whose numbers are much larger.

Next come three Council (elementary) schools:

"A."—A type of the best class Council school, where the parents of the children are well-to-do and the children have mostly comfortable homes.

"B."—A type of school where the parents are mostly of the labouring classes or small shopkeepers. It was selected as a type for the children of the labouring classes whose parents have constant employment.

"C," the last of the Council schools, is a type of the poorest class, where the parents of the children belong almost entirely to the unemployed or casual labour sections.

The mathematical precision with which the result is shown and the extent to which the deterioration has gone, make the tables, Dr. Arkle says, gruesome reading.

AVERAGE HEIGHTS OF THE BOYS.

At 7 Years of Age.

	Ft. in.
Secondary schools	3 11.8
Council School "A"	3 9.3
" "B"	3 8.35
" "C"	3 8

the total difference between the secondary schools and "C" being 3.8 in.

At 11 Years of Age.

	Ft. in.
Secondary schools	4 7.5
Council School "A"	4 5.1
" "B"	4 3.8
" "C"	4 1.7

showing a total difference of 5.75 in.

At 14 Years of Age.

	Ft. in.
Secondary schools	5 1.75
Council School "A"	4 10.2
" "B"	4 8.25
" "C"	4 7.25

showing that the total difference has increased to 6.5 in. or more than half a foot.

AVERAGE WEIGHTS OF THE BOYS.

At 7 Years of Age.

	st. lb.
Secondary schools	3 7.3
Council School "A"	3 2.1
" "B"	3 1.0
" "C"	3 1.0

showing a total difference from the secondary schools to "C" of 6.3 lb.

At 11 Years of Age.

	st. lb.
Secondary schools	5 0.26
Council Schools "A"	4 5.45
" "B"	4 3.05
" "C"	3 13.5

showing a difference of 1 st. 0.75 lb.

At 14 Years of Age.

	st. lb.
Secondary schools	6 10.5
Council School "A"	5 5.82
" "B"	5 5.87
" "C"	5 1.14

showing that the total difference has reached the magnitude of 1 st. 9.25 lb.

The next point to notice is that the degeneration is progressive, that is to say, that the deficit of weight increases out of proportion to the rate of growth. The following table amply illustrates this fact:

Age.	9 st. lb.	11 st. lb.	13 st. lb.	14 st. lb.
Direct proportionate rate of degeneration	3 9	4 5.5	5 7.25	5 12.5
Actual rate of *degeneration*	3 7.5	4 [illegible]	[illegible]	5 1
Amount of loss above the direct proportion	0 2.5	0 6	0 [illegible]	0 11.5

Leaving out the two intermediate schools, and dealing only with the secondary schools and "C," that is, the best and the worst, it is found that a boy of 6½ in the secondary schools is as big and heavy as a boy of 9 in "C," at 8 years he is equal to a boy of 11 years, at 10 years to a boy of 13, and at 11 years to a boy of 14, which shows that the "C" boys are, so to speak, three years behindhand in their development.

With regard to the chest measurements the case is not so clear.

The secondary schools are still ahead, but "C" boys in most cases are rather better than "B," and frequently than "A." This is no doubt due to the life they lead, as they do a good deal of hard work in the open air, which must tend to develop their chests, and there are other causes which come into play.

Similar statistics by Dr. John Hay in an industrial school of children who have been in the school for a year or more, conclusively prove that it is only underfeeding and neglect which cause such deterioration.

The children examined by Dr. Arkle were unsuitably clad rather than underclad, a good many being stitched into their clothes. Nor were they so hopelessly dirty as might have been expected.

With regard to general condition, a classification was made into *good*, *fair*, or *poor*, after a comparison of heights and weights with ages, notes being also made with regard to the feel of the skin, the features, and appearance generally. Those classed as poor showed traces of absolute slow starvation, and it was shocking to find how many there were. As to the general health, Dr. Arkle says they were what might be described as a "good, straight lot," and he adds:

They were dwarfed, maybe, in the poorer schools, and starved, but there were very few cases of deformity or skin diseases, curvature of the spine, or crooked limbs, and they gave the impression that, with better chances, they would make a fine race of men, but at present they have no chance.

Very few of the children showed any definite traces of constitutional diseases.

Setting aside cases which can be attributed almost with certainty to neglect and destitution, the children in the poorest school ("C") come out as more healthy than the children in the two intermediate schools, "B" and "C."

The percentage of cases of heart disease in "C" is only 3.5 per cent., against 5 per cent. in "B" and 6 per cent. in "A," and is not very much worse than the secondary schools, with 1.1 per cent.

Also the number of children with adenoids and enlarged tonsils, curiously enough, gives almost the same percentage in the poorest school as in the secondary schools, while in the two middle schools the percentage is just about twice as great.

In the secondary schools and "C" it is about 20 per cent., while in the others it is about 40 per cent.: and it is this, very probably, which accounts for the fact mentioned earlier in this paper, that the chest measurements of the "C" children are so much better than those of the "B" and "A" children.

The "C" children, living out-of-doors mostly, are possibly hardier, and do not acquire rheumatism so readily as the children who are rather better off, but who live in small and

perhaps overcrowded rooms, who go out and get wet and do not change their clothes, and so contract rheumatism, which is probably the main factor in producing heart troubles and tonsillitis.

When we come to those organs which do suffer from neglect the results correspond closely with the tables of heights and weights—that is to say, there is a marked depreciation as we descend in the social status of the schools.

In the case of the eyes, for instance, while in the secondary schools almost every boy had what one describes as a good working eye, only 5 per cent. being defective, at "A" the percentage had risen to about 16 per cent., and in "B" and "C" to nearly 30 per cent., "B" being fractionally the worse of the two. Among the girls the condition was even worse.

In "B" and "C" only 1 per cent. of the children were provided with spectacles. In "A" 4 per cent. had them. Many of the children could not read ordinary print, or even large writing on a blackboard, and how education is to proceed on such terms I fail to see.

Taking next the teeth, an identical state of affairs is found, only here the figures for the girls are rather better than those for the boys.

The teeth are classified under three headings: *Good*, meaning the teeth were sound, or, if not, had been attended to; *fair*, meaning good teeth with several decayed and not attended to: and *bad*, where all were in bad condition.

On this classification all the secondary schools were good, with the exception of 3 per cent. fair.

"A" gave 58 per cent. good, 30 per cent. fair, and 10 per cent. bad.

"B" gave 28 per cent. good, 43 per cent. fair, and 28 per cent. bad.

"C" gave 25 per cent. good, 28 per cent. fair, and 46 per cent. bad.

The teachers in "A" and "B" both return about 60 per cent. of the children as normal in intelligence, but whereas the former return 25 per cent. as above and 15 per cent. below normal, the latter only return 5 per cent. above and 35 per cent. as below the normal.

But it is in the return from the poorest school that we get the most curious result. In "C" the master only feels justified in calling 22 per cent. of his boys normal, while he puts 33 per cent. above, and 45 per cent. below normal.

Now the "A" figures seem quite reasonable, and it is quite credible that in "B," judging from the amount of physical degeneration, 35 per cent. of the boys do not quite reach up to the average standard in intelligence, but the "C" figures are far more puzzling, and can only be explained on one hypothesis, that almost all the abnormal intelligences in the poorest school are due to the one factor—starvation.

Starvation acting on a nervous temperament seems to produce a sort of acute precocious cleverness. Over and over again were noted such cases of children without an ounce of superfluous flesh upon them, with skins harsh and rough, a rapid pulse and nerves ever on the strain, and yet with an expression of the most lively intelligence. But it is the eager intelligence of the hunting animal, with every faculty strained to the uttermost so as to miss no opportunity of obtaining food.

On the other hand, with children of a more lymphatic temperament, starvation seems to produce creatures much more like automata.

They seemed to be in a condition of semi-torpor—unable to concentrate their attention on anything, and taking no notice of their surroundings if left alone.

And, further, these cases were always associated with the clearest signs of bodily starvation, stunted growth, emaciation, pale skin, and cold skin, and the mouth full of viscid saliva due to hunger.

CONCLUSIONS.

Dr. Arkle sums up as follows:

I. The difference of physique between the children in the secondary schools and the poorer Council schools has reached an alarming proportion.

II. This deterioration appears to grow greater as life progresses.

III. Medically there is nothing to account for the deterioration.

IV. The Industrial School figures show that by care and attention this deterioration can be stopped, and to some extent, at any rate, the leeway made good.

THE late Mr. William Henry Combe of West Hampstead left £1,000 each to the Hospital for Incurables at Putney, St. Mary's Hospital, Paddington, and Salisbury Infirmary, £500 each to King Edward's Hospital Fund, the London Hospital, the London Fever Hospital, the West London Hospital, the British Home for Incurables at Streatham and the Mount Vernon Hospital for Consumption, Hampstead, and £250 each to the Sussex County Hospital and the St. Luke's Home for the Dying.

THE Society of German Neurologists will hold its first annual meeting at Dresden in September. The principal subject for discussion will be the surgical treatment of nerve disorders.

THE PROGNOSIS OF INSANITY.

BEING THE MORISON LECTURES DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THE first of the present course of Morison Lectures was given by Dr. A. R. Urquhart on January 28th. It was only of late years, he said, that the fundamental truths had been disengaged from the fantastic phenomena which formerly dominated the attention of the observer. It was unnecessary to discuss the history of medical literature dealing with insanity until the memorable publication about the middle of last century of Schroeder Van der Kolk's lectures on mental diseases, in which he arrived at the conclusion that much insanity was due to morbid conditions of the great intestine. In accordance with the medical ideas of his time he described this class of cases as "sympathetic insanity." While he clearly recognized the brain as the organ of the mind, he believed that it was liable to disturbance in direct consequence of somatic conditions influencing it in a secondary manner. This conclusion was widely supported in Edinburgh; the influence of the body on the mind was definitely fixed and crystallized by Skae's classification of mental diseases.

The blood of the insane was the *dernier cri* of the modern investigator. Dr. Lauder Lindsay, so long ago as 1854, published a series of observations made in the Crichton Royal Institution on the histology of the blood of the insane. He did not claim that his researches elucidated the morbid conditions of mind or its organ the brain, but rather illustrated the laws of pathology, the natural relations of healthy and morbid states of mind and body, and more particularly the reaction of physical diseases on mental phenomena. The summary was presented under fourteen headings, the fourth being to the effect that a leucocythaemic condition frequently existed. As examples of this, cases of general paralysis, acute mania, and melancholia were cited. Unfortunately Dr. Lindsay concluded that there was no connexion between the state of the blood and the mental condition, but that it bore a relation to the debilitated conditions of the system and general vitiation of the blood.

Thirty years elapsed before another systematic investigation of the blood of the insane was undertaken, when Dr. S. R. Macphail in 1884 won the medal of the Medico-Psychological Association. By that time the haemocytometer and the haemoglobinometer had been invented, and with these instruments of precision further advance was recorded. In general paralysis Dr. Macphail recorded an increase in the relative proportion of white to red corpuscles coincident with the progress of the disease; he failed to find any great influence on the proportion of white to red corpuscles in maniacal attacks, while in a series of recent admissions the proportion was increased. Most important was his conclusion that there was a close connexion between gain in weight, improvement in the quality of the blood, and mental recovery.

Another prize essay on the same subject was the work of Dr. Johnson Smyth in 1890. He inferred that the relative proportions of white to red corpuscles were so variable as to be of little importance. In many instances, however, he recorded an excess of leucocytes, and stated that the blood of the insane was in a pathological condition.

Quite recently the position had been still further developed. Within the last few months Dr. L. C. Bruce had published his records of clinical investigations. Much of his book was concerned with observations on the blood of the insane, and especially on the leucocytosis, which he had shown to be of definite importance in diagnosis and prognosis. What was dimly discerned by Dr. Lauder Lindsay half a century ago was made clear by Dr. Bruce to-day, and especially the important conclusion that the morbid state of blood was a dominating factor in the evolution of mental diseases. Sufficient had been said to indicate the growth of medical opinion relative to insanity as an affair of medicine.

Similar references might be made to other somatic conditions the true nature of which were only now intelligible and explicable. Schroeder Van der Kolk was one of the first to appreciate the toxic nature of insanity. The Hippocratic doctrine that insanity was caused by disease had been obliterated by the superstition of the Middle Ages. The brain, as the organ of mind, infinitely

complex in its own proper connexions, was at present the subject of study in regard to its relations with all pathological somatic conditions. Thus the sympathetic insanity of Van der Kolk was regarded as a toxic affection, not always and inevitably caused by the direct continuity of nervous elements, but rather by a poisoned blood supply. The contributory causes of insanity were to be sought in heredity, in defect and decay of organization, in the disordered working of the somatic mechanism, and specially in the toxic elements which might be formed by that disordered mechanism, or introduced from without, which, again, brought the manifestations of cerebral disorder into line with other pathological somatic conditions, and left the mystery of madness on a par with the mystery of rheumatism. The position was that we had to deal with a constitutional disease, profoundly affecting metabolism, mainly originating in hereditary defect, and issuing in a liability to repeated attacks of insanity, of a cyclical nature, quite different from the maladies which, like smallpox, appeared to confer a future immunity.

From the medical point of view, mind was not a separate entity, nor could we think of mental disorders as entities. The mind, normal or abnormal, was but one, or rather one series of vital manifestations, part and parcel of the individual. The brain was the organ of mind, but it was entirely dependent on somatic agencies for nutrition, repair, rest, regeneration, and removal of noxious products —in short, for the normal manifestations of mind. The psychic disorder was generalized; the somatic disorder was generalized; both were constitutional. Very rarely was insanity a local disease; rather was it a generalized mental reduction, dependent upon generalized bodily conditions.

All insanity was a degradation of function, if not a degradation of structure. Insanity was a unity, not a fortuitous collection of kaleidoscopic symptoms each requiring a proper name. Still, one might conveniently speak of melancholia, mania and dementia, meaning depression, excitement, and enfeeblement, and it was also permissible to use the term "circular insanity" and "delusional insanity" as denoting a pronounced mixed, alternating form, and a systematized, delusional condition, neither of which was distinctly mania, melancholia, or dementia. In fact, this simple classification was founded upon symptoms in terms of time.

As knowledge progressed we were enabled to screen off from the total numbers of insane persons certain persons affected by definite pathological forms. Following Sankey, one might further divide the cases under review into cases of ordinary insanity of obscure causation, and cases of definite pathological causation.

While on the one hand the lecturer regarded the pathological forms as of little moment in respect of prognosis under present conditions as fixed, irrecoverable, and already doomed; on the other, he regarded ordinary insanity as uncertain, curable, and now even hopeful. It might be that general paralysis was to be lifted out of the category of reproach, that it would be fought and conquered, as had been suggested by Dr. Ford Robertson.

Dr. L. C. Bruce had lately shown that, disregarding the mental concomitants, there was evidence of the toxic nature of insanity. This evidence was of such a nature as to be appreciable by the methods of the clinic and the laboratory, to be checked or corroborated by the observers. It was not a theory of disease, but the direct outcome of a long, laborious, and skilful investigation into the facts of disease. His work opened up new vistas and afforded new hopes. He had, finally, brought insanity into the category of other somatic diseases, and established a parallel condition, long surmised and discovered with difficulty, long obscured, and at length distinguished by none other than the method of Zadig.

Briefly, it would appear that the time had already come when the conclusions formulated by Dr. Ford Robertson last year in reference to general paralysis—the failure of the organism to protect itself against bacterial invasion—might be extended to forms of ordinary insanity, which hitherto had baffled the skill of the pathologist. Whether it was consequent on a metabolic toxaemia or on a bacterial invasion, insanity must now be regarded as a condition of disease which demanded no special pathology, and therefore no exceptional treatment.

The numbers under consideration were 419 men and 390 women, being a total of 809 persons, admitted from 1880 to 1904 inclusive.

Any study of insanity must begin with a consideration of heredity—the earliest conditions affecting the organism. The percentage of those with a hereditary history of insanity might be stated as 45, while the inclusion of the whole neuropathic heredity increased that number to 72. It was a narrow view of the heredity of insanity which did not include the occurrence of the graver neuroses, want of mental balance, eccentricity, alcoholism, and paralyses. These manifestations in one generation so frequently issued in pronounced insanity in the succeeding generation that the nature of the incidence was obvious.

We had to deal with a condition which had certain hereditary relations, owing to a defect of organization, and comparable with arterio-sclerosis, gout or other diseases of obscure causation. It was not the crude heredity of yesterday, but a failure in development, or a weakening of somatic defences apparent in early life, in the period of development, in stress of maturity, or in the decay of old age.

There was no adequate reason to deny the existence of pre-natal toxin, assuming that toxins were effective in the production of cerebral disturbance and later of insanity. By the hereditary nature of insanity, therefore, was meant the inborn defect manifested under certain conditions in the existence of the organism. Not, crudely, that fatuous and furious persons were so conceived, but that their defect of organization was such as rendered them liable to fatuous or furious manifestations throughout the course of their existence, when subjected to certain morbid influences.

Heredity worked out in two directions—for better or worse. We heard so much of the latter that the former was neglected, or but partially recognized. Glib talk about the extinction of families and the eradication of undesirables must be balanced by the reasoned knowledge of natural processes. On the one hand, we could discern the ruin and decay of families, in spite of the constant effort of Nature at reconstruction and rehabilitation; on the other hand, by the prepotency of new blood and a more favourable environment, there was a reversal of the process, a rehabilitation just as important and just as certain. Of course this could not be demonstrated by the statistics of asylums, and the official mind, "subdued to what it works in," was obsessed by the calamities and the degradation of human nature. It was just here that statistical information generally failed, for the records of special hospitals must be replaced by the statistics of the general population taken at random, and it was deeply to be regretted that work of this importance was left to a few enthusiasts, instead of being undertaken by the medical profession as a whole, in furtherance of biological and sociological knowledge.

Dr. Urquhart said it had been his practice, as far as possible, to construct graphic charts of each family under observation, and these had been submitted to Mr. David Heron, whose important study of the *Relation of Fertility in Man to Social Status* gained a wide and appreciative audience last year. Mr. Heron had kindly constructed a chart which shows the incidence of insanity in regard to individuals—one member of each family at least having been insane.

It would appear that the incidence bore heaviest upon the eldest members of the families in fraternity, and that there was a fairly constant diminution of frequency as the families increased in size. The important biometric system advocated and instituted by Professor Karl Pearson would greatly enlarge our knowledge and correct our prepossessions, if the desirable data were forthcoming. Only a collection of accurate facts in sufficient numbers was required to correct the margin of error.

In the second lecture, delivered on January 30th, Dr. A. R. Urquhart submitted a series of tables and charts from which all cases of a gross pathological nature had been omitted, only those of obscure pathology being tabulated. First of all, cases in which alcoholism had a part in the etiology of insanity were set aside. The prognosis of alcoholism was indefinite, and generally unfavourable. Hereditary predisposition deeply affected alcoholics. Of 110 alcoholic certified and voluntary cases investigated, nearly 43 per cent. were hereditarily pre-

disposed to insanity, and nearly 23 per cent. to alcoholism. The total neuropathic heredity was 70 per cent.

General paralysis was practically incurable and comparatively rapid in its course. Out of 40 cases, 23 were undoubtedly syphilitic and 14 were alcoholic. There was presumptive evidence of syphilis in 7 other cases.

Turning to the cases of epilepsy reported, it would be seen that they were few in number, and all did not represent the ordinary cases of epilepsy which crowded the wards of the great English county asylums. The cases of ordinary uncomplicated epilepsy only amounted to 5. Eleven were cases of alcoholic epilepsy, a condition implying such a degeneration of nervous elements as practically precluded the possibility of recovery. This, however, was not an invariable result.

It was interesting to note that senile epilepsy in the insane had been resolved into two factors of the same nature as true epilepsy by Dr. John Turner—namely, an unstable condition of nerve cells, and a condition of stasis or cerebral anaemia resulting from arterial disease, endarteritis obliterans. The thesis of his important paper just published was that the blood of epileptics was abnormal and characterized by a special tendency to intravascular clotting.

The group of coarse organic diseases of the brain need not detain them. The recovery of a patient so seriously damaged was a very rare occurrence. But one instance appeared on the records.

Twenty-six cases of traumatic origin were reported, as usual, mostly in men. Cases of isolation have been included where there was a probability of that cause having been effective.

The class of idiots and imbeciles had also been deducted, as persons who, by early defect, were absolutely incurable and of no special interest in this relation.

Consideration, therefore, was begun with 554 persons suffering from ordinary insanity, as distinguished from 255 of obvious pathological significance. Further, it would be observed that the incidence of these pathological cases bore heaviest on the male sex, and illustrated the lower recovery-rate and the higher death-rate for that sex.

All cases have been classified as innate or acquired, and also as affected by mental or physical stress.

With regard to mental and physical stress, these were noted when apparently of some definite importance in etiology. Now severe mental strain, sudden or prolonged, was inevitably put forward as the cause of insanity in the history of every case in which it could be alleged. It was analogous to the similar assertion as to sunstroke in the case of patients with a tropical history. Was it really effective in the production of mental disorder? Dr Urquhart thought not.

The cases in which mental stress was alleged have therefore been critically examined, and it had been found that the almost inevitable complement to mental stress was innate or congenital defect. If a person were entered under mental stress he was almost invariably entered under innate. Sixty-four instances of this combination were recorded. On the other hand, the combination of acquired insanity with mental stress alone was extremely rare.

It was evident that final results tended to show that the innate or hereditary cases recovered in fair proportion, although they were more subject to relapse than the acquired. This had been widely recognized, but probably the heavier death-rate among the acquired cases had not been shown before. It might be that the more severe causal factors requisite to incite to insanity in persons not congenitally predisposed, found expression in this way.

The recovery rates of melancholia were 35.79 and 14.51 having regard to recovery and relapsed cases in innate cases, and 42.15 and 7.61 in acquired cases. On the other hand, the recovery rates of mania were 51.16 and 24.64 for innate cases, and 59.82 and 14.21 for relapsed cases.

The lecturer now glanced at the age period in relation to final results. With regard to the group of melancholias, the adolescents were in a marked minority, while the period of maturity exceeded that of the climacteric, the absolute numbers being 40, 97, and 75. The position was reversed for cases of mania, by the numbers 84, 73, and 69. The percentage of recoveries from melancholia tended to diminish as the age periods increased—a condition of affairs directly the opposite in reference to mania. The tendency in regard to all the death-rates was towards an increase with age, the adolescent naturally showing the lowest figures.

The lecturer inferred that the slight mental reduction of melancholia in youth was eminently curable, for if we added the recoveries and relapses the total was 62 per cent.; but the deeper reduction of mania, even omitting the development of dementia, was less likely to end favourably by 11 per cent.

It was formerly thought that the association of tubercle with insanity was particularly fatal in results. Worked out, the percentages of neuropathic tuberculosis were as follows in 25 persons: Recovered 32 per cent., unrecovered 32 per cent., and died 36 per cent. Although these were small numbers, and therefore liable to a wide margin of error, the lecturer believed that they would be found approximately correct for modern practice.

Considering the incidence of occupation and environment, with reference to heredity and results of treatment, the stress of life in towns was often unfavourably compared with the idyllic conditions of the country. First of all, it was difficult to decide how to place many of these patients. It seemed reasonable to divide urban and rural dwellers in accordance with the size of the towns—a population of some 5,000 being reckoned rural. The usual place of residence for some years previous to admission was regarded as fixing the classification. On that principle 456 might be considered as of urban extraction, and 353 rural. In the former 73 per cent. were of neuropathic heredity, and 27 were acquired cases. In the rural class 70 per cent. were neuropathic, and 30 per cent. were acquired. That represented no great difference, and no marked evil effect of town life, as regards heredity. The towns of course were steadily recruited from the country, but if neuropathic disorders were degenerate, the untoward influence was nearly as effective in the one as the other. Of course, the lecturer was not dealing with the industrial class, but with a comparatively stable class, which had apparently attained its maximum ratio to the general population, and at least for some years had shown no tendency to increase.

When one turned to the nature of the mental disorder, whether ordinary or pathological, one found that these stood in the proportion of 70 to 30 per cent. in urban cases, and 81 to 19 per cent. in rural cases. The untoward side of urban environment was thus revealed. The effective soil for the germination of insanity was nearly equal, while the evolution of the actual insanity was aggravated by the environment, resulting in a difference of 3 per cent. in the death-rate.

On general principles the lecturer had endeavoured to ascertain and record the earliest symptoms of somatic disturbance heralding insanity.

It was evident that the maximal elevations on the chart were for April, June, and December, showing a singular abrupt fall in May and a more prolonged fall towards the autumnal months. These 913 cases have of course been spread over a period of twenty-five years, and there did not seem to be reason to regard the results as untrustworthy. The fall in May and the rise in June was inexplicable, especially when it was noted that the charts of recoveries and deaths showed the same regression.

Sir Arthur Mitchell had kindly constructed a chart of incidence on onset for the lecturer, which showed a more equable course; for the influence of the preceding and succeeding months of any one month were taken into account. The average was carried out instead of the absolute numbers. The result was a period of greater and lesser intensity in winter and summer respectively, and probably this gave a more adequate idea of the total incidence as regards seasons.

Chart XI was designed to show the age on first attack, arranged in quinquennial periods. The curve rose rapidly from ages less than 20 to the maximum on the completion of adolescence. From that point it fell with two short increases to the eventual minimum. These regressions marked the climacteric periods of women and men when the curves for the sexes were separately studied.

It was certainly disquieting to find that, out of 809 persons admitted, no fewer than 195 had already suffered previous attacks. It was good reason for a thorough revision of our methods, for a closer study of the early symptoms, and a revisal of treatment.

The cyclic order of life, the slight diurnal changes in health, were, of course, frequently magnified in disease, and there was distinct tendency to enter upon and to continue in a vicious circle of mental disorder. It has already been stated that nearly a quarter of the whole number received were already relapsed persons on first admission, and one might add that 76 of the 173 re-admissions were returned relapsed, and 18 relapsed after final discharge. The recoveries reported have been regarded as either temporary or permanent, with the result that 38 per cent. of the former yields but 17.18 per cent. of the latter.

It was a loose use of the word "recovery" which confused the issues. A hospital recovery from rheumatism or an asylum recovery from insanity was justifiably recorded for the time being; but these diseases of obscure causation had a marked tendency to relapse or recur, and must remain records of failures until our methods of treatment were efficient to prevent these relapses and recurrences.

One of the questions of prognosis had reference to expectation of life. This was of importance in the matter of life insurance, in the matter of financial arrangements made in the interest of private patients, in the matter of asylum accommodation for State-supported patients. Did insanity shorten the life of the individual, and, if so, to what extent? Obviously the occurrence of general paralysis decided this question for that class within a year or two, although one could recite exceptional cases of a chronic type. The somatic conditions must be taken into account in individual cases, and broad generalizations must be applied with discrimination. Dr. Urquhart found that the average age on admission for men was 36 years, and the age at death 54.65 years, as against 63.96 for healthy males, while the average age on admission for women was 38 years, and the age at death 60.93, as against 66.83 for healthy females.

To resume: 809 persons were admitted, 252 recovered, 315 were removed unrecovered, and 140 died, leaving 102 resident. The percentages are: Recovered, 31.14; unrecovered, 38.93; died, 17.30; remaining, 12.60; rather lower numbers than the returns of Table I for admissions and readmissions. The expectation for this class of patients, therefore, would be: Of every 10 patients received, 3 would recover, 4 would leave unrecovered, 2 would die during residence, and 1 would remain indefinitely resident. But it was to be noted that of 3 discharged recovered, it was probable that not more than 2 would remain permanently sane. This practically agreed with Dr. Thurnam's finding in a similar institution half a century ago, "Not more than two remain well during the rest of their lives."

In his third and concluding lecture, on February 1st, Dr. A. R. Urquhart said there was just at present some disparagement of psychology and a sceptical attitude towards the assumed occurrence of a mental disorder without an operative physical cause. By his researches into the phenomena of fatigue, Kraepelin had explained what was formerly obscure, and improved the methods of education through Germany. Mental fatigue and bodily fatigue exercised the same effects on the brain, and it was a mistake to suppose that by altering the kind of fatigue reparative processes would be encouraged thereby. Italian observers had demonstrated the toxic nature of fatigue in the lower animals, and we could precisely understand the process.

The age and health of parents at the time of conception of offspring were of importance in the evolution of the race. Several instances of paternal drunkenness had been recorded in this connexion, but the mere accident of one act of drunkenness was relatively unimportant compared with the habitual condition of the persons noted.

What was of real importance in the study of neuropathic children was the immediate ancestry, the environment, and the education which conditioned them. Dr. Dewey of Chicago had investigated the early life conditions in 260 sane and 200 insane persons. Briefly, whatever tended to eugenics found expression in the sane in a higher degree than the insane. A neuropathic heredity was continued in a neuropathic environment, and issued in a neuropathic generation.

The evolution of character, ability, temperament, and success had not been studied with that care which the subject demanded. It was not sufficient to write around the great names. The race tended to average abilities, with some slight advantage to the families of exceptionally able, well-balanced, intellectual parents.

As sleeplessness was the most invariable prodromal symptom of insanity, so it was of the greatest importance in the course of the malady—whether from the view of treatment or prognosis. The high pressure of the blood, interfering with repose and nutrition, was the chief disturbing factor. The whole endeavour of treatment must be bent towards the restoration of sleep, not so much by the crude effects of narcotics as by the wider application of medical skill. The return of sleep was a sign of recovery or failure to recover—a good sign if improvement was concurrent in other directions, a bad sign relatively if there was no, or but partial, concurrence. For insomnia was not a symptom of chronic insanity. Excepting a few cases of chronic mania, a few of circular insanity in the excited phase, and especially of that class in which hallucinations were prominent or the coenasthenia was greatly perverted, the old cases sleep soundly and are aroused with difficulty. This restoration of sleep bore a close resemblance to the increase of body weight; if the nutritive processes became active and there was a concurrence of other favourable signs the outlook was hopeful; but degeneration might go hand in hand with an unhealthy pallor and an undesirable flabby corpulency, accompanying permanent enfeeblement of mind.

When the somatic failure was general it was evident to the most casual observer. The chronic degraded patients of one asylum closely resembled those of their class in any other asylum. The facial appearance was characteristic of degradation, if degradation had declared itself. Apart from the emotional expression of the prevailing mental tone, there was an immobile, listless, preoccupied appearance, which augured badly for the future. The nervous system was out of gear, and the enfeebled muscles indicated that failure. The complexion was pallid, and the skin shared in the general inefficiency. The eyes were relaxed and their mobility was restricted. Pigmentation of the skin was of evil omen, and if it was systematically picked by the patient one could hardly look for recovery. The development of nervous system and skin from the point of view of embryology might in some measure elucidate these complications. In any case the extremes of harsh dryness in certain forms of melancholia and copious perspirations in certain forms of mania were commonly recognized. Also the greasy, offensive appearance in degraded cases. The appendages of the skin were also affected. The state of the hair was a valuable index to the general condition.

The general nutrition, perhaps, was the most certain index of the progress of a case, as had been well brought out by the study of body-weight in recoveries and removals. In asylum life, the periodical and exact weighing of patients was a routine practice generally adopted, and generally trusted to indicate the variations in somatic conditions which were so important in the adoption of remedial measures suitable for each particular case; also as indicative of the earliest warnings of complications such as tuberculosis. A restoration of lost body-weight, like a restoration of diminished secretion, was almost invariably one of the first signs of returning health.

The muscular system presented very many problems of interest, apart from the pareses and paralyses of pathological insanity. The fumbling fingers of a general paralytic fail in muscular energy, in co-ordination, and in the guiding direction of the higher cortical centres. In lesser degree the final adjustments of intention and action are discernible in ordinary insanity, and as the degradation deepens, so the inability becomes declared. The somatic failure was then positive. But as a general rule it might be stated that the deeper the mental degradation the more obvious are the reflex defects, whether motor or mental. All cases displaying rhythmic, monotonous movements were to be regarded as most seriously damaged. In some cases these movements, apart from idiocy, had a gross pathological basis.

The morbid condition of bones in the insane had long been recognized. The anaemic failure of the chronic insane was part and parcel of the osseous defect. A few words might be permitted in reference to oral sepsis and a common symptom of general paralysis—a persistent grinding of the teeth.

The gait of insane patients was characteristic—the bent stiff neck, the downcast eyes, the untidy dress, the careless slouching walk, were all in various degrees indicative of somatic and mental degradation. Extraordinary attitudes impressed one unfavourably. Often these were assumed by adolescents who might recover, but the lecturer's experience was that they were symptomatic of relapse sooner or later.

Alterations in handwriting, and tricks of voice or speech, indicated the interaction of mind and body in many important directions. Vain and purposeless repetitions of phrases in the letters of a person not appreciably insane were often evidence of chronic alcoholism, and especially of cocainism. In the case of a person tending towards chronic insanity such repetitions were a mark of incurability. The corresponding phrase of speech was not less ominous; still there was a lower grade echolalia—in which there was a repetition of words heard by the patient and immediately reproduced; and lower still in the scale was verbigeration, in which new words were invented.

To resume, then, these various conditions of the organism betrayed, each in its own relations, the generalized nature of insanity, the generalized defect and disorder in which the mental symptoms originated, and upon which they depended. Within the compass of these brief lectures it was impossible to discuss all the somatic conditions.

It was generally recognized that prognosis would vary with the incidence of these disorders and diseases. If bodily health could be re-established, there was hope of mental improvement and recovery. For instance, if there was no possibility of restoring a damaged cardio-vascular system, the outlook was gloomy. Prognosis, therefore, must await the determination of these events. Of course, those with somatic stigmata generally tended to marked mental degeneration.

In the cardio-vascular group it was important to note the depression and fears which were exaggerations of the usual features of these maladies. Gastro-intestinal cases were similarly affected. The great excess of the female sex under the heading of generative disorders was in accordance with general experience. The lecturer had not been able to corroborate certain American observations which recorded extraordinarily voluminous morbid details in the sphere of gynaecology. There could be no doubt that the urine and vaginal discharges of the insane were highly toxic, but the vast array of surgical necessities alluded to was not within his experience, either by the bedside or in the *post mortem* room.

It was his routine practice to record daily on calendars the excitement or depression noticeable in individual patients. These calendars also showed the days of menstruation. The lecturer had condensed these observations for years together, and on examination of the results found that it was quite exceptional to correlate the catamenia with the exacerbations of insanity—occasionally this was discovered in mania, but never in melancholia, so far as his observations went.

What was of much more importance were the toxic conditions of these tracts—whether puerperal or not.

His aim had been to direct attention to somatic disorders and to correlate these with insanity under the two broad divisions, ordinary and pathological. Yet it was necessary to say something in general terms. For instance, the primary fact of consciousness had a relation to prognosis. If it were lost for any considerable space of time it was a measure of mental degradation indicating incorrigible defect. Mere confusion was not at all a hopeless condition, but delirium was of the gravest import. He had not found that perversions of identity were so incurable as was formerly supposed; but as a general rule it might be stated that perversions relative to self were much less intractable than those relative to others. Did time permit these opinions could be supported by clinical illustrations, but they must pass to the sphere of sensation. The general coenaesthesia was of importance in this connexion. It was a common measure of convalescence to observe carefully the mental attitude relative to fatigue. A loss of the sense of fatigue, an abolition of sensation in regard to fatigue, denoted an uninterrupted course of mental disorder; on the contrary, when the patient began to complain of fatigue and pain and discomfort the complaint was welcomed as the first sign of improvement.

The sensations coloured the delusions. The genesis of delusions from the painful sensations of gastro-intestinal disease was readily understood: it was easy to pass from the feelings of gastritis to the feelings of poisoning. In fact, Dr. Urquhart ventured on the generalization that perverted sensations determined the tone of the delusions and the general mental condition. It was unthinkable that the depressing nature of abdominal diseases, altogether apart from insanity, should issue in grandiose ideas or pleasurable excitement.

It would seem that hallucinations could be an affair of auto-suggestion in some cases.

The measure of degradation might be ascertained by observation of the power of attention and memory, yet these might be acute and the condition of the patient hopeless as regards recovery. It was commonly supposed that an unimpaired memory was an indication of sanity, yet the idiot savant may have a memory of extraordinary tenacity. The perversion of intellect might be complete and both attention and memory perfectly unimpaired.

In point of time, they had already seen that recent cases were most favourable in expectation of recovery, and that cyclic variations were common. Also that a sudden onset and a sudden recovery almost inevitably meant neuropathic inheritance, and recurrence sooner or later. A settled periodicity was bad, yet if there were no remissions tending to recovery the outlook was not less gloomy. The best sign in this respect was intervals of remission, daily becoming of longer duration; and it was specially gratifying when self-knowledge returned, interest in surroundings was displayed, neatness of dress was studied—in fact, when there was an indication of an appreciation of the amenities of existence, when the prayer of the Kilbarchan weaver was answered—in moderation.

Thus they inevitably returned to the initial stage of this discussion: the importance of somatic conditions in relation to the mental states. Prognosis in insanity must proceed upon a wide and careful review of the whole circumstances affecting the individual, who was in a degenerative condition physically, and therefore mentally. All that went to make up that degenerative condition must be separately investigated and summed up. The elements of prognosis were analytical and synthetical, and it was determined by the nature of the degree of the involvement of the organism in the widest sense. If all the functions were involved, if the degenerative process was universal and intractable, the future of the individual was desperate indeed. If the defect was partial and amenable to treatment, naturally the case was more hopeful as these limitations of involvement decrease. In that sense, how hopeless was the case of pernicious anaemia in which the mental manifestations were the direct result of an impoverished brain! For a time it might be possible to draw upon the reserve of red blood corpuscles, but the stock was not inexhaustible. It was in consonance with these observations that the toxic theory of insanity demanded our most serious attention and excited our liveliest hopes.

Prognosis could never be an affair of aphorisms. These *obiter dicta* required to be fitted into the general scheme of things; they were altogether too facile and too partial for the purposes. Finally, on the general question of prognosis of insanity, we had been counselled to give a guarded opinion, because it was the unexpected that happened. An eminent physician once said that he was paid for an opinion, not for a prophecy. But an opinion was truncated and ineffective if it were only relative to the moment of delivery. The questions demanded of us were urgent and necessary. Was the family business to be wound up? Were the pressing difficulties permanent or temporary? Was the home life to be altered for a time or for ever? Were careful plans for a career to be abandoned or postponed? Dr. Urquhart was impatient with a science that executed a strategic retreat before such a battery of questions.

It was an excellent practice in which throughout the years Dr. Urquhart had followed Sir James Crichton-Browne, to sum up the probabilities in the case-book on the reception of every patient. At least, it was a stimulating corrective for self-satisfied science; at best, an incentive to the careful study of every circumstance affecting each patient. For it was only by that study,

ndefatigable and personal, that advance was possible to ndividual students or to the profession.

More steadfastly than ever medical men were labouring for the prevention of disease. That resolved into questions of eugenics, education in the widest sense, and a determined, informed study of all morbid phenomena.

[The lectures were illustrated by statistical tables, charts, and clinical observations.]

BRITISH MEDICAL BENEVOLENT FUND.

At the February meeting of the Committee grants amounting to £171 were made to sixteen of the applicants, two cases being passed over as unsuitable for help. An abstract of the cases assisted is appended:

Daughter, aged 55, of late M.R.C.S., who practised in Wiltshire. Has been obliged to give up her time to her mother, recently deceased, aged 80, whose only income was a small pension. Recommended by Dr. Henry Hetley. Voted £6 immediately and £12 in monthly instalments.

Widow, aged 29, of L.S.A., who practised in Derbyshire. Left penniless at husband's death from new growth a few months ago, and was obliged to sell furniture to defray the expenses of his illness. Proposes to train as a maternity nurse. Three children, youngest aged 13 months. Recommended by Mr. R. H. Luce, Hon. Local Secretary, and voted £10 in one sum.

Widow, aged 43, of M.R.C.S., L.S.A., who practised in London. Quite unprovided for at recent and sudden death of husband. Three children, aged 13 to 7. Recommended by Professor Howard Marsh and by Dr. F. de Havilland Hall (Vice-Presidents). Voted £15, in three instalments.

Widow, aged 45, of M.D.St.Andrews, F.R.C.S.Edin., who practised in London and in Surrey. No income, but will probably shortly obtain help from the Society for the Relief of the Widows and Orphans of Medical Men. Two children, neither self-supporting. Recommended by Mr. Edmund Owen (Vice-President) and by Dr. J. Wayte. Voted £5.

Widow, aged 55, of L.R.C.P., L.R.C.S.Irel., who practised in London and abroad. Applicant has lost her income through the failure of a bank, and is unable to obtain work on account of her age. Dependent on a married son earning a very small salary. Recommended by Mr. Reginald Harrison (Vice-President). Voted £12, in twelve monthly instalments.

Widow, aged 54, of L.R.C.P.Edin., who practised in London. No income; no children. Endeavours to support herself as a midwife, but earnings are falling off owing to competition. Relieved six times, £35. Recommended by Mr. Jonathan Hutchinson (Vice-President). Voted £5.

Daughter, aged 61, of late M.R.C.S., L.S.A., who practised in Cornwall. No income; used to support herself by a boarding-house, but was obliged to give it up. A friend pays for the rent of two rooms. Relieved eight times, £96. Recommended by Dr. Paleman Best. Voted £12 in twelve instalments.

Widow, aged 40, of M.D., who practised in Hampshire. Left unprovided for at husband's death eight years ago. For some time past has given services in exchange for a home for herself and son. Relieved eight times, £95. Recommended by Dr. Mitchell Bruce (Vice-President). Voted £12 in twelve instalments.

Widow, aged 71, of M.D.Glasg., who practised in Hampshire. Dependent on the rent of a small house which will be vacant in a few weeks' time. Four children, but unable to help. Relieved four times, £21. Recommended by Dr. A. W. Orwin. Voted £5.

Widow, aged 58, of M.R.C.S., who practised in Surrey. Has lost her capital through unfortunate investments, and endeavours to support herself by letting rooms but finds difficulty in obtaining lodgers. Six children, unable to help. Relieved once, £12. Recommended by Sir Samuel Wilks (Vice-President). Voted £12 in twelve instalments.

Widow, aged 51, of M.B.Glasg., who practised in Liverpool. No income; endeavours to support herself by needlework; failing health; three children barely self-supporting. Relieved twice, £30. Recommended by Dr. J. Thorburn. Voted £12 in twelve instalments.

L.S.A., aged 63, who practises in London, but whose earnings have greatly decreased owing to competition. Four children, none self-supporting. Relieved once, £18. Recommended by Dr. Mitchell Bruce (Vice-President). Voted £18 in twelve instalments.

Widow, aged 38, of L.R.C.P., L.S.A.Edin., who practised in Yorkshire. No income; two children, aged 10 and 8. Endeavours to support herself by letting lodgings but her rooms have been empty for three months. Relieved once, £5. Recommended by Dr. Walter Broadbent, Honorary Local Secretary, and Mr. Herbert Lund. Voted £5.

Daughter, aged 51, of late M.R.C.S., L.S.A., who practised in London. Quite broken down in health and dependent on her half-sisters, who can only just support themselves. Relieved three times, £32. Recommended by Dr. Theodore Fisher. Voted £12 in twelve instalments.

Daughter, aged 28, of late M.R.C.S., who practised in Wales. No income and indifferent health. Relieved seven times, £73. Recommended by Sir Victor Horsley, F.R.S. (Vice-President). Voted £6 in one sum.

Daughters, aged 59 and 56, of late M.R.C.S., L.S.A., who practised in Gloucestershire. Were comfortably provided for, but lost their capital through the dishonesty of a friend. Only income now £8 per annum each. Relieved three times, £44. Recommended by Dr. William Carter. Voted £12 in twelve instalments.

THE ADMINISTRATION OF THE MIDWIVES ACT.

Devonshire.

A deputation representing the Medical Officers of Health of Devonshire has waited upon the General Purposes Committee of the Devonshire County Council, Sir John Shelley in the chair, and explained the views of the medical officers upon various questions which have arisen in administering the Midwives Act, 1902, as well as upon the scale of fees at present allowed for the work of inspection and supervision of midwives. The Committee decided to make the following recommendations, which have been adopted by the Council:

1. That the delegation of powers under this Act to district councils be revoked, the delegation to this Committee, however, not to be affected.
2. That as there is no medical officer for the county the Committee propose that arrangements shall be made for the supervision and inspection of midwives by Poor-law medical officers throughout the county.
3. The fees to be allowed to the Poor-law medical officers to be: £1 1s. for each midwife per annum, for which not less than two inspections of the midwife and her residence shall be made; 10s. 6d., with 1s. a mile one way, for each special visit required to be made.

Rotherham.

At the suggestion of the Medical Officer of Health, Dr. Alfred Robinson, the Midwives Committee of the County Borough of Rotherham recently—on the motion of Mr. Grundy, seconded by Dr. Lodge—adopted the following report:

The Committee again considered the question raised by the Rotherham and District Medical Guild as to the payment of a fee to medical gentlemen when attending cases of childbirth at the request of a midwife when the patient is unable to pay.

The Committee recommend that the Council agree to pay a fee of £1 1s. where a medical gentleman is called in, at the request of a midwife, in cases of flooding, convulsions, and rupture of the uterus upon the following terms and conditions, namely:

These payments will be made contingent on a certificate and report being furnished by the medical attendant to the Midwives' Committee of facts within the knowledge of the medical practitioner which may appear to the Authority necessary to the elucidation of the case. They will also be contingent on the carrying out by the medical practitioner at the earliest possible moment of any procedures arising out of the visit for which the sum of £1 1s. will be considered an inclusive charge. All cases, in fact, to be treated as cases of emergency by the medical practitioner called in.

These payments will only be made in the foregoing circumstances where the income of the family does not exceed the following rate:

	Per Week. s.	d.
Man and wife	21	0
Parent or parents and 1 child	23	0
Parent or parents and 2 children	25	0
Parent or parents and 3 children	27	0
Parent or parents and 4 children	29	0
Parent or parents and 5 children	30	6
Parent or parents and 6 children	32	0
Parent or parents and 7 children	33	0

The report was presented to the borough council on March 6th and passed.

Glamorgan.

At the meeting of the Midwives Act Subcommittee of the Glamorgan County Council, the County Medical Officer, as Executive Officer under the Act, presented his report.

It stated that the number of midwives within the administrative county whose names were on the last published roll of the Central Midwives Board was 756. In December, 1906, a letter was sent to each midwife, together with a copy of Form XII, which she was requested to fill in and return to the executive officer if it was her intention to practise as a midwife within the area during the year 1907. From the replies received it was found that 19 had died, 23 had left the county, 30 had given up practising owing to ill-health or old age; 634 signified their intention to practise. No replies were received

from the remaining 50. Of the 634 in practice, 595 were on the roll on account of having been in bona-fide practice since July, 1901. The remaining 39 old certificates. During the year 1906 the midwives had sent in 133 notifications of stillbirths and 396 records of sending for medical help. The work of inspection had been continued by Nurse M. Evans, who had made 149 visits during the quarter; 3 cases of puerperal fever were notified, and subsequently visited by the Inspector of Midwives. No complaints were received during the quarter. A letter was received from Dr. Davies, Medical Officer of Health, Swansea, to the effect that the Swansea supervising authority has decided to give a course of lectures in accordance with the rules of the Central Midwives Board. The lectures are to be given at the Swansea Hospital, commencing early in March. Dr. Davies suggested that if the Glamorgan County Council made a grant county pupils might be taken at the same fees as Swansea pupils and recommended that facilities be granted by the county council to pupil midwives at this centre, in like manner to those enjoyed at the Cardiff centre.

LITERARY NOTES.

IT is just forty years since the foundations of antiseptic surgery were laid by Lord Lister in a paper entitled, "On a new method of treating compound fracture, abscess, etc. Observations on the conditions of Suppuration," which appeared in the *Lancet* of March 16th, 1867. The eightieth anniversary of Lord Lister's birth falls on April 5th next.

The *Transactions* of the First International Conference on Cancer Research, held on September 25th, 26th, and 27th, 1906, at Heidelberg and Frankfort-on-the-Main, have been issued as a special number of the *Zeitschrift für Krebsforschung*, which is edited by Professors D. von Hansemann and George Meyer, and published by August Hirschwald of Berlin. The volume, which gives a view of our present knowledge as to cancer, can be obtained through booksellers or direct from the Office of the Central Cancer Research Committee, 13, Bendlerstrasse, Berlin.

Messrs. Spottiswoode and Co. have been appointed publishers of the *Midwives Record and the Monthly Nurse*, described as the only journal devoted exclusively to the interests of midwifery and maternity nursing. It appears at the beginning of each month.

Among the volumes issued by the Publications Committee on the occasion of the Quatercentenary of the University of Aberdeen is one entitled *Studies in Pathology*, written, as we learn from the title page, by alumni to celebrate the quatercentenary of the University and the quatercentenary of its Chair of Pathology, and edited by Dr. William Turbet. It is also a *Festschrift* in honour of Professor D. J. Hamilton, and it appropriately consists of papers embodying the results of original researches in pathology made by his pupils. The volume opens with a sketch of the Professor's career, which enables the reader who has not had the privilege of working under him to feel what his influence must have been. The Chair of Pathology was founded by the benefaction of Sir Erasmus Wilson, who then, as a native of Devonshire, was, in a medical sense, the colleague of St. Bartholomew's Hospital and John Abernethy. The chair was founded in 1882, and Professor Hamilton, then Demonstrator of Pathology at Edinburgh, was appointed. He found a waste, which he has transformed into a fruitful country: how fruitful this has become volume is of itself sufficient to show. Among the contents may be mentioned a paper by the Professor himself on the alimentary canal as a source of contagion; one by Dr. W. L. Mackenzie on the administrative aspects of tuberculosis; one by Professor Cathcart on paroxysmal irregularity of the heart and auricular fibrillation; an experimental study of the immunity against *Bacillus pyocyaneus* by Dr. Pallister; a contribution to the pathology of exophthalmic goitre by Dr. G. M. Duncan; and an experimental enquiry into the relationship of leucocytosis to the opsonic contents of the blood serum by Drs. J. C. G. Ledingham and Bulloch. The book is a worthy record of the devotion of its authors to their Alma Mater, and a personal tribute to Professor Hamilton of which he may well be proud. A fine portrait of the *Altmeister* forms the frontispiece.

Dr. Corlieu, Honorary Librarian of the Medical Faculty of the University of Paris who has just passed away at the age of 82, was one of the best known figures in the medical world of the French capital. He was at one time a busy practitioner, and was Physician to the Municipal Dispensary of Paris. He was the author of many papers on hygiene and sanitary police, and of small handbooks of pathology, clinical medicine, and therapeutics, which were very popular among students thirty-five years ago. He also contributed innumerable articles on miscellaneous subjects, old and new, to the medical press. His great work was a scholarly history of the Paris Faculty. He was a man of wide and curious learning, the weight of which he wore lightly as a flower. His memory was stored with the scandals of the profession, and with anecdotes which he told with a biting wit that made him many enemies. Hence, it is said, he failed to secure admission to the Academie de Médecine, at the gates of which he stood disconsolate, like the Peri excluded from Paradise. It is characteristic of the man that his last application was written in choice Latin. His selection of that tongue for the purpose may have been determined by a desire to show his learning; we cannot help thinking, however, that it was a satiric touch intended for the confusion of pundits whom he probably suspected of inability to construe the language of Cicero. In a volume of verse entitled *Manuel du Parfait Candidat*, he described in a mocking spirit the ordeal of tribulation which the candidate for admission to that illustrious body has to go through. He also wrote satirical songs about the bigwigs of the Faculty which were greatly relished by the rank and file of the profession. But Corlieu was much more than a master of flouts and gibes, as Disraeli called Lord Salisbury. He was a man of sterling worth, and was held in high respect even by those who had felt the playful lash of his tongue. His funeral, which took place on March 10th at Charly-sur-Marne in the Aisne Department, was attended by a great crowd of his professional brethren and friends.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ending February 2nd, 9th, and 16th the deaths from plague in India amounted to 16,601, 20,706, and 15,400. The seizures during the same periods were 20,262, 25,208, and 27,364. The principal returns are: Bombay Presidency, 2,336, 2,471, and 2,571 deaths; Bengal, 1,287, 1,205, and 2,071; United Provinces, 5,409, 6,652, and 6,576; Punjab, 7,992, 7,967, and 9,410; Central Provinces, 1,279, 1,347, and 1,668.

During the weeks ended February 2nd and 9th the returns were: Rajputana, 42 and 92; Kashmir, 51 and 91; Central India, 261 and 175; Hyderabad, 57 and 175; Mysore, 133 and 154; Madras, 37 and 58; Burmah, 509 and 475. During the week ended February 16th the plague returns in districts above mentioned was stated by the *Times of India* to be trifling.

AUSTRALIA.

Brisbane.—During the weeks ended December 22nd and 29th, 1906, and January 5th and 12th, 1907, the fresh cases of plague numbered 1, 0, 1, and 0. The deaths from the disease during the same periods amounted to 3, 1, 0, and 0 respectively. On January 13th 1 case of plague only remained under treatment. A few rats were found to be infected with plague. During the weeks ended January 19th and 26th the fresh cases of plague in Brisbane numbered 8 and 4, and the deaths from the disease 1 and 2. The total number of cases reported between January 1st and 26th, 1907, in Brisbane amounted to 15. The recent outbreak is an example of local plague infection, all the cases being associated with a store in James Street. Dead rats were found on and in the vicinity of these stores prior to the outbreak. The majority of those attacked were Kanakas who had been playing in the neighbourhood of the store. Rat destruction is being vigorously carried out in the infected and other areas.

Port Douglas.—During the week ended January 26th, 1907, no less than 4 cases reported, of which 1 had proved fatal. Twenty-three white people and seven Hindus were under treatment on January 26th. The patients are encamped in a separate camp situated eight miles from Port Douglas. The mail hands have commenced work on the beach near Port Douglas, and the sugar mills closed.

MAURITIUS.

During the weeks ended February 21st and 28th the fresh cases in Mauritius numbered 8 and 1, and the deaths from the disease 6 and 1.

The municipal authorities of Erfurt have decided to establish a dental clinic for the school children of the town. The number of children is 19,000.

PROFESSOR LUCAS BENHAM a week or two ago celebrated the golden jubilee of his graduation in medicine. In honour of the occasion he was made a Privy Councillor with the title of Excellency. The Professor is 73 years of age.

MEDICAL NEWS.

The King has signified his approval by pricking the name of Surgeon-Colonel P. B. Giles, V.D., F.R.C.S., Commandant Volunteer Ambulance School of Instruction, as High Sheriff for the County of Bucks.

On Tuesday next, at 5 p.m., Mr. Noel A. Humphreys, F.S.O., will read a paper before the Royal Statistical Society, 9, Adelphi Terrace, Strand, W.C., on the alleged increase of insanity.

At the last quarterly meeting of the Medico-Psychological Association of Great Britain and Ireland, held at the Notts County Asylum by the courtesy of Dr. Arthur Molyneux Jackson, it was arranged that the annual meeting should be held in London on July 25th and 26th.

The medical profession is more largely represented in the new Duma than in the last. As far as is at present known there are twenty-five medical members of the Russian Parliament; the majority belong to the Cadet party and to the Extreme Left.

A meeting to promote the interests of the Second International Congress on School Hygiene, to be held in London in August next, will be held, on the invitation of the Lord Mayor, at the Mansion House on Wednesday next at 3 p.m.

The Association des Anatomistes will hold its ninth annual meeting this year at Lille from March 24th to 28th, under the presidency of Professor Hallez. The Vice-Presidents are Professors Debierre, Curtis, and Van Gehuchten.

The Portuguese National Antituberculosis Congress will hold its fourth meeting at Oporto from April 4th to 9th. An exposition of hygiene, particularly intended to illustrate the means available for the prevention of tuberculosis, will be held in connexion with the congress.

A medico-historical museum was opened in the Kaiserin Friedrichhaus, Berlin, on March 9th. It has been organized under the direction of Professor Eugen Holländer, well known by his works on medicine in classical art and medicine in caricature, who delivered an introductory address.

A committee of the Massachusetts Legislature is, we learn from the *Boston Medical and Surgical Journal*, considering the expediency of providing nurses for schools. A meeting held at the State House, Boston, on February 26th, was largely attended. The opinion was unanimously expressed, by medical practitioners and others, that a regular system of nursing in the public schools is desirable and feasible. No opposition whatever was expressed to the Bill.

An official return was issued on March 2nd showing the number of British soldiers and sailors killed or wounded in action during the six years ended December 31st, 1903. It covers all wars or warlike operations undertaken during that period either by the Imperial Government or by chartered companies, and gives for killed in action or died of wounds a total of 8,678 officers and men, and an aggregate number of 23,773 wounded. It is a pity that it was not accompanied by a similar return regarding deaths and invaliding from disease.

The Convalescent Homes Association seems to be justifying its existence, having already provided forty-one beds for surgical cases still in need of active attention after operation. It has also opened at 32, Sackville Street, Piccadilly, a central bureau at which information can be obtained by any member of the public as to where beds for convalescent patients are available, and as to what are the conditions imposed. It is to be hoped that before long all hospitals and convalescent homes will join this body, and thus link themselves together to the common advantage. The Chairman of the Association is Sir William Church; the honorary secretaries being Mr. M. O. Fitzgerald and Dr. S. H. Habershon.

The lectures to be given at the Royal Institution after Easter include the following: Professor W. Stirling, three lectures on stimulation, luminous and chemical; Professor G. H. F. Nuttall, two lectures on malaria, sleeping sickness, tick fever, and allied diseases; Professor Sir James Dewar, three lectures on chemical progress, work of Mendeléef and Moissan. The Friday evening meetings will be resumed on April 12th, when a discourse will be given by Professor A. H. Church on conservation of historic buildings and frescoes (with experimental illustrations). On April 19th Professor C. S. Sherrington will speak on nerve as a master of muscle; on April 26th Mr. James Swinburne on new illuminants; and on May 3rd Sir James Crichton-Browne on dexterity and the bend sinister.

Dr. C. G. Seligmann, Pathologist to the Zoological Society of London, in his annual report presented to the Society recently, stated that 356 mammals and 283 birds were submitted to *post-mortem* examination during 1906. As the result of his observations, he drew the conclusion that tuberculosis occurring in birds in the gardens was usually due to infection by the gut. New growths were rarely observed either in mammals or in birds, but one case of carcinoma arising in the kidney was observed in a Chilian pintail, and two cases of benign new growths in birds not inmates of the gardens had been observed. The deaths of rheas, cassowaries, ostriches, and some of the larger storks kept in the gardens appeared to be due in a large number of cases to cardiac failure, the heart being found extremely flabby.

On March 9th the Queen and her sister, the Dowager Empress of Russia, visited the London Hospital, and were enthusiastically received by the students and nurses; the Chairman, the Hon. Sydney Holland, pointed out to the Queen the site, immediately facing the entrance, upon which the statue of Her Majesty, the first in this country, is to be erected. The royal party visited the Queen's ward (the surgical ward for children) and the maternity ward, where the bags of clothing for infants, provided on the initiative of the Countess of Derby, containing two wool vests, a flannel wrap, and two frocks, were examined with approval. Their Majesties then lunched in the committee room, and afterwards visited the men's surgical ward, going on to the out-patient department, where "Queen Alexandra's light department," with its installation of Finsen lamps, the institution of which is so largely due to the personal interest the Queen takes in this treatment, was inspected with interest. The Queen and Empress were loudly cheered when they made their appearance in the gallery of the out-patient department, and the visit will doubtless do much to encourage the workers, medical and nursing, in this great institution.

The Glasgow authorities have determined to discontinue publishing daily reports concerning cases of cerebro-spinal meningitis, and to make statistical returns at the same intervals as in respect to other diseases. The number of cases of the malady in Glasgow, though larger than anywhere else, is not really great, and when compared with the incidence of other diseases, such as scarlet fever and diphtheria, it is quite small. In England isolated cases have been reported during the week as having occurred at various places, the best founded appearing to be a case at St. Helens, and one in Cubitt Town in the east of London. In Scotland the position remains very much as it was last week, the Registrar-General's returns for the seven days ending March 9th including 28 deaths ascribed to cerebro-spinal meningitis at Glasgow, 10 at Leith, 7 at Edinburgh, and 1 at Dundee. In Ireland during the same period 11 deaths were returned as due to cerebro-spinal meningitis in Belfast, and 4 as caused by cerebro-spinal fever in Dublin. Abroad it is reported from Germany that some cases have been noted in the Rhineland provinces. None were noted in these last year when the disease was very prevalent in East Prussia and Galicia.

The Association of Certificated Dispensers, a body which came into being under the auspices of the Society of Apothecaries last year, held its first annual general meeting on February 28th. A membership of 220 was reported, and the Chairman, Mr. Montague Smith, after remarking that those who belonged to the association were the owners of the oldest dispensing qualification in the country, congratulated them on having banded themselves together for mutual protection. An address on the status of the apothecaries' assistants was then delivered by Dr. F. S. Toogood (barrister). Many of their opportunities for usefulness had, he showed, been denied them by legislation enacted at the instance and for the benefit of the chemist and druggist. Their object now was to consolidate their position and to protect themselves against further encroachment on their ancient rights. As things stood they were by the Act of 1815 entitled "to prepare, apply, give, administer, or any way to sell, set on sale, put forth, or put on sale"; in short, though they had no right to independent action, they could dispense or sell any pharmaceutical preparation or drug provided the business was the property of an apothecary. So far as dispensing in hospitals, infirmaries, or for private medical practitioners was concerned no qualification was legally necessary, but the Local Government Board had issued a memorandum stating what certificates should be accepted by bodies under its control as evidence of proficiency in the art of dispensing; among these was the assistant's certificate of the Apothecaries' Hall.

British Medical Journal.

SATURDAY, MARCH 16TH, 1907.

A PROPHET OF QUACKERY.

In John Alexander Dowie has passed into the reign of Silences and Veracities one of the most blatant and impudently mendacious of all quacks, past or present. He has been likened to Cagliostro, but the comparison does injustice to that famous impostor, who, with all his pretensions, never soared to the giddy height of giving himself out to be a reincarnation of the Prophet Elijah. Dowie as the preacher or revealer of a new religion does not concern us; it is as a professed healer of the sick that he comes within our purview. He had the wit to see what a help healing is to the propagation of a new religion, and with characteristic impudence he at once claimed to be endowed with miraculous powers. He formed an International Divine Healing Association in Australia, but he was so little appreciated that he was put in prison. He next tried his fortune at Chicago, where he made himself one of the most successful "shows" of the World's Fair. Americans, with all their proverbial cuteness, are a credulous people, and Dowie soon had his nets full. Cripples and other sufferers flocked to him to be healed. Like all quacks, his successes were loudly vaunted; and in this he found a potent ally in the American press, a large section of which cares much less for truth than for highly-spiced sensation that will help to sell the paper.

Even in America there were unbelieving persons who thought Dowie had more of the rogue than of the fanatic in his composition. Soon the "persecution" that is the fate of the prophet overtook him. He is said to have been arrested more than a hundred times, and to have spent some £4,000 in fines and legal expenses. In the end he managed to slip through the meshes of the law. He shook the dust of Chicago off his feet and founded Zion City on the shores of Lake Michigan. Whatever else he may have been, there is no doubt that he was a shrewd man of business. The site of his new city covered 5,000 acres, which he bought for £250,000, and sold in lots to his followers for £5,000,000. The Prophet granted leases on the condition that the premises should never be used, among other things, for a pharmacy or drug store, or as the office or residence of a practising physician or surgeon. He induced some 50,000 or 60,000 believers to settle in Zion, which for a short time seemed to be a thriving place. Dowie was an autocratic ruler, and, although his theology was in many ways eccentric, he was rigorously orthodox on the subject of tithes, exacting from each follower a tenth of the profits made in his business. He at one time had accumulated vast wealth, but the faith of his disciples began to be shaken, and attempts were made to revive it by campaigns of prayer and preaching in New York and elsewhere. These were utter failures; the Prophet's wild finance and other extravagances brought about collapse, and in 1903 he was deposed. Illness followed, and the end was darkened by madness. The last flicker of belief in his pretensions was extinguished in most of the followers by the sickness of the Prophet, who had boasted that he would never be ill and would never die.

The influence of a quack like Dowie, whose imposture was like Falstaff's lie, gross as a mountain, open palpable, would be incomprehensible but for the fact that men are, as Carlyle brutally expressed it, mostly fools. The larger an impostor's professions, the more readily is he believed, especially by half-educated people such as form the bulk of the population of the United States. There is no reason to doubt that a certain proportion of his "cures" were genuine. The secret is that of all faith healing, which in suitable cases has wrought apparent wonders at all manner of shrines, ancient and new, and still does so in an appropriate atmosphere and environment. Dowie ornamented his church with discarded crutches and other mechanical helps, just as in the South of Europe votive offerings of legs and arms are hung up in testimony of cure. He gave his "cures" the boldest possible advertisement. As his doctrine was that disease is sin, suffering believers had an exceptionally powerful motive for giving every help to the working of the healing influence upon them. Dowie had his failures, like other healers, and more than once, even in the days of his glory, narrowly escaped the clutches of the law. He severely taxed the faith of his followers when his daughter was so badly burnt that a doctor had to be called in. The poor girl died, and the Prophet pacified the doubters among his flock by saying that her death was the punishment of disobedience.

The difficulty in a scientific inquiry as to the claims of faith healing is that of getting sufficiently detailed and authentic reports of cases that can be investigated. The symptoms are generally described so vaguely that it is often impossible to form a precise judgement as to the nature of the disease. The testimony of the patient is obviously worthless, and that of the medical attendant when any is forthcoming, does not always inspire confidence. When a fairly trustworthy account is procurable it often turns out that the cure is incomplete and relapse is frequent. Only in very exceptional cases is anything heard of the after-history; it is therefore impossible to know how long the curative effect lasts.

In the case of Christian Science, and still more in that of Dowie, investigation is out of the question because there is not sufficient definite information to go upon. Everything—symptoms, diagnosis, and result has to be taken blindly on faith. It is in the power of inspiring this faith that lies the whole secret of the thaumaturgy of Dowieism, Eddyism, mind healing, spiritual healing, *et hoc genus omne*. Given this faith with a large infusion of imposture, conscious or unconscious, in the healer, and of suggestibility and delusion in the patient, and the influence of the mind on the body has the freest possible play. We must also take into account that curious feature of human nature which, as Huxley says, makes persons of the highest character capable of absolutely misrepresenting the truth where their prejudices are concerned. Then there is an element of deliberate deception which must not be lost sight of. Very few persons are competent judges of evidence; it is well known that even men of scientific training cannot always be trusted to appraise human testimony at its true value.

Dowie denounced Christian Science as uncompromisingly as he condemned doctors. A comparison of the two forms of humbug may recall Dr. Johnson's unsavoury reply when asked to give his opinion of two minor poets, that there is no settling the point of precedency between a louse and a flea. But if we had to choose between Mrs

Mary Baker G. Eddy and John Alexander Dowie, candour would compel us to say that the defunct Prophet was the greater quack of the two. There is a strain of simple foolishness in Mother Eddy and her disciples that makes us willing to believe that they know not what they do. But Dowie's *Leaves of Healing* show him as more deceiving than self-deceived. He speaks of people standing before his congregation to testify that they had been healed of cancer, paralysis, rheumatism, hip disease, and spinal disease by his prayers, which, by the way, were addressed to Heaven by a simple machinery recalling the prayer mill of the Llamas. We hear of a lady who was thrown out of a cart, and had three ribs and her breast-bone broken, and her skull fractured, who was instantly healed by a prayer of Dowie. We hear of persons sick with "inflammation" and with "what doctors call overflow of the gall," instantly healed at great distances by the same agency. We hear of a woman who had "three or four "incurable diseases of a private nature, cancer being "one," who was healed at the first prayer of all except her spinal trouble. She then suffered from "cataracts in both eyes," but refused to listen to the surgeons whom she consulted. She went to Dowie, but the result, unfortunately, is not stated. Another woman was cured by anointing and prayer of a bleeding cancer of the rectum of twenty-five years' duration. Another was healed when dying of hereditary consumption, skin cancer, paralysis, and heart disease. One thing which cannot fail to strike the reader about these poor people is the manifold afflictions from which they suffer. The number of their fatal diseases is only equalled by that of the physicians whose ministrations they have endured.

Some enlightened persons hold that we are now witnessing a vast unlocking of spiritual forces in the persons of the converts to Christian Science, Metaphysical Healing, and other forms of antimaterialistic philosophy, who are so numerous at the present day. Professor William James thinks that our scientific education has unfitted most of us for comprehending the phenomenon, and that being a religious movement it "will certainly outstrip the purviews of its rationalist "critics." As to this we can only say that until the "mind cure movement" succeeds in purging itself of the immense amount of hallucination and falsehood that now forms the larger part of it we shall continue to regard it as more potent for evil than for good.

MORBID PLEASURE.

From Plato to Herbert Spencer the philosophic mind has ever been powerfully attracted to the contemplation of those two great incentives to all human action, pleasure and pain. A mere recapitulation of the theories evolved by numberless writers to account for their origin and nature would of itself fill a volume, but whether conceived from the standpoint of religion, philosophy, psychology, or physiology, whether pleasure and pain be regarded as having an extrinsic and superhuman source or as of simply intrinsic derivation, through almost all of them there runs the idea of utility. It is true that Plato concerned himself rather with that which occasions pleasure than with pleasure itself; and that a beautiful thing was for him a phenomenal and transient appearance of a permanent and transcendental "absolute beauty," but nevertheless he recognized that beauty lies in the pleasure of sight and hearing, and measured beauty by the standard of "pleasure and utility," finding the common element of all forms of beauty in the suitable or fit.

This idea, that pleasure is the concomitant of actions which are serviceable either to the individual or the race, whether the pleasure accompany the satisfaction of one of the baser instincts or desires, such as hunger, thirst, or the sexual appetite, or spring from the performance of that good deed which shines in a naughty world, received its last convincing proof with the formulation of the evolutionary hypothesis at the hands of Herbert Spencer. The necessary connexion between utility and pleasure has been frequently denied, but notwithstanding that there are many apparent exceptions to this rule, notably the pleasures derived from the taking of harmful drugs or alcoholic intoxication and the often instanced euphoria of the dying—exceptions which prevented Ribot, for example, from admitting its entire validity—notwithstanding these, it does not, we believe, when regarded from the phylogenetic rather than the individual point of view, admit of any exceptions. Herbert Spencer himself, in his *Principles of Psychology*, explained away many of these apparent exceptions, and Max Nordau, in his amusing and often illuminating *Paradoxes*, in his chapter on "Evolutionary Aesthetics," deals with this very question of alcoholic pleasure. After stating, though not explaining in physiological terms, the action of alcohol as exciting the nervous system to a higher degree of activity, producing "an intensive "feeling of strength, cheerfulness, impulses on the part "of the will and a plentiful supply of conceptions on the "part of the judgement, that is, a condition which can in "the natural order of things only be produced by such "circumstances as are in the highest degree beneficial "for the health and life of the individual," he proceeds to show, by a *reductio ad absurdum*, how if alcohol had existed in Nature in a pure and easily accessible state, like water or the fruits of trees, those who had continually experienced pleasure from a copious indulgence in alcohol would have died out and only those or their descendants would have remained to-day who found alcohol as intolerably offensive as, say, petroleum or the fluids of putrefaction. He does not, however, attempt to outline the *rationale* of alcoholic over-indulgence, though he states that the exceptions to the utility-pleasure rule are invariably evidences of morbid states, and he falls into error in assuming that the various feelings of well-being which he describes precede instead of being the earliest result of the paralytic action of the alcohol. To this point, to the elucidation of the mechanism of morbid—or, as it should be, abnormal—pleasure, an interesting though somewhat discursive paper by Dr. Bridou in a recent issue of the *Revue Scientifique*[1] is directed. Dr. Bridou, like most psychologists, does not regard pleasure as a state but as a process, the appreciation of a difference, and one which never exists alone and independent, but always in relation to other functions. The elevation of any one pleasure to the highest field of attention, therefore, always involves the subordination or sacrifice of others, and for this reason the successive emotions should always be justly distributed in order to maintain the harmonious integrity of the individual. "It is," as the late Professor Veitch of Glasgow used to say to his students, "the wide man who is the great man."

Further, in precisely the same way as it may be taken for granted that with man in past ages each stage of evolution had its proper pleasures resulting from the harmonious response of the individual to the exigencies of his then environment, so in man to-day each stage

[1] La joie morbide, par M. le Dr. Bridou, *Revue Scientifique*, October, 13th, 1906.

of his development from childhood to old age has its fitting gratifications, any arrest or transposition of which constitutes a morbid phenomenon which Dr. Bridou terms *manie passionelle*. Its victims have arrested themselves at one stage of affective evolution, have misunderstood the law of human good, and have prepared for themselves a dull and rancorous end.

Abnormal pleasure, then, so far considered, may thus be the expression of a disharmony inherent in the individual, the result of simple hypertrophy of any one function at the expense of others, or it may be due to an arrest of affective evolution at any one of the rounds of the biological ladder. Both these, however, are innate in the individual, and would be operative on a desert island.

The whole seriousness of morbid pleasure, however, lies in its social bearings. The man of sane pleasures lives in harmony with the social conditions which constitute his environment, or, as Dr. Bridon puts it, "in the mind of the normal and well-balanced man "the clavier of the emotions represents an order "approaching that of the hierarchy of reality," whereas the man addicted to abnormal or morbid pleasures must, in so far as these result in conduct, be at war with his fellows, or at least be an obstructor of the world's progress.

Most of the disharmonies of life, most of the derangements of the natural connexion between pleasures and beneficial actions and between pains and detrimental actions, are the result of the fact that since the advent of modern civilization the changes and increasing complexity of the environment have proceeded at a greater rate than the adaptations necessary to bring the whole of mankind into harmony with them. Many have been left behind in the race of life, and are to-day anachronisms, genuine and interesting survivals of a far-off predatory past. But if many fail from native incapacity and the sway of passions natural to savage conditions, still more are backsliders, degenerates in the strict sense of the term. The declension is fatally easy, and, whether brought about by disease, by natural decay, or by inebriety, the path of devolution is ever the same, from higher to lower, from more complex to less complex, from unstable to stable. From the attainment of restraint is born a sense of freedom uncorrected by the now somewhat obfuscated judgement, and the unchained instincts flood the field of consciousness with a brief and illusory sense of power. In this biological regression is to be found not only the explanation of the pleasures of vinous intoxication, but of many other abnormal pleasures, whether encountered in the apparently sane or amongst the inmates of asylums, prisons, or homes for the victims of drug habits.

THE COVENTRY DIVISION AND THE COVENTRY DISPENSARY.

There can be few of those readers of the British Medical Journal who take any interest in the question of contract practice who are not more or less familiar with the protracted history of the difficulties between the committee of management of the Coventry Provident Dispensary and the medical profession. The objections of the profession to the constitution and administration of the dispensary resulted in certain concessions being made, which for the time satisfied the majority of the staff, but they have now become convinced of the impossibility of continuing as medical officers of this institution as at present constituted and retaining their self-respect and the respect of their fellow practitioners. Such consideration impelled the staff early in 1906 to seek the support of the Coventry Division of the British Medical Association in yet another attempt to bring about adequate reforms. The Division cordially promised to support the staff in its efforts to secure such changes in the management of the dispensary as would bring it into conformity with the principles approved by the British Medical Association. Notwithstanding the very patient efforts of the staff to obtain an amicable adjustment of the difficulty this has been found impossible, and five of the seven medical officers have recently resigned their positions. We understand that with the approval of the Division the five medical men in question are establishing a medical service organized in accordance with the principles approved by the Association, and of this service they will be the medical officers. The reason for this action is that their quarrel is not with the members of the dispensary, but with the committee of management, and there is reason to believe that a large proportion of the members of the dispensary agree with their medical officers rather than with the committee, and desire to retain the services of their present medical attendants upon terms fairer to them than the committee of the dispensary has been proved willing to accept. The Division considers that every reasonable facility should be afforded by the profession to these patients to retain the services of their medical attendants. This open rupture of the Coventry dispensary staff with the committee of management is, so far as we are aware, the first instance in which a Division and the medical officers concerned have taken definite action to carry into operation the principles as regards provident dispensaries approved by the Annual Representative Meeting of the Association in July last. In such cases difficulties naturally arise, in consequence of the serious pecuniary loss which individual members of the profession may be called upon to face in taking such action, and we have reason to believe that the necessity of considering this aspect of the problem has in some degree retarded the action taken at Coventry. There can be little doubt that similar considerations are contributing in other places to prevent definite action for the maintenance of the interests of the profession as regards the proper conduct of contract practice. Such considerations make it important that the Medico-Political Committee should be placed in a position to give assistance to individual practitioners who may be unable unaided to face such pecuniary losses, and with this object we would again direct attention of all members of the Association to the Central Emergency Fund, particulars of which have been published repeatedly in the Supplement, but so far without the general response which is desirable. The fundamental condition of successful action in such matters is local union in the profession, and such union may be rendered impracticable through the absolute inability of individuals to play their proper part without such assistance as the Central Emergency Fund is intended to afford.

MEDICAL NIGHT SERVICE IN PARIS.

For the first time during the thirty years the medical night service of Paris has been in existence a report on its working has been presented to the Municipal Council. The author, M. Caston Mery, recalls the fact that the service owes its initiation to M. Renault, who was prefect of police in 1876. It was he who succeeded in inducing the municipality to include in its *Budget* a first credit for £400 to be applied in securing "medical services for persons attacked during the night by "sudden illness." It was understood that the fees should be recovered from the patients when these were in a position to pay. In every police station there was posted a list of doctors among whom a choice could be

made at any hour of the night. A policeman accompanied any one applying for medical aid, first to the doctor, then to the patient, and after the visit handed the doctor a voucher for a fee of 10 francs. The tariff has remained the same since the beginning, but the number of visits has gone on increasing. In 1876 the money expended in fees amounted to 31,780; in 1881 to 55,000; in 1889 to 105,000; in 1896 to 180,000 francs (£7,200). Moreover, a service of midwives and one of pharmacists had been added to the medical service as originally organized. These additions, however, are not sufficient to explain the increased expenditure. It appears that abuses, or at least negligences, crept in, and there was much remissness in the recovery of fees from patients. The duty of recovering the fees had been transferred from the police to the office of the mayors of *arrondissement*, with the result that the proportion of recoveries fell from 30 to 3½ per cent. In 1889 the duty of inquiring into patients' circumstances was again imposed on the police, while that of recovering fees was entrusted to the tax collector. Under this system the proportion of recoveries rose almost at once to 16 per cent. Since then the expenditure has remained stationary, and M. Gaston Méry believes that the working of the service has not been open to serious criticism. At present there are 596 medical practitioners, 477 midwives, and 468 pharmacists on the list. The system works very well, the sick being promptly attended to, and the necessary medicines being obtained without difficulty or delay.

THE FAMILY CARE OF THE INSANE IN GERMANY.

At the meetings of the International Congress of Alienists held at Milan last September, Professor Konrad Ult of Uchtspringe, Saxony, read a paper describing the further development of the family-care system in Germany since 1902, which has now been issued as a separate publication.[1] The story is one of progress so uninterrupted, rapid, and widely extended that to those who are unacquainted with the coherent and admirably designed family-colony system which mostly obtains in Germany, it must appear startling. Whereas in 1882 there were in the whole of Germany but two family colonies whose boarded-out patients barely exceeded 50 in number, in 1902 the family colonies numbered 32 and the patients 1,200, and at the time of Professor Alt's report last year the separate establishments which had adopted the family-care system as an integral part of their administration had risen to 51 and the patients to 2,400. The favourable results, with regard both to economy and the effect on the patients, of the application of this method of disposal of suitable cases has engaged the interest and sympathy of both alienists and administrative authorities; the number of patients has doubled in four years, and new family colonies are springing up on every hand. It is not too much to say that this widespread adoption of the family-care system as an indispensable adjunct to asylum treatment marks the beginning of a new era in the treatment of the insane in Germany. Beyond the account which Professor Alt gives of the new family colonies in Germany, for which we would refer those interested in the subject to the pamphlet itself, his remarks do not concern us here, with, perhaps, the exception of one minor point. This is that in Germany the objection has been urged by some that the withdrawal from the asylum to the outer colony of the quiet and well-behaved insane must deplete the former of its able-bodied labour. Professor Alt, however, points out that suitable cases for boarding out are not necessarily such only as have been good workers in the asylum, for experience has shown that in great numbers of cases patients who have been persistently idle in the asylum have become under family care cheerfully industrious. He further states, after ten years' experience at Uchtspringe, that the removal of numbers of willing workers has never permanently lowered the asylum output of work, the demand for workers always creating the supply by acting as a stimulus to the remainder. The removal of a proportion of the diligent patients is thus not the disadvantage to the asylum it might seem at first sight. The point is worthy of mention because the same objection has been raised here when the family-care system has been under discussion, and is one of decided importance in the management of an asylum. It resolves itself ultimately, however, into a financial question, and, looking at it solely from this point of view, and disregarding the obvious fact that the asylum exists for the patients and not the patients for the asylum, there can be no gainsaying the fact that the application of family care results immediately in a very considerable saving to the public purse.

[1] *Weiterentwickelung der jetzigen Verpflegung der Krankensinnigen in Deutschland seit 1902.* The Development of the Family Care of the Insane in Germany since 1902." By Professor Konrad Alt. Halle a. S.: Carl Marhold. (Pp. 16. Price 75 pf.)

HOW SOCIETY LADIES CHEAT THE DOCTOR.

That modern Savonarola, Father Bernard Vaughan, continuing his sweeping attack on the vices of the "Smart Set," dealt vigorously, in a sermon delivered on March 3rd, with the disregard shown by society ladies for truth. We need not follow him through the various points of his discourse, but the medical profession may be interested to learn that the most striking illustration which he gave of a lie "black as the father of lies himself" was his description of how ladies in society cheat their doctors. We give it in his own words: "A certain "lady had a child that needed an operation. She took "the child to an eminent oculist, and, pleading poverty, "her husband having nothing to do, like the rest, with "her tears and lies she touched the heart of "the good man, and he put the case upon his free list. "I was not surprised to hear what followed. The society "woman was so pleased with her success in having "duped the professor on the poverty plea while she had a "fortune of her own, that she rewarded herself by buying "a new motor car. That is the type of lie I denounce. "Here is a woman defrauding a professional man of "his fee and defrauding a poor sister of an operation— "because even the most generous physician amongst "that most generous class of men, physicians and "surgeons, consistently with attention to home and "family duties, can only perform a given number of "cases free of charge. I charge that woman with "telling a deliberate lie—saying something contrary "to the truth to one who had a right to know the "whole truth, and who was disgracefully deceived. "They tell me this is an exceptional case. I wish I "could say it were so. But it is a case which is a "small one out of a long sordid list of cases to which "every prominent physician and surgeon in London "could contribute his quota." A little more plain speaking on this subject from the pulpit would help to breed a wholesome spirit among persons who would doubtless resent being charged with the utterance of an untruth and who yet seem to see nothing morally wrong and nothing to be ashamed of in the acting of one of the meanest kinds of lie. Nor is it merely a lie; it is a peculiarly disgraceful form of fraud. It is, moreover, a fraud that has consequences reaching far beyond the specific wrong done to the doctor. As Father Vaughan says, it robs a patient really in need of the charity that would otherwise have been bestowed upon him, and it tends to make the doctor suspicious of all persons who afterwards come to him *in formâ pauperis*. We cannot help adding that the clergy at large would perhaps show a keener sense than they do of the particular form of wrongdoing with which we

are here concerned if they had not themselves been encouraged by the charitable custom of the profession to claim the gratuitous ministrations of doctors almost as a right.

THE SLEEP OF CHILDREN IN TOWNS.

The wife of a doctor, fortified, if we understand the matter rightly, by her husband's approval, writes to ask for an authoritative statement as to whether it is injurious to children to sleep in rooms bordering on a noisy thoroughfare, even though they "are not disturbed "by the noises," trams running from 5 a.m. to 11.30 p.m., and brawlers after closing hours. We have been unable to find any authoritative expression of opinion founded on scientific observations, so that we must fall back upon general considerations with regard to the physiology of sleep. According to Kohlschütter and Mönninghofen and Priesbergen, when a healthy person falls asleep the sleep becomes very quickly sound, and then gradually deepens so that such a person is most soundly or deeply asleep during the second hour. Then the sleep gradually becomes less deep until a certain degree of light sleep is attained, which continues without much alteration until the person awakes. The soundness or depth of the sleep was estimated in these experiments by noting the intensity of the sound required to cause awakening. A noise which is not sufficient to awaken will yet cause a temporary diminution of the depth or soundness of the sleep, but the effect does not last very long. In healthy sleep the pupils are contracted, and the deeper the sleep the smaller the pupils. They dilate widely on awakening, and irritation of the surface of the body, or a loud noise insufficient to cause awakening produces some dilatation which is the greater the lighter the sleep. On the strength of these observations the statement quoted above that the children are not disturbed by the noises seems open to doubt. They are not awakened, but the experiments mentioned seem to justify the conclusion that they are disturbed, and that for a time during and after each such disturbance they sleep less soundly. By so much, then, they must benefit less by the same number of hours of sleep than sleepers in a quiet place. The only obvious fallacy in this line of argument is the effect of habit; it may be that the brain of a person who has to sleep every night in a noisy room learns, as it were, to ignore stimuli coming through the ear, so that they produce no effect on the soundness of sleep; but this does not seem probable for several reasons, among others that a sick child may be awakened by a familiar noise which would be insufficient to awaken it in health. It may be that the lighter sleep that we are supposing a town child to experience could be made up by longer hours, but this is no more than a guess; even if true the question arises, does the town child as a rule get the longer hours? Probably not, for it is more likely to be awakened by the noises of the awakening town than the country child who does not live at a farm or near a poultry yard. Most doctors who have watched children growing up agree that they do better in the country than in a town, and this may in part be due to more tranquil undisturbed sleep at night. It should, however, be noted that all country places are not quiet. A village may be very noisy at closing hour, and is apt to take up very early. There is, too, the village cur that bays the moon, and the cow bereft of her calf. Quiet can be found in the country, but the seeker must be ready to take some trouble and perhaps to make some sacrifice of convenience; many a week-ender is left still to sigh for a lodge in a wilderness.

DUST AND DRESSES.

According to a statement in the *Morning Post*, an edict has been issued by the Municipal Council of the city of Prague forbidding ladies to wear trains to their dresses while walking in the streets. Sumptuary laws of a similar kind have often been passed before in America and elsewhere; the results, however, have been such as to leave the less sanguine observer somewhat dubious as to the outcome of this latest endeavour to induce the fair sex to vary the proverb, and cut their coats not according to their cloth but according to the dictates of hygiene. In some places the mere fact that advice, much less an order, to this end was given by a collection of mere municipal males would be sufficient to ensure its rejection; and though Prague may not have its suffragettes, this Bohemian metropolis would probably be the last to assert that its customs in matters of costume do not conform to the dictates of a still more potent force—that of Madame la Mode. The genesis of the order would appear to be a possibly not ill-founded assumption that the height of the local mortality-rate—42 per 1,000—and the length of the dresses hitherto worn may in some degree stand together in the relation of effect and cause. The water supply of the city is bad, typhoid fever is prevalent, and ladies' dresses are regarded as adding in its dissemination. However this may be, if its municipality can induce ladies to wear short skirts while walking it will have effected a useful object. In this respect women in England are less open to criticism than formerly, but trailing skirts are still far from uncommon, and few are to be seen in the streets which might not be shortened with advantage. There is more than one evil in long skirts; apart from adding at least something to the weight to be carried, they increase mechanically the labour of what is in itself a very easy matter—putting one foot before the other—necessitate "holding up," and thus interfere with the natural swing of the body, and in various other ways lessen the enjoyment of what is in itself, and especially for women, one of the most healthful exercises possible. A still more grave indictment is that they collect dust, even if they do not actually sweep the ground, and this is a matter on which women, dainty as they are in most things, show a curious indifference. Provided the streets are not wet, they allow their skirts to touch the dirty pavements, sweep up and down omnibus and other steps, and along uncleanly floors, oblivious of the fact that dirt is dirt, even if it be dirt in the form of dust. Moreover, while it is recognized that boots should be wiped upon a mat at an outer door, no corresponding rule applies to dresses, which are more often than otherwise dusted in a bedroom or in an adjoining passage. This is not as it should be; all dust in a dwelling is undesirable, and skirts should be dusted in the open air with regularity and frequency, and their action as dust collectors lessened as far as may be by their ending at least 2 or 3 in. from the ground. In the circumstances of modern towns, it may be a fallacy to suppose that typhoid germs are often, if ever, to be found in street dust, and it may even be that germs of any well-known pathogenicity are not commonly to be recognized; nevertheless, dust is undoubtedly a hygienic evil, and it is probable that it is responsible for more forms of ill-health than those of which at present it can be accused as the cause with anything like scientific certainty.

A PASTEUR INSTITUTE IN THE FAR EAST.

In the *Bureau Book* for February, Mrs. G. M. Vassal gives an interesting account of the Pasteur Institute at Nha Trang, a large fishing village on the Annamese Coast in French Indo-China. The site was chosen by Dr. Yersin, and the Institute, a large two-storied building with verandahs on each side, is close to the sea, quite separate from the native quarter. There are the laboratories of Dr. Yersin, Dr. Vassal, and M. Schein, the veterinary surgeon, with administrative offices and all the accommodation required for the weighing and treatment of animals. The Institute does

not concern itself with the treatment of rabies, it is a centre of research in the tropical infectious diseases of men and cattle, and microbiology in general. It also prepares every year a certain number of doses of anti-plague serum. During the last few years the Institute has devoted much time to the study of cattle plague, which claims a great many victims over the whole of Indo-China. The serum now being tried is proving very efficacious. A great many horses are wanted for the preparation of this plague serum, and many cattle for the cattle serum. Only a few animals are kept at Nha Trang, which has very little vegetation near it; most of the horses are at Suoi Giau, about fifteen miles away, and the cattle at a small island in Nha Trang Bay. Suoi Giau, or as it is called on maps, "Concession Yersin," is a large tract of land given to Dr. Yersin by the French Government of Indo-China; it is used not only as a farm for cattle, but as an experimental garden for trees and plants. Though an ideal place for both these purposes, it is unhealthy for Europeans; but the health of the chemist, M. Vernet, and the agriculturist of the Institute, M. Pernin, who live there, has much improved since wire gauze has been placed along the verandahs to protect the houses from mosquitos. This method of protection is being slowly adopted elsewhere; the comfort of it, says Mrs. Vassal, can be realized only by those who have lived in a mosquito-infested area. She never had a touch of fever while in the tropics, and attributes this immunity wholly to the wire gauze. In addition to insect pests there are elephants and tigers to be coped with. Elephants will do irreparable damage to the trees in a single night, and the Institute chemist once killed three within a fortnight. The roar of the tiger may be heard any night from either of the two houses, as it prowls round the cattle-sheds; although traps are regularly set, sometimes cows are carried off in broad daylight. The chemist's house, which is very large, has excellent laboratories and every chemical appliance needful for experiments with rubber-trees which, if successful, will have far-reaching consequences. New methods as to cutting and bleeding the trees are being tried; a new instrument for catching the milky fluid has been invented; and the trees are allowed to rest for different periods to prove which is the most efficacious. Coffee, tobacco and cocoa grow readily, the ground and climate being suitable in every way. The cattle on the island are allowed to run wild, and almost return to their savage state, but Dr. Yersin sometimes visits the island in his motor-launch, when they are driven down to the coast for his inspection. Cows are kept at the Institute, but the business of milking is very serious, the natives having to be taught the art, as they themselves never drink milk, and the cows greatly resent the treatment. The Institute also has a water tower and an ice-machine. Ice is necessary to keep the serums in good condition, and the Europeans at the post are allowed to buy it. Dr. Vassal, the medical officer, receives all his European and native patients at the Institute. During the last year the natives were so numerous that he has turned an Annamese hut in the grounds of the Institute into a little infirmary for them. The Annamese, never having been attended by a European doctor before, were at first very diffident about coming, and the first cases brought to Dr. Vassal were all of a hopeless character. The case of an Annamese, however, who had been bitten by a dangerous snake, and who recovered after inoculation with Calmette's antivenomous serum, raised the doctor's reputation among them. Later he performed a successful operation on a member of the royal family (for which he received a curious and elaborate decoration from the King of Annam), and now he is implicitly trusted by all the natives of the district. Medical attendance on natives has its drawbacks, chiefly due to their superstitions, but, on the other hand, the way in which they recover after an operation is most encouraging. The necessity of having natives as servants and helpers either in the laboratory or the infirmary is a serious difficulty. Though skilful in holding the animals while temperatures are taken, etc., they show a lamentable lack of patience, cleanliness, and general attention to detail.

A MEDICAL RESEARCH PRIZE AT OXFORD.

John Radcliffe would in all likelihood have cared as little for scientific research as he did for book learning. Nevertheless, it is to the benefactions of that Philistine son that Oxford owes the most splendid of her medical foundations. We hear much at present of the neglect of research by the University, but the plain truth is that the University has very slender means of furthering research in a practical manner. It might, perhaps, be wished that the Radcliffe Travelling Fellowship were awarded more directly as an encouragement to original research. Apart from that, the only endowments specially intended for that purpose are the Philip Walker Studentship and the Rolleston Prize. Those of our readers who are interested in the development of the Oxford Medical School, in which some far-seeing persons recognize one of the chief hopes for the future of British medicine, will therefore learn with pleasure that another prize for research has been founded by the Master and Fellows of University College, which was Radcliffe's sapient nurse in such portion of the finer arts as could be instilled into him. Full particulars will be found at p. 662. The prize, which is to bear Radcliffe's name, is of the value of £50, and will be awarded, alternately with the Rolleston prize, every second year. It is to be given for research in any branch of medical science comprised under the following heads: Human anatomy, physiology, pharmacology, pathology, medicine, surgery, obstetrics, gynaecology, forensic medicine, hygiene. It will, with certain restrictions in regard to seniority, etc., be open to all graduates of the University who have proceeded, or are proceeding, to a medical degree in the University. The first award will, if possible, be made at the stated general meeting of the Masters and Fellows of University College on October 28th. The competing memoirs must be sent in to the Secretary to the Boards of Faculties on or before June 1st, 1907.

A PROPOSED MINISTRY OF HEALTH IN AMERICA.

At a meeting of the American Association for the Advancemence of Science, held at New York on December 29th, 1906, Professor Irving Fisher, who holds a chair of Political Economy at Yale, presented the report of the "Committee of One Hundred" appointed last July to consider the best means of securing the establishment of a national department or bureau of health as proposed in a paper read by Professor J. P. Norton, of Yale. Among the members of the Committee are Professor W. H. Welch, of Baltimore; the Surgeon-Generals of the United States Army and Navy; Colonel Gorgas, Sanitary Officer of the Panama Canal; Dr. A. C. Abbott, Health Officer of Philadelphia; Dr. C. Harrington, Professor of Hygiene at Harvard; Dr. Hermann M. Biggs, President of the National Association for the Study and Prevention of Tuberculosis; Dr. C. O. Probst, Secretary of the American Public Health Association; Dr. Frank Billings, President of the Association of American Physicians; Mr. Andrew Carnegie; Mr. Edison; General Leonard Wood; Archbishop Ireland the Rev. Dr. Lyman Abbott; and Presidents of Universities and Colleges, economists, statisticians, sociologists, divines, and publicists throughout the United States. Attempts had previously been made to secure a national department of health, notably by the American Medical Association, which for twenty years

has passed resolutions on the subject. Outside the medical profession, however, very little interest seems to have been taken in the matter. The present movement is not distinctively medical either in initiation or in conduct, although the medical profession is fully represented among its promoters. Formal adhesion was given to the scheme on December 13th at a joint conference of the Legislative Committee of the American Medical Association and the National Council on Medical Legislation held at Washington. To that conference was submitted the first draft of a Bill to establish a national department of health. Professor Fisher is selecting a subcommittee which will draft a Bill for Congress and organize a campaign to carry it through. The first duty of the Committee is to decide whether it is advisable to endeavour to secure a department with a Cabinet officer at its head, or to be satisfied with a bureau under one of the existing Government departments.

"THE LATEST ANTIVIVISECTIONIST INVENTION."

In reference to a leading article which appeared under this heading in the JOURNAL of March 9th, we have received a letter from the Secretary of the London Antivivisection Society, in which he says: "When "I said the British Medical Association received a "grant of money from the Treasury for scientific "research, I should have said 'the Royal Society.'" So far from offering any apology for his inexcusable blunder, he goes on to say: "But my original argument "remains unaffected, 'the taxpayer pays.' It doesn't "matter whether it is the British Medical Association "*Tom* or the Royal Society *Dick* who gets the tax-"payers' money; the point is that, whoever gets it, "'the taxpayer pays,' and that was the particular point "to which I wish, and still wish, to draw the atten-"tion of the public." There is another point to which the attention of the public, or such portion of it as subscribes to the London Antivivisection Society, may with advantage be drawn, and that is the light-hearted indifference to truth as to mere matters of fact displayed by its Secretary. He says, with the air of making a concession, "I am "correcting the error wherever it appeared on the prin-"ciple that 'a gentleman should always frankly recog-"nize when he is at fault.'" If he had acted on this admirable principle a trifle more promptly we should have been more convinced of his frankness. His letter to us, which is undated, did not reach us till March 13th. His error was pointed out as soon as it appeared by the General Secretary of the Association in a letter which was published in the *Star* of March 8th and the *Evening Standard and St. James's Gazette* of the same date, but it was not till March 13th that Mr. Sidney Trist's tardy recantation appeared. He admits frankly, but shows no sign of repentance. His purpose has doubtless been achieved. The lie had a long start and will continue to run like the many other inventions of the antivivisectionist fancy. As regards an interesting piece of evidence that at a meeting of the Brighton and Hove Branch of his society held on March 5th Mr. Trist informed a sympathetic audience that "the work involved a strain at times on the nerves in the midst of it almost unbearable. The strain on the magistrates of persecutors of antivivisectors at times must be great at all times, but we really believe that at the time when Mr. Trist's masterpiece was produced it must have been excessively severe.

TEACHING OF HYGIENE AND TEMPERANCE.

On Tuesday afternoon, at the invitation of Mr. Charles Roberts, M.P., representatives of the British Medical Association, of the Medical Committee for the Teaching of Hygiene and Temperance, and of the English Committee of the International Congress of School Hygiene held a conference with members of Parliament, presided over by Mr. George White, M.P. Sir Victor Horsley gave an account of the action taken by the medical profession in this matter, recalling that in 1904 a deputation had waited upon Lord Londonderry, then Minister for Education, asking him to include hygiene and temperance in the code; subsequently a deputation waited upon his successor, Mr. Birrell, to urge the importance of establishing a medical bureau within the Education Department; and a second deputation had invited Mr. Birrell to recast the code so as to include hygiene and temperance, as might easily be done under the regulation for nature study. The replies had been unsatisfactory, and in view of the fact that legislation rendering medical inspection in elementary schools compulsory seemed certain to pass this session, the importance of establishing a medical bureau in the Education Department to advise on methods of medical inspection and to collate the evidence had become obvious. Those interested in the matter must therefore turn from the Education Department to the House of Commons, in the hope that provisions might be introduced into the Bill directly instructing the Board of Education to introduce the teaching of hygiene and temperance into the code, and to establish a central medical bureau. Sir Lauder Brunton, as President of the English Committee of the International Congress on School Hygiene which is to meet in London next August, dwelt on the importance of such teaching, and Mr. Pearce Gould, commenting on the attitude of the Education Department, observed that the objection put into Mr. Birrell's mouth to the effect that the suggestion was impracticable, was met by the fact that such instruction was already given in elementary schools in the Colonies and in India. A general discussion then took place, in the course of which the opinion was expressed that the teaching might be given by ordinary teachers to children up to the age of 8 years but that for older children special peripatetic teachers should be employed. Professor Sims Woodhead said that the experience at Cambridge had shown that the teachers were not opposed to the proposal. In Cambridge an experimental course had been started, and, instead of the 30 teachers expected, 150 actually attended and willingly gave up two hours of their Saturday leisure for twelve weeks. The Members of Parliament present seemed generally anxious to raise both points in the House of Commons, and, as will have been seen, Dr. V. H. Rutherford took an opportunity of referring to the matter in the course of the discussion on Supply on Wednesday.

Medical Notes in Parliament.

The Public Health Acts. The House of Lords have had little work to do this session so far, but on March 7th Lord Onslow raised the question of the amendment and extension of the Public Health Acts, 1875 to 1890, and their relation to a large number of Acts passed recently and to Bills pending this session connected with public health. He asked His Majesty's Government whether they did not consider that the time had arrived for the extension of the Public Health Acts. He pointed out that of late years a number of matters had come under the notice of local authorities, and many had decided to avail themselves of further powers than those given by the general law. For that purpose they had to introduce private Bills, and that entailed upon them very large expenditure. He wished to ask whether the Government did not think the time had arrived for the extension of the Public Health Acts, and whether, if a Bill for the purpose was brought in by a private member, either in their lordships' House or the House of Commons, they would do what they could to assist its reference to a Joint Committee of the two Houses and generally to assist it through Parliament. Such a Bill would be absolutely non-contentious, and with the assistance of the Government might become law this

session. Earl Carrington said the proposal of the noble earl would no doubt be a distinct saving of money to the ratepayers, and if it were carried out other parts of England would be able to share in the blessings of a reduction in rates which was promised in London. It would also save a great deal of time and trouble to the Lord Chairman himself. He did not think his right honourable friend the President of the Local Government Board would put forward any excuse founded on the congestion of public business for not assisting a Bill dealing with this matter, for he quite realized the necessity of giving additional powers to local authorities. His right honourable friend instructed him to say that he had a very warm sympathy with the object the noble earl had in view, but at present he was unable to give any direct pledge on the subject, though he had given it careful consideration with a view to action being taken.

A Public Health Return.—Mr. John Burns promised Sir J. Dickson-Poynder on Monday to grant, so far as he was able to get the information, a return showing (*a*) the salaries of the medical officer of health and inspector of nuisances employed by each of the rural district councils in any three English counties; (*b*) the last annual return of the general expenses incurred by such officers; (*c*) the number of cases in which a rural district council, in any of the three selected counties, has obtained, under the Local Government Act, 1888, from the county council, out of the Exchequer Contribution Account, payment of half the salaries of their medical officer and their inspector of nuisances. The information afforded by such a return will be valuable when the Government Housing and the Medical Officers of Health Bills are discussed.

The Chicago Meat Scandals.—Sir William Ball asked the President of the Local Government Board on Tuesday what action, if any, he proposed to take on Consul Finn's report on the Chicago meat scandals. Dr. Macnamara, replying for Mr. Burns, said that the President had introduced a Bill which if it passed into law would enable the Local Government Board to make regulations with regard to the importation, preparation, storage, and distribution of foods. In adopting this course he had taken into consideration not only this report, but also information collected from various sources regarding the wholesomeness of the imported meat which was especially in question.

Tuberculosis and Milk.—In answer to Mr. Marks, the President of the Local Government Board stated last week that the Dairies, Cowsheds, and Milkshops Orders of 1885 and 1899 prohibited the sale of the milk of a cow suffering from tuberculous disease of the udder, but the prohibition did not extend to the milk of a cow otherwise affected by tuberculosis. These Orders dealt with dairies, cowsheds, and milkshops, and did not relate to such matters as the sale of the cow as a milch cow or for slaughter for food. Nor did they require notification in cases of the kind. Where, however, there was in force a local Act containing what were known as the milk and tuberculosis clauses, a dairyman who supplied milk within the district and who had in his dairy a cow affected with tuberculosis of the udder must give notice of the fact to the medical officer of health of the district. Mr. Burns also said that, in view of the conclusions of the second interim report of the Tuberculosis Commission that cow's milk containing bovine tubercle bacilli was clearly a cause of tuberculosis in man, he was giving attention to the report in order to consider if more stringent measures were required to prevent the sale and use of tuberculous milk.

The Consumptive Sanatorium, Cork.—The proposal to establish a sanatorium for consumptives at Myshall, near Cork, is opposed by the Corporation of that city on the ground that the proximity of the site to the Dripsey River may possibly pollute the water supply of Cork city. Mr. Roche, who asked a question on this matter last week, was informed by Mr. Birrell that the Local Government Board had not yet received its inspector's report, and that before arriving at any decision the Board would give full consideration to the evidence received at the inquiry, and the opinion of the local authorities.

Workhouse Schools.—Sir Walter Foster asked the President of the Local Government Board on Monday if he was aware that, owing to continued overcrowding in the workhouse school belonging to the Brentford Board of Guardians, an outbreak of ophthalmia occurred in November, 1904; that in September, 1906, a second outbreak, affecting over 130 children, occurred; and that during January last an outbreak of diphtheria affecting over 50 children, some of whom died, occurred; and whether he would urge upon the guardians the necessity of boarding out within and beyond the union the children eligible for that method, and of hastening the arrangements for placing others in scattered homes within the union in order to relieve the long-standing overcrowding of the school. Mr. John Burns replied that he was aware of the facts as to the outbreaks referred to and that from time to time there had been overcrowding in the school. He was very desirous that measures should be taken to prevent future overcrowding in respect of the children, and he understood that the guardians had had various schemes before them for providing further accommodation for them. They had met with difficulties in the matter, but various arrangements had been made to reduce the pressure, and steps were now being taken to provide certain scattered homes. He should not lose sight of the subject.

The Sanitary Condition of Lewis.—Mr. Weir is still pressing the Government to initiate a better sanitary administration in the Island of Lewis in accordance with the report of Dr. Dittmar, now nearly two years old. On Monday last the Secretary for Scotland said the matter was under serious consideration, but that it was no slight undertaking, and he could make no statement at present. With reference to the application of a portion of the general aid grant for public-health objects, he said that a minute allotting the grant of £305,618 for the year would be laid before Parliament, but no portion could be allocated to public-health requirements. A School Board could, however, apply its share to the public-health requirements of its schools.

Antivaccination at Croydon.—Mr. Lupton pointed out last week that 138 summonses had been taken out against antivaccinators at Croydon, that the vaccination officer had promised to take out a thousand in all, and that 50 distress warrants were now being executed by the police. He suggested that these prosecutions were instituted in these large numbers to ruin the local antivaccination league. Mr. Gladstone admitted the facts, and said that the police were bound by law to carry out the orders of the justices, and as long as the law remained as it was it would not be proper for him to intervene, even if he had the power. He had no information as to the suggested motive for these prosecutions.

Ventilation of the House of Commons.—There was an amusing conversation on this topic on Tuesday, when the report of the vote for the Houses of Parliament came on. Sir F. Banbury again complained of his cold feet, and wanted the primitive form of open-window ventilation to be tried. Mr. Lupton, who sympathized with the complaint about cold feet, suggested a remedy in the shape of an electrical heater for each seat placed below the grating in the floor. By this means the air could be warmed, and the member could switch on the current as required. Mr. Harcourt explained the impossibility of pleasing everybody. Some complained that the Chamber was too hot, others too cold, and he was placed in a difficult position between the members and the deep sea. He had arranged for a system to modify the supply of air on the Opposition benches, and if Sir F. Banbury would remain some night after the rising of the House, he would join him in the experiment as regards open windows. The report was then agreed to.

The Teaching of Hygiene in Schools.—In the course of the debate in Committee of Supply on Wednesday Dr. Rutherford appealed to the President of the Board of Education to make the teaching of hygiene and temperance compulsory in every school in the country. He also said that there ought to be a medical bureau to guide and help the Board of Education in this matter and in other subjects. This country, he contended, was behind other countries in this respect. Mr. McKenna, in the course of his reply, referred to this appeal, and said that the teaching of hygiene and temperance was at present optional, for to teach these subjects effectively competent teachers were most essential, and everything was being done to qualify teachers for the purpose.

Ireland.

TRINITY COLLEGE AND THE UNIVERSITY SCHEME.

THE Provost has summoned a meeting of graduates in the Examination Hall, Trinity College, at 8 p.m., on Friday, March 22nd, to protest against the University scheme enunciated by Mr. Bryce. It is hoped that many graduates will come from distant places, and that the meeting will be very representative. Graduates who intend to be present should send their names and addresses, so that tickets can be sent to them. Arrangements are being made for the reception of graduates from a distance.

The Trinity College Defence Committee continues its efforts in opposition to Mr. Bryce's University scheme. It has secured the support of Oxford and Cambridge to its efforts, and here and there through the country resolutions are passed protesting against any attempt to interfere with the present status of Trinity. There is not any doubt that a Bill will be introduced after Easter, but it is believed that it will not be on precisely the lines laid down by the late Chief Secretary. The opposition has impressed Mr. Birrell, and it is possible that the changes may be modified so as to introduce the new college only, and not five. Trinity would probably accept this solution, because it would get rid of the difficulty of adding on a crowd of "royal" graduates, with equal rights to those of the University of Dublin. On the other hand, it would leave out the Queen's Colleges of Belfast, Cork, and Galway, and their students must have a university. This would mean the continuance of the Royal University, perhaps under another name. In fact, it would mean the re-establishment of the old Queen's University, which was abolished by a Conservative Government. The arrangement would meet several difficulties, and it would be acceptable to the Roman Catholic hierarchy.

The Defence Committee has published a manifesto, in which it says:

> We do not ignore the fact that the Commission has found "that Trinity College is not to an extent adequate to the reasonable requirements of the country an organ for the higher education of the Roman Catholic population." But if Trinity College has failed to attract the general body of Roman Catholics the blame does not rest with her. In 1793, at a time when Roman Catholics throughout these kingdoms still suffered from civic disabilities, our University led the way in offering to them a part at least of the rights which had been withheld from them. Since then she has loyally accepted the principle of equality in education so far as lay in her will and power. Roman Catholics have been given equal opportunities with Protestants. That in 1871 the governing body of the University and the majority of the students were Protestant was the result of the previous conditions; the disparity could only be rectified by the spontaneous action of the Roman Catholic community: and such provision for religious education as Protestants enjoyed could not be given to Roman Catholics without the co-operation of their clergy. Trinity College has made repeated overtures inviting this co-operation, but they have been declined. The Roman Catholic bishops have expressly declared that they could, and would, on no terms accept a system of mixed education within Trinity College.
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> The experience of the primary and intermediate system of education has proved that even a system which dispenses with tests and is in name of non-denominational will, under the control of an artificially beamed board, necessarily be managed on denominational lines, and the tendency of any college acceptable to the Roman Catholic Hierarchy would inevitably be in the direction of denominationalism.
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> To unite such a college with Trinity would be to combine two incompatible ideals. The intellectual liberty which we uphold cannot be reconciled with that educational theory which the heads of the Roman Catholic Church have declared as founded on the principles of authority. If university teaching is to be shared by colleges which uphold conflicting views there must be constant occasions of strife and bitterness, which can only end when one or other of the contending parties loses its distinctive character. It is contrary to our most cherished tradition that the boundaries of science should be fixed directly or indirectly, by ecclesiastical authority, or that the principles of education should be affected by clerical intervention. Between two or more colleges so sharply divided by principle and tradition there can be no real union. A cleavage on religious party lines is inevitable. The Senate or other governing body of the University would be the prey of sectarian divisions: these would be felt in all questions of policy, in the making of appointments, in the arrangement of studies, and in the control of teaching. Such a state of things must be fatal to efficiency, depress the standard of teaching and [illegible] the University.
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> A Federal University on the general lines of the present Royal University may be useful, even necessary, for the sake of those provincial colleges which are not strong enough to stand alone; and this is the reason alleged by those Commissioners who recommend a federal scheme. But Trinity College is already a self-contained and successful University. To force her into a federation of which the future must be at best uncertain would be to sacrifice reality to speculation, a course both impolitic and unjust. There is no precedent for uniting an ancient foundation, with fixed traditions of its own, to colleges of recent origin, so widely separated as to render intercourse impossible, so dissimilar in character as to prevent community of aim.
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> The reasons assigned by Mr. Bryce for bringing Trinity College into the new University are—first, that the name and fame of the University of Dublin would give strength to the federation; secondly, that this procedure would bring about happier relations between the members of different creeds and parties. We hold this reasoning to be fallacious.

BELFAST HEALTH COMMISSION.

The first public sitting of the Commission appointed by the Local Government Board to inquire and report as to the cause or causes of the high death-rate of the city was held in the City Hall on March 5th. The Commission consists of Colonel Harding, formerly Lord Mayor of Leeds, Chairman; Dr. Chalmers, Medical Officer of Health of Glasgow; Dr. Mair, Medical Inspector of the English Local Government Board; Mr. Cowan, Chief Engineering Inspector; and Surgeon-Colonel Flinn, F.R.C.S.I., Medical Inspector of the Local Government Board of Ireland. A preliminary statement was made by the Chairman, in which he said that the Commission would allow counsel to be present, but that the examination of witnesses would be conducted by the Commissioners.

The first witness called was Dr. R. E. Matheson, Registrar-General for Ireland. After giving details as to the acreage and valuation of Belfast, he said that he estimated the population at 368,241 at the end of 1906. In 1891 it was 273,184; in 1901 it was 349,180; the population of the area added in 1898 was 17,129; so that the normal increase of the city was 58,867. He explained the five methods of estimating the population of a city during the interdecennial years, and pointed out that they were all liable to error. He did not adopt the method of the English Registrar-General. The death-rate according to his estimate would be 20.1; in 1901 it was 22.4. The population per acre was 24.9; the population of District No. 5 of the city in 1901 was 122.4; this would be the density of the centre of the city. The average death-rate for the years 1902-5 of the seventy-six large English towns was 16.7; for Glasgow for 1905, 17.8; for Birmingham, 16.2; for Liverpool, 19.6; for Manchester, 18.0; for Sheffield, 17.0; and for Leeds, 15.3. He did not believe that the method of the English Registrar-General would be correct if applied to Belfast, but the death-rate, if calculated on the same lines, would be decidedly lower. The witness then detailed the number of deaths due to the various diseases; the death-rate from phthisis was 2.77, infant mortality was 146 per 1,000 births; the density of population per house was 6.1.

Mr. Robert Meyer, Acting City Clerk, gave evidence as to the general statistics of the town, its valuation, and the constitution of the Health Department, its orders and by-laws, the control of the milk supply, etc.

Dr. J. King Kerr, Chairman of the Health Committee, gave an outline of the history of the sanitation of the city, and of the main purport of some of the principal regulations. Draining commenced in 1890; in 1898 the city boundaries were enlarged, and the area increased from 6,805 to 16,504 acres. The main drainage scheme was commenced in 1888 and completed in 1900. In 1897 there were 40,959 houses with water-closets and 25,670 with privies; at present there were only about 3,000 privies. In 1901 the refuse destructor was started. No foul matter was allowed into the tipping grounds. The new hospital was now completed; it gave accommodation for 170 general fever cases in separate blocks and for 74 small-pox cases. The city had seven public parks and most streets were wide. If the population were estimated according to the method of the Registrar-General of England it would be 394,778; this would mean a death rate of 18.7. If calculated on the basis of occupied houses, the figure would be 388,159, which would give a death-rate of 19.

PROPOSED STATE MEDICAL SERVICE.

The General Council of the Royal Academy of Medicine in Ireland has passed the following resolution on the report of the Viceregal Commission on the Poor Law:

> That the Royal Academy of Medicine in Ireland desires to express its approval of the suggestion contained in the report of the Viceregal Poor law Commission to convert the entire Poor law Medical Service in Ireland into a national service, to be paid by the State, and to be entered by a competitive examination, the members of such service to be equally controlled by the central body and the local bodies, and that the medical profession should have representation on the central body.

Scotland.

Presentation to Sir Henry Littlejohn.

Sir Henry Littlejohn, the Medical Officer of Health and Surgeon of Police for the City of Edinburgh, was on March 8th presented, by a number of his friends in the medical and legal professions, with his portrait, painted by Sir George Reid, on the occasion of his retirement from the Chair of Forensic Medicine in the University of Edinburgh. The ceremony took place in the Hall of the Royal College of Surgeons, and the President of that College (Dr. C. W. MacGillivray) occupied the chair. There was a large gathering of Sir Henry's friends, including the President (Dr. C. E. Underhill) and Vice-President (Dr. John Playfair) of the Royal College of Physicians; Sir Halliday Croom, Sir Andrew Mure, Professor Annandale, Professor Chiene, C.B., Professor Crum Brown, Dr. John Smith, Dr. Joseph Bell, Dr. Clouston, Dr. Gibson, and many other members of the medical profession. The legal profession was represented by the Lord President of the Court of Session (Lord Dunedin), the Lord Justice Clerk (Lord Kingsburgh), Lord Stormonth Darling, Lord Ardwell, Lord Salvesen, Lord Dundas, etc.

Lord Stormonth Darling, who spoke for the legal profession, said that the confluent streams of medicine and of law met that afternoon to do honour to their old friend and teacher, Sir Henry Littlejohn. Those who had been law students had reason to look back with satisfaction to the days they spent in the little room in the police office under the tuition of Sir Henry. Personally he had never learned so much from any other teacher in so short a time. All knew his extraordinary vivacity and humour, and, above all, the clearness with which he explained the subjects he dealt with. All knew, too, that Sir Henry in his time had rendered far more signal service than he had rendered to his law students, first in his capacity of police surgeon, then in that of Medical Officer of Health in the City of Edinburgh, as well as in the offices of Medical Adviser to the Crown, and Medical Adviser to the Local Government Board for Scotland. In the discharge of all these duties he had won golden opinions, and in the later years of his life he had come to be recognized as one of the leading, if not the most prominent, medical legal experts. Lord Stormonth Darling quoted from a speech by the late Lord Justice Clerk Hope in which he had commented on the clear and candid report which Dr. Littlejohn had prepared in a case of child murder by drowning in November, 1855. He said it augured well for the future career of Dr. Littlejohn, and for the credit of the surgeon of police of the great city of Edinburgh, that they should have had such a report. Lord Stormonth Darling regarded Lord Justice Clerk Hope's words as prophetic because, times without number, Sir Henry had since displayed the same clearness and candour in the presentation of his reports. Dr. John Smith, speaking as Sir Henry's oldest medical friend, referred to the esteem in which he was held by his brethren in the medical profession. It was unnecessary that he should do more than recall the many eminent services Sir Henry had rendered both in a civic and academic capacity, and contrast the sanitary condition of the city to-day with its condition when the medical officer of health first took up his duties.

Lord Stormonth Darling formally asked Sir Henry to accept the portrait as from his friends and as a most sincere tribute of their admiration for him.

The portrait, which was then unveiled, shows Sir Henry in an alert attitude familiar to his friends. In a characteristic reply, he said that the meeting was a most flattering incident in a busy life, passed in the midst of his fellow-citizens and of those keen critics, his medical and legal brethren, in that great centre of medical and legal education. He had lived, so to speak, in the open air, and he had to acknowledge the unvarying indulgence shown him by his medical brethren in the discharge of the delicate duties of a Surgeon of Police and a Medical Officer of Health. He felt proud in possessing such a portrait, and should have great pleasure in handing it down to his family. Like all who had attained a good age, he felt saddened, on looking back, at the absence of many kind friends. Amid great discouragement he began the practical teaching of forensic medicine, and for the long period of forty years taught it with increasing success to legal and medical students in the extramural school and latterly in the University.

Sir Halliday Croom moved a vote of thanks to the Committee which had made the arrangements for the presentation and to the College of Surgeons for granting the use of the hall for the purpose of the ceremony. Dr. MacGillivray replied on behalf of the College and Dr. Joseph Bell on behalf of the Committee.

Arbitrary Dismissal of a Poor-law Medical Officer.

In the Journal of February 23rd reference was made to the dismissal of Dr. George Duncan from the post of Poor-law medical officer to the parishes of Kintail, Glenshiel, and Lochalsh. The parish councils, not unnaturally, resent the criticism to which their conduct has been subjected by a number of newspapers and journals, and now seek to justify their action by relating their reasons for terminating Dr. Duncan's engagement. It appears that petitions emanating from the villages of Kyle and Plockton were directed to the parish councils requesting the appointment of a medical officer for both places on the ground that the present officer, in consequence of advanced age, was no longer fit to discharge his duties. It was then arranged that the subject should receive attention at the meeting of the three parish councils to be held at Aird Ferry on December 24th, at noon. The notice convening this meeting "clearly stated the purpose for which the meeting was being called," and it further appears that Dr. Duncan was invited to attend a meeting "at which the consideration of the necessity or desirability of a rearrangement with regard to the medical officership" was to be discussed. Dr. Duncan, however, was unable to attend. The councils explain that some five years previously, during an outbreak of small-pox, Dr. Duncan's health suddenly gave way, and at his urgent request the parish councils granted him leave of absence. It was then felt that the time had come, "if not for terminating his engagement, at least for putting the medical officership of the parishes on a more satisfactory footing." An arrangement was thereupon made by which Dr. Duncan agreed to provide an assistant, whose salary was to be paid half by the parish council and half by Dr. Duncan. This arrangement, it is alleged, was not carried out. With regard to the terms of Dr. Duncan's engagement, the councils say that, "though disposed to respect the time and the terms of Dr. Duncan's engagement, because of their hoary antiquity, the councils are of opinion that their chief concern is not with those matters, but with Dr. Duncan's fitness for the duties which such extensive parishes demand of him; and they think they are safe in leaving it to the intelligent public to judge whether it can be truthfully asserted that any man verging upon 80 years of age is mentally and physically as fit as ever."

With regard to the petition presented in favour of Dr. Duncan, the councils state that it can clearly be proved that many of the signatures are in one and the same hand, that some of the subscribers are minors and that others have demonstrated their confidence in Dr. Duncan by calling in other medical practitioners.

The parish councils claim that their sole purpose and aim is to act well in the interests of the parishes, and that their action in removing the medical officer and in replacing him by one young active and competent doctor is justified.

It is, of course, only just that both sides should be heard, but we would point out that the defence itself accentuates the necessity of altering the conditions of such an appointment as the one under consideration. The terms of appointment and the conditions of tenure of office must, in fairness to the medical officer and to his patients, be clearly set forth; and we cannot agree with the parish councils that, despite the "hoary antiquity" of the appointment, they are not concerned with those matters. If such appointment were made with a guarantee of fixity of tenure the dispute could never have arisen. It is scarcely just that the failure of health during a period of exceptional pressure of work should be regarded as a cause for the termination of an appointment, no matter whether the incumbent be 30 or 80 years of age. And with regard to the bulky petition which is said to have been presented in favour of Dr. Duncan, the charge which the parish councils make against the signatories amounts to nothing more or less than one

of fraud, and one of a kind easy to make and difficult to controvert.

In spite of the explanation of the parish councils of Kintail, Glenshiel, and Lochalsh, we still sympathize with Dr. Duncan, and believe that the case affords an additional reason for altering the law regarding the appointment of Poor-law medical officers in the Highlands.

American Meat.

The Health Committee of the Corporation of Glasgow has received from its veterinary surgeon a report stating that on February 18th, and again on February 20th, he seized as unfit for human food a foreleg of chilled beef deposited in the meat market on the stance of the agent of one of the largest meat exporters in the United States of America. Each foreleg was marked "U.S. Inspected and Passed 3." On examination each foreleg was found "stripped"—that is, the serous membrane covering the adjoining costal pleura had been removed, but at places distinct tuberculous nodules remained, and on incision glandular invasion was manifest. These forelegs showed no evidence of having been previously inspected. They were parts of carcasses which, in accordance with the regulations issued by the Bureau of Animal Industry to the Government meat inspectors detailed for duty in the packing establishments of the United States, ought to have been rejected as unfit for human food, and to have been rendered into tallow after the diseased parts had been removed.

Liverpool.

Heswall Country Hospital.

The Heswell Country Hospital for the Chronic Diseases of Children, founded about eight years, continues to make progress, and, according to the report presented at the annual meeting, the new buildings are in a forward state. When completed the hospital will hold 200 beds. The parts at present under construction are the administrative block and the central ward block. A large sum has already been given for maintenance, but a further sum of £25,000 is still required to complete the building as originally designed. The distinctive feature of this hospital, the first of its kind to be started in this country, is that there is practically no time limit for the patients, the one condition of admission being that there should be a reasonable prospect of ultimate recovery. At present the work, limited in amount, is carried on in temporary premises, and twenty two cases were discharged from the hospital last year. Of these two had been under treatment for over two years, four for a year, and the rest for shorter periods.

The Stanley Hospital.

This enterprising institution has completed the fortieth year of its existence and has come to be considered one of the most useful charities in the city. The annual report records several recent changes in the staff. Dr. Whitford having completed twenty years of service as physician, has resigned, and Dr. John Hay has also resigned on being appointed assistant physician to the Royal Infirmary. Dr. John Owen, M.D.Lond., an old pupil of the Royal Infirmary, has been appointed physician, and a new post, that of gynæcological surgeon, has been filled by the election of Miss Frances Ivens, M.B., M.S.Lond. In connection with the new gynæcological department, a special ward with six beds has been built, the cost being defrayed by a special gift in memory of Mrs. J. H. Isaac. It is hoped that the new kitchens, laundry, etc., will be finished by June. When complete this work will be dedicated to the memory of Mr. and Mrs. D. C. Keeling. It is proposed to carry out further extensive alterations including a new system of heating the hospital, an electric lift, better accommodation for the nurses and resident staff, and the putting into thorough repair of the drainage system. Sir Robert Hampson, the president of the hospital, referring to Professor Paterson's suggestion that there should be some central committee for all the hospitals of the city, said that whatever advantages might be gained by central control would be more than lost by the obstruction which would necessarily be introduced, and which would hinder that initiative of voluntary work upon which their hospitals so largely depended for their own advancement, as well as for the benefit of the community. Whatever advantages could be secured from Professor Paterson's proposals, equal advantages could, he believed, be got from a conference between those interested in the hospitals, and he hoped that such a conference would shortly be held. Without binding themselves, they could devise means whereby they could work together as far as possible in matters such as the prevention of abuse by patients, and by protecting themselves against the over-rating of hospitals. As a matter of fact, they claimed that, in consideration of the provision they made for the treatment of patients, they were entitled to be relieved from paying rates.

The Samaritan Hospital for Women.

This little hospital, which has only been in existence some ten years, shows great activity, and seems likely to take an important position among the medical charities of the south end of the city. During last year 1,039 new cases were treated. The in-patients were 165, and the operations numbered 149. An urgent appeal is now made for £500 to enable more beds to be opened and an anaesthetizing room to be provided.

David Lewis Northern Hospital.

The annual report shows that there were 2,358 patients treated in the Northern Hospital during the year, the out-patients being 12,891. The income was £9,325, being £1,621 less than the expenditure.

West Yorkshire.

The Co-ordination of Bradford Charities.

This is a subject which is at present exciting considerable interest in Bradford, partly on account of the chaos which reigns in connexion with the collection of the necessary funds and partly from a consideration of the fact that a new agency of investigation—the education authority—has arisen. It will be required to investigate the circumstances of the parents who apply for free meals to be provided for their children. Bradford has recently adopted the Act which allows a rate to be levied specially for the provision of meals for necessitous children. At present half a dozen investigators may be making inquiries into the circumstances of poor people in Bradford for as many different charities. The Board of Guardians School-Attendance Committee, Distress Committee, Cinderella Club, Charity Organization Society (probably for the hospitals), and "The Guild of Help" may all be worrying the same individual at one time. There is, of course, a great waste of time and money in this overlapping. The proposal is to establish a central bureau with an inquiry Board for which investigations shall be made by trained and salaried officers. The Mayor has taken a special interest in the matter, and there is little doubt that through his activity and the necessity for reform which is so apparent the new method will soon come into existence.

The Bradford Sanitary Association.

The report read at the annual meeting of this society on March 7th draws attention to the increasing prevalence of diphtheria in the West Riding. One of the principal causes given for its increase is stated to be "the cutting of waste pipes over the grating of gullies instead of below them, whereby overflow of sewage to the foundations commonly resulted, bringing to the roots of the house that putrescible matter which was known to be a most fertile medium for diphtheria." The system of interceptor traps on soil drains was also considered another cause. The value of disinfectants was discussed but all who put their trust in artificial compounds were advised that the best of all disinfectants were fresh air, pure water and sunshine, which should be admitted as freely as possible to every part of the dwelling, and especially to the dark corners.

Anthrax in Bradford.

At a meeting of the "Woolcombers, Limited," held recently it was stated by the Chairman that the company had allocated a sum of £1,000 for investigations into methods of preventing this disease, and that it was thought that a means of doing so had been discovered. What the method is was not stated, but it is to be hoped

that the Chairman's remarks were not too optimistic. The disease is undoubtedly very prevalent in Bradford, and only last week another fatal case was the subject of a coroner's investigation. The victim was a man, aged 48, who had been dealing for a week previous to his death with East Indian goat hair, Russian red wool and Russian camel hair. His duty was merely to watch the wash bowls, though occasionally he would have to put his hands into the suds. It was brought out in evidence that he would also occasionally have to go into the willowing room. This room, however, was provided with efficient appliances for drawing the dust away. The man developed a pimple on his left wrist on February 26th; next day this was a good deal swollen and very painful, and he was admitted to the Royal Infirmary, where the pustule was excised; symptoms of acute blood poisoning set in on March 1st and the man died two days afterwards. Dr. Eurich, Bacteriologist to the Bradford and District Anthrax Investigation Board, in giving evidence stated that when he examined some of the serum taken from the sore he found bacilli in great numbers. At the *post-mortem* examination he found anthrax bacilli in the brain and lungs. If the man had applied for treatment at once on discovering the sore he would have stood a much better chance of recovery. One of the important factors in the prevalence of fatal cases of anthrax appears to be the carelessness of the men in attending to sores during the course of their work. They go about their work with an absolute indifference to warnings and directions. One of the witnesses in this case stated that 99 out of 100 workmen did not read the regulations, and even if they did he did not think that they would properly understand them. This is one of the chief difficulties in combating this terrible disease.

Bradford Slums.

Miss Jones, a lady sanitary inspector, in lecturing in Bradford on March 4th, stated that some people were living in the city in houses that were mere hovels. In several houses she had seen water dripping from the walls and often the only outlook was on the blank wall of a mill. In some houses there were no sinks, and in many the windows would not open. The drainage was constantly defective. There was little wonder that infant mortality in Bradford was so very high.

Poor Children's Holiday Camp.

The annual report presented to the Leeds Poor Children's Holiday Camp Association on March 1st showed that, quietly and unobtrusively, a considerable amount of work was being done by the Society. At Arnside on Morecambe Bay a large bungalow was erected some two years ago, and to this during the last season 451 poor children—225 girls and 226 boys—had been sent. This number was in excess of that for 1905 by 116. The camp was open during twenty-four weeks, and the total amount of money expended on the children and attendants during that time amounted to £341. The improvement in the health of the children during their fortnight's stay at the camp had been most encouraging. In reply to some criticisms as to the circumstances of the families whose members received benefit from the Association, it was mentioned that the average wage of the families of 369 of the children was 12s. 4d. per week, so it is very clear that the children are drawn from a class which requires assistance. Those who have taken a practical interest in the camp, and who have assisted in its organization, are unanimous in the opinion that the improvement in manners and in character of the children during their stay is at least as striking as the improvement in their physique.

North Staffordshire.

North Staffordshire Workshops for the Blind.

After being closed for alterations and improvements, the North Staffordshire Workshops for the Blind at Hanley were, on February 28th, reopened by the Countess of Dartmouth. It was announced that the Committee had purchased the premises by means of special subscriptions raised throughout the county; and that Mrs. Godfrey Wedgwood had placed in the hands of the Chairman £1,000 as an endowment for the workshops. This gift was made in memory of her late husband, to whom the existence of the workshops was largely due, and whose efforts were responsible for the institution of the joint school for the blind and deaf scholars under the various local education authorities known as the Mount School, Stoke-on-Trent.

Mentally Defective Children.

The Hanley Education Committee has appointed a subcommittee to consider the advisability of making provision for special instruction of those scholars unable to benefit from ordinary school methods by reason of mental defect.

Cerebro Spinal Fever.

Two deaths from cerebro-spinal fever have occurred in the district, one at Longton and the other at Newcastle-under-Lyme.

Canada.

Presentation to Dr. Roddick.

At the annual banquet of the McGill Medical Faculty, Dr. Roddick announced his retirement from the position of Dean of the Faculty of Medicine. He was presented with a silver loving cup by the students, who expressed regret at having to part from the most popular Dean that the Medical Faculty had had for years. Dr. Roddick was sorry that he felt compelled to take the step, but stated that he would always take a lively interest in the student body and the medical school.

Dr. James Stewart.

Dr. James Stewart of Montreal, whose death was announced in the British Medical Journal of October 27th, 1906, had a wealth of knowledge and kindliness behind a gruff exterior. He was beloved by all who knew him, and none can quite fill his place. His course of study was wide both in Canada and Europe, and when he settled in Montreal he became one of the leaders of the profession, his knowledge of nervous diseases being profound. He held for several years the position of Registrar and Professor of Materia Medica in McGill University. Later he was Professor of Medicine and Clinical Medicine, and was appointed Physician in Chief to the Royal Victoria Hospital. He was well known in medical societies throughout the country, and held the position of President of the Section of Medicine at the British Medical Association in 1897. In 1903 he was elected President of the Association of American Physicians. He wrote frequently for medical journals both in America and Europe, and his reports on typhoid fever, rheumatoid arthritis, and nervous diseases were always read with interest as coming from an authority.

Sir William Hingston.

The death of Sir William Hingston removes a remarkable figure from the medical profession in Montreal.[1] He was probably the oldest medical practitioner in the city at the time of his death, being 78 years of age. He held a unique position in the profession, being the greatest connecting link between the English and French speaking medical men. As Chief Surgeon in the Hôtel-Dieu he headed the French school; while as Dean of Bishop's College Medical School—now merged into the McGill medical faculty—he headed a large section of the English school. His readiness as a speaker and dignified bearing made him a popular teacher and speaker both in French and English. He was educated at the Montreal College and McGill University, and graduated M.D. in 1851. He was a Governor of the College of Physicians and Surgeons, President of the Canadian Medical Association; organized the first Board of Health in the Dominion, was Vice-President of the British Association for the Advancement of Science, and from 1875 to 1878 was Mayor of Montreal. He was appointed Commander of the Papal Order of St. Gregory in 1875, was knighted in 1895, later being called to the Senate by Lord Aberdeen.

[1] An obituary notice of Sir William Hingston was published in the British Medical Journal of March 2nd, p. 37.

A model institution for the prevention of infant mortality in the German Empire is to be established in Charlottenburg. It is to be called after the Empresses Augusta and Victoria.

SPECIAL CORRESPONDENCE.

PARIS.

Société de Chirurgie: M. Guinard on 2 Cases of Pancreatitis Treated by Operation.

At a recent meeting of the Société de Chirurgie, M. Guinard made an interesting communication on 2 cases of pancreatitis—one haemorrhagic and the other suppurative—diagnosed before and cured by operation. The first was that of a man aged 35, who for several days had been relieved by injections of the benzoate of mercury for a specific orchitis. After the tenth injection he suddenly felt a sharp stabbing pain in the epigastric region; it was so acute that several hypodermics of morphine failed to give relief. During the following days the patient had fetid diarrhoea, and a small tumour appeared in the epigastric region. It was diagnosed as a gumma, and the mercurial injections were continued; but the patient continued to have great pain, with continued diarrhoea and complete intolerance for food; he lost flesh to an alarming extent, and became cachetic. When M. Guinard was called in he found him almost moribund. To the left of the linea alba, between the umbilicus and the costal margin, there was a tumour of the size of a man's fist, smooth, shining, almost fluctuating, dullish on percussion. An exploratory puncture gave issue to sticky blood. From the sudden onset of the attack, the intense pain, the rapid cachexia, and the absence of fever, M. Guinard diagnosed haemorrhagic pancreatitis, and performed laparotomy. He found a large blackish retrogastric tumour, from which on incision a large quantity of fluid blood mixed with clots escaped. It was a haematic cyst of the pancreas. A drain was put in, and cure was rapid. On awaking from the anaesthetic the epigastric pains had disappeared. The contents of the cyst were found to be absolutely aseptic. The sudden onset, the extreme violence of the pains (which is a veritable coeliac neuralgia), the acute cachexia, the rapid development of the epigastric tumour, situated between the umbilicus and the costal margin to the right or the left of the middle line, as the head or the tail of the pancreas is affected, will always permit of the differential diagnosis of a haemorrhagic pancreatitis from intestinal obstruction, perforated gastric ulcer, or perforating cholecystitis, the only affections with which confusion is possible. The same condition has also been diagnosed before operation by Neumann and Mayo Robson. As to the etiology of the present case, M. Guinard is of opinion that the mercurial treatment had something to do with it. Mercury produces salivation by its action on the salivary glands, and possibly it has an analogous action on the pancreas, which is an abdominal salivary gland, producing a mercurial pancreatism with intense congestion of the gland and interstitial haemorrhages. The second case was that of a woman who was seized during luncheon with violent pain in the epigastrium. Her physician diagnosed renal colic, and gave morphine injections. Nevertheless the pain persisted with almost the same violence; a swelling soon appeared in the left hypochondrium, which was diagnosed by a kidney specialist as hydronephrosis. The patient then began to cough, without expectoration; she was feverish, and examination of the left side of the thorax showed the signs of an encysted purulent pleurisy. M. Guinard thought of a pancreatitis, but consented to operate by the thorax. He resected a rib, and opened the pleura, which he found absolutely free; but he found the diaphragm was markedly bulging, and did not hesitate to incise it after having protected the pleural cavity by a catgut suture. The incision let out pus and a quantity of gas. A drain was inserted, and recovery was rapid. The diagnosis was made in this case before operation from the rapid onset, the extreme violence of the pain, the rapid evolution of the swelling in the hypochondrium, from the fact that the abdominal signs preceded the thoracic signs, from the discordance between the functional symptoms (absence of expectoration) and the physical signs. M. Guinard insists on the advantage obtained in this case from the transpleural opening of the pancreatic suppuration: it is the best way to open collections of pus in the abdomen whose evolution is towards the thoracic cavity. He has used it in three cases, always successfully. There is no danger of infecting the pleural cavity when care is taken to protect it, and when there is good drainage. Even if the pleural cavity became infected, it would, thinks M. Guinard, be less grave than infection of the peritoneal cavity.

VIENNA.

Raising of Medical Fees.—Taxes on Practitioners.—Hospital Abuse.

As already stated in the Journal, the Union of Medical Clubs recently held a meeting and agreed on the necessity of a uniform increase of medical fees. The cost of living has increased so much that the expenditure of a moderate household is now at least 50 per cent. higher than it was two years ago. Thus, for instance, the use of the telephone is dearer by 50 per cent. since the New Year, and the taxes have been readjusted, to the disadvantage of the medical profession. The General Medical Council has therefore consented to allow practitioners to charge for consultation by telephone. A minimum tariff has been arranged by the Union. The fee for a visit at the patient's house is fixed at 4 to 6 kronen (3s. to 5s.) on week days, with 50 per cent. extra for night calls and 25 per cent. extra on Sundays; for a consultation in the doctor's office during his usual hours (mostly between 2 and 5 p.m.) the minimum fee is to be 2 to 3 kronen (1s. 8d. to 2s. 6d.), whilst hitherto the fees were respectively 2s. 6d. to 7s. and 1s. to 1s. 8d. Injections, minor operations, and obstetrical work are to be charged for at special rates. The High Court of Justice has lately decided that fees for medical intervention are payable immediately after the doctor ceases to attend on the patient, and that the credit system now in force is not justifiable. In a case where the fee had to be recovered by action at law, the judge ordered the patient to pay the doctor interest on his fee at the rate of 5 per cent. per annum. Another question which was settled at the same time was who had to pay the consultant if the doctor, not the patient, had called him, or if the latter objected to him. It was decided that the consultant's fee must always be paid by the patient. To inform the public of the changes, notices have been inserted in the daily press explaining the reasons for the increase of fees. The new scale has met with scarcely any opposition.

The taxes to which practitioners are subject on account of their profession are two. There are the "*Erwerbsteuer*," or professional tax. The amount depends on the doctor's style of living and on the social position of his patients. It ranges between 10s. 6d. and £8 5s.; professors have to pay more. The other tax is called "*Einkommensteuer*" (income tax), and must be paid on the entire income derived from any source, including professional earnings. The taxes paid by medical men in 1906 amounted to £100,000.

The members of the Sanitätscommission appointed by the State were recently invited to meet the hospital directors to devise means of checking the hospital abuse which is rife in Vienna. The regulations issued recently have proved a complete failure. The meeting resolved that the benefits of charitable institutions must be reserved for those whose benefit they are intended—the indigent and destitute, and that power must be given directors of clinics to refuse medical aid in the hospital to persons they may deem not entitled thereto. But there are many who do not care to exercise this power, and verification of statements made as to their circumstances by patients entails more trouble than the medical staff cares to take. It has therefore been conceded that the police or the guardians of the poor shall provide tickets of admission to the hospital. Hitherto this measure has proved unsatisfactory. So far no adequate remedy has been found.

Women in German Universities.—Of the German universities there are seven which admit women to full academic privileges. These are Freiburg, Heidelberg, Tübingen, Munich, Würzburg, Erlangen, and Leipzig. The total number of female students matriculated in these universities this winter semester is 254, as against 140 last year. They are distributed as follows: Munich, 90; Heidelberg, 58; Freiburg, 49; Leipzig, 35; Würzburg, 13; Tübingen, 7; Erlangen, 4. Of the whole number 116 are studying medicine and 3 dentistry.

CORRESPONDENCE.

THE ASSOCIATION AND MEDICAL RESEARCH.

SIR,—May I be allowed in regard to an extremely generous review of a volume of mine in your columns appearing over the name of Dr. F. W. Mott to add two words of comment? Dr. Mott mentions that some work of mine has gone towards establishing a motor instead of a sensory explanation for the concurrence of afferent optic paths to a single hemisphere of the brain. It is only just to Dr. Mott to say that any merit attaching to that demonstration belongs as fully to work done by Dr. Mott himself as to work of mine. Dr. Mott, employing quite different methods from that used by me, arrived at and published similar conclusions as early as I did.

In the second place, I would allow myself a brief expression, in this the JOURNAL of the Association, of the indebtedness under which I, with many similar workers, stand to the Association for help afforded by it toward the carrying on of research. Speaking of myself, any research, small as I know it to be, that I have accomplished owes its prosecution largely to such help repeatedly given by the Association through its Council working through Committees which have from year to year administered its scientific grants. It is natural that I should wish to express this, but that would be a small matter with which to trespass upon your space, were it not that in so doing I feel that my position of indebtedness is typical of that of very many others similarly beholden to the Association. Investigational work is often costly, not only in time, but in actual money. Workers in this country are situated differently from workers in some other countries, for instance, Germany. The sum which the Government of the country allows for the assistance of scientific research is very small. The imperial Government hands over each year, under certain stipulations, to the Royal Society the sum of £4,000 to be distributed in aiding scientific investigation throughout the empire. This sum has to support such various departments of natural knowledge as astronomy, botany, chemistry, geography, geology, mathematics, meteorology, mineralogy, plant physiology, animal physiology, pathology, zoology, etc. There is no doubt that this fund is excellently administered by the Society, and is by careful management made to go as far as ever it can toward the support of research. But what is £4,000 as a sum with which to cover so vast a field of needs in the whole expanse of natural knowledge throughout the confines of the most extended, most populous, and most complex empire of the modern world. The sum is about the same in amount as—sad to say—the average yearly takings of a public-house in a poor quarter in this city; and of this sum only about a tenth part can—fair consideration being allowed for all the other manifold divisions of natural knowledge—be allotted to research bearing on medicine. That in the Royal Society's actual administration of the grant a larger amount than that fraction is as a fact often allowed for research in medical sciences is due to a liberal treatment accorded to studies in that direction by the Society. The smallness of the sum available from Government for medical research makes the value of the grants given and dispensed annually by the British Medical Association of paramount importance for the prosecution of such research. With the grants for individual researches I am including in my mind the research scholarships, which are equally as valuable. The British contribution towards advance in medicine depends mainly on and looks annually mainly to this generous source for its financial ways and means.

It is no exaggeration to say that a number of workers find it the sole means for the accomplishment of their carefully-planned and earnestly-desired investigations. This becomes yearly more and more the case. Medicine and medical education progress, and every year the problems opening for investigation and the number of persons capable of undertaking them distinctly increase. So also the number of places (institutions and laboratories) appropriate for carrying on investigational work increases. What does not increase in like ratio is the ability of the willing worker or of the willing institution to provide financial support for such work. The boon which the Association confers on the profession and the community by annually supplying just such aid as this cannot be overstated: it is extreme. It is practically a main source to which in this country medical research can look for help. It is more than purely financial help, for the financial support from this source conveys along with its own material assistance, the assistance of encouragement, and approval which of themselves lend motive power.

At a time when, as I see by your last issue, the funds which the Association devotes to this purpose are being erroneously attributed to a Government source, and by certain lay critics are being instanced with disapprobation, it seems right to offer testimony to their beneficence and utility. I may be forgiven if I express my conviction that among all the varied purposes served by the Association and its organization, none are of higher usefulness, not only to our own profession but to the community at large, than that which is expressed by the foundation and distribution of this fund.—I am, etc.,

Liverpool, March 11th. C. S. SHERRINGTON.

THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

SIR,—The letters of Dr. Saundby and Dr. Mears in the last issue of the JOURNAL on the subject of consultation indicate the great difficulties presented by the problem which the Ethical Committee desires to submit to the Divisions.

I am absolutely convinced that the only final solution lies in the interesting proposal which the Ethical Committee has tentatively included in its report—namely, the recognition of a special class of consultants: men who persistently refuse to undertake the treatment of any case except in co-operation with a general practitioner.

I do not speak on merely theoretical grounds, for a few of my fellow-believers and myself have practised this method of pure consultation and have found it work smoothly. For many years I have invariably prefaced my interview with any patient who did not bring a practitioner's introduction by a statement that it would be necessary for me to communicate to some medical man the results of my investigations and any suggestions I might have to make with regard to treatment. A very small proportion of such patients have gone on to other consultants who do not consider this course as necessary or desirable. The great majority have at once asked that their own medical attendant may be written to, while very occasionally it has happened that the patient has preferred to choose a new general practitioner.

The advantage of this plan is that it places the consultant in a position that can be understood by the patient. The consultant does not say to the patient; "I cannot treat you independently out of consideration to So-and-So who sent you to me or under whose treatment you have previously been, but because I never do treat anybody independently in what I believe to be the best interests of the public and the profession."

I sincerely trust that the Divisions will boldly express their approval of this alternative proposal of the Ethical Committee. It does not appear that any attempt to regulate the system, approved by Dr. Saundby, which recognizes that a consultant is a consultant in one case and an independent practitioner in the next, will ever eliminate the friction between the two classes of the profession to which Dr. Mears's letter bears such eloquent testimony. It is undoubtedly for the good of the public that general practitioners and consultants should work cordially together. The relations that should subsist between them will be open to free discussion in the Divisions in the next few months. I would earnestly appeal to all those whose position gives them the opportunity of working as consultants to consider seriously whether the time has not arrived to make a clear division in the profession similar to the legal division into barristers and solicitors. By adopting this attitude I am convinced that the consultants would forward the interests of their own class, of the general practitioner, and, what is of still more importance, of the community as a whole.—I am, etc.,

March 5th. X.

SIR,—Dr. Saundby thinks it right for a practitioner, whom he terms a consultant, to examine and prescribe for a patient under the care of another practitioner without the knowledge and consent of the latter, but that he may

graciously write to the man in charge after first obtaining the consent of the patient. In other words, that a dishonourable patient pretending to have faith in his own doctor may go behind his back and consult another medical man, misnamed a consultant, and do so with the positive proof that for a guinea or more he may secure an accomplice and purchase his silence. Then he returns to his family doctor and still pretends to take his advice and medicine, while all the time he is using the prescription obtained elsewhere. For everything that goes wrong he blames his family doctor, and if perchance anything by accident happens to go right the "physician" gets the credit. In the end, however, he learns, but sometimes too late, that after all honesty is the best policy, explanations and apologies follow, and then perhaps the "consultant" gets the acrimonious letter which he dislikes and so much deserves.

After all, a consultant is a self-appointed individual. He may be a man of vast knowledge and world-wide reputation, or he may be a young man of 25, who has just been appointed assistant-surgeon to a hospital. Even the latter qualification is not absolutely necessary. Still, so long as he acts as a pure consultant, and will see no patient except in consultation with another medical man, he is entitled to the respect of every one. Other practitioners, whether general or special, who habitually or occasionally take sole charge of cases, all belong to one class, though some may occupy important hospital appointments and be much more frequently sought in consultation by their colleagues than others, and thus attain a much higher position in their class, but the same rules apply to all, and a practitioner who not only breaks these rules but has the presumption to diagnose and treat a case under the care of another man without consultation and with no further history than the frequently mendacious one volunteered by the patient adds to his offence by the display of an inordinately swollen head and a lack of judgement and experience. As house-physician to the pathologist of a great hospital I had exceptional opportunities of seeing how under the best conditions, and after repeated personal observation, the bedside guesses of the most distinguished members of our profession were often at variance with the *post-mortem* answers. How much more must this be the case with self-assertive "consultoids" who, after a brief examination and with no other guide than an imperfect history, undertake to correct the work of men who are frequently better qualified and more experienced than themselves.

One word with regard to hospital abuse. No patient should be treated at any hospital who is under the care of an outside practitioner unless on presentation of a note from the latter. I hope the Divisions will unanimously adopt the recommendations of the Central Ethical Committee, which, after all, simply embody that which has already been the unwritten law of the profession, and that they will also be approved at the Annual Representative Meeting.

Should this happen, Dr. Saundby's amazing statement or threat, ostensibly on behalf of consultants, is worthy of special notice. He says—and the words and italics are his—that consultants would "in self-defence take good care *not to know* in all cases" that any patient seeking their advice was under the care of another medical man. As far as pure consultants are concerned, I leave this statement in their hands, since they are well qualified to maintain their own honour and dignity, but from my point of view, as a general practitioner, I must protest against such a pretence of ignorance, which appears to me totally inconsistent with ordinary, to say nothing of professional, ethics, being apparently approved of by a member of the General Medical Council. I am, etc.,

St Bride's, March 12th. F. C. MEARS.

HOSPITALS AND CLUBS.

SIR,—I shall be obliged if you will print the following letter. I have received several of the same sort during my hospital life complaining that club doctors refer the club patients to the hospitals. I should think I had received twenty such letters. But as these matters are being discussed now, I thought this might be another instance of the "abuse of hospitals."

[To the Secretary, London Hospital.]

DEAR SIR,—I have been the founder of several benefit societies and am ever now member of a large society. The society pays for the services of their doctor £22 per annum, viz. (1s. head per per quarter, consisting of 110 members). For several years serious grievances have been made about the improper treatment of the doctor towards the members. The doctor being slightly in doubt as to the disease of a member, simply says: "You must go to the hospital"; if there is any slight surgical aid required, he again orders the patient to the hospital, treating them as hospital cases.

Now this sort of treatment on the part of a doctor is not what a benefit society requires, and although these complaints have been laid against the doctor, it still continues in the same way; a proof of the same can be found by an inquiry into the wards and out-patients' departments, where it will be seen that eight-tenths are members of benefit societies.

What I should like to ask you is whether this sum of £22 could be contributed to the London Hospital, and that members of the society in need of medical treatment of any kind could obtain the same direct, on producing a card with the name of the society.

It would be to a great advantage on our side, and at the same time on the part of the hospital, and should this scheme be carried out I am sure all the benefit societies in London would follow the same example.

I leave this matter for your kind consideration, and would be pleased with a favourable reply.

Yours very truly,

———.

It strikes me in this case that the doctor is receiving far too low a payment for undertaking to attend, and, I suppose, supply with medicines and bandages, 110 members, and that he is misusing the hospital so as to enable him to do it at this price.

I need hardly say that I do not intend to adopt the suggestion made that the hospital should accept the money. I should value any suggestions as to how to answer this letter, as it is not yet answered and similar ones.—I am, etc.,

Knebworth Hall, Royston, March 3rd. SYDNEY HOLLAND.

TOTAL ENUCLEATION OF THE PROSTATE.

SIR,—After the rather lengthy correspondence that took place in the pages of the BRITISH MEDICAL JOURNAL in 1901, in which not only Mr. Freyer and myself but a number of well-known surgeons took part, I was astonished to see in the JOURNAL of March 9th that Mr. Freyer had again brought forward the same arguments which he previously used.

If any one is sufficiently interested in the subject, he will find full reports of my early cases (one of which is referred to in Mr. Freyer's paper of March 9th) in the JOURNAL, July 14th, 1894, and July 27th, 1901, p. 244, and of the letters that I wrote in the same JOURNAL for July 27th, August 10th, and August 24th, 1901. As Mr. Freyer, in spite of all the arguments used by myself and others, is still labouring under the same beliefs that he previously held, I cannot see that any advantage would accrue from a repetition of the correspondence.—I am, etc.,

London, W., March 11th. A. W. MAYO ROBSON.

SIR,—While many of us may envy Mr. Freyer his dexterity and success in the operation of "total prostatectomy" (so called), and most are content to accept his assurance that it ought by right to be associated for all time with his name, it may be permitted at least to wonder why he has so long delayed meeting the open onslaught which Messrs. Fuller and Guiteras made upon his position so far back as April, 1905.

I should not care to intervene in what has seemed to me from the first a most regrettable controversy, were it not for one statement which Mr. Freyer makes in his paper in your last issue (March 9th). The statement is in the last paragraph, and reads thus:

Dr. Fuller published the description of his operation with six cases in June, 1905, but his teachings seem to have fallen on deaf ears. . . . So far as I am aware, his name was never referred to on this side of the Atlantic for more than six years after—till it was unearthed from the dusty archives of the Medical Chirurgical Society by Mr. Mayo Robson during the controversy that ensued on the publication of my first lecture on my operation in July, 1901. . . . I am not aware that in his own country it fared much better.

May I draw Mr. Freyer's attention to a well-known text-book on *Modern Surgery*, namely, that written by John C. DaCosta, M.D., and published by W. B. Saunders and Co., Philadelphia and London, the 1900 edition of which contains the following on page 1028:

Fuller performs a suprapubic cystotomy, makes a small incision through the mucous membrane of the gland, enucleates the gland with the finger, and drains through an incision in the membranous urethra.

I am not at present concerned with the question whether either to Mr. Freyer's or to Dr. Fuller's method the term "total prostatectomy" should be applied. Albarran and Motz, Wallace, and others have demonstrated to the satisfaction of most anatomists and surgeons that strictly speaking the term is an inaccuracy. To this I drew attention several years since in a letter in the BRITISH MEDICAL JOURNAL. Mr. Freyer, however, holds to his own opinion with characteristic tenacity.

The really important point, and the one which prompted this letter, is that Mr. Freyer should be ignorant of the fact that even in 1900 Dr. Fuller's operation was embodied in a textbook so much in vogue amongst students of surgery at nearly all the medical schools—not only in America, but also in this country—as DaCosta's well-known work.—I am, etc.,

Glasgow, March 10th. ARCHIBALD YOUNG.

OPERATIONS ON THE KIDNEY.

SIR,—"Birmingham Surgeon" in his communication in the BRITISH MEDICAL JOURNAL of March 9th rather scouts Mr. Swain's reference to the treatment of movable kidney. Mr. Swain in his paper states:

"I think it possible that the surgical pendulum has swung too far back, and a greater discrimination of cases suitable for operation is necessary," and again, "In all cases except, perhaps, those associated with some form of kidney degeneration, a belt should be tried."

In these words, it seems to me, he voices the opinion of many observers at the present day. It does not, however, meet with the approval of "Birmingham Surgeon," who quotes, in support of his belief in operative measures, a case in which three months after the operation the patient reported herself "in splendid condition both physically and mentally." It goes without saying that this interval is too short to brand any case as one of successful nephropexy. I have seen within the last three years nearly a score of cases in which single or double nephropexy had been performed; but I have yet to see a case in which the dislocation of the kidney was rectified permanently. As recently as last week I saw a patient in whom double ovariotomy was performed ten years ago, and double nephropexy four years later, and in whom both kidneys came under the category of Glénard's third degree of nephroptosis, that is, the superior margin of the kidney could be reached on deep inspiration. I know not which particular operation was done in this case or in any of the others, but this I do know that all, excepting two, were operated on in London hospitals.

In considering the question of the treatment of movable kidney we should ask ourselves: (1) Is the movable kidney an isolated condition? (2) is there relaxation of the abdominal muscles? (3) is there diminished intra-abdominal pressure leading to descent and straining of the attachments of the kidneys, stomach, bowels, and liver? To ignorance or forgetfulness of these points may be attributed "the lack of satisfactory results." When traumatism is the causative agent, fixation, to my mind, is the proper treatment; but, on the other hand, when the movable kidney represents only part of the mischief, I fail to see how fixation can be permanent, for dragging on the kidney by the organs in the vicinity will surely take place as soon as the patient assumes the upright position. All the requirements of these cases are met by suitable dietetics and therapeutics, electricity, massage, and the application of a properly-fitting abdominal belt (with or without a pad) which, although it will not enable a full *restitutio ad integrum* to take place, will nevertheless help to strengthen not only the abdominal muscles but also all the organs in the abdomen, and will remove those disturbances of the stomach and bowels which are so frequently associated with movable kidney.

Might I ask "Birmingham Surgeon" why, in his case, when both kidneys were down, only the right was fixed?—especially as it was seen in consultation with Dr. Suckling, who in his paper on Movable or Dropped Kidney states that "in the case of the left kidney pain is the most prominent symptom and is very severe."—I am, etc.,

London, N., March 9th. WM. B. THOMSON, M.D., etc.

THE WORKING OF THE MIDWIVES ACT.

SIR,—"Argus" says the general practitioner "is now compelled to act as an unpaid assistant to a person whom the law proclaims to be his equal in the eyes of the ignorant." There is no such compulsion, and every practitioner should know this, and act accordingly. Rule E. 17 of the Central Midwives Board says that under certain circumstances "a midwife must decline to attend alone, and must advise that a registered medical practitioner be sent for." In future I would advise "Argus" to do as I and others do, refuse to attend midwives' cases.

"Argus" and all general practitioners interested in this Act should look up the BRITISH MEDICAL JOURNAL SUPPLEMENT of April 22nd, 1903, and get to know the rules. If he cannot lay his hands on the SUPPLEMENT he can get the Central Midwives Board Rules from Spottiswoode and Co. Ltd., New Street Square, London. Post free 7d.

I quite agree with your correspondent when he says this Act constitutes a grave injustice to the general practitioner. It also constitutes a grave danger to the general public, as, in districts where there is no supervision of midwives, it follows that "Sairey" is now armed with a very powerful weapon to compete against the poor general practitioner in virtue of her being recognized by law, while the ignorant public does not get that protection which was supposed to be one of the chief purposes of the Act.

In the town where I practise, with a population of about 60,000, a medical man was appointed to inspect midwives in accordance with the provisions of the Act. There the matter rests. So far as I have heard there has been absolutely no attempt at any kind of supervision or inspection.

I would advise "Argus," if he still takes midwives' cases, to read Rule E, and report every midwife who does not act strictly in accordance with it.—I am, etc.,

CYCLOPS.

"A POSSIBLE SOURCE OF DIPHTHERIA IN SCHOOLS."

SIR,—I read in the BRITISH MEDICAL JOURNAL of March 2nd, p. 536, a short but very pertinent letter on the above subject from Dr. Francis T. Bond, of Gloucester. I note his intelligent recommendation of "appropriate disinfection" as a remedy.

That the dry-sweeping of the floors of school rooms is a menace to the health of both the sweepers and the school children there can be no doubt. The Klebs-Loeffler bacillus, the pseudo-diphtheria bacillus, and streptococci have all been found in the dust of rooms inhabited by patients whose throats and noses were cultivating these organisms. It has been known for years that the tubercle bacillus and staphylococci live and retain their pathogenic properties for long periods of time in dust. Dr. Bond therefore raises a subject of great national import—a subject which long since should have been satisfactorily dealt with by educational authorities.

In this JOURNAL in May, 1905, I drew attention to the necessity for the constant disinfection of schools. I now hope that Dr. Bond's excellent letter will call forth such further correspondence as will focus universal attention on the matter, so that the responsible authorities may be compelled to act.—I am, etc.,

DAVID SOMMERVILLE.

Public Health Laboratory, King's College, London, March 5th.

SIR,—I am prompted to write in reply to Dr. Bond's letter in the BRITISH MEDICAL JOURNAL of March 2nd, p. 536.

I had occasion last summer to communicate with the education authorities, drawing their attention to this evil. As a result, they appointed two lady members to visit the schools along with me.

The pernicious influence of dust was first pointed out, as it affected the plants potted by teachers and scholars, on shelves and window sashes. Then again, dust was found on the leaves of books, writing papers and slates, ceiling, window panes and door mats. By a process of not very difficult reasoning, we arrived at the conclusion that the same dust found access to the children's eyes and mouths, and even penetrated to their lungs.

This dust being derived from the highways and streets as a result of motor and other traffic, and being mixed

with infectious germs, spreads such diseases as phthisis, diphtheria, ophthalmia, etc. So you will see that in this small matter Dr. Bond has been anticipated.—I am, etc.,

Kirkby-in-Ashfield, March 12th. JOHN M. MACKENZIE.

"MEDICAL PROGRESS IN PERSIA."

SIR,—Emil F. Khan, whose paper in the *Presse Médicale* is referred to in the BRITISH MEDICAL JOURNAL of January 12th, gives a very misleading idea of the state of medical questions in Persia from 1890 onwards. I have been attached to the only official medical school in Persia as teacher. Till last spring I was the only medical teacher of the Dor-ol-Tonoun, or the University of Teheran. So far there is no registration of medical students or medical practitioners in Persia. There is no publication whatever from which one may know who is qualified or not for the practice of our profession. It is impossible for a European to enter into practice without qualification, for the simple reason that his European colleagues would refuse to meet him. But for a native of Persia everything is possible in Persia in every career of life; so it is in the medical career. So far the best medical school in Persia is the Dor ol Tonoun. But two words will give an idea of the value of such teaching. No human dissection in any form is possible in Persia, and we have no hospital attached to our school.—I am, etc.,

M. M. BASIL, M.A., M.B., C.M.Edin.

Teheran, Feb. 14th.

THE MEMBERSHIP OF THE ASSOCIATION.

SIR,—Might not much useful information be obtained by Secretaries of Divisions ascertaining from non-members of the Association in their respective Divisions the reason why such gentlemen refrain from joining the Association? The usefulness of the Association is restricted by this lack of unity in the profession, as, when votes upon certain important matters are taken, unanimity cannot be assured. Incidentally, the funds of the Association would be largely increased, and *pari passu* the power of the Association.—I am, etc.,

Bedford, Feb. 19th. A MEMBER OF THE ASSOCIATION.

THE CONCENTRATION OF PRELIMINARY MEDICAL STUDIES IN LONDON.

SIR,—In connexion with the forthcoming election of two Senators of the University of London by the Faculty of Medicine, and the announcement, in the two latest successive issues of the BRITISH MEDICAL JOURNAL that four candidates have been nominated for these two vacancies, I should like to draw attention to the following points which it is of material importance the electors should keep in mind when voting on March 19th:

1. From the debate at the Senate on the subject on February 20th, and from the resulting announcement in the *Times* of March 4th, it is certain that the policy of establishing a "Third Centre" for teaching preliminary and intermediate medical studies is being actively pushed at the present time.

2. St. Bartholomew's and the London Hospital have publicly announced their withdrawal from any scheme of amalgamation of the preliminary and intermediate medical studies. St. Mary's Hospital has decided to follow the lead of St. Bartholomew's and the London. The Middlesex Hospital has recently accepted a donation of £1,000 on the condition that the teaching of the intermediate medical studies is retained at its own school for a period of at least ten years. It is notorious that Guy's and Charing Cross Hospitals find their dental schools so profitable that they would sustain a loss by amalgamation of the earlier medical studies, and consequently these hospitals have no inducement to participate in this scheme. I have first-hand information to the effect that St. Thomas's Hospital investigated the laboratories and the scale of fees at one of the university centres, and came to the conclusion that its own equipment for the teaching of the earlier studies was better, and that this course was cheaper, and consequently withdrew from the scheme.

3. University and King's Colleges have spent, or will have spent, much effort and money in bringing about their incorporation with the university, and in fitting themselves for recognition as centres. The representation and influence of these two colleges upon the Senate are sufficiently great to ensure their being able to secure their own position, and it is only equitable that they should do so. Should the "Third Centre" ever be constituted, it is quite certain that these two colleges will not allow, and will be able to prevent, any diversion of students to the "Third Centre" until their own benches are completely filled.

4. When these facts are considered in relation with the feeling at the medical schools it seems improbable that there will be any students whatever forthcoming for the "Third Centre." In view of this position of affairs, the expenditure of so large a sum as that contemplated (£130,000), much of which would be spent on bricks and mortar, would seem unnecessary and indeed a regrettable waste of money.—I am, etc.,

E. GRAHAM LITTLE,
Representative on the Senate of Medical Members of Convocation; Member of the Faculty of Medicine.

London, W., March 8th.

SIR,—In a recent annotation in your JOURNAL, Dr. Caley and Dr. Hill are stated to be standing as senators in order to test the feeling of the Faculty on the question of the concentration of "earlier" medical studies. It does not seem to me that this is the most convenient way of raising this question. Dr. Fowler and Dr. Bradford have been consistently carrying out upon the Senate the policy which the Faculty unanimously recommended the Senate to adopt when it made its last pronouncement on this question. It is true that since that date there have been rumours of some dissatisfaction with this policy on the part of individual teachers and schools, but no resolution on this subject has been submitted to the Faculty, and no official communication from the schools received by the University. The Faculty, having unanimously recommended the Senate to take steps to found an Institute of Medical Sciences in the near neighbourhood of the University, also advised that when this policy was within measurable distance of fulfilment the schools should be further consulted. This time has hardly yet arrived, although, in view of recent satisfactory negotiations as to a site it is approaching, until it is known upon what terms the University can offer its assistance to the schools in relieving them of the burden of some of their teaching, it seems impossible for any decisive opinion to be reached. While, then, the time is not yet ripe for the further consideration of this question, neither is the forthcoming election for the Senate a convenient opportunity to raise it. Many other points besides "concentration" may weigh with the electors—the mere desire for change—the feeling that other hospitals should have representatives upon the Senate and the patriotic desire to support one's own school may well confuse the issue.—I am, etc.,

London, W., March 14th. LAURISTON E. SHAW.

TRYPSIN IN CANCER.

WE have received from Dr. John Beard of Edinburgh a long communication on this subject in reply to a letter from Dr. Shaw-Mackenzie which appeared in the JOURNAL of March 9th. We regret to be unable to publish it in full, but fortunately the gist of it can be given in Dr. Beard's own words. He begins by saying:

> The scientific man always stands by his conclusions. In the interests of scientific truth also I feel it to be my duty to support the statements made in your pages of my friend, Dr. William Balnbridge. For nearly twenty five years now I have been a scientific investigator. My published writings are numerous, and they are known to scientific men all over the world. Whenever I have made a scientific conclusion I have published . . .
>
> There is no scientific man, living or dead, who can accuse or could have accused me of annexing any find of his.

On the other hand, Dr. Beard himself is the victim of such practices:

> Of most of the finds I have made and published it can be said, either that some other person endeavoured to annex the find, or that, even though quite true, it had been declared false by some observer or other. In the case of my cancer results both of these things happened.

He takes the opportunity of withdrawing as incorrect two statements made in a paper of his which was published in the BRITISH MEDICAL JOURNAL of January 20th, 1906:

> The one is, that in my work a certain "prescription" of trypsin was employed, but in fact there never was any such

prescription. The other is that Dr. J. A. Shaw-Mackenzie and I independently reached a certain conclusion as to the import of trypsin in the treatment of cancer. He did not do so, in fact; even now he writes that he has "never made any claim in a curative sense for the trypsin treatment of cancer." There was and is no scientific reason why he should do so. *Trypsin will not cure cancer!* Indeed, were the injection used by him as strong in trypsin as another one, sold in London and New York, and employed by Dr. Bainbridge, it would infallibly kill a cancer patient in a very few weeks. This is due to the fact that it contains hardly an appreciable amount of amylopsin. To my knowledge recently these injections have been tested minutely again by a scientific man and consulting physician of high standing. As I also know from experience of them he has found that, for example, the injection used by the author of the "chemico-biological theory of cancer" only does the work on milk in one hour which the injection employed by Dr. Bainbridge performs every time it is tested in five minutes. I agree with the statement, and confirm it, that the treatment used by your correspondent is *not* curative. No one in his senses, who had examined its details and the preparations, would ever dream of thinking it to be so. His case of carcinoma of the breast failed for the same reason as Professor Morton's Case I., owing to the inadequate methods employed. I find that on December 11th last I wrote to a scientific friend, "I should not care to say for sure that Morton's cured cases will remain cured."

Dr. Beard goes on to maintain that "in the whole world there exists no scientific investigator who will support the thesis that trypsin has the property of 'breaking up glycogen' in tissues, living or dead. . . . It is the ferment, amylopsin, which converts glycogen into glucose, and the ferment which 'splits up' glucose thus formed is that of the yeast organism, not trypsin." He objects strongly to the terms "trypsin treatment" and "trypsin in cancer." "The proper scientific treatment," he says, "is the enzyme one, by means of the ferments trypsin and amylopsin." He adds that many people write as though this enzyme treatment had not cured a case of cancer.

A number of cases have been published, and there are more to follow. Concerning the Naples case, briefly described in the *Medical Record* for January 5th, 1907, I have heard again to-day (March 9th). The lady is still cured of inoperable cancer of the tongue, nearly nine months after all treatment ceased. The chief physician, Cavaliere Guarracino, with his colleague, Professor Manzo—both of them men whose names and positions in Naples are sufficient guarantees of their good faith and scientific skill—sends me the message, that he "will not hear of Italian publication, stating that if you who have made such a valuable and matchless discovery have been exposed to so many attacks, he does not wish to incur the same by Italian publication." Comment is needless! My friend, Dr. W. Seaman Bainbridge, Surgeon to the New York Skin and Cancer Hospital, is too scientific a man to attempt ever to employ the unscientific treatment advocated by the author of the absurd "chemico-biological theory of cancer." This treatment was condemned by the Middlesex Hospital, the Cancer Hospital, the Leeds Infirmary, etc. The injections Dr. Bainbridge employs, which are prepared by a scientific chemist, Dr. B. T. Fairchild, will act upon glycogen. The treatment laid down for is use by a scientific investigator *will cure* cancer, if it be vigorously used, if as far as possible surgical interference be avoided, and if the case be not already quite hopeless. In the interests of numerous physicians and surgeons, some of them men of very high standing, my lips are sealed regarding cases under treatment with these same and certain other injections in this country.

Dr. Beard concludes:

Finally, I should like to warn those persons, researchers and otherwise, who attack anonymously myself and this enzyme treatment, that they little know or dream what they are doing. Once again I am well ahead of my published researches. When further finds, which carry the work far beyond anything I have published, are announced every true scientific man in the world will recognize the truth at once. For there is no possibility of my scientific conclusions as to the nature of the natural phenomenon, cancer, and as to its scientific treatment being other than scientifically sound and correct. To render these conclusions wrong would require a new evolution of the visible universe!

We have no wish to intervene in a controversy which is degenerating into a personal wrangle. There is nothing so wearisome as disputes about priority. They make the impartial reader cry "A plague o' both your houses." It is disappointing when one asks for a trustworthy report of a cure to get nothing in reply but the mutual curses of rival investigators. May we hint to the disputants that what the medical profession is mainly interested in is not who made the discovery, but whether any discovery of value has been made? When that point has been settled, it will be time to apportion the praise.

OBITUARY.

THE HON. ALAN HERBERT, M.D.,

FORMERLY PHYSICIAN TO HERTFORD HOSPITAL, PARIS.

WE regret to have to record the death of the Hon. Alan Herbert, M.D., who was during many years the ready helper and cordial host of English medical pilgrims to Paris. He had been in failing health for some time, and some weeks before his death suffered from hemiplegia and aphasia; he at first improved, and recovered the power of speech, but gradually sank and died on March 8th.

Alan Percy Harty Molyneux Herbert was born in 1836, the son of the third Earl of Carnarvon; he was the brother of the fourth earl, who was Foreign Minister, and of Mr. Auberon Herbert, the well-known writer and politician, who died last autumn. From Harrow he went to Christ Church, Oxford, and soon after graduating M.A. entered as a medical student in the Paris Faculty. In 1865 he won, after competition, the position of interne of the Paris hospital. At the expiration of his term of office he took the degree of M.D.Paris, and settled there in practice.

Not very long afterwards the Franco German war broke out, and during the siege Dr. Herbert took an active part in ambulance work and in the relief of the British poor, the distribution of the gifts of the Lord Mayor of London's Committee being under his direction. He remained in Paris throughout the siege, and in 1872 he was created a Knight of the Legion of Honour in recognition of his services not only to his fellow countrymen, but also the French wounded. In 1871 he was appointed Physician to the Hertford Hospital, founded by Sir Richard Wallace, with whom he had been closely associated during the war. He was an original member of the Committee of Management, and remained Physician to the hospital until a few years ago. In many other directions he gave time and skill and money for the relief of distress, and his consistent benevolence was recently recognized by his elevation to the rank of Officer of the Legion of Honour. He was a man of singular personal charm, and not many have passed through life making more friends and fewer enemies.

EDGAR LEONARD FARNCOMBE, M.A.,

M.B., B.CH.OXON.

WE regret to announce the death of Edgar Leonard Farncombe, at the early age of 31; it took place from pneumonia, after five days' illness, on March 6th at his residence at Chudleigh in South Devon. He was educated at Malvern, and studied for the medical profession at St. John's College, Oxford and at St. Bartholomew's Hospital. He took the degree of B.A. with honours in physiology in the Final Honour School of Natural Science, and became M.A. in 1905, and passed the examinations for the M.B., B.Ch. in the same year. He became M.R.C.S., L.R.C.P.Lond. in 1902. At St. Bartholomew's Hospital Dr. Farncombe held the posts of Junior and Senior House-Surgeon, Resident External Midwifery Assistant, and Clinical Assistant in the Throat Department; he was also Resident Clinical Assistant at St. Luke's Hospital. He was the youngest son of Richard Farncombe, M.R.C.S., L.S.A., of Balsall Heath, near Birmingham. In January, 1906, he married the eldest daughter of Mr. J. B. Manly, of Birmingham, and settled in practice in Chudleigh in South Devon. Dr. Farncombe was very popular and highly esteemed not only for his professional attainments, but also for his kindly and sympathetic nature, and his sudden and early death has been a great shock to his many friends.

DEPUTY SURGEON-GENERAL JONAS KING CARR, M.D., died at Cheltenham on March 4th, in the 87th year of his age. He entered the Army Medical Service as Assistant Surgeon, June 24th, 1846; became Surgeon, May 11th, 1855; Surgeon-Major, July 24th, 1866; and Honorary Deputy Surgeon-General on retirement, September 1st, 1875.

BRIGADE-SURGEON HUGH MACKAY MACBETH, R.A.M.C. (retired) died at Lausanne, Switzerland, on February 12th, at the age of 73. He joined the Army Medical Service as Assistant-Surgeon, June 22nd, 1858; became Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1873; and Brigade-Surgeon, August 6th, 1884. He retired from the service, February 6th, 1889.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE REGISTRATION OF PLUMBERS.

The praiseworthy efforts which the Worshipful Company of Plumbers have been making for many years past to secure the efficiency of workmen in the plumbing trade deserve to be more widely known. The Company has established a register, upon which there are already enrolled about 14,000 plumbers. About two-thirds of this number have been able to produce the necessary evidence of experience. The remainder have proved their qualification by examination in technical knowledge and workmanship, and those registered in future will in every case be required to do so. The good results to be expected from this registration are naturally very much weakened owing to its being purely voluntary in character, and although there are obvious difficulties connected with the enforcement of any scheme of compulsory registration, there are several directions in which the existing voluntary scheme might be rendered more efficient than at present. Recognizing this, the Company is endeavouring to secure the necessary legislation to enable a statutory body to deal with cases of complaints against registered plumbers, and also to deal with cases of persons falsely describing themselves as registered.

It is of interest to recall that as long ago as 1883, when the British Medical Association met in Liverpool, the question of the regulation and registration of plumbers was discussed in the Public Medicine Section which was presided over by Mr. F. Pridgin Teale. The suggestions then made were that the names and addresses of all plumbers should be registered by the local authority, and no plumber should be able to carry on his trade until he had been so registered, and had received a licence from the local authority. That before the licence was granted to him the plumber should attend personally at the office of the local authority for examination as to his qualification as a plumber. That the licence should be renewed from year to year, and its continuance depend upon the good behaviour and the return of work done by the person licensed. Finally, that the names of all licensed plumbers should be publicly advertised once a year by the local authority. The movement was one in which the late Mr. Ernest Hart took a great interest.

SMALL HOLDINGS.

The Board of Agriculture has issued a circular to county councils in Great Britain calling attention to that part of the report of the Departmental Committee on Small Holdings which points out that it is a misapprehension to suppose that the small holdings committee of a county council is not required to take action until it receives a petition alleging that there is a demand for small holdings in a particular division of the county; it is on the contrary, the duty of the committee to consider whether the circumstances of the county justify the council in putting into operation Part I of the Small Holdings Act, 1892, and the committee should on its own initiative make inquiries enabling it to report to the council. A further misapprehension is pointed out with regard to the nature of the petitions, such petitions may be general, and need not refer to specific lands. The circular also asks for information for another return to supplement that made in 1905 showing the extent to which the Act has been put into operation.

OTHER PEOPLE'S SEWAGE.

Assembler writes that a town of 6,000 inhabitants puts its sewage on to a field of about seven acres close to a village two miles away. In certain conditions of the atmosphere, especially at night, the smell is very unpleasant although the Corporation deny it. We are asked to advise as to what steps can be taken.

*** Assuming that the village is not within the area of the town, the facts should be put before the sanitary authority having jurisdiction over the village. Failing redress in this way, complaint should be made by one or more of the villagers addressed to the Local Government Board. We assume that the local medical officer of health has been made aware of the conditions described.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Radcliffe Prize in Medical Science.—The Vice-Chancellor has received the following communication:

The Master and Fellows of the College of the Great Hall of the Holy Ghost commonly called University College in the University of Oxford after consultation with the Board of the Faculty of Medicine in accordance with the Radcliffe Trust Deed have resolved to establish and award a prize for the furtherance of medical science in the University, to be known as "The Radcliffe Prize."

1. The prize shall be entitled "The Radcliffe Prize," and shall be of the value of £50. It shall be awarded every second year (alternately with the Rolleston Prize), provided a sufficiently deserving memoir be submitted for adjudication, by the Master and Fellows of University College at their stated general meeting on the twentieth day of March, for research in any branch of Medical Science, comprised under the following heads: Human Anatomy, Physiology, Pharmacology, Pathology, Medicine, Surgery, Obstetrics, Gynaecology, Forensic Medicine, Hygiene.

2. The prize shall be open to all graduates of the University who shall have proceeded, or shall be proceeding, to a medical degree in the University. Candidates shall not have exceeded twelve years from the date of passing the last examination for the degree of Bachelor of Arts, and shall not, at the date of application, be Fellows on the Foundation of Dr. John Radcliffe.

3. Candidates shall send in their memoirs to the Secretary to the Boards of Faculties on or before the first day of December in the year preceding the date of the award. As soon thereafter as conveniently possible the Board of the Faculty of Medicine shall appoint a judge to act in conjunction with the Regius Professor of Medicine (or a deputy appointed by him), and with a judge appointed by University College. The said judges may, if necessary, call in an assessor, or two assessors, to assist them in their adjudication, and shall report to the Master of University College, and to the Board of the Faculty of Medicine, on or before the first day of March next ensuing, on the respective merits of the memoirs submitted to them.

4. No memoir for which any University Prize has already been awarded shall be admitted to competition for the Radcliffe Prize; and the prize shall not be awarded more than once to the same candidate.

5. The Board of the Faculty of Medicine shall cause to be published in the usual manner due notice (1) of the date for sending in the competing memoirs, and (2) of the conditions of the award; and the Board shall have power on any such occasion to announce that the prize will on that occasion be awarded for research in some particular branch, or branches, of medical science, as above enumerated, provided that such preference be not given to the same subject more than once in any three consecutive competitions.

6 (*temporary*). The above regulations notwithstanding, the first award shall, if possible, be made at the stated general meeting of the Master and Fellows of University College on the twenty-eighth day of October next ensuing, and the competing memoirs shall be sent in to the Secretary to the Boards of Faculties on or before the first of June, 1907.

(Signed) Reginald W. Macan,
February 27th, 1907. Master.

UNIVERSITY OF CAMBRIDGE.

Degrees.

The following degrees were conferred on March 9th:

M.B.—V. K. Willis, Queens'.

M.B. & B.C.—J. F. Gaskell, Gonv. and Cai.; J. G. Back, Trin. H.

UNIVERSITY OF DURHAM.

A convocation, to which members of Convocation are invited, will be held in the Castle Hall of the University on March 20th, at 2.30 p.m., for the purpose of discussing the draft Act for the reconstitution of the University of Durham, copies of which can be obtained by any graduate on application to the Registrar, the University, Durham, or to the Secretary, Armstrong College, Newcastle-on-Tyne.

SOCIETY OF APOTHECARIES.

Dr. J. Cockburn of Scunthorpe, near Doncaster, has been admitted to the freedom of the society at a court of the livery.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

SUMMONS TO A PATIENT DEAD ON ARRIVAL.

Q. (M.D.) In accordance with equity and with professional custom to charge a fee for responding to a call to visit a person who on arrival is found to be dead.

A DISCLAIMER.

Mr. Eustace Miles, M.R.C.S. (London, W.), writes: My attention has been drawn to a paragraph in the *People* of last Sunday, March 10th, in which my name has been mentioned. I need scarcely add that this has been done entirely without my knowledge and much to my regret.

HOSPITAL AND DISPENSARY MANAGEMENT.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, LONDON.

The festival dinner in aid of the National Hospital for the relief and cure of the paralysed and epileptic was held on March 11th at the Whitehall Rooms of the Hôtel Métropole, London, with Sir Edgar Speyer in the chair, who, in proposing the toast of "Success to the Hospital," said that the institution dealt with a class of disease which was from every point of view, except, perhaps, the scientific, unpopular. Diseases of the brain and the spinal cord were of all diseases most difficult to deal with, most troublesome to relatives, and often not even interesting to an amateur nurse. Present-day life, with its keen competition and hurry and bustle, imposed an abnormal strain on the nervous system, and resulted in an annual increase of diseases of the nerves and brain. The National Hospital did not and could not pretend to deal with chronic cases, but it could and did deal with cases in which, not many years ago, there would not have been any hope of cure. Great progress had been made, and chiefly through the work of the National Hospital, in the knowledge and cure of nervous diseases, and it was on behalf of both the investigation and the cure of those diseases that he appealed to the public. By means of the Nervous Diseases Research Fund, cure and prevention proceeded hand in hand in the National Hospital, and its staff was renowned throughout the world. The hospital further supplied an opportunity for doctors of all nations to study the nature, causes and treatment of nervous diseases under the guidance of the staff. Owing to the fact that the receipts from legacies in 1906 were much below the average, the hospital had to borrow £4,000 to make up the shortage between income and expenditure. It was urgently necessary to repay that sum and thus enable operations to continue unhampered by debt. The management must be content for the present to maintain the work at its present level, although the provision now made for patients was sorely inadequate.

Mr. Frederick Macmillan, in replying, emphasized the importance of the hospital as a means of alleviating the sufferings of the sick and as a school for doctors to study nervous diseases.

Sir Victor Horsley then proposed "Success to the Nervous Disease Research Fund." The object of the fund was to promote and carry on research into the origin and cure of diseases of the nervous system. The aim of the work was to discover the site of the morbid processes which formed the essential features of the various diseases, and to correlate them with the symptoms they produced, so that the knowledge thus acquired might be of service in the treatment of similar cases. That was the chief method by which intimate knowledge of many forms of diseases had been attained, and by a gradual accumulation of such facts it was hoped to perfect the power of diagnosis, and to open up new fields of treatment. In the report of Dr. G. M. Holmes, the director of the fund for 1906, it was stated that "it has been demonstrated that the disease chorea is due to the infection of the brain by bacteria." Sir Victor Horsley said that the Board of the National Hospital had done more than merely furnishing a clinical laboratory, for they had founded the Nervous Diseases Research Fund, which would have an influence in all parts of the world, and was a matter of more than national importance.

The toast was acknowledged by Mr. J. Danvers Power.

Sir John Paget submitted the toast of "The Medical and Surgical Staff," which was replied to by Sir Wm. Gowers.

Sir C. Kinloch Cooke then proposed the toast of "The Ladies," and he was followed by Sir Felix Semon, who was entrusted with the toast of "The Chairman."

In the course of the evening the Secretary of the hospital, Mr. G. H. Hamilton, announced subscriptions amounting to £2,500.

THE ROYAL PORTSMOUTH HOSPITAL.

Last year is regarded in the fifty-eighth annual report of the Royal Portsmouth, Portsea, and Gosport Hospital, as having been one of exceptional progress. The daily average number of beds occupied rose from 115.6 to 122.7, and the average cost of each bed was reduced from £57 10s. 10d. to £50 15s. 1d., and the year ended with a deficit of only £89. In addition, corridors connecting the new ward blocks have been completed, the museum presented by Mr. Rundle equipped and taken into use, and the new operating theatre got so far ready that it was expected to be available early in the new year. During the year Dr. Lloyd Owen, one of the honorary surgeons, tendered his resignation after thirty-five years' service, and was appointed consulting surgeon; Dr. Davis Taylor was appointed assistant physician.

THE OXFORD EYE HOSPITAL.

The note of the annual report of the Oxford Eye Hospital for 1906 is one of content. The structural alterations effected have enabled the work to be performed much more satisfactorily than before. The total number of attendances has increased by 1,200. There have been more operations but fewer excisions, for the people are learning to seek advice early instead of late. The annual post-graduate course was well attended, many who had profited by it in previous years presenting themselves again.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

QUERIES.

Small Hospitals.

We receive from time to time inquiries with regard to the best method of starting and the probable cost of small hospitals, both cottage and those rather larger. We shall be greatly obliged to any correspondent having experience who will send us notes for publication for the information of members. One correspondent recently offered such information, but his address has been accidentally mislaid.

ANSWERS.

In Travail.—One pound a week would be a reasonable amount to charge for an indoor assistant's board and lodging in estimating expenses in connexion with the income tax.

N. N. P.—The patient is probably suffering from chronic bronchitis with dilatation of the bronchi, but it would not be justifiable to advise treatment without a clinical examination. He should consult a physician.

Izal.—Poor imbecile children are received for training at Rock Hall House, Combe Down, Bath (Clerk, Mr. E. L. Fullar, LL.B., Bath); Midland Counties Asylum, Knowle, near Birmingham; Western Counties Idiot Asylum, Starcross, Devon. Terms of admission may be obtained on application to the respective superintendents.

Chronic Sneezing.

Dr. W. J. Meharry (Belfast) writes, in response to "South-West": Let the patient place a finger on the space between the upper extremity of the nose and inner extremities of the eyebrows, maintaining firm pressure for two minutes. The action should not be begun until after about the third sneeze. I cannot promise any benefit to the watery discharge, but certainly the approaching paroxysm will be arrested. The reason probably is that the pressure is exerted on a nerve which controls the reflex action in question. I should be pleased to know the result in a case so chronic.

Garden Friends and Foes.

Sir James Sawyer (Birmingham) writes: "T. S. D." would do well to apply to Mr. W. E. Collinge, who is the head of the Department of Economic Biology of the University of Birmingham, 55, Newhall Street. This Department is doing excellent work as to the "pests" of horticulture and agriculture from the points of view of scientific causes and practicable cures, and will send, free of charge, publications issued by the Department as to most crops, fruits, flowers, poultry, and live stock. Many members of our profession are finding recreation and some income in their gardens and fields, and such will warmly welcome the help this University gives without money, to all who will apply for it. Any of us who enjoy this work should get "in touch" with Mr. Collinge. His Department provides a free organization for consultative and experimental research in connexion with the economics of animal and plant life.

Periodic Bronchitis.

P. M. writes, in reply to "Coryza's" inquiry published on March 2nd, p. 539: Those accustomed to that particular point of view will recognize, in the case of periodic bronchitis, a clear case of habitual overfeeding. Reduction of solid food to 6 oz. a day, reckoning milk as 15 per cent. solid, can scarcely fail to cure in time, and will soon improve the patient.

Dr. Francis Hare (Upper Norwood) writes in reply to "Coryza": In my experience, periodic bronchitis is in most cases a juvenile form of periodic asthma, just as periodic or recurrent gastric catarrh is a juvenile form of periodic sick-headache or migraine. Both the bronchial and gastric paroxysms may be in childhood associated with pyrexia, which tends to disappear with increasing years. Commonly both affections depend upon hyperpyraemia, that is, a gradual accumulation of carbonaceous material in the blood, occurring during the interval between the paroxysms. Such accumulation is, of course, at its maximum at the commencement of the paroxysm, of which it is an essential factor; it is at its minimum at the end of the paroxysm, which indeed is the dispersing agent. The treatment consists in preventing the accumulation. (1) The carbonaceous income may be reduced by cutting down the purely carbonaceous foodstuffs; sugar should be interdicted absolutely, and starch foods reduced to the minimum compatible with due nutrition; proteid foods such as fish, chicken, eggs, and milk should be somewhat increased. (2) The carbonaceous expenditure may be increased by regular physical exercise in the open air; such exercise should become more severe as the time for the expected paroxysm approaches; it should also be severe in direct proportion to the amount of the purely carbonaceous income. Practically these two methods should be combined; they will be found extremely successfully in children who are fat, or inclined to be fat.

But in some cases of periodic bronchitis the patient cannot be kept free from the recurring attacks except by a reduction of the carbonaceous intake, which is so severe as to interfere with proper nutrition. In such I would suggest superficial cauterization of the septum nasi after the manner introduced by Dr. Alexander Francis and described in his work, *Asthma in Relation to the Nose*.

MOTOR CARS FOR PRACTITIONERS.

W. H. M. writes: My attention has just been drawn to "X. M.'s" inquiry on the above subject in your issue for February 2nd, and, as I have just worked out the problem for myself during the past six months, I can, I think, give him up-to-date information on the point. He is right in saying he is invariably advised to get an 8-h.p. engine. I am afraid this must be so if he is to carry a hood, also probably a wind-screen, and spares and extras in case of a breakdown. The question of price then comes in. The 8-h.p. Rover suggested by "B. H. S." would meet "X. M.'s" requirements so far as the work was concerned. It could be fitted with four seats if so desired, and so would cost from £200 to £225. It is an all-British car. Of later date is the little 2-cylinder 9-h.p. Riley car, with change-speed gears always in mesh. It is a two-seater only, but probably would bear a detachable single seat at the back if required. There is a chain-drive introduced in a clever way, and the car is fast on the level and a very good hill-climber. It is (or was) priced at £168, and, like the Rover, is an all-British car. There is a great run on it at present, and its price will soon go up, if it has not already done so. The last car I would mention here is the Sizaire. The Sizaire is only a two-seater, but is supplied in two models—A and B, and the latter might carry a back seat if required; but the car is pre-eminently a two-seater. This little car has so far finished first in every competition (hill-climbing or level racing alike, some sixteen in all) it has started in, often against much larger cars; and though it will touch forty miles per hour on the level, its speciality may be said to be hill-climbing. It is a single-cylinder car, with thermo-syphon cooling, cardan-drive, and an automatic sparking adjustment, which requires no attention from the driver, but advances or retards the sparking as the speed of the car alters. The control arrangements are extremely simple: one lever on the steering wheel slowing down the car to hardly moving or accelerating it to great speed, while there is only one pedal to think about, which first disengages the clutch, and then on further pressure, if required, puts on both back brakes. Having a frame and body narrowing off forward, this car has a very wide "lock" to its front wheels, a point of interest to doctors who often require to turn in narrow places. The car has been introduced by Messrs. Jarrott and Letts, who sell it at £174 to £178 according to pattern of body. It is not, of course, possible to go into all details here, but if by any chance "X. M." is still "seeking" and would care to communicate with me, I might be of some use to him.

DR. J. L. LOCK (Uxbridge) writes: I have now used a motor car for three years, so my experiences may be of value to others. I started with a 6½-h.p. Clyde two-seated car with front glass and hood; this lasted me two years, and was moderately satisfactory. I have now a 10-h.p. two-cylinder Vulcan four-seated car, with which I have run 5,000 miles in seven months. This has proved most reliable in every way; it is fitted with front glass and Cape-cart hood, and I can easily average twenty miles an hour on the heaviest roads. It is an excellent hill-climber, as I tested it well on my holiday last autumn in the Peak district of Derbyshire and over the North Yorkshire moors round Whitby. I have not yet come across the hill it will not climb, fully loaded. I was especially pleased with the way I could get about at the beginning of the year through the snow. I have tried many sets of tyres, and on the whole I consider Dunlop's, with a *removable* non-skid band on the hind wheels (Durandel or Grooved the best solution of the question. I have also been led to try Benzol (spirit of specific gravity 760) in view of the continued rise in the price of petrol, and find that though there is occasionally some slight difficulty in starting it at first in the morning from the cold, yet I can get a slightly better mileage to the gallon, as I have adjusted my auxiliary air inlet to give more air, and get quite as much power, so that there is a two-fold economy, as the price is 1/4 cheaper per gallon. I have so arranged my hood that it comes just over the top of the front glass, and buttons on to it, so there is no gap between the two as one so often sees. Finally, I could strongly recommend all medical motorists to join the Motor Union. The advantages are very many, including a very satisfactory insurance scheme.

LOCAL ANÆSTHESIA FOR EXTRACTION OF TEETH.

DR. THOMAS D. LUKE (Edinburgh) desires to enter a protest against Dr. Butcher's suggestion that a 10 per cent. solution of cocaine should be used to induce local anæsthesia for dental extraction. 20 minims of such a solution means 2 gr. of cocaine, and there must be very few people indeed who can stand such a dose *injected into the gum* without showing signs of collapse and cardiac failure. Possibly Hindoos are more tolerant of cocaine than Western nations, as they undoubtedly appear to be of chloroform; but he can scarcely think so. It may be laid down as a general principle that it is not only unnecessary but dangerous to use more than ½ gr. of cocaine at a sitting for tooth extraction: and the very best results are obtained with a 1 per cent. solution, about 15 to 20 minims being used. A hypodermic syringe is practically useless for the purpose, as sufficient pressure cannot be got up, but the Alvatunder Company and Messrs. Claudius Ash and Son both make a most excellent and inexpensive form of syringe for the purpose.

LETTERS, NOTES, ETC.

ROYAL MEDICAL BENEVOLENT FUND.

MR. EDWARD EAST will be glad to receive clothing (men's, women's, or children's) for distribution to distressed members of the profession or their families, in connexion with the British Medical Benevolent Fund. Mr. Edward East's address has been changed to 24, Randolph Crescent, Maida Hill W.

A NEW MEDICAL SAINT.

DR. ARCHIBALD JUBB (Glasgow) writes: In answer to your query regarding the new saint, José de Rizal, canonized lately at Manila, I regret that my memory will not yield more than the following brief account. Rizal was a native of Luzon, and early in life showed the ability which was afterwards to lead him in dangerous ways. He joined the Filipino patriotic party, and thus became a marked man in the eyes of the Spanish Government, which, with the suicidal policy of a dying nation, has oppressed genius with cruelty and liberty with bloodshed. He went to Paris to study medicine, and during his residence there attracted many friends by his charming personality; he also wrote two or three novels which had a fairly wide circulation—one, at least, was translated into English. Returning to the Philippines he again entered the revolutionary ranks, and, after many adventures, was finally captured in 1892 and condemned to death. He was about 36 years of age. With two companions he was shot on the public Promenade of Manila, in the presence of the fashionable crowd of the town. His young widow took his place in the revolution with equal bravery, and helped to bring about the Spanish downfall which was completed by Dewey's guns. I have seen a photograph of Rizal's execution in a book which I saw when in the East, but I cannot remember the name of the author.

DR. WM. HARTIGAN (London, E.C.) writes with reference to a paragraph which appeared under this heading in the BRITISH MEDICAL JOURNAL of March 3rd: Dr. Rizal, a Filipino, was president of the revolutionary junta in Manila during "the Nineties." When the Spanish Government "made it too hot" for him there he came over to Hong Kong ostensibly to practise medicine, really to have a convenient *locus standi* from whence to carry on, with others of his countrymen also resident, his plans for throwing off the Spanish yoke. He held the M.D. of one of the Spanish universities (I forget which) entitling him to practise medicine in Spain and her dependencies, and was consequently placed on the Hong Kong register by the Medical Board of which I was honorary secretary. When the Filipinos rose against Spain Rizal returned to his post and, being captured, was shot about 1897, being then about 35 years old. Rizal belonged to one of the up-country districts, the inhabitants of which are still giving trouble to the Americans. The people are Catholics and very similar in ideas to the Mexican Indians, and I have little doubt that the saintship alluded to is a species of new worship locally conferred. Canonization entails years of inquiry by a Committee of Cardinals sitting in Rome. Moreover, Rizal, though a true patriot, would have been the last man to expect such honours. His widow, daughter of an Englishman, was alive four years ago. There were no children.

A SURGICAL CHEMIST.

M. C. writes: I am surgeon for an ironworks. One of the workmen gets his finger crushed. I am attending him for a fortnight. He fails to come one morning to be dressed; on my asking him why, he said he had been at a chemist's buying some things. The chemist asked him what was wrong with his hand, and asked him to give him a trial, as he was sure he could do him more good than the doctor. The chemist dressed it twice without fee or any expectation of one. What should I do under such circumstances? The chemist has only recently opened here.

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A Report

ON

CLINICAL EXPERIENCES WITH SPINAL ANALGESIA IN 100 CASES,

AND SOME REFLECTIONS ON THE PROCEDURE.

By ARTHUR E. BARKER, F.R.C.S.,

PROFESSOR OF SURGERY AT UNIVERSITY COLLEGE HOSPITAL SCHOOL AND SURGEON TO THE HOSPITAL.

I. Clinical.

At the outset of this communication I wish to disclaim all intention of advocating the immediate or general introduction of spinal analgesia. This essay is only intended to be a report on a series of 100 cases in which the procedure was employed tentatively during the last year in the ordinary course of hospital study, with some reflections on its many aspects. I have approached the subject without any prepossessions and with a due sense of its seriousness, not feeling justified, with the abundant evidence before us as to its *possibilities*, in putting it aside as either necessarily dangerous or unpractical. For it must not be forgotten that more than eight years have elapsed since August 16th, 1898, when spinal analgesia was first produced by Bier with *cocaine*, and that a week later he requested his assistant to inject his own lumbar sac to observe its effects. On the same day he injected his assistant, and their careful observations[1] on themselves did much to put the use of cocaine in his way in its true position. But only during the last three years, since the discovery of stovaine by Fourneau, has the procedure come into anything like general use. This was due to the frank avowal by Bier, after a most cautious trial of the method, that so long as *cocaine* was the only drug available the disagreeable sequelae seen in some cases, notably his own, would prevent the general adoption of spinal analgesia. But with stovaine a new point was reached, and the results since obtained in thousands of cases in France and Germany, including 2,000 by Tuffier and 1,000 in Bier's clinic, alone suggest that an addition to our surgical resources of considerable value, *if properly employed*, may have been made.

In the history of the procedure we note the same slow painful evolution which is seen in all important surgical procedures. Antiseptics, asepsis, renal, brain, spinal and stomach surgery, all had vigorous opponents at the outset. And v. Esmarch[2] has left on record an account of the enthusiastic reception of ether and chloroform (1846-7), and the change of feeling towards them as their drawbacks and dangers were demonstrated. This may or may not be the history, too, of spinal analgesia, but to me it seems well to subject it to a cautious theoretical and practical study, and so help either to its rejection or perhaps limited acceptance. In its present stage of development it cannot simply be ignored. There seems but little doubt that it has rendered possible life-saving operations which would have been almost certainly fatal under general anaesthesia, and one of our cases seems to prove this. To inject a small quantity of a toxic agent into the lumbar sac is not necessarily more dangerous than to charge the whole circulation with a poison such as chloroform. There are, of course, the dangers of sepsis. But here, perhaps, more than in many now well-recognized procedures on the brain and spine, these can be controlled. The few drops of solution required as well as the simple needle and syringe can be easily sterilized by boiling. Some very few cases have, perhaps, been lost from an overdose of the drug, but the same may be said of morphine and other poisons in daily use now, which we do not hesitate to employ. The question for the future to decide will be whether these risks are not outweighed by certain advantages in the procedure.

That there are a large number of conscientious workers in this field no one keeping an eye on the current literature of Europe can fail to see, and references to a few of the most important papers on the subject out of a very large number which have appeared are given below. Bier and his pupils have led the way in a spirit of conscientious inquiry embracing the anatomical, physiological and clinical aspects of spinal analgesia, and to him belongs the idea of producing analgesia by injection into the lumbar sac. Corning's discovery of the effects of cocaine on the peripheral nerves, since utilized in *regional analgesia*, of which this is only an extension, and the experiences in tapping the spinal dura in meningitis, doubtless prepared the way, but the idea of applying an analgesic compound to the spinal nerve roots and cord is due to Bier and to him alone whatever view may be held as to its merits.

The 100 cases in the following analysis have been chosen partly for their variety and partly because of some condition present which would have admittedly made a general anaesthetic particularly undesirable. In some, chloroform or ether, in the opinion of those who saw them, would have been perilous in view of heart or lung troubles. Others expressed a great dread of chloroform, and, on the suggestion of an alternative, eagerly grasped at it. So far spinal analgesia has been shown to be only generally applicable to the lower half of the body, although some have used it as an exception for the thorax or even higher. Nevertheless, if it only be found safe and of value below the episternal notch and *local* or *regional analgesia* be employed for the upper part of the body, a good deal will be gained. In all cases where the patients have expressed a wish not to know anything about the operation and to go to sleep, a general anaesthesic has been had recourse to, as also in the case of obviously nervous and excitable people and children. The youngest person in the following list was aged 15, the oldest 71. In both the procedure was eminently successful, and followed by no particular trouble except pain at the seat of puncture, which in the old man lasted until the next day. The method has, however, been used on children by Deetz,[3] and with success. As to the limits in the other direction, it is hard to speak positively. In old people, with damaged lungs, liver, kidneys, or heart, all operations with any anaesthetic are, I believe, more or less dangerous. And in such cases it is difficult to apportion the risk between the anaesthetic and the shock of apprehension or of the operation itself, even though the last be slight. Syncope is very likely to follow even slight violence without operation in old, decrepit people. Perhaps it is well, at all events for the present, to avoid spinal analgesia in *very* old individuals; at least, this appears to be the opinion of many of those who have had the largest experience of the method, although some operations have been done with it on patients over 80. But it is just in such cases that *local* or *regional* analgesia has great advantages, and can be employed much more often than is generally supposed, and without risk in the wrong experience which is now large.

In all our 100 cases, stovaine was employed in order to gain some adequate idea of its behaviour from a fair number of observations. A thousand cases will not settle our They serve, however, at least as mat liminary study of the technique of the enable us to estimate the percentage of d failures in the hands of a beginner. For there be any doubt that at the outset most surgeons w less perfect success than when they have had a experience. The reason for this will appear in the c trast of the first 50 cases in our list with the second. I the first I failed to produce adequate analgesia in 11 cases, in the second group in *none*.

The stovaine employed came direct from the laboratory of M. Billon in Paris, whose courtesy to the writer in many ways, and especially in compounding the drug in different ways to suit some particular objects which I had in view, is cordially appreciated. A beginning was made with Chaput's solution (vide infra), which was used in 38 cases of the first 50. The remainder of this first group is made up of 2 cases in which the canal could not be reached, 1 in which Bier's solution was used, and 9 in which a glucose-stovaine solution made for me (vide infra) took the place of Chaput's, the supply of which had failed for the moment. All the second 50 were treated with my own glucose-stovaine solution, except one in which the canal could not be reached. It would be hardly safe to base any conclusions as to the value of the two solutions from the results in the two series just given, inasmuch as the first series was done without the same experience as the latter. It was hoped that some accurate deductions might be

possible from a comparison of the two series in regard to the frequency of "by-effects" in each. But, as the notes of the first series were not as fully kept on this point as in the second by one observer, such a comparison in figures would be misleading. The impression left, however, is that on the whole the "by-effects" were less marked and less frequent in the last 50 cases with the glucose-stovaine than in the first with the sodium chloride-stovaine (Chaput) solution. If this is correct, experience may have played a part again to some extent. These sequelae consisted in occasional headache and nausea or actual vomiting, usually slight, but in 2 cases in the first series and in 1 in the second sharp for a day or two. It seems clear that these sequelae are more common among highly-strung, sensitive people, and in a good many are independent of the drug. They usually yielded at once to a dose of phenacetin and caffein or to a dose of castor oil, as recommended by our French colleagues. In one way or other they were present in 20 cases in our second series, but mostly very slight.

The amount of stovaine first injected in either of the solutions was from 3 to 6 cg. (= centigrams), and was in most cases about 5 cg. In only 3 cases in the 100 was a supplementary injection to procure more adequate analgesia required, and in each an extra 2 cg. was injected about fifteen minutes after the first, with the desired effect (vide Mr. Morriston Davies's notes). It will be seen that they all belonged to the second 50 cases. Of the 11 cases in the first 50 in which analgesia was imperfect, 9 were abdominal operations out of 25 such, 1 was a fissure in ano, and 1 a knee case. None of the 20 abdominal in the second series failed.

The time elapsing from the moment of injection to analgesia varied from five to fifteen minutes, and was usually about eight minutes. The course of events was that recorded by other observers—first, formication in the feet; then abolition of the cremasteric and knee reflexes, followed by loss of sensation, usually first in the perineum, then in the legs, groins, and abdomen. Motion remained in a few cases throughout. The height on the abdomen to which the loss of sensation rose varied according to the measures adopted, and to some extent to the amount of drug injected. As a rule, with a full 5 cg. and a moderate elevation of the pelvis, the analgesia rose to the episternal notch before the end of the operation. In a very few cases it reached the transverse mammary line (for reasons vide Part II).

The duration of the analgesia has varied between twenty-three minutes and a couple of hours. The average appeared to be about fifty to seventy minutes; but the testing of a number of cases demanded much time which I could not give while operating on other cases, and was sometimes only noted on the patient's statement. The addition of adrenal derivatives in the form of adrenal chloride (1) or epirenin borate (2) was only made in 3 cases. Of these the first was a complete success, the analgesia lasting a full two hours; the two last were inadequate. But there appears to be little doubt that these additions do prolong the analgesia. So far I have not found them necessary, although they are employed almost as a routine by others. Having used adrenalin largely myself in *local* analgesia and with the greatest advantage, its effects on the skin and subcutaneous tissues are well known to me, and I have often been struck with the fact that some hours after injection these tissues look ecchymosed or coloured with blood pigments as though the effects of the adrenalin on the vessels had caused small haemorrhages, and there has been a sense of dull ache and fullness all over the area injected (for example, my own arm). Such punctiform haemorrhages have never to my knowledge led to any trouble in the skin, but one can imagine their giving trouble in the nerve centres or cord. And one cannot help speculating whether some of the undesirable sequelae recorded in a few cases of spinal analgesia may not have been due to the adrenal compounds. Even the suspension of the functions of the nerves for five hours, as in Goldmann's case,[1] seems of doubtful expediency, and may be the explanation of what he records of this case. For these reasons no adrenal principles have been used in this series except in the 3 cases mentioned. And the duration of the analgesia has been ample in all cases but one, which was a very long and complicated operation in which a little general anæsthetic had to be superadded at the end. In the case of varicose veins in which the sensation was abolished only for twenty-three minutes, less than 4 cg. had been injected, and the time was ample for the operation. In another case of arthrectomy of the knee, perfect analgesia lasted all through the extensive operation, but began to return after it was over in fifty minutes. The object has been steadily kept in view of always employing as little of the drug as possible to produce the effect desired, and here we learn from experience. But neither the height nor the duration of the analgesia has *in all* cases appeared to depend on the amount of the injection apparently reaching the dural sac, though as a general rule it seems to do so. This is in accord with the experience of others in longer series of cases. As a rule, with the patient lying on his right or left side, the analgesia rose higher and lasted longer on that side which was lowest in this series (for reason vide infra). All have been eventually turned on the back for operation. Several other points of interest are given in Mr. Morriston Davies's notes appended.

LIST OF CASES.	First Fifty.	Second Fifty.
Strangulated hernia, inguinal and femoral ...	4	0
Radical cure of hernia, inguinal, femoral, and ventral	10	7
Resection of gut for faecal fistula	1	0
Epiplopexy for cirrhosis of liver	0	1
General peritonitis (uraemia 1, perforation 1) ...	1	1
Acute appendicitis	2	5
Appendectomy *a froid*	5	3
Colotomy	2	2
Exploration of abdomen for cancer	0	1
Fistula and fissure in ano	6	3
Piles (Whitehead's operation)	1	7
Varicose veins of legs	2	6
Varicocele, hydrocele, elephantiasis scroti, ruptured perineum	4	6
Caries of pubis (1), of hip (1), knee (1)	3	0
Suppuration in knee (Flushing)	0	1
Breaking down adhesions in knee	0	1
Internal derangement of knee	2	0
Fracture of patella (wiring)	0	3
Necrosis of femur (1), sup. bursa patellae (2) ...	1	2
Amputation of thigh for gangrene; heart disease	1	0
Sarcoma of thigh (1), tuber ischii (1)	2	0
Resection of tarsus	1	0
Failed to reach dural sac with needle	2	1
	50	50

It will be seen from this list that the variety of cases has been considerable. In abdominal surgery, of which there were 45 cases out of 100, and about which there was at first some doubt as to the suitability of spinal analgesia, it has in the 20 falling to the last 50 cases proved most satisfactory as far as the lower half of the abdomen is concerned. Operations above the umbilicus I have not done as yet, and still feel some doubts as to the expediency of doing so, though abroad this is not an absolute rule. But as all this was the work of a comparative beginner I thought it better to advance slowly from step to step, noting everything that might help to a sound appreciation of the value or the reverse of the procedure. So far I have the impression that it will prove of value in proper cases and if carried out with every care.

Among the 100 cases there were 3 deaths, wholly unconnected with the method of anaesthesia employed.

The first, a man, aged 49, entered hospital in a desperate condition with suppression of urine and intense bronchitis. Respirations 40, pulse 152, temperature 104·6° F., and general peritonitis supposed to be from appendicitis. An incision was made over the appendix, which was healthy; but the abdomen was full from end to end with inflammatory fluid. No cause was found, and a gauze drain was inserted. The analgesia was good, with 4 cg., and passed off rapidly, but the peritonitis ran its course to death next day.

The second, a hugely obese patient, seen with Dr. Barnett of Hampstead, was also a case of general peritonitis from carcinoma of the hepatic flexure of colon. The lady, aged 61, was very feeble. She had put off any operation for some weeks after the tumour was found. High fever then set in, with increased distension. Colotomy was done, and on opening the abdomen the usual turbid fluid of peritonitis escaped in large quantities. The analgesia was most satisfactory, and she was much relieved by the operation; but the peritonitis ran its course to death.

The third was a case of very advanced cirrhosis of the liver and ascites in a man aged 50. Epiplopexy was done with 5 cg. The ascites passed off quickly, and he was well in the evening and passed ʒvj of urine. He then began to have much pain in the wound, and was given by the house-surgeon, at 9 p.m., gr. of morphine per rectum. He at once became profoundly sleepy, with contracted pupils and snoring.

When I arrived at the hospital next morning I was told this, and found the man snoring, with pin-point pupils and suppression of urine. When roused he smiled and said he was very comfortable, but immediately began to snore again. This condition lasted to the morning of the fourth day, when he had some uraemic twitching and died comatose, not having passed any urine since the evening of operation day. The necropsy (Dr. Thiele) showed *extreme* cirrhosis of the liver and engorged lungs; bladder empty.

All these operations, with the exception of seven or eight in private, were done at University College Hospital, and the procedure was studied by many strangers as well as our own class, and usually followed up by them in the wards later. I think these gentlemen realized how desirable it is to see the thing done before undertaking it themselves. There are many details as well as essentials to be attended to and errors to be corrected from time to time.

The private cases included 3 colotomies, 2 removals of varicose veins, 1 radical cure of inguinal hernia, and 1 an excision of a large prolapse of the rectum. All were more than pleased with the mode of analgesia employed.

From the patient's point of view this procedure has been quite satisfactory as far as they have expressed themselves. They have been prevented from seeing the operators or operation by a special sloping screen made for me for the purpose which fits on the operating table. It does not prevent those present from observing their expression, which is usually perfectly tranquil. The puncture of the back has not appeared to cause much distress, except in two or three cases, and in these they have made light of it later. But the best evidence on this point exists in the fact that where it has been necessary to operate twice on the same patient, as was the case in several instances, they have been given the choice of the same spinal analgesia or general anaesthesia, and all have unhesitatingly chosen the first, except one nervous woman, who preferred this second time to know nothing about the operation at all. On this question I confess my mind has been much relieved, as I had at first some misgivings as to how the patients would regard the procedure. When they have had the opportunity of contrasting their condition under chloroform anaesthesia in one operation with their experiences under spinal analgesia in another soon after, they have unhesitatingly said they preferred the latter.

The conditions produced by spinal analgesia from the operator's point of view were, as far as this series shows, remarkably good. In from five to ten minutes, during which the final preparation of the field of operation, of the hands, etc., were made; the patient, without any struggling, excitement, or coughing, was not only absolutely anaesthetized but also relaxed in all the parts supplied from below the segment reached to. In rectal operations—piles, for instance—the sphincter relaxes completely, and the piles present themselves without any dilatation with the fingers and without that straining and movement which is sometimes seen under general anaesthesia. The same was the case with abdominal operations.

The impression left upon my mind by the experience of this series is that there is undoubtedly a place for spinal analgesia in surgery, but only when those who would employ it have studied its theory and practice fully as far as they are known. It is not for casual use by the inexperienced.

NOTES BY MR. MORRISTON DAVIES.

[In these notes Mr. Davies refers to my own stovaine-glucose compound when he writes "Glucose A.E.B. (No. 1)" for shortness. The amount in centigrams refers to the stovaine alone.]

Cases in which a Second Injection was Necessary.

LVII (Ruptured Perineum).

1st Injection, 2nd Space.—Flow of cerebro-spinal fluid slow; 9 c.cm. withdrawn. Glucose A.E.B. (No. 1), 5 cg. injected. No result in 12 minutes.

2nd Injection, 2nd Space.—Flow of cerebro-spinal fluid faster; 2 c.cm. withdrawn. Glucose A.E.B. (No. 1), 2 cg. injected. Analgesia present in 5 minutes and extended up to iliac crests.

LXXV (Appendectomy *à froid*).

1st Injection.—1st puncture, 2nd space: Easy. Some cerebro-spinal fluid withdrawn but needle blocked. 2nd puncture, 2nd space: Failed to enter canal. 3rd puncture, 2nd space: Cerebro-spinal fluid escaped very slowly; 8 c.cm. withdrawn. Glucose A.E.B. (No. 1), 5 cg. injected. Loss of knee-jerks and motor power in legs. Analgesia up to 1 in. below anterior superior spines, after 11 minutes. No extension 7 minutes later.

2nd Injection, 3rd Space.—Cerebro-spinal fluid escaped rapidly; 4 c.cm. withdrawn. Glucose A.E.B. (No. 1), 2 cg. injected. Analgesia to within ½ in. of iliac crests.

CXVI (Subcutaneous Wiring of Patella).

1st Injection, 2nd Space.—Flow of cerebro-spinal fluid rapid; 10 c.cm. withdrawn. Glucose A.E.B. (No. 1), 5 cg. injected. No result in 12 minutes.

2nd Injection, 2nd Space.—1 c.cm. cerebro-spinal fluid withdrawn; 2 cg. glucose A.E.B. (No. 1) injected. Sense to pain markedly blunted; felt some pain all through operation but could stand it easily. 15 minutes: Apparent analgesia to iliac crests and anaesthesia to crutch. No paresis.

Cases in which Analgesia was Uniform, but of Unequal Heights on the Two Sides.

LXXIX.—Patient lying right side. 37 minutes after injection: Analgesia extending to umbilicus on right side, and iliac crest on left.

LXXXI.—Patient lying right side. 40 minutes after injection: Analgesia extending to tip of tenth rib on right side, and umbilicus on left. Anaesthesia to iliac crests on both sides.

Cases in which Analgesia was not Uniform.

LXXXIV.—Patient lying right side. 5 minutes after injection: Analgesia to anterior superior spines on both sides, but on the right side the margin of iliac bone, external to it, and for 2 in. on the abdomen internal to it, sensation was unaffected. 50 minutes: Analgesia to umbilicus both sides, except for area along inner side of right iliac crest, over crest itself, and on adjacent part of buttock.

XC.—Patient lying left. 6 minutes: Analgesia 1 in. above umbilicus on left side, and as high as anterior superior spine right: but four minutes later incision into scrotum (? squeezing right testicle) produced pain, nausea, and faintness. 20 minutes: Analgesia both sides up to xiphisternal notch, but pinching right testicle caused pain.

Cases in which Analgesia extended above Line of Incision, but some Pain felt during Operation.

LXIII. (Piles).—Slight colicky pains from introduction of spirit mop high up into the rectum. (5 cg. glucose A.E.B. (No. 1). Analgesia of perineum only.)

LXXVI. (Piles).—Slight colicky pains on and off throughout operation, increasing towards end. (4 cg. glucose A.E.B. (No. 1). Analgesia of perineum only.)

LXXII. (Appendectomy, acute).—Slight griping during manipulation of peritoneum. (6 cg. glucose A.E.B. (No. 1). Analgesia to umbilicus.)

LXXXI. (Appendectomy, acute).—Momentary griping on mopping peritoneal cavity above upper end of incision and scraping caecal abscess. (5 cg. glucose A.E.B. (No. 1). Analgesia tenth rib, right; umbilicus left.)

LXXXIV. (Femoral hernia through inguinal incision).—Slight smarting pain on retracting inner side of wound, and some griping on manipulating sac. (5 cg. glucose A.E.B. (No. 1). Analgesia to umbilicus, with exception of area on side along right inner side of iliac crest, over crest and spine, and adjacent part of buttock.)

Cases in which some Faintness occurred during Operation.

LVIII.—5 cg. glucose A.E.B. (No. 1).
LXII.—5.75 cg. glucose A.E B. (No. 1).
LXV.—5+ cg. glucose A.E.B. (No. 1).
LXXXIII.—5− cg. glucose A.E.B. (No. 1).

Maximum Duration of Analgesia.

LXXVII.—3 hours with 5 cg. glucose A.E.B. (No. 1).

Minimum Duration of Analgesia.

LXXI.—23 minutes with 4 cg. glucose A.E.B. (No. 1).

Maximum Dose.

LVII.—7 cg. glucose A.E.B. (No. 1). Duration 1¾ hours. Analgesia to iliac crests. (Patient's pelvis raised.)

LXXV.—7 cg. glucose A.E.B. (No. 1). Duration 1¼ hours. Analgesia to iliac crests. (Patient's pelvis raised.)

Minimum Dose.

LXX.—4 cg. glucose A.E.B. (No. 1). Duration 55 minutes. Analgesia 1 in. above umbilicus. (Patient's pelvis raised.)

LXXVI.—4 cg. glucose A.E.B. (No. 1). Duration 1¼ hours. Analgesia round anus. (Patient's pelvis not raised.)

Maximum Height of Analgesia.

LXV.—Third intercostal space (nipple line). 5 cg. glucose A.E B. (No. 1). (Patient's pelvis *raised*.)

LXXVII.—Iliac crests. 5 cg. glucose A.E.B. (No. 1). (Patient's pelvis *not* raised.)

Minimum Analgesia.

LXXVI.—Round anus. 4 cg. glucose A.E.B. (No. 1). (Patient's pelvis *not* raised.)

LXXV.—Iliac crests. 7 cg. glucose A.E.B. (No. 1). (Patient's pelvis *raised*.)

I have to acknowledge with pleasure the great help received from Messrs. P. Heath and H. Morriston Davies in observing the phenomena of sensation, etc., during the operations and afterwards, and in filling in the tables which I had prepared beforehand to include these and to secure uniformity of observation. Mr. Davies especially has spared no pains to make these tables complete in the last 50 cases, and from them to extract the data given in the text and compile the summaries subjoined. It would be impossible for an operator to observe the various phenomena of sensation and motion during the operation and after, while engaged on other cases, and one cannot entrust this duty to any but skilled observers. Some of the points to which he paid particular attention are here given in his own words.

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14 König: Ibid., July 5th, 1906.

II. PHYSICAL.

In speculating about the propriety and possibilities of producing analgesia by the introduction of special drugs into the lumbar dural sac and thus suspending the functions of the lower nerve roots and part of the cord we are at once confronted by several problems. The ease or difficulty of solving these is only fully realized when we come to have some practical experience of the procedure. We then learn that the results are sometimes "wayward," or "*launenhaft*" as Bier says, and that no drug yet employed for the purpose in question has so far given absolutely uniform results as to the height and the side affected by the analgesia and with a complete absence of those "by-effects" which led to the disuse of cocaine in this field. The waywardness which has been occasionally seen by all operators has manifested itself in various ways. First, it has been noted as a rare exception that even where lumbar injection has been accomplished to all appearance correctly no effect whatever has followed. Secondly, where analgesia has been more or less produced it has been found in a few of the earlier cases to affect a region other than that required for operation. For instance, the right leg was to be dealt with, and only the left was influenced by the drug, or perhaps a hernia had to be relieved and analgesia was only produced in the perineum. These results, though quite exceptions, have been disconcerting, and up to the present have not been fully explained, and as long as this is so they remain as a weak point in the procedure. Thirdly, we now know that in a large series of cases injected with the same amount of the same drug no by effects may be seen, and then two or three may be troubled with considerable sickness or headache, though the conditions have been apparently the same.

With these experiences before us, we have to set ourselves to solve the following problems:

1. How to explain and meet the difficulty that in a few cases no analgesia at all follows an apparently orthodox injection (vide Part III).

2. How to explain those occasional variations as to height, the side, and the duration of the analgesia which are met with by all.

3. How to avoid the by effects noticed as not infrequent, though rarely of much intensity.

Meeting with a few of these difficulties among the earlier cases in our list last year, I soon became convinced that when *no effect* at all followed on the injection it was due to the fact that the needle had only partially entered the dura, and that though the spinal fluid flowed out of the needle on puncture, the injection did not enter the sac at all, or only partially, and I devised a contrivance to meet the difficulty. This will be referred to below under "Technique." That the drug used in these cases had been overheated, or heated too long in sterilization, and so been rendered inert, appeared improbable, as the results with other samples from the same consignment were good. And that some patients are inherently "refractory" to stovaine seemed also improbable, though possible. It seemed to me purely due to fault in technique.

Again, a little experience at the outset as regards lack of uniformity of analgesia in some of the cases suggested imperfect penetration of the canal and consequent delivery of *some* of the injection external to the dura.* It also led to speculation as to whether the *physical* properties of all the fluid injections were the same, and, if not, whether the want of uniformity in results might not depend upon the difference in their behaviour within the canal.

Finally, it suggested itself that perhaps the by-effects might be as much due to the physical conditions produced within the canal by injection as to the specific action of the drugs themselves, for they have followed the injection of many different drugs.

It is clear that the compound used ought to fulfil several requirements besides the suspension of the sensory and motor functions of the nervous structures with which it comes in contact for a time long enough for operations of considerable duration to be performed. It ought to leave no local or general *permanent* ill-effect on the tissues of the body and little or no *transient* disturbances in them apart from its analgesic properties. The first of these requirements has been met by stovaine and a number of other drugs, but here we are only concerned with stovaine. This has been found both in *local*, *regional*, and *spinal* analgesia to suspend the functions of nerves for a variable time. With the addition of adrenal principles the duration of its specific effects has been much prolonged, but for several reasons this addition appears undesirable to me personally. With regard to the second requirement, stovaine alone has been, so far, found to produce no local or general ill-effects on the tissues when properly used, and thousands of patients who have undergone local and spinal analgesia with it are going about now years after showing no injurious effects of any kind (Tuffier). As to transient "by-effects," we have seen that these occur in a number of cases though of slight consequence. These after-effects have been variously explained. Headache and faintness have been put down in many cases to psychical disturbances, and from what we have seen probably with reason, where they occurred during or just after operation. But where they have been more persistent they have been explained as probably due to increased pressure within the intradural space caused by mild irritation, the result of perhaps the puncture itself or the stimulus of the injection. In some earlier cases in France, where the headache has resisted other treatment it has been relieved by subsequent lumbar puncture and removal of a few cubic centimetres of fluid. Such cases have all apparently done well ultimately. But in spite of the attention bestowed upon their causation these by-effects remain very obscure, the more so as they are *not* uniformly present, the great majority of cases showing no signs of them. This emphasizes the urgent need of scrutinizing the composition of the injected fluid in all its aspects.

That the specific influence of stovaine is limited almost exclusively to the locality into which it is injected in moderate doses seems highly probable from experience with it as a local and spinal anaesthetic. Its effects, if any, on the pulse is to reduce its frequency and increase its volume, and a patient after injection usually looks and feels warmer than before. A good deal has been written upon this point, but it is only necessary to say that other general effects of any great importance have not been observed where moderate doses have been given.

To prevent any local or general irritation the fluid injected must be aseptic, and this is easily secured, as stovaine solutions may be boiled at 115° C. for fifteen minutes without loss of potency. Too much or too prolonged heat renders it inert, which might explain an occasional failure unless it has been prepared by experts. But in addition to this, all fluids injected into the tissues of the body ought to possess the same osmotic tension as the blood serum. In other words, they should produce neither shrinking nor swelling of the blood or tissue cells by osmosis. This point is justly considered of prime importance, and especially where nerve structures are concerned. To secure isotonicity might appear an easy matter at first

* This is also suspected independently by Bosse in a paper since published (vide *Deut. med. Wochenschrift*, January 31st, 1907).

sight, but from my own observations is not so. Without going into the question more fully at present, it may be stated that a 5 per cent. solution of stovaine in distilled water freezes at about −0 58° C., almost the same point as that of blood serum (−0.56° C). If this were the only test applied it ought to be isosmotic with the blood. But if a drop of blood be added to a little 5 per cent. or 4 per cent. solution of stovaine under the microscope, in five minutes the red corpuscles swell and become pale, in ten minutes are almost invisible, and in twenty minutes are all gone. The same is seen if a drop of blood be added to 5 c.cm. of these solutions in a test tube. But here the changes are apparently slower. At the end of an hour a few swollen pale cells can still be seen, but in an hour and a half they are all invisible. In a really isotonic fluid such as normal saline (0.91 per cent. NaCl) or normal glucose solution (5 per cent. of glucose) the cells are seen in twenty-four or forty-eight hours unchanged. This haemolytic action of stovaine, which I have tested in every way I could think of, appears hitherto to have escaped notice. It has been supposed too readily that if its 5 per cent. solution had the same freezing point as the blood it would be isotonic with it. But as we have seen, the blood cells are destroyed by it. Even the solution prepared for Bier in the belief that it was isotonic (stovaine 4 per cent., NaCl 0.11 per cent., epirenin borate 0.01 per cent.) I find to be markedly haemolytic tested as above on the microscope slide and in a test tube. Successive samples taken from the latter show rapid blood-cell destruction until in one and a half hours none are to be seen. But further than this I have found that if to an isotonic solution of NaCl or glucose, in which blood cells are seen to be unaltered at the end of twenty-four hours, 5 per cent. of stovaine be now added the cells rapidly swell, grow pale and disappear, no trace of them being found in one and a half hours. No combination of NaCl or glucose with stovaine which I have made hitherto has prevented this haemolytic action of the drug. Furthermore, it may be added that I have added a 5 per cent. solution of stovaine with a freezing point of −0.58° C. to an equal part of cerebro-spinal fluid and found in this compound destruction of all blood cells in about one hour. Nothing is seen then under the microscope but débris and oily globules. This is as much as to say that a 5 per cent. solution of stovaine injected into the spinal canal would be haemolytic too.

Leaving this point of osmotic tension for the present, and admitting that we have no evidence to show that the small amount of the drug injected has produced any injurious effect as the result of its haemolytic action, there are other physical qualities which an injection compound may possess which also appear to have attracted little or no attention.

It appears beyond all question that there are only three ways in which an analgesic fluid injected in the second lumbar interspace can make its direct effects felt in the mid-dorsal region, or even higher, as is sometimes the case in this procedure. These are either (1) by slow diffusion; (2) by shifting of the whole column of the cerebro-spinal fluid in which it is suspended upwards; or (3) by gravitation, if the injected compound be distinctly heavier than the liquor spinalis. Lumbar analgesia, it must be remembered, is only an extension of the principle of *local* or *regional* analgesia, in which we bring the drug directly in contact with certain nerve tracts which we wish to rob temporarily of their functions. Within the spinal dura, where, as we shall see, we are precluded from injecting above the second lumbar interspace, while desiring to affect the roots or cord in many cases at least as high as the middle of the dorsal spine, we can only do so in one of the ways indicated above, modified, of course, more or less by their combination.

1. Diffusion *alone* of one fluid in another is a slow process, and, as we shall see, is unlikely to be the mode of spread of the injected fluid in this procedure.

2. Bier and his followers have aimed at shifting the injected compound upwards or downwards with the whole mass of the liquor spinalis by raising or depressing the pelvis. That the cerebro-spinal fluid does recede somewhat towards the head on elevation of the pelvis is undoubted, but it is hard to imagine its doing so to such an extent as to carry with it a cloud of fluid lighter than itself from the second lumbar to the fifth dorsal vertebra, some 8 or 10 in. I venture to think that with such a fluid as he has used, whose specific gravity is 1.0058 suspended in the liquor spinalis, whose specific gravity is 1.0070, what he has achieved by elevation of the pelvis has rather been a more rapid diffusion of the injected drug, due to the consequent oscillation of the spinal fluid, aided, perhaps, by vascular pulsation. But this rapid diffusion would, of course, dilute the injection, and perhaps carry it further than desirable.

3. There remains, then, the third possibility—namely, that an injected compound heavier than the liquor spinalis may be affected by gravity, and sink through the latter in a way quite different to the behaviour of a fluid of less specific gravity, such as that just referred to.

It is easy to observe the behaviour of one fluid injected slowly into another through a needle if the first be coloured with aniline blue. Provided that each be of the same temperature and specific gravity, the injected liquid forms at first a distinct blue cloud, which slowly diffuses itself through the whole mass into which it enters if the latter be in a state of rest. On the other hand, if the injected fluid be of the same temperature, but of much greater specific gravity, it sinks rapidly from the point of the needle in a definite stream to the bottom of the second fluid, and remains there as a distinct stratum without diffusion for a time proportionate to its density and viscidity.

Taking these points into consideration, it has for a long time past appeared to me that if we are to aim at localizing our spinal analgesia to any particular region of the cord we ought to employ the force of *gravity* acting upon an injected compound of greater density than that of the liquor spinalis. This would sink to the most dependent part of the canal open to it independent of any displacement of the cerebro-spinal fluid. Here it would remain more or less undiluted in contact with the structures around.

The densities of the only three compounds used in our series compared with that of the cerebro-spinal fluid are as follows at 15° to 17° C.:

Liquor spinalis (from 3 patients mixed fresh)	=	1.0070
Chaput's Compound:		
1. Stovaine 10%, NaCl 10%, distilled water 80%	=	1.0831
Writer's Compound:		
2. Stovaine 10%, glucose 5%, distilled water 85%	=	1.0300
Bier's Compound:		
3. Stovaine 4%, NaCl 0.11%, epirenin bor. 0.01%	=	1.0058

All these are, as we have seen, more or less haemolytic, tested by immersion in them of blood cells, the first much the most so (3 minutes), the two last about the same in this respect (1 to 1½ hours). The first, a very heavy fluid, in which the common salt is present at the point of saturation at ordinary temperatures, has long been used by Chaput[6] and Tuffier[7] with good results, but apparently for other reasons than its density. Their grounds for employing such a high percentage of common salt, as stated by the former, were that M. Billon, who prepared the compound for them, hoped thereby to prevent the splitting up of the stovaine by the alkalinity of the spinal fluid. That it does not do so is evident to any one who adds some of their compound to the cerebro-spinal fluid drawn off. It will then be seen that the latter becomes almost at once milky. If a little of the fluid in this state be examined under the microscope, it will be seen that this turbidity is due to the presence of small globules of an oily nature, which in the course of time run together into larger and larger globules.

I venture to suggest that the undoubted success which our French confrères and we and others have had with their compound probably lies in its high specific gravity (1.0831). Owing to this it sinks rapidly and almost undiluted through the lighter spinal fluid (1.0070) and comes to rest in an almost unbroken stratum at the lowest point it can reach (Figs. 1 and 3). It has, however, the defect that its high percentage of NaCl alone renders it much more hypertonic than the two other fluids, which, taken with the intrinsically haemolytic action of the added stovaine, ought to lead, at least theoretically, to some irritation of the structures with which it comes in contact. This is to some extent diminished no doubt by the French method of injection, in which the few drops of compound in the syringe are mixed before injection with the spinal fluid escaping from the needle by first drawing back the piston

before the syringe is emptied into the canal. This hypertonicity is strongly objected to by many, and has, in fact, been supposed, rightly or wrongly, by some to be the cause of the headache which sometimes followed the use of the compound and possibly also of the occasional sickness.

Taking these points into consideration, I asked M. Billon to prepare for me a compound in which the 10 per cent. sodium chloride was replaced by 5 per cent. of glucose, and this I have been using for about a year now. [In Mr. Davies's "Notes" it is indicated, for convenience and brevity, as glucose, A.E.B., (No. 1)] A solution of 5 per cent. pure glucose in distilled water freezes at about 0.56° C., and is *really* isotonic, producing no effect on the blood or tissue cells in twenty-four hours. Its specific gravity is 1.0178. It is rendered still heavier by the addition of the 10 per cent. of stovaine, and comes out then at 1.0300 at 19° C. But this addition renders it haemolytic, as we have seen, and lowers its freezing point. This, apparently, cannot be helped wherever stovaine is used. It is, however, no worse in this respect than Bier's solution (vide supra). But it is much heavier than the latter, which has only a specific gravity of 1.0058 at 17° C. The latter is, therefore, actually lighter than the spinal fluid, and can only be moved by the oscillation of the latter from elevation of the pelvis and by diffusion. In consequence of its greater weight the stovaine-glucose solution, on the contrary, may, like Chaput's, be made to flow in any direction within the canal, in obedience to the laws of gravity, and, being slightly viscid, remains for a considerable time undiffused, the drug exerting its full power at a given point. These points relating to the use which may be made of fluids heavier than the spinal liquor, acting through gravitation upon the various curves of the spine without these *extreme* measures of inversion of the body and oscillation of the cerebro-spinal fluid resorted to by many authorities abroad, seem to have been almost or altogether overlooked. Further, the possibility of more or less limiting diffusion, and consequent dilution, of the drug by employing, not only a heavier, but also a slightly viscid solution, and so making a smaller dose operative, does not appear to have been noticed so far as published matter goes.

Whether our stovaine-glucose solution will in its further use satisfy all the requirements we have supposed to be desirable remains to be seen in a larger number of cases. Glucose is said to be more stimulating to the tissues than sodium chloride, but on what grounds is not stated; I have not found it so in a large experience of subcutaneous injection with it. But theoretically our compound ought to be safe, and in our second 50 cases, in which it alone was employed, the results were remarkably uniform as to the height and side of the analgesia, and no general anaesthetic had to be employed in a single case, although 20 were abdominal operations. But if experience should show that glucose is undesirable, 5 per cent. stovaine in normal saline would still be heavy enough with a specific gravity of 1.0126. In every case it has been my aim to keep the amount of the drug as small as possible, and to carry the effect on the cord by position or slight elevation of the pelvis only as high as was considered absolutely necessary for the operation in hand. In one or two cases the margin was cut just a little too fine both as to the amount of the compound used and the extent and duration of the elevation of the pelvis. One regretted in these cases not having elevated a little more or a little longer so as to bring one more segment of the cord within the area of the analgesia. Instances of other forms of waywardness were not seen in this 50, and no blank was drawn. Early headaches were seen once or twice and some cases of nausea and vomiting; but neither seem to have reached the degree described by others. From what we have seen I am inclined to think that the frequency and extent of these sequelae are largely determined by individual susceptibility to the amino-alcohol employed (stovaine), just as there is a difference in the way two individuals may react to a glass of the same wine. One will soon have a

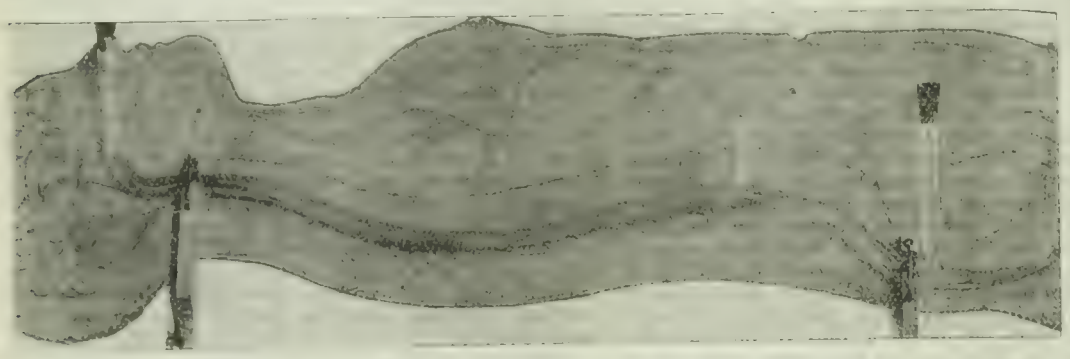


Fig. 1.—A photograph of a tracing from Braune's well-known plate of a frozen mesial section of the female cadaver lying level. Details omitted for the sake of clearness. Over the spinal canal, and following its curves accurately, is a glass tube filled with saline solution of the same specific gravity as that of the cerebro-spinal fluid = 1.0070. Through the middle vertical arm over the second lumbar inter-space the hollow needle has been introduced into the curved tube, and 1 c.cm. of Chaput's solution (specific gravity 1.0531) coloured with methyl violet has been slowly injected. This has run down rapidly into the dorsal curve, and at the end of two minutes is seen as a dark stratum opposite the fifth and sixth dorsal vertebrae. The dark area in the cervical portion of the tube is a shadow on the glass.

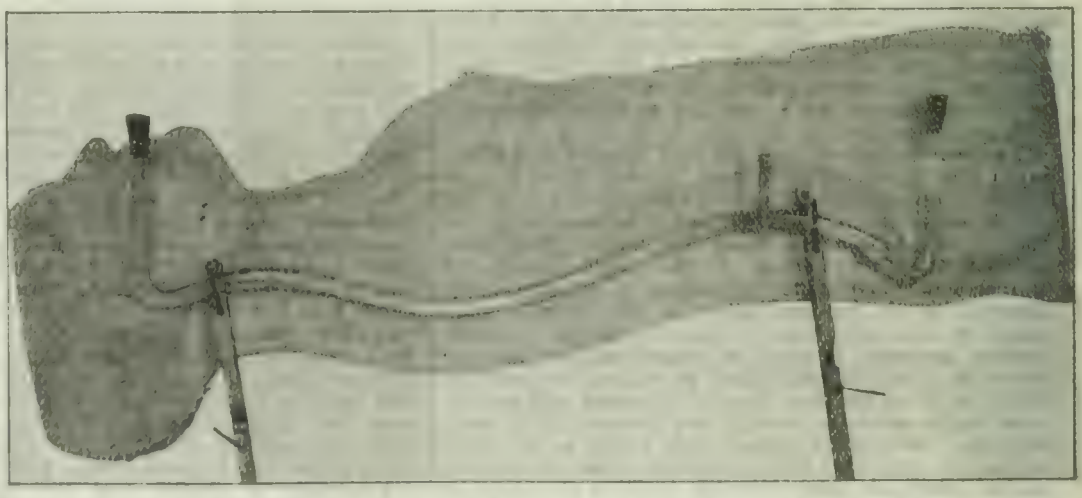


Fig. 2.—Same as Fig. 1, but with the pelvis raised 3 in. from the level. In this case 1 c.cm. of Chaput's solution has been similarly injected coloured. This, having a specific gravity of only 1.0058, has not altered its position, except that, being lighter than cerebro-spinal fluid 1.0070, it has risen in the vertical arm. In the position it remains for a long time undiffused.

headache while the other is quite comfortable. But before we can settle definitely these questions as to by-effects and uniformity of the distribution of the analgesia, we must know more about the physical properties of the compounds we inject, and how they behave in the canal. After this the specific action of the various drugs will be easier to study. That there are wide differences in this respect in those compounds hitherto in use is quite clear from what has been shown above, and uniformity of result with them could hardly have been expected. And it is the same with some other drugs which have been praised, but which I have not yet had occasion to use. Their 5 per cent. solutions contrast very remarkably with one another in weight and with the specific gravity of the cerebro-spinal fluid, and consequently they would behave quite differently if injected into the latter. One is lighter than the spinal fluid, the other two are considerably heavier, and their distribution within the canal ought to be widely different both as to time and locality.

Alypin 5 %, distilled water 95 %, sp. gr. 1 0036, freezing point 0 53°.
Novocain 5 %, distilled water 95 %, sp. gr. 1.0030, ,, 0 555°.
Tropacocaine 5 %, dist. water 95 %, sp. gr. 1 0106, ,, 0 545°.
Stovaine 5 %, distilled water 95 %, sp. gr. 1.0064, ,, 0.585°.
Cerebro-spinal fluid, sp. gr. 1.0070.

The freezing points I have taken three times for each.

It is quite plain that a 5 per cent. solution of alypin, with its low specific gravity (1.0036), ought to float in the highest layers of the spinal fluid, while a 5 per cent. of tropacocaine, with a specific gravity of 1.0106, would rapidly sink to the lowest layers. The greater uniformity of results which are claimed by some for tropacocaine may possibly be due in part to this physical property, perhaps more so than to any difference in specific action on nervous structures. But what I wish to insist upon is that we cannot expect exactly uniform results as long as we employ injection compounds of widely different specific gravities, unless we calculate on their weight in relation to the fluid into which they are injected and act accordingly in regard to the posture of the patient during puncture and after.

To observe the general behaviour of various fluid compounds when injected into the spinal canal, I had made many months ago a number of ½-in. glass tubes bent as accurately as possible to the curves of the spinal canal, as seen in Braune's frozen section of an adult lying on the back (Fig. 1). These tubes are turned up at each end for 3 in., and have another vertical tube rising to the same height as the ends fused on to them at a point corresponding to the second lumbar interspace (Figs. 1, 2, and 3). When filled with a solution of sodium chloride of a specific gravity of 1.0070, they may be held to represent roughly the spinal dura from the foramen magnum to its sacral end filled with its fluid, but minus the cord, which is not material for our present purpose.

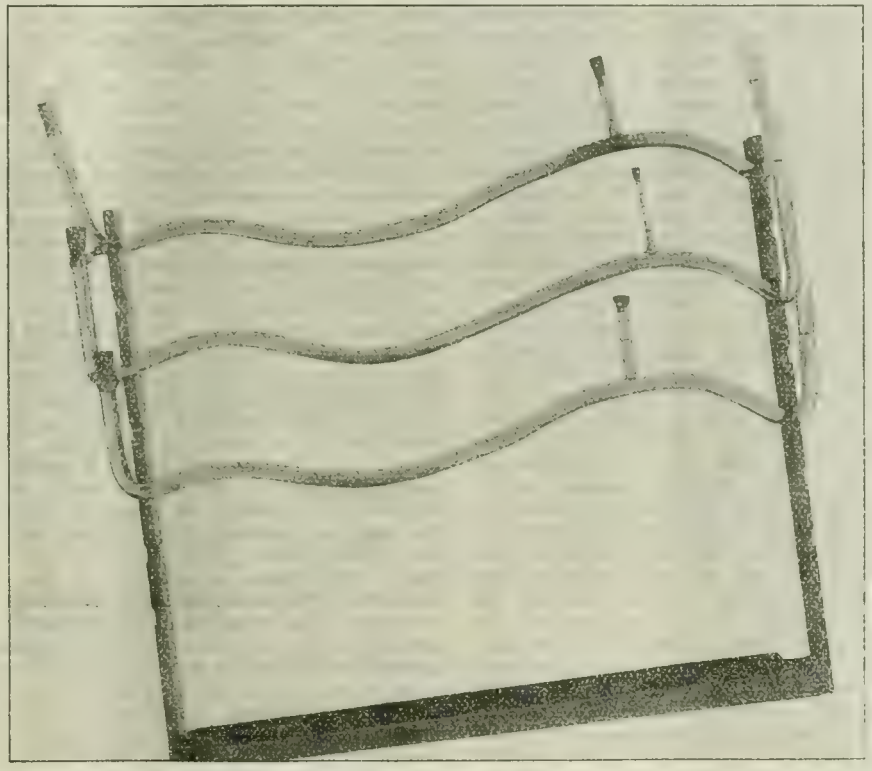


Fig. 3.—Three tubes as in Figs. 1 and 2, but without the tracing behind. Into the top one Bier's light solution has been injected, into the middle tube glucose stovaine (author's solution, specific gravity 1.0300), and into the lower tube Chaput's. The pelvis had been raised 3 in. as before. In the top tube Bier's compound, being lighter than the fluid in the canal, has remained stationary; the glucose-stovaine, 1.0300, is still running down. Chaput's, the heaviest compound, has already reached the dorsal curve and is at rest. Photographed two minutes after injection.

These tubes, accurately adjusted over a tracing of the canal in Braune's plate and filled with the saline solution (specific gravity 1.0070) have been used at various inclinations of the body to observe what occurs, at all events *in vitro*, when the different compounds now in vogue for spinal analgesia are injected into the lumbar sac. Of course, it is conceded that certain vital phenomena would modify the conditions somewhat. But, in the main, what occurs here furnishes us with fairly correct evidence on most of the simple physical points connected with these injections in the living patient.

Each of the compounds to be injected has been coloured with the same quantity of methyl violet and used at the ordinary temperature of the air and of the saline solution filling the tube. It has been gently passed into the latter as on the living patient with the usual needle through the vertical arm over the second lumbar interspace. The figures are from photographs of the conditions actually present in the tubes *in situ* over Braune's plate two minutes after injection. But as the photographer had difficulties with the shadows on the glass thrown by the plate behind, I have had photographs taken of the tubes alone without Braune's plate, the level of the tubes relative to one another being the same.

From Braune's frozen section of the cadaver lying on its back (Fig. 1) it may be seen that the highest point of the canal from the level is in the cervical region, and next to this a point between the third and fourth lumbar vertebrae, that is, the point at which the puncture for spinal analgesia is made. From this last point the dural tube slopes downwards in both directions. The caudal incline ends for the dura opposite the third sacral vertebra. The cephalic incline slopes from the point of puncture downwards as far as the fifth or sixth dorsal vertebra, when it begins to run upwards again to reach its highest point at the third cervical vertebra. With the head thrown forwards on a pillow, as the writer believes it should always be during intradural injection with heavy fluids, the foramen magnum would be the highest point in the spinal canal. These curves vary considerably in individuals and at different ages,* but the above may be taken as generally correct. Now, if it were possible to puncture the lumbar sac from behind at the classical spot, with the patient lying on the back perfectly horizontal, a liquid heavier than the spinal fluid would always flow for the greater part from the injection needle towards the dorsal curve and settle in a layer about the fifth dorsal spine, while some of it would gravitate to the caudal end. This is actually what happens when the experiment is made with the glass tube bent accurately to the curves of the spinal canal (Fig. 1). But in the living body there are practical

* Vide Professor D. J. Cunningham.

difficulties in puncturing from behind with the patient supine. However, if the injection be made while the patient lies on the side, or face, as I have occasionally done, and he then turns over on the back with the head thrown forward, a heavy fluid should take the same course. That it does so is almost proved by the regularity with which the analgesia produced by the Chaput's heavy saline stovaine-sodium chloride compound or the writer's stovaine-glucose one, though not quite so heavy (see above), rises to about the episternal notch or a little higher—that is, the region supplied by the sixth and seventh dorsal nerves. This varies a little, according as the head and neck are raised, and so the dorsal curve increased. This was so frequently observed in the second fifty cases, where the glucose-stovaine compound was alone used, as to be remarkable. Of course, this may be modified somewhat by raising the pelvis a little, as has usually been done, to hasten the flow of the injected fluid towards the dorsal curve before it becomes diluted by diffusion. It must not be forgotten, however, that in raising the pelvis, while the head and neck are supported forwards on a pillow, the lumbar curve is diminished, while that of the dorsum is increased. And the pelvis would have to be raised very high indeed to bring the level of the dorsal curve at the fifth or sixth spine above that of the foramen magnum, with the head and neck bent forward as described. There is, therefore, but little likelihood of the heavy compound reaching the medulla, or even into the cervical region at all. In some cases in Germany inversion has been carried to a very extreme degree, the head being unsupported, with the idea of displacing the whole mass of the cerebro-spinal towards the cranial cavity. But we must remember that in these cases the compounds have usually been of low specific gravity, and in the case of Bier's (see above) actually lighter than the spinal fluid, so that it would not be likely to move as far as the neck by any oscillation of the column of the spinal fluid. There have been a few cases, however, both in France and Germany, in which the analgesia has extended over the whole head as well as the rest of the body without injury, but the details as to injection and pelvic elevation are not given. They were probably instances of diffusion helped by oscillation. Personally I have never aimed at getting a higher analgesia than to the transverse nipple line. At the caudal curves the effects of a heavy compound can be limited in the same way by position. If the patient be seated on the edge of the operating table with his feet on a low chair and his back rounded the heavy fluid injected at the second lumbar interspace at once tends to run into the sacral dura, as we see also in our tube experiment. Here it accumulates at the end of the dural sac, where it quickly affects the roots of the nerves supplying the parts about the anus and the perineum. This is seen so constantly, even where analgesia is less satisfactory in other parts, that it suggests that when the injection is made in the sitting position most of it makes its way caudally, and it requires much and immediate elevation of the pelvis and oscillation of the cerebro-spinal fluid to dislodge it from the sacral sac. That is why I have thought it well in some cases to puncture with the patient lying face downwards, with a hard pillow crosswise under the umbilicus, so as to decrease the lumbar curve. In this position a heavy fluid runs towards the head, and if after half a minute the patient roll over on the back and have a pillow placed under the head and neck pretty high, the injected fluid collects in the lower dorsal curve. This prone position, otherwise desirable, has the defect that the flow of cerebro-spinal fluid is not so good unless the patient is told to raise his head and to bear down. But I think this can be overcome. But so great is the tendency for the injection fluid to be in part locked up in the sacral sac when the injection is done in the sitting position that if I want the analgesia to reach to the border of the ribs for an abdominal operation the patient is placed on the side with the knees drawn up as high as possible for puncture and thus all the compound flows at once upwards and all of it collects in the dorsal curve as the patient rolls over on the back. In such cases where the patient remains for any time on the side after the puncture we have noticed that the analgesia reaches higher up at the end of the operation on the side on which he has been lying. This seems to indicate clearly that the bulk of the compound has run along the roots on that side, but that it ultimately becomes segmental, affecting both sides, though still unequally.

For the careful preparation of the fluids employed in the above experiments and for the estimate of their specific gravities, which have been accurately made with a Westphal's balance, I am much indebted to Mr. R. Bennett, our pharmacologist at University College Hospital.

III. Technical.

To enter the lumbar dural sac effectually with the point of the needle, and to discharge through this all the contemplated dose of the drug directly and freely into the cerebro-spinal fluid below the termination of the cord, is the first technical problem which confronts us.

The human spinal cord terminates at the lowest opposite the second lumbar vertebra, and is below this out of reach of harm. The lumbar dural sac extends about as far as the third sacral vertebra. But from the configuration of the bones any ordinary needle puncture would present great difficulties, or be practically impossible below the fourth lumbar spine. We have, then, a choice between the second and third interspace of the lumbar vertebrae. Here we could reach the sac either laterally between the laminae, or by thrusting the hollow needle exactly in the middle line between the second and third or third and fourth lumbar spines. On theoretical and practical grounds, however, it is now almost universally acknowledged that puncture in the middle line is the easiest, safest, and best course. Here the puncture is least painful, and there is less risk of wounding any nerve structure or vessel if the needle is kept true to the middle line, and only just penetrates the dural sac completely. At either side there is a possibility of touching the strands of the *cauda equina* (Fig. 4). Besides this, any small quantity of fluid injected in the middle line can spread in all directions through the spinal fluid, whereas if delivered among the nerves of the *cauda equina* on either side it has a decided tendency to be entangled there, and to pass upwards and downwards in the interstices between them on that side alone, and not to reach the general cavity of the sac at all, or very partially, as was shown experimentally on the cadaver by Dönitz. The consequence of this in such cases is either an effect too low for the contemplated operation, or a one-sided analgesia. And though the latter might be desirable for some operations, there is no guarantee that, if the needle were designedly entered between the laminae on one side, its point would not be engaged among the nerves of the cauda on the other side. This appears to have been actually the cause of some of the few one-sided analgesias which are recorded elsewhere in earlier publications. The exact middle line, therefore, is decidedly preferable for injection. Here the analgesia compound passes freely into the spinal fluid, and reaches both sides equally, and can move freely upwards or downwards from the point of entry. Afterwards it can be influenced in various ways and for various objects according to its weight relatively to that of the spinal fluid, as already suggested. The fourth lumbar spine is recognized by being on a line uniting the highest points of the two iliac crests across the back. The hollow needle is thrust in just above this or the third spine, and aimed straight forwards and a little upwards (Fig. 4). If this is accurately done, there is no difficulty in the average patient as a rule in reaching the middle of the sac. But in some very stout people it is often difficult to feel the spines with the finger, and the point of the needle may strike bone. Its upward slant is then varied, and this will usually be sufficient for success without a fresh puncture if the back has been well rounded so as to obtain the greatest amount of separation between the spines. But in a few very powerfully-built middle-aged men it may happen that the spines are clubbed or twisted at their ends or even overlap. In such we may fail altogether to reach the sac, but such failures are not common. Only three of these cases were found in our series of 100 cases. Whether the patient during the puncture should sit on the edge of the table, with the back rounded to its maximum, or lie on the side with the knees well drawn up, or, finally, on his face with a hard roller pillow under the umbilicus, is still open to debate, but the puncture is certainly easier in the first position. How the various compounds behave when they

have reached the spinal fluid in these several positions, has been already dealt with.

The needle employed in this series was that used by Bier, and has a close-fitting stylet about 1 mm. in cross section (Figs. 4, *b*, 5, *a*). The point is hollowed out so as to secure sharpness without lengthening the terminal opening too much. The object of this is that when the puncture is made the whole of the open end of the needle shall lie within the dura without the point being pushed so far as to wound any structures within the sac. It is obvious that if the open end of the needle were only partially through the dura (Fig. 4) the spinal fluid might run out freely enough through the needle, but that when the analgesic compound was injected part of it might enter the sac, while part of it escaped through that portion of the terminal oblong opening which had not entered the sac and be lost in the *extra*-dural space. As the operator is dealing with very small amounts of injection fluid, such a loss, if it were only of three or four drops out of eight or ten, would make all the difference between partial and complete analgesia. My own three failures in this respect at the beginning of the first series soon convinced me that this was what had happened. Acting on this conviction, I have since employed the following device for delivering *all* the injection compound beyond the actual point of the needle, whether the whole of its terminal opening be actually within the sac or not. I had a second slender cannula made to fit the first hollow needle loosely and to project beyond its point about 1 mm. when the cone at its base is pushed home (Fig. 4, *d*). This cannula is attached to the syringe, which is filled with the drug compound through it. When the puncture with the first hollow needle is made and the spinal fluid has run out through it to the amount of 10 c.cm., the cannula, still attached to the charged syringe, is passed through the first needle until its cone closes it. The point of the cannula, which is quite blunt, now projects beyond the point of the first needle by about 1 mm., and must be within the dural sac (Fig. 4). When the syringe is now emptied, all its contents must be delivered within the canal, even though only half of the oblique terminal opening may have penetrated it (Fig. 4). This cannula being of less diameter than the first needle, enters it easily, and, having a transverse, blunt end, can do no harm itself besides guarding the sharp point of the first needle. This device has been used for about a year now, and in the second series of 50 cases there were no failures.

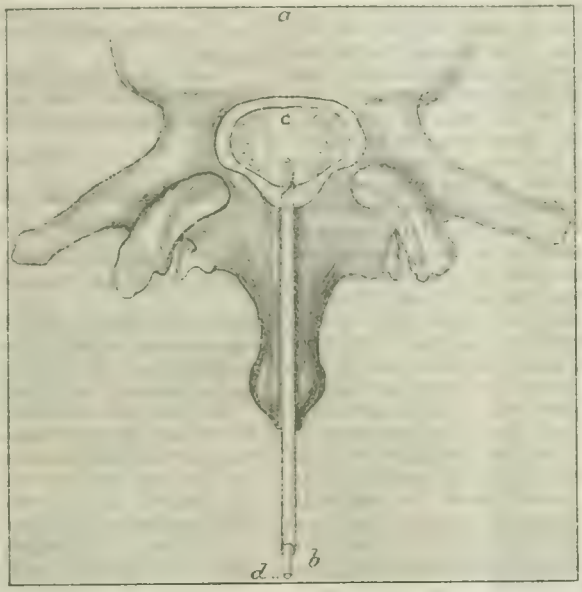


Fig. 4.—Diagram, adapted after *Quain's Anatomy*, shows third lumbar vertebra from above in part: *a*, part of body; *b*, hollow needle with open point half-way through the dura; *c*, dural tube in section with nerves of *cauda equina* on either side in section; *d*, cannula entering the canal completely through hollow needle.

The syringe employed (Fig. 5) was that known as the "Record," and is well adapted to the purpose of graduation of dose. It varies in capacity, that here used holding 2 c.cm. A larger syringe of the same make is now used by many who employ tablets which are dissolved in cerebro-spinal fluid, but the author recommends beginners to work with Billon's solutions and the syringe here described. In filling it the end of one of Billon's "ampoules" containing the sterilized solution was broken off, and the cannula attached to the syringe was introduced into the fluid and the piston withdrawn. The point of the syringe was then turned upwards with the cannula still attached, and bubbles were dislodged by tapping. In this position all the fluid was expelled except the required dose, and the syringe was laid aside for a moment. The lumbar puncture was then made. The hollow needle armed with its stylet was thrust through the skin sharply at the classical point and pushed on steadily for about an inch in the direction given when the stylet was withdrawn. The needle was then pushed on steadily, and as a rule easily. After it had passed the supraspinous and interspinous ligaments very little resistance was felt; it was rather as though it were crossing an empty space. Finally there was a sensation of having punctured a tense membrane, and the spinal fluid flowed out in *rapid drops* or, more rarely, a continuous stream. This is most important, as otherwise there is no guarantee that the sac has been reached by the needle. If the drops come very slowly the needle may be turned round a little on its axis, when they will usually come more rapidly. But *in no case should the analgesic compound be injected unless the fluid runs satisfactorily.* When about 10 c.cm. of liquor spinalis had run off into a measure glass the slender cannula attached to the syringe was inserted and pushed home, and the previously-measured compound was delivered into the sac by a slow thrust of the piston. Then both needle, cannula, and syringe were withdrawn, still attached as before, and the puncture was covered by collodion or a square of rubber plaster at once. The patient was then *quietly* rolled over on the back without hurry, and the pelvis was raised a little as described, about 3 or 4 inches, a pillow being also placed under the head and neck.

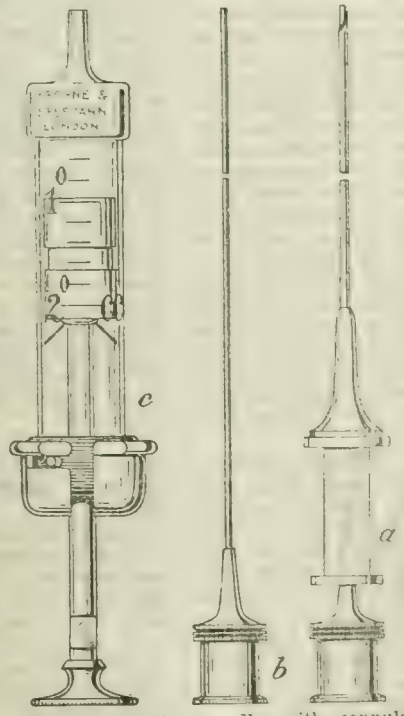


Fig. 5.—*a*, Hollow needle, with cannula inserted; *b*, cannula alone; *c*, "Record" syringe, each c.cm. divided into five.

The puncture made as above was not as a rule painful once the skin was passed, but if the needle scratched the periosteum it was considerably so. But few complained of it, and mostly made light of it afterwards. Of course, the area to be punctured could have been previously rendered insensitive with a local anaesthetic such as ether or ethyl chloride spray; but this has seemed unnecessary if the patient be warned a moment before the prick in the skin, and so far I have never regretted not having used a local anaesthetic. Having undertaken all the punctures myself I can see that a little practice is necessary here, as elsewhere, before proficiency is achieved and that confidence which communicates itself to the patient.

In only a very few cases has any trace of blood appeared in the needle either before, during, or after the escape of the spinal fluid. This was probably due to the fact that almost in every case the puncture was made as carefully as possible in the middle line; had it been made laterally between the laminae this would most likely have been

otherwise, as the veins are much more developed at the side of the dura than directly in the middle line behind.

To secure perfect asepsis in the whole procedure is beyond everything absolutely necessary, but in the nature of things ought to be comparatively easy to any one realizing its importance. And among the many large series of cases operated on by skilled surgeons, in the aggregate including thousands of cases, errors in this respect are practically unknown. But it must be insisted on that the whole procedure demands on the part of those who would practise it both skill in and mastery of the details of asepsis. Moreover, in the use of the usual germicides for the sterilizing of the skin we have to take care that no trace of them be left on the surface which could be conveyed by the needle in any way into the spinal canal, where they are particularly undesirable from their irritating qualities. For the cleansing of instruments, etc., they are not required, and it is easy to sterilize the simple outfit by heat. The first point to be insisted on is that all needles, syringes, etc., to be employed for this procedure shall be kept apart in their own special metal box for this procedure, and for it alone. It will not do, for instance, to use a needle and syringe one day to aspirate an abscess, and the next for spinal analgesia, even though they be boiled; nor will it do to use them for morphine injections even, and then for our purpose. They must be set apart for the spinal puncture, and for that only. The same holds good of the little sterilizer in which they are boiled. This should never be used with any alkali whatever, as is done for general purposes. Any trace of an alkaline fluid remaining in needle or syringe would destroy the stovaine; moreover, soda solutions are particularly irritating if injected into the tissues. Distilled water or steam should be used for sterilizing purposes, and any water with a sediment should be rejected as injurious to the syringes with accurately-fitting pistons. It is also desirable to boil the outfits after each case, and finally to put them away aseptic in their own special box dried. The piston should not be put away in the syringe, but separately, and the same holds good of the stylets, otherwise they may be found to have jammed in drying.

The stovaine in solution, which is apparently antiseptic in itself, was in these cases taken from Billon's sealed glass "ampoules," which had been sterilized before fusing their ends at a temperature of 110° C. (= 230° F.) for ten to fifteen minutes. These capsules were only opened a moment before use by breaking off one end, through which the needle was introduced. Such solutions and capsules should always be prepared by one with a large experience and skill in these matters. Overheating the drug or prolonging its sterilization too much renders it inert. As a matter of fact, all the ampoules were prepared for me by M. Billon, one of the coadjutors of M. Fourneau, the discoverer of stovaine, and his experience and knowledge of what is demanded is probably unequalled. Tablets are prepared containing all the ingredients of several compounds, but how they are sterilized is not mentioned. These are placed in the syringe, where they dissolve in the fluid which runs from the puncture needle, and this is reinjected. The results we should be able to judge of in time, and if found safe and satisfactory this method of preparing the solution will have some advantages.

The skin of the lumbar area is carefully cleansed beforehand by repeated washings with very hot water, soap, and brush. After this each compresses of the usual antiseptics for some hours if possible. A moment before the puncture the skin is washed with normal saline to remove any trace of biniodide, carbolic solution, or spirit which may remain on it, and which might possibly be carried by the needle into the cut. All these precautions, carried out diligently, are necessary in every case, and with them the chances of infection of the canal are remote indeed. They would be considered sufficient for many much larger operations done every day upon the brain and spine.

This report originated in a desire on the part of the writer to fairly test the value of a procedure which has been now for more than eight years attracting much attention. It has naturally led to an examination of the theories and conclusions of those who originated and elaborated the method and practised it with the most painstaking caution in large series of cases. Reflection on these and on the work of others who followed has aroused a doubt here and there as to the correctness of some of the conclusions arrived at so far, and suggested explanations of some of the phenomena connected with the procedure which are not in accord with views held hitherto. It is hoped that these suggestions may be tested, and if found unsound rejected. They will at all events have called attention to some points not yet clear, and perhaps paved the way for further and more fruitful inquiry.

Since this paper was drafted some months ago, some 28 cases have been added to our list, and have only fortified the conclusions here stated.

INFILTRATION ANAESTHESIA IN MAJOR AND MINOR SURGERY.*

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FOR some years I have been interested in local infiltration anaesthesia, or rather analgesia, and my experience of the method leads me to believe that in this country surgical operations are too infrequently performed with its help.

We owe our knowledge of infiltration anaesthesia as a substitute for general anaesthesia almost entirely to Continental and American surgeons, but the few recent papers by British writers, although not marked by much originality, have served to call attention to the good results attained by the method.

The term "infiltration anaesthesia" is far from signifying the haphazard subcutaneous injection of a solution of cocaine or eucaine with a view to rendering painless some trivial proceeding of minor surgery. Local anaesthesia of this kind is inefficient and dangerous, sometimes even fatal, owing to the toxicity of cocaine.

Connell [1] states that out of 250 reported cases of cocaine poisoning 13 terminated fatally. The subcutaneous injection of a solution of indifferent strength is painful in itself, and may be followed by sloughing of the tissues, a point to which I shall again refer.

In 1899, Schleich of Vienna introduced infiltration anaesthesia. Next to the pioneer work of Schleich and to the discovery of other agents less toxic than cocaine, the advancement of local anaesthesia is probably most indebted to Dr. Takamine, the discoverer of adrenalin. Braun of Leipzig first suggested the addition of this substance to solutions used for infiltration anaesthesia. The essential desiderata of such solutions may be summarized under three headings:

1. The percentage of the active agent contained in the solution must be sufficiently high to render the fluid efficient as an anaesthetic, but the total quantity of fluid infiltrated from beginning to end of an operation must contain an amount of the active agent insufficient to give rise to toxic results. As a corollary, it follows that solutions of cocaine are inadmissible unless only a small quantity of fluid be required, since it is not safe to inject more than about ½ gr. of this substance.

2. The solution must be sterile, which is nearly equivalent to saying that its active agent should be capable of being boiled without impairment of its anaesthetic properties.

3. The third essential of the solution on which stress must be laid concerns its physical and physiological features. It must be as nearly as possible isotonic with the tissues.

In specific gravity, freezing point and osmotic pressure, it must correspond with the tissues. Solutions either too concentrated or too weak will be painful when injected, and are liable to cause destructive changes in the tissue cells, which may be followed by necrosis and sloughing. Such untoward results have not infrequently followed the injection of an isotonic solutions. Sodium chloride is common to every infiltration solution, which should be no more destructive by its local effects on the tissues than normal saline. The salt is added in correct proportion to render the solution isotonic.

The addition of adrenalin chloride or its equivalent under another name, such as suprarenin, renoglandin, hemisine, etc., in the proportion of one part in 100,000 is a manifest gain. It acts as a powerful capillary haemo-

* Amplified from a paper read before the South-Western Branch of the British Medical Association.

static, blanching the tissues, delaying the local circulation and consequent absorption of the anaesthetic; its action is consequently prolonged, and much less solution is needed. Solutions containing adrenalin must be freshly prepared, as exposure to air causes oxidation, the solution turns a brownish colour, and the properties of the adrenalin are lost.

We are indebted to some of the large manufacturing chemists for the way they have facilitated the preparation of fresh sterile isotonic and active solutions. A sterile tablet or powder is dissolved in a measured quantity of sterile water. More simple still, we can buy the sterilized solution ready for use.

I have always used either eucaine hydrochloride or novocain in large operations under infiltration anaesthesia. Novocain is probably the better, and has been largely used by Professor Braun. It has a low toxicity, as much as ½ gram being without danger; and this quantity, approximately 7½ gr., is contained in 100 c.cm. of the isotonic novocain suprarenin solution recommended by Braun. Such a large quantity as 100 c.cm. can seldom be required for one operation; but where a large volume of fluid is required, Braun's ½ per cent. solution may be diluted with an equal volume of physiological salt solution. Sterile solutions made to Professor Braun's formula can now be obtained in hermetically-sealed phials. Each 25 c.cm. of the solution contains:

Novocain	0.125 gram.
Suprarenin borate	0 00016 ,,
Sodium chloride	0.225 ,,

I have known the skin quite insensitive to a large needle as long as four hours after an infiltration operation with this ½ per cent. isotonic novocain suprarenin solution; tactile sensation to a certain degree is not absolished, the method, therefore, does not result in a true anaesthesia.

Infiltration is carried out with an all-glass syringe furnished with some fine really sharp hollow needles. It is convenient to use a syringe holding more than the ordinary hypodermic syringe; syringe and needles should be boiled in plain water, or if placed in the sterilizer with the instruments, all traces of soda should be removed by syringing with sterile water free from any alkali. Syringe and needles when not in use should be kept during the operation in a vessel containing plain water.

The line of incision having been marked out by the eye, a probe is dipped in liquid phenol and the adhering droplet transferred to the skin at the point where the incision is to commence. Minute carbolic droplets are similarly placed at intervals of ½ in. along the whole line of the intended incision, and, in fact, a little beyond both of its extremities. The phenol droplets mark the point of insertion of the needle and serve to sterilize and anaesthetize the skin, so that the patient does not feel the pain of insertion. The operator then proceeds to infiltrate the dermis, the needle being inserted nearly parallel with the surface with its aperture pointing upwards. The little pale wheals which are thus made to appear at intervals of half an inch by this process of oedematization of the skin overlap each other at their contiguous margins. If these wheals are not seen, it shows that the solution has not been injected endermically, but has entered hypodermically, and the injection should be repeated, for, unless this artificial oedema of the dermis is produced, the patient will feel as pain the cut of the knife. Within two minutes the skin may be freely divided with absolutely no pain, and the deeper tissues are then methodically infiltrated, after which the operation is proceeded with. Slight pauses are necessary from time to time to allow the infiltrating medium time to act on the nerve branches and their terminations. The slight additional time taken up by the operation is of no moment from the point of view of the welfare of the patient, and the operator is free from the anxiety which the element of time carries with it in operations under general anaesthesia.

No dietetic limitations are necessary in anticipation of an operation under local infiltration anaesthesia. Sometimes, a few minutes beforehand, ¼ gr. or less of morphine subcutaneously may be given with advantage for its tranquillizing effects, and not infrequently ½ oz. of brandy in a little milk or water by the mouth is grateful to the patient in a tedious or trying case.

Coeliotomy can be performed painlessly under infiltration. I have done five abdominal sections without a general anaesthetic. The limiting factor in abdominal work being, as might be expected, the fact that forcible retraction of the abdominal wound and traction on the hollow viscera will be resented by the patient. Bowel can be cut or sutured with little or no pain without anaesthesia of any kind, but traction on the peritoneum or mesentery by stretching nerves not under the influence of the local anaesthetic is painful in proportion to its degree.

In many acute abdominal cases and in strangulated hernia the condition of the patient is so bad at the time of the operation that the immediate risk of general narcosis becomes exceedingly great. Post-anaesthetic vomiting, also, in these cases may result fatally in otherwise successful operations.

Avoidance of prolonged general anaesthesia being of the utmost importance in surgery of this class, a field is opened up for local infiltration, or for infiltration followed if necessary by the inhalation of a minimum amount of chloroform or ether.

Operations on the subjects of advanced pulmonary and cardiac disease and in the elderly and feeble, unjustifiable under general narcosis, may often be carried out by the aid of the method under consideration.

Kocher has shown that local anaesthesia is almost a *sine qua non* in operation for thyroid enlargements and growths in the neck where there is tracheal compression. The advantage of employing this method in some cases of tracheotomy has also recently been pointed out by Dr. StClair Thomson.

My own list of operations under infiltration include the following:

Gastrostomy (by the Ssabanajew-Frank method).
Herniotomy (three cases); appendectomy in a quiet interval.
Laparotomy for intestinal obstruction.
Laparotomy with resection of small intestine and end-to-end anastomosis.
Suprapubic cystotomy.
Closure of an artificial anus (preliminary colostomy).
Radical cure of hernia.
Radical cure of varicocele.
Removal of a mass of suppurating tuberculous glands in the groin (in an old and debilitated patient).
Extirpation of the saphena vein in the thigh and its tributaries in the leg for varix (many cases).
Numerous minor operations for the removal of cysts, lipomata, needles, etc.

The Case of Gastrostomy.

The patient was a woman admitted to the Torbay Hospital in 1903 with malignant stricture of the oesophagus. She was emaciated to the last degree and in an extremely weak and starved condition owing to her inability to take any food by the mouth. At the conclusion of the operation and whilst the patient was still on the table I introduced by way of the gastrostomy a pint of warm milk and eggs—to her immense satisfaction. This, of course, could not have been successfully done so soon had a general anaesthetic been administered. The patient increased in weight and strength after the operation, but succumbed to the progress of the disease one year later.

It is important when employing infiltration analgesia to work gently and without too much haste. The tissues in the field of operation should be thoroughly analgesic. The simple operation for varix affords an example. By the production of an artificial oedema of the dermis in the manner described the skin over the course of the saphena in the thigh is divided with a gratifying freedom from discomfort to the patient, who is probably unaware of what has taken place. The temptation then is to proceed too rapidly with an insufficient infiltration of the remaining structures, and consequently some quite avoidable pain may be inflicted. On the other hand, care should be taken to envelop the superficial nerves and the vein itself in an anaesthetic atmosphere by further injections of fluid, followed by a short pause before proceeding to the ligation and extirpation of the vein.

The main advantage gained by operating under local infiltration anaesthesia instead of under general narcosis lies in the greater safety of the patient. To operate under a local anaesthetic is probably to operate under the safest known conditions. No special preparation of the patient is necessary. There is no after-vomiting or other ill result or discomfort due to the anaesthetic. One less assistant is required—namely, the anaesthetist.

It would be idle to say more in favour of the method for minor operative work, but what I think should be emphasized is the great value of infiltration anaesthesia in the case of many large surgical procedures.

To operate on a conscious patient is often undoubtedly to impose on the subject a certain degree of strain and fear, but in patients who are not acutely ill at the time, even in nervous and highly-strung individuals, the objection to infiltration anaesthesia on this score is of surprisingly little moment, and it is a pleasure to observe such patients comfortably enjoying a meal immediately on their return to bed. As a further set-off to this objection, the great and not altogether unreasonable dread of a general anaesthetic, which exists so prominently in a large proportion of patients, is to be borne in mind.

Infiltration anaesthesia occupies an unimportant position in the surgery of to-day, at least in this country. In the surgery of to-morrow I believe it will hold a different place.

The further developments of local anaesthesia in the form of medullary anaesthesia and regional anaesthesia produced by infiltration of large nerve trunks with stronger solutions are beyond the scope of this short paper, but in this connexion attention may be drawn again to the important researches of Crile[2] and Cushing[3] in America. These experiments have demonstrated that the cocainization of large nerve trunks supplying the field of operation, by blocking the transmission of centripetal impulses which would otherwise bring about reflex loss of vascular tone, abolishes what is probably the main cause of the phenomenon of shock.

By a combination of regional anaesthesia of the great nerve trunks and local infiltration at the seat of operation major amputations can be performed without general narcosis.

The regional anaesthesia produced by the injection of the anterior crural below Poupart's ligament enables Thiersch's grafts to be taken from the front of the thigh. It seems probable that Tagliacotian operations might be undertaken by a similar combination or by local infiltration alone, which would give the important advantage of the co-operation of a conscious patient.

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An Address ON CHOLELITHIASIS.

DELIVERED BEFORE THE STOCKPORT MEDICAL SOCIETY, JANUARY 10TH, 1907.

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[AFTER some introductory observations Mr. Stanmore Bishop said:]

Confining ourselves only to our present subject, gall stones, it is to be noted that attention is no longer concentrated upon these concretions alone. These bodies, wherever found, whether in the gall bladder or in the ducts are now recognized as being only part of a more general condition; a very important, perhaps from the patient's point of view the most important, factor, but not the only one, and except in certain cases, where their mere mechanical position renders them exceptionally harmful, not the most dangerous factor. The eye of the clinician seeks rather to discover the condition of the biliary channels which contain them, and the physician is as much concerned to know the specific organisms with which he has to deal as to witness the removal of the results of their agency.

It has been commonly received as an accepted fact since the writings of Kehr that only 5 per cent. of the persons whose biliary passages contain calculi develop during life any symptoms which call attention to this region. If by such symptoms the ordinary well-marked attacks of biliary colic are understood, this statement is probably near the truth, but subsequent research has shown that the presence of biliary calculi may be responsible for many conditions which in olden times were vaguely described as "stomach trouble," "windy spasms," "indigestion," "biliousness," or even "neurosis," and were indiscriminately referred to some functional disorder of the stomach. As a consequence, many patients who later developed well-marked biliary colic only came for operation when the changes in the gall bladder and ducts had been in existence for years and were already complicated by alterations, local and general, which greatly accentuated the danger of the surgical interference itself, and effectually prevented the ideal return to the normal condition at which almost all surgical measures in the abdomen aim. The increased knowledge though, as I said, far from being complete, is rapidly enabling the surgeon to interfere earlier, and, consequently, to better purpose.

It is now accepted as a well-recognized fact that the essential condition which underlies all cases of cholelithiasis, whether accompanied by symptoms which cause its recognition during life or not, is a catarrhal inflammation of the biliary passages due to infection from certain micro-organisms, and that the most frequent of these are the *Bacillus typhosus* and the *Bacillus coli communis*. Other organisms have been found, but in much smaller numbers.

This infection may reach the channels implicated in one of four ways: (1) Through the duodenal opening, (2) through the portal circulation, (3) through the systemic circulation, (4) through the lymphatic circulation.

At first sight the duodenal opening would appear to be the most likely avenue of infection; there is a direct continuity of lining mucosa between the two channels of the small intestine and the common duct; the intestine is the natural habitat of the two micro-organisms most frequently encountered; from time to time the opening between the two is patent. But certain facts throw considerable doubt upon this theory.

1. Virulent organisms such as would be found in the intestine do not cause the formation of gall stones; the effect of their presence is rather to produce the more acute inflammatory changes which determine phlegmonous cholecystitis, gangrene of the gall bladder, ulceration and perforation. For the formation of concretions a certain attenuation of the micro organism appears to be necessary. Mignot showed[1] that it was the milder catarrhal inflammations which were accompanied by calculous formation. A. Ewald also, in 1903, demonstrated the same fact.

2. Although the intestine as a whole is the habitat of the bacilli in question, the duodenum, as several observers have pointed out, is singularly free from them.

3. When the duodenal opening is patent, there is a free flow of bile through it. Although it has been shown that organisms of this character will grow readily in bile, they would be far more likely to be washed away from the edges of this opening into the intestine than to ascend against the discharging current.

4. If micro-organisms ascend in this way, why are not inflammatory disorders of the pancreatic duct as frequent as those of the biliary channels? The opening of the one duct is as accessible from the common diverticulum of Vater as the other.

So that the probability of such an infection as would lead to the formation of biliary calculi reaching the biliary channels by this route would seem to be gravely discounted. At the same time it must not be understood that this is denied. Lippmann[2] has isolated bacteria from the common duct in numbers decreasing upwards. Kelly[3] says that in presence of gall stones, bacteria are not infrequently more numerous in the lower end of the common bile duct than elsewhere in the biliary tract, and that these are the motile much more commonly than the non-motile organisms.

That an attenuated infection, such as would give rise to calculous formation, will reach these channels by way of the portal vein is much more probable; and the information, mainly obtained by operative work and by experiments on animals, which supports this statement has, at the same time, considerably altered the view taken of the function of the liver itself.

Lately, owing chiefly to the work of the Italian school of physiologists Sciamola d'Amore, Geodfredi, Falcone, and Boccardi the view that one of the functions of the liver is protective has been enlarged and emphasized until now, without denying its action in the production of glycogen, and the other already known facts concerning it, the tendency of modern thought is to look upon it as, in fact, the great toxin filter of the body; by its action the numerous toxins introduced in the food, or produced in the small intestine by the various fermentations and

decompositions which take place there, are neutralized and rendered inert, and bacteria accompanying them are at the same time destroyed or greatly weakened in virulence. Blood taken from the portal vein has been found to be markedly toxic, whilst that of the vena cava above the liver was only very mildly so, if at all. Extirpation of the liver, or ligation of its blood vessels in the lower vertebrates, is followed by a rapidly fatal group of toxic symptoms ending in coma, with or without convulsions, and death similar to that following acute poisoning. Whitridge Williams has shown that in the hyperemesis and eclampsia of pregnancy, when the waste products of two individuals have to be rendered innocuous, the liver, in fatal cases, showed a well-marked form of cloudy swelling of the cells passing rapidly into fatty degeneration and atrophy. Welch also has shown the action of the liver in the destruction of bacteria.

It is easy to understand how the liver cells may be temporarily overtaxed by an excess of toxic material, and consequently the bile excreted by it may contain effective though attenuated toxins, effective though weakened micro-organisms, both capable of producing the low-grade or "catarrhal" inflammation of the surfaces upon which they rest or over which they pass, which is so effective in causing the appearance of masses of cholesterin, whilst the disproportionate occurrence of cholecystitis and pancreatitis, biliary and pancreatic calculi, is also explained.

That bacteria do actually reach the gall bladder in this way seems to be proved by Lartigau's experiments. Having first closed the common bile duct, so that no infection could pass through to the biliary channels by this route, he fed the animals experimented upon with material containing the *Bacillus pyocyaneus*, and in almost half the cases found this organism, sometimes alone, sometimes associated with the colon bacillus in the gall bladder.

That infection by way of the systemic circulation is possible is certainly not to be denied. Doerr[4] injected micro-organisms into the veins of rabbits, and found them within a few hours in their gall bladders, the resulting lesions being usually catarrhal; but most of the evidence in favour of this is open to some doubt, and infection by means of the portal route is very difficult to exclude. Evidence of infection of the biliary passages in cases of influenza and pneumonia (Bryan and Kayser[5]) is necessarily open to this objection.

Infection through the lymphatic system, whilst not impossible, must be extremely rare.

Thus the weight of present evidence seems to show that the steps of the morbid processes are in the majority of cases these:—The small intestine contains normally, but especially during the process of digestion, numerous micro-organisms and toxins. These will, of course, be increased in number and virulence during such diseases as dysentery, typhoid fever, influenza, and similar states; they will also be multiplied by the ingestion of decomposing or decomposable food. These organisms and toxins are taken up by the radicles of the portal vein and carried to the liver, where they are rendered inert and excreted by the bile. Should the resistance of the liver cells be decreased or the toxins sufficiently powerful to paralyse them, some of these toxins and bacteria, much weakened in virulence, may pass through and be excreted with the bile, and produce desquamation of the epithelium of the excretory passages, first in the gall bladder mucosa, since they remain longer in contact with that membrane, thus permitting the penetration of the organism into its walls, and the consequent subacute inflammation which follows their attack. Should the toxins be still more virulent or the resistance of the hepatic cells still further lessened, some may pass into the systemic circulation and cause the headaches, confused mental sensations, and gastric disturbances grouped under the well known term of "biliousness"

The morbid condition may entirely pass away, the liver being able in a little while to dispose of the poisonous material, while the flow of fresh and toxin-free bile washes out of the biliary channels the products of the previous slight attack upon their walls, or inflammatory changes in the gall bladder may cause the deposition of so much cholesterin from the decreasingly vitalized epithelium that it cannot be redissolved by the new bile, whilst the secretion of albuminous lymph is said to cause precipitation of the bilirubin calcium from the bile, which acts as a cement to the original droplets of cholesterin, and calculi are thus formed. This reaction can be produced by adding egg albumen to bile, as in this specimen shown. In this way it is easy to understand the great preponderance of cases of calculi formed and stored in the gall bladder.

Even after the formation of these concretions the inflammatory changes in the walls, being produced by attenuated micro-organisms which are short lived and not reinforced by fresh colonies, may resolve and the organ regain its normal uninflamed condition. In such cases, although calculi will be found after death, the patient may never be cognizant of their existence. Again, after a longer or shorter interval, the same process may recur, and the freshly-inflamed walls will then contract painfully upon their previously formed, more or less angular contents; the result will be an attack of "biliary colic," one or more of the preformed calculi being forced into the cystic duct and either passing painfully through it, or plugging the entrance to the gall bladder.

The further progress of these cases is so well known that it is unnecessary to describe it. The practical points which interest us are:

I. The light hereby thrown upon the causation of "bilious" attacks and of several ill-defined so-called "stomach" troubles.

II. The connexion between these and cases of biliary calculi.

III. The great prospect opened out that, by the further study of such ill-defined conditions, operative interference may be employed at an earlier stage and under improved conditions, so that calculi may be removed and efficient drainage carried out before wide-spreading and dense adhesions around, so often encountered now, have gravely compromised the ultimate result of the operation. It may even be possible to prevent the cancerous degeneration and chronic pancreatitis which sometimes appear to follow and be associated with the presence and consequent irritation produced by these foreign bodies.

What are the changes which are observed in and around the biliary channels during operative work in this region, and what help in the diagnosis of cases of biliary calculi has been gained?

These are the two questions to which I shall endeavour to give some incomplete answer, and the evidence will be derived from the records of 62 operations in my own private and hospital practice.

1. The gall bladder and cystic duct may be greatly dilated and distended, whilst its colour may be altered from the normal bluish-green tint until the bladder resembles small intestine; this was the case with

Mrs. B. Case 61. On opening the peritoneum, apparently a distended and adherent duodenum presented itself. This was firmly adherent to the under-surface of the liver; this coil was not tense and there was no tinge of blue or green such as usually shows through the walls of a distended gall bladder; following this downwards, its lower extremity, equally distended as far as could be seen, disappeared beneath the liver; the colour of the coil was a light pink, its surface was covered by small arterioles, disposed like those of small intestine which had become congested; when a portion of the wall was picked up between the finger and thumb, its consistence was that of the duodenum; below, the hepatic flexure of the colon was easily identified, but the duodenum was not seen; as events proved, it must have been covered by the distended colon. Was this a dilated gall bladder or an adherent duodenum? and should we find the gall bladder, as often happens in these cases, shrunken and deeply placed below this adherent coil? It seemed impossible to be certain; yet if it were indeed duodenum, to open it would needlessly complicate the operation; that the portion presenting seemed to be a blind extremity carried no conviction, since if a loop of intestine is doubled upon itself and the sides of this loop adhere as they would be likely to do where adhesions were so widespread as in this case, such a loop would apparently end in a blind extremity. Only after separating for some little distance the attachment to the liver was it possible to introduce a finger sufficiently low down amongst the multiple adhesions to reach the lower part of this dilated tube and feel within it certain angular masses which the finger recognized as gall stones; on pushing these up—for they had all gravitated to the lower end of the cystic duct—these masses were found to be enclosed in the (doubtful) coil, and thereby its identity as the gall bladder could be established. The calculi shown were removed, drainage arranged for, and a month later recovery was complete.

2. The next stage is illustrated by a case seen with Dr Holt of Heaton Moor:

H. B., aged 28, male. Symptoms for two months; weight in epigastrium, vomiting of bilious fluid, with anorexia; attacks of severe pain, no jaundice until two days before operation. On opening the peritoneum the liver itself was found swollen, almost green in colour, whilst the gall-bladder fundus was distinctly yellow, the two colours contrasting somewhat vividly; in this case we found what I have more than once seen before and since, that the fundus was bent over upon itself so as to almost form a separate cavity; this portion of the gall bladder contained a purulent fluid, but no stones; communicating with it was the main bulk of the gall bladder, a shrunken tube with thicker walls containing one fairly large and over fifty small calculi; the wall of the fundus was infiltrated with pus. On the thirteenth day the drainage tube came away, and the external wound rapidly healed; but a month or two later an abscess cavity formed beneath the scar, and discharged pus and bile; the opening again healed and broke down a second time with a similar discharge. I have not heard whether any further discharge took place; but it is to be noted that no further symptoms of the presence of further formations were complained of. The urine did not contain bile, nor was there any pain other than that which would be caused by the formation of an abscess.

In this case, it will be seen, the changes in the gall-bladder walls had reached a further stage; they were not only inflamed, as in the previous case, but had begun to be infiltrated with pus. This change was most marked at its distal extremity, where stasis of the circulation was most likely to occur. The main bulk of this reservoir was, however, unimplicated; the purulent infiltration was limited to the fundus; drainage, therefore, of the gall bladder was still possible, and with it the tissues would probably return to a healthy state. This naturally required, however, a longer time. If drainage is possible, it is well to utilize the gall bladder, as a drain can be much more easily and rapidly fixed in this viscus than in the gall ducts; subsequent adhesions around this are not so dangerous as they sometimes prove to be when thrown out, as in any case they must be round the incised part, if the drainage tube has to be inserted in the common duct.

In the last case, at the junction of the fundus with the main body of the gall bladder, the mucosa formed a crescentic ridge which projected into the lumen of the viscus. I have noticed in five of my cases a similar tendency of the mucosa to project into the lumen at certain levels. If two projections arise opposite one another, they may blend, and a small cyst-like cavity be shut off, still, however, communicating with the main body by a variable opening. In one case to be mentioned directly the whole gall bladder was converted into a multilocular cyst, with apparently no communication between the cysts; this case is said by Robson to be unique, but comparison of it with several others I have seen in which the change I have described has reached various stages induces me to believe that this is but the same process carried to an extreme. The first case is one in which the extreme tip of the gall bladder was shut off in this way.

Mrs. G., aged 51. The gall bladder was found to be adherent to the small intestine and to the omentum; after these adhesions were separated the shrunken, thickened gall bladder was brought to the surface, and its fundus incised; a space large enough to contain a large glass marble was opened into, containing mucus; when this was wiped away a very minute opening was found by a probe and easily dilated, giving access to the main body of the gall bladder. This illustrates, I think, the first or plate stage of what has taken place to its fullest extent in the specimen shown, which was removed from a patient of Dr Hadburn of Euston.

Mrs. —, aged 47. Biliary attacks had been frequent some years previously but had entirely ceased for at least two years. Fourteen months before examination she had complained of a feeling of weight and Dr Harburn had discovered a rounded mass, dull on percussion this dullness being continuous with that of the liver, and, like it, moving with respiration. On abdominal section the multilocular cystic mass was found occupying the position of the gall bladder, and, on cutting it away, bile issued from a crescentic opening in the stump, thus proving its identity with the gall bladder.

This, however, is a digression. We return to a consideration of the various stages of inflammation.

3. The inflamed gall bladder, containing purulent fluid and calculi, may attach itself to surrounding parts by adhesions, this is Nature's effort to provide against wide-spread mischief should any part of the wall of the gall bladder yield. Should such yielding occur, a collection of pus will then form outside the bladder wall, but shut off from the general cavity of the peritoneum by these protective formations, and by their aid the infective material may be conducted to the outside of the body, or it may collect for a while in a space hollowed out in the abdominal wall itself. It is precisely in such cases that the incision advised by Rutherford Morison—the transversely oblique incision—is of so much value. By its use the pus makes its escape readily without any danger of infecting the most perilous area—that of the small intestine. Such a case was that of

Mrs. A. B., aged 42. Admitted October 16th, 1906; transferred by Dr. Marsden, from the medical out-patient department of the Ancoats Hospital.

For two months she had been treated by Dr. Marsden for persistent frontal headache, abdominal pains of an indefinite character, occasional vomiting, and malaise. On October 11th she was seized with sharp abdominal pain, which commenced at the umbilicus and became generalized, but always most severe in the epigastrium and right hypochondrium; this was followed six hours later by large vomiting of bile; the bowels were constipated.

On examination she was seen to be anaemic, wasted, and jaundiced; respiration was easy and the pulse 100, full, and regular. The abdomen moved very slightly on respiration and there was generalized tenderness on palpation, accentuated in the right iliac and hypochondriac regions; a mass in the latter could be felt, extending from below the ninth costal cartilage to a point half an inch above and to the right of the umbilicus; the liver itself was not enlarged; the urine was loaded with bile.

On October 18th the bowels were freely opened, the stools containing bile; on the 20th there was renewed severe pain in the epigastrium with vomiting; from that date until November 1st the pain and all the other symptoms abated, but on that day she was again attacked by intense pain—now for the first time associated with shivering—in the epigastrium. This pain commenced during the night and progressively increased; the mass felt before enlarged still more and became not merely palpable but visible; it was tender to touch; the patient had lost her jaundice, and this did not return with the last accession of pain.

On November 5th the right hypochondrium was opened by Rutherford Morison's incision; an abscess containing 3 oz. of pus was opened in the substance of the rectus muscle; the gall bladder was enlarged and inflamed; it contained some twenty stones, but the mass which had been felt was the superjacent abscess, the shape of which had strongly resembled that of the gall bladder itself. Both the abscess and the bladder were drained, and the patient recovered perfectly, going home well on November 30th.

4. But perhaps the most disconcerting appearance is to be found in certain cases of which I have seen eight examples. On opening the peritoneum in such cases, the under-surface of the liver appears to be convex; no gall bladder can be seen; the convex under-surface is soft and fluctuant, and if this is cut into, pus mixed with bile escapes. After the contents have flowed away for a little time the gall bladder gradually defines itself, standing out gradually from the normally concave under-surface of the liver; such a gall bladder may or may not contain calculi.

Mrs. M. A. B., aged 52, symptoms for twelve months. On opening the abdomen the liver was seen to be enlarged, with its edge rounded and tense; no sign of a gall bladder could be found. The case was one of the first upon which I had operated, and I was not a little at a loss as to how to act. Thinking that probably my diagnosis was at fault, and that here was really a liver abscess, which it closely resembled, I opened it with all due precautions, and watched the gall bladder slowly disengage itself from the liver substance, becoming minute by minute more and more defined and unmistakeable. One rough gall stone, the size of an almond, was found within it.

5. The most frequent condition, however, is of course the small, contracted gall bladder, deeply placed beneath the liver, in such a position and so far from the anterior abdominal wall that any attempt to palpate it from without must necessarily fail, it being difficult enough to reach it when the abdomen is freely open. One can but smile at the stories one used to hear of men who could diagnose the presence of calculi in the gall bladder by feeling the calculi rub against one another. How utterly impossible this would be is demonstrable at once in even ordinary cases; how much more when complicated, as in the next case, by the presence of a Riedel's lobe a condition far from rare!

Miss C., aged 48, sent to me by Dr Willis, of Gorton, near Manchester. As her history is interesting I quote it at length. When she was 4 years old her parents went to New Zealand, where she lived for eighteen months. Then she came back to England. At 12 years of age she had a severe illness, the

details of which are vague, and which did not last long. Four to five years later, she being about 21, she had a long illness lasting for eight months, and culminating in the formation of a swelling in the epigastrium which burst at that point, giving exit to a number of hydatid cysts; from this she slowly recovered. For the next twenty-one years she appeared to be in good health, then pain was felt for the first time in the right hypogastrium. At this time she would be 42 years old. A very severe and prolonged attack occurred, lasting more or less for eighteen months. After a period of rest this recurred, but not so severely, several times at irregular intervals until three months before examination. From that time until operation the attacks increased rapidly in severity and frequency, requiring constant morphine injections.

Each of these later attacks began with a sense of dull aching in the right hypogastrium, or with dyspepsia; then either acute pain would commence suddenly, or a subacute pain would be felt for some time, slowly becoming more and more unbearable. In these latter there was felt occasionally a dull pushing sensation, sometimes a sudden shooting which made her jump. The actual pain was always in the gall-bladder area, but the aching passed round the right side across the back below the scapulae, being worst on the right side.

On opening the peritoneum, nothing could at first be seen but liver; this extended apparently down as far as the iliac fossa, but on an attempt to rotate the viscus it quickly could be seen that this appearance was due to the extension downwards of a portion, like a flap of the liver, which is known as a Riedel's lobe; its base opposite to the line of the costae was scored by a fibrous intersection which did not extend beyond a few lines of its thickness. When this apron-like process was drawn up the extremely small and contracted gall bladder was found buried in a mass of adhesions about the middle line of the under surface of the liver, from before backwards, containing a single mammillated calculus (shown). Removal of the calculus and drainage for a month ended in her complete recovery.

Nothing would be easier than to multiply instances of this, the most frequent condition found; nothing is more constantly being proved at operations of this kind than that Courvoisier's law is correct in the majority of instances; where gall stones are present a shrunken contracted gall bladder is to be expected; when the gall bladder can be felt before operation some other cause than gall stones is at the root of the mischief; but it is doubtful if any good purpose would be thereby served. Besides, the question of diagnosis has yet to be considered, and will, I think, be found much more interesting than a mere enumeration of cases which mainly differ in the varying complexities of the adhesions met with and the position of the stones removed.

Operations on the Cystic and Common Ducts.—These are fortunately less often required than those upon the gall bladder. Since such concretions are usually primarily formed in the latter viscus, and only reach the duct by dilating the passage between the gall bladder and the point at which they are found, this dilatation admits as a rule of their being once more carried up into the bladder, from which they may be extracted. Occasionally, however, this is not possible, and the stone must be removed through an incision in the duct itself, as in the following case:

Mrs. S. A. D., aged 43, admitted July 15th, 1906, in whom symptoms had existed for twelve years; acute biliary colics for six years. Jaundice was seen in the first attack and occasionally since.

On July 19th, Robson's incision having been made and the liver rotated, a shrunken gall bladder was found containing several facetted calculi; the cystic duct barely admitted a probe; below in the common duct several angular calculi could be felt; as these could not be reached through the contracted cystic duct, the common duct was incised, and five stones were removed from that channel; a drainage tube was sewn into the bladder, and another secured to the opening in the duct. These tubes came away on the tenth day; free escape of bile continued from both openings for over a month. Recovery in the end was perfect.

In two instances I have removed stones from the lower third of the common duct through an opening made in the duodenum, the McBurney operation. As these stones were lying, in the one case in the diverticulum, in the other immediately above, the wall covering them was simply incised to permit of their escape; this incision was not sutured, but the duodenal incision was closed by two layers. Both cases recovered.

I have not yet mobilized the duodenum in order to reach such stones from behind, as recommended by Sencert of Paris, by Haasler, and by Bloch of Copenhagen, simply because I have not so far met with a stone which could not be reached by one or other of the previous methods, but the operation as described by them would seem to be not without utility in certain cases. The danger of wounding the pancreas and so setting free pancreatic juice in the connective tissue spaces behind would appear to be mainly theoretical, since in the cases described the pancreatic tissues had themselves undergone such changes as to render them harmless. Still there is always the possibility that they might still be secreting, and for that reason the transduodenal method would appear to be safer.

The mortality in my series of all operations has been four, and in the last twenty none at all.

In considering the question of symptomatology, the first thing to be done is obviously to get rid of some of the old teaching on this point. Every one knows the classic symptoms—pain in the right hypochondrium, spreading round to the right scapula and up into the right shoulder; jaundice; tumour below the edge of the liver, its own dullness being continuous with that of the liver, and the mass of it moving with respiration; clay-coloured stools; bile in the urine; and probably stones to be found after careful washing of the faeces. Operative work has shown that in any given case one or more of all these symptoms may be present, but that they are seldom or never all present together; that one of them, the tumour, is far more indicative of other conditions, and that even the most constant of all, the pain, requires modification, since in the experience of most it but rarely rises as high as the shoulder. In my own cases I have only met with it at such a height in three cases; in all the rest pain has been felt nearer the angle of the scapula and in that plane, very seldom higher. Jaundice, as we all know, is only seen when there is some obstruction to the outflow in the common or hepatic ducts, and is as likely to occur with simple catarrh of these ducts, when the swollen mucosa diminishes their calibre as with biliary calculi. Clay-coloured stools and the presence of bile in the urine are equally symptomatic of catarrh of these ducts, whilst they are most marked in chronic pancreatitis affecting the head of the pancreas, or in carcinoma in or pressing upon these channels. The discovery of calculi in the stools is, no doubt, evidence that calculi have existed in the biliary channels, but it cannot prove that they are still present there.

But if it is easy to show that the symptoms upon which we used to be taught to rely may mislead, does the fresh evidence as to the formation of these bodies throw any new light on diagnosis? I think that it does, and in this way:

Since biliary calculi only produce symptoms which call for their removal when the channels in which they lie are inflamed, tenderness of those channels on pressure is the one inevitable symptom which must always be present; and it is to be noted that this tenderness is not only to be found during an attack, but persists afterwards and can always be elicited by pressure properly applied. That inflamed tissues should show tenderness is only what might be expected; that they will do so much more if they are compressed upon a hard mass contained within them is still more evident; if in addition they can be compressed against a firm backing, such as the liver substance itself, this tenderness will become more striking still.

That this method of testing is reliable was first demonstrated by Murphy of Chicago, who has in this way not only supplied a means of detecting biliary calculi which otherwise might not have been suspected, but of distinguishing between them and renal calculi, the most likely condition to be confounded with them when the other symptoms present might not have been sufficient to differentiate between them.

Robson had shown that pressure directly backwards over the lower third of a line drawn from the tip of the ninth rib on the right side towards the umbilicus elicited pain in cases of biliary calculi; but this might also be the fact in those of renal calculus, especially if that calculus happened to be one composed of calcium oxalate; direct backward pressure might also impinge on a tender duodenum or hepatic flexure; it was not, therefore, sufficient for exact diagnosis. Murphy's method supplies the requisite differentiation.

The patient, all clothing being removed from the lower chest and abdomen, is placed in a sitting position with his back to the examiner; the latter, sitting behind, places

both hands on the front of the abdomen immediately below the costal margins; the patient bends forward, placing his own hands on his knees. He is instructed to breathe deeply; at each expiration the examiner's hands sink more deeply into the abdominal walls; they not only sink inwards, but they rotate on their own axes, so that soon the ulnar edge lies more deeply than the radial and the tactile surface of the fingers is directed upwards.

Very soon the hands begin to approach the under surface of the stomach on the left, and of the liver on the right side; as soon as the tender gall bladder comes near the compressing right hand during inspiration, which forces the liver downwards, pain is experienced, and the act of respiration is abruptly checked; the pain is definitely referred to the right hand.

Pressure so applied is absolutely deflected from the kidney, which is not compressed. Any pain due to the duodenum or hepatic flexure is felt at first, and is not so definitely caused at a comparatively late period, or at a definite moment in the examination; nor has it any but a general effect upon the respiration, or the respiration upon it. This method of Murphy's will be found, as far as my experience goes, to be extremely reliable.

When, therefore, pain of a paroxysmal character referred to the right hypochondrium occurs, especially if it is associated with nausea or vomiting, it is well to test in this way, since, if the result is negative, we can at once, and safely, so far as my experience goes, eliminate the possibility of biliary calculi; the pain will be found to be due to other causes. If, on the other hand, it is affirmative, the only other condition which might produce it is uncomplicated inflammation of these biliary canals. Any one who has used this test in these two conditions will recognize at once the sharper, more acute pain and interference with respiration which occurs in the calculous cases, and is not, I think, likely to be misled. But, even if such a mistake should occur, no great harm will have been done, since drainage of these inflamed channels is by far the best treatment for such a condition, whilst it is also the best preventive against calculous formation in the future.

By means of this test, also, we may hope to detect calculi which are the real causes of many ill-defined affections at present frequently diagnosed as functional gastric disorders, and, by removing these concretions, rescue some sufferers from long-standing invalidism or persistent, unexplainable misery.

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THE REMOVAL OF ENLARGED TONSILS.

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Some recent communications to the Journal on this subject have suggested to me to put on record a method of operation which I have employed for a long time.

Fifteen or twenty years ago I became dissatisfied with the two usual operations. Of these the removal by guillotine was the worst. As a rule it took a mere shaving off the face of the tonsil, leaving behind a varying amount of the gland, sometimes as much as two-thirds. The procedure was little under the control of the surgeon. It was hit or miss, and the result was often disappointing, the narrowing of the fauces for which the operation was done was sometimes very imperfectly relieved. It was far from unusual for temporary improvement to be followed by increased growth of the part left, and by a return to the stenosed condition. The operation by vulsellum and blunt-pointed bistoury was a little better. The gland could sometimes be drawn well out from between the pillars and effectively amputated, but not always. It was often attended by more haemorrhage than was at all desirable. It was also wanting in precision. By thinking over these various disadvantages, I dropped into the way of operating described below. The results have been such as to satisfy me.

I always have a deep anaesthetic administered. The patient is laid on one side, that being chosen which best allows light to reach the back of the mouth. Occasionally but not often difficulty of removal is taken into consideration. It is somewhat more easy to get at the tonsil when it is on the lower side, and the patient may be so placed as to put lowest the side on which the gland is most embedded in the palate. The following instruments are required:

A Gag.—I use one which I had made for the purpose. Its bearing points are four bars placed in contact with the upper and lower bicuspid teeth on both sides. It is so contrived that it does not interfere with the use of instruments in the mouth. Generally it is self-retaining, but occasionally in a narrow mouth, or when teeth are deficient, it must be tied in place by a tape across the back of the neck.

A Straight Vulsellum.—This should have long teeth which guard each other when the blades are locked, and prevent all points catching where they are not wanted.

A Blunt Dissector.—The one I use has a blade $\frac{3}{8}$ in. broad. The point and edges will not cut. It is slightly curved on the flat. I first knew it as a perio-teum elevator.

Two Pairs of Long Strong Forceps to hold tampons.

A Pair of Scissors curved on the flat.

An Ordinary Scalpel.

A Probe-pointed Bistoury.

The instruments necessary for curetting adenoid growths.

At one time a guillotine was always included, but presently it was left out as a rule, and only taken for an exceptional case. It does well under one condition, when the tonsil is attached by a distinct neck. This is unusual; generally the large tonsil is ensheathed in the mucous membrane of the soft palate, only a small portion of it protruding from between the pillars.

The operation is commenced by opening the mouth as widely as possible with the gag. The tonsil of the side on which the patient is lying is then caught by the vulsellum. The best grip is got by placing one blade on the nasal and the other on the laryngeal end of the tonsil. The tonsil is drawn inwards and forwards. If it comes out from between the pillars no knife need be used, but if a considerable part of it remains behind the palate a transverse incision is made to expose the gland thoroughly. This is done with a sharp-pointed scalpel from within outwards through the mucous membrane. It starts about the middle of the anterior pillar and is from half to three-quarters of an inch long, according to the size of the tonsil, which is made to bulge through it. At this stage, whether the mucous membrane has been cut or not, as much traction is put on the gland as it will bear and the blunt dissector is pushed behind it from above. It is then systematically teazed out from its connexions. There is this distinct advantage in starting in this way, that it prevents the uvula being injured, as it might be if the gland were taken out from below. Most tonsils are cleanly out with a smooth and rounded back surface. Much of the completeness and facility of the operation depends on the consistence of the gland. If it is firm the removal is easy, but if it is soft and bears traction badly it may be a matter of difficulty to get it out whole owing to the teeth of the vulsellum tearing through. Scissors and the blunt bistoury are very useful for a tonsil of the latter sort. It is first well loosened by the dissector, and then its final attachments snipped or cut.

When one tonsil has been removed it is advisable to wait for a few minutes to allow bleeding to diminish before the second tonsil is then dealt with in a similar way. Any adenoid growths and turbinate thickening attended to if necessary.

By this method there is only a very moderate amount of bleeding. I have not encountered troublesome haemorrhage for many years; very occasionally it has been necessary to hold a tampon on the wounded surface which can be compressed between a finger outside and a pad within. This has always proved sufficient to control any active vessel till it closed in due course. The proximity of the internal carotid artery is a time honoured surgical bogey. If the operation is done as just described there is no risk of injury to it. The dissection keeps close to the gland, which is turned clean by out of itself and the traction which is exercised by the vulsellum tends to lift the tonsil away from the neighbourhood of the vessel.

The gland when thus removed never returns, and the operation definitely accomplishes the object for which it was undertaken.

There is generally discomfort and pain for two days after the operation, but by the third or fourth day these have much subsided. Healing is generally complete in about ten days.

A CASE OF GASTRO-ENTEROSTOMY, COMBINED WITH GASTROSTOMY, FOR ULCERATION OF THE STOMACH,

CAUSED BY SWALLOWING HYDROCHLORIC ACID.

By B. G. A. MOYNIHAN, M.S., F.R.C.S.,
LEEDS.

I have recently had under my care a patient who, as the result of the accidental swallowing of a caustic fluid, suffered from extensive ulceration of the stomach, and consequent stenosis of the pylorus. The conditions disclosed by operation, and the success of the procedure adopted, make the case worthy of note.

History.

Mrs. B., aged 28, was sent to me by Dr. T. McC. Foley, of Scarborough. The history was that, seven weeks ago, she drank "a few mouthfuls" of "spirits of salts" (hydrochloric acid) from a bottle, by mistake. She quickly realized the mistake by reason of the onset of extremely severe pain in the mouth, throat, and stomach; she did not vomit then. Within the next few days, the lips, mouth, and throat became very sore, and the attempt to take any form of food was followed by severe pain and by vomiting. For the last three weeks she had been unable to take any food, either liquid or semi-solid, without great pain, and almost instant vomiting. She had lost over 2 st. in weight. On her admission to the hospital it was found that she could drink a couple of ounces of milk quite freely, but after a period of from three to seven minutes the milk was vomited. Apparently none of it was retained. A stomach tube passed 9 in. quite readily, so that it was clear there was no obstruction in the oesophagus.

Operation.

On September 15th, 1905, I operated, opening the abdomen to the left of the middle line. The stomach was found small and empty. The pyloric portion, with the pyloric antrum, was rigid and hard, resembling a large rectal bougie. To this portion of the stomach there was apparently no cavity at all, and it seemed quite impossible that any fluid could find its way through so dense a tumour; the remainder of the stomach felt rather thicker than normal, and velvety.

A posterior gastro-enterostomy was performed in the usual manner. The appearance presented by the stomach mucosa was very remarkable. In colour it was of a deep plum; but the most striking feature was its tenuity. In place of the thick, rugose, mobile membrane, there was found a thin, friable coating of a membrane, which was intimately adherent to the parts beneath it. On incising the stomach its cavity was opened as soon as the muscular layer was cut, so that the excision of a part of the mucosa in the form of an ellipse was impossible. Here and there small patches of greenish—almost gangrenous—material were seen. The opening in the stomach for anastomosis with the jejunum was made nearer to the cardiac orifice than usual. The operation was completed in the ordinary manner.

When the stomach was replaced a portion of its anterior surface, midway between the curvatures, and well towards the cardiac end, was seized in a clip, and a small opening made into the cavity. Through this opening a piece of indiarubber drainage tube of about the size of a No. 14 (English) catheter was passed. With the fingers of the right hand placed below the stomach; this tube was guided through the gastrostomy opening into the distal limb of the jejunum for about 5 in. This being done, the right hand was removed, and the omentum replaced. At the point of entrance of the tube into the stomach on its anterior wall, a gastrostomy was now performed after "Senn's method." A single catgut stitch fixed the tube to the edge of the opening, and a series of circular purse-string sutures were applied round the tube in tiers, so that a cone of the stomach was infolded. A couple of sutures then fixed the anterior wall of the stomach to the parietal peritoneum of the abdominal wall, and the wound was closed.



Posterior gastro-enterostomy, combined with gastrostomy. The tube passes through the new opening into the distal portion of the jejunum.

After-History.

During the first two and a half weeks the patient was fed every four hours through the tube in the manner usual in cases of gastrostomy. The fluid, however, would not pass into the stomach, but through the stomach directly into the jejunum, into which it was delivered, about 5 in. below the gastro-enterostomy opening. The fluids administered were peptonized milk, beef-tea, with plasmon, and sanatogen and water. During the first three or four days, owing to a misunderstanding on the part of the resident officer in charge of the case, some fluid was given by the mouth, but after this time no drop of any fluid was given by the mouth for two weeks. The mouth was frequently rinsed and the teeth frequently brushed, so as to ensure that the mouth was kept both clean and moist. The amount of fluid given at each meal was gradually increased from 6 oz. to 15 oz., the patient throughout was perfectly content and placid, only occasionally giving vent to a good-natured grumble that she was hungry. On the eighteenth day food was again given by the mouth; at first sips of water, then tea, milk puddings, and so on. The tube was removed in the fourth week, and the little wound left in the abdominal wall speedily granulated up; there was never any leakage from it.

In January, 1906, Dr. Foley wrote to say that the patient had made a perfect recovery, and was taking solid foods in ordinary quantities.

An examination of museum specimens and a search into the records show that in cases in which an intensely irritating fluid has been swallowed, accidentally or with suicidal intent, the parts most affected are lips and mouth, the pharynx, and the first inch or more of the oesophagus, the lower end of the oesophagus immediately above the cardiac orifice, and the pylorus and pyloric antrum. The greater part of the oesophagus escapes serious damage, though patches of ulceration, or even gangrene, may be distributed throughout it. So far as the stomach is concerned, the worst injury is inflicted on the pylorus, but in severe cases the whole mucous membrane may be affected.

In several of the recorded cases appearances very closely similar to that which I have described were recognized. The contraction and consolidation of the pyloric portion of the stomach have been frequently observed. Mr. Keetley likens the appearance in one of his cases to "a small sausage"; of a second he says: "the pylorus was thickened and so contracted that it would only just admit the closed blades of a pair of polypus forceps"; and a third that there was "thickening and a very tight stricture of the pylorus."

The mucous membrane is at once deeply burned: in the stomach it assumes very rapidly a deep purple or almost black colour, and ulceration speedily follows. In many of the specimens when a recent examination is made, patches of gangrene, with adherent food particles, may be recognized. In addition to the cauterization due to the

irritating fluid, a septic element caused by the decomposition of adherent food particles is present.

The symptoms noticed at the first moments are an intense burning of the labial and buccal mucous membranes, a scalding sensation in the throat, and an intense burning in the epigastrium. In many cases, though not in the one now recorded, vomiting occurs. The agony at the first may be almost unendurable, and shock is profound.

In the larger number of cases there is soon a marked difficulty in swallowing; when a few drops only of fluid are swallowed the pain elicited may be excessive. Thirst is intolerable, the soreness of the lips and mouth when the sloughs begin to separate is terrible, and a raw bleeding surface may be left. Vomiting is an early and a constant symptom; even when a very small quantity of fluid is taken it may be ejected at once or in a few minutes.

The character of the symptoms changes after a time, according as obstruction, due to cicatricial contraction in healing, is caused in the oesophagus or in the stomach. When a stricture forms in the gullet, it is almost always at the upper end; when in the stomach, it is at the pylorus and in the pyloric antrum. In an apparently favourable case the local conditions quickly clear up, and fluid food may be taken in fair quantity and retained; but, after the lapse of three or four weeks or more, vomiting, which has been absent or in abeyance, returns more seriously than before. The stomach dilates, and its muscular walls hypertrophy until the usual clinical picture of pyloric stenosis is produced in its most exemplary form.

In other cases the characteristic signs of obstruction in the oesophagus are produced, and in still others there may be obstruction both in the oesophagus, at the upper or lower end, and at the pylorus.

TREATMENT.

In all cases it is of the first importance to see that there is complete abstention from food of any kind. By giving food the process of ulceration is quickened, the ulceration spreads, gangrene in more or less extensive patches occurs, and a virulent septic process is set going. The chief attempt should be directed to keeping the scalded surfaces sweet and clean. Mouth washes, sprays, gargles, frequent mopping of the ulcers with gauze swabs, all are useful in helping to ensure cleanliness. The administration of saline enemata by the rectum will help to relieve thirst to some extent.

It is probable that in all cases the safest course will be to have an early resort to surgery. By means of some operative procedure the feeding of the patient can be ensured for such a time as will allow healing to take place in the ulcerated patches.

The two operations—one of which will usually be needed are gastrostomy, when the oesophagus alone is affected, and gastro-jejunostomy combined with gastrostomy, when the pyloric portion of the stomach is most injured. Duodenostomy, as practised by Hartmann, or jejunostomy alone, suffices merely to feed the patient for a time. They do nothing towards securing him against the almost certain troubles which will result from the mechanical obstruction at the pylorus due to the healing of the deeply ulcerated mucosa.

The operation practised in this case effects two purposes: it enables the patient to be fed while healing of the ulcerated surfaces is in progress, and by means of the gastro-enterostomy it establishes an alternative route from the stomach when the pylorus is closed by the contraction of the cicatricial tissue deposited in the ulcers.

Under the will of the late Mr. Joseph Fox of Lindley, Huddersfield, who died on January 12th, the Huddersfield and Agbrigg Infirmary receives a sum of £500.

STRASBURG DOCTORS AND FEES. The doctors of Strassburg have decided to follow the example of those of Berlin and some other large cities of Germany by raising their scale of fees. They have, however, bettered the instruction of their colleagues. Thus it has been agreed that visits at their own houses are to be paid for at the time. Visits to patients' houses, unless arranged for before 9 in the morning are to be charged for at double the usual rate. For night visits between 7 p.m. and 8 a.m., and for visits made on Sunday afternoons the fee is to be trebled. Consultations by telephone are to be charged for at the same rate as ordinary consultations. Accounts are to be sent in at least every six months.

The Lumleian Lectures

ON

INSANITY, ITS CAUSES AND INCREASE.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

BY GEORGE HY. SAVAGE, M.D., F.R.C.P.,

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LECTURE II.

THE CAUSES OF INSANITY.

IN this lecture I purpose considering some of the chief causes of insanity, and giving my opinion as to the part played by them in any increase which is evident among the insane. I shall in order take heredity and its influence, alcoholic excess, and lastly, influenza and its special effect on the increase of neuroses generally.

Much has been written on heredity of late, and still we are not in possession of a clue to what is and what is not transmissible. I accept it as a fact that no mutilation of, or late acquisition by, a parent will be passed on to children, but I must insist upon it that there is a very potent passing on of some tendency to neurosis. There is a common idea that all insanity is inherited, and also that all forms of insanity may be inherited.

The solution of the question whether this is true has far-ranging influence—first, medically and educationally, next socially, as to the right of those belonging to highly-neurotic or insane families marrying and having children. Of course, when there is the tendency in two persons, marriage by them should be stopped if possible.

There is, however, a strong tendency to breed out of neurosis if one of the mates is strong, healthy, and not related to the other. Consanguineous marriages are not dangerous from mere nearness of kin, and the old idea that the deaf and dumb and feeble-minded owed their weakness to such cousinly marriages has not been confirmed. It has been suggested that some of the increase is due to children being begotten by parents only partially recovered, and who have been discharged during their convalescence from asylums. By careful examination from reports of superintendents of asylums this has not been confirmed. Such cases have occurred in my own experience, but they have been very rare.

Neurotic heredity may be compared to the mycelium of a fungus which, unseen, spreads far and wide, and only sends up the fungus as evidence of its existence when conditions suitable to its growth are present.

I have to allow that there is such a thing as a pretty definite neurotic stock or type, but insanity as such is not transmitted, though with the insane there is a strong tendency to produce offspring who are unduly unstable. Insanity, like all highly-specialized mental capacities, genius, etc., tends to extinction or to nervous instability in the following generations.

The children of lunatics may be only neurotic, and never become insane, but the children of the lunatic whose insanity depends on marked brain decay, such as general paralysis, alcoholic insanity, and senile mental disorders, are likely to be mentally weak or morally insane. I have found that any great special power, whether mental or even muscular, is associated with danger. I have had a patient tell me that my safety depended on a dead level of respectability, while his instability depended on family genius.

It is interesting to note that tricks or habits may reappear in children, just as slight bodily peculiarities like the extra finger or toe. If we follow Darwin we should expect only very slight variations to occur and to recur. This is seen in the handwriting, which frequently is very similar in parents and children.

From these general remarks I now pass to concrete evidence. I have known a woman who was already insane, and incurably insane, have children who have, at least for years, remained free from insanity, though some have been unstable in other ways. On the other hand, I have known children of mothers who appeared to be sane during pregnancy yet became insane after delivery, develop insanity early in life or even [illegible] from the first.

In these cases my hidden mycelium bore its part. Truly insane parentage may lead to neuroses of various kinds, to asocial states and to criminal tendencies. One meets with whole families of idiots just as one meets with families in which some special forms of paralysis recur; in these cases the parents are often, I would say generally, not insane, though peculiar in some way. They resemble the old chemical experiment in which two clear solutions being added a black precipitate followed. It is possible that we, or rather our successors, may be able to gauge the stability of nervous tissues quite apart from their chemical structure, and they may thus be able to assist in the diagnosis of such dangerous compounds.

There is no probability that coarse brain lesions in a parent are in any way causes of insanity in the offspring. The question as to the relationship between neurotic heredity and general paralysis is still unsettled, some of the more recent writers considering that a large proportion of general paralytics have a clear history of neurosis in their families. I am free to admit that my experience is that a small proportion only of the cases I have seen have any such history. I have already said that some forms of insanity almost always occur in patients who have a strong heredity of neurosis, but in a sense a man may produce the same symptoms in himself by alcoholic excess and the like.

It must not be forgotten that there is danger of association between an insane parent and a child. I have seen a good number of children who, living with insane mothers, have developed the same or similar delusions. Similarly I have known daughters who, having nursed a parent for a long time, up to their deaths, developed similar symptoms of a purely functional type.

It is often said that there is a special tendency to transmit suicidal inclination in families, and I allow that there are many cases in which suicide has been the common end of members of a family. This is only another confirmation of my experience that melancholic states are very bodily in their origin, and are not uncommon in members of one family.

It seems unlikely from what I have said that there can be any transmission of any definite idea. I have, however, met with several instances in which both parent and child have said that they were the unpardonable sinners. This of course means only that they both lived in a similar religious atmosphere, and were also inclined to melancholia. I have met, too, with parents and children having similar obsessions, such as dread of crowds, of solitude, of dirt, or of heights. Here again we have the transmission of the unstable nervous system, which reacts unduly to social conditions. These obsessions, as a rule, do not get much worse, and do not destroy mind, as some of the invading disorders which occur in the delusional cases. Marriage of such persons is very likely to produce children with similar instability, but with little real danger of the more ordinary forms of insanity.

The truly insane or highly neurotic parent tends to pass on (if anything) special forms of insanity, what I have called the habit insanities, folie circulaire, folie raisonnante, recurrent insanity, a tendency to break down at the epochs of life. These patients seem incapable of standing normal physiological stress. With this there is an extraordinary power of recovery so that patients belonging to highly neurotic stock may have dozens of attacks of most violent mania and yet retain till the end of a long life mental ability.

Strongly marked heredity is associated with the occurrence of the above disorders and with the various forms of hallucinational disorders, with organized delusional insanity, with ideas of persecution, and also with the various dreads or phobias and obsessions to which I have already referred.

Conclusions.

To sum up, heredity has a small share in the causation of general paralysis; it is more frequently seen in relationship with melancholic than maniacal states. This has some connexion with the longer life of persons nowadays. They not infrequently show the weight of years in mental depression. Melancholic states are much more likely to recur in families than maniacal disorders; all forms of insanity, especially sensory hallucinations and their resulting delusions with fixed obsessions, are chiefly dependent on hereditary taint; moral imbecility and asocial and criminal tendencies often arise in very neurotic families.

Idiocy, mental weakness, and eccentricity is common in the children of physically decadent parents.

There is no such thing as transmission of any form of insanity direct, but there is a distinct danger of the passing on of a nervous instability which leads to mental disorder resulting from slight or even normal physiological strain.

Insane parents may have sane children.

Consanguinity alone does not produce mental disorder.

Eccentric and nervous (not insane) parents may give rise to whole families of idiots or defectives.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

THE DISTRIBUTION OF THE "AMERICAN" HOOK WORM.

Until quite recently it was universally supposed that the *Necator americanus*, the causal agent in the production of an anaemia clinically indistinguishable from that due in Europe to the *Agchylostomum duodenale*, was a parasite peculiar to the New World, and on this account it became designated the "American" or "New World" hook worm.

In the summer of 1905, however, Looss was enabled, from a study of the parasites of pigmies from the Ituri Forest, to record the occurrence of this form in Central Africa, and he offered the interesting explanation that the *Necator americanus* was originally African and had been transported thence to America at the time of the slave trade. As most of the slaves imported into the United States were procured from the Guinea Coast, it was to be anticipated that, if the theory were correct, this species would probably be still obtainable in West Africa, and this I found to be the case while on the Gold Coast in the latter part of 1905.

On my return I continued my inquiries with a view to ascertaining the extent of the distribution of the *N. americanus* throughout the old world, and found that the specimens brought from Entebbe, Uganda, by the Sleeping Sickness Commission, and deposited in the Museum of the London School of Tropical Medicine, and those forwarded to me from North-West Rhodesia by Dr. Yule Massey, were wholly of this species. It is evident, then, that the *N. americanus* is widely spread over the African Continent, though it is, curiously, absent from Egypt.

Farther inquiry has shown it to be still more cosmopolitan in its distribution. Dr. Chalmers has kindly furnished me with a large number of "ankylostomes" from natives of Ceylon, and they likewise show no admixture with *Agchylostomum duodenale*. I have also been able, from an examination of material obtained from a patient who had returned to England after working for some years in the goldfields of Mysore, to verify its incidence in India. In a case from Burmah the infection was a mixed one. Stephens has already recorded necator forms from Assam and Burmah, but adds with reference to his material that "whether these species of necator include *N. americanus* remains to be seen."

In Chinamen I have so far only found examples of *Agchylostomum duodenale*. The absence, too, of any record from the active helminthological workers in Japan of its presence there is suggestive of a limitation in the range of *N. americanus* eastwards.

The local incidence of the two closely allied forms in various parts of the world remains still to be worked out, but it is at least obvious that the terms "american" and "new world" are in a sense misnomers as applied at the present day to the parasite under discussion, and that *N. americanus* is little if any less restricted than *Agchylostomum duodenale* in its distribution.

R. T. Leiper, M.B.,
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SCURVY.

The theory that want of fresh vegetable causes scurvy dies very hard. But I thought that the experience of the recent Arctic and Antarctic expeditions had proved that fresh meat is the essential need.

The case of scurvy occurring in a diabetic, recently reported, appears convincing, but I can quote one equally convincing in the opposite direction.

It was necessary to feed a child, under my care from birth, on the bottle. The milk was always sterilized, but orange juice was given daily, and later fish, potatoes, and green vegetables. In spite of this at 2 years his gums were found to be spongy, and bled when his teeth were cleaned. He was given scraped beef, very nearly raw, and in a fortnight his gums were quite healthy. The only other change was reduction in the amount of salt given. Sterilized milk was continued.

Minced meat is usually overcooked, and thus useless. To give my reasons would encroach too much on your space, but from clinical observation I am convinced that scurvy is due to absence of fresh meat juice. I would never recommend lime juice to be carried in any ship for the prevention of scurvy, but would rather try to provide some form of preserved meat juice.

C. B. Gittings, M.D.Lond.,
Staff Surgeon, R.N.

TREATMENT OF THE VOMITING OF PREGNANCY.

The memorandum by Dr. Rowland, of Lichfield, in the British Medical Journal of November 24th, 1906, recommending veronal in the vomiting of pregnancy, has suggested to me to bring to the notice of the profession another method of treating this condition.

We must assume that headache, nausea, vomiting, diarrhoea, albuminuria, occurring during the course of pregnancy, are due in most cases to the presence in the system, at that time, of the products of faulty metabolism. In a normal pregnancy these are not formed in any quantity, or, if formed, are eliminated sufficiently rapidly and thoroughly to help the patient to escape the severer symptoms and the marasmus consequent on them. The elimination takes place through the usual emunctories—stomach, bowels, kidneys. In the early stages of pregnancy the principal organ to throw off the metabolic poison is the stomach: hence the vomiting. It should be our endeavour (1) to remove the metabolic poison already formed; and (2) to prevent the formation of more of this toxin.

1. The first object can be attained (*a*) by washing out the stomach, and hence mechanically removing the matter which is irritating that organ. This can be done by copious draughts of warm water given the first thing in the morning, when it seems that the long hours of fast have allowed the accumulation of the poison. If necessary, the draught of water is helped to return by touching the back of the tongue with the finger. In many cases the patient is sick after this lavage and a little rest, to get up and have food, and is not troubled again for many hours, perhaps not until the next day. (*b*) By breaking up the complex structure of the poison and then washing out the stomach. This is successfully done by the administration of 1 to 4 gr. of potassium permanganate swallowed in a cachet with 3 to 6 oz. of water. The patient keeps this in the stomach from ten to twenty minutes, lying very still, not speaking or moving. Then she is directed to take a pint or more of warm water, which is helped up if necessary. In some cases, when the larger doses of potassium permanganate are not retained long enough to ensure the chemical decomposition of the contents of the stomach, it is beneficial to give 1 gr. doses every four hours, and the patient to retain the cachet altogether, or as long as possible. After experience of this method of treatment I have never noticed any cachexia from the permanganate.

2. To reduce the formation of the metabolic toxin it will be necessary to administer thyroid, on the same principle on which this drug is used in the treatment of the convulsions of pregnancy—that is, to regulate metabolism. Generally one 5 gr. tabloid of Burroughs and Wellcome administered three or four times a day will prove sufficient. The effect of this drug on the pulse must, of course, be watched. It must be stopped or diminished when the pulse gets too rapid and too soft, or when the vomiting disappears, to be recommenced when the symptoms reappear.

I read a paper on this subject, published in the *South African Medical Record* of December 15th, 1905, at the South African Medical Congress, 1905. In it some cases were narrated, and it was pointed out that the complications of the treatment demanded the personal supervision of the medical practitioner or the co-operation of a nurse or intelligent friend.

Durban, Natal. H. Aylmer Dumat, M.D., F.R.C.P.Ed.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE NORTH CAMBRIDGESHIRE HOSPITAL, WISBECH.

RUPTURE OF ULCERATED ABDOMINAL WALL OVER AN UMBILICAL HERNIA, WITH PROTRUSION OF GUT, UNTREATED FOR 7½ HOURS: UNINTERRUPTED RECOVERY.

(By Arthur H. Williams, M.R.C.S., L.R.C.P., Resident Medical Officer.)

On December 8th, 1906, a woman, aged 38, was admitted, under the care of Dr. C. H. Gunson, with 3 ft. of intestine protruding through a small opening in the anterior abdominal wall at the situation of the umbilicus.

For the previous two and a half years she had had an umbilical hernia, for which she had persistently refused to wear any apparatus. This had reached the size of a child's head, and for about two months she had noticed a patch of dark-coloured skin at the summit of it. Two days before admission a small ulcer appeared on this patch, and had reached the size of a two-shilling piece on the day on which the rupture occurred. At 8 a.m., while making no particular effort, the abdominal wall suddenly gave way, and a piece of gut the size of her forefinger protruded through the ulcer. This was accompanied by extreme pain, and followed by several fainting attacks and by vomiting, the latter persisting throughout the morning, and more bowel protruding.

No effort was made to treat or cover the protruded bowel until noon, when some neighbours came in and supported it with a towel. No doctor was communicated with until the afternoon, and on the doctor seeing her he immediately ordered her into the hospital, which was close by, her surroundings being such as to forbid anything being done in the house.

On admission at 5.15 p.m. 3 ft. of red and oedematous-looking small intestine were found protruding through the opening at the umbilicus. The patient was much collapsed, with a rapid, feeble pulse and cold extremities. A hypodermic injection of strychnine sulph. $\frac{1}{30}$ gr. was given.

The extruded part was surrounded with sterilized towels and the bowel thoroughly cleansed and irrigated with 1 in 6,000 mercury perchloride. Solution of cocaine (beta eucaine 3 gr., sodii chloridi 12 gr., adrenalin hydrochlor. ♏ xv, sterilized water 3 oz.) was injected into the skin and tissues of the abdominal wall immediately above the protrusion.

The end of a blunt-pointed, curved bistoury, guarded with the finger, was then inserted between the gut and the upper edge of the opening, which was enlarged. The intestine was gently returned and the edges of the ulcer excised. The abdominal wall, which was much attenuated, was united with deep sutures of silkworm gut and superficial ones of horsehair.

The temperature the same evening was 101.5° F., pulse 120, and there was no pain or vomiting. The following day the temperature gradually came down; it reached the normal on the fourth day, and there was a corresponding improvement in the pulse and general condition. On the fifth day the temperature rose to 100° F., and there was a slight oozing through one of the stitch-holes. The sutures were removed, and a small quantity of thin pus escaped. The wound was irrigated with 1 in 6,000 mercury perchloride solution and dressed with iodoform gauze. The following day the temperature was again normal, and had remained so since. The wound healed rapidly, leaving a slight firm scar.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

Staffordshire Branch.—The second ordinary meeting of the session was held at the North-Western Hotel, Stafford, on Thursday, February 28th, the President (Mr. Charles Reid) in the chair. Mr. F. Milnes Blumer showed a female child, aged 12 months, whose right femur was 2½ in. shorter than the left. The birth was normal, the head presenting, and the deformity was at once noticed. The hip-joint was normal, and the shortening appeared to be due to arrest of development of the lower epiphysis. The patella was quite rudimentary.—Mr. B. Cridland showed a case of movement of the right upper eyelid on depression of the jaw. The patient was a boy, aged 8, with left internal strabismus and slight ptosis of the right eye. With any movement involving depression of the lower jaw there was associated an involuntary raising of the right upper lid, most marked in the inner half. In moderate depression of the jaw the lid was raised to the upper edge of the cornea, and with an extreme depression of the jaw the sclera above the cornea was shown to the extent of 1 mm. or slightly more. It was pointed out that the explanation of this might lie in an abnormal action of the involuntary muscular fibres attached to the tarsus, and associated with tongue movements, or it might be due to mechanical abnormality in the shape of a band of fascia possibly connected with the temporal fascia.—Dr. Mander read a paper on a case of death due to haemorrhage from a duodenal ulcer caused by a stone in the kidney.—Dr. Carter showed specimen of stomach from a fatal case of hour-glass stenosis of the stomach, in which gastro-jejunostomy had been performed, but in which the communication had been inadvertently established with the distal instead of the proximal division of the stomach. Dr. Carter read a paper on a case of benign stenosis of the pylorus in which gastro-jejunostomy had been performed with very successful result.—Mr. W. D. Spanton showed a specimen of a large myoma of the uterus from a single patient, aged 50, upon whom Apostoli treatment had been applied about fourteen years ago, arresting the growth of the tumour until quite recently. Hysterectomy was performed and the patient made an excellent recovery. The tumour was unusually dense, and in parts undergoing calcareous degeneration, but several small myomata had recently developed subperitoneally.

REPORTS OF SOCIETIES.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Priestley Smith, F.R.C.S., President, in the Chair.

Thursday, March 14th, 1907.

Thrombosis of the Cavernous Sinus.

Dr. Rockliffe read notes of a case of thrombosis of the cavernous sinus associated with meningitis originating in a septic sore on the lip.

The patient was a fish dock labourer whose general health, but for bronchitic attacks, had been satisfactory. When first seen on November 18th, 1906, he had proptosis of the right eye. Five days previously a small spot had appeared on the upper lip. He picked it and eventually pricked it with a pin. The lip and face became swollen and he then applied a linseed meal poultice. Four days later he was admitted into the infirmary. He became delirious and a diagnosis of thrombosis of the cavernous sinus was made. Afterwards lumbar puncture was done. He died on November 20th, two days after admission and seven days after the spot appeared on the upper lip. At the autopsy the meninges about the right cavernous sinus were covered with lymph. The right cavernous, the transverse, and part of the left cavernous sinus were thrombosed. The orbital tissues on the right side were inflamed and swollen, but there was no pus.

Sympathetic Irritation.

Dr. Rockliffe also read notes of four cases of sympathetic irritation occurring after eighteen, twenty-two, twenty-eight, and fifty years. In two of these cases a foreign body was found, and the third case probably contained a foreign body, a piece of stone. The injury in the fourth case was a punctured wound. Considerable ossification was present in three of the cases.

Cysts of the Pars Ciliaris.

In a paper on Cysts of the Pars Ciliaris Retinae, Mr. A. R. Bradley stated that clinically these structures had frequently been mistaken for sarcomata of the ciliary body; but little was known of their pathology, though their study might throw some light on the secretion of the aqueous fluid. They were found in such a variety of conditions that he was only able to classify them according to their apparent mode of origin. Two changes which played an important part in the origin of some varieties limited to the cells of the unpigmented epithelium were multiplication of the cells and vacuolation of the cell bodies. This proliferation was most frequently found in senile eyes, and was commonly associated with hypertrophy of the ciliary processes. The cells of the pigmented layer appeared to play a mere passive rôle, and even in cysts arising by simple detachment of the epithelium it was the unpigmented layer alone which was affected, the adhesion between the pigmented epithelium and the underlying ciliary body being a peculiarly intimate one. The different modes of origin appeared to be: (1) Detachment of the non-pigmented epithelium; (2) proliferation of the non-pigmented epithelium cells, with the formation of a cavity arising either by a simple separation of the cells or by their vacuolation and destruction; (3) proliferation and union of the cells of adjacent processes, leading to a portion of the posterior chamber being shut off from the remainder. The number of the specimens was too small for him to come to any conclusion as to the relative frequency of these varieties. The contents of the cysts were usually lost during the preparation of the specimen, but when present they consisted of a deeply-staining, homogeneous, coagulable fluid.

OBSTETRICAL SOCIETY OF LONDON.

Dr. Herbert R. Spencer, President, in the Chair.

Wednesday, March 6th, 1907.

After-History of a Case of Fibroid of Broad Ligament.

Mr. Alban Doran read notes of a case in which, in July, 1901, he removed a cystic tumour of the left ovary and a fibroma of the left broad ligament. After enucleation of the solid tumour he turned the pedicle of the ovarian cyst into the space between the layers of the broad ligament, which he then sewed over it. The right ovary was noted as small and normal. In January, 1906, he removed a cystic tumour of the same right ovary, which was of a perfectly innocent type. There were no adhesions on the left side of the uterus, a fact which seemed to demonstrate the advantages of the treatment of the pedicle adopted at the first operation.

The President agreed that it was desirable, when possible, to bury pedicles in the broad ligament; but that was not always practicable. The rate of disappearance of silk varied much in different cases. He had seen the silk completely disappear from ovarian pedicles in three months, leaving the stump at the cornu of the uterus smooth and quite free from adhesions. On the other hand, he had found silk present after seven years.

Dr. Lewers had performed abdominal section a second time in the same patient in a considerable number of cases. It was certainly not the case that the pedicle left after removing an ovarian tumour, treated in the ordinary way, invariably contracted adhesions. He had several times seen it quite free from such adhesions.

Dr. Peter Horrocks mentioned a case in which the ovaries had been removed nine years before on account of a fibroid tumour. The latter, however, began to grow and give trouble, and so was removed a week ago by panhysterectomy. No adhesions were found over the stumps of the old operation. The greater the degree of asepsis the less was the likelihood of adhesions forming over the stump. If the distal end was strangulated by the ligature being very tight, adhesions were apt to form.

Mr. Alban Doran, in reply, maintained that the usual practice of leaving a ligatured pedicle bare in the peritoneum often led to extensive, if not dangerous, adhesions. Such was his experience of second ovariotomies on the

same patients. Twenty years ago, when thick silks were applied to thick pedicles and the peritoneum irritated by sponges, this complication was far more common than it was at the present day. Dr. Horrocks had referred to a different subject—removal of the ovaries for the "cure" of uterine fibroids. The pedicles projecting from a big fibroid uterus were in a position highly favourable to the development of adhesions.

Perithelioma of the Uterus.

Mr. G. F. Darwall Smith communicated a case of perithelioma of the uterus in a single woman, aged 38, admitted into St. George's Hospital in July, 1906, complaining of pain in the left side and of more or less constant bleeding from the vagina for the preceding four months.

Double ovariotomy had been performed for two ovarian cysts in 1904, one of which was suppurating. These cysts were reported to be cysto-adenomatous in character. The convalescence was uneventful, and the patient was discharged apparently well. After this operation menstruation ceased, and no discharge of any kind was noticed until the bleeding began in March, 1906. When readmitted the cervix uteri was small and of normal consistence. The uterus was freely movable and felt somewhat unusually light. Douglas's pouch was empty and there was no abnormal swelling in the pelvis. On the evidence of tissue removed by curetting and reported to be peritheliomatous, total hysterectomy was performed by the abdominal route. The uterus was only slightly enlarged. After hardening it measured 3 in. in length externally and 2½ in. internally. The external appearances were normal. At the fundus of the cervix and projecting down into the uterine cavity was a soft friable growth distinctly paler than the surrounding mucous membrane, and seen by the microscope to be clearly peritheliomatous.

Mr. Targett regarded the growth as a sarcoma, and thought a further investigation of the specimen was desirable.

Inaugural Address.

The President (Dr. Herbert Spencer) then delivered the inaugural address. After thanking the Society for the high honour which it had conferred upon him, he proceeded to consider how far the "diseases" and "peccant humours" of learning of which Bacon wrote in the *Advancement of Learning* applied to the advancement of obstetrical and gynaecological knowledge at the present time. Allusion was made to the value of statistics, which ought to be "*truths* expressed in figures," with special reference to the statistics of cancer of the cervix and the fallacy of percentages. The common method of stating results in percentages after excluding the cases of death from the operation, of death from other causes, and of those who did not reply to inquiries, would permit an operator with a 99 per cent. death-rate to claim 100 per cent. of "cures" if a single patient out of 100 operated on remained well for five years.

PATHOLOGICAL SOCIETY OF LONDON.

P. H. Pye-Smith, M.D., F.R.S., in the Chair.

Tuesday, March 19th, 1907.

Observations on the Spirochaetes of Relapsing Fever and Tick Fever.

Lieutenant-Colonel W. B. Leishman, after referring to the interesting nature of the problems awaiting solution in connexion with many spirochaete infections, described the results of his own observations. His material consisted of films of blood from cases of African tick fever, and of relapsing fever from Austria, Aden, and several parts of India, in addition, through the kindness of Professor Karl Francfeld, he had had the opportunity of studying the living organisms of tick fever and of relapsing fever, the latter being the strain isolated in America and described by Novy and Knapp. Lieutenant-Colonel Leishman had studied the development of these organisms in white mice, and, contrary to the usual experience, had found both strains equally fatal. The effect of passage appeared to be an undoubted increase in the virulence of the spirochaetes, as evidenced by the earlier appearance of the organisms in the blood and their more rapid multiplication. He had failed entirely to confirm Novy and Knapp's description of easily-recognizable morphological differences between the spirochaetes of tick fever, European relapsing fever, and Indian relapsing fever, and had found wide variations in each case in respect of such features as length of the individual cell, number and depth of curves, tendency to formation of loops and figures 8, etc. The inconstancy of these features appeared to him to depend upon such factors as the vitality of the organism, the stage of the disease, the method of fixation, etc. From other evidence, such as that of the immunity experiments of Breinl and Kinghorn and of Fraenkel, there appeared no doubt of the specific difference between the spirochaetes of tick fever, *S. duttoni*, and relapsing fever, *S. obermeieri;* but further work appeared necessary to prove the existence of two or more varieties of relapsing fever. As regards the biological nature of these spirochaetes, which Novy and Knapp consider to be true bacteria, Colonel Leishman pointed out that considerable differences of opinion and experience existed with respect to several of the points which these authorities considered as demonstrative of their bacterial nature. He had been unable to demonstrate flagella in either organism, but had observed the structure which Schaudinn considered to be an undulating membrane in the spirochaete of relapsing fever.

[A microscopical demonstration was given of the living organisms. The so-called undulating membrane was also shown in the case of a monkey spirochaete and of *Spirochaeta obermeieri.*]

Typhoid Inoculation in the Army.

Lieutenant-Colonel W. B. Leishman gave an account of the progress of antityphoid inoculation in the army since the resumption of the method was authorized by the Army Council on the recommendation of the Committee appointed by them to investigate the subject. The inoculations are voluntary, but every effort is being made to popularize the method by means of lectures to all drafts and regiments proceeding on foreign service. As far as possible the inoculations are carried out before embarkation, but owing to various reasons the second inoculation is sometimes performed on board the transport. For this purpose vaccine is placed on board every outward-bound ship. The inoculations are also being carried out on a large scale in India and elsewhere, and 20,000 doses of vaccine have been prepared and issued from the Royal Army Medical College during the last twelve months. Research work in connexion with the method has been carried on uninterruptedly at the Royal Army Medical College by Lieutenant-Colonel Leishman and his colleagues, Majors Harrison and Grattan and Lieutenant Archibald, and a short account was given of the lines of investigation and the practical bearing of some of the results upon the methods of preparing and standardizing the vaccine. Numerous vaccines had been prepared from typhoid bacteria killed at different temperatures, by various chemical agents, by desiccation, etc., and their effects tested by measurement of the various protective substances which developed in the blood of inoculated animals. In several instances, where the results appeared promising, similar tests were carried out on man. The vaccine at present in use was described, and an account given of the mode of preparation and standardization, which had been somewhat modified from Sir A. E. Wright's methods in the light of the experimental work referred to. The bacteria were still killed by heat, but the temperature had been reduced to the minimum degree which would ensure death in one hour 53° C. The deleterious effects of higher temperatures had been clearly brought out by some of the experimental work, and it was suggested that the comparatively poor results obtained in some instances in the past may have been due to over-heating of the vaccine. The system adopted for ascertaining the protective value of the inoculations was then described, and the result of the inoculation of the 17th Lancers was given. This regiment, the only one which had been exposed to a severe epidemic of enteric since the modified vaccine had been in use, had 147 officers and men inoculated out of a strength of 509. They had 62 cases of enteric, with 11 deaths. All of these occurred among the uninoculated with the exception of 2, both being men who had refused the second inoculation; both of these men recovered.

"BLACKWATER" FEVER IN SIERRA LEONE.

Major H. W. GRATTAN read a paper upon the above subject. In 8 out of 10 cases quinine had been taken before the onset of "blackwater." Malarial parasites were present in the peripheral blood of 36 per cent. of cases after the onset of haemoglobinuria; 50 per cent. of the cases harboured the *Ankylostomum duodenale*. The red cells fell to 1,107,000 per c.mm., and the haemoglobin to 25 per cent. in the most severe cases that recovered. In 2 fatal cases 28 per cent. and 20 per cent. of haemoglobin were noted. An absolute polynuclear leucocytosis was noted at the onset of the disease, and later, when suppression of urine occurred, 13,800 leucocytes per c.mm. was the highest count noticed; this, with 24 per cent. of polynuclears, gave 11,592 polynuclears per c.mm. No malarial parasites or pigment were found in the organs *post mortem*. He considered that the evidence pointed to the disease being of malarial origin; his reasons were: (1) A previous history of malaria in every case; (2) the presence of a malarial parasite in the blood of 36 per cent. of cases; and further, he was of opinion that the disease was due to a special form of malarial parasite allied to but distinct from the parasite of malignant tertian. Specimens of blood films containing parasites were shown, and charts illustrating the destruction and regeneration of the haemoglobin and red cells.

A DIPHTHEROID BACILLUS.

Major W. S. HARRISON showed a bacillus which microscopically resembled that of diphtheria. It was isolated from an old case of chronic suppuration of the middle ear, and was found in a practically pure culture in the discharge. The organism stained by Gram, showed metachromatic granules when stained by Neisser's method, produced involution forms very like diphtheria bacilli in agar, and produced acid in broth. It differed from diphtheria in its cultural reactions, the growth on serum being thick and creamy, and on agar it gave a thick opaque yellow growth, the agar being gradually coloured brown and eventually becoming dark chocolate. He also showed a *typhoid bacillus* isolated from a sinus, following a post-typhoid abscess, a year after the attack of typhoid fever; it was extremely involuted, forming long strings similar to the cultures of typhoid got on malachite-green media; it gave, however, all the cultural characters of typhoid bacilli, and was agglutinated by an antityphoid serum. The patient's serum agglutinated other strains of typhoid bacilli in 1 in 200 to 1 in 400, and his own strain in 1 in 1,000; the phagocytic ratio of the patient's serum was two to four times greater than normal for other strains of typhoid bacilli, and as much as forty-six times greater than normal for his own strain; this last high figure was probably accounted for by the fact that the bacillus isolated from the patient was very resistant to phagocytosis in mixtures containing normal serum only. The writer found it difficult to account for the persistence of the organism in the body of the patient whose blood fluids showed such a high phagocytic ratio for typhoid bacilli.

LIVERPOOL MEDICAL INSTITUTION.

Mr. FRANK T. PAUL, F.R.C.S., President, in the Chair.

Thursday, February 28th, 1907.

CLEIDO-CRANIAL DYSOSTOSIS.

DR. J. HILL ABRAM showed a typical case of the disease described by Maire and Sainton under the name of cleido-cranial dysostosis. The patient was a boy, aged 16. The clavicles were absent, the cranium typically brachicephalic, and the anterior fontanelle still largely open. The distorted vertex with the deficient development of the facial bones led to a superficial resemblance to cretinism; the absence of any solid oedema in the subcutaneous tissue and the considerable standard of intelligence attained showed that cretinism might be excluded.

Dr. A. G. GULLAN said that certain features led him to believe that the lad was to some extent a cretin, namely, the full face, arched eyebrows, thick neck, short stature, lordosis of the spine and the typical waddling gait, full abdomen with unfolded umbilicus, undeveloped genitals, and absence of hair from the pubis, the coarse hair of scalp and characteristic broad hands all pointed to a degree of athyroidism. The lad, though intelligent, was certainly emotional. Dr. Gullan considered that the combination of cretinism and the absence of the clavicles made the case even more interesting.

The PRESIDENT and Dr. E. T. DAVIES also discussed the case.

RECURRENT PARALYSIS OF OCULAR MUSCLES.

Mr. R. J. HAMILTON showed a case of recurrent paralysis of the ocular muscles in a man the subject of haemophilia. The condition was always preceded by severe headache which lasted for some hours, and the paresis lasted from four to six months. The first attack occurred four years ago and followed a very severe and almost uncontrollable haemorrhage, the result of tooth extraction. The author suggested a neuritis, induced by the severe anaemia as a possible explanation of the paralysis.

Dr. K. GROSSMANN agreed with Dr. Hamilton that the case was one of peripheral (neuritic) origin. He had recently observed a similar case occurring after influenza, recovering and reappearing after a second attack of influenza. The second attack of paralysis passed off and recurred, but finally got gradually well. Similar post-influenzal neuritic attacks, followed by alternate improvement and relapse had been observed in other parts of the body.

Sir JAMES BARR and Mr. T. H. BICKERTON also spoke.

CATARACT EXTRACTION.

Mr. RICHARD WILLIAMS read a note on cataract extraction mainly in reference to suppuration in the wound, and reported the case of a gentleman, aged 88, in which the suppurative process had been arrested by the application of a 1 per 1,000 solution of perchloride of mercury after a weaker solution (1 in 3,000) had failed. He suggested that these cases were not due to the introduction of infective material from without, but to abnormal activity of the ordinary micro-organisms of the conjunctiva in certain abnormal conditions of the nervous system.

Dr. K. GROSSMANN said suppuration was fortunately very rare, and when it did occur there would always be a suspicion that that infection had come from without. An inspection of the wound six hours or so after operation was generally desirable, especially after extraction after iridectomy. For antiseptic purposes corrosive sublimate was not always well borne; chinosol, or better still Merk's peroxide of hydrogen, was equally effective, and was not so unpleasant to the patient. At the first sign of infection of the wound the latter would have to be opened and the anterior chamber washed out with the antiseptic solution, and disaster would thereby be often averted.

MALARIA.

Dr. J. LLOYD ROBERTS read a paper on malaria based on the study of 124 consecutive cases under his care in the tropical wards of the Royal Southern Hospital. It was accompanied by a lantern demonstration, and cases were mentioned illustrative of the differential diagnosis between malaria and such diseases as phthisis, suppuration, ulcerative endocarditis, and hepatic abscess.

Dr. W. CARTER thought that the time had come when the word "malaria," which kept up the superstition that bad air caused the disease, should be abandoned for a name more in accordance with absolutely-established facts. Among the unsolved problems of the disease were: (1) The occurrence of attacks years after removal from mosquito-infected areas; (2) the apparent immunity of exceptional individuals even after repeated bites; (3) the impossibility, in some cases, of administering quinine owing to its effects being more poisonous than those produced by the parasites. Among the more troublesome symptoms were: (1) The occasional occurrence of persistent vomiting, rendering it necessary to administer the quinine by rectum or hypodermically; (2) the supervention of coma, which in his experience was best relieved by freely blistering the shaven scalp, unless (3) it was accompanied by a continuous and very high temperature, when cold baths were in addition required. In some cases of chronic cachexia, with acute exacerbations, the utmost benefit follows a course of Warburg's tincture, when quinine in other forms could not be borne or failed to relieve.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—At a meeting on February 21st, Dr. GALLOWAY, President, in the chair, Dr. J. F. CHRISTIE exhibited (1) a young man, aged 23, in good health, who had suffered from a skin

disease for five years, during which time it had shown no change. The rash was a fine papular eruption extending over the back, shoulders and extensor surfaces of the thighs (the skin on the spine being free). It showed no seasonal variation, and was not itchy except on undressing at night. The patient perspired freely. The rash was red in colour, and the papules varying in size from a pin point to a pin head, and there was no grouping, and each was perforated by a lanugo-like hair. The skin was harsh to the touch, and particularly on the thighs had a nutmeg-grater feel. Seborrhœa of the head was markedly present. The condition resembled keratosis pilaris, or ichthyosis pilaris, and was not unlike Crocker's lichen pilaris. Other diseases to be considered in the diagnosis, the exhibitor suggested, were lichen acuminatus, lichen scrofulosis, and pityriasis rubra pilaris. (2) A woman, aged 33, who had been in weak health previous to the development of a skin trouble. Commencing with an itching of the scalp, this soon spread over the whole body, and became so bad as to prevent sleep. The skin was everywhere thicker, drier, and more wrinkled than usual, and showed a marked cutis anserina. The primary lesion was papular, with generally the heads scratched off and covered with a blood crust. The hair had fallen out, but was now coming on; pigmentation was well marked and adenitis was present. She was improving under thyroid extract. (3) An old woman with an eruption, limited to the face of a deep red colour, raised firm patches, semi-circular or elliptical. It was diagnosed as a papulo-tuberculosis syphilitic. It presented many differences from lupus, which was, however, to be considered in the diagnosis. There was some suspicion of syphilis in her history. Dr. Peters showed two cases of *Aneurism of the aorta*. One of the patients, a young man, complained only of beating in his head, which was now slightly felt in other parts of the body. There were no symptoms of intrathoracic pressure and very little cough. Pulsation could be seen in most of the superficial vessels, posterior tibial, etc. The apex beat was displaced outwards, and a double murmur was heard over the base, and probably the same murmur at the apex. The patient, a labourer, was still able to do work. The possibility of the case being one of aortic regurgitation was considered, but a sphygmogram showed it to be the presence of an aneurysm. In both cases iodide of potassium was used, but as rest could not be obtained no evident improvement was noted. Dr. W. R. Dunn showed a case of *Arterial disease* in a young man. [illegible] had been done, but the tumour, seen to be a [illegible] was larger and harder, the carotid pulse of the head was greater, and contraction was further advanced. The vessels were larger and more tortuous. Many of the children died *in utero*, probably owing to changes in the placenta before labour came on. Whereas careful examination as to the relative sizes of the head and pelvis confirmed the belief that a proper time had been chosen labour should be induced. This was easily and safely done; the question of, of course, not to be considered. Dr. A. Eddis read notes of a case of cerebro-spinal meningitis in a boy aged 14, suddenly taken ill with rigors, continuous vomiting and convulsions, and dying within forty-eight hours. Death was considered as due to meningitis. A month later a brother was suddenly seized with intense pain in the back, and later had convulsions. When seen he was lying with his head slightly thrown back and thighs flexed on abdomen; he became restless on handling him, and uttered high pitched cries. His pupils were of normal size, equal, and reacted to light; occasionally the left eye diverged outwardly. There was no rash. Herpes, [illegible] eye was present, and there was slight rigidity of both upper and lower limbs. There was no optic neuritis. The blood showed a marked leucocytosis [illegible] corpuscles to [illegible] red blood cells per c.mm. The cerebro-spinal fluid was at first only very slightly yellowish-white in tint, but on examination of which showed the majority of the cells to be polynuclear. Many of the cells contained diplococci of the form of *Diplococcus intracellularis meningitidis*. Cultures showed growths of the same organism. On *post mortem* examination, a thin purulent infiltration of the meninges of the brain and to a less extent of the cord. The upper part of the cord was more affected than the lower. The mesenteric glands were enlarged and varied in size from a small pea to a large bean. There was no congestion or ulceration of the lymphatic structure of the intestines.

Edinburgh Obstetrical Society.—At a meeting on March 15th, Dr. J. W. Ballantyne, President, in the chair, Professor Sir Halliday Croom read a paper on exophthalmic goitre in its relation to gynæcology and obstetrics. He thought there was no interdependence between exophthalmic goitre and gross pelvic lesions. Disorders of menstruation, however, were frequently found associated with Graves's disease; menorrhagia being the chief symptom when the disease was early and progressive; and amenorrhœa when the disease was far advanced and the patient exhausted. Such disorders might have their origin in the same nervous strain or shock as caused the pathological changes in the thyroid gland. Judging by his own experience, as well as the literature on the subject, the author was of opinion that pregnancy had a very uncertain effect upon the course of the disease. Pregnancy sometimes ameliorated, but more frequently aggravated the symptoms. On the other hand, in his experience the disease exercised no influence on the course of pregnancy. Of the complications which might arise at labour he had found hæmorrhage the commonest. Abortion was not uncommon. His general conclusion was that there were no sufficient grounds for urging women who suffered from exophthalmic goitre to forego marriage and pregnancy.

Glasgow Medico Chirurgical Society.—At a meeting on March 1st, Dr. J. Lindsay Steven, President, in the chair, Dr. Walker Downie read notes of 6 cases of *Sarcoma of the nose*. The tumour generally originated from the lateral masses of the ethmoid and included the middle turbinal or the naso-antral wall. In only 1 case was the septum involved. The growths resembled simple mucous polypi. Epistaxis, pain during manipulation, distension, and hypertrophy of the nasal bones were suspicious symptoms, and called for careful microscopic examination of the tumour. Early diagnosis and thorough removal were most important. Where the tumour was entirely intranasal it should be removed by punch forceps, curettes, and the electric cautery. Where the septum was involved and the area widespread Lange's operation should be performed. Dr. Newman illustrated by the opaque projector (*a*) 3 cases of *Sacculated bladder*. In 2 cases a calculus was present. Without the cystoscope they would have probably remained undiscovered. (*b*) A case of extensive ballooning of the bladder mucous membrane from obstruction to the ureter. The symptoms were those of intermittent obstruction to the ureter. There was pain in the right renal region and in the bladder. (*c*) Three unusual cases of vesical calculus. In the first there was a crowd of delicate fenestrated processes with bulbous ends at the lower margin of the neck of the bladder. They were pale in colour, with bright red tips, translucent, and occasionally [illegible]. The symptoms were those of the vesical calculus; their removal gave complete relief. In the second there was a lobulated hypertrophy of the anterior wall of the bladder. It was associated with pain, frequent micturition, and hæmaturia. In the third, there were small ovoid nodular growths, which could only be discovered with the cystoscope. He also described a method of *Draining the kidney* without the use of dressings by siphoning the urine from the kidney into a bottle. The patient could move about with comfort, and time was given for hypertrophy to occur in the other kidney, after which the diseased organ might be excised.

Royal Academy of Medicine in Ireland.—At meeting of the Section of Pathology on February 15th, Dr. J. F. O'Connell, President, in the chair, Dr. L. G. Gwynn exhibited a specimen taken from a man, aged 46, who had been admitted to hospital with the usual symptoms of urinary tuberculosis. As far as they could

diagnose, he had a large right kidney, from which it was thought the pus in the urine was probably proceeding. The bladder was small, contracted, and tuberculous. A cryoscopic examination led to the conclusion that the patient was on the borderland of insufficiency, and the right kidney was thought to be a bag of tuberculous pus. On operating, a large kidney was found having a great deal of apparently healthy tissue in it. On exploring the pelvis of the kidney, tuberculosis was found present. He presumed he had been wrong in thinking the other kidney healthy; he therefore did not take the kidney out. The patient died two days afterwards, and the *post-mortem* examination showed that the cause of death was extensive miliary tuberculosis affecting the liver, lung and spleen. The other kidney was a tiny structure, apparently congenitally small, but perfectly healthy, though incapable of sustaining life. The primary tuberculous focus was a small chronic abscess in the prostate. The CHAIRMAN said the fundamental interest in the case was the difficulty of making out whether one or other or both kidneys were involved. For many years attempts had been made to settle the matter. An observer had stated that the mere palpation of a healthy kidney was sufficient to produce some degree of albuminuria; a larger amount was produced if the kidney had been damaged previously; but if it were an utterly insufficient thing like a tuberculous mass it did not produce any. If that were established, it might give them a further and pretty commonplace test for which of the two kidneys was involved. Professor MCWEENEY said the large kidney was a beautiful specimen of compensatory hypertrophy; the other was the smallest he had ever seen which bore no evidence of organic disease.—Professor WHITE exhibited specimens of organisms obtained from cases of cerebro-spinal meningitis. From the first case reported he had made direct cultivations from spinal fluid obtained aseptically by lumbar puncture in broth, human blood serum, glycerine agar and litmus milk. The broth next day was barely clouded; tiny discrete grey colonies developed on the serum; the glycerine agar remained sterile. Subsequent examination showed these growths to be pure cultures of a diplococcus, sometimes seen in tetrad form, staining irregularly with simple stains like Loeffler's blue and negative to Gram's stain. Microscopic examination of the cerebro-spinal fluid showed very many pus corpuscles and numerous organisms seen mainly as diplococci, but there were many tetrads and a few short chains. A considerable number of these organisms were inside the pus cells. Some of them appeared to have capsules, and like those in the cultures all were decolourized by Gram's method. He inoculated further cultures from the originals, and continued the inoculation to the fifth generation, which was still alive. The fourth and fifth had grown very well on ordinary agar, although the original inoculation on the glycerine agar was without result. He had done animal inoculations with negative results. The same organism in pure culture was obtained from later cases of the disease, but a smaller number of pus cells and fewer organisms were present, although the cases were more severe clinically. The diplococcus now exhibited had many of the characters of the organism described by Weichselbaum under name, *Diplococcus intracellularis meningitidis*, but apparently differed from it in having a capsule, and in forming short chains. He was not quite satisfied that the organism was a distinct entity, but inclined rather to the opinion that it was a modified pneumococcus. That, however, was difficult to prove. In a previous outbreak he only got the pneumococci from a great many cases, and during that outbreak in only one case did he get an organism which, like those now exhibited, might be classed with Weichselbaum's. Dr. DAY gave the clinical history of four cases, the curious thing about them all being, he said, that they were perfectly clear in their intellect. Professor MCWEENEY had observed two meningitis cases within the last few days from the Children's Hospital, Temple Street. A *post-mortem* examination was obtained in the first case, and revealed the tuberculous form, limited to the cerebral pia arachnoid. From this, numerous tubercle bacilli were obtained in smear preparations. A curious fact was that whilst engaged in searching through preparations of the membranes of the cord he came across a single polynuclear leucocyte containing a few typical "biscuit-shaped" diplococci. Was it a case of mixed infection? In the second case, which was regarded by Dr. D. Farnan as typical cerebro-spinal meningitis, there was no autopsy, but he had examined about 5 c.cm. of fluid obtained from the child (aged 3) by lumbar puncture. The microscopic result was negative, but he had succeeded in growing from it, as the only organism present, a Gram-staining diplococcus tending to form tetrads, and growing well in the form of small whitish colonies on ordinary agar, serum agar, and blood agar. He felt sure this could not be the organism described by Weichselbaum and found by Professor White. The speaker concluded by referring to the probability that the organism obtained access via the posterior fossae of the nose, to its propagation by contacts, to its low resisting power, and to the small numbers in which it occurred even in severe cases. He could only suppose that it must be highly toxic, though of this there was no experimental evidence.

ULSTER MEDICAL SOCIETY.—At a meeting on March 14th, Dr. M'QUITTY, Vice-President, in the chair, Professor MILROY described the *Movements of the stomach* as noted by him in the dog. There was a peristaltic wave which travelled from the fundal portion to the pyloric. When solids were present there was also a reverse peristaltic wave, but this did not occur when fluids only were present. In the fundus there was a tonic contraction lasting for a longer time than the ordinary peristaltic wave. The waves were always regular in time, and were able to pass over the interval made by the removal of a ring of muscle. These waves depended on the presence of nervous ganglia between the muscular coats, as when in stripping off one of the muscular layers the nerve elements were also removed, the waves could not be obtained in the remaining layer.—Dr. WILSON described a new method for isolating the typhoid bacillus from water, the principle of which consisted in evaporating a large quantity of water at a reduced pressure at body temperature. Thus working he had been able to recover typhoid bacilli from a litre of water to which only six bacilli had been added, the bacilli, if present, multiplying during the process of concentration of the water.—Drs. HOUSTON and RANKIN gave a microscopic demonstration of phagocytosis with various micro-organisms, explaining the difficulties of technique when working with certain micro-organisms. The meningococcus was specially difficult to work with owing to the fact that degeneration forms occurred in all growths of this coccus. They found that the blood in cases of cerebro-spinal fever had usually a very high opsonic power with reference to the *Diplococcus intracellularis*, indices of 5, 7, 9, and 14 being common in this disease. The number of cases examined was not as yet sufficient to arrive at any definite conclusions, but the results seemed to indicate that the opsonic power rose progressively during attack in the favourable cases.

GLASGOW SOUTHERN MEDICAL SOCIETY.—At a meeting on February 28th, Dr. T. FORREST, Vice-President, in the chair, Dr. J. HOOD MACDONALD read a paper on the physio-psychology of hallucinations. Speaking of the part played by hallucinations in history, he instanced the case of Joan of Arc, the epidemic hallucinations of the Middle Ages, and those of many illustrious men—Martin Luther, George Fox, Descartes, Socrates, Van Helmont, Goethe, Cowper, Pope, Napoleon, and Cromwell. Having defined an hallucination as a "subjective perception" or a "perception without a corresponding objective stimulus," he described the forms and characteristics of the hallucinations of the different senses. As for the mechanism of hallucinations—their mode of origin and site of production, he held that, though in the majority of cases hallucinations were secondary to the intellectual content, yet they were the primary phenomena of mental alienation in a much larger proportion of cases than was generally supposed. The truth was that when hallucinations obtruded themselves suddenly and without warning upon the consciousness, they frequently gave rise to secondary mental disturbances of a very pronounced nature, so pronounced, indeed, as to overshadow and often hide completely the primary hallucinatory phase. The sensory centres alone could be regarded as the anatomical seat of hallucinations. A psychic or peripheral origin could not be denied in some cases; but, even in these, the hallucinations only arose after intervention of the sensory centres where the

memory images were conserved. The influence of hallucinations upon the conduct and attitude of individuals was next described, and it was shown how hallucinations have varied in different ages and races according to the dominant ideas of the day and people. As regards the question, "Are hallucinations compatible with a state of sound mind?" it was concluded that when the sufferer failed to recognize the hallucinations as an anomalous product of his brain, when he allowed his thoughts to be directed from their ordinary course, and his conduct to be regulated by the hallucinatory mental content, he was no longer of sound mind.

West London Medico-Chirurgical Society.—At a meeting on March 1st, Dr. Leonard Mark, President, in the chair, Mr. John R. Lunn read notes of a case of retroversion of a gravid uterus simulating an extrauterine pregnancy. Dr. Cookshank read a paper on the prognosis and treatment of diphtheria, based principally on six years' work at the Mortlake Isolation Hospital. He alluded to the various factors knowledge of which are necessary to making an accurate forecast of the course of the disease, referring especially to age incidence and the study of associated cases. He discussed in some detail the general treatment of the disease and especially that of cases marked by evident toxaemia. In these cases he recommended the hypodermic injection of strychnine with chloride of adrenalin, and insisted on the advantage of differentiating clinically the cases in which the poison principally affected the central nervous system (vagus nucleus), the heart muscle, or the kidneys.

Nottingham Medico-Chirurgical Society.—At a meeting on March 6th, Dr. W. Hunter in the chair, Mr. Morley Wilkes reads notes of two abdominal cases presenting some *Difficulties in diagnosis*. The first was that of a woman aged 32, who was shown at the meeting, and was now in excellent health. Three months ago posterior gastro-jejunostomy was done for cicatrized gastric ulcer with hourglass contraction of the stomach. After the operation vomiting increased and intestinal obstruction occurred, so that eleven days later an exploratory laparotomy had to be undertaken. The union of stomach and jejunum was found to be perfect, but in its neighbourhood the bowels had become glued together as the result of miliary tuberculosis, occurring since the first operation. Separation of the collapsed and adherent coils and division of the one band was sufficient to enable peristalsis to be resumed, and the patient made a good recovery. There was now no suspicion of peritonitis. The second case was that of a man aged 59, whose symptoms had long suggested ulcerative colitis. He was ultimately found to be the subject of an intussusception 5 in. long per rectum, of which the exciting cause was a papilloma-like growth in the sigmoid region. A free excision of 17 in. of bowel, as well as a considerable portion of mesocolon was carried out, and four months later the resulting artificial anus was closed by a second operation. In the six months since then he had gained a stone in weight, and when seen ten months after the first operation was in perfect health. Mr. A. R. Anderson read a paper on *The resistance of the urinary bladder to infection*, alluding briefly to five cases where there had been a foul pyonephrosis or rectal or uterine cancer discharging septic material directly into the bladder. It was remarkable how long this state of things might continue without causing actual cystitis. The conditions favouring the occurrence of cystitis were traumatism, concretion, and retention. The latter was the most important, as it produced every condition favourable to microbic invasion, as well as congestion from the associated straining. The microbes concerned in cystitis were the *Bacillus coli*, the tubercle bacillus, and the pyogenic streptococcus and staphylococcus. Bacteriuria did not necessarily mean cystitis, and occurred also in typhoid fever and septic osteomyelitis. The resistance of the mucous membrane was, however, such that the normal bladder was practically invulnerable. The paper was discussed by Drs. W. Hunter, J. Watson, C. H. Carter, F. H. Jacob, and M. Penny Jones (Derby), it being pointed out that trophic lesions of the spinal cord greatly favoured the occurrence of cystitis; and Mr. Anderson replied.

British Laryngological, Rhinological, and Otological Association.—At a meeting on March 8th, Mr. Mayo Collier, Vice-President, in the chair, the following were among the exhibits:—Dr. P. H. Abercrombie: (1) A man, aged 62, on whom he had performed thyrotomy for the removal of epithelioma of the right vocal cord. The suspicions aroused by the clinical appearances had been made certainties on examination, by Dr. Wyatt Wingrave, of a piece of the growth removed by Dundas Grant's laryngeal forceps. Operating at an early stage the exhibitor had been able thoroughly to excise the growth; (2) a case in which he had performed thyrotomy two years ago for epithelioma of the left vocal cord, and in which no recurrence had taken place. In both operations he had performed a preliminary tracheotomy, and had inserted into the trachea a Hahn's cannula. Dr. Bark (Liverpool), Mr. Harold Barwell, Dr. Patrick Dempsey (Dublin) congratulated the exhibitor on the result obtained, but said they had found a wide tracheotomy tube, reinforced by a captive sponge let down into the windpipe from the laryngeal opening, more satisfactory than a Hahn's cannula. (3) A case of "tuberculoid" disease of the left tonsil in a woman aged 67. The patient came to hospital complaining of sore throat confined to the left side, of about two months' duration. She had long been a sufferer from bronchitis. On inspection the left tonsil was seen to be enlarged and covered with a whitish exudation, and at its upper border extending on to the palate was a nodular ulcerated area. The left side of the palate, the epiglottis, the left arytenoid, and the left ventricular band were congested and oedematous. The glands at the left angle of the jaw were enlarged and tender. The first explanation of these appearances was that the disease was either tertiary syphilis or malignant disease. The microscopic findings, however, showed, in the opinion of Dr. Wyatt Wingrave, that the tonsil was the seat of a granulomatous deposit of the tuberculous type. No tubercle bacilli were found in the tissue.—Mr. Chichele Nourse: A case of tuberculous disease of the larynx in which enormous swelling of the left arytenoid region existed. The left cord was absolutely fixed, and there had been in the early stages considerable difficulty in arriving at a diagnosis. Mr. Mayo Collier thought that these cases should be treated by tracheotomy in order to give the larynx rest and time to recover from the severe inflammatory reaction; otherwise the condition would go from bad to worse until the tumefaction and pain would effectually prevent swallowing, when the patient would rapidly sink from inanition. Mr. Harold Barwell and Mr. Bark could not agree with the Chairman in his advice. Their experience of tracheotomy had been very discouraging. They preferred to remove the tuberculomata with punch-forceps if the necessity for interference arose.—Dr. Andrew Wylie: A case of paralysis of the left vocal cord of four years' duration, in a young man, due to pressure on the left recurrent laryngeal nerve by large masses of enlarged lymphatic glands in the root of the neck. Dr. Patrick Dempsey had recently seen a case with the same laryngeal condition, but where no cause for the recurrent paralysis was found until a skiagraph of the chest showed well-defined shadows, which were considered to be due to enlarged lymphatic glands. He and Dr. Horace Law (Dublin) considered the glands in Dr. Wylie's case to be the seat of tuberculous disease. Dr. Dan M'Kenzie, judging by the long persistence, the size, the extreme hardness and the discrete character of the glandular masses, thought they were of the nature of lymphadenoma, a supposition strengthened by the presence of enlarged glands in the axillae.

Under the will of the late Mr. Francis Alexander Hamilton of Finchley, the Royal Hospital for Women and Children, Waterloo Bridge Road, receives a sum of £...0.

Medical Students in the United States. According to a list of twenty-three leading American universities given in *Science*, there are matriculated 4,923 students in the medical faculties of the United States. The University of Pennsylvania leads with 591 students, while the University of California has the smallest number, 54. New York has 486; Columbia, 582; Syracuse, 150; Cornell, 336. The others are given as follows: North western University, 550; Illinois, 432; Michigan, 623; Harvard, 296; Johns Hopkins 261; Minnesota, 196; Yale, 155; Virginia, 133; Nebraska, 152; Kansas, 107; Indiana, 65; Missouri, 65.

REVIEWS.

THE EVOLUTION OF LIFE.

In his new book on *The Evolution of Life*[1] Dr. Charlton Bastian recapitulates his earlier observations on archebiosis, which led to a heated controversy with Tyndall and Pasteur, and describes his latest experiments. These were conducted in 1906, and will, Dr. Bastian hopes, "carry conviction to very many as to the reality of the present *de novo* origin of living matter." In his work of some thirty years ago he found urine, which had been boiled and subsequently guarded against contamination, to be the most useful medium for the creation of new life. As the boiling must have killed all living things present in the material, he considers that

the fermentation of some specimens of boiled acid urine, with the appearance of swarms of bacteria therein, under the influence of the high incubating temperature of 122° F. (50° C.), seems inexplicable except upon the supposition that fermentation has, in these instances, been initiated without the aid of living germs, and that the organisms first appearing in such fluids have been evolved therein.

The urine was "fertilized" by the addition of boiled liquor potassae, which was introduced "in a proportion which shall not be more than just sufficient to neutralize the urine at the time when it is added." And in further experiments Dr. Bastian found that by varying the amount of liquor potassae and the temperature of incubation he "could, almost at will, procure micrococci alone, bacilli alone, or a mixture of these with streptococci more especially."

In his latest researches Dr. Bastian has relied on purely artificial media prepared from simple chemicals. One of these consists of sodium silicate, ammonium phosphate, dilute phosphoric acid, and distilled water; and in another medium the ammonium phosphate and phosphoric acid are replaced by liquor ferri pernitratis. These media, enclosed in sealed tubes, have also been found capable of generating life.

After the sealed tubes had been exposed to the temperature of 100° C. for ten minutes, and had subsequently been kept for a few weeks exposed either to diffuse sunlight or to the heat of an incubator, they have been found, on examination, to contain multitudes of micro-organisms. The micro-organisms, too, have been, in part, of such a kind (torulae and cocci) as are well known to be killed at temperatures ranging from 60° to 75° C., and although some bacilli also have been present (known to be destroyed at similar temperatures) there is no reason whatever for supposing that the distilled water, or either of the three chemicals employed, would have contained the more resistant spores of bacilli.

The reason why the average bacteriologist fails to obtain such interesting results is explained as follows:

Bacteriologists, as a result of repeated processes of heating at brief intervals, and often at high temperatures for the special purpose of bringing about complete sterilization, not only kill all pre-existing micro-organisms, but, as I maintain, destroy also any potential germinality of the media themselves.

If bacteriologists wish to observe for themselves the phenomena of archebiosis, they must modify their methods:

The modification needed would be, of course, to heat their nourishing fluids (semi-solid media would not be favourable for the trial) only sufficiently to destroy pre-existing living things, and then to take suitable means, by the agency of heat or light, to favour the possible engendering of new living matter.

Dr. Bastian's position is thus clear enough; he contends that under certain conditions which he describes life can originate *de novo*. He asks us to believe that a process may occur to-day which the evolutionist is compelled to admit must have occurred once upon a time. It is a proposition of great theoretical interest, but will only gain acceptance when the experiments upon which it rests have been repeated and varied, and confirmed by other independent workers. But Dr. Bastian has been led to advance another related hypothesis, which has a more immediate bearing on practical medicine. It is that under certain special conditions one kind of organism can give origin to another kind. In practical medicine Dr. Bastian contests the view that pathogenic bacteria can only arise from others of like kind, and urges that infectious diseases frequently arise *de novo*, and may be due to a modification of micro-organisms originally innocuous. He believes, for example, in "the frequent origin of the tubercle bacillus by transformation of common bacilli constantly gaining access to the body." The fact that a pathogenic organism may vary very much in virulence is familiar to bacteriologists; upon it, in fact, Pasteur founded his earliest attempts to produce artificial immunity; but we are not aware of any evidence generally accepted by bacteriologists which would justify the belief that one microbe has been transformed into another; the fact that microbe *a* morphologically resembling microbe *b* can under certain conditions become endowed with pathogenic properties, whereas microbe *b* does not become so endowed has been accepted as indicating a specific difference between *a* and *b*.

[1] *The Evolution of Life*. By H. Charlton Bastian, M.A., M.D., F.R.S. London: Methuen and Co. 1907. (Demy 8vo, pp. 519. With diagrams and many photomicrographs.)

THE BACTERIOLOGY OF PLAGUE.

Studies in the Bacteriology and Etiology of Oriental Plague[2] is the title of a recently-published book from the pen of Dr. Klein, Lecturer on Advanced Bacteriology at the Medical School of St. Bartholomew's Hospital, London. As will be expected from an author of such experience, it contains some very interesting and instructive facts, based chiefly on personal experiences and studies. An introduction explains the scope of the book, which consists of ten chapters. Perhaps the most interesting are Chapters IV, VII, and IX, dealing respectively with "Microbes simulating plague," "Modes of infection of animals with plague," and "Protective inoculation against plague." All who may be called upon to diagnose cases of plague, especially those isolated ones which crop up now and again in different parts of England, would do well to read carefully the chapter on the "Analysis of plague materials" and that on the "Microbes simulating plague." The author here, in a very clear and convincing style, shows that there are a fair number of traps for the unwary or inexperienced bacteriologist who is content to diagnose plague from the mere presence of a bipolar-staining organism. A series of tests, all of which are carefully described, must be gone through in every instance, and it is quite clear that unless these are systematically done errors will occur. We must also cordially agree with Dr. Klein that the connexion of "climatic bubo," or what has been called "pestis minor," with plague receives no confirmation from bacteriology; either the plague bacillus is present or not, and if not, then there cannot be a half-way house; the case is not plague, and has absolutely no right to be called so. We must again agree with the author in his main contentions in the chapter on the infection of animals with plague. This was evidently printed before the recent experimental work on fleas by the Plague Commission now in India became public. But granting this, and granting, as the author does, that the flea may in certain instances act as the spreader of the bacillus from animal to animal, we still want to know—to use his words—how frequent this method is. No one after reading Dr. Klein's feeding experiments will deny that the intestinal route is also a possible, and probably a common, channel of infection, and abrasions of the cuticle must be also so considered. The chapter on protective inoculation raises some very interesting, and at the same time difficult, points. It is not easy to say if the author's new method of preparing a prophylactic is any better than that originally devised by Haffkine; it remains to be proved. Apart from a needless reiteration of certain statements and a slightly dogmatic tendency which creeps up here and there, there is nothing but good to be said of the book. The illustrations (photomicrographs) are excellent, and help to elucidate many of the points raised. The work is undoubtedly one of the most important additions to the literature of the subject that have been made in recent years.

[2] *Studies in the Bacteriology and Etiology of Oriental Plague*. By E. Klein, M.D., F.R.S., Lecturer on Advanced Bacteriology at the Medical School of St. Bartholomew's Hospital, London. With 89 photograms. London: Macmillan and Co., Limited. New York: The Macmillan Company. 1906. (Demy 8vo, pp. 301. 12s.)

WATER SUPPLY AND SEWAGE DISPOSAL.

Professor L. F. Vernon-Harcourt's volume on *Sanitary Engineering*[3] is one of Messrs. Longman's "Civil Engineering Series," and, as explained in the preface, is in the nature of an added volume, to give more adequate treatment to the subjects of water supply and sewage

[3] *Sanitary Engineering with respect to Water Supply and Sewage Disposal*. By Leveson Francis Vernon-Harcourt, M.A., M.I.C.E. London: Longmans, Green, and Co. 1907. Royal 8vo, pp. 408, 15 plates; 14s.)

disposal. Even with this extension it cannot be said that these all-important branches of engineering have received more than their share of attention, and the author has set himself a difficult task to encompass the two subjects in a single book of 400 pages. To give its drawbacks first, it devotes eleven of the sixteen chapters to matters of water supply, and leaves domestic sanitary appliances, house-drainage, sewerage, and sewage disposal to be reviewed in the last 100 pages. Another point is that as a work for professional engineers it might well have omitted propositions which belong to the ordinary textbook, and discussions calculated to interest the general public. It is not usually a success to cater at the same time for the professional and lay reader.

These minor points notwithstanding, we fully recognize that the book is a valuable contribution to technical literature, comprising a convenient arrangement of engineering data collected by a man obviously well read in his profession.

As already mentioned, it chiefly deals with constructional matters in connexion with public water supplies. After the preliminary chapters concerning the different sources of water, we arrive (Chapter V) at what is really the essential part of the book—the engineering aspects of the supply of water from lakes and storage reservoirs. This section may be regarded as a complete treatise on reservoir dams and embankments of all kinds and all countries, and to the constructional waterworks engineer it cannot fail to be of great interest and value. The illustrations (almost invariably drawn to scale) are so clear, and the descriptions so concise, that the reader will not complain because they are mostly selected from the engineering works of other countries, indeed this adds in some respects to the value of the collection. Having disposed of the chief engineering problems associated with the collection, conveyance, and storage of water, the author briefly deals with methods of purification on a large scale, and finally discusses the details of distribution in towns. Part I appropriately ends here, having traced the supply of water from its origin to its ultimate pollution by the consumer. Part 2 takes up the reverse process, and discusses the means by which the fouled waters or sewage can best be conveyed away to a safe disposal. These stages include house-drainage and disposal of refuse, the construction and use of sewers, and the various means employed for the purification of sewage.

Domestic sanitary arrangements are briefly described and illustrated, but it is to the larger subject of main sewers and their services that the author chiefly addresses himself. The engineering reader will find illustrations of all the chief constructional formulæ in use, as well as examples of sewers laid under difficult or unusual conditions, matters of fall and ventilation being fully dealt with. With regard to the disposal of sewage, we have examples of simple discharge into the sea without preliminary treatment, irrigation on land where adequate facilities exist, and lastly, bacteriological purification by means of septic tanks followed by treatment on contact beds or by mechanical dilution and subsequent aeration. As to the various means of treating sewage on a private system for each house, the question resolves itself into a matter of the most practicable method from a sanitary point of view. The author puts his faith in bacterial purification, and he certainly may be regarded as having made out a strong case in favour of natural means for the purification and useful disposal of sewage at a reasonable cost. It should be remembered, however, that before selecting any system of sewage treatment it is necessary to have regard to the special character of the particular sewage to be dealt with.

Considering the book as a whole, it contains much [illegible] and may be used with profit. Where possible its statements are supported by reference to authorities, and, if it is supplied with a very good index, it will be most useful for reference, chiefly by water engineers.

THE SURGERY OF THE RECTUM.

Mr. F. C. Wallis has written a small manual on the *Surgery of the Rectum*[1] especially suitable to the needs of the young surgeon and practitioner for whom it is designed. A lesson which the book will teach its readers is the necessity for thoroughness in the examination and treatment of rectal affections; in no class of cases is a cursory examination more likely to lead to mistakes in diagnosis and to delays while useless "palliative" methods are tried. One of the most interesting facts which are brought out in the earlier part of the book is the frequent dependence (90 per cent. in Mr. Wallis's cases) of pruritus ani on a shallow ulcer between the sphincters, and the relief afforded to inveterate cases by appropriate treatment of this lesion. Mr. Wallis also writes in an instructive way on the subject of abscesses in connexion with the rectum, on the different situations in which these occur, and the methods of treating the different types. Whitehead's operation is the author's method of choice for haemorrhoids, and he expresses great satisfaction with the results he has obtained by its use. The most important of the other chapters are those on ulceration and stricture, and carcinoma. Mr. Wallis is an opponent of the practice of colotomy preliminary to an excision of the rectum. The article on carcinoma contains several good illustrations, and in fact there are excellent pictures throughout the book which greatly add to its practical value. In the chapter on colotomy, it is recommended that when the colon is distended and cannot be delivered for the performance of colotomy, a loop of small intestine should be brought out and incised, "by this means the large bowel is emptied." We confess that we have no practical experience of this plan, but we read of its success with some surprise; the ileo-caecal valve is sufficiently competent to prevent it in the average case. The final chapter, on the diagnosis of rectal diseases, gives within a small compass many useful practical hints which are worthy of careful notice.

[1] [illegible] London: Baillière, Tindall and Cox. [illegible] pp. 290.

OBSTETRICS.

The first edition of Dr. Jardine's *Clinical Obstetrics*[2] was reviewed in the Journal of June 27th, 1903. It is a book of personal experience, not a compilation from the writings of others. Therefore, as in such a book must be the case, the different subjects included in it are treated in an unequal manner, according to the degree in which they have interested Dr. Jardine. The subject in which he takes the strongest interest is puerperal eclampsia. The frontispiece of the book is a coloured plate of a liver from a case of eclampsia, put there, we presume, to emphasize the fact that that disease is not one of the kidneys alone. Dr. Jardine claims by the method of treatment which he advocates—the subcutaneous injection of saline fluid—to have reduced the mortality of puerperal eclampsia in Glasgow to one-half of what it formerly was. If so, the former mortality must have been very high. Dr. Jardine says his saline injections have reduced the mortality in the Glasgow Maternity to 24 per cent.; now the average mortality of the disease in hospitals all over Europe is about 20 per cent. Still the fact that the Glasgow mortality has been reduced is there; the reduction may be from the use of saline injections, or it may be from other causes; but it is enough to encourage others to use this mode of treatment, which is simple and can do little harm, and is a display of activity highly gratifying to anxious onlookers. Dr. Jardine gives a full account of the methods of producing spinal anaesthesia in obstetrics. He details very fully his experience of pregnancy and labour complicated with disease. It is a very interesting book.

Professor Adam Wright, of Toronto, has published his *Textbook of Obstetrics*[3] we are told, "at the request of students and fellow practitioners." The author is convinced that a work on obstetrics "should be practical in the broadest sense of the word." By "practical" Dr. Wright appears to mean that the author should limit his instruction to matters of direct use in practice; but surely sound practice is built on sound theory, and it would have been well to discuss the mechanical effects of uterine contraction, the general intrauterine pressure, the fetal axis pressure, etc. Dr. Wright finds great difficulty in understanding what uterine retraction is, and

[2] [illegible] M.D. Edin., M.R.C.S. Eng., L.R.C.P. [illegible] Professor of Midwifery in St. Mungo's College [illegible] Second Edition. London: Rebman Limited [illegible] pp. Cr. 8vo. [illegible]

[3] By Adam Wright, A.M., Professor of Obstetrics, [illegible] With 211 illustrations in the text. New [illegible] D. Appleton and Co. 1906. (Pp. 580.)

he quotes from the writings of three English obstetricians, in which, we must admit, the condition is not very clearly defined. If he will turn to the work of Pajot, or one of his successors in the French school of midwifery, he will find the term defined as clearly as anything can be. Dr. Wright quotes from the work of a London obstetrician the clinical differences between primary and secondary uterine inertia; but he does not follow him further and tell the student the difference in the proper treatment. Diagnosis is of little use unless it helps in treatment. Dr. Wright says, "It is well to bear in mind that weak uterine contractions accompanied with little or no pain, if continued long enough, are generally, if not always, followed by tetanic contraction of the uterus accompanied by intense suffering." This sentence is misleading, because there is no explanation of the difference between absolute and relative weakness of pains. Absolute weakness of uterine contractions, without obstruction, leads to no ill consequence beyond delay in delivery; relative weakness of pains, that is, pains too weak to overcome obstruction, may lead to the consequences mentioned. Page 200 is devoted to anaemia in pregnancy. The author says, "It is very difficult in some cases to decide as to when the anaemia of pregnancy has taken on a distinctly pernicious form." This is the only hint that there is more than one kind of anaemia; and there is no suggestion that any information can be gained by examining the blood. Though a full description of the methods of blood examination would be out of place in a work on clinical obstetrics, it should, nevertheless, be mentioned. In the treatment of the vomiting of pregnancy the reader is told (page 195) that "sexual intercourse should be prohibited." Why, the author tells us not. We think to give such a command without good reason is unwise. In speaking of sapraemia, Dr. Wright says: "The term 'sapraemia,' which was first used by Matthews Duncan, has been applied to so many forms of infection that much confusion has arisen." Now, in this matter, Duncan did but introduce to the medical profession in England, and clinically apply, the researches of Koch; and any one may clear his mind on this matter by reading Koch's work, a translation of which has been published by the New Sydenham Society. Taken as a whole, our verdict upon this book is that it is interesting and instructive, as embodying the opinions of a shrewd and experienced man, but it is not altogether a safe guide for students.

Essentials of Obstetrics[7] apparently is either a *précis* of Dr. Ballantyne's lectures or his lecture notes. It is didactic, not explanatory. It is very systematic; thus we have under each heading definition, synonym, symptomatology, etiology, diagnosis, treatment, etc., each given a separate paragraph in which the facts to be impressed upon the learner are set out in short, detached sentences, or even in single words. There are no doubt those who prefer the details of the subject to be communicated in this way. But the manner of the teaching is not the most important thing: its substance is that by which the book succeeds or fails. And we cannot think that a textbook for students fulfils its function when it gives the student a choice between several different ways of acting without telling him which he should choose.

Dr. MANTON of Detroit, the author of a small book on *Obstetrics*,[8] in a new medical epitome series, is apparently a young man who has not yet had time to make up his mind as to what is the best course of action in obstetric emergencies. In treating of rupture of the uterus, he says:

> When the abdomen has been opened, if the rent is not large and is situated laterally or posteriorly, an attempt may be made to close it by deep and superficial sutures—hardly ever possible, on account of the ragged, friable edges of the wound; it may be packed with gauze introduced from the peritoneal side into the uterus and vagina, and cut off flush with the uterine surface; a supravaginal amputation of the uterus below the seat of the injury may be made, or a pan-hysterectomy performed.

After reading this we think an intelligent student will ask, Which? and in our experience the tissue of a healthy uterus is not "friable," at least in the sense in which the word is generally used. In prolapse of the funis the reader is told "the patient may be placed in the knee-chest position or the Trendelenburg position—over the back of a chair." Again he may ask, Which? The effect of the two positions is very different; in the knee-elbow position the long axis of the uterus is vertical, the fundus being the lowest part, and the cord sinks by gravity to the fundus. It, therefore, is the best treatment for prolapse of the cord while the membranes are still unruptured. But in the Trendelenburg position the long axis of the uterus is horizontal and nothing whatever is gained; the patient may just as well and with far greater comfort be lying on her side. Before he can write a good book the author must think out what is the best thing, and why.

VENEREAL DISEASES.

UNDER the title of *The Treatment and Prophylaxis of Syphilis*[9] Dr. C. F. MARSHALL has translated and placed together in the same volume two of Professor ALFRED FOURNIER'S numerous and widely-known works which have been appearing in France at different times during the last forty years. The first edition of Professor Fournier's *Traitement de la Syphilis* was reviewed and warmly commended in the BRITISH MEDICAL JOURNAL in 1894, and it is a translation of the second edition of that work which forms the first and larger portion of the book now before us. As the original work has been before the public for some fourteen years it is unnecessary to say more about it now. The translation has been well and carefully done on the whole. There are a few slips here and there, but only once or twice did these necessitate reference to the French edition. The second part of the book is a translation of *Prophylaxie de la Syphilis*, and contains fifteen lectures and articles written at various intervals since 1877. Among the subjects discussed by Professor Fournier are the public prevention of syphilis, the influence of syphilis on infantile mortality, wet nurses and syphilitic children, the social dangers of syphilis, and the abolition of State regulation of prostitution. In his lecture on the last-named subject, Professor Fournier, in referring to the repeal of the Contagious Diseases Acts in this country and in India, remarks that "Henceforth prostitution, and syphilis with it, regained its liberty throughout the British Empire." In the same lecture he urges the necessity for administrative supervision of prostitution, and is of opinion that such supervision should include medical examination of all women convicted of professional prostitution, and internment of these women when they are found to be diseased. Probably most medical men who have much to do with syphilis are already pretty well acquainted with Professor Fournier's writings on the subject. Those who are not would do well to read this translation, which includes much about the prevention and treatment of syphilis which every practitioner ought to know, and which may be read with both interest and profit.

Dr. P. C. FENWICK,[10] of Wanganui, New Zealand, offers his small book on *Diseases of the Urethra* to his colleagues in Australasia as the work of a general practitioner, and not of a specialist. He also states that the object of the book is to give all necessary information on the forms of urethral disease most commonly presented to the general practitioner. Although the matter is somewhat loosely put together, it certainly includes a good deal of information which should be found useful in practice. But we are unable to agree that "all necessary information" has been given, at any rate as regards gonorrhœa, a consideration of which disease with its complications and sequelae occupies the greater part of the book. The gonococcus, it is true, is several times mentioned incidentally, but nothing is said about the importance of getting rid of it, or of its liability to infect remote parts through the circulation. Even in connexion with gonorrhœal rheumatism

[7] *Essentials of Obstetrics.* By J. W. Ballantyne, M.D., F.R.C.P.E., F.R.S.E.; Lecturer in Midwifery and Diseases of Women and Children in Surgeons' Hall and in the Medical College for Women, Edinburgh; Examiner in Midwifery in the University of Edinburgh. Edinburgh and London: Wm. Green and Sons. 1904. (Demy 8vo, pp. 248. 5s.)

[8] *The Medical Epitome Series: Obstetrics.* A Manual for Students and Practitioners. By W. P. Manton, M.D., Adjunct Professor of Obstetrics and Professor of Clinical Gynæcology, Detroit College of Medicine, etc. London: Rebman and Stoughton. Crown 8vo, pp. 265, 82 illustrations. 4s.)

[9] *The Treatment and Prophylaxis of Syphilis.* By Alfred Fournier. Translated by C. F. Marshall, M.D., F.R.C.S. London: Rebman, Ltd. New York: Rebman Co. 1906. (Demy 8vo, pp. 368. 21s.)

[10] *Diseases of the Urethra.* By P. Clendall Fenwick, M.B. Lond., F.R.C.S. Edin. Melbourne: J. Lukie. 1906. (Crown 8vo, pp. 152.)

the micro-organism is not mentioned. Nor have we been able to discover any allusion to the disastrous results of gonorrhoea in married life.

NOTES ON BOOKS.

THE first volume of the *Archives of the Pathological Institute of the London Hospital*[1] contains several interesting studies in morbid anatomy. Dr. C. H. Miller records a case of chloroma in a child 2 years old, where the diagnosis was made during life. *Post mortem* the green colour characteristic of the disease was observed, but it faded very rapidly. The chief feature in the examination of the blood was the large proportion of large lymphocytes. A small round-celled sarcoma was found on the dura mater, and a deposit of the same growth was present in the scalp. The same investigator contributes a histological study of gastric ulcer. He concludes that a gastric ulcer starts by the bursting of a lymphoid follicle, and is prevented from healing by the damage done to the vessels at the time of ulceration, and by the existing fibrous condition of the basement membrane and submucous layers. Dr. J. D. C. White discusses acute haemorrhagic pancreatitis, and the volume concludes with the report for 1904-5 of the cancer research scholar, Dr. J. Burton Cleland. Cancer theories are discussed in this article, and the author's cytological investigations of the mitotic phenomena of malignant growths are recorded. Dr. Cleland has attempted, but without success, to isolate the *Micrococcus neoformans* of Doyen.

We have received Vol. xiv of collected papers from the Physiological Laboratory of University College, London;[2] it is edited by the Jodrell Professor of Physiology, Dr. E. H. STARLING, and the papers have been reprinted from various periodical publications, without alteration. The volume, however, gives a good idea of the great amount of valuable work done in this laboratory.

We received in February a copy of *Die therapeutischen Leistungen des Jahres 1906*,[3] but we observe that the preface is dated Spring, 1906. The volume contains some four hundred pages in double column, and the subjects are arranged in alphabetical order; there is also an index of titles, a list of authors in alphabetical order, a subject index, and a separate index of medicinal preparations, instruments, dietetic preparations, mineral waters, and sanatoriums. The apparatus for reference is therefore very complete, and the volume, the seventeenth of the series, appears to be a very complete guide to German periodicals on therapeutics.

In vol. ix of the *Archives of the Middlesex Hospital*[4] Dr. E. J. GLADSTONE discusses variations in the shape and size of the skull, and also gives a fuller account of the synechian monster described in his paper published in the BRITISH MEDICAL JOURNAL last year. Mr. Pearce Gould contributes a note on two cases of melanotic sarcoma, and Dr. O. K. Williamson records his further investigations into the value of comparative estimations of the arterial blood pressure on the right and left sides in the diagnosis of aneurysm of the thoracic aorta. The volume also contains the reports for 1905 of the medical, surgical, and obstetric registrars, and the pathologist.

[illegible]

MEDICINAL AND DIETETIC PREPARATIONS.

Dry Fish Preparations.

We have received samples of some of the "Marvis" preparations made by the Patent Fish Food Syndicate, Limited. "Marvis" itself is a fine dry white powder, composed of fresh white fish mixed with a cereal and desiccated. It is intended for use in preparing soups, soufflés, fish balls, etc. The flavour is agreeable and free from staleness. Our analyses showed the presence of 5 per cent. of proteid; the ash contains a high proportion of phosphate, and practically no chloride, thus confirming the absence of salt which is indicated by the taste; only a trace of fat is present, and the preparation should be very digestible and may prove a useful article of diet where fresh fish is not easily obtainable.

Malted "Marvis" is a powder of very similar appearance, but containing dried separated milk and barley malt. The malt flavour is sufficiently distinct to give it a pleasant taste, and will recommend it to invalids, for whose use it is primarily intended. Our analysis showed it to contain 34 per cent. of proteid; it contains, of course, a larger proportion of soluble carbohydrate than the unmalted preparation, but like the latter, is almost free from fat. The ash consists largely of phosphate.

A third of these preparations is known as fish flakes. This consists chiefly of dried cured fish, with a small proportion of cereal; it is in the form of dry flakes, with a strong taste of cured fish; a very short soaking in water produces a soft pulpy material, suitable for use in making fish-cakes, fish-pie, etc. It is claimed that, owing to the removal of offal, skin, bone, and moisture, a quarter-pound packet represents two pounds of the fresh fish. The concentrated nature of this food is shown by the large proportion of proteid, of which we found 47 per cent. It resembles the preceding articles in being practically free from fat and in containing much phosphate.

Soluble Milk Proteids.

Messrs. Peek, Frean and Co. have submitted for our examination samples of the soluble preparation of milk proteid which they have recently put upon the market under the name of "Tilia," and of various articles containing it. "Tilia" is in the form of a pale yellowish fine powder, free from smell and practically tasteless; the greater part of it is readily soluble in warm fluids, and it can thus be added to soups, beverages, etc., to increase their nutritive value, without affecting their appearance or taste. Analysis shows it to contain 72 per cent. of proteid, consisting of the casein and other nitrogenous constituents of milk brought into a soluble form.

"Tilia" cocoa is a mixture of a pure "cocoa essence" with a considerable proportion of the above-described substance. It is similar in taste to several other good cocoas; when made into a beverage the latter is slightly thicker than if made from a plain cocoa essence, the thickening being due to the soluble casein, and not to the addition of starch. Analysis of the article showed 11 per cent. of fat and 51 per cent. of nitrogenous constituents; ordinary cocoas contain about 18 to 21 per cent. of nitrogenous constituents; but in their case only about one-fourth of this is proteid. It must thus be regarded as a true food in concentrated and agreeable form, and occupies a different position from ordinary cocoas which give a stimulating beverage of rather low food-value.

"Tilia" is also presented in the form of biscuits, of which we have examined the "plain," "sweet," "whole-meal," and "diabetic," the latter both sweetened and unsweetened. It is not necessary to say anything of their merits or attractiveness regarded merely as biscuits, as the reputation of the firm is well known. As a food, however, they stand in strong contrast to ordinary biscuits; the three first named were found on examination to contain from 17 to 20 per cent. of proteid, which, with the carbohydrate and fat common to most biscuits, constitute them a complete form of food in portable form. In the diabetic biscuits advantage has been taken of the properties of "Tilia" to prepare a biscuit practically free from carbohydrates, for diabetic patients; the samples of sweetened and unsweetened contained respectively 53 and 56 per cent. of proteid, and a searching examination for starch and sugars showed not more than traces to be present.

Butter-Scotch.

At a time when the preparation of artificial foodstuffs is receiving more attention than ever before, and when new forms of easily assimilable fat to take the place of cod-liver oil are being frequently brought to the notice of the medical profession, it is desirable that some of the older forms of administering natural fats should not be lost sight of. Among natural fats, butter easily takes the first place for nutritive value, and when combined with a suitable soluble carbohydrate, a most valuable food is produced. The butter-scotch which Messrs. Callard and Bowser (Duke's Road, Euston Road, W.C.) have prepared for fifty years, is such an article, which has the great advantage of being palatable, so palatable, in fact, that children are more likely to need restraining from excess than any persuading to take it. This butter-scotch is stated to contain 11·7 per cent. of fat and 79·3 per cent. of sugar, and the results of an analysis which we have made recently of a specimen substantially confirm these figures; further chemical examination of the fat extracted showed it to be genuine butter fat. This confection can therefore be recommended not only as a harmless sweetmeat, but also as a very useful addition to the diet in suitable cases.

MOTORS FOR MEDICAL MEN.

(From a Correspondent.)

I.—INTRODUCTORY.

The choice of a motor is not an easy matter even for those whose acquaintance with the various makes is considerable and whose purses are long enough to enable them to disregard, at least to some extent, considerations of expense. Whilst the main features of design have become comparatively settled and startling novelties do not often appear, there is not a motor in existence the design of which is not capable of material improvement in some respect or other. Very good many of them now are, nevertheless, and it is in the hope of affording assistance to those who, without much knowledge of motors, are thinking of substituting them for horseflesh in the carrying out of their daily work, and in the hope of perhaps saving them from buying their experience at too great a cost, that the following notes are put together. By way of preliminary advice it is well to say that if it is desired to run a motor with economy it is absolutely essential that the owner should be at some trouble to master the construction and working of the machine he selects. There is in practice no such thing as full economy if the owner is in the hands of his driver, nor can he know if his driver be a good or a bad driver from the point of view of nursing his machinery. Paid drivers do not as a class shine in this respect; the majority of them, though they may, in a sense, drive well enough, do not spare the tyres and the machinery as they should and can be spared. It is premised that the car is wanted as a money-earner—that is to say, that its prime cost and the cost of maintenance are to be kept as low as is consistent with efficiency, and therefore no mention will be made of large cars or such as may be accounted luxuries.

Second-hand Cars.

A word may be said about second-hand cars. Excellent bargains are to be picked up sometimes, for a man to whom cost is not a prime consideration may have served his apprenticeship on a small car of low power, which he discards for no fault, but merely because he has come to wish for a larger one. Others are not content unless their car be of the very latest design, and sell their cars every year or two, and a good car well treated should be little the worse for a year's wear of moderate amount. But these bargains are for the knowing rather than for the beginner; if any thought is entertained of purchasing a second-hand car, it is well worth while to pay for expert advice upon it.[1] And expert advice is not infallible; in the examination of a car it is only possible, without such an amount of dismantlement as no owner would consent to, and which would involve much cost and time, to examine certain of the more accessible parts, and to guess from their condition what the probable condition of those less accessible may be. The expert, therefore, while doing his work conscientiously, may nevertheless sometimes be mistaken, and may overlook some hidden fault of a serious nature. On the whole, though the writer has himself been fortunate in his experience of the purchase of second-hand cars, a beginner cannot be advised to risk it, unless, indeed, the whole history and ownership of the car is within his ken. It has been truly said that the purchaser of a worn, faked-up car will learn so much in his first year that what he does not learn will not be worth learning, but the busy medical man cannot afford to acquire his knowledge in this vexatious and time-wasting way.

Horse-power.

One of the first points to be settled is the size and horse-power of the car to be selected. It cannot be too emphatically stated that, apart altogether from the question of initial cost, the lowest horse-power which will do the work is the one to be selected for economy in running expenses. It is often not realized how expenses increase with increased horse-power. To take one thing alone, the cost of tyres—the heaviest item in the motorist's expenses—the area of rubber in contact with the road, through which, by friction with the road-surface, all the work is to be done, does not increase in like ratio with the increase in power. Hence with higher horse-power vastly more power is put through a surface of rubber not proportionally larger, and so the rubber wears away quickly. To give a concrete instance, an acquaintance of the writer's, possessed of very ample means and a 40-h.p. car of excellent make, has bought a low-powered car to do his everyday home work, solely on account of the enormous tyre bill of the larger car, and in a couple of years will have more than saved the cost of the smaller car on tyres alone.

Then, again, something must be said on the subject of the meaning of horse-power as applied to cars. The horse-power of the general engineer is a definite thing enough—namely, the work expended in raising so many pounds weight a foot in a given time. But not one motor car in a hundred has its horse-power correctly described on this basis. The effective horse-power of cars is sometimes understated, sometimes overstated, and is generally not what the engine can do and does do, but what it ought to do if it were a perfect piece of mechanism. That is to say, horse-power as applied to motor cars generally simply means a calculation based upon the diameter of the cylinders, the length of stroke, and the number of revolutions made by the engine per minute. The better the machinery the more nearly will its actual output correspond with this theoretical value.

But as in the best of petrol engines about 20 per cent. of the power is lost in transmission through the various joints, gear wheels, etc., it will be seen that, apart from many other things which have to be considered, the dimensions of the cylinders and the number of revolutions per minute are far from giving a true notion of the effective work. Somewhat better is the so-called brake horse-power (b. h.p.), which is the power actually shown by the engine working against a brake. But this test is usually applied on the fly-wheel of the engine, and so ignores the loss by transmission—a serious and, moreover, a very variable amount. The only true test is the brake horse-power as shown upon the actual road wheels of the car, but this test is seldom applied. However, the intending purchaser should insist upon knowing, not the nominal horse-power, but the actual brake horse-power of the engine, which is generally well known—at least, as far as the fly-wheel of the engine goes—to the makers.

To come to the practical point, the horse-power advisable—this will depend somewhat on the nature of the country. In a fairly level country an 8-h.p. car will suffice, and even 6-h.p. cars are used with satisfaction by a large number of medical men. But in a hilly country 10-h.p. is to be preferred; some of the smaller cars are pretty good hill climbers, but they are necessarily slow in mounting hills, and the delay is sometimes vexatious. Indeed, the satisfaction of driving a high-powered car is largely due to the fact that it will take ordinary hills at a good speed, and so make a better average of time on the day's run, for a powerful car can seldom be let out to do its best on the level. In this connexion it may be mentioned that most cars run best, and all run more economically, when allowed to go near to their top speed—that is to say, not the utmost that they can do, but a fairly high speed for the capabilities of the particular car. This is an additional reason for not having more horse-power than will serve, for it is not satisfactory to feel that one's car is running wastefully in regard to its petrol consumption, especially now that the price of petrol has advanced so much.

With regard to the body, for purposes of a medical practice a two-seated car is better than a four-seated one; the additional weight of the four-seated body involves more fuel consumption, and handicaps the car in climbing hills. A wind screen and a hood are desirable for use in bad weather, but any more complete enclosure, such as a brougham or landaulette body, is out of place on a low-powered car. A car seems about as sensitive to additional weight to be carried as a racehorse; thus the writer is acquainted with one car which will take four persons up a steep hill with its open tonneau body, but with a removeable enclosed body on it will not do so, except by utilizing the extra low gearing of the reverse, and going up the hill backwards.

The Choice between Petrol and Steam.

Up to the present time steam cars have not found very much favour with motorists, one of the troubles being the

[1] The *Autocar* newspaper has instituted a system of providing expert advice at a moderate cost—namely, £2 2s. for second-hand cars not exceeding £150, and £3 3s. for cars between £150 and £400, in addition to third-class railway fares if at a distance.

difficulty of keeping joints tight when employing highly superheated steam, and the frequent need for packing them. The boilers, too, give trouble; and so the steam engine, despite its great advantage in respect of "flexibility," is comparatively rare upon the road. By flexibility is understood the ability of the engine to run at slow speeds: the petrol engine will not work satisfactorily unless running at a great number of revolutions per minute, 800 being considered a slow rate. Hence, in order to drive the car slowly, or to gain power for ascending hills, it is necessary to interpose gear wheels to reduce the speed, but with the steam engine these can be dispensed with.

A more theoretical objection to steam is that no steam engine, however well constructed, converts into useful power more than 11 per cent. of the theoretical heat value of the fuel, whereas a good petrol engine utilizes 60 per cent. This is partly due to the fact that a large amount of heat is consumed in the conversion of the fluid water into the vapour steam; both the steam and petrol engines are heat engines, but as the latter starts with a vapour which it heats up by a combustion so rapid as to constitute an explosion, it is exempt from this source of loss. Though steam engines can burn a cheaper fuel, they have nevertheless not been found economical in running.

The Number of Cylinders.

All 6-h.p. and most 8-h.p. cars have only a single cylinder, and all single-cylinder engines are somewhat noisy and cause more vibration than two-cylindered engines. Noise and vibration largely arise from want of "balance" in the engine; the balance of an engine, completely considered, is a very complex matter, but in a very rough way it may be made intelligible as follows: When an engine is running a number of heavy parts are reversing their direction of motion many times a second, and this tends to move or shake the engine bodily. If parts of equal weight can be introduced which at the same moment are always moving in the opposite direction, this effect is neutralized, and a rough balance, so far as these reciprocating weights are concerned, is effected. But this in practice cannot be done with a single cylinder: with two cylinders it can to a considerable degree, but not less than three or four cylinders allow of its being done with any near approach to completeness. Hence, *caeteris paribus*, two cylinders are to be preferred to one, and, so far as this goes, it is an argument in favour of 10 h.p. cars, most of which have two cylinders. Two cylinders also possess an advantage in the equality of torque: as in the nature of the ordinary type of explosion engine an explosion only occurs in every other revolution, the single cylinder is somewhat jerky in its action, and needs a very heavy fly-wheel to carry it through its non-explosion.

From what has already been said it will be obvious that the number of silence attained in large four or six-cylindered cars is not to be expected in a car with one or two cylinders; for one thing, the individual explosion is often more forcible and therefore more heard. Thus, in a single-cylinder 8 h.p. car the individual cylinder develops 8 h.p., whereas in a four-cylinder 16 h.p. car each cylinder only develops 4 h.p. Still, even a single-cylinder car if well constructed, may be very fairly quiet when running. It is when it is standing still that its compensative virtues will be most noticeable. A good deal may be done in the direction of quiet by a good silencer, while to a considerable degree the explosions of the exhaust gases take place before they escape into the air and so break up the current into noises. But all silencing in this way is done at some expense of power, for it is apt to produce back pressure in the cylinders by hindering the escape of the exhaust gases. Hence racing cars are without silencers and make a noise like a Maxim gun and other cars are sometimes fitted with a contrivance for opening the exhaust pipe short of the silencer when it is desired to get extra power for a spurt up a steep gradient. It is therefore necessary to bear in mind that several persons in a single or two-cylinder car may have been got at a sacrifice of power.

Ignition.

In all modern cars the ignition of the explosive mixture is effected by means of an electric spark, but the methods in which this spark is got vary. The simplest and the commonest is by means of storage batteries or accumulators; the current from these is conveyed to an induction coil, where a comparatively large amount of current at a low voltage is transformed into a small amount at a very high voltage, which enables it to jump the gap between the wires of the sparking plug. This high voltage is necessary, partly at all events, because the charge to be fired is under compression, usually a pressure of 60 to 80 lb. Now, the resistance to the spark is thereby greatly increased; if air be sufficiently compressed it becomes as good an insulator as vulcanite, and so a voltage which would just give a good spark in the open would fail to do so in the cylinder. The subject of ignition is, however, a large one, to which it is proposed to recur later; for the moment, only points which will influence a buyer in the choice of a car need be mentioned. Accumulator ignition is the simplest, the easiest to understand, and the easiest to remedy when in fault; but it has this drawback, the accumulators need recharging, and this in country districts may be troublesome. It may be necessary to send them some distance to a charging station, and charging may only be done on certain days where the demand is not great. Moreover it takes time, as it is damaging to the plates of the accumulator to charge it quickly. Attempts have been made by means of a small dynamo to recharge accumulators whilst running the car, but they have not been very successful; sometimes one finds instead of the dynamo having charged the accumulator, the accumulator has discharged itself through the dynamo, and suddenly gives out.

Hence the introduction of various forms of magneto machines in which current generated by the revolution of an armature between the poles of powerful constant magnets is utilized. There are two general classes of magneto: the low tension and the high tension. In the first of these there is only one winding on the armature which generates a current of no very high voltage. This would not jump the gap in a sparking plug, so no sparking plugs are used. But though the spark would not jump a gap, it will be produced if two points in contact through which the current is flowing are suddenly separated. This involves moving parts within the firing chamber, and a certain amount of complexity added, inasmuch as the points must be separated at exactly the proper moment, and this moment varies with varying speeds of the engine; there is also a certain amount of difficulty in keeping the joint by which the moving parts enter the firing chamber free from leakage. Still low tension magneto-ignition is very serviceable and very reliable, being exempt from some of the troubles to which high tension magneto-ignition is liable.

High tension magnetos have two windings on the armature: the primary or low tension and the secondary or high tension winding: the armature is thus generator and induction coil in one. But a high tension current is difficult to insulate and this difficulty is intensified by the small amount of space available on the armature. Owing to want of knowledge or a momentary oversight by the motorist, or even without any fault of his, internal sparking may break down the insulation of the secondary winding, and then the magneto is dead for the time being and nothing can be done to repair it on the road. Other things, too, may go wrong in it; it is a complicated piece of mechanism the parts of which are of necessity small, and if it fails it is not only a matter of much difficulty to detect exactly what is wrong, but it is almost always impossible to put it right on the road. Hence, though a high tension magneto is quite an ideal ignition when it is working well, as it often will for very many thousand miles, it is hardly to be recommended to a medical man as his sole resource.

For this reason in large cars it is quite usual to fit both a magneto and accumulators, the former to be used ordinarily and the latter to fall back upon if the magneto fails. This is called "dual ignition," and serves another purpose, it is often very difficult, sometimes impossible, to start a car on a high tension magneto, for the starting handle cannot be revolved fast enough to generate an adequate current, though when the engine is running there may be an ample current.

Ignition failures are the most frequent causes of stops on the road, so that dual ignition would be a boon to the medical motorist who lives away from towns. But if he has easy access to a charging station he need not trouble

to have a magneto, which adds materially to the cost of a car. If he elects to have only one ignition, and that a magneto, let it be a low tension magneto.

One word more must be said on the subject of dual ignitions. If the motorist decides to have a dual ignition at all, let each be complete in itself, and let no part of the magneto be used for the purposes of the accumulator ignition. Such devices are handy and compact, but it is always possible that it may be just that part of the magneto which has failed or broken, and then the dual ignition comes to nought.

Some high-tension magnetos, however, do not have a secondary winding on the armature, but make use of a separate induction coil; this gets over some of the liability to failure, though it is, of course, less compact. The Eisenman magneto was of this type. But the same coil cannot well be used for the magneto and for the accumulator, as the winding appropriate for the one would not work well with the other, so this involves two separate induction coils if dual ignition is to be used.

(To be continued.)

COST IN THE SECOND YEAR.

"SUNBEAM" 234 sends the following particulars of the cost of upkeep, etc., of his 12-14 Sunbeam car for the second year of its running ending December 31st, 1906. The expense works out at about £4 more than the first year, but mileage and time are increased:

	1906.				1905.		
Standing Charges.	£	s.	d.		£	s.	d.
Rent, rates, and taxes ...	47	4	11				
Insurance	15	3	2				
Spares	7	15	4				
Man's wages	54	12	0				
				124 15 5			131 16 9
Running Costs.							
Tyres	56	0	6				
Petrol	25	10	10				
Oil	2	6	11				
Repairs	29	15	0				
Painting	12	8	0				
Ignition	5	18	5				
Sundries	2	16	6				
				134 16 2			121 19 4
				259 11 7			253 16 1
Less share of rent and various returns				20 18 0			19 1 0
Total				238 13 7			234 15 1

1906 compared with 1905.

	1906.		1905.
Mileage ...	6,318		6,183¾
Petrol (gals.)	394	= 16¼¼ miles per gal.	317 = 19½⅝ miles per gal.
Hours ...	1,631	= 4⅘ hours per gal.	1,157½ = 3⅝⅝ hours per gal.
Days ...	324	= 19½¼ miles per day.	302 = 20½⅓ miles per day.

He adds: In a medical man's car mileage per gallon of petrol is no guide as to what a car can do as to consumption on a long non-stop run. I have therefore given the time actually taken in doing my work and the petrol consumed in that time.

THE ROYAL COMMISSION ON TUBERCULOSIS.

COMPARATIVE HISTOLOGICAL AND BACTERIOLOGICAL INVESTIGATIONS.

VOLUME IV of the Appendix to the Commissioners' Report[1] is devoted to the Comparative Histological and Bacteriological Investigations entrusted to Dr. Eastwood. Dr. Eastwood was instructed by the Commissioners to make histological examinations and comparisons of the morbid processes set up experimentally by tubercle bacilli of bovine and of human origin; to study and compare the cultural characters of bovine and human tubercle bacilli; and to report to them the results of his observations in so far as they have a bearing on the question of the relationship between bovine and human tuberculosis. The observations recorded in his report extend up to the end of August, 1906. The material which he examined was obtained from the animals inoculated by Drs. Cobbett and Griffith.

SUBCUTANEOUS INOCULATIONS OF CULTURES INTO CALVES.

Both bovine and human viruses have been inoculated subcutaneously into calves in doses of 50 mg. All the nineteen bovine viruses which were thus tested produced fatal infection in less than ninety days. The same result was obtained with 14 viruses of human origin. On microscopic examination of the tissues of the calves used for these experiments, it has been found that the lesions produced were typical of acute, rapidly-progressive tuberculosis, and that there was a complete histological identity between the lesions caused by the human and by the bovine viruses. Lesions histologically identical with these were also produced by three additional human viruses which, though originally of low virulence for the bovine, became highly virulent after animal passage. But in addition to these acute lesions there also occurred, in the fatal infections produced both with bovine and with human viruses, lesions of a more chronic type which were surrounded with fibroblasts, contained few bacilli, and generally exhibited many giant cells.

In contrast to the above results, 37 human viruses consistently failed to produce fatal disease in calves when inoculated subcutaneously in doses of 50 mg. The animals were killed, apparently in good health, ninety days after inoculation. In these cases it was found either that dissemination had not occurred or that the disseminated lesions were small and relatively few in number. Histologically, these lesions were often definitely recognizable as tubercles, and tubercle bacilli were sometimes present in them. The tubercles, though obviously of the chronic type and often exhibiting marked retrogressive changes, could not always be described as "healed." In the case of some of them it was impossible to say definitely that the bacilli present were no longer active or that the foci of caseation had ceased to expand.

Further light is thrown on the wide difference in the results of the 50 mg. inoculations with different viruses by a comparative study of the processes of infection in their earlier stages. Calves have been killed at short periods after inoculation and their tissues have been microscoped. Both with highly virulent and with slightly virulent viruses it was found that a certain amount of dissemination readily took place, and bacilli were demonstrated in sections of organs remote from the site of inoculation; but with the former viruses dissemination was much more abundant than with the latter. Dr. Eastwood attaches importance to the comparative study of the local lesions. "The main issue of the experiment is decided in the subcutaneous tissue at the site of inoculation. This tissue is incapable of offering a successful resistance to a highly virulent virus administered in adequate doses. It is, however, capable of offering against a less virulent virus a resistance which, though not completely successful, is successful to a high degree, and at all events is sufficiently successful to prevent the dissemination of the great proportion of the inoculated material, and, consequently, to prevent the reinforcement from this source of the bacilli which have been disseminated." Furthermore, it is found that in the course of a few weeks the fibrous barrier formed at the local lesion round this less virulent material has become completely impermeable. "The bulk of the inoculated culture, in fact, is as much external to the body as it would be if it were enclosed within a test tube."

Certain viruses, both human and bovine, which had been found virulent in doses of 50 mg. and by other tests, were also tested upon calves in doses of 10 mg. Thirty-nine out of fifty-five of these experiments yielded fatal results in less than ninety days, and the lesions produced in these instances were found to resemble, histologically, the lesions produced by the fatal 50 mg. inoculations. The remaining sixteen calves survived the ninety days' time limit and were then killed.

The lesions found in these sixteen animals exhibit very great variety in different cases. This variation ranges from lesions which are nearly as severe as those found in the fatal cases to lesions which are small and more or less retrogressive, resembling lesions produced by the inoculation of 50 mg. of viruses of low virulence.

[1] Second Interim Report of the Royal Commission appointed to inquire into the Relations of Human and Animal Tuberculosis. Part II, Appendix, vol. iv. Comparative Histological and Bacteriological Investigations. By Arthur Eastwood, M.D. (292 pages, together with 8 charts.)

The general result of the whole of the above-mentioned histological investigations is to emphasize two main points: "(1) The marked difference in the severity of the morbid process produced by different viruses; (2) the underlying histological unity which characterizes all these processes, from the mildest to the most severe, as typical of tuberculosis."

THE VIRULENCE OF CULTURES FOR RABBITS.

In addition to calves, rabbits have been used upon a very large scale for the purpose of testing the virulence of cultures, and a series of observations has been made by Dr. Eastwood on the histology of the lesions produced. He summarizes his results as follows:

1. Cultures which are highly virulent for the bovine are also highly virulent for the rabbit, and the histological characters of the lesions produced by them in the rabbit are the same whether the bacilli are of bovine or of human origin.
2. Those bacilli of human origin which are of low virulence for the bovine are also of relatively low virulence for the rabbit. The only virus which may possibly be regarded as an exception to this rule is H 53 D.H. This virus, derived from a case of lupus, is of high virulence for the rabbit but of relatively low virulence for the bovine. . . .
3. The bacilli of low virulence for the bovine are, however, capable of producing tuberculosis in the rabbit. The morbid process set up, though of much less severity—and, when progressive, of much slower course—is the same in kind as the morbid process set up by more virulent bacilli.

ADDITIONAL OBSERVATIONS ON BOVINE LESIONS.

In addition to the virulence tests in which cultures were employed, other experiments have been performed on bovines for various purposes. A large number of animals have been inoculated subcutaneously with bacilli contained in emulsions of animal or human tissue; the bacilli have also been introduced by intravenous injection, by feeding, sometimes by intramammary inoculation, and occasionally by intraperitoneal inoculation. In nearly all of these experiments much smaller doses of bacilli were employed than in the inoculations made for testing the virulence of cultures, and lesions presenting much diversity were obtained in different cases. An extensive histological study has been made of the material thus provided, and various points of interest are noted concerning different phases of the morbid process in the bovine, the relation of the tubercles to the vascular system, and the occasional association of abundant multiplication of the bacilli with relatively little tissue destruction.

In a few instances human viruses, of low virulence to the bovine when inoculated subcutaneously, were introduced into calves intravenously. In some of these cases the animals died in a few weeks, and tubercle bacilli were found to be swarming all over the body, though no lesions were produced which could be regarded as typical of tuberculosis. In other cases the animals were found to be more resistant; and occasionally "typical tuberculosis, histologically of a chronic type, has been produced in all the organs of the body."

LESIONS PRODUCED IN ANTHROPOID APES AND MONKEYS.

Experiments made by feeding, by subcutaneous inoculation, and by intravenous inoculation, have shown that anthropoid apes and monkeys are highly susceptible to tuberculosis. Histologically examined the lesions produced, though varying in severity in different cases, are typical of tuberculosis. Comparisons have been made between the pathogenicity of different viruses, namely, (1) bovine viruses, which are of high virulence to the bovine and rabbit; (2) human viruses of equally high virulence to bovines and rabbits; and (3) human viruses of much lower virulence. But histologically as well as clinically it has been found that anthropoids and monkeys are so highly susceptible to the disease that all three classes of viruses are capable of producing in them lesions of marked severity. There is no evidence that (3) are of greater virulence for either anthropoids or monkeys than (1) or (2). The susceptibility of these animals to (3) cannot be attributed to a selective action of these particular bacilli for this type of animal.

Subcutaneous and intravenous inoculations are more certain methods of producing severe disease than feeding. With regard to the feeding experiments, which are of especial importance in so far as these animals may be considered to be representative of man, Dr. Eastwood writes as follows:

> Dissemination generally occurs and lesions are usually present in the lungs; in fact, the incidence of the disease is often particularly severe upon these organs. But the lesions found in these and other distant organs differ very considerably in respect both of their numbers and their histological characters. Sometimes they are scanty and not obviously progressive; at other times they are more numerous, and, though not of the "chronic" type, exhibit more or less decisive evidence of progression; and at other times, again, a distinctly acute type of tuberculosis has been produced.

Comparing the diseased tissues of anthropoids and bovines, Dr. Eastwood writes:

> My histological work confirms the evidence that the susceptibility of the anthropoid to tuberculosis is intrinsically higher than that of the bovine. Taking the anthropoid as the animal most nearly related to man, the inference is indicated that human susceptibility to this disease is also greater in degree than that of the bovine.

LESIONS PRODUCED IN SWINE.

Disseminated tuberculosis has been readily produced by feeding with bovine bacilli, and it is noteworthy that the lungs have generally been affected.

> The lesions produced in these feeding experiments are in the majority of cases discrete and of a chronic type, being sometimes apparently retrogressive, and sometimes slowly progressive. Less frequently, a much more extensive disease has been produced, and the lesions are characteristic of a severe infection.

When inoculated subcutaneously, bacilli of low virulence for the bovine and rabbit, as well as bacilli of high virulence for these two species of animals, produce disseminated lesions in the pig, but the effect of the latter class of bacilli is much the more severe.

A histological study of the early stages of infection in the pig has been made, and shows that dissemination of bacilli takes place rapidly after subcutaneous inoculation. These results, together with similar observations made on the bovine, show, in the opinion of the author, that "the old theories concerning the resistance offered by the lymphatic glands to the spread of tuberculosis need revision."

EXPERIMENTAL TUBERCULOSIS IN OTHER ANIMALS.

In goats severe progressive disease has been obtained both by subcutaneous inoculation and by feeding. The viruses producing these results were sometimes bovine and sometimes of human origin, but of high virulence for the bovine and rabbit. In histological characters the lesions caused by these two classes of viruses were found to be identical. Human viruses of low virulence for the bovine produced relatively slight disease in the goat.

In dogs, when the bacilli are administered by feeding, they rapidly gain access to the lungs, and there set up lesions which are usually not of a very severe type. A much more acute type of disease has been produced by intraperitoneal inoculation, in one case with a typical bovine virus and in another case with a human virus of low virulence for the bovine. Most of the feeding experiments were performed with bovine bacilli, but in one instance a human bacillus of low bovine virulence produced disseminated disease of moderate severity. In sections from the tissues of some animals it was noted that the bacilli had multiplied very abundantly, but with the production of a relatively small amount of tissue destruction.

Cats have been sometimes fed and in other experiments inoculated with bovine bacilli. In some cases it was found that histologically typical tubercles were produced; in others, the tissues were swarming with bacilli but no typical tubercles had been formed.

Histological observations conducted upon rats show that the rat exhibits a remarkable degree of tolerance towards the tubercle bacillus, both bovine and human. "Bacilli may be swarming all over the body, although the amount of tissue damage is extremely slight. Their habit of multiplying within the tissue cells is very noticeable. But in order to propagate the bacillus within the rat it seems necessary, in most cases, to inoculate very large doses. Moreover the bacilli do not induce a morbid process which can be histologically described as tuberculosis." All the viruses investigated, including those of low virulence for the bovine, were found, under favourable circumstances, to multiply freely in the rat.

The Differentiation and Classification of Cultures.

In his work on comparative bacteriology Dr. Eastwood has studied and compared the cultural characters of the viruses employed in the experiments. He used for the starting point of his observations cultures which were provided for him by his colleagues as soon as possible after their isolation from animal tissues. All these cultures he has kept up on pure serum. For the purpose of differentiating cultural characters he has examined the subcultures made from serum on broth, glycerine-agar, and potato. Of these last three media he regards glycerine-agar as the most important and potato the least, but he considers that the three taken together help to control each other and give more reliable information than any one taken alone. As a basis for classification he therefore takes the combined characters which his cultures exhibit on broth, glycerine-agar, and potato.

Following this principle, he has arranged his strains of bacilli in order according to their capacity for growth on these media, and commencing the series with those strains which grow least favourably. He attaches high importance to the fact that, when arranged in this way, the strains present one continuous and absolutely unbroken series, passing by gradual and only just perceptible stages of transition from the top of the series, containing the strains which grow with greatest difficulty, down to the bottom of the series, where are found the strains which grow with greatest luxuriance. As the series makes a very lengthy list, it has been divided up for the purpose of convenience into five "grades." This subdivision makes it easy to indicate approximately the position in the series of any particular strain by referring to it as belonging to a certain "grade."

The Comparison of Bovine and Human Strains.

Following this classification, the bovine and the human strains are arranged, for the purpose of comparison, in parallel columns, cultures identical in character being placed opposite each other. Taking first the strains which show no marked evidence of modification, even when they have been subjected to experimental animal passage, it is found that in the upper part of the series (Grades I to III) there is an almost complete parallelism between the bovine and the human strains, whilst the unmodified strains, which grow more luxuriantly, classed in Grades IV and V, are all of human origin. Dr. Eastwood comments upon the significance of this result:

> The unmodified strains which are enumerated in Grades I to III provide in themselves, and independently of any reference to or contrast with the strains enumerated in Grades IV and V, a complete proof that, judged by the criterion of cultural characters, the bovine bacillus is capable of infecting man. The bovine bacilli, in the left hand columns, are representative of the bovine bacillus as usually met with: and the human bacilli, in the right hand columns, which are identical with these, have, in the majority of cases, produced fatal tuberculosis in the human subject. Moreover, this identity of cultural characters is confirmed by identity of experimental virulence.

Certain strains where modification has followed as the result of animal passage are also considered. Five bovine strains show a decided modification in the direction of increased luxuriance.

> In two instances this increased luxuriance has brought the strain down into Grade IV—a grade where no unmodified bovine strains occur.

And eleven cultures isolated from animals inoculated with material ultimately derived from one or other of three human viruses also show a marked change, the modification being in every case in the direction of diminished luxuriance of growth.

> If these modified human strains be regarded from the comparative standpoint, the important fact is established that human viruses, growing with the high degree of luxuriance exhibited in Grades IV and V, are capable, under favourable animal experiment, of acquiring cultural characters identical with those of the unmodified bovine strains classed in Grade I.

Modification by animal passage, therefore, breaks down the distinction between viruses culturally identical with, and different from, viruses of known bovine origin.

The Relation of Cultural Characters to Experimental Virulence for Bovines.

With the majority of strains there is a general correspondence between cultural characters and virulence for the bovine, in the sense that those strains which grow poorly on artificial media other than serum are highly virulent, whilst those which grow abundantly on all the artificial media employed are of much lower virulence. But this rule is only roughly true; it needs modification, and there are marked exceptions to it. The strains classed in Grade III grow much more abundantly than the strains in Grade I, but many of the former have been found as virulent as the latter. Again, bacilli virulent for the bovine have in certain instances been found to grow so well on artificial media that their cultural characters were those of Grade IV and Grade V. Examples are also quoted illustrating both instability of virulence and instability of cultural characters. In summarizing these results Dr. Eastwood remarks:

> These exceptional cases all exhibit, though in different ways, the characteristic of bacteriological instability. This feature is obviously of high significance in its bearing on the question as to the closeness of relationship between the apparently more stable viruses which diverge from one another in cultural and pathogenic properties.

Dr. Eastwood's results do not coincide with the recent theory that mammalian tubercle bacilli are divisible into two sharply-distinguished and widely-separable "types": (1) the *bovine type*, which grows very scantily on culture media, and is highly virulent for calves; and (2) the *human type*, which grows very abundantly on culture media, and is of very low virulence for calves. He illustrates his reasons for disagreeing with this theory by means of a series of charts (Charts II to VIII), which are constructed according to the ordinary mathematical method of expressing variations in the relation between two factors (degree of virulence and degree of cultural luxuriance) by measuring off ordinates and abscissae. Commencing with a zero point at the lower left hand corner of each chart, virulence is measured vertically, and increases from below upwards; commencing from the same zero point, cultural abundance is measured horizontally, and increases from left to right. According to the "two types" theory, the features of viruses belonging to the "bovine" type would all be exhibited by a short transverse line, which would be near the top of the chart (high virulence), and would be close to the left hand side (scanty cultural growth); whilst the "human" type of viruses would be represented by a short transverse line near the bottom of the chart (low virulence), and close to the right hand side (abundant cultural growth). The rest of the chart would be blank. But when the experiments of the present Commission are charted on this principle, the results are very different.

1. The chart illustrating the 50 mg. experiments with cultures shows a wide gap vertically (difference between highly virulent and less virulent cultures), but the two horizontal lines are irregular, lengthy, and nearly overlap (wide variations in cultural characters).
2. The level of the "virulent" line descends when the virulent viruses are tested in doses of 10 mg.
3. When viruses of both high and low virulence are tested in the form of tissue emulsions in various doses, the "virulent" line is very irregular, and often falls to the level of the "non-virulent" line.
4. When the experiments illustrating modification as the result of animal passage are charted, the gap is completely bridged between the two extremes of high virulence with paucity of growth on culture and low virulence with abundant growth on culture.
5. When the results of the preceding charts are superimposed on one another, a separation into "two types" is seen to be impossible.

The Nutritive Properties of Various Liquid Media.

The preceding results of Dr. Eastwood's bacteriological investigations indicate that the differences in cultural characters which have been observed in the viruses examined are merely differences in degree of luxuriance on particular media. There was therefore no reason for expecting that an application of the "physiological method," which has been found useful in the differentiation of various nearly-allied bacteria, would bring out any marked "physiological" differences between strains of mammalian tubercle bacilli. But, on the provisional hypothesis that such physiological differences might exist, he has conducted a series of experiments in which the bacilli, both bovine and human, have been grown on a variety of liquid media in which one or other of various

alcohols, sugars, and other bodies has been used as a substitute for glycerine. The main result of this investigation has been negative. Though these special media serve to bring out various points of difference between various strains of bacilli, "these differences add very little which is new or important to the differences already established by the use of other media." Dr. Eastwood also refers to and criticizes the work of Theobald Smith, who endeavours to differentiate between "human" and "bovine" bacilli by estimations of the change of reaction in the acid or alkaline direction which these organisms bring about when grown upon glycerine broth.

THE MORPHOLOGICAL CHARACTERS OF TUBERCLE BACILLI.

The microscopic characters of human and bovine tubercle bacilli have been examined and compared. The morphology of the bacilli when grown on various culture media has been recorded in detail, and attention has also been paid to the characters of the bacilli as they occur in animal tissues. On artificial media there appears to be "a tendency for the bacillus to express by its morphological condition the nutritive influence of the particular medium upon which it is growing"; but the diversity in morphological features is very great, and does not provide any reliable basis for differentiation of the organisms. Also, with regard to the morphology of bacilli found in living tissues, Dr. Eastwood finds that "morphological appearances cannot be regarded as a reliable guide to diagnosis."

GENERAL CONCLUSIONS.

The following are the general conclusions drawn by Dr. Eastwood:

[illegible]

From the evidence provided, illustrative of both pathogenic and cultural instability, he finds strong reasons for the assumption that

during the course of long residence in the human body a bacillus, originally of bovine origin, might experience a modification of some of those characteristics which are met with in bacilli freshly isolated from the bovine, and that owing to this modification it might be indistinguishable from bacilli derived from previous cases of human disease.

THE IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION.

ANNUAL MEETING.

THE thirtieth annual meeting of the Irish Medical Schools and Graduates' Association was held in London on March 16th. The returns regarding elections to officerships did not show much change: Sir John Moore succeeded Dr. E. Irwin Scott as President, but Dr. J. H. Swanton and Dr. Kenneth Frazer remain respectively Chairman and Vice-Chairman of Council, and Drs. T. Hobbs Crampton and W. Douglas and Mr. E. Canny Ryall continue to be Honorary Secretaries. The Vice-Presidents elected for the year were Sir James Dick, Sir William Whitla, and Drs. Macnaughton Jones and E. Irwin Scott. The financial position of the Association was stated to be satisfactory, and the resignation of his office by Dr. James Stewart was recorded with regret. For nearly twenty-two years he had acted as Honorary Provincial Secretary, and in that position had, by his zeal and energy, done much to promote the welfare of the Association. The remaining incident was the acceptance of a badge to be worn by the President, which has been designed and made by Mr. W. Booth Pearsall, a member of the Council. It is of enamel work in the form of a small shield surrounded by the motto of the Association. The motto encloses a design of shamrocks on a blue background representing the sea, the centre being occupied by the red cross of St. Patrick on a white ground.

FESTIVAL DINNER.

The St. Patrick's Day dinner was held the same evening at the Hotel Cecil. About half those present were ladies, and the toasts being interspersed with music, the evening proved thoroughly enjoyable. The principal guests were the Right Hon. Sir Albert Henry Rollit and Sir A. E. Wright, while Sir John Moore took the head of the table, having as Vice-Chairmen Drs. Swanton, Kenneth Frazer, Bulger, Crampton, Dawson, Mr. E. Canny Ryall, and Colonels A. M'Donnell and J. Moorhead.

The chief event of the evening was the presentation of the Arnott Memorial Medal to Sir A. E. Wright. He was introduced to the Chairman by Dr. CRAMPTON, who explained the grounds on which this honour can be awarded. In earlier years the recipient had been usually one who had performed some heroic or distinguished act in the performance of medical duty; on the present occasion it was allotted in recognition of the services rendered by Sir A. E. Wright in pathological research. "The toast of our Defenders" was proposed in an eloquent speech by Dr. Macnaughton Jones; the fourth leaf of the shamrock, he said, was duty, and in the performance of that, both in the army and navy, Irish medical graduates had ever been to the fore. The toast was acknowledged by Admiral Sir E. Seymour, Colonel Ayden, and Surgeon-Captain R. Jocelyn Swan. Dr. J. A. Macdonald, Chairman of Representative Meetings, British Medical Association, proposed a toast to "The Guests" bidding them "Cead mile failthe." The last formal toast was that to "The Association," proposed by Mr. A. Shirley Benn, L.C.C., it was acknowledged by Sir John Moore, who said that the Association was flourishing in point of membership and fulfilling the purposes for which it was created. The promotion of good fellowship and the interests of Irish medical graduates in their professional career; many more hospital appointments in England were now thrown open to them than formerly. Active attention was being paid to the position of Irish Poor law medical officers, and all hoped that whatever might be done with regard to a new university no step would be taken which would imperil those which they possessed—one with the prestige of three centuries behind it, and another which in the comparatively short span of its existence had already achieved a high reputation.

LITERARY NOTES.

MR. JOHN MURRAY will publish in the autumn, probably in October, the *Letters of Queen Victoria*, being a selection from Her Majesty's correspondence between the years 1837-61, which is published by authority of His Majesty the King. The work, which is in three volumes, is edited by Mr. A. C. Benson and Viscount Esher, G.C.V.O., K.C.B. The first volume covers the correspondence of the Queen till the age of nearly 25. The second covers the period dealing with the repeal of the Corn Laws, the foreign revolutions, of which the most sensational incident will perhaps be found to be the story of the flight of Louis Philippe to Newhaven; the disruption of the old Whig party, and the fiasco of Chartism. The third volume deals with the Eastern question, the Crimean war, the Indian Mutiny, entailing the transfer of the government of India to the Crown, the China war, the Franco-Austrian war, and the struggle for a United Italy. The selection terminates with the Prince Consort's life. The book will be illustrated with many photogravure portraits, among which is one of Baron Stockmar, the trusted counsellor of the Queen, who was originally the Prince Consort's physician.

If Mr. Raymond Beazley is right, one of the most famous books in literature must be added to the list of those produced by members of the medical profession. In the third volume of his *Dawn of Modern Geography* recently issued from the Clarendon Press, he says that the *Book of John de Mandeville*, which was regarded by Samuel Purchas as the genuine record of the "greatest Asian traveller (after Polo) that ever the world had," is now known to be a compilation from the works of other men, written in French, probably concocted by a stay-at-home, but ingenious and unscrupulous physician of Liége, in the middle of the fourteenth century, and published between 1357 and 1371. Its popularity soon became phenomenal; it was translated into all the chief languages of the West; in its English version it formed a landmark in the development of our speech. "Sir John Mandeville" appears to have been Jean de Bourgogne, who in 1372 died in Liége and was buried in the church of the Guillelmins in that city, having practised as a medical man among the Liégeois from 1343. On his death-bed he "revealed himself" to the Netherland chronicler, Jean d'Outremeuse, as "John de Mandeville, knight, Earl of Montfort in England, and lord of Campdi island and of Chateau Pérouse," who in expiation of an unlucky homicide had travelled in the three parts of the world. The truth, says Mr. Beazley, is probably to be reached by reading his "confession" backward.

It is not, we think, generally known that the real pioneer in the humane treatment of the insane was neither Pinel nor Conolly, but a Spanish monk, Juan Gilberto Joffre. We are pleased to see that justice is done to the memory of this forgotten philanthropist by Dr. Bevan Lewis in an address on the formation of character published in the January number of the *Journal of Mental Science*. The passage deserves quotation:

> During mediaeval times, when the thousand years of the so-called Dark Ages brooded as a cloud over Continental Europe, two great lights cast their beams athwart the gloom, bringing out the shadows into still darker relief, as though to solace Europe for the decay of learning, which was then at its lowest ebb. The first great luminary appeared just prior to the plunge into mediaeval darkness, as though to support with hope those who otherwise would have been given over to absolute despair; the second near the termination of the Dark Ages, as if to augur the return of the sun of learning in its full lustre.
>
> The first I allude to was that of a noble Roman lady, her work and its momentous results. The woman's name was Fabiola, who, as an act of penance, founded at Rome the first public hospital that history records; her example, copied by noble emulation throughout Christian Europe, spread like a flood throughout civilized nations, with the wondrous results you perceive at the present time.
>
> The second great luminary was the Spanish monk, Juan Gilberto Joffre, who, tortured by the horror to which wandering outcast lunatics were subjected, built the first asylum for the insane at Valencia in 1409; the cities of Saragossa, Seville, Toledo, and Valladolid followed with their respective asylums, and a new era began to dawn, the doctrine of witchcraft and demoniacal possession was doomed, and we stand here to-days witness to that sterling human instinct which was aroused by these two wondrous characters.

The first of these *casas de orates*, it will be noted, was founded at the very beginning of the fifteenth century; the others followed not long after—that of Saragossa in 1425, that of Seville in 1436, that of Toledo in 1483. Pinel and Alibert speak with high approval of the Saragossa house, where they say lunatics were treated with not less humanity than intelligence. It was not only in the treatment of the insane that Spain was in the van of medical progress in the Middle Ages. In the *Chronique Médicale* of March 1st, Dr. M. Dusolier gives several instances of the comparatively advanced state of the medical art in mediaeval Spain. In the thirteenth century we meet the great name of Arnold of Villanueva, to whom we owe the first treatise on military hygiene. In his *De Regiminine castra sequentium* he treats of the choice of camping grounds, marches, drinking water, and the prophylactic measures to be taken against epidemics. To him is attributed the preparation of spirits of wine, of oil of turpentine, of sulphuric, muriatic, and nitric acids, and of smelling salts. It would appear that in Spain the sanitary regulation of prostitution was first attempted; this was in 1486. These regulations remained in force during the whole of the sixteenth century; they were repealed in 1623 by Philip IV at the instigation of the clergy. Dusolier claims for Isabella the Catholic the credit of having been the first to organize a system of military field hospitals. Dissection was not only permitted in the fifteenth century, but in 1488 a royal decree was issued imposing a heavy fine on any one who should interfere to prevent a dissection. In 1498 appeared a poem on syphilis by Francisco Lopez de Villalobos, then a student of the University of Salamanca, who was thus a precursor of Fracastorius; from this work it may be gathered that mercurial inunction was in use as early as the end of the fifteenth century. The priority of the invention of a method of training of deaf-mutes is claimed for a Benedictine monk, Fray Pedro Ponce de Leon, who flourished about 1530. A later writer, Juan Pablo Bonet, published in 1620 a system of conversing with deaf-mutes which is said to embody the ideas of Ponce. In 1735 Juan Rodriguez Pereira, of Cadiz, who had inherited the tradition of this method, took some of his pupils to Paris and presented them to Buffon. The Abbé de l'Epée, who established his school for deaf-mutes in 1755, always gave due credit to the Spaniards for the invention.

In an introductory lecture delivered at the Guille-Allès Library, Guernsey, Dr. John Aikman discussed in a popular style some aspects of mind. He gives a clear account of the mechanism of the mental processes as far as it has been laid bare by modern scientific research. He illustrates his remarks with interesting examples, one of which may be new to some of our readers. At a Cambridge examination a question was put which only two candidates answered. One of them explained that he read German, and took in a German magazine in which he had seen the problem. The examiners expected a like answer from the other, who is now Lord Rayleigh, and were surprised when he answered: "I sometimes write for a German periodical, and was much flattered to see that you had considered my problem worthy of a place in an examination paper." Dr. Aikman quotes a saying of Dr. Thomas Reid, who was a noted specialist in his youth: "Men with large hands have great responsibilities; so much is expected of them. The elephant has a big head, but he is too wise to try to talk." Dr. Aikman's view of the reformed spelling is worth quoting:

> Notice what a marvellous association hangs round the most simple word which we use—it must be heard, seen, and spoken before its due worth is realized. Add to that the variations of the same word in different languages, in printed and written characters, in its derivation and modulation, and you will recognize that Mr. Roosevelt's reformed spelling is a degeneration. We should lose much to gain little for the sake of indecent haste.
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> Happily the reformed spelling has already, in the words of Keats, "ceased upon the midnight and no pain."

DR. H. PEARSON TAYLOR of Mid Yell, Shetland, was the recipient on March 4th of a freewill offering in the shape of a cheque and typewriter in an ornamental case bearing an inscription. The donors were the inhabitants of Yell and Fetlar islands, speaking on whose behalf the Rev. M. Love said that few men anywhere had shown such devotion to their work as had Dr. Taylor since he came to live among them. His weary travels were many, as were also his sleepless nights; but, in face of all difficulties, he was always ready to go where duty and humanity called. A presentation was also made to Mrs. Taylor.

MEDICAL NEWS.

DR. H. P. HAWKINS has been appointed a Clinical Teacher of Medicine at the Royal Army Medical College, vice Professor J. R. Bradford, M.D.

PROFESSOR C. S. SHERRINGTON, of Liverpool, has been elected a foreign corresponding member of the Belgian Royal Academy of Medicine.

THE tenth Congress of Polish Medical Practitioners and Scientists will be held at Lemberg from June 16th to 24th. In connexion with the Congress there will be an exhibition of objects, instruments, etc., relating to medicine and hygiene.

AN Argentine Society of Sanitary and Moral Prophylaxis has recently been founded for the prevention of syphilis. Its head quarters are at Buenos Aires. The President is Dr. Emilio R. Coni.

THE Department of Education of the State of New York has approved a Bill, now before the State Legislature, for the establishment of a single medical examining board and for the abolition of all sectarian distinctions in the licensure of medical graduates.

THE twenty-fourth German Congress of Internal Medicine will be held this year at Wiesbaden from April 15th to 18th, under the presidency of Professor von Leyden. An exhibition of specimens, apparatus, etc., will be held in connexion with the Congress. The General Secretary of the Congress is Dr. Emil Pfeiffer, 13, Parkstrasse, Wiesbaden.

IN a letter now being circulated, medical men are reminded that the London Fever Hospital specially caters for patients who, as suffering from infectious disease, have to be removed from their residence, but are ready to pay either three guineas for the whole duration of their treatment in a general ward, or three guineas a week if suffering from scarlet fever and a private room is preferred. The diseases treated are scarlet fever, diphtheria, measles, and German measles; a brougham ambulance can be sent on receipt of a telephone or other message.

THE members and friends of the Post-graduate College of the West London Hospital held a *conversazione* at Hammersmith on March 15th. The guests were received by Mr. Bidwell and the other members of the College Committee. The Duke of Abercorn, the Chairman of the Hospital, was present, and a great many medical men came on from the dinner of the Medical Society. Especial notice was taken of the exhibition of x rays by Dr. D. Arthur and Mr. Chisholm Williams, and most of those present inspected the microscopical sections and pathological specimens of tropical diseases shown by Dr. G. C. Low, the pathologist and bacteriologist to the hospital.

SIR CHARLES CUFFE, K.C.B., who served with so much distinction for nearly forty years in the Army Medical Department, retiring recently with the rank of Surgeon-General, is offering himself as a candidate for Queen's Gate Ward, Kensington, at the forthcoming election of guardians. Sir Charles Cuffe is already a member of the Kensington Borough Council, and his long experience of medical administration will, we feel sure, commend his candidature to all medical men residing in the ward. The work which falls to be done by Boards of Guardians is so largely concerned with the care of the sick and infirm that medical experience is of the greatest value.

THE medical golf tournament will take place on Thursday, May 9th, and application has been made to the Burnham Beeches Golf Club for permission to play the event on their links. To secure the continuity from year to year of this popular fixture, and to promote the interests of golf among practitioners, there has been founded a Medical Golfing Society with an annual subscription of 5s., the payment of this sum including entrance to the tournament. Any person on the *Medical* or *Dental Registers* can join by sending 5s. to the Honorary Treasurer, Medical Golfing Society, 1, New Cavendish Mansions, New Cavendish Street, London, W.

AT a private meeting in Chester on March 13th it was suggested and decided that a subscription list should be opened in order to make public recognition of the services of Mr. James Taylor to Chester General Infirmary. The Mayor of Chester presided, and the principal speakers were medical men, the project having originated in the local medical society. Independently of the recognition in view, the event must be most gratifying to Mr. Taylor, as the speeches made were a most remarkable testimony to the services which he has rendered to the institution in question and to the very warm esteem in which he is held by his colleagues. At one time Mr. Taylor was President of the Lancashire and Cheshire Branch of the British Medical Association, and he is now consulting surgeon to the Wrexham Infirmary. With the Chester General Infirmary, where until quite recently he was senior surgeon, he has been connected for over forty years.

THE week's reports present but little to note in regard to epidemic cerebro-spinal fever. So far as England is concerned two out of four reported cases in Shropshire have been finally diagnosed as instances of the disease; the same remark applies to a case in the village of Tollesbury in Essex. In Stepney, what is stated to be the fourth case in the area during the past three weeks has been recorded, and in Chelsea likewise a child has been found to be suffering from the disease. In Glasgow, it was officially notified on March 19th, that in the past fortnight there had been 93 cases and 56 deaths, as against 90 cases and 66 deaths in the previous corresponding period. In Scotland, the Registrar-General's return for the week ending March 16th included altogether 40 deaths ascribed to this disorder; 33 occurring in Glasgow, 1 in Paisley, and 2 each in Edinburgh, Leith and Greenock. In Ireland during the same period the Registrar-General recorded 21 deaths altogether as due to cerebro-spinal fever or cerebro-spinal meningitis, all but one of them occurring in Belfast.

THE medical library established by Messrs. H. K. Lewis has lately undergone extensive alterations and additions, and a new entrance has been made at the corner of Gower Street and Gower Place. The older portion of the premises, No. 136, Gower Street, is now chiefly utilized as a second-hand department, where surplus books from the library and other second-hand stock may be inspected. The chief works of interest for medical men are to be found in the library where the volumes can be examined on the shelves when subscribers are making exchanges; every convenience is supplied for writing and making extracts, and the arrangements are such that practitioners from the suburbs or provinces will find the library a convenient and well-appointed reading-room, with lavatory accommodation provided. The premises of Messrs. H. K. Lewis are within a minute's walk of the Gower Street Station of the Metropolitan Railway, and the new Tube Station, at the junction of Tottenham Court Road, Euston Road, and Hampstead Road is only a few minutes' distance. The termini of the Great Western, Great Central, London and North-Western, Midland, Great Northern, and Great Eastern are thus within easy access, while the new north and south Tubes and the numerous lines of omnibuses bring the library within comfortable reach of the south-western and southern districts of the metropolis.

ON March 20th a meeting was held in the Mansion House under the presidency of the Lord Mayor of London, to promote the interests of the International Congress on School Hygiene, to be held in London next August. Sir Lauder Brunton, the President-elect of the Congress, said that at the first congress, held in Nuremberg three years ago, an invitation was received to meet in Paris this year, but when it was announced that an invitation had already been issued by the Royal Sanitary Institute to the Congress to meet in London the French delegates gracefully waived their claim. Sir Lauder Brunton referred to the rapid development which had taken place with regard to the hygiene of schools and the care of the health of school children in various countries in recent years. The number of delegates present at the first Congress was fifteen hundred, and it was expected that the number attending the London congress would be still larger. Dr. Macnamara, M.P., Parliamentary Secretary to the Local Government Board, dealt especially with the necessity for the medical inspection of schools, and observed that his experience as a school teacher had impressed him with the necessity of the careful examination of children for physical defects. Even if any accident befell Mr. Rea's Bill, identical provisions were embodied in the Government Education Bill containing the non-contentious parts of the Bill of last year, so that there was every prospect that medical inspection would become obligatory during the present session. The Congress, therefore, which would bring together in London this year representatives of many countries, came at a particularly opportune moment. Sir John Cockburn, K.C.M.G., referred to the interest which the Colonies took in the Congress, and, after some remarks by Sir Edward Brabrook, Chairman of the Organizing Committee, Sir Richard B. Martin, Chairman of the Finance Committee of the Congress, appealed to those present to give it their support. A vote of thanks to the Lord Mayor for presiding was moved by Mr. Alfred Moseley, C.M.G., who said that during the recent visit of one hundred school teachers to America they had found much to learn, and was seconded by the President of the National Union of Teachers. The compliment was briefly acknowledged by the Lord-Mayor.

British Medical Journal.

SATURDAY, MARCH 23RD, 1907.

AN EXAMPLE AND AN APPEAL.

THE letter from the Durban Medical Society which Dr. Maclean of Cardiff has sent us for publication is a striking example of the solidarity of the medical profession throughout the British Empire in the struggle against the abuses which have grown up around contract practice. The members of this Society consider that this question is of vital and urgent importance, and no member of the profession who will take the trouble to look into the matter can arrive at any other conclusion.

It is of vital importance to many individual members of the profession who find themselves working under thankless and often unreasonable taskmasters for remuneration utterly inadequate to the character of the services expected, and insufficient to enable them to achieve independence or make any provision for old age. Medicine, as is well known to its followers, is nowadays an expensive profession to enter, and many a man when, after five or six years of hard work, he has won the right to have his name placed on the *Medical Register*, finds himself quite denuded of resources. What wonder if to a young man in such a position the offer of some contract medical organization seems a tempting bait? Presently he finds out that the independence he believed himself to have achieved is a delusion, and that he has little or no prospect of getting free from the servitude into which he has sold himself. It may be said, and has been said, that this is a matter which concerns the individual only, that if he is willing to give his services on such terms it is his own look-out. But this is to take a very narrow view. We may reverently quote the words of St. Paul, "That there should be no schism in "the body; but that the members should have the "same care one for another. And whether one member "suffer, all the members suffer with it; or one member "be honoured, all the members rejoice with it."[1]

We apprehend that when the members of the Durban Medical Society wrote that the question was of vital importance, they meant that it was of vital importance to the whole medical profession, because it touches its honour and the very reason for its existence. We have it on unimpeachable authority that "the "system of rendering medical services under contract "is attended by grave dangers to the character and "efficiency of the medical practitioner concerned."[2]

The gift of the Durban Medical Society may serve also to draw the attention of the profession in this country to the fact that this matter of vital importance to it is also at the present time one of urgent importance. During the last few years the British Medical Association has been requested to advise as to disputes in various localities where, after full investigation and after every means of conciliation has failed, there has been no alternative but to recommend that medical men could no longer retain the appointments in question consistently with their duty to the profession and to their patients. When making such a recommendation, the Association has too often been confronted with the fact that many of those thus advised to resign for the benefit of the profession as a whole have had absolutely no other resources; they have in many instances drifted into contract work soon after qualifying because they had no capital, and the salaries they have received have been inadequate to enable them to save. Often these medical men have children or others dependent upon them, and it has therefore been practically impossible for them to act upon the advice given unless they could be temporarily guaranteed a reasonable income to tide them over the period of contest. When, after full consideration of all the circumstances, the representative body of the profession recommends the extreme step of resignation, it is felt that the profession ought to be in a position to give pecuniary assistance to those who in its interests and on its advice are asked to sacrifice their only source of income. The British Medical Association itself, being at present registered under the Companies Acts, is legally debarred from expending any part of its general funds for the benefit of individual members, and it has therefore been necessary to establish a special fund, the Central Emergency Fund, which is administered by the Medico-Political Committee of the Association. So far this fund has not received the general support from the profession which might reasonably have been expected; in South Wales, indeed, where the prolonged dispute in Ebbw Vale has impressed upon all ranks of the profession the absolute necessity for such a fund, donations have been made on a scale which, had it been imitated in other parts of the country, would by this time have provided a sum which would have materially strengthened the position of the Association in dealing with disputes of this order.

An appeal may now fairly be made to all members of the profession, whether directly affected by contract practice or not, to support the Central Emergency Fund. Money is wanted, but the moral support of men who have achieved success in consulting or general practice is almost equally needed, and we would earnestly appeal to those members of the profession whose lives have fallen in pleasant places to consider the case of their less fortunate brethren and to give generously to the support of the Fund which has been established in the common interest of all.

[1] 1 Cor. xii. 25 and 26.

[2] *An Investigation into the Economic Conditions of Contract Medical Practice* (report by the Medico-Political Committee of the British Medical Association). SUPPLEMENT to the BRITISH MEDICAL JOURNAL, July 22nd, 1905, p. 24.

CANCER CURES.

IF cancer has not yet found its conqueror, it is not the fault of the newspapers. Hardly a week passes without our being told that the long-sought cure has been discovered. Now it is a caustic paste; now a salve made of some wondrous herb, sanguinaria, or spurge; anon it is a blend of toxins, or a serum or an enzyme. However much these remedies may differ in other respects one touch of nature makes them kin—they are all infallible. In the bright lexicon of cancer cures there's no such word as fail—at any rate if we are to believe their inventors. On this point cures bearing what may be taken by the unwary for the stamp of scientific authority, and those which have no warranty but a good faith founded on utter ignorance, are singularly alike. Of "cures" belonging to the former category some striking examples are before the profession. Of the latter an instance is reported from South Wales. Two brothers, Daniel and John Evans, small farmers near Cardigan, have, it appears, been

"curing cancer" for many years with a herbal remedy. Their fame has somehow recently got into the local papers, and sufferers are flocking from distant parts to be healed of their sores. The cases are of the usual intangible kind, the most definite feature being the long duration of the disease. Thus, one man had a cancer for twenty years. He underwent the *x*-ray treatment at a London hospital for ten months, and got from a London specialist a certificate that he was the victim of "a most chronic form of cancer, for which "there was no cure known." He was treated by the Cardigan herbalists with the result, given on the authority of his daughter, that "he has been cured from "the deadly disease of cancer." Another man, said to have had cancer for fifteen years, for which he was repeatedly treated at a London hospital, is now under the hands of the herbalists, who, although he has lost a portion of his gums, one lip, and a part of his nose—and, it may be added, is 80 years of age—are sanguine of success. They are said to have at least forty patients from various parts of the country under treatment at the present time. From one account we gather that they select their cases somewhat carefully; if the disease seems to be beyond the reach of their simple art, they refuse to meddle with it. In another interview they stated that they had never yet declined an "external case" which had not been operated on, and that they had never had a single failure. Success has made them more enterprising, and they hope to find out a method of dealing with internal cancer. The treatment appears to be a combination of herbs and faith healing. They begin with prayer and exhortations to the patient to trust in the Almighty. Then they apply a lotion or ointment said to be made entirely from herbs, and to contain no mineral caustic. They say their chief difficulty is with cancer that has been operated on. Such cases they liken to trees cut away from their roots; the main bulk of the growth being gone, there is nothing into which the remedy can draw the "roots." Unlike other empirics who profess to remove the roots which the knife leaves behind, the Welsh herbalists say their remedy makes the "roots" shrink into the original growth, which then falls off "like a ripe apple from a tree." Of the herb we are only told that it was discovered by Daniel Evans on the shore at St. Dogmell's. After "applying tests" and studying botany, he concluded that it would be useful in the treatment of cancerous growths. A Cardigan doctor is said to have suggested that the herb is probably one of the natural order Euphorbiaceæ or the spurge tribe. The juice of the plant is said to be useful in the removal of warts. Several species of spurge are, it is said, to be found in many places on the shores of the Bristol Channel.

In all this we see nothing but an old old story, which the history and inexhaustible folly of man makes ever new. Does not David Hume say, "In spite of all "warnings we see one generation after another, with "their eyes wide open, fall into the same gulf of "fraud, quackery, and imposture"? We do not accuse these men of conscious guile, for we know nothing of them. There may, for aught we know, be some virtue in their herb. But as but a can be gathered from the newspaper reports which, it may safely be assumed, do not minimise their achievements, there is no shadow of evidence that they have ever cured a cancer. Taking the reports as they are given, the disease dealt with was clearly hopeless. This has been pointed out by more than one of the medical practitioners in the neighbourhood. Another noteworthy point, when the matter is looked into, is the very slender foundation on which the whole story rests. We hear of sheaves of testimonials from grateful patients, but when anything like definite facts are given, one or two cases are made to do duty for a host, like a stage army. We should not have thought the Cardigan "cure" worth notice, but that our attention has been specially called to it by several medical practitioners, and that the irrepressible Mr. W. T. Stead is calling for an investigation of the claims put forward on its behalf. He takes it ill that the Cancer Research Committee will have nothing to do with the matter, because the herbalists refuse to disclose the nature of their remedy. In illustration of his point of view we quote some remarks which appear to be intended for satire: "Supposing an "angel came from Heaven with an infallible specific to "heal instantaneously every case of cancer submitted "for treatment, the Cancer Research Committee would "refuse to recognize the sudden disappearance of cancer "from the maladies of mankind unless they were "informed of the precise ingredients of the angelic "specific. From which it would seem that cancer "researchers are almost as much blindmanbuffers as "the psychic researchers, who have done so much to "make research a byword for the scoffer." From the allusion to the psychic researchers we gather that these inquirers have not seen their way to accept the utterances of Mr. Stead's "affable familiar ghost," Julia, as revelations of divine truth. Mr. Stead doubtless knows more of angels than we do, but he evidently does not know the difference between a quack and an honest practitioner. The former loves darkness, for it is in deception that his power lies. We should have thought that Mr. Stead's own experience with the Mattei cure would have impressed this in ineffaceable characters on his mind. The story is interesting and instructive and may be read in the British Medical Journal of August 13th, 1892, p. 369. Undismayed by the recollection of that memorable fiasco, Mr. Stead now proposes to investigate the claims of the Cardigan cancer curers. With that object he asks for cases of external cancer certified as being unmistakable cases of genuine cancer and declared to be incurable by the Cancer Hospital or by properly qualified medical men. He gives fair warning that the treatment is painful, and that it will last for weeks. But if three or four of these unmistakable duly certified cases of inoperable external cancer can be obtained, and if the sufferers and their relatives are willing to submit to the ordeal, he declares himself willing to make arrangements with the Evans brothers for treating them in Cardigan, on the sole condition that they are willing to have the result of the experiment published with full particulars for the satisfaction of the public. No case of internal cancer need apply; nor will any patient whose general state of health is in so low a state as to render travelling at all dangerous be accepted. Cases which have already been operated upon are also excluded. Mr. Stead would like to have some cases which are regarded by the profession as unfit for operation, and, therefore, as hopelessly doomed. And in every case medical certificates, signed by at least two medical men of good standing as to its being a case of genuine cancer, must be produced "to ensure us in "advance against the usual cry after a cure has been "effected that it was not really cancer after all."

Sydney Smith said of Lord John Russell that he was ready at any time to cut for stone or take command of the Channel Fleet. Mr. Stead's self-confidence is much greater than that. He has, we believe, advised the Pope how to "run" the Catholic Church, and the Czar how to govern his troublesome empire. We have no doubt he would be equally ready to accept the

position of Director of Cancer Research throughout the world. He has had an experience of mischievous blundering that would have sufficed to teach most men a certain distrust of their own inerrancy, but he has never learnt the wholesome lesson which Cromwell sought to impress on his officers—to conceive it possible he might be mistaken. He has evidently not the slightest appreciation of the difficulties of an inquiry such as he proposes. It is to be presumed that his object is to discover the truth; we therefore think it right to tell him that his conditions are by no means such as to ensure a trustworthy result. The certificates as to the nature of the disease which he asks for are quite inadequate, and he gives us no idea what is to be regarded as a cure, or who is to decide that a cure has been effected. The profession knows too much of "cures" after treatment which has lasted for weeks. If Mr. Stead wishes to do something more than supply a subject for irresponsible babble in the newspapers, he will have to arrange that the cases are kept under observation for at least two years. If the Cardigan herbalists can produce a cure that can be guaranteed to have held good for two years, they will have done better than other practitioners of their kind. But it will still be far short of what is done every day by legitimate surgery.

We hope for the sake of humanity that Mr. Stead will see to it that the patients are made fully to understand what they are to undergo. He says the treatment is painful, but he should read the account of the sufferings of victims of other methods of treatment "without the knife" if he wishes to realize what the pain may mean. He will find a number of cases from which he may perhaps derive instruction in a pamphlet entitled *Cancer Cures and Cancer Curers*, by Spencer Wells. We commend to his particular attention the narrative of the last days of Mrs. Emily Gosse, by her husband, Philip Henry Gosse, F.R.S. And if he wishes to learn how an inquiry into the effects of an alleged cancer cure should be conducted, he should read, mark, and inwardly digest the report of the trial made of the Otto Schmidt treatment for cancer which is given in the third report of the cancer laboratories of the Middlesex Hospital by Mr. J. W. Glenton Myler.[1]

Lastly, we would beg Mr. Stead as a preliminary to his investigation to clear his mind of cant. The motion that doctors will refuse to accept any cure as genuine that does not originate in their own body, is mere cant. The whole history of medicine contradicts the foolish charge. There is no profession more open to new ideas than that of medicine, as is clearly shown by the fact that the art of healing has been completely revolutionized in the last half century, largely as the result of the work of men outside the professional fold.

THE INSPECTION OF MILITARY HOSPITALS AND ARMY SANITATION.

Among the army reforms recommended by Lord Esher's Committee was the appointment of an Inspector-General of the Forces, who should review and report upon "the "practical results of the policy of the Army Council "within the limits laid down by the Cabinet" and who should "provide the Secretary of State and the Army "Council with eyes and ears . . . thus enabling the "governing body of the army to know the practical "results of the measures it adopts." The Inspector-General was to report "generally on all that affects the "readiness of the Forces for war." Characteristically no mention was made of inspection of the medical services. Surgeon-General Evatt suggested that this obvious omission should be repaired by the appointment of an Inspector of Army Medical Services on the staff of the Inspector-General of the Forces, and the proposal was strongly supported in the Journal. The advantages of the suggestion were so plain that we were able to state in our issue of December 29th, when announcing the reconstitution of the Advisory Board, that steps were to be taken to appoint an officer of the Royal Army Medical Corps to act as inspector of hospitals and of army sanitation on the staff of the Inspector-General of the Forces. Now we are able to state that the post has been created and filled by the appointment of Lieutenant-Colonel W. Babtie, V.C., a distinguished officer, who we are sure will fully justify the choice. Colonel Babtie won his Victoria Cross at Colenso, and has already had a large experience as an administrative officer at head quarters and elsewhere.

[1] *Archives of the Middlesex Hospital*, vol. iii.

ROWING AND HEALTH.

Comparatively little is heard in these days of the dismal vaticinations that filled the papers thirty or forty years ago after each University boatrace. The young men who did battle for their Alma Mater on these occasions were looked upon by many as "butcher'd" to make a London holiday, or at any rate as foredoomed to premature breakdown and untimely death. The part of Cassandra was first played by Mr. Skey, of St. Bartholomew's hospital, but he had not a few rivals and understudies in the rôle. Mr. Skey's denunciations of the boatrace found a powerful echo in Wilkie Collins, who in *Man and Wife* depicted the University oarsman as a brutal ruffian who is suddenly struck down by death in the flower of his strength. This Journal had the honour of being one of the first to recall public opinion to a saner view. In our issue of October 19th, 1867, the late Sir George Humphry, at the request of the editor, expressed the opinion, based on the experience of more than a quarter of a century, that the ill effects of boatracing had been exaggerated. He said that on the whole boating is unquestionably a great physical and moral good to undergraduates, affording a healthful, agreeable recreation, and imparting vigour to body and mind. His own experience led him to the belief that it is seldom productive of serious bodily mischief, either immediate or subsequent. Some possible evils Sir George admitted, but these, he said, were reduced to a minimum, and he pleaded strongly for boatracing as helping to develop the man and prepare him for the struggles of life, part of their value in this respect being due to the "courage-"exciting risks" involved. The myth as to the dangers of rowing in general, and of the University boatrace in particular, was finally dissipated by the late Dr. J. E. Morgan of Manchester, a graduate of Oxford, who had himself been captain of his college boat.[1] He made a series of inquiries among all the men who had rowed in the race between 1829 and 1869, and their friends and relatives. He found that of a total of 294 only 17 were considered to have suffered any evil effects, and in several of these cases he thought that the evil had probably no connexion with rowing, while in others it was attributable to rowing when "stale" from overtraining or when unfitted for such an exertion by illness. In only two or three cases was the heart damaged; in one of these the organ was known to have been affected before the man had rowed much, and in another the oarsman had begun the exercise too young. Of a total of thirty-nine deaths which occurred in the forty years over which Dr. Morgan's inquiry extended, only 7.4 were due to heart affections, and the mortality from lung disease was also greatly

[1] *University Oars*. Macmillan and Co. 1873.

below the average. In the whole number there was no instance of those rapidly fatal forms of cardiac disease, such as rupture of valves, aneurysm, etc., which are not infrequently seen in men whose occupation entails great muscular effort. In only two cases was rupture of a blood vessel caused by rowing in the boatrace. Dr. Morgan sums up the results of his inquiry as follows: "From these statistics it appears that 115 (or "39 per cent. of the whole) were benefited by their "exertions, 162 (or 55 per cent.) were in no way injured, "while 17 (or about 6 per cent.) refer to themselves, or "are spoken of by their friends, as having sustained "that amount of injury," which, as already said, on critical examination turns out to be open to considerable doubt. By actuarial calculations Dr. Morgan showed that, judging from the experience of the past, the expectancy of life is longer than the average in university oars. At the present day, when the teachings of physiology have been applied to training, the risks are considerably less than they were forty years ago.

DIRTY MILK AND INFANTILE MORTALITY.

To every one, and not only to those specially interested in hygiene, Dr. Harrington's article in the December number of the *American Journal of Medical Sciences* will be of interest. Under the title "Infantile Mortality and its Principal Cause—Dirty Milk," he has collected in a series of tables a comparative index of the importance attached to the matter in various countries, and of the value of its proper appreciation with the corresponding beneficial results accruing, where steps have been directed towards a remedy. After discussing infantile mortality in relation to its main causes, seasonal distribution, methods of feeding, and class, he comes to the question of insanitary dairying as the main factor in producing the much higher mortality shown among the artificially fed than among the breast-fed. His strictures apply with as much, if not more, force to the conditions rife in this country as to those existing in his own, when he sums up the situation by saying "the great majority of dairies are "dirty in appointments and methods," owing to the extent to which local authorities in England are bound by official red tape. In order to support his statement he compares the steps necessary to stop the introduction into London of an infected milk supply with those needed in Massachusetts. His statement that the great majority of dairies are dirty in appointments and methods, and that this applies to England as well as to his own country, is supported by numerous references to reports of medical officers of health, and can be borne out by the personal observation of any intelligent layman. While not in any way minimizing the responsibility resting with the producer, it is pointed out that in reality a great part of it lies with the consumer and the middleman. By a disinclination on the part of the consumer to pay a fair price, or to allow an advance thereof, the producer is unable to bear the increased cost of proper labour for efficiently maintaining cleanliness and proper methods in the management of his dairy. Direct delivery is impossible except in small areas or in the country, and consequently the middleman is necessary, but associations satisfied with a reasonable profit (such as exist in Denmark, where the deliberately dirty producer cannot dispose of his supply) should make clean milk a possibility to all.

NOTIFICATION OF TUBERCULOSIS IN FRANCE.

Bruyerre and Dieulafoy discuss the question of compulsory notification of tuberculosis as it is viewed in Paris at the present time. The enormous mortality caused by this disease is beyond dispute, and official statistics even of its prevalence in the army, do not adequately represent its true extent. Hitherto but little success has attended the efforts made to limit it, and the reason is that they have been directed more to the treatment of the already infected than to the protection of the healthy. Adequate protection, however, means disinfection, and adequate disinfection means compulsory notification; and the law refuses to compel notification of tuberculosis. French medical opinion, on the whole, supports the law in its refusal; and the Academy of Medicine in Paris has not ventured to add tuberculosis to its list of diseases which should be made legally declarable. The grounds of this reluctance are, according to the authors, more sentimental than scientific. It is admitted by most physicians that disinfection is desirable, because it offers the best means of checking the spread of the disease, but the practical carrying of it into effect presents difficulties which they cannot get over. When analysed, the objections resolve themselves into two main propositions: First, it is urged that notification during life, with its consequent disinfection, means that the individual is branded. The measures necessary to carry out the disinfection will inform the neighbours, and the tuberculous patient will be shunned by all, and condemned to the society of others tuberculous like himself. Some years ago the experiment was tried, and in five quarters of Paris 100 sites of the disease were regularly disinfected. The result was that their inhabitants were thrown out of work and became practically outcasts. Secondly, notification involves by its inevitable publicity a sacrifice of the professional secrecy, which is so jealously cherished in France. To the first objection the authors reply that this is merely a question of educating public opinion. As a matter of fact, in dispensary practice a patient diagnosed as tuberculous is not even now cast out by his friends and relatives on that account. Other notifiable diseases carry no stigma; and the disinfection by public authorities necessary for the poorer classes might be done much more simply and quietly than it is at present. The second objection also is unsound, for the public good must and should prevail over such a matter as professional secrecy. This has already been recognized by the Academy of Medicine, which has put tuberculosis first on the list of diseases, which the physician may notify if he thinks fit. Such optional notification is quite useless in practice, for the public will not attend a doctor who is known to insist frequently on disinfection when there are others not so exacting. A middle course is notification after death, or upon removal from one domicile to another. The authors think that this should be made legally obligatory for every form of tuberculosis whatever; but that notification during life should be exacted only where the tuberculosis is actively dangerous, that is, where the patient is discharging bacilli in his sputum.

A PHOSPHORUS-FREE MATCH.

The new regulations dealing with the manufacture of matches, which came into force in Germany on January 1st, should bring about a reform of considerable importance. For some years an agitation has existed in the country to put a stop to the old method of manufacture, not only on the ground of the inevitable ill-health caused to the workers by the preparation of yellow phosphorus, but even more because the poisonous sulphur phosphorus match has figured largely in the annals of crime, and has also been responsible for many serious accidents. It is only recently that the difficulties in the way of reform have proved surmountable. The public has always demanded a non-safety match, but no material was available which combined the desired properties of being non-poisonous, and having a high ignition point, a non explosive combustion and a

friction-ignition on any ordinary surface. The substance now suggested by the German Government known as Schwiennig's powder, may be described as a mixture of the material contained on the heads of the Swedish matches and of that which is pasted over the prepared surface, thus avoiding the poisonous yellow phosphorus, by substituting for it the harmless red amorphous variety. This simple mixture, however, if unmodified, would ignite explosively, and the success of Schwiennig's substance depends on the presence of calcium plumbate ($CaPbO_3$). The decomposition of this salt provides the old oxidizing agent, lead peroxide, while the calcium base aids in the development of a high temperature by neutralizing the freshly-formed sulphuric and phosphoric acids, which at the same time it renders innocuous. The calcium plumbate also acts as a negative catalyzing agent, that is, it reduces the velocity of the reaction, steadies it and affords slow combustion instead of irregular explosion. A further advantage which the matches possess is the high temperature of their ignition point. They do not ignite spontaneously until a temperature of 150 to 160° C. has been attained. In this respect they compare favourably with the old order of phosphorus matches, which began to undergo decomposition and to give off noxious fumes at a temperature of between 50 and 60° C. The history of the discovery is both interesting and significant. Calcium plumbate, its chief ingredient, was first described in 1893 by Dr. Kassner with the similar plumbates of barium and strontium. It is obtained by heating the carbonate or hydroxide of calcium with lead monoxide in the presence of air, as the ortho salt, crystalline with four molecules of water. Three years after the publication of this paper the firm of Schwiennig-Kassel submitted a specimen of the Schwiennig's powder for Dr. Kassner's consideration. It is, therefore, to their initiative that the present reforms are chiefly due.

AN IMPERIAL CONFERENCE.

In order to stimulate general interest in the scientific teaching of hygiene and temperance as an integral basis of national education, and to bring before the country, during the visit of the Colonial Premiers, reliable information as to what is done in various parts of the Empire, an influential committee, numbering among its members Sir Lauder Brunton, Sir Thomas Barlow, Mr. Pearce Gould, Sir Victor and Lady Horsley, Mr. McAdam Eccles, Surgeon-General Evatt, Mr. C. H. Watts Parkinson, Mr. Mayo Robson, Dr. Claude Taylor, and Professor Sims Woodhead, has been formed to convene a Conference on the Teaching of Hygiene and Temperance in the Universities and Schools of the British Empire on St. George's Day, April 23rd, during the visit of the Colonial Premiers to this country. The Conference has the approval of the Earl of Elgin, Secretary of State for the Colonies, who has promised to attend if his engagements at the Colonial Conference permit. Lord Strathcona and Mount Royal, G.C.M.G., and Sir John Gorst, K.C., will respectively take the chair at the morning and afternoon sessions. Arrangements have been made for officially-appointed educational experts to describe Colonial systems of teaching the two subjects, while papers will also be read by leading Continental savants. Further information and tickets of admission may be obtained from the Honorary Organizing Secretary, Miss St. John Wileman, 11, Chandos Street, Cavendish Square, W.

ITINERANT DOCTORS.

The itinerant quack, like Falstaff, labours in his vocation up and down the country; but among our many legitimate grievances we do not suffer from the itinerant doctor. Some other countries are not so happy. At the general meeting of the Belgian Medical Federation held a few weeks ago Dr. Merveille took for the subject of his presidential address the evil of itinerant practice. According to him Belgium is overrun with such doctors of medicine, who go about from town to town, and even in the country, preceded by the distribution of handbills announcing that the celebrated specialist ——— will be at such and such an hotel on such a day and at such an hour, and may be consulted there. These men exact large fees, and naturally damage their brethren very considerably. From Professor Folet of Lille we learn that such medical poachers are far from being unknown in France. The newspapers contain announcements that an eminent specialist for hernia will be in such and such a town on such a day and at such an hotel; the next day in another, and the day after that in a third. From Dr. G. M. Gould we learn of the existence of the itinerant ophthalmologist in America. He has a real medical diploma and goes about the country, generally choosing the smaller cities—what our strolling players call "smalls"—as his hunting ground. He has sufficient knowledge to pose before the ignorant as a scientific authority. He delivers free lectures, illustrated by diagrams and pictures adroitly chosen to impress the public mind. His instruments are of the best make, his stage management is first-rate, and his work is so conducted as to deceive all but real experts. He operates for all kinds of diseases and is successful enough to be a thorn in the side of ophthalmologists. If he is successful in the extraction of cataract he is at least equally successful in the extraction of dollars. The itinerant surgeon illustrates a kind of regression to a primitive type. In the Middle Ages many surgical specialists as well as quacks wandered about from place to place. Some operated for hernia, some for stone, others for cataract, others again treated fractures and dislocations. These operations were for the most part left to itinerant practitioners by the more dignified class of surgeons, not because they despised them, but because they feared to take the responsibility of any operation that might have serious consequences. In the sixteenth century, Franco, one of the Fathers of French surgery—who himself belonged to the class of "masters" or "operators," though he was not exactly an itinerant practitioner—says that if a patient died under the hand of a physician excuses were always found for him; for the superior kind of surgeon too, extenuating circumstances could be found, "but as for "us," he adds bitterly, "if what we have undertaken "does not always turn out as happily as might be "desired, so far from being supported in any way, we "are called murderers and executioners, and are often "obliged to seek safety in flight." Even as late as the beginning of the eighteenth century we find Heister complaining that surgeons had shamefully abandoned the most beautiful and most difficult operations of their art to the empirics and quacks who then swarmed in Germany, contenting themselves usually with knowing how to cure a trifling sore, bleed, open an abscess, or at most reduce a dislocation or set a broken bone. Though undoubtedly surgery owes more to these itinerant operators than to the more respectable men of art of that day, it is scarcely surprising that patients were not always grateful for their ministrations. The hernia operators, figuratively speaking, strewed their way with testicles, which they removed as a necessary part of the procedure. This naturally did not tend to make the operation popular, and it was disapproved of by surgeons like Ambroise Paré, who, however, did not himself operate for hernia. Later, when the truss began to take the place of the knife, operators professed not to remove the testicle. Nevertheless, Dionis says that some continued to do so, throwing the gland under a table or to a dog specially trained for the purpose.

The itinerant oculist survived into the eighteenth century. The notorious quack Chevalier Taylor, who was a regular member of the profession, was a type of the class. He travelled all over Europe, having the big drum beaten before him wherever he went, and crowds flocked to him in the places he visited. Daviel of Marseilles, who was a master-surgeon of his day, whose name is still in good repute among ophthalmologists, adopted similar methods, pleading that he had to contend with such quacks as Taylor with their own weapons. The revival of the itinerant practitioner is a deplorable proof of the bitterness of the struggle for professional life, and it is devoutly to be hoped that he will not reappear among us.

THE WEIGHT OF THE SOUL.

THE Roman satirist asks:

> Expende Annibalem: quot libras in duce summo
> Invenies?

No one, so far as we know, has furnished an answer; but this may be only because no American investigator has found an opportunity of weighing the mighty Carthaginian's ashes. In the meantime, if we are to believe the newspapers, five physicians of Boston, that "Omphalos" of the intellectual world, have done something more: they have succeeded in determining the weight of the human soul. The problem is said to have been solved by the simple plan of weighing a number of persons immediately before and after death. Our antivivisectionist friends will, we are sure, be shocked to hear that the experiment was first tried on dogs, which were found to weigh exactly the same when dead as when alive, and therefore, we suppose, must be held to have no soul. On the other hand, the human subjects always weighed from half an ounce to an ounce less in death than they did in life. *Ergal*, according to the wise men of Boston, we must conclude that the soul weighs from a thirty-second to a sixteenth of a pound. We presume the difference in the weight of souls is to be accounted for by the degree to which they are burdened by sin or whatever other disturbing factor has taken its place in advanced philosophy. If this be the case, it would be interesting to determine whether there is any loss of weight in the bodies of Christian Scientists for whom sin has no existence. Possibly, however, the weight of the soul may be in proportion to that of the body, there being so many fractions of a centigram of the *divinae particula aurae* to each kilo of body weight. The experiments of the Boston physicians suggest a number of interesting problems. If the soul has weight, it must be made of material stuff; it must have dimensions, and a more or less definite form. There are, we believe, clairvoyants who profess to see the colour of the souls and to be able in this way to distinguish the just from the unjust. But the dimensions of the soul are still, like those of Mr. Toole's shallow, to any thick sight invisible. Now that the soul has been placed in the balance, it is to be expected that it will soon be subjected to the Roentgen rays which will reveal not only its dimensions but its locality. Descartes, as we know, localized it in the pineal gland, that being in his view the only part of the brain which was not double. Here we venture with the greatest deference to hint a doubt as to the accuracy of some remarkable information which the experimenting Yankee professor has obtained from one of the best known doctors in London, robbing a high official position. This authority is said to have told our confiding contemporary that "the generally accepted location of the soul by students of anatomy is what is known as the pineal (pine) gland, which is situated near the heart, and was discovered by Dr. Philippe Pineli, a French physician (1745) [illegible] [illegible] [illegible]

departure is the establishment of a course of public lectures dealing with sanitary and educational and such medical matters generally as concern the public as well as the profession. Dr. Dana added that the sum of £40,000 is needed for the enlargement of the Academy and the provision of larger accommodation for the growing library. Money is also required to form an endowment fund to enable the Academy to publish a monthly bulletin of its work.

CHRONIC OXALIC ACID POISONING AND BERI-BERI

In beri-beri patients the effect of the disease on the heart and peripheral nerves is indicated by dyspnoea, cyanosis, irregularity of the pulse, oedema, and impairment of the sensory and motor powers of the extremities. Corresponding to these conditions, the pathological lesions found under the microscope are fatty degeneration of the cardiac muscle and degenerative processes in the nerves, with disintegration of the axis cylinders. Dr. Adolf Treutlein[1] calls attention to the interesting observations of Eijkmann, who found that a clinical picture closely resembling human beri-beri could be produced in fowls by feeding them with rice. Shortly before death these animals exhibited dyspnoea, cyanosis of the comb, and paralysis of legs and wings. Similar results were obtained by Maurer, who fed fowls with oxalic acid. These observations have been confirmed and extended by Dr. Treutlein, who obtained successful results in his feeding experiments with oxalic acid, soluble oxalates, and rice meal. On microscopic examination he found both in the heart and the peripheral nerves a condition of fatty degeneration which closely resembled the lesions present in human beri-beri. These pathological changes in the fowl are attributed to a removal of calcium from the affected tissues, owing to the action upon them of the oxalic acid or sodium oxalate introduced by feeding or of the oxalic acid produced from rice meal by the agency of micro-organisms present in the crop of the animal. Dr. Treutlein has found that by simultaneously administering an excess of calcium carbonate in the food he can arrest the symptoms of illness and check the pathological changes in the heart and peripheral nerves. This result is apparently due to the formation of a difficultly soluble, and, therefore, innocuous compound by the action of the calcium upon the material which would otherwire produce a chronic intoxication. In five cases of acute human beri-beri accompanied by oedema Dr. Treutlein found in the urine crystals of calcium oxalate which far exceeded in amount the quantity of oxalate present in normal urine. These results were confirmed by chemical analysis. On the ground of the above observations the author considers that the study of chronic oxalic acid intoxication in fowls may help to clear up some of the obscurities concerning the etiology of beri-beri.

Mr. W. H. Power, C.B., F.R.S., Medical Officer to the Local Government Board in England, has been appointed Chairman of the Royal Commission on Tuberculosis, in the room of the late Sir Michael Foster, K.C.B.

The election of representatives of the Faculty of Medicine on the Senate of the University of London, which was held on March 19th, resulted in the two vacancies being filled by Dr. L. E. Hill and Dr. H. A. Caley. At the first ballot with 243 voting, Dr. Hill secured 114 votes, Dr. Caley 95, Dr. J. R. Bradford 104, Dr. Kingston Fowler 102, and Dr. Norman Moore 48. The result of the second ballot, at which 227 voted, was Dr. Hill 126, Dr. Caley 125, Dr. Bradford 100, and Dr. Kingston Fowler 99.

[1] *Verhandlungen der physikalisch-medicinischen Gesellschaft zu Würzburg*, 1906, Bd. 38, No. 11

Owing to arrangements now being made preparatory to the rebuilding of 429, Strand, the Editorial and printing offices have been removed to temporary premises at 48, Catherine Street, Strand, W.C. It is requested that all communications for the Editorial Department should be sent to that address until further notice.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

Salaries of M.O.H. — Sir Walter Foster asked the President of the Local Government Board on Monday whether his attention had been drawn to statements made by Local Government Board medical inspectors in reports by them, quoted in the Report of the Select Committee on the Housing of the Working Classes Acts Amendment Bill, to the effect that certain medical officers of health and inspectors of nuisances in rural districts were, in fact, receiving inadequate salaries; whether the Local Government Board had recommended the repayment of a moiety of the salaries by the county councils in these cases; and, if so, whether it had received the consideration of the Board that they were thereby placed in the position of giving their approval to salaries which had been stated by their inspectors to be inadequate for a proper discharge of the duties required of such officers. Mr. John Burns answered that it was only as regards some of the districts in question that the inspectors had in their report directly referred to the salaries of the sanitary officers as inadequate. In most of these cases the Local Government Board had prior to the inspector's visit refused, or threatened to refuse, to sanction the appointment of all or some of the officers concerned. The visit of the inspector had usually led to a more satisfactory arrangement being made than that which previously existed, so that the Board had been able to sanction the appointments with a view to repayment of half the salaries by the County Council.

Scotch Poorhouse Medical Officers and Security of Tenure.—Mr. Cathcart Wason asked the Secretary for Scotland on Monday if he could state how many appeals to the Local Government Board (Scotland) had been lodged during the last five years by medical officers of poorhouses against dismissal by local authorities. Mr. Sinclair said that he was informed that there had been no attempt by any poorhouse committee during the last five years to dismiss a medical officer without the consent of the Local Government Board, and that consequently there had been no appeals.

The Dismissal of a Scotch Parochial Medical Officer.—Mr. Cathcart Wason again raised the question of the dismissal of Dr. Duncan on Monday last, and Mr. Sinclair said that he understood the statement made in reply to a question on February 26th, that Dr. Duncan failed to implement an agreement made with him three years ago to appoint an assistant was correct; and that his recent offer to carry out this arrangement was held by the parish council employing him to have come too late.

Vaccination Officers and Defaulters.—Mr. Lupton is anxious to place the vaccination officers under the Boards of Guardians, and so he questioned Mr. John Burns on Monday on the subject. The President of the Local Government Board said that he was advised that he had not power to alter the order, under which these officers acted, in such a way as to give the guardians control over the vaccination officers.

Cerebro-spinal Meningitis.—Mr. Lupton asked the President of the Local Government Board on Monday if he could give the ages of persons attacked with cerebro-spinal meningitis during the present epidemic; if the epidemic was due to blood poisoning; and if there was any frequently-occurring mode of introducing poison directly into the blood without its passing through the digestive organs, other than vaccination. Mr. Burns replied that in England and Wales, for which alone he was concerned, there was no epidemic of cerebro-spinal meningitis. Only a few sporadic cases had been reported,

and by no means all of them had been proved to be really cases of the disease. The ages of the patients in the reported cases had varied from 7 months to 39 years, and more than 50 per cent. were aged 5 years and upwards. He understood that the disease was regarded by some authorities as due to blood poisoning, but that there was no relation whatever between it and vaccinia.

Disinfectants.—Mr. Rees asked the President of the Local Government Board whether, in view of the prevalence of the sale of disinfectants which did not disinfect, he proposed to take any steps towards the standardization of disinfectants. The President of the Local Government Board said he was not empowered to fix standards of disinfectants, and it did not at present appear to him that he could usefully take action in the matter.

Lunacy in Egypt.—Dr. Rutherford asked two questions last week about the alleged deficiency of accommodation for lunatics in Egypt, and whether there was only one asylum for Upper and Lower Egypt and other points. Sir Edward Grey replied that Lord Cromer's report for 1906, which would shortly be published, contained full information on the first two points raised by the hon. member. He was not in possession of any statistics enabling him to deal with the last two points raised—namely, the number of Europeans and natives respectively placed under control during the last five years, and the proportion they bore to the total number of persons of unsound mind in the country.

The Ardler Scab.—Mr. Wilkie called attention last week to the insanitary water supply of Ardler in Perthshire, where there was prevalent in the village a disease known as the Ardler scab, said to be due to the poisonous nature of the water supply. The Secretary for Scotland said that his attention had been drawn to the unsatisfactory state of the water supply of the village of Ardler. The county medical officer had reported that in the autumn of 1905 a number of the children in Ardler and other parts of the county suffered from "broken-out faces," but that there was no reason to connect these with the water supply. The Local Government Board was in communication with the local authority with a view to an improved supply. Mr. Lupton asked: Did these "broken-out faces" come before or after vaccination? No answer was returned.

Insanitation in Somers Town.—Mr. Lea asked the President of the Local Government Board last week if he had considered the report of the Medical Officer of Health of St. Pancras on the insanitary condition of Little Clarendon Street, Somers Town. Mr. John Burns said that he had received the report referred to. It showed that the houses in question were in fair structural condition, and that no fault was to be found with the supply of light and air. Overcrowding, however, existed in the street, and a large number of notices for its abatement were served from time to time. The case appeared to be one for action under the Public Health (London) Act, 1891, rather than under the Housing of the Working Classes Acts, and he gathered that the borough council were exercising their powers under the former Act.

The Nurses Registration Bill. Mr. Munro-Ferguson has taken charge of this Bill this year, and has put it down for second reading on April 9th, when it stands seventh on the order paper. The Bill is backed by Sir John Dickson Poynder, Mr. Rose, Mr. Rainy, Mr. Eve, Mr. Bell, Mr. Crooks, Sir George Robertson, Dr. Rutherford, Mr. Jowett, and Mr. McKillop.

Dr. Haffkine's Position in India.—Sir William Collins asked the Secretary of State for India, on Tuesday, whether Dr. Haffkine now held any appointment under the Indian Government; whether the use of Dr. Haffkine's prophylactic against plague was now encouraged by the Government; and whether any further information had been obtained in regard to nineteen fatal cases of tetanus at Multowal consequent upon the use of Dr. Haffkine's prophylactic. Mr. Secretary Morley answered that Dr. Haffkine was in the permanent service of the Government of India, and was at present on leave in this country. He held no appointment in India, but the Government of India had offered him employment in that country on research work, at a salary equal to that of which he was in receipt when he left India. Inoculation with Dr. Haffkine's prophylactic continued to be one of the precautions which were recommended by Government to the general population against outbreaks of plague, and facilities were provided for persons who wished to be inoculated. Papers containing the results of the inquiry into the origin of the accidental deaths from tetanus poisoning in the Punjab had recently been published by the Government of India. He had no objection to lay them if they were moved for.

The Public Health Bill.—The Chairman of the Police and Sanitary Committee, Mr. J. W. Wilson, has introduced a Public Health Bill, which is backed by Mr. Harmwood-Banner, Mr. Samuel Roberts, Mr. Arthur Henderson, Mr. Staveley Hill, and Mr. Whitley. The memorandum prefacing the measure is as follows: The object of this Bill, framed upon the principle of the Public Health Acts (Amendment) Act, 1890, and to be read as one with the Public Health Acts, is to enable urban authorities, by following the mode of procedure of the Act of 1890, to adopt many of the clauses which, having been introduced into Private Bills of recent years, have been accepted by Parliament, and to confer upon the Local Government Board the power to extend the Act to rural districts. The clauses selected for embodiment in the Bill relate to streets, buildings, and sewers, sanitary provisions, infectious diseases, milk supply, common lodging-houses, recreation grounds, fire brigade, slaughterhouses, etc. Reference may be made to the Thirty-fifth Annual Report of the Local Government Board, page lxxv, which states: "A considerable number of sanitary authorities have also availed themselves of the additional powers contained in the Public Health Acts Amendment Act, 1890. Up to the 31st December, 1905, we had received copies of resolutions from 955 urban authorities adopting the whole or particular parts of the Act, and from 358 rural authorities adopting so much of Part III as is applicable to rural districts." The Bill has been put down for second reading on April 10th, but has little chance of passing a stage on that day.

Medical Supervision of School Children.—The Education (Administrative Provisions) Bill, introduced by the President of the Board of Education on February 28th, has been printed. Its tenth clause is identical with Clause 24 of the Government Education Bill last year as it passed the House of Commons, and Clause 1 of Mr. Walter Rea's Education (Vacation Schools and Medical Education) Bill published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 2nd, page 109. Mr. Rea's Bill has passed the Standing Committee on Trade without any amendment of the paragraph dealing with medical inspection. Last week Mr. Jowett asked the President of the Board of Education what would be the probable cost of medical inspection, and whether the grant would be in any way influenced by such inspection as is carried out by local education committees. In reply, Mr. M'Kenna said he had no information as to the probable cost of medical inspection. The grants other than those governed by statutes were paid in respect of the efficiency of instruction, and were not affected by any efforts which local education authorities might make in other directions. Mr. Jowett further asked Mr. M'Kenna to state what expert staff it was proposed to provide at the Board of Education to advise as to sanctioning arrangements with regard to medical supervision, and whether there would be any machinery, by inspection or otherwise, for standardizing or ensuring efficiency in the medical measures carried out by the local authorities, and for reporting to the Minister for Education on the valuable scientific materials of educational value likely to become available. Mr. M'Kenna replied that it would be premature to decide what machinery would be required by the Board of Education if the Bill became law; the matter was having careful consideration, and Mr. Jowett's suggestions would not be lost sight of.

Practice by Companies.—A Bill to prohibit joint stock companies from acting as physicians, surgeons, or medical practitioners, and another to prohibit joint stock companies from carrying on practice as dentists or dental surgeons, except by means of duly qualified persons, were introduced into the House of Lords by Lord Hylton on March 15th.

Ireland.

THE UNIVERSITY QUESTION IN IRELAND.

As the time approaches for the introduction of the Irish University Bill, the supporters and the opponents of Mr. Bryce's proposals become more active. The friends of Trinity College in Ireland and England hold meetings and pass resolutions of condemnation. They contend that Trinity should continue as it is. On the other hand, the Catholic Graduates' and Undergraduates' Association has held a meeting in the Mansion House, at which it has passed a resolution strongly in favour of a Catholic College in a remodelled Dublin University. Mr. John Dillon, M.P., addressed a letter to the meeting, in which he stated that the plan of the Government "would be an enormous improvement on the present state of affairs," and that they were "bound to give this scheme all the support in their power." One speaker declared that "the whole country outside the sphere of Trinity College was in favour of the Government settling the questions on the lines indicated." As to the Royal University, the Graduates' Association in Belfast has pronounced against the proposals, and the corresponding association in Dublin has taken the opposite side. Convocation will probably hold a meeting very soon, but it is certain that there will be much difference of opinion. Here, again, the difference will largely depend upon the religious views of those present. So it will be seen how difficult it is to arrive at a decision in a matter of this sort in Ireland, and how great will be the task of the Government in trying to settle the question.

SANATORIUM FOR CONSUMPTIVES.

At a meeting of representatives from the county, urban, and rural district councils for Kildare, Wicklow, and Carlow, held last week, it was agreed to recommend those bodies to erect a sanatorium for consumptives, the expenditure not to exceed one penny in the pound.

INSPECTOR OF ANATOMY.

Owing to the death of Dr. James Curtis, F.R.C.S.I., of Cork, the duties of the Inspector of Anatomy for the School of Anatomy, Munster, have been added on to those now discharged by Sir William Thomson, C.B., who is already Inspector for the other three provinces.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.

Mr. R. O'Brien Furlong, C.B., presided over the annual general meeting of this institution, which was held in the Royal College of Physicians on March 7th. The report said that the medical report was satisfactory. It appears that 408 cases were under treatment and discharged during the year, besides 90 patients remaining in the hospital on December 31st, 1906. Of these, 77 per cent.—as compared with 72.7 per cent. in 1905—were improved to a greater or less degree, many of them affording a probability of permanent arrest of the disease. These statistics show a somewhat improved average as compared with 1905; while the extracts taken from the large number of letters received from former patients (some of them admitted in 1896 and 1897) are distinctly encouraging as to the prospect of restored health, immunity from relapse, and added years of useful work. The number of patients treated in 1906 was 493, as compared with 470 in 1905. To Dr. Parsons and Dr. Coleman, the Visiting Physicians, warm thanks were due for the admirable way in which their voluntary duties had been performed at all times. The Chairman, in moving the adoption of the report said that though the year had been the best in point of donations and subscriptions, which realized £2,478, or an increase of £108, the year closed with a deficit exactly double that of the previous year, the exact figure being £1,367. The maintenance of patients cost £6,284, which was reduced by patient's fees to £3,416. Dr. Lumsden, Mr. Justice Barton, Dr. Parsons, the Registrar-General (Mr. Matheson), Sir C. Cameron, C.B., Sir William Goulding, Bart., Mr. John Mulhall, and Mr. David Ross also addressed the meeting.

THE BELFAST HEALTH COMMISSION.

Dr. W. H. Bailie, Medical Superintendent Officer of Health, was examined on March 6th, 7th, and 8th. He stated that his salary was £600 a year. He had had no previous municipal experience as medical officer of hygiene, but had been a practitioner in Belfast, and a member of the Corporation since 1899 or 1900. He took up his appointment in October, and was at some disadvantage in being called to give evidence so soon, especially as his time had been so much occupied with the outbreak of cerebro-spinal fever. He found the Health Department organization satisfactory, but there was not a sufficient number of officers. He did not think there was any necessity for turning things topsy-turvey, beyond the insufficiency of the staff. He thought the infantile mortality could be reduced. Dr. Bailie then described the cerebro-spinal epidemic and an outbreak of typhoid in the Windsor district. Regarding the registration of births and deaths, he explained that the dispensary officers acted for the Registrar-General, to whom their returns were made. The Corporation had to wait for the weekly report of the Registrar-General, and the figures received were merely the total, and the places where the deaths occurred were not given. The dispensary officers were willing to give the requisite information on payment of a small fee—say 3d. or 4d. a death; it was an important matter about which he was particularly anxious; he had twice made representations to his Committee about it. Regarding infant mortality, he had no returns showing that the mortality was higher in the mills than elsewhere. As regards the water supply of the city he had no power, and as regards dairies and cowsheds no power outside the boundary, unless where infectious disease was suspected. There were about 300 schools, and he had examined some; the reports of the monthly inspection of schools were available, but he had not seen them; there was much overcrowding, and some of the schools were insanitary; they were treated as ordinary houses, and complaint was made to the manager if anything was found wrong; the powers possessed by the Corporation were not used, as there were no other schools available. Dr. Bailie was then examined at length as to the system prevailing in Belfast with regard to drain testing, soil pipes, drain traps, and as to the procedure adopted when a case of disease was notified, and especially as regards the responsibility of disinfection in private cases. He had not as yet gone into the question of the building by-laws; he gave his opinion when the Surveyor's Department asked him; a great many of the old houses were unsatisfactory. Dr. Bailie then gave lengthy evidence with regard to a map which had been prepared by the City Surveyor, showing the notifications of typhoid for the last three years, but was not able to explain the unequal grouping nor many of the other details; no means of providing maps showing the distribution of phthisis, of summer diarrhoea, of pneumonia, nor of bronchitis existed. Meat inspection did not come under his jurisdiction as it was under the Market Committee, but the inspection of food was under the Health Department, so there was overlapping. The new Infectious Diseases Hospital, for a population of 380,000, had 168 beds, but there was the Union Hospital in addition. As regards the water supply, he did not think there was any scarcity; he could not state what portions of the city were supplied from the various sources. When it was necessary to close a school owing to an outbreak of an infectious disease, the sanitary officer called and gave verbal instructions; this was unsatisfactory considering that there were some 300 schools.

Dr. Bailie was examined at great length and in great detail, and from time to time was brought back by the Commissioners to previous parts of his evidence, as new material came to light.

Mr. H. A. Cutler, City Surveyor, gave evidence as to floods, old sewers, the exceptionally rapid growth of the city and its effects on sanitation, the building by-laws, the repair and paving of streets, etc.

Scotland.

EDINBURGH ROYAL INFIRMARY.

AT the weekly meeting of the Managers on March 18th it was reported that eighteen applications had been received for the post of Lady Superintendent of Nurses, which is to be vacated by Miss Spencer on June 30th next. Of these one was from America, fourteen from England,

and three from Scotland. Miss Annie Warren Gill, R.R.C., at present Matron of the Royal Berkshire Hospital, Reading, was unanimously elected by the Board to the office. Miss Gill received her training in the Royal Infirmary of Edinburgh, and after rising to the position of head nurse (now called Sister), acted for one year as Night Superintendent, and for three years as Assistant Lady Superintendent in charge of the Nurses' Home. When the Edinburgh and East of Scotland Hospital was sent out to South Africa, Miss Gill accompanied it in the capacity of Matron. On her return she again took up duty at the Royal Infirmary, until she was chosen by the Government as Matron for service in the concentration camps, Orange River Colony. For her services in South Africa, Miss Gill received the decoration of the Royal Red Cross, and has held her present post at the Royal Berkshire Hospital since June, 1903.

The Scottish Association for the Medical Education of Women.

The Scottish Association for the Medical Education of Women, in its seventeenth annual report, states that the number of students on the roll during the summer of 1906 was 137, and during the winter session of 1906-7 it was 109. These figures, though somewhat below those of the previous year, still showed, in the opinion of the Association, that there was need for such an institution as the Medical College for Women. The Court expressed its indebtedness to the Carnegie Trust for additional grants to defray the cost of extra apparatus, and the salary of the assistant to the Lecturer on Physiology, as well as the matriculation fees of the students. The Board of Studies had appointed Dr. Alex. Goodall to succeed Dr. Noel Paton as Lecturer on Pathology.

West Yorkshire.

Street Noises in Bradford.

Bradford is one of the noisiest cities in the kingdom, and the tramway system, in many ways admirable, is one of the main transgressors. The cost of manufacturing cars that are comparatively silent may be one of the chief reasons, but apparently the municipalities have not demanded the construction of silent cars. As long as the cars are solidly constructed, safely braked, and comfortably seated the municipal authorities have been satisfied. The cars run on the main routes out of the city to the suburbs from shortly before 5 a.m. until after midnight. The early morning cars are workmen's cars, and do not appear to be sufficiently used to warrant the disturbance they cause to the householders on the various lines of route. The clatter and noise caused by the cars is extraordinary, especially when crossing "points." And the question of joints ought to be carefully considered.

But a greater nuisance, though less continuous, are some of the road engines with trucks which traverse some of the main routes. Among the worst offenders are constructions used by several Keighley loom firms to send their goods to Bradford chiefly in the small hours of the morning when the roads are free from tramcars. The wheels of these monstrosities are enormously wide and corrugated so as to prevent slipping and the clatter they make on the granite setts with which Bradford is chiefly paved is indescribable. The houses on the line of route vibrate as if an earthquake were taking place and the inhabitants dropping out of slumber after the stoppage of the tramcars awake with nightmare feelings that defy description. On account of the granite paving all over the city the wheeled traffic is also peculiarly noisy.

All these noises are extremely injurious to health, and contribute to that increase in nervous disease and insanity which affects the West Riding. Persons living along the tramway routes suffer a great deal from insomnia; many have constant recourse to hypnotics, and the serious effect these produce on the nervous system is only too well known. From economic reasons alone the municipality ought to make an effort to lessen the noise nuisance. The loss to the rates from employers whose inhabitants go to live outside the city boundary, and also the increase in payment for the upkeep of lunatics in the asylums, is very considerable. All this noise is not a necessary accompaniment of modern commerce. The corporation ought to put a stop through its by-laws to the misuse of its highways by Keighley firms. If they are to use road engines they ought to be comparatively silent, and traffic of this sort should be prohibited during the night. With regard to the tramcars, the authorities should make an endeavour through their engineers and officials to have them constructed to run as silently as possible. Public action would do more than anything else to stimulate the authorities, and a conference of all concerned would undoubtedly do a great deal to get rid of this curse of modern civilization.

The Bradford Workhouse.

The increased cost of the administration of the workhouse is a subject of great interest to the Bradford ratepayers, and is especially agitating their minds at the present moment as the election for the Board of Guardians is shortly to take place. The Chairman (Mr. Bentham), in speaking on the subject on March 14th, admitted that the cost of Poor-law administration in Bradford had increased during the past eleven years from £4,000 to £17,000, but added that this was largely due to more modern and efficient treatment of the sick poor; the nursing staff had been increased from 12 to 60, and there were now two resident medical officers instead of a medical man who attended for a short period daily; but instead of the sick remaining in hospital three months the average now was five weeks. Something like 3,000 persons were annually treated in the sick wards of the workhouse. A sanatorium for phthisis had also been established which was costing £2,500 a year—nearly equivalent to a halfpenny rate—but many of the cases sent to the sanatorium had been able, as a result of the treatment obtained there, to again earn a livelihood. The lot of the able-bodied pauper had not, however, been made more pleasant, which was proved by an actual decrease in the number of these individuals.

The guardians have determined to buy an *x*-ray apparatus for use at the workhouse infirmary, more especially for the treatment of tinea in children. The number of children affected by this condition has of late been very considerable, and it has been found impossible to eradicate the disease with the usual means available. The treatment by Sabouraud's methods has been found so generally successful that it has appeared to be the greatest economy to adopt it. It is to be hoped, however, that the guardians will see that the necessary work is done by an expert in this subject, as there are grave dangers in using the method without considerable experience.

Newcastle-upon-Tyne.

North of England Edinburgh University Graduates Club.

Seldom has a more pleasant evening been spent than that by the members of the North of England Edinburgh University Club and their friends at the banquet in Newcastle-on-Tyne on March 15th. The duties of the chairman were appropriately discharged by Dr. T. W. McDowall, who was supported by the guest of the evening, Professor Chiene of Edinburgh, Professors Philipson, Page, Oliver, Murray, and Howden, and by Drs. Hume, Robert Anderson, James Farquharson, James W. Smith, the Honorary Secretary (W. S. Campbell), and others. Between sixty and seventy gentlemen sat down to dinner. After the royal toast had been honoured, that of "Alma Mater" was given from the Chair. The toast afforded Dr. McDowall the opportunity, from his lifelong friendship with, and personal attachment to, Professor Chiene, of alluding to the incidents of their early College days—their struggles, their failures, and successes. The remarks were as appropriate as they were complimentary, while those that referred to Edinburgh University were cordial without being effusive, and were a faithful expression of the feelings of the graduates present. The toast was ably and fittingly responded to by Professor Chiene in a speech marked by pathos and humour, and full of that raciness which is characteristic of the North. He passed rapidly from the grave to the gay, from the serious to the light-hearted, without losing the thread of his reply, yet ever keeping his audience in a mood akin to his own. The "King of Uist" must have carried away with him that evening warm memories of his visit to Newcastle. The

toast of "Sister Universities" was proposed by Professor Nichol Smith, and responded to by the Rector of Morpeth, while to Professor Howden was entrusted the task of proposing the health of "The Chairman." In addition to the "Gaudeamus," which was sung by the company, numerous songs were interspersed with the toasts, and contributed to the pleasure of the evening.

Manchester.

The Cost of Pauper Lunatics.

On March 19th the Home Secretary received a deputation from the Lancashire Asylums Board and twenty-eight Boards of Guardians of the county. Mr. W. Scott Barrett, Chairman of the Lancashire Asylums Board, said that the following resolutions had been adopted at the conference between the Board and the guardians of Lancashire unions last September:

1. That it was desirable in the interests of the ratepayers that pauper lunatics who were considered to be incurable be maintained and housed on a less expensive scale than the lunatics for whom there was a hope of cure.
2. That the Boards of Guardians should make agreements with the Asylums Board for the maintenance of harmless chronic cases; and, so far as the guardians did not make such provision, the same should be made by the Asylums Board on a specially economic scale.
3. That the Asylums Board should have power to provide reception hospitals to which all lunatics should be sent for treatment and observation before they were certified as fit for asylum or workhouse treatment.

The deputation desired to enlist the sympathy of the Home Secretary in their desire to reduce the cost of pauper lunatics to the ratepayers by a closer co-operation between the Asylums Board and the guardians. The Clerk to the West Derby Guardians said that all the guardians in Lancashire were in accord with the Board in the wish to provide a cheaper class of accommodation for chronic and senile dementia cases. The Clerk to the Asylums Board said that in spite of all the money that had been spent on lunatic asylums the percentage of recoveries was less in 1904 than twenty years previously, while the death-rate was about the same.

Mr. Gladstone, in the course of his reply, said that the real basis of the proposed economy lay in scientific classification. Boards of Guardians should be asked to receive harmless incurable cases, and other incurable cases should go to the asylums. A distinction should be drawn between those cases which were curable and those which were considered incurable; in dealing with the curable cases a higher standard of medical treatment, of diet, housing, and environment were necessary; differential treatment was therefore perfectly proper, and he would gladly co-operate with the deputation. With regard to the third resolution, he said that the plan and purpose of reception hospitals were admirable; the only authority which had brought the proposal to the notice of the Home Office was the London County Council, but the proposed expenditure was on such an extravagant scale that the plans were opposed and nothing had been done. The only reception hospitals in the country were on an exceedingly small scale.

Medical Men and the Police.

In January last an incident occurred out of which arose a general question as to the right of the police to enter a private dwelling without a warrant for the arrest of any person within, and more especially as to the propriety of their insisting upon removing an arrested person in the face of a direct statement by a medical man that any such removal would be dangerous to the life of the prisoner. The matter was taken up strongly by the Manchester and Salford Branches of the Association, but the circumstances of the case did not permit of a magisterial verdict on the point being obtained. The efforts made, however, were not wasted, for the Chief Constable of Manchester, speaking at a public concert last week, took opportunity of making the *amende honorable* in respect of the friction which had arisen. He had told his men that their duty was very clear; they were not supposed to go into any private dwelling houses without being sent for, and in all cases of accidents and the like they should be careful not to take a patient away without specific instructions from the medical man in charge of the case. A full account of the original incident was given in the issue of the British Medical Journal for February 16th at page 409.

Bristol.

The General Hospital.

The half-yearly Board meeting of the General Hospital was held on March 11th under the presidency of the Lord Mayor. The report, made by the Secretary, stated that the calls on the institution had been exceptionally heavy, both financially and in respect to the large number of patients that had been treated. The support of the public had been fully maintained, but the Committee felt that as they had made no appeal for assistance for the last two years, they could confidently place before their friends the fact that £12,000 was immediately required to pay for two important additions to the hospital buildings that had been found essential to keep the institution up to date. These two were the isolation ward opened in January last, and the new wing of the nurses' home needed for the increase in the number of nurses. Towards this fund Mr. Proctor Baker had given £1,000 and Mr. P. H. Vaughan £500. The number of in-patients admitted was 2,165, and out-patients 35,264, a larger number than in any previous year. The ordinary expenditure, £13,887, was an increase of £500 over that of 1905, while the receipts, £11,261, were the same. The annual subscriptions had increased, and legacies to the amount of £6,149 had been received, but only one-third of this sum had been invested in consequence of the deficiency of other funds at the disposal of the Committee. The balance due to the treasurer was £2,759. After a few words from the Lord Mayor, Mr. J. S. Fry, the treasurer and chairman of committee, said that though at first sight it might seem better to have one central institution, there were certain advantages to be got from separate hospitals. Friendly emulation was not disadvantageous, and a central medical charity might be too large for that personal supervision of the superior medical officers that was obtained in smaller institutions. The hospital, he thought, had not reached its limit of size, because the population was increasing rapidly around it. Mr. Fry paid a graceful tribute to the work of the staff and nurses. After the adoption of the report the usual votes of thanks followed.

South Wales.

Aberdare District Report.

The annual report of the Medical Officer of Health to the Aberdare District Council has just been issued. The estimated population for mid-year 1906 is 48,500, the birth and death-rates being 30.28 and 17.52 respectively. The death-rate for 1906 is below the average; in fact, it has only once been lower during the last 30 years, namely, in 1900, when it was only 16.8. The number of cases of infectious diseases notified, 434, is the lowest number since 1897, in which year the Act was adopted. The infantile mortality-rate is slightly in excess of that for 1905.

Contract Practice in South Wales.

We learn from the *Western Mail* that the Council of the South Wales Miners' Federation at its meeting on March 15th, when Mr. W. Abraham, M.P., was in the chair, received a deputation representing those concerned in a local dispute between colliers and medical practitioners as to the system of employment of colliery surgeons in a certain district. After, as our contemporary reports, a long discussion on the doctors' question generally as affecting the South Wales miners, the following resolution was unanimously adopted:

> That this council after hearing from the deputation of the action taken by the British Medical Association in respect to their new scheme for providing medical attendance, and having received similar complaints from workmen in other districts, are now compelled to state that, although as a federation they have hitherto refrained from participating in any degree in the freedom of the workmen, they felt that the workmen ought to be protected in the appointment of doctors and the management of the funds contributed for this purpose; that if the British Medical Association continues to interfere in the method of appointment and payment of

doctors by the workmen, the Federation will be compelled to take steps to protect the workmen from this undue interference, believing that, as the workmen contribute to the funds, they were fully entitled to decide upon the manner in which the doctors are to be appointed and the funds distributed; that this Executive Council are prepared to appoint a deputation to wait upon the British Medical Association if deemed desirable.

We can but think that the members of the Council of the South Wales Miners' Federation must have insufficiently considered the proverbial advice to "put yourself in his place," and that they have not shown the disposition which might have been expected of them "to do to others as they would be done by."

It is not necessary here to enter into any exposition of the reasons which have made it necessary for the British Medical Association in recent years to organize in various parts of the United Kingdom concerted action by the local profession in order to maintain a proper standard of conditions of medical employment, but it may be pointed out that the resolution contains the very remarkable suggestion that the British Medical Association in taking this action is interfering in matters with which it is not concerned. Such a suggestion involves the assumption that the terms upon which the miners choose to employ their doctors is one as to which the miners alone are entitled to have a voice. We have no doubt that the Council of the Miners' Federation will perceive on further reflection that the terms of employment are not a matter for the employer alone to prescribe, but that the employed also are entitled to a voice, so that it is no more than equitable that the members of the medical profession should set out the terms upon which they are prepared to work.

Underfed School Children.

A meeting of the Underfed School Children Committee was held in the Town Hall, Cardiff, on February 28th. Mrs. McKenzie, the honorary secretary, made a statement showing that in December the experiment of providing halfpenny dinners was begun. About 17,000 tickets had been issued; all the returns had not come in, but it was estimated that 12,000 to 14,000 had been distributed, and, with the exception of 10 per cent., which teachers were allowed to give free, had been charged for. The cost this year would probably slightly exceed that of last year, for various reasons. The treasurer reported that at the beginning of the year there was in hand a balance of £26, and at the end of about £33, sufficient to carry on till the end of the present season. Replying to a question, Mrs. McKenzie said that £12 13s. 6d. had been received for the dinners supplied at a halfpenny; there were some amounts outstanding, and she expected the total would be about £15. Mrs. Cantillon said that in Grangetown particularly, the parents had difficulty in finding the halfpennies for the children's dinners, and there was need for a larger free distribution of tickets. The Chairman suggested that the teachers should be empowered to give more than 10 per cent. It was decided to increase the percentage to 25, and continue providing the dinners so long as the funds in hand lasted. A discussion took place on the Education (Provision of Meals) Act and the Chairman said he was anxious that they should not at once ask the Education Committee to carry out its provisions, as they would mean a great deal of expense. He would rather see the work continue on voluntary lines. A member moved that the City Council be recommended to adopt the Act, and this was seconded, with the proviso that the Education Committee should be asked to co-operate with the voluntary committee. This was agreed to, although Councillor Lewis Morgan said that personally he did not desire the adoption of the Act. As, however, the matter would come up for discussion by the Education Committee, he did not object to the recommendation from the voluntary committee.

Diagnosis of Diphtheria.

At the monthly meeting of the Santuglo and Elaina District Council held on February 23th, the Medical Officer reported birth and death rates respectively of 39·2 and 19·9 per 1,000. In his annual report Dr. Bevan said that with the exception of 1896, the death rate was the lowest since the urban district was formed in 1886. Bearing in mind that the diagnosis of diphtheria cases by the medical practitioners in the district had been called in question by the Local Government Board's Medical Inspector, Dr. Bevan had suggested in his October report, a copy of which was sent to the Local Government Board, that the Board should send down an expert to justify or correct the diagnosis at the time it was made, and added that it was a pity this was not done.

India.

Study Leave.

The recent grant of study leave to the Indian Medical Service was probably an honest effort on the part of Government to increase the efficiency of the service, and to make it more attractive to those of the younger members of the medical profession who are specially keen on their work. Under these circumstances it seems almost churlish to find fault with the scheme, but the fact that it has a serious drawback cannot be disguised, and as this is capable of being easily removed it seems important to call attention to it. Under the old rules, a certain proportion of the members of the service was allowed to be on leave at a given moment, and this proportion was barely sufficient to allow men to avail themselves of the leave for which they were eligible. Now that study leave has been introduced no change has been made in the ratio of men on leave to the total strength of the service, so that the difficulty in getting furlough has been seriously aggravated. Study leave is essentially duty, and cannot be considered leave from the point of view of restoration of health after more or less prolonged service in an unhealthy country, so that the real effect of the grant of study leave has been to shorten considerably the period of recuperative leave available to the members of the service. This is a serious hardship to the individual, and will probably in the end be expensive to Government by injuring the health and so diminishing the efficiency of the members of the service. The Indian Medical Service is notoriously a somewhat inarticulate body, but, none the less, matters which affect the well-being of the service inevitably produce an effect on recruiting, and it is to be feared that if an impression gets abroad among the recently-qualified medical men that it is very difficult to get leave, except for study or on the grounds of serious ill-health, there may be a return to the times when it was impossible to get a sufficient number of candidates of the proper stamp. The fact that of the 25 who qualified at the recent examination 23 were admitted to the service would appear to show that there is not a plethora of candidates at the present time. The rational solution of the problem is to consider study leave as duty and to increase the cadre of the service to such an extent as to allow its members a reasonable amount of leave; or, if this scheme be considered as likely to increase the reserve of medical officers who might be required for active service to an unnecessary extent, a compromise might be effected by making a smaller increase in the cadre and by increasing to a slight extent the proportion of men who are permitted to go on leave at one time.

Blackwater Fever.

The tea planters of Jalpaiguri made a pathetic appeal to the Lieutenant Governor of Eastern Bengal and Assam the other day. It appears that blackwater fever was more virulent than ever last year, and that 13 young Europeans out of a population of about 200 died during the twelve months. It is, therefore, small wonder that the survivors should begin to ask themselves whether their worldly prospects are such as to justify them in running a serious risk to life by remaining where they are. But before abandoning the situation they decided to appeal to the Lieutenant-Governor of the province for advice and help, and he promised to give the matter his sympathetic consideration. The high mortality is not confined to the Europeans, that of the garden coolies and all whose work lies in the Duars is appalling, and it is to be hoped that Government will lend the services of a small commission to investigate the matter on the spot. In spite of all that has been done on the subject it is generally felt that knowledge of blackwater fever is in an unsatisfactory condition, and it would appear that in Jalpaiguri the conditions for studying the subject are

very favourable at the present time. There is a body of intelligent Europeans who are alive to the seriousness of the situation, and who are prepared to co-operate loyally in anything that competent men may suggest. There is a small band of doctors on the spot who have an intimate knowledge of the clinical features of the disease and of the local conditions, and it is certain that they will gladly place these valuable assets at the disposal of any commission that Government may appoint. The planters have also promised a considerable sum towards the expense of an investigation; and, as the very existence of an important industry is at stake, Government can hardly fail to help in the matter, even if actuated only by strictly utilitarian motives.

SPECIAL CORRESPONDENCE.

PARIS.

Académie de Médecine: Treatment of Muscular Atrophy after Effusion into Joints by Muscular Work with Progressive Resistance.

At a recent meeting of the Académie de Médecine, Professor Berger read a report on a work by Dr. Rochard, Surgeon to the Tenon Hospital, and Dr. de Champtassin on the treatment of muscular atrophy following effusion in joints (and particularly hydrarthrosis) by the method of muscular work with progressive resistance. These authors give original views, and suggest a method of treatment in opposition to the methods generally employed in the cure of muscular atrophies and the effusions into the joint which causes them. The general treatment is immobilization with compression, preceded or not by aspiration, followed by treatment of the muscular atrophy and stiffness of the joint by massage, movements, electricity, and Swedish gymnastics and mechanotherapy, which, however, often have to be stopped owing to return of the effusion in the joint. Dr. Rochard thinks that the treatment should be directed to the diminished anatomical and physiological quality of the muscle, restoring its mass and its functions, and to acting through that muscle on the condition of the articulation. If a degenerated muscle has returned to its normal condition by exercises, when these are stopped the muscle remains in its restored condition—that is, of normal strength and constitution. The return of the integrity of the muscle and of its functions hastens also the reabsorption of the effusion in the joint; the diminished muscular tone, the relaxation of the tendons and ligaments are the principal causes of the return and persistence of the effusion. When the normal tension is re-established in the joint by the return to normal of the muscular apparatus, then the exchanges and reabsorption should be regulated as in a healthy synovial cavity. The rhythmical action of the movements of the knee is necessary to the equilibrium of these acts of nutrition in the joint of which it is in a way the regulator. Starting from this principle, Drs. Rochard and de Champtassin treated a certain number of patients with muscular atrophy after affections of the knee-joint by training exercises based on the principle of progressive and calculated resistances. Nearly all the patients had been already treated for some time, often for a month, by compression, massage, sulphur baths, electricity. Fifteen days of treatment by movements with progressive resistance was generally quite sufficient to cause the muscular atrophy to disappear, to bring back the muscular masses of the two limbs to the same circumference, or notably to diminish the difference between them, and at times to diminish or cause to disappear completely the effusions of some duration. The authors make use of an apparatus with a pulley by means of which the patient, seated in a chair or lying down, acts vertically or horizontally on graduated weights; these he raises to bring the knee to extension when, as is most frequently the case, the case is an affection of the knee-joint. They only use the active contraction which raises the weights. Professor Berger considers that the authors have not sufficiently defined the indications for this method of treatment. He thinks that in recent cases it should only be applied when the acute condition, and especially the acute inflammation, has been completely calmed.

BERLIN.

Cerebro-spinal Fever. A Medico-historical Museum. Professor v. Behring on Bovine Tuberculosis and Bovo-vaccination.

Cerebro-spinal meningitis, that terrible scourge which never quite dies down in Prussia, has of late appeared epidemically in various parts of the monarchy, especially in the manufacturing districts of Eastern Silesia. In Benthen, where the disease has assumed a violent character, it has left loss of speech and hearing in a large number of cases—200 say the reports. Children from 1 to 15 years of age are liable above all others to attacks of the disease.

The medico-historical collections of the "Empress-Frederick House for Higher Medical Study" (Kaiserin Friedrich Haus für ärztliches Fortbildungswesen) were ceremoniously opened last week. Professor Schjerning, Director-General of the Army Medical Department, was present, and the Prussian Ministry of Education, and the Imperial Board of Health sent delegates. Professor E. Hollander, to whose skill in collecting and special knowledge of medical history, the collection owes the greater and certainly the more important part of its objects, made the opening speech. He pointed out the value of a historical collection for teaching purposes. It gives students the best insight into medicine and therapeutics of past ages, showing in what manner medical aid was carried out, and what were the notions entertained by doctors and laity as to the nature of disease. The collection was then inspected; it contains originals and copies of ancient apparatus, oil paintings, water colours, engravings, etc., State and municipal rescripts, coins, medals, and many miscellaneous objects of interest. A special division of the collection has been set apart for sending on loan to other university towns.

The expectation of hearing Professor v. Behring speak on the subject he has made essentially his own—"Protection against Bovine Tuberculosis"—sufficed to give this year's Berlin meeting of the German Agricultural Council unusual general interest. And, indeed, there is hardly a question which concerns the population at large more intimately than that of cow's milk and its dangers to the health of infants and young children. Count Posadowsky, Secretary of State for the Imperial Department of the Interior, greeted the Council in person. He defined the struggle with bovine tuberculosis as the most acute problem of German agriculture, saying:

> I firmly hope that by help of new cattle disease legislation which will be submitted to the Reichstag in the course of the approaching autumn session, and with the advice and constant aid of German scientific specialists, it will in time be possible to subdue bovine tuberculosis as bronchopneumonia and other cattle diseases have already been subdued. My department has been diligently occupied with these questions, and I am here to give the assurance that all in my power, and every aiding force at the disposal of my department, will be used in support of the technical endeavours of the German Agricultural Council.

After a report on the advantages and difficulties of bovo-vaccination with bovo-vaccine and tauroman, v. Behring rose for a lengthy speech. He began with a compliment to English science, saying that, since England had officially proclaimed the danger with which the tubercle bacilli of cow's milk are fraught for human beings, the German Government authorities had begun to give more serious attention than heretofore to the question how best to protect infants from the dangers of tuberculous infection. The problem of wholesome milk supply in thickly-populated districts was analogous to that of wholesome water supply. There had been a time when hygienists inclined to look upon none but germless or disinfected water as hygienically admissible, and when salvation was expected from sterilization by heat alone. At the present day boiled water was universally regarded as unsatisfactory and merely a makeshift where pure water was unobtainable. Examination and supervision of the water-source and of its transport until it reached the consumer were now considered the chief hygienic requirements of importance. And did not the same hold true of milk? It was very probable that scarlet fever could be carried by milk where there was infection among the stable servants. Whether the virus of scarlet fever that had got into the milk at the place of production could be rendered innocuous by pasteurization could not yet be affirmed

with any certainty. He himself doubted it, since no proof existed that in the recorded cases of scarlet-fever infection by milk it was unboiled milk that had been drunk. However that might be, surely it would be more expedient to prohibit the sale and dispatch of milk from dairies situated in places where there was an epidemic of scarlet fever, as was done already in places where there was typhoid, dysentery, or cholera. If this reasoning were justified then it should likewise be held to apply to tuberculosis, the more as the tubercle poison is not rendered innocuous by boiling the milk. No cow suspected of being tuberculous should be made use of in the milk trade. Turning to the different methods for combating bovine tuberculosis, v. Behring went on to say that experience had proved bovo-vaccination to be an inexpensive, a comparatively easy, and non-dangerous method of immunization. It was impossible, however, to attempt its application without special study of its technicalities. He then gave an account of a special contract between himself and the Argentine Government under which his assistant, Professor Roemer, had just gone out to Argentina to conduct a stipulated number of experiments. Behring did not conclude his speech without holding out hopes of great things in the future. He said with full assurance that the practical application of his experimentally-obtained results to the combat with human tuberculosis could only be a matter of time. Since the innocuous dose of tulaseaktine had now been ascertained, the next step would be immunization in the mother's womb, and breast-feeding with thoroughly wholesome milk. But this logical and self-evident consequence could not be put into practice in a day. Good things took time to ripen, and none knew better than agriculturists how many factors independent of industry and expert knowledge were necessary in order to bring even the best-sown seeds to a full harvest. Professor Bumm, Director of the Imperial Board of Health, explained the reason why the Board pronounces the meat of vaccinated animals as suspect for some months after vaccination. The vaccine contains human bacilli, and there were experts who pronounced this risky. With all deference to Professor Behring's great authority, the opinions of other authorities could not be neglected.

CORRESPONDENCE.

THE CENTRAL EMERGENCY FUND AND THE SOUTH WALES DISPUTE.

SIR,—I send herewith a copy of a letter received from Dr. Milner Smyth, Honorary Secretary of the Durban Medical Society and also a newspaper cutting from the *Western Mail*, giving the text of a resolution adopted by the Council of the South Wales Miners' Federation on March 15th.

The letter I received this morning, and I am writing to Dr. Milner Smyth on behalf of my Committee, to express to the Durban Medical Society our sincere thanks for the practical manner in which they have shown their appreciation of the stand which is being made at Ebbw Vale for such fair and reasonable conditions as will ensure efficient medical service. The sentiments set forth in this welcome communication from our brother practitioners in Natal will afford hearty encouragement to our colleagues who are undergoing this time of anxiety and strain, as well as to those of us who are *ex officio* intimately concerned in the dispute.

The concluding sentence in Dr. Smyth's letter further emphasizes the fact that in our colonies as well as in the motherland the questions of the scope and conditions of contract practice are felt to be matters of first-rate importance to the profession.

The call for effective combination and co-operation in the ranks of the profession has never been more urgent than it is now, and the serious extent to which ill paid and ill conditioned contract work has gained a footing is largely due to the weakness of individual as against collective bargaining. The later developments of the British Medical Association have undoubtedly done much to stir into activity the corporate instinct of the profession.

The Contract Practice Fund of this Branch was instituted barely twelve months ago and we have already expended close on £1,000. The bulk of this amount has been paid out in respect of the Ebbw Vale dispute, and my Committee with the Branch Council have the keen satisfaction of being assured by the principal officers of the Association that this expenditure from a purely voluntary fund raised in our Branch is in the best interests of the profession at large.

With regard to the resolution of the Council of the South Wales Miners' Federation I do not propose at present to make any detailed comment. I believe that Council to be composed of fair-minded men who will not take any precipitate action, but will give the Association's statement of their case full consideration.

Being thus forewarned, however, I am strongly convinced we should put ourselves into the position of being forearmed, and with this end in view I make a very earnest appeal to my fellow secretaries throughout the Association to urge members to contribute liberally to the Central Emergency Fund, addressing their communications to the Medical Secretary, British Medical Association, 429, Strand, W.C. Contributions, ear-marked "S. Wales Fund," will be forwarded from the head office to me and duly acknowledged.—I am, etc.,

EWEN J. MACLEAN,
Honorary Secretary and Treasurer,
S. Wales and Mon. Branch Contract Practice Committee.

Cardiff, March 18th.

[COPY.]

Durban Medical Society.
Natal Government Hospital,
Durban, Natal,
February 16th, 1907.

Dr. E. J. MACLEAN,
Honorary Secretary,
S. Wales and Mon. Branch, British Medical Association.

Dear Sir,

I am directed by the Durban Medical Society to forward you a bank draft for £13 13s. (thirteen guineas), being a donation from that Society toward the Fund which your Branch of the B.M.A. has started in connexion with the Ebbw Vale dispute.

I am requested, in addition, to state that the Society entirely approves of the attitude taken by your Branch in the matter, and in forwarding a subscription to the fund, the members desire to express their sympathy with those members of the profession who have had the courage to uphold the honour of their calling, and the dignity and prestige of the profession to which they belong.

They consider the question of Medical Contract Practice one of vital and urgent importance and have the greatest pleasure in sending the enclosed sum to augment the subscription list.

I am, dear Sir,
Yours truly,
R. MILNER SMYTH,
Hon. Secretary,
Durban Medical Society.

THE UNIVERSITY QUESTION IN IRELAND.

SIR,—In your issue of March 16th, speaking of Trinity College and the University scheme (Mr. Bryce's), you say: "There is not any doubt that a Bill will be introduced after Easter, but it is believed that it will not be on precisely the lines laid down by the late Chief Secretary. The opposition has impressed Mr. Birrell, and it is possible that the changes may be modified so as to introduce the new college only, *and not five. Trinity College would probably accept this solution*, because it would get rid of the difficulty of adding on a crowd of 'royal' graduates with equal rights to those of the University of Dublin."

There are at least two serious errors in the above statement:

1. Mr. Bryce's scheme did not propose to introduce five colleges into the University of Dublin. The colleges he proposed to bring in were three in number namely, Queen's College, Belfast; Queen's College, Cork; and a new college for Roman Catholics in Dublin.

2. Trinity College would certainly not accept the solution proposed in your statement—namely, the introduction of a new college for Roman Catholics into the University of Dublin. This is evident from the following:

(*a*) Practically every Fellow and professor (65 out of a total of 69) signed one or other of the two protests presented to the recent Royal Commission against "the proposals to introduce into the University of Dublin a separate foundation intended for the special benefit of one religious denomination" (July 30th, 1906).

(See page 718

(*b*) The following letter appeared in the daily papers of February 25th, 1907:

UNIVERSITY QUESTION.

Sir,—As it seems to be possible that the Government may substitute for the scheme of University reconstruction outlined in Mr. Bryce's speech the scheme of a second college within the University of Dublin—generally known as the two-college solution—it may be well to announce that at a meeting of the Executive Committee, held to-day, with the Provost in the chair, it was unanimously resolved to offer the utmost resistance to such a proposal, as well as to Mr. Bryce's scheme.—Yours, etc.,

EDWARD P. CULVERWELL,
EDWARD GWYNN,
Honorary Secretaries.

Dublin University Defence Committee,
35, Trinity College, Dublin,
Feb. 23rd, 1907.

(*c*) The manifesto issued by the Defence Committee on March 11th, extracts from which appeared in the BRITISH MEDICAL JOURNAL of March 16th, contains among others the following statements opposed to the introduction of the new college into the University of Dublin:

To unite such a college with Trinity would be to combine two incompatible ideals. The intellectual liberty which we uphold cannot be reconciled with that educational theory which the heads of the Roman Catholic Church have defined as founded on the principle of authority. If university teaching is to be shared by colleges which hold conflicting views, there must be constant occasions of strife and bitterness, which can only end when one or other of the contending parties loses its distinctive character. It is contrary to our best traditions that the boundaries of science should be fixed, directly or indirectly, by ecclesiastical authority, or the impulse of speculation arrested by clerical intervention. Between two or more colleges so sharply divided by principle and tradition there can be no real union. A cleavage on religious party lines is inevitable. The Senate or other governing body of the University would be the prey of sectarian divisions; these would be felt in all questions of policy, in the making of appointments, in the arrangement of studies, and in the control of teaching. Such a state of things must be fatal to efficiency, depress the standard of teaching, and shake public confidence in the University.

As the statement complained of is clearly opposed to facts, and may lead to the position of Trinity College on this important matter being misunderstood by your readers, I shall be obliged if you will kindly insert this letter in your next issue.—I am, etc.,

ANTHONY TRAILL.
March 18th. Provost, Trinity College, Dublin.

ON THE USE OF CALCIUM SALTS AS CARDIAC TONICS IN PNEUMONIA AND HEART DISEASE.

SIR,—It would be difficult to find a better example of the disadvantages of writing in a hurry than the article by Sir Lauder Brunton on the above subject in your issue of yesterday. It seems that some months ago he discovered that calcium chloride is useful in pneumonia, and he now hastens to give to the medical profession a discovery which to many of us is a matter of ancient history. He pays a well-merited tribute to the experimental work of Dr. Sidney Ringer, and it is to that work that I owe the practical application of the calcium salts in disease. I suppose the first man who used the calcium salts in pneumonia was the man who first prescribed a milk diet, but who first systematically prescribed calcium chloride I cannot say. When Physician to the Northern Hospital in 1892 I find that I prescribed calcium chloride in a case of pneumonia, and for the last nine years I have prescribed calcium chloride more frequently than any other drug in pneumonia. Sir Lauder Brunton refers to the risk of blood-clotting, but this risk can be obviated by any one who will undertake the trouble to follow out the instructions of Sir A. E. Wright, and estimate the relative proportion of lime salts in the blood. I may here remark that this method is likely soon to be superseded by a very ingenious and accurate method of estimating the lime salts in the blood, urine, and other fluids discovered by my colleague, Dr. Blair Bell, while doing some original research work. I shall not give any hint as to the nature of this method which Dr. Blair Bell will soon give to the profession, but I may give an illustration of its practical application. To-day in a case of infective endocarditis a question arose as to the advisability or otherwise of administering lime salts, but when Blair Bell found that the patient's blood contained double the normal amount of calcium we decided to give citric acid, and thus remove any risk of blood-clotting.

The use of the calcium salts has been abused, even before Sir Lauder Brunton discovered their utility. About two months ago I saw a medical friend who was suffering from thrombosis of a middle cerebral artery, and infarcts in both lungs. My astonishment can be better imagined than described when I found him getting, under the supervision of a London professor of the practice of physic, three pints of milk daily, strychnine, and the compound syrup of the glycero-phosphates and formates. It is needless to say that the diet and physic were quickly, and I believe advantageously, changed; at any rate the patient is getting better.

Now for Sir Lauder Brunton's other discovery of the use of oxygen and strychnine in pneumonia. I am pleased to think that the craze for cylinders of oxygen is dying out, notwithstanding this spasmodic attempt to revive it. The best and cheapest oxygen for a patient suffering from pneumonia is that contained in an abundant supply of fresh air. If I were suffering from pneumonia (which I have not at present the most remote intention of contracting), I would prefer to be treated by Dr. W. P. Northrup on the roof of the house rather than by a man whose sheet anchor was a cylinder of oxygen. Strychnine is occasionally a valuable drug in pneumonia, but I know no drug which has been more frequently and forcibly abused in this disease; I rather hesitate to conjecture how many persons have been poisoned by it since that fateful day when Sir Lauder Brunton "scribbled the other half of his paper in a railway train."—I am, etc.,

Liverpool, March 17th. JAMES BABR.

HOSPITALS AND CLUBS.

SIR,—Mr. Sydney Holland raises a point which he admits to be beyond his powers to deal with. The fault of the medical profession is undoubted, but it can plead extenuating circumstances in undertaking to attend patients at club rates. When the club system was originated, the profession filled a gap at a time when there were no vast sums to be collected from the charitable for hospital purposes. In those days the doctor who undertook such services was at all events remunerated by thanks, and if he was content to do the work, rich people did their best to make things as good for him as they could. It is very doubtful whether this pleasant condition of things remains anywhere now, except where hospitals are difficult of access.

No one has been more successful in raising large sums for hospitals than Mr. Holland, and there is probably no such successful hospital administrator. His work is before the world, and there is no greater admirer of his ability than the writer. But the success of such work entails economic consequences which Mr. Holland, who, after all, only claims an hereditary connexion with the profession of medicine, cannot appreciate. It is only those laboriously treading out the corn who can do this. A consideration of the economic position suggests that the basis upon which Mr. Holland's work rests is—to use an expression for what it is worth—socialistic. It is said to be the duty of the community to provide assistance for its own sick. Mr. Holland has successfully recognized this duty. It is also the duty of that unfortunate citizen, the medical practitioner, to provide for his belongings and himself by giving assistance to the sick and injured. The practitioner finds that the system supported so ably by Mr. Holland carries too many guns for him. It is impossible for any private person other than a millionaire to compete with the millions supplied by Mr. Holland's friends.

The socialistic ideal is swamping individual effort, and no suggestions will dam back the tide.

It appears to me that those who have the power of the purse are the people to whom responsibility chiefly attaches, and that it is unfair to fix much upon the little men, who are subjected to conditions with which they are obviously not in a position to compete.—I am, etc.,

Hatfield, March 17th. LOVELL DRAGE.

SIR,—The Honourable Sydney Holland is evidently well pleased to find that there are some club doctors who are responsible for a few drops of the overflowing bucket of hospital abuse. A member of some club has written to

him complaining that a medical man, who is receiving less than one penny a week for attendance on its members, has been neglecting his duty and sending some patients to the hospital. Mr. Holland ingenuously asks some one to advise him as to how he is to reply to this letter. The reply is simple enough, and, as he knows the facts, it is to be hoped he will have the courage and honesty to state them. Why not tell his correspondent that, though there are some club doctors who neglect their duty, there are others, and doubtless among them many who have been students and house-physicians and house-surgeons of the London Hospital who are clamouring for club appointments, and who are quite willing to do the work if appointed? Further, he can tell his correspondent, who suggests that the club subscriptions should be sent to the London Hospital, that the London hospitals are straining every nerve to meet their financial difficulties; and that, as they have not yet been able to contrive how a wound can be dressed by a nurse or a trivial ailment attended to for less than 1s. 6d., it were better meantime that slight ailments at least should be attended to by the club doctor, who is often glad to receive one-third of that sum. Further, if his correspondent is a trade-unionist, Mr. Holland, who professes a deep interest in the welfare of medical men, might be bold enough to tell him that, while he is right in insisting on a reasonable payment for his work, he should not deny that privilege to others and should never wear sweated clothes nor live in a jerry-built house, nor fail to pay his medical man a reasonable sum for attendance.

Mr. Sydney Holland commiserates the fate of medical men receiving small fees. Who are responsible? As one of the rank and file of general practitioners I will give him the benefit of my own experience, as it is probably the same as that of many other medical men practising in London. I sometimes take small fees, not that I am impelled thereto by competition with my neighbours, but because there is within a few yards of me a hospital where well-paid artisans and shopkeepers are attended for nothing, while the absolutely poor and deserving are relegated to the union infirmary. This hospital is always clamouring for money, and, in order to advertise itself, has recently been expending a considerable amount in painting and decorating. Walls and windows are emblazoned with "Medical department," "Ophthalmic department," "Casualty department always open," etc. Such is the modern suburban London hospital, and it is quite evident that, in face of this, medical men in ordinary practice could not possibly hold their own unless they were doing good work. Did a general practitioner advertise himself in this manner, he would be justly branded as a disgrace to his profession.

The present system of hospital management in London is doomed, and practically the only man in London who does not seem to know it is the Hon. Sydney Holland.—I am, etc.,

[illegible] March 14th. J. H. KEAY.

SIR,—Will you allow me to draw attention to two points which the Hon. Sydney Holland's letter on "Hospital Abuse" makes clear?

First, as he has received many letters such as that he quotes, and no doubt other hospital authorities have received similar epistles, it is plain that the present methods of hospital management have led a large part of the population to believe that these institutions are commercial competitors of the general practitioner.

Secondly, the Hon. Sydney Holland is unable to answer his correspondent because he cannot make the reply which he ought to be able to make. The reply should be of this nature:

"No subscription only gives attendance to the necessitous.

"The almoners investigate every case and attendance has been given only to those whose means are manifestly insufficient to obtain medical attendance, by contract or otherwise, adequate to the circumstances of the case.

"In accordance with professional custom, the staff always communicate with the usual medical attendant.

"No doubt the Hon. Sydney Holland means us to infer that in this and similar cases the medical attendant is responsible for the abuse; but two wrongs do not make a right. The difference which I should draw is that at the London Hospital no efficient inquiry into the social condition of the patients is made, and that a large number of persons who can provide for medical attention are treated there for minor injuries and ailments. (I think the hospital authorities admit that two-thirds of their patients are treated for minor conditions.) But, whatever the intention may have been in publishing the letter, we ought to be thankful that so distinguished an authority on hospital management should have put forward such indisputable evidence of the existence of "hospital abuse."—I am, etc.,

Putney, March 17th. DONALD F. SHEARER.

THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

SIR,—In his letter in the BRITISH MEDICAL JOURNAL of March 2nd Dr. Saundby points out one of the many weak points in the *Memorandum* of the Ethical Committee's Report. It will be well if it does not get into the daily press, for in such an event the public will want to know where the patient comes in. Certainly he takes the back seat in the trio. That a few consultants abuse their position to the detriment of the general practitioner may, for the purpose of argument, be conceded, but it must in simple justice be acknowledged that, as a body, the former endeavour to act honourably by both patients and their medical attendants. Moreover, if the unwritten laws governing consultants are not in some instances observed, a written code will be equally ignored.

It must be acknowledged that the word "consultation" is to some practitioners like a red rag to a bull, and I am afraid Paragraph (*c*), under the section "Duty of Consultation," will not tend to improve matters in this respect. We are told, "When the practitioner in attendance is *definitely in doubt* as to the diagnosis or as to the treatment to be followed," etc. Now, if the welfare of the patient is, as it should be, the chief concern of the doctor, he will suggest a consultation when there *is any* doubt, etc. Again, why wait until "there is evidence of *serious* doubt in the mind of the patient or his friends" before seeking counsel? Surely, if there is evidence of the least doubt is it not wiser to act promptly rather than wait until doubt has ripened into absolute want of confidence?

In discussing the questions relating to consultations, it must always be borne in mind that, however good and necessary it may be to have rules regulating the relations between general practitioner and consultant, patients have an indefeasible right to seek advice from whomsoever they may choose, with or without the concurrence of the practitioner in attendance for the time being, although there can be no question as to which would be the more advantageous course for the patient to pursue, and at the same time he would be performing a simple act of courtesy to his doctor.

In these days of diminishing professional incomes it is, to say the least of it, impolitic to render the obtaining of a second opinion as difficult as possible, for by so doing patients are tempted to adopt subterfuges in order to gratify a perfectly legitimate desire, or, worse still, we may cause them to drift into the hands of quacks. It is fervently to be desired that in this discussion every effort should be made to create and foster harmony between members of a common profession; and it is in the spirit of that wish this letter is written.—I am, etc.,

London, S. March 18th. CHAS. W. CHAPMAN.

ALBINISM IN MAN.

SIR,—On looking into the various hereditary conditions which affect man for one which would lend itself to the application of Mendelian methods of investigation, that of albinism appealed to me as the most suitable. The condition is striking, such as may reasonably be expected to impress even the most casual observer, and its occurrence at any time in a family would be a circumstance not likely to be soon forgotten. No estimate that I know of has yet been made as to the frequency with which it occurs in the general population, but it is at least sufficiently common to provide satisfactory data for work such as this.

The condition in itself does not call for description for purposes of identification, but when dealing with a subject about which so little is known, it may be as well to venture on a description of what I take to be the type.

In the first place, then, in the typical human albino the skin is of a uniform milky colour, except in those parts

where the epidermis is thin, allowing the vessels underneath to show through in a highly characteristic manner. The hair system of the whole body, being devoid of pigment, is of a silvery-white colour, though often when viewed in bulk a pale-straw hue is apparent. But the most striking change is seen in the eyes. There the rays of light diffuse through iris as well as pupil, giving to the latter the red appearance familiar through the mirror of the ophthalmoscope, and to the former a rose-pink hue derived from the vessels of the choroid and of the iris itself. The photophobia which results from the relative non-absorption of the rays of light leads to a habit in the albino of continually screwing together his lids in order to admit only the minimum of rays essential to sight; and this, in conjunction with the characters already mentioned, forms a picture which makes what I am in the habit of calling the *albinotic facies* a distinctly characteristic one.

Probably the varieties of this condition are more numerous than we ssupect. Among the coloured races, in whom the condition is much more common, a piebald variety is often found, for which the name of "partial albinism" seems as good as any. When one of these patches of congenital leucoderma exists in the situation from which the eyes are developed, true albinotic eyes are found as a result, and similarly when a patch involves the scalp or other portion of the hair system, the hair in that situation partakes of all the characters of true albinotic hair. For some time I have been strongly of opinion that a like condition occurs among Europeans only masked by the already white colour of the greater part of their skin. In some cases observed the hair has been pigmented, as in that described by Folker, while the rest of the body showed the usual features associated with albinism; in others again the only indications of albinism at all have been the characters of the eyes, which were in every respect those of an albino. In still other cases eyes and skin have been apparently normal, while the hair of the scalp has been congenitally white. I have never been able to satisfy myself that in these instances there were any corresponding differences to be noted on the skin, but the condition is bound to include many varieties, and I should be greatly obliged if physicians who have the opportunity of doing so would kindly endeavour to come to a decision on this interesting point.

I have thus briefly described the typical appearances presented by an albino, and some of the varieties which have been observed, because it is important in examining such cases that one should have a standard to go by, the deviations from which should be carefully noted. For this reason I have chosen my adjectives with care, as representing what to my mind is the type of the condition; and, in closing, I venture to ask the aid of those medical men who may happen to meet with such cases of albinism, or of any of its varieties, in the pursuit of their profession, that they may be good enough to help me to get into communication with the individuals they come across with a view to obtaining the particulars of their family histories, assuring them that from all those who are good enough in this way to supply me with cases, I shall feel myself the recipient of considerable personal favour.—I am, etc.,

A. R. GUNN,
Physiological Department, Edinburgh University.

March 16th.

A CENTENARIAN'S ADVICE.

SIR,—A certain maiden lady, much to her disappointment, for she had hoped to be "elsewhere," completed her hundredth year last January. This afternoon she was bewailing the infirmities of age, and I suggested she might hasten the end by altering her abstemious habits, since it had seemed to me that old age depended principally on extreme moderation in eating and drinking. She immediately replied, "You, then, agree with Milton:

> "The rule of not too much, by temperance taught
> In what thou eat'st and drink'st, seeking from thence
> Due nourishment, not gluttonous delight,
> Till many years over thy head return,
> So may'st thou live, till like ripe fruit thou drop
> Into thy mother's lap, or be with ease
> Gather'd, not harshly pluck'd, for death mature."

In this age of total abstinence, vegetarianism, purin-free diet, poltophagists, *et hoc genus omne*, the advice and practice of the centenarian are worthy of greater publicity than my note-book. The context is not uninteresting; it may be found in Canto XI of *Paradise Lost*.

She still retains an acute interest in current politics, literature, and reviews, as well as the daily paper, and, curiously, her opinions are often more Radical than Tory. She still takes daily half a glass of beer, occasionally a little brandy or sherry, and her diet has always been sparse. For some years her bodily powers have shown increasing weakness, so that she has kept to one floor. All her life she has suffered from migraine, which she calls "the dazzles," sometimes lately with temporary aphasia and numbness of the right hand. Only once have I been successful in taking her blood pressure; it was then 180 mm. Hg., probably due to the excitement of the operation.

Her mother died of phthisis within a year of her birth, and she herself lived for some months at Brighton as a child on account of enlarged glands in her neck. It is fortunate for her that she never tried to insure her life.—I am, etc.,

March 18th. W. R. G.

CASTING UP ACCOUNTS IN CONNEXION WITH MALARIA.

SIR,—It will be my duty in the autumn of this year to present a report to the International Congress of Hygiene at Berlin on the progress of antimalaria measures in British possessions, and, if possible, in America. Ten years will then have elapsed from the date when the parasites of malaria were first discovered in gnats; and I should therefore like to give as complete and trustworthy an account as possible of all that has been done against the disease during that period.

From official publications, articles in the medical press, and private letters, I gather that campaigns have been at least commenced in the following localities: Freetown, Lagos, Gambia, Gold Coast, Hong Kong, Federated Malay States, Andamans, Candia, Khartoum, Trincomalee, Port Said, Natal, Mian Mir, Peshawur, Rawal Pindi, Sialkote, Ferozepore, Karachi, Mhow, Kampti, Deesa, Saugor, Jhansi, Poona, Meerut, Lucknow, Secunderabad, Mandalay, Maymyo, all in British dominions; and in Italy, German possessions, Greece, Havana, Panama, and United States. Unfortunately, the available descriptions of the work done and the results obtained in most of these localities are so vague that they are of little value. Will you therefore allow me to appeal through your columns to all medical men and sanitary officers who have interested themselves in the campaign to send me the necessary details to the address given below? The statements should of course give the area and population of the district dealt with (including towns, villages, plantations, factories, mines, railways, and ships); the exact nature of the protective measures, and, if possible, any facts bearing on their results. In using the information I will, of course, always take care to give the name of my informant, unless specially desired not to do so.—I am, etc.,

RONALD ROSS,
Professor of Tropical Medicine, the University, Liverpool.

March 18th.

THE TREATMENT OF FRACTURES.

SIR,—It was said the other day by a distinguished man of letters that "if a man was engaged entirely with the principles of the knowledge of his department he would become academic, and if he was occupied only with the practical, he would become mechanical."

In the department of the treatment of fractures the study of principles has been unduly subordinated to that of practical details. Consequently the principle of immobilization has been accepted in a mechanical way without any close examination of its limitations or its claims. Many of the evils resulting therefrom have been already pointed out in these columns. A few months ago I saw in a large children's hospital a deplorable case of the so-called Volkmann's ischaemic paralysis which had been admitted for operative treatment. The condition was the result of too rigid immobilization for fracture of the forearm. The muscles were extraordinarily attenuated, the tendons at the wrist being reduced to mere threads, much smaller than the nerve trunks of the region. Similar cases have been reported by Mr. C. A. Morton and Mr. R. P. Rowlands

under the name of Volkmann's contracture.[1] Early massage and movement, though condemned not long ago by a London surgeon and rhetorician as methods of barbarism, would at all events save the practitioner from calamities like these.

In the *Journal de Médecine et de Chirurgie Pratiques* of February 10th, 1907, M. Lucas-Championnière quotes the observations of Drs. Ducroquet and Emile Pillet on the fragility of the bones which results from long-continued immobilization. Spontaneous fractures of the femur had taken place in several cases of congenital dislocation of the hip on removing the limb from the usual apparatus after immobilization for some months.

Professor G. A. Wright, whose recent letters in your columns have been of so much interest and importance, is to preside over the Surgical Section at the Exeter meeting of the Association this year. May I suggest that he should endeavour to arrange that a full discussion of this subject—that is, the principles of the treatment of fractures—should then take place? The permanent value and interest of such a discussion would be very great, especially if it were found possible to induce M. Lucas-Championnière to take part in it as the guest of the Association. The adoption of this suggestion would, in my opinion, go far to ensure the success of the annual meeting at Exeter, and, in particular, a record attendance at the Surgical Section.—I am, etc.,

Penrith, March 11th. J. EDWARD BOWSER.

AFTER-TREATMENT OF OPERATION CASES.

SIR,—After reading Mr. Morton's letter in answer to mine of March 2nd, I cannot see that he makes his case any stronger for the after-treatment of operation cases being taken out of the hands of the general practitioner. I have recently had a conversation with a consulting surgeon enjoying a very large operating practice on the subject of Mr. Morton's paper, and he decidedly agreed with the views expressed in my letter.

If Mr. Morton does not distrust the competence of the general practitioner to deal with post-operation cases, how is it that he says in his paper that even if any medical complication should arise in the case the general practitioner should meet him in consultation before treating it? Mr. Morton says in his letter that he admits that the general practitioner is the most competent to deal with any complications arising after a labour case. So I take it that should, for instance, a pelvic abscess form, the general practitioner is the most competent person to open and drain this. Is not this the very ground on which Mr. Morton in his paper says the general practitioner should not tread?

Mr. Morton also tells us that the busy practitioner cannot find the time to profit by the writings of others. This may be his unfortunate experience, but I think I am not wrong in stating that practitioners in general do read, and that many, like myself, never lose the opportunity of visiting their old hospitals to see what they have read put into practice. It seems strange that no other operating surgeons should have found it necessary to read and publish a paper on the subject which Mr. Morton has taken; and one cannot but believe that they must have had happier meetings and experiences with the general practitioners than the paper suggests Mr. Morton has had.

I am, etc.,

Watson under Edge, March 12th. ERNEST F. CLOWES.

TRYPSIN IN CANCER.

SIR,—With great reluctance I must ask you to allow me to submit one word in reply to the communication on trypsin in cancer in the BRITISH MEDICAL JOURNAL of March 16th.

I should hardly have thought that any one could have disputed the claim of Dr. J. A. Shaw-Mackenzie as being the originator of the method of treatment of inoperable cancer now known generally as the "trypsin treatment."

I am in a position to speak with authority on this question, inasmuch as I was associated with Dr. Shaw-Mackenzie in the treatment of some cases of inoperable cancer while his researches were being made and before, to my certain knowledge, he sent the injections of trypsin and communicated the details of his treatment to Dr. Beard.

[1] *Lancet*, October 21st, 1905, and May 19th, 1906.

As you rightly observe, the question of priority is the least which need be concerned in a problem of such magnitude, but it is only just to Dr. Shaw-Mackenzie to state that whatever controversy which seems to have arisen was not of his seeking.—I am, etc.,

London, S.W., March 16th. THOS. LIGERTWOOD, C.B., M.D.

*** We have received several letters on this subject which we do not think it expedient to publish, as they only tend to prolong an unprofitable and not very edifying controversy. On two points, however, Dr. Beard has been good enough to show us the error of our ways, and we hasten to make acknowledgement of our backsliding. We accidentally conferred the degree of "Dr." on Mr. B. T. Fairchild; this, Dr. Beard tells us, that gentleman may regard as a personal insult. If Mr. Fairchild feels it an insult to be designated by the same style and title as Dr. Beard, we tender him our humble apology. Again, in the thirty-first line from the bottom of p. 661, we made Dr. Beard say, after the manner of Cockayne: "The treatment laid down for *is* use." This is one of those tricks of that wayward sprite, the "printer's devil," which grieve the soul of the unhappy editor who has to bear the blame. The rest of Dr. Beard's communication is in his customary style of Sir Oracle, but there is a more than Delphic obscurity in his latest utterance which we are unable to penetrate. Some of our readers may be glad to add the concluding part of the letter to their collection of literary gems:

> You talk, or your writer does it for you, very wisely about apportioning "praise," and presumably blame also. When that time comes, what place do you suppose will be occupied by your various small spicy editorials? Do you really think that the editorial "WE" will then represent MINOS and AEACUS with a CANCER RESEARCHER as RHADAMANTHUS behind the scenes pulling the Editorial strings? ? ? Well, NOT EXACTLY! ! ! !

As Johnson said, in like circumstances, "Are we alive after all this satire?"

THE ART OF POLITE LETTER-WRITING.

SIR,—In your issue of March 9th, calling attention to a slight error in a letter which I addressed to the press, you used language so disgraceful that it showed you to be incapable of fair and gentlemanly controversy.

On March 16th you returned to the attack with a comment on a letter of mine which you, meanwhile, had not the moral courage to publish; but which you had the turpitude to suppress, contrary to all the honourable traditions of English journalism, as the non-medical newspapers, at least, interpret them.

Your new complaint against me is that I did not reply to you as early as you expected. It does not occur to you such is the extraordinary bent of your mind—that there might be a perfectly reasonable explanation; and the explanation, I may tell you for your information, was that I was suffering from lumbago and a bad cold, which prevented my attending to my ordinary duties.

You will no doubt continue your attacks upon me and to suppress my replies, which will be in perfect keeping with the peculiar ethics of medical journalism as you understand them; but to every fair-minded person, and in accordance with the best and highest traditions of journalism, the person attacked has the right of reply.

To every decent Englishman this unwritten law is a binding moral obligation, but to so simple and honourable a duty you convict yourself of being indifferent. You, who prate of honour! You, who cant of truthfulness! You are so afraid of criticism which gets beneath the armour of your self-complacency that you are content to keep your thousands of readers ignorant of your opponent's case lest you be found out!

I have only one remark to make to you, and it is this: That your father may have succeeded in making of you a medical man, but he obviously failed to make of you a gentleman. I am, etc.,

SIDNEY TRIST, Secretary.

London Anti-vivisection Society, 15, Regent Street, Waterloo Place, London, S.W., March 20th.

*** Mr. Trist is under a delusion if he thinks we have any complaint against him. On the contrary, we cannot have too much of such a controversialist on the other side.

OBITUARY.

DAVID LOWSON, M.D.,

SURGEON TO THE HULL ROYAL INFIRMARY.

WE regret to have to record the death of David Lowson, M.D., at the age of 56, which took place in Wimpole Street last week.

Dr. Lowson pricked his finger when operating for appendicitis in Hull in November last, and for several weeks was lying dangerously ill at home with septic cellulitis. After a few weeks' holiday he returned to work about Christmas, but it was obvious to his friends that he had not regained his health. At the end of January he left Hull again for the South, and when in London was taken ill with pleurisy, which ran on to empyema; for this the chest was freely opened and drained some four or five weeks ago, but he had, unfortunately, no reserve strength to weather this fresh storm, and after lingering for a few weeks between life and death the end came on March 15th.



Dr. Lowson was born in Aberdeenshire in 1850, and was educated at the University of Aberdeen, where he took the degrees of M.B. and C.M., with highest honours, in 1871, proceeding to the M.D. four years later. Some years after he was invited to act as Examiner in Surgery in his old University, an honour he greatly appreciated; he held the appointment some time. After qualifying, one of the first appointments he held was that of Assistant House Surgeon to the Pendlebury Children's Hospital, and later he became Resident Surgeon to the Huddersfield Infirmary. He then commenced practice in Huddersfield in partnership with one of the leading surgeons, and his success seemed assured when his health broke down. He contracted diphtheria from sucking a blocked tracheotomy tube, and though he saved his patient's life, and was awarded the Albert medal (1st class), he was thrown out of work for quite a year. After travelling about for some time he settled in Hull twenty-five years ago, when his health was quite re-established. His first public appointment in Hull was Surgeon to the Hull Dispensary, and later he became Surgeon to the Hull Hospital for Diseases of Women and Orthopaedics. It was not long before his exceptionally brilliant talents as a surgeon began to be recognized, and he was appointed Assistant Surgeon to the Hull Royal Infirmary, becoming full Surgeon in 1898, an office which he held at the time of his death.

Dr. Lowson frequently read papers at the meetings of local societies, and was one of the most constant attendants, always entering into the discussions, but he did not often publish. One of his most striking papers was in the BRITISH MEDICAL JOURNAL in 1893, when he published a successful case of pneumonectomy for early phthisis. This we believe is the first recorded case. The operation has many difficulties, and we are not aware that he ever attempted another case. He was a very quiet man, entirely free from fads and cranks, tied down to no school of thought, but always with an open mind ready to take up any new line if it appeared promising.

For some ten years he had occupied the position of the leading surgeon in Hull, and he was greatly trusted for many miles round, not only because his surgical opinion was always sound, but because his skill as an operator was universally recognized. Perhaps some of his most brilliant operations were those for resection of extensive lengths of the bowel. He was always at his best in a difficult operation—cool and collected, and with a clear head. From the earliest days in which operation was undertaken for appendicitis he was of opinion that the delay so often advocated till a quiescent period was a grave mistake in many cases, and it is interesting to note the change of opinion which has in recent years taken place, showing how correct was his view. It was also always a pleasure to see him perform an Alexander-Adams operation. Some surgeons appear to have difficulty in finding the round ligaments, and are apt to condemn the operation, but with him they appeared always to come invitingly into the wound the moment he made his first incision. Any one who had ever seen him open a deep-seated abscess in the lung could not help being profoundly impressed at his masterly skill; the flow of blood boiling up from the incised lung did not worry him. Within a few seconds he would have the cavity opened and the wound firmly plugged with as much calmness as if he were opening a whitlow.

The funeral service took place at Holy Trinity Church, Hull, at noon, on March 20th, a very large number of old patients being present, and the profession largely represented, and later the body was cremated.

He leaves a widow and one son, who is now an undergraduate at Cambridge.

Professor OSKAR ISRAEL, Prosector in the Pathological Institute of the University of Berlin, died on March 5th, at the age of 53, after a long and painful illness. He had been connected with the Pathological Institute for thirty years. He was a pupil of Virchow, and edited the important work entitled, *Internationale Beiträge zur wissenchaftlichen Medizin* [international contributions to scientific medicine], issued on the occasion of the great pathologist's seventieth birthday. Professor Israel was the author of books on pathological histology and pathologico-anatomical diagnosis and of a number of other contributions to the literature of pathology.

WILLIAM A. FREDERICK BATEMAN, M.R.C.S.Eng., L.M., Etc.,

HONORARY SURGEON TO THE RICHMOND HOSPITAL.

THE death of Mr. W. A. F. Bateman on March 11th, at the age of 71, has deprived Richmond of its oldest medical practitioner. His loss will be greatly felt in that pleasant suburb and its neighbourhood, both socially and professionally, as for forty years there he had taken a leading part in philanthropic and literary movements. He joined, in the Sixties, after leaving King's College Hospital, in partnership with Dr. Julius, who was then living at the Old Palace, Richmond, and became one of the first members of the staff of the Richmond Hospital, and at his death was its Senior Honorary Surgeon. He was present at the first committee meeting held there, and during his forty years of service devoted much time and labour to the development of the institution. He was

especially instrumental in extending the hospital and adding a children's ward.

He was also Surgeon-Lieutenant-Colonel of the 3rd Volunteer Battalion East Surrey Regiment, and, after many years' service, received the volunteer decoration. Mr. Bateman more than once filled the office of President of the Thames Valley Branch of the British Medical Association and was a frequent contributor to its proceedings; at the time of his decease, too, he was a member of Council of the Richmond Division, into which the Thames Valley Branch became merged under the new constitution. He was also President of the Richmond Athenaeum a few years since.

His genial disposition and genuine, yet unostentatious, kindness of heart endeared him alike to his professional colleagues and his large circle of friends and patients, of whom there was a crowded attendance at his funeral service on March 14th. Mr. Bateman's death followed a surgical operation, and much sympathy is felt with his widow, a daughter of Dr. Julius, and their large family in their bereavement. An old King's College friend adds: "Nothing I can write can adequately express my high esteem both of Mr. Bateman's professional and private character and the sense of loss which all who knew him are experiencing on his removal from our midst."

ARTHUR ERNEST SANSOM, M.D.Lond., F.R.C.P.,

CONSULTING PHYSICIAN TO THE LONDON HOSPITAL.

In the person of Dr. Arthur Ernest Sansom, who died on March 10th, at Bournemouth, of pneumonia, there passed away a well-known member of the medical profession, much respected both at home and abroad. Born at Corsham, near Bath, on May 13th, 1838, and educated at Queenwood College, Stockbridge, Hants, and afterwards at King's College, London, where he was an exceptionally brilliant scholar, he early showed tastes for original research. In 1865 he wrote one of the first and most practical works on anaesthetics entitled, *Chloroform; its Action and Administration*, followed by a paper read before the Obstetrical Society, on "Anaesthetics in Obstetric Practice," in which he advocated the employment of anaesthetic mixtures of absolute alcohol and chloroform.

In 1869-70 he brought before the medical profession in this country the importance of Pasteur's researches on fermentation, and embodying those views, together with the results of many experiments of his own, brought them before the Medical Society of London in a series of papers, subsequently publishing them in a book entitled *The Antiseptic System* (1871). His researches on carbolic acid and the introduction of the sulpho-carbolates into medicine are well known. In his later years he became better known in connexion with diseases of the heart, and wrote *The Physical Diagnosis of Diseases of the Heart* (1876), *Treatment of Some of the Forms of Valvular Disease of the Heart*, together with articles on the heart in *Allbutt's System of Medicine*, and many others.

He was Consulting Physician to the London Hospital and to the North Eastern Hospital for Children; late Examiner in Medicine at the Universities of London and Durham, and at the Royal Colleges of Physicians and Surgeons, London; ex-President of the Medical Society of London; Fellow or Corresponding Member of the Medical Societies of Paris, New York, and Moscow.

To all who knew him he was the embodiment of uprightness of conduct, and he lived and died a pattern, not only of a good physician, but of an English gentleman.

HENRY ST. JOHN BROOKS, M.D.,

FORMERLY PROFESSOR OF ANATOMY, DUBLIN.

We learn with very much regret of the death of Dr. Henry Brooks, of Dublin, who died in that city on March 16th, after an operation. He was born in Cape Colony, and became a graduate of the University of Dublin in 1883, after a most distinguished undergraduate course. He was First Senior Moderator in Natural Science, and Medical Scholar. After holding the office of Demonstrator of Anatomy he became University Anatomist in Dublin University, under Professor D. J. Cunningham, and Surgeon to Sir Patrick Dun's Hospital. He was a remarkable enthusiast in his work, but that was by no means confined to anatomy. He had a very extended knowledge of many collateral sciences, and one of his relaxations was the study of languages and out-of-the-way subjects. His writings were very numerous. He was the author of The Nervous System in Morris's *Treatise of Anatomy*, and he contributed frequently to the *Proceedings* of the Royal Dublin Society, the Royal Academy of Medicine, the *Journal of Anatomy and Physiology*, etc., and his reports showed the completeness of his investigation. Some years ago he went to Australia, where it was found necessary to subject him to an abdominal operation for some obscure complaint. Later on he returned to Dublin, where he lived in restored health. Some months ago he began to complain of symptoms which made it necessary to perform another operation last week, but he rapidly sank.

Dr. Brooks's death will be regretted by all his old pupils and by all who knew him. He was a fine and rare type; in some senses a genius, whose force was never fully realized.

In the tragic death of M. Berthelot, at Paris, on March 18th, in his 80th year, the scientific world must record the severance of one of the strongest links which bound the present with the past. As a man of science Berthelot ranks with the greatest, for the reforms which he introduced into the study of chemistry have been of fundamental importance. Before his day the methods of organic chemistry were almost entirely analytic, but to this method he added the synthetic. To him we owe the preparation of acetylene from its elements—an achievement rapidly followed by the artificial formation of various hydrocarbons, alcohols, fats, and sugars. The developments which followed these discoveries make it clear that to no other one worker does organic chemistry owe a greater debt. The founder also of thermo-chemistry, he was indefatigable in devising and conducting experiments to establish it on a firm foundation. Nor was his work purely or even chiefly of theoretical importance; the world at large has already benefited by his discovery of the true mechanism of the fixation of atmospheric nitrogen in the soil. Despite the vast amount of his original work, the great French thinker found time to devote himself to the history of the science he loved so dearly, and his researches on the beliefs and the achievements of alchemy, both European and Asiatic, have added enormously to our knowledge and appreciation of the Middle Ages. For a time he served his country as Foreign Minister; but the almost absolute unanimity with which the French Chamber decreed the honour of a public funeral was a homage to the man of science, and was a fitting culmination to the many marks of public recognition accorded to him in his lifetime.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Election of Chancellor.—In a Convocation held on Thursday, March 14th, the Right Hon. George Nathaniel, Lord Curzon of Kedleston, M.A., Hon.D.C.L. All Souls College, was elected Chancellor of the University.

Degree.—In a congregation held on March 14th the degree of Doctor of Medicine was conferred on J. Freeman, University College.

Degree Days.—The degree days for next term are the following: Thursday, May 2nd, at 10 a.m.; Saturday, May 25th, at 2.30 p.m.; Thursday, June 20th, at 10 a.m.; Thursday, June 27th, at 10 a.m.; Saturday, July 6th, at 10 a.m.

Official Fellowship in Natural Science at Jesus College.—The Principal and Fellows will shortly proceed to elect to an Official Fellowship, to be held in conjunction with an Assistant Tutorship in Natural Science. The Fellow so appointed will be expected to teach one of the larger subjects recognized in the Honour School of Natural Science, to undertake the entire direction of the science tuition of the College, and generally to superintend the College laboratory now in course of erection; this, when completed, will be adapted for the teaching of Chemistry and Physics. He must be a graduate of some University within the United Kingdom, and must be unmarried. His duties will commence at the beginning of the October term, 1907, and he will be required to reside in College during full term. The emoluments will be those of an Official Fellowship, together with such a sum from the Tuition Fund as the College may from time to time determine, the whole stipend being not less than £150 per annum, together with the free use of rooms in College, and the usual allowances. Applications, together with a statement of the candidate's qualifications and experience, and such testimonials as he may desire

to submit, should be sent, not later than May 1st next, by letter to the Principal, Jesus College, from whom further details, including the conditions of tenure of an Official Fellowship, may be obtained. All letters addressed to the Principal on this subject should bear the words "Science Fellowship" upon the envelope.

UNIVERSITY OF CAMBRIDGE.

THE General Board of Studies have recommended that a second Additional Demonstrator in Physiology be appointed without stipend from the University.

DEGREES.

The following degrees were conferred on March 14th:

M.D.—G. H. L. Whale, Jes.; F. E. Shipway, Christ's; W. B. Heywood, Emm.

M.B.—W. O. Pitt, Emm.

The Examination in Sanitary Science, Part I, will begin on Wednesday, April 3rd, and Part II on April 8th.

UNIVERSITY OF LONDON.

Proposed Institute of Medical Sciences at South Kensington.

THE authorities of St. Mary's Hospital Medical School (University of London) having had under consideration the proposal to concentrate the preliminary and intermediate medical studies at an institute of medical sciences at South Kensington, have decided not to participate in this scheme, but to continue to maintain as hitherto complete courses of instruction in these subjects in the medical school.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SOCIETY OF MEMBERS.

Deputation to the Lord President of the Council.

ON March 14th a deputation from this Society was received by the Lord President in reference to a memorial recently submitted to the Prime Minister, asking that some voice in the management of the College and its property might be given to the Members of the College.

The deputation was introduced by Dr. V. H. Rutherford, M.P.

Dr. Joseph Smith gave a short account of the history of the College, drawing attention to the fact that Members had made this claim from time to time ever since the first Charter was granted in 1800. He pointed out that the undoubted corporate rights of the Members as such did not carry with them as they should any vote in the election of the Council or governing body. He referred to the fact of there being some 17,000 Members thus excluded as against 1,300 Fellows who alone have a vote at present. He also showed that a very large proportion of the income of the College is derived from the Members' fees. He concluded by quoting a former president of the College, Mr. Jonathan Hutchinson, who stated that, putting aside all other arguments, "he would simply ask whether or not it will be for the good of the profession that the Members of the Royal College of Surgeons should be admitted to some share in its government? For himself, most unhesitatingly did he believe that the advantages would be great."

The Lord President inquired whether, apart from their general claim for representation, the deputation made any specific charges against the present governing body.

Dr. W. G. Dickinson stated that no accusation of gross mismanagement was made against the Council, though they naturally considered that the management could be improved in various ways. He then dealt seriatim with the various objections to the proposed reform which had from time to time been put forward by the apologists for the present system.

The Lord President, in reply, said that he had listened with interest to the statements made respecting the position of the Members, and he thought that the deputation had stated their case, on the whole, with great moderation. He agreed that it was anomalous that the representation in the College should be so limited. He would give the matter his closest attention, and would endeavour as far as possible to act as a mediator in smoothing over the differences which had arisen between the Council and the Members. The deputation would not expect him to say more than this at present, and he would probably have to ascertain the views of the Council of the College in greater fullness.

The deputation then thanked his lordship and withdrew.

Medico-Legal.

THE FEES OF ANAESTHETIST.

IN the Brompton County Court, on March 11th, a point of some interest was raised in respect of fees due for the administration of anaesthetics. The plaintiff, an anaesthetist, claimed 10 guineas from the defendant for ten administrations of an anaesthetic to the latter's patients, contending that it was the custom for the medical man in charge of a case to hold himself responsible for any fees due to an anaesthetist; this was necessary, because knowledge of the patient as far as the anaesthetist was concerned, and all relation between them, began and ended with the performance of the operation. Evidence for and against this view having been given by various persons, the judge ruled that the custom existed, and gave judgement for the plaintiff for £6, this being an average between the fees variously stated commonly to be paid to anaesthetists.

MIDWIVES IN IRELAND.

R. R. (Ireland) asks our opinion under the following circumstances. He writes: I was called to see a woman who had been confined two days previously by an unqualified midwife. I diagnosed puerperal sepsis, and I warned the woman not to attend any more cases. (1) Suppose the patient should die would I be justified in giving a certificate? (2) How does the law deal with unqualified midwives? (3) Has a medical man any right to attend a case when called in by an unqualified woman? (4) Is this covering?

*** (1) Unless our correspondent has reason to believe that the patient's death was due to wilful default on the part of the midwife, we consider he would be justified in giving a certificate. (2) In the same way as it deals with unqualified practitioners of medicine who do not represent themselves or assume any titles which would lead the public to conclude they were qualified. (3) Yes. (4) No. Most of the poor in Ireland are attended by "handy women" even when qualified midwives are available, and notwithstanding the utter lack of sanitation and cleanliness, domestic and personal, the death-rate in childbed is exceedingly low, and in most cases when it occurs in the practice of a handy woman can be traced to the fact that she has tried to impress the patient with her skill by making vaginal examinations, etc., with dirty hands, proving the truth of the adage about the danger of a little knowledge.

DEFAMATORY STATEMENTS.

A. is negotiating for the sale of his practice to X., and, it is alleged, makes a grossly defamatory statement with regard to a rival in the same village. We are asked whether such a communication is privileged, and are advised that it is not.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A COUNCIL meeting of this Association was held at 9, Copthall Avenue, E.C., on March 12th. The President (Surgeon-General Evatt, C.B.) was present, and the chair was taken by Mr. D. B. Balding, J.P., Chairman of Council. Among other matters discussed were the following:

The question had been raised whether it was legal for the district medical officers of a union to contract out of the extra-fees and midwifery fees allowed by the General Order of July, 1847, without the consent of the Local Government Board. It was the unanimous opinion of the Council that such a contract would be invalid.

A medical superintendent of a Poor-law infirmary had inquired whether his Board of Guardians could require him to give special lectures to nurses and midwives as part of his duties. After some discussion it was held that there was nothing laid down in the duties of a Poor-law medical superintendent requiring him to instruct nurses or midwives without his consent, and that if he acted in this capacity he ought to claim additional payment.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

VOLUNTEER OFFICERS' DECORATION.

THE Volunteer Officers' Decoration has been conferred upon the undermentioned officers: Surgeon Major and Honorary Surgeon-Lieutenant-Colonel W. NETTLE, 2nd Volunteer Battalion the Duke of Cornwall's Light Infantry; Lieutenant-Colonel J. TURTON (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer Sussex and Kent Volunteer Infantry Brigade, Royal Army Medical Corps (Volunteers), Sussex and Kent Bearer Company; Surgeon-Major C. AVERILL, M.D., 5th Volunteer Battalion the Cheshire Regiment; Surgeon-Lieutenant-Colonel D. HEPBURN, M.D., 2nd Volunteer Battalion the Welsh Regiment; Surgeon-Major A. NICOL, M.D., 4th (Donside Highland) Volunteer Battalion the Gordon Highlanders, Lieutenant-Colonel and Honorary Colonel V. MATTHEWS, Royal Army Medical Corps (Volunteers), London Companies; Major VINCENT JOHN MAGRANE, 3rd Volunteer Battalion the South Staffordshire Regiment, who served in South Africa, operations in Orange River Colony, in command of Volunteer Service Company, South Staffordshire Regiment (Queen's medal, 2 clasps).

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

FIDDLE ELBOW.

C. E. R. writes: Although I have played tennis all my life I have never had a symptom of tennis elbow, but I have had severe attacks of what I term "fiddle elbow." This comes on after practising on the violin, and consists of acute pain over the posterior aspect of the neck of the *right* radius, and appears to be either an affection of the supinator brevis or of the fibres of the posterior interosseous nerve as they pass through that muscle. I should be interested to hear if any of your readers have suffered from or met with this complaint.

ANSWERS.

A. T.—The medical degrees of the University of New Zealand are registrable in the United Kingdom.

M.B. is reminded that no notice can be taken of anonymous communications.

W. G. J.—Vernet les Bains has warm springs containing sodium sulphide. It is frequented chiefly in the summer, and is recommended in chronic rheumatism, as well as chronic respiratory disorders and skin diseases.

SUBSCRIBER.—Electrolysis is generally considered to be the best method of permanently removing superfluous hairs. We would recommend our correspondent to advise his patient to consult a specialist in skin diseases.

TREATMENT OF STAMMERING.

G. P.—There does not appear to be any school or home to which parents in poor circumstances can send a boy for the cure of stammering. We are informed that Mr. William Van Praagh, Director of the College for Teachers of the Deaf, 11, Fitzroy Square, London, W., might be able to advise our correspondent.

BLEACHING THE HAIR.

SENEX asks how patches of dark-grey hair can be safely and uniformly bleached.

*** The best way would be to bleach with a fairly concentrated peroxide of hydrogen solution (10 per cent.). Apply carefully on cotton-wool, lifting hair up with a comb. The effects are not immediate. The solution should be protected from light and air. The preparation should be pure, as it tends to produce a yellow tint if it contain traces of nitric acid.

CHRONIC SNEEZING.

Dr. H. J. THORP (Ipswich) writes: In response to "South-West" I would suggest ½ gr. of quinine in a little milk twice daily, and cocaine in the form of solution (10 per cent.) painted locally into the nostrils.

R. [illegible] writes: In a similar case I had great satisfaction from treatment on the following lines: Warm flannel underclothing, measures to induce general perspiration (Turkish baths twice weekly or Dover's powder nightly); ferri et ammon. cit. gr. v, with liq. arsenicalis mij, saline nasal douche every morning, a mixture of potassium chlorate gr. v and tr. belladon. ♏v taken as required to check the watery discharge.

J. H. M. writes: Having observed the frequent coincidence of paroxysmal sneezing with spasmodic asthma I have for some years recommended inhalation of asthma powder in those cases where no local disease could be detected, and frequently with marked relief to the patient. The powder I have found most useful is a compound of stramonium, belladonna, lobelia, opium, black tea and nitrate of potash, with a little cascarilla to improve the smell.

PSEUDO-BRONCHITIS.

ARTHUR writes: I have met with one or two cases somewhat similar to that described by "CHEMIST," in which the removal of enlarged tonsils and adenoids was not followed by immediate cure of the cough and other symptoms, though the attacks were not quite so frequent. Sugar and starchy foods should be reduced to a minimum. Indeed it is well to forbid all sweet things, and the child should live as much as possible in the open air, and the bedroom windows should be kept open night and day. Cod-liver oil is invaluable, for the child's throat it may be as well to employ tepid water, but cold water should be used as soon as possible and will be found most invigorating. Cod-liver oil and iron wine or iron tonic may be given. A change of residence might prove beneficial, and the child should be sent into the country for a time if she happens to live in a town or city. After removal of enlarged tonsils or adenoids it is important that the child should do separate exercises, the aim and purpose of which are to encourage nasal breathing. The incipient coryza and incessant cough will probably improve, and finally disappear under this general tonic treatment, which is, I think, the important point in the treatment of such cases. However, I might suggest that menthol and cocaine be tried for the coryza (menthol gr. iij, cocaine gr. ij, vaseline ʒiv), painted on the nasal mucous membrane three or four times daily. For the cough heroin hydrochloride, and for a child of that age ¹/₁₂ of a grain night and morning.

LETTERS, NOTES, ETC.

POST-PARTUM HAEMORRHAGE.

DR. A. CORDES (Geneva) writes: The use of an emetic in *post-partum* haemorrhage (BRITISH MEDICAL JOURNAL, March 2nd, p. 540) seems to have been known a long time ago and in savage countries; for Witkowski (*Accouchements chez tous les peuples*, p. 626) says (I translate): "When the labour is tedious with the Indian people of the East, the midwife blows into the parturient's mouth a powder, to make her vomit" (Witkowski gives an engraving of the proceedings). The *Gros-ventres* give an emetic. Now, the property that an emetic has of increasing or promoting the contraction of the uterus in labour is the same as we want in *post-partum* haemorrhage.

THREAD-WORMS.

"INVERNESSIAN" writes: I saw a man last night who has been a miserable sufferer for twenty years. He had consulted scores of doctors and had swallowed filix mas, santonin, etc., and had been injected daily for three months with salt and water. His nose had been treated with vermicidal ointment. Night was hideous to him with irritation at the anus, and his nose itched by day. By accident he took a course of Hunyadi Jaños for one month and was completely cured for four years. Subsequent attacks readily yielded to the same treatment. He used to be a morose melancholic. Now he wears a smile which won't come off.

TRYPSIN IN CANCER.

DR. J. L. RENTOUL (Lisburn, Ireland) writes: I would like to state my experience in one case. The patient, a female aged 38, had malignant disease of the vulva (two sisters had died of cancer of the breast). She refused operation. On April 25th, 1906, I started injecting Allen and Hanbury's trypsin, mxv. I continued to do so every other day till June 1st, 1906. I also had the "sore" painted with trypsin pigment. After the third injection the pain was greatly eased and the odour much lessened. I am confident that the treatment did good. Unfortunately, the patient was of a nervous and irritable nature, so objected to the constant injections, though at no time was there any local sepsis. I followed as closely as possible the advice given in Dr. Shaw-Mackenzie's book on *Cancer*.

RAILWAY APPOINTMENTS IN INDIA.

"TRAPPED" considers a warning necessary in respect of medical officerships to railways in certain parts of India. The pay usually begins at 450 rupees a month, and candidates are given to understand that owing to annual increments they will be receiving the maximum (800 rupees odd) in ten years' time. Many, however, who have served longer are still receiving only 600 or 650 rupees a month. Moreover, there are several deductions to be considered; thus the company deducts 10 per cent. if it provides a house, and if it does not the officer must find one for himself, at a cost perhaps of 60 to 80 rupees a month; he has also to contribute to a provident fund and a guarantee fund. Frequent changes of station are another source of grave monetary loss. The professional and social status of a railway medical officer is bad as compared with that of his fellows in other services, and private practice can only be taken by favour of the lay railway officials, even if permitted it cannot bring in more than £3 or £4 a year, partly because the civil surgeons have a monopoly of such practice, partly because it is known that the railway doctor never remains long in one place. There is no set-off even in having large opportunities for professional work and study among the surrounding populations, for owing to lack of proper hospital equipment even gratuitous practice is almost impossible to obtain.

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An Address

ON THE

DIAGNOSIS OF CERTAIN FORMS OF RENAL DISEASE.

DELIVERED BEFORE THE RICHMOND DIVISION OF THE METROPOLITAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

BY J. ROSE BRADFORD, M.D., F.R.C.P.,

PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—In selecting a subject on which to address you this evening I have chosen one dealing with common affections, as the problems connected with these are really of more importance than questions concerning rare diseases, and, as it has been well said, anomalous forms of common diseases are really much more common than rare diseases. During recent years our views have changed considerably, both as regards the nature of various renal diseases, and more especially as regards the treatment of the more common forms of the inflammatory diseases of the kidneys.

I propose to address you to-night on the diagnosis of certain forms of renal disease, and also on the principles of treatment of Bright's disease.

The diagnosis of renal disease depends very largely, as is well known, on the examination of the urine, and only too often the mistake is made of arriving at a diagnosis merely on the result of the examination of the urine. Nothing is more common than to diagnose nephritis, both in its acute and chronic form, merely on the strength of the presence of blood or of albumen in the urine, and at the very outset of the subject stress should be laid on the importance of never diagnosing the presence of serious renal disease merely on the strength of urinary examination. This should be always controlled by a clinical examination of the patient, with especial reference to the state of the cardio-vascular system and the general nutrition. Not only is this true, but the converse is also true, that renal disease should not be excluded on the strength of a single examination of the urine showing the absence of albumen. In some of the gravest forms of renal disease albumen may be absent from the urine, at any rate temporarily.

FUNCTIONAL ALBUMINURIA.

The importance of observing these rules is well illustrated by the study of the condition known as functional, cyclical, or physiological albuminuria. This is an affection of great interest and of considerable importance to the practitioner, and one about which our views are still much less definite than is desirable. Physiological albuminuria is one of the forms of albuminuria that may be present in the apparently healthy, but it is well to bear in mind that albuminuria due to serious renal disease may also present itself in persons who are apparently healthy, so that this characteristic alone is not sufficient for purposes of definition, and some other must be sought. Various authorities have described this albuminuria as resulting not only from exercise, but also from diet, from cold bathing, etc.

A more extended study of the condition has shown that the most constant factor in the production of the albuminuria is the effect of posture, and hence of recent years the term "postural" or "orthostatic albuminuria" has been applied to the condition. It has been shown that the influence of diet is often extremely small, and that not uncommonly the most rigid diet fails to produce any diminution in the albumen. On the other hand, posture produces the most marked effects, and so long as the patient remains in the recumbent position the urine remains free from albumen. Thus the urine secreted in the night, and passed the first thing in the morning on rising, is free from albumen, but even after a few minutes of assuming the erect posture the urine becomes albuminous, and remains so throughout the day until the late afternoon, when not commonly it may diminish or disappear. The assumption of the recumbent posture during the day leads to the speedy disappearance of the albumen, and this remains absent so long as the patient is kept in bed.

One of the most interesting points with reference to this condition is the recent observation that the occurrence of such a febrile disease as scarlet fever does not necessarily lead to albuminuria when the disease affects individuals suffering from postural albuminuria. So long as they are confined to bed, notwithstanding the presence of pyrexia, no albuminuria results. Modern investigation has shown, then, that posture, or the assumption of the erect attitude, has more to do with the development of physiological albuminuria than diet or bathing. Exercise, however, undoubtedly increases albuminuria, and it has been shown that albumen may appear in the urine as the result of severe exercise in a large number of individuals—for example, soldiers who are not only healthy but who do not suffer from postural or functional albuminuria, so that both posture and severe exercise must be looked on as possible causes of albuminuria in the apparently healthy.

Variations in the amount of albumen dependent on posture may, however, occur in renal disease as well as in the so-called functional albuminuria, and one of the most important discoveries of recent years is unquestionably the fact that in the granular kidney the albuminuria may be of the postural variety. This is a point of great clinical importance inasmuch as the postural characteristic—namely, the absence of albumen in the morning urine—has been looked upon by many as an absolute criterion of functional disease.

Not only may the albuminuria of the granular kidney be affected by posture but the same characteristic may be seen during the convalescence from nephritis. Under these circumstances the albuminuria during the height of the nephritis is doubtless abundant and persistent; but as convalescence sets in and the nephritis subsides, the albuminuria becomes first of all less abundant, and later on may be only present when the patient assumes the erect posture. Finally, it disappears altogether. The fact that albuminuria may be of the postural variety when dependent on such gross organic disease as the granular kidney or during a subsiding nephritis led, of course, to the view that in many cases of functional albuminuria the albuminuria was really due to a former attack of nephritis, which was either subsiding or else had left a slight lesion of the renal structures. This explanation is, however, probably untenable, inasmuch as in many cases of functional albuminuria no history of any infection may be obtained.

We see from these considerations that, however characteristic of functional albuminuria the effects of posture may be, these results are also seen in certain organic diseases, but that, on the other hand, there is no evidence to support the statement that all cases of functional albuminuria are due to some slight non-progressive renal lesion the result of some former infection.

After all, the main interest of functional albuminuria, apart from a discussion of its etiology, lies in the errors of diagnosis which are liable to be made. As we have already seen, the postural characteristic may be present in cases of subsiding nephritis and in some cases of granular kidney, and it is well to remember that granular kidney, even of a severe type, may be sometimes seen in quite young patients.

Functional albuminuria may, however, not only be confounded with subsiding or slight nephritis and with granular kidney, but there are at least two other affections that may be confused with it. The diagnosis of functional albuminuria, strange as it may seem, has been made more than once where the real underlying condition was a renal calculus, and where the patient has either not suffered much pain or the history of pain has not been elicited. This is a mistake in diagnosis that would scarcely seem possible, and probably would not be made if a very thorough examination of the urine were performed. It is not unusual for a trace of blood or of pus to be overlooked, and only the albumen recognized that is really dependent on the presence of the blood or pus. At any rate, explain it as we may, it is not very uncommon for such an error of diagnosis to be made.

The other condition with which functional albuminuria may be confounded is movable kidney, or, to put the matter in another way, some cases of movable kidney may present themselves as cases of functional

albuminuria. In fact some writers have supposed that movable kidney is one of the most frequent causes of this form of albuminuria, and that the characteristic effect of posture is to be explained by dislocation of the organ with kinking of the renal vein produced by the erect posture. A number of observations have been made tending to show that the activities of the kidney are more marked during rest and in the recumbent posture, and this has been attributed to the greater freedom of the circulation through the kidney in this position. Where the organ is movable it has been supposed that the upright posture may lead to slight kinking of the renal vein, and thus cause the albuminuria. Whether movable kidney is to be regarded as a cause of most cases of functional albuminuria is much open to question, and personally I think this view is quite untenable, but, on the other hand, it is very probable that some cases may be so produced. This condition affords a ready explanation of the subsidence of the albuminuria with rest. At any rate, the association is of sufficient importance for the condition to be searched for where functional albuminuria is present. There is really at the present time no completely satisfactory explanation of functional albuminuria, and there can be little doubt that different cases are due to different causes. Some may result, as already pointed out, from the presence of a slight renal lesion; others may perhaps be due to undue mobility of the organ; a very considerable number are dependent on the urine containing other elements, such as pus cells, and especially spermatozoa—and it is probable that more cases are dependent on this last condition than is sometimes thought; but a certain number remain over which cannot be explained in any of these ways, and we are driven to suppose that this must be dependent on some vasomotor disturbance of the renal circulation. In some of the cases other vasomotor disturbances, such as cold extremities and tendency to faintness, may be present, and this faintness may very probably also be of vasomotorial origin, and dependent on lack of control of the nervous system over the vessels of the abdominal area.

Nephritis.

Having considered some of the points in relation to functional albuminuria, I will now pass on to the consideration of certain facts in connexion with nephritis. The classification of nephritis is well known to be difficult, and many diverging views are held, but at any rate two marked forms of acute nephritis may be recognized, in one of which dropsy is well marked and in the other dropsy is absent, although the urinary changes are well marked, and it is not uncommon even for the changes in the urine to be more severe in the latter type of case than in the former.

Much confusion is produced owing to the fact that the same causes, or at any rate similar causes, may give rise to both varieties of nephritis. Thus in scarlet fever, for instance, the onset of nephritis may reveal itself by the suppression in the flow of urine or the secretion of a scanty, highly blood-stained urine without the development of any dropsy. Or, on the other hand, dropsy may occur with the secretion of a highly albuminous urine containing little or no blood. The dropsy cannot be correlated with the mere severity of the urinary changes, as certainly some of the most severe forms of nephritis due to scarlet fever and other cases are not necessarily accompanied by dropsy.

The recognition of these two forms of nephritis is important from the point of view not only of diagnosis but also of prognosis, since, speaking generally, there can be little doubt that the outlook, or at any rate the ultimate outlook, is more grave in cases accompanied by dropsy than where this is absent. From the point of view of diagnosis, it must be borne in mind that a scanty blood-stained urine may arise from other causes than the onset of acute nephritis, thus, for example, it may be due to extreme passive congestion of the kidneys, as in some cases of heart disease, and it may also arise suddenly as a result of infarction, and under these circumstances is peculiarly liable to be erroneously diagnosed as acute nephritis. In many cases of infarction no haematuria is present, the only urinary change being the development of sudden and copious albuminuria, and this may also lead to the suspicion that nephritis is present when such is not the case.

Infarction is characterized not only by the sudden onset of haematuria and albuminuria, but also by its equally sudden subsidence, and in this way the diagnosis can often be made. Pain is by no means so frequently present as was at one time thought, and in the diagnosis of infarction the sudden onset of the renal changes without the development of dropsy, and their equally sudden subsidence, are really the main points of importance.

The dropsy of acute renal disease is not only characterized by its well-known distribution and its tendency to involve the looser subcutaneous tissue, but also by its great persistence, and not uncommonly its severity. It is uncommon for the patient with cardiac disease to be so dropsical as to become unrecognizable, but this frequently occurs in renal disease. Further, the dropsy of renal disease is very difficult to treat and is much more persistent and refractory than the dropsy of heart disease.

Apart from these considerations, there is another characteristic of renal dropsy that is of very great practical importance. Renal dropsy never involves the subcutaneous tissues to a high degree without at the same time affecting the serous cavities, and especially the solid organs. It is, perhaps, more difficult to detect traces of dropsy in the serous cavities and solid organs than in the subcutaneous tissue, and hence these internal dropsies are no doubt frequently overlooked.

Pulmonary oedema is especially of importance, owing to the frequency of its occurrence and owing to its danger. Renal dropsy is more likely to lead to pulmonary oedema than to oedema of any other solid organ, although oedema of the brain and of the larynx sometimes occurs. Pulmonary oedema not only occurs in association with renal dropsy, but also in cases of renal disease where uraemia is present and where dropsy may be absent. In fact, the frequency of the involvement of the lungs is most characteristic of renal disease. The oedema usually affects the lungs, generally from base to apex, but it is not uncommon for the condition to be more marked at the apex than at the base, and cases may be seen where the degree of the involvement of the apex is such as to produce actual dullness on percussion as well as the well-known râles and crepitations associated with this condition.

Pulmonary oedema when at all well marked or extensive reveals its presence not only by signs but also by symptoms, and a peculiar hissing respiration is often present. In higher degrees of the affection the dyspnoea may, of course, be extremely urgent, and this is especially the case where the oedema involves the larynx as well as the pulmonary tissue.

The natural tendency of acute nephritis is undoubtedly to subside and ultimately to clear up, although, of course, death occurs in a certain number of cases. It is exceptional for the condition to pass on to chronic nephritis or chronic Bright's disease, and there can be little doubt that in many instances where this is supposed to have been the case the more correct reading of the facts is that the disease has really been chronic from the beginning, and, owing to the sudden manifestation of symptoms, its onset has been thought to have been acute. It is now well recognized that the onset of acute symptoms is not always due to the onset of acute disease, but may be dependent on sudden manifestation of chronic disease. This is especially true of renal disease, and illustrations of this may be seen in such very chronic diseases as cystic degeneration of the kidneys, and also in the ordinary granular kidney. Death in acute renal disease may not only be caused by such well-known complications as uraemia and secondary inflammations of the pericardium, pleura, and lungs, but it may also be due to the development of cardiac degeneration and the production of great cardiac dilatation; in fact, cardiac dilatation from myocardial degeneration should really be regarded as one of the great dangers of acute renal disease, and the occurrence of this complication is the main reason why all tendencies to plethora of the circulation should be neutralized as far as possible by purgation, and to some extent by the limitation of the amount of fluid consumed by the patient.

Although the natural tendency of acute nephritis is to subside and clear up, yet it must be admitted that not uncommonly patients who have suffered from this disease are liable to recurrences, and not infrequently to more than one recurrence. After repeated recurrent attacks

the disease may undoubtedly become chronic, but, as already stated, it is not usual for the malady to pass from the acute stage straightway into the chronic.

Acute nephritis may not only leave behind it a liability to further attacks, but it is also possible that an acute nephritis of slight severity may perhaps lead to such changes in the kidney, that a chronic disorder like the granular kidney develops as a sequel after the lapse of many years. This is by no means proved, but the occurrence of granular kidney sometimes in young patients has suggested that it may possibly arise in this way.

One of the most important varieties of nephritis is that associated with syphilitic infection, and the relation of nephritis to syphilis is undoubtedly frequently overlooked. It is well known that nephritis is commonly produced as a result of some infective process. This is well recognized in the case of scarlet fever, typhoid fever, pneumonia, and influenza. But it is curious that in the case of renal affections the part played by cold in the production of disease is more insisted upon than in the case of most other diseases. Pneumonia, pleurisy, peritonitis, pericarditis, were all at one time attributed to the direct action of cold; it is now recognized that all these maladies, even when apparently due to cold, are really due to a specific cause. That cold plays some part in the etiology of many of these diseases, and especially in the case of pneumonia, cannot be gainsaid; but, although we all recognize that pneumonia may follow exposure to cold, no one looks upon the disease as directly and solely dependent on such exposure. The most that the cold does is in some way to affect the organism so that the virus of pneumonia, the pneumococcus, is able to produce its effects. Further, it might be pointed out that myelitis was also frequently attributed to exposure to cold, and numerous cases were recorded in which the disease followed such exposure, and especially, perhaps, to the combined action of cold and damp. We now know in the case of myelitis that a great many of such cases are really of syphilitic origin and dependent on the effects of endarteritis. Nevertheless, the influence of cold as a direct etiological factor in the production of renal disease is still very largely held. It is, of course, possible that there is some obscure relation between the skin and the kidneys of a nervous or chemical nature; and when we remember that such a gland as the pituitary secretes a material which is a potent diuretic, it is clear that the chemical and nervous interrelationships of different organs is very complex, and it may well be that there is some connexion between the skin and the kidneys, but it has not at present been discovered.

Putting these theoretical considerations on one side, there can be no question that nephritis of the type of parenchymatous or diffuse tubal nephritis is by no means uncommon in the first two years following syphilitic infection. Further, this nephritis often occurs at a time when the patient is well, or, at any rate, is not profoundly affected by the underlying specific disease, and hence the nephritis when it occurs is extremely liable to be looked upon as produced by exposure. The presence of syphilitic infection in many of these cases is discovered, one may say, accidentally; thus, in what seems an ordinary case of acute or subacute nephritis, a few spots of some characteristic secondary syphilitic eruption may be seen, or a node or a gumma may be found on examination. It is interesting to observe that nephritis occurs in the syphilitic much at the same period that myelitis or hemiplegia are liable to occur—that is to say, within one or two years of infection.

There are other characteristics, however, of syphilitic nephritis which reveal its nature. Thus, it is characterized by very intense albuminuria, the urine frequently becoming solid, and although the urine is loaded with albumen, the patient may not present very marked signs of illness. Thus, it is not uncommon for the condition to be discovered more or less accidentally, the symptoms being vague, and the urine perhaps examined as a matter of routine. In some instances dropsy undoubtedly occurs of the usual type, and this form of the disease is more severe in its course. The albumen is not only present in large amount, but it persists for a very long time—six or eight months or even longer; and it is important to recognize that, notwithstanding this long persistence, it may not uncommonly ultimately completely clear up and the patient may regain his usual health, neither the urine nor the vascular system showing any sign indicative of the renal affection which has been present.

Nephritis occurring during the course of secondary syphilis and of a high degree of severity is undoubtedly much more common than is usually supposed, and this possible etiology should be borne in mind in cases where one might at first sight be inclined to attribute the disease to exposure. I do not mean to imply that all cases of renal disease not due to scarlet fever, alcohol, or lead are due to syphilis, but I would suggest that it is probable that all cases of renal disease are really due to toxic agents and not directly due to cold, and that in some of the cases imputed to cold syphilis is really the causative factor. It is well established that toxic agents are capable of producing nephritis precisely similar in its clinical course and morbid anatomy to the nephritis said to be produced by cold; thus, for example, in phthisis, Bright's disease of the ordinary type is not uncommon as a complication, and it would seem probable that it is produced here by the tubercle bacillus. In other words, that the specific organisms, like the bacillus of tubercle, may not only cause a definite tuberculous lesion of the kidney, but that it may also give rise to a nephritis which, although of tuberculous origin, is not characterized by the presence of definite tuberculous lesions. The bacillus of tubercle has been found in the kidney and in the urine of many cases of so-called chronic Bright's disease complicating phthisis. Of course it may be argued that their presence is accidental.

Another variety of chronic Bright's disease of great interest is that which may be called the "small white kidney." This form of the disease is of importance to the practitioner, inasmuch as it so frequently runs a latent course, and the patients only come under observation with the terminal symptoms, which are often of great severity and are of the uraemic type. These patients are usually young, or at any rate under 30 or 35 years of age, and not uncommonly under 25. They generally seek advice on account of the general disturbances of nutrition, loss of flesh, anaemia, or else on account of headache, with, possibly, some failure of sight. But, in a very considerable proportion of cases, advice is not sought until uraemic symptoms, often of great severity, have developed. It is very remarkable that sometimes these uraemic complications develop at a time when the patient is apparently not very ill. Thus, instances are on record where a patient has perhaps sought to have his life insured, and therefore presumably is not obviously suffering from ill health, and where not only the life has been declined, but where death has taken place within a few days or weeks of such examination. These patients with contracted white kidney pass an abundant urine containing a considerable quantity of albumen; they do not usually suffer from dropsy, but cardio-vascular changes are well developed, and albuminuric retinitis is very generally present. In many of these instances the disease is first recognized owing to the failure of sight. On the whole, perhaps, this form of chronic Bright's disease is the most important from a clinical standpoint, inasmuch as it is very fatal, and so suddenly fatal, and the symptoms may be extremely equivocal. Most curious errors of diagnosis may be made in such cases; thus, it may be confounded with cerebral tumour, with uraemia, with epilepsy, with chlorosis, and with Addison's disease. The last mistake may be made owing to the great impairment of strength that is sometimes present, and also owing to the fact that some degree of pigmentation may occur. A proper examination of the urine and of the fundus oculi should prevent such errors being made.

The confusion with epilepsy is liable to arise for several reasons, first and foremost because the uraemic seizure may take the form of a series of epileptiform convulsions, occurring perhaps at a time when the patient thinks himself in good health. Thus I have known of a case where a man, returning in the early spring from fishing in Scotland, and therefore presumably feeling well, was seized with uraemia of this type on the night of his arrival in London. Examination of the urine and of the fundus oculi revealed the true nature of the case. But it must be remembered that there are apparently rare forms of true epilepsy with the recurrence of severe fits, often at long intervals, and where for some days subsequently to the fit the patient passes a highly albuminous urine

Traces of albumen in the urine are, of course, common after epileptic seizures; but I have met with two instances where epileptic seizures occurring at an interval of many years have been of great severity, and where the state of the urine for many days after the fit was such as to lead to the suspicion that serious renal disease was present, but the albuminuria subsequently cleared, and the patients regained their usual health. In one of these cases there could be no doubt as to the disease being primarily epilepsy, inasmuch as the fits had followed an injury of the head received in childhood.

The confusion with asthma is very liable to be made, owing to the fact that in most forms of uraemia, and especially in acute uraemia, dyspnoea is a leading feature. As already mentioned, the error of diagnosis can generally be avoided by careful examination of the urine and of the fundus oculi.

The true granular kidney is also a lesion of great importance to the practitioner, as here, also, we have to deal with the insidious disease. The usual type of case with marked cardio-vascular changes, high tension and abundant urine with a trace of albumen, is easily recognized, and the main point of clinical interest with reference to these cases lies in the recognition of the fact that this malady may exist in a very advanced form and yet the patient present a spurious appearance of health, being apparently vigorous, rosy in colour, and with nutrition apparently well maintained. This type of case is often difficult to treat, inasmuch as the patient refuses to recognize the real gravity of the underlying condition. There are several other types of granular kidney which are of clinical interest. Thus, it is important to recognize that albumen is not constantly present in the urine in all cases. Further, that the albuminuria, when present, may sometimes be of the postural type, and therefore absent in the morning specimen of urine. Granular kidney should never be excluded on the strength of a single examination of the urine. It is more important to pay attention to the quantity of the urine, the specific gravity, and the state of the retinal arteries as revealed by the ophthalmoscope. The ophthalmoscope should be used in these cases not so much from the point of view of detecting albuminuric retinitis as for the purpose of detecting the earlier changes in the retinal vessels.

Again, in some instances of granular kidney the patient presents marked neurasthenic symptoms, and the very serious error may be made of looking upon all the symptoms as entirely due to such a functional cause when arterial sclerosis and granular kidney are really present.

There are two other types of granular kidney which are of interest clinically, although they are both of them rare. There is one where an extreme form of atrophic granular kidney may be present and where the patient presents no cardio-vascular changes, or at any rate no changes which can be recognized with certainty clinically. It is obvious that grave errors are liable to be made in the diagnosis of these cases, inasmuch as the leading symptoms of high tension, arterial thickening, and cardiac hypertrophy are absent. Such patients present vague symptoms of ill health generally for a prolonged period, accompanied with much wasting, and finally die, probably of uraemia or of some secondary inflammation such as pericarditis or pneumonia, and in many of these cases the nature of the disease is only recognized in the *post mortem* room.

Lastly, cases are sometimes seen of granular kidney where there is the most intense anaemia, rivalling that of pernicious anaemia, and where the symptoms are entirely referred to this anaemia and disorder of nutrition, the obviously renal symptoms, such as headache and vomiting, not being well marked. These cases are also difficult to diagnose owing to the prominence of the anaemia and the slight changes in the urine.

[illegible] late Mrs. Jane Harriet Oakley of Hove, whose will has [illegible] proved, made the Sussex County Hospital [illegible] residuary legatee. The amount to which the institution will [illegible] is [illegible].

[illegible] Council of the late Mr. Cuppler Henry Talley of Sevenoaks, Kent, contributes the Seaford and Newhaven [illegible] Hospital [illegible] sum of £500 for a cottage [illegible] [illegible] endowment of £1,000, a year for the maintenance of a bed in the men's ward.

A Clinical Lecture
ON
ALBUMINURIC RETINITIS.

DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL.

BY WALTER H. JESSOP, M.B., F.R.C.S.,

SENIOR OPHTHALMIC SURGEON AND LECTURER ON OPHTHALMIC MEDICINE AND SURGERY AT ST. BARTHOLOMEW'S HOSPITAL.

GENTLEMEN,—We have had lately in the wards three cases exhibiting the classical signs of the retinitis associated with Bright's disease. I cannot do better than to refer first to the short notes taken of these cases, as they serve to summarize the clinical conditions of the disease. Before doing so let me remind you that the existence of eye symptoms was noted in the first observations of Dr. Bright, who described loss of vision, partial and complete, in some cases. Heymann gave the earliest description of the retinal changes which he and Coccius observed by the ophthalmoscope; whilst Liebreich in 1859 first illustrated the ophthalmoscopic appearances in his admirable drawings.

The first case described is typical of albuminuric retinitis as found in parenchymatous nephritis. The second case exemplifies the affection in chronic interstitial nephritis, and the third case illustrates the albuminuric retinitis of acute nephritis.

Parenchymatous Nephritis.

A horse-collar maker, aged 26, was admitted under Dr. Tooth. The past history of the case was that in October, 1905, he had severe frontal headache for twenty-four hours, since when he has had polyuria; four days after this attack he had headache and vomiting for twelve hours and had six fits the night after. He returned to work in a week and remained apparently well till November, when he had another attack of vomiting, lasting twelve hours, and since then has had continual headache with vomiting two or three times a day independent of food. He has lost 10 lb. in weight, and has had muscular twitchings for one month.

On admission the patient's face was pale and puffy: he looked anaemic, and his tongue was furred: temperature normal; pulse 76, with moderate tension. His eyes were slightly unsteady in conjugate deviation. The eyelids were rather puffy, the pupils were equal, and reacted normally. Ophthalmoscopic examination showed oedema of retina in the right eye; the optic disc edges were fairly clear, of muddy aspect, but with no swelling; the yellow spot at nasal side showed half a star of bright white small radiating patchy spots. The retinal arteries were convoluted and rather small. The retinal veins were dilated. Scattered about the retina, chiefly within the equator and near the vessels, were several flame-shaped superficial haemorrhages. Numerous white and yellowish-white patches and spots were near the optic disc and along the retinal vessels; no cholesterin spots present.

The left eye showed the same conditions except that there was no marked star at the yellow spot, but the Mullerian fibres were seen very distinctly as radiating lines; there was one large linear haemorrhage between the optic disc and the yellow spot. There was no detachment of the retina and there were no black retinal pigment spots.

The heart and lungs were normal but the pulse tension was increased. The abdomen was rather pigmented, the reflexes were brisk, and the spleen not enlarged; the knee-jerks were exaggerated; urine 1016, pale in colour; there was about $\frac{1}{4}$ albumen; there was no sugar. The past history of the patient was that he had scarlet fever at 11 years of age and typhoid soon afterwards. He had drunk a great deal of beer up till some months before admission.

On the eighth day after admission to the hospital the patient vomited several times, and then continued vomiting at times with slight delirium till the sixteenth day when he showed signs of uraemia, and died from uraemic convulsions on the seventeenth day.

The *post mortem* appearances showed the large white kidney of chronic parenchymatous nephritis.

Chronic Interstitial Nephritis.

A man, aged 42, who consulted me in [illegible], complaining of dimness of vision in the right eye, a ring of the eyes, and headache. His vision, right and left eye, was [illegible]. Ophthalmoscopically in each eye the retinal arteries were rather tortuous and with marked "copper wire" look; the retinal veins were dilated and in places were distended where crossed by the arteries. The vessels were examined three times, and were found to be permanently dilated. The urine did not contain albumen. The radial arteries were atheromatous to the touch, and there was increased tension of them.

I saw him again in [illegible], and found he still complained of [illegible] vision, [illegible] day [illegible] was dim by [illegible], and he had lately passed more urine than usual, and had

nausea every morning. He was pale, anaemic, and sallow-looking; the tongue flabby, furred, and moist. The radial arteries were rather thickened and tortuous; pulse regular but of high tension. The heart dullness was enlarged, with the first sound prolonged and second sound accentuated at base.

Ophthalmoscopically the right eye showed the optic disc normal, with the retina near the disc oedematous; there were small flame-shaped retinal haemorrhages near the vessels; there were numerous white plaques and spots, most of them soft-looking, and a few were glistening white. Around the macula there was a concentric circle of white glistening spots. In the left eye the appearance was exactly the same, but there were no marked signs of degeneration; vision, right and left, $\frac{6}{9}$; urine 1012, acid, with a trace of albumen and a few hyaline and granular casts; the heart dullness was enlarged, with the first sound prolonged and booming and accentuated at the base. I gave a gloomy prognosis as to life, and heard that in fourteen months he died of uraemic convulsions, and that a *post-mortem* examination showed contracted kidneys.

Acute Nephritis in Pregnancy.

The patient, aged 23, complained at her first visit that her vision for the last few days had been deteriorating and that at times she had been quite blind in the right eye. She was six months pregnant. The urine showed a specific gravity of 1020 and was loaded with albumen. Her vision was—right eye, $\frac{6}{60}$; left eye, $\frac{6}{24}$. Ophthalmoscopic examination showed that in her right eye the retina was oedematous, the optic disc was congested, the edges were indistinct, but there was no swelling; there were numerous large soft-looking retinal plaques and spots, some confluent, mostly situated near the optic disc and well within the equator, there was no tendency to the "albumen star" at the macula; numerous retinal haemorrhages were observed, some flame-shaped.

DIAGNOSIS.

The points I want to consider to-day are the ophthalmoscopic signs in albuminuric retinitis and the prognosis in these cases considered as to life and vision. From the point of view of the ophthalmoscopic appearances the changes in all these cases may be considered first as they affect the retinal tissues as oedema, white or yellowish-white spots and patches, haemorrhages, pigment spots, and rarely as a late change detachment of the retina; secondly, as they affect the optic disc as congestion or swelling; and, thirdly, as they affect the arteries and veins.

I advise you in your notes of similar cases to take the ophthalmoscopic signs in some such order as I have indicated.

Considering first the retinal changes, it will be found that oedema of the retina is generally present, the retina especially near the optic disc being opaque-looking. The white plaques or spots vary in size, shape, and appearance. They may be mainly divided into two classes, the one characterized by soft edges, yellowish-white colour, and due to exudation, and the second much brighter white, with often metallic lustre due to cholesterin and degenerative changes. These spots are as a rule situated within the equator, and mainly in the neighbourhood of the yellow spot and the optic disc. Around the macula lutea the white spots tend to arrange themselves as a star or ring enclosing an area of apparently normal retina. These spots and plaques, especially the soft-looking ones, tend to disappear, and alter sometimes from day to day; the degeneration ones also alter, but much less rapidly. The haemorrhages are, as a rule, superficial and flame-shaped, and situated near the blood vessels. They may, however, be horizontal, linear, sausage-shaped, or more or less rounded when they are in the deeper layers of the retina. At the periphery, in cases of granular kidney, small black pigment retinal spots may be found, but these occur late in the course of the disease, and result from inflammation of the retina. Detachment of the retina may be found occasionally, and is a very serious sign.

Considering next the optic disc, it will be found that the colour may be altered, being either too pale or too red; the edges are often not quite distinct owing to the oedema of the retina, and in some cases there may be distinct optic neuritis with swelling of the disc.

As to the arteries and veins, it will be seen that the arteries generally show signs of degeneration, and are tortuous and irregular in contour; the light streak is broadened and bright in colour, like copper or gold wire. In some cases the arteries have apparent kinks in them, and sometimes minute aneurysmal dilatations. The veins are tortuous and dilated, and when crossed by an artery are often flattened and distended peripherally.

Such, then, are the signs of retinitis in Bright's disease, and the combination of these signs make up the more or less characteristic picture of albuminuric retinitis. Retinitis exhibiting exactly the same signs is met with without any albumen being found in the urine, and sometimes without any apparent cause. The retinitis found in diabetes resembles very much the albuminuric form, and is often very difficult to diagnose. In most diabetic cases, however, there are many more haemorrhages, and the plaques have a more yellowish colour with a greater tendency to coalesce, presenting a soft cotton-wool look, the edges being crenate and frayed-out-looking. If I were asked to say which of the ophthalmoscopic signs was the most diagnostic of albuminuric retinitis, I should certainly say the ring or star of spots round the macula, though in some cases this may be absent.

Retinitis is more often observed in chronic interstitial nephritis than in parenchymatous nephritis, and much less frequently in acute nephritis.

The differentiation of granular kidney from the large white parenchymatous form is sometimes possible by the ophthalmoscope, but the signs vary very much in intensity and appearance. Dr. West has tried to draw a sharp distinction between these two forms as far as the retinitis is concerned, but I am bound to say that though the first case described in this lecture exhibits a more exudative than degenerative condition, the two forms easily pass into one another. The eye symptoms in the chronic contracted kidney occur late in the disease, and after increased arterial tension has existed for some time, and this in chronic interstitial nephritis may often be diagnosed before even albumen can be found. I have noticed the presence of "copper-wire" arteries years before the retinal changes could be seen, and those changes afterwards not characterized by haemorrhages but by small retinal plaques and spots, especially in the neighbourhood of the yellow spot. The retina may also show at the periphery small spots of black pigment. Now these appearances are quite distinct from those seen in parenchymatous nephritis, where the characteristic signs are the large patches of exudation, the presence of haemorrhages either superficial or in the substance of the retina, and the absence of definite arterial changes known as "copper wire."

PROGNOSIS.

The prognosis in albuminuric retinitis must be considered as to vision and as to life.

The disturbance of vision varies greatly and bears no marked relation to the intensity of the retinitis or to the kidney mischief. Patients very rarely become blind except suddenly from uraemic poisoning. The sight, if affected, is gradually impaired, and often to the end of life patients retain good acuity of vision. The reason for this is that though the retinal lesions may be very gross the actual yellow-spot area is little affected. In acute retinitis, especially that of pregnancy, the loss of vision, which is often very marked, may be completely recovered from. In the other forms any improvement of vision is, as a rule, only slight and temporary.

The prognosis as to duration of life is very serious, except in cases of acute nephritis in pregnancy. I have notes of patients with marked gravidic retinitis who are alive and well fifteen years or so after the attack.

In the other forms of Bright's disease the duration of life after the ocular signs are present is limited to months, very rarely years. Statistics have been compiled by numerous authors, but unfortunately no differentiation as a rule has been made between the varieties of nephritis. In 45 cases Miley found that all died within eighteen months, and no less than 43 within twelve months. Baroness Possauer found in 39 private cases that 23 died within two years, and in 33 hospital cases all the men and 68 per cent. of the women died within two years. Belt in 100 private cases found 73 per cent. died within one year and 94 per cent. within two years. He also collected 419 cases from different authors, including hospital and private patients, and found that 72 per cent. died within one year and 90 per cent within two years.

There seems little doubt that private patients suffering from albuminuric retinitis live a longer time than hospital patients, and this might be expected, as they need not, as a rule, be so much exposed to climatic and hygienic changes. From my own experience I should

say most of these patients die within one year of the diagnosis of albuminuric retinitis, but as vision is often for some time so little affected, patients do not probably seek advice at first, and therefore this rule cannot be made hard and fast.

Remarks
ON
THE TREATMENT OF SYPHILIS,
WITH SPECIAL REFERENCE TO INTRAMUSCULAR INJECTIONS.

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THE subject of the treatment of syphilis, though an old one, is perennially youthful and full of life and vigour. The clashing of opinions, the struggles of partisans, the alarums and excursions which have circled round it as a storm centre have been fast and furious, and I may add, as some points of my present paper will show, discussions as to the proper mode of treatment are still going on with unabated energy.

If there is a disease about the treatment of which there is a fascinating divergence of opinion—it is syphilis. Ideas and methods regarding it vary not only from medical man to medical man, so much so that one might be tempted to exclaim: *Tot homines, tot sententiae*, but also from country to country. About one thing every one appears to be quite sure, however, namely, that he knows how to treat syphilis better than anybody else. As far as I am concerned, I consider it is very necessary to be eclectic in the choice of method and that the golden rule of treating every case on its merits should be our guiding principle. It will be my endeavour to show that there are a variety of methods of treating syphilis, or as I prefer to put it, of treating syphilitics—for there is really no such thing as syphilis in itself, convenient an abstraction though it be. What we, as professional men, have to deal with is a human organism suffering from the invasion of another organism, the *Spirochaeta pallida*, for there appears to be little doubt now as to specificity.

Having diagnosed the kind of infection, the next step before prescribing treatment is to consider the kind of patient infected—sex, age, nationality, occupation, history, habits, weight, general condition, giving special attention to the state of the mouth and teeth, the stomach and intestines. The urine should be tested, and an approximate idea at least of the amount passed in the twenty-four hours obtained, for the state of the eliminatory processes in each individual case, including the condition of the heart and circulation, is of primary importance, especially in the early days of the infection.

I would again strongly insist on examining the teeth and mouth carefully in a routine way. The success or otherwise of mercurial treatment may depend on the good or bad state of the buccal cavity. In many cases it will be of the first necessity to send the patient to a reliable dental surgeon, and thus avoid the vexation of having to interrupt the treatment on account of stomatitis, gingivitis, and so forth.

The mode of life is a factor not to be neglected, for it has been shown over and over again that syphilitics leading outdoor lives, with every comfort secure about them and without incentive to cerebral exertion, do better than individuals in the hurly-burly of competition or following unhealthy occupations.

I need hardly call attention at this time of day to the bad effects of alcohol on the syphilitic processes. Not only does alcohol interfere with the play of the phagocytes, but it also impairs the nervous system generally.

Smoking again, especially if excessive, is bad from the mouth point of view.

There are syphilitics, again, with what we call in our ignorance idiosyncrasies. Mercury upsets them, but it should be borne in mind that *no* mercury which may not suit them in one form may in another. Therefore attempts should be made to deal with the case by the trial of various preparations, preference being given in my opinion to a mixture of hq. hydrarg. perchlor. and pot. iod., the mercury of which is much more rapidly eliminated than when mercury is given alone, as demonstrated by the experiments of Tschiriew.[2] Iodide of potassium appears to act as a diuretic. But it may happen that mercury cannot be tolerated at all. Then I would recommend a salicin mixture, commencing with gr. xv ad ʒj; increasing rapidly to gr. xx and upwards, ter in die, p. c. I have little in the way of proof to support this view, but what little I have, and judging by analogy, I consider that salicin as an adjuvant or alterative in the treatment of syphilis may be of service. The knowledge that mercury is *the* treatment for syphilis renders it a difficult matter to withhold it for the purpose of experimenting with another drug. Such idiosyncrasies, again, make an overhauling of the patient imperative, more particularly as regards the renal, hepatic, and circulatory conditions, especially in elderly patients.

I will first deal with drugs and methods, and later with the syphilitic manifestations themselves and their treatment.

It is frequently stated that syphilis and its mercurial treatment were well known to the Chinese ages ago. This view rests mainly on the work of a French writer, Captain Dabry, who, by the way, was not a medical man. The hoary antiquity of the disease in China has, however, been rudely shaken by Okamura,[3] a Japanese physician, who has recently searched the Chinese records, with the result that he found nothing relating to syphilis earlier than the sixteenth century.

In more recent times the employment of mercury met with much opposition, many maintaining that syphilis could be cured without mercury. A good English account of the battles of the mercurialists and non-mercurialists will be found in Cooper's *Dictionary of Surgery*.[4] But it must not be forgotten that the proper analysis of the so-called venereal diseases has been accomplished, comparatively speaking, quite recently, although the earlier writers in the sixteenth century had apparently distinguished syphilitic manifestations as a separate thing. For many years gonorrhoea, soft sores, and syphilis proper were all jumbled up together. Owing to the influence of John Hunter, to whom every one bowed down, the clock was kept back, for his fallacious experiment on himself had satisfied him, and therefore the medical profession at that time, that gonorrhoea and syphilis were one and the same infection.

Later, when gonorrhoea had been separated out, Ricord, another great authority, remained a unicist as regards soft sores and syphilis. Bassereau, however, in the face of much opposition naturally, showed that the soft sore and syphilis were two different affections. This was followed by Rollet, who demonstrated the fact that both the infection of the soft sore and of the syphilitic chancre might occur at one and the same time; *chancre mixte*.

Ricord's influence also retarded the recognition of the infectious nature of the early secondary, so-called, manifestations of syphilis authority gone wrong again leading to most unfortunate results as can well be imagined.[5]

It is not to be wondered at, therefore, that rational treatment made but slow advance in the circumstances.

At the present day the value of mercury in the treatment of syphilis is generally admitted. It is still contended, however, that mercury is not absolutely essential to the cure of the disease. G. H. Fox[6] of New York, although he employs mercury, is of this latter opinion for instance, and he adds "that cases will get well by virtue of the *vis medicatrix*, even when no mercury is administered." I would here remark that, as far as the syphilitic infection is concerned, this beneficent *vis*, whatever is meant by that term, has done very little apparently to stay the evil effects of syphilis in Turkish Asia Minor, for instance, as investigated by von Düring.[7]

This leads me to point out that, however benign an attack of syphilis may appear to be, the treacherous nature of the infection and its protean effects must ever be present to the mind. Many a serious late manifestation has a past which was full of hopefulness, nay, in some cases, especially in women, the early morbid phenomena may have been so evanescent as to have escaped attention altogether. It is recognized generally that severe late syphilis occurs more frequently in those who have been insufficiently treated in the early stages. There are exceptions to this, as to all rules, and I have observed such myself.

In the present connexion I would call your attention to the experiments of Neisser,[8] and of Finger and Landsteiner,[9] who have obtained positive results in apes by the inoculation of gummatous products derived from man. The importance of these positive results are obvious, but as I am dealing here with treatment only I will take this opportunity of insisting on a practical point which is frequently overlooked, namely, the absolute necessity of employing mercury in all stages of syphilis. If this rule were always observed much better results would be obtained, and unpleasant consequences avoided. Over and over again I have seen late or so-called tertiary lesions treated by means of iodide of potassium only. Now, we all agree that this drug is most valuable in clearing up gummatous material in many instances; but this can be achieved much more rapidly in obstinate cases by combining mercury in the form of inunction, for example, with the iodide treatment. Moreover, where nerve structures are involved, this rule of exhibiting mercury becomes imperative.

With regard to pills, I need not detain you long on that score. The usual pill employed in this country is hyd. c. cretâ, in varying doses. Reduced iron is also apparently useful, especially where there is marked anaemia, either due to the syphilitic infection, an anaemia accompanied by leucocytosis, or to this *plus* an already existing anaemia due to other causes (chloro-anaemia, etc.). I say that reduced iron is apparently useful, for Bunge found by experiment on animals that inorganic iron did not increase the haemoglobin, but an increase occurred only when organic iron was added in the form of haemoglobin or haematin to the food.[10]

Here it is convenient to refer to the action of mercury itself on the blood. According to Justus,[11] when a fairly large dose of mercury is introduced into a syphilitic patient, either by inunction or intramuscular injection, a rapid and characteristic sinking of the haemoglobin takes place. This reaction he considered a test, as it was said not to occur in healthy subjects, but only in syphilitics. Subsequent observers have not, however, confirmed this view. After the mercury has been administered for a time the haemoglobin content rises again and reaches a higher level than before treatment (Justus).

With the other preparations of mercury employed in the form of pill, tablet, cachet, or mass I need not detain you. In this country it is usual to give hyd. c. cretâ either in small doses—say, gr. j, ter in die—continuously for six to twelve months, or to exhibit it in larger doses—gr. ij, gr. iij, ter in die—intermittently, alternately with a course of iodide of potassium. There are other combinations, which I do not think it is necessary for me to enumerate. Others, again, think highly of a mixture of perchloride of mercury, whereas some swear by the combination of this salt with iodide of potassium. On *a priori* grounds the latter mixture would not appear to recommend itself as a method of treatment, for the reasons I have alluded to, namely, the rapid elimination of the mercury.

Inunction is a much more energetic and useful method of introducing mercury into the organism. The ordinary ung. hydrarg. or capsules of mercury-vasogen 33⅓ per cent. can be employed, but even in the latter form, although the penetrating power is apparently superior to the ordinary ung. hydrarg. from the point of view of cleanliness, the preparation still leaves much to be desired. The capsules are put up in boxes, and look like sweetmeats, so should be kept locked up, especially where there are children.

Unless one has a patient under direct control the drawbacks where private patients are concerned are obvious. Moreover, to be effectual the mercury must be thoroughly rubbed in; of course, better results are obtained when the rubbing is carried out by another person, wearing a rubber glove. In Copenhagen I noticed that in the wards of the late Professor Haslund at the Communal Hospital the syphilitics rubbed one another, both getting in that way mercurial treatment. The inunctions are best carried out at night, that time being more convenient in various ways. Moreover, the *Spirochaeta pallida* appears to swarm at night (in the tissues of indurated chancres, at any rate). If such turned out to be a general fact, it would perhaps explain the well-known nocturnal exacerbations of syphilitic headache and bonea·he.[12]

In fat subjects, a severe dermatitis may be induced if the inunctions be too vigorously carried out. Mayer records a recent case of this kind which was fatal.[13]

In patients who are cachectic, broken down through alcoholic excess, or in whom there exists renal inadequacy, a stomatitis may be readily produced. In such an occurrence, I would point out the importance of seeing that the soiled undervest worn during the inunctions should be removed, as I have seen the stomatitis go on from bad to worse by overlooking this precaution, the patient continuing to absorb mercury, although the inunctions had been stopped.[14]

When a good deal of the body surface is affected by ulcerating lesions so as to make inunction difficult, Welander spreads 6 grams of ung. hydrarg. at a time with a spatula on a part that is free—a limb for instance—and bandages the part. The same writer also employs cotton-wool or linen smeared with the ointment to be worn in the form of a sachet on the chest, scapulary fashion. The so-called mercolint is used in this way; and Blaschko has recommended a kind of chest protector, worn day and night in the same way. But this mode of exhibiting mercury is no new thing, for Daniel Turner, a dermatologist of the early eighteenth century, mentions that mercury spread on a flannel girdle was recommended in his time.[15]

Calomel fumigations were at one time in current use. I need only call your attention here to their excellent effects in some obstinate cases which have resisted other methods of treatment.

In the efforts to open up new ways for the introduction of mercury into the organism, the rectum had apparently been overlooked. This has now been rectified, for Audry has treated cases of syphilis by employing suppositories made up of 40 per cent. grey oil (oleum cinereum) in various strengths.* According to him, the method is efficacious, simple and safe.[16]

I now come to the hypodermic, or rather the intramuscular method. Scarenzio in 1864[17] was the first to practise it. He used calomel and injected it hypodermically. Later it was found preferable, in order to avoid abscesses, to introduce the mercury into the muscles, and that is the method generally employed now. Lang, of Vienna, employed grey oil (metallic mercury with lanoline and olive oil) in this manner. As to the soluble preparations, Lewin was the first to use perchloride of mercury.

The syringe should be either of ♏ xx capacity or 1 c.cm. divided into 20, or one of the special small calibre syringes (Barthélemy–Edmond Fournier–Duhot); for some of the soluble preparations a syringe of 2 c.cm. capacity is required. The syringes should be of the all-glass type so as to allow of thorough sterilization by boiling in water or, as Lambkin advises, in liquid paraffin.

Platino-iridium needles should be employed. They can be boiled or passed through the alcohol flame; but they require sharpening from time to time, for it is very important the point should be very sharp to avoid pain when plunging it through the skin into the muscles. As to the length, this varies from 2½ to 5 cm. and over. Much depends, of course, on the buttocks to be operated on and the seat of the injections. Various positions in this situation have been recommended, such as the post-trochanteric fossa (Smirnoff); the intersection of a horizontal line passing two fingerbreadths above the great trochanter and of another, vertical, separating the inner third of the buttock from the outer two-thirds (Galliot); the middle of a line uniting the anterior superior iliac spine and the base of the coccyx (Barthélemy). These are the usual points, but Duhot, Lévy-Bing, and Pedersen recommend other positions. The injections should be made alternately in right and left buttock, and a note kept of their position, with the dose injected each time.

The *modus operandi* is as follows: The part selected having been thoroughly disinfected with soap and water, and a brush if need be, perchloride of mercury solution, ether, alcohol, or other method preferred, the sharp needle attached to the barrel of the syringe (all previously sterilized by boiling, is plunged quite perpendicularly and rapidly through the skin into the subjacent muscle, the patient standing at ease or lying face downwards on a couch. Some prefer the patient standing at attention. The syringe is then detached from the needle, the proximal

* This method of treatment is not new, for it is mentioned in *Bryan's Surgery*, 5th ed., p. 142, vol. i. I am indebted to Dr. Humphreys, of Hampstead, for this reference.

end of which is watched to see if any blood issue forth. Or the syringe can be left attached to the needle and the piston withdrawn a little to see if any blood comes up into the barrel. The syringe is then charged with the sterilized mercurial preparation, all air being driven out, reattached to the needle, and the contents slowly and firmly injected. Duhot recommends that when this has been done the syringe should again be detached and a little air or sterilized salt solution drawn into the barrel, which is then reattached and the piston pushed down, to clear out any preparation remaining in the needle, and thus avoid leaving any of it behind in the track of the needle when this is withdrawn. A little collodion and wool or zinc oxide adhesive plaster may be applied over the puncture or not. It is not necessary to massage the part; indeed, massage is best avoided.

Another method is to fill the syringe, fix on the needle, and drive out excess over amount of mercurial preparation required, taking care to wipe the end of the needle clean with a sterilized piece of linen or closely-wove gauze, but not with wool. With the latter there is risk of introducing some of the material into the tissues. The injection is then made direct into the muscle. This I have found answer too, but I have aspirated first to see if any blood came up into the barrel before pushing the dose home.

As to the insoluble preparations, calomel, specially prepared, suspended in vaseline or in olive oil, is employed in doses of 5 cg. This is injected weekly, or at somewhat longer intervals, to test the patient and avoid cumulative effects. Calomel injections are in some subjects extremely painful, but by associating guaiacol and camphor with the olive oil, Emery has had good results without pain.[22] The preparation put on the market by Zambeletti of Turin is practically painless, but it is not known how it is made. In all cases the preparation should be well shaken before injecting.

Lessèr's method is not to employ calomel straight off, but to begin with hydrarg. salicylas, followed by hydrarg. bijodidum, finally injecting calomel.[23]

Although calomel thus used has given brilliant results in many cases that had resisted all other treatment it has disadvantages—pain, toxic symptoms, and so forth—which have relegated its employment to special cases only. But even in some of these cases where it acted like a charm relapses of the local syphilitic trouble have occurred.

The insoluble preparation which is now generally used is metallic mercury suspended in various media, such as lanolin, paraffin oil, and vaseline.[24] In this country Lassar[25] first advocated the value of this preparation, and the Army Board for Army Medical Services has recognized its importance in the treatment of syphilis.

The advantages of intramuscular injections of grey oil or mercurial cream are great, not only for the services but for general private practice, if patients will submit to them. Of course the patients must be properly selected. By giving one injection a week in series of 6, 8, or more, as the case may be, one is sure of introducing a sufficient quantity of mercury.

In well-fed, sound, regards the urine, and fairly muscular subjects of good weight I have found 12 successive weekly injections of 5 to 5½ cg. (0·065 gram = 1 gram) to be very easily borne, even in patients who were liable to attacks of diarrhœa before the injection. [illegible] symptom 5 gr. cachets of salicylate of [illegible] meals) always acted readily. After a rest I have given a fresh series of 12, and so on. The number of injections must depend on the kind of patient and the kind of syphilis being the most urgent; but when the mercurial agent well they should be pushed, with care of course.

Pinkus[26] lays stress on the importance of what he calls the "Abortivbehandlung der Syphilis." There is much to be said in favour of pushing the treatment, and starting them as early as possible in the disease.

With regard to insoluble preparations, it is very important to remember to shake them thoroughly after [illegible], and stirring in case of creams before injecting. Otherwise unpleasant results may occur when this is overlooked as much too large amounts of mercury may be given owing to the settlement of the metal at the bottom of the vessel containing the preparation.

It has been stated that these injections are very dangerous. This is too alarmist a view to maintain and promulgate. That there have been serious complications is quite certain, but if care be taken such mishaps can be reduced to a minimum. Considering the enormous number of injections of insoluble salts that have been given all over the world the bad cases have been few.

Recently, Claude and Dobrovici have published some cases in which death followed injections of grey oil.[27] But I would point out that these patients were, I should say after reading the notes, not quite suitable cases for such a treatment.

I must again insist that we must be eclectic in our treatment of syphilis, and not go off our heads in favour of any one method to the exclusion of all the others. Injections of grey oil are often contraindicated absolutely. It is not a routine treatment, and is not applicable in the case of old people, the broken-down, those with renal inadequacy or with albumen in the urine, patients suffering from tuberculosis, lead poisoning, or decidedly active gout, and alcoholics.

When cases are carefully selected I have never seen mercurial intoxication or other complication, nor have I ever seen embolism occur.

I will now pass on to the soluble preparations, such as perchloride, benzoate, succinimide, peptonate, cyanide, biniodide, énésol (salicylarsinate of mercury), and sozoiodolate of mercury, which have all their partisans. They are all useful, are more easy to handle than the insoluble preparations, but are also more evanescent in their action. They are more or less painful, but this symptom varies very much from patient to patient, and with the preparation used. Among the best soluble preparations are the sozoiodolate, succinimide, and benzoate, but it is useful to follow up their action by injections of an insoluble salt, in suitable cases.

As to the sozoiodolate, gr.½ is injected once a week, but when the urgency of the case called for it the injection could be given more frequently, carefully observing the patient the while. It is less painful, on the whole, than the perchloride.

The benzoate of mercury is employed in daily doses of 2 cg., that is, 2 c.cm. of the hypertonic benzoate of mercury as used in France, with good results. As compared with grey oil or mercurial cream this daily injection is a drawback in ordinary private cases, but it is of great service to combat severe symptoms, especially with the patient in bed at home or in hospital; or, again, when a patient is undergoing a cure at a health resort, especially where there are sulphur springs.

Instead of employing small doses of perchloride of mercury daily, or every other day, some observers have recommended large weekly ones, that is, 5 cg. on average, and speak well of this procedure.[28]

Chéron advocated, and employed, large doses of perchloride in salt solution, but *a priori* this appears to be an imprudent proceeding with such a preparation of mercury, seeing how rapidly absorbed the latter constituent is. Jullien tried it once, and then with only 2½ cg. instead of 5, the result proving very nearly fatal.[29]

Biniodide of mercury in watery solution, though painful, is considered by Emery and Druelle as a very useful method in cases where the mercury has to be pushed, owing to its good effects.[30] This is no doubt quite true as regards clearing up symptoms, but I would certainly not rely on it as a sufficient and fundamental treatment of syphilis in the early stages. It should certainly be followed up by an insoluble preparation, preferably grey oil, or inunction, or other mercurial method, as the case may be.

With regard to organic mercurial salts, the fact that the mercurial molecule is split off with difficulty in the organism may account for the want of success in some cases, the original salt having been found again as such in the urine.[31]

It now remains for me to say a few words about the intravenous method. This was introduced by Baccelli in 1892, who employed perchloride of mercury. The salt now used is cyanide of mercury in a 1 per cent. solution, the usual dose being mxx, which may be given daily. The arm is prepared as for bleeding by placing a ligature round it to make the vein prominent, usually the median basilic. The parts are thoroughly cleansed in the usual way; the needle is introduced into the lumen of the vein, in the direction of the blood stream. The ligature being removed, the contents of the syringe are injected,

and the needle rapidly withdrawn, a finger being placed on the puncture, and wool and collodion applied. The operation is very simple and without danger, provided all the rules of asepsis be observed, and any air in the syringe got rid of before injecting. Opinions are divided as usual, but it is maintained by some who have tried it that the effects are not comparable with those obtained by intramuscular injections of insoluble salts, for instance, a larger number of intravenous injections being required to achieve the same end.[29]

It is, however, a method which should not be overlooked, as it may in some cases give good results, especially in syphilitic conditions of the eye,[30] and where other means have failed. In some patients the veins are so poorly developed as to make the application difficult or impossible. Other observers have seen various complications, such as phlebitis, thrombosis, etc.

In the early manifestations iodide of potassium should be given in doses of gr.v t. d., p.c., diluted, in the intervals of mercurial treatment. But a point to remember is when there is stomatitis as a result of mercury the iodide should not be prescribed, as it will bring more mercury into the circulation, and make matters worse. In such cases it is good treatment to rely on mag. sulph., and, of course, suitable mouth washes. Where it is inconvenient for a mixture to be taken three times a day, the iodide of potassium can be prescribed in doses of gr. xv ad ℥j, and taken first thing in the morning or at bedtime, with 3, 4, or 5 drops of tinct. iodi, the effects being watched.

In small doses iodide of potassium is generally well borne, but larger doses upset the stomach in some cases, especially in gouty subjects. Where there is renal inadequacy, circulatory troubles, etc., the drug may lead to other complications, and it may be necessary at times to employ the other iodides (sodium, ammonium) instead of the potassium salt.

As is well known, iodide of potassium often gives rise to coryza in the susceptible, and may also lead to conjunctivitis and to iodide rashes, which may be tumour-like, bullous, or purpuric. One word of warning: iodide of potassium should never be ordered in bullous eruptions, which will be considerably aggravated thereby.

Iodipin (Merck) and lipiodol (Lafay[31]) are iodized oils. They can be given by the mouth (capsules, etc.), or are preferably injected hypodermically, where the tissues are lax (back, loins in posterior axillary line; the abdomen is recommended by some and not by others; the antero-external part of thigh, etc.), so as to allow of the injection of 5 or 6 c.cm. at a time. The daily dose in injection varies from 5 to 15 c.cm., according to the kind of case. Large doses have been employed in this way for many days (15, 20, 30) together without inconvenience of any sort. The parts to be injected should be left and right alternately. The Germans recommend an ordinary large asbestos piston syringe with a long needle, but as a matter of fact a platino-iridium needle of 4 cm. with a good lumen suffices, so long as the oil is slightly warmed. The French, too, employ a syringe with a screw (somewhat on the principle of Guyon's instillation syringe), and this answers better (Chatin's, also Barthélemy and Lévy-Bing's pattern). Of course, I need hardly say the syringe and needle and the skin must be, respectively, thoroughly and carefully sterilized and cleaned up.

The preparation is slowly absorbed into the organism and slowly eliminated, a very different state of affairs to that which obtains in the case of ordinary iodide of potassium mixtures, in which elimination is rapid. These iodized oils have proved valuable in the treatment of severe cases, especially in syphilitic conditions of the eye.

In passing, I must briefly allude to the Zittmann treatment, the good effects of which appear to be mainly due to the large amount of fluid taken. It is a treatment to bear in mind in obstinate cases, when other remedies have failed. Competent writers speak very highly of it.

As to immunization, it has been shown by experiments on monkeys and man that the immunity to syphilis is not readily or quickly established. The attempts at prophylactic vaccination carried out by Metchnikoff and Roux on monkeys have failed, as have also similar attempts with gummatous products.[32]

Further attempts have been made to prepare anti-syphilitic serums, but up to the present without success, or rather with little success, for Metchnikoff and Roux have obtained interesting but inconstant results by the use of serum obtained from the lower monkeys inoculated with syphilis. These results, such as they are, have encouraged them to persevere, and they are engaged in experiments with a view to obtaining a more powerful serum.[33]

As to the general hygiene, good feeding and clothing, and so forth, I need hardly insist on such important matters. There is no doubt that in the upper ranks of life syphilitics do uncommonly well, a fact that has been noted by many of us, and more particularly by life assurance medical officers.[34] Of course, it must not be overlooked that patients of that class are much more likely to be adequately treated, besides being able to travel and sojourn in favourable climates.

This brings me to refer to the use of sulphur in the shape of waters and baths. It must be quite understood that sulphur waters are valuable auxiliaries; but the fundamental treatment must, of course, be mercury.

As a result of various researches on the subject, the following appears to be in brief the fate of mercury introduced into the organism. In the first place, it combines with the chloride of sodium contained in the body fluids to form a double chloride of sodium and mercury, which with the albumen of the tissues leads to the formation of an albuminate. Under the influence of sulphur waters taken by the mouth a sulphate of mercury is formed, which is rapidly eliminated,[35] coming into contact with the syphilitic lesions. This "mobilization" of mercury explains why very large quantities of mercury, either in inunctions or injections, can be administered to patients concurrently with the sulphur water, also why obstinate syphilitic lesions can be cleared up in these circumstances. This has been shown to be the case even in Paris hospitals with bottled waters.[36] When the treatment is carried out at a watering place, the change of air and scene, and so forth, naturally play an important and beneficial part.

In connexion with the foregoing I may be allowed to call attention to the demineralization which occurs as a result of the syphilitic infection. A number of observers have dealt with this point, the upshot being that there is an excessive elimination of chlorides, sodium, potassium, lime salts, especially sulphur.[37] That we should endeavour to remedy this malnutrition is obvious, and for this purpose injections of salt solution might prove useful in some cases, where the onslaught of the syphilis has been severe, as in poor, badly-fed women chiefly, as far as my observation goes. Phosphoric acid, the hypophosphites, etc., are also very useful in dealing with such cases.

I will now touch on the various stages of syphilis and on some of its baneful effects, which call for special remark.

Let us begin with the hard chancre. Excision was long ago recommended and carried out, by John Hunter for instance,[38] and the method has been more recently tried by many, but the results have not been encouraging. Numerous experiments on monkeys, by Neisser in Java for instance, have demonstrated its uselessness, for excision even as early as eight hours after inoculation did not prevent the formation of a primary chancre.[39] In the case of a primary chancre of the prepuce, especially with phimosis, circumcision is good treatment.

This is an opportune place for mentioning the prophylactic treatment at the seat of the experimental syphilitic inoculation by means of a calomel ointment (calomel 1, lanoline 2). Metchnikoff's and Roux's experiments on apes and on a medical man, Dr. Maisonneuve, who volunteered to undergo experimental inoculation, were successful in preventing further developments.[40] Doubts have been thrown on the value of this experiment, however, and failures cited by Lévy-Bing[41] and Gaucher. In another case[42] a hard chancre and a macular rash appeared in due course, notwithstanding the use of the calomel ointment immediately after copulation. Neisser, it is stated, has also investigated this point, and inoculated no less than 200 monkeys, the ointment being applied from one to eighteen hours after the inoculation of the syphilitic virus, with the result that he failed in 100 instances, a primary chancre developing in the usual way.[41] The value of the ointment as a prophylactic, therefore, is doubtful, but one should try it nevertheless, and every medical man, dental surgeon and midwife, liable as they are to accidental infection, should have a pot or a tube of it handy in case of need, so as to apply it with as little delay as possible.

Another consideration of importance is: When should mercurial treatment be commenced? Undoubtedly immediately the primary chancre is diagnosed with certainty, and this is possible in a good many cases. Where there is any doubt, one should of course wait for corroborative symptoms.

This brings me to another point, namely, for how long after its appearance is a primary chancre auto-inoculable? The experiments of Queyrat in this connexion, with histological examinations by Levaditi positively revealing *Spirochæta pallida*, assuming that micro-organism to be the *fons et origo mali*, appear to show that a successful auto-inoculation can be carried out up to the eleventh day, on condition, of course, that the patient undergoes neither local nor general treatment.[44] This also agrees with what is known as "successive syphilitic chancres,"[45] and with the results recorded by Duhot, who treated a number of cases by pushing the injections of grey oil at an early stage. Clinically, he found the twelfth day after the appearance of the primary chancre to be the limit within which one might expect, by the intensive method he advocates, to prevent the appearance of the so-called secondary symptoms, which by their presence show us that the infection has become general.[46] The auto-inoculability of chancres may, perhaps, be compared with what has been observed in vaccination, in which condition auto-inoculation may be carried out up to the ninth, and sometimes the tenth, day.[47]

Duhot further insists that in his cases (134) cerebro-spinal lymphocytosis did not occur. I would call your attention to the important part played by an examination of the cerebro-spinal fluid obtained by lumbar puncture,[48] in the matter of syphilis, by revealing at a period when proper treatment may do so much the early insidious stages of severe syphilitic affections of the brain and spinal cord.[49]

With regard to the manifestations of the early or secondary period, they may vary greatly as far as the cutaneous lesions are concerned. In bad cases these may be severe and gummatous, and therefore require careful treatment and judgement. No rule can be laid down, but if it is borne in mind that all the facts of the individual case require to be taken into account, good and not harm will come of such an attitude.

The secondary rash may be preceded by a high temperature, which should be no bar to mercurial treatment if a positive diagnosis can be made on the evidence of primary chancre or chancres.

In the case of iritis, atropine must be exhibited to prevent synechiæ. It is a curious fact that early syphilitic iritis will make its appearance, although the patient is under mercury. Iritis is a symptom which usually means a severe infection, and indicates that treatment should be pushed and the nervous system watched, for it has been shown by Trousseau, the ophthalmologist, that a large proportion of the cases he followed up developed serious brain and cord affections.[50] Where the eye is threatened seriously, as in a case of central retinitis which developed in a syphilitic patient under my care, intramuscular injections of sozoiodolate of mercury, which I employed as soon as the diagnosis of the eye condition was made by Mr. Fleming no doubt saved the eye.[51] Whilst on this subject I may be permitted to allude to two cases of syphilitic optic neuritis in which Jullien, a determined partisan from early days of calomel injections, was able to save the sight by this method.[52]

It is important to remember that serious nerve symptoms may arise in the earlier periods of the syphilitic infection.[53] Take the case of syphilitic hemiplegia in young men. The importance of immediate and vigorous mercurial treatment of such cannot be overrated. A few pills are of no use whatever. It is here that intramuscular injections of mercury are indicated, commencing with an insoluble preparation such as calomel and following up with a soluble mercurial salt when the case is out of danger.

As to syphilitic affections of the nails[54] and hair, specific treatment gives very good results.

With regard to the later manifestations, included under the term tertiarism the keynote of treatment must still be mercury, either with the usual iodide treatment or following on the latter.

I would like to call your attention to the importance of combining mercurial inunctions or injections with large doses than the ordinary pot. iodi gr.v ad ʒj in rebellious serpiginous gummata, and also in bony lesions. Gummatous infiltrations and broken-down gummata also do well with scraping *plus* the mercurial and iodide treatment. A great deal of time can be saved by surgical means under an anaesthetic.

Another gummatous affection frequently lost sight of is syphilis of the myocardium, which often leads to sudden death.[55] The importance of the early recognition and specific treatment, that is, with mercury, of such cases is obvious.

Late syphilis of the uterus is sometimes overlooked. It is here that proper specific treatment may be of the greatest value, not only in leading to a cure but in possibly preventing the development of malignant disease.[56]

In severe lesions of the tongue, looking like epithelioma and becoming so if left alone, excellent results have been recorded with intramuscular injections of calomel when other treatment has failed. Such conditions do well with sulphur waters as auxiliaries.

I must now deal with congenital syphilis. The first thing to note is that infants stand mercury very well. There should be no hesitation in prescribing pulv. hyd. c. cretâ gr. j ter in die p. c. Another method is to smear ung. hydrarg. on the binder.

The syphilitic coryza of infants should receive more local attention than it usually does, for it brings in its train various complications, one of the chief being the cachexia so frequently met with in infants with the snuffles. Histological examination has shown that this condition is not a syphilitic infiltration of the nasal mucous membrane but a polymicrobial, mainly streptococcal, infection.[57] Therefore every care should be taken to keep the orifices as clean and aseptic as possible.

Another point to remember is that the mother of a congenitally syphilitic infant is herself syphilitic, although she may display no symptom of the infection, and be unable to give a history of any symptom. Of course, in women a negative history goes for very little. That Colles's law was right and that Colles's law is a law, I have myself no doubt whatever. The alleged exceptions when examined cannot hold water.[58] It is obvious, therefore, that the mother should also be treated, especially from the point of view of future pregnancies.

This leads me to a consideration of the treatment of the pregnant syphilitic woman. Of course, mercury is required and should be given, but it will not unusually happen when the infection is of recent origin that the first child will be born dead whatever is done in the way of treatment. No doubt much depends on the kind of treatment, and how it is carried out by the patient.

Again, in women suffering from congenital syphilis, miscarriages are frequent.[59] In some cases of this kind appropriate mercurial treatment might be of value from the point of view of a living child.

One word now, in conclusion, as to prevention. We are all agreed on the seriousness of the morbidity and mortality brought about by syphilis. There is no doubt whatever that syphilis is on the increase in London, judging from hospital work alone.[60]

Again, all medical students and hospital nurses should be warned of the dangers of accidentally contracting syphilis, and told of the precautions to take to avoid extragenital infection.

In the time at my disposal my survey has necessarily been a rapid one. I have purposely omitted to touch on certain details of treatment which are a matter of common knowledge, preferring to deal with points of interest germane to the subject. But at the same time I cannot but see how incomplete this paper is, and acknowledge that I have merely skimmed the surface of a vasty deep.

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Researches

ON THE

BACTERIOLOGICAL DIAGNOSIS OF CHOLERA,

CARRIED OUT BY MEDICAL OFFICERS OF THE SANITARY, MARITIME AND QUARANTINE COUNCIL OF EGYPT, UNDER THE DIRECTION OF

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PRESIDENT OF THE COUNCIL.

IN 1897, during the return of the pilgrimage from Mecca, Dr. Galvani showed me microscopical preparations from the intestinal contents of a pilgrim, who had been found dead on a ship returning from Jeddah. No history of the man's illness could be obtained.

I was greatly astonished to find in these preparations a large number of micro-organisms, not to be distinguished microscopically from cholera vibrios. At the autopsy of this pilgrim, dysenteric lesions were found, together with fibroid kidneys and heart. Cultures from the intestinal contents, made first in peptone water and then in gelatine, showed the presence of comma-shaped, monociliated, motile, non-phosphorescent vibrios, which were extremely virulent for guinea-pigs, did not coagulate milk, and gave a marked indol reaction. In fact, the cultures could not be distinguished from those of cholera.

The agglutination test with the serum of a horse repeatedly injected with cultures of cholera obtained from Professor Pfeiffer, showed that the vibrios agglutinated and gave Pfeiffer's reaction, exactly like those isolated from cholera cases. No quantitative or qualitative differences were noticed.

My first idea was that the patient had either suffered from, or had been in contact with, cholera. After careful inquiries, this theory had to be abandoned, for it was found that no cases of cholera had occurred among the pilgrims in the Hedjaz, nor on the return journey. A sharp look-out was kept at El Tor for cases of sudden diarrhoea, vomiting and cramps, but in vain. No disease resembling cholera was observed.

On the days following this discovery, the intestinal contents of every pilgrim who died in the camp were examined bacteriologically. I superintended the autopsies and examined all the patients in hospital, together with Dr. Zachariadis Bey; who, having seen several epidemics, was well acquainted with the clinical signs and lesions of cholera. Nevertheless no case of cholera was discovered, though in no less than five typical cases of colitis and dysentery we isolated cultures not to be distinguished from those of cholera, even by the agglutination test and Pfeiffer's reaction. The pilgrims finally left El Tor, five days after the finding of the vibrio, and no cases of cholera occurred either on the ships or after the pilgrims reached home.

During the four following years, the work of reorganization and the lack of skilled assistance prevented the systematic prosecution of these researches; though I frequently observed vibrios in the stools of pilgrims free from all symptoms of cholera.

In 1902, the pilgrims brought back typical cholera from Jeddah and Yambo to El Tor. The observations performed at the time showed three facts quite clearly:

1. The stools of almost every pilgrim suffering from diseases other than cholera—namely, pneumonia, rheumatism, dysentery, constipation, diarrhoea, etc.—contained vibrios numerous enough to be recognized microscopically.
2. Vibrios agglutinating with cholera serum were isolated from patients showing no symptoms of cholera. On the other hand, some vibrios isolated from typical cases of cholera did not agglutinate with cholera serum.
3. Although it was unavoidable that pilgrims carrying vibrios should mix with other pilgrims, yet only one fresh case of cholera occurred in the camp; all the others were imported. In the general hospital, where the majority of patients were excreting vibrios in every stool, not a single case of infection occurred among the patients, the European or native attendants. Further, not a single case of cholera occurred on the ships leaving El Tor after the period of quarantine was over.

BACTERIOLOGICAL INVESTIGATIONS.

In 1905, after the Hedjaz and El Tor had been free from cholera for nearly two years, Dr. F. Gotschlich examined systematically for vibrios the stools of every patient who died at El Tor. The autopsies were made by myself, and it may be stated once for all that no lesions resembling cholera were found in any case.

The results of these bacteriological examinations may be summed up as follows: Vibrios were found in 38 patients out of 107 cases examined. Thirty-two of these vibros did not agglutinate, but six agglutinated readily with cholera serum. The characteristics of those which agglutinated with cholera serum were as follows: they were monociliated, non-phosphorescent, very virulent (with one exception) for guinea-pigs, and not virulent for pigeons, did not coagulate milk, liquefied 10 per cent. gelatin and gave a well-marked indol reaction. The morphological characteristics were not the same in all, but the differences were not greater than those existing between cholera vibrios isolated from different cases.

The results of the agglutination test are shown in the accompanying tables.

Five of these vibrios therefore agglutinated with specific serums just like cholera vibrios, and did not agglutinate at all with ordinary serums. One of them agglutinated far less than the others, but similar differences occur among vibrios isolated from typical cholera cases.

Table I.

Number of Culture.	Name of Pilgrim from whom Vibrios were Isolated.	Nationality.	*Post-mortem* Diagnosis.	Horse Cholera Serum. Standard, 1 in 3,000.	Goat Cholera Serum. Dilution, 1 in 500	Rabbit Cholera Serum.	
						Dilution, 1 in 200.	Dilution, 1 in 1,000
1	Osman Hussein	Anatolian	Colitis	Limit, 1 in 1,000	+++	++	+ (limit)
2	Sanka Uschaluga	Russian	Dysentery	Limit, 1 in 2,000	+++	+++	+
3	(?)	Turk	Colitis	Limit, 1 in 1,000	+++	+++	+
4	Ahmed Salih	Rumelian	Colitis gangrenosa	Limit, 1 in 1,000	+++	+++	+
5	Bekir Mahomet	Anatolian	Colitis	Limit, 1 in 500	+	+ (slight)	0
6	Achmet Aly	Rumelian	Dysentery	Limit, 1 in 2,000	+++	+++	+

N.B.—The control tubes containing vibrios, normal serums, and physiological salt solution showed no agglutination.

Table II.—*Showing Results of Pfeiffer's Reaction.*

No. of Culture.	Specific Bacteriolytic Rabbit Serum.			Control: Normal Rabbit Serum; Serum, 0·02: Culture 1 Loop.
	Serum, 0·005: Culture, 1 Loop.	Serum, 0·01: Culture, 1 Loop.	Serum, 0·02: Culture, 1 Loop.	
1	Complete bacteriolysis: death after 24 hours	Complete bacteriolysis; death after 30 hours	Complete bacteriolysis: animal survived	No bacteriolysis; death after 24 hours.
2	Complete bacteriolysis; animal survived	Complete bacteriolysis; animal survived	Ditto	Ditto
3	Complete bacteriolysis; animal died after 48 hours	Ditto	Ditto	Ditto
4	Ditto	Ditto	Ditto	Ditto
5	Avirulent	—	—	—
6	Complete bacteriolysis; animal survived	Complete bacteriolysis; animal survived.	Complete bacteriolysis; animal survived	No bacteriolysis; death after 24 hours.

The six vibrios all belonged to the same class, for on immunizing rabbits with each vibrio, the serums of all the rabbits diluted to 1 in 2,000, agglutinated not only all the six vibrios, but the cholera micro-organism also.

Pfeiffer's Reaction.

One culture, being avirulent, could not be tested on animals, but the rabbits inoculated with cholera serum and cultures either recovered, or lived much longer than the controls.

Further, the six serums of animals inoculated with any of these vibrios protected animals against every one of these micro-organisms.

These researches were continued during the pilgrimage season of 1906, when the intestinal contents of 127 dead pilgrims were examined. Vibrios were found in 18 cases of dysentery and colitis, which presented no lesions or symptoms of cholera. Two of these vibrios gave with cholera serum all the reactions of true cholera vibrios, and were agglutinated also by the serums of animals inoculated with one of the six vibrios isolated in 1905.

In order to establish the relations existing between the micro-organisms isolated at El Tor from dysenteric and cholera cases (the former called "El Tor vibrios"), and the vibrios of cholera, all the unconciliated comma-shaped micro-organisms treated by us during the epidemic of 1902 and the El Tor vibrios, were studied by bacteriological methods by Dr. Milton Chendiropoulo. Some strains kindly sent by Professor Gaffky of Berlin, Dr. Hogge of Calcutta, Mr. E. H. Hankin of Agra, and Dr. Golubeff of Alexandria were examined also.

Agglutination Test.

Two cultures were used: first, a highly agglutinating serum kindly provided by Dr. Gaffky, and secondly, an agglutinating and bacteriolytic serum prepared in these laboratories, with a culture having all the characteristics of the true cholera vibrio, and isolated from a cholera stool (vibrio Ck). The Berlin serum had very highly agglutinating properties, and was tested in solutions as weaker than 1 in 4,000 (Berlin Institute standard), which agglutinated in half an hour at the temperature of the laboratory. All the vibrios reacting to this test, the serum prepared with vibrio Ck was in excess and had not exactly the same agglutinating power for all the vibrios. Nevertheless, the action of both serums was identical, in so far that all the agglutinating micro-organisms were acted on by both serums. The method employed was the usual one. The agar cultures were always 18 hours old, and the serums were diluted in 9 per 1,000 NaCl solution.

Table III gives the main results of this examination, as far as the agglutination test is concerned.

Table IV gives the details not only of the agglutination but of all the other tests as well.

Saturation Test.

Bordet was the first to notice that an emulsion of a microbe, added to the agglutinating serum of an animal previously injected with the same microbe, absorbed most if not all, of the specific agglutinins of the serum. The specific agglutinins of an immune cholera serum, for instance, are completely absorbed by adding cholera vibrios to the serum, whereas the non-specific agglutinins remain free in the serum.

In our experiments, 10 loops of a cholera vibrio (Ck) grown for eighteen hours on agar, were suspended in 10 c.cm. of a 5 per cent solution of cholera serum (Berlin). After standing for two hours at the temperature of the laboratory, the mixture was centrifugalized, and the clear supernatant fluid decanted. The agglutinating power of the decanted liquid was now tested on all the vibrios which, in previous experiments, had been agglutinated by the serum. As a control, the agglutinating power of the same serum, not previously saturated with cholera micro-organisms, was examined comparatively. The result was that all the vibrios agglutinated with cholera serum whether isolated from cholera cases or not absorbed the specific agglutinins. (See Table IV.)

Pfeiffer's Reaction.

Owing to the number of microbes to be examined it was impossible to try this reaction on guinea-pigs. The enormous number of animals which would have been necessary, and the fact that some vibrios were not virulent, made the experiment an impracticable one. Metchnikoff had noticed that if one drop of peritoneal lymph from a guinea-pig (which had received either no previous injection, or merely one of bouillon) was added to vibrio corpuscles in a little immune serum, a typical Pfeiffer's reaction took place. Bordet used guinea-pig's serum instead of peritoneal lymph.

Three cubic centimetres of bouillon were injected into the peritoneum of an animal, and four hours afterwards the opaque liquid, full of leucocytes, was withdrawn, and left in the ice-box until the next day. The cholera serum was prepared by injecting rabbits with vibrio Ck. When a trace of this

TABLE III.

Total Number of Vibrios Isolated from Cases of Cholera: 15.		Total Number of Vibrios Isolated from Patients who had no Symptoms of Cholera: 23.		Vibrios of Doubtful Origin, including Sea-water Vibrio: 4.	
Agglutinating with cholera serum:	Not agglutinating with cholera serum:	Agglutinating with cholera serum:	Not agglutinating with cholera serum:	Agglutinating with cholera serum:	Not agglutinating with cholera serum:
11 (73 per cent.)	4 (27 per cent.)	7 (30 per cent.)	16 (70 per cent.)	0 (0 per cent.)	4 (100 per cent.)

TABLE IV.

No.	Name of Vibrio.	Origin of Vibrio.	Agglutination Test.		Saturation Test.		Pfeiffer's Reaction.	Fixation Test.		Remarks.
			Serum Berlin.	Serum CK	Serum Non-Saturated	Serum Saturated.		Border's Method.	Jacoby's Method.	
1	CK	Cholera stool	3,000	1,000	3,000	250	+	+	+	
2	Aida	,, ,,	3,000	1,000	3,000	250	+	+	+	+
3	Fatma	,, ,,	3,000	1,000	3,000	250	+	+	+	+
4	Alioglu	,, ,,	+	+	+	+	+	+	+	+
5	LXII	,, ,,	+	+	+	+	+	+	+	+
6	141	,, ,,	3,000	800	3,000	500	+	+	+	+
7	Berlin 70	,, ,,	3,000	1,000	3,000	300	+	+	+	+
8	CV	,, ,,	3,000	1,000	3,000	300	+	+	+	+
9	98	Dysentery (El Tor)	+	+	+	+	+	+	+	+
10	147	,, ,,			+		+	+	+	+ after 48 hours.
11	Berlin 76	Cholera stool	3,000	800	3,000	500	+	+	+	+
12	Machaent	Pneumonia during cholera epidemic	3,000	1,000	3,000	500	+	+	+	+
13	Tor No. 1	Dysentery (El Tor)	3,000	500	3,000	300	+	+	+	+
14	V	Cholera stool	+	+	+	+	+	+	+	+
15	173	Dysentery (El Tor)			+	+	+	+	+	+ very slight.
16	Berlin 115	Cholera stool	2,500	1,000	2,000	250	+	+	+	
17	Tor No. 2	Dysentery (El Tor)	3,000	500	3,000	250	+	+	+	+
18	CVA	Cholera stool	2,000	1,000	2,000	100	+	+	+	+
19	IV	,, ,,	+	+	+	+	+	+	+	+
20	167	Dysentery (El Tor)	+	+	+	+	+	+	+	+
21	Tor No. 3	,, ,,	3,000	800	3,000	300	+	+	+	
22	145	Cholera stool	3,000	500	3,000	500	+	+	+	+
23	218	Dysentery (El Tor)	+	+	+	+	+	+	+	+
24	184	,, ,,	+	+	+	+	+	+	+	+ after 48 hours.
25	10	,, ,,	+	+	+	+	+	+	+	+ slight after 48 hours.
26	Tor No. 4	,, ,,	3,000	800	3,000	250	+	+	+	+
27	Tor No. 5	,, ,,	3,000	500	3,000	250	+	+	+	+
28	16	,, ,,	+	+	+	+	+	+	+	+ slight after 48 hours.
29	21	,, ,,	+	+	+	+	+	+	+	+
30	23	,, ,,	+	+	+	+	+	+	+	+
31	Tor No. 6	,, ,,	3,000	800	3,000	300	+	+	+	+
32	Calcutta 2	(?)	+	+	+	+	+	+	+	+ after 48 hours.
33	1	Dysentery (El Tor)	+	+	+	+	+	+	+	+
34	2	,, ,,	+	+	+	+	+	+	+	+
35	3	,, ,,	+	+	+	+	+	+	+	Very slight after 48 hours.
36	Calcutta 6	(?)	+	+	+	+	+	+	+	+ after 48 hours.
37	Calcutta 8	(?)	+	+	+	+	+	+	+	+
38	4	Dysentery (El Tor)	+	+	+	+	+	+	+	+ very slight
39	5	,, ,,	+	+	+	+	+	+	+	+ ,, ,,
40	6	,, ,,	+	+	+	+	+	+	+	+ ,, ,,
41	Mansone	Sea water	+	+	+	+	+	+	+	+ ,, ,,
42	Agra II	Cholera stool	3,000	800	3,000	250	+	+	+	+

N.B.—The numbers give the dilution at which the serum produced complete agglutination. + means that a given test was positive. — means that a given test was negative.

peritoneal lymph was added to vibrios suspended in serum (CK), the vibrios which reacted at all were almost completely transformed into granules. The microscopical appearance of these preparations, therefore, differed entirely from that of control preparations. The main results are given in Table IV, which shows that all the vibrios agglutinated with cholera serum also reacted to Pfeiffer's test.

Fixation Test.

If a serum (previously heated to 56° C.), specific for the corpuscles of an animal or for a certain micro-organism, namely, cholera vibrio, be mixed with the red corpuscles of the same animal or with the cholera vibrio, the corpuscles or vibrios absorb the immune body.

Bordet also showed that if red corpuscles or microbes containing an appropriate immune body be added to fresh non-heated alexine (namely, fresh rabbit's serum) the corpuscles or microbes absorb the alexine, so that none remains free in the liquid.

Accordingly, if fresh guinea-pig's serum be added to cholera vibrios which have not absorbed any cholera-immune body, the alexine, not being absorbed, remains free in the liquid. The proof of this is that if "sensitized"* corpuscles be added to such a mixture, the globules are quickly haemolysed. If, on the other hand, vibrios, which have already absorbed the cholera-immune body, be added to the same quantity of fresh serum, the microbes absorb the alexine; and, provided the amount of fresh serum is not too great, the alexine is absorbed so completely that "sensitized" corpuscles, when added to the mixture, are not dissolved. If, on the other hand, vibrios other than cholera be added to cholera serum, the immune body is not fixed, the alexine added remains free, and the sensitized corpuscles are dissolved.

Such are the fundamental facts on which Bordet and Gengou's method is based. This has been tried on various microbic species, but, as far as I know, not systematically on vibrios.

This test was tried by two different methods:

Bordet and Gengou's Method.

The immune serum was heated at 56° C. during half an hour, and fresh rabbit's serum was treated in the same manner. An agar culture, eighteen hours old, of the microbe to be tested was suspended in 2 c.cm. of physiological solution. The alexine was the serum of a rabbit, bled on the preceding day and centrifugalized until freed of corpuscles.

The following mixtures were then prepared in three tubes:

Tube I contains 0.2 c.cm. of microbic emulsion, 0.6 c.cm. of immune serum, and 0.1 c.cm. of alexine.

Tube II contains 0.2 c.cm. of microbic emulsion, 0.6 c.cm. of new heated serum, and 0.1 c.cm. of alexine.

Tube III contains the same mixture as the first.

All these remained for four to five hours at room temperature, and were well shaken from time to time.

One volume of a mixture consisting of two parts of a heated serum, haemolysing bovine red corpuscles, and one part of the washed corpuscles of the same animal, was then added to Tubes I and II. One volume of a mixture of two volumes of physiological salt solution and one volume of bovine, non-sensitized, red blood corpuscles was added to Tube III. After three hours the tubes were examined, and note was taken of any haemolysis which had occurred. When the vibrios fixed the immune body the contents of Tube II showed very marked haemolysis after two hours, whereas haemolysis was entirely absent in the other tubes. In Tube III haemolysis appeared after twelve to eighteen hours, if the microbes used were themselves haemolytic, but when this was not the case, no haemolysis took place. The results are shown in Table IV.

Dupter's Method.

The following mixtures were introduced into five different tubes:

Tube I. Twenty drops of immune serum (CK) heated to 56° C., 5 drops of alexine, 5 drops of microbic emulsion.

Tube II. Twenty drops of immune serum (CK), 5 drops of alexine, 6 drops of microbic emulsion.

Tube III. Twenty drops of immune serum (CK), 5 drops of alexine, 6 drops of microbic emulsion.

Tube IV. Twenty drops of fresh rabbit's serum previously heated to 56° C., 5 drops of alexine, 6 drops of microbic emulsion.

Tube V. Twenty drops of fresh rabbit's serum heated to 56° C., 5 drops of alexine, 6 drops of microbic emulsion.

After the tubes had been left four to five hours at the temperature of the laboratory, 2 drops of sensitized corpuscles were added to each tube.

The results obtained are shown in Table IV, and it is noticeable that, although a distinct relationship exists between agglutination test and Pfeiffer's reaction in so far that the microbes reacting to one test also react to the other, there is no agreement between these two reactions and the fixation test. Fourteen of the twenty-four vibrios not agglutinated by cholera serum fixed the immune body of the same serum. Conversely, six microbes which were transformed into granules and agglutinated by cholera serum did not absorb the immune body.

Haemolysis Test.

Kraus, having noticed that certain vibrios dissolved red corpuscles, extended his researches, and concluded that no haemolytic comma micro-organism was a true cholera vibrio. He used the following method: Tubes of agar were liquefied, cooled to 40° C., and 0.3 to 0.5 c.cm. of defibrinated rabbit's blood were allowed to mix slowly and uniformly with the agar in each tube. The agar was poured into Petri's dishes, and, when cool, was inoculated with the vibrio to be examined, in such a way as to obtain separate well-defined colonies. After twenty-four hours in the incubator, the colonies, when haemolytic, were surrounded by a clear, more or less extended areola, contrasting sharply with the dark, opaque colour of the agar.

The objection to this method is that the results are not constant and not easily observed. A simpler method, by which the slightest trace of haemolysis may be readily demonstrated, was therefore used.

An agar culture, eighteen hours old, was rubbed up in 4 to 5 c.cm. of physiological NaCl solution; 0.1 c.cm. of this emulsion was mixed in a tube with 0.9 c.cm. of physiological salt solution, to which one large drop of washed red corpuscles or of the defibrinated blood of a rabbit or any other animal had been added. After twelve to twenty-four hours as a rule, haemolysis was noticeable, if it was ever to take place at all, though in some cases it did not appear for twenty-four hours. If no haemolysis had taken place after forty-eight hours, further observation was unnecessary, as such vibrios would not dissolve blood later on, and were therefore non-haemolytic.

The haemolytic properties of vibrios were tested on the red corpuscles of rabbits, goat, sheep, and guinea-pigs, and the corpuscles of all these animals reacted in the same way. The vibrionic haemolysins, therefore, were not specific for one special kind of animal.

At first sight, the haemolytic properties of vibrios appear to stand in no relationship to the agglutinating and Pfeiffer's reactions, for several agglutinating vibrios haemolyse and others do not. Nevertheless, Table IV shows that no vibrio haemolyses, when the agglutination test, Pfeiffer's reaction, and the fixation test are positive.

RECAPITULATION OF BACTERIOLOGICAL RESULTS.

The vibrios examined may be divided into four groups:

1. Those which give the four principal tests with cholera serum—namely, the agglutination test, saturation, Pfeiffer's reaction, and the fixation test. They do not haemolyse, even when remaining in contact with red corpuscles for three days, at the temperature of the laboratory.

2. The second group contains the vibrios agglutinated and giving the saturation and Pfeiffer's reactions with cholera serum, but not fixing the cholera-immune body. These vibrios are strongly haemolytic. This group consists of the El Tor vibrios only.

3. The third group is formed by vibrios which are not agglutinated by immune serum, do not give the saturation or Pfeiffer's reactions, but fix the cholera-immune body. These vibrios also haemolyse, but feebly and late, often after thirty-six to forty-eight hours only.

4. The last group is formed by strongly haemolytic vibrios not reacting at all to cholera-immune serum.

DISCUSSION OF RESULTS.

The discovery at El Tor of vibrios agglutinating with cholera serum is of great importance, for two chief reasons: (1) It is the first time that vibrios agglutinating with cholera serum have been found in the absence of a local or general epidemic. (2) The discovery raises the whole question of the value of the present system of bacteriological diagnosis; for, if the agglutinating El Tor vibrios are not cholera vibrios, the reliance placed so far on the agglutination, Pfeiffer's, and saturation reactions as specific tests is not justified.

An opinion regarding the specific nature of the vibrios found at El Tor can be formed only by considering the subject from the epidemiological and from the bacteriological points of view.

Discussion of Epidemiological Data.

Three principal epidemiological questions present themselves:

First, Are there any facts to show that in 1897, 1905,

* The French word "sensibilisé" translated here "sensitized" means that the corpuscles or microbes have fixed a certain amount of immune body.

and 1906 cholera existed in the Hedjaz or in any country traversed by the pilgrims on their way to and from Mecca? The answer is: "None."

Secondly, Is it likely that the vibrios agglutinating with cholera serum come from a different place than the non-agglutinating vibrios? In my opinion, the probability is that wherever the pilgrims infected themselves with vibrios agglutinating with cholera serum there they absorbed the other vibrios also.

Thirdly, Did the pilgrims whose faeces contained vibrios agglutinating by cholera serum bring these vibrios from their homes to the Hedjaz and El Tor, or were they infected en route?

A few details concerning the route followed by pilgrims travelling to and from Mecca are here necessary. The pilgrims who undergo quarantine at El Tor go to Mecca by two different routes. A number of them, chiefly Turks and people from Asia Minor, land at Yambo, stay there a few days, and then proceed to Medina on foot or by camel. After resting a few days at Medina, they travel to Mecca, remaining in the holy city until the feast is over—that is, from a week to a month, or perhaps longer in some cases.

The other pilgrims, consisting for the most part of Egyptians, Moghrabys, Algerians, Syrians, and Russians, proceed the reverse way—that is, they land at Jeddah and go on to Mecca, Medina, Yambo, and El Tor.

It is an undoubted fact that the vibrios agglutinating with cholera serum have been found only among pilgrims from Turkey, Russia, and Asia Minor returning via Jeddah, and it has been argued that the latter carried the cholera vibrios from their own country into the Hedjaz and back to El Tor.

I am not ready to admit this theory, and for the following reasons. In the first place, I do not believe that the presence of vibrios among the pilgrims was limited to the years 1897, 1905, and 1906, but consider it highly probable that the phenomenon occurs every year. As a matter of fact, vibrios agglutinating with cholera serum have been found at El Tor *whenever they have been looked for, and exclusively among pilgrims returning via Jeddah.* In 1897, when the vibrios were first discovered, Asia Minor and the route followed by pilgrims were free from cholera. In 1905 and 1906 certain districts, but by no means the whole of Asia Minor, were infected with cholera; but there is absolutely no evidence to show that the pilgrims harbouring vibrios in their intestines came from a cholera-infected district, or had been in contact with cases of this disease either at home or on the journey. As will be shown presently, the conditions for the development of cholera at Mecca are simply ideal. Yet these people who excreted vibrios in every stool at El Tor did not contaminate the holy city. To argue, as has been done, that because cholera is present in some parts of Asia Minor, therefore every person coming from there must be regarded with suspicion, is equivalent to saying that because cholera exists at Marseilles therefore every one coming from St. Petersburg or Moscow may carry vibrios in his intestine. The comparison is by no means far-fetched, for a journey of one hundred miles in Asia Minor may and often does take longer than that from Marseilles to St. Petersburg. As a matter of fact, moreover, the pilgrims carrying vibrios agglutinating with cholera serum did not come from the same place, or even from the same district. Two were from Asia Minor (no place could be ascertained exactly), two were Roumelians, two Anatolians, one Russian, and one Turk.*

Rejecting as I do the theory that the vibrios were brought by the pilgrims from their homes, I would fain advance another theory based on reasons which appear to me overwhelming. I believe that the pilgrims infected themselves with vibrios at Mecca or Jeddah, and that the reason why vibrios agglutinating with cholera serum were found among pilgrims only returning via Jeddah and not among pilgrims returning via Yambo was simply that a much shorter time elapsed between the date of infection and the arrival at El Tor in the case of the former than in the case of the latter. Further, I consider it highly probable also that the infection took place by drinking the water in Jeddah, or more probably, in Mecca.

* Since this paper was written a vibrio agglutinating with cholera serum (1 in 2,000) was isolated this year from the intestinal contents of an *Algerian* pilgrim who had died from carcinoma of the liver and colitis

It is necessary to consider very briefly the possible infection by water in both places. The Jeddah water comes from wells in the town, or is brought from some distance, and when I tasted it in 1905 the water sold to the pilgrims was indescribably filthy and briny. It teemed with all kinds of micro-organisms, though I cannot say for certain that it contained vibrios. Indeed, it was so bad that the Europeans drank it only when obliged to; when, in fact, water from ships was not obtainable.

At Mecca part of the ceremonies consists in drinking water from the Zemzem well. A bacteriological examination, made at El Tor, has shown this water to be swarming with vibrios, though those agglutinating with cholera serum have not been found so far. Moreover, it is part of a religious ceremony for the pilgrim to wash in certain tanks. I have obtained photographs showing the pilgrims, some drinking in these tanks, others filling their vessels, others performing their ablutions (including the cleaning of the anus) in the very place where, a few seconds afterwards, a pilgrim may quench his thirst. One pilgrim carrying vibrios may contaminate the whole water supply, and that this actually does occur is shown by the explosive character of the epidemic, and the appalling mortality following on this promiscuous bathing and drinking, when a case of cholera has occurred at Mecca. If these Asia Minor people really carried the cholera vibrios from their homes to Mecca, why did not an explosive outbreak of cholera follow on their using these tanks? More favourable conditions for the spread of cholera can hardly be conceived than water contaminated with vibrios, drunk by thousands of people of whom many are suffering from gastro-intestinal disturbances, and whose constitutions are undermined by hardships of every kind. Yet no case of cholera occurred at Mecca.

Should the pilgrim return home via Jeddah, he arrives at El Tor after a period averaging three weeks; should he return via Yambo, he does not reach El Tor till six weeks at least have elapsed after leaving Mecca. In his report on the pilgrimage and the cholera epidemic at El Tor in 1902, Dr. Crendiropoulo drew attention to the fact that the faeces of almost every pilgrim entering the hospital contained vibrios, but that this was only the case during the five to eight days following the arrival of the pilgrims. As time went on, the vibrios became rarer and rarer, and after thirteen to fourteen days at El Tor (corresponding on an average to thirty-three to thirty-four days after leaving Mecca) none were found in the faeces. The pilgrims returning via Yambo, therefore, whose journey to El Tor lasts from five to eight weeks have almost certainly to eliminate many of the vibrios absorbed at Mecca.

Lastly, a most important fact is that not a single case of cholera occurred on the voyage home, although some of these ships were overcrowded with people coming from Asia Minor. I conclude, therefore, that, epidemiologically, there is no evidence to show that the vibrios found at El Tor were true cholera vibrios.

Discussion of Bacteriological Results.

In the literature concerning the part played by Koch's vibrio in the causation of Asiatic cholera, there is one fact, and one only, which stands out as being of supreme importance; namely, that at a time when no epidemic of Asiatic cholera existed in Europe, certain persons wilfully or accidentally swallowed a small quantity of microbes isolated from cases of cholera, and that these persons either died or presented more or less acute symptoms of the disease. The rest of the evidence, as compared to this cardinal fact, is of minimal importance.

The value of even this observation, however, may be over-estimated; for the symptoms of cholera, whether mild or acute, are only those characteristic of other intoxications of intestinal origin. These symptoms have been produced also by vibrios isolated, not from cholera patients, but from water; and at a time when the disease did not exist anywhere near the locality where the vibrios were found. In this connexion the experiments of Metchnikoff are particularly valuable. This observer produced in man the symptoms of cholera with vibrios isolated from Seine water, at a time when there was no cholera in Paris. Nevertheless, these experiments do not invalidate those previously noted, as the symptoms produced by Metchnikoff's micro-organisms were neither so

definite nor so acute as those due to vibrios isolated from cholera cases.

I admit, therefore, that the cause of cholera is the microbe which has produced typical cholera, experimentally so to speak, in several human beings.

The serums of animals inoculated with this vibrio acquire new and definite properties. Minimal doses agglutinate cholera vibrios; if cholera serum and cholera vibrios be introduced into the peritoneum of guinea-pigs, the micro-organisms are first converted into granules, and ultimately dissolved; when the cholera vibrios are added *in vitro* to this serum, they absorb the specific agglutinins. The conclusion usually drawn from these facts is that any micro-organism giving these reactions with serums so prepared is the true vibrio of cholera, and that any vibrio not so reacting belongs to another class. Several reasons compel me to reject such a conclusion.

Ever since the discovery of biological reactions, more especially of the precipitation and agglutination tests, attempts have been made to attach an absolutely specific value to these reactions. To my mind, such attempts have failed. The precipitation test, for instance, is not entirely specific; for although it is easy to obtain a serum precipitating that of humans only, yet a serum which precipitates that of other animals also—for example, monkeys—may be prepared at will. The test is therefore specific under certain conditions only; conditions ill-defined, but nevertheless existent.

TABLE V.—*Showing the Port of Departure of the Ships and the Origin of the Water containing these Vibrios.*

Date of Arrival at Port Said.	Name of Ship.	Flag.	Port of Departure.	Origin of Drinking Water.	Observations.
July 15, 1905	*Clan [illegible]*	British	Liverpool	Glasgow	In a preceding journey the ship sailed from Calcutta and called at Port Said on May 12, 1905.
August 25, 1905	*Torbryan*	British	Swansea	Swansea	Usually runs between Yokohama and Singapore.
September 22, 1905 ...	*Benarty*	British	Colombo	Colombo	Usually sails to Japan, calling at Yokohama, Singapore, Bombay, Colombo.
September 24, 1905 ..	*Knowsley Hall*	British	Karachi, Colombo	Karachi	—
October 1, 1905 ..	*Congo*	French	Alexandria	Alexandria	Runs between Marseilles, Alexandria, Port Said, and Beyrout. Had not crossed Suez Canal for many years.
October 20, 1905 ..	*Vesta*	Russian	Odessa	Constantinople	Runs between Odessa, Constantinople, Smyrna, Beyrout, Jaffa, Port Said, Alexandria. The ship had not been through the Suez Canal in 1905.

TABLE VI.—*Showing the Chief Morphological and Cultural Characteristics of the Vibrios.*

[illegible]	Form and Size.	Motility.	Cilia.	Reaction with Gram.	Optimum Temperature.	Culture in Bouillon and Peptone Water.	Cholera-roth.	Gelatine Culture.	Cultures on Potatoes.	Cultures in Milk.	Inverting Action.	Bacterio-lytic action.
[illegible]	[illegible]	Motile [illegible] forward [illegible]	Many [illegible]	Does not retain stain	Optimum 37° C.	[illegible] developed [illegible] surface veil.	Present	Growth slow. Colonies translucent, yellowish-brown, with irregular borders; cholera-rose after 24 hours in stab cultures.	Whitish layer	No coagulation. Slight acidity.	Well-marked reaction	Very marked, clear; 3 mm. areola round colonies
[illegible]	[illegible]	Very active. More [illegible] one	More [illegible]	Ditto	Ditto	[illegible] developed [illegible]	Present, but feeble and slow. More marked by addition of potassium [illegible] solution	Very slow liquefaction. Brown and turbid, with irregular contours and dark nucleus. No bulla in stab cultures.	Yellowish moist [illegible] layer	No coagulation. Reaction unaltered.	Reaction very feeble	None
[illegible]	[illegible]	[illegible]	More [illegible]	Ditto	Ditto	Ditto	Ditto	No liquefaction. Brown yellowish colonies, granular with irregular contours	Yellowish layer	Ditto	Ditto	Very slight, but clearly shown
[illegible]	[illegible]	[illegible] slow	More [illegible]	Ditto	Ditto	Ditto	Ditto	No liquefaction. Slow colonies, with irregular contours and central nucleus	Yellowish, [illegible] layer	Ditto	Ditto	Ditto
[illegible]	[illegible]	[illegible]	More [illegible]	Ditto	Ditto	Ditto	Ditto	Very slow liquefaction. Brown colonies. Liquefied colonies. No [illegible] cultures	Very [illegible] yellowish layer	Ditto	Ditto	Ditto
Vesta	[illegible]	[illegible]	More [illegible]	Ditto	Ditto	Ditto	Ditto	Liquefaction very slow. Colonies red dish-yellow with irregular [illegible]. No [illegible] cultures	Dark yellow layer	Ditto	Ditto	Ditto

[illegible] [illegible] [illegible] [

Similarly, typhoid serum agglutinates, less actively it is true, paratyphoid bacilli also. The agglutination test, therefore, is only relatively but not absolutely specific.

Further, it is unusual to rely on one or two characteristics only in the classification of plants and animals. In every classification every characteristic should be taken into consideration, and its possible value weighed.

A comparison of vibrios found at El Tor in cases of dysentery with those of the specific vibrios of cholera, shows that although both are equally affected by the agglutination, Pfeiffer's, and saturation tests, they react differently to the haemolysis and fixation tests. These reactions appear to me as important as the former.

All the El Tor vibrios haemolyse under certain conditions, but all the vibrios isolated from cases of cholera and agglutinating with cholera serum, do not. This fact, in my opinion, is a sufficient reason for classing the El Tor and the cholera vibrios into two distinct groups.

It has been urged, however, that haemolytic vibrios, agglutinating with cholera serum, have been isolated from cholera stools, and the conclusion drawn that the true cholera vibrio may occasionally be haemolytic. The fact is correct, but the conclusion would be true only if typical cholera stools contained but one kind of vibrio. In the East, at any rate, this is far from being so, and many cases of cholera are cases of mixed "vibrionic" infection. In many stools one finds not one but several comma-shaped bacilli; some agglutinating with cholera serum and others not; some monociliated, others multiciliated, etc. It is possible, nay likely, that in some cases both the cholera and the El Tor vibrios exist in the same stool.

In this connexion I may state that some years ago I wrote to a distinguished bacteriologist, who was watching an epidemic of cholera in the East, to send me cultures isolated from cholera stools. Four cultures of vibrios were sent, of which only one agglutinated with Berlin serum. The three others, although monociliated, did not agglutinate, but were intensely haemolytic. I quote this fact only to show how very complicated the bacteriological examination of a cholera stool is in reality.

The fact, therefore, that a vibrio, not only agglutinating but haemolytic also, is occasionally found in cholera stools does not necessarily prove that a cholera vibrio haemolyses at times, but it may simply show that several kinds of vibrios, some haemolytic and some non-haemolytic, may be isolated from cholera stools. Indeed, in view of the facts recited in this paper, the last conclusion seems to me the only possible one.

What has been said regarding haemolysis applies equally to the fixation test. All the vibrios isolated from the cholera stools which agglutinated with cholera serum, gave the fixation test; all the El Tor vibrios, without exception, did not. On the other hand, several vibrios, though neither agglutinated nor converted into granules by cholera serum, reacted to both the fixation and the haemolysis tests.

I conclude, therefore, that all these reactions are relatively and not absolutely specific, and that any one test or group of tests is insufficient to establish a true classification. The only possible classification is to group together all the vibrios reacting in the same way to all tests, separating them from those which, under the same conditions, behave in a different way. If this method be applied to the vibrios found at El Tor, there is no difficulty in distinguishing them from the true cholera vibrios in spite of several of the reactions of both being similar. And it follows that *the agglutination, saturation, and Pfeiffer's tests are not in themselves of absolute diagnostic value for cholera vibrios.*

ON VIBRIOS FOUND IN SHIP WATER.

During the second quarter of the year 1905, the drinking water of ships calling at Port Said was examined for vibrios by Dr. Zirolia. The samples of water submitted to bacteriological examination were 384 in number, and in 32 cases vibrios were found. Six only of these eighty-two vibrios gave a positive result with various high dilutions of cholera serum. (Fluid horse serum kindly sent by Dr. Gaffky of Berlin, Standard 1 in 3,000, date September 23rd, 1905.) Special attention was therefore paid to these six vibrios, as representing in a natural classification a group most closely related to that of the cholera vibrio.

Agglutination Test.

Cholera serum was diluted in physiological salt solution. The macroscopic test only was applied. In 1 c.cm. of the solution of serum, one loop or 2 mg. of agar-culture, grown for eighteen hours at 37° C., was suspended. The result was considered as positive when agglutination took place in two hours' time at 37° C.

As the Berlin cholera serum contained carbolic acid, it was necessary to see whether carbolic acid possessed any agglutinating properties on these microbes. For this purpose, chemically pure carbolic acid was tested in 0.5 to 0.25 per cent. solutions either in distilled water or physiological salt solution, but none of these vibrios were agglutinated by carbolic acid, not even by a 0.5 per cent. solution.

Several rabbits were immunized also by intravenous injections of gradually-increasing doses of living and dead cultures, against each of these six vibrios and a cholera vibrio isolated during the last Egyptian cholera epidemic of 1902.

TABLE VII.—*Showing the Results of the Agglutination Test of these various Vibrios with different Serums.*

Name of Serum.	V. Clan Ronald.	V. Torbryan.	V. Benarty.	V. Knowsley Hall.	V. Congo.	V. Vesta.	Cholera.
Serum cholera (rabbit) agglutinates	500	100		—	500	100	500
Serum cholera (horse) ..	10,000	500	500	500	500	100	3,000
Clan Ronald	10,000	50	—	100	500	-	2,000
Torbryan...	—	2,000	1,000	—	—	—	—
Benarty	500	-	20,000	—	100	100	2,000
Knowsley Hall...	500	50	—	20,000	—	—	—
Vesta	100	1,000	—	—	500	2,000	100
Congo	2,000	—	100	50	1,000	-	50

Pathogenic Effects and Pfeiffer's Reaction.

Pfeiffer's reaction was obtained with the V. Clan Ronald only, and the result is shown in the following table. In the case of the other vibrios the requisite virulence could not be obtained.

TABLE VIII.

Name of Culture.	Result of Injection into Pigeons.	Result of Injection into Guinea-Pig.		Pfeiffer's Reaction.
		Result.	Minimum Mortal Dose.	
Clan Ronald ...	Negative	Positive	¼ loop of culture 24 hours (guinea-pig 300 grams)	Positive
Torbryan	..	..	3 loops	-
Benarty	..	..	2 ..	-
Knowsley Hall..	..	..	2 ..	-
Congo...	..	..	3 ..	-
Vesta	..	..	3 ..	-

The conclusion to be drawn from the recital of the more marked characteristics of these 6 vibrios is that V. Clan Ronald possesses, more than any of the others, the characteristics of the true cholera vibrio. The five other vibrios markedly differ from cholera vibrios by their general properties. Their most marked characteristic—namely, their agglutination by a very active cholera serum in 1 in 500 solution—means that there is a certain degree of relationship between them and the true cholera vibrios. In other words, the agglutination reaction must not be regarded as a specific test but as a group reaction.

The results of agglutination tests made with the seven serums, although apparently surprising, show there is a distinct relationship between the V. Clan Ronald and

cholera vibrios, as the serums of animals injected with either vibrio agglutinate both. I do not believe that V. Clan Ronald is a true cholera vibrio, as it is haemolytic.

The experiments also show the degree of relationship existing between the six vibrios and between each and the cholera vibrio.

The conclusions which I base on the experiments carried out at Port Said are as follows:

1. A certain number of vibrios, although agglutinating to some extent with cholera serum, *are sharply differentiated morphologically from the cholera vibrio, by the fact that they are multiciliated.*

2. Whereas some vibrios found in ship water are agglutinated by very dilute solutions of cholera serum, others are agglutinated by far stronger solutions only. The latter form a transition stage, so to speak, between the non-agglutinating and the highly agglutinating vibrios.

3. Although an active cholera serum agglutinates all the vibrios to some extent, yet only two of these vibrios when injected into animals produce serums having a powerful agglutinating effect on cholera vibrios; two serums had the same property but to a slighter extent, and two had none.

These experiments therefore support the conclusion previously arrived at—namely, *that it is not advisable to trust to the agglutination test only in the bacteriological diagnosis of cholera. The test is useful but not specific.*

The Lumleian Lectures

ON

INSANITY, ITS CAUSES AND INCREASE.

Delivered before the Royal College of Physicians of London.

By GEORGE Hy. SAVAGE, M.D., F.R.C.P.,

consulting physician and late lecturer on mental diseases, guy's hospital.

Lecture III.

ETIOLOGY.

Alcoholism as a Cause of Insanity.

Alcoholic excess has long been considered to be one of the most powerful causes of insanity; any increase among the insane was looked upon as depending upon such self-indulgence. England is now much more temperate than it was; this is shown by the greatly-diminished consumption of all forms of alcohol, and by a general consensus of opinion that it is good to be temperate or teetotal. Notwithstanding all this there has been no decrease among the insane, but a fairly steady increase.

As a consulting physician I am much struck by the large numbers of teetotalers by whom I am consulted. This does not prove that such persons are unstable in consequence of their temperance, but it shows that teetotalism alone does not decrease insanity. Dr. Mott has expressed the same opinion. Doubtless alcohol affects the nutrition of the brain, and may be called a nerve toxin. It produces acute symptoms which may pass from delirium to mania, and this may pass into a chronic hallucinated state. Prolonged indulgence in certain persons leads more or less rapidly to mental weakness which has special characteristics. These are interestingly associated with sensory disorders, the ideas of time and place becoming confused. In many respects alcoholic excess resembles in its results senile mental decay. It may give rise to neuritis which may be misinterpreted so as to give rise to ideas of cutaneous annoyance or electrical interference. Chronic alcoholism leads to a state of the nervous system which is allied to that produced by strong neurotic heredity. Alcoholic parentage tends to produce mental weakness and criminality in the offspring. Dr. Mott, supported by Dr. Bevan Lewis, has shown that alcoholics admitted into general hospitals have kidney and liver disease whereas the insane alcoholic dying in an asylum rarely has evidence of his excess in his viscera. It seems as if the brain of those becoming insane from alcoholic excess is a weaker organ or one more easily affected than that of the drunkards who escape. We all know that injury to the head may render a person very easily influenced by drink, and it is easy to think that there are specially susceptible persons who readily suffer from alcoholic excess.

Alcohol leads to delusional insanity, to recurring mania, to delirious mania, and later to dementia of a peculiar type. It plays an important part in the production of general paralysis of the insane, for though I have never been able to satisfy myself that any one case was due to this cause alone, yet with syphilis it is common. The special report of the Irish Commissioners expresses very strongly the opinion of the Irish medical superintendents that alcohol is a real cause of insanity in that country, though they also mention the excessive indulgence in tea as a cause.

Influenza as a Cause of Insanity.

In the earlier epidemics it was thought that the insane were less liable than the sane to this disease, but later it was proved that their comparative freedom depended on their isolation. I am much struck by the numerous cases of mental disorder which always follow an epidemic. My own opinion is that the influenzal poison has a special and most potent effect on the nutrition of all parts of the nervous system. It acts most perniciously as a destroyer of sleep, and also has serious effects by its influence on the digestion and general nutrition. It is noteworthy, too, that the number of suicides rises rapidly at and after an epidemic of influenza.

It may produce any form of psychopathy: it may act either as a predisposing or exciting cause: it may precipitate impending dementia or general paralysis of the insane; it may be the starting point of dementia of adolescence. In a few cases it causes an alternation in neuroses, so that it relieves an asthma but develops melancholia.

The severity of the influenza has no direct relation to the form or gravity of the insanity. As a rule, however, the prognosis is rather better when the insanity depends on influenza. The point to which I would make most reference is that, in my opinion, influenza, like alcohol, seems to have a specially dangerous influence on some persons and prepares a very large number of such persons for some form of nervous disorder. It puts them at a disadvantage to resist any physiological or social strain.

Sexual Causes.

I have not time to go into the question of sexual causes of insanity, but it would not be right if I did not express my opinion that the tendency to late marriages in men, the great limitation in the number of children, and the distaste of the mothers to nurse their children all have potent influence in producing mental instability.

Increase in the Number of the Insane.

There is sufficient evidence to show that there is a steady increase in the numbers of the insane in England, Ireland, and Scotland, though in the most recent reports there has been shown to be a reduction in the proportion of insane recognized, but I shall point out reasons for the apparent reduction.

Among the more wealthy in England particularly, there is a growing disinclination to send their insane relations into asylums. There is certainly no change in relationship to the feeling against asylums and against certification. With the more educated the dread of the transmission of insanity is very great, but if the malady is called by any other name and treated by other than alienist physicians people are satisfied.

Statistics are dry bones, but one must make use of some of them. On January 1st, 1906, there were 121,976 certified patients in England, this being an increase of 2,150 on the previous year, the rate of increase being less than that of the average for the former five and ten years.

The decrease was most in the private patients. Nowadays fewer insane patients are retained in workhouses; fifty years ago half of the pauper lunatics were in workhouses, now only a small number are detained there. The chief increase among the insane is seen in the metropolitan area. The capital attracts the weak as well as the strong.

The increase is shown by my tables to be very large in fifty years. In 1859 there were in England and Wales 36,762 certified insane persons. The increase in that time in proportion to the general population has been 231 per

cent., while the increase of the population has only been 75.4 per cent. In 1906 there was 1 lunatic to 283 sane persons, the proportion being 35.31 per 10,000 of population, whereas in 1859 it was only 18.64. I regret to say the recovery-rate has not increased in any way proportionate to the increased humanity of the treatment.

In Scotland as in England there is an increase, generally of the poor insane, though here too there has been a reduced rate of increase recently. The wealthy insane in Scotland are fewer in number as far as certification is concerned. In Scotland a very large number of poor patients are boarded out with peasants. This form of treatment seems more suitable for the careful and religious-minded Scot than for his English and Irish brothers.

In England and Scotland as well as in Ireland there is considerable increase among the general paralytics. The special report of the Irish Commissioners sums up the general result of their investigations as follows:—The increase in the number of the certified insane depends chiefly on accumulation, and is more apparent than real, being due to the fact that the patients now live longer than they did, in and out of asylums; to the withdrawal of a large number of quiet harmless patients from their village homes and from the workhouses to fill the asylums. The returns show that the large number of healthy men and women who emigrate leave a very feeble residuum which provides a large number of feeble-minded and insane.

Again, a large number of insane patients are repatriated from America, and thus add to the numbers in Irish asylums.

It is interesting to remark that of those who emigrate to America a larger number of Irish emigrants become insane than emigrants from other countries. In Ireland the proportion of insane in quiet secluded villages is greater than might have been expected, but this is due to the stronger having left.

Dr. Mott so very forcibly expresses his opinion as to the general pathology of insanity, that I will quote in part from a lecture of his:

> A pathology which only considers the macroscopical and microscopical anatomy is useless; there must be a correlation of the clinical and psychological symptoms with the morbid, physical, chemical, and structural changes of the organs and tissues of the body, particularly of the brain.
>
> No one with practical experience of insanity can come to any other conclusion than that the majority of the people who become insane suffer because there is an inborn tendency in their nature.

General Conclusions.

Though there is undoubtedly a great increase in the numbers of the insane, it does not follow that there is any ground for fear that the race is rapidly degenerating. There is increase in general paralysis of the insane, and also of those suffering from terminal dementia. There is doubtless a growing nervousness which means less ability to withstand the strains of life, but it appears to me that the indication is rather to do all we can—not very much, perhaps—to reduce these strains and thus prevent mental breakdowns.

I believe great good may follow a special receiving hospital for London such as at present is in working order in Glasgow. This hospital would sift out the acute, presumably curable patients and prevent many being sent to asylums. I do not think very much will be gained by a special staff with only knowledge of general medicine and pathology. Let as much study as possible be followed with the knowledge that in certain diseases like general paralysis of the insane a definite cause will be traced, and then we may be able to do more to arrest the decay induced by this disease. There are certain other forms of insanity allied to definite bodily states which may be studied with useful effect in a general or special hospital; but still, as I have been saying, so much so-called insanity depends on the patient being out of harmony rather than out of health, that supervision and general measures will still be found more efficient than elaborate prescriptions.

The late Mr. James Considine, of Rush, Dublin, formerly H.M. Consul in Majorca, left £100 to the Salamanca General Hospital. £50 to the Weymouth Eye Hospital, and £25 to the Chief Hospital in Calais.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

RECURRENT TORSION OF THE SPERMATIC CORD.

In the British Medical Journal of April 8th, 1893, I published a case of torsion of the spermatic cord, which I relieved by untwisting. This appears to have been the first instance in which this treatment was applied. Since then I have had under my care 2 cases in which recurrent torsion of the cord has occurred.

Case I.

In the course of about three years I was sent for as many times to see a schoolboy, who suffered from a stiff ankle which necessitated the use of a crutch, on account of sudden painful swelling of the right testicle. On each occasion there was some swelling of the testis and tenderness of the cord immediately above it, but I was never able to detect any swelling of the cord. The swelling subsided in a few hours. The only explanation of the attacks was that a slight temporary twist of the cord occurred and that this relieved itself before my arrival. The twist might have been induced by the rotation of the body caused by the use of one crutch. The patient is now about 28 years of age, and for ten years has had no recurrence. He has ceased to use a crutch.

Case II.

When 15 years of age this patient thought he bruised his right testicle in learning to ride a bicycle. The testis remained swollen a week. He is now 25, and during the past ten years the testicle has swelled about three times a year, generally after unusual exercise. He has never sought medical advice. On December 26th, 1906, he romped about more than usual, and when he got up next day noticed some swelling of the right testicle. As this got worse during the day and the attack was unusually severe, he consulted me at 9 p.m. on December 27th. I found the right testis considerably swollen and tender. There was also distinct tenderness of the cord as high as the external abdominal ring. He complained of pain in the lower abdomen, but was not sick and had no rise of temperature. The epididymis lay in its usual position. I was able to twist the testis two half-turns to the left, and immediately the patient felt relieved. Next morning the testis was normal. This appears to have been a case of recurrent torsion of the testis which previously had always relieved itself. I advised the man if he got any further recurrence to have the testis sutured in its normal position.

Bedford. W. Gifford Nash, F.R.C.S.

LUPUS VULGARIS OF LONG DURATION: IODOFORM INJECTIONS: RAPID RECOVERY.

The patient whose case is described here was shown at the Edinburgh Medico-Chirurgical Society, on November 7th, 1906.

In the family history of the patient in this case, a woman aged 29, there is nothing material. Her lupus began on the left cheek when she was between 15 and 16 years of age, and was then called "eczema." Almost simultaneously it appeared on the right pinna, and at the angle of the jaw on the right side. So far as she recollects no treatment was adopted for some years. When she was 21 she consulted the late Dr. Stewart Stirling, and was under his care from 1898 to 1902. He cauterized the spot and tried a number of different ointments without benefit, and seems from the prescriptions to have tried all drugs which have ever had a reputation in the disease.

In July, 1904, on the advice of Dr. Norman Walker, she commenced a course of Finsen lamp treatment, which she continued for twelve months. The lupus on the left cheek improved somewhat, but the right ear and cheek were unaffected. In July, 1905, she discontinued radiotherapy, partly because she felt that "it took a lot out of her," but mainly because of family circumstances.

On August 9th, 1906, or rather more than a year later, her statement was that the disease was worse than it had ever been, any benefit she had received from the lamp having quite passed off. She was dyspeptic, looked ill, and had lost 1st. in weight during the preceding

twelve months. She had a slight cough, but nothing was discovered in the lungs; also swelling and pain over the third and fourth right costal cartilages. These symptoms have now disappeared. There was a ragged triangular ulcer on the left side of the nose, a chain of smaller circular ulcers with unhealthy scar tissue intervening joined this to a fresh extending ulcer over the left malar. Numerous small pits were at the margin of the affected area, passing upwards to the lower eyelid. The lobe and helix of the right ear were ulcerated on both sides (and the resulting deformity can still be seen). Small ulcers extended up the cheek in front of the tragus. A large ulcer ¾ in. by ½ in. was situated over the angle of the jaw on the right side, and extended upwards in a deep fissure between the concha and mastoid. The surrounding tissue was reddish-brown in colour, thickened and indurated, beyond which were scattered little vesicles. On scraping off the tops of these, sharply-punched little red holes were seen. The diseased areas were extending and covered with crusts. The treatment consisted in an endeavour to restore her appetite and digestion, which even now is not very satisfactory; although she has gained at least 6 lb. in weight, she is still 8 or 9 lb. under weight. The scabs were washed off with hot water. Those which would not come off were removed with a spoon or pulled off with forceps. No violence was used, and I endeavoured not to cause bleeding. When thoroughly freed from scabs and discharge, and dried, thin pieces of cotton-wool soaked in a 5 per cent. solution of cocaine were applied to the ulcers for a few minutes. On removing these, thin films of cotton-wool soaked in a 10-volume solution of peroxide of hydrogen were left on, and kept in position by touching the edges with collodion. Every second day she received an intravenous injection of 15 minims of an ethereal solution of iodoform plus liq. paraffin. I examined the discharges microscopically, and failed to find tubercle bacilli, but this is a common experience. A test injection of Koch's old tuberculin was followed by a rather violent reaction. Now, if the local application of peroxide of hydrogen can heal a case of lupus vulgaris of 13 years' standing, when the Finsen light and other approved methods had failed, then lupus is not the serious malady it is considered. No one, I venture to think, would suggest this. If this is admitted, we are then left with the conclusion that the intravenous injection of an ethereal solution of iodoform has played an important part in the recovery. I have long desired to test my method of treating phthisis in a case of lupus, for it appeared to me that if an ethereal solution of iodoform, intravenously injected, was equal to arresting pulmonary tuberculosis, it should be of value in lupus. As I have said, the treatment was begun on August 9th: she was quite healed in every part by September 18th—that is, in the short period of forty days.

THOMAS W. DEWAR, M.D., F.R.C.P.Edin., F.R.S.E.
Dunblane

THE TREATMENT OF SCABIES BY BALSAM OF PERU.

THE treatment of scabies in military hospitals is disappointing. The average detention in hospital for the disease, and for the treatment of the dermatitis which usually results from the vigorous application of the preparations of sulphur, is seldom under fourteen days. There is a good deal of difficulty in deciding as to the perfect cure of the patient and as to his fitness to be discharged from hospital. The number of days which these healthy men abide in hospital and the labour and dirt involved in their treatment are also worth considering. In the military hospital at Berlin and in the Bavarian army cases of scabies are merely detained for the day in the sick inspection room at their barracks, and are thoroughly rubbed with pure balsam of Peru, which is applied after a hot bath and a plentiful application of soap. It has never been heard that the disease has spread in consequence of the non-isolation of these cases. This treatment used to be carried out in the Italian army, but has been discontinued on account of the expense.

From December, 1905, to December, 1906, every case of scabies in the Colchester garrison has been treated by this remedy. They numbered 51. The patient should lie in a very hot bath for at least half an hour, and be thoroughly scrubbed with flannel and ordinary soap by a reliable orderly. Particular attention should be paid to parts which are obviously much affected by the disease. He is then quickly dried and varnished all over with a mixture of balsam of Peru 3 oz. and glycerine 1 oz. This application—best applied by a soft, worn nailbrush—is well rubbed into the skin. The above quantity will be found sufficient to varnish an ordinary-sized man. He then puts on hospital clothing, the cotton shirt being worn next the skin. His ordinary clothing and his barrack bedding are sent to be disinfected. In very bad cases it is advisable to give a second rubbing to the worst places next morning. A supply of cotton drawers and undershirts would be very useful for these cases and would save soiling of the hospital clothing.

No patient who has been properly varnished has ever reported that his next night's sleep has been disturbed by itching; and if the remedy has been faithfully applied according to the above instruction, that is the end of the case. If it were possible to disinfect the patient's uniform and bedding while he is being rubbed, there would be no necessity to admit him to hospital at all. All these cases come up for observation once a week, for three weeks. The average detention in hospital has been about three days.

At the present time, it is a little uncertain whether the ova are killed at the same time the parent undoubtedly is, namely, within the first few hours. For this reason it is thought advisable to prohibit bathing for seven days. Further observation may show that it is possible to reduce this period to three or four days.

For use on transports, and in large out-patient departments of civil hospitals, this treatment should be most valuable. Balsam of Peru can be purchased at 4s. 6d. per lb. One shilling would therefore cover the cost of the whole treatment of one patient apart from baths and disinfection of clothing.

In military practice, the great features of this method as compared with preparations of sulphur are (1) the possibility of returning men to their duty after a few hours' detention in hospital; (2) the absolute certainty that the acarus has been killed; (3) the ability to dispense with a ward which has to be kept for the treatment of these cases. This treatment was introduced at Colchester by Lieutenant-Colonel S. C. B. Robinson, R.A.M.C.

F. J. W. PORTER,
Major, R.A.M.C.
Colchester.

A SPIRILLOSIS AND A HAEMATOZOAL DISEASE OF DOMESTIC FOWLS IN THE ANGLO-EGYPTIAN SOUDAN.

PRELIMINARY NOTE.

THE great interest which is at present being taken in tickborne diseases, and their importance both in veterinary and human pathology, must be my justification for publishing a short preliminary note on two diseases of this class affecting domestic fowls which have come under observation in Khartoum.

The first is a spirillosis, to all appearance identical both as regards symptoms and parasite with the spirillary septicaemia first described by Marchoux and Salimbeni [1] in Brazil and on which much work has been done by Levaditi,[2] both alone and in conjunction with Manouelian,[3] by Borrel [4] and by several other observers. Its occurrence in the Soudan is of special interest because so far as I know it has not hitherto been recorded, save as a laboratory disease, outside Brazil and the Argentine, while the only other similar disease in birds is the spirillosis of geese in Transcaucasia described by Sakharoff [5] in 1891. Another fact worth noting is that in the first instance I found the disease in fowls which had been recently imported from Italy and which had embarked for Port Soudan at the port of Genoa. It is just possible that these birds during their transit to the Soudan may have acquired infection from being attacked by infected ticks brought on shipboard from South American ports. We know that ticks which have fed on infected fowls may remain capable of transmitting the disease for at least five months. On the other hand this spirillosis may really be endemic in Khartoum, where Argas ticks are exceedingly common. One observation favours this hypothesis, for it has been noted that a Soudanese hen which had been

[1] *Annales de l'Institut Pasteur*, vol. xxvi., September, 1905, p. 569.
[2] Ibid., vol. xxi., March, 1907, p. 173. *Comptes Rendus de la Soc. Biol.*, vol. lx., April 1906, p. 695.
[3] *Annales de l'Institut Pasteur*, vol. xx., July, 1906, p. 593.
[4] *Comptes Rendus de la Soc. Biol.*, vol. lx., January, 1906, p. 138; Ibid., March, 1906, p. 54.
[5] *Annales de l'Institut Pasteur*, vol. v., 1891, p. 166.

introduced by mistake into the infected fowlhouse exhibited spirilla in the blood two days after being placed in its new surroundings. Now, Marchoux and Salimbeni, as well as Levaditi, give the incubation period *after tick bite* as five or six days. The fowl had not been examined previous to its exposure to infection, so that it is possible that it was already a victim of a disease not hitherto recognized as attacking fowls in the Soudan. This is a point requiring early elucidation. The condition is now being studied, as a good deal of work is required before one can definitely say that the organism in question is really *S. gallinarum* (Laveran) and the disease the same as that commonly called Brazilian septicaemia.

The second disease I so far believe to be a true piroplasmosis. It seems to be common amongst the fowls kept for sale in the Khartoum market, is certainly often fatal, and the unpigmented intracorpuscular parasites strongly suggest piroplasmata. They are best seen and studied when the blood is stained with a mixture of borrel blue and eosin, a process of coloration which brings out the ruby-red colour of the chromatin much better than does the Leishman or the Giemsa method. The symptoms of the disease are not at all unlike those of spirillosis. There is the same somnolent aspect, there is often diarrhoea, the feathers are ruffled, there is emaciation, weakness, and anaemia. The temperature curve is, however, probably quite different, and *post mortem* there is no enlargement of the spleen or liver; and there appears to be a certain amount of renal congestion. The blood infection, apparently entirely intracorpuscular, may be very severe, and there is no doubt of its protozoal nature. Larvae of Argas ticks have been found on the infected fowls, and, as has been said, it is probable the disease is a true piroplasmosis. If so, I believe, it is the first to be observed in birds. At a later date I hope to fully describe the parasite, the blood conditions, and the symptoms of a disease which is of very considerable importance in a land where there is a large trade in fowls and where these birds and their eggs form specially valuable articles of diet—as, indeed, is the case in most tropical countries.

I have since learned that cases of fowl spirillosis are being reported from various countries, and that the disease has been observed in Egypt, though apparently it has not been recorded in the literature.

Andrew Balfour, M.D., B.Sc., F.R.C.P.Ed., D.P.H.Camb., Director, Wellcome Research Laboratory, Gordon College, Khartoum.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

STOCKPORT CORPORATION HOSPITALS.

PERSISTENT DEEP CERVICAL ABSCESS AND THREATENED MASTOID SUPPURATION TREATED BY ANTI-STREPTOCOCCIC SERUM.

(By Meredith Young, M.D., M.S., D.P.H., Medical Superintendent.)

A boy, aged 3 years, was admitted for scarlet fever on August 27th, 1906. He was anaemic, ill-nourished, and feeble. The attack of scarlet fever was prolonged by diphtheria, chiefly nasal, followed by albuminuria.

On September 3rd the temperature rose to 101.6°, and the cervical glands on both sides were swollen and tender. Prompt applications of glycerine of belladonna with heat and firm bandaging to secure rest sufficed to reduce these on the right side, but on the left the glands continued to remain enlarged and others became swollen, until it finally appeared that almost every gland on that side was involved. The temperature ranged from 97° to 103°. On September 8th, though fluctuation was only doubtfully present, an incision was made about ½ in. in depth and 1½ in. long, as nearly as possible on the line of the external jugular vein. No pus was obtained, and as no anaesthetic had been given the wound was left to be fomented, as it has frequently happened to the writer that after such a superficial incision has been made and antiseptic fomentations applied for twenty-four hours pus has made its appearance. However, after two days no such happy result followed; and as the swelling had, if anything, increased, chloroform was administered, the incision enlarged and a careful dissection made, pus being struck below the deep fascia. Nearly 4 oz. of thick pus was removed, and a few small masses of disintegrated gland substance. The cavity was well scraped, cleansed, and drained. The wound continued to discharge pus freely for two weeks despite the most careful local and constitutional treatment; the cavity was again scraped and swabbed with pure izal. For two more weeks the discharge continued unabated, and the child was reduced to little more than a tallow-skinned skeleton. The pus was several times examined for tubercle bacilli, but always with a negative result, streptococci being alone present. Pain was now noticed on the slightest movement involving the head and neck, and it was suspected that the abscess had eaten its way to the vertebrae or base of the skull: the most careful probing, however, on several occasions proved this suspicion groundless. Various kinds of dressing were devised and constitutional treatment persevered with, but the purulent discharge still went on for thirty eight days. There appeared to be nothing left but the injection of antistreptococcic serum, but as the writer had, some four or five years ago, unexpected and disastrous results from it he feared to employ it again. Inquiries, however, assured the writer that no such bad results were to be feared with the new Aronson's serum, which was accordingly procured, and 10 c.cm. were administered on October 17th, followed by 10 c.cm. on the following day; on the evening after this second injection the child was almost covered with urticarial blotches, but there was no pain and no elevation of temperature. This rash had completely vanished next morning and the discharge from the abscess was much less. No serum was administered on that day, but next morning, as the discharge had increased somewhat, 20 c.cm. of serum were injected. Next day there were but a few drops of pus on the dressings, and those were the last that were seen. The cavity was washed out with weak perchloride, drainage tube removed, and a simple dressing firmly applied; in four days the wound was absolutely united and all dressings abandoned except a little piece of lint with boracic ointment to prevent the scab detaching.

On October 31st the child complained of earache, and there was some ill-defined mastoid tenderness with a very slight rise of temperature; as there had been otorrhoea for some weeks it was feared that the mastoid antrum had become invaded. Glycerine of belladonna and hot applications locally were ordered. On November 2nd, as the temperature was now 101° and the mastoid tenderness was slightly worse, 10 c.cm. of Aronson's serum were given: the temperature dropped the same evening to 99°, but ran up next morning to 103°: 10 c.cm. more of the serum were at once given: the temperature fell to 99°, the local tenderness vanished, the ear discharge lessened, and in five days everything had cleared up; the temperature remained normal, the otorrhoea completely vanished, and the child made an uninterrupted recovery.

It appears, therefore, that in this case the antistreptococcic serum put an end to a long-standing cervical abscess in a manner little short of wonderful, whilst later on it cut short or prevented a septic development in the mastoid cells, and in both cases without creating any ill effects.

Medical Teaching in Paris.—The Association d'Enseignement Médical des Hôpitaux de Paris is the name of a newly founded organization which proposes to complete the official scheme of instruction of the Paris Medical Faculty. The initiator of the movement is M. Lucas-Championnière, and among its prominent supporters are Drs. Babinski, Variot, Hirtz, Béclère, Darier, and Bazy. The General Secretary is Dr. Souques, the Assistant Secretary is Dr. Labey. About forty hospital physicians, surgeons and obstetricians have joined. The object of the Association is to arrange a system of free teaching in the hospitals. There will also be a central establishment where courses and lectures will be given by young physicians and surgeons, and by men of medical or scientific distinction holding no hospital appointment or official position in the Faculty.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BATH AND BRISTOL BRANCH.

Bath, February 27th, 1907.

D. S. DAVIES, M.D., President, in the Chair.

The Early Diagnosis of Cancer of the Stomach.—Professor OSLER, F.R.S., in opening a discussion on this subject, laid down three preliminary propositions: (1) Cancer of the stomach was the most common of all forms of malignant disease. According to the just issued report of the Registrar-General, there were for the quinquennial period 1901-1905, 24,750 deaths from cancer of the stomach against 19,675 from cancer of the uterus and 14,418 from cancer of the breast. To these three groups a very considerable proportion of the 19,380 cases of cancer of the liver and gall bladder should be added. (2) So far as was known at present, there was but one method of treatment in cancer—namely, early and complete extirpation. The results of later years in cancer of the breast had furnished the one bright spot in a very sombre picture. (3) The work of surgeons justified the belief that what had been done in the case of the breast was possible in the stomach. In support of this figures were quoted from Mayo Robson, Paterson, and the brothers Mayo, both of total and partial gastrectomies. The great difficulty was in the early recognition of the disease. Professor Osler then referred to the evidences of cancer of the stomach, grouping them in four divisions: *the general symptoms*, such as loss of weight, loss of strength, and anaemia; *local symptoms*, loss of appetite, forms of dyspepsia, nausea, vomiting, pain, and the three types of bleeding—oozing, active and occult; *the local examination*, dividing the cases into three groups—those in which the examination was negative, those which presented simple atony and dilatation of the stomach, and those with tumour. He referred particularly to the very large proportion of cases with tumour visible or palpable, 238 in a series of 300 cases. And, lastly, *the examination of the stomach contents:* blood, fragments of mucosa, persistent absence of free hydrochloric acid, the presence of lactic acid and the presence of the Opler-Boas bacillus. Except when a tumour was present, the features were notoriously uncertain. No one or no two are characteristic, but from a combination of several a reasonable diagnosis may be reached. The following were considered among the more important points: The onset in a man at the cancer age, 40 to 60, of a dyspepsia, associated with anorexia, pain and vomiting, which resisted treatment for three months. Stress was laid upon the importance of the steady loss in weight, and on the examination of the stools and of the vomitus for occult haemorrhage, which was present in a much larger percentage of cases of cancer than of ulcer. The second important feature was the progressive anaemia, upon the characters of which, and the distinction between it and the primary pernicious anaemia he dwelt at length; and lastly, stress was laid on the absence in the stomach contents of free hydrochloric acid, and the presence in them of the lactic acids and of the Opler Boas bacilli. A plea was made for the more careful study by the medical man of every case of dyspepsia in a man or woman in the cancer age. He urged the more frequent use of the stomach tube and of test meals. And lastly, he spoke of certain necessary qualifications of the surgeon for successful gastric work. he must be a good pathologist, and able to distinguish between ulcer and carcinoma, and even able to make a shrewd guess at an atypical carcinoma. He should be a deft and rapid operator with good technique. Professor Osler regretted that conditions in this country did not permit young surgeons to acquire the suitable technique in gastro-intestinal work from operations upon animals. In consequence, they had to get their experience often a slow, painful affair in the course of their ordinary operative work. In doubtful cases he had no hesitation in urging exploratory operation. He agreed that often the question was one full of difficulty, requiring a keen clinical judgement; but he felt that with an accurate study of each individual case, and an improved technique on the part of the surgeons, the results would steadily improve. And it was not only in the very early stages that good results had been obtained. Mr. Bush of Bristol had shown him photographs of two very large tumours which he had removed from patients who were still alive a year or more after the operation. Dr. MICHELL CLARKE, after expressing the great pleasure with which he had listened to Professor Osler's able and lucid address, said that in going through the notes of his hospital cases he was rather surprised to find that, although cancer of the stomach was so common, patients admitted to hospital with this disease amounted to only about 1 per cent. of all cases. He thought that the fault that the diagnosis was not made earlier often lay with the patient, for in his cases the average time from the appearance of the symptoms to admittance into hospital was five months. No doubt this was often due to the symptoms being regarded as due to indigestion, and therefore of no serious importance. A history of previous dyspepsia of any duration was absent in two-thirds of his cases. If dyspepsia did precede cancer, it was rarely of the acid variety. Gastric ulcer as a precursor of cancer was also in his experience very rare. Anaemia did not appear such an early and marked sign as stated by some authors. Cases of cancer of the cardiac end of the stomach were, perhaps, the most difficult to diagnose early, and there was sometimes great difficulty of distinction from cancer in cases—which were, however, not common—of dilatation of the stomach with absence of free HCl, and anaemia in middle-aged or elderly people. He emphasized the importance of analysis of the gastric contents in cases of obstinate dyspepsia. To be of value in diagnosis of cancer HCl must be found persistently absent on repeated examination. Inflation of the stomach was sometimes of value in bringing into prominence a small previously doubtful tumour. When free HCl was persistently absent he had generally found an excess of lactic (sometimes butyric) acid present. Microscopic quantities of blood were also of value in diagnosis. Dr. CAVE said, using the term "early" in the sense of the surgeon or pathologist, he doubted the possibility of the "early" diagnosis of cancer of the stomach, except under rare circumstances, by an exploratory incision. Their power of early diagnosis was very little greater than that of their fathers, twenty-five years ago, and there seemed little prospect of any real advance until they knew more of the natural history of cancerous growths and obtained a specific reaction in relation to their biological character; he instanced the advance gained by the serum reaction in typhoid fever and the detection of the tubercle bacillus. He referred to a case of persistent absence of free HCl in the stomach of a neurotic female patient who was not cancerous. His own experience in surgical procedure was almost confined to the operations of gastrostomy and gastro-enterostomy, and he had never yet seen a case where excision was practicable and successfully carried out. The only advance within his recollection in dealing with cancer of the stomach lay in the increased safety and success of palliative surgical measures. Dr. H. WALDO thought that, roughly speaking, one of the earliest symptoms was dyspepsia, the distension accompanying which was of so persistent a character that no dieting or drugs influenced it. Another useful sign was enlarged glands above the clavicle; he had found this condition to be present fairly early in some cases. To make an early diagnosis of cancer necessitated the exclusion of some other diseases, and he thought one of these was syphilis of the stomach, which he believed occurred much oftener than was usually thought, and the treatment of which was so satisfactory. Professor Osler had reminded them that the blood condition was a means of differentiating between cancer and pernicious anaemia. After diagnosing a case of pernicious anaemia, one often felt that it might turn out to be one of cancer. He thanked Professor Osler for his address, which he thought would be the means of much good. Dr. C. J. WARREN said the indications of the existence of cancer of the stomach were of two main kinds, first the traditional or "classic" symptoms pain, vomiting, and so forth, secondly, the information derived from modern methods of precision. The moral of Professor Osler's address appeared to be that the latter deserved more attention than they at present received, and were often essential to a correct diagnosis. A recently published series of cases analysed by Dr. H. Colwell showed that pain and vomiting combined were the commonest initial symptoms, but these might point to a number of different

maladies. Dr. Whitby quoted the opinion of Dr. W. S. Hedley to the effect that, though the diagnosis of cancer of the stomach by means of the *x* rays was at present a matter of difficulty, yet, in view of what had been achieved by their aid in the diagnosis of lung disease, he considered it theoretically possible. The speaker alluded to some recent experiments by Drs. Lazarus-Barlow, Douglas, and Colwell, relative to the treatment of rabbits with cancer serums and the testing of human blood with the antiserums thus obtained, with a view to determining a specific cancer reaction. He regretted the negative result of these experiments, and expressed a hope that some such test might ultimately be discovered, although the present opinion of investigators did not much favour the existence of analogy between the nature of cancer and ordinary infective diseases. Dr. WALKER HALL said that the routine examination as outlined by Professor Osler of all cases of chronic dyspepsia and suspected early cancer ought not to be limited to hospitals, but might with advantage be extended to everyday practice. He suggested that the stomach should be washed out before the test meal was given, and the extent of the alkalinity determined and compared with the condition of the contents after the test meal. He also expressed the opinion that the increase in the urinary extractive-nitrogen and the decrease in the urea nitrogen, when observed on three or more successive days, would yield helpful indications. Mr. C. E. S. FLEMMING said that general practitioners were accused by one of the speakers of being too passive, but this was not at all true, nor none more than they recognized the diagnostic difficulties of the disease. They saw the very beginning of these cases before consultants or surgeons did, and for them the difficulties were greatest. They were naturally most anxious to learn anything that might help them to form a more exact diagnosis; they would try to profit by all they had heard that night, and when next they had a doubtful case they would marshall all the arguments for the one side and for the other, but still they would require Professor Osler's judicial mind to settle the differences between the contending pathological parties. At any rate, the Professor would have stimulated them to make greater efforts in the future than they had in the past. One difficulty the speaker wished to mention was that of differentiating between an ulcer with adhesions and carcinoma. In practice the exact diagnosis was not so essential, for in either case an operation ought to be done—a gastro-enterostomy would cure the former condition and give great relief to the latter. He also referred to the marked anorexia that at times preceded other symptoms in cancer of the stomach—an anorexia that apparently had little to account for it. Mr. J. R. BENSON said the symptoms of cancer of the stomach were really late symptoms, and that if operative treatment—which Professor Osler had said was the only real treatment at present—was to be given a fair chance, still earlier symptoms must be discovered. He pointed out that absence of HCl was in itself a comparatively late sign. Blood, too, was of necessity, as a rule, late, as also were well-defined pain, vomiting, or tumour. To some extent he was pessimistic, because, while admitting that operation promised brilliant things, no one could tell them when to operate; and if they waited for the symptoms mentioned, they were practically always too late for real cure. On the other hand, whilst he agreed with Dr. Cave as to the at present impossibility of diagnosing really early cancer of the stomach, he could not share his pessimism as to the results of surgery. He pointed out that the very favourable conditions usually present, such as the extreme slowness of extension of many growths, the marked relief brought about by palliative surgery, such as gastro-enterostomy; the site of election of the growths—namely, at the pyloric end of the stomach, nearer the upper curvature, the curiously-favourable arrangement of the lymphatics of that area enabling one to remove the pyloric stomach and glands without extensive interference with other parts—all these and other favourable facts promised great results from early surgery; and that, consequently, though the present was dark, careful investigation should make the future hopeful of brilliant results. Dr. Osler's first proposition clearly showed how very urgent the need was for concerted and continued study of symptoms, and especially for early surgical interference. He accentuated Mr. Flemming's remarks upon sudden and marked anorexia in a previously healthy individual in the danger age, and added that in the few cases that had come before him there was also present an intense anxiety as to the mischief and the coming discomfort. He called attention to the early disagreeable condition of the stomach contents which frequently progressed to marked offensiveness. He hoped that in the very near future they would more clearly appreciate the early conditions and give surgery the chance it deserved, feeling sure that the results would be as hopeful as that of surgical operations for similar disease elsewhere. Dr. EDGEWORTH cited cases in which the diagnosis of cancer of the stomach presented unusual difficulties. For instance, the first symptom might be a copious haematemesis, and then if no tumour were present the case was liable to be confounded with haematemesis from atheroma. A history, for example, of previous haemoptysis might give a clue, but judgement had often to be suspended for a time. Again, a displaced spleen might overlay the stomach and simulate a gastric carcinoma, as happened in a case operated on by Mr. Bush at the speaker's suggestion. Lastly, exceptional cases of Addison's disease might present no pigmentation, and the weakness, anaemia, and repeated vomiting give rise to the idea that they suffered from gastric carcinoma. Mr. J. PAUL BUSH, C.M.G., thought the surgeons had little to say except to agree entirely with the able address given by Professor Osler, as he had advocated so strongly the view that the patient should be operated upon at the earliest possible date. He took exception to the remarks made by Dr. Cave, and maintained that the means of making a diagnosis, as well as the operative treatment, had vastly improved during the last few years. Mr. FORBES FRASER said that Professor Osler had thrown the responsibility of the final diagnosis of early malignant disease of the stomach on the surgeon, who was expected to determine the nature of the tumour exposed to view at an exploratory operation. From several cases Mr. Fraser had seen operated upon it appeared to him to be an extremly difficult matter to distinguish between cancer of the stomach and the inflammatory mass which surrounds a chronic ulcer; and in the literature of the subject one found that surgeons of the greatest experience and skill had confused those conditions. To quote an analogous condition found in the bowel, he did a colotomy over two years ago in a lady who was suffering from intestinal obstruction due to what was to all appearances a cancer of the descending colon; the patient was now alive and well, and the tumour has disappeared. As the distinction between those conditions in the stomach meant to the patient the difference between a simple and safe gastro-enterostomy and a much more severe and dangerous gastrectomy, he thought that every method of investigation should be employed by the physician prior to operation, and that the diagnosis of the disease should not be left to the surgeon. Dr. LLEWELLYN JONES referred to the fact that gastric disturbances were almost always associated with cutaneous tenderness of the segmentally-related areas. He wished to know whether in Professor Osler's experience the presence of such hyperaesthetic areas had proved of practical utility in localizing the seat of an early carcinoma of the stomach, inasmuch as Head had stated that the seventh dorsal segmental area showed tenderness in affections of the cardiac, and the ninth of the pyloric, end of the stomach, and that the former area was more particularly involved in cases attended by vomiting. Dr. EDGEWORTH, Dr. CHARLES, and Dr. STACK also joined in the discussion. In closing the discussion, Dr. OSLER agreed with Dr. Michell Clarke that in hospital practice one usually saw cases of cancer of the stomach too late, and he referred to the fact that among 300 consecutive cases in his series in 238 the tumour was present. He had little hope in finding any specific reaction for cancer, as suggested by Dr. Cave, but he thought that they could do a great deal by the more careful and systematic study of individual cases. In connexion with Dr. Waldo's remarks on syphilis of the stomach, he also had had his attention called to the much greater frequency of this condition than was usually supposed. He agreed with Mr. Benson as to the remarkable relief obtained in certain cases by gastro-enterostomy, but that was not the group of cases to which he wished to call attention.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

Sir EDGCOMBE VENNING, F.R.C.S., Vice-President, in the Chair.

Monday, March 25th, 1907.

OPERATIVE TREATMENT OF ASCITES.

MR. LAURENCE JONES read a paper on the surgical treatment of the ascites of hepatic cirrhosis. The actual cause of ascites occurring with hepatic cirrhosis was still doubtful; both portal obstruction and toxaemia seemed to play some part, and it was wisest to suggest that obstruction of the portal vein was only able to produce ascites when a certain grade of toxaemia was present, but that the toxaemia alone was unable to reproduce the effusion if the portal obstruction was relieved by the formation of fresh porto-caval anastomoses. Chronic peritonitis, although often associated with ascites, was not necessarily the primary cause. The patient most suitable for operative treatment was one who had survived the tapping of a fluid shown to be of mechanical rather than of inflammatory origin, whose liver was in the hypertrophic stage, who was still fairly young, and whose symptoms were more those of toxaemia. The common object of all operations was to increase the communications between the portal and caval systems: the omentum was the portal area usually selected, and it was sutured to the abdominal wall outside the peritoneum, as in the operations of Schiazzi, Bunge, Pascale, and others, or inside the peritoneum as in the original operation of Monson. The operation as devised by Monson seemed still the best. Various additions, such as hepatopexy and splenopexy had been made to simple fixation of the omentum or had been performed where the latter had failed or had been impossible. The operation certainly relieved the patient in many cases of the ascites and thereby prolonged life in comfort for some years; occasionally the condition of the liver itself appeared to have improved, but that effect was not claimed for the operation, and it was not possible to explain any such result. About one-third of the patients died within one month of the operation, about one-third were definitely improved and their lives were prolonged for some years, and about one-third were improved but slightly or not at all. The death-rate due to the operation should not be more than 10 per cent.

Mr. W. G. SPENCER said that the mortality actually arising in connexion with the operative procedure adopted by him was *nil*; the mortality depended not on the operation but on the case.

Dr. DE HAVILLAND HALL advised the investigation of the possibility of syphilis in all cases of ascites, especially in young subjects.

Dr. PARKES WEBER pointed out that if in cases of ascites with fever, the fever promptly disappeared with specific treatment, then the diagnosis was in favour of syphilis.

Mr. A. E. BARKER said that to secure adhesions he made a 2 in. incision, stripped off the peritoneum, and formed a pocket between the fascia transversalis and the peritoneum into which the omentum was tucked.

Mr. WARING considered that the best time for operating was as early as possible.

Dr. JOHN BROADBENT urged the importance of a proper choice of patients for operation.

After Dr. POYNTON had spoken, Mr. L. JONES replied.

CLINICAL SOCIETY OF LONDON.

CLINICAL EVENING.

H. H. CLUTTON, M.A., M.C., F.R.C.S., President, in the Chair.

Friday, March 22nd, 1907.

CONGENITAL HYPERTROPHY, OR GIANT GROWTH OF FEET. THE PRESIDENT showed a girl, aged 17, with this deformity, noticed at birth, which slowly increased up to the age of 14. During the last three years the growth had been much more rapid. The feet were enormous, but fairly equal in size, the distal parts being rather larger than the proximal. The whole left lower extremity was also enlarged and nearly 3 in. longer than the other limb. The President proposed to amputate the shorter limb by a "Chopart" operation, the longer one by a "Syme."

RUPTURED PANCREATIC CYST.

MR. F. W. FORBES ROSS showed a male, aged 71, in whom a pancreatic cyst had ruptured a fortnight after an operation for rectal prolapse. When opened from the left ilio-lumbar region the resulting abscess contained 2½ quarts of pus; the subsequent discharge gave the reactions of pancreatic secretion. Dilute hydrochloric acid administered by the mouth caused a great increase of the secretion.

PULMONARY (?) HYPERTROPHIC OSTEO-ARTHROPATHY.

Dr. H. BATTY SHAW and Mr. R. HIGHAM COOPER showed a woman, aged 21, who had always suffered from palpitation and breathlessness. For ten years past she had had pains in the legs after standing or walking; no history of acute rheumatism. She was cyanosed, and had well-marked clubbing of fingers, toes, and nose, and swellings of the bones of both legs. A systolic murmur was heard over the precordium. The lungs were free from signs of disease.

OSTEOGENESIS IMPERFECTA (? SYPHILITIC).

Dr. G. A. SUTHERLAND showed a male infant, aged 8 weeks, a first child, who, after an easy labour, had the left wrist and the left thigh and leg bones, also several ribs, broken. Mercurial treatment had been carried out, and the fractures had apparently united.

Dr. LEONARD GUTHRIE thought some of the cases, not all, were due to syphilis. He read notes of one with several fractures and a syphilitic rash. The child died, and no ensheathing callus was found *post mortem* in any of the broken bones, which were soft and could be easily cut.

Mr. W. G. SPENCER suggested that the condition might be due not to disease but to arrest of development; if so, improvement might be wrongly attributed to mercurial treatment.

Dr. SUTHERLAND, in reply, said his case was probably syphilitic; it had improved greatly under mercurial treatment.

FACIO-HYPOGLOSSAL ANASTOMOSIS FOR POST-OPERATIVE PARALYSIS.

Mr. A. H. TUBBY showed a male, aged 19, who had had a swelling opened behind the left side of the jaw, with the result that the left side of the face was paralysed, the cheek flattened, and the tongue deviated to the right. At an operation the distal ends of the facial nerve were implanted into the hypoglossal nerve laterally, and the head was kept absolutely without movement for fourteen days. Slowly the movements of the facial muscles returned, the patient could whistle, and the food no longer accumulated in the cheek. But after the withdrawal of electric stimulation for six months the movements had again become less good.

COMPLETE PARALYSIS OF GASTROCNEMIUS AND SOLEUS, WITH TALIPES CALCANEUS TREATED BY NERVE-GRAFTING.

Mr. A. H. TUBBY showed two boys, each aged 9 years, in whom the above conditions had supervened. In one case the branches to the muscles from the internal popliteal nerve were separated from that nerve and grafted by lateral implantation on to the external popliteal. After four and a half months a return of power was noted, which was still improving. In the other case there was marked talipes calcaneus with contraction of plantar fascia; the plantar fascia was first divided and the sole of the foot rectified. Later, a grafting of similar nerves on to the external popliteal was effected, which had been followed sixteen months afterwards by a partial improvement.

Mr. W. G. SPENCER thought that physicians should decide on a limit beyond which spontaneous recovery was impossible, and then call in the surgeon.

Mr. TUBBY, in reply, said distinction should be made between the direct effects of muscular paralysis and the secondary effects of contractures, and surgical measures resorted to earlier.

ACUTE THYROID SWELLING, WITH ACUTE HAEMORRHAGIC OEDEMA OF RIGHT SIDE OF PHARYNX AND LARYNX.

Dr. PARKES WEBER showed a man, aged 54, with chronic interstitial nephritis, and a blood pressure of 235 mm. When admitted to the German Hospital the thyroid gland, especially the right lobe, was enlarged, tense and tender, the neck was swollen, and there was

oedema of the right side of the larynx and pharynx. The swelling gradually subsided under scarification, local application of ice, etc.

Dr. FORSYTH thought the anatomical structure of the thyroid gland made it improbable that haemorrhage therein would produce all the symptoms described. The gland had preserved its normal shape.

Dr. WEBER, in reply, said the gland had been tense and swollen.

ENLARGEMENT OF CLAVICLE AND LOWER JAW.

Mr. H. BETHAM ROBINSON showed a boy, aged 13, with chronic inflammatory swelling of right clavicle and left side of lower jaw. The former condition had resulted from a fall against a wall, the latter had followed toothache. There was slight swelling of the right half of the thyroid. Was there relationship between it and the swellings of the bones? Mr. Robinson had found potassium iodide of service, and proposed to push it and also give some mercury.

OTHER EXHIBITS.

Dr. HARRY CAMPBELL showed a girl, aged 21, in whom there was disappearance of the subcutaneous fat above the region of the lower extremities; Mr. DONALD ARMOUR showed a woman, aged 29, married, from whom a large polycystic kidney had been removed two and a half years previously; Mr. W. G. SPENCER exhibited a woman, aged 25, who had a bilateral psoas abscess freely incised on each side, and subsequently treated for months, with the result that the sinuses were now nearly healed; Mr. A. H. TUBBY also exhibited a case of congenital dislocation of the hip; Mr. A. E. BARKER showed a woman, aged 24, with fibroid ankylosis of the lower jaw; the left masseter was also fibrous.

LIVERPOOL MEDICAL INSTITUTION.

FRANK T. PAUL, F.R.C.S., President, in the chair.

Thursday, March 14th, 1907.

NEPHRECTOMY FOR RENAL SARCOMA IN CHILDREN.

MR. K. W. MONSARRAT read a paper on two cases, with remarks on the pathology and the recent results of surgical treatment. The first was that of a boy aged 3 years, the signs of disease being haematuria and abdominal tumour. The growth removed weighed 2 lb. 6 oz. The child recovered from the operation, but died from recurrence in six months. The growth was a sarcoma containing tubules and striated muscle fibres. The second case was that of a boy aged 5 years, with abdominal tumour and haematuria. The child recovered from the operation, and remained well at the end of six months. The growth weighed 2 lb. 2 oz., and was a pure round-celled sarcoma. Mr. Monsarrat found that published records indicated the occurrence of haematuria in about a third of the cases. He presented a statistical study of 104 cases published between the years 1897 and 1905 inclusive. These records showed that the present mortality from operation was 26 per cent., and that to the number of complete recoveries a total of seven had been added during the years examined. He considered that operation was justifiable in cases which showed no evidence of metastasis. The PRESIDENT, Dr. PERCY MARSH, Mr. R. W. MURRAY, and Dr. STOOKES discussed the paper.

PLEXIFORM NEUROMA.

Mr. G. G. HAMILTON showed a patient from whom he had removed a large plexiform neuroma. There were about 62 cases on record. This one grew from the ilio-hypogastric nerve and was incorporated with the neighbouring muscle. It measured 10 by 4½ in., and showed numerous strands of nerve thickened to the size of a toothpick, and many of them coiled up into little capsules. There were very few axis cylinders present, the whole nerve being simply a mass of thickened gelatinous endoneurium. Mr. Hamilton's communication was illustrated by several lantern slides.

The pathology of the condition was discussed by Dr. E. E. GLYNN.

VARIATIONS IN THE "NORMAL TEMPERATURE."

Dr. W. CARTER read a short note on the above subject. After recalling the facts that Ogle and Liebermeister had recorded fluctuations varying from 1.8 to 2.3 Fahr. in twenty-four hours, and that Dr. Finlayson had observed that aged people in the Glasgow Workhouse Infirmary who died without any definite disease generally sank at the time when, in normal health, the body temperature was lowest, he stated that on two occasions at distant intervals he had been able by the co-operation of the matron and night nurses of the Royal Southern Hospital to see if an inversion of the ordinary periods of night and day duty affected the normal rise and fall. Each nurse, towards the end of her period of three months' night duty, took her temperature three-hourly, when not asleep in the day; but as the charts, which were shown, proved, the normal depression which took place under ordinary conditions of life at about 3 a.m., remained fairly constant even after three months of turning night into day and vice versa. It seemed, therefore, to be deeply impressed on the organism, and independent of external circumstances, so far at least as the trial of three months tended to establish the fact.

Sir JAMES BARR doubted if the records of nurses' temperatures taken by themselves could be implicitly relied upon.

A NEW ASTIGMOMETER.

Dr. K. GROSSMANN explained the mechanism of his astigmometer and demonstrated a working model. A full description of the appliance would appear in due course, illustrated by diagrams.

THE SURGERY OF WARFARE AND CATASTROPHE.

Dr. ARTHUR EVANS, in an interesting lecture illustrated by numerous lantern slides from photographs and radiographs taken during the Boer war and after the earthquake in Jamaica, drew attention to the great contrast between the conditions under which surgery was practised in modern wars and those which obtained in sudden catastrophes such as an earthquake. In the one every contingency was foreseen and provided for, and the organization was perfect beforehand, while in the other all aid had to be organized under the most appalling conditions and literally without a moment's notice.

The PRESIDENT proposed a vote of thanks to Dr. Evans for his lecture and of congratulation upon his escape from the earthquake and on the great services he had been able to render to the injured. The vote was carried with very hearty cheers.

HARVEIAN SOCIETY.—A meeting of this Society was held on March 7th, with Dr. S. P. PHILLIPS in the chair, to discuss the diagnosis and treatment of fractures in the neighbourhood of joints. Mr. WATSON CHEYNE urged that the correct setting of fractures should be assured by the use of *x* rays. If accurate apposition was found not to have been effected by the first attempt a second effort must be made to remedy the displacement, and after that if no improvement was shown the condition must be dealt with by open operation unless there was some marked contraindication. He thought no advantage was gained by waiting, and advocated the use of screws or pegs. Mr. EDMUND OWEN pointed out that when a surgeon had been treating the fracture of a joint, especially in children, and was not quite satisfied with the condition, he should trust to time. Mr. A. PEARCE GOULD contended that in fracture near a joint the favourable time for making a correct diagnosis was immediately after the injury. He deprecated delay in operating in those cases in which surgical interference was necessary. Mr. ARBUTHNOT LANE described the methods he employed in the operative treatment of fractures by wires, screws, plates, and staples. He explained why in some cases operations should be avoided, and produced numerous skiagrams of fractures near joints before and after operation. Dr. ROBERT JONES advocated the adoption of the acutely flexed position in serious fractures of the elbow joint; and after Mr. CLAYTON GREENE and Mr. T. CRISP ENGLISH had spoken, Mr. WATSON CHEYNE replied.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting at Sheffield on March 15th, Dr. E. O. CROFT (Sheffield), President, in the chair, the following were among the communications:—Mr. CUFF (Sheffield): (1) A case of ruptured isthmial ectopic gestation. The patient, aged 34 years, 4-para, had two miscarriages, each at about the fifth month. Menstruation was regular up to the last period, which was a week late. After an interval of thirty days she was suddenly seized with

pain in the lower abdomen. This rapidly became intense. There was considerable collapse, pulse 120, temperature subnormal, respiration sighing. Abdominal section was performed within six hours of the onset of the first symptom. The abdomen contained free blood, and the isthmus of right Fallopian tube was found to be the seat of an early gestation which had ruptured. (2) A case of uterine fibroid in a woman, aged 35, 1-para four months pregnant, who suffered from abdominal pain and constant vomiting. The temperature was 101° and the pulse 120, and she looked very ill. The abdominal enlargement exceeded a four months pregnancy, and on the left side a hard, excessively tender swelling could be felt. It could be moved independent of the uterus, and this, together with the fact that it had increased in size, rapidly pointed to its being a solid ovarian tumour with twisted pedicle. Abdominal section revealed a uterine fibroid the size of a fetal head springing posteriorly from the left cornu of the uterus. Enucleation was performed, and a second and smaller fibroid also removed. Superficial and deep sutures closed the uterine incision, and the abdominal wall was sutured in three layers. There was no interference with the progress of the pregnancy.—Dr. Gemmell (Liverpool): Notes of a case of early carcinoma of the cervix uteri treated by abdominal hysterectomy and pelvic dissection. Five years previously he had removed a left adenomatous ovarian cyst and right hydrosalpinx. The patient remained in good health until the summer of 1906, when she began to have pain in the left leg and thigh. On admission to hospital in January, 1907, there was marked oedema of the left leg. Per vaginam the uterus was the size of a three months pregnancy, of soft, solid consistence, and fixed; the cervix hard, irregular, bleeding easily. Early epithelioma of the cervix was diagnosed with fibroid of the uterus. Abdominal hysterectomy rendered difficult by short, broad ligaments resulting from the previous operation, and the presence of enlarged pelvic glands only recognized on opening the abdomen. The pelvic glands were removed, those in the obturator canal forming a mass 2 in. long and ½ in. broad. Sections of the cervix showed early adeno-carcinoma, some of the acini being free from infiltration; definite carcinoma in the obturator and iliac glands. The uterus contained pus, and sections of its wall showed round-celled infiltration with destruction of the endometrium. The patient made a good recovery. The case demonstrated how extensive an infiltration might take place in the pelvic glands, with very early disease of the cervix.—Dr. Wallace (Liverpool) described a modification in the technique of ventrifixation of the uterus. The subsequent occurrence of intestinal obstruction in a patient on whom he had performed ventrifixation, as well as recorded cases of a similar accident in the practice of some other operators, led him to modify his procedure in the technique of the operation. He had noticed that when occasion arose for opening the abdomen in patients who had previously been subjected to this operation, a window existed in the utero-vesical pouch below the suspended uterine body. This space would sometimes admit four fingers, and through it a loop of bowel could readily pass. To obviate this a complete peritoneal diaphragm was formed from the vesical and utero-vesical peritoneum, before suspending the body of the uterus. Dr. Stookes mentioned a case of single condyloma of the cervix in a patient five months pregnant. There were no other evidence of syphilis except pigmentation of the thighs.

British Gynaecological Society. At a meeting on March 14th, Mr. W. D. Stanton, President, in the chair, the following were among the exhibits. The President: (1) A specimen of the parovarium removed from a patient aged 42, who had been married sixteen years, had had two children, and one miscarriage twelve years ago. Her health had been good until five years ago when she had neuritis of the limbs and head. During the last two years catamenia had only appeared four or five times, before then they occurred regularly every three weeks. She had noticed her abdomen enlarging for twelve months and considered herself pregnant. At operation a parovarian cyst was found in the left mesosalpinx containing two gallons of straw coloured fluid. At its base was a solid growth attached to the ampullary extremity of the tube. After removal of the growths a satisfactory recovery was made. The cyst wall was extensively infiltrated with spindle-celled sarcomatous growth probably of endothelial origin. (2) A large uterine myoma with sarcomatous outgrowth from a thin feeble woman, a widow aged 49, who complained of metrorrhagia, abdominal pain, and frequent sickness. A solid abdominal tumour reaching halfway between the umbilicus and ensiform cartilage, and freely movable, was found and removed by supravaginal hysterectomy. The omentum was adherent to the outgrowth, which was a spindle-celled sarcoma undergoing hyaline degeneration and mucoid softening; the larger growth was a fibroid with mucoid and hyaline degeneration. Convalescence was satisfactory.—Dr. J. A. Mansell Moullin: A fibroid uterus containing a four-months fetus. It was removed from a patient, aged 26, who was pregnant for first time, and complained of great abdominal pain and tenderness. Examination suggested ectopic gestation. When the abdomen was opened a cervical fibroid was found, which would probably have interfered with delivery at term.—Dr. H. Ma Laughton-Jones: A primary carcinoma of the vagina from a patient aged 65. It involved the lower third of the left lateral wall of the vagina, and proved to be a mixture of squamous and columnar carcinoma. It was removed under scopolamine, morphine, and chloroform method of anaesthesia, but rapidly recurred, invaded the bladder, and proved fatal about ten weeks after operation. Statistics showed that primary carcinoma of the vagina was comparatively extremely rare—certainly not more than 1 per cent. of all cases of cancer attacking the female.—Mr. F. Bowreman Jessett: A carcinoma of the ovary involving the sigmoid flexure removed from a patient aged 48. She had complained of a vaginal discharge, which occurred irregularly, and was sometimes sanguineous, sometimes watery. She was a healthy-looking, well-nourished, active woman, and no abnormality was discovered on abdominal examination. Vaginally the cervix was noted to be eroded and thickened; bimanually, a small tumour was found connected with the posterior surface of an enlarged but quite mobile uterus. As the discharge seemed to come from the erosion local treatment was recommended with good result, but fifteen months afterwards an abdominal tumour was discovered extending nearly to the umbilicus, and closely connected with the posterior surface of the uterus. Removal of the growth, which proved to be an alveolar carcinoma, necessitated resection of the sigmoid flexure of the colon.—Mr. Stanmore Bishop, in a paper on mobile kidney, said the only form of importance was the wandering kidney, and there was general agreement that the condition existed; that it was more frequent in women and chiefly occurring on the right side, often associated with neurosis. Two stages existed, the first being one of descent and the second that of loosening of the ureteral attachment to spine. As the result of the first there was bending of ureter and subsequently stagnant urine; then kinking of vessels and dragging of duodenum and biliary ducts. The results of the second stage on the left side were traction on the pericardium through the diaphragm with anginal attacks, constipation and saprаemia followed by hysteria. After stating his objections to posterior methods of fixing the kidney, he described a plan by which it could be supported from below, and be placed at a proper height. Through a transverse incision in front the liver was raised, and the hepatic flexure depressed, and the kidney then pushed up to its proper level. A transverse incision being made through the peritoneum, the capsule was cut through in a curved line and then turned down and its edge fixed. The peritoneum was then replaced and sewn up. Next an incision was made through the skin and tissues posteriorly over the lumbar muscles. Fixation sutures of chromic or iodized gut were then passed through the kidney from the front with due regard to vessels and nerves to the posterior incisions, and there tied. After this both wounds were closed. This operation had been performed ten times with satisfactory results in all but the first case, in which, however, the capsule was not utilized as described.

Midland Medical Society. At a meeting on March 15th, Dr. Arthur Foxwell, President, in the chair, the following were among the exhibits: Mr. C. A. Ledingham-Gibbon: Female child on whom he had operated with

success for the cure of a *Prolapsed and inverted bladder*. The operation consisted, after the replacement of the prolapse, in the injection of a small quantity of liquefied hard paraffin into the periurethral tissue at the neck of the bladder. Dr. DOUGLAS STANLEY: A case of *Osteitis deformans* in a woman aged 60, who had complained of pain in the back and legs for some years. There was also pain in the right knee. The pains were thought to be "rheumatic" Eighteen months ago she noticed that the right leg and thigh were 'getting bent and that she was going lame." About the same time she began to stoop. On examination well-marked kyphosis was present; the right leg and thigh were bent forwards and outwards; the tibia and femur were massive, presenting the typical appearance of Paget's disease. The left femur and the right humerus were similarly affected to a slight degree. The skull showed no abnormality, nor were there any signs of tumour formation. He also showed for contrast a woman suffering from syphilitic osteitis affecting the right tibia. Dr. O. J. KAUFFMANN: A man, aged 28, suffering from very pronounced *Saltatory spasm* coupled latterly with frequent severe hystero-epileptic attacks. He had suffered from epilepsy ever since his fifth year, and until December, 1906, had been subject to true epileptic seizures about once every six weeks. Nevertheless his mind had remained normal, and he had been in regular employment as a clerk. In December last he had been attacked with influenza, which had kept him in bed for about a week. The day after rising from bed the jumping spasm had begun, and despite energetic treatment by bromides, had gradually increased in strength. Five days before his exhibition the patient had suddenly commenced with violent hystero-epileptic convulsions. At the time of his exhibition the saltatory spasm was so intense that the patient was unable to stand without support. The spasm was rendered more intense by being observed, and when the patient lay in bed it took the form of occasional sharp flexions of the thigh on the trunk. Dr. J. G. EMANUEL: A girl, aged 15, with *Clonic spasms* of the left arm and left leg of six weeks' duration, appearing after a fright caused by the barking of a dog. The movements for the most part consisted of alternate supination and pronation of the hand combined with eversion of and inversion of the foot and flexions of the trunk on the thighs. Some three years previously the patient had experienced a similar attack, lasting two or three months, also brought on by fright caused by a dog. At this time she was acquainted with another child suffering from chorea. The case was described as one of complicated habit-spasm or habit-chorea brought on by fright, in the production of which mimicry apparently played a part. Mr. J. JAMESON-EVANS: A woman, aged 34, the subject of *Graves's disease*, who exhibited new signs. The exophthalmos was confined to the left eye, the pigmentation of the eyelids (Teillais' sign) and marked difficulty in everting the lids (Giffard's sign) were present on both sides. Dr. J. E. H. SAWYER: A specimen of *Malignant growth of the heart*. The patient's left leg had been amputated for an osteo-sarcoma of the lower end of the femur, of four months' duration, but she died three months later from secondary growths in the heart. The right auricle contained one small nodule of secondary growth. The outline of the right ventricle was irregular in shape, owing to the growths in its walls, and it was necessary to use a saw to open the ventricle. Most of the growth projected into the cavity of the ventricle, and consisted of round hard nodules of osteo-sarcoma. Many of these growths were freely movable, being attached to the ventricular wall by narrow pedicles. There were no deposits in the left side of the heart, but many in the lungs and pleurae. Dr. JAMES MILLER: Specimens from a case of *Early acute poliomyelitis*, from a boy, aged 9, the total duration of whose illness was less than a week. On admission he complained of pains in the back of the neck; the legs and the abdominal muscles were paralysed and the reflexes, with the exception of the pupil reflex, were absent. Before death the arms and the chest muscles gradually became paralysed. The autopsy revealed a softening and swelling with congestion and scattered punctate haemorrhages affecting especially the fourth, fifth, sixth, and seventh cervical segments and to a less marked extent the whole of the spinal cord. A pure growth of *Staphylococcus pyogenes citreus* was obtained from the grey matter. Microscopically there was found dilatation of the vessels passing into the grey matter, infiltration of the perivascular lymph spaces with large numbers of cells, haemorrhages into the grey matter of both anterior and posterior horns, and degenerative changes in the cells of the grey matter. There was no evidence of thrombosis in the vessels.

MEDICO-LEGAL SOCIETY.—At a meeting on March 12th, Mr. JUSTICE WALTON, President, in the Chair, a discussion was held on the working of the Midwives Act, 1902. Mr. J. THEODORE DODD, M.A. (barrister-at-law), dealt with the two practical points which arise—(1) when the certified midwife is bound by her regulations to send for medical aid; and (2) the payment of certified midwives at such a rate as would attract a competent and better class of women. As to the former, it was noted that although it was the duty of the medical officer of health to keep the population in health and alive, it was not his function to help at birth, and hence the necessary aid must come from the Poor Law. In principle the law provides such assistance but in practice it is difficult to obtain. Medical relief was only given to the destitute, others had to enter into an agreement to repay the cost, and for a matter of emergency the necessary proceedings were too leisurely, and led to too great a delay. A letter from a certified midwife to a medical man should be a sufficient claim upon the guardians in cases of poverty. As to the latter point, he held that women in labour often needed not only the prayers of the Church but also the help of the State. He would have midwives attached to the medical staff of the union, as already is the case in Ireland; otherwise, to avoid the stigma of pauperism, midwives should be on the staff of the medical officer of health. Whatever is done, full publicity should be given to any change, as well on behalf of the mother as of her innocent offspring. Dr. F. S. TOOGOOD (Lewisham Infirmary) had found no difficulty, as alleged, in practice. Serious cases should be brought into the infirmary. Guardians would object to their privileges being handed over to certified midwives; district medical officers relied upon the extra midwifery fees to make their posts worth being held, and would resent the introduction of competing midwives; further, he feared any such plan would foster the unthrifty. Sir WILLIAM COLLINS, M.P., thought the greatest need was the efficient education of the public in matters of sanitation and recognition of the necessity of the due and proper supply of trustworthy midwives; the medical profession had so very tardily recognized the teachings of the gospel of cleanliness that it was not to be wondered at that the lay public was still very ignorant on the matter. The lying-in chamber until recently was under the thraldom of antiquated superstitions. When he was a member of the London County Council he had objected to having to fetch and carry for the Central Midwives Board, as also to allowing the co-option of irresponsible persons to the Midwives Act (Special) Committee—the local supervising authority should have been given proper control and not power to send forward merely indefinite and anonymous charges against midwives. The London County Council was offering annual scholarships to would-be midwives. If the State as a benevolent despot assumed the duties of the individual and dissociated medical relief from the Poor Law the provision made would still be in the nature of charity. If modern tendencies led to the assumption of such new duties, these must be fulfilled by responsible elected persons. Miss WILSON (President of the Midwives Institute), as one who had been on the Central Midwives Board for four years, was well acquainted with the thorny subject. Midwives were poorly paid, their work was not peculiarly attractive, and of those who were now being examined by the Central Midwives Board, at least one half were not going to attend the poor, but were intending to take up monthly nursing or other well-paid work. If only efficient midwives were available, the preventive work they could do in guarding the health of poorer mothers would obviate to a large extent the need of sending them to the local infirmary, which act also often implied robbing the home of its mainstay. The supply of midwives was not the function of the Central Midwives Board to regulate; 12,000 certified women were in private practice in England and Wales, only one-third of whom had been properly trained. That the Poor Law could help midwives in difficulty was shown by the recent action of the guardians of King's Norton and Birmingham, who for one year had allowed midwives to

summon the district medical officer without the usually indispensable order of a relieving officer. Poor-law medical officers were called in now more frequently than formerly: this was an admitted hardship where the salary was an inclusive sum. The training of midwives was fairly expensive, and no reasonable income was assured to them; widows with a small private income were often the best for the work. We should do as was done abroad in so many cases, and look upon the provision of efficient midwives by ensuring a minimum salary in poor districts as a duty for the State. We had also much to learn from the system in Ireland of dispensary (Poor Law) midwives. It had many advantages; although its adoption in England as it stood might not be advisable, it was practical and full of suggestions. Dr. A. H. Downes (Local Government Board), premising that his remarks were not to be regarded as in any way an official declaration, said the first object in the working of the Midwives Act, 1902, should be to facilitate the provision of proper aid to women in labour. He was surprised to hear it stated that it was not the function of the Central Midwives Board to consider the supply of midwives; it was certainly not the province of the Local Government Board, nor was there any basis for the extraordinary misapprehension that the Local Government Board desired to establish a second standard of training for certified midwives. Midwives would find many of their difficulties vanish if they practised in harmony with the local medical practitioners. He thought that there was more power for the provision of medical assistance in cases of difficulty than had been suggested in the discussion; thus an Act of 1848 (11 and 12 Vict., c. 110, s. 2) enabled the guardians of any union, if they thought proper, to pay for any medical or other assistance rendered to any poor person on the happening of any accident, bodily casualty, or sudden illness, although no order had been given by any of their officers or by the overseers. This power had been acted upon in some unions long before there was any question under the Midwives Act, and the attention of guardians had been drawn to it by the Local Government Board on various occasions since the Act. The action of the guardians under the 1848 Statute, however, was entirely discretionary; there was no guarantee that the medical practitioner would get his fee in all cases, and it was a crux whether compulsory powers should be granted, in which case the State would tend to become a debt-collecting agency. In some cases sanitary authorities had availed themselves of a provision of the Public Health Acts (s. 133 of the Act of 1875; s. 77 London Act, 1891) for the furnishing, with the sanction of the Local Government Board, of temporary medical assistance for the poorer inhabitants of their district, although originally this was probably only intended to apply to epidemic disease. Dr. A. Ashbee objected to the action of the Act in conferring a quasi-official position on a number of Gamps. He was told that the supply of midwives was short; he knew that the quality was bad. Miss Packer (Central Midwives Board) said it was not the fault of the Midwives' Institute that 8,000 untrained women were allowed to style themselves certified midwives; the Central Midwives Board was in fact gradually removing the worst from the roll. Dr. Lilla S. Gibbs (Inspector of Midwives, London County Council) thought that in London there was far too much charity available for maternity cases. If a trained midwife reported interference in the practice of the untrained she soon became very unpopular locally. Dr. Scott Tebb and Dr. St. Aubyn Lawrence likewise spoke. Dr. Tew (West Kent) said he had found it impossible strictly to enforce the regulations of the Central Midwives Board, there were no substitutes if the untrained women were excluded from practice. Many Gamps would survive 1910. Dr. C. H. Wise had discarded a body of medical men from referees' lists to the assistance of midwives by indicating to them the peremptory view a coroner's jury would take of their inaction in the event of a fatal issue. County councils could not guarantee the medical man's fee. Mr. Percy Cory (Public Control Department) thought that the problem of midwifery in the poor could be solved only by education and by sanitation. Bad cases could and should be sent to hospitals as in measles. Some endowed maternity hospitals. Dr. Bertrand Watson (the President) feared any change which would increase the fear of parental responsibility; he also laid great stress on the difference between a voluntary charity and the legal obligation to support others. He fancied that the working of the Midwives Act and time would cure the apparent evils. It might possibly be enacted that a certified midwife should send for a medical man in cases of difficulty: he should be paid by the guardians in necessitous cases, otherwise the husband should be responsible, even although he were not privy to the contract. Mr. Theodore Dodd, in reply, said that the Local Government Board might settle the whole question by the issue of a circular to Boards of Guardians. Was it fair that women and infants should suffer and die because of a quarrel between medical men and midwives? To those who commended inaction lest thriftlessness should be encouraged, he would ask if a child unborn could practise the virtue of thrift? It was demoralizing for those who had means to sit passive while the poor were dying unaided.

Royal Academy of Medicine in Ireland.—At a meeting of the Section of Surgery on February 22nd, Mr. H. R. Swanzy, President, in the chair, Mr. Robert H. Woods exhibited three cases of *Frontal sinusitis* subsequent to operation. In each case an incision had been carried from within outwards along the line of the eyebrow, and the frontal sinus laid open by means of a small trephine, the aperture being subsequently enlarged by means of gouge forceps. The diseased mucous membrane lining the sinus and its recesses was thoroughly removed with a curette. The entire anterior wall of the sinus was not removed, as, in his opinion, this step was unnecessary. Obliteration of the cavity could be brought about after removal of the mucous membrane by the growth of granulation tissue from its bony walls which developed subsequent to the operation. Obliteration of the sinus took place first at the infundibulum, as the granulations fused first at this narrow outlet. Drainage, consequently, could not be carried out by this passage as efficiently as by means of a tube introduced by the wound. Mr. P. Dempsey alluded to the difficulty in the complete eradication of sinus infection. There was nothing easier than to alleviate the discharge, and nothing more difficult than to get it to cease altogether. Sir Thomas Myles referred to the methods of effecting complete obliteration of cavities in bone, and instanced the difficulty met with in securing the obliteration of a cavity in the head of the tibia—for instance, by granulation tissue.—Mr. C. A. K. Ball exhibited a gangrenous gall bladder from a patient sent to hospital as a case of perforated typical gastric ulcer. On admission he presented symptoms of general peritonitis, originating probably in the appendix. An incision in the right iliac fossa revealed free blood-stained fluid; the appendix was slightly inflamed, and the caecum was both inflamed and thickened. Another incision was made below the right costal arch, and a tumour resembling a kidney came into view. It proved to be a distended and gangrenous gall bladder adherent to the colon. A small concretion was found blocking the cystic duct. The gall bladder was removed and the upper abdominal region flushed out. The patient recovered and her stomach symptoms were relieved. The contents of the gall bladder were submitted to bacteriological examination, but were found sterile.

Leeds and West Riding Medico-Chirurgical Society.—At a pathological meeting on March 1st, Dr. Bampton in the chair, Dr. Gruner read a paper on the composition and constitution of certain body fluids. It was shown how, from a determination of the relative amount of chlorides and nonchloride electrolytes in ascitic, pleural, and ovarian fluids, a diagnosis of their nature could be made. The chemistry of these fluids was carefully considered, and reference was made to the value of determining the absolute (ionic) acidity. Several cases were then gone into, with especial reference to the cytology, as the presence of large vacuolated cells in the deposit had been the means of diagnosing carcinomatosis of the peritoneum.

The following were among the specimens shown:—Messrs. J. K. Jamieson and J. E. Dobson: A series of anatomical preparations injected to show the lymphatics of the stomach, caecum, and appendix. Dr. F. W. Edmeades: An example of congenital atrophy of the appendix. Mr. W. B. Bates: An enchondroma of the breast. Dr. R. J. Thevenard: A polypus of the larynx which had been coughed up.

REVIEWS.

CANCER OF THE BREAST.

MR. W. SAMPSON HANDLEY'S book on *Cancer of the Breast*[1] is a record of pathological research on the mode of dissemination in this type of malignant growth, based on the examination of advanced cases of the disease. Much of the work is confirmatory of already recognized facts, but one important observation stands out from the rest—the demonstration that abdominal visceral metastasis may arise by direct invasion of the abdomen by way of the epigastric lymphatics. A report is given of two cases in which this event was microscopically demonstrated, in the one case the liver, and in the other case the peritoneal cavity generally, being shown to have been invaded by growth from the lymphatic plexus in the epigastric region. In the first of these two cases an interesting point is the presence also of nodules in both ovaries; the author's view is that they originated from the escape of cancer cells into the coelom, their gravitation into the pelvis, and implantation in the ovary. The association of breast and ovarian cancer is not rare and is of much interest, but the explanation here given is not applicable to a considerable number of such cases. Mr. Handley's work indicates the probability that invasion by the epigastrium takes place in the late stages of a considerable number of cases; whether or not this is the usual manner in which abdominal metastases originate is a question for further study.

The author's researches confirm in a most important manner the work of Petersen, Heidenhain and others on the continuity of growth in cancer dissemination. These researches show that while lymphatic embolism plays an important part in dissemination, more striking still is the gradual and continuous permeation of lymphatics and lymphatic spaces by growth extending directly from the primary focus. The deep fascial lymphatic plexus is shown to be the plane along which this permeation can be most extensively traced, a fact which the author most properly insists upon as having an important bearing on operative treatment. A statement which will require further investigation is that the appearance of subcutaneous nodules is to be taken as indicating that the underlying deep fascial lymphatic plexus is coextensively permeated by growth. The part which retrograde embolism from lymphatic glands plays in the dissemination of these nodules is probably underestimated by Mr. Handley, but he certainly establishes the fact that they are efflorescences from the deep fascial lymphatics to an extent not previously realized.

Mr. Handley's work once again teaches the lesson that very wide removal of the lymphatic area is essential to success of operations for breast cancer. He considers that in many operations done to-day, removal in the plane of the deep fascia is insufficient, particularly in the direction of the epigastrium, and this is probably true to a certain extent. Of course breast cancer shows no particular predilection for extension in the epigastric direction; continuous infiltration probably takes place in all directions fairly equally, and the position of the primary growth is the surgeon's guide to the area which requires removal, particular attention being necessary, as Mr. Handley shows, to the plane of the deep fascial lymphatic plexus. There are other matters of pathological importance in this book which are well worthy of comment. Mr. Handley's views on metastases in the bones, for example, will be much discussed by pathological anatomists, and although we are unable to give complete assent to some of the conclusions at which he arrives, we look upon his book as a valuable and painstaking piece of work.

THE PATHOLOGY OF MENTAL DISEASES.

THE second part of the valuable series of *Reports from the Pathological Laboratory of the Lunacy Department, N.S.W.*,[2] the first of which was reviewed in our issue of March 26th, 1904, p. 743, contains two useful contributions to cerebral anatomy—an account of the internal features of the brain of a microcephalic idiot, showing lack of corpus callosum, and a preliminary note on the motor areas in the cerebral cortex of marsupials—both by Dr. J. Froude Flashman, the Director of the Pathological Branch of the Lunacy Department of New South Wales. The external features of the brain, which forms the subject of the first paper, were described in Part I, and the present paper is valuable in that it helps to settle the much-disputed question of the constitution of the tapetum, the author showing that, in these cases at least, the tapetum is formed of callosal fibres. The second paper gives the results of the experimental stimulation of the cerebral cortex of the marsupial *Dasyurus viverrinus*. A note on Golgi preparations is furnished by Dr. C. Quaife, correcting one of the statements made in his paper on this subject in Part I. He now recommends final treatment of the tissues with potassium bichromate instead of silver nitrate solution as then advised. This is followed by two important papers on asylum dysentery—one, a description of an epidemic of dysentery in the Hospital for Insane, Paramatta, by Dr. Charles Gordon Moffitt and the other a study from the bacteriological point of view of acute dysentery in Sydney, by Dr. Flashman. Dr. Flashman's exceedingly careful paper is directed to answering the question, Is there a special disease—asylum dysentery? As is well known, Mott in this country, Kruse in Germany, and Vedder and Duval in the United States, maintain that epidemic and non-institutional dysentery is identical with institutional or asylum dysentery. Flashman's own investigations have resulted in the isolation from the stools of his cases of a bacillus whose morphology and cultural properties place it in the class with *B. dysenteriae* (Shiga). He therefore answers the question, with Mott and others, in the negative, and in a review of the results obtained by other workers, concludes:

1. That there appear to be two fairly sharply separated groups (the members of which differ in minor points among themselves) of dysentery bacilli which produce a specific disease—acute dysentery. This disease, as caused by the one group of organisms, cannot at present be distinguished from the same disease caused by the other group.
2. That on clinical, pathological, and etiological grounds, asylum dysentery and epidemic (or acute) dysentery are identical.

The results of an examination of the diet supplied to the inmates of the Hospital for the Insane, Kenmore, N.S.W., are given by Dr. C. A. Hogg at the invitation of the Inspector-General of Insane for New South Wales, Dr. Eric Sinclair.

The concluding paper of the series is a report by Dr. Flashman to the Inspector-General of the results of his recent visits to European pathological institutions. This paper, though not perhaps the most important, is of great general interest. For many years there has been so great an amount of frankly-expressed pessimism amongst alienists, not only as to the value of pathology to the study of so-called mental diseases in the past, but as to actual possibility of any future benefit—a pessimism born of the confusion of Mind as a metaphysical, inscrutable, noumenal reality, and the physical conditions of its phenomenal appearance—that we welcome the exceedingly thoughtful remarks of a pathologist of standing like Dr. Flashman on the present position and trend of the pathology of insanity.

Dr. Flashman visited most of the pathological institutions in Great Britain, and also in Paris, Zurich, Vienna, Berlin, Hamburg, Leipzig, Frankfurt, Florence, Rome, Brussels, and Louvain, and is therefore able to take a broad survey of the situation. In dwelling on some of the reasons for the comparatively slow development of this branch of pathology, Dr. Flashman instances the narrowness of the customary field of investigation, workers restricting themselves mainly to neuropathology, whereas the lines on which inquiry should proceed are through the whole of the processes of normal and pathological metabolism, for, he says:

> We must look upon insanity as a disease whose symptoms are expressed chiefly through the nervous system, but whose primary cause may reside in any one of the tissues or organs of the body. In our investigations of the disease, therefore, we must not too closely focus our attention upon the nervous system, but must examine all systems by all methods, collecting gradually and carefully an array of facts as to the relation

[1] *Cancer of the Breast and its Operative Treatment.* By W. Sampson Handley. London: John Murray. 1906. (Demy 8vo, pp. 232; 53 figures. 12s. 6d.)

[2] *Reports from the Pathological Laboratory of the Lunacy Department of New South Wales.* Vol. I, Part II. Published by the authority of the State of New South Wales. Sydney: William Applegate Gullick. 1906. (Demy 4to, pp. 83. 4s. 6d.)

of normal and abnormal secretions and excretions of the various organs to the function of the nervous system till they shall be so numerous as to permit of a principle of some value being deduced.

KEEN'S SURGERY.

THE first volume has appeared of a comprehensive text-book on *Surgery*[1] which is the joint work of various authors, both American and English, and is edited by Dr. KEEN of Philadelphia. The remaining four volumes, the editor informs us, are to follow as rapidly as they can be printed. Volume I, after an interesting account of the history of surgery, illustrated with excellent portraits of famous surgeons, deals with surgical physiology and general pathology, infective diseases, tumours, and wounds.

In the chapter on surgical physiology and its chemical application in operative surgery, Dr. G. W. Chile discusses anaesthesia accidents, and calls attention to the importance of making a prompt and accurate diagnosis between collapse due to cerebral anaemia and collapse caused by acute dilatation of the heart, since the best treatment for the one is the worst treatment of the other, and collapse which is really due to the latter cause is sometimes misinterpreted. For the treatment of this condition the author recommends that the patient should either be bled or put in the upright posture for a moment, and that cardiac massage and artificial respiration should then be resorted to. In the same chapter there is a useful account of methods for determining blood-pressure in the human subject, and some interesting charts showing variations in the blood pressure during the course of different operations.

The chapter on inflammation is contributed by Professor Adami, whose writings on this subject are well known to readers of *Allbutt's System of Medicine*. The present article is briefer and less adequate, and the reader of Keen's *Surgery* will do well to follow Professor Adami's suggestion that he should supplement his knowledge by referring to the fuller and, in our opinion, much better article published in the medical work. We note that in discussing the obscure questions concerning the nature of some of the cells which take part in inflammatory processes Professor Adami is inclined to follow Maximow. "In such a confused field," he writes, "Maximow appeals strongly to us when, in addition to the definite haematogenous leucocyte, and equally definite fibroblast, he includes all the above mononuclear cells under the designation of 'polyblast.'" Opinions differ as to the value of Maximow's work upon inflammation, which is largely based upon experiments of a highly artificial nature: it is easy to postulate the existence of a cell possessing the obliging versatility which the term "polyblast" connotes; but postulates are not identical with proofs, and it is somewhat doubtful whether this new arrival in the technical vocabulary of histologists has come to stay.

Dr. C. H. Frazier of Philadelphia contributes several chapters, including three on "Erysipelas," "Tetanus," and "Diseases caused by Special Infections." The last deals with anthrax, glanders, actinomycosis, and malignant oedema. The principle of classification is rather obscure. It is difficult to see why these last-mentioned diseases are more "special" infections than tetanus or erysipelas; and surely there are many other diseases for example, tuberculosis and syphilis, attributable to infections which are distinctly "special." We are glad to see that Dr. Frazier recommends the use of Sclavo's serum in the treatment of anthrax. The pages on both anthrax and actinomycosis are illustrated by excellent coloured plates.

The chapter on surgical tuberculosis by Dr. J. C. DaCosta is not altogether satisfactory. It is said that in the opinion of most writers, human and animal tuberculosis are essentially the same, "although the bacilli certainly present distant differences." The expression "distant differences" seems to call for elucidation. "The bacilli of bovine tuberculosis," he continues, "are doubtless less virulent to man than are the bacilli of human tuberculosis." Are they? It would be interesting to know the author's reasons for making this statement. The bovine bacillus is virulent not only for the bovine but for all mammals, susceptible to tuberculosis, upon which it has been tested; it is known to cause fatal disseminated tuberculosis in man, and no evidence has been brought forward to show that its virulence for man is lower than the virulence of the human bacillus. Dr. DaCosta is very uncharitable towards the specific treatment of tuberculosis with serums and with tuberculin. He disposes of it in a curt paragraph in which he states that it "has utterly failed to realize the high expectation at one time entertained concerning it." He declares that "tuberculin itself seems very unreliable, and the results from its use are by no means certainly good." This will hardly be encouraging news to the disciples of the "opsonin" treatment, who think that a new era of therapeutics has dawned, nor will they be vastly consoled by Dr. DaCosta's niggardly concession that "the one form of tuberculosis in which tuberculin has occasionally produced definitely valuable results is lupus." Treatment with tuberculin for various forms of tuberculosis, particularly the more chronic, has certainly not been proved to be a failure; its precise value is not yet completely determined, but it is undergoing careful investigation and demands serious consideration; to dismiss the subject in this rough-and-ready fashion is a mistake.

Syphilis is treated by Dr. E. Martin, of Philadelphia, and is profusely illustrated. Perhaps more space might have been devoted to recent animal experiments on the transmission of the disease and the possibility of producing immunization. The article on tumours, by Mr. Bland-Sutton, contains very little which this eminent surgeon has not published elsewhere. He admits that the "cancer question," that is, the problems concerning the etiology of cancer, is still involved in complete obscurity. One important point on which he insists is the necessity for surgeons removing solid tumours of the ovaries to ascertain that the disease is not secondary to a malignant growth originating in some other organ.

The expectations with which this work has been awaited have been high, and if this first volume does not quite fulfil them it is perhaps partly because some of the contributors have trusted too much to their individual experience; the editor may no doubt have deliberately preferred that the introductory essays on general subjects should be expressions of the writers' individual opinions, but this must diminish the value of the book as a work of reference, whilst possibly increasing its readability as a textbook.

[1] *A System of Surgery: its Principles and Practice.* By various Authors. Edited by W. Williams Keen, M.D., LL.D. Volume I. Philadelphia and London: W. B. Saunders Company. 1907. Roy. 8vo, pp. 985, with 261 illustrations in the text and 17 coloured plates. 30s.)

GYNAECOLOGY.

A LITTLE over ten years ago, in a review of the first edition of *Operative Gynaecology*,[1] the opinion was expressed that English works of the kind had become remarkable for good diagrams and fine coloured engravings, but that the illustrations of Dr. HOWARD KELLY'S work could defy all rivals. Since that date the deserved fame of that great treatise has spread all over the world. Not the least of the benefits which gynaecological literature owes to Dr. Kelly is a great reform in pictorial art—or rather the reintroduction of art, almost eclipsed since the days of Ramsbotham. Since 1898 a marked improvement in the illustrations accompanying monographs and textbooks on diseases of women has been generally recognized, and the credit is awarded almost unanimously to the author to whom it is due and to the institution that supports him. Other teachers at the same university have enriched their treatises with first-class pictorial work, and the artistic methods of Max Brödel have crossed the Atlantic. Yet where we may confer just praise we must be permitted to express legitimate criticism. Dr. Kelly's book holds the first rank still for its illustrations, but now we do not fail to find first class work in British and Continental European treatises. The microscopic drawings in the *Transactions* of societies published in the United Kingdom are far superior to what they were ten years ago, partly owing to French and German example. On the Continent the improvement in the drawings illustrating morbid anatomy and operative surgery is particularly evident. We are

[1] *Operative Gynaecology.* By Howard Kelly, A.B., M.D., LL.D., F.R.C.S. (Hon. Eng.), Professor of Gynaecological Surgery in the [illegible] and Gynaecologist to the Johns Hopkins Hospital, Baltimore. With 4 plates and 295 original illustrations, for the most part by Max Brödel, Associate Professor of Art applied to Medicine in the Johns Hopkins University. Second edition, revised and enlarged. Two vol. London: Sydney Appleton. 1906. (Demy 8vo, pp. 1139. Two vols., 63s.)

thinking mainly about Pozzi's *Revue de Gynécologie* and Wertheim's work. Perhaps the tendency of European art of this class to retain a diagrammatic character even in the most faithful representations of Nature is in some respects better than a severely natural style such as prevails at Baltimore. Still all must admit that Dr. Kelly's illustrations of radical operations for uterine cancer cannot be excelled for clearness. As a book, the new edition is a little less sumptuous and a trifle more handy than the first issue. As a work, its essence is frankly what its title professes it to be. Hence it is unfair to enter into questions about the justifiability of the operations described in its pages, and about after-histories, but we must express our satisfaction at the stress Dr. Kelly lays on the after-histories of suspension of the uterus. Let the young operator bear in mind that, analysing 182 cases in which suspension was performed alone or in association with dilatation at the Johns Hopkins Hospital, Dr. Holden, on the basis of after-histories from one year (far too short) to eleven years in length, finds that in 109 cases the patients "were either absolutely cured or their symptoms very greatly relieved"; the rest were either only "slightly improved" or classed as "no relief." These conclusions are very candid, and not highly complimentary to suspension operations. It is for the details of major operations that this treatise is mainly consulted. The author has modified the sentence which in the first edition read, "The great majority of myomatous uteri need no treatment whatever," by omitting the word *great*, but he retains, without any editing, his well-known dictum: "I feel it my duty to utter an urgent warning against accepting the simple fact of the presence of a tumour as a sufficient indication for operation." Dr. Kelly still advocates supravaginal or "subtotal" hysterectomy for fibroids, and states that in 100 operations of this class, including all kinds of complications, he lost 2 cases. Much text, illustrated by instructive drawings, has been added to demonstrate the management of some of the complications due to growth of the fibroid into the broad ligament, to suppuration, and to other causes. The author's methods of detachment of the tumour from below upwards in certain cases, and of bisecting the uterus in others, as already described by him in the *American Journal of Obstetrics* and elsewhere, are conveniently included in his new edition. Dr. Kelly also dwells on bisection in his chapter on hysterectomy with extirpation of the ovaries and tubes, adding also several particularly good drawings, which amongst other things will convince the inexperienced that the manœuvre is easier to describe than to perform. There are considerable additions to the chapter on extrauterine pregnancy, and the figure representing a typical tubal gestation sac is one of the very best in the entire splendid series, yet we do not think that the other drawings of tubal sacs, clear though they are as illustrating particular cases, serve so well to teach the distinctions between tubal pregnancy, tubal abortion, tubo-ligamentary gestation, etc., as do drawings of far less artistic merit in many British and European textbooks. There remains much that is essential on which nevertheless we will not dwell, not so much on account of want of space as for the reason that study of the original will be more instructive to the reader than any criticism that we could offer. We refer more especially to the description of operative technique and to the author's opinions and practice in respect to uterine cancer. We may say in conclusion that at p. 468 in the second volume will be found an important summary of recent developments, showing how intelligently Wertheim, the author, and Sampson have co-operated in the perfecting of the radical operation.

For well-known reasons, the histology and pathology of the uterus are studies attended with much difficulty. Many uterine disorders are not fatal, whilst the catamenial function leads to confusion in the interpretation of appearances which may signify normal menstrual changes, or, for aught we know, may represent disease. Dr. Jessie Macgregor's *Contribution to the Pathology of the Endometrium* showed how these difficulties might be faced, and in a monograph of high merit, entitled *Chronic Metritis*,[5] Dr. W. FLETCHER SHAW shows that he has known how to take full advantage of an appointment at a Manchester hospital to endeavour to make out the pathological anatomy of chronic metritis; to note the differences, if any, between the symptoms of chronic metritis and chronic endometritis, and to ascertain whether chronic metritis be primary to or secondary to chronic endometritis. He has been able to obtain 27 specimens of the uterus extirpated for chronic metritis and compared them with the normal uterus of 23 women of various ages. He has also carefully inspected 5 examples where chronic metritis complicated cancer, fibro-myoma, or disease of the appendages. The pathological work is illustrated by twelve photomicrographs prepared with the assistance of Dr. David Orr. Curettings from 50 cases of chronic endometritis have been compared by Dr. Shaw with the tissues of the endometrium in chronic endometritis. After the pathological section of the monograph come several tables explaining the clinical features, treatment, appearance of the endometrium, and after-histories of the cases under observation, which are also analysed individually. Dr. Shaw's conclusions will be read with interest. Chronic metritis is, according to his views, never a primary affection; it is usually a result of chronic endometritis, although it may be associated with any uterine or other pelvic disease leading to increased uterine contraction or vascularity. It is a simple hypertrophy of the mesometrium and not a connective tissue hyperplasia. In the earlier stages of this disease all the well-known symptoms disappear after dilatation and curettage of the uterus, thus demonstrating that the endometritis is the primary cause. The curette, in Dr. Shaw's experience, is the best instrument for the relief of chronic metritis. "In a few instances the symptoms are not relieved even by repeated curettings; in these cases nothing short of hysterectomy is of any avail. This drastic measure is, however, only necessary in a small percentage of these patients. At St. Mary's Hospital, in 1905, 171 patients were curetted for chronic metritis or chronic endometritis, while in the same year only 5 hysterectomies were performed for these ailments."

[5] *Chronic Metritis: Its Pathology and its Relation to Chronic Endometritis.* By William Fletcher Shaw, M.D., Ch B. London and Manchester: Sherratt and Hughes. 1906. (Demy 4to, pp. 88.)

DERMATOLOGY.

DR. BULKLEY of New York has recently published a volume on *The Influence of the Menstrual Function on Certain Diseases of the Skin*,[6] a subject on which Danlos of Paris wrote in 1874, but to which numerous observers have called attention. With regard to menstruation it may be well to point out in this place that according to the recent researches of Marshall and Jolly (Croonian Lectures on the Chemical Correlation of the Functions of the Body. By Ernest Starling, Royal College of Physicians, June, 1905) the changes in the uterus which determine menstruation are due, not to ovulation, but to an internal secretion arising from the ovary. In the present volume the author does not touch on physiological points, but confines himself to clinical observations. He dwells on a variety of symptoms connected with the important functions, which have become more or less common knowledge, but whether this knowledge is accurate is another question. As observers, we can only note what we see or think we see, and there is no doubt that many so-called facts which have been handed down to us or are bandied about rest sometimes on shaky foundations. Nevertheless, that there is a relation between menstruation and its disturbances and the skin is undoubted, but whether the nervous system is the sole connecting link must not be accepted too readily now we have been enlightened on the part played by the hormones (vide Starling, loc. cit.) in the organism. Dr. Bulkley has industriously collected his data on the subject, and his book is one well worth reading. Little by little the darkness surrounding the phenomena of the individual life is being illuminated by the searchlight of specialized investigation. It need scarcely be emphasized here how easy it is to assume a cause and effect where there is mere coincidence.

Dr. TÖRÖK of Buda-Pesth has written a book devoted solely to the subject of clinical diagnosis of diseases of the skin.[7] In it he has reviewed numerous points in a

[6] *The Influence of the Menstrual Function on Certain Diseases of the Skin.* By L. Duncan Bulkley, M.D. London and New York: Rebman. 1906. (Demy 8vo, pp. 103. 5s.)

[7] *Spezielle Diagnostik der Hautkrankheiten für praktische Aerzte und Studierende.* Von Dr. Ludwig Török. Vienna: Alfred Hölder. 1906. (Demy 8vo, pp. 409. Mk 9.)

minute and exhaustive manner. The introductory chapters are valuable, giving as they do a thorough survey of general phenomena connected with the reactions of the vascular system. The division of the subject is pathological, under headings such as haemorrhages, atrophy, necrosis, granulomata, and so forth, the various diseases being described, and points of differential diagnosis stated. The descriptions are, if anything, too minute, painfully so, as is often the case with Continental writers, and at times the text degenerates into cataloguing, not always avoidable, it is true, but nevertheless disagreeable, for one cannot see the wood for the trees at times. The book, however, contains much that is interesting, and, supplied as it is with a good index, it should prove very useful for reference. Most men will find it hard reading. There is no breeziness about it.

EMBRYOLOGY.

Professor Leopold's valuable study of a very early human embryo *in situ*, which forms the fourth volume of the archives of the Royal Gynaecological Clinic in Dresden,[8] is a careful microscopical report, drawn up under his direction by Professor Schmirl, who prepared the sections. A young woman poisoned herself with phosphorus. Pregnancy being suspected the uterus was carefully examined. The cavity at first appeared to be empty, no ovum being detected, even by aid of a magnifying glass. Yet the endometrium suggested early pregnancy, and on yet closer research a minute point was detected somewhat lighter in colour than the surrounding tissue. In consequence, the mucosa and adjacent muscularis bearing the light-coloured speck were excised. The uterus had previously been laid open in front and hardened, first in formalin, then in alcohol gradually increased in strength. The excised tissues were carefully hardened and a fine series of sections prepared. The middle 160 sections were found to include a minute ovum, measuring 1.4 mm. in its longest diameter, and hence smaller than Peters's specimen, which measured 1.6 mm. The menstrual history of the suicide previous to her death could not be obtained. The author dwells on the fact that the experience of Peters, von Spee, and himself has shown that by the resources of modern microscopical science and art perfect sections of extremely minute ova may be prepared without the least disturbance of the delicate relations of the conceptus to the adjacent uterine tissues. Since it is equally possible to make perfect sections of the Graafian follicles, including the unimpregnated ovum there is no reason why the microscopist should not succeed some day in making preparations of the ovum within a few hours of impregnation, granting that certain circumstances furnish him with the necessary material. This monograph is adorned with a series of plates by Scholz, of the excellence of which the author justly speaks in high terms. Professor Leopold demonstrates at full length the appearances of the sections, and dwells on the decidua vera, the trophoblast, and the syncytium. As to nidification and the nature of the germinal layer, the appearances in this specimen do not entirely correspond with what was noted in Peters's specimen. He concludes that much more has to be made out especially as to the trophoblast, and his final words suggest that the conditions associated with suicide do not favour histological perfection in sections of early ova. He demands specimens from suicides that have died suddenly through other causes, and then when successful sections of early ova are prepared, the embryologist may feel a little more sure as to the normality of the delicate tissues in and around the ovum.

The object of Dr. Sycamore's *Outlines of Human Embryology*, as stated in the preface, is "to give to the medical student the principal facts of human embryology." Yet only about 33 of the 99 illustrations represent facts of human embryology, whilst of the remaining 66 some are diagrams and others represent conditions that do not occur during the process of human development, though they may be explanatory of the conditions met with at certain stages in human embryos. It would scarcely have been necessary to notice the utilization of processes met with in other animals to illustrate an account of the developmental history of man had it not been that Dr. Satterlee states at the outset that "theories and details are not necessary to a general understanding of the subject," and proceeds afterwards to give those very details so scorned, but without which he could not make his subject clear. We urge this point because it is a mistake for any writer upon subjects of this kind to assert that details are not important, more particularly in human embryology, where a knowledge of details is essential to the proper understanding of some of the peculiar abnormal conditions occasionally met with. The book will serve as a good introduction to the study of embryology.

NOTES ON BOOKS.

The handbook of Professor Gérard of Lille on urinary analysis[10] is accurate and clear, and contains well-drawn figures to illustrate the text, including a coloured plate of the spectroscopic appearances of the common urinary pigments, normal and pathological. It makes no pretensions to be original, but so far as we have been able to test it, appears to be thoroughly trustworthy, and equal to any work of the same kind.

The activity of the American Dermatological Association[11] is well shown by the volume of *Transactions* comprising reports of papers on a variety of dermatological and syphilitic subjects read at the twenty-ninth annual meeting in 1905. The quality of the contributions is high, many of them being suggestive, as are also the opinions expressed in the discussions. On the third day numerous unusual and interesting cases were exhibited, together with photographs of others. Dr. Charles J. White, who has edited the volume, is to be complimented on the result of his labours.

[10] *Traité des Urines. L'Analyse des Urines considérée comme un des Éléments de Diagnostic.* Par Dr. E. Gérard, Professeur à la Faculté de Médecine de Lille. Deuxième Edition. Paris: Vigot Frères. 1907.

[11] *Transactions of the American Dermatological Association at its Twenty-Ninth Annual Meeting.* New York, December 28th, 29th, and 30th, 1905. By Dr. Charles J. White, Secretary. (Large 8vo, pp. 239. Plates xxiii.)

MEDICINAL AND DIETETIC PREPARATIONS.

Carbonated Bath Salts.

Messrs. Croydenand Co., of 55, Wigmore Street, London, W., have submitted samples of their "Nauheim Bath Salts" for the production of carbonated baths. Each box contains sufficient alkali and acid for a full bath of 45 gallons; the former is divided into packets and the latter into tablets, allowing the correct quantities to be taken for a half or quarter bath if desired. The acid salt employed is in hard fused cakes, so that it only dissolves slowly in the hot water, and gives a steady evolution of carbonic acid gas, lasting for a considerable time; the quantities are so adjusted that the bicarbonate is in excess, and the bath does not contain any free acid other than carbonic, even when the reaction is complete. "Droitwich Brine Crystals" are also supplied, by the use of which, together with the alkali and acid, carbonated brine baths may be prepared.

Thyroidectin.

The suggestion to treat Graves's disease by the administration of the milk or blood of animals from which the thyroid glands have been removed arises naturally from the accepted theory of the way in which thyroid extract is able to benefit myxoedematous patients. For the further application of this treatment Messrs. Parke, Davis and Co. have brought forward a dry preparation of the blood of animals that have been so treated. It is in the form of a reddish-brown powder, to which the name of thyroidectin has been given; it is put up in capsules containing 5 gr. each. We have examined specimens of these capsules, which contain the powder without any oily basis; it is quite free from any unpleasant odour or taste which might militate against its employment, and much resembles ordinary dried blood with the addition of a trace of an agreeable flavouring agent. The content of a number of the capsules showed no appreciable variation in dosage; they are supplied in bottles of 50.

MOTORS FOR MEDICAL MEN.

[From a Correspondent.]

(Continued from page 697.)

II.

Transmission.

It will be desirable to deal with the subject of transmission more fully later on, but the various respects in which a purchaser is offered a choice must be mentioned at this point.

The Clutch.

The revolution of the crank shaft is, in nearly all cases, transmitted in the first place by means of a friction clutch. Several kinds of friction clutch are in vogue, the oldest and commonest of these being male and female cones, one of which (the male cone) is covered with leather; these two coned surfaces are held together by a powerful spring and separated, when desired, by the depression of a clutch pedal. A short time ago it appeared as if the leather-faced clutches were about to be completely superseded by types of clutch in which the friction took place between several flat discs of metal working in a bath of oil. These clutches have the advantage that the engagement is always smooth and gradual, as the oil has to be squeezed out from between the discs before any friction occurs between them. But more trouble than was anticipated has arisen with these metal disc clutches, which sometimes fail to engage promptly and sometimes also fail to disengage promptly, which is more dangerous. The leather clutch is, therefore, still fitted by a considerable number of makers, and will, indeed, be found in most small cars. With a little attention in the way of keeping the leather supple by dressing with an appropriate oil their working leaves little to be desired.

Sliding Gears.

The next place in which variations will be found is the mechanism by which the high rate of revolution of the engine is reduced.

The most usual arrangement is by means of two parallel shafts contained in a gear box. On one of these, which is square, several gear wheels of different sizes slide, so that one or other can be made to engage with one of the wheels fixed upon the other shaft. This sliding gear, known as the "Panhard" gear, is very strong; moreover, if well made and carefully used, it does not wear much.

The sliding gears are operated by a lever, and there are two forms of this lever. The commonest and the oldest works along a notched quadrant with a catch which drops into the notches. To work this neatly and certainly requires some practice, and it is very possible to miss the notch and fail to engage the gears. To meet this difficulty an improved form of lever has been introduced in which the lever slides in one of two parallel slots furnished with a central gap through which the lever can be passed to the outer or inner slot. This is called the "gate" change, and has the advantage that the lever is in each position sent right home to the end of the slot, and so there is little chance of missing engaging the gears. But though the "gate" is an advantage, the other is perfectly satisfactory when once the proper knack has been acquired, and the absence of the modern gate change is hardly a sufficient reason for rejecting a car otherwise satisfactory.

Epicyclic Gears.

There is another and totally different method of obtaining a change of gears in which an epicyclic, or a sun and planet, method of arrangement of gear wheels is used; by locking by means of a sort of brake one or other element of the system different rates of revolution are obtained. Here there is no possibility of missing gears; on the other hand, there is a slightly greater complexity, and hence a greater liability to get out of order. However, this form of change gear is used on the de Dion cars, which have proved themselves to be amongst the most reliable of small cars, and in various modifications on some others.

Chain or Live Axle.

Behind the gear box or its equivalent motion is transmitted to the driving wheels by one of two methods. In some cars there are two or four sprocket wheels carrying a chain, or two chains, which pass backwards to the back axle; this used to be universal with high-powered cars, a certain number of which still retain it, and it is used on a few small cars. Chains are, however, a nuisance; they stretch and require adjustment, they not uncommonly break, they are very dirty, and they are noisy. For small cars, and now, indeed, for moderate and even high-powered cars, they are becoming displaced by the other form of drive—namely, the "cardan" shaft. This is a shaft running lengthwise of the car, and conveying motion to the transverse back axle by means of a bevel pinion wheel, which is out of sight in the differential gear box. This is much cleaner than chains, is more silent, and is in almost every respect to be preferred. Its only disadvantage is that the pinion wheel is, from the necessities of its situation, of small size, though it has very hard work to do, as it transmits the whole power of the engine. Hence its teeth occasionally break, though now that the use of special steels is better understood, this rarely happens.

This method of drive is known as "live axle," for in it the hind axle, or part of it, revolves and carries with it the driving wheels. With a chain drive (in most cars) the axle is stationary and the wheels revolve upon it much as ordinary carriage wheels do.

The Brakes.

The life of the motorist, and the lives of other users of the road, may depend on the efficiency of the brakes, which deserve more attention than they generally get either from the intending purchaser or the user of a car. All motors are provided with at least two brakes, one of which is actuated by a foot lever and the other by a hand lever. The former is usually a band brake either of metal or metal lined with leather (which is not desirable), which grips the circumference of a metal wheel situated on some part of the transmission mechanism. It is possible, therefore, for this brake to be rendered useless by a breakage of other parts between it and the driving wheels, such, for example, as the teeth of the pinion wheel already mentioned. The hand-lever brakes operate upon the back wheels or occasionally upon part of the back axle. Two types are in use; the one consists of band brakes operating upon the outside of a brake drum fixed to the wheel, the other of blocks expanded from within and pressing upon the inside of the brake drum; these are the most satisfactory if well designed and well constructed, which sometimes they are not. It is very necessary to be sure that the brakes hold equally well in either direction, backwards or forwards; nothing is more dangerous or nerve shattering than to have a car run away backwards down a steep hill. Either of the two brakes used alone should be able to hold the car stationary on a steep incline.

In addition to the brakes, every car that is to be used in a hilly country should be furnished with some sort of sprag, lest the brakes fail unexpectedly.

Tyres.

The wear of tyres is, perhaps, the heaviest item of expense in running a car. In order to economize expense makers often put upon cars the lightest tyres they can; but this is not in the interest of the user. It will pay in the long run to have the heaviest tyres the car will take; tyres, like everything else, vary in quality even when turned out by the same makers. Michelin tyres appear to give very general satisfaction, and those made with heavy square treads are about the best; another good tyre, as yet not very well known, is the Jenatzky, made by the winner of the Gordon Bennett race a few years ago, who happens to be a rubber manufacturer. Yet another good tyre is the Gaulois.

In wet weather when the roads are greasy and slippery some form of non-skid is almost essential for a doctor's car, which has to go out in all conditions of weather, but unfortunately none are wholly satisfactory. It may be at once said that no non-skid tyre is any economy; they save side slip, they also save some punctures, but they do not prolong the life of tyres, the steel-studded leather bands wearing out much faster than a good surface of rubber, and also rapidly deteriorating the rubber tyre to which they are fixed. From the point of view of economy, therefore, it is a mistake to use them in dry weather, and this would seem to point to the preference being given to detachable non-skid appliances, of which there are many. But none with which I am acquainted is so easily and quickly removed that in practice it is removed whenever the day is dry. The non-skid appliances vulcanized on

and not removable are too often mounted on a very inferior tyre with very little rubber on it, and these soon wear out and very often cannot be repaired at all. They get much hotter in running than plain rubber tyres, and often blister. The faults of detachable non-skids are that they often shift a little upon the rubber tyre underneath them and so get out of truth, and in so doing wear the tyre; they also admit wet dirt, which gets underneath them, and then dries into a hard cake, which makes an efficient file wherewith to file away the rubber, so that if they are not pretty frequently removed and cleansed, the surface of a perfectly new tyre underneath them may be found cut down to the canvas in places.

If expense is no object, then the non-skids vulcanized on give the least trouble, but it should be realized that they are extravagant. If economy is sought, then some form of detachable non-skid should be chosen, and used only in wet weather. After all, side-slip is a rare occurrence when the driver is careful and is content with moderate speed, especially round corners. The Parsons chains which swing somewhat loosely round the tyre do not as a rule do much harm to the tyres, though I have seen pieces of rubber gouged out by them.

In order to obviate the nuisance of punctures which may occur at the most inconvenient moment, various attempts have been made to substitute solid rubber tyres; and some cars, for example, the Albion, are constructed especially with regard to the use of solid tyres. But even where the car is provided with special springs, the jolting and vibration is unpleasant for the driver and bad for the mechanism; to begin with solid tyres and have them changed to pneumatics is not a rare experience.

Punctures do not happen as often as they used; and if the heaviest treads obtainable are selected and the car is driven with care, punctures are a somewhat rare occurrence. On the whole, solid tyres are not at present to be recommended. The advent of a really efficient spring wheel—that is, a wheel providing resilience elsewhere than in the tyre—might change this, but no spring wheel has so far proved quite satisfactory. It may be added that, with solid tyres, only low speeds are feasible; apart from the jolting, solid tyres are so heavy that they fly off by centrifugal force if any considerable speed be attempted.

(*To be continued.*)

THE ADMINISTRATION OF THE MIDWIVES ACT.

The Training of Midwives by the Local Government Board.

Sir Dyce Duckworth introduced on March 22nd a deputation to Lord Crewe, the President of the Privy Council, which had been arranged by the Association for Promoting the Training and Supply of Midwives.

Sir Dyce Duckworth said that he represented the Queen's Jubilee Nursing Institute, and also spoke for the Royal College of Physicians of London. The deputation attended because of certain reports that the Local Government Board contemplated the organization of a system of training for midwives of its own, which was not likely to be adequate nor in accord with the requirements of the Central Midwives Board. Such a training would not secure the confidence of the public. The Royal College of Physicians would defer to the opinions of the Central Midwives Board rather than those of the Local Government Board. The Queen's Jubilee Nursing Institute could not recognize any midwives with a training inferior to that required by the Central Midwives Board.

Dr. C. J. Cullingworth, representing the Association for promoting the training and supply of midwives, said that the Local Government Board proposals would to a certain extent remove midwives under the Poor-law authorities from the jurisdiction of the Central Midwives Board, because that Board whilst retaining the duty of examining all candidates for admission to the Midwives Roll would no longer have complete control over the details of their education and practical training. According to the Midwives Act the Central Midwives Board was entirely responsible for the training and certification of the midwives in this country, and the introduction of two standards of training would hamper the work of the Board. The certificate of that Board was accepted as evidence that a midwife had been satisfactorily trained, but under the plan of the Local Government Board that would not be the case. He urged that the education and training of midwives should be under the entire control of the Central Midwives Board.

Dr. F. F. Fremantle, Medical Officer Hertfordshire County Council, said that under the revised draft rules before they were amended by the Privy Council, the certificate of the Central Midwives Board could be accepted without hesitation, but now it was proposed to make the Local Government Board responsible for the training of midwives in Poor-law institutions, using the Central Midwives Board for the purposes of examination. To prevent the establishment of two standards of training for midwives, the Local Government Board would require an Advisory Board of equal experience to the Central Midwives Board, and failing that, the local authorities would have to distinguish between the standard of the Central Midwives Board, which they could test and trust, and the standard of the Local Government Board, which they could neither test nor trust.

Miss Brodie-Hall, Poor-law Guardian, Eastbourne, pointed out that the intended alterations would make two grades of midwives, and contended that the laxity of guardians would render the rules of the Local Government Board easy of evasion.

Miss Alexander, representing the Society of Poor-Law Workers, emphasized the importance of maintaining one standard of training for midwives.

Lord Crewe, in his reply, paid a high tribute of praise to the Central Midwives Board, but expressed surprise at hearing it stated as a fact that it was proposed to set up in Poor-law institutions an entirely different standard for the education of midwives. He himself would not countenance such a project, and his perusal of the correspondence on the subject did not lead him to believe that any such proposition was intended by the Local Government Board; and when that Board asked the Central Midwives Board to accept its definite assurance that the training of its midwives was of the same character and in general conformity with the standard of the Central Midwives Board, it had a right to expect that the guarantee would be accepted. The Central Midwives Board was an irresponsible body, but the Local Government Board was responsible for its every act to Parliament. He hoped the differences between those two authorities were more matters of form than of fact, but if the demand was that the Central Midwives Board was to undertake the duty of a systematic inspection of institutions under the care of the Local Government Board, then he must declare that that was a change he could not possibly recommend, and it was one to which he thought the Privy Council would not assent. The whole question of those relations was being considered, and he hoped it would not be necessary to recommend Parliament to make any change in the constitution of the Central Midwives Board or in its powers or duties. In regard to the suggested system of inspection, for which no provision existed, he was unable to hold out any hope of such being established.

Sir Dyce Duckworth said it was not believed that the Local Government Board had the necessary machinery for training midwives properly.

Lord Crewe replied that the Privy Council was consulting the Local Government Board on the matter.

The deputation then retired.

ROYAT.

Royat is situated on the northern slope of the volcanic mountains which constitute the backbone of Auvergne, in Central France. It is reached from Paris by the P.L.M. Railway in about eight and a half hours. The length of time occupied on the journey might be considerably reduced, as the travelling over the last forty miles is very slow and tedious, even by the express trains. Most passengers alight at Clermont Ferrand, that station being little more than a mile from Royat.

The first impression is of the exceedingly beautiful position of the town, which occupies a site at the mouth of the Tiretaine Valley, 1,500 ft. above the sea, and surrounded on nearly all sides by mountains from 500 ft. to 1,000 ft. higher. The bottom of the valley is occupied by the gardens, in which the baths, drinking fountains, and casino are situated, while the hotels are to be found on the higher ground, most being on the hill forming the south side of the valley. The hotels are good, as in most French watering places, and vary from the luxurious cosmopolitan palace to the more modest hostelry which satisfies the thrifty Frenchman of moderate means.

The principal spring is the Eugénie, which gives a water at 95° F., very rich in sodium chloride, and containing considerable quantities of sodium and calcium carbonates; this water is the one chiefly used for baths. The bath is usually taken fasting, early in the morning, and for this purpose the patient walks down to the bath-house, a good building in the casino garden with a handsome hall; the bath rooms are not luxurious, although sufficiently comfortable, and the baths, especially those on the lower floor, are old-fashioned, and might with advantage be replaced by others of a more modern type. The bath generally occupies from twenty minutes to half an hour, and although the water feels slightly cool at first, the sensation of chilliness is soon replaced by a feeling of pleasant

warmth which is more marked if, as is usual, running water has been prescribed. These baths are used for cases of gout and rheumatism, and also for anaemia and atonic dyspepsia. A special bath, with specially trained attendants, is in use for cases of locomotor ataxy, and other forms of neurosis are said to be greatly benefited here. Douches hot and cold, of varying strength, are used after the bath in suitable cases. *Massage sous l'eau* is much used at Royat, where it is as popular as at many other bathing places. The patient lies on a table while a spray of warm water is made to fall over him continuously, the massage being carried on at the same time in the usual way.

The Eugénie water is also used for drinking, two or three glasses a day being usually prescribed. In throat affections it is also employed as a gargle.

The St. Mart spring is rather less highly mineralized than the Eugénie, but, on the other hand, yields a water containing a much greater quantity of free carbonic acid. This water is usually drunk in conjunction with the Eugénie, one being taken in the morning and the other in the afternoon. There is a small bath-house in connexion with the St. Mart spring, and baths of this water are often prescribed, especially in cases of heart affection. An arrangement also exists by which additional carbonic acid can be pumped into the water, and it is said that the baths can be made as gaseous as those at Nauheim. The rooms and baths at the St. Mart bath-house are more comfortable than those at the larger establishment.

The waters from two other springs, the César and the St. Victor—the latter being distinctly ferruginous—are prescribed in cases of nervous debility and anaemia. Altogether the arrangements for hydropathic treatment give the impression of being very complete, and there is no doubt that most forms of disease likely to be benefited by a muriated alkaline water can be satisfactorily treated here.

The temperature of Royat in the summer is often very high, but the heat is tempered by the close proximity of the mountains of Auvergne, which makes the daily range rather great. The wind rises very rapidly in this district, and it is necessary for invalids always to have a wrap handy in the latter part of the day, as the temperature may fall 10° or more in little more than half an hour.

The walks in the neighbourhood are varied and beautiful. It is said that the visitor who remains for a month can find a fresh excursion for every day. The district is extremely hilly, and from most of the elevated points the views are very fine. On the summit of one of the hills overlooking the town on the north a house is being erected for those requiring an open-air treatment; it will command a magnificent view, embracing Royat and Clermont Ferrand, and extending to the Forez mountains which form the western side of the Rhone valley. On the other side of the town, but not visible from this house, is the Puy de Dome, one of the highest mountains in central France, and the most prominent object in the landscape to the west. The mountain is about six miles from Royat, and it is the favourite object of a drive, as by taking a smaller carriage at the foot of the peak the summit can be reached without exertion, although at the expense of some shaking.

The railway journey from Royat to the Alps for an after-cure is very tedious, taking ten hours either to Geneva or Grenoble, some seven hours being consumed between Clermont and Lyons, although the distance is only about a hundred and twenty miles. It must be added, however, that the patient who has completed his treatment at Royat can even now obtain mountain air without submitting for too long to the tender mercies of the P.L.M. Railway Company, there being a good hotel some 3,700 ft. above the sea level at Le Lioran in the Cantal, which is not much more than sixty miles south of Clermont.

LITERARY NOTES.

To the February number of the *Johns Hopkins Hospital Bulletin* Dr. J. H. Mason Knox, jun., contributes a very interesting account of the medical life of Oliver Wendell Holmes. When a junior at Harvard the future "Autocrat" was undecided as to a career: but it is interesting to note that he had no thought of authorship as a career. He was, as may readily be believed, very popular among his fellow-students. He describes himself at that period as a "plumeless biped of exactly 5 ft. 3 in. when standing in a pair of substantial shoes, having eyes which I call blue." He studied law for a year, but threw it up for medicine. He entered the Medical School of Harvard in 1830 at the age of 21. In 1833 he went to Paris, where he was one of a group of American students, among whom were Jackson, Bigelow, Warren, and Morse. They lived in the Quartier Latin, and worked under Louis, Andral, Dupuytren, and other famous men. He usually began the day at 7 o'clock at the Hôpital de la Pitié, where he attended lectures and clinics until breakfast, which was about 11. Afterwards he worked till 5, when he dined at a café with his fellow-students. He gives some interesting sketches of his teachers. Of Louis he says:

> Louis had, in a rare degree, the power of attracting youth, so that those who followed him among the beds of the hospitals became filled with an ardent ambition. He was the object of our reverence—I might almost say of idolatry: modest in the presence of Nature, fearless in the face of authority, unwearying in the pursuit of truth; he was a man whom any student might be happy and proud to claim as his teacher and friend.

Lisfranc he describes as a "great drawer of blood and hewer of members, and who regretted the splendid guardsmen of the old Empire because they had such magnificent thighs to amputate." Then there was Larrey, Napoleon's favourite surgeon, a short, square, substantial man, with iron-grey hair, ruddy face, and white apron. Holmes says:

> To go around the Hôtel des Invalides with Larrey was to live over again the campaigns of Napoleon, to the last charge of the Red Lancers in the redder field of Waterloo.

Of Dupuytren we are told:

> No man disputed his reign, some envied his supremacy. He marched through the wards like a lesser kind of deity.

He mentions also Ricord, whom he called the

> Voltaire of pelvic literature; a sceptic as to the morality of the race in general, who would have submitted Diana to treatment with his mineral specifics and ordered a course of blue pills for the vestal virgins.

Holmes went to theatres and delighted to roam about the streets of Paris at night looking at the shops. He took especial pleasure in hunting for old books on the walls of the "Quais" and at the small dealers'. Holmes spent the summers, after the close of the lectures, in travel. In 1834, with several companions, he visited the Rhine Provinces, the Low countries, and England. In the autumn of 1835, after an extended tour in Switzerland and Italy, he returned home, landing in New York in December. In 1836 he took his doctor's degree at Harvard and immediately started to practise. He seems to have been only moderately successful, and it is doubtful if he ever cared much for the life of a general practitioner. Dr. Knox thinks it probable that he did not add many to his list of patients by publishing a book of youthful poems a year after his return from Europe. He competed successfully for the Boylston Prize in 1836 and 1837, winning three out of the four prizes offered by writing dissertations on "Indigenous Intermittent Fever in New England," "Neuralgia," and "The Utility and Importance of Direct Oral Examination in Medical Practice." The first of these is still a medical classic. In it Holmes gathered together all that was known of malaria, its distribution and symptoms, in the early settlement of New England. In 1838 he was appointed Professor of Anatomy and Physiology in Dartmouth College at Hanover, but resigned after a year or two. In association with Dr. Bigelow he edited the American edition of Marshall Hall's textbook on the *Theory and Practice of Medicine*. In 1842 he published two lectures on "Homoeopathy and its Kindred Delusions." In them various senseless medical fads are playfully reviewed. The reader is introduced to the Royal cure of the King's Evil, the Weapon Ointment, which was applied to the weapon producing the wound for its healing, the tar water mania of Bishop Berkeley, and the "metallic tractors" of Perkins. Holmes's most important contribution to medicine was made in 1843, when he read before the Boston Society for Medical Improvement an essay on the contagiousness of puerperal fever. This was published in the *New England Quarterly Journal of Medicine and Surgery* for April of that year. In that essay, which he republished unchanged twelve years later, he marshalled a number of cases of puerperal fever presumably carried to the mother by the attending physician or nurse. He pointed out clearly the probable connexion between erysipelas and

childbed fever. His contention met with violent, almost contemptuous, opposition from the leading obstetricians of the day—notably by Drs. Hodge and Meigs of Philadelphia. He gave some instruction in the use of the microscope, which he was among the first to use in America. He had unusual mechanical skill, and invented a stereoscope for hand use. In 1847 he was elected Professor of Anatomy and Physiology at Harvard Medical School; that position he held for thirty-five years, although the Chair of Physiology was separated in 1871. Dr. Chever, one of his demonstrators, vividly describes him in the lecture room:

Time flies, and a boisterous crowd of turbulent Bob Sawyers pours through the hall to his lecture-room, and begins a rhythmical stamping, one, two, three, and a shout, and pounding on his lecture-room doors. A rush takes place; some collapse, some are thrown headlong, and three hundred raw students precipitate themselves into a bare and comfortless amphitheatre. Meanwhile the professor has been running about, now as nimble as a cat, selecting plates, rummaging the dusty museum for specimens, arranging microscopes, and displaying bones. The subject is carried in on a board; no automatic appliances, no wheels with pneumatic tyres, no elevators, no dumb-waiters in those days. The cadaver is decorously disposed on a revolving table in the small arena, and is always covered, at first, from curious eyes, by a clean, white sheet. Respect for poor humanity and admiration for God's divinest work is the first lesson and the uppermost in the poet-lecturer's mind. He enters, and is greeted with a mighty shout and stamp of applause. Then silence, and there begins a charming hour of description, analysis, simile, anecdote, harmless pun, which clothes the dry bones with poetic imagery, enlivens a hard and fatiguing day with humour, and brightens to the tired listener the details of a difficult though interesting study. . . . As a lecturer he was accurate, punctual, precise, unvarying in patience over detail, and though not an original anatomist in the sense of a discoverer, yet a most exact descriptive lecturer; while the wealth of illustration, comparison, and simile he used was unequalled. Hence his charm; you received information, and you were amused at the same time. He was always simple and rudimentary in his instruction. His flights of fancy never shot over his hearers' heads. "Iteration and reiteration" was his favourite motto in teaching.

He was Dean of the Medical School from 1847 to 1853. He never was a strict disciplinarian, and confessed that when he examined a man who was to live on 25-cent fees he usually confined his questions to the biceps. Holmes knew the worthies of medicine and their writings from Hippocrates down. He said on presenting his loved collection of 1,000 volumes and many pamphlets to the Boston Medical Library, an institution largely due to his name and influence, and of which he was President for fifteen years:

These books were very dear to me as they stood on my shelves. A twig from one of my nerves ran to every one of them.

Literature never really weaned him from the science of medicine, although it put an end to his practice as a physician. He retired from active teaching in 1882, saying that he "had taken off his professor's gown and was in his literary shirt sleeves." Towards the end of his long life, during a morning spent with the editor of the British Medical Journal, Holmes remarked that he had passed the best years of his life as a doctor, adding:

I hope they are not ashamed of me and do not reproach me for succeeding to tread the flowery path of very light literature rather than chain myself for ever to the heavy tasks of medical practice.

He need not have had any fear, for there are few of its members of whom the profession is more proud.

MEDICAL NEWS.

The name of Dr. Ernest Mackenzie of Cheadle has been added to the Commission of the Peace for the county of Stafford.

On March 23rd Professor Senator of Berlin celebrated the fiftieth anniversary of his graduation as doctor of medicine.

Sir Thomas Barlow, Bart., M.D. Lond., who is one of the Representatives of Convocation on the Senate of the University of London, vacates his seat on the expiration of his term of office on May 11th. Sir Thomas Barlow was elected by the graduates in medicine and surgery and we are informed by the Honorary Secretaries (113, Harley Street, W.) of the Medical Section of the University of London Graduates' Union that he is seeking re-election.

The seventy-ninth Congress of German Scientists and Doctors will be held at Dresden this year from September 15th to 21st. The Secretaries are Professors E. von Meyer and Leopold.

The German Otological Society will hold its annual meeting this year at Bremen under the presidency of Professor Passow of Berlin. The principal subject of discussion will be the bacteriology of acute inflammation of the middle ear on which a report will be presented by Professor Kümmel of Heidelberg.

At the annual general meeting of the governors of University College Hospital on March 22nd, special attention was drawn to the medical baths provided by it. Last year they served the needs of 5,018 free and 393 paying patients sent by their own doctors. The belief was expressed that if the existence of the department were more widely known more use would be made of it.

Dr. Schilling, head of the Department of Tropical Hygiene in the Berlin Institute of Infectious Diseases, has been granted by the Government eight months' leave of absence in order that he may pursue researches on immunization against tsetse fly disease. In the course of his work he will make an expedition to the Congo.

Andrew Balfour, Esq., M.D., Director of Wellcome Research Laboratories, Khartoum, has received the King's permission to accept the Third Class of the Imperial Ottoman Order of the Medjidieh, conferred upon him by the Khedive of Egypt in recognition of valuable service rendered by him.

At the annual meeting of the Society for the Study of Inebriety at the rooms of the Medical Society of London on Tuesday, April 9th, the President will give a short address, and afterwards a discussion on Alcoholism and the Poor Law will be opened by Dr. F. S. Toogood, medical superintendent of the Lewisham Infirmary.

The annual general meeting of the Medical Graduates College and Polyclinic took place at 22, Chenies Street, on March 22nd, with Dr. Theodore Williams in the chair. In moving the adoption of the annual report and balance-sheet the Chairman stated that 1,164 cases of disease—many of them rare and interesting—were shown at the clinics. During the year there was an attendance of 14,528 medical practitioners, and the laboratory department reported on 512 clinical specimens. After the report had been adopted unanimously the meeting proceeded to the ordinary business of the College.

Christian Science in Delaware. An amendment to the Delaware State medical laws, forbidding any but regularly licensed physicians to receive fees for medical treatment, passed both the House and the Senate on March 12th, notwithstanding the opposition of a delegation of fifty Christian Scientists. The amendment will become law when the Governor has affixed his signature thereto. There is nothing in the amendment, says the *New York Medical Journal*, to indicate that its provisions are aimed directly at Christian Scientists; but the fact that fees shall not be taken by any except doctors who have conformed to the State medical school extending over a period of four calendar years deals a blow to those who have made a living by the laying-on of hands or by similar treatment.

International Congress of Hygiene. It has already been announced in the British Medical Journal that the fourteenth International Congress of Hygiene and Demography is to be held at Berlin this year, from September 23rd to 29th, under the patronage of Her Majesty the German Empress. We are asked to state that the Organizing Committee and the Local Committee are anxious to afford the members of the congress facilities for making themselves acquainted with the numerous hygienic institutes of Berlin and its neighbourhood. With this object it has been decided that the sittings of the scientific meetings shall not be extended beyond 2 p.m.; the afternoons will be reserved for sight seeing. In co-operation with the presidents of the different sections, more than a hundred establishments have been chosen which can be visited during the Congress, some by individual members independently, others by groups under special conduct. A hygienic guide is being prepared which will give a short description of the institutes in three languages. This will enable the members from the beginning to choose for themselves the institutes they would like to inspect. The Local Committee is under the presidency of Dr. Ellsberger, Privy Councillor in the Ministry of Public Worship and Education, and includes representatives of imperial and State offices which have to do with hygienic matters, of the members of the Municipal Council of Berlin, of members of the Medical Faculty of the University and of the Chamber of Physicians, of directors of different hygienic societies, physicians, engineers, industrials, and journalists.

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SATURDAY, MARCH 30TH, 1907.

SECURITY OF TENURE FOR MEDICAL OFFICERS.

THERE are two Bills of much medical interest referred to in the Parliamentary Notes of this week. The first is the Parochial Medical Officers (Scotland) Bill and the second the Public Health Officers Bill. The first measure is limited to Scotland and the second to England. Both deal with security of tenure and aim at preventing the arbitrary dismissal of medical men by local authorities. For many years past attempts have been made by Scottish Members of Parliament to remove the grievance which places the outdoor medical officer in Scotland at the mercy of the parish council, while the poor-house doctor has a right of appeal to the Local Government Board against dismissal. Last week the Secretary of Scotland, in answering a question, admitted that such appeals were hardly ever made, and thereby demonstrated how completely the right of appeal prevented arbitrary and unjust action on the part of a local authority. Up to now the attempt to equalize the positions of the two classes of parochial medical officers has been directed to an amendment of the Local Government Act (Scotland), 1894, but Mr. Cathcart Wason has this year boldly declared the purpose of his measure by calling it the Parochial Medical Officers (Scotland) Bill, and giving it as a short title the Poor-law (Scotland) Amendment Act, 1907. It consists of but one operative clause, which reads, "A "medical officer holding office under a parish council "in Scotland under the Poor Law (Scotland) Act, 1845, "shall be removable from office only by or with the "consent of the Local Government Board for Scotland." The Bill has an influential backing on both sides of the House, but we notice that no medical member of the House has his name on the Bill. This omission is significant, but not flattering. The promoters have evidently felt that, dealing as it does directly with medical interests, and only indirectly, although possibly equally, with public interests, the Bill is more likely to pass if its only sponsors are non-medical members of the House. The instinct, good or bad, of the House of Commons is always against any class, except Labour members, seeking legislation for their fellows, and oddly enough no body is more obnoxious to this feeling than the medical profession. The omission is wise, therefore, inasmuch as it avoids a possible difficulty, and with a little benevolence on the part of the Scottish Office the Bill may very likely pass this session.

The second measure, the Public Health Officers Bill, has also been for several years before the House, and seeks to require for medical officers of health and sanitary inspectors proper qualifications, and to give them security against dismissal by local authorities without a right of appeal to the Local Government Board. It would extend the law as it stands in the metropolis as regards medical officers of health to these officers and sanitary inspectors in the provinces. What is good for London, and has worked well in the interests of public health, would, it is very naturally thought, be good outside the metropolitan area. The municipalities, however, do not think so. The Bill was blocked even before it was printed. This does not augur well for its success. But there is a still more serious consideration raised by this active opposition. The Select Committee on Housing of the Working Classes has specially recommended the adoption of these provisions for security of tenure and qualifications, as well as the transfer of public health administration to county councils from the smaller bodies, called rural district councils. The report of this Select Committee deals very ably with the public health administration of rural districts, and clearly shows that little or no progress can be expected so long as medical officers of health and sanitary inspectors are not given independence in the discharge of their duties. To secure this the Committee recommended that the County Council should be the health authority of the future, and should appoint sanitary officials to devote their whole time to the public health work allotted to them. As long ago as 1885 the Housing Commission report contained a memorandum of similar import, and the Royal Commission on Labour shortly afterwards suggested proposals identical with those advanced last year by the Select Committee. Under these circumstances the time of legislation must be drawing nearer, but we fear it is not yet. In face of opposition from local authorities the proposed reform is too big a task for a private member. The Government is alone strong enough to tackle the problem and amend the Public Health Acts as suggested. It is true that a Housing Bill is promised for this year on the lines of the report of the Select Committee of last year, but it will probably not be considered good policy to load the measure very much. Taking into account the amount of work to be got through before August, there is not any great prospect of any housing measure becoming law this year, and, if any legislation is passed, it will have to be on the lines of least resistance, and so must almost of necessity be lightened of any clauses that are unpopular with local authorities. The argument which is most likely to force on reforms in the sanitary service of the country is that, without them, the proper housing of the people becomes absolutely impossible. To secure healthy homes, the medical officer and his staff must be commissioned for the work. They form the only real expert judges of the situation and when placed in a position of security will become the most unselfish and impartial agents for promoting the wholesome housing of the poor.

ALCOHOL AND INSANITY.

THAT alcohol drowns more than the sea and all the rivers that fall into it is an old saying and a true one; that drunkards "drowne their wits, seethe their braines "in Ale, consume their fortunes, lose their time, weaken "their temperatures, contract filthy diseases, dropsies, "calentures, tremor, get swoln juglers, pimpled red "faces, sore eyes, and heat their livers," we know, and also the psychologically significant fact that, as Dr. Maudsley puts it, "the drunken man exhibits the abstract "and brief chronicle of insanity." There seems to be no room for doubt that alcohol does act as a cause of insanity; but as to the proportion of cases of occurring insanity in which alcohol is justly attributable as an efficient factor there is considerable conflict of opinion, and the part which it plays in the production of many of the cases of alcoholic insanity is as yet largely a matter of conjecture. The two questions are intimately connected, for it seems fairly evident that, until we

know more of the mode of operation of this agent in producing mental derangement, and have in consequence some means of eliminating other possible etiological factors, the first question as to the proportional damage done by intemperance can only rest on conflicting statistical evidence from which a personal bias cannot be excluded. In the midst of considerable controversy and the widest divergence of opinion we therefore welcome a very able and temperate article by Dr. F. W. Mott on the effects of alcohol on the body and mind, as shown by asylum and hospital experience in the wards and *post-mortem* rooms.[1]

Dr. Mott, who is widely known on account of his neuro-pathological researches, is also physician to Charing Cross Hospital, and is, therefore, in a position to speak with an unusual degree of authority on this question, and we take this opportunity of touching on one or two of the several important points he discusses. First, with regard to the comparative frequency of alcohol as a cause of disease in the hospital and the asylum. In the annual reports of the Commissioners of Lunacy alcohol is assigned in about 23 per cent. of the male and in about 9 per cent. of the female pauper cases admitted to asylums, and Dr. Mott has found that in the medical cases admitted to Charing Cross Hospital, out of nearly 800 cases, intemperance was an efficient cause in quite a quarter of the male cases and in a very considerable number of the female cases. The alcoholic non-mental cases thus approach very closely in relative frequency to the alcoholic cases of asylums, the slight preponderance of the former being doubtless due to the situation of Charing Cross Hospital and the comparatively large proportion of its patients who are concerned directly or indirectly with the liquor traffic. A few cases of polyneuritic psychosis occurred, and in this relation Dr. Mott makes two suggestions, one of public and the other of scientific value. The first concerns the fact that polyneuritic psychosis, whether met with in a hospital or an asylum, occurs far more frequently in women than in men. Many of these cases arise in women who, without perhaps ever having been drunk and incapable, have acquired the habit of continuous secret tippling, and Dr. Mott has no doubt whatever that this habit is facilitated to an enormous extent by grocers' licences. The other point concerns the etiology of this psychosis. This disease Dr. Mott has found so frequently associated with some other morbific factor—septic infection from a miscarriage or abortion, gonorrhœa, syphilis, or tuberculosis—that the question arises how far the mental and neuritic symptoms are due to such causes and how far to the alcohol. In some cases gastritis occurs so often associated with decaying teeth and oral sepsis that Dr. Mott is inclined to believe that the gastritis may become infective in nature, with the formation of microbial toxins and consequent damage to the tissues. This important suggestion opens up the whole question of the etiology of the chronic alcoholic psychoses. It may be recalled here that Bonhoeffer,[2] G. Wehrung,[3] and in this country, Ford Robertson[4] have all affirmed that in Korsakow's syndrome a clinical picture characterised by amnesia, disorientation, pseudo-reminiscence and confabulation, with the almost invariable presence of neuritic symptoms besides chronic alcoholism there must be a flooding of the system with other toxic substances not identical with alcohol; that is, that alcohol acts by breaking down the defences of the organism and so permitting the ingress of bacterial toxins, generally formed, according to Ford Robertson and Wehrung, in the alimentary tract. This theory is supported by the fact that Korsakow's syndrome is not, as was formerly supposed, invariably preceded by over-indulgence in alcohol, for Dr. Mott and others have seen precisely similar symptoms, and even, Dr. Mott relates, similar pathological conditions follow other intoxications—for example, lead and arsenic.

These are very interesting facts, but a further point calls for mention. Dr. Mott for a long time past had been struck by the extreme rarity of alcoholic liver in the *post-mortem* room of the asylum—in fact, he can only recall one case of hobnailed liver with abundant ascites in his whole asylum experience. He therefore instituted with Dr. Candler a comparative inquiry into the clinical and *post-mortem* results of patients dying in Charing Cross Hospital and Claybury Asylum. The inquiry covered over 1,000 cases at each institution, with the result that definite signs of liver affection were present in 9 per cent. of the male and 4.9 per cent. of the female hospital cases, whereas in the asylum cases these signs were found in only 2.2 per cent. of the males and 1.4 per cent. of the females. These results confirmed the conclusion to which Dr. Mott had already come on *a priori* grounds—namely, "that, as a rule, "only people with an inherently stable nervous system "could drink long enough to acquire alcoholic disease "of the liver." The obvious alternative expression of this truth would be that cases succumbing to insanity as the result of alcoholic over-indulgence, whatever be its mode of operation, have already a *locus minoris resistentiae*, and are, in fact, in varying degree potential lunatics. The recognition of this fact not only throws light on the share of alcohol in inducing insanity, but has important bearings on practice. The perfectly stable nervous system is a rarity, but beneath the people of average neuro-psychic equilibrium there exist large numbers of individuals in whom alcohol, *even when taken in moderate doses*, brings to light, in some cases with startling rapidity and in others only after years of moderate drinking, their latent defect. The marked intolerance of alcohol exhibited by the epileptic, the imbecile and the degenerate, many of whom find their way to prison as the result of some fatal outburst following on the taking of what to another would have been an innocuous amount of liquor has been often observed, and has within recent years been proved abundantly by Aschaffenburg,[5] Dannemann,[6] Sommer,[7] and others, and is well expressed by Dr. Mott when he says that what is moderate drinking in one man may be excess in another. This truth, however, still largely escapes recognition by a considerable section of the public, and does not often receive its full value in the law courts.

As no truth, however, is without its practical application, we may refer in conclusion to certain preventive measures recommended by Dr. Mott. First of all there is, of course, the necessity for educating the public conscience to the evils caused by alcoholic abuse; then the desirability of placing all chronic inebriates, of whatever social class, who endanger their own or others' safety under compulsory control—a matter which we hope will shortly be embodied

[1] [illegible] Abstract read [illegible] Report from the *Journal of Mental Science*, October, 1906.

[2] [illegible] *Deutsche Zeitschrift für Nervenheilkunde*, Bd. xxvii. Heft 1 and 2, 1904.

[3] [illegible] *Archiv für Psychiatrie*, Bd. xxxix. Heft 2.

[4] [illegible] *British Medical Journal*, 1904, vol. ii. p. 1161.

[5] Aschaffenburg: *Ueber das Strafmass bei gewohnheitsmässigen Verbrechern*. Carl Marhold. Halle a. S. 1903.

[6] Dannemann: *Ueber Erinnerungsstörungen durch Alkohol*. Klinik f. psych. u. nerv. Krankheiten. Bd. i. Heft 3. 1906.

[7] Sommer: *Untersuchungen über Zählen von Mord und Totschlag*. Monatsschrift f. psych. u. nerv. Krankheiten. Bd. i. Heft 1. 1906.

in the law. Further, Dr. Mott recommends that all alcoholic cases admitted to hospitals and infirmaries should be made to pay the cost of their maintenance; and, lastly, that the temptation to alcoholic abuse should be removed as far as possible. Dr. Mott maintains that it should be made a statutory offence for a grocer or dealer with an off-licence to supply any form of alcoholic beverage to a woman while charging it in his account under the head of groceries or other provisions. The greatest amount of good is likely to result from the education of the public conscience coupled with instruction as to the results of over-indulgence in alcohol, and its baneful effects in some persons when taken in amounts apparently harmless to others. There are everywhere signs that this process of education is going on, but although the time has long gone by when to drink to excess stamped the gentleman, and to refuse to drink marked a churlish disposition or even worse, *qui potare recusat, hostis habetur*, there is still too close a mental connexion between wine and conviviality, between business dealings and drinking. It may be that to the man with a stable nervous organization light alcoholic beverages are harmless, but to the hereditarily burdened, to the neuropathic or psychopathic, alcohol is pregnant with disaster; if such persons will drink, then, "like Grasse-hoppers, whilst they sing over their "cuppes all summer, they starve in winter; and for "a little vaine merriment, shall find a sorrowfull "reckoning in the end."

THE TUBERCLE BACILLUS IN MILK.

THE Sanitary Committee of the Public Health Department of the Corporation of London has issued a report by Dr. William Collingridge, Medical Officer of Health, on the practical significance of the second interim report of the Royal Commission appointed to inquire into the relations of human and animal tuberculosis. With regard to Koch's sensational pronouncement made in 1901 Dr. Collingridge writes: "Professor Koch's "position as a scientist commanded respect and "inquiry, but he had few adherents in this country, and "to most of those capable of forming an opinion, the "evidence he adduced in support of his views appeared "inconclusive and unsatisfactory. Naturally enough, "however, the pronouncement was largely accepted "by the trade, and from that date it has practically "become an article of faith with them that tuberculosis "cannot be conveyed to man from animals. . . . During "the last few years, evidence from all parts of the "world has accumulated as to the identity of human "and bovine tuberculosis, and the still more definite "pronouncement to this effect, first published in the "Second Interim Report, has been fully expected by "those who had followed the question."

This report, whilst fully establishing the identity of human and bovine tuberculosis, and therefore the possibility that man may be infected from tuberculous meat, calls for no change in the present system of meat inspection. The recommendations of the previous Royal Commission on Tuberculosis, supported by the circulars of the Local Government Board, remain as the standard by which meat in this country is to be judged. But additional emphasis has been laid, in the recently-issued report, upon the dangers arising from tuberculous milk. It has been shown that "the danger to "health and life is a real and ever-present one, and "more stringent measures are necessary to prevent" its use. To this danger Dr. Collingridge states he has repeatedly called attention. In his report dated October, 1902, he made the following observations: "It "is a remarkable fact that while tuberculous disease at "all ages has greatly diminished in this country during "the last half-century, that among children in the first "years of life has practically remained stationary. "The diminution in tuberculous diseases at all ages is "due to the great improvement in the hygienic con-"dition of the people generally, while the high rate "among young children is probably owing to the "ingestion of infected cow's milk. Observations show "that a very large percentage of milk cows are affected "to some extent with tuberculosis." Dr. Collingridge also quoted the statistics of Mr. James King, who found that, out of 500 carcasses of cows examined by him, only 266, or 52·3 per cent., were entirely free from disease, whilst all the remainder showed tuberculous lesions in some part or other of the body. In the same report Dr. Collingridge expressed his disagreement with the assertion that the tubercle bacillus is found only in the milk of animals in which the mammary glands are diseased. "The proportion of cows so affected in "this country is found to be about 2 per cent. of the "total number examined, and if this were correct it "would appear that the risk is but small. Unfortunately, "however, this cannot be accepted, while at the same "time there are other undoubted indirect ways in "which the milk can become contaminated. The dust "of the cowshed or byre in which tuberculous animals "are kept must certainly become infected, and this can "readily obtain access to the vessels during the opera-"tion of milking. It thus becomes a most important "matter to determine how far the milk supply of a "town is infected in order to consider as to what "means should be adopted to combat this source of "danger." In 1904 milk samples representing the supply from twenty-two counties were taken at the railway stations and submitted to Dr. Klein, with the result that out of thirty-nine samples three were found to contain tubercle bacilli. In August, 1905, a second series representing twenty-two counties was taken, and out of twenty-two samples tubercle bacilli were found in two. Again, in January, 1906, a third series representing thirteen counties yielded two cases of tuberculous milk out of a total of twenty-five samples.

In discussing the practical remedy against the dissemination of tuberculosis through the milk supply, Dr. Collingridge admits that it might not be possible to secure an immediate examination for tuberculosis of all cows throughout the country, but he considers that "it "would certainly not be unreasonable to insist upon "this after a certain time in the case of all farmers who "sell their milk." He also suggests that power should be given to every county council, on receipt of information that a sample of milk has been found infected, "to investigate forthwith, and, if the fact of disease be "confirmed, to absolutely prohibit the use of the milk "for any purpose from the infected animals." Special attention is called to Section 71 of the Public Health (London) Act, 1891. This section makes provision for the protection of the public from the sale of milk "likely to "cause infectious disease," but Dr. Collingridge points out that "unfortunately, action can only be taken when "the disease is a 'dangerous infectious disease'; in "other words, disease notifiable by statute, and tubercu-"losis is not one of these; were it otherwise, the section "might be of considerable service." An important case, which suggests a useful way of bringing farmers under adequate control, was decided in the Tower Bridge Police Court on May 12th, 1905. Milk provided by the defendant, who was under contract to supply pure new

milk to a firm of wholesale milk distributors, was shown to contain faecal matter, pus cells, and tubercle bacilli. The defendant was fined £25 and £5 5s. costs. "The case is notable," Dr. Collingridge remarks, "as "being the first of the kind with regard to milk, and "should have a good effect in awakening farmers to a "sense of their responsibilities and the importance of "cleanliness in handling milk. An appeal to the "pocket to the extent of over £30 is likely to protect "the public better than a benevolent admonition in "cases of this kind."

Dr. Collingridge considers it important that legislative measures should be made to apply equally to all parts of the country. The source of the infected milk must be dealt with, and its distribution stopped; if its distribution is merely forbidden in a particular district, it will at once be sent to another district where this restriction is not in force.

LORD LISTER'S 80TH BIRTHDAY.

A MEETING of the Committee which has been formed to celebrate Lord Lister's 80th birthday, which occurs on April 5th, will be held on the previous day, at the Royal College of Surgeons of England, at 5 p.m. The form and method of the republication of Lord Lister's scientific papers, which, as already announced, is felt to be the most suitable way of commemorating the occasion, will be considered, and arrangements will be made to greet Lord Lister on his birthday, and acquaint him with the proposals of the Committee.

THE END OF A CONFLICT.

READERS of the BRITISH MEDICAL JOURNAL will be gratified to learn that the prolonged conflict between the Leicester Division and the Guardians of the Lutterworth Union respecting the conditions of appointment of the Medical Officer of Nos. 3 and 4 Districts of that Union, upon which reports have already appeared in the JOURNAL, has resulted in the Guardians appointing Dr. Jacobsen at a salary which the Division supported him in demanding. The case is so instructive that a short recapitulation of the facts may be acceptable. Dr. Jacobsen in October last succeeded to the private practice of Dr. Steele, who for many years had been Poor-law Medical Officer for Nos. 3 and 4 Districts of the Lutterworth Union; the salary of Dr. Steele had been £66. Dr. Jacobsen was a candidate for the appointment, but the Guardians resolved to reduce the salary to £58. This Dr. Jacobsen refused to accept, and having carefully considered the nature of the duties, stated that he would accept £52 per annum. The guardians then advertised the vacancy, and Dr. Jacobsen having brought the matter to the notice of the Medical Secretary, the Leicester Division was requested to consider the case; the facts were brought by the Division to the notice of all practitioners, and the appointment was included in the warning notice in the BRITISH MEDICAL JOURNAL. Through some misapprehension the medical officer of a neighbouring district, whom the guardians sought to appoint, for a time consented to act, but afterwards withdrew. The Local Government Board also intervened in opposition to the appointment of a non-resident so long as a suitable resident was available. After several months the guardians, finding themselves unable to replace any medical man sooner to accept the appointment at a lower salary than that approved by the Leicester Division, have at above stated appointed Dr. Jacobsen at this salary.

THE COVENTRY DISPENSARY.

A MEETING of the members of the Coventry Provident Dispensary was held on March 21st, to receive a statement from the Committee on the situation created by the resignation, announced in these columns on March 16th, of five of the seven medical officers. The statement shows that the committee has entirely failed to understand the principles by which the action of the British Medical Association has been guided. The Committee, for instance, states that "the all-"important question now raised is whether those "who find the money shall rule, or whether the "medical staff who are really paid officials of the insti-"tution, shall likewise have the control of the manage-"ment." This paragraph is rather ambiguously expressed, but it seems clear from the context that the Committee has lost sight of the nature of the institution, why it was founded, and why it has been carried on. Large sums of money have been left to this institution as a charity, and it is admitted that a considerable number of the well-to-do members do not avail themselves of the privileges; they continue to subscribe, as to any other charity. The point is also lost sight of that this form of contract medical practice is against the pecuniary interests of the profession; and is only allowed to continue in order to meet the wants of that section of the community who live from hand to mouth. Without some such system the demands on the resources of the hospitals and the Poor Law would be increased; contract medical practice on the penny-a-week system is nothing more nor less than a semi-charity. Until this is recognized, misunderstandings between the profession and the community are bound to arise. If this point is appreciated it will be the more easy to approach the question as to who shall "rule." Too much has been made of the question of "ruling"; the master and servant aspect of the question has been pushed so much to the fore that it was inevitable that it would at last be resented by the profession; they are merely "paid officials"; the essential character of the institution is in this way entirely lost sight of. Such an interpretation of the position of the parties to a contract is not placed on matters of much less consequence than the tendering of medical assistance. If one buys articles at a shop, the buyer does not call himself the "master" and the vendor the "servant"; such an appellation would be very quickly resented, but the Committee of the Dispensary has no qualms in using such terms in a very much more offensive way. It is not long since one of the members of the staff on being summoned to attend at the house of a fairly well-to-do person ventured to say that he thought that that household ought not to be members of the Dispensary; this venturesome statement was reported to the Committee, who forthwith called on the member of the staff to apologize; he declined to do so and resigned. The relation of medical attendant to patient is peculiarly personal and does not readily lend itself to the intervention of a committee. Yet what other profession or even trade would consent to allow a committee to come between itself and those with whom it deals? What would a baker think of the formation of a committee of his customers who determined for him the price at which he should sell his bread and to whom he should sell it at that price? This action would be peculiarly inappropriate when the particular price was one which was fixed for the benefit of the poorer people. So long as out of a committee of thirty-one only seven were members of the medical staff, misunderstandings as to the actual position of affairs, particularly as to the question of "master and servant," were bound to arise, and this is emphasized in the statement of the Committee. It is

rue that a number of the better-class members of he dispensary do not take advantage of their member-hip; but they have the *right* to do so, and the Com-nittee will uphold them in this action; when they do ot actually insist on their rights they often employ lispensary doctors privately; in these cases their ayments to their medical men are nothing more nor ess than gratuities, and could not be sued for; to such position the professsion has a right to object. The rofession does not desire gratuities, it desires to be aid for its services, and where these cannot be paid for he profession has not shown itself backward—beyond ny other profession or trade—in giving its services for othing or for a diminished payment.

NEWSPAPER MEDICINE.

THE American newspaper scribe shows, as might be xpected, the most fertile invention in his descriptions f medical discoveries and the triumphs of surgery; in hese flights of fancy his imitators in the English press oil after him in vain. The French journalist does not, s a rule, use medicine so unworthily as his Anglo-Saxon brethren; he and his readers have greater respect or science. But even a French newspaper in dealing vith medical matters sometimes allows itself to be led stray by

The light that never was on land or sea.

Not long ago the Marseilles correspondent of the *Matin* ent a report of a case in which our readers may be in-erested as it is a fine instance of the unscientific use of he imagination. A patient, whose name and address re given, is said to have awaked one morning with a iolent headache which became so bad that he con-ulted his doctor. The result of the prescription given im was that in blowing his nose he dislodged a bug. The man of art is credited with the sapient opinion that he parasite had got into the man's nose through the ear when he was asleep. By a somewhat premature pplication of the principle, *sublata causa tollitur effectus*, he foretold a complete cure. The sub-equent course of the case showed that he had poken in his haste. Before long the patient was eized with such agonizing pain that he was taken o the Hospital of La Conception, where the situation was regarded as so serious as to demand operative inter-ention. Trephining was accordingly performed, and he surgeon was not a little surprised to find in the "cervical matter" a nest of bugs which was extracted with some difficulty. It is satisfactory to learn that at he time of the report the patient was going on well. The case is certainly unique. Many people are said to ave "maggots on the brain," and the symptoms in uch cases are sometimes almost curious enough to warrant the diagnosis. We have it on the authority of hat learned clerk, Sir Hugh Evans, that the louse is a amiliar beast to man. But that bugs should make heir nest in the "cervical matter" suggests a degree of amiliarity that has bred contempt both for man and is anatomy. Had this remarkable case been reported n any other newspaper it might have been dismissed with a shrug of the shoulders. But the *Matin* has been privileged to be used by such oracles of science as Behring and Doyen as a resonant mask for the convey-nce of their revelations to an expectant world. It must therefore be regarded as having special knowledge of "bugs" and their habits. We may hint to our enterprising contemporary, however, that a little more ttention to anatomical accuracy would make its tales of surgical mystery more probable.

THE PREVENTION OF ANKYLOSTOMIASIS.

SIR CECIL HERTSLET, Consul-General for Belgium, has ent a long report on ankylostomiasis in the mines of that country, which has just appeared as a Foreign Office Blue Book. As the pamphlet is mainly intended for lay reading and as a help to mine-owners and others likely to be brought into connexion with the malady, it of necessity has much on the nature and symptoms of the disease and the life-history of the parasite which need not be alluded to here, but the details given of the action taken by the Government with regard to the various provinces and the effects resulting from it are of interest. With few exceptions, we are told, every mine in the country is infected; but the disease, which a few years ago affected more than half the workers employed, is now practically under control, and in many mines is non-existent. In November, 1904, laws were passed for the checking of the spread of ankylostomiasis. These were applicable only to the province of Liége, the most infected district. They compelled the installation at the surface of properly-fitted closets, to the number of one or more to every 25 miners. Below ground portable buckets with hermetically-closed covers must be provided. The closets must be cleaned after the descent of every gang, and the buckets have to be brought to the surface at least every twenty-four hours. The cleansing is to be done by steam or boiling water, and must be superintended by special persons. No other latrine usage is permitted. The miners must undergo examination whenever required, the cost of the examination and the wages forfeited by the workman examined being chargeable to the mine-owner. Finally, it is in the power of the authorities to compel the removal of mud and the checking of running water in the galleries. No funds were voted by Government, but the provincial authorities of Liége granted a subsidy which helped to pay the miners undergoing treatment, each man receiving 1 fr. 50 c. a day as well as free hospital attendance, a sum which was further augmented in most cases by the mine-owners, thus giving the patient nearly 17s. a week during his treatment. This system has worked very well, the men no longer refusing to submit to treatment on account of loss of wages. In addition, miners were instructed to take various precautions as to drinking water, washing their hands in clean water before meals, and not putting pipes or food or spoons and forks upon the ground. The miner was also instructed to change his clothes on coming out of the pit and to take a thorough bath, numerous bathrooms with hot, cold, and shower baths being provided. These laws and precautions only held good for the province of Liége. Hainaut suffering less, they were not enforced there, and the consequence has been that the disease has increased alarmingly, so much so, indeed, that last September the laws obtaining in Liége were extended to Hainaut province also. The mine-owners in Hainaut, however, disclaim the prevalence of ankylostomiasis in their mines, and do not give any assistance to the subsidy of the provincial authorities, so that the miners will have less inducement to submit themselves for treatment, and the task of stamping out the disease will be harder. The total number of miners in the Liége district is about 34,000, and of these 1,251 underwent treatment last year. The average number of days taken in the treatment of each case is eleven, but in Hainaut the patient enters the dispensary on Monday and leaves it on Saturday. Thymol is apparently little used as a remedy, extract of male fern, eucalyptus, and chloroform being preferred.

LOUIS THE FOURTEENTH'S IRISH SURGEON.

IN the BRITISH MEDICAL JOURNAL of December 8th, 1906, p. 1661, some account was given of George Marshall, or Mareschal, an Irishman, who was surgeon to Louis the Fourteenth. Some further particulars of a man who played a considerable part as a reformer of his profession may be interesting. It was at an acute

crisis in the history of surgery that Georges Mareschal rose to distinction. The separation of medicine and surgery, initiated in the time of Charlemagne, was still in operation. The bitterness between the *chirurgiens de la longue robe* and the surgeons of St. Sulpice had been apparently reconciled, but the latter were still smarting at the disappointing results of the union, from which they had hoped so much. Georges Mareschal was not long in the service of his master, Maître Le Breton, without attracting favourable attention. A few years after he reached Paris he became surgeon to the Hospital of La Charité, and shortly afterwards chief surgeon to Louis XIV. The success of his operations and the affection which the King invariably showed towards him placed Mareschal in an exceptionally favourable position for the task of reformation to which he set himself. At the time medicine was in a most unsatisfactory state. The deductive method was proving lamentably sterile, and the doctors were becoming daily more and more discredited. To compensate for their professional inefficiency they emphasized the superiority of the position which they enjoyed. Thus, after Mareschal had operated successfully on Fagon, the King's physician, for stone, and was recommending him a diet, Fagon replied, "J'ai eu besoin de votre main, "mais je n'ai pas besoin de votre tête pour mon "régime de vivre." This famous rebuke was quoted with the warmest approval by the members of the profession. The reforms which Mareschal introduced fall naturally into three divisions. In the first instance he reorganized the surgeons throughout France, and by insisting on the intervention of a properly qualified surgeon at every operation conducted in the country hospitals, he secured an efficient system of teaching in all the medical schools. The second class of his reforms were those which were established largely in opposition to the claims of the Faculty, and which eventually secured the freedom of surgery from University control. The University had invariably been represented at surgical lectures, and in fact their representative had often delivered the lectures, while a surgeon occupied the humbler post of demonstrator. On Mareschal's initiative a teaching college was founded, and five surgeons appointed as lecturers. The University was not even invited to be present, but the doctors came unasked, and Paris made merry over the unedifying spectacle which ensued. A pompous procession of doctors, arrayed in all the glory of full academic dress, wended its way to the lecture hall, and waited in the public street for three-quarters of an hour, while forty heavy blows were delivered with the college knocker. Meanwhile, the wife of the porter, true to the instincts of her class, watched proceedings from the vantage ground of a second-story window. Eventually, as the surgeons refused to grant admission, the procession returned by the way that it came, and sought reparation in the courts for the gross insult to which the Faculty had been subjected. The doctors argued learnedly on the deplorable results which must ensue from the monstrous alliance of theory and practice, but were eventually compelled to give way, and in point of fact the general control of surgery now vested in the person of the King's first surgeon. None of Mareschal's achievements, however, at all compare in importance with his foundation of the Académie Chirurgique at St. Come in 1752. The object of the Academy was to facilitate the interchange of ideas, and to record and publish all advances made in the study of surgery. It is interesting to notice that in the year of its foundation, Cheselden, the first surgeon of the Queen of England, was made a foreign member in recognition of his skill in lithotomy. It would be impossible to over-estimate the value of the work done after the inauguration of the Academy. In 1768 the site of the old college of Burgundy was acquired, and surgery was taught there under its auspices until its suppression in 1793. After being reorganized by Napoleon, it was eventually absorbed by the Academy of Medicine, and as such continues the good work of its talented founder to the present day. An estimation of Mareschal's work would be quite inadequate without some reference to the nobility of his character. Repeated evidence of his reputation for uprightness is afforded in the works of St. Simon and in other writers of the day. He was not ashamed to admit himself in the wrong even at the height of his prosperity. In his *Précis d'opérations de chirurgie* Leblanc describes an operation performed on the Minister for War. A young surgeon, Morand, by his presence of mind corrected at the last moment a mistake Mareschal was about to make. The Minister recovered, and gave a dinner to his professional attendants. When he congratulated Mareschal publicly with the words, "Voilà celui à qui "je dois la vie," the latter at once pointed out Morand, with the remark, "Vous vous trompez, Monseigneur, "c'est ce jeune homme à qui vous la devez, car sans lui, "je vous tuais." Space alone prevents the consideration of other instances. We can only refer those who wish to know more of Mareschal and his work to the excellent account which has been written of him by his descendant, Count Gabriel Mareschal de Bièvre.

PROFESSIONAL SECRECY AND SYPHILIS.

PROFESSOR PARISOT, in an address delivered on taking the presidential chair of the Société de Médecine of Nancy, discussed the present position of French practitioners in relation to Article 378 of the Penal Code, which forbids the disclosure of professional secrets, except in cases where the law requires it. He pointed out that the exception recognized by the law of 1810 referred to the old police regulation of Louis XI, by which any person becoming cognizant of a plot, machination, or enterprise against the King or State, or the public safety, incurred the guilt of *lèse majesté* unless he revealed what he knew. By the law of 1892 the rule of professional secrecy was set aside in order to allow of the notification of certain epidemic diseases. No professional prejudice ought to be allowed to obstruct a law which is eminently useful, but if it is desirable to notify "mumps and measles," it would be still more advantageous to include syphilis. Means should exist to prevent anyone suffering from this disease from communicating it to innocent persons, and most persons would agree with Professor Parisot in holding that a patient who would knowingly do this is a criminal who ought to suffer the penalties of the law. If callous parents desire to confide their syphilitic child to the care of a healthy foster-mother, it is the duty of the medical practitioner to warn her of danger without naming the disease; if he neglect to do so, he may be held liable, as in a case decided by the Court of Dijon (May 14th, 1868). On the other hand, if a practitioner called by the employers to prescribe for a servant, discovers her to be suffering from syphilis, Professor Parisot thinks he should give her a written diagnosis, with directions what to do and what to abstain from, in order to prevent risk of infection, and a prescription for the necessary remedies; then, if asked for his opinion as to the nature of the case, he can refer the employers to the servant, stating that he has given his opinion to her in writing, and that she is the proper person to inform them if she thinks fit. But a more difficult question arises when a man suffering from recent syphilis insists, in spite of the most solemn warning, on getting married. What is the practitioner to do? M. Parisot evades this important problem by discussing what should be done if Mr. X., the prospective father-in-law, seeks to interview the medical man under whose care Mr. Y., the

proposed son-in-law, has been. We agree with the quoted opinion of Professor Brouardel that it is best to stop such inquiries at the outset. No one should discuss with a third person the case of a patient, saving where the patient has given plain authority in writing. Professor Parisot is here rather vague, and contents himself with deploring the "rigour of the law," which prevents medical men from following the dictates of their consciences. To us, living in a country where there is no such law as Article 378, this seems inadequate, as the right course to take is by no means clear. Supposing that a medical practitioner knew the woman who was to be victim of his patient's selfishness, he might be strongly tempted to interfere, but what could he do? Is he to seek an interview with her or with her mother or father? It has been suggested that if he were known to them personally and felt that he had their confidence he might risk such a step, but that he could not venture to approach strangers on such an errand. While recognizing that there must be a strong disposition to interfere to safeguard the future of a young woman, the child of old patients or friends, it seems to us that no distinction can be drawn, and that whatever the nature of the medical man's responsibility, it is the same towards a stranger as towards a friend. Public opinion may in time become sufficiently developed to insist on special legislation for the control of syphilis. The subject is one surrounded by many difficulties, and it would be interesting to learn the experience of medical men who have resided in one locality for two generations as to how far the present freedom is fraught with evil and to what extent it should be curtailed in the interests of the health of the people.

CALCIFICATION OF THE BREAST.

PROFESSOR THAYER AND DR. HAZEN describe[1] an unusual case in which calcification of the breast occurred after a typhoid abscess. The patient, a coloured girl aged 16, was admitted to the Johns Hopkins Hospital on the ninth day of a severe attack of typhoid fever. During the course of the treatment calcium lactate was prescribed, doses amounting in all to 132 grams being given by the mouth in eleven days. Five grams of calcium chloride were also introduced subcutaneously under the left breast. Eleven days after the subcutaneous infusion a large abscess of the breast developed from which cultures were isolated of *Bacillus typhosus* and *Staphylococcus aureus*. The abscess was opened, and the wound packed with iodoform gauze. Eleven days later a deposit of calcium appeared in the granulation tissue at the borders of the wound. This rapidly increased until the margin of the opening and the lining of the granulation tissue were converted into a hard calcareous mass. Nodules of apparently similar character also appeared in other parts of the breast. A month later the iodoform gauze was removed and the patient was put upon a carbohydrate-free diet, which was continued for twenty-four days. Under this treatment the abscess almost entirely healed, and the deposit of calcium completely disappeared. Studies of the intake and output of calcium showed that during three days under a diet of milk and eggs there was a marked calcium retention of 1.346 grams, whereas during two periods, amounting to three weeks in all, under a carbohydrate-free diet there was an excess of calcium elimination over the intake amounting to 3.672 grams. During ten days following the last carbohydrate-free period, under a normal diet, there was a retention of 0.602 gram of calcium. The disappearance of calcium from the breast took place when the patient was under a carbohydrate-free diet, and was eliminating an excessive amount of calcium. During this period acetone and diacetic acid appeared on two occasions in the urine, but were not accompanied by any increase in the elimination of calcium. The authors are not prepared to give a definite opinion as to the cause of the calcification, but, in addition to the fact that the patient had been receiving large quantities of calcium, they think it important to note that the deposition occurred in tissues which were in contact with a dressing containing iodoform. This drug, they point out, produces in some animals degenerative changes in the kidneys and liver which are peculiarly prone to calcification. Whether the disappearance of the calcium was due to the carbohydrate-free diet cannot be regarded as definitely proved, but the coincidence of this treatment with its disappearance is remarkable and suggestive.

[1] *Journal of Experimental Medicine*, January 7th, 1907.

DEATH CERTIFICATION.

SIR WILLIAM COLLINS, M.P., in the course of his remarks introducing a deputation from the Medico-Legal Society and the London County Council to the Lord Chancellor on March 22nd, pointed out that the present system of death certification was lax, imperfect and dangerous. Mr. H. J. Anstruther, Chairman of the London County Council Public Control Committee, furnished a report urging the appointment of medical investigators to make preliminary inquiries where an inquest seemed desirable. Dr. F. J. Smith said that it was easy to dispose of a body by means which, whilst conforming to the letter of the law of the present day, might still be immoral and criminal in their potentialities. The present law afforded opportunities for secret murder, and for rendering such a crime undetectable. He urged on behalf of the Medico-Legal Society that an improved form of death certification should be framed; that the fact of the death of any person should be affirmed by the medical practitioner in attendance, and that he should identify the body by personal inspection; that medical practitioners should be required to send certificates of death directly to the Registrar; and that in no case should a death be registered without the production of a certificate of the cause of death signed by a registered medical practitioner or by a coroner after inquest or in Scotland by a procurator-fiscal. After Dr. W. Wynn Westcott and Mr. John Troutbeck had spoken, the Lord Chancellor replied, assuring the deputation that he would investigate the matter personally, and would consult with all the authorities concerned. The deputation then withdrew.

VIBRATION.

FRANCE, which has strong claims to be regarded as the mother of automobiles, has hitherto lagged far behind in the matter of vehicles intended for heavy traffic, with the result that automobile omnibuses are rare in the streets of Paris as compared with those of London, and of many other towns in these isles. Obviously, however, it is intended that when at length the machine-driven omnibuses replace the horse-driven vehicles at present in use they shall be, from the hygienic point of view at any rate, beyond reproach. With this object the Public Health Committee of the Department of the Seine has taken the matter in hand, but so far would appear to have tackled only one point, that of vibration. To eliminate this as far as may be it is demanded that the back wheels shall be covered with india-rubber corrugated tyres, and the fore wheels with smooth tyres of the same material. The chassis or under carriage must be connected with the axle by steel springs which must not be stiffer than stability demands, and between the body and the chassis india-rubber cushions must be interposed; similarly the seats for the passengers both inside and outside must be provided with steel springs. The scientific fashion in which the committee has dealt with this point

is doubtless admirable, but there is no particular reason to desire that our English authorities should follow suit, since there are many other points of much greater importance. Vibration is a matter in which the public can be trusted to look after its own interests; there is great variation in the extent to which cars of different construction jolt, and those which jolt unpleasantly will be avoided, and are, indeed, already avoided. Apart from this it is open to question whether vibration should really enter into any consideration of automobile vehicles from the standpoint of hygiene. A little shaking has for long, indeed, one might almost say from the earliest ages so far as modern medicine is concerned, been regarded as a good thing for the liver—one of those luxurious forms of treatment chiefly reserved for the rich in the shape of a prescription to ride in Rotten Row. It has been applied likewise, though chiefly abroad, by means of complicated machinery to the treatment of various other diseases. As produced by certain manipulations it is still the chief weapon of certain Swedes and others in the West End, and it is the object in view in sundry appliances occasionally used in the treatment of deafness. When the latter is due to immobility of the ossicles it has been applied before now, and not without benefit, by the simple expedient of journeying on the underground railway with the head leaning against the partition. On the Metropolitan Railway, however, as it now is, this gratis treatment is no longer available.

THE SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

The second general meeting of the Society of Tropical Medicine and Hygiene was held at the Royal College of Physicians, London, on March 15th. Dr. F. M. Sandwith occupied the chair. The business of the meeting was to receive the report of the Subcommittee nominated at the meeting held at the Colonial Office on January 4th, 1907, to draw up rules and a constitution for the Society. These were considered and after several suggestions had been made, a subcommittee, consisting of Sir Patrick Manson, Colonel Melville, R.A.M.C., Dr. F. M. Sandwith, Dr. Carnegie Brown, Dr. G. C. Low, a representative of the Liverpool School of Tropical Medicine, and Mr. Cantlie, were empowered to deal with the matter. At the two meetings the following were present: Sir Patrick Manson, W. M. Haffkine, C.I.E., John Anderson, C.I.E., Professor G. H. F. Nuttall, Professor W. R. Smith, Fleet Surgeon Bassett-Smith, R.N., Lieutenant-Colonel C. N. Melville, R.A.M.C., Lieutenant-Colonel Andrew Duncan, Lieutenant-Colonel Oswald Baker, Drs. F. M. Sandwith, W. Carnegie Brown, William Hartigan, L. Sambon, C. F. Harford, Leopold G. Hill, George C. Low, Henry D. McCulloch, J. M. H. MacLeod, R. N. Moffatt, T. P. Beddoes, Francis Fremantle, A. T. Stanton and James Cantlie. Letters in support of the Society were received from Professor Ronald Ross, C.B., Colonel David Bruce, C.B., Major Leishman, R.A.M.C., A. E. Shipley, F. V. Theobald, R. W. Felkin, Professor W. R. Simpson, and from many medical men resident in the tropics.

VACCINATION IN JAPAN.

We learn from the *Seoul Korea Medical Journal* of January 31st that in 1870 the Japanese Board of Education, recognizing the beneficial effects of vaccination, ordered local governors to encourage its use among the people. In 1874 certain regulations were made. The administrative control of vaccination was, however, transferred from the Department of Education to that of Home Affairs in 1876. The former law was then repealed and new regulations for the prevention of small-pox were promulgated. These enactments were in every respect defective, and a new law, which still holds good, was passed in 1885. The chief provisions of that law are that if vaccination performed within one year of birth is not successful the child must be vaccinated again two or three times the following year till a satisfactory result has been obtained. Even when the primary vaccination has been successful the child must be revaccinated within five or seven years. A further revaccination must be performed five or seven years after the second. If an epidemic of small-pox occurs, every child must be submitted to an emergency vaccination. In Japan, as elsewhere, it would appear that it is one thing to make a law, and quite another to get it obeyed. We gather that there was a good deal of difficulty in regard to this at first, as in the Eighties not only had the people no notion of scientific hygiene, but the arrangements for vaccination were inadequate. Humanized lymph was at times used in the provinces. At a later period many private establishments for the preparation of vaccine were established in the provinces, but the high price and bad quality of the lymph were hindrances to the success of vaccination. In 1896 a Government establishment was founded to supply the whole empire with pure lymph at a low price. Since then the results of vaccination have improved, and in Japan, where the unreason of antivaccinists is understood, it is considered impossible to fail to see its beneficial influence.

The President of the Local Government Board has appointed Mr. J. M. Hamill, M.A., M.B., B.Sc., an Assistant Inspector of Foods in the Medical Department of the Board.

We regret to announce the death of Professor Ernst von Bergmann, which occurred on March 25th. He had suffered for some time intermittently from symptoms of abdominal disease. At his own request he was operated upon last Saturday and again on Monday morning. He did not rally from the second operation. Professor von Bergmann, who was unquestionably the foremost surgeon of Germany, only a few months ago celebrated his 70th birthday. We hope to publish a detailed biography in a subsequent issue.

From communications which have reached us during the last fortnight it would appear that a medical man practising in Kingston, Jamaica, has issued to a number of medical men in various parts of England a letter stating that his house and other property in Kingston were wrecked by the earthquake, and asking for pecuniary assistance to enable him to make a fresh start in life. It has occurred to some of those who have received this appeal that it is desirable to obtain further information with regard to the position and losses of members of the profession generally in Kingston; an inquiry has in consequence been addressed to the Branch.

Medical Notes in Parliament.

The Public Health Officers Bill, which is down for second reading on April 10th, has been blocked by Mr. A. W. Black and Mr. Harmwood Banner, in the interest of hostile municipal bodies.

The Parochial Medical Officers (Scotland) Bill, which was introduced last week by Mr. Cathcart Wason, seeks to amend the law relating to the tenure of office of parochial medical officers in Scotland. The Bill is backed by Mr. Ainsworth, Mr. Harmsworth, Mr. John Dewar, Mr. Crombie, Mr. Cultland, Sir Henry Craik, Viscount Dalrymple, Major Anstruther Gray, Mr. Younger, Mr. Cross and Mr. Mitchell Thomson. The second reading has been put down for Wednesday, April 24th, on which date it is at present first order.

Tuberculous Cows.—Sir Arthur Bignold called the attention of the President of the Local Government Board to the statement made by Professor McCall that milk from a cow suffering from tuberculous mammitis should not be used for human food, and that such an animal should be destroyed or fattened for the butcher; and asked whether he would take action to prevent such animals being fattened for the butcher to the danger of the public. Mr. John Burns said he had not seen the statement referred to. The report made in 1898 by the Royal Commission on Tuberculosis, presided over by Sir Herbert Maxwell, contained a statement of the principles upon which they considered that meat inspectors should act in dealing with the carcasses of animals affected with tuberculosis, and the Local Government Board had more than once brought the views of the Commissioners under the notice of local authorities. The Royal Commission, however, did not go so far as to recommend action of the kind referred to in the last part of the question. A further Royal Commission was now considering the transmission of tuberculosis from animals to man, and he should expect guidance from them as to the course which should be taken with regard to the meat of animals affected by the disease. Meanwhile, he could not undertake to promote the legislation which would be necessary to give effect to the suggestion.

Tuberculosis in Parochial Infirmaries.—Mr. William Pearce asked the President of the Local Government Board if he would state which metropolitan parochial infirmaries had special wards for the treatment of cases of pulmonary tuberculosis; and could the Local Government Board encourage the establishment of such wards. Mr. John Burns replied that in the majority of the metropolitan Poor-law infirmaries special wards were set aside for these cases. The general practice was to extend this system, and he desired to encourage it in every way in his power.

Tuberculosis among Soldiers.—Referring to a point raised by Major Seeley that only 6 per cent. of soldiers discharged for tuberculosis of the lungs were sent to sanatoriums, while more than 70 per cent. were sent to their homes, Mr. Haldane said that the disposal of soldiers invalided for lung tubercle was a matter involving several difficult considerations, and he proposed to institute a small committee to advise on the subject.

The Treatment of Inebriates.—Last week Mr. Birrell informed Mr. William Redmond that since the establishment of Ennis State Inebriate Reformatory in 1899 38 men and 69 women had been committed, of whom 29 men and 52 women had been discharged. Each case was watched and reported on periodically after discharge. Of the 29 men discharged, 16 were reported cured, 3 were dead, and 10 had relapsed. Of the 52 women discharged, 21 were reported cured, 5 were dead, 2 were in lunatic asylums, and 24 had relapsed. The question of sending persons to the inebriates' reformatory was one entirely for the judicial authorities themselves. He would, however, bring the suggestion of the advisability of sending persons convicted of offences arising from drunkenness to the reformatory instead of to prison to the notice of the Lord Chancellor.

The Cost of Poor Law in London.—At the end of last week Mr. John Burns informed Mr. Haddock that the total expenditure for the relief of the poor and purposes connected therewith of the Poor-law authorities in London for the ten years ended March, 1906, not defrayed out of loans, was £35,083,889. The expenditure out of loans was £4,844,960. The amounts for the year ended March, 1906, were £3,869,308 and £244,463 respectively. The expenditure of the Metropolitan Asylums Board for the purposes referred to was in the year last mentioned £396,991, excluding the expenditure out of loans, which amounted to £51,750. The totals for the ten years given above include expenditure by the Metropolitan Asylums Board in connexion with their small-pox and fever hospitals, ambulance service, etc., prior to 1900–1, when the amount of the latter expenditure was for the first time separately ascertained. It was not possible to state the expenses of the Local Government Board in respect of the administration of the Poor Law in London, as it was only one of the many subjects dealt with by the Board, and was not wholly conducted by a separate staff.

Marriage Certificates and Medical Relief.—Mr. Alden asked the President of the Local Government Board whether it was necessary, under any order of his department, that all married applicants for medical relief should produce a marriage certificate; and, if not, whether he was aware that the Kensington Board of Guardians made this a condition for granting such relief; and what action he proposed to take in this matter. Mr. John Burns replied there was no order of the Local Government Board requiring married applicants for medical relief to produce a marriage certificate. He was making inquiry as to the practice of the Kensington Board of Guardians in this matter.

Coastguard Medical Attendance.—Mr. Lamont asked the Secretary to the Admiralty what was the salary paid for medical attendance on the coastguard at Lamlash and Kildonan respectively in the county of Bute. Mr. Edmund Robertson replied that Dr. Robert Jamieson, surgeon and agent, who attended both the Lamlash and Kildonan detachments, was not in receipt of a fixed salary, but was paid at the ordinary rate laid down in the instructions to Admiralty surgeons and agents. If desired, he could furnish a statement of the actual amount paid to Dr. Jamieson during the last financial year in respect of these two stations.

Typhus Fever at Oughterard.—In answer to Mr. O'Malley, who asked about the outbreak of typhus fever at Oughterard, co. Galway, Mr. Birrell replied that an outbreak of typhus fever occurred in this district early in February, since when four families, comprising 25 persons, had been affected. Three deaths had occurred, 16 persons were still in the fever hospital, and six had been discharged cured. The Local Government Board had already fully investigated the matter, and were satisfied that the outbreak was not due to the destitution of the people but to insanitary conditions. None of the people affected were destitute, and none had applied for relief at the time of the outbreak. The local medical officer of health, in consultation with the medical inspector of the Local Government Board, was making every possible effort to prevent the spread of the disease. Three additional fever nurses had been appointed by the guardians. There was every reason to hope that no further cases of fever would occur.

Deaths after Vaccination.—Mr. Lupton asked the President of the Local Government Board if Dr. Fletcher reported on the case of Olive Hunt, who died after vaccination; if the same Dr. Fletcher reported on the case of Willy Kellam, vaccinated on October 30th, 1906; if the wound in this case took seventy-two days to heal; and if he would lay a copy of Dr. Fletcher's reports upon the Table of the House, or give a copy of the report to the relatives. Mr. John Burns answered that Dr. Fletcher reported on both these cases. He did not know the precise number of days which the wound took to heal in the case of Kellam. The reports were made for his information and were confidential documents. Hence he could not take the course suggested in the last part of the question.

The Municipal Milk Depots Bill, introduced on Tuesday by Mr. Burns, will make it lawful for local authorities to have sterilized milk dépôts without the liability of being surcharged for the necessary expenditure. There are only seven or eight municipalities carrying on this excellent experiment, which has been shown to have an important influence in reducing infant mortality. Under the Bill, when passed, and the regulations to be made by the Local Government Board, it is hoped that such dépôts will be established in all populous districts.

The Course of Business After Easter.—The House of Commons adjourned on Wednesday last, and will meet again after the holidays on Monday, April 8th. On that day Supply will be taken, and the vote for the Board of Works will be discussed. On Tuesday the second reading of the Army Bill will be the first order, and the debate is likely to occupy Wednesday as well. On the Thursday the consideration of the new Rules of Procedure will be resumed. On the Friday the Coal Mines (Eight Hours) Bill will occupy the sitting.

Scotland.

The Judicial Conception of Insanity.

The trial of Mr. T. M. Brown, a retired colliery manager, in the High Court of Justice at Edinburgh, on March 18th, 19th, and 20th, for the alleged crime of poisoning, and the condition of his mind as brought out in medical evidence, suggests many points of paramount importance to the medical and legal professions and of great interest to the public.

The indictment against the prisoner was in the following terms:

The charge against you is that, on November 19th, 1906, you did send by post, from the Post Office at Kilmarnock, addressed to William Lennox, Esq., Woodside, Old Cumnock, a cake of shortbread having a covering or layer of icing adherent thereto, with which icing you had previously mixed a quantity of strychnine, your intention in so sending the cake being to poison the said William Lennox; and said cake, having in course of post been delivered to the said William Lennox at Woodside aforesaid, a portion of said cake and icing was eaten, on November 23rd, 1906, at Woodside aforesaid, by Grace M'Kerrow, housekeeper to the said William Lennox, in consequence of which she died at Woodside aforesaid on said November 23rd, 1906; and you did thus poison her, and did murder her.

At the first, or pleading diet, at Ayr, on March 8th, 1907, the Procurator-Fiscal produced a medical certificate by Dr. John Carsewell and Dr. Donald Fraser certifying the prisoner to be of insane mind and not capable of pleading to the indictment. The law agent of the prisoner objected to the production of the medical certificates and insisted that Brown should be allowed to plead not guilty. The Sheriff Substitute, in respect of the medical certificates, did not call upon Brown to plead, and reserved the matter for the consideration of the Court at the second diet. Upon the case being now called, the Solicitor-General intervened and informed the Court that the prisoner, according to his information, was in the same state as that described in the medical certificates, and he therefore brought the matter before the Court (consisting of the Lord Justice-General and Lords McLaren, Stormonth Darling, Dundas, and Salvesen) in order, if they thought fit, to order such investigation as would enable them to determine whether or not the prisoner ought to be called upon to plead.

The Lord Justice-General said it was perfectly clear that if this trial proceeded the jury would be able to follow one of several courses. They would be able to say at the end of the evidence, if they came to that conclusion, that the prisoner was insane at this moment, and if so, that would end the matter. They would be able, without saying that he was insane at this moment, to find that he did not commit the crime, and that would also end the matter; or they would be able to say that he did commit the crime, and was insane at the date when he committed the crime, and that would also end the matter. It was obvious that the prisoner had suffered no possible prejudice by the procedure that had been followed, because before being sent to the Assize, he would be called upon to plead, and he could not wish for anything better than that he should be allowed to plead not guilty. His lordship and his fellow judges proposed that the case should now proceed in the ordinary way. The prisoner, having been asked by the Lord Justice-General if he were guilty or not guilty of the charge, replied, "I am not guilty." A jury was then empanelled, and the trial proceeded. The Solicitor-General said this was a case, if ever there was one, of circumstantial evidence. After a three days' trial the jury found by a majority that accused was now insane. The Solicitor-General moved the Court to desert the diet *simpliciter* against the prisoner. The effect of the Solicitor-General's motion is that the prisoner cannot now be proceeded against on the same charge, and that he will be detained during His Majesty's pleasure.

It would appear that the position taken up by the Lord Justice-General in his summing up of the case will form, on the special point of insanity, an era in Scottish criminal jurisprudence. In early days the fact of a man's mental condition when he committed a crime was scarcely taken into account at all. One of the earliest judicial deliverances on the subject was that of Judge Tracey, who held that unless a criminal was as irresponsible as a "wild beast" he should suffer the usual punishment. Since that time there had been an almost continuous divergence of opinion between the legal and medical professions as to the amount and kind of mental disturbance or weakness which should be taken into account by the judge and jury in any case of a prisoner accused of a criminal action, and where mental responsibility was questioned. Although the Lord Justice-General may have been right when he said: "In one sense no one could say what insanity was; he did not think, if they had all the doctors who were learned on that subject, that any of them would agree on a definition," yet it is certain that he was right also when he added:

It was quite certain that what might be called scientific opinion upon insanity had greatly altered in the course of years, and courts of law, which were bound to follow, so far as they could, the discoveries of science and the results of experience, had altered their definitions and rules along with the experts. It was perfectly well recognized that although science had not yet taught them sufficiently about the brain to know upon what these matters depended, yet it was a perfectly possible thing to have a person who might for all purposes be as sane as any one on nearly every matter, and yet, upon one point, be hopelessly insane. . . . Where they were called to determine whether the man was or was not insane at this moment, he must consider what that class of insanity meant. It meant a class of insanity which prevented a man from doing what a truly sane man would do, and was entitled to do—maintain in sober sanity his plea of innocence, and instruct those who were to defend him as a sane man would do.

Thus, for the first time, a British judge of high standing has laid down in plain language a principle which all doctors will accept and agree to. It is, indeed, following out and applying in practice to an individual case the dictum laid down by the late Sir James Stephen, in his *History of the Criminal Law of England*, as to what the law of England ought to be, but was not, at that time. His definition was even more comprehensive than that of the Lord Justice-General of Scotland. He said that

No act is a crime if the person who does it is, at the time when it is done, prevented, either by defective mental power or by any disease affecting his mind, from controlling his own conduct, unless the absence of the power to control has been produced by his own default.

What is of special interest to the public is this—Have the experts who have studied the brain in its mental relations in health and disease come to any recent conclusions that would extend the area of irresponsibility for crime, and can they assign strong enough scientific data to confirm their conclusions? The school of Lombroso in Italy has gone so far in this direction that neither the public nor the experts in Great Britain, America, or Germany are prepared to follow them to their conclusions, which they still regard as extreme. But at least it may be asserted that recent scientific investigations have proved that disease may be so partial as to produce a condition of moral paralysis without such impairment of the intellectual faculties as results in delusions or complete absence of self-control. It is now recognized that the power of mental inhibition, on which will and conduct depend, may be paralysed through brain disease of a very partial nature. Again, brain disease may produce such mild enfeeblement of mind that it does not interfere with a man's ordinary appearance before a casual observer, but, nevertheless, deprives him of the real power of being a law-abiding citizen. Such conditions often constitute the most dangerous of all forms of mental disease as regards the public safety—a fact which the public do not yet realize. The condition of epilepsy, from which Mr. T. M. Brown had suffered for forty years, was undoubtedly one of those brain diseases apt so to weaken a man's moral sense, and his power of self control, as to interfere with his capacity to be a law-abiding citizen. It produces, in most instances, when so long continued, a deterioration and degeneration of the mind. A very considerable number of the murders of Europe and America have been committed by epileptics. In the case of an epileptic the *onus probandi* as to his responsibility is undoubtedly thrown on the side of the prosecution. In recent years Europe and America have been startled by the appalling murders of presidents, kings, rulers, and others, by men, some of whom were undoubtedly insane. What the public are concerned to know about such persons is, Were many of those murderers men of essentially weak brains, of perverted intellects, of impulsive and unreasoning natures, who should have been taken care of by the criminal authorities long before their dramatic crimes had been committed? If they were, for the most part, persons with such weakened brains and diminished inhibition, it cannot be denied that preventive measures against such dangers to society should have been adopted. It matters little, after such crimes have been committed, whether the doers of them are hanged or kept in lifelong confinement. No one who reads intelligently the medical evidence in the Cumnock case can doubt for a moment that the

prisoner at the bar was mentally deteriorated and therefore irresponsible. To any one who knows the mental condition of most epileptics, the crime of which he was accused was not an unlikely one, and the chain of evidence connected it with him somewhat closely. The verdict of the jury, which was undoubtedly in accordance with the law and the judge's charge, was neither unjust nor harsh as looked at from the public interest. Ordinary mental hospitals have cure as their chief object, and their arrangements do not provide for the safe custody of the dangerous lunatic of criminal tendencies. The lunatic department of Perth prison is simply a mental hospital with more stringent precautions. Perhaps few medical men would say that such a case as that under review has much, if any, chance of recovery. While one does not wish to be harsh or unjust towards any one afflicted with the most terrible of human diseases, the medical profession is bound to secure society from serious danger, due to mental disease, just as it is bound to protect the insane from the many absurd prejudices which attach to those who suffer from any form of mental disease.

Arbitrary Dismissal of Poor-law Medical Officer.

In the British Medical Journal of March 16th the version put forward by the Parish Councils of Kintail, Lochalsh, and Glenshiel, of the dismissal of Dr. George Duncan from the post of Poor-law Medical Officer was given. The *Inverness Courier* of March 5th has published a reply to this version which puts the case strongly in favour of Dr. Duncan. The points, briefly stated, are the following: It was urged against Dr. Duncan that the Parish Councils granted him leave of absence some five years ago, when he was suffering from an attack of influenza, and made an arrangement that he should supply an assistant. Dr. Duncan and others interested claim that this arrangement only applied for the period of the leave, and had it been otherwise the Councils would have been bound to have pointed out to him that he had failed to comply with the arrangement when, after his return to work, he dismissed the assistant. In spite of the Councils' statement to the contrary, it appears that Dr. Duncan has been physically and mentally fit to discharge his duties from that time up to the present. Next, importance appears to have been attached to a comparatively small petition which is supposed to have urged the appointment of two medical officers for two separate places situated within the district. What the real nature and importance of this first petition is does not appear to be quite clear, but the defenders of Dr. Duncan refute the statement that the larger petition contained forged and irresponsible signatures. It is stated that some ulterior motive must have been acting when the dismissal was carried. In any case, the line of defence taken up by the writers in the *Inverness Courier* bears out the contention that the dismissal was arbitrary.

The Royal Hospital for Sick Children, Glasgow.

The number of cots available in the Sick Children's Hospital is 74, while at the country branch at Drumchapel there are 22 cots. The site of the hospital in Bucclench Street is by no means ideal, and the directors propose to rebuild the hospital on a more suitable site, and at the same time increase the accommodation to 250 cots. They calculate that £100,000 will be required for this purpose. In support of this appeal a public meeting was held last week in the City Chambers, when the Lord Provost intimated that about £40,000 had been already subscribed, so that there seems a reasonable prospect of this much-needed extension being soon possible.

Ireland.

The Defence of Trinity College.

On the evening of March 22nd there was a great demonstration of graduates of the University of Dublin in defence of Trinity College. So large was the number in attendance that it was found necessary to hold an overflow meeting, but neither differed in the enthusiasm with which Mr. Bryce's proposals were repudiated. The Provost occupied the chair at the principal meeting, and the speakers were Lord Ashbourne, Viscount Iveagh, Sir James Henderson, the Bishop of Derry, Rev. Dr. Prenter, Sir C. Ball, and Sir W. Watson. The overflow meeting was presided over by the Rev. T. Gray, S.F., T.C.D., and the speakers were the Bishop of Ossory, Mr. J. H. Campbell, M.P., Rev. Pastor Brown, Mr. W. Jellett, K.C., Sir Edward Carson, and Dr. C. Fitzgerald. The principal resolutions passed were:

This meeting protests against the scheme put forward by Mr. Bryce in his speech of January 25th, 1907, as a grievous injustice to this University and disastrous to the best interests of higher education in Ireland.

That the enforced alliance, within the same University, of Trinity College and a college specially designed for Roman Catholics, would be followed by sectarian strife, and must entail serious limitation to liberal education and free inquiry, not only in the University but in Trinity College, the educational ideals of the two Colleges being incompatible.

That the prestige of the University of Dublin would not survive a process which abolishes the old University of 300 years, and transfers its name to a new and different institution.

That copies of these resolutions be sent to the Prime Minister, the Chief Secretary, to the Lord Lieutenant, and to the other members of the Cabinet.

It is just possible that the Education Bill may be postponed. It does not seem likely that the Government will be able to bring in two Bills—the devolution and the Education—at this period of the session, unless Parliament should sit again in the autumn. Mr. Birrell on March 25th made some ominous observations, which have caused much comment. In the course of his speech in the House of Commons he said he was "sanguine that the measure the Government would introduce after Easter for the reform of the administration of Irish affairs would be found to contain the means of enabling the Irish people themselves to do that which all Irish people agreed was pre-eminently necessary—the overhauling from top to bottom of the educational system of the country." It would be a curious evasion of the fight in Parliament to hand the whole matter over to some new form of Irish Government for settlement.

The Health Commission in Belfast.

An evening meeting of the Commission was held on March 20th to give opportunity to the operatives and working class to bring forth such evidence as they desired. The chief points dealt with were the sanitary appliances, dining rooms, excessive heat and cold in some departments, flooding of houses, filling in the low-lying ground in one of the parks with offensive material, and irregular demand for labour. The Commissioners are making personal investigations during the week, and will resume their sittings on April 8th.

Primary Education in Belfast.

A special meeting of the Council in Committee was held on March 19th, to consider the primary school accommodation in the city. The Lord Mayor (the Earl of Shaftesbury) said that he had called the meeting to discuss the present state of the primary schools, which, as shown by the report of the national school inspectors, left a blot upon the city. After some discussion, the following resolution was passed unanimously:

That a special committee be appointed to inquire into the primary school accommodation in the city, investigate the condition of affairs, and bring up a report and recommendation to the Council.

Cerebro-spinal Fever in Belfast.

The Medical Officer of Health for the City reported to the last meeting of the Public Health Committee, held on March 21st, that there had been 21 cases of the disease notified during the week, as against 31 for the previous week. The total number of cases had been 201, and there had been 107 deaths. He also reported that he had had great difficulty in persuading parents of those children who were suffering from cerebro-spinal fever to allow them to be removed to Purdysburn. The number of patients suffering from the disease remaining in hospital was 39.

Monkstown Hospital.

The report of the Committee of Monkstown Hospital which was read at the annual meeting on March 22nd, stated that 224 patients were admitted and 471 accidents were treated in the extern department; 6,266 were treated at the dispensary.

West Yorkshire.

The Leeds General Infirmary.

The annual meeting of the subscribers and friends of the General Infirmary at Leeds is an event of importance, not only in respect of the magnitude of the charity, but also because the institution has always been singularly happy in its treasurer, as the chairman of the Weekly Board is termed; he presides at the meeting, and to his remarks, in moving the adoption of the balance sheet and annual report, all who are interested in hospital management look forward. There must be many, laymen and medical men alike, who remember with pleasure the eloquence of Mr. R. Benson Jowitt, and in the present treasurer, Mr. Charles Lupton, the infirmary has one who combines with business acumen an intimate knowledge of infirmary management, and is fully alive to the advances in modern medicine and surgery. The 139th annual report shows that 1906 was a busy year, not only at the infirmary, but at the two semi-convalescent hospitals under the management of the Board. At the infirmary the total number of in-patients treated was 7,052, which includes the 292 remaining in the institution at the end of 1905. Of the new admissions, 1,297 were medical, 4,440 surgical, and 1,023 ophthalmic and aural. The daily average number of beds occupied was 365, and the average duration of treatment was nineteen days. The rate of mortality was 6·93 per cent., but, deducting the number of patients who died within forty-eight hours of admission, this percentage is reduced to 4·83. There were 804 accident cases admitted, and of these 69 were burns and scalds, 40 being children and 29 adults. From these figures it is seen that Leeds does not enjoy any immunity from that form of stupidity which exposes children to the risks involved in unsuitable clothing. It is safe to say that the overwhelming majority of these catastrophes, especially in children, might have been obviated by the exercise of a little care and common sense. The report goes on to say that the total number of out-patients admitted to the various departments was 39,666, as against 38,660 for 1905. Including with these new out-patients those transferred to the department from the wards and those remaining under treatment at the end of 1905, together with those attended to in the out-patient maternity department, the total number of out-patients attended to was 45,632, while the total number of attendances was 202,889.

One would like to see these large numbers reduced, or at least to feel sure that they are not unduly large, and that the amount of abuse which exists at all large hospitals is kept within reasonable limits. For some years an inquiry officer has been engaged, who devotes all his time to inquiring into the circumstances of those applying for treatment. The figures in the report bearing on this are of interest. It appears that 14,367 inquiries were made in the out-patient hall, and that 134 of the applicants frankly admitted their ability to pay, and were not attended to. In the case of the remainder a certain percentage were cut by the method of inquiry as to addresses given, and of 1,017 so enquired into 922 were found to be suitable patients to receive the benefits of the infirmary, and 95 were found to be able to pay for the treatment required. There can be no doubt that the mere fact that such inquiries are made is instrumental in preventing many people from imposing on the institution who would otherwise do so.

It is interesting to note that of the 46,326 new patients (exclusive of the maternity department), 14,640 were women and 11,625 were children under 15 years of age, so that the infirmary remains the largest institution in Leeds for the treatment both of women and children.

The two convalescent hospitals have been fully occupied during the whole of the year. 1,247 patients have been transferred to them, and the experience gained of the method of practically enlarging the infirmary has been altogether encouraging. The total absence of patients soon after operation to one of these hospitals secures a double advantage, for on the one hand the cost of maintenance per bed is less than at the parent institution, and on the other hand room is made for the admission of more patients into the infirmary. All the three institutions together (for it is to be remembered that the whole year out of a total of 483 beds always in readiness to receive patients.

The expenditure at the infirmary has amounted to £31,708, including an extraordinary expenditure of £1,417. The total expenditure at the Ida and Robert Arthington Semi-convalescent Hospitals amounted to £3,336, so that the total expenditure on the three institutions has exceeded £35,000. The average cost of each in-patient at the infirmary for treatment, nursing, and maintenance was £3 6s. 8d., or, including every item of ordinary expenditure, £3 13s. 11¼d., but including the total expenditure, less the cost of out-patients, £3 17s. 11½d. The average cost per bed occupied on the total ordinary expenditure was £71 8s. 8½d., but including the whole expenditure, except the cost of maintaining the Ida and Robert Arthington Hospitals and the estimated cost of the out-patients, it was £75 6s. 4½d. as against £78 2s. 1d. in the previous year. The cost per occupied bed would have come out lower this year had it not been for a considerable amount of extra expenditure, of which some items were £643 for extra washing machinery, £472 for additions to the Pathological Laboratory, which, as above noted, amounted in all to £1,417. There can be no doubt that the diminution in the cost per occupied bed, which Mr. Lupton referred to with so much natural satisfaction, and which he attributed in part to the diminished cost in certain articles consumed, has resulted also from the plan suggested in the first instance by himself, and carried out with the cordial approval of the honorary staff, of acquainting every member of the staff of the number of patients under his care who are having stimulants, or any treatment, medical or surgical, involving unusual expenditure. There has not at any time been the slightest hesitation on the part of the Board to sanction necessary expenditure; but unless care is exercised, such luxuries or necessities—as the case may be—as extra nurses, massage, expensive drugs, and dressings may readily increase the cost per bed without increasing the efficiency of the hospital. Perhaps it may be permissible here to point out that the custom which prevails in the public charities of Leeds of every member of the honorary staff having a seat on the Board of Management makes it easy to introduce regulations of this kind, which, if emanating from a purely lay Board, or one on which the staff was inadequately represented, might cause friction and misunderstanding.

Appointments at the Bradford Royal Infirmary.

Five gentlemen were appointed by the Board of Management at a meeting held on March 20th to be district medical officers to this institution. They are: Drs. Martin, Higgins, Manknell, Wheatley, and Haughton. Four of these are Poor-law medical officers, the general feeling being that the work could be done more satisfactorily by men holding these appointments. The fifth gentleman is in general practice in the town, and has done a good deal of the work previously for the infirmary. Many members of the Board of Management have felt that it would have been better to have dissociated the work altogether from the infirmary, but there have been many obstacles to this procedure. One of the most important was the fact that the infirmary was established as a dispensary on November 3rd, 1834, and that it was only some twenty years later that it really became a hospital for in-patients. There would in consequence probably be legal difficulties if the infirmary proposed to shut up the department or hand it over to some other body.

Liverpool.

The Control of Pulmonary Tuberculosis.

The annual report of the committee of the Hospital for Consumption and the Delamere Sanatorium, in dealing with the latter institution, announces that the two have somewhat narrowed their sphere of work, and for the most part only attempted to deal with early cases. The experience of five years has shown that the large number of patients who were admitted in the second and third stages of consumption frequently necessitated a large waiting list, including many in the earlier stages, who were more promising cases, and, further, the success of these earlier cases was ever increasingly demonstrated,

while the failures were shown to be among the cases of advanced disease. The medical report of the Hospital for Consumption deals at some length with the tuberculin treatment controlled by observations of the opsonic index. It appears that this line of treatment is at present being carried out on thirty patients, with encouraging results. They show a general gain in weight, and some are able to continue at their employment during the treatment. The report concludes as follows:

The treatment is at present on its trial, but the results are, so far, encouraging. Should it ultimately prove successful its importance can hardly be overestimated. It will enable the working man to undergo treatment early in the disease without depriving his wife and family of their support.

The Lord Mayor, in the course of his remarks, referred to the same subject, and said that it was a matter for congratulation that the Committee had placed in the hands of the staff the means of carrying out in a complete manner this method of treating tuberculosis. It was well, however, to remember that previous workers have found that it was less successful in tubercle of the lungs than in other parts, and it was to be hoped that neither this nor other methods of treatment may be brought into discredit through premature or extravagant statements as to the good they are likely to effect.

Birmingham.

Overcrowding of Out-Patient Departments.

At the annual meeting of the governors of the General Hospital an important point in hospital administration was touched upon by the Chairman, Mr. Neville Chamberlain. The out-patients had increased from 61,652 in 1905 to 65,427 during last year, and there is a feeling that something ought to be done to diminish this enormous number of patients who flood the casualty and out-patient departments. Mr. Chamberlain thought that what used to be known as "hospital abuse" was a comparatively rare occurrence in Birmingham, but considered that the real abuse lay in connexion with the trivial cases, which, in his opinion, should not be treated at a hospital at all. There were also a number of cases for which no permanent and radical cure could be effected, and he thought that medicine to relieve these and also the trivial cases could equally well be given at a dispensary, and that it was not fair on the medical staff of the hospital to have to treat so many of these patients. He did not think any new cases ought to be turned away without being attended to, but after they had had the benefit of the opinion of the medical officers, and after having had first aid, if they could be equally well treated elsewhere they should be sent away, and not further dealt with by the hospital, so that the medical staff should have more time to attend to the other more important cases. There were many difficulties to be considered in this question, and if great care were not taken, a scheme to remedy the evil was more likely to produce harm than good. Before any scheme was adopted the committees of the various hospitals would do well to consult with the Committees of the Hospital Saturday and Hospital Sunday Funds, to see if they could not bring moral influence to discourage patients applying for help at the hospitals when such aid was not necessary. Mr. W. Darby, the Chairman of the Queen's Hospital, speaking on the same subject, said that the number of cases in the out-patient departments had been about doubled during the last forty years. He did not think that this was an unreasonable increase; he found that the cases included under the head of accidents had increased by 174 per cent., while those under the head of medical had increased only by 73 per cent. In this large increase, under the head of accidents, there was very little room for abuse. He thought that every hospital or town would have to work out for itself the remedy for the large growth in the out-patient work.

Hospital Saturday Fund.

At the annual meeting of the members of the Birmingham Hospital Saturday Fund, it was stated that the total receipts of the last collection in manufactories and industrial establishments amounted to £19,317. This is the largest amount yet obtained, and it is hoped that this year it may reach £20,000. The sum was subscribed by 2,050 firms, as compared with 2,031 in 1905. Of the grand total £10,000 was handed to the medical charities of the city, and the balance was distributed among the convalescent homes for men, women, and children. Birmingham is at the head of the large towns with regard to the amount raised in this way, for at Manchester the amount realized was £4,608, at Liverpool £8,276, at Leeds £10,279, and at Leicester £10,931. In London, however, £25,434 was collected. The cost of collection in Birmingham is only 5¼ per cent., whereas in Manchester it is 10 per cent., London 9¾ per cent., and Liverpool 5½ per cent.

Birmingham Medical Institute.

The number of books in the Birmingham Medical Institute is now over 14,000, and during the past year 180 volumes have been added; 76 periodicals are supplied to the reading room, 35 British and 41 foreign. An arrangement has been made with the authorities of the University by which members of the Institute have the privilege of consulting books in the University Library, while members of the University staff in return have the privilege of consulting books in the Institute Library. In neither case has the right to borrow books been conceded. There are now 200 members, of whom 164 are ordinary and 36 life members. During 1906, 22 members resigned for various causes, some on account of removal from the district, and 1 member has died; on the other hand, 13 new members have joined, so that during the year the number of members has been reduced by 10.

Bristol.

Pathological Report of Royal Infirmary.

The Pathological Department of the Royal Infirmary, under Dr. Walker Hall and Dr. J. Lucas have issued a report to the medical faculty which forms an interesting summary of the work done there during the nine months ending December 31st, 1906. That 180 autopsies were performed and 1,100 laboratory examinations is evidence that the department has been kept busy. To the museum 71 specimens have been added and a card catalogue has been prepared. The curator's report is full, and we have space to note only the following points as of general or particular interest. Referring to Widal's reaction, which was obtained in 56.7 per cent of the serums examined, it is mentioned that in the several epidemics the agglutinating properties of the blood of patients attacked varied very considerably. There appear to have been two epidemics, and while in the first the reaction was definite and easily obtained, in the second it was rare to get any satisfactory results, though the clinical and *post-mortem* evidences were indubitable. Cultures from the blood were obtained twice. Under the title "regional" certain cases of infrequent occurrence are reported, one a retro-peritoneal growth of sarcomatous nature arising in the loose tissue lying between the rectum and vagina but invading neither: and another, a soft fibroma, successfully removed by Mr. Bush. Others consist of (1) a large renal and suprarenal growth, an adeno-sarcoma; (2) multiple endothelioma of the intestinal serosa; (3) a Meckel's diverticulum 4½ in. long, causing strangulation of 12 in. of ileum, in a man aged 44; (4) a case of fibro-cystic disease of the jaw of seven years' duration, in a woman: (5) a cystic condition of the liver of unusual character; (6) a case of multiple hepatic abscesses following a successfully-performed operation for perforated gastric ulcer; and (7) a malignant adenoma of the tongue, the growth being an extension of an aberrant thyroid nodule in connexion with the thyroglossal duct. The removal was not followed by myxoedema, as has been observed in similar cases. Under the classification of "general," three interesting cases of anaemia are reported. The first case was that of a man who died suddenly in the institution, the *post-mortem* examination revealing numerous haemorrhages in almost every part of the body. The curators suggest the presence of some endogenous toxin possessing specific affinities for vascular endothelium. The other two were cases of pernicious anaemia, one remarkable for the deposit of free iron in the tubules of the kidney, the other for extensive tuberculous glands in the mesentery. The above short account of some of the interesting

cases does less than justice to this excellent report, which it is to be hoped will be continued annually and widely circulated.

South Wales.

WELSH NATIONAL MUSEUM.

On March 22nd Sir Alfred Thomas, Kt., M.P., formally handed over to the Town Clerk of Cardiff the Charter of Incorporation of the National Museum of Wales to be established at Cardiff. The Home Secretary handed the Charter on March 20th to Sir Alfred, who is the first President and "Head and Chief Officer of the Museum" appointed under the Charter, and will hold that office for five years. The Town Clerk will report the receipt of the Charter to the meeting of the City Council. What steps will then be taken to constitute the Court of Governors has not yet been decided, but in all probability the initiative will be taken by the officers of the Museum named in the Charter.

INSPECTION OF MEAT AND BUTTER.

In calling attention to the quantity of unfit meat, etc., seized and destroyed by the officials of the health department, the Chairman, at a meeting of the Cardiff Health Committee held on March 12th, said that it had recently been stated at a meeting of the Glamorgan County Council Committee that suspected animals had been removed to a village, there slaughtered, and the carcasses afterwards sent into Cardiff for sale. At present there seemed to be no means of preventing such a scandalous state of things. Some time ago it was decided that a joint conference of the city and county authorities on the subject should be held, but nothing had yet been done to bring that about. A member suggested that steps should be taken to call the conference without delay, and this was agreed to. The Chairman mentioned, in connexion with the administration of the Food and Drugs Act, that he had heard that butter was sold at some establishments which turned out to be a different article from what the purchaser expected. Dr. Walford, the Medical Officer of Health, said that cases had been brought to notice of people purchasing butter in nicely-packed parcels, and on opening the packages at home found they bore a printed intimation that the butter contained a certain percentage of water, which was larger than that prescribed by law. Steps would be taken to deal with this infringement of the Act.

SWANSEA EDUCATION COMMITTEE.

In his quarterly report to the Swansea Education Committee, held on March 11th, Dr. Rice Morgan said that any one who carefully examined the various schools could not but be struck with the great contrasts in the various classes. Whereas, in the one class there was slovenliness in the clothing and general appearance, in others the opposite prevailed. In his opinion the only means of clearing up satisfactorily the question of underfed children was by carrying out by some trained, tactful person of fuller investigation at the home of the child. There was evidence of under feeding and improper feeding, notably at certain schools. Broadly speaking, the majority of the children were sufficiently clothed. At Brynhyfryd boys school, with an attendance of 592, there were 52 children underfed, at Martin Street, 33 out of 510, and at Plasmarl 31 out of 260. There were much smaller numbers in the other schools.

SANITATION IN GLAMORGAN.

At the meeting of the Sanitary Committee of the Glamorgan County Council at Cardiff on March 1st Dr. Williams (County Medical Officer) presented his quarterly report, in which it was stated that the following diseases were on the increase as compared with the previous quarter: diphtheria and membranous croup, erysipelas, scarlet fever, and puerperal fever. Scarlet fever was very prevalent in the Penarth district, 141 cases having been notified, as against 29 in the previous quarter. Only one case of small pox was notified, from Merthyr borough. No infectious diseases were reported from Porthcawl and Pontardawe Rural Division. A report was presented on the epidemic of anomalous typhoid fever at Gorseinon, and the work done at the County Laboratory in connexion therewith. The question of human and animal tuberculosis and the results obtained by the Royal Commission as indicated by their recently-issued interim report was the subject of a special report, and evoked much discussion. As regards the possibility of the introduction into the county of cerebro spinal meningitis, Dr. Williams reported that he had caused to be sent out from his department a circular letter to each medical practitioner within the administrative county, intimating that where a case of this disease is suspected intimation should be sent to the local medical officer of health, and that arrangements had been made at the County Laboratory whereby the examination of cerebro-spinal fluid would be undertaken.

NEWPORT HOSPITAL.

At the annual meeting of subscribers to the Newport and Monmouthshire Hospital on February 28th, when the Mayor presided, Lord Tredegar was re-elected President. The directors in their report referred with regret to the death of Mr. C. H. Bailey, a vice-president, who for some years had maintained a cot in the children's ward, and had helped substantially in other ways. The work in each department, proceeded the report, continued to grow. There had been an increase of 48 in-patients, and the daily average of patients was 85. The number of out-patients was 4,459, an increase of 361; the casualty patients numbered 1,268, an increase of 62.

PONTYPOOL TYPHOID EPIDEMIC.

Dr. S. B. Mason, Medical Officer of Health, Pontypool, has issued his twenty-ninth annual report. The death-rate was 15.1, which, considering the amount of sickness prevailing during the later months, is low. The birth-rate—29.5 per 1,000—is the lowest recorded since 1901, when it was 28.3. The number of cases of typhoid notified was 160 with 12 deaths, but these were the only deaths from notifiable diseases during the year. Dr. Mason reports that in endeavouring to ascertain the cause of the infection he found that the Pontypool Gas and Water Company had, unknown to him, "captured" a well near the gas works, the water from which was alleged to be impure. The water was conveyed from the well by a service of iron pipes laid at the side of the Trosnant brook to a tank in the gas works yard. During heavy rains these pipes would be covered by the water in the brook, which Dr. Mason described as "a most unwise and insanitary proceeding," as the brook carried sewage from houses and a slaughterhouse. Reviewing the health of the district, Dr. Mason considers the amount of sickness, apart from the epidemic of typhoid, excessive, although the death-rate kept fairly low. The physical condition of the population had become less resistant to general disease. The general health of the large number of people who had come into the district, attracted by the flourishing condition of the colliery work and building trade, had been of a low standard. The district had been regarded by many as a health resort, or they had come to "try a change of doctor as well as a change of employment." The great scarcity of water for domestic purposes had caused much inconvenience and suffering. He recommended the district council (*a*) to establish an isolation hospital; (*b*) to consider a suitable sewerage scheme; (*c*) to provide a refuse destructor; (*d*) to consider the necessity of providing a proper common lodging-house; (*e*) to provide a public abattoir; and (*f*) to provide a disinfector.

TYPHOID EPIDEMIC AT GORSEINON.

At a meeting of the Swansea Rural District Council Dr. Mitchell reported that the typhoid fever epidemic at Gorseinon was apparently at an end. The source of the water supply was free from contamination, but it was not at all impossible that in some cases the water might have been contaminated owing to pitchers from infected houses having been handled by the man in charge of the water cart, who subsequently handled pitchers from non-infected houses. The watermen had consequently for the past two months been forbidden to handle any pitchers. The milk supply was free from suspicion. Dr. Mitchell went on to say that the water supply of Gorseinon is quite inadequate for the ordinary decencies of life. Many parts of Gorseinon are in a horribly offensive state, and during the past few months the inhabitants had paid heavily for the neglect of past years. A proper system of water supply and sewerage ought to have been provided twenty years ago.

India.

The Prevention of Plague.

Dr. Pearse, the special health officer of the Plague Department of Calcutta, has sent us copies of a series of notices published by the department as precautions against the spread of plague. One of these consists of nine suggestions, and in a large form would be useful for posting up on walls and other places throughout the native quarters; the others are regulations dealing with the notification of cases by medical practitioners and managers or occupiers of factories. To make the disease notifiable is undoubtedly sound policy, and should help in the stamping out or diminution of the epidemic. The regulation with regard to notification by medical practitioners runs as follows:

Any medical practitioner who attends in any house a case which he has reason to believe to be a case of plague or which presents symptoms which may be those of plague shall forthwith report such illness to the Health Officer. A fee of one rupee will be paid for notification of each case not otherwise known to the department.

South Australia.

Munificent Bequests to the Hospitals.

By the recent death in England of the widow of Mr. Thomas Martin, formerly a butcher in Adelaide, the whole of his Australian property has become available for distribution among the beneficiaries. One-fifth he left to a brother, a similar amount to his Adelaide attorney, two-fifths go to the Adelaide Hospital, and the remaining fifth to the Children's Hospital. It may perhaps seem ungracious to criticize the testamentary dispositions of so munificent a benefactor, but one cannot help half regretting that he (the late Mr. Martin) should have bequeathed so much money to the Adelaide Hospital, rather than to the impecunious University, or to some or several deserving charities, such as the Incurables. The Adelaide Hospital is entirely a Government institution, and is bound to be kept up in any case; the money might just as well have been handed over to the State Treasurer outright. The bequest to the Children's Hospital is somewhat different, because the Government assistance to it has never exceeded £1,000 a year; the legacy should, therefore, be very welcome to the management, who live rather from hand to mouth, and, indeed, in recent years have had to resort to street collections in order to make both ends meet. The estate consists entirely of city property, and has been valued for probate at £210,000. It is in the hands of trustees, one of whom, the ex-Mayor of Adelaide, was recently sent to gaol for gigantic frauds on the Customs.

The City Coroner and the Profession.

The City Coroner has been keeping very quiet ever since his trial by the Royal Commission for excessive zeal in the cause of anthropology; but keeping quiet appears to be irksome to him. An unfortunate young man, named Harvey, seems to have made a mildly festive night of it on New Year's eve, and to have wound up his dissipations with a street vendor's meat pie. Soon after eating this he was taken ill, and within three or four hours he died in convulsions. He was treated by Dr. E. L. Borthwick, who judged him to be suffering from strychnine poisoning and therefore refused to give a certificate of death. It came out in evidence that the deceased had been heard to say that he knew where there was enough of this poison to kill a hundred men. Dr. Borthwick communicated with the police, and the police with the coroner. Now New Year's Day is our great holiday and picnic festival. The coroner may possibly have wished to complete that epoch-making paper on the aborigines of the Northern Territory, where he spent a couple of weeks recently, for the Australasian Congress of Science, shortly to be held in Adelaide—it is sad to relate that this particular paper was spoken and written about slightingly by jealous rival anthropologists—or it may have been the heat; at any rate, the coroner did not feel it necessary for him to hold an inquest, and therefore he gave an order for burial, together with a certificate that the deceased had succumbed to heart failure. Dr. Borthwick felt it his duty to take further steps in the matter, and he communicated his views to the Chief Secretary, as well as to the Council of the Medical Defence Association. The officials of that body also interviewed the Chief Secretary, it is believed, and finally the coroner and Dr. Borthwick met in his presence. The coroner, after explaining to his ministerial superior that even the *Di Superi* could not compel him to hold an inquest if he did not feel so inclined, graciously consented to look into the matter, and the body of Harvey was exhumed. The viscera were consigned (though some sceptics wonder whether they were the identical Harvey's own) to the Government Analyst, as to whose competence to carry out the investigation the coroner assured the jury he had satisfied himself. No strychnine was found, but there was some shadowy evidence of possible ptomaines. Knowing this fact the day beforehand, the coroner had a good trump card up his sleeve, and therefore took the opportunity of giving Dr. Borthwick a bad time, characterizing his conduct as impertinent, and examining him closely about his dealings with the Defence Association. The summing-up was worthy of a Gilbert and Sullivan comic opera, including as it did a dissertation upon the sacred nature of the "crowner's" office, and a violent philippic against the evil machinations of the medical profession. The obsequious jury were told to bring in a verdict of "death from fits," and did so. The deceased had a brief time before solemnly declared to the lodge authorities that he had not been subject to fits, nor are such fits usually attended with such extreme opisthotonos that the patient rests upon his occiput and heels. The episode has created an uneasy impression amongst all classes and a voluminous correspondence in the daily papers during the silly season.

Death of Dr. Cawley.

Dr. Thomas Cawley, who may be credited with having taken an active and leading part in the establishment of our Branch in 1879, died suddenly at a patient's house in November, 1906.

SPECIAL CORRESPONDENCE.

BERLIN.

The Jubilee of the Tubercle Bacillus.—Treatment of Tuberculous Paupers.

Just twenty-five years ago, on March 24th, 1882, Robert Koch gave to the world his discovery of the tubercle bacillus. At a meeting of the Berlin Physiological Society he read a paper on tuberculosis, in which he reported fully his culture experiments, and ended by saying that the result of these researches was that certain bacilli were invariably present in tuberculous tissue, that these bacilli could be detached from the organism and preserved in pure cultures for a length of time, and that animals infected by various methods with the isolated bacilli become tuberculous. From this it is fair to conclude that tubercle bacilli constituted the true cause of tuberculosis, which therefore must be considered a parasitic disease. Six months earlier, in the autumn of 1881, Koch had demonstrated his culture and staining methods to the International Medical Congress in Lord Lister's laboratory. On his return to Berlin he continued his researches, and, making use of Ehrlich's methylene-blue pigment, discovered a bacillus present in none but tuberculous matter. In order to bring this out clearly on the plate, Koch stained with Bismarck-brown, and found that the bacilli retained their blue colour, while all the rest grew brown. This gave him a method of demonstrating the presence even of isolated tubercle bacilli.

The German Federal States possess a special civil court, the "*Bundesamt für das Heimathswesen*," which has supreme jurisdiction in all matters relating to pauperism, night shelters, tramps, and tramping, etc. In the case of a tuberculous pauper in Charlottenburg (Berlin) that occupied the *Bundesamt* a short time ago, the court ruled that municipal guardians of the poor were in duty bound to give consumptive paupers the benefit of suitable therapeutic treatment by placing them in special lung sanatoriums. It made no difference that the patient in ques-

tion had not himself applied for relief and assistance; it was quite sufficient that the guardians had been informed of the advisability of sanatorium treatment by the local "Bureau of Advice and Help to the Tuberculous." The municipality of Charlottenburg would have failed in its duty if it had not given to the pauper in question the only really beneficial form of help—that is, sanatorium treatment. Simple and to the point as this ruling is it involves an important principle, and its wide application may prove of the greatest benefit to sick paupers all over Germany.

CORRESPONDENCE.

THE THREATENED DISINTEGRATION OF THE UNIVERSITY OF LONDON.

Sir,—It is interesting to note the striking similarity between the present condition of affairs in the new University of London and that which occasionally attracts public attention in the old Universities of Oxford and Cambridge. In both cases men who have devoted their lives to science and teaching are endeavouring to make their universities more fitted to the needs of the present day. In both a set of men, representing either vested interests or pure reactionism, work upon the prejudices or ignorance of those far from the field of strife to support them in their resistance to reform.

In London the credit for the organization of this resistance may probably be ascribed to the excellent coaching institutions which flourished under former conditions, and which, by a careful study of the idiosyncrasies of the various external examiners, were able to give their clients just so much information as would fit them to pass any desired examination. The co-ordination of teaching with examination, established by the London University Act of 1900, and the improvements in the standard of the examinations brought about by the action of the new Senate, although the first steps in the development of a real university of London, could not be to the advantage of these institutions, and they have therefore applied their energies to the invention of a political machine for the capture and destruction of the reformed university.

The methods of this machine, which enjoys the name of the Graduates' Association, are simple, and consist in the gradual replacement of men of independent views on the Senate by men whose sole claim to eminence will be the fact that they have a seat on the Senate, and who, therefore, to preserve this eminence, will agree to vote on all questions as directed by the Association. Any representatives of Convocation who, like Dr. Benson or Mrs. Bryant, presume to exercise an independent judgement, are opposed in any future candidature. It is worth noting that the candidate chosen to succeed Dr. Benson on the Senate was Mr. Keeys, the head of a coaching institution known as Cecil's College.

The task of the Association is unfortunately rendered easier by the huge size of London and the difficulty of achieving combination among its schools. Any cause of complaint by a particular school or schools, or group of schools, is taken up by the Association and used as a weapon to help it in destroying the solidarity of the University.

From a circular I have just received it appears that, in the approaching election of a representative of the medical graduates on the Senate, our present member, Sir Thomas Barlow, is opposed by Mr. Ernest White, M.B. Sir Thomas Barlow has given valuable time and the benefit of his ripe knowledge and judgement to the affairs of the University, both as a member of the Statutory Commission, and since then as an active member of the Senate. Dr. White's claims to act as our representative are unknown to me, unless it be that he is an authority on the treatment of the insane. His chief stated reasons for opposing Sir Thomas Barlow are (1) that he objects to the concentration of preliminary and early medical sciences in a new building at South Kensington, and (2) that while Sir Thomas Barlow has been Senator the standard of degrees in the University has been lowered.

The scheme of "concentration" at South Kensington was the child of the Faculty of Medicine, which includes all teachers of medicine in London, and was killed by the Faculty a week ago, after a precarious existence of a few years. It can only be revived by the direct action of the Faculty.

The suggestion as to the lowering of the standard of degrees is devoid of foundation. I have been engaged for the last eighteen years in the preparation of students, both at Guy's Hospital and at University College, for the London University examinations, and have also held the post of external examiner in the University. During this time, the standard of the preliminary scientific training and of the Intermediate M.B. and B.Sc. examinations has steadily advanced. Any graduate can convince himself of this fact by a cursory examination of any young friend who is undergoing the ordeal which precedes qualification in the London University. He will find that the requirements from the student of to-day are 100 per cent. higher than those obtaining when he or I were students.

But any story, if it is believed, may serve the purpose of replacing a man of eminence by a nominee of the Association, and so aiding in the disintegration of the University. I trust that every graduate who has the interests of his University at heart and wishes to see it, as it should be, the foremost medical school and centre of research of the world, will aid us in retaining Sir Thomas Barlow's invaluable influence and service in the building up of the University.—I am, etc.,

Hampstead, March 26th. Ernest H. Starling.

THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

Sir,—It appears to me that your correspondent "X." is right in his conviction that the only solution which will satisfy all concerned is "the recognition of a special class of consultants: men who persistently refuse to undertake the treatment of any case except in co-operation with a general practitioner." I should have no objection to join in such an arrangement; but I cannot agree with "X." that this should include the seeing of patients without any introduction and the writing of a letter, perhaps, to a practitioner other than the one already in attendance. To my mind patients should be introduced to the consultant by a general practitioner, and by this means and this means only should they be able to procure an interview with him (the consultant). The general public ought not to have private interviews with medical consultants any more than with legal ones.

In my capacity as consultant and general practitioner I know there is much to be said on all sides. The blame is sometimes with the consultant, though he often suffers from misrepresentations he is unable or has no opportunity of contradicting, sometimes with the general practitioner, and more often with the patient who makes false statements to shield himself. Some consultants strive to act as such, but a large number are merely glorified general practitioners who annex every patient they can. They see them in their rooms, and instruct them to come again and again. Some will go to the extent of visiting them in their own homes, and I have known them to do this at many miles distant. They treat them by post. I have known titled members of the profession undertake the treatment of a case by letter which they had never seen.

They are very elastic in their charges. Members and Fellows of the College of Physicians who are bound not to accept less than a guinea fee, evade their obligation by charging the guinea for the first time, and subsequently seeing the patient two, three, or four times for nothing. They also rapidly become sufficiently friendly to pay a visit for the week end or for golf or other sport, and at the same time take the opportunity of seeing the patient for nothing.

Surgeons perform operations for those who can well afford to pay for trifling fees. It is not at all uncommon for patients to go and make a bargain. I have known senior surgeons from large hospitals travel twenty or thirty miles and perform major operations for a five pound note.

They play the "specialist" game for all it is worth, asserting that they are specialists in whatever the patient happens to be suffering from. The poor deluded patient believes that they attend only such cases.

They see in their rooms patients they have previously seen in consultation with their own attendant, and that

they make derogatory remarks as to the subsequent treatment is evident from the fact that the medical attendant is turned off.

And after all these offences they go to medical meetings and read pious opinions on medical etiquette.

The sooner an agreement can be arrived at the better it will be; for until there is some guarantee against such abuses the body of the profession will continue to avoid consultations in all cases they can to the detriment of the profession and public alike.

I write under a *nom de plume* in case any of my charges should be supposed to apply to consultants in this neighbourhood. I am prepared to substantiate all the statements I have made.—I am, etc.,

March 18th. Y.

AFTER-TREATMENT OF OPERATION CASES.

Sir,—I am surprised Mr. Clowes does not think my letter gives further reasons for the conduct of the post-operative treatment by the surgeon. I think my paper gave ample reasons for this, and my letter was taken up in refuting his insinuations and misstatements. In the last letter he maintained that I wrote my paper to make larger fees from the public; now he has discovered another reason. He thinks it strange that I am the only surgeon who has thought it advisable to express in public my opinion that post-operative treatment is best conducted by the surgeon who performs the operation, and that I have done so because I have had unhappy meetings and experiences with general practitioners. He should not be so surprised, for he might imagine that it is not pleasant to any surgeon to suggest to general practitioners that it would be well for them to recognize that the surgeon is better able than they are to deal with post-operative conditions, and I would rather not have done so myself if I had not felt so strongly on the subject. Instead of writing the paper with the idea of making larger fees, as Mr. Clowes alleged in his last letter, I felt when I read it that I might even lose a good many fees for my plain speaking, and perhaps a few years ago I should not have felt able to take the financial risk of its publication. Indeed, one of my surgical colleagues, a day or two after the meeting at which I read the paper, told me he thought I had been rash in my own interests, but that he thoroughly agreed with what I had said, and much deplored the way in which some general practitioners expected to assist at important operations when they were not conversant with the antiseptic method of the surgeon, and were therefore a constant source of anxiety during the operation. I am not therefore surprised that other surgeons have not spoken out on this subject, even though Mr. Clowes is. As to the unhappy meetings with general practitioners which Mr. Clowes now suggests as the motive of my paper, I am afraid one with Mr. Clowes would hardly be a happy one; but I am glad to say he is not the type of general practitioner I have usually met, and whom it has been a pleasure to me to meet, and I sincerely trust our meetings have at any rate not been unpleasant to him.

I notice that though Mr. Clowes is ready to make fresh insinuations about me, he has forgotten to tell us the names of the hospitals where the after-treatment of important operation cases is left to the house-surgeon. Perhaps the consulting surgeon who enjoys such a large operating practice, and who, Mr. Clowes tells us, agrees with the views expressed in his letter, is surgeon to one of these institutions, and has no time left to give to the after-treatment of his hospital operation cases.

What Mr. Clowes means by his remarks about "medical complications" after operation I cannot tell, and therefore cannot answer them. The complications of labour which I had in my mind when I said I was incompetent to deal with them, were such things as eclampsia and retained placenta, but a pelvic abscess is so essentially surgical I do think I might lay claim to a greater experience in its operative treatment than the general practitioner.

I must say a word more about the opportunities of the busy country practitioner for acquiring information with regard to post-operative treatment, for Mr. Clowes still seems quite convinced they have ample. They have morning surgery, long country journeys taking the greater part of the day, and often evening surgery as well, and I think few sit up late at night studying recent surgical literature. What little time they have for reading they will wisely give to gaining information about the diseases they are daily dealing with in large numbers, and these are almost wholly medical or obstetric; certainly the after-treatment of an important operation does not often occupy their time. They will not waste the valuable time available for reading, which is all too short, on the study of post-operative treatment, when they will very rarely have to deal with such conditions. Then, again, Mr. Clowes says he keeps himself well abreast of post-operative treatment by occasional visits to his old hospital. He may in this way see a brilliant and interesting operation now and again, but he will learn very little of the after-treatment of the case in his occasional and brief visits.—I am, etc.,

Clifton, March 24th. Charles A. Morton.

THE VENOUS PULSE.

Sir,—In the British Medical Journal of January 12th Dr. Mackenzie has done me the honour of replying to my paper on the venous pulse. Dr. Mackenzie and I seem to have come to an understanding as to the causation of the wave which he has called the "ventricular," and for which I propose the name of "onflow wave." We both agree that, as seen in people with competent valves, it is produced by the blood flowing in from the extremities faster than the heart can receive it. We also agree, I think, that in disease of the tricuspid valves a wave due to regurgitation of blood from the right ventricle blends with this wave, and often completely overshadows it. Our difference is simply one of phraseology. Dr. Mackenzie calls it the "ventricular" wave in all cases. I call the normal wave the "onflow" wave, and would say that in tricuspid regurgitation it is obscured by the "backflow" wave from the ventricle. If these plain Saxon terms are not very elegant, they at least convey correct ideas as to the mode of production of the waves in question. I think I appreciate Dr. Mackenzie's reasons for using the term "ventricular," but I am sure that some have been misled by it.

I consider the question of the "carotid" or systolic wave much less important. I am quite prepared to admit that the carotid artery may contribute to its formation. Dr. Mackenzie misquotes me when he states that I said it had "absolutely nothing" to do with the carotid. I said it had "little or nothing" to do with the carotid. This was in a brief reference to it in the "heart-block" discussion. In my venous pulse paper I admitted that a receiver might be so placed as to get a venous pulse tracing along with the systolic wave from the carotid; I even gave a tracing (Fig. 4) from a dog in which I ascribed a systolic wave in the jugular exclusively to the carotid. I gave reasons, however, for my conviction that there was another factor present as a rule which originated in the heart, and was propagated up the veins. My reasons were, briefly: First, that I have found this wave consistently present in a great number of tracings which I have taken from the right auricle of dogs; secondly, that this wave persists in the right jugular after the right carotid has been clamped at its point of origin from the aorta.

Dr. Mackenzie finds fault with me for not discussing the arguments advanced in his book. I plead guilty, and will consider them now. His arguments are six in number, as follows: (1) "This wave is always synchronous with the carotid pulse." I admit this, but as the carotid pulse is caused by the systole of the left ventricle, and the wave under discussion by that of the right ventricle, they are naturally synchronous as long as the two ventricles beat together. Any presphygmic interval delaying the carotid pulse is compensated for by the fact that the propagation of waves is somewhat slower in the veins than in the arteries. (2) "In moving the receiver away from the vein towards the artery, this wave assumes more and more the character of the arterial pulse, or when the venous element in the tracing diminishes the arterial element remains." True, but this only proves that we may have one receiver placed so as to get a combined record of the arterial pulse and the venous, which I readily admit. If we move away from the carotid and take the pulse from the external jugular, we frequently get an excellent venous pulse tracing with a distinct systolic wave.[1] (3) "It is never present in the liver pulse when

[1] See Fig. 13 in my Venous Pulse paper, British Medical Journal, December 22nd, 1906.

otherwise the liver pulse bears a distinct resemblance to the venous pulse in character and rhythm." We do not get any liver pulse at all except where the auricle is hypertrophied, as in tricuspid stenosis. In other words, waves of ordinary strength do not show, so that the systolic wave would have to be stronger than usual to be seen. I see no reason why the systolic wave should have this unusual force in tricuspid stenosis. However, there does seem to be at least a suggestion of a systolic wave in the liver pulse in parts of Fig. 236 in Dr. Mackenzie's book. (4) "During irregular heart action, when there is an absence of arterial pulse while the venous pulse continues, the carotid wave is absent from the venous pulse during the irregularity." It is practically only in cases of failure of contractility that this test can be applied. In the only case of the kind I have published (Case I in my contribution to the recent heart-block discussion), the wave in the venous pulse which was synchronous with the carotid pulse when it was present persisted when the carotid dropped a beat.[2] (5) "When the jugular valves are competent so that the jugular bulb is much distended there is no carotid wave in the tracing." I have a tracing from a very distended jugular bulb in a case of goitre with mitral stenosis where very marked systolic waves are seen. (6) "When the pulse in the jugular vein is very large and the carotid very small this wave is usually absent." The figure referred to in support of this statement[3] is not convincing; it makes the A-V interval occupy about three-quarters of the whole pulse interval if we accept Dr. Mackenzie's interpretation. I do not think that either the auricular or systolic waves show, but believe that there is a general fusion of waves as I have shown to occur sometimes in dogs.[4]

Now to return to Dr. Mackenzie's letter. He cites experiments in which Professor Cushny separated the artery and vein, with disappearance of the systolic wave in the venous pulse. I am at a disadvantage from not having seen Professor Cushny's tracings, but I know by experience that if the jugular vein is too freely exposed it is very difficult to get a good tracing. I should like to know if the extensive exposure did not affect the auricular wave as well. Dr. Mackenzie thinks that in my experiment of clamping the carotid at its point of origin with the aorta there may have been a recurrent pulsation. The artery was freely opened above the clamp and did not bleed, showing that there was no recurrent pulsation. Dr. Mackenzie says I misquoted him in speaking of the femoral vein. I apologize for having done so, but the argument was in no way affected. I find the systolic wave so constant in the curve of auricular pressure that I feel compelled to question the technique of those who habitually fail to get it. I fancy I have experimented on about 70 dogs in the last eight years in connexion with this venous pulse work. I have taken auricular tracings, I believe, from about a score. I have tracings where all possibility of tricuspid regurgitation can be excluded and where I still get a well marked systolic wave. I have even had cases where the auricular and systolic waves were both quite distinct in the auricle, but were indistinguishable in the jugular, being fused with the "outflow" wave. On the average the systolic wave bears quite as good a proportion to the auricular wave as in tracings from the jugular vein of the same animal.

The real difficulty in the way of an agreement on this wave between Dr. Mackenzie and me is that he uses preferably, if not exclusively, the internal jugular vein, and tries to include the carotid artery in his receiver. I try to get away from the carotid, and where possible use the external jugular in the hope of getting a pure venous tracing. The result is that there is a larger carotid element in his tracings than in mine. The systolic wave that I frequently get in the external jugular can hardly be due to the carotid. If it contains any arterial factor it must be from the subclavian or some other artery. Whatever others may say, there is commonly a systolic wave in auricular pressure which can be recorded by suitable apparatus, and which must surely be carried up the veins, as at least a factor in the systolic wave. If we call it the systolic wave we include all possible causations. If we use Dr. Mackenzie's term, "carotid" wave, for the internal jugular, we must call the same wave in the external jugular by the name of the subclavian or some other neighbouring artery. It seems to me that the use of the term "systolic" simplifies matters considerably.—I am, etc.,

Montreal, Jan. 30th. WILLIAM S. MORROW.

[2] British Medical Journal, October 27th, 1906, Fig. 2.
[3] Fig. 56, The Study of the Pulse.
[4] British Medical Journal, December 22nd, 1906, Venous Pulse, Fig. 2.

ON THE USE OF CALCIUM SALTS AS CARDIAC TONICS IN PNEUMONIA AND HEART DISEASE.

SIR,—I quite agree with Sir James Barr that hasty publication is inadvisable, and therefore I tried, both in the paper on oxygen and strychnine and in that on calcium chloride in pneumonia, to excuse my action. Sir James Barr's letter seems to show that I have not made my excuse sufficiently plain. It is simply this—that, having found certain remedies to be of use in pneumonia, I thought it better to make them known to the profession in a short communication while the disease was prevalent, rather than to spend, on working up literature on the subject, weeks, during which patients might die, whose lives might possibly have been saved by a widespread knowledge of the treatment.

In regard to the treatment by oxygen and strychnine, I still consider it to be of much value notwithstanding Sir James Barr's disapproval, and if all methods of treatment which have done harm when improperly used are to be excluded, our medical resources will become sorely limited. I am delighted to learn, however, that Sir James Barr has already found calcium chloride so useful that he has used it regularly as a remedy in pneumonia for nine years. I shall be very pleased to admit the priority in the use of this remedy of Sir James Barr or any one else when I learn when and where a notice of it was first published. The absence of chlorides from the urine in pneumonia has caused many chlorides, especially ammonium chloride, and perhaps calcium chloride as well, to be given in the hope of accelerating resolution in the inflamed lung. I should like to point out, however, that I have not recommended calcium chloride because it is a chloride, but because it is a soluble salt of calcium and as such a cardiac nutrient. If my hasty publication has done no other good, it may perhaps be excused on the ground that it has probably brought to the notice of some who were previously ignorant of its use in pneumonia, a drug whose utility is attested by Sir James Barr's long and ample experience.—I am, etc.,

London, W., March 25th. LAUDER BRUNTON.

SIR,—As the all-important question as to the effect of calcium salts upon the pneumonic process has not been touched upon by your correspondents, it may fill a gap to refer to some of my previous statements in connexion with The Principles of Treatment of Pneumonia[1] which do not appear to be widely known. Their publication having been anterior to that of the practice now advocated, I need offer no apology for my dissent from the latter. So long as we shall continue prescribing the salts of calcium to favour coagulation where this is deficient, there would be some inconsistency (except, perhaps, in a homœopathic sense) in recommending them, even with a corrective such as that suggested by Sir James Barr, in a disease so prone to clottings that one of its common fatal terminations is intracardiac thrombosis. Our cardiac stimulants should be sought in some other direction. As a fact, the danger special to pneumonia is not so much a clotting in the vessels as *that within the alveoli*; and the worst danger for the patient is the attitude of expectancy which watches the progress of his "consolidation" as though it were a fated fulfilment, instead of hastening to forestall it by defibrinating treatment. The prevailing neglect of this early and only opportunity of influencing the disease accounts for the uniformly neutral results from various lines of medication, which are all likely to be inoperative after consolidation has set its seal upon the case. Happily those therapeutic and dietetic measures which are indicated, whilst they are in themselves harmless, are demonstrably of service, and effectual in proportion to the early date of their adoption. Their aim is to maintain in the congested areas as much fluidity of blood and lymph as possible, to prevent vascular and lymphatic obstruction, and thereby to promote *a steady rate of elimination of the*

[1] *Lancet*, vol. i, 1905, p. 139.

infecting agents and of their toxins, thus avoiding or lessening the possible disaster consequent upon their concentration.

In view of these indications calcium chloride can have no place in our treatment of the early stages, but there remains the more urgent duty of relieving local congestion by leeches, of withholding fibrin formers from the fever diet, of stimulating excretion in every way, including cardiac stimulation; and, lastly, of administering freely the citrates and iodide of potassium to reduce the viscosity of the blood, unless we should discover some better means of checking the deposit of fibrin and of furthering its reabsorption before it has become completely solidified.—I am, etc.,

London, W., March 23rd. WILLIAM EWART.

TOTAL ENUCLEATION OF THE PROSTATE.

SIR,—Mr. Freyer's article in the JOURNAL of March 9th does little to clear the difficulties of either the subject discussed or of his own position therein. That he should again, in coming into print, evade the issues repeatedly raised by others regarding his various claims is a matter which concerns largely his own position. (Of the six issues which I tabulated in your columns of October 13th, 1906, Mr. Freyer deals with one only.) His treatment of others is another matter. I have repeatedly, as your columns show, protested against Mr. Freyer's continued misrepresentation of my own work, and that without effect. Mr. Mayo Robson is evidently in the same position. In his article of March 9th Mr. Freyer speaks of "the attempt by Mr. Robson to father my" (Mr. Freyer's) "operation on himself." The idea exists in the mind of Mr. Freyer. Any one who cares to refer to Mr. Robson's publications will find in them repeated references to McGill as the "father" of the operation. One of Mr. Freyer's many misrepresentations of Fuller's work is exposed in Dr. Archd. Young's letter in the JOURNAL of two weeks ago.

The illustrations in Mr. Freyer's article are to me a source of both disappointment and surprise. It is to be regretted that photographs have not been employed. When such matters as the so-called "sheath" and "capsule," and the presence or absence of the mucous membrane of the urethra are in question, wash drawings, however excellent of their kind, are valueless. Their examination results in disappointment. The manner in which they have been presented also somewhat surprises me. Mr. Freyer includes each in his paper with a simple title, in quite the ordinary way of surgical writers. I find no difficulty in accepting each illustration as that of the prostate which was originally labelled in its bottle. I believe that with ordinary care there is little risk of specimens getting into the wrong bottles. But Mr. Freyer's mind, as shown in his letter in the JOURNAL of October 6th last, is so impressed with the possibility of such error that in his own case, where, with specimens so numerous, what risk there is must be proportionately increased, I felt constrained to think he must adopt exceptional precautions, such as the presence at each of his operations of an official receiver accredited by some public body to seal and stamp the label of the bottled specimen ere it left the operating room and furnish a certificate for it on publication.

To the bulk of your readers the main interest of Mr. Freyer's article is its advocacy of an operation which consists in removal of the prostate in one mass *plus* the prostatic urethra. The introduction of that operation was accidental. Amongst earlier operators, Mayo Robson and Fuller, following McGill in the vesical route, Macewen and others by the perineal route, and myself, employing the combined route, removed the *whole of the hypertrophied prostate*. The idea for long was to remove the prostate without the prostatic urethra. To that end the prostate was commonly removed in lobes, but from time to time prostates came away *en masse*, or were purposely so removed. In whichever form the prostate came away, entire or *en masse*, the central idea of the operation was the preservation of the prostatic urethra. Its removal was an accident. That was also Mr. Freyer's idea when, in 1900 and 1901, he first published on prostatic surgery. In the descriptions of both of his alleged "new" operations (perineal and vesical) that idea is prominent. Mr. Freyer's first removals of the prostatic urethra were accidental, but, as his writings show, Mr. Freyer, unlike his predecessors, did not recognize the occurrence of the accident. He showed his earlier specimens as specimens removed from cases in which the urethra had been left. On subsequently finding out his error, he came to the conclusion, as others had before him, that the removal of the urethra at least did not mean the immediate death of the patient. That has long been clear.

One of the main questions now waiting answer is, Does this removal of the prostatic urethra, which accidentally has "arrived," affect the *ultimate functional state* of the bladder? Put in another way—distortion (and stricture) of the prostatic channel is an occasional after-effect of all forms of prostatectomy—is it more frequent in cases in which the entire prostatic urethra has been removed, by one or other method of prostatectomy, than in cases in which the mucous channel has been preserved? That stricture may follow I know; I have seen it in my own practice, and have been told of it by others. The proportion of strictures in the two classes of cases—those of preserved urethra and those of removed urethra—is, however, the important question. Its investigation involves the records of cases not weeks, but months, or even years, after prostatectomy. Since the disappearance of castration has again made prostatectomy common several years have elapsed, and the later results of the operation are becoming available.—I am, etc.,

Glasgow, March 16th. JAS. H. NICOLL.

ALBINISM IN MAN.

SIR,—More than a year ago you were kind enough to insert in the BRITISH MEDICAL JOURNAL an inquiry on the part of Dr. E. Stainer, Mr. E. Nettleship and myself, with regard to cases of albinism in man. A circular was drafted and sent to ophthalmic surgeons throughout Europe and America. The result has been a fairly generous response, and further cases are still occasionally coming in. At the present time from this appeal and from published sources we have nearly 250 pedigrees of albinotic stocks. Some of these are of minor importance; others, however, are excellent pieces of pedigree work involving in some cases four generations and even hundreds of individuals of albinotic stocks, and a good record of many of their physical characters. These pedigrees are at present in the engraver's hands and will shortly be issued, when it will be possible for any one interested to discuss on the basis of them any theory of heredity, Mendelian or not. May I add that we are still desirous of receiving further data, as the memoir in course of preparation is not yet completed?—I am, etc.,

KARL PEARSON,
Biometric Laboratory, University College.

London, W.C., March 26th.

THE INSPECTION OF ELEMENTARY SCHOOL BUILDINGS.

SIR,—As a medical officer of health in the discharge of my duties I inspected and reported on the insanitary condition of the premises and building of a certain Board school in my district. Two epidemics had prevailed in the district, and certain defects in the Board school were in some measure to blame for the sickness prevailing amongst the scholars.

At a meeting of the rural council the clerk made a remarkable statement, to the effect that the medical officer of health *had nothing to do* with the sanitary defects of the Board school referred to. All he had to do in the case of an epidemic was to see that the school was closed, and there his duties ended. If the sanitary conditions were defective it was for the education authorities to make complaint.

Now, I have sent to me from the Local Government Board, through the clerk of the "Rural Council," certain definite instructions as to the framing of the annual report, and we are requested to give information under different heads, and one head is worded thus: "Schools, especially public elementary schools SANITARY CONDITION of, including water supply; action taken in relation to the health of the scholars, and for preventing the spread of infectious disease." Here we have a confusion of authority; one says we must report on the sanitary condition of schools, another says

we have nothing to do with the sanitary defects of Board schools.

I have made the applications to the Local Government Board for a definite statement in reply to my question to them; and at the end of a month I got the subjoined reply, which is remarkable for its ambiguity.—I am, etc.,

EDWARD JEPSON,
Medical Officer of Health, Durham Rural District Council.

Durham, March 1907.

Local Government Board.
Whitehall, S.W.,
March 18th, 1907.

SIR,—I am directed by the Local Government Board to advert to your letters of the 20th ultimo and 1st instant, as to your right to enter public elementary schools in your capacity as medical officer of health, and in reply to state that in the case of non-provided schools you should apply to the managers for permission to enter, when such is required, and in the case of provided schools your application should be to the Local Education Authority—i.e., the Education Committee of the Durham County Council. I am to state, however, that, as the Board are advised, the position of a medical officer of health as regards right of entry is the same in the case of a school as of any other premises (e.g., a dwelling-house) to which Section 102 of the Public Health Act, 1875, applies, and a medical officer of health has no right, either with or without an order from a sanitary authority, to insist, in virtue of his office, on admission to a school for the purpose of inspecting the school premises.

I am at the same time to state that the Board would regard the defective sanitary condition of public elementary schools in his district as coming within the purview of the duties of a medical officer of health under Article 18 (1) and (3) of the General Order of the 23rd March, 1891.

I am, Sir,
Your obedient servant,
JOHN LITHBY,
Assistant Secretary.

VACCINATION AND THE L.C.C. ELECTIONS.

SIR,—Before the recent election *The Vaccination Inquirer* published answers received from 61 candidates in reply to a circular sent out by the National Antivaccination League. Candidates were asked definitely if they were in favour of abolishing the vaccination test for teachers and others who "honestly believe" vaccination to be injurious to health or unnecessary.

Since the election I have made an analysis which shows how the 61 candidates stand: 24 replied in the affirmative without definitely indicating whether they were provaccinists or antivaccinists, merely assenting to the principles of conscientious objection in their answers; of these 19 were elected and 15 defeated; 36 declared themselves definitely pronounced antivaccinists; of these 2 were elected and 24 defeated; 11 declared themselves provaccinists, of these 3 were elected and 3 defeated.

These results must be very disappointing to the officials of the National Antivaccination League. Having regard to the declaration of the editor of *The Vaccination Inquirer* that "the question is one of the greatest importance to our cause," the league must be rather disconcerting. One candidate, evidently regarding his election an absolute certainty, answered, "I shall certainly vote in the manner desired by the League." He was defeated. Another candidate answered, "I will not. I am convinced of the necessity of vaccination." He was at the head of the poll.

I am, etc.,
ALFRED DERBY, M.B., C.M.

LANCASHIRE AND CHESHIRE BRANCH: ELECTION TO THE CENTRAL COUNCIL OF THE ASSOCIATION.

SIR,—A report has been widely spread in this district that I am retiring from the Central Council, and I desire to contradict it. I did in November last, send in my resignation of membership of the Association to the Branch Council, and also to my Division, the West. The Executive of the latter, when my letter was read, passed a resolution calling upon me to continue to do the work I had done for the Association. This was forwarded to me with a request that I would withdraw my resignation. The Branch Council selected a more convenient method, and requested that my letter of resignation be destroyed. With much personal and unsolicited expression of appreciation for my services to the Association I have received the Association it would have been most unpleasant of me to persist in my desire to retire from the arduous duties involved in the official position I hold, and it is out of regard and respect for those of my colleagues who have so faithfully done their share in the work, and not for my own gratification, that I take the trouble to make clear to the Branch my present attitude. I shall be a candidate for a seat. I shall pursue the policy I have always followed *at the command* of my constituents, and shall continue to oppose the policy of those gentlemen who have recently done so much to bring the Association into its present unsatisfactory position, and who are making such desperate attempts to belittle the influence of the Branches. These are agitators; they are in a small minority, but they are reckless in their methods and very mischievous. I represent the great majority. This is a personal explanation, and it would not be graceful to introduce my colleagues on the Council, all of whom have done splendid work. The Branch will shortly have an opportunity of declaring which of us have failed in carrying out the work entrusted to us. For myself, I have the profoundest confidence in the judgement of the electorate; at least, any doubtful tactics will be promptly exposed, and disaster will follow the authors.—I am, etc.,

Old Trafford, March 25th. JAMES BRASSEY BRIERLEY.

MEDICAL STUDENTS AND ORGANIZED GYMNASTIC TRAINING.

SIR,—I noticed recently at Aldershot the young medical officers of the R.A.M.C. dépôt going through a gymnastic training at the Central Gymnasium there.

I suppose the average age of young medical officers on joining the army is between 25 and 26 years. It seems to me a pity that young men of this age should need, when officers, to go through such a course. The training should be given them as students and a certificate required as a qualification to entrance to the army medical competition. Gymnastics is a branch of practical physiology, and should be carried out by trained scientific teachers who know the machine they deal with.

In the army we have allowed the gymnastic training to fall into the hands of men of the drill sergeant type, not sufficiently trained in the organization of the machine they work. An amount of gymnastic ceremonial has overlain the simple gymnastic teaching, and now we want a scientific reform of the whole subject. So far back as 1885 I drew attention to the want of care shown in medical schools as to the social surroundings of their pupils—the absence of clubs, restaurants, gymnasiums, etc. Time has done wonders in this direction, and now in most places the student need not go to a public-house round the corner for lunch.

I now suggest that the student be taught gymnastics in a regular, organized, scientific manner; that the instructor be a medical man employed as gymnastic demonstrator, attached as a colleague to the professor of physiology; that regular scientific observations as to fatigue, overstrain, and circulatory effects be carried on, and that the students themselves be asked to help the work, using their own bodies as a laboratory for tests, and that prizes be given for personal reports.

At once, when the medical profession produces scientific gymnastic teachers qualified as medical men, a new field of office will be open to the doctor, and science will drive out the present non scientific employé. In America I believe this is done at the great universities, and Maclaren, the pioneer of army gymnastics, belonged to our cloth. A gymnastic prize should be given at medical schools. A gymnasium is as needful there as a laboratory. At the school festival a gymnastic display could be part of the routine, and in London the hospitals cricket or football clubs should expand their functions to include gymnastics.

In the army, the officers R.A.M.C. should be permitted to qualify as instructors and to hold the appointment and I notice that in the Royal Navy the whole gymnastic training, now so important owing to the disappearance of masts and yards, is passed over to the lieutenant class, and no medical officer has a look in. If this continues drill and gymnastics, with all its wretched ceremonialism, will surely creep in and the true science of gymnastic training be lost. The R.A.M.C. candidate should also produce a certificate of proficiency in gymnastics from the Central Gymnasium for R.N. medical competition, and the medical officers at Osborne

College and the *Britannia*, as at Sandhurst and Woolwich military schools, still more carefully supervise the gymnastic training of the growing lads in their important charge.

No barrier should exist in the navy to men of the sick-berth staff qualifying as subinstructors of gymnastics; nor, in the army, should the R.A.M.C. non-commissioned officers and men be barred entry to training as gymnastic subinstructors. A definite physiological pass examination should be essential before entry for training.—I am, etc.,

G. J. H. EVATT,
Surgeon-General, late A.M.S.

London, S.W.

INCOME-TAX REDUCTION.

SIR,—While efforts are being made in London by means of meetings and discussions to urge the Chancellor of the Exchequer to relieve the income-tax payers of a portion of their burden, I think the medical profession should make some effort likewise to urge the claims of those who live by earned incomes, to obtain some substantial abatement. If the Medico-Political Committee were to take steps in the matter and advise a concerted action on the part of the profession, I believe the Government would be induced to consider the question favourably. In this, as in other affairs, a well-considered and concerted action is necessary.—I am, etc.,

MILNER MOORE.

Coventry, March 25th.

*** From the report of the Medico-Political Committee on January 9th, published in the SUPPLEMENT of February 16th, it will be seen that that Committee has been considering the position of the medical profession in regard to the application of the principle of differentiation to the income tax; that several influential societies representative of various professions had agreed to co-operate with the British Medical Association; and that the Medico-Political Committee was inviting these societies to confer with it as to representations to be made to the Chancellor of the Exchequer.

REAR LIGHTS ON VEHICLES.

SIR,—A very important Bill on the lighting of vehicles has passed the second reading of the House of Commons, and has been referred to the Standing Committee on Law, and its consideration will come on very shortly. It is very important that this Bill should be amended in order to secure a red light being carried at or showing at the rear of every vehicle used on the highways. Members of our own profession are especially interested in such an amendment. Some vehicles, such as furniture vans, very often carry a small light in front, placed in such a position that vehicles overtaking it have no warning until they are close on it. The country doctor using his motor in answer to an urgent summons in the night or early hours of the morning runs in constant danger from this cause, and everyone of us must at some time or other have had narrow escapes owing to the absence of a light showing to the rear giving warning of the presence of a cart in front. Even before it was necessary that the motor cars should carry a light at the back for the purpose of illuminating the number plate, it was compulsory that they should show a red light at the back, and how it could be possible for legislators to pass a Bill compelling the fastest vehicles on the road to show a light at the back to prevent them being run into and yet allow farm carts and furniture vans and the like to use the same road and yet carry no light at the back at all, has always been a puzzle to me. It would be a great help in securing such an amendment as I have referred to, if all the medical motorists in the country would write to the Member of Parliament for their district pointing out the danger run by the doctor who has to be out all hours of the night. I hope medical men will not treat this matter as though it were one of little concern to themselves. The passing of such an amendment would amply repay every medical man in the country for the small amount of time it would take to pen such a letter.—I am, etc.,

H. E. B. BRUCE-PORTER,
Hon. Sec. Committee of Medical Men using Motors.

London, W., March 21st.

DELAYED CHLOROFORM POISONING.

SIR,—Is it not probable that the two cases of so-called delayed chloroform poisoning, described by Dr. Crawford Renton, on p. 617 of the BRITISH MEDICAL JOURNAL were typical examples of acute *Bacillus coli* infection? In both the symptoms were identical with those observed in this infection. In the second case the bacillus was found in the spleen: it is not stated whether it was looked for or not in any of the organs or secretions in the first. Two questions arise:

First, is it possible to produce symptoms characteristic of acute *B. coli* infection by poisoning with chloroform? Secondly, is there any such thing as chloroform poisoning, except from overdosing?—I am, etc.,

EDWARD LAWRIE.

London, W., March 16th.

COMMON ERRORS IN DIET AND GENERAL HYGIENE OF CHILDREN.

SIR,—With the greater part of the admirable popular lecture of Dr. Voelcker in the BRITISH MEDICAL JOURNAL of January 26th I cordially agree. Such teaching is much needed as part of the practical training of students. The work in the laboratory must not be less, but diet and hygiene must occupy a far more prominent place than hitherto, for every doctor should be a daily teacher of these in his practice. He alone has power to enforce the application of such teaching. It must be given simply but insistently, so that the ignorant may understand, and the lazy be made to feel, that implicit obedience to the doctor's directions as to diet, preparation of food, ventilation, cleanliness, etc., is as essential as attention to the giving of medicines.

The simple practical teaching of preventive medicine must hold an important place in our work if our people are to continue to hold a first place among the nations.

But unless the importance of it is impressed on students young practitioners are apt to devote their scientific knowledge only to local treatment, leaving the preventable cause of ill-health and disease unchecked.—I am, etc.,

D. H. STIRLING, M.D.

Perth, N.B., March 12th.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

IN a Convocation held on Wednesday, March 20th, the degree of D.C.L. by diploma was conferred upon the Right Hon. George Nathaniel, Lord Curzon of Kedleston, M.A., Hon. D.C.L., Chancellor-elect of the University.

Radcliffe Travelling Fellowship.—John Freeman, D.M., University College, has been elected to a Radcliffe Travelling Fellowship.

UNIVERSITY OF EDINBURGH.

University Court.

THE Edinburgh University Court, at its meeting on March 18th, on the recommendation of the Senatus, appointed the following additional examiners in connexion with theses submitted for the degree of D.Sc.: Dr. R. T. Glazebrook, Director of the National Physical Laboratory; and Colonel R. H. Firth.

The Court agreed to recognize the University College and King's College, University of London, under Ordinance No. 30, Section iii, 1, and No. 40, Section iii, 3.

Dr. Francis D. Boyd was recognized as an Extra Academical Teacher whose course of instruction in practical materia medica shall qualify for graduation in medicine.

A letter from Dr. Andrew Davidson intimating his resignation as University Lecturer on Diseases of Tropical Climates was read. The Court accepted the resignation, and resolved to record in the minutes their high appreciation of his valuable services. Brigade-Surgeon-Lieutenant-Colonel Arnott, M.D., late I.M.S., was appointed to conduct the class of Tropical Diseases during the ensuing summer session.

A letter was read from Dr. J. M. Beattie intimating his resignation of the offices of Lecturer on Bacteriology and of Senior Assistant in Pathology on his appointment as Professor of Pathology in the University of Sheffield. The Court accepted the resignation, and resolved to record in the minutes their high appreciation of his valuable services. Dr. W. E. Carnegie Dickson, Second Assistant in Pathology, was appointed to undertake, during the ensuing summer session, the duties of Senior Assistant in Pathology and Lecturer on Bacteriology.

UNIVERSITY OF LIVERPOOL.

CHAIR OF CYTOLOGY.

UNDER the auspices of the Liverpool Cancer Research Society, a Chair of Cytology has been established and endowed in the University, and the Council of the University has elected as its first holder Mr. John Edmond Salvin-Moore, F.L.S., who has been for some time Director of the Cancer Research. The new professor was educated at Tonbridge School and at the Royal College of Science. In 1896 and 1899 he was leader of the

Tanganyika explorations in Central Africa, and subsequently he was appointed demonstrator, and later Acting Professor of Zoology at the Royal College of Science. The new post is essentially a research professorship, and its occupant will continue Director of the Cancer Research. He is the author of numerous publications, of which the most recent is the First Report on the Cytological Investigation of Cancer, published jointly with Mr. C. E. Walker, F.L.S., the Assistant Director of the Research.

UNIVERSITY OF LEEDS.

APPOINTMENTS.

THE Council of the University has elected the following lecturers of the University members of the Faculty of Medicine: Arthur G. Plumley, M.B.Lond., L.D.S.Eng., Lecturer on Dental Surgery; Thomas S. Carter, L.D.S.Eng., Lecturer on Operative Dental Surgery; A. Alan Forty, L.D.S.Eng., Lecturer on Dental Anatomy and Physiology; C. Rippon, L.D.S.Irel., Lecturer on Dental Mechanics. Mr. Arthur G. Plumley was also elected a member of the Board of the Faculty of Medicine. The Council also invited the Dental Committee of the Leeds Public Dispensary, which consists of the honorary dental staff of that institution, to nominate two of its members to act on the Dental Committee of the Board of the Faculty of Medicine, in order that the dispensary, in virtue of the important part it is destined to take in the development of the Dental School, should be directly represented in the University.

EXAMINATIONS.

The following candidates have been approved at the examinations indicated:

MATERIA MEDICA.—A. Pertman.
ANATOMY AND PHYSIOLOGY.—J. P. Musson, E. C. Piercey, A. Riley, W. Shaw, R. E. Smith, J. N. L. Thoseby.
PATHOLOGY, FORENSIC MEDICINE, PUBLIC HEALTH.—J. H. M. Frobisher, G. A. C. Mitchell, G. C. H. Nicol.

THE TEACHING OF BIOLOGY.

It has been decided by the Council of the University to create a separate chair of botany. This has arisen out of the resignation of Professor Miall, who combined the teaching of botany with zoology. It was felt that the importance of each of the two subjects, and especially the possible development of the economic aspects of botany, rendered it advisable that the biological department of the University should in future be represented by two separate chairs.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held at the College on Monday, March 25th, the President, Sir R. Douglas Powell, in the chair.

Presidential Address.

The President delivered an address dealing with the chief events of the collegiate year, and gave obituary notices of the following nine Fellows of the College who had died during that period: Dr. Henry Augustus Goodrich, Sir Willoughby Francis Wade, Dr. John Henry Bryant, Dr. John Henry Bridges, Dr. John Cameron, Dr. Thomas Harris, Dr. Gustave Isidore Schorstein, Dr. Edmund Symes Thompson, and Dr. Arthur Ernest Sansom.

Election of President.

Sir R. Douglas Powell then vacated the chair, and voting took place for the Presidentship of the College for the ensuing year. Sir R. Douglas Powell was re-elected by a large majority, and gave his faith to the College.

Communications.

The following communications were received:

1. From the Secretary of the College of Surgeons, reporting proceedings of their Council on March 14th.

2. From A. Forbes Sieveking, Esq., asking permission to examine the records of the College as an assistance in writing a biography of his father, the late Sir I. Sieveking. Permission was granted subject to the usual restrictions.

Reports.

The following reports were received:

1. From the Committee of Management recommending that the Leys School, Cambridge, and Trent College, Long Eaton, be added to the list of institutions recognized by the Examining Board in England for instruction in chemistry, physics, and biology. The report was adopted.

2. The quarterly report of the Examiners for the Licence on the results of the January examinations.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

An ordinary Council was held on March 14th, Mr. Henry Morris, President, in the chair.

Issue of Diplomas.

The Diploma of Membership was issued to Mr. H. O. Howitt. The Diploma of Fellowship was issued to Mr. L. E. S. Norbury, and to Mr. G. C. E. Robinson. The Diploma of the Licence in Dental Surgery was issued to Mr. T. L. Barnett.

Bradshaw Lecturer.

Mr. Rickman J. Godlee was chosen Bradshaw Lecturer for the ensuing collegiate year.

Representatives of the College upon the Senate of the University of London.

Mr. A. Pearce Gould was re-elected one of the two Representatives of the College, the appointment now made being for four years from May 14th, 1907.

Central Midwives Board.

Mr. J. Ward Cousins was re-elected as the College Representative on the above.

Petition in Favour of the Admission of Women to the Examinations of the College.

A petition was presented, bearing 2,708 signatures, 20 signatures being included of medical women or of lay persons other than those officially connected with the London School of Medicine for Women and the Royal Free Hospital.

National Anthropometric Survey.

A vote of thanks was given to Dr. Arthur Keith for his attendance as the College Representative with the deputation to the Prime Minister to urge the importance of a national anthropometric survey.

TRINITY COLLEGE, DUBLIN.

THE following candidates have been approved at the examination indicated:

FINAL EXAMINATION IN MEDICINE (PART I.).—*W. E. M. Armstrong, O. Gogarty, W. A. R. Spong, A. H. Smith, J. C. Baker, R. de C. Wheeler.

* Passed on high marks.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved at the examinations indicated (March, 1907):

SURGERY.—†*F. A. Bainbridge, †*A. E. Blythman, †S. F. Fouracre, †*A. F. Palmer, †*A. Shepperd.
MEDICINE.—†*F. A. Bainbridge.
FORENSIC MEDICINE.—F. A. Bainbridge, E. S. Cooke.
MIDWIFERY.—F. A. Bainbridge, H. Morris, E. H. Paterson, W. F. Skinner.

The Diploma of the Society has been granted to Messrs. F. A. Bainbridge, A. E. Blythman, A. F. Palmer, and W. F. Skinner.

† Section I. * Section II.

Medico-Legal.

A DENTIST AND HIS TITLE.

ON March 11th, James Evans Jordan, of Riverholme, Keswick, was charged at the Cockermouth Police Court, at the instance of one C. E. Jagger, with having unlawfully used the title of "D.S., U.S.A., the American dentist," at Cockermouth, on February 28th, thereby implying that he was duly registered under the Dentists Act, 1878. Mr. Jones of Whitehaven (instructed by the London and Counties Medical Protection Society) prosecuted; Mr. Theodore Fisher appeared for the defence.

It appeared that the summons was issued under Section 3 of the Dentists Act, 1878. It was stated that the defendant used a brass plate on his door, with the letters "D.S., U.S.A., the American dentist." In addition to this, he had an advertisement in the *Cumberland Times* to the same effect. He had applied for and obtained an appointment as dentist to the Industrial School by the Cumberland County Council, and was receiving a fee.

Mr. Fisher admitted that his client was not registered, that he was not a legally-qualified practitioner, and he also admitted the words on the brass plate and the advertisement in the paper. He concluded, however, that his client had not held himself out as specially qualified to practise dentistry.

Mr. Jones referred to the case of "Penhouse *v.* Brown," in which the words "German Dental Institute" were used, and were held by the magistrate to imply that the defendant was registered under the Act and that he was qualified to practise.

Mr. Fisher pointed out that the defendant had obtained the appointment referred to some eight years ago, and that upon the County Council being informed of his qualifications, the matter was referred to the Home Office. The Home Office said that if the work done by the defendant was satisfactory the appointment was good and right. In these circumstances it could not be said that the County Council were deceived. As to the present charge, he concluded that his client had not held himself out as qualified under the English Act.

The Clerk: That is not the point. The point you have to meet is that he said he was a dentist, and that he is not entitled to say that he is a dentist or that he is specially qualified to practise, unless registered under this Act.

Mr. Fisher: What I have to meet is not that we held ourselves to be specially qualified to practise dentistry.

The Clerk: Surely you do not suggest that a man who advertises as an American dentist is not holding himself out as specially qualified to practise dentistry.

Mr. Fisher: No.

The Clerk: Then you admit your offence.

Mr. Fisher: He was not using the title of dentist or any description implying that he was registered under the Act.

The Clerk: He is not a person qualified to practise unless registered under this Act.

Mr. Fisher: I think the true interpretation is that a man must not hold himself out as specially qualified under the Dentists' Act.

The Clerk: That is not what the Act says. He must not hold himself to be specially qualified unless he is registered under the Act.

Mr. Fisher said that in America he would be a properly-qualified dentist. The whole point was as to whether the public had been deceived or not. Mr. Jordan had done his best to indicate to the public what his qualifications were, and he submitted that he was absolutely innocent, and that he had no case to meet.

The magistrates retired, and on their return the Chairman said that they felt that under the circumstances they could not do otherwise than inflict a penalty of 1s. and costs.

WATER SUPPLY FOR THE SURGERY.

Is the practitioner entitled to have water in his surgery without paying a special rate? A water company is generally entitled to make a special charge for water which is used otherwise than for domestic purposes. The question is: Does the practitioner who uses water in his surgery use it for a domestic purpose? It appears that Dr. Lightfoot of Watford has recently raised this point in a concrete form. The Watford Urban District Council sought to charge him the minimum charge of 10s. for water supplied to his dispensary. In February, 1906, the Water Committee of the Council fixed the extra charges on doctors, chemists, dentists, and on butchers, for water used for trade purposes. The clerk of the council, who appeared in support of a summons issued against Dr. Lightfoot, said that a special rate must form the subject of an agreement between the Council and the consumer. He pointed out that although there was no agreement in this case there had been delivery of the demand note and payment of the first instalment. This payment was, however, made under protest, and in the event, the prosecution being unable to prove any agreement or to show upon what basis the charge of 10s. was made, the summons was dismissed. It may be mentioned that no case on the point, whether the purposes of a dispensary are domestic purposes, was cited to the magistrates. The phrase "domestic use" has been judicially defined to include all the water that the occupiers of a house or building in which they dwell use for the health, comfort, and enjoyment of themselves, apart from any trade or business purpose. It has been held to include the supply of water for horse and carriage; for a boarding house; and for a pauper school; but the supply of water for a swimming bath at a school carried on under a charitable scheme is a supply for the business of the school, and not for domestic purposes.

PRESCRIBING CHEMISTS.

AT an inquest held by the Exeter city coroner on March 18th concerning the death of an infant who had been put out to nurse, the medical evidence was to the effect that death was due to inflammation of the lungs and abscess in the left lung. It appeared that the mother had taken the child to a chemist's shop, and that an unqualified assistant had supplied a mixture which, he stated in evidence, contained ipecacuanha wine; he did not advise her to take the child to a doctor. The evidence of the mother and another woman was to the effect that he had advised them that there was nothing to be alarmed at.

The jury found that death was due to natural causes, and thought that there had been great neglect on the part of the mother and the woman who had charge of the child.

The coroner then asked the jury whether they wished to express any opinion with regard to the chemist and his assistant; the foreman replied, "Chemists prescribe for hundreds of children in the course of a year. I don't see any wrong in it, as far as I am concerned."

It seems a singularly heartless answer, but illustrates the view which certain classes of the community take with regard to prescribing chemists and the difficulty of protecting the public from themselves. In this case it might have been supposed that the helpless age of the child would have appealed to the better instincts of the jury.

A SECOND CONVICTION.

AT the Central Criminal Court, on March 19th, Caleb Charles Whitefoord, of Upper Marylebone Street, was convicted of performing an illegal operation on a woman, and sentenced, in spite of a recommendation to mercy on the ground of age and physical infirmity, to ten years' penal servitude. This is the same individual who in 1891 received five years' imprisonment for a similar offence, and whose name was removed from the *Medical Register*. The case is chiefly noteworthy on account of the large number of well-dressed women who, in the police-court proceedings, confessed to having had illegal operations performed upon them by him. The fees which he seems to have received were only two or three pounds in each case.

MEDICAL LAW AND LIMITED COMPANIES.

MR. L. STRANGWAYS, L.D.S.Eng. (Tor Grange, Torquay), writes: In view of the publicity recently given to a case of evasion of the above Acts by limited companies, the following facts may show the need for amended legislation. A short time ago a patient came to me offering to apprentice his son with a view to practising dentistry, and when I inquired which hospital the boy would join, the father exclaimed, "Hospital? Why should I waste my money on fees and my son's time as well, when he can practise equally well as a limited company?" So I refused to have anything to do with the case. It is useless for a private practitioner to prosecute, for one cannot obtain evidence without "setting a trap," and this is obnoxious to most Englishmen and prejudices the jury in the defendant's favour. During the last three years seven unregistered men have begun dental practice in this immediate neighbourhood, and by example the numbers will increase. The man in the street regards every one who extracts teeth as a dentist, and if limited companies are to be tolerated they should be compelled to employ only registered operators, otherwise parents will not go to the expense of the hospital curriculum.

ENGAGEMENT OF MONTHLY NURSE.

MATERNITY writes that a lady engaged a nurse for confinement from July 1st. The nurse at the time informed the lady that she had another engagement for the early part of June, and a month later called and said that she found it was from June 11th. The lady then offered to engage the nurse from June 24th, but this was declined. She thereupon cancelled the engagement. The lady has now received a threatening letter from a solicitor, and our correspondent wishes to know if the lady had not a right to change her mind, especially under the circumstances of the case.

*** It does not appear that the nurse refused to come on July 1st, so that the contract was broken by the lady. If, therefore, the nurse should be out of employment during the time she had been engaged for, she would be legally entitled to recover damages to the extent of the fee, it had been agreed to pay her.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

COMPULSORY VACCINATION IN THE UNITED STATES.

A BILL has, we learn from the *Medical Record*, been introduced into the Pennsylvania Legislature requiring all children to be vaccinated before they are 2 years old, and also providing that persons taking up their residence in the State shall be vaccinated within one month, or produce a physician's certificate that they have been vaccinated or have already had smallpox. It is further provided that any child or person required to be vaccinated under the provisions of the Act, but suffering from any affection or condition that would as a result of vaccination become dangerous to life or health, may be excused from the enforcement of the law for a period of one year on presentation of a written certificate to that effect signed by a regularly licensed physician and endorsed by a physician appointed by the Department of Public Health, or by any local Board of Health of the Commonwealth.

THE VENTILATION OF LONDON.

A PAPER read recently by Mr. A. A. Hudson, barrister, before the Surveyors' Institution, well merits the attention of sanitarians; not London only but many other large towns are sadly in need of ventilation, and although a good deal has been done by Acts of Parliament towards improving the condition of dwellings there is still much to be done in the direction of ensuring some change of air in narrow streets. The natural ventilators of London are the river Thames, the London parks, and the squares, but even these can do little more than relieve the discomforts of the householders whose dwellings abut on them. The current of air passing down the narrower streets is uncertain and inadequate, except when the wind happens to blow end on; and the enclosed spaces behind blocks of houses to which very often admission is only gained by archways are very imperfectly ventilated. Ventilation may be produced by local eddy winds such as are created when a building springs up considerably higher than those surrounding; perhaps on this account there is something to be said for the irregularity of height which so much distinguishes English thoroughfares. Mr. Hudson urged that it is essential that streets should be ventilated, and mentioned the many sources of evil odours, and among other points discussed was the problem of sewer ventilation. Probably, however, the discharge of any large quantity of sewer gas into the air at the road level is rare and perhaps what is called sewer ventilation more often consists of relief of occasional exceptional pressure. Mr. Hudson truly said that more consideration should be given to the ventilation of individual houses where it is impossible to obtain the [illegible]

advantage of open windows owing to the dust and noise of the streets. He discussed the sources from which air could be obtained and the need for a more careful supervision of the health of those compelled to carry on their work in basements. The remedies suggested included the more careful cleansing and watering of the streets, the further regulation of the height of buildings, and special regulations for the ventilation of basements. He proposed also the appointment of a staff of sanitary inspectors chosen for the acuteness of their olfactory organs, but this is, perhaps rather outside the present scope of sanitary departments. The paper was followed by an interesting discussion and though perhaps in some respects rather utopian its suggestions may afford the practical reader considerable food for thought.

INTERNATIONAL PROTECTION AGAINST TUBERCULOSIS.

S. Bauer in *Z. f. Hygiene und Inf.*, Bd. ix, Heft 1 urges the necessity of international regulations as a protection against the spread of tuberculosis. Improved methods of communication have increased the danger of spread of disease. Bacteriological examinations of the dust in a railway carriage have revealed the presence of tubercle bacilli, and inoculation experiments have shown where the bacilli may not have been identified that they were present in a virulent form. Clinical proof also has not been wanting of the high rate of mortality from phthisis among commercial travellers who spend half their lives in railway carriages. Cases are known to show the danger incurred, and a more definite example is that of a party of seven Germans who spent a long journey together, and who one and all developed phthisis. The statistics of the naval hospitals of Toulon, Brest, Rochefort, Cherbourg, and Lorient show an alarming increase in phthisis among the sailors in the navy since the introduction of armour-clad vessels. The deaths due to phthisis as compared with the total number of deaths in the navy were in 1850-59 per cent., in 1885-94 per cent., and in 1897-1901 increased still further to 76 per cent. The prevalence of phthisis among the sailors of the merchant service is even more dangerous to communities as a whole than that in the navy, because the sailors of merchant vessels, spending time on land, more frequently change their abodes. The causes which especially predispose to phthisis in the navy are overcrowding, defective ventilation of the living spaces, poor food, and extreme variations of temperature from one part of a vessel to another. As means of prevention against infection from railway carriages he suggests that the floors should be kept thoroughly clean; that each carriage on arrival at a terminus should be thoroughly washed out, preferably by a vacuum apparatus, and that the interior of the carriage should be disinfected, as for instance with formol vapour. Persons with regard to whom there are especially to be feared the spitting of a rival. These should include a certain proportion of those who arrive, and those who are found to be suffering from tuberculosis, whether they are aware of it or not, should be treated as definitely infectious cases. Hygienic measures should be more generally carried out on board ships. On board ships themselves disinfection and isolation are needed. It is also recommended that there should be given instruction in the principles of prophylaxis, individual and general. It is hoped to eliminate tuberculosis the same as has been done in the case of cholera, in order to which compulsory notification is necessary. The great importance of a uniform method of treatment should be required to be kept in view. Legislative measures in this direction are already in force in Norway, Sweden, and Denmark. Above all, however, instruction and education in the hygienic education of the people is necessary.

LOCAL SANITATION.

In the midst of the alarm of defence against imported disease, the surveillance of a port is hardly of interest even when it is a matter, as it was not recently by the medical officer of health for the Hull port authority. The results of the examination by the medical officer on account of symptoms suggesting infectious disease were twenty cases in all. Twenty cases were found to be suffering from the most infectious form of small pox, one to the middle form, and one to the mildest form. Cases of small pox were removed to the fever hospital. The number of vessels which had on board people known to be infected was 32, and those in which infection was suspected 81. Of 5,636 vessels examined during the year 3,181 were British. The number of persons examined was not stated, and is estimated to be a number of the crews passing through the port of Hull in the year, so far as known, was 2,677.

PASTEURIZATION OF MILK IN NEW YORK.

We learn from the *Medical Record* that a Bill providing for the pasteurization of all milk sold in New York City has been introduced before the New York State Legislature. It would provide that the Commissioner of Health should designate stations to which every part of milk brought into the city must be taken and put through the process of pasteurization; a stamp would then be put on the receptacle by the health authorities, whereupon the dairy and milk companies, and any others whose milk had been subjected to the process, might distribute their milk. The penalty for selling milk which had not been pasteurized would be imprisonment for not less than six months, or a fine of £100, or both. Provision is made for the confiscation and destruction of any milk found to be unpasteurized. Authority would also be given for the appointment of a large number of additional milk inspectors.

AMERICAN SANITATION.

THOSE who attended the meetings of the Sanitary Section at the Toronto meeting will not fail to remember Dr. Probst, the Health Secretary of the State of Ohio, and for all students of public health there is provided much interesting reading in his annual report of the doings of the Board of Health in Ohio for the year 1905. The Board controls the sanitation of 5½ millions of people spread over an area of 41,000 square miles, and divided among 59 cities, 405 villages, and 658 townships, which represent the units of Government. The total death-rate for the whole State is 10.87, the most fatal diseases being tuberculosis and pneumonia. Typhoid fever accounted for 1,253 deaths during the year, and Dr. Probst calls special attention to the need for the supervision and protection of existing water supplies, and for a strict inquiry into the character of proposed water supplies. There is a demand for further and more stringent legislation to compel municipalities and private corporations to desist from polluting the streams. At present it would seem that action can only be taken at law by private individuals, a course involving undue delay, great cost, and frequently proving ineffectual. It is suggested that the state should proclaim its ownership of all streams and natural bodies of water within its boundaries in so far as protecting them against pollution is concerned. Two cases of trade pollution are specially noticed, the one being from a distillery at which it has been found possible to utilise the refuse as food for cattle, and the other the acid waste liquor from tube works, a frequent source of pollution also in English manufacturing districts. The acid was removed from the waste, and converted into crystal copperas at considerable profit. The Secretary advocates the appointment of county medical officers of health, so that some of the work now brought before the Board in detail may devolve upon an officer upon the spot; it appears, however, that in the rural districts, although by the law of 1895 every township is empowered to appoint a medical officer of health—a proceeding made mandatory in 1902—the salary in most cases is so small that the officer takes no interest in the work. In the villages the average salary given is 15 to 20 dollars a year, which is quite ridiculous.

A QUESTION UNDER THE NOTIFICATION ACT.

Cases having been notified in a certain district, the medical officer of health received a notification from the parent of a child suffering from the disease. The medical officer of health visited the patient, and instructed the parent to inform him when the child had recovered, that the house might be disinfected. About three weeks later the ordinary medical attendant was called in to certify that the child was well again, and that the house was ready for disinfection. He found, however, that the illness was not quite over. Should the ordinary medical attendant notify the case, being aware that the medical officer of health was already cognizant of it? If so, should any fee be paid to him by the local authority?

The medical attendant should notify the case to the medical officer of health. The medical attendant is entitled to the ordinary fee from the local authority.

OBITUARY.

JAMES GOOD CURTIS, F.R.C.S.I.,

CONSULTING SURGEON, SOUTH INFIRMARY, CORK.

At an early hour on the morning of March 3rd, Dr. J. G. Curtis passed away at his residence, 7 Camden Place, Cork, to the regret of an extensive circle of friends. He was one of the oldest surgeons in the city, having taken the Licence of the Royal College of Surgeons, Ireland, as far back as 1869. He became Fellow of the same College in 1874. He held many important positions in the City of Cork, being Consulting Surgeon to the South Infirmary, Medical Inspector under the Factories Act, Police Surgeon, Cork Southern District; Inspector of Anatomy for Munster and Physician to the Model Farm. Though his years had bridged a greater span than is allotted to most men, he continued to attend to his professional duties almost to the last with unbecoming care and solicitude, giving evidence of a quality of energy which seemed to be proof against the inroads of advancing years. He was highly esteemed by his colleagues in the medical profession, both for his ability and his personal qualities,

and in the social circle in the city and county he was a welcome and much appreciated figure. His wife predeceased him, but he leaves two children to mourn his loss. His only son, Colonel James Henry Curtis, is in the R.A.M.C.

FRANÇOIS JOSEPH HERGOTT, M.D.,

PROFESSOR OF CLINICAL MIDWIFERY, NANCY.

PROFESSOR F. J. HERGOTT of Nancy, who died on March 4th, in his 93rd year, was for a long time one of the most prominent of French obstetricians. He was born at Guebwiller, in Alsace, in 1814, studied medicine at Strassburg, and graduated there in 1839, the subject of his inaugural dissertation being the varieties in shape of the uterus during gestation and delivery. His thesis was that in most cases it is the shape of the uterus that determines the presentation.

In 1841 he settled at Belfort as a surgeon. In 1854 he competed successfully for a post of *agrégé* at Strassburg. In that capacity he taught successively surgery, midwifery, embryology, and otology. For his devotion to the sick and wounded during the siege of Strassburg in 1870 he was made a Knight of the Legion of Honour.

After the war Hergott migrated to Nancy, where, in 1872, he was appointed professor of obstetrics. On the death of Stoltz, in 1876, he succeeded him in the chair of clinical midwifery. In the same year he was elected a corresponding member of the Académie de Médecine, of which he became an Associate in 1890. In 1895 he was elected a corresponding member of the Académie des Sciences.

Among Hergott's contributions to the literature of his special province of medicine, are monographs on the obliteration of the vagina as a means of curing incontinence of urine; on podalic version; and on spondylizema and spondylolisthesis. He gave much attention to the history of the obstetric art. In 1878 he published a work on the Chamberlen family and the discovery of the forceps. He translated Siebold's *History of Midwifery*, to which he added a third complementary volume, bringing the narrative down from 1845 to 1895. At the age of 82 he translated the treatise on diseases of women of Soranus of Ephesus.

Hergott was deservedly regarded by his fellow-countrymen as one of the glories of his profession. Admirable as teacher and as practitioner, he was not less admirable as a man. He made a point of following up his patients after their discharge from the hospital. When a poor mother presented herself with a child whom she had suckled in accordance with his advice, he would slip a louis into her hand. He was held in affectionate veneration by his pupils, and in the highest honour by his professional brethren.

FRANK E. MURRAY, M.B., B.C., F.R.C.S.ENG.

FROM South Africa comes the sad news of the death of Dr. Frank Murray at Graaf Reinet on February 1st.

Frank Everett Murray, the youngest son of Mr. W. E. Murray of Roodebloem, Graaf Reinet, South Africa, began his medical training at St. John's College, Cambridge, in the autumn of 1894. Having taken his degree in the Natural Sciences Tripos in 1897, he entered as a student at St. Bartholomew's Hospital, whence he graduated M.B., B.C.Camb., in 1901. In 1902 he acted as House-Surgeon to Mr. Langton, and in the following year became a Fellow of the Royal College of Surgeons of England.

He decided to return to South Africa, and for a few months resided in Capetown and later took over the practice of Dr. J. L. Rubidge in his native town. Six months ago he sustained a severe fracture of the thigh, caused by an accident while riding, and afterwards never regained his strength: he was attacked by a virulent form of typhoid fever which proved fatal.

This sad and early termination of Dr. Murray's promising career will cause great regret to a large circle of friends, not only in South Africa but also among his old fellow students in England, and much sympathy will be felt for his wife and two little children in their sad bereavement. His death is a distinct loss, for he was a man of wide reading and much reflective power, and in spite of his somewhat retiring nature and unwillingness to push himself forward was likely to rise high among his fellows in South Africa.

Dr. PIERRE BENOIT EMILE MAUCHAMP, the French physician whose assassination at Tangier has caused the greatest indignation, not only throughout France, but in all the European Colonies of Morocco, and seems not unlikely to lead to far-reaching political complications, was a man of considerable note. He was born in 1870 at Chalon-sur-Saône. He studied medicine in Paris, where he graduated in 1898 with the note *Extrêmement bien*. He was a favourite pupil of M. Lucas-Championnière, and gained several prizes and medals of the Faculty. In 1899 he was a laureate of the Faculty in recognition of reports embodying the results of personal observations of plague at Oporto and of plague and yellow fever at Santos in Brazil and Rio de Janeiro, which he sent to the Minister of the Interior. He afterwards travelled in the Levant, Russia, and elsewhere. In 1900 he was appointed by the French Government to the medical charge of the hospital of St. Louis at Jerusalem. That position he held till 1905, doing excellent medical work and helping to consolidate French influence in Syria. He particularly distinguished himself in epidemics of small-pox and typhoid fever in 1901 and 1902. While Dr. Mauchamp was in Palestine his relations with the Turkish authorities were always good. On one occasion he was the guest of the Pacha of Aleppo. In 1905 he went to Morocco, where he established a dispensary in Marakesh. There, too, he rendered valuable service in epidemics of diphtheria, typhoid fever, and small-pox, and he was mentioned with high commendation by the French Consul in official reports. His professional work among the natives was doing much to extend French influence in Morocco. He was extremely popular, and his murder appears to have been due to a misapprehension on the part of the natives. He had put a pole, bearing a flag, on the top of his house intended, it is said, to serve as a landmark in some triangulation work that is being carried out by a French scientific mission. The Moors thought this was part of an apparatus of wireless telegraphy which they thought would lead somehow to increased taxation. An angry crowd gathered outside the house, and Dr. Mauchamp coming out, it is believed with the intention of explaining the situation, was stoned to death. His death has caused widespread regret in the district of Chalon-sur-Saône, where his family is well known and highly respected. His father is a member of the General Council of the Department of Saône et Loire, and was formerly Mayor of Chalon-sur-Saône. He is a Knight of the Legion of Honour, a distinction for which the name of his unfortunate son had recently been put forward.

DEPUTY INSPECTOR-GENERAL WILLIAM CAMPBELL SEAMAN, late of the 72nd Duke of Albany's Own Highlanders, died in London on February 14th, in the 88th year of his age. He entered the Army Medical Service as Assistant Surgeon, February 16th, 1841; was made Surgeon, May 16th, 1851; Surgeon-Major, February 6th, 1861; and Deputy Inspector-General on retirement, July 10th, 1866. He served in the Crimean campaign as Surgeon of the 72nd Highlanders, and was present with the expedition to Kertch, at the siege and fall of Sebastopol, and the attack on June 18th (medal with clasp, and Turkish medal). He was also in the same capacity in the Indian Mutiny Campaign in 1858-9, including the siege and capture of Kotah, being present with the leading column of assault on March 30th, 1858, and subsequently throughout the operations in Central India, and the pursuit of Tantia Topee and Rao Sahib (medal with clasp).

COLONEL JOHN M'CONAGHEY, M.D., I.M.S. (retired), died at Exmouth on March 18th, aged 57. He joined the Bengal Medical Department as Assistant Surgeon, March 30th, 1872, and became Surgeon-Colonel, June 16th, 1902. He retired from the service in 1905.

LIEUTENANT-COLONEL GERARD MACKLIN [illegible] M'KEE, Indian Medical Service (Madras), died at Exeter, on February 27th, aged 52. He joined the Madras Medical Department as Assistant Surgeon, October 2nd, 1880, becoming Lieutenant-Colonel October 2nd, 1900. He was with the Burmese expedition in 1885-7, receiving the medal with clasp, and in the China war in 1900 for which he also received a medal.

The death of the undermentioned officers is announced: Deputy Surgeon John Anderson Cox, retired, Indian Medical Service, in London, on January 6th; Surgeon-Major John George Gibbs, on December 27th, 1906; and Captain William Edward James Tuohy, at Kamptee, India, on January 19th.

Deputy Inspector-General George Curtis, R.N. (retired), died at Port St. Mary, Isle of Man, on February 1st, at the age of 61. He joined the Royal Navy Medical Service as Surgeon, October 8th, 1861, became Staff Surgeon, October 20th, 1875; Fleet Surgeon, September 1st, 1882; and Deputy Inspector-General, April 20th, 1895, at which time he retired from the service.

Dr. Mathias Duval, Professor of Histology in the University of Paris, died recently, at the age of 63. Born at Grasse, he studied medicine in the old Faculty of Strassburg, where he took his Doctor's degree in 1869. After the annexation of Alsace by Germany he went to Paris, where, in 1873, he became a Professor *Agrégé*; the thesis on the structure and uses of the retina, presented by him on the occasion, attracted a good deal of attention. He became successively Director of the Anthropological Laboratory at the École des Hautes Etudes and Professor of Anatomy in the School of the Fine Arts. In 1882 he was elected a member of the Academy of Medicine, and in 1883 he succeeded Charles Robin in the Chair of Histology. He was the author of a manual of physiology, originally written in collaboration with Professor Kuss of Strassburg, which has gone through countless editions; a handbook on the microscope (1873); a compendium of microscopical and histological technique (1878); a manual of anatomy for artists (1881); lectures on the physiology of the nervous system (1883); a treatise of histology; and numerous memoirs on subjects of histology, embryology, anthropology, including one on the brain of Gambetta. Mathias Duval was very popular as a teacher and held a high position in the scientific world of France.

We regret to announce the death of Dr. Emanuel Schreiber, Senior Medical Officer of the 11th East Siberian Regiment of the Russian army, which occurred at Cronstadt on March 1st. The deceased officer, who was in his 41st year, fell a victim to his zeal in scientific research. He was carrying out an investigation in the laboratory of the Institute of Experimental Medicine in Fort Alexander I at Cronstadt on plague bacilli, on which to found a dissertation for the degree of Doctor of Medicine, and in making experimental cultures he infected himself. After a short illness he died, with all the classical symptoms of the pulmonary form of plague. His body was burnt in the crematory of the fort, and his ashes will be kept there in an urn. Dr. Schreiber studied medicine at Kieff, and entered the medical service of the Russian army in 1890. He served in the war with Japan, and was afterwards attached to the Military Medical Academy, St. Petersburg.

We regret to announce the death of the well known Paris ophthalmologist, Dr. Xavier Galezowski. He was born at Lepowice in Poland in 1833; he was therefore in his 74th year. He studied medicine at the University of St. Petersburg, where he took his doctor's degree in 1858. In the following year he went to Paris to pursue his studies, and worked in the clinics of Trousseau and Barthez. After a time he became *Chef de Clinique* in the Ophthalmic Service of Desmarres. This determined him to take up his permanent abode in France. At that time, with few exceptions, ophthalmic surgery in Paris was in the hands of foreign specialists. Having taken the Paris degree in 1865, Galezowski proceeded to found a clinic for diseases of the eye, which during many years was a recognized centre of eye surgery. Large numbers of students were attracted by the accuracy of Galezowski's diagnosis and his operative dexterity. He acquired a European reputation, and was on several occasions summoned to foreign courts. He went to Persia at the invitation of the Shah Nasr-ed-din. In 1870 Galezowski did excellent service to his adopted country in the ambulances during the siege of Paris. He served as surgeon-major of a battalion of the National Guard. For this he received the special honour of what is called "*grande naturalization*." Galezowski contributed much of value to the literature of ophthalmology, his papers ranging over nearly the whole field of eye diseases. Two of his writings attracted special attention. In one of these he dealt with changes in the optic nerve and the cerebral disease on which they depend; in the other with the diagnosis of eye diseases by means of retinal chromatoscopy. Galezowski was married to the only daughter of the famous singer Tamberlick.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. G. A. Nivert, a well-known obstetrician of Paris, aged 73; Professor Roux, Director of the Surgical Clinic of the University of Lausanne; Dr. Adalbert Tilkowsky, Director of the Lower Austrian National Lunatic Asylum, and a prominent reformer of the treatment of the insane, aged 65; Professor Paul Krabler, Director of the Clinic of Children's Diseases of the University of Griefswald, aged 66; and Dr. Thomas, Professor of Materia Medica and Children's Diseases in the University of Freiburg, and head of the University Poliklinik, aged 69; Dr. Alexander Ritter von Weismayr, Lecturer on Medicine in the University of Vienna, and one of the leaders in the movement for the repression of tuberculosis in Austria, aged 40; Dr. Michael Pilcicki, sometime Professor of Anatomy in the University of Warsaw, aged 80; Dr. Alessandro Petraglia, the oldest medical practitioner of Rome, aged 91; Dr. Labeda, Professor of Operative Surgery in the University of Toulouse, and Dean of the Medical Faculty; Dr. Adolph Gad, Director of the Ophthalmologicl Department of the Copenhagen Polyclinic, aged 60; and Dr. George Bingham Fowler, one of the leading physicians of New York, founder and editor of the *Dietetic Gazette*, a former President of the Medical Society of the County of New York, in his 60th year.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE TEMPERANCE HOSPITAL.

At the annual meeting of the supporters of the Temperance Hospital on March 11th it was stated that the new out-patient department would shortly be ready. There seems little hope at present of the completion of the rebuilding scheme in its entirety, as last year income fell so far short of ordinary expenditure that some capital had to be sacrificed.

THE KENSINGTON GENERAL HOSPITAL.

At the annual meeting on March 16th of the Queen's Jubilee Hospital, Earl's Court, now called the Kensington General Hospital, the Chairman, Sir James Clark, after describing the financial position of the institution, proposed that the wards should be closed for six months, and a special meeting then be held to decide the future of the hospital. After discussion, an alternative suggestion—that half the beds should for the present be reserved for paying patients, and that out-patients, other than those with subscribers' letters and sent by local practitioners, should pay for their medicine—was approved. It will be remembered that the Committee of the King Edward's Hospital Fund, which investigated the affairs of this institution in 1905, expressed an opinion adverse to its maintenance other than as an out-patient clinic, with a few emergency beds attached.

THE YARROW CONVALESCENT HOME.

The eleventh annual report of this institution states that during last year the admissions numbered 1,000, of whom 490 were boys and 510 girls. The home, which is at Broadstairs, is intended for children belonging to the educated middle classes, whose parents are under ordinary circumstances not in a position to send them away to the seaside after illness. The home is supported entirely by private endowment.

THE ROYAL DENTAL HOSPITAL.

The financial affairs of the Dental Hospital in Leicester Square are represented in the thirty-fourth annual report, appear to be in a sufficiently satisfactory state, the number of annual subscribers having increased. The details of work given include 61,067 extractions, the great majority being under anæsthesia. The plan of supplying patients with the preparations they may require, and at cost price, has been found convenient and satisfactory. Mr. T. Lloyd Williams, after twenty years' work at the hospital, has been succeeded in the post of lecturer on dental mechanics by Mr. J. May, while Mr. Leon Richards has been appointed to the post of lecturer on Dental Metallurgy, vacated by Dr. Forster Morley.

ESSEX AND COLCHESTER GENERAL HOSPITAL.

THE point of special interest in the report of the Colchester General Hospital is the intention indicated to close the private wards. The latter are not remunerative, and it is calculated that by redistributing the area occupied by them it will be possible to provide a children's ward and increase the accommodation for the nurses. The result will be that a very necessary addition to the number of adult surgical beds will be possible. Owing to the increase of the surgical work of the institution, an addition to the staff has been considered desirable. Mr. W. F. A. Clowes has been appointed honorary assistant surgeon.

THE ROYAL ALBERT ASYLUM, LANCASTER.

AMIDST the multitude of modern movements for the benefit of the feeble-minded class, the efforts in this direction of the institutions long ago established for the training of idiots and imbeciles (the latter term including many nowadays designated "feeble-minded") call for increased recognition. From the recently-issued forty-second annual report of the Royal Albert Asylum, instituted in 1864 for the training of the mentally-defective children of the northern counties, we learn that since its opening an aggregate of 2,663 patients have been dealt with, and that as a result of training 396, or 26.36 per cent., have been discharged "much improved"; 532, or 35.42 per cent., "moderately improved"; 363, or 24.17 per cent., "slightly improved"; and only 211, or 14.05 per cent., not improved; whilst 511 have died and 650 were resident in the institution on June 30th, 1906. During the twelve months ending on that date the average number resident had been 627, and the Central Committee report that owing to recent enlargements the accommodation is now increased to 700 beds. The total receipts for the year had amounted to £26,604 14s. 2d., of which £4,038 19s. 6d. was derived from annual subscriptions, an amount which the Committee remark is "in no way commensurate with the population and wealth of the extensive area served by the institution." No less a sum than £12,758 2s. 3d. is derived from the payments, large and small, made for patients, and it is satisfactory to note that even the parents of elected patients are willing to contribute according to their means. The financial statement shows a credit balance of over £1,000 at the end of the year's operations, and it has always been a strong point in the management of the Royal Albert Asylum to keep its expenditure well within its income. For its sound financial condition, the Committee owe much to the sagacity and energy of their first Secretary, Mr. James Diggens, whose demise in February last, after more than 40 years' devoted service, is regretfully referred to. For a period of 13 years, on the retirement of Dr. Shuttleworth from the post of Medical Superintendent (now Hon. Consulting Physician), Mr. Diggens undertook the duties of Principal as well as of Secretary; but the original plan of management has now been reverted to, and Dr. Archibald R. Douglas has been appointed Medical Superintendent, while Mr. Samuel Keir continues to fulfil the duties of Secretary.

From the Medical Superintendent's report we learn that 105 patients (73 males, 32 females) were admitted during the year, that 65 (50 males and 15 females) had been discharged, and that 17 (7 males and 10 females) had died. As the average number of each sex resident was 402 males and 225 females respectively, the death-rate (2.71 per cent.) seems to be very unequally distributed between the sexes, namely, 1.7 for the males and 4.4 for the females. Of 5 deaths attributed to tuberculosis, 4 were of females, and this fact suggests the consideration how far the more sedentary and indoor life of girls in institutions as compared with that of boys may conduce to tuberculous disease. A scarlatina epidemic extending to 26 cases (with 1 death) and a few cases of chicken-pox are recorded, but otherwise the general health was well maintained. Stress is laid on the importance of the provision of a reception house for the quarantine of new patients; and it is satisfactory to learn that such a house is to be built as a memorial to the late Secretary, Mr. Diggens. In consequence of structural alterations at Brunton House, a detached mansion reserved for higher payment cases near, but distinct from, the asylum, more accommodation for this class has been obtained, and the senior assistant medical officer (Dr. Coupland) has his quarters there. A second Assistant Medical Officer (Dr. Farries) has also been appointed. Other detached dependencies of the Asylum are the farm house, where fourteen lads reside with the bailiff and are trained as farm labourers; and the "Storey Home" for thirty-eight older feeble-minded girls who are usefully employed in industrial work. The upper floor of the Rodgett Infirmary is reserved for infectious cases, and the lower wards are in constant use for the ordinary sick. There are also two "chalets" for tuberculous cases. The Ashton Wing for paralysed and epileptic cases has proved a great boon in suitably providing for this doubly-afflicted class of male imbeciles; and Dr. Douglas is anxious to secure like special accommodation for girls suffering from similar infirmities. The estate extends to 185 acres. The report is a record of excellent work in the way of training, accomplished in a charitable institution, but that supplementary permanent care by the State is required, in the majority of cases discharged, is fully recognized by the authorities.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

PROFESSIONAL ATTENDANCE ON BOYS' SCHOOL.

R. has been asked to suggest a fee for which he would give professional attendance to the boarders of a boys' school where the parents pay £40 a term.

*** We are advised that a fee of 10s. or 10s. 6d. a term is a usual one under the circumstances mentioned. This would not cover surgical operations or the administration of anaesthetics. The average age of the pupils and the number in the school are factors which would deserve special consideration in certain cases.

THE VALUE OF PROTARGOL.

DR. VAUGHAN PENDRED (Coventry) writes: The preparation of silver known as protargol, and so widely used in all stages of gonorrhoea, has latterly played me false in my practice. One young man with gonorrhoea of three months' standing was ordered a 1 per cent. solution for injection; he complained of intense pain, increase of the discharge, and dysuria after the first injection, which was so aggravated by the second that he abandoned it. Another young man complained of increase of the discharge and pain on using a 4 per cent. solution. The first patient told me that in talking the matter over with his friends he found that three others had suffered severely from protargol. A third case quite recently derived little or no benefit after weeks of use with a thoroughly efficient syringe. It would be well to know if my experience has been shared by other practitioners.

CHEMICAL THEORIES.

P. H. W. asks: Is there a small book up to date on inorganic chemistry? The textbooks and teachers of thirty years ago gave us facts, but made no attempt to explain the *rationale* of chemical combinations. Mendeléef in two volumes I could not attempt.

*** Newth's *Inorganic Chemistry*, published by Messrs. Longman (6s. 6d.), is an excellent type of textbook, and deals in a fairly complete elementary way with the theory of the subject. Messrs. Arnold publish a shorter but very readable account at 4s. 6d., by Shenstone. Dupré and Hake in Griffin's series (6s.) devote over a quarter of their text to considerations of pure theory. For those who are familiar with the subject the book last named would perhaps be the most suitable. All these textbooks are thoroughly up to date.

EXPLOSION OF AMYL NITRITE.

A. B. asks for information as to the explosive nature of amyl nitrite. I have just heard, he writes, from abroad of the spontaneous explosion of some tubes of that compound. Unfortunately all the tubes were destroyed, so no analysis of the contents could be obtained. The age of the amyl nitrite was not known for certain, but it had been in store for at least three years. The climate of the place is hot and moist for the greater part of the year. The explosion took place during the coolest period. There was no blow or concussion of any sort; the tubes exploded spontaneously whilst lying on a table.

*** Amyl nitrite is decomposed by various reagents with evolution of oxides of nitrogen, chiefly nitric oxide. We are not aware that spontaneous explosion of this liquid has been recorded before, but ethyl nitrite, which is closely allied to it, if kept in a moist or otherwise impure condition, gradually decomposes and not infrequently bursts the vessel containing it. Probably the long keeping in a hot climate had caused slow decomposition, with accumulation of gas under pressure in the capsules; and the bursting point of one having been reached, the concussion would shatter the others.

ANSWERS.

SENEX.—The most efficient and cheapest way of getting rid of bugs would be to fumigate the room thoroughly with sulphur. If this is applied strong enough, there is little chance of any surviving. Any cracks in the furniture or floors should be thoroughly soaked with crude carbolic or any other strong antiseptic. If this is done once or twice any young ones from eggs that may have escaped would also be destroyed.

ESTATE DUTY.

CAESAREA.—Money invested in the name of the mayor of a city as sole trustee of a medical scholarship would not in the

United Kingdom be charged with estate duty on the trustee's death—see the Finance Act, 1894, section 2, subsection 1 (*b*). So far as estate duty is concerned, therefore, there would be no advantage in appointing a second trustee in the manner suggested.

Local Anaesthesia for Extraction of Teeth.

Dr. Harold Snape (Anaesthetist, Manchester Children's Hospital, Pendlebury) writes: As many medical men have to extract teeth under local anaesthetics, and as Dr. Butcher has recommended a 10 per cent. solution of cocaine for this purpose, I should like to join with Dr. Luke in protesting against such a strong solution of this drug being used when absolutely as perfect results can be obtained with the use of a 1 per cent. solution. Dr. Butcher says: "Care should be exercised to avoid spilling on mouth." He is quite right; a comparatively few drops of his solution mean a big internal dose of cocaine. I would not have troubled you but for the fact that I consider it essential for perfect anaesthesia that some preparation of suprarenal gland should be used in the injection; this enables the small percentage solution to act more perfectly, as well as being more beneficial in preventing haemorrhage afterwards. Messrs. Parke, Davis, and Co. make up cocaine and beta-eucaine with adrenalin, either in ampoules or in tablets, and either diluted or undiluted the solution acts perfectly. I think most failures are due to the fact that a hypodermic syringe is used; it is practically impossible to get up the requisite pressure to force the fluid into the dense alveolar tissue with this kind of syringe, and I can speak of the good qualities of the syringe made by Messrs. Claudius Ash and Son for this purpose; the needles are separate and cheap, and a fresh one has to be used nearly every time owing to their getting blunted: this is an advantage. This syringe is made specially for dental use, and the needles are short for other purposes, being about 1 in. long, but this firm has, at my request, made me some needles 1½ in. and 2 in. long, and I now have a syringe which acts both for dental use, and is excellent also for infiltration anaesthesia.

LETTERS, NOTES, Etc.

Surgeon-General Sir Charles Cuffe desires to thank the members of the medical profession who supported him in the election for the Kensington Board of Guardians on Monday, March 25th, and attributes his return at the head of the poll in the Queen's Gate Ward largely to the efforts made on his behalf by members of the British Medical Association.

The Edalji Case.

The following protest has been signed by, among others, Sir Charles Ball, Sir Charles Cameron, Dr. James Little, Sir Arthur Macan, Sir Thomas Myles, Professor W. H. Thompson, Dr. Lombe Atthill, Dr. James Craig, Sir Francis Cruise, Sir Francis MacCabe, Dr. Walter G. Smith, all of Dublin; by Professor Osler of Oxford, by Professor John Glaister of Glasgow, by Dr. Waldo, Coroner, and many others:

Protest.

In view of the decision of the Home Secretary to restrict the scope of the Edalji Commission in such a way as to exclude from its purview the public examination of the officials involved, we, the undersigned, representatives of divinity, law, literature, science, and medicine, desire to record our unqualified protest against any such restrictions, as we consider that no inquiry can satisfy the claims of the public interest that does not include a thorough investigation of the conduct of all the officials concerned, whether members of the Home Office or of the Stafford-hire Constabulary.

Further signatures are invited by Professor M. A. Gerothwohl, D.Litt., of the University of Dublin, who will reside during Easter at 8, Alma Terrace, Kensington, W.

Motor Cars.

The Managing Director of the Rover Company, Limited (Coventry), writes: Replying to "B. H. S." in your issue of March 9th, we are quite certain from his remarks that his 6 h.p. car is badly out of order. If he will communicate with us we shall be very pleased to prove to him that she is capable of travelling at a fair speed on top gear against a strong head wind, and is a very good hill climber.

Trypsin in Cancer.

Mr. Leonard M. Brooke, F.R.C.S. Edin., Adelaide, S. Australia, writes: In view of the prominence you are giving to the question of the value or otherwise of trypsin in malignant disease the experience of individual cases, even when collected together, will be of value. So far I have only tried it in one case, and then I had to wait weeks to get the remedy. The case in which I used it was one of recurrent inoperable cancer of the neck. The first operation was done for epithelioma just on six years since. Later the glands of both sides were removed. Last year there was a recurrence under the angle of the jaw on the right side, and involving the right tonsil. From the pain developed it was evident the growth involved the facial nerve. When the trypsin was procured, on November 20th, 1906, the tissues around the angle of the jaw were swollen, of a dusky purple hue, and threatening to break down. Painting was only done with the greatest difficulty. A tablespoonful of trypsin co was given in 3j doses, ter in die. The immediate result was to relieve the throat distress. In about a week's time the tissues around the angle of the jaw were less swollen, and the colour was altered, and there was no appearance of breaking down. This condition lasted till death occurred on February 14th, 1907. It was only a partial trial and not very complete, as no hypodermic injections were given. The progressive emaciation was never for a moment checked. Two or three weeks after beginning the trypsin he fell out of bed and broke his right collar-bone close to the sternal joint. Union did not occur, and a large lump formed over the joint the size of a small orange. This did not break down. As the pain in the throat was relieved at once by the trypsin when other remedies had failed, and as the breaking down was prevented it seems reasonable that some credit can be given to the drug in this instance for relieving some of the distress.

Shakespeare's "Insane Root."

Major Fink, I.M.S. (ret.), writes: In the British Medical Journal, January 5th, 1907, the question is raised as to what was meant by Shakespeare by the "insane root." Mandrake, hemlock, belladonna and henbane root, have each in turn been supposed to be the root. Each by quoting passages from other plays and the scene in *Macbeth* is laid in Scotland. Macbeth brought the nation to favour his cause by the methods which we all are familiar with in history. His first victim was Banquo who had been privy to the murder of the King. Feeling insecure, he erected a castle on "Dunsinane" from which he could overlook the country. There is every probability that stramonium (datura) sometimes known as "Jamestown weed," common in waste places in South Europe as well as in the United States, is the root referred to. It is a herbaceous plant, 2 to 3 ft. high, of the same natural order (Solanaceae) as tobacco and the deadly nightshade. All parts of the plant exhale a strong nauseous odour. The toxic effects of stramonium (datura) are to be witnessed in India from the days of Thuggee and Dacoity up to the present time when cases occur especially at large gatherings known as *melas*, when pilgrims from all parts of the country arrive, as at Hardwar and other places of worship. During my service in the North-West Provinces and Oudh, now the United Provinces of Agra and Oudh, I saw three cases, and they presented very much the same peculiar toxic symptoms. The patient divests himself of his clothing, stoops or squats down on the floor with hands in an extended position in front, palms downwards, fingers semiflexed and directed to the floor as if searching for something. Anything the hands meet is cast away gently or turned over. There is a semiwild stare, with injected conjunctivae and a peculiar lustre of the sclerotics. While searching or groping the hands tremble, he sings or makes a sound as if humming a tune, to which the hands keep time in rhythmical fashion, here and there, to and fro, round and round. The effects of datura poisoning often lasts two, three, or more days. In India after large *melas* or gatherings these cases are brought in by the police, sometimes found by the railroad stations, and perhaps in quite the opposite direction to where their homes lie, and are then placed in the lunatic cells, as a rule outside the gate of the gaol and a police guard placed over them. In one case the toxic effects lasted over a week, and had to be most carefully watched throughout, as there was no abatement of the symptoms from day to day.

The Prevention of Hospital Abuse in Paris.

The Director of the Assistance Publique has had the following notice posted up in various public places in Paris: Consultations in hospitals and dispensaries are exclusively reserved for sick persons without resources, needy or indigent. Every person applying at a hospital must establish his identity, his domicile in Paris and his indigence, by production of a card from the Bureau de Bienfaisance, receipt for rent, etc. Except in cases of emergency, the medical staff and administrative officers must send away persons whom their occupation, the amount of rent they pay, etc., prove to have no right to gratuitous ministrations. The administration of the Assistance Publique will make inquiries at the person's place of residence in order to verify his statements, and in case of need proceed at law for the recovery of the cost of maintenance or medical attendance, and for the repression of abuses.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.



THE LISTER BAS-RELIEF IN THE TYMPANUM OF THE SURGICAL PAVILION OF THE POLICLINICO UMBERTO, ROME.

LORD LISTER

AND

THE EVOLUTION OF WOUND TREATMENT DURING THE LAST FORTY YEARS.

*BEING THE JAMES WATSON LECTURES DELIVERED AT THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW IN FEBRUARY, 1906.**

By Sir HECTOR C. CAMERON,

PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF GLASGOW.

WHEN the President and Council of the Faculty did me the honour of inviting me to deliver these lectures, my first and greatest difficulty was to select, if possible, from the wide range of subjects at my command one which might prove of interest to the greater number of my audience rather than one which must of necessity appeal to comparatively fewer; in other words, it seemed well to select a subject dealing with some surgical principle or system rather than one so limited in its interest as would be the consideration of a special disease or group of diseases. Another reason for the choice which I have made presented itself in the fact that the principles which underlie all modern wound treatment were first recognized and put into practice by the then Professor of Surgery in our University, while one of the earliest and most important communications regarding them was made by him to a very large audience in the room in which we are now met. But most of all, perhaps, have I been influenced by the belief that in the minds of many at the present day, especially among the younger surgeons, there exists an erroneous view as to the aims which Lister had even in his earliest efforts to avoid suppuration, and as to the methods which he advocated from time to time for that purpose. If one may judge from much that one reads and hears, many have been led to believe that those aims and methods were, in important and essential respects, distinctively other than those which now regulate the more advanced forms of surgical practice, and that, while he must be fully acknowledged to be the author of our modern surgery, its practice now is a great and beneficent advance on anything which he taught. How far such a mental attitude is justified is a matter which may be best determined by observing and tracing the evolution of wound treatment in the light of its history during the last forty years.

The growth of human power in any department of human activity has never been continuous, uniform, and uninterrupted. Rather it has proceeded, as time has slowly rolled on its way, by startling and unforeseen occasional bursts of progress, separated from one another by periods which, although enriched by inherited acquisitions, have themselves shown only an even and unexciting pace of advancement.

> Ages elapsed ere Homer's lamp appeared,
> And ages ere the Mantuan Swan was heard;
> To carry Nature lengths unknown before,
> To give a Milton birth, asked ages more.

And what is so true of literature is not untrue, in many respects, of science and of those applications of science upon which the prosperity and the power of mankind so entirely depend. In this way we recognize that genius "rises and sets" only "at ordered times," and we have crystallized the thought into that much-abused but useful word—epoch-making.

If I ask myself what epochs in this sense have been inaugurated in the past history of our own art of surgery, on what occasions and by whom have ideas and principles been announced and carried into effect which have quickened progress over the whole domain of the art and increased its power for the future as compared with the past, I can only think of three occasions of such paramount importance. One was when Ambroise Paré substituted the use of the ligature for the red-hot knife and cautery; a second when Morton demonstrated that human beings could be operated upon painlessly under the influence of anaesthetics; and the third and last when Lister, founding upon the researches of Pasteur, introduced the antiseptic principle in wound treatment.

In the forty years which have since elapsed—to use a frequently-repeated expression—the practice of surgery has been revolutionized and a progress made such as past centuries had not achieved. Lucas-Championnière was not, therefore, unjustified when he said that there are only two periods in surgery—that before Lister and that since Lister—and it is to the gradual evolution of the latter period that I desire now to direct your attention. I have already, in the Lister Jubilee Number of the British Medical Journal, gone over a considerable

*Since these lectures were delivered they have been revised by Lord Lister, and he has, with much kindness, rewritten some passages in the second lecture. These emendations I have accepted very gratefully, since they give to the views set forth the value of his authority and approval.

portion of the same ground, and I must, in order to be consecutive in my remarks, once more travel over it. I can hardly fail, in doing so, to repeat myself, since, in walking more than once between two given points, one is always apt unconsciously to tread to-day in the footsteps of yesterday. I trust that any who have done me the honour of reading the paper I have referred to may not feel the repetition too tiresome.

Mr. Syme's Practice.

In the period immediately preceding the introduction of the antiseptic system of treatment, wounds were probably best and most safely treated in accordance with the simple plan practised and taught by Mr. Syme in the Edinburgh School. He, and probably many others, had long before recognized the fact that union depends upon a peculiar living power and action in the wounded tissues, and in no way upon the virtues of any superstitious observances or even upon those of balsams, lotions, and other local applications. Not only was there no longer any need for using "mundifying," "incarning," and "cicatrizing" applications in due succession, but the numerous and much-vaunted liniments and ointments which had succeeded that ancient form of practice were equally unnecessary. Writing in 1867,[1] that is, after the first papers on the antiseptic system of treatment had been published, Syme referred to an early paper of his own as follows:

> In the *Edinburgh Medical Journal* of 1835 there is a paper on the Treatment of Incised Wounds, which I wrote in order to show that the retention of blood between the cut surfaces was a great obstacle to their adhesion, and to suggest the treatment that seemed best calculated to prevent this effect. In those days it was the custom to seal up wounds immediately after their infliction by straps of adhesive plaster which prevented the discharge of any fluid from the cavity, so that when the edges united, as they frequently did, a troublesome abscess was sure to result. Unless, therefore, the solution of continuity had two orifices as when seated in the lips or cheeks, so that there was thus afforded a drain for the bloody or serous effusion, complete primary union was hardly possible. The means that seemed most suitable for counteracting a want of drainage on the other and more ordinary occasions when there was only one orifice was to delay the closure of the wound until the oozing from it appeared to have ceased, to apply pressure along the course of its sides, and to place some bibulous material over the lips.

His later practice, in accordance with these views, was as follows: He arrested haemorrhage in the case of small vessels by means of torsion, as suggested by Amussat, but was deterred from doing so in that of the larger vessels, to some extent at all events, from the fear, as he himself tells us, "that the absence of ligatures, which serve as the conductors of the discharge, would increase the risk of blood or serum being pent up in the cavity." The ends of the long, well waxed silk ligatures, tied as they were upon vessels fairly equally distributed throughout the wound, were left hanging out at its angles, and were relied upon and valued not merely as haemostatic, but as draining agents. The stitches were of silver wire, as recommended by Marion Sims in 1857. Pressure was made on the flaps or sides of the wound by folded pads of dry lint, and a piece of the same material was bandaged lightly over its lips. When a complaint of pain and a quickened pulse gave the warning of commencing suppuration (or only in the smallest and simplest wounds was union by first intention ever seen), these dressings were removed by being bathed with warm water, and either a water dressing covered with gutta percha tissue or a poultice was applied. Frequent change of the dressing and washing of the wound with Condy's fluid and water was practised as long as necessary. Complete union could not be looked for, under any circumstances, until the last of the ligatures had separated, which might be three weeks, or even longer, after the infliction of the wound. When I first became a dresser, the carrying out of all such details was my daily occupation. Every wound discharged pus freely, and putrefactive changes occurred in the discharges of all, producing in the atmosphere of every crowded ward, no matter how well ventilated, a fetid, sickening odour, which tried the student on his first introduction to surgical work just as much as the unaccustomed sights of the operating theatre. It is hardly necessary to add that fatal wound diseases and complications were never absent at any time from the hospitals of that day.

Acupressure.

While many surgeons, in accordance with such teaching as I have referred to, regarded the retention of the wound products as the most potent cause of suppuration, and were disposed, while using as few ligatures as possible, to value those they did use for their power of drainage, there were others who attributed to the ligatures all the mishaps and difficulties incidental to wound healing. The man who most insisted upon this view of the case was Sir James Y. Simpson. Viewing the silk ligatures as unmixed evils, as little better than so many putrid setons so long as they remained in the wound, he devised what he considered an altogether more desirable haemostatic agent—acupressure. By means of metallic needles introduced in various ways he compressed the divided arteries. This method of treatment, although devised in Edinburgh, and put to the test in many parts of the country, was really most practised in the Royal Infirmary of Aberdeen. Professor Pirrie and the other surgeons of that institution undoubtedly made some very remarkable progress, in so far as they were able to publish many cases of large wounds, such as those of amputation of the limbs and excision of the female breast, which had healed without any suppuration whatever. At the very same time Lister had begun the antiseptic system of treatment in Glasgow, and was also claiming to be able to prevent suppuration in wounds. The two forms of treatment started almost simultaneously on a race for public favour, and the spirit of rivalry was inevitable. It is not hard for us now to see that one of those methods was doomed to ultimate neglect. The replacement of the absorbent textile ligature by a metallic needle no doubt removed one obstacle to the exercise of that protective power which our living bodies possess, and by which they can sometimes defend themselves successfully against the malign effects of organic germs which may have been introduced from without, provided these do not enter too abundantly or in too virulent a form. In a certain number of cases, therefore, of incised wounds, even of large size, immediate union was safely accomplished. But the gradual growth of antiseptic surgery, and the knowledge of wound infection which grew with it, long ago convinced every one how comparatively seldom such fortunate results could be looked for.

Pasteur and Lister.

Hitherto medicaments used in wound treatment had been always applied more or less empirically, and it was hard, perhaps, to appreciate the fact that carbolic acid was not used by Lister (as it undoubtedly had been previously used by others) as "a local dressing of wounds" with the view of acting directly, and with a specific healing influence on the wounded tissues, but rather that it was employed to destroy germs which, if they reached the wound in the living state, had the power of preventing the natural processes of repair. While others had attempted by the use of carbolic acid to lessen the discharge and fetor of suppurating surfaces, Lister taught that its beneficial influence, as he employed it, was entirely due to its germicidal action and its consequent power against the sources of disturbance, which existed in the dust of the surrounding air and on such surfaces and objects as had come into contact with the air. He had long taught that wound inflammation and its consequences were due to the chemical changes which occurred in the putrefaction of blood and serum, but only began to realize the character of the interaction of wounds with outside agencies after Pasteur published his researches on fermentation in the early Sixties. No sooner had he read the papers of Pasteur in the *Comptes Rendus* than he seems at once to have felt that the views there given of the cause of the decomposition of organic fluids, which had been in contact with the air, satisfactorily explained much that had hitherto been mysterious in the behaviour of wounds, and might show the way towards the prevention of much that was fraught with danger, and hitherto unpreventable.

Although only forty years have elapsed since the time of which I speak, it is very difficult for the younger members of the profession now to realize the great scepticism and contemptuous criticism with which such a doctrine was received. Sir James Simpson was by no means the only one who regarded the atmospheric germs as "mythical fungi," and many spoke of such teaching as if it were

rather a revival of beliefs, like those regarding the aërial sylphs and spirits of Rosicrucian philosophers, than a sane scientific discovery. Now, when we recognize those early researches and experiments of Pasteur to have been the foundation upon which a wonderful and fruitful science has been reared, now that laboratories have been built for its prosecution and professorships founded for its teaching, we marvel rather that they should not have been at once accepted with enthusiasm and full belief. It is only another proof of the often-recognized fact that new ideas seldom greatly influence the generation in which they have their source. They gain the assent then of only a minority, and are disregarded by the majority which adopts them later.

It has been more than once supposed and stated that Lister had made some forms of bacteriological investigation before he became aware of the work of Pasteur, but this was certainly not the case, as he himself has always indicated. Professor Annandale, in his communication to the Lister Jubilee Number of the British Medical Journal as to Lister's early work in Edinburgh, fell into this error when he wrote:

Before leaving for Glasgow in 1860, Mr. Lister had commenced his bacteriological work in connexion with antiseptics, but at this time the practical details were still in their infancy, and it was not until after much further experience that antiseptic surgery became simplified and satisfactory as regards its practical application.

His old Glasgow colleague, Sir William Gairdner, also fell into the same mistake. He wrote me after the articles in the British Medical Journal to which I have already referred had been published, giving expression to his belief that Lister and he had held a conversation in Edinburgh, before either of them came to Glasgow, regarding a case of hydro-pneumothorax, in which Sir William was interested, and that this conversation showed that Lister then entertained distinct views as to putrefaction being caused by atmospheric germs. After I had assured him, on Lord Lister's authority, that this was not so, he replied, in a letter dated January 24th, 1903, which in many ways is so interesting, that I offer no excuse for reading it.

I suppose after all, then, I must have got mixed in my dates somehow as to Lord Lister's communications with me *re* pleural effusions. It may have been that he told me of the case referred to in your note of 4th instant, and that I may have remarked to him how curious it was that pleural effusions, associated with pneumothorax, are so rarely putrefactive. Of course, when the ingenious experiments of a later date, following up Pasteur's ideas, came to my knowledge, they would come quite pat to the subject; and I had it in my mind accordingly that the germ of these had existed in Lister's mind before he left Edinburgh. But this only shows how easily one is led astray when dealing with nascent ideas or advances in thought of any kind. The whole incident serves, perhaps, to cast a little light on the confusions which sometimes arise in self-assertive minds on the question of priority. Lister's is, happily, *not* such a mind; quite the contrary. But, if the almost *unthinkable* case should have arisen of his having wanted to show that he had himself partially anticipated Pasteur, and he had applied to me, I should have been very much inclined to say that he had, in so far, at least, as to have revealed some trace of a germ theory of putrefaction before he left Edinburgh. Of course, it did not present itself to me quite in this way, because I did not know till you told me the date of Pasteur's first researches.

It is well, then, that the fact should be clearly understood that Lister's treatment was founded on Pasteur's demonstrations and writings. No man ever acknowledged an indebtedness more often and more unequivocally. In the very first communication he made to the profession of the new method of treatment[3] in connexion with compound fracture he dealt with this question of how the atmosphere produces decomposition of organic substances. He wrote:

We find that a flood of light has been thrown upon this most important subject by the philosophic writings of M. Pasteur, who has demonstrated, by thoroughly convincing evidence, that it is not to its oxygen, or to any of its gaseous constituents, that the air owes this property, but to minute particles suspended in it, which are the germs of various low forms of life long since revealed by the microscope, and regarded as merely accidental concomitants of putrescence, but now shown by Pasteur to be its essential cause, resolving the complex organic compounds into substances of simpler chemical constitution, just as the yeast plant converts sugar into alcohol and carbonic acid.

From this time, and for a great many years to come, Lister, knowing from Pasteur's researches that the germs contained in the atmospheric dust occasioned the decomposition of putrescible substances outside the body, assumed that they would have the same effect in wounds, and hence attributed to the atmosphere an importance in surgery which his own researches and experience showed him in after years that it did not possess.

Earliest form of Antiseptic Treatment: Compound Fractures.

In his earliest efforts at antiseptic treatment he directed his attention to compound fracture. That this form of injury should have been the starting-point of such an attempt in treatment may be easily understood, when one reflects how great was the contrast in those days between the course followed respectively by simple and compound fractures. The latter were the most fatal of all surgical injuries, and accounted for by far the greater number of the cases of pyaemia which were of such frequent occurrence in all hospitals. The first method adopted with a view to applying this newly-conceived principle of treatment was as follows:

A small piece of calico or lint, thoroughly saturated with undiluted carbolic acid, and held in a pair of dressing forceps, was introduced into the wound, and all its accessible interstices were thoroughly and freely swabbed. Two layers of lint, also saturated with the undiluted acid, were laid over the wound, overlapping it in all directions for about ½ in. This was covered by a piece of thin block tin or sheet lead, moulded in a concave form so as to fit over the little mass of lint. It was fixed in position by strips of adhesive plaster, the limb being placed in suitable splints padded with some soft and absorbent material, which received such bloody discharge as oozed from the wound during the first day or two. The carbolic acid and blood formed a thick paste, with which the small mass of lint was thoroughly saturated, making it into a sort of crust or scab which adhered to the wound with great tenacity. Once a day the tin cap was removed, and the crust of lint and blood was painted over lightly on its outer surface with carbolic acid. What was aimed at was to keep this crust from becoming septic, while the surface of it in contact with the wound became gradually free from the carbolic acid which it at first contained, and so, being unirritating in itself, permitted of healing beneath it. In this respect the early treatment was an imitation of those few, but fortunate, cases often referred to in the surgical writings of that day, in which a small wound communicating with a fracture became covered with a dry clot of blood or a dry piece of bloody lint. This adhered, and under it healing took place without suppuration. I do not, however, remember that union was completed under such artificial antiseptic scabs as I have described. The vapour of the often-renewed carbolic acid retained under the cap of tin interfered with the process of cicatrization, and, therefore, after it seemed likely that the wound was so far repaired as no longer to communicate with the seat of fracture, the antiseptic crust was detached, and the final closure of the surface wound allowed to take place under some simple form of dressing.

By such treatment, crude and simple as it may now appear to us, it was abundantly demonstrated that suppuration might be prevented in compound fractures, and as safe and tranquil a course pursued as if the injury had been a simple one from the first. In those early experiments, as has been stated, carbolic acid was introduced into the wound in its full strength. The carbolic acid obtainable was very impure, and was quite insoluble in water. The first which Lister made use of, obtained from his colleague in the Chair of Chemistry, Professor Thomas Anderson, was dark from tarry impurity, and known in trade as German creosote. Afterwards, when purer samples were obtained in the form of crystals, and it was found that a solution of 5 per cent. of the acid in water was possible, an injection of the solution into the wound was substituted for the swabbing of it with the undiluted acid. It is, however, instructive and well to remember that even such energetic applications of it produced no distinct toxic or other bad consequences. No doubt its caustic qualities were lessened by admixture with the blood "with which it formed a tenacious mass that hardened into a dense crust, which long retained its antiseptic virtue." Sharply painful at the moment of applica-

tion, it had the advantage of exercising so sedative an effect on the sensory nerves of the part, that in quite a few minutes all pain, both that of the caustic acid and of the injury, subsided.

I remember shortly after this method of treatment was begun, and while I was acting as House-Surgeon, finding myself face to face with what appeared to be an unforeseen difficulty in the light of the knowledge then possessed. A patient of very intemperate habits who, while in a state of intoxication, had jumped out of a window to the street, a height of 15 or 20 ft., was admitted with a compound fracture of both bones of one leg about the junction of their lower and middle thirds. The constant and reckless movements of the leg, as the drunken man was brought to the hospital from a distant part of the city, had introduced air abundantly into the wound and driven it far and wide into the cellular spaces of the limb, so that emphysematous crackling could be felt for a considerable distance up and down the limb, which was itself greatly distended with extravasated blood. This was exactly the kind of injury which was most dreaded in those days, and in which it was a common practice at once to make incisions at various parts to provide free and early exit for the abundant pus and sloughs which were certainly expected. I was at a loss to see how such local application of the acid as could be made could possibly overtake the mischief which seemed to have been driven far and wide into the limb. However, I carried out my instructions, and treated this case exactly as others had been dealt with. When Mr. Lister subsequently arrived and learned the facts, he took a hopeful view of the issue. If sepsis depended upon the chemical constituents of the air, he argued, then, indeed, such a case must be hopeless as regards the prevention of suppuration. On the other hand, if it were true that it depended upon minute organisms in the air, one might expect that these might have been all filtered out in the wound, and left within easy reach of the carbolic acid applied. The patient recovered without the occurrence of suppuration, although he suffered from a subacute attack of traumatic delirium.

It was during this early period that Lister made those observations on the absorption of blood clot, dead bone, and sloughs of the soft parts which gave rise to so much criticism at the time of their publication, and which suggested to him the very valuable practice subsequently introduced when he employed for the first time antiseptic absorbable ligatures. The grumous mass formed by blood and carbolic acid, which filled the wound, was found capable of being converted into living tissue, in this sense, that as it was removed by absorption new tissue formed *pari passu* by the organizing processes going on in the wound, and ultimately a living mass replaced the inanimate clot. In the course of the report of one of these early observations he wrote:

> I was detaching a portion of the adherent crust from the surface of the vascular structure into which the extravasated blood beneath had been converted by the process of organization, when I exposed a little spherical cavity about as big as a pea containing brown serum, forming a sort of pocket in the living tissues, which when scraped with a knife, bled even at the very margin of the cavity. This appearance showed that the deeper portions of the crust itself had been converted into living tissue. The cavities formed during the process of organization, like these with clear liquid contents in a Gruyere cheese, occur in the grumous mass which results from the action of carbolic acid upon blood; and that which I had exposed had evidently been one of them, though its walls were now alive and vascular. Thus the blood which had been acted upon by carbolic acid, though greatly altered in physical characters and doubtless chemically also, had not been rendered unsuitable for serving as pabulum for the growing elements of new tissue in the vicinity.[3]

In like manner he reported an observation, quite novel at the time, of the absorption of some dead bone on the end of a fragment which lay exposed in the wound of a compound fracture.

APPLICATION TO TUBERCULOUS ABSCESSES.

Shortly after this early work in relation to compound fracture his attention was turned to the treatment of abscess, especially to that of large chronic abscesses associated with caseous caries—abscesses which we now know to be really the result of the tuberculous process in bone. They were forms of disease which even in children were very fatal, and in the adult almost always so. A case of abscess, in a middle-aged woman, pointing in one loin, having presented itself, and being on the point of bursting, an attempt was made to treat it in a manner resembling that which had been adopted in compound fracture. After the abscess was opened some of its thick contents were mixed with liquid carbolic acid and laid over and around the wound in two pieces of lint covered with a cap of block tin. When this dressing was changed next day, instead of pus escaping, as had always been the case under ordinary treatment, a drop or two of serous fluid exuded upon pressure. No material was now furnished with which to make a second dressing of the same character, and so in place of it a putty, made by mixing ordinary whiting (carbonate of lime) with a solution of carbolic acid in boiled linseed oil (1 to 4), was spread upon a piece of block tin and laid over the incision, care being taken that this overlapped widely in all directions. It was fixed in position by straps of adhesive plaster, and over all an absorbent compress was bandaged. This case of abscess remained free from any septic change throughout and ultimately healed, having furnished nothing from first to last but a steadily diminishing quantity of clear serous fluid. This was the first demonstration—and in those days it was necessarily an astonishing one—of facts which became well established as the treatment was more and more developed—namely, that after the original contents of an abscess, whether acute or chronic, are evacuated, if changes in its interior resulting from contact with outside morbid agents be avoided, instead of pus, only a thin serous fluid will be discharged and will rapidly diminish in quantity; that, in consequence, it is a matter of indifference whether the opening made be dependent or otherwise, while the necessity for counter openings no longer exists; that we may rely, under such circumstances, on the absence of all constitutional disturbance; and, lastly, that such abscesses, if a careful course of antiseptic treatment be persevered in, may be expected to close satisfactorily and permanently.

The mode of treatment respectively of compound fracture and abscess was now, shortly stated, as follows: In compound fracture, after the interior of the wound had been thoroughly washed out with a 5 per cent. solution of the acid, a piece of lint saturated with carbolic oil (1 to 4) large enough to overlap it a little in every direction was placed over it, and over this was put a large dressing of the putty, smoothly spread on calico to the thickness of about ¼ in., and covered with block tin. The dressing of putty was changed daily, but the piece of oiled lint, soon saturated with blood, was left next the wound, harbouring under it a crust of blood of greater or less amount. It became usually fairly dry, and when the time arrived for discontinuing the splints, either a firm cicatrix or a superficial granulating sore was exposed to view. In opening an abscess, a large piece of lint, soaked in a solution of carbolic acid and oil (1 to 4) was placed over the portion of the skin to be incised, and left for a little to act upon it. The lower edge of it was then raised, the incision made, and the curtain of lint was let fall, the abscess being evacuated by gentle pressure under its protection. A narrow strip of lint dipped in the same oily solution was introduced through the incision, with the object alike of preventing primary union and of acting as a drain. On removal of the oily antiseptic curtain, a dressing of the putty, spread upon a square piece of block tin was immediately fixed over the incision by adhesive plaster, and bandaged to the part. The thin discharge flowed out beneath its edges, and it was renewed once a day. It is to be specially remarked that the antiseptic was never injected into the cavity of the abscess; experience having shown that to do so would be quite superfluous, while it could only do mischief by causing irritation.

THE BURIED LIGATURE.

The covering of block tin was afterwards dispensed with, the putty being spread upon calico; and thus modified, the dressing with putty was extended to the treatment of incised wounds made by the surgeon. But, in order to make it a success, it was evident that the old method of using the ligature must be either abandoned or modified. The observations already made on the absorption of portions of dead tissue in a wound treated antiseptically, led Lister to the practice of using buried ligatures specially prepared with a view

to their absorption. It seemed reasonable to hope that, just as dead bits of tissue had been disposed of by absorption, so more or less slender threads of organic material, prepared so as to be free of septic organisms, might be similarly removed.

Before putting the matter to the test in actual practice, he tied the left carotid artery of a horse (December 12th, 1867), in the old Veterinary College in this city, with a piece of purse silk steeped in a strong watery solution of carbolic acid, the ends beings cut short, and the wound dressed antiseptically. Healing occurred immediately. Six weeks afterwards, the horse having died, the parts were examined, and the results may be best stated in his own words.

On laying open the vessel, I found at the cardiac side of the ligature a firm adherent clot 1½ in. long, but at the distal side coagulation had been entirely prevented by the reflux current of blood through a branch about as large as the human vertebral, which took origin as close to the ligature as was possible. Under such circumstances secondary haemorrhage would necessarily have occurred had the thread been applied in the usual way. Here, however, the artery appeared as strong at the part tied as elsewhere. The cul-de-sac showed, indeed, some irregularity in consequence of the puckering of the internal and middle coats, but the surface appeared completely cicatrized, and presented the same character as the natural lining membrane of the vessel, and the ligature, which seemed as yet unaltered, was found lying dry in a bed of firm tissue, that within the noose being apparently a new formation in place of the portion of external coat killed by the tightly-tied thread, while externally the constriction necessarily caused in the first instance by the operation had been filled in by a similar compact structure.[4]

He felt himself justified by these appearances to adopt essentially the same procedure in the human subject when, a few weeks afterwards (January 29th, 1868), he was called upon to tie the external iliac artery in an elderly lady suffering from an aneurysm of the common femoral artery. On that occasion the silk ligature was steeped in undiluted carbolic acid. It was tied with sufficient force to divide the internal and middle coats of the artery. The ends were cut short and the wound dressed antiseptically. The aneurysm consolidated and the wound healed without suppuration. In four weeks the patient was allowed to leave her bed, and in another fortnight was able to take exercise in the open air. Within a year, however, after suffering from repeated attacks of spasmodic dyspnoea, she died suddenly from rupture of an aortic aneurysm. Careful examination, after death, of the artery operated upon shook Lister's confidence in this form of ligature. The knot of silk was still in great part present, enclosed in a thin-walled capsule.

Besides the remnant of the ligature, the tiny capsule contained a minute quantity of yellowish semi-fluid material, looking to the naked eye like very thick pus. Under the microscope, however, pus corpuscles were seen to form but a small proportion of its constituents, which were principally rounded corpuscles of smaller size and fibro-plastic corpuscles, together with some imperfect fibres and granular material.[5]

There were evidences of the silk having been eroded by the action of the tissues around it, pieces of its fibres being present in the puriform fluid, not having lost their elasticity and not having been materially softened, but only "superficially nibbled, so to speak." Lister added:

Indeed, considering the organic character of silk, the remarkable thing seems to be, not that it should be absorbed by the living tissues, but that it should resist their influence so long.

The use of animal ligatures was next resorted to. Although ligatures of catgut, leather, and tendon had long before been tried and abandoned, it was hoped that very different results might be obtained from their use in the absence of sepsis. There seemed no objection to using carbolic acid in the purification of the animal ligatures, for he had, as we have seen, already observed not only that portions of dead tissue and of blood clot, free from sepsis, were absorbed, but also that this process was in no way interfered with when carbolic acid had freely acted upon them. He also had long been satisfied that the injection of a strong solution of perchloride of iron or tannic acid for the cure of naevi produces sloughs and clots which, though impregnated with those chemical substances, disappear without suppuration. On December 31st, 1868, he tied the right carotid of a calf at about the middle of the neck with ligatures of two kinds, separated from each other by a distance of about 1½ in. One was composed of three strips of peritoneum from the small intestine of an ox twisted into a cord, the other being of fine catgut. Both had previously been soaked for four hours in a saturated watery solution of carbolic acid. The wound healed by first intention, and the calf was killed a month afterwards. He found on dissection, and at first to his great disappointment, that the ligatures were still to all appearance present and as large as ever; but more careful inspection showed that in reality they had been absorbed and

replaced by bands of living tissue, the growing elements of which had replaced the material absorbed, so as to constitute a living solid of the same form. . . . They had, indeed, a deceptive resemblance to their former condition from the persistence in their substance of the impurities of the original materials, the darker adventitious particles being of mineral nature, incapable of absorption, so that they had remained as a sort of tattooing of the new structure.

The fleshy bands so formed were found continuous with the arterial walls, and, so far from weakening the vessel at the point of ligature, had rather strengthened and reinforced it; while, by the early healing of the wound, an immediate reconsolidation of the tissues detached from the vessel had taken place. The evidence of the organization of these ligatures, though clear to the naked eye, was abundantly confirmed by the microscope. All these facts seemed to give sure promise—as, indeed, has proved to be the case—of security against the secondary haemorrhage so frequent and so justly dreaded up to that time, as well as of the absence of suppuration in connexion with such ligatures. Since then the catgut ligature, prepared in one way or other, has been employed almost universally in tying arteries, whether in their continuity or after being divided in wounds.

The Introduction of Protective and Shellac Plasters.

After the lapse of some time it was felt that, although the antiseptic putty had yielded striking results, it was attended with various practical inconveniences, and Lister expended an enormous amount of time and patience in the attempt to find a satisfactory substitute. At length he discovered in shellac that which he was in search of. When carbolic acid was mixed with it, it formed a flexible material which retained the acid with great tenacity, and from this reliable reservoir the acid was given off constantly, but not too quickly. Spread as a plaster, it stuck, however, too firmly to the skin, obstructing all drainage. He had learned in other experiments that carbolic acid passed very freely through india-rubber and gutta-percha, and this fact enabled him to get over this difficulty of the adhesiveness of the new plaster. A mixture of 1 part of carbolic acid in 4 parts of shellac was spread in thin layer on calico, and painted over with a solution of india-rubber in benzine. When the benzine evaporated, the thin layer of india-rubber was left, preventing all adhesion of the plaster to the skin, but in no way interfering with the action of the antiseptic. This dressing proved much more satisfactory in every way than the putty. It could not be disintegrated by friction like the putty, and, being much lighter, was not only far less cumbrous, but could be more easily maintained in position, while, being always ready for use, it avoided the great inconvenience the putty had of requiring to be specially prepared by the surgeon. Hence its use was resorted to alike in the treatment of injuries, abscesses, and incised wounds.

No one has ever recognized more fully than Lister did the necessity of limiting, as far as was consistent with the avoidance of all fermentative changes in the wound, the irritating effects of the chemical substances employed in the treatment. His constant aim was to place wounds as far as possible in conditions resembling those of subcutaneous injuries, free from the access of external morbid agencies, as well as from direct irritation by foreign substances. In order to avoid undue stimulation by the contact of the antiseptic dressings, he therefore endeavoured to devise something which, by its interposition between the dressings and the wound, would protect the latter without diminishing the efficiency of the former. He aimed at covering the wound itself with something more or less impenetrable to even the vapour of the carbolic acid, while the antiseptic dressing should overlap this widely in all directions. It had been proved that the acid passed easily through gutta-percha tissue and thin sheets of

india-rubber; but, on the other hand, the common oiled silk used for covering water dressings was much less penetrable by it. Taking this as a basis, he covered it with gum copal, which offers even stronger opposition to the passage of carbolic acid than oiled silk itself, and lastly painted over both a solution of dextrin. Before being applied to the surface of a wound this "protective plaster" was dipped in a solution of carbolic acid, the dextrin-coated exterior permitting of its being uniformly wetted. The acid was soon dissipated, and the plaster became an unstimulating covering of the wound, defending and protecting it from the direct action of the superimposed and widely-overlapping antiseptic dressing, while in no way interfering with the outflow of the blood and serum.

INTRODUCTION OF ANTISEPTIC GAUZE.

One characteristic of these early methods, soon to be changed, was that the dressings were purposely made unabsorbent and impervious to the discharges. The putty and the lac plaster alike shed the fluids from the wound, and only acted upon them as they flowed beneath, preserving, by the volatility of the antiseptic they contained, an antiseptic atmosphere in the interval between themselves and the skin. They were reservoirs of carbolic acid, from which it was constantly given off, and out of which it could not possibly be washed, however great the flow, in the first instance, of blood and serum. It had become the practice in some quarters to dress wounds with oakum, carefully selected and teased, and good reports were given of its virtues as an antiseptic dressing. It was the use of this substance which suggested to Lister the employment of gauze in surgical practice—a form of dressing which would absorb the fluids of the wound instead of shedding them. In the BRITISH MEDICAL JOURNAL of January 14th, 1871, he wrote:

> Hitherto I have been opposed to porous antiseptic dressings, having observed that, when in the form of lint steeped in an oily solution of carbolic acid, the discharge, if at all free, washed out the antiseptic liquid from among the neutral fibres and opened a way for the penetration of putrefaction: but having heard reports from various quarters of the efficacy of oakum, I have lately put it to the test with granulating sores where, if it should happen to fail, no mischief would result, and I have found it more than answer my expectations. The reason for its superiority over oily cloths is readily intelligible: each fibre of the oakum is imbued with an insoluble vehicle of the antiseptic, so that the discharge, in passing among the fibres, cannot wash out the agent, any more than it can when flowing beneath the lac plaster, to a narrow strip of which an individual oakum fibre is fairly comparable. I may remark, as worthy of notice by those who still cling to the idea that carbolic acid has some unknown virtue distinct from its antiseptic property, that oakum contains none of that substance, but creasote and probably other antiseptic hydrocarbons, the effects of which in preserving smoked meat are familiar.

The material selected by him and still used all over the world, either impregnated with some antiseptic material or sterilized by heat, was a cheap muslin of open texture, known in trade as "book muslin." This was charged with resin, paraffin and carbolic acid. Resin, which is one of the principle constituents of ordinary oakum, holds carbolic acid mixed with it with great tenacity, so that a mixture of one part to five does not, if applied to the tongue, produce any undue sense of pungency. But such a mixture is very sticky, as well as apt to be irritating to many skins. Paraffin was therefore added with a view to correct such defects. The melted ingredients were mixed in the proportion of one part of the acid to four respectively of resin and paraffin and the mixture was diffused through the fibres of the cloth. This antiseptic gauze had carbolic acid thus fixed in every fibre, while the fine spaces between, which give to the cloth its porous character were still open for the discharge to pass through. It was folded in such a way as to make a thickness of eight plies, and placed over the wound overlapping it widely in all directions. But, in order to prevent fluids from going straight through the eight plies of gauze and possibly exhausting its antiseptic ingredient, a piece of very thin mackintosh or jaconet, previously washed in the antiseptic lotion, was incorporated with a piece of gauze by being slipped under its top layer, thus having seven layers of the gauze next the wound and compelling the discharges to make their way to the margins of the dressing, instead of coming straight through. Over the wound was placed, as before, a piece of the 'protective plaster', over that, a layer of gauze wrung out of the 5 per cent. solution of the carbolic acid, then the dressing as I have just described it, and the whole was fixed in position by bandages made of the antiseptic gauze.

The application of the antiseptic principle to wounds led to the abolition of the metallic suture, and a return to the far more convenient threads formerly in use, but which now no longer caused any of the inflammatory disturbance and suppuration which used to be the invariable attendants of their presence for a few days among the tissues. The silk was rendered, at first, antiseptic by being impregnated with a mixture of carbolic acid and melted beeswax, and afterwards by being simply kept constantly immersed in a 5 per cent. solution of the carbolic acid. The common pin was found quite unsuitable for gauze dressings, and this was the occasion of the introduction into surgical practice of the safety-pin, the use of which is now universal.

THE SPRAY.

Two novel additions were made to the treatment about the same time as gauze was first used—namely, the antiseptic spray, and the employment of drainage tubes. Anxious as he had always been to bring carbolic acid as little into contact with wounded surfaces as possible, and therefore equally anxious to give up the washing of the wound prior to stitching it, if he were quite sure that harm would not result, Lister conceived the idea of rendering the ordinary atmosphere with its dust innocuous by a finely-divided spray of carbolic acid, thus trying to avoid the risk of air infection which he still believed to be a serious danger. From this time until 1890 all wounds were made and all dressings changed under its protection. With the very perfect steam spray-producing instruments which he ultimately devised, kept at a distance from the wound, wetting of the parts scarcely occurred, and, while it is true that the spray may be said to have always produced a fine irrigation of the wound and its surroundings, it certainly acted far less potently on the cut surface than the actual washing with solution had done. Of the discontinuance of the spray as a part of the treatment, Lister made the following remarks in his Presidential Address to the British Association in 1896. After a reference to some experiments which he had made, he said:

> Hence I was led to conclude that it was the grosser forms of septic mischief, rather than microbes in the attenuated form in which they exist in the atmosphere, that we have to dread in surgical practice; and at the London International Medical Congress in 1881 I hinted, when describing the experiments I have alluded to, that it might turn out possible to disregard altogether the atmospheric dust. But greatly as I should have rejoiced at such a simplification of our procedure, if justifiable, I did not then venture to test it in practice. I knew that with the safeguards which we then employed I could ensure the safety of my patients, and I did not dare to imperil it by relaxing them. . . . Nine years later, however, at the Berlin Congress of 1890, I was able to bring forward what was, I believe, absolute demonstration of the harmlessness of the atmospheric dust in surgical operations. This conclusion has been justified by subsequent experience; the irritation of the wound by antiseptic irrigation and washing may therefore now be avoided, and Nature left quite undisturbed to carry out her best methods of repair.

THE DRAINAGE TUBE.

A considerable flow of blood and serum is sure to follow immediately upon the infliction of the wound, however subsequently managed; and it is to be remembered that, at the stage of wound treatment of which I now speak, this was much increased by the stimulating effect of the antiseptic fluid applied to its surface, even although the endeavour was always made to reduce this to a minimum. Further, we had not then the great advantage of pressure forceps, the use of which enables us to staunch by a few minutes' pressure, and, if thought necessary, to tie all the numerous small bleeding points. Lister was at first in the habit of introducing and retaining for at least forty-eight hours or so at one angle of the wound, for the purpose of avoiding accumulations of these discharges, a strip of lint soaked in a solution of carbolic acid and oil (1 to 4). He afterwards adopted the use of india-rubber drainage tubes, with which we are now so familiar. These were devised by the French surgeon, Chassaignac, early in the century, for carrying off pus. Their employment proved a valuable addition to the antiseptic treatment. They were of course kept constantly immersed in a strong solution of carbolic acid. Other

means of drainage were from time to time suggested, but none, so far as I know, have persisted in favour. Knowing that a drain need not be a tube in order to act, and wishing to avoid "the necessity of dressing a case solely to shorten the tube," Mr. Chiene of Edinburgh used skeins of absorbable prepared gut, leaving them until the ends hanging from the wound detached themselves in consequence of the absorption of that portion which was inside the wound. Others substituted horsehair for catgut as being more economical, although not absorbable. Some time later Neuber introduced absorbable decalcified bone tubes, made from the bones of oxen, and kept ready for use in a suitable antiseptic; while Dr. Macewen employed for the same purpose decalcified chicken and rabbit bones in his practice in the Royal Infirmary of Glasgow.

Mercurial Gauze Dressings.

In the early Eighties Koch's researches had drawn attention to the great value of the solutions of corrosive sublimate as a germicide, and very soon in many cliniques, not only in Germany, but also in this and other countries, it became extensively substituted for phenol in wound treatment. Always open to conviction, and anxious to favour progress in any direction, so long as the progress was real, Lister himself largely experimented with the new antiseptic, and sought to find some mercurial preparation which might be substituted for the mixture of carbolic acid, resin, and paraffin in the gauze. For a mercurial compound, if satisfactory otherwise, would have this great advantage over carbolic acid, that, not being volatile, it would remain for an indefinite period in a dressing containing it, whereas carbolic acid is being perpetually dissipated by evaporation, and in order to avoid the chance of this occurring to a dangerous degree, the dressing has to be changed more frequently than might otherwise be desirable. For several years he toiled at this task. He found, to use his own words, that

> when corrosive sublimate precipitates albumen, the precipitate is not, as has generally been supposed, an albuminate of mercury—that is to say, a combination of albumen as an acid with mercury as a base: in other words, that the albumen does not displace the chlorine from the combination, but that the bichloride of mercury retains its properties intact, the albumen being loosely associated with it in a species of solid solution if I may so speak."

It was further found that this loose compound was soluble in blood serum—that of the horse being employed—and also that the sublimated serum, if dried, could be redissolved in more serum, still retaining in solution the antiseptic properties of corrosive sublimate. Hence, if a solution of corrosive sublimate in serum of any strength that might be desirable was diffused through gauze and dried, it would in the dried state serve as a store of the antiseptic, which would be slowly dissolved by the serous discharge from the wound, communicating to it its antiseptic properties. Such was the origin of the sero-sublimate gauze which was the first of a series of antiseptic gauzes, to each of which in turn was given a trial in the treatment of wounds in substitution for carbolic gauze.

Although good results were got from its use, the sero-sublimate gauze exhibited certain marked defects, being somewhat harsh and not very absorbent. Sal alembroth, the double chloride of mercury and ammonium, was next used. It proved a powerful antiseptic, and was less irritating than mercury bichloride. Experience of its use, however, showed that its free solubility in serum was a great disadvantage. The salt was apt to be washed away by any considerable flow of the fluids of the wound from the more central parts of the gauze dressing, and being carried towards and becoming concentrated in the edges of the dressing caused often very undesirable irritation. Cyanide of mercury proved to be irritating and not very satisfactory otherwise; but ultimately, at the suggestion of Mr. Martindale, Lister tried the double cyanide of mercury and zinc. This salt is a white powder which, though absolutely insoluble in water, proved capable of being dissolved in small amount by blood serum; and small as that amount is, it is sufficient to inhibit absolutely the development of septic microbes, while its very slight solubility in serum enables a dressing charged with it to retain its antiseptic virtues in spite of a very copious flow of discharge through it. It is at the same time perfectly unirritating to the skin or a healing wound.

But when gauze was charged with the double cyanide by drawing it through water in which the salt was diffused, the gauze, when dry, had the great inconvenience that the powder dusted out with the greatest facility. This difficulty was at last got over by dissolving a small quantity of one of the aniline dyes in the water. This had the remarkable effect of attaching itself in a uniform manner to large quantities of the salt, and at the same time fixing them securely to the fabric. All dusting-out was thus prevented, while there was the further advantage that the colourless salt, being dyed, the depth of tint of the gauze indicated the uniformity or otherwise of the distribution of the salt through it. A further advance was made by having the salt itself stained with the aniline dye by the manufacturing chemist, whence its mauve colour in its present form.

Though the double cyanide, when dissolved in serum, is perfectly effectual as an inhibitor of microbic growth, it has little, if any, germicidal power. Hence, any septic impurities originally attached to the gauze would have their contained microbes alive after the mode of charging hitherto described. In order to guard against possible risk from this cause, a 5 per cent. solution of carbolic acid was used, instead of water, in the process of charging. There was still the chance of septic matter having become attached to the gauze after its preparation. Lister therefore advised that at least the proportion of gauze next the wound should be moistened with a 5 per cent. solution of carbolic acid. Corrosive sublimate solution should not be used for this purpose, since the latter forms, with the double cyanide of mercury and zinc, a triple salt which, as Lister has told us, is an extremely irritating substance.

It was a further advantage from the use of the cyanide gauze that the mackintosh covering could be dispensed with, so that the gauze becomes in a very short time a dry dressing.

Lastly, it may be mentioned that, as was pointed out by Lister in a post-graduate lecture in 1893, gauze, though convenient, is by no means necessary for a cyanide dressing. A folded towel, or mass of rag, wet with carbolic lotion, can be readily charged with the dyed cyanide, uniformity of distribution being not at all essential, and excess of the salt at any part being of no disadvantage.

Altogether the double cyanide is remarkably suited for the purposes of antiseptic surgery.

NOTE BY LORD LISTER.

"I have often regretted that the double cyanide of mercury and zinc is not more generally employed, especially in foreign countries. This is, I feel sure, due to want of acquaintance with it, and I avail myself of the opportunity kindly afforded me by Sir Hector Cameron of saying a few words here regarding its nature, mode of preparation, and use.

"Professor Dunstan, of the Imperial Institute, who most kindly undertook to investigate its composition, found it to be a double salt of very unusual type, being a tetrazincic monomercuric decacyanide, $Zn_4\ Hg\ (CN)_{10}$. Its insolubility in water appears to be also a very unusual feature in a double salt. (See *Journal of the Chemical Society* for 1892.)

"Messrs. T. Morson and Son (of Elm Street, Gray's Inn Road, London, W.C.), to whom I am much indebted for the great pains they have taken in the preparation of the salt, have given me for publication the following formula:

Pot. cyanid. 98 per cent.	... ...	46 parts.
Hydrarg. cyanid.	... ...	88 ,,
Dissolve in water	... ...	240 ,,
Zinc. sulphat.	... ...	102 ,,
Dissolve in water	... ...	120 ,,

When the solutions are cooled to about 60° F., mix, collect the precipitate and wash until no precipitate occurs with ammon. sulphid.

"The white powder so obtained is dyed with rosalane, ½ oz. being used to colour 4 lb. of the powder.

"I tried various aniline and other dyes, and found none that answered its purpose in all respects so perfectly as purified rosalane (as supplied by Messrs. Meister, Lucius and Brüning, of Hoechst on Main). Its principal object is to attach the cyanide to a fabric charged with it, and this it does with absolute security. At the same time the colour which it imparts to the white powder has the important effect of indicating the presence and distribution of the salt in the fabric.

"Gauze may be charged by drawing it in several thicknesses through a 5 per cent. solution of carbolic acid in which the dyed cyanide is diffused in sufficient quantity to be about 3 per cent. of the weight of the dry gauze, the liquid being constantly stirred to prevent deposition of the heavy salt.

"Old rags or other absorbent fabrics can be readily charged by dipping several layers of them in the 5 per cent. solution of phenol, and dusting one surface with an excess of the powder, which is then diffused by folding the mass and pressing it till a pretty uniform tint is produced. The absolutely unirritating character of the double cyanide makes a little excess of it in any parts a matter of indifference.

"The solution of carbolic acid is used because the cyanide powder is much more readily diffused in it than it is in water, while it destroys any microbes present in the gauze as it comes from the manufacturer. The solution of phenol has the further advantage that it does not receive the slightest colour from the dyed cyanide, so that the depth of tint of the fabric charged with it is in exact proportion to the amount of salt it contains.

"The gauze, as supplied by the chemist, is dry, and having lost the carbolic acid used in charging it, may have been subsequently contaminated with septic material. The double cyanide, though very remarkable for its inhibitory power over bacteric development, is without efficacy as a germicide; and the microbes in the contaminating material would be free to develop in the deep parts of the gauze as soon as the cyanide in them had been exhausted. In case of moderate discharge this would probably never occur, thanks to the slight solubility of the salt and its secure fixation by the dye. But in case of copious effusion of blood and serum, the salt would in time be exhausted and the microbes in the infective material would be free to develop. In order to guard against this risk the dressing may either be damped throughout with the carbolic lotion, or, as ample experience has proved to be sufficient, a portion of the gauze in several layers, soaked with the lotion, may be applied over and around the wound and the rest of the dressing used dry.

"Bichloride of mercury must not be employed for moistening the gauze, because it forms with the double cyanide a triple compound which is both feebly germicidal and highly irritating.

"The double cyanide might, I believe, be very satisfactorily used in military practice as a first dressing, by dusting it over the wound with a pepper box, and covering with any absorbent material that might be at hand. The salt might be used with the utmost freedom, as experience has shown that there is no risk of its producing poisonous effects. Some surgeons who undertook to use the cyanide in this way in the late South African war, had unfortunately no opportunity of doing so at the front. But Mr. Cheatle informed me that granulating wounds behaved more satisfactorily with the cyanide than with iodoform, while the unpleasant odour of the latter was of course avoided. For further particulars regarding the use of the double cyanide I would refer to an address on the antiseptic treatment of wounds published in the British Medical Journal for January 28th, February 11th and February 18th, 1893. The part in the number for February 18th contains the reference to the double cyanide."

Some Criticisms of Antiseptic Methods.

Having traced the progressive steps and changes in the methods of antiseptic dressing from the commencement of the treatment until Lord Lister retired from practice, I shall immediately refer to the reaction which began about fifteen or twenty years ago against the use of chemical antiseptics, and in favour, so far as possible, of sterilization by heat of everything used in wound treatment. But before doing so, it will be convenient to refer to certain criticisms which one reads and hears by many of those who adopt this latter plan of seeking aseptic results, criticisms which, although made doubtless in all good faith, do not seem to me to show always a very exact knowledge of what the forms of practice which I have described to you really were.

One common belief is that, in his earliest efforts, Lister, fearing as he did the influence of the atmospheric dust with its contained organisms, endeavoured to exclude air from wounds altogether, and so sealed them up by means of dressings—the putty and lac plaster—which were impervious to exuding fluids, and adhered closely to the surface of the body. Thus Schimmelbusch says:

> The best means of protecting a wound from the dangers which threaten from without might, *a priori*, appear to be to close it up as closely and firmly as possible. A completely impermeable dressing was one of Lister's ideas. The dressing which he first made use of to effect his object was a kind of putty made of common whiting and linseed oil such as glaziers use, to which was added carbolic acid. This was laid over the wound smoothly and closely, and covered with a piece of sheet block tin.

He then describes methods of permanently sealing up a recent and clean-cut wound by unirritating strapping or by collodion with or without gauze; and adds:

> Either plan will probably be preferred nowadays to the use of putty and tin foil. But the number of wounds, he continues, that can be so treated must always remain very small, for success is possible only when there is no secretion from the wound. If it secretes only a moderate amount of fluid, sealing is futile and even dangerous. The secretion, which consists of blood or lymph exuded after the dressing is applied, collects under the impermeable covering, breaks through the weak spots in the covering, and soon decomposes.[8]

I have thus quoted at some length, because this mode of criticism is one which I have often heard, and one which has no justification in fact. It is an entire misconception of Lister's meaning and method. The covering of block tin was simply used to check the evaporation of the volatile antiseptic. The putty permitted all wound fluids to flow freely between its surface and the skin into absorbent materials, specially arranged outside for their reception. Constantly giving off carbolic acid, it maintained an antiseptic atmosphere in the space between itself and the skin, even in parts where these might not be in direct contact, and being made sufficiently large to overlap the wound widely, it securely prevented the access of sepsis up the stream of fluid discharge. The lac plaster, the use of which supplanted that of the putty, was coated with india-rubber with the express purpose of preventing its adhesion to the skin, and the consequent sealing of the wound. A drain of lint, steeped in carbolic acid and oil, was introduced into every abscess cavity when opened, and into every wound of importance, while for this was latterly substituted the constant use of drainage tubes. Lister was from the first well aware that he could not exclude air from wounds, even if he would; and he was also equally well aware of the supreme importance of avoiding the distension of wounds by the accumulation of fluids. This he taught in season and out of season, and so far from crediting him with any desire to seal up wounds, I should rather contend that he was the first to advocate complete and constant drainage, with, of course, the proviso that the fluids in the course of their escape must be guarded from all septic influences from without. Further, the very dressing which is now used, as the extreme opposite of anything which seals, since it is something which constantly absorbs, namely, gauze, and which meets with such approval on that account, was, as I have already said, a suggestion of Lister.

Another criticism frequently repeated is that in those earlier days of antiseptic treatment it was believed that the atmosphere with its dust was the only source of wound infection. This is a strange misconception. If mischievous contamination of wounds could result from exposure to the microbes of the atmospheric dust, and of this, in the then existing state of knowledge, no doubt could be entertained, still more must this be the case with the contact of objects on which that dust had been accumulating for an indefinite time. And, from the earliest days of Lister's antiseptic work, infection from the skin both of the patient and of the surgeon's hands, as well as from instruments and sponges, was guarded against with a care as watchful as any which is enjoined and exercised at the present day. Thirty years ago, the fact of there being varieties of wound infecting organisms, more or less morphologically distinct from one another, each with a separate life-history and producing a specific form of infection, was entirely unknown, yet it was not altogether undreamt of. It is interesting to find a prophetic insight into some such discovery in a footnote in a paper by Lister published in 1870, a paper in which he discusses at some length the subject of suppuration. He there speaks of what he was then in the habit of distinguishing as two different kinds of suppuration. When an antiseptic substance like zinc chloride or carbolic acid is applied to a

wound, it stimulates the surface of the sore to granulate and to furnish a certain amount of pus, but this suppuration is only co-extensive with the area of antiseptic material in contact with the sore. It spreads no further. From the rest of the wound, even though this limited suppurating spot communicate with it, nothing may be furnished but clear serous fluid. Thus it often happens that if one opens a large abscess and dresses it with an antiseptic gauze, after the lips of the incision have granulated, an exact pattern in pus of the little granulating wound remains on the gauze, which is removed at each dressing, while around and beyond it the cloth is wet with a clear serous discharge only from the interior of the cavity. Pressure over the cavity will cause to exude not pus, but some of the same clear serous fluid, if any has been retained. On the other hand, he taught that while a chemical antiseptic may thus stimulate and cause some limited suppuration on the surface upon which it acts, and is itself diluted and rendered less stimulating by every drop of fluid which exudes, putrefaction, being a fermentation, is self-propagating and progressive, passing into the wound as far as there is blood or serum, or portions of dead tissue. The first form of suppuration he was wont to call "antiseptic suppuration." The second he always spoke of as "putrefactive suppuration," and it is when writing of this latter that he appends the footnote to which I have referred. It is as follows, and was written in 1870:

> This group ought to include the products of other ferments besides those of putrefaction, for I am satisfied that inodorous ferments sometimes occur in the animal fluids, and produce salts which stimulate to suppuration; also viruses inducing suppuration are very probably of the same essential nature (ferments), though some, at least, are odourless, as in the case of erysipelas.

Mr. Watson Cheyne, in his article entitled "Listerism and the Development of Operative Treatment" in the British Medical Journal of December 13th, 1902, writes of this same matter as follows:

> At that time (that is, 1872) the scientific basis on which the Listerian system was founded was very crude. Septic conditions were looked at as essentially of a putrefactive nature, and when putrefaction was absent, sepsis was looked on as also absent. But even at that time, and before I had completed my studentship, Lord Lister was beginning to conclude from his operative work, and the observations made on his wounds, that this was too narrow a generalization, and that these organisms must be of a great variety of species, and that the association of putrefaction was not essential to even the most serious forms of sepsis. He was coming to the conclusion that different species of organisms must be accountable for different septic diseases, and I well remember his timidly putting forward the view that even tetanus was probably due to an organism, because he had not had a case of tetanus for many years, although previously it was quite a common disease. Lord Lister himself probably provided the first complete demonstration of the existence of distinct species of fermentative organisms in his researches on lactic fermentation, when he was able by a very ingenious device to separate a single organism, the *Bacillus lactis*, which produced this fermentation and no other.

In his Presidential Address to the British Association at Liverpool in 1896, Lord Lister himself said:

> The striking results of the application of the germ theory to surgery acted as a powerful stimulus to the investigation of the nature of the micro-organisms concerned, and it soon appeared that putrefaction was by no means the only evil of microbic origin to which wounds were liable. I had myself very early noticed that hospital gangrene was not necessarily attended by any unpleasant odour, and I afterwards made a similar observation regarding the matter formed in a remarkable epidemic of erysipelas in Edinburgh, evidently of infectious character. I had also seen a careless dressing followed by the occurrence of suppuration without putrefaction. And as these non-putrefactive ailments had the self-same propagating property as ferments, and were suppressed by the same antiseptic agencies which were used for combating the putrefactive microbes, I did not doubt that they were of an analogous origin, and I ventured to express the view that, just as the various fermentations had each its special microbe, so it might be with the various complications of wounds. This surmise was afterwards amply verified.

Another frequent criticism is, that one great objection to the antiseptic method of dressing, as taught by Lister, is that the dressing is moist, for we know that moisture favours the development of the germs which cause wound infection, while dryness as perfect as possible has precisely the opposite effect. Under efficient antiseptic dressing, however, it is a matter of indifference whether the material applied be dry or wet. This is well illustrated by the equally satisfactory results obtained by the carbolic gauze, kept more or less damp by the sheet of mackintosh under its outer fold, while the edges of the wound were always moist under the protective, and by the cyanide gauze where the dressing was a dry one after the short time required for dissipating the solution of carbolic acid with which the part next the wound was moistened.

Another objection often stated is the assumed fact that the carbolic acid necessarily caused poisoning of the patient's system, and by its local application interfered with the power of resistance or self-defence against the influence of septic microbes possessed by the living organism. This protective power was both known and respected by Lister, who used to say that, previous to antiseptic treatment, surgery would have been impossible without it. He endeavoured, after the first dressing, always to avoid any direct contact of the antiseptic with the wound. The whole ideal of this treatment as I have detailed it, was to permit the wound to progress like a subcutaneous injury free from external stimulation, whether septic or antiseptic. It is true that, believing as he then did in the risk of infection from the atmosphere, it was his invariable practice for many years to wash the surface of the wound with an antiseptic solution before stitching and dressing it. But the washing he employed was on that one occasion only. When dealing with abscess no antiseptic was ever introduced into the cavity at all. It was far otherwise with many of those who counted themselves amongst his disciples and imitators. Not perhaps thoroughly appreciating the scientific facts which were the basis of the treatment, they were unable to divest themselves of the old idea, that, whatever was used in the treatment of a wound, was necessarily intended to have some specific effect on its healing. It could not, therefore, be brought too freely or too often into contact with it. They filled kettles with carbolic solutions, and poured them over wounded surfaces, or injected these same solutions into all interstices of wounds with syringes; while abscesses, empyemata, and the like, were freely syringed out in the same manner at the time of operation as well as at every subsequent dressing. This was the kind of practice which prevailed widely in supposed imitation of Lister. One saw it equally in the wards of colleagues who worked under the same roof as himself, and in those of surgeons at a distance, both at home and abroad. It is little marvel that this reckless and constant pouring and splashing about of carbolic solution was found to have injurious effects on the healing process, as well as to be poisonous to many patients.

Antisepsis by Heat.

The excessive use of antiseptics, with the disadvantages which it obviously entailed, led in time to the wide adoption of those methods of treatment which endeavour to dispense, as far as possible, with chemical agents, and to substitute for them the employment of heat, by which instruments and dressings are sterilized. It is, in my opinion, to be regretted that this form of treatment—which involves no new principle but only a change of procedure—should have received a distinguishing name and should be spoken of as if it was represented by a different school of thought and of practice. Every treatment which is directed against sepsis, no matter what the means be which are employed, is surely *antiseptic* treatment. The word *aseptic* was devised by Lister to denote the condition of a wound from which sepsis is absent. In the earlier days of antiseptic treatment surgeons used to speak of a wound as being "in an antiseptic condition," or an operation as being followed by "a thoroughly antiseptic result"; and any one who chooses to turn back to the medical journals of the period will find such expressions in their pages. It was in order to avoid such awkward phraseology that Lister suggested the adoption of the word "aseptic," a word which he afterwards found had been used by Hippocrates. To speak of the "aseptic treatment of wounds" is clearly as confused and inelegant as to speak of "the antiseptic condition of wounds."

Lister was probably the first to use a dressing sterilized by heat—a fact not generally known. This he did during his time in Edinburgh, the dressing which he so sterilized being absorbent cotton-wool. He did not persevere in the practice, mainly because he felt that, if it was to be

adopted it could only be in such cases as furnished a comparatively small amount of fluid exudation. To use dressings which contained no antiseptic material in their substance in compound fractures, and in wounds which yield at first a large flow of blood and serum, or in such cases as empyemata and large abscesses, seemed to involve a most serious risk of failure. The sentiments of many surgeons nowadays incline them apparently to consider mainly the treatment of operation wounds. To that consideration the treatment of all other classes of surgical patients is subordinated. Precautions are taken as regards architectural and mechanical arrangements, the amount of skilled assistance required, and the use of gloves, masks, and other accessories, all of which are in their entirety quite incompatible with ordinary practice. Surgery is thus converted into a pursuit which, at least in its ideal manifestation, can only be carried on successfully in a splendidly-equipped hospital. This tendency of some modern surgeons to place the treatment of aseptic operation wounds in a separate category from all other kinds of surgical cases involving the use of dressings, is very contrary to the spirit and the wishes of the author of antiseptic surgery. He deplored the complications to which I have referred, which he knew from his own experience to be wholly superfluous. From first to last he had worked in old-fashioned hospitals, and the infirmary here, in which the antiseptic system originated, had a bad history as regards surgical salubrity. But long before he left Glasgow for Edinburgh in 1869, he had reached a practical certainty of securing aseptic results, which alone justified many of the operations which he performed. The successive modifications of his dressings were for the sake of convenience rather than security.

The spray, introduced during his Edinburgh incumbency, was indeed adopted as an additional measure of safety on the supposition that it would purify the atmosphere around the wound, by destroying the microbes in its dust. But no one disliked more than he the complications which it involved; and it was with very great satisfaction that he was able to place before the Berlin Congress, in 1890, what he considered absolute demonstration of the fact that the atmospheric dust might be entirely disregarded in operations. Thenceforth the means by which he carried out the antiseptic principle were of the utmost simplicity, and could be employed with complete confidence of aseptic results by the private practitioner under any surroundings equally with a hospital surgeon. The spray, however, was by no means useless. Being far less irritating to the wound than washing with carbolic lotion, it greatly reduced the serous discharge, and with it the amount of drainage necessary. But by far the most important service rendered by the spray was the proof which it finally afforded of the innocuousness of the atmosphere. To this conclusion Lister had long been inclined. At the London Congress, in 1881, after describing some experiments that he had recently made which proved that putrefactive bacteria, if widely diffused by means of water sterilized by heat, are incapable of development in normal serum he made the following statement:

> The facts seemed to indicate that the putrefaction so apt to occur in wounds not treated antiseptically is due rather to septic matter in a concentrated form than to septic matter in the diffused condition in which it exists either in water or in air. In other words, is there sufficient chance of the air of an operating theatre or private room containing septic matter which can prove effective in blood serum to make it needful to regard the question of contamination from the atmosphere at all?[10]

But he did not dare to omit the spray without positive proof that this could be done with perfect safety. Of that he was at length fully assured by a consideration of the physical constitution of the spray, coupled with the success that had attended its use through many years, in spite of the entire abandonment of other precautions against the atmosphere which, before the introduction of the spray he had deemed essential. Especially instructive in this respect was his experience with empyema. Before the spray he had always covered the wound during the evacuation of the pus, and at subsequent dressings with a piece of lint soaked with a strong solution of carbolic acid, to prevent the entrance of air into the pleural cavity during inspiration. Under the spray this was dispensed with and the patient was allowed to draw air freely into the pleura, both during the operation and subsequently. Yet this change, while it greatly simplified the procedure, in no way interfered with the constancy of what he used to regard as perhaps the most beautiful of all the results of antiseptic treatment. The evacuation of the original pus was followed by merely serous discharge, which, copious at first, diminished rapidly in quantity, and, though cases differed as to the period at which the drainage-tube could be removed, healing invariably occurred sooner or later. The pleura then having recovered its normal functions, absorbed the air it contained, and the lung, just as in pneumothorax from puncture by a fractured rib, was restored by atmospheric pressure through the trachea to its natural dimensions, while the thorax on the affected side retained its original contour uncontracted. During the protracted period that often elapsed before complete healing, multitudes of atmospheric microbes had at every dressing been drawn with vitality unimpaired into the pleura, where they were securely protected against any action of the antiseptic, but never occasioned the slightest inconvenience.

These facts, occurring as they did under ordinary conditions of hospital theatres and wards, or of private rooms, seemed to Lister conclusive evidence of the harmlessness of the air in operations.[11]

One of the great aims of those who use dressings composed of gauze sterilized by heat, is to secure a very dry condition of the wound before closing it up; and many tell us that, if this be done, even large wounds like those now made in operating upon the female breast for cancerous disease may be closed without drainage, while no fear need be entertained either of the retention of wound products, or of any undue saturation of the dressings. I have no doubt that, with some painstaking as regards haemostasis, and the careful adjustment and coaptation of opposing surfaces, such a result may often be attained; but my experience leads me to doubt whether this could be relied upon in any given case. One patient when wounded differs from another in the matter of persistence of oozing of blood. Pull a tooth, and in one man the empty socket will cease bleeding in half an hour or less, while in another it will ooze for a couple of days or longer, and that without any question of peculiar diathesis. But diathesis and varying conditions of health must also be considered. Some years ago I tied the femoral artery at the apex of Scarpa's triangle in the case of a professional brother who was well known to many of you. He had been for a considerable time in bad health, and for some months had been confined to bed. He suffered from some form of anaemia, and constantly complained of a sense of great weakness. When in bed he one day discovered an aneurysm at the back of one of his knees. After tying the femoral artery I saw no vessels in the comparatively small wound demanding ligature, but a persistent flow of blood-stained fluid from all its surface made me introduce a small drainage tube. Such a wound may, no doubt, be generally left without drainage, and, if aseptic, will heal at once. But in this case for a whole week a fluid like cherry juice kept constantly exuding, so that I had to change the double cyanide gauze with which I dressed the wound every second day during that week. I was then able, from diminished exudation, to withdraw the drainage tube. The wound healed at once, and permanently, without a drop of pus formation. The aneurysm consolidated, and ultimately became cured. A cerebral haemorrhage, however, took place in less than a year afterwards, and caused my friend's death, after a few hours' illness. In such a case I cannot believe that it would have been possible by any means to secure a dry wound; and there must be, under such circumstances, great risk in using heat-sterilized gauze as a dressing, no matter how great a mass of it be employed. It is obvious that no disadvantage can arise from the fact that the gauze contains an antiseptic in its substance, provided it causes neither local irritation nor general intoxication, and the presence of the antiseptic undoubtedly adds greatly to the security of an aseptic result.

SCARIFICATION OF THE SKIN.

For preliminary sterilizing of the patient's skin around the seat of operation surgeons at the present day differ greatly as to the character and complexity of the methods they employ. Lister till he gave up operating in 1896, continued the simple procedure which he adopted thirty

years before; and he informs me that he never had any reason to doubt its efficacy. This consisted of washing the surface freely with a 1 to 20 watery solution of carbolic acid, and keeping it covered with a piece of lint or other cloth soaked with the same lotion during the interval between the washing and the performance of the operation. That interval was never made by his directions a protracted one. In private practice the washing was done when he entered the patient's room, and the operation was proceeded with as soon as the instruments had been got ready and the anaesthetic administered. He never took any steps for ridding the skin of greasy impurity or epidermic débris. The great affinity which carbolic acid has for most organic substances, including the fixed oils and epidermis, made any such measures, in his opinion, wholly unnecessary. The contrast between oil and water in their relations to carbolic acid was referred to in an instructive manner by Lister in the course of a demonstration on Antiseptic Surgery at the Richmond Hospital in Dublin in 1879.

> A new principle in pharmacy seems to have been brought out by our experience with this agent. I believe it is generally assumed by pharmacists that the strength of any given agent in its action depends upon the proportion in which it is present in the vehicle or solvent: that, if the agent exists in twice as great amount, it will be twice as strong in action. Now that is true with the same solvent, but it is not true with different solvents. Thus carbolic acid is soluble in 20 parts of water, but oil can be mixed with it in any proportion. Suppose you compare a 1 in 20 solution in water with a solution of 1 part of carbolic acid in 5 of oil, you will find that the solution of 1 in 20 in water is more powerful in its immediate action than a solution of 1 in 5 parts of oil. The solution in oil contains four times as much of the agent as the watery solution, and yet is not so powerful in its action. You can bear the 1 to 5 oily solution applied to your tongue tip or the thin skin of the lip better than you can the 1 to 20 watery solution; and the 1 to 20 solution in oil is so bland that it can be used for smearing a catheter without irritating the delicate mucous membrane of the urethra, to which the 1 to 20 watery solution would be intolerable. Now, the reason appears to be simply that water holds the carbolic acid feebly, and so lets it readily fly off to attack anything else.[1]

And so he taught that the 1 to 20 watery solution readily and at once penetrates the greasy epidermis and is very powerful in its immediate action upon it, but as there is not a large quantity of it present that action is comparatively transient.

The avidity with which carbolic acid seizes upon epidermic tissues was strikingly illustrated by an experiment which he related in an unpublished address to the medical students of Glasgow delivered in 1894.

> Having discovered a method by which the amount of carbolic acid present in a watery solution could be determined,* he packed a test tube closely with hair of the human head, and added just enough 5 per cent. solution of carbolic acid to cover it, eight times the weight of the hair being required for the purpose. Half an hour later he poured out some of the liquid and applied the test, when it was found that already nearly half the carbolic acid had been withdrawn by the hair from the watery solution. Considering that the hair was only an eighth part of the weight of the solution, this was certainly very remarkable. The hair must thus have become charged with about a sixth of its weight of the antiseptic, and if a larger quantity of the lotion had been used the proportion would have been still greater.† In such strength it could not fail to act powerfully as a germicide on any microbes which the hair might contain; and this applies equally to the epidermis. A knowledge of these facts, coupled with the constancy of aseptic results obtained by Lord Lister, which has probably never been surpassed, may well make us content with his simple method of purifying the skin.

My own practice is to insist upon a dressing of 1 to 20 watery solution of phenol being applied widely over the part to be operated on for half an hour or an hour before the operation takes place, no matter what preparation of the skin, if any, has been made. As a matter of fact, we operate in our Glasgow hospitals at an early morning hour, and my nurses always prepare the skin on the previous evening, washing it with warm water and soap, and afterwards cleansing it with turpentine and spirit. This is, I believe, in accordance with the general practice of the hospital. A dressing of 1 to 40 phenol solution is then bandaged over the part to protect the skin from contact with other parts of the body or with clothing during the night; and about an hour before operation this is changed in my wards for a 1 to 20 dressing. It is well to remember that the latter would by itself be quite efficient, and that the preliminary details I have related are unnecessary. Especially in cases of great collapse and urgency, such as visceral perforations, ruptures of ectopic pregnancies and the like, is it especially valuable to know that we may avoid the very prolonged and inevitably rather painful scrubbing and washing of the skin of the abdomen, which is quite necessary if no disinfectant, or such a one as corrosive sublimate, is to be used. The delay and the increased pain of such procedures have, I have sometimes thought, seriously compromised the patient's chance of recovery. A large dressing of lint over the whole front and sides of the abdomen, with a small separate piece loosely packed into the umbilical depression, all thoroughly wet with a warm 1 to 20 solution of phenol, and allowed to remain on for at least half an hour, will be found equally efficacious, and will, by saving time, save a good deal of the patient's fast-vanishing strength and power of endurance. My own experience under the exceptional circumstances referred to entirely confirms the efficacy of Lister's practice.

Sterilization of the Hands.

Frequent immersion of the hands in a saturated watery solution of carbolic acid cannot be borne, especially nowadays when so much operating falls to the lot of every hospital surgeon. My practice is, therefore, to wash the hands thoroughly with soap and warm water, brushing the nails with a sterilized nail brush, and afterwards soaking them in a 1 to 40 watery solution. I am well aware that authorities who command all respect tell us that it is impossible to sterilize the skin in a truly scientific sense. But if experience shows us that by the use of certain means we can purify the skin sufficiently to secure uniformity of aseptic result, that is all we need desire or aim at. I learn from Lord Lister that he continued to the last the use of the 5 per cent. solution of carbolic acid for purifying the hands; and his method certainly has the advantage of simplicity. Trusting to the power which carbolic acid has of rapidly penetrating organic substances, he regarded the use of a nailbrush as superfluous, and merely dipped the fingers in the lotion shortly before the commencement of the operation. During its performance the lotion was not applied further to the hands, unless some unusual circumstance involved their contact with objects likely to defile them.

Sterilization of Instruments.

For sterilizing instruments, our practice is to boil them for twenty minutes or half an hour, except in the case of knives, which may be placed in a 1 to 20 carbolic solution for some time before being used.

Lord Lister informs me that he always trusted to placing the instruments in the 5 per cent. solution immediately before the administration of the anaesthetic. There can be no question that this is more convenient than boiling, especially for private practice, provided that it is really reliable. This Lord Lister's long experience seems to

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* In the course of some work on the preparation of catgut for surgical purposes, he observed that if a weak solution of chromic acid in water is mixed with carbolic lotion, the mixture, which is at first a pale straw colour, gradually grows very much darker during the next few hours. This fact afforded the means of estimating the quantity of carbolic acid in a watery solution. Making a mixture of equal parts of the weak chromic liquid and a 5 per cent. watery solution of carbolic acid to serve as a standard of comparison, and at the same time making a corresponding mixture of the chromic liquid with the carbolic solution to be tested, and ascertaining how much the standard had to be diluted in order to bring its tint down to equality with that of the mixture containing the liquid to be tested, an estimate could be formed of the amount of carbolic acid present in the latter. Lord Lister informs me that on going over the subject again recently, he ascertained that hair retains this remarkable power of withdrawing carbolic acid from a watery solution after all fatty matter has been removed from it by prolonged steeping in sulphuric ether.

† Hair thus highly charged with carbolic acid by washing with 5 per cent. solution may sometimes be turned to account in surgery of the scalp as an effective and unirritating antiseptic dressing. This may be illustrated by one of Lord Lister's latest cases. The patient was a lady with numerous atheromatous tumours scattered over the scalp. To have shaved around each of these would have caused a very inconvenient loss of hair; but this was avoided by washing freely with the lotion about each tumour, and simply passing a comb along the line where the incision was to run, the hair being replaced in position after removal of the cyst. The several tumours having been so dealt with, a cap of folded cyanide gauze was bandaged over the head, and when this was removed some days later all the wounds were found to be healed.

place beyond doubt. But, as he remarks, it is essential that the instruments be thoroughly immersed. He tells me that in a few cases in which he has witnessed operations in private practice by others, the layer of carbolic lotion has been too shallow to cover the instruments completely. They might almost as well have been left without any attempt at sterilization. In hospital practice this is much less likely to occur, even although the trays employed be broad, since abundance of the lotion is always at hand. For his private practice he used a narrow but deep tray not requiring much of the solution to fill it, sufficiently long to accommodate all instruments except saws and long amputating knives. These were wrapped in lint soaked with the lotion at the same time that the other instruments were placed in the tray. The teeth of saws and forceps were always brushed clean before being put away after the operation.

Treatment of Compound Fractures.

In the case of compound fracture, I cannot believe that the application of chemical antiseptics to the wound can be safely omitted. That it should be entirely discarded is the advice given by Professor von Bergmann in a recent article on the subject, written by him in the volume on *Erste aerztliche Hülfe*, edited by Meyer. He strongly objects to any antiseptic solutions being used to purify the wound itself, limiting such use entirely to the purification of the surgeon's own hands and the skin of the wounded limb. He writes:

> I advise that every wound be purified dry, and not with antiseptic fluid—an advice which is, of course, opposed to that which was at one time warmly recommended. . . . In compound fractures, for which Volkmann required washings out with streams of carbolic solution, the same principles hold good which have been already in part developed in reference to the general treatment of wounds.

He then recommends that the skin of the limb should be cleansed and afterwards disinfected with corrosive sublimate, the wound being temporarily plugged with sterile gauze during the process. He trusts entirely to the protective power of the living organism for defence against such microbes as may have entered. This he does even in cases where a fragment may have protruded, and come into contact with clothing, or been otherwise defiled, and then been reduced. In severe compound fractures, he is very insistent upon the stopping of all bleeding and the formation of counter openings, "so that the wound products may escape by the most direct and shortest route." He writes:

> When the walls of what is often an immense wound have ceased to bleed, or bleed only slightly, and the counter-openings have been made, they are dabbed all over with swabs of sterile gauze that is for cleansing. The swab takes up what there is of dust and dirt still adhering to the wounded surfaces, and removes it. The outflow and oozing of the blood provides for the more complete separation, shedding and removal of infectious matters, dead or alive, by washing them out, and carrying them from the deeper parts of the wound to the surface. Syringing is dangerous, inasmuch as it drives the dirt, and the bacteria of infection into the deeper interstices of the tissues. In addition, we have the irritating action of antiseptic solutions causes the recesses of the wound to be filled with additional exudations, and these as dead stagnant fluids furnish an excellent nutrient medium for the growth of bacteria. For certain bacteria which make their way into every wound, but specially those complicated by injuries of tissue, the protective action of the tissues themselves is competent to deal. But for many micro-organisms that grow in putrid fluids, and become very virulent there, these powers of resistance do not suffice. In a dry wound bacteria may remain and still remain idle; but in the fluids within the wound which are the best growing medium for them, they increase until they are ripe to attack the cells of the organism. Therefore I insist again upon the importance and careful arrest of bleeding before cleansing the wound.

It may seem presumptuous to join issue with so great a surgical authority as Professor von Bergmann in regard to a matter of such vital importance as the treatment of compound fracture, but I have no hesitation in saying, after an experience as a surgeon for more than thirty years in Glasgow hospitals, that no mere toilet by dry sterilized cloths apart from germicidal solutions, will be sufficient, in our patients, to prevent sepsis and suppuration in fractures where the end of a fragment and the wound one, or other, or both have been defiled by contact with skin, clothing, the dust of machinery, or the mud of the street. I can further say that I have always washed out such wounds freely with a solution of 5 per cent. phenol, and I have never been conscious of any of the evils which von Bergmann dreads. In the last few weeks I have treated four compound fractures of both bones of the leg, each of them certainly with a comparatively small external wound, but all produced by great violence, causing much blood extravasation and distension of the limb, as well as, in three of them, extensive vesication of the skin. All were freely injected with 1 to 20 carbolic acid solution, and, after the skin of the leg and foot had been thoroughly disinfected, they were dressed with double cyanide gauze. All have progressed like simple fractures. Bleeding was fairly free in all of them, saturating the antiseptic gauze in the first twenty-four or forty-eight hours. At the end of that time the internal wound was in each filled with a clot, which was on a level with the edges of the wound in the skin, and which became gradually organized and covered with cicatrix. In a fortnight or three weeks each was permanently put up in plaster-of-paris. One of these 4 cases came to us from the West Highlands twenty-four hours after the accident had occurred. I instructed my house-surgeon, when he telephoned to me for advice, to stir up the wound with a piece of gauze wet with a strong solution of phenol in spirit—say, 1 to 6—and held in a pair of dressing forceps, and thereafter to inject it as usual. This was done, and the case progressed like the others. It is very possible that in all of these cases—except, perhaps, that which was twenty-four hours old before being dealt with—healing might have been obtained without suppuration by simply dry-cleaning the wound according to von Bergmann's plan, disinfecting the surrounding skin and dressing with a mass of sterile gauze. Such microbes as happened to have been introduced might have been disposed of by the defensive power of the living organism and the wound have healed at once, as such wounds sometimes used to heal under a dry crust of blood. But I maintain that this is too doubtful an issue to be entirely trusted, especially in such cases as those I have referred to, where the wounds, although not large, were by no means mere punctures. No harm comes of adopting the measures I have described, in spite of strong statements so frequently made to the contrary. That those measures are beneficial and reliable may be still further learned by considering other forms in which compound fractures present themselves.

Occasionally a fragment or the dislocated end of a long bone stretches the elastic skin over it, and suddenly bursts through. When this happens the hole in the skin may so tightly grasp the base of the protruding bone that reduction is impossible without enlarging the wound. In such circumstances it is surely right to cleanse and disinfect the fragment before reducing it. The dentist sometimes places a stretched sheet of india-rubber over a tooth, a cavity in which he is about to stop, with such force as to make the tooth burst through the stretched rubber. By spreading out the sheet of india-rubber, he is then able to operate on the tooth cavity without fear of contact with the oral moisture and sepsis. For this device he adopts the engineering term—a "cofferdam." Well, in the form of compound injury which I am describing, the defiled piece of bone is thoroughly "cofferdammed" as regards the internal wound, and it is well to spare no pains in disinfecting before reducing it.

A short time ago a man was admitted into my wards during the visiting hour, and I had the opportunity of seeing him before his clothing was removed. He had a fracture of the fibula, a little above the malleolus; the foot was everted so as to be at almost a right angle to the leg, while the lower end of tibia, minus its tip, protruded through a rent in the skin, which gripped the bone as tightly as if it were a ring of india-rubber. But further, the malleolus was protruding through a filthy woollen sock which smelt most foul. The bone lay in contact with the end of his trousers, on which was a quantity of the dried mud of the street. The protruding bone was at once carefully covered and packed round with lint, dripping wet with a 5 per cent. solution of phenol. He was then undressed, and his foot and leg were cleansed. Afterwards, with a knife and a pair of dissecting forceps, all trace of the soft parts which still adhered to the protruding bone were cut away, until it was left quite bare. Lint soaking with carbolic acid solution, was then more closely wrapped over it, and pushed well into the angle between it and the skin, and a towel, also soaking wet with the same solution, was wrapped round the foot and entire leg. After twenty minutes or half an hour these were removed, and I insinuated a probe pointed knife between the tight and stretched ring of skin and the protruding bone,

enlarged the wound, and reduced the dislocation. I then, to make assurance doubly sure, injected the interior of the wound and joint with a 1 to 20 phenol solution. I put a couple of stitches in the cut I had made, but left the irregular hole in the skin open, so that no wound exudation should be unnecessarily retained. The result was absolutely satisfactory. The man recovered without pain, fever, or suppuration, and has a movable ankle-joint.

I could relate many other similar cases, but only one more will I refer to.

It was the case of a carter who, in trying to stop his runaway horse, fell, and his leg becoming entangled in the wheel of the cart, he was dragged for some distance. On admission his left knee-joint was found to be dislocated, the internal condyle projecting through the skin, which tightly and firmly embraced the base of it. The entire condyle and the skin around it were thickly covered with the dirt of the street, which was ingrained into the tissues. The clothing which covered his knee had of course been extensively torn. Having cleansed the parts as well as possible I pared off all tags of the soft parts remaining attached to the protruding bone, and treated the case by the method just described. Where I found dirt ingrained into the bone I swabbed freely with undiluted carbolic acid. After enlarging the wound and reducing the dislocation, I cut away the blackened edges of the skin wound and washed out the joint with a 1 to 20 solution. The patient recovered without the slightest unpleasant symptom. Within a year afterwards he was readmitted with a simple fracture of both bones of the other leg, and we had the opportunity of hearing from him and seeing for ourselves that his left knee was in all respects as good and serviceable as his right.

A third form of compound fracture is that in which large and severe wounds exist, while the broken and probably comminuted bones are fully exposed. Much laceration of muscles and injury of blood vessels are probably also present. We must all admit that these are more uncertain cases for treatment. They are those in which the question of amputation arises but is decided in favour of retaining the limb. Von Bergmann prefers to trust to the dry wiping of both wounds and fragments, removing with forceps all foreign bodies and entirely detached pieces of bone, making free counter-openings, arresting haemorrhage by ligature if need be, and stuffing and so preoccupying all cavities with sterile iodoform gauze. My practice is to wash out such cases and dress them just as I do those less severely injured, wiring fragments if it is thought desirable, and securing by ligature vessels which seem to require it. Our results have, I think, justified the treatment entirely.

Organization of Blood Clot.

I have spoken already of the organization of blood clot in connexion with aseptic compound fracture. Long ago Lister took advantage of his observations in this matter to aid him in obtaining healing where bone had been excavated in the course of operations, the cavity filling with blood, which coagulated and became organized as in compound fracture. Volkmann afterwards published cases in which he applied this method successfully, even where he had to deal with previously-existing suppuration. By the free use of his sharp spoon he removed the septic soft parts, destroying the carious bone with the thermo-cautery. Allowing blood to clot in the cavity so produced, he obtained its organization, and consequently healing without suppuration. I have lately treated the following case, which illustrates the value of this antiseptic procedure, where it is possible of accomplishment.

On November 15th, 1905, I operated, in a nursing home, in the case of a boy aged 11, on a tuberculous ailment close to the upper epiphysis of the right tibia. The head of the bone was expanded, and an abscess tended to point over the inner side, where an area of skin, about the size of a shilling, was thin and livid. Having applied a tourniquet in the form of an elastic bandage to the thigh, I evacuated the abscess, and cut away the thin tuberculous skin. With the sharp spoon I most carefully scraped away all granulations and caseous material in the subcutaneous space. A hole in the tibia leading into a cavity was then seen and enlarged, and from it I extracted a sequestrum about the size of the distal phalanx of one's forefinger. With a strong sharp spoon I cleaned out the cavity, the walls of which were for the most part bare and carious, as carefully as a dentist would one in a tooth, removing portions of its walls all round, until I was satisfied I had taken away all diseased bone. Following Mr. Watson Cheyne's advice, I then soaked its walls with undiluted carbolic acid, and washed out any excess which remained, with a solution of 1 to 40 of the same acid. After dressing with a sufficient mass of cyanide gauze and applying a posterior splint, I removed the tourniquet, placing the limb in such a position that the wound was uppermost. Next day, as some blood had come through the dressing, I removed it, and found the whole wound filled with a firm clot, which was on a level with the skin edges. This I succeeded in keeping aseptic throughout the whole course of the case. No suppuration occurred and no fever was shown by the thermometer from first to last. The clot became organized, and after some weeks its surface granulated. A cicatrix spread over it from the edges of the skin, and by January 18th (a little over two months) it was almost completely healed. On that day the patient seemed to have a cold in the head, and his temperature rose to 90° F. On January 19th it rose in the evening to 101.4°, and on January 20th he was covered with the rash of measles, and his temperature was 102.4°. He was removed to the Infectious Hospital at Ruchill. When I visited him there five days afterwards, I found the wound entirely healed, and the whole region of the knee was in a very satisfactory state. On February 8th I fixed the limb in plaster-of-paris bandages, and on the 10th he was removed to his own home in the country.



Fig. 1.—Case of tuberculous cavity in the head of the tibia, which was filled with blood clot, as described in the text. The skiagram was taken after the cure was complete.

In three weeks he returned and had the plaster-of-paris bandages removed. The wound remained whole, and the knee could be slightly bent without pain. A flannel bandage was applied, and he was ordered to walk about with crutches, a patten being put on the boot on the sound foot. On April 2nd he was brought back to see me, when I found the limb perfectly well, and the knee once more freely movable. For some time past he had been walking without any support, and returned to school shortly afterwards.

I mention this case as an excellent example of the immediate obliteration of a large bone cavity by the organization of a blood clot which filled it; and this is one of the valuable means of treatment which we owe to the antiseptic method in cases which are apt to present great difficulty in the attainment of final closure. Where the skin is unbroken prior to operation, such beautiful results may be anticipated with confidence.

Many other materials have been employed for the

plugging of the bone cavity with a view of acting like the clot—as a framework which new tissue, sprouting from the walls, may enter, penetrate, and absorb, and become ultimately ossified. Prepared catgut, bone fragments and marine sponge have all been used for the purpose, but I am afraid with no very encouraging success.

Comparatively recently, however, Professor Moorhof of Vienna has devised a bone-plugging wax, the use of which appears to have yielded, both in his own hands and in those of others, more encouraging results. The walls of the cavity to be plugged must be so dealt with as to make sure they contain no diseased tissue, must be thoroughly aseptic, and must be perfectly dry. The drying is effected by hot air driven into the cavity by a special apparatus devised for the purpose. The wax consists of a mixture of sixty parts of finely-pulverized iodoform and forty parts each of spermaceti and oil of sesame. At 112° F. this mixture is fluid, and after being shaken up is poured slowly into the cavity, in which it sets and becomes solidified in a few minutes. The skin is stitched over it, and, according to Professor Moorhof and others, immediate healing may with considerable confidence be expected. The wax is absorbed by newly-formed tissue sprouting from the bony walls of the cavity, "the production and gradual growth of bone tissue being effected by a primary formation of new connective tissue."[14] Results of the best kind are said to be obtained in spite of the previous presence of suppuration and abscess, provided that most thorough care be taken in cleansing and disinfection. The absorption of the antiseptic wax, as well as the bone formation, have been verified by the use of the Roentgen rays. Whether, therefore, it be brought about by the organization and absorption of blood clot, or by some such artificial filling as that suggested by Professor Moorhof, the immediate closure of bone cavities resulting from tuberculous disease, from the separation of sequestra following osteo-myelitis, and the like, is a beautiful example of practical progress due to antiseptic surgery.



Fig. 1.—[illegible] of tuberculous cavity of the [illegible] filled with the bone wax of Professor Moorhof. [illegible] wax had been introduced.

Treatment of Tuberculous Abscesses.

I had hoped, had time permitted, to speak at some length of the antiseptic treatment of abscess, which, as I have indicated, was an early development of the system which Lister introduced. The power we possess by this treatment, of guiding large tuberculous psoas or lumbar abscesses to a successful issue is one of which I have had abundant personal experience. I could, indeed, produce a long list of such cases treated during the last thirty-five years, who are now well and leading useful and active lives in many parts of the world.

From time to time I have been led to vary the treatment as originally practised when suggestions promising to shorten convalescence have been made. Thus, I have scraped out the abscess cavity thoroughly with the flushing spoon, using some sterile but not very stimulating fluid for the purpose. I have also injected iodoform emulsion in glycerine, sometimes associated with and sometimes without the use of the sharp spoon. The result has been to make me adhere more confidently than ever to Lister's original plan of simple incision and drainage, combined with most scrupulous and systematized antiseptic precautions. The antiseptic gauze is changed at intervals of time, determined by the amount of exudation, with all the same care that was exercised on the first occasion of evacuating the abscess. The treatment is to be continued until the final absolute closure of the wound, no matter how long that be delayed; while the patient must be kept constantly recumbent to give due rest to that part of the spine in which has originated the tuberculous disease. If sepsis invades the sinus from without, even months after the abscess has been opened, and a mixed infection is produced, the case may be regarded as hopeless. There is, I believe, under such circumstances, no treatment which can undo the mischief produced, or avert the fatal issue to follow sooner or later. On the other hand, if septic contamination is avoided, only a serous exudation, diminishing as time goes on, will take place, while the patient continues free from fever, and steadily increases in weight. Under such circumstances, a permanent and complete recovery may be expected. The injection of iodoform emulsion, which is often so very successful in cases of limited and accessible tubercle, as in small tuberculous abscesses of the soft parts, in dactylitis, in diseases of carpal and metacarpal, of tarsal and metatarsal bones and the like, is quite futile, as far as I have seen, in the treatment of large abscesses connected with bones and joints.

I fear, however, the advantages of careful antiseptic drainage of these great tuberculous collections have not been sufficiently appreciated by the majority of hospital surgeons. This is probably due to discouragement caused by failure to maintain the aseptic state in the course of the long period during which such cases must be kept in hospital. Yet the dressing is a matter of extreme simplicity, and when the first few days have passed, may be safely entrusted to a dresser who has been duly impressed

with its vital importance. To discharge such patients before healing is complete merely because they have been long in hospital, and the serous discharge has become scanty, is surely not justifiable. If admitted at all, they must be treated with the same care until they are healed. If failure to exclude septic mischief occurs, evidenced as it will be by the supervention of hectic fever and the discharge of pus from the sinus, no reason longer exists for keeping such a patient in the hospital. His fate is sealed, no matter where or how he may be treated.*

Abscess of the Hip Joint.

I must also refer very briefly to abscess of the hip joint. Here results are obtained by antiseptic treatment essentially similar to those which I have described in speaking of spinal abscess. If scrupulous antiseptic dressing is maintained, along with perfect rest of the articulation, the serous discharge which alone follows the evacuation of the original contents ceases after a longer or shorter period, and if no shortening of the limb had occurred before the operation complete restoration of the normal condition may be anticipated, while in cases of partial absorption of the head of the bone incomparably better results are obtained than can be got by excision, the patient having meanwhile remained absolutely free from constitutional disturbance.

Treatment of Acute Abscess.

In ordinary acute abscesses, such as those occurring during lactation, a merely serous discharge follows antiseptic evacuation and drainage, just as in the chronic cases; but instead of the protracted course commonly followed by the latter, complete healing occurs with great rapidity, the micrococci which abound in and around the abscess wall being speedily disposed of by the antibacteric power of the living organism, when the disturbing influence of the pent up pus is removed and prevented from recurring, while contamination from without is precluded. In acute abscesses of a pyaemic character which one meets with occasionally in connexion with such ailments as enteric and scarlet fever, pneumonia, and the like, as well as after parturition, this typical course cannot be reckoned on, yet even in them the difference in the chances of the patients, according as they are treated antiseptically or not, can hardly be exaggerated. If strict antiseptic treatment and free drainage be adopted, and the access, therefore, of bacteria from without be prevented, the most happy results usually follow. Very soon the discharge becomes thinner, and often a mere serous exudation ultimately takes the place of the original thick pus, while the evidences of septicaemia, as indicated by high fever, rigor, delirium, and the like, pass quickly away. No washing of the cavity is desirable, provided that mischief from without be successfully excluded. If, however, this is not accomplished, an accession of grave symptoms may supervene, and a fatal issue is a frequent result, for acute abscess of large size is often a late episode in the illness of a patient already debilitated by serious disease.

The fear which is sometimes felt of contamination of aseptic incised wounds by abscesses, of whatever nature, treated in the same ward, will be found to be absolutely groundless under antiseptic management.

Conclusion.

I have now, gentlemen, reviewed the gradually and slowly built up additions to our resources and powers in controlling the progress of wounds, and the issues of abscesses. This I have not attempted to do in full detail, but rather tried to refer to the chief principles which guide us, and the character of the materials with which we work in carrying out these principles. It is unnecessary that I should endeavour to portray the contrast which may be easily drawn between surgery as it exists to-day and surgery as I witnessed it on my introduction to hospital as a student. Let it suffice to say that we who practise surgery to-day do so with a confidence and a sense of safety to which the surgeons of forty-five years ago were entire strangers, and this is an outcome of the application of scientific truths. The very fact that it is such an outcome makes it as necessary now as it was declared to be at first that we shall constantly keep before our minds what those scientific truths demand of us in the treatment of each individual case. If we maintain such a mental attitude we need not strive for, or indeed expect, absolute uniformity of practice. The more clearly we recognize the principles which are the common guides of all of us, the more we shall agree in that which is essential and be free to differ as we please in carrying out the various details of our everyday procedures.

* Since these lectures were delivered reports have appeared by different surgeons of the application to surgical practice of the so-called "vaccine treatment" evolved from the beautiful researches of Sir Almroth Wright. Among the cases recorded are some of the nature referred to in the text, where cure is said to have been effected in spite of the contamination of the abscess from without. A hope is thus raised that such cases may in the future lose their present hopeless character; and also that the progress towards recovery of uncontaminated cases treated antiseptically may be greatly accelerated.

References.

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DR. HUGHLINGS JACKSON'S VIEWS OF THE FUNCTIONS OF THE CEREBELLUM,

AS ILLUSTRATED BY RECENT RESEARCH.

Being the Hughlings Jackson Lecture for 1906.

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The Hughlings Jackson Lecture was founded in 1897, by the Neurological Society, to do honour to Dr. Hughlings Jackson, and to acknowledge the great service he has done to humanity by his work on the functions of the nervous system.

The power of genius evinces itself by the happy use of analysis and synthesis, with as a result the discovery of principles. Dr. Hughlings Jackson's writings are *all* such expositions of principles, and no one rises from their perusal without realizing that his conclusions are final without dogmatism, that a subject dealt with in his way always remains open for further scientific advancement, and finally that his reader has learnt far more than can be at once simply and adequately expressed. His teaching of first principles will always be gratefully remembered by the ever-increasing army of neurologists, but this is the opportunity for those of us who have enjoyed the inestimable privilege of being immediately his pupils specifically to recall the profound depth of our indebtedness to him. We feel that his precept and example has influenced us both in methods of work and in methods of thought. Of the former I need only now particularize his constant inculcation of accuracy in observation, and, above all, his insistence on the necessity for correlating disturbances of function with the structural changes found after death.

Of even greater value has been his method of thought, by which a thinker can keep his mind open to appreciate broad principles even when it is most inclined to be narrowed by close attention to detail. Above all, the intellectual width of his demonstration of the true principles of localization of function in the central nervous system, and how with the coexistence of such localization the functional activity of the nervous system as a whole can yet be estimated and philosophically considered.

Indeed, the greatest principle which underlies all he has written is the true nature of localization of function in the central nervous system—namely, that it is relative and not absolute, that conceivably every part of the body is

represented in every nerve centre, just as it of necessity is in the single primordial ovum. And that, when the central nervous system, considered functionally, is regarded in the view of Flourens as working as a whole the determination of action by any given part is never more than relative.

Perhaps Dr. Jackson's view of localization in the central nervous system is not always sufficiently remembered, and more especially when we are labouring with the difficulties of endeavouring to establish a differential diagnosis are we likely to forget that the whole machine is in active operation while our attention may be drawn to one part only.

In no sense is this truer than of the difference between and yet consonance of function in the cerebrum and cerebellum. Both organs are intimately correlated and both must be considered as invariably working together. Dr. Jackson's own confession of faith on this point is as follows:

> I believe that the cerebrum represents all parts of the body, and that the cerebellum also represents* all parts of the body. . . . That the cerebrum and cerebellum are engaged in any (every?) operation will, I suppose, not be doubted!—*Brain*, vol. x, p. 317.

But it is not only the correlation between the cerebrum and cerebellum that is of importance, we have to add to these two organs a third, the equally important spinal cord.

Dr. Jackson has for thirty years[9] impressed upon us the necessity of always remembering that an interaction of these three parts is continually going on, that if one of them is put out of gear—for example, by an accidental lesion—then the functional energy of the remaining parts must assert itself. Let me here point out that this logical conclusion carries with it the further assumption that a certain degree of nerve energy is being constantly evoked, and as constantly is passing from one part to the other, and in that sense the central nervous system does work as a whole.

In confirmation of this the experimental observations of Gotch and myself in 1891 on the marked diminution in the resting electrical difference of the spinal cord when it is separated from the brain may be quoted,[5] as well as the similar diminution or fall shortly before and at systemic death. Further, the "drainage" hypothesis of inhibition recently enunciated by Professor McDougall[12] also connotes the same idea—namely, that there is a certain quantum of nerve energy constantly being evoked in any given central nervous system; while finally, as I have often urged, the clinical pictures of surgical shock and of traumatic neurasthenia can only be explained on the same basis.

Thus each part of the nervous system influences another, and for a long time Dr. Jackson has spoken of that share of energy emanating from the cerebrum or cerebellum (the latter more especially) as the *cerebral* and *cerebellar* influx respectively.

The evidence of its occurrence must, as he says, be a positive phenomenon, and thus the causation of (post-cerebral) rigidity and tonic contracture has been regarded by Dr. Jackson under the view that if the higher centres of the cerebrum or cerebellum are constantly exerting an (efflux) influence on the lower centres, it needs only to remove the higher organ for example, the cerebrum to allow of the lower for example, the cerebellum producing effects of its own unhampered. Hence the doctrine of *cerebellar influx* as postulated by Dr. Jackson, but it is obvious that whatever be the ultimate explanation of early hemiplegic rigidity, his establishment of the principle of the production of motor phenomena of a chiefly tonic character by the lower level or bulbo-spinal apparatus when the highest level centres have lost their functional value, is of vital importance to neurology. His, in effect, is the converse of Setschenow's original position[13] in respect of the influence of the corpora quadrigemina or optic lobes in the frog on the reflex function of the spinal cord.

The questions that rise immediately for discussion when such a principle is advanced are those which must govern its application, namely, inquiries into the specific or individual function of localized centres.

[illegible] to remark that it equally includes the topographical presentation

For the present occasion of this lecture we will select the cerebellum.

To begin and end with the cerebellum, it is partly necessary to allude to previous ideas of the action of that division of the neural axis in its relation to the cerebrum and the spinal cord. Two hypothetical views thus prevail on the interaction between the cerebrum and cerebellum.

1. The cerebellum favours the activity of the cerebrum.
2. The cerebellum hinders the activity of the cerebrum.

I do not propose to enter upon a discussion of these views; because, at the present time, they deal only with the dynamic activity of the cerebral and cerebellar centres, and their output of energy, as estimated by the force of muscular contractions, wholly without reference to the facts of reciprocal innervation, as we now understand them, thanks chiefly to Sherrington's work,[18] and with very little reference to the subdivisions of the cerebellar and bulbo-mesencephalic tracts and structures.

Any systematic attempt to analyse the cerebello-cerebro-spinal interaction, or to trace the paths and degrees of its influence, must be based on facts which can only be ascertained by the physiological investigation of the following tracts:

I. *Cerebellum Cortico-nuclear Paths.*
Cerebellar cortex to nucleus dentatus.
" " " fastigii.
" " nuclei vestibulares.
" " pons Varolii.

II. *Cerebellum Nucleo-encephalic Paths.*
Nucleus dentatus to nucleus ruber.
" " thalamus.
" " griseum centrale tecti.
" fastigii to nuclei nervi vestibularis.

III. *Cerebrum Thalamo-cortical Paths.*
Thalamus to "excitor-motor" area.
" "equilibrial" area.

IV. *Cerebellum Nucleo-spinal Paths.*
Nuclei nervi vestibularis to spinal nuclei.

V. *Side Paths of Correlated Importance.*
Rubro-spinal tract.
Tecto-spinal tract.

For the complete investigation of these tracts it will be ultimately necessary to trace to their original source the nerve impulses which pass along them. So far, the data to hand are very incomplete, but in order that we may, if possible, analyse Dr. Jackson's position, we can arrange the facts at our disposal, and we shall find that they justify certain positive conclusions, all of which are in gratifying harmony with his speculations.

The primary distinctions in functional or physiological value between them must be grouped as follows:

1. Cerebellar effects alone.
2. Cerebellar effects *plus* cerebral influence.
3. Cerebellar effects *plus* spinal cord influence.

Unfortunately these combinations of functions cannot be properly analysed by clinical research, and what we observe in any given patient are extremely compound effects. On the other hand, since, in accordance with the Jacksonian view of localization of function, the seat of disease in the very large majority of cases acts as the "predominant partner" among the coexcited portions of the central nervous system, the purposes of diagnosis are often sufficiently met.

Such a consideration brings us back to the point of view previously expressed, that there is reason to believe that the output or quantum of nerve energy is fairly constant for the same individual, assuming, of course, that his normal physiological health is maintained. It is, of course, an obviously necessary corollary to such a proposition, that, given a considerable output of nerve energy from one focus or centre (in this sense one organ) there must be so much less from the remainder of the nervous system.

In other words, any compound group of symptoms must, at some time, exhibit a predominant characteristic, and, if it can be detected, of necessity demonstrates the localization of the disease as before said.

Though localization can, by these means, be partly ascertained, it is through experimental investigation of the interacting encephalic organs in the lower animals alone possible to effect the differential analysis we need, for only in animals can the Galenical method of exclusion of parts be deliberately and restrictedly applied.

So far this has been thoroughly accomplished only between the excito-motor cortex cerebri on the one hand and the lowest level bulbo-spinal centres on the other. This elemental analysis was begun by François-Frank and Pitres, and soon after confirmed by myself and others. Their well-known work consisted in the demonstration that whereas the muscle-contraction phenomena evoked by excitation of the cortex cerebri were essentially clonic in character, those obtained by stimulating the pyramidal fibres of the corona radiata conducting to the lowest level centres were tonic.

Precisely this condition had been previously surmised by Dr. Hughlings Jackson as follows:

> The cerebellum is the centre for continuous movements, and the cerebrum for changing movements. Borrowing medical terms to describe normal physiological conditions, the former (that is, *cerebellar*) are tonic, the latter (that is, *cerebral*) clonic.*—*The Medical Examiner*, April 5th, 1877.

In all discussions by Dr. Jackson of the "cerebellar" influence as contrasted to "cerebral" influence, his conclusions being drawn from clinical evidence, have been arrived at in full cognizance of the fact that all the groups of lower centres and paths, that is, cerebellar cortex, cerebellar nuclei intrinsic and extrinsic, as well as the bulbo-spinal system of lowest level centres are in action and co-operation.

The hind-brain, in short, from the point of view of physiological topography, consists wholly of Dr. Jackson's lowest level† of representation, to which the cerebellum, forming an appendage or "anhang" to the direct system, is superadded. It is probably owing to the development in the higher mammalia of the specialized pyramidal projection system that the cortex cerebri has physiologically become so different from the numerous lower nerve centres in the mode of its discharge.

In saying this, however, it must not be forgotten that even this difference is not absolute, as indeed every instance of ankle clonus suggests, and Schäfer and I proved experimentally in 1885 that the outflow of every nerve centre is fundamentally a combination of tonus and clonus.

Precisely as with the representation of movement, so is the character of the outflow different according to the proportionate degree of one or other of these two features of tonus and clonus. Hence Dr. Jackson's assertion of the essentially tonic characteristics of the discharge of the lowest level centres is not only of vital importance to cerebellar physiology, but it is in accord with the principles which underlie all nerve activity.

The best illustration that can be offered of the absolute truth of his general position on this point is that derived from a study of the epileptic convulsion. For this we happily need only to compare middle level and lowest level fits. In 1885-7 I found that in fits obtained by Magnan's absinthe method the type was clonic or not according to the proportionate activity of the cerebral cortex. Boyce, at my suggestion, removed a cerebral hemisphere in cats, and proved that such extirpation of the highest cerebral influences resulted in fits of a strikingly tonic character. I proposed this year to Dr. Bouché, who has for some time been investigating at University College the details of the epileptic convulsion, that he should repeat these experiments to settle finally the question, and this he has done very completely. A good example is the following experiment which I witnessed with him. A cat, three weeks after removal of the left cerebral hemisphere, in excellent condition (that is, to superficial appearance normal, walking, etc., but exhibiting the typical atopognosis, *mouvement de manège*, etc., of an animal deprived of one cerebral hemisphere), was etherized, and the right (the remaining) hemisphere found to be normally excitable to electrical stimulation. A small dose of absinthe was injected into the jugular vein, and the typical result obtained of a tonic-clonic fit (chiefly flexor) on the left side of the body, but only a tonic (chiefly extensor) fit on the right. The attitude of the trunk and head was that of moderate flexion. While such a fit was in active development we made an instantaneous section of the mesencephalon. Immediately the clonic movements were changed for tonic in the whole body, the head was powerfully drawn backwards, the left limbs and trunk gradually sharing in the extensor movement.

This sudden conversion from (what remained of) the higher to the lower type of fit was very impressive, and constituted a remarkable demonstration of Dr. Jackson's dictum, that "Speaking very roughly and neglecting some parts of the body, the cerebellum represents movements of the skeletal muscles in the order trunk, leg, arm, preponderatingly extensorwise: the cerebrum represents movements of the same muscles in the order, arm, leg, trunk, preponderatingly flexorwise." Dr. Bouché has established the constancy of this phenomenon by a series of successful ablations of one cerebral hemisphere and subsequent exploration with absinthe.

Perhaps the most brilliant experimental proof of Dr. Jackson's position is Leonard Hill's series of experiments[7] in which he varied at will the clonic or tonic character of an absinthe fit by respectively leaving open or clamping the arterial supply to the cerebrum.

So, too, as regards the lowest level of all—namely, the spinal centres. The phenomenon first discovered by Schiff,[16] and confirmed by myself and other workers, of extensor convulsions of the tail and hind limbs occurring even after section of the spinal cord, is a clear illustration of the tonic-extensor character of a lowest level fit.

Finally, Loewenthal, in an interesting work[10] on the effect of anaemia on the spinal cord, obtained spinal fits in which, with flexion of the spine and hips there occurred extension of the tail, knees, and ankles.

An extreme example of such tonic response attributable in the main to cerebellar influence is illustrated in Dr. Jackson's communications published in 1871. The extreme contracture extension of the head (with lateral attitude in Figs. 1 and 2) and lower limbs and tonic flexion of the fore limbs, are clearly demonstrated in the sketches by Sir Stephen Mackenzie, whose absence to-night we all regret. But we must postpone for a few moments the determination of the precise source of the representation of these movements.

With the guidance of Dr. Jackson's principles of localization we must now endeavour to trace out the nerve impulses which have this power of evoking such a definite and specific association of muscular phenomena.

After what has been stated it follows that the direct investigation of the problem of Dr. Jackson's views on "cerebellar influx" naturally begins with the cerebellum itself.

As Thomas was probably the first (on anatomical grounds) to suggest,[20] the cortex cerebelli and the (intrinsic) nuclei cerebelli must now be considered as two distinct organs. Dr. R. H. Clarke and myself,[3] by means of lesions *actually* restricted to the cortex cerebelli and tested by the Marchi method, have proved this opinion to be a neurological fact, and have demonstrated that:

1. The cortex cerebelli sends no direct axones via the cerebellar peduncles to the brain or spinal cord.

2. The cortical efferent axones terminate in the intrinsic nucleus dentatus, nucleus fastigii and nucleus emboliformis vel globosus.

3. The intrinsic nuclei send efferent axones to the cerebral, spinal, and paracerebellar—that is, bulbar—nuclei.

The cytological investigations of Kölliker, Ramon y Cajal, etc., Retzius by the Golgi method, and Clarke and myself with polychrome blue, of these nerve centres, confirm the results obtained by the degeneration method, for whereas the cerebellar cortex is, histologically speaking, a structure *per se*,* the intrinsic nuclei are morphologically homologous with the efferent apparatus of the bulbo-spinal system. Particularly is this the case with the roof nucleus, one class of cells therein being typically spinal efferent in character.

So much for morphological evidence respecting the nature of the parts of the cerebellar apparatus. A phenomenon like that of tonic muscle contraction and the source of its maintenance, however, can only be investigated physiologically.

In 1904 I made a few experiments on dogs at Dr. Jackson's suggestion as follows:—In one group the mesencephalon was divided at the level of the intercollicular

*The italics in brackets are mine.—V. H.

†In Dr. Jackson's own words: "The lowest level extends, it is suggested, from the tuber cinereum to the conus medullaris. It is made up of sensory and motor centres of the cord, medulla, pons and aqueduct representing the body in detail."

*The nearest morphological homologue to the Purkinje cell system is Clarke's column in the spinal cord and the cells of the "cerebral" root of the fifth nerve.

groove. The degree of the resulting decerebrate rigidity—that is, Dr. Jackson's "cerebellar influx" was then tested during and after removal of the cerebellar cortex in sections from above down. The hypertonus was not appreciably affected by such extirpations until the section involved the intrinsic and paracerebellar nuclei.*

In another group of but two experiments a large horizontal lesion separating the dorsal half of the cerebellar cortex, omitting the nuclei (save in one case where one of the nuclei fastigii was destroyed), was made three weeks before the division of the mesencephalon. In these cases, also, no appreciable difference was observable in the decerebrate rigidity from that seen in normal animals.

Finally, this is the place to refer to the work accomplished by Dr. Thiele[19] in his investigation of the sources of the phenomena of hypertonus known since Sherrington's original investigation as decerebrate rigidity. Thiele found that, apart from the autonomic action of the spinal cord, the plane of the principal source of the motor impulses evoking the rigidity is the level of the paracerebellar nuclei (that is, Dieter's nucleus, nuclei vestibularis, nucleus magno-cellularis substantiae reticularis, etc.).



Fig. 1.—Tetanus-like seizure.†
(Case of tumour of the middle lobe of the cerebellum.)

So far, then, the evidence by experiments on disordered function tended to show that the immediate source of the "cerebellar influx" must be looked for in the basal or nuclear region of the cerebellar complex, and that the activity of the cortex cerebelli, though physiologically antecedent thereto, is not essential to the maintenance of the contracture phenomenon. The next step, naturally, was the direct re-exploration of the cerebellum, and that Dr. Clarke and myself have entered upon.

During nearly one hundred years various investigators have endeavoured to obtain evidence of cerebellar function by the excitation method‡ either chemical, mechanical, or electrical, but, as a critical survey of the methods employed and of the results we have obtained up to the present show, it is probable that the effects observed by our predecessors were due to irritation of the subjacent nuclei and neighbouring tracts rather than to excitation of the cortex, except when the intensity of the stimulus was very high—that is, when the whole apparatus of cortex and nuclei is simultaneously thrown into an active state.

The differential exploration of the cerebellum entails among many other problems, first, that of focally irritating any given point (square or cubic millimetre is the unit adopted by Clarke and myself); and, secondly, of marking and destroying it for the purpose of accurate localization, and of tracing secondary degenerations therefrom.

We* have, as described in a preliminary communication, been enabled to do this with a special apparatus carrying, by glass insulated fine needles, a current which can be readily changed from faradic to constant at will, to any desired spot in the encephalon.

This method of investigation has brought us to the following conclusions:

First Conclusion.—*That the cortex cerebelli is inexcitable when compared to the cortex cerebri of the gyrus centralis anterior (ascending frontal gyrus).*

The immediate inference from this result is that the cortex cerebelli is not to be regarded as a motor centre or series of such centres, but as an afferent receptive centre

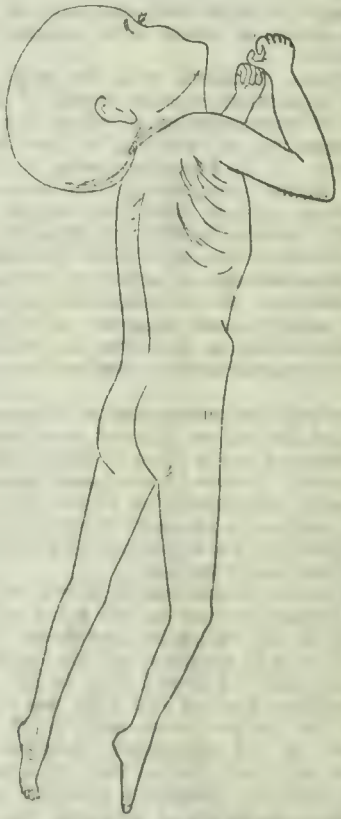


Fig. 2.—Cerebellar paralysis with persisting rigidity.
("Cerebellar attitude" in a case of tumour of the middle lobe of the cerebellum.)

from which axones pass to the ventrally-placed efferent nuclei. In fact, the cortex cerebelli is somewhat parallel in arrangement to the pallial visual cerebral centre.

It must now be shown how far this position has been already established by previous researches on other lines and methods.

The vermis region of the cortex cerebelli is the end station of the dorsal spino-cerebellar tract (of Flechsig) and the ventral spino-cerebellar tract (of Gowers). These paths are sensory tracts of the second order in the central nervous system, and therefore are really homologous to the fillet. In that case the cerebellar cortex in the general scheme of the nervous system cannot be considered physiologically higher than the ventro-lateral region of the thalamus.

The termination of these spinal tracts of fibres in the cortex cerebelli discovered by Mott" deserves, but has not yet received, a minute numerical analysis. Mott traced the dorsal spino-cerebellar tract to the middle lobe

* In the [illegible] it will always [illegible] that [illegible] were correct, and that [illegible] effects were [illegible] the lesions involved the "middle" of the whole cerebellum.

† The [illegible] of this figure, of course, in use for centuries before the excitation method.

* Henceforth in the lecture, wherever the expressions "we," "us," "our" are used, they must be understood to refer to Dr. Clarke and myself.

(Elliott Smith) of the vermis and the ventro-lateral tract to the lobus centralis, while the further development of the nature and functions of these paths we owe to Tooth, Cohnstamm, Auerbach, and Sherrington.

I have myself made in different animals minutely limited lesions of both tracts, and like all other observers have fully confirmed Mott's original description. The direct cerebellar tracts have of recent years been made the subject of closer physiological study. Thus Marburg found that section of the tractus spino-cerebellaris dorsalis (Flechsigii) was followed by extension of the homolateral limbs which were abducted from the trunk and in a state of hypotonia although sensation and the spinal reflexes were both normal. So, too, Bing.

The time is not yet ripe to take advantage of the careful clinical work of Petrén on the ventral tract, but the general conclusions which can be justifiably drawn from the facts at our disposal, confirm Dr. Jackson's position that the atactic helplessness is primarily due to loss of information—that is, of afferent impulses.

As regards the question of the posterior columns being through their terminal bulbar nuclei partly a spino-cerebellar tract, it ought, perhaps, to be added here that, like many observers, I have not traced any fibres into the inferior peduncle from the posterior columns.

This last-named anatomical fact is but an extension of the physiological position arrived at by Professor Hermann Munk, who demonstrated that section of the posterior columns did not produce ataxy whereas lesions of the posterior roots did.

Time unfortunately does not permit me to discuss further the enormously interesting and important work of Hering,[8] Mott and Sherrington,[14] Trendelenburg,[21] and especially of Bickel,[1] in this part—namely, the sensory or afferent side of the subject. I must strictly confine myself to the "motor" effects.

We recognize as the result of these morphological* and physiological considerations, that the cortex cerebelli is an afferent recipient organ, as Edinger has always taught, and that the impressions from the trunk and limbs which it receives by these secondary neuronic systems from the spinal segments of the cord are of a special character, being already co-ordinated. What is true of the spinal afferent paths is apparently also true of the cranial nerve tracts, except that the intrinsic cerebellar and para-cerebellar nuclei additionally receive primary collaterals directly from the entering root fibres.

To return now to direct physiological investigation of the efferent phenomena. Clarke and myself have found that while excitation of the surface of the cerebellum is without effect, when on the contrary the insulated needles penetrate the cerebellar cortex, a minimal stimulus gradually becomes maximal as the needle points are made to approach the intrinsic nuclei, which are highly excitable, and give rise to such precise motor effects as to establish as follows our second conclusion.

Second Conclusion.—*That the intrinsic and the para-cerebellar nuclei are the efferent mechanisms of the cerebellum.*

To use Dr. Hughlings Jackson's terminology, these nuclei are the immediate source of the "cerebellar influx," the cortex cerebelli standing in the same causal relationship to the resultant motor effects as does the afferent side of every nerve centre.

The muscular contractions which follow excitation of these nuclei must be surveyed from two points of view to compare them with Dr. Jackson's opinions; first, the topography of the part of the body represented, and secondly, the character of the muscular contraction observed.

(1) *Topographical Representation in the Cerebellar and Paracerebellar Nuclei.*

As yet our researches are not completed, but provisionally it may be asserted that the essential motor representations of the parts of the body in the intrinsic and para-cerebellar nuclei are in the former the movements of the eyes and head, in the latter more especially those of the trunk and limbs.

(2) *Character of the Muscular Contraction.*

The character of the motor effects obtained from excitation of the efferent side of the cerebellar apparatus is very striking and precisely of the kind originally ascribed by Dr. Jackson to it, namely, tonus and hypertonus. The movement even of the eyeballs is a steady swing over, which increases in contractile force as the excitation continues and without any clonic intermission of the motion or any development of any after-effect when the stimulation ceases. This being understood, the next questions respecting the character of movements derived from the efferent cerebellar mechanism are: (*a*) their relation to the middle plane of the body; (*b*) differentiation between flexion and extension.

(*a*) *Relation of the Cerebellar Influx to the Mid-plane.*—We find that when the stimulus is unilaterally applied to the intrinsic cerebellar nuclei, the effect as gauged by the action of the systemic muscles is homolateral, contrasting with the typical cerebral contralateral phenomena. A demonstrative example and proof of this principle, which was first enunciated by Luciani,[11] and especially by Risien Russell,[15] is afforded by the result of our direct excitation of the upper part of the dentate nucleus alone, which we find evokes deviation of the eye of the same side, followed by conjugate deviation of both the eyes and head from the middle line to the same side.

So, too, excitation of the basal region of the dentate nucleus and the upper divisions of the paracerebellar nuclei of one side evokes powerful bicipital flexion of the homolateral elbow.

(*b*) *Relation of Flexion to Extension.*—As regards the second point, Clarke and myself find, that while excitation of the basal region of the dentate nucleus with a maximal stimulus will produce, in addition to the homolateral conjugate deviation of the eyes and head, flexion of the homolateral elbow, a deeper excitation, that is, of the paracerebellar nuclear region itself, produces widespread and additional effects, namely, extension of the contralateral elbow, hyperextension of the neck and trunk, with powerful extension* of the lower limbs. While, therefore, the forelimb is flexed at the elbow the hind limb is extended with the trunk.

Before pointing out the identity of these movements, we have observed, with those Dr. Jackson has taught for thirty-five years to be characteristic of the cerebellar apparatus and lowest level centres, I must revert for a moment to the debatable question of special representation in the central nervous system of the progression-like movement of extension of one limb associated with flexion of the corresponding contralateral limb, which is involved in the discussion of our observations on the paracerebellar mechanisms.

The analysis of such regular and adjusted alternation of motor function carries with it several fundamental considerations, of which the most important is the first, namely, what is the highest plane in the neural axis from which such a characteristic phenomenon can be elicited by direct excitation?

Sherrington had in his work on decerebrate rigidity proved the existence of a co-ordinated organization of the lowest (spinal) centres for the simultaneous performance of similar movements by alternated and contralateral limbs, and had proved the alternated character of representation in the spinal centres. Thiele then, in an exhaustive inquiry by the excitation method, combined with previous exclusion of the pyramidal tracts by degeneration, demonstrated that in the posterior third of the optic thalamus there exists a "centre" for progression—that is, walking.

The ablation experiments of various observers, especially Goltz, had proved for many years that, roughly speaking, the cerebral pallium was, in the quadrupedal animals at any rate, not absolutely essential to the functions of standing and walking.

It follows, therefore, that the compound movement of walking is at least represented in the red nuclear region, and that one efferent path is therefore Monakow's or

* Previous to the determination of the existence of direct spino-cerebellar afferent paths, the existence of a relationship of the spinal cord areas to the middle lobe of the cerebellum had been theoretically suggested by Prideaux (*Medical Times and Gazette*, September 24th, 1864, p. 340) from consideration of the relative evolution of: (1) tactual sensibility of the skin of the body—that is, spinal distribution—and of the lateral cerebellar lobes: of (2) muscular power and co-ordinated "muscular sense associated with development of the middle cerebellar lobe." I have to thank Dr. Hughlings Jackson for kindly referring me to Prideaux's paper.

* For a perfect illustration of this cerebellar movement in man, see A. Fig. 1, of Dr. Jackson's paper, published in 1871. While such extension is observed to be the end result it is necessary to state that the hamstring and sural muscles are also in action, though with less efficiency than the extensors, which preponderate, to quote Dr. Jackson's words.

the rubro-spinal bundle. Progression is, of course, an associated movement of primal importance and of co-ordination. It is therefore reasonable that it should have a parallel representation in the paracerebellar nuclei, just as in the thalamus, and finally in the elementary manner of the reciprocal association of flexion and extension in the spinal segments.

We therefore consider the representation of the limbs in the paracerebellar nuclei, as far as the upper limbs are concerned, to be compound and partly of the progression-movement type. But it must be further noted that in progression (for which the attitude of standing is practically requisite) the action of the remainder of the body, namely, the trunk and lower limbs, is especially that of extension. Thus the trunk is either held straight in extension or over-extended so as to cause a dorsal concavity, while the lower limbs are extended as aforesaid; hence in man and the erect apes standing is impossible after destruction of the paracerebellar mechanisms.

The "cerebellar influx" of the trunk and lower limbs is, therefore, *par excellence* extension, but for the minuter and proportionate representation of flexion and extension in the cerebellar and paracerebellar nuclei reference must be made to a forthcoming paper by Dr. Clarke and myself.

Enough has now been said to show that Dr. Jackson's views of the nature of the cerebellar motor output, and his mode of interpreting the stimulation effects of gross cerebellar lesions, have been amply substantiated by the findings of experimental differentiation, but his facts of illustrative interest must now be again quoted. The republication of his description of two cases on which his views have been in part founded makes this easy.*

It will be recognized that Dr. Jackson's conclusions were founded on instances of massive bilateral excitation of the whole cerebellar complex, and therefore in his cases and Sir Stephen Mackenzie's striking sketches, we see that the features of the alternate movements of progression are entirely overwhelmed by the cerebellar disturbance with as resultant a strikingly peculiar position of the body, namely, hyperextension of the head, trunk, and hind limbs associated with powerful flexion of both elbows.

I think it must be granted that, under the circumstance of secondary intraventricular distension occurring in such cases, the removal of the cerebral influx is a natural consequence of the condition. This special combination of muscular contractions, which Dr. Jackson has termed "the complementary inverse of epileptiform seizures," is comparatively rare, but as a contribution to the subject I may allude to an instance of glioma cerebelli in a boy whose case I recently reported to the Society. In that case we repeatedly observed severe "cerebellar fits" of Dr. Jackson's type, and an operation enabled a glioma of considerable size to be removed from the right lateral lobe of the cerebellum. The boy remains in perfect health, and it can only be assumed that the paracerebellar structures were at least severely pressed upon only and not destroyed. So, too, in Dr. Farquhar Buzzard's very interesting case of diagnosed lesion of the cerebellum, a like affection of the nuclei doubtless existed. The discussion of the subject of extension, as Dr. Jackson's characteristic muscular movement, resulting from cerebellar and lower level centres' active influence cannot be closed without allusion to his teaching concerning the representation of eye movements in the cerebellum. From the first Dr. Jackson has considered that since the cerebellum is the essential organ in locomotion and progression, as just narrated, there must be represented therein associated ocular movements.

Now, in accordance with this view, Dr. Clarke and I have found that the eye movements described by Ferrier as obtainable by excitation from the surface of the cerebellum, owe their motor genesis, not to localized centres in the cortex cerebelli, but to foci in the intrinsic nuclei.

We have found that the simplest movement in a binocular vision animal like the monkey is derived from the dentate nucleus, and consists of a conjugate deviation to the homolateral side, and further, that as the excitation point approaches the midline (and the neighbourhood of the nucleus of the sixth nerve below), differences in deviation tend to appear.

The analysis of these functions will take some time, probably years, to complete, but one condition is well worthy of notice, namely, that originally observed by Magendie, which Dr. Jackson has spoken of as skew deviation, and in which the eyes are directed in opposite ways. Thus, one visual axis is directed up and in, while the other is down and out.

Dr. Jackson has always urged that this apparently parodoxical phenomenon is really only half a normal binocular conjugate deviation, and he traces skew deviation to a destructive lesion affecting one half of an individual's apparatus for the locomotory appreciation of distance and position in space, the localization of such an apparatus being as yet incomplete, but unquestionably in the temporo-cerebellar complex. The experimental illustration of the truth of this view occurred by the following happy accident.

Having for other purposes selected the armadillo (*Dasypus villosus*) as almost the lowest available mammalian type of cerebellum, Dr. Clarke and I were gratified to find on excitation of the intrinsic nuclei that skew deviation was the rule in this animal,* and that inasmuch as it is remarkably monocular in almost every position of its head, it clearly illustrates Dr. Jackson's views most completely, since it normally employs but one half of a binocular apparatus.

The coaptation of eye movements with those of the limbs in locomotion of the body by means of the limbs is, theoretically, a fundamental physiological fact in man and the higher animals. Dr. Clarke and I suggest, therefore, that the true results of cerebellar excitation are those which give first place to the representation movements of the eye rather than of the limbs, which conclusion is in general accord with Ferrier's pioneering observations.

The *antecedence* of eye movements in all skeletal muscular actions is well recognized in most cases, but the fundamental importance of such time relation in cerebellar physiology has scarcely been so much appreciated.

Conclusion.

This brings me to the general conclusion with which any statements of cerebellar function must now be summarized—namely, that all research, ancient and modern, tends to confirm the view of Flourens, Luciani, Jackson, and Edinger, that the cerebellar cortex is the first chief station of representation of the afferent basis of movements of all the skeletal muscles.

Gratefully to acknowledge to Dr. Jackson his share in bringing order out of confusion in this and many other departments of neurology is the object of our meeting here; and greatly as I feel the honour of being selected as the Society's representative to-day, I esteem the charge of communicating your thanks to him as my highest privilege.

May I add the expression of our hope that we may long continue to enjoy his illuminating speech and his stimulating example?

Literature.

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* See the original paper of Dr. Jackson.

* The three animals, monkey, dog, armadillo, thus arranged, show very strikingly the increase in skew deviation as the vision becomes [illegible].

ON IODINE-SPIRIT CATGUT.*

By J. SCOTT RIDDELL, M.V.O., M.A., M.B., C.M.,

SENIOR SURGEON AND LECTURER ON CLINICAL SURGERY, ABERDEEN ROYAL INFIRMARY.

o link in the aseptic chain requires to be more ıoroughly tested than the sterility of the ligature and ıture material buried in the tissues. Thousands of ards of catgut are used every year by the busy surgeon, ıd every inch of it is a possible source of infection. ottle catgut as supplied by the manufacturer is xpensive, and faith in it speedily wanes, so that the perator sooner or later finds it necessary to experiment ı order to determine the best method by which he may repare reliable catgut for his own use. I made a series f experiments, some of them involving complicated ıethods of preparation and the use of special apparatus, ut many were attended by undue difficulty and by ailure to secure uniformity in the finished material, and was thus led to discard in turn Elsberg's ammonium-ılphate catgut, as used in the Eppendorf Clinic at Iamburg; cumol catgut, at one time the stand-by in eipzig; formalin catgut, and others. It was only some wo years ago that I discovered a method so simple and eliable as to mark it out as the plan of choice.

The cardinal attributes of an ideal catgut were tabulated y Moschcowitz as follows:[1]

1. It should be absolutely sterile.
2. In the course of its preparation it should not lose any of ts tensile strength.
3. It should be readily and simply prepared and without any ndue expense.
4. It should be absorbed completely, but only after it has erved the purposes for which it was intended.

It is my desire to show in this paper that iodine-spirit atgut fulfils all these conditions of an ideal catgut, and hat it can be easily prepared and stocked by the surgeon r general practitioner without special apparatus, at little xpense, and with uniformly good results. A clinical xperience of over 1,000 operations in which this catgut ıas been employed in my practice, including all forms f abdominal work, general and gynaecological, has con-inced me that it is trustworthy in all circumstances. Laboratory experiments incorporated in the bacterio-ogical report given below support and form a scientific oasis for these clinical observations.

A short summary of the history of the sterilization of catgut by iodine is a necessary foreword to the thorough ınderstanding of the method to be described.

The advantages of iodized catgut were first brought before the surgical world by Claudius in a paper published n 1902, on a method for "Sterilization and Sterile Preser-vation of Catgut,[2] followed in 1903 by a statement in the same journal of the results obtained.[3] By his method, which we may call the "iodine-water method," raw catgut s kept for eight days in a solution of iodine 1 part, potassium iodide 1 part, and water 100 parts. When it s to be used it is placed in 3 per cent. carbolic solution or sterile saline, by which the excess of iodine is washed away. From lying in the iodine the catgut assumes a deep black colour and is absolutely sterile. In this 1 per cent. aqueous solution of iodine staphylococci are killed in three minutes and anthrax spores in twenty hours. Claudius made many experiments, and found that after eight days in the solution no growth of aërobes or anaërobes from infected paper was observed. He advised that the catgut, before using, should be placed in carbolic or sterile fluid for a short time—not to exceed one to one and a half hours—as it was found that after twenty-four hours in such solution all the iodine and the peculiar consistence was gone. In 25 patients operated on there was no inflammatory reaction and the gut was completely absorbed in from twelve to sixteen days.

Von Hippel[4] reported that raw catgut treated in this way was usually free from germs in thirty minutes and from anthrax spores in one and a half hours, but the latter observation is certainly open to doubt.

Zimmer found that this catgut behaved as follows in 250 cases:

98.75 per cent. of all wounds healed *per primam.*
1.25 ,, ,, ,, *per secundam.*

* Communicated to the Aberdeen Medico-Chirurgical Society.

Bloch of Copenhagen found it excellent and used it extensively, but reported that after seven months' keeping it was somewhat brittle, and Professor Wanscher (Copenhagen) made a similar complaint.

In an excellent article,[5] Alexis V. Moschcowitz of New York described a modification of the Claudius method, which he had found it necessary to institute, owing to the brittleness of the catgut, which he discovered to be due to the long immersion in the aqueous iodine solution. After the statutory eight days he removes the catgut from the solution into sterile Petri dishes, in which it is kept till it is to be used. From his clinical experience and from over 170 experiments, which are detailed in his paper, he concludes that:

1. The dry iodine catgut is absolutely sterile.
2. It is impossible to infect it by ordinary means.
3. Its imbibition with iodine is not sufficient to act as an irritant on the tissues.
4. Its tensile strength is superior to raw catgut and to that prepared by the sublimate and alcohol method.
5. It is easily and cheaply prepared.
6. It is absorbed only after it has served the purposes for which it was intended.

Recognizing the great advantages of iodized catgut, and though aware that antiseptics act more strongly in an aqueous solution, I decided some two years ago to give a fair trial to a method described by Salkindsohn, in which spirit is used instead of water as the iodine medium. His directions are to use tincture of iodine 1 part, proof spirit 15 parts, and to keep the catgut immersed for eight days before using.

I have used catgut so prepared in many hundreds of operations as ligature and suture material, and have nothing but good to say of it. After some months' clinical experience the advantages of the method impressed me so much that I thought it wise to have a series of observations conducted by a bacteriologist with a view to establishing the procedure on a sound scientific basis. I was fortunate in securing the kind help of my friend, Dr. G. G. Macdonald, Travelling Thompson Fellow of Aberdeen University, who conducted his investigations in the bacteriological laboratory of the London Hospital. His report, which I subjoin, entirely corroborates all that I have found clinically, and proves conclusively that the method is reliable in every way, and is specially fitted for general use from its simplicity.

Dr. Macdonald's report is as follows:—

The iodine solution used in the experiments was prepared according to the following formula:

Tincture of iodine (*B.P.*) 1 part, proof spirit 15 parts. Since proof spirit contains 49.24 parts of alcohol to 50.76 parts of water by weight this is very approximately the same solution as was recommended by Salkindsohn, who uses 50 per cent. alcohol.[6]

The catgut was wound on glass spools and placed in the solution of iodine for periods varying from five minutes to ten days. The spools were then washed each in a fresh quantity of sterile normal saline (0.85 per cent.) solution for one hour. Thence each was transferred to tubes containing 10 c.cm. bouillon which were then incubated at 37° C. for four days. This includes the first series of experiments.

The spools thus found to be sterile were impregnated with *Staphylococcus pyogenes aureus*, *Bacillus typhosus*, and spores of *Bacillus mesentericus* and anthrax. This was done by immersing the spools in twenty-four-hour broth cultures of the staphylococcus and of the *Bacillus typhosus* and incubating them for twenty-four hours at 37° C. The infection with *Bacillus mesentericus* spores was done by immersion in a three-day-old broth culture for twenty-four hours and that with anthrax spores by the usual method for the preparation of anthrax-spore silk threads. In one set of experiments with *B. mesentericus* spores the catgut was tied in skeins. They were washed in sterile normal saline solution, transferred to broth and placed in an incubator at 37° C. for four days as in the first series.

The results are exhibited in the following table, from which it is obvious that catgut infected with staphylococcus or the typhoid bacillus is sterile in two to three hours, with anthrax spores in two to three days, and with the highly resistant spores of *Bacillus mesentericus* in four to six days.

Each group of experiments was performed with freshly prepared solutions of iodine, as it would appear that the iodine is used up in the process. Thus in the residual iodine solution from the first batch of experiments were immersed spools infected with *Bacillus typhosus* and *Staphylococcus aureus*. These were not sterile till six to twenty-four hours, compared with three hours in the fresh solutions. Hence the importance of having a large excess of the solution bathing the catgut spools.

Sterilization of Catgut by Iodine-Spirit Method.

Time in iodine spirit.	Commercial catgut, wound on spools and placed in iodine spirit for various periods as follows: (In the catgut staphylococcus, *B. pyocyaneus* and sapo-sporing organisms were found by cultivation.)	Sterilized catgut infected with *Staphylococcus pyogenes aureus*, as above.	Sterilized catgut infected with *B. typhosus*, as above.	Sterilized catgut impregnated with anthrax spores. (Killed by 4 to 7 minutes' boiling.)	Sterilized catgut infected with spores of *B. mesentericus* (resisted 18 mins. at 100° C.)	Sterilized catgut (tied in skeins) infected with spores of *B. mesentericus* more resistant than the above (being killed by 23 and not by 20 minutes' boiling.)
1 min.	S.A., B.P., sp.	...	T.	...	...	...
2 mins.	S.A., B.P., sp.	S.A.	T.	...	...	...
3 hr.	S.A., sp.	S.A.	T.	B.A.	...	...
4 hr.	S.A., sp.	S.A.	T.	...	M.	M.
7 hr.	sp.	–	–	...	...	...
8 hrs.	sp.	–	–	...	M.	M.
9 hrs.	sp.	–	–	B.A.	...	...
1 day	sp.	–	–	B.A.	M.	M.
2 days	sp.	–	–	B.A.	M.	M.
3 days	sp.	–	–	–	M.	M.
4 days	–	–	–	–	M.	M.
5 days	–	–	–	–	–	M.
6 days	–	–	–	–	–	–
7 "	–	–	–	–	–	–
8 "	–	–	–	–	–	–
9 "	–	–	–	–	–	–
10 days	–	–	–	–	–	–

A minus sign = organisms sterile.
S.A. signifies *Staphylococcus pyogenes aureus.*
B.P. " *Bacillus proteus.*
sp. " sapo-sporous organism.
T " *Bacillus typhosus.*
M " *Bacillus mesentericus.*
B.A. " *Bacillus anthracis.*

That the catgut thus sterilized possesses considerable antiseptic properties was demonstrated by inoculating a bouillon tube with *Staphylococcus pyogenes aureus*, and then immersing in it a spool of catgut which had been in the iodine solution for seven days. Growth failed in each case; in the controls, where the iodine was removed by washing in 100 c.cm. sterile salt solution, abundant growth was present after twenty four hours. This antiseptic property would tend to prevent infection from the hands during the manipulation of the catgut at operations.

From two years' constant use of the iodine-spirit catgut I venture to summarize as follows:

1. It is sterile. Dr. Macdonald's experiments and the results of its extensive use at my operations show this conclusively. It has moreover, as pointed out above, the same antiseptic properties as Moschcowitz claims for dry-iodine catgut.

2. It loses none of its tensile strength in preparation, and, what is more important and an advantage over Cargile's catgut, it can be stored indefinitely in the solution in which it is prepared without becoming brittle. The catgut is soft and very nice to handle.

3. It is readily and simply prepared, and without any outlay of expense. This is an important desideratum, and I know of no method which can in any way compare with it in this respect. Any one can prepare the catgut with the greatest ease and with absolute certainty of result. I may say that for hospital work my house-surgeon prepares all the catgut required, and for private work the theatre nurse at a nursing home is quite competent to carry out the process. The transference to sterile Petri dishes in Moschcowitz's dry-iodine method involves a risk of contamination which is not possible here. All that is required is a glass jar, a supply of iodine-spirit solution, commercial catgut (preferably Hartmann's), and a few glass spools. I would give the following hints as to the preparation of the catgut: Ordinary glass tubing about the thickness of the little finger should be cut in lengths of 2 in. This is long enough to take one length of Hartmann's catgut in single layer without knotting. The catgut must be tightly wound on the tube, or, what is better, the tube should be rolled into the catgut as described in Binnie's *Operative Surgery*. The catgut is first fixed, either by tying it through or round the tube, and when wound on is fixed with a slip loop below the last turn. The spools are immersed in the solution and are kept there indefinitely till they are to be used. They must not be used till the eighth day after immersion, and for guidance the date of immersion and the size of the catgut should be noted on a small label on the side of the glass jar. No. 2 catgut I find most useful for ordinary purposes, and a larger supply of it should be prepared than of the other sizes. If many spools are immersed in one jar and are not used for some weeks after immersion, it is well to add fresh iodine-spirit solution at intervals of two to three weeks, so that one may be certain that there is always an excess of iodine bathing the catgut.

4. It is absorbed completely, but only after it has served its purpose. I have had no trouble from delayed absorption of ligature or suture. A fair test of this is its suitability for subcuticular suture.

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MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

SPRAINS AND THEIR CONSEQUENCES.

As a continuation of this subject, the following account of an unusual lesion may be of interest:

The patient, D., slipped on his doorsteps and fell. He has no idea how he landed, but found that his right wrist was painful and that there was a slight abrasion on the radial side of the joint.

When I saw him first, a fortnight later, he had been applying lotion and had the arm in a bandage and sling. The wrist joint was swollen, painful, and red; there was a small amount of fluid in it, and on movement there was distinct crepitus on the dorsal surface, which might or might not have been tendinous. A splint was applied, and two days later an *x*-ray photograph was taken, when it was seen that a large triangular piece of bone had been wholly or partly broken away from the dorsal edge of the lower or articular surface of the radius and projected above the dorsal surface of the bone. The splint was kept on for several days and both passive and active movements used every evening. The crepitus soon disappeared, and, movements being without pain, the splint was dispensed with at the end of a week.

Measured with calipers, the antero-posterior diameter of the right radius at its lower end is now about 1 in. more than that of the left. Flexion is slightly limited, and there is slight tenderness over the seat of fracture.

As it is scarcely a month since the accident, the patient can look forward to practically normal use of his wrist.

London N. A. E. Shoyer, M.B., B.C.Cantab.

COINCIDENT EMBOLISM OF CEREBRAL, MESENTERIC, AND FEMORAL ARTERIES.

Mrs. H., aged 67, was seized with severe pain in the abdomen about midnight on February 10th, and shortly afterwards began to pass blood per rectum. When seen by Dr. Jas. Macfarlane in the morning she had passed about half a pint of blood and the pain was still very severe.

Four hours later we were sent for again, as the family had noticed that the patient's speech had become indistinct, and we then found hemiplegia affecting the left arm and leg and the left side of the face. The discharge of blood had ceased, the abdominal pain was a little less, and the diminished rigidity rendered distinctly palpable a large tender swelling in the right iliac region. The question arose whether this might be an intussusception with

secondary cerebral apoplexy due to straining, but the patient, who was quite conscious, said there had been no straining; the blood had merely trickled from her—indeed, she was uncertain from which passage it came—and our examination of the blood showed it to be free from mucus. Moreover, the tumour had not the rounded outline of an intussusception, but was flat and extended more towards the middle line. The heart was rapid and irregular, and no distinct murmur could be detected, but five months previously we had attended the patient for a Pott's fracture, due to a fall, which she could not properly explain, but which seemed to be the result of a fainting turn, and at that time a mitral murmur was found. Our diagnosis of embolism was further confirmed when, within a day or two, the right leg—the one unaffected by the hemiplegia—became cold and discoloured with a bluish mottling from 6 in. above the knee downwards. No pain in this limb was complained of, but by this time the patient was semicomatose and could not feel pain. She died on the fifth day from the onset of the abdominal symptoms.

Sanquhar. T. R. Rodger, M.D.

WEST AFRICAN CLIMATE.

An examination of the numbers of Europeans on the sick list at Sapele, Southern Nigeria, British West Africa, in relation with the meteorological records, shows that the greatest number of cases of illness occur when the difference between the midday and midnight temperature is greatest, that is, during the dry season. The figures for the last three years show a great general improvement in the health of the Europeans in the place, due in all probability to: (1) Clearing away the bush; (2) digging ditches to drain the water off; (3) inducing the Europeans to take quinine daily, and to take interest in sanitation by the formation of a local sanitary Board and European reservation. A further improvement is to be expected, as quinine is now being supplied to the natives, who also bring their children for quinine injections.

The months during which there has been the greatest variation between the daily maximum and minimum temperature for the years 1902-5 inclusive are February, March, and April. During these months the diurnal variation has averaged 17° F., and the number of Europeans sick has averaged 6.3 per month. July, August, and September are the months of least diurnal variation, the average being 8.26° F., and the average number of Europeans sick for those months has been 3.83.

Table showing Number of European Residents under Medical Treatment.

1900-2, before the Board: and 1903-5, after the formation of Sanitary Board.

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1900	8	8	6	6	5	3	4	8	9	5	8	9
1901	12	9	10	4	5	6	4	10	10	12	9	10
1902	11	12	12	8	5	4	4	4	7	5	9	6
1903	7	9	6	10	8	12	6	5	6	4	5	3
1904	5	3	3	2	3	3	2	2	3	5	3	4
1905	3	4	1	4	4	0	3	1	3	1	4	3

Table showing Average European Population for Years 1900-5 and Actual Number of Deaths.

	Population.	Deaths.
1900...	14	2
1901...	15	1
1902...	17	2
1903...	19	0
1904...	23	0
1905...	23	0

The difference in the variation of temperature is due to rain and cloud, which combined make the wet season cooler by day and warmer by night than the rest of the year; thus the dry season is the time of great variation between the maximum and minimum daily temperatures.

Taking the three years before the formation of a Sanitary Board as a basis, it appears that each European fell ill, on an average, more than five times each year. During the three years the Board has been in operation this figure has steadily fallen, until for 1905 it fell to 1.24—that is to say, out of an average of 25 European residents, the total number of cases of sickness during 1905 was 31 in an area of about one-third of a square mile.

G. F. Darker,
M.R.C.S., L.R.C.P., D.P.H.Durham.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

OAKLEY HOSPITAL, BLAENAU FESTINIOG.

SEVERE CRANIAL INJURY WITHOUT LOSS OF CONSCIOUSNESS.

(Reported by T. J. Carey Evans, M.D.Brux., M.R.C.S., L.R.C.P.)

W. R., aged 32, a slate quarrier, was admitted on February 1st, 1905. He had been laying a charge of gelignite ready for blasting when it suddenly exploded, inflicting severe injuries.

When seen shortly after admission by Dr. R. D. Evans he was very confused and delirious though not unconscious, as he knew Dr. Evans, and actually called him by his name. There was a large gaping wound about 1½ in. in width, extending upwards and slightly outwards for about 4 in. from the right eye, which was completely destroyed and collapsed. There was a great deal of haemorrhage and brain matter exuded from the wound on to the right cheek. The wound was washed with mercury perchloride 1 in 1,000, and several loose portions of bone were removed, including the greater portion of the right horizontal plate.

On exploring the exposed portion of brain with a probe something hard was felt; a pair of forceps was introduced, and after a little trouble a large flat, diamond-shaped piece of slate was removed. It weighed nearly 1 oz., and measured 1¼ in. in its broadest part and was ¼ in. in thickness. It must have entered somewhere near the inner canthus and worked its way up through the right horizontal plate, destroying the eye and fracturing the bone in its course. The dura mater was dangling out of the wound and had to be cut. The wound was filled with boracic acid and plugged with iodoform gauze.

The patient never lost consciousness the whole time he was in hospital (about six months), but was very irritable and morose for about six weeks. There was no elevation of temperature beyond a slight rise during the first few days. He had no convulsions, nor any impairment of sensation or motion. The left eye was also destroyed by the fire and loose stones. The wound granulated, and after a great deal of trouble was got to cicatrize. His cerebration is at present normal, and his intelligence is not in the least impaired. There is at present a large depression covered by a thin layer of skin beneath which the brain can be seen pulsating. It is remarkable that with such severe injury to the brain consciousness was not completely lost.

A Psychiatrico-Legal Society has been founded at Amsterdam with the object of promoting co-operation between doctors and lawyers.

The late Mrs. Mary Harford Gill of Lower Walmer, who died on February 11th, left the residue of her estate for division equally between Westminster Hospital, Charing Cross Hospital, and the Royal Westminster Ophthalmic Hospital. The amount thus divisible is estimated at about £13,500.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

Birmingham Branch.—At a meeting held on March 14th, Dr. O. F. Wyer, President, in the chair, Professor Saundby read a paper on chronic splenomegalic polycythaemia. He showed a patient suffering from this condition, and discussed its cause, contending against the view that there was a primary change of bone marrow, and maintaining that the increased production of red cells was secondary to capillary stasis, which in turn was dependent on vasomotor spasm and thickening of the middle-sized arteries, the whole being a neurasthenic condition which in some instances had followed influenza; he also drew attention to the fact that the recent history of the disease tallied in point of time with the revival of serious epidemic influenza.—Mr. Leedham Green read a paper on his experiences with anaesthesia produced by injecting eucaine into the spinal sac, and concluded that the method was safe if properly carried out as regarded the risk of sepsis, and valuable in many cases not suited for a general anaesthetic. The level of the anaesthesia and its completeness and duration were alike satisfactory; and, beyond a certain amount of headache and vomiting, neither of which were serious, he had seen no bad results.

Gloucestershire Branch.—At a general meeting held at the General Hospital, Cheltenham, on March 21st, 1907, the President, Dr. Cox, being in the chair, Dr. H. Bramwell showed: (1) Case of fractured patellae, one treated by wiring, the other not treated, in same patient; (2) case of serpiginous ulcer of cornea. Mr. Howell showed: Case of osteomyelitis of lower jaw in a girl aged 12 years, in which the periosteum was stripped from the bone on either side as far as outer molar. Dr. Carter showed: Case of myasthenia gravis, in which indican was present in large quantities in the urine; the patient had been treated with various intestinal antiseptics without decreasing the amount of indican present. Dr. Oswald showed: Case of keratitis from which a coccus had been cultivated. The cases were discussed by the President, Mr. Buckell, Dr. Bramwell, Mr. Dykes Bower, Mr. J. A. Bower, and Mr. Mouat Biggs. Dr. H. Bramwell then took the chair in the unavoidable absence of Dr. Cox.—Dr. Pruen read his paper entitled, Some thoughts on cerebral haemorrhage. He pointed out the rare occurrence of cerebral haemorrhage in the presence of the high pressure which occurred during exertion, straining at stool, and during violent straining in bronchitis, asthma, and epileptic fits, though they were just the occasions when one might have expected such haemorrhage. He maintained that it was rare for a patient to have a severe stroke without having had one or more slight strokes, of which the symptoms were: 1. Giddiness, (2) pins and needles, (3) stumbling, (4) headache, (5) paresis of one vocal cord, (6) palpitation, (7) nausea, (8) sudden general weakness, (9) change of character. The connecting links in these symptoms were: (1) The instantaneous nature of the onset, (2) the absence of any apparent cause, (3) the very early but gradual improvement of the condition. In the treatment of these cases he drew attention to the inadvisability of allowing patients to lie longer on their backs than could be possibly avoided, and advised good, careful feeding after the first few days and suggested an ointment of diachylon, beeswax and olive oil for the protection of the back in cases of incontinence of urine. The paper was discussed by Drs. H. Bramwell, Kirkland, Collins, Foster, Carter and Mr. Dykes Bower. Seventeen members afterwards sat down to dinner.

Southern Branch: Portsmouth Division.—At the spring clinical meeting, held on March 21st, Dr. Mumby in the chair, Dr. Ward Cousins showed a patient in whom he had removed the upper jaw for myeloid sarcoma two years previously. There had been no recurrence. Also, a case of empyema of the gall bladder, which had been successfully drained, the cause not having been ascertained. Mr. C. P. Childe showed a patient, aged 59, in whom he had successfully removed 9½ ft. of gangrenous small intestine, with specimen. It was due probably to embolism of the superior mesenteric artery. He also showed 2 feet of small intestine which he had successfully removed in a case of a strangulated umbilical hernia four years previously. Mr. L. Maybury related a case of paroxysmal tachycardia, which always terminated in vomiting. Profiting by this he had successfully aborted the attacks by the injection of apomorphine. The ice-pack in this condition was discussed by several speakers. He also showed a radiograph of a fractured patella in which a good result had been obtained without wiring. The two treatments and their respective indications were discussed. Dr. Ridout showed a case of congenital atresia of the external auditory meatus, with very little deformity of the auricle; also a case of double mastoidectomy in which a good functional result had been obtained. Dr. Leon read a paper on two cases of intrathoracic new growths, in which the various symptoms were detailed, and their importance discussed. He also showed a microscopic specimen of blood from a case of spleno-myelogenic leukaemia. Dr. Ward Cousins showed an improved gag.

Yorkshire Branch: Bradford Division.—At a conjoint meeting of the Division with the Bradford Medico-Chirurgical Society, held in the Bradford Royal Infirmary on Tuesday, March 19th, Mr. J. Basil Hall (Chairman of the Division) in the chair, a discussion on modern midwifery was opened in a lucid and eloquent address by Mr. J. Wherry Willson, who took as his title, Some remarks on forceps delivery. The history of forceps delivery was briefly sketched, and reference made to historic occasions on which it was employed. The question could be considered (1) in relation to the child, (2) to the mother. Many affections of childhood associated with head symptoms were attributed to the two factors—forceps delivery and prolonged labour. These evils were due to one cause—namely, pressure—and the most extreme manifestation of this was death of the child. Dr. Galabin's figures were given comparing the ratio of stillbirths in the two charities of Guy's and St. Thomas's Hospitals, and later the statistics of Drs. Beach and Langdon Down showing that idiocy was more often associated with a history of prolonged labour than with one of forceps delivery. In reference to the mother, it was stated that pelvic ailments were exceedingly frequent nowadays, and it was suggested that the growing practice of using various drugs and appliances for the purpose of procuring abortion, with the subsequent neglect of miscarriage, might be important factors in the causation of these disabilities. The opinion was expressed that ruptured perineum, so often attributed to the use of forceps, was quite as likely to occur in cases left to Nature, and was almost as liable to be caused or at least extended by the shoulders as by the head; and that when a practitioner found that his use of forceps was persistently accompanied by ruptured perineum, it was time for him to consider whether there might not be something wrong with his methods of application. The debt which the world owed to distinguished obstetricians and authors was expressed, but it seemed to the speaker that, assuming that every antiseptic precaution was taken, and that the extraction was made with care and deliberation, under chloroform if necessary, forceps might be used with safety and advantage at an earlier period than that indicated in many of the textbooks, and that in this respect Playfair seemed to take the most practical view. The practice of undue and too early interference was strongly condemned, the whole address being practically a plea for moderation and restraint. The Chairman and Drs. and Messrs. Burnie, Mercer, Hime, Mitchell, Metcalfe, Rowe, Craig, and Woon took part in the discussion. The opinion of the speakers appeared to be that Dr. Willson had given the meeting one of the most interesting and eloquent addresses ever heard at a Bradford medical meeting. There appeared, too, to be a pretty general consensus of opinion that the rational use of the forceps as advocated by the speaker was a right and proper one to carry out in the practice of modern midwifery. The meeting then terminated.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. Warrington Haward, F.R.C.S., President, in the Chair.

Tuesday, March 26th, 1907.

Complete Volvulus.

Mr. Jonathan Hutchinson, jun., described a case of volvulus of the entire small intestine, caecum, and ascending colon, with operation and recovery; and gave an analysis of nine other cases of complete volvulus. The anatomical condition which led to complete volvulus was described and illustrated, and its frequency discussed. The arrest of development being congenital, complete volvulus was most common in children, and much more frequent in males than females. The whole of the intestine supplied by the superior mesenteric artery, from the duodenum to the transverse colon, underwent torsion to the amount sometimes of 360 degrees. In nine out of the ten cases reviewed and abstracted in the paper this rotation brought the caecum and ascending colon behind the mesentery, which latter acted as an obstructing band. In one case the rotation was in the opposite direction. The caecum, greatly distended, might be found close to the spleen, or in the left iliac fossa. The condition was very difficult to recognize even after the abdomen was opened, and there seemed to be only two successful cases of operation for it recorded. The first was Mr. Hutchinson's, operated on in 1901, and the second operated on by Brentano, 1904. It was essential to draw the intestines outside the abdomen in order to recognize and reduce this form of volvulus, and it was advisable to evacuate the caecum by tapping. The details of causation, diagnosis, and treatment were discussed in the paper.

Mr. A. E. Barker described a somewhat similar case he had recorded. The volvulus involved the whole of the small intestine, but not the caecum or ascending colon. It occurred in the fourth month of pregnancy two years after a gastro-jejunostomy had been done. The volvulus was untwisted without removing any of the intestine from the abdomen. Recovery occurred in ten days, and parturition was normal.

Dr. Keith had come to the conclusion that the peculiar manner in which the intestine was fixed up in the abdominal cavity was associated with the erect posture. The type described in the paper belonged to the category of congenital malformations.

Mr. G. Hughes described a case resembling that brought forward by Mr. Barker, the whole of the small intestine being twisted.

Mr. Hutchinson, in his reply, maintained that his case was a representative of a type of volvulus previously hardly recognized.

Demonstration.

Mr. J. Hutchinson, jun., described a case of recovery after operation for acute obstruction by a band formed of the vermiform appendix and omentum, with general septic peritonitis. He also showed a series of drawings and radiographs illustrating certain dislocations and fractures of the thumb and great toe.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

R. D. Purefoy, M.D., F.R.C.S.I., President, in the Chair.

Friday, March 8th, 1907.

Pubiotomy.

Dr. Hastings Tweedy narrated a case in which he had delivered a primiparous woman of a living child through an internal conjugate of 6.5 cm., at full term, by the performance of a left-sided hebotomy. Haemorrhage had been very severe, and had resulted in a considerable degree of collapse. Delivery had to be hastened because of prolapse of the cord, which took place before the operation was undertaken. Deep lacerations of the cervix, of the soft parts lying between the severed bone, and of the perineum, required catgut sutures. The patient's recovery was uneventful, and she left the hospital in perfect health on the ninth week with a living child.

Dr. M. J. Gibson read a paper on 3 cases of the same condition. He had adopted Döderlein's subcutaneous pubiotomy, which was really a new operation. It was so simple and the results were so good it might be regarded as one of the greatest discoveries in modern obstetrics. It was indicated in cases of narrow pelvis when the cervix was fully dilated and in spite of good contractions the head moved freely about the brim. It might be performed in cases of flat pelvis with a conjugata vera up to 6.75 cm., and in generally contracted pelvis up to 7 cm., but for these very low conjugates the head must not be larger nor harder than normal. A small incision, sufficient to admit a finger, was made over the bone, usually at the left side between the symphysis and tubercle; a Döderlein needle was then passed down behind the bone and its point brought out in the greater labium. Gigli's saw was attached and the bone divided. The haemorrhage was as a rule easily stopped by compression. The patient should not be delivered unless it was absolutely indicated. After labour was completed a few strips of adhesive plaster were put around the pelvis, a binder applied, and the patient kept lying on her back for twelve days. She might get up on the fourteenth or sixteenth day. The advantages over symphysiotomy were that the pelvis was prevented from springing suddenly apart by the undivided soft parts; the bladder and urethra were not so liable to injury during the operation; the operation was very much more easily and more rapidly performed.

Sir A. V. Macan said the ease with which he had seen the operation done by an operator who had never done it before, had convinced him that pubiotomy was certainly the operation in such cases as had been described by Dr. Gibson. There was nothing in it which could not be done by a man who had been through the Dublin school; and he considered it of the utmost importance that they should be able to put before the practitioner in the country the possibility of saving the life of both mother and child in cases where he had put on the forceps but had failed, and was face to face with perforation.

Dr. Neil considered the operation of great importance, since the risk of sepsis would be less than in the induction of premature labour.

Dr. Alfred Smith believed the operation had come to stay.

Dr. Jellett asked the communicators whether they would agree in dividing the operation into two classes: First, as the operation of election which they would select in preference to other procedures in any case in which they had reason to believe that the patient could not be delivered by forceps or her own efforts; secondly, as the operation of compulsion, where the forceps had been tried and failed. It seemed to him that in doing Caesarean section on a perfectly healthy patient, unweakened by the long continuance of labour, they were more certain of the after-results. On the other hand, he certainly agreed that, in the second class, pubiotomy had got its place and would keep it. The ease with which it was performed, the small amount of assistance required, the small extent of the wound, and the short time in performance, would be important factors in producing a small mortality.

The President could not see how pubiotomy could take the place of Caesarean section in certain cases. He thought that its danger had perhaps been passed over too lightly. The danger of injury to the bladder had been amply demonstrated by recorded cases. The danger of haemorrhage must, he thought, be considerable, since a fatal case had been reported from Vienna. He could not help wondering whether the locomotive powers of the patients had in all cases been satisfactory afterwards, or whether sufficient time had elapsed to enable them to judge on the point. He agreed, however, as to the value of the procedure.

Dr. Tweedy, in reply, said that while both symphysiotomy and hebotomy had come to stay he did not think that either would prove a perfect panacea. He had performed both operations with equal ease.

Dr. Gibson replied.

Hunterian Society.—At a meeting on March 13th, Mr. John Poland, President, in the chair, Dr. George Carpenter, in a paper on *Nephritis in infants*, said that, according to some American authors, albuminuria, with passage of casts, was common in infants, especially during the course of gastro-intestinal disorders. In his own experience, however, albuminuria in infants was rare; he had found it in only 2 out of 62 infants in the out-

patient room. In both these there was a marked diminution in the amount of chlorides in the urine. Nephritis undoubtedly occurred in infants with the usual signs and symptoms, and the disease might begin during intra-uterine life. Syphilis played some part in the etiology—there was retarded development of the kidneys in congenital syphilis. Some other toxin might also be a cause of the disease. An important point to remember was that in infantile nephritis, whether of syphilitic origin or not, the kidneys might appear to be normal to the naked eye.—Dr. David Lees, in a paper on the *Administration of salicylates*, said he considered sodium salicylate as directly antagonistic to acute rheumatism as was mercury to syphilis or quinine to malaria. The drug was often given in inadequate doses because it sometimes caused unpleasant symptoms, and because there was a prevalent idea that salicylates act as cardiac depressants. Unpleasant symptoms, except vomiting, were rare in children, and usually disappeared if two or three doses were omitted. He always gave double doses of sodium bicarbonate with salicylate. Potassium salts were cardiac depressants but sodium salts were cardiac stimulants, and tended to diminish the cardiac dilatation produced by acute rheumatism. The dose should be increased daily or every second day until the maximum was reached. In adults this might be 450 gr. in twenty-four hours. One of his patients, a boy of 15, had taken 600 gr. in twenty-four hours and then 500 gr. six days a week for three weeks. There was no need to discontinue the drug during an attack of pericarditis. If sodium salicylate was given without sodium bicarbonate, a condition of acid intoxication, very much resembling diabetic coma might be produced. This condition might also be produced by aspirin. In chorea small doses of sodium salicylate was not much good: the dose should be 200 to 300 gr. per diem. Aspirin was especially useful in chronic cases. The objection to this drug was that it could not be given with an alkali.—Mr. Harold Barnard read a paper on *Intussusception*, based on an analysis of 197 cases treated at the London Hospital; 135 occurred in babies under 1 year old, 165 under 10 years of age. Only 4 cases occurred in infants under the age of 3 months; 131 patients were male, 56 female. He considered that two factors of great importance in the etiology were lack of nervous control of the ileo-colic sphincter and hypertrophy of the lymphatic nodules at the lower end of the ileum. Prolapse of the mucous membrane of the ileum through the ileo-colic sphincter might occur, like prolapse of the rectal mucous membrane through the anus, and act as the starting point of the intussusception. The diagnosis was usually easy, but colitis might simulate intussusception and vice versa. The best treatment was immediate operation, though, according to Mr. McAdam Eccles's statistics, the results of injection were just as good. Messrs. Douglas Drew, Hugh Rigby, Hugh Lett, and Hugh Davies, who discussed the paper, were none of them willing to accept Mr. Harold Barnard's theory of the causation of intussusception as explaining all cases. Cases in which the caput coli formed the apex of the intussusception were not uncommon. They were all of opinion that preliminary injections and inflation were useless, as, although these methods of treatment often effected partial reduction, they did not effect complete reduction.

South West London Medical Society.—At a meeting on March 13th, Dr. Macpherson, President, in the chair, Dr. Hayward gave an address on *Constipation and dilatation of the colon*, and showed a typical example. The case was that of an infant aged six months, whose grandfather had been under Dr. Hayward's care for the same condition, dying of it at the age of 60. There was a history of constipation from birth, requiring a daily interference on the eighth day, alternating with diarrhœa; there had been no vomiting and there seemed to be no pain. The abdomen was distended and a large loop of distended colon ending in the left iliac fossa was well marked, and showed peristaltic movements. On examination per rectum the bowel felt on the finger like a glove, and no superior opening could be felt but a No. 8 tube could be passed upwards through which small quantities of liquid faecal matter had been drained away. The adult form of the condition was of the same nature and origin as that of the child and was to be regarded as a rare and exceptionally long-lived instance of the congenital form. In no case was any organic obstruction to be found, the dilatation and hypertrophy producing a funnel-shaped portion of colon of which the lower end was usually in the pelvic colon, led to the supposition that the condition was due to a tight muscular contraction of the bowel in this position; or, what was an equally effective obstruction, paralysis of a segment of the bowel. Patients, as a rule, were in good health until the onset of a fatal toxaemia; it was therefore essential that these cases should be recognized in an early stage, as operative interference might be, and had been, successful. Such operation should be short-circuiting of the bowel to a point below the supposed obstruction; colotomy was not a desirable measure, and the removal of the dilated colon had on some occasions been followed by a fresh dilatation. The address was illustrated by lantern slides.

Aberdeen Medico-Chirurgical Society.—At a meeting on March 7th, Dr. Rudolf Galloway, President, in the chair, a discussion on the pancreas, its diseases and treatment, was opened by Professor MacWilliam, who was followed by Dr. Hugh McLean. The latter had tried Cammidge's test in two cases of undoubted pancreatic disease and found the reaction negative. In other suspected cases of pancreatic disease the reaction also gave negative results, while in the urine from an apparently healthy person he obtained the reaction. While his experience of Cammidge's test was too limited to allow his giving a definite opinion on it, there could be no doubt that the fact of a negative result being obtained did not always exclude pancreatic disease; while, on the other hand, a positive reaction did not necessarily indicate a diseased pancreas. These facts indicated a considerable limitation to the usefulness of the test. All urines contained a certain amount of substances which were capable of being changed into dextrose on hydrolysis, and it was possible that in concentrated urines these substances might be normally present in amount sufficient to give the reaction without in any way indicating a pancreatic lesion. On the other hand, there seemed to be some evidence that in certain cases of pancreatic disease substances which were of a carbohydrate nature were increased. This might account for the reaction in certain cases, but at present it would seem that the reaction had to be further studied before any definite indication of its usefulness or otherwise could be confirmed. Dr. John Rennie, Natural History Department of the University, and Lecturer in Parasitology, then discussed the relation of the islets of Langerhans to the alveoli of the pancreas. He considered in detail the functions and relations of the masses of epithelial-like tissue—the islets of Langerhans—which occur in the pancreas of all the leading vertebrates. After a critical review of the literature of the subject and an account of his own work in connexion with it, he said that, after all, the fact must not be lost sight of that all observers were agreed that these islets were neither effete nor otherwise useless structures, but ascribed to them an internal secretion. Whether they were dependent upon the zymogenous tissue for their existence (which seemed unlikely) or not, they were always present, and there was little doubt that they fulfilled an important rôle in vertebrate metabolism. That that function was the control of the amount of sugar in the blood had been the one most frequently suggested, but it could not as yet be said that it had been satisfactorily proved. Several speakers followed. Dr. Thomas Fraser then read a paper on a number of cases of diabetes which had been treated with an extract prepared from the islets of Langerhans as found in certain fishes. (As this paper was published in the *Biochemical Journal*, vol. ii, Nos. 1 and 2, it is not necessary to reproduce it here.) Thereafter Professor Ogston traced the surgery of the pancreas in a very lucid manner, and Mr. Harold Gray and Mr. Matheson gave details of certain cases of acute pancreatitis which had come under their notice.

Pathological Society of Manchester.—At a meeting on March 15th, Dr. A. Hill Griffith in the chair, Messrs. J. E. Platt and F. E. Lees showed microscopic slides to illustrate the difficulty of diagnosis of breast tumours. The left breast and a large axillary gland of a woman aged 35 were removed for supposed carcinoma. Micro-

scopical examination showed that the tumour in the breast was due to chronic mastitis, while the axillary tumour was a fibro-adenoma, and must have occurred either in an aberrant lobule or as a supernumerary breast. Dr. J. de Ville Mather read a communication on the pathology of carcinoma of the cervix uteri. In some 47 cases of malignant disease of the cervix treated by vaginal hysterectomy the microscopical examination showed squamous epitheliomata in 37, glandular cancer in 6, and sarcoma in 4. Referring to sarcoma of the cervix in more detail, Dr. Mather showed one case of angio-sarcoma and another case where the growth was a mixture of round-celled sarcoma and squamous epithelioma. The author did not consider sarcoma of the cervix to be as rare as was generally supposed. Dr. John Cameron gave a lantern demonstration of an adult brain with complete absence of the corpus callosum, and exhibited the specimen. Dr. C. P. Lapage showed a specimen of *Congenital malformation of the heart* from a child aged 2½ years. The organ was twice the normal weight, owing to hypertrophy of the right side. The walls of the right ventricle were thicker than those of the left, and both ventricles communicated freely with the aorta, owing to a deficiency of the interventricular septum. The aortic valves were normal. The ductus arteriosus supplied the lungs by the right and left pulmonary arteries. There was a constriction on the right pulmonary artery, and immediately after this it was joined by a fine occluded artery which took origin from the wall of the right ventricle behind the aorta, and probably represented the pulmonary artery. The auricles communicated by a small opening.

Liverpool Medical Institution.—At a pathological meeting on March 17th, Mr. Frank Paul, President, in the chair, Dr. Ernest Glynn read a short paper on *Pulmonary thrombosis* and embolism. He described cases of hypopyon, of appendicitis, and of mammary cancer, all dying unexpectedly in from ten to thirty minutes. Very extensive stratified thrombi were found in both the right and left branches of the pulmonary artery, but its main trunk was free. This fact, combined with the absence of lesions in the systemic veins and of macroscopic and microscopic evidence of large emboli embedded in the clots, suggested the probability of primary thrombosis or the possibility of thrombosis secondary to many small emboli. He contrasted two undoubted cases of pulmonary embolism—in the one the embolus, a vegetation from the pulmonary valve, caused death in five minutes; in the other a large, old pigmented red thrombus, the result of phlebitis in the calf, lasting ten days, plugged the pulmonary aorta, producing a secondary thrombosis and death in one hour. Dr. Abram was prepared to accept thrombosis as opposed to embolism in these cases. He had long taught that the sudden onset of symptoms was not an absolute proof of embolic origin; the final occlusion of any vessel by thrombosis was often quite sudden, as he had found on many occasions. Dr. Warrington read a paper on *Epidemic cerebro-spinal meningitis*, in which the question of the relation of this form of meningitis to other types was discussed. The peculiar characters of the disease and of its spread in so-called epidemics were touched upon. Dr. J. Hill Abram said he proposed to try intraspinal injections of collargol in any case coming under his care, as several successful cases had been recorded. He thought sporadic cases of meningitis were classed under cerebro-spinal meningitis, as Dr. Warrington used the term, without adequate proof; in his own experience he had not met a case he could record as proven. The severity of certain symptoms was only relative, and such characteristic symptoms as the skin rashes were not noted as a rule in the sporadic cases. Differential diagnosis turned largely then on the investigation of the fluid obtained by lumbar puncture, apart from obvious sources of sepsis or tuberculous infection. Cytological investigation had proved useless in the case of pleural exudates at the Johns Hopkins Clinic, and he thought it would do so in the cases under discussion. Bacteriological findings were of greater value, but in his experience were not so often positive as previous speakers suggested. In his cases of tuberculous meningitis the bacillus had not been found in a single instance. As regards Weichselbaum's coccus no doubt the intracellular position of the organisms was an almost characteristic feature, but he would hesitate before allowing the absolute value of a Gram-staining. Jager Henbuer had shown that occasionally an intracellular coccus was Gram-positive. Hutinel stated that variation arose from the duration of the infection, that is, if early, Gram-positive, if late, Gram-negative. The speaker was surprised to hear the meningococcus had been found so often in the peripheral blood. If this statement was confirmed a valuable factor in the recognition of a pneumococcal infection had been destroyed. Dr. A. S. Gullan said that recently he had seen two cases of cerebro-spinal meningitis, the first, a child aged 3, was admitted into the Stanley Hospital after a few days' illness with hyperaesthesia, retracted head, rigidity of the limbs, and Kernig and Babinski's signs well marked. A few petechial spots were present and the temperature was high. Lumbar puncture was performed, and 1½ oz. of turbid watery fluid was withdrawn on two occasions; this was found to contain mononuclear leucocytes, and the organism was not found; unfortunately no *post-mortem* examination was allowed. The second case was a girl aged 9. She showed the typical symptoms—that is, rapid onset high fever, intense headache—otherwise she was mentally clear, her head was very much retracted, limbs flexed, and rigid resisting movement. Petechiae, and erythematous eruptions over the abdomen and extremities, hyperaesthesia, vomiting and diarrhoea were present. A lumbar puncture withdrew about 5 oz. of turbid watery fluid, which contained multinuclear leucocytes and the *Diplococcus intracellularis*. This patient had steadily improved since the withdrawal of the fluid, and was now convalescent. The speaker added that some years ago he had seen 4 cases of sporadic cerebro-spinal meningitis, 2 of which recovered and 2 died, and he then first noticed the benefit obtained by lumbar puncture, which was fully corroborated by his 2 recent cases.

Glasgow Pathological and Clinical Society.—At a meeting on March 11th, Dr. J. Lindsay Steven, President, in the chair, Professors Stockman and Muir described a case of lymphadenoma in a boy, aged 14, who had had an enlargement of glands over a period of eight years.

Seven years ago enlarged glands were removed from the left side of the neck in Glasgow Royal Infirmary. Further enlargement took place on the same side two years later, but disappeared under treatment in the Edinburgh Royal Infirmary. A year later they again became swollen, and were removed at the Sick Children's Hospital, Aberdeen. Since then the remaining cervical glands had enlarged, and these had been followed by enlargement of glands in other parts of the body. At the end of September the abdomen became very prominent, and a large hard swelling appeared on the left side, and cough and night sweats became troublesome. On admission to the Western Infirmary in December, extreme emaciation, profound anaemia, and a general enlargement of the lymphatic glands were noted. The spleen was greatly enlarged, and the liver also showed enlargement; ascites was well marked, and there was oedema of the scrotum and lower limbs. The blood examination showed a considerable diminution in the percentage of the haemoglobin, and a polymorphonuclear leucocytosis. The temperature was very variable with evening exacerbations, and loss of weight and strength progressive in character; and latterly pleural effusion and jaundice developed.

Death took place on January 22nd, 1907. The autopsy showed a general glandular enlargement, the abdominal lymphatic glands especially formed a large mass, and were continuous with those in the groin; enlarged glands were also present in the portal fissure. The spleen weighed nearly 2 lb., and distributed through it were small pale nodules. The liver was also much altered in appearance by diffuse infiltration, and a similar condition was present in the lungs. The bone marrow showed a slight hyperplasia. The microscopic appearances of the lymphatic glands showed a proliferation of the endothelial cells and of the connective-tissue cells with disappearance of the lymphoid cells from the older foci and subsequent sclerosis.

Erratum.—In the proceedings of the Liverpool Medical Institution reported at page 687, on March 23rd, and in the remarks attributed to Dr. K. Grossmann, the words "that that infection" should read *that infection*, and "after iridectomy," should be taken as *without iridectomy*.

REVIEWS.

SEA VOYAGES.

Dr. Edmund Friedreich[1] of Dresden has written a lengthy book on *Sea Voyages*, which is remarkable for the great care with which the author has collected and analysed the literature. English, German, French, and American authors are abundantly quoted, and, as a work of reference, the volume is doubtless the most complete on the subject, and will be invaluable to all those who are interested in the history of the therapeutic employment of sea voyages. During the Middle Ages and in much later times the dangers and uncertainties connected with sea voyages, owing to wind, weather, and pirates, rendered them unlikely to be undertaken for exclusively therapeutic purposes, though their value—that is to say, that of Mediterranean voyages—had long before been recognized by the Greeks and Romans. But E. Gilchrist, in his book on the *Use of Sea Voyages in Medicine*, published in London in 1756, wrote in their favour, and a long series of more or less medical publications exists to illustrate opinions on the therapeutic use of voyages from Gilchrist's time to the present day. Rough weather and unsuitability of diet and accommodation for invalids have always been great difficulties in the way, so that Jules Rochard wrote to the effect that, if the right sort of ship could be sent to the right place in the right kind of weather, with the right sort of patients, a great deal of good might result. In recent times, however, the difficulties have been much lessened by the improvement in the vessels themselves, and in the accommodation and diet for passengers. The drawbacks of a sea voyage could be still further avoided by the introduction of ships specially built and furnished to serve as "ocean sanatoriums," such as Sir Hermann Weber advocated in 1899. In September, 1893, Ludwig Jerrmann had already, under the heading "Ocean Sanatorium," issued a prospectus in Hamburg for sea voyages of five months' duration in winter and three months' duration in summer.

Jerrmann himself was no doctor, but a practical and energetic sea captain whose plan was well received by leading members of the medical profession in Germany. The patients specially invited were those threatened by an illness which could still be warded off by the timely help of a sea voyage. They were to be under strict medical supervision, and were not to exceed fifteen in number. A wooden sailing vessel was selected fitted up with all the comfort of a fast steamship, but without any of the smoke and noise connected with steam engines. The first tour was to be in the spring of 1894 to the Canary and Cape Verde Islands and Mogador, and possibly also to the Azores and Madeira; the voyage planned for October, 1894, was to include visits to the Canary Islands, Martinique, Puerto Rico, Havana, Bermuda, etc. Jerrmann's scheme fell through, however, because the number of applications to take part in the voyage was insufficient from the financial point of view. For the same reason an earlier English scheme of the same kind (1869) failed, and the medical voyages on specially equipped "ocean sanatoriums" arranged by the Hamburg-American Line in 1905 had likewise to be abandoned.

Another question which has been much discussed is the influence (if any) of sea voyages on haemoptysis in pulmonary tuberculosis. Sir H. Weber believes that voyages in or through the tropics increase a tendency to blood-spitting, and as T. B. Peacock (1875) pointed out, a ship is not a satisfactory place for treating a patient during an attack. On the other hand, Friedreich quotes a number of authors who have regarded haemoptysis as an indication, or at all events as no contraindication, for sea voyages. Amongst the ancients he mentions Pliny and Caelius Aurelianus, and coming to relatively modern times, Gilchrist (1756), Sutherland (1763), and several later writers. Gilchrist indeed advised sending patients with haemoptysis on to the sea, whatever the direct cause of the haemoptysis might be. Sutherland wrote that the value of sea voyages in haemoptysis could only be doubted by theorists. Millingen declared that amongst the great number of consumptives he had observed during sea voyages haemoptysis had not been induced by the voyages, but that, on the contrary, in several patients who commenced a voyage when they were daily spitting blood the haemoptysis ceased as soon as the period of sea-sickness passed. With regard to this, he recalled the value which Gilchrist attached to emetics in serious cases of pulmonary haemorrhage. Friedreich's book is a valuable and careful compilation, giving much information not easily to be obtained elsewhere; it should be in the hands of every one interested in the subject who can read German.

[1] *Die Seereisen. Historisch und Balneologisch.* Von Sanitätsrat Dr. E. Friedreich. "Sea Voyages: Their Historical, Physiological and Remedial Value." Leipzig: Voigt and Fernbach. 1906. (Royal 8vo, pp. xii + 372.)

TUBERCULOSIS.

The two large volumes which form the second edition of Cornet's work on tuberculosis[2] contain a mass of information on this disease which practically includes all that is definitely known on the subject up to the present time. The amount of the literature on the subject of tuberculosis is appalling, and has increased considerably in the last few years. The labour necessary to search for and to digest even the more important papers is great. Professor Cornet has, however, digested an immense number of the articles which have from time to time appeared in the medical journals of Europe and America, and has thus simplified the work of the student who wishes to bring himself up to date. The number of authors quoted and criticized in the text is, in fact, somewhat bewildering to the reader who might prefer definite conclusions to be drawn and dogmatically stated for his benefit. The present work is, however, not so much a textbook as a book of reference, and as such is most valuable, since almost every statement is vouched for by the name of the observer responsible for it. In the majority of instances the name alone is given in the text, the reference to the works of the various authors being given in a bibliography at the end of each section of the book. This bibliography constitutes a special and important feature; its extent and the labour involved in bringing the work up to date may be gathered from the statement in the preface that, in the seven years which have elapsed between the appearance of the first edition and the completion of the second, some 13,000 works of one kind or another dealing with tuberculosis have appeared. The care bestowed upon the revision may be appreciated when it is borne in mind that about 9,500 references to about 8,000 different authors have been consulted. This has delayed the appearance of the second edition, which is almost double the size of the first, but it has resulted in a work of the highest value. The first volume deals with the etiology of tuberculosis, the bacillus, the paths of infection, and the predisposing conditions in the individual. The general plan of each section is to discuss first laboratory and experimental observations, and then the clinical facts observed in human beings. Cornet believes that by far the most dangerous source of infection for man is the tuberculous man himself—and especially the consumptive through his sputum. The most usual path of infection is, he thinks, by the air passages, leading to tuberculosis of the lung. He finds no evidence of any special predisposition of any particular organ to suffer from tuberculous infection, the part of the body to become attacked depending upon the path of entry of the infection. Infection through the skin, alimentary canal, and the air passages is all fully considered, and the whole section on infection is well worth careful study. The second volume consists of two parts. The first and larger is concerned with the symptoms, diagnosis, prognosis, and treatment of pulmonary tuberculosis. It contains a good chapter on climate; but Professor Cornet does not appear to be favourably impressed with the result of sanatorium treatment. Sanatoriums, he says, have not, in fact, justified their existence; and again, a few pages later, he expresses the opinion that in the fight against tuberculosis as a disease of the people sanatoriums have accomplished very little; not only so, but they have produced an endless number of discontented individuals, who, after the comfort and ease of life in the sanatorium, become dissatisfied with their homes and indisposed to work. In the last section of the book, under the heading, Tuberculous complications, tuberculosis of the various tissues and organs of the body—skin, serous membranes, larynx, brain, etc.—are discussed. Altogether,

[2] *Die Tuberculose.* Von Prof. Dr. G. Cornet. Zweite Auflage. Wien: A. Hölder. 1907. (Royal 8vo. I Hälfte (pp. 1-548), II Hälfte (pp. 549-1,442). M. 32.

this forms one of the most complete, as it is also one of the best, of the many works on tuberculosis.

In this book, on *Pulmonary Phthisis*,[3] Dr. H. H. Thomson gives some of the results of five years' experience at the Bridge of Weir Sanatorium—first as Resident Medical Officer and later as Visiting Physician. In some respects the book suffers from the author's evident intention to make it complete in itself, embracing the etiology, pathology, prophylaxis, and treatment of pulmonary phthisis. It gives, certainly, a readable and trustworthy sketch of the subject; but much of the matter, especially in the earlier chapters, suggests compilation rather than observation. When we reach the sections on treatment and prevention the author's personal knowledge and experience give an interest and definite value to his writing. There are many books from which the broad facts concerned with the etiology and pathology and treatment of pulmonary tuberculosis may be learned, but every one who has had special opportunities of treating patients in a sanatorium—opportunities of intimate and possibly prolonged observation of the course and progress of individual cases—may, by the record of his experience and by the criticism of the opinions and experience of others, add to our knowledge of the subject. We could have wished for more decided statements as to the author's own opinions. For instance, in the matter of diagnosis, Dr. Thomson is so cautious that we do not feel that he has given us much help; he seems to suggest the conclusion that, since the safest course is to treat all doubtful cases as though they were tuberculous, accurate diagnosis is unnecessary. Possibly this apparent excess of caution does not represent his true state of mind, but is intended to inculcate care in those less expert than himself in the diagnosis of lung diseases. On the whole, the author has succeeded in the aim which he had in view, and has produced a short and concise account of pulmonary phthisis which will be helpful to the practitioner.

A PATHOLOGICAL CATALOGUE.

The *Catalogue of the Pathological Museum of the University of Manchester* forms part of the *Publications of the University of Manchester*,[4] and is the sixth in the "Medical Series" which includes Dr. Brockbank's history of the honorary medical staff of the Royal Infirmary, Mr. Kirkby's *Practical Prescribing and Dispensing*, Wright and Preston's *Surgical Anatomy*, Thorburn's *Operative Surgery*, and Sellers's *Legal Medicine*. The *Catalogue*, carefully compiled by Professor Lorrain Smith, is worth inspecting as a book and as a catalogue pure and simple. It is so bound that it may be taken to pieces to allow the insertion of additional pages when required. On many catalogues the specimens are numbered straight through from first to last—a simple plan, no doubt, but objectionable for several reasons. Thus numbers over a thousand are liable to be misprinted, 2864 for 2064, for example, an error more likely to confuse the worker than misprints where each series and subseries are numbered separately, so that the highest numbers seldom come near to 100 and not often to 50. Again, additions have to be intercalated with an alphabetical letter or some other device to distinguish them; thus a specimen similar to 2864 will be numbered 2864A, an arrangement which adds to the chances of misprint in reference. Then, as is shown by the example of the Museum of the College of Surgeons of England, the intercalations, if numerous, cannot always be arranged in this simple manner. For it may happen that the additions which must be placed between 2864 and 2865 will grow numerous in the course of years; then, when 2864 G or H are reached, it is possible that a fresh addition ought for some reason to be placed not after H but between C and D. This necessitates more complication, so that the new specimen has to be marked 2864 CC, or A 2864 C, or 2864 C2, and so on. The separate numbering of each series—diseases of heart, diseases of lungs, etc.—avoids many sources of confusion, but in actual practice has not always proved satisfactory. In this catalogue the decimal system of classification of Abbott of Montreal has been adopted, and a museum number, day-book number, and, where needed, an autopsy number, are also appended to the description of each specimen. The system allows, it would seem, of indefinite rearrangement with but little confusion, yet we doubt if it will prove so popular as to be widely adopted. The mechanical arrangement, above described, by which the book may be taken to pieces to allow of additions is, we suspect, more likely to be imitated. We have dwelt at length on a subject of interest to many now that museums are growing numerous, so that catalogue making is becoming more and more important. In conclusion, we need only say that Professor Lorrain Smith has performed the most essential part of his task—the description of the specimens—excellently, and an honourable mention must be made of the book as a publication, reflecting credit on Messrs. Sherratt and Hughes, publishers to the Manchester University Press. All conservators, curators, and pathologists ought to inspect and study Dr. L. Smith's highly original catalogue.

ANATOMICAL ATLASES.

In the second section of the third volume of the German edition of Lehmann's atlas of systematic human anatomy[5] Dr. Sobotta illustrates the anatomy of the sense organs and the lymphatic vessels and glands, and in the third volume of the Essentials of Systematic Human Anatomy he describes the vascular system, with the exception of the heart (which was dealt with in the second volume), the nervous system, and the sense organs. The figures in the atlas are beautifully executed and coloured; they are anatomically correct, although in many cases diagrammatic, indeed so diagrammatic that many of them look much more like representations of casts or models than of actual dissections. Perhaps this is no drawback from a teacher's point of view, but the student is apt to be disappointed when he finds how far his own attempts to make preparations fall short of the figures he has seen, and forgets that a given figure frequently represents the good points of many dissections. The figures in the atlas are accompanied by short descriptions, which are sufficient to explain their chief points, but are far too brief to serve collectively as a satisfactory textbook of anatomy. The volumes dealing with the essentials of descriptive human anatomy[6] are devised to remove this defect of the atlas, which they are intended to accompany and amplify, and the two together constitute a very excellent and beautifully illustrated textbook of descriptive anatomy, which deals only with facts that can be demonstrated on preparations. It is a book which all who are interested in human anatomy will wish to possess, but unfortunately it is too bulky and costly for the majority of students. Indeed, the price from a student's point of view is almost prohibitive, amounting for all the parts together to about seventy shillings. Both the atlas and the essentials will no doubt find places in scientific libraries and teaching institutions, and they are well worth the price placed upon them. The figures have been well thought out, well executed, and well reproduced; the text, which is clear and adequate for its purpose, deals only with facts, theories and discussions on disputed points being rigorously excluded. We understand that with the last two volumes the atlas and the essentials are finished, and we can most heartily congratulate both author and publisher on the completion of a most excellent piece of work. At present, so far as we are aware, the text has not been translated into English, and it is therefore not adapted to the use of those who do not use German, but the figures in the atlas will be of service to all, for the terms used in connexion with the directing lines are those now generally adopted by anatomists.

The *Atlas of Applied (Topographical) Human Anatomy*,[7] which Dr. Karl von Bardeleben and Professor H. Haeckel have produced in collaboration with Dr. F.

[3] *Pulmonary Phthisis: Its Diagnosis, Prognosis, and Treatment.* By H. H. Thomson, M.D. London: J. Bale, Sons, and Danielsson. 1906. (Demy 8vo, pp. 188. 5s.)

[4] *Catalogue of the Pathological Museum of the University of Manchester.* By J. Lorrain Smith, M.A., M.Sc., M.D., Professor of Pathology. Manchester: At the University Press. 1906. (Royal 8vo, pp. 1240. 7s. 6d.)

[5] Lehmann's Medizinische Atlanten, IV Band, *Atlas der deskriptiven Anatomie des Menschen.* Von Dr. med. J. Sobotta. III Abteilung. 2 Lieferung Die Sinnesorgane des Menschen, nebst einem Anhang. Das Lymphgefass-system des Menschen. München: J. F. Lehmann. 1907. (Royal 8vo, pp. 99, 1 lithographic plate, and 103 figures. M.6.

[6] *Grundriss der deskriptiven Anatomie des Menschen.* Von Dr. med. J. Sobotta. III Abteilung. Die Gefasslehre, die Nervenlehre, und der Lehre von den Sinnesorganen des Menschen. München: J. F. Lehmann. 1907. (Royal 8vo, pp. 703. M.6.)

[7] *Atlas of Applied (Topographical) Human Anatomy.* By Dr. Karl von Bardeleben and Professor Dr. H. Haeckel. Translated by J. Howell Evans, M.A., M.B., F.R.C.S. London: Rebman Limited. 1906. (Crown 4to, pp. 330, 205 figs. 32s. 6d.)

Frohse and Professor T. Ziehen, is one of the most complete and valuable of its kind, and it is well adapted not only to the requirements of the medical student, but also to those of the practitioner and specialist who wishes to revivify his knowledge of the details of any important part of the body of either children or adults. The atlas is divided into sections, which deal respectively with the head, the spinal cord, the neck, the arm, the thorax, the abdomen, the pelvis, and the leg, and in one or other of the sections all parts of practical importance are depicted from one or more points of view. Colours are used freely and with great success from a diagrammatic point of view, and with their aid a very successful attempt has been made to delineate the distribution of the segmental nerves to the surface areas and to the underlying muscles. In this way the non-correspondence of the distribution of segmental nerves to superficial areas and to deeper structures is very clearly exposed. The anatomy of the parts more commonly operated on, more especially in the head, neck, abdominal, and pelvic regions is very fully depicted, but even these excellent figures cannot accomplish the impossible, and they fail to show, as all non-stereoscopic figures fail, the great depth of some of the structures from the surface. The atlas would be improved if it were possible to add a number of representations of sections made through the areas of the more important dissections, for by a consideration of the two sets of figures a better idea of depth would be given. The figures are accompanied by a short but sufficiently explanatory text. The pointing lines on the figures are well arranged, the printing and paper are good, and the translator's part of the work has been excellently accomplished.

NOTES ON BOOKS.

The Medical Annual for 1907,[1] the twenty-fifth year of its existence keeps up, and more than keeps up, its character as a faithful representative of the medical *zeitgeist*, together with that of compactness and practical utility. Merely to enumerate the titles of some of the sections or to mention a few of the subjects would go far to prove this first and principal characteristic as Serum therapeutics; Opsonins and Vaccine Inoculations; Cancer, its Causation, Pathology, Dissemination, and Treatment; the newer pathology of the Coagulation of the Blood and the Use of the Viscosimeter; and the newer work on the Spirochaetes of Syphilis. The motto of the book—a thoroughly present-day idea might be taken from the preface. "The work of the physician is to help the vital force to resist disease instead of trying to batter down the 'symptoms' which represent its struggles." Among other specially noteworthy features are the review of therapeutic progress in 1906, the well known dictionary of remedies, and more in detail a good bibliography of papers on opsonins and correlated subjects, and several really good coloured plates of skin diseases.

Eleven essays make up the text of the forty-second volume of the *St. Bartholomew's Hospital Reports*.[2] Sir Lauder Brunton, as consulting physician to the hospital, sets a good example by contributing an instructive clinical paper on the treatment of a case of disseminated sclerosis. He ascertains that sulphates, especially sodium sulphate, in doses of potassium iodide, and magnesium sulphate with sulphuric acid in large doses, are indicated on physiological grounds, and have at least proved beneficial in one distinct case. Dr. Samuel West writes on exophthalmic goitre with acute myocarditis, and Dr. Langdon Brown on supranuclear atrophy and supracerebral haemorrhage. His clinical reports are good, and he adds some useful tables showing the lesions of the viscera found in all the necropsies *post mortem* examinations during the past twelve years. Dr. William Pearson records some observations on intracranial tuberculosis in childhood, based on work in the wards of the Children's Hospital at Shadwell. Dr. Lindsay Alexander's Cambridge thesis on hypertrophic pulmonary osteo-arthropathy is a fine monograph adorned with instructive skiagrams. The synopsis of cases and bibliography are very complete, and a testimony to the extraordinary energy of contemporary writers. Dr. Burstal contributes some clinical reports; Dr. Graham Forbes another clinical article on diseases of the blood in children, associated with spleno-medullary leukaemia and other diseases of the spleen; Herbert Williamson another on solid teratoma of the ovary; and Mr. Elmslie a paper on active rachitic processes in the bones, continued into the adolescent period, with good photographs and skiagraphs; Mr. Rawling writes on certain symptoms of rectal carcinoma and on its treatment; Mr. Ernest West on lateral sinus thrombosis and temporo-sphenoidal abscess; and Mr. Jefferson Faulder on bronchoscopy.

Dr. A. H. Carter's *Elements of Practical Medicine*[3] has been in favour with more than twenty generations of third or fourth year medical students—those beginning the study of medicine proper in out-patient and dispensary practice. The book has now reached its ninth edition—in itself strong testimony to its usefulness. While keeping as closely as possible to the original plan of the work as an elementary introduction to the study of medicine, the text has been carefully revised throughout, many sections have been entirely rewritten, and a few additions have been made. The chapters on pathology and nervous diseases have been revised by Dr. Stanley Barnes, and that on diseases of the skin by Dr. Douglas Heath. Taking the book as it stands, perhaps the most important criticism that suggests itself is in respect of classification. Thus, acute pneumonia is grouped with diseases of the lungs and not with specific infectious diseases, exophthalmic goitre with diseases of the heart and pericardium, and Raynaud's disease with diseases of the blood vessels. Here and there are statements to which exception might be taken by some—for example, that chronic jaundice is not infrequently accompanied by ascites in cancer of the head of the pancreas, the more general opinion being that when the two symptoms occur together cancer of the liver is the more probable diagnosis. Beyond this, there are what we take to be misprints; thus, for the treatment of the paroxysm of angina pectoris, it is recommended that 4 or 5 drops of nitrate (*sic*) of amyl should be inhaled from a handkerchief. The book, in spite of the defects of its qualities, remains a useful working instrument for the medical student even if he quickly outgrow it. At the end is a useful therapeutic index.

Fasciculus XXV *bis*[4] of the New Sydenham Society's *Atlas* is devoted to variola, vaccinia, and varicella. It contains fifteen plates, eight of them coloured. The first three are devoted to variola in a Lascar on the fourth, eighth, and tenth day respectively. It is explained that it is difficult to obtain coloured illustrations of small-pox, as artists are reluctant to incur risks of infection, and that the Society is indebted to Dr. Alexander McPhail, of Glasgow, for those shown. The illustrations are given not as typical, but as exceptional. Besides an uncoloured plate of haemorrhagic small pox, of which the appearances are not very well shown, these are the only pictures, coloured or uncoloured, of variola in the fasciculus, it being perhaps assumed that the average medical man in England is now so well acquainted with small-pox as not to require illustrations of the typical disease. A similar view has evidently guided the selection of the vaccinia cases, as only vaccinia gangrenosa is shown. Two cases are from Mr. Jonathan Hutchinson's paper in the *Medico-Chirurgical Transactions* for 1881. One of them was fatal. Of varicella, two gangrenous cases are shown, one of them belonging to the year 1980, and reported in Vol. LXV of the *Medico-Chirurgical Transactions*. There are also good (uncoloured) plates of typical varicella, others of varicella after scarlet fever, another of varicella after diphtheria, and another of varicella with unusually large vesicles. Each plate in the fasciculus is accompanied by a brief and clear description of the case, which adds much to the value of the illustrations.

[1] *The Medical Annual*: A Year Book of Treatment and Practitioner's Index. Edited by Arthur Cooper Jordan. With Coloured Plates and Illustrations. Bristol: John Wright and Co. 1907. (Demy 8vo, pp. 747. 7s. 6d.)

[2] *St. Bartholomew's Hospital Reports*. Edited by A. E. Garrod, M.D., and S. M. Adam Forbes, M.B., F.R.C.S. Vol. XLII. London: Smith, Elder, and Co. 1907. (Med. 8vo, pp. 382; with Coloured Plates and Illustrations in the Text. 10s.)

[3] *Elements of Practical Medicine*. By A. H. Carter, M.D. Ninth Edition. London: John Bale, Sons, and Danielsson, Ltd. 1907. (Crown 8vo, pp. 613. 10s. 6d. net.)

[4] *Atlas of Clinical Medicine, Surgery, and Pathology, and of Special Diseases*. Fasciculus XXV *bis*. Variola, Vaccinia, and Varicella. (The New Sydenham Society.) London: H. K. Lewis. 1907. (Private subscribers, 1*l*. 1*s*. net.)

German Gynaecological Congress. The German Gynaecological Society will hold its twelfth congress this year at Dresden, from May 21st to 25th, under the presidency of Professor Leopold. The questions to be discussed are the indications, technique, and results of operations for widening the pelvis; asepsis in gynaecological operations.

SCHOOL HYGIENE.

RELATION OF PHYSICAL AND MENTAL CONDITIONS TO HOME SURROUNDINGS.

THE City of Edinburgh Charity Organization Society has lately published a *Report on the Physical Conditions of Fourteen Hundred School Children in the City, together with some Account of their Homes and Surroundings.*

A Committee was formed, and a school selected with a mixed attendance, some of the children being very poor, while others came from a respectable working class. Every child was weighed measured, and thoroughly examined by medical experts. Volunteer visitors, selected with the greatest care as regards their fitness for the work, visited the home of every child, being accompanied by the School Board officer, who was already known to the parents. A system of verification was arranged and carried out by the Committee and visitors.

OCCUPATION OF PARENTS.

Of the trades the parents were engaged in, printing and cognate occupations engaged more than any other single trade, but a large number were found to be unskilled labourers, regular or irregular in their work. Out of 781 families visited (with 1 389 children attending the school), 142 parents were occupied in the manner last mentioned; and out of these 64 were odd jobbers, and 52 in trades allied to printing. Edinburgh is not a city noted for female employment; still, in the 781 families visited, 262 mothers were found to be wage-earners, though only 153 were regularly at work. Of the total, 186 were from families in which drinking was a *noticeable* feature, and only 29 from sober and respectable homes where the father was at work too; and these 29 were not regularly employed.

EMPLOYMENT OF CHILDREN.

The number of children of school age found to be at work was 175. Of these, 68 were of sober, decent families, but some of the fathers were ill, two were at sea, one in a lunatic asylum, and so on. In the cases of 104 of the children either one or both parents were addicted to drink. Out of the 175 children at work, 130 were boys; this did not mean that the girls were idle, for they often had the heavy task of helping mother about the house, and minding their mother's or a neighbour's babies. The total wages earned by children still attending the day school was £16 9s. 11d., or an average of 2s. 5 25d., or nearly 2s. 6d. a week each. There were 23 children exempt from attendance at the day school, but obliged to attend the evening school regularly. These children earned an average of 4s. 10d. each a week, working 53 hours each. Of children still at the day school working regularly, 64 in number, the average working hours were 15 488 a week.

HOUSING.

Of the families of children attending the school:

20 per cent. lived in one roomed houses with an average occupancy of 1 94 adults and 2 62 children.

55 per cent. in two-roomed houses (2.24 adults and 3 72 children).

20 7 per cent. in three-roomed houses (2.78 adults and 4.21 children).

4 5 per cent. in four-roomed houses (3.24 adults and 4.02 children).

0.76 per cent. in five-roomed houses (2.83 adults and 4 children).

In Edinburgh all houses with a cubic content of 2 000 cubic feet and under are ticketed. Of those visited, the proportion of ticketed houses was over one-fifth of the whole number, and of these 20 were found to be overcrowded according to city regulations. Two children under 10 are counted as one person; otherwise the statistics of overcrowding would sound much more alarming.

CHARITABLE ASSISTANCE.

The report points out that inasmuch as the police and School Board compulsory officers are appealed to for names, those forthcoming will be of children of dissolute and ill-behaved parents who draw upon themselves the attention of the law, while the decent poor remain unnoticed. Statistics collected bear out this statement.

WAGES AND WORK.

The detailed notes of wages and work show the drinking habits of the families (it is significant that there are 425 drunken families), the number of wage earners in each family, the average wages in different trades, and the number of women workers and the trades they are engaged in.

WEIGHTS AND HEIGHTS.

Heights and weights of children attending certain four other schools were taken for comparison with the tables of the selected City school. The other schools were two country schools bordering on the Highlands; one attended mainly by children of the agricultural labouring class, and another by the children of a small country town, with outlying farms, and mostly fairly well-to-do. The other two schools were in one of the districts of the city of Edinburgh. The one is attended by children of small shopkeepers, of skilled artisans, and of clerks, while the other is a higher grade school of the most advanced type. It is attended by children of ages from 10 to 18 years, sons and daughters of poorer professional men, well-to-do tradesmen who want the excellent technical education which cannot be had otherwise if the children are to be kept at home. It has been noted by Dr. Chalmers and others that Scottish boys and girls are usually above the average height of their neighbours south of the border; so it need cause no surprise that country children and well-

Comparative Table of Heights, in Inches, of Children in the Five Schools.

Age.	Sex	Selected School.	Country School (Poor District)	Country School (Prosperous District)	Edinburgh Public School.	Edinburgh Higher Grade School.	Anthropometric Committee's Standard Average.
5	M	40 53	42 00	41 89	42 38	—	41.03
	F	39.57	—	40 96	41.52	—	40.55
6	M	42 55	43 25	42 83	43.81	—	44 00
	F	41.53	41 75	43.45	43.45	—	42.98
7	M	43 85	47 75	46.34	45.53	—	45.97
	F	43.45	43.75	45.02	46.58	—	44.45
8	M	45 82	49.37	47 42	47.50	—	47 0[illegible]
	F	45.11	48 25	47 64	47.84	—	46.60
9	M	47.52	52 75	49.63	50.11	—	49.70
	F	47.19	50 75	48 49	49.26	—	48.73
10	M	49 19	48.50	51.06	52 24	52.60	51.84
	F	48.88	50.75	51.17	50 84	51.25	51.05
11	M	50 86	54 00	53 75	52 91	54 16	53.50
	F	50 89	53 83	53 39	52.67	53.70	53.10
12	M	52 71	58 12	60 33	53 73	55 23	54 99
	F	52 03	56.00	56.36	54.98	55.72	55.66
13	M	54.02	58.00	55.40	55 99	59.38	56.91
	F	54.69	58 00	6[illegible]	56.60	62.12	57.77
14	M	55 [illegible]8	—	—	58 64	61.72	59 33
	F	58.88	—	61.70	59.82	62.30	59.80

Comparative Table of Weights, in Pounds, of Children in the Five Schools.

Age.	Sex	Selected School.	Country School (Poor District)	Country School (Prosperous District).	Edinburgh Public School.	Edinburgh Higher Grade School.	Anthropometric Committee's Standard Average
5	M	37 73	41.25	40.23	42 03	—	39.0
	F	36 [illegible]9		38.50	40.01	—	38.2
6	M	42 94	45 44	44 54	43.62	—	43 [illegible]
	F	39 67	42.40	43.75	41 11	—	41.7
7	M	44.93	47 50	48.03	47.79	—	49.7
	F	43 [illegible]7	47.75	44 20	45.03		47.5
8	M	50 2[illegible]	56 00	53 46	52.70	—	54.9
	F	46.73	54.00	52 39	52.10	—	52 1
9	M	53 5[illegible]	61 [illegible]6	59 15	56.96	—	60.4
	F	51 46	62 [illegible]3	55 52	55.74	—	55 5
10	M	58 [illegible]5	54 00	61 67	63 11	66 87	67.5
	F	[illegible]1	63 [illegible]7	60 51	59.57	69.97	62.0
11	M	62 56	73 37	68 60	65 22	70.14	72.0
	F	60.47	66 00	67.34	63.71	66.91	68.1
12	M	67 71	58 50	73 30	70 26	75 68	76.7
	F	66.52	75.28	73 16	71.15	72.74	70.4
13	M	71.61	74 25	74 03	76 46	84.70	82 6
	F	74 77	86.75	96 68	85.06	94.89	87.2
14	M	78 70		—	100 19	97 07	92.0
	F	72 00	—	109.50	92.67	96 83	96.7

nourished town children exceed the standard heights in a noticeable degree, and this gives sadder emphasis to the lesser heights of the children of the selected school, many of whose chances of healthy growth are apparently spoiled for life before they begin to attend school by bad conditions of the mother's life before and after the birth of her children.

Results of Medical Examination.

For the medical examination of the children in the schools the work was subdivided among eight examiners. The schedule drawn up and adopted by Dr. Leslie Mackenzie for the Royal Commission on Physical Training was followed in its entirety, and the examination, with an average working of four hours a day, occupied one month. The results are given in a series of tables (which are explained in the text) which also include the social section of the investigation.

Pupils from Different-sized Houses.

76.77 per cent. of the children came from houses with one or two rooms.

Mental Capacity.

Out of 735 boys, 332 are described as "excellent" or "good," and 136 in the teachers' opinion dull or defective. Of 635 girls, 268 are "excellent" or "good," and 121 dull or defective. The girls after 8 years of age, probably owing to domestic work at home, fall behind the boys.

Personal Appearance.

Under this head were included the general health appearance, state of nutrition and muscle, brightness and alertness. Here 9.48 per cent. were classed as "bad," 45.72 per cent. as "medium," and 44.8 per cent. as "good." The state of nutrition was far from satisfactory, 32.22 per cent. being classified as "thin," 50.34 per cent. as "medium," and only 17.44 as "stout"; 20.77 per cent. were classified as "bad" as regards "brightness and alertness," and these came from those classed as "bad" in health appearance and as "thin" in nutrition.

Cleanliness.

Only 29.95 per cent. were returned as "good" for clothing and 35.94 for body-cleanliness, the girls being much the worst. It was among the "bads" in this table that most of the cases of infectious skin diseases, enlarged glands, and sore eyes were found.

Weight.

At all ages the weights of both boys and girls compared unfavourably with the average age-weight according to the Anthropometric Committee's standard. At 5 years the boy of this school weighed 2.16 lb. less than the average, and the girl 2.8 lb. At 13 years the boy weighed 10.99 lb., and the girl 12.43 less than the average.

Height.

The height too was below the Anthropometric Committee's average. In boys at 5 years the difference was 0.6 in., gradually increasing to 5.65 in. at 14 years. In girls the difference was 0.7 in. at 5 years, and 3.22 in. at 14 years.

Teeth.

The teeth were examined in 1,318 children for cleanliness, regularity, shape, and the number of first and second sets decayed or lost. Only two children were found who admitted to brushing the teeth once a day; 22.38 per cent. had irregular teeth which might have been avoided if a little care had been given. Scarcely a single child was without one or more decaying teeth; this applied equally to first and second teeth.

Eyes and Eyesight.

1,339 children were examined as to the condition of their eyes. In 41 per cent. suffered from some unhealthy condition of the eyes or eyelids, notably inflammation of the eyelids and inflammation of the conjunctiva. As no attempts were being made at treatment the conditions were tending to become chronic; further, in most of the cases the conjunctivitis present was infectious; 61 cases of corneal nebulæ were found, and 61 of squint, 49 being cases of convergent squint and 12 of divergent.

Acuteness of Vision.—Each eye was tested separately, Snellen's test types being used, and the children divided according to the line of type read at a distance of 6 metres. When both eyes were used 56.54 per cent. of the children had normal vision ($\frac{6}{6}$); 20.9 per cent. had two-thirds normal vision ($\frac{6}{9}$); 9.3 per cent. had half normal vision ($\frac{6}{12}$); and 12.87 per cent. had one-third or less than one-third normal vision ($\frac{6}{18}$ or less).

Refraction of the Eyes.—1,309 children were examined by retinoscopy for the presence of errors of refraction: 36.13 per cent. were optically normal; 27.64 per cent. had hypermetropia, and 2.22 per cent. had myopia. Astigmatism was present in 27.58 per cent.; 18.72 per cent. had hypermetropic astigmatism; 6.11 per cent., mixed astigmatism; and 2.75 per cent., myopic astigmatism.

Ears and Hearing.

1,358 children were examined, both subjectively by the watch and voice tests, and objectively for gross lesions by the speculum.

Watch Test.—Taking the better ear, 89.25 per cent. had "good hearing" and 10.45 per cent. either slightly defective, defective, or very defective hearing. In the latter cases the watch was heard at a distance only of between 2 ft. and 3 ft. or under 1 ft. respectively.

Voice Test.—87.85 per cent. could hear the voice at a distance of 16 ft. or more, and consequently had good hearing; 12.15 per cent. were more or less defective, while 5.89 per cent. heard the voice at a distance between 12 ft. and 16 ft., and 2.8 per cent. between 8 ft. and under 12 ft., showing defective hearing.

Diseases of the Ears were very various, the most serious being otitis media and perforation of the drum, and suppuration, found in 78 children or 5.74 per cent. 103, or 7.58, had the outer ear more or less full of wax, and 213, or 15.68 per cent., had indrawn membranes. Altogether, 402 children, or 29.6 per cent., were found with some pathological condition of the ears.

Throat and Nose.

Throat.—192 children, or 14.14 per cent., had enlarged tonsils; 109 children, or 8.03 per cent., had both enlarged tonsils and adenoids; and 92, or 6.77 per cent., had adenoids only. Naso-pharyngeal catarrh occurred in 116 children, or 8.54 per cent. of the school.

Nose.—92 suffered from some pathological condition of the nose; 60, or 4.42 per cent., had rhinitis. Altogether 42.49 per cent. were victims of some unhealthy conditions of the nose and throat.

Diseases of the Heart and Circulatory System.

1,319 children were examined, and those in whom some abnormality was found were re-examined at the end of a week; 61 were found with either some functional or organic condition of the heart; 23 were cases of permanent structural alterations in one or more of the heart valves; the mitral valve was affected in all 23; 14 were cases of mitral incompetence, 8 cases of mitral obstruction, and 1 child had both mitral incompetence and obstruction. Functional diseases of the heart numbered 38 cases.

Skin Diseases.

Of 1,319 children examined, 909, or 68.92 per cent., were noted as having unhealthy skins. In this were included cases that showed lesions of skin due to bites of fleas and pediculi; they formed 59.47 per cent., and were due to neglect.

Bones and Joints.

Only 2 cases of hip-joint disease were found, otherwise the cases of joint or bone conditions were almost entirely due to rickets resulting from improper feeding in infancy.

Deformities.—The congenital cases numbered 10 and only one example of each deformity was present. The acquired cases were 20, and in most cases rickets was the cause.

Relation of General Condition to Housing.

The mental capacity, personal appearance and cleanliness of the children are grouped at different ages and compared with the class of dwellings they come from.

Mental Capacity.—Grades of mental capacity, based on the teacher's estimate, from "excellent" to "defective," were taken. The number classed as "excellent" increases with better accommodation; the number "good" varies only a little, but slightly in favour of the 1-room child. Probably a child's capabilities do not altogether depend on its environment.

Personal Appearance.—In brightness and alertness and state of nutrition the children living in 1-roomed and

2-roomed houses compare favourably with those living in 3 and 4.

Cleanliness.—In cleanliness the children living in 1 or 2 rooms came out very badly, over 30 per cent. being classified as "bad" with regard so body and clothing. The underclothing was dirty and unsuitable.

Height.—The difference between those living in 1 and 2 rooms was 1.32 in., and was especially marked among the boys.

Weight.—Here again the greatest difference was between children living in one, and children living in two-roomed dwellings, and again the increase in case of better housing was more noticeable in the boys than in the girls.

Chest Capacity.—At all ages the chest capacity of children living in houses of one room is least, the average being 0.14 less than the chest capacity of children living in three-roomed houses.

MOTORS FOR MEDICAL MEN.

[From a Correspondent.]

(Continued from page 778.)

Cost of Running.

Such are a few of the chief points to which an intending purchaser should look; it is proposed in future numbers to enter into some further detail as to the construction and use of the cars, but it may be of service at this stage to say a few words as to the cost of running a motor.

The Comparative Cost of Horses and Motors.

On this subject diverse views obtain, and it is very difficult to lay down any positive statements. On the whole, the general consensus of opinion appears to be that if a motor be in constant daily use there is not much difference in the cost. The motor, however, does the work more quickly, and so either gives more leisure or enables its owner to do more work. A large number of medical men, amongst them even some who have found motors to be somewhat more expensive than their horses used to be, declare that nothing would induce them to go back to horses again.

The expense will vary with the owner; there is no doubt that for intermittent pleasure-use motors are less expensive than the horses which could do the same work. But the heaviest item of expense is in the wearing out of tyres, a matter partly of mileage, and partly of the skill of the driver. The man who comes up to a door at fifteen miles an hour, and stops within a few yards by a free use of his brakes will have a much heavier tyre bill than the man who so judges his distance that his car runs itself to a standstill at the right point; and the man who picks his way along the best parts of the road, and avoids, as far as may be, new laid stones, or, if he cannot avoid them, puts a good pace on to his car, and takes the clutch out as he reaches them, so that the car runs over them by its momentum, and with no power on its driving wheels, will save a good deal in the cost of renewal of tyres.

Then, too, the owner who understands his car, is able to attend to small matters himself, and is the real master of his chauffeur, will have smaller repair bills than the man who employs an expensive driver, and is at his mercy as to the necessity for repairs and renewals, on which the driver gets a commission. Again, if an owner usually drives his own car, and employs only a coachman or a boy to clean it, he will effect a large saving; and the man who loves a beautiful machine and nurses it, not putting it on every occasion to the utmost of its powers will reap the advantage in economy of running. For these and sundry other reasons two persons owning similar cars, and traversing the same mileage in the year will find their expenses by no means identical.

The Various Makes of Cars.

It would be unwise to recommend any particular makes of car, for several reasons, the chief perhaps being that no one man can have a thoroughly intimate knowledge of more than a very few cars. No process of inspection, no trial runs, no general acquaintance with the mechanism, constitute a real knowledge of a particular car. It is necessary to have owned it for a considerable time, to learn how its parts have worn after a few thousand miles, and what weaknesses it has developed, if any, after long use, before one can be said to know a car. For many a poor car, constructed of inferior and soft material, will make an excellent show when it is new; but a very poor one, when it has run some five or six thousand miles. But it may be of some assistance to readers to give the names of some makes which are favourably known to the writer, or, what is more to the purpose, of makes which have given satisfaction to some of our correspondents after adequate trial in actual professional work.

It is obvious that a list compiled on these lines can not only make no approach towards completeness, nor will the cars therein included be necessarily the best to be had for the money, seeing that their inclusion is to a certain extent the result of accident. Much more complete lists will be found in the *Autocar* for November 17th, and in the *Automotor Journal* for February 17th, 1906. These back numbers are usually easily procurable, but the novice will be bewildered by their magnitude. The cars about to be named may, however, afford some guide as to what a purchaser may expect to get for his money.

Not exceeding £200 for the complete Car.

One cylinder:	Two cylinders:
8-h.p. Rover	8-h.p. Swift
9-h.p. Cadillac	8-h.p. Gregoire
7-h.p. Darracq	7-h.p. Star
10-h.p. Adams Hewitt	
8-h.p. Wolseley	
6½-h.p. Peugeot	

Not exceeding £250.

One cylinder:	Two cylinders:
8-h.p. Peugeot	8-h.p. Brown
8-h.p. Rover	8-h.p. James and Brown
8-h.p. Darracq	8-h.p. Singer
	9-h.p. Orleans
	10-h.p. Swift
	10-h.p. Alldays

Not exceeding £300.

One cylinder:	Two cylinders:	Four cylinders:
8-h.p. De Dion	8-h.p. Renault	10-h.p. Humber
9-h.p. De Dion	10-h.p. Metallurgique	10-h.p. Leader
	10-h.p. Siddeley	10-h.p. Star
	8-h.p. Wolseley	
	8-h.p. Clement	
	10-h.p. Gladiator	

Various correspondents who have given an account of their experience in the British Medical Journal have expressed their satisfaction with the following cars:

6-h.p. Wolseley	10-h.p. Allday
8-h.p. and 10-h.p. De Dion	12-h.p. Humber
8-h.p. Humber	10-h.p. Panhard
10-h.p. Humber	8-h.p. Peugeot
10-h.p. Swift	10-h.p. Adams-Hewitt
9-h.p. Speedwell	12-h.p. Sunbeam.

As illustrative of the amount of work of which a small car is capable, we may cite from our correspondence a 6-h.p. Wolseley which took the place of three horses and covered 7,600 miles in the year; an 8-h.p. De Dion which covered 6,700, an 8-h.p. Humber which covered 6,300, and a 7-h.p. New Orleans which covered 7,500.

Above the price of £300 we come to a class of car hardly of the cheapest kind available for medical practice; for about £350 a considerable choice of four-cylinder cars of from 12 to 14-h.p. may be found to seat four persons.

It is hoped that the cars enumerated may serve at least to give some definite idea of what can be obtained for various prices, and it must be repeated that it is in no way asserted that the cars enumerated are the best to be had at a price, but merely that these are either rather better known to the writer than other makes of cars or have been used satisfactorily in medical practice by our correspondents.

To sum up, the most desirable car for the medical motorist, if he feels that he can afford it, is one of 8 to 10-h.p. with two cylinders, two-seated, and the addition of some form of wind screen is desirable as a protection, as is a hood. But the writer, though possessed of both, very rarely uses them, preferring to rely on suitable clothing. If economy is to be studied to the uttermost, a 6 to 8-h.p. car, with one or two cylinders, will do excellent service if the hills in the district are not too severe in their gradients.

On the other hand, if the medical motorist is inclined to indulge himself in a car which is capable of more than fulfilling his actual needs, a 12 to 16-h.p. car with four cylinders, or even a 16 to 20-h.p. is an exceedingly nice possession. Higher powers than this are out of the

question if economy is to be studied at all; indeed the use of high-powered cars is somewhat of a craze at the present time and is in the opinion of the writer an expensive mistake.

(To be Continued.)

BRITISH MEDICAL BENEVOLENT FUND.

At the March meeting of the Committee twenty-two applications for assistance were received, and sums amounting to £254 voted in relief to twenty-one cases. The deaths of three annuitants were reported, and the vacancies so created filled from the list of selected candidates. Mr. E. Parker Young was re-elected Chairman of the Committee for the ensuing year. An abstract of the cases relieved is appended:

1. Widow, aged 49 of L.R.C.P., L.R.C.S.Edin., who practised in London. Quite unprovided for at husband's death three years ago and is unable to obtain regular employment on account of ill-health and a deformity. No children. Relieved three times, £22. Recommended by Mr. Coulson. Voted £14, £2 immediately and £12 in monthly instalments.

2. Daughter, aged 68, of late L.S.A., who practised in Monmouthshire. For thirty-six years has earned a living as governess, companion, etc., but her health is now breaking up. Recommended by Dr. Miles Miley and Mrs. Louisa Anderson. Voted £12 in twelve instalments.

3. M.B.Lond., aged 70. Has practised for forty years, but is now quite incapacitated. No income. Children only just self-supporting. Recommended by Sir John Tweedy and Dr. F. P. Roberts, Vice-Presidents. Voted £20 in one sum.

4. Daughter, aged 65, of late M.R.C.S., who practised in Yorkshire. Has maintained herself as a governess for many years, but is now quite broken down in health and dependent on a small weekly allowance from a charity. Recommended by Dr. Hector M. Robinson, Honorary Local Secretary, and by Mrs. Braithwaite. Voted £12 in twelve instalments.

5. Widow, aged 50, of L.R.C.P.Irel., who practised in Cheshire. Quite unprovided for at death of husband a few months ago, and has recently undergone a severe operation. Recommended by Mr. J. Taylor. Voted £12 in twelve instalments.

6. Daughter, aged 62, of late M.R.C.S., who practised for many years in London. Since mother's death has been living on a small legacy, which is now exhausted. Health very feeble. Recommended by Mr. Reginald Harrison, Vice-President. Voted £12 in twelve instalments.

7. Daughter, aged 47, of late M.R.C.S., L.S.A., who practised in London. Is an epileptic, and practically incapacitated by the results of burns. Recommended by Dr. Walter Rosser, Honorary Local Secretary. Voted £12 in twelve instalments.

8. Widow, aged 4[illegible], of L.R.C.P.Edin., M.R.C.S.Eng., who practised in Herefordshire, and whose savings were exhausted by a long illness ending in death. For several years applicant has kept a boarding house, which she is now compelled to give up on account of ill-health. No income; five children, of whom only two are able to give a little help, and two are quite dependent. Relieved four times, £20. Recommended by Surgeon-Lieutenant-Colonel Deeble. Voted £12, in twelve instalments.

9. Daughter, aged [illegible], of late L.R.C.P.Edin., L.S.A., who practised in Lancashire. No income is allowed a few shillings a week by a friend. Used to be a dressmaker, but her health is unable to do so now, and income dissolved a few years ago, and since then has been unable to obtain regular employment. Relieved [illegible] times, £[illegible]. Recommended by Dr. Alfred Goodall. Voted £[illegible] in instalments.

10. Widow, aged [illegible] of L.S.A., who practised in Suffolk. No income; lets lodgings, but has had her rooms empty all the winter. Has one child only able to give a little help, and two still dependent. Relieved [illegible] times, £[illegible]. Recommended by Dr. W. S. [illegible] Griffith. Voted £10 in two instalments.

11. Widow, aged [illegible] of M.D., C.M.Edin., who practised in Cheshire. No income; practically dependent upon this fund and a few shillings a week from the Ladies' Working Guild. Relieved [illegible] times, £[illegible]. Recommended by Miss Farquhar. Voted £10 in two instalments.

12. Daughter, aged [illegible] of late L.R.C.P.Edin., L.S.A., who practised in London. Used to support herself by taking boarders, but for [illegible] years has been unable to do so, and is now dependent upon the efforts of her sisters to maintain themselves. Relieved three times, £30. Recommended by Mr. Anderson Critchett. Vice-President. Voted £10.

13. Widow, aged [illegible] of L.R.C.P., L.R.C.S.Irel., who practised in London. Applicant was well provided for at her husband's death three years ago, but [illegible] everything through a lady friend. Endeavours to maintain herself as a companion, but during the past year has undergone four operations, and is now in a very feeble state of health. Relieved twice, £20. Recommended by Messrs. W. and A. Gallabin. Voted £10 in one sum.

14. Widow, aged [illegible], of M.R.C.S., L.S.A., who practised in Somersetshire. For twenty years after husband's death applicant maintained herself as a cook-housekeeper, but her health is now broken down. Relieved once, £12. Recommended by Mr. J. Gould. Voted £12 in twelve instalments.

15. Daughter, aged 55, of late M.R.C.S., L.S.A., who practised in London and Birmingham. No income. Endeavours to support herself and invalid sister by needlework. Recommended by Dr. J. E. Nevins, Honorary Local Secretary. Voted £12 in twelve instalments.

16. Daughter, aged 57, of late M.R.C.S., who practised in Gloucestershire, and was an annuitant of this Fund. Is given a home in return for services, but receives no salary. Relieved five times, £84. Recommended by Mr. O. H. Fowler. Voted £12 in twelve instalments.

17. Widow, aged 49, of L.R.C.P.Edin., L.S.A.Lond., who practised in Cumberland. Quite unprovided for at husband's death four years ago. Health indifferent. Five children, barely self-supporting. Relieved once, £10. Recommended by Dr. G. A. Hume. Voted £10 in two instalments.

18. L.R.C.P.Edin., M.R.C.S.Eng., aged 60, who practises in Surrey. For the last three years has been incapacitated by hemiplegia and consequently earnings average less than £1 a week. Seven children, the youngest being 3 years old and only one self-supporting. Relieved four times, £27. Recommended by Deputy-Surgeon-General E. L. Kellar. Voted £18 in twelve instalments.

19. Widow, aged 63, of L.R.C.P., L.S.A.Edin., who practised in Glasgow. No income; allowed £10 a year by a charity. Has endeavoured to support herself for some years by taking boarders, but is obliged to give up on account of ill health. Applicant's only daughter, a teacher, has been ill for the last four or five months, and it has been necessary to sell some of the furniture to meet unavoidable expenses. Relieved eight times, £96. Recommended by Sir Patrick Heron Watson and by Dr. Joseph Bell, Honorary Local Secretary. Voted £12 in twelve instalments.

20. Widow, aged 46, of M.R.C.S., L.S.A., who practised in co. Durham. No income; endeavours to support herself by sewing. Health indifferent; 2 children, a son just self-supporting and a daughter a school-girl. Relieved five times, £47. Recommended by Mr. Henry Power and by Dr. W. B. Winston. Voted £12 in twelve instalments.

21. Daughter, aged 51, of late M.R.C.S., L.S.A., who practised in London. No income; is allowed a few shillings a week by a sister. Health too indifferent for regular employment but does needlework when able. Relieved nine times, £101. Recommended by Mr. W. Bramley Taylor. Voted £12 in twelve instalments.

LITERARY NOTES.

At a meeting of the Société des Etudes Rabelaisiennes held on March 25th, the President, M. Abel Lefranc, announced that the Marquise Arconati Visconti who is the daughter of a distinguished man of letters, M. Alphonse Peyrat, had given £1 600 for the production of a critical edition of the works of Rabelais. The creator of Pantagruel has the special interest for us that he was a Doctor of Medicine of the University of Montpellier, where his cap is, or used to be, placed on the head of newly made doctors when the degree was conferred upon them. The new edition of his works is to be prepared under the direction of M. Abel Lefranc. Although elaborate editions by Jannet Montaiglon, Marty-Leveaux, and Burgaud des Marets and Rathez have appeared, none of these is regarded as definitive. There is no edition that enables the reader to follow the evolution of Rabelais's thought as modified by the different episodes of his diversified career. In the projected new edition it is proposed to restore the text to its original state before it was pruned and toned down by the author with the fear of the prison and the stake before him. It may be mentioned that a new edition of Rabelais in English is in preparation by some American scholars, and in Germany a minute commentary on his works is in course of publication.

The California University Press announces the issue of a monograph on the *Mechanism of the Physiological Action of the Cathartics*, by John Bruce MacCallum, late Assistant Professor of Physiology in the University of California. The book is published posthumously, with an introduction by Jacques Loeb, Professor of Physiology. The same Press will shortly publish, in the series of University of California Publications in Pathology, a volume on *Fermentation*, by Alonzo Englebert Taylor, Professor of Pathology in the University.

Dichotomy seems to be a fairly ancient institution in France; a horrible example of the practice occurred in the reign of Louis the Fourteenth and in connexion with the august person of the Sun King himself. The story is told by Dr. Lavergne in the *Presse Médicale*. In 1693, when the monarch began to feel the first touches of age, his physicians ordered him to be bled once a month.

That duty was, of course, entrusted to Maréchal, his Irish surgeon. There was at the time in Paris a young brother of the craft who conceived the idea of making his fortune by bleeding the King. The enterprise was difficult, but he knew that the most solid doors can often be opened with a golden key. Following the advice of Iago, he put money in his purse and sought an introduction to Antoine Daquin, the King's chief physician. The negotiation was conducted on a strict business footing. Daquin, who was known to love money, was told that ten thousand crowns were deposited with a notary who had instructions to transfer the sum to him as soon as the surgeon had got the job. It was not an easy thing to manage, as Maréchal never left the King. One day, however, he asked permission to leave Versailles for three days. Daquin seized the opportunity to introduce his protégé, whom he had ready at hand for the purpose. Feeling the King's pulse one morning as usual, he pretended to be alarmed by its strength and volume, and ordered the illustrious patient to be bled forthwith. As Maréchal was away the King hesitated, but fear soon made him yield to his physician's proposal. The young surgeon bled the King, and Daquin got his money. In the meantime a message had been dispatched for Maréchal, who was not far off. He returned to Versailles in haste, and was much surprised to find that the King, whom he had left in the best of health, had been bled. He was not on friendly terms with Daquin, and he quickly grasped the situation. He went to see the young surgeon, and forced him to disclose the whole plot. When the King learnt the truth he flew into a terrible rage, ordered Daquin to be arrested, and placed the matter in the hands of the Council of State. That obsequious body, after a very short deliberation, unanimously voted that the physician who had trafficked in the blood of the King deserved death. The royal wrath, however, subsided to some extent, and he graciously spared Daquin's life, but deprived him of his office and exiled him from the Court to Quimper-Corentin. The too greedy physician did not long survive his disgrace; he died in 1696. He had been appointed Chief Physician to the King in 1671.

THE ADMINISTRATION OF THE MIDWIVES ACT.

Payment of Medical Men called in to assist Midwives.

Dr. C. W. Hogarth (Greenwich) writes: At a meeting of medical practitioners of Deptford, Greenwich, and Charlton, held at the Parochial Hall, East Greenwich, on Thursday, March 28th, 1907, it was unanimously resolved:

> That in the event of assistance being required by a midwife under the recent Act, the nearest available practitioner ought to be called, and that the fee should be paid by the guardians on a joint certificate signed by doctor and midwife stating the reasons why such assistance was necessary.

It was further resolved:

> That copies of this resolution be sent to the guardians and J. Hamilton Benn, Esq., and Lord Thynne.

MEDICAL NEWS.

The War Office authorities have sanctioned a payment from army funds of £300 per annum for two years to the Anglo-American Hospital at Cairo.

At the meeting of the British Gynaecological Society which takes place on Thursday next, April 11th, Professor Jacobs of Brussels will read a paper on The Radical Cure of Prolapsus Uteri.

A laboratory for the study of human nutrition is to be built by the Carnegie Institute of Washington on a site adjacent to the Harvard Medical School. The work will be under the direction of Professor F. G. Benedict, of Wesleyan University.

The Lord Chancellor has placed the name of Mr. W. Black Jones, M.D., B.S.Lond., D.P.H., of Llangammarch, Wells, upon the Commission of the Peace for Breconshire, and that of Mr. Alfred H. Carter, M.D., F.R.C.P., Professor of Medicine in the University of Birmingham, on the Commission of the Peace for the County of Worcester.

At the annual meeting of the governors of the Royal Eye Hospital, Southwark, on March 20th, it was reported that owing to the great number of applicants for relief during the past year it had been necessary to open the out-patient department both morning and afternoon.

A Bill has been introduced into the Pennsylvania Legislature appropriating the sum of £120,000 for two years for the establishment and maintenance under the charge of the State Department of Public Health of one or more sanatoriums for the free care of indigent persons suffering from tuberculosis.

By a special Act of Congress, passed on February 27th, the President of the United States was authorized to promote Lieutenant and Assistant Surgeon James Carroll to the rank of Major in the Medical Department of the United States Army in recognition of his important experimental work on yellow fever.

A discussion on the aim and scope of women's work in relation to public health will be held at a sessional meeting of the Royal Sanitary Institute on Tuesday next, at 8 p.m. Curiously enough the discussion will be opened by a man, Dr. Meredith Richards, M.O.H. Croydon. He will be followed by another man, then three ladies are to speak, and finally a third man.

With 1907 the Factory Girls' Country Holiday Fund enters the twentieth year of the useful work it does in helping these young people to spend a short time during the year amid country surroundings, the girls themselves paying a portion of the necessary expenditure. By July 1st last year 5,000 applications had been received, and all others had to be refused for want of funds. Subscriptions may be sent to the Honorary Secretary, Miss Paget, 28, Campden Hill Square, W.

A league for the repression of cancer has been founded in Belgium on the initiative of Dr. O. Laurent, professor of surgery in the University of Brussels. The President of the organizing committee is M. B. Hanicq, and among the members of the committee are Professor Laurent, Drs. A. Maréchal, *chef de clinique* in the hospital of St. Josse-ten-Noode, Brussels; V. Decoster, and J. Charbonnier.

The spring meeting of the South-Eastern Division of the Medico-Psychological Association will be held at the East Sussex County Asylum, Hellingly, on Wednesday, April 17th. The asylum and grounds will be open to inspection from noon, and Dr. Taylor invites the members to lunch at 1.45 p.m. The general meeting will take place at 3 p.m., and after the transaction of general business a paper will be read by Dr. C. H. Fennell on the care of children in county and borough asylums.

The reports of cases of epidemic cerebro-spinal fever during the last fortnight present little worthy of special note. In several new localities of England authenticated cases have been recorded, but there does not seem to be any particular tendency for fresh cases to occur in connexion with others previously noted. In Scotland and Ireland the situation remains practicall unchanged, except for the fact that the authorities ha followed the example of Glasgow in ceasing to issue daily reports. Altogether there have been in Belfast, up to March 29th, 228 cases since the beginning of the year, of which 138 have ended fatally.

New Medical Schools in China.—The German Budget for the coming year includes a grant of £2,000 towards the establishment of a medical school at Shanghai. The University of Yale has founded a College of Medicine in Chang Sha, Central Hunan, and the University of Pennsylvania is making arrangements to establish another at Canton.

The Supply of Midwives. The London County Council has given notice that it will again award next July six scholarships to students in midwifery who are ordinarily resident within the County of London, and between 24 and 40 years of age. The value of each scholarship will be £25, and the course of training must extend over a period of six months. Applications should be addressed to the Executive Officer, Education Offices, Victoria Embankment, not later than Saturday, April 20th, 1907.

Hygiene of Mines. By a decree dated February 28th the French Minister of Public Works appointed a Special Committee to inquire into the whole subject of the sanitary conditions of mines. The Committee consists of five representatives of the medical profession, two representatives of the masters, and three of the miners, besides two representatives of the Ministry of Labour and four members of the mining service. The medical members are Drs. Vagnat and Raymond, Senators G. Arsonval and Laveran, members of the Institute of France and of the Academy of Medicine, and Professor C. Lucite Director of the Pasteur Institute of Lille. M. Delafond, Inspector-General of Mines, is Chairman of the Committee.

British Medical Journal.

SATURDAY, APRIL 6TH, 1907.

THE DEBT OF SURGERY TO LISTER.

LORD LISTER, who was born on April 5th, 1827, published his first exposition of the antiseptic principles in surgery in 1867,[1] and happily lives to-day to receive the congratulations of surgeons throughout the world. As previously announced a committee has been formed in London with representatives in other medical centres at home and abroad to arrange for the publication of a collected edition of all Lord Lister's papers and addresses, and it will perhaps only then be possible to form an adequate estimate of the immense value of his contributions not only to practical surgery but also to pathology, especially the pathology of the infections.

Lord Lister has recently revised and republished in a small volume his Huxley Lecture delivered in 1900, giving a summarized account of some of the early studies and experiments which prepared his mind to frame the great generalization that was to transform the practice of surgery and to extend its limits far beyond the bounds then apparently set for it. Sir Hector Cameron, of the University of Glasgow, has kindly placed at our disposal for publication in this issue, which bears a date so nearly contemporaneous with Lord Lister's birthday, the substance of two lectures delivered by him last year and since revised with the assistance of Lord Lister himself. The lectures were of course not prepared with any view to the celebration of this week, but their author was good enough to fall in with our suggestion that their publication to-day would be very appropriate.

The whole story is a striking illustration of the scientific method of inquiry carried out in the true spirit of Harvey's injunction "to search and study out the Secrets of Nature by way of Experiment," and resulting in benefits to mankind which must for ever place the name of Lister among the immortals. His discovery, like most great advances in knowledge, was not achieved by one of the happy accidents which figure in story books, or by a single crucial experiment;[2] it was reached gradually, after prolonged observation and experiment carefully made, carefully recorded, and interpreted with the independence of mind and sobriety of judgement which are the true marks of scientific genius.

In the Huxley Lecture[3] Lord Lister sketched the nature and the scope of his earliest researches, but the limits set by the time then at his disposal did not permit the whole to be told, and Sir Hector Cameron takes up the story where Lord Lister left off. From these two documents we can clearly trace how observation and reflexion during some twenty years gradually but surely prepared his mind to appreciate the full significance for surgery of Pasteur's researches and discoveries with regard to the nature and cause of fermentations.

Clinical and *post-mortem* examination of cases of pyaemia and hospital gangrene, diseases then common in hospitals, combined with the microscopical study of the affected tissues, led Mr. Lister, while yet a house-surgeon to Mr. (afterwards Sir J. E.) Erichsen at University College Hospital, to the conclusion that the disease was of the nature of a purely local poison, and the observation in the sloughs of hospital gangrene of some bodies of pretty uniform size, sketches of which are still in existence, caused him to imagine that they might be the *materies morbi* in the shape of some kind of fungus. Thus the idea that hospital gangrene was probably of parasitic nature was present to his mind when he went to Edinburgh to see something of Mr. Syme's practice. He seems to have been specially impressed by two points: the prominence which Mr. Syme gave to the pathological side of surgery, and his surgical skill not only as an operator but in the after-treatment of wounds. The place of water dressings, which invariably became putrid within twenty-four hours, was taken by dry lint left untouched for four days, during which union by first intention proceeded undisturbed, except in the track of the ligatures upon the blood vessels. But this system, highly satisfactory up to that stage, could not be continued in the further progress of the case, for the ligatures had to be separated by a process of suppuration occupying a variable period, so that, under the best management which the knowledge of those days permitted, suppuration was the inevitable attendant on nearly every wound, and so long as it continued there was no security against the advent of one of the various specially unhealthy conditions, then quite inexplicable, which might ruin the results of the most beautifully planned and executed operations.

The idea that this suppuration was due not to irritation produced by the mere presence of the ligature but to some irritant in the substance of the ligature seems already to have presented itself to him, but Lord Lister tells us that it was the observation that a wound might heal without suppuration if silver sutures were used, which led him to the conclusion that the silk suture was irritating because the blood and serum it imbibed underwent decomposition in its interstices, the irritation growing greater the longer the process continued. These and other analogous considerations justified him at that time in teaching that decomposition of the organic liquids was the essential cause of suppuration, and when Pasteur's researches on fermentation were made known, they at once threw a flood of light on the cause of that decomposition, furnished the clue to the enigma, and gave an indication of the way in which suppuration and other infective processes in wounds might be prevented. In his address to the British Medical Association in Dublin in 1867, Professor Lister said: "When it had been shown by the researches of "Pasteur that the septic property of the atmosphere "depended, not on the oxygen or any gaseous constituent, as chemists had believed, "but on minute "organisms suspended in it, which owed their energy "to their vitality, it occurred to me that decomposition "in the injured part might be avoided without excluding the air, by applying as a dressing some material "capable of destroying the life of the floating "particles.

Simultaneously with these studies in infection, Lister as a student, as a house-surgeon in London and Edinburgh, and while assistant surgeon to the Edinburgh

[1] On a New Method of Treating Compound Fractures, Abscess, etc., with Observations on the Conditions of Suppuration. By Joseph Lister, Esq., F.R.S., Professor of Surgery in the University of Glasgow. Part I. Issued March 14th, 2nd, 9th, April 27th, and the address on The Antiseptic Principle in the Practice of Surgery, delivered before the Annual Meeting of the British Medical Association in Dublin, 1867. BRITISH MEDICAL JOURNAL, 1867, vol. ii. p. 246.

[2] Cf. Sir Erasmus Wilson Harveian Oration, 1856.

[3] This lecture was previously published in the BRITISH MEDICAL JOURNAL [illegible] The Huxley Lecture, entitled "Lister," was published a few weeks ago by Harrison and Sons, London.

Royal Infirmary, was prosecuting with the same thoroughness and independence, a long series of researches into the coagulation of the blood within and without the body; into the action of irritants, showing their effect not only on the blood vessels, but also and more especially on the tissues; and into the phenomena of inflammation. He showed that the tissues, as distinguished from the blood vessels, were the parts primarily and essentially affected by the action of the irritant, which, when producing inflammatory congestion, prostrates for the time being the vital energies of the tissues on which it acts. Observations and experiments were made also on the share of the nervous system in the production of the signs of inflammation.

Thus was Lord Lister prepared, to quote his own words, "to welcome Pasteur's demonstration that "putrefaction, like other true fermentations, is caused "by microbes growing in the putrescible substance. "Thus was presented a new problem: not to exclude "oxygen from wounds, which was impossible"—then supposed by chemists to be the cause of putrefaction—"but to protect them from the living causes of decomposition by means which should disturb the tissues as "little as is consistent with the attainment of the "essential object. It has been since shown that "putrefaction, though a most serious cause of mischief "in wounds, is not its only cause. In other words, it "has been proved that there are microbes which "produce septic effects without occasioning unpleasant "smell. But the principle that first guided me, still "retains, I believe, its full value, and the endeavour to "apply that principle so as to ensure the greatest "safety with the least attendant disadvantage has been "my chief life-work." Of how this work was done; of the technical difficulties encountered in the application of the principle to practice; and of how they were surmounted, Sir Hector Cameron gives an account which ought to be read by every surgeon and by every medical student, not only for the interest of the story, but for the great lesson it affords of the true method of scientific inquiry by way of experiment, observation, and reasoning.

THE CHARTER.

The Representative Meeting of 1904, held at Oxford, having considered difficulties in carrying out the full scope of the work of the Association, passed a resolution instructing the Central Council to take steps to effect such changes in the constitution of the Association as would enable it to carry out its objects more freely. Before the Council proceeded with the introduction of any essential changes, it obtained legal opinion as to the best methods, and was advised that, as it was doubtful whether it lay in the power of the High Court to grant such extensions of its existing Memorandum as would enable the Association to attain its wishes, it would be a wiser course to wind up the present Company and to form a new one. It was further suggested by one of the legal experts consulted that the difficulties which had arisen would be better met by seeking to obtain a Royal Charter, and that it appeared to him unlikely that any great difficulty would be experienced in obtaining such a Charter as would meet the wishes of the Association. The Representative Meeting of 1905 considered this advice, and although not without some opposition, instructed the Central Council to prepare a draft of the proposed Charter and to submit this draft to the Divisions at as early a date as possible. The Council took up a very strong position with regard to the proposal. The Organization Committee was thereupon instructed to proceed with the draft under legal advice, and in due course this draft was issued to the Divisions. The Charter as drafted contained provisions for nearly every possible exigency, and in the opinion of some members it was so nearly ideal that doubts were expressed as to whether the Privy Council would grant it in this form.

The Council and the Organization Committee then proceeded to consider the advisability of still further improving the draft and thought it wiser to reconsider the matter afresh, especially in view of certain developments which had taken place. The subject was then brought before the Representative Meeting held at Caxton Hall in London in July, 1906, and a number of amendments were suggested and discussed, and it was resolved that the Organization Committee should redraft certain portions and that the revised draft should be submitted to the Divisions, prior to a final decision being reached at a Special Representative Meeting to be held early in 1907. It is a matter of history that while circumstances justified the Council in modifying its views with respect to the Charter, the voting for and against a Charter at the Representative Meetings in 1905 and 1906 remained practically numerically unaltered.

The question has frequently been raised as to why it is desired to seek a Charter at all. Without going minutely into the history of the Association, it will be sufficient to recall that at the reorganization in 1900-1901, the question of the wisdom of seeking a Charter to place the Association on a firmer footing was discussed, and as the prospect of such an application meeting with success was then deemed doubtful, the proposal was allowed to drop. But it soon became apparent that the limitations of the existing Memorandum and Articles of Association were such as to debar advance in certain directions, and thus to interfere with the attainments of the objects of the Association. The Association was founded for the promotion of medical and the allied sciences and for the maintenance of the honour and the interests of the medical profession. In the course of the development of the work a number of fresh interests arose and numerous lines of possible action were opened out. It was recognized that it would be most desirable to institute provisions for mutual assistance and support in the profession, and this was possible only within very narrow limits under the old conditions. Special provision has to be made in order to carry out medical defence, benevolence, insurance, and certain other matters, which undoubtedly belong to the objects for which the Association was founded. It became especially desirable that the Association should have power to organize a system of benevolence among its members and their families, and this is quoted as one of the most important reasons for seeking a Charter, since no memorandum and articles of association could be devised under the Companies Act to legalize this object.

The Association has grown in importance, and it is necessary to remove all obstacles which hinder its full evolution and development in the future, and to provide for as many exigencies as possible. The alternatives were a fresh Memorandum and Articles and a Charter, and the question of medical benevolence *inter alia* turned the scale in favour of the latter.

In order to attain what was desired, it was felt that the Charter must be planned on as comprehensive a scale as possible, and the proposal of the advising counsel to introduce an "omnibus" clause appeared to cover what was wanted. The most important general

conditions must be placed in the Charter itself, while certain regulating and restricting limitations are to be embodied in "ordinances" and in "by-laws." The Charter can only be amended by the granting of a supplemental Charter, while ordinances may be altered, added to, or removed with the sanction of the Privy Council, and by-laws may be amended, deleted, or altered by the Association itself, subject to certain slight restrictions.

The first draft embodied those general principles which apply in the existing Memorandum and Articles. In the body of the document provision is made for the holding of meetings, for the sale and publication of lists and other material of interest to the medical profession, for the publication of a journal, for the granting of sums of money for and giving encouragement to scientific research, for originating, supporting, and opposing Bills in Parliament and elsewhere, for taking proceedings against or defending persons in the interest of the profession, for providing facilities for sales, etc., of practices and partnerships, for carrying out benevolence among the members of the profession and their relatives, and for executing trusts. Provision is also made for unlimited holding of lands, moneys, for the sale or mortgage of the same, and like transactions. The Association would thus be empowered to carry out anything for the benefit of the profession and for its members, provided that it does not engage in trade or business, save for the purposes of the sale of publications, of transferring of practices, and of investing and realizing funds. It must be understood that the objects of the Association form the most important part of the Charter, and it has been expressed that as these are defined in a very wide way the freedom of movement under such a Charter would be great and the legal restrictions small.

The Charter differs also in another respect from the existing regulations under the Companies Act. The Association at present is more or less under the jurisdiction of three bodies. The Representative Meeting can direct and instruct the Council, and the Council can organize and act, subject to the consent of the Representative Meeting. But in matters of finance and in certain other matters the decision is in the hands of the general meeting. An example of the clumsiness of this arrangement has recently been experienced, when general meetings had to be called four times in order to confirm certain alterations in the by-laws. Again, at the last annual meeting the question of the finances of the Association was brought up in duplicate, and it seemed as if considerable difficulty might have resulted from a confusion of instructions to the Council by the General Meeting and by the Representative Meeting. The Charter arranges for the Representative Body to be endowed with full power of controlling financial and other matters.

In the draft which the Organization Committee is now issuing to the Divisions in the SUPPLEMENT for this week, a certain number of changes have been included. These changes owe their existence to resolutions passed last summer at Caxton Hall, to the wishes of some of the Colonial Branches, and also to the advice of the Organization Committee, which has conferred on material points with counsel. The most important changes include provision for establishing circulating medical libraries and club houses, for including the superannuation of the staff in the provisions for organizing benevolent funds, and the plan of determining the limit of subscriptions. The first two points carry with them obvious advantages. With regard to the last named, it appears that while the Representative Meeting resolved that if it were regarded necessary to fix the limit of a member's liability, the sum of 100s. would be a sufficiently high one to provide for future exigencies. Counsel, however, advised that the matter of subscription might be transferred to the by-laws, and that as the Representative Meeting would be empowered to alter a by-law, it would be wiser to state the amount of annual subscription at 25s.—the present rate. A further change which affects the Colonial Branches is placed in the by-laws. This provides for special subscriptions of members of Branches not in the United Kingdom, but safeguards the members by giving the right of voting by means of voting papers before such a rule could be put into effect. Certain contingencies might arise which would render it advisable to levy a special subscription and the by-law provides for this, while it offers such protection as is possible to dissentient members. In another by-law it is enacted that the grants to Branches shall be changed from the present capitation grant of 4s. a head to a sum which shall not exceed the amount named to be determined by the Council. This has been introduced for the purpose of preventing the accumulation of funds in the hands of certain Branch Councils, as happens at present. The Organization Committee will call the attention of the Divisions to a laxity of the rules governing the Council's power of referendum; the Council might decide on a referendum, but fail to carry it into effect which would result in the matter being postponed, Provision should, it is thought, be made to ensure resolutions being put into effect if they are not referred by the Council to the Divisions.

Lastly, reference must be made to the subject of the mode of election of the Central Council. The draft Charter embodies the scheme approved of by the Representative Meeting that twenty members be elected by the Branches and ten by the Representative Meeting. By this scheme the number of the members of the Council would be reduced to about one half, and economy would be effected. Whether there would be a loss or gain in efficiency is a matter of opinion. Election by Branches really means election by individual votes, and the arrangements are made to distribute or to group the individual members in such a way that geographical distribution would be secured. The election could be carried out by individual votes of the members grouped in Branches, as is in force at present, or the Branches could be grouped in such a way as to provide for some topographical distribution, or the voting could be delegated to the Representatives of the Divisions at the Representative Meeting or the Representatives could vote as a body.

In discussing the draft Charter, the Divisions will be requested to consider certain alternative schemes, which have been offered, as being more suitable. In three of these schemes over representation is aimed at for those districts which are situated at such a distance that attendance at Council meetings would be rendered difficult. The points in favour of each scheme is pointed out to the Divisions in the prefatory memorandum, and the choice must rest with them.

The new draft is a very carefully worded document, and great care and much thought have been expended on its preparation. The Divisions will have to consider the various points, and it is very much desired that each should express a clear opinion as to whether it can extend its approval or not to each item. When the matter is discussed at the special Representative Meeting, it should be borne in mind that the decisions arrived at will be binding, so that any criticism offered should be deliberate and carefully considered.

MEDICAL EXAMINATIONS AND REFERENCES UNDER THE NEW WORKMEN'S COMPENSATION ACT.

The Workmen's Compensation Act 1906 imposed upon the Home Secretary the duty of making regulations under the Act with regard to the examination of an injured workman both at the time when he gives notice of the accident and subsequently from time to time while in the receipt of weekly payments. It also imposed on the Home Secretary the further duty of making regulations for the proceeding to be followed by the medical referee to whom, if the employer and the workmen fail to agree, the county court must refer the decision as to the workman's condition of fitness for employment, and as to whether, and to what extent, the incapacity is due to the accident. It will be remembered[1] that when a workman has given notice of an accident he may be required by the employer to submit himself for examination by a medical practitioner provided and paid by the employer; and any workman receiving weekly payment under the Act may be required by the employer to submit himself to examination by a medical practitioner, or may, on his own motion, be examined by a medical practitioner selected by himself. In either case either party must furnish the other with a copy of the report of the practitioner as to the workman's condition. This report must, therefore, be made in writing, and must of course be carefully drawn, since it affords the basis of the action of the county court in sending the matter to the medical referee in those cases in which no agreement is otherwise reached. The duties of a medical referee must often be of a somewhat delicate kind, inasmuch as he will have before him the report of at least one, and probably in most cases two practitioners, called in by the workman and employer respectively, who have formed and expressed in writing their opinion upon the condition of the workman and the degree of incapacity. If the Act is to work easily, and if friction and litigation are to be avoided we venture to think that the Home Office would be well advised to take counsel with the medical profession as to the mode of procedure which should be prescribed under the regulations. Various suggestions might be made, as for instance that the regulations should provide for consultation between the medical practitioner or practitioners and the medical referee before the latter makes his certificate, but upon this and other points which occur we refrain from expressing any further opinion feeling that the matter is one upon which the British Medical Association, which includes within its membership medical practitioners in all spheres of practice, is peculiarly well qualified to advise.

BYWAYS OF MEDICAL CHARITY.

Every physician to out-patients at a hospital, and every practitioner whose sphere of work is largely among the poor, must often feel bitterly the irony of the situation when he has to tell a man to whom the struggle for existence means a constant scramble for the daily crust that what he needs is rest, and a half-starved woman that she must take a liberal supply of nourishing food. He has daily occasion to realize the truth of the following words of Dr. Richard C. Cabot which we take from the *Boston Medical and Surgical Journal*: "In the out-patient department of the "Massachusetts General Hospital (and I suppose in "most other hospitals) there occurs many times each "year a scene not unlike that described in *Alice in "Wonderland*: '"Have some wine," said the Hatter. "'"I don't see any wine," said Alice. "'There "'"isn't any," said the Hatter.' Without any sense "of the humour and pathos of the situation, we say "(in substance) to many patients: 'Take a vacation,' "or 'Get a job,' 'Get a set of teeth," or 'Get a truss.' "There is none in sight and no means of getting any. "What do we do then? We pass cheerfully to the next "patient." What else can be done? It is well known that the doctor often provides what is urgently needed out of his own pocket, but this is a tax on his generosity that he who gives so much in other ways is surely, of all men, the least called upon to pay. There are, of course, homes of rest, Samaritan funds, and charitable organizations of one kind or another that to some extent meet this crying want, but their benefactions are but a drop in the vast ocean of human need. An attempt to supplement the purely medical treatment of the very poor has been made at Boston by Dr. Cabot, who has lately given an account of work in this direction done at the Massachusetts General Hospital for more than a year past. The work includes in addition to ordinary medical treatment a study of the patient from every point of view, social and mental as well as physical. It has gradually developed to such an extent that more than a dozen workers are needed to carry it on. Beginning in the simplest way, the work is now divided into the following special branches: Tuberculosis, with particular attention to the proper disposition of cases; hygienic teaching; infant feeding and the care of delicate children, with demonstrations and directions to mothers; vacations and country outings; the care of unmarried girls, pregnant, morally exposed, or feeble-minded; help for patients needing work or a change of work; provision for patients sent to the hospital; and assistance to patients needing treatment after discharge from the hospital wards. In each of these branches of the work patients have been carefully followed, their real needs ascertained, and the best means of supplying those needs determined. The number of cases thus dealt with up to October 1st, 1906, was 684. Besides the relief given to individual cases, the work has the advantage that it indirectly brings the hospital into closer relationship with other charitable institutions having as a common aim the relief of suffering and the alleviation of the conditions of life.

CLOSING OF SCHOOLS ON ACCOUNT OF EPIDEMIC SICKNESS.

Among the most responsible duties of a medical officer of health is that of advising the closing of a public elementary school on account of the existence of infectious disease among the scholars. The exercise of the duty is one, moreover, which very frequently brings him into conflict with the school managers, and for quite diverse reasons. It is to be feared that the difference of opinion between the medical officer of health and the school managers as to the necessity for closing the school often arises from the fact that the medical officer of health considers the question from the point of view of lessening the spread of infection while the school managers are influenced by a desire to save money grants from the central authority. An example of this attitude of the school managers is related in a communication we have received from a correspondent who states that "a public elementary "schoolmaster wrote to the medical officer of health "for an order to close his school because of an "alleged prevalence of mumps amongst the scholars. "The medical officer of health asked for a medical certi- "ficate to verify, which was not supplied. The matter "was passed on to the Clerk to the Education Authority, "who complained that the school had lost upon the "grant owing to the medical officer of health having "withheld a certificate authorizing the closing of the "school." In this case neither the schoolmaster nor the Clerk to the Education Authority appear to have appreciated the fact that the responsibility of deciding whether a school shall be closed for epidemic reasons

[1] See Supplement to the British Medical Journal, January 19th, 1907.

is cast entirely upon the medical officer of health or some other medical practitioner. If a medical certificate authorizing the closing of a school is to be obtained merely upon the request of a schoolmaster or of the Clerk to the Education Authority, the intention of the Legislature is frustrated. In the memorandum of the Local Government Board issued to medical officers of health in England and Wales upon the closing of public elementary schools it is very properly pointed out that the closing of a school is a serious interference with educational work, and should not be recommended as a matter of routine nor until other methods—such as the exclusion of individual scholars or groups of scholars—have been adopted or considered. The Scottish medical officers of health have even more precise instructions. In a memorandum of the Local Government Board for Scotland on the closing of schools, it is definitely stated that "the fact that many "school children are suffering from an infectious "disease, and that the attendance is thereby greatly "reduced, is not of itself sufficient ground for advising "the closing of a school." The Scottish Education Department in calling the attention of managers, especially of rural schools, to the same subject, say very decidedly, "it is to be kept in view that the closing "of a school or a division thereof is not justified by "the fact that the fall in the attendance threatens to "affect the grant to a serious extent."

STATISTICS OF A LIFE ASSURANCE COMPANY.

We have received a copy of the Investigation of Mortality Experience, submitted by their actuary to the directors of the Rock Life Assurance Company. In addition to the actuarial report as to the company's mortality experience, there are some valuable medical notes drawn up by its chief medical officer, Dr. de Havilland Hall, which are of general interest to the profession. The statistics dealt with are based upon claims occurring between the years 1847 and 1894, including in all 3,066 deaths. Although the number of cases is not large, material of this sort is valuable because the population from which it is obtained is less heterogeneous than that from which statistics are usually derived, since the poorest class of the community is almost unrepresented. Some noteworthy figures may be quoted: 48 deaths were returned as due to valvular disease of the heart, and 154 under the vaguer heading "Heart Disease." In the former group only $\frac{1}{24}$ of the total mortality (2 cases) occurred during the first ten years from entry; in the latter more than $\frac{1}{4}$ (20 cases). It would seem to follow that "the more obscure form of heart disease in which "valvular trouble is not distinctly recognized plays an im-"portant rôle in the early mortality from heart disease"; 129 deaths are classified under "Consumption." No inference could be drawn from the details recorded as to the influence of heredity, but the heavy loss this disease entails upon an assurance company is indicated by the following figures: (*a*) The average age of death was only 45·5 years; (*b*) nearly half the deaths, 56 out of 129, occurred within 10 years after assurance; (*c*) 15 of these deaths occurred within the first 2 years after assurance. Of malignant disease there were 125 cases 1847-74. External cancer, 10; internal cancer, 42; sarcoma, 1. 1875-94. External cancer, 32; internal cancer, 36; sarcoma, 4. The total number of cases of cancer dealt with thus 120 and of sarcoma 5. The policies in the two periods were nearly equal: the average age at death in the first group was 62·8, in the second 65·5 years. These facts do not support the view that cancer now tends to occur at an earlier age than formerly. It is interesting to note that the number of cases of external cancer increased, while that of internal cancer diminished. In classifying the deaths attributed to old age and senile decay, 321 in number, by professions, the clergy lead the way with 30, farmers have 14, the medical profession 13, and the liquor trade only 4. The authors of the report are to be congratulated on the clear and succinct manner in which the facts are presented.

MEDICAL TERMS IN THE NEW ENGLISH DICTIONARY.

The new section (a treble one) of Dr. Murray's *New English Dictionary on Historical Principles*[1] carries the work from *Piper* to *Polygenistic*, and between these words there are not a few medical terms of considerable interest. Of these we may select two or three almost at random. There is *plaster*, with its collateral form *plaister* (which has sometimes been the more common), which is thus fully and correctly defined by Dr. Murray: "An external curative application, consisting of a solid "or semi-solid substance spread upon a piece of muslin, "skin, or some similar material, and of such nature as to "be adhesive at the temperature of the body; used for "the local application of a medicament, or for closing a "wound, and sometimes to give mechanical support." In an illustrative quotation (of date 1579) we are told that "a plaster of sowre bread boyled in wine, draweth sores "passing well," and in another from Burns's *Holy Fair* we read of an orthodox preacher, with "His eldritch squeal "and gestures, O, how they fire the heart devout, Like "cantharidian plaisters." *Poor man's plaster* is one composed of tar, resin, and yellow wax; and a *burglar's plaster* (as defined by a newspaper of 1905) is not one for the assuagement of wounds received from or given to that dreaded individual, but is "a piece of brown "paper covered with treacle, and used to deaden the "sound of breaking glass." *Plaster-mull*, a name sometimes seen nowadays in connexion with the treatment of obstinate skin diseases, is "a plaster consisting of a "thin sheet of gutta-percha, backed with mull or muslin, "and spread on the inner side with a medicated and "adhesive substance." *Plastic*, in its sense of a reparative—for example, plastic operation—does not seem to have been used before 1879; but with the meaning of "capable of being organized into living "tissue"—that is, plastic lymph—its employment dates back to 1834. A great many words beginning with *platy-* are defined; in them all it has the meaning of flat, as in *platycephalic*, *platycnemic* (having a broad and flat tibia), *platyhieric* (having a broad sacrum), etc. A surgeon, when he asks for a *pledget*, has probably no notion that he is using a word whose origin and early history are obscure; it may be derived from the Middle Dutch *plagge*—a patch of cloth, or from the Latin *plaga*—a wound, or it may be connected with *pleach*, to intertwine; but "all these suggestions present difficulties." The *Dictionary* leaves the pronunciation of *plethora* somewhat in doubt; the word itself is nowadays used more often in its figurative than in its medical sense. A large group of terms begin with *pleuro-* or with *pneumo-*. In a quotation of 1534 we are told that "they "that lye in a plewrosy, thinke that every time they "cough, they felc a sharpe sweorde swap them to the "heart." An interesting sidelight on the past is thrown by a statement of a writer of 1744 who has "known some pleuritic persons cured without bleeding." *Pock* is defined in both its meanings of "a pustule or "spot," and a "disease characterized by pustules or "eruptive spots." *Small pox*, of course, is variola; but it is not so generally known that the *great-pox* is syphilis. A long list of compound words (such as *pock-holed*, *pock-marked*, *pock-fretted*, and *pock-pitted*) attests the frequency of these maladies. That the *Dictionary* is well up to date is borne out (if proof were needed) by the remarks which appear in regard to *policlinic* and *polyclinic*, and a writer in the *Times* of 1898 is quoted as speaking of "Mr. Hutchinson's Polyclinic a title

[1] *A New English Dictionary on Historical Principles. Piper to Polygenistic.* Oxford: At the Clarendon Press. April 1st, 1907. Treble Section. Price 6s.

"which, whatever it has 'come to denote,' seems an odd "one to apply to an institution which will have 'no "'beds of its own.'" If spelled *policlinic*, we must look upon it as a town or city hospital; while, if it appear as *polyclinic*, we may regard it as a place where many branches of medical and surgical practice are taught.

ST. JOSEPH RIZAL, M.D.

We have received several replies to our request for information as to Dr. José Rizal, who was lately canonized a saint by the National Church of the Philippine Islands. Two of these were published in the Journal of March 16th. Mr. William Simons, of the Royal Devon and Exeter Hospital, has been good enough to send us a copy of *Blackwood's Magazine* for November, 1902, containing an article on Rizal by Mr. Hugh Clifford, C.M.G., now Colonial Secretary for Trinidad and Tobago, who is a recognized authority on the Malayan people and language. In that article an account is given of a career so adventurous and so romantic that we venture to think some of our readers will be glad to have their attention called to it. After more than three centuries of Spanish rule, the natives of the Philippines had preserved all their vices and all their original limitations. Now and again some rose in abortive rebellion against their masters, only to be crushed by the heavy hand of the white man. At last there arose one of their own race who was able to tell the story of their wrongs and give expression to their aspirations. This was José Rizal, the son of full-blooded Filipino parents. He was born at Calamba, on the island of Luzon, in 1861, and educated in Manila by the Jesuits. In 1882 he was sent to complete his education at Madrid, where he took the degrees of Doctor of Medicine and Licentiate in Philosophy and Literature with distinction. He had received a sound classical training from his first masters, and after taking his degrees he quickly mastered French, German, English, and Italian. He travelled extensively, and his observation of European countries inspired him with the desire to bring about an improvement in the hard lot of his own people. After a sojourn of three years in Europe Rizal felt that the hour had arrived to begin his crusade. His first step was to write a novel illustrative of the conditions of life in the Philippines. He called it *Noli Me Tangere*, and it first appeared in Spanish in 1886. That book, and a subsequent one, entitled *Il Filibustero*, are described by Mr. Clifford as supremely able political pamphlets rather than works of fiction. In them the manifold evils of the Spanish rule were powerfully set forth. It was shown that the press was ruthlessly muzzled, that the people were superstitious and ignorant beyond belief, that they had degraded Christianity into a pantheistic idolatry, and that their religious creed had no sort of influence upon their conduct. Rizal himself, while waging fierce war against the priests of the Philippines, because they stood for the perpetuation of the abuses which he hated, none the less remained a Roman Catholic. He urged his countrymen to remember the enormous debt which they owed to the friars, who were the first to bring them the light of Christianity; he insisted that the ignorance, selfishness, and crimes of her agents and representatives were excrescences of human growth, and had nothing to do with the Church herself; but he added that gratitude for ancient obligations must not be suffered to blind the men of to-day to the evils which the influence of the friars was being exercised to sustain. Rizal persistently counselled legitimate agitation as the only means of securing the much-needed reforms, and set his face against armed rebellion. Nevertheless, the clerical party publicly burned his books and branded their author as a heretic, and when he returned to Manila in 1887 he was treated by the Government as a dangerous revolutionary. Early in 1888, therefore, he thought it prudent to return to Europe. He lived quietly in London, passing much of his time in the reading room of the British Museum. In the meantime the spirit of discontent was growing rapidly in the Philippines. Ill-managed spurts of rebellion burst forth, only to be ruthlessly repressed. One of the most serious revolts occurred in Rizal's native *pueblo*, Calamba, and was stamped out in a bloody fashion. Rizal offered to use his influence with his countrymen towards pacification on condition that guarantees of personal safety were given. His offer was accepted with professed gratitude by the Spanish authorities, and, relying on their pledges, he set sail from Hong Kong for Manila in July, 1892. A few days after his arrival he was arrested and banished to the island of Mindanao, which is mainly inhabited by Mohammedan Malays whom the Spaniards name "Moros" or Moors, a rude and savage race which had never completely accepted the yoke of Spain. They knew nothing of Rizal, and cared not at all for the cause which he had at heart. Yet, even in these unfavourable surroundings, the man's personality made itself felt. With considerable difficulty he got permission to practise his profession. Soon he became the friend and trusted counsellor and comforter of those about him. For four years he dwelt among them. Then a rebellion more serious than the others broke out in the island of Luzon. Rizal was arraigned on a charge of complicity, and executed on December 30th, 1896. If he was not a martyr in the religious sense, he gave his life for his native land, and for the delivery of his countrymen from hateful and degrading oppression.

THE "SCIENCE" OF ANTIVACCINATION.

Mr. Joseph P. Swan, of Liverpool, has written to remind us that in mentioning in the British Medical Journal of January 5th that he had presided over a meeting of a body calling itself the People's League of Medical Freedom, we confessed that we had never heard of his existence. This was of course our misfortune, but Mr. Swan appears to think that our statement implied contempt. How we could despise a person of whom we had no knowledge is a riddle which we must leave Mr. Swan to solve; we have little doubt from his cavalier way of dealing with the abstrusest scientific problems that he could do so. The august body over whose deliberations Mr. Swan appropriately presided seemed, as far as we could make out, to have two objects mainly in view. One of these was to raise a fund for the promotion of cancer research by herbalists; the other was to establish a herbalists' college on Thomsonian lines. The fear that Thomson may next arise and complain that he was treated with contumely prevents our saying that his name had also failed to reach our ears. It is at least a comfort that one of these illustrious men has now revealed himself to us, and we hasten to proclaim to others who may still be sitting in the darkness of ignorance that Mr. Joseph P. Swan is "Chair-"man, Liverpool and District Committee, Garden City "Association." This, perhaps, explains his sympathy with herbalism. A pretty picture rises to the imagination of the Chairman on the ornamental water, which we have no doubt is one of the delights of the Garden City, realizing the poet's vision

> The swan on still St. Mary's lake
> Floats double, swan and shadow.

But alas! Mr. Swan casts a shadow that spoils the brightness of the picture. Leaving the herbalists and that *magni nominis umbra*, Thomson, on one side, he defies us to mortal combat on vaccination. We gather that, though we knew it not, he is a leader in antivaccination Israel. A very cursory examination of some literature on the subject which he has sent us, including an address

to the Antivaccination League on the "Science" of Vaccination, is sufficient to show that he is well fitted for that position. In proof of this we need only quote the following illuminating passage: "To be "pumped up with vaccine matter until the system "refuses to take any more is a Bedlamite remedy, infi- "nitely worse than the disease of small-pox. The "latter is a cleansing process and not, like vacci- "nation, a poisoning one. To dub such practices "as these scientific is an impertinence." This, we suppose, is the "science" of antivaccination! It would be waste of time to hold serious discussion with a controversialist to whom the attitude of the scientific investigator is unintelligible, and the inevitable changes in opinion and practice produced by larger knowledge are proofs of "medical imposture." Of Mr. Swan's style of argument a single example will suffice. He takes from the BRITISH MEDICAL JOURNAL a statement that "as concerns the question whether vaccina- "tion itself is useful against small-pox there never was "any subject regarding which there is less real con- "troversy." That statement, one would have thought, is plain enough to the understanding, say, of an ordinary member of the Antivaccination League. Yet it is too much for the President of the People's League of Medical Freedom, who proceeds to demonstrate that it "ludicrously . . . reverses the truth," by showing that the etiology of small-pox is still, in the opinion of the profession, an unsolved problem! We venture to recommend Mr. Swan to look into a treatise on logic, and give a few minutes' study to the fallacy which he will find described as *ignoratio elenchi*. It will not, of course, convince him that what he calls the "monstrous impertinence" of the pronouncement lies not with the BRITISH MEDICAL JOURNAL, but with its critic; but it may help to dissipate some part of the mental confusion which prevents his exercising his best gift of reasoning to the fullest advantage. Of the tone and temper of Mr. Swan's address, of his description of vaccination as "a gigantic medical imposture" and his assertion that it is supported by the profession because it is a valuable trade asset, of these and many like graces of oratory we need not speak. They are the kind of thing much from the platform of the "anti-vak." Mr. Swan is rather more outrageous, though not more ignorant than most of the set, and, though his invitation to the Medical Association to welcome him as a candid friend is not the least amusing of the many with which he professes to have overwhelmed us.

THE HEARING OF TELEPHONE CLERKS.

Nearly every one who uses the telephone much has at one time or another felt tempted to express himself strongly with regard to the tuneless goddesses who preside over the communication of messages. The ordinary user suffers their inattention, and what often seems to be deliberate disregard of his requirements, to the natural depravity of the jack in office, while the more charitable may attempt to account for their shortcomings by the strain on their power of hearing caused by their occupation. Particularly the ground of this explanation has lately been cut away by a Scandinavian physician, Dr. Blegvad. He examined the ears of all girls employed in a telephone exchange and found that in a little over 20 per cent. of them there was some retraction of the tympanic membrane caused by the ear used for listening at the telephone. He satisfied himself, however, that continual listening at the telephone does not lessen the power of hearing. On the other hand, he was unable to convince himself that the statement often made by the girls that it is totally impossible to hear more than with one ear is based on fact. This result, he thinks, is only apparent, what happens is that the ear adapts itself better to the particular function by acquiring the power of disregarding interfering sounds. In some 19 per cent. the ear used at the telephone perceives deep notes less clearly. Dr. Blegvad thinks the ear acquires a habit of receiving particularly well sounds corresponding to rapid acoustic vibration. Listening at the telephone has no influence on the extreme limit of sound perception. Dr. Blegvad therefore concludes that the occupation of the telephone clerk cannot by itself do harm in a healthy person to a hearing apparatus originally sound. But accidents such as electrical discharges due to short-circuiting, and shocks which are fairly frequent, may bring into operation latent conditions that may impair the hearing or even create such a defect. This makes it essential that candidates should have their ears examined before they are accepted for employment on the telephone. Dr. Blegvad adds that in rare cases perhaps only in neuropathic or hysterical subjects, the occupation may produce headache, buzzing in the ear earache, or acoustic hyperaesthesia. Hence girls who show any signs of anaemia, neurasthenia, or hysteria should not be accepted.

A RUNNING LIE.

THE lie as to the British Medical Association started by the Secretary of the London Antivivisection Society in the beginning of March, and fully exposed in the BRITISH MEDICAL JOURNAL of March 9th, is still running. We find it in full cry in the *Kent County Examiner and Ashford Chronicle* of March 29th, and it may therefore be assumed that it pursues its course with unabated vigour in other quarters obscure enough to give it a chance of escaping arrest. It may be remembered that Mr. Sidney Trist, after his recovery from the lumbago and bad cold which seem to have been among the immediate consequences of his daring flight into the cloudland of fancy, stated that he was correcting the error wherever it appeared. Did he at the same time take steps to prevent its appearing in other places? If he did, they were evidently not long enough to overtake the lie, which may therefore still go on running indefinitely like *Charley's Aunt*. We have no doubt that Mr. Trist will try to check its wild career though somehow we do not think he will come up with it. But he may feel assured that we will watch him, with sympathetic interest, as, like panting Time, he toils after his headstrong progeny in vain. Seriously, however, we would ask the well-meaning and honest, though deluded, people who support antivivisection, Is this the kind of thing they give their money for?

MEDICAL PRACTICE IN THE UNITED STATES.

Across the Atlantic we hear of very large fees paid for professional services in the United States, the average earnings of the American doctor are, according to the *St. Paul Medical Journal*, very small. Our contemporary estimates them at considerably less than £300 a year. It adds that the average American bricklayer, carpenter, or plumber earns more than that. It relates a story recently heard from a country practitioner who was summoned several miles into the country to see the wife of a prosperous farmer. His fee, $1 (about 10s. 8d.), was objected to as excessive. Yet on the same day the farmer cheerfully paid a veterinary surgeon £2 for driving the same distance to see a valuable horse. This might perhaps be taken to show the relative value which the farmer placed on his wife and his horse respectively. More probably, however, it only shows that he had grown accustomed to get medical attendance for next to nothing and thought the horse doctor's services more valuable because they were charged for at a higher rate.

CELEBRATION OF LORD LISTER'S BIRTHDAY.

The proposal to celebrate Lord Lister's 80th birthday on April 5th by republishing in suitable form all his writings, at present scattered through many volumes of transactions, proceedings, and periodicals, has been very warmly taken up not only in the United Kingdom but also abroad and in Canada, the only British colony with which the provisional English committee has had time to communicate. Among foreign representatives who have joined the committee up to the present time are the following distinguished men, classified under countries:

Germany.—Professor Bardenheuer, Professor Baumgarten, Professor Bier, Professor D. Ehrlich, Professor E. v. Esmarch, Director of the Institute of Hygiene, Göttingen; Professor C. Flügge, Professor K. Fraenkel, Professor Gaffky, Director of the Institute for Infectious Disease, Berlin; Professor E. Goldmann, Professor A. Kossel, Professor H. Kossel, Director of the Institute of Hygiene, Giessen; Professor R. Koch, Professor P. Kraske, Professor F. Loeffler, Professor R. Pfeiffer, Professor B. Riedel, Professor E. Richter, Professor O. Schmiedeberg, Professor L. v. Stubenrauch, Professor O. Witzel.

Austria.—Professor v. Eiselsberg, Professor Max Gruber, Professor J. Hochenegg, Professor Paltauf, Professor A. Weichselbaum.

France.—Dr. Roux, Director, and Dr. Metchnikoff, Assistant Director, Pasteur Institute, Paris; Dr. Calmette, Director, Pasteur Institute, Lille; and Professor Hartmann, M. Lucas-Championnière, and Dr. Quénu of Paris.

Belgium.—Professor Bordet, Director Pasteur Institute, Brussels.

Italy.—Professor F. Durante, Rome; and Professor D. Morisani, Naples.

Switzerland.—Professor T. Kocher, Berne.

Denmark.—Professor Oscar Bloch, Copenhagen; Professor C. J. Salomonsen, Director, and Dr. Madsen, Director of the Laboratory, State Serum Institute, Copenhagen.

Canada.—Professor G. Adami, Montreal; Professor I. J. Cameron, Toronto; Dr. J. C. Connell, Kingston, Ontario; Professor T. J. Roddick and Professor F. J. Shepherd, Montreal.

United States.—Professor F. Billings, Chicago; Professor H. P. Bowditch, Boston; Professor Harvey Cushing, Harvard; Professor F. S. Dennis, Cornell University; Professor Reginald Fitz, Harvard; Professor Simon Flexner, Director Rockefeller Institute for Medical Research, New York; Professor W. S. Halsted, Baltimore; Professor W. W. Keen, Jefferson Medical College, Philadelphia; Professor McBurney, Columbia University, New York; Dr. Rudolph Matas, New Orleans; Dr. W. J. Mayo, Dr. S. Weir Mitchell, Professor M. H. Richardson, Harvard; Dr. M. Senn, Chicago; Professor L. Stimson, Cornell University, New York; Professor J. H. Tyson, Philadelphia; Professor J. Collins Warren, Harvard; Professor W. H. Welch, Baltimore; Professor J. William White, Philadelphia.

Holland.—Dr. C. B. Tilanus.

Egypt.—Mr. H. P. Keatinge, M.B., Director of the Government School of Medicine, Cairo, and Dr. M. A. Ruffer, President of the Quarantine Board, Alexandria.

Among the British members of the Committee are the President of the Royal Society (Lord Rayleigh), the President of the Royal College of Physicians of London, the President of the Royal College of Surgeons in England, Lord Kelvin, Sir Henry Roscoe, Chairman, and Lord Iveagh, a member, of the Council of the Lister Institute; the Director-General of the Medical Department, R.N., the Director-General of the Army Medical Department; Surgeon-General Branfoot, President of the Medical Board, India Office; Mr. W. H. Power, C.B., Medical Officer to the Local Government Board; Professors Osler, Gotch, and Ritchie of Oxford; Professors Clifford Allbutt, Howard Marsh, Sims Woodhead, and J. N. Langley of Cambridge; Sir William Turner, K.C.B., Sir John Batty Tuke, Sir Thomas Fraser, Professor T. Annandale, Professor J. Chiene, C.B., Dr. Byrom Bramwell, and Dr. Gibson of Edinburgh; Principal Donald MacAlister, Sir Hector Cameron and Professor R. Muir of Glasgow; Professor A. Ogston of Aberdeen; Sir C. Ball and Professors A. O'Sullivan and C. J. McWeeney of Dublin; Sir R. W. Boyce, and Professors Rushton Parker, Sherrington, and Ronald Ross, of Liverpool; Professors Dreschfeld and and Delépine of Manchester; Professor Saundby of Birmingham; Sir William Broadbent, Sir W. S. Church, Sir Thomas Barlow, Sir Thomas Smith, Sir Frederick Treves, Sir Samuel Wilks, Sir Felix Semon, Sir Hermann Weber, Sir John Tweedy, Sir Victor Horsley, Sir Patrick Manson, Sir Norman Lockyer, Sir Lauder Brunton, Sir A. E. Wright, Sir John MacFadyean, Mr. H. T. Butlin, Dr. Ferrier, Mr. Jonathan Hutchinson, Professor Watson Cheyne, Mr. Mayo Robson, Mr. Clutton, Mr. Pearce Gould, Mr. C. A. Ballance, Professor A. E. Barker, Mr. C. J. Bond, Mr. A. Bowlby, Professor Rose Bradford, Professor W. D. Halliburton, Professor J. G. McKendrick, Mr. G. H. Makins, C.B.; Dr. Pye-Smith, Professor E. H. Starling, Mr. Lynn Thomas, C.B., and Dr. C. J. Martin, Director of the Lister Institute (Chelsea Gardens, S.W.), to whom communications may be addressed.

JOSEPH, LORD LISTER.

April 5th, 1907.

Nature, the children of her choice
Takes early by the hand;
She speaks to these with graver voice,
Because they understand—
The kisses of her steadfast lips
Are steeped in Truth's apocalypse.

She says, "Behold! the way is long,
The mountain-paths are steep,
The goal is only for the strong
Who hardly pause to sleep;
But where the ice-peaks front the skies
Blooms the supernal edelweiss."

She whispers, "Lo! the way is there—
The lonely path, whereby,
Through toil and torment, patient pray'r,
And nard of sympathy,
Thy weary feet shall touch the goal
Where Truth shall be Life's aureole."

* * * * *

He bowed his head and, consecrate,
Passed onward to his high reward,
Despising fear, disdaining hate,
Keen-edged his purpose as a sword—
Till, the deliberate years o'erpast,
He reached the mighty Fact at last:

And gave to all his suff'ring kind
A common language in their need,
A tongue of healing that should find
Expression, that should intercede
To save and purify, and give
A saner law whereby to live.

Fourscore his reverent stainless years!
And Time that gives, and Time that takes,
Holds poised the hour-glass, and the spheres
Of sifted sand his stern hand shakes
But lightly still—O pause sublime!
Withhold thou yet thy winnowing hand, O Time.

G. H. R. D.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Scotch Parochial Medical Relief.—Mr. Cathcart Wason asked the Secretary for Scotland, last week, whether, in view of the fact that parish councils cannot use money out of the rates to compel a medical man to provide an assistant for the general benefit of the public, he would put into operation the powers of the Local Government (Scotland) to protect the interests of the poor. Mr. Sinclair replied that he was informed that the Local Government Board for Scotland had no authority to see that medical assistance is provided to other than the legal poor. The duty of providing for them rested with the parish council.

The Prevalence of Anthrax. Sir E. Strachey, speaking for the Board of Agriculture, in answer to Mr. Herbert Roberts, last week admitted that for the week ending March 9th last there were 28 outbreaks of anthrax and 36 animals attacked by the disease in seventeen counties in Great Britain. He was happy to state, however, that the disease was not increasing throughout the country, the number of cases this year being slightly less than in the corresponding period of 1905 and 1906. Investigations were proceeding both as regards the nature of the disease and the means by which it was spread, and any amendments in the existing orders which should appear to be necessary would at once be made.

Insanitation in Metropolitan Factories and Workshops.—The Home Secretary informed Mr. Ramsay Macdonald last week that the number of notices sent by the men inspectors to the metropolitan borough councils during the twelve months ending February 28th last with regard to insanitary conditions in factories and workshops was 488. He had not been able at such short notice to obtain the number sent by the women inspectors, but the number in 1906 was 298. He had not the number of prosecutions instituted by the borough councils in respect of insanitary conditions during the period in question, but the figure for 1905, as given by the returns of the medical officers of health, was 19.

The Debate on the Adjournment for Easter was remarkable for an animated discussion on labour colonies for the unemployed, in which the attitude of the Local Government Board was criticized by some members of the Labour Party. Mr. Lupton, however, managed ingeniously to drag in the subject of vaccination. He argued that the money spent on the present system of vaccination—namely, £250,000 a year—might be used for better purposes, and he proceeded to show the evil effects of vaccination in various directions. The Speaker, however, exercised a vigilant supervision as regards the order of debate, and Mr. Lupton was unable to develop to the full his particular crotchet. He had previously in the day postponed his question on the use in the House of Commons of veal from vaccinated calves, but when the House resumes on April 8th he is likely to be satisfied on this latter point.

Lambeth Poor-law School. Mr. L. Haslam asked the President of the Local Government Board if he would state how many children in the Lambeth Poor-law School at Norwood had been, and were at present, affected by the recent outbreak at that school of diphtheria, scarlet fever, and whooping cough respectively; and if any cases had as yet been fatal. Mr. Burns replied that there was a misapprehension in this matter. He understood that, with the exception of six mild cases of whooping cough, five of which were convalescent, there had been no recent outbreak of the diseases mentioned in the question at the school, nor had there been any death from them. At present there was not a single case of diphtheria or scarlet fever in the school.

Guardians and Boarding-out System. Mr. L. Haslam asked the President of the Local Government Board whether, in consideration of the fact that Poor-law guardians might make arrangements for the maintenance of Poor-law children in such institutions as Dr. Barnardo's Homes, and, seeing that the boarding out of children with foster parents was satisfactorily and more economically carried out by the managers of such institutions, he would consider the advisability of empowering, under regulations, Poor-law guardians to arrange for the boarding out of Poor-law children under the auspices of such institutions. Mr. Burns replied that he noted the suggestion of his hon. friend. He might state, however, that it had previously been brought under the notice of the Local Government Board, but there were difficulties in the way of its adoption, and they had not seen their way to giving effect to it.

Tests for Colour Blindness—The President of the Board of Trade informed Mr. Henniker Heaton before Parliament rose for Easter that the colour tests for the Mercantile Marine were adopted on the advice of a Committee of the Royal Society of the highest eminence, and that the Board of Trade had no reason to doubt their efficiency.

The Royal Commission on Sewage Disposal presented a report with some important recommendations some time back, but Mr. John Burns says the matter is still under consideration, and that he cannot make any announcement with regard to it at the present time.

NEW DRUGS AND SECRET REMEDIES.

F. ZERNIK continues his reports on new drugs, proprietary preparations, and secret remedies in the *Deut. med. Woch.*, Nos. 49 and 52, 1906.

Purgatives and "Antifats."

Ayer's Cathartic Pills, a proprietary medicine manufactured in America, are put up in bottles of 54 pills, and contain aloes, extract of colocynth, scammony or jalap resin, podophyllin, powdered capsicum, and some indifferent aromatic substances.

Morison's Pills are much used in England. Two strengths are offered; one contains aloes, jalap resin, cream of tartar, and probably colocynth; the other contains some gamboge as well.

Redlinger's Pills contain aloes, jalap and calomel.

Pagliano's Syrup is advertised in Germany as a blood purifier. The active constituents are senna leaves, Orizaba resin, and turpethum root. The two last named ingredients have been substituted for scammony and jalap in order to avoid coming into conflict with the law. Both the resin and the root are as active as the corresponding scammonium and jalap derivatives.

Winter's Nature Health Restorer consists of tablets containing for the most part aloes.

Burkhart's Herb Pills.—Samples are sent, together with voluminous advertisements, to "the lady of the house" in South Germany; 70 pills cost 2s. 6d., and are said to be good for the blood. Children are not to take them. They are said to cure certain diseases of the liver and kidneys, rheumatic and neuralgic affections, erysipelas of the face, certain catarrhs, many diseases of women, and constipation. They contain aloes, capsicum powder, starch, and sugar, and some indifferent vegetable powder, as well as a small quantity of mandragora root, which contains a substance similar to atropine.

Dalluff's Tea "contre l'obésité." "Regular use," it is asserted, "leads to the removal of superfluous adipose tissue and the person becomes healthy and attains old age." Each box costs 7s. 6d., or the half box 4s. 6d. The latter contains 80 grams of a mixture of senna leaves, *Uvae ursi* leaves, *Lavandula vera* (lavender) leaves, and anthyllis flowers (*Anthyllis vulneraria* is a herb used by herbalists). The action depends on the senna leaves.

Graciana Reducing Treatment (Zehrkur). The advertisements promise wonders. Each parcel costs 3s., and contains a packet of a greyish-brown powder, a box of 40 starch capsules, each containing 0.3 gram of a light brown finely divided powder, and a box of 36 pills, each weighing 0.22 gram. The chief ingredient of each of the preparations is powdered fucus. The pills contain an emodin containing substance, and also some sulphates and chlorides. *Fucus vesiculosus* has long been employed against fatness.

Corpulin contains fucus and also tamarind and cascara sagrada.

West Yorkshire.

Bradford Conference on Infantile Mortality and the Milk Supply.

An interesting example of the general public interest in questions affecting the health of the community was shown by the large attendance at a conference on this subject held on March 25th. The conference was called by the Mayor and Mayoress, and was preceded by a reception held in the Cartwright Memorial Hall. The principal speaker was Bailie Anderson, Chairman of the Glasgow Health Committee, who said that "he had come to the conclusion that if men and women wished to be patriotic there was no scheme so grand, so intensely real, so urgently clamorous for help, as the question of saving the babies." Although the death-rate for adults was declining all over the country, the death-rate amongst infants was as high or higher than ever. However squalid the surroundings, he held that every child that came into the world had unlimited possibilities for good if it only got a fair chance—parental care, love, and affection, good food, sunlight, proper clothing, and cleanliness. In Scotland infantile mortality, high as it was, was 25 per cent. lower than in England and Wales, and if there was the same rate in England and Wales as in Scotland, there would be a saving of 23,249 lives every year. In Ireland the infantile death-rate was only 104 per 1,000, whereas it was 152 in England. This was due in great part to the fact that in Ireland mothers more commonly fed their infants from their own breasts. A great number of infants in England were fed on artificial foods, the bulk of which contained over 50 per cent. of starch. The Government should not allow any infant food to be put on the market unless it had a certificate of genuineness. Mothers should not be allowed to go to work after childbirth until they were fit, and then not until they had made proper provision for the care of the child. The Infant Life Protection Act required amendment, so that a check could be put upon women taking babies in to nurse. Power was required to have municipal milk dépôts without the risk of being surcharged. Alderman Broadbent of Huddersfield urged the necessity of early notification of a child's birth, in order that the mother might be properly advised on the feeding question. The ground could not be covered by any system of paid visitors, who had to be supplemented by a voluntary association of ladies. The following resolutions were proposed and adopted:

1. This Conference is of the opinion that the health of the city needs safeguarding by more stringent regulations of the milk supply.
2. That the Health Committee be respectfully asked to consider how the milk dépôt might be extended and made more efficient as a means of saving infant life.
3. That the Health Committee be called upon to obtain earlier notification of births (*a*) by means of a small fee for voluntary early notification, (*b*) by applying for the Huddersfield powers of compulsory early notification.
4. That the Ladies' Committee, which the Health Committee invited to co-operate with them, and which was approved by the Council meeting of February 12th, 1907, be increased by representatives from the City Guild of Help, the Cinderella Club, and ladies engaged in hospital work, in order that voluntary help may be secured in the work of the lady sanitary inspectors.

Anthrax Investigation in Bradford.

Dr. Eurich reported to the recent meeting of the Anthrax Investigation Board that 4 cases of the disease had occurred since the previous meeting, and that one of these had terminated fatally. He had received from a local woolcomber four samples of mohair for a quantitative estimation of the number of organisms present. No anthrax spores were found in any of them. The results obtained were as follows. (*a*) Unwashed gave 132,000 organisms in 5 grams of wool; (*b*) after washing or scouring gave 300 per 5 grams; (*c*) the tops in oil from the same lot gave 300 per 5 grams; (*d*) the tops after backwashing also gave about 300 per 5 grams. Dr. Eurich also stated that he had tested the action of formaldehyde on anthrax, and found that it would sterilize wool within fifteen minutes if allowed to pass through the wool in a constant stream. A series of thirteen experiments had been conducted with a local electrical engineering firm with a view to determine the efficacy of their electrical process in cleansing wool. In nine of these experiments the anthrax spores with which the wool had been impregnated were found to be destroyed.

Shipton Union Infirmary.

Some excitement has been caused in Shipton by the report of Dr. E. Hugh Kitchin, the medical officer, on the state of the workhouse infirmary, which was only erected a few years ago, and would, it was thought, fulfil the requirements of the district for many years to come.

The wards generally are congested, and patients approaching convalescence have to be discharged into the "house" to make room for new cases. The day rooms have to be frequently used as isolation wards, and, in consequence, some of the convalescent and aged patients have had to live, eat, and smoke in the general wards, where patients were undergoing treatment in bed. Some bad cases of phthisis were being treated in the general wards, and cases of mental, infectious, and offensive diseases, which ought to be isolated, were also necessarily left there.

Dr. Kitchin stated that a large number of cases of consumption were admitted to the infirmary, but on account of the inclemency of the weather it was found almost impossible to get the patients to use the outdoor shelters. If they were ordered to do so, they at once gave notice of their intention to leave the institution. It is satisfactory to note that the Board recognized the serious character of their medical officer's report, and gave instructions to their building committee to consider details with a view to submitting a scheme of extension.

The Health of Keighley.

Dr. Scatterty, medical officer of health for Keighley, in his report for 1906 draws attention to two points which are now very common in the towns of the West Riding. These are low mortality and low birth-rates. Keighley, with an estimated population of 44,500, had a birth-rate of only 21.19, compared with 23.7, 23.3, and 23.4 for the three previous years. This gave not only the smallest number of children born during any of the past ten years, but more than 200 fewer than were registered ten years ago. The deaths totalled 664, equal to an annual mortality of 14.92, compared with 14.9 in the previous year and 17.7 in 1904. Of the deaths 141 were of children under 1 year of age. The question of infantile mortality is in Keighley, as in other towns of the country, a most serious problem. It is here that the great saving of life must take place to compensate for the low birth-rate now so prevalent. It ought to be easily possible to reduce the infantile mortality by at least 50 per cent.

Liverpool.

Ophthalmia Neonatorum.

The annual report of the St. Paul's Eye and Ear Infirmary shows an increase in the year's work as compared with the previous year. A considerable enlargement of the hospital has been effected, and no doubt as a result the debt on the hospital has increased considerably. At the annual meeting special attention was drawn to the prevalence of purulent ophthalmia in the newly born, and it was stated that for two months the only children's ward had been occupied entirely by these cases. This had brought the ordinary work of the ward to a standstill, and day after day cases which ought to have been admitted had had to be sent away. To deal effectually with these urgent cases of purulent ophthalmia an isolation ward of at least ten beds was needed, where the babies could be admitted together with their mothers. A statement of this kind seems to suggest that there is room for more care in cleansing the eyes of the infant at the time of birth than is at present exercised. The hope was expressed that the Corporation would grant the committee a parcel of land to build a new hospital.

The Dental Hospital.

Much sympathy will be felt by the members of the medical profession with an appeal which is now being made for funds to erect a new dental hospital. The present building in Mount Pleasant—the only dental hospital in Liverpool has been in use for nearly thirty years, and is now totally inadequate. Every effort has been made to

alter and extend the premises so far as space will permit, but in every respect the accommodation is insufficient. The space available for operating rooms and laboratories is far too limited; the rooms are small and ill-ventilated, there is a lack of proper waiting room accommodation, and the sanitary conditions of the hospital are unsatisfactory. During the year 1906 23,982 patients were treated in the hospital. Over 30,000 operations were performed, of which about 11,000 were conservative. The success of the dental school at the University depends largely on the provision of good hospital accommodation for the students, and the Council of the University have expressed their cordial sympathy with the proposal to remove and rebuild the hospital. The cost of a new hospital is estimated at about £10,000, of which nearly £7,000 has been already promised.

The Control of Pulmonary Tuberculosis.

The account given in these columns on March 30th, p. 773, of the annual meeting of the Hospital for Consumption at Liverpool concludes with some cautionary observations as to the results which may be expected from the tuberculin treatment controlled by observations of the opsonic index, now in progress. These, as printed, might be read as having been made by the Lord Mayor of Liverpool who addressed the meeting, but are really comment upon his remarks.

Birmingham.

Proposed Sanatorium for Consumptives.

For some considerable time the Health Committee has been considering a scheme for providing a sanatorium for consumptives; the chief difficulty has been to find a suitable site, and the Committee, after visiting many, has decided to recommend the City Council to avail itself of the option of purchasing a house and 360 acres of land upon the Cotswold Hills, near Cheltenham. By additions to the present building provision could be made for the accommodation of forty patients. The capital outlay would be £17,000, and the annual expense of maintenance a little over £3,000. The estate is on the slopes of Leckhampton Hill, which is about 800 ft. above sea level, at a distance of about three and a half miles from Cheltenham, and it is sheltered on the northern and eastern sides. Only cases in the early and curable stages of the disease will be taken, and it is estimated that on an average a three months' stay would be necessary. The treatment is also to be of an educative character, so that the patient on discharge should know what conditions of life he should follow. A certain amount of after treatment is also contemplated. For the efficient working of this sanatorium a medical officer would be required at a salary of £300 a year, with a matron and staff of nurses and servants.

Birmingham and Midland Women's Hospital.

At the annual meeting of the Birmingham and Midland Women's Hospital it was stated that during last year 19,748 patients were treated, which is 2,003 more than in 1905. The in patients numbered 744, and of these 66 were paying patients. The subscription list had only been slightly increased during the year, and at the present time is totally inadequate for the increased work, as is shown by an adverse balance of about £2,000 during 1906. A legacy of £1,000 has been received from the late Mrs. Hannah Tinney, and with it a bed has been dedicated to her memory. The new in patient department has now been in work for a full year, and the arrangements have given entire satisfaction. The Convalescent Home is doing good work, for 227 patients were received during last year, and of these 20 paid weekly sums for their maintenance, while many others contributed according to their ability.

Bristol.

Children's Hospital.

At the annual meeting of the subscribers to the Children's Hospital, over which the Lord Mayor presided, it was stated that the number of admissions of children had increased by 65, there having been 869 in patients in 1906. The number of women admitted was 64, less by 12 than in the previous year. In the out-patient department 3,663 children attended, making 16,910 visits, and 1,842 women, making 12,701 visits, from which it might be concluded that children are more easy to cure than women. Dental patients numbered 906. Reference was made to the great loss the Convalescent Home at Weston-super-Mare had sustained by the loss of Dr. Graeme B. Fraser, who for twenty years had been honorary medical officer. The ordinary income for the past year was £4,479, the ordinary expenditure £5,152. The staff during the past year had lost one of its most valued members, Mr. H. W. Kendale, who had been one of the surgeons for ten years.

Ireland.

Royal City of Dublin Hospital.

The report for the past year shows that 1,376 patients were admitted, and that 2,367 emergency cases were treated in the out-patient department; 4,325 attendances were registered for the light treatment of lupus. The cost of working was considerable. There were 308 applications of x rays for therapeutical purposes. There is a debit balance of £1,462 6s. 6d., and the Board appeals earnestly for funds.

Orthopaedic Hospital of Ireland.

The annual meeting of the Orthopaedic Hospital of Ireland was held in Dublin on March 27th, and was presided over by the Lord Chancellor. The report stated that the debt on the institution had been increased to £2,131 17s. 6d., and many cases had to be refused admission, but the work done had been rather larger than in any former year; 136 had been treated in hospital, and 2,472 at the dispensary; 59 beds were in occupation. The speakers included Mr. C. Dickinson, Professor Joly, Mr. A. Goodbody, Mr. Merry, Mr. R. L. Swan, F.R.C.S.I., Mr. Mooney, and the Lord Chancellor.

Queen's College, Belfast.

St. Patrick's Day Dinner.

Sir John Byers, M.D., presided at the annual St. Patrick's dinner of the Students' Representative Committee, which took place in the large Examination Hall of Queen's College, Belfast. There were about eighty present. The Chairman proposed the toast of "The King," and referred to the number of distinguished men who had passed through the College since he had been a student. "The Lord-Lieutenant and Prosperity to Ireland" was proposed by Professor Symmers, and responded to by Professor Symington. "The College" was proposed by Mr. Henry, M.A., and responded to by the President. "Sir Donald Currie and the Athletic Field" was proposed by Professor Gregg Wilson, and responded to by Mr. W. H. Davey. "Q.C.B. Clubs and Societies" was proposed by Dr. J. Walton Browne, and responded to by Mr. J. Ferguson, President of the Students' Representative Council. "Our Guests" was proposed by Professor Lindsay, and responded to by Sir Otto Jaffé. "The Chairman" was proposed by Mr. McCready, and responded to by Sir John Byers, who proposed that of "The Honorary Secretaries."

Insanitary Areas in Belfast.

Dr. Bailie, the M.O.H. of the City, brought before a recent meeting of the Public Health Committee two areas of insanitary property. They were described as dangerous or injurious to the health of the inhabitants; this was owing to the closeness, narrowness, and want of arrangement of the streets and houses, and the want of light, air, and ventilation; the evils and the sanitary defects could not be effectually remedied otherwise than by an improvement scheme for the rearrangement and reconstruction of the streets and houses. This formed only part of the scheme now under consideration. It was resolved "that a sub-committee be appointed to visit these localities, and draw up a report and recommendations for the consideration of the principal committee." It cannot but be felt that in the adoption of this resolution the authorities are once more making the same mistake that they have made not once or twice, but systematically, during the past. They supersede their own officer; they relieve him of responsibility; they undertake a duty which he is much

more competent to perform. How can they hope to escape the suspicion in the eyes of the public that they were afraid that their officer might draw up a report that would prove unpalatable or indigestible?

Royal Victoria Hospital, Belfast.

At the annual meeting of this institution the Lord Mayor (Lord Shaftesbury) presided, and Dr. McKisack, Honorary Secretary of the Medical Staff, read the medical report. It stated that 3,075 new cases had been admitted, and that of these 1,277 were medical and 1,793 surgical; there were 184 deaths, including 39 moribund on admission; 1,384 surgical operations had been performed, with 44 deaths. Dr. McKisack, in speaking to the report, drew attention to the great value of the medical school to the hospital. The Chairman moved the adoption of the annual report, and said that there was an urgent need for the opening of the remaining 64 beds, which were at present unused owing to the wise decision of the Board that no beds would be brought into use till they had some reasonable guarantee from the public that they would be supported and not become a source of debt. He thought it was one of the most economically managed hospitals, as proved by the cost a day of each patient.

South Africa.

Johannesburg.

The Epidemic of Small-pox.

The medical officer of health for Johannesburg (Dr. Charles Porter) has recently issued a report on the health of that town during the period July 1st, 1904, to June 30th, 1906. In it a graphic account is given of a severe outbreak of small-pox which occurred from May to September, 1905.

There were in all 212 cases, 149 among the European population and 63 among the coloured. The case mortality of the former was 15 per cent., and of the latter 22 per cent. A remarkable feature of the outbreak was the large proportion of purpuric and haemorrhagic cases. Every one of the 33 patients who were attacked with this type of the disease died. Six had not been vaccinated for thirty years, and the remaining 27 had never been vaccinated. In June, 1904, owing to the presence of small-pox in the Orange River Colony and in Natal earlier in the year, Dr. Porter advised the Johannesburg Corporation to take the necessary steps for making vaccination compulsory in the district. The Public Health Committee endorsed this advice, but the Corporation appeared loth to act upon it, and it was not until May, 1905, when infection was introduced by Indian pilgrims from Mecca that special vaccination regulations were proclaimed to be in force within the municipality. Vigorous measures were then taken. Those persons actually attacked were isolated in the Government hospital eight miles distant from Johannesburg, contacts were sought out and vaccinated, disinfection of premises and clothing was resorted to, and facilities for free vaccination and revaccination provided by the Corporation. This public vaccination was carried out by seventeen medical practitioners who vaccinated all those who applied to them and by two medical men who made house-to-house visitations through the infected districts and offered vaccination. Altogether 37,501 white and 21,661 coloured persons were vaccinated and of these only seven were attacked with small-pox, all in a modified form and all recovered. The difficulties in dealing with the outbreak were greatly increased owing to the presence among the population of Asiatics and Somalis. The former greatly resented any intrusion on their privacy, objecting both to isolation and to disinfection, and frequently concealing patients when premises were being searched. The Somalis also showed great cunning in hiding their sick, sometimes carrying them a considerable distance to an empty house, into which food was smuggled until the cases were discovered by an inspector.

The Public Health Department of the Johannesburg municipality is to be congratulated upon the success of the measures which were taken to control this outbreak, and that success can perhaps be best estimated if the 212 cases which occurred are compared with the 3,000 which were reported in the outbreak of 1896 8.

India.

Sanitary Reports.

Bombay.

The report for 1905 is written by Major T. E. Dyson, but Lieutenant-Colonel O. H. Channer, M.B., held the office of Sanitary Commissioner during the year. This circumstance perhaps accounts for the very bald character of the record, which is almost entirely statistical. The information regarding meteorology is very meagre, and there is no statement regarding food supplies or their price. The birth-rate of the native population was 33.07 and death-rate 31.84, both being less than in 1904. Among Europeans the rates were 17.71 and 14.41, and among Eurasians 25.32 and 20.89. Registration is still very defective, and several anomalous results are pointed out in the Government resolution. Infant mortality amounted to 220 per 1,000 of births. In the city of Bombay the rate was 568 and in Ahmedabad 803. There was an abatement in the mortality caused by fevers. Preventive action is limited to the distribution of quinine. Cholera was in comparative abeyance but small-pox in excess throughout the presidency, children falling victims to the disease in large numbers. The relation between excessive mortality and vaccination is not stated. Deaths from plague amounted to about a third of those of the preceding year, and, except in the city of Bombay, there was a great decrease throughout the province; 27,242 persons were inoculated with prophylactic serum, among whom 5 cases of plague occurred soon after inoculation.

As regards the progress of sanitation, there is practically no information in the report of the Sanitary Commissioner. It appears that during the year no new schemes of water supply or drainage have been introduced, and it is stated that the financial situation of most municipalities has prevented them from carrying out many urgent projects.

This quotation is from the Government resolution on the Sanitary Commissioner's report, and constitutes a very regrettable confession of apathy and inaction.

Canada.

Proprietary and "Patent" Medicines.

There is at present under discussion at Ottawa a Bill respecting proprietary and patent medicines, which, if passed, would revolutionize the trade in Canada.

It provides that every manufacturer or importer of such medicines shall, before offering them for sale, transmit two samples in full trade packages to the Minister, accompanied by an application for registration and an affidavit stating whether the medicine does or does not contain alcohol, and, if so, the percentage. A similar provision to apply to the following drugs: Acetanilide, aconite, arsenic, atropine, belladonna, cantharides, carbolic acid, chloral hydrate, chloroform, cocaine, conin, corrosive sublimate, digitalis, ergot, hellebore, hyoscyamin, cannabis indica, morphine, nux vomica, phenacetin, prussic acid, opium, savin, strychnine, sulphonal, antimony tartrate, veratrin. One of the samples is to be analysed and the other to be kept for comparison. The fee accompanying the samples must be renewed annually. Should the sample conform to its description and contain percentages of the above-mentioned drugs not deemed excessive, the Minister may cause a certificate of licence specifying the number and date of registration, and this will appear in conspicuous characters on each package or bottle, forming an inseparable part of the general label. Each package or bottle shall, as soon as filled, have attached an Inland Revenue stamp for an amount of duty varying according to the retail price of the medicine and container. The retail price must be marked plainly on each package. Should the analysis go to show that the description of the manufacturer was incorrect, or that the medicine is dangerous in the opinion of the Minister the proprietor may be heard before the Minister by, counsel or in person. After such a hearing the Minister may, according to the facts, declare that the medicine analysed is in fact an alcoholic beverage in which the medication is insufficient to bring the preparation properly within the description of a legitimate medicine, or that it contains alcohol in excess of the

amount needed as a solvent and preservative, or that it contains some one of the poisons mentioned in the schedule in such quantity as to render the use of such medicine in the doses prescribed dangerous to health or life, or that it contains cocaine or any of its salts, or that it is on any other grounds improper and unfit for sale; and the Minister may thereupon order that the medicine in question shall not be sold unless the formula of ingredients is revised, or unless the formula is legibly printed upon the label; or he may prohibit the manufacture and sale entirely.

No medicine may be sold unless these provisions have been complied with, and in default the Minister may take proceedings without notice to the firm engaged in manufacture or sale of the medicine. No person may distribute from door to door any sample of a patent or proprietary medicine; and no one may advertise that any medicine has passed the Government analysis.

All regulations made under this Bill, whether by the Governor in Council or the Department of Inland Revenue, will have the force of law, and suitable penalties have been imposed for its violation.

Doubtless many changes will appear in the Bill before it passes, but it is welcomed as a step in the right direction, although improvements could well be made in many of its provisions.

The Quebec Provincial Board of Health.

The Board of Health of the Province of Quebec has entered its new quarters on St. James Street, Montreal. The laboratory equipment and library are valued at $8,000, and the building is probably the best and most complete institution of the sort in Canada. The provincial grant reaches $12,000 a year, with a special allowance in time of epidemic. The work of the Board was commenced in 1885, and great strides have been made since its actual foundation in 1887. During the present epidemic of typhoid in Montreal, when more than 125 cases were at one time reported in the hospitals alone, the Board notified the city that a part of the water supply was contaminated, and that immediate improvement in this respect was essential to prevent an increase of the epidemic. The problem of pure milk has been attacked, and a decided improvement has been noted. In regard to contagious diseases, Montreal is now well supplied with hospitals the Alexandra and the St. Paul—and the Board can now with justice begin to insist upon such cases being taken to the hospitals when the surroundings are not suitable for home treatment.

In the annual report of the Alexandra Hospital, Dr. Roddick mentioned that 293 cases were treated, the daily average being 22.15. This institution, together with the St. Paul Hospital has been suffering from lack of funds for running expenses, and, in spite of the greatest care it has been found that an additional $15,000 a year would be necessary to make ends meet. A delegation has waited upon the City Council asking for this substantial increase, and doubtless it will be granted at an early period.

The Occurrence of Babinski's Sign in Normal People during Sleep.

At a recent meeting of the Toronto Clinical Society Dr. Rudolf of Toronto read a paper in which were embodied the results of an investigation undertaken to determine the frequency of the so-called Babinski's sign in normal people during sleep. As has been pointed out by Collier, this sign which consists in such a disturbance of the normal plantar reflex that the great toe and often the other toes also become dorsi-flexed, or extended, when the sole of the foot is irritated, instead of being flexed towards the sole, is common in the infant during sleep, a fact generally omitted from the text-books. The investigation was carried on in the Victoria Hospital for Sick Children and in the Toronto General Hospital by the assistance of house-surgeons in these institutions, and the following conclusions were reached. 75.5 per cent. of sleeping children between the ages of 2 and 15 years show a marked degree of extensor response to plantar stimulation. About the same number give indifferent results, in that response of any kind is absent or is neither markedly flexor nor extensor in type. The rest gave a typical plantar flexion. The cases were classified as the sleep was deep or light; of those children deeply asleep 47 per cent. gave the sign markedly; in the lighter sleepers the sign was present in 22.7 per cent. Among the marked cases the average age was 6.5 years, and the oldest child was 13 years. Over fifty adults were examined, but it was hard to catch them sufficiently asleep in many cases, and responses other than the Babinski were met with. Sixteen of the cases did not wake up, and of these three gave an extensor response. They were aged respectively 19, 23, and 84 years, and were suffering from pleurisy, convalescing cerebro-spinal meningitis, and senility. The method of testing for the sign was that described by Bramwell, the outer part of the sole was stimulated. From a practical standpoint it is important to remember that in patients examined during sleep, as children so often are, Babinski's sign is of little value.

Toronto Hospital Patients.

During the past year the City Relief Officer for Toronto had applications from 1,081 people for admission to the hospitals in the city. By nationalities they numbered: Canadians, 421; English, 293; Irish, 132; Scotch, 59; other nationalities, 176. Seventy-six of the applicants had been in the city less than three months.

New South Wales.

Sydney.

Recrudescence of Plague.

During the last two or three weeks we have had an unpleasant reminder that the plague has not disappeared from Sydney. For some considerable time, although many hundreds of rats and mice were being daily caught and examined in the laboratory of the Board of Health, no plague-infected rat was discovered. During the last month or two of 1906, however, an occasional plague-infected rat was caught, and one or two sporadic cases of plague in human beings were discovered, which could not be traced definitely to any infective focus. On January 26th 2 cases of illness of a suspicious nature were definitely diagnosed as plague, and then 6 or 7 other cases were rapidly brought to light. The source of infection in all was found to be in the heart of the city, in a block of buildings in which the General Post Office is situated. Another focus of infection was found to be in the neighbourhood of the markets. In this latter centre it appears pretty certain that some deaths which had been attributed to ordinary pneumonia were really due to plague pneumonia. The disease has manifested itself in the three forms—bubonic, septicæmic, and pneumonic. Needless to say, the utmost activity prevails in all the departments of public health. The Lord Mayor summoned a special meeting of the City Council, and it was decided to enforce most rigidly the following by-law:

> No person shall place, throw, or leave, or suffer to remain on any premises in the city, any refuse in such a manner or for such a time as to have a tendency to encourage vermin to visit or frequent such premises.

Other by-laws relate to the floors and skirtings of buildings being kept in such a condition as to prevent the harbouring of rats; to the area gratings being rendered rat proof by wire netting of a certain mesh. Another by-law states that all garbage tins shall be kept properly covered, whether on private premises or when exposed in the street. It is quite obvious that in spite of the constant supervision by the health officials a serious epidemic of plague among the rats in the heart of the city was in full swing before it was discovered, and then only after some cases of disease among human beings had developed. This only points the more strongly to the fact that in dealing with plague, while the health officials may do their utmost, individual citizens—or rather, all the citizens must co-operate in eradicating all vermin, and at once reporting any unusual number of deaths among rats. Unfortunately, a certain amount of familiarity with the plague has bred a culpable amount of indifference and carelessness among householders, and we are now being painfully reminded that, as regards plague, constant watchfulness is absolutely necessary if we are to escape serious epidemics of this disease. There appears to be a rather widespread infection of the rats—or perhaps, it would be more accurate to say that the infected rats are

being cleared out of the central focus of infection, and are spreading to other parts of the city. It was rather striking to learn that a plague-infected rat had made its way into the Town Hall grounds, and died there. Some two or three cases have also occurred in a country town on one of the northern rivers. It is almost certain that the infection has been conveyed thither by rats in fodder and other produce.

The Labour Party and the Public Health.

A conference of the Political Labour League has just been held in Sydney, and it is interesting to note that this political party is very active in all that concerns the public health. This is manifest from a perusal of the following recommendations made by its Health Committee:

1. That the whole of the Acts dealing with public health, and the sections dealing with public health in the Early Closing and other Acts, be consolidated and administered by the Board of Health, who shall have sole power to appoint inspectors.
2. That sellers of meat and bread be licensed the same as milk vendors.
3. That vendors of meat, bread, and milk shall be liable to forfeit their licence upon the third conviction.
4. That no meat shall be exposed outside shops, or in any place where it is liable to become contaminated with dust.
5. That similar provisions shall apply to the sale of bread.
6. That the premises used for the manufacture or sale of food, or their ingredients, be brought up to a specific standard with regard to sanitation and construction.
7. That the name of the manufacturer must appear on the labels of all foods and drugs.
8. That all packets and bottles of foods and drugs shall bear a copy of the analyst's report.
9. That all patent medicines and foods shall be analysed by the Government analyst, and the result of the analysis published, showing the contents and cost of the same.
10. That the use of antiseptics or preservatives in foods or drugs shall be prohibited. That the penalty for using either of the above shall be very severe, and for the third offence imprisonment.
11. That no chemist shall be allowed to dispense any medicine unless on a doctor's prescription. That no doctor shall, where a chemist is available, be allowed to dispense or sell any medicine.
12. That inspectors shall be appointed for the inspection of hairdressing saloons. That all hairdressing saloons shall be registered. That regulations shall be provided for the proper control and cleanliness of the same.
13. That inspectors concerned in the inspection of foods and drugs, and also sanitary inspectors and inspectors of nuisances, shall hold a certificate of competency, issued by some recognized responsible body.
14. That the Public Health Act be amended to provide a simple and effective method of securing samples of foods and drugs. That the sections dealing with the demolition of premises and the abatement of nuisances be simplified.
15. That an agitation be started with a view to getting municipalities to establish milk dépôts.
16. That all schools be subject to inspection by an officer of the Board of Health.

These recommendations were fully discussed. It was suggested that if the compulsory declaration of the contents of patent medicines was enforced, it would lead to the withdrawal of the better class of proprietary articles from the market. Consequently an amendment of the 9th recommendation was carried as follows:

That all proprietary foods and medicines have the Government analyst's report, certifying that such are not injurious to human life, and guarantee their purity; and all preserved foods shall bear the date of their packing.

We may take these recommendations as the manifesto of the Labour Party, and no doubt much good would result if legislation based upon them could be passed in Parliament and effectively administered afterwards.

Estimated Population.

The population of New South Wales on December 31st last, according to the official estimate just issued by the Bureau of Statistics, was 1,530,940, the number of males being 815,070, and females 715,870, or 114 males to 100 females. The increase during the year was 34,890, of which 25,895 was due to excess of births over deaths, and 8,095 the excess of immigration over emigration. The excess of births over deaths was the largest ever experienced, but the excess of arrivals is 1,000 less than in 1905. The increase during the year, namely, 34,890, was 373 more than in 1905, which showed the largest increase for any year since 1891. The number of births during the year was 40,898, the largest number ever registered in any year. The rate was 27 per 1,000 of population, which is satisfactory as compared with the rate during the three preceding years, but still much below the rate for even so late a year as 1897. The deaths numbered 15,003, of which 8,709 were of males, and 6,294 of females. The rate was 9.91 per 1,000 of the population, that is, less than 1 per cent., the first time it has stood so low. The rates for 1904 and 1905 were both very low, but that for 1906 shows a still further improvement. The marriages were 11,530, the largest number on record, and 500 more than in 1905. The rate is 7.64 per 1,000 of the population, which is a trifle lower than that for 1901, but otherwise is the highest for twenty years.

SPECIAL CORRESPONDENCE.

PARIS.

Recent Vaccinations in Paris. Injection of Fresh Serum as a Haemostatic in Haemophilia.—Proposed Memorial to the late Professor Budin.

At the last meeting of the Académie de Médecine M. Kelsch made some remarks on the vaccination undertaken in Paris during the last fortnight in March. An epidemic of black small-pox has been going on at Dunkerque, and two fatal cases occurred in Paris. There has been no epidemic of small-pox in Paris; in fact, the number of fresh cases notified weekly has been below the average, but owing to the publicity given to the matter by the press, a panic seized the population and accomplished in a few days what the law and the recommendations of medical men were powerless to bring about. It is estimated that nearly 500,000 vaccinations and revaccinations have been performed. At the Académie de Médecine, where free vaccinations are performed, the average number of persons attending till the middle of March was 0 to 5 at each sitting. The numbers rose suddenly to 1,000, 1,500 to 2,000 at each sitting, and it became necessary to have police to maintain order. The sittings were held daily from 9 a.m. to noon, and from March 16th M. Kelsch and his assistant, Dr. Cassius, have performed 6,254 inoculations. Small-pox exists permanently in France, and epidemic outbreaks occur at different points. Among sixty departments about which reports were sent in to the Minister of the Interior in 1904, 15—that is, a quarter—had epidemics of small-pox, with a total of 1,000 cases and 130 deaths. Vaccination (in infancy) is usually carried out in France, although a few children of 3 to 6 years came for vaccination during the recent panic. The population, however, does not so readily come for revaccination, and many stop coming, as they say it never takes with them. M. Kelsch, however, said that when revaccination is followed by the appearance of simple papules, which are irritable and appear on the third day, it is as efficient as when pustules appear, while it is rare for revaccination to be followed by such marked pustules as a first vaccination in infancy. M. Chantemesse said it would be very desirable to organize compulsory vaccination for the crews and passengers who came to France from places where small-pox was raging or had been epidemic (Spain, Algeria, Tunis, etc.), as there was a risk of these introducing the disease into the ports; the recent epidemic at Dunkerque was probably thus produced.

At a recent meeting of the Société de Chirurgie, M. Broca made an interesting report on a communication by M. P. Emile Weil, who has observed that the subcutaneous injection of fresh serum from animals or man favours to a remarkable degree the coagulation of the blood in cases of haemophilia; he quoted several cases which demonstrate this action incontestably, both as regards prevention and cure, in cases of haemorrhage in such persons. The serums of man, the rabbit, the horse, the ox, were equally efficacious, but the serum must be fresh if a rapid therapeutic effect was to be obtained. The average dose for the adult was 20 to 30 c.cm. of serum injected under the skin; in children half the dose would be sufficient. In practice it might be difficult to obtain fresh serum quickly, and then antidiphtherial serum might be used, which was furnished fresh every month by the Pasteur Institute. Before operating on a haemophilic patient it would be advisable to give a preliminary injection of serum. M. Toussaint, at a subsequent meeting of the Society, said he had obtained the same good results

by the injection of antitetanic serum hypodermically in a case of haematorhachis by contusion of the brain. This serum had the further advantage that it was less liable to cause secondary accidents than the serum of Roux.

A Committee has been formed to honour the memory of the late Professor Budin. It is proposed to found a *consultation* for infants which shall bear his name and become a practical school of puericulture. The Chairman of the Committee is M. Paul Strauss, Senator, and the Treasurer, M. O. Doin, 8, Place de l'Odéon, who will receive subscriptions.

CORRESPONDENCE.

THE LONDON UNIVERSITY SENATORIAL ELECTION.

SIR,—I must take exception to the hysterical heading of Dr. Starling's letter in your issue of March 30th. There is no "threatened disintegration of the University of London," but there is a strong desire on the part of many of its graduates that the radical changes initiated since its reconstruction should cease, in order that its high position, obtained by a steady process of evolution during a long term of years may not be lost. It is to give these graduates an opportunity of expressing their desire I have consented to nomination for the vacancy on the Senate in May next. We recognize in Sir Thomas Barlow one of the parents of the concentration scheme at South Kensington, which now stands condemned by the vote of the Medical Faculty on March 19th, when Drs. Oaley and Hill defeated Drs. Bradford and Fowler, the former representatives on the Senate. Dr. Starling states "the suggestion as to the lowering of the standard of the degrees is devoid of foundation." How does he reconcile this statement with the following official statistics? At the Intermediate Medical Examinations for the quinquennial period 1892 to 1896, 45·2 per cent. of the candidates were rejected; from 1897 to 1901, 40 per cent.; and from 1902 to 1906, 30 per cent. At the 1906 examinations only 27·2 per cent. failed to pass. Then, again, at the M.D. examinations. In 1906 only 8 candidates in 60 failed; and in December, 1905, but 3 in 20 were rejected; whereas, in July of that year, 12 failed out of 31. In July, 1906, 14 presented themselves in medicine and 13 passed; and last December, 17 entered and 15 passed. In midwifery and diseases of women 6 presented themselves in December, 1906, 5 passed; and in July of that year, 11 entered and 10 passed.—I am, etc.,

London, W., April 1st. ERNEST W. WHITE.

THE TRANSMISSION OF PLAGUE.

SIR,—The report in the *Journal of Hygiene* from the Plague Commission in India has established very conclusively the fact that the flea is the most important factor in the transmission of plague from rat to man. This report confirms the theory first formulated by Simond, and afterwards further elaborated and demonstrated by Elkington, Thomson, and Tidswell. Elkington's paper, published in the *Australasian Medical Gazette*, August, 1903, can be said to have first scientifically shown the transmission of plague from rat to rat by means of the flea.

The reports on the Sydney outbreaks, 1900-4, are valuable records of a systematic research by epidemiological methods into the etiology of plague, and constitute a most valuable collection of data in connexion with the disease. Elkington's paper and the Sydney reports can claim to have scientifically proved the connexion of rats and fleas with the occurrence of plague in man, and we think that these workers have not received that recognition that their results deserve.

Our object in writing this letter is to show that the splendid opportunity of studying outbreaks of plague on a large scale in a European community has not been lost and that scientific work of a high character in connexion with the disease has been carried out in Australia.

We would also like to point out that while Imperial honours as is only right have frequently been conferred on the medical officers of the various smaller colonies, those of the great self governing States have hitherto been almost entirely ignored, though much valuable work often of world-wide importance has been done by such officers.

In conclusion, it is hardly necessary for us to say that, working as we do in a far-distant part of the Australian commonwealth, we have no direct connexion with the three investigators above mentioned, though profiting much by their researches, and, as a natural delicacy has prevented them from laying claim to the credit which is their due, we who are able to estimate the merit of their work, have considered it right to take this opportunity of making it known.—We are, etc.,

T. L. ANDERSON, M.D.,
Special Medical Officer, Fremantle, W.A.
J. BURTON CLELAND, M.D.,
Government Pathologist, Perth, W.A.

February 23rd.

THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

SIR,—Your correspondents "X." and "Y." agree that "the only solution which will satisfy all concerned is the recognition of a special class of consultants—men who persistently refuse to undertake the treatment of any one except in consultation with a general practitioner." And "Y." adds, "The general public ought not to have private interviews with medical consultants any more than with legal ones."

It certainly argues great want of perspicacity in your correspondents that they should consider their proposals would "satisfy all concerned." Are the public not concerned? Would the patients be satisfied? Have they, the sick, no right to be considered?

And what nonsense all such talk is! Fancy comparing the case of a man dangerously ill with that of a man taking legal proceedings! The one in danger of his life, the other waiting on the law's delay for weeks or months.

Apparently your correspondents would insist that a patient must be left to bleed to death, to lie unaided with a crushed limb or intestinal obstruction, unless he first sends for a general practitioner.

Assuredly the views of "X." and "Y." will never be the views of patients; nor will they ever be the views of any practitioner who has a grain of common sense, or who has the least perception of the fact that every profession exists for the good of the whole community, and has duties to the public as well as to itself.—I am, etc.,

April 2nd. A.

SIR,—I think that my friend Dr. Chapman somewhat misses the point. No one denies that "patients have an indefeasible right to seek advice from whomsoever they choose," but I submit that there are patients whom a consultant has no right to advise; those, namely, who, having been originally introduced to him by another medical man in consultation, came to him subsequently without the knowledge and consent of such medical attendant. This is what we general practitioners have to complain of most, and we have to be careful to select only consultants who follow this rule. I agree that there may be exceptions caused by change of address or change of medical man, but when on inquiry the consultant finds that the patient is still under the care of the man to whom he owed the introduction, I think there is no doubt as to the course which ought to be pursued in the interest of all parties, including the patient. The latter should be informed that the result of the consultant's examination will be communicated to his usual adviser, to whom the prescription will also be sent. Many would extend this rule to all patients who have a regular medical adviser. I am, etc.,

Putney, March 27th. W. G. DICKINSON.

SIR,—In a letter from "Y," published in the BRITISH MEDICAL JOURNAL of March 30th, occur the words, "Members and Fellows of the College of Physicians, who are bound not to accept less than a guinea fee, evade their obligation. . . ."

"Y." concludes his letter with the remark that he is prepared to substantiate all the statements he has made. If your correspondent is referring to the Royal College of Physicians of London, will he be so good as to quote an authority for his statement that its Fellows and Members are "bound" not to accept a fee below a certain amount, and to say when and where such "obligation" is imposed upon them? I am, etc.,

April 1st. M.R.C.P.LOND.

SIR,—Might I venture to add one more letter on the ethical aspect of medical consultation so ably put by "Y." in the BRITISH MEDICAL JOURNAL of March 30th, touching the habit these so-called consultants have of treating patients for nothing when staying in the country village for a holiday?

Last summer a well-known London consultant and three so-called consultants (the latter all general practitioners who have obtained appointments on the staff of a provincial hospital through purely local or family influence) treated patients of mine gratuitously. The London man spent nearly an hour frightening my patient with absurd questions, and in the latter's own words the only way he could stop him was to pull out his cheque book in fear and trembling, when, to his relief, a fee was refused.

Now, Sir, if these men like to charge, I for one would not grumble; but to treat a retired army officer whom he had never seen or heard of before, and who could well afford to pay, for nothing, is not fair play. I may add that not being solely dependent on my practice for a living I can afford personally to shrug my shoulders, but there must be many struggling members of the British Medical Association who seriously feel this "unsportsmanlike" conduct.

My experience is that these latter gentlemen are much more imbued with the ethical side of professional conduct than the "general practitioner specialist on everything consultant."—I am, etc.,

April 1st. Z.

HIGHLAND MEDICAL OFFICERS.

SIR,—When considering the above vexed question there is a point which seems always to be missed—namely, that there is no statutory obligation imposed upon parish councils in Scotland to provide medical men for the benefit of the ratepayers at large. Their business legally is to see that the paupers receive medical and surgical attention. If parish councils agree to conform to certain rules laid down by the Local Government Board, they can participate in the medical relief grant.

The legal relationship between a medical man and his parish council begins and ends with the latter's duties to the paupers (including the pauper lunatics), and in some cases his duties as public vaccinator, when he has been appointed to that office by the parish council. Beyond these duties for which the medical officer is paid a "fixed salary," neither they nor the ratepayers have any jurisdiction over the medical officer. It is the overstepping of this boundary by highland parish councils which has caused all the unfortunate friction between them and their medical officers.

If in any parish the ratepayers as a whole, or a section of them, want a doctor to reside in their midst, it is open to them to form an association, advertise for a doctor, appoint, and pay him a salary agreed upon mutually. I say it is no part of a parish council's duty to step in and act on their behalf.

Highland parish councils, in appointing a medical officer, consider primarily the ratepayers, the paupers are apparently quite a secondary consideration, except in so far as it is through them that financial assistance is forthcoming from the medical relief grant.

If there is a genuine want of medical assistance for the non-pauper poor in the crofting counties, it proves the need of legislation in order to provide it, and not leave it to the over-taxed charity and humanity of the medical officers as at present.

The whole of "the true and unprejudiced account" of the position of the combined parish councils of Kintail, Glenshiel, and Lochalsh in regard to their medical officer bears out my contention that the ratepayers are the primary consideration.

There was a petition (by the way, there is no mention that this one was not bona fide; it seems that it was only the one got up in favour of the doctor which the parish councils would have us believe was "cooked"), sent in to the combined councils from the villagers of Kyle and Plocton asking them to appoint a doctor for each place, as they found the present one was no longer fit to discharge his duties. This seems bordering on the libellous. What "duties" was he neglecting? Was an assistant required to help the doctor to attend the paupers?

I do not think parish councils have any concern with a medical man's physical and mental fitness, except they find that he has, in fact, proved himself physically or mentally unfit to carry out satisfactorily his duties to the paupers.

I have no wish to foment the acute feeling which at present exists between highland parish councils and their medical officers, but I am anxious to have the position of the highland medical officer clearly defined.

I am also desirous to see the non-pauper poor in highland and island parishes provided with efficient medical assistance, but at the same time with a due regard to the doctor's interests.—I am, etc.,

March 24th. NEMO.

PRACTICE IN SOUTH AFRICA.

SIR,—Of late I have very frequently been approached by members of the profession in England for information as to the prospects of practice in South Africa, and as I find that in replying to these individually forms a very heavy tax on my time, I am asking the hospitality of your columns for a general statement on the subject.

Generally speaking, it may be said that the prospects of making an immediate living are far better in South Africa than in England, but that practices, except in the large towns, are of an essentially stationary character, and consequently little if any advance can be hoped for as the practitioner gets older. As regards expenses of living, these have recently gone down materially, but it must be borne in mind that there is a much greater difference in the expenses of a married *ménage* and that of a bachelor than in Europe. I should say that in the country districts and small towns a bachelor practitioner can live at less expense than would be the case in Europe, but for a married with, say, one or two children, it would be safe to put expenses at something like 50 per cent. higher. In the large towns expenses would be very much higher both for bachelor and married man. I will now deal with fields of employment under their different headings.

Assistants.—For these there is a fairly steady demand, usually much greater than can be supplied, for indoor men, but very seldom any openings outdoor. The salaries paid are usually from £20 to £25 per month, all found: in the Transvaal and Orange River Colony £25 to £30, and occasionally more. These are extremely satisfactory appointments, as in the villages and small towns, where they are mostly required, there is not the slightest necessity for a man to spend more than £3 or £4 per month at the outside, and consequently he can readily, as I have known many men do, save enough in a year or a year and a half to buy the entry into a good practice. The work is far less irksome than in England, as owing to there not being any marked difference in the social grades of work the assistant does exactly the same work as the principal, only usually very much less. He is, indeed, mainly used as deputy for his principal in one part of the district when that gentleman happens to be away in another, and invariably has plenty of time for sport and other recreation. Principals always pay fare up from Capetown on engagement of assistant.

Locum Tenencies.—The demand for these is irregular. At the period of the year when practitioners are taking their trip to Europe—that is, from about March to about November—there is always a greater demand than it is possible to supply for *locums* for a period of about six months, at salaries of usually about £25 per month all found and fares both way. Married men are frequently acceptable for these appointments, in which case, instead of the *locum* being boarded, he is given the principal's house and paid a boarding allowance in lieu of board. The remarks made above as to the possibility of saving apply also to these appointments. For short-term *locums*—that is, anything up to three months—the usual rate is £1 a day all found and fare paid. But these vacancies are very irregular. It may be pointed out that in the case of assistants very rarely, and in the case of *locums* not often, is the knowledge of Dutch a *sine qua non*, so long as the man is willing to learn it. I may point out that the South African Dutch is a language extremely easy to learn, enough to conduct a practice without an interpreter, in a very short time, especially if he be accustomed to the Scotch vernacular: and I may say that the majority of practitioners prefer Scotch *locums* and assistants to any other.

Practices.—It must at the outset be pointed out that there is no opening for squatting, the whole of the ground,

except in very objectionable and poorly-paid districts in the Karroo and the outlying parts of the Transvaal, is thoroughly occupied—in fact, over-occupied—and to commence practice otherwise than by taking up a vacancy is infinitely a proceeding more expensive than buying. But practices can be obtained at rates very much lower than in England, and, what is of more importance, on very easy terms. Exclusive of the large towns, where probably a full year's purchase down in cash can be obtained for well-established practices, the premiums vary from one-quarter to one-half year's purchase, including drugs and surgery fittings. The maximum would be asked for a practice in the Eastern Province of Cape Colony, with an appointment attached in a pleasant town on the railway; the minimum for places in the more Dutch districts away from the railway. It may be said that, *caeteris paribus*, practices in the Eastern Province of the Cape, or in Natal, command at least 25 per cent. more than elsewhere, owing to the expenses being lower, the population almost entirely English, and the social surroundings much more pleasant. As a rule, anything from one quarter to one half of the purchase-money in cash is accepted, the balance being paid in half-yearly instalments running from one to three years. For instance, to take an extremely common type of practice—one in a small town or village, with or without a district surgeoncy attached, bringing in about £700 or £800 a year at the present time—the premium would be from £300 to £400, including drugs and fittings; and most vendors would be satisfied with £100 to £150 down. The purchaser, if a bachelor, would find that from £50 to £100 additional capital would be quite enough to go on with until his money came in; the former sum in the Eastern Province and Natal, where accounts are paid more frequently, and the latter in places where half-yearly or annual renderings are the rule. Very frequently a retiring practitioner will also sell his furniture on a part-credit system. It must be pointed out that, given the same population and the same amount of competition, the value of any ordinary practice in normal times would be from 25 per cent. to 33 per cent. greater than during the present depressed financial times.

Appointments.—Gentlemen on your side must disabuse their minds of the idea that appointments are plentiful. The district surgeoncies—of which there are a considerable number—do not, except in the native territories, where there is hardly any private practice, and where vacancies do not often occur, supply a living income. In the great majority of places these appointments bear very much the same relationship to private practice as a Poor-law appointment does in England; and, except in Natal, where the district surgeon is a sort of quasi-civil servant, they are usually transferred with the sale of the private connexion. But whole-time appointments are very few and very seldom vacant, and almost all require a Public Health qualification. Mine appointments on the Rand are now almost all permanent whole time, appointments are very rarely effected, even when vacant, as they are almost always given to some local practitioner already well known. Mine appointments sometimes occur in Rhodesia, but they are not as a rule well paid in proportion to the conditions of life there and lack of private practice.

In conclusion, I may point out that South Africa even now affords a very fair field to two classes of men—one, the man with no capital, who is prepared to work up through an assistantcy or locum tenency to independent practice; the second class, the man with £200 or £300 capital to purchase at once. Either class in a very short time can see their way to an income varying from £700 to £1,000 a year, but that income will, in most cases, remain stationary. In the large towns there is no opening whatever, as the conditions are in almost all respects similar to those in England, should a man decide on taking a locum tenency he would be wise to come out during the season mentioned above, as otherwise the chances of a position are very uncertain, and he might spend all his capital living at hotels without employment.—I am, etc.,

W. Douglas Hartley, M.D., M.R.C.P.,
Late Senior Physician, Kimberley Hospital.

Cape Town, Feb. 5th.

ON THE USE OF THE CALCIUM SALTS IN PNEUMONIA

Sir,—Dr. William Ewart and I are not likely to agree as to the proper treatment of pneumonia, but I should give him an opportunity of converting me if he can prove that the following statements, which I look upon as facts, are erroneous.

Caeteris paribus, in the acute stage of pneumonia, the more scanty and more sticky the expectoration, the more viscous the blood, the more lime salts and leucocytes it contains, the more favourable the prognosis; on the other hand, the more fluid and haemorrhagic the expectoration, the more liquid the blood, the less the lime salts and leucocytes, the worse the prognosis. Acting on these views, I have for many years—long before Dr. Ewart published his *Principles of Treatment of Pneumonia* in 1905—ceased to prescribe carbonate of ammonia and other expectorants during the acute stage of the disease. Those cases of creeping and influenzal pneumonias where there is no proper consolidation are the most fatal. The cardiac thrombosis is more frequently a sequel than a cause of cardiac failure; occurs chiefly in the right auricle and ventricle; is due to cardiac weakness, blood stagnation, leucocytic destruction and fibrin ferment, rather than to any great excess of lime salts. When the febrile process is over it is then well to use some agents to liquefy the blood and the effusion in the alveoli.—I am, etc.,

Liverpool, March 30th. James Barr.

Sir,—It may be of interest at the present moment to know that I have treated successfully a few cases of pneumonia with calcium iodide, a drug which combines the valuable heart-stimulating properties of calcium with the alterative and absorption-producing properties of iodide.—I am, etc.,

Swansea, April 2nd. G. Arbour Stephens.

ARE PERICARDIAL ADHESIONS OF GREAT IMPORTANCE?

Sir,—The paper of Dr. Wenckebach on the Pathology of Adherent Pericardium, interesting and thoughtful though it is, apparently fails to recognize some features of inflammation of the pericardium and its sequels. The statement that "the disturbance of the circulation in adherent pericardium is a purely mechanical one" is far too strong an assertion. One fact is outside the region of dispute—namely, that general adhesion of the pericardium is often associated with very great enlargement of the heart. Pericardial adhesions, however, are not uncommonly met with when there is no enlargement or other evidence that the action of the heart has been hampered. It is where the pericardial adhesions follow rheumatic pericarditis occurring in children that enlargement takes place. When they are a sequel of other varieties of pericarditis such as may arise as a complication of pneumonia, some septic infection, or in association with tuberculous mediastinal glands, adhesions cannot be said to lead to even a moderate degree of cardiac enlargement. Although, however, rheumatic pericarditis is so serious during early life when arising after the age of 20, it is rarely followed by injury of the heart.

The limitation of enlargement of the heart associated with adherent pericardium to one variety of pericardial inflammation and to one period of life shows that pericardial adhesions cannot alone be responsible for the enlargement. Other facts point to the same conclusion. Enlargement of the heart may commence during the acute stage of rheumatic pericarditis before any adhesions have been formed. This enlargement is not merely due to dilatation, there is often considerable increase in the weight of the heart, as was long ago noticed by Dr. Goodhart. This rapid increase is especially striking when it is borne in mind that virtually no enlargement or even noteworthy dilatation of the heart takes place in suppurative pericarditis, complicating such diseases as pneumonia or osteomyelitis in children. There appear to be toxins present in the pericarditis of rheumatism which affect the cardiac muscle in a distinct manner. The view that rheumatism can produce toxic enlargement of the heart is also supported by the fact that in rare instances cardiac hypertrophy and dilatation may be seen in the *post mortem* room following rheumatism when neither pericardial adhesions nor lesions sufficient to interfere with the function of the valves prove to be present.

It appears, therefore, that enlargement of the heart associated with general adhesion of the pericardium may be due to interference with the metabolism of the heart.

wall by rheumatic poisons. The enlargement probably is present most commonly where there has been pericarditis, because this is the most serious variety of rheumatic infection of the heart. It may be considered virtually to follow pericarditis occurring only in children, because during the growing period the heart is most susceptible to rheumatic poisons.

Whether this be the true explanation or not of the cardiac enlargement it seems clear, for reasons already given, that pericardial adhesions cannot be the only factor, or even, it seems to me, the main factor in the production of this enlargement, or of the cardiac failure with which the enlargement is accompanied.—I am, etc.,

February 2nd. THEODORE FISHER.

YELLOW FEVER IN BELIZE.

SIR,—In arguing against the hypothesis that an epidemic of yellow fever can be stamped out only if *Stegomyia* is exterminated, I cited our local experience, and referred to the cases of Spain, Sierra Leone, and the West Indies. The Liverpool School of Tropical Medicine replied in your issue of January 26th. Ignoring the facts against them, they set out a new dogma that "mere emergency measures are insufficient against yellow fever," and they again resort to the *argumentum ad hominem* in the following words: "The simple truth is that antimosquito measures are unpopular among officials owing to the trouble they give," and "they are uncertain only when improperly or perfunctorily carried out." It thus appears that they consider their hypothesis sufficiently established when they emit an *ipse dixit* and accuse public officers of laziness, incompetence, and even ignorance. Their new dogma and their defence of the *argumentum ad hominem* are too much opposed to common sense to prove mischievous by being accepted.[1]

They entered the arena to defend Professor Boyce, and to prove I was in error in saying that antimosquito measures are costly. Professor Boyce's theory is as dead as a doornail. As to the other matter, they say the measures "are far from costly in comparison with the benefits they confer." Granted. But, to use their words, "the busy world will still continue to see the point"—that the crux of the position is to furnish the funds in the first instance so as to secure the benefits. "I cannot afford it" is the pathetic rejoinder with which the poor man has many a time to set aside what is unquestionably good advice. And so it is with poor communities.

In conclusion, though I cannot subscribe to the extreme dogmas of the Liverpool School of Tropical Medicine or approve of the methods by which they seek to establish their hypotheses; I am, nevertheless, entirely at one with them on the wider issue. By all means let the campaign against mosquitos proceed wherever practicable.—I am, etc.,

C. H. EYLES,
Belize, Feb. 12th. Colonial Surgeon (ret.).

LIBEL BY FLATTERY.

SIR,—In the BRITISH MEDICAL JOURNAL of January 12th last, p. 102, in an article headed "Libel by Flattery," you say that "although the publication had not been authorized . . . it had a tendency to lead the public and the profession to believe he was advertising." *The Supreme Court held that the complaint was actionable libel.* This was in the Supreme Court of Louisiana, U.S.A. And you go on to say you never heard of such a case in an English court. Perhaps the reason is the same as here in Natal—there is no redress to be obtained. A notice of you may be printed and published and you are helpless, as, however objectionable the matter may be, you cannot proceed against the offender unless the article is distinctly libellous. Such a case has just occurred here, and perhaps as it is of common interest to the profession I may relate it. The facts are as follows:

Some enterprising individuals in Durban conceived the idea of raising the wind by compiling a book called the *Natal Who's Who*. It was supposed to be on similar lines to a work of the same name in England. The proprietors wrote to me in my capacity of President of the Natal Branch of the British Medical Association, stating the medical profession in Durban were not inclined to favour their publication with their biographies as it was considered unprofessional, and might be construed as advertising. They requested my decision on the point. I replied expressing my disapproval; also my disapproval was expressed further as a member of the Natal Medical Council, which body expressed itself as discountenancing the insertion of medical men's biographies in the production. Imagine my surprise and annoyance, therefore, on finding that the proprietors had possessed themselves of a photograph of myself, and inserted a copy of it in their book with some remarks below it. It looks as if I had furnished a photograph of myself, and also subscribed to the wretched production, after telling my colleagues that I did not approve of our appearing in it. Now comes the point you have mentioned in your article. On taking legal advice I found that I had no ground of complaint, as the matter was not an actionable libel. I could apply to the Supreme Court for an injunction to restrain the defendants from further publication; but if I gained my case, the probability was that the defendants would not be in a position to pay the costs, so it was useless trying it. Whatever the condition may be in England the condition in Natal is this—that any unscrupulous person may procure a photograph of any one and insert a copy in a book, which may be hawked about for sale; and yet, providing the letterpress accompanying it is not actionably libellous, there is no redress. It is as well this should be known.—I am, etc.,

CHARLES WARD, F.R.C.S.Irel.,
President Natal Branch of B.M.A. (1906), Pietermaritzburg.

THE RIDEAL-WALKER COEFFICIENT.

SIR,—We ask a few lines of your space to state that it has been found necessary to substitute the term "Rideal-Walker coefficient" for that originally introduced by us, namely, "carbolic acid coefficient," owing to the abuse of the latter on the part of unscrupulous manufacturers and vendors.

The necessity for adhering strictly to the *modus operandi* prescribed in our test has been strongly emphasized in the last two or three years since we published our method, and that this caution is necessary is shown by the fact that many disinfectants are advertised as having a certain "carbolic acid coefficient," when the figure given has obviously been obtained by methods having little or nothing in common with the test as described in the *Journal of the Royal Sanitary Institute*, vol. xxiv, part 3, 1903, thus introducing confusion and robbing the term of the value it originally possessed.

Much of the success of our method is due to the fact that we provide for the postulant and control being tested not only *in* the same time but *at* the same time. As the resistance of the test organism, even when subcultured from the same stock, varies from day to day, it is unfair and misleading to offer a "coefficient" obtained by testing the postulant on one occasion and the phenol control on another.

Similarly, when the "thread," "garnet," or any modification of the Rideal-Walker test has been employed, information that such a method has been used should accompany the "coefficient," and the latter should certainly never be advertised without this information.

It is therefore most desirable that bacteriologists, when reporting on the germicidal value of a disinfectant, should specify precisely the method employed. Great discredit has been thrown on the Rideal-Walker test by the publication of results obtained by the worker modifying the technique—sometimes to a very large extent—without notifying the modification; and many of the discrepancies referred to by critics are directly attributable to this fact.—We are, etc.,

SAMUEL RIDEAL.
April 1st. C. T. AINSLIE WALKER.

THE MEDICAL SUPERVISION OF SCHOOLS.

SIR,—In your article of March 9th under the above heading you refer only to the question of "the medical inspection of school children" as proposed to be dealt with by the Bill now before Parliament. With regard to this, the fact that practically all children are already under medical supervision by the family medical attendant either in private practice or under the Poor Law, seems to me to be strangely overlooked. Surely the

[1] "Mere emergency measures are insufficient." I can afford no other. *Ergo*, it is useless to act. Such would be the outcome of accepting this new dogma. C. H. E.

family doctor is in a far better position to know the constitution, to make required examination, and to deal with delicacy or disease than any public functionary; and surely the home, in presence of the mother, is far more suitable for such examination than the school.

At present it is no part of the general practitioners' duty to advise the school in matters of health (unless in cases of infectious disease), and interference on his part, when required in the interest of the child, is as a rule not well taken; he cannot therefore be held responsible for the serious state of matters found to exist in some schools. If, however, medical inspection and supervision of school children is to be enforced by law, I hold that the family medical attendant is the proper person to undertake that duty. A form similar to those used by insurance companies might be given to the parent with the registration certificate, to be duly filled up and sent with the child when entered at school. Other forms for periodic report, etc., might be issued by the school. Remuneration might be as in the notification of infectious diseases, but at an adequate rate for the work done.

It appears to me that such a plan might be worked more economically, more efficiently, and with far less friction—socially and professionally—than one by specially appointed inspectors.

There is still to be considered the very important question of the medical inspection of schools.—I am, etc.,

Bootle, March 19th. J. STRACHAN.

HOSPITALS AND CLUBS.

SIR,—I submit that the man who undertakes to treat persons who fall sick from among 110 members of a society for the sum of £22 per annum must be either a philanthropist or poverty is nigh unto his door.

I am sorry to think the latter cause is the one actuating a large percentage of practitioners of medicine. The reason so many practitioners are obliged to accept such servile pay is due to the encouragement that people receive from large, well-organized hospitals to regard advice and medicine as obtainable for the mere asking or for a few pence. The hospital system of inquiry, to be of any use, should be conducted by almoners appointed by bodies independent of hospital authorities. Secondly, large employers of labour and companies should not be permitted to obtain gratuitous advice for their employés by a subscription to the hospital. Thirdly, house surgeons and house-physicians should be adequately paid for their services. Though the public should be encouraged to contribute to the deserving poor, there is no reason why medical services should be expected to be given gratuitously, an allocation from public subscriptions being made for medical work.

The delinquency of certain members of the profession in sending cases to hospitals is due to the long-continued unsympathetic attitude assumed by hospitals to the reasonable demands of the profession for more efficient supervision and administrative reform in the hospital out-patient departments. Hospital policy undervalues medical work so that the poorer classes are unreasonable in their demands and are unwilling to pay reasonable remuneration.

I would suggest that medical men should refuse all cases unless their funds pay their medical advisers according to the services rendered—in other words, patients should be paying for work.—I am, etc.,

Eastbourne, March 19th. FREDERICK W. COLLINGWOOD.

TENNIS ELBOW.

SIR,—The cause of the affection which is termed "tennis elbow" was brought to your columns more than twenty years ago. I held the opinion at that time, in spite of opinion from friends, that the affection was produced by a rupturing of the posterior interosseous nerve by the supinator brevis muscle through the fibres of which it passes. In my case nothing is done to the musculo-spiral nerve either at that point or where the main trunk passes between the heads of the triceps muscle. The condition, if produced by merely traumatic means, soon gets well with rest. I have not heard of a case for some considerable time, though one sees tennis played very frequently.—I am, etc.,

[illegible], March [illegible]. C. E. WHEELHOUSE.

MEDICAL STUDENTS AND ORGANISED GYMNASTIC TRAINING.

SIR,—Surgeon-General Evatt does not seem quite to understand why young army medical officers are now being passed through the gymnasium at Aldershot. It is part of the duty of all medical officers in charge of effective troops in barracks to visit all places set apart for the physical training of the troops frequently, and to give his advice on such subjects (vide Paragraph 61 Medical Regulations). Unless the visiting medical officer has actually been put *through the same course* as the recruits whom he is watching, he can hardly be expected to appreciate the results of the gymnastic training as fully as he would wish.

I think we are all at one with Surgeon-General Evatt in his desire to see gymnasia put in charge of the R.A.M.C.—I am, etc.,

Colchester, April 1st. F. J. W. PORTER, Major R.A.M.C.

*** We understand that Surgeon-General Evatt was misinformed when he stated "that in the Royal Navy the whole gymnastic training . . . . is handed over to the lieutenant class and no medical officer has a look-in." It appears that there are two naval medical officers attached to the Portsmouth School of Physical Training solely for assisting in instruction and medical supervision of classes. Arrangements have also been made for medical officers on entering the Royal Navy to go through a modified gymnastic course so as to make them conversant with the present system of training and to qualify them for similar duties when appointed to ships.

THE SLEEP OF CHILDREN IN TOWNS.

SIR,—I venture to think that the following case, showing what appears to be the remarkable effect of locality on the sleeping of an infant, will be of interest.

Possibly others may have had a similar experience, if so one would be glad to hear of it. The child was very carefully tended; there was no variation in its regulated diet wherever it was, therefore diet as a cause was eliminated. Wherever the child was fresh air and ventilation was attended to. I was obliged, therefore, to admit locality was the cause of the sleeplessness, owing to the persistency of the effect of change upon it.

A boy, normal and healthy, born in London and breast-fed, at 4 weeks went to St. Margaret's Bay, stayed there two weeks and then returned home, a place 600 ft. above sea level. Then he commenced to suffer from sleeplessness, nearly always being awake from two to four hours in the middle part of the night, and averaging only five to six hours' sleep in the twenty-four hours. At 4 months he went to London for a week and slept well there. This was considered to be a fortunate coincidence. He immediately reverted to his sleepless habit on his return home. At the end of the seventh month he was weaned, but this made no difference in sleeping. From the eleventh to the twelfth month he lived in Warwickshire and then two weeks at Boulogne; he slept well in Warwickshire and all night at Boulogne.

In the twelfth month he came home again and the sleeplessness returned as bad as ever. In the thirteenth month he was at Brighton for a week. He kept well for the first three nights, and the other four nights were wakeful, but he had slight diarrhœa at the time. At the end of his thirteenth month he came home; he slept well the first night, less the second, worse the third, and then was as bad as ever, wanting to play in the small hours.

At the eighteenth month he went to Florence, and slept well two nights in the train. He continued at Florence two months, and slept well all the time. He has now returned home, and, although not so bad as before, is wakeful two or three times every night.

It appears to be pretty certain to me that locality is the factor in this case.

All one can say to the parents is, Take him away again somewhere else.—I am, etc.,

Wallington, Surrey, March 18th. W. R. FRANKS, M.D.

ERRATUM.—In a letter entitled "Vaccination and the L.C.C. Election," by Dr. Arthur Drury, of Halifax, which appeared in the BRITISH MEDICAL JOURNAL of March 30th, p. 780, the clause in the first sentence of the second paragraph, "Of these 19 were elected and 15 defeated," should read, "I were elected and 15 defeated."

Medico-Legal.

PROPOSED STERILIZATION OF CERTAIN CRIMINALS.

A BILL has been submitted to the Indiana Senate which provides for the sterilization of confirmed criminals, idiots, imbeciles, and those guilty of rape. Each institution in the State entrusted with the care of confirmed criminals, idiots, rapists, and imbeciles, is to appoint upon its staff two surgeons, whose duty it shall be, in conjunction with the chief physician of the institution, to examine the mental and physical condition of such inmates as are recommended by the institutional physician and Board of managers. If, in the judgement of this committee of experts and the Board of managers procreation is inadvisable, and there is no probability of improvement of the mental condition of the inmate, it shall be lawful for the surgeon to perform such operation for the prevention of procreation as shall be decided safest and most effective. It is established that the consultation fee to the experts shall not exceed three dollars in any one case. The Bill, according to the *Medical Record*, has already been passed by the House.

BONDS NOT TO PRACTISE IN AN AREA.

"CORNERED" writes that when assistant to a practitioner twenty years ago, he signed a bond restricting his practice in a certain neighbourhood. He has lately wished to become a candidate for the post of ophthalmic and aural surgeon to a hospital in that neighbourhood. He does not remember the exact terms of the bond, and is not sure that he is precluded by it from accepting such a post, but his old principal refuses to let him see it, or to give him a copy. He wishes to know whether he can compel an inspection of the bond, or if such an inspection is refused, whether he would be liable for infringing its conditions.

*** It is not easy to understand why the principal should refuse an inspection of the bond. If before taking any steps which might infringe its possible conditions, our correspondent's solicitors were to write for a copy, offering to pay any necessary expense, and were met by a refusal, in any subsequent step the principal might take on account of infringement of the bond, such a refusal would render his success in an action for damages unlikely.

LUNACY CERTIFICATES.

T. L. B.—The Lunacy Act of 1890, Section 32, Subsection (2), states that "Neither of the persons signing the medical certificates in support of a petition for a reception order shall be the father or father-in-law, mother or mother-in-law, son or son-in-law, daughter or daughter-in-law, brother or brother-in-law, sister or sister-in-law, or the partner or assistant, of the other of them." The second signature, therefore, cannot be that of T. L. B.'s assistant.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

THE ETHICS OF CONSULTATION.

QUAERENS writes that a patient wished to have in consultation a general practitioner whom "Quaerens" objected to meet, owing to his "dishonourable conduct." The patient insisted, and approached the practitioner in question, who wrote to "Quaerens" to say that he had declined to see the case except in consultation with him, and invited "Quaerens" to meet him at a certain time. The practitioner went to the house at the hour fixed, too soon for him to receive a reply from "Quaerens," who seems to have done nothing. At the house he was told that "Quaerens" declined to meet him. He then went in and saw the patient and prescribed. "Quaerens" wishes to know whether the practitioner acted rightly in seeing the case under these circumstances.

*** The circumstances seem to us to be outside the ordinary rules of professional conduct. If "Quaerens" is in earnest in stating that the other practitioner should not be met on account of his dishonourable conduct, he ought to have told his patient that he should retire from the case if the consultation were insisted upon, and under the actual circumstances we do not see how he can with dignity retain his position in attendance. Upon this point we would recommend our correspondent to consult paragraphs 3 and 4 of the recommendations of the Central Ethical Committee, published in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL of February 16th, p. 76. If an honourable practitioner is asked to see a patient under the care of another, and his offer to meet that practitioner in consultation is declined, we are not prepared to say that he is precluded from seeing the case. Every patient has the right to consult any one he pleases, and this patient seems to have given sufficient notice to "Quaerens" to allow him to take such action as he considered necessary. "Quaerens" can hardly plead that he did not actually refuse to meet the other practitioner in consultation, but the latter should certainly have given him reasonable time to reply.

INTRODUCTIONS IN A DEATH VACANCY.

ETHICS writes: A. and B. are in general practice in a country district. B., who is elderly, dies, and his widow tries, but fails, to sell the practice, practically all his old patients having called in A. upon B.'s death. Six years later B.'s widow sells what purports to be the goodwill of the practice to C. Is it ethical for Mrs. B. to introduce C. to patients who have now become A.'s?

*** We have nothing to do with the ethical proceedings of Mrs. B., who is not a member of the medical profession, but it seems doubtful whether it is an ethical proceeding for C. to accept introductions to patients six years after the death of their former medical attendant, as they must in the meantime for the most part have come under the care of other practitioners.

SUPERSESSION.

W. B. C.—It is better that the patient should write a courteous note to his former medical attendant, intimating to him that his services are no longer required, and that as a rule the superseding practitioner should not write to him.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

INTERNATIONAL RED CROSS CONFERENCE.

THE following official delegates to the International Red Cross Conference, to be held in London in June, have been appointed:

By the Admiralty—Inspector-General Herbert M. Ellis, K.H.P., F.R.C.S., LL.D., Director-General of the Medical Department of the Navy; and Deputy-Inspector-General Arthur W. May, Deputy-Director-General of the Medical Department of the Navy.

By the War Office—Surgeon-General Sir A. Keogh, K.C.B., M.D., Director-General, Army Medical Service; Lieutenant-Colonel M. W. Russell, Royal Army Medical Corps, Deputy-Assistant Director-General, Army Medical Service; Lieutenant-Colonel W. G. Macpherson, C.M.G., M.B., Royal Army Medical Corps, Deputy-Assistant Director-General, Army Medical Service; and Lieutenant-Colonel J. E. Edmonds, Royal Engineers, of the Department of the Chief of the General Staff.

PAID APPOINTMENTS TO STAFF SURGEONCIES, ETC., IN INDIA.

THE Commander-in-Chief in India has directed a rearrangement of the paid appointments to Staff Surgeoncies and Cantonment Hospitals between Royal Army Medical Corps and Indian Medical Service officers throughout India. The new arrangement will come into force on April 1st. The Northern and Eastern Commands are the areas chiefly affected.

INDIAN MEDICAL SERVICE.

The Entrance Examination.

THE regulations for the examination of candidates for admission to His Majesty's Indian Medical Service have recently been revised and copies are now obtainable. The principal change appears to be in the list of subjects for examination; formerly Division No. 6 comprised chemistry, pharmacy, and a choice between botany and zoology, but in the new regulations the place of these subjects is taken by materia medica, pharmacology and toxicology. No syllabus relating to the latter subjects will be issued, but the examination will be conducted so as to test the general knowledge of the candidate in them. Under the old regulations the examination in chemistry was limited to the elements of the science and to its application to medicine, pharmacy and practical hygiene, but corresponding knowledge would appear still to be required. The number of marks allotted for the subjects in question is 600, being equal to those obtainable in the Division of applied anatomy and physiology and in that of midwifery and diseases of women and children.

THE late Miss Mary Louisa Jackson of Bath, who died on January 12th, left £300 to the British Home for Incurables; £250 to St. Luke's Hospital for the Insane; and £200 each to the New Hospital for Women and the Samaritan Free Hospital.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

REMOVAL OF PAUPER LUNATICS TO WORKHOUSE FOR CERTIFICATION.

C. W. P. states that he had a club patient who, in his opinion, required to be certified as insane. He notified the relieving officer of this, and asked for the necessary forms. The latter then called upon him, saying that the usual course would be to supply him, the relieving officer, with a certificate that the patient required supervision, upon which he would be removed to the workhouse, and that the workhouse doctor would then certify if he thought fit. Our correspondent contends that he was himself the proper person to certify to the insanity of the patient, and asks whether he was justified in refusing to give a certificate for the removal of the patient to the workhouse without any fee for so doing, and what he is to do in the future if he has a similar case. He further asks whether the guardians have the power to fix the fee for certification of lunatics at ten shillings a case.

*** We assume that our correspondent is a district medical officer, and, if this be so, it is his duty, when he has knowledge of the insanity of any pauper in his district who ought to be sent to an asylum, to give notice of such in writing to the relieving officer; it then becomes the duty of the latter "to give notice thereof to a justice having jurisdiction where the patient resides," who, after receiving such notice, is bound by order to require the relieving officer to bring the alleged lunatic before him, or some other justice having similar jurisdiction, at such time and place as shall be appointed by the order then given. It is contrary to the spirit of the Lunacy Act for a relieving officer to remove an alleged lunatic from his residence to a workhouse *for his detention there as an inmate* before being sent to an asylum. For any such irregularity a relieving officer or overseer is, in strict law, liable to a pecuniary penalty, and this has been enforced. As it rests with the justice who acts in these cases to select the medical practitioner whom he is required to call to his assistance, our correspondent cannot claim the right to certify the case for the asylum. The usual fee for this duty is one guinea, but the actual amount rests with the justice only to decide. We do not consider it to be the duty of a district medical officer to give a certificate, even at the request of the relieving officer, to enable an alleged lunatic to be removed from the district to the workhouse, as by so doing it would be facilitating a course of action undoubtedly illegal.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.

The following appointments are announced:

J. Barcroft, M.A., King's College, Senior Demonstrator in Physiology; S. W. Cole, M.A., Trinity College, Junior Demonstrator of Physiology; V. J. Woolley, M.A., King's College, additional Demonstrator of Physiology.

VICTORIA UNIVERSITY OF MANCHESTER.

The following candidates have been approved at the examinations indicated:

[illegible]

UNIVERSITY OF LIVERPOOL.

The following candidates have been approved at the examinations indicated:

SECOND M.B., CH.B. (*Part A*).—L. S. Ashcroft, K. J. C. Bradshaw, L. Buckley, A. G. W. Owen, J. A. Parkes, J. F. Roberts, N. W. Steinberg. (*Part B.*) S. P. Sykes.

FINAL M.B., CH.B. (*Part II.*).—G. W. N. Joseph (second class honours).

DIPLOMA IN TROPICAL MEDICINE.—A. Bond, M.D., B.Ch.Dubl., M. H. G. Fell, M.R.C.S., L.R.C.P., R. H. Kennan, M.B., B.Ch.Dubl., W. H. Kenrick, M.R.C.S., L.R.C.P., G. E. H. Le Fanu, M.B., C.M.Aberd., H. Valiance, M.R.C.S., L.R.C.P.

THE ROYAL UNIVERSITY OF IRELAND.

The supplement to the *University Calendar* for 1907, containing the examination papers set in 1906, has been issued by the University Press, Dublin. Among other papers it contains those set at the spring, summer, and autumn examinations in medicine, and at the examinations for the D.P.H. degree.

CONJOINT BOARD IN IRELAND.

The following candidates have been approved at the examination indicated:

PRELIMINARY MEDICAL.—*N. S. Deane, M. J. Ahern, J. C. Blackham, W. P. Bole, J. H. Cooper, F. A. V. Denning, M. J. Dunne, A. C. Gordon, J. A. Hart, C. J. Hogarty, H. F. Holmes, F. Horsley, T. F. Keating, P. J. Kelly, C. Maguire, S. N. Manning, T. E. Martin, E. J. Morrissey, J. Saudys, W. F. Watson, V. J. White.

* With honours.

TRINITY COLLEGE, DUBLIN.

The following candidates have been approved at the examinations indicated:

PRELIMINARY SCIENTIFIC (*Physics and Chemistry*).—G. Beckett, T. M. Crawford, C. W. M'Kenny, Mary G. Caskey, R. T. Vaughan, W. A. Taylor, T. A. Watson, E. N. Bateman, V. M. Fisher, E. H. P. Murphy, W. O. Halpin, J. B. Burgess, R. P. Pollard, E. W. G. Young. (*Botany and Zoology*).—R. V. Dixon, O. C. Tandy, M. M'Knight, R. A. G. Elliott, J. T. Simpson, R. C. M'Kell, L. Shiel.

INTERMEDIATE (Part I.).—R. E. T. Tatlow, V. B. Kyle, H. S. Metcalfe, W. P. H. Smiley, C. D. Hanan, C. B. Jones, D. Drew, J. D. Murphy, A. K. Cosgrave.

FINAL (Part II., *Surgery*).—F. R. Seymour, J. Gray, E. Jameson, E. C. Stoney, G. G. Vickery, F. W. H. Bigley, H. P. Hart, A. T. J. M'Creery, A. E. Knapp, Rev. R. B. Bryan, J. W. Lane, G. H. Stack, J. H. Morton.

DIPLOMA IN PUBLIC HEALTH (Part I.).—C. Scaife.

OBITUARY.

HIS EXCELLENCY PROFESSOR ERNST VON BERGMANN,
BERLIN.

By the death of Ernst von Bergmann, Germany has lost one of her most skilful surgeons, and the Berlin University one of its most commanding personalities. Tall, broad-shouldered, with the quick, energetic movements that tell of a strong temperament, penetration and acute observation in the glance of his steel-blue eyes, his was a notable figure alike in the lecture room and the operating theatre.

Unlike many successful and famous surgeons he believed in the entire teachableness of his art. He was never weary of developing and working out his methods down to the minutest detail, and of drilling his students in their practical application. He was never the genius on a pedestal accomplishing, by a light given to him alone, what others would vainly attempt, but rather the head of a school trained to carry on and carry out the master's successful work.

Von Bergmann was born in Riga, the capital of the Russian Baltic provinces, on December 16th, 1836; he studied and took his degree in the Russo-German University of Dorpat. There, too, he began his professorial career. In the Austro-Prussian campaign of 1866, and again in the Franco-Prussian war of 1870, he served as a Surgeon in the Prussian army. In 1871 he was appointed to a full Professorship in the Dorpat University. When the Russo-Turkish war broke out he for the third time took the field as a war surgeon. In 1878 he accepted a call to the Würzburg University, and in 1882 he was appointed Professor in the Berlin University. That Chair he continued to hold until his death.

The sad circumstances connected with the late Emperor Frederick's illness in 1887 and 1888, and with the animosity between the Royal Martyr's German and English medical advisers, brought von Bergmann's name for a time into an atmosphere of sensation. This is not the place to reopen a discussion on this subject; it need only be said that the event proved the German physicians to have been right in their early diagnosis.

About two years ago von Bergmann's health began to fail; there were symptoms of serious intestinal mischief. No one understood the gravity of the situation

more clearly than the sufferer himself. But not an iota of the work that filled his strenuous life would he give up; he showed himself determined to struggle against the inroads of the disease to the last possible moment. All through the last severe winter this man of 70 began his day at his university clinic before 8 a.m. For two hours he gave his clinical lecture, then continued to operate till close on midday; went though the daily routine of his Directorial duties, often had examination papers to read through and students to examine, worked and superintended work at the microscope, and after all this went on to his private hospital, where more operative work awaited him.

Of late his hands had begun to tremble, and though his operating skill seemed undiminished, he found it increasingly difficult to keep up his explanations of the course of the operation while at work on it. Very speedily his hearers noticed this diminution of power, and the theatre, in which there had never been an empty place when von Bergmann lectured, began to show empty spaces. Noticing this falling off, Bergmann took his resolve at once, and, at the close of the winter half-year, sent in his resignation. So that even if a longer space of life had been granted to him, von Bergmann's career as a teacher was ended.

Early in March he went to Wiesbaden with his family, but change of air and rest failed to do him good, and it soon became apparent that he had indeed fought the good fight, doing his day's work until wellnigh the end. On Friday, March 22nd, symptoms of intestinal occlusion appeared, and the sufferer at once sent for his former pupil, Professor Schlange of Hanover, who performed the required operation early on Saturday. No evacuation of the bowels followed, and therefore Bergmann's former first assistant, Professor Borchardt (Berlin), who had in the meantime arrived in Wiesbaden, proceeded to open the intestine in another place; but purulent peritonitis had already set in. Von Bergmann himself was fully aware that death was imminent, and calmly spoke of his end on Sunday evening. On Monday, the 25th, at 11 of the forenoon, all was over.

The funeral took place in Potsdam, where von Bergmann had his home, on Good Friday afternoon. Earlier in the day a ceremonial mourning service was held in the operating theatre of the university clinic, where for so many years the great teacher had been watched and listened to in such rapt attention. On the coffin lay a wreath of palm branches sent by the German Emperor, and all around wreaths lay piled up high. The Crown Prince was present as the representative of his father, while Princess Frederick Leopold attended in place of the Empress. Ministers of State, high military and municipal authorities, University professors with the Rector at their head, delegates of medical organizations from all parts of the Empire, old pupils from far and near—all these filled the benches hitherto appropriated to students alone. Choral singing by the Cathedral choir of boys ushered in a sermon, followed by memorial speeches by v. Angerer (München), Riedel (Jena), Kraus (Berlin), Landau (Berlin), Leube (Würzburg), and a second chorale made an impressive close.

Masterful and sometimes even rough in manner as Bergmann was known to be, his heart held a wealth of kindness and devotion to his fellows. Berlin newspapers have this week been full of stories about him; stories of impecunious patients treated in his own house with exquisite attention—of assistance given to fugitive Russian Jews, shaken by "Pogroms"—and suchlike. And it should not be forgotten that von Bergmann was the chief founder and moving spirit of the Berliner Rettungsgesellschaft, the great centralized ambulance organization of Berlin.

Take him for all in all he was emphatically a man, and one whose place it will be difficult to fill.

JOHN LATIMER PARKE, M.R.C.S., L.S.A.,

TIDESWELL.

A link with the past was broken on March 21st by the death of John Latimer Parke, of Foxlowe House, Tideswell, one of the oldest practitioners in the Midlands. He was born in 1825 in Lincolnshire, and was a student of St. Bartholomew's Hospital, taking the M.R.C.S.Eng. as far back as 1848, and the L.S.A. two years later. On the termination of his student career he paid a brief visit to New Zealand, and then, on the suggestion of a friend, settled down almost immediately at Tideswell in Derbyshire. He found there both a wife, in the person of Miss Longden, and plenty of work, and remained faithful to the place for the rest of his days. During the last few years he had, of course, done very little in the way of practice, but he may be regarded as having worked for Tideswell as a medical man for at least fifty out of the fifty-nine years during which he was a qualified medical practitioner. A cheery bluff-mannered man with a strong sense of humour, he was full of reminiscences of the early days of Tideswell, and took a great interest in its progress and welfare. His affection for it was returned with interest by a locality which was proud of numbering him among its inhabitants. The celebration of his golden wedding two years ago was the occasion of a presentation to him and his wife of an illuminated address, signed by over a thousand persons, and of various valuable gifts provided by subscriptions limited to the sum of one shilling. This compliment he acknowledged in characteristic fashion by repainting and regilding the face of the parish church clock as a mark of his appreciation of the kind expression of feeling of which he had been the object. Throughout his life Dr. Parke played a large part in the affairs of the neighbourhood, and especially in those of the parish church. He was for long people's churchwarden, and for many years superintendent of the Sunday School. He also took much interest in friendly societies, and this had for many years past been annually acknowledged by the toasting of his name at any social gathering connected with them. His membership of the British Medical Association he retained to the end. He was buried on the Saturday following his death in Tideswell churchyard in the presence of a very large gathering of people, a memorial service being held on the following day. Of Dr. Parke's six children—two sons and four daughters—all, with the exception of one daughter, survive him. Both his sons are medical men, one of them being established in Tideswell and the other in Huddersfield.

The late Dr. Robert Sterling, of Stoneyford, co. Kilkenny, whose death occurred last month, was a student of the School of the Royal College of Surgeons of Ireland. Becoming L.R.C.S.Ire. in 1871, he, in the year following, took the licence of the Royal College of Physicians of Edinburgh as well as the licence in midwifery of the same body, and of the Rotunda Hospital, Dublin. On the termination of his student career he was appointed House-Surgeon of the Royal City of Dublin Hospital, and afterwards served the hospital at Dorchester in a corresponding capacity. Later on he entered the Irish Poor-law Medical Service, and on appointment as medical officer and medical officer of health to the Knocktopher dispensary district settled down at Stoneyford, in co. Kilkenny, and there remained until very shortly before his death, fulfilling, in addition to his other duties, that of medical attendant to the local division of the Royal Irish Constabulary. Last winter proved for him an exceedingly exhausting period, for one after another he had upon his hands a succession of very trying cases, and eventually he himself contracted influenza. He had had an attack of the same disease some six years ago, and then showed that it was for him a peculiarly dangerous enemy. He was not free from its effects for a very long time, and on this last occasion he did not really recover at all, for though he regained sufficient strength to go away for a fortnight's holiday he had not really shaken off the influence of the disorder, and died suddenly at about the time he should have returned to work. His death is a great loss to the neighbourhood, for he was a practitioner of more than average skill, and one who was always ready to respond to the calls of those, whether rich or poor, who needed his services. He was known, moreover, and will be regretted, by a wider circle than that of his patients and his immediate neighbours. One of those who visited Toronto last year, he was a sedulous attendant at the annual meetings of the British Medical Association, taking a profound interest in his profession in its more scientific aspects. Personally a quiet, unassuming man, fond of his home life, he divided what spare time he had between his garden and his study, and hence remained to the end thoroughly abreast of the

time. Dr. Sterling married some sixteen years ago, and leaves a widow, with whom deep sympathy will be felt.

Surgeon-General Sir John Harry Ker Innes, K.C.B., died in Florence on March 12th, in his 88th year. Born in 1820, he entered the Army Medical Service as Assistant Surgeon, April 8th, 1842; became Surgeon, March 11th, 1853; Deputy Surgeon-General, December 31st, 1853; and Inspector-General, July 24th, 1872. He retired from the service, January 27th, 1880. In 1854, his regiment being in India, he went to the Crimea as a volunteer, and took part in the siege of Sebastopol and in the attack on the Redan on June 18th (medal with clasp and Turkish medal). During the Sepoy revolt in India he served with great distinction with the 1st Battalion of the 60th Rifles. He was wounded and his horse shot in the action on the Hindun: he was present at the battle of Budli ke Serai, at the storming of the heights before Delhi, and the siege, assault, and capture of that city. As P.M.O. of Sir John Jones's force he went through the Rohilkund campaign, and subsequently held a like appointment in Oude with Brigadier Troup's column (frequently mentioned in dispatches, medal with clasp, and appointed C.B.). In 1871 he was selected to act as British Medical Commissioner on the staff of the Crown Prince of Prussia during the Franco-German war. At the close of this campaign he received from the Emperor the Steel war medal and the Iron Cross. From 1876 to 1880 he held the appointment of P.M.O. in India, and in 1877 was appointed an Honorary Surgeon to Queen Victoria. In 1878-9 Surgeon-General Ker Innes was P.M.O. of the Afghanistan expeditionary force; he was present at the assault and capture of Ali Musjid and the subsequent advance up the Khyber Pass (mentioned in dispatches, medal with clasp). He was in receipt of a Reward for Distinguished Service granted him in 1885, and was promoted to be K.C.B. in 1887.

Dr. Oronhyatekha, of Toronto, who died on March 3rd of heart disease and diabetes, was a full-blooded Mohawk, and was born on the Six Nations Reservation near Brantford, Ontario, in 1841. He received his medical education at the University of Toronto, and was, we believe, for some time at Oxford. He practised his profession in Ontario until 1889, when he took up his residence in Toronto.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Gustav Hirsch, Physician to the Czar, aged 79; Dr. Ottomar Rosenbach, sometime Professor of Internal Medicine in the University of Breslau, aged 53; Dr. Labbé, formerly Professor of Operative Surgery in the Medical Faculty of Toulouse; Dr. Peter Sawitsch-Inski, formerly Professor of Pharmacology in the Military Medical Academy, St. Petersburg, aged 64; Dr. Wlady-law Krajewski, of Warsaw, one of the leading surgeons of Poland, aged 52; Dr. John H. Brinton, of Philadelphia, author of the article on gunshot wounds in the first portion of the *Medical and Surgical History of the War of the Rebellion*, and afterwards Surgeon to the Jefferson Hospital and Professor of the Practice of Surgery and Clinical Surgery in the Jefferson Medical College, aged 78; and Dr. João Augusto Teixeira, Director of the Medico-Chirurgical School of Funchal.

HOSPITAL AND DISPENSARY MANAGEMENT.

INVERNESS DISTRICT ASYLUM.

The Medical Superintendent has been able to submit [illegible] report for the year ending May 15th, 1906. There were [illegible] patients on the register on May 15th, 1905; the total number under care during the year numbered 811, and there remained 69[illegible] on the register on May 15th, 1906, an increase of [illegible] during the year.

During the year 1[illegible] were admitted, of whom 99 were [illegible]. In 5 the attacks were first attacks within [illegible] and in 18 [illegible] within twelve months of admission, in 4 [illegible] were "first" attacks within twelve months of admission, in 14 the attacks were of more than twelve months' duration, and in 3 were of congenital origin on admission. Only 31 were in average bodily health and condition [illegible] 13 being in bad or reduced, and 32 in bad or exhausted, conditions. Further, 53, or 34 per cent., had been under treatment before, as compared with 27 per cent. of the previous year. It is to be noted, however, that several of these cases were readmitted to the asylum from amongst those boarded-out, and are thus not to be regarded as really relapsed cases.

The admissions were classified as to the forms of mental disorder into: Mania of all kinds, 68; melancholia of all kinds, 60; dementia, 11; general paralysis, 5; acquired epilepsy, 2; and cases of congenital or infantile defect, 2. As to the probable etiological factors in the admissions, alcoholic intemperance was assigned in only 8, or 5 per cent.; syphilis in 5; adolescence, old age, and the climacteric in 25; phthisis in 20; previous attacks in 53, and moral causes in 43. Hereditary influences were ascertained in 42, or 27 per cent., and in 4 more congenital defect existed. In 17 no cause could be assigned. During the year 77 were discharged as recovered, giving the unusually high recovery-rate on the admissions of 50·6 per cent., and, notwithstanding the exceedingly unfavourable character of the admissions, 53 of these had recovered and been discharged before the end of the asylum year. There were also discharged as relieved 11, as not improved 7, and there were 28 deaths. The deaths are almost half those of the previous year, and give the record-breaking death-rate for this institution of 4.2 per cent. on the average number daily resident.

The deaths were due in 3 cases to general paralysis, and in 1 to exhaustion from senile mania: in 19 to chest diseases, including 6 deaths from phthisis pulmonalis; in 2 cases to general tuberculosis, and in 1 each to cancer of stomach, senile decay, and "malignant disease." All deaths were thus due to natural causes, and, further, no accident of a serious nature occurred during the year. The general health appears to have been good during the year, and no illness of epidemic form affected either inmates or staff.

THE ROYAL NATIONAL ORTHOPAEDIC HOSPITAL.

From the statements made at the recent annual meeting of what is now the Royal National Orthopaedic Hospital, it would appear that the amalgamation scheme has, up to the present, worked very harmoniously, and that financial results have been entirely satisfactory. Building of the new premises is expected to commence early in the spring, the expenditure, estimated at £5,700, being partly covered by sale of the old premises of the Royal Orthopaedic Hospital in Hanover Square. During rebuilding it appears to be the intention to continue to rent some vacant wards at Charing Cross Hospital as well as use certain portions of the existing premises in Portland Street. It is still hoped that the City Orthopaedic Hospital will join in the amalgamation, but arrangements to that end have not yet been completed.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

The General Council of King Edward's Hospital Fund for London met at Marlborough House, on March 15th, to receive the accounts and report for the year 1906. The Prince of Wales, President of the Fund, took the chair. The report, read by Mr. Danvers Power, one of the honorary secretaries, stated that the total income of the Fund from general sources had been £110,955 16s. 1d., of which £110,000 had been distributed. Note was also made of the various large bequests to the capital, of which the Fund received notice during the year, though several had not yet been paid; of the completion of the revision of the system of keeping hospital accounts; and of the steps being taken to obtain a Bill for the incorporation of the Fund. The important meeting of the year being that held in December to receive the recommendations of the Distribution Committee, the business on the present occasion was mainly of a formal character; and after the reports had been adopted on the motion of the Prince of Wales, the proceedings terminated with a vote of thanks to the Prince for presiding.

ROYAL SEA BATHING HOSPITAL.

At the annual meeting of the Royal Sea Bathing Hospital, an institution which, though situated at Margate, mainly caters for the needs of London patients, an intention was indicated to improve in many ways the accommodation and equipment of the institution at an early date. During last year the number of beds daily occupied was 156. The number of applications for admission, 716, exceeded those of the previous year by 57. Of the total applicants 115 were, on medical examination, deemed to be unsuited for admission.

THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

The ninety-third annual report of the City Chest Hospital, the first established in Europe for the study and treatment of pulmonary disorders, records the completion of all the structural improvements and additions asked for by the Medical Council of the hospital in 1905. The hospital has therefore now been brought in every way up to the standard of present-day requirements. The number of in-patients treated—485—is under the figure for 1905 as one ward had to be kept closed during the alterations. The new arrangements include an x-ray room and improvements in the operating theatre.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

L. J. L. wishes to hear of a home where an old lady of 80 who has cancer of the breast could be taken care of and looked after for a guinea a week. Hampshire preferred.

W. L. C. would be glad to hear of any treatment likely to benefit a widow lady, 64 years of age, suffering from *chorée rhythmée*. The movements in the upper and lower limbs are distinctly choreiform, are aggravated in bed and when sitting, relieved while standing. Aspirin, bromides, arsenic, hyoscine, and massage have been tried with but little relief.

ANSWERS.

LIEUT.-COLONEL.—Imbecile children of parents in poor circumstances are received for training at Earlswood Asylum, Redhill, either gratuitously or with such small contributions as can be afforded, but have to be elected by the subscribers. Particulars may be obtained from the Secretary, W. Howard, Esq., 36, King William Street, London Bridge, E.C.

ICH DIEN.—The minor examination of the Pharmaceutical Society of Great Britain and the licence and assistants' examinations of the Pharmaceutical Society of Ireland include practical dispensing. Most of the colonies have a Pharmaceutical Society or Pharmacy Board conducting examinations which include dispensing. Army "compounders" are selected from among non-commissioned officers of the Royal Army Medical Corps by an examination in pharmacy, posology, etc., and are eligible for Poor-law dispenserships.

THE JAMAICA EARTHQUAKE.

IN reply to several correspondents who have forwarded letters they have received from a medical man practising in Kingston, we may repeat that inquiries have been addressed to the officers of the Jamaica Branch of the British Medical Association in Kingston, but that some weeks must elapse before any reply can be obtained. Judging from the specimens which reach us, the medical man in Jamaica who is sending out the typewritten letter asking for pecuniary assistance must be doing so in a somewhat broadcast way. The result of inquiries will be communicated as soon as received.

PINHOLE OS.

A. G. W. asks if pregnancy occurring in a woman, aged 30, with extreme congenital hypertrophy of the cervix and pinhole os is likely to prove dangerous? Are many similar cases on record, and, if so, what treatment has been adopted?

*** The condition is very rare. It is not dangerous, but produces delay in the first stage of labour. If "congenital hypertrophy" means elongation of the vaginal portion, the best treatment is to amputate it. For "pinhole os" the best treatment is bilateral division of the vaginal portion.

CHRONIC SNEEZING.

DR. F. W. JORDON (Heaton Chapel) writes in reference to Dr. Meharry's communication in the BRITISH MEDICAL JOURNAL of March 16th: I have been familiar with this method of preventing sneezing ever since I was a boy. I learned it from my father. It certainly is effectual at times. I have not investigated the subject, so I cannot say whether it would be equally effectual in sneezing due to gross irritation of the nasal mucous membrane, as it is in what may be called idiopathic sneezing. The explanation is probably psychological.

CLINICAL MICROSCOPY.

SIMPLEX asks to be recommended a book on the microscopical examination of blood, urine, etc., suitable for the use of a general practitioner.

*** Emery's *Clinical Bacteriology and Haematology for Practitioners*, published in Lewis's Practical Series, is a useful volume. Or our correspondent might obtain the information he requires from the small book by W. T. Connell entitled, *A Laboratory Guide in Practical Bacteriology, with an Outline for the Clinical Examination of the Urine, Blood, and Gastric Contents*; it is published by R. Uglow and Co., Kingston, Ontario.

LETTERS, NOTES, Etc.

MOTOR CARS FOR MEDICAL MEN.

TWO CARS writes: I have found, with both an English car and a very good French car, that long before the cars have run 5,000 miles the repair and overhaul bill reaches a very heavy amount. No maker seems capable of producing a car that can stand a road test of 5,000 miles, still less of 10,000 miles, without very serious and expensive refits being necessary. The amateur driver saves considerably in the item of tyre expenses, as the paid chauffeur always uses his brakes too freely and drives too fast, and never anticipates or avoids tyre trouble by forethought. But when no paid chauffeur is employed, all the minor running repairs have to be done at a repairing shop, which is a heavy item; and, furthermore, must be near at hand, and therefore only applicable to dwellers in a town. In London, where stabling or garage must be paid for, the general cost of running a small car is £120 a year (without a chauffeur, but including all repairs); and of a larger car about £200 per annum. This makes no allowance for the capital expended on the purchase. A car may be expected to last about three years, and is worth very little at the end of that time, so far as realizing upon it. When a medical man can only afford a very definite limited sum per annum for driving, he had better stick to horseflesh, by job or otherwise. But if he has long distances to cover, and time is of great value, then the expensive luxury of a motor car will repay him. If one is daily to have a car at one's service, then two cars are a necessity, and in the long run work out economically. Two small cars, if capital is limited; a small and a larger car when funds permit. In large towns, adding capital to running expenses, the cost of a small car (for two people only) works out about the same as jobbing a single horse and brougham. That of a larger car (costing £500 to £600) will be about the same expense as jobbing a carriage and pair. But with the motor car there is not the same absolute certainty that your carriage will be at the door to a fixed time each morning. Yet, on the other hand, the car, small or large, does what six or eight horses could not achieve, apart from further advantages for health and pleasure. To sum up, the motor car is an extravagant and luxurious necessity to the busy and well-to-do practitioner; but a needless and useless expense to the man of restricted means. To save money and worry always go one better in the size of tyres to the stock size supplied by the manufacturers of a motor car.

DR. F. P. BARTLETT, M.R.C.S., L.R.C.P. (Ottery St. Mary, Devon) writes: The following experiences with my first car may be of interest to the many medical men who are contemplating purchase. In February, 1906, I bought a 10-h.p. De Dion, two cylinders, four-seated (or rather five, as the revolving front seat allows of ample seating for three people at the back). I had no previous experience with motors in any form, and took charge after six or seven days' tuition and have driven the car myself ever since. My gardener, who previously looked after the horse, does all the dirty work—cleaning, lubricating, grinding valves, etc.—so that I seldom have to soil my hands. The car's first birthday was on February 20th last, and it had then done 6,700 miles without once failing to take me to my journey's end or bring me back again, or being for a single day unfit for work. The longest delay I have had on the road was half an hour to replace a burst tyre tube. My repairs bill, apart from tyres, was 5s. 9d. for the twelve months, for trifles such as a bent mudguard, etc. The country here is hilly, and the byways which a medical man must penetrate are rough and flinty; but the car takes all the hills easily with four up, and the grades of 1 in 25 or 1 in 20 are negotiated on the second gear at 10 or 12 miles per hour. On the third speed, on good roads, one can run up to 35 or 40 miles an hour. The repair bill compares well with the experiences of Drs. Marriner and Hilliard, who give their results in your issue of February 23rd, and makes one doubt whether the cheaper cars pay in the long run, to say nothing of the annoyance of frequent breakdowns. Dr. Marriner's Coventry Humber should be debited with thirty-four days' hire of horse and trap, less the petrol which would have been used if the car had been at work. As a reminder to those thinking of buying a car, I may point out that no mention has been made of the largest item of expense—namely, depreciation. I shall

be very pleased to give further details as to costs of running to anyone who is interested.

In Defence of Steam Cars.

Dr. E. H. O. Sankey (Boreatton Park, Baschurch, Salop) writes: In your issue of March 23rd there is a paragraph on the choice between petrol and steam, in which are some statements which I feel to be unfair to the latter. I have been driving a Turner-Meiss car for some years now and have never had any difficulty in keeping joints tight, and there is no "frequent need for packing"; indeed, in the Turner car there is no packing. Again, in the modern steam car there is no boiler properly so-called to "give trouble," and I have never had the slightest shadow of a sign of a trouble with my generator. Neither do I agree with the statement that the petrol is cheaper in running than the Turner car, and, though I can only only speak with knowledge of this particular make, I have not the slightest doubt that it applies to all the modern steamers. The only objection which I can see to steam cars is that they take about fifteen minutes to get up heat enough for the road from dead cold. In simplicity and power they are certainly in front.

The Apprenticeship System.

Dr. H. J. Johnston-Lavis (Beaulieu, Alpes Maritimes, France) writes: I always look back with profound gratitude for the valuable instruction I got from a three-months' apprenticeship which was required at my student time, and which I willingly prolonged into a year. There is a large quantity of details that no school of medicine or hospital can place at the disposal of the medical student. It is to this I attribute the great superiority of the English general practitioner of 50 years and upwards of age over his French, German, and Italian *confrères*. I say this from a long and extensive experience, having been a student in several foreign schools and a graduate in Italy and France, besides my English qualifications. A man learns how to treat those minor ailments that never reach a hospital and which constitute a large part of one's practice. He learns medical tact, bedside manners, and patience with cantankerous patients little required of him in hospital practice. He has to surmount difficulties, rig up impromptu apparatus or instruments when far removed from the multiple and elaborate supplies he is accustomed to during his hospital training. The apprentice has usually to dispense, and, although a slavery in practice, this is an admirable introduction to the art of prescribing. It is this that is the prime cause of the vast amount of unofficial preparations, tabloids, etc., ordered by medical men because they have not learnt how to write a complex prescription. This is bad enough in England, but in France has reached such a point that many specialities are ordered by doctors who do not even know the composition of the syrup of Dr. X. or the capsules of the Pharmacie Y. By all means make every man do at least three to six months' pupilage or assistantship.

Local Anæsthesia for Extraction of Teeth.

Mr. J. W. Struthers, F.R.C.S.Edin. (Clinical Tutor on Surgery, Royal Infirmary, Edinburgh) writes: Under the above heading there appeared on p. 604 of the British Medical Journal for March 9th a recommendation from Dr. J. Butcher that 10 minims of a 10 per cent. solution of cocaine should be injected on either side of a tooth to produce anæsthesia for extraction. Such a procedure involves the injection of nearly 2 gr. of cocaine in 10 per cent. solution, and as this would, I believe, be attended by very grave risks to the patient, it appears to me advisable that Dr. Butcher's suggestion should not be allowed to pass without comment. All authorities are united in condemning the use of such strong solutions of cocaine for hypodermic injection as most dangerous, and reference to the literature of the subject, especially to the writings of Reclus, Schleich, and Braun, will, I think, convince any open-minded reader that there is unfortunately ample evidence in support of this view in the long list of serious toxic symptoms and fatalities which have followed the use of large doses and of concentrated solutions of cocaine. Fortunately it has, on the other hand, been clearly shown that solutions of 0.5 or 1 per cent. are perfectly effective and safe, especially when combined with a small dose of some adrenalin preparation. Even with these solutions the dose of cocaine should certainly never exceed 1 gr., and any one continuing to use large doses and relatively concentrated solutions for hypodermic injection would appear, in view of the evidence of recorded facts, to undertake a very grave and totally unnecessary responsibility.

The Estimation of Proteids in Milk

MM. Trillat and Sauton (*Ann. de l'Inst. Pasteur*, December, 1906) recommend a method for the estimation of the nitrogenous bodies in milk which is based on the fact that formaldehyde has the property of rendering albuminous material insoluble. The insolubility is so great that it is not affected by boiling water, alcohol, ether, benzine, toluine, acetone, or carbon tetrachloride; sulphuric, hydrochloric and acetic acid, whether dilute or even in concentration of 50 per cent., merely cause it to swell up after acting upon it for some hours, and it is not attacked by dilute potash or soda. Strong ammonia, a very slight amount of which is sufficient to dissolve casein, has no action, even at the boiling point. Finally, it is insusceptible to the action of either the gastric or the pancreatic juices. The method of estimation is as follows: Five c.cm. of milk are diluted to 25 c.cm. with distilled water in a 100 c.cm. flask; the liquid is boiled for five minutes, and five drops of commercial formalin are then added. It is important not to add the formaldehyde until after boiling; otherwise a small portion of the proteid (the lactalbumin) will be lost. The liquid is boiled again for two or three minutes; then, after allowing it to stand for five minutes, 5 c.cm. of 1 per cent. acetic acid are added, and it is stirred with a glass rod. A powdery precipitate is formed, which is collected on a small weighed filter and washed with distilled water. The filtrate ought not to give any precipitate with the most sensitive tests for proteids. After draining the residue, the fatty material is extracted with acetone; the proteid is then dried at from 75–80° C., and afterwards weighed. The precipitate obtained is white, and ought not to adhere to the paper nor to exhibit any signs of grease. The entire experiment occupies less than two hours, and several estimations can easily be made simultaneously. The authors have carefully controlled their method by estimations performed in others ways, and claim that it gives reliable results.

Domestic Physicking.

The following was the experience of a man who tried to cure himself of a bad cold without having recourse to the doctor: He made, first, a decoction of horehound and wormwood, which he drank before going to bed. On the following day, finding that he had a worse cold than he had expected, he took five little liver pills, and put a mustard plaster on his chest and another between his shoulder blades. An old lady who happened to be staying in the house disapproved of these measures, and recommended rest in bed, hot bricks to his feet, a dose of "goose oil," and another of Epsom salts. Towards evening he felt very bad, and his wife gave him a couple of pills of her own make, each about the size of a walnut, and a tablespoonful of friar's balsam "to keep them down." But an old sailor friend stated that the real way to cure a cold was to produce a copious perspiration, and the patient was made to swallow half a pint of hot rum and to soak his legs in a hot mustard bath. On the following morning the assiduous lady could not help seeing that "his blood was out of order," and made him drink a quart of spearmint tea and an ounce of castor oil; shut him up in a room with doors and windows fastened, and put round his neck a flannel soaked in salt and vinegar! At intervals she returned to his room and burnt feathers there. This case may be looked at from two different points of view. It may be regarded as an illustration of the truth of the saying that in the multitude of counsellors there is safety; or it may be taken as a proof of the resisting power of the human organism. We leave our readers to form their own judgement.

Tsetse Fly and Horse Sickness.

P. H. W. (Cape Colony) writes: In the British Medical Journal of November 17th Captain Markham Carter remarks, "It is worthy of note that horse sickness has again appeared at Kataba, . . . 1½ miles from . . . where the fly (*Glossina tachinoides*) was first found." Is this what is known as South African horse sickness, characterized by sudden pyrexia, cough, and almost immediate death from suffocation, due to great extravasation of serum into the pleura, the pulmonary tissue, and bronchi? In 1905 an outbreak began in Western Pondoland towards the end of January, and spread from district to district, entirely exterminating the horses in some localities. Here, at least, it was associated with a fly I had never seen before, and it ceased abruptly after the fly disappeared with a cold north gale in the middle of May. There had been no such widespread outbreak for twelve years. The fly was very difficult to catch. I only secured two males and one female, and the latter was destroyed in the post—very unfortunately, for it was peculiar in having an elongated abdomen and laying eggs on the horses as the bot fly does. Both sexes had the strong Tabanid proboscis, were about a third larger than the bot fly, and of a reddish-brown colour.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

An Address

ON THE

SURGICAL FORMS OF ILEO-CAECAL TUBERCULOSIS.

Delivered before the Medical Society of London, December, 1906.

By Dr. HENRI HARTMANN,

Associate Professor in the Medical Faculty of the University of Paris, Surgeon to the Lariboisière Hospital; and Member of the Surgical Society of Paris.

Mr. President and Gentlemen,—When you were so kind as to invite me to give an address to your old and renowned Society, I was greatly honoured, though I was tempted in the first instance to refuse, for I feared to bore you, speaking in bad English, on a subject with which you are already acquainted. I decided, however, to accept your invitation, as I was convinced you would excuse any defects in my address, knowing well with what indulgence and courtesy you treat the shortcomings of your guests.

My reason for selecting the subject of surgical forms of tuberculosis of the caecum, or the forms amenable to operative interference, is because I think they occur more frequently than is generally recognized; and, moreover, when suitable treatment is followed patients thought to be incurable may be cured.

It is only about fifteen years ago that the surgical forms of ileo-caecal tuberculosis became known; up to that date they were confused with the other forms of intestinal tuberculosis, which only physicians were called upon to treat. The words "intestinal tuberculosis" evoked always the idea of diffuse lesions, of numerous ulcerations, more often secondary to a pulmonary tuberculosis already advanced in its evolution.



Fig. 1.—Hyperplastic tuberculosis of the caecum.

In the meantime some writers had described cases of localized tuberculosis of the caecum. One of your countrymen, Ward, in 1849, pointed out in pathological specimens the existence of localized tuberculous deposit, causing thickening of the coats of the caecum. In France, Leudet and Lasègue had described, from a clinical point of view, tuberculous typhlitis. But until the present day, when intestinal surgery has undergone the development with which you are acquainted, we hardly thought that some cases of caecal tuberculosis were amenable to operative treatment.

The physicians alone seemed able to treat them, for two reasons: First, because modern intestinal surgery was at its beginning and could not venture upon complex cases of ulceration, of perforation with pyostercoral fistula, and extensive inflammatory thickening. Secondly, because the forms most accessible for surgical treatment—those strictly limited to the caecum—were mistaken for cancer and removed as neoplasms, no one dreaming that the tumours might be of a tuberculous nature.

The progress of intestinal surgery, the increasing use of short-circuiting, and of excision of intestines, has made it possible in an indirect manner to operate upon extensive lesions accompanied by intestinal fistula. Moreover, the progress of pathological anatomy, showing the tuberculous nature of certain tumours, has taught us that we often remove tuberculous tumours, instead of neoplasms, as we thought.

As a general rule the caecum is more often the seat of tuberculosis than any other part of the intestines. In the statistics of Fenwick and Dodwell we find out of 100 cases of intestinal tuberculosis, 85 cases in which the caecum was affected; and in 9.6 per cent. of these 85 cases the caecum was alone affected. The frequency of localization of tuberculosis in the ileo-caecal region has been attributed to the fact that there the chyme makes its way more slowly than in the other parts of the bowel, so that it comes into more prolonged contact with its coats; the caecum also has a special circulatory system.

What is true regarding tuberculosis in general is much more so in regard to surgical forms of tuberculosis. Ileo-caecal tuberculosis is much more amenable to surgical treatment than that which attacks other parts of the bowel.

It is of these surgical forms of ileo-caecal tuberculosis that I wish to speak to-day, leaving aside tuberculosis of the appendix, which is treated in the same way as ordinary appendicitis. Appendicectomy in such cases does not present anything particular, and more often it is only the microscopic examination that shows us, instead of an ordinary appendix, a tuberculous one.

The surgical forms of ileo-caecal tuberculosis were not described previous to the last fifteen years. Czerny in Germany, Durante in Italy, had made a few excisions of tuberculous caecums. But we must go back only to 1891 to see Billroth in Vienna, and Hartmann and Pilliet in France, simultaneously insisting on the fact that in the caecum tuberculous lesions exist which are mistaken for cancerous diseases. Since that date numerous works have been published on the question. Among the most important are those of Conrath in Germany and, in France, the clinical lectures of Dieulafoy, the papers of Demoulin, Bérard and Patel, etc.

From the point of view of pathological anatomy, the surgical forms of ileo-caecal tuberculosis reveal themselves under two different aspects: First, the ulcerative caseous tuberculosis which is more often accompanied by pericaecal inflammation, and is sometimes described for this reason as the entero-peritoneal form of ileo-caecal tuberculosis. Secondly, the hyperplastic form which, by its aspect and evolution, has a strong resemblance to certain strictures of the rectum, formerly described as inflammatory or syphilitic strictures, and which recent research has often shown to be of tuberculous origin.

1. *Entero-peritoneal Form.*—In this form the caecum alone may be involved; it is the exception. In many cases the lesion occupies at the same time the end of the ileum, which, like the caecum, is sloughed away by the ulcers. The appendix is often destroyed, the whole of the ileo-caecal region is lost in a mass of adhesions, interspersed with caseous matter, and even purulent tuberculous cavities, communicating sometimes with the intestinal tract. When these tuberculous abscesses advance towards the abdominal wall their rupture is followed by a pyostercoral fistula, which usually occurs in the right iliac fossa, but which is sometimes found in the back, at the umbilicus, etc. Contrary to what we observe in the tuberculous ulcerations of the small bowel, the ulcers, when they heal, do not form fibrous strictures.

2. *Hyperplastic Form.*—The hyperplastic form, which I described with Pilliet in 1891 as tuberculous typhlitis

simulating neoplasms, is the most important to the surgeon. It is generally limited to the caecum, it rarely involves the ileum, and then only to a slight extent and at a late period; moreover, when this involvement takes place, the lesions are different in character, the ulceration destroys the ileo-caecal valve and spreads to the adjacent parts of the ileum, but the hyperplastic process remains confined to the caecum.

The hyperplastic lesion (Fig. 1), beginning in the caecum close to the valve, gradually involves all that part of the bowel, and when it spreads it does so in the direction of the colon, seeming to be a descending tuberculosis.

In a patient whom I examined, and who was operated upon by my assistant, Dr. Cunéo, the lesions, which left the end of the ileum quite intact, had spread over the end of the ascending colon, and even to the angle of the transverse colon (Fig. 2).

In a case operated on by Roux (of Lauzanne) the lesion had extended much more considerably, and the surgeon was obliged to remove with the caecum the whole of the ascending colon and a part of the transverse colon.

Besançon and Lapointe have seen the whole of the large intestine as far as the sigmoid part involved by the hyperplastic process.

Exceptionally the hyperplastic tuberculosis of the caecum is associated with other hyperplastic tuberculosis of the colon, as we have observed at the *post-mortem* examination of one patient (Figs. 3, 3*a*, 3*b*, 3*c*).

In this form of tuberculosis, the caecum appears externally increased in volume, more or less mobile in the iliac fossa, and often included in a fibro-adipose mass which attains a thickness of 3 or 4 cm. (Fig. 4).

This fibro-adipose deposit can be compared to that observed around the kidneys in calculous pyelitis, and is the manifestation of a chronic inflammatory process. It may spread as far as the spinal column, and contains lymph glands.

The regional lymph glands are involved, and are more voluminous than in cancerous degeneration. As a result of the chronic inflammation of the mesocolon, whether or not there is a fibro-adipose thickening, a retraction of the tissues is sometimes produced which displaces the colon and the caecum upwards. The ileum, instead of being at right angles to the caecum, then passes upwards for a length of 8 to 10 cm., and seems to continue the direction of the colon.

When the intestine is opened we find the coats have become rigid with much thickening; its cavity has disappeared to a great extent; the cul de-sac normally formed by the caecum is effaced, and is only represented by a slight depression. The stricture will generally admit the index finger; it may be more marked, not thicker than a goose's quill; its maximum is reached at the valve, which is shrivelled up rigid, and sometimes impossible to recognize. Exceptionally there is a dilatation of the diseased parts.

The mucous membrane is more often ulcerated; sometimes we find villous vegetations, granulations and projecting polypi which may be as big as a hazel nut, growing above the ulcerations but not ulcerated. These vegetations, which extend to a certain distance, bring to mind certain forms of laryngeal tuberculosis (Fig. 5). The appendix, lost in the inflammatory exudation, is often almost intact; sometimes it is thickened and in some cases ulcerated. When it is diseased the lesions affect its proximal part, continuing directly the lesion of the caecum, leaving the end intact. In the ordinary appendicitis the appendix tends to be obliterated at a point more or less approaching its caecal implantation; in the hyperplastic tuberculosis the appendix is always open, and often communicates with the caecum by an enlarged orifice.

In connexion with the usual form of hyperplastic tuberculosis of the caecum, there are a few exceptional forms to be noticed. The lesion may be limited to the ileo-caecal valve. In a case of Jaboulay, there was a tumour in the shape of a cauliflower implanted on the upper lip of the valve. In another case of Souligoux it took the form of an orange ending in a point with an orifice in the inferior side, and projecting in the caecum like a shark's jaw.

I must also mention a case that was operated on in my hospital by my assistant, Dr. Michon, in which the lesions were confined in the lower part of the ileum; the ileo-caecal valve, thickened and deformed, made a circular projection into the caecum.

Microscopically, the lesions differ from ordinary tuberculosis because they are neither entirely ulcerative nor destructive. There exist with tuberculous lesions, sometimes slightly developed, other modifications of the intestinal wall due to a defensive reaction of the tissues, showing itself to the naked eye by the thickening of the intestinal wall, and by the usual development of a new adipose formation.

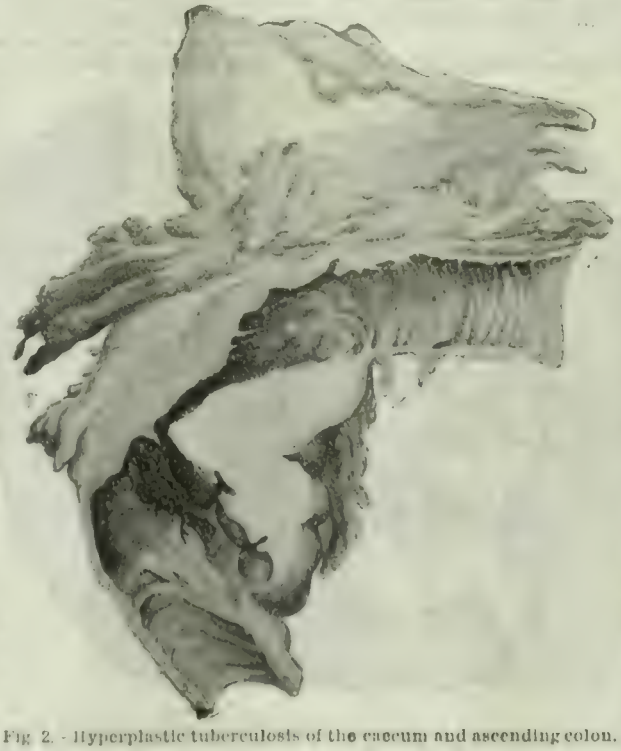


Fig. 2. - Hyperplastic tuberculosis of the caecum and ascending colon.

The tuberculous lesions may be developed at the surface of the mucous membrane, or chiefly in the subserous coat. When the mucous membrane is especially affected the ulcerations are more or less deep, very exceptionally reaching as far as the serous membrane, which may be perforated; as a rule, however, they stop at the muscular coat.

We find between the glands and in the tissue of the ulcerations a great quantity of round cells, with here and there some giant cells and in some parts caseous deposits. The most extensive lesion is the diffuse round-cell infiltration, which is the chief of these tuberculous lesions (Pilliet). This round-cell infiltration continues in the submucosa, where we find also giant cells and caseous tubercle; it spreads through the muscular coats, following the lymph vessels and extending again in the subserous tissue (Fig. 6).

In a few cases the mucous membrane is not ulcerated, and we find two layers of infiltration one in the submucosa, the other in the subserous coat (Fig. 7).

Together with these tuberculous lesions showing the peculiarity of being associated with a considerable round-cell infiltration, we find other lesions which are simply inflammatory; for example, the sclero-adipose thickening, and the production of polypi and vegetations, nearly always present in the disease. These polypi have the ordinary structure of intestinal adenoma and are not tuberculous.

In connexion with hyperplastic tuberculosis of the caecum I should like to discuss certain strictures, called inflammatory, which have been described by Gerard Marchand and Demoulin, and by Schwartz. Twice I have met with such strictures. Though microscopic examination and inoculation in both cases failed to prove the tuberculous nature of the lesions, and though the complete recovery of the patients after the operation and their general good health were entirely in favour of simple inflammatory lesions, still, in the first case, the patient returned after nine years with phthisis, of which she died ten years after the resection for the stricture, without the

least intestinal trouble; in the second case, the patient remained well for six years after the operation, but during the seventh year a new suppuration of the pelvis supervened, from which she died. At the *post-mortem* examination mesenteric glandular tuberculosis was found. It can therefore be affirmed that both these patients (the first ten years after operation, the second seven years afterwards) succumbed to tuberculous lesions.

The question therefore arises, Is it a simple coincidence or was the primary lesion, in appearance non-tuberculous, in reality of bacillary origin? We are tempted to believe it, inasmuch as to-day the work of Poncet of Lyon has attracted our attention to certain forms, before unknown, of inflammatory tuberculosis very different to ordinary tuberculosis from the pathological point of view.

If this supposition be confirmed, hyperplastic tuberculous lesions will be increased by the addition of a number of so-called inflammatory strictures. In any case, clinically or therapeutically, or even from the point of view of pathological naked-eye anatomy, these strictures remind us of hyperplastic tuberculosis.

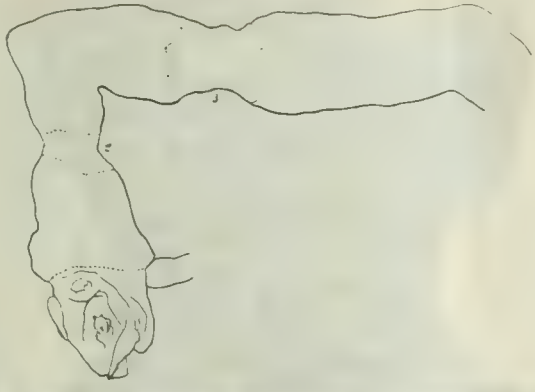


Fig. 3.—Multiple hyperplastic tuberculosis of the caecum and of the colon (*post-mortem* specimen).

Etiologically, ileo-caecal tuberculosis, in its surgical forms, is equally observed in both sexes. Conrath has recorded cases in 36 males, 41 females; Demoulin in 48 males, 35 females; my cases number 105 males, 112 females.

The disease seems to present its maximum frequency between the ages of 20 and 40; before 20 and after 40 it becomes rare. We find only few cases between 10 and 20; however, Guinon and Pater have published a case in a child 4 years old.

The patient may be affected with lung tuberculosis, but generally to a slight degree or even not at all. There is, between localized caecal tuberculosis and ordinary tuberculous enteritis, a great difference from this point of view, the tuberculous enteritis appearing in the late stages of lung tuberculosis. It seems that infection is brought about by ingesta, and that it localizes itself in the caecum because of the stagnation of intestinal contents which favours inoculation.

Clinically, the surgical forms of ileo-caecal tuberculosis manifest themselves chiefly by two kinds of symptoms. Some of the cases exhibit the reaction of the peritoneum and its surroundings, simulating more or less appendicitis. Others are the result of intestinal stricture, and remind us of neoplasms, and do so all the more because direct examination nearly always allows us to state the existence of a tumour.

In some cases the symptoms of the peritoneal reaction increase, and the iliac fossa is filled with an inflammatory mass; abscesses and fistulae are developed. In other cases, on the contrary, the symptoms of peritoneal reaction are slightly marked, there being simply a tumour and signs of intestinal stricture.

Clinically in the entero-peritoneal form, which is characterized anatomically by the presence of numerous ulcerations in the ileo-caecal region with inflammation and even with pericaecal suppuration, there is a collection of symptoms corresponding to the lesions. The patient has sometimes, at the beginning of the disease, signs of tuberculous enteritis; the stools are frequent, copious, liquid, and contain some blood. The attention is then attracted to the ileo-caecal region by an acute attack of pain in the right iliac fossa. This painful attack is sometimes the first symptom; I have sometimes been tempted to consider such an attack to be due to appendicitis, and all the more because I was able to find a tumefaction in the iliac fossa. The rate at which the disease increases is, however, as a rule, slower than that of appendicitis, and the tumefaction, instead of diminishing after the acute period, persists. The disease generally progresses, the swelling becomes diffuse, extends to the median line towards the pelvis, and then becomes accessible to rectal or vaginal examination. A slow suppuration develops and discharges spontaneously through the skin above the femoral region. There one or more fistulae are found through which a loose serous pus is discharged, mixed with faecal matter; these fistulae extend sometimes as far as the umbilicus and lumbar region, etc. Sometimes these abscesses open into the intestine, and their evacuation is accompanied by purulent discharge per anum.



Fig. 3*a*.—Caecum in the above case.

The general symptoms increase by the constant persistency of the suppuration and also as the result of the evolution of a pulmonary tuberculosis, usual in these patients. Exceptionally the abscess bursts into the peritoneal cavity, and death occurs within two or three days.

Clinically the hyperplastic form of tuberculosis of the caecum, which is the most interesting form, has, as a rule, an insidious onset, with loss of appetite, slow digestion, and disagreeable but vague sensations in the right iliac fossa. For months this condition remains nearly stationary, improving sometimes temporarily after a course of appropriate treatment. Then the disease declares itself. The intestine becomes clogged, there is alternating constipation and diarrhoea, sometimes attacks of colic two or three hours after meals, accompanied by local meteorism, peristaltism, and gurgling, which indicate generally the end of the attack. In other cases the signs of intestinal stenosis are less marked or even entirely absent. The attention is simply attracted by

intermittent pains in the right abdomen, by recurrent acute attacks, simulating appendicitis. As a rule the patient does not recover entirely in the interval. In certain emaciated patients mere inspection shows a swelling which makes us think immediately of the presence of a tumour; this projection may be absent when the abdominal wall is thickened, or when there exists a slight meteorism, or when the tumour is small, but by palpation it can generally be felt. The tumour is sharply outlined at its lower end, but it is more difficult to follow its edge at its superior part where it becomes continuous with the colon; it is slightly mobile and tender.

Sometimes the tumour, instead of occupying the normal position of the caecum, is higher up at the upper part of the iliac fossa, or even higher, above the iliac crest. This is a point that Obratzow has well defined, and one which has been noticed in several of my patients, the ileum ascending about 8 to 10 cm., and, when there is a marked stenosis, forming at the lower part of the iliac fossa under the raised caecum a hard sausage-shaped mass corresponding with the contracted intestine, or a coil animated by peristaltic contractions. On percussion the caecal tumour does not give the normal sound of the intestine; there is some dullness, and sometimes a sound of a special character.

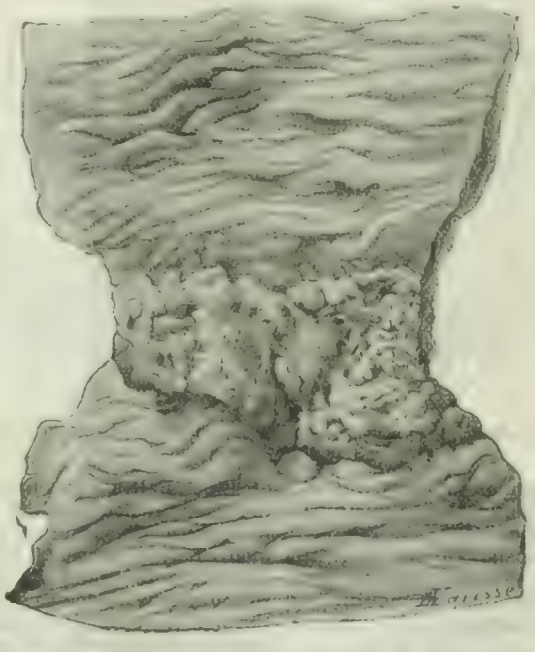


Fig. 3b.—Hyperplastic tuberculous stricture of the ascending colon (same case).

The evolution of this hyperplastic tuberculosis is a slow one, inasmuch as the lungs are often intact for a long period. Gradually the obstruction advances, the general health is impaired, and the emaciation accentuated.

Sometimes the tuberculosis extends to the peritoneum, and the disease takes some characteristic resembling the entero-peritoneal form. This is exceptional. Or a pulmonary tuberculosis is developed, from which the patient dies. The disease never retrocedes, and I also agree with Bérard and Patel "that spontaneous evolution of the hyperplastic tuberculosis of the caecum, such as we know to-day, is fatal."

The average duration of the disease, according to Cornet, is two and a half to three years. It is in reality very difficult to state a definite period, because its onset is insidious, and there exists sometimes a previous simple enteritis. What we must remember is that, in the absence of complications, it has the appearance of being a chronic disease, and that the patients only die after a long time by the progress of cachexia, by a secondary pulmonary tuberculosis, or by a diffuse tuberculosis of the intestines or of the peritoneum.

In diagnosis the entero-peritoneal form of ileo-caecal tuberculosis can be mistaken for appendicitis, but the absence of resolution of the indurated mass, the subacute attacks of inflammation, the concomitant diarrhoea, and the frequent coexistence of pulmonary tuberculosis should guide one to a correct conclusion.

When fistulae exist, there is sometimes hesitation between tuberculous lesions and a simple pyostercoral fistula following an appendicitis. The history of the disease and an examination for the tubercle bacillus will often enable us to distinguish these affections.

Actinomycosis can only be suspected when the abdominal walls are rigid and board-like. When sinuses appear and discharge a reddish-yellow puriform material, the characteristic sulphur-like granules are usually seen, and with the microscope we can verify the presence of the actinomyces.

It must also be remembered that some sinuses of bony origin can also give rise to errors.

The hyperplastic form of caecal tuberculosis may be mistaken for neoplasm. The most distinctive features in the diagnosis of this form of the disease are: (1) the evolution, in neoplasms the obstruction increases more rapidly; (2) the characters of the tumour, which is more nodular in carcinoma and does not preserve so much the normal form of the caecum as in tuberculosis. It is also evident that the presence of pulmonary disease will favour the diagnosis of caecal tuberculosis, but this pulmonary disease, fairly frequent in the entero-peritoneal form, is on the contrary rare in the hyperplastic tuberculosis, especially at its onset. In the same way the detection of tubercle bacilli in the stools, which is of positive value, is seldom seen, except in ulcerative forms.

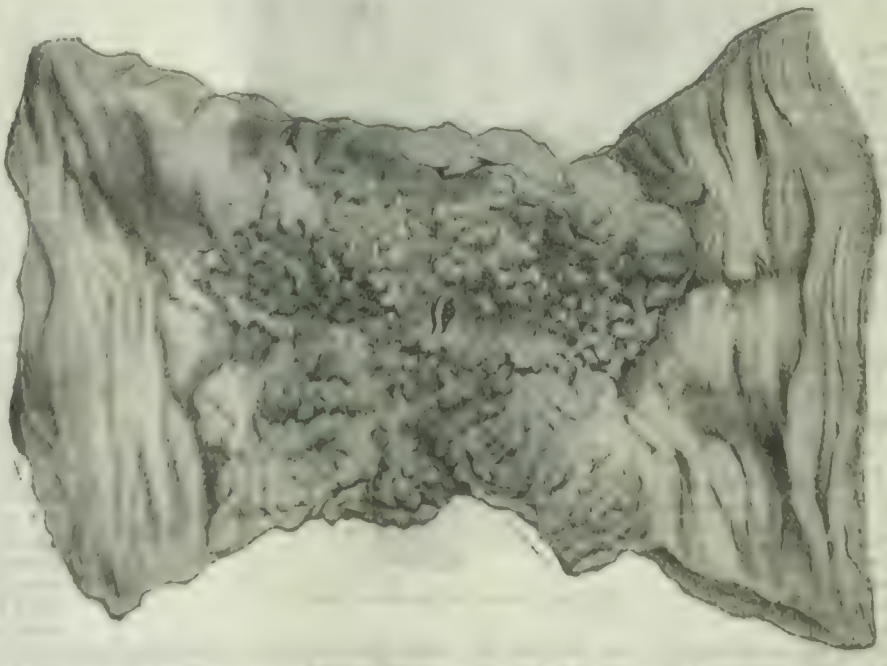


Fig. 3.—Hyperplastic tuberculosis of the transverse colon, with subserous ulceration (same case).

Tuberculin is no longer used. In one case Dieulafoy relied for diagnosis upon the positive result of serodiagnosis by the method of Arloing and Courmont. This method of investigation has only a negative value, because it does not allow us to exclude the existence of other tuberculous foci.

Practically, moreover, the diagnosis between hyperplastic tuberculosis and carcinoma has no interest, because in both cases operation is indicated. It is the same in cases of inflammatory strictures, these being, perhaps, the result of a special form of inflammatory tuberculosis already described.

The treatment of ileo-caecal tuberculosis is surgical. You must always open the abdomen.

In cases of glandular tuberculosis with subserous nodules, signs of slight localized peritonitis, without symptoms of lesions in the intestinal mucous membrane, the simple explorative coeliotomy may be followed by cure. I have had the opportunity of observing such a case, the patient remaining well after two years.

Crouzet, in his recent dissertation, has published several similar observations. Campiche has collected 19 cases, with 15.7 per 100 of permanent cure. It is evident that after such operations an appropriate general treatment is quite necessary. More often, however, in the entero-peritoneal form and in the hyperplastic tuberculosis, we have to do a more extensive operation.

I have summarized from the literature on the subject 229 operations:

9 partial excisions of the caecum, 8 cures, 1 death.
78 resections with end-to-end anastomosis, 59 cures, 19 deaths.
19 resections with end-to-side implantation, 16 cures, 3 deaths.
31 resections with side-to-side anastomosis, 26 cures, 5 deaths.
10 resections in two sittings, 7 cures, 3 deaths.
29 short-circuitings (ileo-colostomies), 25 cures, 4 deaths.
9 unilateral exclusions, 8 cures, 1 death.
22 bilateral exclusions, 20 cures, 2 deaths.
Lastly, 22 patients have undergone multiple operations, 14 cures, 8 deaths.
Total, 229 cases operated on, with 46 deaths.



Fig. 4.—Ileo-caecal tuberculosis. There is a large fatty deposit around the caecum and an ulceration in the lower part of the ileum.

When I add that many patients have succumbed more or less lately from pulmonary, intestinal, or peritoneal tuberculous complications, it seems at first that the results are not good, but in reality they are much better than these statistics *en bloc* would lead us to suppose.

Intestinal surgery has in the last few years made such strides, and its results have so much improved, that now the question is quite different. This is evident when we divide our statistics of resection into two parts: the cases operated on before 1900 and those operated on after 1900.

Before 1900, 73 cases, 22 deaths = 30 per 100.
After 1900, 58 cases, 7 deaths = 12 per 100.

Personally, I have made 7 resections for tuberculous disease with 1 death, and that was a case operated on before 1900; all the cases operated upon after 1900 have been cured.

I think that, in the future, I shall obtain better statistics than those I am now able to publish, and as the disease when left to itself is always fatal, I advise operation in all cases.

The question next arises as to which operation is to be done for the condition. In the hyperplastic form of caecal tuberculosis I advise resection.

The method of ablation in two sittings, of which the advantages are appreciated in removing tumours of the colon, and in those of the caecum accompanied by almost complete obstruction, seems unnecessary in the tuberculous disease of the caecum, where the obstruction is never extensive.

Through an incision in the iliac fossa we can reach the diseased caecum, and take it out of the abdomen, limiting with gauze the field of operation. The breaking-down of adhesions does not present great difficulty.



Fig. 5.—Hyperplastic tuberculosis of the caecum.

It is important to remove, with the caecum, the glands generally occupying the ileo-caecal angle, which are always enlarged and often caseous. The resection performed, we may reunite the ileum and the colon end to

end or end to side. I prefer to close the cut intestines and to do side-to-side anastomosis (Fig. 8). To unite the two openings I use, as in all my gastro-intestinal work, two sutures, both continuous. The inner one includes all the coats; the outer, the serous, muscular, and submucous coats. If I use the Murphy button, I think it is a good plan, before closing the ends of the cut intestines, to insert each half of the button through the open end of the bowel; after closing the cut ends, the button is grasped through the intestinal coats, the projecting cylinder causes the intestinal wall to bulge (Fig. 9); a small incision is made in the bowel with the bistoury or the Paquelin cautery over the cylinder, and the two halves of the button are then united; the purse-string suture is unnecessary, the opening of the gut having exactly the dimensions of the cylinder. In the entero-peritoneal form, or when with a hyperplastic tuberculosis there is an extensive mass of adhesions, resection is dangerous, and the indirect treatment, the exclusion of the diseased parts, is indicated. Generally unilateral exclusion is sufficient (Fig. 10); the bilateral exclusion, with closure of both ends, is specially used in cases of faecal fistula (Fig. 11); Hochenegg advises bilateral exclusion and leaves both ends of the excluded part opened and stitched

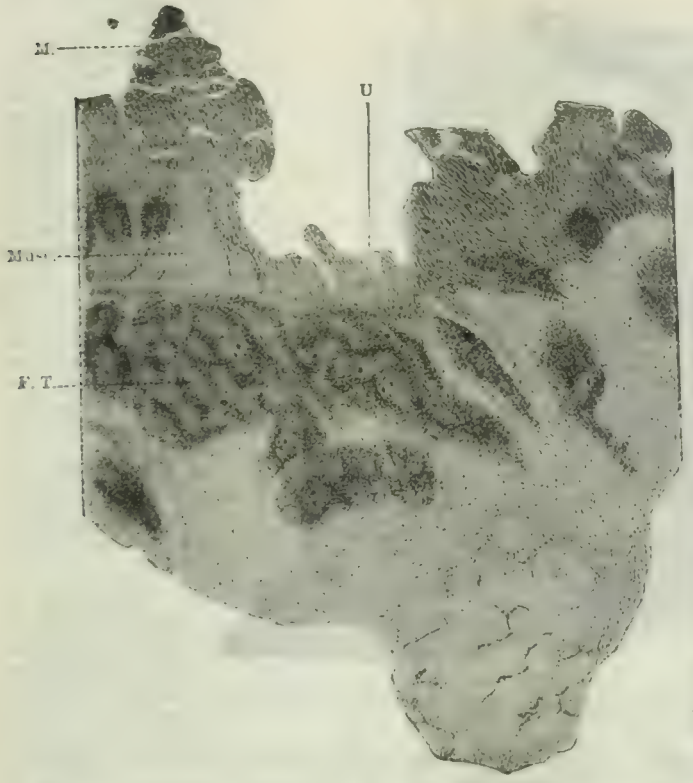


Fig. 8.—Ulcerative caecal tuberculosis. U., Ulceration; Musc., muscular coat. F. T., microscopic tubercle.

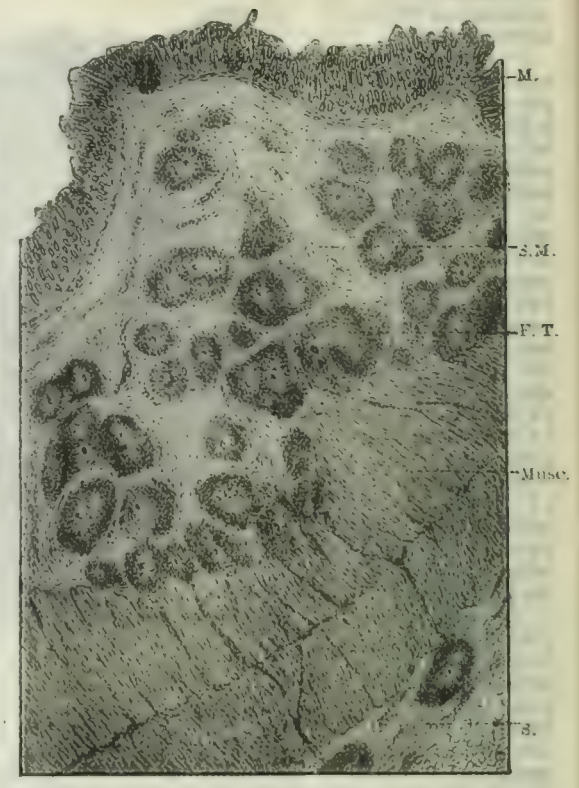
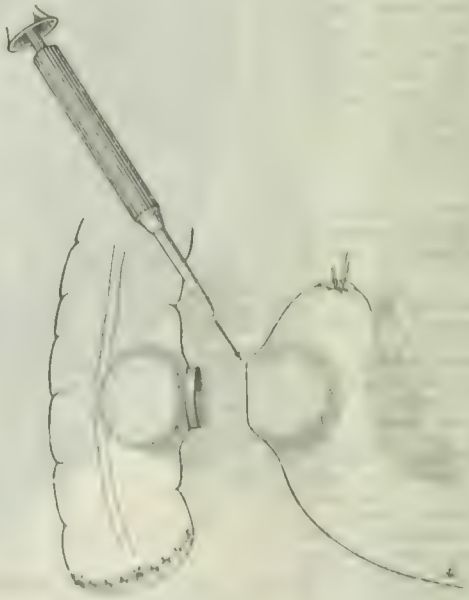


Fig. 7.—Non-ulcerative caecal tuberculosis. M., Mucous membrane; S.M., submucosa; F. T., microscopic tubercle; Musc., muscular coat; S., serous membrane.



Fig. 9



to the skin (Fig. 12); sometimes this practice has allowed a secondary extirpation. Even when secondary

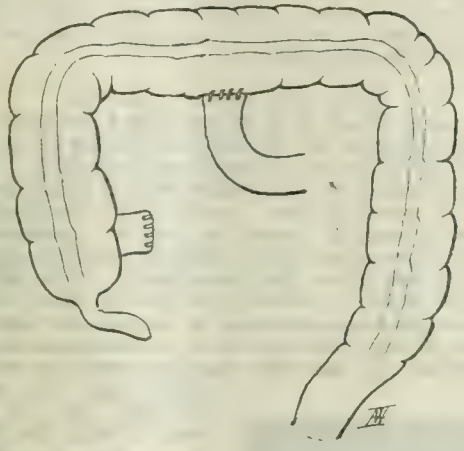


Fig. 10.—Unilateral exclusion with end-to-side anastomosis.

resection is not possible, the improvement is such that the patient has no trouble, gains weight, and, practically, is cured.

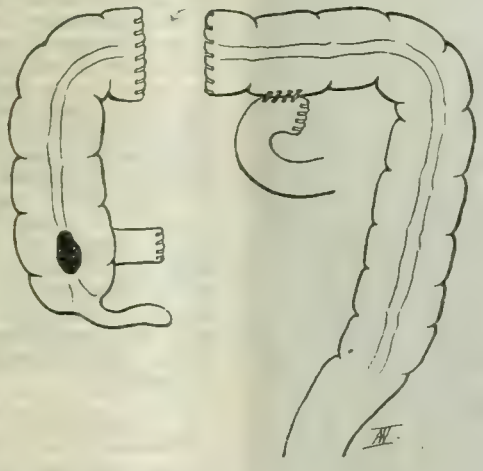


Fig. 11.—Total exclusion (previous fistula of the caecum).

This, gentlemen, is what I wished to say about the surgical forms of ileo-caecal tuberculosis, which are now



Fig. 12.—Total exclusion (Hochenegg's method).

well distinguished from other diseases of that region, and in which the various indications for operation seem to us well established.

Clinical Remarks

ON

THE TREATMENT OF SURGICAL TUBERCULOSIS.

By F. J. STEWARD, M.S., F.R.C.S.,

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The striking improvement in the results of treatment of medical forms of tuberculosis, particularly of pulmonary tuberculosis, during the last decade is thoroughly well recognized and appreciated, but it is doubtful whether it is realized by the general body of the profession that during the same period an improvement equally if not more marked has been brought about in the results of treatment of those forms of tuberculosis generally looked upon as surgical. The reason for this probably lies in the fact that in connexion with the treatment of surgical tuberculosis there has been no striking innovation such as the introduction of open-air treatment in the case of phthisis, but that the improvement is due rather to gradual perfection in the details of the application of the principles of surgical cleanliness in the first place, and to advance in pathological knowledge in the second. Both these factors have helped to diminish the number of cases in which a secondary infection by pyogenic organisms is added to the original tuberculous infection, and herein lies the key to the advance that has been brought about. Sinus formation is, however, unfortunately still often spoken of and described in the textbooks as being a stage of tuberculosis, and the bearing on the case of the added element of pyogenic infection is consequently to some extent lost sight of. The great importance of due recognition of this distinction is twofold. In the first place, the principles of treatment that apply to a case of pure tuberculous disease are very different from those suitable to a case of mixed infection, and in the second the prognosis of the case is profoundly affected in an adverse direction when once a secondary pyogenic infection has been added to a tuberculous lesion.

Tuberculosis of bone or joint is, under appropriate treatment, curable in the great majority of cases, but once sinuses have formed and the bone or joint has become infected secondarily, the case is rapidly drifting into the incurable class with the prospect of the eventual onset of lardaceous disease. It is clearly, therefore, of the highest importance to be careful in these cases lest operative measures should lead to a mixed infection, and thus contribute to the production of a condition far more serious than that for which they are undertaken. The risk of such a result is at the present day considered to be almost negligible, and with careful and thorough aseptic technique such should be the case. But that this risk is even in these days very real must be recognized by all who have had experience in the out-patient departments of large hospitals and especially of children's hospitals. I may seem, perhaps, to unduly labour this point of sinus formation; I feel, however, that it is necessary to emphasize its importance, for, great as the improvement has been in the last few years, the results might well be still better, and no doubt will be as it becomes more and more realized that in strict attention to detail lies the hope of success. Infected sinuses are, perhaps, most frequently seen in cases of spinal disease, and, unfortunately, it is in this very class of case that such a result is most to be deplored, for, once a pyogenic infection of the carious vertebrae has taken place, the chance of cure becomes very poor, owing to the impossibility of dealing radically with the seat of disease; whereas, apart from this contingency, tuberculous disease of the spine is of all forms of bone disease probably that which most readily becomes cured.

Attention to the following points in the treatment of spinal abscess and tuberculous collections generally will, I believe, help to minimize the chance of subsequent sinus formation.

Preparation of the Patient.

The patient—I refer particularly to hospital patients—is usually in bad general condition from pain and insuffi-

cient nourishment, and hence is particularly liable to pyogenic infection of a wound. It is therefore, of great importance to improve the general condition as much as possible before operation by complete rest in bed (in the open air, if possible), plenty of good food, tonics, etc.

The Operation.

The skin incision should be made in a position where the structures overlying the abscess are thick, so that their subsequent suture will leave as considerable a mass of tissue as possible between the skin and the abscess sac. For if the incision passes through skin thinned out and adherent to the abscess the sutures will almost certainly pass directly between skin and abscess cavity and thus form lines along which direct infection will be liable to occur. In the case of a psoas abscess for instance, it is preferable to make the incision above Poupart's ligament and parallel to its outer half, so passing through the abdominal muscles before the abscess is reached. An incision in this position has the further advantage of giving access to the whole cavity, thus avoiding the necessity for a second incision, and so a second possible source of infection.

When the sac of the abscess is reached it is well to draw the superficial structures to one side before opening the abscess, so that the incisions in different layers, and consequently the lines of suture, shall not lie directly in contact with one another. This prevents the several layers becoming adherent to one another; and, moreover, should the abscess refill and the scar in the sac stretch, the parts immediately over it do not become thinned and liable to give way.

The use of the fingers to explore the cavity should be strictly avoided for obvious reasons, for all the information required can be equally well obtained by means of sterile instruments.

The curetting should be carried out with as much gentleness as is consistent with the complete removal of the lining of the sac, in order to avoid haemorrhage and subsequent filling of the cavity with clot, all débris being thoroughly washed out and bleeding arrested by free douching with hot sterile saline solution. The cavity is then gently dried with pledgets of sterile gauze and some sterilized iodoform introduced. This is safer than using the ordinary iodoform emulsion, which may be neither sterile nor antiseptic. The application of strong antiseptics to the sac wall is of doubtful utility, and is at least as likely to do harm as good, owing to the destruction of tissue which is caused thereby; while, on the other hand, there cannot be many tubercle bacilli within reach of an antiseptic so applied, if the curetting and flushing have been efficient.

Closure of the wound should be complete and thorough and attained by the introduction of several rows of interrupted sutures, the sac, the muscles or other overlying tissue, and the skin all being sutured separately in lines as far as possible, not superimposed, for the reasons mentioned above. I am strongly in favour of catgut for the suture material, in addition to the advantage of being absorbed it can be sterilized with more certainty and facility than other suture materials.

A drainage tube should on no account be used, for, however carefully the subsequent dressings are carried out, there must be a great risk of infection from the skin along the track of the tube, with a resulting sinus. There is no need for drainage if the operation has been properly carried out, occlusion of the cavity being largely obtained by the dressings, and, in the case of a psoas abscess, by the intra-abdominal pressure.

Treatment after Operation.

The parts should be kept at rest for a prolonged period in order to ensure that the cavity is soundly healed before the patient is allowed to pass from observation. Failure to attach sufficient importance to this principle is the cause of many sinuses forming after the wound has apparently soundly healed in the first instance. How often one sees cases that have left the hospital apparently cured, return from the convalescent home with an incurable sinus! I make a practice of fixing the part with suitable apparatus and of keeping the patient in bed for at least three weeks after the operation wound has healed, and am sure that this period is too short rather than the reverse. Refilling of a cavity treated with the precautions above described is in my experience comparatively rare, because, in the great majority of cases, the collections so treated really come into the category of residual abscesses, the primary cause having been previously cured. When, however, refilling does take place, it may be due either to continued activity of the primary disease, or to failure of the operation to remove the whole of the disease. Such a recurrence may be treated in exactly the same manner as before, with the prospect of cure, and is certainly no indication for permanent drainage, the employment of which would probably end in disaster.



Fig. 1

Aspiration.

Treatment of a tuberculous collection by this method should be condemned as inefficient and risky. It is inefficient, because the more fluid part of the contents only can be withdrawn by this means, and the wall of the sac (which, it must be remembered, is actively tuberculous) is left untouched. The risk of aspiration lies in the fact that the needle track is liable to become the seat of tuberculous disease, the skin at the site of puncture becoming gradually destroyed by the tuberculous process, and a channel so opened up for the infection of the original cavity with pyogenic organisms, the result being an infected and intractable sinus.

Hip Disease.

With regard to the treatment of hip disease, it may be said at once that the old controversy between palliative treatment and early operation is by no means definitely settled.

Treatment by rest, with extension where necessary, abscesses being treated as already described, is less risky, is more prolonged, and gives a better final result; whereas early operation is accompanied by greater risk, but saves time at the expense of a final result that is not so good.

I have always adopted palliative treatment, and have no cause to regret it. The final result, even after complete

destruction of the joint, is far better than the average result obtained by an early excision of the joint, provided that the case is kept under treatment until final cure has taken place, so that bad deformity is prevented. If this be true, it necessarily follows that in the less severe cases—and they constitute the great majority—the final result is still better than that after excision.

The most valuable inquiry that I know of into the final results in a large number of consecutive cases treated at one institution is that carried out by Drs. Gibney, Waterman, and Reynolds, who publish an analysis of 150 cases of hip disease treated at the New York Hospital for Ruptured and Crippled over a period of twenty years.

Of these, 25 were still under treatment, and 11 had died. The remaining 114 cases were examined finally at an interval varying between five and twenty years after leaving the hospital.

Of these, 107 cases "were cured and able to follow an occupation without the slightest trouble," and the remaining 7 were cured of the disease, but were suffering from considerable deformity. Of the cured cases, in 9 only was the joint entirely fixed, the remainder being movable to a varying extent.

Shortening was absent in 21 cases, under 1 in. in 71, and over 1 in. in 36

Flexion was absent in 47 cases, under 10 degrees in 77, and in the remaining 30 cases it was under 30 in.

The treatment adopted consisted of rest and extension, abscesses being aspirated or opened and curetted. In only 4 cases was excision performed.

These results must assuredly be looked upon as a strong encouragement to follow the plan of treatment adopted. In order to obtain the best final results the great essential is undoubtedly to keep the limb at rest for a prolonged period after all signs of active disease have disappeared, at least two years when no abscess has formed, and at least three years after abscess formation being usually necessary.

The great value of prolonging the treatment is seen particularly in the surprising way in which movement finally returns even in bad cases. The following is a typical case, and serves to illustrate the point.

A child, aged 4, was under my care in November, 1902, for hip disease of two months' duration. The hip was fixed, extremely tender, and markedly flexed and adducted. The child's condition was, moreover, very poor, and the temperature rose every night to 101° or 103° F.

Extension was applied in the adducted and flexed position, but the condition remained practically unaltered for three weeks. The temperature then gradually fell to normal, the tenderness disappeared, and the position of the limb steadily improved, so that at the end of six weeks it was straight. Three weeks later the child left the hospital in good condition in a splint.

Progress was satisfactory for six months when a collection appeared on the front of the thigh. This was opened, curetted, and closed, but refilled some months later, and was again operated upon. No further trouble occurred, and the splints were discarded in May, 1906, three and a half years after the child was first treated. Although the joint was fixed at this time movement soon appeared and steadily increased, and at the present time flexion is possible up to 60 degrees.

The marked degree to which restoration of function takes place, even after severe tuberculous disease of a joint, is evidence that *per se* tuberculosis of joints does not specially tend to result in bony ankylosis. On the other hand, it is well known that new bone formation is particularly well marked after pyogenic infections of bones and joints. Again, examination of museum specimens of tuberculous disease of bones and joints in which the evidence of new bone formation and of bony ankylosis is marked, shows that in the majority of instances sinuses were present, and secondary pyogenic infection had therefore taken place.

It seems clear, therefore, that the prospect of a useful joint after tuberculous disease is very greatly diminished if sinuses have been allowed to form and the joint consequently to become infected; so that here again is a further very strong incentive, if one were needed, to make use of every possible precaution against sinus formation.

In a few rare cases tuberculous foci can be detected in the neck of the femur before the disease has involved the hip-joint, and can be successfully dealt with by early operation. The chief difficulty lies in diagnosing the condition before the joint has become involved. The usual signs of early disease of the hip-joint are present, probably owing to a simple synovitis caused by the neighbouring inflammation. In addition, some degree of thickening about the region of the femoral neck may be noticed, but beyond this there is usually little to be made out in early stages. Here *x*-ray examination is a most valuable aid in diagnosis, and might with advantage be resorted to more frequently in cases of early hip disease, for by this means the number of cases in which a diagnosis can be made in early stages promises to be considerably increased. I have recently seen two cases in which *x*-ray examination demonstrated a focus in the femoral neck, the clinical evidence being quite insufficient to justify such a diagnosis.



Fig. 2.

The Knee-joint.

Conditions in the case of the knee-joint favour resort to operative interference much earlier in the course of the disease than in the hip-joint. From the anatomical point of view the knee, unlike the hip, is easily accessible in all its parts, so that the entire disease can be eradicated. In addition, if the operation be undertaken before the destruction is great, and thoroughly carried out, the results are extremely satisfactory both as regards the final condition of the joint and the time taken up by treatment. If complete rest, and if necessary extension, does not quickly result in improvement, and especially if the disease primarily involves the synovial membrane, as it does in the great majority of cases, there is everything to be gained by the performance of erasion—that is, complete removal of all the diseased tissues—before the bones and cartilages have become affected, and the crucial ligaments have been destroyed.

The result in the majority of cases is complete cure, without shortening of the limb, and with a strong stable joint endowed with a varying degree of mobility.

The chief objection to the performance of arthrectomy for tuberculous disease of the knee is the tendency to flexion, either alone or combined with displacement of the tibia backwards. These troubles may, however, be prevented in the vast majority of cases and a satisfactory final result secured, and with this end in view the follow-

ing considerations in connexion with the operation and after-treatment are of importance.

The operation must in the first place be complete and thorough, and every precaution must be taken to avoid the possibility of any infection of the wound, for there is reason to believe that the tendency to flexion, after an apparently satisfactory arthrectomy, is due in some cases at least either to persistence of tuberculous disease in a mild form, or to a septic arthritis of a low type of virulence. That this is the case is shown by the fact that the joint as well as tending to become flexed is hotter than the sound joint, and is, moreover, painful, especially if any attempt is made to move it.

In order to ensure a thorough exposure of all the disease the joint must be widely opened and for this a very free transverse incision dividing either patella or ligamentum patellae is best. In the majority of cases an additional oblique incision is required passing from the transverse one along one side of the patella to the top of the suprapatellar pouch. The whole of the synovial membrane must be completely removed by careful dissection with knife and forceps, special care being taken to reach the top of the suprapatellar pouch and the pockets behind the condyles of the femur. It is in these pockets that disease is so liable to persist and thus lead to flexion afterwards.

The crucial ligaments must next be cleared of synovial membrane and carefully inspected, for on the condition of the posterior of these the remaining stages of the operation depend. Should the posterior crucial ligament be destroyed displacement of the tibia backwards must of necessity occur, but if it can be saved no displacement backwards can take place. If then the posterior crucial ligament is found to be destroyed it is necessary to abandon arthrectomy and to perform excision so as to obtain ankylosis, otherwise displacement of the tibia backwards is certain. Should the ligament be intact, the arthrectomy may be completed by removing any disease of cartilage or bone that may be present, suturing the capsule and patella and closing the wound.

Should disease of either bone be present the cavity left after thorough curetting may with advantage be filled with small pieces of decalcified cancellous tissue and sterilized iodoform. It is a striking fact that in some cases, even when considerable bone disease is present and has to be treated in this way, it is possible to obtain a good joint with free movement, although the prospect of such a result is necessarily diminished by the presence of bone disease. Such a case was shown by the writer at the Clinical Society three and a half years after operation.[1]

As regards after-treatment the essentials are prolonged rest and avoidance of any attempt to move the joint; for it seems certain that flexion and the persistence of a chronic arthritis (tuberculous or septic) has been largely caused in the past by discarding splints too soon under the impression that this must be done if any mobility of the joint is to be obtained, and in this manner no doubt arthrectomy of the knee for tuberculous disease got into disrepute some years ago.

The knee should be kept at rest for eighteen months after the operation in a rigid apparatus which is gradually discarded during the following six months. If there has been any sign of arthritis, such as heat or tenderness, after the wound has healed the period of rest should date from the time that such signs disappeared. In young children, again, the period may with advantage be lengthened, for in them the tendency to flexion appears to last a longer time.

During this period of rest the thigh should be massaged daily in order to maintain the nutrition of the extensor muscles as far as possible, and so prevent any tendency that the hamstrings may have to overaction when the splint is discarded.

These measures will succeed, with few exceptions, in preventing the tendency to flexion. No attempt by active measures, such as forcible moving, should be made to obtain mobility of the joint after the splint is removed, for this again is liable to set up arthritis, and so cause flexion. Nevertheless, in many of the cases movement soon begins to return, and gradually increases, as it does in the case of other joints after tuberculous disease if rest has been maintained for a sufficient period after all signs of active disease have disappeared.

The accompanying photographs, taken three years after operation for extensive tuberculous disease, will serve to illustrate the degree to which movement may gradually develop without any active interference on the part of the surgeon. If, on the other hand, forcible attempts are made to move the joint, a troublesome arthritis will almost certainly be set up, the joint becoming hot, painful, flexed, and stiffer than ever.

TUBERCULIN.

No reference has so far been made to the use of tuberculin in the treatment of surgical tuberculosis, the reason being that in the lesions hitherto spoken of the treatment must be considered to be still on trial. For some time past I have been giving tuberculin in all cases of tuberculous disease of bones and joints, and although it is not possible to go further than recording one's impression of the result, that impression is that in the majority of cases the effect has been beneficial and in a few cases markedly so, especially in several cases of severe hip disease that have improved with considerably greater rapidity than, as far as one can judge, is usually the case.

In the treatment of tuberculosis of the urinary tract, however, it is quite certain that tuberculin is of the greatest service, and this is, I think, now generally recognized. Its value is enhanced, and its effects the more easily realized, from the fact that hitherto the treatment of tuberculous disease of the bladder has been so extremely unsatisfactory and disappointing.

The following case in which all the usual methods of treatment were tried without any sign of arresting the progress of the disease, and in which under treatment with tuberculin apparently complete cure took place, illustrates very well the great value that the treatment has in some cases, even though advanced and apparently hopeless.

A woman, aged 29, was admitted into Guy's Hospital under my care on September 13th, 1905, with tuberculous disease of the right kidney and the bladder. The kidney, which was in an advanced stage of tuberculous pyonephrosis, was removed, together with 6 in. of the ureter which was also tuberculous. The patient at first did well, and the wound healed by primary union, but ten days later she began to lose ground, the bladder symptoms increasing and the temperature rising every evening to about 100° F. At the same time the wound gradually reopened and exposed a mass of pale granulation tissue, discharging a small quantity of pus.

In spite of every care and attention, the patient a month after the operation was steadily going downhill. She was at this time very thin and pale, the temperature rose every night, the urine, which contained blood and pus, was passed with great pain every half-hour, and the wound in the loin showed no sign of healing. Moreover, at this time all local treatment of the bladder had to be discontinued, as the passage of a catheter caused such intense pain. At this stage, all other treatment having completely failed, the tuberculo-opsonic index was taken on two occasions, and was found to be 0.62 and 0.84. Treatment with tuberculin was then commenced by Dr. Eyre, and was continued for five months. Improvement began immediately, and made steady although slow, progress under the treatment. The condition of the urine gradually improved, the wound slowly healed, and the pain and frequent micturition diminished. When the last injection of tuberculin was given, five months after the first, the patient was strong and well, of a good colour, and had regained her normal weight. The wound, moreover, was soundly healed, and the urine, which now contained no blood or pus, was passed without pain and at normal intervals.

REFERENCE.

[1] *Clin. Soc. Trans.*, vol. xxxvii, p. 237.

INTERNATIONAL ANTIALCOHOL CONGRESS. At the invitation of the Swedish Government, the eleventh International Antialcohol Congress is to be held at Stockholm this year, from July 28th to August 3rd. Among the subjects to be discussed are alcohol and mental disease; alcohol and race degeneration; alcohol and responsibility; alcohol and crime; alcohol and sexual questions; the place of the school in the war against alcohol; the press and alcohol; alcohol, abstinence, and sick benefit societies; alcohol from the insurance point of view; the Gothenburg system; the organization of modern Swedish temperance societies. Popular addresses will be delivered on women and the antialcohol campaign; young people and alcohol; alcohol and artistic creation; alcohol and social questions; alcohol and the upper ranks of society. All communications relative to the Congress should be addressed to Professor Dr. Ivan Wallis, Tegnergatan, 2, Stockholm.

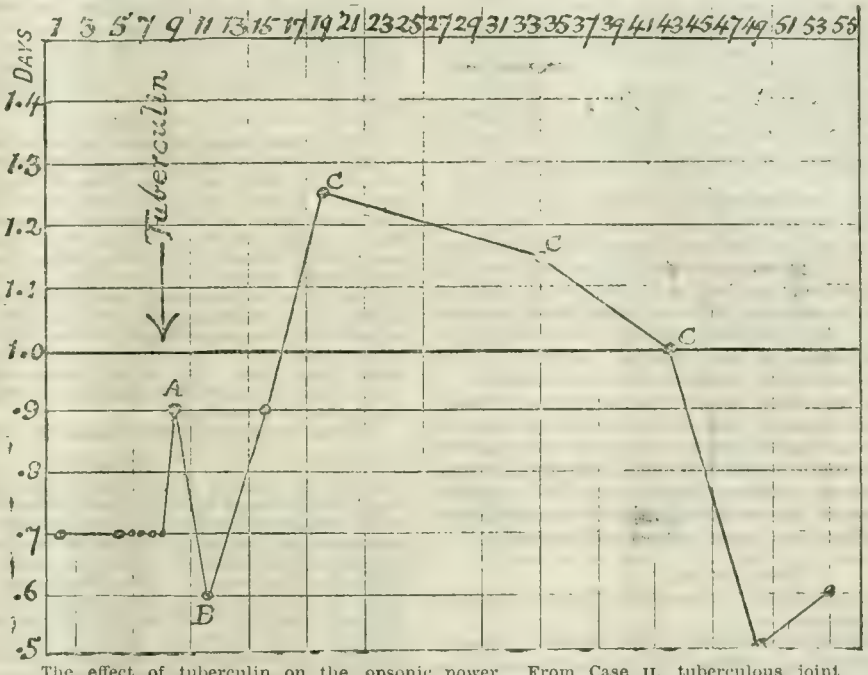
THE

VACCINE TREATMENT OF TUBERCULOSIS IN CHILDREN.

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The scientific investigations regarding tuberculin treatment, which we owe to the brilliant researches of Sir A. E. Wright and his co-workers, have placed in our hands a remedy the value of which is now assured, and which requires only the confidence of the profession to give it the recognition it so justly deserves. The results of the old empirical methods of injection have left behind a feeling of distrust which still clings persistently to the very name tuberculin. The profession ought to realize how widely different is the treatment as at present carried out. Formerly we dosed by rule of thumb, often with unfortunate results; now, thanks to the discovery of opsonins, the dose of tuberculin, its effects, and the most suitable intervals for injection can be studied with scientific precision. This discovery has, in short, brought treatment with tuberculin, and with bacterial vaccines generally, within the realm of safe therapeutics, and the clinical success that has attended the employment of that treatment has firmly established its position. Thus, though we are indebted to opsonins for the modern vaccine and tuberculin treatment, yet, be it noted, this treatment does not stand or fall with the opsonic theory, but rests on a clinical basis. At present the determination of the opsonic power of the blood remains a fairly accurate measure without which tuberculin and other vaccines cannot be intelligently or safely used; but other and less laborious methods of determining dosage may perhaps be found, and the days of the "opsonist" pass. Whether this happens or not, the therapeutic position of the vaccines (including tuberculin) is now assured; the vaccines have come to stay. The time is coming, or perhaps has come, when the practitioner who omits to suggest tuberculin in the treatment of localized tuberculosis will be open to justifiable reproach from his patient.



The effect of tuberculin on the opsonic power. From Case II, tuberculous joint disease. A = "prenegative rise"; B = "negative phase"; C = "positive phase."

The cases which form the basis of this paper were treated some at the East London Hospital for Children, Shadwell, and some at the City of London Chest Hospital, Victoria Park. My thanks are due to my senior colleagues on the staff of the former hospital for their kindness in placing beds at my disposal, and to Sir Hugh Beevor at the latter hospital for a similar courtesy. The scientific work in connexion with the treatment is carried out by myself in the laboratories of the City of London Chest Hospital, and I am indebted to my friend Dr. George W. Ross for my initiation into the details of the methods at present used in Sir A. E. Wright's laboratory.

The Opsonic Index in Tuberculin Treatment.

The opsonic index is a measure of the resistance to microbic invasion of the patient's blood serum as compared with that of a healthy individual. Thus, if the index is 0.5, the resistance is only one-half what it should be; if it is 1.2 or 1.3, it is greater than normal. The object of tuberculin treatment is to raise the opsonic power—that is, the resistance to infection—and to maintain it at the higher level for as long a period as possible. In the case of the tubercle bacillus the index does not often rise above 1.5, and any figure at or above 1.0 is satisfactory. The chart shows the effect of a tuberculin injection on the opsonic index. Immediately after injection, a short rise, which may be called "prenegative," is observed (not seen in all cases) followed immediately by a "negative phase"; this gives place later to a "positive phase," at the end of which the index again sinks.

In most of the cases treated the opsonic index was low before injection, 0.6 or 0.7 being a common figure, but in some the index was already high. There is a natural tendency to believe that if the index is already high, and especially if it fluctuates, no advantage will be derived from tuberculin treatment. In such a case it is presumed that the lesion is not strictly localized, but the tuberculous focus so open to the blood stream that the patient inoculates himself from his own lesion. Such auto-inoculation is increased with any increase in the local blood supply, and a corresponding fluctuation of the opsonic index can be shown as a result of exercise, or of manipulation of the diseased area (in tuberculous peritonitis, for example). Under such conditions it does not seem rational to use tuberculin, and at the beginning I steadfastly refused to undertake such cases. I was, however, persuaded to take over one apparently hopeless case with a high opsonic index, and the improvement was so striking that I am now inclined to give such cases a trial and to disregard the original index, except as an indication for rest during treatment. The opsonic power steadies under the injections, and, though it may rise no higher, still clinical improvement is manifest.

Dosage.

At the beginning I was persuaded to gives doses which I have since learnt were excessive. My first cases received $\frac{1}{2000}$ mg. irrespective of age, and though there was generally a rise of opsonic power accompanied by improvement in the lesions after the first injection, subsequent injections produced a prolonged negative phase, and the local conditions got worse. It was soon easy to see, even with these comparatively small doses, how much harm may be done with tuberculin in inexperienced hands. As the result of experience I have come to regard $\frac{1}{200}$ mg. as an average adult dose, and fractions of this must be given to children according to their size. On the whole, I find children stand rather larger doses in proportion to their weight than adults; I commonly give $\frac{1}{12000}$ to $\frac{1}{6000}$ mg. to a child of 1 year, $\frac{1}{4000}$ mg. at 5 years and $\frac{1}{3000}$ mg. at 10 or 12 years of age. It is always safer to begin with a

comparatively small dose. With regard to the intervals at which injections should be given, I started with the belief that it was best to wait over the period of raised index before reinoculating; I now prefer to shorten the intervals when possible, and, as long as the reaction is prompt, to reinject at intervals of about two weeks. As a result of the smaller doses and shorter intervals I am obtaining much better results in my later than in my earlier cases.

It has been stated by some that tuberculin may be given safely without opsonic determination. In children this is certainly not so; even with the help of the index the dose is often difficult to fix, and individual idiosyncrasy must be considered. It is also stated that after the dose has been fixed, the opsonic index may thenceforth be disregarded. Even this is not altogether safe advice; I have seen susceptibility increase suddenly after more than six months' treatment, so that the dose had to be reduced to one-half and then one-third of its original strength. The result of continuing the earlier doses would have been a dangerously prolonged negative phase. At the present time I begin a case with two examinations of the opsonic index, one before exercise and one after, to determine whether any auto-inoculation is taking place. I then inject and examine the index twenty-four hours, seventy-two hours, one week, and two weeks afterwards, to determine the negative and positive phases and their duration; and if I consider the result satisfactory, I afterwards examine the index once weekly, or in some cases only once between the injections.

No additional treatment has been used in the cases described, but there is good reason to suppose that other forms of treatment on general lines may often be advantageously combined with tubercle vaccination.

Some Details of Treatment.

All cases should remain quiet for a day or two after injection; later, in purely localized cases, there is advantage in activity. With lesions not strictly localized, or where the local disease is widespread, much harm may be done by injudicious exercise; all such cases must be kept strictly at rest. The necessity for this may often be indicated by fluctuation of the opsonic index; a steady curve is attained only when complete rest is enforced.

Injection with tuberculin should be postponed during acute intercurrent illness. One of my cases was unfortunately injected the day before an attack of mumps, the index fell to 0.4 and remained at that figure for a couple of weeks, though no ultimate harm resulted. On the other hand, two cases (one an adult) injected immediately after influenza suffered no harm but reacted normally.

Conclusions.

The conclusions at which I have arrived from a study of my cases are as follows:

1. That in tuberculin we have a most valuable remedy for localized tuberculosis. There is nothing dramatic in its effects, but, with proper dosage, a steady uphill progress occurs both in the local conditions and in the general health. That this improvement corresponds with an increase of opsonic power I have satisfied myself by observing the alternate improvement and relapse in superficial lesions with the rise and fall of the opsonic index of the blood.

2. That tuberculin, especially suitable for localized tuberculosis, is also of value in many cases of less localized infection, especially if nutrition be not greatly impaired. Many of my cases appeared hopeless from the outset, being either chosen by myself for the purpose of testing the limitations of tuberculin (Case I, abdominal tuberculosis, and Case III, tuberculous glands) or handed over to me because other treatment had failed (Cases II and III, abdominal tuberculosis, and Case I, psoas abscess). With marked wasting and general illness no good results should be expected; yet even under such conditions tuberculin is occasionally the turning point in a downhill course (Case III, abdominal tuberculosis) so that unless the lesions are known to be widespread it is still worthy of trial.

3. That tuberculin cannot take the place of surgical procedures but should be used in conjunction with these. Especially must caseous material, unless small in quantity, be removed, and this should be done at a time when the opsonic index is at a high level. On the other hand, many cases would escape the necessity for surgical measures if tuberculin were given sufficiently early.

4. That the secondary infection, always present with open tuberculous lesions, generally lessens with improvement in the tuberculous process. The advantage of and occasional necessity for a second vaccine is a point to which I am devoting my time at present.

5. That tuberculin treatment should only be undertaken by those who have given it special study. This must be obvious to all who remember the results of its use in the old days.

Tuberculous Dactylitis and Superficial Abscess.

These are most suitable cases for tuberculin treatment if taken early. The three cases described were among my first, and at the beginning were treated with doses which I now regard as excessive. Two of the three did well; the third had widespread lesions, and died of accidental diphtheria with empyema.

Case I.

A. G., 4 years of age, showed scars of three superficial abscesses, an open sinus ¼ in. deep over a metatarsal bone, and enlargement of one finger with sinuses on each hand. This trouble had been present for twelve months. The opsonic index before injection was 0·8, and the first injection (0·1 mg.) was given on June 26th; the index rose steadily to 1·5, and the sinuses had healed by July 3rd. After the second injection on July 17th the sinuses opened again, the dose of tuberculin having proved too large. Subsequently, after a third injection (0·1 mg.), the sinuses healed permanently.

Number of estimations of the opsonic index, 21. Injections, 3.

Case II.

W. B., 1 year of age, showed two superficial abscesses on the right foot, two enlarged fingers with sinuses on the right hand, and on the left hand one diseased finger and a superficial abscess. These lesions had been present for six months, and the sinuses grew a white staphylococcus. The opsonic index was 0·5 and 0·6 before injection. The first injection (0·001 mg.) was given on June 26th, and the index rose to 1·3; the lesions had nearly healed by July 17th. A second injection of 0·1 mg. (too large a dose) caused a depression of the opsonic power, with reopening of some of the lesions. The most appropriate dose was difficult to find in this case, but eventually all the lesions healed except one finger where there was some dead bone. The child became an out-patient, and unfortunately contracted measles, of which he died at the beginning of December.

Estimations of the opsonic index, 28. Injections, 7.

Case III.

E. H., 14 months old, showed lesions of the left foot and hand, and a large abscess over the left elbow. The opsonic index before injection was 0.5, and the first injection (0·005 mg.) was given on June 26th; the index rose to 1·2, and the lesions improved, but before reinjection a tuberculous abscess of the left buttock appeared. After the second injection the index began to fluctuate, and continued to do so to the end. The foot and hand got well, but the abscess remained. The child suffered with diarrhœa, and on September 4th had nasal diphtheria, developed an empyema, and died.

Estimations of the opsonic index, 18. Injections, 3.

Tuberculous Glands.

These cases are eminently suitable for tuberculin treatment, and the two uncomplicated cases mentioned below have done well. Case I was treated at a distance, the blood and tuberculin for injection being sent through the post; it was one of my earlier cases, and I had some difficulty in finding the best dose. The child now reacts well to inoculation, and his general health is excellent. Case II illustrates the necessity of removing caseous material when present in quantity. Case III was a wasted infant with enlarged glands, but also with generalized tubercle of which he died, though the glands got smaller before death.

Case I.

J. C., 2 years of age, was treated in conjunction with Dr. Lauder Smith, of Wells, Somerset. The child had a bad family history, there were moderately enlarged glands in both posterior triangles (one of which had softened), one enlarged submaxillary gland, and some enlarged glands in the axillæ and groins. The opsonic index before injection was 0·68 and 0·75, the first injection (0·01 mg.) was given on July 26th, resulting in a long "negative phase," during which the softened gland discharged itself. After the second injection (0·1 mg.) the abscess healed, and subsequently he has reacted excellently to doses of 0·1 mg., his opsonic index rising to 1·4 to 1·8. He has lately been brought up to town to see me, and I find the glands considerably smaller, and his general nutrition greatly improved.

Estimation of the opsonic index, 27. Injections, 10.

Case II.

N. L., 10 years of age, showed a softened gland the size of a cherry under the chin, and enlarged glands in the right posterior triangle, the largest being about the size of a cherry. The opsonic index before injection was 0.8, and the first injection ($\frac{1}{10000}$ mg.) was given on September 5th: there was tenderness of the glands a few days later, and by September 26th the largest in the posterior triangle had shrunk to one-half of its former size. The second injection was given on October 3rd, and during the "negative phase" the softened gland began to discharge its contents. This continued at intervals into December, and, since much dead material remained, it was scraped away; two weeks later the wound had completely healed. She has reacted well to injection throughout, the opsonic index rising to 1.1 to 1.6; the glands in the neck are smaller and the child in excellent health.

Estimations of the opsonic index, 12. Injections, 6.

Case III.

E. P., 16 months old, one of twins, was wasted and ill with signs in the left lung, and masses of glands on both sides of the neck, the largest being the size of a chestnut. The opsonic index before injection was 0.8, and the first injection ($\frac{1}{10000}$ mg.) was given on November 16th, but with no opsonic response. The child continued to lose weight steadily, though the glands diminished in size, and he died on January 8th.

Estimations of the opsonic index, 10. Injections, 4.

Psoas Abscess.

This case was handed over to me owing to lack of improvement under ordinary treatment. The child was pale and wasted; under tuberculin treatment she has become rosy and plump and is still gaining weight rapidly, but there remains a deep sinus which grows a pure culture of *Staphylococcus aureus*. Her opsonic index to this organism is high (2.0), but if the sinus does not heal I intend vaccinating her against the staphylococcus as an addition to tuberculin treatment.

Case.

E. B., 5 years of age, had a psoas abscess three years ago and has worn a spinal jacket ever since. In March, 1906, a second abscess was opened, and the discharge has continued since with loss of flesh and anaemia. The opsonic index before injection was 0.8 and 0.7; the first injection ($\frac{1}{20000}$ mg.) was given on July 9th, and treatment has been continued up to the present time with the result described above. She is now receiving $\frac{1}{40000}$ mg. of tuberculin every two weeks, and her index usually rises to 1.0 to 1.2.

Estimations of the opsonic index, 20. Injections, 11.

Tuberculous Joint Disease.

The slow course of these cases renders it very difficult to draw conclusions as to the value of tuberculin treatment. On general grounds one would believe that to keep the opsonic index high was to do good, but more than this it is difficult to say. The cases I have treated have disappointed me somewhat, but I do not feel that they represent all that can be done. Perhaps more attention should be paid to secondary infections in these cases; I hope to collect material for a more decisive statement on this point later on. In Case I I suspended the treatment, as the child was getting about the ward and the opsonic index fluctuating; under such conditions I felt I could do her no good. Case II improved considerably in general health, but there was not sufficient time to note any alteration in the local condition. Case III was a very acute tuberculous process, and received only three injections. He has now returned from the country with a secondary streptococcal infection, and I am recommencing tuberculin, and preparing to make a streptococcal vaccine.

Case I.

E. L., 11 years of age, showed old tuberculosis of the right elbow and recent tuberculosis of the right ankle, with an open sinus, from which cultures of *Staphylococcus aureus* and *albus* were obtained. The opsonic index before injection was 0.4 and 0.9; the first injection ($\frac{1}{25000}$ mg.) was given on June 26th, and others following it on July 20th ($\frac{1}{20000}$ mg.) and August 17th ($\frac{1}{20000}$ mg.). The patient reacted well to these injections, the index rising to 1.1 to 1.3, but the "negative phase" was longer in each case than I should now permit, that is, the dose was relatively excessive, and I do not think the local condition was noticeably improved. About the time of the third injection she was permitted to get about the ward on the other foot, and as this rendered her condition unsuitable for tuberculin treatment I did not reinoculate. On October 5th an abscess appeared on the left elbow, and I have since lost sight of the case.

Estimations of the opsonic index, 22. Injections, 3.

Case II.

A. B., 10 years of age, showed disease of the left hip-joint, but no sinuses. The opsonic index before injection was 0.6, 1.0, and 1.1: the first injection ($\frac{1}{20000}$ mg.) was given on July 9th, and subsequent inoculations on July 20th ($\frac{1}{20000}$ mg.) and September 11th ($\frac{1}{10000}$ mg.). At the beginning the opsonic index after tuberculin fluctuated more than I liked; this was due, I discovered, to overmuch movement of the joint, and after the adjustment of a long splint the opsonic power of the blood remained steady. The patient improved in general condition, and was the picture of health when sent home in October, but I do not know whether there was any change in the local condition.

Estimations of the opsonic index, 20. Injections, 3.

Case III.

A. N., 6 years of age, developed a large tuberculous abscess over the left hip, which was opened on July 6th. The opsonic index before injection was 1.1, 1.1, and 1.0 on three different occasions; the first injection ($\frac{1}{20000}$ mg.) was given on July 9th, and the second ($\frac{1}{10000}$ mg.) on July 30th. Before the second injection was given his index had fallen, and the wound, nearly healed, broke open and began to discharge. Later the discharge became offensive, and continued in considerable quantity. On October 15th the head of the femur was resected. No injections were given after September 18th, and by December 14th the condition was worse. At this time culture showed a pure growth of streptococcus, to which the opsonic index of the patient's blood was 1.5. The child soon after was sent to Bognor; since his return (January 25th) tuberculin injections have been resumed.

Estimations of the opsonic index, 26. Injections, 4.

Abdominal Tuberculosis.

This represents a mixed group in which, for the most part, the lesions are widespread and accompanied by constitutional disturbance. Conclusions as to the effects of any form of treatment in abdominal tuberculosis are open to many fallacies, and not too much reliance must be placed on a few isolated cases. Nevertheless, Case III appears to be a definite score for tuberculin, and Cases IV and V have progressed admirably. Case I I regarded as hopeless from the outset owing to the marked wasting and the early age of the child. Case II was handed over to me because the patient was doing badly on other treatment; I do not think tuberculin has done her any good. Case III also was handed over to me because the child was going downhill. The result, however, has been strikingly different from Case II, seeing that the patient has steadily gained ground ever since the beginning of the treatment. Case IV is improving rapidly, but might, of course, have shown improvement with other methods of treatment. Case V is very interesting, being an acute tuberculous infection of serous cavities (peritoneum and pleura). This rapidly cleared after the first injection, but appeared again four weeks later, tuberculin having been withheld. After the second injection it again cleared, and, the injections being continued, the child has remained well.

Case I.

J. B., aged 2 years, ill and wasted with frequent stools; showed enlargement of the abdomen with adherent coils of intestine and masses, but no fluid. The opsonic index before injection was 1.4 (after abdominal examination), and 0.6 and 0.7 on two other occasions. The first injection ($\frac{1}{10000}$ mg.) was given on July 6th, and was followed by a prolonged "negative phase," but the patient reacted to $\frac{1}{20000}$ mg. on July 20th, and to $\frac{1}{10000}$ mg. on July 30th, the index rising to 1.1 to 1.4. In August she had a bad attack of vomiting and diarrhoea, and thereafter her temperature remained high and fluctuating; she continued to waste, and died on September 5th.

Estimations of the opsonic index, 18. Injections, 4.

Case II.

R. B., 4 years of age, has had abdominal tuberculosis and enlarged glands since June, 1905, and in June, 1906, was getting markedly worse. The abdomen showed tuberculous masses but no fluid. The opsonic index before injection was 2.0 and 1.2. The first injection ($\frac{1}{20000}$ mg.) was given on July 9th, the second ($\frac{1}{10000}$ mg.) on July 30th; by August 28th her general condition had improved. Subsequently her index began to fluctuate, and in November she went to the hospital convalescent home for a long stay, but lost flesh considerably while there. Since then she has not improved; she has suffered with diarrhoea, and her stools contain a large growth of short streptococcus. Her opsonic index to this streptococcus (January 4th) was 1.5, to staphylococcus 1.8. There is perhaps a secondary infection present, but her general condition is too bad to make any further inoculation desirable.

Estimations of the opsonic index, 22. Injections, 7.

Case III.

E. J. was a child, aged 5 years, wasted, with large abdomen showing adherent coils and general resistance but no fluid. The opsonic index on July 24th was 1.3, and since it was high I did not advise treatment. The child steadily lost

weight under other treatment, and at the beginning of October I was again requested to try tuberculin as a last resort. On October 5th the index was 1.2, and I injected $\frac{1}{10\,000}$ mg. The child immediately improved in spirits and weight, but on October 13th had a severe gastro-enteric attack and nearly died. Since then she has steadily improved on fortnightly doses of $\frac{1}{10\,000}$ mg., and her weight rose from 1 st. 11 lb. on October 26th to 2 st. 7 lb. 6 oz. on December 30th. From January 11th, however, she again began to lose weight, and on February 2nd a tuberculous mastoiditis was discovered and treated by operation. Tuberculin was continued, the wound healed rapidly, and her weight, which had sunk to 2 st. 6 lb. on February 19th, had risen to 2 st. 8 lb. by February 26th, and the child continues to improve.

Estimations of the opsonic index, 14. Injections, 9.

Case IV.

A. G., aged 6 years, wasted and anaemic, showed some enlargement of glands, and peritonitis of the dry variety. The history dates from January, 1906. The opsonic index before injection was 0 8, the first injection ($\frac{1}{10\,000}$ mg.) was given on November 13th, and subsequent inoculations at intervals of about two weeks. The weight on November 11th was 1 st. 13 lb. 6 oz., steadily rising to 2 st. 5 lb. 5 oz. by February 17th, the child being now rosy and fairly plump. Treatment continues.

Opsonic indices, 9. Injections, 6.

Case V.

J. T., 9 years of age, was brought to me for wasting on August 20th. I considered the child tuberculous, but a careful examination discovered no lesion. Ten days later he returned with abdominal pain and swelling, and there was free fluid present in the abdomen. I admitted him to hospital, and on September 5th there appeared also a small effusion in the left pleural sac. The opsonic index before injection was 0.86; the first injection ($\frac{1}{10\,000}$ mg.) was given on September 5th, and by September 19th both the pleural and peritoneal effusions had disappeared, and he was gaining weight. His opsonic index remaining at about 1, I postponed the second injection till October 13th, with the result that by this date a fresh peritoneal effusion had formed, and pleural dullness was returning. After the second injection ($\frac{1}{10\,000}$ mg.) the signs again began to subside, so that by October 24th there was no longer any evidence of ascites, and the pleurisy had cleared; the remaining abdominal enlargement and resistance to palpation gradually improved till, by September 7th, the organs appeared to be quite normal. He has remained well since, and is steadily gaining weight.

Opsonic indices, 17. Injections, 8.

Phthisis.

Only one case of phthisis has been treated, and this patient was chosen not because she seemed suitable for tuberculin, but because no other treatment offered a chance of improvement. The disease was too advanced for sanatorium treatment, so tuberculin was given a trial. The patient has been seven months under treatment and has held her own; the physical signs are much as at first, but with fewer moist sounds in the lungs. Her weight at the present time is 4 st. 12 lb., and I think she is better nourished than at first, but unfortunately her weight was not taken at the outset.

Case

J. L., 12 years of age, had a history of twelve months' duration. There was finger-clubbing and involvement of the whole left lung and the apex of the right. Her index before injection was 1 1, 0 8, 1.15, 0 8 on four separate occasions. The first injection ($\frac{1}{2000}$ mg.) was given on July 20th, and $\frac{1}{2000}$ mg. at intervals since. In January her index to streptococcus was 1 1 and to staphylococcus 2 0. She was treated in the wards for the first five or six weeks, went to the convalescent home for a time, and has been treated as an out patient since October.

Opsonic indices, 16. Injections, 8.

THE INFLUENCE OF ANTITUBERCULOUS SERUM ON THE OPSONIC INDEX.

BY

W. CECIL ROSANOFF and RONALD E. FRENCH,

M.A., M.D.Oxon., F.R.C.P.

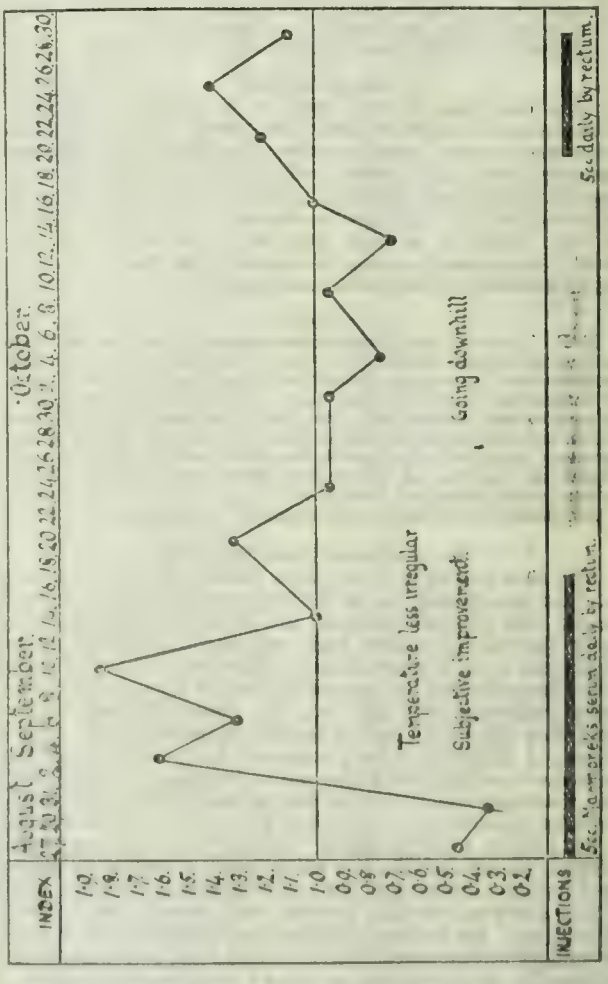
M.A., M.B., B.C.Camb.,

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Very encouraging reports have been made as to the value of Marmorek's antituberculous serum by a large number of Continental writers; indeed, in looking through the available literature, scarcely any entirely adverse verdicts are to be found. Some authors write enthusiastically in favour of the remedy. Thus Richet states that it is a true antitoxin, and temporarily inhibits the growth of the bacilli; Frey calls it undoubtedly a specific antitoxin, and Ullmann holds that it is superior to all other remedies yet devised against tuberculosis. It seems, therefore, advisable that more extended trials should be made of the serum in this country, and that records of the results obtained should be published, so that more complete statistics may be available for estimating the true value of the remedy. The following brief communication deals with one point only in the action of the serum—namely, its effect on the opsonic index of the blood, since in so chronic a disease as tuberculosis only a prolonged course of treatment can afford a basis for definite conclusions as to the value of any remedy, and such a trial was impossible in the circumstances in which we were situated.

The patients selected for this trial were all suffering from advanced tuberculosis of the lungs. This was in accordance with advice kindly given by Dr. Marmorek himself, it being difficult to estimate the effects of any



remedy in early cases, which often improve wonderfully under open air and plentiful feeding alone. One of our cases was probably hopeless from the outset; the others appeared capable of improvement, but had made little or no progress while in hospital. They were all febrile cases, such being chosen in the hope that the effect of the serum might be rendered visible on the temperature chart. In accordance with the advice of Dr. Marmorek the most recent method of administration of the serum, rectal injection, was chiefly employed; but in one case subcutaneous administration was used as a control.

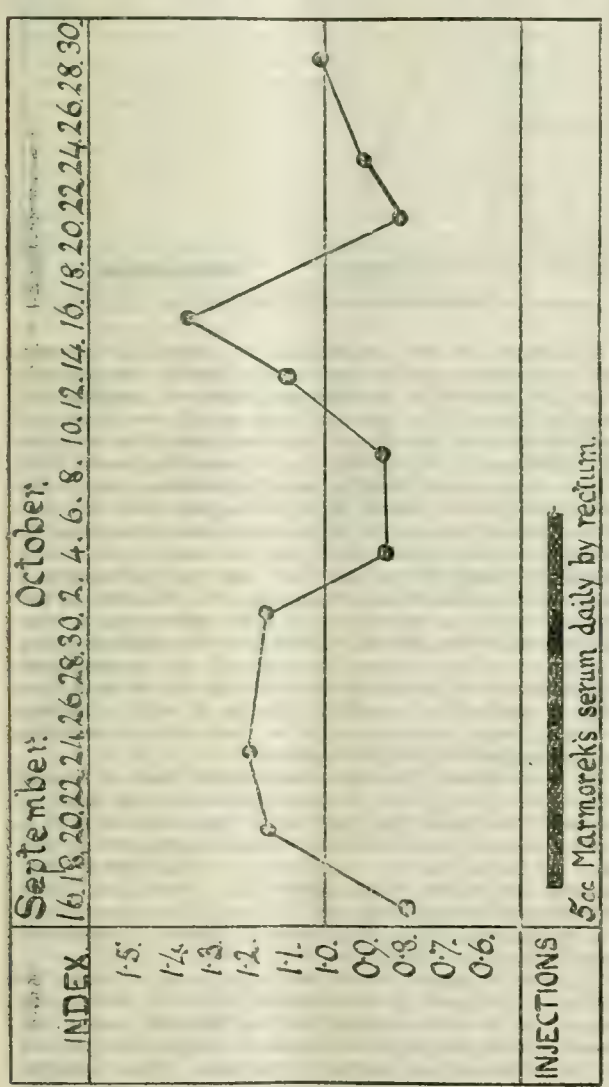
Case I.

C. B., aged 18 years. Tuberculosis of the right upper lobe and of the whole of the left lung. Very ill, vomiting at times, and suffering from abdominal pain, weakness, and emaciation. Going downhill, practically a hopeless case. Serum was given *per rectum* in daily doses of 5 c.cm. from August 27th to September 15th. The patient's temperature appeared to fall a little during the first part of the course, and he looked and felt better, the pain being at first less, but returning towards the

end. There was no change in the physical signs. The opsonic index, after the first few doses of serum, rose from 0.4 to about 1.5; it was maintained at this level so long as serum was being given, and for the week following the last dose. Shortly after discontinuing the serum the opsonic index fell, and the patient seemed to go downhill more rapidly, suffering from greater pain and from vomiting; weakness increased. A second course was begun on October 20th, and again there seemed some diminution of pain; but the improvement was not maintained, although the opsonic index was raised. The injections were discontinued on October 31st, and the disease made rapid progress. He died on November 19th, and at the autopsy there was found extensive abdominal tuberculosis in addition to the pulmonary disease.

Case II.

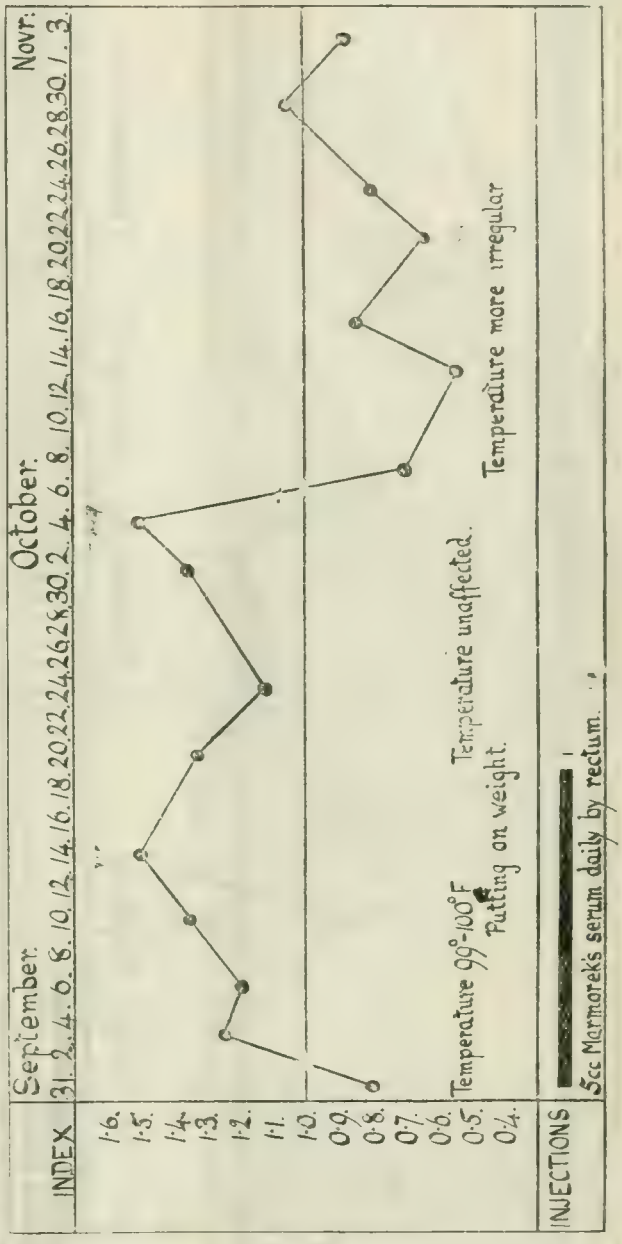
T. G. C., male, aged 37. Tuberculosis of whole of right lung and of left upper lobe. The patient's temperature was somewhat irregular, generally reaching 99° F. to 100° F. in the evening. Serum was given rectally, as in the former case, from



September 17th to October 6th. The temperature became steady about October 6th, and there was some subjective improvement, but the physical signs remained unchanged. The opsonic index was raised from 0.8 to 1.15, and maintained there for some time; it fell, however, to its original level on October 4th, just before the end of the series of injections.

Case III.

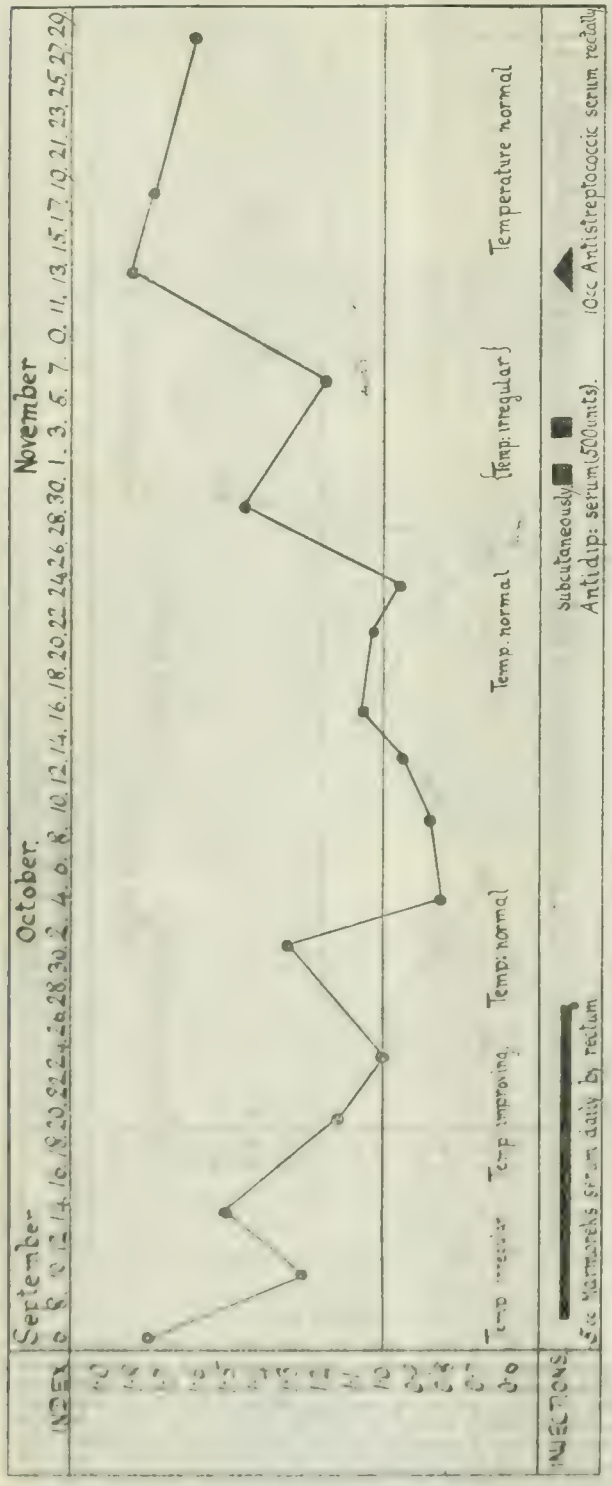
J. A., male, aged 50. Tuberculosis of whole left lung and of right upper lobe. Temperature very similar to that in the last case. Serum was administered from August 31st to September 19th. The opsonic index rose from 0.8 and continued to oscillate about 1.3 for five weeks; that is to say, for all the time during which serum was being given—namely, twenty days—and for a fortnight after the last dose had been injected. The temperature was unaffected, but seemed to become more irregular after the serum had been discontinued. The patient's appetite seemed to improve under the treatment but he suffered from rectal irritation. He refused a second course of injections, saying that he was not strong enough.



Case IV.

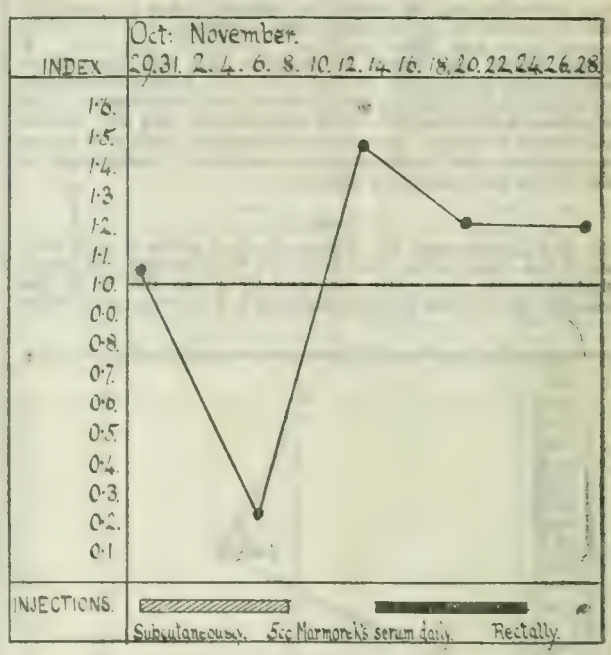
O. J. C. K., a boy, aged 10, was said to have been ill for seven years. On admission there were signs of tuberculosis of the upper and lower lobes of both lungs. His temperature was irregular, generally reaching 99° to 100° F. in the evening, and occasionally rising to 103° F. Serum was given by the rectum from September 7th to 27th. The temperature remained irregular, but gradually became more steady, and was practically normal from September 28th to October 4th. In order to see whether horse-serum, as such, had any effect on the tuberculo-opsonic index the boy received two injections of antidiphtherial serum (1 c.cm. = 500 units) on October 31st and on November 3rd. On November 13th he received per rectum 10 c.cm. of antistreptococcic serum. His temperature after October 27th remained normal, except during a few days from November 3rd to November 8th. He steadily advanced in general condition, and left the hospital considerably improved at the beginning of January, but with the physical signs unaltered. In this case the opsonic index was high (1.75) to start with; it fell somewhat while serum was being administered, and a week after the last dose fell below normal. From that point on it gradually rose. The antidiphtherial serum seemed to cause a fall followed by a considerable rise to a higher level, which was well maintained after the injection of antistreptococcic serum on November 13th.

How far these changes were due to the three doses of horse-serum it is difficult to say.



CASE V.

T. H. S., a man of 49 was admitted suffering from tuberculosis of the right upper lobe and of both lobes on the left side; he also had tuberculous laryngitis. His temperature was persistently above normal, but seldom reached 100° F. He suffered from much pain in the throat. With a view to testing the effect of serum on this symptom he received subcutaneous injections of serum from October 29th to November 6th. These were discontinued owing to a fall in the opsonic index. The pain diminished somewhat during the treatment. From November 11th to 24th rectal injections were administered. Again the pain seemed to lessen, but there was no change in the physical signs. The patient finally left the hospital unimproved. The number of estimations in this case was rather small, but subcutaneous injections of serum produced an alarming fall in the opsonic index; when the injections were stopped the index soon rose again, but was not affected either way when serum was given daily by the rectum.



Although it is well known that, in phthisical patients, the tuberculo-opsonic index undergoes considerable variation from time to time, yet, when we analyse the results obtained in the five cases which we have had under treatment, we come to the conclusion that a series of daily doses of Marmorek's antituberculous serum will, when administered rectally, usually produce a rise in the tuberculo-opsonic index; this rise begins after the first three or four doses and soon reaches a maximum, close to which the index remains for three or four weeks, while serum is being given, and does not fall till nearly a week after injections have been omitted. This rise in the opsonic index is coincident in some cases with an improvement in the general condition of the patient and a diminution of the diurnal variation of the temperature. Subcutaneous injections of the serum do not seem to have such a good effect; possibly a series of such injections given at longer intervals might be preferable as avoiding an accumulation of negative phases.

In order to see if other serums would have a similar effect, we tried giving antidiphtherial serum subcutaneously; the result was very much the same, in that it caused a rise in the tuberculo-opsonic index, but in this case an initial fall was observed; a rectal dose of antistreptococcic serum, given during this rise, did not seem to affect the index either way. It would be interesting to see in what way, if any, injections of normal horse-serum would affect the tuberculo-opsonic index.

If, as is suggested by our own experience, a rise in the index is produced by the administration of Marmorek's serum, but is not maintained for long after the serum has been omitted, the action of the serum might be explained by its containing an excess of opsonins. This, however, is scarcely to be expected, as a serum, when kept *in vitro*, gradually loses its opsonic power, so that at the end of two weeks the index is only about an eighth part of what it was when the serum was fresh. To prove that Marmorek's serum is not loaded with opsonins we tested its opsonic index in the usual way; in the slide made from normal serum we found 568 tubercle bacilli in 200 polymorphonuclear leucocytes, and in the slide made from Marmorek's serum only 72. This gives an index of 0.127. Some other explanation, therefore, must be found for the action of Marmorek's serum.

Should the conclusions which we have tentatively deduced from the small number of observations here recorded be confirmed by others, one piece of definite pathological evidence will have been furnished in support of the opinion of Continental writers founded on clinical investigations, as to the remedial value of Marmorek's serum in tuberculosis. It seems highly desirable that

further investigation should be made as to the action of this preparation.

We are much indebted to Dr. Eyre for affording us every facility for carrying out the opsonic estimations in the Bacteriological Laboratory at Guy's Hospital.

THE RELATIVE OPSONIC POWER OF THE MOTHER'S BLOOD SERUM AND MILK.

BY

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OUR attention was first called to the question of the relative opsonic power of the blood serum and the milk of the human mother and of the cow by the statement of Professor Sims Woodhead at the Pathological Section of the British Medical Association at Toronto, that he had found opsonins corresponding to complement in cow's milk, and also opsonins of a somewhat different character the result of the injection of tuberculin.

To investigate this subject we estimated the opsonic index to the tubercle bacillus and to the *Staphylococcus pyogenes aureus* of (1) the mother's blood serum, (2) the mother's milk, (3) the blood serum of healthy cows, (4) the same cow's milk, and (5) the ordinary domestic milk supplied by the dairy company.

The usual method of Wright for estimating the opsonic index was used, and we employed our own white blood corpuscles, as we found those of the cow awkward to procure and difficult to work with. The normal standard was our own "pooled" blood serums. The mother's milk was obtained by means of a breast pump, at the same time as the blood was collected. Each cow was milked, and the blood was taken in one of Wright's tubes, by making a small incision into the cow's ear.

In order to obtain the "milk serum," one of the blood-collecting tubes was filled with the milk, and both ends sealed up. It was then centrifugalized until the cream was completely separated. The tube was marked with a file and broken into two parts; the milk serum could then be used quite free from fat.

All the women were healthy and were suckling healthy children.

Mother No. 1 was a primipara, aged 22 years, and the opsonic indices were estimated on the eighteenth day after parturition.

Mother No. 2 was a multipara, aged 24 years, suckling her third child. Blood and milk were examined in the ninth week after parturition.

Mother No. 3, aged 27, was suckling her fourth child. The opsonic estimations were made in the eleventh week after parturition.

The cows were all perfectly healthy, and were certified by a veterinary surgeon as free from tuberculous disease, though no tuberculin test was used. All these cows had calved within the last five or six months. The ordinary domestic milk supply which was examined was that obtained from a city dairy company, and its source was unknown. The saline solution used for the white corpuscles and for the emulsions of the organisms contained 0.85 per cent. of sodium chloride. The results of the opsonic estimations are given in the accompanying table.

	Tuberculo-opsonic Index compared to Normal Human Serum.	Staphylococcic Tuberculo-opsonic Index compared to Normal Human Serum.
Blood Serum: Mother No. 1 ...	1.17	0.92
" " " No. 2 ..	1.10	0.98
" " " No. 3 ..	0.92	0.86
" " Cow No. 1 ..	0.45	0.72
" " " No. 2 ..	0.49	0.85
" " " No. 3 ..	0.53	0.55
Milk: Mother No. 1	0.10	0.14
" " No. 2	0.07	0.09
" " No. 3	0.06	0.10
" Cow No. 1	0.40	0.30
" " No. 2	0.12	0.09
" " No. 3	0.22	0.14
" Dairy Supply No. 1	0.22	0.02
" " " No. 2	0.19	0.09

It would appear from these figures that whilst the opsonic power of the mothers' blood serum for both the tubercle bacillus and the *Staphylococcus pyogenes aureus* is within the normal range, that of the milk from the same source is very low, averaging 0.077 for the tubercle bacillus and 0.11 for the *Staphylococcus pyogenes aureus*.

The cows' blood serum would appear to have about half the opsonic power of human blood—an average of 0.49 for the tubercle bacillus, and rather more than this, 0.71, for the *Staphylococcus aureus*. The index of the three cows' milk averaged about 0.25 for the tubercle bacillus and 0.18 for the staphylococcus, whilst the ordinary dairy supply averaged 0.20 and 0.05 for the same organisms respectively.

The presence of antitoxin has been demonstrated in the milk of animals immunized against various toxins, as, for example, the tetanus and diphtheria toxins. It has also been shown that the milk of animals immunized against the typhoid bacillus, and of mothers who have suffered from typhoid fever, contains agglutinins for that organism.

It would appear, however, that the amount of these protective substances in the milk is very much less than in the blood, being usually about in the ratio of 1 to 30, in the case of antitoxin.

With the object of comparing the opsonic power of the blood serum of the child with that of the mother's serum and milk, we estimated the opsonic index of the blood of two newly-born children for the same two organisms, and obtained the following result:

	Tuberculo-opsonic Index compared to Normal Serum.	Staphylococcic Opsonic Index compared to Normal Serum.
Mother's blood serum, No. 1 ..	1.09	0.90
Child's blood serum, No. 1 .. (estimated on 7th day after birth)	0.72	0.56
Mother's blood serum, No. 2 ...	1.16	—
Child's blood serum, No. 2 .. (estimated on 4th day after birth)	0.40	—

It will be seen that in both these cases the opsonic power of the child's blood is very much less than that of the mother, and it would be interesting to know whether any absorption of opsonins can take place from the mother's milk. The opinion of authorities seems to be divided on the question of the absorption or not of agglutinins and antitoxins in the intestinal canal of the child.

Another aspect of the question which it would be of interest to investigate is the opsonic content of the milk of mothers and of cows suffering from tuberculosis. If there are tubercle bacilli in the milk we can conceive of these uniting themselves to, or combining with, the opsonin present, and thus becoming capable of absorption by the phagocytes in the intestinal walls. If there is enough opsonin present, will the bacilli become comparatively harmless; or, on the other hand, if the opsonic power of the milk is small, would the admixture of milk rich in opsonin be a means of rendering the milk less harmful?

ANTITOXIN FROM CONVICTS.—We learn from the *Medical Record* that at a recent meeting of the Baltimore County Medical Association, Dr. H. Burton Stevenson said that antitoxins would be more effective if they were prepared in the human body, because only a few animals were susceptible to the diseases of man. He suggested that such antitoxin could readily be produced by using criminals for the production of serums. A law could be enacted making the punishment for certain crimes optional with the convict—imprisonment on the one hand, inoculation with certain disease germs on the other.

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

SUGGESTED MODIFICATION IN THE OPSONIC ESTIMATION OF TUBERCLE.

Any suggestion which will tend to shorten a process so important as opsonic estimation is to be welcomed. The process suggested below both shortens and simplifies the technique in the case of tubercle, and, in addition, has the further advantage of giving clearer definition of the protoplasmic area of the leucocytes than is obtained in the ordinary method.

I have found that for opsonic estimation the tubercle bacilli may be prepared stained beforehand. In common with ordinary dead tubercle bacilli, the stained bacilli in simple admixture with leucocytes are not taken up, but, like the ordinary bacilli in the presence of serum, the dried bacilli were roughly powdered and then placed in a fair quantity of carbol-fuchsin and stained in the cold for twenty-four hours. The mixture was then centrifugalized, the supernatant fluid siphoned off, and the sediment shaken up with distilled water. This process was repeated three or four times to wash the bacilli. The sediment of stained bacilli was then used in the same manner as the ordinary bacilli, ground with saline solution in an agate mortar, and the bacillary emulsion prepared as usual. The stained bacilli may be kept as a stock. The process is then as usual up to the staining of the films, when, instead of the carbol-fuchsin and counter-staining process, a self-fixing blood stain is used, Jenner's being, perhaps, the best. With this stain very fine films may be obtained, with only one slight disadvantage—that the fine eosin-stained granules of the polymorphonuclear leucocytes are apt to cause confusion with the fuchsin-stained bacilli. With experience, however, the difficulty is slight.

The fact that bacilli treated with such a powerful stain as carbol-fuchsin, containing roughly about 4 6 per cent. carbolic acid, can be influenced by the opsonin to the extent of allowing phagocytosis is of interest. Is the virus contained in the bodies of the dead bacilli neutralized by the staining process? If so, then there must be another non-virulent body present, which, in combination with the opsonins in the serum, forms the substance causing chemiotaxis in the leucocytes. Such questions might with advantage be studied further.

Kirriemuir, N.B. R. D. Campbell, M.B., Ch.B.Glasg.

IODINE-SPIRIT CATGUT.

Mr. J. Scott Riddell describes with approval (British Medical Journal, April 6th, p. 809) Salkindsohn's method of preparing catgut. I have been using catgut thus prepared for over a year, and can duplicate the favourable experiences of Mr. Scott Riddell.

In regard to its preparation for use in private work, the following suggestions may be of service:

It is very difficult to obtain a glass jar whose cover fits so accurately that no portion of the solution ever escapes by splashing, involving the risk of injury to the contents of an operation bag. To obviate this I have the glass jar enclosed in a closely fitting boxwood case, the cover of which screws down, and in which is placed a pad of absorbent wool.

The catgut is wound on glass reels two reels in each jar, the smaller fitting loosely within the larger but there is no reason why the number of reels should not be increased to three if an extra large supply is desired.

The reels, which have perforations near their rims for attachment of the ends of the catgut, are ⅞ in. in length, the diameter of the larger being ⅞ in. and of the smaller 1 in. A reel with a length greater than its diameter does not tend to fall on its side as does a reel whose diameter is greater than its length.

A reel is the most convenient form of carrier for ligatures, which can be unwound from a reel far more rapidly than from a frame.

The diameter of the glass reels on which catgut is supplied by instrument makers is too often ridiculously small, and is responsible for the ligature taking the form of a cork-screw and going through a series of contortions which renders the catgut as difficult to handle as a freshly-caught eel. This cork-screw appearance of the ligature is obviated by a reel with a large diameter, which has the additional advantage of carrying six to eight lengths (according to the thickness of the ligature) of Hartmann's catgut, of which I find Nos. 0 and 1 the most convenient sizes.

Plymouth. C. Hamilton Whiteford.

TUBERCULOUS SOIL CONDITIONS (?).

In the hope that some of your readers may throw light on an interesting subject I write the following:

Some years back, in endeavouring to find a cause for what, rightly or wrongly, I judged pretuberculous conditions, occurring in a class of patients living mainly on a dietary of potatoes, milk, butter, bread, and tea, I found that relative to the potash ingestion (in vegetable food) there was a deficiency in the intake of sodium chloride. Some of these patients from week's end to week's end never used one grain of salt. They never gave it to cows pigs, or horses, from year's end to year's end fed on grass, potatoes, roots grown from soil, yearly nurtured with artificial manures (in which potash salts occur largely). Knowing that while potash is essential to the growth of the vegetable cell, sodium chloride is just as essential to the growth of the animal cell, I asked myself how children reared on such cow's milk could obtain the necessary chloride.

Knowing that tuberculous disease means the soil plus the crop growing on it and raised from the tubercle bacillus or vegetable seed; knowing the impossibility of either isolating the animal organism from contact with the seed or the seed from the organism, I asked myself whether the favourability of the soil might not in one way be due to deficiency of chlorides and such excess of potash that the potash base might seize on organic acids and so lead to degeneration of the cell nucleus, thus causing a disturbance of cell growth. I had found in a large percentage of tuberculous adults a history of a dislike for salt. As the soil was built up from the food I began to look closely to it. I wrote to prominent individuals in the medical world and to the Journal with a view of getting information as to the possible resultant effect in the organism of the action of sodium chloride on the organic salts of potash in vegetable food. The result was negative.

Inquiries in the agricultural district about me proved that horse, goat, sheep, and pig never got salt, and were thus as likely to give a favourable soil for the tubercle bacillus as man. From local I made general inquiries. From the Department of Agriculture I obtained statistics of the number of live stock in Ireland, and the imports (40,000 tons almost) of salt into Ireland. From an expert of theirs I got the wonderful information that neither dairy cows giving milk or cattle being finished for the meat market required salt, that it was not necessary to put it in good hay, or to give it with roots. Stockmasters, farmers, all had heard of the good of putting rock salt on pasture, but few did it. Taking the population of Ireland, allowing for salt used in manufactures, and in saving fish (to be exported), I would have been able to get an idea of the amount available for use both for live stock and men, but inquiries sent to the Carrickfergus salt firms were not replied to, and thus I had to discontinue my work on a subject that I trust some others may follow up.—I am, etc.,

Ardrahan. C. H. Foley, M.B.

INTRAUTERINE STRANGULATION.

Mrs. C., the wife a labouring man was expecting her sixth baby early in April. The child was vigorous and the movements strong up to the beginning of February, when the movements ceased. I saw her first on March 2nd. She was very weak, and had frequent attacks of fainting, and a severe cough due to phthisis. On abdominal palpation the bones of the skull could be easily felt loose. Labour began on March 4th. When the head was born, I found the cord wound tightly round the neck six times, the folds were evenly applied and did not overlap, and they were so tight that I had difficulty in separating them to count the number of turns. The part of the cord which was round the neck was flattened, and the tissues of the neck firmly crushed against the cervical vertebrae. The cord had to be cut before the body could be born, otherwise the labour was easy. The patient is now well except for the cough.

Belfast. M. Henry, M.B., B.Ch., B.A.O., R.U.I.

MORTALITY AFTER SURGICAL OPERATIONS.

As a tribute to the value of Lord Lister's work (at whose 80th birthday we all rejoice), I would like to place on record that in our last 210 operations, and as confirming Sir Hector Cameron's remarks on antiseptic surgery, the results show a mortality of 2 per cent. The operations include abdominal sections of all kinds, intestinal obstructions, ectopic gestations, ruptured gastric ulcers, gastro-enterostomies, hernias, gall bladder and appendix cases. The mortality in the latter has greatly diminished because medical men now send their cases earlier, and, in addition, less interference is carried out than used to be, and many cases recover on this account. Gastro-enterostomies are aided by the no-loop method and the upright position. These points are matter of detail; but the main factor is Listerism, and to Lister we must ever remain indebted for the low mortality we can now obtain. As his old student, I may be excused for recording the above.

J. Crawford Renton, M.D.,
Surgeon and Lecturer on Clinical Surgery, Western Infirmary, Glasgow.

FOREIGN BODY IN APPENDIX ABSCESS.

Some four years ago I discovered in the interior of an appendix abscess, in a girl aged 18, a flat splinter of wood about 1 in. long. I was for a long time puzzled to know how the wood got there, and took refuge in the idea that she had been picking her teeth with and accidentally swallowed it. Recently, however, when carving a round of cold beef I noticed that the carving knife took off embedded in the slice of beef a small portion of one of the wooden skewers used to hold the joint together, exactly the size and shape of the fragment that I removed from the appendix abscess. This, I think, explains the origin of the latter; and the moral of the story is, when you eat cold beef be careful not to swallow fragments of the skewers.

Cardiff. William Sheen.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROYAL ALBERT HOSPITAL, DEVONPORT.

ACUTE INTESTINAL OBSTRUCTION DUE TO INTUSSUSCEPTION IN AN ADULT.

(By G. S. Thompson, M.R.C.S., L.R.C.P., Resident Medical Officer.)

The patient, a man aged 52, thin, emaciated, and of poor physique, was admitted on November 26th, 1906, for persistent vomiting and obstinate constipation. He said that he had not passed anything by the rectum for five days. When seen he was in a condition of shock; the pulse tension was very low. The abdomen, having regard to the emaciated state, was markedly, as well as generally, distended. The vomit which the patient brought up whilst in hospital was of a faeculent character. He dated his present condition from the ingestion of a pork pie, which was followed by pain in the abdomen; in addition, he stated, on his doctor's authority, that he had previously been affected with chronic bronchitis and pleurisy.

An operation was undertaken, ether being the anaesthetic administered, and in sparing quantity. When the abdomen had been opened an intussusception, involving the lower part of the ileum, was brought up and exposed to view. The upper part of the affected piece of small intestine was invaginated into the lower for a considerable distance. The intussusception was reduced without much difficulty. Apart from the hyperaemic aspect of the bowel consequent on the obstruction, this part of the gut showed nothing abnormal in its wall to account for the induction of the abnormal phenomenon. The peritoneal aspect of the intussusceptum, although somewhat rough in appearance, was not black, but merely hyperaemic, like the bowel above the site of the obstruction. The intestines were returned to the peritoneal cavity with a little difficulty and the wound closed. The patient, however, did not rally from the operation, and died the same evening. The pulse tension was very low, even more so than before the operative interference.

This case (which was under the care of Mr. F. E. Row) occurring at such an unusual age—having regard to its site and associations—seemed to be worthy of publicity.

SUNDERLAND INFIRMARY.

INTESTINAL OBSTRUCTION CAUSED BY A GALL STONE.

(By William Robinson, M.S., F.R.C.S., Honorary Surgeon.

A married woman, aged 44, was brought into the infirmary on January 8th last by Dr. Watson, of Hetton-le-Hole, suffering from intestinal obstruction of four days' duration with stercoraceous vomiting.

History.—My house-surgeon, Dr. C. S. Thompson, obtained the following history: In the second week of September, 1906, the patient was seized with violent pain in the back radiating around both sides to the navel and up into the chest. Rest in bed and warm applications relieved her, but her bowels would not act for five days and then only after big doses of castor oil and copious enemata. She was left weak by this attack and had pain shooting down from the iliac region into her right knee. At the end of October another severe attack of abdominal pain, vomiting and constipation occurred, lasting five days, which left her still weaker and with a vague foreboding of future trouble. On December 21st she began with "rotten egg-like" eructations, heartburn and constipation. Strong purgatives produced only scanty motions. On January 4th, 1907, a third attack of severe abdominal pain, vomiting, and obstinate constipation came on and lasted until the 8th, when Dr. Watson was called in and ordered her to be sent to hospital immediately.

State on Admission.—She looked ill, and had a thin face, pinched nose and anxious expression. The vomit was stercoraceous; pulse, 110; temperature, 98° F.; respirations, 20. There was abdominal distension, the umbilical and epigastric regions being most distended; liver dullness present; there was no marked tenderness; neither motion nor flatus had passed for four days and an enema had returned without result.

Operation.—The same afternoon I opened the abdomen by a 4 in. incision in the middle line below the umbilicus, under chloroform, and several coils of greatly distended and congested small intestine presented, and a considerable quantity of serous fluid had exuded into the peritoneal cavity from the gorged vessels. On inserting the hand a stone-like mass was immediately felt within a coil of the lower end of the ileum below the wound, which was brought out and nipped on each side of the mass by Dr. Thompson's fingers and with the necessary precautions incised along its free border, and a gall stone, measuring 3.8 cm. in length and 2.6 cm. in diameter, was removed. It was found afterwards by our pathologist to consist of cholesterine, and a thin coating of faecal matter, and to weigh 70 gr. when dry. The stone distended the gut, but could be moved up and down within it, and below it the bowel was of course collapsed. The incision into the bowel was closed by a continuous layer of fine silk through all the coats, reinforced by a row of Lembert sutures. Although the case was most unpromising, she made an excellent though slow recovery, partly hindered by an abscess which formed in the abdominal wall, of which the odour was like that of a *B. coli* abscess. This took three weeks to heal.

Remarks.—Although infrequent, obstruction due to a gall stone is the simplest form met with, since the stone merely plugs the gut and causes no interference with its vascular supply, yet the results are as a rule unsatisfactory because of the delay in operating. The severity of the symptoms in ileus are to some extent in proportion to the nipping of the gut and the consequent interference with its vascular supply; and this condition being absent in gall-stone cases makes the symptoms less urgent at the beginning of an attack; hence the delay. In this case there was no history of jaundice; the stone, therefore, as is usual, had ulcerated its way through from the gall bladder into the small intestine, and its course became blocked only when it reached the narrowest part of the small gut—namely, its lower end. Neither was there a history of rigors, which Charcot showed to characterize sometimes this quiet ulcerative process. The severe attacks of colic were evidently due to spasm of the intestine, as the stone was not a tight fit in the gut. The duration of the obstruction (four days), the stercoraceous character of the vomit, the greatly-dilated and congested condition of the bowel above the obstruction, and the large amount of serous exudate did not justify the hope of the happy result which fortunately took place.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH.

PATHOLOGICAL AND CLINICAL SECTION.

Birmingham, March 22nd, 1907.

THOMAS NELSON, M.D., in the Chair.

Nomination of Officers.—Officers for the ensuing session were nominated.

Transduodenal Choledochotomy for Gall Stones.—Mr. GEORGE HEATON showed a woman whom he had operated upon through the duodenum for a gall stone impacted in the lower end of the common bile duct.

She had suffered from attacks of biliary colic for several years. In November, 1906, she was operated upon for gall stones. The gall bladder was opened, and 84 faceted calculi removed from it. A much larger one was found firmly impacted in the cystic duct, and removed at the same time by an incision through the duct wall. She made a slow recovery, and left the hospital in December. When the sinus closed she began again to have attacks of colic, more severe than before, and was readmitted into hospital in February last. The attacks became more frequent and severe, and were accompanied by slight jaundice. A second abdominal section was performed on March 2nd. A calculus was felt in the portion of the duct behind the duodenum, in the ampulla of Vater. As it was impossible to press it backwards along the duct or to expose the duct behind the duodenum, an incision ¾ inch long was made in the vertical axis of the second portion of the duodenum, the papilla of the duct was exposed from within the intestine, and the opening was enlarged by an incision. The stone was easily extracted, and the wound in the duodenum sutured. She made an excellent recovery.

The calculus extracted was shown. Mr. Heaton also showed the gall bladder and gall stones removed from an elderly woman that morning, and expressed the opinion that in all suitable cases the gall bladder should be removed when it has evidently been functionless for some years owing to the pressure of calculi within it.

Functional Spasm.—Dr. SAWYER showed a case of functional spasm in a woman, aged 29 years. The duration of the illness was about ten weeks. The onset was sudden, after a period of general mental depression, with twitchings in the muscles at the back of the neck. The shoulders and arms were next affected, so that she was constantly raising her shoulders and adducting the arms. The trunk muscles became involved later, and especially the recti abdominis, so that there was a constant bending forward movement. The twitchings increased with the least excitement, and were so constantly present that the patient could not write, and was only able to feed herself with great difficulty. There were no signs of any organic nerve disease. The eyes were normal, except for some astigmatism; the knee-jerks were brisk, and there was no ankle clonus. Tactile sensation appeared normal. She had greatly improved by rest in bed, and by the exhibition of general tonics.

Fatal Case of Lupus Erythematosus.—Dr. THOMPSON (for Dr. [illegible]) read notes of a fatal case of lupus erythematosus. The patient, a woman aged 38, was admitted to the infirmary on November 29th, 1906. Her history was that she had been ill for about four months.

The first thing noticed by the patient were on the tip of the nose and tops of the cheeks, where the skin became [illegible]. The [illegible] nodes, and of a dark red colour. About the same time she began to suffer from pains in the head and back, [illegible] by pain in one of the face. In the morning and some [illegible] vomiting. These symptoms varied in severity, and the patient was treated for dyspepsia.

On admission the face was pale, with a diffuse swelling at the [illegible] of the nose and adjacent parts. On the left cheek over the malar region there was a reddened patch about the size of a [illegible], the surface of which was dry and scaly. The lobes of the eyelids very scanty. The finger tips and backs of the toes were red and desquamating, and there was slight oedema of the feet.

Course of Illness.—A week later, small blebs containing pus appeared on the ends of one finger and one toe near the nails. Two weeks after this the eruption on the left cheek became more marked, a similar condition appeared on the right cheek and on the eyelids, and the upper lip became swollen and covered with hæmorrhagic blebs, which dried up and formed thick crusts. This continued for about three weeks, the face getting more swollen and inflamed. The hair was very dry and came out rapidly, but there was no visible inflammation of the scalp. Small rings of white follicular ulcers appeared on the roof of the mouth; the vulva and feet became oedematous, and the lymphatic glands generally became enlarged, hard, and tender. The temperature during this period averaged about 101° F., and then came down gradually in two days to normal. At this time—that is, January 3rd, 1907, five weeks after admission, the patient had a general convulsion, becoming unconscious for two or three minutes, and on regaining consciousness vomited. Marked improvement of all the symptoms followed, and lasted for a week. Then vomiting began again, the face swelled, herpes reappeared, and after a few days twitchings and convulsions were almost daily occurrences. The symptoms were very severe about the middle of January, that is, seven weeks after admission, and about a week before death. The appearances were then as follows: The face was very swollen and oedematous. Over the whole of the cheeks and forehead, but missing the upper and lower eyelids, the skin was of a dull red colour, and distinctly thickened. The congestion was most marked in the central region of the cheeks, and less marked at the margins of the patches. Both ears were greatly swollen and red, and their outer surfaces were covered with thick white sloughs. There was a discharge from the subauditory meatus. The nose was reddened, and slightly rough over its bridge, and the upper lip was greatly swollen and covered with thick dry scabs. Both eyebrows were affected symmetrically, the hair being thin and the skin rough and of a red colour. The hair of the scalp was extremely thin, but there was no eruption in this region. The fingers of both hands showed dark red scaly areas, chiefly on the palmar surface of their tips, but one or two red areas were visible on the dorsum of one or two of the fingers. The toes were similar, the most marked changes being on the big toes. No erythematous areas could be seen anywhere on the trunk and limbs, except at the point of the left elbow, where two very small red and slightly scaly spots were visible. The glands of the neck were much enlarged and prominent. In the gluteal region two or three subcutaneous nodules were found. They caused the patient considerable pain. During the last week pneumonia developed, the patient became delirious, and died on January 23rd, eight weeks after admission. Her temperature was about normal until the herpetic condition of the face appeared, when it rose to about 101°, until the period of slight improvement, after which it rose again to about 102° each night, falling to nearly normal in the morning. The urine was always of low specific gravity, 1007–1015; in spite of this the quantity was slightly below the average. A cloud of albumen appeared with the first rise of temperature and persisted.

On *post-mortem* examination the lymphatic glands were found to be generally enlarged; some contained purulent material in the centre. The nodules over the sacrum were enlarged lymphatic glands. Lungs: Extensive phenmonic consolidation on both sides. No sign of tuberculosis. Kidneys: Very pale and mottled. Microscopically showed marked cloudy swelling and small haemorrhage. Dr. Miller reported on the microscopic appearances in the organs of the case as follows: Skin showed hyperkeratosis with thickening of the stratum corneum, which was apparently coming away in large flakes; marked thinning of the stratum Malpighii. There was disappearance of the papillae of the cutis vera, which showed a general fibrous overgrowth: the fibrous tissue, which was well formed, passed for some distance into the subjacent fatty tissue. There were a few small aggregations of round cells. The fibrous layer immediately under the cuticle showed an absence of elastic fibres and appeared hyaline. Several areas of cuticle, with keratin centres, could be seen. Glands showed a replacement of the lymphoid tissue by large epithelioid cells which in places were multinucleated. There was in places haemorrhage into the gland; in other places there were large necrotic or caseous areas. Preparations stained with ziehl-neelsen failed to show any tubercle bacilli. The subcutaneous nodules showed a similar structure to the glands. The spleen showed some fibrous thickening of the trabeculae, the capsule, and the Malpighian bodies. The kidneys showed early interstitial change, spreading in wedge-shaped areas from the capsule. The lungs showed a condition of diffuse consolidation with much fibrin and many leucocytes in the alveoli. There was no evidence of tubercle in these organs.

Death under Anaesthetic.—Mr. L. KERSHAW THOMAS showed a heart from a fatal anaesthetic case. The patient was admitted into hospital for removal of a very large ovarian cyst. She was a thin, somewhat feeble woman of 39, and was mentally deficient, having been in charge of an attendant off and on for some years. She was prepared for operation in the usual manner. Before proceeding to anaesthetize, the chest was examined. The heart sounds were rather weak, there were no murmurs, and no obvious enlargement. The respiratory sounds were normal. A mixture of chloroform one part, ether two parts, was then given in a Clover's inhaler without the bag. About two minutes later the patient began to struggle, but not suffi-

ciently as to render restraint necessary. The inhaler indicator at this time was at the two mark. Suddenly the patient's head, which she had raised during her struggling, fell back, the breathing became shallow, and the pulse disappeared. The pupils were moderately contracted. The usual remedies were applied, but without success. At the *post-mortem* examination the cyst above referred to, a multilocular of the left ovary, was found to occupy nearly the whole abdominal cavity, the intestines being pressed upwards beneath the diaphragm. There was free peritoneal fluid, and some old adhesions between the liver and spleen and the diaphragm. The lungs were healthy, but the pleurae almost universally adherent. The heart, which was shown, was generally small. The cavities contained a very small amount of fluid blood. The walls were thin, and the muscular tissue pale, friable and flabby. The right auricle was markedly dilated, and its wall so thin that it was almost possible to see through it. The valves were competent and healthy.

Specimens.

Dr. Wilfrid Allport showed two specimens of tubercle of the vitreous. Dr. Kaufmann showed specimens from a case of Banti's disease.

Perth Branch.—At a clinical meeting held in the Perth Infirmary in February, 1907, Lieutenant-Colonel Moffet, R.A.M.C.(ret.) in the chair, Dr. R. Stirling read a paper dealing with the pathology and treatment of varicose veins, and showed some cases recently operated upon for the relief of varicose veins of the leg. The operation advocated was the simple one of excising under local anaesthesia the upper portion of the long saphena vein, along with any branches entering it in the region of the saphenous opening. He stated that this was simply following the reasoning and example of Trendelenburg, but urged that in his opinion an early performance of such an operation would prevent the development of varicose veins in many instances, and cure others without removal of the dilated veins usually met with below the knee. He reserved excision of the varicose veins in the leg only for advanced cases, and was able to show patients in whom extensive excision of veins in the right leg had failed to give relief, while in the left leg and in the same patient, excision of veins plus removal of the upper part of the long saphena was followed by absence of pain and disappearance of oedema. Illustrations of varicose veins disappearing after excision of the upper part of the long saphena were also exhibited. Dr. Stirling also showed a case of musculo-spiral paralysis following fracture of the humerus. After finding massage and electrical treatment of no avail, he operated and relieved the nerve from adhesions. This was done on October 6th, 1906, and only in the beginning of February, 1907, some movement returned. The patient can extend, and to a slight extent supinate, the arm. In the discussion which followed, Dr. Haig asked if the patient had been advised to help by will power, which he had found useful.—Dr. Trotter showed a *post-mortem* specimen of a brain and skull-cap removed from a patient who had fallen down a stair, and was admitted to the infirmary late on a Saturday night. On admission the patient was unconscious, the breathing stertorous, the right side paralysed, the right pupil dilated and insensitive to light, the left leg twitching. Chloroform was administered, and an incision made over the left Rolandic area, and on trephining a huge blood clot (extradural) was found and cleared away. As bleeding continued very freely, the opening was packed with gauze, and the patient sent back to bed. He died on the Monday morning following. At the *post-mortem* examination the fracture of the skull was found to run forward, involving the anterior meningeal artery, and not the posterior as might have been expected. There was a large haemorrhage and laceration of frontal and temporal lobes on the left side. Some discussion followed.—Dr. Taylor read a paper on Pernicious Anaemia, and showed a case where the blood count was 2,076,965, kindly examined by Drs. Alcock and Mitchell, and in which microscopically all the signs of the disease, such as megaloblasts, erythroblasts, microcytes, etc., were to be found. The patient had been previously under treatment for ten weeks, and was able to resume his ordinary duties all summer, but relapsed again at the beginning of the year after a bout of intemperance. Dr. Stewart read a paper on Epidemic Cerebro-spinal Meningitis, and briefly traced its history on the Continent and America, and how it had only recently come to this country. He explained the etiology, symptoms, treatment, etc., and later informed the meeting what measures had been taken in this city to cope with it if it should occur. On the motion of Dr. Taylor a hearty vote of thanks was accorded Lieutenant-Colonel Moffet for taking the chair.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. Warrington Haward, F.R.C.S., President, in the Chair.

Tuesday, April 9th, 1907.

The Pre-suppurative Stage of Amoebic Hepatitis.

Professor Leonard Rogers in a paper on amoebic hepatitis described and tabulated fifteen cases of fever, nearly all accompanied by acute hepatitis and a leucocytosis of a peculiar type, which he looked on as the early stages of hepatitis set up by an active or a latent amoebic dysentery, that commonly went on to the stage of suppuration, and then constituted amoebic abscess of the liver. In nearly all these cases large doses of ipecacuanha were administered, in spite of the absence of all symptoms of dysentery in nearly all of them, with a view to curing the latent disease in the large bowel (according to his view, the cause of the hepatitis present), the result having been a rapid cure of the hepatitis, and of the dysentery when present, and the early cessation of the fever, and probably preventing the fatal suppurative stage of the disease. In a few of the cases there were no actual symptoms even of hepatitis, the cause of the fever being entirely obscure, until an examination of the blood revealed the leucocytosis, and led to the adoption of the ipecacuanha treatment, with the result that the fever rapidly ceased as in the other cases. In one-third of the cases the hepatitis was so marked that exploratory operation was carried out for liver abscess with negative results, yet after this they cleared up rapidly under the ipecacuanha treatment, which the author urged should always be resorted to before operative measures were undertaken in every case in which any doubt remained as to whether liver abscess had already formed or not.

Sir Patrick Manson said there were many kinds of dysentery—amoebic, bacillary, etc.—all of which demanded different kinds of treatment. Ipecacuanha, he held, was a specific for amoebic dysentery, but of no value in the bacillary variety. This drug had fallen into disrepute because it had not been given in sufficient quantity or over long enough periods. His own practice was to give it in large doses for a week and in smaller doses for at least a month longer, and on these lines he had met with much success in the amoebic form. In amoebic hepatitis by its accidental use he had had some success. In future he would make use of it in hepatitis and threatened liver abscess.

Sir Lauder Brunton compared the use of ipecacuanha with the specific use of quinine in malaria, and suggested that the ipecacuanha killed the amoeba. The leucocytosis he was inclined to ascribe to the irritation of Peyer's patches by the dysenteric process.

Dr. Anderson had found that the nausea and vomiting caused by ipecacuanha were much diminished by giving chloral with it, which he had found better than opium.

Mr. James Cantlie thought it necessary to remember that the temperature often fell and all the symptoms disappeared in cases of hepatitis after merely putting a needle into the liver.

Professor Rogers replied.

A Seven-day Fever simulating Dengue.

Professor Rogers also contributed a paper, in which he described a short fever, which was the commonest met with in Europeans in Calcutta, although hitherto returned as either malaria or "simple continued fever." This had been differentiated by the author in the course of a study of 1,350 consecutive fever cases by means of the blood changes and clinical notes during the last two years' work in Calcutta. It began suddenly with severe headache, pains in the back and limbs, and pyrexia of a peculiar

"saddle-back" type of from six to seven or slightly more days in the great majority of the cases, but sometimes presenting a continued type which was often mistaken for typhoid for a time, especially as it was accompanied by a very slow pulse relatively to the temperature. The slow pulse was in marked contrast to the rapid one of malaria during high fever. This seven-day fever had a very definite seasonal incidence during the later hot weather and early monsoon months in Calcutta, and declined just when the principal malarial rise of the year took place, at the end of the rainy season, the two fevers together constituting one curve through both seasons, and hence had been looked on as malarial. The seasonal prevalence differed totally from that of influenza, which resembled it in some respects. It had also been regarded as dengue, although it was wanting in some of the chief characteristics of that disease, while its temperature curve differed widely from that met with in dengue. The fever now described was probably a new one hitherto confused with malaria and dengue.

Dr. Anderson said the fever described reminded him very much of a fever common in the North-West Provinces called the "ardent fever." Quinine was of little or no use, but preparations of bromine were seemingly helpful with cold sponging.

Sir Patrick Manson believed that there were, in addition to malaria, a crowd of undifferentiated fevers of which he believed this was one. He thought it quite distinct from dengue. He believed the Indian fevers to be protozoal and not bacillary.

Professor Rogers replied.

OBSTETRICAL SOCIETY OF LONDON.

Dr. Herbert R. Spencer, President, in the Chair.

Wednesday, April 3rd, 1907.

Removal of the Cervix in Hysterectomy.

Mr. J. D. Malcolm, in a paper on the advisability of removing the cervix in performing hysterectomy, pointed out that after a partial hysterectomy the cervix uteri, with its blood supply to some extent cut off, and with its narrow central tube lined by mucous membrane which might be chronically inflamed, offered a favourable nidus for the development of pathogenic micro-organisms in the divided uterine tissue, whilst the provision for drainage of discharges was imperfect. He therefore argued that the cervix should be removed. The subsequent convalescence was also smoother after this procedure. Before operating the patient's health should be made as good as possible, and no woman should be advised to retain a uterine tumour of any considerable size, or one which had become definitely prejudicial to her health.

Mr. Alban Doran was persuaded that the so-called "subtotal" operation ought not to be abandoned. The cervix was an important part of the pelvic floor, which should not be treated as a negligible quantity by the operator, and in many conditions it could be safely spared. There was reason to believe that, in order to ensure the full benefits which should follow the saving of more or less of the ovaries in hysterectomy, it was advisable to leave a portion of the endometrium as well; in other words, not only the cervix, but a little more of the uterus, should be spared. He had already brought forward evidence, based upon long after histories of 60 subtotal hysterectomies, showing the value of this practice and further experience had not induced him to alter his views. Long after-histories were of great importance, for a woman convalescent from hysterectomy for fibroid was never so sure of permanent benefit as was a patient convalescent from ovariotomy for a non-malignant tumour.

Dr. Amand Routh was not convinced by the considerations advanced by the author. He did not believe that the blood supply of the cervix after subtotal hysterectomy was "to some extent cut off," nor that the cervix tended to degenerate, and he thought the phlegmasia and other symptoms in the author's cases were secondary to infection of the pelvic cellular tissue. In the absence of real proof that leaving the cervix was likely to cause mischief, the disadvantages of its removal should be carefully considered. The mortality of panhysterectomy was distinctly greater. Taking over 1,000 cases, collected by Pozzi, of each of these two forms of hysterectomy, he found the percentage mortality of panhysterectomy was 10.4, whilst the mortality of the subtotal operation was only 7.4. There was also the question of internal secretion, and it was quite certain that such a glandular structure as the cervix must have one. If organs were to be removed for possible dangers in the future, where was the line to be drawn?

Dr. Eden said that he had performed a large number of hysterectomies for fibromyoma by the supravaginal method and a small number by the total method, and he was equally satisfied with both. He was not at all convinced by Mr. Malcolm's arguments, either theoretical or clinical, that the total operation possessed any real advantages over the other. He should continue to prefer the subtotal operation, except in special circumstances.

The President said he had performed total abdominal hysterectomy for fibroids, to the entire exclusion of the partial operation, for the past six years. He had seen no evidence brought forward which led him to modify his opinion as to the superiority of the total operation when performed by Doyen's method. It was superior in that it had a lower mortality (as was shown in Sänger and Herff's extensive statistics);[1] it provided for drainage; it gave security against injury to the bladder and ureters, and against unrecognized haemorrhage; it removed the cervix, which might become infected, slough, contain unrecognized malignant disease, or develop malignant disease subsequently. It was also less likely to be followed by intestinal obstruction if the peritoneum were closed by a purse-string suture. He had never seen prolapse nor trouble with the bladder caused by the operation. The supposed advantage of the internal secretion of the cervix and the slight shortening of the vagina by the removal of the cervix could not be seriously set off against the above-mentioned advantages. Their importance was disproved by the excellent results of vaginal hysterectomy.

Mr. Malcolm replied.

LIVERPOOL MEDICAL INSTITUTION.

Thursday, March 21st, 1907.

Frank T. Paul, F.R.C.S., President, in the Chair.

Vaccine Serums and Infections.

Dr. Nathan Raw read a paper on the treatment of the acute pathogenic infections with vaccines and serums. Antidiphtheritic serum, if given early in pure cases of diphtheria, was of great value, but in mixed infection it did not seem to exert the same beneficial influence. He had treated 212 cases of erysipelas, puerperal fever, and other septic infections with antistreptococcic serum, and was convinced that in streptococcal infections the serum, if given early, had a marked curative effect. The use of a polyvalent serum had immensely improved the results of treatment. After treating a large number of cases of tuberculosis he had come to the conclusion that tuberculin R. had not much curative value in phthisis pulmonalis, even in the early stages of the disease, but in the so-called surgical forms of tuberculosis, such as lupus, tuberculous glands, joints, and peritonitis, tuberculin R. had a most marked curative effect. He was not favourably impressed with the value of antitetanic serum.

Dr. W. B. Warrington considered antistreptococcic serum to be of little utility in medicine, and pointed out that it was the recognition of this that led Sir A. E. Wright to introduce the method of vaccines. He alluded to the value of endoneural injection of the antitoxin in tetanus.

Dr. Ernest E. Glynn, commenting upon the very favourable results obtained by Dr. Raw with antistreptococcic serum in puerperal septicaemia, asked what evidence there was that the cases were true septicaemia and also due to streptococci, as cultures were not made in the majority of instances. Might not many have been cases of intoxication, and recovery been the result of local treatment of the uterus? Dr. Raw's success in treating lupus with tuberculin, uncontrolled by the opsonic index and unassisted by light treatment, was not in accord with the experience of many, for lupus was very refractory. He was also surprised that Dr. Raw had cured three cases of tuberculous meningitis with tuberculin, especially as the opsonic index had not been taken.

[1] *Encyklopädie der Geb. und Gyn.*, 1902, Part 2, p. 91.

Dr. A. S. Parkinson said that the earlier tuberculin was given in phthisis the greater probability there was of a good result. The failure in advanced cases was sometimes due to secondary infection of the lungs by pyogenic organisms; the immunity of such patients against secondary infections should be raised as well as the treatment by tuberculin injections carried out.

Exhibition of Clinical Cases.

Among the cases shown were the following:—The President: (1) A boy, aged 11 years, who had been scalded when 2 years old on the side of the chest. Subsequently the mother noticed a swelling in the region of the left pectoral muscle. This had gradually grown until it was now the size of a hen's egg. It had been examined and found to consist entirely of muscle. (2) Case of immense hypertrophy of the gums of both jaws—shown previously before the society, and now cured. The gums were removed by four operations two years ago without extracting the teeth, and recurrence had taken place. A second series of four operations was undertaken with removal of the entire alveolar processes, resulting in complete cure. Models of the original condition were shown by Mr. Phillips, Dental Surgeon to the Royal Infirmary.

Medical Society of London.—At a clinical meeting on April 8th, Dr. William Pasteur in the chair, Mr. H. Betham Robinson showed a case of *Multiple sarcomatous tumours* in a girl aged 14. The chief tumour involved the lower half of the left femur; on the inner side of the head of the left tibia there was some swelling and tenderness; there was a hard flattened gland below Poupart's ligament, some small glands along the iliac vessels, and a hard gland in the right axilla, with a small rounded nodule about the middle of the axillary border of the scapula. The diagnosis was general sarcomatosis, the outlying nodules forbidding any operative procedure. Dr. C. W. Chapman showed two cases of *Aneurysm of the arch of the aorta*, in each of which the specific history depended solely upon the pre-existence of a small itching venereal sore which attracted but little notice, and consequently escaped adequate treatment. Dr. F. Parkes Weber showed a case of chronic *Myelocytic leukaemia*; the spleen occupied apparently about two-thirds of the whole abdomen. For one month the patient was treated by exposure to the Roentgen rays, and, though the white cell count fell from 480,000 to 100,000 per cubic millimetre, the *x* rays were discontinued because of the resulting pain. Dr. Weber also showed a case of great enlargement of the liver and spleen of uncertain origin in a man who had been in the tropics. Dr. A. F. Voelcker showed a case of multiple serositis, and Dr. F. J. Poynton one of multiple exostosis. A patient suffering from *Adiposis dolorosa* associated with myxoedema was shown by Dr. J. Porter Parkinson, and Dr. Clutterbuck exhibited a case of infantilism of the ateleiotic type.

Glasgow Obstetrical and Gynaecological Society.—At a meeting on March 27th, Dr. Lawrence Oliphant, President, in the chair, the proceedings included the following: Dr. Nigel Stark read notes on a case of a fibroid of the cervix uteri weighing 17½ lb.

The patient, aged 40 years, complained of swelling of the abdomen for four years; she had had four children, the last labour being difficult. Menstruation was normal, slight leucorrhoea. The bowels were regular, and only during the last few weeks had there been any trouble with micturition. Pain was sometimes present. On examination the patient was found well nourished; the abdomen was greatly distended by a tumour which could be felt rising out of the pelvis, and on vaginal examination was found to be bulging down into the posterior fornix. It was removed by abdominal section, the operation being rendered somewhat difficult owing to its size and to various adhesions.

The tumour weighed 17½ lb., and it measured 34 in. in circumference and 27 in. from side to side. The body of the uterus could be seen perched upon it in front, freely movable, and not implicated in its mass. The tumour was subperitoneal in origin, and grew from the posterior median part of the cervix; there was no pedicle to be found. The patient made a good recovery. Dr. Munro Kerr thought that in most cases of cervical fibroids the tumour could be shelled out and the uterus left intact: he had removed a tumour of 14 lb., and fixed the uterus to the anterior abdominal wall, the patient subsequently menstruating. Dr. Caskie had only had experience of one case where there was a large polypoid fibroid projecting into the vagina.—Dr. Russell read notes on some cases of *Pruritus vulvae*, which he classified under two headings—those due to local and those due to general conditions. The treatment was often unsatisfactory, local heat and medicinal applications being used. When the patient's health suffered the parts ought to be excised. The danger of subsequent malignant disease occurring had to be kept in view when treating these cases of pruritus.

Glasgow Medico-Chirurgical Society.—At a meeting on March 15th, Dr. J. Lindsay Steven, President, in the chair, Dr. A. A. Young showed 3 cases successfully operated on a few hours after perforation of the digestive tube. In 2 the ulcer was in the duodenum; in the third in the anterior aspect of the stomach, close to the pylorus The operations were performed respectively four, five, and seven hours after perforation occurred. The success of these cases was largely due to early operation. In 11 cases he had 6 recoveries and 5 deaths. In 7 cases seen within twelve hours of perforation he had 1 death from pneumonia on the fifteenth day; the perforation was healed and the peritoneum healthy. Four cases seen after twelve hours were all fatal. The diagnosis had generally to be based on sudden and violent pain with rigidity and tenderness of the abdomen. The previous history was of little service, and many cases of unsuspected perforation occurred. The peritoneum should be gently sponged after sewing up; the ulcer and the parts should be handled as little as possible. The area of perforation should be drained and Fowler's position adopted, as it lessened the danger to the lungs.—Dr. A. MacLennan read a paper on *Bier's treatment for infective lesions*, and demonstrated some of the Bier-Klapp apparatus. It was suggested that the word *stauung* used by Bier to denote the hyperaemia produced by the elastic band might be incorporated in the English vocabulary. *Stauungshyperämie* of Bier was produced by applying a light Martin's rubber bandage as remote from the inflammatory region as convenient. The degree of tightness was important. When correctly applied not pain but the reverse should be produced, and redness and swelling increased. The nutrition of the part so congested was improved. The bandage was retained in acute cases for twenty-two hours. An interval of from two to four hours was employed in reducing the oedema the result of the bandage. Where pus existed it must be let out, but smaller incisions than usual sufficed. During the treatment all dressings must be very loosely applied. Increase in pain, extension or dissemination of the infection, erysipelas, and haemorrhage were due to faulty technique; the illness observable during the interval of the treatment was due to the absorption of endotoxines. The method was applicable to many septic conditions, and was specially serviceable as a means of preventing wounds becoming septic. In treating localized conditions the suction apparatus was most successful. It produced congestion as well as encouraged discharge. It should be allowed to act for five minutes, then there should be a pause of three minutes, these alternations being repeated for about an hour daily.—Dr. G. H. Edington showed: (1) A composite ovarian tumour of three cysts, one with papillae and a large intracystic growth; also two dermoids, one with red and the other with black hair. The uterus was the seat of an interstitial myoma. (2) A strangulated parovarian cyst, with columnar epithelial lining. The ovarian tissue was largely replaced by blood clot. (3) A strangulated multilocular ovarian cyst. Scanty papillae were present in several of the loculi, and patches of golden yellow pigmentation. The left ovary was cystic.

Royal Academy of Medicine in Ireland.—At a meeting of the Section of Pathology on March 15th, Dr. W. R. Dawson in the chair, Dr. Harvey exhibited slides from a case of *Cerebro-spinal meningitis* in a girl, aged 10, stated to have been perfectly well on the morning of the day of her admission. While swallowing a piece of liver she choked, and, not getting much relief, she was brought to hospital.

There she developed great tenderness down the spine and passed into a comatose condition; her eyes were open, but there was no cornea reflex. She died the same night. Next morning some fluid obtained by lumbar puncture showed diplococci in great numbers, even in the original fluid and outside the cell. They were distinctly non-Gram-staining. One of the slides showed round the cocci a capsule, which was said not to exist. Professor White observed that the cocci shown were all stained much in the same way. In those which he himself had got the irregularity of the staining was most pronounced, some taking it deeply, others only slightly. The regularity in Dr. Harvey's specimens was probably due to the early stage at which the patient had died. With regard to the cocci which exhibited capsules, he had found the same in some of the organisms which he had got from certain cases this year. Weichselbaum and his school denied absolutely the existence of a round capsule in his coccus; but Jäger, who had considerable experience, stated that capsules were freely seen. Between the supporters of the two there was considerable strife, both on that point and also as to whether the organisms were always negative to Gram. The former school say that those which were positive to Gram were not the specific organism at all. He mentioned the fact that subcultures of an apparently pure non-Gram-staining organism became Gram-staining, as showing that the question of staining was not yet settled. Dr. Day asked if there was any history of discharge from the nose in the case. He had found it in all cases except one, and Continental observers had reported a diplococcus found in swabs taken from 50 per cent. of cases. Mr. Gunn said he had seen the child in hospital, and no history of discharge could be obtained. He was inclined to think she had been ill for a longer period than the parents made out, and that the choking was probably some defect of swallowing. About an hour and a half before death there were five or six fairly typical spots on the child's limbs. After death he saw the body almost covered with them. Dr. Harvey, in reply, said the preparation to which Professor White had referred as showing regularity in staining had been made from the original fluid; but on making some more that day he had noticed great irregularity in the staining; and the appearance of diplococci apparently much larger than the other cocci gave him the idea that the cocci had swollen out.

Leeds and West Riding Medico-Chirurgical Society.—At a meeting on March 22nd, Dr. Eampton in the chair, Dr. Hellier read a paper on post-operative pneumonia and bronchitis. Estimates of the frequency of such complications varied, he said, greatly, but their occurrence was well recognized. Some Continental authorities found 4 per cent. or 5 per cent. of pneumonia in abdominal cases after operation. The factors in causation were multiple, among those considered being chilling of the patient, infection from the inhaler, oral sepsis, aspiration into the lungs, specific action of ether on the lungs, impurity of the anæsthetic and faulty administration. Dr. Brooksbank (Bradford), in a paper on the surgical treatment of diseases of the nasal accessory cavities, said these cavities were very frequently affected, and were a very common cause of anæmia, gastritis, meningitis, atrophy of the optic nerve, and disease of the cavernous sinus. The maxillary antrum was affected most frequently, and the disease could spread from there into the frontal and ethmoidal cells. He generally opened up the antrum through the alveolar process and inserted a large Williams's tube. The cavity should be washed out daily and powders insufflated; if there was any discharge after two or three months, the antrum should be plugged with ribbon gauze through the tube. This method often effected a cure in the most obstinate cases. In very bad cases the radical operation should be performed through the canine fossa, and a large opening made into the nares. In disease of the maxillary antrum there was often pain over the frontal sinus, and the antrum should always be explored before that sinus was opened. For diseases of the frontal sinus Killian's operation was the best in severe cases. In most cases of frontal sinus disease the anterior ethmoidal cells were also affected and should be removed. The anterior ethmoidal cells were very often diseased, and were the cause of the frequent recurrence of nasal polypi. The best method was to remove them with Meyer's ring. Disease of the posterior ethmoidal cells and the sphenoidal sinus often gave rise to meningitis, atrophy of the optic nerve, paralysis of the ocular muscles, and disease of the cavernous sinus. These cases were very frequent, and generally overlooked. Meyer's ring and Hajek's hook were very useful for operating on these parts. The use of adrenalin had greatly simplified these operations. The speaker expressed a hope that general practitioners would take a greater interest in diseases of the nares. He also alluded to the danger of intranasal operations; even the smallest operation might be followed by dangerous and even fatal complications.—Mr. A. S. Grünbaum showed a fibrotic testis and a brain showing minute haemorrhages, both removed from a syphilitic chimpanzee.—Mr. James Ewing showed a case of "hairy" black tongue. There was great elongation of the filiform papillae in the centre of the dorsum which looked like black hairs.—Mr. A. L. Whitehead, a specimen of multiple cysts of the retina causing absolute glaucoma; and Mr. L. Knaggs, a specimen showing ureters implanted into the rectum from an infant 1 year old, which died from causes unconnected with the operation, and some time afterwards.

Dermatological Society of Great Britain and Ireland.—At a meeting on March 27th, Dr. Alfred Eddowes, a Vice-President, in the chair, the following were among the exhibits:—Mr. Arthur Shillitoe: A case of *Untreated syphilis* in a man, aged 22, the primary infection being six months ago. There was a crusted psoriasiform eruption widely distributed over the trunk, scalp, and limbs. Dr. Eddowes: Two sisters, aged 29 and 27, suffering respectively from *Tylosis palmae* and *Palmar warts*. In the first case the condition was hereditary in origin. Mr. Spencer Hurlbutt: (1) Two cases of *Psoriasis*, one in a man, aged 45, who, in addition to a guttate eruption upon the body, face and limbs, presented a more or less greasy fawn-coloured rash over the sternal region, the whole condition being of fourteen days' duration. The other patient, a man of 23, had a similar general eruption, but he had had several previous attacks of true psoriasis. A general discussion ensued with regard to the exact nomenclature of the two cases and upon the relationship of psoriasis to seborrhoea. (2) A case of *Bazin's disease* in a young woman, aged 24, in whom not only the inner sides of the middle third of the legs presented indurated nodules, but also the extensor aspects of both forearms. The condition began on the left forearm a year ago.

Hunterian Society.—At an afternoon meeting at Poplar Hospital on March 27th, Mr. John Poland, President, in the chair, the following were among the exhibits: Mr. T. H. Openshaw: (1) A boy of 18 who had old tuberculous disease of the knee resulting in 9 in. shortening. (2) A little girl with double congenital dislocation of the hip cured by Lorenz's method. The reposition was functionally perfect on both sides, anatomically perfect on one side. Mr. Openshaw said that by this method one might expect, out of 20 cases, 6 perfect results, 9 functionally but not anatomically perfect results and 5 cases in which relapse occurred. (3) A case of rheumatic ankylosis. The knees, ankles, and hips were ankylosed, and for five years the patient did not walk at all. Now, with Hessing's apparatus with elastic traction, he could walk fairly well. (4) A child with congenital absence of one fibula and the characteristic groove in the tibia. The exhibitor considered that such cases were due to intrauterine fracture. (5) A baby with congenital shortening of the femur and absence of fibula. (6) A child with congenital absence of the left tibia and partial absence of the right tibia, probably the result of intrauterine fracture. Mr. Hugh M. Rigby: (1) A woman of 37 who had suffered from ascites in childhood. A few months ago her abdomen was opened at another hospital and fluid removed. She was admitted into Poplar Hospital under the care of Dr. Theodore Thompson with ascites and intestinal obstruction. Mr. Rigby opened the abdomen, and found great distension of the small intestine. There was gradual narrowing of the lower end of the ileum, and the caecum and ascending colon were like those of a child, evidently a congenital condition. The patient made a

good recovery after an ileo-sigmoid lateral anastomosis. (2) A boy from whose ureter a stone had been removed by a parasacral incision. The exhibitor considered that this incision was indicated when a stone was impacted within 2 in. of the bladder, the operation by this method being easier and affording better drainage than the usual method. Dr. Theodore Thompson showed: (1) A woman with a to-and-fro aortic murmur, syncopal attacks, and tabes dorsalis. He considered that she had syphilitic aortitis. (2) A man with an abscess of the lung treated with success by administration of creosote internally up to ½-drachm doses, and inhalation of creosote and iodine. He had put on 18½ lb. in weight in three months, and was practically well.

Nottingham Medico-Chirurgical Society.—At a meeting on March 20th, Dr. E. Powell, President, in the chair, Mr. J. Mackie showed a boy, aged 15, who for eight years had suffered from *Chronic suppurative otitis media*.

There had been occasional attacks of pain for the last two years accompanied by vomiting and giddiness, usually followed and relieved by profuse discharge of pus. The temperature ranged from 97° to 105°, and thrombosis of the lateral sinus was diagnosed. On September 27th, 1906, the mastoid antrum was opened and found to be continuous with an extradural abscess. The sinus was opened, the clot removed and the abscess drained. Four days after the operation the patient developed left basal pneumonia and pericarditis with daily rigors. Nine days after the operation the temperature fell from 106.2° to 95° in three hours. Four days later a profuse expectoration of foul purulent material occurred, probably from a pulmonary abscess. Nine days later (October 19th) a swelling developed in the neck along the course of the internal jugular vein. The neck was freely incised, the abscess opened, after tying the internal jugular vein at its junction with the subclavian.

After this the boy made an uninterrupted recovery, and when shown was in excellent health.—Mr. R. C. Chicken, in a paper on *Renal calculus*, analysed critically from the point of view of diagnosis all the symptoms in 10 recent cases. The three cardinal symptoms of haematuria, local tenderness and renal pain were variable within such wide limits that corroborative evidence, such as was sometimes obtainable by the *x* rays, was often extremely valuable. Pain might radiate as far as the breast, the scapula, or the iliac crest; but on the other hand pain and tenderness might be completely absent. In one typical case no stone could be found by nephrotomy, and in another the pain was so slight that a large uric acid stone would probably not have been detected but for the help of *x* rays. Then, again, all the pain might be referred to the healthy side, and much confusion might be caused when pain was set up by a long, adherent, chronically-inflamed appendix.—Dr. F. H. Jacob, in a paper on the use of *x* rays in the diagnosis of renal calculus, pointed out that with the improved coils now in use a better picture of the kidney and its relations could be obtained under difficult circumstances. The necessary time had also been greatly reduced, and as the kidney moved on an average 1½ in. at each respiration this had its importance. Scybalous masses were much more obvious in an *x*-ray photograph than a calculus would be, and this fallacy had to be guarded against by complete evacuation of the bowels. Calcified tuberculous glands were another source of error. Dr. Jacob also read a paper on 2 cases of *Leucocythaemia* treated by *x* rays. In the first, a woman aged 36, the white corpuscles in three months' treatment had fallen from 200,000 per c.mm. to 9,000, though a fortnight later they were 10,000. The myelocytes, at first so abundant, had now disappeared, but polynuclear neutrophile cells were still in excess. The blood count was now practically normal. The second case, a man aged 26, one of longer duration, was probably on that account more resistant to treatment; but in two months the white corpuscles had fallen from 822,000 per c.mm. to 138,000, and the haemoglobin had risen from 30 to 85 per cent. At first the temperature had been 100° and the urine loaded with urates. The former had become normal again and the latter was now quite clear. In each case the rays had been applied directly over the spleen.

Under the will of the late Miss Mary Bastow, of Queen's Gate, who died on January 30th, the London Hospital receives a sum of £200.

REVIEWS.

MIND AND MATTER.

The search after knowledge of the nature of the tie between body and mind, or between mind and matter, has ever exerted an irresistible fascination for philosophers of every age. It is the eternal riddle which no age has solved, but of which many interpretations have been set forth and for a time have held sway; and it seems probable that at no given period of man's intellectual development have philosophers been in accord on this tremendous question, and that from the time of the ancient hylozoism to Haeckel's naïve materialism of to-day—or shall we say yesterday?—the conflict of idealism *versus* materialism has been waged without a truce. One of the most interesting, readable, and in many ways suggestive attempts at a solution is contained in M. Binet's *The Mind and the Brain*,[1] whose somewhat awkward title had to be adopted because that of *Mind and Body* had been already taken up by Bain's work published in the same series. Although it would appear almost impossible to say anything fresh on a matter which has afforded occasion for endless speculation for thousands of years, M. Binet indubitably regards in a new light certain propositions which are of fundamental importance in every psychological presentation of the facts of consciousness. It is this new setting which gives value to the book. M. Binet agrees with the idealists that we are acquainted with nothing of the outer world but our own sensations, which are not necessarily similar to the object which excites them, but differs from them in refusing to see in the elements of mentality, sensations, feelings, images, etc., facts of a purely psychical order. In all of these processes, he maintains, we have to do with two orders of elements which, though united in reality, our thought may consider as isolated; first, the sensation, image, or emotion, as the case may be, as an object—that is, as an impression felt; and, secondly, the consciousness of the sensation, the cognition of the image, the experiencing of the emotion—the first belonging to the physical and the second to the psychical. Mind is "that special activity which is engaged in sensation, image, idea, emotion, and effort." It is important to recognize that for M. Binet mind is not a subject which has consciousness, but is the act of consciousness; is not an entity apart from matter, but is an incomplete form of existence; "it is like form, which can only be realized by its application to matter of some kind." It is evident that if it be admitted that mind has an incomplete existence and is only realized by its incarnation in matter, the figure which is the basis of the modern orthodox doctrine of psycho-physical parallelism—a doctrine stigmatized by the author as a materialism perfected especially in the direction of caution—becomes indefensible. In his conclusion M. Binet explains with rare skill and ingenuity by means of his theory how man attains to a knowledge of the external world—that is, by what means the disentangling of impressions of intra-neural origin from those of external excitation is brought about. For this, and for his admirable criticism of current explanations of the connexion between mind and matter, we would refer readers to the author's clear and logical exposition, admirably rendered into English.

In the work reviewed immediately above a position is taken up which is neither purely materialistic nor simply idealistic, but somewhere between these—though, inasmuch as mind is denied anything but an incomplete existence, Professor Binet undoubtedly leans towards a materialistic interpretation, notwithstanding the dualistic basis from which he sets out. Another writer on this subject, Professor Berthold Kern, whose closely-reasoned work on the nature or essence of soul and mind[2] is the second and much-enlarged edition of a small book published in 1905 under the same title, similarly finds the only reality in the union of mind and body in the

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[1] *Mind and the Brain* (being the authorized translation of *L'Ame et le Corps*). By Alfred Binet, Director of the Laboratory of Psychology at the Sorbonne. Edited by F. Legge. Paris: The International Scientific Series: London: Kegan, Paul, Trench, Trubner, and Co. 1907. (Cr. 8vo, pp. 280; 5s.)

[2] *Das Wesen des menschlichen Seelen- und Geistes leben als Grundriss einer Philosophie des Denkens* [The Nature of Soul and Mind as the Foundation of a Philosophy of Thought]. By Professor Berthold Kern. Second edition. Berlin: August Hirschwald. 1907. (Pp. 434. Mk. 7.)

experiencing subject himself, but, unlike Professor Binet, in the subject as thought—that is, as thought itself. Maintaining the identity of mind and body—though with a somewhat different connotation from that of modern identity-philosophy—he places both in inner and necessary dependence on dominating, immaterial, and free reason, unconditioned by any relation of cause and effect. Professor Kern's is thus the transcendental philosophy of Immanuel Kant, brought up to date and revised in the light of modern scientific knowledge of the nervous activities subserving intelligence, emotion, and conduct. Professor Kern will listen to no theory which states or implies the possibility of any interaction between body and mind. To state, for instance, that an external stimulus excites sensation and presentations accompanied by feelings whose result is volition eventuating in conduct is, he says, only to heap fallacy on fallacy and could only be brought about by a rupture of the chain of causes and effects in both the bodily and mental series. A bodily or physical fact can only be the cause of another bodily effect and vice versa. Hence, though will is the beginning of conduct, this conduct is not physical but mental, whose final consequence consists in influencing and changing the content of sensation (as a conscious and not a physical process) and ideation. There are thus two chains of conduct, an external and an internal, the latter being the sphere of the will, the correlate of external conduct but not its cause. So far, this is psycho-physical parallelism, which he indeed accepts, but only with a difference. This doctrine of psycho-physical parallelism is being assailed from all sides, and it is indeed evident that it is no explanation but only a confession of ignorance, or at most an affirmation that the two series of bodily and mental phenomena are bound together in a time but not in a causal relation. The *why* of this constant synchronicity this doctrine does not attempt to explain, but this Professor Kern finds in the experiencing subject, conceived as thought, the transcendental ego of Kant, by whom both the bodily and mental series are perceived, and in whom both find their culminating point. This is the dominant theme of the book, elaborated through 434 pages of sustained argument and expressed in modern scientific terms. The sum and substance of this work, however, will be found in the smaller first edition, which will be found of interest as a thorough and careful attempt to harmonize physiological teaching concerning the mechanism of sensations, perceptions, etc., with their psychical counterparts, and whilst accepting the law of causality, relegating it to its proper sphere, and thus escaping a fatal and pessimistic determinism.

ENTERIC FEVER IN THE TROPICS.

Major Ernest Roberts's work on enteric fever in India[1] is replete with presentments of the numerous factors which may appear to throw light upon the epidemiology of enteric fever. In order to elucidate this problem vital statistics are graphically set forth, and the effects of seasons, camps, campaigns, class, and nationality, as well as of geographical situation, are discussed. The work is comprehensive, and has been written by an officer who has acquired familiarity with the vital statistics relating to all classes of the population in India, and who now offers facts and figures which, more usually concealed in Government publications, have escaped the attention of all but those specially studying these matters.

Major Roberts points out that after the introduction of the short-service system in the army the mortality of European troops in India fell considerably, but, concurrently, enteric fever increased. Short service was attended necessarily by the influx annually into India of greatly increased drafts of young soldiers. At the same period England was becoming a sanitary country and its population less immunized against enteric fever. The increased annual influx into India consisted consequently of more susceptible soldiers. This susceptibility was not limited to young men; it existed equally among the older men during their first two years of residence. Hence, it must be inferred that a cause is to be sought which operates more especially during the early years of residence in India. The suggestion that environment has greater influence than age is borne out by the fact that change of station appears to stimulate the liability to attack by enteric fever. This liability cannot be attributed wholly to impurity of water, for the author shows that, although the water supplies to cantonments have so improved that the incidence of cholera has been lessened, yet the incidence of enteric has increased. There must, therefore, be some potent vehicle other than impure water to account for the spread of this fever. Major Roberts accepts enteric fever as a contagious fever and as a filth disease transported by intercourse (p. 327), and is of opinion that epidemiologists must in future regard the human host as the essential feature in the propagation of the disease.

> For the rest, it is only a question of the means of transfer. . . . It may be through infected clothing or bedding passed on to others (South African blankets) or by contamination of other clothing at the "wash"; by deposit of the virus in latrines and trenches, and on the site, and its subsequent adhesion to the persons and clothing (boots, etc.). But when the infective agent has escaped from the host the way is open for the operation of other agents of dissemination, for example, dust, flies, insects, rainfall (p. 337).

As in the case of the United States volunteer camps, enteric fever in India must be attributed to importation by individuals among the bodies of men arriving from time to time. Lessened resistance pending acclimatization may help to account for the spread of the disease among newcomers, and its dissemination throughout the localities of outbreak. Major Roberts does not regard the native of India as the source of the disease, or as liable to the disease except where in contact with British troops. In this respect the Gurkhas, whose habits more nearly approach those of Europeans, prove to be more liable than other natives. He sets forth reasons for this view, which has long been held in India; but it must be confessed that statistics relating to the native population impart an unhappy sensation that they are based upon diagnoses which are too often not completely satisfactory. Major Roberts attributes such immunity of the native to subtle changes in his tissues: after generations of residence during which the susceptible have been eliminated the native has become adapted to his environment. This view presupposes the existence of enteric fever in India before the advent of British troops, and we are inclined to agree that the native may perhaps have become naturally immune; this argument, however, does not support the importation theory. The increased susceptibility acquired within comparatively recent years by our countrymen seems to afford sufficient explanation of the increased incidence of enteric among those of them who are rapidly transferred to a polluted environment. Major Roberts compares Indian cantonments to rural areas in England, and at any rate they cannot be regarded as sanitary. The prevention of enteric fever must therefore lie in the application of modern sanitary devices in such localities. We may look for results in India corresponding to the results attained in England by the application of similar measures. The initial expense would be heavy, doubtless, but the reduction of the expenses incurred in providing treatment for the sick, and the diminution of the financial loss induced by death, and invaliding, and loss of service, would in time more than refund the money spent in the introduction of sanitary reforms. Major Roberts considers that prominent among these reforms are water carriage of excreta and scientific methods of sewage disposal. At the same time, education of officers and men in hygiene should assist and lead to the avoidance of insanitary folly, and to the adoption of effective preventive measures on active service. Methods of anti-enteric inoculation are touched upon, but this subject might well have received more adequate notice by the author.

Those who have followed through many years the discussions upon enteric-fever epidemiology will find that Major Roberts's work embraces every aspect of the case, while those to whom tropical conditions are as yet unknown will discover therein much valuable information and thoughtful reasoning upon a problem which is of the highest importance to all sorts and conditions of men whose lots are cast in our foreign possessions.

[1] *Enteric Fever in India and in other Tropical and Subtropical Regions.* By Ernest Roberts, M.B., D.P.H., Major, Indian Medical Service. London: Baillière, Tindall, and Cox. 1907. (Crown 4to, pp. 571. 21s.)

OPERATIONS ON NOSE AND THROAT.

Professor Beamann Douglass gives in his work on *Nasal Sinus Surgery*[4] a good account of operations on the nose and throat in comparatively small space. The largest part of the book is concerned with the modern surgery of the nasal sinuses and septum. The frontal sinus is taken in the first place, the clinical anatomy being well described, including particularly the parts which form landmarks for probing the sinus from the interior of the nose. Enlargement of the naso-frontal duct by intranasal operations is very strongly deprecated. The account of the external operations on the frontal sinus is clear, and contains some good practical hints. The author is in favour of the open treatment in the radical operation. Ethmoidal suppuration is discussed with exceptional clearness. The general statement is made that "for some unexplained reason the closed empyemas which affect the posterior ethmoidal cells have a greater tendency to perforate into the orbit than those which affect the anterior ethmoidal cells," "while the closed empyemas of the anterior ethmoidal cells are more apt to perforate the brain, or more frequently into the nose itself." In the treatment of antral suppuration attempts at radical operation by intranasal operation receive little commendation. The various radical methods are fully described, particular attention being given to the anatomical relations concerned. In probing the sphenoidal sinus the guide recommended is the roof of the nose, along which a slightly curved probe is to be pushed. We cannot help feeling that it is safer to glide the probe from below upwards over the front of the body of the sphenoid. The author advises opening the sphenoidal through the posterior ethmoidal cells by way of the nose, or, if there be antral suppuration, by way of the antrum. The list of measurements given will be found most valuable for study and reference. Deflections of the septum, with and without thickenings, are judiciously classified, and the opinion is expressed that "in many cases if the thickenings are carefully removed it will not be necessary to do an operation for the deflection." Should the deflections still require treatment, cuts are made through the ridges or lines of deflection in whatever direction they may extend, chiefly by means of the author's spear-pointed knife and curved blunt-pointed bistoury. Then by means of forceps the triangular (quadrangular) cartilage is freed from its attachments to the floor of the nose and to the septal plate of the ethmoid. After the straightening the septum is kept in position by means of Simpson's nasal tampons or McKernon's splints. Other methods, including submucous resection, are briefly considered, the submucous operation being recommended when the bony septum is deflected. The material of the whole book will well repay the reader, who must, however, overlook some slips or eccentricities in phraseology and spelling. It would be well if the references to the very full collection of pictures, which are very worthy of careful study, had been more carefully made.

NEW GROWTHS.

The deserved popularity of *Tumours Innocent and Malignant*[5] is in great part due to the reputation of the writer, but also to the fact that it is very readable, a quality rare in modern works on pathology. The new edition supplies a great want. We pointed out in our criticism of the third issue that Teacher's valuable researches were not published in time to be noticed by Mr. Bland-Sutton. In the new edition these researches have been taken into account, and recent opinions as to the physiological and pathological significance of lutein are mentioned. Some of the clearest microscopical drawings from Teacher's fine monograph are rightly inserted into the new edition, and Mr. Bland-Sutton sums up what is known and can safely be taught concerning chorion-epithelioma, *alias* deciduoma malignum, in his well-known lucid manner. Another pathological novelty, which has of late secured the interest of physicians and surgeons as well as of pure pathologists, is the "adrenal" question, revived since 1903 by Bulloch and Sequeira, and others. The hairy bodies of children subject to adrenal tumours and their precocious sexual development are facts of high interest. Mr. Bland-Sutton is careful to remind the reader that in cases of adrenal tumour ascribed to the suprarenal capsule itself we must be sure of the presence or absence of that organ. In cases where the tumour is obtained by operation the surgeon can rarely, if ever, be certain that he has not left the capsule behind, the tumour being possibly renal or developed in the subperitoneal tissue. In failing to make sure about the origin of the adrenal tumour many observers, following Grawitz, have in their efforts to establish the actual site of the adrenal tumour, "only served to increase a literary rubbish-heap of false facts already far too big." Here the author expresses himself a little too strongly. What are false "facts"? What then is the "real" truth? The writers to whom Mr. Bland-Sutton refers, however, would do well to imitate the clearness with which he usually expresses himself. The chapter on heterotopic teeth is adorned with a good series of illustrations. The most important chapter in the new edition is the twenty-sixth, "Concerning the Cause of Cancer." He sums up modern views with his characteristic lucid and candid scepticism, concluding with a quotation from *Empedocles on Etna* which, according to Mr. Bland-Sutton, expresses the position of the non-expert who studies theories on cancer. That unfortunate personage "dares stamp nothing false where he finds nothing sure."

Although the public are much better informed in medical matters than was once the case, yet the very fact that spiritualism, homoeopathy, Matteism, and a thousand and one other forms of treatment are taken up and "run" by certain classes of society shows that true medical knowledge is, outside the medical profession, of the scantiest. It must almost of necessity be so, for the medical profession proper does not advertise itself or its results in popular works or in the public papers, and the numerous advances that have been made in recent years in the treatment of various diseases are practically unknown, with a few exceptions, to the public at large. This especially applies to the treatment of cancer, which, were we to judge by the advertisements in the papers, is one of the most curable of diseases; but the public, having tried most of the advertised "cures" and found them wanting, has finally drawn the conclusion that cancer is incurable. *The Control of a Scourge*,[6] by Charles P. Childe, F.R.C.S., is an attempt to place before the public the advances that have been made in recent years in the treatment of one of the greatest scourges afflicting the human race. The author has written a very readable and interesting work, with a very full knowledge of his subject, and, while giving all necessary details, he has carefully avoided everything sensational or gruesome; so that, unlike many popular books on medical subjects, his work may with advantage be placed in the hands of the public, and can do nothing but good. While exposing the uselessness and the harmfulness of sham methods of treatment, it shows how delay in seeking proper advice at the earliest possible moment removes all chance of a real cure. The author advances ample evidence to prove that cancer is a local disease, which, if diagnosed early and removed widely, is curable in a very large proportion of cases. Early diagnosis and early treatment can be attained in no other way than by education both within the profession and outside it, and this work, by placing in the hands of the intelligent, educated classes the knowledge which will enable them both to avoid delay themselves and to convey the information to those with whom they come in contact, is an honest and conscientious effort to do a real service to the public.

BURDETT'S "HOSPITALS AND CHARITIES."

The issue of Sir Henry Burdett's yearbook on *Hospitals and Charities*[7] for 1907 follows the same general lines as its predecessors. The review of hospital progress printed

[4] *Nasal Sinus Surgery, with Operations on Nose and Throat.* By Beamann Douglass, M.D. (Illustrated with 67 full-page half-tone and coloured plates, including nearly 100 figures.) Philadelphia: F. A. Davis Co. 1906. (Demy 8vo, pp. 264. 2.50 dols.)

[5] *Tumours Innocent and Malignant; their Clinical Characters and Appropriate Treatment.* By J. Bland-Sutton, F.R.C.S., Surgeon to and Member of the Cancer Investigation Committee of the Middlesex Hospital, etc. Fourth edition, with 355 engravings. London: Cassell and Co., Limited. 1906. (Demy 8vo, pp. 675. 21s.)

[6] *The Control of a Scourge: or, how Cancer is Curable.* By C. P. Childe, B.A., F.R.C.S. London: Methuen and Co. 1906. (Demy 8vo, pp. 299. 7s. 6d.)

[7] *Burdett's Hospitals and Charities, 1907, being the Yearbook of Philanthropy, and the Hospital Annual.* By Sir Henry Burdett, K.C.B. London: The Scientific Press, Limited. (Cr. 8vo, pp. 889. 7s. 6d. net.

annually at the beginning of the volume has been modified by the inclusion of a chapter on hospitals and hospital opinion in the United States, and the omission of several matters of minor importance which appeared in former editions.

The first chapter of this year's issue deals with the Misuse of Hospitals, and the author refers with satisfaction to the series of propositions embodying the principles which should be followed in the administration of hospitals, formulated by the Hospitals Committee of the British Medical Association, and discussed at the United Hospitals Conference held in December, 1906. Far from regarding the results of the conference as disappointing, Sir Henry Burdett considers that a good beginning has been made, and that the ground has been cleared for reforms which may be expected to remedy many of the evils of which complaint has been justly made in the past. He regards the future outlook of medical relief in the United Kingdom with hope, and thinks that the solution of the problem of preventing the misuse of hospitals will be found in the organization of a system of provident dispensaries and district nursing homes. To meet the legitimate demands of the less necessitous classes, he suggests that pay wards and public nursing homes should be provided, the cost of erecting and maintaining them to be defrayed from sums received under a system of insurance by which every one so desiring might insure under a hospital policy entitling him to treatment for a limited period. The usual tabular statements of hospital income and expenditure are given, and marked progress in the direction of economy during the twelve months under review is to be noted. This progress lies mainly in the all-round reduction of expenditure which the publication of statistical reports by King Edward's Hospital Fund has so largely assisted. The saving of no less than £21,000 on a year's working of the sixteen large general hospitals cannot be regarded as otherwise than satisfactory. Special reference is naturally made to the munificence of the late Mr. George Herring, who, in addition to princely gifts during his lifetime, has by his will left the residue of his estate, amounting to about £600,000, to the Metropolitan Hospital Sunday Fund.

We have confined our observations to the introductory part of the yearbook, for the directory of institutions to be found in the body of the work is too well known to need description. An attempt has this year been made to increase the practical utility of this directory by omitting particulars of institutions which have made no returns for five years or upwards. The volume is one which should be at the elbow of every one who has much to do with hospitals and charitable institutions; and, so far as we have tested it, the revision for the current edition appears to have been as systematic and thorough as in previous years.

NOTES ON BOOKS.

We have received from the Director, Dr. A. STENGEL, a new volume (No. 5) of *Contributions from the William Pepper Laboratory of Clinical Medicine* of the University of Pennsylvania. It consists of reprints from various medical periodicals of papers founded upon the work done in the laboratory during the years 1902 to 1905. The volume does not lend itself to detailed review, more especially as the Director does not provide a preface, but it gives some idea of the activities of the laboratory.

The *Dentists' Register* for 1907, issued last week, contains 1,772 names (4,757 on the list for the United Kingdom, 4 on that for the Colonies and 22 on the foreign list. Of those on the list for the United Kingdom, 2,616, or 54·99 per cent., are graduates or licentiates of a university or college in the United Kingdom; 16, or 0·55 per cent., practise dentistry with surgical qualifications; and 2,116, or 44·46 per cent., are registered without additional qualifications as in the bona fide practice of dentistry before the appointed day, last year the percentage under this head was 46·16.

The eighteenth volume of the *Transactions of the Southern Surgical and Gynaecological Institution* is edited by Dr. W. D. HAGGARD, and consists of the addresses and communications made public at the Louisville (Kentucky) meeting of the Association in December, 1905. Amongst the papers are several of interest on the surgery of the gall bladder and bile ducts. Dr. Ransohoff, F.R.C.S.Eng., publishes instructive notes and comments on gangrene and rupture of the common duct, and an important discussion on this group of papers is added; several well-known authorities—Charles H. Mayo, Crile, Reed of Cincinnati, amongst others—took part in the debate. Dr. Hugh Young read notes on the early diagnosis and radical cure of carcinoma of the prostate, based on a study of 50 cases. He has devised a radical operation which he describes in full. An earlier report by Dr. Young appeared in the *Johns Hopkins Hospital Bulletin*, and he announces that a full monograph on his experience of the radical cure of prostatic cancer is to appear in the *Reports* issued by the authorities of that famous hospital. Dr. I. S. Stone of Washington relates two cases of retroperitoneal wandering parasitic or aberrant uterine fibromata. This type of tumour is mainly of interest on account of its troublesome relations, which may entail operative difficulties and dangers, especially in regard to the ureters. It is not universally admitted that these free retroperitoneal tumours are invariably of uterine origin. Among the most important of the surgical reports is an essay by Crile of Cleveland on the treatment of cancer of the head and neck, with a summary of 121 operations. On account of the rapid infection of lymphatics in malignant disease Crile strongly advocates bold, free dissection in the triangles of the neck, with the excision of veins as well as the resection of portions of muscles.

[1] London: Spottiswoode and Co. 7s. 6d.

MESSRS. FIEDLER and SANDBACH'S *Second German Course for Science Students*[2] is characterized by the excellent selection of its passages, but it partakes rather too much of the nature of the ordinary school reader. An adult student who wishes to learn German sufficiently to be able to make his way through a scientific paper needs a relatively small vocabulary, and it is a matter of regret that the authors did not supply a list of words at the end. Dictionary work is admirable as a mental training, and is, of course, essential to a sound knowledge of any language, but it is questionable whether those who will avail themselves of this book will be able to afford the extra time which its use will render essential.

The new (seventh) edition of the *Dictionnaire de Médecine et de Thérapeutique Médicale et Chirurgicale*, edited by Professor BOUCHUT and Professor DESPRÉS, and now revised by Professor G. MARION and Dr. E. BOUCHUT,[3] is a colossal volume weighing in its paper cover nearly half a stone, and measuring 11 by 8 by 2½ in. It is printed in rather small type in double column, and ranges over the whole field of medicine and surgery. It is illustrated by a number of drawings of plants, lesions, instruments and appliances. The title page claims that it contains a prescription for every disease, and it does undoubtedly contain a very large number. Appended to this edition is an essay by Professor E. Bouchut on therapeutics during the nineteenth century, which opens with a strong condemnation of therapeutic scepticism. Therapeutics, Professor Bouchut says, is the aim and the end of all medical knowledge, and he develops this idea throughout what is in fact, though not in name, a short treatise on the elements of therapeutics, in which he discusses in succession the *vis medicatrix Naturae*, the effects of the mind in the production and the cure of disease, the influence of general hygiene and diet, the part to be played by surgery, and the use of drugs. Here he introduces a classification of drugs which seems to be somewhat novel: those which act on the nervous system, on the muscular system, on the blood, on the glands, and on parasites; a sixth class being formed for external remedies.

[2] London: The de la More Press. 1906. (Medium 8vo, pp. 86. 2s. 6d.)

[3] *Dictionnaire de Médecine et de Thérapeutique Médicale et Chirurgicale.* Par les Drs. J. Bouchut et A. Desprès. Septième édition revue par les Drs. G. Marion et E. Bouchut. Paris: F. Alcan. 1907. (Demy 8vo, pp. 1,476, 1,097 illustrations. Fr. 25; bound, Fr. 30.)

UNDER the will of the late MRS. Harriet Venables, of Slough, who died on December 30th, 1906, the Maidenhead Cottage Hospital, the Windsor Infirmary, the National Hospital for the Paralysed and Epileptic, and the Royal Hospital for Incurables, Putney, each receives a sum of £400.

LORD LISTER'S BIRTHDAY.

At a meeting held on April 4th at the Royal College of Surgeons of England, Mr. Henry Morris, President, in the chair, it was unanimously resolved to commemorate the completion of Lord Lister's 80th year by publishing in quarto form a complete collection of his scientific papers, and Sir Hector Cameron, Professor Watson Cheyne, Mr. R. J. Godlee, Dr. Dawson Williams, and Dr. C. J. Martin, Director of the Lister Institute, were appointed an editorial committee to carry out the necessary arrangements and to issue the work in two quarto volumes. The editorial committee was instructed to prepare a note of a biographical character showing the sequence and interrelation of the various researches and observations made by Lord Lister and recorded in the papers to be reprinted. It was further resolved on the motion of Mr. Jonathan Hutchinson, seconded by Professor Tilanus of Amsterdam, that the following letter should be sent to Lord Lister acquainting him with the wishes of the meeting, formally asking him to allow his birthday to be commemorated in the above manner, and at the same time conveying the congratulations of the Committee, etc. The following is the text of the letter which was signed by Mr. Henry Morris, President of the Royal College of Surgeons, as Chairman of the meeting:

April 4th, 1907.

Dear Lord Lister,

A desire having been widely felt that the 80th anniversary of your birthday should be marked in some special manner, a committee of your professional brethren both at home and abroad was formed to consider in what way this could best be done.

This committee met to-day at the Royal College of Surgeons, when it was unanimously resolved to ask you to allow them to commemorate the occasion by collecting and publishing your various scientific papers in book form. In anticipation of your acquiescence, an editorial committee was appointed to carry out such publication.

At the same time, those present at the meeting wished to convey to you their warmest congratulations on this occasion and gratefully to acknowledge the debt which the medical profession, and, indeed, the whole world, owe to you for the work which you have done. That you have lived to see such enormous advances in surgery and medicine flow from your work must be a source of great gratification to you, and the committee hope that you may be spared to see still many further advances follow therefrom.

I remain, dear Lord Lister,
Yours sincerely,

Hy. Morris,
President, Royal College of Surgeons,
Chairman.

Lord Lister having expressed his willingness to receive a limited number of members of the Committee on the morrow, a small deputation waited upon him and wished him happy returns of the day. As Mr. Morris, the Chairman of the Committee, was unavoidably prevented from being present, Mr. Jonathan Hutchinson expressed the good wishes of the Committee to Lord Lister. Professor Tilanus of Amsterdam presented an address from the physicians and surgeons of that city, and Dr. Thorvald Madsen of Copenhagen another bearing the signatures of a thousand medical men in Denmark. Lord Lister made a brief reply, and subsequently addressed the following letter to Mr. Morris:

April 6th, 1907.

Dear Mr. Morris,—I duly received your letter yesterday informing me of the decision of the General Committee to ask me to allow them to commemorate the occasion of my 80th birthday by collecting and publishing my various scientific papers in book form.

This proposal is almost overwhelming in its kindness, and I expressed to the deputation which met here in the morning my profound sense of gratitude. This surpassingly generous offer is extremely gratifying to me.

Believe me,
Very sincerely yours,
Lister.

Remembering the fact that Lord Lister was for a good many years Surgeon to King's College Hospital, and is now Consulting Surgeon, the King's College Hospital Medical Society and other students of the hospital forwarded the following address:

My Lord,—We, the undersigned, being members of the King's College Hospital Medical Society, and other students of the hospital, wish to offer you our heartiest congratulations on the attainment of your 80th birthday.

We desire to express our appreciation of the honour we feel in being associated with a hospital which has been made illustrious in all countries and for all time by being the scene of your many researches and discoveries, and with a medical society which has been honoured with your presidency.

We cannot adequately express our gratitude for the great example which you have set us.

The following are the terms of the address of congratulation presented by the Senatus Academicus of the University of Edinburgh:

Dear and Honoured Colleague,—Mindful of the near approach of the eightieth anniversary of your birthday, the Senatus Academicus of the University of Edinburgh desire to send you an expression of their abiding pride and regard, and to offer you their cordial congratulations on the interesting and auspicious occasion.

They rejoice and are devoutly thankful that you have been spared for so many years to carry on that brilliant and noble work by which your name will ever be remembered as one of the most signal benefactors of suffering humanity.

It is a source of great gratification to the Senatus to recall that it was in the service of this University that you laid the foundations of your fame, and they are deeply sensible of the lustre which the University derives from this early tie.

The University of Edinburgh, we are assured, holds a place in your recollections, and it may not be uninteresting to you to hear that the Faculty of Medicine at the present time is composed almost entirely of former colleagues and former pupils of your own.

It is the heartfelt hope of the Senatus that many years of health and honourable activity may yet lie before you.

In the name of the Senatus,

Wm. Turner,
Principal.
L. J. Grant,
Secretary of Senatus.
D. J. Cunningham,
Dean of the Faculty of Medicine.
T. Annandale,
Professor of Clinical Surgery.

April 3rd, 1907.

The following address was sent by the Royal College of Surgeons of Edinburgh:

Dear Lord Lister,—The President and Fellows of the Royal College of Surgeons of Edinburgh desire to offer to you their heartiest congratulations on the occasion of your attaining your eightieth year.

It is but a short time since 1905, when you did this ancient College the honour of accepting its Honorary Fellowship at the celebration of its quatercentenary. But it is of special interest to this College to recall the fact that you joined it as a Fellow so far back as 1855, for it was in the succeeding years while Regius Professor of Clinical Surgery, first in Glasgow and afterwards in Edinburgh, that you announced to the surgical profession your epoch-making researches, the results of which have been a boon to humanity, and have provided the foundation upon which our modern surgery is built.

Since the foundation of this College—400 years ago—many distinguished names have appeared on our roll of Fellows, but no name is more universally respected and revered than that of your lordship.

It is our earnest wish that you may long be spared to occupy the distinguished position accorded to you not only by your old College, but also by your surgical brethren in all parts of the world.

Signed on behalf of the Royal College of Surgeons of Edinburgh,

Charles Watson MacGillivray,
President.
R. M'Kenzie Johnston, F.R.C.S.Edin.,
Secretary.

The following congratulatory address was sent by the Royal Society of Edinburgh:

In the name and by authority of the Council of the Royal Society of Edinburgh, we venture to offer our warmest congratulations to you on attaining the age of 80 years. We recall with pleasure your residence in Edinburgh fifty years ago as a young surgeon on the staff of the Royal Infirmary of this city, and subsequently as professor of clinical surgery in the University from 1869 to 1877. We are proud to have recorded in our *Transactions* your early papers on "The Histology of Involuntary Muscular Fibre," and your memoir on "The Germ Theory of Putrefaction and other Fermentative Changes," written at the time when you were actively engaged in your researches into the scientific basis of the antiseptic system of treatment in surgery—a discovery of inestimable benefit to mankind which will for all time be intimately associated with your name. We have followed your career since you went to reside in London with interest and satisfaction, and we have

noted with pleasure the recognition which you have received from our late Queen and his Majesty the King, from learned societies at home and throughout the world, and from universities and other schools of learning. We desire to express our hope that you may be long spared to reap the reward of your long and active professional life, and to enjoy the leisure which you have so well earned. April 4th, 1907. (Signed) KELVIN, President; G. CHRYSTAL, Secretary.

Lord Lister also received the following telegram from the Lord Provost of Edinburgh:

On behalf of my colleagues on the Town Council and myself, I send hearty congratulations to you as a distinguished burgess of this city on your eightieth birthday.

At the weekly meeting of the managers of the Edinburgh Royal Infirmary on April 8th, the Clerk submitted an address, drawn up by Dr. Affleck, which it was proposed to send to Lord Lister. The address, which is in the following terms, was approved:

My Lord,—The Board of Managers of the Royal Infirmary of Edinburgh desire to convey to your Lordship their respectful and cordial congratulations on your attainment of your 80th birthday. The Managers recall with gratitude and satisfaction the valuable and efficient services you rendered while acting as a member of the surgical staff, and they can never forget that it was while holding the Chair of Clinical Surgery in the University of Edinburgh that you carried on within the Royal Infirmary that famous work which has formed an epoch in the history of medicine; has revolutionized the science and practice of surgery, and has conferred untold benefits on mankind. The Managers desire to assure your Lordship of their continued interest in and regard for you, and their earnest hope that every blessing may attend you in time to come.

The following is a copy of the communication forwarded by the Senatus Academicus of the University of Glasgow:

My Lord, The Senatus Academicus of the University of Glasgow desire me to express to your lordship their cordial congratulations on the occasion of your eightieth birthday.

They remember with proud satisfaction that over forty years ago you were of their number. As Professor of Surgery you gave new lustre to the Chair you occupied, and enhanced the ancient fame of the University as a school of science and medicine. The studies and researches which you then instituted were of profound interest in themselves, and were fraught with stimulating impulse to the students and colleagues who first learned of them from your lips. But they also furnished the foundations of that great system of treatment which has revolutionized the science and the art of surgery, and has brought uncounted benefits to sufferers in every land.

You have thus earned the gratitude of humanity, and the Senatus rejoices to know that high honours and distinctions have been offered to you in token of the affectionate esteem in which your name is held. But they feel assured that, amid the brilliant tributes paid to you by princes and peoples, you will not deem a message of regard from this University to be unworthy of your acceptance. Love, honour, and obedience accompany you in the evening of your days: by none are these more loyally yielded than by your disciples and admirers in your old University.

They pray that the consciousness of great work well done may afford you abiding solace and inward strength in your years of retirement and repose.

In name and on behalf of the Senatus Academicus,

DONALD MACALISTER,
March 21st, 1907. Principal.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

During the weeks ended February 23rd, March 2nd, 9th, and 16th the deaths from plague in India numbered 24,242, 27,769, 41,667, and 19,467.

The provincial figures were: Bombay Presidency, 3,506, 3,746, 7,744, and 1,953; Bengal, 1,955, 1,971, 4,955, and 5,019; United Provinces, 6,137, 10,870, 14,651, and 10,530; Punjab, 10,834, 11,571, 13,853, and 1,756; Central Provinces, 1,663, 1,413, 5,248, and 1,708; Central India, 512, 1,951, 1,951, and 18; Burmah, 459, 449, 449, and 344. Plague also prevails in Rajputana, Mysore, Kashmir, and Madras, but the numbers are insignificant compared with the above.

From January 1st to March 16th, 1907, there have been 254,015 deaths from plague in India, a marked increase upon the returns for the year 1906, when the deaths from plague for the whole year amounted to only 216,509.

The number of deaths from plague in India during the years 1904, 1905, and 1906 were respectively 1,023,815, 946,558, and 216,509.

The number of deaths from plague in India from January 1st to the middle of March during the years 1904, 1905, 1906, and 1907 amounted to 253,903, 316,801, 70,761, and 254,033 respectively.

The number of deaths during the current year are therefore, to the middle of March, somewhat above the number in 1904 during the year, when over 1,000,000 died of plague; they are, however, considerably fewer than the deaths which occurred during the corresponding period of 1905; but this satisfactory state of affairs is counterbalanced by the fact that the mortality during the third week of March, 1907, amounted to 2,000 more than in the corresponding week of 1905, and 9,000 more than in the same week of 1906. The outlook is therefore not hopeful. Since plague appeared in India in the autumn of 1896, the number of deaths from the disease in India to March 16th, 1907, has been 4,767,141.

MAURITIUS.

During the weeks ended March 7th, 14th, 21st, and 28th, the fresh cases of plague numbered 0, 1, 0, and 2, and the deaths from the disease 0, 1, 0, and 2 respectively.

HONG KONG.

During the week ended March 23rd the fresh cases of plague numbered 3, and the deaths from the disease 3. No cases recorded between August 24th, 1906, and March 16th, 1907.

AUSTRALIA (QUEENSLAND).

Brisbane.—During the weeks ended January 19th, 26th, February 2nd, 9th, and 16th, the fresh cases of plague number 8, 4, 3, 1, and 3; the deaths from the disease amounted to 1, 2, 3, 1, and 1 respectively.

Port Douglas.—During the week ended January 26th, as previously reported in the BRITISH MEDICAL JOURNAL of March 16th, 31 cases of plague were reported at Port Douglas. Of these one case only proved fatal: all the others recovered. The disease is declared to be of the pestis minor type. During the week ended February 9th, six fresh cases of pestis minor were reported.

Ipswich.—During the week ended February 16th, one fatal case of plague occurred at Ipswich, Queensland.

MALARIA IN LIBERIA.—The Foreign Office has published a long report on Liberia by Captain Braithwaite Wallis, British Consul at Monrovia. The country, which is described as being one of the richest of the whole West Coast, lies about 400 miles north of the line, and consists very largely of forest. It is especially promising as a rubber centre, and Captain Wallis points out that as Germans have made a success of trading there is no reason why Englishmen should not do likewise. The climate, however, is described as being very bad. In the coast settlements there is no drainage, and practically no attempt at all at sanitation. The worst season of the year is at the beginning and end of the rains, when malaria of a severe type is prevalent, the Americo-Liberians suffering nearly as much from the disease as Europeans. The aboriginal adult is affected, but very seldom dies of malaria. In the vicinity of all the Americo-Liberian towns, as well as in the native villages connected with them, innumerable stagnant pools, the breeding grounds of *Anopheles* mosquitos, are found, and the blood of practically every single native child teems with malarial parasites. It is, therefore scarcely surprising to learn that mosquitos caught in the villages are likewise found to be almost invariably affected. The geographical distribution of malaria is to all intents and purposes universal in the country, and at Monrovia, owing to the abundance of pools and the absence of any attempt to battle with the causes of the disease, a very high percentage of the resident Europeans are fever-stricken. Their houses, invariably built near native huts in which there are swarms of children, show the deadly effect of such reckless disregard of the first principles of prophylaxis. The rainfall on the Liberian coast appears to be about 150 inches. From the British colony of Sierra Leone, where some 175 inches are registered, the rainfall diminishes as one goes southward until on the Gold Coast only about 90 inches fall annually. The heavy rainfall of Liberia is, however, more or less confined to the coast belt, for on the inland plateau beyond the forest only about 70 to 80 inches fall, and the climate is healthy, with cool nights, the thermometer going as low as 54°. Mosquitos are most prevalent at the beginning and at the end of the rains, as there is too much water for the larvae at the height of the rainy season. Owing to lack of sanitation, bad food, extreme humidity, and generally unpleasant surroundings, the climate of Liberia, even apart from malaria, is both dangerous and enervating to whites. The European merchant has literally a struggle for existence. Captain Wallis writes strongly as to the absolute necessity of every European firm established in the country issuing stringent orders as to the mode of life and precautions to be adopted by its staff and employés, insisting on the regular use of quinine and unremitting care with the mosquito net.

NEW DRUGS AND SECRET REMEDIES.

(Continued from page 882.)

The following is a summary of further reports by F. Zernik on new drugs, proprietary preparations, and secret remedies which appeared in the *Deut. med. Woch.*, Nos. 49 and 52, 1906.

Purgatives and "Anti-fats."

Melal is made in Dresden, and is vaunted as an apple powder containing nutrient fruit salts, to be used especially as a spring blood-purifying mixture. It is prepared from unripe apples, which are dried, and to this one-third of the weight of cane sugar is added; 40 grams of this powder costs 1s.

Myrtill Laxative Juice (*Laxiersaft*) is supposed to be a mild and painless aperient for children, which should be preferred to all other children's powders, etc. It consists chiefly of a thickened syrup of bilberries and has a pleasant sweetish acid taste. Bilberries are believed to have a constipating action, and it is, therefore, unlikely that the syrup would act as a laxative. If this should be the case it would depend on the fruit acids present in the preparation.

Eunor's Fruit Salt, an English imitation of *Eno's Fruit Salt*, consists of sodium bicarbonate 50 per cent., sodium bitartrate 15 per cent., and free tartaric acid 35 per cent.

Remedies for Nervous Ailments.

Antiépileptique (Uten) is a solution of potassium bromide (16 per cent.), coloured green, and containing 1 per cent. of an indifferent bitter tincture.

Fucol is made in Brehmen by extracting roasted seaweeds (chiefly *Fucus vesiculosus*) with sesame oil. It is supposed to replace cod-liver oil, and the advantages claimed for it are its high emulsive properties, its iodine content, and the large quantity of free fatty acid it contains. On examining it, Zernik found that it contained only small traces of iodine, and that its emulsifying capabilities are not nearly so marked as are those of cod-liver oil. It appears to differ only very slightly from sesame oil, which was once introduced as a substitute for oleum morrhuae.

Dr. B. W. Hair's Asthma Cure is an English preparation. It is prepared in Germany by Dr. B. W. Hair of Leipzig. The advertisement accompanying the preparation announces that the wonderful results attained by its means impel the introducer to announce to the world that he has discovered a certain cure for asthma. It is a fluid containing 5.6 per cent. of potassium iodide in a mixture of wine, water, and alcohol. Besides these ingredients there is a trace of a substance extracted from wood tar, and also an apparently indifferent bitter. The price of the bottle, containing 175 c cm., is 5s.

Dr. P. Harold Hayes' Asthma Medicines are sent out from the Asthma Institute in Buffalo, U.S.A. A pamphlet containing instructions, dietary, etc., is sent, and the patient is informed that the medicines are not sold; the medical advice is charged for and the necessary medicines are supplied free of charge. A six weeks' course costs $10, payable in advance! Six of the seven medicines constituting the treatment were examined. The first contains turpentine and peppermint in emulsion; it is given for cough in doses of from 20 to 30 drops. The second was a mixture of potassium iodide, to which wine, hydrochloric acid and sugar is added. The dose is 15 minims three times a day before meals. The third is an evening mixture (dose, 30 minims) containing the iodides of potassium, sodium and ammonium (6.7 per cent.). The fourth is a solution of peptonate of iron given in doses of 15 minims three times a day after meals. The fifth consists of small capsules containing about 1½ gr. of quinine sulphate, "in order to strengthen the lungs and lessen the tendency to catching cold." The sixth consists of sugar-coated pills, consisting chiefly of jalap resin.

Körber's Cure for Consumption.—The advertisement of this preparation is a flagrant one. Treatment for a fortnight costs about 12s., and the medicine contains butter fat, honey, catechu and tar-water.

Migränol is a Leipzig remedy for headache and toothache. It is sent out in small glasses, costing 2s. and 1s. 2½d., while refills cost 1s. It is applied externally to the painful area. It is a 10 per cent. solution of menthol in acetic ether, with 4 per cent. of the spirit of dzondium, camphor and some sweet smelling ethereal oils.

L. and G.'s Nerve-curing Cigars.—These cigars have recently been introduced by Siegmund, Lewin, and Co. in Berlin, and have been praised as a remedy against sleeplessness, headache, and other nervous symptoms by a general practitioner, Dr. Ebeling. They are cigars of moderate quality which have been treated with some bromine compound, but the smoke only contains such minute traces that an action is quite impossible.

Perox o cop is a tapeworm remedy, containing about 2 gr. of copper oxide (black) and "Hungarian salts" in powder form. Copper sulphate has been recommended for tapeworms by Hager. The powders must not be taken with acid foods.

Pink Pills for Pale People (Dr. Williams).—These are put up in a wooden box containing thirty-six rose-coloured egg-shaped pills. The price is 2s. 9d. They contain potassium carbonate, iron sulphate, small traces of manganese oxide and "neuraemin" (supposed to be a combination (?) of lecithin, haematin, and smilacine. The last-named is derived from sarsaparilla). It also contains a substance containing emodin. The constituents of these pills vary, and some arsenic has been found in some. A warning against the use of them has been issued in Carlsruhe.

Steiner's Oriental Strength Powder is said to produce a full, fine figure and increase of weight. The powder consists of leguminous starches (beans, pease, and lentils), rice, sugar, common salt, and sodium bicarbonate. The Carlsruhe health authority warns the public that the same substances can be obtained at a much lower price. The cost of 185 grams is 2s.

MEDICINAL AND DIETETIC PREPARATIONS.

Charcoal Biscuits.

We have received samples of the charcoal biscuits prepared by Mr. J. E. Mason, 38, Chapel Street, London, W. These are well-made biscuits, entirely without sweetening; the charcoal which they contain is very finely levigated, and, consequently, causes no grittiness to the teeth in eating. These biscuits will, no doubt, be appreciated for patients subject to flatulent dyspepsia.

The Formates in Medicine.

The use of formic acid, or preferably, of the formates of the alkali-metals and of lime, has been recommended for their tonic effect and stimulating action on the muscles; in addition, they have a slightly diuretic action and have been prescribed in neurasthenia and senile weakness.

We have received and examined a number of combinations for their administration, and the following which are prepared by Messrs. Duncan, Flockhart and Co. (143, Farringdon Road, London, E.C.), are elegant preparations well suited to the purpose:—Capsules: These contain formates of sodium, potassium, calcium, quinine and strychnine; examination of the contents of a number of the capsules showed no variation of importance in the dosage; this combination is recommended in cases of exhaustion from physical exertion, and also for chronic rheumatism. Compound elixir: This contains formates of sodium, calcium, and strychnine only, in the form of an agreeably-flavoured rather acid syrup. Liquid extract of malt with formates: This contains formates of sodium, potassium, and calcium, with liquid extract of malt; it is a pleasant sweet preparation with strong malt flavour, and is recommended for convalescents. In another preparation to which they have given the name "Glycerofomate," Messrs. Duncan, Flockhart and Co. put forward a mixture containing formates of sodium and potassium, with glycerophosphates of calcium, sodium, potassium, manganese, iron, and caffeine. The importance of the glycerophosphates for the administration of phosphorus in natural organic combination has become thoroughly established, and doubtless the combination of these therapeutical agents with the formates will prove a very useful one. This preparation is of a syrupy nature; the tincture of kola of Robin's original syrup of glycerophosphates is here replaced by a definite proportion of caffeine, while the tincture of ignatius is omitted, leaving the prescriber free to add strychnine if desired.

We have also examined a sample of Setterie's Compound Syrup of Formates, prepared by the British Pharmacal Company (155, Marlborough Road, Hornsey Road, N.). This preparation contains formates of sodium, iron, quinine and strychnine in the form of a moderately sweet, and agreeably flavoured syrup; the combination will no doubt find favour as a tonic.

LITERARY NOTES.

THE German Central Committee for Cancer Research has voted to Dr. Jacob Wolf of Berlin the sum of £100 for his recent work on the history of our knowledge and theories as to cancer, and for the prosecution of further researches in the same field.

Professor Luigi Luciani of Rome is preparing a third edition of his well-known treatise on physiology. He has issued an announcement to all members of the medical profession stating that he will give the most careful consideration to any suggestions as to changes or corrections in the work.

The March number of the *Journal of Physiology* contains an account of the life and scientific work of the late Sir Michael Foster by Professor Langley. It is admirable alike in feeling and in style, and is illustrated by a characteristic portrait from a photograph taken in 1896 by Mr. R. A. Bickersteth, one of Foster's old pupils.

The W. B. Saunders Company writes: "We notice in the issue of the JOURNAL of April 6th a review of the German edition of Sobotta's *Atlas and Textbook of Human Anatomy*. The notice of the book concludes with the following statement: 'At present, so far as we are aware, the text has not been translated into English, and is therefore not adapted to the use of those who do not use German,' etc. Might we point out that an English edition of this work is being published by us, the first two volumes of which have already appeared? The concluding volume, which is the subject of your review, is in active course of translation and will be issued at an early date."

Messrs. J. and A. Churchill are about to publish a third edition of vol. ii, Part 3, of Allen's *Commercial Organic Analysis*. The subjects dealt with are: Acid derivatives of phenols, aromatic acids, resins, and essential oils. Much of the work of revision has been done by Mr. A. R. Tankard, F.C.S., Deputy Agricultural Analyst for Monmouthshire and the County Borough of Newport. With its issue the complete work in eight volumes may now be procured.

An appreciative account of the life of the late Sir John Burdon-Sanderson, by Professor Gotch, has been reprinted from the *Proceedings* of the Royal Society. It is illustrated by an excellent reproduction of a photograph taken by Miss Acland at Oxford in 1894. No one knew Burdon-Sanderson better than Professor Gotch, and none of his pupils was better fitted to set his scientific aims and achievements in a clear and striking light. The author is to be congratulated on having produced a fine piece of biography, which is all the more interesting in that it has evidently been a labour of love.

The new volumes of the World's Classic Series, to be published this month by Mr. Henry Frowde, include Goldsmith's Poems, with introduction and notes by Mr. Austin Dobson; Hazlitt's *Lectures on the English Comic Writers*, with introduction by Mr. R. Brimley Johnson; Carlyle's *French Revolution*, in two volumes, with introduction by Mr. C. E. L. Fletcher; Palgrave's *Golden Treasury* with additional poems; and the fourth volume of Barker's *Waverley*.

The following passage from the New York *World* will show how far [illegible] even the *Daily Mail* and the *Morning Leader* fall of [illegible] the Yellow Journal in the land of its birth:

> [illegible] was tearing her own heart to [illegible] with her own hands, she was feeding her own soul to the flame of [illegible] and [illegible] of insane unchastity, every [illegible] eyes [illegible] stirred a remote bird sat watching [illegible] might watch the dismemberment of a quivering, living [illegible]

It is boldly graphic, but our prosaic mind has a difficulty in following exactly what the lady did. Did she feed her soul with pieces of her heart after roasting in the flame? Or did she keep her soul in vitriol and set it on fire? Or did she feed the flame of vitriol with her soul, as a starved bird [illegible] with meat? We should be glad, for the benefit of the [illegible] of a living carcass. If the fine frenzy of the writer may be held to excuse the passage from the point of view of style, it is surely not pardonable in connexion with a lady.

Messrs. Baillière, Tindall, and Cox have in preparation a *Dictionary of Nursing Terms*, by Dr. Henry Lawrence Wilcock, Physician to the Royal Victoria Hospital, Bedford. [illegible] *Effective Treatment of Hip Disease*, by Dr. Alexander B. Bennie, of Melbourne Children's Hospital; a *Synopsis of the British Pharmacopoeia*, by H. Wippell Gadd, F.C.S.; *Pocket Osteology*, by Philip Turner, F.R.C.S., Demonstrator in Anatomy, Guy's Hospital; *Mental Nursing*, by Dr. W. Maule Smith and R. H. Crosse of the West Riding [illegible]lum, Wakefield; *Blood Stains*, by Major W. D. A[illegible]han [illegible]erland, I.M.S.; *Diagnosis of Urinary Diseases*, by Dr. Suth[illegible]ful, [illegible]nesly, Honorary Surgeon, Wolverhampton General E. Dea[illegible]e [illegible] *Trypanosomata and the Trypanosomiases*, by A. Hospital; [illegible]h. 1[illegible] F. Mesnil, translated and edited by Dr. Laveran and [illegible], Assistant Professor of Pathology, Uni- David Nabarro [illegible] London, and late Royal Society Commis- versity College, [illegible]eks [illegible] Sickness in Uganda. sioner on Sleeping [illegible]ague [illegible]he first number of the *Proctologist*, a new quarterly periodic[illegible] Ho[illegible] is published at St. Louis, and is edited by Dr. Rollin H. [illegible]s [illegible] a new medical journal. We think it sufficient to mention [illegible] devote our efforts to the most [illegible] suffering, and the most severe suffering, is the d[illegible] any." Dr. Herman A. Bray says: "[illegible] speciality was Frederick Salmon, M[illegible] in 1835 founded the Benevolent Dis[illegible] of the poor afflicted with fistula, pile[illegible] of the rectum. The Dispensary develo[illegible] Hospital. Dr. Achilles Rose, in a note[illegible] rectum with carbonic acid gas, says tha[illegible] old book that Kuester and Perkins, the [illegible]ary 18[illegible] who lived from 1740 to 1799, had tred[illegible] the rectum, especially in cases of dy[illegible] inflating the rectum with carbonic acid gas pu[illegible] the last twenty-four years Dr. Rose has [illegible] treatment in all cases of dysentery that have come [illegible] his care, with results that have convinced him that [illegible] the most rational and most reliable method of d[illegible] with the disease. In 1903 he claims to have demonst[illegible] that simple complete rectal fistula, provided it is ne[illegible] syphilitic nor tuberculous, can be cured by a few appl[illegible] tions of carbonic acid. "This," he plaintively says, "[illegible] fact which cannot be taken out of the world, and [illegible] appears strange to me that so little attention has been p[illegible] to this most remarkable observation of mine." He [illegible] perhaps find comfort in the reflection that [illegible]

> Full many a rose is born to blush unseen
> And waste its sweetness on the desert air.

Bibliographical research is sufficiently laborious when the printer interposes no artificial obstacles in the way of the student, such as turning 6's into 9's, adding a superfluous *e* to the straightforward British name of Brown, and the like. It must be owned, too, that authors are not so careful about such things as they might be; even if they have not a soul above small details, their handwriting too often resembles speech as defined by Talleyrand, who said it was a means of concealing thought. It is seldom, however, that even a combination of these causes so completely conceals a man's identity as in a reference to the paper on the temperature in malignant disease of the liver and bile passages contributed to our pages on February 9th by Dr. James W. Russell, which appears in the *Gazzetta degli Ospedali* of April 2nd. Had it not been for the clue supplied by the title of the JOURNAL, which happened to be right, we doubt whether we should have recognized our contributor under the disguise of "Janis W. Rutlet." We can only remember one case approaching to this. Some years ago a well known French surgeon, M. Tuffier, made a contribution to surgical literature which was widely quoted throughout the medical press of the world. The author's natural gratification must, however, have been somewhat dashed by the distortions of his name, which were so numerous as to suggest that some arithmetical jugglers were using it as a subject for combinations and permutations. It appeared in different quarters as "Tutier," "Tuffer," "Tufier," "Tuffir," and "Tufir." The worst indignity was that poor M. Tuffier finally lost his nationality, figuring in an Italian journal as "Tuffieri," and in a Spanish one as "Tuffiero." We follow the phases in the evolution of the name no further but imagination may trace the transformation of Tuffier into "Tuwerow," "Tufferowski," "Tuffermann," "Tufferich," perhaps even "Tufferson."



Aix-les-Bains and Lac du Bourget.

NOTES ON HEALTH RESORTS.

AIX-LES-BAINS.

Aix-les-Bains has long been celebrated for its springs, its race-course, and its baccarat tables. Crowds gather there during the season, and under the bathing cloak gamble away large sums of money, although of course a certain proportion have always taken the cure seriously.

Situated in the canton of Savoy, not far from Geneva, and nine hours from Paris, the valley in which Aix lies is bounded on the west by the Jura range, and on the east by Mont Revard (5,070 ft.), which can be ascended by a cogged-wheel railway; to the south are the Chartreuse masses and the distant Alps and Dauphiné mountains. The valley of Aix is highly cultivated, being full of farms, gardens, and vineyards; along the borders of Lake Bourget, at the base of Mont du Chat, figs ripen in the open air. The temperature is equable owing to the protection afforded by the hills from violent winds. In summer it is rare to find the thermometer as high as 82° F., and the mornings and evenings are always cool.

There are two thermal springs, the Sulphur and the Alum, or Saint Paul, which yield over one million gallons in twenty-four hours. Both springs are probably of the same origin, their chemical and physical characteristics being very similar. The water is clear and has a slightly sulphurous smell; its specific gravity is 1.0024 to 1.0025, and the temperature taken at the spring is 113° F. at the Sulphur and 115° F. at the Alum spring. The chemical composition of the water, according to the analysis made by M. Wilm in 1878, is as follows:

Composition of "Sulphur" and "Alum" Springs.

	Milligrams or c.cm. per Litre.	
	Sulphur Spring.	Alum Spring.
Sulphuretted hydrogen	3.75	3.74
Hyposulphites	3.84	3.60
Carbon dioxide	47.15 c.cm.	44.58 c.cm.
Nitrogen	13.03 c.cm.	12.50 c.cm.
Calcium carbonate ..	0.1894	0.1623
Magnesium carbonate ..	0.0105	0.0176
Lime sulphate .. .	0.0928	0.0810
Magnesium sulphate ..	0.0735	0.0493
Sodium sulphate	0.0327	0.0345
Sodium chloride	0.0300	0.0274

With a trace of lithium and a minute quantity of silicon.

The "Alum" spring does not contain a trace of alum. There is also a cold spring (51° F.) which yields more than a million gallons of water a day, and is used in the hydrotherapeutic rooms to cool the water from the hot springs.

Indications and Contraindications.

The therapeutical indications are, in a general way, the same as for any massage and vapour thermal bath. The disease which Aix chiefly professes to cure or benefit is rheumatism in all its varied chronic forms, muscular stiffness, lumbago, articular and tendinous rheumatism, hydrarthrosis, synovitis, periarthritis, neuralgic rheumatism, sciatica, etc. Arthritis deformans in the early stages may be benefited, as also infectious rheumatism (gonorrhoeal, etc.). Chronic articular gout is treated by external methods, and in those cases of arthritism in which the uric acid diathesis predominates a mixed cure is recommended, and patients are often sent on to such places as Contrexéville, Evian, or Vichy. In pseudo-ankylosis and muscular atrophy some wonderful cures are claimed. In syphilis the assimilation and elimination of the specific drugs are, it is held, aided by the increase of the circulation after the douche massage. Patients tolerate daily doses of 6 to 8 grams of mercury ointment and as much potassium iodide for several weeks at a time, while at home this would be impossible. Treatment at Aix is also of value in the prophylaxis of all arthritic diseases, especially in children with a tendency to obesity. Among the diseases in which Aix treatment is distinctly contraindicated are tuberculosis of joints, bones, or viscera, heart disease when not compensated, kidney diseases with renal insufficiency, large varicose veins with thrombosis, and suppurative diseases of the bladder. Some of the chronic diseases of the bronchial tract, such as asthma, emphysema, etc., are recommended to observe a few simple precautions when under treatment. Those who have a great tendency to apoplexy, women with fibromyomata causing metrorrhagia, and patients who have biliary calculi are not recommended to visit Aix.

The Bathing Establishment.

The bathing establishment has been added to from time to time, and is now a large building, subdivided into the usual departments. Massage is the great feature of the Aix treatment, and no less than ninety masseurs and masseuses are employed. Following an old custom, they are chosen from among the men and women of the country. They are taught by physicians, begin quite young, and the art is hereditary from generation to generation. During the dull winter season the masseurs are given lessons in general anatomy and in the practical art of massage by members of the Aix Medical Society; they thus learn to give all the various forms of manipulation included under the general head of massage. The essential and original Aix "cure" is the douche-massage—that is to say, massage of the body while it is under the flow of the hot sulphur water. The douche may be general or

local, and is sometimes supplemented by various steam vapour applications, and by reclining and swimming baths, as well as by treatment at Marlioz.

The douche pipes are arranged in the various rooms so that the pressure may be varied according to requirements, and some can be combined so as to give the *douche Ecossaise*, that is, an alternate hot and cold douche. The patient sits upon a stool while the water is allowed to flow over him, and the two attendants massage the muscular parts for five or six minutes; then the patient lies on an inclined board while the lumbar regions are massaged for a few minutes, and finally he stands in the corner of the room while the douche jet is applied as the physician may prescribe. The entire operation should only last ten or twelve minutes; if this is exceeded the patient may suffer an attack of fatigue and indigestion, commonly called at Aix "thermal fever."

The rooms in which local douches are given are small, and are divided into two by a partition in which there are rubber-covered holes through which the patient puts his arms or lower limbs to be massaged by the operator, who is on the other side of the partition, after the fashion of the native ladies of India where the doctor may only examine the tongue and wrist, the rest of their body being concealed behind a purdah. The object of the partition at Aix is to spray water over the affected limb without necessitating complete undressing. The name *bouillon* is given to one form of steam-vapour application. In the portion of the douche-room in which this is given the water falls like rain, coming direct from the springs at 107° F., and filling the room with natural hot vapour. This method is usually combined with the massage douche, and the result is abundant sweating. The other steam-vapour application is known as the Berthollet. The vapour is gathered in large pipes as it rises from an artificial fall, obtained by allowing the Alum water to descend rapidly from a great height. The temperature varies from 104° F. to 107° F. In some cases the patient sits in a "caisse," or closed box, completely undressed, with his head out; but in the majority of cases the Berthollet is used only for local application, in which the treatment is limited to a leg, foot, or arm, or the lumbar regions. This treatment, which lasts about twenty minutes, is often followed by dry massage. In the inhalation rooms—called *humage*—there are four large drums, which bring the vapour from the springs; attached to them are flexible tubes, from which the patients inhale the vapour in throat or bronchial diseases. The vapour is also used in diseases of the ear and conjunctiva.



Aix-les-Bains: the Bath Establishment.

The patients use the baths on off-days from the massage treatment; the swimming baths are also prescribed by way of exercise in cases of stiff joints or partly paralysed limbs.

When it is desired to prolong the period of perspiration produced by the treatment, when there is thought to be danger of catching cold, or if the patient is infirm, he is put into a "maillot" after the water applications, wrapped in blankets, and carried in a sedan chair to his hotel and deposited in bed. Here he is left to sweat, hot drinks being sometimes given; then he is rubbed down by a special hotel attendant, and dresses only in time for lunch. Over fifty men are employed for this purpose. Another feature of Aix is that the doctors meet their patients at the baths daily to give exact instructions to the attendants as to temperature, force, and form of massage, and other applications of the waters.

Duration of the Cure.

The duration of the treatment varies according to the case. Local treatment may be continued for a considerable time, but for the full general treatment in which an effort is made to modify a rheumatic or gouty diathesis, from eighteen to twenty treatments of the douche massage suffice to produce the maximum effect, this with certain days of rest brings the duration of the cure to about twenty-five or thirty days. Attention has to be paid to diet, and the physician usually gives instructions. The appetite is improved by the mountain air, and care should be taken not to increase the nutrition too much.

Physiological Effects.

It is claimed for Aix that the physiological effect of the treatment consists in a modification of the various functions of the organisms of a two-fold nature, internal (physico-chemical) and external, by the douche-massage and percussion. The internal results are brought about by the temperature and mineral constituents of the water and, as it is believed, by an electric state produced during the application. The constituents of the water are, it is thought, absorbed by the skin, and in the case of sulphuretted hydrogen by the lungs. The external effects do not depend upon the character of the water, but on the method of application, by massage, percussion, the douche, etc. The massage acts not only upon the skin but also upon the subcutaneous tissues, the lymphatics and on the circulation of the blood in muscles and vessels. During the treatment by douche-massage there is an increase in the total urinary solids, especially uric acid, and a decrease in the urinary water; there is also a lowering of arterial tension, with a consequent relief of heart symptoms. In chronic forms of rheumatism the benefit of the cure is only felt several weeks after treatment, and a permanent cure can only be expected, as a rule, if the treatment is followed for several seasons. The drinking of water is considered much less important than its external use, but it is very digestible and its diuretic action is considerable.

Marlioz.

The cold alkaline-iodurated sulphur springs of Marlioz are within Aix itself, the establishment, which is in the middle of a beautiful park, being only seven minutes by the omnibus from Place Carnot. There are three springs of clear, limpid water, with a sulphurous alkaline taste, having a temperature of 57° F. The analysis is given in the accompanying table.

There are rooms for cold and hot spray applications, and two large rooms for dry inhalation of the water products, a gargling room, cold spray rooms, and a bath house with warm and cold baths and douche rooms.

Chief Mineral Constituents of the Marlioz Spring.

	Per litre.
Calcium carbonate	0.1912 milligrams
Sodium hydrosulphide	0.0295 ,,
,, sulphate	0 2631 ,,
Calcium sulphate	0 0605 ,,
Magnesium chloride	0 0640 ,,

With minute quantities of sodium iodide and silicon and a trace of bromine.

The Marlioz treatment is chiefly appropriate for chronic forms of laryngeal and bronchial catarrh, granular pharyngitis, adenoid vegetations, hypertrophy of the tonsils, ear disease, eye diseases, and chronic conjunctivitis. The waters are specially indicated in the case of lymphatic children who are in an anaemic state from city life, and for children suffering from scrofula, glandular enlargements, and hereditary syphilis. Pastilles containing the natural salts of the waters are manufactured at Marlioz.

Saint Simon.

The St. Simon spring is about fifteen minutes' walk beyond Marlioz. The water is clear and transparent, with no taste and a slight alkaline reaction. Its chief mineral constituents are sodium sulphate and magnesium carbonate, chloride, and oxide. It is used as a table water, and, owing to its slight mineralization and the salts of magnesia it contains, is useful for gouty people and for persons with delicate digestion.

The Aix-Massonnat Source.

These waters are conducted from the property of M. Massonnat on the hills north-east of Aix to a kiosque in front of the thermal establishment, and sold there. The water is a pure spring water, containing little more than traces of mineral constituents. It is soft and slightly alkaline in reaction, and its use tends to moderate vascular excitement, and keep up the normal activity of the kidneys, thus helping to eliminate toxic products.

Mechano-therapeutic Institute.

There is a large Zander institute at Aix, containing a complete set of apparatus, the mechano-therapeutic treatment being found useful in certain cases, in conjunction with the bathing cure. Even here the Aix sporting instincts break out, for in the circular issued by the directors we read, under the description of the Zander treatment: "It gives exercise, or even a kind of sport, without fatigue, to old people who could not otherwise take exercise."

The tenth Congress of Polish Scientists and Medical Practitioners will be held this year at Lemberg some time between June 16th and July 24th. There will be a scientific and medico-hygienic exposition in connexion with the congress.

The late Mrs. Emily Rachel Merton, of Hove, left £50 each to the Hospital for Sick Children, Great Ormond Street; Brompton Consumption Hospital; the Royal Hospital for Incurables, Putney; and the Jews' Hospital and Orphan Home, Norwood.

The seventh International Congress of Physiologists will be held this year at Heidelberg, August 13th-16th, under the presidency of Professor A. Kossel. The previous congresses were held at Basle, in 1889; Liége, in 1892; Berne, in 1895; Cambridge, in 1898; Turin, in 1901; and Brussels, in 1904.

M. Regnault, French Minister at Tangier, in a speech delivered over the body of the late Dr. Mauchamp before it was put on board ship for conveyance to France, stated that the Government of the French Republic intended to perpetuate the memory of the unfortunate doctor by a hospital to be founded at Marakesh at the expense of the people of Morocco. In this way, said M. Regnault, one of the punishments inflicted on them for the murder of a Frenchman would be a benefit to themselves. This ingenious method of practising the precept to return good for evil—at the culprit's expense—may furnish a hint to penologists.

MOTORS FOR MEDICAL MEN.

[From a Correspondent.]

(Continued from page 822.)

Theory of Explosion Engines.

In order to get the best results and to get them with economy of fuel, it is essential to understand, so far as it is known, exactly what takes place in the cylinder of an explosion engine. The first point to realize is that the power is wholly derived from the expansion of the gases by the heat generated by the explosion, and not by the formation of products which are more bulky than the contents of the cylinder before the explosion. It is true that the products of the combustion of petrol vapour and air do occupy, when reduced to the same temperature, a little more space than they did before combustion, but it is only a little; it is the enormous heat produced, a heat higher than the melting point of platinum, to which the gases are raised that expands them. Thus in the strictest sense an explosion engine is a heat engine, and were it feasible to employ a red-hot cylinder, the gain in power would be enormous. The cooling by means of a water circulation is all waste of power, but it is unavoidable. So, too, the engine when cold does not develop its full power; the cold walls of the cylinder rob the charge of its heat and so lessen its expansion, even perhaps extinguishing the flame along the stratum of gas which lies in contact with the cylinder walls.

Compression.

The more combustible material we can get into the cylinder the greater the heat developed; the charge is therefore compressed before being fired. The gas engine, the pioneer of explosion engines, only became a success after the compression of the charge was adopted, and nowadays compression is truly said to be the soul of explosion engines. Of course the engine has to do work in compressing the charge to a pressure of from 60 to 80 lb. on the inch, but this work expended is nothing as compared to the gain, although Professor Hopkinson has found that in a 17-h.p. engine with four cylinders the work expended in compression and in turning the engine is as much as 1 h.p. Precisely similar charges were exploded in a closed chamber, and the pressures reached measured; it was found that the charge when compressed to 6 or 7 lb. and fired, only gave a pressure of 45 lb. on the inch, and took so long to attain to this that it would have been useless in the cylinder of an engine. But the same charge compressed to 60 lb., and then fired, gave a pressure of 300 lb. on the inch, and reached this very quickly. To this subject we shall need to recur later in connexion with the operation of the engine; for the moment it will suffice to point out the importance of prior compression of the charge.

The fuel burnt, known as petrol, is not a pure chemical compound, but is a mixture of several of the more volatile constituents of crude petroleum, separated by a kind of fractional distillation; it should, however, chiefly consist of pentane, a hydrocarbon. Hence the products of its complete combustion should be only carbonic acid and water, but as a matter of fact, under the conditions of actual use, other compounds are formed in small quantity.

There is some reason to suppose that, at the high temperatures involved, the hydrocarbon does not entirely burn as such, but that dissociation occurs, and the hydrogen burns first and the carbon afterwards. Hence, if there be an insufficiency of air, all of the hydrogen burns, but some of the carbon escapes in the solid form, making smoke or deposits of carbon.

The Carburettor.

Hence it is of the greatest importance to get a properly apportioned mixture of petrol vapour and air, a function discharged, often imperfectly, by the carburettor. It might have been supposed that the best mixture would be that which contains the exact amount of air requisite to provide oxygen for the complete combustion of the hydrocarbon, but in practice some excess of air is found to be advantageous. If, on the other hand, the excess of air be too great, forming what is termed a weak mixture, the results are far from satisfactory, and, notwithstanding the excess of oxygen, some of the hydrocarbon always escapes unburnt.

The Construction and Working of a Petrol Engine.

We may now pass on to the actual construction of a petrol engine and the manner of its working. The cylinder, which is usually placed vertically, is open at its lower end, whilst above the part bored true is a space termed the combustion chamber which is closed, though two openings shut by valves are made into it. The piston is of the trunk engine type: that is to say, it is a hollow cylinder, closed at the top but open below, and the connecting rod is attached to a rod which crosses the hollow of the piston near its upper end. Thus both cylinder and piston are open below into the crank chamber. The piston is forced downwards by an explosion above it, but is returned by the momentum of the fly-wheel of the engine.

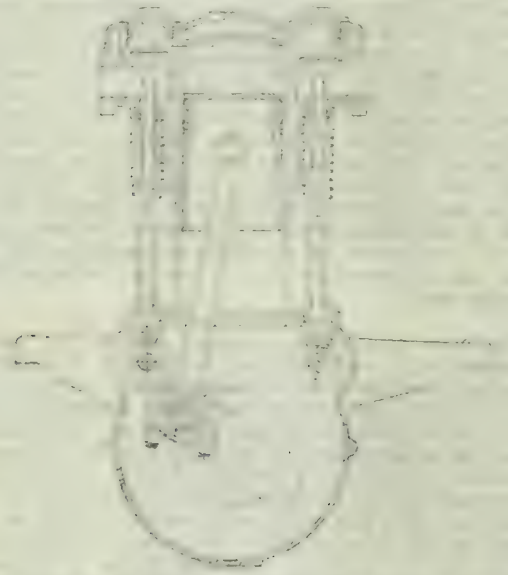


Fig. 1.—Sectional view of a cylinder. The piston is near the top of its stroke, having nearly risen, its lower end with a connecting rod is seen, its lower end with the crank chamber is seen below. At the sides of the cylinder are the inlet and exhaust valves covered by caps, on the left one of which is seen, strong valve springs. The inlet valve is open for the admission of a charge, the exhaust valve is closed. (Lent by the Humber Company.)

The sequence of events in the working of the engine is as follows:

First Revolution.

First Half.—The piston is at the top of its stroke, the inlet valve open and the exhaust valve shut. The piston descends, sucking in a charge through the open inlet valve.

Second Half.—The piston ascends, both valves being shut, and compresses the charge above it.

Second Revolution.

First Half.—The piston being at the top, both valves shut and the charge under compression, the spark occurs, and the piston is driven down by the explosion.

Second Half.—The piston ascends, the exhaust valve having opened, and expels the burnt charge. This sequence of events, in which the piston receives only one impulse during two complete revolutions of the engine, is known as the "Otto cycle," having been first introduced in the Otto gas engine. As this cycle is the source of the power, and its accomplishment correctly is a vital matter, it will be well worth while to consider somewhat closely what happens.

The compression is effected in the cylinder, and, supposing the valves and the piston to be air-tight, its degree will be determined by the ratio of the cubic area swept by the piston to that of the explosion chamber above it into which the piston does not enter. The importance of good compression has already been alluded to, and the first point to notice is that, as the piston continues to descend again, the compression diminishes rapidly. Hence, unless the effective firing of the charge takes place at the moment the piston is at the top, full advantage of the compression will not be obtained; in other words, retarded ignition comes to just the same thing as poor compression, and that means waste, for the petrol used is not burnt so as to develop its utmost power.

To understand this aright it is desirable to study a diagram embodying the results of Messrs. Bairstow and Alexander's experiments on explosions, not in a motor cylinder, but in a closed vessel. They found, in the first place, that there was a lag of one-hundredth of a second after the spark took place before the explosion developed any material power. Hence, if the spark be so timed as to occur exactly when the piston is at its highest point, a hundredth of a second will elapse during which the compression is diminishing by the descent of the piston before much force is exerted.

Now if the engine is running at 1,000 revolutions a minute—a fair average speed—the piston traverses the whole length of the cylinder in three-hundredths of a second, so that a third of its compression effect would be lost. Moreover, in practice it is found necessary that the exhaust valve should open a little before the completion of the explosion stroke, else the return of the piston will be impeded, and so there is less than three-hundredths of a second during which the full force is exerted:

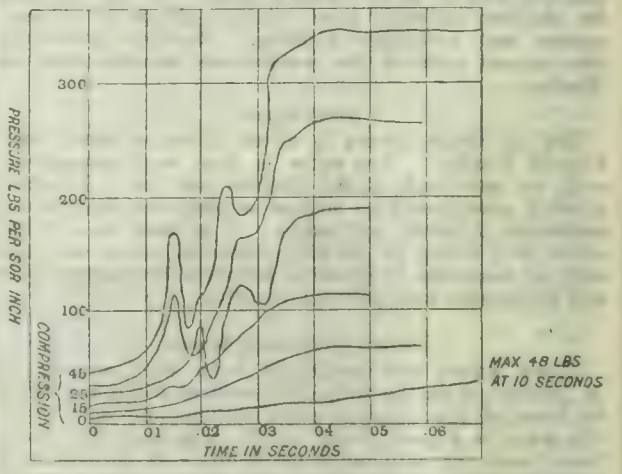


Fig. 2.—The horizontal line at the bottom marks the time, measured in hundredths of a second. Along the vertical line are marked pressures in lb. per square inch. The traced curves show 1) the initial compression before the charge was fired, (2) the maximum pressure attained, (3) the period or time in which this maximum was reached, and the period of its decline. The spark took place at the point marked 0.

hence the spark is made to occur in practice a trifle before the piston reaches its top point, and this allowance, when the engine is running fast causes the force of the explosion to coincide nearly with the highest position of the piston and with the best compression. But if the engine is not running fast, as, for instance when it is being revolved by the starting handle, the explosion will attain to force before the piston has reached the highest point, and will drive it backwards, reversing the action of the engine, and constituting a "back fire." Or, if the engine is running faster than this, but still not fast enough to carry the piston past its highest point before the pressure comes upon it, the action of the engine will not be reversed, but a sharp knock will be heard, a condition of things very detrimental to the engine. It will therefore be understood that while, to give the best results, the ignition should always be advanced as far as it can without producing a knock, care must be taken that it is not too much advanced.

If the diagram be examined with the view of seeing what the condition of things during the available three-hundredths of a second is, it will be seen that not only is good compression essential in order to get a great pressure per inch as the result of the explosion, but also that good compression is indispensable in order to arrive at the maximum pressure speedily. For with a low initial compression (say, 7 lb. to the inch) the low maximum explosion pressure of 45 lb. will not be reached during the piston stroke, but, in fact, takes ten hundredths of a second to develop that is, the time of three piston strokes and thus only a very low pressure can be attained before the exhaust valves open and the charge escapes, but with a compression of 60 lb. to the inch the maximum of 300 lb. per inch will be reached in two hundredths of a second, and if the ignition be advanced to a period one hundredth of a second before the piston reaches the top to allow for the lag almost all will be

into the three hundredths of a second period.

It must not, however, be supposed that this diagram can be taken as exactly representing what takes place in a motor cylinder, for the experiments were conducted in closed chambers with fixed walls, whereas one side of the explosion area of a motor engine is formed by the moving piston, which yields before the force of the explosion. Hence, although the diagram is most instructive, the pressures which it gives are not attainable in the motor cylinder. Recent experiments have shown that an average pressure of eighty to a hundred pounds throughout the stroke is more like what is actually attained.

The general lesson to be learned, then, is to see, in the first place, that the compression is made good by the accurate fitting of the piston and of the valves, and, in the second place, that the compression is fully utilized by accurate timing of the spark, so that effective explosion takes place while the compression is at its best. It will also be noticed that, inasmuch as the piston does not sweep out the area of the explosion chamber at the top, the whole of the exploded charge will never be expelled, but some part of the burnt charge must remain behind to mix with the incoming fresh charge.

It is further to be observed that, inasmuch as the explosion takes a very long time for its completion when the compression is low, its effect can then never be utilized within the three-hundredths of a second available. Without entering into further details, it may be said again that the diagram will convey a good deal of information which is practically useful in driving if the periods of three-hundredths of a second be studied in order to see what can occur in that time.

The valves of the majority of modern engines are what is styled "mechanically operated" — that is to say, they are opened by cams on a revolving shaft; the exit valve is always so operated, but some cars still use inlet valves held shut by a spring and opened against this spring by the suction of the engine. The spring inlet valves present this advantage: that whereas the width of the opening of the mechanically-operated valve is always the same, the spring valve opens wider if the suction of the engine becomes stronger, and so admits a larger charge. To some extent mechanically-operated valves may be made to meet this by contrivances

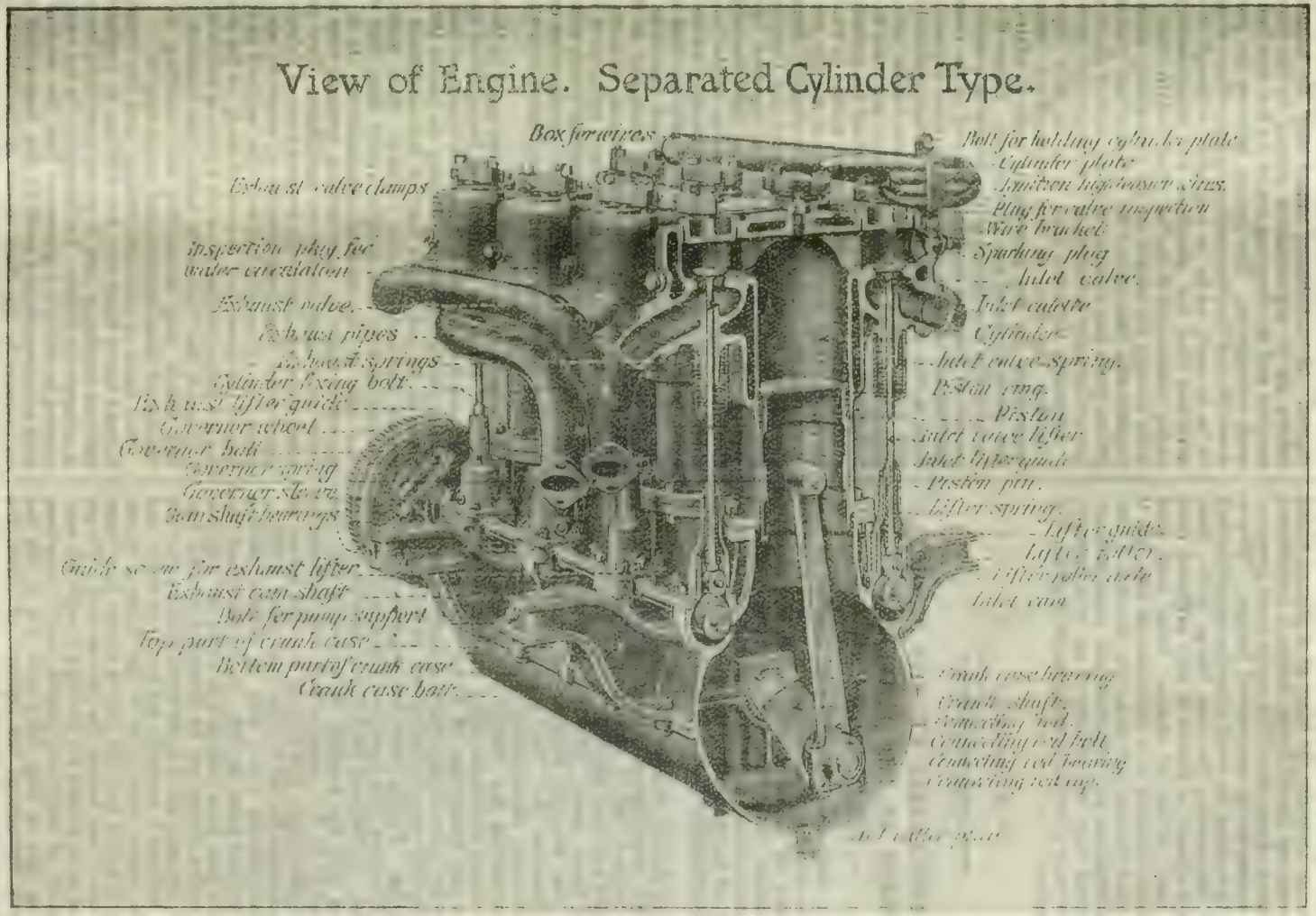


Fig. 3.—General view of a 4-cylinder engine, one of the cylinders and its belongings being bisected to show its interior. (Lent by Messrs. Panhard and Levassor).

for varying the lift of the valves. Such is the construction of the cylinders in the great majority of cars, and the differences between them are in matters of detail rather than of principle, but a car is about to be placed on the market by the Valveless Engine Company in which an entirely different plan is adopted. Instead of valves, which give at times some trouble, the cylinder has two open ports, which are simply uncovered by the piston as it passes them in the lower portion of its traverse. In order to secure the entry of a charge, which in entering sweeps out the old burnt charge, it is necessary that the incoming charge should be under some pressure, though it is subsequently compressed further. This is accomplished by making the crank chamber approximately air-tight, and compressing the new charge in it; then, when the port is opened, it rushes in with sufficient force to drive out most of the old charge. Some very good results have been obtained with experimental cars, but it remains to be seen whether this principle, which is a considerable simplification, will supersede the usual arrangement; at present only one pattern of car is to be made, and that rather more powerful than the majority of medical men would employ.

(To be continued.)

THE UNPOPULARITY OF THE MEDICAL DEGREES OF THE UNIVERSITY OF LONDON.

The assertion that the University of London is still shunned by the majority of students who yearly enter the medical schools of London will readily be accepted by those familiar with the work of those schools. While other universities succeed in attracting between 80 and 90 per cent. of the students in their districts, in London a far smaller percentage even aim at obtaining a university degree.

It was hoped that the scheme of reorganization carried through in 1901 would speedily have led to an improvement in this respect, but it must now be realized that these hopes have not been fulfilled.

During the three years, 1899-1901, which preceded the change, the average number of students who presented themselves for the preliminary scientific, the first professional examination, was 279, but in the four years succeeding the change this average it fell to 263, the numbers successful being 141 and 140 respectively. From the standpoint of those who presented themselves for the intermediate examination for the M.B., the period 1899-1903 may be considered to belong to the old order of things. During these four years there was an average of 242 entries, the number of successful candidates being 159. In 1904 and 1905 the average number of applicants was 235, the average of successes 150. As regards the final M.B., B.S. examinations only 1906 can be classed in the new order, and in that year 126 passed as opposed to an average for the five previous years of 139.

There are two lessons which may be deduced from a brief consideration of these figures. In the first place, the idle talk which has been indulged in about the degradation of the London degree can be dismissed without further comment, for analysis of these results shows that the percentage of failures is certainly not less than in the old days. At the same time it is in the highest degree unsatisfactory to notice that the degree course is no more popular now than it was before the innovations. We are well aware that these figures are not only meagre but subject to a number of disturbing causes which have been felt in London just as they have been felt in all the medical schools throughout the country, of which the chief is said to have been the South African war. But the fact remains that the reorganization of the University has not succeeded in making it popular with the London students at the medical schools.

If we accept this deduction and, quite apart from the statistics quoted, the fact is notorious it becomes a matter of the utmost moment to consider what are the causes of the distaste for the University of London displayed by those now entering for medicine, and how far it is justified. At the outset, the fact that about 50 per cent. of those who pass the intermediate examination fail to graduate might appear to provide the explanation, but further consideration makes it seem probable that the causes at work are independent of the nature and standard of the final examination. The leakage is apparently to be accounted for in large measure by students taking the earliest opportunity to obtain a diploma which shall qualify them for hospital appointments. Stress of work often prevents these from subsequently proceeding to the degree. As contributory causes may be suggested the taking up of appointments abroad in the Government services and the dropping out of the few who find hospital work uncongenial. The leakage between the preliminary scientific and the intermediate examinations would appear to be so small as to be negligible, although it must be admitted that the statistics are unsatisfactory, since, owing presumably to the fact that certain other examinations exempt students from the preliminary scientific, the number who have passed the intermediate examination in recent years has actually exceeded that of those who took the preliminary scientific at a corresponding period.

Assuming therefore that it is logically impossible to consider the final or the intermediate examinations responsible for the unfortunate state of affairs, we have the choice of one of two alternatives. Either the unpopularity is due to a dislike of the course as a whole, so that no part of it can be especially blamed, or the nature of the preliminary tests furnishes the required explanation. As regards the first possibility, it is unquestionable that a few men fight shy of the London course owing to its generally reputed difficulty, but that many are so deterred is disproved by the keen interest which the normal medical student takes in his professional work. It would seem, therefore, that the great deterrents are the preliminary examinations. Many years ago the standard demanded in Chemistry, Physics, and Biology by the Conjoint Board was unquestionably lower than that required by the University. For some past, however, the standard of the Conjoint Board in these subjects has tended to rise, and there is no longer the great discrepancy which used to exist between these two bodies. All are now agreed on the advantage of a thoroughly sound scientific groundwork, failing which a satisfactory treatment of the theoretical portions of strictly professional subjects becomes impossible. In view of the revised syllabus of the Conjoint Board and the greater prestige which attaches to a degree, the preliminary scientific examination cannot be the chief factor in preventing candidates from attempting to graduate in London.

How far does the same argument apply to the matriculation? It has the reputation of being a very formidable test, and the fear which it inspires is more or less justified by the published results. During the period 1899 to 1905, between 53 and 54 per cent. of the candidates who presented themselves were rejected. This percentage of failures is very considerably higher than that which is the rule at the medical examinations. It is obvious, therefore, that the matriculation presents very real difficulty to a large number of candidates. Two considerations alone can justify the present state of things. Either there must be a large number of students who wish to enter the University, but are quite unfitted to appreciate any of the prescribed courses of study, or the preparation for the matriculation demands a form of intellectual training which the University authorities consider essential, but which they themselves are unwilling to supply. Neither of these suppositions seems tenable.

The curse of the matriculation and the reason why it forms a bar to those who are wishing to graduate in the medical faculty, is that it serves a two-fold function, and is adequate in neither. Legitimately it is the examination, success in which is a guarantee that the student will be able to appreciate and profit by the instruction which he will receive in the class rooms of the various schools of the university. But, unfortunately, it also serves as a minor degree. People have come to regard it as something more than a school leaving certificate; in fact, as a testimony that the successful candidate is now competent to take his place among the wage earners, among the primary and even among the secondary teachers of the country. No one examination can adequately fulfil this double function, and in so far as it attains success as a test of the nature of a minor degree it fails as an entrance examination to the medical profession.



The above diagram reads from right to left. In the horizontal column are plotted years 1874-1905; in the vertical column the number of candidates. The higher of the two curves represents the number of candidates who presented themselves for matriculation, the lower the number of candidates successful.

A glance at the statistics dealing with the entries and passes for the London matriculation amply confirms the accuracy of the contention that the examination is made to serve a double function, if confirmation of any sort is needed for what is after all common knowledge. Between 1874 and 1898 the number of would-be matriculants showed a steady and more or less regular rise, being in round numbers 1,100 in 1874, and 3,550 in 1898. In 1905 the number of candidates had increased to 6,700. The numbers of those who passed show a similar but smaller increase. These figures can only point to the fact that to a very considerable number of students the matriculation is the final stage in their academic career.

Years.	Candidates.	Passes.	Percentage Successful.
1880	1,400	680	48 58
1881	1,576	848	53.8
1882	1,671	821	49.13
1883	1,746	972	55.04
1884	1,794	993	55 35
1885	1,900	1,094	57.58
1886	1,889	1,085	57 44
1887	2,071	1,230	59 39
1888	2,617	1,499	57.38
1889	2,856	1,546	54.13
1890	2,762	1,278	46.24
1891	2.889	1,501	51.95
1892	3,108	1,561	50.22
1893	3,287	1,638	49.77
1894	3,278	1,644	50.15
1895	3,420	1,710	50.00
1896	3,327	1,566	47.07
1897	3,508	1,734	49.43
1898	3,539	1,584	44.76
1899	3,938	1,883	47.82
1900	4,341	1,917	44.16
1901	4,198	2,121	50.52
1902	5,106	2,426	47.51
1903	5,929	2,821	47.58
1904	6,708	3,255	48.52
1905	6,718	2,824	42.04

A glance at the papers set at any of the recent matriculation examinations is sufficient evidence of the unsatisfactory nature of the test as a preliminary examination. Some of the defects are common to all the papers. In the first place, they are as a whole inordinately long; the English paper for January contained over 1,500 words. Again, the simplest questions are often wrapped up in a mass of verbiage which makes them appear enormously formidable to the student, especially some months before the examination when he is hesitating between the choice of the colleges and the University. This character of the papers may perhaps make little difference to those candidates who actually sit for the examination and who are adequately prepared for it, but the candidates who fail and their parents will estimate the difficulty of the examination rather by the nature of the papers than by the standard demanded for a pass. This difficulty, which may be only apparent, is responsible for many evils. It has become the recognized practice to have recourse to the assistance of tutors and crammers. The examination is not taken straight from the schools as universally as it undoubtedly should be.

Perhaps an even more serious evil of the examination is its catchiness. Those who question the truth of this need only refer to the papers either in English or in mathematics, both compulsory subjects. In the English let them try to disentangle the speech between Valence and the Duchess, or to scan the lines given in the latter half of the question:

ENGLISH.

6. PROSODY.

(*a*) The following passage is a dialogue in blank verse between Valence and the Duchess. Rewrite it in metrical form with the proper punctuation, assigning the words to the proper characters:

First has she seen you yes she loves you then one flash of hope burst then succeeded night and all's at darkest now impossible we'll

try you are so to speak my subject yet as ever to the death obey me then I must approach her and no first of all get more assurance.

(*b*) Give an account of the metre of the following lines:

(i) Thro' the shadow of the globe we sweep into the younger day;
Better fifty years of Europe than a cycle of Cathay.

(ii) But now they are moaning on ilka green loaning.
The Flowers of the Forest are a' wede away.

(iii) Near the face of dawn that draws athwart the darkness,
Threading it with colour, like yewberries the yew.

Similar eccentricities will be found in the mathematical papers.

The character of the papers set is unsatisfactory. They would seem to be set from a peculiar point of view, which makes some form of special coaching eminently desirable, if not absolutely essential. This specialized instruction is provided in all the better class of secondary schools, many of which have matriculation forms, where the boys are carefully drilled in the type of questions which they will have to answer in this examination. There is, perhaps, no great harm in this so far as the boys who get this special preparation are concerned, but the lamentable and unjust fact is that a large quantity of really good material which has not these advantages is by the action of the authorities debarred from the benefits of the University. The training which they have received is in many cases perfectly sound, but in so far as it has not been specialized it puts them at an undue disadvantage. The policy of the examiners has resulted in a very high premium being set on a peculiar type of teaching. They look for finished results where they should only look for promise. Examination polish earns the marks which should be given to an adequate knowledge of the more elementary groundwork.

The mathematical papers especially appear to be designed to test the power of the students to do original work. Originality is of the utmost importance to the progress of science in its widest meaning, but originality is not the only quality which fits a man to be a useful member of his profession, and it is notorious that many able and successful men would have, and that a large number of men of average ability have had, a quite unreasonable amount of difficulty in preparing for the matriculation examination in this and other subjects. Many boys at the age at which they should take the matriculation have not developed their reasoning faculties. An examination designed to serve as a test before entrance to a university should be a test of the possession of an adequate amount of knowledge on well-defined lines and of the power to apply it.

This is hardly the place to discuss in detail the failings of the matriculation, such as the too common overstepping of the syllabus, the apparently wilful obscurity of the French papers, and the like. These faults are but the outcome of those mentioned above, and if they were changed the minor idiosyncrasies of the examiners would soon be eliminated.

It is commonly believed that the examiners have instructions to pass all those who secure more than 33 per cent. of the maximum; if this be so, then it may be said that the severity of the papers is compensated by the low standard required to pass. This may hold for those students who actually sit at the examination, but it exerts little or no influence on those who are planning out their course of study in advance.

Though the peculiarities of the matriculation affect the students of every faculty, they press with especial severity on those entering for medicine. In most other courses the actual knowledge acquired in preparing for the matriculation simplifies the later work, so that the successful men have not to regret as lost the time thus spent. But those who are to study medicine have not even this consolation, and may well look on the existing system of matriculation as an unnecessary burden. It is well to remember that sacrifices to the fetish of examinations can be made at too high a cost. The argument that the matriculation ensures that all graduates shall have reached a certain standard of culture is largely fallacious. The man who has hurriedly stuffed himself with the obligatory amount of English history or English literature out of the cram books of the day can feel little enthusiasm for a subject so acquired. He is more likely to avoid all intercourse with it to the end of his days.

The present time is critical in the history of the University, and not only for the University but for the future of the medical schools of the metropolis. The unfortunate fact is that the University authorities do not appear to be alive to the gravity of the situation. They seem to forget that the matriculation is intended to admit students to the benefits of the great educational opportunities which London affords. At present it is used as a Procrustes bed.

THE PRESENT CRISIS IN THE HISTORY OF THE LONDON MEDICAL SCHOOLS.

That the position of the London medical schools is at the present moment critical is a proposition which will readily be admitted by all those who are in any way familiar with the politics of the London University. At the present juncture, when Sir Thomas Barlow and Mr. Ernest White are actively canvassing the members of Convocation for their support at the coming election, it cannot but be instructive to consider the events which have led up to the present position.

In paragraph 4 of the report which they issued under the University of London Act, 1898, the Commissioners made the following statement:

> 4. In Section 80 of the Statutes we have introduced the words, "the Senate shall use its best endeavours whenever practicable to secure common courses of instruction for internal medical students in the preliminary and intermediate portions of their studies under appointed or recognized teachers at one or more centres."

The arguments adduced by the Commissioners for this advice are now so well known that it is unnecessary here to recapitulate them. They are set out at length in the pages of the report. So convinced were the Commissioners of the urgency of these reasons, however, that further on in their report they say:

> It must rest with the Senate of the reconstituted University to deal with the whole of this question, and we have empowered and recommended the Senate to proceed as soon as may be in the right direction.

And again, after stating that their recognition of the Medical Schools was only provisional, the Commissioners add:

> In so doing, however, our sole object is to give emphasis to our opinion that concentration in these groups ought to be effected without delay; and it is not to be inferred that in our judgement concentration in the other groups is undesirable or impracticable.
>
> Indeed, the arguments in favour of concentration in the case of the first (preliminary) and second (intermediate) groups of studies are so strong that we feel very confident that the Senate will be able at no distant date to give effect to our recommendations in regard to one or both of these groups.

The Senate, recognizing the importance of the obligation laid upon it, at once took action.

On February 27th, 1901 (a few months after the reconstitution of the University) it passed the following resolution:

> That it be referred to the Faculty of Medicine to consider and report to the Senate as to the manner in which it may best carry out the duty stated in the following paragraph of Section 80 of the Statutes of the University, namely: "The Senate shall use its best endeavours, whenever practicable, to secure common courses of instruction for Internal Medical Students in the preliminary and intermediate portion of their studies under appointed or recognized teachers at one or more centres."

On March 8th, 1901, on the reception of the resolution of the Senate, the Faculty of Medicine resolved:

> That a committee be appointed to report to the Faculty upon the subject referred to the Faculty by the Senate, and that the committee be empowered to confer with the authorities of the medical schools of the university.

The Committee consisted of thirty-one persons, members of the Faculty, representing, so far as possible, every interest, as is evidenced by the names of those on the Committee:

Concentration Committee, March 19th, 1901.

Dr. Allchin	Mr. Ballance
Sir Thomas Barlow	Mr. Stanley Boyd
Dr. Rose Bradford	Mr. Butlin
Mr. Watson Cheyne	Miss Cock
Mr. Dent	Dr. Fowler
Mr. Gould	Professor Halliburton
Dr. Hawkins	Dr. Hebb
Dr. Norman Moore	Mr. Openshaw
Mr. Page	Dr. Pasteur
Dr. Perry (Sir E. Perry)	Dr. Sidney Phillips
Professor Robinson	Mrs. Scharlieb
Dr. Lauriston Shaw	Mr. Morton Smale
Dr. F. J. Smith	Professor Starling
Dr. Frederick Taylor	Professor Thane
Dr. Waller	Mr. Waterhouse
Dr. (Sir) Isambard Owen	

It drew up a report which was first approved by the Faculty *nemine contradicente*, and presented by the Faculty to the Senate, and which was dated December 13th, 1901. The report was accepted by the Senate, and the Secretary of the Senate wrote to the Dean of the Faculty (January 29th, 1902) in these words:

I am further instructed to inform you that the Senate are gratefully appreciative of the vast amount of labour which the Faculty have bestowed upon the preparation of this so elaborate and exhaustive document, from which they hope that a scheme may be developed of great benefit to the cause of medical education.

The report contained the following recommendation:

The Faculty recommends that the Senate should take steps to secure funds to enable it to establish in the near neighbourhood of the University a School of Preliminary and Intermediate Medical Studies.

On February 19th, 1902, the Senate, on the recommendation of the Academic Council, adopted the following resolutions:

That a Committee be appointed to consider and report upon the matter to the Senate through the Academic Council, with power to confer with the Committee appointed by the Faculty of Medicine, and that any report from the Faculty on the subject stand referred to such Committee.

That the Faculty of Medicine be requested to furnish the Senate through this Committee with information as to (*a*) the capital outlay, (*b*) the annual cost of maintenance, and (*c*) the accommodation and staff that would be necessary for the proposed Institute of Medical Sciences, with suggestions for the administration of the Institute.

In the course of the next month, March, 1902, the Faculty of Medicine received these resolutions, and at once appointed a Committee to consider and draw up a report in reply to them.

The Committee consisted of no fewer than 58 members of the Faculty:

Proposed Institute Committee, March, 1902.

Mr. H. W. Allingham	Sir Thomas Barlow
Sir William Bennett	Mr. Bloxam
Mr. Stanley Boyd	Dr. Rose Bradford
Dr. Mitchell Bruce	Mr. Butlin
Dr. H. A. Caley	Dr. Calvert
Mr. Brudenell Carter	Dr. Champneys
Dr. Chattaway	Dr. Cheadle
Sir William Church	Mr. Clutton
Miss Cock	Dr. Crawfurd
Dr. Radcliffe Crocker	Dr. Cullingworth
Mr. Dent	Dr. Fawcett
Dr. Fowler	Mr. (Sir) A. D. Fripp
Mr. Gossage	Dr. de Havilland Hall
Professor Halliburton	Dr. Leonard Hill
Mr. Juler	Dr. Keith
Mr. Langton	Mr. Leathes
Mr. Makins	Dr. Chalmers Mitchell
Dr. Norman Moore	Dr. Forster Morley
Dr. (Sir) Isambard Owen	Mr. Page
Dr. Pasteur	Mr. W. B. Paterson
Dr. (Sir) E. Perry	Mr. Reinold
Dr. Ridewood	Professor Robinson
Dr. Savage	Mrs. Scharlieb
Sir Felix Semon	Dr. Lauriston Shaw
Dr. Shore	Mr. Morton Smale
Dr. F. J. Smith	Professor Starling
Dr. Stevenson	Professor Thane
Mr. Tomes	Dr. Turney
Dr. Waller	Mr. Waterhouse

The report of the Committee, on which again a large amount of care and labour was expended was considered by the Faculty of Medicine on June 6th of the same year. It contained two schemes, which differed from one another only in magnitude and, in consequence, in cost. At the end of the report was the following paragraph:

The Faculty respectfully urges on the Senate to make the provision of the proposed Institute of Medical Sciences one of the chief items in the public appeal for funds shortly to be issued by the University, and requests that it may be allowed to submit for the approval of the Senate suggestions for the terms in which the appeal on behalf of the Institute should be made.

The report of the Committee was adopted by the Faculty of Medicine, in the same manner as the report on Concentration, *nemine contradicente*, and the report was sent up to the Senate as a report of the Faculty of Medicine.

After a conference had been held between the Committee appointed by the Senate and a Special Committee appointed by the Faculty of Medicine, the Committee of the Senate decided to recommend the adoption of the larger and more costly scheme by the Senate.

The Senate accepted the recommendation, and an appeal for funds was issued, privately, on the authority of the Senate in February, 1903.

In the following month, March, Dr. Kingston Fowler and Mr. Butlin were appointed (by the Senate) Treasurers of the fund.

On November 18th of the same year, 1903, on the recommendation of its own Committee on the subject, the Senate passed the following resolution:

That the Institute of Medical Sciences Committee [that is, of the Senate] be authorized to issue to the general public the appeal on behalf of the Institute, as set forth in Minute 881 of the Senate meeting of February 25th, 1903.

and, in consequence of this resolution, the appeal was published in the lay press on December 18th, 1903.

On March 29th, 1905, the Senate adopted this further resolution:

That the Institute of Medical Sciences Committee be empowered to form a General Committee of persons willing to aid in obtaining funds to build and equip an Institute of Medical Sciences under the control of the University in general accordance with the scheme adopted by the Senate on February 25th, 1903.

The following distinguished noblemen and gentlemen at present form that Committee:

Institute of Medical Sciences: General Committee.

The Right Hon. the Earl of Rosebery, Chancellor of the University.
The Right Hon. Lord Rothschild.
Mr. Alfred de Rothschild.
Mr. Leopold de Rothschild.
Sir Douglas Powell, Bart., President of the College of Physicians.
Sir John Tweedy, Past President of the College of Surgeons.
Sir John Pound, Bart., late Lord Mayor.
Lord Justice Cozens-Hardy.
Lord Justice Fry.
Sir Henry Roscoe, F.R.S., etc.
Sir William Ramsay, K.C.B., F.R.S.
Sir Charles Metcalfe, K.C.M.G.
Sir John Wolfe-Barry, K.C.B., F.R.S., Treasurer of Westminster Hospital.
Mr. Cosmo Bonsor, Treasurer of Guy's Hospital.
The Hon. W. F. D. Smith, Treasurer of King's College.
The Bishop of London.
The Bishop of Stepney.
Sir Arthur Rücker, F.R.S.
Sir Cooper Perry.
Sir Walter Palmer, Bart.
Sir Francis Laking, Bart., G.C.V.O., Physician to H.M. the King.
Sir Frederick Treves, Bart., G.C.V.O., Serjeant-Surgeon to H.M. the King.
The Right Hon. Lord Avebury, F.R.S., etc.
Sir Thomas Barlow, Bart., K.C.V.O.
Sir William Broadbent, Bart., K.C.V.O.
Mr. J. G. Wainwright, Treasurer of St. Thomas's Hospital.
Mr. Henry Harben, Chairman of the Board, St. Mary's Hospital.

As a result of the appeal, a sum of more than £70,000 has been promised, of which a large part has actually been received, and the "fifty-one" Commissioners have offered to the University a suitable site in close proximity to the University building, on condition that the remainder of the sum necessary to build and equip the Institute be provided by February of next year, 1908.

Two attempts have been made in the Senate to induce it to withdraw the appeal.

The first of these occurred at a special meeting of the

Senate, held on February 8th, 1905, in the course of a discussion on a proposed interim scheme of concentration of preliminary and intermediate medical studies, when the following motion was made:

> To consider and report to the Senate as speedily as possible whether it is advisable to make any further appeal by the University for funds on behalf of a scheme for concentrating the teaching of preliminary and intermediate sciences to medical students while the purposes for which the University was reconstituted—namely, the promotion of research and the advancement of higher education—remain inadequately provided for.

A division was taken in a Senate of 32 members, when 9 voted for the motion and 17 against it. The motion was therefore lost.

The second attempt was made at a meeting of the Senate, February 20th, 1907, on a statement of the Vice-Chancellor of the University, Sir Edward Busk, that he had made formal application to the Exhibition of 1851 Royal Commissioners for a site for the proposed institute; the following resolutions were then proposed:

> That the appeal for funds to build and endow an institute of medical sciences is, in its present form, erroneous and misleading, and that it be forthwith withdrawn from circulation.
>
> That the institution of a third centre for teaching preliminary medical studies is unnecessary, in view of the prevalent opinion at the constituent medical schools; that all appeal for funds for this purpose cease; and that the University announce the abandonment of its intention to proceed with its establishment.

After discussion, these motions were withdrawn.

The scheme, however, continues to encounter considerable opposition; St. Mary's, St. Bartholomew's, and the London Hospitals have already refused to fall in with the scheme, and the other larger hospitals, such as St. Thomas's, will only sacrifice their medical schools if the other hospitals give up theirs.

Evidence of the strength of the opposition is afforded not only by the recent election of Dr. Leonard Hill and Dr. Caley, who are openly avowed opponents, in place of Dr. Kingston Fowler and Professor Rose Bradford, who are supporters, but as much, or even more, by the election letter of Sir Thomas Barlow. In asking for votes from his supporters next May he refers to a meeting of the Faculty of Medicine on March 19th, when the Faculty decided by a small but definite majority that at present medical teachers in London are unwilling that a third centre should be established. He states his regret at this decision, but assures all voters that if elected he will loyally abide by it. Sir Thomas Barlow, in common apparently with the Medical Faculty in general, seems to ignore the fact that in London the salaries offered to teachers in the medical schools and in the University itself are very far below those offered in most of the Universities of Great Britain; in consequence London loses some of its ablest teachers. Further, the attitude assumed sets on one side the express directions of the Royal Commission, and the recent decision of the Medical Faculty is calculated to bring discredit and ridicule on the medical profession. In the first instance the Medical Faculty approved the scheme *nemine contradicente*: it has now waited until the King has given his warm approval, until the Prince of Wales has expressed his fullest sympathies with the proposal, until the Management Committee of the King's Hospital Fund has given evidence of its satisfaction, until it has secured the refusal of a free site for its building, and until the energy of the Financial Committee has collected a large proportion of the required funds, and now at the eleventh hour it turns round and with scarcely an expression of regret, and with no attempt to assign a reason of any weight in excuse of its fickleness, decides that a central medical institute no longer meets with its approval. With apparent irresponsibility it declines, in the name of the medical profession, the rich endowment which has been offered, it refuses the site, and vouchsafes no explanation for its refusal.

Happily it is possible in this case to bring home some measure of responsibility. All those whose names are printed above as having been members of one or other Committee have, in the past at least, so far approved of the scheme as not to vote against it when it was at first proposed. Some of them oppose it to-day. Let them make known the arguments which have caused this change in their attitude. If the Medical Faculty of London deliberately prefers the inadequate scientific facilities which are available in the hospitals to the possession of a well-equipped school for preliminary studies, not only will the London Faculty of Medicine be the laughing-stock of the country, but it will soon cease to be reckoned among the greater medical schools. It is the bounden duty of the London graduates to prevent this suicidal policy. One can only hope that they will take action before it is too late.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

The course of instruction for surgeons, Royal Navy, at Haslar concluded on April 5th, when the prizes were distributed.

The gold medal was awarded to Surgeon W. H. Hastings of University College, the microscope to Surgeon S. F. Dudley of St. Thomas's Hospital, and the silver medal and books to Surgeon J. L. Barford of King's College.

The names of the candidates, with the marks gained at the entrance examination and at the Haslar course, are subjoined:

Hastings, W. H., M.A., M.B.	4,660
Dudley, S. F.	4,465
Barford, J. L.	4,341
Chilcott, W. W. D.	3,995
Vaughan, J. C. F. D.	3,792
Archibald, W. F., M.B.	3,535

MEDICAL NEWS.

The Princess Louise, Duchess of Argyll, will open the new out-patient hall of the London Temperance Hospital on May 14th.

The Duke of Northumberland, K.G., President, will preside at the annual dinner of the Royal Sanitary Institute to be held at the Langham Hotel on May 15th.

Dr. R. R. Rentoul of Liverpool will give a lecture on Woman's Health: our Greatest National Asset, at the Institute of Hygiene, 34, Devonshire Street, Harley Street, London, W., on Monday next, at 8.30 p.m.

The twenty-fifth anniversary of the foundation of the Russian Pirogoff Society of Surgery is to be celebrated with appropriate ceremony in the theatre of the Pirogoff Museum at St. Petersburg on May 8th.

The Government of Siam has awarded the Order of the White Elephant to Dr. Chas. S. Braddock, jun., Chief Medical Inspector to the Royal Siamese Government, in recognition of his services in connexion with cholera and plague.

Judging by the headlines in the papers, an event of national importance took place last week, but on examination it proved to be nothing more stirring than the decease of a successful patent medicine proprietor. That the obituary notices should have been of a length not often accorded even to leading politicians or great generals can scarcely, however, be a matter of surprise; for in these days the end, if it be riches, tends to be everything. Moreover, the proprietor of "Beecham's Pills," besides being very successful himself, was a valuable asset to newspapers; he is credited with having distributed yearly as much as £100,000 in return for advertisements. Reduced to their proper focus, there is in the facts of his career nothing specially notable; like many self-made men in more desirable walks of life, he started from nothing. The special preparation he sold was a pill of exceedingly simple composition, one practically identical with what must have been prescribed an endless number of times by every medical practitioner for an unknown number of centuries; it contained aloes, ginger, and soap. Doubtless if sold as a simple aperient, and not credited with other and almost unlimited virtues, its sale would have fallen flat, but, cleverly boomed, it appealed to the imagination of the public, and in practice met an existing, if unrecognized, need for a domestic remedy of the sort. For long it had an enormous sale, aided by the pseudo guarantee of a Government stamp on the boxes, and that curious outcome of modern progress, increasing gullibility on the part of the public, which is as ready to believe everything which it reads in the newspapers as it is disposed to discard anything which it hears at its mother's knee. Hence there are more flats caught daily on land by quacks than ever in the form of fish were dragged from the sea by fishermen, and a lie well told has longer legs than ever.

British Medical Journal.

SATURDAY, APRIL 13th, 1907.

THE UNIVERSITY OF LONDON AND MEDICAL EDUCATION.

The University of London is once more, in so far as regards its Medical Faculty at least, in a parlous state. In the article entitled, The Crisis in the History of the London Medical Schools, we have been careful to quote chapter and verse, minute and resolution for every statement, otherwise the irresolution and uncertainty of purpose which it discloses might well have seemed incredible to readers who had grown to believe that the teachers of the metropolitan medical schools had at length come to an understanding with the view of placing the teaching of the early and intermediate subjects of the medical curriculum in London on a satisfactory footing. What is now happening more than justifies the bitter jests often made at the expense of the medical by members of other professions and by men of business. The Royal Commission recommended in the strongest terms that the teaching of these subjects should be concentrated in one or more centres, and after full consideration and long discussion it was determined to establish three such concentration centres, one at University College, another at King's College, and a third in a new institution under the direct control of the University at South Kensington. The first centre is now fully established as part of the University, the second has gone far on the same road, and for the third some seventy thousand pounds has been collected and the offer of a suitable site secured. Now at the eleventh hour the Medical Faculty turns round and declares that it objects to concentration, or, at any rate, to the establishment of a third centre. The motive of this sudden right-about appears to be a recrudescence of the jealousy and suspicion of each other which the medical schools in London had, it was hoped, outgrown.

The story may well give pause to any parent who is thinking of putting his son to medicine. How can men, he may well ask, of such infirmity of purpose, such weakness of will, such narrowness of view, be fit guides for youth? If they are capable of sacrificing medical education in the bulk to their small jealousies, their petty rivalries and suspicions of each other, will they not also be capable of sacrificing the interests of my son on the same shabby altars? For nearly ten years now the teachers of the medical schools of London have had their chance, and, with some notable exceptions, they have made nothing of it. They have not even been asked to build, but only to accept what others would build for them; they have torn up the plans, and are now trying to kick down the foundations which with infinite pains and self-sacrifice have been laboriously put in. They have authorized an appeal to the public for money and to the public authorities for a site, and the response, if not overwhelmingly generous, has at least not been niggardly; yet some £70,000 and a site worth half as much more are to be thrown away—lost to medicine for ever. And why? For two reasons. First and foremost, when the Medical Faculty is considered, the jealousy of the teachers of the medical schools. The second reason, which applies more particularly to the Faculty of Arts, whose members vote by voting papers in their hundreds at every election of a Representative of Convocation on the Senate, is that, on the Bismarckian principle of *beati possidentes*, graduates may retain their vested interests in degrees gained in spite of peculiar and unnecessary obstacles.

Let it be admitted that the Senate, even in its most enlightened days, say two or three years ago, cannot be held altogether blameless. It has, for instance, as is shown in an article on page 886 permitted the Matriculation to continue to be probably the worst examination which the witlessness of man outside of China has attained to contrive. Radically wrong in its conception, pedantic in its syllabus, and conducted with complete disregard of the interests of learning or common sense, it has become the natural prey of the crammers. We have nothing to say against these gentlemen and ladies; they labour in their vocation, which is to help youth over any obstacle which the universities or the Civil Service Commissioners may choose to introduce into the examinational hurdle race. They are able and acute persons, and it is not wonderful that they discover the weak places in the hedge and the best landing places over the ditch on the other side. Then the examiners, who, in spite of appearances, are also able and acute persons, stick in some more thorns and run a little more water into the ditch that the footing may be more slippery; and so this game goes on. It would be stopped in a week if the University were blessed with a Principal who understood that the first of his duties was not to lament the small proportion of graduates who proceed to the higher degrees, but to see that this absurd contest between examiners and crammers did not lead to the erection of obstacles designed, not to test a candidate's capacity or knowledge, but merely to circumvent the crammers.

But this by the way, for the immediate subject is not the success of the Principal in excluding students who want to be taught from the University which ought to want to teach them, but the apparent success of the majority of the Faculty of Medicine in rejecting a scheme which would have conferred great benefits on medical students in London whether undergraduates of the University or not.

MIND AND THE BRAIN.

Almost at the same time that the translation of Professor Binet's *L'Ame et le Corps*, reviewed on another page of this issue, has been published, another work under a similar title[1] has appeared by Dr. Auguste Forel, lately Professor of Psychiatry at the University of Zürich. These two works have different aims, Professor Binet's book being purely philosophical whilst that of Professor Forel is directed to mental and nervous prophylaxis. It is, however, of more than passing interest to note that although the former work is a prolonged effort to prove that there exists at the bottom of all of the phenomena of intelligence a duality, an essential distinction between mind and matter, and although Professor Forel, the author of the other work, like the "God-intoxicated Spinoza," is a convinced monist, in the two works the

[1] *L'Ame et le système nerveux* [The Mind and the Nervous System]. By Dr. Auguste Forel, late Professor of Psychiatry at the University of Zürich. Paris: G. Steinheil. 1906. (Pp. 334. 1 Plate.)

relationship between mind and brain is expressed in almost precisely the same terms. Both authors recognize that all we can know of what is called matter is in reality the sum of our individual reactions; both find the point of union of mind and matter not in a hypothetical, unknowable reality outside of and transcending experience, but in the phenomena of sensation, of feeling, and of cognition themselves; and both see in each of these, even the highest intellectual conception, two factors always united in reality—the psychical and the physical. They differ, however, in that Professor Binet considers them to be factors of two entirely different orders, whereas for Professor Forel they are but the same fact from different points of view. This is emphatically affirmed in the opening lines of the preface, where Professor Forel says: "The "mind and the activity of the brain are one and the "same thing."

Professor Forel, then, finds in neuro-psychic function a unity with two faces: one introspective, psychological, or consciousness; and the other physiological, or, as Binet would say, physical, the nervous wave or neurocyme—these being, as Fechner has said, but the concave and convex surfaces of an arc. Both authors are opposed to the doctrine of psycho-physical parallelism, for, Professor Forel repeats, we have to do here with identity, not parallelism, and "it is impossible for a thing to be "parallel with itself." Professor Forel does not attempt to evade the obvious difficulties in the way of maintaining the necessary identity of neurocyme and consciousness. If we study, he says, the central nervous system from the point of view of its neurocymic activity we see only a series of dynamisms which obey absolutely the law of conservation of energy, whilst, on the other hand, states of mind observed introspectively do not offer the same constant connexion, and it appears impossible to establish a relation of cause and effect, of action and reaction, for all the phases of consciousness. It is on this basis, he says, that a dualism which maintains the existence of mind independently of matter has been erected. Now, whether or not Professor Forel is right in basing all dualistic explanations of the universe on the distinction between consciousness and its object, it is indisputable that the birth of a sublime and apparently original conception, say in the mind of a Shakespeare, by its seeming detachment from the law of causality puts a serious difficulty in the way of any explanation of mechanical determinism. This difficulty Professor Forel would surmount by the introduction of the subconscious mental life. "The whole enigma and all the "contradictions of this ancient dualistic supposition "are explained in an absolutely satisfactory fashion if "one admits . . . that the causes of the superconscious "life of the brain secrete themselves for the most part "in the subconscious activities of our nervous centres, "activities which were or actually still are dissociated "and if we also admit that all introspection that is, "all our consciousness of ourselves and of the world "has no real existence, but only represents the "subjective or internal reflection of the neurocymes "of our brain."

What has been termed not inaptly the passion of modern science for unification, the insistent desire for reducing the heterogeneous to the homogeneous of all forces to a primal will, seems to be an inalienable part of our mental heritage. Doubtless it is for this reason that a monism, whether materialistic or spiritualistic, appears a more logically convincing hypothesis of universal phenomena than any other. Not only, however, does such a conception appeal most effectively to reason by its abandonment of *a priori* deduction and its facility of inductive explication, the scientific method *par excellence*, but its proved value in practice must not be overlooked. The deplorable end of the rational system of therapy initiated by Hippocrates, which was continued for hundreds of years by his followers, in the mists of priestly superstition and Platonic teaching as to the independent nature of the soul; the grievous wrongs inflicted on the mentally deranged in the Middle Ages, these wrongs being the logical outcome of the then current beliefs in possession by disembodied spirits, itself a debased form of dualism; and the striking improvement in the treatment of the insane in modern times brought about by a recognition of the fact that insanity is a bodily disease, all point in one direction, and indicate very clearly the path of future progress in the hygiene of the nervous system. As a guide upon this path we heartily commend to our readers Professor Forel's book. Inasmuch as nervous tissue is the master-tissue of the body, so nervous hygiene—for Professor Forel, in harmony with the views outlined above, admits of no distinction in kind between mental and nervous disease—descends into every province of man's life, and should preside over his environment as a child and guide its selection in adult life in such a way as to bring about a harmonious development of the central nervous system; should lead him in the choice of a mate, and above all should help him to attain to clear and sane views of life and the continued striving after an ideal. In each of these provinces the distinguished author lays down admirable guiding principles with the authority of ripe experience, and it is impossible to read his admirable and philosophical discourse, whether its author is engaged in condemning alcoholic beverages, in denouncing social bigotry and vice, or in defining true citizenship, without some mental readjustment and increased breadth of view.

It may be asked what, in denying the independent existence of mind or soul, the author leaves as an incentive to right living, what furnishes his ideal? This will be best answered in his own words: "It is," he says, "in the first place, the hope, the inextinguishable "faith in a better future for our race, that is to say, for "our descendants, for our children, for the better part of "ourselves which will continue to live in them; and, in "the second place, in the gratification which every good "man experiences at every good work accomplished, at "every difficulty he surmounts, and at every step of "progress into the secrets of Nature." Whatever be the ultimate verdict upon the great unsolved question of the relation between mind and body it cannot be denied that these are noble words and that their author has not only formulated an ideal but largely fulfilled it, holding his pen in trust to science and humanity.

OPHTHALMIC QUACKS IN AMERICA.

Coleridge counted some sixty smells "each distinct "and several stinks" in Cologne. Dr. G. M. Gould, as we learn from a paper contributed by him to the *Cleveland Medical Journal*, has counted a number of eye quacks in America relatively almost as large, and composed of equally "distinct and several" units. He enumerates ten types of ophthalmic charlatanism. There is first the "confidence-man" who works what strolling players call the "smalls," that is, the smaller cities, villages, and country districts in a given State. They go two or three together, the leader posing as the son of some well known oculist, or as a physician sent from a hospital to see and treat the victim. On

one pretext or another half-blind people are wheedled or coerced into paying absurd sums for worthless spectacles, or for an equally worthless prescription. The ophthalmic Autolycus lays hands on any watches or other unconsidered trifles that may be within reach. Then there is the "Surgical Criminal," who says he is "sent by some distant person to take the cataracts "off his friend's eyes." For this he usually charges from £2 to £5. His stock in trade is some irritating powder, a pair of small forceps, and a piece of leather about one-fourth of an inch in diameter. After getting his fee he pinches the patient's lids or conjunctiva enough to make a sharp impression; he then flicks the powder into the eye, exhibits the "cataract" to the family, and disappears. Another type is the itinerant "Professor" or "Scientific Optician," whose advent is heralded by handbills announcing that he is staying for a few days at such and such an hotel, where he will examine the eyes of all comers without fee. He sells spectacles which cost a few cents for as many dollars as he can extract. In this class there are many grades, ranging from the agents of optical houses in the cities to vendors of spectacles and eyeglasses, who also sell crystals and magical lenses of miraculous powers. Next we have the itinerant ophthalmologist with a real medical diploma. He chooses smaller cities as his hunting grounds. Dr. Gould says that one of this type recently succeeded in getting several thousands of dollars out of one family before the mind's eye of the patient was unscaled.

The "jeweller optician" of the village or small city also examines eyes free and fits glasses. Of him Dr. Gould, while denying him competence in the ticklish matter of eyestrain, says with a delicate irony, which doubtless his professional brethren will appreciate: "Frequently they are as accurate in their refrac- "tions and as skilful in a medical sense as the professor "of ophthalmology in the neighbouring medical col- "lege, or as the famous oculist of the place." He adds that the village optician is the least objectionable of all the quacks, possibly because "he sometimes recom- "mends an eyestrain sufferer to a good oculist." The "Doctor of Optics," "Graduate Optician," "Ophthalmo- "neurologist," "Doctor of Refraction," "Ophthalmo- "trician," is described as "another product of the "neglect and quackery of the medical profession." He, too, has his good point; he does not pooh-pooh eyestrain reflexes, "and so does not harm his patients "as much as do the tenotomaniacs and some of the "most respectable city professors and surgeons who "scorn the refractionist." Again, there are the "Department Store Opticians and City Eyes-Examined- "Free Opticians," who are tersely characterized as a pretty bad lot. As regards physiological optics, their glasses are always and without exception wrong. Next we have the "physician turned quack" in partnership with the opticians. Many stores and opticians have a "physician in attendance." A particularly virulent quack, we gather, is the "tenotomaniac," who is said to "operate on the eye muscles for Morton's toe, rheuma- "toid arthritis, phlebitis, choroiditis, for all reflex "neuroses, for all diseases." We are told that for snipping a tendon or the conjunctiva he gets several hundred dollars, and for doing it on the same patient a score or more times he charges several thousands. He operates on every patient who comes under his hands, and "a tremendous effect is made upon the patient, "his friends, and upon pocket books." Lastly, there are the "Ophthalmic Success-hunters, Professional "Judges, Consultation-seekers, Presidency-getters," whose offices, we are told, are "merely sand-screens "for sorting out the surgical practice, which makes "money and fame."

Of ophthalmic surgeons Dr. Gould has a poor opinion. They do not, it seems, appreciate the "awful rôle played "by eyestrain in the production of human disease and "life-wreckage." "Who," he asks indignantly, "turned "the jewellers into opticians, and who created the "department-store opticians?" His answer is: "Plainly "and bluntly it is official ophthalmology which for thirty "years or more has ignored the overwhelming testimony "of good medical men as to the rôle of eyestrain." But a better day is breaking. "The mass of oculists are "turning their minds to the astounding value of "scientific refraction, and everywhere they are per- "meating to smaller cities and towns; and they "are reporting the good results of their good "work. Ten thousand more are needed." It is not clear where they are to be found, seeing that "the "fateful misfortune is that nowhere is it possible to "get adequate instruction in the most difficult and "delicate of all arts and sciences." Meanwhile "with "few exceptions the neurologists, gastrologists, "gynaecologists, and even the surgeons are as hope- "lessly impenetrable as the antiquated professors of "ophthalmology." The medical world, in fact, is out of joint, and from the violence of Dr. Gould's comprehensive denunciations, he would seem to be disposed to say with Hamlet—

Oh cursed spite!
That ever I was born to set it right.

SPECIAL REPRESENTATIVE MEETING.

As will be seen from the formal notice published in the Supplement, the Special Representative Meeting for the consideration of the draft Charter, the text of which was published in the Supplement of the British Medical Journal of April 6th, has been summoned to meet in London on Wednesday, May 29th. The hour and place of the meeting will be announced in a subsequent issue.

AN HONOUR FROM THE KING.

The King has granted a very uncommon honour to Sir Frederick Treves and Sir Francis Laking in recognition of their "great skill and unremitting attention" during His Majesty's dangerous illness in 1902. The King has, by Royal warrant, granted to them an "honour- able augmentation" to their arms; this augmentation consists of the addition to their shields of one of the lions from the Royal arms. The late Sir William Gull received an honourable augmentation of the Prince of Wales's feathers for his services, but so far as we can ascertain professional services have never before been recognized by the incorporation of the Royal arms with those of a physician or surgeon; in fact, to find a precedent for the grant of an honourable augmentation for like services, it is necessary, we believe, to go back to the time of Charles II, who added certain items from the Royal arms to the shields of the Penderells of Boscoble, and to the Lanes, members of these families having been instru- mental in saving his life after the battle of Worcester. Honourable augmentations have occasionally been granted to great Court officials, the last recipient being, we believe, the late Earl of Liverpool, who received additional arms to commemorate the fact that he was Lord Steward of His Majesty's household, while his son, Lord Hawkesbury, was Lord Steward to the Viceregal household in Dublin. The Royal Warrant to Sir Frederick Treves and Sir Francis Laking directs that the augmentation now granted shall be borne by their descendants, and the uncommon character of the

honour thus conferred illustrates the fact that the King is not unmindful of the medical profession.

ST. JOHN, NEW BRUNSWICK, BRANCH.

ON March 7th the St. John, New Brunswick, Branch held a meeting for the transaction of its ordinary business. After the meeting the members were entertained at dinner at the Union Club by the President, Dr. Murray MacLaren. When the health of the King had been drunk with loyal cordiality, the President proposed "Success to the British Medical Association "and to the St. John, New Brunswick, Branch"; this was received with great enthusiasm. Next came the toast of "The Canadian Medical Societies," which was proposed by Dr. Thomas Walker, and responded to by Dr. J. R. McIntosh, on behalf of the Canadian Medical Association; by Dr. T. D. Walker in the name of the Maritime Medical Association; by Dr. S. Skinner in that of the New Brunswick Medical Society; and by Dr. G. Melvin in that of the St. John Medical Society. "The Medical Council" was proposed by Dr. J. Christie, and responded to by Dr. J. McInerney. Dr. Inches proposed "The "Canadian Army Medical Services," which was appropriately responded to by Lieutenant-Colonel Walker. The dinner passed off most pleasantly, and the evening was thoroughly enjoyed by all present. We congratulate the members of the St. John, New Brunswick, Branch, on the healthy energy by which it is animated, of which this dinner is only one among many manifestations. The indefatigable Honorary Secretary, Dr. J. Henry Scammell, also deserves congratulation on the success of his efforts to extend and consolidate the influence of the British Medical Association in one of the most important divisions of the Empire.

THE SYSTEM OF PROPORTIONAL REPRESENTATION.

A FEELING of dissatisfaction with the present methods of conducting the voting at elections has led to the formation of a society called the Proportional Representation Society,[1] which advocates the adoption of a system known as the "single transferable vote." This society has published a pamphlet giving the details of experimental election carried out under the auspices of the society in November last, and a perusal of this pamphlet, together with the descriptive annual report for 1906, places the reader in the possession of the details of the system, and affords him an insight into the practical working of the same. In brief, the system depends on the following principles: The voter receives a voting paper on which are recorded the names of the candidates. He chooses the candidate he would prefer and marks the figure 1 against his name. He then marks his second choice with the figure 2, and his third choice with the figure 3. The voting papers are then so arranged in bundles that the number of 1st votes for each candidate can be reckoned without difficulty. The next step is to determine the number of votes sufficient to render the election of a candidate certain. This is called the "quota." The quota is arrived at by dividing the number of valid voting papers by a number equal to the number of vacancies *plus* one, and adding one to the quotient. Thus, for two seats it would be one third *plus* one vote, for five seats one sixth *plus* one vote, and so on. It will then be found that some candidates possess more votes than are required to return them. This surplus would be wasted under ordinary circumstances. In order to utilize this surplus voting, the votes given to the second, or possibly third, choice, in the surplus number of voting papers are transferred to the candidates named. When large numbers of votes are recorded, it has been found, both in practice and by working out the mathematical element of chances, that the last filed bundle of 500 papers may be taken as representative of the total. The number of surplus votes which the first successful candidate had registered would then be calculated. After all the candidates who had obtained a quota of votes had, as it were, given over their surplus, the same procedure would be applied to those candidates who had received so few votes that under no circumstances could they obtain a large enough number of transfers to render election possible. The totals would then be counted and those candidates who had the highest number of votes to their names would be returned. The illustrative election was conducted through the medium of eight influential daily newspapers, representative of the various political opinions. The names of twelve important politicians were put up for election, and it was announced that five seats were vacant. The poll resulted in the return of three Liberals, one Independent Labour candidate and one Unionist. On analysis it was found that the result corresponded fairly closely to the proportion of the electors, and it is urged that the distribution is much fairer to the minorities than would have been the election of the five members who recorded the largest numbers of first votes. In the annual report of the Society it was pointed out that in the last Parliamentary general election, in the last two County Council elections, in the last German general election, and elsewhere, the actual returns were in no sense proportionate to the opinions of the electorate. In many instances a certain party may have a moderately large following, and yet by reason of this following being divided up and forming a minority in the various subareas, the party may fail altogether to obtain any representation. By the method of proportionate representation this would be impossible. The system has been put to the test in Belgium, first in municipal elections and then in Parliamentary contests, and has proved a highly satisfactory solution of a very difficult problem. Efforts are being made to secure the system for other countries. The system appears to have been carefully worked out, and difficulties in handling the votes to have been elaborately guarded against. Whatever the actual value of the system may be, it certainly seems desirable that it should receive consideration, and that its possibilities as an alternative method should not be forgotten when methods of election have to be decided on.

[1] Honorary Secretary Mr. J. H. Humphreys, 107, Algernon Road, Lewisham, S.E.

LOCAL ANAESTHESIA IN THE EXTRACTION OF TEETH.

THE correspondence which appeared recently in these columns on the subject of the use of cocaine in the extraction of teeth will serve a useful purpose if it directs the attention of the profession to this subject, the importance of which is not sufficiently realized in this country. At present the very phrase "painless extraction" is little more than a byword, and a large proportion both of the public and the profession have the idea that dentists who use cocaine before extraction use it merely as a placebo, as something to give confidence to the patient, and assuage his terror before inflicting the inevitable torture. There are those, in fact, who place the method of local anaesthesia on a level with the brass band which drowned the shrieks of the victims of the "painless dentistry" of the operator at a fair. It follows that we rely almost entirely on general anaesthesia, nitrous oxide being administered in the vast majority of cases. It is admitted that this anaesthetic is both safe and convenient, but its duration is too short for the extraction of more than a few teeth, especially when there is any difficulty attending the operation. It is under these circumstances that the medical man is called in, and is presented with the

choice between chloroform, which is notoriously dangerous in dental work, and ether, whose inconveniences are apt to appear out of proportion to the comparative triviality of the operation. It is impossible to read Dr. Sauvez's book, *L'Anesthésie Locale pour l'extraction des Dents*, without coming to the conclusion that much of the scepticism which exists in this country as to the anaesthetic value of cocaine in tooth extraction is due to a haphazard and in fact faulty method of applying it. After a very careful analysis of the advantages and disadvantages, the dangers and comparative efficacy of the two methods, Dr. Sauvez declares definitely in favour of local anaesthesia in all but a few exceptional cases; and of the various methods of producing local anaesthesia, injection of the gum with cocaine is almost always the best, though he thinks it likely that cocaine will be largely superseded by the newer drug, stovaine, owing to the slighter toxicity of the latter body. It is sometimes argued that cocainization cannot abolish the pain of extraction, because while anaesthetizing the gum it leaves untouched the nerve which supplies the tooth itself, and it is assumed that the drag on this nerve and its final rupture is a principal cause of the pain. This last assumption is altogether denied by Dr. Sauvez, and he claims to have disproved it in an earlier work.[1] In support of his contention he quotes the following significant fact, namely, that where the pulp of the tooth is exposed and the gum is properly anaesthetized, the touch of a probe on the pulp still produces intense pain, but extraction of the tooth is nevertheless perfectly painless. This fact, which Dr. Sauvez claims to have amply verified, would seem sufficient of itself to prove his contention that the real cause of the pain is the rupture of the "alveolo-dental ligament." Dr. Sauvez's account of the fibrous and membranous relations of the tooth is not perfectly clear, but what he describes as a ligament evidently consists of certain fibres derived from the membrane familiar to English readers as the periodontium. But even if we regard his differentiation of these fibres as somewhat fanciful, his argument is not thereby affected. "The object of local anaesthesia for "the extraction of teeth," he says, "is solely anaesthesia "of the alveolo-dental ligament." The important point of the book is Dr. Sauvez's account of the technique by which he achieves this object, and that account is admirably clear and convincing. If for "alveolo-dental ligament" we choose to substitute "periodontium," it makes no difference. To achieve the above object the needle should be entered obliquely at a point midway between the free border of the gum and the level at which the point of the fang is assumed to lie, or, according to Loup, slightly nearer the neck of the tooth. It is of the utmost importance that the point of the needle should not penetrate quite through the mucous membrane, or, as Dr. Sauvez says, the injection should be "intradermic" rather than "hypodermic." The point of the needle is carefully advanced as the fluid is very slowly pressed out. If the needle has been entered aright there will be considerable resistance to the expression of the fluid, and the injection will be followed by blanching of the gum. If there is no resistance it is because the needle has penetrated into the loose submucous tissue, or is too close to the epithelium, which it raises in a bulla. In either of these cases the anaesthesia will be unsatisfactory. The aim of the operator should be to surround the tooth with a zone of anaesthesia, and for this purpose at least two punctures are necessary. When there are no other teeth in contact with the one to be extracted four punctures may be made with advantage. If the fluid is expressed slowly enough anaesthesia will be established as soon as the last injection is complete. In all ordinary cases ½ gr. of cocaine hydrochlorate dissolved in 15 minims of water (that is, 1 per cent. approximately) will be sufficient, but in more difficult cases Dr. Sauvez has used as much as ½ gr. without mishap; but in these cases it is most important that the recumbent position should be maintained both during and after the operation. In order to overcome the resistance which ought to be met with it is important that the syringe should have a wide thumb-piece on the end of the piston, and two wings attached to the barrel to afford a purchase for the first and second fingers; the needles should be *screwed* on to the syringe with a rubber washer to prevent any escape of fluid at the joint. The best results are obtained with the 1 per cent. solution of cocaine combined with 5 per cent. of adrenalin chloride; and Dr. Sauvez also speaks highly of stovaine, which is less toxic than cocaine. But the danger of syncope and other accidents arising from the use of cocaine he shows to be due in most cases to ignorance or carelessness in the method of administering it; and he emphasizes the fact that the same amount of the drug is more dangerous in a concentrated solution than in a weaker one. Altogether, this book is one of great practical importance both to surgeons and dentists, and we venture to believe that an English edition would be welcomed by both professions.

[1] Des meilleurs moyens d'anesthésie à employer en l'art dentaire. *Thèse*, Paris, 1893.

THE DISTRIBUTION OF SEVERITY OF ATTACK IN CASES OF SMALL-POX.[1]

The current number of *Biometrika* contains some interesting observations regarding small-pox statistics. Dr. F. M. Turner publishes a set of figures, obtained from the records of the hospital ships, in which cases of small-pox, classified in accordance with the severity of pocking, appear to show a high order of "skewness," the group corresponding to a number of pocks, between 0 and 100 being the largest. Professor Karl Pearson had concluded from other observations, in which the interval elapsing between the onset of disease and the first bath was used as a test of severity, that the distribution of cases was approximately "normal" in *unvaccinated* subjects, the mildest cases not being the most numerous. In some valuable notes on Dr. Turner's figures, Professor Pearson shows that there is some reason to believe that they deal with a heterogeneous population. He remarks: "If an investigation "similar to the present on cases vaccinated—say within "ten years—should show that a normal distribution of "pock-markings fits in well there also with the death-"rate severity scale, it would indicate that Dr. Turner's "severity skewness is due to a mixture of vaccinated "and unvaccinated in his returns. Dr. Brownlee's view "that the disease is physiologically different in the two "classes would thus be confirmed." The statistical point at issue is too technical for discussion in our columns; we may, however, remark, for the benefit of Mr. Lupton and his friends, that biometric work of the last few years has made clear to all persons capable of appreciating a statistical argument, the enormous prophylactic importance of vaccination.

[1] *Biometrika*, vol. v., part iii., February, 1907, pp. 361-4.

GOAT'S MILK AND MALTA FEVER.

Colonel Bruce, in his paper, Recent Researches into the Epidemiology of Malta Fever (read before the Epidemiological Society on February 15th, and published in the *Journal of the Royal Army Medical Corps*), gives a synopsis of the work recently accomplished by the Commission that has been working for the past two or three years in Malta. It was found that the goat suffers from Malta fever and excretes the specific coccus in enormous numbers in its milk. There is little doubt now, after reading Colonel Bruce's able paper, that this

is the chief mode of infection for man, the facts brought forward in support of this opinion being overwhelming. As a result of measures directed against the use of goat's milk, striking results have already been obtained, both amongst the soldiers in the garrison and amongst the patients in the Royal Naval Hospital. Since goat's milk was forbidden in the latter institution not a single case of Malta fever has occurred or can be traced to a residence there. On those grounds Colonel Bruce believes that there is reasonable ground for the hope that Malta fever will now disappear from the garrison of Malta and some 70,000 or 80,000 days of severe illness be blotted out from the yearly medical reports of the army and navy. This will be a splendid result, and Colonel Bruce, who was largely responsible for the sending out of this Commission, must be heartily congratulated on the good work done and on the success which they have attained.

WIGS AND SKULLS.

In the number of the *Journal of Anatomy and Physiology* just issued, Dr. G. Elliot Smith, Professor of Anatomy in the Government School of Medicine, Cairo, discusses the causation of the curious symmetrical thinning of the parietal bones seen in many ancient Egyptian skulls. The condition was described by Maier in *Virchow's Archiv*, vii, 336, and subsequently by Sir George Humphry (who, by the way, would scarcely have liked to see his honoured name misspelt "Humphrey" in a journal which he helped to found), in *The Human Skeleton*, published in 1858. Maier looked upon the condition as a senile atrophy, whereas Humphry was inclined to regard it as congenital. The condition, of which Humphry could find only six examples in European museums—one in Cambridge, four in Paris, and one in Berlin, is produced by a gradual wearing away of the outer table of the cranium, until in many cases the diploë is reached, and even the inner table may become eroded. The shape of the cranial cavity is not affected. The process of erosion never attacks the parts of the skull that are covered by muscle, and a ring of bone, about a centimetre in diameter, around each parietal foramen is almost invariably spared. Professor Elliot Smith thinks that it is clearly due to some agent exerting continuous pressure on the cranial vault where this is unprotected by muscle, and that the pressure may act by interfering with the blood supply of the bone. It occurs both in male and in female skulls. In large collections of crania of the most archaic period Professor Elliot Smith has not found a single example, nor has he found it in any skulls later than the New Empire. It is seen only in those belonging to the period between the fourth and nineteenth dynasties. At that period it was the fashion among people belonging to the upper classes to wear wigs of enormous proportions and great weight, and it is a remarkable circumstance that it is only in skulls found in the tombs of wealthy persons that the thinning of the parietal bone is seen. Although he does not commit himself to a positive statement on the subject, Professor Elliot Smith thinks the fact highly suggestive of a causal relationship between the thinning of the skull and the wearing of heavy wigs. The modern Fellahin women are accustomed to carry water jars of enormous weight on their heads, but he has never met with parietal thinning in them. It is, he holds, continuous pressure of a lesser weight, not the intermittent application of a great weight, that brings about the atrophy. This theory is in accordance with the general principle as to the effects of pressure enunciated by Sir James Paget. It would be interesting to know if a similar condition was produced in European skulls by the vast periwigs with which our ancestors of the seventeenth and eighteenth centuries burdened their heads. The ancient Egyptian wig could scarcely have been much heavier than that of the famous scholar, Dr. Parr, which was described by Sydney Smith as the *μέγα θαῦμα* of barbers.

[1] Part iii, vol. viii (third series—no. 3).

CIVILIZATION AND MISSIONARY ENTERPRISE.

To those not especially interested in missionary enterprise, the Presidential address of Dr. W. W. Keen, the distinguished Professor of Surgery in Jefferson Medical College, Philadelphia, at the last annual congress of the American Baptist Missionary Union, is perhaps of greater interest than usual, for it deals with matters of which they are in a position to judge. Not with the value of Christianity, pure and simple, when taught to heathen nations, nor yet with the value of what may be regarded as the by-product of mission work—the introduction of something approaching Western conceptions of life and civilization. These are matters concerning which, rightly or wrongly, there is some difference of opinion, and except incidentally and indirectly Dr. Keen does not allude to them. His object, rather, is to estimate the value of missions to the nations which have sent them forth, or more correctly, to set forth the general data of a balance sheet between the missions and civilization at large, and show what items of knowledge, what factors in progress, missionary enterprise may claim to its credit. It must be admitted that the account is a fair one, and the debt shown to be considerable; that owed by philology ranking first. The initial conception of the whole duty of a missionary was that he should preach the Gospel, but the study of philology in a most practical form soon followed. Sometimes the task was merely that of translating the Bible into a language of which a written form was already in being, but far more often it entailed creating signs representative of what, until then, were merely sounds. In this way the services of missions to philology have been immense, for many of these languages are now extinct, and but for the missionaries would have been utterly lost to philology. Other branches of science have also benefited; in the past, as now, much of the material for scientific study in great centres has been obtained and forwarded by missionaries. Owen's work on the gorilla in 1847 was, for instance, based on a skull sent from Africa by a missionary, and Owen thanked him by the term "Troglodytes savagei." Geography is another debtor; in this connexion, of course, Livingstone's name at once occurs, while in America the names of certain Jesuit missionaries are especially familiar: Père Marquette, Hennepin, Lasalle, Le Jeune, and others. Medicine, too, owes its quantum: Cinchona bark, for instance, was originally known as Jesuit's bark, a knowledge of its value having been brought to Europe by Jesuit missionaries in South America; calabar bean, kola-nut, and strophanthus are also examples of drugs to which attention was first directed by missionaries. The same is true of commerce, which owes to missions a good deal of its original knowledge of the industrial sources of the world. African rubber and the silkworm are instances in point. The value of missionary work to diplomacy and colonial enterprise at the present moment may possibly be open to some dispute, but that in the past missions, and especially medical missions, have opened doors which would otherwise have remained closed is uncontestable. From the beginning, medical work, whether of a domestic or scientific character, has played a large part in the missionary enterprise, but it is only of late years that medical missionaries as such have come into existence, and they still appear to be the special product of British and American missionary

bodies. Thus Dennis, in a paper on the subject some eight years ago, showed that of all medical missionaries then known, 338 were American and 322 British, as compared with 20 belonging to other nations.

EGYPT AND THE SOUDAN IN 1906.

Lord Cromer's report on the finances, administration, and condition of Egypt and the Soudan in 1906 contains only brief references to medical and public health questions. With regard to Government hospitals, after stating that 31,000 in-patients and 128,000 out-patients were treated in the hospitals last year, he observes that the complaints with regard to the unsuitability of the buildings of the Kasr-el-Aini Hospital at Cairo for hospital purposes are well founded, admits that it will be necessary to build a new hospital, but expresses the fear that, in view of the very large demands for buildings in other directions, some time must elapse before this work can be taken in hand. This opinion will be read with regret by those who are acquainted with the facts, more especially as Kasr-el-Aini is the clinical hospital of the Egyptian School of Medicine, the courses in which are now recognized by the Conjoint Board in England. It appears that 97 students sought admission during 1906, but that it was only possible to admit 53. The 44 aspirants were declined partly because the teaching staff and the laboratory accommodation would not have been sufficient for so large a number, and partly for other reasons, which are indicated in a quotation from the report of Dr. Keatinge, who has been for the last seventeen years Director of the school. He holds that it is necessary to advance very cautiously in regard to the number of medical men turned out from the school. "If," he says, "these young men find that on leaving "the school they cannot get work, there will be an im- "mediate drop in the number of entries to the school, "and no recovery will take place until the Government "has suffered for some years from a dearth of young "medical men. Also, in my opinion, it is hardly possible "to set loose on the country a more dangerous element "than the needy medical man." The number of beds at the lunatic asylum at Abbassiyeh, under the able direction of Dr. Warnock, was raised during the year from 520 to 640, and accommodation will be found for 172 more patients by the adaptation of the buildings of a hospital vacated by the Egyptian army last December. Plans for a new asylum at Khanka, about eight miles from Cairo, on a site comprising about 75 acres of land, have been prepared, and when this asylum is erected the overcrowding at Abbassiyeh will be greatly relieved. The campaign against ophthalmia started by Sir Ernest Cassel, and subsequently taken up by the Government, is being prosecuted vigorously, but as it is impossible to carry on the work properly in tents during the hot weather, when acute inflammations of the eye are most common, the need for the provision of ophthalmic hospitals in the principal towns is now fully recognized. One such hospital is to be opened at Tantah during the current year, and arrangements are being made for the erection of another at Assiout. During the year about 7,000 additional ophthalmic patients were treated, who paid 94,000 visits to the hospital, 5,800 operations were performed, and Sir Horace Pinching reports: "Appreciation of the work of the hospitals is becoming widely "spread in Egypt, not only among the poor, who avail "themselves of the gratuitous treatment the hospitals "afford, but also among the well-to-do, who realize the "amount of suffering which the hospitals relieve." The same officer states that vaccination is efficiently carried out among the native population, but not among the Europeans, who are not obliged by law to register the births of their children. About 439,000 children were vaccinated during 1906, an increase of 12,000 on the previous year. The results obtained from the lymph prepared at the Vaccine Institute were most satisfactory, 98·5 per cent. of primary and 82 per cent. of secondary vaccinations being successful. The native infant mortality is extremely high, the total number of deaths among infants being nearly twice as numerous as those among adults, a rate probably six times as great as it ought to be. Among European children the rate is also high, but much less than among the natives. The great mortality among the native infants is due to the negligence and ignorance of parents and to the filth and overcrowding of the native quarters. Although children are usually suckled until they attain the age of 2 years, they are also allowed to eat all kinds of unsuitable food. The most unsatisfactory feature in the report is the implied opinion that the reconstruction of the Kasr-el-Aini Hospital is not a matter of urgency. We believe that there would be no difficulty in showing that this view is mistaken. The same note is struck in Lord Cromer's comment on Dr. Christopherson's recommendation that sun-proof, rain-proof, and mosquito-proof houses for everybody should be constructed in the out-stations of the Soudan. Lord Cromer says, "I fear "some little time must elapse before the Soudan "Government will be able to work up to this ideal. In the "meanwhile, they are doing the best they can." This really appears to be something like a contradiction in terms. The experience of the Italian railways, for instance, has shown that the cost of providing mosquito-proof houses is very small, and repays itself within a year or so. Dr. Christopherson's recommendation that well-equipped hospitals should be erected at three large centres in the Soudan—Port Soudan, the Atbara, and Khartoum—is being carried out.

IMMUNIZATION AGAINST BULLETS.

The practice of artificial immunization against snake venom is found among certain savage peoples, and is founded, as we know from Pliny, on a very ancient belief, which is embodied in the proverb about the curative properties of the "dog that bit you." Mithridates, who reigned over Pontus, on the Southern shore of the Black Sea, in the first century before Christ, is said to have made himself immune against all kinds of poisons, and Professor Behring has consecrated the tradition by giving the famous King's name to one of the recognized methods of immunization. A curious belief which, according to Dr. Paul Lewoniewki, a medical officer of the Russian army, exists among the Cossacks would seem to be a survival in a grotesque form of the old notion of immunization. They think they can effectively protect themselves against death by bullet on the battlefield by swallowing a sufficient number of the deadly missiles. In cases where the immunizing body is taken in moderate amount, the effect is probably no more than that of the "Everlasting Pill" which among ourselves not so long gone by used to do duty for a whole family during several generations. But the desire to make assurance doubly sure every now and again leads to overdosing, and then trouble is likely to arise. Dr. Lewoniewki reports the case of a young soldier who had such faith in the prophylactic that he one day swallowed fourteen modern jacketed bullets, following up this heroic medication with thirty-one more on the following day. The charm is supposed to lose its virtue unless the motive of its use is kept secret; hence the reason assigned for the swallowing of the bullets was that the soldier wished to excel some of his comrades who had taken but a few. In them the foreign bodies passed through the intestine without difficulty. The man who had swallowed the forty-five bullets, however, was soon seized with pain in the stomach. The repeated administration of purgatives having failed to dislodge the bullets the man was

admitted to hospital. For some weeks the only symptom observed was salivation. A few bullets were passed, and radiographic examination seemed to indicate that many others were gradually working their way towards the rectum. Serious symptoms, however, intervened—stinking vomit, acute abdominal pain, a foul smell about the mouth, and earthiness of the complexion, and forty days after admission gastrostomy was performed. The incision of the stomach gave issue to about half a pint of a foul sanguinolent fluid. Eleven bullets were removed; they were smooth, and showed no change on the surface. The mucous membrane of the stomach was congested and dotted with many small ecchymoses. The man made a good recovery.

THE POPULATION OF FRANCE.

In France, unlike England, the population has been counted regularly every five years since the beginning of last century, the date of the last census being just over a year ago. No full report relating to it has yet appeared, but the Minister of the Interior has published a summary of its contents so far as gross population is concerned. From the figures given it would appear that the population of France on March 4th, 1906, numbered 39,252,267, which represents an increase of 290,322 in five years. Such increase is considerably less than in the previous five years, when it was little less than half a million; on the other hand, if the ten years ending March, 1906, be compared with the ten years ending March, 1901, the rate of increase is in favour of the later decennial period. A further point from which can be drawn some consolation for those who view the comparative depopulation of France with alarm is that the increase, such as it is, is distributed over a larger number of departments than in earlier periods, or, in other words, the population seems to be stationary or decreasing in fewer parts of France than heretofore. A further item in the summary relates to the number of foreigners resident in France. They were counted for the first time in 1886, and then numbered 1,115,214; they now only just exceed a million. It is believed that this diminution is the outcome of a law passed some seventeen years ago with reference to foreign residents, which has the effect under certain circumstances of converting resident foreigners into French subjects automatically and irrespective of their wishes. A certain amount of information is also supplied as to changes in the distribution of the population. Some large towns have added to their population although that of the departments in which they are situated has decreased, but the figures as a whole are considered to indicate at least some slackening in the flow from the country districts to large centres. In considering these figures it is worth while to remember that the British census of 1901 revealed a population of 41,976,857; this was equal to an increase in ten years of not far short of 4,000,000, against, roughly speaking, a quarter of a million in five years in France.

Medical Notes in Parliament.

After the Recess. The House of Commons resumed work on Monday last and after about a dozen questions only went into Committee of Supply. The benches were poorly filled and there were only about 200 members present in the House altogether. Like the Prime Minister, most of the members had extended their holiday, and did not hurry back to consider the prosaic matters connected with colonial money for royal palaces and public buildings. The ballot subjects in the Commons are often full of surprises and so it proved on Monday, for Mr. H. C. Lea had unearthed the interesting fact that a gentleman who resided by favour in St. James's Palace was in the employment of a foreign firm of champagne shippers. Here was the presence of a most interesting scandal and the Committee rallied to it eagerly, but the Chairman held that the Committee of Supply had only to deal with the rooms, and not with the persons who lived in them. So after all the matter could not be discussed, and Mr. Lea, who had threatened to take a division on a motion to reduce the vote, was finally placated, and the £63,400 granted for the royal palaces.

The Osborne Convalescent Home for officers was next considered and questions asked as to the water supply and the general sanitary condition. Mr. Harcourt said that when Osborne House was taken over the drainage was found to be very bad, but the whole system had been remodelled, and was now in a condition to meet the highest requirements of a convalescent hospital. The water supply was taken from West Cowes, and was better than could be obtained on the estate. The administration of the hospital had been most successful. During the year 1906-7 330 patients passed through, an increase of 30 on the previous year, and of 88 on the year 1904-5. Mr. Morton then asked for an explanation of the travelling expenses of the Advisory Committee, and Mr. Harcourt said that a body of distinguished doctors and surgeons gave their services gratuitously for the purpose of inspecting the hospital and the cases therein. He thought the least the country could do was to pay the necessary travelling expenses of gentlemen whose services he could not praise too highly. The vote was then agreed to. The other votes which followed were passed after some debate, and the House celebrated its return to work by adjourning at the early hour of 8.15.

Tinned Foods from South Africa.—Mr. Ernest Lamb asked the President of the Local Government Board whether he was aware that, at a recent auction in the City of London (March 21st), a large quantity of tinned goods were offered for sale, some of which were seized and destroyed as unfit for food by the port sanitary authority in whose district they were lying, although the owner of the goods stated that some of these goods were returned military stores from South Africa; and whether he was aware that a quantity of these goods were still in this country and on the way, and that arrangements were apparently being made to put them on the market from time to time at the rate of one halfpenny per pound after expense of freight, storage, etc., had been paid; and whether, under these circumstances, he would take such steps as might be necessary in the interests of public health to prevent such sales. Mr. John Burns replied that the facts appeared to be generally as stated. Further legislation of the kind contemplated by the Public Health (Regulations as to Food) Bill now before Parliament was necessary for the proper dealing with a matter of this kind, but in the particular instance mentioned attention was given by the local authorities concerned to the condition of the goods sold at the auction. A special notice was exhibited at the auction to the effect that they were sold subject to being passed by the medical officer of health of the district in which they were lying; and steps were taken by the medical officers of health of the City and Port of London, of Stepney, and of Finsbury to obtain the surrender of such of the articles of food as were considered to be unfit for human consumption.

Magistrates and Vaccination. Mr. Clarke on Monday asked the Home Secretary about a case in which a conscientious objector was refused a certificate at Lambeth Police Court, although he had stated his conviction that vaccination would be injurious to his child, and asked that the magistrate should have his attention called to the views of the Lord Chief Justice. Mr. Gladstone said in reply that he had no information as to the facts of the case. The law required that an applicant should satisfy the magistrate that he conscientiously believed that vaccination would be injurious to the child, and he could not, therefore, take any action in the matter. The magistrates were well aware of the views of the Lord Chief Justice on the subject.

Public Health Bills. The Public Health Officers Bill and the Housing of the Working Classes Acts Amendment Bill, which deals incidentally with the position of rural health officers, were both down for second reading on Wednesday last; as there was no chance of their being reached, Sir Walter Foster put them down for Wednesday, April 17th. The Public Health Bill of Mr. J. W. Wilson was also postponed.

West Yorkshire.

Post-graduate Course at the Leeds Public Dispensary.

Encouraged by the large measure of success which attended the first course of post-graduate instruction at the Leeds Public Dispensary, which was held in the summer of last year, the Faculty of that institution has decided to conduct another course this year on very much the same lines. The meetings will be of the nature of practical demonstrations rather than of set lectures, and will be very fully illustrated by specimens and cases. The committee considers itself very fortunate in having secured the co-operation of Dr. James Mackenzie, of Burnley, who will give an opening address and demonstration. Dr. Mackenzie's well-known work on the more abstruse phenomena of the circulation, conducted as it has been in the midst of the cares and exactions of a large general practice, must stand as an eloquent illustration of what can be done by patient and self-denying research, and his presence ought to act as an incentive to all who desire to keep up and to extend their scientific knowledge. As was the case last year, two members of the staff of the General Infirmary have been asked to associate themselves with the course, and Mr. R. Lawford Knaggs will give a demonstration on suppuration and tuberculous joint affections, with special reference to ultimate results, while Dr. J. B. Hellier will discuss the different forms of puerperal infection. The committee has also secured the assistance of Dr. Leo Rowden, who will give a demonstration on the uses of the x rays. Dr. Wardrop Griffith's demonstrations will be on selected cases of diseases of the circulatory system and on cases of diseases of the nervous system. Dr. Trevelyan will discuss haemoptysis in phthisis and its management, and will, at his second meeting, go through the systematic examination of a case of disease of the nervous system. Dr. Telling's demonstrations will be on the differential diagnosis of abdominal effusions and on the manifestations of rheumatism in childhood. The routine clinical examination of urine will be in the hands of the honorary pathologist, Dr. Watson, and Mr. Seaton and Dr. Alexander Sharp will deal respectively with cases of surgical interest and with the importance of diseases of the throat and nose in general practice. Mr. Michael Teale will show instances of the external and internal diseases of the eye. The opening meeting will be held in the third week of April, and the course will terminate on June 25th. As all the meetings are intended to be eminently practical the number of the class will be limited to twenty.

Post-graduate Study in Anatomy in Leeds.

For many years the Professor of Anatomy has conducted a class on applied anatomy during the summer term in which the application of anatomy to the practice of medicine and surgery is made the subject of discussion and demonstration. This class is for the benefit especially of senior students and is probably more necessary in these latter years when less time is available for students to make their knowledge of anatomy sound and permanent than it was when the claims on their time by the physiologist were less pronounced. It is a frequent cause of complaint on the part of examiners in medicine, surgery, and midwifery all over the country that even the best students frequently break down over the incidental anatomical knowledge they should manifest in the examinations on these subjects. A considerable number of qualified men have from time to time attended this class, and in the coming summer term it is intended to encourage this by extending the course and enlisting the co-operation of some members of the teaching staff who have devoted attention to special points of practical importance in anatomy.

Investigations as to the Quality of the Milk Supply of Yorkshire.

A joint Committee has been appointed, representative of the county councils of the West and East Ridings, of the Yorkshire Council for Agricultural Education and of the leading county boroughs, to carry out a series of investigations mainly directed to the study of the contaminating influences which may be brought to bear on milk from the time it leaves the farmer's premises until it reaches the consumer. The investigation will take the form of a number of bacteriological tests of samples of milk from various sources, and samples of milk will be taken at various stages of its passage from the farmer to the consumer's house. An expert bacteriologist has been specially engaged for the inquiry for a period of twelve months. The samples of milk will not be taken under the provisions of the Food and Drugs Act, but will be obtained by arrangement with the farmers and milk dealers in each case. They will be obtained from the milk at the cowsheds after any cooling or mixing processes have been carried out—that is to say, in the condition in which it begins its journey, at the railway stations, in the shops of the vendors, in the streets, and at the houses of the consumers. The conditions of cleanliness or otherwise, of light, air, and ventilation of the various resting points of the milk will be inquired into. The investigation promises to be a very fruitful one, and one which in justice to the farmers should be entered upon. The report of the Committee will be looked forward to by all who are interested in the question.

Keighley Guardians and their Public Vaccinators.

At a meeting of this Board of Guardians, held on March 27th, a resolution was adopted by 12 votes to 4 that twenty-eight days' notice should be given to the Public Vaccinators of the union to terminate their engagements. The gentleman who moved the resolution remarked that last quarter the Board paid £35 in vaccination fees, equivalent to £140 per annum, for what was, in his opinion, a waste of time and labour. They ought to economize wherever possible, and vaccination expenses were one of the first items in which they could economize without any detriment to the country. The seconder of the resolution said that it was monstrous that they should have so much money to pay and without getting anything in return. A supporter of the resolution said that at the recent conference it was considered that 2s. 6d. was quite sufficient to pay for vaccination, and that in some cases 1s. 6d. was enough to pay the doctors for putting filthy rubbish into the child. When, however, we consider the amount of clerical work involved; the fact that many visits have to be paid for the 1s. fee, where the parents desire that their own doctor should vaccinate; that in every case for the 5s. fee paid two visits have to be made at the home of the child vaccinated; that antiseptic powders and pads have to be provided; and that detailed information has to be given of the results to the guardians and the Local Government Board, it seems absurd to think that any body of men can be found to cavil at the cost involved. It is to be hoped that local medical men will stand united, and support their professional brothers in showing the Keighley guardians that they are not prepared to accept the value sought to be placed on their services. They will thus demonstrate to the guardians that their ignorance of the value of vaccination does not lessen their responsibility for the adequate remuneration of those who have been selected for carrying it out.

Newcastle-upon-Tyne.

The Clinical Society.

There was a large audience of medical practitioners and students at the College of Medicine on April 4th to listen to an address on recent theories of diet and their bearings on practical medicine by Dr. Robert Hutchison of the London Hospital. The address was delivered under the auspices of the Newcastle-upon-Tyne Clinical Society and under the presidency of Dr. Geo. Foggin. After a few introductory remarks upon the physiology of the subject, in which the required daily quantities of proteid, fat, and carbohydrate foods were respectively dealt with, the income and expenditure contrasted, and interesting comparisons made between the nitrogen amounts required according to the Voit and Chittenden standards, the lecturer proceeded to discuss at considerable length the various theories in regard to the therapeutical system of feeding such as those of Haig, Hare, and others. The theories and systems were subjected to a close scrutiny, the weak points and the values of each thoroughly explained. In each system there was a certain

amount of good and of usefulness, but the lecturer wisely pleaded for non-adherence to a too rigid system of diet. A low diet, for example, might be necessary for certain people whose arterial tension was too high, but when carried to too great an extent, as in at least one case within the lecturer's knowledge, it so reduced the vitality of the patient that she became the victim of tuberculosis, while another patient who was the subject of tuberculous lung disease lost his pulmonary disease under forced feeding, but developed nephritis. From time to time during a course of treatment by diet its composition should be reviewed, for, apart from the feeling of distaste which might be created by constantly taking one kind of food, other morbid conditions might arise and necessitate an alteration of the diet. The address was remarkable for its breadth and comprehensiveness. On the motion of Professor George Murray, seconded by Dr. Beattie, a vote of thanks was awarded to Dr. Hutchison.

In the evening the Clinical Society held its annual banquet in the Turk's Head Hotel, under the presidency of Dr. George Foggin, who was supported by the Lord Mayor of Newcastle-upon-Tyne, Sir George H. Philipson, Professors Page and Oliver, Drs. MacBean, Drummond, Gordon Black (Harrogate), Armstrong Atkinson, Beatley, Bolam, Beattie, Gordon Bell (Sunderland), Wear, and the Honorary Secretary, Dr. Leech. Altogether 110 gentlemen sat down to dinner. After the Royal toast the Chairman proposed, in appropriate terms, "The Health of the Guest of the Evening," Dr. Hutchison, who in a few well-chosen sentences gracefully acknowledged the compliment. To Dr. Armstrong Atkinson, son of one of the first batch of students who attended the College of Medicine seventy-four years ago, was very properly entrusted the toast of "The College of Medicine." It drew from Sir George H. Philipson and Professor Page interesting and hopeful replies. By Dr. Gordon Black the toast of "The Royal Victoria Infirmary" was proposed, and responded to by Dr. Hume, who dealt with the subject of hospital abuse. In Dr. Gordon Bell the Newcastle Clinical Society found a warm advocate of its claims and a competent exponent of its duties; the toast was acknowledged by the Honorary Secretary. "The Commerce of Tyneside" was given by Professor Oliver, and responded to by the Lord Mayor. An enjoyable evening was brought to a close by the company singing "Auld Lang Syne." The thanks of the Society, and especially of the members present at the banquet, are due to Dr. Leech, who was untiring in his efforts to make the dinner, as it was, a great success.

Manchester.

Medical Men and the Police.

It will be remembered that last January the question arose in Manchester as to the right of the police to remove a person accused of attempted suicide, contrary to the advice and wishes of his medical attendant. The patient in the case died recently, and an inquest was held at the Manchester coroner's court, when Dr. Bagley, the medical man concerned, had for the first time an opportunity of stating publicly the grounds upon which he objected to the man's removal. Dr. Bagley stated that when he first went to the house he was led to believe that it was the wish of the family that the man should be removed to the hospital, and that he therefore proposed only to bandage the wound; subsequently the patient himself and his sons pleaded that he should not be taken away, whereupon Dr. Bagley, after explaining that the father having committed an offence must be placed under arrest in his own house, stitched up the wound, and arranged to treat the patient there. Eventually an inspector of police arrived and insisted upon the patient being removed. The jury returned a verdict of death from senile decay, while stating that no blame attached to the police they at the same time expressed the opinion that the police ought to have been more careful. The incident may now be considered closed in view of the recent declaration of the chief constable, reported in the British Medical Journal of March 23rd, p. 715, to the effect that he had instructed the police that they were not entitled to enter any private dwelling house without being sent for, and that in all cases of accident and the like they should be careful not to take the patient away without specific instructions from the medical man in the case.

South Wales.

Merthyr Isolation Hospital.

An isolation hospital, which the corporation of Merthyr have erected at a cost of £17,000, was opened on March 23rd by Mr. J. Keir Hardie, M.P. The hospital, which Dr. Williams, the county medical officer, has described as one of the finest in Glamorgan, stands on a site of four acres in a splendid position about a mile south of the centre of the town. Mr. Keir Hardie said it was an honour to be associated with the opening of so fine a building, but it was a sad commentary on our civilization that buildings of the kind should still be needed. We were, however, learning—or beginning to learn—that the business of the doctor was not so much to cure disease as to prevent it. Perhaps in future medical men would be paid not for attending the sick, but would be fined for having any sick in their midst. The mystery of disease, as it used to be considered, was rapidly disappearing. He was sure that the doctors of the staff, with their self-sacrificing work, would do all that human genius could to restore to health all who were brought under their charge. It was only those who had had the experience of being attended to in a hospital or public institution who knew how valuable the doctor and nurse could be. Such a building, or rather the spirit underlying the erection of it, brought out all that was best in human nature. Every phase of it had been represented among those who had worked to bring that building to completion. The most rigid Conservative, the most revolutionary Socialist, the most advanced Radical and Liberal had all combined as human beings in that little bit of work for suffering humanity, and he regarded that as an augury for better days to come, when we should be able to combine not merely to relieve suffering but to remove the causes that produced it. After votes of thanks to the council's engineer, who designed and supervised the erection of the hospital, and to Mr. Keir Hardie, the ceremony ended.

Newport Grant to University College, Cardiff.

At the Newport Education Committee held on April 2nd, the Secondary (Scholarships) Subcommittee reported that at a special meeting Mr. J. Austin Jenkins, who attended on behalf of University College, Cardiff, explained the whole matter from the standpoint of the College authorities. The Subcommittee recommended that the Committee should make an annual grant of £200 to the University College, Cardiff, provided the College Council (1) allocated to Newport nine free studentships to be tenable in the faculties of arts or science, or the department of applied science and technology; (2) admitted all students from Newport other than those holding free studentships to the higher technical departments at a reduced fee of £13 13s. instead of a composition of £30; (3) admitted all students from Newport who wished to study a portion of a course only or separate subjects, on payment of one-third of the usual class fees; and (4) granted one representative from Newport on the Council of the College. Alderman Howell, in moving the adoption of the Committee's report, said he thought Newport should be affiliated to University College, Cardiff, and expressed surprise that a grant of £200 per annum had not been made long ago. The report was adopted.

Llanelly Rural District.

In his annual report to the Llanelly Rural District Council the Medical Officer, Dr. E. Evans, states that the estimated population is 21,532. The rainfall for 1906 was 57.51 in., which with one exception is the heaviest recorded during the past ten years. There were 789 births, giving a birth rate of 36.64 per 1,000 per annum, which with two exceptions (namely, 1903 and 1904) is the highest recorded in the district for many years, and 2.50 above the average for the last ten years. The subdistrict of Llannon again gave the highest birth-rate recorded, 41.95. The Llanelly suburban district had the lowest birth-rate, 29.81. The total number of deaths was 289, giving a death-rate of 13.42, the lowest on record in the district, and 2.89 below the average for the last ten years; 107 deaths or 37.02 per cent. of the 289 deaths at all ages were those of children under 5 years of age and of these 28 were those of children under 1 year of age. The mortality-rate of children under 5 years for the whole district

was 4.96. This is far below that recorded for any other year during the last decade. The mean duration of life for the year 1906 was 32 years. The water supply of some parts of the district has been extended and improved, but certain localities still require a much better supply. The Dairies, Cowsheds, and Milkshops Order has been partially carried out in the district. He advises that much more stringent measures should be adopted in carrying out this order.

Scotland.

Hawick Cottage Hospital.

The report presented to the annual meeting of the Hawick Cottage Hospital and Dispensary on March 28th stated that the outstanding feature of the past year had been the completion of the Ballantyne Ward, the total cost of that and other improvements having been £1,515. The number of patients treated in the hospital during the past year was 164, an increase of 26 from the previous year. The Chairman, in moving the adoption of the report, which was agreed to, congratulated the subscribers upon the continued success and the increased interest taken in this admirable institution for the alleviation of human suffering. Dr. Hamilton said that, knowing as he did a great deal about hospitals, he could with confidence say that this was one of the best-managed institutions of the kind at the present moment. There was never an abuse to which any medical man might draw attention that the managers did not rectify at once. The proposed new rules for the cottage hospitals of Great Britain and Ireland had been taken almost exclusively from the Hawick system.

Glasgow Royal Infirmary.

Post-Graduate Classes.

The Summer Course will this year be short but very complete, including, besides instruction in general Clinical Medicine by Dr. J. M. Cowan, and in Clinical Surgery by Messrs. J. H. Pringle and H. Rutherford, the following special subjects: Symptomatology of the Nervous System, by Dr. Walter K. Hunter; Surgical Diseases of the Urinary Organs, by Dr. David Newman; Gynaecology (A), by Dr. J. K. Kelly; Gynaecology (B), by Dr. Balfour Marshall; Diseases of the Eye, by Mr. H. Wright Thomson; Diseases of the Skin, by Dr. Alex. Morton; Diseases of the Throat and Nose, by Mr. Robert Fullarton; Anaesthetics, by Mr. J. King Patrick; Gynaecological Pathology, by Dr. William D. Macfarlane; Operative Surgery, by Mr. Peter Paterson; Bacteriology, by Mr. David McCrorie. These courses will be thoroughly practical, the amount of material at the disposal of the teachers being so large that they have every facility for illustrating their lecture-demonstrations by clinical cases. During last year the attendance on the various courses was most encouraging. The attendance at the classes (not including members of the staff) numbered 137. It is therefore hoped that, in order to facilitate arrangements, members of the profession who desire to join any of the classes will communicate as early as convenient with the Superintendent, who will enrol members and supply any information desired.

The Judicial Conception of Insanity.

We have received the following letter for publication in this column:

The Medical Profession and Lunacy Certification in Scotland.

Sir,—I have read with great interest the article on the above subject. Surely it is time that some action was taken by the medical profession in Scotland to secure an amendment of the law with regard to the certifying of the insane.

You state that "the medical profession is bound to secure society from serious danger due to mental disease," but where is the law to protect the doctor from unjust and iniquitous actions brought against him or her? Suppose a doctor has under his care a patient suffering in the same way as the prisoner in the Cumnock poisoning case. He calls in a specialist, and he and the specialist sign certificates that the patient is insane, and he is put in an asylum. Later, the law, in the person of a sheriff substitute, may decree that the man may leave the asylum; in such case the doctors will almost certainly have an action brought against them. The sheriff who signs the order to place him in the asylum is protected, but the doctors are not. Why should not the members of the medical profession have the same protection as the members of the legal profession?

You say, very truly, that "brain disease may produce such mild enfeeblement of mind that it does not interfere with a man's ordinary appearance before a casual observer, but nevertheless deprives him of the real power of being a law-abiding citizen. Such conditions often constitute the most dangerous of all forms of mental disease, as regards the public safety—a fact which the public do not yet realize."

Dr. Clouston has over and over again pointed out that such cases are the most dangerous to themselves and to the public, but those are the very cases that it is the most dangerous for the medical profession to certify. Therefore we have the anomalous position with regard to the law: The lunatics that are of the greatest danger to the public and themselves are the most dangerous for the doctor to certify, and therefore the most likely to be left at large.

Some time ago I, along with another doctor who is described by our leading newspapers as a lunacy expert of high standing, signed a certificate for a man. I had nothing personally to gain by it, I had not even a fee, and did it merely as a sense of duty—to the patient and the public. Later, without sufficient inquiry into the matter, my action was called in question by a sheriff substitute. The man was allowed to leave the asylum, and he brought an action against me for £10,000. This I had to defend, and at the very busiest time of the year had to attend eight full days in the Court of Session in Edinburgh. I had all the trouble and annoyance and waste of time and energy in preparing a defence for myself for having done my duty to the patient and to the public, and in addition had over £500 of law expenses, as the Scottish Medical Defence Society paid none of the expenses, although it was stated in the papers at the time that it defended the case. Some members of the medical profession came generously forward and sent me £260, and for this, and especially for the sympathy which they showed, I am for ever indebted to them. I have especially to thank Dr. Renton and Dr. Dunn for the great amount of trouble which they took as Secretary and Treasurer of the fund. I would like also to take this opportunity of thanking all those medical men who gave so much assistance at the trial. The kindness of Dr. Clouston, Dr. Joseph Bell, and many others I shall never forget.

In spite of the full acquittal at this trial, I had again a few weeks ago a further attempt to bring an action against me, and again the expense of agents in Glasgow and Edinburgh to watch the case. The attempt failed, but I may have any number of further attempts to face. The law gives me no protection for having done my duty, even when it has definitely proved that I have done my duty.

Now why should law have all the protection and medicine have none? If a sheriff substitute makes a mistake in letting a patient out and that patient kills some one, the sheriff can have no action brought against him. As the law stands now, any doctor who signs a lunacy certificate runs the risk of having an action brought against him, no matter how insane or dangerous the patient may be at the time. The sheriff or officer of the law who signs the order, and who is really the person who puts the patient in the asylum, runs no risk whatever of an action being brought against him. This is not only a great injustice to the medical profession, but a great injustice to the patient and the public. The patient suffers because he is often allowed to go free when he is too ill to take care of himself, and his being free deprives him of the chance of being cured, and it leads often to the loss of his life. One case in particular—and it is only one of many others—I will instance to you. When the action came out against me, a man in Glasgow with temporary insanity was seen by two doctors. These doctors said, If we sign a certificate for this man, and he is put in an asylum, he may get well and get out, and if he does so he will certainly bring an action against us, therefore we will not sign a certificate for him. In a few days the man committed suicide. If doctors could be freed from the liability to actions being brought against them, then there should be some other means of putting insane patients in asylums. There should be certifying doctors approved by the Crown and protected from the risk of actions being brought again them—just as the sheriff who signs the order is protected—or the responsibility should be laid entirely on the sheriff.

It is surely time that there was some alteration in the law of Scotland in this respect. The law of England has been altered so that no action can be brought against a doctor without a preliminary Crown inquiry having been held. Surely this provision at least should be extended to Scotland. If it had been at the beginning made applicable to Scotland, I would have been saved from a most vexatious and unjust action, and would have been richer by three or four hundred pounds of hard-earned money.

Marion Gilchrist.

Epidemic Cerebro-spinal Meningitis.

In the two weeks ending April 6th, 80 deaths from cerebro-spinal meningitis were reported in the eight principal towns in Scotland; of these, 60 were in Glasgow, 10 in Edinburgh, 6 in Leith, 2 in Paisley, and 2 in Dundee. In the same period 19 cases were notified in Edinburgh as suspicious cerebro-spinal meningitis, of which 15 were removed to the City Hospital; 19 cases remained under observation on April 6th.

Ireland.

The Irish University Bill.

A question of great interest just now is whether the Irish University Bill will see the light this session or not. Last week the *Times* suddenly announced, on the authority of its Irish correspondent, that the Government had "definitely abandoned the idea of introducing an Irish University Bill during the present session of Parliament." But quite promptly Mr. Birrell declared to a deputation from Queen's College, Galway, that there was "not a word of truth in that statement." But it is to be noticed that he paraphrased the *Times* announcement in these words: "that His Majesty's Government had abandoned the projected legislation for this university question." If, therefore, his denial applied to his paraphrase, it was not a contradiction of the original statement, which referred, in time, to "the present session." The public is always careful in accepting the denials of statesmen and politicians, who acquire a facility in evading direct statements when they would be inconvenient. But the editor of the *Independent* immediately sent this telegram to the Chief Secretary:

Would Mr. Birrell please say if it is true that the Government has definitely abandoned intention to legislate this session on Irish University Question?

and the reply from the Private Secretary was:

Statement wholly unauthorized, and without foundation.—Davies.

The question refers to "this session" and Mr. Birrell's reply is quite definite. Nevertheless, although there is no doubt of the Chief Secretary's intention to introduce in this session an Education Bill in connexion with University education in Ireland, it is hard to see how it can get beyond the very earliest stages; and therefore, perhaps, it was deemed safe to make a declaration of deliberate intention to abandon, which in reality may come about only by the force of circumstances as they exist just now. We are now in middle of April, Parliament will rise in August, and the Whitsuntide recess must be taken out of the few weeks remaining for work. But in that time the Army Bill has to be passed, the Devolution Bill discussed, the Budget brought in, the House of Lords subjected to proposals of reform, and a host of smaller but important subjects considered. If the Chief Secretary thinks that he can in addition carry through such a contentious question as the Education Bill must be, he has an optimism which can only excite wonder. We accept the declaration of his desires and intention, but we doubt his ability to give force to them in the present session of Parliament.

Queen's College, Galway.

Queen's College, Galway, made a brave protest to Mr. Birrell on April 6th in regard to the proposal to place it on a lower plane than the Colleges of Belfast and Cork in its relation to the proposed new University. Not only were the professors headed by their president, but there were also county councillors, and, strangest of all, a Roman Catholic bishop, who in an excellent speech pleaded the cause of the College. President Anderson, Professor Trench, Professor Kinkead, M.D., and Professor Pye, M.D., also spoke, and the Chief Secretary made a sympathetic reply, in the course of which he said:

The question which we have to consider is the chance there may be in the future for making this College a great university in the West. When I say a great university, of course, I don't mean great in the sense of an extraordinary number of its graduates. I mean great having regard to the possibilities of the situation, and to the necessities of the case, and having regard to the quick-witted population availing themselves of its advantages as a university. If you have a university in the West which is well attended and if you find it producing a number of distinguished graduates, successful in their college careers, successful also in after life, why, then your college has succeeded to the utmost that can be desired for it and it is the most that any rational man would expect from it that it should be regarded with affection and esteem by the whole of the population amongst whom it was situated. As I have said, of course, in this matter of education I cannot but think that there are in the Queen's College, Galway, all the materials for a successful future. It has fine buildings, which, of course, are always attractive, although not the trappings of a university; still, it is something to find fine buildings well situated and in a central part of the locality. Therefore, you start with advantages in that respect, and the numerical difficulty seems to me to be reasonably got over by assuming that you will be able so to alter your constitution so as to make the educational advantages of your College available to the whole population—that is to say, to such portion of the population as are able to avail themselves of such higher education. Speaking for myself, I am anxious that no proportion of Ireland should be unreasonably omitted from these proposals of ours for higher education, and I certainly think that the omission of Queen's College, Galway, reconstituted and remodelled, as I hope it is going to be, would be a very grievous omission.

Typhoid Fever in Cork District Asylum.

Typhoid fever has again broken out in the Cork District Asylum. It is only a few years ago since a similar outbreak took place, traced to inmates drinking water from a stream that flowed through the grounds; in this stream a dead monkey was found. The course of the stream was diverted, and it was thought there would be an end to further epidemics. This time the milk supply is the suspected cause, and both the milk and the water supply of the farmers who contract for the asylum have been submitted to bacteriological examination, with the result that the milk has been deemed highly suspicious. The Committee of Management warned the three contractors of the danger they were incurring, and the acting resident medical superintendent, Dr. Cashman, drew up certain directions as regards greater cleanliness to be observed by the farmers who supply the milk. These the contractors pledged themselves to observe, but at the last committee meeting it was reported that two of the three had apparently grown tired of the restrictions and had purchased milk elsewhere and sent it in with their own, thus undoing what had been done to trace the cause of the outbreak. The architect of the institution has reported on the sewage system and can find in it no cause for the illness prevalent. A fortnight ago there were 40 patients affected, and when the overcrowded condition of the asylum is considered, one cannot wonder at the anxiety felt by the medical staff.

County and City of Cork Lying-in Hospital.

The County and City of Cork Lying-in Hospital has just issued its report for 1906; it shows a further increase in the number of patients seeking admission to the hospital or attendance at their own homes. The number admitted during the year was 388; of these 322 were delivered, while 66 were discharged unconfined; the number attended at their own homes was 267, making a total of 655 cases treated, being 70 cases more than in 1905. The number of complicated cases was as usual very large, including contracted pelvis, abdominal section, albuminuria, hyperemesis, version, *post-partum* haemorrhage, adherent placenta, cystoma, mastitis, sapremia, yet withal the maternal mortality was *nil*. The infant deaths numbered only 18, which does not appear large considering the total number of deliveries; 6 were cases of macerated fetus, 5 were premature births, and 3 were born dead at full term. On the recommendation of the medical staff arrangements have been made whereby resident students are accommodated with rooms close to the hospital.

The annual meeting of the Invalid Children's Aid Association will be held, by kind permission of the Right Hon. the Speaker and Mrs. Lowther, at the Speaker's House in the Palace of Westminster, at 3 p.m. on Wednesday, May 1st. Lord Strathcona will preside, and the Rev. Father Bernard Vaughan, Mrs. Creighton, Mr. I. Zangwill, and Sir William Bennett will be among the speakers. Admission by ticket only, application for which may be made to the Secretary, 69, Denison House, Vauxhall Bridge Road, Westminster, S.W.

A meeting of the Northern and Midland Division of the Medico-Psychological Association of Great Britain and Ireland will be held at the Lancashire County Asylum, Prestwich, near Manchester, on Thursday next, at 2.30 p.m. Drs. David Orr and R. G. Rows will give a demonstration of some recent researches in pathology, and Dr. Clarke will read a paper on a case of pure motor aphasia. Members are invited to lunch by Dr. Perceval, and will dine together at the Midland Hotel, Manchester.

OBITUARY.

THOMAS HENRY WAKLEY, F.R.C.S.Eng.,

SENIOR EDITOR OF THE "LANCET"; CONSULTING SURGEON TO THE ROYAL FREE HOSPITAL; AND JOINTLY SENIOR FELLOW OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

We regret to announce the death, at his residence in Queen's Gate, of Thomas Henry Wakley, the senior proprietor and Editor of the *Lancet*.

Thomas Wakley, who never used his second name, which belonged also to a younger brother, was born on March 20th, 1821, and had therefore passed by a few days the 86th anniversary of his birthday when he died. He was the eldest of the three sons of Thomas Wakley, the well-known coroner and member of Parliament, who founded the *Lancet*, and was educated with the intention that he should enter the Church, being carefully tutored in the classics preparatory to matriculation at Oxford. His stay at Oxford was, however, very brief. The University of London had been founded a few years previously with a liberal programme which appealed strongly to his father's views, and Thomas Wakley entered the medical faculty of University College, London, abandoning all idea of the Church. In those days the medical teachers, or professors, of University College were an extremely distinguished band—probably no medical school has ever been served by such a famous group, so that an industrious student had extraordinary opportunities. Young Wakley soon became known to more than one of his teachers as a promising pupil, showing in particular great aptitude for surgery and surgical anatomy. He was coached by Erasmus Wilson, at that time attached as lecturer on and demonstrator of anatomy at the Middlesex Hospital, and in 1845 he took the diploma of Member of the Royal College of Surgeons of England, having previously proceeded to Paris in obedience to his father's often-repeated assertion that the scheme of medical education enjoyed by the Parisian students was preferable to that of the London medical schools.



In Paris he lived with Dr. J. Henry Bennet, the gynaecologist, and attended regularly the clinics of the best operating surgeons in the city. He always held that his skill in practical surgery, which was recognized by his contemporaries as considerable even while he was quite a young man, was due half to the lucid teaching of the French professors and half to the thorough study of anatomy which he made under Erasmus Wilson. In the year 1848 he was elected surgeon to the Royal Free Hospital, and entered into the spirit of his duties with enthusiasm. He took a house in Guilford Street, Russell Square, so that he might be near the hospital, which had just been removed from its original site in the city to Bloomsbury, and for several years acted, without any formal appointment, as casualty surgeon to the institution. His house was so near to the hospital that it was inevitable that the resident staff should appeal to him in all cases of difficulty or obscurity, and he was delighted with the opportunities which he thus got for increasing his experience. In 1849 he took the Fellowship of the Royal College of Surgeons of England, of which College he was, jointly with Mr. G. C. Steet, senior Fellow at the time of his death.

He soon made a name for himself as a bold and successful operator, and in a short time felt justified in moving from Guilford Street to Arlington Street, where he enjoyed for many years a good surgical practice, a large number of his clients belonging to the highest ranks of society. In those days surgical operations were performed in the houses of the patients, the private hospital not having been invented, and Wakley spent a large portion of his time travelling about England, staying with the objects of his skill until he could leave the dressing of their wounds or the treatment of any after-effects to the practitioner in attendance. Being an expert both with rod and gun, as well as a good rider, he found himself at home in the country houses where his professional duties made him a visitor, and he always looked back to this part of his career with pride, regretting that circumstances led him to surrender so pleasant a position.

But in 1857 Thomas Wakley, the father, who five years previously, owing to ill-health, had resigned his seat in Parliament, made an arrangement by which his eldest and youngest sons became part proprietors of the *Lancet*, and Thomas Wakley, the son, became actively interested in the conduct of the paper. The father died in 1862, when his youngest son, Dr. James Wakley, became editor. Although Thomas Wakley did not actually retire from consulting practice until twenty years later, he began soon after his father's death to attend daily at the *Lancet* office, and acquired such experience of practical journalism that he was able, upon the death of his brother in 1886, to assume the editorship in association with his son, the third Thomas Wakley. Under the joint rule of father and son our contemporary has prospered, and not a little of this prosperity has been due to the indefatigable zeal and energy of the subject of this brief memoir. A member of the staff of the *Lancet*, who was in daily touch with his deceased chief, writes to us as follows concerning him:

"Of unbounded activity, physical and mental, he was never ill and never absent from his duties. In all weathers and on all occasions he arrived at his office at his appointed time. Until the last four or five years of his life, during the summer that time was 10 a.m. For many years he spent the winter months in Brighton, but he never allowed this to interfere with his regular attendance at the *Lancet*. As late as 1903, when he was over 80 years of age, he made the journey from London to Brighton and back daily, and his arrivals at his office, though later in the day, were made with the same punctuality, save when the eccentricity of railway service upset his plans. During the last decade of his life the editorial management of the journal gradually passed from the hands of the father to the hands of the son, but to the end of his days Thomas Wakley showed no abatement of interest in the details of the paper. He continued to come daily to the office, and could always be relied upon in cases of unusual difficulty or doubt for a sound and sensible consulting opinion, while his familiarity with the details of bygone medical politics was frequently exploited by his younger colleagues to the benefit of the medical world."

Thomas Wakley was extremely interested in the work of the Hospital Sunday Fund, which was largely founded by Dr. James Wakley. He personally supervised the publication every year of a special supplement of the *Lancet* issued in the interests of the Fund, and was a regular attendant

at the meetings of the General Purposes Committee. An exceedingly charitable man, the institution of the *Lancet* Relief Fund was due to his deep sympathy with professional brethren in trouble. The income of this Fund since its foundation in 1889 has been supplied by himself and his son, as the proprietors of the *Lancet*, in accordance with his original idea that it should "meet unforeseen and urgent pecuniary exigencies among members of the medical profession." He was a warm supporter of Epsom College, to the funds of which useful foundation he made in 1902 a donation of £1,000, and his private generosity in cases of undeserved or sudden money troubles was unstinted.

A very robust man, in his youth an athlete, and throughout his life an active sportsman delighting in outdoor pursuits, his last illness was—within the memory of all who knew him—his first illness. It was of short duration. A little over six weeks ago he found himself troubled with attacks of faintness and breathlessness. He was assiduously cared for by Dr. Alfred Baddock in consultation with Sir R. Douglas Powell, and in his temporary absence with Sir Lauder Brunton; but it was not possible to arrest the increasing cardiac weakness, to which he quietly succumbed. He leaves a widow, a son, and a daughter. His wife was the third daughter of Mr. Francis Blake, of Rickmansworth, and she and her husband celebrated their golden wedding six years ago. The son, Mr. Thomas Wakley, jun., has for the last twenty years been his father's colleague in the editorship of the *Lancet*.

A funeral service was held in St. Mary Abbots Church, Kensington, on Wednesday, April 10th, after which, in accordance with his wish, his remains were cremated at Golder's Green.

THE unexpected news of the death of Dr. PHILLIPS was received by his numerous friends in the towns of Hove and Brighton on March 27th with the keenest regret mingled with surprise. He had only been suffering for a few days from what was regarded as a mild attack of influenza. On the afternoon of March 26th an attack of vomiting with slight haemoptysis heralded the approach of alarming symptoms of heart failure and collapse, to which he succumbed before 3 o'clock on the following morning. Born at Brighton on December 24th, 1855, he commenced the study of medicine as a pupil at the Sussex County Hospital. He then entered as a student at Guy's Hospital, where he was distinguished for his painstaking and conscientious work. He took the diplomas of M.R.C.S. and L.S.A. in 1880, and obtained his first knowledge of private practice by working in the East End of London. As soon, however, as the post of House-Surgeon to the branch of the Brighton Dispensary in Hove became vacant, he applied for it, and held the appointment for six or seven years, he then entered into partnership with the late Dr. Medcalf. Eight years ago Dr. Medcalf died, and Dr. Phillips carried on the practice, and succeeded to nearly all the appointments. Subsequently he was appointed surgeon to the Police Force. He was Honorary Medical Officer to the Hove Branch of the Brighton Dispensary and the hospital in connexion with that institution. This appointment he held from 1883 until the time of his death, and did a great deal of operative surgery. His colleagues feel that they have lost a sincere friend whose skill and judgement they greatly appreciated. On leaving Guy's he still continued his studies, obtaining the D.P.H.Camb. in 1884, the L.R.C.P. Lond. in 1885, and the M.D.Durham in 1898. Although not of robust appearance, he nevertheless enjoyed very good health, and was never laid up. He worked very hard at his profession, and never took any holidays, with the exception of a day or two's fishing and sailing. For this relaxation he kept a boat, and was intensely fond of being on the water. Although of a retiring disposition, his warm-hearted and genial character gained for him a great many friends, who thoroughly appreciated his many sterling qualities. He was unmarried. His father, Mr. Barclay Phillips, an old and highly-respected Brightonian, is still alive at the age of 92, and resides at Bedford, where his eldest son, Dr. F. B. W. Phillips, is medical officer of health. The funeral took place at the Hove Cemetery on April 2nd. The route to the cemetery was lined by people of whom a large proportion were poor, and had come to show their respect and regard for one who had treated them with kindness and consideration for so many years.

WE regret to have to record the death of Dr. FERDINAND A. PURCELL, who died at his residence, 7, Manchester Square, in his 70th year. He was for many years Surgeon to the Cancer Hospital, Brompton, and was the first surgeon in Great Britain to perform vaginal hysterectomy for cancer of the uterus. He was a Member of Council of the Medical Defence Union, and was a regular attendant at its meetings, taking a lively interest in its welfare. He was a foundation Fellow of the British Gynaecological Society, and contributed several papers of interest and importance at its meetings. Dr. Purcell was the author of *Cancer: its Allied and other Tumours*, and contributed several papers on cancer and other subjects to medical periodicals.

SURGEON-MAJOR CHARLES HATCHELL, Indian Army Medical Service, retired, died at South Kensington on April 2nd, aged 72. He joined the Bengal Medical Department as Assistant Surgeon, July 23rd, 1858, and was made Surgeon-Major, July 1st, 1875. He retired from the service in 1888. He served with the Bhootan Expedition in 1865-6, receiving the medal granted for that campaign.

STAFF SURGEON EDMUND WALLER, M.D., R.N. (retired), died on March 29th, at Peterborough, in his 75th year. He was appointed Surgeon in the Royal Navy, August 4th, 1854, and was made Staff Surgeon, November 4th, 1864, and retired from the service, April 1st, 1870.

AT the end of the summer session Professor A. Politzer will retire from the Chair of Otology in the University of Vienna under the age clause. His friends and pupils have resolved to take the opportunity of expressing to him their sense of gratitude and esteem. A medal from the design of the eminent sculptor Teles will be struck, and a gold copy presented to Professor Politzer, together with an address containing the names of all the subscribers. Silver and bronze copies will also be struck for those who may desire to possess them as souvenirs of the occasion. Those who desire to subscribe to the fund should communicate with Dr. G. Kaufmann, Vienna VI., Mariahilferstrasse 57. A donation of 20 kronen (£0s.) will entitle the donor to a silver, of 12 kronen (10s.) to a bronze copy of the medal.

CORRESPONDENCE.

THE STANDARD OF THE MEDICAL DEGREES OF THE UNIVERSITY OF LONDON.

Sir,—I have for some time past been surprised at the reckless and unfounded statements which have been made in several quarters about the alleged lowering of the standard of medical degrees in the University of London. Having served both on the old and the new Senate for some years, and having now retired, I think I am in a position to speak without prejudice and from an independent point of view. As to the statement that the standard has been lowered, I can only say that nothing could be wider of the mark—the precise opposite is the case. The present Senate has not only maintained the standard, but has introduced improvements which, whether intended to do so or not, have the effect of making the M.B. degree distinctly harder than it was.

With your permission I should like to say a word on these improvements. To begin with pathology. The old examination in pathology was a very poor one and had been objected to before the reconstitution of the University. It used to consist of two questions on "general pathology" in a paper which included also general therapeutics and hygiene, and a so-called practical examination. The examiners were the examiners in medicine. Evidently this was not enough to accentuate the importance of a subject so fundamental in medicine and surgery. The practical examination consisted merely of the recognition of specimens, which some Examining Boards still dignify with the name of pathology, but which students with much greater accuracy define as "spotting." Now, spotting is a lively game enough, but to succeed requires luck as well as skill, and when, as used to be the case, the examiners were precluded from putting any oral questions on the specimens, chance played an important part. The system had not been changed for many years, and was quite out of date as well as inferior to that of several other universities.

When the late Dr. Cavafy and I were examiners in medicine—I think about 1895-6—we sent in a memorial to the Senate, suggesting that pathology should be made a separate subject, that there should be separate examiners, and that the practical examination should be improved. The old Senate moved slowly; a Committee was appointed, but ultimately it was decided to leave the matter to be settled by the new Senate. The suggested reforms have now been carried out, and the practical examination has been placed on a satisfactory footing by having three hours allotted to it. No one can possibly imagine that this makes the examination easier; in fact, the changes are so great as to make it almost a new subject. In order to compensate partially for this increased severity some modifications have been made in the examination in forensic medicine, a subject to which undue importance was attached in the old system, it being made, along with medicine, surgery, and midwifery, one of the four fundamental obligatory subjects. But the balance is clearly on the side of increased difficulty.

In clinical medicine there have also been changes. In addition to the written reports on hospital cases, we have a *viva-voce* clinical on other cases. The plan of written examinations had great merits, and produced some remarkably good reports; but it also had some weak points, and the supplementary examination is a valuable addition. I do not say that the whole is more difficult, but it is certainly not easier. It is in surgery that the most important change has been made. Originally, the Bachelor of Medicine degree in the University of London, as in other universities, was a degree in medicine, surgery being left to the College of Surgeons. But gradually more and more surgery has been incorporated with it, till under the Medical Act of 1887 a full qualification in each of the three subjects—medicine, surgery, and midwifery—is required. Perhaps hardly sufficient importance was given to surgery at the M.B., as it was thought the separate examination for B.S. did justice to the subject. However, when the subject was reconsidered after the unfavourable report of the Inspectors of the General Medical Council, it was decided to incorporate part of the B.S. examination in the M.B., and to give the successful candidate both titles, obviously requiring more work than the M.B. alone. Now I do not suppose any one wished to make the examinations harder, for they were hard enough before, but this is the net result, which personally I regret, for several reasons, especially because I think examinations may be made too hard.

It must not be taken for granted that it is always desirable to raise the standard, or that the mere difficulty of getting a degree is the true criterion "*stantis vel cadentis academiae.*" The difficulty of an examination depends on many things, such as the efficiency of the teaching, the length of the curriculum, and—what is often forgotten—the amount of time given to the examination itself. By crowding an examination into too short a time it is quite possible to increase the difficulty, though not the value of a degree. In all our medical examinations there is too much haste. "Raw haste," says Tennyson, is "half sister to delay"; and the haste of the examining body may mean the delay of the student in getting his degree or diploma. Besides, an examination may be too hard, not because candidates do not get through, but because they do get through, and in achieving this feat consume an amount of time, chiefly occupied in storing the memory, which might be better employed. The great function of a university, and what gives it renown, is not merely setting up difficult barriers and keeping out the duffers. This is no doubt a necessary though a humble function of examinations, but their chief end is to influence teaching in the right direction, to ensure that students have well-trained minds, and have learnt the true method of science, and thus equipped may be able to aid their university in its highest task, that of adding to the sum of human knowledge, and so increase its reputation.

The Senate stands acquitted of having lowered the standard of medical degrees, and I maintain that this is equally true of degrees in science and arts, though I cannot now discuss them. During the years in which I was honoured with the confidence of the medical graduates as their representative on the Senate I never supported any measure that would lower the standard of degrees, nor can I remember that any such was ever passed.

At the present moment it is of the highest importance that the Senate should have a supply of men, not only able, but qualified by experience to continue a wise and enlightened policy. I do not think the graduates generally have any idea of the variety and complexity of the medical questions which come before the Senate and are referred to the Medical Committee. Unless the Committee contains a large proportion of men who are more or less *experts* in medical education and examination, these questions cannot be properly dealt with. The Senate is already the poorer by the loss of two such eminent men as Dr. Bradford and Dr. Kingston Fowler, which I say the more willingly because while on the Senate I did not always agree with them about disputed questions. It is now apparently proposed to try and get rid of other eminent persons, and replace them by candidates who will come in pledged to vote for certain measures dictated by their supporters, and with minds already made up on questions which require full discussion. This policy seems to mean introducing into university matters one of the worst features of political and municipal elections. It would be a great pity to run the risk of lowering the general level of distinction and experience in the Medical Committee. If this were done, the Committee would no longer receive the same unquestioning adhesion from other members of the Senate as it does now on all medical subjects; the decisions of the Senate would carry less weight with the profession and the public, while the general prestige of the University would be lowered. These are the dangers ahead.—I am, etc.,

J. F. Payne,
New Barnet, April 2nd. Fellow of the University of London.

Sir,—In reference to the present controversy concerning the maintenance of the standard for the London degrees, I have been asked—on the ground that I was an examiner in medicine during the last year of the old system as well as during the first three years of the new—whether there has or has not been any actual lowering of the standard. May I be permitted to say that I have throughout considered it my duty to maintain the standard, and that to the best of my knowledge no lowering has taken place.

So far as the Medicine at the M.B., B.S. is concerned, my impression is that at the present time the standard is higher than at any previous period. Of this I am certain: that no suggestion—official or unofficial—to the effect that at any of the examinations in which I was concerned any lowering of the standard was advisable has ever reached me or been discussed in my presence, and that ancient usage has been the principal factor in solving new problems.

I have assumed—how far correctly of course I cannot say—that the improved results at the M.D. examination have been due to two changes. Under the old scale of fees a candidate paid £5 on entering for any M.D. examination. Under the recent scale he paid £20, instead of £5, on first presenting himself, and, if he failed to pass, an additional £20, instead of £5, every time he re-entered. It appears highly probable that a graduate would, under the higher scale of fees, be more careful in preparing himself for the examination, and be less likely to enter unless he felt tolerably certain of passing. Again, the additional opportunities for specialization under the new regulations afford a man a chance of working at what most interests him, and therefore of attaining more easily a higher degree of knowledge.

It is the business of examiners to test as closely as possible the merits of the individual candidates, and to arrive at a decision without reference to the statistics of previous examinations. Any other course involves gross injustice to the candidates, and must bring discredit upon the University.—I am, etc.,

London, W., April 9th. H. Montague Murray.

Sir,—In last week's Journal Mr. White quoted, as evidence of the lowering of the standard of the examinations, the following figures:

Intermediate M.B.	1892-6,	45.2	per cent. rejected.
" "	1897-1901,	40	" "
" "	1902-1906,	30	" "

During the period 1839-98 (see *University Calendar*) the average rejection at this examination was 39 per cent., namely, 9 per cent. higher than during the last five years.

No doubt the somewhat increased facilities which have been granted at the Intermediate by the new regulations (though they did not come into force until 1904) must have some effect in getting more candidates through, the standard in each subject being fully maintained, but it should be remembered that since the reconstitution of the University the London schools have been very active in improving their teaching and the teaching in the provincial centres has in these years made great strides. Of course the candidates may have been unusually good or the examiners may have been unconsciously lenient. It would be a good thing if some of the examiners would express an opinion on the subject in your columns.

As to Mr. White's M.D. figures for 1906—figures which are not yet published—I confess that 8 rejections out of 60 candidates is rather an alarming circumstance; but I have seen several of the examiners, and they all repudiate with scorn the suggestion that they have lowered the standard, and it is certainly comforting to remember that the M.D. examiners also examine for the Final M.B., B.S., the figures for which I now propose to give you, although Mr. White did not think it worth while to mention them. Here they are:

Final M.B., B.S.	1892-6,	35.6	per cent. rejected.
" "	1897-1901,	41.3	" "
" "	1902-6,	39.5	" "

During the period 1839-98 the average rejection was 29 per cent.; thus the rejections during the last five years are 10 per cent. above the average; and, taking into consideration the improved teaching in London and in the provincial centres during this period, I think the Final shows up very well indeed, and every one should remember that if the London degree is to maintain its great prestige it must be by developing and making as good as possible the teaching and examinations in the final subjects.

As to the Preliminary Scientific. During the period 1901-5, 4·7 per cent. were rejected. During the period 1849-98 the average rejection was 42 per cent. So that in spite of improved teaching the rejection is still so high that the standard appears to me to be raised out of all proportion to the rest of the curriculum.—I am, etc.,

London, W., April 8th. James Calvert.

Sir,—It is illustrative of the apathy with which the progress of the London University is regarded by its graduates that Professor Starling's defence of the present standard of degrees should meet with such little opposition. It is the avowed object of the rulers of the University to include all London students in its fold; and since no particular elevation of the standard of knowledge in the schools has lately occurred, it is obvious that, to secure its object, the University must come down to the level of the average student. This descent it is rapidly performing. The matriculation, not so long ago regarded as the standard of a sound school education, has been degraded to a level not much above that of a higher-grade Board school. The proof of this lies in the enormous increase in the number of candidates who present themselves for and pass this examination. No one can honestly say that the examination, as it now stands, represents a satisfactory basis for entry to a learned profession. The University has further divided the professional examinations into groups, consisting in many cases of single subjects, each of which may be taken at a separate examination—a proceeding which of all others is most demoralizing to the student mind. It is futile to maintain a high standard in a paper if there is only one to answer. It was the high standard of knowledge in cognate subjects demanded from students at one examination which constituted the great value of the old University degrees. Upon this fact depended the great reputation of its Doctorate of Medicine. This reputation appears to be already declining, and, at the present rate of progress, not much of it will be left for the contemplation of the rising generation.—I am, etc.,

A. Campbell Stark, M.B., B.S.Lond.

Manor Park, Essex, April 8th.

*** As Dr. Stark's statement that the proof of his assertion that the Matriculation Examination has been degraded lies in the enormous increase in the number of candidates who present themselves for and pass this examination, we think it well to say that the figures showing the number of candidates and percentage of passes, published on page 887, have again been carefully checked since the receipt of Dr. Stark's letter. It will be seen that though the number of candidates and successful candidates has increased, the percentage of successful candidates has decreased. The point is further illustrated by the graph on the same page.

Sir,—It has been brought to my notice that your issue of March 30th contains a letter signed by Dr. Starling which in its reference to myself I can only construe as a personal attack. I regret that Dr. Starling's antipathy to any one holding educational views which differ from his own should have induced him to descend to personalities. These are particularly to be deprecated when supported by statements that have so little basis in fact. Dr. Starling asserts that the University of London Graduates' Association is a "political machine" invented by coaching institutions "for the capture and destruction of the reformed University." A more ludicrous statement can scarcely be conceived. The Association consists of nearly 2,000 graduates, while its Council of more than fifty members includes men of every Faculty and of the widest reputation. Its objects are:

(*a*) To assist all graduates of the University, whether resident in or out of London, to exercise their legitimate influence on the work and development of the University. (*b*) To secure that the representatives of Convocation on the Senate shall be graduates who, whilst desirous of aiding the development of university teaching in London, will make it their aim to continue the Imperial work by which the reputation of the University was made, and to keep the degrees and distinctions of the University open to all comers on terms of equality and impartiality. (*c*) To promote intercourse amongst the graduates of the University and maintain interest in its affairs.

This is scarcely a policy of disintegration. I can assure Dr. Starling that no institution connected with the teaching of external students founded the Association. In

fact, I am the only member of the Council to whom his courteous expression, "head of a coaching institution," can in any way be applied. Dr. Starling does not seem able to grasp the elementary fact that a graduate who loves his university can oppose the depreciation of its prestige without being actuated by any mercenary or interested motives, and that a teacher of external students may have as high a sense of honour as even a professor at University College. Dr. Starling is apparently under the impression that I was selected by the Association to oppose Dr. Benson. This is not the case. Dr. Benson resigned of his own accord, and did not offer himself for re-election. I accepted the invitation of the Graduates' Association to contest the Arts vacancy last October because I was, and am still, in hearty accord with its principles. But I am under no pledge to vote as it directs, nor has any such pledge been sought. It is difficult for me to discuss questions of "eminence," but the fact that 1,215 graduates, including some of the most distinguished men and women in the University, deemed me worthy to represent them, as against 561 who supported the candidate nominated by Dr. Starling's colleagues in the London Graduates' Union, is sufficient to make me indifferent to his criticism, inspired, as this apparently is, by the irritation which springs from defeat.—I am, etc.,

London, W.C., April 9th. R. C. B. Kerin.

HOSPITALS AND CLUBS.

Sir,—Allow me in your columns to thank the many members of your profession for the very courteous and helpful private replies which I have received as a result of my letter in the British Medical Journal; and allow me with proper humility to acknowledge the advice, which I am, unhappily, unable at the moment to adopt, to "go and hang yourself," received from "G. P."

The letter which I received, and sent to you, has been answered, and I enclose a copy of my reply, which I hope will satisfy even my indignant and anonymous correspondent.

Kneesworth Hall, Royston, Herts,
March 22nd.

Dear Sir,—I understood your question to be this: Your members pay 4s. a year to a doctor, and for this receive attendance and medicines and bandages without further charge. You ask, as you say "the doctor too often merely refers them to the hospital," whether, if they paid their contribution to the hospital, they could have the same privilege from the hospital without further charge. This is accurate, is it not?

Well, my reply is that a hospital only exists for those who cannot afford to pay a medical man for what is needed to cure them.

For instance, I suppose none of your members could afford to have an operation at home with the skilled nursing (£4 4s. a week) required. Hence, if they need it, the hospital is open and free to them, their wives and children, and we only ask our patients to give what they can by way of donation, and there is no compulsion. So far for in-patients.

For out-patients it is different. Your members can all afford, presumably, to pay a general practitioner, at any rate for a time. If they become "reduced in circumstances" and unable to pay, then our out-patient department is open free to all of them as regards attendance and advice, and they would get the advice of a consultant physician or surgeon free, but would have to pay for any medicine or bandages supplied at the rate of 3d. for a week's medicine.

Considering how very much the hospitals do for the working classes and the enormous sums given by the richer classes to help hospitals—in the case of the London £90,000 a year—I feel very strongly that the working classes as a whole, with very brilliant exceptions, do not behave well to hospitals. I believe this arises a good deal from a want of organization rather than from a want of good-will on their part. Last month I happened to meet a railway man who had a small cut on his hand which any general practitioner could have done up perfectly well, and would have charged at the most 2s. 6d. I asked the man what he was earning, and he said 22s. a week. I told him that he was not the sort of man for whom our casualty rooms should be used. He was very indignant, and said that he subscribed 1d. a week to the hospital—not a fact, I found out, as he subscribed to the Hospital Saturday Fund—and was therefore "entitled," he said, to use the hospital. I reminded him that this money might fairly be considered to be paid for the enormously expensive advantages he had for himself and family if they required in-patient help, and I asked him if he thought it fair for hospitals to be so run as to kill the ordinary doctor. I need hardly tell you that my arguments had no effect, and that he left very angry, and will probably leave off subscribing, and yet if he has a rupture, a cancer, appendicitis, or any long illness, he will come to us and we may quite easily spend £20 on him. It is not an easy question. But I could not agree to have your members' subscriptions and undertake that they should have free treatment in the out-patient department, or any treatment there, never mind what they are earning.

Yours truly,
Sydney Holland.

Will that do? It seems to me to set out the proper conditions of hospital help.

I wish I could persuade the members of your profession that it is not my desire, but very much the contrary, to do anything which is unfair to them. Because I have tried to defend hospitals from the all-round attacks levelled at them, it appears to be assumed by many that I do not appreciate the reasonableness of some of the complaints of medical practitioners.

The fault giving rise to the present difficulties is not all on one side by any manner of means. My experience is that the cutting of fees by new men starting in a district does as much—and more—harm to the profession than do the hospitals. Much of the club practice is also to blame, and perhaps—but of this I cannot speak with any certainty—the overcrowding of the profession may also be to blame.

Lately there was formed, at the instance of the British Medical Association, as all your readers know, a Joint Hospitals Committee composed of members of the Association and of non-medical representatives of hospitals, and "model principles of hospital management" were laid down. My recollection is that these were unanimously agreed to. Every one of these model principles is in force at the London Hospital, and was so before the meeting of the Committee; and this is the state of things at a great number of other hospitals too. I admit that at the London Hospital we have, perhaps, in the past taken too lenient a view of what is a "trivial ailment," which after being seen once should be referred elsewhere, and not to the out-patient departments. So many who read this letter will have worked in the casualty or receiving room of a hospital that I need not refer to the many difficulties which arise when a patient is refused further treatment except to say that it is much easier to lay down the rule than it is invariably to act on it.

We have, however, done much to improve in the last eighteen months, and have referred a large number of cases to "outside healers"—if I may use such a term—with the result that our ordinary out-patients, excluding the special department patients, have decreased in the year. We could have done more if we had had the co-operation of those gentlemen who practise in the East End, but the letter we received from the Secretary of their Association rendered any further communication with their organization impossible.

Most of us laymen who work hard for hospitals, and do our best to try and manage them efficiently, err because we are more or less kind-hearted and less or more ignorant. But we can better be brought to a right feeling and frame of mind by kindliness and courteous discussion than by threats and abuse, which only serve to put us on the defensive.

For instance, it does not put me in a very sweet frame of mind to read Dr. Knowsley Sibley's speech to the Westminster Division of the British Medical Association, where he "went bald-headed" for us. "Hospitals," he said, "must be rescued from the hands of irresponsible *(sic)* individuals and from the narrow cliques of many of the medical and lay committees"; in other words, rescued from those appointed by the people who have found all the money! And again, "The subscribing public has a right to know that the money given by it is not, through negligence and stupidity, wantonly squandered in a way the law would not permit by any but a charitable institution." This delicate innuendo is offensive and undeserved, as is also his suggestion that workers for hospitals do so for "social preferment" or "personal advancement." If there is any charity in the world where the expenditure is carefully watched and analysed by outside authorities, it is a hospital. Another speaker, Dr. Capes, at the same meeting said that the Westminster Division would earn the gratitude and praise of the whole Association if it "could draw up a scheme which would abolish lay committees"! Does the profession owe nothing to lay committees who have year in and year out given time in raising money for the hospitals? Where would medical education be if it were not for these lay committees?

Such language, and much more that was said, does not help towards harmonious working.

I have, I fear, wandered from the original subject of this correspondence, but I have done so as a means of answering the many letters I have received. In conclusion, let me say that I shall be only too glad of any advice and help to do what is right and fair at any hospitals in which I am concerned—right and fair to both interests: first, the interests of the sick poor; secondly, the interests of the profession. The only thing I, speaking for myself, will never agree to is that, except in cases of emergency, the only passport to hospital help should be a letter from a medical man.—I am, etc,

SYDNEY HOLLAND.

Knebworth Hall, Royston, Herts, April 7th.

ARE PERICARDIAL ADHESIONS OF GREAT IMPORTANCE?

SIR,—Dr. Theodore Fisher asks the above question in the JOURNAL of April 6th, and I gather that he answers it in the negative. The grounds on which he appears to come to this conclusion are that pericardial adhesions associated with enlargement of the heart are limited to rheumatic pericarditis occurring in childhood; that it is not found in connexion with pneumococcal, tuberculous, and septic conditions other than rheumatism, and that it does not occur in suppurative pericarditis. Dr. Fisher will, I think, agree with me that in all these non-rheumatic varieties of pericarditis the inflammatory process spreads from neighbouring organs towards the pericardium, and is not as a rule associated with endocarditis; while, in the rheumatic variety, and especially in young subjects, all the cardiac structures are affected in the general infective process. In *rare instances*, he further states that the heart may show enlargement after rheumatic infection, even when there are neither pericardial nor endocardial lesions. He admits, however, that "one fact is outside the region of dispute—namely, that general adhesion of the pericardium is often associated with very great enlargement of the heart."

It is not contended, Sir, that pericardial adhesions are *alone* responsible for this hypermyosis. Such cases are practically always associated with endocardial lesions and interstitial carditis, but a great number of the largest hearts are found in cases in which to the latter pericardial adhesion is superadded. The correct answer to the question gains importance from the fact that we cannot actively modify established carditic and endocarditic lesions, but may attempt a modification by operation of the pericardial circumstances.

In young subjects we find that the hypermyotic and labouring heart tends by its force and bulk to alter the shape of the thorax and to cause a notable bulging in the precordia. Operative interference takes its clue from this natural effort of the heart to gain more room for action, and the cases published by Brauer and Weneke-bach show that such interference may be followed by beneficial consequences. These considerations appear to me to indicate the importance of pericardial adhesions as an added impediment to the action of the hypertrophied heart, and a question of practical importance not yet actually determined, is whether such operative relief may not be conferred even in cases in which there is hypermyosis without pericardial adhesions, especially in older subjects with more rigid thoracic parietes. I confess, therefore, that to my mind the mechanical factors play a more important part under these circumstances than the merely toxic, and I should feel disposed to answer Dr. Fisher's question in the affirmative, on the ground that the rule is more important than the exception in coming to a conclusion.—I am, etc.,

[illegible] W., April 8th. ALEXANDER MORISON.

ON THE USE OF CALCIUM SALTS IN PNEUMONIA.

SIR,—Sir James Barr has honoured me with a challenge to convert him. In spite of his misgivings as nothing seems to me more unlikely nor could be more deplorable than a disagreement upon fundamental questions, I should not feel doubtful of success in the attempt if only he would permit the ground selected to be that of genuine pneumonia instead of the awkward fringe of mixed conditions and of old cases and above all not that of mere argument, by which no true clinician was ever convicted.

The strict evidence which was asked for as to the action, if any, of calcium chloride upon the lung condition in croupous pneumonia is indispensable because of the illusive uncertainty of *a priori* therapeutics. Therapeutic results can only be obtained as the vital act of the organism—the drug is only a fuse—and they may miss fire if its vitality be disabled. This dread disablement in pneumonia is the larger question. No clinician could refuse to admit the urgency of forestalling it, if possible, before it had led to final imperviousness to curative agencies. Neither could he doubt the significance of the results which on fair trial can be achieved and demonstrated *when the treatment is begun early*, that is, before consolidation has taken place. The charts will show within twelve hours from the beginning of treatment a marked lowering of the pyrexia, with appreciable lowering of the pulse-rate and of the respiratory-rate, and definite alteration in the sputum (and later in the physical signs); whilst pain will have been relieved, the aspect and the tongue bettered, and the patient himself alive to his improvement which is manifest to observers.

The *principle* which I feel it a duty to urge is that we should treat pneumonia, not watch it, nor merely drug it. Drugs are indispensable accessories. Better ones than those I have used are much to be desired; and we shall fly to calcium chloride (or to the iodide which Dr. Arbour Stephens deserves our thanks for suggesting), if only clear evidence can be obtained of a beneficial action upon the pneumonic process.

With these views Sir James Barr would hardly disagree. Perhaps he might go yet further. *Salus populi* must be the first consideration in a disease with a mortality second only to that of tuberculosis. However painful the confession, if the profession is unequal to its task, and still unable to decide upon an answer even to the first of our questions of treatment, "Is it proper to check or to encourage pneumonic consolidation?" it is high time that State action be taken in a matter of such vast importance, and that a Royal Commission be appointed to inquire into the prevention and treatment of pneumonia.—I am, etc.,

London, W., April 7th WILLIAM EWART.

SIR,—In his very interesting letter which appeared in the BRITISH MEDICAL JOURNAL of April 6th I am gratified to see that Sir James Barr states that, "Acting on these views, I have for many years ceased to prescribe carbonate of ammonia and other expectorants during the acute stage of the disease."

More than twenty years ago I noticed that when carbonate of ammonia and squill were prescribed in the early stages of pneumonia haemorrhagic expectoration not infrequently followed. This led me, as a matter of routine, to treat all cases of pneumonia (the patients being almost invariably vigorous young soldiers) by milk diet and a simple diaphoretic mixture. Stimulants were not given until the pulse had become soft and compressible, which is generally the first sign of approaching crisis, when a moderate amount of brandy was prescribed for two or three days to prevent any risk of syncope. The results were highly gratifying. Distressing cough, severe dyspnoea, cyanosis, and other unfavourable symptoms were rarely seen. The crisis almost invariably occurred on the fifth or sixth day. Convalescence was rapid, and the restoration to health was quicker and more satisfactory than when less simple treatment was prescribed.—I am, etc.,

C. H. YOUNGE, F.R.C.S.I.,
April 8th Lieutenant-Colonel R.A.M.C. (R.P.)

WHOLE MILK FOR INFANTS.

SIR,—I want to emphasize the value of pure cow's milk, undiluted, and properly sterilized, as a food for infants. I have been using this article with lime water in the proportion of 5 per cent. and sugar 5 per cent. now for ten years. I begin with this food at birth, feeding for the first week every one and a half hours, and ten feeds in the twenty-four hours; after that, for a month I feed every two hours, and eight feeds in the twenty-four hours. I can confidently say I have never had a single instance in which it has disagreed in spite of the larger amount of proteid in the shape of casein. Even to-day, a mother told me that her own medical man ordered her to add two parts of water to one part of milk. Some doctors order

even three parts of water; for what reason this extraordinary dilution I cannot understand. Milk is made up of more ingredients than casein, and, seeing that pure and good cow's milk rarely contains as much as 4 per cent. of fat, it is difficult to see why one part should be diluted to the proper strength when another ingredient is likewise reduced two or three times and no steps taken to raise it to the same proportion as found in mother's milk.

There are more infants done to death each year by this evil in feeding than die from ordinary diseases. When the milk is so much diluted the infant requires to take two or three times more than his stomach capacity; the result is constant micturition—because the water simply filters through the system—distension of stomach, pain until relief comes with emesis, and slow growth. If ever cream is ordered to be mixed with the milk, it is more often an afterthought than a rational instruction.

I hope some men will be induced to try the undiluted sterilized pure cow's milk as food for infants and let us hear less of barley and other patent foods.—I am, etc.,

Darwen, March 15th. F. G. Haworth.

Medico-Legal.

MEDICAL CERTIFICATES UNDER THE EMPLOYERS' LIABILITY ACT.

E. J. asks: Who is responsible for payment for certificates as to nature of injuries to workmen under the Employers' Liability Act?

*** Under the Workmen's Compensation Act a workman is entitled to compensation from his employer for certain accidents, but the medical practitioner can recover the cost of professional services from his patient only.

THE DUTY OF CHEMISTS WITH REGARD TO PRESCRIPTIONS.

M.D. Edin. asks (1) if a chemist is legally bound to make up medicine according to the prescription tendered; or whether he can say that he has not got that medicine but will furnish some of his own. (2) What should a chemist do, when written to by a patient, asking him to send something for whooping-cough?

*** (1) A chemist should make up a prescription with all care and accuracy, and, if he has not all the ingredients, it is most improper for him to suggest that he shall give the patient something of his own instead. (2) He should refer the applicant to a registered medical practitioner, otherwise he takes upon himself a dangerous responsibility.

PARTNERSHIP ACCOUNTS.

G. E.—A. joins B. in partnership, taking a third share. Many of the patients of the firm have old accounts with B. still unpaid. At short intervals bills are sent in for services rendered. Can B. rightly expect all these old accounts to be paid up out of the money received before putting any into the partnership account?

*** If a debtor pays money on account, the creditor, in the absence of special arrangement, rightly applies it to cancel the debtor's earliest liabilities. It would seem, therefore, that B. is legally entitled to take for himself any moneys paid by patients on account, after A.'s entrance into the firm, until debts contracted before that time had been fully paid. This would not apply to debts that had been cancelled by any Statute of Limitations.

CONTRACTS NOT TO PRACTISE.

Messrs. Hedges and Davis (London, W.C.) write: In connexion with the sale and purchase of a medical practice, our attention has been called to a legal opinion expressed in your issue of January 26th last, p. 237, to the effect that if A. sells his practice to B., undertaking not to practise within a certain radius within a certain time, and if B. sells his practice to C., that in that case, unless the agreement was made between A. and B. and B.'s assignees, C. could not avail himself of the covenant. With due respect, we think the advice given you is incorrect. In the recent case of Henry Leetham and Sons, Ltd., *versus* Johnstone-White, 1907, 1 Ch., p. 322, Lord Justice Farwell in his judgement on p. 327 states as follows: "It seems to me to follow from the decision of the Court of Appeal in Jacoby *v.* Whitmore, (1) applied by me in Townsend *v.* Jarman, (2) that on the sale of a business with a goodwill, although nothing more is said, the benefit of the restrictive covenant passes with the business, because it is not for the benefit of the individual, but it is for the benefit of the business."

PAYMENTS OF *LOCUM TENENS*.

Curiosity asks if the day during which a *locum tenens* is travelling to the residence of his principal and also the day of his departure should be paid for as working days. He would also like to know whether "washing" is usually allowed by the principal, and wine or other alcoholic stimulants.

*** The engagement of a *locum tenens* is usually from a certain date to a certain date inclusive, and he is entitled to be paid for those days only. "Washing" is not usually allowed, neither are wine and alcoholic stimulants.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE LAW AS TO REMOVAL OF HOUSE REFUSE.

Owing to the obstinacy of two women and the failure of a metropolitan police magistrate to find a way of applying common sense to the interpretation of statute law, the Marylebone Borough Council has been placed in a most curious dilemma. Two women lived in the same house, Miss X. occupying the ground floor and Mrs. Y. the basement. Miss X. had allowed the dustmen to go through the front passage to get the dust, but refused to allow them to take it out through the same passage, on the ground that the dust was not hers, but Mrs. Y.'s; while Mrs. Y. resolutely refused to allow it to be removed through the basement, on the ground that it belonged to Miss X.

The Council endeavoured to bring about an amicable arrangement but without success, and accordingly applied to the stipendiary magistrate for a warrant under Section 115 of the Public Health (London) Act to empower the Council's workmen to enter the house for the purpose of removing the dust. The words in the section refer only to a "refusal or failure to admit to any premises," and the magistrate held that as there was no refusal to admit, but only a refusal to permit egress with the dust he had no power to interfere. The representative of the Council argued that as there was a positive obligation upon the local authority not only under the Public Health Act, but also under the by-laws of the London County Council to remove the house refuse at least once a week subject to a penalty not exceeding £20, the Council had the right both to enter and leave a house for the purpose of removing dust. The magistrate however remained obdurate, only promising to send a police constable to speak to the women.

REMOVAL OF PAUPER LUNATICS TO WORKHOUSE FOR CERTIFICATION.

Dr. Charles J. Marsh (Yeovil) writes: In your remarks on the certification of pauper lunatics (British Medical Journal, April 6th, p. 844), referring to the fee you say, "The actual amount rests with the justice only to decide." I think this statement somewhat misleading. It is true that the justice has the power to make an order upon the guardians for a reasonable fee, and he may select any medical practitioner he chooses; but simply by reason of his position as a justice has he any authority or power afterwards to fix any fee he thinks fit without reference to the medical practitioner?

When a justice calls a medical practitioner to his assistance surely he becomes liable for the fee, and to protect him from having to pay this out of his own pocket the law empowers him to make an order upon the guardians for any reasonable amount.

I think in these cases common courtesy demands that the justice should ask the medical practitioner his fee, just as he would if consulting him for any ailment; if the fee claimed is unreasonable, he could then make an order for a reasonable one, and tell the medical practitioner to take such steps as he may be advised if he is not satisfied.

Supposing a charge of one guinea is made, and the justice refuses to make an order upon the guardians for more than half a guinea, is there any reason why he should not be sued in the county court for the balance? I imagine a justice has no power to compel a medical practitioner to come to his assistance, and, if he has any doubt about a reasonable fee being charged, he should inquire beforehand as to the amount.

In cases of this description a Poor-law medical officer is on exactly the same footing as any private practitioner, and I think it is time that it should be clearly understood that when a justice calls a medical practitioner to his assistance he must be prepared to take steps to ensure payment of such practitioner's ordinary fee at least. I imagine that no medical practitioner would think of certifying in a private case for less than a guinea, and why should he do so when called in by a justice of the peace?

Under the will of the late Mr. Thomas Aitken, of Edinburgh, who died on January 29th, Leith Hospital, the Longmore Hospital for Incurables, Edinburgh, and the Royal Edinburgh Hospital for Sick Children, each receive a sum of £1 000.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Radcliffe Infirmary.

The Board of the Faculty of Medicine gives notice of the following conditions of the award for the Radcliffe Prize in the year 1907.

The prize, which is of the value of £50, will be awarded by University College every second year for research in any branch of medical science comprised under the following heads:—Human anatomy, physiology, pharmacology, pathology, medicine, surgery, obstetrics, gynaecology, forensic medicine, hygiene.

The prize is open to all graduates of the University who shall have proceeded, or shall be proceeding, to a medical degree in the University. Candidates shall not have exceeded twelve years from the date of passing the last examination for the degree of bachelor of arts, and shall not, at the date of application, be Fellows on the foundation of Dr. John Radcliffe.

Candidates shall send in their memoirs to the registrar's office on or before the first day of June, 1907.

No memoir for which any university prize has already been awarded shall be admitted to competition for the Radcliffe Prize, and the prize shall not be awarded more than once to the same candidate.

UNIVERSITY OF LONDON.

Meeting of the Senate.

A meeting of the Senate was held on March 20th.

Recognition of Teachers.

The following were recognized as teachers of the University in the places and subjects indicated:

University College Hospital Medical School: Messrs. Bilton Pollard and W. B. L. Trotter, surgery.

University College: Dr. R. W. Gray, chemistry.

London Hospital Medical College: Mr. Chas. Wilberforce Daniels, tropical medicine; Mr. Major Greenwood, physiology.

Guy's Hospital Medical School: Dr. R. K. Brown, hygiene.

London School of Medicine for Women: Miss S. T. Widdows, chemistry.

The Physiological Laboratory.

The annual report of the Physiological Laboratory Committee for 1906 was presented; it gave particulars of the courses of lectures delivered during the session, and stated that two courses of lectures—animal metabolism by J. B. Leathes, and the morphology of normal and pathological blood by G. A. Buckmaster—were published during 1906 by Mr. John Murray, under the scheme sanctioned by the Senate in 1902.

From the list of work done in the laboratory, appended to the report, it appears that in the department of general and physical physiology Dr. F. W. Pavy has continued his work on carbohydrate metabolism; Messrs. P. L. Mummery and W. Legge Symes have been engaged on the investigation of surgical shock; Mr. G. P. Mudge has continued his work on intravascular coagulation; Professor T. Johnson has worked on seed testing by electrical methods; Miss C. B. Sanders and Miss H. P. Kemp have worked on vegetable physiology; and Mr. J. A. Craw on the action of chloracetic acids on nerve.

The department of chemical physiology opened in July, 1906, has worked satisfactorily under the supervision of Mr. J. A. Gardner, M.A., F.I.C., and much new apparatus has been obtained, so that the department is now well equipped for research. Dr. G. A. Buckmaster and Mr. J. A. Gardner have worked on the rate and mode of assumption of chloroform during anaesthesia. Mr. Gardner and Mr. Symes have studied the connexion between chemical constitution and physiological activity. Mr. C. Dorée, Lindley scholar, and Mr. Gardner have worked on the excretion of cholesterin and the effect of diet thereon, and Mr. Gardner and Mr. G. D. Knox, B.A., have investigated the content of cholesterin in the bile of different animals.

In the department of experimental psychology the investigation of the Hipp chronoscope has been completed by Mr. Legge Symes and Miss Edgell. The experiments on memory and reaction-times have been continued, and two research students, engaged in the preparation of a thesis for the D.Sc. degree, have begun their investigations relating to fatigue.

Francis Galton Laboratory.

The report of the Francis Galton Laboratory Committee stated that in continuation of the work on noteworthy families begun by Mr. Francis Galton, accounts of about four hundred families revised by some member of each family have been filed in the Francis record office. Mr. Edgar Schuster, M.A., and Miss E. M. Elderton, Francis Galton Research Fellow and Scholar respectively have prepared memoirs on inheritance of ability, on psychological characters, and on the promise of youth and the performance of manhood.

Appointment of Members of the Senate.

The following are among the medical representatives elected to the Senate for the period 1907-11, together with the names of the bodies they represent:

Royal College of Surgeons of England: Mr. A. Pearce Gould, M.S., M.B., F.R.C.S.; *King's College:* Dr. T. Buzzard, F.R.C.P.; *London County Council:* Sir William Collins, M.P.; *Faculty of Medicine:* Dr. H. A. Caley and Mr. L. E. Hill, M.B., F.R.S.; *Faculty of Science:* Dr. A. D. Waller, F.R.S.

Appointment of Representatives.

Mr. H. T. Butlin has been appointed a Governor of Rugby School in succession to the late Lord Davey.

Dr. W. H. Allchin has been reappointed a member of the Committee of the Chelsea Physic Garden for a further period of four years.

Admission to the Faculty of Medicine.

Professor Bilton Pollard has been admitted to the Faculty of Medicine.

Lectures in the Physiological Laboratory.

A course of nine lectures will be given on Fridays on psychological research in schools, beginning on April 26th. The lecturers will be: Lectures I-III, Miss B. Edgell; Lectures V and VI, Mrs. Reid, and Lectures VII-IX, Dr. A. Waller, F.R.S.

Lectures in Protozoology.

Professor E. A. Minchin, University Professor of Protozoology, will give a course of twenty lectures at the Lister Institute, Chelsea, at 5 p.m., on Mondays, Wednesdays, and Fridays, commencing on May 1st.

King's College.

Special Lectures in the Physiological Department.

A course of nine lectures on the visual and cutaneous sensations will be given by Dr. C. S. Myers during the summer session, on Fridays at 4.30 p.m., commencing on May 3rd. The lectures are free to students and medical practitioners on presentation of their cards.

Presentation Day.

The Dean of Westminster has, at the request of the Committee of Students of the University, arranged a service at which he will preach, for members of the University, at Westminster Abbey at 6 p.m. on presentation day, Wednesday, May 8th. Graduates desiring to attend should apply to Mr. L. S. Kempthorne at University College, Gower Street, and not to the Dean or other official of the Abbey.

UNIVERSITY OF EDINBURGH.

The following candidates have been approved at the examinations indicated:

First M.B., Ch.B. (*Zoology*).—M. Atal, H. F. Blacklee, A. Bloom, T. C. Britton, H. N. Bronnum, E. H. Cameron, E. R. Carlos, T. Caul, J. D. M. Claosseus, F. W. Craig, D. H. D. Cran, May F. W. Davidson, P. L. Davies, C. G. Deane, Helen C. Dykes, A. Eprile, H. H. C. Fuller, A. Gallelly, J. P. Glyn, J. Gray, A. Groenewald, A. C. Heard, T. P. Herriot, S. Hodkinson, G. G. Hunter, A. Jassinowsky, W. H. Johnston, B.A., B. B. Kapila, W. E. Lewis, N. L. Lochrane, A. H. Louw, F. M. Low, E. F. G. M'Anliffe, I. C. Mackay, R. M'Laren, D. F. Macrae, W. C. B. Meyer, A. E. Moore, J. T. Morrison, Lucy M. Muir, R. Park, L. T. Poole, N. Purcell, S. D. Reid, A. B. Robertson, E. St. J. Seely, R. G. Shaw, P. M. Shiels, S. E. Silberhauer, C. E. H. Smith, J. J. Stander, R. H. Stewart, R. M. Stewart, S. D. Stewart, S. W. H. Stuart, J. Taylor, D. L. Theron, P. H. du Toit, F. L. Tulloch, P. G. Tuohy, C. D. Walker, S. J. A. H. Walsh, J. Watson, J. H. Watson, J. F. van der Westhingzen, J. B. Wilkie, N. C. Young.

(*Physics*.—G. M. Adam, J. R. Aeria, R. Aitken, J. E. Allan, A. J. T. Allison, J. G. Anderson, J. A. Andrews, M. Atal, A. A. Atkinson, C. M. Austin, W. A. Barclay, H. Bedingfield, A. J. Bennee, P. N. Berry, A. G. Bigsam, Charlotte M. Birnie, H. F. Blacklee, R. B. Blair, T. Blaney, N. H. Bolton, J. R. Boyd, U. F. F. Brown, C. E. H. Browne, W. Bruce, C. Burnham, F. D. Cairns, W. Campbell, T. Caul, A. B. Cheves, G. J. Cillie, J. D. M. Closseus, A. Cochrane, G. N. Cole, J. Cook, Lilian Cook, W. L. Coultie, D. A. Crow, May F. W. Davidson, E. L. Davies, J. S. P. Dickie, B.A., R. C. Dickson, D. A. Donald, R. Dow, Helen C. Dykes, R. C. Edgar, G. M. Elliot, D. O. Fairweather, S. Fenwick, W. E. Fitzgerald, J. Geoghegan, K. A. Gilchrist, J. N. Gillespie, C. W. Grabham, S. E. M. H. Hay, J. A. Henderson, A. M. V. Hesterlow, J. Hewat, S. Hodgson, Julie Elise Hoffmann, N. J. Hofmeyr, E. A. H. J. Hopps, J. L. Huggan, Gwendoline G. Hunter, W. H. Irving, O. R. Jones, Cicely M. Kerby, H. A. Khin, A. L. Krogh, A. Langwill, G. L. Leggat, T. Lindsay, A. H. Louw, F. R. Lake, Eva M. Lyon, E. F. G. M'Anliffe, G. M'Connell, G. S. M'Diarmid, M. R. MacKay, H. M. M'Kenzie, R. M'Laren, W. S. M'Laren, N. G. M'Lean, P. M'Nab, J. G. MacQueen, L. R. C. Mackenzian, C. C. Martin, J. S. S. Martin, C. A. Mason, V. H. Mason, J. R. Menzies, W. C. B. Meyer, A. R. K. Mizra, J. S. Monro, R. V. Morrison, R. C. Moses, T. P. Noble, J. B. T. Panton, M. J. Paris, R. Park, F. D. Pascoe, L. T. Poole, J. F. G. Power, B. W. Prasad, H. H. Proudfoot, K. A. Rao, S. D. Reid, H. P. Robertson, H. A. Von Rom, W. J. Rosie, Agnes Rothe, Mossie Rougvie, C. M. Rout, E. A. Sengar, R. G. Shaw, P. M. Shiel, T. Singh, W. D. D. Small, B. M. Smith, C. E. H. Smith, B. H. B. Spence, J. J. Stander, R. S. Stevenson, H. B. Stewart, R. M. Stewart, J. H. Tennent, C. M. R. Thatcher, D. L. Theron, P. H. du Toit, J. S. Tomb, A. L. Urquhart, A. P. Veitch, P. Vieira Mano, B. Walker, C. C. Wang, V. Watson, T. C. Welch, H. J. Y. White, L. S. Willox, D. M'D. Wilson, H. E. Windle, W. O. Wood.

(*Botany*.—D. T. Angus, J. P. Blockley, T. Caul, Anna Closser, F. A. M. Craig, D. C. M. Grant, J. Honeyford, A. Jassinowsky, Cicely M. Kerby, E. W. Lawrence, J. J. Levin, F. M. Low, E. F. G. M'Anliffe, W. C. B. Meyer, H. M. Mills, R. V. Morrison, S. H. Page, J. M. Sellar, S. E. Silberhauer, P. H. du Toit, S. J. A. H. Walsh, F. H. C. Watson, J. Watson.

Second M.B., Ch.B.—D. C. Adams, T. A. Adams, D. Aitken, R. J. Allcroft, A. Archibald, A. E. M. Babington, T. H. Baltour, E. R. Bennett, W. M. Bolon, T. C. Borthwick, F. A. J. Broderick,

G. S. Brown, A. N. Bruce, W. F. Buist, *W. L. Burgess, B. N. Burjorjee, *A. W. Burton, S. E. Buyers, *J. A. Campbell, L. L. Cassidy, J. Cathcart, G. L. Cawkwill, R. B. Chamberlain, P. H. Chauvin, F. M. Chrystal, N. N. A. Corard, J. Crocket, L. E. Davies, J. K. M. Dickie, A. A. Dreaper, J. W. C. Drever, *A. M. Elliott, E. L. Gallethy, C. Gamble, M. D. Gardner, A. W. Gill, E. S. B. Hamilton, *R. C. Harkness, G. R. Inglis, F. R. Innes, W. C. Jardine, *G. E. King, J. C. Lee, L. A. Lewis, C. L. Louw, Mary Low, H. F. Lumsden, A. B. M'Callum, D. M'Carroll, A. J. M'Connell, W. Macdonald, G. E. G. Mackay, D. Mackinnon, J. C. Mackenzie, A. J. MacLeod, D. M'Phail, R. C. M'Queen, J. Malloch, H. R. Mathieson, W. M. Menzies, W. Messer, E. L. Middleton, L. M. U. Mitchell, J. Montgomery, S. P. Moore, J. A. Mortimer, J. M. Moyes, C. C. Murray, K. Nehru, J. E. Nicholson, F. H. Narouha, J. Oag, J. E. T. Oxley, J. J. Pace, S. P. P. Proctor, J. Renwick, *D. G. Robertson, W. S. Robertson, D. M. Ross, M. C. Ross, W. Ross, R. P. Rosser, P. Roytowski, A. C. Russell, C. M. Shanter, J. J. M. Shaw, J. C. Simpson, K. Simpson, G. H. Sinclair, G. M. Smith, J. G. Smyth, J. Sprent, W. Stewart, C. P. A. Stramaghan, J. Swan, H. W. Teague, E. V. Williams, W. Brand, P. M. Carlyle, J. C. Tennant.

(*Anatomy and Physiology*). J. G. Beal, T. E. Harwood, A. T. W. Millar.

THIRD M.B., CH.B.—R. C. Alexander, H. M. Anderson, Marion H. Archibald, M.A.; Margaret W. Bartholomew, *Lydia de la T. Bateman, G. L. Batra, J. Black, H. Blyth, A. M. Bose, W. Boyd, J. Brander, F. S. Brennan, B. S. Browne, J. A. Browne, J. E. Brydon, Jean Cathels, J. J. P. Charles, W. P. Chrystal, D. G. Cooper, H. S. Cormack, F. G. Cowan, D. D. Craig, E. C. Creaser, G. H. Dart, F. J. Davidson, J. M. Deuchars, J. G. Dickson, Joanna M. F. Drake, W. J. Duncan, A. L. Dykes, W. G. Evans, *J. Findlay, W. Fleming, *K. Fraser, T. Gardner, *A. Gibson, M.A.; A. J. Girdwood, R. L. Girdwood, J. A. Gordon, P. Gorrie, J. C. B. Grant, F. W. Greaves, J. A. W. Hackett, J. K. Hamilton, M.A.; R. Hannah, W. W. Hay, Hester M. Henderson, H. Hutson, J. D. Ingram, F. E. Jardine, J. J. Jervis, W. W. Johns, H. E. Johnson, J. V. Karve, A. W. Kendal, E. W. Kirk, R. A. Krause, F. R. Laing, C. L. Laurent, H. R. Lawrence, A. J. B. Leckie, M. A. Lindsay, V. D. O. Logan, Jas. Lorimer, J. C. Lorraine, H. Bruce Low, R. F. D. Macgregor, *K. Mackenzie, A. C. M'Killop, W. M. MacNab, David MacNair, E. R. D. Maconochie, A. C. Mallace, M.A., *J. Marshall, W. J. F. Mayne, J. A. Mitchell, J. B. de W. Molony, Catherine B. A. Nelson, J. A. Van Niekerk, E. W. F. Nixey, A. C. Norman, A. B. Pearson, J. H. H. Pearson, H. Peck, Laura W. Pugh, K. A. Rahman, E. M. Reid, J. J. Van Rensburg, C. L. D. Roberts, D. H. Russel, *J. Scott, F. Shannon, J. T. Simson, E. W. Smerdon, W. B. Summers, G. S. Sowden, M.A., J. E. Spence, J. W. Stirling, W. Stobie, E. A. Strachan, A. Tait, G. P. Taylor, Eleanor M. Thompson, J. G. Thomson, M.A., *J. J. Thompson, R. W. L. Todd, B.Sc., F. H. de Villiers, A. A. Walbrough, E. A. Walker, W. O. Walker, H. S. Wallace, L. E. B. Ward, J. Ware, F. K. te Water, *T. W. Waterworth, A. P. Watson, M.A., H. B. Watson, M.A., H. L. M. Wemyss, A. White, D. J. Williamson, E. G. Wilmot, G. D. Wray, A. G. Yates, M.A., W. A. Young.

* With distinction.

UNIVERSITY OF GLASGOW.

THE following candidates have been approved in one or more subjects of the examinations indicated:

FIRST M.B., CH.B. (*Botany, Zoology, Physics, and Chemistry*).—T. Adam, M.A., J. B. Alexander, J. C. H. Allan, J. W. Anderson, W. L. Anderson, C. Auld, C. Averill, R. B. Bain, A. Baird, T. S. Barrie, A. M'A. Blackwood, J. Bower, D. S. Brough, J. T. Brown, R. A. Brown, A. D. Buchanan, C. Cameron, J. Cameron, J. Campbell, G. W. Clark, G. Cochrane, J. H. Coulter, J. N. Dobbie, A. M. Dunlop, W. D. Dunlop, K. Falconer, A. S. Findlay, H. Forrest, L. L. Fyfe, A. Gardner, J. J. Gibb, J. Gibson, J. R. Grice, M.A., A. S. Hannay, A. G. Henderson, P. Henretty, A. G. Holms, J. Johnstone, W. Johnstone, W. H. Kay, F. A. Kerr, C. J. Kirk, I. Macdonald, A. Mackay, B. M'Kean, J. G. Mackenzie, J. D. Mackinnon, M. Mackinnon, A. K. Mackinven, A. B. MacLean, A. M'Leod, W. M'Murray, W. W. MacNaught, G. H. M'Robert, J. P. M'Vey, A. T. M'Whirter, M. Manson, F. W. Martin, F. Matheson, J. Matheson, O. H. Mavor, C. L. Miller, M.A., A. Mitchell, J. Mitchell, N. Morison, A. Muir, M. J. Murray, H. L. Neil, H. Paterson, J. E. Paterson, R. R. K. Paton, J. Penman, A. Poole, J. F. Quigley, A. Rae, H. C. D. Rankin, J. L. Scott, W. L. Scott, W. Sneddon, M. Sommerville, R. A. Steven, J. A. Stewart, J. N. Sutherland, W. R. Taylor, J. A. H. Telfer, W. Tudhope, G. A. Valentine, A. G. Waddell, A. G. S. Wallace, T. Walmsley, T. Waterhouse, T. Whitelaw, J. Williamson (Holytown), A. S. Wilson, A. Wilson, D. Wilson, G. J. Wilson, H. G. Wilson, W. L. Wilson, J. C. Wood. Women—Mary Alexander, M.A., Agnes B. Auchencloss, Mary A. A. Beard, Muriel M. Curtis, Isabel Inglis, Barbara Macgregor, Katherine S. Macphail, Lucy MacB. Ross, Barbara G. Rutherfurd, Christina H. Shearer, Barbara Sutherland, Marion MacB. Sutherland, Mary B. Thomson, Margaret Walker.

SECOND M.B., CH.B. (*Anatomy, Physiology, Materia Medica, and Therapeutics*).—D. R. Adams, A. Aitchison, J. A. Aitken, W. S. Alexander, M.A., J. G. Anderson, A. Ballantyne, M.A., D. Barbour, E. Barnes, M.A., A. M. Bayne, E. A. C. Beard, C. S. Black, D. M. Borland, C. Brash, M. W. Bromly, C. J. B. Buchheim, J. A. G. Burton, J. Cameron, A. H. Clark, A. B. Cluckie, J. C. Coalburn, R. D. Cramb, C. Duguid, M.A., J. K. Dunlop, M.A., D. Fisher, G. Fletcher, M.A., T. S. Forrest, R. D. B. Frew, R. Gale, W. E. Gemmell, A. G. Gilchrist, E. G. Glover, R. D. Goldie, G. S. Gordon, E. O'D. Graham, J. Granger, K. C. G. Gray, A. W. Gregorson, G. Haddow, W. Hamilton, J. Harper, M.A., J. M'L. Henry, W. Howie, B. M. Hunter, J. P. Kinloch, D. N. Knox, W. T. Lindsay, W. M'Adam, M.A., J. Macallan, W. C. Macartney, A. Macaulay, R. M'Carlie, W. M'Connell, D. M'Dougall, D. M'Intyre, R. B. F. M'Kail, W. M. M'Kie, T. M'Kinlay, A. M'Kinnon, D. M'Kinnon, W. A. Maclennan, G. Macleod, M.A., J. M'M. M'Millan, J. W. M'Nee, J. H. M'Nicol, A. M'Pherson, M. M'K. MacRae, A. Maguire, T. Marlin, W. A. L. Marriott, D. Meek, A. Miller, H. B. W. Morgan, J. M'I. Morgan, A. A. Murison, A. Naismith, F. L. Napier, W. Niecol, C. M. Nicol, W. Noble, J. Robertson, H. G. Robinson, A. Roemmele, W. W. Rorke, W. Rutherford, W. W. Scott, A. Semple, W. A. Sewell, J. J. Sinclair, J. S. Somerville, R. Steel, W. Stevenson, A. Stewart, A. F. Stewart, R. W. Sutherland, D. C. Suttie, R. Sweet, D. M. Taylor, W. Telfer, A. G. W. Thomson, A. Turnbull, M.A., J. L. Ure, W. S. Waterhouse, J. B. Whitfield, J. A. Wilson, J. Y. Wood, D. Yellowlees, D. Young. Women—Christina Barrowman, Honoria S. Keer, Mary C. Mitchell, Margaret Muir, Jessie D. Rankin, Margaret E. Robertson, Olive Robertson, Margaret E. Rutherfurd, Jemima Wallace, Ethelwyn M. Walters.

THIRD M.B., CH.B. (*Pathology, Medical Jurisprudence and Public Health*).—D. Anderson, W. Anderson, T. Archibald, W. Barr, C. Bennett, J. Blakeley, J. L. Boyd, J. N. Brown, M.A., W. B. Brownlie, H. M. Calder, J. Carrick, M. I. T. Cassidy, D. Clark, D. J. Clark, J. Cook, J. Cruickshank, N. Davie, W. Dawson, J. C. Dick, A. D. Downes, M.A., W. M. Fairlie, W. Gilmour, J. S. Harbinson, M. Harkin, T. Harkin, J. M. Henderson, S. J. Henry, B. Hutchison, J. Lang, F. C. Macaulay, J. G. M'Cutcheon, C. Macdonald, W. M'Kendrick, M. D. Mackenzie, T. C. Mackenzie, F. W. Mackichan, W. C. Mackie, J. W. M'Leod, J. MacMillan, P. R. M'Naught, D. I. M'Naughtan, D. Manson, F. N. Marsh, W. Matheson, K. C. Middlemiss, A. F. Miller, R. M'K. Morison, M.A., J. Muir, W. A. Muir, A. C. Munro, C. S. M'K. Murison, A. R. Paterson, A. Patrick, M.A., R. M. F. Picken, B.Sc., M. Purvis, E. Quigley, R. Rae, H. N. Rankin, N. M'N. Rankin, M. M. Rodger, N. C. Scott, J. B. Sim, J. A. Stenhouse, D. Stewart, H. C. Storrie, D. Taylor, J. S. Thomson, R. M. Walker, T. C. D. Watt, T. M. Watt, H. White, D. M'G. Wilson, W. M. T. Wilson, H. Young. Women—Margaret B. S. Darroch, Mabel Foley, Annie M'Crorie, Winifred M. Ross, Jessie C. Russell.

HONOURS.

The following passed with distinction in the subjects mentioned:

Zoology and Chemistry.—T. S. Barrie, W. M'Murray, J. E. Paterson.
Physics and Chemistry.—W. L. Anderson.
Botany.—C. Averill.
Zoology.—T. Adam, M.A., J. T. Brown, C. Cameron, K. Falconer, J. R. Grice, M.A., J. D. MacKinnon, A. B. MacLean, W. W. MacNaught, F. Matheson, J. A. H. Telfer, A. S. Wilson.
Physics.—A. S. Findlay, J. Mitchell.
Chemistry.—A. Baird, J. Campbell, M. Sommerville, W. Tudhope, G. A. Valentine.
Physiology.—C. Duguid, M.A., D. Fisher, G. Fletcher, M.A., W. M'Adam, M.A., J. H. M'Nicol, Mary C. Mitchell, Margaret E. Robertson, A. Roemmele, W. W. Rorke, R. Steel, D. C. Suttie, J. L. Ure.
Materia Medica and Therapeutics.—G. Macleod, M.A.
Pathology and Medical Jurisprudence and Public Health.—J. Cruickshank, R. M. Walker.
Pathology.—C. Bennett, W. B. Brownlie, P. R. M'Naught, R. M. F. Picken, B.Sc.
Medical Jurisprudence and Public Health.—B. Hutchison, A. C. Munro, A. Patrick, M.A.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE winners of the prizes for the winter session at the Schools of Surgery are as follows:—DESCRIPTIVE ANATOMY: *Junior*, J. T. Duncan. *Senior*, H. G. P. Armitage. PRACTICAL ANATOMY: *First year*, T. M. Thomson. *Second year*, W. Swan. PRACTICE OF MEDICINE: C. Greer. SURGERY: G. S. Levis. MIDWIFERY: H. W. White. PHYSIOLOGY: H. M'Adoo, CHEMISTRY: P. F. Crowe. PATHOLOGY: I. Scher. PHYSICS: J. T. Duncan. The prizes were in each case a medal and a small sum in money. Second prizes with certificates were also given.

The work of the schools recommenced for the summer session on April 8th.

CONJOINT BOARD IN ENGLAND.

THE following candidates have been approved at the examinations indicated:

FIRST EXAMINATION: (I) CHEMISTRY AND (II) PHYSICS.—C. V. Anderson, D. G. Arthur, A. Barry, E. C. Bowden, R. T. Brotchie, M. Burnett, P. N. Button, N. S. Carruthers, J. Coplaus, H. G. Crawford, J. H. C. Davis, W. T. Dobson, J. H. Drinkall, W. A. S. Duck, R. S. Fawsett, J. K. Garner, F. Garratt, J. C. Hallinan, L. P. Harris, G. A. Hodgson, T. H. Jackson, A. C. Jap, F. G. Lloyd, D. H. McDonald, A. R. N. MacGillycuddy, E. H. Marshall, B. N. Norman, G. V. Ormsby, C. L. Pattison, D. H. Pennaut, G. B. Pritchard, C. H. L. Rixon, M. Salem, H. F. Stephens, J. H. Wilkinson, O. E. Williams.

(III) ELEMENTARY BIOLOGY.—A. Abdel-Al, G. Aldridge, G. N. Atlee, D. G. Arthur, M. Barker, V. A. Berne, W. H. Bord, H. H. Budd, M. Burnett, T. C. Butler, A. S. Coalbank, C. G. Colyer, J. Coplans, F. C. Cowtan, D. H. Davies, J. B. C. Davis, B. G. Derry, M. S. Esler, A. G. T. Fisher, W. T. Flooks, M. Foulkes, E. A. T. Green, K. B. Greenwood, N. Grellier, S. Hall, J. C. Hallinan, M. Z. Hanafy, E. H. Heaton, J. E. Hepper, H. C. Highton, G. G. B. Holroyde, A. C. Jap, J. C. Jefferson, C. Kennedy, A. G. S. Keyworth, G. W. King, V. Kucewizky, S. Lal, J. V. Lambert, J. L. Lauder, F. G. Lloyd, A. Lowndes, H. Mahmud, E. M. Mahon, G. N. Martin, F. H. Mosse, B. N. Norman, G. V. Ormsby, H. F. Overend, F. J. Palmer, D. H. Pennant, G. H. Piercy, J. Pinder, C. H. G. Pochin, R. F. Quilton, C. G. Reinhardt, E. U. Russell, M. Salem, D. Scott, J. R. C. Stephens, C. H. Symons, H. A. Turner, W. Watkins, J. D. Webb, S. A. Wilkinson, M. A. K. Wood.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved at the examinations indicated:

PRIMARY EXAMINATION, PART I (*Chemistry*).—I. M. Bernard, M. C. Dence. (*Materia Medica and Pharmacy*).—C. A. Mortlock-Brown, G. F. Wilson.

PRIMARY EXAMINATION, PART II (*Anatomy*).—E. C. R. Fisher, A. Jonathan, B. A. Keats, H. W. Phillips, J. E. S. Sheppard-Jones, A. Singha, H. H. Smith, S. W. Turtle, H. J. Welsh. (*Physiology*).—J. A. Bullbrook, B. A. Keats, J. E. S. Sheppard-Jones, H. H. Smith, W. E. N. Smith.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Queries, answers, and communications relating to subjects to which special departments of the British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

Dr. R. R. Rentoul (Hartington Road, Liverpool) desires to know whether, by municipal action or private benevolence, free meals are anywhere given to poor pregnant women.

ANSWERS.

Parish Nurses.

J. W. W. A.—The usual salary for a district or parish nurse is £30 to £40 per annum, if board and lodging are provided; £80 to £100 if the nurse provides for herself. She should be allowed a bicycle if the district be a scattered one. The nurse is generally responsible to a committee, elected annually by the subscribers, who appoint a president, treasurer, and secretary. The committee draw up rules for the nurse (the rules of the Queen's Jubilee Nurses would form a good guide for this purpose), and decide the class of patients whom the nurse is to visit. It is important that the medical men in the neighbourhood should be consulted, and thus co-operation secured.

Artificial Dentures.

C. M. R.—The Dental Hospital and the dental department at Guy's Hospital supply false teeth at a reduced rate, but they are, we believe, overwhelmed with applications, and a patient may have to wait a long time. Moreover, at the Dental Hospital (Leicester Square) a certain number of subscribers' tickets are necessary. We understand that the dental surgeon to the St. Marylebone Dispensary, Welbeck Street, W., will make artificial teeth for approved patients of that institution, a full set costing £4 and smaller plates in proportion. This and one or two of the provident dispensaries are the only places, so far as we can ascertain, which in any way meet the want.

The Identification and Classification of Diptera.

D. M. C. C.—A considerable amount of information is given in *Studies in Laboratory Work*, by C. W. Daniels, M.B., M.R.C.S. (London: John Bale, Sons, and Danielsson, 1903), and *The Practical Study of Malaria and other Blood Parasites*, by J. W. W. Stephens, M.D.Cantab., D.P.H., and S. R. Christophers, M.B.Vict., I.M.S. (London: Williams and Norgate, 1904). If more is required, Theobald's *Monograph of the Culicidae or Mosquitos* and Austen's *Monograph of the Tsetse Flies* (London: Longmans, Green, and Co., 1903) might also be consulted. There are also good articles in Allbutt's and Rolleston's new *System of Medicine*, vol. I, Part II, by Theobald and Austen.

Rhine Wine as a Beverage in Diabetes.

Caledonia.—White Rhine wine or hock contains very little sugar. Dupré found a bottle to contain from 1 to 8 grains, but many kinds contain practically none. It compares favourably with such a wine as Sans Sucre champagne, which, according to the *Lancet*, quoted by Hutchison, contains 6·2 per cent., which would give for a reputed quart bottle (Lancet about 20 grains. In Professor J. König's table Steinmetzberger (1894) and Geisenheimer (1894) contain 0·15 per cent. of sugar, while Steinberger (1893) contains none. If, therefore, the wine be taken in a quantity not exceeding a bottle a day the amount of sugar would not be prejudicial, but it must be remembered that many diabetics are gouty, and that hock is a highly acid wine, likely to give rise to urinary irritation, so that the objection to it may have been made on this ground.

Chloroform under Local Anæsthesia.

Dr. Alex. Urethration in young children is quite feasible with local anæsthesia, and is often practised. The mucous surface of the prepuce can be anæsthetised by absorption by means of a pledget of cotton-wool soaked in 1 per cent. solution of cocaine laid over it, and left for three or four minutes before the operation. The skin should be anæsthetised by injection with the hypodermic needle. Injection of cocaine is slightly more painful than that of eucaine, and eucaine also has a higher degree of toxicity, a matter to be carefully considered. The best result can probably be obtained with a solution of cocaine and adrenalin chloride. The solution of cocaine should not exceed 2 per cent. in strength. The total amount injected can be half a grain. One ought to be sufficient for complete anæsthetisation of the prepuce. It can be taken to keep the point of the needle obliquely *within* the substance of the prepuce. If the solution be injected into the loose tissue between the prepuce and glans it will be rapidly absorbed, and the anæsthesia will be unsatisfactory. The child should be kept in the recumbent position during the operation, and for at least an hour afterwards.

The Value of Protargol.

Dr. Alex. Veitch (Edinburgh) writes: In reply to Dr. Pendred, I may say that I invariably use protargol in various strengths, and in all stages of gonorrhœa, with happy results. If used early in 1 per cent. solution it may cause pain, but the patient can easily dilute it till the inflammatory process is sufficiently abated and tolerance of the injection is established. Previous to using protargol in ophthalmia neonatorum, which I am of opinion is largely a gonorrhœal infection, I had the misfortune to see many eyes more or less permanently injured. A 1 per cent. solution of protargol has, in my experience, never failed to effect a speedy cure, and without permanent damage to the cornea. It must be used frequently, however, and the conjunctiva must be flushed with it. Success here has justified my faith in its value in gonorrhœal urethritis.

Mr. Harold Walker, F.R.C.S. (Middlesbrough), writes: I can quote for Dr. Vaughan Pendred two cases which seem to be instructive, as having diametrically opposite results. In both cases the gonorrhœa had passed into a stage of gleet of over three months' standing. In the one case the usual treatment by internal administration of copaiba, cubebs, and sandal wood had been followed and pushed, combined with injections of potassium permanganate, and later with solutions of silver nitrate and zinc sulphate. These all proved ineffective, but when injection of 1 per cent. solution of protargol was substituted for the former treatment improvement rapidly occurred. In a fortnight or three weeks all pain had ceased, and the discharge completely disappeared, now many months later, and has not since recurred. In the second case a line of treatment similar to that detailed above was thoroughly tried, and again proved to be inadequate, and a 1 per cent. solution of protargol was consequently employed. The pain immediately reappeared, and the amount of discharge, previously reduced to a small quantity, again assumed distressing proportions. In spite of this, the injection was persisted in for two or three weeks, and then abandoned. I think results such as these tend to prove that, although in certain cases we may get satisfactory cures by one or other of the many astringents confidently advocated, nevertheless we cannot do more than try one where the other fails, and can pin our faith on what seems to be the only true and rational treatment of chronically-inflamed tissues—normally placed in recesses and rugæ—namely, by the application of astringents directly to the stretched patches of mucous membrane exposed and brought within reach by means of the electric urethroscope.

LETTERS, NOTES, Etc.

Proposed Manchester University Lodge.

Dr. F. W. Jordan (Heaton Chapel) writes: It has occurred to me that one of the useful and agreeable means of bringing together in a friendly way men who ought to cultivate each other's acquaintance and become known to each other, and also of strengthening the ties of affection that bind them to their Alma Mater, might be found in a Masonic Lodge. I would suggest, therefore, to those Freemasons who are members of the University of Manchester, or of its cognate institutions, that a meeting be arranged with a view to founding a Manchester University Lodge of Free and Accepted Masons. I shall be glad to receive communications from any Freemasons who are interested.

Congenital Absence of One Kidney.

Mr. A. Rajasingham, M.B., C.M. (Aberdeen), writes: While holding a *post-mortem* examination on a tea estate labourer, of about 15 years of age, who died of other than urinary disease, I was surprised to find that only the right kidney was present. It was considerably hypertrophied, and its ureter was much enlarged and thickened. On the left side there was not even a rudimentary kidney, and the ureter was entirely absent. The right kidney weighed 5 oz. 1 drachm; it measured in length 5 in., breadth 2½ in., thickness ¾ to 1 in. On section the organ appeared healthy.

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THE EFFECTS OF RESPIRATION ON THE CIRCULATION:

AND

THE PULSUS PARADOXUS VEL PULSUS INSPIRATIONE INTERMITTENS.

BY

SIR JAMES BARR, M.D., LL.D., F.R.C.P., F.R.S.E.,

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DR. P. WATSON WILLIAMS, in his letter[1] on the pulsus paradoxus, has drawn attention to a difference of opinion between Professor Wenckebach and myself as to the explanation of this phenomenon. Many years ago I settled the question of the pulsus paradoxus to my own satisfaction, and as I have lately given over missionary work it does not trouble me very much whether Wenckebach or anyone else agrees or disagrees with me. It seems to me that there is no use trying to settle anything in medicine, because no sooner does anything appear settled than up springs some one with a new theory, or an old theory in a new garb. Therefore, Professor Wenckebach's article on adherent pericardium,[2] which I read with much interest, did not draw me from my lair; nor would the letter of my friend Dr. Watson Williams in the JOURNAL have done so, but a private letter from Dr. Williams requesting my criticism forces me into the arena.

I have again carefully read Professor Wenckebach's paper,[3] and I should not care to speak of the pulse in the case which he describes as the *pulsus paradoxus*, but I may be quite reasonably told that Wenckebach felt the pulse and thus designated it, and surely such an authority on the pulse should be quite good enough for me or any one else. However, I am quite willing to approach the subject under an aspersion of medical treason for daring to question the observations, or rather deductions from observations, of this undoubtedly great authority. It does not matter much what a man says so long as you understand what he means, so let us examine his word picture and illustrations.

> The pulse was small, weak, and frequent, diminishing during inspiration (pulsus paradoxus); the veins were considerably overfilled, and during inspiration there was marked swelling of the veins in the neck.

He does not say whether the diminution in the pulse during inspiration was in frequency or force, or both, but in the pulse tracings taken at a later date there is slight diminution in frequency but no alteration in the character of the pulse. There are very much greater respiratory variations in my own pulse, and in the pulse of every healthy individual with a good respiratory pump. I call my own pulse normal; I might call that of Professor Wenckebach's patient abnormal, but there is no reason why I should call it a *pulsus paradoxus* unless it were for the mere sake of agreeing with Professor Wenckebach.

The fact of the matter is Kussmaul first described the pulse under the title *pulsus paradoxus* in a case of chronic indurative mediastinitis, and thought that it was pathognomonic of the disease, and since then every patient with extensive pericardial adhesions has got to have a pulsus paradoxus whether he likes it or not. It was soon found that many persons, both in health and disease, had this form of pulse, hence it ceased to be pathognomonic of mediastinitis. Under whatever conditions it occurred, it was looked upon as an abnormality, something to write about; and it seems to have had a peculiar fascination for observers, especially of the juvenile type (among which I certainly do not include Professor Wenckebach, as he is one of the keenest and most accurate observers I know), and hence an enormous amount of printer's ink and paper have been wasted over one of the commonest of cardiac phenomena. I should like to say with Prior, "Let him be kept from paper, pen, and ink, So may he cease to write, and learn to think."

Each writer on this subject has had almost as many theories as the number of cases he has described. For my own part, I have always accepted the dictum of Sir Isaac Newton that we are to admit no more causes of natural things than such as are both true and sufficient to explain their appearance, hence the theory which I have on many occasions put forward is intended to explain every case; but before I deal with my own views I must continue my destructive criticism of others.

When Kussmaul[3] published his cases of indurative mediastino-pericarditis in 1873, he looked upon the pulsus paradoxus as pathognomonic of the disease, and explained the phenomenon by suggesting that the inspiratory act put a strain on the adhesions which kinked the aorta or great vessels, and thus prevented the pulse from reaching the wrist. This absurd explanation was generally accepted in Germany and in this country with unreasoning credulity on account of its distinguished author; but how any one who had the slightest knowledge of natural laws could propound or accept such a theory is a puzzle to my mind. Nowadays it is the heart rather than the great vessels which is hampered by the adhesions, and writers talk of the adhesions dragging in the chest walls. I wonder if these writers have forgotten that there is such a thing as atmospheric pressure. When a child of very tender age is suffering from laryngeal diphtheria and the chest walls are caved in at every attempt at inspiration no one would say that they are retracted by the membrane in the larynx and trachea; but it has just got as much or more to do with the falling in of the chest walls than pericardial and pleuritic adhesions have. During inspiration, and when the heart contracts and alters its shape, there is the formation, or the tendency to the formation, of a partial vacuum, and if this cannot be filled up by the contents of the thorax, the chest walls are driven in by the difference between the atmospheric pressure inside and outside the thorax.

If the chest wall were retracted by fibrous adhesions between the heart and itself, there must be some fulcrum from which the heart can act, and some writers have apparently recognized this, as they have supposed the heart also to be anchored to the posterior mediastinum, or even to the vertebral column. In the majority of cases there is no such universal adhesions, and when they do occur the heart's action is very weak, the force of even the left ventricular systole rarely equalling a fluid pressure of 2 lb. to the square inch, which is a trivial force compared with that of the atmosphere. When the heart acts from its attached base as a fulcrum it might readily through some adhesions retract the intercostal spaces, but such force is not likely to retract the bony chest walls. The systolic "retraction" and diastolic recoil of the lower part of the sternum and costal cartilages, which frequently occur in cases of pericardial adhesions, are due to the pressure of the atmosphere.

Even Wenckebach attributes all these phenomena to the heart and its adhesions, and takes no notice of such a powerful and ever-present force as the atmosphere, as the following sentences from his paper will show[3]:

> Indeed, the heart is hindered in its lateral forward movements by tough and hard fibrous masses, so that it can neither be properly filled nor properly emptied. By its shortening at every systole it pulls the chest wall in front, and by means of the posterior mediastinum, at the vertebral column. Neither of these structures gives way. In youthful individuals the ribs may be so flexible that the heart is able to pull them inward; in older patients this will be impossible; and in both cases the heart has opposed to it an enormous amount of extra work.

The heart is more likely to be anchored to the chest wall than the chest wall to be pulled in by the heart; moreover, the exocardial adhesions are always sufficiently long to allow of cardiac systole.

> The diaphragm is greatly limited in its movements: thus, the abdomen will not be pushed forward during inspiration, or very slightly. At that same moment the diaphragm pulls, by means of the heart, at the chest wall in the regio cordis, so there is no forward movement of the chest, but rather an inspiratory retraction of the chest.

One would think that the pull would depend on the amount of movement, yet, according to this fanciful explanation, a greatly limited movement of the diaphragm retracts the chest wall through the pericardial adhesions of the heart to the diaphragm and chest walls. According to this authority the heart pulls one way and the diaphragm another, and the resultant is what

happens; this, it is presumed, should satisfy any one who has got a mathematical mind!

The inspiratory traction on the heart, which cannot give way [it was previously the chest wall which could not give way, now it is the heart], is bound to affect injuriously the action of this organ. The "debit" of the heart, too small in expiration, must become still smaller during inspiration. As a result of this embarrassing action during inspiration, the well-known symptom of pulsus paradoxus is produced—namely, a lessening of the blood pressure and of the pulse wave in the arterial system. Another symptom furnishes further proof that during inspiration the heart is working under worse conditions—namely, the inspiratory swelling of the veins of the neck. In normal conditions these veins are emptied by the increased suction of the thoracic cavity during inspiration. Here the contrary happens; the flow of blood to the heart is diminished. We may put aside the more subtle question whether there be a direct traction on the aorta or on the large veins, as some authors assume. The more embarrassed condition of the heart during inspiration is obvious, and both symptoms—the pulsus paradoxus and the swelling of the veins—are coupled together and have the same origin. Perhaps it is noteworthy that in the patient here described both symptoms were present; in another patient I saw both were absent.

This explanation, like the respiration in these cases, is very laboured. It would seem, according to this, that, under similar conditions, the symptoms may be present or may be absent.

He then quotes my explanation of the pulsus paradoxus from my Toronto address,' On the Circulation Viewed from the Periphery, but he omits a rather important point, in my opinion, the storage of blood in the lungs; and he disposes of my views as follows:

A great deal might be said about this assertion. Certainly the explanation by an increased suction of the chest (be it working on the arteries or on the veins) holds good in a great many cases, distinctly where there are a low arterial pressure, a weak heart action, and strong inspiratory movements. But it does not hold good in the cases of adherent pericardium. The particular consequence of this disease is the impediment to inspiration, not by narrowing of the air tract, but by the anchoring of the diaphragm. There is not an increased fall of pressure in the chest, but a very deficient inspiratory mechanism. And the proof that there is *not* an increased suction of the chest and *not* a sudden emptying of the veins is shown by the inspiratory *swelling* of the veins. So we have to adopt the explanation of an increased hindrance to the circulation during inspiration, and I venture to think that the increase of the hindrance is due to the tugging of the diaphragm on the heart, that cannot give way on account of its being fixed to its immovable surroundings.

We find him acknowledging that my theory, or as he calls it assertion, is correct in a great many cases, and my contention is that any true theory which explains any one case should be comprehensive enough to explain every case, but Professor Wenckebach, while agreeing that the pulsus paradoxus may be associated with a strong negative pressure within the thorax, yet contends that in his case it occurred with a positive pressure sufficient to obstruct the entrance of blood. You might as well expect the experiments of Müller and Valsalva to have the same effects. It might be worth Professor Wenckebach's while to consider whether the pulse in his case should be dubbed the *pulsus paradoxus*, and whether this supposed tugging of the diaphragm really existed, and, if so, what effects had it if any.

Before giving my own views, it might be well to state what seems to me the evolutional history of this subject.

In 1733 Valsalva found that after a deep inspiration, if you close the glottis and make a most forcible expiratory effort, the circulation is arrested.

In 1739 Dr. Wilson[1] of Newcastle held that the blood in the veins was returned to the heart by atmospheric pressure, a doctrine, said Haller not to be despised.

In 1815 Dr. James Carson[2] of Liverpool taught that great assistance was rendered to the circulation by the aspirating effect of the thorax during inspiration sucking in the blood from the systemic veins. This theory was afterwards further established by Dr. Andrew Buchanan of Glasgow, Dr. Patrick Black of London and Dr. Leonard Hill, and it has now become an established fact in physiology. Dr. Carson also seems to have accepted the view of Dr. Bryan Lang[3] that the heart dilated independently of the force of the returning current.

In 1826 Dr. David Barry[4] published two important essays on the motion of the blood in the veins and on external absorption. This experimental investigation corroborated the work of Carson, and well exemplified the part played by the suction of the thorax and the atmospheric pressure in carrying on the circulation in the veins. Dr. Barry's work received the high approval of Baron Cuvier and Professors Dumbril and Laënnec. He turned his experiments to practical account by showing that the application of a powerful cupping glass to a recently-poisoned wound would prevent the absorption of the poisonous matter.

In 1838 Johannes Müller noted that if after a deep expiration you close the glottis and make a very forcible inspiratory effort the pulse at the wrist disappears, and this he ascribed to the engorgement of the pulmonary vessels and the consequent emptiness of the left ventricle. This is the very opposite of Valsalva's experiment, though in both you can obliterate the pulse at the wrist; but in the latter the artery remains full, whereas in Müller's experiment it is empty.

In 1850 Dr. C. J. B. Williams[5] stated that:

Advanced stages of severe pericarditis and adhesions of the pericardium present a remarkable kind of inequality, and even intermission, in the radial pulse, whilst the heart's pulsations are quite regular; in fact, some of the latter are too weak to reach the wrist, hence the irregularity; and I have distinctly ascertained that the weak or deficient beats are those corresponding with inspiration, whilst the stronger pulses are those enforced by the expiratory act, which thus helps the weak heart and augments its propulsive power. So it often happens that the act of coughing gives a momentary strength to a weak pulse.

In 1854, at the Tübingen Clinic, Griesinger[6] had a case of fibrinous mediastinitis under his care, in which he noticed

"a small, irregular pulse, while the heart beat regularly; the intermissions of the pulse occurred at regular intervals and simultaneously with inspiration." At the autopsy, "stiff, stringy exudations were found in the connective tissue in which the large vessels are imbedded after their exit from the pericardium. Some of the venous trunks were notably constricted, as was also the aorta in its ascending portion and arch; it was also indented and partly twisted about its axis. The pericardial cavity was almost obliterated by fibrinous membranes."

In 1864 Friedreich[7] described a sudden diastolic collapse, and a systolic filling of the cervical veins which frequently occur in cases of mediastinitis.

In 1873 Kussmaul[8] described the pulsus inspiratione intermittens or pulsus paradoxus in association with indurated mediastino-pericarditis of which he thought the pulse pathognomonic. He also noticed the inspiratory swelling and diastolic subsidence of the cervical veins in these cases. He ascribed the swelling of the veins and lessened pulse to the same cause, namely, the fibrous bands kinking or obstructing the great vessels—arteries and veins during inspiration. We have seen how Wenckebach also ascribes the two phenomena to the same cause, but he places the obstruction a little further back, namely, in the heart.

In 1874 Traube and Baeumler[9] found the pulsus paradoxus in cases of pericarditis exudativa without mediastinitis, but in these cases the inspiratory swelling and expiratory collapse of the cervical veins did not occur.

In 1876 Josef Bauer wrote an excellent article on diseases of the pericardium in von Ziemssen's *Cyclopaedia*. He refers to cases of purulent pericarditis and effusion into the left pleura in which the pulsus paradoxus occurred. He gives the following explanation of the phenomenon:

In my opinion the inspiratory displacement of the thorax may produce, under different conditions, mechanical obstructions which result in the expulsion of a less amount of blood; these may occur in the aorta, perhaps also in the subclavian or at the origin of the vessels, and then the heart sounds are unchanged; or they may be in the heart itself, and then we find at the same time a diminution of its action. The production is favoured by a weak, degenerated heart. Besides these mechanical hindrances in the circulatory system, caused by the act of inspiration, the phenomenon of the pulsus inspiratione intermittens may also be produced *by abstract air to the entrance of air* into the lungs, for the inspiratory augmentation of the negative pressure (suction) within the thorax opposes the supply of a proper amount to the aortic system. In this case there is an exaggeration of a normal relation, for even under normal conditions the sphygmograph shows that the negative pressure within the thorax during inspiration can cause a slight diminution of the wave, as Riegel and Sommerbrodt have shown.

When dealing with the retraction of the chest walls in

cases of pericardial adhesions, he is about the only author I have met who has not neglected the atmospheric pressure.

In 1877[11] and 1882[12] I published papers on Reduplication of the Cardiac Sounds; in 1884[13] on the Causes and Mechanism of the Cardiac Impulse; and in 1900 and 1901[14] on the pulsus paradoxus, in all of which I entered very fully into the effects of respiration on the circulation.

In 1877 Stricker[15] published a case of the pulsus paradoxus in tuberculous pericarditis without mediastinitis; in 1883 the occurrence of the pulsus paradoxus was noted in a case of purulent pericarditis by J. West,[16] and in a case of pericarditis without mediastinitis by E. Boehr.[17]

In 1893 Dr. E. M. Brockbank[18] found this phenomenon in a case of acute laryngitis.

In 1894 and 1896 the late Dr. Thomas Harris made some interesting communications in the *Medical Chronicle* on indurative mediastino-pericarditis, in which he referred to the occurrence of the pulsus paradoxus. In the *Lancet* of April 22nd, 1899, he published a valuable article on the pulsus paradoxus, with special reference to its occurrence on one side only.

In 1897 Gerhardt[19] published two cases in which the phenomenon was only observed in one radial artery, and he ascribed the cause to variations in the size of the two subclavian arteries, but in Dr. Harris's unilateral case no such difference was found. In connexion with such unilateral variation, I may mention a little trick, taught me by Mr. C. E. Walker (of cancer fame), of abolishing the pulse in one or both upper extremities by simply compressing the subclavian artery as it passes over the first rib by the clavicle. Some such compression, voluntary or involuntary, during inspiration would readily account for a unilateral pulsus paradoxus in the upper extremities; but, of course, the other arteries could not be thus affected. However, in most pulse records the observers seem to think it unnecessary to refer to any artery except the radial.

There are a plethora of articles on this subject to which any further reference would serve no useful purpose.

I now come to the letter of Dr. Watson Williams,[1] and at the very outset I must fall foul of my friend for ascribing a statement to Wenckebach about myself which he does not make:

> He (Wenckebach) shows that the explanation of pulsus paradoxus by Sir James Barr and the majority of clinicians . . . does not hold good in adherent pericardium.

I thought my views were my own, but it seems that I have got to be lumped with others who have got no personal theories, but who have swallowed the physical absurdities of Kussmaul and others, and who, with the exception of Bauer, have utterly ignored the potent force of atmospheric pressure. He fairly sums up Wenckebach's criticism of my views as applied to cases of adherent pericardium:

> There is not an increased fall of venous pressure, there is not an increased suction of the chest, and there is not a sudden emptying of the veins, so we have to adopt the explanation of an increased hindrance to the circulation during inspiration.

I at once challenge Wenckebach's facts. In the vast majority of cases of adherent pericardium, during inspiration there is a distinct fall in the intrathoracic pressure, both in the aërial and blood-vascular cavities; the respiratory pump is in action and the veins of the neck shrink. These things may not have happened in Professor Wenckebach's case, but then I maintain that there was no pulsus paradoxus, and he has given no evidence to show that there was, and in another case he acknowledged that there was no inspiratory swelling of the cervical veins. He has no right whatever to reason from a particular case to a general. His reasoning would just be as good if he said, "Man is an animal; therefore all animals are men." I happen to have 3 cases of mediastino-pericarditis with pleuritic adhesions under my care at present, and not one of them has got the pulsus paradoxus. In two of the cases the veins of the neck collapse during inspiration, and in the third there is just an appreciable diminution in the veins of the neck (which are constantly swollen), at the very beginning of inspiration, and then they fill up during the remainder of the period. This case is almost an exact counterpart of Professor Wenckebach's case. There are extensive pericardial adhesions, adhesions of both pleurae, especially the left, general venous obstruction, distended cervical veins; scarcely any movement of the chest walls, and any expansion during inspiration is counterbalanced by the atmospheric pressure caving in the left side of the chest; a very large, hard liver, ascites for which he has been tapped three times, and for the present, at least, the fluid has disappeared under the influence of adrenalin. This boy has been under observation for some years, and I rather think was seen by Professor Wenckebach when he visited my wards. In the early history of this case fluid was drawn from both pleurae, and his pericardium was tapped twice, 19 and 20 oz. of fluid respectively being drawn off. On the second occasion I nearly killed him by the injection of 40 minims of adrenalin solution (1 in 1,000) into the pericardium. This turned out to be too large a dose for the pericardium, but as this was the first time that the injection was ever performed, I had no previous experience to guide me, except the effect on the pleura. However, the immediate injection of nitro-glycerine and atropine brought him round.

If there be little or no variations in the thorax during respiration, how can you expect respiratory variations in the pulse? If the respiratory pump is out of gear, I for one do not expect it to act, but it is generally thought that a case of mediastino-pericarditis should have a pulsus paradoxus, and hence every little irregularity in the pulse is thus dubbed. If the chest is blown out with large emphysematous lungs and perhaps adherent pleurae, the intrathoracic pressure raised, and scarcely any fall in the pressure during inspiration, there can be practically no respiratory assistance to the circulation, and little or no inspiratory effect on the pulse. Dr. Watson Williams[20] suggests

> that the dominant factor in the production of pulsus paradoxus is the physiological rhythmical variation in the activity of the cardio-inhibitory centre, corresponding to the rhythmical variation in, and activity of, the respiratory centre.

Dr. Williams is a bold man to talk of the cardio-inhibitory centre in these days of the myogenic function of the heart, muscular production of a contraction stimulus and its conduction, irritability, contractility, rhythmicity, not forgetting the bundle of His. Although I think the heart would get on very badly without its nerves, yet I think the time element is strongly against any such theory as a cause of the pulsus paradoxus. We believe that the knee-jerk is not a reflex movement, because the response is far more rapid that any nerve reflex. In the case of the heart the reflex is much slower than that travelling along the voluntary nerves, but the response of the pulse to inspiration is even quicker than the knee-jerk. The atmospheric pressure, on which I contend this phenomenon depends, is an ever-present force, and its effect is practically instantaneous with the causes which induce the variations in pressure, as is readily shown in sphygmographic tracings taken during the various phases of respiration. When a deep inspiration is started at the end of the cardiac cycle the next cycle is lengthened, and the arterial blood pressure falls; these phenomena could not possibly occur so quickly if they were determined by any organic reflex. The effects of respiration on the pulse are well illustrated in my paper on reduplication of the cardiac sounds, published in the *Liverpool Medico-Chirurgical Journal*, July, 1882. That number of the journal is now out of print, but I shall be pleased to send a copy of the paper to any one who desires it.

I am now in a position to explain my own views on the causation of the pulsus inspiratione intermittens, and by way of illustration I shall first start with the experiments of Valsalva and Müller.

The experiment of Valsalva carried out in 1740 has been kept alive by the records of physiologists, but I do not know one of them who has tested its accuracy. The aim of this experiment is not merely to stop the pulse at the wrist, but also to arrest the heart's action, and the ordinary Englishman is so cautious that if you ask him to try it, he wishes first to see how it pans out on yourself, and if he happen to think that your congested face betoken any risk of an apoplectic seizure he begs to be excused, as he has got a wife and family, or is going to get some encumbrance, but he never wishes you to think that there is any personal apprehension. However, I have carried out this experiment sufficiently often on myself (and I was the

first on whom I tried it) and on other medical men and students to warrant me not only in corroborating the accuracy of Valsalva's observation, but also in giving the following refinements on the experiment.

When a person with a good respiratory pump takes a deep inspiration, and then tries to expire forcibly without allowing any air to escape, he produces an intrapulmonary pressure of 80 to 100 mm. of mercury. I make the individual who is carrying out the experiment, after taking a deep inspiration, blow into a mercurial manometer without, of course, allowing any of the air to escape. You can thus see what the intrapulmonary pressure is, and how it is sustained, and there can be no faking of the experiment. During the deep inspiration the heart and lungs are well supplied with blood, the blood pressure in the pulmonic and arterial systems falls, the cardiac contractions are effective and slightly quickened, and the heart sounds are clear. During the compression period no more blood enters the chest, as the intrathoracic pressure is much higher than that in the extrathoracic veins. At first the heart is well supplied with blood—on the left side from the large lung reservoir, and on the right side from the superior vena cava and its immediate tributaries, and also from the inferior vena cava and liver, as during the compression of the chest the abdomen is submitted to a similar pressure through the action of the diaphragm and the abdominal muscles. Therefore there is practically no alteration in the force of the cardiac contraction or in the lengths of the cycles until the surplus blood in the two reservoirs has been disposed of, or there may be slight slowing of the heart, owing to the increased blood pressure in the pulmonic and systemic systems, and the pulse becomes smaller and firmer. When the complementary and tidal blood have been disposed of, which is generally accomplished in four or five beats of the heart, the pulse gradually disappears in all the superficial arteries, but the vessels remain full, and the heart's sounds cease. The pulse and heart sounds may remain absent as long as the patient is able to keep up the pressure, and they are generally absent in any successful experiment for 8 or 10 seconds. It would seem to the observer that the heart had actually come to a standstill, but when the experiment is viewed under the light of the *x* rays the heart is seen to keep up a slow rhythmical contraction, getting gradually smaller in all its dimensions as it disposes of the supplementary blood in the thorax; and, finally, it does not appear half the size that it did during inspiration. In its contracted state the range of movement is so slight as to be barely appreciable. The heart is best viewed from the back, and the left side is seen to contract until it comes close to the border of the dark shadow of the spine and sternum. When the pressure is relaxed and an inspiration taken, the heart fills up immediately and resumes its wide range of movements. The experiment is most successfully carried out on a person with a good respiratory pump and low blood pressure, and the whole experiment barely occupies half a minute. During the compression period the extrathoracic venous pressure is gradually rising, and it is probable that the pressure might rise so high (especially if the experiment was only partially successful) as to force the blood in against an intrathoracic pressure of, say, 45 to 50 mm. of mercury, more especially if this intrathoracic pressure was intermittent or not well sustained. In this case the pulse may not quite stop or only for a beat or two, and the pressure may rise sufficiently in the right ventricle to give rise to a tricuspid systolic murmur; this murmur disappears when the normal circulation is re-established. In such a case I have seen the heart's action much quickened towards the end of the experiment, so it was evident that some blood was getting into the chest either from the systemic venous pressure being so high as to force the blood in, or the intrathoracic pressure has become either intermittent or not sufficiently high to keep the blood out. In cases of very high arterial tension the experiment is difficult to successfully carry out owing to the powerful left ventricle forcing the blood onwards, but even in these cases a powerful chest is able to expel the blood out, and so make the experiment a success. At the very instant you relieve the intrapulmonary pressure the heart is filled up, and restarts its usual beat, and the pulse returns; the arteries have never been empty, so there is no delay in filling them.

In carrying out the experiment of Johannes Müller I direct that in the expansion of the chest after a deep expiration the mouth should be connected with a mercurial manometer, but of course no air allowed to enter the chest except the few millimetres which he can suck out of the manometer. You can thus see how the experiment is being carried out by the amount and sustention of the negative pressure in the manometer. Supposing the negative pressure is 80 mm. of mercury, and that the barometer stands at 760 mm., then the intrathoracic pressure will be 760—(80 plus the elastic tension of the lungs, say, 10) = 670 mm. of mercury, and the pressure on the blood vessels outside the thorax will be 760 mm. Therefore there is a pressure of 90 mm. of mercury driving the blood into the chest, the first effect of which is a storage in the great veins and a good supply to the right side of the heart. The capacity of the lung reservoir is increased, so the immediate effect is a diminished supply to the left side of the heart, and the systemic pulse becomes slower; when the enlarged lung reservoir is filled both sides of the heart are well supplied with blood, and the cardiac action is rather quickened. While this is going on in the chest there is a rapid depletion of the veins and capillaries and a fall in the arterial pressure. If there be a large lung reservoir to fill, the pulse may disappear in many of the superficial arteries for several beats.

In cases of low arterial pressure the arteries are rapidly emptied into the capillaries and veins at their peripheral end, and are not filled at the proximal end, so the pulse disappears. When the lung reservoir overflows, the heart fills up the empty arteries and the pulse again returns even while the chest is fully expanded, and, owing to a good supply of blood to both sides of the heart, its force and frequency are increased. Unlike the Valsalva experiment, the heart at no time stops, and its active movements can be watched under the *x* rays. The following is a very good example of this experiment carried out on a healthy young man, aged 22, one of the best mountain climbers in the north of England, and one of the two who made the first ascent into the Devil's Kitchen in North Wales—a feat which in the attempt cost Mr. Hudson his life about two years ago. In the first pulse tracing, after the first two normal pulse waves the chest was fully expanded but no air admitted, and the pulse completely disappeared at the wrist for about thirty beats, and then when he relaxed the inspiratory effort and opened his glottis the pulse immediately reappeared.

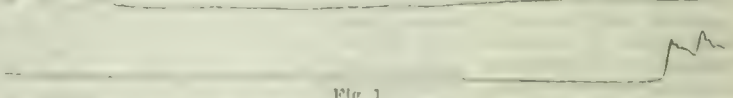


Fig. 1.

The following two tracings were taken in succession. In the first there are three normal pulse waves, and then the chest was expanded with obliteration of the pulse; after a short period the second paper was inserted, and it shows a return of the pulse while the chest was still fully expanded. Towards the end of the tracing he resumed breathing. These tracings show that the artery which was at first depleted gradually filled up and exhibits a marked rise in blood pressure. This is exactly what has been noticed in some cases of mediastinitis with the so-called pulsus paradoxus.

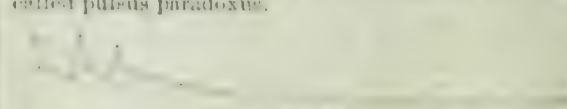


Fig. 3.

In a case of Stokes-Adams disease,[1] which I read at the meeting of the British Medical Association at Toronto, I could bring on an attack of the so-called heart block whenever I wished, by simply making the patient take a long deep breath and then hold his chest fully expanded. During the attacks the right auricle and ventricle beat more frequently, but the weak right ventricle had to fill

up the extra large lung reservoir, and consequently after the left ventricle had disposed of its immediate supply by two systoles it ceased beating until the lung reservoir overflowed, and then the pulse returned in all the arteries, even with the chest fully expanded. This is well shown in the accompanying pulse tracing (Fig. 4). The chronograph records one-fifth second.

I think we have now sufficiently considered the defective filling of the systemic arteries at their central end owing to storage in the enlarged reservoirs of the lungs and other parts of the intrathoracic blood vascular cavity, such as occurs in Müller's experiment; in laryngeal diphtheria and other obstructive lung diseases; in ordinary deep nasal inspiration when there is a good respiratory pump; often in mediastinitis and pleuropericardial adhesions, etc. Where the right ventricle is weak, as in my case of Stokes-Adams disease,[21] it may take a long time to fill up the large lung reservoir, and so the systemic pulse may disappear so long that the cerebral anaemia induces convulsions. We will now consider the emptying of the arteries at their peripheral end into the capillaries and veins.

We have seen how Carson, Barry, Buchanan, Black, Leonard Hill, and myself have shown how the inspiratory suction of the chest and the atmospheric pressure hurries on the circulation in the veins. This relieves the capillaries, and my tracings[12] show that in low-tension pulses it has an immediate effect on the arteries. With a weak heart the arteries are not sufficiently filled, and with a good respiratory pump and low tension pulse they are quickly emptied. On the other hand, where there is high blood pressure and a poor respiratory pump, inspiration has scarcely any effect on the pulse. It was held, in explanation of the pulsus paradoxus, that the diminished pressure within the thorax during inspiration retains the blood in, or even sucks it back from, the periphery into the aorta and its intrathoracic branches; but this, in my opinion, is entirely erroneous, as it is impossible to produce a negative pressure within the thorax equal to the positive pressure within the aorta, and so there can be no aspirating effect interfering with the ordinary course of the circulation.

The thorax contains, as I have before said, both an aërial and a blood vascular cavity, and any diminution in the thoracic pressure affects both these cavities. In inspiration both cavities are enlarged, but as they are complementary to one another they will be variously affected by the suction according to the freedom of inflow. In ordinary oral breathing the air enters so freely that there is scarcely any negative pressure, and consequently the circulation receives very little assistance; but in deep nasal breathing, Müller's experiment, etc., there is a great negative pressure, and so the blood rushes on in the veins and capillaries, and the arteries are rapidly drained and the pulse disappears. In my own case I can produce a negative pressure within my thorax of 80 to 90 mm. of mercury, and this causes such a fall in my venous and arterial pressures that my radials are empty for two or three beats of the heart, which of course is performing its function all the time. I have discovered that

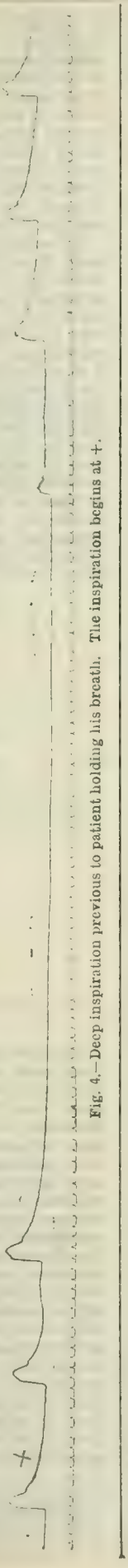


Fig. 4.—Deep inspiration previous to patient holding his breath. The inspiration begins at +.

the effect is more pronounced in those who have got not only low blood pressure and soft pliant arteries, but who also have large superficial veins in the arms. In such cases there is greater scope for draining the arterial branch, and so the arteries are more completely emptied, and therefore take longer to fill. The phenomenon is better observed when the arm is depressed than when it is elevated, because, although in the latter case the blood pressure is somewhat lower, the arteries are more contracted, the veins are comparatively empty, and there is not the same opportunity for the drainage of the arteries. On the other hand, in those with high blood pressure or very rigid arteries the respiratory pump can have very little effect on the pulse. In the lower extremities the vessels are more rigid and the blood pressure higher, especially when they are dependent, and the tactile phenomenon can scarcely be observed either in health or disease, but numerous experiments have shown me that this respiratory phenomenon, the so-called pulsus paradoxus, exists in the lower as well as in the upper extremities. Of course in the Valsalva experiment the pulse disappears in all the superficial arteries.

In many cases the pulse is more affected by rapid emptying than by defective filling of the arteries; such is apt to happen in many cases of mediastinitis, extensive pleuropericardial adhesions, moderate left pleural effusion, etc., where the lungs cannot fill up the enlarging thorax or encroach on the heart. In these cases the respiratory pump has a great effect in aspirating the blood from the peripheral vessels into the thorax. In cases of laryngeal diphtheria in elder children with firm chest walls we have a modified Müller's experiment, and here the arteries are rapidly emptied at the periphery, and perhaps badly filled at the centre owing to storage in the lungs and a weak heart. In very young children, where there is almost complete obstruction of the larynx, we do not get the pulsus paradoxus, because when the child attempts to expand its chest, the atmospheric pressure drives in the soft pliant costal cartilages behind which the heart and great blood vessels are situated, and thus the respiratory pump is thrown out of gear. In those cases where there is inspiratory filling of the cervical veins there can be no depletion of the peripheral vessels of the upper extremity, so any irregularity or weakening of the pulse which may occur must be due to lung storage and defective filling. I find that if the venous return from the upper limb is obstructed without shutting off the arterial supply, you cannot obliterate the pulse at the wrist by Müller's experiment, though the pulse does become smaller from the general fall in the blood pressure. Any obstruction of the return from one limb and not from the other would readily explain the unilateral phenomenon recorded by Harris and Gerhardt. In the case recorded by Dr. Harris there was inspiratory swelling of the cervical veins on the right side of the neck, and the pulsus paradoxus was absent in the right radial. Of course there might also be some pressure on one of the subclavian arteries during inspiration.

As I stated and showed in Toronto in my case of Stokes-Adams disease, and in my address on the Circulation viewed from the Periphery: In Müller's experiment, and in cases of the pulsus paradoxus the systole of the left ventricle may be delayed or abolished for one or more beats owing to defect in the diastolic tension in the left ventricle; and the aspirating effect of the thorax causes a sudden emptying of the veins to fill up the vacuum in the chest, and with this removal of the obstruction to the capillary flow there is a simultaneous depletion of the arteries. The pulsus paradoxus is due to one or both of the two following causes, namely, defective filling, or rapid emptying of the arteries. In the former case a weak right heart and a large lung reservoir are important factors, and in the latter a good respiratory pump and low blood pressure are the causal agents.

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[1] British Medical Journal, February 16th, 1907, p. 412. [2] Ibid., January 12th, 1907, p. 63. [3] Ueber schwielige Mediastino-Pericard tis und den paradoxen Puls, *Berliner Klinische Wochenschrift*, 1, 73. [4] British Medical Journal, August 25th, 1906, p. 401. [5] *An Inquiry into the Causes of the Motion of the Blood*, etc., by Dr. James Carson, 1815 and 1835. [6] Experimental researches on the influence exercised by atmospheric pressure upon the progression of the blood in the veins, and upon that function called absorption, 1826, by Dr. David Barry. [7] *London Journal of Medicine*, 1850, vol. ii, p. 464. [8] Bauer. *Von Ziemssen's Cyclopaedia*. London, 1876, vol. vi, p. 649. [9] Ibid., p. 649. [10] Ibid., p. 654. [11] *Medical Times and Gazette*, January, 1877. [12] *Lancet*

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THE PULSUS BISFERIENS.

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THE observations upon which this contribution is based were made during and since my term of residence at University College Hospital.

The term "pulsus bisferiens" is now applied to a form of palpably double pulse.* It is described by Broadbent[1] as having two beats, the second of which is really a reinforcement of a prolonged systole. It is the habit of most writers on the subject to define this type of pulse as one which is double to the finger. If this definition is accepted it follows that every individual observer will have a standard of his own, according to the delicacy of his tactile sense. As this definition is followed in this communication it will be of advantage to add that no case is described as pulsus bisferiens in which the apices of the two waves are separated by a time interval of less than $\frac{1}{16}$th of a second, and in which the second wave is not prominent.†‡ Most of the tracings are from pulses in which the time interval is slightly less than $\frac{1}{8}$th of a second. It has been stated by one observer[3] that the pulsus bisferiens is rare. This is far from being the case. In twenty unselected cases of aortic regurgitation, a double-topped pulse was distinctly appreciable to the finger in thirteen cases.[6] In three it was an obvious phenomenon, and could be seen as well as felt in the vessels of the arm and neck.

The literature dealing with the pulsus bisferiens from a clinical standpoint is scattered and unconnected. Broadbent[1] associated it with aortic stenosis and with senile degeneration of the arteries. Steell[11] found it in connexion with aortic stenosis particularly, but did not consider it pathognomonic of that condition. He stated that a sphygmogram of an ill-developed pulsus bisferiens type is found in aortic incompetence, a conclusion in accord with Mahomed's[3] work, and in which the present observations fully concur, though they indicate the frequent presence of a well-developed type also in such conditions. Steell[11] stated that it is usually accompanied by an ill-developed dicrotic wave, a statement which is by no means free from doubt (*cp.* Lewis[6]). Both D'Espine[4] and Mackenzie,[7] associate the double pulse with aortic conditions. So far the position is clear, and it may be said that almost all writers (*cp.* Marey,[8] Galabin,[5] and others) are agreed that this type of pulse is most frequently associated with disease of the aortic valves. It must be borne in mind that in speaking of the pulsus bisferiens a character of the pulse rather than its general type is indicated, for there is no distinct dividing line between it and other pulse types; there are all intermediate forms. The transitions to flat-topped, high-tension, and anacrotic types are those most commonly seen. It will simplify matters if only that type having a well-marked bisferient character is discussed.

The opinion was originally expressed in this country by Galabin,[5] and is still adhered to in some measure by Mackenzie,[7] that the splitting of the systolic portion of the tracing into two waves is instrumental in origin; it is impossible to accept this position, on account of the palpability of the waves.* Moreover, Galabin,[5] who originally attempted to explain the deception of the finger in this respect, was eventually convinced of the double nature of the pulse by its visibility in certain cases. Another point of interest, a point which still remains unsettled, is the fact that the double beat is frequently more easily palpable, and gives a more distinctive tracing on one or other side of the body. Taking the experience of all writers, it cannot be said that it is associated with one side of the body more than with the other, its predominance on one side is of little diagnostic importance unless very marked. The view of Walter Broadbent[1] that it depends on the arrangement of the aorta and its branches is not tenable, for, if so, it should invariably present more prominence on one side. Steell[11] said that he had looked in vain for an anatomical explanation in fatal cases. Morrison[10] was inclined to the view that it is due to varying longitudinal tensions developed in the vessels during the investigation. It is true that it is better shown in tracings taken with the wrist extended, but, as Broadbent[1] has shown, it is better developed by pressure, and extension of the wrist tends to throw pad pressure on to the vascular contents rather than on to overlying tissues.[6]

Moreover, it is frequently more visible on one side of the neck than the other, and there is sometimes a marked difference in tracings from the two superficial temporal arteries, where longitudinal tension can play little or no part (Fig. 1). Again, in cases in which it occurs on one side it is often impossible to obtain it on the other by rearranging the limb. In a previous communication it was pointed out that the height of the second wave of the pulsus bisferiens depends on the degree of arterio-sclerosis present. Differences on the two sides are possibly due to differences in the expansibility of the two vessels. The association of arterio-sclerosis is so close that it is probable that in aortic cases it forms an essential factor to its appearance at the wrist. I venture to place certain cases which will be described later, and which are unassociated with sclerosis, in a different etiological category.

Dealing with the first or generally-recognised type (Figs. 1 to 4), it may be said to occur in those cases in

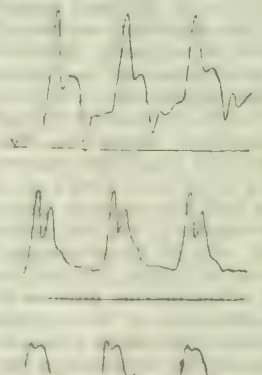


FIG. 1.—From above down, cardiogram, left and right superficial temporal arteries.

which there is great enlargement of the left heart, associated with or caused by disease of the aortic valves or larger arteries. Attempts have been made to draw conclusions from it as to the relative degree of hypertrophy and dilatation,[7] but the relationship appears to be inconstant. Some writers associate it with poor compensation, others with improved compensation. Steell[11] noticed its development after the administration of digitalis. In more than one case I have noticed it for a day or two without further change in physical signs. In one case it developed in conjunction with some symptoms of cardiac distress. In the literature three morbid conditions are commonly described in connexion with it: a greatly enlarged heart; pericardial adhesions or excess of fluid, and lastly ballooning of the aorta. It would appear that in aortic cases it is best developed in those cases where with great enlargement of the left heart compensation, though for the moment sufficient, is in a state of instability. In Fig. 1 tracings are shown from the R.A. and superficial temporal arteries of a patient aged 50, with free aortic regurgitation, poor compensation, great cardiac enlargement, and a fair degree of arterio-sclerosis.

* The association of this pulse with great but cardiac enlargement is suggested by its frequency in mitral disease.

† All the cardiograms were taken with the Hudgson's sphygmograph, that scale of comparison might be instituted between them and the corresponding sphygmograms.

In Fig. 2 tracings are given from the left radial and left superficial temporal of a patient, aged 35, who died in hospital of aortic disease. The pulsus bisferiens was easily palpable and visible, and the physical signs were those of free regurgitation and great cardiac enlargement. The type of pulse was not so well developed on the right side. *Post mortem* the peri-

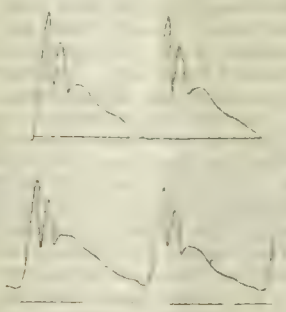


Fig. 2.—Left radial and left superficial temporal arteries.

cardium contained excess of fluid, and the heart weighed 32 oz., the enlargement being chiefly left-sided. The muscle substance was firm. The aorta was dilated, the valves sclerosed and calcareous, but though regurgitation was free, there was little stenosis. The arteries showed considerable sclerosis. The type of pulse remained practically the same

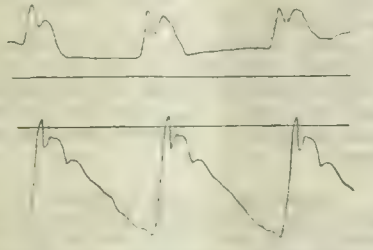


Fig. 3.—Cardiogram and right radial artery.

during the two months during which the patient was under observation.

Fig. 4 shows a cardiogram and the right radial pulse of a woman admitted for double aortic and double mitral disease. Compensation was poor and the heart greatly enlarged ; there was a fair degree of arterial thickening.

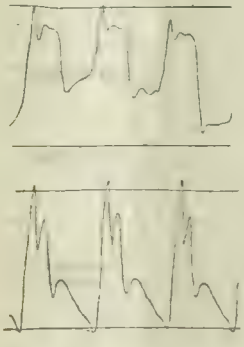


Fig. 4.—Cardiogram and right radial artery.

The chief point of note in these tracings, all bisferiens to the finger, is the striking resemblance between cardiogram and pulse tracing. Although in several the second wave of the cardiogram is more prolonged than that of the pulse, yet the general type is the same, and the commencement of the second wave occupies the same time relation to the first in both. This is of considerable importance, for it proves the central origin of the second wave, whether this wave be considered as having its origin in the same manner as the normal "predicrotic" or not. A point which is difficult to settle is whether the second wave has its origin in the ventricle or in the aorta, as Marey held. In many of these cases there is a visibly double impulse at the apex, notably in the case whose tracings are shown in Fig. 2. This physical sign has apparently been much neglected. Occasionally it is accompanied, as in this case, by reduplicated first sound at the apex, a point of importance in consideration of the views of D'Espine.[4]

Fig. 5 shows a typical pulsus bisferiens from a patient aged 60, in whom there were no signs of aortic valvular disease, but general arterial disease and high blood pressure (160 mm. Hg). The H.A.B. was in the sixth space, 6½ in. from the middle line. There was a past history of syphilis. Fig. 6 shows an aneurysmal, and left radial tracing, from a patient with no signs

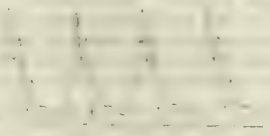


Fig. 5.—Right radial artery.

of aortic regurgitation, but an enlarged heart and pointing thoracic aneurysm. The tracing is of interest in connexion with the fact that dilatation of the aorta is commonly asso-



Fig. 6.—Aneurysmal tracing and left radial pulse.

ciated with this type of pulse. There was a fair degree of arterial sclerosis.

Passing to the second type of double pulse, it is illustrated in Figs. 7 and 8.



Fig. 7.—A, Right jugular vein. B, cardiogram: C, right superficial temporal artery: D, right brachial artery: E, right radial artery.

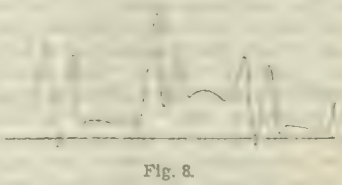


Fig. 8.

A patient, aged 52, suffering from emphysema and general bronchitis, was admitted a few weeks before his death with cyanosis and dropsy. The pulse and H.A.B. were very dis-

tinctly double. The H.A.B. was in the fifth space, 6 in. from the middle line. At the apex the first sound was reduplicated; there were no murmurs. The systolic blood pressure was on an average 170 mm. Hg. *Post mortem* the pericardium was normal, the heart weighed 24 oz., and the muscle substance was firm. The arteries showed little or no degeneration although the left heart was chiefly enlarged; mitral and tricuspid rings were dilated. The tracings from H.A.B. and three arteries show the same time relations throughout. The possibility of the second wave being of dicrotic origin is negatived by this, and by the fact that the second wave reached the superficial temporal artery before the second sound was audible.

The tracing shown in Fig. 7, A, was taken by means of a light straw lever from the jugular vein. It shows the single auricular impulse preceding the double beat of the carotid.[7] The tracing excludes the possibility of a double auricular beat.

Fig. 8 is from a case of severe mitral stenosis of rheumatic origin in a lad, aged 21. He was admitted with marked cyanosis and dropsy, and a large wavy double heart impulse over the fifth to seventh spaces extending 7 in. from the middle line. The blood pressure varied from 90 to 117 mm. for different beats, the pulse being irregular. Originally the pulse was interpreted as dicrotic, but more careful examination proved it to be of the bisferient type, for the second sound was audible an instant later than the upstroke of second wave, also the dicrotic wave is apparent in the last half of each curve.

The type of pulsus bisferiens described in the last two cases is uncommon, and is worthy of more attention. No account of it has been found in the literature: possibly it has been mistaken for dicrotism. The type is very different from that depicted in an earlier part of this contribution, and it is notable that in both cases it was unassociated with arterial sclerosis. The cases strongly support the hypothesis of the *deux temps* beat of the ventricle, advocated by D'Espine[4]; it is indeed the only rational interpretation of the tracings. As two cases alone have been met with, it is not possible to draw any further conclusions as to its origin or prognostic significance. Its recognition is of importance in that it is indistinguishable from a dicrotic pulse by palpation.

In conclusion, there appears only one constant relationship with the pulsus bisferiens, and that, a greatly dilated and hypertrophied left ventricle; there appear to be two types, the one associated the other unassociated with arterio-sclerosis.

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ON THE PART PLAYED BY THE CALCIUM SALTS IN THE BLOOD AND TISSUES,

WITH SPECIAL REFERENCE TO THEIR INFLUENCE IN REGARD TO THE FEMALE GENITAL FUNCTIONS; TOGETHER WITH A DESCRIPTION OF A SIMPLE METHOD OF QUANTITATIVE ANALYSIS.

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[Preliminary Communication.]

A year ago I made a short communication,[1] based entirely on clinical observation, in which I expressed my belief that the uterus took an active part in the genital functions of the female, and was not merely a passive receptacle for the fertilized ovum. I then stated that I looked upon the uterus as an organ whose glands secreted some substance which, for the want of a better or more accurate name, I called "uterin" and which, when in excess was excreted, producing in some way the menstrual cycle. I further stated that "uterin" circulated in the blood, and produced many of the phenomena common to women, such as the manifestations of the menopause.

Since that time I have been following out the lines of investigation then suggested, and although in this preliminary communication I can only indicate briefly some of the results obtained, I shall describe fully the method by which I have been able to demonstrate them, and point out in what directions these investigations open up possibilities for further research in branches of medicine other than that in which I am specially interested. Much of this is already in hand, and will I hope be carried out by those who are more competent to deal with it than I am.

It was only after much thought that an explanation of the probable nature of the substance secreted by the uterine glands dawned upon me. Finding no clue from a chemical consideration of the phenomena associated with the function, I turned my thoughts to comparative physiology, and there at once I found the explanation I was seeking—the oviducts of birds secrete calcium salts. Why should not those of the higher animals do likewise?

The more I thought the matter over the more it seemed to fit in with many of the hitherto inexplicable phenomena to be daily observed by any one dealing with women. To take but one example: During lactation, when the woman is giving away to her infant large quantities of lime salts in her milk, the menstrual function is normally in abeyance.

So far I had only the hypothesis, and in my attempt to obtain definite proof I was confronted with a serious obstacle: There was no known method for estimating small quantities of calcium salts in the blood, secretions, and tissues. At least a litre of blood would be necessary for incineration and analysis; even then only a very skilful chemist could be relied upon to give an approximately accurate estimate.

It was necessary, however, to have a method at once simple and accurate that could be used for clinical investigation. I have therefore devised the following, whereby in about half an hour I can calculate the amount of calcium in any solution, in however small a quantity it may be present.

Method as Applied to Blood.

A small capsule (Fig. 1) containing 250 c.mm. of oxalic acid (1 in 30 aqueous solution) sealed at the end of the stem is taken to the bedside of the patient whose blood is to be examined.

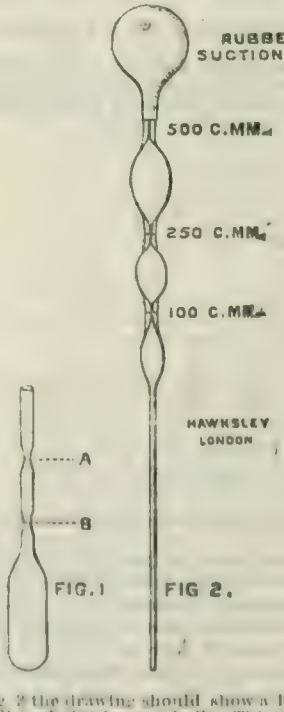


FIG. 1. FIG 2.

N.B.—In Fig. 2 the drawing should show a longer stem between the rubber ball and the largest bulb. This stem should also be marked to indicate the 200 c.mm. level.

When all is ready the stem is broken at the mark A, care having been taken first to shake all the oxalic acid solution into the bulb, and the finger or lobe of the patient's ear pricked; 100 c.mm. of blood are then drawn into a graduated pipette (Fig. 2), and immediately emptied into the oxalic acid by passing the fine stem of the pipette down the neck of the capsule. The stem (or neck) of the capsule is then sealed. The contents on shaking become uniformly chocolate coloured, and the blood is laked. After ten minutes this mixture is ready for further dilution, but if necessary the final processes may be left over for some hours, although the sooner they are carried

out the better, for if left until the following day the heavy sediment of pigment may vitiate the result.

When the examination is to be continued, the capsule, after the fluid has been well shaken down into the bulb, is broken at the mark B, and 250 c.mm. of the following mixture added to the oxalic acid and blood:

Acetic acid (1 per cent.) 95 parts.
Glycerine ... ... 5 ,,

This is allowed to stand for another ten minutes, a rubber cap being placed over the broken end of the stem to prevent evaporation. The capsule is then thoroughly shaken, and 100 c.mm. are withdrawn and immediately mixed in another capsule with 500 c.mm. of distilled water previously placed there. It is of this last mixture that the examination is made.

A drop is placed on an ordinary Thoma haemocytometer plate, which must be carefully examined microscopically before each experiment to see that it is clean, and the crystals of calcium oxalate are counted and noted for each square. At least 250 squares should be counted.

I have found that a standard aqueous solution of 1 in 5,000 calcium chloride, which is practically equivalent to a solution of 1 in 10,000 CaO, gives 0.59 crystals per square. I have therefore taken as my standard that an average of 1 crystal per square is equivalent to a 1 in 6,000 solution of CaO.*

In ordinary individuals of middle life I find the normal, as estimated from this standard, varies from 1 to 4,000 to 1 to 5,000 of CaO in the blood.

The count is a perfectly easy matter, as the above dilutions result in a faintly-coloured solution affording a background against which the crystals show up well. A few hints as to details of technique are necessary.

Tap water must, of course, be avoided entirely in all washings throughout the whole of the procedures, and only reliable distilled water used. I have had several calculations entirely upset by impure distilled water. The greatest delicacy and accuracy are required in the measuring of the quantities; for to obtain an accurate estimate accurate dilutions are necessary. The special pipette (Fig. 2) which I use has three bulbs and a fine stem; it is accurately marked for all the necessary quantities.† (Three separate pipettes may be used if desired; they have the advantage of cheapness.) If the blood clots in the pipette it can be cleaned out with a strand of fine silkworm gut.

An artificial light is much better than daylight for distinguishing the crystals, and the diaphragm must be almost closed.

For counting, a magnification of 450 diameters should be used. Only those crystals which can be definitely seen should be counted. The fine adjustment should be moved to and fro in order to get a bright speck of light followed by a dark spot.

In blood solutions the crystals are very evenly distributed, are usually of uniform size, and do not lodge in the lines of the haemocytometer plate; they are, too, until they have been on the plate for some little time, continually undergoing "Brownian" movements. This is especially the case if the plate is not completely covered with the drop. They should not be counted, therefore, until they have been on the plate for a few minutes.

In aqueous solutions the crystals are rather more uneven, not being held so well in suspension, and tend to collect in the lines. Only those should be counted which are clearly discernible, and are not fixed in the lines in such a way as to prevent them from giving the bright and dark spot on focussing, and render their identity uncertain.

The above remarks indicate that crystals should be counted in a thicker medium than water, and I am now making experiments in this direction. Chemists will, no doubt, adopt this suggestion, if they feel disposed to estimate dilute solutions by this method, and avoid pure aqueous solutions, which, although they give rise to some difficulty and would be apt to lead those who were inexperienced into error, can be estimated as I have stated above, if sufficient care be taken.

There are two other points. In albuminous solutions, and especially with the use of glycerine (vide second solution above), clumping of the crystals does not occur unless the mixture be allowed to stand too long before examination.

In very strong solutions (1 in 1,500 and stronger) the crystals are sometimes uneven in size. This difficulty may be surmounted by diluting the liquid to be examined four or more times with normal saline solution before adding it to the oxalic acid. This can be effected in the three-bulb pipette. An allowance, of course, should be made in the final calculation, for the same quantity (100 c.mm.) of the diluted fluid is used as though it had not been diluted.

* The atomic weight of one molecule of calcium chloride ($CaCl_2$) is 111; that of CaO, 56. This latter is, therefore, practically half the molecular weight of $CaCl_2$. But each molecule contains the same weight of Ca, and so a 1 in 5,000 solution of $CaCl_2$ is equivalent to a 1 in 10,000 solution of CaO as regards the amount of Ca present. Consequently, if the above solutions give an average of 0.59 (which we may take as 0.6) crystals per square, a 1 in 6,000 solution of CaO will give an average of 1 crystal per square. When we speak of the calcium content of the blood as being 1 in 4,000 or 1 in 5,000, we mean one part by weight of CaO to so many thousand parts by weight of blood, whatever the latter number may be.

† The apparatus required can all be obtained from Mr. Hawksley, 357, Oxford Street, London, who has made it for me.

This is the method recently alluded to by Sir James Barr,[2] and I believe it to be accurate in all respects. I hope, however, to improve the technique still further, and perhaps place the normal calcium index at 1. At present, if an average of one crystal per square indicates a solution of 1 in 6,000 of CaO, the normal calcium index is an average of 1.5 (1 in 4,000) to 1.2 (1 in 5,000). The dilutions now used, however, are so simple that I am not inclined to alter them, since the calculation is a very straightforward matter, the formula being $\frac{6.000}{\text{calcium index}} = \text{CaO content}$.

It will occur to every one that the crystals might be estimated in bulk in a capillary tube by centrifugalization; but this, in dealing with blood and similar fluids, introduces so many complications in the way of obviating the deposit of pigment and white corpuscles, not to mention the difference of "packing" of the crystals according to the revolutions, time employed, and density of the medium, that I have not thought it advisable at present to do otherwise than estimate the calcium by the simple method above described, which can be carried out without laboratory assistance.

It remains, however, to prove that the objects which are counted consist of calcium oxalate in a crystalline form.

This is a somewhat difficult matter owing to the small size of the objects and the small quantity available.

The following facts are therefore submitted as forming a conclusive chain of evidence on this point:

1. When in excess many are of the definite "envelope" type, while the rest assume the recognized polymorphous (dumb-bell or irregular octohedral) shapes.
2. A comparison (with a magnification of 880 diameters) of these crystals with those obtained from an aqueous solution of calcium chloride of a strength similar to that in the blood gave an identical result as regards the appearance and number of the crystals.
3. The crystals do not stain.
4. On standing for twenty-four hours the crystals "clump," forming definite crystalline masses, which are easily recognized.
5. The crystals are insoluble in acetic acid (20 per cent.), but are soluble in hydrochloric acid.
6. With a small quantity of crystals obtained (from hydrometra fluid) and dissolved in hydrochloric acid, the typical flame coloration was observed, but there was not a sufficient quantity for spectrum analysis.
7. As far as can be ascertained, oxalic acid or the oxalates alone produce these crystals in the blood.
8. By adding to the blood taken an equal quantity of calcium chloride solution equivalent to a solution of calcium oxide, 1 in 5,000, a corresponding increase of similar crystals was observed.

Having thus got my method, I was able to settle, as I believe, the question of the secretion of the uterine glands by an examination of the fluid in an artificial hydrometra. The fluid obtained from this source gave an estimate of CaO, 1 in 350! Since they will be published later, I need not here enter into the experiments made with reference to the blood of menstruating women and the menstrual fluid, it is sufficient to state they are of a highly interesting and confirmatory nature. Nor shall I discuss now the probable part the ovary plays in the cyclical event. A large number of experiments are at present proceeding to the complete elucidation of the part played by the calcium salts in this and other directions.

Taking a broad survey, I would enunciate the belief that there are three calcium periods in a physiological sense. First, the period of growth, when the young person or animal requires all the calcium salts obtainable for the formation and growth of the bony skeleton. Secondly, the period of reproduction, when a calcium equilibrium as regards growth is reached and an "excretion" of the excess occurs. This is most obvious in the reproductive processes of women, when large quantities of the calcium salts are first given up to the fetus and then for the formation of milk, during which the menstrual function is in abeyance. Some observations I have made seem to show that pregnancy is terminated when the fetus ceases to absorb (or receive) calcium salts from the mother's blood and a large accumulation occurs in her system, bringing about contraction of the uterine muscles. The third period is that of late life, when no calcium salts are required for the building-up processes or for those of reproduction. These salts then accumulate in the tissues, especially in the vessels (and it is interesting to note how

rare this is in women in middle life), atrophy occurs, and the individual gradually declines.

Apart from the physiological investigations above mentioned, observations are being carried out, at my suggestion, by the above method in the following directions:

The relation of the calcium salts to infective processes, acute and chronic, especially with regard to the temperatures, to the opsonic power of the blood and to the fibrosis which results from chronic toxaemias. This investigation will undoubtedly prove the value of calcium salts in certain types of pneumonia and similar affections.

The influence of menstruation on the opsonic power of the blood from this standpoint.

An estimation of the lime salts in the blood in bone diseases, such as rickets and osteomalacia.

The relation of the calcium salts to the thyroid secretion and their bearing on thyroid disease. Owing to the frequent occurrence of this disease in women and the relation often seen to the genital functions important results should be obtained.

The significance of the calcium salts in neuroses and in such diseases as spasmodic asthma and urticaria.

I am myself making a series of observations on the disorders of menstruation, on the neuroses of women, and on the diseases of pregnancy, such as vomiting, chorea, eclampsia, and thrombosis, many of which conditions seem undoubtedly to have a definite relationship to a disordered calcium economy on the part of the patient.

Also, in conjunction with Professor J. E. S. Moore, I am carrying out a clinical and experimental investigation into the influence the calcium salts may have in the onset of cancer and the cancer period.

I have much hesitation in putting forward this formidable list, on which some work has been done already, lest I should appear to overstate the importance of the subject. I should not now have had the courage to do so had I not had, and did I not still hope to have, the generous advice, co-operation, and assistance of my colleagues and others interested in these researches. In this connexion I should like to express my obligations to Sir James Barr, Professor Benjamin Moore, Dr. Grimsdale, and Dr. Pantland Hick.

References.

[1] Liverpool Medical Institution, May 3rd, 1906, vide *Liverpool Medico-Chirurgical Journal*, July, 1906. [2] British Medical Journal, March 23rd, 1907, p. 775: On the Use of Calcium Salts in Pneumonia.

FURTHER OBSERVATIONS ON THE ETIOLOGY AND PATHOLOGY OF PEPTIC ULCER.*

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(From the Research Laboratory of the Turck Institute.)

Introduction.

The present communication on the etiology of peptic ulcer presents two phases developed by the author's experimental researches on animals. By feeding animals, principally dogs, with a certain strain of bouillon cultures of *Bacillus coli communis* for several months, spontaneous or induced genuine peptic ulcers of the stomach or duodenum were found in every animal experimented upon, the ulcers causing death either by perforation or haemorrhage. Certain changes in the blood serum and cellular changes found indicated a general process characterised by diminution of the normal protective bodies, resulting in auto-cytolysis. The blood changes and general condition seemed to be produced by the absorption of products formed in the gastro-intestinal tract. Histological examinations of the induced peptic ulcers showed no round cell infiltration or other evidences of a healing process.†

In the first series death occurred from perforation or haemorrhage; in the second series the feeding of bouillon of *B. coli* was stopped as soon as there appeared indications of the formation of the ulcer. Then allowing sufficient time to elapse for healing to take place, the animal was killed. On *post-mortem* examination we found round-cell infiltration and cicatrization of the incomplete ulcers, in various stages of healing, thus further showing the close relation between the feeding experiments with bouillon cultures of *B. coli communis* and spontaneous or induced peptic ulcers in animals.

Controls were made by observation on 271 dogs, 189 of which were healthy and were killed at the dog-pound, and the other 82 dogs that had died from various diseases—injury, poison, etc. On *post-mortem* examination no peptic ulcers were found in the stomach or intestines of any of these 271 dogs, showing that the occurrence of peptic ulcers both in the healthy street dogs and diseased animals is at least exceedingly rare.

Historical.

The peculiar type of the round peptic ulcer confined principally to the stomach and duodenum early led to the conclusion that the ulcers were the result of autodigestion of a portion of the mucous membrane rendered susceptible by some unknown cause. That the living healthy mucous membrane could not be digested was explained by Stahl as due to the protection offered by the "sensitive soul." Hunter's living principle displaced the idea of the "sensitive soul," and with the development of cellular pathology we acquired the idea of the vital resisting power of the tissues, which is yet used in pathological expressions. The vital resistance of the tissues is represented in more modern terms by Weinland, who holds that an antipepsin ferment residing in, and a part of, the gland cells protects them from destruction. It is easy to understand why so much experimental work has been done to produce a lessening of the resistance of the tissue by diminishing or destroying the vitality of local areas of the mucous membrane of the stomach. These experimental investigations, clinical observations, and *post-mortem* examinations may be grouped as follows:

(1) Attempts to produce ulcers by mechanical and physical injury, such as those by Ritter, Decker, Matthes, Schmidt, Korte, and others; (2) by chemical injury, such as employed by Roth, Matthes, Schmidt, and Ewald; (3) by inducing blood changes, thus lessening resistance, such as haemoglobinaemia, by the methods employed by Silberman, Cohnheim, and Fütterer; (4) disturbances of the local circulation to conform to Virchow's idea of embolism and thrombi were worked out by Panum, Klebs, and Welti, Talma, Rindfleisch, and Müller; (5) injuries to nerves and nerve centres, such as accomplished by Schiff, Ebstein, Brown-Séquard, Vedora, Yzeren, Saitta, Ophüls, Roch, and Ewald; (6) local infection was studied by Cohnheim, Bottcher, and Nauwerck.

Ulcers were produced in many cases; but these artificial methods were either no other than would cause ulcer formation in any part of the body, or they were foreign to the conditions present in ulcer of the stomach in man.

Experiments.

With some modifications I have carried on similar experiments in attempting to produce artificial ulcers, following out at first the methods of mechanical and chemical irritation, later taking up injections of toxins, then the question of metabolic disturbances, and, finally, the problem of the genuine induced peptic ulcer. Mechanical and chemical irritation failed to produce ulcers, even with such radical means as the feeding on mustard oil for fourteen months. The possibility of systemic disturbances, altered metabolism, impaired nutrition, being etiologic factors in the production of ulcer led to the experiment of confining animals in very close quarters for a long period of time. Of the 96 guinea-pigs and 36 rabbits used in this experiment, all the rabbits died, while 6 guinea-pigs survived nine months of confinement. Two genuine peptic ulcers were found in the 6 surviving guinea-pigs.

These induced ulcers, produced for the first time in the long series of experiments, suggested the possibility that systemic conditions were important factors; that alteration in the toxic state of the alimentary canal, with consequent changes in the blood, might play some rôle in the formation of the ulcer. To modify, then, the bacterial status of the alimentary tract, experiments were begun by

* Presented before the Section of Pathology and Bacteriology, British Medical Association, Toronto, August, 1906.

† The full report, with protocols, physiological examinations and [illegible] appeared in the Journal of Medical Research, January, 1907, and published in the Journal Amer. Med. Assoc. June 8th, 1907, vol. xlvi, pp. 1761-1776.

introducing cultures of *Bacillus coli communis* into the circulation and into the stomach. The toxin of *Bacillus coli* being intracellular suggested the experiments of using killed as well as living cultures.

Intravenous inoculations of dogs and rabbits with cultures of *Bacillus coli* for a long period of time (one to six months) failed to produce ulcer of the stomach. But it was found that artificial ulcers made by removing portions of the mucous membrane of the stomach did not heal in 4 cases out of the 20 animals receiving the above inoculations. Genuine induced peptic ulcers were produced, however, in every experiment in which cultures of *Bacillus coli* were fed to dogs. Bouillon cultures of this organism were given daily in increasing amounts, from 50 c.cm. to 2,000 c.cm., for two to four months, in connexion with an ordinary meat diet, and in other cases with meat extractives in addition to the bouillon cultures.* During the course of the experiments observations were made of the blood changes such as the agglutinating, haemolytic, and coagulating power, the bacteria in the blood and stomach, the systemic disturbances, the evidences of infection, the symptoms of ulcer, as pain, haemorrhage, etc. It was found that the dog's serum agglutinated *Bacillus coli* in high dilution, that the coagulating time of the blood was slower, that haemolysis was present, that bacteria were at no time found in the blood, and that few, if any, symptoms of systemic disturbance appeared. In one case, where death resulted from haemorrhage from a pyloric ulcer, symptoms of internal haemorrhage developed a few days before death.

Post-mortem examination revealed ulcers in either the stomach or duodenum, the number varying, however, from a few in the duodenum to numerous typical peptic ulcers in the stomach. Histological examinations were made of the ulcers in various stages of their development, and of the liver and kidneys. The chief points of interest noted in this study were: (1) Catarrhal conditions of the mucosa; (2) local necrosis of the cells; (3) breaking down of the glandular structures; (4) disappearance of the chief cells; (5) marked hyperplasia of the parietal cells, which were large and prominent; (6) vacuolization of the parietal and chief cells; (7) complete degeneration of the cells; (8) no inflammatory reaction, such as round-cell infiltration, either surrounding, or at the site of, the ulcer.†

The factors concerned in the production and persistence of ulcer of the stomach and duodenum appear from the experiments to indicate a dual condition: There seems to be some toxic condition produced which overcomes natural resistance, resulting in *cytolysis*, and possibly some chemical substance formed within the alimentary tract which, when absorbed, may neutralize the protective bodies in the blood and tissues, resulting in *autocytolysis*.

These facts, obtained through several years of experiments, warrant the conclusions that (1) ulcer of the stomach and duodenum can be produced in dogs by feeding *Bacilli coli communis* for a variable length of time; and that (2) we have now for the first time a firm basis by which to solve the problem of the finer or underlying etiology of ulcer.

As observed in our mention of the first series of the feeding experiments with bouillon cultures of *B. coli communis* (which were continued over a considerable period of time), there was in the ulcers that were formed no round-cell infiltration or connective-tissue formation or other evidences of a healing process. As the feeding experiments continued, the ulcers that formed, resulting in the death of the animal either from perforation or haemorrhage, indicated a progressive destructive process confined to the ulcerated areas in the stomach or duodenum.

In the second phase or series of the experiments it was necessary to determine the result of the stopping of feeding experiments with the bouillon cultures of *B. coli communis*. After one or two months had elapsed from the beginning of the experiments and the changes in the blood and other distinct evidences of systemic disturbances had been found, the feeding of the bouillon cultures of *B. coli* was stopped, and the animals kept under good general hygienic conditions on ordinary food for one month. The dogs were then killed. Ulcers were found in the stomachs of the dogs in various stages of the healing process. Fig. No 1 is an example of a typical deep ulcer found in the stomach of a dog, which was allowed to undergo the process of round-cell infiltration and cicatrization, showing that the factor that prevents healing, as well as that which induces the formation of ulcer, had been removed.

During the course of the experiment of feeding dogs with cultures of the *B. coli communis*, examinations of the blood changes were made about every two weeks, for example, blood count, haemoglobin curve, haemolysis, agglutination, alkalinity, bacteriolysis and phagocytosis. The control blood examinations were also made as often as possible. It will be of interest to make a partial further report of these findings.

1. *Blood Count and Haemoglobin Curve.*

The percentage of haemoglobin did not change materially during the feeding experiments of most of the dogs. In the case of two, however, the percentage dropped to 70.

Similarly the number of red blood corpuscles remained about the same. The number of leucocytes, while found to be high (about 12,000 to 15,000) normally in dogs not experimented with, nevertheless increased in the experimental dogs, in several cases to about 25,000.

2. *Haemolysis.*

An increase in the haemolytic power of the experimental dog's serum was noted during the course of the experiment, but great difficulty was experienced in testing the haemolysis, because dog's corpuscles are so readily broken down.



Fig. 1.—Deep cicatrized peptic ulcer at pyloric end of the stomach (dog) found after stopping the feeding experiment.

3. *Agglutination.*

In every case agglutinins were found to increase in amount during the experiment, so that at the end of about four weeks' feeding marked agglutination of *B. coli* took place in four hours with a serum dilution of 1 in 500.

It was not found possible to increase the agglutinins to so high a degree or so quickly by feeding dogs with cultures of *B. coli* as in the case of intravenous inoculations of the bacteria.

4. *Alkalinity.*

Titration of the serum of the experimental dogs with fortieth normal oxalic acid showed very little change in the reaction of the serum. However, while the alkalinity came within the limits of normal dog's serum—for example, 0.001 to 0.008—in most of the dogs it remained low—for example, nearer 0.001 than 0.008.

5. *Bacteriolysis.*

The bacteriolytic power of the serum was tested by comparing the number of bacteria in a bacterial emulsion

* Protocols of these experiments. See loc. cit.

† Macrophotographs and microphotographs of ulcers. See loc. cit.

of *B. coli* before and four and eighteen hours after adding dog's serum.

This bacteriolytic power became materially less during the course of the experiments, and was markedly less than that of serum of normal dogs.

6. *Phagocytosis.*

The extent of the phagocytosis was measured by counting the number of bacteria ingested by the leucocytes after one hour's incubation of a mixture of leucocytes, serum, and a bacterial emulsion.

The phagocytic index—for example, the average number of bacteria taken up by the leucocytes—was less in the case of the experimental dogs than in the case of dogs not experimented with.

The following are abstracts from the tables of the blood examinations:

Agglutination.

Method: 1. Bouillon suspension of twenty-four hours' growth of *B. coli communis* on slant agar.

2. Made dilutions—namely:

Control: 1 part bouillon + 4 parts emulsion.

Dilution 1 in 50: 1 part serum (diluted 1 in 10) + 4 parts emulsion.

,, 1 in 100: 0.5 part serum (diluted 1 in 10) + 4.5 parts emulsion.

,, 1 in 500: 1 part serum (diluted 1 in 100) × 4 parts emulsion.

,, 1 in 1,000: 0.5 part serum (diluted 1 in 100) × 4.5 parts emulsion.

3. Incubated twenty-four hours. Recorded degree of agglutination after four hours, eighteen hours, and twenty-four hours.

	Name and Date.	Dilution 1 in 50.		Dilution 1 in 100.		Dilution 1 in 500.	
		4 hrs.	18 hrs.	4 hrs.	18 hrs.		
Normal dogs	Wooly	0	0	0	0		
	Whity April 2	0	0	0	0		
	Trixie April 21	0	0	0	0		
	Kate April 28	0	0	0	0		
	Jimkey June 29	0	x	0	0	0	0
	July 10	0	x	0	0	0	0
May 8th, began feeding living bouillon cultures *B. coli communis* ...	Trixie: April 21	0	0	0	0		
	May 22	xx	xx	x	x		
	June 12	x	xxx	0	xx		
	June 21	xx	xx	xx	xx	x	x
May 8th ditto	Kate April 28	0	0	0	0		
	May 22	0	x	0	x		
	June 12	x	xxx	x	xxx		
	June 21	xx	xx	x	x		
	July 10	xx	xx	x	xx	0	x
May [illegible]	Pete May 8	0	0	0	0		
	,, 22	x	xxx	x	xx		
	June 12	x	xx	x	xx		
	June 21	xx	xxx	x	xx	0	0
May [illegible]	[illegible]						
	June 21	xx	xx	x	x	0	0
May 8th [illegible]	[illegible]						
	[illegible]	x	xx	x	x		
	[illegible]	x	x	0	x		
	[illegible]	xx	xx	x	x	0	0

Bacteriolysis.

Method. 1. Used sterile blood. Defibrinate centrifuge. Separate the serum.

2. Made a bouillon emulsion of twenty-four hours' growth of *B. coli communis* on slant agar. Made slightly cloudy emulsion.

3. Made known dilution of serum with bouillon. Added 1 looped emulsion to 1 c.cm. bouillon, then added 1 loop of this to each tube and to control.

Control = 4 parts bouillon + 1 loop emulsion (diluted).

a = 1 part serum + 3 parts bouillon + 1 loop emulsion (diluted).

b = 1 part serum + 4 parts bouillon + 1 loop emulsion (diluted).

4. Plate 1 loop of control at once.

5. Incubated tubes eighteen hours. Plate 1 loop from each tube at the end of four hours and eighteen hours.

6. Counted colonies on plates.

Name and Date	Control. No. of Bacteria at once.	Control. No. of Bacteria after 4 hours.	Control. No. of Bacteria after 18 hours.	Normal Dogs. Mixture.	Normal Dogs. No. of Bacteria after 4 hours.	Normal Dogs. No. of Bacteria after 18 hours.
Jimkey, June 29	560	3,796	Many	A	0	Many
,, ,,	—	—	—	B	34	Many
Trixie, May 4 ...	—	28	1,248	A	5	160
,, ,,	—	—	—	B	124	638
Kate, May 14 ..	—	[illegible]	1,248	A	2	1,341
,, ,,	—	—	—	B	10	656
Jimkey, July 10	15	122	Many	A	0	604
,, ,,	—	—	—	B	2	Many
					Trixie.	
May 4	—	28	1,248	A	5	160
,, ...	—	—	—	B	124	638
May 22	—	1,072	[illegible]	A	42	—
,, ...	—	—	—	B	132	210
June 21	361	19,800	Many	A	4,016	Many
					Kate.	
May 4	—	28	1,248	A	2	1,341
,, ...	—	—	—	B	10	[illegible]
May 22	—	1,072	680	A	6	—
,, ...	—	—	—	B	70	120
June 12	196	982	Many	A	410	Many
,, ...	—	—	—	B	—	—
June 21	361	19,800	Many	A	7,260	Many
,, ...	—	—	—	B	Many	Many
July 10	15	122	Many	A	2	57,600
,, ...	—	—	—	B	8	Many
					Pete.	
May 22	—	1,072	680	A	32	—
,, ...	—	—	—	B	41	374
June 12	196	982	Many	A	105	Many
,, ...	—	—	—	B	—	—
June 21	361	19,800	Many	A	1,870	
,, ...	—	—	—	B	Many	—
July 10	15	122	Many	A	6	16,256
,, ...	—	—	—	B	9	Many
					Gyp.	
June 1	—	[illegible]	Many	A	2,688	—
,, ...	—	—	—	B	360	—
June 21	361	19,800	Many	A	261	—
,, ...	—	—	—	B	Many	—
					Nig.	
June 1	—	968	Many	A	379	Many
,, ...	—	—	—	B	680	1,160
June 21	361	19,800	Many	A	1,188	Many
,, ...	—	—	—	B	24,961	Many
June 29	560	3,796	Many	A	57	Many
,, ...	—	—	—	B	1,220	Many

Alkalinity.

Method: 1. One part serum plus one part aqueous solution of rosalic acid.

2. Titrate with N/10 oxalic acid until the red colour had given place to a pure yellow.

3. Calculate alkalinity in terms of N NaOH.

Alkalinity beef serum (normal) 0.0[illegible]

,, dog ,, ,, 0.068 to 0.091

	Living Cultures. May 9 Trixie	Sept. Pete	May 18 Kate	Killed Cultures. May 16 N[illegible]	May 14 Gyp	Normal Dogs.
May 4	[illegible]		0.0014			Trixie, 0.0.12
,, [illegible]	0.001	0.0021	0.0314	0.006		Kate, 0.0012
June 1				0.0017	0.0[illegible]	
,, 12	0.0[illegible]3	0.0016	0.0014			
,, 21	[illegible]		0.0[illegible]5	0.[illegible]	0.002	
,, 29 ...				0.0[illegible]1		Jimkey, 0.0025
July 10		0.[illegible]47	0.[illegible]			,, 0.001

Phagocytosis.

Method: 1. One part leucocytes (removed from surface centrifuged blood), one part serum, one part bacterial emulsion.
2. Incubated one hour.
3. Made smears and stain (Wright's stain).
4. Count the number of bacteria in leucocytes.

Normal Dogs.

Name and Date.	Polymorphonuclear Neutrophiles.		Small Lymphocytes.		Mononuclear Leucocytes.		Eosinophiles.		Average in P.M.L.
	Number of Leucocytes Counted.	Number of Bacteria.	Number of Leucocytes Counted.	Number of Bacteria.	Number of Leucocytes Counted.	Number of Bacteria.	Number of Leucocytes Counted.	Number of Bacteria.	
Jimkey—									
June 29 ...	25	124	7	35	0	0	12	2	5.0
July 10 ...	14	205	10	0	2	0	0	0	14.0
* Trixie—									
May 22 ...	9	22	3	0	1	0	6	3	2.4
June 12 ..	16	50	0	0	1	0	2	2	3.1
,, ,, ..	10	0	1	0	2	0	3	0	
,, ,, ..	13	135	7	0	1	0	4	30	7.5
† Kate—									
May 22 ...	9	32	1	0	0	0	0	0	3.5
June 21 ...	9	50	4	0	1	0	2	0	5.5
July 10 ..	15	120	10	11	2	4	0	0	8.0
‡ Pete—									
May 22 ..	8	19	4	0	6	0	0	0	2.4
June 21 ..	9	69	19	0	2	2	6	7	7.6
July 10 ..	10	80	3	0	5	0	6	18	8.0
§ Gyp—									
June 1 ..	8	55	13	39	1	0	2	5	6.8
,, 21 ...	16	36	4	6	3	0	2	0	2.2
‖ Nig—									
May 22 ...	10	0	2	10	3	24	8	57	
June 1 ...	19	165	23	21	5	0	3	0	
,, 21 ...	8	96	5	0	3	0	0	0	
,, 29 ..	6	62	15	0	5	0	0	0	

* May 8th, began feeding living cultures *B. coli*.
† May 8th, began feeding living cultures *B. coli*.
‡ September, began feeding living cultures *B. coli*.
§ May 14th, began feeding killed cultures *B. coli*.
‖ May 16th, began feeding killed cultures *B. coli*.

Histological Changes.

The first change in the healing ulcer that appears microscopically is the presence of a round-cell infiltration



Fig. 2.—Ulcer partly developed when feeding experiment was stopped (dog). Beginning round-cell infiltration.

which begins at the upper lateral walls of the ulcer, near the surface of the healthy mucosa. These cells infiltrate the entire mucosa and reach downwards towards the base of the ulcer, which is shown in Fig. 2.

Another stage in the healing process shows the formation of bands of connective tissue which appear at the upper part of the wall of the ulcer, and dip downward and inward (as shown in Fig. 3). The contraction of these bands draws up the base of the ulcer, and subsequently bands of connective tissue form the connecting strand with the opposite side of the ulcer wall. The high power shows the character of these strands (Fig. 4). Gradually the area of the ulcer is filled in by the walls of the ulcer drawing closer together.

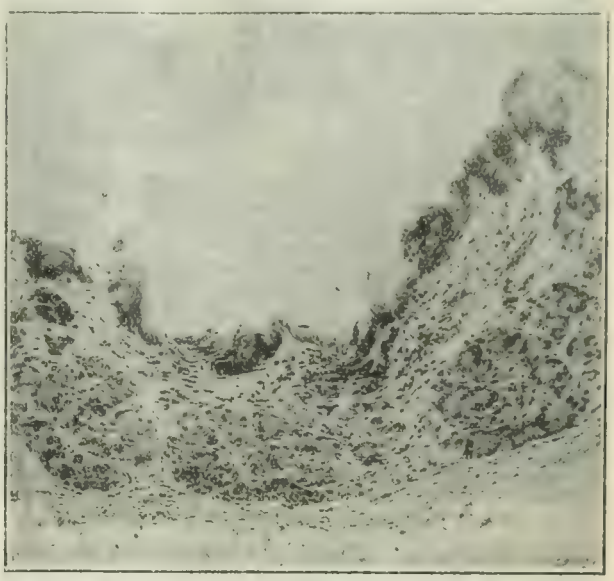


Fig. 3.—Connecting bands of tissue "filling in," and by contraction drawing the walls of the lesion together.

Finally the area of connective tissue is reduced to a small strip forming a very narrow cicatrix, which is well shown in Fig. 5.

Summary.

The conditions which normally should be active in stimulating round-cell formation and healing process are suspended in the first series of experiments; while in the second series—after a pause in the feeding experiments—the round-cell infiltration and healing by connective tissue replacement are re-established. These experiments lead

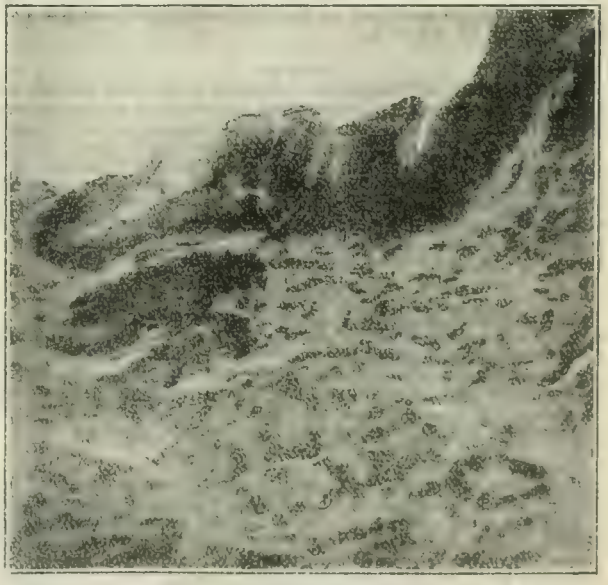


Fig. 4.—Same as Fig. 3, higher power (note elongation of nuclei).

us to the conclusion that the problems involved in the two series are fundamental and far-reaching, and enter into the question of the etiology not only of peptic ulcer but of many diseases.

The conditions produced in the first series, that permit ulcers to form in stomach or duodenum without a definite attempt at healing, seem to correspond to the changes

found in the blood; these in turn are produced by some bodies formed in the gastro intestinal tract.

The altered growth of the flora of the stomach and intestine in certain nutrient media, as produced in the



Fig. 5.—Completely healed ulcer (stomach of dog).

feeding experiments, indicates the important factors in the formation of ulcer of the stomach or duodenum, and the relation to other pathological conditions frequently associated with the lesions.

A CASE OF REPEATED ABDOMINAL SECTION FOR PERFORATION OF GASTRIC ULCERS.

By W. MORLEY WILLIS, F.R.C.S.,

HONORARY ASSISTANT SURGEON, GENERAL HOSPITAL; SURGEON, CHILDREN'S HOSPITAL, NOTTINGHAM.

The paper by Mr. Archibald Cuff, of Sheffield, in the British Medical Journal of February 2nd, much interested me on account of its close similarity to the following case of my own:

History.

A. H., aged 33, suffered from pain after food about the age of 18, and the first definite fact beyond this which I can ascertain is that he was admitted into the General Hospital, Nottingham, with an attack of haemorrhage from the stomach about fifteen years ago. He remained in the hospital one month. He suffered, more or less, with pain after food ever since, until on December 21st, 1905, at about 5 a.m., he was seized with intense abdominal pain. His supper overnight had consisted only of a little warm milk. I saw him with Dr. Fulton at about 1 p.m. the same day, and he was removed to the hospital.

First Operation.

At the operation (about 4 p.m.) I found a large ulcer in the cardiac end of the stomach, nearer the greater curvature, with a perforation in it about the size of a threepenny-piece. This was closed by a double row of continuous silk sutures, which invaginated the ulcer completely. The peritoneum was wiped out, and his recovery was uneventful. He left the hospital well, except for some oedema of his lower extremities.

Second Operation.

On October 2nd, 1906, at about 6 p.m., I was again asked by Dr. Fulton to see this man, and agreed with him that he had a perforated ulcer of the stomach. He was again admitted to the General Hospital, and I reopened the abdomen about 9 p.m. An entirely different ulcer was found this time, at the pylorus, with a small perforation at its base. This was closed in the same way as the former, and the peritoneum wiped out dry and the abdomen closed. At both this and the former operation the abdomen was completely closed.

At this second operation I carefully inspected the stomach especially that part which was the site of the previous ulcer. No trace of it remained, and not an adhesion was left to indicate the catastrophe which had taken place in it. This removal of all traces of former pathological changes inside the peritoneum is remarkable, and has been commented on frequently. In cases of suppurative appendicitis, when at the operation the appendix is not discovered, it is my habit to advise the subsequent removal of the organ. I therefore have on many occasions opened the abdomen of patients who have been the subjects of intense inflammation in this neighbourhood, and the frequency with which one discovers an apparently perfectly undamaged peritoneum is most remarkable.

As regards the patient about whom I am now writing, I am informed that he is perfectly well except for some slight oedema of his left leg. He is able to eat any article of food without pain, so I expect he will not take my advice and have a posterior gastro-jejunostomy performed on him.

Success in dealing with perforated gastric ulcers depends almost entirely upon the period which elapses between the catastrophe occurring and the operation, and to Dr. Fulton is due the recovery of this patient, as immediately he saw him he took steps to ensure instant operation. The interval between the perforation of the first ulcer and the operation was about eighteen hours, in the second case eight hours. In both cases only about two or three hours elapsed between his first being seen and the operation itself.

A CASE OF CELLULITIS

FOLLOWING INFECTION BY AN ORGANISM SET FREE BY THE WOUNDING OF AN OLD BLIND DIVERTICULUM OF THE LARGE INTESTINE.

By G. H. MAKINS, C.B., F.R.C.S.,

SURGEON, ST. THOMAS'S HOSPITAL.

The discrimination of cases of cellulitis into varieties corresponding with the causative organism is of much importance both with regard to prognosis and treatment, and of late years much progress has been made in this direction.

The case related below appears to warrant the assumption that it is an example of a rare infection possessing distinct and characteristic features. It was at first assumed to be an ordinary infection by the *Bacillus coli communis*, until the entire absence of gas formation as a part of the process was noted. This clinical fact was later fully substantiated by the results of cultural experiments made with the organism, which showed the bacillus to be both clinically and in cultural characters distinct from *Bacillus coli communis*.

The original development of the organism in a portion of the large intestine excluded from the rest of the alimentary canal is of interest as possibly explaining its presence and peculiarities, since it appears to be of the same nature as certain organisms cultivated from faeces by Houston.

History.

A. B., a seamstress, aged 35, had undergone inguinal colotomy fifteen years ago, in order to exclude a sinus into the rectum which had resulted from a former operation for the removal of diseased Fallopian tubes, which plastic operations had failed to cure. The artificial anus established at that time worked well, it was of small and convenient size, the bowels acted once daily, there was never any prolapse, the faeces were readily controlled by apparatus, and the patient followed her occupation without any disadvantage.

Eight months ago, however, a sudden attack of intestinal obstruction occurred, the patient was admitted into the hospital, and it being assumed that contraction of the artificial anus was the cause of the trouble, the latter was dilated, and after this the bowels again acted freely.

Two days ago the patient took a dose of castor oil, which was followed by a free evacuation, but last night she was seized with sudden pain in the lower abdomen, and since then she has vomited frequently and neither faeces nor flatus have been passed.

Condition on Admission.

The patient complained of acute pain and was vomiting frequently. The tongue was clean, pulse 120, temperature normal.

On inspection the abdomen was flat and not distended nor tender, the colotomy opening admitted the forefinger, the colon appeared empty, and this corresponded with the negative result of an enema given in the morning. The scars corresponding to the old fistula and the operations for its attempted closure were sound; beneath the centre one some hard masses, about the size of a walnut, seemed to indicate the presence of old faecal lumps.

Operation.

A diagnosis of acute obstruction from adhesions was made, and the abdomen opened near the middle line by displacement of the left rectus muscle. Collapsed small intestine was seen, and when traced upwards was found to lead to a tight adhesion of the lower part of the jejunum in the pelvis. The incision needed to be carried somewhat more downwards to give access to the affected coil, and during this procedure it is believed the old sinus was wounded and laid in connexion with the incision.

After-History.

The result of this operation was satisfactory as far as the obstruction was concerned: on the third day the bowels were opened freely by enema, and the pulse and temperature only showed slight occasional variations from the normal.

On the eighth day the temperature rose to 101° and the pulse to 112, and when the dressings were removed to take out the stitches it was found that the wound was suppurating. The pus evacuated was of a dark dirty-brown colour and of such strong faecal odour that the house-surgeon assumed the development of a faecal fistula. Hot boracic-acid dressings were applied.

During the next two days a spreading cellulitis developed towards the right groin, the skin assuming a red marbled aspect, and on the sixteenth day an abscess was opened just within the right anterior superior spine of the ilium.

The incision had no effect in staying the extension of the cellulitis; superficial oedema steadily spread downwards in the right thigh and into the adductor region, the surface of the limb assuming the same red marbled aspect that had been noted at the commencement of the process. Other incisions were made in the adductor region, and on the thirteenth day a number of incisions were made over the front and inner aspect of the upper four-fifths of the thigh.

The condition revealed by these incisions was remarkable, as in the previous wounds, a very large amount of the subcutaneous tissues was gangrenous and sloughing, while the pus was of the same dark, dirty-brown colour, extremely foul-smelling, to all appearances resembling fluid faeces. The superficial network of veins was completely thrombosed, while the individual vessels were dissected out by the process of sloughing of the supporting tissues, and still retained the normal dark colour of coagulated venous blood. The connexions with the deep veins were also thrombosed, but there was no evidence of extension of the process into the deep veins themselves, since the foot and leg and also the outer aspect of the thigh throughout remained free from oedema. The remarkable marbling of the surface appeared to be dependent on this condition of the veins.

One week later an apparently superficial bleb formed just behind the inner hamstring tendons, and from this again there was a free flow of discharge, which the Sister of the ward described as faeces. This marked the lowest point reached by the process

During the extension downwards of the cellulitis a striking change took place in the tissues earliest affected—the sloughs were thrown off, and the dirty-brown pus was replaced by thick yellow inodorous pus. The wounds were dressed every four hours with warm boracic fomentations, and on each occasion syringed with a solution of hydrogen peroxide. It should be mentioned that in addition to the multiple incisions made by the knife, a number of small, almost pinhole, spontaneous openings were formed, a small black slough separating at each spot, apparently corresponding to a thrombosed vessel.

The process gradually worked itself out, until during the fifth week the wounds had almost ceased to discharge, when it was discovered that a large deep abscess had formed in the adductor region, and was pointing at the back. This abscess was covered by normal skin, and proved, as was expected, to contain thick yellow pus similar to that which had before superseded the brown pus in the other wounds. No gas formation was observed at any time.

A cultivation made from one of the fresh wounds was reported from the clinical laboratory as consisting of an experimentally non-pathogenic bacillus, which was agglutinated with the patient's own blood serum. It was determined to treat the patient with a vaccine prepared from the organism, but when the opsonic index was taken it was found to be 3.2, hence although the vaccine was being prepared, the idea was given up in view of the degree of resistance exhibited by the patient to the organism, and the obvious fact that she was rapidly improving.

The general condition of the patient during the progress of these local phenomena may be disposed of in a few words. She looked very ill, slept badly or not at all, had little appetite, a very dirty tongue, the temperature ranged from normal to 102°, with a fairly regular evening rise, and the pulse averaged 100.

The abdominal condition remained satisfactory, and the patient—a plucky, hopeful woman—made the least of her troubles. After the opening of the last of the abscesses she rapidly regained strength, put on flesh, and made rapid progress towards recovery. She has now completely recovered, and at the end of three months has resumed her occupation.

The case seems worthy of record in that I have never before observed a similar cellulitis, the prominent features being the remarkable dark-red marbling of the skin, unaccompanied (as was first expected) by any gaseous emphysema, the extensive venous thrombosis, the steady progress of the infection in a contrary direction to that of the lymph stream, the strict limitation of the process to the subcutaneous tissue, the widespread sloughing of the connective tissue infected, and, lastly, the strong similarity of the discharge in odour, colour, and consistence to liquid faeces.

These peculiarities were no doubt due to the infecting organism, possibly modified in its nature by the seat of its initial growth in small masses of faecal matter contained and retained in an old blind diverticulum of the large intestine.

Other remarkable features existed in the comparative moderate nature of the general symptoms considering the extent of the area of the body affected, and the length of time during which the process of extension continued.

It is clear that at an early date the patient developed a very high degree of resistance to the organism, as shown by the opsonic index of 3·2 obtained at the end of the third week, which, taken with the fact that at that time she was rapidly improving, seemed to render the trial of any vaccine superfluous. Again, the limitation of the thrombosis to the superficial veins was both fortunate and striking. It is evident that the clotting depended solely on direct extension of the inflammation from the supporting tissue to the venous wall, and there seemed no tendency of the clotting to spread by continuity in the blood-stream into the parts beneath the deep fascia of the limb where the connective tissue remained unaffected by the process proper. To this fact the patient was no doubt indebted for the absence of anything like the detachment of fragments of clot and the dispatch of septic emboli to other parts of the body.

Other points seem to contraindicate a very high degree of virulence in the organism and its products, thus, the comparatively slow and quiet initial development of the cellulitis, and the tendency of the process to work itself out with some rapidity.

I am much indebted to Mr. Dudgeon and Dr. Panton for the trouble they took in the determination of the organism concerned, and to Mr. Dudgeon for the following details regarding the same.

The bacillus isolated from the pus of the wounds in the abdominal wall and the thigh presented morphological and cultural properties as follows:

It was a small rod-shaped bacillus with rounded extremities, and definitely motile. It failed to retain Gram's stain. It formed dark blue colonies on the medium of Drigalski and Conradi, decolorized neutral red broth (anaërobically) without producing any definite green fluorescence, acidified litmus glucose, lactose, maltose, mannite, salicin, saccharose, without the production of gas, while litmus glycerine, erythrite, and sorbit remained unaffected. Litmus milk was rapidly acidified, clotted, and peptonized. Gelatine media were completely liquefied. There was an absence of indol formation.

A young agar culture was emulsified with normal saline, and 1½ c.cm. of the emulsion was injected intraperitoneally into a guinea-pig without producing any effect. The animal was killed fourteen days later and was found to be quite healthy, while cultures made from the spleen remained sterile.

The patient's serum produced a marked agglutination reaction with the bacillus in a dilution of 1 in 20, a fair reaction with a dilution of 1 in 50, and a very slight reaction with 1 in 100 Normal serum failed to produce any effect on the bacillus.

The opsonic index was tested during the latter part of the patient's illness and was found to be very high—3.2.

The most interesting feature in connexion with this organism was that, though it was proved beyond question to be pathogenic to the patient, yet it failed to have any effect on a healthy guinea-pig. It is, of course, a well-known fact at the present day that micro-organisms which are pathogenic to man may be found to produce no effect when injected into animals.

The late Mr. James Hodge, of Manchester, who died on February 6th, left £500 each to Manchester Infirmary and Montrose Infirmary, and £250 each to the Manchester Southern Hospital and the Northern Counties Hospital for Incurables.

DISLOCATED SPLEEN WITH TORSION OF PEDICLE COMPLICATING PREGNANCY:

REMOVAL OF SPLEEN: DELIVERY AT TERM.

By H. MEEK, M.D.,

LONDON, ONTARIO.

I HAVE not seen any report of a case similar to the following, in which the enlarged dislocated spleen with twisted pedicle, complicating pregnancy at four months, was removed:

Mrs. B., aged 32, a school teacher, married four and a half years, was referred to me on December 26th, 1905, by her physician, Dr. Minshall of Brownsville, Ontario.

History.

From childhood she had never been robust. At the age of 15 years she was ill for a time with malaria, and at the age of 17 she had a mild attack of typhoid fever.

Her menstrual periods appeared at the age of 14 years, and previous to marriage were irregular, sometimes two and even three months intervening. After marriage they became more regular, occurring about every five weeks and lasting five or six days, with moderate loss and very little pain. Her last menstrual period occurred on September 7th, 1905, and was of the usual duration and other characters of previous periods, except that she suffered more pain, which she attributed to a cold from which she was suffering at the time.

On December 3rd, 1905, she was taken suddenly ill, with severe abdominal pain on the left side, attended with considerable fever. She was confined to bed, and morphine was required to relieve the pain. After a few days the temperature dropped to normal, and the sharp cutting pain subsided to a dull persistent aching. From this illness she was unable to leave her bed for two weeks.

Two years previously she was taken suddenly ill during the night with severe pain on the left side of the abdomen, which her physician said was in the left ovarian region, but this pain had disappeared by the following day. After this she was free from any abdominal discomfort for about one year. During the past year she had suffered at times from some pain in the same locality, and since some time during the past summer she thought she could feel a hardness on the left side, and this hardness had become more noticeable since her present acute illness.

Condition when First Seen.

She looked pale and thin, and complained of an aching pain on the left side of the abdomen, some distance below the ribs; appetite was poor, and the bowels had been constipated since her present acute illness, although usually they were inclined to be relaxed, particularly after any excitement. There had also been some frequency of urination recently but not previously. Her temperature and pulse were normal. She had not suffered from nausea or vomiting except occasionally after taking morphine for pain.

Examination of the abdomen revealed in the left iliac region an elongated tender lump, elastic but not fluctuating and dull on percussion. The lower extremity of this lump dipped down into the pelvis, and the upper extremity reached a point above and to the left side of the navel. It could be moved up and down, and from side to side slightly, but could not be brought over to the right of the median line. It was, however, too tender to bear much handling.

Examination of the vagina, uterus, and breasts gave all the usual signs of pregnancy, advanced to between three and four months. Bimanual examination showed the fundus of the enlarged uterus above the symphysis, and the lower extremity of the abdominal lump dipping down into the pelvis behind the left side of the enlarged fundus very close to but apparently not connected with the uterus. The left ovary could not be palpated, and I was therefore inclined to think that the growth was probably a dermoid cyst of the left ovary complicating pregnancy.

Operation.

Operative intervention was advised, and on December 30th she went into St. Joseph's Hospital for that purpose.

On January 2nd, 1906, under chloroform anæsthesia, I made a median abdominal incision below the navel. On opening the peritoneum the enlarged pregnant uterus presented, and some clear serum [illegible] from the pelvis. The abdominal lump to the left was of a dark purplish colour, and on examination was found to be an enlarged spleen, with its upper convex border directed forward and the lower notched border looking backward.

Both ovaries and tubes were found to be perfectly normal. The abdominal incision was extended upward to the left side of the navel, and the pedicle of the spleen was examined and found to be more than 2½ in. long and about 1½ in. from the hilum was twisted upon itself from left to right for somewhat more than a half turn.

The veins on the splenic side of the twist were greatly enlarged, measuring fully ½ in. in diameter and presented the appearance of a mass of large varicose veins almost on the point of rupture. The splenic artery was also much larger than normal. At the hilum there was some thickening from inflammatory adhesions, and two or three enlarged glands. The vessels in the pedicle were ligated separately with silk, and the spleen removed.

The other abdominal organs were apparently normal. The long abdominal wound was carefully closed with running catgut in peritoneum, interrupted silkworm gut sutures down through walls to peritoneum, interrupted kangaroo tendon sutures in sheaths of recti muscles, and a running gut suture in skin. The patient became somewhat cyanosed just after the removal of the spleen, but soon recovered her normal colour.

After-History.

There was practically no shock, and her convalescence was uneventful. The abdominal wound healed throughout its entire length by first intention.

She left the hospital about four weeks after operation. The spleen after removal measured about 8 in. in length, 4 in. in breadth, and 2½ in. thick. It weighed 12 oz.

In a letter from Dr. Minshall on July 9th last, he says that after returning home the patient enjoyed good health; pregnancy progressed without further complication, and on June 18th, or just 283 days following the first day of her last menstrual period, she had a perfectly normal labour, giving birth to a well developed 7-lb. boy. Her puerperal convalescence was normal, and at the time of writing she was in good health.

From the symptoms complained of previous to operation and the condition of the veins in the pedicle found at operation, it is quite probable that, if left to itself, rupture of splenic vessels would have occurred with death from internal haemorrhage.

From the uneventful after-history in patients, where a dislocated or chronically-diseased spleen has been removed, it would seem that such spleens become functionless, other glands taking up the work, so that after removal of the organ the patient does not suffer from any special symptoms referable to the loss.

With regard to the diagnosis, I think with one experience one would not be likely to make a mistake in a second case; but, confronted for the first time with a case like the one reported—an enlarged pregnant uterus, with an elastic, tender tumour on the left side dipping down into the pelvis, and the patient just recovering from an acute attack of local peritonitis—an exact diagnosis before opening the abdomen would not be an easy matter.

A NOTE ON HAFFKINE'S ANTIPLAGUE VACCINE.

By T. C. LUCAS, B.A., M.B.CANTAB., M.R.C.S., L.R.C.P.ENG.,

LIEUTENANT, R.A.M.C.

ON looking back at the results obtained by using Haffkine's vaccine in the epidemic of plague which occurred at Kirkee, India, in 1906, I feel that I ought to add my testimony to that already given in support of the very great value of this method, not only in reducing the incidence, but also the mortality, of the disease.

A trial was given to the new "curative" serum at the Poona Plague Hospital during the epidemic there in 1906. The serum, which was very costly, did not have any effect upon the mortality, which was at the rate of 65 per cent. amongst 1,700 cases treated. It is clear, then, that for the present we must rely upon a prophylactic serum until such time as a satisfactory curative serum is discovered.

At the commencement of the epidemic the population of Kirkee was estimated at 6,952 people. Of this number, 5,640 formed the civil element, while the remaining 1,312 were employed by the military authorities, constituting the followers with their wives and families. The two communities are separated from each other by a street which runs through the village. On one side are the followers' huts, on the other those of the "civilians." The followers have no shops in their part of the village, and make all their purchases in the bazaars of the civilians. They are almost to a man in the hands of the native moneylenders, and taken as a whole are in worse circumstances than the other inhabitants. Indeed, at the commencement of the epidemic I had several under treatment for famine fever. On the other hand, the sanitation of their huts is better than that of the civilians.

In the middle of August, 1906, plague was raging in Poona city, four and a half miles away; and at about this

time numbers of tree squirrels and rats were dying in Kirkee. On September 1st, 1906, the first case occurred in the bazaar. On September 5th it reached the lines of the followers, who, on the following day, were ordered to come up to hospital for inoculation with Haffkine's serum; out of 1,312 men, women, and children on the list, 1,300 presented themselves, and among them 5 subsequently developed plague, of whom 4 recovered and 1 died. Of the 12 uninoculated, 6 contracted the disease, of whom 3 recovered and 3 died. Among the civilian element inoculation was optional, and, for the most part, they did not seek medical advice if attacked Out of 5,640 people, 45 volunteered for inoculation, and none of them contracted the disease. Of the remaining 5,595 (uninoculated), 383 subsequently suffered from plague, of whom 123 recovered and 260 died.

Influence of Haffkine's Serum upon the Incidence of Plague at Kirkee.

Comparison of the incidence amongst the uninoculated and the inoculated. The former give the epidemic incidence which might have been expected amongst the followers if they had not submitted to inoculation.

	Total Number.	Number Attacked by Plague.	Incidence per Cent.
Inhabitants who were not inoculated	5,595	383	6.8
Inhabitants who were inoculated with Haffkine's serum	1,300	5	0.33

Influence of Haffkine's Serum upon the Mortality of the Disease at Kirkee.

To estimate this three classes of cases must be considered:

1. The inoculated inhabitants who developed plague (and were subsequently treated in the followers' hospital).
2. The uninoculated inhabitants who developed plague (and were subsequently treated in the followers' hospital).
3. The uninoculated people who developed plague (not treated in hospital; majority treated by native doctors).

	Number.	Result.		Mortality per Cent.
		Recovered.	Died.	
Class 1.—Inoculated (treated in hospital) ...	5	4	1	20
Class 2.— Uninoculated (treated in hospital) ...	*12	7	5	41
Class 3. — Uninoculated (not treated in hospital)	383	123	260	66

* Includes 6 additional cases admitted from the ammunition factory at Kirkee.

The vaccine, consisting of a culture of the *B. pestis* killed by heat to which a minute quantity of carbolic acid had been added, was supplied by Government in sealed glass tubes. The dose, varying from ½ c.cm. in the case of a strong man to 0.5 c.cm. for a child 10 days old, was given subcutaneously at one sitting, except in the case of women who were more than seven months pregnant, when it was divided into two halves, the second being given at a week's interval. Glass syringes were used, and were sterilized by the hot oil method. The needle was sterilized between each operation. The site chosen for the injection was the centre of the posterior surface of the upper arm. The arm was scrubbed with soap and water, after which carbolic 1 in 20 and finally spirit was used. The symptoms following the inoculation varied with different individuals; as a rule, within four hours there was pain and swelling locally and a slight rise of temperature. The symptoms subsided on an average in 30 hours. In some cases there was practically no reaction. In spite of the antiseptic precautions observed, six out of the series of 1,300 developed an abscess at the site of inoculation; they were treated in the ordinary way and all healed rapidly. There were no other untoward sequelae.

With regard to drug treatment, strychnine appears to be almost a specific for the disease.

5

A CASE OF CHLOROMA.*

By T. HARRISON BUTLER, M.D.Oxon.,

HONORARY OPHTHALMIC SURGEON TO THE COVENTRY AND WARWICKSHIRE HOSPITAL.

The case described in these notes was shown in my absence to the Coventry Division of the British Medical Association by Dr. Harman Brown, on January 21st, 1907, and on February 19th I was able to show the Division the *post-mortem* specimens and read the full notes.

L. C., female, aged 11, was admitted to the Coventry and Warwickshire Hospital on December 20th, 1906, suffering from exophthalmos She had previously been seen by a medical man, who had found the urine to be loaded with albumen.

Family History

The girl was an orphan, and none could be obtained. A sister was seen, and was found to be healthy.

History of Present Condition.

In the first week in December it was noticed that the "eyes looked queer"; a fortnight later the swellings of the temples were noticed. There was no history of vomiting, vertigo, or headache.

Condition on January 1st, 1907.

There is great proptosis of the right eye, which is displaced outwards and downwards. Its movements are very limited in an upward direction, but are fairly free in the other directions. There is also marked exophthalmos on the left side, but the condition is not so extreme as on the right side. The left eye moves well in all directions.

There is enormous engorgement of the conjunctival vessels in the upper cul-de-sac on each side, that on the right side being more intense. The veins of both eyelids and on the temples are greatly distended. There is marked chemosis of the right eye. No pulsation can be felt in either orbit, nor can any bruits be heard.

The pupils are equal and normal in size, and react to light and accommodation. All the media are clear.

There is optic neuritis on each side, the right disc being choked to the extent of 2.5 dioptres, the left only to 1.5 dioptres. The congestion of the retinal veins is not extreme. There is a retinal haemorrhage at the outer and the upper aspect of each disc, close to its margin in each case. These haemorrhages are in extent equal to about one-sixth the area of the disc.

VR uncorrected = $\frac{6}{9}$ TR $-+\frac{1}{2}$.
VL ,, = $\frac{6}{9}$ TL normal.

Each temporal fossa is bulged out by a semifluctuating swelling which becomes harder as one leaves the temporal muscle; and above it merges into bone. This swelling is much larger and harder on the right side.

The girl looks very ill. Her skin is a yellowish waxy colour, and suggests extreme anaemia. She can, however, walk and co-operated intelligently in the ophthalmoscopy and vision testing.

There are no subcutaneous haemorrhages and no oedema of the ankles or legs. The chest was carefully examined and was found to be normal, there were no cardiac murmurs and no dullness was detected over the sternum. The abdomen was flat and there was no ascites. The liver and spleen were normal in size. No enlarged glands were felt.

The urine contained neither sugar nor albumen, but before admission albumen had been found in large amount.

The blood examined fresh showed a large excess of leucocytes. The count gave the following result:

Red cells, 3,000,000.
White cells, 26,000.

I made some films, and they were kindly examined for me by Dr. J. Cropper, of Chepstow, who reported as follows:

Differential count:

Polymorphonuclear cells ...	2	per cent.
Large lymphocytes	69	,,
Large mononuclear cells ...	14.8	,,
Small lymphocytes	14.2	,,
Eosinophiles } not present.		
Mast cells }		

"The low proportion of polymorphs is very striking. The condition is one of lymphatic leukaemia rather than myelogenous leucocythaemia, pointing to affection of the glands rather than of the bone marrow, there being no eosinophiles of any kind, such as one sees so commonly in myelogenous leukaemia."

The photograph shows the general appearance of the patient at this stage.

Progress of the Case.

January 10th The spleen can just be felt. Small glands can be felt in the axilla, neck, and groin.

There are some purpuric haemorrhages under the skin on the right buttock and thigh. The saliva is also a little blood-stained, the blood apparently coming from the gums. Patient

* Communicated to the Coventry Division.

is deaf on the right side. Her general condition is much the same, but she sleeps a great deal.

January 24th. During the night there was an alarming haemorrhage from the orbit, the blood coming from under the eye. The house-surgeon controlled it by pressure and by perchloride of iron, but not before the patient had become much collapsed. At the end of the haemorrhage the eye sank back into the orbit, and there was no proptosis.

January 30th. The proptosis of the right eye is much increased. The lower cul-de-sac is occupied by a bleeding, fungating mass, which, however, showed no green colour. The general condition is unaltered, but patient passes most of her time in sleep. She takes little notice of her surroundings, but answers questions. Complains of no pain. She has apparently good vision in the left eye. The right cornea has sloughed. She is very deaf on the right side, but hears well on the left.

February 17th. There has been some dyspnoea for the last few days. Patient is semicomatose, but can be roused to answer questions. She is very weak, and has lost flesh. A second blood count gave—

Red cells, 1,450,000;
White cells, 17,000.

The child died on February 18th, the disease having been diagnosed as "chloroma."

Notes of Post-mortem Examination.

The body was much wasted, there being little fat present. Both eyes, which, during life had been pushed forwards, were retracted into their sockets.

On removing the sternum, a large flat growth was seen on its inner surface; this was pale olive-green in colour, and was under the periosteum.



[illegible] were green by transmitted light.

[illegible] was about a pint of blood-tinged fluid in each pleural cavity. The right lung [illegible] a plastic pleurisy of recent origin. At the apex of each lung was a mass of new growth which [illegible] the lungs to the vertebrae. On section, [illegible] growth was found to be invading the lungs to the extent of about ½ in. from the surface. The cuts were otherwise free from metastases. The growth was olive green. Both lungs were very oedematous, but there were no haemorrhages.

[illegible] normal, but the pericardium was covered with small [illegible]

The spine along its whole length was covered by large flat masses of growth varying in thickness up to ½ in. These [illegible] were superficial and were olive green in colour. The [illegible] were [illegible] along the ribs, especially on the left side. [illegible] a thicker growth than others.

The stomach and [illegible] intestines showed no naked eye [illegible] The [illegible] and rectum were contracted and empty except for the first 6 in. of the ascending colon. At this point there was a section narrowing in the [illegible] but the gut did not appear to be infiltrated with growth.

The liver and spleen were normal in size, and contained no [illegible] growth. Both ovaries were enormously enlarged, and were [illegible] masses of green growth. The right eye was [illegible] and [illegible] There was not much growth in the orbit, there was a small mass deep in the orbit, and apparently arising from the bony wall and from the periosteum. The right lacrymal gland was invaded by a green growth.

In the right temporal fossa, under the temporal muscle and the [illegible] there was a large, flat growth about ½ in. in thickness. There were small masses of growth along the sagittal and coronal sutures and a large mass on the right half of the occipital bone. There was an excess of cerebro-spinal fluid. The meninges were thickened and infiltrated with a green growth along the sagittal suture. The right cavernous sinus was filled with a green growth and the lateral sinus on the right side was occluded by the same substance.

The pendulous were placed into formalin solution 10 per cent. After twenty-four hours the green colour was still as obvious as ever, and the intestines had a greenish tinge. The contraction of the colon was regarded as a congenital abnormality. The thyroid gland was enlarged, but not infiltrated with growth.

The specimens were sent to St. Bartholomew's Hospital, and the dura mater and an ovary have been added to the Museum. Dr. W. Branson examined the sections of the growth, and reports as follows:

"The growth is a round-celled sarcoma with an unusually well-marked stroma. At one spot it may be seen infiltrating the dura mater. The ovary shows a diffuse infiltration of the ovarian tissue with round-celled sarcoma."

The total duration of the case was about seven weeks. The exophthalmos was chiefly due to vascular engorgement and to thrombosis of the cavernous sinus. It was absent after the severe haemorrhage and after death. Very little growth was found in the right orbit.

The case was first regarded as a sarcoma of the orbits and temporal fossa, then as a case of lymphatic leukaemia with lymphomata in the orbits, but was finally correctly diagnosed as a case of "chloroma."

In spite of the intracranial tumours and the excess of cerebro-spinal fluid, there were never any symptoms of compression.

The case is very similar to one described by Dr. Melville Dunlop in the British Medical Journal for May 3rd, 1902. He gives references to 26 previous cases. There has been one recently at St. Bartholomew's Hospital, and Dr. Coles of Bournemouth tells me that he saw one at York Hospital. In any case the disease is very rare.

My thanks are due to Dr. J. Cropper of Chepstow, who kindly examined the blood films, to Dr. Branson of St. Bartholomew's Hospital for his report on the histology of the growth, and to Dr. T. H. Barton, Senior House-Surgeon to the Hospital, who made careful blood counts. I am also indebted to him and to Mr. Russell, Junior House-Surgeon, for making the *post-mortem* examination.

ALBUMOSURIA AND THE DURATION OF ALBUMINURIA IN CHOLERA.

By U. N. BRAHMACHARI, M.A., M.D.,

TEACHER OF MEDICINE, CAMPBELL MEDICAL SCHOOL, CALCUTTA.

The constant presence of albumose in the urine of patients suffering from cholera after suppression has ceased is, as far as I am aware, a new observation. In all the cases that I examined this was as constant as albumen. In most of them it disappeared from the urine along with the albumen. In some cases the period of albumosuria was shorter than that of albuminuria, and in very rare cases it continued to exist some hours after the disappearance of the latter. (See Table.) The amount of albumose present varied from a mere turbidity to a distinct precipitate, and was not in all cases proportional to the amount of albumen present. In a few cases there was a mere trace of albumose, while the quantity of albumen was large. The albumose present was characterized by the following tests:

1. Not precipitated by heat.
2. Precipitated by HNO_3. The precipitate was soluble on boiling and reappeared on cooling.
3. The precipitate was granular and never crystalline under the microscope.

The period of albuminuria ranged in my cases from 24 to 300 hours with an average of nearly 120 hours, which is much greater than what is stated by any previous observer. (See Table.) I append here the table containing the results of my observation.

No.	Albumosuria.	Duration of Albuminuria.	Duration of Albumosuria.
	Present	Hours	Hours
1	..	36 (death)	36 (death)
2	..	60	10
3	..	72	7
4	..	60	12
5	..	84	60
6	..	36 (death)	36 (death)

Nos.	Albumosuria.	Duration of Albuminuria.	Duration of Albumosuria.
	Present.	Hours.	Hours.
7	,,	132	132
8	,,	172	132
9	,,	300	300
10	,,	196	196
11	,,	132	132
12	,,	64	64
13	,,	120	120
14	,,	144	144
15	,,	60	60
16	,,	132	132
17	,,	132	—
18	,,	72 (death)	—
19	,,	60	—
20	,,	36	—
21	,,	208	—
22	,,	84	—
23	,,	54	—
24	,,	114	—
25	,,	204	204
26	,,	240	240
27	,,	80	80
28	,,	64	64
29	,,	200	200
30	,,	96	120
31	,,	96	72
32	,,	66	66
33	,,	300	300
34	,,	—	—
35	,,	—	—
36	,,	—	—
37	,,	—	
38	,,	—	—
39	,,	—	—
40	,,	—	—

MEMORANDA:
MEDICAL, SURGICAL, OBSTETRICAL.

THE INTESTINAL ORIGIN OF LEPROSY.

IN the BRITISH MEDICAL JOURNAL of November 10th, 1906, you note some very interesting experiments on kids and goats carried out in the Pasteur Institute at Lille as to the intestinal origin of tuberculosis. As the result of these investigations it is inferred that in man the *intestine* is the usual means by which the tubercle bacilli infect the lungs and other parts of the body, especially as "evidence is not wanting that the penetration of airborne bacilli into the lungs is difficult, if not impossible." Can we not apply this hypothesis to another disease analogous in pathology—leprosy?

Leprosy is not infectious, it is doubtful if it is contagious, certainly not hereditary. In parts of China, as Pakhoi, where leprosy is common, there are lepers who sell eatables on the street. They and the food are, of course, surrounded by flies, which come in contact with their sores. Some time ago a medical man in Pondicherry gave as a possible explanation of Hutchinson's theory the fact that the fish in the local market, he observed, were black with flies, which probably had before settled on lepers, and thus would carry the bacilli with them to the fish. That putrid fish makes an excellent nidus is impossible to deny, and if eaten half raw some of the bacilli must certainly enter the alimentary tract in a living condition.

But, if fish, why not other edibles, especially if these, after coming in contact with flies laden with the bacilli, undergo no further cooking? Does not this explain why Hutchinson's theory sometimes appears so plausible and at other times seems to break down? I mean that the practice of eating putrid fish in a more or less raw condition is not essential to the spread of the disease; that the bacilli can reach the intestine through the medium of other food also. In this district, where leprosy is fairly rife, I doubt if much fish is eaten; the lepers grow and sell vegetables.

In tuberculosis the bacilli are carried by leucocytes which lose their amoeboid movement. In leprosy the bacilli have been found occasionally within white blood corpuscles; perhaps the lepra cells were originally leucocytes?

The taking of common salt really seems to benefit the patient; this may be because of increased hydrochloric acid, which helps the digestive juices to destroy the germs, and the system is thus relieved from ingesting more *living* bacilli.

Three points leprosy has in common with tuberculosis: There must be a predisposition, natural or acquired, in the patient; both may have a long incubation period; and both are incurable—the patient is said to be "cured" because treatment and environment have "stayed" the disease.

H. LECHMERE CLIFT, M.B., Ch.B.Edin,
Nanning Fu, Kwangsi, China.

SALICYLISM AND EPISTAXIS.

IN reference to the memoranda which have appeared recently in the BRITISH MEDICAL JOURNAL on Influenza and Epistaxis, may I be permitted to point out that in many of these cases the epistaxis has probably no relation to the attack of influenza, but is rather due to the salicylate administered for its treatment, a symptom of salicylism which is not very uncommon? Whether this, as seems probable, be due to certain impurities in the drug or not I am not prepared to say.

A rather striking example of the onset of epistaxis after taking salicylates in a patient once under my care is, I think, worth recording. He was the master of a large Eastern liner, and, like many of his calling, suffered from gout. A medical friend gave him a prescription as follows: ℞. Pot. bicarb., sod. salicyl., aa ʒjss, vin. colchici, ʒjss, aq. ad ℥vj. Sig.: Two tablespoonfuls four times a day. He insisted on trying this mixture during three separate attacks. On each occasion epistaxis followed.

At no time was the bleeding severe, but the point that is so very interesting is that on the two subsequent occasions the epistaxis was accompanied by the development of a rash, the latter resembling more than anything else large so-called "blind boils."

On stopping the sodium salicylate but still giving the potassium bicarbonate and colchicum the rash disappeared, nor was he troubled with further epistaxis. There were no other symptoms of salicylism present, no ringing in the ears, headache, etc. There was no local disease, and the urine was free from albumen throughout.

Eccles, Lancs. E. LEACH, M.R.C.S., L.R.C.P.Lond.

HERNIA OF THE GALL BLADDER.

THE patient in the following case, a Hindu woman aged 50, was admitted into the Kinnaird Hospital at Lucknow on February 11th, under Dr. Christina Mayne, by whose permission I report it. On the right side of the abdomen was a soft, round, tender swelling, diameter 1½ in., its centre 2 in. to right of mid line, and 3 in. below the margin of the ribs. She complained of having had indigestion for the last two months, and said that the swelling had appeared suddenly one month previously, when she was doing some heavy grinding. Pain, she said, had been present only ten days, but histories in Indian women are very unreliable. On February 12th the patient was operated on by Dr. Mayne. Below the subcutaneous fat and beneath the abdominal muscles was the fundus of the gall bladder enclosed in a peritoneal sac. The edges of the stricture round the neck, formed by the abdominal muscles, were snicked, a few adhesions between stricture

and sac and bladder and sac separated, most of the latter removed, and the fundus returned into the abdomen. Both the right and left lobes of the liver were enlarged. The stitches were removed on February 24th, and the patient discharged well on March 10th.

Lucknow. HELEN B. HANSON, M.D., B.S.

OXYURIS VERMICULARIS.

THAT the *Oxyuris vermicularis* is capable of making the life of its host extremely uncomfortable is strikingly demonstrated when one reads that an eminent surgeon suggests an appendicostomy, and subsequently an attack on the parasite *in situ* with suitable injections, as a simple operation for relieving the patient. As suggesting an alternative to such heroic treatment when the parasite has its habitat high in the bowel, the following case may be interesting:

A. B., a young adult male, after countless enemata of infusion of quassia, salt and water, alum and water, and other medicaments, administered over a period of several months without affording relief, was given 2 oz. of the compound decoction of aloes before breakfast, and ordered a diet rich in proteid but meagre in quantity. At night he was given a pill of extract of quassia 2 gr. (coated with keratin). The next day a similar pill was administered morning, noon, and night. The third morning the aloetic purge was repeated. On that day the patient passed a mass which was described as like "a ball of frayed cotton." The pills were continued for a few days, as the parasites still showed in the stools. At the end of the week all treatment ceased as the patient expressed himself cured. So far as I know there has been no recurrence of the trouble.

A similar treatment in the case of young children, the class mostly affected, would have to be pursued with caution, owing to the possible nervous effects of the quassia.

It is important that the pills be coated with keratin or some substance which will resist the action of the gastric secretion. If the coating be fairly thick it is not impossible to imagine that the parasite is attacked *in situ* in a desirably lethal manner.

A. NEWTON DAVIES, L.R.C.P. and S.Edin., L.F.P.S.G.
Liverpool.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE THROAT HOSPITAL, GOLDEN SQUARE.

A CASE OF DOUBLE BEZOLD'S DISEASE: RECOVERY WITH PERFECT HEARING.

(By CHARLES J. HEATH, F.R.C.S., Surgeon to the Hospital.)

ON one occasion I was called to see a patient, a butler suffering from profuse discharge from both ears, following an attack of influenza. There had been no pain preceding the discharge, which was not offensive, but unusually abundant, great obstructive deafness was present, and the drum membrane could not be seen on account of the swelling in the meatus. Some swelling could also be detected over the left mastoid process, but it was only perceptible when the two sides were felt at the same time. There was no tenderness. The temperature was about 102° F., the man looked ill. I ordered local and general treatment and advised that if he became worse, or even if he were no better, within forty-eight hours his left mastoid should be opened. I heard nothing more of him for ten days, then, when attending the out-patient clinic at the Throat Hospital, at 2 o'clock one evening, I got a telephone message from his doctor, to say that he had been seized, at the patient was delirious, and that he wished to know what I advised under the circumstances.

I recommended him to go and fetch the patient, whatever his condition might be, and bring him to the hospital for operation, and meanwhile gave instructions for preparations to be made for his reception.

State on Admission. He arrived at 9 o'clock, was evidently weak, and suffering greatly, but was not delirious. He was at once prepared and anaesthetized, and on examining the parts more fully when the patient was under chloroform it was found that the mastoid abscess on the left side had probably extended into the neck, for a swelling was perceptible beneath the upper part of the sterno-mastoid muscle, and, so far as I could gather, this must have been of recent occurrence.

Operation.—In the course of the operation the mastoid antrum was practically obliterated, but no exposure of the dura mater was observed. The external surface of the mastoid bone was entirely removed, and it was then found that a probe could be passed through an aperture in the inner part of the tip of the process into an abscess in the neck, whence pus was being expelled by the elastic reaction of the cervical muscles. The tip of the bony process was thin, and after its removal it was possible to pass a flat gutta-percha tissue drain downwards, well into the cavity of the neck, thus avoiding the necessity of making a counter opening for the purpose of drainage. A drain made from this thin tissue, being flat, permits the opposing soft parts to come closer together than does a round drainage tube, and when removed there is only a potential, and not a real, cavity left, wherein pus may accumulate, and subsequently give rise to trouble; this drain was only left in forty-eight hours.

Progress.—The left ear, having been operated upon, progressed satisfactorily, but the right ear continued to discharge freely, and a week or two afterwards a swelling appeared in the neck on that side also, but not preceded by urgent symptoms. An operation was therefore performed on the right ear, similar in every way to the one on the other side, the abscess in the neck being drained upwards.

Result.—Recovery was complete and uneventful, and the patient told me, when I last saw him, that he thought he heard rather better than before the illness, but when I first saw him he was so deaf that no useful test of his hearing could be made. His master, who visited him, feared he would never be fit for service again, but I expressed the belief that his hearing would be restored, and on his recovery he returned to his employment, and has remained perfectly well.

REMARKS.—It appears to me that the bony cortex of the inner part of the tip of the mastoid process in this patient must have been always incomplete on both sides, and that it was only necessary for the resistance of the pericranium to be overcome in order for the pus to burrow into the neck; the remarkable symmetry one observes, when operating on both sides in one person, would account for this peculiarity occurring on both sides. Further, the attack was free from the pain which is usually present when the products of suppuration are pent up, under pressure sufficient to cause absorption and perforation of a sound, even though a thin, bony cortex. I have in my possession a temporal bone in excellent condition, showing this deficiency in the bony surface, and around this opening the bone is as thin as tissue paper. It has been shown to several anatomists, all of whom agree that the aperture in the mastoid process is congenital. In this bone the cells extending from the mastoid antrum to the tip of the process are large and intercommunicating, and a horsehair can be passed through the whole length of the cancellous bone. Now if such a condition existed in the patient concerned in this case, it would account not only for the profuse discharge, for there would be an extensive area capable of giving off pus, but also it might account for the absence of pain, preliminary to the arrival of pus into the neck. Observation of the modern skulls in the Museum of the Royal College of Surgeons leads one to the opinion that this condition is very rare, but that an extremely thin cortex is fairly common. The performance of the operation, too, so soon after the appearance of suppuration beneath the sterno-mastoid muscles, prevented the abscess there from becoming so extensive as to demand that counter openings should be made in the neck.

THE second Congress of the Goutte de Lait is to be held this year at Brussels from September 15th to 16th. It will be under the patronage of their Royal Highnesses Prince and Princess Albert of Belgium, and the Governments of various countries will be officially represented. Preparations for the meeting are in active progress under the direction of an organizing committee of which Dr. Devaux, Inspector-General of the Belgian Civil Sanitary Service, is chairman. The general secretary is Dr. Lust, 27, Rue de la Limite, Brussels; the treasurer, M. Stockx, 5, Rue Bayard, Brussels.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Charters J. Symonds, M.S., F.R.C.S., Vice-President, in the Chair.

Friday, April 12th, 1907.

Filigree Implantation.

Mr. Lawrie McGavin referred to the difficulty experienced in attempting a cure in cases of very large or recurrent inguinal hernia. The success met with in dealing with very large abdominal hernia by Bartlett's method had led him to modify it to meet the requirements of inguinal hernia. For this purpose he utilized two separate filigrees, an iliac and a pubic section, of special pattern, without sacrifice of testis or cord. The pubic section was placed upon the peritoneum between the internal abdominal ring and the pubes; the posterior wall of the inguinal canal was then remade over this by Bassini's method, the conjoined tendon being sutured to Poupart's ligament. The cord was then laid in position, and the transversalis and internal oblique muscles being incised outwards towards the iliac spine, the peritoneum was peeled from their deep surface, and the iliac filigree so placed on the peritoneum that its inner third lay upon the cord at its exit from the internal abdominal ring, overlapping for three-quarters of an inch the outer end of the pubic filigree. The divided muscles were then united over this iliac section, the aponeurosis of the external oblique being closed over the whole area as far as the external abdominal ring. The results in all cases hitherto had been entirely satisfactory. The method had produced an inguinal region so firm that no truss or support of any kind had been worn since operation, nor did it appear possible that any yielding of the scar could take place. No complication referable to the presence of the filigree had arisen, nor had any filigrees to be removed. Pain and discomfort were entirely absent. The author had adopted the method described as routine practice in all cases of recurrence or of very large hernia.

Mr. W. G. Spencer considered the suggestion an important advance in surgical technique. Bartlett's method was of great value in the treatment of large umbilical herniae. He narrated a difficult case, in which eventually he had to remove the filigree, but not before it had made a mass of scar material which eventually closed the opening.

Mr. Douglas Drew had used filigree in cases of ventral hernia. It was not necessary to remove the filigree, even if exudations occurred. The method was superior to that of darning with silver wire, being much more quickly done.

Mr. A. E. Barker had had no experience with filigree, but thought it might be of great value in bad cases. The darning method had produced good results in his hands.

Mr. McGavin, replying, said that he now used much larger filigrees, in fact, as big as 9 by 4 in. Recurrence was not probable, except when the filigree was too small.

Acute Suppuration in Muscles.

Mr. W. G. Spencer described a case occurring in the psoas and iliacus muscles, in a quite healthy boy, aged 13. The boy died four days after the onset without being relieved by the incision made the day before. There was no history of strain; the pus yielded a pure cultivation of *Staphylococcus pyogenes aureus;* the only lesion found after death was acute suppuration in the right psoas and iliacus muscles; everything else was found normal; there was no distant septic focus. Apart from the cases arising by extension from uterus, appendix, spine, etc., there were several on record in which a slight strain along with some distant septic focus, such as chronic otorrhoea, had occasioned acute and fatal suppuration. In other cases the distant septic focus had been apparently the cause without strain, and again, in others a strain had proved sufficient without any distant septic focus being revealed at the necropsy. Both the above antecedents had been absent in the case narrated. At present there appeared to be no sufficient explanation of the disorder, which, to judge by the number of cases on record, formed a distinct affection.

The Chairman related two cases in other muscles that recovered. He supposed there was general infection and a local strain by which the infecting organism escaped into the tissues.

Mr. Drew had seen three cases in children following impetigo.

Dr. de Havilland Hall related 3 cases of abscess of muscle in which there had been difficulty in diagnosis.

Dr. Essex Wynter said foreign literature on the subject was extensive. He related a case of suppuration of psoas, due to infection with *Staphylococcus pyogenes aureus.*

Dr. Gordon Watson related 2 cases following labour, in which patients had walked about before the symptoms began. Both recovered after incision of the abscess.

Mr. McGavin suggested reasons connected with its anatomy for the frequent selection of the psoas for suppuration.

Anti-Colon Bacillus Serum.

Mr. G. H. Makins and Mr. Percy Sargent presented a paper which contained a tabular statement respecting 25 cases of acute appendical peritonitis treated by injections of a multivalent serum prepared from differents trains of *B. coli* by Dr. H. H. Dale at the instance of Dr. L. S. Dudgeon, by the following process: A horse was immunized by receiving 14 injections of 10 c.cm. of seven days' broth culture of eight strains of *Bacillus coli* from cases of puerperal fever, at intervals of seven days; 7 injections of 5 to 20 c.cm. of a washed culture of *B. coli* of unknown origin, at intervals of ten days; one injection of 5 c.cm. of three weeks' growth in lactose broth of seven strains of unknown origin; seven strains separated by Dr. Dudgeon from cases of peritonitis; and eight strains from cases of puerperal fever. In all cases the cultures injected were killed by the addition of 0.1 per cent. chinosol. The 25 cases were of severe type, 6 probably being such that no good effect could be anticipated. Of the 25, 9, or 36 per cent., recovered. In all the others, improvement followed, toxic symptoms were relieved, localization of the infecting area was effected, and in cases that died the end was delayed considerably beyond the period usual in the disease. It was claimed that the general improvement in the patient's comfort, the sequence of quietude or sleep, a definite fall in the pulse-rate and temperature (either temporary or continued), and the relief in many cases from vomiting, obtained by use of the serum, justified its more extensive trial, the treatment being in no way harmful or dangerous. A successful case of treatment of acute infection of the urinary tracts by colon bacillus, under Dr. H. G. Turney, by use of the serum, and a report on the treatment of 3 cases of puerperal sepsis by Dr. A. K. Gordon, of Manchester, were alluded to.

Dr. L. S. Dudgeon thought the serum of greatest value, if used early enough, though it was useless in chronic cases with no constitutional symptoms.

LIVERPOOL MEDICAL INSTITUTION.

Frank T. Paul, F.R.C.S., President, in the Chair.

Thursday, April 4th, 1907.

Suppurative Cholecystitis.

Mr. T. C. Littler Jones, in a note on suppurative cholecystitis with perforation of the gall bladder, mentioned three cases under his care which had recovered. In one case the gall stones, after perforating the gall bladder, collected in a large perinephritic abscess. This then opened into the pelvis of the kidney, some of the stones being passed out of the body through the urinary tract, others being removed from the kidney at the time of the operation. Some of the stones were partially encrusted with a deposit of phosphates. The other cases were acute, and in each, after the peritoneum had been cleansed, the gall bladder, the site of the perforation, and the abdominal incision were each separately drained. He attached much importance to early diagnosis, to the method of draining, and to the way in which the gall bladder was stitched to the abdominal parietes, attempting where possible to have the edges of the incision into the gall bladder invaginated in order to facilitate the early closing of the biliary fistula.

Benign Cysts in Long Bones.

Mr. R. Jones and Mr. D. Morgan read a note on benign cysts in the long bones, reporting four cases, three of which appeared in the proximal phalanx of the index finger, and one in the centre of the ulna. After referring to the literature of the subject, an attempt was made to simplify the differential diagnosis both by differences in *x*-ray appearances and by other clinical signs.

MERCURY IN MODERN THERAPEUTICS.

Dr. WM. CARTER, in a paper on this subject, did not include any consideration of the drug in connexion with syphilis. He thought its use was neglected, and mentioned cases (1) of lymphatic block with enormous swelling but no escape of fluid through Southey's trocar; (2) of peritonitis; (3) of cerebral meningitis, even when suspected to be tuberculous; (4) of chronic cardiac disease when death appeared to be imminent. In all of these the free use of mercury, either internally or by inunction, and in meningitis accompanied by blistering of the scalp, was followed by relief, and where the organic changes were not such as to render such result impossible, by recovery. Five cases were mentioned of the control of the delirium which sometimes accompanied rheumatic fever, and of the persistent headache of robust men in whom there was no fever, by 5 gr. of calomel, even though the purgative effect were less than that produced by other cathartics. He showed three bottles, in one of which bile alone had been kept for ten days; in a second, bile with 2½ gr. of calomel, and a third in which calomel had only been added to the bile after the terribly offensive odour which characterized the contents of the first bottle had been developed; and asked if the freedom from, and correction of, decomposition in the two latter might not possibly help to explain the utility of the drug. Its insolubility allowed it to be conveyed to the duodenum unchanged (where it came into contact with the bile and pancreatic fluid, over which latter it could be shown to exercise a similarly antiseptic action) and it was not unreasonable to suppose that absorbable toxins were so influenced by it as to be rendered harmless.

Dr. F. H. PARKNDT regarded mercury as second only in importance to opium, and in cutaneous medicine, apart from syphilides, mercurial preparations were among the most valuable in treating chronic skin diseases. He extolled the use of unguentum hydrargyri subchloridi, linimentum hydrargyri, and unguentum hydrargyri iodidi rubri in brawny infiltration as a result of chronic eczema. Internally the alterative action of mercury could scarcely be overestimated, and he drew attention to its administration in psoriasis, as a prophylactic against recurrence, after the eruption had been removed by external medication. He quite agreed with Dr. Carter that it was most important to give exact instructions to the patient, even at the risk of stating the self-evident.

Dr. SCANES SPICER considered that the intestinal antiseptic property of mercury was indirect, being in great measure attributable to the increase in the output of bile, which acted as the best of all intestinal antiseptics.

Dr. S. KELLETT SMITH drew attention to the danger of administering mercurials to feeble old people with septic mouths. In such cases dangerous salivation might ensue from even single doses of calomel or blue pill. He had found phenolphthalein in 8 gr. doses a good purgative when there was reason to fear any ill effect from a mercurial.

Dr. J. LLOYD ROBERTS referred to the benefit derived from the occasional use of mercurial preparations in the treatment of chronic valvular disease of the heart when failure of compensation was threatening.

PATHOLOGICAL SECTION.

PEARCE GOULD, F.R.C.S., President, in the Chair.

Thursday, April 11th, 1907.

LYMPHATIC LEUKAEMIA.

Dr. WARRINGTON showed preparations of the blood and bone marrow from a case of chronic lymphatic leukaemia. The white cells in the blood were almost entirely small lymphocytes and amounted to 217,000 per c.mm. There was also severe anaemia. The bone marrow preparations showed that its proper tissue was replaced by great excess of lymphocytes, and a similar condition was found in the lymph glands.

CORTICAL DEVELOPMENT.

Drs. J. BEARD and GEORGE A. WATSON gave a [illegible] on the mode of development and [illegible] of the Cajal primary cell lamina of the cerebral cortex of man and of the lower mammalia. They stated that the cerebral cortex was composed of two primary divisions, of which the first and fourth were in essential structure fibre layers, and the second, third and fifth were cell layers. The undifferentiated cortex in the human subject consisted of a superficial and a deeper layer of neuroblasts. From this basis were first developed the fifth, polymorphic or inner cell layer, and the fourth (inner line of Baillarger) or inner fibre layer. The third, granule or middle cell layer, developed next, its appearance being followed by evolution of the second, pyramidal or outer cell layer, *pari passu* with which occurred a further development of the first or outer fibre layer. The same order of development of the cortical layers had been found to hold good in several lower mammals. The fifth, polymorphic or inner cell layer, was the first cell lamina of the cortex to be differentiated during the progress of lamination, and in association with the fourth or inner fibre layer subserved the lower voluntary and instinctive activities of the animal economy, and thus formed a lower-level basis for the carrying on of cerebral function. The third, granule or middle cell layer, developed after the fifth or inner cell layer and before the second or outer cell layer. In the prefrontal region of a fetus of 6 months it had just become differentiated from the outer cell layer, and was already one-half of the normal adult depth. In a child at birth it had become three-fourths of the normal adult depth. It primarily subserved the reception or immediate transformation of afferent impressions, whether these arrived directly from the lower sensory neurones or indirectly through other regions of the cerebrum. The second, pyramidal or outer cell layer in the prefrontal region of the human subject was the last layer to develop. It was visible in a fetus of 6 months, and was at that time only a quarter of the normal adult depth. In the visuo-psychic region it developed earlier than in the prefrontal region. In infants of 1 and 3 months it was respectively nearly two-thirds and more than three-quarters of the normal adult depth. It reached practically the same adult depth as in the prefrontal region. In the visuo-sensory region it developed much earlier still. In infants of 1 and 3 months it was already 84 per cent. of the adult normal depth. In the lower mammalia this layer was the most variable in depth of the primary cell laminae. It underwent, on the whole, a progressive increase in depth and complexity as the mammalian scale was ascended—in great contrast to the behaviour of the inner cell layer, which remained much more constant in depth. The purpose of this second pyramidal or outer cell layer was to subserve the "psychic" or associational functions of the cerebrum. In the human subject these functions were pre-eminent in the prefrontal region. They were less important in the visuo-psychic region, and they were of least importance in the visuo-sensory region. These three areas were therefore of different grades in the hierarchy of cerebral function. The second, pyramidal or outer cell layer, in association with the first, superficial or outer fibre layer, thus formed a "higher-level" basis for the carrying on of cerebral function. It was superadded on a "lower-level" basis, consisting of the fifth, polymorphic or inner cell layer, and the fourth or inner fibre layer, which subserved the lower voluntary and instinctive activities of the animal economy.

SOUTH-WEST LONDON MEDICAL SOCIETY. At a meeting on April 10th, Dr. MACKINTOSH, President, in the chair, Mr. D. F. SHEARER opened a discussion on the early differential diagnosis of abdominal pain, arguing that the present methods of arriving at a diagnosis were faulty, since capable and experienced men frequently came to different conclusions upon the same case. He put forward the view that the diagnosis should always be based upon a consideration of the nature of the pain alone, and that mistakes frequently arose from the introduction of signs and symptoms which were accidentally present. Pain was to be considered under two headings—character and locality. The character of the pain varied with the tissue affected and the disease affecting it, but was constant for the same tissue similarly affected; thus, pain due to intestinal colic was essentially different from that due to calculus, and the latter bore no resemblance to pain due to peritoneal affection. In addition to the classical instances, where a definite pain was recognized as diagnostic of a particular condition, recent researches had tended to show that all parts of the abdominal contents were in definite relation to sensory areas. Sooner or later a complete knowledge of these relations would form a sound groundwork for diagnosis. Referred and associated pains were best eliminated by full doses of opium, and the phrase "opium masks symptoms" was misleading, as

opium tended to diminish the accessory features, and to bring into prominence the pains which were essential for diagnosis. The discussion was continued by Drs. Bligh, Biggs, Dickinson, McDade, Richards, the President, and Mr. Ryall, the general feeling being that in many cases no diagnosis was possible without laparotomy, and that at present no trustworthy diagnosis based on pain alone could be made, and that it was not desirable to substitute a method which might lead to less careful abdominal examination.

Manchester Medical Society.—At the meeting on March 27th, Dr. Moritz, President, in the chair, Dr. Dreschfeld opened a discussion on the Diagnosis and Treatment of Acute Appendicitis. The symptoms by no means always corresponded to the pathological changes found, but appendicitis might be divided into mild and more severe forms without symptoms of suppuration, appendicitis with suppuration, appendicitis with perforation and followed by general peritonitis, and the fulminating or septic appendicitis. The speaker thought each and any of the various symptoms corresponding to the several forms of acute appendicitis might be absent, but in most cases the pulse, the fever (remittent with or without rigors), the muscular rigidity, and the presence of an intumescence either in the right iliac region or the pelvis (rectal examination should never be neglected) and leucocytosis showed the presence of pus or abscess formation. Diffuse peritonitis and the fulminating type were recognizable more by the aspect and general condition of the patient than by the local symptoms. Primary typhlitis was rare, and clinically could not be distinguished from appendicitis. Stercoral typhlitis occurred chiefly in old people, and gave rise to no pyrexia and often to very little pain in the ileo-caecal region, while faecal masses were often detectable in other parts of the large intestine. Tuberculous appendicitis generally ran a chronic course, but in children might set in more or less acutely. In children, intussusception and acetonaemia brought on by errors of diet might give rise to confusion, but their recognition was not difficult. Mucous colitis, intestinal spasms, enteralgia, and appendicular neurasthenia or hypochondriasis were chronic, non-febrile affections. Typhoid fever during the first few days might simulate appendicitis. Some cases of ovarian disease (pyosalpinx, haemorrhage, twist of the pedicle of the ovarian cyst, etc.), and of movable kidney, gave rise to symptoms difficult to distinguish from appendicitis. The perforation of a gastric or duodenal ulcer, or of a pyosalpinx causing perforative peritonitis, was often only to be recognized by the history previous to the perforation. As croupous pneumonia at its onset had sometimes been mistaken for appendicitis, it was well to examine the chest repeatedly if there was any suspicion of a pneumonic affection. In treatment small enemata, not drugs, should be used, and opiates as a rule avoided, but if pain were severe small doses of morphine with atropine, or the latter alone, might be injected subcutaneously. Only small quantities of liquid food should be given, and if vomiting were persistent rectal feeding should be adopted. He was in favour of an early operation. He remembered no case in which he regretted having advised early operation, whilst in some cases an even earlier operation might have prevented some of the most serious complications. Mr. Southam, who favoured early operation, thought that while in the initial stage pulse-rate and temperature bore no constant relation to the severity of the attack, painful local rigidity and thoracic breathing were symptoms usually pointing to the onset or the presence of the destructive form of appendicitis, and were indicative either of perforation or of gangrenous changes taking place in its walls. Owing to the tendency of appendicitis to recur and the difficulty of predicting with certainty what course an attack would take, the rule of early operation might with advantage be extended to all cases, even when the early symptoms were of a mild character. Mr. Burgess thought acute appendicitis the least difficult to diagnose of all abdominal disorders, the symptoms being definite, and following one another in characteristic order: (1) Pain around the umbilicus: (2) nausea, which in many cases, but not in all, proceeded to vomiting; (3) localized tenderness; (4) rigidity of the overlying abdominal muscles; (5) rise of temperature and pulse. A rectal examination should always be made. There was no sign nor any combination of signs by which it was possible in an early stage to foretell what course the disease would pursue. There was sometimes a deceptive improvement when the appendix became gangrenous or perforated, an improvement which had often led to fatal delay in advising operative treatment. The appendix should be removed as soon as a definite diagnosis of acute appendicitis had been made. Mr. Platt thought that at no distant date operation would be regarded as just as urgently required in these cases as in cases of strangulated hernia or ruptured gastric ulcer. Mr. Stanmore Bishop thought most surgeons were agreed as to the advisability of an operation during the first forty-eight hours if possible. The main difficulty, however, was not then, but in the period immediately after. Great mortality attended operations during that period; whereas, if it were in any way possible to wait until a quiescent period, the mortality was *nil*. Many patients had a previous history of several more or less mild recurrences. If such a patient came during the early period of one of these secondary attacks, was it wise to operate? It was infinitely preferable to wait if that were possible, since such appendices were frequently buried beneath adhesions or behind the caecum, needing long and sometimes tedious dissection to enucleate them, whilst the risk of setting free small collections of virulent pus was great. He believed that no hard-and-fast rule was possible. Each case must be judged on its own merits.

Nottingham Medico Chirurgical Society.—At a meeting on April 3rd, Dr. E. Powell, President, in the chair, Dr. W. Tibbles, in a paper on *Diabetes*, pointed out that many remedies had been given with the object of correcting the glycogenic function. Sodium salicylate and uranium nitrate were of service in mild cases and in old or gouty subjects. Alkalies were useful during the transition stage from ordinary diet to one poor in carbohydrate or highly nitrogenous. Large doses of sodium carbonate had a good effect in acetonuria. Opium and arsenic were pre-eminent amongst remedies, and their action was through the nervous system. Glycosuria in depancreatized animals was checked by transfusion of normal blood, lymph, leucocyte extract, or vegetable glycolytic ferment. Hence the proper treatment appeared to consist in furnishing such an enzyme, supposed to be supplied by the normal pancreas. Yeast, which is a glycolytic agent, had therefore been used, but with varying success. Jambul was of value in diabetes, and its action might be due to an enzyme, but it was untrue that it prevented sugar formation. Certain disinfectants, as creosote, iodoform, salicylic acid, aspirin, and benzosol, appeared to increase the patient's power of consuming carbohydrate with impunity. The ideal in diet was physiological equilibrium, and over-nutrition was as bad as underfeeding. The nitrogenous intake and output ought to be watched as carefully as the carbohydrate. In any case diet must be the basis of all treatment for diabetes.—Dr. James Watson showed: (1) A specimen of *Ovarian myoma* from a patient aged 31. She had noticed her clothes were getting tight only three weeks before she sought advice. Examination revealed free fluid filling the pelvis and part of the abdomen, and floating in the fluid a hard mass in the right hypogastric region. It was diagnosed as a solid ovarian tumour, probably of a malignant nature, and removed without difficulty; but during the tying of the pedicle the traction exerted separated the tumour from the ovary, from the distal third of which it arose. The tumour weighed 1 lb. 3 oz. On section it was found to be an ovarian myoma with very pronounced "whorling" of the fibres, so that very few neighbouring fibres were cut exactly in the same direction. An area of softening was found passing from the point of attachment to the ovary up to the middle of the tumour. The ovary itself showed very little ovarian tissue, the unstriped muscular fibres being in excess, but towards the tumour it showed areas of haemorrhage succeeded by areas of organizing clot. There were no adhesions, and the surface had the usual smooth and glistening appearance, although there were a few small pea-like nodules on it. (2) A fresh specimen of ovaries removed for abscess. The larger one was the size of a duck's egg, and had walls ¼ in. thick. There was a typical pyogenic membrane, but even the walls

showed numerous small abscesses and a multitude of points of leucocytic infiltration. He suggested the term "pyo-ophorosis" for such an ovary, on the analogy of "pyonephrosis."

British Gynaecological Society.—At a meeting on April 11th, Mr. W. D. Spanton, President, in the chair, Mr. F. B. Jessett described (1) an extrauterine pregnancy in a patient aged 30.

She gave a history of a lump in the left side of her abdomen, which had been getting larger for three or four months; she had never been pregnant, but had had no menstrual period for five months previously. Two months before coming to hospital she felt ill after exertion, and had to keep in bed for six weeks suffering from pain and vaginal haemorrhage. On examination a hard irregular mass was found in the left iliac fossa extending to the pubes and above the umbilicus. It was painful midway between the umbilicus and left anterior superior spine. Coeliotomy revealed a gestation sac between the layers of the broad ligament and with many adhesions. It contained a dead fetus of five or six months, which was readily removed with the attached placenta. Any attempt to remove the sac caused haemorrhage, which was controlled by ligature and pressure. The sac was brought into the wound, and the cavity plugged. Convalescence was uninterrupted.

The specimen was shown (2) of a case of ruptured ovarian cyst which was followed by generalized peritonitis of a malignant nature, and by secondary growth in the uterus and vaginal walls some months later.

The patient, aged 35, had been operated on fifteen months previously for ruptured ovarian cyst, and returned complaining of metrorrhagia and pain in the right iliac fossa. The uterus was found to be retroverted and mobile. In the recto-vaginal septum a small hard swelling was found, which readily bled when touched. This mass was excised before vaginal hysterectomy. The growths in the ovary and uterus presented the same histological characters, showing cystic formation and intracystic papillae.

Convalescence was satisfactory during observation.—Dr. Macnaughton-Jones read for Professor Jacobs (Brussels) a paper describing a radical treatment of prolapsus uteri. It was used only in severe cases, and had been tried in 77 such. The ages of the patients varied from 43 to 71. Five showed a slight relapse consisting of cystocoele with prolapse of the anterior vaginal wall, and 1 died from stomachic causes. The operation was named abdominal colpopexy, and consisted in exposing the uterus by a median coeliotomy and then exercising strong traction on it in an upward direction. The uterus was then carefully released from its attachments until held only by its attachment to the vagina. Section of the latter was then made at a point lower or higher, according as the prolapse was pronounced, by V-shaped anterior and posterior incisions with widely-separated limbs above at the junction of the vagina and the uterus. The margins of the incisions were then united by sutures, the knots turned into the vagina, and the pelvic floor reconstructed by whipping together the cut surfaces of the broad ligaments and round ligaments on each side so as to unite them above the newly formed vaginal vault. To prevent any return of prolapse the round and utero-sacral ligaments on both sides were united to the vaginal stump, which was thus raised up in the middle of the pelvic cavity. In the discussion which followed, Sir William Smyly said he was surprised at the successful results, but thought that in cases where the pelvic diaphragm was destroyed the operation was deserving of trial. Cases ought to be operated on early. Mr. Christopher Martin thought that this operation would fail in some cases, and was in favour of using pessaries, but, where they failed, would resort to removal of uterus and vaginal mucosa and union of the pelvic fascia of opposite sides in the middle line. Dr. Macnaughton-Jones thought the important point consisted in uniting the round and utero-sacral ligaments in the middle. Mr. F. B. Jessett considered the same result would be accomplished by removal of the uterus by the vagina rather than by the abdominal route. Dr. Ethel Vaughan thought a distinction should be drawn between prolapse in younger women and in those who had passed the climacteric. Mr. Fürstenau Jonnas considered the operation would prove useful in supporting the vaginal vault which caused a difficulty in most other methods of operation. The procedure was quite justifiable. The President thought that in a case in which prolapse occurred in an elderly woman with a patulous vagina, who expressed a strong wish to have something done, this operation might be attempted.

Society for the Study of Disease in Children.—At a meeting on March 15th, Dr. G. A. Sutherland in the chair, Dr. G. Russell Howard read a paper on *Tuberculosis of the testis* in infants. The condition was rarer in infants than in adults, owing to the period of active function not having arrived, and was rare in the undescended testis. It began in the epididymis, spreading to the body of the testis, the vesiculae seminales and prostate being rarely affected in the early stage. The diagnosis from syphilitic disease rested chiefly on the result of treatment. Tuberculous peritonitis was a frequent complication. If one testis only be affected and general treatment unsuccessful, the testis might be removed without bad effect on the mental and bodily growth. The following were among the exhibits:—Dr. Howard: Teratoma from the sacrum of a child, aged 6, and consisting of several parts, one resembling a kidney in a serous sac, with a mass of cysts above. Bone, lymphoid tissue, and muscle and cartilage were also found. The tumour was very vascular. The large kidney-shaped mass consisted of interlacing tubules lined with a columnar-celled epithelium, with lymphoid tissue and large round cells in between the tubules; some of the cysts were lined with stratified epithelium with sebaceous glands, others with columnar epithelium. The tumour, therefore, was derived from all the layers of the embryo. Dr. Cautley: A boy aged 2 years, with a large, solid, nodular tumour in the left lower quadrant of the abdomen. The spleen and liver were somewhat enlarged. The blood was approximately normal. He regarded the tumour as sarcomatous in character. Dr. Porter Parkinson: A case of cerebral tumour in a girl aged 7 years. There was history of occasional convulsions for fifteen months. Two months ago weakness of the right side of the face and the right limbs had been noticed. Recently there had been headache and vomiting. There was double optic neuritis. In one fit which had been observed the movements were chiefly of the right side. The exhibitor considered there was a subcortical tumour in the left hemisphere, probably gliomatous in nature, and proposed to have the child trephined with the object of preserving the sight. Mr. G. Pernet: A case of multiple lupus vulgaris in a boy aged 10. The patches, which were on the chin and right shin, followed an attack of measles. They had much improved in three months' treatment by *x* rays, preceded by scraping.

Society of Registered Medical Women. At a meeting on March 4th, Miss Aldrich-Blake, President, in the chair, Mrs. Savill showed a case of *Urticaria pigmentosa* in a boy aged 9. He had suffered from ringworm, and the skin was so excitable that the mildest antiseptic ointments or lotions could not be tolerated. X-ray treatment had yielded excellent results. A case of severe lupus erythematosus was also shown which had resisted all ordinary remedies for three years but had shown rapid improvement after four injections of tuberculin ($\frac{1}{5}\frac{1}{0}\frac{1}{0}$ mg.) administered at intervals of six weeks.—Miss Simpson read notes of a case of *Caesarean section* on a woman aged 37, whose five previous deliveries had all been accomplished with great difficulty, the children dying or being injured. The operation was performed on December 29th by Miss Ivens, assisted by Mrs. Scharlieb, and a healthy male child was delivered. The uterus contracted well, and there was no haemorrhage. The patient was sterilized at her husband's request, by the removal of about 2 in. from both tubes. The omentum was drawn down in front of the intestines, and the abdomen closed in the usual way. The patient, however, died four days later, having vomited a good deal and having passed nothing but flatus. The abdomen was examined *post mortem*, and intestines found very much distended, especially the large gut; an incomplete obstruction was found at the lower end of the sigmoid flexure, produced by an appendix epiploica being adherent on the inner side to the mesentery and on the outer side to the omentum. The cause of death was probably heart failure from pressure of the distended intestines.

The late Miss Anne Robinson Boulton, of Tetsworth, who died on February 25th, left £4,000 to King Edward's Hospital Fund and £200 each to the Radcliffe Infirmary, Oxford, the General Infirmary, Stafford, and the General Hospital, Birmingham.

REVIEWS.

THE SANITARY EVOLUTION OF LONDON.

The province of bricks and mortar which we call London is a phenomenon of ill-ordered and unscientific growth which must always be full of interest to the student of sociology. The general survey leaves one lost in wonder at the enormous population and vast area of a city which has become great without guidance, and maintained supremacy in size in spite of difficulties and neglect. When Topsy accounted for her existence by saying that she supposed she "growed," she said what London must have replied to a similar question. In *The Sanitary Evolution of London*[1] Mr. Henry Jephson gives us a study of the evolution of the world's greatest city from the health point of view; and although the problem of how it all came about is here narrowed to very clear and definite limits, the vastness of the subject and wonder of the story are just as entrancing. Really, when regarded from the modern scientific standpoint of public health, London ought to have been wiped out by pestilence time after time, on account of the infinite filthiness of the town in the olden times and the crass ignorance and shameful apathy of its rulers. A terrible toll was paid to Death year by year, and at times a tenfold penalty was exacted, but through it all the great city muddled on, with true British obstinacy, till to-day, if not one of the best governed, it has become one of the healthiest of town dwelling-places.

Mr. Jephson tells his story of London with great skill, and has collected in the seven chapters into which he divides his book a marvellous amount of valuable information and recondite material. It is very interesting to trace in the first chapter the small beginnings of modern sanitation. The greatest population that the world has ever seen on the same area seems to have grown up content to suffer and die in callous indifference to disease and dirt. Dirt ought really to be placed first, for after all this book shows, as all modern science teaches, that dirt is the prolific mother of disease. In the early part of the seventeenth century London's first sanitary reform was effected in the introduction of the New River water supply; and in 1666 the Great Fire following the Plague, by destroying much of the worst part of a filthy city, made another contribution to the preservation of health. From that time on little more was accomplished till another plague in the shape of cholera started the slow beginnings of the sanitary reforms which are, after all, the chiefest glory of the Victorian age. There were in 1832 a million and a half of people in the metropolis, and 10,000 cases of cholera occurred, while the mortality reached the enormous proportion of 5,000. The people were startled, and the authorities, such as they were, became active for a brief period in cleansing and inspecting their localities.

The energy engendered by panic soon died down when the cholera departed, and it was not till some years later that Dr. Southwood Smith and others began to rouse public attention to the continuous prevalence of fever. In a Parliamentary paper it was shown that in 20 metropolitan parishes, there had been 14,000 cases and 1,300 deaths from that cause among 77,000 paupers in the single year 1838. The prevalence of this fever was the direct result of filth. The London of those days was an unclean city. It had no sewage system, it was honeycombed by cesspools, it had no proper water supply, its river was an open sewer, and its atmosphere was blackened by the smoke of its factories and foul with the gases given off by the accumulations of refuse. No one was responsible. There were no local authorities with adequate powers; the City with its Corporation was a thing apart, and the outside communities had no civic organization. There were Poor-law authorities, paving Boards, commissioners of sewers for certain districts, and vestries, but none of them with powers to deal with the problems of public health and no central authority to direct or control.

In 1840 Parliament awoke to some sense of its duty and appointed a Select Committee to inquire into the health of London and the large towns throughout the country. It should always be remembered, to the discredit of the statesmanship of that time, that the large towns in the provinces had been given, under the Municipal Reform Act, 1835, adequate powers of self-government, while the largest of all towns—London—had been excluded from a like advantage and left (except the square mile of the City) without even the rudimentary framework of local government. That neglect, it may justly be asserted, has cost London tens of thousands of lives and many millions of treasure. From 1840 onwards Commission followed Commission, and the evidence collected brought into view "the limitless insanitation of London." The filth diseases consequently ravaged the metropolitan area, the deaths from such maladies increased from 9,600 in 1846 to 14,000 in 1847. In this latter year typhus levied a fourfold mortality, and influenza attacked half a million of people in a few weeks out of a population of 2,100,000. In 1848 the Government introduced a Public Health Act, but, with an inconceivable blindness to the wants of London, limited its provisions to England and Wales outside the metropolis on the plea that London must have a Bill for itself. The separate Bill did not appear, and so the Government left untouched the source and centre of disease and exposed the people of London unprotected to a fresh onslaught of pestilence. The peril was near at hand. Cholera was on its way westwards, and in the autumn of 1848 reached London, but died down in the winter.

In the meantime the Nuisance Removal and Diseases Prevention Act of 1846 was re-enacted with a valuable addition—the appointment by the Privy Council of a General Board of Health. London City had meanwhile done its best day's work for public health by appointing John Simon to be its medical officer, and so, when the great scourge began early in 1849, some preparations had been made. How futile they were was shown by the fact that the attacks were about 30,000, and the deaths from cholera no less than 14,600 in London alone. In other words, the deaths in this epidemic were more numerous than the attacks in 1832-33. The Board of Health had on it three pioneers of sanitary work—Lord Ashley, Southwood Smith, and Edwin Chadwick; they, together with John Simon, then Medical Officer of Health for the City, and in 1855 to become Medical Officer to the Privy Council when the Board of Health took a new form under fresh legislation, were the fathers of modern sanitary administration. Probably no men ever did more for the health and well-being of their own and the succeeding generation than these four sanitarians and the medical inspectors and officers of health who were for the time associated with them.

Cholera had once again become the parent of sanitary reform. It began to dawn on the intelligence of legislators that water polluted by London sewage was not fit for drinking, and so in 1852 the companies were required to remove their intakes above Teddington Lock, where the tide would not affect the supply and London sewage would not be mixed with it. All water for domestic use was to be filtered, and the supply was to be made constant within five years of the passing of the Act of 1852. The five years' limit was, with almost wanton indifference, allowed to apply to the removal of the intake from the foulest parts of the river to above the tidal reach. But the great teacher Cholera was again at hand. Late in 1852 it began with a few cases, in 1853 it became more virulent, and in 1854 it was so prevalent that in the last six months of the year the total mortality was 10,675.

The third time of teaching was effective. The lesson that polluted water was the great propagator of cholera was learnt at last, thanks to Snow's admirable observations. From this time onwards the gospel of cleanliness was accepted, and Parliament with timid steps has gradually given to the greatest of cities more and more power to protect itself. As our author justly says, the turning point in the sanitary history and evolution of London came in 1855, in the shape of the Act "For the Better Local Management of the Metropolis." Some 300 petty existing local bodies were swept away, and in 23 of the largest parishes definite vestries elected by the householders were constituted. The smaller parishes were grouped into "districts," some fourteen in number, with a Board of Works for each district, while a central body for dealing with matters affecting London as a whole was constituted as the Metropolitan Board of Works. Moreover, a New Nuisances Removal Act was passed which at last gave London a code of sanitary laws in some

[1] *The Sanitary Evolution of London.* By Henry Jephson, L.C.C. London: T. Fisher Unwin. 1907.

degree similar to those enjoyed by other parts of England. It was soon found that while the Central Board was given large powers, it was not authorized to appoint a medical officer of health to advise it, or inspectors to ascertain sanitary defects. But, graver than all, it had no power to compel negligent authorities to carry out their public health duties. The vestries thus became practically independent bodies. They appointed medical officers of health, some forty in number, who began their work in January, 1856. Mr. Jephson has collected a most interesting series of extracts from the reports of these unselfish and devoted men, which form a remarkable record of the sanitary conditions and ideas of the period, and are a monument of the industry and capacity displayed by these public servants. If the vestries had only been inspired by the same ideals as their medical officers, London would have saved much treasure and avoided infinite human misery. The greatest achievement of this era was, however, the cleansing of underground London and the river. The Metropolitan Board of Works had charge of the main drainage, and with this gigantic task it boldly grappled from the outset. To cleanse the Augean stable was a great labour for the hero of antiquity, but there was a greater task here. It was to cleanse a city of one hundred square miles in extent with two and a quarter millions of inhabitants crowded together on a site polluted for centuries, riddled with shallow drains and honeycombed with cesspools; a city built on the banks of a river which was the main sewer into which was discharged the filth of the town, and in which the tide swept the noisome burden up and down, or left it rotting on the exposed banks. In the course of ten years the Metropolitan Board of Works accomplished their great triumph for public health. Till they had completed their main drainage and sent London's dirt down the river to Barking the Thames was a foul ditch. Members of Parliament in these days could not sit on the Terrace of the House on account of the stench from the river, while to-day the same Terrace has become a fashionable resort for ladies for afternoon tea, and men are heard to talk of the time when trout may be caught from the Victoria Embankment. However ignobly the life of the Metropolitan Board of Works finished, it should always be remembered that this Board cleansed the Thames.

The other great essential for health—a better and more copious water supply—was only partially met. The Nemesis of neglect, cholera, was again at hand, and in 1866 once more pointed the moral of its coming in the most striking way. Of the 5,548 deaths in this invasion, 3,000 died in the East districts alone, and this called attention to the pregnant fact that the epidemic was due to an illegal and most culpable act of the East London Water Company "in distributing for use water which had not passed through its filter beds." This lesson has never been forgotten since, although it has in many instances been imperfectly applied. Parliament also passed this year a sanitary Act which this time included London, and gave, among other provisions, valuable powers as regards the wholesome and cleanly housing of the poor.

The remaining chapters of the book begin in each instance with the Census results, and contain valuable material as to the rates of mortality, the overcrowding, and infant mortality in each decennial period. In these chapters there are many illuminating quotations from the reports of medical officers of health. It is borne in upon one from time to time how the position through all these years in London resembles the position even now in many rural districts, where the sanitary officers hold their appointments at the pleasure of the local authority. For the discharge of these delicate duties fraught with infinite possibilities for good, there should be absolute independence for the medical health officer. No vested rights to property and dirt should stand in the way of the moral and material security of the poorest citizen. The Act of 1875 on which the present sanitary administration in England and Wales rests, will have to be amended in this respect before the health service of the country can be secured for the highest and noblest uses. The guidance and protection of a central authority is also necessary for the effective administration of Public Health. This was recognized in the old Metropolitan Board of Works, in 1855 it was admitted in the creation of the Metropolitan Asylums Board, and in 1875 it was finally sanctioned in the Act which gave London its central authority in the County Council. In 1891 the Public Health (London) Act was passed, and for the first time the metropolis was placed in a position in advance of the provincial cities. The sanitary officers were given security of tenure, and required to have proper qualifications, and the County Council was endowed with large powers of supervision, and, under certain circumstances of action in cases of default on the part of a local authority. All this was evidence of progress, and in 1893, when cholera once again broke out in 64 localities, the highest testimony to the advance made since 1866 was the fact that only 135 lives were lost in the whole kingdom. The work done in London itself under the County Council is narrated with great care in the two last chapters of the book. The author, himself a member of the County Council up to the last election, has raised in this volume a memorial of the spirit in which he and others have done health work. It seems a niggardly treatment for such services that even now the Council is not trusted with the water supply of London, but that a separate and unelected Board should be responsible for this prime necessity of healthy life in a great city. That is one of the defects which will have to be remedied. Others, as our author points out, are the need of stronger powers as regards the housing of the poor, and the necessity of requiring all local authorities to fulfil their obligations as regards sanitation under the control and supervision of the central authority.

The book shows how we are working surely, if slowly, up to these more perfect conditions. From the timid and stumbling steps of the childhood of sanitation we have seen, under Mr. Jephson's guidance, the advance to the more sure and sturdy movement of to-day, and we leave this fascinating study of progress in the sure hope of a more wise and perfect administration in the future.

CHOLELITHIASIS.

THE monograph on calculous obstruction of the common duct,[1] by Dr. RAYMOND FRANÇAIS, is something like a graduation thesis. It is based upon fifteen cases under the care of Dr. Hartmann, and, as might be expected, conclusions drawn from so limited a number are not of universal application. The duration of the cases varied from a few months to as long as thirty years. The symptom upon which he lays most stress, after jaundice, is the occurrence of periodical paroxysms of pain; but, while insisting upon its diagnostic importance, he admits that it is occasionally absent, as was the case in a patient of whom he records the history. He points out that vomiting does not relieve the pain as it does usually in stomach troubles, and thereby makes a point of distinction in diagnosis. When the pain is localized below the costal border in front and under the scapula behind it points to an affection of the gall bladder, but when situated in the epigastrium in front and between the shoulder blades behind it points to the common duct. Vautrin's sign is tenderness along the course of the common duct; he advises that the practitioner should stand on the left of the patient and depress the abdominal wall outside the rectus muscle with the fingers extended as if desirous of reaching the vertebral column; if the patient is thin, a sharp pain may be elicited at a certain point, and even a deep-seated induration may be felt. Desjardins has drawn attention to a point in a line drawn from the umbilicus to the axilla, situated 6 cm. from the umbilicus; pressure here causes sharp pain and may permit the perception of a deep swelling when chronic pancreatitis is present. In connexion with the jaundice, he speaks favourably of what he calls "Hayeraft's" test, although he does not mention its use in the histories of his cases. It is extraordinary that this mistake should be perpetuated by writers who evidently do not take the trouble to look up the original authority; the test described is that of Hay, and was recommended by him not for *bile pigments* as Dr. Français seems to imagine, but for *bile salts*: but so far from being useful it is, in our experience—and we have used it systematically for several years—absolutely useless. In the differential diagnosis between calculous obstruction and cancer Dr. Français attaches great importance to ascites, distension of the gall bladder, and painful swelling

[1] *Essai d'étude sur l'ictère par rétention de la Lithiase biliaire.* (The Causes, History and Treatment of Calculous Obstruction of the Common Duct.) Par le Dr. Raymond Français. Paris: G. Steinheil. 1906. Demy 8vo. Pp. 176.

bove the umbilicus a little to the right of the middle ne, as signs of cancer; this swelling does not move on espiration, it is, however, present in cases of chronic pan-reatitis. He omits to consider other causes of difficulty n differential diagnosis such as a hydatid cyst communi-ating with and discharging membrane into the common luct.

A considerable part of the book is taken up with the lescription of the operative treatment. Operation is justi-ied in: (1) Cases of acute cholecystitis; (2) where the patient's general condition is bad and there are frequent vomiting, painful paroxysms, intense jaundice, and enlargement of the liver; (3) where the patient is becoming addicted to morphine for the relief of pain. Naunyn's period of a year is too long to wait; he would operate at the end of six weeks if there were no appearance of improvement. During the waiting period he recommends medicinal treatment by the use of doses of 125 grams of olive oil on three consecutive days. He regards as a contraindication the presence of ascites, which he thinks indubitably indicates cancer when associated with pro-gressive jaundice. The operation he recommends is that of choledochotomy, with drainage of the hepatic duct and removal of the gall bladder if this contains stones. The part of the book descriptive of the operative procedures is illustrated by excellent drawings.

COMPARATIVE MEDICINE.

MR. JOWETT'S *Notes on Blood-Serum Therapy*[3] are intended to give the student of veterinary pathology an outline of the scientific methods of prophylaxis, vaccination, and diagnosis with which the up-to-date veterinary practitioner ought to be familiar. The book will also be of interest to many students of human pathology who find that their ordinary textbooks say little or nothing about many interesting infective diseases which are prevalent amongst animals but do not occur in man. For example, the "pasteurelloses," or haemorrhagic septicaemias, are a group of very important bacterial infections which are little known except to veterinary surgeons, and the diseases produced in animals by piroplasmata, trypanosomata, and spirochaetes are also of great importance for the comparative study of animal and human pathology. In a book of such small compass the discussion of each disease is necessarily very brief and more or less incomplete, but it serves the useful purpose of giving a preliminary definition of what the subject means. In stating the differences between avian and mammalian tubercle bacilli, Mr. Jowett says that the former are longer. This is not invariably the case. Both in the tissues of animals and when grown on certain culture media avian tubercle bacilli are often remarkably small.

Professor KITT'S *Comparative General Pathology*,[4] translated from the German by Drs. CADBURY and SMITH of the University of Pennsylvania, is intended for the use of practitioners and students of veterinary medicine. It is an adaptation, for the special purposes of veterinary science, of those general principles of pathology which are usually dealt with from the standpoint of human disease. The theoretical treatment of such subjects as immunity, intoxication, the processes of infection, and fevers, is necessarily rather brief and does not contain all that a student of human medicine would be required to know, but it is, perhaps, adequate for the purpose of the average veterinary practitioner. The discussion of tumours, both innocent and malignant, is interesting and is enriched with illustrations of specimens obtained from a variety of domestic animals. We note that the author is strongly in favour of the view that human and animal tuberculosis are caused by one and the same infective agency, nor does he regard the mammalian and avian types of the disease as absolutely distinct from one another. Birds, he points out, have sometimes been rendered typically tuberculous by inoculation with a mammalian virus, and, conversely, horses, as shown by Nocard, can be infected with avian tuberculosis. As Professor Kitt is a well-known veterinary authority, this expression of opinion is of considerable interest. The translators appear to have revised their proofs rather hurriedly. We have found a considerable number of printer's errors, and under the illustration of a skin disease in the bovine, on p. 384, there is written the remarkable inscription, "cutaneous papillomatosis of beef."

[3] *Notes on Blood-Serum Therapy, Preventive Inoculation, and Tuberculin and Serum Diagnosis.* For Veterinary Practitioners and Students. By Walter Jowett, F.R.C.V.S., D.V.H. London: Baillière, Tindall, and Cox. 1907. (Crown 8vo, pp. 204; with illustrations. 5s.)

[4] *Textbook of Comparative General Pathology for Practitioners and Students of Veterinary Medicine.* By Professor Dr. Th. Kitt, of Munich. Authorized Translation by Dr. William W. Cadbury and Dr. Allen J. Smith. London: Baillière, Tindall and Cox. 1906. (Royal 8vo, pp. 471, with 4 coloured plates and 131 illustrations in the text. 25s.)

MASSAGE AND ELECTRICITY.

THE manual of practical massage, by ex-Professor MARFORT of Odessa[5] is not the work of a doctor, but is nevertheless a complete and concise presentation of the aims and claims of massage and medical gymnastics up to date. It is unfortunate that many of the claims made in behalf of massage rest on a very slight scientific basis, and that in many instances it is impossible to distinguish the physical from the mental or "suggested" effects of the remedy. The reader of a book of this sort need not be over-sceptical if he attribute some wonderful results more to the latter than to the former cause. Professor Marfort gives clear directions for the performance of the six kinds of massage and their nine varieties—fifteen distinct processes in all. He states categorically (and we agree with him) that for vibratory massage (or seismotherapy) the mechanical vibrator is to be preferred to the hand, because it is impossible to give sufficiently rapid and continued vibrations with the latter; but in all the plates illustrating the use of vibrations the manual method only is shown. Uterine massage has not found much favour in this country, and in this book, after condemning any position of the hand which involves contact with the clitoris, the author gives as an illustration of the proper method a plate which shows the very position he has just condemned. The practice of uterine vibrations is in general unjustifiable. If there are cases in which it may be admissible, it should only be done by a *masseuse*. In any event figure 36 is unnecessarily realistic, and will, we hope, be omitted in future editions. The section on medical gymnastics includes an article on scoliosis, in which, however, there is nothing new or noteworthy, and also one on gynaecological gymnastics. No doubt exercises are beneficial in certain disorders of the pelvic organs, but the author claims more definite effects than the evidence seems to warrant. The movements are divided into those causing congestion and promoting the menstrual flow, and those having a contrary effect, and we find the same movement credited with opposite effects, according to whether it is performed in the erect or the sitting position. We could have wished that more space had been given to the consideration of massage for injuries and deformities, in which its good results are most striking and permanent.

The fact that the sixth edition of Dr. STRETCH DOWSE'S *Lectures on Massage and Electricity*[6] lies before us would seem to show that it is well established in the good opinion of its readers. The author writes enthusiastically of his subject, and in the preface he refers with just pride to the place which massage has taken in therapeutics, despite the coldness with which it was received in its earlier days. Dr. Dowse defines massage as follows: "The application of sentient living matter to sentient living matter in divers ways, and with an amount of energy in direct ratio with the resistances which have to be overcome." This is very vague. It would take in prize-fighting and many other proceedings which certainly are not massage. Those passages in the book which treat of the actual manipulations of the masseur are clear and instructive, but it is a discursive work, and teems with quotations from other authors. For example, there are nineteen pages of quotation from Charcot on hysteria in the male, which, although very interesting, have little or nothing to do with massage or electricity. Three-quarters of the book are taken up with the lectures on massage, in which a good many references to electrical matters are

[5] *Manuel Pratique de Massage et de Gymnastique Médicale Suédoise.* Par J. E. Marfort, ex-professeur de massage et de gymnastique médicale et orthopédique à l'Institut de l'Empereur Nicholas Ier, ex-attaché à l'Institut des demoiselles nobles à Odessa pour le traitement des scolioses. Troisième edition, avec 111 figures intercalées dans le texte. Paris: Vigot Frères. 1907. (Fcp 8vo, pp. 318. Fr. 5.)

[6] *Lectures on Massage and Electricity in the Treatment of Disease.* By Thomas Stretch Dowse, M.D.Aberd., F.R.C.P.Edin. Sixth edition revised. Bristol: John Wright and Co.; London: Simpkin, Marshall, and Co. 1906. (Demy 8vo, pp. 447. 7s. 6d.)

included, and the remaining quarter is more formally devoted to the consideration of medical electricity in its various forms. The descriptions of apparatus and of the uses of the various currents are adequate. The illustrations in this section are most of them familiar to the reader of electricians' price lists.

LORD LISTER'S BIRTHDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following letter has been sent to Lord Lister on behalf of the Council of the Royal College of Surgeons of England:

Dear Lord Lister—The Council of the Royal College of Surgeons, at their meeting on the 10th instant, deputed us to write and convey to you the sincere good wishes of every member of the Council on the completion of the 80th year of your age.

Crowned with honour and regarded with grateful esteem and admiration as you have been for years past, we have heard with great gratification of the further evidences of universal homage which have reached you from all parts of the world on this occasion. But by none are these feelings of esteem and homage more profoundly and genuinely entertained for you than by the members of the Council of this College.

We recall with pride and satisfaction that for eight years you occupied a seat on this Council; that your services to the science of surgery have been commemorated by us in making you one of the very small number of recipients of the honorary medal of the College; and that your portrait was presented by Fellows and Members of the College in 1897 as an expression of respect and admiration for you as a man, and as a tribute to you as a great benefactor of the human race. This portrait we regard as one of the most valued possessions of the College, and we delight in the fact that it will convey to our successors, for all time, the likeness of him who is, and will always be regarded as, the greatest master of modern surgery.

We are sure we shall be expressing the thoughts not only of the present and of ex-members of the Council, but also of every Fellow and Member of this College when we say that you, more than any other who has ever lived, have succeeded in applying scientific and practical surgery to the benefit of mankind and to the sparing of human life and suffering.

The blessings which have followed from your life's work have been innumerable, and the knowledge that they increase and become, as time passes, more and more manifest, must, we feel assured, be a source of extreme happiness and consolation to you in your distinguished and honourable retirement.—We are, dear Lord Lister, yours very truly,

HENRY MORRIS, President.
EDMUND OWEN, } Vice-Presidents.
FREEMAN J. CHANCE, }

FACULTY OF PHYSICIANS AND SURGEONS.

The following is the text of the address of congratulation by the Faculty of Physicians and Surgeons of Glasgow:

My Lord—It is with greetings of profound pleasure and satisfaction that the Faculty of Physicians and Surgeons of Glasgow approach your Lordship on the occasion of your completing the eightieth year of your age. The Faculty have the greater sympathetic interest on this occasion inasmuch as upward of forty-six years have passed since you were admitted a Fellow of the Faculty, and nearly nine years since the Faculty had the pleasure of bestowing on you their Honorary Fellowship.

It is now upwards of forty years since, while resident in Glasgow, you were impelled by feelings of dissatisfaction at your experience as a hospital surgeon to make those investigations and trials in our Royal Infirmary which resulted in the establishment of the antiseptic system, and in effecting a benefit and revolution in the system of treating wounds. You have lived to see the system adopted throughout the whole civilised world and the consequent saving of a large number of human lives which would otherwise have been sacrificed.

The Faculty trust in your retirement you may still have many days in store for you, and that the retrospect of your life may continue to afford you the highest comfort and happiness.

WILLIAM L. REID, President.

SECRET REMEDIES AND PROPRIETARY PREPARATIONS.

DR. ZERNIK continues his list of new remedies, specialities, and proprietary preparations in the *Deut. med. Woch.* of January 24th.

Sapalin is supposed to be pure mono iodo behenate of calcium, but is not absolutely pure. It should contain 35 per cent. of iodine, but only contains 24·5 per cent. It usually contains from 1½ to 2 per cent. of moisture.

Ian is said to be a 0·2 per cent. saccharate of ferric oxide. It is prepared in liquid form. Saccharated oxide of iron has long since been on the market, but hitherto it has not been possible to prepare the chemical combination of $C_{12}H_{22}O_{14}FeO$. On analysis it turned out that *ian* is a neutral oxydulated citrate of iron with sugar, presenting no advantages over other preparations.

Urocitral has been introduced in Hanover as a sodium citrate of theobromine. The theobromine acts diuretically, while the citrate of sodium is supposed to render the action more pleasant; and it is further said to have the advantage over diuretin that it is free from the by effects of salicylates. It is, however, not a single chemical compound, but is merely a mixture of theobromine (52·22 per cent.) and citrate of sodium. Theoretically, the theobromine content of a compound would be 39.13 per cent. It cannot be supposed that such differences would be immaterial with regard to dosage.

Formurol is a recent antigout and urinary disinfecting medicament. It is said to be hexamethylen tetramine sodium citrate, having the formula of $C_6H_7O_7Na$. $C_6H_{12}N_4$. The dose advised is 1 gram three to five times a day. The combination is not new, and a similar compound is to be found both in helmitol and in neurotropin. The action in gout is stated to depend on the splitting off of formaldehyde, which takes place not only from hexamethylene tetramine, but also from anhydromethylen citrate. The formaldehyde, it is said, converts the uric acid into the more soluble diformaldehyde uric acid, while the citric acid is oxidized to carbonate, which is supposed to raise the alkalinity of the blood, and thus favour the interaction with the uric acid. There would not appear to be any necessity for this new preparation, as the older ones should be regarded as more likely to act well. But the chemical analysis showed that the preparation is not a chemical compound, but only a mixture of about 37.5 per cent. of hexamethylen tetramine and 62.5 per cent. of a mixture of neutral and acid sodium citrate.

Aspirophen is also a new preparation, which is supposed to have an antipyretic and analgesic action. It is said to be the acetyl salicylate of amido-aceto-para-phenetidin. It is said to combine the antirheumatic action of a non-toxic salicylate with the analgesic action of the phenacetin group. The dose recommended by Fackelmann is 1 gram five to eight times a day. Zernik has found that in reality this preparation consists of 63 per cent. of monoacetyl paraphenetidin (a hitherto unknown compound) and 37 per cent. of free salicylic acid. The prospectus claims an advantage over all preparations which contain free salicylic acid.

Divinal is a powder, which is said not to be a remedy but a natural product, possessing remarkable properties. Each packet, weighing 2½ kilograms, costs 2s. 6d. It consists of mineral substances, one-third of which is quartz, and the rest clay, iron compounds, silicates, and carbonates of alkalies, etc. It appears to vary in composition greatly, and its only action seems to be as a poultice, it being a bad conductor of heat.

Electricum is described as "aethereal tirolese fir and pine wood oil, a pure, harmless natural product of powerful penetrating action," and is recommended as an external remedy for rheumatism, gout, pains in the limbs, paralysis, sciatica, lumbago and backache, neuralgia, tumours, etc. A bottle containing 100 c.cm. costs 1 mark, while larger bottles cost 2 marks. Samples are supplied for 60 pfg. (about 7 d.). It seems to consist of the oil of the coniferæ. This oil is used in certain districts as a popular rheumatic remedy.

Lawrie's Gout and Rheumatic Soap is prepared by Fritsch of Dresden. It is a piece of medium-quality sodium soap, containing a very small quantity of an ethereal oil. The cake weighs 70 grams, and costs 1 mark.

Weigand's Rheumatic and Gout Spirit "relieves the pains within a few hours, and cures after a short time." The bottle contains about 55 grams of turpentine oil and 55 grams of the spirits of camphor (made from denaturated spirit) and 5 grams of Venice soap. This costs 2s. 6d.

Rheumatikon is a protected remedy against rheumatism and gout. The bottle costs 2s. 6d. It is said to be a harmless preparation, containing 0·005 per cent. of sodium phosphate, 0·05 per cent. of colchicum, 0·01 per cent. of aconite, and 0·1 per cent. of cochineal, with spiritus vini aquosus. The bottle would therefore contain 5·5 c.cm. of a slightly coloured alcoholic liquid. Apart from some milk sugar no other ingredient could be detected.

LITERARY NOTES.

Among the numerous tributes to Lord Lister which have appeared in the Press we have seen no mention of the fine sonnet in which the late William Ernest Henley, who was a patient in the Edinburgh Royal Infirmary for eighteen months, gave a pen picture of the great surgeon. We make no excuse, therefore, for quoting it here:

THE CHIEF.

His brow spreads large and placid, and his eye
Is deep and bright, with steady looks that still.
Soft lines of tranquil thought his face fulfil—
His face at once benign and proud and shy.
If envy scout, if ignorance deny,
His faultless patience, his unyielding will,
Beautiful gentleness and splendid skill,
Innumerable gratitudes reply.
His wise, rare smile is sweet with certainties,
And seems in all his patients to compel
Such love and faith as failure cannot quell
We hold him for another Herakles,
Battling with custom, prejudice, disease,
As once the son of Zeus with Death and Hell.

This is one of the series entitled "In Hospital" which appears in Henley's *Poems*.

Some of our readers may be interested to know that an artistic reproduction of the fine portrait of the late Professor von Bergmann, by Franz Skarbina, can be obtained from Rich. Bong, Postdamer Strasse 88, Berlin, W. The famous surgeon is represented in the act of performing an operation surrounded by his assistants.

The portrait-group of Drs. Halsted, Kelly, Osler, and Welch, of the Medical School of the Johns Hopkins University, painted by Mr. John Sargent, was unveiled in McCoy Hall on January 19th. The picture was presented to the University by Miss Garrett, and accepted on behalf of the trustees by President Remsen. Professor Welch delivered a speech in which he related some of the experiences of the sitters.

It is proposed to found a prize in memory of the late Dr. Paul Julius Möbius of Leipzig, well known by his contributions to the literature of neurology and psychiatry and by his medico-literary studies on Goëthe and other celebrities. The prize is to be known by his name, and is to be awarded every year for the best essay dealing with some neurological or psychiatrical subject. A committee, which includes among its members Professor Edinger of Frankfort-on-the-Main, Professor Moeli of Berlin, and Dr. Lamhofer of Leipzig, has been formed to collect subscriptions for the purpose.

New editions of Mr. Harrison Cripps's books, entitled *Diseases of the Rectum* and *Cancer of the Rectum*, have just been published by Messrs. J. and A. Churchill. They are illustrated with plates and engravings.

Messrs. J. Nisbet and Co. will shortly publish a *New Medical Directory*. In the prospectus it is stated that "the information given will be in each case full and sufficient, and no pains will be spared to make it accurate as well as cheap."

The late Mr. Beecham, whose death has been mourned with such disinterested sincerity by the newspapers, was a genius in his way. But, as far as we are aware, he never claimed for his pills that they would do more than cure the manifold ailments of man's tenement of clay. A forerunner of his in the days of Queen Anne was not so modest. In the *Tatler* Addison says he remembers "when our whole island was shaken with an earthquake some years ago, there was an impudent mountebank who sold pills which (as he told the country people) were very good against an earthquake!"

We have been asked as to the composition of the "Everlasting Pill," to which reference was made in a paragraph which appeared in the Journal of April 13th under the heading "Immunity against Bullets." It is given by Dr. J. A. Paris in his *Pharmacologia*. He says:

> The Everlasting Pill was composed of metallic antimony, which was believed to have the property of purging as often as it was swallowed. This was economy in right earnest, for a single pill would serve a whole family during their lives, and might be transmitted as a heirloom to their posterity. We have heard of a lady who, having swallowed one of these pills, became seriously alarmed at its not passing. "Madam," said her physician, "fear not; it has already passed through a hundred patients without any difficulty."

A revised edition of W. B. Saunders Company's *Catalogue of Medical and Surgical Books* has just been issued in a more attractive form than such productions usually wear. In addition to full particulars of the books published by the firm, reduced specimens of illustrations, representative of the pictorial features of the works from which they are taken, are given. Some of these are admirable in point of clearness and beauty of execution.

We learn from the *Semaine Médicale* that at the Congress of Scientific Societies recently held at Montpellier, Professor Calmette exhibited the oldest theses presented for professional chairs that are preserved in the archives of the Medical Faculty of Montpellier. They escaped the notice of M. Germain when he was gathering materials for his work on the old theses of that ancient school, which was published in 1886. The theses unearthed by M. Calmette belong to a competition held in 1574, a fact which shows that the *concours* for professorships is an older institution than is generally believed. The competitors were François Danchez, afterwards celebrated as a philosopher; Jean Saporta; Jean Blezin, otherwise Schywn (*sic*); and Pagesi. Taken together the theses cover the whole range of medicine as it was at the time, and enable us to judge of the state of knowledge in one of the great centres of medical science in the sixteenth century. Besides the theses, some fragments of the defence of the candidate's position have been preserved in the form of rapid notes scribbled on the margin, in some of which the "exchanges" between the examiner and the candidate are reported in detail.

According to a report presented by M. del Gaizo to the Medical Faculty of the University of Naples, when it was decided to adorn the central hall of the University with portraits and busts of famous teachers, the medical faculty was left out in the cold. The only representative of medical science accorded a place in the Valhalla was Nicolà Cirillo, who, it appears, owed the honour to political reasons. The affront put upon medicine is now to be repaired. In the new *aula magna* of the University there will be memorials of seven medical celebrities. These are Marco Aurelio Severino, Giovanni Alfonso Borelli, Michele Troja, Domenico Cotugno, Salvatore De Renzi, Ferdinando Palasciano, and Salvatore Tommasi. Severino was born at Tarsia, Cosenza, in 1580, and died at Naples of the plague in 1656. He studied at Naples, and took his degree at Salerno in 1606. He was the author of a work on comparative anatomy entitled *Zootomia democritea, id est anatome generalis totius animantium opificii*. The date of the first edition is unknown; the book was reprinted at Nuremberg in 1646. Severino also published treatises *De recondita abscessum natura* (1632), and *De efficaci medicina*, reprinted at Frankfort in 1646. He is said to have trephined in epilepsy and mania; he performed tracheotomy in cases of septic sore throat; he practised thoracocentesis and treated aneurysms surgically. Borelli was born at Naples in 1608 and died in poverty at Rome in 1679. He taught at Messina from 1635 to 1646, and at Pisa from 1656 to 1667. There he worked at mathematics, which he applied to the explanation of physiological problems. He embodied his researches and ideas in his great work, *De motu animalium*, which was published in 1679. He wrote besides on the great plague at Pisa in 1661, and described the eruption of Mount Etna in 1667. Troja was born at Andria in Apulia in 1747; he occupied for many years a chair of a curiously heterogeneous character (diseases of the eyes and of the bladder) at Naples. He gave much attention to the study of the structure and regeneration of bones, as to which he published a work (*De novorum ossium in integris aut maximis ob morbos deperditionibus regeneratione experimenta, 1775*); and another entitled *Osservazioni ed Esperimenti sulle Ossa* in 1814. He helped to diffuse vaccination in his own part of Italy. He died in 1828 at Naples. Cotugno was born at Ruvo di Puglia in 1737, and died at Naples in 1822. He studied at Naples and graduated at Salerno in 1756. From 1766 to 1814 he was Professor of Anatomy at Naples; he gave special attention to the internal ear, and his name is perpetuated in the aquaeductus Cotunnii, which he discovered in 1761. De Renzi was born at Paternopoli (Avellino) in 1800 and died at Naples in 1872. His name is known to all students of medical history by his *Collectio Salernitana* (1853 56), his *Storia Documentata della Scuola Medica di Salerno* (1855), and his *Storia della Medicina Italiana* (1845 48). De Renzi took great interest in the education of the blind, and was a strenuous propagator of vaccination. He did good work

in the cholera epidemics of 1837 and 1857, and in one of typhoid fever in 1840-41. He was professor of pathology and afterwards of the history of medicine in the University of Naples. Palasciano, who was born at Capua in 1816 and died at Naples in 1891, was Professor of Surgery and editor of the *Archivio di Chirurgia Practica*. He was a corresponding member of the Institute of France and a Senator of Italy. Tommasi was born at Boccaraso, Abruzzo Aquilino, in 1813, and died at Naples in 1888. He was Professor of the Practice of Medicine at Naples from 1844 till 1848. His political opinions led to his being deprived of his chair; he was exiled in 1849. On his return to Italy he was appointed Professor of Pathology at Naples in 1860: then he became Professor of Clinical Medicine at Pavia, and in 1865 he returned to take the corresponding chair at Naples. He was the author of the first Italian manual of physiology; it went through three editions.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications for sums to be granted, should reach this office not later than May 15th, and must include details of the precise character and objects of the research which is proposed, and must be made on forms to be had of the General Secretary, at the temporary office of the Association, 6, Catherine Street, Strand, London.

Every recipient is required to furnish to the Science Committee, on or before May 15th following upon the appointment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing: (*a*) A brief statement for the report of the Science Committee, showing the results arrived at, or the stage which the inquiry has reached; (*b*) a general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers: (*c*) and references to any Transactions, Journals, or other publications in which the results of the research have been printed.

The work of the Grantees shall be subject to inspection.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council, provided the whole term of office has not exceeded three years.

The scholarships exist for the encouragement of research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, and Clinical Surgery.

The holders will be subject to inspection.

Applications for scholarships must be made on forms to be had of the General Secretary, and returned on or before May 15th.

ERNEST HART RESEARCH SCHOLARSHIP.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Memorial Scholarship of the value of £200 per annum, tenable for one year but subject to renewal by the Council for another year. The Scholarship is for the study of some subject in the department of State Medicine.

Applications for Scholarships and Grants should, as a rule, be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

GUY ELLISTON, *General Secretary*.

6, Catherine Street, Strand,
April , 1907.

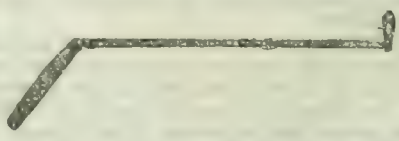
MEDICAL AND SURGICAL APPLIANCES.

Holland's Instep Arch Sock.

MESSRS. T. HOLLAND AND SON send us specimens of their "Improved" and of their "Pezplanus" supports for flat foot. The former is already well known to the public. The latter differs from the "Improved" in having three instead of only two springs, and it gives a more rigid and less elastic support in consequence. In certain cases this would prove useful no doubt, but if the support is very stiff it loses any advantage over the ordinary steel valgus plate, which is simpler and consequently cheaper. The "Pezplanus" is covered with a leather sock of excellent and pleasantly smooth surface, which the makers state will resist dampness and perspiration.

A Retinoscopy Long-arm.

MR. J. H. TOMLINSON (Holborn, W.C.) writes: The instrument depicted is one designed by me to take the place of the trial frame when practising retinoscopy. It is primarily intended for examining children, in whose case it is often impossible to get a trial frame to stay on the nose, but it may be used generally, its chief value being that the surgeon has not to rise from his seat to change the lenses. The trial lens is held by pins projecting behind a thin resilient plate of celluloid, which, when the instrument is being used, is brought against the patient's brow. The rod is graduated both in inches and centimetres, and is furnished with a slide engraved with test glass and carrying a clip for a test card, so that the instrument can be used for finding a patient's near point. It is manufactured by Messrs. Raphaels, Clerkenwell Road.



Moustache Clips for Laryngoscopy.

MR. E. CRESSWELL BABER (London, W.) writes: A pair of small spring forceps such as are sold for the purpose of raising the ends of the moustache, are very useful for temporarily keeping up an overhanging moustache during an examination of the pharynx, larynx, or naso-pharynx. They must be applied horizontally just on either side of the median line with the fluted blade below, and the handles directed outwards. They may be obtained of Messrs. Mayer and Meltzer, 71, Great Portland Street, W.



A Nasal Cotton-wool Carrier.

DR. KNOWLES RENSHAW (Manchester) writes: The accompanying engraving (half actual size) illustrates a cotton-wool carrier designed for the purpose of making local applications to the naso-pharynx. With this instrument, which has been made for me by Messrs. Mayer and Meltzer, the Eustachian orifices or any other part of the naso-pharynx can be reached with ease and accuracy, and the point to which the application is being made can meanwhile be kept in full view by means of a posterior rhinoscopic mirror. The wool carrier has a rounded point, incapable of injuring the mucous membrane, and is sufficiently rigid to make it impossible for involuntary movements of the tongue or soft palate to deflect it. The dropped handle prevents the hand from obstructing the view when it is used with a mirror.

THE late Captain William Jackson, of Camborne, who died on April 4th, left £1,000 each to the West Cornwall Miners' Hospital, the Royal Cornwall Infirmary, and Perranporth Convalescent Home.

MOTORS FOR MEDICAL MEN.

[From a Correspondent.]

(Continued from page 886.)

The Carburettor.

As has already been stated, the function of the carburettor is to provide for the engine a properly-proportioned mixture of petrol vapour and of air. The earlier carburettors were of the surface type, that is to say, the air was charged with petrol by being passed over the surface of a layer of petrol; a carburettor in which a bundle of wicks was used is only a modification of this principle. But surface carburettors are now not often used, having been displaced by the spray type. In these the petrol is made to issue from a fine jet or jets, and is mixed with air in a state of spray.

The patterns of carburettors are innumerable, but all have certain points in common. The petrol is kept at a constant level by means of a float which cuts off the supply when it reaches this level, which is just below that of the jet—about $\frac{1}{16}$ in. — so that no petrol flows through the jet by gravitation. When, however, the suction of the descending piston pulls upon it the petrol issues from the jet.

It is obvious that the suction will vary with varying speeds of the engine, and so the flow of petrol will vary, and also that when the engine is running faster it will want more charges per second, and so more petrol, but, as a matter of fact, the pull then becomes excessive, and too much petrol is drawn through the jet.

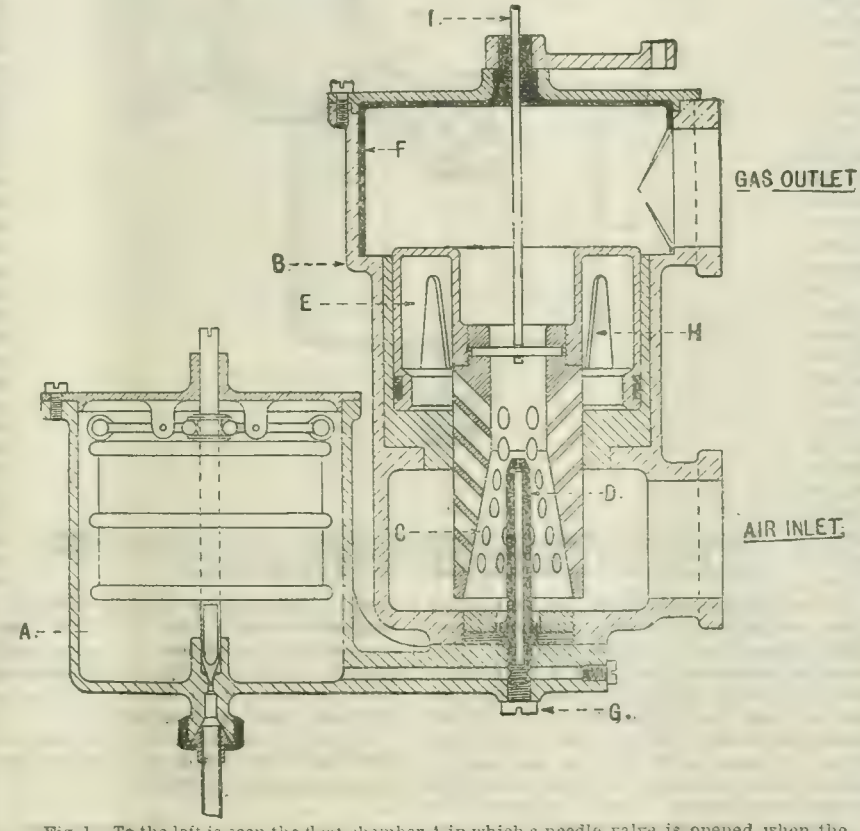


Fig. 1.—To the left is seen the float chamber A in which a needle valve is opened when the float falls and closed when it rises to the proper height. The petrol goes to the jet D which is surrounded by a conical sleeve. The main air supply comes from the air inlet on the right and exercises suction on the jet as it rushes past it, but the whole sleeve (E, H, C) is movable, rising under the suction of the engine and falling by its own weight. When it rises extra air is admitted through the ports H, which has not passed over the jet and so diminishes the suction upon it.

In the earlier types of carburettor the driver had control from his seat of the petrol supply, and also of the air supply, and, in addition to these, of the supply of mixture to the engine. With such an arrangement a driver sufficiently skilful could regulate the work of his carburettor to a nicety, and drive with the utmost economy, but it needed constant attention and adjustment. Moreover, few were possessed of the requisite skill. To meet the case of the average driver, automatic carburettors were invented, in which the attempt was made to render the carburettor self-regulating, so that under varying suction it should always supply a mixture of the strength required. If this could be done, the gain would be great, but, many as are the devices, none known to the writer are quite successful—that is to say, none are quite so good as a skilled driver with separate control over the three things—mixture, air, and petrol. Still there are many which give a very fair result without special attention.

The principles adopted are generally similar, though the variety is great in the means adopted. As the trouble arises from excessive suction on the jet, it is met by the introduction of supplies of air which are taken in above the jet, and so do not pass over it. These sources of extra air are controlled either by spring valves somewhat like automatic inlet valves, or valves otherwise controlled so that they open and admit extra air only when the suction is becoming excessive.

The Rover automatic carburettor will serve as an example of an automatic carburettor, while a simpler carburettor, also employed by the Rover Company to meet the wishes of those who do not like automatic carburettors, will illustrate the simpler type of carburettor.

Ignition.

As has already been mentioned, the object of all ignition arrangements is to produce a good strong spark in the explosion chamber at the exact moment that compression is at its best, and of the various plans used that by accumulators and a separate induction coil or coils is the simplest. This is effected by the battery circuit through the primary winding of the coil being completed by some form of contact actuated by a shaft which revolves at half the pace of the engine, and this quick make and break would suffice to cause a spark from the secondary winding of the coil; but principally for the sake of economizing the consumption of the accumulator current, it is more usual to employ a coil fitted with a trembler, which, so long as the current is running through the primary winding by the contact being in operation, makes and breaks the circuit with great rapidity, and so gives rise not to one or two but to a stream of sparks in the secondary circuit.

This arrangement leaves little to be desired in the case of a single-cylinder engine, but it is to be noted that the timing is effected by the making and breaking of the primary circuit, and so the timing of the spark in the secondary, or high-tension, circuit is determined indirectly and is influenced by the speed with which the trembler of the coil acts. Where there are several cylinders there are usually as many induction coils as cylinders, each having its own trembler, and it is impossible to adjust and keep always adjusted these tremblers so that they act quite alike. Hence for multi-cylinder engines an improvement has been introduced in the form of a distributor upon the high-tension circuit, which sends the actual sparking current to each cylinder at the right instant, and ensures the several cylinders firing at exactly the same intervals. It is, of course, possible to employ dry primary batteries instead of accumulators, and this is done in the De Dion cars and in some others. They can, of course, be used on any car.

It may be mentioned that recent experiments have appeared to indicate that the power of the explosion is in no way influenced by the strength of the spark, but

that any spark which will fire the mixture at all is equally good. This experimental result is, however, at variance with all motor experience, and a great falling off in power is noticeable if the accumulator current falls at all below 4 volts, although much less would produce a spark. The discrepancy is probably due to the difference of circumstances; in the experiment every care was taken, and could be effectively taken, to secure the most complete insulation of the high-tension current, whereas in motor practice the contacts are apt to be short of theoretical perfection, and the complete insulation of the high-tension current is rendered more difficult by the various connexions necessary, by oil getting about, and by the sparking plugs becoming more or less dirty. Hence in practice the "fat" spark is certainly a desideratum. This is, perhaps, a reason why, in cars fitted with both accumulator and magneto ignition, an increase of speed and power is noticed when switching from the former to the latter; when the engine is running at a good speed the magneto high-tension current is generally of a higher voltage than that of accumulators and coils. When a high-tension magneto is employed the conditions are not really dissimilar from those in which an accumulator is employed: that is to say, the low-tension current of the armature, which is short-circuited through most of its revolution, is broken at a given time, and so the secondary current occurs at this moment. But it is almost universal in the case of magnetos to have also a high-tension distributor, even where the coil is separate from the armature, so that the timing in multi-cylinder engines is rendered quite exact. But in most magnetos the range of timing is much less than in the case of accumulator ignition—that is to say, the spark cannot be advanced or retarded very much. This, however, for some reason not easy to divine, seems to matter less than with accumulator ignition, so that some motorists do not avail themselves even of the range that there is, but fix the magneto in an average position.

There are now many makes of magneto which work satisfactorily; an interesting form is the new pattern Bassé Michel magneto, in which the armature carries only a low tension winding, and there is a separate induction coil. This latter, however, has the peculiarity that it has two low-tension windings and one high-tension winding. Both of the low-tension windings are in use with the magneto, one being permanently earthed, and the other containing a make and break in its circuit. It is claimed that these two low-tension currents reinforce one another by induction, and so cause a stronger current in the secondary winding. If it is desired to use accumulator ignition the accumulator is so connected up as to make use of the same make and break, and of one of the two primary windings of the induction; and the same high-tension distributor is made use of for both forms of ignition. This is a particularly neat arrangement, but it is open to the objection that it is always possible that one of the parts of the magneto made use of for both might be the part to fail, in which case both ignitions would be put out of work. For reasons already alluded to the low-tension magneto—namely, that in which there is no high-tension current at all anywhere, but a low-tension current is made to give a spark by the abrupt separation of two points through which it is flowing inside the firing chamber—is the least liable to derangement.

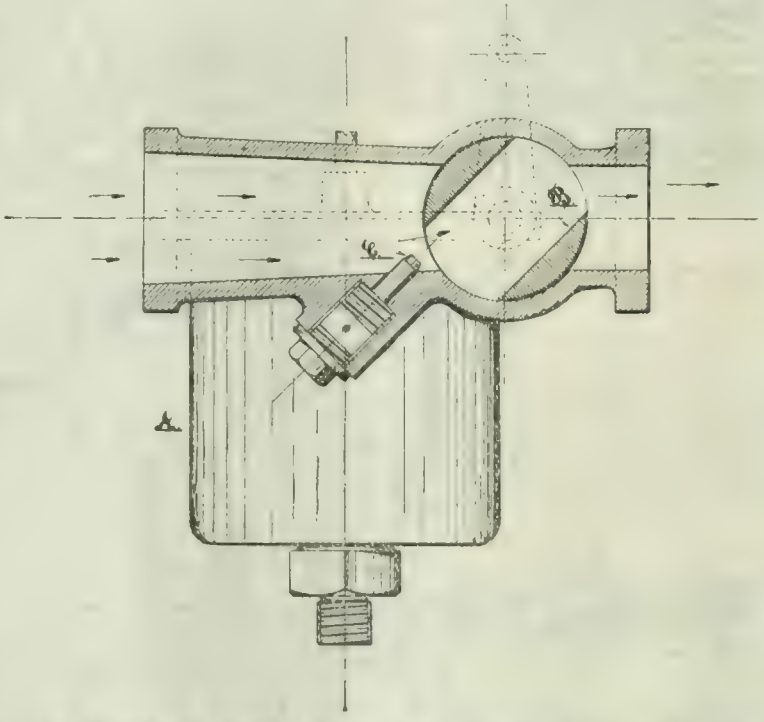


Fig. 2.—Simple form of Rover carburettor. A, Float chamber; t, throttle valve; c, jet. In this there is no separate regulation of petrol and air, but only a throttle controlling the mixture so arranged as to vary the suction on the jet.

It may be repeated that if a magneto does go wrong the location of the trouble is far more difficult than in the case of accumulator ignition.

(To be continued.)

THE ANTIVIVISECTIONIST CONSCIENCE.

Our attention has been called to the following advertisement which appeared in the *Christian* of April 4th:

SOCIETY FOR THE ABOLITION OF VIVISECTION.

[illegible]

In the *Journal of Physiology* for August last, there is an account of some experiments on cats. Each animal was [illegible] and the [illegible] of a portion of [illegible] of the skull, then the skull itself [illegible] and the [illegible] being a part of the [illegible] and a part of the skull [illegible] to expose the [illegible]. The animal was then left a few [illegible] the cotton-wool was removed and the [illegible] the exposed [illegible] by means of [illegible]. The operator [illegible] the [illegible] to the [illegible] and [illegible] that position. The ganglion was [illegible] by means of the electrical needles and the [illegible] [illegible] and [illegible] to [illegible]. And [illegible] were again [illegible] to the society gratefully acknowledged.

We do not know much about the Society which makes itself responsible for this statement and so ingeniously makes it the basis of a hint that subscriptions to its funds will be welcome. The advertisement is a further proof of the straits to which the keenness of competition in the figment market drives the rival antivivisectionist bodies. It is in fact a lie that has already been worn threadbare by overuse. The *Tribune* had to apologize for publishing a slightly different version, to which reference was made in the JOURNAL of November 17th, 1906.

A more detailed version was given to the Royal Commission on Vivisection by Mrs. K. Cook ("Mabel Collins"). It appears in the Minutes of Evidence, October to December, 1906, published as an appendix to the First Report of the Commissioners, as part of her answer to Question 1,919 (page 67). We think it well to quote it here in full:

In the August number (1904) of the *Journal of Physiology* there is an account of a number of experiments carried out by Professor Starling at the Physiological Laboratory of University College. These experiments were performed on cats, the reason for this choice of animals being given by the vivisector in the following words: "Endeavours to expose the Gasserian ganglion in the dog were unsuccessful,

owing to the severity of the operation required" (The italics are in the original.) In the cats the scalp and the muscle under the scalp were skinned off one-half of the skull; then the skull itself was sawn through and the bone removed, leaving a part of the brain with its covering membrane exposed. Plugs of cotton-wool were packed in between the brain and a part of the skull which had not been removed, so as to squeeze out the fluid contained in the brain. The animal was then left for five or ten minutes, after which the cotton-wool was removed and the brain itself dragged aside so as to expose to view the Gasserian ganglion, which is a knot where several nerves meet and cross each other, and which lies on the floor of the skull underneath the brain. One of the nerves that enters this ganglion was then caught up in a hook and cut through. Electrical needles were driven into the ganglion itself and fixed there by means of modelling wax, which held them in position. The anterior chamber of the eye, into which a needle had already been introduced, was then connected with a recording apparatus. The ganglion was then "excited" by means of the electrical needles which had already been fixed into it with modelling wax, and the effect produced on the eye observed and noted. For how long the vivisector carried on the experiment, so elaborately prepared, repeating again and again his "stimulation" of nerves at the very core of life and feeling, we are not told; but when at last his curiosity was satisfied, "the animals," so he tells us "were allowed to recover, and were kept alive for three or four weeks," in order that they should be again experimented upon in a similar way. We are told that the cats were anaesthetized with ether and morphia for the operation, and that an injection of curare was also given. *For three or four weeks these scalped animals, with mutilated nerves, were allowed to live, and then they were again anaesthetized, another nerve was cut through, and the electrifying and stimulating and observing began again.* (The italics are ours.) Eleven cats are mentioned as being used for these experiments; how many dogs were used "unsuccessfully" does not appear.

It will be seen that in the advertisement part of this is reduced to a meaningless jumble of words. But the lie remains, as will be seen on comparing Mrs. Cook's evidence with the evidence of Professor E. H. Starling as given in the same report (p. 126):

3662. (Chairman.) I think you were just going to refer to Mrs. Cook's account of some experiment that you had been concerned in yourself, or of which you had special knowledge?—Yes. The witness said: "Endeavours to expose the Gasserian ganglion in the dog were unsuccessful owing to the severity of the operation required." That merely means that the Gasserian ganglion of the dog is hidden under a vessel containing blood, and this prevents its isolation. That is what is meant by a severe operation being required. Then what follows is an account, partly in the witness's own words, of a method for exposing the Gasserian ganglion, which is the same as that adopted in the human being, when, in cases of persistent neuralgia, for example, it is necessary to excise this ganglion. The method that we adopted in the case of that cat is practically the same as that method.

3663. For what purpose was the experiment?—It was to study the influence of the fifth nerve upon the pressure of the fluid in the eyeball.

3664. (Colonel Lockwood.) "For how long the vivisector carried on the experiment," etc., "we are not told?"—Again, of course, the witness is unaware that one is stimulating a nerve cut away from the brain altogether.

3665. (Chairman.) You mean that the afferent nerves, as they are called, are severed?—Yes. *So that, however much one had stimulated this Gasserian ganglion, even if the animal had not been anaesthetized, it could not have felt anything of it.* (The italics are ours.) But, of course, it was anaesthetized throughout. Then we come to a paragraph which is rather difficult to understand, if the witness had really the original paper in front of her: "When at last his curiosity was satisfied, the 'animals,' so he tells us, 'were allowed to recover,' and were kept alive for three or four weeks in order that they should be again experimented upon in a similar way." If we turn up the paper we find that that is quite contrary to what is stated in the paper.

3666. (Colonel Lockwood.) Did you write the paper yourself?—I wrote the paper myself. None of these experimental cases, in which the Gasserian ganglion had been treated in this way, were allowed to recover. In the *Journal of Physiology*, vol. xxxi, p. 316, there is the following statement: "To decide this point it was necessary to eliminate any possible action of the sympathetic nerve fibres. In three cats, therefore, the superior cervical sympathetic ganglion was excised on one side, under antiseptic precautions. The animals were allowed to recover, and were kept alive for three or four weeks." *It is another experiment altogether* (the italics are ours), but apparently the excision of the superior cervical ganglion, being such a very small operation, was not sufficiently sensational, and so we are told by this witness that the animals which had been subjected to this exposure of the Gasserian ganglion, were allowed to recover, *which is not true.* (The italics are ours.)

3667. (Mr. Ram.) Would the animals which survived after the cervical ganglion had been excised suffer pain?—Not at all. There is now (I might have brought it down to show to the Commission) a cat which has had the superior cervical ganglion excised for a couple of years. The animal would know nothing at all about it. There is no pain from the beginning. The cervical ganglion is cut out.

3668. Under anaesthesia?—Under anaesthesia, of course, and treated cleanly in the aseptic fashion, and when the animal recovers from the anaesthesia it has no pain at all.

3669. (Sir Mackenzie Chalmers.) So that it has not to be killed under the licence?—No, it would not have to be killed. In the case I have mentioned the animal is still under observation.

3670. (Chairman.) But the point is that this is not an accurate statement?—The point is that it is a misquotation of my paper. *A statement is made here which is not contained in the paper.* (The italics are ours.)

3671. A statement which is made with regard to one comparatively painless operation, at least a comparatively small operation?—A trivial operation.

3672. That statement has been attributed to another and a much more serious one?—Yes; the witness goes on to enlarge upon that point: "For three or four weeks these scalped animals, with mutilated nerves, were allowed to live, and then they were again anaesthetized, another nerve was cut through, and the electrifying and stimulating and observing began again." *That is entirely false.* (The italics are ours.)

3673. (Colonel Lockwood.) That is absolutely false?—Absolutely false.

No comment of ours can make this exposure more damning. Professor Starling's evidence simply dissipates Mrs. K. Cook's charges into thin air. And be it noted that it is on her misreading or deliberate misquotation of the paper in the *Journal of Physiology* for August, 1904, to which she refers, that the advertisement is apparently founded—unless we are to assume that antivivisectionists are so much alike in their mental constitution that they naturally hit on the same lie.

As to the general character of this lady's evidence we may be allowed to quote the opinion of a witness who certainly cannot be said to be biassed in favour of vivisection. The *Verulam Review* for April-June, 1907, a copy of which has been obligingly sent us, says, speaking of the Royal Commission (p. 176): "Our only witnesses at present, Mrs. Cook and Dr. Snow, seem to have done us serious harm." After referring to her "elusiveness" when asked for proofs of her statements, our contemporary goes on to say: "Almost every one of Mrs. Cook's horrifying cases seems, when examined, to melt away." It adds:

We trust that for the sake of common-sense humanity the witnesses still to follow will make themselves acquainted with the matter in hand, will study the subject on which they offer themselves to discourse; will read the papers on which they profess to comment.

We note, too, that Mr. Stephen Coleridge said the other day in Dublin that serious injury was being done to the movement by the evidence given by persons not qualified to do so. Such being the opinion of the *Verulam Review* and the Hon. Secretary of the National Antivivisection Society, it is almost pathetic to find the Society for United Prayer for the Prevention of Cruelty to Animals passing resolutions protesting against the one-sided aspect of the Royal Commission on Vivisection. As all the trustworthy evidence is on one side, what else can be expected?

If in a spirit of charity we assume that Mrs. K. Cook erred in ignorance, what is to be said of the Society for the Abolition of Vivisection which repeats in a public print a lie which had been so fully exposed? It is difficult to believe that those responsible for the advertisement we have quoted can be acting in good faith. Perhaps their action is to be explained by the extraordinary elasticity of conscience which often goes with the profession of exalted moral sentiments.

Diplomas for Nurses.—At a special general meeting of the Royal British Nurses' Association held on April 12th at 11, Chandos Street, Cavendish Square, London, the recommendations of the Executive Committee in regard to the granting of diplomas in nursing by that Association were considered and adopted. In the opinion of Sir James Crichton-Browne, who presided, the scheme would prevent ignorant, half-trained nurses from presuming upon the sphere of the doctor. The scheme as set forth in the adopted recommendations provides for the granting of diplomas in nursing after examination of candidates in elementary anatomy, physiology, and hygiene; medical, surgical, and gynaecological nursing, and in practical ward work and invalid cookery. The examinations would be conducted in writing and orally, and it is proposed that the Committee for setting the papers should consist of one physician, one surgeon, one gynaecologist, one general practitioner, and four matrons.

MEDICAL NEWS.

Dr. E. H. Kelly has been appointed a Justice of the Peace for the county of Lanark.

The adjourned discussion on Epilepsy at the Hunterian Society will be resumed at the London Institution on Wednesday next at 8.30 p.m.

Under the will of the late Mr. John Visger Miller of Bristol, who died on March 4th, Bristol Infirmary receives a sum of £250.

On the initiative of the German Samaritan Association, an International Ambulance Congress is to be held at Whitsuntide at Frankfort-on-the-Main.

The festival dinner of the Middlesex Hospital, unavoidably postponed last year, will be held under the chairmanship of H.R.H. the Duke of Connaught on May 10th.

The Bill providing for the sterilization of certain classes of criminals and the hopelessly insane, presented by Dr. Owens Adair of Astoria to the House of Representatives of the Oregon Legislature at Salem, has been rejected.

Dr. A. T. Brand, Public Vaccinator, Driffield District, Driffield Union, has been awarded the Government extra grant for efficient vaccination for the ninth consecutive time.

The Registrar-General for Scotland reports that in the week ending Saturday, April 13th, 1907, 44 deaths were due to cerebro-spinal meningitis in eight principal towns of Scotland. Of these, 30 were in Glasgow, 8 in Edinburgh, 2 in Dundee, 3 in Leith, and 1 in Greenock.

A Bill was passed unanimously by the Assembly of New York State on March 25th restricting the use of cocaine. It provides that cocaine shall not be sold except on a medical practitioner's prescription, which is not to be dispensed more than once. Another Bill has been introduced which prohibits the sale and manufacture of cigarettes in the State.

The Prince and Princess of Wales opened, on April 15th, a new wing at the Royal Hospital at Richmond. The addition provides a ward with 6 beds for men on the ground floor, corresponding accommodation for women on the first floor, a small operating theatre, and some rooms for the nursing staff. This wing, which is to be devoted to the treatment of cases of ophthalmic disease, has been erected and partly endowed by Mrs. Bousfield Swan, as a memorial of her late husband.

Tuba Voyages d'Etudes Médicales, arranged annually by Dr. Carlyon de la Carrière (2, Rue Lincoln, Paris), will be directed this year to the health resorts of the Jura and the Basses Pyrénées; and the pilgrims, who will be headed as usual by Professor Landouzy, will visit Sermaize, Vittel, Contrexeville, Martigny, Bourbonne, Luxeuil, Bains, Plombières, Gérardmer, La Schlucht, Bussang, Le Ballon d'Alsace, Besançon, Montillier, Salins, La Faucille, Divonne.

The American Anti-tuberculosis League will hold its next meeting at Atlantic City, New Jersey, on June 1st to 7th, 1907, under the presidency of Dr. George Brown of Atlanta. The following are the objects of the League as set forth in its Circular letter: The prevention of consumption by educating the people that it is a preventable disease; to secure legislation to prevent consumptives from entering hospitals in every State of the Union. The membership is not limited to medical practitioners, but is open to all men of whatever calling to whom these objects appeal.

A conference on the teaching of hygiene and temperance in the universities and throughout the British empire will be held at the Examination Hall, Victoria Embankment, on St. George's Day (Tuesday, April 23rd). The chair will be taken at the morning session, at 11 a.m., by Lord Iveagh, and addresses will be delivered by representatives of Canada, Australasia, New Zealand, Cape Colony, India, and the Crown Colonies. In the afternoon, at 2.30, the chair will be taken by Sir John Gorst, and speeches will be delivered by representatives of France, Germany, and Scandinavia. A paper on the teaching of hygiene and temperance in secondary schools and universities will be read by Sir Victor Horsley, and another on the teaching of the same subjects in primary schools by Miss Hosky Abraham.

A Pan-German Medical Society has recently been founded. Its head quarters are to be in Berlin. The Presidents are Professors von Leyden and Hildebrandt in Berlin and Professor Bechterew in St. Petersburg. The object of the new society is the promotion of closer scientific and professional relations between the medical practitioners of Germany and Russia. The subscriptions and funds otherwise collected are to be applied towards the foundation of a library and a dispensary for indigent Russian sick persons. When means exist for the purpose it is intended to establish a Russian hospital in Berlin and to build a house for the society. Several leading members of the profession in Germany, Austria, and Russia have joined the society.

Dr. R. R. Rentoul, in an address on "Woman's Health: Our Greatest National Asset," at the Institute of Hygiene on April 15th, insisted that there was too much encouragement to the diseased, and too little encouragement to the healthy, to marry, and suggested that if we raised the age of marriage to 25 years in the man and 21 in the woman, required a pre-nuptial medical certificate of good health, made it illegal for the diseased to marry, abolished actions for breach of promise where existing disease can be proved, prohibited paupers and vagrants from marrying, taxed bachelors and reduced taxation to those of small income who had large families, there would be fewer separations, fewer squalid homes, and fewer degenerate children. Our terrible infant mortality had often been referred to, but it was not so generally known that, during the last thirty years, over 200,000 women had lost their lives from puerperal fever and other accidents of childbirth. The lecturer thought the leaders of the medical profession were largely responsible for this state of things, as they had done their best to degrade the work of midwifery, instead of elevating it to the important position it deserved to hold.

A Quarterly Court of the Society for the Relief of Widows and Orphans of Medical Men was held on April 10th, Sir Thomas Smith, Bart., Vice-President, in the chair; thirteen Directors were present. Proposals for membership of the Society were read from three candidates, and they were duly elected. It was reported that since the last Court two members had died. The report and balance-sheet for 1906, to be submitted at the annual general meeting, were read and approved. Applications for relief were received from two widows of deceased members, and grants at the rate of £50 per annum were voted. One widow who was left in very indigent circumstances had been made an immediate grant of £10 10s. over and above the annual one. Eight letters had been received from the widows of medical men during the past three months asking for relief, but this had in each instance to be refused, as their husbands had not been members of the Society. Any registered medical practitioner, residing at the time of his election within a twenty-mile radius of Charing Cross, is eligible for membership; full particulars and proposal forms may be obtained from the Secretary, at the offices of the Society, 11, Chandos Street, Cavendish Square. The annual general meeting will be on May 9th at 5.30 p.m.

French Medical Association.—The Association Générale des Médecins de France held its annual meeting on April 14th in Paris under the presidency of Dr. I. Lereboullet. The meeting was attended by doctors from every part of France. The report of the General Secretary (Dr. G. Lepage) showed that the membership is now more than 1,200. The report of the Treasurer (Dr. Blache) stated that the funded capital of the Association amounts to 1,560,000 francs. More than 170,000 francs are distributed annually in grants and pensions. This year ten pensions of 500 francs were voted, bringing the total number now paid by the Association up to ninety three. In five cases the amount of the pension is 1,000 francs, while in eighty-eight it is 300 francs.

Anti-vivisection in America.—A Bill has been presented to the New York State Assembly providing for the restriction of research by experiment on living animals. The Bill does not aim at the abolition of vivisection, but provides that experiments on living animals shall be attempted only under the authority of the faculty of a college or university incorporated under New York laws or under the authority of the State Commissioner of Health or a City Board of Health. The place where the experiment is conducted must be registered with the State Health Commissioner, who shall become the holder to pursue animal experimentation. Before and during the experiment the animal must be completely under an anæsthetic. If pain is likely to be felt when the effect of the anæsthetic has passed off the animal must be killed immediately. It is further provided that the experiment must be for the advancement of knowledge useful for saving or prolonging life or alleviating suffering.

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SATURDAY, APRIL 20TH, 1907.

THE ALLEGED INCREASE OF INSANITY.

"In submitting for the consideration of the Royal "Statistical Society a further paper on this subject, "after a lapse of seventeen years, it is disappointing to "have to admit that, notwithstanding the valuable and "much improved statistics recently issued by the "Lunacy Commissioners, thoroughly satisfactory mate- "rials are still wanting for solving the question whether "the prevalence of insanity, as a physical disease, is or "is not increasing." These are the opening words of an exceedingly clear and comprehensive examination of the available information concerning this important national question by Mr. Noel A. Humphreys.[1] That there has been a constant increase in the numbers of the registered insane in England and Wales since the formation of the Lunacy Commission in 1859, and that the rate of this increase has considerably exceeded the rate of increase of the English population is, of course, well known; but whether this increase is due to inherent or contingent causes, is an evidence of an actual increase in the rate of occurring insanity, or is merely the result of increased certification and accumulation inside asylums from a variety of causes, is a question which is still open. Unfortunately, it is precisely the information which would definitively settle this question that is wanting, but, notwithstanding several considerable gaps, Mr. Humphreys has been able to marshal a sufficient number of facts to warrant certain conclusions which, if they cannot be adduced as absolute proof that insanity as a physical disease is not on the increase, certainly show that the inference so naturally and so widely drawn from official statistics, namely, that the prevalence of this class of disease is increasing, is quite unjustifiable. The facts, moreover, leave a considerable balance of probability in favour of Mr. Humphreys's two main conclusions: That the continued increase in registered and certified insanity "is mainly if not entirely due (*a*) to "changes in the degree and nature of mental unsound- "ness for which asylum treatment is considered neces- "sary and desirable; and (*b*) to the marked decline in "the rate of discharge (including deaths) from "asylums."

With reference to the former of these two factors, and leaving aside entirely the general opinion of most experts in lunacy that the standard of mental soundness which decides certification has for long been moving in the direction of increasing stringency, it is evident that if it can be shown that there exists outside the aggregate of the actually certified a considerable reserve of cases of mental unsoundness from which the certified insane are constantly recruited, and that this reserve has been and still is increasingly drawn upon, then in so far as this factor has been in operation, the increase in insanity must be only apparent. It will be remembered that in the three important and much criticised articles contributed by a correspondent to the *Times* last year, it was asserted that "the effect of the mere "sweeping up and incarceration of the harmless "so-called 'naturals' of country villages was ex- "hausted within a few years of the passing "of the Lunacy Acts of 1845." Against this assertion Mr. Humphreys brings conclusive rebutting evidence. He shows by means of an instructive comparison of the census returns and those made to the Lunacy Commissioners that to-day, more than sixty years after the passing of the Act, there still exists a very considerable reserve of uncertified cases of insanity; and, further, that an increasing proportion of these cases have been certified in recent years, the numbers of the certified thus increasing at the expense of the uncertified, and the annual reports of the Lunacy Commissioners affording at each successive year a nearer approximation to a true estimate of the insane. Thus the three censuses of 1871, 1881, and 1891 gave the aggregate numbers of the insane (including in this term "lunatic," "idiot," and "imbecile") as 69,019, 84,503 and 97,383 respectively, and the returns of the Lunacy Commissioners for the same years, 56,755, 73,113 and 86,795, thus showing progressively diminishing percentage deficiencies in the Lunacy Commissioners' numbers, as compared with the census returns, of 17.8 for 1871, 13.5 for 1881, and 10.9 for 1891. A comparison of the figures for 1901, however, gives a very remarkable and instructive result. The census of that year showed a total number of insane of 132,654, and the Lunacy Commissioners' returns 107,944, that is, the percentage deficiency of the Commissioners' figures rose again to 18 6. This striking change followed and is satisfactorily proved to be due to no other cause than the official adoption for the purposes of the census of the term "feeble-minded" in place of "idiot," this change in nomenclature resulting in an increase in the censual insane of no less than 21.4 per cent. upon the rate in 1891, or more than double the percentage of increase in the twenty years 1871-91. The change of terms used in the schedules thus destroyed the value of these returns for comparative figures, which consequently cannot be employed to disprove the conclusions arrived at above that there has been a progressive augmentation of the certified insane at the expense of the reserve of uncertified cases.

A still more important factor of the apparent increase of insanity is the accumulation of the insane. This has been due to two causes, a gradual decline in death-rate from 103 1 per 1,000 for the ten years 1859-68 to 99.4 per 1,000 for 1899-1905, and a diminishing rate of discharges as recovered, from 115.4 per 1,000 of the average number daily resident in the five years 1873-77 to 92.5 per 1,000 in the five years 1898-1902, and a still further decline to 88 0 per 1,000 in the three years 1903-5. The total discharge rate, including deaths, was equal to 218 0 per 1,000 of the average number daily resident in the quinquennium 1873-77, and has steadily declined to191.2 per 1,000 for 1899 1902, and still further to 186.9 in the three years 1903-05. "If, therefore," Mr. Humphreys says, "the total discharge rate during these "last three years (1903-5) had been as high as the rate that "prevailed during the five years 1873-77, an additional "discharge rate of 31.1 per 1,000 would have occurred, "and the number of inmates would thereby have been "reduced by 2,938 per annum or by 8,814 in the "three years." This leaves out of consideration, as Mr. Humphreys points out, any calculation of what the present figures would have been if the discharge-rate of 1873 77 had been constantly maintained, and also, on the other hand, the obvious fact that a higher discharge-rate would have entailed to some extent an increased number of readmissions. In these two factors, then, of

[1] *The Alleged Increase of Insanity.* By Noel A. Humphreys, Esq., I.S.O.

increased certification to, and diminished discharge from, asylums. Mr. Humphreys finds the two principal causes of the increase of certified insanity, and with regard to the latter is careful to state that "having "regard to the decline of the death-rate in asylums it "seems more reasonable to attribute this decline of dis- "charge on recovery to the increasing unwillingness of "relatives to resume the personal care of the insane on "their attainment of a harmless condition than to any "decrease of success in the treatment of the insane in "asylums." Mr. Humphreys also furnishes and analyses tables showing the age distribution of patients on admission to asylums and the increasing tendency to certify persons suffering from simple senile dementia—a point of so much and so pressing importance that it requires separate treatment.

The publication of Mr. Humphreys's paper should do much to allay alarmist fears of a rapidly-progressive mental deterioration in England and Wales. It shows conclusively that a very large part—certainly the greater part—of the alleged increase of insanity is merely the statistical expression of changes in distribution of the insane, but it does not and cannot, for want of the necessary information, answer the question whether there is or is not an actual increase of insanity. As we have pointed out when referring to this matter on previous occasions, this question can only be solved by means of complete information extending over a considerable number of years concerning the numbers and ratios to population of first admissions. Further, having regard to the large reserve of mental unsoundness shown by Mr. Humphreys to exist outside the control of the Lunacy Commissioners, it is necessary to know what proportion of the first admissions to asylums come from this reserve, whether these have been previously reported upon as living in workhouses or with relatives or not, and what proportion may truly be regarded as cases of occurring insanity. The information given in the *Annual Reports* of the Lunacy Commissioners is quite inadequate for this purpose—in fact, the published information differentiating between first admissions and readmissions only dates back to 1898. We are therefore in agreement with Mr. Humphreys when he says that without this information the number and proportion of admissions is practically useless as evidence of the growth of insanity, and also with his concluding recommendation, "that provision should at "once be made for obtaining trustworthy statistics "concerning the annual admissions, transfers, dis- "charges, and deaths occurring among the pauper "insane retained in workhouses, and similar informa- "tion relating to insane paupers in receipt of outdoor "relief." The lack of this information is possibly one of the results of the divided control of lunacy in England and Wales, but in any case there can, as Mr. Humphreys says, be no insuperable difficulty in the way of obtaining this indispensable information.

SOME RECENT RESEARCH WORK ON ANAESTHETICS.

Professor G. A. Buckmaster and Mr. J. A. Gardner have undertaken experiments since 1905 with a view to ascertaining the relation into which inhaled chloroform enters with the blood, and their results were given in a recent communication to the Royal Society. They point out that experiments *in vitro* on the relation between liquid chloroform and defibrinated blood, while they show that the tension of chloroform is lower in blood, serum, and solution of haemoglobin than in water or saline solution, a definite quantity of chloroform being associated with some constituent or constituents of blood, yet do not lead necessarily to conclusions applicable to the physiological norm. In the present research cats were selected for use in most of the experiments, as the phenomena of chloroform action upon these animals have been shown by MacWilliam to resemble closely those evinced in man.

Previous workers have supplied data on the amount of chloroform found in blood after anaesthetization; thus Lallemand, Perrin, and Duroy found that 100 grams of blood contained 1 c.cm. of chloroform vapour in the blood and tissues of dogs killed by the anaesthetic; Gréhant and Quinquaud, by a more exact method, found 1 gram of chloroform in 1,800 to 2,181 grams of blood, the estimation being taken at the moment of anaesthesia in dogs. Pohl, in a series of elaborate determinations, employing a modification of Schmiedeberg's method, arrived at the average amount of chloroform present in the blood of animals killed by chloroform as being 0.035 gram per cent. The very interesting researches of Nicloux and J. Tissot are considered at length in the present paper. The contention of Desgrez and Nicloux that chloroform becomes decomposed, and that carbon monoxide is present in the blood after prolonged chloroform inhalation, is not borne out by the experiments of Buckmaster and Gardner.

To determine the amount of chloroform in the anaesthetized animals Buckmaster and Gardner relied upon the difference in the chlorine content of the blood before and after inhalation of chloroform, samples of the blood being withdrawn at intervals during the experiment. The chlorine was estimated by the method of Carius, some special precautions being adopted to ensure accuracy. The anaesthetic was given through a tracheal tube either from a Woulfe's bottle or from a bag containing a mixture of known strength obtained by Dubois's apparatus. Reviewing the experiments as a whole, the investigators propound the following conclusions: The amount of chloroform in the arterial blood of cats at the moment marked by cessation of the conjunctival reflex in both eyes is estimated as between 14 and 27·6 mg. per 100 grams of blood. The amount varies according to individual peculiarities of the animals, but the percentage of chloroform in the blood necessary to produce anaesthesia is not affected by the body weight of the individual. The rate of induction is also variable, and does not appear to be wholly dependent upon the percentage of chloroform in the inspired air. The lethal dose capable of abolishing respiration is also variable, being on an average 40 mg. per 100 grams of blood. This dose is very near the anaesthetic dose; indeed, all recent workers have shown how narrow is this margin between the amounts of chloroform in the blood which are necessary on the one hand to induce anaesthesia and, on the other, that degree of narcosis which is marked by cessation of respiration and death. The elimination of chloroform after its inspiration has ceased is rapid and less variable than that of its absorption. The important question, How is the inspired chloroform distributed between the corpuscles and the plasma? is also considered in the present portion of Professor Buckmaster's report. The corpuscles appear in the case of cats to take up most of the chloroform; the plasma, unless the anaesthetic is rapidly administered or is pushed to an extreme point, remains free. This is also true of dogs, except that in their case chloroform appears to enter more easily into the plasma. These results agree, it will be seen, with those arrived at by Nicloux.

Professor Buckmaster and Mr. Gardner's research, the first portion of which is described, is certainly one of great importance, and, taken in connexion with the reports of the Special Chloroform Committee of the British Medical Association, throws much light upon the vexed question, What is the percentage of chloroform in the blood which represents the state of anaesthesia, and how far is this removed from the percentage which destroys life? Tissot asserts that no relation subsists between the proportion of chloroform in the blood and the effects of the drug, since these effects depend upon the quantity which acts upon the central nervous system and not on the absolute amount of chloroform in the blood. Again, the same observer has pointed out that the actual quantity of chloroform required to induce anaesthesia is far less when the rate of induction is slow, so that in the case of rapid administration, as in that of the administration of high percentages, there is a more or less large surplus of chloroform in the blood, which may find its way to the central nervous system and produce lethal effects. These conclusions, arrived at from so many different points of view, all tend to accentuate the dangers of rapid anaesthetization, as also of the employment of high percentage vapours, and thus tacitly condemn those methods which do not afford a means of controlling the percentage of vapour inhaled and the rate at which it is administered.

Dr. N. H. Alcock, in the course of a research upon the action of anaesthetics on living tissue,[1] has investigated the behaviour of isolated nerve and that of frog's skin when subjected to the influence of anaesthetics. Chloroform, ether, and carbonic dioxide affect not only the negative variation in mammalian nerve, as was shown by Professor A. D. Waller, F.R.S., but influence also the injury current. Dr. Alcock's experiments, which are of a highly interesting and ingenious nature, appear to demonstrate that chloroform, ether, and probably alcohol also, are capable of producing an electromotive effect upon nerve tissue. In frog's nerve the maximum value of electromotive effect was found to be about 0.030 volt. This has the same sign as the current of injury. A further result of the action of chloroform or ether is a diminished polarization of, but no change in the resistance of the nerve. From his experiments Dr. Alcock infers that the electromotive effects are due to the same cause which produces the injury current, and as the resistance is not lessened no additional ions are formed.

The experiments dealing with the frog's skin are perhaps more important in the sense that they permit of wider generalizations, and they are less open to the ambiguity such as may exist in the case of the experiments upon nerve. Dr. Alcock is led to advance the theory that the action of the anaesthetic probably lies in its power of entering a semi-permeable apparatus—in the case of nerve, an axis cylinder, in that of skin or cognate structure, a semi-permeable membrane. Such a theory seems to fit in with Dr. Alcock's experiments, and to explain many of the recognized facts of anaesthetic action. As the author of the research points out, the views of Professor Benjamin Moore and Dr. Roaf that anaesthesia is "due "to a paralysis of the chemical activities of the proto-"plasm as a result of the formation of such aggre-"gates," harmonize and may even explain this power of permeation. The subject is one not only of great importance, but peculiarly fascinating, and will, we trust, be advanced further in the course of the prosecution of the researches which these experimenters are conducting.

Dr. E. H. Embley has reported to the Royal Society the results of an investigation into the pharmacology of ethyl chloride carried out in the Physiological Laboratory of the University of Melbourne. Dogs were selected for the experiments, but many initial difficulties were encountered. Ethyl chloride is soluble in water to the extent of 253.36 per cent. by volume, and although it is freely absorbed by blood, the exact amount taken up is not easy to estimate, as the blood becomes of tarry consistence and "lakes" in the earlier part of the absorption process. It seems clear that like chloroform, ethyl chloride enters into chemical union with the blood. Upon the isolated heart ethyl chloride caused paralysis, an effect common to it and chloroform, although nineteen times more ethyl chloride is needed. Similarly it causes relaxation of the arterioles when these are isolated from the central nervous system. Upon the central vasomotor mechanism ethyl chloride acts as a stimulant, at least for a time, and the net result upon the vasomotor system in the intact animal is dilatation, although the degree of paralysis is strikingly less than that caused by chloroform. Experiments with regard to vagus inhibition showed that although the heart was readily stopped under ethyl chloride as it is under chloroform, yet under the former anaesthetic the inhibition was never fatal, whereas under the latter it is frequently so. The cardiac inhibition appears to be due to central stimulation; it is not reflex. In concentrations of 10 per cent. and over, ethyl chloride, according to Dr. Embley, produces paralysis of the myocardium quite comparable to that caused by chloroform in one-nineteenth of the above concentration.

With regard to respiration, these experiments indicate that with ethyl chloride, as with chloroform, the respiratory function is maintained so long as blood pressure does not fall. The fall of blood pressure, when it takes place, is due to vagus inhibition, and so in this respect ethyl chloride differs from chloroform, since under the latter the fall in blood pressure is due in part to cardiac paralysis and in part to vagus inhibition. High concentrations (20 per cent.) of ethyl chloride can, however, produce respiratory failure apart from any vasomotor effects. For dogs the limit of safety is placed at from 5 to 7 per cent. in air inspired, and Dr. Embley is led to believe from his clinical observations that a like dosage should be accepted in the case of man. The value of Dr. Embley's work is great, especially at the present time, when the use of ethyl chloride has become so general. There have been several deaths under this anaesthetic, and it is to be hoped that a more accurate knowledge of its properties will obviate the repetition of mistakes which, in the case of a powerful drug such as ethyl chloride undoubtedly is, are liable to have serious if not fatal results.

[1] *Proceedings of the Royal Society*, Biological Section, vols. 77 and 78.

THE REPRESENTATIVE MEETINGS.

AT the commencement of the business of the Central Council of the British Medical Association on Wednesday, April 17th, the Chairman of Representative Meetings stated that, having carefully considered the business which would come before the Annual Representative Meeting, he thought that it would not be necessary to begin on Friday, July 26th, as originally proposed, and accordingly moved that the meeting should be summoned for the following day. This recommendation was unanimously accepted. The annual general meeting of the Association will there-

fore be summoned to meet in Exeter on Saturday, July 27th, at 9.30 a.m., and the Annual Representative Meeting will commence immediately after the conclusion of the business of the General Meeting. A recommendation of the Organization Committee with regard to the grouping of Divisions and the formation of certain others into independent constituencies will, according to a statement made to the Council by the Chairman of the Committee, raise the number of Representatives for the year 1907-8 to 166, an increase of 7; he added, however, that of the 159 constituencies previously entitled to elect representatives, only 144 exercised this privilege. The Special Representative Meeting for the consideration of the Draft Charter has, as already announced, been summoned to meet in London on May 29th.

THE LIMITATION OF OUT-PATIENTS.

AT the annual meeting of the Birmingham General Hospital the Chairman, Mr. Neville Chamberlain, in a very able speech, as reported in our columns at the time, alluded to the concern felt by many members of the Board at the constant increase in the numbers of persons seeking assistance at the hospital as out-patients; many were not suffering from diseases which called for any special skill or treatment, but persons who could be perfectly well dealt with as dispensary or club patients, whereas by crowding to the hospital they occupied space and time which ought to be devoted to more serious cases. He intimated that the matter was under consideration, and since that time we are informed the report of the Committee has been considered, and has been accepted by the Board. The report recommends the constitution of a special department through which all applicants for admission to the hospital must pass, and where those whose circumstances or ailments render them unsuitable will be given first aid and referred elsewhere, while the others will be passed on and made in-patients or out-patients in accordance with their needs. For this purpose a special staff of officers is to be appointed, whose sole duty will be to attend to the business of these receiving rooms, where they will be aided by the requisite clerical and nursing staff. We understand that the report in its first shape recommended that a building should be erected for the purpose of this special work, but the Board seems to have shrunk from incurring such an expense for what some of them may regard as at best a hopeful experiment; at any rate, the scheme was only accepted when shorn of any proposals involving an outlay on bricks and mortar. According to the present plan a part of the out patient building is to be rearranged so as to provide a receiving room and its necessary annexes, and the staff is to consist of three receiving room officers, who are to be non resident, but to give up the whole of their time to the work, and to be paid a salary of £150 a year each. Undoubtedly it is in accordance with the ordinary evolution of hospital organization that department after department should be created and supplied with a special staff at the work is to be carried on efficiently, and it must be admitted that the number of trivial cases now seeking relief at hospitals has become so great that means must be devised to diminish the burden in the interests alike of general practitioners and of the officers to out-patients. If this can be well done the hospital out patient work will be correspondingly lightened and should be improved in quality, but the work to be done is difficult, requiring some experience, good temper, tact, and patience, or endless troubles will arise; yet this delicate work must necessarily be entrusted to comparatively junior men who will not be under supervision. Moreover, it cannot be professionally interesting work or tolerable except for a short time, so that the incumbents may be expected to change nearly as often as the residents in the hospital. It is unlikely that mistakes will be altogether avoided, yet it will be necessary for the Board of the hospital to support their officers or they will avoid rebuke by erring so far on the safe side that the results will not justify the expense incurred by the system. In an institution like the Birmingham General Hospital, which derives a large part of its income from subscriptions from governors who receive tickets in return, the Hospital Saturday and Sunday Funds, whose delegates are accessible to complaints from disappointed applicants, it is to be expected that the new system will give rise to a certain amount of discontent which will be brought home to the hospital authorities. In so far as there may be any failure to give the necessary assistance to suitable cases, this must be attributed not to the system, but to imperfections in carrying it out, and we regard this as a more serious difficulty than the other, which some might think the more important—that is, that subscribers, whether governors or contributors to the Saturday and Sunday Funds, may be inclined to insist upon their rights to have any patient treated by the hospital whom they choose to send. We do not believe that either of these classes of subscribers would attempt to maintain such an unreasonable position, and we give them credit for sufficient good sense to recognize that a hospital's sphere of work must necessarily have limitations, and that it is wasteful folly to clog the delicate machinery of a highly-organized hospital by crowding it with cases which do not require the sort of assistance which it has been specially and expensively created to supply. The danger of trouble arising from the mistakes of the reception room officers is greater, but this should be diminished by the rule that no case is to be sent away without relief to its immediate needs, trivial though these may be, and that all those who are not given an order for admission to one of the departments of the hospital will be referred to some external agency from which they can receive adequate treatment. The Birmingham experiment will be watched with interest. It is not, and does not pretend to be, altogether original, as something of the same kind has been carried out at St. Bartholomew's Hospital for many years, but St. Bartholomew's Hospital has a great advantage in having a large medical school attached to it, from which to draw its junior hospital officers, and for whom they constitute keenly sought prizes, whereas in Birmingham as in other provincial towns, the number of hospital appointments exceeds that of the number of local candidates who desire such posts, so that many go to men from other schools. A provincial hospital, therefore, which tries this plan has to face the probable difficulty of an inadequate supply of trained medical officers to carry on the work.

THE MEDICAL OFFICER AND HIS ARMS.

A MEDICAL officer of the French army, Dr. Epaulard, has recently suggested that medical officers of all civilized armies should wear the same uniform. Although this might have certain advantages on campaign, it is open to the fatal objection that it would tend to make medical officers, in a military sense, "kinless loons," and thus to detach them from the fellowship of the army to an extent that would seriously compromise their rank and impair their authority. Dr. Epaulard, who would seem to be revolutionary to the point of iconoclasm, further proposes that the medical officer of the future should wear no weapons, which in his opinion are mere encumbrances without any compensating usefulness. This proposal would doubtless have had the enthusiastic assent of a late Commander-in-Chief. It may be remembered that some years ago,

an inspection in Dublin, Lord Wolseley ordered the en of the Army Medical Service to be deprived of their vords on the ground that they were not soldiers. It is ossible that this may only have been that distinguished eneral's way of displaying his ill-feeling towards ie service which so largely helped him to win the aurels gathered by him in his "doctors' wars." Notithstanding Lord Wolseley's petulant *obiter dictum*, edical officers are soldiers, and in the field they are ten as much exposed to danger as combatants. At ny time, especially in savage warfare, they may be illed on to defend themselves or the wounded under eir charge. Even in so-called civilized war, when ie medical officer is going about the battlefield, parcularly at night, he is likely to meet with marauders id camp followers, who would not hesitate, if disturbed their ghastly business of robbing the wounded and ie dead, to turn their attention to him. In the rearuard of an advancing army, again, the doctor may eet with ruffians or drunken or mutinous stragglers, ho, if they knew him to be unarmed, would refuse to overawed and might be dangerous. Frankly, we link Dr. Epaulard's proposal foolish. If in some roxysm of reforming frenzy the War Office should er be led away into disarming medical officers, they ould be compelled in self-defence to include a revolver their professional armamentarium.

THE MORAL TREATMENT OF DISEASE.

OR several months past, we learn from an American ontemporary, the *Literary Digest*, the "moral treatment of nervous disorders" has been carried out at an piscopalian church in Boston. In this system the ombined forces of medicine and religion are brought bear on the patient. The ministers under whose spices the movement has been set on foot refuse to ccept any patient for treatment till his case has been agnosed by a trained specialist in nervous diseases. is said that an advisory board consisting of some of ie best neurologists in New England has been secured, id their assistance will be given in difficult cases. or ordinary work, two younger doctors trained on ie most advanced scientific lines in psychological edicine attend on certain days of the week at the hurch, where they may be consulted. Only persons ffering from nervous troubles and functional sturbances are accepted, and should any of iese already be under medical advice they ust bring the physician's consent before their names an be enrolled. "One of the main pillars of the movement," we are told, "is the highest obtainable scientific skill of our time. Its other main pillar is religious faith. While no one is asked about the exact shade of his religious belief, or even whether he has any, nevertheless the best results are gained with those who accept some form of the Christian religion. When through lack of such faith no religious appeal can be made, an ethical appeal is still possible, and is often fruitful." As to the details of the treatment and the methods of application, we are informed hat "scientific and religious remedies are administered by suggestion." Appeal is made to the subconscious lf by the suggestion through eye and ear of a few simple uplifting ideas." If we ask for some definite nformation as to the unconscious self, we are told hat science suggests that it is "that portion of our nature that is most closely related to the functions and organs of our physical body. It is this self which sees that the commands of the will are carried out. It contains within itself these healing and recuperative processes that take place in silence and darkness, usually in sleep. Faith believes that it is this self which acts as an intermediary between the normal self and God, that "through it liberating and regenerating forces may "come, and that, once it is penetrated by optimistic, "expectant, and believing thoughts, the patient is on "the road to recovery." This, it will be observed, is not an explanation of the process of cure by moral treatment, but a mere restatement of the fact that faith makes whole—under certain conditions. This is admitted by every one. The difficulty is first to define, and then to fulfil, the conditions. The exponent of the "moral treatment of nervous disorders" from whom we have been quoting, says that at present suggestion is available only within certain limits. There is not, he frankly allows, the slightest evidence that when an organic change has taken place in the body such a change can be effected by mental means. Yet even here, he argues, the suggestive principle is not without value. It creates the hopeful atmosphere within which the material remedies may work. A cancer, for instance, is not amenable to mental treatment. But both preceding and succeeding the operation good suggestion is of the highest value. The patients disclose their secret fears and broodings in private interviews with the physicians and ministers. There can be no doubt that this cleansing of the stuff'd bosom of the perilous stuff which weighs upon the heart has a distinctly therapeutic effect in itself. Then advice—now medical and physical, now mental and spiritual—is "earnestly and scientifically" given. "Already," we are told, "the results are "so beneficent that they justify all the expenditure of "mental and physical vitality involved." We are assured that the system is in no sense a new cult, nor is any new discovery in science exploited. "The only novel "element is the alliance between religion and scientific "medicine in a purely philanthropic interest—that of "getting mentally, morally, and nervously run-down "people into a healthful attitude." The system has two features which sharply distinguish it from Christian Science. No attempt is made to cure organic disease, and not a cent has ever been received in payment for the services rendered. The idea seems to us a good one if the system is worked on the right lines. Medicine and religion, which are too frequently regarded as mutually antagonistic, should be mutually complementary. There are many diseases in which the medicine of the soul is a powerful adjuvant in the treatment of the body. The danger that lurks in spiritual healing is that enthusiasm may easily o'erstep the modesty of Nature and fall into the quagmire of quackery and superstition.

A MOHAWK PHYSICIAN.

In the JOURNAL of April 6th we announced the death of Dr. Oron-hya-tekha, of Toronto, a Mohawk chief who was a regularly qualified physician, and practised his profession first in Ontario and afterwards in Toronto. His career was so remarkable as to deserve a fuller record. Some interesting particulars are given in Mr. J. B. Atlay's *Life of Sir Henry Acland*. Acland accompanied the King, then Prince of Wales, on his visit to Canada in 1860. At Toronto he met a herculean Indian with a ring in his nose, and painted. He was a chief of the Mohawks, and gave his name as Oron-hya-tekha, or Burning Cloud. He told Acland that he had gone all the way to Ohio and lived on charity to attend the University. He became apprentice to a shoemaker to get maintenance, and then went back to his people and taught them what he had learnt as well as he could. Acland offered to do anything he could for the chief, and not long after his return to England received a letter from Oron-hya-tekha, announcing his intention of coming to Oxford: the letter was followed by the unexpected arrival of the chief, clad, not exactly in his war paint, but in moccasins and deer-hide. He had

worked his passage, and his capital amounted to 4½d. Acland befriended him to the utmost of his power, raised the necessary funds, and got him entered as a student at St. Edmund Hall, of which Liddon was then Vice-Principal. Though he is mentioned as having prepared a grammar of the Mohawk tongue for Professor Max Müller, Oron-hya-tekha went back from Oxford without a degree, but he became, thanks in no small measure to the interest which Acland continued to manifest in him, a doctor of medicine in Canada, was appointed medical attendant in the Indian Reserves, and became a highly respected citizen, famous for racy eloquence, and head of the important order of Canadian Foresters. He never ceased to correspond with his benefactor, and would often send him small specimens of his handwork, and on his visits to England on business connected with the Foresters he seldom failed to pay a visit to Oxford and to Broad Street. Oron-hya-tekha once brought with him his wife and daughter to show them, as he said, the man and the home, but for whom he would still have been a wild Red Indian.

COOKING FOR SOLDIERS

MAN has been defined as a cooking animal, but it is to be feared that his untaught efforts to justify the definition are too often disastrous to those who have to consume the results of his handiwork. The "son of a "sea-cook" is, or used to be, one of the worst insults that could be applied to a sailor. There are now of course trained cooks in the navy and also in the army, but in war these men do not bear charmed lives, and it may not be easy to replace them when killed or disabled by sickness. Several witnesses gave the Royal Commission on the South African war harrowing accounts of the sufferings of the men from bad food. A keen sense of these evils had moved the authorities of the United States Army to determine that cooking shall be systematically taught in the army. It is held that every soldier should be able to cook, and to that end military cookery schools have been established in the Washington barracks and at some of the western forts.

THE LATE PROFESSOR VON BERGMANN.

In the *Deutsche medizinische Wochenschrift* of April 11th Professor H. Schlange of Hanover gives an account of the last illness of Professor von Bergmann. The distinguished surgeon had for many years suffered from occasional attacks of intestinal disturbance; the origin of these was attributed by himself to severe dysentery from which he suffered while on service in the Russo-Turkish war. Professor von Bergmann's health had been failing for some time, and symptoms of obstruction manifested themselves while he was at Wiesbaden in March. It was not the first time this had occurred, and it was hoped that they would give way to medical treatment. It became evident, however, that surgical intervention would be required, and Professor Schlange was summoned. He first opened the caecum: this gave some relief, but in a few hours continued obstruction and pain made a second operation, on the left side, necessary. This eased the pain, but the patient gradually sank. As he had expressed a wish that a *post mortem* examination should be made, the body was opened six hours after death. The condition found was stenosis of the splenic flexure of the colon from adhesions, pancreatic necrosis and diffuse purulent peritonitis. There was no trace of cancer.

THE FIRST LADY DOCTOR.

A WEEK OR TWO AGO the *Westminster Gazette* published a letter from a correspondent in which he stated that last summer Dr. Elizabeth Blackwell, the *doyenne* of the feminine medical body, now in her 86th year, crossed the Atlantic on a visit to relations and friends. On arriving at the Boston Custom House the authorities passed on her luggage intact. "The first lady doctor," they said, "should not be troubled by the customary "inspection." The writer goes on to say:

> As considerable misconception exists on this point, it is as well to observe here that Dr. Elizabeth Blackwell has an incontestable claim to this title. The U.S.A. fiscal authorities knew what they were talking about. A native of Bristol, with her family, this lady settled in the United States in 1838, passed her preliminary studies at Charleston and Philadelphia, matriculating in New York in 1847, the first woman in America to receive a medical degree. In 1854 her sister Emily also took her degree of M.D. In 1860 Miss Elizabeth Garrett (Mrs. Garrett Anderson) commenced the study of medicine at the Middlesex Hospital (I quote from *Men of the Times*), obtaining her medical degree in 1870. Since that period large numbers of women in Europe and America have followed these examples, in France ladies practising also as oculists and dentists. But to Dr. Elizabeth Blackwell is due the honour of leading the way.

We have no wish to deprive Dr. Elizabeth Blackwell of any honour to which she is justly entitled. She was a pioneer in the modern movement which has had the result of giving women a new sphere of activity, and the medical profession a considerable addition to its ranks. As a matter of history, however, she is far from being the first lady doctor. Without taking into account Agnodice of Athens and other ladies of ancient Greece, who were not merely midwives but physicians; or Antiochis and the other *medicae* of Rome, to whom Galen refers in terms which show that he recognized their claim to professional fellowship; or Trotula and the other "Mulieres "Salernitanae" in the Middle Ages; and the *miresses* and *médeciennes* to whom diplomas were granted by the University of Paris down to the seventeenth century there were several lady doctors of the most authentic character in Italy, Germany, and France in comparatively modern times. We need only mention Maria Pettracina, who obtained the degree of Doctor of Medicine at Florence in 1780 and practised at Ferrara; her daughter and assistant Zaffira Peretti who graduated in medicine at Bologna in 1800; Maria Mastellari and Maria Dalle Donne, both of whom graduated at Bologna in 1799; Dorothea Christina Erxleben née Leporin, who, by special permission of Frederick the Great, studied medicine at the University of Halle, where she took her doctor's degree in 1754; Regina Josefa von Siebold who was admitted doctor in obstetrics by the University of Giessen in 1819, and whose daughter, Charlotte Heidenreich, was also a regular doctor; and the famous Madame Boivin, celebrated by Oliver Wendell Holmes, author of a treatise on midwifery, and of monographs on hydatid moles, on abortion, on absorption of the placenta, etc., and inventor of a speculum and other instruments, on whom the University of Marburg conferred the honorary degree of Doctor of Medicine in 1827. To these might be added several women who practised as military surgeons in the disguise of men. Of these the best known are Henrietta Faber who, as Henry Faber, after being trained in surgery under Larrey, was regularly commissioned and served with the Grande Armée; and the famous "Dr Barry" of our own army, about whom much has been written.

THE QUEEN'S JUBILEE HOSPITAL.

A CORRESPONDENT has pressed upon our notice the affairs of the Queen's Jubilee Hospital, Earl's Court, now known as the Kensington General Hospital, which he considers require more attention than they have received since the notable occasion, when a special Committee of King Edward's Hospital Fund held an inquiry and made sundry sweeping recommendations. In support of this statement he refers to the proceed-

ings at the annual general meeting on March 16th, as reported in the *Kensington News*. At this meeting the report submitted and adopted did not materially differ from similar documents which have been approved innumerable times elsewhere. In other words, the report lauded the work of the hospital, claimed that it was an immense benefit to the district, and ended up with a lament that the institution did not receive more financial support from those in whose midst it worked. The interest lies in the remarks made by the chairman. The institution, he said, was already in debt, and by the end of twelve months they could count on being saddled with a debt of £5,000 with little, if any, prospect of paying it off. Even as things were, they had been absolutely dependent upon the medical staff to pay their bills from day to day, or they would frequently have been in great difficulties. On one of the medical staff present at the meeting offering a donation of £200 from himself and his wife if eight others would make the sum up to £1,000, the chairman remarked that it was a liberal offer, but what were they to do in the immediate future? Finally he proposed that the hospital should be closed for six months, and that at the end of that time a special court of governors should be called to decide upon its future. The meeting, however, appears to have considered this remedy too drastic, and nobody seconded the motion. Another suggestion, made by one of the medical staff, was that all out-patients should be charged 6d. a week; to this it was replied that out-patients were people unable to pay even for the bottle in which their medicine was given them, and that if such a course were adopted the character of the institution would be entirely changed. Nevertheless, it was eventually decided to reserve half the beds for paying patients, and to demand from all out-patients other than those who brought letters from local medical men or subscribers' recommendations some sum, the amount of which should be determined by the Board of Management. The condition of affairs thus disclosed is lamentable, and it is much to be regretted that the suggestion of the chairman was not approved. The whole history of this institution from the beginning has been unfortunate, and it seems still fated to continue to place all those connected with it in an invidious position. It has never been highly esteemed either by medical men or laymen residing in the locality, and in its present condition it is still less likely to be popular; for when an institution ostensibly founded for the benefit of the suffering poor exacts a fee from the majority of its out-patients and reserves half of its twenty-three beds for paying patients, it has more the appearance of a private than of a public hospital. Philanthropy is an excellent thing in its way, but when philanthropy is carried to the extent of medical men giving their services to such an institution and also paying its bills, it is open to misinterpretation.

VACCINATED VEAL.

The Chairman of the Kitchen Committee gave to the House of Commons, in reply to a question by Mr. Lupton, some lurid culinary information which may rival the "lurid pathology" dear to that honourable gentleman himself. The champion of the antivaccinists wanted to know whether vaccinated veal was bought for the House, and, if not, whether some might not be purchased if the price were moderate. Sir J. Jacoby declined to satisfy Mr. Lupton's gastronomic curiosity, on the ground that "vaccinated veal is very dark in "colour, and, on being cooked, turns quite black." This reply, which seems to have amused the House of Commons very much, involves a certain fallacy, apparent to logicians, which Sir John Batty Tuke sought to lay bare by addressing the following question to the Chairman of the Kitchen Committee: "Whether he is aware that "calves used in the preparation of vaccine are imported "from Ireland, and are not less than four months old, "and have not been fed exclusively on milk; that calves "the flesh of which is sold by high-class butchers are fed "exclusively on milk; that calves used for the prepara-"tion of vaccine are killed instantaneously, and are not "submitted to the process by which white veal is ob-"tained; and will he produce substantial evidence that "the veal of vaccinated calves turns black when cooked.' The question was, however, not accepted by the clerk at the table on the ground that no responsibility for the management of vaccinated calves fell on the Chairman of the Kitchen Committee. The fact is that the calves used by the Vaccine Department of the Local Government Board are 3 or 4 months instead of 4 to 6 weeks old, and their flesh when prepared for table is darker than veal ordinarily sold by butchers, partly because the animals are older, partly because they are fed in Ireland not exclusively on milk, but on grass, hay, roots, potatoes, etc., and partly on a difference in the manner of killing, calves to yield what is called "first-class veal" being more slowly bled.

We regret to record the death on April 16th, at the age of 83, of Dr. William Henry Ransom, F.R.S., Consulting Physician to the General Hospital, Nottingham.

Professor von Leyden has been made an Acting Privy Councillor with the title of "Excellency." The honour corresponds to that of a Privy Councillor in this country, the "Excellency" being virtually equivalent to "Right Honourable."

Dr. J. C. McVail has begun his duties as medical investigator of indoor and outdoor Poor-law medical relief in England and Wales for the Royal Commission on the Poor Laws and the Relief of Distress. At the request of the Royal Commission the county councils of Stirling and Dumbarton have granted him special leave of absence during the continuance of this investigation.

The Ingleby Lectures of the University of Birmingham will be delivered in the medical lecture theatre on Thursdays, May 9th and 16th, at 4 p.m., by Dr. Thomas Wilson, obstetric officer to the General Infirmary, Birmingham; the subject is inflammation of the uterine appendages. A course of post-graduate lectures will be given on Thursdays, May 23rd and 30th and June 6th and 13th, at 4 p.m., and will be open to members of the medical profession and students of medicine.

It will be remembered that rather more than a year ago Dr. John Carswell was the defendant, together with Dr. Marion Gilchrist, in an action brought against him by William Purves, a retired Clyde pilot, claiming £10,000 damages on the ground that the doctors had improperly signed certificates of unsoundness of mind. After a prolonged trial in the Court of Session a verdict was given entirely in favour of the defendants. On April 16th Purves fired three shots from a revolver at Dr. Carswell in the street, wounding him in the thigh and buttock. Dr. Carswell was removed first to the parochial hospital, and afterwards to his own home; we are glad to learn that he is reported to be making satisfactory progress.

Medical Notes in Parliament.

The Progress of Business last week was very disappointing. The Army Bill occupied two days, and had to be held over for another day's debate before the second reading stage could be carried. The new procedure rules also remained unfinished, and the only thing really accomplished was the second reading of the Mines Eight Hours Bill on Friday. This after all was only a protest in favour of legislation, as the Bill referred to the Grand Committee will have to be transformed by the inclusion of Government clauses or dropped in favour of a Government measure. This week the first three days have been taken up for the conclusion of the reform of procedure and the second reading of the Army Bill, while the most important feature of the session, the Budget, will be introduced on Thursday after the JOURNAL has gone to press. The slow progress made with the legislative proposals for the session is causing a good deal of anxiety among members interested in social questions. Unless the new rules work wonders by sending all Government Bills to Grand Committees, and so getting three or four Committees to work simultaneously for the purpose of pushing on the Committee stages of Bills, it is difficult to see how, even with an ordinary autumn session, the Government programme can be accomplished. For private members' Bills the prospects which have never been promising, grow more gloomy as the weeks pass.

The Compulsory Notification of Phthisis.—Sir Francis Channing asked the President of the Local Government Board if he had considered the unanimous request of the Kettering Urban Council for the compulsory notification of phthisis, and whether he was aware that there was special dread of this disease in the shoemaking towns. Mr. John Burns said that he had received the statement of the district council and the report of the medical officer of health. They had only reached him in the last few days, and were still under consideration. In reply to a further question on the working of compulsory notification of phthisis in other places, Mr. Burns said there had been statements in the annual reports of the Medical Officers of Health for Bolton and Sheffield on the subject, but he was not aware that any authoritative reports had otherwise been made, nor had he received any report through the Scottish Local Government Board as to the working of compulsory notification in the towns in Scotland. Dr. Bulstrode, one of the Medical Inspectors of the Local Government Board, had, however, been engaged for some time past on an inquiry as to phthisical sanatoriums in England and Wales, and incidentally had acquired much information as to the working of both voluntary and compulsory notification of pulmonary phthisis. This information had been embodied in a report now in the press.

Tuberculosis and Dairies. In answer to questions by Mr. Harry [illegible] as to the adoption of the model regulations for dairies by local authorities, Mr. Burns said that he had [illegible] the making of regulations under Article I. of the Dairies, Cowsheds, and Milkshops Order, 1901, regulations under the Article were in force in all except about 250 out of some 1,200 urban and rural districts. The precise figures would appear in a return now in preparation. The regulations usually contained an Article as to the inspection of cattle and dairies. The circular of March 11th, 1901, was sent to the councils of all the urban and rural districts. Regulations under the Order had since been made by 900 of these councils and they had generally been based on the model regulations issued by the Local Government Board.

The Mortality from Snake Poison in India. Sir William Collins asked the Secretary of State for India what had been the total number of deaths and the death-rate per million living from snake poisoning in India for each year for the last thirty years, and what measures curative or preventive, were provided or encouraged by the Government of India with a view to reduce the mortality from snake poison. Mr. Secretary Morley gave, in reply, the figures for the last thirty years which showed 15,319 deaths in 1876, the lowest number in any of the years, and 21,737 deaths in 1905. The deaths per million of population were given, and varied from 55.6 in 1876 to 91.0 in 1905, while the highest points were reached in 1889 and 1890, when the death-rates were respectively 112.9 and 107.5. The first ten years of the thirty-year period showed the lowest average mortality rate, namely, about 95.5; the second decennium had a rate of 100.9, and the third of 98.1 per million. Mr. Morley said the returns were probably not very accurate, as they were based on unskilled diagnosis. Rewards were offered in most provinces for the destruction of snakes, but experience had shown that this measure was not likely to have any appreciable effect on the mortality from snake bite, and the total amounts so paid were small. The medical officers employed at the research laboratories in India were engaged in investigating and testing the antivenomous serums or other curative agents which had been suggested, and a system of treatment of affected persons by permanganate of potash, suggested by Sir Lauder Brunton, was being tried in some provinces.

Vaccinated Veal for M.P.'s.—Mr. Lupton on Monday last was finally relieved as to the possibility of his being supplied with vaccinated veal in the House of Commons. The Chairman of the Kitchen Committee informed him that no vaccinated veal was supplied to the House of Commons. He added that he was informed that vaccinated veal was very dark in colour and when cooked turned quite black, and he declined to purchase any as suggested by the honorary Member.

Vaccination.—Mr. Lupton also asked questions as to the practice of vaccinating all persons admitted to workhouses and the cost thereof, and the order issued October 18th, 1889, with reference to the standard of vaccination marks. Mr. John Burns said in reply that, so far as he was aware, there was no such practice as that mentioned, of vaccinating every person irrespective of age who was admitted to a workhouse. As the cost of vaccination in workhouses was not separately shown in the returns, he was unable to say what it was. As regards the order of October, 1889, it was still in force, and the medical advisers of the Local Government Board did not recommend that it should be altered. They had not come to any conclusion in this matter opposed to the views expressed in Paragraphs 294, 295, and 297 of the final report of the Royal Commission on Vaccination.

Death Certificates. Mr. Summerbell asked the President of the Local Government Board if his attention had been called to the charge (3s. 7d.) made for death certificates by the relieving officer and collector of the Shardlow Union; and, if so, whether it was his intention to take any action having for its object the fixing of a smaller charge for such certificates. Mr. Burns replied that one of the relieving officers of the Shardlow Union was also registrar of births and deaths, and it was in the latter capacity that he had issued certificates of death when required. He understood that in no case had he charged a higher fee than that authorized. The charges in connexion with certificates of death were statutory and he was not empowered to alter them.

Deaths of Railway Servants from Accidents. In answer to Sir Francis Channing, Mr. Lloyd George gave some interesting figures last week showing the number of railway servants killed for each year from 1896 to 1906, both inclusive, in the movements of railway vehicles. The total number for eleven years was 5,241, and the yearly average number of deaths was somewhat over 476. The worst year was 1900 with 585 deaths, and the best year was 1905 with 393.

Insanitation at Draperstown. Mr. Shaw questioned the Chief Secretary last week on this subject and pointed out that the blocking of the main sewer for some years had produced a dangerous condition of things which demanded inquiry. Mr. Birrell replied that the Local Government Board had ascertained from the Magherafelt Rural District Council that an obstruction existed in the main sewer at the back of the houses in New Row, Draperstown. A question had arisen as to whether the work of removing the obstruction should be carried out by the council or the Drapers' Company, and this question was considered at a conference between a Committee of the council and a Committee of the Drapers' Company on the 6th instant. The result of the conference was to be considered at a meeting of the rural district council at once.

Canada.

The New Toronto General Hospital.

The Committee appointed by the Board of Trustees of the Toronto General Hospital to gather information which would serve for the projected new building, visited five hospitals in New York City, St. Luke's, Roosevelt, Bellevue, Mount Sinai, and the New York; one in Philadelphia, the Jefferson Medical College Hospital; and one in Baltimore, the Johns Hopkins. The relative cost of treating patients in these compared with the Toronto General are as follows:

Toronto General Hospital	$1.33 per diem.
St. Luke's	1 97 ,,
Mount Sinai	2.00 ,,
Roosevelt	2.29 ,,
Bellevue	1.30 ,,

Bellevue, the only one which approaches in economical management the Toronto General, is the City Hospital of New York, has under treatment over 900 patients, and as it has no private or semi-private wards, the standard of food and treatment is not nearly so high.

Generally there are two styles of hospital building, the pavilion and the multiple story building. The former was the favourite for some time, but while it possesses many advantageous features from the standpoint of treatment, it requires too much land if it be in the centre of a large city, and introduces many complications into the internal economy which make it vastly more expensive. It was found that it is more economical and satisfactory to have the kitchen and laundry on the first floor than on the top floor, as was advocated some years ago and as is the case in several American hospitals, with projection under a separate roof, so that odours may not pass into the main part of the building. The enormous expenditure on operating theatres in many hospitals is unjustifiable from the standpoint of efficiency, glass and marble tiles may be replaced by cement or ordinary tiling, without sacrifice of anything but appearance. In respect of ventilation, artificial means had been found unsatisfactory, and are not generally approved.

McGill University.

Two fires have occurred at McGill University within a fortnight. The second at least is, according to a Reuter's telegram, believed to be the work of an incendiary; this fire, which occurred on April 16th, was very serious, destroying the medical building; but we are glad to learn from Professor Osler that he has received cable messages which enable him to state that the library has been saved and the most important part of the museum—the exceptionally fine collection illustrating the heart and arteries. The monetary loss is estimated at £100,000, of which £70,000 is covered by insurance.

The Canadian Army Medical Corps.

Major F. L. Vaux, of the Canadian Army Medical Corps, has been instructed to go through a course of instruction at the Dépôt of the Royal Army Medical Corps at Aldershot. Major Vaux served with distinction in the South African war in 1899-1902, being present in numerous engagements in the Orange Free State and the Transvaal, and receiving the Queen's medal with three clasps and the King's medal with two clasps.

West Yorkshire.

Midwives and Infant Mortality in Bradford.

Following on the recent conference on infantile mortality and the milk supply, a further gathering of a practical character took place in Bradford on April 10th. The Mayoress entertained seventy midwives who are registered in the city at tea, and afterwards there was an informal discussion on some of the means to be adopted in preventing the excessive wastage of infant life which at present takes place. There is no doubt that midwives can do a great deal in this way if they are properly instructed.

Bradford Fever Hospital Administration.

A return has been distributed to the members of the Bradford Health Committee on the cost of administration and maintenance of patients at the Leeds Road Infectious Diseases Hospital in Bradford for the year ending December 31st, 1906. The total cost of the institution for that year was £6,671, while the average cost for five years was £5,670. The cost per head averaged 22s. 7d. a week, whilst the average for five years was 21s. 6d. The Committee has been subjected to some criticism on account of its supposed extravagance; but whereas the Bradford average has been £1 2s. 7d., in Edinburgh it was £1 5s. 7d., Manchester (Monsall) £1 10s. 4d., Leeds from £1 1s. 10½d. to £2 3s. 3d., and Glasgow £1 10s. 1d.

Child Life and Labour: the Half-time Question.

Dr. Crowley, Medical Superintendent to the Bradford Education Authority, gave a lecture recently on this subject, in the course of which he said that deterioration was generally noticeable after a child became a half-timer. He quoted the opinion of a teacher who had had half-timers under him for thirty years and who said that the bodily development of half-timers was inferior to that of day scholars; they had often a harassed, wearied, quite unchildlike look, and in the afternoon were too tired to work. They were morally very much below the standard of day scholars, and had habits of untidiness, inattention, and carelessness. They were less amenable to discipline, took less interest in their school work, and made slight progress, and were therefore a great loss to the city and the nation. Dr. Crowley considered that the time appeared to be ripe for definite legislation on the subject. Temporary sacrifice from an economic point of view would soon be made up if this form of labour, which was bad from the physical, educational, and moral standpoint, were stopped.

Anthrax in Bradford.

In spite of the efforts of the Anthrax Investigation Board to discover some certain means of eliminating the danger of infection in handling the various classes of wool and mohair likely to be dangerous, cases continue to occur. A man, 32 years of age, employed as a woolcomber, went home on March 25th complaining of pains in the head and stomach, but continued working more or less for a few days afterwards. On Tuesday, April 2nd, he was taken to the Royal Infirmary, but died a few minutes after admission. It appeared that the wool that this man came into contact with must have been opened, part of it sorted, washed, dried, and carded, and would be practically free from dust. Dr. Eurich, Bacteriologist to the Anthrax Investigation Board, stated that he had made a *post-mortem* examination of the body a few hours after death. There were no external signs of disease, but internally he found anthrax bacilli in the right lung. He was of opinion that death was due to pulmonary anthrax, brought about by inhalation.

Another somewhat peculiar case was that of a man, 55 years of age, who had worked for a firm of mohair spinners for the past fifteen years. He was seen by Dr. Eurich on March 29th. He had then a typical malignant pustule over his left eye which involved both eyelids. The base of the right lung also showed signs of pneumonia; 40 c.cm. of antitoxic serum was injected. The deceased died in delirium on April 2nd. A *post-mortem* examination was made on April 4th. Remains of anthrax were found in the pustule and evidences of pneumonia in the lung. There were no anthrax bacilli in any of the internal organs, and the probability was that the man died from pneumonia accelerated by anthrax.

Sheffield.

Medical Scholarships.

At the last meeting of the Council of the University it was announced that the Faculty of Medicine had received offers of no fewer than three scholarships for the department, to be competed for before the next winter session. A "Sheffield Citizen" who desires to remain anonymous has made a gift of a scholarship, of the value of £100, to be paid in remittance of fees, which is limited to women medical students. The honorary staffs of the Royal Infirmary and Royal Hospital have promised two scholarships, of the value of £50 each, open equally to men and women students. These scholarships will be awarded on the results of examinations. It may be here mentioned

that the Royal Infirmary and Royal Hospital have been for many years joined for clinical purposes, and under the management of a special Clinical Committee, the students have the privilege of attending either or both institutions, thus having the advantages afforded by something like 430 beds, with large out-patient departments. There are at these institutions thirteen resident appointments, which are mostly filled by local students. By the Charter of the University, all its degrees are thrown open equally to both sexes.

POST-GRADUATE COURSES.

An extensive scheme of post-graduate courses has been arranged in connexion with the University for the summer. The classes will be as follows: Surgery, by Professor R. J. Pye-Smith and Dr. Sinclair White; Operative Surgery, by Mr. Arthur Connell; Ophthalmology, by Professor Snell; Ear Diseases, by Dr. George Wilkinson; Nose and Throat Diseases, by Dr. W. S. Kerr; Physiology, by Professor J. S. Macdonald; Anatomy, by Professor Patten; and Bacteriology, by Professor Beattie and Dr. Smedley.

THE CHAIR OF PATHOLOGY.

As already mentioned, Dr. Corbett, Professor of Pathology, has resigned the post on election to one at Cambridge. There were several excellent candidates for the vacancy. Dr. Beattie, Assistant to the Professor of Pathology at the University at Edinburgh, was elected as the new Professor. He enters upon his duties with the commencement of the new session on April 24th.

CONSULTANTS AND GENERAL PRACTITIONERS.

A few of the general practitioners of the city and neighbourhood recently entertained the consultants at dinner. Mr. D. M. Clark was in the chair, and the gathering was of interest as indicating the good feeling existing between the general practitioners and the consultants. A similar dinner, arranged under the same auspices, was given some two or three years ago.

Liverpool.

THE HOUSE-FLY AS A CAUSE OF SUMMER DIARRHŒA.

At a recent meeting of the Health Committee, Mr. A. E. Jacob, one of the members, raised the question of the part played by the common house-fly in the propagation of zymotic diarrhœa. These flies, he said, settled on all sorts of filthy matter, and their hairy feet were peculiarly adapted for picking up germs; they then settled on the sugar on the kitchen table, or were drowned in the milk of the children. The Committee had granted Professor Ronald Ross 20 guineas to investigate the life-history of the fly. There was no doubt that if they could strike at the breeding place of the flies, thereby reducing their number, there would be a corresponding decrease in the death-rate. Every encouragement should be given to the public to do away with ashpits and substitute sanitary bins. Greater cleanliness in courts and in stables, and the freer use of water for flushing purposes were necessary. Mr. Jacob pointed to the beneficial results from dealing with mosquitos in West Africa and expressed his belief that ophthalmia was largely carried by flies. Dr. Hope, M.O.H., said the work was constantly going on, and the question was whether it could go on any faster; whether, for instance, the conversion of ashpits could be proceeded with more rapidly. About 35,000 ashbins have been put in in place of the old ashpits. The house fly was a very important contributory cause of diarrhœa, but it was by no means the only cause. The investigations which the committee authorized some few months ago into the life history of the house-fly had been going on during the winter months, though it was not an easy matter to get at the places where they were breeding. Professor Ronald Ross and Dr. Newstead were investigating the matter, and in a few weeks, certainly a few months, they would issue a report. The discussion would be of great value if it would impress on the public what they could do. It was within the power of every householder to dispose of domestic refuse by burning and so to prevent putrescence near his windows.

South Wales.

CARDIFF INFIRMARY.

MR. JOHN CORY, J.P., has written the following letter to General Lee, Chairman of the Management Committee of the Cardiff Infirmary:

Dear General Lee,—I am very glad to hear from Colonel Bruce Vaughan that the appeal to the colliery and Cardiff workmen is likely to be a success, and that the income of the infirmary will then be assured for the present and extended hospital. This will, no doubt, induce the Committee to take the necessary measures to press their appeal for the amount needed (£30,000) for the extension of the hospital, so as to provide for the increased accommodation so much needed. If the Committee will now take the matter in hand, and to encourage them to do so and to make it possible to get the sum required quickly, I will consent to promise £5,000 towards same on condition the balance, £25,000, be raised in six months.—Yours faithfully,

JOHN CORY.

The Cardiff Infirmary is doing a great work, and yet, through lack of accommodation, over 600 patients are now awaiting admission. Mr. John Cory's challenge is a generous one, and, for the sake of the 600 suffering patients, it ought to be taken up in the same spirit. The extension to be provided by the £30,000 would mean 64 new beds. The present income of the infirmary is £11,000, all obtained voluntarily; while a further £2,500 is needed to meet the institution's annual expenditure. With the provision of 64 new beds an additional income of £6,500 would be necessary to keep the infirmary free from debt. It is urged that the working classes, considering the benefits they derive directly and indirectly from the infirmary, might subscribe more liberally.

LLANDAFF AND DINAS POWIS HEALTH REPORT.

Dr. Prichard, Medical Officer of Health for Llandaff and Dinas Powis, in his annual report for 1906, says:

The Council is to be congratulated in that the enlightened policy which they have consistently adopted is now bearing fruit. There are few, if any, districts of its size, population, and varied character, which will compare favourably with the Llandaff and Dinas Powis when judged by the sanitary test, such as low infant and general death-rate, the fewness of cases of typhoid fever, diarrhœa, and the so-called filth diseases.

Dealing with infant mortality, which shows a gradual decrease in the Llandaff district, Dr. Prichard says:

The mothers of to-day are living under better sanitary environments than those of a generation ago. From a somewhat extensive observation I am of opinion that a large number of the women, especially of the working class, undermine their health by excessive tea-drinking, and thus probably conduce to premature confinements.

Referring to the milk supply, the doctor states:

I am told that in Norway milkmaids have to undergo an examination in their work and be licensed. They present a unique appearance in their clean smart cotton or print dresses. An inspector cycles round the farms at milking time, and any remissness is punished by loss of licence and a severe penalty. In this country there is a gross want of cleanliness to be observed in the delivery of or retailing of milk. Any kind of coat or waterproof, no matter how dirty, is deemed to be suitable for the person handling the milk, and every time he indulges in the prevalent and reprehensible habit of dipping the measure into the churn he adds a quantity of filth and decomposable organic matter to the milk. This question of pure milk supply is an urgent one, and is within the range of practical politics. A problem which smaller States like Norway and the Netherlands are reputed to have solved should not be too difficult for this country, especially as it is not a party one.

Scotland.

THE GLASGOW ROYAL ASYLUM.

THE ninety third annual report of the Glasgow Royal Asylum shows that this institution is in a very satisfactory condition. The report covers the year 1906. At the commencement of the year the institution contained 458 patients. During the year 125 patients were admitted, while 100 were discharged (49 as recovered, 38 as relieved, and 17 as not improved). The deaths numbered 34. At the end of the year the number of patients on the register was 483. The percentage of recovery is high, amounting to almost 40 per cent. of the admissions, and is considerably

above the general recovery-rate for the district asylums of Scotland. An analysis of the admissions shows that 76 were admitted for the first time, and that 49 had previously been under treatment. In some of the latter cases the relapse could be distinctly traced to over-indulgence or error on the part of the patient, but in a large number of cases no cause could be ascertained, and the mental illness came on without any exposure to strain. The medical superintendent points out that there is a type of mental illness which shows a distinct tendency to relapse even under the most favourable conditions, and this periodicity is not unlike that of malaria, and may possibly indicate a blood infection. Another factor is that, on the whole, patients in private asylums are liberated at an earlier date than those in district asylums. The number who entered as voluntary patients was 26. Dr. Oswald is in favour of making admission into a private asylum as easy as possible. It should not be unduly hedged round with legal technicalities. He suggests that, as far as possible, the use of the terms "lunatic" and "lunacy" should be avoided so as not to offend the susceptibilities of the patients' friends. It is interesting to note that, of the 49 patients discharged as recovered, 15 had suffered from mania, 21 from melancholia, and 4 from alcoholic insanity. Three were over 65 years of age, which showed that suitable treatment could do much for even these cases of senile psychoses, provided the changes in the brain and arteries were not too far advanced. *Post-mortem* examinations were made in 30 out of 34 cases that died, and in one instance the rare condition of rupture of the heart was discovered. In the treatment of the patients as much use of the garden was made as possible, and both ladies and gentlemen were encouraged to engage in this useful form of outdoor work. Some 60 per cent. of the patients are thus employed.

The charitable intentions of the founders of the institution have been constantly kept in view. A large number of patients were admitted to the institution at reduced rates, and received asylum care and treatment at or below cost price. The difference between the amounts received and that required to meet the full rate of board and treatment was annually £1,329. There were 68 patients who paid unremunerative rates of board, 10 of whom were kept at from £10 to £20 per annum.

During the year the directors entered into a contract to rewire the institution to enable the current of the Glasgow Corporation to be used directly for lighting purposes and to do away with the present system of dynamos.

The Glasgow Medical Golf Club.

An unfortunate occurrence marred the opening meeting of the Glasgow Medical Golf Club. The meeting was held at Gailes, and was largely attended. The first place on the prize list was divided by Dr. Lyson and Dr. William Sneddon of Beith. Dr. Sneddon complained of not feeling very well in the afternoon, but started out to play a few holes. At the third hole he was seized with a sudden illness and almost immediately expired. For over thirty years Dr. Sneddon had practised in Beith and held several appointments. He was an enthusiastic volunteer and a skilled shot. He was a keen golfer, and frequently attended the meetings of the Glasgow Medical Golf Club.

Ireland.

The Belfast Health Commission.

The Commission resumed its sittings on April 8th in the City Hall. The Commission consists of Colonel Harding, ex-Lord Mayor of Leeds (Chairman); Dr. Chalmers, M.O.H. of Glasgow; Dr. Mair, Medical Inspector of the English Local Government Board; Mr. Cowan, Chief Engineering Inspector; and Surgeon-Colonel Flinn, Medical Inspector of the Irish Local Government Board.

Sir John Byers, the first witness, gave evidence in great detail and at great length, and was under examination for two whole days. The tables of Mr. Muir, accountant, were produced, and witness explained that these showed there was an enormous immigration of persons aged from 15 to 30 into Belfast; they were good lives, and so the death-rate ought to be lower. Last year in Belfast, out of a population of 366,220 there were 90 deaths due to typhoid fever, whereas in all the remaining twenty-one towns in Ireland, with a population of 735,279, or more than double Belfast, there were only 59 deaths. In all Ireland and also in Belfast more women than men died from phthisis, contrary to what was found in England. The highest mortality from tubercle in Ireland was between the ages 25 and 35; whereas in England it was under 5. Regarding the water supply, there was strong suspicion of the Stoneyford catchment area; during both epidemics, that of 1897-8 and of 1901, there was typhoid in some of the farms not yet purchased by the Water Commissioners. It was a necessity that the whole area be bought up before the area would be satisfactory. Sir John then gave evidence as to the flooding, the foreshore nuisance, insanitary dwellings, and the necessity for open spaces. Regarding the milk supply, he referred to the epidemic due to milk in the Windsor district in 1906, and to the fact that it took the authorities two months to stop the sale of the suspected milk. He advocated some such method as that in force in Brighton and the necessity of a standard of bacterial cleanliness of milk; he thought milk should not be sold in small shops. Regarding the organization of the health department, he said that it was a legal point whether or not the fourteen district medical officers of health were independent of the medical superintendent officer of health. Regarding this latter officer's means of locating disease, the witness pointed out that it was (1) by the notification of infectious disease; (2) by voluntary notification on the part of the dispensary district medical officers; (3) by the returns of the cemetery officers. The weekly returns of the Registrar-General were merely statistical; the ex-medical Officer (Dr. Whittaker) had frequently complained of this want of information. Although the birth-rate in Ireland had fallen from 24.5 to 23.1, yet the birth-rate corrected for married women and for the child-bearing period had actually risen from 35.2 to 36.1; this tended to show that the race was not degenerating, and that the high phthisis death-rate was not due to such degeneration; nor was it due to the industries, for in Dublin, where there were few textile industries, there was a high phthisis death-rate, and in many English towns with textile industries there was a low phthisis death-rate. In England the indoor relief had increased while the outdoor relief had fallen; whereas in Ireland, the indoor relief had fallen, and the out-door relief had risen (Newsholme): this meant that the Irish poor nursed their dying friends at home, and in the case of phthisis this was dangerous; or, to put it in another way, segregation in institutions had been more practised in England than in Ireland. To deal with Belfast, the witness advocated some plan, such as the Edinburgh one, with a local committee. Sir John then dealt with infantile mortality, and advocated early registration of births, milk dépôts, and the cleansing of the streets, especially in summer. The Chairman thanked Sir John Byers for the valuable information and for the great trouble he had taken.

Durham.

Colliery Cottages.

The rural district of Chester-le-Street, in the county of Durham, includes numerous colliery villages, the surroundings of which are really those of an urban district. There is a total population of over 70,000 persons, nearly all of whom are dependent upon the coal-mining industry. At the end of 1904 the Durham County Council reported to the Local Government Board that the District Council were not enforcing the Public Health Acts and that insanitary conditions were allowed to continue in various parts of the district. The report which Dr. Wilfred Fletcher has recently presented to the Local Government Board shows that there were quite sufficient grounds for the County Council's complaint. It appears to be the custom for the colliery companies in this district to provide houses for their married workmen; if there are insufficient company houses, an allowance of 2s. 6d. weekly is made towards whatever rent may have to be paid by the workman. If the collier prefers to live in a better house than that provided by the company he is not allowed the weekly 2s. 6d. There is every

inducement, therefore, for the collier to continue to live in the colliery houses, and as the companies can keep their houses tenanted whatever their condition may be, it is difficult to induce them to make any improvements. That improvements are urgently needed is evident from nearly every page of Dr. Fletcher's report, as well as from special reports which have been made from time to time in recent years by Dr. John Taylor, the Medical Officer of Health for the district. Not only are there many houses with insufficient accommodation so that overcrowding results, but there are houses in single rows without through ventilation, or built back to back, or, worse still, back to earth. Dr. Fletcher considers that prompt and very energetic action ought to be taken by the District Council to improve the deplorable conditions which he found, and he recommends that Part III of the Housing of the Working Classes Act, 1890, should be adopted and its provisions put into practice. With the prospect of an enormous amount of work requiring the advice and supervision of the medical officer of health, he advises the appointment of a whole-time medical officer of health. A well-merited tribute is paid by Dr. Fletcher to Dr. Taylor, who by tact and persuasion seems to have succeeded in moving the colliery companies to effect many improvements without formal reports to the District Council. Indeed it is difficult to realize what the condition of the district would have been if it had not been for Dr. Taylor's "unofficial activity," the results of which are apparent on every hand.

SPECIAL CORRESPONDENCE.

PARIS.

Serum Treatment in Bacillary Dysentery.—The Congress of Practitioners.

AT a recent meeting of the Académie de Médecine, M. Vaillard, in collaboration with M. Ch. Dopter, read a paper on the serum treatment of bacillary dysentery. The first communication on the subject was made by the authors on February 20th, 1906, and was analysed in the BRITISH MEDICAL JOURNAL at the time. MM. Vaillard and Dopter now give an account of 243 cases of dysentery of bacillary origin treated by this method during the summer of 1906. Of the cases 43 were insane and 10 children. Excluding the asylum cases, 200 cases were divided into 101 of average intensity and 99 which were considered grave or hopeless. There were in all 10 deaths, but in 6 cases the patients were already moribund when the serum was injected, giving the small mortality of 2 per cent., which is remarkable when it is remembered that 25 of the cases were considered mortal and 74 as grave before the treatment was commenced. The value of the serum, they said, is shown not only by the diminished mortality, but by the immediate relief and the quick recovery of the patients. The serum in a few hours quiets the abdominal pain and tenesmus; it also rapidly diminishes the number of motions, the character of which changes: first, the blood disappears from the stools, then the mucus, and the motions become faecal. Cases of mean intensity are cured in twenty-four to forty-eight hours. The effect of the serum appears quicker when it is injected at the beginning of the illness. The dose of serum must be in proportion to the intensity of the affection; 20 to 50 c.cm. may be sufficient in moderate cases, but in the dangerous forms intensive treatment with large doses must be started at once (50, 60, 100 c.cm.) and repeated. The results were not so good in the 43 asylum cases, but the mortality (7 cases fatal) was less than in previous epidemics. In concluding M. Vaillard said that he was convinced that the antidysenteric serum represents the specific means of treating dysentery of bacillary origin; by its action and its efficiency it is to dysentery what antidiphtherial serum is to diphtheria, its general use will reduce the dysentery mortality to a minimum. The serum which cures dysentery can also prevent its development. The frequent occurrence of epidemics in families in rural districts, especially in Brittany, will justify its use as a preventive. M. Widal described a grave case he had seen with violent tenesmus and very frequent stools which had lasted more than a month. One injection of 40 c.cm. of the antidysenteric serum of Vaillard and Dopter quieted in a remarkable way all the symptoms; sleep became possible, and on the following day the colic and tenesmus had disappeared, and there were only fourteen stools. In fifteen days the patient was cured, but the treatment had required the injection of 250 c.cm. of serum. M. Vaillard, in reply, said he had not much experience of chronic cases, but described the case of a gendarme in Savoie who had been suffering for several months from a lienteric diarrhoea (seven to twelve stools daily) which resisted all treatment; the patient was becoming cachetic and was moved to a military hospital in Lyon, where the doctor found the blood agglutinated in strong proportions cultures of the bacillus of dysentery and thus established the diagnosis. Serum was injected, the diarrhoea stopped in twenty-four hours and was followed by constipation for a week; the general condition was rapidly changed and in a few days the cure was an accomplished fact. Of the 243 cases mentioned 223 received no other treatment than the antidysenteric serum.

The Congress of Practitioners was opened in Paris on April 12th under the chairmanship of M. Dubuisson, and the fact that more than 1,200 medical men and students became members will give some idea of the interest taken in the two principal questions discussed, that is, the free choice of their medical attendant by employés in Government factories, etc., and by members of medical aid societies; and secondly, the reform of the medical curriculum. The discussions on the reform of medical education were long and animated, the revolutionaries desiring the abolition of the present system. The general result was that resolutions were passed in favour of eliminating the present preponderance of physics, chemistry, and natural history from the early part of the student's training, and giving students more individual clinical training in the last year of their curriculum. Some speakers desired the institution of *Privat-docenten*, practically founding an extramural school, the professors to be paid by the students, and the duty of the State reduced to the holding of examinations and the conferring of the diploma of Doctor in Medicine. Dr. Jayle made a report on medical education in Germany, Dr. Jarvis on medical education in Great Britain, and Dr. Koenig on medical education in the United States.

CORRESPONDENCE.

THREATENED DISINTEGRATION OF THE UNIVERSITY OF LONDON.

SIR,—Mr. White's letter of April 6th, in reply to an earlier one by myself under the above title, well exemplifies the attitude taken up by those who are attempting to break up the new University and restore it to the condition of a mere examining body, that it held prior to the year 1900. In speaking, as he does, approvingly of "the strong desire of many of its graduates, that the radical changes initiated since its reconstruction should cease," he shows that he has no conception of the colossal task which lies before the University, namely, to provide a university that shall not only minister to the intellectual needs of a city of seven million inhabitants, but be the head and front of similar institutions throughout the Empire. Such a university cannot be modelled even on the great universities of Berlin or Vienna, but must be formed on lines adapted to the unique position of London among the capitals of the world, and transcend them in size and importance just as London is without rival among the cities. When we consider how far Berlin and indeed a dozen German towns surpass us in the provision of facilities for university education and research, we may appreciate the magnitude of the task imposed by Parliament on the Senate of the reconstructed University.

But Mr. White and his friends apparently care nothing for the development of a university or for the advancement of higher learning in this country. They cry in effect All things were for the best ten years ago; what was good enough for us is good enough for our sons; London needs no other university; let us go back to our Examining Board with its cut and dried schedules and syllabuses. If they were right, the statements by Mr.

Haldane and others as to the needs of higher academic teaching and research in England would be but hysterical exaggerations.

It is on such a purely reactionary and negative policy that Mr. White seeks election to the Senate. How far he is fitted by his personal experience to deal with the difficult questions continually arising in medical education is shown by his arguments with regard to the standard of the degree. As Lecturer in Psychological Medicine he can have but little to do with the main training of the student; so he adopts the primitive but fallacious method of judging of the standard of an examination by the percentage of rejections. Any one who is practically acquainted with examinations knows well that the percentage of rejections is in itself no guide to the standard of an examination. By relying on such a criterion one might obtain some astounding results as to the relative standards of the College of Preceptors, the London University, the Conjoint Board, etc.

In the case of one of the examinations cited by Mr. White—namely, the Intermediate M.B.—I am in a position to judge how far his conclusions are correct. He points to a continuous reduction of percentage of rejections at this examination since 1892. This *may* mean a better preparation of the candidates for the examination, and not, as Mr. White assumes, a lowered standard of examination. Perhaps my experience as teacher in one of the subjects of this examination may be instructive. In 1892 my physiology course for the Intermediate M.B. students, including lectures and practical work, but exclusive of revision and tutorial classes, amounted to 180 hours. In 1900 the same students had to attend for 260 hours, while at the present time the Intermediate M.B. courses occupy 350 hours. If, with this improvement in teaching and the large increase in the work of the students, there had *not* been a reduction in the number of rejections, the fact would have redounded to the discredit of the examination.

As a late examiner at the Intermediate M.B., I can assert that the standard attained in that examination is higher than the standard in any other university in which I have examined. Whether we do not now expect too much of the men who are to make the care of patients their life's work, and whether some of their energies might not with advantage be reserved for the later subjects of the curriculum, are moot points; but the facts I have brought forward may serve to show how unfounded is the contention of Mr. White as to the lowering of the standard at the Intermediate M.B. Examination.

But this question of the lowering of standard is nothing but electoral bait. The point that the graduates have to decide is whether they will return a man to the Senate qualified and anxious to continue the work of building up a great university worthy of London, which shall incorporate or co-ordinate all the present inadequate forces for higher teaching, and use them as stones in the greater edifice, or whether they prefer a representative who is pledged to oppose all progress, and to work towards the disintegration of so much of the University as is already set up—I am, etc.,

Grange, Keswick, April 12th. ERNEST H. STARLING.

SIR,—The duty of the Commissioners was to reconstitute the University of London, to enfranchise the teachers, and to leave them to work out the destiny of the University. To direct the lines on which the policy of the new University should run was beyond their proper function, and their opinions on such a question as the concentration of the medical schools require no more nor less respect than the contrary opinions of equally learned and distinguished men. Why should the writer of the article in the last issue of the JOURNAL hold up to us the Statutory Commission as a deity whose recommendations must be piously followed? I respect the opinions of the individual Commissioners, but I refuse to bow down to the worship of a Statutory Commission.

The truth is that the South Kensington Institute scheme was evolved by a small coterie, who successfully passed it through the Faculty. This Faculty, as constituted by the Commission, contained only 162 members, now it contains 392. All the science teachers of the medical schools with the exception of the professors of University and King's Colleges, and with, I think, one other individual exception, were disfranchised, together with the junior and more active members of the hospital staffs. Such a fundamental question as concentration should not have been put to such an imperfectly constituted Faculty. To do so was an act of flagrant injustice to the disfranchised teachers. Even to the imperfectly constituted Faculty the question of the South Kensington Institute was, I am told, never openly and directly put. The subject was referred to a Committee, and the Faculty was summoned to consider and vote on the report of this Committee.

When the new Faculty met in 1902 and the science teachers and younger clinicians, now enfranchised, attended for the first time, the Chairman of the Faculty announced that the South Kensington concentration scheme had been passed, and all that remained to do was to appoint a Committee to consider the details. The mouths of the newly enfranchised were thus shut on the main issue, and I can remember the sense of injustice and unfairness that this procedure left on the minds of myself and my colleagues. We had then no information, no knowledge of procedure, no association of opinion, and no method of resistance. Dr. Keith and I were nominated to the Committee of March, 1902, on the spur of the moment, by some who were opponents to the scheme. But we could do nothing; the main question had been passed. We either never attended or quickly ceased to attend the Committee or its subcommittees which were summoned, and very improperly so in our opinion, to meet in the private houses of certain members of the Committee and at after-dinner hours.

We, the opponents of the scheme, could leave it to time only, to be crushed by maturer consideration and the inevitableness of its failure to gain the support of wealthy public-spirited men. The original scheme of the Institute was of glittering architecture. It included the whole of the medical students of London, excepting the Conjoint students, who were left, I believe, to go I know not where. There was no question then of University and King's Colleges being medical centres. The new institute was to be built and endowed for some half to one million pounds. In physiology there were to be some six professors and a dozen demonstrators, and one fatherly Director was to control the whole, shepherding 500 students through marble halls fitted with costly apparatus. The students were to be inspired not only by the splendour of this temple of science and galaxy of scientific intellect, but also by the classic atmosphere and artistic culture of the South Kensington Museum. They were, it is true, to spend any time from five minutes to two hours or more in getting there from all quarters of Greater London, to be the bagatelle of scientific specialists and lose all their collegiate life. The public was to endow the Institute, and the greater part of the fees of the students were to be left for the clinical schools. No wonder a scheme so bedecked temporarily seized on the imagination of many of the Faculty. The scheme has now become whittled down to the building of a £100,000 institute, totally unendowed, and this institute is to compete with King's College and University College, whose medical schools are not filled, and with the larger hospital schools which have refused to join in. I can remember when the Institute scheme was first mooted the cynicism with which it was said that the science departments of the medical schools would shortly be closed and many of the teachers turned adrift; that the first act of the new University was to destroy the men who had worked hard and well for education. I can remember the absurd farce of appointing a junior clinician with no special scientific training to investigate and report on the laboratories and appointments of the medical faculties of the United Kingdom, when there were scientists in the medical schools who knew all the chief laboratories of Europe and had the proper equipment of institutes at their finger ends. I can remember the unjust attacks of the Press on the teaching and laboratory appointments of the medical schools, the efforts made to gain the Institute by defaming the schools, the opinions expressed that the enthusiasm of a scientist could be purchased by money, and good teaching and training of character only attained by the erecting of institutes and the purchase of costly apparatus. There was, moreover, the attack delivered through the King's Hospital Committee, which the antivivisectionists immediately used to the disadvantage of the medical sciences. The teaching in London has never been better and is nowhere excelled. I know

this as University examiner: and the external examiner has more than once expressed his opinion to me of the value of the work done in the London schools.

The scientific journals and the minutes of the scientific societies express the value and volume of research published by the scientific staff of the medical schools. In physiology alone, Bart's has had Klein and Edkens; Guy's Starling and Pembrey; Thomas's, Sherrington, Brodie, and Leathes; St. Mary's, Waller and Alcock; Charing Cross, Mott, B. Moore, and Myers Ward, leaving aside the distinguished men who have University and King's Colleges. From my laboratory at the London some fifty or sixty contributions have been made to science in the last ten years, and the output has been equal or greater in the other schools. The medical schools of London are acknowledged to form almost if not the most active centres of medical research in the country.

Men of science are not made by institutes, money, or apparatus. Helmholtz did his best work on £120 a year, and modelled his inventions out of spectacle lenses and his wife's sewing gear. Faraday did his epoch-making work with bits of wood, glass, and wire. Claude Bernard filled his pupils with enthusiasm in a laboratory little better than a cellar. In the medical schools the laboratory accommodation and fittings are ample, and with a little help from the University the salaries could be made adequate and the equipment unsurpassed.

Medical students cannot be herded with advantage into big institutes. They do not require complicated apparatus, but want the individual attention of, and personal contact with, their teachers and all the advantages of collegiate life. London demands many schools of medicine. In Germany there would be six universities for a population of the size of Greater London.

Small salaries call forth the right sort of men as teachers—those of signal purpose and naturally devoted to the pursuit of knowledge; the number of the schools allows the play of their individuality. The medical schools are centres of enthusiastic work and play; they are aided by the guiding hand of capable business men, and, with a little help from the University, could be made perfect. Why waste money on bricks and mortar when adequate laboratories exist and efficient men are crying for fellowships and help for research?

This unhappy scheme has torn the University with dissension and rendered it unpopular to many, drawing off attention from its proper work of promoting research. It has been crushed by the wisdom of the public in refusing it adequate support, and by the vote of the now properly constituted Faculty. Let it lie, and let us get to work in strengthening the valuable institutions that exist, and in reforming the medical curriculum and examination system. I am, etc.,

London, E., April 16th. LEONARD HILL.

THE STANDARD OF THE MEDICAL DEGREES OF THE UNIVERSITY OF LONDON.

SIR,—It seems to be assumed, by both parties to the controversy over the London University election, that the "standard" of the examinations is indicated by the proportion of rejections to passes, and that difficulty in passing the examinations is in itself desirable. Both these propositions seem to me questionable. If candidates for a degree in medicine were to present themselves for examination in Arabic, and were confronted with a paper on Arabic grammar, it is probable that the proportion of rejections would be 100 per cent. But the paper in Arabic might be of the most elementary character, such as a pupil of an Arabian board school, who had attained only to standard IV could master with ease. In this case the "standard" of the examination would be very low, and yet the rejections would be 100 per cent. Conversely, an examination might require the most skilful performance of the most recondite processes in chemical analysis, or the most accurate knowledge attainable of the history of ceramic art in Timbuctoo and yet if the candidates had been forewarned of what was required of them, and had ably well taught, the result might very easily be that every candidate would pass. Yet in this case the "standard" of the examination would surely be considered a high one.

If we disregard "standards," and regard the efficiency only of the whole work of a university, there is good reason for considering a high rejection rate an indication of inefficiency, and vice versa. The ideal of a university seems to me to be, not difficulty in its examinations but thoroughness in its training. A large proportion of rejections at its examinations seems to me not a credit, but a discredit, to the university, if we regard a university not as an examining body, but as a training and teaching institution. Difficulty is a relative term. The examinations of a university, however difficult they may appear to the ignorant, ought not, in my opinion, to be difficult to those who have passed through the university curriculum, and been prepared by the university teachers. In choosing our representative on the Senate, we should surely have regard to something higher than the maintenance of a large proportion of failures.—I am, etc.,

London, W., April 15th. CHARLES MERCIER.

SIR,—Surely there is a flaw in the position that, the number of candidates for an examination having during a term of years increased, the degradation of the examination cannot be assumed if the percentage of successful candidates be shown not to have increased. If this position is to be maintained it must be shown that the quality of the candidates has not fallen away. It is hardly likely that the 6,900 candidates for matriculation in 1905 were of the same average calibre as the 600 of 1880. I am not concerned with the dispute, only with the argument. If all Colney Hatch were to be examined and the "percentage of failures" were not less than in the old days, what then?—I am, etc.,

Barnes, S.W., April 12th. F. G. CROOKSHANK, M.D.

THE SENATE OF THE UNIVERSITY OF LONDON.

SIR,—In your article on the University of London and Medical Education I am sorry to see the Principal of our University spoken of with disparagement. If you had attacked the cumbrous machinery and the multitude of advisory bodies of the Senate, and the consequent divergent and incompatible recommendations which are the result of the constitution of the University, I should have had nothing to say. But so far as the Principal is concerned, it is a matter of astonishment to me that he has been able to do as much as he has for the University. His work has been incessant and difficult in the extreme, and I am sure it must have been a great strain upon him.

Personally, as Dean of the Faculty of Medicine and as a Member of the Senate and of the Finance Committee, I am conscious of having given him a great deal of trouble, and I can only admire the patience and courtesy with which he has always met my demands upon his time.—I am, etc.,

London, W., April 15th. HENRY T. BUTLIN.

THE REVISION OF THE DRAFT CHARTER, B.M.A.

SIR,—The Divisions are now being invited to discuss the revised draft Charter published in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL of April 6th, and I take this opportunity to draw the attention of members to two points in the By-laws which in my opinion require alteration.

I must preface my remarks by expressing my admiration of the thoroughness with which the Organization Committee did their work, and congratulating them on the happy expedient of removing all contentious matter from the Charter itself and the Ordinances to the By-laws. Such a course is calculated to prevent any unnecessary constitution tampering in the future.

The first point in the By-laws to which objection may be taken is the proposed method of electing the Central Council. It is based on a compromise reached at the last Annual Representative Meeting, and, like most compromises, is illogical, complicated, and clumsy. It is to be hoped that the Special Representative Meeting to be held on May 29th will adopt the recommendation of the Stratford Division, "that the Central Council shall be elected by the Representatives of the Divisions at the Annual Representative Meeting." I have carefully perused the speeches of those Representatives who opposed this resolution at the Caxton Hall meeting, but have found that the only serious argument advanced against it was the fear that the more distant parts of the country might not be adequately represented on the Central Council under such an arrangement. To obviate this difficulty some such scheme as the one proposed by the Ayrshire Division of grouping the Representatives for the

purposes of election into sections covering well-defined geographical areas, might be adopted.

The other point in the By-laws which I consider requires to be modified is the present method of electing new members. This duty is delegated to the Branch Councils, bodies which in the metropolitan area—and I expect in all the larger Branches as well—are quite unable to exercise any efficient control over the admission of undesirable candidates. Divisions or the Executive Committees of Divisions appear to me to be the proper channels through which admission should be sought and obtained to the membership of the Association, and I hope this question will be considered by the Divisions when the Charter comes up for discussion.—I am, etc.,

London, E., April 15th. EDMUND HAY.

SIR,—It is perfectly evident that the proposals in the draft Charter require the closest attention on the part of the members of the Association. One has not had sufficient time to criticize the proposals in much detail, but after a cursory examination of them I would submit the following as being objectionable:

Paragraph 2 (2) (viii):

> May provide facilities for sales or transfers of medical practices, for the arrangement of medical partnerships, and for the engagement of qualified assistants and temporary substitutes for medical practitioners being members of the Association.

I venture to say that to undertake work of this kind is altogether outside the scope of the Association. This is a business, surely, that had better remain in the hands of agents, medical or otherwise.

In the *By-laws No. 5* it is laid down that the election of members shall be conducted by the Branch Councils. I am sufficiently democratic in my notions to think that such elections should take place by the *members* of the Branches. At the present time, unless one happens to be a member of the Branch Council, one has no intimation whatever of the names of candidates proposed for election. And moreover, it is quite possible that at times the members of a Branch Council may not number more than three or four at a meeting. It is, therefore, quite possible that a candidate may be elected a member who is objectionable from a professional point of view.

In *Section III, Paragraph 3*, it is laid down definitely that the subscription shall be twenty-five shillings a year. Would it not be better to say that it (the subscription) shall *not be less* than twenty-five shillings a year?

In *Section IV, Paragraph 18—Grants to Branches.* Why should the sum granted to Branches be limited to *four* shillings per annum? Why not leave it open, and say *not less* than four shillings per annum?

Section V. Election of Representatives.—Would it not be better to make the election of a Representative *compulsory* by means of voting papers? It is perfectly evident that the Organization Committee are of opinion that more and more power is to be given to the Representative Meeting; it is therefore most important that the Representatives should be men in whom the Divisions have implicit confidence, and should be chosen in the same manner as members of the Central Council are.

Business of Annual Representative Meeting. 29.—There are several matters in this clause which require the most careful scrutiny, and amongst them I should particularly mention the following: (1) The election of President of the Association; (2) the election of ten members of the Council; (3) the appointment of place of next Annual Representative Meeting. With regard to (1) I am of opinion that the method at present employed of electing a President is one that requires alteration. The Association as a body have nothing whatever to do with the election of President: it simply confirms the nomination made by the particular Branch which has invited the Association to meet in its district. It seems to me that the honour, and it is a very high honour indeed, of becoming the President should be conferred on men who have rendered signal service either to the Association or to the medical profession. I believe fully in recognizing the services of men who have in some way or other given their valuable time towards improving the *status* of the profession and have at the same time become fully acquainted with the inner working of the Association.

If the Organization Committee mean by conferring the power of electing the President the power of nomination as well, then I think their recommendation is an excellent one.

2. *The Election of Ten Members of the Council.*—This is undoubtedly the most important proposal of all, and requires the most earnest consideration. I personally fail to see why the Representatives (who are all members of a Branch) should have this extra power conferred on them. If it were proposed that all the members of the Central Council were in future to be elected by the Representatives, it would be easy to understand; but to propose that a third of the Council should be elected by them seems to me illogical. Either constitute the Representative Meeting as a body empowered to elect the Council or let it remain as at present in the hands of the various Branches. One cannot help feeling that the proposal is entirely uncalled-for, and is one that will make the Council less representative of the members of the Association than it is at present. What I have always contended for is the election of an executive body from the whole of the Council—a body which should meet much more frequently than the Council does at present, and act in much the same way as the directors of large trading concerns do. The executive body could, and should, report to the whole Council at certain stated periods. An executive composed of twelve members elected by ballot from the members of the Council could very well carry on the business of the Association, and the cost of such an executive would be much less than the cost of a Council. The idea of making the Representative Meeting a sort of rival to the Council is a mistake, and one that is likely to meet with disastrous results. I would ask those who propose such a revolutionary scheme to tell us how it is to be carried into execution. Are the Representatives to have power, without consulting the members of the Division they represent, to nominate any member of the Association as a member of the Central Council? Or are the Representatives to be instructed beforehand by their Division on the subject?

It must be manifest that some members of the Association are bent on making the Representatives the supreme power. Apparently their method is to carry this into execution "little by little" so as not to alarm the general body of members. I hope, however, that the Divisions by a large majority will veto this revolutionary proposal, and will at the same time make such recommendations as will prevent any further tinkering of the Constitution. There is, Sir, so much important work to be done on behalf of the medical profession to improve its status, to resist the ever-increasing number of poachers on our preserves, and to defend our confrères from attacks, that we really have no time to spend on ever-recurring proposals for altering our laws.—I am, etc.,

Cardiff, April 13th. T. GARRETT HORDER.

SIR,—The interesting article in the BRITISH MEDICAL JOURNAL of April 6th on the proposed new Charter of the Association suggests to me that those who are drafting it may be tempted into a not uncommon mistake, and try to include every conceivable object it may be thought likely the Association will wish to have power to deal with. It may be well to remember that the fundamental difference between incorporation by charter and incorporation by certificate of the Board of Trade (under the Companies Acts) is this: a body incorporated by charter has practically power *to do everything (in harmony with its objects) not expressly or by implication forbidden* by the charter, whereas a corporation formed under the Companies Acts may *not do anything not expressly included* in the memorandum of association.

In my humble opinion, it would be well after setting down the general objects of the Association, and providing for its constitution and government, to conclude with a "general powers" clause giving "power to do all such things as may be necessary or desirable for carrying out the objects of the Association."

May I add that it is extremely unlikely the Association will be allowed by charter to hold an unlimited value in land and property? There is very sound constitutional reason against this. It would be well to fix a reasonable figure, and ask for that, rather than for unlimited power.—I am, etc.,

London, W., April 10th. J. Y. W. MACALISTER,
The Royal Medical and Chirurgical Society.

THE NAME OF THE ASSOCIATION.

SIR,—I venture to suggest that the Council of the British Medical Association be inclined to consider the appropriateness and utility of endeavouring to obtain a grant from His Majesty the King and Emperor under the proposed Charter, to add one word to the present name of the Association—namely, "Imperial"; or, better still, to alter the whole designation. "The Imperial British Medical Association" would, to my mind, be very much less satisfactory than "The Imperial Medical Association of Great Britain and the Dominions beyond the Seas," curtailed for ordinary purposes to "The Imperial Medical Association." Such a title would most truly convey the composition of the Association, and be of immense value in promoting unity, for the good of the calling, and the benefit of the public in every part of His Majesty's territories.—I am, etc.,

London, W., April 15th. HERBERT SIEVEKING.

HOSPITALS AND CLUBS.

SIR,—By the curious irony of fate, Mr. Sydney Holland's letter is preceded by a correspondence on the position of the University of London with regard to medical educational matters. The contrast is appalling; on the one hand, absolute command of the situation, and, on the other, absolute ineptitude.

The thought which has arisen in my mind from a perusal of the correspondence is this: How can the medical profession attack a problem such as that connected with hospital relief when there is strong evidence to prove that it is incapable of dealing satisfactorily with a problem intimately connected with its own constitution? With the latter problem there is no question of outside lay interference.

The profession may congratulate itself that a man with so clear a head as Mr. Sydney Holland has so much to do with the lay management of hospitals. The medical profession has to deal with a problem intimately connected with the loss of self-respect of the working classes, and so has Mr. Holland. The loss of self-respect is, I believe, very largely due to the propagation of what are known as Socialistic principles, which work out at this: If you cannot live upon any one else, live upon one another.

I have only recently received a circular from a club composed of what I may term the aristocracy of working men; at all events, I have always looked upon its members as being of the best type of men. The circular, whilst lamenting inability to pay the salaries of the doctors when they were due, urged them to put down malingering, to which the financial position of the club was attributed. It appears to me that sentiment, when introduced into business matters, leads invariably to gross injustice. Judicious thought is quite another matter. Sentiment and want of system in business matters are the factors underlying the troubles connected with the relations now existing between hospitals and clubs on the one side and the medical profession on the other. Sentiment can only be kept in check by the sufficient general education of the mass of the profession, which can best be obtained by the establishment of a State examination for admission to its ranks.

As soon as the one portal system of entrance is established, universities will be free to work out their educational systems in their own ways. Those universities which provide the best educational methods on the best terms will attract students and those which provide indifferent methods will not obtain them. In the medical profession vast attention is paid to examinations and strings of letters which the examinations provide, but very little attention is paid to the fact that training is the one important factor in medical education.

A high examinational standard provides the class of men who have high examinational ability, but this class contains but few who successfully cope with the problems met with in the world. The sooner a minimum standard is provided by the state which all must pass the better it will be for Mr. Sydney Holland and the profession, because there will every year be more men who have taken time, and the preparation of examinational impediments, but few preparations for their work in the world.—I am, etc.,

Hereford, April 14th. LOVELL DRAGE.

SIR,—There is one sentence in the Honourable Sydney Holland's letter to which I would like to call attention. "A hospital only exists for those who cannot afford to pay a medical man for what is needed to cure them." To this every one will agree. It is the very thing general practitioners contend for. But what we complain of is that neither the London nor any of the leading hospitals is carrying out this principle. At the present time, besides those attended by the parish, two millions, or about one in two individuals in London, are attended at hospitals. Surely no one will affirm that half the population of London are so poor that they cannot afford a small fee to a medical man and must subsist upon charity in the form of medical attendance. In these circumstances, can any one wonder that subscriptions are falling off and that there is a bitter cry from general practitioners and even from consultants, when they find that the number of paying patients is still diminishing, and that their livelihood is at stake?

Mr. Holland's letter sheds a fresh light on the recommendations of the Joint Hospitals Committee. He tells us that for a considerable time these recommendations have been in force at the London Hospital, and yet we find from the statistics furnished by that hospital that over 200,000 were in 1905 attended as out-patients. It would be grossly unjust to disparage the excellent work done by the Hospitals Committee, but do they seriously believe that the question can be solved by the appointment of almoners, or by any of the other proposals brought forward? No almoner, however astute, can possibly sift the crowds that besiege the portals of out-patient departments. Nor is it possible to exclude working men who have subscribed a few coppers to a Hospital Saturday or Sunday Fund and whom no one will convince that this does not entitle them to attendance for every trivial complaint.

Further, now that we have free education, open museums and public parks, it would be a hard task to convince the body of working people or even of the middle classes that they are not entitled to free attendance. In a word, the trend of the present time is so socialistic that it seems evident that no such recommendations as those made by the Hospitals Committee are ever likely to stop the overcrowding of hospitals.

The Hospitals Committee have not gone so far as to recommend that only those patients be admitted who bring letters from medical men. I am glad that Mr. Holland has spoken out so freely on this subject. However much we, as medical men, might desire this, it is becoming increasingly evident that the large number of subscribers, who expect a *quid pro quo* for their subscriptions, will never agree to it. What right, they naturally ask, have outside medical men, who are doing nothing for hospitals, to dictate as to who is or is not entitled to attendance?

The longer I think of it the more am I convinced that no remedy will be found until medical men are paid in a different manner. If the public are to have free medical attendance, let them pay for it by deductions from wages and contributions from employers, or in the form of rates and taxes. This country is now paying four times as much for education as it paid fifteen years ago, and from the body of the people there is no complaint. The suggestion I now make could not have been made a few years ago. It is now decidedly practical. The present Government is in favour of old age pensions. If the State provide for those incapacitated for work by old age, why should it not provide for those incapacitated for work by sickness? This has been done with excellent results in Germany and elsewhere. If medical men were united and pressure brought to bear, the day need not be far distant when hospitals would be placed on a different footing, and for attendance in ordinary disease on those earning less than a fixed income general practitioners would receive adequate payment from the State.—I am, etc.,

Greenwich, April 16th. J. H. KEAY.

SIR,—I have read with interest the correspondence in the BRITISH MEDICAL JOURNAL on this subject. It has occurred to me for some time past now that a solution of the difficulty might be found by instituting a rule in every hospital that *no* patient (casualties excepted) is to be treated except on the production of a letter or card of some qualified medical practitioner.

It is undoubtedly to the advantage of the general practitioner—and, what is more, comes more under his notice—to ascertain the financial condition of his patients; further, it would throw part of the onus of the question of hospital management on to the very class of practitioners who are most affected by the present abuse of the hospitals; it would also be a check on the present system of "letters" in lay hands. Later on, if this were universally adopted, printed forms could be issued by the various hospitals to the local practitioners, to be filled up as required.

I know of several medical men who make it a practice never to give any donations to hospitals because they regard them as institutions which unfairly rob them of their patients. Under this scheme they could hardly take that view of the matter.—I am, etc.,

Winscombe, Somerset, April 16th. W. MARTIN, L.S.A.Lond.

THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

SIR,—It is really time that a little more common sense was exercised in discussing questions of medical ethics. Some of your correspondents hold views on the subject which would almost lead one to suppose that they look on their patients in the light of private property. Is it to be wondered at that the general public speak with ridicule of doctors' etiquette, and the attempts made to limit patients' freedom of action in consulting what practitioners they please? It is absurd to suppose that the suggestions put forward by "X." and "Y." on the subject of consultations could ever come into general use.

May I state a case which has some bearing on the question? A lady came to see me, bringing her daughter as a patient. The latter had been under the care of the family practitioner, but had not improved. On my suggesting that I should write to her doctor the mother said she did not wish me to do so, that she had come to me for treatment, and did not intend to have her daughter treated any longer by her own medical man for this particular illness. The girl did not require visiting at home. I saw her two or three times, and she was soon well.

Now, it is clear that some of your correspondents would consider that the proper course here would have been to send this patient away untreated. This is certainly not my view, nor, I venture to say, would it be that of any practitioner who, as "A." writes in the BRITISH MEDICAL JOURNAL of April 6th, "has a grain of common sense."

I acted in the above case as, were I in general practice, I should be quite satisfied for any doctor to act, should one of my patients go to him under similar circumstances.—I am, etc.,

April 6th. B.

SIR,—The very contradictory views expressed by your correspondents in their letters on this subject indicate the necessity of its thorough discussion by the Divisions. I hope we shall be able to keep from abuse of different classes of the profession and of the public, and calmly consider the principles underlying existing methods and their proposed reform.

The first essential in any reform is that it should be of advantage to the general public. I would most strongly maintain that the recognition of a special consultant branch of the profession, the members of which do not undertake the independent treatment of patients, would be of the highest advantage to the patients themselves. By no other method can we secure that every patient who requires the special skill and assistance which can alone be developed by specialization, shall receive it. Patients cannot tell when their condition needs such special consideration. To decide this question they require professional assistance. It is not possible to expect that every general practitioner will freely recommend his patients to seek such special advice at the hands of colleagues who are admittedly his competitors in practice. That practitioners do so so largely now is due to the high sense of honour of the profession and the recognition that monetary considerations must not be allowed to weigh when a patient's health, or possibly life, is at stake. Can we imagine for a moment that solicitors would be willing to advise consultations with barristers whenever a difficult problem of law arose if barristers frankly competed with them for practice? It is not fair that this conflict between the general practitioner's desire to do the best for his patient and the maintenance of his own pecuniary interest should arise whenever the use of a consultant is under consideration. It is on this ground that I maintain that the existence of a consultant class to whom the general practitioner could turn in all difficulties with no fear of damaging his own practice would benefit the public by making more accessible special medical skill when it is specially needed.

It is often urged against this proposal that "patients have an indefeasible right to seek advice from whomsoever they choose," and this phrase has been used and approved by some of your present correspondents. But surely it is not true—at least, if the right of the patient entails any corresponding obligation on the profession. Is an obstetrician, let us say, bound to treat a patient with scarlet fever who asks him to? Must a physician set a broken leg? Assuredly we have a perfect right to fix the terms and conditions on which we will offer our services to the public. Beyond the obligation which binds us in common with all mankind to use our knowledge to save life in emergency without question of fee or reward, we are perfectly entitled to sell our services on any terms we please.

In this regard it is important to recognize that consultants of the first rank in London and in many large provincial centres steadfastly refuse to visit patients in their own homes without the presence of a general practitioner. It is therefore only in the case of patients well enough to come to the consultant's house that the proposed modification would make any change in existing practice, so far as many consultants are concerned. If once it is recognized that a consultant may refuse to visit a patient who is presumably seriously ill except on certain terms, surely he is also justified in refusing to allow a patient to visit him unless such terms as he chooses to impose are complied with.

I have endeavoured above to answer the objections of those who see difficulties in taking any step towards the recognition of a special class of consultants. It now remains to meet the objections of correspondents such as "Y.," who think the proposal as made by the Ethical Committee does not go far enough.

I quite agree with "Y." that the ideal towards which we should all work is that a special class of consultants should be approachable only through a general practitioner. If the affairs of the medical profession were in the hands of a paternal government able to enforce its decrees, I would vote for such a scheme; but any change we make must be voluntary, and can only be very gradually introduced. So long as a fairly large number of the "heads of the profession" continue to see and treat all patients who come to them, it will be difficult for the younger men to take the strong line of refusing to admit to their consulting rooms any patient without an introduction from a general practitioner. To refuse to prescribe for or carry out the treatment of any such patient without the co-operation of a general practitioner is a half-way house which would soon lead to the more perfect arrangement. Those who do so will undoubtedly obtain a larger share of true consulting practice, and their example will gradually be followed. Despite "A.'s" doubts, I believe that patients will come to recognize that real second opinions obtained from consultants by the assistance of their general practitioners are worth more than independent opinions picked up casually from any one in Harley Street. It will become the hall-mark of a competent consultant not that he lives in a particular street or charges two guineas, but that he works in co-operation with his colleagues and cannot be approached except through their introduction.—I am, etc.,

April 7th. X.

THE TREATMENT OF PNEUMONIA.

SIR,—In my challenge to Dr. Ewart I am quite willing—nay, I am anxious—to narrow down the terms of reference, to suit him, to true cases of pneumococcal pneumonia; the more pure the culture the better for my purpose, but there must be a sprinkling of severe cases. That there may be no doubt in my mind, I have read Dr. Ewart's article on the Principles of Treatment of Pneumonia,[1]

[1] *Lancet*, vol. i, p. 138, 1905.

which is written in Dr. Ewart's best style and is an excellent piece of dialectics, but to my mind is not very convincing. I have also read the able and trenchant criticism of Dr. Auld,[2] with whom I perfectly agree, "that the pneumonic consolidation is Nature's method of localizing the morbid process and of curing the disease. . . . Moreover, in cases of pneumococcus infection showing little or no tendency to pulmonary hepatization—when the pneumococci run riot in the organism, so to speak—the result is always grave, and indeed generally fatal." We have also the valuable corroborative evidence of Colonel Younge.

I quite agree with Dr. Ewart that pneumonia is a preventable disease; so also are appendicitis and a whole host of other diseases out of which physicians and surgeons earn a legitimate livelihood. If the British public would only spend more money on the preservation of health and the prevention of disease there would be less required for treatment. Then our huge hospitals would not be half filled, the purveyors of synthetic remedies and artificial foods might find a suitable place in a home for the destitute, our surgeons and specialists would largely join the ranks of the unemployed, and the physicians and general practitioners would be kept busy treating slight deviations from physiological health. As this would mean work of a high order, and might even include the estimation of the calcium salts in the blood, the fees would be proportionately high. If Dr. Ewart can hasten these halcyon days by the appointment of a Royal Commission, by all means let him hurry up, as there is just a possibility that the ravages of time may have disposed of him and myself before a proverbially slow Commission have arrived at any conclusion.—I am, etc.,

Liverpool, April 15th. James Barr.

Sir,—I have often heard Professor Laycock, in his lectures, declare that when many drugs are vaunted as cures for one disease, and when many diseases are said to be cured by a special remedy, it is reasonable to assume that Nature is largely concerned in producing the convalescence in such conditions.

It is most interesting to read the letters of Sir Lauder Brunton and Sir James Barr on the treatment of pneumonia. For over a quarter of a century pneumonia has been regarded as a septic disease comparable with diphtheria or with enteric fever, terminating ordinarily in seven days, or in peracute cases in three and a half days. Experienced physicians have long known that the fatal issue is not always determined by the amount of lung tissue involved, and, *caeteris paribus*, left pneumonias are more fatal than right ones. Further, Niemeyer, in his textbook (in my opinion the best book on medicine in the early Seventies) emphasized the facts that when the cough is slight and the expectoration absent or very scanty the outlook is less hopeful.

It is well known that the toxins produced by the poisons of diphtheria, enteric fever, measles, influenza, etc., have a most depressing effect on the vagus nerves, and the same no doubt applies to the toxins generated in a case of pneumonia. The effects of toxins on these nerves have never been fully considered in the degenerative changes occurring in diseases of the chest and abdomen. Let us take, for example, the action of the toxins induced by indulgence in alcohol, or tobacco, or both. In one patient there may be interstitial pneumonia or fibroid phthisis, in another an alcoholic or smoker's heart, in a third gastric catarrh (which may or may not stop short of malignancy), and in a fourth hepatic cirrhosis. Idiosyncrasy may determine which organ might first give way, but the conditions common to each are alcohol and tobacco, their toxins, and the pneumogastric nerves. Professor Hughes Bennett rang the death knell of blood letting in pneumonia, and established the expectant form of treatment which practically holds the field to day, supplemented if necessary by oxygen, strychnine, digitalis, calcium chloride, and the like. All such remedies have one point in common, namely, the maintenance of the nutritive integrity of the cardio vascular and pulmonary systems for a certain length of time, or, in other words, to get the best work possible out of the pneumogastric for the time being.

It is generally admitted that left pneumonia is the more

[2] [illegible] p. 780.

serious, and, as a rule, this is ascribed to contiguity and extension of the inflammatory process. It would, however, be equally reasonable to ascribe the result to the fact that toxins which have already weakened the pulmonary branches of the vagus may so much the more readily affect the cardiac filaments, giving rise to death from sudden syncope, acute oedema of the lungs, or to a hybrid kind of catarrhal or double pneumonia. The extension of the supposed inflammation cannot in all cases be seen *post mortem*, and in those ending suddenly by syncope it has not time to develop.

As the giving of oxygen is to fresh air in severe cases, so, in an ordinary case of cardiac failure, is a hypodermic injection of strychnine to the taking of a sugar or silver-coated pill containing an ordinary dose of nux vomica.—I am, etc.,

Leeds, April 2nd. Thomas Johnstone.

LOCAL ANAESTHESIA IN THE EXTRACTION OF TEETH.

Sir,—In your appreciation of Dr. Sauvez's book dealing with this subject you have presented one side of the question with clearness, but have not pointed out the dangers of the method advocated.

In England practically all dental operations can be performed under nitrous oxide gas, as the most prolonged ones, lasting ten to fifteen minutes or more, can be provided for by the nasal method of giving nitrous oxide. Ethyl chloride, which in competent hands involves little risk, is largely used in dental surgery, but has the drawback that it often causes sickness. The injection of cocaine was advocated and largely used in dental practice many years ago, and I then pointed out, in a communication made to the Odontological Society of Great Britain, that even small doses will produce serious circulatory embarrassment in some persons. Most dentists have had experience of alarming cases when cocaine has been used, and not a few have had patients lying on a sofa of their waiting-room for hours after the operation. In some persons respiratory failure of the most alarming character has followed the injection of cocaine. It is, of course, possible to say all untoward cases are those in which the inexperienced have used the drug, but such is not the case. The use of cocaine, if revived, would be carried out, however, by the inexperienced, and for this reason its employment in dentistry is to be deprecated.

Stovaine, novocaine, and the various drugs of this character which have been advocated as being less toxic than cocaine are less efficacious as local analgesics, and have for this reason to be given in larger quantities. When injected into the dense tissues about the teeth there is a danger of local sphacelation. The addition of the adrenal extracts, while minimizing the dose of cocaine and of other analgesics, does not lessen local dangers, and introduces an added peril unless the dose is kept within narrow limits.

The one great advantage of a general anaesthetic is that its action can be checked at any moment; an injection into tissues once made cannot be withdrawn. For these reasons it seems right to warn those who have not studied the action of cocaine and its allies against resort to them without fully appreciating that such analgesics are potent agents. I should be sorry to appear to be unaware of their great value, but I cannot admit that the methods which Dr. Sauvez advocates are by any means as safe as the casual reader might think.—I am, etc.,

London, W., April 14th. Dudley W. Buxton.

DIRTY AND INFECTIOUS MILK.

Sir, In the British Medical Journal of March 30th, p. 764, in a leading article under the head of The Tubercle Bacillus in Milk, is mentioned a case which was decided at the Tower Bridge Police Court on May 12th, 1905. The article reads as if the Corporation of London had been the prosecutors in the case. As a matter of fact, the prosecutors were the St. Pancras Borough Council, and the first hearing was at the Marylebone Police Court; but Mr. Chapman, the Magistrate, at the second hearing, was back in his own court at Tower Bridge, and consequently the case was heard and decided there, far away from St. Pancras, so that it is not at all astonishing that it should have been looked upon as a City of London case.

I should like to point out, also, that the milk in question was an obviously dirty milk, visibly dirty to the naked eye, and consequently the consignment was seized, taken to the magistrate (who saw the milk himself), condemned as unfit for human food on the opinion of the medical officer of health and destroyed, and that upon the facts the Borough Council decided to prosecute. Samples of the milk were collected from the scum and the deposit, and these were found to contain faecal matter, pus cells, and tubercle bacilli, but the milk had already been condemned and destroyed before these had been demonstrated to be present. The point is that *unless the milk* is so obviously filthy to the naked eye that it *can be seized on the spot*, all milk can be transported and distributed with impunity, although some of it may contain faecal matter, pus cells, and tubercle bacilli, because it takes time to find the faecal matter, pus cells, and tubercle bacilli, and when found it is too late to stop the sale and distribution of the milk, so that the only remedy for this state of the law is to empower the sanitary authority that finds faecal matter, pus cells, and tubercle bacilli in the milk to proceed against the wrongdoer within twenty-eight days, as in the case of the Food and Drugs Adulteration Acts, and recover a thumping penalty. This is the only method, in my opinion, by which a wrongdoer can be brought to a sense of his responsibility.—I am, etc.,

JOHN F. J. SYKES,
Medical Officer of Health, St. Pancras.

London, N.W.,
April 9th.

TOTAL ENUCLEATION OF THE PROSTATE.

SIR,—Mr. Freyer challenges those who assert the above operation was not originated by him to produce a single specimen of a prostate gland removed as he recommends, with any published report of the operation, *before* the time he published his reports about it, and surely this should not be a difficult matter, seeing the number who are stated to have performed this very operation before him. If the operation was as common several years ago as Mr. Nicoll states, surely there must be one specimen somewhere to prove his assertion, and the production of it will settle the matter once and for all. In the long letters published by Nicoll and Mayo Robson on the subject I do not notice a word about Freyer's challenge, and yet to my mind it is *the* part of his article that required answering.—I am, etc.,

April 1st. F.R.C.S.

AFTER-TREATMENT OF OPERATION CASES.

SIR,—A consultation with a specialist is at times a necessity, but it is not to be regarded as an entirely one-sided affair. The consultant is rarely chosen without the recommendation of the practitioner in attendance, and he would be hardly likely to select on a second occasion an individual who would construe the word "consultation" as "dictation."

As regards "the after-treatment of operation cases," having chosen your specialist you would, if you valued your own opinion, be most anxious to carry out his pet methods; but there is nothing "special" in Mr. Morton's paper whatever, and certainly nothing that any average general practitioner would not be quite competent to carry out.

In fact, the necessity for elaborate methods after operation cases is in inverse proportion to the skill and dexterity of the carrying out of the operation.

Seeing, as I do, on occasions manipulations by "specialists" more like dissections than operations, sadly deficient in precision and unduly prolonged, I can appreciate only too readily the utmost necessity for most careful after-treatment of such operation cases, and where such careful treatment is so needed I, for one, should be only too glad to let the operator do his own "cleaning up."—I am, etc.,

April 2nd. G. P.

TAXATION AND DEGENERATION.

SIR,—Is it a fact that the burden of taxation falls unduly heavily upon the merchant and professional class? If it does so, as is so often stated, I would like to submit an opinion for criticism in your very appropriate columns, that such undue taxation is a sufficient cause in itself of mental and physical deterioration in the inhabitants of these islands.

In the first place, it must be granted that the merchant and professional class is the nation's best class. It contains the great majority of the mentally and physically fittest individuals. It is the class therefore which, if unhindered artificially, would most certainly keep up its numbers and its quality by the natural power of superiority of body and brain. It is the class which eugenists and wise rulers would most encourage to increase.

Now, what is the effect of overtaxing the members of this merchant and professional class? It makes their living more expensive, their marriages fewer and later, and their children scarcer. Can it be denied that this is just what is happening in our country, and that the number of our best individuals is being reduced by the present system of taxation?

But this pernicious restraint on the maintenance of the fittest by undue taxation is only part of the mischief. For why is the merchant and professional class disproportionately taxed? It is overtaxed to make living and married life easier, if not easy, for the handworking classes. This may be charity, but, like too many other charities, it has the unfortunate effect of multiplying the physically and mentally inferior class at the expense of the superior. The young workman marries as soon as he gets a situation. It means little or no financial risk for him, as his children will be educated for him. If he falls idle he and his have the poorhouse, and if they take ill they have, in addition, the hospital provided for them.

Perhaps it can be shown that, as a result of this chivalrous policy, members of the lower classes are always and in sufficient numbers coming up to the standard of the better classes. If not, then my fear remains that the comparatively unfit are being multiplied while the comparatively fit are diminishing in numbers. A clear case will have to be made out to justify a policy which is contrary to Nature's method of the survival of the fittest. The longer we continue it the more easily shall we yield one day to the advance of some foreign race which will have for generations been breeding naturally and abundantly from its strongest and cleverest.—I am, etc.,

London, April 15th. B. D.

THE THERAPEUTICAL SOCIETY AND THE ROYAL SOCIETY OF MEDICINE.

SIR,—With your permission I should like to explain why I think it impossible for the Therapeutical Society to form a section of this Royal Society of Medicine, now practically complete.

One-fifth of our numbers reside abroad, and we encourage them and expect them to report to us upon new or old remedies used in foreign parts. One-third are provincial Fellows, so that fewer than the half would be in a position to obtain any of the additional advantages which the united societies offer. For these advantages we in London should pay half a guinea, and all the rest, deriving no additional advantage, would have their subscriptions greatly increased. As we are in a satisfactory financial position with our present subscriptions, the advantages of union must be great and perfectly evident. I am sorry I cannot perceive any to speak of. If others agree with me, which is just possible, there will be a serious loss of membership. Now the success of such a society is of course not to be judged by its income as by the numbers it can interest in its proceedings. It would be a thousand pities if our foreign members fell away.

As in therapeutics we make use of drugs and chemicals, so we invite the co-operation of botanists and analytical chemists, and we have these amongst our most useful Fellows. Our Society includes the F.C.S. or D.Sc., as well as the F.R.C.S. or L.S.A. We also have some ladies Fellows. I cannot gather that these will be welcomed as heretofore, or even admitted.

What, then, will be left for the Royal Society to take over? So long as the union seemed to promise friendly co-operation with the other societies, which are now to be called sections, many of us were in favour of it. But I can be no party to any radical treatment which would knock to pieces this Society, framed with so much wisdom. The Committee seem to have some old wine skins in

Hanover Square, and in trying to put all of the societies therein, perhaps some of the wine will be spilt.—I am, etc.,

George Crichton, M.D.,
Honorary Treasurer Therapeutical Society.

London, W., April 2nd.

AN HONOUR FROM THE KING.

Sir,—The statement that the well-merited "royal augmentation" in the arms of Sir Frederick Treves and Sir Francis Laking is without precedent is scarcely correct, as the following examples will show.

Gideon Delaune, apothecary to James I, and who obtained from his sovereign the charter for the Apothecaries Society, was granted, March 7th, 1612, the gold lion passant on a red field as well as a fleur de-lys, then part of the royal arms. Sir Henry Halford, Physician to George III, at the accession of Queen Victoria was awarded "by royal warrant of augmentation," *inter alia*, "a staff entwined by a serpent and ensigned by a coronet composed of crosses patée and fleurs-de-lis." Sir James Clark, Her late Majesty's First Physician, had the boar's head in his family coat converted into a lion rampant. Sir Thomas Barlow bears an imperial eagle charged with a red rose; and Sir John Williams, with graceful significance, has been awarded the white rose of York.—I am, etc.,

April 15th. Arma Virumque.

THE DEVON AND EXETER MEDICAL BENEVOLENT SOCIETY.

Sir,—May I call the attention of your readers to the existence of this Society? It was founded over a hundred years ago, and during that time has done and is still doing much good work.

The invested funds of the Society amount to over £3,000, and though the membership has of late years fallen to rather a low level, I am glad to be able to report a decided increase during the present year. Dr. Gordon, of Exeter, is President, and the annual meeting will be held in Exeter in May. I shall be glad to receive the names of any gentlemen wishing to join before that date.—I am, etc.,

Elgar Down,
Honorary Secretary and Treasurer

Wingfield House, Stoke, Devonport, April 15th

THE SHIPPING FEDERATION AND THE WORKMEN'S COMPENSATION ACT.

Sir,—My excuse for troubling you again is that this correspondence may serve the purpose of stirring up some of our Divisions to take an interest in this matter before it is too late.

Dr. Findlay could not have read my letter (British Medical Journal, February 9th) very carefully or he would have seen that I suggested 2s. 6d.—not half a guinea—as the contract rate for examining each seaman, so that his sarcasm is quite beside the mark.

Dr. Findlay says in his letter to the Shipping Federation "I think the examination of seamen should be thorough," and now he proceeds to pour ridicule on the idea of spending fifteen minutes in testing for defective vision and colour blindness, examining for hernia, varicocele, syphilis, gonorrhœa, aneurysm, valvular disease, tuberculous disease and chronic bronchitis, to mention only the most obvious diseases that would have to be excluded.

However, I am not going to quarrel about that. Perhaps Dr. Findlay can do each case in three minutes, and, to take an example from his letter, could examine a crew of 400 men for an Atlantic liner in twenty hours. For that he would get 2 guineas (maximum fee). I do not know what the Division thinks about that, but in Sunderland we would call it sweating.

However, this vision that Dr. Findlay conjures up of hundreds of men to be examined while the liner is impatiently waiting to cross the Atlantic is all moonshine. It may be a rush of work at first, but it is only reasonable to suppose that the Federation will keep a register of seamen who have been medically examined and passed, and those men will, perhaps, not be re-examined for twelve months or more, so that of each crew only a small percentage would require examination before signing on, and the expense (after the first year) would be very moderate indeed at 2s. 6d. per medical examination.

The discontent throughout the profession with existing contract work is notorious, and yet here we are allowing the wealthiest corporations in England to impose terms that would be mean if offered by a friendly society.—I am, etc.,

April 1st. X.

TUBERCULOUS SOIL CONDITIONS (?).

Sir,—Dr. Foley's note in the British Medical Journal of April 13th is, in my opinion, well worthy of some attention. For some months I have been collecting data which go to show the comparative scarcity of what I may call indigenous tuberculosis in the districts of Cheshire which lie above the more superficial saline deposits. In many of these I have found the pasture and cultivated land in a thin layer of 12 to 18 in., mixed with sand. The grasses and the available water supply have been rich in sodium chloride. The figures I have obtained have convinced me that the matter is worth going into, and I shall be pleased to communicate with Dr. Foley and any other medical man who is interested. Both for the individual and for the race the prevention of tuberculosis is more important than its cure, and anything that bears on the question practically deserves to be well threshed out.—I am, etc.,

Nantwich, April 15th. J. W. Wyncoll, M.B.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

At the spring graduation ceremonial on Friday, April 12th, the honorary degree of LL.D. was conferred on the Hon. Sir Joseph George Ward, K.C.M.G., Prime Minister of New Zealand; on the Hon. Leander Starr Jameson, C.B., M.D., Prime Minister of Cape Colony; on the Hon. Frederick Robert Moor, Prime Minister of Natal; on David James Hamilton, F.R.C.S., F.R.S.E., Professor of Pathology in the University of Aberdeen and Medical Officer of Health for the City of Aberdeen; and on Sir John Tweedy, late President of the Royal College of Surgeons of England.

The degree of Doctor of Science was conferred on William Cramer, Ph.D.; on James Robert Milne, B.Sc.; and on John Tait, B.Sc., M.D.

The degree of Doctor of Science in the Department of Public Health was conferred on George Henry Masson, B.Sc., M.D., and on Owen St. John Moses, B.Sc., M.D.

The degree of Bachelor of Science in the Department of Public Health was conferred on George Stewart Clark, M.A., B.Sc., M.B., Ch.B.; John Pool M'Gowan, M.A., M.B., Ch.B.; and on William M'Donald Scott, M.B., Ch.B.

UNIVERSITY OF ABERDEEN.

The following degrees and diplomas were conferred at the graduation ceremony, April 9th:

M.D.—A. Callam, Burnley, Lancs.; L. Conry, Fort Beaufort, Cape Colony; A. W. Falconer, Stonehaven; A. Thomson, Edinburgh.

M.B., Ch.B. (with Second Class Honours).—N. S. Gilchrist, M.A., Rothienorman; R. W. A. Salmond, Aberdeen; Williamina Veal, Aberdeen; D. Anderson, M.A., Aberdeen; W. Angus, Aberdeen; J. W. Barnett, Balfour Agnes V. Baxter, M.A., B.Sc., Aberdeen; J. S. Beadie, B.Sc., Tisbert, by Turriff; A. M. Clark, Portsoy; A. L. E. F. Coleman, Stamford-le-Hope; I. A. Davidson, Cults; J. Donaldson, Aberdeen; R. P. Garrow, Aberdeen; H. W. Gleshan, Dyce; L. H. Hay, Flotta, Orkney; J. Hunter, Aberdeen; A. Hutton, Huntly; H. Middleton, Aberdeen; G. Mitchell Inch; J. F. Mitchell, Aberdeen; J. P. Mitchell, Fraserburgh; J. H. Mott, Burton-on-Trent; A. J. Price, Rousay, Orkney; J. Reid Lees, M.A., St Cyrus; [illegible] A. H. Skinner, M.A., Aberdeen; J. P. Stuart, Aberdeen; F. P. Storm, M.C., Calcutta; J. E. C. Thomson, Aberdeen; J. L. P. Wilson, Orkney.

W. S. Duthie, Aberdeen, has passed all the examinations, but will not graduate until he attains the necessary age.

The honorary degree of LL.D. was conferred on Thomas Smith Clouston, M.D., F.R.C.P.Edin., Physician Superintendent, Royal Asylum, Edinburgh.

D.P.H.—A. C. Anderson, M.A., B.Sc.Aberd., M.B., Ch.B.Edin., Aberdeen; F. A. Fox, J. Jenkins, M.A., A. Kellas, F. J. Stroud.

[illegible] "Commendation for thesis [illegible] "Honours for thesis [illegible] "Honours without distinction."

UNIVERSITY OF WALES.

From the Blue Book containing reports from University Colleges which participated during 1906 in the annual grant, now amounting to £100,000, made by Parliament for "University Colleges in Great Britain," it appears that the three colleges in Wales received a grant of £14,000 each.

The report from University College of Wales, Aberystwith, states that the number of students drawn from North Wales

was 68, from South Wales 251, from England 113, and from Ireland 1. Seven students have graduated M.A.; three have been elected University Fellows. Three former students have been elected Gilchrist travelling students of the University. One graduated D.Sc. and 6 B.D. The finances show the expenditure (including debit balance of Day Training Department, £357 17s. 6d., and overdraft on Agricultural Department, £14 13s. 5d.) to have amounted to £70,057 7s. 3d., and the receipts leave a deficiency for the year of £289 18s. 2d. The total expenditure in connexion with the Agricultural Department was £1,907 1s.

At the University College of North Wales, Bangor, 337 students attended, the students having come from North Wales, 247; South Wales, 30; total for Wales, 277; England, 56; Scotland, 1; Ireland, 2; West Indies, 1; total, 337. The degrees and other diplomas gained during the session 1904–5 were: (*a*) University of Wales: Degree of B.A., pass, 16; honours, 19; degree of B.Sc., pass, 6; honours, 7; degree of M.A., 5; certificate of education, 3. (*b*) University of London: Degree of B.Sc., pass, 1; honours, 1. The higher certificate of the National Froebel Union was gained by 3 students. The accounts show expenditure (including a debit balance of £348 at the beginning of the year) amounted to £10,490 12s. 9d. and receipts £9,456 19s. 8d., leaving a deficit of £1,034 13s. 1d. Upon the Agricultural Department account £2,708 7s. 7d. was expended, the year having been commenced with an adverse balance of £417 13s. 5d., and closed with a deficit of £391 14s. 11d.

The University College of South Wales and Monmouthshire during the same session had a total of 551 students; of these, 160 attended one course, 67 two courses, and 437 three or more courses of lectures. In addition, 113 students were trained at the School of Cookery and Domestic Arts. The following students attended special courses of lectures: School hygiene, 122; midwifery for midwives, 83; mining and the allied subjects, held during August, 51. Of the 551 students referred to above, 451 attended secondary schools before entering the college. The distribution as to locality is as follows: Cardiff, day students, 168; cookery students, 50; other parts of Glamorganshire, 236 to 239; other counties in Wales, 125; England and abroad, 22 to 23; totals, 551. The general income and expenditure shows that the latter amounted to £15,705, and that a surplus of £[illegible] remained from the receipts and was transferred to the capital account.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY Council meeting was held on April 11th, Mr. Henry Morris, President, in the Chair.

Jacksonian Prize.

This was awarded for the year 1906 to Mr. Donald John Armour, F.R.C.S., for his dissertation on the Diagnosis and Treatment of those Diseases and Morbid Growths of the Vertebral Column, Spinal Cord and Canal, which are Amenable to Surgical Operations.

The subject for this prize selected for the year 1908, is, the Pathology and Treatment of those Conditions and Diseases of the Colon which are Relievable by Operative Measures.

The Triennial Prize.

The subject selected for the next triennial prize is the Histological Anatomy of the Lymphatic and Haemo-lymphatic Glands, more especially with reference to the changes which these glands undergo in acute infection processes.

Election to the Fellowship of Members of Twenty Years' Standing.

The following gentlemen were elected, under Section 5 of the Charter of the 15th Victoria: Dr. Alex Hill, Downing College, Cambridge; Professor Arthur Thomson, University Museum, Oxford.

Board of Examiners in Dental Surgery.

Mr. F. S. Eve was appointed a member of the above Board in the vacancy occasioned by the retirement of Mr. C. H. Golding-Bird.

Centenary of the Geological Society.

The President was appointed to represent the College on the above occasion, to be celebrated in September next, in answer to a letter from the President of the Geological Society.

Central Midwives Board.

The best thanks of the Council were given to Mr. Ward Cousins for his services as the Representative of the College on the above Board.

In Mr. Ward Cousins's report to the Council he states, with regret, that up to the present time there has been no attempt to amend the Act so as to provide just payment for medical men who are summoned to assist midwives in cases of difficulty and danger, notwithstanding the strong opinions expressed on the subject by the Royal College of Physicians, the Royal College of Surgeons, the Central Midwives Board, the British Medical Association and its Branches in all parts of the United Kingdom.

The number of certified midwives on the Roll amounts to 24,549.

The Board have recognized 61 training schools; 48 of these institutions are in England, 6 in Scotland, and 7 in Ireland. The number of teachers appointed amounts to 144; 28 reside in London and 116 in the provinces.

During the past year the Board has held examinations in London, Bristol, Manchester, and Newcastle-on-Tyne; 1,976 candidates entered for the examinations; of this number 1,527 received their certificates and 449 were unsuccessful. The Board has not yet made any recommendation respecting a standard of elementary education for pupil-midwives before commencing special professional training.

The number of cases of alleged misconduct and neglect brought against certified midwives has recently considerably increased as a result of greater activity on the part of the local supervising authorities in the administration of the Act. The following table indicates the nature of these charges:

1. Carelessness in carrying out thorough disinfection and failing to procure the necessary appliances and antiseptics.
2. Neglecting to send for medical aid according to the rules of the Board.
3. Not observing the regulations as to personal cleanliness and appropriate dress.

These judicial proceedings of the Board have resulted in the removal of forty midwives from the Roll, and eleven others have been severely censured and cautioned.

Hunterian Lectures.

The President stated that Professor William Wright's postponed Hunterian Lectures on the Prehistoric and Early Historic Inhabitants of England will be delivered on May 6th, 8th, 10th.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT a stated meeting of the President and Fellows of the Royal College of Physicians of Ireland, held on Friday, April 5th, Dr. William Roche, L. and L.M., K.Q.C.P.I., 1867, was admitted to the Membership of the College.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Election of Examiners.

APPLICATION from persons desirous of becoming examiners under the Conjoint Board in Ireland and for examinations conducted by the Royal College of Surgeons in Ireland should be sent to the Registrar of the Royal College of Surgeons in Ireland, Stephen's Green, W., Dublin, on or before Tuesday morning, April 30th.

CONJOINT BOARD IN ENGLAND.

THE following candidates have been approved at the examination indicated:

ANATOMY AND PHYSIOLOGY.—N. S. Adler, E. W. Atkinson, G. W. Beresford, N. W. Berry, D. C. Bluett, D. F. Borrie, J. Capell, W. R. Catto, R. C. Clarke, T. Cock, T. R. Davey, G. de H. Dawson, P. J. de Miranda, A. Dias, G. D. G. Fergusson, B. Goldsmith, A. B. Gunasekara, C. Hall, N. H. Harrison, A. H. C. Hill, J. B. H. Holroyd, J. S. Hopwood, E. Howden, G. James, G. Jefferson, B. A. Keats, T. J. Killard-Leavey, M. M. Kumarasamy, F. W. Lastic, J. Luciani, K. D. Marriner, R. T. Martin, M. C. Mason, B. C. Maybury, J. F. H. Morgan, C. W. Morris, F. L. Nash-Wortham, C. P. A. de L. Pereira, W. L. Pink, *G. H. Pooley, F. C. Pridham, E. A. Seymour, F. L. Smith, V. E. Somerset, H. Steinbach, T. E. A. Stowell, A. E. Taylor, M. C. Thavara, H. W. Tilling, J. M. Todesco, H. A. Treadgold, T. A. F. Tyrrell, L. M. Waldron, J. P. Williams, R. Yood.

* Under four years' regulations.

CONJOINT BOARD IN SCOTLAND.

THE following candidates have been approved at the examinations indicated:

FIRST EXAMINATION.—*Four Years' Course:* Adeline M. Watts. *Five Years' Course:* *M. Greene, H. D. Brown, J. F. Sweener, A. M. Billings, J. Mitchell, *A. C. Price, F. L. Kennefick, T. K. JavaRam, A. L. Gibbon, H. A. Whitehead, A. B. Kramer.

SECOND EXAMINATION.—D. R. Das Gupta, R. W. A. Brown, H. G. Chouler, W. T. Lawrence, G. N. Groves, J. N. Robson, R. Parry, *J. Young, T. Crawford, Beatrice Coxon, P. G. Phillips, C. W. Kay.

THIRD EXAMINATION.—J. Reid, L. N. Robertson, W. R. Mackenzie, F. R. Watson, T. G. Shand, J. du T. Malan, A. E. James, S. C. Jog, W. McKee, L. O. S. Poidevin, W. F. Mitchell, B. S. Photographer.

FINAL EXAMINATION.—D. T. de Kretser, T. D. Murison, G. McC. Williamson, R. M. Liddell, W. McKee, F. L. Scott, C. E. Anderson, A. H. Bloxsome, A. P. O'Connell, H. H. Babington, W. M. Chambers, J. Ferguson, O. M. Gericke, A. McMillan, H. B. Stephenson, D. Golding, J. H. Simpson, V. A. Vijayakar, D. Ll. S. Radford, S. Sarkar, R. M. Jones, S. Canagasooby, M. L. Pura.

* With distinction.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

FIRST PROFESSIONAL.—*J. S. McHugh, C. J. Bourke, T. Buckley, F. M. J. Byrne, A. D. Clanchy, P. Daly, J. A. Dowling, F. T. Eagar, J. T. Hill, N. Keating, P. Murphy, F. J. McCarthy, A. McGrath, J. Nally, C. H. Oliver, T. P. O'Reilly, D. P. H. Pearson, A. A. Russo, M. V. Seaton, J. P. Shorton, H. H. K. Sparrow, T. M. Thomson, F. W. Warren, F. Webster, P. J. Wigoder, P. O'C. White.

* With honours.

LONDON SCHOOL OF TROPICAL MEDICINE.

SESSIONAL EXAMINATION.

THE following candidates passed at the twenty-third sessional examination in Tropical Medicine:

*Major F. R. Ozzard, I.M.S., *Captain T. G. N. Stokes, I.M.S., *†J. M. O'Brien, *O. Berkeley Hill, I.M.S., *Captain J. W. F. Rait, I.M.S., *†A. W. Atkinson, M. Gamble, M.D., F. W. Woolrabe, †E. G. H. Weir, M.D., A. Orgnieri, †C. W. McLeay, †E. W. Wood-Mason, Miss A. M. Cowen, †R. W. Orpen, †F. McF. W. Pollard, Miss A. M. Clark, †W. N. Alexander, †H. O'Hara May, M.D.

* Passed with distinction.
† Colonial Medical Service.

TRINITY COLLEGE, DUBLIN.

THE following candidates have been approved in the subjects indicated (Hilary Term examination):

FINAL MEDICAL EXAMINATION (PART II).

MEDICINE.—*Eleanor E. Finegan, J. Powell, J. W. Lane, L. Hogan, J. H. Morton, D. F. Hunter, C. G. Sherlock, G. H. Stack, J. H. Elliott, H. J. Wright, J. A. L. Hahn, A. J. T. M'Creery, R. Holmes, H. D. Woodroffe, F. W. H. Bigley.

SURGERY.—The names of the candidates successful in the subject were published on April 6th, p. 844.

MIDWIFERY.—*Julian B. Jones, D. F. Hunter, C. H. O'Rorke, O. St. J. Gogarty, E. H. Sheehan, B. A. H. Solomons, G. H. Stack, A. J. Powell, J. D. K. Roche, J. G. M. Moloney, T. P. S. Eves.

* Passed in high marks.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

CHELMSFORD RURAL DISTRICT.

THE rural district of Chelmsford has a population of 24,000 persons. The death-rate in 1906 was 11.5 per 1,000 and the infantile mortality-rate 59 per 1,000 births. In his annual report the medical officer of health (Dr. J. C. Thresh) attributes this satisfactory condition in great measure to the excellent sanitary condition of the district, due to the satisfactory administration of the rural district council. In the section of the report dealing with the housing of the working classes it is stated that there are in many parishes very old and unsatisfactory dwellings used for human habitation. The condition of cottages in the village of Writtle is described, the principal defect appearing to be a lack of rainwater spouting, resulting in a permanent condition of dampness. An account is given of a series of cases of arsenic poisoning caused by beer which had been supplied by a publican in a gallon jar purchased with others at a farm sale and probably put away while containing a saturated solution of arsenic. When Dr. Thresh broke the bottle there was in it about half a pint of beer, and in this he found 30 gr. of arsenic in solution. All those who partook of the beer were affected, but all recovered.

MALDON RURAL DISTRICT.

THERE is a population of 14,700 persons in the Maldon rural district, and in 1906 the death-rate was 14.2 per 1,000, and the infantile mortality rate 79 per 1,000 births. An account is given by Dr. J. C. Thresh, in his annual report on this district, of an outbreak of scarlet fever which occurred in March and April, 1906. Altogether 55 cases were notified from 20 houses. All the patients were nursed at home, and Dr. Thresh considers that the shortness of the outbreak shows what can be done without the help of an isolation hospital if time is spent in searching out the mild cases. The schools attended by the infected children were closed, and when the patients had recovered the rooms they had occupied were fumigated with sulphur. No bedding or clothing was removed for disinfection, and none was destroyed.

Medico-Legal.

AN APPEAL FROM THE CENTRAL MIDWIVES BOARD. On April 10th in the King's Bench before the Lord Chief Justice, Mr. Justice Darling, and Mr. Justice Phillimore, Mrs. Ida Feldmann appealed against the resolution of the Central Midwives Board on July 11th, 1906, directing her name to be removed from the Roll and her certificate to be cancelled. The charge against her was that she had as her substitute an uncertified person not being a legally qualified medical practitioner. The substitute referred to was her husband, a barber, who, it was alleged, held a Russian medical certificate. Mr. Mulligan, for the appellant, argued that the appeal was by way of rehearing, that there was no legal evidence against the appellant, and that the word "employ" in the section meant "employ for payment." Lord Robert Cecil, K.C., and Mr. Fischer Williams for the Board contended that the scheme of the Act was purely administrative and therefore the rules of legal evidence did not apply.

The Lord Chief Justice, in giving judgement, said that he declined to lay down any general rule as to what was to be the conduct of the Board in any particular case; but he was not satisfied that the Legislature intended it to act on the strict rules of evidence, though he did not mean to say that they had a general licence to act on any hearsay. Neither would he say that it had no power to compel the giving of evidence on oath, as he was not satisfied it had not. It was a body acting judicially, and, there being an appeal to this Court, they must see that injustice was not done, having regard to the materials on which the Board had acted. He was not prepared to say more to assist the Board in the discharge of its duties, and he ought not to attempt to do so. He did not construe the word "employ" in the sense of "employ for payment." It meant allowing some other person to perform the midwife's duties, and, when the Board came to the conclusion that the appellant had employed her husband as her substitute, all he could say was that it was perfectly entitled to act upon the evidence of the Inspector of the London County Council at to what the appellant had said to him. The persons who had now made affidavits on behalf of the appellant were not called before the Board, and he was by no means satisfied that the appeal to this Court was an appeal by way of rehearing, though he expressed no opinion on the point. This Court ought not, however, to doubt the correctness of the Board's decision, because people made affidavits supposed to support the case made on appeal. It was impossible to say on the strictest view of the matter that the Board had not evidence before them that the appellant had allowed her husband to do work in her place.

The other learned judges concurred, and the appeal was accordingly dismissed.

A CASE OF SUSPECTED OPIUM POISONING.

AN inquest was held in Wedmore, Somerset, on March 25th, on the body of a man who had been living in the same house as his wife, but was not on speaking terms with her. He had been ill for some time, but had refused to allow medical attendance to be summoned until the day of his death. The medical man then summoned found reason to suspect possible opium poisoning, and took away a bottle containing some medicine which had been given by a chemist. The latter had been asked to give something for a man suffering from colic, and complied by dispensing a prescription, containing, among other drugs, 80 minims of tincture of opium. The body was examined by Dr. Openshaw, who found congestion of the lungs and a gangrenous condition of six inches of small intestine. He considered that death was due to heart failure, brought about by the condition in the intestine, and that the medicine prescribed could not under the circumstances have done any harm. It would possibly have eased the pain the deceased must have suffered before the intestine became gangrenous. Dr. Henson, who saw the deceased before death, considered the prescription mentioned might be harmful, as the deceased had suffered from nephritis, but otherwise such a remedy would be good for a man suffering from colic. The jury returned a verdict in accordance with the *post-mortem* findings, and acquitted the chemist of blame.

BOOK CANVASSERS.

AT the last county court at Croydon Messrs. W. T. Pike and Co. of Brighton sued Dr. Collingwood Fenwick for the sum of five guineas in respect to a copy of *Surrey in the Twentieth Century*, which it was alleged Dr. Fenwick had contracted to purchase after an interview with the canvasser of the plaintiffs' firm. Dr. Fenwick returned the book to the plaintiffs immediately. The Court accepted the evidence of the canvasser and found against Dr. Fenwick.

THE JUDICIAL CONCEPTION OF INSANITY.

DR. GEORGE HANSON (New Cumnock) writes: In your article on the above subject (BRITISH MEDICAL JOURNAL, March 30th, pp. 770 *et seq.*) there is discussed the verdict in what is locally known as "The Cumnock Poisoning Mystery." As your correspondent states, the verdict of the jury bore that, at the time of trial, the accused was insane. As a result the usual order was pronounced, namely, that the prisoner be detained during His Majesty's pleasure. Toward the close of the article referred to there occurs the statement: "The verdict of the jury, which was undoubtedly in accordance with the law and the judge's charge, was neither unjust nor harsh as looked at from the public interest." This statement may be perfectly true, so far as the public interest is concerned, but what about the accused, his relatives and friends? So far as I know the law at present regards an accused person as innocent until he is proved guilty. That being so, Mr. T. M. Brown is, in the eye of the law, an innocent man, yet, by the order of the Court, he is confined in a criminal lunatic asylum! Is that not both harsh and unjust to the accused and his friends? The relatives and friends of Mr. Brown were most anxious to have a trial, so that his innocence might be proved. They had good grounds for hoping that the result of the trial would be a verdict in his favour. By this verdict of insanity they are precluded from clearing his character. Mr. Brown is now detained in the Criminal Lunatic Asylum at Perth innocent in the eye of the law, yet he is one of the law, regarded as guilty by the

general public! More general satisfaction would have been given had the verdict related to the charge as laid against Mr. Brown. For example, had the verdict been "guilty—but insane," one could understand the procedure, and also appreciate the force of your remarks as to the safe custody of the dangerous lunatic. Under the circumstances, however, one is compelled to the opinion that in the law, as presently interpreted, there is something far wrong. If, as you state, the decision of the Lord Justice General forms an era in our Scottish criminal jurisprudence, if this verdict is to rule the procedure in future cases, then, for the poor epileptic who may happen to come under suspicion, the outlook is black indeed.

MIDWIFERY ENGAGEMENTS.

TORQUAY.—A. has made an engagement to attend Mrs. Z. at a confinement. A. is out when called for, but has arranged with B. to attend, if required in A.'s absence. Mr. Z. declines B.'s services, and calls in C. to attend. (1) Has Mr. Z. the right to consider contract with A. cancelled because A. was absent, and Mr. Z. objects to B.? (2) Can C. knowing this, consider Mrs. Z. as his own patient, or has he to hand her over to A. on A.'s return?

*** (1) We are advised that Z., if he chooses, can consider the contract with A. cancelled. (2) According to professional ethics C. ought to hand over the patient to A. on his return, unless the patient objects. In the latter case C. should offer to share the fee with A.

ATTENDANCE ON CASE OF ATTEMPTED SUICIDE.

J. P. W.—We are advised that our correspondent has no legal claim upon the Police Commissioners for payment for his attendance upon the case in question. His claim is against the patient or his friends.

Medico-Ethical.

The advice given, in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

THE COURTESY CALL.

A. C.—A new-comer should follow the well-established custom of the profession and pay a visit of courtesy to the medical men residing in the neighbourhood.

CIRCULARS TO PATIENTS.

P.D.C. AND S.B.—(1) In notifying the transference of a practice an engraved or lithographed circular might be sent in something like the following form: "Dr. —— presents his compliments to Mr. (Mrs. or Miss) ——, and begs leave to inform him (her) that he has transferred his practice to Dr. ——, who will (has come to) reside at ——." (2) A change of address may be notified by an engraved or printed card. In both cases care must be taken that these communications reach only bonâ fide patients of the practice.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

MR. HALDANE, Secretary of State for War, has accepted the invitation of Surgeon-Colonel P. B. Giles and officers to be present at the annual dinner of the school, which will be held at the Trocadero Restaurant, Piccadilly Circus, W., on Friday, May 10th, at 7.45 p.m. The school is now completing its twentieth year of existence.

Among those who have also accepted the invitation to be present are: General Lord Methuen, G.C.B., General Officer Commanding in Chief, Eastern Command; Surgeon-General Sir A. Keogh, K.C.B., Director-General to the Forces; Lieutenant-General C. W. H. Douglas, C.B., Adjutant-General to the Forces; Colonel A. T. Sloggett, C.M.G., Principal Medical Officer, London District; Colonel G. F. Ellison, C.B., War Office; Lieutenant-Colonel M. Russell, War Office; Colonel J. Cantlie, F.R.C.S., London Companies, R.A.M.C.V.; and Mr. Mayo Robson.

Past and present members of the school can obtain tickets by applying to the Mess President, Surgeon-Major E. M. Callender, M.D., 47, Connaught Square, W.

INDIAN MEDICAL SERVICE.

STUDY LEAVE RULES.

IN supersession of the rules contained in Military Department Notification No. 891 of 1905 the following regulations for the grant of study leave to officers of the Indian Medical Service are published for information:

1. Extra furlough for the purpose of study may be granted to officers of the Indian Medical Service on the recommendation of the Director-General, Indian Medical Service.

2. The period of such study leave will be calculated at the rate of one month for each year of service, up to a total of twelve months in all, during an officer's service.

3. Study leave may be taken at any time, but will not be granted more than twice in the course of an officer's service.

4. The minimum period of study which will render an officer eligible for study leave shall be two months.

5. The minimum period of leave granted solely as study leave shall be six months. Time spent on the journey to and from India by an officer whose study leave is not combined with any other kind of leave will reckon as study leave, but the allowance specified in Rule 10 will be granted during the period of study only.

6. Study leave can be combined with any other kind of leave, provided the period occupied in study is not less than two months, and, in the case of leave on medical certificate, provided that the Medical Board of the India Office certifies that the officer is fit for study. In the case, however, of officers in military employment, study leave cannot be taken in continuation of the combined privilege leave and furlough admissible under the terms of India Army Order No. 64 of 1904, if the total period would thereby exceed eight months, but study leave may be so taken provided such leave is for not less than two months, and the total period of combined privilege leave, furlough, and study leave does not exceed eight months; this limitation to eight months does not, however, apply in the case of study leave combined with privilege leave alone. The total period of absence from India, in the case of officers under the Leave Rules of 1886 for the Indian Army, will be strictly limited to two years.

7. Except as provided for in Rule 8 all applications for study leave shall be submitted, with the audit officer's certificate, to the Director-General, Indian Medical Service, through the prescribed channel, and the course or courses of study contemplated and any examination the candidate proposes to undergo shall be clearly specified therein.

8. Officers on furlough who wish to have part of their furlough converted into study leave should address the Under Secretary of State, India Office, and should furnish a statement showing how it is proposed to spend the study leave.

9. An officer who is at home on combined leave may be permitted to commence a course of study before the end of his privilege leave, and to count the period so spent as part of his study leave, without forfeiting his privilege leave allowances during such period.

10. During the course of study lodging allowance at the rate of 8s. a day for a field officer, 6s. for a captain, and 4s. for a lieutenant will be granted. It is to be understood that, in order to qualify for the grant of study leave or for the receipt of lodging allowance, a definite course of study at a recognized institution, which will occupy the time of the officer for five or six days a week, must be pursued. This allowance will not be admissible to an officer who retires from the service without returning to duty in India after a period of study leave.

11. An officer in civil employ will be entitled to draw furlough pay at civil rates for a portion of his study leave equal to one-twelfth of his service under civil rules, and for the remainder either (1) at the military rate, or (2), if furlough is due to him under civil rules, at the rate admissible under those rules; in the latter case a corresponding portion of the ordinary furlough earned under civil rules which is at his credit will be treated as if it had been earned under military rules.

12. On completion of study the certificates of examinations passed, or the certificates of special study, which must show the dates of commencement and termination of the course, with any remarks by the instructor, shall be forwarded to the Under Secretary of State, India Office, who will arrange for the transmission of the documents to the Director-General, Indian Medical Service. Officers may also be called upon to report themselves in person to the President of the Medical Board, India Office, on the conclusion of their course of study.

13. Study leave will count as service for promotion and pension, but, except so far as it may be taken during privilege leave (see Rule 9), it will not count for furlough or any other leave. It will not affect any leave which may already be due to an officer, and will not be taken into account in reckoning the aggregate amount of furlough taken by an officer towards the maximum period of six years admissible under Article 299 of the Civil Service Regulations.

THE HEALTH OF THE FRENCH ARMY IN 1904.

IN the usual elaborate annual report,[1] recently published, the health of the French troops during 1904 is shown in two sections France and Africa (Algerie-Tunisie); no returns given from such French foreign possessions as Madagascar and Cochin China; and in this respect the report is less complete than our own annual medical reports.

[1] *Statistique Medicale de l'Armée pendant l'Année 1904.* Paris: Imprimerie Nationale. 1906.

In 1904 the total effectives in France were 474,345, and in Algerie-Tunisie 71,153; about 40 per cent. were under one year's service, showing the youthfulness of a conscript army.

Malades à la Chambre.

This term covers a plan equivalent to our recent system of treatment in barracks, which seems growing in popularity, although formerly severely repressed in our army. In France 1,181 per 1,000 and in Algerie-Tunisie 1,386 per 1,000 were so treated, but in the French, as in our army, the numbers varied very widely both in army corps and in regimental units; in the Tenth Army Corps it was 848 per 1,000 against 1,485 in the Third, and 528 in the Legion de la Garde against 2,864 in the Compagnies de Discipline. Probably barrack treatment is much at the discretion of the medical officers; but, as pointed out in the report, the nature of the slight ailments and injuries which can be thus treated are largely determined by the special constitution and duties of the different units.

Malades à l'Infirmerie.

The admissions under this head probably represent the more severe cases. In France they averaged 434 per 1,000, against 389 in 1902 and 419 in 1903; in Algerie-Tunisie, 380, against 319 in 1902 and 329 in 1903. In the Tenth Army Corps they were 389, against 535 in the Ninth; in the Section d'Infirmerie Militaire, 41, against 524 in the Regiments de Cavalrie; while they rose in the Chasseurs d'Afrique in Algiers to 625. Curiously, the mounted troops seem to have the heavier sickness.

Malades à l'Hôpital.

This class apparently represents cases treated in station or regimental hospitals. Such cases averaged in France 215, and in Algerie-Tunisie 354 per 1,000, showing a slight decrease on years immediately preceding. They varied from 161 in the First to 274 in the Ninth Army Corps; and, in different units, from 109 to 562 per 1,000 in France to 216 and 935 in Algerie-Tunisie.

Total Admissions.

The totals under the two last heads were 649 per 1,000 in France, much the same as our own home average; and 734 in Algerie-Tunisie, which does not bear an unfavourable comparison with our Mediterranean garrisons.

Seasons.

The heaviest sickness was in the winter months in France and in autumn in Africa.

Deaths.

The mortality from all causes was, in France, 3·21, and in Algerie-Tunisie 7·56 per 1,000; but no less than 253 accidental deaths and 117 suicides were recorded. The chief causes of death were typhoid fever and tuberculosis in France and typhoid fever in Africa.

Specific Diseases.

These are elaborately tabulated and reviewed in the report, and the incidence of the chief diseases in the French Prefectures shown at a glance in coloured maps. It appears that influenza, certain of the exanthemata, and ear diseases are more prevalent in the Atlantic and northern provinces; while typhoid fever is most prevalent in the south. Tuberculosis and chest diseases are pretty widely distributed, but prevail most in the north western areas. Venereal diseases occur more in the south.

OBITUARY.

WILLIAM H. DRUMMOND, M.D.,

MONTREAL.

The profession has not many poets whose verses embody the best qualities of a race, and in these days fewer still who have written verses with that peculiar lilt which reaches them to sing. Dr Drummond of Montreal, whose untimely death has just been announced, has portrayed in vivid verse the best features of the French habitant of the New World—his happy, contented nature, his endurance, his love of the forest and of the stream, and his devotion to his adopted country and to its Church. Some of Drummond's best pieces, as "Mon Camarade Vermette," "Dr. Fiset," and "Mon Chemal Noir," will be read by generations of British Canadians and Americans and will help them to recognize the fine qualities of the race from whom they have wrested a continent.

Dr. Drummond was born in Ireland in 1854, went to Canada early with his parents, and was brought up in the Eastern Counties, a district of the Province of Quebec where the French and English overlap, so that from childhood he was familiar with the half French and half English spoken by many of the people, particularly by the voyageurs. He studied medicine at McGill, where he distinguished himself more in athletics than in the class-room, and particularly in walking (in which he held the Canadian championship), in putting the heavy weight, and in throwing the hammer. In Montreal, where he settled, he combined the practice of medicine with literary pursuits and lecturing. His most important publications are the *Habitant*, *Johnnie Courteau*, *Phil-O-Rum*, and *The Voyageur*. Dr. Drummond was an enthusiastic sportsman, and there were in Canada few better woodsmen or men more expert in casting a fly. A good companion and a good story teller, he will be sadly missed in Montreal at social gatherings. But his chief work has been to interpret the *Habitant* to his fellow-countrymen on the North American Continent, and this he has done in an inimitable way in his poems, in the quaint *patois* used by the voyageurs and the French-Canadians who have come into close contact with the English. In one of his poems, "Old Docteur Fiset," he has sketched the hard, self-sacrificing life of the country doctor, in a poem that may be placed beside Johnson's elegy on Levett. Two or three verses may be quoted as an example of the *patois* and of his style:

But Docteur Fiset not moche konne he get,
Drivin' all over the whole contree,
If de road she's bad, if de road she's good,
W'en ev'ryt'ing's drown on de Spring-tam flood,
An' Workin' for not'ing half tam' mebbe!

Let her rain or snow, all he want to know
Is jus' if anywan's feelin' sick,
For Docteur Fiset's de ole fashion kin'
Doin' good was de only t'ing on hees min'
So he got no use for de politique.

An' he's careful, too, 'cos firs't t'ing he do,
For fear dere was danger some fever case.
Is tak' w'en he's come leetle w'isky chaud,
Den 'noder wan too jus' before he go,
He's so scare carry fever aroun' de place!

W. O.

ARTHUR D. PEILL, M.B., F.R.C.S.Edin., died of typhoid fever, on October 18th, 1906, at Kirin, Manchuria, whilst on a tour recommended for his health which had suffered from overwork. He graduated at Edinburgh University in 1895, and commenced his career as a medical missionary to China in the following year. This work created a wide interest in Great Britain and the Colonies. Through the friendly help of the local Chinese, he escaped from the "Boxers" in 1900, and before his escape with his wife and colleagues they managed to send away to places of safety all the converts on the mission station. After the suppression of the Boxer outbreak Dr. Peill returned to his station of Tsangchon, near Tientsin, by the invitation of the magistrate of the city, who rebuilt the ruined hospital and dwelling houses of the mission. While home in 1901 he passed the examination for the F.R.C.S. Edinburgh with credit. His hospital reports reveal an almost incredible amount of successful surgery under the most primitive conditions. The spiritual results of his missionary life and efforts were commensurate with the beneficent influence of his professional activity. At a memorial gathering in Tsangchon, the magistrate and all the leading members of the community, together with the representatives of every class in the city and surrounding district, met to show their appreciation of the character and work of Dr. Arthur Peill. In him China has lost a great missionary friend, and the medical profession an honoured member. He leaves a widow and three children to mourn, with his parents and brothers, an irreparable loss.

CAPTAIN THOMAS WHITE, Royal Army Medical Corps, died at Jenkinstown, co. Tipperary, on February 26th aged 51. He joined the Army Medical Department as a Lieutenant, November 29th, 1890, and was made Captain, November 29th, 1903. He served in the South African war in 1900-02 in various parts of Cape Colony, receiving the Queen's medal with three clasps.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Ernst Klin, for many years Surgeon-in-Chief to the First Municipal Hospital, Moscow, aged 72; Dr. Paux, of Lille, who has left his large fortune to the Faculty of Medicine of that city, aged 85; Dr. Micé, Professor of Chemistry in the Medical Faculty of Bordeaux, of the foundation of which he was one of the chief promoters, aged 75; Dr. Ottomar Domrich, Physician to the Duke of Saxe Meiningen, and some time Professor of Physiology and Director of the Physiological Institute of the University of Jena, aged 88; Dr. Hermann von Burckhardt, head of the Surgical Department of the Catherine Hospital, Stuttgart; and Dr. Eduard Gregr, for many years leader of the Young Czech party in Bohemia, in his 80th year.

HOSPITAL AND DISPENSARY MANAGEMENT.

CITY OF LONDON ASYLUM.

THE annual report of Dr. R. H. Steen, Medical Superintendent of the City of London Asylum at Stone, near Dartford, shows that on December 31st, 1905, there were 552 patients in this asylum, and on the same date in 1906 there were 562. Of the 562, there were 207 who were chargeable to the City of London Union, 65 to the county rate, 27 to other unions and parishes, 1 to His Majesty's Commissioners of Prisons, and 262 were private patients. Altogether 696 patients were under treatment during the year. Including 46 transfers from other institutions, there were 144 admissions during the year, of whom 128 were first admissions. In 51 cases the attacks were first attacks within three, and in 14 more within twelve, months of admission; in 26 the attacks were not-first attacks within twelve months of admission, and in all the remainder the illness was of more than twelve months' duration. The admissions were classified as to the forms of mental disorder into: Mania of all kinds, 52; melancholia of all kinds, 44; dementia, 6; delusional insanity, 19; general paralysis, 8; dementia praecox, 4; acquired epilepsy, 6; and cases of congenital or infantile defect, 5. As to the probable etiological factors, the most important assigned were: Alcoholic intemperance in 25, or 17·3 per cent.; venereal disease in 2, or only 1·2 per cent.; previous attacks in 45, change of life and old age in 12, and moral causes in 28. Hereditary influences were ascertained in 40, and congenital defect was assigned as cause in 5. During the year 34 were discharged as recovered, giving a recovery-rate on the admissions of 35·05 per cent., 49 as relieved, and 2 as not improved. There were also 47 deaths, giving a death-rate on the average numbers resident of 8·29 per cent., which were due in 19 cases to cerebro-spinal diseases, including 11 deaths from general paralysis; in 17 cases to chest diseases, with only 6 from pulmonary consumption; in 5 to abdominal diseases, and in 6 to general diseases. All the deaths were from natural causes, no inquest had to be held, and no serious casualty had to be recorded, which is very gratifying, seeing that of the number remaining at the end of the year 28 were epileptics, 6 general paralytics, 15 were suicidal, 27 over 70 years of age, and 155 under continuous observation at night—facts which, as Dr. Steen says, redound to the credit of the nursing staff. The general health was satisfactory throughout the year, though 2 cases of enteric fever occurred in the spring and a smart epidemic of influenza in November attacked 37 of the patients and 18 of the indoor staff. Dr. Steen notes that after isolation of these patients was carried into effect the epidemic gradually ceased.

THE RADCLIFFE INFIRMARY, OXFORD.

THE hundred and thirty-sixth annual report of the Radcliffe Infirmary and County Hospital, Oxford, indicates a year of progress and relative prosperity. Contributions have somewhat risen and sundry structural improvements have been effected. A completely equipped x-ray chamber has been provided, thanks to the exertion of Mr. A. P. Parker, one of the honorary surgeons, and his friends, and Mr. R. H. Sankey has been placed in charge of it. Departments have also been opened for diseases of the ear, throat, and skin, and a course of clinical lectures instituted by the Regius Professor of Medicine.

MOUNT VERNON HOSPITAL, HAMPSTEAD.

AT the annual meeting of the Governors of the Mount Vernon Hospital for Consumption and Diseases of the Chest it was stated that the institution is now relying for success not only upon fresh air, but upon the teeth and digestion of the patients. Great attention is being paid to the denture of all patients, in the belief that in default of ability to masticate and digest food well the patient has little chance of overcoming his disease. It remains to raise some £30,000 more for the special fund of £100,000 in order to make effective the conditional promise of the Zünz trustees to make a donation of £20,000.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

ANSWERS.

M.B. is reminded that no notice can be taken of communications not authenticated by the writer's name.

J. E.—Our correspondent will find an article on the miracles of Jesus Christ by Dr. Reginald John Ryle in the *Hibbert Journal* for April.

A SCOTCH MEMBER.—There is no institution other than an ordinary asylum to which the patient in question could be sent: she appears to be a suitable case for detention in an asylum.

IODINE SPIRIT CATGUT.

DR. C. HAMILTON WHITEFORD (Plymouth) writes: In view of the inquiries which I have received as to the above, may I add the following details? When in use the reel is removed from the jar, placed in a bowl or tray and covered with methylated spirit. On emergency I have found brandy or whisky equally efficacious. The size and weight of the reel, aided by the spirit in which it is immersed, prevent it from jumping out of the bowel while the ligature is being uncoiled. On completion of the operation, the end of the catgut is again tied to the reel, which is then returned to the jar. The boxwood cases and glass jars were made for me by Messrs. Allen and Hanburys of London, and the glass reels by Messrs. Reynolds and Branson of Leeds.

ARTIFICIAL DENTURES.

MR. EVELYN C. SPRAWSON (Medical Superintendent, National Dental Hospital W.,) writes concerning the reply about the supplying of artificial dentures at a reduced rate, on page 912 of the JOURNAL of April 13th: The National Dental Hospital, Great Portland Street, London, also supplies them at the same rate; but is also, like the other institutions mentioned, overwhelmed with applications. The cases they are not able to deal with are, however, dealt with in the following manner. All the necessary extractions and fillings are done—that is, the mouth is *prepared* for artificial dentures, and they are then given a letter of recommendation to a private practitioner, preferably to a past student of the hospital, and in the neighbourhood where the applicant resides, asking him if he will undertake to fit dentures for the patient at the hospital rate, and in most cases they are willing to do so. In this way over 1,200 patients were given letters of recommendation to private practitioners by the hospital during the year 1906 for the supply of artificial dentures, and, judging by the ever-increasing numbers dealt with year by year in this manner, and the willingness with which many dental surgeons in private practice undertake these cases, there ought to be no difficulty in dealing with those numbers of patients the hospital or dispensaries are unable to cope with. It is in this way only that the dental profession is enabled to fight the unregistered practitioners, quacks, and companies who abound so at the present moment, and whose numbers are being augmented yearly.

LETTERS, NOTES, Etc.

MOTORING FOR COUNTRY PRACTITIONERS.

DR. HUGH EYRES (Richmond, Yorks) writes: In regard to motoring for the country practitioner, my experience is that the most economical method is to keep, in addition to a car adequate to the nature of the district, a motor bicycle. I find that, taking the year all round, half the work can conveniently be done by motor cycle. This half is done much more cheaply than the half done by car. The duration of the life of the car is doubled. The day the car is at home gives the man every opportunity to effect repairs, adjustments, etc.

I prefer the cycle for night work if the weather is anything like fine, especially if narrow and bad roads have to be traversed. A good motor cycle gives very little trouble and is as easy to ride as an ordinary bicycle. The rider can, except in wet weather, arrive at his destination clean. He is never too hot. My aim is always to use the bicycle when work and weather permit. To keep one car only must mean a good deal of horse hiring, as few if any cars will run every day. To keep two cars means a considerable outlay. A motor bicycle is cheap to buy and cheap in the upkeep. I may add that my district is very hilly, and that the road surfaces are bad.

LOCAL ANAESTHESIA IN THE EXTRACTION OF TEETH.

IN an annotation published in the JOURNAL of April 13th, p. 894, reference was made to Dr. Sauvez's book, *L'Anesthesie Locale pour l'extraction des Dents*, and the belief was expressed that an English edition would be welcomed both

by the medical and the dental professions. Dr. T. D. Luke informs us that the chapter on local anaesthesia in his book, *Anaesthesia in Dental Surgery* (London: Rebman. 6s.), is practically a translation of this special section of Dr. Sauvez's work. Dr. Luke recognized that Dr. Sauvez's experience was very extensive, and felt that the chapter would be a valuable addition to his own book, and Dr. Sauvez authorized him to make use of his work in this manner.

CYSTINURIA.

DR. J. REID (London, E.C.) writes: A simple test for cystinuria consists in acidulating the urine with HCl and allowing to stand in a test tube for twenty four hours. Crystals can be skimmed off in less than an hour. Most of the uric acid falls, and so will most of the salicylic acid. The crystals can be examined under the microscope. Boiling the urine with KHO gives ammonia in cases I have seen. Three old ladies with the complaint suffered also from troublesome stomach symptoms and rheumatism. One had rheumatic fever two years previously, and had albuminuria with small casts; another had been described as a classic case of myxoedema; she also had albuminuria and casts. The third had cystitis, much pus, and also casts. I have no doubt Sir W. Roberts's numerous cases had given him trouble to diet, etc. Of two little girls under 10, one had an ashy appearance, was fidgety in diet, and liable to influenza; the other had incontinence of urine for three months, which speedily yielded to appropriate antirheumatic treatment.

SCABIES AND BALSAM OF PERU.

DR. A. W. WILLIAMS, Physician to the Skin Department, Royal Alexandra Hospital for Children, Brighton, in a comment on the treatment of scabies in soldiers by balsam of Peru, advocated by Major F. J. W. Porter in the JOURNAL of March 30th, 1907, says that the urine, especially in children, should always be tested for albumen before applying either balsam of Peru or styrax to large areas of the skin, and repeated daily during their use. He adds: Dr. Adolf Richartz reported a case in the *Münch. med. Woch.*, May 8th, 1906, in a patient, aged 16 years, with scabies and secondary eczema, who was treated with a 10 per cent. ointment of balsam of Peru. About three applications were made, acute nephritis followed, and the patient died comatose fourteen days after the first application of balsam of Peru. In the 1904 July number of the same journal Dr. A. Grossman recorded the case of a man aged 26 years. One-third of his body was anointed on two successive nights with Peru balsam vaseline, which was removed in a bath the next morning. Two days later the urine became brown; an acute nephritis had been set up. His temperature was 38·2° C. The urine contained 3 per cent. albumen, with blood and tube casts. In the Pharmacopoeia of the Royal Alexandra Hospital for Children, Brighton, there is an old formula (ung. styracis) with two-thirds its weight of styrax in it. I used this formula in three cases of scabies in children in whose urine no albumen was found before application, and asked our house-surgeon, Dr. Allan, to test the urine daily during its use. Albumen appeared in the urine of each case on the second day, when, of course, the treatment was stopped. The method of use by a single application to soldiers, presumably well-developed men, as described by Major Porter, is safe, but in children, small-bodied adults, and patients suffering from renal troubles, I do not think it should be used. The size of the patient must be considered in widespread applications to the skin of drugs absorbable through the epidermis. The smaller a body is the greater is its proportion of surface to its weight. This, of course, has an important, but sometimes overlooked, influence on the strength of an irritant in the patient's blood when it enters through the general skin surface.

LICKING THE FINGERS.

DR. T. GRAHAM SCOTT (Herne Hill) writes: I should like to point out the objectionable and disgusting practice on the part of waitresses at the various London teashops in invariably *licking* their fingers before picking up and sending you your bill, or a paper bag for packing cakes. Many have bad teeth, and if in addition there is sore throat, etc., it becomes a most dangerous act, as the girls will not hesitate to pick up cakes with their fingers without first washing them. It would certainly be a good plan to enforce the use of tongs when removing food.

ADVICE CURES.

I FEEL, doctor has had unpleasant experience of the economical method [illegible] take advantage of a casual meeting at the dinner table or elsewhere to importune him for counsel as to [illegible] Ailments. It is not always easy to get rid of these pests. Abernethy was as we know, equal to the occasion when a wealthy alderman, whom he met at a friend's house, recited his catalogue of woes ending up with the question "What do I do I take?" The reply was "Take advice." A French doctor recently rid himself in an equally ingenious manner of a patient who sought to impose on his good nature. He was accosted one afternoon on a crowded boulevard by a lady notorious for this practice. She at once began to tell of her afflictions, making particular complaint of pain in the hypogastric region. To which the doctor gravely replied, "My dear madam, I must examine you. Be good enough to take off your things!"

A COMPLICATED FAILURE.

THE following verdict is said to have been returned by a coroner's jury in Michigan which inquired into the case of a merchant who had died suddenly: "We, the jury, find from the physician's statement that the deceased came to his death from heart failure superinduced by business failure, which was caused by speculation failure, which was the result of failure to see far enough ahead."

AN OLD ELECTION BILL.

DR. J. MCNAMARA (Kensington, W.) sent us some time ago a copy of an old election bill. It appears that at the time of a contested election in Meath in 1826 Sir Mark Somerville sent orders to the proprietor of an hotel in Trim to board and lodge all that should vote for him. In due course he received a bill, from which we extract one or two items:

	£	s.	d.
To Tenting 16 Freehold above stairs for Sir Mark, at 5s. 3d. a head, is to me	2	12	0
To Eating 15 more below stairs, and 2 Priests after Supper, is to me	2	15	9
To six beds in one room and four in another, at 2 Guineas every Bed and not more than 4 in any Bed, at any time, cheap enough, God knows, is to me	22	15	0
For Breakfast on Tay in the morning for every one of them, and as many more of them as they brought in, as near as I can guess, is to me ...	4	12	0
To raw whiskey and punch, without talking of pipes and tobacco, as well as for breaking a pot above stairs, and other Glasses and delph for the first day and night, I am not very sure, but for the 8 days and a half of the Election, as little as I can call it, and to be very exact, is in all or thereabouts, as near as I can guess, and not to be 2 particular, is to me at least ...	79	15	9
For Shaving and cropping of the heads of 49 Freeholders for Sir Mark, at 13d. for every head of them, by my brother, who has a vote, is to me...	2	13	1
For a Womit & Nurse for poor Tom Kernan in the middle of the night, when he was not expected, is to me ten hogs. I don't talk of the piper, for keeping him sober as long as he was sober, is to me	0	10	0
The total amounting to	£110	18	7

It is surprising that after fifteen "freeholds" had been eaten, to say nothing of the two priests after supper, a "Womit and Nurse" were not required for many more besides poor Tom Kernan.

PREMATURE BIRTH OF TWINS.

DR A. CORDES (Geneva) writes with reference to Dr. H. S. Martyn's case, published in the BRITISH MEDICAL JOURNAL of March 16th, p. 623: I can quote the following interesting case: one of my nieces, a female twin, was born prematurely on August 15th, 1858; she weighed one pound and a quarter (625 grams), the other one weighed just double, both are still living.

A PUNISHMENT FITTED TO THE CRIME.

THE *New York Medical Journal* states that according to press reports, the House of Representatives of the State of Delaware, on January 22nd, passed a Bill by twenty-six votes to eight providing that a "surgical operation," presumably castration, should be performed on all men convicted of attempting to assault women. The operation must be performed within twenty days of the conviction, and will be in addition to the existing penalty of twenty years' imprisonment. The Bill is said to be the outcome of recent assaults on white women by negroes in Delaware.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Clinical Remarks

ON THE

VALUE OF BLOOD EXAMINATION.

By H. BATTY SHAW, M.D., F.R.C.P.,

ASSISTANT PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON; FELLOW OF UNIVERSITY COLLEGE, LONDON; AND LECTURER IN THERAPEUTICS, UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL.

THERE can be little doubt that a great deal of the progress of modern medicine is based upon an appeal to methods of investigation which, in comparison with older ones, have given to medicine a precision in diagnosis which was hitherto unknown. This tendency does not remain satisfied with past achievements, and every year the medical profession is asked to consider some new diagnostic test, so that the older members of the profession may well suffer from a metaphorical breathlessness in their efforts to keep pace with the newer revelations of the laboratory. The younger members of our profession are not without their disquietudes, for the same inevitable deduction is brought home forcibly to them that in order to equip themselves thoroughly for the duties before them, they must plan their careers on lines very different to those of their medical forefathers.

In no department of clinical investigation have such strides been made as in the examination of the corpuscular contents of the blood, and it is not out of place to consider from the point of view of the practitioner whether really, after all, the extra toil expended in such examinations is recompensed in any adequate way. Is it worth a practitioner's sacrifice of time and money to equip himself with the instruments and facility to carry out an ordinary blood examination? Such a question when looked at from the point of view of a busy practitioner, harassed by a thousand and one anxieties in his routine work, is a very cogent one. It may well be asked whether, after all, the number of diseases which can be positively diagnosed by an appeal to the microscopic examination of the blood is for an ordinary practitioner in this country not a very limited one. The answer is, that such cases *are* very limited, for amongst 1,117 medical cases, including men and women who were admitted to University College Hospital during one year, there were only 20 cases of chlorosis, secondary anaemia, leucocythaemia, lymphadenoma, pernicious anaemia, malaria, and splenic anaemia; that is, something less than 2 per cent. of the total of cases so ill as to require ward treatment could not be certainly diagnosed without the special appeal to the microscope. It is, however, obvious that this 2 per cent. does not represent all the cases in which the clinical pathologist was asked to report on the microscopic appearances of the corpuscular elements of the blood; no doubt numerous other cases of glandular enlargement, of enlargement of the spleen and liver, were examined with negative results, not to mention those cases occurring in our hospitals which are so full of enigmas as to require an appeal to special methods, if for no other purpose than one of exclusive diagnosis. There is no doubt, however, that it happens to many of us that, in the press of work, we make an appeal to the laboratory rather too often to please the minds of those fellow workers who are anxious to equip the student with that ready stock-in-trade of clinical facts which has come down to us as a rich inheritance from the physicians of the past—the men who have made "clinical medicine," and especially the form of it developed by British workers, a specially unique and valuable asset. The perusal of some modern textbooks designed for use in the clinical laboratory shows only too clearly that there is a risk, and a very great one, that our students and those qualified practitioners who, with worthy self-sacrifice, return to their hospitals for courses of post-graduate work after a few years in practice, are given work to do which can have no practical value. If any one doubts this statement let him peruse the chapters on chemical pathology of many quite recent guides to work in the clinical laboratory; let him peruse the stout volumes which concern themselves with the special examination of the blood, not of diseases such as have been enumerated above, but in numerous infections. To sift any real value from those husks of chemical and haematological exercises may well defy us and bring into undeserved disrepute methods of investigation which when properly directed are absolutely invaluable. No practitioner will ever complain of microscopic examination which will make diagnosis certain, and though unfortunately he may not receive much assistance in a positive sense in the direction of treatment, even when a case of leucocythaemia or pernicious anaemia has been diagnosed by these methods, he will at least be prevented from carrying out treatment based on a wrong conception of the malady as derived from ordinary clinical methods. It has been my experience to know of a case of unsuspected pernicious anaemia to be operated upon because of persistent vomiting and some abdominal pain which appeared to develop after a "run over" wagon accident twelve months previously, and of splenectomy being performed for the removal of an enlarged organ from a leucocythaemic patient who had had malaria some years previously.

A timely blood examination would have in both cases discovered important facts, and shown them to be cases of grave blood disease. It is a regrettable fact that both cases died not many hours after the operation. Still another case of an elderly subject was admitted for enlargement of glands of the neck suspected to be tuberculous or lymphadenomatous; a precautionary suggestion on the part of the surgeon that the blood should be examined saved a difficulty, for the case was readily established to be one of leucocythaemia, and death occurred quite unexpectedly within a few days of admission. Similar cases could be readily cited to show that it is absolutely necessary in certain cases of doubt that an appeal should be made to the microscope.

The value of positive findings can in no way be belittled by the frequent occurrence of negative ones; the latter will be small in proportion as the practitioner is well trained clinically, and is able to suspect just those cases which do not accurately correspond with examples of disease in which no gross corpuscular alteration of the blood is a feature.

One is well aware that such remarks as the above have no special value for those who have access to our hospitals and laboratories; to them, reference to the numerous contradictions met with in blood examinations would be more palatable; to the general practitioner, however, far removed from centres of research, there is the certainty that the simple assurance of the value of the blood examination with reference to corpuscular content will come with a large degree of welcome. To quote a few examples of the way in which one blood disease alone can assume clinical similitudes, I can call to mind cases of leucocythaemia which were, prior to blood examination, considered to be "septicaemia," "scurvy," "gangrenous stomatitis," "diphtheria," "lymphadenoma," "tuberculosis of the lungs," "appendicitis," "malaria," and "tuberculous peritonitis." To the general practitioner hesitating about the value of blood examination, such an array of wrong diagnoses will remove any vestiges of doubt, especially as they were met with in the very short experience of one who has, however, the advantage of an appeal to a clinical laboratory.

There remains another field of observation on the corpuscular contents of the blood, to which hopeful attention has been turned by many observers, and by none more intently than the surgeons. It has long been recognized that suppuration is closely associated with an increase in the leucocytic content of the blood, and an effort has been made to make use of this reaction as a means of diagnosing the existence of foci of suppuration which have failed to be detected by the simple methods of clinical investigation. Thus efforts have been made by this means to detect the presence of intracranial suppuration in association with otitis media, to determine the existence of empyemata, of suppurative osteitis farremoved from any ordinary clinical detection, and above all to discover suppuration and gangrene in appendicitis, a disease of which, even at the present day, it may well be said that special consideration is needed for each individual case; unfortunately even then there may be want of unanimity between the surgeon and physician, or, in the case of a general practitioner, between his surgical and medical instincts. Probably, however, there will be little difference of opinion on one point at least, and that is that, if suppuration has occurred and an abscess has

formed, the sooner evacuation can be secured the safer for the patient. It is a very unfortunate thing that observations on leucocytosis occurring in appendicular suppuration should not have yielded clear evidence on this point; suppuration may have occurred, and yet not have provoked leucocytosis; leucocytosis may have developed even to the extent of an increase of the total leucocytes to three times their number, and yet suppuration may be absent as a feature of the lesion affecting the appendix.

Opinions further differ very much upon the question of degree of leucocytosis, some observers hesitating to diagnose a suppurative process until the leucocytosis is very extreme. It is therefore not to be wondered at that there is much hesitation in attaching any value to this form of investigation as a means of deciding the advisability or not of immediate operation. Quite apart from this objection, there is another very practical one—namely, that it is not always possible to delay till even such a simple matter as a leucocyte count can be carried out; to the inexpert it is tedious, and to obtain the help of others may mean considerable trouble and delay—both drawbacks, the removal of which, however, if necessary for the welfare of the patient, should be possible, though the difficulty in the case of our hospitals of enthusing a house-physician or house-surgeon to carry out a blood examination at late hours of the night, which is a common time for the arrival of such cases in the casualty room, is a real one.

That we should not abandon blood examination in suspected suppuration is shown by a contribution in the *Annals of Surgery* for this year. Dr. C. L. Gibson does not lay such stress upon mere high grades of leucocytosis as being diagnostic of suppuration. Hyper-leucocytosis includes any increase over 10,000, but, as he points out, some other change than mere leucocytosis is necessary before it can be confidently stated that suppuration has occurred. Leucocytosis with a moderate increase of polymorphonuclear cells may mean merely a localized infection and limited absorption, whereas even moderate leucocytosis and a notable polymorphonuclear increase means one of two important conditions—(*a*) a severe lesion, or (*b*) a diminished resistance to absorption.

Dr. Gibson considers that inflammatory reactions which are well resisted produce such corpuscular alteration of the blood that the polymorphonuclear cells are increased approximately one degree (taking their normal percentage to be 75 of the total leucocytes of the blood) for every increase of 1,000 leucocytes above 10,000. In acute surgical cases in which—for example, say, in appendicitis—suppuration or gangrene has taken place, the increase of the polymorphonuclear cells is greater per 1,000 of the total leucocytic count than when resistance is well maintained. When such statements are made, the old question at once recurs as to whether the condition of suppuration and gangrene can exist in the absence of this interesting and peculiar increase in the relative proportion of the polymorphonuclear cells. Dr. Gibson's answer is that negative findings—that is, no relative increase of the polymorphonuclear cells or actual decrease of the proportion of those cells—show with but rare exceptions absence of severity. To the practitioner such information will come with welcome, for he probably has no more anxious experience than the management of cases of appendicitis; he can at present formulate no rule which will guide him to a timely operation. Again and again the ordinary signs of severe intoxication will be absent, and yet, unfortunately too often too late, the appendix is found to be gangrenous; or he may seek in vain for the signs of an abscess by ordinary means, and yet under the same sad circumstances as in gangrenous appendicitis the true state of affairs is found too late.

It is no part of my purpose to give a critical review of the progress or the reverse of blood examination. It is, on the other hand, a worthy object to attempt to bring forward a few features of this interesting study which, by reason of their foundation in careful scientific inquiry, may be confidently tried by the practitioners, who, groping hitherto in the dark by the help of older methods and older teaching, may find helpful assistance by the newer methods.

Probably all observers have been disappointed with many of the vaunted methods of cure of the comparatively trivial and yet ill understood condition chlorosis—a disease which, by a pure convention, is restricted to the female sex, though there is little doubt that a parallel condition occurs in boys.

Our failure to properly understand, I will not say the cause, for that is still wrapped in obscurity, but the reactions of the body in response to the cause or causes of this disorder is very largely, if not entirely, due to a slavish satisfaction and contentment with the readings of the haemoglobinometer. To this day the hackneyed theory of a poverty of the iron content of the red cells is repeated as an explanation of the anaemia, dropsy, and other well-known features of the disease. Because the haemoglobinometer gives readings far below the normal, and as a rule, though not invariably, shows a proportionately greater reduction than that of the red cells of the blood, we have been satisfied to give our patients "more iron during one week than the whole body contains under ordinary circumstances," and to hope for cure. It is common knowledge that cases of chlorosis will improve and recover without the use of iron in any form, and even if iron appears in some cases to effect a cure, the ordinary clinical examination of the blood, which has given us in the past a diagnostic indication and, on erroneous grounds, a pathological explanation of chlorosis, has been shown to be fallacious.

It is with the hope of dispelling this error that attention is called to an investigation which in importance ranks with the first observations that have been made on the changes of the blood in disease. I refer to the work by Dr. Haldane and Dr. J. Lorrain Smith, who have so clearly shown by their introduction of an original method of investigating the haemoglobin content of the blood and by the application of this method in the investigations of disease, that some statements which have come to be accepted as veritable corner stones of the fabric of haematology have been shown to be quite erroneous.

It is simple enough now to see why such grave errors should have been made in the past, because the teaching of Cohnheim has been accepted without question that plethora, by which is meant an increase of the volume of the blood circulating in the vessels of the body, is an impossibility. As Dr. Lorrain Smith says, this is the truth in health but in disease it is not so. It seems almost certain that here again medicine, as in other instances, has suffered by a too slavish subscription to the view that what is experimentally true for a healthy animal is true also in disease. No doubt in healthy animals the introduction into the circulation of an isotonic fluid produces no permanent increase in the total blood volume, for the kidneys, intestines, skin, and lungs soon effect an elimination from the circulation of the extra fluid, which, escaping from the blood vessels and filling the lymphatics, finds normal processes at work by which such fluid escapes by the ordinary channels.

The two workers above mentioned have taught us, several years ago now, how necessary it is for us to shake ourselves loose from the older conceptions, and that it must be realized that in pathology physiology has really gone astray, and in various forms of anaemia the normal blood content of the circulation is increased; in fact, the old-time use of the term "plethora" may be reintroduced, at any rate in one of its senses—namely, that in which it is meant that the fluid part of the blood, the plasma, is increased in amount. A sort of plasmic plethora has developed, for it is known, for example, that the specific gravity of the blood in chlorosis is unaltered, although the total volume of blood has increased. Dr. Lorrain Smith has shown that in chlorosis the total amount of the haemoglobin is normal in amount, even though the readings by the haemoglobinometer give a figure much below the normal. A given unit of blood removed from a patient suffering from chlorosis contains less haemoglobin than the same volume of blood removed from a healthy patient, but this is due to the fact that in this disease, for some unknown reason, the plasma is increased in quantity and there is less room in the particular volume of chlorotic blood for the number of corpuscles usually contained therein. The question at once occurs whether the unequal reduction of red corpuscles and of the haemoglobin, as estimated by various methods, does not show that Dr. Lorrain Smith's contention is wrong for example, the average percentage of the haemoglobin in 21 cases of chlorosis examined by Dr. Lorrain Smith and showing less than 50 per cent. of haemoglobin was 39.9 per cent., a much greater reduction than that of the red corpuscles per cubic

millimetre, the average of the same cases being 3,222,000. The answer, however, to this apparent anomaly is found in a further observation by Dr. Lorrain Smith—namely, that though in such cases the number of red corpuscles per cubic millimetre may be found to be as low as 3,222,000, the absolute number of red corpuscles is really much greater even by as much as three times or more; obviously, as the total amount of haemoglobin is normal in chlorosis each red corpuscle will contain less haemoglobin than normally is the case.

Such important work as that I have just alluded to has not received the recognition it deserves, and though it does not show us the ultimate cure of chlorosis, it does at least show that if the use of iron preparations in chlorosis does effect a cure there is no evidence that salts of iron aid in such cases "by the direct upbuilding of haemoglobin," and incidentally it offers no valid objection to the observation that chlorosis does not always respond to the use of iron or of arsenic, and will frequently yield to methods of a less pharmaceutical character.

Another investigation which in part concerns the blood, and which has been studied very widely abroad and to a much less extent in this country, is known as "cryoscopy." As is well known, this method consists of an application of the principles of the new physico-chemistry to the estimation of the freezing point not only of the blood but of the body fluids, and thereby to ascertain—as, for example, in suspected kidney disease—whether the organ is properly performing its duty of excretion of the various soluble contents of the urine, a comparison being made in bilateral renal disease of the blood and urine with that of the normal individual, or, in the case of unilateral disease, by a comparison of the freezing point of the patient's blood with the normal and of the segregated urines from each kidney with one another and with the normal urine. The Beckmann form of cryoscope is well known in the physical laboratory, and with practice can be used with accuracy. The one general objection to its clinical use is that a considerable amount of blood needs to be drawn from the patient investigated; moreover, the preparation of the freezing mixture is often a somewhat inconvenient drawback. This difficulty as well as others is greatly resolved by the method of cryoscopy introduced by Sir Almroth Wright,[1] in which the salt content of a fluid, for example, urine, is determined by a comparison of the haemolyzing power of such urine with the haemolyzing power of varying strengths of decinormal salt solution. So much is gained by the simplicity of this method over the older cryoscopic ones, that the drawback that the findings are all expressed in terms of sodium chloride is fully outweighed. Dr. O. C. Gruner[2] has contributed a valuable paper on the applicability of both cryoscopy and observation of electro-conductivity of the various body fluids in disease, and though he adopts a most cautious attitude as to the value of these special investigations, more especially in diagnosis, he yet thinks that from the point of view of prognosis and treatment there is room for hope. From the diagnostic point of view he thinks that cryoscopy will prove of service in determining the existence of renal disease as opposed to bladder disease, or the existence of renal disease in a case of heart disease. Contrary to the earlier teaching of Kümmel and Rumpel, he does not think that cryoscopy any more than any other means of diagnosis enables one to say a kidney must or must not be removed.

There remains one last subject to which reference must be made in any contribution dealing with the investigations which have been made on the blood, the more particularly as these investigations, though based upon the reaction of the body to all sources of infection in which the causative organism has been determined, are carried out by means on the one hand of the polymorphonuclear cells of the blood, and on the other by means of the serum of the blood. So important are these investigations, not only from the diagnostic point of view, but also from the therapeutic one, that it has already been surmised that the whole subject of medicine from the point of view of the study of infections, is experiencing a great impetus. Pathogenic bacteria have now for years been studied closely in their morphological, cultural, and pathogenic aspects; the hopeful expectations of sero-therapy have, except in two or three directions, notably in that of the diphtheria antitoxic serum, proved so disappointing that interest in bacteriolcgical problems was beginning to give place to an interest in chemical pathology. Sir Almroth Wright, by his initiative action in the study of the opsonic content of the blood in various infectious diseases, has brought before the profession at large matters which claim the closest attention. It is not my purpose to attempt any appreciation and criticism of these newer methods, for weighted as I am with a recently acquired debt of gratitude to Sir Almroth Wright and his associates for their unfailing courtesy and patience in expounding the principles upon which these methods are based, I have but a few isolated personal experiences to draw upon; but there remains an important duty, namely, to point out what is not grasped by all who hear or read of the investigation mentioned, namely, that Sir Almroth Wright's efforts have succeeded in detecting the specific action of organisms upon the body when once they have secured a footing, and in certain cases of doing so when ordinary clinical evidence of infection is indefinite, when cultural examinations of the blood are negative or when it is impossible to trace the organisms at work by the examination of pathological discharges owing to their absence. By such means it is possible to detect in certain cases a *transitory* infection without at any time the immediate cause of the infection being brought to view, and even by organisms which are generally believed "to come to stay." Such a possibility may well revolutionize the whole of medicine, at any rate that part of it which till recently has had to satisfy itself with the mere anatomical localization of the seat of this or that infection. The numerous papers published in this and other countries are enough in themselves to show how deeply this new aspect of applied bacteriology is interesting the profession. Mere diagnosis, however, is but part of the modern battle with infection, there remains the therapeutic side; the same observation in the opsonic content of the blood as used in diagnosis is also indispensable in following the therapeutic effects of inoculation with the dead causative organisms—vaccination, in other words, in accordance with the nomenclature adopted by Sir Almroth Wright.

One word remains to be said of another aspect of this study. As an onlooker one is obliged to confess that, far reaching as are sure to be the results which Sir Almroth Wright and his colleagues are bringing before our notice, it is incumbent upon the medical profession, and that part of it which is especially responsible for the education of the medical student and for the further education of the qualified practitioner willing to modernize his knowledge, to see to it that our pathological laboratories are made into living institutions, not merely for the instruction in the naked-eye and microscopic appearances of the derelict organs of the body and of the organisms causing such change, but that the bacteriological departments should be furnished and endowed with an eye to the possibilities of their conversion to therapeutic purposes. No doubt much more remains to be done to complete the details of our knowledge of the opsonic reaction, and particularly of that embodying the beneficent effects of vaccination. This, however, is impossible unless our hospital managers, following the example already set in two at least of our great hospitals, will prepare themselves for the endowment, in the first place, of expert bacteriologists for our hospitals, and, in the second, of contingents of assistants prepared to carry out the exacting details of a method of investigation which will suffer if not left in the hands of those thoroughly versed in the important principles underlying them. It is needless to say that the bacteriological laboratory under the new circumstances assumes an economic importance for our hospitals which threatens to cast into the shade the old-world pretensions of their dispensaries and the empiric value of their hydropathic and electro-therapeutic departments.

References.
[1] *Lancet*, October 21st, 1905. [2] *Medical Chronicle*, September, 1906, p. 353.

The award list of the International Jury at the Milan Exhibition, which has now been issued, contains the names of Mr. Walter Dowson, M.A., M.B.Camb., and of his colleague, Dr. Barger. They seem to have been very successful, obtaining gold medals themselves and winning the Grand Prix with their exhibits illustrative of the work performed by them in the conduct of the Burroughs-Wellcome Physiological Research Laboratory.

Remarks
ON
MANIACAL CHOREA.*

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Chorea is one of the commonest of all nervous affections met with in hospital, as well as in private practice, and is very often associated with rheumatism. It presents varying degrees of severity, from the mildest form, consisting of awkwardness of movement and facial grimaces, to incessant, irregular movements and contortions, with such jerking and throwing about of the limbs, that the patient must be confined to bed, and watched to prevent her from injuring herself.

In these latter cases (chorea gravis) some delirium, with delusions, is not uncommon. But there is yet a still more grave form of chorea, in which mania may supervene and so completely overshadow the motor disturbances that the true nature of the disease may be overlooked and the patient sent to an asylum.

So wide is the difference in the symptoms that it seems hard to realize that it is really not another and a new disease, but only an exaggerated variety of the chorea simplex of Sydenham.

The following is an example of maniacal chorea, or chorea insaniens":

Case. (From notes taken by Mr. Thos. Graham, Resident Pupil.) Annie G., aged 17 years, unmarried, was admitted to Sir Patrick Dun's Hospital on June 14th, 1906, suffering from general choreiform movements, particularly of the left arm and hand. Six years ago she was treated in another hospital for enlarged cervical glands. She had enjoyed good health ever since up to a fortnight ago, when she was treated for rheumatic pains in the legs; two days before admission these pains left her, and then the choreic movements became manifest. The patient herself said she had a "fright," but could give no explanation of its nature, and the accuracy of her statement was questioned by her sister and mother with whom she lived. She complained of trouble in her head, and said her mind was getting affected. The motor disturbance was not confined to any part of the body—the trunk, head, arms and legs participating, but the left side was most affected; the eyes rolled about, and she continually uttered a sort of sob, and had delay and difficulty in answering questions, which she did in a sudden, jerky fashion, but with intelligence. The deep reflexes were not increased. The pulse was about 80, and of low tension; temperature 98°. A systolic murmur was distinctly audible in the mitral area. The skin over the lumbar vertebræ was congested, but not broken, and the toes were of a dusky blue colour. A mixture of ammon. brom. and liq. arsenicalis was ordered; and chloral 15 grains every at bedtime. She did not sleep, but became so noisy and intractable with shouting and screaming that she was removed into a ward by herself, and our house surgeon considered it to be a case of acute mania and suggested her removal to the Richmond Lunatic Asylum. The choreic movements next day were very violent, and in a day or two after admission, in spite of all efforts, she had severe bruises on her elbows, rubbed her heels sore against the bed clothes, and with the heel of one foot abraded the skin of the opposite instep. Her back was also stripped over the sacrum. She could hardly speak, but at times would become calm for a few minutes, and could be fed with soft, liquid food. She was given ¼ grain hyoscine hydrobrom. subcutaneously for a few hours, but a second dose was declined. She took the mixture and, on procuring sleep, she got about three hours' sleep. She was quite unrestrained at times striking out, shouting and screaming, or sinking into deep moans or sounds refusing food at times, and then taking it readily. She passed her motions and water unconsciously in the bed, owing to the extreme violence of the movements, the use of a bed pan was out of the question. The urine examined on one occasion was found to be acid, specific gravity 1.015 and free from albumen and sugar. It contained calcium oxalate crystals. During the night she was restrained by chloral etc. she was perfectly motionless, and the breathing quiet. The temperature, which was normal on admission, rose to 101° on the evening of the 15th, the fourth day, and fell again to 98° next morning. It remained normal till the evening of the 18th, when it shot up to 103.4°. The pulse, when possible to count it, was usually about 140, but on the evening of the 18th rose to 164. The murmur in the heart was audible all the time, and was pretty rough. The heart beat very violently on the least sign of great noise or excitement. It became quite irritable.

During the 19th and 20th the condition continued to present the same state—periods of calm, in which she would say some words intelligently, such as "No, thank you, sir," alternated with periods of wild activity in which she had to be held down in the bed, and in which she flung her legs and arms about in the strangest fashion. Owing to the involuntary biting by her teeth, and the rubbing of them by her hands, her lips were sore and bleeding. She was indeed a pitiable object. The mental disturbance was maniacal in type—at one time with delusions, and again with hallucinations, and lastly one of semi-coma.

In the afternoon of the 21st she became particularly violent, after a rather calmer forenoon, and remained in a continuous state of turbulent activity till about 9 30 p.m., when I went to see her. She could not be restrained by six attendants from knocking herself about, and all the wadding and padding and bandages which had been put around her limbs to prevent her injuring herself were rubbed or torn loose. A strait-waistcoat was then put on and her legs wrapped round in a sheet; although these means prevented her springing out of bed and injuring her limbs, she kept up, nevertheless, an incessant wriggling and movement, while she was bathed in perspiration. She had had chloral, a hypodermic of morphine, hyoscine, but the only remedy that succeeded in calming her was chloroform inhalation. Under it she became quite quiet, and the various appliances to keep her in bed were loosened so that she was not oppressed in any way that night. She slept quietly, and took nourishment fairly well at times. Rectal feeding could not be managed. Next day she looked, however, very ill. The heart was beating excitedly (the mitral systolic murmur being present), the pulse was 140, very compressible, respiration 44, and temperature, which had risen to 103 4° at 7 p.m. the previous evening, was 102.4° at 7 a.m., 101.8° at 10 a.m., and 101.4° at 2 p.m. The motor disturbance was much less, and she was quiet, but in a semi-comatose condition. Loss of flesh had been noticeable for some days, but now that the limbs were quiet they were seen to be extremely emaciated. This was the ninth day of her sojourn in hospital. At 4 p.m. she suddenly became unconscious, her respirations very laboured, and her extremities and face cyanosed; $\frac{1}{100}$ grain of digitalin and $\frac{1}{30}$ grain of strychnine were immediately injected hypodermically, but without avail, and she died in five minutes.

Post-mortem examination was made on June 24th. Dr. O'Sullivan, F.T.C.D., Pathologist to the Hospital and Lecturer on Pathology in Trinity College, Dublin, has kindly supplied me with the following report:

The longitudinal sinus contained a small quantity of mixed clot. The vessels of the cortex of the brain were engorged. A very small amount of fluid was found in the lateral ventricles. The brain presented no abnormal appearances to the naked eye. It was fixed in formalin and pieces were subsequently removed from various parts and examined microscopically. The only portion which presented any abnormal appearance was in the Rolandic area. Here some of the small vessels in the cortex were thrombosed. In others collections of cells with oval nuclei lay heaped up in the perivascular lymphatic spaces, and there were clumps of what appeared to be broken up nuclear material in these spaces. The spinal cord was also examined and presented nothing abnormal. The cerebro-spinal fluid was examined bacteriologically in the media recommended by Wassermann for the cultivation of the coccus found by him in rheumatic cases, but the culture remained sterile and no micro-organisms were found in the meninges on section. The other organs of the body showed no abnormality, with the exception of the heart, which was in a very atrophic condition, and some calcified tuberculous glands in the mesentery and in the root of the lung.

The prominent features presented by this case were Rheumatic pains in the legs for a fortnight, upon which chorea supervened. A mitral systolic murmur, audible on admission, of varying loudness, and lasting up to the ninth day the day of her death. The pulse quiet and regular, about 80 each day up to the last three days, when it rose to 120, 150, 140. The temperature normal or subnormal until the day before death, when it touched 103.4°. The choreic movements were slight for about forty eight hours, and then became so violent that two special nurses were required to watch her and prevent her from falling out of bed and from striking her limbs against parts of the bed. (The idea of treating her by placing her mattress on the floor, with pillows around, was considered, but discarded in favour of the bed with nurses at either side.)

The psychical phenomena were prominent, out of all proportion, and at first quite overshadowed the motorial. They differed, however, by the absence of incoherent speech and wild garrulity, from the forms one is accustomed to associate with the acute delirium of fever or acute mania.

Another point worth noting was the occasional, though temporary, mental calm, which my visits, once or twice a day up to the last three days of her life, seemed to produce. At those times she would cease shouting, the movements became quieter, she could always understand

* Read before the Section of Medicine at the Dublin Meeting of the British Medical Association.

what was said, and sometimes she succeeded in speaking and making intelligent replies, such as "Yes, sir," "No, sir," and "Thank you, sir"

Treatment by medicines totally failed to have any effect on the course of this terrible disease, and the only help it gave was by securing some hours of sleep, and muscular rest during sleep. The drug which seemed most useful for that purpose was chloral. On two days $\frac{1}{200}$ grain hyoscine hydrobrom. (once repeated) was successful in calming the violence of the delirium, but it failed to have any effect the last two days of her life; while morphine hypodermically was practically useless.

The occurrence of a systolic murmur at the mitral area, which was considered on admission to be probably due to rheumatic endocarditis of some two or three weeks' duration, must now, in the light of the autopsy, be judged to have been dynamic, and due to simple and acute ventricular dilatation. It is not to be explained on the grounds generally accepted—namely, anaemia and choreic cardiac excitement.

The foregoing case is an example of one of the rarest diseases to be met with in the practice of medicine. It is one of the most grave of the varieties of chorea, whether regard be paid to the extreme violence of the muscular movements, the psychical disturbance, or its acute course, usually terminating in death. "Truly a terrible disease is maniacal chorea" (Osler).

In evidence that this variety of chorea is very uncommon I would point to the very scant literature on the subject, the paucity of published clinical records, and the very short description it receives in standard works of reference on medicine and on insanity.

Two of the most recent works I have been able to consult are *The Textbook of Psychiatry*, by Bianchi and MacDonald, 1906; and *Clinical Psychiatry*, by Kraepelin and Johnston, 1904. No reference to "maniacal chorea" appears in the index of either, while under the title of "Choreic insanity" a very different condition is described.

Bianchi writes: "A choreic subject is always mentally affected, the character of the child or young adult is changed; he becomes irritable and fearful, his sentiments are altered, his power of attention is defective, and he may suffer from hallucinations."

Kraepelin writes: "Senselessness and bewilderment, with choreic movements, occasional hallucination, a morbidly cheerful mood and great restlessness, with rapid physical sinking, are particularly diagnostic of choreic insanity."

From these excerpts it is evident that these authors never met with a case of maniacal chorea, and it is a matter of regret, if not of negligent omission (to say the least of it), that they should not have made themselves familiar with published cases of this disease in the British Isles.

The same adverse comment is applicable to the majority of books I consulted, be they written by specialists in mental and nervous disease, or textbooks on the practice of medicine. Thus Mercier, Bevan Lewis, Hack Tuke, Ziemssen, *Quain's Dictionary*, Reynolds's *System of Medicine*, Strümpell, and many other textbooks in medicine, give no description of any such marked psychical complication as was portrayed by my case. In some, such as Ross and Allchin, it is said "Chorea in adults is sometimes followed by acute mania." Gowers makes the short comment: "The mental state may not appear till the disease be well developed, or it may precede the chorea. The latter may be slight or quickly cease, while the mental disturbance continues in an intense form. There are often delusions, sometimes wild, violent excitement without the garrulity common to ordinary mania. This excitement may be followed by apathy or dullness." However, Hilton Fagge, Clifford Allbutt, Roberts, and Osler are notable exceptions, and they attest to the reality of the extent and the gravity of maniacal chorea; while Clouston (*Mental Diseases*) gives in detail a typical case of rheumatic chorea with acute maniacal insanity.

A fatal termination of chorea in children is practically unknown, but it may occasionally occur between the ages of 15 and 25.

Dr. Handford[1] in thirteen years (1875-88) had 154 cases of chorea, with 4 deaths—that is, 2.6 per cent. This number tallies very closely with the 2 per cent. of the collective investigation report of the British Medical Association[2] (439 cases, with 9 deaths).

The association of pregnancy or parturition with chorea gravis is more than an accidental coincidence, and such cases, more than others, add to the death roll in chorea. But, perhaps, of all the grave varieties maniacal chorea (chorea insaniens) is the gravest as well as the most fatal. Of 23 cases collected from various sources by William Gay, M.D.,[3] complete recovery took place in 10, death occurred in 8, 1 was followed by permanent weakmindedness, and 4 were lost sight of, having been sent to asylums.

The duration of these cases may be very short; death occurred in my case on the ninth day; in some cases it happens as early as the sixth, or even the second day, although generally not until after some weeks. The mode of death seems to be due to the exhaustion resulting from the wild muscular movements, inanition, and want of sleep and rest. Many cases end in unconsciousness and coma, although the intellect may remain clear almost to the last—a fact first noticed by Wilks, and confirmed by subsequent observers.

Dr. Tuckwell[4] had his attention first called in 1861 to maniacal chorea, in a woman aged 24, by Professor Trousseau. He saw a similar case in Vienna in 1862, in a pregnant woman, aged 20; and he describes a case of a boy, aged 17, under his own care—"probably embolic"—in 1867. All three had furious choreic movements, maniacal delirium set in early, and death ensued within ten days of the onset, after semicoma, with partial or complete cessation of the movements. In each of these cases a mitral systolic murmur had been audible during some part of the illness, and a fringe of beads, or bright warty vegetations, the size of a pin's head, was found at the mitral valve. Dr. Tuckwell analyses 34 fatal cases, recorded up to 1867, to which an autopsy was attached. In 4 the heart was healthy, in 5 no mention was made of its condition, and of the remaining 25, 20 had vegetations on the valves. He attributes the fatal results to the vegetations being set free and becoming embolic in the brain, and probably also in the cord, and thus favours the theory attributed to Kirke and supported by Hughlings Jackson and Sir William Broadbent.

On the other hand, as negativing the embolic theory, and as bearing a close resemblance to the case of Annie O., I would refer to two fatal cases of acute chorea, with insanity, reported by Dr. Evan Powell,[5] Medical Superintendent, Nottingham Borough Asylum, in which there was a complete absence of valvular disease or cerebral embolism. The first was a male, aged 19, who had been cured of a second attack of rheumatism ten days before the chorea developed. In three days' time acute mania set in, with delusions and hallucinations and great violence, and death ensued by coma after fifteen days, during which there were lulls in the tempest, and in these quiet intervals the mind was quite clear to all that had occurred. A mitral murmur was present.

The second case was a female, aged 20, without any history of rheumatism or heart disease. After fourteen days of chorea, insanity and hallucinations of hearing and sight set in, and it took four people to hold her in bed. She was sent to the asylum, and died in a week, but she was quite conscious, and her mind was clear up to the last two days.

The autopsy in each case was made by H. Hanford, M.D.,[6] and the only abnormal feature present was hyperaemia of the brain. After hardening he found (*a*) thrombosed vessels in the anterior cornua of the cord; (*b*) haemorrhages into the lymph sheaths; (*c*) haemorrhages into the anterior horns, causing destruction of the nerve tissue; (*d*) haemorrhages into the deep transverse fibres of the pons. He concludes that the "numerous haemorrhages from small vessels as well as capillaries, the thromboses, and general dilatation of vessels, afford evidence of a very unusual degree of vascular engorgement of the nervous centres during life."

These cases, while they by no means conclusively prove that the pathological changes discovered in the nervous centres were the cause of the psychical disturbances, negative the theory of emboli, as there was an absence of mitral valve disease in either.

Still more recently further evidence against the embolic theory has been adduced by Drs. Poynton and Gordon Holmes in their admirable contribution to the pathology

of chorea (*Lancet*, 1906). They found, on microscopical examination of three cases of fatal chorea, "very little evidence of embolism," although great hyperaemia was present, with thrombosed vessels in all parts of the brain.

My case is practically another of the same type, as there was neither mitral valve disease nor cerebral embolism. From what I have stated, the embolic theory as causative of chorea—be it chorea major, chorea minor (Sydenham's chorea), or the maniacal type illustrated by my case—can be no longer tenable. Rather must we recognize the difference in the severity of the choreic manifestations to be due to the presence of a toxin, and to the virulence or mildness of its action on the nerve elements of the cerebral cortex and of the lower nervous centres. In direct proportion as the psychical and the higher centres of ideation and volition or the motor centres are those most invaded, so the symptoms each case may present will be either those of mania and other disordered mental states, or those of inco-ordinate muscular contractions and movements of the body and the limbs.

The intimate association of chorea and rheumatism has been long recognized, and has of late years been more and more insisted on, and the consensus of opinion of many *clinical* observers is in favour of there being one common underlying cause for each of them. It is a well-recognized fact that the first indication of rheumatic fever may be chorea, and that myocarditis, endocarditis, or pericarditis may equally occur in either.

Sir Dyce Duckworth,[7] in his paper read before the Medical Congress at Lisbon last June, emphasized the view that chorea should be considered as "cerebral rheumatism." He has for many years consistently maintained the intimate relationship between the two diseases, and clinical experience tends, with increased authority every year, to confirm the truth of that relationship.

In 1892, Clouston,[8] writing upon the varieties of insanity, under the heading of "Rheumatic Insanity," describes the typical case of rheumatic chorea with acute maniacal insanity to which reference has been made above, and asks the question, "Was the rheumatism the true cause of the mental symptoms of the chorea or of both?" and asserts his view, from a *clinical* standpoint, that the poison of rheumatism was the true cause of the insanity.

It may be interesting to note, *en passant*, that this view is by no means a new one. It simply reasserts what was propounded in 1850 by M. Germain Sée.[9] His expression is, "that chorea was due to the rheumatic diathesis acting on the brain and spinal cord." Trousseau,[10] who quotes Sée's view, and acknowledges its probability, did his best to refute it and to prove that chorea was a purely functional derangement, similar to hydrophobia and tetanus. The ground upon which he based his theory was that no gross evidences of inflammation of the brain or its membranes are present in fatal cases of any of these diseases.

It is curious to see that now, in these latter days, the older views based on clinical observation have again gained ground, and that the keen and exhaustive researches of scientific minds, combined with highly skilled bacteriological dexterity and acumen, have shown that the pathological conditions of these so-called functional nervous diseases are really due to microbic infection and toxic influences. The first ray of light which illumined this difficult subject, after which so many thoughtful physicians were groping in the dark and feeling after the truth if possibly they might find it, was the discovery by Wassermann, in 1903, of a diplococcus which he had isolated from the cerebro-spinal fluid and inflammatory exudations of a patient who had died of acute rheumatism and chorea. With this diplococcus he had experimentally inoculated rabbits and produced in them polyarthritis.

Drs. Poynton and Paine, in 1904, confirmed the observations of Wassermann, and found the diplococcus in a case of chorea. In 1905 they reported another case of fatal chorea, in which they demonstrated its presence, isolating the diplococcus from the cerebro-spinal fluid, they had produced by inoculation arthritis, endocarditis, and pericarditis in a rabbit.

In a valuable paper[11] Dr. Beattie accepts the theory of a bacterial origin of rheumatic fever, and deals with the objections raised against it, while he calls the organism *Micrococcus rheumaticus*.

It is not my intention to follow further this most interesting branch of the subject, but would refer to the lucid and convincing contribution on the pathology of chorea which Dr. F. J. Poynton and Dr. Gordon M. Holmes published in the *Lancet*, October 13th, 1906, and from which I have already freely quoted above. These observers found the diplococcus in the brain and its membranes, and also in the diseased valves of the heart, in 3 fatal cases of chorea and rheumatism, and they assume that the presence of micro-organisms goes far to prove that these inflammatory pathological changes are due to a toxin derived from these micro-organisms, and that chorea is caused by the action of bacterial poisons on the brain.

"The conclusions they come to, in their research on this subject, in the first place support the clinical evidence that chorea is a manifestation of acute rheumatism; and secondly, that the demonstration of diplococci in each of their three cases is a striking confirmation of the assertion that the *Diplococcus rheumaticus* is the infective agent in acute rheumatism."

My case does not exactly add support to the views just stated, in so far as no micro-organism was discovered by Dr. O'Sullivan in his careful bacteriological examination of the brain and spinal cord. I have, however, felt it my duty to record it, as a contribution to the literature and clinical history of this most interesting subject, since it is only by the accumulated records of cases of chorea, in which a full and reliable pathological report is made by capable bacteriologists, that a sure foundation can be laid and a true pathology erected.

References.

[1] *Brain*, vol. xii., p. 129. [2] British Medical Journal, February, 1897. [3] *Brain*, vol. ii, p. 181. [4] *Med. Chir. Trans.*, vol. xl. 1857, p. 306. [5] *Brain*, vol. xii. p. 187. [6] Ibid., vol. xii. p. 178. [7] British Medical Journal, p. 1484, 1906. [8] *Mental Diseases*, p. 460, 3rd edit., 1892. [9] *De la Chorée, Mém. de l'Acad. de Méd.*, Tome xv, 1850 (quoted by Trousseau). [10] *Clinique Médicale*, 1868, vol. ii, p. 786. [11] British Medical Journal, December, 1906.

ON THE VALUE OF AN ABNORMAL RISE IN THE AVERAGE LEVEL OF THE DIAPHRAGM AS A GUIDE TO THE VOLUME OF THE BLOOD IN ACTIVE CIRCULATION.*

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The object of this paper is to bring forward clinical evidence in favour of the following propositions:

1. When, from any cause, the total volume of the blood in circulation is materially diminished, the total bulk of the intrathoracic viscera is correspondingly diminished by the relative emptiness of the thoracic blood vessels, especially those of the lungs. This diminution in the bulk of the intrathoracic contents shows itself by an elevation of the diaphragm, which has to be maintained at a higher average level than the normal in order to adjust the cubic content of the thorax to the altered volume of its contained viscera.

2. That such a rise of the diaphragm may frequently be detected clinically, and, when present, is of value in diagnosis, and affords important indication for treatment.

Normal Position of the Diaphragm.

The position of the diaphragm can be recognized clinically by ascertaining the upper level of the gastric resonance in the left nipple line, or of the upper border of the liver in the right nipple line. In both cases percussion is best done with the patient recumbent, and in the case of the gastric resonance the recumbent posture is essential to accuracy, because in the erect posture the gaseous contents of the stomach, if scanty, may rise up into the arch of the diaphragm, and the dullness of the liquid contents of the stomach be continuous with the dullness of the left lobe of the liver and the heart.

Of the two methods named, the percussion of the gastric resonance is easier and more reliable for the following reasons:

1. There is much variation in the upper level of the liver dullness of healthy individuals, dependent upon

* A paper read before the Birmingham Branch of the British Medical Association.

the degree to which the lungs have been expanded by exercise or athletics, etc.

2. The respiratory movements of the lower edge of the lung render exact accuracy of record as to its level impossible.

3. The level of the diaphragm on the right side is more apt to be interfered with by ill-defined pathological conditions of the lung than is the case with the level of the central tendon which underlies the heart.

Gastric Resonance.

For the study of the gastric resonance it is necessary, as before mentioned, for the subject to be lying on his back, so that any gas in the stomach may come to the front and give a contrast with the dullness of the left lobe of the liver and the heart, which lie above it.

The determination of the area over which the gastric resonance is obtainable is greatly assisted by listening to the area over which "reverberation" can be heard when some continuous sound is communicated to the air in the stomach. This is simply done by means of a short rough bone rod, which is pressed over the stomach area and scratched regularly with the finger-nail. The echo, similar to the bell sound in pneumothorax, is clearly heard over the whole gastric area, but is sharply limited to it.

As a rule the results obtained by percussion and by noting the area of gastric reverberation coincide very closely with each other.

By these methods the normal level of the upper limit of the gastric resonance is found to be in the sixth left interspace. It sometimes in health reaches the upper border of the sixth rib, but, as a rule, when it reaches the fifth interspace it must be considered pathological. Only once or twice have I found well-marked gastric resonance in the fifth interspace in a person who was apparently in perfect health, and under circumstances which pointed to its being the normal level for the individual concerned.

Upper Level of the Liver Dullness.

Although the percussion of the upper border of the liver is of less value than that of the stomach, where exact observations are desired upon the level of the diaphragm, it nevertheless gives us important information as to the condition of the diaphragm, for its elevation above the normal level may be very great when the diaphragm is high. Thus in one patient (Case XI) there was distinct relative liver dullness up to the middle of the third rib in the right nipple line.

The percussion of the upper border of the liver dullness is also of considerable value, because it often gives an indication as to the amount of arching of the diaphragm present, if the distance between the level of the absolute dullness and that of the relative liver dullness be carefully observed, and the changes during respiration noted. Thus a wide area of relative dullness suggests an abnormally arched diaphragm, and a sudden change from full lung resonance to absolute liver dullness suggests a flatter diaphragm, as in emphysema.

This abnormal wideness of the area of relative dullness indicating a highly-arched diaphragm is well shown in some of the following diagrams—namely, Figs. 6, 10, 19.

Observation of the Lower Edge of the Liver.

The careful mapping out of the lower edge of the liver dullness is also of importance in the study of the level of the diaphragm, because as the diaphragm rises, the rise of the lower border of the liver dullness is often more marked than the upper. It is not uncommon to find in such cases a total disappearance of the absolute dullness of the liver, internal to the right nipple line, accompanied by a marked rise in the lower edge of the liver, sometimes to the extent of 2 in. or more above the costal arch. This change is well shown in Figs. 5, 10, 17, 19. It seems as if the liver slips back into the hollow of the diaphragm, and its lower anterior edge is thus drawn up and back so much that it barely comes in contact with the ribs anteriorly at all; and the intestinal or gastric resonance meets the lung

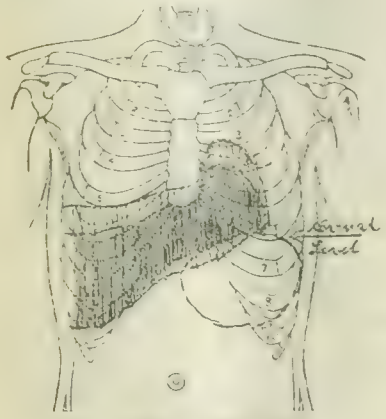


Fig. 1.—Case I: Normal chest.

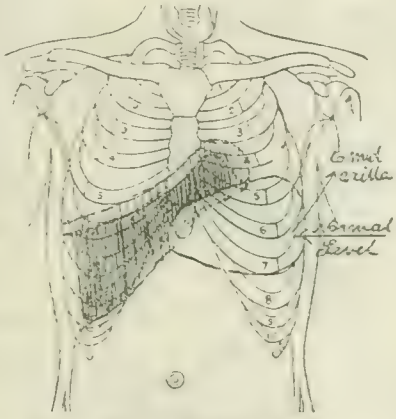


Fig. 2.—Case II: Collapse of lung. Diaphragm high on left side only.

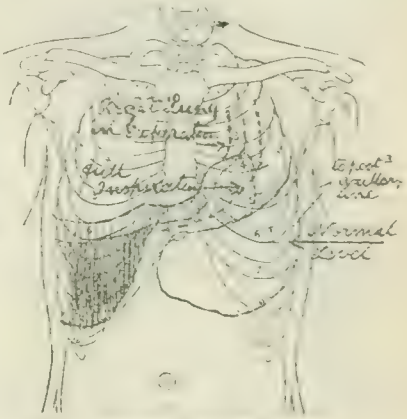


Fig. 3.—Case III: Collapse of lung. Very high left diaphragm.

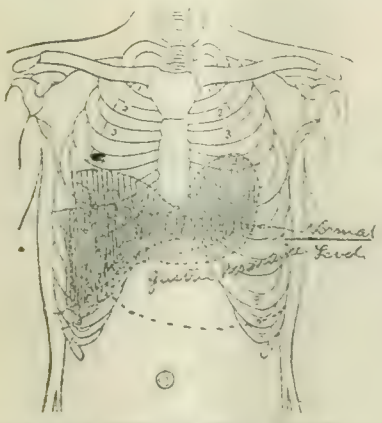


Fig. 4.—Case IV: Gastric ulcer. March 7th. Before limitation of food.

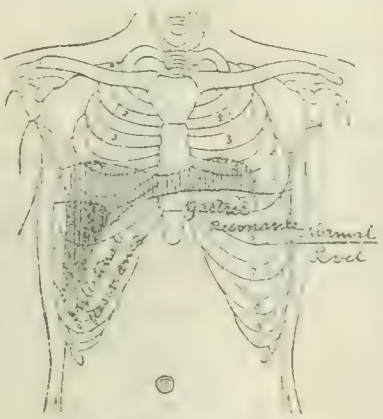


Fig. 5.—Case IV: March 17th. After 6 days of rectal feeding.

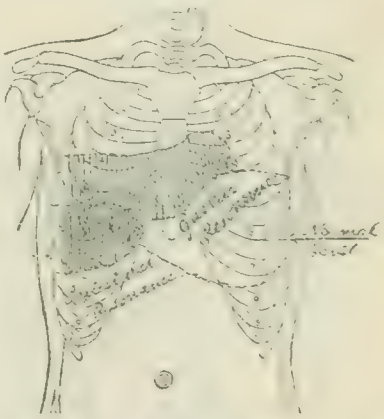


Fig. 6.—Case IV: March 24th. More food given; heart larger.

resonance over this area. This strange change in the shape of the absolute dullness of the liver will sometimes develop in a week or so, and then as speedily give way to the normal relationship of the liver dullness to the costal arch, when the conditions causing the ascent of the diaphragm subside (Case IV).

SCOPE OF SUBJECT.

Though this paper does not deal with cases in which the level of the diaphragm is altered by some obvious physical cause, such as the pressure of distended abdominal viscera, or the traction of a collapsed or fibrosed lung, nevertheless, it may be well to say a few words as to the changes which take place when the left lung shrinks from healing tuberculosis, or remains unexpanded after compression by extensive pleurisy. In these cases we know that the diaphragm is drawn up by the lessened size of the left lung, and as the changes which take place in the level of the gastric resonance are precisely those which occur in the cases dealt with in this paper this may be taken as evidence in favour of the points raised.

I give the notes and figures of two such cases, one moderate and one extreme.

CASE III (EXTREME ELEVATION).

There was complete non-expansion of the left lung (Fig. 3). The right lung crossed over, and its left border could be detected just internal to the left nipple line (2¼ in. from the sternal edge) on expiration, and during full inspiration it crossed to beyond the nipple line (more than 4 in. from the left edge of the sternum) in the second, third, and fourth interspaces. This shows the extreme shrinkage of the left lung. The diaphragm also was correspondingly high, as judged by the level of the gastric resonance.

The expansion of the right lung pushing down the heart prevented any great rise of the diaphragm in the nipple line, and it was only at the fifth interspace; but in the axilla there was full gastric resonance to the posterior axillary line in the sixth space, 8 in. from the middle line. Its lower border was in the eighth space.

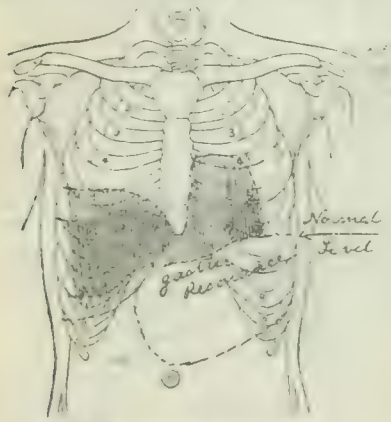


Fig. 7.—Case IV: March 18th. Food increased.

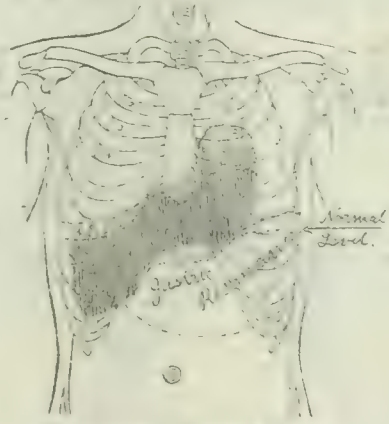


Fig. 8.—Case IV: March 28th. Transient cardiac dilatation.

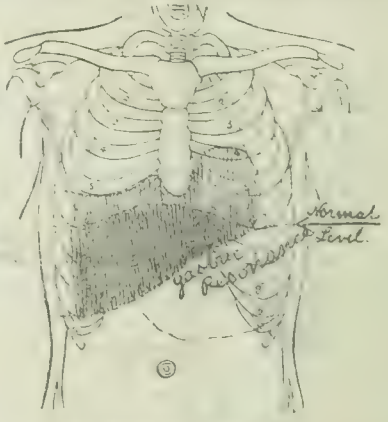


Fig. 9.—Case IV: March 30th. Practically normal.

CASE II (MODERATE ELEVATION).

The heart is drawn up a little to the left by the rise of the diaphragm, but there is a central area of the gastric resonance (Fig. 2) not only in the left middle line, but [illegible] in the axilla as far back as to this case the resonance reached the fourth interspace in the nipple line and extended nearly to the posterior axillary line, 4 in. from the sternum. In the space of resonance, and in the sixth space there was full gastric resonance and resonance also to the posterior axillary line, 6 in. from the sternum, the lower border was at the eighth rib.

[illegible] depended on the rapid absorption of [illegible] and in seven days the upper border of the [illegible] had descended to the normal level, and there remained no [illegible] to the posterior axillary line.

HIGH DIAPHRAGM IN ENTERIC FEVER.

Although, in common with all those who carefully percuss the cardiac dullness, I have long been conscious that there is occasionally abnormal resonance below the cardiac area, I did not give the subject special attention till the following case brought it forcibly under my notice:

A man suffering from an extremely severe attack of enteric fever presented very great asthenia but no complications of any sort until the end of the third week. He then became decidedly feebler, although the temperature was not specially high, and the condition of the abdomen was satisfactory. He had had no diarrhœa. This asthenia was [illegible] of the virulence of the poison he was absorbing, but as his condition became worse it was evident that some other cause was at work.

The abdomen, from being moderately full became morbidly retracted, and his face and limbs gave the appearance of extreme emaciation. The rapid change in his appearance was probably due to lack of liquids in the body. He was taking three pints of milk daily, besides some water. I tried the effect of a [illegible] saline infusion of half a pint or more; it was rapidly removed, but [illegible] by the kidneys, and the patient's condition was in no way improved. There was a peculiar respiratory type of dyspnœa, which I have now learned to associate with this condition and also a decided



Fig. 10.—Case [illegible]. Axilla [illegible]



Fig. 11.—Case [illegible]. Much [illegible], diaphragm lower.

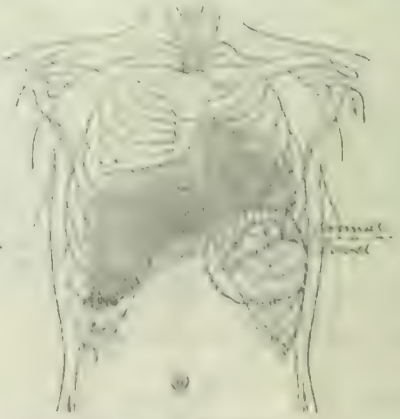


Fig. 1.—Case V. February 14th. Diaphragm lower.

elevation of the diaphragm, the gastric resonance reaching well into the fifth space, and the liver being decidedly above its usual level in the right nipple line. He died within two or three days of these symptoms becoming noticeable.

Post mortem the diaphragm was at the third rib on the left and at the fourth rib on the right side; the heart was small,

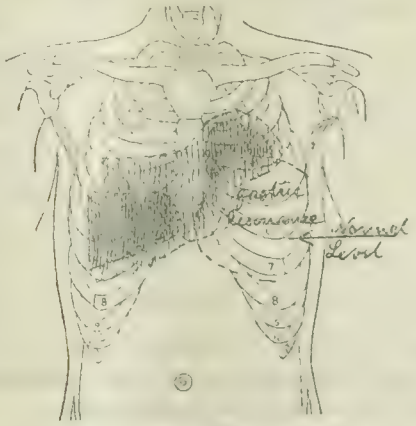


Fig. 13. Case VI: Haematemesis.

its lower border at the fourth interspace, and all the organs dry and bloodless.

In thinking over the cause of death, I was forced to the conclusion that death was practically due to starvation, owing to the interference with intestinal absorption, which resulted from inflammatory changes in the mesenteric lymphatics, and my explanation of the case was as follows:

This defective absorption from the intestines, coupled with the tissue waste due to the fever, would presumably in course of time lessen the proteids in the body to such a degree that the total volume of the blood would have to diminish in order to prevent it from becoming too dilute. This diminution at last became so extreme that the proper nutrition of brain and heart was no longer possible, and the patient died. The explanation of the elevation of the diaphragm which appeared to be most probable was that the diminution in volume of the circulating blood caused such a lessening in the size of the heart and such emptiness of the pulmonary artery and great vessels, that the volume of the heart and lungs was so materially diminished that the diaphragm had to rise so as to diminish the cubic content of the thorax to a corresponding extent.

I have had some confirmation of this explanation of the preceding case, for I have on several occasions seen the same symptoms appearing in severe cases of enteric fever. When I have detected the peculiar sighing breathing and the elevation of the diaphragm, associated with signs of lack of fluid in the body, I have been able at once to remove the dangerous symptoms by the administration of peptones and of milk sugar, the absorption of which takes place through the portal vein and not through the intestinal lymphatics.

It is now some years since I have seen such a case, because I am careful to guard against such malnutrition.

High Diaphragm in Limitation of Food.

If the above suggestion were accurate and a diminution in the intake of nutritive material would, if carried to excess, cause a diminution in the total volume of the blood, and show itself by a shrinking of the thoracic contents, the same phenomenon of high diaphragm ought to be found where semi-starvation is adopted as a therapeutic measure; for instance in the treatment of gastric ulcer.

For many years I have noticed that as a rule in cases of gastric ulcer there is a marked rise in the diaphragm after some days of strict limitation of food, as where the patient is fed only by nutrient enemata.

The amount and the duration of the rise varies much in different cases. In some the gastric resonance will, after a few days of rectal feeding, rise into the fifth interspace, or even into the fourth, and as rapidly return to the normal level on the resumption of full feeding. In others the rise may take place more slowly, attaining its maximum height after the cessation of rectal feeding, and only returning to the normal level after the patient has been on ordinary diet for some time.

The accompanying table of measurements (p. 982) shows an unusually rapid rise and fall of the diaphragm in such a case.

High Diaphragm after Severe Haemorrhage.

Closely allied to these cases are those where, after a sudden severe haemorrhage, the diaphragm may be found to be an interspace or more above the normal level.

High diaphragm, if looked for, can very often be found in such cases as are blanched by severe haemorrhage, and the gradual return of the diaphragm to the normal level can be observed as the patient recovers (Fig. 13).

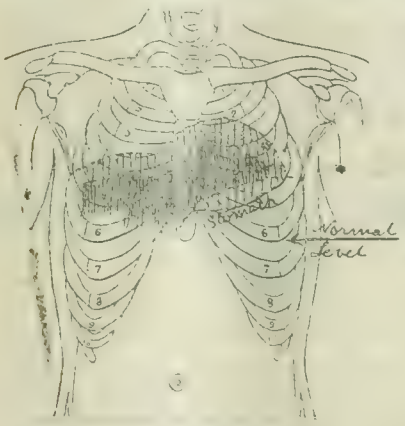


Fig. 14.—Case VII: Anaemia. High diaphragm and dilated heart.

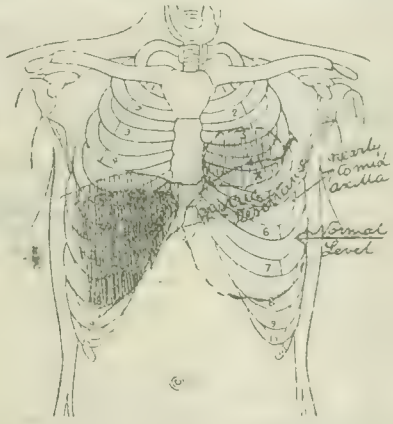


Fig. 15.—Case VIII: Anaemia. February 15th. Diaphragm very high in axilla.

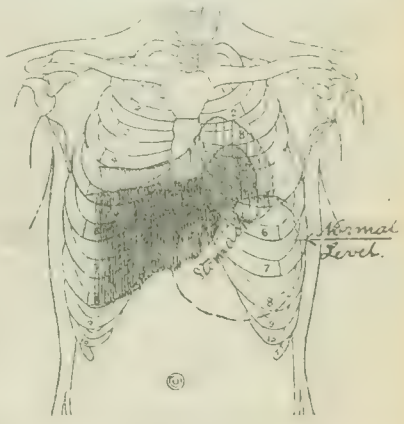


Fig. 16.—Case VIII. March 29th. Nearly normal.

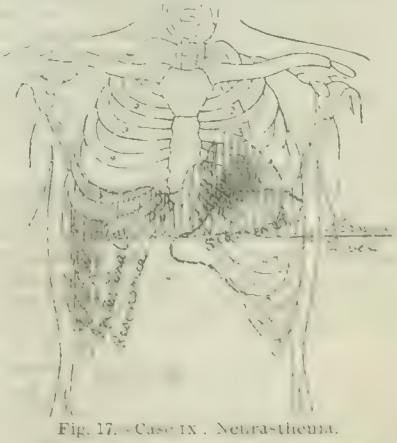


Fig. 17.—Case IX. Neurasthenia.

High Diaphragm in Anaemia.

In anaemia, from causes other than loss of blood, the same phenomenon of high diaphragm, though by no means constant, is very frequently noticed. In a series

Details as to the Rise and Fall of the Diaphragm in Case IV.

Date.		Stomach Level.	Upper Border of Liver Dullness.			Lower Border of Liver.	
			Absolute.	Relative.	Width of Relative Dullness.	Situation.	Distance from Costal Arch.
March 7	Fed entirely by the rectum	6th rib (U.B.)	5th rib (L.B.)	4th rib (L.B.)	1¼ in.	—	1½ in.
.. 13		5th rib (U.B.)	5th rib (Mid.)	4th rib (Mid.)	—	—	2 in.
.. 14		4th rib (L.B.)	—	—	—	—	—
.. 15	1 oz. per hour by mouth	4th rib (L.B.)	5th rib (L.B.)	4th rib (U.B.)	2 in.	7th rib (L.B.)	2½ to 3 in.
.. 18	Low diet: enemata stopped	6th rib (L.B.)	5th space	5th rib (L.B.)	1¾ in.	8th rib (Mid.)	1¼ in.
.. 19							
.. 23	—	6th rib (L.B.)	6th space	5th rib (Mid.)	¾ in.	9th rib	At C.A.
.. 26	Fish diet	—	—	—	—	—	—
.. 30	—	6th rib (L.B.)	6th rib (Mid.)	5th rib (L.B.)	—	9th rib (L.B.)	Below C.A.

Explanation.—U.B., Upper border. L.B., Lower border. Mid., Middle. C.A., Costal arch.

of consecutive observations upon cases of anaemia and chlorosis I found a well-marked rise of the diaphragm—that is, to the fifth interspace, or higher—in about one-third of the cases; but I was not able to determine the exact reason for the difference in this respect without a fuller investigation into the blood changes present in each case than the time at my disposal permitted.

In true chlorosis it is supposed that the volume of the blood is, if anything, increased; and if this be proved to be so, the observation of the level of the diaphragm may prove of diagnostic value in these cases.

The reason for the rise of the diaphragm in these cases cannot be definitely stated. It may be the result of deficiency of proteids, or it may be due to deficiency of iron, or some other necessary constituent of the blood acting in the same way as deficiency of food acts.

This hypothesis may be expressed in general terms by saying that the total volume of the blood diminishes because there is a deficiency of some one or more of the essential constituents of the blood, and therefore the total volume of the blood in circulation must be lessened in order to keep the percentage of that substance at its irreducible minimum.

In these cases of anaemia the area of cardiac dullness is, as a rule larger than in the cases previously mentioned. This is due to the frequent presence of dilatation of the right ventricle. As it weakens the coma arteriosus of the right ventricle and enlarges the heart upwards and to the left, it increases the area of the cardiac dullness to the left of the sternum, sometimes to a very considerable extent.

In connexion with these changes in anaemia there is one result of high diaphragm which may have been misinterpreted in the past—namely, the displacement upwards of the apex beat. In papers I have written and even again on this subject the upward and outward displacement of the apex of the heart in anaemia has been explained by changes in the heart itself. I am now sure that in some of the cases, at all events, the displacement is simply due to the rise in the diaphragm.

HIGH DIAPHRAGM IN NEURASTHENIA.

In many other diseases a high diaphragm may occasionally be met with, but in cases of neurasthenia it is of such relatively frequent occurrence as to raise the question whether in this condition some of the chemical or organic constituents of the blood are not deficient in amount.



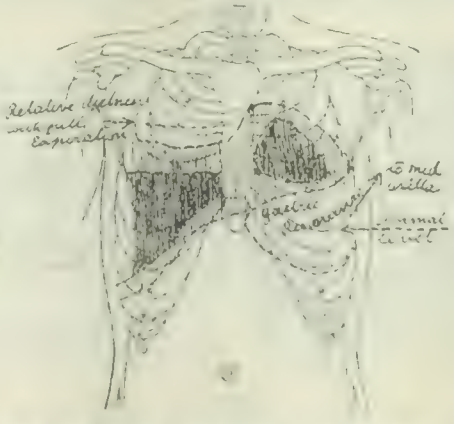


Fig. 19.—Case VI. December 2nd. Very ... [illegible]

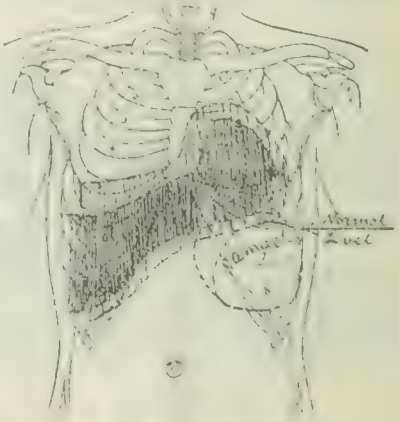


Fig. 20.—Case VI. December 8th. Normal again.

A case of a somewhat similar nature is that of a labouring man who was sent to me as a possible malingerer, because he looked comparatively hale and hearty, but nevertheless complained of great lassitude and inability to work. His colour was good, there was no complaint except of a little atonic dyspepsia. Physical examination showed nothing except a high diaphragm, the gastric resonance reaching to the fourth left interspace and the absolute dullness of the liver being almost normal to the right nipple line (see Fig. 17). There were some symptoms which suggested the possibility of deficiency of thyroid secretion, and treatment by thyroid extract entirely cured him.

COMMENTARY.

We must now discuss the explanation of the phenomena described and illustrated by the diagrams given.

Is it right to conclude that elevation of the gastric resonance on the left side and of the liver dullness on the right side implies certainly an elevation of the diaphragm? As the phenomena described, though less marked, are still present in the erect as well as in the recumbent attitude, and as the rise in the gastric resonance can usually be noticed far back in the axilla as well as in front, an affirmative answer must be given. The diaphragm is high in such cases.

Granted, then, that the diaphragm is high in the cases of which we have been speaking, what is the explanation of its rise in this marked manner?

It must either be drawn up by suction from above, or

pushed up by pressure from below: for we know of no power inherent in itself whereby the diaphragm could rise and compress the thoracic viscera.

But of these two forces it is easy to eliminate pressure from below as a cause of the elevation of the diaphragm. In all these cases the abdomen is empty or normal in appearance, and there is certainly no increase of intra-abdominal pressure.

Then, again, it cannot be due to some peculiar action of the stomach, because the rise is bilateral, involving the liver as well as the stomach. Moreover a glance at the diagrams will show that the lower level of the stomach is often raised as well as the upper border, and I have never in these cases noticed any prominence of the stomach in the epigastrium such as is always noticeable when the stomach is sufficiently distended and tense to exert pressure on the thoracic viscera.

Moreover, the pitch of the reverberation note as heard over the stomach is not of the high and varying character noticeable where the organ is distended and undergoing contraction.

We must therefore conclude that the diaphragm is drawn up as the result of some change in the intrathoracic pressure.

What intrathoracic force can do this?

Now although there is a danger of error in reasoning when a process of exclusion is used, we may, I think, resort to it in this instance.

The thorax contains practically only four things whose variation could materially alter the volume of the thoracic contents: the lung tissue, including the bronchi; the air in the lungs and bronchi; the heart and blood vessels; and the blood.

Now some of these variable factors are easily excluded. (1) There can be no abnormal suction exerted by the air in the lungs, as there is no mechanical interference with the entrance or exit of the air from the thorax. (2) The actual bulk of the lung tissue is not changed; the lungs in the cases spoken of are healthy.

The agency causing elevation of the diaphragm must, therefore, be either a variation in the cardiac and vascular tissue, or in the degree of distension of the heart and blood vessels in the thorax (including those of the lungs) with blood. As the cardiac tissue is practically constant in bulk from day to day, the factor we are searching for must consist of a lessening in the amount of blood contained in the lungs, heart, and great vessels in the thorax.

When we consider how large a proportion of the lung tissue consists of capillary vessels, how much blood the veins of the thorax and the heart itself are capable of holding, it is clear that a decided diminution in the volume of blood circulating in the thorax might cause a distinct lessening in the thoracic contents, and the space thus left vacant would have either to be filled up by air or by a corresponding lessening of the cubic content of the thorax by means of a rise in the level of the diaphragm. There is, therefore, physiological justification for the theory that the rise in the diaphragm is caused by a lessening in the amount of blood in the thorax.

These theoretical considerations are in accord with the facts of the cases mentioned, for in them there were conditions leading to malnutrition of the body, and presumably also lessened power of regenerating the blood.

One theoretical consideration which follows upon the clinical facts here brought forward, if the explanation given be correct, is that there must be a limit below which the specific gravity of the blood (or the percentage composition of its various constituents) is not allowed to fall. Where there is a lessened intake of food, when the impoverishment of the blood reaches this minimum limit, it can go no further without damage to the organism, and consequently if the lessened intake of food continues the total volume of the blood must be lessened, in order that the minimum limit be not passed.

It is possible that this law of an irreducible minimum may hold for many of the constituents of the blood, and that the high diaphragm of neurasthenia is due to the deficiency in the blood of some chemical substance, or some internal secretion. The case I have already referred to of the labourer who suffered from neurasthenic symptoms, and had a high diaphragm and was cured by the administration of thyroid gland, seems to point towards such a possibility.

High Diaphragm from Heart Weakness.

Further evidence can, however, be adduced in favour of this proposition that a lessening of the amount of blood in circulation through the lungs and heart causes a recognizable diminution in their total bulk, and is followed by a rise in the diaphragm.

The volume of the blood circulating through the lungs is not dependent solely upon the total volume of the blood in the body; it is also dependent upon the strength of the heart.

A decided weakening of the heart as a whole might reasonably be expected to diminish the volume of blood circulating through the lungs. If a diminution of the total volume of the blood in circulation causes such emptiness of the lungs and vessels that the diaphragm has to rise so as to adjust the size of the thorax to the diminished bulk of its contents, then this same phenomenon would also occur if a weakening of the heart muscle results in an automatic diminution in the amount of blood in circulation in order to accommodate, as far as possible, the burden to the heart's power of bearing that burden. There is good clinical evidence that this takes place, for marked cardiac asthenia is extremely frequently accompanied by a rise in the level of the diaphragm.

This phenomenon of high diaphragm would not, however, be expected in cases in which cardiac weakness is accompanied by fullness of the veins, such as cases of failing compensation. In cases of valvular disease, nevertheless, the level of the diaphragm ought to be watched, as it may give very important indications.

Such a sudden weakening of the heart with a fall in the strength of the pulse is a well-known sign of the onset of pericarditis, and when this takes place in a young patient whose fibrous tissues have not yet become unyielding a well-marked rise in the level of the diaphragm will be found to be present.

This rise is especially noticeable where failure of the heart muscle from myocarditis or pericarditis occurs as a complication of rheumatic fever, for the rheumatic poison causes a softening of fibrous tissues, allowing the displacement of organs to occur more readily than if rheumatism were not present.

I give an illustration of an extreme case of this type:

The gastric resonance reached as high as the lower border of the fourth rib on the left, and the relative liver dullness reached the upper border of the third rib in the right nipple line, the lower edge of the liver dullness being at the lower edge of the sixth rib (Case XI, Figs. 19 and 20). When the heart recovered, some eighteen days later, the gastric resonance and the liver dullness had both returned to the normal level.

A similar well-marked case was one in which sudden myocardial weakness occurred in a case of influenza complicated with acute colitis.

The heart weakness showed itself by a sudden fainting attack, during which the heart-rate fell to 40, and even to as low as 30 for a short time, if the pulse-rate were to be trusted. The cardiac asthenia was so extreme, that for a fortnight or more the patient dare not raise his arms for fear of bringing on a fainting attack. During this time the diaphragm rose steadily. In spite of the fact that the patient was a young man, with voluminous lungs, the gastric resonance on the fourth day of the illness reached into the fifth left intercostal space, and by the twelfth day reached the middle of the fifth rib in the left nipple line. Similarly, the absolute liver dullness by the twelfth day had risen from the sixth interspace to the lower border of the fifth rib. Accompanying this rise in the diaphragm there was a marked diminution in the cardiac dullness; in fact, it almost entirely disappeared, there being on the twelfth day of the illness no absolute dullness, and only a little relative dullness in the fourth space, internal to the nipple line but not reaching to the sternum.

Here, then, we had marked cardiac asthenia associated with a rise in the diaphragm and diminution in the size of the cardiac dullness.

Within five weeks of this date the gastric resonance was back at the normal level, and there were 4 in. of cardiac dullness in the fourth interspace instead of under 2 in., as on the date above mentioned, and the heart was much stronger. The patient made a perfect recovery, although appendicitis supervened on the acute colitis.

Clinical Significance of High Diaphragm.

As regards the clinical significance of high diaphragm, the question has of necessity been dealt with in the above discussion of the phenomenon. It is an important danger signal in some cases of severe enteric fever. It is a useful guide as to the extent to which rectal feeding may be

pushed. It must also be borne in mind because in cases of suspected rupture of a gastric ulcer the absence of a liver dullness cannot, as is now well recognized, be relied on as an indication of free gas in the peritoneal cavity.

In heart disease also the level of the diaphragm is a useful guide as to the condition of the circulation. If the weakness of the heart muscle be the prime factor, we shall expect a high diaphragm, unless, as in advanced age, the tissues be too rigid to yield easily; if, on the other hand, some obstruction to the circulation, such as valvular defect, be the chief cause of failure, there will be excess of blood in the veins of the thorax, and a normal or a low diaphragm would be found.

Thus we have in the height of the diaphragm, as shown by the upper level of the gastric resonance, an indication for treatment and a help in the diagnosis and prognosis of disease, with which we can ill afford to dispense.

CASE IV. *Gastric Ulcer.*

Kate G., aged 38, admitted to hospital March 6th, 1906 (Figs. 4, 5, 6, 7, 8, and 9). There was a history of dyspepsia of many years' standing, and an attack of haematemesis six years ago. Present illness dates back to an attack of influenza three weeks ago; ten days ago an attack of vomiting was followed four days later by haematemesis, half a pint of blood being brought up.

On admission, much pallor. Pain after food and epigastric tenderness were noted. Examination of the abdomen showed that the diaphragm was rather high, the gastric resonance reaching up to the upper border of the sixth rib, and the lower border of the liver being 1½ in. above the costal arch. There was 1½ in. of relative liver dullness in the right nipple line. She was fed entirely by the rectum for a week, and then the food was gradually increased.

The rise of the diaphragm, and its return to normal, are well shown in figures No. 4, 5, 6, 7, 8, 9, and also in the table given. With regard to Fig. 8, the transient dilatation upwards of the heart is of the type usually seen in anaemia.

CASE V.—*Gastric Ulcer with Severe Loss of Blood.*

Nelly Y., aged 20, admitted January 18th, was kept on nutrient enemata only till January 20th, then allowed one pint of milk a day as well. This diet was increased gradually till by February 16th she was taking a full fish diet.

The stomach resonance and the liver dullness (Figs. 10 to 12) continued to rise till Jan. 31st, when they stood at the upper border of the fifth left and fourth right ribs respectively. At this date she had been for two days on an ordinary bread and milk diet. By February 10th there was still some elevation of the diaphragm, but the relationships of the organs were more normal.

CASE VI.—*Haematemesis.*

Louisa C., aged 35, admitted with very severe haematemesis. She was so blanched that the foot of her bed had to be kept elevated to prevent faintness.

The figure (13) shows the marked rise in the level of the gastric resonance, and of the lower edge of the liver; also the broadening of the relative liver dullness. In this case there was full tympanitic resonance for 2 in. above the costal arch in the right nipple line.

CASE VII.—*Severe Anaemia.*

Grace G., aged 21. The gastric resonance reached well into the fourth left interspace, and in the fifth interspace there was well-marked gastric resonance throughout the whole interspace from the sternum to the anterior axillary line (Fig. 14). The heart was displaced upwards, and, owing to the anaemic dilatation of the right ventricle, there was a large area of dullness than in the case of pulmonary stenosis without marked anaemia. There was some cardiac impulse in the fourth interspace, but the maximum impulse was in the third left interspace external to the nipple line, 3 in. from the sternum. In the second left interspace there was relative dullness and pulsation for 2 in. from the sternum.

CASE VIII.—*Anaemia.*

Ada P., aged 17. Admitted to hospital February 15th with anaemia and severe epistaxis. On admission the area of cardiac dullness was small, there being no absolute dullness, and the gastric resonance was large, namely, up to the middle of the fourth rib in the left nipple line. There was also a great tympanitic space in the axilla. The gastric resonance and relative dullness were easily retrievable in the fourth interspace next to the sternum, and in the fifth interspace in the left axillary line (Fig. 15). In the course of ten days the anaemia was better, the gastric resonance receding from the fourth rib and only extending into the axilla to the sixth and seventh interspaces. After being in hospital six weeks (Fig. 16) she was thought still up to the fifth rib, but could lose the axilla at all, and the cardiac dullness was larger, showing some anaemic dilatation.

CASE IX.—*Rheumatoid Pericarditis.*

Polly T., aged 7, was admitted on October 29th, very ill with [illegible].

The diaphragm was very high, the gastric resonance reaching to the fourth rib, and the relative dullness of the liver was at the third rib in the right nipple line. The lower edge of the liver only reached to the lower border of the sixth rib. Three weeks later, on November 20th, the condition had improved, but the diaphragm was still high, as shown in Fig. 19. Within another three weeks the diaphragm was nearly back to its normal level (see Fig. 20).

There was very considerable dilatation of the right ventricle upwards to the left in this case.

THE POSSIBILITY OF ACTINOMYCOTIC INFECTION BY THE VAGINA.

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IN the course of a study of actinomycosis in man Ruhrah[1] classified 628 cases according to the original sites of infection. His series included 132 abdominal cases, all of which he considered had been infected from the digestive tract. He gives no instance of primary vaginal infection. If a doubtful case published by Zemann[2] is excluded, I have discovered two cases of this nature in the literature. They were published respectively by Grainger Stewart and Muir,[3] and by Giordano.[4]

I. J., single, a kitchen maid, was admitted to St. George's Hospital on October 24th, 1904.

History.

She was recovering from an illness characterized by acute abdominal pain, nausea, vomiting, constipation, and painful micturition which dated back nine days. There was a history of two similar attacks seventeen months and eleven months previously which confined her to bed for three weeks on each occasion. Dysmenorrhoea had been present for two months before admission, otherwise the menses had been normal. She had been somewhat anaemic for the previous four years. The family history was good.

Condition on Admission.

The patient was well nourished, her tongue suggested dyspepsia, and tenderness was present on deep palpation in the right iliac region. A mass was felt in the pelvis on bimanual examination. There was no vaginal discharge. The thorax and the urine presented no abnormality.

After-history.

On November 3rd the uterine appendages were removed. There was a right pyosalpinx, and the left ovary had become a bag of pus. The appendix, which showed signs of old inflammation only, was also excised. The patient was relieved by the operation, notwithstanding a persistent faecal discharge, and she went to a convalescent home on December 9th. Here she began to complain of pain on the right side, and the temperature rose to 103°. On January 17th the abdomen was explored without result. On January 31st it was noticed that there was a fluctuating swelling over the right lower ribs. This was incised, and a pint and a half of pus, coming apparently from a liver abscess, was evacuated. Subsequently a rib was resected over the liver, and the wound, which had become cedematous, was scraped. An abscess, which pointed 2 in. higher up, and which contained 2 oz. of pus, was also opened, and the discharge from the wound over the liver became faecal. The patient lived till June 14th, gangrene of the right leg being the immediate cause of death.

Necropsy.

I found chronic peritonitis in the pelvis and in the hypogastric region. The caecum and ascending colon formed part of the posterior abdominal wall, having their anterior surfaces only in relation to the peritoneum. Several abscesses were found in the muscles and fasciae on the right side. There was a somewhat diffuse retroccecal abscess and an abscess the size of a large marble 1 in. above the iliac crest. The ilium was smooth, and no connexion could be traced between the bone and the lower abscess, or between one abscess and the other. A third abscess was found between the posterior surface of the right lobe of the liver and the diaphragm reaching as far down as the suprarenal gland. It contained inspissated pus, and the contiguous surface of the liver was eroded. There was a burrowing hepatic abscess the size of a large orange close to the surface of the liver and to the last mentioned abscess. It was made up of a large number of small cavities which gave it a honeycombed appearance on section, and a resemblance to a sponge containing pus. The liver was enlarged and fatty, and it weighed 5 lb. 10 oz. The spleen was large and soft, and the kidneys were cloudy. The mesenteric glands were enlarged and caseous. The organs showed no waxy change to the iodine test. The alimentary canal was normal except in the caecal region. The pelvic organs were normal. The right lower extremity was gangrenous, and there was a clot in the common femoral vein.

Dr. R. S. Trevor, who suggested the actinomycotic origin of the lesions, carried out the following investigations:

Some pus from the liver was stained by Gram's method and in eosin, and numerous typical actinomycetes with interlacing filaments were found. Sections taken from the liver substance in the neighbourhood of the abscess were also stained with a similar result. The pelvic organs had been kept since the operation, and an examination of the pus in the left ovary demonstrated many streptotrichiae. The substance of the organ, however, yielded no organisms although it was thoroughly searched. The right ovary and the tubes were also examined with a negative result.

Did infection take place through the vagina or by way of the intestinal mucosa? The following points may be mentioned in favour of the vaginal route: At the first operation the uterine appendages were much disorganized, and beyond the results of old appendicitis of uncertain date no evidence of disease was found in other parts of the abdomen. The three attacks of illness would, therefore, appear to be referable to the pelvic organs and the retrocaecal abscess to be of more recent development. This theory as to the direction of spread of the disease is borne out by the subsequent history of the case, for in the later stages the advance was in an upward direction. On the other hand, infection from the intestine is of far more frequent occurrence; and the discovery of a retrocaecal abscess at the necropsy, and the fact that the right side of the abdomen was involved, are further points in favour of this method of infection.

I am indebted to the kindness of Mr. G. R. Turner, Dr. A. F. Stabb, Mr. F. Jaffrey, and Mr. T. C. English for permission to publish the case.

References.
[1] *Ann. of Surg.*, 1899. [2] *Wien. med. Jahrb.*, 1883. [3] *Edin. Hosp. Reports*, 1893. [4] *Ann. of Surg.*, 1896.

A PLEA FOR THE USE OF OATMEAL IN THE DIETARY OF CHILDREN.

By CHALMERS WATSON, M.D., F.R.C.P.E.,
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There is ample clinical evidence that a dietary into which oatmeal largely enters is one which is specially valuable for the growth and nutrition of children. In former days the diet of the people in many districts of Scotland included oatmeal as one of the staple ingredients, and, as is well known, this régime produced a big-boned and well-developed race. This being so, it is reasonable to think that there may be some ingredients in an oatmeal diet that have a favourable influence on one or more glands whose functional activity is of special importance during the growing period—for example, the thyroid gland. Some facts in favour of the correctness of this hypothesis have recently been ascertained,* as follows:

Six young rats about 6 weeks old were fed for four to eight weeks on a diet of uncooked oatmeal and water, an equal number of controls being fed on a bread and milk diet. At the *post-mortem* examination the most striking feature was the thyroid gland in the oatmeal-fed animals. This gland was markedly enlarged in the oatmeal-fed rats, the average percentage weight being 0.078 gram, as against 0.029 gram in the controls. Histologically the glands of the oatmeal-fed rats showed evidence of greatly-increased functional activity (see Fig. 2), with in two instances a swollen and detached condition of the secreting cells.

In a second series of 6 young rats which were fed on an exclusive porridge diet, the porridge being made with skim milk, a similar result was obtained.

These results appear to indicate that an excessive oatmeal diet has a markedly stimulating effect on the thyroid gland of young animals, and there seems no reason to doubt that a more moderate and more physiological use of the same food would by followed by a stimulation in a degree which would be wholly beneficial. It appears to me that we may find in these facts the explanation of the value of oatmeal in the dietary of young children, the results furnishing the scientific explanation, in whole or in part, of the well-established clinical fact that porridge is an excellent food for children. In accordance with the teaching of these results we should no longer regard oatmeal water as a mere diluent or as a convenient form in which starch may first be administered to an infant (Holt), but as a foodstuff of very special value for the growing child.

This brings me to a brief consideration of the practical aspects of the subject, my remarks being restricted to the use of oatmeal in children from the third year onwards. Breakfast is the meal into which oatmeal should most

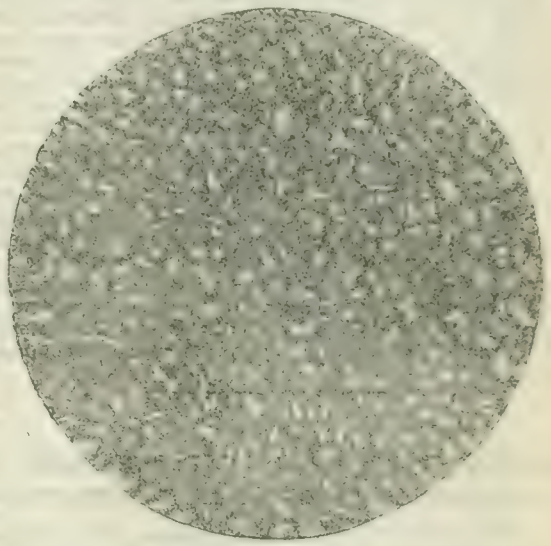


Fig. 1.—The normal appearance of the thyroid gland of a rat fed on the ordinary laboratory diet—bread and milk in known proportions. × 50.

largely enter, the best form of administration being porridge and milk, which should be followed by a glass of milk and some bread and butter. It is not, in my opinion, advisable to supplement the meal by meat in any form, for two reasons: First, because it is not necessary and may be harmful; and, secondly, because the use of the meat tends to create a distaste for the more wholesome but less appetizing meal of porridge. If a child be given for its breakfast a little porridge, followed by bacon, it is



Fig. 2.—Thyroid gland of a rat of same age as Fig. 1, after being fed for six weeks on an oatmeal diet. The gland is enlarged, the colloid being increased in amount and staining more deeply.

certain that in 9 out of 10 cases, or an even greater proportion, the chief element in the repast, from the child's point of view, is the bacon. In this respect children are just like young animals. In an extensive experience of feeding rodents on different diets I have never seen a young rat which would look at porridge or bread and milk if meat was available. We must, however, recognize two important reservations to this general recommendation of a porridge breakfast for children. In the first place, a porridge diet, *per se*, is not good for

*This investigation was carried out in the Physiological Laboratory of Edinburgh University, the expenses being defrayed by grants from the Moray Fund and from the Carnegie Trust.

children on account of mastication not being essential for this diet. This fault may be counteracted by including in the diet crusted bread, rusks, Vienna rolls, and the like, which should be taken "dry," and not merely washed down with fluid, as is often the case. The inclusion of such articles of diet in the breakfast will ensure that due attention is paid to the development of the muscles of mastication, salivary glands, and jaws, a point of very great importance in the dietary of children. Secondly, clinical experience teaches us that certain children cannot properly digest and assimilate oatmeal. This feature is, in my experience, most frequently observed in the offspring of typically gouty parents. The parents of such children tell us that they cannot take porridge because of its "heating" properties, the objective indications of disturbed nutrition being found chiefly in a concentrated urine and in various skin eruptions. These symptoms are, however, much less frequently observed if the porridge forms the main article of the meal and is not followed by other highly nitrogenous food, such as bacon and eggs, as is frequently the case. There are, however, some children who cannot properly digest and assimilate porridge, and these are better without it, but, if careful attention be paid to the details of the dietary as a whole, it will, I believe, be found that these cases are much rarer than is commonly supposed.

ON THE

PRESENT POSITION OF THE TREATMENT OF TUBERCULOSIS BY MARINE CLIMATES.*

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[An examination of some of the principles of marine climatic treatment and of the requirements of the pulmonary affection was the subject of the address, which began with some general remarks on thalassotherapy, or sea treatment (sea air, sea water, sea bathing, sea voyages, and the pharmacology of the sea), and with a brief reference to Quinton's subcutaneous sea-water infusions.] *Ocean climate* differs from all others in its exclusively marine character and its *equability*, in contrast with the *sea-coast climate*, which are the *most variable* and offer endless combinations between the features of the coast and those of the sea, none of them being the ideal one for consumption, because not always at their best, whilst some may prove to be *too protective* in the individual case, and others *too active* for some of the complications.

Climate and open air can have no direct effect upon the bacillus, and the beneficial *effects of the seaside and its sea air* are mainly dependent upon the patient's power of "reaction" on the one hand and, on the other, upon the all-important effect upon the tendency to catarrh.

Touching the *forms of tuberculosis*, Nathan Raw has recently urged an etiological and clinical distinction between the infection from the "bovine" bacillus and that from the "human" bacillus, which agrees well enough with our climatological data and practice, all cases of "bovine" infection (surgical, glandular, scrofulous, cutaneous, serous, and visceral other than pulmonary) being almost universally benefited by the sea. This is not always the case with the pulmonary affection, for which alone the "human" bacillus invasion would be to blame.

The multiple types evolved by individual predispositions (constitutional, external, and functional) fall into the two groups: *Uncomplicated Tuberculosis* and *Catarrhal Tuberculosis, or Phthisis Pulmonalis*. In the first group, tuberculosis may be "latent" and healing, or "declared" and spreading. In the second (which includes the acute caseous form) catarrh is the chief agent of mischief as well as the first object of climatic treatment. To describe as "consumptives" the bearers of latent and spontaneously-healing tubercles would be inaccurate; and, on the other hand, "tubercle-phthisis" does not depict the varied miseries of catarrh, of pneumonia, and of cavitation in the painful record of advanced consumption. Bacillary infection ("tuberculosis" *per se*) may mean little or much damage, but "consumption" (or, in the Greek vernacular "phthisis") is always a big affair, and in pathology it spells "catarrh." We now have to reverse the famous dictum of Niemeyer, and to recognize that "the worst fate that can befall the patient infected with tubercle is that he should develop phthisis."

The aërotherapeutics of tuberculosis are thus, practically speaking, those of catarrh; but whereas sea air is curative of some forms of simple non-bacillary bronchitis, it is not always sufficiently dry for the cure of catarrh based upon tubercle. Whether we consider the meteorological factors or are guided by the results observed clinically, it cannot be gainsaid that the altitude is likely, and proves itself, to be more effectual in obviating early catarrh and curing it at any of its stages than the climate of the coast. In this connexion Dr. William Gordon's investigations upon the influence of wet winds are most suggestive, although he has not hitherto formulated any conclusions beyond the broad fact that the prevalence of phthisis is definitely increased by it.

But as we have not any altitudes available in this country, we should adopt an opportunist policy and make the most of our unrivalled assortment of "protecting" and "bracing" seaside resorts by careful selection of cases, by progressive elaboration of their clinical treatment, and by measures tending to correct any imperfections of the local climates. The "bracing" resorts possess the highest restorative efficiency, but their suitability for pulmonary tuberculosis is limited. The criterion of fitness for these climates is integrity of the mechanisms of "reaction," which are dependent above all upon cardio-pulmonary efficiency. Thanks to the possession of sound lungs and of a sound heart, the great majority of cases of tuberculosis other than pulmonary — surgical, scrofulous, cutaneous, etc. — are eligible for the bracing resorts and derive there the greatest benefit. Many cases of "latent" pulmonary tuberculosis are for analogous reasons eligible. But "declared" pulmonary tuberculosis, even at an early stage, and "early phthisis pulmonalis," claim the most careful climatic management, with a view to the avoidance or the cure of catarrh, and need protection from the stronger kinds of sea air. All cases of "advanced" phthisis, as well as the group of "chronic quiescent phthisis," admit of no alternative—they are to be sent to the milder stations.

The present position of the treatment by marine climates rests upon the recognition of the fact that mere "airing" and "salting" are not competent of themselves to cure the pulmonary complications of the disease when it affects the lungs. "Open air" and "sea air" are a basis for treatment, but cannot supersede the scientific methods of modern therapeutics. The marine resorts should add to their natural resources increased facilities for a systematic treatment planned upon a combination of the hospital idea and of the sanatorium idea. On this scheme alone can they look forward to an increased curative efficiency.

Meanwhile a much greater field of usefulness is open to them in *prevention*. The sanatorium movement is gravitating in that direction; but the seaside is *par excellence* the place for the "Prevention-Sanatorium" or "Preventorium," the inmates of which should be recruited from the most threatened ages and from the most dangerous surroundings. This is the direction in which a more extensive and systematic use of our marine climates is indicated. Their wider employment for the extirpation of tuberculosis in the coming generation is a possibility and a public duty.

Lastly, the task of improving the local opportunities for climatic treatment is not beyond the skill of modern engineering. Some of our prosperous stations rejoice in a sandy soil suitable for the growth of the pine; others in a mild and sunny hinterland; others in cliffs combining available shelter and altitude. Among them the city of our welcome is not the least favoured, and may yet secure a home of unequalled efficiency in the struggle against tuberculosis.

Dr. T. Lalor of Cashel informs us that the County Council of the South Riding of Tipperary is to be added to the list of those which have accepted the opinion of Sir H. Poland, K.C., that the medical officer of a Poor law institution is entitled to inquest fees under the Coroners' Act.

THE SCIENCE COMMITTEE

OF THE

British Medical Association.

REPORT XCIX.

LESIONS OF SPINAL AND CRANIAL NERVES EXPERIMENTALLY PRODUCED BY TOXINS.*

BY

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IN a previous paper[1] we described the lesions in the posterior columns of the spinal cord in cases of general paralysis, and pointed out their similarity with those in early tabes. We showed that the degeneration always commenced at or close to the point where the posterior roots enter the cord. It is here that the sensory fibres become part of the central nervous system and lose their neurilemma sheath; and in all cases we found that precisely at this point degeneration began.

While studying these lesions we had indications that it would be advisable to inquire into what was known of the lymphatic system of the posterior roots and columns, and we found evidence of a very convincing nature that there was a continuous flow of lymph upwards along the nerves to the cord; it is believed that the main lymph current lies at the periphery of the nerve bundles immediately under the fibrous sheath.

We have in three previous publications[1,2,3] referred to the data on which these assertions are based, and in this would put forward several additional arguments of importance.

It is well known that tetanus and rabies spread to the cord by the nerve paths, and in this connexion we might mention the experiments of Marie and Morax,[4] who, after cutting the nerve to the fore-limb of an animal, and later injecting a lethal dose of the toxin into its paw, found that no convulsions followed. Homén and Laitinen[2] after injection of streptococci into the sciatic nerve traced the organisms upwards into the meninges of the cord; while Pirrone,[4] experimenting with the pneumococcus, found changes in the cord, but limited to that side on which the nerve was injected. But in addition to organisms, chemical and inert substances have been used with like results, for example, Guillain[4] injected ferric chloride into the sciatic nerve, subsequently introducing potassium ferrocyanide into the general circulation, and then found prussian blue in the posterior roots. Then Sicard and Bauer,[4] using China ink, found after injection into the nerve that the granules ascended along the nerves towards the cord.

It was evident that if these views were correct we ought to find in the cord of cases in which some septic focus existed, lesions of the posterior columns occasioned by the presence of toxins ascending in the lymph stream. On examining cases of brachial neuritis (infective), bedsores, suppurating knee-joint, and septic psoas abscess, we found in the cord of all the lesions expected.[3] We then submitted our theories to experimental test, and have been successful in inducing posterior column lesions in rabbits exactly similar to those already found in man.

The method which we adopted—at the suggestion of Professor Lorrain Smith, and in whose laboratory the experiments were carried out—consisted in filling a celloidin capsule with a broth culture of a certain organism. The sciatic nerve being exposed, the sealed capsule was placed in apposition with it, after which the gluteal muscles were stitched in their original position and the wound closed. As toxins are known to diffuse through the wall of these capsules, we assumed they would find their way into the ascending lymph stream of the nerve and so to the cord, where their presence would be demonstrated by the ensuing degeneration. The organisms we first employed were *Staphylococcus pyogenes aureus Bacillus pyocyaneus*, Gaertner's bacillus, and the *Bacillus coli*: later we used the organisms taken from cases of acute colitis.

We commenced our experiments at the beginning of 1905, and at first used organisms whose virulence had not been raised in any way. We found, however, that, in order to obtain definite lesions, it was necessary to do so; and, further, that it was advantageous to renew the capsule from time to time in order to maintain the supply of toxin. We purposely at this stage ignored the question as to the predilection of certain organisms for the nervous system, and kept strictly to our original purpose of testing our own views and those of others on the direction of the lymph stream in the spinal roots and the possibility of cord infection by this channel.

The lesions of the posterior columns in the rabbit's cord were very definite. The degeneration commenced at the point where the sensory fibres lost their neurilemma sheath, and spread inwards to the root-entry zone. The collaterals springing from this area and passing into the grey matter were also affected. The degeneration, studied by the osmic acid method, was, in its distribution, quite indistinguishable from the early system lesions already described by us—namely, the exogenous zones were much more affected than the endogenous ones. The appearance of the affected fibres in both transverse and longitudinal sections shows that the degeneration in its early phase is essentially a primary one of the myelin sheath alone. In a more advanced phase we have observed in longitudinal sections of the posterior columns long rows of black globules showing the typical arrangement met with in Wallerian degeneration. In no case did the posterior spinal roots outside the cord or the sciatic nerves show any change when treated with osmic acid.

Turning our attention next to the pons and medulla, we found that lesions of the cranial nerves in general paralysis commenced exactly at a corresponding point to those of the spinal nerves; the degeneration affected not only sensory but also motor nerves, and by the experimental method described we have been able to induce similar cranial nerve lesions in rabbits by implanting a bacteria-laden capsule under the skin of the cheek. This, the latter portion of our research, from our recognition of the importance of using organisms of adequate virulence and of maintaining the supply of toxins, has yielded more constant results and thrown more light on the initial changes affecting nerves in their intramedullary course where they are devoid of neurilemma. Up to the present we have only completed the serial examination of the pons and medulla taken from two experiments.

In the first experiment the fifth and sixth nerves alone showed definite degeneration; in the other nerves the degree of affection was very slight. In the second experiment the degeneration was much more marked and more widely spread, affecting the third, fourth, fifth, sixth, seventh and eighth, and the twelfth to a very slight extent. No appreciable change could be observed in the other—ninth, tenth, eleventh—nerves. The degeneration affected only the intramedullary part of the nerve, and in the case of the motor nerves could be traced as far inwards as the nuclei of origin, especially in the third and sixth, which readily lent themselves to examination. The changes in these two, as revealed by the osmic-acid method, consisted in an acute necrosis of the myelin sheath, which assumed various morbid forms—for example, long and short oval masses, elongated threads of varying thickness, mostly slender, on which were moniliform swellings. The degenerative products stained intensely black, and in the motor nerves the myelin affection was a little less marked towards the nucleus of origin. In one of the degenerated fifth nerves there was Wallerian degeneration in the descending root as far as the lower end of the medulla. All the degenerations were sharply defined from the surrounding tissues, into which obviously no appreciable diffusion of toxins had taken place from the nerve paths. In both cases the extramedullary portion of the nerves showed no reaction to osmic acid.

Conclusions.

1. Toxins readily travel up spinal and cranial nerves to the central nervous system.

2. While these nerves in their extramedullary portion possess a neurilemma sheath and are protected by its

* The experimental portion was carried out with the help of a grant from the British Medical Association.

vital action, in their intramedullary part, having lost their neurilemma, they immediately undergo degeneration.

3. The first change is a primary degeneration of the myelin; axis cylinders and nerve cells are evidently affected later.

It seems to us that the results of our investigations suggest the possible lymphogenous origin of some nervous affections. We know that tabetiform and cranial nerve lesions in general paralysis, and even those in tabes, are not the result of nerve-cell degeneration, but are a primary affection of the myelin sheath, commencing where the neurilemma is lost. In our clinical cases, and also experimentally, we have found similar lesions starting at the same point, the result of absorption from a definite toxic focus situated outside the central nervous system, the toxins gaining access by the lymph stream. May it not be possible that the former lesions are also the result of toxins passing to the cord, medulla, and pons by the lymph stream from some external but as yet unknown focus? In support of the lymphogenous theory of infection, we have lately added two additional clinical cases, namely, one of chronic middle ear and mastoid disease in which the eighth nerve was markedly degenerated in its intramedullary portion; and another of multiple abscesses in the right trapezius in which the right eleventh nerve was attacked within the medulla.

REFERENCES.

[1] *Loc. cit.* Wilter, 1904. [2] *Zeit. Nerv. und Psych.*, October, 1903. [3] *Ibid.*, January, 1908. [4] *Manuel d'Histologie Pathologique*, Cornil and Ranvier, T. 3, 1907, pp. 718 to 725.

REPORT C.

AN INVESTIGATION ON THE REGENERATION OF NERVES, WITH REGARD TO SURGICAL TREATMENT OF CERTAIN PARALYSES.

BY BASIL KILVINGTON, M.S., M.D.MELB.

(From the Physiological Laboratory, Melbourne University.)

IN this article some experiments will be detailed on nerve crossing in the spinal canal, and their surgical bearing discussed.

It is generally admitted that regeneration is impossible in the nerve tracts and fibres in the cord. This faculty of repair ceases at the point of entrance and exit of the nerve bundles from the cord itself, and corresponds to the place where the primitive sheath ends. The latter seems in some way to be essential for regeneration. In the case of the posterior roots useful regeneration can only take place when the lesion is distal to the posterior root ganglion. Section and suture central to this are doubtless followed by regeneration as far as the cord, but it ceases there, and the result is of no value.

In the case of the anterior roots, the recovery can follow a lesion anywhere in the neural canal if the ends be brought into satisfactory apposition. There is an obvious advantage in keeping nerve surgery within the spinal canal. It has long been recognized that injury to the cauda equina can sometimes be successfully treated by laminectomy and suture of the individual trunks, exactly as lesions of peripheral nerves can. Up to the present, I believe, nerve crossing has never been suggested within the spinal canal, and I wish to show that it is possible and has practical importance. The experiments were performed on dogs and consisted in suturing the central ends of one of the lumbar nerves to the peripheral ends of the nerve supplying the rectum and bladder, with the object of innervating these structures by the higher nerve. The results were very encouraging. Before giving details of the experiments the bladder supply of the dog may be briefly given.

According to Langley and Anderson and Sherrington,[1] the nerve supply of the bladder in the dog is variable. The second and third sacral nerves always give bladder motor fibres sufficient to expel the contents.

The first sacral in a few cases gives bladder motor fibres, but not enough to cause micturition. It is very rare for the last lumbar (the seventh) to innervate the bladder, and even when it does the amount is insignificant.

The experiments were performed on three large dogs: in one the first sacral was sutured to the second and third, and in the other two the last lumbar was joined to the second and third sacral, leaving the first untouched. Preparatory to the operation a large area of the skin of the back was shaved, and cleaned with turpentine, ether, and warm perchloride solution. The single median incision was made over the vertebral spines. On each side the spinal muscles were rapidly cleared from the laminae till several of the bones were bared. The very free oozing was then arrested by firm pressure with a sponge wrung out of hot antiseptic solution. Then the laminae were chipped away with bone forceps and the nerve roots exposed in the spinal canal. The ones to be used were hooked up in their sheath with an aneurysm needle, and the dura mater was not opened. It was found that the seventh lumbar was the highest that could be sutured to the second and third sacral without any tension, and only a single thin chromic catgut suture was used. The muscles were sutured over the exposed dura to form a protection, and finally the skin. Several animals were operated on, but only three which healed by first intention were kept. The after-results produced were some awkwardness in the hind leg on the side operated upon, which partly disappeared in time. Nothing peculiar about the bladder function was noticed.

In order to identify the nerves, the following points were observed. A line joining the two posterior superior iliac spines crosses the point where the second sacral pierces the dura. The first sacral was very much larger than the second and third, and the last lumbar is nearly as big as the first sacral. The key to the position lies in identifying the second sacral, and counting the roots upwards and downwards.

The following are the details of the experiments:

Dog 1.—Operated on June 29th, 1906. The central end of both roots of the first sacral nerve were fixed to the distal end of both roots of the second and third sacral on the left side. The first sacral was cut out of the intervetebral foramen, and the second and third where they come out of the cord. There was no chance of the two ends of the same nerve joining in any way.

October 15th, 1906. The spinal canal was again opened up, and the nerves isolated. There is always considerable difficulty in this, as the outer surface of the dura is roughened and adherent to the surrounding structures at the time of the second operation. Faradic stimulation of the first sacral nerve caused no sensory reflexes as the posterior root had been divided central to the ganglion. Stimulation of the first sacral produced strong movement of the tail and contraction of the pelvic diaphragm, and usually started bladder contraction with expulsion of contents. A cannula tied in the bladder and connected with a manometer showed a rise in the intravesical pressure. It seemed as if the contraction of the pelvic floor started the bladder reflex rather than caused the bladder contraction directly. This was not quite certain, however, but the practical results were the same in either case. Stimulation of the first sacral on the right side produced none of these effects.

Dog 2.—Operated on August 20th, 1906. The anterior root of the seventh lumbar was joined to both roots of the second and third sacral nerves on the left side; in the latter case both roots were used, because they were so small that it was impossible to separate anterior from posterior without causing much damage. An endeavour to do this in one animal spoiled the operation.

February 12th, 1907 (176 days after). Stimulation was performed, after cutting the spinal cord across at the level of the 13th lumbar nerve. The faradic current on the seventh nerve produced: (*a*) A vigorous contraction of the muscles of the pelvic floor; (*b*) vigorous contraction of the sphincter ani, and after ceasing the stimulation, extrusion of faeces; (*c*) expulsion of some of the bladder contents through the urethra in a jet (the organ having been previously filled with fluid), though no definite and visible contraction of the bladder or rectal wall was noticed. These organs were exposed by making a large incision in the abdominal wall. As a control, the seventh lumbar of the opposite side was stimulated and produced no contraction of the pelvic floor, sphincter ani, or expulsion of bladder contents. On the sound side stimulation of the second and third sacral produced exactly the effects of the seventh lumbar on the opposite side, but here, too, there was no contraction of the bladder or rectal wall detectable by the eye alone.

Dog 3.—Operated on October 13th, 1906. Both roots of the last lumbar nerve on the left side were fixed to the two roots of the second and third sacral nerves. The posterior root of the lumbar was cut distal to the ganglion, and the second and third sacral central to this. There were thus two ganglia in connexion with the posterior roots connected with the regenerating second and third sacrals. The first sacral was left untouched.

February 5th, 1907 (115 days after). Stimulation was performed. On the left side the faradic current, when applied to

he seventh lumbar nerve (which was detached from the cord), resulted in (1) vigorous contraction of the perineal muscles and sphincter ani; (2) slight expulsion of bladder contents; 3) movement of the leg normally produced by stimulation of the second and third sacral roots. In this case, too, no visible contraction of the bladder wall was observed. As a control the second and third sacral roots of the untouched side were stimulated, and identical, though somewhat more forcible, movements resulted. No bladder movements were visible. The seventh lumbar of the opposite side, as well as the first sacral roots on both sides, caused only leg movements without the slightest contraction of the perineal muscles. Curiously, in none of the three dogs have I been able to get satisfactory and forcible bladder contraction, even by a current applied to the untouched sacral roots. I attribute this to the low state of the animal, resulting from the laminectomy and pulling on the cord and nerve roots. In addition, a large abdominal incision has to be made and the viscus pulled into the wound to be observed. This always starts the reflex and results in emptying the organ, and it has to be filled by means of a cannula passed through a small hole in the bladder wall. But it has been conclusively shown that the last lumbar, when joined to the second and third sacral roots, can produce all the effects that these latter give on the untouched side.

The Surgical Possibilities of Intraspinal Nerve Crossing.

The experiments described show that the bladder, and presumably the rectum, can be innervated by other of the spinal nerves than those which normally supply them. In fracture-dislocation of the spine much of the trouble and most of the danger result from the paralysis of the bladder. The well-known retention, overflow, cystitis, and ascending infection up to the kidneys, usually cause the death of the sufferer. In cases which do survive, the bladder and rectum empty periodically without the patient's knowledge. If it were possible to innervate the pelvic viscera in such cases by nerves above the spinal lesion, bringing them again under voluntary control, many deaths would be prevented, much inconvenience and misery would be relieved. I believe that this can be done in some instances by surgical intervention. In man there are two bladder centres, one sending impulses through the lumbar roots, and the other by the second and third, and possibly the fourth, sacral. The exact function of the upper of these is not quite understood. Sherrington[2] states that stimulation of the lumbar nerve produces a bilateral contraction which does not overcome the sphincter, and does not produce micturition.

Stimulation of the sacral roots produces a strong contraction which is unilateral, and results in expulsion of contents. There is a general consensus of opinion that the sacral nerves are the more important, and they are the ones which should be used in performing nerve anastomosis. It is most important to innervate the pelvic floor in addition, because the bladder muscle itself is not directly under the control of the will. Micturition is a reflex act started by a voluntary contraction of the abdominal and perineal muscles, and, when once started, is very difficult to inhibit. If the reflex be intact, and the pelvic and perineal muscles brought under sensory and motor connexion with the brain, the viscera would be under satisfactory contol, as this appears to be all that obtains naturally.

In the human subject fracture-dislocation of the spine occurs commonly in two situations, the cervical and the dorso-lumbar regions. The latter is the one in which nerve anastomosis offers some help. The operation does not seem feasible in the cervical lesion. It is important to know how far direct suture of the nerve roots is possible in the spinal canal. In the dog the last lumbar root was the highest that could be sutured without the least tension to the second and third sacrals. It might have been possible, by dividing the sixth lumbar far out in the intervertebral foramen, to have obtained sufficient length, but this complication of the operation was unnecessary to establish the principle aimed at. It is a very important point in making use of this operation in man, because it determines the level of the spinal lesion in which it is applicable. In the human subject a considerably higher root can fortunately be utilized. In man the spinal cord ceases usually at the lower border of the first or upper border of the second lumbar vertebra, and a large number of the lower nerve roots arise very close together, and have a long intraspinal course. I have made a number of dissections in the human subject to determine this point. After opening the spinal dura mater it was found that the second and third sacral roots could be joined to the first lumbar root if the latter be divided as low as possible—that is, where it is piercing the tube of dura mater. There are several disadvantages, however, in using this intradural method, which exclude its use. The most important objection is that the ganglion of the posterior root lies outside the dura in the intervertebral foramina, and if the nerve be divided central to this, no regeneration of sensory fibres is possible, and the operation would therefore lose a great deal of its utility.

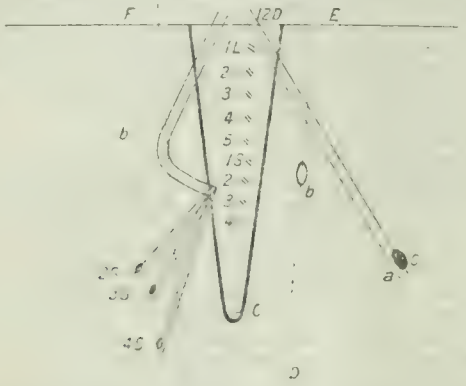
Another fault of the intradural operation is that the upper root with which we intend to innervate the pelvic structures can be obtained much longer by cutting it from the intervertebral foramen; or, in other words, a higher one can be used. I have found by several trials that it is possible to get the twelfth, or even the eleventh, dorsal roots in their fibrous sheath, and cut distal to the ganglion to come in apposition with the highest parts of the second, third, and fourth sacrals where these are arising from the cord. It would even be possible to get the tenth dorsal to do this if the intervertebral foramen were opened up, and the anterior and posterior primary divisions followed for a short distance.

Summing up our facts, so far, we find (1) it is possible to satisfactorily innervate the pelvic structures by means of a nerve arising higher up from the spinal cord; (2) that the eleventh or twelfth, or possibly even the tenth dorsal nerve, can, in man, be sutured directly to the second, third, and fourth sacral nerves. One could even use a higher nerve still by bridging over the gap by means of a nerve graft. This would be preferably obtained from the patient himself (auto-transplantation). A gap of 3 in. has been successfully bridged over in this way in the case of peripheral nerves. I would suggest a piece of the internal popliteal be selected for this, as it supplies muscles already paralysed, and has a comparatively small skin distribution. Direct end-to-end suture, where possible, is much to be preferred, as nerve bridging adds another element of complexity and is a possible source of failure. In an ordinary total transverse injury of the spinal cord in the dorso-lumbar region the lesion is usually just below the point where the twelfth dorsal nerve arises.

The main objections to the operation which is advocated are its severity and the possibility of leaving the patient in a worse state than he originally was. It is certainly true that a laminectomy with subsequent isolation, division, and suture of nerve roots, entails a good deal of shock. On the other hand, the patient's condition when left is extremely pitiable. A large proportion die in a few months of septic bladder and kidney trouble. Even if life be preserved, their condition with no control over bladder or rectum is a miserable one, and any chance of improving it would be eagerly consented to by the patient. With regard to the second objection, it should be noted that the only extension of the paralysis would be of one, or at the most two, dorsal nerves on one side, which is of not much consequence. Where the bladder centre is intact and working automatically, I should only advise crossing on one side. The untouched nerves on the opposite side would be still sufficient to innervate the organ, even if the nerve crossing were unsuccessful, and to connect the bladder with its spinal centre. In cases where this is destroyed by the injury, crossing should be done on both sides. The operation was tried recently by Mr. Bird and myself on a case, but we failed mainly through errors in technique, which we think could be avoided in the future. It is of sufficient interest to be briefly recorded. A man, aged 40, had six years previously fallen from a tree on to his head. On recovering consciousness it was found he had complete paralysis of both legs. He had survived the bladder trouble, and that organ with the rectum emptied periodically without his knowledge. When we saw him there was an obvious deformity of the vertebrae. The lesion extended as high as the twelfth dorsal on one side and the eleventh on the other side, these being the last nerves intact. The operation was unfortunately divided into two stages. At the first several laminae were removed, and the dural sheath exposed. It was found that three vertebrae were displaced and partly rotated, causing compression and destruction of a considerable length of the cord. The second operation was performed ten days later. It was found almost impossible to identify the structures, owing to the formation of recent scar tissue

where the previous dissection had been made. At the seat of the lesion the cord had disappeared, and the dural sheath was greatly thickened, its lumen being practically obliterated. The sheath was opened below, but it was impossible to pass a fine probe through the part where the dura had been damaged. It was felt that to persevere and perform nerve suture in the midst of this scar tissue would only have been to court disaster, and the identification of the nerve roots would have been most difficult. The operation was abandoned, but we both thought that it might have been performed if everything had been done at the first sitting.

The technique had been worked out previously on the dead subject, and can be understood by reference to the diagram. The twelfth dorsal was to be cut as far from the cord as possible in the intervertebral foramen (at *a*), and



F E, Level of lesion; 12 D, twelfth dorsal nerve; C, cord; D, dural sheath; G, posterior root ganglion.

brought through a slit in the dura distal to the lesion (at *b*). The nerves here have a firm fibrous sheath derived from the spinal membranes, and are easily handled. This part of the dura was then to be opened in the mid line, the twelfth dorsal pulled through as far as possible, and fixed to the anterior and posterior roots of the second, third, and fourth sacral, which were to be cut free from the cord as long as possible, as shown on the left side of the drawing. The median incision in the dura was to be closed with fine catgut, and one suture where the twelfth dorsal was put through the dural sheath. This would prevent any tension being put on the actual nerve junction.

The identification of individual nerve roots is a matter of difficulty, as they lie very close together. The easiest way of doing this is by applying a very weak interrupted electric current by means of sterilized electrodes, and noting the resulting contraction. This is an easier method than following definite landmarks for the individual nerves, for their level is variable. I have used this method during the operation on cases of brachial palsy and found it most helpful.

The nerves supplying the bladder also cause priapism when stimulated, and this is the easiest result to go by. Contraction of the pelvic floor and perineal muscles is readily appreciated. If nerve crossing be attempted, it would be best to operate as soon after the injury as possible, that is when the original shock and the acute symptoms following had subsided. Postponement only gives time for septic troubles to arise, and in any case it will be some months before any recovery takes place. If the level of the injury be lower down than the twelfth dorsal, the procedure becomes easier. Provided the lumbar roots be intact and in connexion with the brain, it might be feasible to anastomose some of the sacrals into a gap made in the higher nerves. It is even within the bounds of possibility that with several of the lumbar nerves we might produce sufficient power to enable the patient to walk again in a feeble manner. At any rate, enough has been said to show that nerve crossing within the spinal canal may open up a new field in surgery, and, though necessarily a severe operation, is worthy of trial.

My best thanks are due to Professor Osborne, Dr. Mathison, and Mr. Bird for their valuable assistance.

The expenses of this research were partly defrayed by a grant from the British Medical Association.

[illegible]

[1] Schäfer, *Physiology*, vol. ii, page 748. [2] *Journal of Physiology*, 1902.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

THE THIRD FACTOR IN THE ETIOLOGY OF BLACKWATER FEVER.

OF the many good articles in that new volume (Part II, vol. ii) of *Allbutt's System of Medicine* which is devoted to diseases of tropical countries there is none which will be read with greater interest than that by Dr. J. W. W. Stephens on blackwater fever, which disease in the Duars and Terai tea-planting districts of India has recently had considerable attention drawn to it.

I confess to having been strongly opposed to the theory which ascribed blackwater fever to malaria, assisted by quinine. It is difficult, however, to resist the facts and closely reasoned arguments used by Dr. Stephens in the article just mentioned, but while one may agree with Dr. Stephens that intense malaria *plus* quinine can and does induce haemoglobinuria, still the fact remains that, in the districts where both intense malaria and blackwater cases are found, there are many bad cases of malaria which are treated successfully by quinine in which no such untoward symptom as blackwater occurs. Hence, while admitting the two factors, namely, malarial attacks of greater and lesser frequency and quinine, not necessarily in large doses, still I think that the real clue to the etiology of this disease may lie in Plehn's suggestion that a kidney lesion is one of the essential factors. On this view we have three factors, namely, malaria infection, use of quinine, and a lesion of the kidneys.

This, it seems to me, might explain the scattered incidence of the disease in the same district, where intense malarial fevers are common, the use of quinine universal, but the third factor, a diseased kidney (we can understand), will only rarely be present also. In this way the state of the kidneys acquires a prognostic significance equal to that which it has in the prognosis of cholera attacks, and possibly it may be found that, in regions where bad malarial fevers abound and also blackwater fever, it would be wise before administering quinine to make an examination chemically and microscopically of the urine, and to avoid using this drug where the microscope gives evidence of a kidney lesion. The exact nature of the kidney lesion which (on this hypothesis) joins in precipitating an attack of haemoglobinuria would therefore be a subject for further inquiry.

— W. J. BUCHANAN, M.D., D.P.H., Major, I.M.S.,
Calcutta. Editor, *Indian Medical Gazette*.

A CASE OF COMPLICATED STRABISMUS.

THE patient in the following case, a girl aged 15, asked me in June, 1906, to do something to improve the defect in her appearance caused by the following condition: In addition to an unsightly left internal strabismus of 24° there was well marked lateral nystagmus which only ceased on extreme abduction to the left, and sight in this eye was extremely defective as the lens had been removed in infancy for congenital cataract. Fixation was possible, but could not be maintained for any length of time. The right eye was highly myopic (−7 D., with astigmatism of 4 D.). Movement was perfect. The patient being anxious for treatment, the question arose as to which eye it would be the best to operate on. As fixation was possible with the left eye, and the nystagmus became so much lessened on abduction to the left, it was hoped that an extensive advancement of the external rectus of the left eye would be productive of parallelism, and at the same time lessen the nystagmus. It was also considered that an operation on the right eye would leave her practically blind whilst the right was recovering from the operation, and any mishap to the eye would be a most serious state of matters. Lastly, the myopia present in the right showed that it was not completely healthy. All these points led one to attempt the rectification by operation on the left eye.

The left external rectus was advanced, and it was found necessary to divide completely the Internal, leaving the eyes exactly parallel at the completion of the operation and for some days after. Unfortunately, within a few weeks the left eye returned to its old position of convergence, only 4 degrees having been removed by the operation, though a marked lessening of the nystagmus was gained. No fault in the

technique could be found with the operation, as the advanced muscle could be plainly seen under the conjunctiva in its fresh situation. In October it was decided to operate on the right eye, the external rectus of which was freely advanced, and an almost but not quite complete tenotomy of the internal was carried out. This operation practically amounted to producing an abduction of the fixing eye, with the result that adduction to the middle line results in a corresponding abduction of the left eye, and a consequent removal of the convergence. The result was everything that could be desired, and the only drawback was the inability to see to do anything during the period of convalescence whilst the operated eye was occluded by a bandage.

This case is of interest in that it shows how much can be done by operation for a squint, even when associated with so many complications. The failure of the first operation is of very practical value in proving the uselessness of operating on the amblyopic eye in such cases. Many cases of squint following injury, loss of lens after operation, etc., are frequently met with, in which an example like this will show the advisability of operating on the sound eye and not on the squinting eye. Of course in cases of alternating squint it does not matter which eye is chosen, but otherwise the wisest course is to bring the fixing eye into alignment with the deviating one.

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MUSCULAR SPASM UNDER CHLOROFORM ANAESTHESIA.

In January I attended a primipara, aged 26. The occiput was posterior, and the vagina small, so that it would barely admit two fingers. Labour was slow and tedious, and after twenty-four hours recourse was had to forceps. Chloroform was administered from a Skinner's mask until the corneal reflex was abolished. The moment the fingers touched the vulva the legs were violently extended and became so rigid that the united efforts of the assistant and myself were insufficient to flex them. The anaesthetic was pushed, and another attempt made to introduce the finger, only to reproduce the same phenomena. It was only on the establishment of deep anaesthesia that delivery was effected with considerable difficulty. The patient made an uneventful recovery.

The chloroform used was the methylated, of very well-known makers and of guaranteed purity. I have used the same batch on several occasions since with no unusual symptoms. Although muscular rigidity in the early stage of chloroform anaesthesia is common enough, such reflex spasm as that described, after the loss of the corneal reflex, seems sufficiently rare to be worth reporting. The spasm appeared to be limited to the legs, and I assume the cause to be a reflex impulse from the lumbar centres, these centres having failed to reach the general level of depression of the rest of the cord. The reasons for this failure are not easy to find.

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ERYSIPELAS TREATED BY A SPECIFIC ANTISERUM.

The patient in the following case—an elderly woman, stout, with a softened cardiac first sound—had a history of two previous attacks of facial erysipelas, the first six, the second four, years ago. She was ill six weeks the first, four the second, and had been troubled for some time with facial eczema after each attack. She had a cold for a week previous to her illness in the present instance.

State on Examination.

When I saw her first, on January 16th, there was a brawny swelling on each side of the bridge of the nose, more extensive on the left side; on this side the eye was half closed. Temperature 102.4°, pulse 120. Prescribed zinc and starch dusting powder, and applied a dressing. Wired for serum.

Progress.

The following day both eyes quite closed, swelling extended from occiput to naso-labial folds. Patient was deaf owing to involvement of the external auditory meati with the auricles, and breathing was oral owing to involvement of the nose; there was the usual subcuticular serous effusion. Temperature 101.6°, pulse 120. Delirium. Administered 25 c.cm. of antistreptococcus "erysipelas" serum. Evening temperature 102°, pulse 118.

Jan. 18th. The disease had not extended. Delirium still present. Temperature 100.4° in morning, 100° in afternoon; pulse 124, irregular, and somewhat intermittent. A mixture containing strychnine and digitalis prescribed.

January 19th. Temperature 98° in morning, 99.4° at night. Marked improvement in condition; both eyes half open, serous blebs drying up, swelling markedly decreased; delirium still present. A bromide and hyoscyamus draught given at night. A further 25 c.cm. of serum given.

Result.

January 20th. She had had a good night, and was quite sensible. Both eyes quite open, almost the only signs of the disease being a bleb on each upper lid and desquamation. She heard well, and breathed freely through her nose. Temperature 98°, pulse 96, and steady. She made an uninterrupted recovery, getting downstairs two days later. There was no sign of eczema.

The patient, from her age, physical condition, and tendency to heart failure, was an unfavourable subject for the disease, and one in which it might well have had a fatal issue. The almost immediate checking and rapid disappearance of the disease under the influence of the serum was remarkable and quite as satisfactory as the results obtained by the serum treatment of diphtheria. The serum was obtained from the Wellcome Research Laboratories.

Sutton Bridge. W. M. Crofton, M.B., R.U.I.

CALCIUM IODIDE IN ULCERS OF THE LEG.

It may perhaps be worth bearing testimony to the excellent results to be obtained from the use of calcium iodide in leg ulcers, as advised by Dr. Stephens in his article of July 21st, 1906. Through the kindness of my Superintendent, Dr. Chilcott, I have since last August been able to follow out the treatment with it of a large number of leg ulcers, and the result, as Dr. Stephens states, is nothing short of marvellous.

Ulcers which have for years stubbornly resisted all kinds of treatment, and whose owners have without avail been simply saturated with potassium iodide, in a week or two showed clean granulating surfaces, and have in almost all cases healed up. Two or three cases, which are healing more slowly, though immensely improved, are due, I believe, not to any deficiency in the drug, but to the ingenuity displayed by their owners in counteracting its effects—to put off the evil day of their discharge. In all cases the induration around the ulcers greatly diminished or entirely disappeared.

I also observed in a few cases of syphilitic necrosis of the nasal bones considerable benefit from its administration, and great relief was obtained in headaches associated with syphilis. The dose given in all cases was 2 grains in mixture three times a day, and there did not appear to be any increased advantage from augmenting the dose. Any mild external application seemed equally efficacious; in most cases I used a mild mercurial or iodoform ointment. I cannot claim quite so rapid results as those got by Dr. Stephens, except in recently acquired ulcers; at the same time I do not think any one who gives this drug a fair trial will be dissatisfied with its action.

In many institutions, and especially in Poor-law infirmaries, where a well-maintained leg ulcer is to the indolent as good as an old-age pension, one cannot but think calcium iodide will prove of great value, as the initial expense of the drug is more than counterbalanced by the ultimate economy in dressings.

Highgate Infirmary. A. G. Peter, M.B., Ch.B.Aberd.

A CASE OF HAEMOPTYSIS.

For fifteen years this patient, aged 42, had suffered from recurring attacks of haemoptysis; several of these had been of extreme severity, and had almost led to death. He had consulted physicians in all parts of the United Kingdom and had received a variety of diagnoses. The only physical signs which had ever been detected were a few râles at the right base after each haemoptysis. The sputum had been examined for tubercle bacilli on a great number of occasions, always with a negative result. Again on this occasion the only physical signs were a few râles at the right base. The haemoptysis was very considerable in quantity, and occurred almost daily over a period of three weeks. The sputum was examined

about every third day, and showed excellent blood casts of the bronchi, numerous pearly granules containing quantities of alveolar cells, but no purulent portions, and, although the search was most thorough, no tubercle bacilli. The haemoptysis was gradually diminishing. We had decided that on its complete cessation we would take an *x*-ray photograph, with the view of determining whether any tuberculous foci in the lungs would be detected by the screen or on a plate; such foci, being old and sclerosed, would give a very marked shadow both on the screen and on the negative. He died from a sudden haemorrhage of enormous extent, within five minutes of its onset.

At the autopsy we found a few old sclerosed nodules both at the left apex and at the right base; also at the right base a small mass of thick caseous material surrounded by consolidated lung. The caseous material contained a large number of tubercle bacilli.

We would suggest that the previous attacks of haemoptysis were produced in a similar manner, namely, that the tuberculous focus underwent a very slow degeneration, that the resulting caseous material was too thick to escape into the bronchi and be coughed up and that on this account tubercle bacilli had not been found in the sputum: that the retention of the caseous material led to ulceration of the vessels in the lung tissue immediately around and thus to the severe haemoptyses; that in the previous attacks a sclerosis of the surrounding tissues eventually cut off the caseous mass which finally became absorbed.

An *x*-ray examination in this case would certainly have shown the presence of nodules in the lung and aided in establishing a diagnosis.

The case of haemoptysis appeared to us to be of sufficiently unusual type to be worthy of being placed on record, as is also the fact that phthisis may exist for fifteen years without tubercle bacilli being found.

J. BERNARD THOMPSON, M.R.C.S., L.R.C.P.
F. H. JACOB, M.D., M.R.C.P.,
Physicians, Nottingham General Hospital.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE LONDON HOSPITAL.

A CASE OF CEREBRO-SPINAL MENINGITIS OF THE APOPLECTIC TYPE WITH HYPERPYREXIA.

(Reported by HOWARD F. WARNER, M.B., B.S.Lond., House Physician.)

A boy, aged 10, was admitted on April 11th.

History.

It appeared that the child had been quite well (but rather dull) for the last few days of any previous fits or illness of any kind in recent years. She had gone to school as usual in the morning; she was in Standard IV., and during the morning had complained once without apparent reason. She went home to dinner in the middle of the day and then only complained of pain under the left arm where there were some enlarged glands. She returned to school in the afternoon, and nothing further was noticed until suddenly she fell off the form on which she was sitting and had a "fit," as the teacher said, this lasting 5 minutes.

Condition on Admission.

The patient was brought up to the hospital at 5.30 still in a comatose condition. She could not be made to respond to her name or commands, and was irritable on examination. The pupils were dilated and equal, but not much reacted, and there was marked rigidity of the neck and limbs, slightly greater on the left side. The breathing was stertorous and rapid. Pulse 160; temperature 105°. There was no unilateral paresis to be found. The knee-jerks were increased and equal, but ankle clonus was present in both legs. Babinski response was first down and then markedly upwards. There was no ankle clonus. There were very marked dissociated eye movements, and divergent strabismus prevailed the whole time (there had been none while the child was in health). The corneal reflex to touch was only just present. The hands were clenched with the thumbs turned into the palms, and from time to time there were convulsive movements of the arms and legs, but bilateral throughout; the knees were drawn up and all joints flexed strongly, but the head was retracted.

There was an abrasion over the right eye where the child had fallen, and another slight one on the right cheek, but nothing sufficient to lead one to regard the symptoms as an "effect" of the fall rather than its "cause." There was no discharge from either ear. The lungs showed signs of a diffuse bronchitis only; the apex beat was displaced 1 in. to the left, but the heart sounds were clear.

After-History.

A diagnosis of cerebro-spinal meningitis was made provisionally and the child was put to bed and given chloral and bromide every four hours for six doses, and fed on milk, which could then be given with a spoon. She vomited once that evening. During the night the temperature rose to 103.5°, and dropped to 103° in the morning; the stupor deepened, and nasal feeding had to be instituted.

The next day (April 12th) the right knee-jerk had disappeared, and the Babinski response was definitely upwards on both sides; the condition was otherwise unchanged. Incontinence of urine and faeces had been present throughout. Towards evening the respiration rose suddenly from 40 to 85 a minute, with cyanosis and slight bilateral movements of the arms and legs; the temperature taken during this attack was 106° F. It lasted about five minutes and then passed off, leaving the temperature 105.5°, and respirations 40. The pulse could not be counted during the attack, but afterwards was 156. The eyes were carefully examined, and definite early optic neuritis was seen.

Lumbar puncture withdrew a large quantity of absolutely clear fluid with great ease, which on bacteriological examination grew a large Gram-positive coccus but no meningococcus; another culture remained quite sterile for three days.

Another attack of dyspnoea with hyperpyrexia (107° F.) came on at about 11 p.m. that night, and the patient died at 5.30 a.m. on the following morning without recovering consciousness.

An evanescent erythematous mottling of the skin on the limbs was noticed on April 11th, but nothing very definite in the nature of a rash. The whole illness, from the sudden onset in school till death, only occupied thirty-seven and a half hours.

Necropsy.

There was marked engorgement of the small vessels in the meninges over the whole brain, but absolutely no thickening of the membranes or exudation; the ventricles were slightly distended, but no gross change of any kind was found in the brain after a very minute examination. The spinal cord was found to be surrounded by a peculiar gelatinous material in the supradural space; this material was quite clear. The spleen was rather of the typhoid type, there was tremendous enlargement of Peyer's patches and the lymphoid follicles of the rectum, which were so swollen that they could be easily seen from the outside of the intestine before it was opened. Lymphatic glands were enlarged somewhat all over the body, and the thymus was distinctly large, weighing 1 oz. The lungs were congested with areas of collapse, but there was no sign of tubercle in lungs, brain, or elsewhere.

REMARKS.

There is very little doubt that this was a case of meningitis, another due to the *bacillus intracellularis* of Weichselbaum or to the large Gram-positive coccus which was actually found; and that the overwhelming virulence as to cause death before the usual exudation had time to occur. It is also remarkable that apoplectic symptoms should have been so quickly produced, and these look like the result of some very virulent toxin.

In connexion with publishing these notes I am much indebted to Dr. Percy Kidd, under whose care the case was.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. Warrington Haward, F.R.C.S., President, in the Chair.

Tuesday, April 23rd, 1907.

Diagnosis of Addison's Disease.

Dr. Otto Grünbaum read a paper on this subject. The chief signs and symptoms of Addison's disease were asthenia and pigmentation, but either or both of these might be present in many other diseases, and frequently the early stages were difficult of diagnosis. Some eight years ago he had found that oral administration of suprarenal extract to normal individuals did not cause a rise of blood pressure. Since then evidence had accumulated to show that when a rise of pressure followed the exhibition of the drug by the mouth it indicated suprarenal inadequacy. In doubtful cases the blood pressure was determined accurately, and then 3-grain doses of suprarenal extract were administered thrice daily for three days. The blood pressure was again estimated, and a distinct increase was very suggestive of Addison's disease provided there was no valvular lesion of the heart. Often it was possible to decide that the lesion of the adrenals was tuberculous by suitable examination of the opsonic index of the blood after inoculation with tuberculin.

Dr. H. D. Rolleston agreed that a most important point in the diagnosis of Addison's disease was the low blood pressure, and he had seen a rise of blood pressure occur after giving suprarenal extract by the mouth in that disease. A condition of suprarenal inadequacy existed short of Addison's disease, and it might be that the effect of suprarenal extract on blood pressure might be of diagnostic importance in such cases. The lowest blood pressure he had seen in Addison's disease was one of 70. The entire disappearance of the radial pulse within some hours of death was not infrequent in the disease. The pigmentation of the mouth seemed to require irritation, as from bad teeth, for its occurrence, so he attached but little importance to its absence in diagnosis.

Dr. F. Parkes Weber referred to the condition of prolonged asthenia following on an attack of some ordinary infectious disease as characteristic of Addison's disease. Reference was made to a case of prolonged asthenia after influenza; some months after recovery pigmentation appeared, and death occurred in a syncopal attack. Both suprarenal glands were found at the necropsy to be caseous and matted across the aorta.

Dr. Howard Tooth alluded to the pigmentation of bromism which sometimes occurred in young people.

Dr. W. Ewart remarked that there were probably several diseases grouped as Addison's disease—there was an asthenic variety which was often fatal and another and less severe variety in which pigmentation was very pronounced. There might, indeed, be different diseases of the suprarenal causing difference of type of symptoms.

Dr. F. E. Batten asked how the electrical reactions in Addison's disease compared with those in myasthenia gravis.

Dr. Grünbaum replied.

MEDICAL SOCIETY OF LONDON.

Charles A. Ballance, M.V.O., M.S., F.R.C.S., President, in the Chair.

Monday, April 22nd, 1907.

Iliac Affections Simulating Appendicitis.

Mr. H. J. Waring in a paper on some surgical affections of the right iliac fossa which simulate appendicitis restricted his remarks to cases in which the cardinal symptoms of an attack of acute or subacute appendicitis are manifested—namely, abdominal pain commencing usually in the umbilical or epigastric regions, of sudden onset and becoming localized later in the right iliac fossa, nausea or vomiting, and rigidity of the muscles in the lower part of the anterior abdominal wall, especially on the right side. As examples he detailed two cases of acute infective osteo-myelitis affecting the hollow portion of the ileum where it forms the deep boundary of the right iliac fossa. Tuberculous disease of the deeply-placed lymphatic glands in the right iliac fossa might exist for some time without giving rise to symptoms which rendered detection of the disease possible. Enlarged lymphatic glands in that fossa which became the seat of secondary infection might also superficially simulate an attack of appendicitis; so too, in the absence of a complete history and detailed pelvic examination, might an abscess secondary to a septic condition of the right broad ligament or Fallopian tube. In one instance an adeno-papilloma of the mucous membrane of the caecum surrounding the opening of the vermiform appendix into the caecum simulated the disease in question. The early symptoms of haematoma of the right ovary might also suggest the condition, and the same was true of an acute torsion of a displaced right ovary, and of a haematoma of the right iliac fossa brought about either by mechanical violence to that region, or from breaking down of a malignant growth, or rupture of a diseased blood vessel. Other affections which the author had seen lead to confusion were extrauterine gestation and typhoid fever. In all supposed cases it was essential to ascertain, if possible, the exact mode of onset of the disease and the chronological sequence of the different symptoms, to consider carefully all facts of importance in connexion with the previous history, to make a complete clinical examination of the abdomen and pelvis, and, if still in doubt, examine the blood.

Goitres Removed under Cocaine Anaesthesia.

Mr. J. Lynn Thomas, in a paper on a series of cases of goitres removed under cocaine anaesthesia, described his method of producing anaesthesia. He drew the edge of the scalpel very lightly along the neck in the position which later on formed the collar incision of Kocher; by that manœuvre no pain was inflicted, but sufficient blood exuded to form a thin red line, under which from 1 to 2 drachms of a 1 per cent. solution of cocaine was injected, by means of Kocher's syringe, from end to end, so as to form a continuous subcutaneous ridge. As soon as the injection of cocaine was completed, the collar incision was made at once; the upper flap was first dissected upwards, and consisted of skin, subcutaneous tissue, platysma myoides, and the fascia covering the anterior surface of the neck muscles. Every blood vessel exposed was first clamped by two Kocher forceps and divided between them, so that the amount of blood lost was a mere trifle. The lower flap was then formed.

Mr. A. E. Barker said instead of cocaine he used beta eucaine 0.2 per cent., with an addition of adrenalin chloride 1 in 200.000.

Glasgow Medico-Chirurgical Society.—At a meeting on April 5th, Dr. Walker Downie, Vice-President, in the chair, Dr. A. A. Gray showed the temporal bones of a patient who suffered from *Sercus catarrh of the middle ear*. Both tympanic cavities were full of gelatinous material of a pearly-grey colour. The membranes were sodden and the epidermal layer came off in flakes. There was no perforation. The membrana membrane of the tympanum was softened and friable. This condition extended into the antrum. The stapes was movable. The cavity of the middle ear, antrum and mastoid cells were filled with the exudation. The attic and aditus were also filled, leaving no air-containing space. The case explained the frequent absence of a demarcating line on the tympanum, distinctly indicating the level at which fluid in the middle ear stands. Dr. H. Wright Thomson showed cases illustrating skin grafting in ectropion, symblepharon and rodent ulcer. Both skin and fat were removed and the fat cut off with scissors; the skin was then placed in position as required. The cases shown had been greatly improved by the operation. Dr. G. T. Dearson, C.B., reported a case of *Traumatic* [illegible] in a man 24 years of age. The head had been crushed by a jail cage antero-posteriorly, and the shoulders driven downwards and forwards into the abdomen and pelvis. There was intense congestion of the head and neck, also petechial in character but not affected by pressure. There was considerable oedema around the eyes and mouth. Subconjunctival haemorrhage was considerable and there was a large sublingual haematoma. There was also a probability of haemorrhage into the orbit as there was some proptosis; there was no fracture. In three days the congestion and discoloration began to fade and by the

eighth day was only present in the forehead, and this now yielded to digital pressure. There was discoloration around the eyes and nose as in an ecchymosis. In a short time all the discoloration had disappeared. Professor Glaister referred to another example, and said the case was of great medico-legal importance.—Dr. A. Young gave a lantern demonstration illustrating a modification of the *Wolfe-Krause method of skin grafting*. The whole skin and subcutaneous fat were rapidly removed and placed in sterile saline solution. The wound was then stitched up, the removal of fat facilitating the coaptation of the edges. The fat on the graft was then removed, and the remainder, cut into suitable sizes, was then placed on the prepared surface—if a fresh surface, strong disinfectants were avoided; if a granulating surface, the granulations required to be healthy. A layer of protective gauze was subsequently laid over it and a moist boracic or saline dressing put on. The dressing was changed daily but the protective gauze was left for several days.

Royal Academy of Medicine in Ireland.—At a meeting of the Section of Medicine on April 5th, Dr. J. M. Redmond, P.R.C.P.I., President, in the chair, Dr. George Peacocke read notes of a case of cerebro-spinal fever in a child, aged 5, the subject of lymphatism. The attack ended fatally eleven hours after the onset of symptoms. The chief symptom was repeated attacks of convulsions. There was only slight retraction of the head. Kernig's sign was absent. There were several purpuric spots of irregular size on the legs and arms. The autopsy revealed the presence of lymphatism—enlarged and bulky thymus, enlarged mesenteric glands, hypertrophied Peyer's patches and solitary follicles, prominence of the Malpighian corpuscles on section of the spleen. Cerebro-spinal fluid removed by lumbar puncture after death was turbid, the turbidity being due to leucocytes. Weichselbaum's meningococcus was found. Dr. Kirkpatrick asked if a diagnosis of the condition of lymphatism had been made before death, and if there was any way by which it could be recognized. The condition had been found in a number of cases in which sudden death had occurred during the administration of anaesthetics for operations, and the diagnosis of lymphatism before death was a matter of practical importance. Professor White thought it possible that the condition of lymphatism had a good deal to say to the question of infection. Most of the cases that died of cerebro-spinal meningitis had had trouble with adenoids and a good deal of lymphoid tissue at the back of the nose, and it was possible that they became infected in that way. The organisms existed in some healthy people. At the back of the nose there were many kinds of diplococci, many difficult to distinguish from the organism in cerebro-spinal fever. The only case which he had examined *post mortem* in the present outbreak had the condition which Dr. Peacocke called lymphatism. Dr. Peacocke, in reply, said the idea of lymphatism did not occur to him during the patient's life. The symptoms before death were, unfortunately, practically nil, and the only physical sign likely to be detected was such dullness as the very large thymus present might cause.

British Balneological and Climatological Society.—At a meeting on March 16th, Dr. William Ewart read a paper on the present position of the treatment of tuberculosis by marine climates, an extract of which is published at page 986. In the discussion which followed, Mr. H. Colbeck in a statistical paper emphasized the value of clear air; the great cities of England lost from three to four hundred hours of bright sunshine yearly through smoke alone, and Dr. A. Scarlyn Wilson showed from mortality statistics that there was reason to infer that the stream of phthisical patients which formerly flowed to Hastings, among other towns, had been partially diverted into other channels. If other seaside resorts had been similarly affected, a great change must have taken place in the opinion of the medical profession as to the value of marine stations in the treatment of active phthisis. Dr. Arderon Bailey thought that the patients who did well at marine stations were those whose opsonic index showed a considerable power of reaction to be present, especially when tested by injections of tuberculin. Dr. Bacshaw, looking back upon an experience of forty years at Hastings, was able to point to a long list of patients who had lived through the active stages of pulmonary tuberculosis and had settled down to spend long lives, with arrested damage, some partially, some entirely cured. Such cases bore striking testimony to the advantages to be derived from a sheltered sea-coast climate. Mr. George Pernet (London) desired to call attention to the importance of general treatment in tuberculosis of the skin. As to lupus vulgaris, now that patients could be made presentable by appropriate treatment, it should be possible for such cases to be allowed without demur to take advantage of convalescent homes on the sea coast, the more especially as their complaint was not infectious. Dr. Wethered (London) said a marine climate was practically one form of the "open-air" treatment of the disease, the essentials of which might be obtained *par excellence* at English seaside resorts. It was important to study "individualism" in the selection of cases to be sent to marine climates. Some patients seemed to have a great predilection for the seaside and this characteristic should be encouraged. Residence at the seaside was most valuable in the treatment of patients who had passed some months in a sanatorium and in whom permanent arrest had not yet been obtained. Dr. Percy Lewis (Folkestone) criticized sanatorium treatment, and advocated the advantages of marine climates for the treatment of most forms of tuberculosis. Dr. Leonard Williams said that sanatoriums were doing a fine work, not so much in curing phthisis as in educating the public in open-air methods. Marine climates could offer no such advantages, because climate without method was useless. The discussion was adjourned to the next meeting.—Dr. Alfred Street (Westgate-on-Sea), on the resumption of the discussion on April 10th, thought that, as maintained by the opener of the discussion, a more extensive and more systematic use of our marine climates was strongly indicated. Dr. Solly (Harrogate) alluded to the beneficial influence of variety of scene to all who were obliged to seek health under the necessarily restricted conditions of a sanatorium life; in this respect a "sea view" offered advantages which no inland station could afford. Dr. Clippingdale considered that a case of phthisis, in any stage of the disease, did better in a bracing climate than in a relaxing one. Dr. Leonard Williams said that it was necessary to draw distinctions between various kinds of marine climates. The climate of the north coast of the Isle of Thanet was as different, for example, from the south coast of Devonshire as the climate of high altitudes was different from the climate of the plains. It depended upon the type of tuberculous person which of these climates should be recommended. Dr. Ewart, in reply, said the bacilli could not be directly influenced by such slight oscillations of temperature or such moderate variations of climate as occurred within the temperate zones. But to their host these influences made all the difference. He entirely agreed with Dr. Street and other speakers as to the unequalled value of the bracing climate of Thanet; but it was apt to be too "strong" for the more advanced cases of phthisis, although invaluable in the early stage and in surgical tuberculosis.

Ulster Medical Society.—At a meeting on April 4th, Dr. Gaussen, President, in the chair, Dr. Calwell showed a case of induration and enlargement of the thyroid, with a similar condition of the glands on both sides of the neck, in a man aged 50. A provisional diagnosis of malignant disease had been made, but the patient had refused to allow a gland to be removed. The condition had existed from five to six months, and had been slowly progressive. The patient had lately lost flesh, and was showing signs of pressure on the trachea. There was nothing in the larynx. Mr. Mitchell showed a case in which ankylosis had insidiously set in in the right hip, with 1½ in. shortening and outward rotation of leg, while the patient was undergoing treatment for necrosis of the right tibia, there had probably been a latent arthritis with destruction of the bone. Dr. Mekie showed a young boy with true aortic stenosis, as evidenced by the slow, weak pulse, strong heart action, and thrill.—Mr. Mitchell made some suggestions as to the treatment of some common surgical ailments from a general practitioner's standpoint. (1) For nocturnal emissions he had tried a blister over the lumbar region, which he kept open by

D'Albespeyre's plaster; this method was serviceable also in enuresis and in one case in functional incontinence of faeces. (2) For internal piles he demonstrated a method of injecting into the neck of the pile 10 minims or so of a solution of hazeline and 15 per cent. carbolic acid. (3) For anal fissure he had found relief and cure from painting with orthoform and with pure ichthyol. (4) For pruritus ani, the application of 30 per cent. carbolic acid or a saturated solution of chloretone. (5) For chronic abscess, opening and curetting. (6) For tubercular sinus, the injection of a 2 per cent. solution of formalin.—Dr. Williamson read notes on a case of cerebro-spinal fever during pregnancy in a girl of 13 years and 9 months. Death ensued too rapidly to allow of delivery.

Leeds and West-Riding Medico-Chirurgical Society.—At a clinical meeting on April 12th, Dr. Bampton in the chair, the following were among the exhibits:—Dr. A. G. Barrs and Mr. H. Littlewood: A case in which a tumour pressing on the spinal cord at the level of the 9th dorsal vertebra, and causing complete paraplegia, had been removed by laminectomy. Sensation in the limbs returned as soon as the patient regained consciousness after the operation; in a fortnight there was perfect control over the sphincters; improvement was still in progress. Mr. A. L. Whitehead: A case of extensive *Mastoid disease* with extradural abscess and much external pachymeningitis, successfully operated upon. There had been an old-standing otorrhoea, but the acute condition supervened upon an attack of influenza. Mr. R. L. Knaggs: A case of *Duodenal fistula* in the right loin in a girl aged 17. Last August she had an acute attack of abdominal pain, and from October to January had pyrexia and induration in the right psoas region; this was opened and thought to be a psoas abscess. Two months later food began to come through the fistula, shortly after being swallowed. For various reasons the fistula was regarded as being probably of duodenal origin. Mr. J. F. Dobson: A case of *Spinal caries* treated on a Bradford's wire frame for six months with much improvement. Dr. Maxwell Telling: Two cases of *Anaemia splenica infantum* in Jewish twins; also a third case in which complete recovery had taken place. Dr. Gordon Sharp: A girl of 5 in whom motor aphasia with left hemiplegia developed subacutely. Two months later right hemiplegia was ushered in by a convulsion. This side had since recovered, but some weakness of the left side persisted. Mr. T. H. Fox: A cretin showing marked improvement under three years' *Thyroid treatment*. The case was interesting in that a particular brand of tabloids produced improvement for six months and then became inactive. A similar result was obtained with another preparation; on reversion to the first a like result followed. This happened throughout the case. Dr. T. Churton: A case of *Anaemia splenica infantum* in a child the subject of congenital syphilis. The spleen was enormously enlarged, and five distinct notches could be felt in it. Also a case of splenic anaemia in a man of 30. The anaemia was of the secondary type; there had been three severe attacks of haematemesis during an eighteen months' history. Dr. Wardrop Griffith: A case of *Ataxia* of sudden onset and rapid progress. Commenced on February 27th, and rapidly spread to the arms, increasing in the legs. The Babinski phenomenon was present and varying areas of anaesthesia present in the legs, but no other abnormal sign. The case was regarded as probably one of disseminated sclerosis. Mr. H. Collinson: A case in which half the tongue had been removed by Whitehead's method, together with the submaxillary and deep cervical glands. The operation had been performed three and a half years ago, and so far there had been no recurrence.

Laryngological Society of London.—At a meeting on April 5th, Dr. J. B. Ball, President, in the chair, the following were among the exhibits:—Dr. StClair Thomson: (1) A man, aged 29, who had been shown at the previous meeting on account of a malignant endolaryngeal growth. The latter had since been removed by operation, and a section of it was shown. Some members present not being satisfied that the growth was malignant, the specimen was referred to the Morbid Growths Committee. The interest of the case lay in the early age of the patient. (2) A woman, aged 50, with prolapse of the ventricle of Morgagni. This patient had also been exhibited at a previous meeting, and since then the prolapse had been removed. A microscopic section showed mainly oedematous tissue.—Dr. H. J. Davis: A boy aged 12, who, according to his mother's statement, had never spoken. He was unable to protrude the tongue. He was very intelligent, and heard and understood perfectly. He could hum songs in tune, but could not speak a word (aphemia). At the age of 3 he had had right hemiplegia. Opinions being invited as to suitable treatment, Dr. James Donelan cited a similar case, in which improvement followed education in a deaf and dumb institution. Dr. Dundas Grant considered that there was a mechanical defect, the muscles of articulation being weak. Dr. Watson Williams, who suggested there was a lesion in the neighbourhood of Broca's convolution, and that there might have been an injury at birth, agreed with Dr. Donelan's suggestion. Dr. de Havilland Hall considered the case should be trained, and that the mother should be informed that the treatment would be a matter of years. Mr. C. A. Parker also considered that the patient would do well under training, unless the disuse of his tongue had rendered articulation impossible. Dr. Davis, in reply, said he thought the boy could not speak owing to the paralysis of the tongue, and on that account he would not derive much benefit from being trained.—Dr. Donelan exhibited a patient the columella of whose nose had been destroyed either by syphilis or lupus. Various suggestions were made for overcoming the resulting defect, opinions being divided between a plastic operation and the use of a mechanical appliance.—Dr. Dundas Grant exhibited a case of pharyngo-keratosis (mycosis) improving under application of salicylic acid in sulpho-ricinate of soda. The patient had been under this treatment for twelve months. When first seen various applications were made, first a saturated solution of salicylic acid in alcohol to the spots on the right tonsil, the galvano-cautery to the left one, then pure formalin to the left one, and a 10 per cent. solution of sulpho-ricinate of soda to the right. Next a 1 per cent. solution of formalin in glycerine was applied for a month, at the end of which time comparatively no change had taken place. The patient then commenced a daily application of a 10 per cent. solution of salicylic acid in sulpho-ricinate of soda, first to the right tonsil and then to both. She complained at times of the application producing a dry feeling in the throat at night, but eventually scarcely a vestige of the disease remained. The President said that he had tried salicylic acid for mycosis, but he had little faith in it. Dr. de Havilland Hall said keratosis, like warts elsewhere, sometimes cleared up in an astonishing way. Sir Felix Semon inquired why keratosis should be treated locally at all, inasmuch as it always got well of itself. There was no real remedy for the condition, constant applications to the throat rendered the patient needlessly nervous, and greater importance was attributed to the malady than it deserved. Moreover, any one who treated such a trifling condition for a long time exposed himself to recrimination. Sir Felix Semon hoped the profession would recognize that keratosis occurred when the patient was run down, and that it would disappear under a change of air and tonic treatment, and that no local treatment was necessary. Dr. Fitzgerald Powell had found that cases generally got well after the application of a cautery. Mr. Herbert Tilley also spoke of spontaneous disappearance of the condition without local treatment. Dr. Dundas Grant, in reply, expressed himself in agreement with Sir Felix Semon. He had put before the patient the fact that the appearance of the throat was of no significance, and thought the discomfort that the patient had gone through in using the remedy was out of proportion to the result. He would not recommend the treatment in every case of the kind.—Dr. Jobson Horne exhibited a macroscopic specimen of lymphosarcoma of the mediastinum. The growth had caused extensive obstruction, almost obliteration, of the oesophagus without any breach of the mucous membrane. The larynx presented oedema localized to the right arytenoid region; immediately below the oedema in the fold passing down between the cartilages of Santorini and Wrisberg was a small ulcer. The points of interest were the unusual extent of the oesophageal obstruction, and the question whether the localized oedema of the larynx was occasioned by local infection or was secondary to obstruction caused by the mediastinal growth.

North of England Obstetrical and Gynaecological Society.—At a meeting in Manchester on April 19th, Dr. E. O. Croft (Leeds), President, in the chair, the following were among the exhibits: Dr. Lloyd Roberts (Manchester): A *Malignant ovarian tumour* from a multiparous widow, aged 65. The menopause had occurred twenty years previously. Abdominal swelling had been noticed for eight months, but there was no pain or loss of flesh. The physical signs were those of an ovarian cyst with ascites. The patient being feeble, a preliminary paracentesis abdominis was performed, followed by ovariotomy four weeks later. The opposite ovary, being cystic, was removed also. Recovery was uneventful. Microscopically the growth was an adeno-carcinoma. Dr. Blair Bell (Liverpool): *Sarcoma of the clitoris* removed from a woman aged 56, 6-para, and nine years past the menopause. A lump in the external genitals had been noticed for about six months and caused considerable discomfort in walking, but there was no pain, bleeding, or difficulty in micturition, and no loss of flesh. The growth, which was widely removed, consisted of a large, irregularly-spherical mass, more or less necrosed on the surface and extending to the left labium minus. Under the microscope it was seen to be a large spindle-celled sarcoma with a somewhat unusual amount of intercellular substance.—Dr. Arthur J. Wallace (Liverpool) related a case in which a *fibroid weighing 23½ lb.* had been removed with the uterus from a woman aged 53:

The tumour had burrowed between the layers of the left broad ligament and up beneath the peritoneum, covering the posterior wall of the abdomen, and during operation the lower part of the descending colon and its sigmoid flexure had to be stripped off the growth. Forty hours after operation the patient began to have a continuous discharge from the rectum of dirty, watery, slimy fluid, very occasionally streaked with blood. All general and local remedies proved ineffective, the discharge persisting until the sixteenth day. It was deemed to be due to damage of the nervous supply of the colon during operation, with resulting vasomotor paralysis and trophic disturbances in the wall of the bowel involved and sepsis within its canal. Six weeks after operation a temperature of 104° suddenly developed, and for a week the temperature was rarely below 100°. The patient's general condition steadily improved during this time, and no cause could be discovered for the temperature. The operation wounds had healed by first intention, and there had been no return of the diarrhoea. Now, four months after operation, the patient was in good health, but she still had elevations of temperature for which there was no apparent cause.

Dr. Arnold W. W. Lea (Manchester) related a case of *bilateral ovarial rotation of ovarian cysts* during pregnancy.

The patient, aged 27, was suddenly seized with severe abdominal pain and vomiting whilst pregnant three and a half months. A tense cystic tumour occupied the right side of the abdomen, and a smaller cystic mass was felt on the left side, the uterus occupying a central position. Abdominal section was performed. Both ovaries were converted into dermoid cysts, each of which had undergone acute torsion. The tumour on the left side had ruptured, and the peritoneal cavity contained blood. Both tumours were removed, and fifteen days later miscarriage occurred spontaneously; the foetus had evidently been dead for some days.

Bilateral ovariotomy had, it was noted, now been performed during pregnancy in at least sixty cases, and in the great majority without interruption of the pregnancy.

Dr. Carmichael (Liverpool) described a case of a woman aged 29, who had never menstruated, but complained of pain in the back, which lasted for two days each month. Her general health was good. There was no cough, and no local thoracic signs could be detected in the lungs. There were healed scars in the right groin, suggesting old suppurating glands, and a depressed healed scar on the inner side of the lower part of the right thigh, suggesting old necrosis of the femur; there were also some healed scars over the right tibia. The patient could not give any account of these scars. She was well developed, and apparently a strong healthy girl. There was no abdominal tumour. Under an anæsthetic the uterus was found somewhat enlarged and movable, and to its left a definite cystic swelling the size of a small orange. The sound would only pass ½ in. The diagnosis of malformation of the uterus with possibly some retention of blood was made. The abdomen was opened, and the uterus and Fallopian tubes removed; the vermiform appendix was adherent to the right tube, and also to the upper part of the rectum, into which it had opened. Both Fallopian tubes were distended with thick pus. The uterus contained caseous pus in its cavity, and also disseminated through its walls. The case was deemed one of *Tuberculous disease of the uterus* and appendages, causing primary amenorrhœa.

Society for the Study of Disease in Children.—At a meeting on April 19th, Dr. C. Chapman in the chair, the Chairman read notes on two cases of glandular fever in a mother and child. The following were among the exhibits:—Dr. T. R. Whipham: (1) A girl aged 8, the daughter of alcoholic parents, who had developed deafness, stuttering, and stridor, transient ptosis and anæsthesia, and some atrophy of the tongue. She was hypersensitive and emotional. The diagnosis lay between neurosis and disseminated sclerosis. (2) A girl aged 11, with adherent pericardium and aortic and mitral regurgitation, due to an attack of acute rheumatism eighteen months previously. Dr. Fletcher Beach: A boy, aged 6 years, with fibrous nodules over the right eye and occiput, atrophy of the left side of the face, marked curvature of the dorsal spine, and large pigmented areas on the abdomen and back. The case was considered an instance of von Recklinghausen's disease. Dr. Porter Parkinson: A girl of 2½ years old, with right hemiplegia and motor aphasia. After a month of complete loss, power of speech was gradually returning. Dr. Poynton: Addison's disease in a girl aged 9 years. She had had vomiting, lassitude, and fainting attacks for a year, and pigmentation of the face for a month; there was some pigmentation of the mucous membranes and the blood pressure was only 60 mm.; there was no anæmia. Mr. D. Fitzwilliams: (1) Multiple abscesses in a child 9 months old; there were twenty-seven abscesses on the head, body, and limbs, and a few had burst. There was no history of syphilis. (2) A syren fetus with a normal pelvis, but only one lower extremity. This consisted of a thick femur below which were two partially separated bones; the bones of the paddle-like foot were normal. (3) A girl, aged 11 years, with congenital absence of the left arm. The bones and muscles of the shoulder girdle were well developed. There was spinal curvature due to the unbalanced weight of the right arm. Mr. G. Pernet: (1) Erythema iris in a child, aged 3, due to intestinal intoxication. (2) Erythema papulatum haemorrhagicum in a girl aged 15, stated to be a vegetarian. Mr. Jaffrey: An infant, aged 6 months, with a cartilaginous tumour attached to the whole length of the left side of the nasal septum, it blocked the left side of the nose, and bled freely. Dr. J. H. Tallent: A child, aged 2½, with both testicles retained. When 6 weeks old a swelling appeared in the right groin, but disappeared again in about five minutes; a similar swelling had since frequently been noted.

Therapeutical Society.—At the meeting on April 16th, Dr. T. E. Burton Brown, President, in the chair, Dr. George Oliver, in a paper on the *Control of supernormal arterial pressure*, gave the leading results of his clinical observations on the management of a persistent rise in the arterial pressure by diet, baths, electricity, and drugs. He pointed out the value of a non-stimulating diet, and especially of a lacto-vegetarian and salt free diet in the high pressure cases; a minimum proportion of calcium salts in drinking water, warm massage douching, saline and carbonic acid baths, d'Arsonvalization and the electric light and ozone baths, warm equable climates (Jamaica, India, and Egypt), evacuant treatment, asepsis of the bowels. Control over persistent increments of arterial pressure was limited to the cases in which the rise was moderate, and the vasomotor play of the peripheral arteries was not seriously impaired. Sir Lauder Brunton thought that in cases of very high tension absolute rest in bed, with quiet of body and mind, was indispensable. With perfect rest, vegetarian diet, and the steady use of nitrites, even cases of exceedingly high tension might be successfully treated. A salt free diet might be useful but it was too irksome to be continued for long. Salt might to a considerable extent be replaced by sugar in the dietary. The modern treatment of high tension by nitrites and nitrates had been recommended by Lord Bacon in the time of Elizabeth, as the two remedies he recommended for pro-

longation of life were nitre and blood letting. The nitre he employed probably contained a quantity of nitrates, and blood letting was a remedy which had fallen too much into disuse, and in cases of high tension might be employed again with advantage. He showed Von Basch's instrument as modified by Potain for estimating blood pressure and also a combination of this instrument with Riva-Rocci's armlet. Dr. Herbert French reminded the Society that cases of very high blood pressure occurred even amongst those who were at the same time vegetarians, non-smokers, and lifelong abstainers. In his reply, Dr. Oliver agreed that rest in bed would diminish the high blood pressure even in the worst cases, but this was owing to a diminished call at the cardiac end of the circulation. In those who were obliged to work, the ventricle factor could not be diminished, and such cases seldom reacted to drugs so long as they remained up and about. He thoroughly approved of the revival of venesection in such cases.

Midland Medical Society.—At a meeting on April 17th, Dr. Edward Malins in the chair, the following were among the exhibits: Dr. Walter R. Jordan: A father and two children (boy and girl) with a condition of *Congenital keratodermia* affecting the palms of the hands exclusively. The father's father had been similarly affected. A brother of the father and a third child of the father were entirely free from the condition. Mr. L. P. Gamgee: A girl, aged 24, who for eight years had suffered from symptoms of *gastric ulcer*. She had had two attacks of haematemesis. The symptoms had been relieved by medical treatment, but there had been a relapse each time.

On July 25th, 1906, an anterior gastro-jejunostomy was performed by stitching. Within half an hour of the patient's return to the ward severe haematemesis set in, three pints of blood being vomited within the first twenty-four hours after operation. This ceased, and then at the end of ten days it became evident that a vicious circle had been formed, large quantities of bile-stained fluid being frequently vomited. On October 20th, 1906, a lateral anastomosis was made between the piece of jejunum passing up to and that passing down from the junction with the stomach. This resulted in cessation of the vomiting till February 13th, 1907, when vomiting recurred. On March 4th, 1907, the abdomen was reopened, and it was found that the jejunum, at a point just over the seat of the lateral anastomosis, and at another point 6 in. below this, was bound down by dense adhesions. These were divided, and the patient had been perfectly well ever since.

Dr. Douglas Stanley: A girl in her 13th year, who first came under observation when 10 years old on account of typical Raynaud's disease and rheumatoid arthritis. At that time the joint lesion was slight. The patient was deficient in weight and stature, and her mental condition was much under average. During the two and a half years the Raynaud's disease had improved, but the arthritic lesions had advanced, the hands especially showing typical characters of rheumatoid arthritis. The height and weight were now 3 ft. 10½ in. and 30½ lb. There was no evidence of enlargement of the spleen or lymph glands. Dr. J. G. Emanuel: A heart in which there was practically a *Single ventricle* (the right) into which the mitral and tricuspid valves opened and from which arose the aorta anteriorly and the pulmonary artery posteriorly. Close to the opening of the aorta was a foramen which led into a small potential cavity in the wall of the ventricle, and with this cavity the aorta communicated. This, therefore, represented a rudimentary and functionless left ventricle, and the foramen of communication between it and the right ventricle was the patent pars membranacea septi. The interauricular septum was complete. The aorta at its origin lay anterior to the pulmonary artery, and externally there was but an imperfect separation of the aorta from the pulmonary artery. This malposition of the great vessels was explained by an irregular descent of the septum, which should completely divide the primitive arterial bulb into aorta and pulmonary artery. All the valves were well formed; the foramen ovale was closed; the ductus arteriosus was obliterated. The specimen was from a male infant of 20 months who died from thrombosis of the right pulmonary artery with multiple infarcts in the corresponding lung. During life there was no cyanosis and no clubbing. The symptoms were sudden syncopal attacks. There was no thrill, but a loud systolic murmur was audible all over the precordium.

REVIEWS.

POISONS.

The constantly-extending investigation of organic products from both the vegetable and animal kingdoms, as well as the introduction into medicine and the arts of large numbers of artificially prepared bodies, and the development and improvement of methods of detecting and estimating poisonous substances, alike make it necessary that a work on toxicology which is to be really useful should be brought up to date at somewhat short intervals. The fourth edition of the book on poisons by Dr. A. W. Blyth and Mr. M. W. Blyth[1] is described on the title-page as "thoroughly revised, enlarged, and rewritten," and in essaying a judgement of the book it is natural to look principally at the newer portions of the matter. The general scope of the work remains as before, and is of the same comprehensive nature that characterizes the volume on *Foods* by these authors.

The first chapter is devoted to a general historical review of the subject and is of much general interest; definitions and methods of classification are next dealt with, and then follows a very useful summary of established knowledge on the relations between the chemical constitution of substances and their toxic action. The greater part of the book is occupied with a detailed consideration of the various poisonous substances ordinarily met with, which are dealt with in groups according to their nature and properties. Most of the poisons described are discussed very fully and in a manner to make the book extremely useful both to the physician and the practical chemist who has to detect poisons; pharmacological action and symptoms are described in detail, as well as methods of detection and separation. It must be admitted, however, that the references to new substances and to recent work are somewhat disappointing, and it is not quite easy to understand the principle on which matter has been selected for inclusion. For instance, a good deal of space is given to recent work on the aconite alkaloids, and the relatively non-poisonous benzoyl-aconine, which never occurs except in association with aconitine and is thus of no importance as a poison, is described, together with its gold compound and other derivatives; while strophanthin, the active principle of a drug that is in every pharmacy and dispensary, receives only eighteen lines altogether, and nothing is said about its chemical behaviour or methods of separating it. Antiarin, in the same group as strophanthin, is more fully described, and directions given for extracting it in cases of poisoning; but surely poisoning by strophanthin is far more likely to occur. Among the many synthetic remedies that may be classed as poisons, sulphonal and veronal and some of their homologues are referred to, but antifebrin, antipyrin, and other common and dangerous substances are omitted; sulphonal, by the way, is spoken of (p. 171) as dimethyl sulphone diethyl ethane, and all its homologues but one are referred to as derivatives of ethane, although the formula is given correctly representing it as diethylsulphone-dimethyl-methane. Eucaine receives a bare mention as a substitute for cocaine, while all the newer artificial local anaesthetics are not referred to at all. On the other hand, recent refinements in detecting and measuring very small amounts of arsenic receive adequate treatment; while cyanogenetic glucosides in plants, and epinephrin (adrenalin) from the animal kingdom are other recent matters that are dealt with.

FAMILY DISEASES.

The fall of the birth-rate, which began earlier in France than in other countries, has caused French pathologists as well as patriots to turn their attention to the etiology and prevention of hereditary maladies, and it has thus produced a large amount of valuable research during the last twenty years. Dr. Apert has already published many papers on heredity and kindred subjects, which would lead us to expect a masterly summary of all that is known about the matter in his treatise on family and congenital diseases.[2]

[1] *Poisons: Their Effects and Detection.* By Alexander Wynter Blyth, M.R.C.S., F.I.C., F.C.S., etc., and Meredith Wynter Blyth, B.A. Cantab., B.Sc. London, F.I.C., F.C.S., etc. Fourth edition. London: Charles Griffin and Co., Limited. Pp. 772. 21s. net.

[2] *Traité des Maladies Familiales et des Maladies Congénitales.* Par le Dr. E. Apert, Médecin des Hôpitaux de Paris. [Bibliothèque de Médecine Professeur Dieulafoy. Paris: J. B. Baillière et Fils. 1907. (Demy 8vo, pp. xi + 588, avec 80 figures dans le texte.)

It does not, however, pretend to be a complete presentation of the subject, for the author, as he says in his introduction, has limited the chapters devoted to congenital maladies to those diseases which have come under his particular notice, or which from their hereditary character most resemble family diseases, but the list is fairly exhaustive. Judging from the tone and the form of the chapters we presume that it is founded on a course of lectures delivered to students. Should this be the case, it would account for a certain dogmatism which characterizes its conclusions. The first three chapters are devoted to cardiac malformations, in the causation of which, when not associated with deformities of the chest wall, the author assigns a preponderant part to fetal endocarditis. When chest deformities are present the effect of intrauterine pressure acting through the upper extremities is clearly shown. Dr. Appert quotes largely from the excellent papers of Le Damany of Rennes on congenital dislocation of the hip. He considers that the alleged greater size of the fetal pelvis in the female explains the greater frequency of the deformity in the female sex. We do not think, however, that it has yet been proved that there is such a difference in size as would account for the incidence of the deformity. Achondroplasia is classed among the family diseases, and, whether or no this classification be accepted, the chapters on this subject and on facial fissures, branchial fistulae, and anomalies of the ears and eyes, are worth reading. The occurrence of telegony is now generally discredited, but the case quoted by Dr. Appert is so striking that the only alternative explanation appears to be coincidence. Sudden death as a family malady must be so rare that it would have little general interest but for the fact that it very nearly led, only two years ago, to a miscarriage of justice. Madame Weber had the misfortune to be alone with four of her nephews and nieces, and also her own son, when they were attacked by spasm of the glottis, which in every case proved fatal. Committed to the assize court, she would certainly have been condemned but for the intervention of Professor Brouardel and other medical authorities. Besides this striking case, Dr. Appert quotes a good many others which are worthy of note by medical jurists. The various palsies and myopathies which are more or less family diseases are succinctly dealt with. Perhaps the most curious of these is that family disease known as periodic palsy, the victims of which suffer from occasional attacks of paralysis of all the voluntary muscles, except those of the face and the tongue, without loss of sensation or consciousness but with complete absence for the time being of electrical excitability of the muscles and nerves. Having described the family affections of the sensory organs, of the skin, the blood, and the viscera, the author goes on to discuss vulnerability to certain diseases as a family affection. This chapter and the two which follow, on the various kinds of heredity—direct, collateral, or sexual, etc—and on temperaments and diathesis, contain much that is of interest. The book is well illustrated by drawings and photographs and a large number of genealogical trees. Its usefulness would have been enhanced by a fuller index and a bibliography. The references are scanty, and those that are given lack precision.

PATHOLOGY AND THE NEWER PHYSICAL CHEMISTRY.

Dr. Pauli's object in publishing his addresses on *Physical Chemistry*[1] in the service of medicine has been defined in his preface. He has wished to study "the extensive parallelism between the laws which govern the colloidal state *in vitro* and in the living organism," and has expressed his views in print, rather in the hope of stimulating his readers to undertake research on the questions he deals with than in the belief that his treatment of them will prove in any way adequate. The book suffers from the fault common to the majority of published addresses. What is an advantage in a lecture is often a drawback when seen in cold print. Thus, in the present work we read time and again of one man's "excellent investigations" (p. 118), of another's "fundamental work" (p. 107), of a "beautiful colloidal gold solution" (p. 107); these appeals to our emotions being supported by no reference to the original papers in which the phenomena were described. The author, moreover, has set out from the standpoint that the ionic theory in all its latest developments may be regarded as not less fundamental than the best established chemical hypotheses. When we remember that among the eminent men who have refused to accept the theory was the late Professor Mendeléef, and also when we consider the rash way in which the ion is only too often invoked to give an apparent explanation of what is at present inexplicable, we may well call in question the wisdom of assuming the doctrine of the ion to be established beyond all possibility of refutation. After making due allowance for these reservations, however, the work contains much that is of value. Special pleading, when as able as Dr. Pauli's, has the merit of giving a clear exposition of at least one side of the question.

After a short introduction on the influences to which the theory of medicine has successively been subjected, the first address deals with the inadequacy of the *energetische Weltanschauung*, or energetic conception of natural phenomena, of Ostwald to serve as a key to biological problems, and points out the intense significance of the ions of salts as opposed to the salts themselves or the solubility of protein solutions; it deals also with the methods employed to determine the work performed by the kidneys and the reasons why the behaviour of the blood apart from its white corpuscles may be looked on as determined by the ordinary laws which govern any solution. Numerous illustrations are given of the analogies between dead and living matter, such as the amoeboid movement discovered by Quincke in oil droplets, the formation of cases about testaceans as mimicked by Rhumbler with chloroform and finely-ground glass powder, and the like; the honeycomb structure of jellies described by Bütschli, and its relations to living material are fully discussed, the author preferring to explain the antagonistic action of cells not by divisions in the cell substance but rather as an analogy with reversible reactions in chemistry. The fourth address contains a most interesting and valuable account of a number of therapeutic experiments with the "sulphocyanate ion." The cases treated with the drug were neuroses and organic nervous diseases; the results were markedly beneficial, and contrasted very favourably with the similar effects of bromides and iodides. Equally successful was the treatment of a number of cases of increased blood pressure due to the most varied causes, small quantities of the sulphocyanate being, in accordance with theory, equivalent to much larger quantities of its possible substitutes. In another address, on the changes wrought in pathology through the growth of physical chemistry, the author lays especial stress on the success which has attended the application of the facts of colloidal chemistry to the investigation of toxins and antitoxins. His work concludes with a brief consideration of the electrical behaviour of protein. Dr. Pauli is fortunate in having secured in Dr. Fischer a translator whose work on similar lines has made him more than sympathetic. Though the German text has been closely followed it has also been rendered into readable English.

CHROMOCYSTOSCOPY.

Dr. FRITZ VOELCKER'S work on chromocystoscopy[4] is an interesting contribution to the investigation of renal function. The particular method of which it treats is the cystoscopic examination of the ureteral discharge after the subcutaneous injection of indigo-carmine. The coloration of the urine which follows this injection makes it possible to study with the cystoscope the alterations in renal efficiency and the contractions of the ureter which take place under varying conditions and in pathological states. In unilateral renal disease the method demonstrates differences in the discharge from the ureters and in the concentration of the indigo carmine coloration and may enable the surgeon to dispense with the use of the separator and the ureteral catheter.

Dr. Voelcker does not claim that this method is superior to those in which these instruments are used, but has

[1] *Physical Chemistry in the Service of Medicine.* By Dr. W. Pauli and Dr. M. H. Fischer. New York: J. Wiley and Sons. London: Chapman and Hall. 1907. Cr. 8vo, pp. 152. 7s. 6d.

[4] *Diagnose der Nierenkrankheiten unter Verwertung der Chromocystoskopie.* The Diagnosis of Surgical Diseases of the Kidney by Chromocystoscopy. Von Dr. Fritz Voelcker. 1906. Wiesbaden: J. F. Bergmann. (Pp. 187, 30 figures. 4s. 9d.)

applied himself simply to discover what value it possesses. He is able to show that information of the greatest value can thus be obtained, and that many obscure cases can be cleared up by it alone. Indigo-carmine appears to be superior to other colouring agents in the depth of colour which it imparts to the urine, the salt used by the author is the sodium compound of indigo-disulphonic acid. The examination is not attended by any particular difficulty if care is taken to obtain as concentrated a urine as possible. From a calculation of the percentage content of indigo-carmine in the urine and of the time of appearance of the colour after injection, an estimate is formed of the activity of the renal function. By the cystoscope it can be seen whether the colour comes from both sides simultaneously, whether it is equally excreted by both kidneys, whether the stream is stronger on one side than the other, and what amount of urine is being passed into the bladder with each ureteral contraction. It can thus be determined whether there is a difference between the functional capacity of the two kidneys and which kidney is doing the greater part of the work. Dr. Voelcker discusses the value of this method in the diagnosis and investigation of various renal diseases, and relates a large number of clinical cases illustrating its application. In renal tuberculosis, for example, most frequently a colourless urine is discharged from the diseased side; even when a kidney has only small foci the indigo-carmine reaction is markedly altered; such a kidney loses the power of concentration, and if a concentrated blue solution is obtained from a kidney, the organ is probably not tuberculous. Other conditions in which the author has tested the value of the method are calculus, stricture of the ureter, tumours, pyonephrosis, and movable kidney. It must be admitted that chromocystoscopy alone in a certain number of cases is able to afford sufficient evidence of the condition of a kidney to guide the surgeon in treatment. The information it affords is, however, less complete than that given by a study of the separated urines, and it appears extremely unlikely that it will displace the latter from clinical practice.

THE HANDICRAFT OF MEDICINE AND SURGERY.

We are not acquainted with any book in the English language which exactly corresponds to Dr. Julius Schwalbe's *Therapeutische Technik*.[5] Books such as Pye's *Surgical Handicraft* most nearly approach to it, but they only cover a part of the ground occupied by the distinguished authors who have collaborated under the editorship of Dr. Schwalbe. In his preface the editor says that the object of the work is to enable the student and the practitioner to become acquainted with all the most up-to-date methods of treatment and so render them less dependent upon specialists. It differs, he says, from the other books on the subject in that it treats of the practically important technique of the whole of therapeutics. The present "half volume" includes articles on massage, gymnastics, and mechanical orthopaedics, by Professor Hoffa; on hydrotherapy and thermotherapy, by Professor Vierordt; on radiotherapy, by Dr. H. E. Schmidt; on the preparation and administration of medicines, including plasters, baths, etc., by Professor Kobert; on selected subjects from general surgery (anaesthesia, general, local, and spinal; antisepsis and asepsis, infusion and transfusion, Bier's treatment of joint diseases, bleeding, sutures, and fractures and dislocations), by Professor Hildebrand. The technique of the treatment of the eye is dealt with by Professor Eversbusch; that of other organs will no doubt be included in the second "half volume," which is to appear at an early date. The names of the writers of the different sections are enough to ensure that their contributions will be valuable; but although a high standard of excellence is reached there are some defects in the book. For instance, in the section on gymnastics, the latest electrical machines for passive motion are not described. The article on sutures is scarcely up to date, for only the three commonest methods are mentioned. In an up to date work the subcuticular method should at least have been mentioned. The massage treatment of fractures, advocated by Lucas-Championnière and others, is well enough established to have merited description, even though Professor Hildebrand is not personally in favour of it. But these are minor defects, and the book should prove of great use to practitioners and students. It is well printed, and the illustrations are generally excellent, but some of the reproductions from photographs show very little beyond portraits of the operators and their assistants.

GENITO URINARY DISEASES.

A Textbook of Genito Urinary Diseases,[6] by Professor Leopold Casper, is a translation by Dr. Bonney of Philadelphia of the *Lehrbuch der Urologie* which was reviewed and commended in the British Medical Journal of July 16th, 1904. The translation, however, is considerably larger than the original work, owing partly to additions to the text by Dr. Bonney, and partly to the insertion of new illustrations in the text, as well as a number of full-page plates. The translation also differs from the original in that the section on radical operations for hypertrophy of the prostate has been rewritten conjointly by the author and the translator. The conclusions arrived at are: that when catheterization fails, or has to be frequently repeated owing to smallness of the bladder produced by thickening of its walls, when severe cystitis is present, or frequent attacks of retention occur, and when a case is not suitable for the Bottini operation, then a radical operation is to be considered. As regards prostatectomy, the weight of evidence is held to be in favour of the suprapubic operation for the majority of cases, but when the gland is hard and fibrous, and does not project far upwards into the bladder, the perineal operation is probably better. Dr. Casper has performed Bottini's operation thirty times with four deaths, and is in favour of it in selected cases, though he recognizes its dangers and realizes that its results are altogether uncertain. From the foregoing remarks it may be gathered that the present volume is made up of a mixture of German and American views and pictures. The book, no doubt, will appeal to a certain number of readers, and these may be assured that good and trustworthy information about diseases of the genito-urinary system may be gained from it. One slight drawback, however, is that as the translator's additions are not distinguished by a different type, and not always even by separate paragraphs, the reader who is not on the look-out for not very conspicuous brackets may at times be uncertain whether he is reading author or translator. Those who wish to possess Professor Casper's work only and who can read German may save their pocket considerably by buying the original work, which costs little more than half as much as the translation. The latter, moreover, would be all the better for careful revision, for a pretty lengthy list of errata might easily be compiled from it as it stands. This notice may fitly end with the following quotation from the author's preface: "An English surgeon first led me into the realm of genito-urinary diseases, and it is with a feeling of satisfaction and gratitude that I think of him, my honoured teacher, Sir Henry Thompson, of London."

M. Pillet's clinical guide to the principal diseases of the urinary organs[7] has a preface by Professor Guyon, who points out that the book is intended, not for the specialist, but to help the general practitioner in the management of cases of urinary disease which come before him in his daily work. Thus, while the examination of the patient, symptoms, diagnosis, and the indications for or against operation are duly dealt with, the surgical treatment described relates mainly to catheterism, exploration of the urethra and bladder, and other manipulations in minor surgery. The major operations are not described, and cystoscopy and catheterism of the ureters are also omitted, for the reason that, in M. Pillet's opinion, such delicate methods of examination ought to be relegated to the specialist. The book is tersely written and well illustrated, and seems to be in every way well adapted to the purpose for which it has been produced.

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[5] *Therapeutische Technik für die ärztliche Praxis. Ein Handbuch für Ärzte und Studierende.* [Therapeutic Technique for Medical Practice. A Handbook for Practitioners and Students. By various Authors.] Herausgegeben von Dr. Julius Schwalbe. Erster Halfband. Mit 290 Abbildungen. 1906. Leipzig: Verlag von Georg Thieme. (M 8.80.)

[6] *A Textbook of Genito Urinary Diseases, including Functional Sexual Disorders in Man.* By Dr. Leopold Casper. Translated and edited, with additions, by Charles W. Bonney, B.L., M.D. London: Kelman Ltd., 1906. (Royal 8vo, pp. 718, 215 illustrations and 25 plates. 28s.)

[7] *Guide Clinique des Praticiens pour les Principales Maladies des Voies Urinaires.* Par Emile Pillet. Paris: A. Maloine. 1906. (Cr 8vo, pp. 270; 51 illustrations. Fr. 4.)

NOTES ON BOOKS.

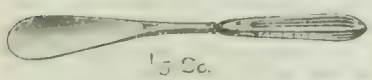
The edition of the *City of London Directory*,[1] published at the beginning of this month is the thirty-seventh annual issue of a reference book long valued by all those brought into business touch with the official or private bodies within the city. Never published until the end of the first quarter of the year, the book has the advantage over its fellows that Christmas and New Year removals are by that time over, and the new addresses can be correctly entered, and lists of committees of the Corporation and of the London County Council, and other public bodies brought up to date. The full information which it contains as to the Corporation, and as to the various livery companies and parishes, is not readily accessible elsewhere. A further good feature is a coloured map, showing clearly the boundaries of the varies parishes, and the alterations which from time to time are made in the streets of the city.

[1] The *City of London Directory*, 1907. Thirty-seventh edition. London: W. H. and L. Collingridge. Price 7s. 6d.

MEDICAL AND SURGICAL APPLIANCES.

Protection of the Perineum.

Dr. John F. Elliott (Verulam, Natal) writes: I have adopted a device lately in midwifery which I believe to be of some use in preventing torn perineums. I do not know whether I am in all innocence copying somebody else's method, but it is simple enough to have suggested itself to many. When the child's head presents I insert a highly polished thin horn of silver steel between the face and the perineum, and over this the front aspect of the head glides, the smooth surface of the medium equalizing the pressure on the perineum and facilitating its passage. I was led to employ this simple method by noticing that the principal tear always occurred, or seemed to occur, after the brow was born and the irregularity of surface lent itself to further rupture. I believe that this perineal horn is of use also in protecting the posterior wall of the vagina during passage of the head immediately prior to its expulsion. Messrs. Fannin of Dublin have made me the perineal horn in two sizes.



A Cut Tendon Forceps.

Dr. Stanley Raw (Sunderland) writes: The illustration shows a pair of clamp forceps, made to my design for the retention of the cut ends of tendons in apposition whilst being sutured. Although primarily intended for such use, they can be employed for all varieties of tendon work, and for temporarily clamping the edges of wounds during suture. All surgeons are aware of the two prime difficulties in treating cases of cut tendons, namely, the finding of, and having found, the retaining of the proximal end of the tendon in apposition with the distal end until a sufficient number of sutures has been passed to ensure a final and permanent connexion. Obviously these forceps will in no way obviate the first difficulty, but when the proximal end is found it can be brought down to its fellow, and the two ends clamped into the forceps and immediately sutured without any risk of further retraction and without the



and of an assistant. Similar in general construction to ordinary modern forceps, the jaw blades have an internal measurement of 1 in. by ¼ in., thus allowing sufficient room for the proper manipulation of the ends of the tendon. On their inner surfaces the blades carry short spikes ⅛ in. long and ⅛ in. apart, so arranged on each blade that when the forceps are closed there is a spike every ⅛ in., which ensures the capture of the smallest tendon. It is advisable to encircle in the jaws of the forceps rather more of the ends of the tendon than is actually required to fetch them into contact, for by this means an amount of "slack" is obtained that allows of very easy manipulation during suture. The advantages claimed for the forceps, and which will be gathered from the foregoing description, are:

1. Rapid temporary anchorage of the ends when once they are found.
2. Their use obviates the necessity of continual handling and crushing of the muscles, and an assistant is unnecessary.
3. Each suture can be tied at once, instead of being left slack until all the sutures are passed.
4. There is no necessity to keep the wrist hyperflexed or hyperextended during suture, for, as the ends are fixed between two rigid points, they cannot be separated by the weight of the hand.
5. The operation is completed more quickly.

The forceps have been made for me by Messrs. Down Brothers, Limited, 21, St. Thomas's Street, London, S.E.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

The annual general meeting of the London and Counties Medical Protection Society was held on April 18th at 31, Craven Street, Strand, with Dr. G. A. Heron in the chair.

The annual report of the Council contained an interesting account of the work done by the Society during the past year. The following paragraph, referring to one of the cases in the law courts dealt with by the Society, illustrates the manner in which members were assisted in time of difficulty:

An action was brought against a member in the High Court of Justice by a patient whom the member had attended in her confinement. The patient alleged that she had suffered damage from injury caused to her from the defendant's negligence as an accoucheur. The plaintiff alleged that the defendant, when he attended her as accoucheur, was suffering from an injury to the hand, and that he made use of the injured hand in his attendance on the plaintiff, and that the plaintiff in consequence contracted blood poisoning, and had been dangerously ill and confined to her bed for three months. Alternately the plaintiff said that the defendant wrongfully and negligently attended her in her confinement, inasmuch as he had been bitten in the hand by a stoat or other wild creature prior to such confinement and was suffering at the time of such confinement from blood poisoning as the result of the bite, and ought not as a medical man to have acted in such a case as accoucheur, and was wanting in proper skill in so acting. The patient claimed £500 damages. The defendant was prepared to prove that the injury to his hand, which resulted in blood poisoning, and arose from the bite of a rat when he put his hand into a corn bin, did not exist till some time after the confinement. The plaintiff was without pecuniary means sufficient to cover the costs if the verdict was against her, and therefore it was thought best, on the eve of the trial, to settle the case on the terms that the plaintiff withdrew her claim, and the defendant his counter-claim for medical attendance, each side paying its own costs, and the plaintiff signing an apology for the charges made against the plaintiff's professional care and skill.

Under the heading of Coroners' Inquests the Council of the Society set out the following details of a case showing how much confusion exists in regard to the rights of medical practitioners in connexion with coroners' courts:

The superintendent of an isolation hospital asked advice in regard to the refusal of a coroner to pay a fee to a lady doctor who gave evidence at an inquest on a child who died in the hospital under her care. The lady doctor refused to make a *post mortem* examination as ordered by the coroner, and it was made by the superintendent himself. He was advised that, by refusing to make a *post mortem* examination, the lady doctor had rendered herself liable to prosecution and a fine of £5, and that probably, in any case, as medical officer of a public hospital, under Section 22 (2) of the Coroners Act, she could claim no fee. He was therefore advised to let the matter rest.

The annual report brought out clearly that each member of a medical partnership must become a member of the Society in order to give full protection to the firm, in attacks made upon individual partners, but one partner only can become a member if he pleases.

The Chairman, in moving the adoption of the report, seconded by Dr. C. M. Fegan, said the Society was in a strong financial position. After the report had been unanimously adopted, the meeting proceeded to transact formal business, in the course of which opportunity arose to acknowledge the valuable services rendered to the Society by Dr. Hugh Woods, the General Secretary.

MOTORS FOR MEDICAL MEN.

[From a Correspondent.]

(Continued from page 944.)

Transmission.

The Clutch.

The clutch which consists of male and female cones held together by strong springs, the male cone being faced with leather, still remains in use on a great many cars. It is necessary to keep the leather in soft, pliant condition, and various applications are used for this purpose, such as castor oil, neatsfoot oil, and collan oil. Of these, neatsfoot oil and collan oil appear to be the most efficacious, but if once the leather has become overheated and burnt by friction nothing will restore it; a new leather is necessary. This, which ought to be a perfectly easy job, is sometimes rendered very troublesome by no provision being made for getting at the clutch without dismantling several other parts; to this point the purchaser of a car with a leather clutch should always look. The writer has a 16-h.p. car, the construction of which is most satisfactory in other respects, and which has run some 10,000 miles without needing any but the most trifling repairs, but the clutch leather is worn, and would have been replaced ere this were it not that to get at it involves the dismantling of the whole gear box—at least a day's work, even if no unforeseen difficulty arises; so the worn leather is still there.

The other type of clutch, the metal disc clutch, may be illustrated by that used in the Speedwell cars.

This consists of a number of thin discs of metal, held together when in use by the pressure of a large spiral spring. When this pressure is removed by depressing the clutch pedal, the plates are separated by small spring tongues on each alternate plate, and then do not grip but slip on one another.

One great advantage of the disc clutches is their gradual engagement, so that no jerk can be given to the engine and transmission apparatus by letting in the clutch too suddenly. But they need nice adjustment, and sometimes give trouble because they either fail to grip or to release freely; of this particular form, the Speedwell clutch, the writer has no experience, but in construction it appears well designed.

The Gear Case and its Contents.

The commonest form is often termed the "Panhard" type, and may be illustrated by that used in Panhard cars, though of course various makers modify the type in matters of detail without departing from the broad principles of its construction (Fig. 2).

In the Panhard gear the drive of the engine is conveyed to a square shaft (the first motion shaft) upon which gear wheels with different numbers of teeth slide. These mesh with their appropriate wheels on the second motion shaft, which lies parallel with the first named (above it in the figure), and on which the several gear wheels are immovably fixed. They are so spaced that when the gear wheels are moved backwards or forwards on the first motion shaft only one at a time can be in mesh with the wheels on the second motion shaft.

At its hinder end the second motion shaft carries a bevel pinion wheel, which meshes with a much larger wheel, the axis of which is at right angles to the gear box shaft, and is in fact on a transverse axle which carries at its two ends sprocket wheels for the chains which drive the driving wheels. The differential box is attached to this larger bevel wheel, so that the two sprocket wheels need not revolve at the same pace. This particular gear case is of course designed for chain transmission to the driving wheels.

There is thus no direct drive on any speed, but the rotation of the first motion shaft is always transmitted to the secondary shaft, and by this to the differential. As an example of a direct drive on the top speed, we may return to the Speedwell gear box (Fig. 1). In this the first motion shaft, which is of course in line with the clutch, is also in line with the shaft which conveys motion to the differential, which is not the case in the Panhard. The first motion shaft appears on casual inspection as if it were continuous, but this is not the case; it is divided somewhere about its middle, and the one half is socketed into a bearing in the other, so that its two ends can revolve independently. When the top speed or direct drive is in operation the two portions are locked together by means of dogs which slide into engagement, and then it revolves as one. The second motion shaft still revolves, as it is permanently geared to the first motion shaft, but it is doing nothing. At all other speeds motion is conveyed to the second motion shaft from the front half of the first motion shaft by gear wheels, and conveyed back to the posterior half of the first motion shaft by means of whichever set of gear wheels are placed in mesh at the moment. Thus a direct drive involves use of fewer gear wheels when the top speed, the one most commonly in use, is in operation; but on the other speeds it involves one more transmission by means of gear wheels than the original Panhard form, in which the motion has not to be retransferred to the first motion shaft.

The Singer gear box affords an example of the "gate"

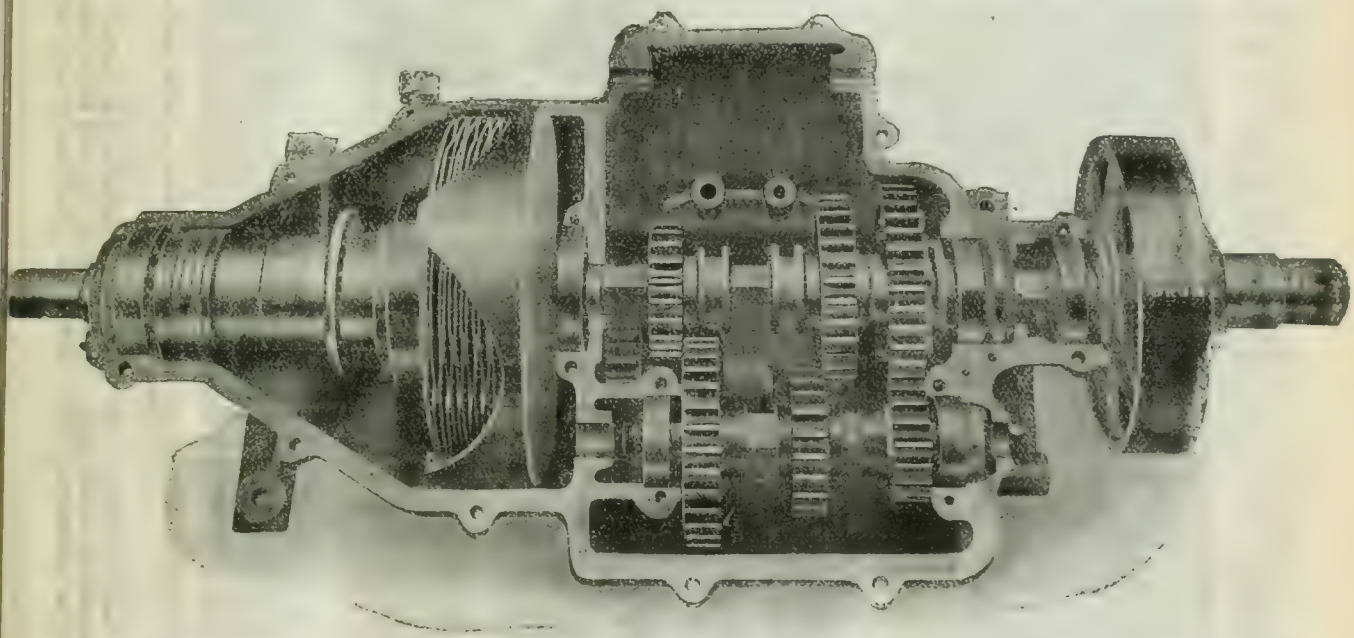


Fig. 1.—Speedwell gear box and clutch. To the extreme left is seen the end of the engine-crank shaft; next comes the cylindrical box containing the clutch spring; then the disc clutch, part of the side of which is cut away to show the discs. In the centre is the gear box proper, the first motion shaft being above; this is square, and carries the sliding gear wheels. Outside the gear box to the right is the drum of the foot brake; behind this the shaft leading to the Cardan shaft. (Block lent by the Speedwell Company.)

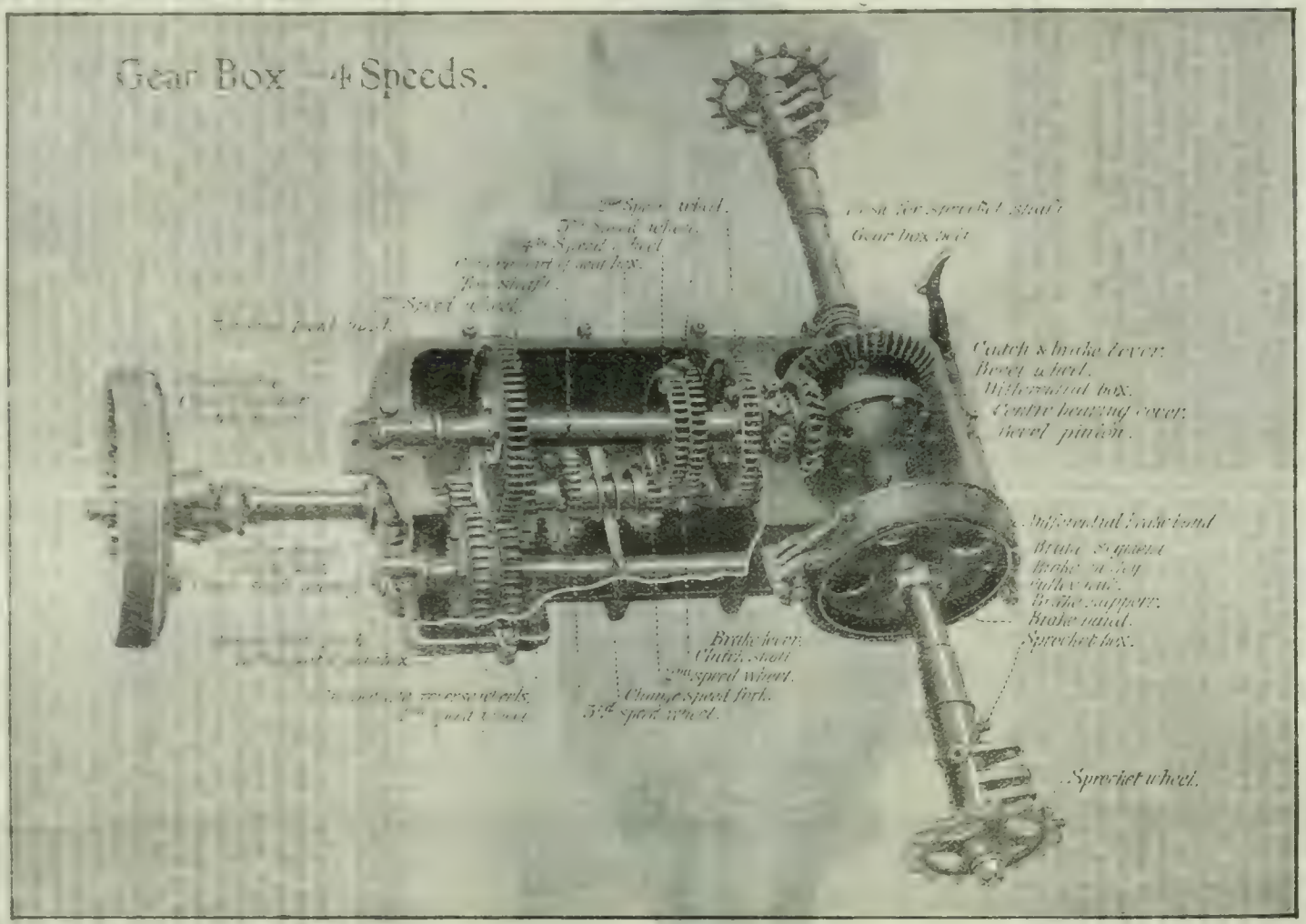


Fig. 2.—Panhard gear box. To the left is seen part of the clutch; at the right the differential gear and secondary axle carrying the chain sprocket wheels. Lent by Messrs. Ducros.

which the frame of the car is exposed in travelling over uneven surfaces. If all the attachments are rigid, then any disturbance of alignment would cause strains on the bearings, and as of course there is no such thing as absolute rigidity in the frame, the safest course is to contrive that temporary disturbance of alignment shall cause no mischief. The employment of one universal joint is common to all cars, but in the case of the Singer there are two, besides the special attachment of the gear box.

In the use of any form of sliding gears it is necessary when changing gears to cause the teeth of two gear wheels, both of which are revolving at a high speed, to mesh together, and to accomplish this without bruising and knocking about the teeth of the wheels requires considerable practice. The "gate" change lever renders the act easier, inasmuch as no particular notch has to be found, but the lever is always sent right home in one or other of its parallel channels. Nevertheless, even with the gate change, it is quite possible to make the gears clash badly and to bruise their teeth; how to avoid this will be mentioned under the heading of "Hints on Driving." In the smaller De Dion cars a form of change gears, in which no such difficulty exists, is adopted, but in their larger cars a more ordinary sliding gear is used. The special form alluded to has points in common both with sliding gears and epicyclic gears (Fig. 5). A first and a second motion shaft are provided. On the first motion shaft the gear wheels are all fixed, but those on the second motion shaft

are free to revolve upon the shaft. Each, however, carries a hollow metal drum, and in these drums are expanding

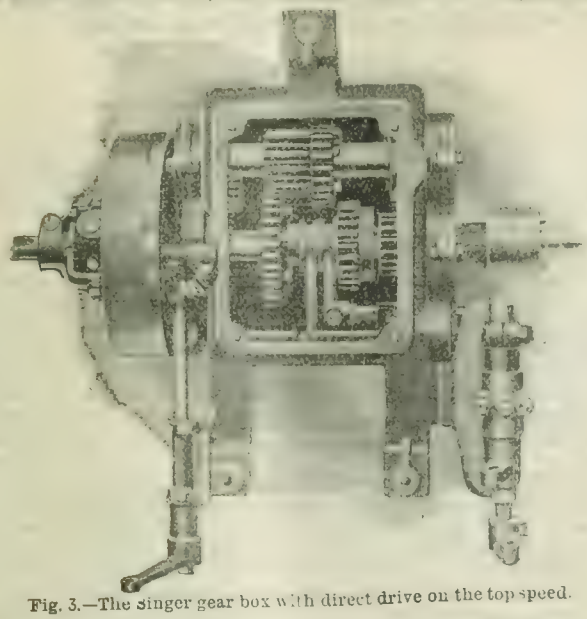


Fig. 3.—The Singer gear box with direct drive on the top speed.

brakes. When a particular gear is to be used, the expanding brake within its drum is put into operation, and that wheel becomes locked to the second motion shaft, the others remaining free to revolve upon it. As the toothed wheels on the two shafts are always in mesh and running, though all but one are idle, there is no engaging of revolving toothed wheels with one another, but all that has to be done is to expand the brake of the desired speed. Hence gears cannot be missed, and no damage can be done by the gear wheels clashing.

Means are provided for the adjustment of these

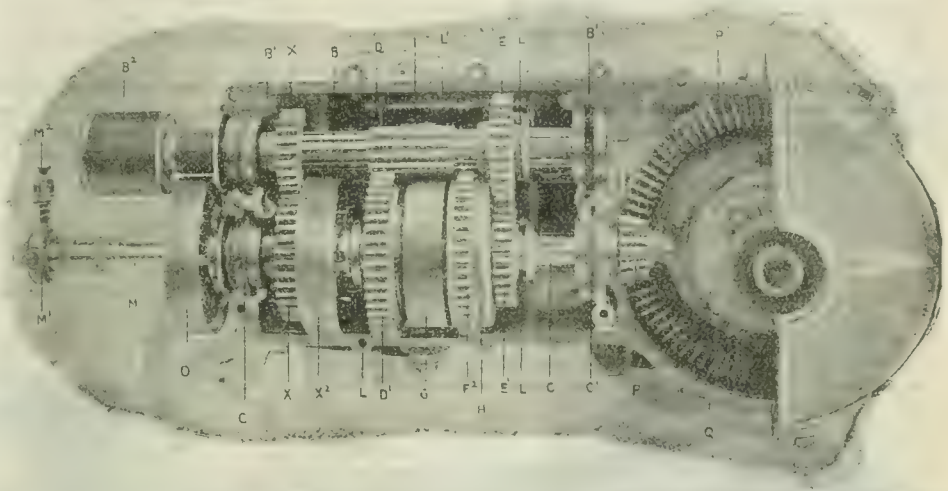


Fig. 5.—De Dion gear box with which is combined the differential. D and D^1, Low gear wheels; G, locking drum of low gear; X, X^1 and X^2 gear wheels and drum of middle speed; E, E^1 and H, gear wheels and locking drum of high speed; B^2, connexion of first motion shaft with engine crank shaft; M and C, second motion shaft; O, brake drum; P, small pinion driving P, the large bevel wheel of the differential.



Fig. 4.—"Gate" change lever (Singer).

brakes should they wear, but they seldom need touching, and the changing of gears is remarkably easy, being effected by a small lever of no great power on the steering pillar. With this arrangement there is of course no direct drive on the top speed, which is got by bringing into operation equal sized wheels on the two parallel shafts.

The remaining type of change speed gearing is quite different in principle and involves no second motion shaft, so-called "epicyclic" gearing being adopted. This is somewhat difficult to explain without several figures and at considerable length. Briefly speaking, it consists of a box containing trains of wheels on a sort of sun and planet system. Most of these toothed wheels are free to revolve on their axles, but can be locked by a sort of brake. When different members of the system are thus locked, the outer case of the box will revolve at different speeds, though the axial drive from the engine remains at the same speed.

One objection to the use of the epicyclic system was that the internally-cut teeth of the outer case wore out quickly, but the Adams-Hewitt Company have now constructed an epicyclic gear in which all of the wheels are externally toothed, and they claim to have thus constructed a durable epicyclic gear. In this type of gear, changing of the gear is, of course, just as easy as in the De Dion type, for all of the wheels are at all times in mesh. It is also lighter and smaller than a gear box of the more ordinary types.

Immediately behind the gear box, or even in it, a drum is fixed upon the transmission mechanism which serves for the foot brake; this is almost always of the external or band type and consists usually of a metal band which is tightened upon the periphery of the drum. Where the drive is of the live axle type, behind this (except in the De Dion cars) follows the cardan shaft which runs from before backwards and by its rotation conveys motion to the back axle. As this is subject to disturbances of alignment owing to the spring suspension of the back axle and other causes, a universal joint is interposed close behind the brake drum. The cardan or propeller shaft may be exposed, but is more commonly enclosed in a sleeve in which it revolves on ball bearings; it is seen in the general view of a chassis lent by the Humber Company. The universal joint needs some attention in the way of lubrication as it is exposed to heavy wear, and it should be protected from grit and dirt by enclosure in a loose leather bag, if no special provision for its protection has been made. At its hinder end the cardan shaft terminates in the casing of the differential gear where it carries a bevel pinion wheel; for this bevel pinion a worm is substituted in some cars, and the worm drive is claimed to be the more silent of the two.

As there is a strain tending to force the bevel pinion away from the bevel ring with which it engages the bearing of the cardan shaft should be long, and it is desirable that an additional bearing should be provided behind the bevel pinion to further hold it up to its work. This bevel pinion is one of the weak places in a car: it is impossible

to make it of large size, yet it has to transmit the whole power of the engine, it must therefore be constructed of a special steel in order to enable it to stand at all.

the differential casing; in this car the torsional strain of the drive is entirely removed from the back axle and the differential can be fixed with extra firmness.

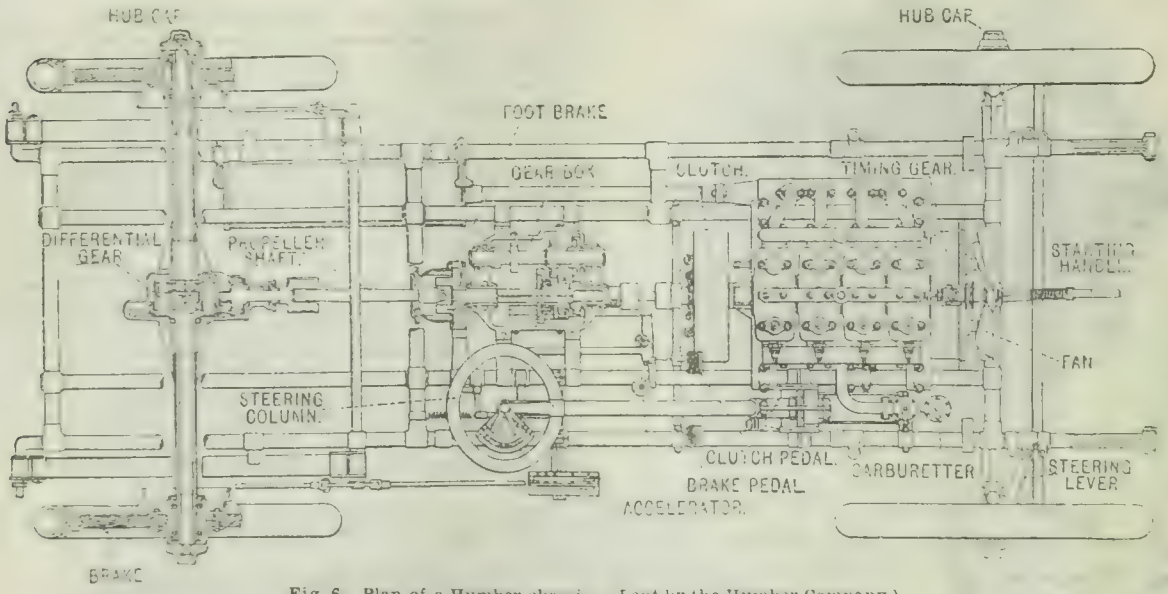


Fig. 6.—Plan of a Humber chassis. (Lent by the Humber Company.)

The accompanying plan of a Humber chassis will give a good idea of the general arrangement of parts in a gear-driven or live-axle car; though this is a four-cylinder car the disposition of the various parts is quite similar

A side view is given of a Grégoire chassis in which the disposition of the parts is much the same. It will be noticed that the frame of the chassis is unusually deep and of strong construction; the large pipes for the water



Fig. 7.—Side view of a chassis. (Lent by Messrs. Grégoire.)

to that used in motor cars. The position of the gear lever under the driver's foot is that commonly adopted in the small De Dion cars, however, it is carried further back, and thus enables it to form one with

circulation are visible between the radiator and the cylinder, natural circulation without any pump being relied upon for cooling of the water.

(*To be continued.*)

THE MIDWIVES ACT.

(Continued.)

At a recent meeting of the Chatham Town Council the Town Clerk read a letter from the Chairman of the local County Council with reference to the administration of the Act, which had been referred to the Town Council. It pointed out that the Council had power to allot funds for the purpose of providing special instruction and evening courses for midwives, and that the Education Committee proposed to establish and maintain a free training scholarship to be held at Sheerness Hospital.

Steps were also made for the better administration of the Act. The Town Clerk read the report of the Medical Officer of Health, stating that the general working of the Act in the borough was satisfactory, and that he had made periodical visits to each registered midwife, inspecting their cases, books, bags and appliances, and generally investigating their mode of practice. The Town Clerk also reported that twelve midwives had been registered, and that all notices and registrations had been duly carried out, and the provisions of the Act duly administered. It was resolved that the Town Clerk should write to the Higher Education Committee asking whether they were making any provision for holding classes for the purpose of providing instruction for persons intending to become midwives, and pointing out that such classes would be of no service unless provision was also made for giving practical instruction.

THE POLICY OF THE UNIVERSITY OF LONDON IN RELATION TO LONDON MEDICAL EDUCATION AND MEDICAL SCIENCE.

By William Hunter, M.D.Edin.,

Fellow of the Royal College of Physicians of London; Teacher in Pathology in the University of London; Recent Examiner in Medicine in the University of Glasgow; and former Research Student of the University of Cambridge; Ettles Scholar, and Gold Medalist, University of Edinburgh.

I.

In 1898 the University of London was granted a new charter embodying many important new provisions, and its government was placed on a broad democratic basis. These provisions included an important change regarding the relation of the University to the London Medical Schools. These latter were for the first time in history affiliated to the University; their lecturers were recognized, after due approval, as teachers of the University; and granted, as members of its Medical Faculty, a share in its government.

The object of these changes was admittedly a determined attempt to make the University what is called a "Teaching University," instead of being, as it always has been, merely an examining body. This effort on its part has been powerfully aided by the "University College Transfer Act" of 1905, by which that College, with the truest regard for the interests of education and great public spirit, has transferred all its property to the University, in so doing separating its medical school from University College and keeping it independent.

The new University of London Act of 1898 came into operation in 1902, and was generally heralded as opening up fresh prospects of usefulness to the cause of education, which the University has always had so much at heart. The care bestowed by the Commissioners who laid down the basis of its new constitution, and by those who drew up its statutes, was immense. It seemed that after the vicissitudes, unusual both in number and degree even for a University, through which it had passed in its short and chequered career, since its foundation in 1835, it had at last entered upon a clearer line of policy and fresh career of activity. The number of its difficulties is reflected in the history of its origin, and in the number of the supplemental Charters it has received since the original one granted to it in 1835. In that year University College was first founded as a teaching college, and its Charter contained the following paragraph:

> Another Charter will be granted to persons eminent in literature and science to act as a Board of Examiners, and to perform all the functions of the examiners in the Senate House of Cambridge, this body to be termed the "University of London."

Such was its original basis; and in spite of the various supplemental Charters it has received—in 1853, in 1858, in 1863, in 1867 (admitting women to its degrees), in 1878, and lastly in 1898 (the latter the most liberal and democratic of all)—this characteristic has not been eliminated. Five short years have passed since the new charter came into operation, and the University of London is again in the middle of a "crisis," and is even said to be "threatened with disintegration." This crisis has arisen in relation to the policy to be pursued with regard to medical education, one of the subjects which more than any other it endeavoured, for the first time in the history of medical education in London, to place on a broader and sounder basis, by inviting to its councils, and affiliating as its schools, all the Medical Schools in the metropolis. The condition of so important a branch of education as that concerned with medicine is indeed well worthy of the attention of any University. Its importance in the case of the greatest metropolis in the world is often dwelt on. Let it here be said at once, as a prelude to the considerations and conclusions which follow, that at no time in the long history of medical education in London has the equipment or teaching facilities of its Medical Schools ever approached those at present supplied by these Schools. And yet it is in connexion with the prospects and requirements of medical education in London that this "crisis" has arisen.

I propose to consider (1) how far this alarm about the state of medical education in London is justified; (2) if justified, what factors have been at work to produce it; (3) how far it is possible, by the removal of these factors, to remedy defective conditions existing.

Tests of Educational Prosperity.

There are various tests by which the success and prosperity of a medical school may be judged. The test may be the *Quality* of the students educated, even if they are few in number; or it may have reference to the *Number* of students seeking entrance into the medical profession through that particular door. Quality alone, however great it may be, will not serve to maintain a medical school without some fair proportion in numbers. The number of students might conceivably be affected by the cheapness of the education, the lowness of the standard, and the easiness of the examinations. All these are matters on which every one can have his own opinion. I consider there is no basis for any such depreciation of large schools. As a graduate of one great University, a research worker in another, an examiner in medicine in a third, and as a teacher in a fourth, I have formed my own opinion, and it is this—that talent on the part of the teachers in imparting knowledge, and on the part of the students in receiving a high-class education, is not confined to one school or one centre of education. I have witnessed a clinical examination of a girl graduate educated in a small school, which could not have been surpassed by anything I could ever hope to see on the part of any candidate, even if he had the advantage of three university educations. She received her due reward of a university degree.

I have similarly seen a keenness in work and a brilliant clinical skill on the part of a London student—licentiate of one of the Royal Colleges—which would have qualified him to compete on equal terms with the most distinguished graduate of a university. This student, however, was deprived of the privilege of taking a university degree in the centre, London, which had been selected for him by his parents, by the accident that he had not passed the particular matriculation examination required.

The opinion that smallness of number is made up for by the quality of the education may be, and in certain cases is, not at all baseless. It is the motive which has led in the past and will lead in the future to the formation of all new medical schools. On the other hand, it is certain that increase in number of students in particular centres or schools of education is a hardship most patiently borne by those suffering from it, despite any adverse opinions regarding efficiency of the education which may be entertained by less favoured rivals.

As a matter of fact, the history of medical education during the past forty years shows that there is no real basis for the view that the flow and ebb of students to and from particular medical centres is determined by any such inferior considerations as those referred to—cheapness of education or easiness of standard.

Factors Influencing the Original Choice of a Medical School.

Other factors of a more important kind come into play in determining the choice of the particular medical centre to which, after full consideration of ways and means, and after consultation with their medical friends, parents eventually decide to send their boys.

Apart altogether from the above-mentioned considerations—of cost of education (of which they can judge), of standard of education (of which they can know nothing except by hearsay), or of other considerations of a social or personal character, which always deserve and receive due weight—there remains for the parents the prime consideration which eventually governs their decision—"If I decide to give my boy a medical education, how can I best further his prospects of a subsequent successful career? Can I best do so by giving him a medical qualification, which costs least, and entering him in a medical centre where living is cheap, thereby saving myself £20, £30, or £40, as the case may be, in the total cost of his medical education? Or shall I, on the other hand, at the initial sacrifice of this amount to myself, enable the boy to obtain if not necessarily a better education, since education everywhere is now good—at least a good university education and degree such as will give him not only a good medical education but afterwards in the eyes of the public a higher medical status?"

Medical education, like other practical affairs of life, is a practical business; and must be conducted with due regard to practical considerations. And the considerations above mentioned are of an eminently practical character, which it is quite useless for anybody concerned with medical education to ignore.

This being the case, how do the educational facilities (now admittedly of a high character everywhere) and the qualifications and degrees offered to the student at the end of his career (which are not of so uniform a character) appeal to parents entering their boys into the medical profession? Through what centres or schools of medical education do they elect to enter their boys, in the belief that they may obtain a good education, and enter on their profession with every reasonable prospect of success?

Registration Data.

The answer to this question seems to be best supplied by the official registration statistics supplied by the General Medical Council regarding "the place and date of commencement of study, as certified by an official of a university, school of medicine, or scientific institution recognized by a licensing body and approved by the Council."

Prior to December 4th, 1894, it was permissible to commence professional study by pupilage, and the number entering the medical profession may have been slightly in excess of that officially registered. The number so entering was, however, small, and in any case does not affect the accuracy of the official figures presently to be given regarding the number of students registering at the different universities and schools of the United Kingdom. Since December 3rd, 1901, registration as a student can be effected on commencement, not only at a university or school of medicine, but also at a "teaching institution where physics, chemistry, and elementary biology are taught," recognized by a licensing body and approved by the Council."

The tables and chart I now submit are based on the official statistics regarding registration of students supplied by the General Medical Council since the institution of registration of students in 1865.

The information supplied by these figures is of a definite kind. It relates to the "place and date of commencement of study" as certified by an official of the institution. It does not afford any information as to places of study which the student may have subsequently entered. It is, however, a matter of common knowledge that with the two notable exceptions of the Universities of Cambridge and Oxford, which have no hospital facilities for their students, the movement of students from one school to another (so common in Germany) is not so common in this country.

Provided he gets the educational facilities he needs and the qualifications fitted to his attainments, the student entered at a particular medical centre generally stays there till he completes his course.

Any movements that take place do not affect the chief University medical centres, such as Edinburgh, Cambridge, Glasgow, Aberdeen, since these Universities require their full curriculum to be passed before granting their degrees. But such movements do affect the numbers attending the medical schools of London.

A certain number of students come up each year from other schools to the London medical schools to work for the London University degree and the Conjoint examinations. It would be interesting to ascertain precisely what that number is.

But the chief movement is connected with the Cambridge and Oxford students. Some of these (it would be interesting to know how many) elect to take their clinical work in the great provincial universities, such as those of Manchester, Liverpool, etc.; but by far the great majority come to the London medical schools.

For the purposes of the present inquiry, the London schools are credited with receiving all the Cambridge and Oxford students for the later half of their education.

Reliability of these Registration Data.

As stated, the figures here dealt with are official. But before attaching importance to them, or drawing conclusions from them, the question arises how far they can be relied on as complete.

In the first place, if they are not accurate or complete if they do not represent all the students entering the medical profession—it would seem to be a very misleading and purposeless task on the part of the General Medical Council to take the trouble to compile them year by year. One or two licensing corporations—including the Conjoint Board of England—decline to recognize registration as a necessary preliminary to their qualification. And it may be thought, therefore, that possibly there may be many students at the London schools in particular, working for the Conjoint Examinations who are not registered at all. If this were the case, it would absolutely stultify the whole object and meaning of the *Medical Students' Register* of the General Medical Council. It would absolutely stultify in particular the returns on that *Register* regarding the number of students registering in the London medical schools.

I consider any doubt or fear on this score as to the accuracy of these figures for the London schools as well as for other schools to be groundless—for the simple reason that it is not the Conjoint Board which is asked to make the returns of their students to the General Medical Council, but the individual schools at which the students enter.

These schools have no object whatever to gain by registering students on their roll, and not notifying the same to the Registrar of the General Medical Council. On the contrary, each school and university is only too pleased to be able to notify the students who have entered with them. It is quite immaterial to them whether one body demands registration or another body deems it unnecessary; the more students they can return, the more to the credit of their school.

The following is the information supplied by these figures as to the schools originally selected by parents for their sons entering the medical profession:

NUMBERS OF MEDICAL STUDENTS REGISTERED AS COMMENCING THEIR MEDICAL STUDIES.

	1905.	1906.
London, Cambridge, and Oxford.		
Number of medical students registered in London Medical Schools	256	253
Number of medical students supplied with final portion of education from (1) University of Cambridge ...	107	114
(2) University of Oxford	25	21
Total	132	135
Grand Total	388	388
Other English Universities.		
University of Birmingham	13	21
,, Liverpool	22	39
,, Leeds	20	18
,, Sheffield	3	3
,, Manchester	49	50
,, Bristol	12	9
,, Durham	27	31
University College, Cardiff	14	21
Total	160	192
Edinburgh and Glasgow.		
Edinburgh University	178	174
Two Extramural Schools	56	44
Total	234	218
Glasgow University	107	105
Three other Schools	26	27
Total	133	132
Grand Total	367	350
Other Scottish Universities.		
University of Aberdeen	49	29
,, of St Andrews ... ...)	11	15
,, College, Dundee ...)		
Total	60	44

University of London.

The University of London supplies education to none of its medical students. It leaves that duty to the London (or other) schools. The medical education of its London students is carried out in independent London Medical Schools, to which equipment or upkeep the University contributes nothing, and by teachers, both scientific and clinical, to whom it pays nothing.

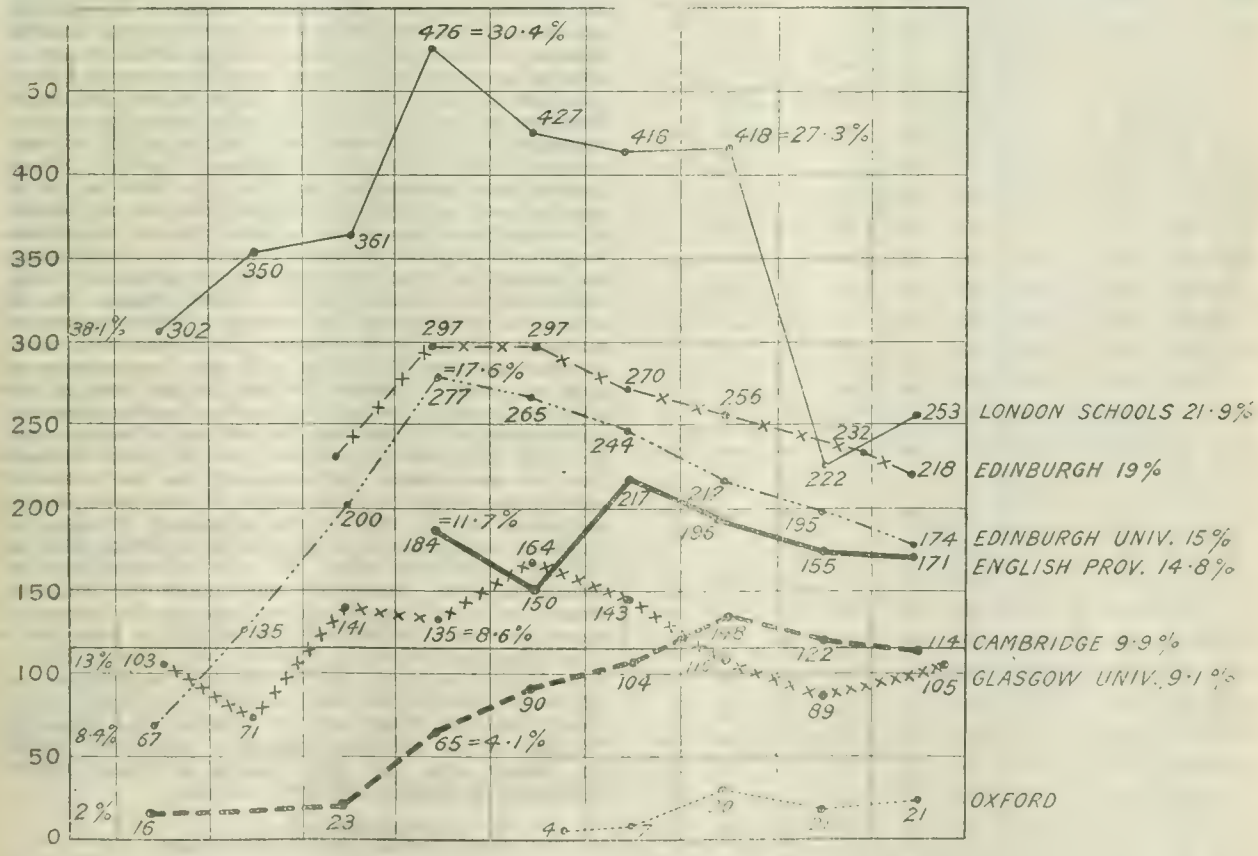
The position it has throughout its history occupied in relation to London medical education would be paralleled in the case of the Edinburgh School, if at the critical period in its history, 1870-80, when it made its great forward bound, the University of Edinburgh had said: "We shall "make no further endeavour to provide laboratories and "teachers for any of our students. We leave that inferior "(*sic*) task to any teachers who choose to form small schools "around us. They will do all the educational work. We "shall confine ourselves to setting up a standard, and "to examining and giving our degree only to those who "attain that standard. We shall, however, issue our orders "to these smaller schools as to the kind of laboratories "they must provide and the education they must supply. "Moreover, to restrict as much as possible the number of "those privileged to take our degree, we stipulate "that any candidate, however well qualified he "may be, shall pass a matriculation examination "of a totally unnecessary kind." Is it conceivable that under such a policy the University of Edinburgh would have attracted students to the number as high as 300 a year from all parts of the British Empire; or could possibly have discharged the task—in the truest sense Imperial, since for many years it was the great Colonial School—which for so many years it successfully discharged and still continues to discharge, to the advantage alike of its students, of itself, and of medical education?

The policy of the University of London might have been even more closely paralleled in the case of another great University—that of Cambridge—if at the period in its history (1875-85) when it underwent, under the stimulus and guidance of Sir George Paget, Sir George Humphry, and Sir Michael Foster, its great scientific medical development, it had adopted a policy similar to that of the University of London. Like the latter, and unlike Edinburgh University, it was already provided with great and wealthy independent Colleges and independent teachers. It might have urged on the Colleges the necessity of creating a scientific medical school in Cambridge, and left it to each College to provide itself with costly and highly-equipped laboratories. It might have stood aloof and contented itself with laying down the standard of education, and stipulated that the ordinary matriculation examination which it deemed sufficient (and rightly so) for those desiring to enter on its course of education should not suffice for its medical degree, but must be replaced by one of a totally different kind, of a character so peculiar that if the candidate did not afterwards succeed in taking his medical degree, he could go down from the University, and claim ever afterwards the credit of having passed the Cambridge matriculation.

The policy these two great Universities did adoptwas of a very different kind. They recognized that *theirs* was the duty to supply the laboratories and teachers necessary to give their students the education they deemed needful. They made no call on others to do this work; and in the result the individual Colleges (in the case of Cambridge), the Extra-academical School and teachers (in the case of the University of Edinburgh) not only prospered, but by their prosperity and zeal contributed largely to the prosperity of their Universities. Both to them and to their students their Universities played the part of Alma Mater.

EFFECTS OF UNIVERSITY POLICIES ON THE NUMBER OF STUDENTS ENTERING THROUGH THE DIFFERENT UNIVERSITY CENTRES.

The following chart and tables show the effects of the policy pursued in these three University centres (and other centres) on the relative prosperity of the Medical Schools associated with them. From this it will be seen that the proportion of students entering at the London Schools has fallen continuously from 38 per cent. in 1866 to 22 per cent. in 1906. Edinburgh University rose from



Year	1866	1870	1875	1880	1885	1890	1895	1901	1906
Total Registration England and Scotl.	791	892	1,051	1,570	1,549	1,617	1,530	1,172	1,154
London School for Women:—	8	14	25	46	11	16			

NOTE.—The figures represent the number registered in the year stated. The percentages are those of the total number of students registered for England and Scotland in that year. The figures for the London School for Women (founded 1877) are not included in the London curve, except in the last year, 1906. The number registered in 1906 in the term "London Schools" forming the London curve was therefore 237, = 20·5 per cent., as compared with 38.1 per cent. in 1866, 34.3 per cent. in 1870, 30·4 per cent. in 1880, 27.5 per cent. in 1885, 25.7 per cent. in 1890, 27.3 per cent. in 1895, and 18.9 per cent. in 1901.

8 per cent. in 1866 to over 17 per cent. in 1880, and still stands at 15 per cent.; and Cambridge has risen from 2 per cent. in 1866 to over 4 per cent. in 1880, and to nearly 10 per cent. in 1906.

CONCLUSION.

The concern about the state and prospects of medical education in London are therefore amply justified.

Number of Students registered as having commenced Medical Study, 1865 to 1906.

	England.				Scotland.					
	London Medical Schools.	University of Cambridge.	University of Oxford.	Seven Chief Provincial Schools and Colleges.	Edinburgh. University.	Edinburgh. Extramural School.	Glasgow. University.	Glasgow. Other Schools.	University of Aberdeen.	University of St. Andrews and University College, Dundee.
1865	184	10	—	—	34	—	41			
1866	302	16	—	—	67	—	103			
1867	—	—	—	—	62	—	44			
1868	—	—	—	—	74	—	61			
1869	—	—	—	—	102	—	73			
1870	350	—	—	—	138	—	71			
1871	—	—	—	—	140	—	82			
1872	—	—	—	—	144	—	101			
1873	—	—	—	—	174	—	99			
1874	—	—	—	—	167	—	106			
1875	361	23	—	—	200	—	141			
1876	—	44	—	—	150	(23)	104			
1877	—	42	—	—	230	28	110			
1878	—	41	—	—	200	(27)	107			
1879	470	45	—	180	245	(70)	150	—	73	
1880	426	60	—	184	277	20	135	—	80	
1881	477	75	—	204	260	24	137	—	66	
1882	377	72	—	194	232	28	131	24	77	2
1883	393	76	—	165	248	31	131	24	79	1
1884	438	107	—	186	270	22	141	19	75	—
1885	427	90	—	150	266	32	164	17	88	—
1886	430	99	—	185	230	46	137	27	56	2
1887	444	94	—	212	252	60	157	15	78	6
1888	483	103	4	226	297	35	192	31	97	7
1889	508	106	15	267	283	45	177	21	91	5
1890	449	104	7	217	244	36	143	24	80	13
1891	506	115	31	245	244	44	172	39	91	13
1892	497	130	24	272	270	30	156	27	69	25
1893	484	156	37	251	247	19	101	12	69	3
1894	476	126	32	222	154	21	96	26	56	8
1895	446	148	29	196	212	44	110	22	66	10
1896	504	142	32	193	192	45	109	31	63	12
1897	521	145	24	210	178	46	90	30	45	18
1898	532	113	22	194	159	41	92	19	52	29
1899	510	102	27	180	169	43	107	16	60	15
1900	503	140	21	178	146	32	92	16	57	10
1901	542	122	21	198	200	57	99	26	68	14
1902	546	97	14	176	220	45	132	18	75	21
1903	532	92	9	142	208	35	101	17	68	26
1904	476	90	16	164	204	40	98	7	64	34
1905	478	85	8	143	148	35	102	26	49	11
1906	468	114	21	167	168	41	109	25	59	13

London.—Year-books include also Charing Cross, Guy's, King's College, The London, The London School of Medicine for Women (1905-6), Middlesex, St. Bartholomew's, St. George's, St. Thomas's, University College, and Westminster. *Provincial Universities and Colleges* included are: University College, Bristol; University of Durham, University of Birmingham, University of Liverpool, University of Leeds, University of Sheffield, University of Manchester.

NOTE.—The totals in the above table from 1879 onwards are those given in the *Medical Students' Register*. Prior to that year the entries in the different schools were not totalled, and I have had to ascertain them, in the particular years selected, by going through the names of all the students entered at the schools against which figures are given.

LITERARY NOTES.

ON January 15th Fleet Surgeon W. E. Home, R.N., read on board H.M.S. *Exmouth*, the flagship of Admiral Sir A. K. Wilson, V.C., at that time Commander-in-Chief of the Channel Fleet, a paper on Edward Pellew, the first Viscount Exmouth. The narrative is a thrilling record of a career full of

> Most disastrous chances,
> Of moving accidents by flood and field,
> Of hairbreadth 'scapes i' th' imminent deadly breach,

and of deeds of daring and heroism of all kinds. Lord Exmouth was a sailor of the Cochrane type, but, like him, while always ready to fight against the most fearful odds, he was always very careful not to throw away the lives of his men uselessly. He said himself: "I have always gone where I was sent and done what I was ordered, and any one who does as I did will get on as I have done." His principle of action is expressed in the verse of Ecclesiastes: "Whatsoever thy hand findeth to do, do it with thy might." Fleet Surgeon Home's paper, which has been reprinted in pamphlet form, might well be circulated throughout the schools and training ships which are the feeders of our navy.

We have received a reprint of a memoir of Dr. William Smith-Forbes, read by Dr. Frederick P. Henry to the Philadelphia College of Physicians on January 2nd, 1907. Dr. Forbes was born in Virginia in 1831. He was the grandson of Dr. David Forbes of Edinburgh, who married Margaret Stirling of Dumbarton, whose family is said to have in its possession a letter from Mary Queen of Scots thanking George Stirling for the successful defence of Dumbarton Castle. Dr. Smith-Forbes began the study of medicine at the University of Virginia in 1850–51, and completed his course of the Jefferson Medical College, Philadelphia, graduating in 1852. In 1853 he got an appointment in the British Military Hospital at Scutari. In recognition of his services in the Crimea he was offered a commission in the medical service of the British army, but declined it because its acceptance involved the renunciation of his citizenship in the United States. On his return to Philadelphia he opened a private school of anatomy and operative surgery. He served with credit in the American Civil War. He was Demonstrator of Anatomy in the Jefferson Medical College from 1879 to 1886, and took a leading part in securing the passage of an Anatomy Act by the State Legislature in Pennsylvania. In 1882 occurred the tragedy of Dr. Smith-Forbes's life: he was arrested for complicity in the crime of robbing the graves of a cemetery. He was triumphantly acquitted, and in 1886 he was appointed Professor of Anatomy and Clinical Surgery in the Jefferson Medical College, a position which he held till his death in December, 1905. Among his most noteworthy contributions to medical literature were a paper on the removal of stone from the bladder (1894), in which he described a new lithotrite devised by his son, Mr. John S. Forbes, a mechanical engineer, and the results of experiments on 134 vesical calculi; and one entitled "Liberation of the Ring Finger in Musicians by dividing the Accessory Tendons of the Extensor Communis Digitorum" (1898). Dr. Henry says that the epitaph of Alvaro Gomez de Castro, a Spanish mediæval scholar,

> Nemini scelus nocui
> Prodesse quamplurimus curavi,

might fittingly be inscribed on the tomb of William Smith Forbes.

The April number of *Macmillan's Magazine* contains an amusing article, entitled "Aesculapius in Ireland," by Sheila Desmond. She says the ignorance of medical matters that prevails among the Irish peasantry is a source of unfailing wonder to those who come in frequent

contact with them. The belief that if one tablespoonful of physic will do good, five, six, seven tablespoonfuls will do still more good is very popular, and often leads to queer results. Very recently a farmer went into a certain chemist's shop in C—— and asked for a box of well-known pills. When the purchase, neatly wrapped in paper, was handed to him he paralysed the assistant by tearing off the wrappings and emptying the contents of the box down his throat so quickly that no one in the shop had time to stop him. In answer to their horrified remonstrances he grinned, paid his bill, and walked out. Nothing has since been heard of him, nor has the trembling assistant yet been summoned to give evidence at the inquest. Even in Ireland, however, this heroic pill-taker was an exception. There, as elsewhere, the colour of a medicine works wonders, and when Tim Delaney died the village did not wonder (for "wasn't it a green bottle the Docthor was afther givin' him? "), whereas Mary Regan's recovery was solely due, as was well known, to the efficacy of the red mixture she swallowed so hopefully. Bonesetters are now much less frequently met with than they used to be. They were credited with special gifts which enabled them, with an absolute ignorance of anatomy, to set any and every breakable bone in the human body. Faith in them was absolute; they, like the King, could do no wrong, and Sheila Desmond knows of instances in which limbs set by a mere qualified doctor were afterwards broken again to be reset by some tinker or smith, generally an itinerant, who having received his fee went on his way rejoicing. One blacksmith had an unrivalled reputation in the country, and so renowned was his skill that a leg (set by, and mending nicely under the care of, the dispensary doctor) had to be broken and set again by him before the sick man or his relations would believe recovery possible. One old woman treated in this way never regained the use of her leg, while, on the other hand, many cases, in which no certified practitioner had any part, got well with marvellous rapidity. A few words about Paddy the Doctor concludes the sketch. He was born at Crosshaven in the county of Cork on a Good Friday morning many years ago, and the priest told his mother that if he were christened between the first and second mass on Easter Sunday he would have power to cure all diseases. The conditions having been fulfilled, Paddy grew up possessed of almost miraculous powers. To a certain knowledge of herbs and their uses he added the magic potency of charm and spell which no malady can resist, and soon his fame spread far and wide. With two complaints he was particularly successful, one being the "Evil" (King's Evil) and the other the "Farsee" (farcy), which attacks horses. Once three men were sent to him as a deputation from county Waterford, begging him to return and heal the people there, and his mission was attended with wonderful results. It is some sixteen or seventeen years since Paddy was last heard of, but the following, which is his own prescription for the cure of the "evil," gives a very fair idea of his methods: "You must take the first pup of the first litter, and divide him from the nose to the tail, split the tail too and then apply one half the pup to the part affected. The patient can never stand it more than two hours, 'tis so fetching, but in troth 'tis a wonderful cure entirely!"

MEDICAL NEWS.

Dr. W. Robb of Irthlingborough has, on the recommendation of Earl Spencer, Lord Lieutenant of the county, been appointed to the Commission of the Peace for Northamptonshire.

Dr. Reginald Dudfield, Medical Officer of Health for Paddington, has been appointed to represent the Incorporated Society of Medical Officers of Health on the Registration Committee for the National Registration of Plumbers.

Sir Edward C. Buck, late Secretary to the Government of India Revenue and Agricultural Department, will read a paper before the Indian Section of the Society of Arts at 4.30 p.m. on May 2nd on the Applicability to India of Italian methods of utilizing Silt. The subject includes medical as well as agricultural and geographical interests, and it is claimed that the Italian work is a great campaign against malaria.

The inaugural lecture of the summer session of the Postgraduate College, West London Hospital, will be given at 5 p.m. on Monday, May 13th, by Major Leonard Rogers, M.D., F.R.C.P., I.M.S. The subject of the lecture, which will be illustrated by lantern slides, is the clinical diagnosis of fevers in the tropics.

The Newcastle-upon-Tyne and Northumberland Sanatorium for Consumption at Barrasford, North Tyne, will be opened on Saturday, May 11th, at 3 p.m. A special train will leave the Central Station, Newcastle, at 1.10 p.m.

Mr. G. B. Morgan of Bishopwearmouth, Senior Surgeon of Sunderland Infirmary, was the recipient on April 16th of an illuminated address, in the form of an album enclosed in a casket, from those who have been associated with his work. Mr. Morgan joined the institution as House-Surgeon and Secretary in 1857, and he has been closely connected with its fortunes ever since, and has greatly contributed to its growth and prosperity. Five years after his appointment as House-Surgeon and Secretary he was elected to the honorary staff, and for thirty-seven years he has been Chairman of the Medical Board. This is not the first appropriate recognition that Mr. Morgan's great services to Sunderland Infirmary have received, for some years ago, on the fortieth anniversary of his appointment, he was presented with a portrait of himself and with a number of silver ornaments, and at the same time one of the wards was named after him. Mr. Morgan, who is still in full work, was formerly President of the Northumberland and Durham Medical Society, and of the North of England Branch of the British Medical Association.

Margate as a Health Resort.—Dr. F. E. Nichol, in proposing the health of the guests at the banquet given by the Margate Chamber of Commerce on April 19th, at the Queen's and High Cliff Hotel, Cliftonville, said that the world at large ought to know what splendid air there was at Margate, and how the perfect water supply was an important addition to the many natural and other advantages possessed by the place. Margate had an ambition to be something more than the playground for the crowds that came from London; it wanted to be known and recognized as one of the greatest health resorts and sanatoriums in the empire. Amongst other medical men present at the banquet were Mr. W. G. Sutcliffe, Dr. E. A. White, Dr. G. W. Chapman, Dr. G. H. Gould, Dr. P. C. Burgess, Dr. J. J. Hemming, Dr. C. Heaton, and Dr. W. Blagdon Richards. One of the features of the evening was the speech by Mr. G. R. Sims, who pleased his audience by declaring that Margate did not stand still, for it had brought itself up to date, it went ahead of date, and defied foreign competition.

The Midland Medical Union.—The sixth annual meeting of the Midland Medical Union took place in Chesterfield on April 18th, and was followed by the annual dinner. At the general meeting Dr. J. G. Shea, J.P., was voted into the chair, in the absence through illness of the President, Mr. A. Chawner, of Clay Cross. Letters having been read from various members regretting their inability to be present, and the minutes of the previous annual meeting having been confirmed, the report for the year 1906 was read and adopted, on the motion of Dr. Goodfellow, seconded by Dr. Worthington. The Honorary Treasurer, Dr. F. R. Mutch, of Nottingham, not being present, the accounts for the year were then presented by the General Secretary, Mr. G. S. O'Rorke, M.A., LL.D., and were approved, on the motion of Dr. Shea, seconded by Mr. W. Stratton. The officers for the coming year were then elected, Mr. Chawner being re-elected President, on the motion of Dr. Worthington, seconded by Dr. Goodfellow; while Mr. O'Rorke and Dr. F. R. Mutch were reappointed to the posts previously held by them, and Messrs. A. Fulton and J. H. Cox elected auditors. A Council representative of the Nottingham, Mansfield, Belper, and Chesterfield branches was also appointed. The meeting then closed with a vote of thanks to the Chairman. At the dinner, held at the Hotel Portland, in Chesterfield, Mr. R. G. Allen took the chair, in the absence of the President, and, in due course, proposed the usual loyal toasts. "Success to the Midland Medical Union" was then proposed by Mr. J. Smith Whitaker, and acknowledged by Dr. Brownlow Smith, Honorary Secretary of the Belper branch. The toast of "The Guests," proposed by the Chairman, was coupled with the name of Mr. Winstan St. A. St. John, Honorary Secretary of the Derbyshire Division of the British Medical Association, who responded in suitable terms. This brought the formal proceedings to an end, the rest of a pleasant evening being devoted to conversation and music.

British Medical Journal.

SATURDAY, APRIL 27TH, 1907.

THE SHIFTING OF THE INCOME-TAX BURDEN.

In January, 1906, an article was published in these columns dealing with the income-tax burden of the professional classes, and members of the medical profession were urged to use the opportunity afforded by the imminence of a general election to bring their claims prominently before the notice of Parliamentary candidates. We attempted to formulate and to justify the demand of the worker to be taxed at a lower rate than the possessor of an income from invested capital, and, in referring to the subject from time to time, we have consistently maintained the position then taken up. Twelve months ago, in his first financial statement as Chancellor of the Exchequer, Mr. Asquith admitted that an adjustment of the income-tax was a necessity, and made the welcome announcement that he had decided to appoint a select committee of the House of Commons to inquire into the practicability of graduating the tax and of differentiating between earned and unearned incomes. Pending the result of this inquiry he declined to interfere with the incidence of the impost, but he dropped a significant hint as to his own views by stating that not only was a shilling income tax in time of peace impossible to justify, but that the present tax pressed with excessive severity on that class of the community whose incomes ranged from £600 to £2,000 a year.

The promised committee was appointed without delay, it got to work at once, and reported in the late autumn. We have already dealt at some length with the report of this Committee, and it is unnecessary to do more than recapitulate briefly the conclusions to which it came. These were: (1) That graduation of the income tax by an extension of the system of abatements on small incomes is practicable; (2) that graduation by means of a super-tax on large incomes, while practicable, would be attended with grave administrative difficulties; and (3) that differentiation between earned and unearned incomes, with the object of taxing the former at a lower rate than the latter, is practicable. During the last few months expression has been given in a variety of ways to the widespread opinion which exists as to the inequitable incidence of the present tax, and several meetings have been held at which the question has been discussed and resolutions calling for reform carried without dissent. As will be remembered the Medico Political Committee of the British Medical Association took up the matter last summer, when it was announced that it was seeking the co-operation of the Incorporated Law Society and societies representative of other professions with a view to joint action. At a recent meeting of graduates of the University of London and other universities, held at the Westminster Palace Hotel, a deputation headed by Sir Walter Palmer, Bart., was appointed for the purpose of impressing upon the Chancellor of the Exchequer the urgent necessity for the readjustment of the incidence of the tax on professional and industrially earned incomes.

With all these influences at work it is not surprising that interest in this year's Budget speech should be mainly directed to the income-tax proposals, and manifested in the close attention paid to Mr. Asquith when he rose to address the House. After reviewing with satisfaction the finance of the year which ended on March 31st, 1907, the Chancellor spoke at some length on the position of the national credit and the necessity for making liberal provision for debt reduction. He then explained the views of the present Government on the subject of social reform, and foreshadowed the lines on which it intends to proceed during the remainder of their term of office. After stating that he proposed this year to make no alterations in indirect taxation and announcing forthcoming changes in the financial relations existing between the imperial and local authorities, he passed to the income tax, and an eager House was soon able to gather the general trend of his proposals. He compared the position of a person in receipt of £1,000 a year from a safe investment with that of another person making "the same nominal sum "by personal labour in the pursuit of some arduous "and perhaps precarious profession, or some form of "business." The taxing of these two persons at the same rate in the past, he said, had been palliated—not justified—on the ground that the tax should be regarded as a mere temporary expedient, to be repealed at the earliest opportunity, but now that it had come to be looked upon as a permanent part of our financial system some readjustment is called for. Turning to the report of the Select Committee, Mr. Asquith pointed out that it was unanimous in upholding the necessity for making a difference between the taxation of earned and unearned incomes, and expressed himself as completely in agreement with it on this point. He then announced a reduction in the rate of tax payable on earned incomes from 1s. to 9d. in the pound, subject to the condition that the total income of the person claiming the relief should not exceed £2,000. The lower rate is to apply only where a proper claim is made by the taxpayer when sending in his annual return of income for assessment, or, if the assessor omits to serve him with a form, by the 30th September in each year. If in any year he does not make this claim in due time, it would appear that he will be taxed at 1s. in the pound as at present, and that no claim to a reduction will be afterwards entertained in respect of that year. The existing abatements on small incomes of all classes are to be continued. With regard to incomes which are partly earned and partly unearned the loss to the revenue arising from the introduction of the differential tax will be minimized by the arrangement that abatements are to be allowed primarily from earned income.

Contrary to expectation, the Chancellor made no reference to the proposal of the Select Committee to extend the existing graduation by further abatements. With the much-discussed super-tax he would have nothing to do. He rejected it for administrative reasons, one of which was that the machinery of the Inland Revenue Department would break down under the strain of introducing graduation by a super-tax and differentiation simultaneously, and he went on to point out that the Committee were themselves divided on the question of the practicability of such a tax. The apprehensions of the wealthier classes, however, have not been entirely without foundation. The relief granted on earned incomes will cost the State about £1,250,000 a year, and, having regard to other

demands on the national purse, this sum is more than the Chancellor can afford. He therefore announced his intention of meeting the loss of revenue arising from the readjustment of the income tax by a further graduation of the death duties. The duty payable on estates not exceeding £150 000 in capital value is not to be altered, but beyond that amount the rates are to be gradually increased to a maximum of 15 per cent. on the excess above £1,000,000 of estates valued at upwards of £3,000,000. The additional yield of the estate duty as the result of these changes is estimated at £1,200,000 a year, so that in effect the burden on the wealthy man is increased to the extent by which the worker is relieved.

In the discussion after Mr. Asquith's Budget speech and again in the debate on the income tax last Monday, the question of how pensions are to be treated was raised. Mr. Austen Chamberlain argued that there was nothing "more decidedly earned income than a "pension, whether you look upon it as deferred pay or "as an enforced provision for old age." The Chancellor of the Exchequer did not give a specific answer, preferring to keep an open mind on the subject, on the ground that the arguments are nicely balanced, since a pension may be regarded as deferred pay, but may also be looked upon as compulsory savings set aside and accumulated, and subsequently returned to the pensioner in the form of an annuity, and therefore to be treated as property and taxed on the higher scale. Deferred pay, however, is unquestionably earned income, and the justice of taxing it on the lower scale can hardly be questioned, but there will probably be a disposition to treat annuities as unearned. Having regard to the many years of arduous labour and good service that have in general to be given before a title to pension is acquired, it is to be hoped that the Government will be able to take the more generous view and tax pensions at the ninepenny rate.

What, then, is the general effect of the Budget on the position of members of the medical profession? They will, in common with other taxpayers, probably feel some disappointment at the Chancellor's inability to make an all-round reduction in a tax which stands in a time of peace at a rate "impossible to justify." On the other hand, the reduction which is to be made in the tax on earned income will more than compensate the average professional man for the high nominal rate. If his total income does not exceed the limit, the tax payable on his earnings will be reduced by one-fourth, and the placing of this limit as high as £2,000 means that probably nine-tenths of the members of the medical profession will pay at the lower rate. The practitioner whose earnings and total income amount to £500 will be relieved to the extent of £4 7s. 6d. a year, on a similar income of £1,000 the relief will be £12 10s., on £1,500 it will be £18 15s., while on an income of £2,000 the reduction will amount to £25. Beyond £2,000 there will be no reduction, and thus it will happen that an earned income of £2,001 will bear £25 more tax than one of £2,000, an anomaly which will probably lead to attempts on the part of persons with incomes just above the limit to discover some trifling additional expense which may legitimately be deducted, so as to bring them within the more favoured class. The wealthy professional man obtains no relief even though his earnings may be small; if his total income exceeds £2,000 he will be charged at the shilling rate even on his professional income, while if he is fortunate enough to leave behind him after his death an estate exceeding £150,000, his representatives will be called upon to pay estate duty at a higher rate than at present. Looking to the state of the national finances as a whole, and bearing in mind the many demands, both for relief from taxation and for the wherewithal to defray the cost of increasing public services, we are inclined to the opinion that the professional man has been not illiberally dealt with.

CIVIL AMBULANCES IN GERMANY.

As the subject of a really efficient first-aid service for London is at the present moment under consideration, some notes on the way in which our German neighbours have dealt with the question will be opportune. The first ambulance society in Germany was founded in Kiel by Esmarch, whose writings on first aid on the battlefield gave a great stimulus to public interest in the subject. The need for an efficient system of first aid was also greatly emphasized by the appalling loss of life at the burning of the Ring Theatre in Vienna in 1881.

The Berlin *Rettungs-gesellschaft*, or First Aid Society, founded on October 15th, 1897, undertakes to deal in a systematic manner with the whole subject of rendering first aid in cases of sudden illness and accident. The central station of the Society is situated in the heart of the city of Berlin, in close proximity to the offices of the more important medical institutions. It is in direct telephonic communication with all the hospitals in the city and suburbs, the various ambulance stations situated in places where hospitals are far apart, the police stations, railway stations, and transport dépôts. In the early days of the Society, there was the telephone at the central station, but with the increased use of telephonic communication and the more frequent demands on the services of the central station, this proved insufficient. In the beginning of 1905, the postal authorities arranged that on the call "*Rettungs-gesellschaft*" being given at any telephone office, the caller should be put in immediate communication with the central station, and this has greatly facilitated the work of the Society. The most important duties of the central station are, first, to supply medical aid in cases of necessity, and, secondly, to undertake all arrangements for the admission of patients into hospitals, including the transport of cases of infectious disease, and the disinfection of the vehicles afterwards. In order to facilitate the admission of patients to hospitals, and to avoid their having to go from one hospital to another seeking admission, as happens occasionally at all events in London, a book is kept at the central station, in which the names of all the hospitals in Berlin and its suburbs are enrolled, and the number of vacant beds in each is entered twice a day. If a patient, then, wishes to be admitted into any particular hospital he can at once find out if there is a vacant bed there by applying at the central station. The number of cases dealt with at the central station has increased from 8,690 in 1898, the first complete year's work after the inauguration of the Society, to 47,516 in 1904, the total for seven and a quarter years' work being 205,899 cases, a number which shows that the Society has amply justified its existence.

There is a First Aid Society in Leipzig, older than that in Berlin, as it was established in 1888. It is worked on the same lines, and boasts a similar extensive telephonic communication to that of the Berlin society. Some points of interest noticed in the report of this Society may be briefly touched upon. It appears that the medical profession and the ambulance authorities vie with each other in rendering speedy aid to the victims of serious accidents. In order to ensure that

all the arrangements are in a state of readiness to cope with emergencies, the authorities occasionally send false alarms to the central first-aid station to test the celerity with which first aid can be rendered. Two such alarms were given by the railway authorities during the year 1904. On one occasion less than twenty minutes after the receipt of the call at the central station eight doctors and eight first-aid assistants were on the spot ready to attend to the injured. A very large number of the cases requiring first aid are examples of foreign bodies swallowed or introduced in some other way, and *x*-ray apparatus has been installed at one of the principal first-aid stations of the city. In 1901 it was decided to keep all these foreign bodies, and by the end of 1904, 580 of these treasures were collected and catalogued, forming a most varied assortment, consisting of peas, beans, beads, buttons, fish-bones, splinters of iron, glass, wood, etc. If this collection is of no further use, it at any rate serves as a practical illustration of some of the work done by the Society. Every first-aid station in Leipzig is provided with an apparatus for administering oxygen in cases of suspended animation, etc. Any medical man is allowed to use this apparatus so long as it is not actually being employed at the first-aid station.

That the medical profession in Germany is keenly alive to the great importance of the work done by these societies is shown by the large number of doctors who enrol themselves under their banners. Thus, in 1904 there were about 1,100 medical men in Berlin and its suburbs and 46 in Leipzig working for the Society. Many of these gave their services free, and the fees given to those who accepted payment must have been very small, considering that in Leipzig only £387 was spent in medical fees in 1904, the number of cases attended during the year having been 7,507.

THE DECLINE OF LONDON MEDICAL SCHOOLS.

Whenever attention has been called to the striking decline in the number of medical students entering the London medical schools in recent years the explanation usually offered has been that this was a part of a general decrease affecting the three kingdoms, and that the falling off in London was only proportionate to the general decline. The statistics which Dr. William Hunter has embodied in the paper published elsewhere in this issue appear to prove that this comfortable doctrine is unsound. The statistics show that though there has recently been a decline all round, the fall in London has been much greater than elsewhere. The statistics are founded upon figures extracted from the *Students' Register* of the General Medical Council, and Dr. Hunter gives reasons for concluding that in spite of the fact that the two Royal Colleges in London do not require students seeking the diplomas of the Conjoint Board in England to register at the commencement of their medical studies, such registration is in fact carried out by the authorities of the medical schools. The interpretation which Dr. Hunter would invite us to put upon the statistics is only partly indicated in his paper this week, but when he has fully developed his conclusions, they will, we have no doubt, be of a sufficiently convincing kind; meanwhile the figures, which are the result of a most laborious investigation, will afford much food for reflection to the members of the medical faculty in London. A great deal of interest is being taken in the approaching election of a medical representative of Convocation on the Senate. The candidates are Sir Thomas Barlow, the sitting representative, and Dr. E. W. White, Professor of Psychological Medicine, King's College, London. The candidature of the former is promoted by the University of London Graduates' Union, and that of the latter by the Graduates' Association. The election takes place on May 7th, and the voting papers will be issued next week; meanwhile the graduates are being freely supplied with leaflets and pamphlets setting out the views held respectively by the two candidates and the organizations which they represent. The Graduates' Association seeks to show that the standard of medical degrees of the University has been lowered. We publish elsewhere a letter from the Principal of the University giving the official statistics for the Intermediate examination in medicine, and for the M.B., B.S. examinations in 1905-06. These figures are analysed in a letter by Dr. Calvert, one of the Honorary Secretaries of the Graduates' Union; he draws from them the conclusion that the view put forward by the Graduates' Association as to the degradation of the standard is unfounded. This conclusion is confirmed by the letters from examiners published in this and previous issues. It would appear, at any rate, that Dr. Calvert has convicted the Graduates' Association of an inaccuracy with regard to the mode of calculating passes and rejections at the final M.B., B.S. examination. It seems to us abundantly clear that candidates rejected in one subject must be counted as rejected at the examination. If they were counted as passed they would, when they eventually passed the whole examination, be counted a second time; the only alternative would be to treat them in a class by themselves. But the argument founded on the increase or decrease in the number of candidates rejected appears to us to be unsound, for the reasons so pungently expressed by Dr. Mercier.

MEDICAL PRACTITIONERS IN THE JAMAICA EARTHQUAKE.

A few weeks ago, in consequence of the receipt by numerous correspondents in this country of a circular letter from a member of the Association resident in Jamaica appealing for pecuniary assistance owing to loss caused by the earthquake, a communication was addressed to the President of the Jamaica Branch, and we are indebted to Dr. G. C. Henderson for a very prompt reply. He states that "there is not a single "medical practitioner in Kingston who has not suffered "severely by the earthquake, and who had not to camp "out in his coach house or other out-buildings for at "least a month after January 14th, but nearly all of us "have now got some sort of shed or bungalow fixed up "as a temporary shelter, till we can more readily face "the problem of rebuilding. Some have already left, "or are leaving the island, and may not return, but "the majority are staying on, and are awaiting the "result of the appeal of the delegates of the Kingston "Restoration Committee, composed of the Archbishop of "the West Indies, and Mr. Arthur Farquharson, the Crown "Solicitor, as regards the grant and loan before finally "deciding on their action. If the suggestions of the dele-"gates are favourably received and acted on, though the "amounts of both are greatly under the total losses sus-"tained, the way will be open for rebuilding, and under "Mr. Olivier's leadership, in succession to the present "Governor, I trust the terms of obtaining such grants and "loans will not be made too onerous. I have not had an "opportunity of consulting other members of the profes-"sion in the few hours since receiving your letter, but, as "I understand it, judging from the conversations we have

"had during the past two and a half months, there is no "general desire on their part to make a special appeal to "the English profession for aid till we have exhausted "all the opportunities at present in our power, and the "result of the application for loan and grant is settled." It is clear, therefore, that the appeal in the circular letter mentioned above is purely personal, and it would appear that the writer's losses, though undoubtedly severe, are probably not greater than those suffered by the majority of practitioners in Kingston. Dr. Henderson adds some particulars with regard to his own experiences and those of other medical practitioners which will, we think, be read with interest: "Dr. G. F. da Costa, Secretary of our local Branch, "had his house rendered uninhabitable and was "buried in the collapse of his consulting rooms, "saving himself by putting up his hands over his head, "and thus preserving that from injury. The débris "surrounded him up to his chest, but he was able when "the shock ceased to push aside some of the bricks with "his hands, and to crawl, as if by a rat-hole, into a place "of security. Contrary to the dicta of Sir Alfred Jones "and Sir J. Crichton-Browne, it was the shanties and "poorest tenement houses which have remained intact, "while the more substantial masonry work buildings "collapsed altogether or were so cracked and shattered "as to need rebuilding more or less completely. The "streets have been lit by gas for the past month, "but the electric light and telephone services are "still in abeyance in a great part of the city which "was not burnt, and the extemporized oil lamps "are not at all an efficient substitute for the former. "My office, or consulting room, being of wood on "concrete foundations, is the only one in the city "which was not injured, though many of the drugs "were lost by breakage of bottles and jars, and the "dispenser's room was about ½ in. deep in a pool of "mixed tinctures, liniments, and liquid extracts, which "took several days to dry sufficiently to be cleaned out. "On the night of January 14th it was like a casualty ward "after a bad railway smash, and every available chair "and bench, as well as the floor space, was occupied by "the injured, but by the afternoon of January 15th "most of them were able to be moved by their friends "to some sort of shelter."

THE PATHOLOGICAL MUSEUM OF THE ANNUAL MEETING.

The Subcommittee of the Pathological Museum at the annual meeting of the British Medical Association at Exeter, from July 30th to August 2nd, 1907, reports that the arrangements for the museum are making good progress. Since the last meeting of the Executive Committee this Subcommittee has met, and has considered the promises of exhibits up to date. In many instances the exact nature of exhibits has not at present been stated, but it is even now evident that there will be good collections of specimens, illustrating tumours of the brain, diseases of the breast, diseases of the liver and gall bladder, tropical medicine, and of skiagraphs of fractures and dislocations. The Subcommittee is glad to be able to state that it has promises of exhibits from Cambridge, and also from St. Bartholomew's, St. George's, King's College, St. Mary's, St. Thomas's, Westminster, and other hospitals. Professor Ehrlich, of Frankfort, has promised to help, and it is hoped that it will be possible to get together a really cosmopolitan exhibit illustrating cancer research, in which the English, American, and German schools will be represented. The Honorary Secretaries of the Pathological Museum are Dr. R. V. Solly, 40, West Southernhay, Exeter; and Dr. G. P. Hawker, 8, St. Leonard's Road, Exeter.

INCOME TAX AND THE MEDICAL PROFESSION IN FRANCE

The medical profession of this country finds the income tax, even with the mitigation which has at last been granted, a grievous burden, and it will therefore be prepared to sympathize with the profession of France in its approaching subjection to the same yoke. The proposal of an income tax has naturally been received with dislike by a large section of the people, but among the doctors it has caused something like consternation. This feeling found expression in a strongly-worded resolution passed by the Congress of Medical Practitioners which brought its work to a close on April 15th. The tax itself is felt to be bad enough, but there is a complication, from which we are free, that threatens to make the situation intolerable. If M. Caillaux's scheme becomes law, the medical practitioner will find himself on the horns of a cruel dilemma between the terms of the new law and the prescriptions of the Penal Code relative to professional secrecy. One article of the Bill, which relates to the profits of liberal professions, provides that every person enjoying revenues taxable under this head must make a detailed return of such revenues every year in the course of the month of January to the comptroller of direct taxes, and this return must be accompanied by all vouchers necessary to establish their correctness. What, the doctors are asking, are these vouchers? Doubtless practitioners will be called upon to produce their books and all records of visits or consultations which the comptroller may require for his enlightenment. On the other hand, these confidential documents come within the terms of the law of professional secrecy. If they are shown to the comptroller, that official will necessarily learn the names of the patients, and the details of operations, major or minor, that have been performed. He will learn that such a father of a family has been treated for such a disease; that such a lady of fashion has undergone such an operation; that a certain marriageable girl has a delicate chest, a fact which the family has carefully concealed. The Penal Code makes physicians and surgeons, except in cases where the law compels them to disclose secrets entrusted to them in their professional capacity, liable to imprisonment for one to six months, and to fines of £4 to £20. Will it be argued that the circumstances of the case bring it within the scope of the exception indicated in the code? Clearly the production of particulars as to medical practice can scarcely be construed as giving information as to crime, and the words of the law would have to be seriously strained in order to extract from the obligation to state the amount of one's income an authorization to violate professional secrecy. The comptroller is also sworn to secrecy; but there is a Control Committee, to be appointed by the Prefect, which will also have the right to poke its nose into all matters relating to the tax. Confidences shared by so many could only be *secrets de Polichinelle*, and in the provinces especially the ailments of local society would furnish inexhaustible material for gossip, and the most jealously-guarded secrets of many lives would be exposed to public view. Are doctors to be obliged to keep books by a kind of double entry—one for their own use with real names, another for the tax-gatherer with false names or cabalistic symbols? As there is no provision for any safeguards of the kind in the Bill, the fiscal authority would have the right to refuse such vouchers as insufficient. M. Clemenceau said the other day of himself and his colleagues that they were in a state of incoherence. This confession receives a striking illustration in the new Income-tax Bill as it applies to the medical profession. As the President of the Council is himself a member of that profession, it might be

expected that he would insist on means being found to extricate his sometime brethren from an impossible position. So far, however, no attention seems to have been paid to the matter by the Government. The doctors are anxious for guidance as to what they are to do. That, however, is what nobody seems to know, or, if M. Caillaux knows, he keeps the secret *altâ mente repostum.*

OLD MISSOURI DOCTORS

MARK TWAIN is contributing some delightful reminiscences of his early life to the *North American Review*. Apparently he dictates them just as the scenes of the past rise to the surface of his memory. This makes his autobiography "a mighty maze but not without a plan." In the last instalment, which appears in the *Review* for March 15th, he tells of an old-world farm belonging to an uncle near Florida, a townlet in County Monroe, Missouri. There he spent some of the happiest days of his childhood. The mention of certain swings on the forest slopes brings him by a natural transition to doctors. The swings were made of bark stripped from hickory saplings. When they became dry they were dangerous. They usually broke when a child was 40 ft. in the air; this, says Mark Twain, is why so many bones had to be mended every year. He had no ill-luck himself, but none of his cousins escaped. There were eight of them, and at one time and another they broke fourteen arms among them. But it cost next to nothing, for the doctor worked by the year—$25 (£5) for the whole family. He mentions two of the Florida doctors, Chowning and Meredith, who not only tended an entire family for $25 a year, but furnished the medicines in addition. "Good measure, too. Only "the largest persons could hold a whole dose. Castor-"oil was the principal beverage. The dose was half "a dipperful, with half a dipperful of New Orleans "molasses added to keep it down and make it taste "good, which it never did. The next stand-by was "calomel; the next rhubarb; and the next jalap. "Then they bled the patient and put mustard plasters "on him. It was a dreadful system, and yet the "death-rate was not heavy. The calomel was "nearly sure to salivate the patient and cost him "some of his teeth. There were no dentists When "teeth became touched with decay or were other-"wise ailing, the doctor knew of but one thing to do: "he fetched his tongs and dragged them out. If the "jaw remained, it was not his fault." Mark Twain goes on to say that doctors were not called to cases of ordinary illness; the family's grandmother attended to those. Every old woman was a doctor and gathered her own medicines in the woods, and knew how to compound doses that would stir the vitals of a cast-iron dog. Then there was the "Indian doctor," a grave savage, remnant of his tribe, deeply read in the mysteries of Nature and the secret properties of herbs, and most backwood-men had high faith in his powers, and could tell of wonderful cures achieved by him. There was the "faith doctor," too, a woman whose speciality was toothache. She was a farmer's old wife, and lived five miles from Hannibal. She would lay her hand on the patient's jaw, and say "Believe" and the cure was prompt. Twice Mark saw the cure performed, his mother being the patient.

HYGIENE AND THE PUBLIC SCHOOLS.

THE conference on the teaching of hygiene and temperance held on St. George's Day this week was well attended, among those taking part in the proceedings, in addition to Lord Strathcona the Chairman, Mr Deakin, the Australian Premier, and Sir John Cockburn, being Sir Phillip Jones Consulting Physician of the Prince Alfred Hospital, Sydney. Sir John Cockburn, a medical man who, after a successful political career in Australia, has for some years past shown an active interest in questions of child culture; Mr. Pearce Gould, Sir Victor Horsley, and Sir T. Lauder Brunton. The final upshot of the conference was the adoption of two resolutions, one urging all educational authorities to recognize that the teaching of hygiene and temperance should form an essential part of all educational systems, and the other expressing the opinion that to meet the responsibilities of the State towards school children adequately, it was essential that a medical department should be instituted in the Board of Education. Sir Victor Horsley gave an interesting address on the present attitude towards alcoholism of those in charge of the higher education of the country, a subject which he has recently investigated. He thought that at least 72 per cent. of all secondary schools could justly be described as total abstinence schools; he had had no idea previously that common sense on the subject had reached such a development, and thought that a debt of gratitude was owing to the principals of these schools for quietly training the nation in temperance. The remaining 28 per cent. were mainly old-established schools in which intellect seemed frozen by custom. There were public schools, he said, in which 50 per cent. of the scholars were given alcohol regularly; while in one school alcohol was given to every one of the boys on six particular saint days during the year. To many, as to Sir Victor Horsley, it may seem strange that in the present state of civilization and knowledge any responsible person should countenance such practices, but it is really not surprising at all. As has already been remarked in these columns, some of the great public schools are far behind those of a socially lower grade in the intelligence exhibited in the upbringing of the young people entrusted to their care. In some the buildings are in themselves structurally imperfect, and in others the authorities are slow to accept the teachings of modern science, or even to regard the care of their pupils' health as in many respects the most important part of their duty. The old saying, *mens sana in corpore sano*, is accepted as a general principle, but the attention paid to many factors which would contribute to the production of a healthy mind in a healthy body is only perfunctory. More particularly, any new and in itself desirable practice which happens to clash with an old established custom or tradition has a very bad chance of being observed. Parents themselves are not altogether blameless in the matter; having chosen a place of education for their children, they take it for granted that everything must be for the best in that best of all possible schools, and even if they become alive to the existence of things to which objection might properly be raised they are shy in driving their objections home. There are schools, in short, which would be all the better for the existence of an association of parents for the promotion of reforms.

DISSENSIONS AMONG ANTIVACCINATORS.

THERE was no curtain raiser in the shape of an amusing letter from Mr. G. Bernard Shaw at the recent annual meeting of the National Antivaccination League. It appears, however, from the report in the *Vaccination Inquirer* (April number), that the meeting was not without "brilliant characteristics." One of these apparently consisted in a knock down blow for the executive, who presented a resolution, proposed by Mr. J. M. Robertson, M.P., by which it was intended to ask the Prime Minister to receive a deputation from the League. This deputation, in the terms of the resolution, had to ask for something which the League did not really want a repeal of the penal clauses of the Vaccination Acts. Such a modified demand did not suit the whole hoggers who were present. They swooped down and showed their want of confidence in the executive by defeating

the resolution. This has greatly exasperated the officials. Such insubordination on the part of the rank and file, it is now said, ought not to have been displayed in public, pointing, as it does, to dissensions within the camp and suspicions against the solidarity and unanimity of the League. After all, the defeated resolution was only a bluff to obtain, if possible, an interview with the Prime Minister. By straightforward means there was no hope of being received, but by obscuring their real object they might gain an entrance. Then the masks could have been thrown off and the usual bludgeons brought from beneath the cloaks; but, as Gilbert says:

It would not do, the scheme fell through.

The resolution was not only defeated, but the mover received a well-timed and well deserved rebuke scarcely contemplated. He had made a most unwarranted attack on the medical profession. The mortality from cancer had risen. Was vaccination the cause? "If the "doctors," he is reported to have said, "are carrying on "a practice which they cannot show to be innocent of "that far more dreadful disease of cancer, what are we "to say for their moral scrupulosity as a whole?" Also, "I am disposed to bring against the profession in the "mass a charge of want of scientific good faith in this con-"nexion." Thus Mr. Robertson sinks to the lowest level of the claptrap antivaccination agitator. The indictment of the medical profession was not supported by the slightest tittle of evidence. In this respect it was less excusable, though perhaps less amusing, than that of another prominent antivaccinator, who supported a similar contention in a weekly journal last year, by announcing that "in almost every case of cancer the roots show as "many distinct growths as there are vaccination "marks"! Dr. Scott Tebb moved and carried an amendment to the resolution, and promptly repudiated Mr. Robertson's statements about cancer. He expressed his "disagreement with suggestions made that day "and in the past with regard to the possibility of vac-"cination being in part responsible for the great increase "in cancer mortality." Mr. Robertson must have winced under this castigation from his own platform. Of this attack on one of the Caesars of the National Antivaccination League it may be said with Mark Antony, "This "was the most unkindest cut of all." If Mr. Robertson was not convinced of the audacity of his groundless attack on the "moral scrupulosity" of medical men, he might consult the Final Report of the Royal Commission on Vaccination, page 102, paragraph 391, where he will find this reference to the increased cancer mortality—"There is not a shadow of evidence to con-"nect this with the practice of vaccination, whilst there "is, as we have shown, evidence pointing the other "way." Mr. Arnold Lupton, M.P., did not add much to the gaiety of the proceedings. He was evidently downhearted, and possibly missed the laughter which greets him in the House. There was not much encouragement he averred to "further our cause" in Parliament. Members who agreed with him in private, he lamented, failed "to make themselves equally disagreeable with "him in public." Surely Mr. Lupton cannot complain of lack of the disagreeable element on a recent occasion, when Sir W. J. Collins administered a lashing similar to the one which had just been applied to Mr. Robertson. The opponent of compulsory vaccination expressed his desire to dissociate himself from the "lurid pathology" of the member for Sleaford. Protests of this kind should be more frequently in evidence from medical men who find themselves associated with the anti-vaccination movement. They are calculated to check and correct rabid and mischievous utterances. The letter-writing ring has been busy of late. The favourite target for abuse at present is Mr. John Burns. Many of those not thus engaged are reduced to arguing that there can be no defence of vaccination, because medical men do not show a disposition to mount the platform and debate the subject in public. No sane person would argue that this question could be settled by counting noses at a public debate. It is further doubtful whether any useful purpose would be served by a variety entertainment such as the debate would provide.

THE SMOKE NUISANCE.

At the annual general meeting of the Smoke Abatement Society on April 22nd, Sir William Richmond, the President, was able to give a fairly satisfactory account of the progress made. The society, he said, was encountering less opposition than formerly, as it had been able to convince manufacturers that absence of smoke—or, in other words, complete combustion of coal—spelt not expense but economy. He had grave complaint to make, however, against the inertia of the Local Government Board. In the course of the past few years the society had occasion to make complaint, in the matter of undue smoke, to the West Ham Corporation no less than 1,788 times; the laxity of that authority in this respect was responsible for a good deal of the absence of clearness in the air in London, for the volumes of smoke emitted in West Ham were carried into London when an easterly wind prevailed. Under the circumstances it was a statutory duty of the Local Government Board, imposed upon it by the Public Health Act, to take action itself, but it did not do so. Sir Frederick Treves described the deleterious effects on the human economy of the presence in the atmosphere of the products of incomplete coal combustion. He showed, too, that, apart from all other disadvantages of coal smoke, the latter is the principal cause of fog, and that every fog kills off large numbers of persons. Commenting on a statement often made that smoke abatement is impossible, he pointed out that not so very long ago London was without any drainage system, and yet the movement for its provision—an infinitely more expensive undertaking than that of smoke abatement—had been successful. His observations were very much to the point, and it is a pity that the public at large does not show a greater amount of interest in the subject. At the present moment house building in the suburbs and house alterations and flat-erection in more central areas is proceeding at a great pace, and householders should insist upon the habitations which they are invited to occupy being fitted with some of those improved heating appliances now readily available. There is much to be said in favour of central heating, which is readily applicable to houses of moderate size; and, at all events, no one leasing a new home should be content with the ancient form of grate. Several of those recently introduced not only produce less smoke, but also warm a house efficiently at less cost than their predecessors. This is a question in which women would probably play a more active part, if only they recognized that a smoky atmosphere has further disadvantages than that of being ruinous to clothes and furniture. At present there is a tendency to believe that, by getting a few miles out of London, all the advantages of good air are at once obtained; but this is not the case. The visibility of smoke particles in the atmosphere depends on other factors than their absolute quantity, and the presence even of a very small proportion of carbon, and of the acid products of coal combustion, is devitalizing both to the old and young.

A FREE EXPERIMENT.

A correspondent has called our attention to a preparation which is now being widely advertised as a disinfectant for household use, under the name of "Antozone," and on analysis it appears to be sub-

stantially merely a weak solution of zinc chloride. Even pure zinc chloride is but a feeble disinfectant, and this particular solution, when tested by the Rideal-Walker method, seems to have a carbolic coefficient of only 0·02. The fact which makes this preparation worthy of remark is, however, not that as thus gauged it is almost more feeble than any nominal "bac-"tericide," or "antiseptic," or "disinfectant" which has yet been advertised, but that the public is being offered an assurance of its alleged virtues which is as ingenious as it is disingenuous. The advertisers offer to supply any member of the public who wishes to assure himself that the preparation is all that it is claimed to be with a free sample and small quantities of sulphuretted hydrogen and ammonium carbonate on which to test it. This is decidedly smart, in the modern sense of the term, for, of course, zinc chloride having a natural affinity both for H_2S and $(NH_4)\,2\,CO_3$, either of the latter on being brought into contact with this "disinfectant" will be at once destroyed. Hence any person ignorant of chemistry would naturally at once conclude that this new disinfectant must be a powerful deodorant and antiseptic for general use. One has long been accustomed to the exhibition of similar ingenuity by the vendor of proprietary drugs, but this is the first instance we remember meeting in connexion with the trade in disinfectants. This evidence that the microbe of misplaced and misleading ingenuity has spread from one body to the other will supply a further argument to those who hold that the trade in disinfectants should be regulated by Government, and that all of them should be officially examined to ascertain their power as compared with some common standard.

PRESERVATIVES IN FOOD.

We learn from *Science* that under the auspices of the University of Illinois, a Commission has been organized for the purpose of conducting experiments on the effect on the consumer of the preservatives in common use in food stuffs, especially meats. The work will be done under the direction of Professor H. S. Grindley, of the department of physiological chemistry of the University. The other members of the Commission are R. H. Chittenden, Professor of Physiological Chemistry, Yale University; J. J. Abel, Professor of Pharmacology, Johns Hopkins University; and A. P. Mathews, Professor of Physiological Chemistry, University of Chicago. The expense of the investigations is to be borne in part by the University and in part by some of the beef-packing houses of Chicago.

THE STRENGTH OF POTENT DRUGS.

With a view to the international unification of the formulæ of potent medicines an agreement was signed at Brussels last November by representatives of nearly all the countries of Europe including Great Britain, dealing with standards for the drugs to be used and processes and strengths for the preparations to be made from them. The text of the agreement has recently been communicated to Parliament [illegible] effect is to be given to the agreement in the next issue of the British Pharmacopœia. A number of doses of various strengths of [illegible] and their dosages form the subject of a report which has just been published by the Pharmacopœia Committee of the General Medical Council to the Privy Council. The report states that, while many of the changes might easily be made without [illegible] or difficulties, others might involve serious risk if not [illegible] until the new formulæ became thoroughly familiar. Thus it would be necessary to increase the strength of the tincture of strophanthus to nearly four times what it is at present, and if a prescription, written before the change, were dispensed with the stronger tincture that had become official, fatal consequences might easily ensue. The Committee further point out that certain of the changes are actually of a retrograde nature, apart from their disadvantage merely as changes; the proposal, for instance, that nux vomica and its preparations shall be standardized according to the amount of total alkaloid instead of, as now, according to the amount of strychnine, would, if carried out, be distinctly a sacrifice of uniformity of therapeutic value, since the ratio of the active strychnine to the inactive brucine is variable, and a drug standardized according to the total alkaloid might actually be entirely free from strychnine. The British Government has reserved to itself the right of introducing into the stipulations of the agreement such modifications in detail as the progress of medical and pharmaceutical science may render necessary, and such a case as that described may well be held to come under this reservation.

THE FRENCH HOSPITAL IN LONDON.

THE thirty-ninth annual dinner of the French Hospital in London took place at the Hotel Cecil on April 20th. The chair was occupied by His Excellency M. Paul Cambon, the French Ambassador. He was supported by many members of the Corps Diplomatique, the Lord Mayor and Sheriffs, the medical and surgical staff, and over 300 subscribers and visitors. From the number present, and the handsome sum of £4,490 which was subscribed for the hospital, it is evident that the *entente cordiale* extends into the realm of charity as well as into that of international politics. After the toasts of "The King" and "The President" had been duly honoured, the Ambassador proposed "The Bene-"factors of the Hospital, le Corps Diplomatique, "and the Corps Médical." Mr. Edmund Owen, the Senior Surgeon, replied on behalf of the medical and surgical staff. Alluding to the Lord Mayor, whose interest in cripples is well known, he wittily modified the wording of an old French proverb, making it "Au royaume des estropies, le "Lord Mayor est roi." The toast of "The Press" was entrusted to the hands of Dr. George Ogilvie, the Senior Physician, who proposed it in felicitous terms. In referring to the efforts of the press of both countries in bringing about our present cordial relationships, he said: "Elles ont contribué à resserrer les liens de "l'amitié et de l'affection entre nos deux pays. "Puissent cette amitié et cette affection croître et "s'étendre comme le palmier, et que la paix, avec "sa couronne d'épis nous enlace en une durable "union." These graceful remarks evoked a sympathetic response on the part of the audience, the peroration of Dr. Ogilvie's speech being received, as our French neighbours would say, "avec les applaudisse-"ments chaleureux."

MEDICAL MEN AND THE INSURANCE OF EMPLOYEES.

In reply to several correspondents, we are glad to be able to state that the negotiations with regard to arranging special terms of insurance for medical men against risks arising under the new Workmen's Compensation and other related Acts are now nearly concluded. It is hoped that it will be possible to make a definite announcement next week. The new Act comes into force on July 1st.

MEXICO. THE XV CONGRESS. A medical congress organized under the auspices of the Pedro Escobedo Medical Society will be held in the city of Mexico on May 20th and three following days. The congress will be opened by President Diaz. The president of the society is Dr. Lopez Hermosa. The work of the congress will be distributed among eleven sections.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Budget, which was unfolded by Mr. Asquith in a luminous speech on Thursday in last week, was specially interesting to the medical profession. For the first time differentiation between earned and unearned incomes was introduced as regards income tax. This principle affects all classes of professional men, indeed touches the whole middle class of workers, and as proposed will give a 25 per cent. reduction to the earned income. For the medical man with a professional income under £2,000 a year there will be an income tax of 9d. only. The Chancellor of the Exchequer put the effect of his proposals most clearly as follows: "I will take an income of £1,500 a year. At present, whatever may be the source of that income, at the rate of 1s. in the pound it pays £75. Under the new system, if the income is derived wholly from the Funds, it will continue to pay at the rate of 1s. in the pound, or £75. If, however, it is derived wholly from a profession or a trade, it will pay at the lower rate of 9d., or £56 5s. If, on the other hand it is a composite income, say, £500 from the Funds and £1,000 from a profession or trade, it will pay 1s. on the £500 and 9d. on the other portion, or £62 10s. instead of £75. Now as to the abatements. I will take an income of £600. At present such an income is allowed a deduction of £120, so that income tax is paid on £480 irrespective of the source of income. Under the new system how will it work out? If the income of £600 is derived wholly from the Funds, it will pay £24; if wholly from a profession or trade, it will pay £18, at the rate of 9d. per pound, coupled with an abatement; and if the income is made up of £200 from the Funds and £400 from a profession or trade, it will pay £20 10s., the abatement of £120 being deducted from professional earnings." The increase on the death duties will only take effect on estates over £150,000, and so will not affect many doctors. The maintenance of the general rate of income tax at 1s. in the pound for incomes over £2,000 and for all income from investments was criticized by some, while the working-class members grumbled a little that there was no relief to indirect taxation, and that the provision for old age pensions would not take effect for another year. On the whole, the Budget was very favourably received on the night of its introduction. On Monday when the resolution continuing the income tax of a shilling in the pound was under discussion, it came in for a good deal of criticism, and Mr. Austen Chamberlain directed attention to the question of pensions; he objected to the Chancellor of the Exchequer keeping an open mind on so important a matter, and asked whether there was anything more decidedly earned income than a pension, whether looked upon as deferred pay or as an enforced provision for old age. Mr. Asquith, in his reply, expressed the opinion that the arguments were nicely balanced upon this question. It might be argued that a pension was deferred pay, and therefore entitled to the lower rate; or it might be treated as accumulated savings, accumulated no doubt by compulsion, accumulated on behalf of the pensioner by somebody else; it might then be argued that when he came to the enjoyment of this at his time of retirement it should be treated as property and taxed on the higher scale. While desirous of avoiding the imposition of a grievance, he was anxious not to admit a principle of exemption capable of illegitimate expansion in other directions.

The Notification of Births Bill.—On Tuesday Lord R. Cecil introduced under the ten minutes rules a Bill to provide for the early notification of births. He said that out of every 1,000 children born in this country 145 died without reaching the age of 1 year; and there were particular localities in which as many as 250, 300, or even 400 out of every 1,000 born died at that early age. It was no exaggeration to say that half of them might be saved, for the rate in some of our Colonies was no higher than 70 per 1,000, and in some of our own counties it was not higher than 84. While the general death-rate in this country had been much diminished as the result of sanitary measures, the infantile death-rate remained practically stationary. This he attributed mainly to two causes—neglect by mothers of their own health before the birth of their children, and neglect of the children's health immediately after they were born. This neglect in most cases was due to ignorance, which was a far more potent cause of infantile mortality than the more commonly assigned causes of parental poverty and intemperance. Something could be done to remedy this state of affairs by the provision of skilled assistance to mothers in the early days of motherhood, and many health societies throughout the country had charged themselves with this duty. Remarkable results had been achieved in Huddersfield from the creditable efforts of the ex-mayor. But, under the existing registration law, six weeks might elapse before registration, and one-third of the children dying in the first year of life died in the first six weeks; so that these children were dead before the societies to which he referred could know that they had been born. It was solely with a view to remedy this defect that he had been asked to introduce this Bill. It provided that within forty-eight hours of the birth of every child a notification of that birth should be given to the medical officer of health. Notification was to be made in the simplest way, it being specially provided that it might be made by postcard, and the duty of notifying a birth was thrown, in the first place, on the father of the child, and, failing him, on any one who had been in attendance on the mother. The Bill further required that notification of children stillborn should be made as well as of those born alive. He urged the House to consider the seriousness of the evil the Bill was designed, he would not say to cure, but in some degree to mitigate. This was a perfectly and absolutely non-party question, and he ventured to hope that the Bill would be regarded as absolutely non-contentious. It was supported by hon. members in all quarters of the House, and he hoped its promoters would have the sympathetic support of the Government, and that the measure might be passed into law before the close of the present session. The names on the back of the Bill are Lord R. Cecil, Mr. Lyttelton, Mr Shackleton, Mr. Verney, Mr. Gulland, Mr. Masterman Mr. Sherwell, and Mr. Tennant.

Factory Inspectors and Lead Poisoning.—In answer to a question by Mr. Wedgwood respecting the facilities afforded to factory surgeons to examine patients, and Dr. Shufflebotham's suggestion that a private room should be set aside in each factory, Mr. Secretary Gladstone said that he had not seen the paper referred to, but on the covering letter issued with the Earthenware Special Rules of 1901 manufacturers were informed that arrangements should be made to allow due privacy for medical examination required under the rules. The health register in use at each pottery contained the following instruction: "In order to secure due privacy it is requested that the surgeon may have the exclusive use of a room or office while he is conducting the examination." The Medical Inspector of Factories had made special inquiry into this subject, and he learned that one of the four certifying surgeons in the Staffordshire Potteries had no complaint to make of unsuitable rooms being provided for his examination of workers, or of want of privacy; and in the very few cases mentioned by the other surgeons, in which the intervention of the medical inspector was necessary, there was no difficulty in securing better conditions. As regards the alleged superficial nature of the present examination, he might point out that all that could be done on factory premises in the way of physical examination was to observe the objective signs of absorption of lead into the system, which were very few—namely, the blue line on gums, anaemia, and weakness of fingers or wrist. In cases where the certifying surgeon considered a further examination necessary he arranged for the workmen to attend at his surgery.

The Central Midwives Board and the Training of Midwives.—In answer to a question put last week by Mr. Ashton, Mr. Burns stated that in nineteen counties in England and Wales there were institutions approved by the Central Midwives Board for the training of midwives, and that there were 51 approved institutions in England and Wales (of which 35 were voluntary—that is, non-Poor Law—and 16 Poor Law; of the latter, there were 6 in London and 10 in the provinces). The Paddington, Farnham, and Epsom infirmaries had not been approved. He had no information as to the payment and application of

fees in voluntary institutions. In Poor-law institutions there were usually no fees.

Milk and Tuberculosis.—Mr. Burns, in answering a question put by Mr. Marks in which it was suggested that the milk supplied to children in workhouses should be treated so as to render it free from tuberculous poison, stated that the dietary order issued by the Local Government Board in 1900 contemplated that young children in a workhouse should be dieted in accordance with the directions of the medical officer and with careful regard to the requirements of each individual child. In many Poor-law establishments the milk was treated in the manner suggested; but, looking to the circumstances he had mentioned and also to the division of medical opinion on the question of the best way of dealing with milk for children, he doubted the expediency of issuing a general order on the subject at the present time. In answer to a further question suggesting the notification of cases of disease of the udder in cows, Sir E. Strachey replied that the report of the Commission was receiving careful consideration. The matter was, however, one primarily affecting the public health, for which the President of the Local Government Board was responsible, and with whom it was proposed to confer on the subject.

The Butter and Margarine Bill came on for second reading last week, but did not pass this stage, and so will have to be discussed on some future day before it can go to a Committee. The Bill is founded on the report of the Select Committee, and is a larger and more complete measure than any of its predecessors. It deals with the adulteration and "faking" of butter, and places factories where butter and butter substitutes are made under provisions similar to those of the Margarine Act. Mr. Flynn criticized the Bill especially as regards the extraordinary provision for 24 per cent. of water in butter substitutes, while 16 per cent. was the limit for fresh butter.

Plague in India.—On Monday last Mr. Secretary Morley, in reply to questions by Dr. Rutherford, stated that the recorded deaths from plague in India, including native States, from September, 1896, to end of March, 1907, were approximately 5,012,000. The monthly returns which he received from India showed 58,438 deaths in January, 93,397 deaths in February, 171,522 deaths in March of the present year. He hoped that the hon. member would be satisfied with monthly totals. The provinces most affected were the United Provinces, the Punjab, Bengal, and Bombay. He also promised a return of the number of officers I.M.S. now on duty in India, exclusive of those attached to regiments, and the number of medical officers especially deported for plague work, exclusive of civil surgeons and officers in other medical work, and a second return of the number of medical men from England who have from time to time been engaged by the Secretary of State for plague work in India, and the number now on special plague duty. On Tuesday, Sir William Collins moved for and obtained the promise of a return showing the number of deaths and the death rates per million living in India for each of the last thirty years from plague, cholera, enteric or typhoid fever, and small-pox respectively.

A Special Sanitary Service for Plague. In answer to Dr. Rutherford, who asked whether a special sanitary service composed of Indian medical men and women, as recommended by Professor Simpson, had been instituted to deal with plague in India, Mr. Secretary Morley referred Dr. Rutherford to the published resolution of the Government of India, dated September 8th, 1904, creating the office of Sanitary Commissioner, in which was described the action taken by it in various schemes for the constitution of a separate sanitary service, and the difficulties, financial and administrative in the way of an effective and speedy reorganization. Much had been done to strengthen and improve the existing sanitary agency at the disposal of local governments, especially in districts where plague was liable to occur. The subject was still engaging the anxious consideration of the Government.

Public Vaccinators and their Fees. Mr. Rees asked the President of the Local Government Board last week whether he was aware that the operation was held by certain persons competent to judge that the minimum payment to public vaccinators under the Vaccination Act should be reduced from 5s. to 2s. 6d.; and whether he was prepared to accept and act upon such opinion. Mr. Burns replied that he had in preparation an order dealing with the subject of the remuneration of public vaccinators, which would shortly be issued.

Insanitation of Kingston Barracks.—Mr. Hicks Beach called the attention of the Secretary of State for War to the fact that in the barracks at Kingston-on-Thames, eleven miles from Hyde Park Corner and twelve miles from the War Office, the barrack rooms were still unprovided with lavatory conveniences, and the men were forced to use urinal tubs which had to be removed by hand; and that the water closets used by the men were only allowed to be flushed twice a day. Mr. Secretary Haldane answered that the drainage at Kingston Barracks was at present under reconstruction, and, as part of that reconstruction, the whole of the latrines, urinals, etc., used by the troops would in future be in accordance with modern sanitation. Urine tubs for night use were retained as a temporary measure. The existing water-closets were flushed twice daily without any stint of water, but when the new system was in order would be flushed as used.

The Sanitation of Irish Constabulary Barracks.—In answer to Mr. Sloan, Mr. Birrell stated last week that separate sanitary accommodation for women and children was almost invariably provided at the larger stations, but it was not possible to provide such accommodation at many of the small rural stations where the premises were small. The latter stations were usually occupied by one married constable only, and in such case the necessity for separate sanitary accommodation was not so marked. Constabulary stations were periodically inspected by county and district inspectors, as well as by officers from head quarters, so that ample opportunity was afforded for bringing to notice any defects in the sanitary arrangements. The local medical attendants advised on all matters affecting the health of the men and their families and the sanitary condition of the barracks. The surgeon of the force, who was attached to the dépôt, exercised no supervision in this respect.

Typhus at Oughterard.—Mr. O'Malley asked the Chief Secretary last week if his attention had been called to the resolution of the district council stating that the outbreak of typhus in Oughterard was due to famine conditions rather than to insanitation. Mr. Birrell answered that according to the resolution referred to, the district council appeared to consider that the fever was not due to the insanitary conditions described by the Local Government Board's inspector, inasmuch as the same conditions had always prevailed in Oughterard. The Board, however, was satisfied that the contention of the council had no support. The state of things found by the inspector constituted a perpetual menace to public health, and if district councils were to be absolved from all responsibility in cases in which insanitary conditions had existed for a long time there would be an end of sanitary reform in Ireland. The Local Government Board was entirely satisfied that there was no foundation for the suggestion that famine prevailed in this union and had caused the outbreak of fever. The guardians were bound by law to keep their relieving officers in funds for the relief of all urgent cases. They were well aware of their statutory obligations and powers, and the Board could not consider that they would be so oblivious of their duty to the destitute poor as to allow them to suffer from want of food to an extent which would cause famine fever. The Local Government Board had afforded through the spring months, and was still affording, employment to many hundreds of families in the poorest parts of this union where distress was apprehended, and the rates had thereby been relieved of a considerable burden. The Board was satisfied that the resources of the union would be ample to enable the guardians to provide any further relief that might be necessary.

King Edward's Hospital Fund. The Bill promoted by the King Edward's Hospital Fund for London was before the Chairman of Committees of the House of Lords on April 23rd as an unopposed measure. Having heard the formal evidence of Mr. Danvers Power in proof of the preamble of the Bill, the Chairman passed the Bill and ordered it to be reported to the House for third reading.

Canada.

Montreal General Hospital.

After mature deliberation, it has been decided by the Board of Governors of the Montreal General Hospital that the present medical building shall be destroyed and a new one erected on the same site at a cost of $500,000. Several of the members of the Board thought that a position up town should be chosen in preference to the present site, which is in the heart of the business section. It was agreed, however, that ample accommodation for those in the outskirts of the city had been provided, and that it was essential to have a hospital in the present locality for the benefit of the working classes and on account of the numerous accidents which occurred in the vicinity. The wharfs, docks, railways, and factories are close by, and immediate aid, it was contended, could be obtained from the General Hospital by summoning an ambulance, whereas it would take much longer to get help from the hospitals situated in the suburbs. Many arguments were advanced in favour of remaining—among others, the convenience of the outdoor patients—and eventually the block bounded by Dorchester, Lagauchetiere, Cadieux, and St. Dominique Streets was selected as being the most suitable. The greater part of this block already belongs in clear title to the General Hospital, together with a holding on the south side of Lagauchetiere Street. It is believed that the new wing can be erected without seriously interfering with the work of the hospital. The new power-house has already been contracted for, and will be started at once; it will cost about $80,000.

Montreal Infectious Hospital.

The difficulties in connexion with the new hospitals for infectious disease in Montreal will shortly be adjusted if the governors see fit to agree to the rather severe conditions which accompany the concessions of money. The hygiene committee recommends to the city council that a new twenty-five-year contract be drawn up between the city and the Alexandra and St. Paul hospitals. This contract will increase the annual grants from $15,000 to $30,000 to each hospital, and end the old arrangement under which the city paid $1 a day for each additional patient after twenty beds were occupied. Each hospital must in addition erect a pavilion for erysipelas and cerebro-spinal meningitis, and the whole of the buildings are to be open to the inspection of the city health officers. To these conditions two clauses have been added, the first, that the chairman of the health committee shall be on the executive board of each hospital, and the second, that at the expiration of the contract, twenty-five years hence, the city may expropriate the properties of both hospitals; the value to be determined by recognized appraisers.

Teaching of Medicine at McGill.

Owing to the death of Dr. James Stewart, Professor of Medicine and Clinical Medicine at McGill University, several new and important appointments have been made. In his place have been elected Drs. F. G. Finley, H. A. Lafleur, B.A., and C. F. Martin, B.A. All of these gentlemen are graduates of McGill and have studied in Europe, Dr. Finley being M.B.Lond. Dr. Lafleur is well known in connexion with his work with Councilman on amoebic dysentery. He also introduced the Brand method of cold bathing in typhoid fever to the profession in Montreal, and this treatment has been almost exclusively used there since that time. Dr. Martin is connected with the Royal Victoria Hospital, and is well known in the medical societies of Montreal and Canada as an authority on diseases of the digestive tract. The large increase of work which will fall upon the professoriate owing to the new five years' course has, it is considered, rendered the appointment of these three well-known men essential, and the appointments have been enthusiastically received by the staff and the profession in general. Dr. Finley is to have charge of the organization and didactic work, while the hospital work will be largely in the hands of Drs. Lafleur and Martin.

The late Dr. W. H. Drummond.

The sudden illness and death of Dr. William Henry Drummond has cast a gloom over Montreal. Best known as the author of *The Habitant* and other poems on the French Canadian, and as a delightful *raconteur*, he will be greatly missed in Montreal society. His delineation of the French habitant, with broken English and quaint sayings, will live long in the minds of all Canadians; and some of his characters, such as "Jean Baptist Troudeau, habitant," who, after a short stay in the city returns as "John B. Waterhole," have become almost proverbial in their application. Dr. Drummond always had something new for any special function, and could be relied upon to provide a large portion of an evening's entertainment at a moment's notice. He was as well known in New England as he was in Canada, and his popularity was unbounded. Very frequently he was called upon to go down to New York or Boston for a lecturing tour, or even for a banquet, as his presence ensured success. Much sympathy is felt for his wife and family.

New South Wales.

The Bubonic Plague.

The first outbreak of plague in Sydney occurred in the year 1900, and the total number of cases up to last week that have occurred in New South Wales was 566, the number of deaths being 192. The first year of the outbreak of the disease was by far the most serious, both as regards the number of cases and the rate of mortality. The figures for Sydney are as follows: 1900, 303 cases, 103 deaths; 1901, 21 cases, 1 death; 1902, 138 cases, 38 deaths; 1903, 2 cases, no deaths; 1904, 10 cases, 6 deaths; 1905, 18 cases, 5 deaths; 1906, 20 cases, 8 deaths; 1907, up to March 9th, 20 cases; total, 522 cases, 169 deaths. In addition, 15 cases and 4 deaths have occurred at Newcastle; 25 cases and 15 deaths in the year 1905 occurred on the Northern rivers; and in 1907, 4 cases, all fatal, occurred at Kempsey, a town on one of the northern rivers. In each year the months of March and April have furnished the largest number of cases of the disease.

The Friendly Societies and the Medical Profession.

Some few months ago a committee composed of delegates from all of the metropolitan and suburban medical associations drew up a form of agreement which it was considered desirable to employ in connexion with all lodge contracts with their medical officers. This draft was submitted to the different associations, and finally to the Council of the New South Wales Branch of the British Medical Association. After some amendments it was finally adopted as a standard agreement. It contained certain important amendments affecting all existing contracts, and especially enforced the recognition of a wage limit of £200. This form of agreement was published as a Supplement to the *Australasian Medical Gazette*. The different friendly societies, recognizing that matters were becoming serious, and no doubt also anxious to avoid a collision with the profession, sought a conference with the Council of the New South Wales Branch of the British Medical Association. This was agreed to, and the delegates from the various friendly societies met six members of the Council of the Branch. The chair was taken by the President of the Branch, Dr. Antill Pockley. At the outset, on the introduction of the delegates from the various societies, two delegates were present from the Australian Natives' Association. As this association is not recognized by the profession in New South Wales as a legitimate friendly society, but as a political organization with medical benefits tacked on to make it "go," Dr. Pockley at once refused to consent to their being present, and insisted on their withdrawal as a condition of the conference being proceeded with. These delegates accordingly withdrew. The various points of the agreement were then discussed, without serious difficulty except regarding a wage limit. The conference was resumed later on, with a view to arriving at a settlement of this important question; after considerable discussion on both sides it appeared as if a deadlock had been arrived at. As there seemed no sign of wavering on the part of the friendly societies, Dr. Pockley said that it was useless to prolong the conference, as the representatives of the British Medical Association had quite decided not to yield on this point.

The prospect of such a termination of the conference, however, was not acceptable to the lodge delegates, and they at once agreed to recognize the principle of the wage limit. It was then agreed on both sides that they should recommend to their respective associations the adoption of a rule that no man who with his wife had an income of over £200 per annum should be eligible for medical benefits in any of the lodges; and if the income of any one already a member reached £300 per annum, then he should cease to be eligible for medical benefits. Of course, so far these points have only been agreed upon by the delegates from the two sides, and it yet remains to be seen whether the various friendly societies will adopt the recommendations of their delegates or not. There is no doubt that the medical profession will agree to these suggestions. The influence and power of the united action of all the members of the New South Wales Branch of the British Medical Association, in dealing firmly with the Australian Natives' Association at its inception in New South Wales, has been a most important object lesson to all the other friendly societies in New South Wales, and, although some of them profess to despise the British Medical Association, they cannot, as a matter of fact, do so. Hence their desire to meet the Council and discuss the question of the wage limit—a question which some time ago they declared could not be entertained.

West Yorkshire.

Bradford Royal Infirmary Finances.

A special fund, known as the "Mayor's Sustentation Fund," was started in 1903 to make up the deficit at Bradford Royal Infirmary. The amount raised was £15,000, but all of it will have been expended by the end of the present year. An appeal has now been made by the present mayor to raise a similar amount to make up the deficit in income for the next five years. Excluding the contribution from this Guarantee Fund, the expenditure and income for the last four years have been as follows:

	Ordinary Income.	Expenditure.
1903	£9,278	... £12,420
1904	8,648	... 11,969
1905	9,272	... 11,455
1906	9,280	... 11,716

This shows that the normal income is constantly below the expenditure, and in consequence some of the infirmary work is "starved." Attention has in these columns previously been drawn to the inadequate subscriptions of the employers of labour in the city to the infirmary finances, and the appeal is specially to be brought before them, for they benefit from the hospital treatment of their working men.

Eldwick Sanatorium and its Critics.

This small sanatorium, containing some 20 beds for the treatment of pulmonical women, has lately been subjected to a good deal of criticism by the inhabitants of Eldwick on account of its proximity to their houses. The sanatorium is conducted by a small limited liability company, but any profits made are devoted to philanthropic schemes in connection with the institution. The Bradford Board of Guardians, which has sent a certain number of patients to the sanatorium, has been asked by the Keighley Urban District Council not to send any more cases of consumption there, on account of the danger of spreading the disease amongst the inhabitants of the district. The Local Government Board has also been petitioned on the subject, and has asked the Bradford Guardians for their observations. The Bradford Guardians have a sanatorium for male phthisical cases at Cayby, and it is suggested that this being far away from any inhabitants, could be enlarged so as to also include female patients. It has, however, yet to be proved that any increase in the number of cases of or deaths from phthisis has taken place since the sanatorium was opened in Eldwick.

Notifiable Disease in Bradford.

At a meeting of the Bradford Town Council on April 10th a resolution was carried that it was desirable for a period of three months [illegible] pneumonia should be notifiable within the meaning of the Infectious Disease Act. The Chairman of the Health Committee said that the disease was gradually getting nearer to Bradford, and it might appear among the migratory class frequenting the lodging-houses of the city at any moment. Another resolution authorized the M.O.H. to arrange with medical practitioners for the voluntary notification of cases of tuberculosis of the lung and to pay a fee of 2s. 6d. in respect of each case notified. The latter resolution led to a somewhat prolonged controversy, but was eventually adopted unanimously.

Lancashire.

Infant Mortality in Wigan.

The rate of infantile mortality in the County Borough of Wigan has been persistently high for many years past. The average yearly rate in the ten years 1896-1905 was 180 per 1,000 births. The average birth-rate during the same period was 36 per 1,000 persons living, and the death-rate 21.5 per 1,000. In a report to the Local Government Board upon an inspection of the town which he made in the spring of 1906 Dr. S. Monckton Copeman ascribes this excessive mortality among young children to the large amount of diarrhoea which prevails in the summer and autumn months of the year. As long ago as 1870 the late Sir George Buchanan made an inspection of the general sanitary condition of the town, with special reference to the excessive mortality to which even at that time he found that diarrhoea largely contributed. Three years later the late Mr. Netten Radcliffe came to the same conclusion. There were then existing a large number of privy middens in the district and in subsequent years these have been replaced by tubs or pails. It would appear that this method of excrement disposal has not been altogether satisfactory, and water carriage is now being gradually introduced. Dr. Copeman, during his inspection of the borough, tried to ascertain whether, in any particular district, there was an exceptional amount of fatal diarrhoea. He found that in one block of isolated houses, with a population of 6,000 persons, the diarrhoea death-rate during five years had been as high as 3.6 per 1,000. On visiting the area he was surprised to find that the houses were altogether superior to much of the cottage property in the borough. Not far from the houses in question is the corporation dépôt, where there is always stored, awaiting removal by farmers, an enormous amount of night soil mixed with ashes, which, in hot weather especially, is not only exceedingly offensive, but is beset by myriads of houseflies. The occupants of some of the houses stated that, at certain times of the year, their rooms were apt to be invaded by a veritable plague of flies, which swarmed over everthing edible on the premises. The proximity of this dépôt was probably, therefore, a considerable factor in spreading diarrhoea among the inhabitants.

Ireland.

Belfast Health Commission.

Professor J. A. Lindsay, M.D., who was examined on April 9th, said that there were enormous arrears of health work in Belfast. As regards consumption, facts as to its location could not be got; the death-rate from it was much too high; the total number of beds for consumption was 295, and there were about 6,000 to 7,000 patients suffering from the disease in Belfast. Out of a total of 3,555 phthisical patients he had ascertained that 591 were flax workers; unsanitary conditions contributed to the phthisis rate, but only to a moderate extent. In Ireland a propaganda of cleanliness was needed; domestic influences were very important and the people should be educated up to a higher level. The housing question was most important. As regards the treatment of consumptives, he thought there should be a sanatorium for the early cases, a colony for those able to work, and a hospital for the advanced cases. Belfast had 161 beds for infectious cases, and there were 2,629 notifications annually, omitting measles

and whooping-cough; but the notifications were an imperfect gauge. He could not avoid the conclusion that some of the typhoid fever took its origin in the Stoneyford water supply. As regards the primary schools, the Public Health Authorities should use their powers and inspect the schools, compel improvement and close the insanitary buildings. He thought Dr. Bailie should have a thoroughly-trained assistant, one who had experience in some large city and had devoted his life to public health work.

Dr. Aicken gave evidence as to insanitary houses.

Dr. Dempsey spoke as to the necessity of more open spaces, insanitary sites, filled-in ground, unsatisfactory house drainage, and the connexion between dampness of the house and the prevalence of phthisis. He strongly advocated the teaching of hygiene in schools.

Dr. William Calwell, who was examined on April 11th, said that the health reports of the city had been totally inadequate, and reflected very strongly on the health authorities; a large number of subjects fully dealt with in the reports of other towns were not mentioned in the Belfast reports. Many important measures taken up by the Health Committee were passed by unnoticed. These reports proved a want of hygienic spirit in the Council and a laxity in the department. He had pointed out these defects, the high death-rate, and the prevalence of phthisis and typhoid since 1900. The question of an infectious hospital had been mooted in the City Council in 1890, but the building was not completed till 1906; the question of a sanatorium had been debated for a long time, and nothing had been done; but the Poor-law Board of Guardians had first considered the matter in 1901, and in 1905 there were 50 patients under treatment in a sanatorium, and at present some 250. As a cure for want of cleanliness in the houses, he advocated the teaching of domestic hygiene in the schools. There was an imperative necessity for a consumptive sanatorium in addition to the Poor-law one; there should also be compulsory notification for advanced cases of phthisis; an "open" case of phthisis should not be allowed to expectorate to the danger of his fellows just as a person with typhoid fever was not allowed to defaecate or urinate to the danger of his fellows. Why should so much attention be paid to the excreta of the less fatal disease than to that of the more fatal? The proof of the danger of the one was quite as strong as of the other. He thought there was no doubt as to the possibility of infection with typhoid fever from the water derived from the Stoneyford catchment area, and the presence of the disease in the houses in the catchment area during the epidemics of 1898 and 1901 gave strength to the belief. He knew of one case where cockles from the Greencastle foreshore gave rise to typhoid fever. He had ascertained that the epidemic of typhoid in the Windsor district in 1904 had been caused by milk; it had lasted most of the year, and it was said that two of the employés from this dairy, who were then suffering from typhoid, subsequently went to the dairy which was the cause of the epidemic in the very same district in 1906. If these facts could be substantiated, it would prove that typhoid fever had been propagated by milk from infected people for two years. He advocated in the strongest possible manner the necessity for registration and inspection of all milk supplies. Apart from the risk of typhoid fever, he could imagine nothing more disgusting or dangerous than a child being fed on milk coming from a cow suffering from a tuberculous udder. There was no real or sufficient milk inspection in Belfast. He was strongly of opinion that children should not be compelled to go to school unless it were made safe for them to do so; medical inspection of pupils and buildings was necessary (1) for the child, to see whether it was fit to learn; (2) for the other children, to see whether it was dangerous to them; and (3) to enable it to grow up the strongest and healthiest citizen under its environment. The administration of the Health Department was in need of reform; he had been insisting on this for six years; there should be no doubt as to the relations of the medical superintendent officer of health and the fourteen district medical officers of health. Every encouragement should be given to register births and deaths at once, and all registration should go through the City Hall. He thought the head medical officer should have more independence, and that not only his tenure of office but also some rise of salary should be to a certain extent independent of the Health Committee and Council.

Failure and Success.

As a rule the medical officers of the Ulster unions have recognized the futility of asking their hard-fisted masters for those graded scales of salaries which have been pretty freely granted in Leinster and Munster, but the medical officers of the Armagh Union—one of the richest in the province—mustered courage lately to state their claims to increased remuneration for their services in most moderate language. The result was a prompt refusal. This they no doubt anticipated, and we would commend to their consideration the course pursued by the medical officers of another union bordering on their own province. These gentlemen, having in vain asked for an increase of salary, informed the guardians that until such increase was granted they would be reluctantly compelled to double their ordinary fees. The result was magical. The guardians, who had previously declared their inability to mulct the "poor ratepayers" in the interests of the doctors, when they found their own pockets were likely to suffer, promptly acceded to the demands of their medical staff. *Verbum sap. sat.*

Rotunda Hospital.

Dr. E. Hastings Tweedy, the Master, submitted the annual report to the Board of Governors on April 12th. No less than 4,158 women were attended during labour by the hospital staff, an increase of 76 over the previous year, and a new record. The Master made the following interesting observations:

> It must be remembered that many of these poor women are in a deplorable condition. Whilst in the hospital they are kept clean and placed in spotlessly clean beds; they are provided with bed gowns and with clothing for the baby; are fed well, and have all their wants attended to; they are carefully instructed in the proper method of managing their babies, and on the day of their departure are driven to their homes free of expense to them. Furthermore, before their departure their friends are communicated with, and this in itself involves an immense labour and the writing of many letters. From the above statement it will be readily understood that the moral training received by these poverty-stricken women is by no means the least of the advantages derived from their sojourn in the institution. I may add that all this is accomplished at an expense per patient not a quarter as great as that for which similar work can be accomplished in the English maternity hospitals.

Meath Hospital.

At the annual meeting of the Meath Hospital, on April 15th, it was announced that the total expenditure for the year was £6,517, and the income £5,661. The year's deficit amounted to £856, and this increased the debit balance to £5,381 10s. 9d. The Committee fears that it will have to close a considerable number of beds. Mr. John Mulhall moved the adoption of the report, and appealed for more support, while Sir Lambert Ormsby reminded the public that the hospital was the Dublin Infirmary and had a peculiar claim upon the people in the county. Sir John Moore moved a vote of thanks to the Corporation for £300 a year, to the Dublin County Council for £1,000 a year, and to the Committee of the Dublin Hospital Sunday Fund for its generous contribution. Mr. Lawlor and Mr. Lane Joynt also spoke, and earnestly advocated the claims of the hospital.

Alleged Bribery at an Election in Limerick.

At the last meeting of the Limerick Board of Guardians a memorial was submitted for adoption, signed by sixteen guardians, requesting the Local Government Board to hold a sworn inquiry into the recent election of a workhouse resident medical officer. As district councillors, individually and collectively, they were publicly suspected of selling their votes. The matter had been so discussed outside that, so far as the public went, such positions might as well be put up for public auction. They asked the Local Government Board to hold the inquiry "to enable honest men to do their duty to the public without corruption, and enable men with superior ability to get such position without purchase." The memorial was adopted by a large majority. The Local Government Board replied that unless some more specific charges were made, such an inquiry would be futile. It is a pity perhaps this could not have been made a test case, as this is not the only election in the south of Ireland in which bribery has been openly alleged to have taken place.

Scotland.

Post Graduate Work in Edinburgh.

During the ensuing autumn the second post-graduate course in medicine will take place in Edinburgh. Last year more than seventy medical men and women attended the demonstrations, clinics, and lectures, and it was felt by some that the time allowed (three weeks) was rather short for those who wished to see everything, while for those who only desired a few lectures on one or two subjects it was, perhaps, too long. Arrangements have therefore been made this year whereby teaching will go on for four weeks (practically during the whole of September); but there will really be two courses of two weeks each, so that while some post-graduates will no doubt attend for the whole four weeks, taking different subjects in the second fortnight from those attended in the first, others will be content to spend only the first or the second fortnight in Edinburgh. The range of subjects taught will also be greater than it was last year, lectures upon infant feeding and dietetics, practical classes on *x* rays, and clinics on infectious diseases having been added. Individual subjects will also be taught in more detail; for instance, last year in bacteriology there was one class meeting twelve times, while this year there will be three elementary classes, each meeting for twenty hours, an advanced class for twenty hours, and ten demonstrations on bacteriological research in relation to practical medicine. Further, all the classes will be strictly limited. A number of additional lectures and demonstrations will be announced later in the complete syllabus which will appear (as last year) at the beginning of each week. For those who desire it, board and lodgings may be had at one of the residences of the University Hall. All the arrangements are being carried out by an Executive Committee consisting of Professors Cunningham and Harvey Littlejohn and Dr. Logan Turner, representing the University, and by Dr. G. A. Gibson, Dr. J. W. Ballantyne, Mr. David Wallace, C.M.G., and Dr. Harry Rainy, representing the Royal Colleges of Physicians and Surgeons. Dr. Edwin Bramwell will continue to act as Honorary Secretary, and Mr. John Stirton (University New Buildings) as Secretary. This Committee is making arrangements for post-graduate teaching at other times besides the month of September, and promises a syllabus for post-graduate work going on throughout the year; this syllabus is to be ready about the end of June.

The Judicial Conception of Insanity.

We have received the following further letter on this subject:

Sir,—Under the above heading appears an interesting and important letter from Dr. Marion Gilchrist, Glasgow, which raises serious questions. With the views of the writer I am in entire agreement, except in regard to "certifying Crown doctors." I am of opinion that in all cases the family doctor should appear, and if he does not, the reason for non-appearance should be fully examined and given to the magistrate or sheriff. The entire profession in Scotland know that Dr. Marion Gilchrist and Dr. Carswell suffered much in the way of annoyance, worry, and expense, but neither the public nor the profession was aware that a second attempt to raise an action involving expense and annoyance to Dr. Gilchrist was made, and was pending, at the present state of the law. Dr. Carswell has fared worse, his life having been threatened. Until the much needed change in the law suggested by Dr. Gilchrist is made doctors will hesitate to certify, and the potentially dangerous lunatic will be allowed to roam at large.

There is one way by which doctors would not suffer, and that is by an amendment of the law to that applicable to certain Chancery cases in England or in cases under Section 15 of the Lunacy (Scotland) Act, 1857, by which the patient appears in person before the judge, and the medical evidence is to be given taken on oath, no vexatious action resulting to the certifying doctors. I have heard it suggested that the relatives should indemnify doctors at least against pecuniary loss, but I hardly think this would work out satisfactorily.

Regarding the part the "Crown" plays in the matter of lunacy certificates, I have heard recently the opinion of two Scottish sheriffs, the one holding that the doctor's certificate was everything, the Crown's order essential nothing, the other that without the Crown's order accepting as valid the two certificates the certificates were worth nothing. With the latter view I entirely agree, and therefore am at a loss to see why the doctors should suffer in health, in personal safety and in purse, as they did in Dr. Gilchrist and Carswell cases done.

It is quite apparent a change in the law is urgently called for. Etc.

Edinburgh, April 23. J. F. Sutherland.

Births, Deaths, Marriages and Vaccination.

Interesting details are given in the Report of the Registrar-General for Scotland for 1906.[1]

Births.

The estimated population of Scotland in the middle of 1906 was 4,726,070, of whom 2,305,850 were males and 2,420,220 females. The registered births in 1906 total 131,920. These births are 474 fewer than the average number of births registered during the last five years. For the first time in the history of registration the birth-rate has fallen below 28 per 1,000 in Scotland, the rate for 1906 being 27·91 per 1,000.

Marriages.

The marriages registered in Scotland during the year 1906 numbered 1,321 more than the average number registered during the previous ten years. This constituted the largest number of marriages in Scotland in any year since the institution of national registration. June was the favourite month with 160 marriages. The accepted notion of May as an unlucky month for marriage prevails, the fewest marriages being recorded in that month, as in the previous year.

Deaths.

The number of deaths registered in Scotland during 1906 was 75,585. This is 1,059 more than in the previous year, but 2,081 fewer than the average number registered annually the previous ten years. Deaths were most numerous in January and fewest in August.

Vaccination.

Minute details are given regarding the vaccination of children born in Scotland in 1905. Successful vaccinations numbered 111,164; they amount to 84·6 per cent. of the total number of children born during the year, and to 93·2 per cent. of those children who survived to the time for vaccination (12,168 children having died before vaccination). The number of children successfully vaccinated in Scotland has each year since the passing of the Act formed a large proportion of the total number of children surviving at the age of compulsory vaccination. The proportion has never been below 93 per cent., and has been as high as 96·9 per cent. Postponements on the ground of ill-health were slightly more numerous in 1905 than in previous years. Constitutional insusceptibility forms a very small proportion of the cases, but curious variations in the number of insusceptibles certified in different parts of Scotland are reported: for example, in seven counties named not a single case of insusceptibility is certified; 1 in 2 is stated to have been the rate in the Island of Coll; 1 in 89 in Dundee; whereas it was 1 in 555 in Aberdeen. The report refers to the effect vaccination has had on the diminution of the prevalence of small-pox in Scotland since the introduction of the Act.

In the nine years before the introduction of the Act deaths from small-pox averaged 978 annually; during the first seven years they averaged 373, during the decade 1871 to 1880 they averaged 52, and from 1901 to 1904 they averaged 146. Not only has there been a great reduction in the number of deaths from small-pox, but there has been a marked alteration in the age distribution, that apparently being due to the greater protection given by compulsory vaccination to children than adults.

Figures are quoted which amply justify this conclusion; from it, it is also estimated that the saving of deaths from small-pox in persons under 20 years of age during later years may reasonably be assumed to be no less than 753 per annum. This saving of life, it is stated, must be credited to vaccination. During the last ten years the number of deaths from cow pox or the effects of vaccination in Scotland amounted to 8, an average of less than 1 a year; during the last six years there have only been 2 such deaths, or 1 in three years. One death from the effects of vaccination in three years in Scotland is equivalent to 1 death in 356,000 children vaccinated, a risk which is described as being so small as to be completely insignificant. Such details afford striking testimony to the benefits of compulsory vaccination, and show at what small risk its benefits have been procured in Scotland. They provide further confirmation of the conclusions of the Royal Commission published eleven years ago.

[1] *Thirty-second Annual Report of the Registrar-General on Births, Deaths and Marriages Registered in Scotland during the Year 1906, and Forty-second Annual Report on Vaccination.* Edinburgh: Oliver and Boyd. London: Wertheimer and Sons. Dublin: E. Ponsonby. 1907. (5d.)



The New Medical Buildings, University of Glasgow.

UNIVERSITY OF GLASGOW.

New Medical Laboratories.

On April 23rd, during the visit of the Prince and Princess of Wales to Glasgow, the new medical buildings erected by the University of Glasgow were formally opened. They are situated on the south side of the roadway leading from the University to the Western Infirmary. They face the football field. In the building accommodation is provided for the three departments of materia medica, forensic medicine, and physiology. Each department is complete in itself and is provided with separate entrance, and at present there is no intercommunication between them. The advantage of housing the three departments under one roof is that a common heating and ventilating system materially reduces the expense of maintenance. In itself the building is not strikingly handsome, but the internal arrangements for lighting and ventilating are extremely satisfactory. The style of architecture adopted is a phase of modern Renaissance and the general effect is shown in the accompanying reproduction of a wash drawing of the completed building. The main architectural features are a cupola over the horseshoe-shaped lecture room for physiology and a fine entrance porch leading to the materia medica department. The building stands on ground sloping downwards to the Kelvin, consequently the highest floor is only one story above the entrance. The main axis runs from east to west, but there is a south wing enclosing an area well.

The Physiological Department.

The main portion of the available space has been allotted to the physiological department, which is placed at the western end, next the Western Infirmary. The whole of the lower ground floor and a large part of the upper western end belong to this department; the other two are situated in the eastern portion and the southern block.

The main entrance to the physiology department leads into a spacious hall from which the museum and library, the professors' room, and a large preparation room communicating with the lecture theatre are entered. In the cellars there are rooms for centrifuge and a large built-in incubator. Opening into the area between the front and south blocks is an animal house detached from the main building. We understand that this animal house is not considered satisfactory, and possibly in the future some other arrangement will be made. On the ground floor there is a well-lit room for monkeys, and adjoining it a workshop. Beyond the museum, facing the south, there is a laboratory and lecturer's room for the department of psychology.

The main feature of the ground floor is the lecture theatre. This is a large horseshoe-shaped building seated for 250 men. A separate entrance for students is provided at the back of the theatre and here there is ample provision for cloak room and lavatory arrangements. The theatre slopes fairly rapidly and it is lit on either side by two pairs of large windows, with additional roof lighting from a cupola. The theatre communicates with a preparation room behind the lecturing bench, and the communicating door is sufficiently large to allow a large table to be prepared for demonstrations in the room and wheeled into the theatre. The cupola has had a certain influence on the acoustic properties of the theatre and there is a tendency to reverberation. On this floor there is a diagram room conveniently placed for the lecture theatre, and separate lavatory accommodation for women students is provided. The chemical department is on the first floor; it consists of a large laboratory and a lecturer's room with balance and distillation rooms attached. This laboratory faces the south. It is a large room, 77 ft. by 35 ft., well lighted and ventilated. The walls are covered with white tiles up to the ceiling. It is subdivided into two portions, one for research work. Three tables accommodating 20 to 30 advanced workers are provided. The teaching laboratory is fitted for 60 to 70 men. One of the features of this portion of the building is an ingenious arrangement by which a large external fume chamber has been fitted in the corner between the distillation room and research laboratory, so that it can be used from either room. In addition, there is ample fume chamber accommodation inside the laboratory. The drainage is provided by open gutters lined with asphalt. Underneath the tables the waste pipes run directly into open gutters which communicate with similar gutters under the flooring. On this same floor there is a preparation room and an assistant's room, while arrangements have been made for providing for galvanometric and polariscopic work.

The experimental laboratory faces the north. It is subdivided into a teaching laboratory and a research laboratory, to be fitted up with respiration pumps, etc. In the research portion very ample provision for electric currents has been made by numerous wall plugs. A small flight of stairs leads to a separate suite of three private research rooms.

By another stair access to the upper floor is gained. The main feature on this floor is the histology room, 100×42 ft. It faces the north, and is lighted by a series of front windows, while the roof is on the weaving-shed principle, which only admits light from the north side. The result is most satisfactory and the room is brilliantly lighted. At first it was intended to provide accommodation in the histology room for the whole class of practical physiology; but subsequently it was decided that for teaching purposes it was better to divide the class into two portions. Consequently the histology room has been divided into two by a partition. In the one half accommodation is given for 80 to 70 students. The benches are in the form of long tables, and are fitted for microscopic work. At the back of each table there is an open lead-lined gutter for disposing of refuse. Gas and water taps are provided for each pair of students. Underneath the tables for each man there is a drawer and two small cupboards capable of holding a microscope. The tops of the benches were first fitted with beech, but this has been found unsatisfactory and will be changed for teak tops. The remaining portion of the histology room has not yet been definitely allotted but is available for future extension. Connected with the histology room is an excellent preparation room fitted with a stone slab for paraffin basins, etc. On this flat there is also a photographic room.

THE FORENSIC MEDICINE DEPARTMENT.

The whole of the accommodation for the department of forensic medicine is on the second or upper floor, to which entrance is gained by a separate staircase. With the exception of the museum all the rooms are on the one floor. This section of the building is L-shaped and the lighting is extremely good. At the first landing there is a cloakroom for students with lavatories attached and the continuation of the staircase leads to the students' entrance to the lecture theatre and to the museum. The lecture theatre is well lit by side windows and a roof light. Underneath the lecture theatre is a diagram room. The professors' room and a dark room come next. Beyond that is the toxicology laboratory, fitted with simple benches for thirty-two to thirty-six students. Off this is a service room which is a large storage room fitted with shelves of glass for apparatus. Then comes the assistant's room next the balance and drawing room. The tables in the balance room are wooden. Beyond this is the chemical laboratory. The benches are of the ordinary type with a special modification. There is a central open gutter over which are long-necked, screw-down taps for condensing purposes, so as to have the front of the bench as free as possible and make all condensing apparatus to be put at the back out of the way. There are four benches, each accommodating six students—three on each side. There is ample cupboard and drawer accommodation. Underneath the sinks small traps have been placed to dilute any strong acids before they find their way into the general drainage system. Each bench is fitted with steam points, in addition to the ordinary provision for gas, water, and electric light. The woodwork in this department consists entirely of kauri pine. The lighting of this laboratory is good. There is a north roof light and side windows. To prevent condensation of moisture and radiation of heat, a line of hot pipes is laid along the foot of the sloping roof window.

The bacteriological laboratory is of the same type. In this room, instead of an incubating chamber, a temporary incubating bench has been fitted up, covered with uralite instead of asbestos. Along one wall there is a stone bench for an autoclave and steamer, while along the north wall there is a microscope table, and in the corner an electric centrifuge. Outside the bacteriological laboratory there is a ledge for meteorological work. The animal house is on the roof.

THE MATERIA MEDICA DEPARTMENT.

This occupies the lower floor of the eastern end, and runs along the south block. The students' entrance is at the east extremity of the building. The main entrance is through a porch which gives access to a small passage behind the steps leading to the forensic medicine section. The students' entrance leads directly to the theatre by a turret stair, underneath which is the cloak-room and lavatory. The professor's room opens into the class room.

From the vestibule of the main entrance a flight of steps leads down to a corridor which gives access to the practical pharmacy laboratory, lit by roof and side windows. Connected with this are a service and store rooms. On the same floor, facing the south, there is a workshop and a students' museum, and at the end of the passage a dark room.

From the vestibule a staircase leads to the upper flat, which is in line the whole southern side of the first floor. Facing the north is a clinical research room and a small library. Facing the east are the experimental and chemical laboratories with a balance room between. On the same floor, but facing the south, there is a combustion room, an assistant's room and an advanced pharmacy laboratory for the use of B.Sc. students. Connected with it is a second service room. At the end of the passage is the department museum, a very large room, lit from the south, west, and north sides. The room is L-shaped, and the wing is provided with large wooden frames for hanging pictures and in the other wing with large cases for displaying specimens. These cases are arranged between the windows, and are excellently lit. Throughout this department and the table tops are made of teak. The animal house is outside the main building towards the east end, and is placed behind the staircase leading to the students' entrance. In the materia medica department metal fittings have been used as far as possible to minimize cleaning.

Throughout the building a supply of steam jets has been laid on to facilitate evaporating and distillation operations. The heating and ventilation system is a modification of the plenum. The various laboratories are in different stages of completeness. The forensic medicine section is practically finished, while the materia medica portion is well in hand; but the physiology department is still somewhat unfinished. Still, all the departments will be utilizable during the summer session.

The architect of the building is Mr. James Miller, A.R.S.A., Blytheswood Square, Glasgow.

SPECIAL CORRESPONDENCE.

VIENNA.

Professional Secrecy.—The Summer Term.—Prevalence of Influenza and Anthrax.

A VERY interesting lecture on professional secrecy was delivered a short time ago before the Vienna College of Physicians, in which the reforms to be instituted by a new Bill were discussed and formulated. As the law now stands the physician or surgeon is bound not to disclose facts concerning his patients if he has learnt them in his professional capacity. On the other hand, the law requires from the practitioner information concerning facts which are strictly confidential, and which would not be known to him unless the patient were sure of his discretion. For instance, in cases of duel, of criminal abortion, rape, etc., the doctor finds himself in a dilemma between two articles of the law, which in their bearing upon his attitude are in absolute contradiction to each other. In like manner, insurance companies, friendly societies, and public corporations require the services of practitioners in a way which involves breaches of professional secrecy. Another very difficult condition arises when the doctor learns, in his professional capacity, of the existence of facts which ought to be disclosed in order to prevent disease or accidents. Such a conflict between professional duty and moral and legal responsibility arises when the doctor knows that a man about to marry is suffering from syphilis or other infective disease, or when a railway servant placed in a responsible position is suffering from colour blindness, defect of hearing, or epileptic fits. The Bill which is to be presented to Parliament is intended to make such disclosures permissible if the welfare of the public is endangered by the doctor's silence. A very influential part of the profession, however, is opposed to any reform which may tend to lessen the confidential relations between the patient and his medical adviser. The matter is now being warmly debated in the different medical clubs and associations.

The summer term of the Vienna University, which begins in the middle of April, will last till July 25th, while a number of post-graduate courses will be delivered from July 15th till September 30th. The official clinical lectures of the professors begin in the last week of April, and will be continued till the first week of July. They comprise lectures on surgery, medicine, ophthalmology, obstetrics, gynæcology, and dermatology, and may be attended by any student matriculated in the University for the official fee—that is, 2 crowns (about 1s. 9d.) per hour per week, so that the maximum fee for these lectures is covered by the sum of 18s. for the whole term. The special classes, mostly for doctors or for students about to present themselves for examination are more expensive, although they hardly extend over four weeks. The fees are from £2 2s. to £4 4s. Some of these classes are conducted in English, as a large number of English-speaking doctors, mostly from Scotland, America, and Japan, come to study in Vienna. In the winter term of 1906-7, 112 doctors from America and 71 from England were registered here. Special courses in English are to be had in otology, rhinology, ophthalmology, and haematology, while lectures on other subjects are given in English from time to time. The centralization of medical teaching in the general hospital, with its 2,600 beds, is a great convenience, and facilitates the economical allotment of the student's time.

Within the last few weeks the number of cases of influenza notified in Vienna has shown an alarming

rease, and the type of the disease has become more ere. At first the broncho-laryngeal form was pre-ent with but few complications, mostly neuritic and umatic; lately, however, the gastro-intestinal form has n more often observed. This is the reason why the rtality for the month of March was higher by 2 per nt. than during the last five years, reaching the figure 27 per 1,000. Another epidemic, alarming but quickly pressed, was an outbreak of anthrax. The first four es were not diagnosed, but the remainder came under servation on the first or second day of the illness, and re promptly isolated. There were in all thirteen cases; but three died. By means of a very patient search source of infection was discovered and destroyed. It s a sack of Russian imported hair, used here to manu-ture brushes and hat decorations. The manufacture of se articles is often carried out in private lodgings, and young individuals, as the work is poorly paid. Thus, ven of the patients were under the age of 18 years. e treatment consisted in opening the primary lesion, stroying it by means of injections of carbolic solution, d thorough disinfection.

CORRESPONDENCE.

IE CHARTER AND THE FUTURE CONSTITUTION OF THE ASSOCIATION.

SIR,—The consideration of the draft Charter and the cision as to the form it shall ultimately take, constitute e of the most critical problems which the members of e British Medical Association as a whole have ever been lled upon to solve. The constitution which is to be anted by the Charter will in all probability be irre-cably fixed for many years to come, and it therefore hoves all who take an interest in the Association, as ll as the many thousand members who seem to be in-ferent to its affairs, to weigh very carefully the pro-sals which have been made, and, before taking any cisive step, to consider what constitution is most likely conduce to the welfare of the Association and to the rtherance of the objects for which it exists.

Viewing the draft Charter as a whole, it appears that its ost vital provisions are that it is designed to make per-anent and to extend certain principles in the organiza-on which first came into existence with the adoption of e present constitution in 1902. The Branches are be, as now, parcelled out into Divisions, which e to elect the members of the Representative Body. at there is this important difference, that whereas der our present constitution grants of money can only made by the general meeting of members—the "Repre-ntatives" only voting as individuals—in accordance with e law governing joint stock companies, under the new arter the Representatives will have the control of the rse, and in fact of all matters concerning the work of e Association. Further, a considerable proportion, if t the whole, of the Council, which is now elected by e Branches, is to be elected by the Representative Body, hich will thus be the undisputed arbiter of our great ssociation. The only qualification to this last remark is e right of the Council to employ the referendum where is of opinion that the decision of the Representative Body es not truly represent the views of the Association. But nsidering that the Council is to be reduced to half its esent numbers, and its members are to be largely the minees of the Representative Body, the chances of this ght being exercised seem to be exceedingly remote.

I venture to submit that the Representative Body as at esent constituted, and as it is proposed that it should main constituted under the Charter, is a body scarcely ted to exercise such an undisputed authority. Its embers are elected annually, and are chosen, as a rule, t so much on account of any special knowledge of, or ness for, the work, but because they happen to be going the annual meeting. They only meet for four consecu-ve days, as a rule, and during that time the Sections are full swing, and the Representatives will naturally sire to take part in them. Unless they are allowed me laxity in this respect, I doubt if it will be possible find a number of members willing to undertake the sition of Representative at all; and, as a matter of fact, find now that few gentlemen who have been Representa-ves one year are willing to undertake the office again. What amount of confidence can be placed in a meeting taking place under such circumstances? By way of answer, let us try to conceive what parliamentary government would be like if it were constituted upon similar lines. Let us imagine that the House of Commons, instead of being elected for seven years, was elected annually; that, instead of sitting for eight months, it sat only for a week, and that during this week there was a great national festival going on, in which the members desired, and indeed were expected, to take a part. Finally, let us suppose that the only appeal from such hasty legislation as might be adopted during the annual session of a week lay to a small body chosen by the members, and holding office until the next parliament met. I have no hesitation in saying that such a parliament would command no confidence, that it would have no power of initiative, that it would be driven to follow blindly some irresponsible leader who knew the ropes, and could make out a plausible case.

We are apt to forget why, under our present constitution, the Branches have been split up into Divisions, and why there is a Representative Body at all. The true reason is that by company law financial business can only be voted on at a general meeting of shareholders—that is, of members of the Association. Under the old constitution it was not the business of any one in particular to attend the business meeting, and as twenty-five constituted a quorum it was possible for a handful of determined individuals to carry resolutions pledging the Association to a course of action or an expenditure of money quite contrary to the wishes of the vast majority of the members who were not present nor represented in any way. To obviate this possibility a number of Representatives were chosen, part of whose duty it is to attend the general meetings of the Association and thus give it, to a certain extent, a representative character. The Representatives also form a meeting by themselves to discuss and pass resolutions on matters not directly concerned with the voting of money. In order to form the machinery for the election of the Representatives the present Divisions were made, and, apart from this, it is hard to see what functions the Divisions can perform that cannot be more efficiently and cheaply performed by the Branches. In fact, I have no hesitation in saying that if a poll were taken of all the members of the Association an overwhelming majority would declare that the Divisions had proved a failure, and that the sooner they were abolished the better.

I now turn to the other body which has for many years guided the destinies of the Association—which has guided it to an unexampled pitch of prosperity, and which it is proposed by the Charter to make entirely subservient to the Representative Body, and to reduce to the numbers and status of a Committee—I mean the Council. It is a truly representative body, being elected by the Branches in proportion to their membership; it meets at frequent intervals, so that its members have the time and opportunity to learn their work and to form opinions of their own. The work is continuous and therefore interesting, and the position is one which confers a distinction on its holder, who is thus incited by an honourable ambition to deserve well of his Branch, in the hope that the honour will be renewed; the meetings do not interfere with attendance on the sections at the Annual Meeting, and are spread over the whole year.

The object of this letter is to urge upon the members of the Association the view which I hold, that we should apply for a Charter which will vest the whole administration in the hands of the Council—in short, a Charter which will restore the *status quo* before the new constitution was adopted, with the addition that the Council shall have the power to deal with finance, and shall not be at the mercy of a snatched vote at a general meeting. With this could easily be combined a proviso allowing a referendum on the requisition of, say, 100 members.

I repeat that the Representatives and the Divisions were only adopted as a *pis aller* to meet the requirements of company law, and with the granting of a Charter the need for them will no longer exist. I therefore propose that under the Charter the powers now exercised by the Representative Body shall be vested in the Council, and that Divisions, where they are retained, shall be merely voluntary associations of members for local purposes. I venture to submit that if some such constitution as I have

suggested be adopted the Association will prove more than ever an efficient organization for the promotion of medicine and the allied sciences and for the maintenance of the honour and the interests of the medical profession.—I am, etc.

Liverpool, April 22nd. THOS. R. BRADSHAW.

SIR,—May I ask:

(1) Is it definitely provided for in the draft Charter that a fund for the benefit of the widows and orphans of members shall or may be created? By this I do not mean a charitable fund, to which the widows or orphans must appeal, *in forma pauperis*. I mean a fund to which members shall pay a fixed yearly subscription, and where the widows and orphans shall obtain a yearly grant as their right. In so far as I read, Clause 2 (i) makes no such provision, neither does Clause 2 (ix), neither does Clause 3, neither does the "Schedule to By-laws" definitely provide for the creating of a "fund for the benefit of the widows and orphans of members." Let us hope the point will be definitely settled. It is over twenty years since I brought forward the formation of such a fund, and it would be a pity if the proposal were not now definitely provided for.

(2) Draft Ordinance 10 (*a*) provides that the Central Council shall have, after due inquiry, power "to expel" a member. May I suggest that the words "censure" or "fine" or "suspend" from membership for one or more years, be placed before the word "expel." Let "expulsion" be our very last act. Clause 9 provides the reasons for expulsion. May I also suggest that provision be made so that the Division or Branch which calls for the trial of a member by the Central Council and fails to substantiate the charge shall pay the costs of the defendant? This would only be fair, and would keep down needless litigation.

(3) Clause 5 proposes that a practitioner may be elected a member "by the Branch Council." Does this mean by a majority or a two-thirds majority? I take a practical interest in this question, because, upon two separate occasions the Council of the Lancashire and Cheshire Branch refused to elect me as a Branch member, although I was at the time a member of the Association.

(4) As to the election of the Central Council, Clause 9 of the draft Ordinance and Clause 36 of the draft By-laws propose that the Central Council shall consist of 41 members, 20 to be elected by Branches or combined Branches, and 10 by the Representative Body. Surely members generally will be opposed to this, and will insist that the Central Council shall be elected by the Branches or combined Branches only. The Representative Body may consist of 300 members; and why have three different elections for one purpose—that is, an election *of* the Representative Body, an election *by* the Branches, and an election *by* the Representative Body? The proposal is not business-like. Also, Clause 38 provides that such election shall be by "voting papers sent by post"; but it does not state by whom they are to be sent and at whose expense. They should be sent by the General Secretary of the Association and at the expense of the Association. Further, Clause 41 provides that no person can be a candidate for election to represent a Branch upon the Central Council "unless at the time of his election" (query, at the time of his *candidature?*) he is a member of the Branch he wishes to represent. This is a very parochial proposal. Why not adopt our parliamentary plan, and let the best candidate from anywhere come along? Again, provision should be made that any Branches *outside of* the United Kingdom, that is, Colonial Branches, shall have power to elect a person resident in the United Kingdom to represent them upon the Central Council.

(5) By law 21 (1) proposes that the person elected by a Division to the Representative Body shall be elected "by a general meeting of the members" or by "voting papers." Why not by voting papers only? Why take us from our work to record a vote and why practically disfranchise all who cannot attend the meeting to vote?

—I am, etc.,

Liverpool, April 22nd. ROBERT R. RENTOUL.

THE MEDICAL DEGREES OF THE UNIVERSITY OF LONDON.

SIR,—I have been informed that certain figures referring to the Medical Examinations have been quoted in the course of recent discussions on the examinations of this University, and that, as not all of these figures have been calculated on the same statistical basis, there may be difficulties in the way of drawing conclusions from them. No actual error, so far as I am aware, has appeared in these figures, but I am informed that, in the case of the M.B., B.S. Examination, certain figures for 1905 have excluded, and those for 1906 have included, candidates appearing for a first part of the examination only. To remove all doubt as to these figures I beg to subjoin the complete statistics for the M.B., B.S. Examination of the last two years, including all candidates, of whatever category. I also subjoin the figures for the Intermediate Examination in Medicine for the same years.—I am, etc.,

ARTHUR W. RÜCKER,

April 23rd. Principal, University of London, 3, Kensington, S.W.

Statistics of the Intermediate Examination in Medicine in 1905 and 1906.

	Total Candidates.	Candidates for Entire Examination.	Passed.	Referred in One Subject.	Failed.	Candidates for Re-examination in One Subject.	Passed.	Failed.
January, 1905	98	87	60	11	16	11	6	5
July, 1905 ...	152	135	90	21	24	17	13	4
January, 1906	83	82	34	5	13	31	26	5
July, 1906 ...	97	86	62	13	10	11	8	3

Statistics of the M.B., B.S. Examination in 1905 and 1906.

	Candidates.	Completed entire Examination.	Passed. Group I.	Passed. Group II.	Failed.	Recommended for Honours.
Entered for Entire Examination:						
May, 1905	49	32	5	2	10	8
October, 1905	64	35	1	16	12	9
May, 1906	69	42	4	11	12	13
October, 1906	49	30	3	7	9	8
Entered for Group I:						
May, 1905	37	13	8	—	16	—
October, 1905	33	11	24	—	9	—
May, 1906	46	17	4	—	25	
October, 1906	37	18	5	—	14	—
Entered for Group II:						
May, 1905	36	9	—	16	10	
October, 1905	34	12	—	23	11	
May, 1906	37	11	—	13	13	
October, 1906	26	8	—	12	6	—
Entered for B.S. only *						
May, 1905	22	—	16		6	4
October, 1905	8	—	8		0	2
May, 1906	9	—	8		1	3
October, 1906	2	—	1		1	—

Total Number of Candidates.

May, 1905 ...	144	May, 1906	161
October, 1905	139	October, 1906	114

* Only candidates who have taken the M.B. degree under former regulations are now permitted to present themselves for the B.S. Examination.

SIR, In answer to a letter which I wrote to the Principal yesterday, I have received from the University detailed information concerning the results of the Intermediate and Final M.B., B.S. examinations during the years 1905-6. I have also been told that this information has been sent for publication to the BRITISH MEDICAL JOURNAL. I may mention that the 1906 results will not be published until the *Calendar* appears in September, but as they had been given to others I claimed that they should be given to me.

With regard to the figures for the Intermediate M.B., it will be seen that they correspond with those recently published in a pamphlet by the Graduates' Association, namely:

	Candidates.	Rejections.	Percentage of Rejections.	
1905	240	71	29·4	average 30·2 per cent.
1906 ...	180	61	31·2	

In this pamphlet the Graduates' Association contrast this average (30.2 per cent.) with the average of rejection

n the years 1897 to 1902—namely, 37.6 per cent., and leduces therefrom clear evidence of "lowering the tandard"!

But in making such a contrast surely a most impor-ant circumstance has been absolutely forgotten. certainly forgot it when I wrote two weeks ago oncerning Mr. White's figures—that in the years 1905-6 here was interposed between the Preliminary Scientific xamination and the Intermediate M.B. an examination n organic chemistry, which during the years 1897 to 1902 vas included in the Intermediate M.B.

The average percentage of rejections at this examination n organic chemistry in the years 1905-6 was 29 per cent.

So that really the contrast should be:

Interm. M.B.,	1897 to 1902,	average rejections,	37.6	per cent.
Organic Chem.,	1905-6	,, ,,	29.0	,,
Interm. M.B.,	1905-6	,, ,,	30.2	,,

Surely this throws a very different light on the matter.

And now with regard to the figures for the Final M.B., B.S. Here, again, there is an evident fallacy. The detailed figures expose at once the reason of the low percentage of rejections in 1905-6 quoted by the Graduates' Association.

In 1905-6 the examination could be taken in two groups, and the percentage of rejections evidently depends upon how you regard those candidates who entered for the whole examination, but failed in one group. (In the Intermediate M.B. figures, candidates who fail in parts of the examination *are* counted as *rejections*.) Are such candidates at the Final M.B. to be ranked as *passes* or as *rejections*?

If as *passes*, then the figures will stand thus:

	Candidates.	Rejected.	Per cent. Rejected.
1905	253	68	26.9
1906	264	79	29.9

But if as *rejections*, then the figures will be:

	Candidates.	Rejected.	Per cent. Rejected.
1905	253	92	36.3
1906	264	104	39.4

If the figures are used to contrast with those of former years, it is evident that these candidates must be counted as *rejections*, seeing that candidates in former years who failed in parts of the examination were rejected, and counted as rejections. The Graduates' Association pamphlet contrasts them with the average rejections during the years 1897 to 1902, namely, 43.2 per cent. And if the Association had chosen the years 1892 to 1896, the average rejections would have been 35.6 per cent. How then can the Association say from these figures that the standard has been lowered? Moreover, to draw a conclusion that the standard has been lowered from a contrast based on the results of *two* years would, under any circumstances, be unjustifiable.—I am, etc.,

London, W., April 24th. James Calvert.

Sir,—An appeal by Mr. Percy Allan for support for Professor White at the senatorial election of the London University has reached me, and with your leave I should like to comment upon it.

Objection is taken to the number and character of the qualifications that are accepted in lieu of matriculation, and a point is made in Professor White's own address that some of these are qualifications of strange and distant bodies—a Finnish secondary school, the Chinese College of Canton, the Lycée of Jasi, etc. If these qualifications represent a knowledge and training equal to that represented by matriculation, there seems no reason to object to them because the bodies that grant them are strange and distant. Dr. Allan says that these exemptions have in some cases been forced through the Senate in spite of the admission that no definite information had been obtained in regard to them. If this is so, it would justify a change in the personnel of the Senate; but I find it hard to believe that it is so.

Elaborate statistics are given to show that a larger proportion of candidates for the medical examinations has been successful since the University was reconstituted, and this larger proportion of passes is adduced as irrefragable proof that the standard of examination has been lowered. I have already given reasons for disagreeing with this inference, which seems to point to the desirability of including logic among the subjects of the medical examinations. The proportion of passes to failures at an examination is a function of two variables—the difficulty of the examination, and the efficiency of the preparation for it. An increase in the proportion of passes may mean that the examination is become easier, or that the candidates are better prepared. Which of these explanations we accept must be determined by the evidence. In this case we have the evidence of Dr. Montague Murray that the examinations are not easier, and we have the evidence of Professor Starling that the training is more efficient. On the other side there is no evidence at all.

It seems to be forgotten that the motive power, which originally led to the movement for the reconstitution of the University, was the desire of the ordinary London medical student to obtain a university degree. The statistics which are brought forward to prove the degradation of the medical degrees since the reconstitution of the University do not, as I have shown, prove any such thing; but they do prove incontestably that the medical degrees of the University are no more accessible to the average student of average ability and average diligence than they were before the reconstitution. The most remarkable feature in the present senatorial election is that neither of the candidates pays any attention at all to this very urgent need.

The ideal that should be held before the University should be, in my opinion, not a greater and greater restriction of the number of candidates, and a still greater restriction of the number of successful candidates, but the very opposite. I should like to see every medical student in London present himself for examination at the University of London, and I should rejoice if every candidate were successful in obtaining his degree.—I am, etc.,

London, W., April 22nd. Chas. Mercier.

Sir,—For myself I can say why I voted for Hill and Caley in the recent election. The reason itself is very simple, but the circumstances that have given rise to it are very complicated, and I trust you will allow me to ventilate them for discussion.

My reason was and is a sense of irritation with the London University, which seemed to promise so much and has done so little for the medical students of London. Sir Frederick Treves is the only man, so far as I am aware, who ever ventured to speak the naked truth when he publicly said, "What we want in London is a university which will give to our average student in London a degree in medicine as the result of fair work in our own medical schools." His words fell on deaf ears, and no one was found with sufficient courage to back up this simple statement; everybody talked above and around it while the subject of reforming the London University was on the tapis. What has been the result? Reform was carried out, but, so far as the above idea was concerned, reform was, and is, and seems to me likely to remain, a sham and a farce; in fact, in the very number of your Journal which cries shame on us for voting as we did are letters stating in very plain and bald language that the M.B. of the London University is as difficult to obtain as ever, if not even more so.

My sense of irritation is in no sense lessened by the difficulty that I feel in suggesting a remedy, for my very impotence only adds to the sense of it.

God knows I cannot advocate any lowering of standards of real knowledge in our students, for the papers I have to read as an examiner are poor enough in composition to prove to a demonstration that no lowering of the standard of English-as-she-is-spoke-and-written could be contemplated; and the answers given to questions in medicine and ordinary clinical pathology equally reveal a standard of medical knowledge below which it would be unsafe to allow a candidate to practise his profession. But, Sir, I have every reason to believe that, poor as they may be, these same standards allow more fortunately-placed—as regards a local university—students to place the coveted letters M.B. after their names, when reached out of London. Hence I feel that a real injustice, which rankles, is being inflicted upon our students, and until this injustice is removed I fear that the sense of irritation above is likely to remain.

Now, it is on just that point—namely, how to remove that injustice without inflicting an equal injustice on the other side—that explanations become very complicated;

but lest I grow wearisome, let me put my views very shortly. They are:

1. That we should unitedly back up the Medical Acts Amendment Bill of the British Medical Association, which provides the one great panacea for all these troubles—namely, a one-portal system, with all that is covered and understood by that term.

2. That all M.B.'s, M.D.'s, M.R.C.P.'s, F.R.C.S.'s, etc., should be left very much as they are at present, except that the possession of the right to practise (the State qualification) should be an indispensable condition for permission to offer oneself for examination for any of them; and, on the other hand, that not any nor all of them should give a legal right to practise without the State certificate.—I am, etc.,

London, W., April 16th. FRED. J. SMITH.

SIR,—The impression left on one's mind after reading the statement issued by the University of London Graduates' Association is the impossibility of judging of the value of one examination by a reference to the percentage of rejections only.

As a recent examiner in surgery I may say that the instructions issued to examiners direct as to the number of marks required to pass and also for honours, but the conduct of the examination is left to the examiners. And it must be remembered that there are but four examiners in medicine and four in surgery, whereas formerly there were two assistant and necessarily somewhat less experienced examiners.

Taking surgery, for example, there are four parts to this subject, and the examination is so arranged that each examiner meets every candidate. The marks are awarded without any knowledge of those obtained in any previous division of the subject. At the meeting of examiners not only are the total marks of each candidate considered, but the separate marks in each section, and, moreover, the subjects on which he was examined and the examiners' notes on the answers.

To say that the examination is easier and the degree less worthy is surely to charge the examiners with the deliberate intention of reducing the value of the degree. You must trust your examiners, and I venture to assure Dr. Percy Alban and his colleagues that the graduates in medicine of to-day are every whit as worthy of the degree as in his day. To judge fairly one must be a teacher as well as an examiner, and as one of the former for just over thirty years I see few men pass who do not deserve to. It must be remembered that the teaching is better than it was, and I think, too, the examinations are conducted with greater accuracy and fairness.

That the pass list is larger is due, I believe, solely to the division of the final subjects into groups. This no one will deny. The University has ordained this; we must accept it. Change to the former condition can never be expected, and I trust most will agree that the division is a wise one.

We, as teachers, want the student to obtain a degree in London after a fair course of study. It is a time when degrees are considered of great importance, and we must all desire to keep our men in London. Those who took their degree under the old constitution, and consider they obtained a distinction few could command, will serve their University best not by increasing the difficulties and discouraging intelligent student in obtaining a degree.

With regard to the M.D. surely the rejections should be very few indeed. The number who enter for this examination compared with those eligible is ridiculously small. These are nearly all well prepared, and most of them men of more than average ability, and therefore few if any should be rejected.

Surely a man who has been a teacher of general medicine and surgery is a more suitable representative than one trained in a special subject. We need on the Senate from the medical faculty men who know the wants and the capacity of the average student, and who will adapt the University to the wants of London, and thus while maintaining a high standard. Has the University of London Graduates' Association observed that the London graduate no longer commands the positions he did, and that not because of any deterioration in the standard, but because of the success of the local university training? This is becoming obvious in the provinces, and Australia a man to obtain an appointment must posse the degree of a local university. Again, in Canada t training is now so good that a degree in itself no long will command attention.

My observations refer to the final medical degrees onl as of these I have experience; and I feel sure that t action of the Graduates' Association will impede t progress and diminish the usefulness of the University. I am, etc.,

CHARTERS J. SYMONDS,
Surgeon to, and Joint Lecturer on Surgery at, Guy's Hospital late Examiner in Surgery, University of London.

London, W., April 24th.

SIR,—As one extremely interested in your article the London matriculation, I am watching the prese senatorial contest with attention. It appears to me th all fair-minded persons must agree there is a hardsh entailed, and the present London degree in medicine obtained actually by comparatively few students residi in the metropolitan district. Leaving altogether aside t controversy with regard to the present value of t London degrees, with which I am not in a position treat, I should like to say that a more reasonable degr than that granted by the University might be with reach were London students able more easily to tak degrees at provincial universities.

The difficulty of obtaining such lies in the fact th residence in particular provincial towns is require With the unsurpassed scientific teaching and means clinical study in London this residence is absolute unnecessary. Would it not be to the advantage of t provincial universities to abolish all residential deman on the London student, and so obtain men who do n feel themselves qualified to take the degree of the Lond University? in other words, let these men join external students, and study entirely at the Lond schools.

I have the general respect for the London Universi and would not see the degrees lowered, as some say th have been, to catch the average man. Though the schem I have proposed might be opposed by the London Conjoi Board, it would solve a difficult and, I think, urge problem. If, as I understand, the London Univers admit to its higher degrees those who have passed t intermediate or other examinations at provincial univ sities, surely these latter should reciprocate by admitti as external students those who have studied at t schools of the London University. Is it not in t province of the London University to request su reciprocity?—I am, etc.,

April 15th. UNDERGRADUATE.

THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

SIR,—"B.," in his letter in last week's issue, advoca more "common sense" in the discussion of the ab subject. What is the "common sense" of the positio Surely it is this: That there are two classes of pr titioners recognized alike by the public and by medical profession—the "general practitioner" and t "consultant"—whose duty it is to work together for benefit of their patients and of themselves. The cl function of the "consultant" is the giving of a seco opinion, and that is the real light in which the membe of the general public regard him. It is for this rea that "A's" letter seems to me to contain so mu "common sense" when it suggests a working basis between the two classes, which is as far as one can go the present time—namely, to refuse to prescribe for, o carry out the treatment of, a patient except by co-operat with a general practitioner.

"B." quotes a case of a mother who brought her chil him, and on his suggesting that he should write to t own doctor the mother replied that she did not wish t to do so, as she did not intend to have her daug treated any longer by her own medical man. "B." in effect, What could I do but treat her? This appe to me no reason whatever. I might just as well say t although I liked champagne, despite the fact that it d bad for me, yet, because a friend had asked me out dine with him, and had said that he would wish m drink champagne, that therefore I—knowing it was

unwise thing for me to do—was, nevertheless, obliged to drink it. Ye cannot serve both God and Mammon. If the position which a man wishes to take up is that of a "consultant," then he should adhere to the unwritten rules which should govern that class; if not, then he should call himself a "general practitioner," and not a "superior general practitioner-cum-consultant."

I am fully convinced that the recognition of the two classes will, in the near future, become better defined, and I am confident, from my own experience, that the members of the general public have little difficulty, even at the present time, in comprehending the position when once it is put before them, realizing as they do that it is a distinction which exists for their advantage as well as for ours.—I am, etc.,

April 22nd. Z.

Sir,—Will you allow a general practitioner from the country to suggest a way out of the difficulties connected with medical consultation? At present we are treated indulgently by the public. The "man in the street" laughs at our absurd medical etiquette and does not bother his head to find out what it all means. He says to himself, "It pleases them and it doesn't hurt me." But if the *Daily Scavenger* or some other enterprising paper works up an agitation and proves that medical etiquette is for him no laughing matter, but that, on the contrary, it may be a question of life and death—what then? Are we prepared for a searching examination into our dealings between ourselves and with the public? I think not.

The majority of the medical men that I have known appear to forget that patients have rights as well as doctors. A slavish adherence to some absurd rule of etiquette comes first, the welfare of the patient second. It is generally held that if you are called to see a patient in consultation with another medical man it would be wrong of you to accept the position of ordinary medical attendant to that patient or any member of his family for some considerable time afterwards. Does that rule bear investigation? Is it just to you? Is it just to the patient?

Take a case of frequent recurrence: Dr. A. is attending Mr. Jones for some acute illness. Mr. Jones is dissatisfied with the treatment, and asks that Dr. B., "about whom he has heard so much" (and who he has decided in his own mind should be his medical attendant in any future illness) should be called in consultation. Dr. B. sees the case, and makes no endeavour to score at Dr. A.'s expense, but, on the contrary, does everything a gentleman should, and honestly tries to increase Dr. A.'s influence over the patient. What will the man in the street think when he knows that two months later, when Mr. Jones was ill again, he was at liberty to have any doctor except the one he wanted and had confidence in? And what crime has Dr. B. committed that he should be penalized? Any of the other doctors in the neighbourhood can take this good patient but he must not.

Take another case: A doctor, A., is going away for a day or two, and asks B. to see his patients. B. does so to oblige A., and does his very best in A.'s interests, and in his effort to do what is right is a little less nice to A.'s patients than to his own. If afterwards any of A.'s patients whom B. has seen decide to make a change, they can go to any other doctor but they must not go to B.

These are two instances of some of our absurd rules. In my opinion they do far more harm than good. I would do away with them, and, so far as medical consultation is concerned, would substitute one rule: that when a medical man is consulted by a patient, the medical man should in every case notify the patient's last medical attendant, and the public should be made aware of the existence of this rule. Any one possessed of the requisite grain of common sense can work out for himself what the effect would be on patients and on doctors and on medical practice generally.—I am, etc.,

April 20th. Antiseptic.

Sir,—Dr. Dickinson in your issue of April 6th called attention to a necessary qualification to my statement that "patients have an indefeasible right to seek advice from whomsoever they may choose." It is lamentable such an obvious breach of good manners as that of "advising a patient who had been originally introduced by another medical man" should ever have been committed. I quite concur with my friend's condemnation of such conduct.—I am, etc.

London, W., April 22nd. Chas. W. Chapman.

INFLUENCE OF AN EXCESSIVE MEAT DIET ON FERTILITY.

Sir,—I have read the article by Dr. Watson in the Journal of January 26th with great interest, as I live in a land of seeming contradiction to his theory.

Among the entire Boer population in South Africa meat forms a large proportion of their diet, and nevertheless the race is very prolific. To confirm my observation I have recently discussed the matter with a considerable number of typical and intelligent Boers on whose statement I can implicity rely; but it will suffice to quote the following as a fair sample of the rest, in respect to diet, prolificness, and lactation:

Breakfast, dinner, and supper, meat and bread; tea or coffee in afternoon with bread alone.

Maternal grandmother, 21 children; paternal grandmother, 19 children. All were breast-fed, so far as the memory served informant.

From my own experience I have roughly calculated about eleven to be the average number of a family and 90 per cent. breast-fed, whilst I can confirm the statement regarding how largely meat enters into every meal. Vegetables such as potatoes are not often seen on up-country Boer tables, and fruit only occasionally. Coffee is drunk in enormous quantities; occasionally one hears of twenty cupfuls being consumed in a day by one person, whilst a half to a third of this would be the average.

This is merely interesting in so far as it controverts any theory holding that meat *per se* diminishes fecundity.

The statements here made I think will be generally accepted by any one having a sufficient knowledge of South Africa.—I am, etc.,

Arthur King.

Fauresmith, Orange River Colony, February 25th.

INFILTRATION ANAESTHESIA.

Sir,—Having had a practical experience of local analgesia for the past eight or nine years, I should like to make a few remarks on the article by Mr. Gilbert J. Arnold in the Journal of March 23rd. In the description of the technique as practised by him, which is in substance the antiquated method of Schleich, he states that liquid phenol (I take it he means the pure liquid carbolic acid) is to be placed at various spots on the skin, which will "serve to *sterilize* and *anaesthetize* the skin." Surely Mr. Arnold does not seriously regard this as a desirable method of sterilizing the skin, for it must predispose to the occurrence of small areas of necrosis in the region of the wound. Further, I fail to see the need of anaesthetizing the skin in that manner, for the process of infiltration itself is amply sufficient if care is taken to reintroduce the needle within the area already infiltrated. In my experience the patient does not feel any more pain after the first prick, and that is so trifling that it can be ignored.

Mr. Arnold uses an adrenalin solution, and advocates operating *at once*, injecting more solution as the operation is proceeded with. This is not only most cumbersome and irksome to the operator, but is quite at variance with the facts on which the use of adrenalin is based. Adrenalin not only prolongs analgesia, but, what is equally important, also *delays* its appearance, and complete analgesia may not obtain for quite thirty minutes after the tissues have been infiltrated. The best results should therefore be obtained by waiting for at least half an hour after infiltrating the tissues before beginning to operate; and this is found to be so in practice. The whole of the skin, subcutaneous tissues, and deeper parts can be rendered analgesic with the utmost certainty at one and the same time, so that after a suitable interval the operator can proceed with the operation and complete it without being hindered by the necessity of infiltrating the tissues as he proceeds.

Apparently Mr. Arnold approves of the commercial preparations for producing local analgesia that are on sale. For my part I would decline to accept any of the proprietary solutions as sterile. If any one wishes to succeed in producing a reliable analgesia, he will be far better

advised if he prepares his solutions himself. It is a very simple matter, and I invariably do so.

In conclusion, I would like to draw Mr. Arnold's attention to an article on local analgesia by Mr. A. E. Barker, which appeared in the BRITISH MEDICAL JOURNAL for December 24th, 1904, and which he has apparently overlooked. He will there find the details of a much simpler technique, much of which is due to Mr. Barker's own careful researches. I have practised the method as described by Mr. Barker after having studied it as applied by him, and can speak for its simplicity and efficacy. I have used local anaesthesia for both major and minor surgery, and at the present time I very seldom use a general anaesthetic. I have especially had most excellent results in cases of grafting (skin) by the Thiersch method.

I am sure that if Mr. Arnold will try these modifications he will get results which will be far better than any he has yet had.—I am, etc.,

Wisbech, April 2nd. D. LEIGHTON DAVIES.

THE ALLEGED ACTION OF CHLOROFORM ON THE HEART.

SIR,—In the leading article on recent work on anaesthetics, in the BRITISH MEDICAL JOURNAL of April 20th, the following passage occurs: "Under chloroform the fall in blood pressure is due in part to cardiac paralysis and in part to vagus inhibition." Nothing could be further from the truth than such statements as this, since neither cardiac paralysis nor vagus inhibition play any part whatsoever in normal chloroform anaesthesia. Paralysis, or weakening, of the heart and vagus inhibition are wholly abnormal conditions under chloroform, and are unmistakable signs of a faulty method of administration involving interference with the breathing or overdosing, or both. In research work on anaesthetics two facts stand prominently out, both of which have been resolutely ignored. In the first place, the Hyderabad Commission demonstrated that the fall of the blood pressure under chloroform is not in itself dangerous, and cannot therefore be due to weakening of the heart. In the second place, my cross-circulation experiments, originally devised by Drs. Gaskell and Shore, still hold the field of research on anaesthetics, and must continue to do so until they are repeated and the results compared, on the one hand, with those obtained by Gaskell and Shore when the cross-circulation was not successfully established, and, on the other hand, with those obtained by me when the cross-circulation was established successfully and completely. By means of these experiments—the conditions laid down by their distinguished authors as essential having been fulfilled—it was proved: (1) That the normal fall of the blood pressure under chloroform is produced entirely by vasomotor narcosis, which is the very first effect of the anaesthetic; and (2) that when chloroform is administered by inhalation it has no direct action upon the heart. In the normal administration of chloroform not only is there no direct cardiac effect, but the heart is efficiently safeguarded throughout by having its work made easy for it by dilatation of the arterioles and consequent fall of the blood pressure; and no other fall of pressure takes place, provided that the nutrition and action of the heart are maintained unimpaired in the only way which is possible—by regular breathing. It follows—and this is our whole case—that chloroform can be given with uniform and guaranteed safety to any patient who is in a fit state for an operation in any branch of medicine or surgery if the breathing alone is properly attended to.

The position of anaesthetics at present may be summed up in the following proposition. Two methods of chloroform administration are before the profession. One is founded upon the established fact that chloroform, when given by inhalation, has no direct action upon the heart. Employed on this principle there is no risk in giving chloroform, death from the anaesthetic is avoidable, and its use may be indefinitely extended so as to bring us within a measurable distance of the total abolition of pain. The second method is founded on the belief that chloroform does in some mysterious manner directly affect the heart. If given on this principle its administration can never be made safe, a certain percentage of deaths must occur because the method itself renders danger inevitable, and the use of the anaesthetic is naturally restricted to a limited number of picked cases. It must be to the interests of the profession, in a degree only second to that of the general public, that deaths under anaesthetics should cease to take place, and I would, therefore, suggest that an immediate inquiry be made into the truth or untruth of the proposition which I have stated, and that this inquiry be entrusted to the Royal Commission on Vivisection, with which subject anaesthesia ought to be most closely allied.—I am, etc.,

London, W., April 23rd. EDWARD LAWRIE.

THE TREATMENT OF SYPHILIS.

SIR,—I have read with much interest Mr. Pernet's article in the JOURNAL of March 30th, and agree with him that "we must be eclectic in our treatment of syphilis, and not go off our heads in favour of any one method to the exclusion of all the others." Mr. Pernet, however, seems to be in favour of the intramuscular injection of grey oil, and refers to "alarmist" objections to this method. It is true that this method has proved of great use in the hands of Lambkin in this country, at the Rochester Row Hospital, and in the hands of the late Dr. Barthelemy and Dr. Levy Bing at the St. Lazare Hospital in Paris; but a good many cases of severe stomatitis (some of them fatal) have been reported recently. I therefore maintain, with Alfred Fournier, that mercurial injections have not superseded the older methods of treatment, and that the great majority of cases of syphilis can be efficaciously treated by means of pills or mixtures of mercury perchloride and iodide. Mr. Pernet refers to the use of iodipin and lipiodol, but, as Fournier has pointed out, all the substitutes for potassium iodide are of inferior therapeutic value to the original.

I agree with Mr. Pernet that the effect of the "Zitmann treatment" is due to the large quantity of fluid taken, but I may add that this effect may be attained without resorting to the complex and almost mediaeval formulae which are stereotyped for this treatment. With regard to the attempts at the preparation of an antisyphilitic serum from the lower monkeys by Metchnikoff and Roux, Mr. Pernet says that "inconstant results" have been obtained. I venture to state that in their last publication from the Pasteur Institute the above observers have shown that the *Macacus rhesus* monkey has been proved capable of attenuating the syphilitic virus inoculated from the chimpanzee, and that one of Metchnikoff's laboratory assistants, who contracted a sore from one of the *Macacus rhesus* accidentally, was afterwards pronounced free from syphilis by Fournier. But how far this goes towards "vaccination" against syphilis remains to be seen, and is also beside the mark.

As R. W. Taylor recently wrote to me: "An ape is one thing and a man is another; the laboratory is excellent, but clinical practice is the greater law." Mr. Pernet refers to the so-called prophylactic treatment of syphilis by inunction of calomel ointment, and mentions the now historical experiment on Maisonneuve. It is hardly necessary to state that the evidence to prove such a case is almost impossible to obtain. One point worth bearing in mind is that supposing the *Spirochaeta pallida* has been inoculated on an abrasion, any vigorous inunction may rub it *in* and not *out*. It appears to me that ordinary soap and water would have a better effect. As regards the prophylactic use of calomel ointment, it might be better used before than after, which I believe is the proper meaning of prophylaxis.—I am, etc.,

London, W., April 2nd. C. F. MARSHALL.

FUNCTIONAL ALBUMINURIA IN ATHLETES.

SIR,—It was with very great interest that I read in your issue of January 5th Dr. W. Collier's article on this subject.

Early in 1902 with Sydney W. Patterson, I made some investigations in this subject at the instance and under the guidance of Dr. C. J. Martin, then Professor of Physiology in the University of Melbourne.

Like Dr. Collier, we took as our subjects the eight members of the racing crew of a university college. For the fortnight preceding the race, and on race day itself, urine was collected from each member of the crew immediately on leaving the shower-bath after the row. Two tests were made—namely, boiling with the addition of acetic acid, and ferrocyanide of potash. Almost invariably albumen was present, invariably after severe

rows, and after the race. Actual percentages of albumen were measured by Esbach's albuminometer.

During the fortnight urine was collected from each member of the crew every morning, immediately on rising from bed. Only on the rarest occasions was a trace found.

Three days later not a trace was found in any of the urines.

Five years later I have been able to collect urine from four of the eight members of the crew. These four have rowed constantly since in races. There is no trace of albumen in the urine from any of the four.

Urine was collected from eight competitors in a ten mile cross-country run immediately they emerged from the shower-bath. Every one of the specimens contained albumen.

These results were published in the *Intercolonial Medical Journal of Australasia*, July 20th, 1902,—I am, etc.,

THOMAS P. DUNHILL, M.D.,
Surgeon to Out-patients, St. Vincent Hospital.

Melbourne, Victoria, March 5th.

THE TRADE OF MEDICINE.

SIR,—Such is the expression which is being preached from the Temple of Æsculapius, rightly or wrongly. The word "trade" and equally "trade-unionism" are grating to my ears when applied to medicine. There are many others in my Division and Branch who share the same opinion. And what a large proportion of the profession there must be who can take no note of "hours of labour."

Any one who acts merely for money is in trade (Webster's Dictionary). "Musicians . . . taught the souls of the people in angelic harmonies to converse with heaven" (Professor Wilson). "How did you dare to trade and traffic with Macbeth?" (Shakespeare). The riches and commerce of Tyrus (vide Ezekiel, chapter xxvii, v. 13). Javan, Tubal, and Meschech, they were thy merchants; they traded the persons of men and vessels of brass in thy market. Referring to this trading, "Her great and irrecoverable fall" (chapter xxviii). These and similar quotations distinctly point out that a trade is business pursued, occupation, employment.

If medicine is a trade, therefore theology comes under the same title, and it is not incorrect to say the trade of the Church. And if we approach the army, the navy, and the law, it would not be inaccurate to style them trades. So it is with the millionaire, is he not a trader? But it all appears so inconsistent, that I am loth to apply the word "trade" to medicine in place of the "profession of medicine." Again, on searching Webster's large dictionary, I find that the noun "trade"

is also the business which a person has learned, and which he carries on, for procuring subsistence, or for profit; occupation; especially, mechanical employment; distinguished from the liberal arts and learned professions; as, we speak of the trade of a smith, of a carpenter, or mason; but we never say the trade of a lawyer, or physician.

Thus, according to this ruling, I err in heading my letter "The Trade of Medicine," it proves the exception. We are wrong, then, when we apply the words "trade" and "trade-unionism" to medicine.

Assuredly the profession of medicine stands aside of trade. Of all human callings it is the one applied to research bordering on theology. It approaches the very soul of man, and studies thoses vices which, at all times, have led to the fall of empires. Thus medicine is a tower of strength which all else has to bow to; and those who wilfully practise it as a trading concern have mistaken their calling in life. That is one of the reasons perhaps why some men in the profession do not seek the portals of the British Medical Association. It is such as these who frustrate the principal object of our Association, namely, unity, peace, and concord.

The excuse for these remarks is that at the spring meeting of our Division we—some of the members—entirely and emphatically objected to the use of the word "trade" or anything that savours of its methods in connexion with the medical profession. We are not slave traders, nor do we look upon medicine, the scientific study of human bodies, in the same light as a trade. If that is the spirit of modern medicine, I maintain the British Medical Association will fall like a house built of cards. Some of us, I admit, obtain enormous fees rendered for valuable services to the human body, but are these big fees to be regarded as the one aim of medicine? Is this the teaching of to-day? And is there no nobility in medicine and a something else, foreign to other callings, wrapped up in better material than brown paper, and of more value than the current coin of the realm?—I am, etc,

March 17th. POST VIRTUTEM CURRO.

"THE QUEEN'S JUBILEE HOSPITAL."

SIR,—In your issue of April 20th an editorial appears under the above heading. There is no such hospital now in existence, for the name you mention was changed a year or more ago to that of Kensington General Hospital—a fact that the third line of your paragraph proves to have been within your knowledge. This inaccuracy is unfortunate, and in any other journal than the BRITISH MEDICAL JOURNAL the use of the discarded title might have suggested an undue bias, instead of its being, as undoubtedly is the case, a mere oversight.

May I venture to say that with the change of name there has been a complete reorganization of the hospital? Its president is Lord Brassey, its chairman Sir James Andrew Clark—a name that must command universal respect in the medical profession—while the board of management includes such men as Sir Charles Cuffe, Colonel Burnaby, the Rev. Willoughby Carter, Mr. D. Fripp, and Mr. Hayes Fisher. It has a well-qualified and responsible medical staff. Speaking generally, certain objectionable elements have been deleted, and a sustained and strenuous effort has been made to render the hospital worthy of an honourable position among the great medical charities of London.

Under these circumstances, it is disheartening to find a powerful professional organ like the BRITISH MEDICAL JOURNAL offering harsh and sweeping criticism, instead of holding out a helping hand to those who have achieved so thankless and difficult a reform. This is the more to be regretted as the views thus expressed might presumably influence the attitude of the Hospital Saturday and the King Edward's Funds. In the present instance, however, you have attacked the Kensington General Hospital in the following scathing terms: ". . . For when an institution ostensibly founded for the benefit of the suffering poor exacts a fee from the majority of its out-patients, and reserves half of its twenty-three beds for paying patients, it has more of the appearance of a private than of a public hospital."

What are the facts of the case? A charge of threepence a week is to be made to each patient not having a subscriber's recommendation or a letter from a medical practitioner. Each out-patient costs us about eightpence a visit, and as Treasurer to the hospital I most reluctantly consented to a portion of that cost being contributed by the patient. This step is adopted simply as a temporary measure—until we can get our finances into a more satisfactory condition. Personally, I am strongly opposed to patients' payments, and am glad to hear you speak out this open condemnation of the system. But what is sauce for the goose is sauce for the gander. The enormously rich hospitals—Guy's and the London—charge their out-patients threepence each for medicine, while St. Thomas's, the Poplar, and various other general hospitals accept fees from patients. I gather, then, that all such institutions appear in the deliberate judgement of the BRITISH MEDICAL JOURNAL more like private than public hospitals.

I may say that quite recently the Kensington General Hospital determined to invite a member of the local Branch of the British Medical Association to sit on their Executive Board.

What we ask, Sir, is a fair field and no favour. Before accepting information from outsiders, who may be prejudiced as they have certainly shown themselves to be inaccurate (*vide* name of hospital) it would be well to write to the Chairman of the Kensington General Hospital, Sir James Clark, for the facts of the case.—I am, etc.,

London, W., April 23rd. DAVID WALSH.

*** Our observations were all based on remarks made by the Chairman and other responsible speakers at the meeting. If Sir James Clark desires to defend the existence and the administration of the institution now called the Kensington General Hospital, our columns are open to him.

OBITUARY.

WILLIAM HENRY RANSOM, M.D., F.R.C.P., F.R.S.,

SENIOR CONSULTING PHYSICIAN TO THE GENERAL HOSPITAL, NOTTINGHAM.

WE regret to have to record the death of William Henry Ransom, at the age of 83, which took place on the afternoon of April 16th at his residence, Park Valley, Nottingham. Though his health had been failing for several years, the end came somewhat suddenly from heart failure. By his death medicine and science lose one of their most distinguished exponents, and Nottingham one of its greatest citizens. A familiar and venerable figure, up to a very few years ago he moved about with a vigour and alertness which men twenty years his junior might envy. For the last three years he was confined entirely to the house in consequence of heart weakness following influenza, and suffered from several attacks of bronchitis and pneumonia. Nevertheless, his mental energy was little affected, and he was accustomed to spend several hours of every day in literary work which was an unfailing pleasure and helped him to retain to the end his natural cheerfulness.

Born at Cromer in 1823, and educated at a private school at Norwich, Dr. Ransom was, at the age of 16, apprenticed in the old-fashioned way for four years to a doctor at King's Lynn. He came of an old seafaring family, his father being the captain of a ship of which he was also the owner; his mother was the daughter of a clergyman. In 1843 he became a student at University College, London, and during his stay there gained several gold medals both at the College and at the University, where he graduated in 1848, taking the degree of M.D. in 1850. At University College Dr. Ransom had Huxley as a fellow student, and it is interesting to note that he was the indirect means of influencing Huxley's career. In a letter to Herbert Spencer, who was also a friend of Dr. Ransom, Huxley on June 1st, 1886, wrote:

> You will be quite taken aback at getting a proof from me with so few criticisms, but even I am not so perverse as to think that I can improve your own story of your own life. It is a curious thing. If Ransom had not overworked himself I should probably not be writing this letter, for if he had worked less hard I might have been first and he second at the examination at the University of London in 1845, in which case I should have obtained the exhibition, should not have gone into the navy, and should have forsaken science for art.

During 1848 and 1849 Dr. Ransom pursued his studies on the Continent, first in Germany and then in France, obtaining a competent knowledge of the language of each country which enabled him to follow the medical and scientific literature of the Continent. Whilst living abroad too, he made the acquaintance of many leading figures in the political and medical world. In 1869 Dr. Ransom was elected a Fellow of the Royal College of Physicians of London, and subsequently became a Fellow of the Royal Medical and Chirurgical Society, and of University College.

Dr. Ransom settled in Nottingham in 1850, and took the house in Low Pavement now occupied by his son, Dr. W. B. Ransom. During the period of waiting for patients he did a good deal of laboratory work and had a couple of rooms fitted up for chemical and physiological work. Among the subjects he took up was the early development of the ovarian ova, the result of his investigations being published in the Royal Society's *Proceedings* of 1856. Other researches of his were published in the *Transactions* of 1870, and in 1870 he was elected a Fellow of the Society. Dr. Ransom took a prominent part in the organising of the British Association in Nottingham in 1866.

In the year 1867, when the British Medical Association held its annual meeting in Nottingham, Dr. Ransom was President of the Section of Medicine and in his address chose for his subject a remarkable clinical puzzle and one in relation to human pathology which he developed and illustrated more widely during the last few years of his life. In the course of a strenuous life Dr. Ransom found time to devote to geology, and helped to explore the caves of Settle and Derbyshire. In the course of his investigations he discovered the jawbone of the lynx, hitherto known to exist only as a fossil found in England, and that possibly unique specimen is now in the Nottingham Natural History Museum.

The year 1854 saw his election as physician to the General Hospital, in succession to Dr. Gill, a position which he retained up to 1890, when he retired, and was appointed an honorary consulting physician, being succeeded by his son, Dr. W. B. Ransom.

It is, after all, as a sound and successful consulting physician for upwards of forty years that Dr. Ransom will be best remembered both by his patients and by the numerous members of the medical profession who sought his advice in Nottingham, Nottinghamshire, and the neighbouring counties. Pre-eminent in diagnosis, his self-reliance and confidence begot confidence in his patients. Sometimes impatient and occasionally brusque, especially in his earlier years, he was one of the kindest and most genial of men. Always attracted by the scientific side of medicine, no trouble or pains were too great to enable him to arrive at a correct diagnosis, and full use was made of the aids to diagnosis afforded by the collateral sciences. Several generations of practitioners have testified to his thorough straightforwardness in his relations both with doctor and patient. Like most men of unbounded energy combined with unusual mental powers, he naturally took the lead in whatever position he was placed. The enlargement and remodelling of the General Hospital in the late Seventies was mainly directed by his wide knowledge and experience, and resulted in a building in which ornament was subordinated to the essential principles of hospital hygiene. It is no little credit to his foresight, and to his appreciation of the importance of keeping in the van of sanitary progress, that the wards then designed remain after thirty years well abreast of modern requirements. Indeed, in all matters connected with the interests of the General Hospital he remained the leading and moving spirit for many years.

In 1871, when encyclopaedias and systems of medicine were not so numerous as at the present day, Dr. Ransom wrote the article on Intestinal Worms for the third volume of Dr. Russell Reynolds's *System of Medicine*.

In his early professional days he became sceptical about the truth of the opinion, then so widely held both by the profession and the public, that cold was the general cause of many diseases; and in 1887 he published a paper on Cold as the Cause of Disease, in which he pointed out that such a doctrine was a gross exaggeration. In recent years the part played by bacteria in the causation of pneumonia and the success of the open-air treatment of consumption have done much to bring round the profession towards his point of view. In his own habits and in the treatment of his patients he illustrated the soundness of his views. He was seldom seen wearing an overcoat, and he had trained himself to be remarkably indifferent to the discomforts of even severe cold.

The death from scarlet fever of two of his children in 1870 was a severe blow, but was received in a characteristic spirit. It stimulated him to study the subject of infection, and led him to devise a hot-air disinfecting stove, heated by gas, which was widely used in this country for many years until superseded by steam.

Dr. Ransom was one of the first to join the Robin Hood Rifles in 1859, and he continued as a private in the regiment for fifteen years. Side by side with him at that first parade was the late Right Honourable A. J. Mundella. In the early Sixties Dr. Ransom became a keen politician, throwing his whole-hearted energies on the side of Liberalism. In the candidature of the late Samuel Morley, Lord Amberley and the Honourable Auberon Herbert Dr. Ransom took a prominent part. He appeared on the hustings in the market place to nominate Viscount Amberley, and made a strong speech in support of reform. Electors in those days were riotous affairs, and an echo of what happened is contained in his concluding sentence: "regret at not being able to make himself better heard. Twenty years later, at the time of the Home Rule split, Dr. Ransom became a Unionist, although he took no prominent part in political warfare.

Dr. Ransom was much interested in education, and had some share in the foundation of the Nottingham Literary and Philosophical Society, now defunct. He also took an active part in the founding and early management of the Nottingham University College, and was long on the governing body of that institution, and of the High School.

About Christmas last Dr. Ransom started a new book,

which was to be a small and more popular treatise on the natural history of galls, a subject which had interested him for a great many years, and the pursuit of which had enlivened many a week-end and summer holiday spent among the beautiful woodlands near Belvoir or Edensor.

No account of the late Dr. Ransom would be complete which failed to record the remarkable happiness of his disposition—he was always bright, cheerful, and contented. In 1860 Dr. Ransom married Miss Elizabeth Bramwell, sister of an old college friend, Dr. Charles Bramwell of Nottingham, a member of a well-known Northumberland family, from whom Dr. Byrom Bramwell of Edinburgh is also descended. Mrs. Ransom died about eighteen years ago, but three sons survive—namely, Dr. W. B. Ransom, Senior Physician to the General Hospital; Mr. D'Oyley Ransom, solicitor, of Nottingham; and Mr. Herbert Ransom, who is an engineer in London.

JOHN COMYNS LEACH, M.R.C.S., M.D.DURH., J.P.,

STURMINSTER, DORSET.

It is with sincere regret that we record the death of John Comyns Leach of Sturminster Newton, Dorset, which occurred on board the ss. *Argonaut* between Malta and Port Said. It is not too much to say that the sad intelligence cast quite a gloom over the town of Sturminster Newton, where he had practised for over forty years, and was beloved by all classes. He became M.R.C.S.Eng. in 1864, L.S.A. in 1865, and M.D.Durh. in 1881. He received the Diploma of Public Health at Cambridge in 1876, and that of the Conjoint Board of England in the early Nineties. He was also a Fellow of the Institute of Chemistry. He acquired his medical education at University College, London, gaining a gold medal in comparative anatomy and becoming B.Sc. of London University in 1861. At the time of his death Dr. Leach held the appointment of County Coroner, County Analyst, and Medical Officer of Health for the Sturminster District. He was a member of the Lodge of Oddfellows at Sturminster, and was for some years its Medical Officer. Some time ago he retired from practice, but had lost none of his love for or interest in the profession, and remained an ardent and devoted member of the British Medical Association. Dr. Leach was a former President of the Dorset and West Hants Branch, and had for several years been Honorary Secretary to the West Dorset Division. He was a man of many parts, and his genial and sympathetic disposition had won the esteem and regard of all. He was greatly interested in all matters affecting the welfare of the people, and his position as chairman of the parish council and a Justice of Peace for the county may be taken as proofs of the high place he occupied in the estimation of those who had known him throughout a long, active, and honoured career. By his death the profession suffers a severe loss, and the blank in our ranks is a wide one. To those who knew him best his sterling qualities and steadfast friendship will ever remain as cherished memories. A man of literary bent, he was the author of *Geological Evidences of the Antiquity of Man*, *Lectures on Cremation*, and many contributions to the medical journals. He leaves a widow and three daughters to mourn his loss.

DR. THOMAS HOLMES RAVENHILL.—Many of his old fellow-students will be grieved to hear of the death of Thomas Holmes Ravenhill, of Bordesley, Birmingham. In the early Sixties he came to Birmingham from Arlingham, Gloucestershire, where his father was vicar, and entered as a student at Queen's College. His quiet, unassuming manner, quaint humour, and straightforward character very soon made him beloved by his fellow-students, and the same qualities in after-life endeared him to a large circle of patients. After a successful student career, during which he took nearly all the medals at Queen's College, he held the resident posts at the Queen's Hospital, and was subsequently appointed Resident Surgeon to the Camp Hill Branch of the General Dispensary, where he remained for some years. He then went into partnership with the late Dr. Savage of Bordesley, and from that time his life had been that of a very busy general practitioner. The profession at large has reason to remember him with gratitude, for it was he who originated the idea of starting the Medical Sickness and Assurance Society, and the meeting which inaugurated its existence was held in his dining-room. He was laid to rest on Friday, April 12th, at Yardley Wood Church, in the presence of a large assemblage, many patients coming a great distance to pay their last respects to his memory. He leaves a widow and six children, the elder of his two sons having adopted his father's career.

SURGEON MAJOR WILLIAM EDWARD BAIRD, late of the Indian Medical Service, died at St. Leonards very suddenly, at the age of 74. He joined the Bengal Medical Department as an Assistant Surgeon, August 4th, 1857, and was promoted to be Surgeon-Major, August 4th, 1869.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. August Grissing, physician-in-ordinary to the Duke of Parma, as the result of an accident on the railway, aged 54; Professor Gabritschewsky, a distinguished bacteriologist and founder of the Bacteriological Institute of Moscow; Dr. Ashbell P. Grinnell, for some years Dean of the Medical College of the University of Vermont; Dr. Hugo Magnus, professor of ophthalmology in the University of Breslau, well known by his contributions to the literature of his speciality, and by his writings on medical history; and Dr. William C. Glasgow of St. Louis, professor of laryngology in the Medical Department of Washington University, and one of the founders of the American Laryngological Association.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

APPOINTMENTS.

THE following appointments have been made:

Dr. L. Cobbett, University Lecturer in Pathology.

Messrs. Cuthbert Wallace and Raymond Johnson, additional Examiners in Surgery in the 3rd M.B., Part II.

Dr. Barclay Smith, Examiner in Human Anatomy for the 2nd M.B., in place of Professor Macalister, who is unable to examine.

Dr. Harmer and Messrs. Bateson and Shipley to represent the University at the Seventh International Zoological Congress at Boston in August, 1907.

SANITARY SCIENCE EXAMINATION.

The following candidates have been approved in both parts of the examination:

E. J. Brown, J. B. Cook, Catherine Fraser, D. H. G. Hutchinson, D. O. Kirkhope, C. H. Lindsay, D. MacNicol, P. MacKessack, J. S. New, W. G. Parker, J. C. Robertson, J. B. Smith, A. N. Stevens, S. E. Stokes, J. M. Strang.

UNIVERSITY OF ABERDEEN.

THE following candidates have been approved at the examinations indicated:

FIRST M.B., CH.B.—C. Clyve, E. W. H. Cruickshank, A. Ingram, E. P. Duncan, *A. C. MacRae, E. L. Reid, J. Ross, C. K. Smith, W. M. Will, †J. Hunter, †E. H. Moore, †P. Reid.

SECOND M.B., CH.B.—W. Allan, †A. G. Anderson, W. Anderson, J. S. Annandale, D. M. Baillie, J. A. Beattie, J. C. Bell, W. J. Calder, A. L. D. Cameron, W. Chapman, E. C. Davidson, W. Y. Davidson, H. Dugmore, W. Duguid, J. D. Fiddes, †M. J. Gerrie, A. Grey, J. Jakeier, W. W. Jameson, H. G. E. Jamieson, J. Johnston, C. A. M. Kendall, Elizabeth McLardie, C. R. Marshall, G. McPherson, C. A. Masson, †G. S. Melvin, J. L. Menzies, H. S. Milne, J. Mitchell, D. C. Robertson, F. C. M. Ross, A. C. L. Smith, H. A. Smith, G. C. Souttar, D. M. Spring, W. L. Stephen, †A. G. Stewart, R. Tindall, C. C. Twort, A. J. Williamson, D. H. W. Williamson, A. Wilson.

THIRD M.B., CH.B.—C. D. S. Agassiz, J. Anderson, W. S. Angus, W. M. Badenoch, A. A. Bisset, †T. C. Boyd, J. Brown, E. Buchanan, J. G. Dawson, G. Davidson, T. Davidson, R. E. Flowerdew, A. Gilchrist, S. Goodbrand, G. F. Hunter, P. S. Hunter, Elizabeth J. Innes, W. K. Dickson, E. Johnston, W. G. Magnus, jun., W. G. Macdonald, J. D. Mackie, J. Meiers, R. M. Ogilvie, R. W. Martin, A. Massey, A. J. Milne, N. F. Nicholls, J. O. Paterson, W. J. Pirie, J. Rennie, K. Ross, †R. J. Twort, W. G. Watt, M. J. Wilkinson, C. C. Wood, †D. Wood, †J. B. Nicholson, C. Cruickshank, †J. S. Cameron, †A. Dickie, †A. J. W. Stephen, †J. Watt, †J. H. Will.

* With honour distinction. † With distinction. Twenty-two to be examined in certain subjects.

UNIVERSITY OF LONDON.

KING'S COLLEGE.

A course of nine lectures on visual and cutaneous sensations will be given in the Physiological Department by Dr. C. S. Myers, Professor of Psychology, during the summer session on Tuesdays, at 4.30 p.m., commencing on May 21st. The lectures are open to students of King's College, students of other medical schools in London, internal students of the University of London, and medical practitioners on presentation of their cards.

UNIVERSITY OF DURHAM.

The following candidates have been approved in the subjects indicated:

First M.B. *All Subjects*:—†W. G. Beadle, F. P. Evers, W. J. Hickey, C. J. V. Swahnberg, H. F. Stephens, R. W. Smith, A. T. Thompson, T. R. West. *Elementary Anatomy and Biology*: J. B. Alderson, R. M. Barrow, R. Errington, D. Farquharson, Sarah L. Green, T. A. Hindmarsh, A. S. Hopgood, T. M. Hopgood, F. H. Kennedy, R. B. Lilly, J. Lumb, B. B. Noble, T. A. Peel, A. H. Wear. *Chemistry and Physics*: E. C. Abraham, L. E. S. Gellé, H. L. James, H. V. Leigh, G. C. M. M'Gonigle, O. S. Norton, A. R. G. Vander Beken. *Elementary Anatomy*: W. Smith, B.Sc.

Second M.B.—*All*: E. Dainty, C. Marks, H. C. W. Allott, W. Barkes, J. A. Caulcrick, F. H. Fawkes, H. E. Fullerton, C. J. Henderson, F. F. T. Hare, S. Mezumder, W. Reynolds, W. Sacco, Dorothea M. Tudor, W. R. E. Unthank, C. L. Wigan.

* First-class honours. † Second-class honours.

CONJOINT BOARD IN ENGLAND.

The following candidates have been approved in the subject indicated:

Practical Pharmacy.—**C. J. Aveling, H. S. Berry, R. D. Brown, H. E. Cockcroft, H. F. Collins, K. F. R. Davison, C. W. De Morgan, E. C. East, H. H. B. Follit, A. L. Foster, F. H. Fuller, C. W. Gee, A. K. Glen, M. Greer, B. Haigh, A. T. McCaw, J. C. Mackwood, J. Morris, J. H. Owens, G. L. Parsons, B. J. Phillips-Jones, H. Pinto Leite, E. J. J. Quirk, P. C. Raiment, D. D. Rosewarne, R. G. Smith, S. H. Smith, C. G. Sprague, R. W. Starkie, G. W. Twigg, B. Varvill, V. Vesselovsky, C. E. Waldron, J. L. Waller, G. H. Watson, J. N. Watson, J. S. Williamson.**

CONJOINT BOARD IN IRELAND.

The following candidates have been approved at the examination indicated:

Second Professional.—*H. Gray, A. M. T. Blake, A. G. Bennett, P. Egan, J. M. Gage, H. Hoyt, T. Murray, J. T. O'Boyle, J. J. O'Connor, J. G. O'Mahony, J. Patton.

* With honours.

TRINITY COLLEGE, DUBLIN.

The following degrees were among those conferred at a meeting of the Senate on April 18th:

M.D.—**F. G. H. Bigley, T. Creaser, G. G. Harnett, J. G. Lane, C. H. M'Comes, C. G. Sherlock.**

M.B., Ch.B., B.A.O.—**R. B. Bryan, F. H. Hudson, J. Gray, J. G. Lane, A. T. L. M'Creery, J. H. Morton, C. G. Sherlock, G. H. Stack, G. G. Verbery, H. J. Wright.**

SOCIETY OF APOTHECARIES OF LONDON.

The following candidates have been approved in the subjects indicated (April, 1907):

Surgery.—†**H. S. Burnell-Jones, †*M. F. Emrys-Jones, †*C. S. Spencer, F. A. K. Stuart, †*E. E. C. Vollet.**

Medicine.—**H. J. W. Barlee, E. J. Cree, *E. B. Messenger, *R. J. W. McKane, †J. F. McQueen, †S. K. Poole, †*E. Sutcliffe, W. V. P. Teague.**

Forensic Medicine.—**H. J. W. Barlee, J. F. McQueen, E. Sutcliffe, W. V. P. Teague.**

Midwifery.—**E. M. Adam, H. E. Battle, J. Cree, M. F. Emrys-Jones, H. A. Fenton, H. E. Mobbs, R. J. W. McKane, E. Rowland, R. Rowlands, H. Stacey.**

The diploma has been granted to Messrs. **H. A. Fenton, C. S. Spencer, F. A. K. Stuart, and W. V. P. Teague.**

* Section I. † Section II.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL ARMY MEDICAL CORPS (VOLS.).

Regimental Stretcher Bearers.

Lieutenant-Colonel L. J. de Zouche Marshall, R.A.M.C.V., commanding East Surrey Bearer Company (Teddington), writes: Will you allow me to draw the attention of other volunteer medical officers to a plan I have recently hit upon for the solution of a problem which has puzzled me for nearly twenty years—namely, how to get a fair proportion of the contents of the *R.A.M.C. Manual* into the heads of my non-commissioned officers and men? It has always been difficult to get them to read, and still more so to remember.

I have had nearly twenty years' experience as an instructor in St. John ambulance first aid and the contents of the *R.A.M.C. Manual*, and ought to know something about it. But the same problem has presented itself weekly and yearly at "question time" in the same old disheartening way. Of course I do not include drill: they all take some interest in that. At the beginning of January last I thought I would make the men of my Bearer Company read aloud in the mess-room and give them questions on paper to take home and learn, by way of help to the aid of their *Manuals*.

The company was put in single rank, numbered and extended round the long mess-table. Each man has to bring his copy of the *Manual* and is called on to read out a paragraph in succession, which I follow in my copy, and make all necessary explanations. The paper given to be taken home is neatly printed on both sides on our new cyclostyle copying machine by my sergeant-major (W. Argent), and contains about thirty questions and sufficient space between each for the answer. Each paper is numbered 1, 2, 3, 4, etc., and the paragraphs with which they deal, in the left margin, so that they can be pinned or sewn together for future reference.

The examination paper set at about the middle of March, consisted of twelve exhaustive groups of questions, with an average of about twenty-five parts to (nearly double) answers for each; the highest possible being 237. The best man, a recruit named Scears, actually gained 223 marks, the next being 157, 144, 136, two 131's, 129, 122, 113 and 105—these best ten averaging 139 each, and thirteen more, averaging 72 marks each, giving an average of 105 all round.

This two months' labour took us slowly, but I hope surely, through anatomy, physiology, triangular and roller bandaging (the practical work being taught concurrently), fractures, dressing, and antiseptic treatment of wounds to the end of para. 87. We have since got to the end of para. 142 (postponing "contents" of all but the surgical haversack until camp, when we will have the panniers, etc., to go through, if we are not ordered to spend the valuable time in trudging along dusty roads), and another examination will soon be held on the work done in March and April. I intend to reward these men for their industry, not by the usual sort of prizes, but by extra pay during camp, in exact proportion to their attendance throughout the year for instruction—drill or lecture—together with knowledge shown in these and subsequent examinations in first aid and drill, etc.

I venture to suggest a trial of this plan to Volunteer medical officers, and shall be happy to forward specimen examination papers on receipt of stamped envelope. One advantage it possesses is that it gets the *Manual* into the officer's head to begin with, and far more permanently than any system of cram; it limits the flights of physiological fancy which old F.A. lecturers like myself may feel inclined to indulge in, and it keeps us within the two covers of our book. I may also inform R.A.M.C. Volunteer officers of a useful fact—namely, that my sergeant-major has often composed, as well as printed, the weekly lists of questions, can explain the difficult paragraphs probably as well as I can, and is thus able to "run" the instruction in my absence. I may also add that I am trying this system on a first-aid class of Metropolitan Police at New Scotland Yard, and with promises of success.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

QUALIFICATION FOR MEMBERSHIP OF BOARD OF GUARDIANS AS AFFECTED BY RECEIPT OF PENSION.

J. W. B. writes as follows: I have recently retired from general practice, and am entitled to an annual payment from the superannuation fund. I have been nominated for election as guardian, but the returning officer has marked my nomination invalid, as he holds my pension is an emolument and equivalent to a paid salary. I wrote to the Local Government Board; they sent me a form with disqualifications on it, and, although a paid salary is one, no mention is made of emoluments or pensions. Will you therefore oblige me with your opinion? It appears to me a simple matter, and one the Local Government Board should decide. At present it seems to me that those who pay to the superannuation fund do so under a penalty.

*** This question has frequently cropped up, and different opinions have been expressed in reference to it. We believe it is now generally held that superannuation allowance must be regarded as "emolument" paid by the guardians, and that the receipt of any such emolument renders the recipient of it ineligible to sit as a guardian of the parish or union which pays it. If, however, there should still be reasonable legal doubts on the point, the question cannot be decided by the Local Government Board, but by a court of law. The 5th and 6th Victoria, cap. 57, Sec. 14, provides that "no person receiving any fixed salary or emolument from the poor rates of any parish or union shall be capable of serving as a guardian of such parish or union." This prohibition appears to be confirmed by the Local Government Act, 1894, Section 46 (1) (*c*), which states that "A person shall be disqualified for being elected a member of the Board of Guardians if he is concerned in any bargain or contract entered into with the Board, or participates in the profit of any such bargain or contract or any work done under the authority of the Board." We are aware that in the article on the principal laws affecting the medical profession by Messrs. Glenn and Hodges, which is prefixed to the *Medical Directory*, it is stated that a medical officer of a union who has been pensioned is not disqualified from being a guardian. No authority is cited in support of this proposition, and it appears to conflict with an opinion expressed by the Editors of the *Justice of the Peace*, who in their issue of February 23rd, 1907, p. 93, write that an ex-medical officer who is in receipt of a pension as such is ineligible for the office of guardian. We are unable

(for the present purpose) to draw any distinction between the master of the workhouse and the medical officer. The disability would not, we take it, apply to election to the Board of another union.

DUTIES OF DISTRICT MEDICAL OFFICERS.

A District M.O. asks the following questions:

(1) At page 20 of the *Medical Directory* for 1906, it is stated (Glenn's abstract of the laws affecting the medical profession) that "As a general rule the guardians may not assign to any medical officer a district . . . . which contains a population exceeding 15,000 persons." At the census of 1901 the population of my district was 20,718. What steps, therefore, could or ought I to take in this matter?

(2) In the matter of certification of lunatics, is it my duty as district medical officer to visit and examine any and every person alleged to be of unsound mind to whom I may casually be summoned by a police officer or other unauthorized person? I take it I am only called upon to do this in the case of a pauper lunatic, and how am I to know whether it is that of a pauper or not unless receiving the order of my relieving officer beforehand?

(3) With regard to any fee accruing for such examination, am I, or am I not, entitled to a fee in cases where a certificate is supplied to the relieving officer of the person's unsoundness of mind? I may say that during eight years' occupancy of my present post as a district medical officer I have never once received any fee for certification of a lunatic, but have invariably been informed that it is part of my ordinary duty.

*** (1) We believe that there are many Poor-law medical districts in England with an acreage or population, or both, in excess of the limits which by Consolidated Order of 1847, Art. 159, ought to be assigned to any one medical officer. Some of these districts appear to be tacitly sanctioned by the Local Government Board, and others formally sanctioned by being suspended from the force of the article in question by special orders of the Board. If at the time our correspondent accepted office, the acreage or population was *then in excess of the regulation*, we do not think that any good would result from raising the question now. If, however, the population did not exceed 15,000 at that time, and has since then increased to 20,000, this fact would be good ground on which to claim an increase of salary.

(2) We suggest that our correspondent should refer to the British Medical Journal of April 6th, 1907, p. 844, where he will find some of the information he requires. No district medical officer can claim a fee for any certificate, or for any opinion or information regarding a pauper lunatic given to the relieving officer for his guidance; he can only claim a fee when he has certified any such patient for an asylum, and his certificate has been available to enable the magistrate in the case to make an order for the patient to be sent to an asylum.

(3) We assume that our correspondent is aware that, by the Lunacy Act, he can claim 2s. 6d. for every quarterly visit paid to harmless pauper lunatics residing in his district.

LISTS OF VACCINATED CHILDREN.

Public Vaccinator.—The action of any Board of Guardians in posting on a church door the names and position of parents who have their children vaccinated by the public vaccinator (or any other vaccinator) would be illegal. If this has been done, application could be made for an injunction to restrain such conduct. The whole cost of such proceeding would fall upon members who had authorized the posting of such names, unless the action had been taken under advice, in which case the cost would fall upon the common fund.

DOGS IN WORKHOUSE INFIRMARIES.

Canis asks: Is it right (or desirable) to allow a dog to be kept in an "infirmary," where there are old people, young children, imbeciles, and sick? The opinion of the medical officer has not been asked, but the guardians have given their sanction, allowing it to be kept by the superintendent nurse. Would this meet the approval of the Local Government Board?

*** Save for some very special reason, we cannot think it desirable for a dog to be kept, and we are surprised to hear that any Board of Guardians should have sanctioned such an arrangement, more especially without consulting their medical officer. We are ready to believe that it would not meet the approval of the Local Government Board if the question were referred to that body.

Medico-Legal.

PAYMENTS OF *LOCUM TENENS*.

"Country Doctor" dissents from our views as to a *locum tenens* not being entitled to his washing and an allowance of alcohol (April 13th, p. 909). No doubt he has known instances where the principal has paid for the washing both of his assistant, or *locum tenens*, but the latter cannot claim it as a right, unless he has so stipulated, neither can it be said to be customary in the profession for the principal to pay for the washing either of an assistant or a *locum tenens*, although a certain number may do so. With regard to alcohol, it is quite another matter. Few principals, we believe, would admit for a moment the claim of an assistant or *locum tenens* to an allowance of wine or spirits. No doubt table beer is generally allowed, and both assistant and *locum tenens* would expect to live in the same way as his principal, and where the latter was in the habit of taking alcohol with his meals, it would probably be offered. Where a medical practitioner disapproved of the habitual use of alcohol in his household—as many do—it could hardly be expected that he would be willing to provide it for his assistant or *locum tenens*.

Locum having done a large amount of work as *locum tenens* writes that on one occasion only has he been asked to pay for his laundry and wine, etc.

MONTHLY NURSES.

M.B. writes: A. and B., sisters-in-law, engage the same nurse to attend them in their confinements, which are expected within six weeks of each other. A.'s confinement is delayed, and occurs within a fortnight of B.'s, and the former allows her nurse to attend B. in the emergency, on the condition that she shall return to her on B. procuring another nurse. Another nurse is engaged but sent to A., while B. insists on keeping A.'s nurse, although the latter was not due to come to her for nearly a fortnight. Ought A.'s nurse to have returned to her?

*** A.'s nurse ought not to have stayed with B. save with A.'s consent. B. was only entitled to demand her services from the time when she had engaged her.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE CITY OF LONDON HOSPITAL FOR MENTAL DISEASES.

In presenting his annual report for 1906, Dr. R. H. Steen, the Medical Superintendent, records his gratification that the title of "mental hospital" has been permitted for non-statutory purposes in place of "asylum." He has found it, he says, a matter of great congratulation both among the relatives of patients and patients themselves. Whilst it might appear to some to be a matter of no importance, it is evident that there is a great deal in a name; and in this particular instance an alteration, in harmony with the changes which these institutions have undergone from places of refuge to places of healing, is desirable, both as moderating the stigma which attaches to the term "asylum" and as formulating an ideal for the institutions themselves. Even the term "hospital" is not entirely free from reproach, and doubtless some English equivalent for the German "*Heil- und Pflegeanstalt*" would be preferable. In addition to the usual statistical tables, Dr. Steen furnishes interesting charts showing graphically the fluctuations in the asylum population, the percentage of recoveries on admissions, etc. These show a steady drop in the number of admissions since 1901, and at the same time a rise in the numbers resident at the end of each year, due evidently to accumulation. The chart of percentage recoveries shows great fluctuations, as a rule within three or four year periods, at times even as much as a difference of 34 per cent. within two years. This wide fluctuation in these figures is common to most asylums, and exemplifies the necessity of drawing deductions only from the averages of series of years.

KENT COUNTY OPHTHALMIC HOSPITAL.

The Kent County Ophthalmic Hospital at Maidstone completed last January the sixtieth year of its work, and is casting about for some means to commemorate what is regarded as its diamond jubilee. The idea in view seems to be to raise a fund of some £200 to modernize the operating room and its annexes, and also to increase by 100 the list of annual subscribers, further support being greatly required. In the year 1847 only 47 persons were treated in the wards, and 696 in the out-patient department; while the corresponding figures last year were 477 and 5,410.

POPLAR HOSPITAL.

At the annual meeting of the Governors of Poplar Hospital for Accidents on March 26th, it was stated that a site for a convalescent home had been acquired at Walton-on-the-Naze for £900. The whole scheme, it is estimated, will cost £5,000. During 1906 the receipts from annual subscriptions rose.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

R.A.M.C. asks for information as to a reliable hypnotic for hypodermic use when it is not possible to give morphine, either owing to its effect on the heart or because an abdominal operation has been performed and the risk of possible paralysis of the intestines must be avoided.

Cosmetics.

W. J. P. asks for information as regards the best books on (1) cosmetics; (2) methods adopted by beauty specialists.

*** (1) Eichhoff's *Kosmetik* and Paschki's *Kosmetik* (both in German). (2) Ladies' newspapers and Law Court reports; a good deal can be gathered from these sources. A visit to a beauty establishment would be instructive.

The Cigarette Habit.

EXCESS asks for advice or suggestions in dealing with a case of excessive cigarette smoking. The patient is a man of 30 who for five years has smoked and inhaled about thirty cigarettes per day. His chief symptoms are severe frontal and occipital headache. He is sincerely anxious to break the habit, but has not the moral courage to do so for more than a day at a time. What are the remedies to counteract the effects of previous excess and to render the habit distasteful? Is there any authoritative literature on the subject?

Incontinence in the Adult.

Y. asks for help as to diagnosis, prognosis, and treatment of a healthy and active married man, aged 47, who has a few times during the past year (about four times in all) waked from his sleep to find he had passed a little urine in bed—he wakes up in the act and says he has pain. During the following day he has a dull pain in the lumbar region, and he feels weak. After a sleep the next night he feels as well as usual. He has a large varicocele on the left side and the veins from the left calf to the groin are varicose. He is a total abstainer and smokes very moderately.

ANSWERS.

MEDICUS B.M.A. (who sends a cutting from the *Norwood Press*) and "Pilgrim" are reminded that no notice can be taken either by the Ethical Committee or the Editor of communications not authenticated by the writer's name.

LETTERS, NOTES, Etc.

The Treatment of Tuberculosis.

We have received from Dr. John McMullen, of Capetown, a communication in which he describes a method of treating phthisis which he has been led to adopt, and which he is anxious should be tried by those who have an opportunity of experimenting with animals on a large scale. When he can get a patient to acquiesce he draws off 2, 3, or 4 oz. of blood comparatively slowly from a vein in the arm, and at the same time injects a saline solution into the axilla. An immediate improvement is the result, and in four weeks he repeats the treatment, administering in the intervals a mild preparation of iron. This treatment is the outcome of clinical observations on his part, and of two cases in particular. One, a woman with advanced tuberculous pleurisy, recovered completely after a severe attack of malarial fever accompanied by high fever. The high fever, he believes, led to a great destruction of red corpuscles and a corresponding output of phagocytic leucocytes. In the other case a man suffering from a very advanced pulmonary phthisis recovered completely after a series of severe haemorrhages, probably because his blood-forming centres were stimulated to furnish leucocytes in abundance. He has also noted that after the menstrual period there is commonly an improvement, and that accidental loss of blood is also followed by amelioration of symptoms in phthisical persons.

His theoretic objective is to increase the patient's natural powers of overcoming his disease by augmenting the number of phagocytic leucocytes in his blood and keeping them in the highest state of fighting efficiency by lessening the normal labours they have to perform in the way of getting rid of effete red corpuscles. In support of the physiologic data upon which his treatment depends in theory he quotes from Quincke, Riegel and Boeckmann, Bizzozero and Salvioli, Hewson, His, and Jendrassik.

The Effect of Respiration on the Heart.

DR. J. REID (London, E.C.) writes: Although the observations of Müller and Valsalva on the effect of extreme expiration and inspiration on the muscular vessel are accepted, still most men have noted a regular heart with lungs riddled with abscesses and very little effective lung tissue left. Many have seen a lung collapse after injury to ribs, with haemorrhage from lung and stomach, and the heart beating regularly. Many theories—mechanical, etc.—look well on paper; but the factor irritability, so variable, is lost sight of. Students who have to cram for examinations rack their brains to grapple with conflicting theories. And to what end?

A Remarkable Speciality.

WE learn from the *St. Louis Medical Review* that in that city a physician's "sign" bears the legend, "Chronic Deceases a Specialty." Sudden death is still, we believe, not uncommon in some parts of the United States, but medical aid is not generally required to bring it about. The "chronic decease," however, is clearly a province of practice which offers considerable scope to medical skill. We are not aware whether this latest development of specialism has reached our comparatively unprogressive country.

Palpation of the Umbilical Cord in Utero.

DR. ALEX. MACLENNAN (Glasgow) writes: In the EPITOME of the issue of April 13th appears an extract on palpation of the umbilical cord *in utero*. The statement is made that the author of the original article "had never come across, in any classical textbook or treatise on obstetrics, a report of an instance where the umbilical cord was both to be seen and felt *in utero*." Regarding the seeing of the cord, he may be right, but it is nothing new to have palpated it *in utero* through the abdominal wall. Dakin (*Handbook of Midwifery*, 1897) and Kennedy (*Observations on Obstetric Auscultation*, 1833) both refer to this matter; and in my book, *Abdominal Manipulation* (Rebman, 1902) four references are made to actual palpation of the cord.

Christian Science.

Harper's Weekly tells the following story of a darkie in Mobile who recently became a convert to Christian Science. Meeting a friend in the street, the convert asked about the health of his aunt. "She's got de pleurisy pretty bad," was the answer. "You and she is both wrong," was the solemn assertion of the convert. "As a mattah of fact, she only thinks she got the pleurisy. Dere ain't no sich thing." Nothing further was said on the subject; but a few days after, the two again meeting, the convert repeated his inquiries touching the aunt's condition. "Does she still persist dat she's got de pleurisy?" "No, indeed," came the reply: "de poro woman now thinks dat she's dead. We berried her yisterday."

A CORRECTION.—The author of the article entitled Papain in Malignant Growths, published in the BRITISH MEDICAL JOURNAL of January 19th, p. 135, and attributed to Dr. C. W. Branch of St. Vincent, W.I., was that gentleman's father Dr. W. J. Branch of St. Kitts, W.I.

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Clinical Remarks
ON
THE OPERATIVE TREATMENT OF FRACTURES.

BY W. ARBUTHNOT LANE, M.S.,
SURGEON TO GUY'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN.

WHILE recent fractures of the femur can usually be readily and effectually dealt with by operation practically without risk, the surgical treatment of malunited fractures of this bone is often difficult in the extreme, and occasionally causes some anxiety because of the profuse haemorrhage which may take place in the course of the operative procedures which are necessary for the restoration of bone to its normal form, or as near to it as possible. In a recent fracture, unless the comminution is excessive, the accurate coaptation of the edges of the fragments can always be effected with time and patience. Even if there is much comminution after wiring loose fragments together, narrow steel plates perforated by a number of holes can be screwed on to the main fragments, forming a rigid metal splint which retains the axes of the fragments securely immobile in the same straight line, and to these plates as well as to the main fragments the smaller pieces can be firmly secured.



Fig. 1.—Left thigh, October 29th, 1906.

In the case, however, of a fracture of the femur in which the fragments have united in a bad position you have usually to overcome the shortening of all the soft parts which have accommodated their length to the altered condition of the femur. Therefore you must have a junction which will hold securely in spite of considerable strain exerted upon it.

In some cases you may attempt to do this by so cutting the fragments that they to some extent dovetail into one another, but this is rarely applicable to fractures of the junction of the upper with the middle third, where the resisting ties lie almost entirely internal to the bone. It is surprising how much the soft parts will stretch, and how little they form an obstacle to reduction if enough force is employed. I have never seen any trouble arising from such stretching, and do not hesitate to exert a force sufficient to bring it about. I mention this as the danger of doing this has been used as an argument against operation by surgeons of eminence.

The simplest mode of dealing with these fractures would seem to be by cutting the bone transversely. This, however, is not often the best way, for the reason that it is difficult to keep two transverse vertical surfaces immovably in apposition by any mechanism, and because a large proportion of the fractures are spiral or oblique. Consequently, unless a considerable length of the bone is sacrificed only a proportion of its circumference may be obtained in the transverse section, and a secure junction is not so certainly ensured. Generally speaking, I have found an oblique section the most economical from the point of view of shortening, and most useful in enabling the surgeon to retain the surfaces immovably and securely on one another by screws. Much care is requisite to determine accurately the plane in which each fragment must be divided if an accurate junction is to be obtained.

Perhaps I can best illustrate this by the description of such a case. On March 25th, 1906, while in Cabul, the patient fell 40 ft., fracturing the left thigh and sustaining other injuries. A Bryant's splint was employed in the treatment of the fracture. I saw him on October 29th, 1906, seven months after the injury. He was on crutches. The left thigh was very deformed, and the limb was 3½ in. shorter than its fellow. The leg below the seat of fracture was rotated outwards, so that the heel hitched behind the right leg and prevented the left leg being advanced in front of it. He was unable to bear any weight upon the left leg. The knee had become fixed.

The *x*-ray photograph as illustrated in Fig. 1 showed that, beside the deformity, there was some comminution of the upper fragment. It seemed advisable to reduce the existing considerable brawny oedema and induration of the soft parts of the thigh, and to obtain some movement in the knee-joint before an operation was performed; consequently he was massaged vigorously for several weeks.

On December 5th the seat of fracture was exposed, and the bones were sawn through in two oblique planes. Before making the sections it was necessary to shell off masses of bone which surrounded the seat of the fracture. Two stout steel plates were then screwed on to the opposing fragments so that some of the screws perforated the oblique faces, which they held securely together. They were arranged vertically, and corresponded in position to the antero-lateral and postero-lateral aspects of the shaft. He was placed in a double Thomas's splint, and his convalescence was uneventful.

Fig. 2 represents the condition of the femur at the end of February, when the shortening of the limb was 1 in.,

which was compensated for very comfortably by an elevator ½ in. in height. The femur was functionally perfect.

The next instance of malunion of the fragments of the femur to which I would call your attention is consequent on fracture through the epiphysial line of the head, or, as it is commonly called, separation of the upper epiphysis of the femur.

This fracture is very rarely recognized at the time the injury is sustained, for the reason that the soft blunt end of the fragment of the neck of the femur produces no great pain when the leg is moved, so much so that the patient will often walk about in comparative comfort with such a fracture, unconscious of having done other than strain the hip-joint somewhat.

The mobile head becomes displaced in the cavity, so that its convexity looks inwards, backwards, and downwards, while the stump of the neck ascends to a variable extent, retaining its contact with the anterior and upper portion of the surface of the epiphysial line. In proportion as the neck ascends, as the ilio-femoral ligament is relaxed, the femur rotates outwards and the stump of the neck projects forwards. This outward rotation is controlled solely by the resistance offered by the anterior ligament of the hip-joint. Secure union is effected by an abundant callus with great rapidity.



Fig. 2. Left thigh, February 19th, 1907.

The patient suffers from two disabilities — an excessive outward rotation of the lower limb and a limitation in the flexion of the hip-joint, in which rotation takes place around an altered axis, which passes through the displaced head of the bone and the rotated trochanter. The limitation in flexion is consequent on the forward projection of the stump of the neck of the femur which impacts upon the margin of the acetabulum before the bone has reached its normal range of flexion.

I many years ago showed that flexion of the hip-joint was limited by the impact of the front of the neck of the femur against the acetabular margin, and that the range of flexion varied directly with any associated abduction, and indirectly with any adduction.

Originally it was—and, I believe is still taught that flexion of the hip-joint is limited by the impact of the thigh against the abdominal wall, and, in consequence, the correct mechanics of fractures of the neck and dislocations of the head of the femur were wrongly described. The mode of production of these injuries is easily explained by the leverage action exerted by the femur in the manner indicated.

The normal situation of the areas of impact of the neck of the femur upon the acetabular margin are shown in a clear and unmistakable manner in the bones of labourers who carry heavy loads on their backs during the performance of which they lock the femur on the innominate bone in a position of flexion and adduction.

While I have never had an opportunity of treating a recent case of separation of the upper epiphysis of the femur I have operated on many such fractures united in a bad position in order to remedy the disabilities complained of, namely, the excessive outward rotation of the femoral shaft, the limited flexion and to some extent the alteration in the axis of rotation at the hip joint.

To do this the front of the capsule is exposed, and the anterior ligament cleared and defined. If the stump of the neck is excessively prominent, as it so usually is, enough is taken away from it to allow of a more or less complete range of flexion. The outward rotation of the shaft is overcome by lacing up the anterior ligament transversely to the length of its fibres by silver wire, so approximating its points of attachment till the range of rotation of the limb equals that of its fellow.

This restoration of the rotation of the leg to its normal relationship to the other also reduces the deviation from the normal of the axis of rotation in the hip-joint. Instead of a limb which because of its rotation is brought forward with great awkwardness in walking, and whose range of adduction and flexion is practically *nil*, the patient has one that only requires the compensation for a very small amount of shortening by an elevator to render his locomotion comfortable and easy, and the leg to all casual outward appearance normal in form and function.

As we are frequently asked for assistance in finding some place in which an idiot or mentally defective child can be placed and be morally trained and to a certain degree educated, attention may be directed to the Magdalen Hospital, Bath. This institution, devoted to the training of defective children, belongs to the Trustees of the Bath Municipal Charities, and now that certain structural alterations have been effected, it is, its medical officer considers, excellently suited to its purpose. Its site is on Combe Downs at an elevation of 600 ft. above sea level, facing south, and the grounds are sufficiently extensive for most of the work to be carried on out-of-doors. Children are admitted at any age from infancy to puberty, and trained on a modified kindergarten system, with results both physical and intellectual which the medical officer states fully justify the pains bestowed on the place.

Clinical Observations

ON

A CASE OF DIVERTICULUM OF THE OESOPHAGUS.*

BY BILTON POLLARD, F.R.C.S.,

SURGEON TO UNIVERSITY COLLEGE HOSPITAL.

GENTLEMEN,—I show you a specimen of a variety of diverticulum of the oesophagus—the so-called pressure pouch of the oesophagus—removed from a woman aged 45. The existence of the pouch was recognized five and a half years before it was removed, and during that period the progress of the case was observed. The pouch was large, its capacity being nine fluid ounces. Its position was accurately located and registered by radiography, and is shown in the accompanying skiagram. Its removal was very simple, and the patient made a quick and complete recovery.

The case is a typical instance of the most common form of diverticulum—that which gives rise to the most distressing symptoms, and that for which surgical intervention is most commonly required. It arises in the middle line posteriorly just at the junction of the pharynx and the oesophagus, at the weak spot left by the divergence of the longitudinal muscular fibres of the oesophagus. It may with equal propriety be spoken of as a diverticulum of the pharynx or of the oesophagus. The latter is, however, the best name, as there are other pouches, probably of embryonic origin, which are definitely connected with the pharynx.

History.

The patient was 45 years old at the time of the operation, which took place in December, 1904. She had always been delicate, and nearly every winter she had suffered from some chest complaint. She had had several more or less severe attacks of pneumonia and bronchitis, and she had had a severe attack of double pleurisy. In 1892 she began to suffer from asthma. The attacks were severe, and lasted till 1899, when they ceased. The strain of coughing is thought by some to be an important factor in the causation of these pouches. This patient had certainly been troubled by frequent attacks of coughing for several years preceding the onset of the symptoms due to the pouch, and their influence in causation cannot be denied, though there are other and possibly more important causes to which reference will be made later. In 1893, about eleven years before the operation, the patient noticed the first symptom which may now be attributed to the diverticulum. She had taken a pill, and the sensation of the pill having lodged in her throat continued, and the taste of the pill also remained till the next morning. After this the patient often noticed that pieces of food swallowed several hours before, in some cases a day or more before, returned to her mouth. For instance, she often noticed that pieces of coagulated white of egg were returned, though she had taken several meals in the interval, which had apparently been swallowed into the stomach normally. Here was a symptom which was quite inexplicable on any other theory than the presence of some pouch capable of interrupting food, and protecting it from the action of the gastric juice for a long period. This symptom, regurgitation of food, became more marked, and actual difficulty in deglutition was added to it.

When the diverticulum is small it may intercept the food first taken, whilst that taken later, when the pouch is filled, may pass quite normally into the stomach. There is thus established a condition resembling rumination, for the intercepted food may be returned to the mouth later on. But as time goes on, and the pouch gets more and more distended and heavy, it pulls on the pharynx, and appears to be the direct continuation of it; whilst the distended pouch presses on the oesophagus and the lower margin of the opening into the pouch falls against the anterior wall of the oesophagus and blocks the entrance into the oesophagus like a valve. In 1897 the case was diagnosed as one of "loss of power of the gullet," the condition having been mistaken apparently for the incurable one known as idiopathic dilatation of the oesophagus. About this time, that is to say, about four years after the onset of the symptoms, a very trying and characteristic symptom developed. About an hour after going to bed the patient was awakened by irritation in her throat which induced incessant and violent coughing; the attacks of coughing were repeated several times during the night, but during the day she was rarely, if ever, troubled by them. During each night she expectorated or regurgitated about a pint of frothy mucus. This is a common symptom, and patients soon learn the necessity for emptying the pouch and washing it out by repeated drinks and regurgitations before going to bed. The saliva and mucus is swallowed and it collects in the pouch. In the recumbent position the contents of the pouch overflow into the larynx and set up the fits of coughing, and, indeed, the irritation of this overflow secretion may set up chronic laryngitis. Some patients find that if they stoop well forwards the contents of the pouch will run out

In April, 1899, the patient first consulted me in regard to nasal polypi, to which her asthmatic attacks were attributed. I removed the polypi, and the attacks of asthma ceased. At the same time the patient told me of her other symptoms, from which it was evident that she had a diverticulum of the oesophagus. The question of its removal was discussed, but the patient decided that her chief trouble was asthma, and that the symptoms attributed to the pouch were not sufficiently distressing to necessitate its removal at that time.

The diagnosis was at once suggested by the symptoms, and was supported by examination with bougies. A medium sized oesophageal bougie was at once passed into the stomach. It went down with the greatest ease, and was not gripped at all; but subsequent attempts to pass bougies of larger size failed, as also did the attempts to pass smaller ones, or even the one originally employed. It was clear that there was no stricture as a medium-sized bougie had been passed so readily. The only explanation seemed to be that the bougies passed into the diverticulum. It has sometimes been found that by varying the position of the patient's head and neck, turning it to one side or the other or backwards or forwards, the bougie could be passed. But in this case it was not possible to coax it down by any manœuvre. It was always arrested at a distance of 7 in. from the teeth. On two subsequent occasions the whole series of oesophageal bougies were passed with the greatest ease, and so the absence of oesophageal stricture was definitely determined.

I next saw the patient about two years later—February, 1901. The symptoms had been getting gradually worse; deglutition was more difficult; some fullness was observable at the root of the neck, particularly on the left side, and pressure at this spot occasionally caused gurgling. About this time the patient consulted Mr. Tilley on account of laryngeal catarrh. Mr. Tilley advised the patient to consult Mr. Butlin, who confirmed the diagnosis of oesophageal pouch and advised its removal. During the three succeeding years the symptoms became much aggravated, and the patient had to spend the greater part of the day in endeavours to get enough food into the stomach to maintain life. She ate her meals with a basin by her side, and into it she was continually returning the food which she had taken and had failed to swallow into her stomach. Then she started again and took more, but only to bring it back again. She was steadily getting thinner. When she first consulted me in the early part of 1899 she weighed 7 st., but when towards the end of 1904 she consulted me for the third time her weight had fallen to 5 st. 13 lb. The difficulty in getting food beyond the pouch was then extreme. She could drink from 8 to 10 oz. of milk at a time, but not more than 1 oz. of this got into the stomach; the rest passed into the pouch, distending it and causing fullness of the lower part of the neck and pain in that situation and behind the sternum, until by straining and squeezing the lower part of her neck with her hands she succeeded in emptying the pouch. She never had much difficulty in emptying the pouch, and there was never the slightest evidence of digestion or of decomposition of the regurgitated food. It always came back in exactly the same condition as it had been swallowed. By forced attempts at expiration, with closed

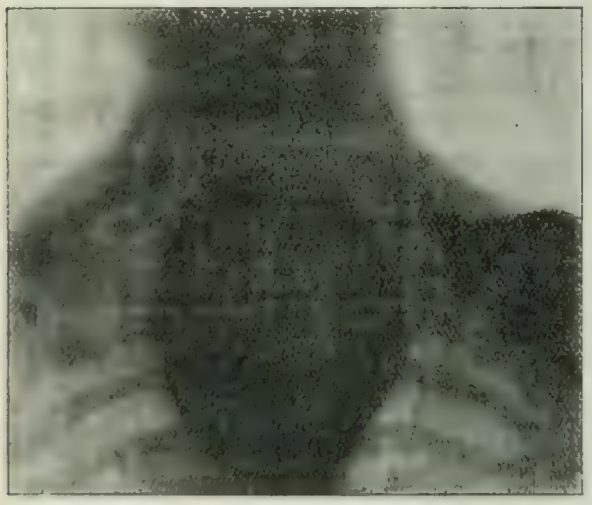
* Part of a clinical lecture on Diverticula of the Pharynx and Oesophagus delivered at University College Hospital.

mouth and nostrils held, the patient was readily able to distend the lower part of her neck, which was thereby rendered tympanitic on percussion.

It was still impossible to pass bougies into the stomach. They were now arrested at a distance of 9¾ in. from the gums. In April, 1899, the bougies were arrested at a distance of 7 in. from the gums; in November, 1904, they could be passed 2¾ in. further. The length of the pouch had greatly increased during the interval of five and a half years.

In order to gain the most accurate idea of the size and position of the pouch I had a radiograph taken of the lower part of the neck and the upper part of the thorax after the patient had filled up the pouch with half a pint of gruel, in which were suspended 2 drachms of oxide of bismuth. The radiograph, which was taken by Mr. Worrall, is excellent, and the accompanying illustration is a reduced copy of it. The plate was held against the patient's back, so that the interval between it and the pouch might be as small as possible. The position and relative size of the pouch is well shown. It extends down into the thorax and reaches well beyond the arch of the aorta, indeed to beyond the sixth rib near the spine. After the radiographic exposure had been made the patient regurgitated 9 oz. of the gruel which she had swallowed.

After struggling against her malady for eleven years, and steadily losing ground all the time, the patient



determined to face the risks of the operation, as she was convinced that she could not live much longer in the condition to which she had been reduced.

Operation.

The operation was performed on December 2nd, 1904. For two days before the operation the patient only took sterilized food, and she frequently washed out the pouch, first with saline solution, and then with boric acid lotion. The operation itself was an extremely simple one. An incision was made along the anterior border of the sterno-mastoid muscle from the sternum to the level of the hyoid bone. The anterior belly of the omohyoid muscle and the superior thyroid artery were divided, thus exposing the carotid sheath freely. The pretracheal layer of the deep cervical fascia was divided as it passes from the carotid sheath to the thyroid body, the larynx and trachea were rotated to the right by traction on the posterior border of the left ala of the thyroid cartilage. The pouch was at once found lying behind the oesophagus, and apparently in direct continuity with the pharynx. It was lying in loose connective tissue, and was easily isolated and hauled up from the posterior mediastinum, and brought out through the wound, whence it projected like a partially-distended balloon, swelling out during expiration and partially collapsing during inspiration. Its average size was about that of an ordinary tumbler with a narrow mouth. The circumference of its neck measured about 4¾ to 5 in. at its attachment to the pharynx and oesophagus. The pouch was attached at the usual position in the middle line just below the inferior constrictor muscle. Its neck was bounded above by the lower border of the muscle just mentioned and on either side by the diverging longitudinal muscular fibres of the oesophagus. It was itself devoid of a muscular covering and consisted of mucous membrane and submucous tissue only. The cause of the difficulty in deglutition was very evident. The pouch with its wide mouth was the direct prolongation downwards of the pharynx, whilst the oesophagus opened into it in front by a narrow mouth. The pouch was divided at its neck and removed. On passing the forefinger into the oesophagus a resistance was encountered at its commencement. There was no stricture in the ordinary sense and the mucous membrane appeared quite normal. But, nevertheless, the commencement of the oesophagus was firm, not dilatable, and would only admit the first phalanx of the forefinger. Immediately above the resistant ring at the upper end of the oesophagus was the weak point in the middle line behind, at which the pouch had been developed. To the combined effect of these two conditions the origin of the pouch may be attributed. A large bolus, either solid or fluid, meeting with a little resistance at the entrance to the oesophagus, would exert pressure on the weak place at the junction of the pharynx with the oesophagus.

To resume the description of the operation, the opening left by the excision of the pouch was closed by three layers of continuous sutures. The first involved the mucous membrane alone, the second the muscle alone, and the third the outer fibrous layer, together with some of the muscular coat. The last row of sutures were inserted after the manner of Lembert's intestinal sutures. The greater part of the skin wound was closed. Two pieces of gauze were inserted for drainage, one being passed into the posterior mediastinum and the other down to the neighbourhood of the sutured oesophagus.

After-History.

Rectal feeding was commenced at once after the operation. But the patient was not restricted to rectal feeding. It had been intended to feed her through a small rubber tube, which had been passed from the mouth into the stomach at the operation, but the patient vomited this tube six hours after the operation. No attempt was made to replace it. It was decided that it would be no more harmful for her to swallow little sips of milk than to swallow her saliva, which she was continually doing. No leakage from the oesophagus into the wound occurred, and so more liberal drinks were allowed and the intervals increased. By the sixth day after the operation the patient was taking soft solid food, such as pounded fish or breadcrumbs in milk and custard. On the sixteenth day after the operation the patient was taking ordinary diet.

The dressing was changed daily, and on the second day and daily afterwards the gauze drains were changed. They were finally left out on the ninth day after the operation.

On the day after the operation an attack of right basic pneumonia commenced. The crisis occurred on the eighth day, and afterwards the patient's temperature continued normal and she made rapid progress. She left the nursing home three weeks after the operation. I saw her again five months later. She was still quite well. She could swallow anything, she had put on flesh, and indeed weighed 3 lb. more than she did before the onset of her troubles eleven years previously. The patient was last heard of about two years after the operation. She was quite well and free from any difficulty in deglutition.

THE late Mr. William Whiteley left £2,000 to St. Mary's Hospital, £1,000 to the London Fever Hospital, £500 each to the Children's Hospital, Paddington Green the Cancer Hospital, the Middlesex Hospital, the West London Hospital, and the Chelsea Hospital; and £100 each to the Royal Hospital, Richmond, and Hayes Cottage Hospital, Middlesex.

DR. JULIUS ARNOLD, Professor of Morbid Anatomy and General Pathology, and Dr. Wilhelm Erb, Professor of Internal Medicine in the University of Heidelberg, have retired from the active duties of their chairs. On both of them the German Emperor has conferred the honour of an Active Privy Councillorship with the title of Excellency.

The Oliver-Sharpey Lectures

ON

NEW FACTS IN RELATION TO THE PROCESSES OF

NERVOUS DEGENERATION AND REGENERATION.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS, LONDON, APRIL 29TH AND 30TH,

BY W. D. HALLIBURTON, M.D., LL.D., F.R.S., F.R.C.P.,

PROFESSOR OF PHYSIOLOGY, KING'S COLLEGE, LONDON.

LECTURE I.

NERVOUS DEGENERATION.

MR. PRESIDENT AND FELLOWS,—I have first to thank the College for the honour conferred upon me, in selecting me as the Oliver-Sharpey lecturer for the present year. The College has always recognized from the days of Harvey onwards, that scientific medicine must be grounded on physiological knowledge. The founder of this lectureship has exemplified this precept in his own lifework, and Sharpey, the great master whom the lectureship commemorates, always recognized the importance of physiology as the Institutes of Medicine.

Many years ago, when I was a first year's student at University College, I remember Sharpey's commanding figure; for, though he had then relinquished his professorship, he continued to haunt the laboratory which had been the scene of his teaching and of his investigations. I well recollect the sad day on which his remains started from the precincts of University College to their last resting place. His name still lives not only in the memory of those whom he inspired, but will be remembered in relation to his discoveries, and is commemorated at his College by the foundation of the Sharpey Scholarship.

Being myself one of the early Sharpey scholars, the invitation to deliver these lectures was one which was especially acceptable, and I can only trust that what I have to say will be considered worthy both of the great memory to which I have alluded, as well as of the high traditions of this College.

In the days of Harvey the subject of physiological chemistry, chemical physiology or bio-chemistry, as some prefer to term it, did not exist. The late Sir Michael Foster in his *History of Physiology*, when speaking of Vesalius, said: "The great anatomist would no doubt have made use of his bitterest sarcasms had some one assured him that the fantastic school which was busy with occult secrets, and had hopes of turning dross into gold, would one day join hands in the investigation of the problems of life with the exact and clear anatomy so dear to him." Almost the same words might be used in reference to Harvey's attitude. The scientific men of his time paid no heed to chemical learning; they ignored or even despised the beginnings of that branch of knowledge which in later years was to become one of the foundations of physiology, and the mainstay of the art of medicine.

It was the work of Lavoisier in France, of Mulder in Holland, and of Liebig in Germany, that first placed bio-chemistry on a sure basis, but even in Sharpey's time the disciples of this branch of science might have been counted on the fingers of one hand. Sharpey himself retained to the end the anatomical conception of physiological advance. How different things are to-day; how great have been the strides made in chemical physiology and in its sister science, chemical pathology, can be realized by even a superficial survey of modern medical literature.

A few years ago, when I had the honour of delivering before this College the Croonian lectures, I selected as my subject the chemical side of nervous activity, in which I hope I was successful in showing how chemistry has invaded even the difficult country we call the nervous system. I then indicated that although some progress had been made, even in the practical applications of that knowledge, much still remained to be done. The same is true to-day, but in the few years that have elapsed since I uttered these words a little progress has been made, and it is to some of this new work that I propose to devote the present lectures. One great charm of physiology to the investigator is that fresh facts are always being discovered, and new light is thus shed on the problems of living matter. In so far as I myself have had any small share in such work, my energies have been mainly directed into a bio-chemical groove, and it is one of these questions—nerve degeneration—to which I shall devote the first of the two lectures. But bio-chemistry is not a narrow specialism, and research on such lines usually branches out in many directions; this will be illustrated by the circumstance that for the subject of my second lecture I shall take that of nerve regeneration, in which at present there is but little to be said from the chemical point of view.

In relation to both of these subjects, it would have been impossible to have spoken at all if it were not for the assistance of certain of my colleagues. Among these I would particularly mention Dr. Mott, to whose loyal co-operation and helpful advice I owe so much. Mr. Arthur Edmunds, Dr. Rosenheim, and Miss Tebb are others to whom both Mott and myself are indebted for great assistance in several portions of our conjoint work.

One more word of introduction, and only one, before I pass to the subject proper of my first lecture. It is impossible in our present state of knowledge to avoid controversial questions. I have to-day to deal with one and to-morrow with another. Polemics are always distasteful to me, and I trust I may deal with both without a single note of personal feeling. The proverbial disagreement among doctors is especially true of physiologists; and this is really as it ought to be. Whilst knowledge is in the making there must be divergencies of opinion, and it is only by a full and free discussion of these, and by the renewed research of which criticism is the stimulus that any certainty in the way of truth can be arrived at.

NERVE DEGENERATION.

It is more than fifty years ago that the elder Waller described the degeneration that occurs in nerve fibres which are cut off from the cells of which they are outgrowths. So complete and exact was his description of this phenomenon, now known as Wallerian degeneration, that in the intervening years but little has been added from the anatomical and histological standpoint to what he taught. But in order to understand completely the chemical transformations which lead to these anatomical appearances, it is first necessary to know the chemical composition of the healthy nervous structures involved. It is just at this fundamental point that we meet with a great hiatus in knowledge. We know something of (because we can easily estimate it) the proportions between water and solids in the various districts of the nervous system; we know, further, that among the solids protein matter, and especially nucleo-protein, largely predominates, particularly in grey matter; but it is in relation to the phosphorized fatty constituents, the presence of which forms such a striking characteristic of all nervous material, that our ignorance is greatest. Thudichum did yeoman service in his attempts to unravel this problem, and the value of his investigations is only just beginning to be appreciated. His work is marred, it is true, by too hasty generalizations, and by such faults as are always seen in a new endeavour—faults which subsequent observers should be grateful for, as they profit by them and avoid them. No one who has not attempted to work at the chemistry of the brain can imagine the difficulties that meet one at every turn. In America Waldemar Koch, and Gies may be mentioned among those who have had the courage to enter this thorny field, and in my own laboratory Dr. Rosenheim and Miss Tebb are prosecuting similar researches. The phosphorized fats are not the only complex substances which are present. The crystalline monatomic alcohol called cholesterin is present in a free condition in considerable amount; this cannot be devoid of physiological moment, and yet absolutely nothing is known either of its mode of origin, its destination, or its function. Then there are complex nitrogenous glucosides, called the cerebrins or cerebrosides; here, again, although some of them have been separated in a fairly pure condition, analysed, and labelled

with fantastic names, we have no certain knowledge either of their constitution or of their use. One notes with some regret the final disappearance of the substance originally termed "protagon" by Liebreich. This is one of the few materials that can be obtained in a crystalline form from nervous structures by cooling a warm alcoholic extract of brain, for instance. It has passed through many vicissitudes, being alternately regarded as a mixture and as a chemical individual. The work of Gies in New York, and of the workers in my laboratory have, however, finally demonstrated that it has no independent existence.

It will, however, be beside my purpose to dwell too long on the lack of the knowledge we hope to obtain some day, or to go any more fully into incomplete researches now in progress. When the day arrives of perfect knowledge in such matters there may be a very different story to tell. We must, however, take things as they are, and at any rate I think we are pretty safe in taking lecithin as a type of the phosphorized fats, and we are acquainted both with its composition and with the products of its decomposition. It is present in considerable amounts in nervous tissues, and it is owing to its presence that the black staining with osmic acid of the fatty sheath of nerve fibres is mainly due. The use of osmic acid as a reagent for the detection of fat depends on the presence in the fat of oleic acid and its compounds. Oleic acid is the only representative of the acrylic series of fatty acids found in the body, and all the acids of this unsaturated series possess the power of taking oxygen from osmic acid — osmium tetroxide — and so reducing it to the condition of a lower oxide which has a black colour. Fats which are compounds of acids of the acetic series — such as palmitin and stearin—do not give the reaction.

When Wallerian degeneration occurs the degenerated fatty sheath is stained much more readily with osmic acid than the healthy medullary sheath. It will strike the black colour with osmic acid even in the presence of chromic salts, and it is this circumstance that has led to the adoption of a mixture of the two acids, known as Marchi's reagent, for the detection of degenerated fibres. The intense black staining which the degenerated myelin gives is due either to an increase of the osmic acid radical or more probably to a loosening of its combination with other atomic groups, so that it is able to exert its reducing action more forcibly.

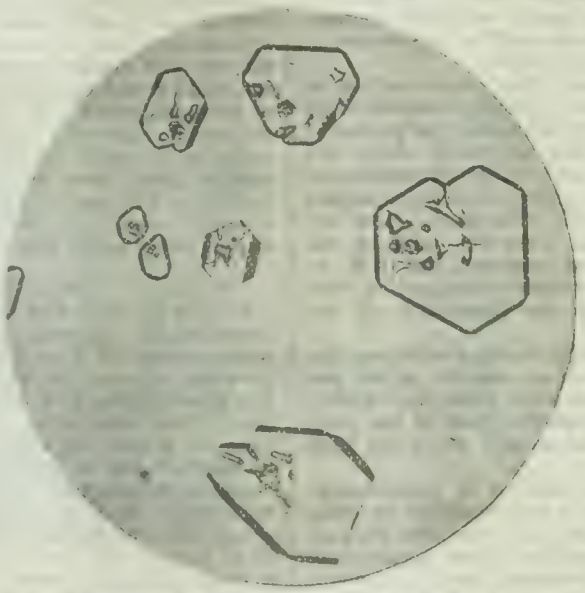
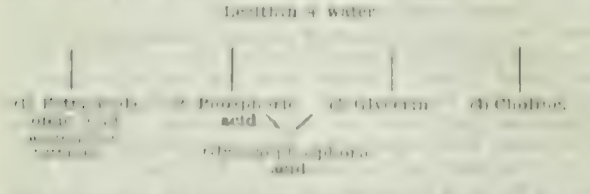


Fig. 1.—Crystals of platino-chlorides of choline and platino-chloride of potassium, on the same slide. From a photograph by Otto Rosenheim.)

Lecithin is a fat which yields on hydrolytic decomposition four groups of materials. They may be represented in the following simple way;



An ordinary fat yields only two—namely, fatty acid and glycerin. The phosphoric acid obtained contains all the phosphorus of the original lecithin, and unites with glycerin to form glycero-phosphoric acid. The fourth decomposition product—choline—is an ammonium-like base, and contains all the nitrogen of the lecithin. I dealt with these points more fully in my Croonian lectures, but it may be necessary to remind my hearers of these main facts in order to pave the way to what we are coming. I would further remind you that Mott and I showed that in degenerative diseases of the nervous system, as well as in the degeneration artificially produced in animals by the cutting of nerves, the products of degeneration pass into the circulating fluids, and can be detected there. We further showed that in a certain stage of the degenerative process in a nerve all traces of phosphorized fat disappear, and the fat or fatty acid which is absorbed more slowly remains in the nerve sheath for a considerable time, and while it is present it continues to give the Marchi reaction.

THE DETECTION OF CHOLINE.

In our work we laid special stress on the importance of the discovery of choline in the blood and cerebro-spinal fluid. If this is found, there is available a definite proof of the breakdown of nervous tissues. We further indicated that the detection of choline in such situations might be of practical service in diagnosing organic nervous diseases, for functional disturbances are often difficult to distinguish from these by the observance of mere symptoms. This discovery has been confirmed by numerous subsequent observers, and the expectation that the test would be diagnostically useful has also been fulfilled.* On the other hand, our methods for the detection of choline have been subjected to criticism, and it has been this criticism which has stimulated us to further work on the subject, and has led us to modify the tests we previously published, and also to rectify some of our conclusions.

As the invention of the choline test has been hitherto the main practical outcome of our work from the clinical point of view, I take this opportunity, when I am addressing physicians, of amplifying this part of my subject by mentioning the main objections that have been raised to our work, the further examination to which we have in consequence subjected our methods, and the present conclusions at which we have arrived. I think you will find that we have succeeded in confirming all our main previous statements, and what is more important, rendering the means of detecting choline absolutely trustworthy.

The tests for choline which Mott and I chiefly dealt with were two in number. The cerebro-spinal fluid or the blood was first extracted with absolute alcohol; the alcoholic extract was evaporated to dryness, and the residue again taken up with alcohol, and this operation was repeated several times in order to avoid any contamination with potassium salts. We imagined at the time that potassium salts were quite insoluble in absolute alcohol. The final residue was dissolved in alcohol again, and an alcoholic solution of platinum chloride added; the yellow precipitate so produced was washed with alcohol by decantation, and finally dissolved in 15 per cent. alcohol; on evaporation of this at a fairly low temperature, yellow crystals, prisms, and octahedra separated out, and these consist of the double chloride of choline and platinum. The same test with slight modifications was also adopted by Donath in Germany, who was one of numerous others to confirm our results.*

The second test was a physiological one. It consisted in taking the final residue after alcoholic extraction, and dissolving it in salt solution. When this solution is injected into the blood stream of anæsthetized animals it produces a temporary fall of arterial blood pressure; if,

* Donath's statement that choline is similarly also found in the fluids of epileptics requires confirmation. If the diagnosis of epilepsy in these cases was correct, and the existence of choline is confirmed, it appears necessary to remove epilepsy from the list of functional diseases.

however, the animal has been previously poisoned with atropine, the fall is either absent or replaced by a rise. This action is characteristic of choline, and is quite different from the effect produced by the substances most likely to be confused with choline, which are the chlorides of ammonium and of potassium. It is, however, a test which is not available for ordinary clinical use, and so special interest attaches to the chemical test which can be obtained with smaller quantities either of the cerebro-spinal fluid or of the blood.

It is the chemical test which has been mainly the cause of the criticisms to which I have alluded. Some of our critics seem to have thought that we had been content to diagnose the crystals of the choline platinum compound by mere inspection, which is usually a fallacious method of identifying any crystalline substance. If our original papers are consulted, it will be seen that this is not the case; in some cases where we were successful in obtaining a large supply of material, we examined other properties of these crystals (their solubilities, the amount of platinum in them, etc.), and, moreover, found that in heating they gave out the odour of trimethylamine; and we further supported our statement that choline was present by performing other tests in addition.

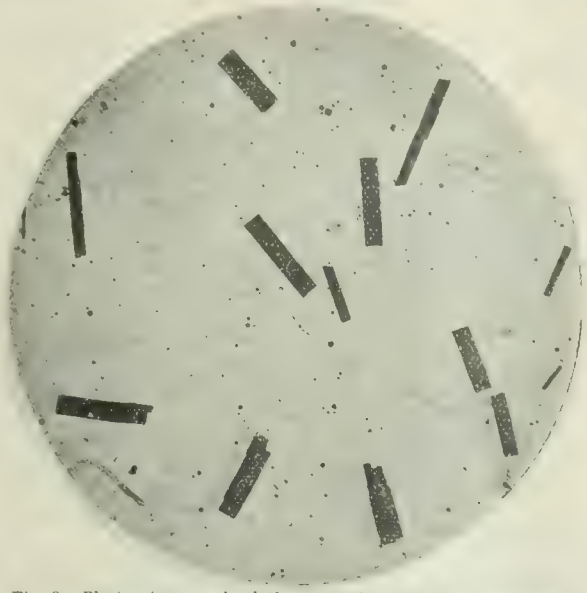


Fig. 2.—Photomicrograph of the crystals of choline periodide. (O. Rosenheim.)

Some critics—for instance, Vincent and Cramer—regarded our contentions as "*a priori* improbable" and "scarcely conceivable," but they did not examine either pathological blood or cerebro-spinal fluid in order to determine whether the facts as we had stated them were correct or not.

The first serious piece of criticism came from Guy's Hospital. Allen and French pointed out that the treatment with absolute alcohol did not get rid of potassium salts entirely; and as the platino-chloride of potassium is exactly similar in form to that of choline platino-chloride inspection of crystals obtained by our method was insufficient to distinguish them. Inspection of crystals is usually the only test which a clinical observer has time for; and if the amount of material is small it is probably the only available test. On account of this uncertainty, Allen and French abandoned the platinum test entirely, and adopted instead a modification of the iodine test for choline in which there is no risk of such confusion. By the help of this reaction, Allen subsequently confirmed our statements concerning the presence of choline in the blood of patients suffering from acute degeneration of nervous structures.

The accompanying drawing from a photograph (Fig. 1) will illustrate the impossibility of identifying the two platino-chlorides in question by their crystalline form. At this lapse of time I cannot remember which of the crystals are those composed of the choline and which of the potassium compound. They are quite indistinguishable by mere inspection; but they can be distinguished, as I shall presently show, and were actually distinguished in the specimen from which the photograph was made.

Shortly after Allen and French published their observations, a paper by Mansfeld appeared in one of the German journals criticising Donath's results on much the same lines. I thought, therefore, it was high time for us to take up the matter once more, and I therefore placed it in the hands of Dr. Otto Rosenheim, whose knowledge of chemistry and chemical technique is much superior to my own, and he carried out the research in my laboratory. In the course of his work he came to the conclusion that the solubilities of potassium and ammonium salts in absolute alcohol and of their platino-chlorides in 15 per cent. alcohol, though small, were nevertheless such as to make a contamination of the final choline platino-chloride, with platino-chlorides of potassium or ammonium, a possible source of error. It was therefore necessary to search for other tests for choline which are not given by these inorganic salts.

As an outcome of his work he discovered three such tests, but I shall be content here with describing one only, since it is simple and easily applied, and, moreover, is absolutely decisive. Like Allen's, it is a modification of the iodine test, and it is performed in the following way: A strong solution of iodine in potassium iodide is added to a preparation of the choline platinum chloride crystals; these then alter in a characteristic way, and the change may be watched with the microscope. In the course of a minute or so the yellow crystals as shown in Fig. 1 disappear, and their place is taken by dark-brown plates and prisms in large quantities. They show marked dichroism, they are doubly refracting, and have a superficial resemblance to the well-known haemin crystals. Their appearance is depicted in Fig. 2. They are composed of a periodide of choline ($C_5H_{14}NOI.I_8$), but are extremely unstable, and if the slide is allowed to stand, so that the liquid gradually evaporates, the crystals begin to disappear, and their place is taken by brown oily droplets, or sometimes clear spaces showing the skeletons of the crystals are seen. This indicates the formation of a lower iodide, and the appearance is depicted in the next figure (Fig. 3). If now a fresh drop of the iodine solution is added, the crystals gradually form once more, and their formation and disappearance can be watched repeatedly.

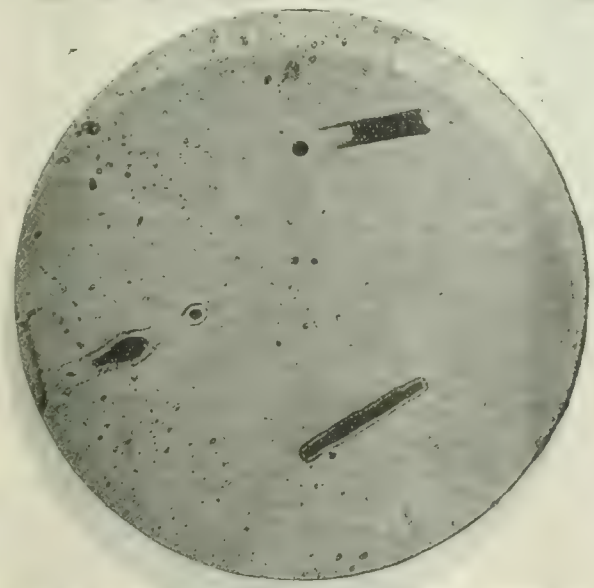


Fig. 3.—This shows the disintegration and the formation of oily droplets which occurs when the choline periodide is exposed to the air. (From a photograph by O. Rosenheim.)

If platino-chlorides of potassium or ammonium are present on the same slide, they remain unchanged under the action of the iodine solution.

It was possible by this simple test to detect choline in 20 c.cm. of blood when choline had been added in the pro-

portion 1 to 20,000. When 5 c.cm. of blood containing choline in the proportion 1 to 2,000 were used, the whole field was covered with crystals, which could be seen with the naked eye.

In the same number of the *Journal of Physiology* in which Rosenheim published these interesting and striking results, Donath answered his critics by publishing another distinctive character of the crystals of the platino-chloride of choline. They are doubly refracting, and so appear bright in the dark field of the polarizing microscope, and show changes in illumination when they are rotated in the field. In this way every microscopic fragment of the choline platino-chloride is rendered visible which by ordinary microscopic methods might escape detection owing to their transparency. The platino-chlorides of potassium and ammonium do not exhibit this phenomenon. Donath puts his case very well when he says:

"The occurrence of inorganic chlorides which have hitherto interfered with the testing for choline by the platinum reaction on account of their slight solubility in absolute alcohol, is a circumstance which has lost its terrors, so much so that an actual addition of potassium-chloride has become part of my method, and causes no difficulty when the polarization test is applied."

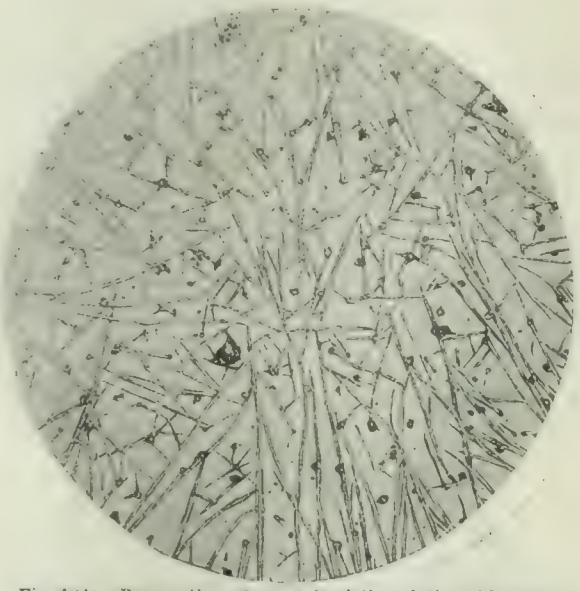


Fig. 4 (A).—Preparation of crystals of the platino-chlorides of choline (needles) and of potassium (octahedra) obtained from a specimen of cerebro-spinal fluid from a case of general paralysis of the insane. (O. Rosenheim.)

He then proceeds to give a list of cases where he has examined the cerebro-spinal fluid removed by lumbar puncture from patients suffering from various nervous diseases, and illustrates his results by a series of photo-micrographs showing the crystals under various positions in the field of the polarizing microscope.

Dr. Rosenheim has confirmed these statements, and the next figure illustrates the appearances observed.

In Fig. 4 (A) the crystals of the platino-chloride of choline are seen as separated from an actual case of pathological cerebro-spinal fluid. In this case they were crystallized from an aqueous solution, and have taken the needle like form they usually exhibit when crystallized in this way. Mixed with them are seen a number of small octahedra of the platino-chloride of potassium. Fig. 4 (B) shows the same preparation under polarized light; the crystals of the choline salt show up as bright needles, but the crystals of the potassium salt have disappeared from view. The crystals of the choline salt in this case further gave Rosenheim's new iodine reaction.

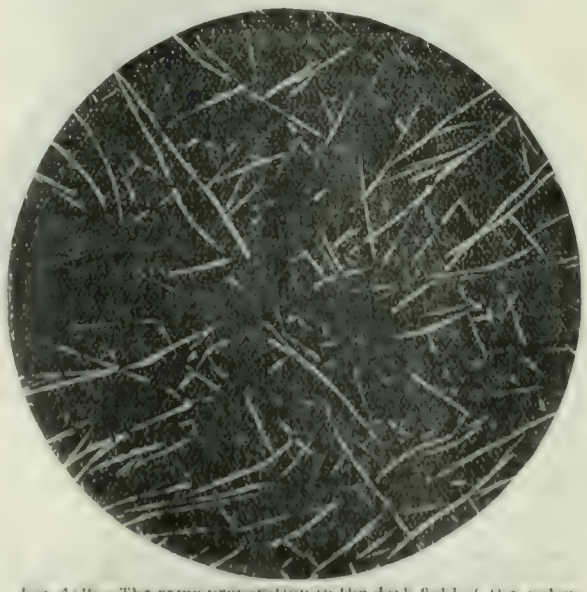


Fig. 4 (B).—The same preparation in the dark field of the polarizing microscope: the crystals of the choline salt are bright, but the crystals of the potassium salt have become invisible. (O. Rosenheim.)

In some cases Rosenheim made out another fact which is not devoid of significance. If he obtains from cerebro-spinal fluid which contains choline a slide of the crystals of the mixed platino-chlorides, and places it under the field of the polarizing microscope, the inorganic platino-chlorides exhibit no double refraction, but a large proportion of the crystals present show the phenomenon. If he then subjects the same slide to his iodine test many of the doubly refracting crystals are transformed into the brown crystals of the periodide of choline, but some remain unaltered, and others yield crystals of different form from the choline periodide.

In other words, some of the doubly refracting crystals are not choline compounds, but probably crystals of other organic platino-chlorides. This is only what one would expect. Mott and I were always from the first careful to point out that choline is not the only product of nervous breakdown; the complex chemical structure of nervous material to which I have alluded in some of the earlier passages of this lecture would lead one to suppose that the cleavage products which are liberated during the degenerative process would be exceedingly numerous. We called attention, among other points, to the great increase of the nucleo-protein which passes into the cerebro-spinal fluid in such circumstances. The importance of the detection of choline arises because it is at present the only one of these numerous substances which has been identified with certainty, and which can be detected with comparative ease. Its presence indicates the breakdown of one of the best known of the constituents of nervous matter (lecithin), but suggests that it must be accompanied by the presence of numerous other similar and even dissimilar compounds.

During the last year Dr. Mott has sent from Claybury Asylum a great number of specimens of cerebro-spinal fluid to Dr. Rosenheim, and the latter has subjected them to his new tests. The number of specimens of blood similarly sent has been small, and hitherto choline has only been detected in one of these; they were in the main from cases where choline would hardly be expected to occur, for, as Mott pointed out, active degeneration must be recent for the test to be a decisive one.

But the examination of the cerebro-spinal fluids have been fully satisfactory, and a sufficient number of positive results have been obtained to corroborate the views of Mott and myself. I do not propose to anticipate any further Dr. Rosenheim's full paper on the subject, except to say that it has ultimately been found better to shorten the procedure of testing by applying the iodine reaction direct to the alcoholic extract of the fluid. There is no necessity to prepare the platino-chloride first and apply the iodine test to those crystals. It was found that some of the other bases already referred to, the identity of which is still uncertain, often by their presence interfere with the iodine reaction when it is applied to the mixtures

of the crystalline platino-chlorides. This is an additional reason for using the test in the direct manner.

I had, happily, kept a considerable number of the preparations of crystals which Mott and I had made years ago, and from which we drew our previous conclusions. On examining these afresh by the new means of identification we now possess, I have found that without doubt they do not consist wholly of the choline compound, but contain a considerable admixture of inorganic platino-chlorides, especially the platino-chloride of potassium.

We, however, still hold that the obtaining of a large crop of crystals, whether they be those of the choline salt or a mixture of the potassium and choline salts, is diagnostic of extensive breakdown in nervous tissues. The contrast between such cases and the insignificant yield from normal blood is most striking. This is quite intelligible when we take into account the very high percentage of potassium that nervous tissues contain. This has been amply demonstrated by the microchemical work of Macallum and of Macdonald. The rôle which Macdonald assigns to the potassium salts in nervous phenomena it is unnecessary to discuss here, interesting and important as his views are.

This has suggested to us a new piece of work which has only just been started—namely, the actual estimation of the potassium in the cerebro-spinal fluid and blood in cases of acute degenerative diseases of the nervous system in comparison with the normal. I am sorry I cannot at present give any final figures, but, so far as the preliminary work goes, it indicates a considerable increase of the potassium in those cases where disintegration has occurred, and where choline is also discoverable.

THE PHYSIOLOGICAL TEST FOR CHOLINE.

I have devoted so much time to the chemical test for choline because that is the one so obviously suitable for clinical work. The physiological effect on the blood pressure that choline exercises is, however, not devoid of interest, and a brief mention of some recent work in this direction will conclude what I have to say. Swale Vincent, in his earlier work on the physiological action of extracts of nervous tissues, found that the intravascular injection of such extracts caused in anaesthetized animals a considerable fall of blood pressure. I had simultaneously published similar results, and attributed the fall to the presence of choline. Vincent, however, denied that choline was present. He subsequently, with Cramer, amended this statement, but was of opinion that the choline present was in the form of dicholine anhydride. The existence of this compound is very problematical, and the analytical evidence presented is not very convincing; still the suggestion that compounds or modifications of choline may exist is not devoid of interest. Vincent and Cramer also found what I had missed—namely, that there are other substances present in such extracts which are readily soluble in ether, and which produce a much more powerful depressor effect on the blood pressure than choline, and that in the case of such substances the depressor effect is not abolished by atropinization. The identification of these other materials was not attempted. It is quite possible that these substances are absolutely distinct from choline; and, on the other hand, the view is permissible that they are choline derivatives. This second view gains point from a study of some experiments which Reid Hunt and Taveau brought forward at the meeting of the British Medical Association in Toronto last year.

Dr. Hunt is one of numerous American pathologists who have repeated and confirmed the original statements of Mott and myself, and has thrown himself into the choline controversy with characteristic transatlantic enthusiasm. He has prepared and studied the physiological action of as many as 19 compounds of choline, and suggests the possibility that some of these may be formed in the body. Some of them are more and others less active than choline itself; the most powerful is acetyl-choline; this is one hundred times more active in producing a fall of blood pressure than adrenaline is in producing a rise; the injection of a few cubic centimetres of a solution containing it, diluted with one hundred million times its volume of water, produces a distinct effect in a rabbit. The action of acetyl-choline is not annulled by atropine, and it is capable of overcoming the effect of adrenaline. On the other hand, some of the choline derivatives examined were less powerful than choline itself; the introduction of a phenyl group, for instance, diminishes its depressor effect.

As an outcome of his work, Dr. Reid Hunt recommends two new tests for choline; one is the formation of the acetyl compound to render the physiological test more sensitive: the other is the formation of the benzoyl compound; this gives a distinctive crystalline platinum salt which cannot be confused with the platino-chlorides of ammonium or potassium. I have not actually tested these methods myself, but I think I have said sufficient to show that in the future those engaged in research will have no lack of methods to render the testing for choline a matter of no difficulty.

REFERENCE.

The bibliography of this subject up to 1905 will be found very completely given in my article on Die Biochemie der Nerven, in the *Ergebnisse der Physiologie*, vol. iv, p. 23, 1905. The principal papers which have appeared since are the following: J. Donath, *Journal of Physiology*, vol. xxxiii, p. 211; Rosenheim, ibid., p. 220; Reid Hunt and Taveau, BRITISH MEDICAL JOURNAL, 1906, ii, p. 1788. Several observers have surmised that the breakdown of lecithin is due to the activity of a ferment; the ferment has, however, not been isolated. Marinesco (*La Presse Médicale*, February 16th, 1907) suggests that the ferment is formed by the neurilemmal cells, which actively multiply during Wallerian degeneration.

REMARKS ON A CASE OF SEVERE COMPOUND FRACTURE OF THE SKULL: RECOVERY.

BY W. P. M'ELDOWNEY, M.B., B.C.H., ASSISTANT PHYSICIAN, and J. WARD COUSINS, F.R.C.S., SENIOR SURGEON, ROYAL PORTSMOUTH HOSPITAL.

THE result of a severe injury of the head on the higher faculties is very uncertain and variable, and therefore it is always wise not to venture upon a hasty prognosis. After a severe concussion of the brain the patient may be often roused from a state of partial insensibility, and may even respond to simple questions, yet from the facial expression and the slowness of the articulation it is evident that a thick cloud is hanging over the intelligence, and this may soon end in fatal coma. Sometimes a moderate amount of shock and mental confusion is followed by the acute excitement of cerebro-meningitis, which terminates in damage to the sensory functions and permanent impairment of the faculties. On the other hand, cases of dangerous injury attended with deep insensibility and other grave symptoms do occur, and yet the patient ultimately recovers without any permanent disorder of the mental powers, as in the following case:

REPORT OF CASE BY DR. M'ELDOWNEY.

The patient was a young man, 18 years of age, who was just convalescent from an attack of typhoid fever. On March 21st, 1904, he retired to rest in fair health, but about 7 o'clock next morning he was found in bed in an insensible condition, with extensive head injuries inflicted with a heavy poker found in the room covered with blood and hair, and much bent by the force used in inflicting the blows. His head and face were enveloped with dried blood, the bed and carpet were saturated, and the ceiling and walls were spattered in every direction.

On my arrival at the house the patient was sufficiently conscious to say, "Hullo, doctor!" but he did not reply to questions, and shortly afterwards vomited and became unconscious. The pulse was then extremely rapid and feeble; the pupils were equal, half dilated, and insensible to light.

About 9.30 a.m. Mr. Ward Cousins met me in consultation. The patient was wrapped in blankets and placed on a table in another room; his head was then shaved and the scalp thoroughly sterilized. By this time the patient had rallied somewhat; his pulse had improved, and he showed some signs of restlessness and pain. An anaesthetic was administered, and we proceeded at once to examine the injuries and to carry out surgical treatment. The fracture extended over the posterior and inferior part of the right parietal bone, and involved also the upper edges of the squamous portion of the temporal and occipital bones. The diagram (Fig. 1) exhibits the outline of the broken and lacerated area where the fragments were driven in and firmly jammed together. The injury, however, extended over a larger portion of the cranium, for the edges of the opening were fissured and depressed in all directions. The dura mater and scalp were both extensively torn, and cerebral matter had escaped in two places into the wound through lacerations caused by portions of the bone, which had been driven into the brain (Fig. 2).

With the aid of the trephine and forceps all the fractured pieces were removed, and the depressed edges were elevated into position. The torn dura mater was, as far as possible, closed with catgut, the injured and bruised scalp placed in position and united by silkworm-gut sutures. Gauze drains having been introduced, the dressings were then applied.

Very little vomiting followed the operation. The patient

remained in a state of deep insensibility; the pulse was very rapid, the respirations hurried, and the pupils were half dilated and insensible to light. A rectal saline was administered at once and a nutritive enema was directed to be given every four hours.

No marked change occurred till the third day, when a severe convulsion set in, which commenced in the left arm and afterwards became general. Potassium bromide was administered. Within the next thirty-six hours there were two more attacks, but they were much milder, and afterwards they did not recur.

About the tenth day he began to exhibit increasing restlessness and other signs of returning sensibility. He commenced to swallow nourishment and freely ejaculated emotional expressions. The wound healed rapidly without any suppuration, and only a little serum escaped in the position of the gauze drain. The temperature was practically normal throughout.

On April 17th the patient was allowed to sit up. He frequently made inquiries about his head, and often made efforts to remove the protecting dressings. He was, however, quite unfit for any mental exertion, his memory for the little events of the day was very indistinct, and he could not recognize his friends or understand that he was at home.

His mental condition cleared very gradually, but on May 3rd he was sufficiently convalescent to leave home for rest and change. The pulsations at the seat of the injury were very marked.

After a few months he returned greatly improved, but he often remarked that he did not feel well enough to return to his studies. His memory was not as good as formerly, but he remembered going to bed on March 21st.

In May, 1905, he appeared in excellent health, the large scar on his head was much firmer and the pulsation much less marked; the unprotected area being, roughly speaking, a little larger than half a crown owing to the development of bone along the edges of the fracture.

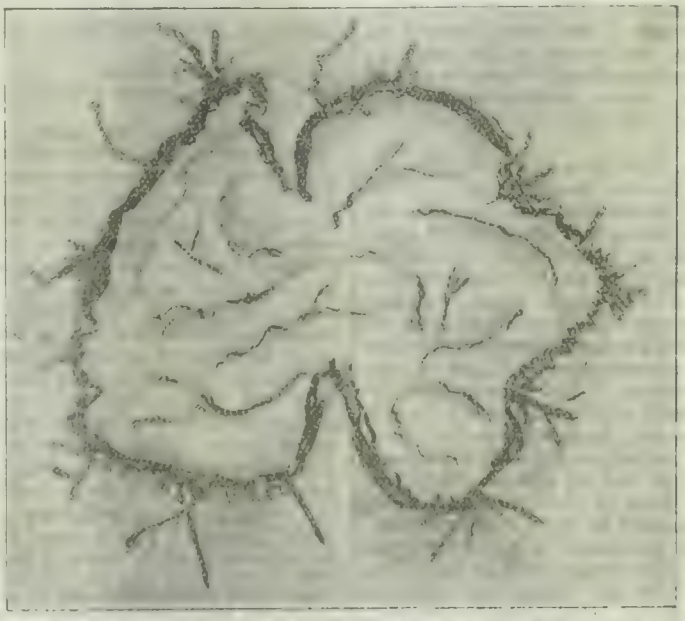


Fig. 1.—Shape of opening in skull. The size was about 4 in. by 3 in.

REMARKS BY MR WARD COUSINS.

Period of Danger and Insensibility.

In this case the patient had received many severe blows on the head with a poker. The skull was extensively smashed, the dura mater contused and torn, and through two large openings the cortical substance had freely escaped. Free haemorrhage had taken place from the wound, and the scalp had undergone much bruising and laceration. When first discovered he could be roused for a few moments, but after a brief period deep insensibility supervened with hurried respiration, rapid pulse, and marked depression. The pupils were half dilated and equal, but they did not contract to light. The urine was passed involuntarily, and in this critical condition it was impossible to estimate the probability of recovery.

About sixty hours after the injury severe but not prolonged convulsions occurred, and involved every part of the body, but they were most marked in the left arm. Convulsions are generally cortical in their origin, and the parts convulsed may sometimes be regarded as a guide to the position of the lesion. In this case there was no direct injury of the motor area, but the damage was certainly not far away, and quite near enough to provoke convulsions. Twitchings and irregular contractions confined to a group of muscles or one limb may occur occasionally without loss of consciousness, but when convulsions are general, they are always accompanied by varying degrees of insensibility, the result of widely-diffused cortical irritation.

As a general rule, it may be fairly assumed that the amount of violence received by a blow on the head, or an injury caused by falling from an elevation, with or without definite local lesion, bears a distinct relation to the severity and persistency of the mental disturbance. The external injury may be slight and the indication of internal lesion of the brain very indistinct, and yet the damage to the higher faculties may turn out to be far more serious than those which result from a compound comminuted fracture of the skull; and it is my opinion that if the same extent of injury to the brain and bones of the skull which took place in this patient could be produced by gentle means without any violence, there would be very little insensibility immediately following the laceration.

The effects of traumatism are generally peripheral, and they bear a direct relation to the position and extent of the injury done to the brain. Superficial lesions of the cortex are far less serious than damage to the centre. Contusion and laceration of the cerebral tissue is always accompanied with the effusion of blood, and when the destructive changes involve the ventricles, pons Varolii, or medulla oblongata, fatal symptoms rapidly set in.

Position of the Cortical Injury.

The insensibility that followed violence was the result of the widely diffused molecular disturbance of the nervous tissue. The whole organ was severely shaken by the blows, but the damage found on examination was confined to the convolutions immediately under the seat of fracture. This region behind the motor area includes the angular gyrus, the upper part of the occipital lobe, and part also of the temporo-sphenoidal lobe—a sensory area probably situated within the centres of sight and hearing, and in a region of the cortex where a unilateral and circumscribed injury is unattended with any definite loss of function. Now, although the brain contains many special centres linked together by perfect continuity of structure, there is no evidence to show that the higher faculties are mere functions of some portion of the complex nervous apparatus; but, on the other hand, there are many facts which clearly indicate that the mental activities are exercised through a wide cortical area, and are dependent upon the stability and normal condition of the whole organ. Our patient received a serious injury of the convex surface of the brain, which rendered him dangerously insensible for a period of ten days. When indications of returning sensibility set in, he became restless, and performed irregular and meaningless efforts to carry out habitual movements. He opened his eyes, raised his hand to his head, and uttered emotional language indicating some irritability and uneasiness. Four weeks elapsed before he commenced to take any notice of his attendants, and he remained still longer incoherent and confused, then slowly the mental faculties began to reappear. He recognized that he was at home, and he casually inquired what had happened to him. He exhibited, however, no interest in his surroundings, and appeared to have no recollection of passing events. At the end of two months the intellectual improvement was very marked, and gradually his memory and all the higher faculties were completely restored.

Return of Mental Activity Coincident with Favourable Local Changes.

The passage from insensibility to the conscious state after a severe head injury is marked by slow improvement. The first signs in this case of reviving activity in the nervous centres were irregular muscular movements. The limbs were stretched out, and contractions followed in response to external stimulation. The eyes were then opened and the organs of sense exhibited some returning sensibility. No doubt these external indications were

coincident with the favourable changes which were taking place at the seat of injury. The extravasated blood and cellular elements which had infiltrated the wounded tissue were now being steadily absorbed, and although many neurons had been destroyed the damage sustained was limited, and quite insufficient to cause any permanent loss of function. The gradual improvement in mental power was well sustained, and this rendered the prospect of a good recovery more hopeful without any remnant of the lesion beyond the scar, the local thickening of the membranes, and some adhesions between them and the cerebral cortex.

Risk attending Injury increased by Intemperance and Constitutional Disorders.

The prognosis in every case of head injury attended with violence is a matter of anxiety, but when the patient is in feeble health or is the subject of any constitutional disease, the risk to life is at once greatly increased. A man in good health and of regular habits often recovers from the effects of violence which, occurring to any one suffering from the structural changes associated with intemperance, would either prove fatal or terminate in serious loss of mental power.

A man, aged 52, well-built and muscular but unfortunately a very heavy drinker for many years, was thrown out of a carriage early in August, 1905, in a state of semi-intoxication When seen a few minutes after the accident he was deeply insensible, with dilated and immovable pupils, and a large haematoma behind and above the right ear. There were also some small superficial wounds, and a little blood escaped from the external meatus, but no fracture of the skull could be detected. He continued in this condition for seven days with rapid pulse, hurried respiration, and moderate fever. A few teaspoonfuls of nourishment only were taken during this period, and the secretions escaped involuntarily; then partial consciousness returned, and was soon followed by paroxysms of great violence, during which he required the constant attendance of two male nurses. At the end of three weeks his condition improved, the maniacal excitement subsided, he slept calmly, and took nourishment freely.



Fig. 2.—Position of fracture. Line across skull indicates direction of fissure of Rolando.

Many months have now elapsed since the accident, and the general health of the patient is well restored. There is no indication of any form of paralysis, no loss of muscular co-ordination, the senses are entire, and the articulation is clear and distinct; still his mental power is obliterated, and he continues incoherent and senseless.

The patient in this case received a violent injury of the cortex without any definite indication of fracture of the skull. The mechanical disturbance of the brain caused at once capillary haemorrhage and transudation of blood into the strained and bruised nerve tissue already damaged by structural changes and vascular degeneration, the result of years of irregular living and intemperance. The violence, however, in this case happened to fall upon a dangerous region, and it is my experience that the immediate effect of an injury to the back of the head, whether with or without fracture of the skull, is attended with special risk, arising from the proximity of the disturbance of the brain to the vital centres which are lodged in the posterior fossa.

Permanent Injury to the Superior Cortex.

A few days after the accident a severe attack of localized meningo-cerebritis set in, which has left behind many pathological changes. An examination of the brain of this unfortunate patient would probably reveal the destruction of a large number of neurons in the system of the superior cortex and a broad lesion involving both hemispheres, showing the formation of areas of sclerotic tissue, the increase of glia cells, and a large development of connective tissue elements. In similar cases the atrophic changes have been found to extend over a large part of both hemispheres. Now, the structure of the nervous system exhibits great complexity, and is composed of cellular elements exhibiting many common characters and of marked histological similarity. Still, from clinical and experimental evidence, we are able to associate them together in groups by their functional activities in many regions of the cortex. The neurons are recognized as original elements, persistent structures of the organization, liable to very slow biological change, and, if injured or destroyed by any pathological process, are incapable of regeneration. They are, in fact, the material basis of the higher faculties during life, and their destruction over a large area results in a permanent loss of mental power.

Mental Condition of these Patients after Convalescence.

On reviewing these cases we can discover that they present many characters in common. At the same time, the after-effects of the injuries on the mental powers are widely dissimilar. Both patients received severe posterior cortical damage from direct violence which caused dangerous cerebral disturbance. Both escaped without any loss of motor power, the lingual and ocular muscles were unimpaired, and articulation and muscular co ordination undisturbed. Both regained their health and vigour; but here the resemblance ceases. When we turn to the condition of the higher faculties, the first patient, a young man of regular and temperate habits, has completely recovered without any loss of mental energy. In the second case the patient, a man of middle age, who had been for years a heavy drinker, and at the time of the accident was in a state of partial intoxication, still remains intellectually weak, his memory is confused, and he is incapable of engaging in any occupation.

The persistent presence of alcohol in the blood has a very harmful effect on the delicate structures of the nervous system, and at all times adds greatly to the risk of every form of traumatism.

Immediate Treatment for Promoting Firm Repair at the Seat of Injury.

Small bony injuries of the skull have often been successfully treated by immediate replacement of the fragments. Periosteum does not appear essential for maintaining the vitality of the graft, but whenever possible it ought to be preserved. Sometimes the replanted fragment becomes firmly united to the adjacent bone, but it is probably more often absorbed and replaced by new osseous tissue. In the closure of large defects of the skull caused by compound fracture the comminuted pieces cannot be reinserted in this way, and the orifice in the majority of cases is ultimately filled up by firm fibrous tissue without any formation of new bone.

In this case five square inches of broken fragments were removed at the time of the operation, but the injury extended over a much larger area, for all round the margin of the fracture the bony edge was broken and depressed. In closing the wound the fractured pieces were elevated into position, the lacerated dura mater was lightly placed over the exposed convolutions and fixed by a few catgut sutures, at the same time all the scales and little fragments of bone adhering to it and to the periosteum were carefully preserved, and after trimming the contused and injured skin the flaps were drawn accurately together with another layer of fine stitches and protected by three gauze drains. In this way a number of small bone grafts were introduced into the opening and in becoming ossifying centres they added greatly to the formation of the firm cicatrix. The centre of the fractured area was also fortunately narrowed by two projecting pieces of

partially detached bone, and these no doubt materially helped forward the satisfactory result.

For some months after the injury well-marked pulsation of the brain continued and the bony edges of the defect could be easily recognized; but when the patient was examined after a lapse of sixteen months a thick cicatrix had developed, the whole margin of the opening was well covered with firm tissue, and only a very feeble pulsation could be detected. I have practised this simple method in many cases of head injury with equally good results.

In concluding these remarks I desire to accentuate the value of utilizing scales and small fragments of bone in cases of extensive fracture of the skull, for the purpose of securing the development of a sound and thick cicatrix, a result which may be anticipated with confidence provided the wound is rendered thoroughly aseptic at the time of the operation, and the general condition of the patient continues favourable for gradual recovery.

The performance of secondary osteoplastic operations for the closure of large openings ought to be limited to cases in which persistent headache and other severe head symptoms are present, and there is evidence that these disorders can be attributed to the injury. Under these circumstances surgical interference may be undertaken for the relief of suffering which appears to be caused by some local irritation involving the cerebral cortex, and associated with cicatricial thickening and adhesion of the membranes.

CASE OF SUBCUTANEOUS INJURY OF THE PANCREAS: OPERATION: RECOVERY.

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Cases of subcutaneous injury to the pancreas without involvement of other organs must be extremely rare; in fact, it is difficult to conceive how such an injury can take place. Mikulicz (Moynihan's *Abdominal Operations*) had collected up to July, 1903, twenty-four recorded cases; of these thirteen were not operated upon, and all died; and of eleven which were operated upon, seven recovered. Some of the operations were late, and consisted of evacuating disintegrating blood clot and providing drainage.

J. H., a man aged 38, was admitted to the Royal South Hants and Southampton Hospital on October 10th, 1906.

History.

On October 6th he was walking home after dark on a road skirting the river Itchen, which was guarded by a wooden railing. He had taken a fair amount of liquor that night, and, his foot striking some obstruction, he fell over the rail into the river, hitting his abdomen as he did so. He was rescued and taken home, but remembered nothing until the next morning. He then had great pain in the stomach and back, shooting up into the chest. The pain came on worse in paroxysms, and was accompanied by severe vomiting, the vomit being of a greenish colour. He remained in much the same condition till October 10th, when he became much worse, the pain having spread all over the abdomen. He sent for Dr. Jackson of Eastleigh, who at once advised his removal to hospital. The day previously he had taken three doses of salts, but there had been no bowel action, though a little flatus had been passed.

State on Admission.

He looked extremely ill and was very pallid. The pulse was 100 and very small; temperature, 98.8° F. The abdomen was uniformly distended but not greatly so, and there was much rigidity; there was a little dullness in both flanks and in the hypogastrium, the rest of the abdomen was tympanitic. Liver dullness was present. There was tenderness all over. Rectal examination was negative. The examination of the chest yielded nothing of moment. Urine drawn off by catheter was healthy, a small quantity only being obtained. He complained of great abdominal pain and of much thirst. The case was regarded as one of peritonitis and exploration decided upon, it was carried out shortly after admission.

Operation.

The abdomen was opened a little to the left of the middle line between the umbilicus and pubes by an incision about 3 in. in length. Liquid blood began to flow out from all directions as soon as the peritoneum was opened. The incision was enlarged upwards and downwards, and the lower viscera explored, no injury or disease being detected; there was much clot in the pelvis. The hand, passed upwards, came across a bulging, semi-fluid swelling above the navel; an incision was therefore made above the umbilicus, about 4 in. in length, when blood was seen coming through a hole in the omentum, between the stomach and transverse colon. The two cuts were now joined, and it became apparent that the swelling was the lesser sac filled with clot and fluid blood. The opening in the omentum was enlarged by tearing and the clot removed by handfuls. Dark liquid blood continually welled up from the region of the pancreas, obscuring everything so that a view of the source of the flow was impossible. It was obvious that the only thing to be done was to trust to gauze pressure, and accordingly gauze was packed firmly against the pancreas and the back of the lesser sac, quite 12 yards being used. The abdomen was rapidly closed with through and through silkworm-gut stitches, and several pints of saline fluid poured into the general cavity. The end of the gauze was brought out of the wound on a level with the hole in the gastro-colic omentum. The operation had to be completed as rapidly as possible owing to the collapsed condition of the patient.

The next day, October 11th, the man had recovered to some extent from the shock. Temperature was 99.2° F.; pulse about 100, and extremely feeble. He vomited on and off all day. Saline fluid was given by the bowel. An enema in the evening brought away a fair amount of flatus. There had been much oozing from the wound; the dressings were changed, the gauze plugging being left untouched.

On October 12th he was distinctly better, and was able to take fluid nourishment. Calomel was given with good result. Dressing changed. Discharge thinner.

October 13th. Still improving. Pulse 86. The gauze plug was becoming loosened by the blood-stained discharge, and part of it was removed by gentle traction.

October 15th. The rest of the gauze packing was removed quite easily. There was much discharge of blood-stained fluid.

The wound healed up fairly well, except for the sinus where the plug had been, and from this was discharged daily 6 to 8 oz. of clear fluid. This fluid was most irritating to the skin, causing a very painful dermatitis wherever it came in contact with it. The skin condition was relieved by a catheter conveying the fluid from the sinus to a bottle. A specimen of the fluid was sent up to the Clinical Research Association, and was reported to be pancreatic.

He was discharged well on December 12th, fitted with an abdominal belt, to which was fixed a celluloid flask with a small rubber tube leading into it, the other end of which, inserted into the sinus, conveyed the juice away without contact with the skin.

When seen last, in March, 1907, he was doing his work, the sinus still discharging 3 or 4 oz. of fluid a day; belt and apparatus as before.

On one occasion (January, 1907) the sinus had closed, as he had left out the tube for some days. He came up complaining of pain in the back. A small nick was made at the site of the sinus, and several ounces of fluid let out, with immediate relief; the tube was then put back.

Before operation no diagnosis was made, in fact the condition was extremely puzzling. There was the history of injury with much pallor and signs of commencing peritonitis, the patient having become much worse the day of admission. There was no bruising to be found anywhere. Ruptured bladder was thought of, as there had been some difficulty of micturition with frequency. On opening the abdomen the appearance was just like that of a ruptured ectopic gestation. When the abdomen was completely laid open by joining the two incisions, a rapid examination of liver, spleen, mesentery, etc., disclosed no apparent injury, the trouble being confined to the lesser sac.

There is no doubt that laceration of the pancreas had taken place, as was proved afterwards by the discharge of pancreatic juice. An irregular mass could be felt at the back of the cavity; but no view could be obtained, owing to the continual flow of blood.

Evidently bleeding at first was confined to the lesser sac, and the paroxysmal increase in the pain the patient suffered the first day or two was probably due to successive haemorrhages into the distended cavity. When the man became so much worse on October 10th, the extravasation had doubtless burst through the omentum between the stomach and colon, involving the general cavity of the peritoneum.

Many cases of pancreatic cyst so called have followed injuries to the upper part of the abdomen, and are probably caused by blood extravasations into the lesser sac with a wound of the pancreas allowing the escape of a certain amount of pancreatic secretion. In this case it is

quite possible that if the secondary giving way of the gastro-colic omentum had not occurred, a pseudo-pancreatic cyst would have been produced had the patient survived without operation.

RETROPERITONEAL SARCOMA OF DOUGLAS'S POUCH.

BY

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RETROPERITONEAL growths have assumed considerable importance within recent years, and a large number of benign and malignant growths have been recorded. An admirable summary of these is given by Steele.[1]

Of growths arising in the retroperitoneal tissue of Douglas's pouch, only 7 cases appear to be reported in the literature at hand. The paucity of this record justifies the mention of the following instance.

A married woman, aged 35, was admitted to the Bristol Royal Infirmary in October, 1906, for the treatment of an abdominal swelling. Prior to 1904 her health had been good. In 1904, Dr. James Swain operated upon her for an attack of cholelithiasis. From March, 1905, she complained of "dragging" pains in the pelvis and thighs, and pain, located at the lower part of the abdomen, during micturition. Wasting had been gradual and continuous.

On admission, micturition was frequent, but painless. Menstruation regular. The "period" which took place two weeks before admission was, however, accompanied by a certain amount of pain.

On examination, the swelling was found to be located in the pelvis. It was about the size of a fetal head, was situated between the uterus and rectum, and was firm, and nodular in consistence. The uterus was displaced upwards and forwards, and the os uteri could only be felt at the level of, and immediately posterior to, the symphysis pubis. The new growth appeared to be connected with the posterior wall of the upper portion of the cervix uteri, and with the anterior wall of the rectum. The body of the uterus, the ovaries, and other uterine appendages were not involved. The superficial veins of the thighs and legs were enlarged; the abdominal veins were unaffected.

The differential diagnosis compelled the consideration of fibroids, uterine and rectal growths, retroperitoneal and intraligamentous tumours, dermoids, and myeloid and periosteal new formations. Dr. Swain sent the case in as a "fibroid," with the alternative diagnosis of malignant pelvic growth.

Operation.—The usual median subumbilical incision exposed a vascular, soft growth, covered by a thin, shiny capsule, which filled the posterior half of the true pelvis, being apparently attached to the cervix uteri anteriorly, and to the rectum posteriorly. When the peritoneum was cut through, a friable haemorrhagic mass was revealed. The attempt to remove this tissue occasioned such free haemorrhage that it was a matter of necessity to treat the haemorrhage only, and desist from further removal of the growth. Death occurred forty-eight hours later.

At the autopsy it was found that the organs were generally healthy, and there were no signs of post-operative haemorrhage. The tumour arose in the retroperitoneal tissue on the left side of Douglas's pouch. Here there was a mass, about the size and shape of a five-months placenta, cream-white in colour, fairly firm in consistence, separated from the utero-vaginal and rectal tissues by a thick, well-defined fibrous capsule, from which radiating trabeculae passed into the tumour, and situated chiefly adjacent to the vaginal wall but extending also into subperineal and perirectal tissues. This part of the growth lay with its long axis parallel to that of the uterus, and measured 4½ by 3 in. From this area of origin extension had taken place across the middle line, a small proportion of the mass reaching the right side of the pouch. An extension upwards had also occurred, but in this direction the tumour began to lose its solid characters, and exhibited haemorrhages, degenerations, and cystic collections. Superiorly it had lost the capsular tissue which was so apparent at its lower margins, and was covered only by the peritoneum itself.

There were no metastases; the pelvic bones were normal. When the uterus was bisected it was seen that the body of the uterus was normal. Its internal surface presented a blood-stained area, which microscopical examination showed to consist of haemorrhage and oedema only. The tumour was adherent to the posterior lip of the cervix uteri, and to the entire length of the posterior fornix of the vagina. It then occupied the whole of the subperineal tissue, and became adherent to the anterior wall of the rectum by perirectal tissue. In these areas a distinct capsule was apparent; this capsule became thinner as it passed upwards, the thin peritoneal covering being alone present at the advancing edge. The bladder was quite unaffected.

Microscopically, the capsule was composed of vascular fibrous tissue. At its inner border there were evidences of a slight invasion of tumour cells. The coats of the rectum were quite normal. The vaginal wall was not infiltrated. The tumour itself was composed of sarcomatous cells. These varied in type, large and small round cells and small spindle cells being present. Mitotic figures were easily demonstrable. The adipose tissue of the part was represented by masses of fat crystals and degenerating fat cells, infiltrated slightly by sarcoma cells. There were no evidences of dermoid or implantation structures, nor of any cells of a glandular type. From the characters of its cells, its blood vessels, and its degenerations, the tumour was considered as a mixed cell sarcoma.

Before discussing the prognosis, treatment, and etiology of these growths, it may be well to shortly recount the cases previously recorded in the literature to which access is possible.

Sarcoma (Verocay[2]).

Boy, aged 9. The clinical diagnosis was lympho-sarcoma of the pelvis. For eight months a swelling had been noticed in the abdomen; fourteen days before death alteration in hearing and speech and loss of intelligence were observed. *Post mortem*, there was slight oedema of the brain, pus in both tympanic cavities, pulmonary congestion, bronchial catarrh, and distension of the bladder and renal pelvis. Between the bladder and rectum there was a nodular tumour the size of a fetal head, rising slightly out of the true pelvis. A most careful examination of the tumour was made, but no connexion with any pelvic organ could be ascertained. On section it appeared dark red in colour, streaks of connective tissue could be seen running through it, and in places it was yellow, apparently fatty. The mass was completely enclosed in a thick capsule.

Microscopically, the tumour was composed throughout of a vascular connective-tissue stroma, forming irregular meshes, and contained spindle and round sarcoma cells, the former predominating; there were areas of necrosis and degeneration.

Spindle-celled Sarcoma (McLachlan[3]).

An elderly unmarried woman complained of anorexia, sleeplessness, malaise, and a feeling of fullness in the abdomen, with slight pain; a definite tumour was found, which steadily increased in size, and eventually reached the dimensions of an eight months pregnancy. It was dull on percussion, and the superficial veins of the abdomen were enlarged, especially on the left side. The patient died suddenly in an attack of dyspnoea. *Post mortem* the examination was limited to the abdomen. A tumour, arising from the pelvis, was found to be adherent to the whole anterior surface of the sacrum and to the uterus and tubes, the ovaries being free. Microscopically, it was a spindle-celled sarcoma, with many giant cells and large chondrifying areas.

Cystoma of Congenital Origin (Krönig[4]).

This was a retroperitoneal growth, arising between the uterus and rectum, and reaching to the umbilicus; it was diagnosed as an intraligamentous cyst. Laparotomy showed that it was not attached to the uterine appendages, but that it was intimately connected with the pelvic floor and the posterior wall of the uterus. During removal it had to be separated from dense adhesions. The broad ligaments were not involved, but the peritoneum of the posterior pelvic wall and the right side of the sigmoid was pushed upwards by the growth.

After microscopical examination it was considered to be a retroperitoneal pelvic multilocular cystoma, quite unconnected with the uterus, ovaries, or tubes, the cysts being lined with a single layer of cylindrical epithelium, with isolated muscle fibres and glands occurring in the wall, such as might arise from remains of the Wolffian body.

Cystoma (*Papilliferous*) (Winternitz[5]).

Winternitz removed a retroperitoneal pelvic growth, which proved to be a papillary cystoma, presenting the appearance of an ovarian cyst, although no ova or follicles could be found in its walls. He considered it as originating from some aberrant cells or ova, as there was no reason to infer the presence of a third ovary.

Sarcoma (Winternitz[5]).

Winternitz also mentions a retroperitoneal pelvic tumour which he removed, which was sarcomatous in nature. It recurred shortly after.

Of these cases, one could be definitely assigned to a bony origin, and another was considered as arising from aberrant glandular cells. The remainder, including the present case, were sarcomatous in character. They all contained a considerable amount of fibrous tissue, and were more or less encapsuled. None of them, so far as can be ascertained, were metastatic at the time of operation or death, although metastases occur in about 33 per cent. of retroperitoneal tumours as a whole. The case we now report differs from those previously recorded in its tendency to haemorrhages and in its location in a region which did not easily permit pressure on and subsequent distension of the urinary tract.

PROGNOSIS AND TREATMENT.

Judging from retroperitoneal sarcomata as a whole, the prognosis is unfavourable; but Williams, in the *American Journal of Medical Science* for 1903, collecting the results of operation on these tumours, mentions that Burgoin of Paris had 14 recoveries in 29 cases of extirpation of solid retroperitoneal tumours, 4 of which were sarcoma 2 of these being among the recoveries; that McCann successfully removed a retroperitoneal sarcoma with several inches of gut; and that Heurteaux of Wartes successfully operated on a man of 60. Other so-called successful cases are reported, but the period of immunity from recurrence is not mentioned. Death usually occurs from exhaustion unless the tumour is surgically treated. In 3 cases intraperitoneal haemorrhage was the cause of death. The presence of a capsule in these growths suggests that, were it possible to accurately and early diagnose the existence of a tumour mass in the retrovaginal tissues, its removal via the perineum offers considerable chances of success. An attempt at extirpation is therefore certainly justifiable

ETIOLOGY.

Retroperitoneal sarcoma may arise from lymph glands—perhaps their most common origin—and from the periosteum of the vertebral and pelvic bones. A certain proportion originate from normal or inflammatory connective tissue and from the sheaths of vessels and nerves. There are also a number of cases of retroperitoneal growths recorded in which the structure of the tumours suggested an origin from Wolffian bodies or ducts, or from the Müllerian ducts. The latter group of cases may be ruled out of court in the present instance, on account of the structure of the growth.

In view of the tendency of many recent writers to trace the origin of sarcomata to some traumatic influences, it may be remarked that the location of the tumour in this case is consistent with the hypothesis of trauma since the region here involved must be more or less injured in all parturitions. It is impossible, however, to cite this case in support of the phrase 'coitus trauma, cloacarcoma,' for this location is one of the rarest seats of sarcoma, and yet one which is perhaps, of all tissues, the most exposed to injury.

It is a great pleasure to express our thanks to Dr James Swain for his courtesy in permitting the publication of this case.

REFERENCES

[illegible]

ACUTE PELVIC ABSCESS FOLLOWED BY ACUTE OBSTRUCTION.

BY ERNEST LEACH, M.B., B.CH.OXON.,
WITHERIDGE, NORTH DEVON.

THE interest of the following case appears to lie chiefly in the patient's condition before operation with regard to the diagnosis as to the cause of the original trouble. The pelvic abscess suggested appendix or ovary as its origin.

On August 14th 1906, I was summoned to see Mrs. G., aged 53, the wife of the rector of a neighbouring village. She had complained of constipation for the last four months with attacks of pain of a darting character situated in the left flank, usually noticed in the early hours of the morning when in bed. Previously she had always enjoyed good health, except for one or two attacks of bronchitis. The bowels had always acted regularly up to the last few months. For the last two years she had noticed the pain after standing on damp grass; during the last year this had been more marked. The menopause had occurred three years previously. There was no history of any loss of flesh.

The patient was stout and healthy-looking; the tongue was clean, the heart and lungs normal. The abdomen moved well with respiration; there was no tenderness on palpation nor was any abnormal swelling felt. On rectal examination nothing was detected. The pulse and temperature were normal; the urine was normal. There was no history of any mucus with the motions. A mixture containing bismuth salicylate was given.

On August 18th she was feeling better and the pain was relieved.

On my arrival, in answer to an urgent telegram, on August 21st, I found that during the previous night she had been seized with violent abdominal pain accompanied by frequent vomiting. The pain, which was situated all over the lower half of the abdomen, was so severe that she could not lie still in bed. The face was flushed, the temperature was 102.6°, and the pulse 104. The abdomen was excessively tender, more especially over the left lower half, and moved badly with respiration; micturition was painful. On vaginal examination the mucous membrane was very hot and tender; the uterus was not fixed. By the rectum nothing was felt. She was given a saline fever mixture by the mouth, and two doses containing 20 minims of liq morphinae to allay the pain, also hot vaginal douches and hot fomentations over a square of lint spread with glycerine of belladonna.

During the following week the pain gradually diminished. The temperature ranging between 100.8° and 102.6°. The abdominal tenderness was less marked, but always more noticeable on the left side. A definite band of thickening could be felt lying just above and parallel to Poupart's ligament on that side. The uterus became fixed, and posteriorly a well-marked swelling could be felt occupying Douglas's pouch. On August 29th during defaecation about a pint of very offensive pus was passed from the rectum, and on five occasions during the following twenty-four hours in smaller quantities. After this the temperature came down to normal, and the patient felt very much more comfortable. The band of thickening above Poupart's ligament slowly disappeared, and the mass felt in Douglas's pouch was very much smaller in size.

On September 6th I asked Dr. Harper of Barnstaple to see her with me in consultation, as the temperature had been steadily rising for the last four days. It was decided that no operative interference was needed, and a mixture containing potassium iodide and liq hydrarg. perchlor. was prescribed, also salol gr. x in cachets twice a day. Five days later the temperature reached the normal again, there having been no fresh discharge of pus. On September 11th the uterus moved much more freely, and no indefinite band of thickening could be felt high up in Douglas's pouch extending towards the left.

On September 23rd the patient came downstairs and had made arrangements to go away the following week. All this time the bowels were acting naturally, and all seemed to be going well. On September 25th, after breakfast, the patient vomited once or twice, and the bowels were open naturally; a dose of calomel to be followed by salts was ordered and a carminative mixture prescribed. The following day she felt better the calomel had caused. She complained of one or two attacks of pain on the left side, but not severe. The abdomen was not distended, the pulse and temperature were normal. As the bowels had not moved, a simple enema was given with a small result. She passed a good night, and on the following day as the bowels had not acted, a simple enema followed by an olive oil enema was administered the result from both being practically *nil*, otherwise her condition was unchanged.

At 2 a.m. on the morning of September 28th she was seized with violent abdominal pain accompanied by frequent vomiting. When I saw her she was in great pain, the face was flushed and anxious, the abdomen was distended, the temperature 98.6°, the pulse was bad and 120 per minute. The vomiting continued and frequent hiccough. The patient was clearly suffering from acute obstruction probably due to adhesions from the previous attack of peritonitis. I wired at once for Dr. Harper to an urgent operation was needed. He very

kindly came and performed abdominal section under chloroform. A hard growth (? carcinoma) was found springing from the left ovary, to which the bowel was bound down by numerous dense adhesions, giving rise to the obstruction. The patient's condition was so bad that it was impossible to do more than bring up a loop of bowel into the wound, which was accordingly done. She gradually sank and died the following afternoon.

NOTE ON THE PECULIARITIES OF THE TONGUE IN MONGOLISM AND ON TONGUE-SUCKING IN THEIR CAUSATION.

By JOHN THOMSON, M.D.,

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NEARLY all the peculiarities which distinguish the so-called "Mongol" baby from other children, and make him look like the young of a different species of man, are obviously developmental in origin and are recognizable from the day of his birth.

The condition of the tongue, however, forms a notable exception to this rule. Its apparent largeness may, indeed, often be noticed soon after birth; but this appearance is probably attributable rather to an abnormal shortness of the mouth than to any real longness of the tongue. The well known characteristics of the mucous membrane—its coarse, raw, sodden appearance, from swollen papillae, and the numerous deep fissures in it—are entirely absent at birth and for long after. They only develop slowly as the child grows. The enlargement of the papillae sometimes begins during the second month, oftenest in my experience between the third and ninth months; and, rarely, not till late in the second year. The fissuring generally begins to appear in the course of the third or fourth year. It may be present in a slight form, however, during the second, and it may not be noticeable till as late as the sixth year.

The slow development of these changes on the tongue's surface may be explained in two ways. On the one hand, it may be supposed that, though the organ looks normal at birth, it is really so abnormally vulnerable as to be unable to carry on for long the common work of an ordinary tongue with impunity. On the other hand, it may be suggested that the various abnormalities of the mucous membrane might be accounted for if it could be shown that the child used the organ in an abnormal way. Neither of these explanations seems quite adequate without the other. It is probable, however, that though the lingual mucous membrane in these children is, like their skin, not quite normally resistant, yet what chiefly determines its swelling and cracking is the way in which it is used.

Tongue-sucking is, of course, a well-recognized characteristic of Mongolism. In studying recently the notes of 92 cases of Mongolism observed during the last twenty years, I have been greatly struck with the extreme frequency of this habit among them, and with the extraordinary energy and persistence with which it is practised by many of the children. In 69 cases in which its presence was inquired into, it was found certainly to exist, or to have existed, in 59. In the other 10 it was said never to have been observed, although at least 2 of them were given to sucking their fingers or hands. Two children who were noticed when in hospital to suck their tongues constantly were stated by their mothers, on admission, never to have practised the habit. Its presence is, indeed, so easy to overlook that it seems allowable to suppose that possibly all Mongols at some period of their childhood may have a period of tongue-sucking, although it may not always be recognized.

In all the cases of older children I remember to have seen, in which the tongue-sucking had been very prolonged and severe, the fissuring and the enlargement of the papillae were particularly marked. In a few in which a reliable history was given of the habit having lasted only for a short time, the surface of the tongue was comparatively little affected.

THE fourth French Congress on Public Assistance and Private Beneficence, which was to have been held this year at Rheims, has been postponed till the spring of 1908 on account of the death of M. Casimir-Perier, Ex-President of the French Republic and President of the National Committee.

THE ACCIDENTAL RASHES OF VARICELLA.

By J. D. ROLLESTON, M.A., M.D.Oxon.,

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THE occurrence of accidental eruptions in varicella receives but scant notice in most of the English and American textbooks. Considerable attention, however, has been given them by French authors, especially during the last fifteen years. Gintrac is usually credited with having first noted a prodromal rash in varicella, but Willan* in 1801 and Bateman† in 1813 had already described such an eruption. Regarded at first as exceptional and prodromal only, they were later shown to be by no means rare, and to be likely to develop at any stage of the disease, being premonitory like the prodromal rashes of small-pox and measles, concurrent with the specific exanthem, post-eruptive, or a combination of two or more of these forms. Cerf, writing in 1900, had collected 45 cases of accidental rashes in varicella. A search through subsequent literature has enabled me to add 14 more, excluding the 6 personal cases recorded below which have come under my own observation at the Grove Hospital in the course of the last two years.

Though accidental rashes in varicella may develop at any stage of the disease, the prodromal and concomitant ones are much more common than the post-eruptive. Examples of the latter are recorded by Charmoy, Chauffard, Comby, Cerf, Galliard, Nissim, Clemmey, Daverède, and Gillet, and below in Cases II and III.

The varieties of the accidental rashes of varicella are in order of frequency—scarlatiniform, purpuric, morbilliform, and mixed. The scarlatiniform variety is the only one represented in the cases below. Purpuric eruptions have been recorded by Bérard and De Lavit, Baader, Andrew, Lannoïse, Comby, and Rundle; morbilliform by Revilliod, Chauffard, Désandré, and Heubner; and mixed by Lannoïse and Roger.

Urticaria, which, as I have shown elsewhere, not unfrequently precedes the characteristic eruption of measles, is rarely met with in varicella. In MacCombie's case a bright erythema with numerous urticarial wheals preceded and accompanied the specific exanthem. Varicella being mainly a disease of childhood, it is obvious that most of the cases will be found in children. Cases in older patients, however, have been published by Alméras in a female of 16, by Lorrain in a male of 19, by Nissim in a female of 24, and by Metcalfe in a male of 39. The trunk is most frequently affected, but there is no site of predilection, like the abdomino-femoral region in the prodromal rashes of small-pox. Like the prodromal rashes of measles, the accidental rashes of varicella are usually of short duration, and are not accompanied by any cutaneous irritation nor followed by desquamation. These facts sufficiently explain how it is that the accidental rashes of these two diseases have not received a wide recognition in the profession. With the following exceptions there is nothing noteworthy in the previous history of the recorded cases. In a few there had been a recent pre-existent eruption. Thus one of Chauffard's patients had had measles a fortnight before. Oeconomon's case had recently had scarlet fever. One of Daverède's cases showed the eruption of hereditary syphilis. Four cases reported by Sabathé, Charmoy, Bourdineau, and Cruet respectively were convalescent from broncho-pneumonia; and two cases reported by Nissim and Lannoïse respectively were suffering from pulmonary tuberculosis. Alezais's case was a weakly child prematurely weaned. One of Daverède's cases was delicate and rickety.

From a diagnostic standpoint varicella rashes are of considerable interest. The scarlatiniform variety is most likely to cause difficulty in diagnosis. Since 1899 a total of 94 cases, or an annual average of 15·6 cases, of varicella has been admitted to the Metropolitan Asylums Board hospitals, which had been certified to be suffering from scarlet fever, probably on account of the prodromal scarlatiniform rash.

With the important exception that the scarlatiniform

* "The varicella, or chicken-pox, has been very prevalent during the summer [1797]. The eruption was generally preceded by a strong fever, and in three cases, by a vivid universal rash, similar to that which often attends the eruption of the small-pox." Loc. cit., p. 129.

† "The eruption is sometimes preceded, for a few hours, by a general erythematous rash." Loc. cit., p. 20.

rash of varicella is not followed by desquamation (vide Cases v and vi), there is no definite pathognomonic feature to distinguish it from the eruption of scarlet fever. The triad of symptoms supposed to be characteristic of scarlet fever—namely, headache, vomiting, and sore throat—may also occur in varicella. Saint Paul records two cases in which a scarlatiniform rash with faucial symptoms shortly preceded the vesicular eruption. Injection of the fauces was a noticeable feature in Case vi. The temperature may not be raised, or only slightly (Case ii), or be high, as in Cases i, iii, and iv. In Thomas's and Baader's cases the temperature was 106.8° and 104.6° respectively.

Can varicella exist without a vesicular eruption? In other words, is there a varicella sine varicellis analogous to variola sine variolis, and morbilli sine morbillis?

French writers[1] have recorded cases where the prodromal rash formed the entire eruption in small-pox. I have elsewhere[2] published a case in which the prodromal rashes constituted the sole cutaneous evidence of measles. Revilliod is the only writer who relates a similar abortive form of varicella.

Out of nine children suffering from varicella three presented at the onset a morbilliform rash on the trunk and limbs. In one patient this eruption appeared to replace the vesicles of varicella, although the other symptoms appeared sufficiently clear to justify the diagnosis of varicella sine varicellis.

The accidental rashes of varicella do not appear to have much prognostic value. It is true that they have been found in varicella gangraenosa, as in the cases reported by Staniforth, Charmoy, Augier, and Beaudoin. Of these Beaudoin's was the only fatal case. Unless accompanied by haemorrhages from the mucous membranes, as in Comby's and Rundle's cases, both of which died, the existence of purpura does not justify a sombre prognosis. In the cases of Alméras, Lorrain, and Nissim, the prodromal, and in Metcalfe's case the concomitant, symptoms were severe. It must be noted, however, that these four cases were in adults, in whom the constitutional disturbance produced by varicella is often more severe than in children. Albuminuria may sometimes be present, as in Cases iii and v. In one of Daverède's cases it was considerable, and was accompanied by much oedema of the legs.

Pathogeny.

The accidental rashes of varicella, like those met with in the other acute exanthemata, are probably septic or toxic in character, and are independent of the varicellar infection itself. Drugs and gastro-intestinal disturbance can usually be excluded from the etiology. Secondary infection may find entrance through any part of the mucocutaneous surface. The rashes are especially liable to develop when the skin is in a condition of diminished resistance owing to a pre-existing eruption. This fact accounts for the frequency of rashes that occurred in my own cases, most of which were convalescent from scarlet fever. The greater frequency of these rashes in childhood is to be explained not only by the predilection of varicella for young persons, but also by the greater sensitiveness of the nervous system and more active capillary circulation in the child. Certain individuals, too, from the mere fact of their idiosyncrasy are more likely than others to develop rashes. Authorities are agreed that the character of the eruption is determined by the degree in which the cutaneous capillaries are affected. If the paralysis is small, and is in discrete areas, a morbilliform rash results. If the vascular paralysis extends over a more considerable area a scarlatiniform rash is produced. After an extreme degree of dilatation, capillary ruptures occur, represented by the purpuric type of rash.

Case i.

Boy, aged 8, admitted November 28th, 1904, with mild scarlet fever. Typical desquamation followed.

December 4th. Varicella. Bright scarlatiniform rash on trunk most marked on back. Fauces normal. Morning temperature, 98°; evening temperature, 99°.

December 5th. 11 a.m. Erythema faded, vesicles semi-confluent on back where there is a faint diffuse erythema. Still fainter erythema on chest. Morning temperature, 99.4°; evening temperature, 102°.

December 6th. Erythema faded. Morning temperature, 98°; evening temperature 100.4°.

December 7th. Temperature normal.

Case ii.

Boy, aged 2, whose brother had developed chicken-pox on January 26th, was admitted with scarlatina anginosa on February 1st, 1905.

February 6th. Varicella. Morning temperature, 98.6°; evening temperature, 99.6°.

February 7th to 9th. Fresh vesicles. Temperature, 98° to 101°.

February 10th. General desiccation. Faint generalized erythema of trunk and limbs. Morning temperature, 100°; evening temperature, 99°.

February 11th. Erythema still present on trunk, but faded on limbs. Morning temperature, 99°; in the evening and subsequently the temperature was normal.

February 12th to 13th. Erythema still present.

February 14th. Erythema faded.

The autonomous existence of scarlet fever in this case is proved by the character of the onset, characteristic desquamation, and the supervention of otorrhoea.

Case iii.

Boy, aged 3, admitted February 28th, 1905, with scarlatinal nephritis. The rash had occurred a fortnight before.

March 11th. Varicella.

March 12th to 14th. Fresh vesicles. Temperature 98° to 105.2°.

March 15th. Punctate erythema of trunk and limbs. Morning temperature, 98.2°; evening temperature, 101.4°.

March 16th. Erythema still present. Morning temperature, 99°; evening temperature, 100°.

March 17th. Erythema faded. Morning temperature, 99°; evening temperature, 98°.

Case iv.

Girl, aged 5, admitted March 29th, 1905, with mild scarlet fever. Characteristic desquamation followed.

April 8th. Varicella. Morning and evening temperatures, 98°.

April 10th. Numerous fresh vesicles. Faint punctate erythema on trunk; most marked in hypogastrium. Morning temperature, 100.2°; evening temperature, 104.2°.

April 11th to 12th. Erythema still present. Temperature, 100° to 102°.

April 13th. Erythema faded. Morning temperature, 100°; evening temperature, 102.4°.

April 14th. Temperature normal.

Case v.

A girl, aged 3, was admitted November 3rd, 1905, certified to be suffering from scarlet fever. She had had a sore throat on November 2nd, and a rash had appeared the same day. On admission there was an indefinite erythema on the back. Fauces normal. Vesicles of chicken-pox on body and limbs. Trace of albumen in urine. Temperature 101.6°.

November 4th. Temperature normal. Erythema faded. No subsequent desquamation.

Case vi.

A boy, aged 9 months, was admitted December 18th, 1905, certified to be suffering from scarlet fever, on the first day of disease. On admission there was a punctate erythema of trunk and limbs. Fauces injected. Temperature 101°.

December 19th. Varicella on face and trunk. Erythema still on chest and limbs. Fauces still injected. Morning temperature 98.8°; evening temperature 99.2°.

December 20th. Erythema fading. Morning temperature 97°; evening temperature 99.2°.

December 21st. Erythema gone. More vesicles on trunk. Morning temperature 100.4°; evening temperature 99.8°.

December 24th. Temperature normal. No desquamation occurred.

I am indebted to Dr. J. E. Beggs, Medical Superintendent of the Grove Hospital, for permission to publish these cases.

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MERYCISM OR RUMINATION IN MAN.

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I WAS much interested in reading the article by Dr. Brockbank under the above title in the BRITISH MEDICAL JOURNAL of February 23rd, as when in England I had a case in many respects similar to that related by a "professional gentleman" in Dr. Brockbank's paper. The patient in my case also was a young professional man of about 28 years of age, and rumination had first occurred some ten years ago when he was studying at college. As in a majority of the cases cited by Dr. Brockbank, the rumination occurred most frequently after dinner, and it was mostly meat that was regurgitated, though other substances—such as bits of vegetable, etc.—also came up. It was only very rarely that fluids were regurgitated. The process would start a short time after the completion of the meal, usually within a quarter of an hour, and a mouthful or two would come up at a time without any voluntary effort on his part, and quite unaccompanied by any acid eructations or pyrosis. The patient seldom brought up more than eight or ten mouthfuls altogether, and never went so far as to rechew a whole meal. At first he used to spit out the mouthfuls as they were regurgitated, but by-and-by, as there was no disagreeable taste accompanying them, he got into the habit of chewing them over again and reswallowing them, finally reaching the stage of quite enjoying the process of rumination, more especially if the food regurgitated were anything he particularly liked.

When I saw him this curious idiosyncrasy had been in existence for some ten years. The habit did not seem to worry him at all, and, as a matter of fact, I only came to know about it accidentally. In his case there was no family history of such a habit; his father and mother both had good digestions, and, of several brothers and sisters, none were affected. At the time I set it down to a somewhat anomalous form of atonic dyspepsia, although at a loss to account for the rumination of food without any other unpleasant symptoms. The regurgitation in this case, however, was not constant, and the patient himself said it varied largely with his general health, being much worse and more frequent when he was working hard at college and feeling "run down" than during the vacation, when he was taking plenty of exercise and feeling in "good form." Unlike a number of Dr. Brockbank's cases, he at no time suffered from constipation. On the other hand, he had occasional bad attacks of flatulence, accompanied by pain; these, however, were very infrequent, though, generally speaking, he appeared to have a "weak" digestion. His stomach was particularly intolerant of fat, and, as in a number of Dr. Brockbank's cases, bits of bacon used to come up, a mouthful at a time, after breakfast. He also illustrated in a marked degree what one might almost call a "selective" action of the stomach in regurgitating certain articles of food and not others (see Dr. Brockbank's paper, p. 423). In the case of my patient the regurgitation was certain to occur after eating fat, even if swallowed unconsciously—for example, if he had partaken of a stew or curry in which small pieces of fat were mixed up with meat, etc., whether anything else were regurgitated or not, these bits of fat were certain to be returned shortly after the meal was concluded. Even when his general health was at its best and he was not bringing up his food as a rule, if he inadvertently swallowed a bit of fat it was absolutely certain to be regurgitated. The fat he did not rechew but always spat out, as he did not like it. In the case of the food he did rechew—meat, etc, but principally meat—he had no more trouble with it after he had reswallowed it.

It is a very curious thing that when he was ruminating little the food returned would usually be of an indigestible nature—for example, bits of gristle, skin, etc., as if his stomach were pointing out that these bits needed more mastication than the rest, if that organ were not to be overtaxed. In the case under notice smoking had no effect in preventing the rumination.

Another point of interest is that the actual rechewing and reswallowing of food was distinctly secondary to the regurgitation and might be spoken of as an "acquired" habit, as the patient had been regurgitating and spitting out his food for some time before he began to rechew and reswallow it.

Except for this peculiarity of merycismus the patient was in good health—in fact, of very active habits, going in for gymnastics, golf, cycling, swimming, etc.—and, although not fat, had not lost weight during the ten years he had been ruminating.

I should be inclined to class this case in subdivision (6) of the varieties of merycism as classified by Lemoine and Linossier and quoted in Dr. Brockbank's paper.

In conclusion, I may state that I had this patient for a long time under observation, and was enabled to verify personally all the facts stated.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

TWO CASES OF DIAPHRAGMATIC HERNIA.

SUCH anomalies are uncommon. During the four years that I have been in charge of the public mortuary at Hong Kong, only these two cases have been found.

CASE I.—The child was stillborn. The defect in the diaphragm was on the right side. Through this, part of the stomach, the greater part of the small intestines, the omentum, and a fold of the large gut had passed. The heart was displaced to the left. The left lung was fully developed, the right being only about one-third of its normal size, and lying posteriorly. The serous membranes of the peritoneal and right pleural cavity were continuous through the cleft in the diaphragm. The other organs were normal.

CASE II.—The child was stillborn. The defect in the diaphragm was on the left side. Through this the entire stomach, the majority of the folds of the small intestine, a large loop of the large intestine, the omentum, and the spleen had passed into the left pleural cavity. The other organs were normal.

According to Arnheim, about 400 cases had been reported up to 1896. The condition is also found in animals. They are not true hernias, in that there is no sac. Most authorities are agreed that the left side of the diaphragm is the seat of predilection for such a condition. In my own cases, however, one existed on the right, the other on the left side of the diaphragm.

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CONGENITAL MALARIA.

A CASE of congenital malaria has lately come under my notice. Briefly, the facts are as follows: The mother of the child suffered from malaria during the early months of pregnancy, and it was on this account that she left Africa and came home. She had been over four months in England when the child was born, and had been living at a South Coast watering place.

I saw the child in March, when it was 7 weeks old. The parents had not noticed any symptoms except the obvious and intense anaemia, and it was on this account that they consulted me. On examining its blood I found numerous malarial parasites of the malignant type.

I propose to publish fuller details later, but send this preliminary note in the hope that by doing so I may learn whether any indisputable cases have been previously reported. I believe the possibility of malarial infection *in utero* is denied by some authorities, and it would seem important, therefore, to draw attention to the fact that it can occur.

London, W. R. U. MOFFAT, C.M.G., M.B.Edin.

FRACTURE OF THE LACRYMAL BONE WITH PERFORATION OF THE LACRYMAL SAC.

H. J. T., aged 36, whilst boxing on October 9th, 1906, received a somewhat severe blow over the left eye. He retired to his room, and half an hour later a slight tickling sensation in his nose caused him to sneeze, when, to his astonishment, the whole left side of his face "blew out like a balloon," to use his own expression. I saw him a few minutes later, and found extensive emphysema of the left upper and lower eyelids and side of the face. The ciliary margins of the eyelids were in contact and buried beneath the swollen doughy palpebral folds, the upper being festooned over the lower, completely occluding the cornea. There had been no epistaxis and the patient felt no pain in fact, could not desist from laughing at the ludicrous figure he cut in the looking-glass.



Puncture of the left lacrymal sac by one or more fragments of the left lacrymal bone was diagnosed. Equable pressure with a pad of cotton-wool and bandage soon resulted in the absorption of most of the air from the areolar tissue. A curious symptom, caused doubtless by the irritation set up by the bone spicules, was an irresistible inclination on the part of the patient to sneeze at frequently-recurring intervals. Unfortunately, each time he did so, and in spite of the dressings, the air distension reappeared. However, it was found that by placing the tip of the forefinger over the inner canthus, and gently but firmly pressing backwards and inwards during the expiratory effort, air could be prevented from entering the subcutaneous tissues.

Epiphora was present for the first week only, and in less than a month all signs of injury to his lacrymal apparatus had disappeared. The accompanying photograph was taken four hours after the accident.

C. MARSH BEADNELL,
Fleet Surgeon, R.N.

CALCIUM CHLORIDE IN HAEMORRHAGE.

I was surprised to see that Dr. Davidson had not prescribed calcium chloride in his interesting case of recurring epistaxis, especially as the patient's history showed such a marked haemophilic tendency; the value of this drug seems to be very much underestimated in cases of haemorrhage. I have had some very striking results myself during the past eight years, not only in the treatment of haemorrhage but also of chilblains. The action of the drug is rapid if given in sufficiently large doses. I remember being called in the middle of the night to see a medical man who was suffering from haemorrhage after the removal of two lower molars (he was suffering from chronic leucocythaemia). Naturally he had tried all the remedies that he could think of before sending for me, including, amongst many others, adrenalin chloride and pressure, but the bleeding had persisted for twelve hours. I ordered him to take 20 grains of calcium chloride every hour (now I should order drachm doses). He told me the next morning that the haemorrhage ceased after the third dose. Before doing any intranasal operation I always insist upon the patient having full doses of this drug for three days. Since I made this rule I have never had any troublesome haemorrhage, nor have I had to plug a nose.

Lincoln. A. STANLEY GREEN, M.B., B.S.

"ENTEROSPASM" CAUSED BY LEAD POISONING.

HAVING recently held a *post mortem* examination on a dog suffering from lead colic, which was killed (as mad) during an attack, the conditions found were so identical with those described by Dr. Ashe in the BRITISH MEDICAL JOURNAL for March 2nd, that the question arises whether the case cited was not really our old friend lead colic, or some form of enteralgia due to toxic irritation of the splanchnic terminals. The facts of the case were as follows:

A painter who was painting a large block of new flats, having suffered from petty thefts, decided to keep a dog in the shed where his paints were stored. The dog was fastened day and night among the kegs of dry paint, the chief being white lead, which lay over the floor in a thick dust. The dog's food was thrown on to this floor, and much of the white lead dust found its way into his water bowl. In a few days he became very constipated, refused food, sickened, and died.

In spite of warning the painter obtained another dog, which soon developed the same symptoms; but, in addition, this dog had attacks of acute pain, with every appearance of extreme agony, yelping continuously. In one of these attacks he broke away, and with terrible howls flew up and down the stairs, through the grounds and into the new buildings, to the terror of the workmen, who considered the dog mad. One man, more courageous than the rest, seized the dog in a bag and straightway drowned it.

In a few minutes the abdomen was opened, and the small intestine was found hard and contracted, being about the diameter of a large earthworm, and feeling like that when rolled between the fingers. The stomach contained a small quantity of undigested food and the rectum some hard faeces.

There is no doubt there was a condition of "enterospasm," which would probably be commonly found if only abdominal sections and *post-mortem* examinations were made during attacks of colic, or before the *ante-mortem* spasm has had time to pass off; it would seem to be a well recognized though not often visually seen *symptom*, but not a "disease," as suggested by Dr. Ashe.

HORACE R. WILSON, M.R.C.S., L.R.C.P.

Willesden, N.W.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

BIRMINGHAM WORKHOUSE INFIRMARY.

TETANUS FROM SELF-INFLICTED WOUND: SERUM INJECTION: RECOVERY.

(Reported by E. R. THOMPSON, M.B., Ch.B.)

A MAN, aged 30, well made, a labourer by occupation, was admitted under the care of Dr. T. Sydney Short on September 30th, 1906. He was unable to give any reliable account of himself, for although he seemed mentally clear, it was found afterwards that many of his statements about himself were incorrect.

Previous History.

The history of the case, as given by the patient and as derived from the report received from Dr. Murray, who attended him before his transfer here, was as follows: On September 2nd, nearly three weeks before admission, he had had a drinking bout, and was found with an incised knife wound at the bend of each elbow, admittedly self-inflicted. He had been under medical treatment for his wounds, and on the fifteenth day after the injuries it was

noticed that he had contraction of the muscles of the right arm and painful spasms.

Condition on Admission.

On September 20th he was found to be suffering from severe general tetanic spasms, occurring at intervals of from one to three minutes. The muscles generally of the body and limbs were affected; marked risus sardonicus was present, but only slight opisthotonos. Each spasm was accompanied by pain of a cramping nature—not so severe as eventually developed, but enough to make him call out—and also by severe respiratory embarrassment, with flushed and cyanosed face and hissing respiration. In the short intervals between the spasms the general muscular contractions passed off, but the back appeared cramped, and the whole of the right arm was stiff in a semiflexed position, the muscles being hard and firm. The right hand was closed, and the fingers could only be straightened by strong passive extension. The muscles of the right shoulder were affected similarly, but to a less degree. Any movement of the legs, active or passive, caused clonic spasms, continuing as long as any effort was made. The knee-jerks were very active, a slight tap on the patellar tendons producing a state of clonus for several seconds. A similar condition occurred at the ankles. There was no difficulty with micturition or defaecation. The wound at the left elbow was healed; at the right it was open for 2 in. in length and ½ in. in depth and suppurating.

Treatment.

The wound was immediately opened up, scraped, swabbed with pure carbolic acid, and covered with a simple dressing. It healed in a few days.

On admission, at 3 p.m., chloral hydrate, 30 grains, was ordered every four hours by the mouth. At 8 p.m., and again at midnight, 10 c.cm. of antitetanic serum were injected subcutaneously.

The next morning the spasms were less frequent, only about one in fifteen minutes; the patient was in a very drowsy condition. The chloral was stopped until evening and then given again, 20 grains every four hours, and continued. During the afternoon the spasms became more severe and more frequent. Liq. morph. acet., ♏ x, was given by the mouth, and the patient slept for short intervals, waking up each time with severe spasms. There were no twitching movements during sleep. At night three more 10 c.cm. doses of serum were injected at intervals of four hours.

The next day, September 22nd, the pain both during and between the spasms became more severe; the muscles of the back were now very stiff. Morphine was given freely on September 23rd, as the condition was manifestly worse, chloroform was administered at intervals, and the patient kept under morphine in between the inhalations. This treatment was continued during the next six days. During this week there was constant severe abdominal pain from tonic contraction of the abdominal muscles. The spasms, although less frequent, were more severe and accompanied by great pain unless relieved by the chloroform or morphine.

On September 27th he improved a little. The spasms were slighter and less frequent, but his general condition was one of great weakness and mental depression. He seemed scarcely answerable for his actions, and was foul in speech and dirty in habits.

On October 6th, sixteen days after admission, he was feeling well, but the right arm was still slightly stiff; the knee-jerks were exaggerated, and ankle clonus could be elicited.

After another ten days he could walk about, although still stiff generally. He gradually improved, and by October 23rd, when he was discharged, his reflexes and mental condition were normal.

When seen again a month later, he was doing well.

REMARKS BY DR. SHORT.

So far as clinical observation went, there was no evidence that the injection of the antitetanic serum had any beneficial effect upon the condition of the patient. The spasmodic contractions were certainly worse after, but not necessarily on account of the injections. The chloroform inhalations appeared to give him the greatest relief, and the gradual recovery seemed to date from the diminution both in force and frequency of the attacks, following the administration of this drug.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

YORKSHIRE BRANCH: BRADFORD DIVISION.

Bradford, Tuesday, April 9th, 1907.

BASIL HALL, M.B., B.C., F.R.C.S., in the Chair.

Acute Mental Excitement.—The CHAIRMAN introduced Dr. BEDFORD PIERCE, of the Retreat, York, to the meeting, who read a paper on states of acute mental excitement, with remarks on prognosis and treatment. Dr. Pierce said that the appearance of mental disease in a family was a calamity of the first magnitude, and the position of the medical man who was consulted was frequently most perplexing. His difficulties were increased by the confusion that existed in the classification of the forms of mental disorder, no two authorities agreeing together. Dr. Pierce claimed that it was now becoming possible to distinguish certain clinical groups, each possessing characteristic features that justified the physician in drawing conclusions as to prognosis. Acute mental excitement was apt to occur in the following seven conditions: Acute delirium, confusional insanity, maniacal-depressive insanity, alcoholism, general paralysis, dementia praecox, and epilepsy. In considering these, delirium and confusional insanity were found to be closely allied; in both there was incoherent thought and speech, clouding of consciousness with disorientation, hallucinations being common, delusions fleeting and variable. After the attack there was rarely complete memory of what had happened. Heredity as a rule played little part in the causation, which was due to toxaemia, and recovery was generally perfect if the patient survived the early acute stages of the disorder. As the patient approached convalescence there was found a marked leucocytosis, and the examination of the blood was helpful both in diagnosis and prognosis. Much included in the term "confusional insanity" was described as acute mania in textbooks. The excitement occurring in maniacal depressive insanity, mania in the modern restricted sense, was recognized by an acceleration of the mental processes, the flight of ideas, feeling of increased fitness, great motor activity, often destructiveness and delusions of an expansive nature, usually without hallucinations, disorientation, or any loss of consciousness. There was generally marked neurotic inheritance. The prognosis was good for the attack itself, but relapses were very common, also subsequent attacks of depression. Dr. Pierce quoted a number of cases in illustration of those forms of mental disorder, and briefly gave the distinguishing features of the other varieties mentioned. In the diagnosis of general paralysis the combination of both mental and physical symptoms was important, neither alone being sufficient; in most cases there were very early some distinct signs of mental enfeeblement. Mental disturbance occurring in the course of alcoholism was often very difficult to distinguish from general paralysis. The mental excitement appearing in the course of dementia praecox was usually dependent upon vivid hallucinations, and the diagnosis was generally manifest from the other symptoms: the mental inaccessibility, emotional indifference, possibly a long insidious history, and the presence of peculiarities in gesture, grimaces, or stereotyped attitudes. Some remarks on treatment followed. The use of sedatives in acute excitement with sleeplessness was strongly discouraged unless other remedies failed and the patient showed objective signs of failing strength. Mention was also made of the importance of regular feeding in acute delirium, and also the value of saline rectal injections in lessening excitement and improving the general condition. In conclusion Dr. Pierce dwelt upon the harm frequently done by the deception of patients and that in not a few cases their confidence in their relatives and every one about them was shattered by a lack of straightforward dealing. He alluded also to the great importance of obtaining the services of specially trained nurses, and said that if they could realize their hopes as to specific treatment, good nurses would still be needed. They could not afford to neglect the influence of mind upon mind, and should endeavour to secure for their patients a restful mental atmosphere in which they will be exposed

to a silent and continuous bombardment of healthy influences. Dr. Gilmour (Medical Superintendent, Scalebor Park Asylum) wished to thank the speaker for his excellent paper, and mentioned the difficulties in the early diagnosis of general paralysis, particularly those cases where the spinal symptoms predominated. He also referred to the initial symptoms in cases of dementia praecox. As regards treatment, he had seen recovery follow two cases of gastro-enterostomy and one case of fixation of a movable kidney. At the present time he was injecting nucleinic acid with a view to producing a leucocytosis, and in certain cases the results were favourable. In cases with muscular inertia and weakness following influenza the formic acid preparations were valuable. Dr. S. Lodge asked if Dr. Pierce thought that general paralysis could be got without syphilis. Dr. Campbell proposed a hearty vote of thanks to Dr. Pierce, and stated that one of the great difficulties in mental states was to know which was the proper time to put the patient under restraint. Dr. Hime seconded. He considered the paper an admirable one, and thought it somewhat strange that they had so few papers on mental subjects. He hoped that Dr. Pierce might have touched on the subject of the responsibility of persons mentally weak, as two or three somewhat notorious cases of this character had recently been before the public. The vote was put to the meeting by the Chairman and received with acclamation. Dr. Pierce thanked the meeting for the way in which he had been received. It had given him the greatest pleasure to be there and to read his paper. The meeting then terminated, but a social gathering was continued for an hour longer.

Bath and Bristol Branch.—At an ordinary meeting held at Bath on April 24th, Dr. D. S. Davies, President, in the chair, Dr. W. P. Kennedy read a paper on liver abscess, which was discussed by Dr. Michell Clarke and Dr. Charles.—Dr. R. Waterhouse read notes of a case of osteitis deformans, and showed bones which had been in the Museum of the Royal United Hospital since 1869 demonstrating the ordinary deformation produced by that disease. Comments were made by Dr. Preston King, Dr. Walker Dunbar, Dr. Michell Clarke, and Dr. Charles.—Dr. Paul Franze of Nauheim demonstrated the use of the orthodiagraph in *x*-ray work, and showed his modification of the instrument. In the discussion which ensued the following took part: Dr. Bowen, Dr. Preston King, and Mr. Scott. The President, on behalf of the Branch, congratulated Dr. Franze on the interesting nature of his communication, and thanked him for the trouble he had taken in giving the demonstration. The instruments and apparatus were sent for the occasion by Mr. K. Schall, of New Cavendish Street.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Clinical Evening.

Mr. H. Clutton, M.A., M.C., F.R.C.S., President, in the Chair.

Friday, April 26th, 1907.

Filigree Implantation.

Mr. Lawrie McGavin showed two cases of large ventral hernia treated by implantation of very large filigrees of silver wire. The first, a woman aged 58, had hernia at the site of an operation done a year before, the gap measuring 5 by 4 in. The whole cicatrix was removed by an elliptical incision 11 in. long. The external oblique aponeurosis was for a distance sutured to the posterior sheath of the rectus muscle and upon this as a bed, the filigree, measuring 8 by 4 in., was laid beneath the rectus and deeper tissues which were sutured over it as far as possible whilst the left rectus muscle was partly sutured across the middle line to fortify a weak spot. Thirty-five Michel clips were used to close the skin and superficial fascia. No belt had since been worn. The second, a woman had a very large hernia following an operation for appendicitis a year before. The gap measured 7 by 5 to 6 in., and the abdominal contents were constantly protruded into the sac when she stood up. The hernia was treated as in the former case. The patient had since worn no belt. In a third case, also shown by Mr. McGavin, a huge inguino-scrotal hernia had been treated in a similar fashion, and a radical cure effected.

Mr. Douglas Drew also exhibited two cases illustrating the use of a filigree of silver wire in the radical cure of umbilical hernia. Both patients were mothers, aged 49 and 41 respectively; the treatment in each case had been entirely successful.

Mr. A. E. J. Barker thought the results most encouraging, whilst the method saved time and manipulation. He had used interlacing wire in about 30 cases, and in two instances had subsequently to remove it. In cases of large herniae it was sometimes difficult to replace all the rupture without embarrassing the diaphragm, and he had occasionally refused to operate for this reason.

Mr. McGavin had not met with this difficulty. In his 15 or 16 cases he had never had to remove the filigree. He put it between the rectus muscle and its posterior sheath.

Mr. Drew commented on the ease and rapidity with which the filigree was inserted beneath the rectus muscle in umbilical hernia.

Habitual Dislocation of Patella.

Mr. Drew showed a girl, aged 13, who, when 6 years old, had severe genu valgum and dislocation of patella when the knee was flexed. McEwen's femoral osteotomy was performed in 1900. The present condition was still much the same. On flexing the knee the patella slipped completely over to the outer surface of the external condyle, whereas, when the knee was extended, it lay over the external condyle. It was suggested to treat the case by dividing the capsule on the outer side of the patella and by shortening up the capsule on the inner side, and if necessary deepening the patellar surface of the femur.

Mr. W. G. Spencer advised excision of the patella, care being taken not to damage the aponeurosis.

Mr. D. Drew recalled a case operated upon in the manner suggested by Mr. Bilton Pollard in 1891, with a perfect result.

Acute Ataxia.

Dr. F. E. Batten exhibited 3 boys. In one, aged 6, the illness followed general convulsions and coma after measles three years ago. He now walked fairly well, but was unsteady, his articulation slow and hesitating. The second patient had been ill since April 1st, when he had headache, vomiting, and nine days later was found to have ataxia of both legs, and some ataxia of one hand. He had rapidly improved. Case 3 had always been backward, and for seven years had had attacks of petit mal. In September, 1906, he had 130 fits and was unconscious for three days, and had not since been able to walk, his gait being wildly ataxic. Under treatment he had improved very slowly, as was generally the case. The prospect, however, was favourable. Slighter cases recovered completely; severer cases also usually recovered, but slowly. Dr. Frederick Taylor had a case that in three years showed only slight improvement, but had perfectly recovered twenty-five years later.

Modified Pirogoff's Amputation.

Mr. A. Gordon Watson exhibited two men, aged 30 and 20 respectively, who had had severe talipes equino-varus following infantile hemiplegia, upon whom he had operated a year ago, doing tenotomy of tendo Achillis, subcutaneous division of all contracted tissues in the immediate neighbourhood, excision of astragalus, and amputation of foot in front of os calcis, removal of internal malleolus and cartilage from lower end of tibia, removal of cartilage from external malleolus, and removal of small portion of anterior extremity of os calcis. Each patient could walk well, and had a very comfortable stump.

The President commented on the excellent result of this new operation, which enabled the patient to walk on the sole of his foot and not upon soft skin. The incision adopted would correspond to that for a "Syme" rather than a "Pirogoff."

Encephalitis Chiefly Affecting the Mid Brain.

Dr. Reginald Miller showed a boy, aged 5, suddenly taken ill six months ago with a convulsion, followed by three weeks' unconsciousness. He was afterwards unable

to walk or talk, and had some rigidity of right arm and leg, weakness of right side of face and right external rectus, with slight lateral nystagmus. He also had extreme emotionalism. The facial and ocular signs quickly cleared up, and he could now walk, but could not speak intelligibly. Recovery had been slow but continuous.

TUMOUR OF TONGUE.

Drs. W. G. STONE and F. NORMAN exhibited a boy, aged 5, who had severely bitten the right side of his tongue three years ago. A tumour arose at the spot as large as a hazel nut. It was bitten again a week ago, and had since increased quickly and become purple.

Mr. A. E. BARKER considered it a case of mixed lymphatic naevus.

Dr. STONE, in reply, said no tumour had been noticed before the first bite.

LIVERPOOL MEDICAL INSTITUTION.

FRANK T. PAUL, F.R.C.S., President, in the Chair.

Thursday, April 18th, 1907.

CHRONIC SUPPURATIVE OTITIS MEDIA.

MR. E. M. STOCKDALE read a note on the above based upon a series of cases which included 60 radical mastoid operations. He drew special attention to the importance of skin grafting in certain cases. His experience showed that the hearing was often improved by the radical operation, and thus the danger of allowing the disease to run its course was much greater in every respect than the risk even of the radical operation.

Dr. W. MILLIGAN thought the great difficulty was to determine the point at which local treatment should be given up and operative treatment instituted. For localized disease in the epitympanum and in the antrum, removal of ossicles and the outer attic wall or Stacke's operation was, as a rule, sufficient. The chief difficulty in practice was to determine the extent of the disease in the accessory cavities of the ear. An exploratory operation, followed if need be by a complete radical operation, was frequently indicated in chronic cases.

THREE UNUSUAL CASES OF EMPYEMA.

Dr. W. B. WARRINGTON read notes of and commented on the following cases:

1. Empyema latent for over a year in a boy of 17. There were very few symptoms, and spontaneous cure followed rupture of the empyema through the lung.

2. Empyema limited to the upper part of the thorax following pneumonia occurring in a patient who had six years previously had an empyema which had been opened in the usual infrascapular site.

3. Empyema in a boy aged 8 years. The physical signs were unusual—extended hyper-resonance, with amphoric breathing, coin sound and metallic tinkling, depression and rotation of the liver, and an area of movable dullness in the lateral and basal regions of the right thorax. The exhibitor considered the symptoms were such as could be caused by air and fluid in the pleural cavity, though evidence as to the cause of a pneumothorax was wanting.

THE DIAGNOSIS OF ABNORMAL CHEST CONDITIONS.

Dr. JOHN HAY read notes of the following cases:

1. *Actinomycosis of the Lung Simulating Pulmonary Tuberculosis; Embolic Pyaemia; Death.*—A girl, aged 16, suffered from great dyspnoea, cough, and anaemia; had been losing weight for six months; pulse 160 per minute; signs of consolidation at the apex of the right lung. Three weeks later numerous abscesses had formed.

Actinomycosis of the lung was diagnosed with a secondary actinomycotic pyaemia. This diagnosis was proved to be correct by subsequent examination of the pus.

2. *Centrally-placed Empyema not Discovered by Frequent Exploratory Aspirations.*—A woman, aged 34, was admitted into the Stanley Hospital five weeks after a difficult confinement, suffering from pain in the chest, pyrexia, and cough. Ten days before admission she had a rigor and pain in her left side. Exploration of the chest gave a negative result. Later the spleen was enlarged, the temperature remained elevated, and there was leucocytosis. Widal reaction negative. Exploration on two more occasions failed to locate pus, but finally it was found below the costal margin and the abscess was drained. The patient died the next day.

The autopsy revealed an empyema in front of the root of the right lung adjacent to the pericardium. The pus had travelled down through the diaphragm and formed a subphrenic abscess. The recent delivery, the rigors, continued temperature, the normal position of the apex beat, the enlarged spleen, severe anaemia, and the failure to strike pus, all added to the difficulties.

3. A man, aged 36, with marked dyspnoea, cough, recurring haemoptysis, cardio-pulmonary murmur audible at the mouth, but with slight physical signs, had contracted syphilis when aged 27. He first began to suffer from lung symptoms five years ago. The *x* rays showed some fibrosis, especially at the root of the right lung, the apices were clear, the right side of the diaphragm limited in its movements. There was no history of night sweats nor of any abnormal temperature, and there was no expectoration.

Under treatment by mercury and potassium iodide the dyspnoea had greatly diminished, the cough had almost disappeared, the man's weight had increased, but the cardio-pulmonary murmur remained unaltered.

Dr. T. R. GLYNN referred to a case of actinomycosis in an elderly man, apparently commencing in the lung, which he had seen with Dr. Thacker King. The early symptoms were harassing cough with the expectoration of blood and sanguineous mucus: the later, the development of a tumour on a leg in which the ray fungus was found. The mode of infection was not discovered.

Dr. T. R. BRADSHAW, in discussing Dr. Warrington's cases, drew attention to the difficulty of distinguishing between empyema of the apex and a pulmonary abscess pointing in the same situation.

Dr. P. MARSH was astonished that so large a collection of fluid should cause so small an area of dullness as was shown in Dr. Warrington's diagram, and he doubted whether the pleural cavity of a child of 8 years would have a capacity to hold much air in addition to 40 oz. of pus and compressed lung. He asked whether there had been any escape of air when the pleural cavity was opened by the surgeon, and whether an exploratory puncture had been made before the signs of pneumothorax had appeared, as this operation had been known to cause pneumothorax.

Dr. WARRINGTON answered in the negative.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—At a meeting of the Section of Obstetrics on April 12th, Sir A. V. MACAN in the chair, Dr. SPENCER SHEILL exhibited a chart showing diagrammatically the dates and occurrences during three years in the life of an *Eclamptic patient*. About 1900 nephrectomy was done for tuberculous left kidney. In 1904 the patient married and became pregnant. The remaining kidney, having the extra strain of pregnancy put upon it, began to fail; and in March, 1905, when about six months pregnant, she went to him suffering from eclampsia. Induction of labour was satisfactorily done, but the child was lost. In August of the same year she became pregnant again. The usual treatment was adopted, and as far as the kidney was concerned it was fairly satisfactory. In December of the same year the kidney again showed signs of failure. In the following January, when about eight months pregnant, the symptoms became so marked that he determined to induce labour. He delivered her of a living child, and about three hours afterwards she had an eclamptic seizure. Although warned as to the danger of a third pregnancy, she again became pregnant, and in November of that year the kidney showed symptoms of rapid failure. After consultation with two other doctors, it was determined, in December, 1906, when only three months pregnant, to save her life by emptying the uterus. This was effected under anaesthesia, and in about three days the amount of urine became normal. In January of this year it was thought advisable to prevent any further pregnancy, and after consultation, and with the leave of the husband and the patient, her Fallopian tubes were resected. The chart raised certain points of interest, such as the postponement of marriage for at least three years after the removal of one kidney, the desirability of inducing labour and of sterilization, and the significance of the amount of urea in the urine. If he had gone by the amount of albumen he would never have done anything with the case; it never rose beyond 0·15 per cent., whereas the amount of urea excreted fell as low as 7½ grains per ounce in 14 oz. in twenty-four hours. The CHAIRMAN asked if the urine was examined between the pregnancies, and whether she had a very small quantity of urea. Dr. SHEILL replied that the kidney was functioning absolutely normally between the pregnancies, and was quite capable of carrying on its work. The urine was examined at very

frequent intervals in order to be quite sure on that point. Dr. Hastings Tweedy said the result had absolutely justified the treatment, but he had never heard of a woman being deliberately sterilized when no symptoms were present, and when there was no suggestion that she would ever become pregnant again. He did not suggest that anything but the right thing was done, but it was a very bold procedure, and if he had to contemplate such an action he would be very glad to be able to refer to the record of a successful result in a case of a similar kind. Dr. Jellett could not agree with Dr. Tweedy as to the particular boldness or rarity of removing the tubes for renal disease. It was on all-fours with the very old treatment of osteomalacia. One could not wait until pregnancy in order to resect the tubes. He could not look on the patient as being a healthy woman. Her kidney might be acting at one time, but it was amply proved that it would not act under the adverse circumstances of pregnancy. Dr. Kirkpatrick instanced a case of a girl of 20 who became pregnant last year and had eclampsia at the time. She died with all the symptoms of failure of the kidneys. At the *post-mortem* examination they found she had old and chronic tuberculous disease of one kidney, which had completely destroyed its function; the other kidney was amyloid. She recovered from the eclampsia, but died some months afterwards from failure of the single kidney. Dr. Horne said that, considering the age of the patient (28) and her apparent fertility, he thought the action taken perfectly justified. If Dr. Sheill had allowed her to become pregnant again he would probably have had to repeat the former operation with less favourable results. In his experience albumen was always found persisting in the urine six and eight months after delivery where eclampsia had occurred. The Chairman agreed with Dr. Horne. Dr. Sheill, in reply, said the patient was not on an absolute non-nitrogenous diet except when she was showing kidney insufficiency. Between pregnancies she was on a mixed diet, but warned against taking a usual amount of meat.

Glasgow Medico-Chirurgical Society. At a meeting on April 19th, Dr. J. Lindsay Steven, President, in the chair, Mr. H. Clutterbuck read notes of (*a*) a case of *Cerebellar abscess* following otitis media. The patient, a boy of 14 years, had been previously resident in a medical ward, when his chief complaint was of headache and dizziness. Under treatment the symptoms disappeared, and he was sent to the convalescent home with a view to bettering his general condition before operation. On readmission he suffered from frontal headache and was dull, apathetic, dusky and livid. Pulse 52 to 62. After the radical mastoid operation the pulse ran up to 116, but soon fell again. Six days after he became suddenly insensible and livid. Respiration failed and he died. Miss M. Hannay performed the *post mortem* examination and found a cerebellar abscess. There was no suppuration at the base of the brain. Granulation tissue was found around the eighth nerve. (*b*) A case of fat embolism of the brain after a simple fracture of the leg. Dr. H. Wright Thompson read notes of a case in which, three months after the mastoid operation the internal jugular vein was ligatured for sinus thrombosis. The patient's vision then failed rapidly and the left eye became quite blind, but the right eye improved temporarily. The external appearance of the eyes was normal. Vision of right eye . . . She was unable to recognize colour in the central field of vision. Peripherally blue and white were partly recognized. The optic discs were very white, with irregular margins. The lamina cribrosa was invisible. A month later the vision of the right eye was $\frac{6}{9}$; colours were recognized. The papillitis in this case was considered to be secondary to the retro-ocular neuritis. The case was probably of toxic origin, from an attack of influenza she had had before the operation and from the septicæmic condition. Dr. J. Stoddart Bain showed (*a*) three cases operated upon for empyema of the mastoid cells in which the resulting cavities were filled with the *Iodoform wax of Mosetig Moorhof*. In all the cases there had been a history of pain in the ear profuse otorrhœa, with swelling and tenderness over the mastoid region for from five to nine weeks. On operation extensive purulent disintegration of the mastoid cells was found in every case, but only in one was it necessary to open the antrum, which was slightly involved. In another of the cases the disease had extended backwards so as to expose the sinus wall and neighbouring dura mater. In Case I six days, in Case II nine days, and in Case III twelve days passed after the mastoid operation before the cavities were filled with the iodoform wax. Healing was complete in sixteen, eighteen, and twenty-one days respectively after the vertical cells had been curetted. In all the cases the otorrhœa had ceased, the post-auricular scar was slight, with no depression, and the hearing had greatly improved. A contrast case was also shown in which the older method of packing with gauze strips had been adopted, and in which healing was not complete until twelve weeks after the operation, leaving a marked depression behind the ear. (*b*) A patient from whose nose a foreign body had been removed, which had been there for fully forty years, and had excited severe and constant headache. Pain over the top and back of the head for many years was the chief complaint of the patient, a man of 49 years. By posterior rhinoscopy pus in large quantity was seen filling the left choana. The left middle turbinal was removed, as sphenoidal or posterior ethmoidal disease was diagnosed. It was only after this had been done that the foreign body—a piece of indiarubber, 1 in. square, and covered with pus—was seen lying upon the anterior wall of the sphenoidal sinus. Its removal, which was easy, was followed by complete cessation of the headaches. On close questioning, the patient stated that when very young he had been taken to a doctor to have something removed from his nose, which he understood had been done.

Nottingham Medico-Chirurgical Society.—At a meeting on April 17th, Dr. E. Powell, President, in the chair, Dr. M. Parry-Jones (Derby) read a paper on some cases of pneumothorax. As far as the causes could be classified, 90 per cent. were due to phthisis, 8 per cent. to gangrene and acute inflammatory conditions, and only 2 per cent. to causes such as severe pleurisy, empyema, enteric fever, hydatid, or aneurysm. It was very rarely the result of chest injuries, even with fractured ribs or stabs. In the symptoms accompanying its onset the condition was most variable, and the degree of pain present, as well as the displacement of viscera, greatly influenced by the presence or absence of adhesions. The presence of fluid effusion also modified signs, causing the tympanitic area to vary. In the more severe cases death might occur rapidly from shock and exhaustion; in more favourable ones the air might be rapidly absorbed without any further complication; on the other hand, pneumothorax sometimes became chronic, or was accompanied by serous effusion; the pleuritic effusion might quite overshadow the pneumothorax, or an empyema rapidly develop. Dr. J. C. Sale (Skegness) mentioned the case of a girl who had come under his notice, where there had been eleven separate attacks of pneumothorax.

Harveian Society of London. At a meeting on April 18th, Dr. Sidney Phillips, President, in the chair, Mr. F. Jaffrey read a paper on a case of *Ulcerative Colitis, Appendicostomy and Caecostomy*, under the joint care of himself and Dr. Latham. The patient, a man aged 48, was admitted into St. George's Hospital in March, 1906, with severe ulcerative colitis; as the severe haemorrhages and other symptoms were not controlled by medical treatment, appendicostomy was performed; the appendix however was a small one, and irrigation through its lumen was unsatisfactory; five weeks later, caecostomy was performed, and in less than a fortnight practically all the symptoms had disappeared, there being no blood, pus, or mucus in the stools. The caecostomy was ultimately closed, and the patient was now in normal health and at work.—Dr. Leonard Guthrie in a paper on *Functional Nervous Disorders in Childhood* suggested that all depended upon individual instability of the nervous system and not upon the normal physiological instability common to all young subjects. Such instability was manifested in (1) derangement of co-ordination shown in nystagmus, head-nodding, enuresis and stammering; (2) defective control by higher over lower centres, instanced in chorea, the ties, some cases of recurrent pyrexia; (3) explosiveness of the higher centres accounting for epilepsy, eclampsia; (4) explosiveness with readily induced exhaustion of psychical, sensory and motor realms characterizing hysteria; (5) instability

and exhaustibility of all parts of the nervous system explaining neurasthenia; (6) derangement of the sympathetic and vasomotor system was the cause of many functional ailments such as pseudo-angina, palpitation, tachycardia, enterospasm. The neurotic child was the father of the neurasthenic adult.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—At a meeting on April 24th, Dr. LESLIE ROBERTS, President, in the chair, the following cases were exhibited:—Mr. G. W. DAWSON: (1) A case of *Paget's disease of the breast* in an old lady aged 79. She had previously been shown before the Society, and she was exhibited again in order to demonstrate the improvement that had occurred under the *x* rays. (2) A boy, aged 14, with *Keratosis pilaris*. With the exception of the palms and soles, the condition was generalized, and was associated with some degree of ichthyosis. Dr. GRAHAM LITTLE: (1) A girl of 13, with *Tuberculosis of the ear*. When first seen by the exhibitor, the margin of the left pinna was in a suppurating condition, and when this had cleared up it was obvious that there was some local necrosis. The child looked delicate, and had a strongly tuberculous family history, while the local trouble had existed for seven years. (2) A case of *Ringworm of the nails* in a man aged 40. All the finger nails of both hands were attacked by the disease, which was of thirteen years' duration. The fungus had been identified. Dr. ALFRED EDDOWES: (1) A case of *Syphilitic alopecia* in a young woman, associated with much tenderness and oedema of the scalp; (2) a man, aged 57, with a *Secondary syphilitic eruption* of an unusual type. The condition of the rash upon the forearms resembled a scaly psoriasis, while upon the trunk there was a fairly good imitation of lichen planus, the papules being small, nummular, raised, and glistening. He had had the rash for four months.

MANCHESTER CLINICAL SOCIETY.—At a meeting on April 16th, Dr. LE PAGE, President, in the chair, Dr. G. H. LANCASHIRE read a paper on *Tuberculous skin diseases*. The common bacillary types of disease were described, special attention being paid to lupus vulgaris and its treatment. It was pointed out that considerable scope still existed for caustic methods of treatment in lupus, amongst the best drugs for this purpose being a saturated solution of zinc chloride, pyrogallol, and potassium permanganate. The latter the speaker employed in the form of a powder, which was packed into holes made in the nodules by means of a wooden skewer, the powder being afterwards moistened. In this way several nodules could be treated at a sitting, a local anaesthetic being preferably used. Diseases of the so-called "toxi-tuberculide" type were also described, and a case shown which was held to be a "papulo-necrotic toxi-tuberculide."

SLEEPING SICKNESS IN THE FRENCH CONGO.—M. Fourmeau, Acting Commissioner-General of the French Congo, has recently issued to the lieutenant-governors of the Gaboon, the Middle Congo, and the Oubangui-Chari-Tchad, a circular in which it is pointed out that, in view of the encroachments of the disease, an accurate knowledge as to its geographical distribution in the French Congo is urgently needed. Information is asked for as to the place origin of sleeping sickness, and as to the mode of its diffusion; whether at the present moment it is making progress or receding; whether it occurs in epidemics with intervening periods of remission; whether in villages there are points that are more particularly contaminated; and, if so, what is the situation of these points in relation to neighbouring rivers. Further questions are: Have any special symptoms (glandular enlargement) been observed? By what name is the disease called by the natives? What, according to them, is the cause of it? How do they treat it? Do they report any cases of spontaneous cure and any of relapse? Have they any means of recognizing the disease whilst it is still in the earliest stage? Are there flocks of sheep in the region? Are there any diseases prevalent among domestic animals? What kind of savage game is there in the neighbourhood? Are there flies that sting? The circular points out the means of capturing and preserving the insects which transmit the trypanosome to man. It is recommended that observers should not allow themselves to be deterred from sending specimens by the fear that they may be common and of no interest.

REVIEWS.

VARIATION AND HEREDITY.

IN *Recent Progress in the Study of Variation, Heredity and Evolution*,[1] by Mr. R. H. LOCK, we have a book with many virtues and one or two defects. The author intends it to be an exposition of modern biology, "intelligible to the general reader as well as to the more scientific public," and so far as clearness and power of expression go he has carried out his intention to the letter.

We feel, however, that such a treatise should be written so that the reader may get a clear idea of the general subject without being biassed in regard to contentious problems—in other words, that the author should keep himself as much as possible in the background. In the present work we cannot but feel that Mr. Lock has put considerable weight into one side of the balance with regard to the chief subject dealt with in the book.

Since the rediscovery in recent years of the work of Gregor Mendel, once Abbot of Brün, two rival schools have sprung up in Britain, one having its centre in Cambridge University and the other, until recently, largely at Oxford. The former, under the leadership of Mr. Bateson, are known as the "Mendelians," since they rely upon Mendel's so-called "law" as the main principle of heredity, the latter under the triple leadership of Professors Galton, Karl Pearson, and the late Professor Weldon, being known as the "biometricians" or "ancestrians" since they rely upon the law of ancestral heredity as first propounded by Professor Galton. Mr. Lock is one of the former school and the book is rather an essay—and a very brilliant one—in favour of Mendelism than a general essay upon modern biology.

In the preface the author admits his indebtedness to Mr. Bateson, and in almost every chapter the tenets of the true Mendelian are to be found. True, there is a chapter of thirty-nine pages upon biometry—an excellent, clearly-expressed account, written, however, rather to show its limits than its extent. It is followed by a chapter of thirty-four pages upon De Vries's mutation theory, in which that theory is shown to its best advantage. But the chapter upon Mendelism occupies fifty-nine pages, and is a splendid exposition of the views of the Mendelian School.

It must not for a moment be imagined that we would minimize the importance of the rediscovery of Mendel's "law," or of all the valuable research work to which it has given rise, but our feeling is that more might have been said on the other side in order to justify the title of the book.

There is, however, one real blemish in the book, since in the chapter upon biometry—and, in fact, in other parts of the book also—there is what seems to be a studious avoidance of mention of the name of the greatest biological exponent of that branch—namely, the late Professor Weldon. This is specially regrettable, seeing that Professor Weldon is no longer with us, and also because we cannot forget that in various now famous debates between the Mendelians and the Ancestrians there was not seldom a large amount of ill-feeling and bitterness, which, unfortunately, was not in all cases confined to the debating-room. We do not suggest that the author was an offender, but neither was Professor Weldon; and we cannot but feel that the omission of mention of his name, or of any reference to his work, is unfortunate. We can only hope that it was by an oversight that work so important as his has not received its due consideration in the present volume.

PSYCHOLOGICAL MEDICINE.

SELF-MUTILATION,[2] except in those cases in which the subject has some definite and easily-comprehensible advantage or reward in view, such as, for example, to evade compulsory military service, or in prison to escape irksome labour and receive hospital comforts—in prison slang "to fetch the farm"—bears on its face the stamp of insane conduct. There is scarcely any possible form of bodily injury, however gruesome, which has not been

[1] *Recent Progress in the Study of Variation, Heredity and Evolution*. By R. H. Lock, M.A., Fellow of Gonville and Caius College, Cambridge. London: John Murray. 1906. Demy. 8vo. pp. 389. 7s. 6d.

[2] *Les Auto-Mutilateurs: Etude Psychopathologique et Médico-légale*. By Dr. Charles Blondel. Paris: Jules Rousset. 1906. (Crown 8vo. pp. 132. Fr. 3.)

self-inflicted by the subjects of the various psychopathies, from driving daggers through the skull or tearing out the tongue, to simple incision of the body surface. Instances of one or other form, most commonly of the self-mutilations accompanying perverted sexual instincts, are to be met with in every textbook of insanity; but, notwithstanding its great inherent interest, there are exceedingly few works dealing exclusively with this subject. In an essay published recently, Dr. Charles Blondel makes an effort in this direction, but unfortunately contents himself almost entirely with a bald description of the numerous cases he has himself encountered, and of many more collected by him from the works of others. Though these reports are of undoubted interest, of that careful and original psychological analysis for which the subject is most apt, and which would have made the book of real as apart from merely historical value, there is hardly a trace. The first three chapters treat of voluntary castration or eunuchism, voluntary enucleation or Oedipism, and voluntary burning or Scaevolism (from Scaevola or Caius Mucius, who, taken as a spy, burnt off his hand over a lamp to show his contempt of torture). All of these cases, whether of erotic or religious or other nature, are traced by Dr. Blondel to their common origin in the mental constitution. The following chapters treat of the syndrome of Cotard, in which the mental characteristics —depressive, possessive, or melancholic—are joined to a marked analgesia and hypochondriacal ideas of the non-existence of bodily organs, the principal types of auto-mutilation and military auto-mutilation. The author does not add anything new to this subject, but the references to cases described by other writers and by the author himself may be useful to students of this branch of morbid psychology.

A detailed examination of the phenomena of sexual perversity is a matter from which the healthy mind instinctively recoils, but, however unpleasant the task, inasmuch as some of these unnatural actions come under the ban of the law, their causes and the practical results of their legal restriction must of necessity be considered from time to time in special journals and treatises. That even this is attended with some risk is evident from the fact that certain scientific books dealing with this subject —notably Krafft-Ebing's *Psychopathia sexualis*—are retailed to the general public by dealers in pornographic literature. The subject may be viewed and legitimately discussed from at least three standpoints: First, as a philosophical inquiry into the foundation of the general execration of perverse sexual conduct; secondly, in the legal aspect of such conduct and the justification for its customarily rigorous punishment; and, lastly, as a medico-legal matter concerning which the medical man may be called upon to give expert opinion as to its significance in any particular case as an indication of nervous or mental derangement. The second and third points are discussed by Dr. Salgó, a neurologist on the staff of the St. Margareth Hospital at Buda-Pesth, in a recent monograph.[1] After giving an interesting account of the various laws in different countries in respect to this matter, Dr. Salgó points out that all countries, with the exception of Hungary, which do legislate on it, punish only male homosexuality and sodomy, and that even in Hungary capitulation is disregarded in practice. In his opinion the law stipulates either too little or too much. On the one hand if the law be intended to limit sexual congress entirely to procreative acts, then many other practices which do not need further mention here should come within its scope, and, on the other hand, it can be only the statutory expression of the public horror of perverse acts as being unnatural and therefore damnable when, in so far as it takes notice of secret vices which do not violate public decency, the law oversteps its bounds and infringes private interests. Dr. Salgó therefore considers that it would be better, both as a matter of morals and of public decency, if the various articles dealing with homosexuality were expunged and its punishment left instead, like many other immoral and vicious acts, to social condemnation. From the point of view of psychiatry, Dr. Salgó falls foul of the term "perversion sexuelle." There is nothing, he maintains,

[1] [illegible] By Dr. I. Salgó, [illegible] Margareth Hospital, Buda-Pesth. [illegible] (pp. 47.)

in the phenomena of perverse sexuality to justify its use as descriptive of a class or category; he can recall from his own experience a whole series of cases in which there existed neither any disease, morbid tendency, nor any sign whatever of abnormal function of the central nervous system. On the other hand, he has observed cases with an entirely intact intelligence, with a most enviably stable emotional organization, individuals endowed with high capacities for labour and clear moral consciousness, to whom, nevertheless, homo-sexuality appealed with irresistible attraction. The whole question in all of its aspects is highly controversial, is impossible of treatment except at considerable length, and for obvious reasons, could be most suitably debated only by special societies, such as, for example, the Medico-Legal Society. Doubtless much could be said on both sides, for whilst it is certain that too great a degree of odium cannot be attached to these practices, it may be open to question whether in some cases the most profitable use, from the point of view of the State, is being made of raw material by sentencing youths scarce grown to manhood to long terms of imprisonment for offences—strange, foul, and unnatural though they be—committed before the judgement had matured sufficiently to control insurgent organic stimuli.

PATHOLOGY OF THE SYMPATHETIC.

Dr. Hönck has written a somewhat remarkable treatise on the importance of the sympathetic nervous system in disease of the vermiform appendix.[1] He has been reading the work of Gaskell, Langley, and other eminent physiologists on the sympathetic nerves, and has endeavoured to apply the results of these investigations to the study of clinical medicine. From his clinical experience he has discovered that disease of the vermiform appendix is very much more common than is usually supposed. Everybody knows that the lumen of this troublesome appendage usually becomes obliterated during the course of life, but the ordinary person imagines that the process of obliteration generally takes place quietly without giving rise to any symptoms. Dr. Hönck takes a much less comfortable view; he says he is firmly convinced that the appendix can never become obliterated without causing clinical symptoms, and argues at great length that relatively trivial lesions of this organ bring about widespread disturbances of the sympathetic nervous system, the consequence of which is that severe disorders are set up in situations far remote from the real source of the trouble. His book is occupied with the elaboration of this theme. He has collected numerous clinical cases in support of his argument, and lays particular emphasis upon the causal connexion by way of the sympathetic nerves between slight disturbances of the appendix, which might escape the notice of less acute observers, and manifest lesions of the nose and throat. The appendix is also held to be responsible for many cases of tuberculosis, the explanation being that the disturbance of the sympathetic system brings about a lowered resistance of the tissues, and thus makes them a favourable soil for the development of any tubercle bacilli which may invade them. Instances are also quoted in which disturbances of the heart, the liver, the gall bladder, the urinary bladder, and various other organs have been traced by the author to a disordered sympathetic innervation primarily attributable to epityphlitis. In short, he arrives at the broad generalization that there is no organ in the body which may not be brought into a morbid state owing to the agency of the appendix. The relation of the sympathetic nerves to the morbid processes of the body is a subject of profound interest about which relatively little is known, and therefore any endeavour to throw fresh light upon it deserves to be welcomed. It must also be admitted that the symptoms of epityphlitis are often obscure, and may often manifest themselves in regions other than the immediate neighbourhood of the appendix. But though we may freely concede so much in his favour, we are afraid that Dr. Hönck's enthusiasm for his particular theories has carried him too far, and we hardly think that his bold generalization from clinical observations will meet with general acceptance either amongst physiologists or physicians.

[1] [illegible] Von Dr. F. Hönck. Jena: Gustav Fischer. 1907. (Royal 8vo, pp. 180; with 21 illustrations in the text. M. 4.)

A HISTORY OF CANCER.

DR. JACOB WOLFF'S volume on the history of cancer from ancient times to the present[5] is in reality a contribution to the history of medicine generally, and one of the most painstaking and valuable with which we are acquainted. Dr. Wolff does not merely paraphrase the writings of those who have laboured at cancer. He does much more, for he is obviously learned in the history of medicine, and possessed of special knowledge of cancer. Having himself no hypothesis to support, he has impartially reviewed and ably criticized the work of others, and has assigned to the workers of the past the positions they seem to merit among their contemporaries. Dr. Wolff brings out very clearly how conceptions of cancer throughout the ages reflect the progress of medicine as a whole. The volume brings the progress of our knowledge of cancer up to modern experimental research, of which no account could be taken. Within the space of less than 750 pages he has condensed an enormous amount of information never before contained within one volume; for this reason, and because of its reliability, it cannot fail to become a valuable book of reference. Naturally it is not a book which is easy to read, but we have laboured through it with profit. At the present time such a volume meets a want, in that it covers the whole extent of the work which has been done on cancer. The investigation of cancer is one of the fashions of the hour. As the author points out in his preface, much printer's ink could have been spared had those engaged in the study of cancer been informed of what others had thought and written before them. Hypotheses long tested and found wanting crop up again and again in the pages of Dr. Wolff's book, often supported by masses of evidence identical with that which had already proved insufficient to previous generations. He might have added that such repetition is occurring to-day.

Dr. Wolff has gone to primary sources for his information. We can only admire the industry which has enabled him to cover so vast a field as the literature of cancer, and to consult and quote his authorities at first hand. The book has the added value of being excellently arranged, supplied with a full table of contents greatly facilitating consultation, and provided with a good index. We heartily recommend it to the medical profession generally, and particularly to all who contemplate adding to the literature of cancer. Its perusal will save "cancer researchers" much useless labour; perhaps it may restrain some of them from re-inflicting the exploded hypotheses of the past upon the readers of the present. The volume is printed and illustrated in accordance with the traditions of Gustav Fischer's well-known house.

ORTHOPAEDICS.

WE take it that in this country the term "orthopaedic therapeutics"[6] means the treatment of deformities, but on the Continent it has a more restricted meaning, and implies the mechanical treatment of such affections only. Even so Dr. DUCROQUET'S *Traité de Thérapeutique Orthopédique* hardly covers as much ground as the title would lead us to suppose, for it deals exclusively with tuberculosis of the joints of the lower extremity and the spine. In his dedication to Dr. Jalaguier, Dr. Ducroquet says that the work is almost as much Dr. Paul Meunier's as his own. This fact does not, however, deter the latter from praising it heartily. He claims that this book is the first to set orthopaedy on a scientific basis, and that here for the first time the processes of mechanics are to be found applied to physiological notions. We hope that the slang may be pardoned if we say that this is "a large order." *Vixère fortes ante Agamemnona*, but as has been sarcastically remarked, "each Agamemnon now is his own Homer." During the last fifty years a large number of treatises on orthopaedics have appeared that have as good or better claims to be considered scientific as that now under review. The work is divided into five "books," of which one is devoted to general considerations and the remainder to tuberculosis of the spine, foot, knee and hip respectively. As usual in a book of this sort, a great deal of space is given up to the technique of gypsum jackets and splints, and many minute details are described and principles discussed, which are familiar to every dresser and nurse. Dr. Meunier says that Dr. Ducroquet has invented under the name of "*Retournés*" a series of very simple manœuvres which enable any one to apply a plaster-of-paris apparatus "remarkable for simplicity, solidity, and elegance," and that there is no doubt that this technique is "infinitely superior, in all respects, to all those practised hitherto." We have not had an opportunity of trying this invention, but judging from the very clear illustrations, we should think that it is a needless refinement, offering no advantage over the simpler and well-known methods of bandaging already in vogue. Dr. Ducroquet has no good word to say for the instrument maker or the non-medical specialist; nevertheless he is reluctantly driven to confess that appliances of celluloid and steel, which cannot be made by the surgeon, are to be preferred to plaster-of-paris. The very simple and well-known, but often neglected, principles on which any immobilizing apparatus should be designed are clearly stated in this book and well illustrated, and if they are insisted on at great length, this is a fault on the right side. The figures on p. 227 are an excellent illustration of the important principle that to fix a joint those immediately above and below should be included in the retentive appliance. The author's views on the physiology of the arches of the foot are not those of most authorities, who hold that the internal arch is the most important; nor is his statement that in disease of the foot flexion deformity never occurs to be accepted without protest. Continental surgeons so generally ignore the very original and valuable work of the late H. O. Thomas, that we note without surprise that the author's walking instrument for disease of the knee is nothing but an elaboration of Thomas's knee splint. The illustrations, the type, and the paper of this book are excellent, but when nearly four hundred pages are devoted to one aspect of the treatment of one disease in a few joints, imagination boggles at the thought of a system of surgery on the like scale.

SURGICAL HANDICRAFT.

DR. WARE'S book on the use of plaster-of-Paris[7] will be found very serviceable in both private and hospital practice, as it contains within a small compass full and reliable information on suitable materials, the best and most convenient methods of their application, and the different modifications of bandage in cases of fracture and articular disease and in orthopaedic surgery. The final chapter deals with the use of plaster-of-paris in dental work. Some welcome hints are given respecting the best way of overcoming the inconvenience so often experienced in making plaster splints in a small private house. The author imparts his information in a thoroughly practical manner, and the value of his instructions on different points of his subject is much enhanced by a free supply of clear illustrations, many of which have been reproduced from original photographs and sketches.

DR. RUSSELL S. FOWLER, in his book on *The Operating Room and the Patient*,[8] gives in a condensed and somewhat abrupt form much useful instruction relating to the maintenance of proper order and of cleanliness in the former, and to the efficient preparation of the latter. The reader is told in dogmatic style how an operating room should be built and equipped, and how in its management things should or should not be done, without any regard to the great variety of conditions in different hospitals and to the diversity of the views, especially relating to antiseptic and aseptic details of practice, held by different surgeons. The book, which seems to be intended for the use of dressers and nurses, is likely to be serviceable to them, but its bulk has been rendered cumbersome by much irrelevant matter on the work of the anaesthetist, and by a bare and useless list of surgical instruments and dressings, which takes up almost one-third of the total number of pages.

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[5] *Die Lehre von der Krebskrankheit von den ältesten Zeiten bis Gegenwart.* Von Sanitätsrat Dr. Jacob Wolff. Jena: Gustav Fischer. 1907. (Royal 8vo, pp. 747. M.20.)

[6] *Traité de Thérapeutique Orthopédique.* [Treatise on Orthopaedic Therapeutics.] Par le Docteur C. Ducroquet. Paris: Jules Rousset, Editeur. 1907. (Royal octavo, pp. 384. Fr. 15.)

[7] *Plaster-of-Paris and How to Use It.* By M. W. Ware. New York: The Surgery Publishing Company. 1906. (Crown 8vo. pp. 88. 1 dol.)

[8] *The Operating Room and the Patient.* By Russell S. Fowler, M.D., Surgeon to the German Hospital, Brooklyn. New York, Philadelphia, and London: W. B. Saunders and Co. 1906. (Demy 8vo, pp. [illegible]. 33 illustrations. 10s.)

Dr. MORROW, in the preparation of his book on *The Immediate Care of the Injured*,[1] has evidently worked with too comprehensive an aim. It is intended, he states, to be useful to the practitioner, the nurse, and the layman, and naturally according to the different points of view of those for whom he writes, his teaching will be considered either as too slight or too advanced and technical. The first part deals with human anatomy including development, the second with bandages, dressings, and splints, and the third with "first aid" methods. In some respects, and especially in the abundance of clear and useful illustrations, it may be regarded as a sound and practical guide for the use of young surgeons and surgical nurses, but for others it is likely to fail in the two important points of simplicity and convenience. The volume is too large for ready reference, and is not suitable, as works of this kind should be, for the pocket or for forming part of a light equipment.

SURGICAL HANDBOOKS.

DR. BUCHANAN, in his *Handbook of Surgery*,[1] proposes to meet the natural need of students for a work on surgery that is short but reliable in its teaching, and one that may be found useful in association with larger books in working for examination. The preparation of such a work is, as the author acknowledges in his preface, necessarily in great part one of compilation, and a long list is given of recognized surgical textbooks of which use has been made. The work of compilation has been well done, and the material derived from many sources has been arranged with much care and judgement. The instruction, as may be expected, is somewhat scanty here and there, but the author has succeeded in presenting in a handy and convenient volume a very serviceable manual on the principles of modern surgery. Its excellence inspires a dread that future reissues and revision will in this, as in other works of like origin, lead to the extension of this attractive volume into one of unwieldy dimensions.

MR. BILTON POLLARD in his preparation of the thirteenth edition of the work on *Minor Surgery and Bandaging*,[1] so long associated with the name of Christopher Heath, has by his able and thorough revision maintained the reputation of this manual and adapted it to the requirements of the modern student. The difficulty in dealing with a work first published nearly fifty years ago, and before the introduction of antiseptic methods into surgical practice, has been ably overcome by the present editor, who, while adding, as was necessary, much new matter, has preserved very much of the sound and practical teaching of the original author.

Whilst acknowledging an inadvertent delay in our notice of these two volumes we have no hesitation in appreciating their merits and in commending them as excellent and very useful guides to elementary surgery.

SERUMTHERAPY.

DR. D MONTGOMERY PATON of Melbourne, Victoria, writes to express the opinion that the review of his book, *New Serumtherapy*, published in the BRITISH MEDICAL JOURNAL of February 9th, 1907, does not give an adequate idea of his arguments, and sends the following observations:

Antidiphtheritic serum orally exhibited is specific in its action on infections of the streptococcus, staphylococcus, and *Bacillus coli communis*. It is also of great value in trauma and other non-intestinal conditions, in which it meets all the indications.

The normal immunity of an animal may be transferred to a patient by the continued oral use of the normal plasma of the animal. The action is neither bacteriolytic nor antitoxic, but the following experiments indicate its character.

I was taken ill in my residence with the staphylococcus, and was the subject of the following tests by Dr. Julian Smith [illegible] pupil of Professor Wright.

1 My normal opsonic index to the staphylococcus was taken on October 7th, 1906, and found to be 0·84. On October 10th it was 0·93. On October 13th, after taking 1 oz. of (Paton's) antidiphtheritic serum in the previous eighteen hours, the index was 1·34.

2. On October 25th the normal index was 0.22 and pustule present. On October 29th, after 1 oz. antidiphtheritic serum (heated for ten minutes to 60° C.) in the previous eighteen hours, 1·85.

The action of the serum is the passive raising of the opsonic index to the organism. This is not done by the mere transfer of opsonins, for they were largely if not entirely removed by the heating and the preservatives.

Therefore there must have been a reaction producing them, and this agrees with all the work recorded in *New Serumtherapy*. The reaction alone is required, and is available in trauma, and the reaction, plus the opsonin formation, in infection. Both in lesion and infection the patient's resistance is definitely increased.

If the natural immunity of an animal is due to the opsonic value of its plasma, then by this method that opsonic value may be transferred to the human. All the results obtained by the oral use of sheep and horse plasmata (animals very resistant to tubercle) are exact counterparts of the results of successful inoculations with tuberculin under Wright's method. The only difference is that they are passive instead of active after tuberculin, and hence the plasmata have to be exhibited regularly to maintain the higher index as long as may be required.

Antistreptococcic serum gives the same reaction in trauma as antidiphtheritic, but in infection its value is limited to the streptococcus. Experience has clearly shown that although an animal be thoroughly immunized the full immunity of that animal in no case can be transferred to the patient by present methods. If there is to be an advance it must come along new roads, and results must not be tossed aside because of their novelty.

It is well known that antitoxins and bacteriolysins are scarcely absorbed by the stomach, but in the face of the evidence submitted I am waiting for some one to prove that the elements in the immune animal's serum of opsonic character, or which cause reactions leading to the formation of opsonins, are incapable of absorption by the digestive canal and of producing the same effects in the patient ingesting them as in the animal supplying them. Reading *New Serumtherapy* in the light of what I have just written, and giving some consideration to the fact that it contains records of similar results to my own obtained in many capable practitioners' hands, will give any impartial mind much food for thought and experimental work.

NOTES ON BOOKS.

DR. HOWARD'S book on *Surgical Nursing*,[1] based on a series of lectures given to probationers at the London Hospital, is a good example of the excellent manner in which the claims of the modern nurse for efficient training have been assisted by the junior members of hospital staffs. Recognizing the important part taken by the nurse in modern surgical practice, and especially in surgical emergencies, the author has endeavoured, with much success, to impart fully and yet simply those principles in the application of which the surgeon of the present day depends so much on nursing aid. The book, although in some parts open to improvement by compression and omission (especially in the chapters on special injuries), is well fitted to give sound and clear instruction not only to nurses, for which class it is especially intended, but also to junior students who need an elementary guide to surgical practice under modern conditions.

A pamphlet recently issued by Messrs. John Wright and Co., of Bristol, under the title of *Invalid and Convalescent Cookery*, contains some sixty receipts. Its author, Miss MARY F. BUCKLE, the daughter of a medical man, under whose supervision she cooked for her mother during a two years' illness. The directions given are, therefore, all the outcome of practical experience, combined with what is in cookery books an unusual degree of sound scientific knowledge.

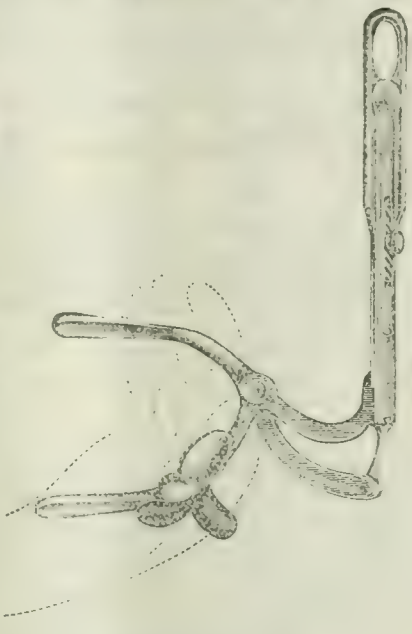
A new edition of *Low's Handbook to the Charities of London* was published last month by Mr. Eliot Boothroyd of Fleet Street. It is the seventy second issue of a book which supplies for the small sum of 1s. the information most likely to be required about London charities. All its contents are up to date, and the book, which includes over 1,500 institutions within its scope, is well turned out.

[illegible] *Nursing and the Principles of Surgery for Nurses*. By [illegible] M.B. Lond., F.R.C.S. Eng. London: Edward Arnold. Crown 8vo, pp. [illegible]

MEDICAL AND SURGICAL APPLIANCES.

Improved Tonsil Guillotine (patented).

DR. R. TAYLOR (Clapton, N.E.) writes: The annexed figure represents an improved form of tonsil guillotine manufactured for me by Messrs. Arnold and Sons, London, who have embodied the theoretical points in a highly practical manner. (The instrument bears both relation and contrast to the Mackenzie guillotine.) Even in the hands of a beginner the instrument will be found to ensure an independent firm grip by the thumb assisted as against all motion, rotational or otherwise, that might disconcert. The fingers proper are left free to operate in any way or at any suitable moment on the free second handle in forceps-compressing manner. Proper apposition for cutting can be easily and naturally assured, and, in addition, most easily maintained *during* cutting. The cutting power is strong. The slightest false start for a best cut can at once be rectified by finger extension on and behind the free operating handle, though this is little likely to occur. Similarly, resetting is easy, and with the one using hand. In short, each handle represents separately a separate function separately controlled, actuated, or combined at pleasure by the user's one hand. Power, deliberation, and complete control, appositional or otherwise, are the main points. The instrument can be easily cleaned, and the projections rubber-clad if desired.



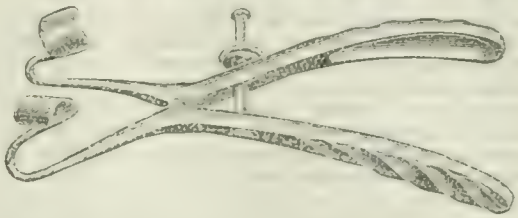
A Ring Probe.

Dr. DAN MCKENZIE (London, W.) writes: For the last two years I have been using for all purposes connected with the nose and ear a probe like that shown in the adjoining cut. The advantages of the looped handle are considerable. The instrument is straight, and consequently more easy to manage and control than the bent probe generally used in nose and ear work; and yet it possesses the advantages of the bent probe, for, while using it with the forefinger looped into the ring, the decided shoulder present at the junction of the ring and the shaft raises the shaft well above the surgeon's hand. By means of the ring, also, it is possible to slip the probe on one or other finger when not using it, and so the necessity of constantly laying aside and as constantly losing the instrument, is done away with. It is made in two sizes, suitable respectively for the ear and for the nose. The shaft and point are of the usual flexible metal. It has been made for me by Messrs. Mayer and Meltzer.



A Mouth Gag.

Mr. H. LYLE, M.R.C.S.Eng., Senior Surgeon to the Liverpool Skin and Cancer Hospital, writes: While doing operations on the mouth, I have been struck by the inadequacy of the gags in use. All that I have seen are liable to slip into the mouth, particularly if there are teeth in the upper jaw with corresponding vacancies in the lower, and vice versa. To obviate this I have had a gag made, which, as shown in the illustration, has two wide tooth plates which fit firmly over either teeth or gum, as the case may be, and when fixed in position by the screw it is, as far as my experience goes, impossible for it to slip into the mouth or even to move. The gag, which I have been using for nearly eighteen



months, was made for me by Messrs. White and Wright, 93, Renshaw Street, Liverpool. The plates measure 1¼ in. by ¾ in., and are covered with rubber.

A Sterilizable Enema Syringe.

We have received for examination from Messrs. ARNOLD AND SONS, West Smithfield, an enema apparatus made after the pattern of the time-honoured Higginson, but of material which makes it decidedly preferable to most of those with which we are acquainted. Neither bone pipes, which get dirty and discoloured; nor vulcanite, which cannot easily be sterilized; nor gum elastic, which gets soft, enter into its composition, and all its parts are capable of real sterilization, and well calculated to preserve a cleanly appearance. The bulb and tubes, said to be made by a new method, appear to stand boiling water well, and are guaranteed not to split. The rectal and vaginal pipes are made of glass of a kind which is claimed to be practically unbreakable; and this, in spite of their apparent fragility, we find to be case. The arrangements by which they are fixed and unfixed is new and ingenious.

MEDICINAL AND DIETETIC PREPARATIONS.

Vivaq Water.

WE have received from the Natural English Mineral Water Company, 43-45, Great Tower Street, London, E.C., samples of a new mineral water from an English spring, which has recently been put on the market under the name "Vivaq." It is a bright, highly carbonated effervescing water, and our analysis shows that it contains—

Sodium bicarbonate	...	61·6 grains per gallon.
Sodium chloride	...	44·8 ,,
Sodium sulphate	...	11·3 ,,
Calcium bicarbonate	...	4·2 ,,
Magnesium bicarbonate	...	1·9 ,,
Nitrate and nitrite	...	None.
Ammonia, saline	...	1.02 part per million.
Ammonia, albuminoid	...	0·05 ,,

The characteristic features are thus the large proportions of sodium bicarbonate and chloride, with a fairly large amount of sulphate; it is an excellent alkaline water of pleasant taste; the agreeableness of its taste is partly due to the sodium chloride and partly to the thorough impregnation with gas. The source is stated (and certified by an analyst who has reported on the water) to be a deep well, properly cemented in the upper portion and free from any surface contamination; the saline ammonia is, therefore, of mineral origin, and by no means an indication of impurity.

Diethyl-Barbituric Acid (Diethyl-malonyl-urea).

Among the many synthetic substances having a hypnotic action which are available for the prescriber to-day, probably none has more rapidly come into favour than diethyl-barbituric acid. Under the name "veronal," this substance already finds very extensive application; it is now being issued under the name "hypnogen" by Messrs. Oppenheimer, Son and Co., and we have received a sample of 5-grain hypnogen palatinoids. The substance is contained in these in the form of crystalline powder; on placing one palatinoid in water at body-temperature, the envelope burst in 35 seconds, liberating the powder. If administered in this form, therefore, the drug would be at once set free in the fluid of the stomach, while the dose of 5 to 15 grains can be easily and completely swallowed. The contents of five of the palatinoids were found to weigh respectively 5.5, 5.5, 6.2, 5.5, and 5.4 grains.

THE late Mrs. Martha Ellen Kortright, of Grosvenor Crescent, whose will has now been proved, left £10,000 to the London Hospital, and £1,000 each to King's College Hospital, Guy's Hospital, the Poplar Hospital, the Grosvenor Hospital for Women and Children, the Victoria Hospital for Children, Chelsea, and St. Mary's Hospital, Paddington.

A CENSUS OF THE BLIND AND DEAF IN THE UNITED STATES.

A REPORT on the blind and deaf in the United States has been issued by the Bureau of the Census.[1] The twelfth census was taken on June 1st, 1900, and the enumerators were instructed to note the name, age, sex, and post office address of each person alleged to be blind or deaf. Further details were secured by direct correspondence with the individuals or their guardians or friends. From the data thus obtained these voluminous reports have been prepared.

The inquiry was initiated and the correspondence conducted under the direction of Dr. Alexander Graham Bell. He also prepared the text relating to the deaf. In arranging the classification of the causes of blindness Dr. Bell was assisted by the late Dr. Swan M. Burnett. The statistical tables were compiled under the supervision of the late William A. King, chief statistician for vital statistics.

The terms "blind" and "deaf" are applied to various degrees of defective sight and hearing, and the sense in which they are used in these reports will probably best be indicated by quoting from the instructions to enumerators.

After completing the enumeration of all the members of a family you will ask whether all the persons just enumerated have good sight and hearing—that is, can see well and hear well. For all such persons no further inquiry need be made: but if you find that some member of the family cannot see well, you will then ask whether he or she can see well enough to read a book; and should it appear that the sight is so seriously impaired that it is impossible for the person to read a book, even with the aid of glasses, then you will note such person as "blind," even though, as a matter of fact, he or she may have some slight power of sight.

In the same way, if you find that some member of the family cannot hear well, you will then ask whether he or she can hear well enough to understand loud conversation; and should it appear that the hearing is so seriously impaired that the person cannot be made to understand what people say, even when they shout, you will note such person as "deaf," even though, as a matter of fact, he or she may have slight power of hearing. You will then ask further whether this deaf person can speak; and should it appear that the person cannot speak so as to be understood, you will note such persons as "deaf" and "dumb," even though, as a matter of fact, he or she may have some slight power of speech.

Only those dumb persons who are deaf as well as dumb are to be noted; so that if you should come across dumb persons who are not deaf, they should not be included, nor should the "semi-blind" and those blind only in one eye be reported on this schedule.

BLIND.

The enumerators reported a total of 101,123 persons alleged to be blind, but direct correspondence with the individuals resulted in a considerable diminution of the number, some stating that the alleged defect did not exist, others that the blindness was only in one eye, while about 20,000 sent no reply to repeated inquiries. For these and other reasons 35,725 were eliminated. It is evident, therefore, that the accuracy of statistics of this class based upon the enumerators returns are likely to be seriously defective, and that the personal particulars obtained by direct correspondence with the individuals are much more reliable.

The number of cases remaining for statistical treatment was 64,763. This number can be considered only as a minimum; but the figures furnish a basis for determining with fair accuracy the seats of the causes of blindness, and the relative frequency of different diseases of the eye producing loss or impairment of vision.

The results are summarized in twenty-two tables and commented upon and detailed in seventeen general tables. The facts set forth relate to sex, colour, general nativity, marital condition, present age and age at which blindness occurred, causes of blindness, and occupations. Consanguinity of parents, the number of the blind having blind relatives, and the educational advantages as indicated by school attendance are also shown.

Causation.

It is not possible to present in the space at our disposal even an abstract of the results of this investigation. We shall merely give a few examples of the thoroughness and elaboration of detail with which it has been carried out.

Table I shows that of the total number of blind (64,763), those totally and partially affected numbered respectively 35,645 and 29,118. The number of males and females under each of these heads is set forth, also their percentage and their ratio to the population. In Table II the distribution, by degree of blindness, of the blind, and the number of each class per 100,000 of the population, are shown for States and territories. Table IV gives similar information regarding the white and coloured population separately. Table VII shows the classification by degree of blindness, of the blind under 20 years of age, 20 years of age and over, and of unknown age, with respect to colour and nativity, with the number at the specified ages per 100,000 of population in the same age group. Table XI deals with the age when blindness occurred, and Table XII with the cause. The anatomical divisions of the eye have been adopted as the basis in classifying the many causes. From Table XIII we learn that, of the specific causes of blindness, those to which the greatest proportion of cases per 1,000 from all causes is due are: cataract (121.4); injuries, accidents, and operations (103.3); congenital (73), old age (60.3), and sore eyes (57.7). Considered with reference to the degree of blindness, the percentage totally blind is considerably greater than that partially blind, when the defect is due to the following causes: meningitis (80.8), glaucoma (76.4), congestion or disease of brain (73.7), scarlet fever (72.5), small-pox (71.2), venereal diseases (67.7), etc.; while the percentage partially blind is greater in the cases due to granulated lids (69.4), old age (63.4), scrofula (60), catarrh (55), measles (54.3), and military service (51.1). Table XIV shows the number of blind from each cause per 1,000 blind from all causes, by colour and degree of blindness. The figures (the commentary states) confirm the opinion, generally held by observers in America, that granulated lids, or trachoma, which is so fruitful a cause of blindness among the Irish, the Russians, the Jews, and the Italians, is almost unknown among the negroes in this country.

Of 20,704 persons who were blind from childhood, 4,728 were born blind, about 23 per cent., the other principal causes being injuries, accidents, and operations, 2,295; sore eyes, 1,753; cataract, 942; measles, 841; scrofula, 725. The tables further show that 7,369 persons whose vision was either totally lost or seriously impaired before the completion of the first year of life, represent 11.4 per cent. of the total number of blind. The commentator, in passing, emphasizes the danger of the so-called "sore eyes" of babies, and the importance of treating this affection promptly and energetically.

Of the 64,763 blind reported, 22,120 (34.1 per cent.) are single, 24,559 (37.9 per cent.) married, 17,333 (26.8 per cent.) widowed, 379 (0.6 per cent.) divorced, and for 372 the marital condition is not stated.

Heredity.

The relationship or consanguinity of the parents was reported in 56,507 cases; in 2,527, or 4.5 per cent., the parents were related as cousins. In 57,726 cases the inquiry as to the existence of blind relatives was answered, 10,967, or 19 per cent., replying affirmatively. Of the blind persons whose parents were cousins, 39.3 per cent. have blind relatives; of those whose parents were not related, 17.6 per cent. have blind relatives. Table XIX elicits the significant fact that of the blind whose parents were cousins 25 per cent. are congenitally blind, while among those whose parents were not so related 6.8 per cent. are congenitally blind.

Education.

The inquiry as to education of the blind was limited to the simple question as to whether the person had attended school, and, if so, the kind of school attended, as "special school for the blind," or "common school," "high school," "college," etc. The replies show (Table XX) that 37.9 per cent. of the whole number of blind have some schooling, while 44.8 per cent. have attended no school.

Occupation.

Of the blind aged 10 years and upwards, 20 per cent. were reported as engaged in definite remunerative occupations. The percentage of the general population similarly employed was 50.2. The occupations of the blind were compiled according to the classification adopted for the

total population. Table XXII shows that there is a larger percentage of totally blind persons gainfully employed in professional pursuits, trade and transportation, and manufacturing and mechanical industries than is found in the general population, while the percentage engaged in agricultural pursuits and domestic and personal service is less. Of the partially blind gainfully employed the majority follow agricultural pursuits, the percentage in this class being higher than that in the general population.

Of the 64,763 persons reported as blind, 2,772, or 42.8 per 1,000, were found to be also deaf. Both defects were present at birth in 76 cases, and developed between birth and 5 years of age in 64.

THE DEAF.

The total number of persons with seriously impaired hearing was 89,287. Of these, 51,861 were not totally deaf, as they could understand loudly-shouted conversation; they have been tabulated under the head of "partially deaf."

The total number of blind and deaf persons is as follows:

Blind (alone)	69,023
Deaf (alone)	86,515
Blind-deaf	2,772
Aggregate blind and deaf	158,310

The assigned causes of deafness are classified by their effect on the ear, and diseases producing the same effect are grouped together, for example, scarlet fever, measles, disease of ear, etc., leading to abscess in the middle ear, and the resulting deafness is ascribed to a "suppurative condition of the middle ear." The report also deals with the consanguinity of the parents, the possession of deaf relatives, and the occupations of the deaf.

The deaf themselves are classified according to the age when deafness occurred, namely, "the deaf from childhood" and the deaf from adult life," that is 20 years and over. In some of the previous censuses the ability to speak formed the basis of classification. This condition being acquired—often independently of the hearing—is, however, unsuitable.

The proportion of the population reported as deaf and dumb (unable to speak at all) is less than one half of that returned at the census in 1890 (648 to the million in 1890, 321 to the million in 1900). One explanation, although a somewhat doubtful one, of this decrease is the greater activity in articulation teaching in the schools.

Age or Period of Life when Deafness Occurred.

This was unknown in 3.4 per cent. of the cases returned. As to the remainder, 50,296 have been deaf from childhood (under 20), and 35,924 have been deaf from adult life (20 and over).

The age when deafness occurred is definitely stated in 31,590 cases, and of these 59 per cent. became deaf before reaching the age of 20 years, 48 per cent. before 10 years, 40 per cent. before 5 years, and 18 per cent. were born deaf. One half of the deaf lost hearing before they were 11 years old. There is usually difficulty in determining the age at which an infant becomes deaf. If he remain speechless at an age when he should be commencing to speak, the speechless condition attracts attention, and he is then found to be also deaf. If he has had any serious illness the deafness is attributed to that; if not, the natural assumption is that he was born deaf. It is probable that some of those reported deaf from birth really lost hearing in infancy, and that some of those reported deaf from infancy after birth were really born deaf.

Several tables relate to the geographical distribution of the deaf, by States and territories. Upon the whole, deafness is more common in the northern part of the United States than in the Southern.

Ability to Speak.

Out of an aggregate of 89,287 persons returned as deaf, 55,501 were able to speak "well," 9,417 "imperfectly," and 24,369 "not at all." More than 99 per cent. of those unable to speak at all became deaf before the age of 20 years. The majority of the deaf who speak well, became deaf in adult life.

Of 24,369 deaf and dumb, more than 96 per cent. were reported as totally deaf, and less than 4 per cent. as partially deaf. The probable reason of the comparatively small number of partially deaf is that those of this class acquire speech more readily than those who cannot hear at all, so that comparatively few of them would be returned as deaf and dumb; they would appear, instead, among those who speak either well or imperfectly.

As would be expected, the statistics show that the ability to speak is largely dependent upon the period of life when deafness occurred, and upon the degree of deafness. Table XIV and diagrams 14 and 15 show that substantially all of the deaf and dumb became deaf before they were 20, nearly all (98 per cent.) before they were 10, and the vast majority (92 per cent.) before they were 5. More than two-thirds lost hearing before they were 2, and nearly one half were born deaf.

It is striking that 11,123 who became deaf before the age of 5 are reported as able to speak. All of these, naturally, are deaf and dumb, and the evident explanation is that they have acquired speech artificially by special instruction. This conclusion is supported by Table XVIII, which shows that the vast majority of the totally deaf from early childhood have attended special schools for the deaf where facilities exist for articulation teaching.

Ability to Read the Lips.

Out of a total of 89,287 deaf persons, 14,474 could read the lips, 13,986 could not, and in 60,827 cases the ability to read the lips was not stated. The census returns show that the power of speech-reading is confined to the totally deaf. The commentator points out that this does not arise from any natural incapacity on the part of the partially deaf to acquire the art but from artificial conditions which interfere with its acquisition. The chief of these are the turning of the good ear towards the speaker, the speaker placing his mouth close to the deaf person's ear, and the speaking into mechanical appliances, whereby the deaf person is unfavourably situated or even unable to observe the movements of the speaker's mouth and the expression of his face. The totally deaf, on the other hand, are free to rivet their whole attention upon the visible manifestations of utterance. Further, the partially deaf who speak well, became deaf in adult life and have not received any special instruction in lip-reading; whereas most of the totally deaf lost hearing in early childhood and were sent to special schools for the deaf where they were taught speech-reading.

The Usual Means of Communication.

The four employed by the deaf are: Sign language, finger-spelling, speech, and writing. Some of the deaf use one of these methods alone, others employ two or more, and still others, all of them. The returns have been classified under fifteen varieties which include all the possible combinations of the four methods. The results show that the deaf from adult life and the partially deaf employ substantially only one of the methods, namely, speech. The use of sign-language and finger-spelling seems to be confined chiefly to the totally deaf who lost hearing before reaching the age of 5. In 86,635 cases the method of communication was reported. The sign-language is used by a total of 25,748, finger-spelling by 19,570, speech by 64,918, and writing by 19,388.

Speech and writing are principally employed by the deaf in communicating with hearing persons, sign language and finger spelling principally in talking with other deaf persons.

Sex.

Out of a total of 89,287 persons returned as deaf, 46,915 were males and 42,372 were females. That the majority of the deaf are males is not surprising in view of the fact that there are more males in the population at large than females (51.1 per cent. and 48.9 per cent. respectively). The proportion of males among the deaf (52.5 per cent.) is somewhat in excess of the proportion in the general population. This is not explainable by the hypothesis that males are more exposed to accidents, for of the deaf from birth 53 per cent. are males. In relation to the principal assigned causes of deafness, the males are greatly in the preponderance among those deaf from meningitis (59 per cent.) and brain fever (59.1 per cent.). On the other hand, females predominate where deafness was caused by affections of the middle ear.

Race.

Out of 89,287 persons returned as deaf, 84,361 belong to the white race and 4,926 to the coloured races. Of the

whole population of the United States, 87.9 per cent. belong to the white race and 12.1 per cent. to the coloured races. In the case of the deaf 94.5 per cent. are white and 5.5 per cent. coloured, so that the proportion coloured is less among the deaf than among the general population.

Of 84,361 white deaf persons, 69,865 were native, 13,786 were foreign born, and in 710 cases the nativity was unknown. The statistics show that the proportion foreign born among the white deaf is slightly in excess of the proportion foreign born in the total white population.

Causes of Deafness.

Of 89,287 persons returned as deaf, in 10,115 cases the causes of deafness were unknown. In the remaining 79,172 cases the supposed causes were specified. The assigned causes in many instances, however, were vague and unsatisfactory—for example, military service, 3,242 cases; sickness, 2,143; medicine, 205; hard work, 101, etc. In 1,514 cases a curious or fanciful cause was ascribed—for example, milk of a diseased cow; chewing paper, and speaking loud in my ear; bitten by a rat; worms; carelessness of drug clerk; black hives; etc.

The assigned causes have been classified according to their effect upon the ear; there are thus grouped together in one class all those diseases or proximate causes that produce the same effect upon the ear. Three broad groups are formed containing affections respectively of the external, middle, and internal ear. Each group is divided into subgroups, as follows:

External Ear.—Impacted cerumen, foreign bodies, miscellaneous (external ear).

Middle Ear.—Suppurative affections, non-suppurative (or catarrhal) affections, miscellaneous (middle ear).

Internal Ear.—Affection of labyrinth, affections of auditory nerve, affections of brain centre for hearing, miscellaneous (internal ear).

The causes of deafness have been classified in 47,967 cases. The percentage of cases in each class is as follows: External ear, 1.8 per cent.; middle ear, 72.6 per cent.; internal ear, 25.6 per cent. The principal subgroups are: Suppurative, 36.5 per cent., and non-suppurative, 36 per cent., affections of the middle ear; affections of the labyrinth, 5.7 per cent, and affections of the nerve, 19.5 per cent.; other subgroups, 2.3 per cent. Among the classified cases the principal assigned causes are: Catarrh and colds, 14,776; scarlet fever, 7,425; meningitis and brain fever, 6,004. These three causes alone include the majority of the classified cases (58.8 per cent.). Among the unclassified cases, numbering 31,205, the congenital cases 14,470 overshadow those due to all other causes.

In special tables the classified causes of deafness, and the principal assigned causes, are presented in connexion with their geographic distribution. A series of shaded maps shows the ratio per million of population in each State and territory reported as deaf from the specified causes. A map is also given showing the average percentage of sunshine in the States during a period of thirty-one years. From this it is seen that the area of country having the least percentage of sunshine corresponds very closely to the area showing the largest ratios deaf from affections of the middle ear; the affections, however, are rather those of the suppurative variety caused principally by scarlet fever, than catarrhal.

In each of the three broad groups—external, middle, and internal ear—the number of deaf from childhood exceeds the number deaf from adult life. The deaf from childhood predominate among those deaf from suppurative affections of the middle ear and affections of the auditory nerve due chiefly to scarlet fever, meningitis, and brain fever, while those deaf from adult life predominate in the case of non-suppurative affections of the middle ear and affections of the labyrinth resulting principally from catarrh, colds and influenza.

In Table XLIV the deaf are classified by degree of deafness, deaf relatives, consanguinity of parents, and causes of deafness. In Table XLV the classification relates to the sex, race, nativity of whites, and causes of deafness.

Heredity.

The returns show that at least 4·5 per cent. of all the deaf and 11·3 per cent. of the deaf from birth are the offspring of consanguineous marriages. Of the deaf whose parents were cousins, 55·5 per cent., and of those whose parents were not, 29·9 per cent., have other members of their families deaf.

In considering the relatives of the deaf four kinds are distinguished—namely, (*a*) brothers, sisters, or ancestors (direct line); (*b*) uncles, aunts, cousins, and other relatives not *a*, *c*, or *d* (collateral); (*c*) sons or daughters (descendants); (*d*) husbands or wives (relatives by marriage). In making a classification the deaf are first divided into two classes—those who have *a* relatives and those who have not. Each of these classes may then be divided into two broad groups—those who have *b* relatives and those who have not, and so on, until all the possible combinations of *a*, *b*, *c*, and *d*—sixteen in number—are included.

The questions relating to deaf relatives were answered by 80,481 deaf persons. Nearly one-third of the deaf, 32.1 per cent., are reported as having deaf relatives. The proportion having deaf relatives is greater among the deaf from adult life than among the deaf from childhood, and greater among the partially deaf than the totally deaf. It is also greater among females than males. It is greatest of all among deaf persons whose parents were cousins (55.5 per cent.)

Of the deaf from birth—45·5 per cent., of the non-congenitally deaf from early childhood (under 5)—18.9 per cent., and of the deaf from adult life 34.7 per cent., had *a* or *b* deaf relatives. These figures seem to indicate that heredity has played a part in the production of congenital deafness and of deafness occurring in adult life (chiefly catarrhal), whereas deafness occurring in early childhood after birth and under the age of 5 (due principally to scarlet fever, meningitis, and brain fever) is probably adventitious in a large proportion of cases, the sporadic cases constituting 81.1 per cent. of the whole.

The number of deaf persons returned as having deaf children is 677. The results, on being worked out, show that the tendency to deafness among the children of deaf persons is more than five and a half times as great as in the case of the general population of the United States.

It is surprising to find that the majority of the deaf who have deaf children are persons who became deaf in adult life. This result merely confirms the conclusion reached upon other grounds, that heredity plays a part in the production of catarrh of the middle ear—the chief cause of deafness in adult life.

Out of a total of 89,287 deaf, 5,051 had deaf husbands or wives. Of these 5,051 persons, 88.5 per cent. were deaf from childhood and 9.6 per cent. from adult life; 83 per cent. were totally deaf; 5.2 per cent. were the offspring of cousin-marriages; 29.2 per cent. had deaf relatives *a* or *b*; 3.3 per cent. had deaf children, and 96.7 per cent. had either hearing children or no children at all. The facts that the great majority of the above were totally deaf from childhood, and that the sexes are almost equally affected, lead to the inference that these unions consist largely of intermarriages of deaf-mutes with one another.

The Married Deaf.

The number of married deaf persons reported in the census of 1900 was 34,206. Of these 57·7 per cent. were males and 42.3 per cent. were females; 37.8 per cent. were deaf from childhood and 58.5 per cent. became deaf in adult life; 34.7 per cent. had deaf relations (*a* or *b*); 1.4 per cent. had deaf children; and 15.8 per cent. had deaf husbands or wives. Of 4,695 married deaf who had deaf husbands or wives, 88.5 per cent. were deaf from childhood, while of 26,369 married deaf whose husbands or wives were not deaf 30.3 per cent. were deaf from childhood. Thus the vast majority of the married deaf who had deaf husbands or wives (88.5 per cent.) were deaf from childhood, and about two thirds of the married deaf whose husbands and wives were not deaf (67.1 per cent.) were persons who lost hearing in adult life.

Marital Condition.

The largest number of single persons is found among those who were deaf from childhood, while the proportion of married and widowed is especially large among those who became deaf in adult life. More than two thirds of those who are reported single belong to the totally deaf class, while three-fourths of those who are married are only partially deaf. Males are in the majority in both the single and married class.

Condition Affecting the Production of Deaf Offspring.

Out of 31,334 married deaf persons, 473, or 1.4 per cent., had deaf children. The numbers show that the sex of the deaf partner in marriage does not appreciably affect the proportion having deaf children. Of married deaf persons who were totally deaf, 2.4 per cent., while of those who were partially deaf 1.1 per cent., had deaf offspring. Of those who were congenitally deaf, 5 per cent. had deaf children; of those who were deaf from childhood (under 20) 1.9 per cent. had deaf children; and of those who became deaf in adult life 1 per cent. had deaf children. Of married deaf persons who had deaf relatives (*a*, *b*, or *d*), 2 per cent. had deaf children; while of those who had no deaf relatives, 0.9 per cent. had deaf children. The largest percentage of married deaf persons having deaf children, however, is found among those having *a* and *b* relatives who married deaf husbands or wives, and amounts to 9.5 per cent.

Present Age.

About one-fifth of the deaf are under 20 years of age; of these, over 75 per cent. are totally deaf, while among the number over 20 only about 33 per cent. are totally deaf.

School Attendance.

This is not a very satisfactory test, as many persons who have not attended school may be literate, and among the deaf it is likely that a large proportion would come within this class. From the answers received it is found that 73.6 per cent. attended school. Of the totally deaf 77.5 per cent., and of the partially deaf only 6.8 per cent., attended special schools. Illiteracy among deaf persons should be less than among the general population, since writing necessarily forms for many the principal medium of communication.

Occupations.

Of the total population 50.2 per cent., and of the deaf 38.5 per cent., are gainfully employed. These figures indicate that deafness is a drawback to some extent in securing employment, but they also show that the deaf as a class are by no means a burden upon the community. Few of the deaf who are under 20 years of age are engaged in gainful occupations, but this is because the majority are attending school. Of those over 20 years 43 per cent. are engaged in gainful occupations.

Of the deaf gainfully employed, 89.7 per cent. are engaged in agricultural, manufacturing, and mechanical pursuits, and domestic and personal service, three classes of occupation in which even partial hearing is not essential. On the other hand, only 10.3 per cent. are engaged in trade and transportation and professional service, both of which require hearing and speaking power. In all these classes of occupation a larger percentage of partially than of totally deaf are engaged. Those who have attended school also show a much larger percentage gainfully employed than do those who have not attended school. It appears that the deaf from childhood are more self-supporting than the deaf from adult life. Of the deaf from childhood who were 20 years of age or over, the majority (51.6 per cent.) were gainfully employed, against 36.8 of the deaf from adult life. Although the deaf from adult life, as a rule, possess perfect speech and partial hearing, yet the deaf from childhood seem to succeed better in earning a livelihood. This apparently anomalous state of affairs seems to be due to the fact that many persons who become deaf in adult life fail to accommodate themselves to the new condition of deafness. They lose their situations on account of increasing deafness, and feeling themselves too old to begin life again by seeking a new occupation with which deafness would not interfere, lose heart and drop out of the struggle.

In the case of the deaf from childhood, however, the accommodation to the environment has become complete before the dawn of adult life. Further, the special schools exercise a powerful influence in fostering a spirit of independence, and in leading their pupils to believe that a stigma attaches to those who become a burden upon their friends or the public.

The census tables relating to occupations show that there are extremely few occupations pursued by the people of the United States in which deaf persons do not find employment.

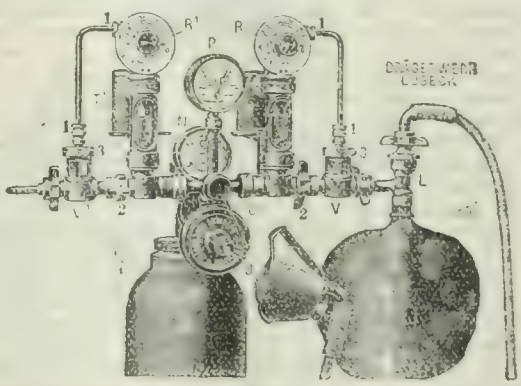
The last 100 pages of this interesting volume are filled with tables in which detailed statistics are set forth of the points to which reference has above been made.

THE ROTH-DRÄGER OXYGEN AND CHLOROFORM APPARATUS.

THE trend of recent research work dealing with chloroform and other anaesthetics has been in the direction of enforcing the necessity of the use of apparatus for the administration of anaesthetics which enables the anaesthetist to control the concentration of the vapour which the patient inspires. Snow and Clover, and more recently Vernon Harcourt, in this country, Bert and Raphael Dubois in France, have devised methods of giving more or less exact percentages of anaesthetic vapours.

In Germany the Roth-Dräger apparatus has been adopted widely, and has recently been tried in several London hospitals. It differs from the apparatus mentioned above in that it is designed to supply a mixed anaesthesia of chloroform vapour, with or without ether vapour, in an atmosphere of oxygen. The facepiece itself forms an additional mixing chamber, as it admits air which dilutes the oxygen, and thus presents an atmosphere richly supplied with oxygen, and easily respirable.

Two main principles have been adopted in the past for regulating chloroform inhalers. In the one case the patient has to draw the vapour into his lungs by inspiratory effort, as in Snow's, Clover's, and Vernon Harcourt's models. In the other an atmosphere consisting of air or oxygen, with a known percentage of anaesthetic vapour, is propelled by some mechanical means, while the patient merely breathes to and fro into the facepiece,



Apparatus for oxygen-chloroform, and ether narcosis (according to Professor Krönig, Jena).

which is kept filled with the mixed atmosphere. This obtains in the case of the Junker, the Dubois, and the Roth-Dräger inhaler. The last two apparatus are capable of supplying an exact percentage, which is not the case with the first named. Professor Kionka and Professor Krönig[1] have undertaken a careful research into the results which can be obtained from the Roth-Dräger inhaler, and their results, which are derived from both clinical and experimental observation, prove the value of the apparatus.

The working of the inhaler, when fitted with Professor Krönig's ether supply arrangement, may be briefly described.

The oxygen is contained in a large cylinder fixed vertically in a stand. To its lateral outlet the apparatus is firmly screwed. The oxygen cylinder is opened by a key, and oxygen streams through the apparatus when the cock, O, is placed horizontal; N is the gauge which tells how much oxygen is in the cylinder; P shows the amount of oxygen passing through per minute, and Q is an adjustment which regulates with accuracy the amount of oxygen which passes into the apparatus from the cylinder. There are two dials (R and R') on which travel indicators, the dial faces are marked with double sets of figures, the peripheral show drops per minute, the central give the grams per minute, each drop of chloroform being estimated as 20 milligrams by weight. Below these indicators are the glass chambers in which the anaesthetics drop,—that on the right being chloroform, that on the left ether.

[1] Mischnarkosen mit genauer Dosierung der Dampfconcentration, *Archiv f. klin. Chir.*, Bd. 75, Heft 1.

The dosage is controlled by turning the indicators on the dials: R and R' from right to left; T and T' are respectively the glass vessels which contain the anaesthetics, and which are filled by a specially-arranged funnel, through which chloroform or ether is poured. To the right of the apparatus are seen the bag J, with the saving apparatus L, and the tube carrying the mixed vapours is shown. The facepiece is constructed of metal, is furnished with an expiry valve, which is very true and works with a perceptible "click." There is a hole in the facepiece through which air enters during inspiration and supplements the supply of oxygen. In use 4 litres of oxygen per minute are allowed to flow through, the exact quantity being adjusted by the screw Q. The aperture in the facepiece is estimated to admit 8 litres of air per minute. The supply of chloroform is opened by the indicator R, that of ether by R', and 5, 15 to 75, or more drops per minute are allowed to evaporate and be conveyed by the oxygen stream into the bag T, and ultimately through the tube and facepiece to the patient.

In use the apparatus satisfies some of the requirements of ideal anaesthesia. It produces an easy and sufficient narcosis by gradually increased doses of the anaesthetic, and it enables the administrator to maintain control of the amount of anaesthetic required at different stages of an operation. If he desires only chloroform he turns only one indicator, if he wishes to employ ether with chloroform he can easily do so, and can further regulate the amount of each as he deems the necessities of each patient require. We have found the inductive period averages six to eight minutes for adults; it is seldom marked by excitement or struggling and respiration seems free and unembarrassed. The narcosis is wholly satisfactory and is sufficiently profound for abdominal surgical proceedings, even for those in the upper half of the abdominal cavity. The use of oxygen, while it increases the cost of the anaesthesia—a cost which could be lessened when large quantities of oxygen are under contract—certainly is of great value in the more serious operations now practised. The facepieces are rigid, and in that way are less adaptable for the edentulous, but fit very well when the face has not fallen in.

The experience of such Continental surgeons as Roth, Hagen, Krönig, and Kinoka is strongly in favour of the Roth-Dräger apparatus. In England the use of the method has proved equally satisfactory. It has been tested for us in a series of cases, and it was found that the apparatus is extremely simple to work in spite of its somewhat formidable appearance, and that it produces a satisfactory narcosis, usually without any period of struggling or respiratory distress. The anaesthetist has complete control of his dosage, and can with a touch of the finger lessen or increase the amount of the anaesthetic vapour. The after-effects are usually slight if the anaesthetist is careful to limit the amount of anaesthetic given. It is not possible in this place to discuss the advantages of using so large a percentage of oxygen as a routine measure, but it is clear that in many cases the Roth-Dräger method is of the utmost value, and probably enables the anaesthetist to obtain and maintain an anaesthesia which would be either dangerous or impossible without the use of oxygen combined with the anaesthetic. We gather from the literature dealing with this method that dangers and difficulties have been recorded when the apparatus was in use. The vomiting during the induction which has occasionally been met with is probably caused by giving too feeble a vapour, and is therefore avoidable. More serious difficulties have not occurred in our experience, but the apparatus as constructed can be made to deliver a fairly high percentage of vapour of chloroform, and must therefore, unless carefully used, be capable of giving a dangerously large dose of anaesthetic. This cannot be imputed as a fault to any apparatus. The anaesthetist needs a margin of strength of vapour and the power to control the range of strength; this the Roth-Dräger apparatus supplies. It is the work of the anaesthetist to know when to give and when to withhold; observation of his patient's condition must guide him, and his decision once made, he can rely upon the accuracy of the apparatus to deliver a stronger or a weaker strength of vapour. Dr. W. Hagen[1] has made some observations upon the blood pressure and respiration when oxygen-chloroform vapour is inhaled, and his conclusions are worthy of study.

The complexity of the Roth-Dräger apparatus and the slightly increased cost of the narcosis due to the large amount of oxygen needed are apparent objections to the method, but, as we have pointed out, the first is not valid, for the apparatus is really extremely simple, and the latter should not be allowed to weigh against the diminished risk to patients. There is no doubt that for hospital work the Roth-Dräger apparatus should take a high place and be adopted in well-ordered operating theatres.

BRITISH MEDICAL BENEVOLENT FUND.

At the March meeting of the Committee nineteen applications for assistance were considered, and sums amounting to £193 voted in relief of eighteen of the cases, one being postponed for further inquiries. Two annuities of £20, vacant through death, were filled by the election of approved candidates.

Appended is an abstract of the cases helped:

1. Daughter, aged 50, of late M.R.C.S. Health too indifferent for regular work. Slight help from a relation. Voted £5.

2. Widow, aged 63, of L.F.P.S.Glasg. No income; very bad health. Dependent on a daughter who is a waitress. Relieved once, £12. Voted £6.

3. Daughter, aged 57, of late M.D.Aberd. Dependent on small and decreasing earnings from teaching music. Health indifferent. Voted £10.

4. Daughter, aged 74, of late M.R.C.S. Only income five guineas a year from a charity. Health indifferent and sight failing. Voted £12.

5. Wife, aged 42, of L.R.C.P., L.R.C.S.Edin. Applicant's husband has practised for many years as assistant in Lancashire, but lost his reason a few months ago, and is now confined in an asylum. No income; two children at school. Voted £15.

6. Daughter, aged 6, of late L.R.C.P., L.R.C.S.Edin. At father's death, two years ago, applicant had to go to the workhouse, but has been removed by an uncle of extremely small means. Voted £9, payable to the uncle.

7. M.D.Edin., aged 68. Used to be well provided for, but lost his capital through the failure of a home for inebriates and other misfortunes. Is now unable to practise on account of ill-health. No children. Voted £18.

8. Widow, aged 65, of late M.D. Unable to obtain remunerative work on account of age. Relieved 9 times, £79. Voted £12.

9. Widow, aged 47, of M.R.C.S., L.S.A. Supports herself as a housekeeper, and is obliged to help an invalid son. Relieved 8 times, £100. Voted £10

10. Widow, aged 35, of L.R.C.P.Edin. Endeavours to support herself by nursing. Two children, aged 12 and 3. Relieved 3 times, £30. Voted £10.

11. Widow, aged 56, of L.F.P.S.Glas. Nine children, of whom six are self-supporting and able to give a little help, but three still dependent. Relieved 8 times, £120. Voted £5.

12. Widow, aged 59, of M.R.C.S.Eng. No income; children unable to help; health very indifferent. Relieved once, £12. Voted £12.

13. Daughter, aged 64, of late M.R.C.S. Only income an annuity of £20 from a charity. Relieved twice, £12. Voted £6.

14. Widow, aged 60, of L.R.C.S.Edin. Income £18 a year. Receives a little help from a son; is in very bad health. Relieved five times, £50. Voted £12.

15. Widow, aged 44, of L.R.C.P., L.R.C.S. No income; slight help from a son who is a sailor. Relieved three times, £27. Voted £12.

16. M.R.C.S., L.S.A., aged 67. Has been incapacitated for some years by paralysis and heart disease. Receives a small superannuation allowance; eight children, only able to give slight help. Relieved five times, £75. Voted £15.

17. Widow, aged 46, of M.B., C.M. Income £20 a year; receives slight help from her father in law and takes boarders; seven children, aged 16 to 8, health indifferent. Relieved eight times, £90. Voted £12.

18. Daughter, aged 49, of late M.R.C.S. Income £8 a year; practically disabled by an accident. Relieved once, £5. Voted £12.

The late Mrs. Anne Julia Lloyd of West Kensington Gardens left £1,500 to the West London Hospital; £500 each to the Convalescent Home for Poor Children, St. Leonard's and the Fever Hospital, Islington; £400 to the Royal Free Hospital; £200 each to the London Fever Hospital and the Royal Hospital for Incurables; and £100 each to Chelsea Hospital for Women, the National Hospital for Diseases of the Heart, and the London Hospital.

MOTORS FOR MEDICAL MEN.

[FROM A CORRESPONDENT.]

(Continued from page 1004.)

THE DIFFERENTIAL GEAR.

THE hind wheels of an ordinary carriage are free to revolve on a fixed axle as they choose, and consequently, in going round a corner, the wheel on the outside of the curve, having to traverse a longer space, revolves more quickly than its fellow; if it did not do so it would have to be dragged with a sliding motion over the additional surface. But where the motive power is put upon the back wheels, whether by means of chains or by the use of a revolving axle which carries the wheels with it, this accommodation is impossible unless other means are taken to provide for it. Hence the necessity for a differential, which, in the case of chain drives, is upon a secondary axle carrying the sprocket wheels (see Fig. 2, BRITISH MEDICAL JOURNAL, April 27th, page 1002), and in or near the gear box, or else, when live axle drive is employed, on the back axle itself. The principle of a differential gear is not easy to state in words; the axle on which it is placed is, of course, divided in the middle, and the two halves are connected only by gear wheels specially arranged. Perhaps the best illustration of its action may be got from a pair of scales. If a pair of scales having equal weights in its pans is lifted by its central support, the two scales and the whole system rise equally. But if the weights are unequal, then one scale is lifted more than the other, or may even be descending while the other is rising; nevertheless, the system is raised as a whole.

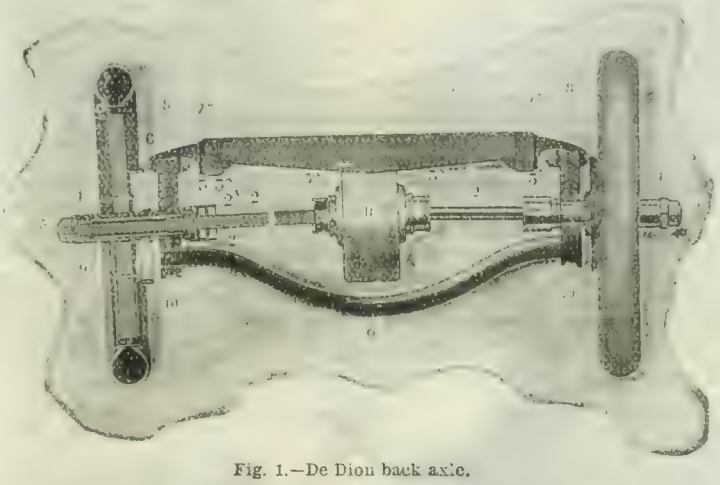


Fig. 1.—De Dion back axle.

Such is the result of a differential gear. If the resistance upon the two wheels is equal then each is revolved forwards at the same pace. In the case of the scales raised by their central tag, if the one scale does not come up, then the other rises more than it would if both had come up equally. So, too, with the differential. If from any cause one wheel revolves forwards less than the other, then the other revolves forwards faster than it would had both moved alike. Just as with the scales the balance of motion was upwards though one scale failed to rise, so with the differential. If the big wheel or ring is revolved forwards, whatever may be the relative motions of the other parts geared with it, the balance of motion is forwards and the car must go forwards, either in a straight line or in a curve. It is very important that the differential gear should act freely; hence it is advisable from time to time to jack up the back of the car, so that both hind wheels are free of the ground, and to spin them by hand to see that their proper independence, or, rather, their proper dependence, on one another works freely.

It would serve no useful purpose to describe minutely the construction of differential gears, but an idea of their general plan may be gathered from the figures.

THE BACK AXLE AND ITS COMPONENT PARTS.

It will be remembered that the right and left halves of the back axle have to revolve with a certain degree of independence; hence it must be cut into two halves, held together by the casing of the differential box. As this axle has to carry the weight of the car as well as to transmit the power, it was frequently found after wear to sag in the middle, with the result that the wheels no longer stood vertically, but their tops inclined inwards. Various means have been adopted to obviate this source of weakness. In the Décauville cars the plan was first introduced of making the differential casing very strong and continuous with a strong sleeve, which carried, near its ends, the bearings of the driving wheels. The weight of the car was thus carried independently of the divided driving axle, which was inside this sleeve, and had nothing more to do than convey the rotatory motion to the wheels by means of dogs at its ends. This was a great improvement, and remains a satisfactory form of construction. Other makers have adopted the plan of superadding a bent solid axle to carry the weight, as is exemplified in the back axle here figured. It is necessary to make it bent, in order to get it out of the way of the actual driving axle, which has to be in line with the hubs of the driving, wheels and to pass through the ends of the bent axle which serve as bearings.

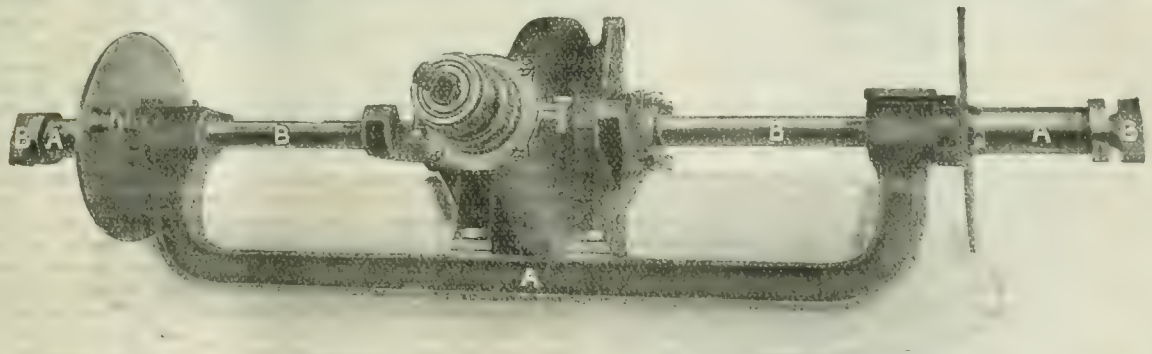


Fig. 2.—Back axle of a Speedwell car. A, The bent weight carrying axle with its continuations in the form of sleeves to carry the wheels; B, the live axle, entering the differential box, in the centre and terminating in dogs which engage with a part of the hubs of the wheels.

In the smaller De Dion cars, and indeed in some of their more powerful models, the weight-carrying axle is independent, and the driving axles are not, as in the Décauville pattern, contained within it, but are outside. They are not placed in line with the hubs, but are inclined to them, and this necessitates their being connected with them by means of universal joints. It might be thought that the interposition of these two universal joints would be a source of friction and also of undue wear, but they appear to have answered well, and are used even in the heavy motor omnibuses with De Dion chassis. There is perhaps not very much to choose

between the different ways of rendering the back axle stiff, but some one or other should be adopted, and the weight should never be carried by the prolongations of the differential which convey the drive to the hubs of the wheels.

The Frame.

At one time tubular frames were common, but nowadays the frames are more generally constructed of angular pressed steel, whilst in some few the hollow of the angular steel is filled with wood. A very slight frame is bad, as it is subject to distortion under stresses, and this is very bad for the machinery, bringing its parts out of line. But on the whole the modern frame is adequate for the work it has to do, and does not constitute a weak part of the car, so no more need be said about it.

Lubrication.

The high speed at which a motor engine runs, and the exceedingly high temperature of the exploding mixture necessitate very thorough lubrication with an oil which will not carbonize readily, and is sufficiently thick to remain an efficient lubricant when very hot. There are also a number of bearings which call for constant lubrication, and many others which need free lubrication, but on which the lubricant lasts much longer. Hence it is generally arranged that the principal bearings shall be fed with oil by some system which is in constant operation while the car is running. The older form is the "drip" lubrication, in which oil drips by gravitation through glass tubes in which the rate of drip can be watched and regulated, and from which it is carried by copper tubes to its destination. If, however, one forgets to turn it off, the oil continues to drip away needlessly when the car is not running.

A modification of this "sight feed" lubrication is the substitution of a centrifugal pump for the force of gravitation, and in this case of course the feed of lubricant ceases when the engine stops.

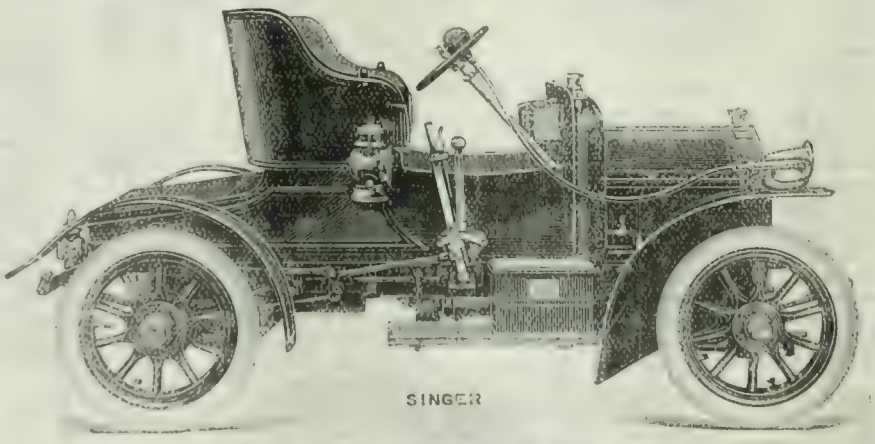


Fig. 3.—Singer 7 h.p. double cylinder live axle car.

In a third system a pump is likewise employed, but there is no "sight feed," and the apparatus is trusted to perform its work quite automatically. The lubrication of the pistons is generally effected by splash; that is to say, the lower part of the crank chamber stands full of oil, and the cranks and the big ends dipping into this splash it up into the cylinders; it is usual, also, to feed oil into the sides of the cylinders at a higher point by copper tubes from the lubricator.

There is one defect in this splash lubrication which, strange to say, is remedied in a few cars only. Whilst it is of the utmost importance that there should be enough oil in the crank chamber (see Figs. 1 and 3, British Medical Journal, April 13th, page 831) no means is provided for ascertaining at what level it is standing, and the motorist is merely directed to put so much oil in every so many miles. But the rate of its wasting is not constant, and if there is too much a smoky exhaust from partly burnt oil is the result, and sooner or later the sparking plugs foul up, and then cease to act as the current is short-circuited. It is odd that in machines on which so much care and thought have been bestowed so important a matter should be left to chance.

Water Circulation.

As every one knows, it is quite possible to secure a tolerably rapid circulation of water due to differences of temperature alone, and that natural circulation is relied on in some cars, for instance the Renault, the Gregoire, and the Mercèdes. A great many makers, however, still fit a pump to accelerate the circulation, and these pumps are apt to give trouble at times. Sometimes they leak so badly as to run the water out on a long drive; they may also freeze, for in very cold weather, when it has been thought wise to empty out the water, the pump often remains full. This may split a joint or pipe, or may break the pump if the engine is started before it is thawed out of it. After considerable experience of two cars with very efficient pumps, and of one with no pump at all, the writer is unable to find the least difference in the heating of the water after a long run; the natural circulation seems to be thoroughly adequate, and on the only single occasion upon which any overheating occurred the belt which drives the fan was found to have broken.

The fitting of a fan which draws the air through the spaces of the radiator has now become universal; when the car is travelling fast, enough air to cool the water is probably forced through the radiator, but in climbing a long hill at a slow speed—just the conditions under which overheating is likely to occur—the fan is needed to ensure a sufficiently brisk air circulation.

Ball Bearings versus Plain Bearings.

It has already been mentioned that a very considerable part of the power is lost in the process of transmission by friction, and it is, therefore, desirable to diminish this as far as possible. Ball bearings, of course, help to minimize this loss, and it is usual to put them in a good many places, though not in all. For example, the bearings of the crank are generally plain bearings; on the other hand, the bearings of the gear box are generally ball bearings. The bearings of the cardan shaft in its sleeve and where it enters the differential box are almost always ball bearings. As to the bearings of the wheels themselves some difference of practice prevails, plain bearings being adopted in some of the most expensive makes of cars, although ball bearings are more general. The ball bearings have the advantage not only of minimizing friction, but also of enabling a little shake to be taken up more readily and precisely; on the other hand, balls may break and the ball races may wear unevenly, necessitating new cups. Ball bearings are, of course, more expensive to make, and unless very well made are not to be desired, so that in the less expensive grade of cars the adoption of plain bearings is to be expected and is not a reason for the rejection of a car. Still, on the whole ball bearings are to be preferred in all places for which they are suitable. In the Leader cars roller bearings in some places take the place of ball bearings, and the large surface thus taking the work may be expected to minimize wear.

The Bodies of Cars.

Though the novice may be inclined to look too much at the body whereas it is the chassis which is all-important, nevertheless the comfort of the occupants of the car depends largely upon the body. A caution has already been given as to the putting of too heavy a body upon a low-powered chassis, and this point is always to be kept in mind. For cars under 10 h.p. two seats are to be preferred to four, and a few illustrations of bodies may be given in order to convey some idea as to the sort of thing obtainable.

The 7 h.p. two cylinder Singer car here illustrated is a fair type of the construction of a two-seated car. The sides are closed in by low doors which afford not a

little protection; even a four-seated car with open sides is always cold to the legs of those in the



Fig. 4.—De Dion 8-h.p. single-cylinder car with Victoria carriage body.

front seats. The dashboard is recessed in the manner known as the Daimler pattern, and the space is utilized for the petrol tank. Accessibility has been studied; the whole body can be raised on hinges situated at the back, and the clutch can be removed for the renewal of the leather without disturbing anything else of importance. The weight of the complete car is about 12 cwt. Provision

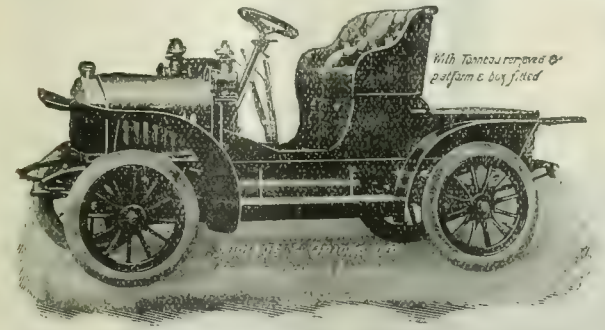


Fig. 5.—Alldays and Onions 10-h.p. double cylinder long-axle car.

is made for the ready attachment of a glass wind screen, and a leather or canvas hood can be fitted; but these are extras. So also is a metal cover to go under the engine; this latter is a material saving of labour in cleaning the car, as without such a screen mud and dirt accumulate in places from which their removal is troublesome.

The glass screen in the De Dion car can be raised to meet the hood, or can be removed entirely. The hood, of course, can be lowered. The radiators are placed low, below the bonnet, and a centrifugal pump is used for the water circulation. There is also a peculiarity in the



Fig. 6.

regulation of the charges, this being effected not on the inlet, but on the exhaust; by partial closure of the exhaust the fired charge is not wholly got rid of, so that only a smaller fresh charge can be admitted to the cylinder. Similar bodies are also fitted to the 10-h.p. chassis and there are various other forms of body employed. Thus a four-seated tonneau may be had with a removable back portion converting it into a two-seated car, the front seats being fitted with a detachable hood and wind screen. Broughams and landaulettes, the former being sometimes constructed without a driver's seat, one of the occupants



Fig. 7.

driving from inside; a spider seat at the back may be added.

Messrs. Alldays and Onions fit to their 10-h.p. double-cylinder car a form of body very convenient for those who ordinarily require only a two-seated car. The two back



Fig. 8.

seats and a luggage box can be removed (either both or the seats only) in a few minutes. It will be noticed that there are no side doors to the front seats, but a substitute may be found in leather flaps made to button on to studs,

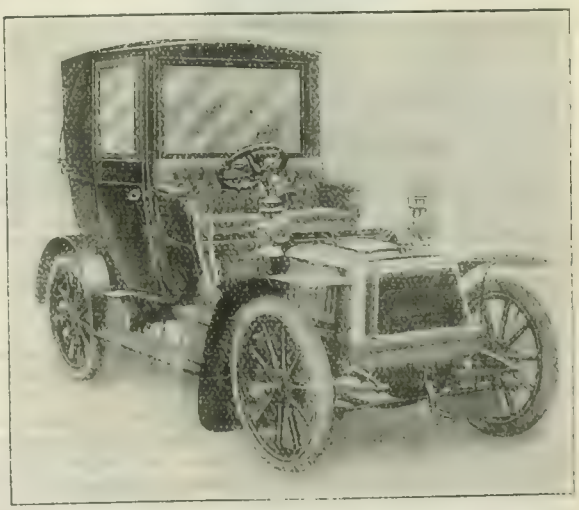


Fig. 9.—Three-cylinder 11-h.p. Panhard car, chain driven.

which answer the same purpose; hoods, glass wind screen, and under cover for the engine can all be added to these cars, but are extras. It may be mentioned that a folding glass screen presents certain advantages over a

screen always fixed at its full height. When not facing a driving rain, a screen which does not reach to the level of the eyes affords a great deal of protection against wind, apparently because the current is deflected upwards or sideways. The writer was much struck by the fact that in a car with half of its screen down, the screen being of such height that one looked over it with ease, not the least wind was felt on the face when the car was driven at fifty miles an hour to show what it could do. The wind created buffeted the sides of the head and the back of the head, nevertheless; so that the protection at that speed was not quite all that could have been desirable for a long run.

The Swift Motor Company build a 9 to 10-h.p. car with either two or three cylinders, the latter being somewhat more expensive (about £45 more). These cars can be had either with a two-seated body or a four-seated body, in the latter access being had to the back seats by one of the front seats swinging out of the way.

At an additional cost of £62 a landaulette body can be fitted, with a third seat behind. In this type of body the front glass and its framework is a fixture, and serves as a wind screen when the hood portion is open.

For town work, and for those who cannot face any exposure, a landaulette body may be preferred, and the accompanying illustration of an 11-h.p. Panhard car with such a body will indicate how it is fitted upon a chassis.

There is a disadvantage for those who wish generally to drive their own car in having a landaulette body, in that the space available for the driver's seat is, unless in the case of the extra long chassis of high powered cars, somewhat curtailed, so that it is less comfortable for the driver than other types of body.

The same chassis is sold with the ordinary open four seated tonneau body.

The Humber car, of which an illustration is given, is a 10 to 12 h.p. four cylinder, two seated car, with wind screen and Cape cart hood. The screen and hood, as well as an under mud shield are extras.

Before deciding upon a car it will be well to get from the makers or their agents the catalogue of such cars as appear likely to answer the purpose, and then to go through the specifications with a view to seeing how far they fulfil the desiderata laid down in these articles, in which the writer has endeavoured, so far as can be done in brief compass, to point out what should be looked for in a good up-to-date car.

The Actual Purchase of a Car.

A word of warning may be useful as to this final step. A vicious custom obtains in the motor trade of requiring the purchaser when giving his order to pay down a deposit of one-third of the price, the remainder to be paid on delivery of the car. Having thus secured their customer, the makers are often in no hurry to deliver the car, and the purchaser is quite helpless unless he has secured an unusually binding agreement as to the return of the deposit or payment of a material forfeit if the car is not delivered to date. The writer himself would never in future assent to pay any deposit whatever, but would bind himself to pay the full amount at the moment of delivery of the car. Perhaps his experience was unusually unfortunate, but after paying a deposit he was unable to get delivery of a car within any reasonable period, and finally had to enter upon a law suit to recover the deposit. Rather than face the exposure of the witness-box, the vendors repaid the amount of the deposit and also paid the writer's legal expenses (which amounted to two-thirds of the sum deposited), but they did not do so till the whole of one day and part of another had been wasted in the law courts waiting for the case to come on, and until the judge before whom the case was to be tried was summing-up the case preceding it. This was no doubt an exceptional case, but it serves to illustrate the helplessness of the purchaser who has parted with the deposit money and the possible trouble to which he may be put.

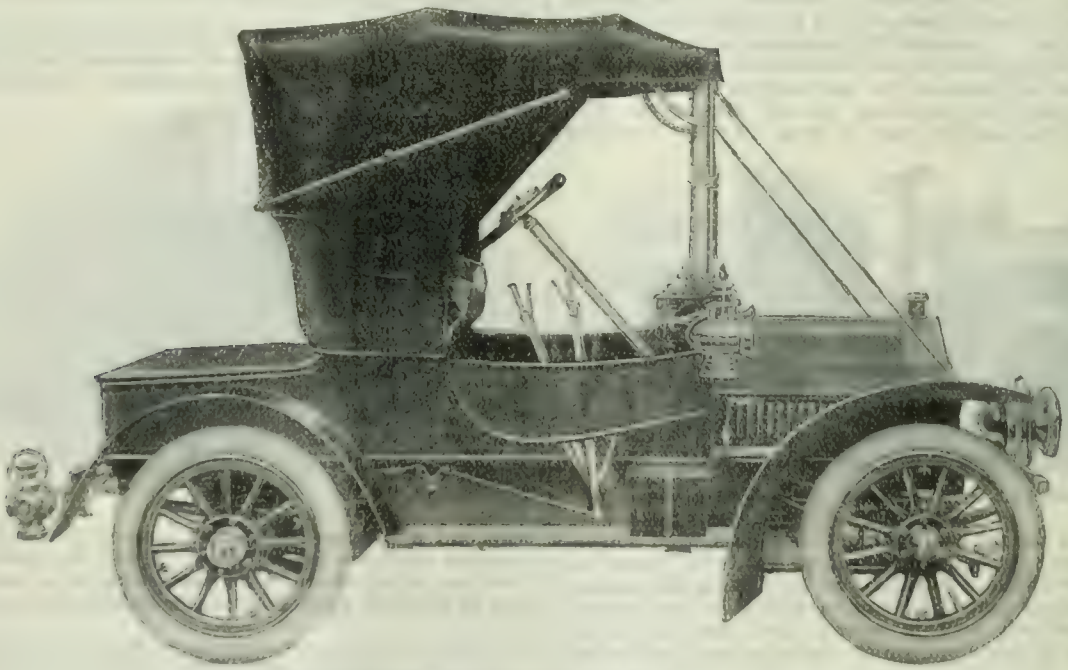


Fig. 10.—Humber 10 to 12 h.p.

The custom does not exist in other trades, and it is difficult to see why the motor trade should be a law unto itself in this matter.

(To be continued.)

CERTIFICATES UNDER THE WORKMEN'S COMPENSATION ACT.

At a meeting of the Newbury and District Medical Society, held on April 25th, 1907, the following resolutions were proposed, seconded, and carried *nem. con.*:

1. That this meeting is of opinion that the certificates issued under the Workmen's Compensation Act by any insurance company, which are required to be filled in at the expense of the injured workman, and stating the probable duration of disablement, should not be signed by any member of this Society.

2. That no certificate be filled up on behalf of the employer, under the above Act, for a less fee than one guinea.

THE MILK SUPPLY OF THE LONDON CHILDREN'S HOSPITALS.

A MEETING of representatives of the lay Boards and medical staffs of the principal London Children's Hospitals was held at Great Ormond Street on Friday, April 26th, to discuss the means by which a more uniform and satisfactory milk supply to these institutions could be secured. Mr. Arthur Lucas, the Chairman of the Hospital for Sick Children, presided. The following resolutions were unanimously adopted:

1. The milk shall be pure, genuine, and with all its cream as yielded by the cow, and absolutely free from any and every kind of adulteration, including preservatives. It shall be of such quality as shall produce at least 3.5 per cent. of butter fat.
2. It shall be supplied from a farm, or farms, whose name, or names, and locality are notified to the hospital.
3. It shall be permissible for an authorized representative of the hospital to inspect such farm, or farms, at any reasonable time.
4. The cows supplying the milk shall be in a good state of health, and the veterinary surgeon shall give a certificate at least once a quarter to that effect.
5. The milk shall be strained and refrigerated at the farm, and there canned and sealed.
6. The milk shall be delivered, sealed, at the hospital, within 24 hours of milking.
7. It shall not be "pasteurized" or treated otherwise than as mentioned in Clause 5 without the written sanction of the hospital authorities.
8. It is advisable that the milk as supplied to the hospital should be tested bacteriologically and chemically once a week.
9. That the name of the medical officer of health of the district in which a supplying farm is situated be furnished by the contractor, and that he be informed of the relation between the farm and the hospital, and that he and the clerk of the urban district council be supplied by the hospital for their information with a copy of these recommendations.

These resolutions would seem well adapted to the desired purpose. They make no demands on the milk contractors further than might reasonably be expected in a grave matter involving the welfare of the many patients in the London children's hospitals. It should be possible, too, to adopt them without unduly raising the price of milk supplied to these institutions. Before adoption they will, of course, have to be submitted to, and approved by, both the lay and medical committees of each of the hospitals concerned. A unanimous agreement on the part of the children's hospitals on the point might prove a potent factor in the improvement of the milk supply of London in general, now so lamentably defective. It is a pity, too, perhaps, that these institutions were not more directly consulted by the different municipal authorities before establishing their present systems of milk dépôts.

SECRET REMEDIES AND PROPRIETARY PREPARATIONS.

CONTINUING his publications on new remedies, secret and proprietary preparations, Dr. Franz Zernik[1] deals with some substitutes for migraenin. He mentions that since he wrote about *sulfopyrin*, the firm which brought this preparation out entered into a correspondence on the subject, and notified its intention to introduce a sulphanilate of antipyrine in molecular proportions, that is, roughly 52 per cent. of sulphanilic acid and 48 per cent. of antipyrine. This preparation has now appeared under the name of *beta-sulfopyrin*. The dose recommended by a medical man who has employed it is 1 gram four or five times a day. He advises it for iodism and for catarrhal affections of the respiratory organs. In spite of the claims put forward by the manufacturing firm, Dr. Zernik finds that beta-sulfopyrin is a mixture of about 50 parts of the sulphanilate of sodium, 45 parts of antipyrine and 5 parts of sulphanilic acid.

Migrophen is another substitute for migraenin. It is to be given in doses of 0.25 gram once or twice. It is said to be a chemical combination of quinine and lecithin, and it is claimed that the bitter taste of the former is considerably toned down in the compound. On examination, he found that it was simply a mixture of about 10 per cent. of lecithin and 90 per cent. of quinine sulphate, and that, contrary to the prospectus, its solubility is identical to the solubilities of the two constituents, namely, 0.2 per cent. in cold water. It has a very bitter taste.

Alformin is advertised as a basic formate of aluminium which can be used instead of aluminium acetate. It is supposed to possess from two to three times the astringent power of the latter, to be considerably more disinfectant and more stable. For external application it is to be used as a lotion diluted with 8 or 10 times the quantity of water; as a gargle or mouth wash 8 or 10 drops are to be put into a glass of water. Zernik found that it contains about 14 per cent. of basic formate of aluminium and nearly 3 per cent. of free formic acid. It decomposes fairly easily, as does the acetate. While the free formic acid may enhance the disinfectant action, it is necessary to realize that this acid is present on account of its possible irritant action.

Iodofan is said to be a condensation product of resorcin, iodine, and formaldehyde, and is recommended as a substitute for iodoform. The various analyses have led to very different results. It appears that the preparation varies very greatly; one sample contained only 4 per cent. of iodine instead of the theoretical 47.75 per cent. It is further claimed that formaline is split off from iodofan, but this could not be detected chemically. It thus appears that the small and varying content of iodine and the failure to give off free formaline renders it unlikely to prove a good substitute for iodoform, but the final judgement must be left to bacteriologists and clinicians.

Ziegler's Specific against Jaundice and Gall Stones, according to the prospectus, has been used throughout Germany for twelve years without advertising. It is supposed to be the cheapest and most efficacious remedy for jaundice. Two "glasses" are required for cure, while obstinate cases may require a third glass. Each glass contains 100 grams of a mixture of 20 per cent. potassium carbonate and 80 per cent. dried sodium sulphate, and costs 6 marks.

Dr. Lauser's Stomach Powder is a proprietary remedy prepared by a dispensing chemist, T. Lauser, under the supervision of a general practitioner, Dr. Lauser. They claim that it is the best remedy for all diseases of the stomach and intestines. The dose recommended is one teaspoonful four times a day, dissolved in water. On examination it was found that the constituents do not correspond with the ingredients given by the manufacturers. It actually contained sodium bicarbonate 23.62 per cent., sodium sulphate 18.08 per cent., magnesium carbonate 22.25 per cent., precipitated calcium carbonate 22.38 per cent., powdered wood charcoal 3.34 per cent., powdered ginger 3.09 per cent., gum arabic about 0.81 per cent., bismuth subnitrate 0.42 per cent., sodium chlorate 0.48 per cent., water 4.15 per cent., ferric oxide and a trace of aluminium.

Dr. Lauser's Cough Drops are prepared under the same supervision, and, like the preceding, differ in composition from the supposed ingredients. They contain only 3.35 per cent. of alcohol, so that a statement about 50 per cent. tinctures is wrong. Besides, the mixture appears to consist of an aqueous solution of liquorice, an infusion of senna root, some liquor ammoniae anisatus, and small quantities of ammonium chloride.

Reichel's Cough Drops cost 1 mark for a bottle containing 65 c.cm. The purchaser is supposed to take 15 or 20 drops on sugar or in water four or five times a day. It is an alcoholic fluid, smelling and tasting of arnica, pimpinella, and anise.

Anticelta Tablets are produced by the Anticelta Association, 62, Chancery Lane, London. The tablets, each weighing 0.52 gram, are put up in oval boxes. The directions are that one or two can be taken after each meal, and that they are quite harmless. Apart from this, the advertisement contains details of dietaries. The tablets contain chiefly sodium bicarbonate and 1.25 per cent. of a digestive ferment.

Retterspitz Water was the stock-in-trade of a female charlatan, and was supposed to cure inflammation, and especially appendicitis, when applied locally. The woman being now dead, her relatives send the water out at 4s. 6d. a litre. The liquid is a whitish-yellow opalescent fluid, in which a precipitate occupying about one-fifth of the bulk is found. It is probably an aromatic water mixed with an albuminous substance derived from milk.

[1] *Deut. med. Woch.*, March 21st, 1907.

BRENTRY REFORMATORY FOR INEBRIATES.

THE report of Dr. Fleck, Superintendent and Medical Officer of Brentry Inebriate Reformatory, shows that 133 female and 182 male inmates have been under treatment during the year 1906.

The number of males admitted was more than twice that of females—a significant fact when it is remembered that a few years ago the female cases committed were in a vast majority. It would seem as though the real benefit of removing eligible inebriates of both sexes to such institutions as Brentry is at last commending itself to the magistrates and local authorities who are responsible for the fate of all such cases.

The mental condition of the individuals admitted during the year is represented thus:

(*a*) Congenitally defective, 11 males, 4 females.
(*b*) With acquired mental defect, 46 males, 21 females.
(*c*) With average mental faculties, 24 males, 10 females.

Therefore 34 out of 82 were of average mental condition. A considerable number of all the cases show a criminal record or are ex-convicts, and one in three of the women admit having borne illegitimate children. About a quarter of the cases are not English, but (presumably) vagrants from other parts of the British Isles.

Of discharged cases, the men show a higher percentage doing well than the women; Of 48 discharged women, only half are known to be doing well; of these 48, only 20 could be considered of even fair mental faculties.

Of 19 discharged men, 13 are doing well; of the 19, 12 at least were below the mental normal. Reports are given of a number of ex inmates who have been doing well from one to nearly five years since discharge.

A very large number of industries are taught in the reformatory, but there is very great difficulty in getting newcomers to learn any trade, as they are all wanting in stability and fixity of purpose, and are always desiring change. The great majority are entirely unskilful. It is also found difficult to teach reading and writing to the illiterate, as they cannot concentrate their minds. Many other inmates take a pleasure in reading.

Dr. Fleck considers it a waste of time to commit to reformatories persons who are either permanent physical invalids or mental degenerates; he thinks that suitable institutions should be provided for these cases elsewhere. They are all, of course, in need of permanent supervision and unsuitable subjects for reformatory treatment.

The physical health of most inmates is bad at first, but soon improves. About one in four shows evidence of cardiac derangement, and some of these have obvious organic cardiac disease.

Dr. Fleck is to be congratulated on the excellent results obtained by him from entirely deplorable material; he has under his hand a mass of clinical material of which he is evidently making good use.

The really scientific researches which are being patiently made in Brentry, and other institutions of the kind have already in a few short years done more to elucidate the real nature of alcoholism, and to indicate the direction in which rational treatment lies, than all the advocates of royal roads and short cuts to "cure." The contributions of such advocates to our knowledge of the disease remain in inverse proportion to the size of their claims.

By the will of the late Mr. Edmund Johnstone Eyre, of Dublin, the Adelaide Hospital, Dublin, and the Donnybrook Hospital for Incurables each receive a sum of £1,000.

Milk Commission in New York.—The Mayor of New York has appointed a Special Medical Milk Commission, the purpose of which and the reasons for its appointment are explained by him in the following announcement: "In view of the recent discussion of the subject of New York City's milk supply I have to-day (April 2nd) on my own responsibility and with a view of settling authoritatively this very important matter, appointed a Commission of five members to look into and investigate the entire subject and recommend what steps if any are necessary to ensure the city an abundant supply of absolutely pure milk. The members of the Commission are Drs. Joseph D. Bryant, T. Mitchell Prudden, Rudolph C. Lamb, Abraham Jacobi, and J. Emmett Holt.

LITERARY NOTES.

APROPOS of the armorial augmentations recently granted to Sir Frederick Treves and Sir Francis Laking, a correspondent of the *Westminster Gazette* recalls the epigram by Shirley Brooks on the baronetcy conferred upon Sir James Paget by Queen Victoria:

Thanks for the word, good Queen, which thou hast said—
"Give the Red Hand to Paget, wise and brave."
For, when *his* firm and gentle hand is red,
'Tis dyed that he may succour or may save.

In a book entitled *The English Factories in India*, 1618-1621, by William Foster, recently published by the Clarendon Press, mention is made of the professional devotion of one of the Company's early surgeons, who, but for the weakness of which mention is made, was evidently a fine fellow. We quote the passage:

We may note the professional zeal of the Surat factory's surgeon—a worthy prototype (were it not for his intemperance) of the Indian Medical Service—who, being summoned to attend the Governor of Broach, could only promise a hurried visit, because (as his superiors wrote) "a dangerous cure, which (unknowne to us) he undertock uppon a poore man that hath an impostume, will [require] his speedy returne or indanger the mans life." In the letter referred to, dated May 21, 1619, Kerridge wrote to the factors at Broach about the surgeon: "Wee pray you further to have an especiall care [to] keepe him sober, that wee be not through him gener[ally] skandalised by these infidells; which, except you looke [very] narrowly to him (if any stronge drinke be stirringe), you will hardly performe."

But the doctor seems to have compared favourably, in point of morals, with a clerical colleague, for Mr. Foster goes on to say:

Equal praise cannot be given to the chaplain at the same place, who gave rise to much scandal by levanting in "Moores apparel" to Ahmadābād, in pursuit of the three Englishwomen who had come out in the same fleet.

In a second article (see BRITISH MEDICAL JOURNAL, November 10th, 1906, p. 1310) on the Psychology of the Crusades contributed to the *Journal of Mental Science* for April, Dr. W. W. Ireland quotes from Abbot Guibert de Nogent's *Histoire des Croisades* a story which, as he says, throws a curious light on the military surgery of the Middle Ages. Baldwin, the brother of Godfrey and the second King of Jerusalem, had received a severe wound in trying to save one of his soldiers. The surgeon who attended, seeing that the wound in the abdomen was a deep one, was afraid to endeavour to close the outer edges by plasters, fearing an internal abscess. To relieve his uncertainty he asked the Prince that one of the Saracen prisoners should be delivered up to him upon whom he might inflict a similar wound, for, the Abbot remarks, to propose such an experiment upon a Christian would be a crime. The surgeon desired to kill the prisoner after having given him the wound in order that by opening his body he might at ease compare it with the injury which the King had received. Baldwin, however, declared that he would never consent to cause the death of any man, even of the most odious race, merely to seek through so many uncertainties to save another life. The persevering investigator then requested the French prince to have a bear given to him that he might hang it up by the fore-paws and then give the beast a similar wound in the abdomen which he might compare with that of his royal patient. The experiment was made, and the surgeon came to the conclusion that it would be dangerous to try to close up the lips of the wounds at once. History has not preserved the name of this ardent vivisector.

We are informed that, owing to the amalgamation of the Societies forming the new Royal Society of Medicine, the issue of the *British Gynaecological Journal* in its present form will cease after the publication, about August next, of a Supplement to the twenty-second volume recently completed. The Obstetrical Society of London and the British Gynaecological Society will unite to form a single Section of Obstetrics and Gynaecology in the Royal Society of Medicine, and the *Obstetrical Transactions* and the *British Gynaecological Journal* will be superseded by the publication of the Proceedings of that Section in a form which will represent and continue both the former publications.

Messrs. J. and A. Churchill are about to publish a thoroughly revised edition, with improvements in type and size of page, of Mr. Bowlby's *Surgical Pathology*, which has been out of print for some time. The author has

been assisted in his task by Dr. Andrews. In May the same firm will issue a new book on diseases of the eye by Mr. J. H. Parsons, Assistant Surgeon to the Royal London Ophthalmic Hospital. A feature of the book will be the series of coloured plates prepared by the three-colour process. There will be in addition a large number of figures in the text.

In a booklet entitled *Glimpses of American Surgery* in 1906 (London: Harrison and Sons) Mr. C. Hamilton Whiteford, of Plymouth, gives an account of what he saw in the course of a visit to the clinics of some of the best known American surgeons after attending the annual meeting of the British Medical Association at Toronto. His general impressions are that American surgery is, except in regard to the treatment of the vermiform appendix, of the highest class. Indiscriminate and wild operations were conspicuous by their absence, and the operating itself was frequently brilliant. It is implied, however, that the healthy appendix is often removed in order to prevent possible degenerative changes in the future. In Mr. Whiteford's opinion, special liability of the American appendix to inflammation cannot explain such figures as the following: "At the Toronto meeting an American surgeon stated that he had operated upon 1,700 cases of appendicitis with only one death. In the report of the St. Mary's Hospital, Rochester, Minnesota, for the year 1905, the number of in-patients operated upon was 2,727. Of these 764, or 28 per cent., were operated upon for some form of appendicitis. In addition to this, 'the appendix was removed 267 times during the course of other abdominal operations'—a grand total of 1,031 appendices removed from 2,727 patients." Mr. Whiteford says the American surgeon very rarely operates at a patient's house. Almost without exception the private patient who needs an operation goes into a hospital with which the operating surgeon is connected. The patient pays two distinct accounts—one to the surgeon for the operation and the other to the hospital for board, lodging, and attendance. Comparatively few patients are operated upon gratuitously. Even the heads of the profession are willing to accept very small fees from poor patients. Mr. Whiteford's little book is full of interest for surgeons.

Members of the Indian Medical Service, whether on the active or the retired list, will be interested to learn that a new edition of *The Imperial Gazetteer of India*, dedicated by permission to the King, is to be issued by the Oxford University Press. This may be considered as a new work rather than a new edition, and it will consist of twenty-six volumes, including a companion atlas. The first edition, in nine volumes, was issued in 1881, and the second edition, in fourteen volumes, appeared in 1885-7. The single volume of *The Indian Empire* has been expanded into four volumes—descriptive, historical, economic, and administrative—and these, with the exception of the second, will be published early in May. Apart from the historical volume and a few other chapters of *The Indian Empire* the whole of this great work has been written by officials in India under orders of the Indian Government, and every page has been submitted to the criticism of the several administrations or departments concerned. The volumes of the *The Indian Empire* have been entirely rewritten, with the exception of the history of the British period, where the personal impress of Sir W. W. Hunter's knowledge and style is preserved. The articles that make up the body of the *Gazetteer* have also been rewritten. Sir Herbert Risley, Mr. W. S. Meyer, and Mr. R. Burn has each acted in turn as editor in India, and the editor in England throughout has been Mr. J. S. Cotton, who was closely associated with Sir W. W. Hunter in both the former editions.

The Library of the College of Physicians of Philadelphia dates from 1789. Its growth was slow, the number of volumes being only 291 in 1836. In 1859 they had increased to 4,000. In 1866 the library, which had ever since its first beginning languished in the cold shade of neglect, entered on a new phase of vigorous vitality. Since then its growth has been steady. In 1876 they had increased to 17,765; in 1886 to 36,442; in 1896 to 51,175, and in 1906 to 82,305, besides 56,116 pamphlets and 20,978 inaugural dissertations. The library subscribes for 327 periodical publications, and receives 62 in exchange. In addition to these, 61 periodical publications are received from the editors or publishers. Exchange of publications is made with 19 foreign universities, and between 1,000 and 1,500 theses and dissertations are received every year; the number for 1906 was 1,433. The library contains 123 books printed before the year A.D. 1500, technically known as Incunabula. Among the special treasures in this class are *Valastus de Tarento: Tractatus de epidemia et peste. Argentorati, M. Flach* (*circa* 1470), which is believed to be the first medical book printed. There is a copy of the first edition of Simon of Genoa's *Synonyma* (Milan, 1473), the first medical dictionary. There is also the *editio princeps* of Benvenuto Grassi, *De oculis eorumque egritudinibus et curis*, printed at Ferrara in 1474, and one of Isaac's *Tractatus de particularibus diaetis* (Padua, 1487), said to be the first book on diet ever printed. There is a copy of the second edition of Bagellardus, *De infantium aegritudinibus et remedis* (Patavii, 1487), the first book printed on diseases of children; the first edition was published in 1472. There is a copy of the only edition in French published in the fifteenth century of Bernard de Gordon's *Fleur de lys en médecine* (Lyon, 1495), an exceedingly rare book. There are 366 volumes of manuscripts. Among these is one believed to have been written in the fourteenth century. The leaves are of vellum, and a part of what may be called a title reads, "*Secresit medici.*" The library of the College of Physicians of Philadelphia for size and value of its collection ranks probably as the third medical library in the world.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ended March 23rd, 30th, and April 6th, the deaths from plague in India numbered 54,005, 53,681, and 62,826. The seizures during these weeks amounted to 62,155, 62,897, and 73,185 respectively.

The chief centres of plague were as follows: Bombay Presidency, 4,811, 4,066, and 3,757; Bengal, 4,670, 3,867, and 6,229; United Provinces, 17,946, 15,162, and 15,294; Punjab, 23,488, 27,900, and 34,651; Central Provinces, 2,818, 1,911, and 1,565.

Telegraphic reports announce that the mortality from plague during the second week in April numbered 75,000.

AUSTRALIA.

During the weeks ended February 23rd, March 2nd, 9th, 16th, and 23rd, the reports from Brisbane and Port Douglas in Queensland were as follows:

Brisbane.—Fresh cases 0, 0, 1, and 1, and the deaths during these weeks *nil.*

Port Douglas.—Fresh cases 0, 0, 0, 6, and 0, and the deaths during these weeks *nil.*

On March 17th a fatal case of plague occurred at Townsville.

MAURITIUS.

During the weeks ended April 4th, 11th, 18th, and 25th, the fresh cases of plague numbered 1, 1, 2, and 1, and the deaths from the disease 1, 0, 0, and 1.

EGYPT.

Between February 10th and March 9th 147 cases were reported in Egypt with 110 deaths.

ARABIA.

At the port of Jeddah between February 4th and March 4th the fresh cases of plague numbered 124 with 118 deaths.

SPAIN.

A Reuter's telegram from Carthagena, Spain, dated April 24th and reproduced in daily papers, stated that 300 cases of plague had occurred at Carthagena. This news has neither been substantiated or denied.

THE German Public Health Association will hold its annual meeting this year at Bremen, September 11th to 14th. The programme of questions proposed for discussion includes cerebro-spinal meningitis, disinfection, friendly societies and public health, garden cities and hospital construction.

THE total number of students registered in the Medical Faculties of Austria in the last winter semester was 3,715. These were distributed among the several universities as follows: Vienna, 1,725; Graz, 360; Innsbruck, 162; Prague (German), 273; Prague (Bohemian), 475; Lemberg, 219; Cracow, 501. Of the whole number, 134 were women, of whom Vienna had 52, Graz 1, the German and the Czech Universities of Prague each 8, Lemberg 26, and Cracow 39.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications for sums to be granted, should reach this office not later than May 15th, and must include details of the precise character and objects of the research which is proposed, and must be made on forms to be had of the General Secretary, at the temporary office of the Association, 6, Catherine Street, Strand, London.

Every recipient is required to furnish to the Science Committee, on or before May 15th following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing: (*a*) A brief statement for the report of the Science Committee, showing the results arrived at, or the stage which the inquiry has reached; (*b*) a general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers; (*c*) and references to any Transactions, Journals, or other publications in which the results of the research have been printed.

The work of the Grantees shall be subject to inspection.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council, provided the whole term of office has not exceeded three years.

The scholarships exist for the encouragement of research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, and Clinical Surgery.

The Scholars' work shall be subject to inspection.

Applications for scholarships must be made on forms to be had of the General Secretary, and returned on or before May 15th.

ERNEST HART RESEARCH SCHOLARSHIP.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Memorial Scholarship, of the value of £200 per annum, tenable for one year, but subject to renewal by the Council for another year. The Scholarship is for the study of some subject in the department of State Medicine.

Applications for Scholarships and Grants should, as a rule, be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

GUY ELLISTON, *General Secretary.*

6, Catherine Street, Strand,
April, 1907.

MEDICAL NEWS.

DR. M. J. MCQUAID, of Ballyjamesduff, has been appointed to the Commission of the Peace for the County of Cavan.

DR. BECKER, of Radeberg, in Saxony, has died of cerebro-spinal meningitis, which he is believed to have contracted from a patient.

THE annual general meeting of the Medical Defence Union will be held at the Midland Hotel, Manchester, on Thursday, May 9th, at 4 p.m.

A CURATIVE exhibition, organized by the *British and Colonial Druggist*, will be open at the Royal Horticultural Hall, Westminster, from May 6th to 10th.

MR. A. EMMOTT, M.P., will deliver an address on The Necessity for a Minister of Public Health before the New Reform Club, at 10, Adelphi Terrace, London, W.C., on Friday next, when the chair will be taken by Sir W. J. Collins, M.P., at 5 p.m.

THE annual meeting of the State Children's Association will be held at Stafford House, St. James's, S.W., by kind permission of the Duke and Duchess of Sutherland on Wednesday, May 8th, when the chair will be taken at 4 p.m. by Lord Emmott.

UNDER the will of the late Mr. Derman Christopherson of Blackheath the East London Hospital for Children receives a sum of £250.

THE Bishop of St. Albans will take the chair at the forty-seventh annual dinner of King's College, London, at the Hotel Cecil, on Monday, May 27th. Particulars can be obtained from Mr. P. H. Kirkaldy, Honorary Secretary, at the College.

PROFESSOR WILLIAM WRIGHT is to deliver the first of three lectures on the Prehistoric and Early Historic Inhabitants of England at the Royal College of Surgeons on Monday next at 5 p.m. The second and third lectures will be delivered on Wednesday and Friday of the same week, and all will be illustrated by lantern slides. Ladies and gentlemen will be admitted to these lectures on presenting their visiting cards.

THE annual general meeting of the British Medical Temperance Association will be held at 20, Hanover Square, W., on Tuesday next at 4 p.m. At 5 p.m. a meeting, open to medical practitioners and students on presentation of card, will be held at which Professor Sims Woodhead will give an address on the medical justification of total abstinence.

A BILL intended to restrict the scope of expert testimony in murder trials is now before the Legislative Assembly of New York State. It provides that the expert must have actually examined the person concerning whose mental state he is to testify. Provision is also made against the abuse of the hypothetical question. The Bill is doubtless an outcome of the Thaw trial.

THE German Society for the Prevention of Venereal Diseases will hold its third Congress at Mannheim on May 24th and 25th. The principal subject of discussion is the question of instruction in sexual matters to be given in the home and in schools of all grades. Professor Eulenburg of Berlin and Frau Adams-Lehmann of Munich will deal with "sexual dietetics."

THE University of Geneva will celebrate with appropriate pomp and circumstance the 350th anniversary of its foundation, which falls in 1909. A committee has been appointed to arrange for the proper solemnization of the festal rites, to which representatives of foreign universities will be invited. The "Academy," founded by John Calvin in 1559, retained that title till 1798. It was afterwards erected into a university, and reached its full development, with faculties of theology, law, physic, philosophy, and science, in 1873.

AT a meeting held recently under the presidency of Professor Golgi, at which all the leading representatives of neurology in Italy were present, it was decided that an Italian Neurological Society should be established. Professor Bianchi was elected President, Professors Morelli and Mingazzini, Vice-Presidents, and Professor Tanzi, General Secretary. The Society will hold annual or biennial congresses. The first has been fixed for October 16th, 17th, and 18th of the present year, and will take place at Naples.

THE reports submitted and adopted at the annual general meeting of the Metropolitan Hospital Saturday Fund showed that the income for 1906 exceeded that for 1905 by some £500, the total being £26,460. The distribution of £23,898 amongst 215 institutions was recorded; of this sum the general and special hospitals received £16,241, convalescent homes £1,469, dispensaries £911, and the Surgical Appliance Committee £1,500. The expenses of administration were 9.6 per cent. of the gross receipts. This fund, it will be remembered, makes its contributions on the general principle of *quid pro quo*, and the extent to which it puts this idea into practice is indicated by the number of letters of recommendation issued last year by the Distribution Committee. It was 41,686.

AN International Stomatological Association has been formed to bring the science and art of dental surgery into line with other branches of medicine, such as laryngology and ophthalmology. A circular letter, signed by an International Organization Committee, of which Dr. Sim Wallace is the English member, has been addressed to stomatologists and stomatological societies throughout the world. By stomatology the new Association understands the dental art or odontology in all its branches. The members will be exclusively medical practitioners, and it will consist of the official delegates of all societies of stomatologists (that is, medically qualified men practising oral or dental surgery), of delegates of stomatological or dental journals, and of the delegates of oral or dental clinics, institutes, and departments of universities. The inaugural meeting will be held in Paris on August 6th and 7th, 1907. There will probably be four sections: (1) Legislation and professional organization; (2) education (general, special, public and private); (3) literature and international stomatological bibliography.

British Medical Journal.

SATURDAY, MAY 4TH, 1907.

INSURANCE FOR MEDICAL PRACTITIONERS.

OF Acts of Parliament passed in recent years none will "come home to men's business and bosoms" so nearly as the Workmen's Compensation Act, 1906, for it is a piece of legislation which will affect every householder who employs a servant. No class of the community ought to consider the liabilities it creates more carefully than members of the medical profession, because it will apply not only to domestic servants, grooms, coachmen, motormen, and gardeners, but also to skilled persons employed for the purposes of the practice; it will apply, for instance, to a dispenser and to most assistants, probably the majority, and, in many instances at least, to a *locum tenens*.

The provisions of the Act, and their interpretation in view of earlier Acts and the decisions of the law courts, were discussed in two articles published in the SUPPLEMENT on January 12th and 19th, 1907, respectively, to which we would refer readers, but it must be clear that the new liabilities created are so numerous and considerable that every prudent man will recognize the necessity of insuring against them. This aspect of the matter, which must have been present to the minds of every one who gave even cursory attention to the discussions in Parliament, was brought to the attention of the editors of the BRITISH MEDICAL JOURNAL and the *Lancet* by Dr. Benthall, who had had considerable experience of the risks incurred by employers affected by the older Acts. He suggested that it would be desirable to consider seriously whether it might not be possible to establish a special medical agency which by an arrangement with some well-established insurance company would be able to obtain favourable terms for medical men insuring through the agency.

It was found that under its existing constitution as a company registered not for profit, the British Medical Association was not able to take the matter up, and at the instance of the BRITISH MEDICAL JOURNAL and the *Lancet*, a Medical Insurance Committee was formed, consisting of representatives of these two medical journals, together with Dr. Radcliffe Crocker, Dr. J. A. Macdonald, Mr. George Eastes, Dr. Benthall, Dr. Arnold Chaplin, Dr. J. Smith Whitaker and Mr. Guy Elliston. Dr. Radcliffe Crocker accepted the chairmanship, and the Committee ascertained that certain other bodies of persons had arrangements under which a committee conducted an agency for insurance against accident and certain other risks, the usual agency commission received by this committee being used in part to make a rebate to the insurer, in part to defray the clerical labour of the agency, and in part for benevolent or other similar purposes for the benefit of the insurers. The committee obtained particulars of rates of premium and agency commission from a number of insurance companies, and is now in a position to recommend the establishment of a medical insurance agency with the Guardian Assurance Company, Limited, against risks arising under the Workmen's Compensation Acts, and in respect also of fire, accident to the insurer, or loss by burglary.

The scheme, then, as it stands at present is that the Medical Insurance Committee has established an agency for insurance against risks arising under the Workmen's Compensation Acts and at common law, and against fire, burglary, and accident to the insurer. The agency will be in a position to allow a discount of 10 per cent. to the insurer, except on fire premiums, the principal insurance offices being united in requiring that no discount shall be allowed to an insurer in respect of fire insurance. If the scheme meets with the support from the profession which is hoped and expected, there will be left, after allowing the discount and paying expenses, an annual sum the amount of which cannot at the present stage be estimated; the scheme provides that this sum shall be devoted to benevolent purposes—that is to say, be expended for the benefit of persons insuring through the Medical Insurance Committee who by reason of old age or chronic illness are incapacitated from work and are in poverty or of their widows or orphans left in poverty.

The old Act of 1897 as amended by the Act of 1900 applied to workmen in or about certain specified employments, but the new Act includes all employments and all persons employed therein, whether male or female. The words defining "workman" are "any "person who has entered into or works under a contract "of service or apprenticeship with an employer, whether "by way of manual labour, clerical work or otherwise, "and whether the contract is expressed or implied, is "oral or in writing." There are certain exceptions of which the most important in the present connexion is that a person employed otherwise than by way of manual labour whose remuneration exceeds £250 a year is not entitled to compensation. In reckoning the amount of remuneration received, board and lodging will be taken into account, but an indoor assistant who received a salary of, say, £150 a year would without doubt come within the provisions of the Act. In the event of the death from accident of an employee the employer will be liable to pay dependants wholly dependent upon his earnings a sum which may amount to £300 and cannot be less than £150, since the compensation must amount to not less than a sum equal to the earnings in the previous three years, with a maximum of £300. If the employee leaves persons in part dependent upon his earnings then the amount of compensation to be paid to them is to be agreed upon, or in default of agreement is to be determined by arbitration in the way provided by the second schedule of the Act. If the employee leaves no dependants, the employer must pay reasonable expenses for medical attendance and burial, not to exceed £10. If the accident result in total or partial incapacity, the employer becomes liable to make a weekly payment during the incapacity not exceeding half of the average weekly earnings of the employee. In case of partial incapacity, the weekly payment will be fixed so that it shall not exceed the difference between the amount of the average weekly earnings of the employee before the accident and the average weekly amount he earns or is able to earn after the accident. If the incapacity lasts less than two weeks no compensation will be payable in respect of the first week, but if the incapacity lasts more than two weeks, compensation is payable from the time of the accident. A weekly payment may be reviewed at the request of either party, and may then be ended, diminished, or increased, but if a weekly

payment has been continued for six months the employer will be entitled to redeem it by the payment of a lump sum.

The definition of workmen in the Act exempts from its benefits "a person whose employment is of a casual "nature and who is employed otherwise than for the "purposes of the employer's trade or business." The interpretation of this proviso is not quite clear, but for the present at any rate, and until the courts have given decisions defining the matter more precisely, prudence will dictate that the employer should accept the widest interpretation. It would probably exclude a charwoman who was called in at irregular intervals to assist in the domestic work, but it would probably include a charwoman who attended regularly once or twice a week, and also such a person as a gardener whose services were engaged to attend once a week. The question then arises whether it would apply to a *locum tenens?* Probably it would unless his remuneration was at a rate exceeding £250 a year. As will be seen, all liabilities with regard to casual labour of all kinds can be insured against by an annual payment, and this precaution ought unquestionably to be taken.

An employer will not be under a liability to compensate his immediate relatives, his wife, his parents, or grandparents, his children or grandchildren, his brothers or sisters, or his step-children, but he will apparently be liable to compensate a nephew or niece, or any remoter relations in his employ.

An advertisement giving further particulars with regard to the arrangements of the Committee with the Guardian Assurance Company, Limited, the rates of premium, and a form of proposal addressed to the Committee, will be found at page 35 of the advertisements. If the lower part of the form is detached and forwarded to the address there mentioned, it will receive immediate attention.

HUMOURS OF ANTIVIVISECTIONISM.

Antivivisectionist agitators are now stumping the country, each trying to outshriek the other. The spectacle is amusing, if not edifying. The Humanitarian League has addressed a memorial to the Chairman of the Royal Commission on Vivisection, calling his attention to the incompatibility of vivisection with the modern democratic spirit. It is pointed out that the dogma upon which vivisection rests is "not "modern but mediæval, a part of the old anthropo-"centric philosophy which has dug deep gulfs of "division between the human and the non-human "race." Lord Selby is solemnly assured that "this "drawing of absolute lines of demarcation is precisely "the kind of privileged arrogance which it is the work "of democracy to destroy." The memorialists go on to explain that "the growing recognition of kinships, the "gradual widening of sympathies, which brings with it "the bestowal of rights where rights have hitherto been "refused; and therefore the deliberate sacrifice and "exploitation of one class of sentient beings, in the "supposed interests of another class—when the human "conscience has already been awakened to the kinship "subsisting between them—cannot possibly be justified "in accordance with democratic ideas."

Are our humanitarian friends prepared to accept the consequences of their own teaching? If the sacrifice or exploitation of one class of sentient beings for the benefit of another cannot be justified in accordance with democratic ideas, not only must the killing of animals for the food of Demos be stopped, but a democrat has no right to take the life of a lion or a snake, a mosquito, or a flea, for his own protection against death or disease. The house-dog must no longer be chained in the degrading servitude imposed upon him by the "privi-"leged arrogance" of his master, and the coster must give up the exploitation of his moke. We must allow ourselves to be eaten out of house and home by rats and mice. Here, however, we may be allowed to call to our assistance a witness so far above suspicion in this matter as Mr. Stephen Coleridge, who said the other day at Brighton that if we could not kill rats our lives would be impossible. Another point we would ask the Humanitarians to consider is whether they are prepared to draw any "absolute line of demarcation" between sentient and non-sentient beings. There is no "deep gulf of division" between the lowest forms of animal life and plants; indeed there are plants which under certain conditions exhibit phenomena which might be taken for the expression of sentiency. This being the case, how can the democratic conscience sanction the sacrifice or exploitation, in the supposed interest of its owner, of a cabbage or a French bean? Unless the Humanitarians know positively that these vegetables are non-sentient, it is surely vain to "seek to justify themselves under "the outworn pretext of a division which has no "existence in fact."

Other humours of antivivisectionism may be culled almost at random from the reports of meetings. At Hereford the other day the Dean made a graceful reference to the anomaly that "thousands of workmen "were annually fined and perhaps sent to prison, "yet doctors had been able to persuade Parliament "to grant licences to commit cruelties on animals in "a way far surpassing those committed by ignorant "workmen." There is in this statement the fine flavour of charity that we have learned to look for in the utterances of antivivisectionist parsons. The Dean went on to quote medical authorities against vivisection; among them we note such famous names as Garth Wilkinson and Professor Atkinson! And is it not time that the public should be told the exact weight which the profession attaches to the opinion of Lawson Tait on this subject? At the same meeting Dr. Hadwen, in the course of "an entertaining "and instructive address," described the Commission as "packed with men absolutely committed to vivisec-"tion." The accuracy of his knowledge about the Commission is shown by the fact that he went on to say that Professor Starling is one of its members. But his most delicate touch of humour was in his contention that if vivisection were righteous they would be perfectly justified in torturing a drummer boy for the benefit of the Commander-in-Chief, or some poor curate at £60 a year for the benefit of the Dean! Then came a Mr. Beeson, who stated that the most serious condemnation of vivisection was to be found in the fact that it was not exercised in any form in any of the veterinary colleges. If, he argued, vivisection was of any use at all, surely it should be so in respect to the treatment of injuries and diseases of animals. The innocence of this gentleman almost takes one's breath away. We can only remind him that Sir John McFadyean is Principal of the Royal Veterinary College, and recommend him to read the evidence of Mr. Stewart Stockman, M.R.C.V.S., which extends from p. 85 to p. 115 of the Minutes of Evidence published by the Commission. Not to be left behind, Miss Kidd, Secretary of the British Union for the Abolition of Vivisection, in an address delivered at Sheffield, said that the Home Secretary had definitely declined to place on the Commission any person of pronounced views against

vivisection. Does she suggest that Colonel Lockwood, Mr. Tomkinson and Dr. George Wilson are, if not open sympathisers, at least veiled Laodiceans on the subject? Lastly, we have the Rev. Dr. Warschauer, who at Torquay complained that the Government had committed a serious error in making the Commission secret. Why, he asked, should the proceedings be hidden from the gaze of the public? If vivisectors were not ashamed of their practices, why should they desire secrecy? The reverend doctor seems to have forgotten that neither the Government nor the vivisectors are responsible for the fact that the sittings of the Commission are held in private. In accordance with the usual custom that point was decided by the Commission itself. This was stated in the House of Commons by the Home Secretary, as Dr. Warschauer should know. We put it to him that it is not altogether fair to describe as secret the proceedings of a body which has already issued a bulky report of its proceedings, and promised to issue further reports at intervals. Doubtless but for the illness of Lord Selby, from which we are glad to note he has recovered sufficiently to take the chair again, a second report would have been published before now. The vivisectors have no reason to desire secrecy. Those to whom secrecy would be a decided advantage are the antivivisectionists, whose witnesses so far have revealed the nakedness of the land with an unwitting frankness that has spread dismay among the supporters of the cause.

MATTERS FOR DISCUSSION BY THE DIVISIONS.

NOTICE has already been given of the dates of the Special Representative Meeting (May 29th) and the Annual Representative Meeting (July 27th). The business of the former is to be restricted to the discussion of the Draft Charter, Ordinances, and By-laws, and to the proposed alteration of By-law 20 (see SUPPLEMENT, April 6th and April 27th). Each Division or group of Divisions forming one Constituency is being requested through the Honorary Secretaries to hold a meeting to consider the Drafts, in order that the Representative may be instructed as to the views of his electorate. The Representative who will take part in the Special Representative Meeting is the one elected for the Annual Representative Meeting of 1906, but if he is unable to attend, the constituency has power to appoint a deputy in his place. It is further desired that any special resolution which any Division wishes to have placed on the agenda with reference to the Charter should be sent to the Medical Secretary not later than Monday, May 6th. The report of the Organization Committee will be found in the SUPPLEMENT of April 6th, and contains full details of the proposed changes, which have been embodied in the Draft Charter.

At the Annual Representative Meeting, which is to be held at Exeter, certain matters will be discussed which form the subjects of special reports. These reports have already been published in the SUPPLEMENT. The report of the Hospitals Committee appeared in the SUPPLEMENT of April 13th (pages 189, 190), and this Committee has expressed a desire to receive replies to the "Specific Questions," submitted in the report, from the Divisions. The report further contains some proposals which were circulated for the information of the Honorary Secretaries last summer. Although the Divisions were not asked to consider the proposals at that time, some Divisions did consider them and passed resolutions which were duly reported to the Committee. The subject will receive attention at the Annual Representative Meeting, and it is, therefore, hoped that the Divisions will deliberate on it and instruct their Representatives as to what action they are required to take.

The report on the Ethical Aspects of Medical Consultation was published in the SUPPLEMENT of February 16th. As the Central Ethical Committee propose reporting on this matter to the Annual Representative Meeting, the opinions of the Divisions are invited on the subject.

Another special report has also been published in the SUPPLEMENT (February 16th, 1907), which deals with the medical inspection of school children. The Medico-Political Committee invites the expression of opinion of the Divisions on the scheme included in the report, as it is important to make representations to the Government as soon as possible.

The Divisions are thus requested to undertake a considerable amount of work within a comparatively short space of time, but inasmuch as the matters all involve the welfare and development of the Association and the good of the profession, it is hoped that the various Divisions will not grudge the time necessary for the discussions.

DEATH OF DR. MARKHAM SKERRITT.

IT is with the deepest regret that we have to announce the death of Dr. Markham Skerritt, Senior Physician to the Bristol General Hospital, who was Treasurer of the British Medical Association from 1902 to 1905. He was seized with pneumonia on April 21st, but unfortunately did not give up his work until April 24th. On the following day he had two very severe attacks of palpitation, with rapid and irregular action of the heart, and, in spite of all efforts, he passed away at 6 p.m. on April 29th. The Association can ill spare such a member as Markham Skerritt. He was long one of the Honorary Secretaries of the Bath and Bristol Branch, and afterwards its President. His services as Treasurer of the Association are fresh in memory, but for many years before and since he was a valued member of the Central Council; wise in counsel, independent in judgement, and calm and clear in speech, he might always be depended on to go direct to the heart of a question. He kept up his interest in the Association after the termination of his term of office as Treasurer; he continued to be a regular attendant at the meetings of the Council, and was present at its last meeting only a few days before the onset of his fatal illness. We hope to publish a full obituary notice in an early issue.

THE COVENTRY DISPENSARY

ATTENTION has on many occasions been directed in these columns to the long controversy with regard to the Coventry Dispensary. The utmost patience has been shown by the profession in Coventry, acting in recent years through the Coventry Division, and the medical staff of the Dispensary has also done all that was possible to induce the Managing Committee to take a reasonable view of the situation. All efforts have, however, failed, and as was announced more than a month ago, five of the seven medical officers have resigned their position and with the approval of the Coventry Division have established in Coventry a medical service organized in accordance with the principles approved by the British Medical Association. Of this service they are the medical officers, and the committee of the Dispensary is now advertising in the daily papers for medical practitioners to take their place as officers of the Dispensary. The Chairman of the Coventry Division, Mr. Faulder White, in a letter which appears in another column, appeals to members of the medical

profession throughout the country not to respond to the advertisement. All the necessary details for forming an opinion as to the justice of the action of the Coventry Division have been published in the British Medical Journal, and we may refer specially to the report of the Birmingham Branch, published in the Supplement of December 1st, 1906, p. 292; but those who are not able to refer to a file of the Journal may obtain information by applying to Dr. Milner Moore, The Quadrant, Coventry, as stated in the Warning Notice published in the advertisement columns. The Managing Committee of the Coventry Dispensary seeks to dictate to the profession the terms and conditions under which it will render professional services, and in order to prejudice still further the mind of benefit members of the Dispensary, it has recently circulated an address which contains a number of bold assertions in regard to candidates for vacant appointments and to consultants, the validity of which we take leave to doubt. The straits to which the Committee is reduced are indicated by one paragraph which is nothing more or less than an insinuation that, in order to increase their profits, medical men not belonging to the Dispensary in Coventry will give their patients inferior drugs. It is not necessary seriously to repel this innuendo, which shows how little the Committee knows about the profession which it maligns. We observe in this circular a statement to the effect that the Committee proposes that among the new appointments shall be one of a fully qualified lady practitioner. We hope—and past experience gives us good ground for hoping—that the women members of the profession will prove, by refraining from making application, that they are at one with the male members in resisting the attempt of the Committee of this so-called provident dispensary to impose conditions on their medical officers contrary to the rules of the profession, and inimical to the public weal.

THE CONSCIENTIOUS OBJECTOR.

Mr. Burns's little Bill to make things easy for the conscientious objector to vaccination is printed in the Supplement this week. It repeals Section 2 of the Vaccination Act, 1898, which requires the parent to satisfy two justices or a stipendiary, or metropolitan police magistrate in petty sessions, that he conscientiously believes that vaccination would be prejudicial to the health of the child. The Bill proposes to substitute a statutory declaration for the appearance before a magistrate; the declaration must be made before a commissioner for oaths or justice of the peace, or some other officer authorized to receive a statutory declaration, and must be in the form prescribed in the schedule of the Bill or in a form to a like effect. The declaration is to be exempt from stamp duty, but the person making it will have to pay the commissioner for oaths taking it his fee of 1s. 6d. What the effect of the Bill upon the total number of vaccinations in the country will be if it becomes law is rather difficult to foresee. The anti-vaccinist societies, in pursuance of their mischievous agitation, may be expected to print any number of the forms of declaration, and probably, through their local organizations, to make arrangements for some legally authorized person to witness the declaration in every district.

GERMAN CRUSADE AGAINST INFANTILE MORTALITY.

The German Committee formed to further the establishment of a central institution for the prevention of infant mortality in the German Empire met recently within the precincts of the Reichstag. Among those present were representatives of all the provinces and most of the cities of the Empire. Dr. Schoenstedt, who took the chair, delivered an address, in which he gave an account of the scheme and the progress that had so far been made towards its realization. The town of Charlottenburg has given a site of 12,500 square metres, but it has been found that this will be inadequate for the purpose in view, and more ground will have to be purchased. The institution is to be called by the name of the Empress Augusta Victoria. A sum of 950,000 marks has already been contributed, but it is estimated that from four to five millions will be required. The statutes of foundation were adopted. The chief architects are Professor Messel and Herr Hoffmann, and the latter exhibited plans of the buildings. Dr. Keller of Breslau explained the objects of the institution. These consist in the scientific study of questions relating to the nourishment and care of nurslings and the care of the mothers and the promotion of necessary reforms in these matters. We learn from a paper by Dr. Esser, in the *Muenchener medizinische Wochenschrift*, that in Bonn an institution has been established for giving advice and assistance to mothers with regard to the feeding of infants. Every foster infant has to be brought to the institute at least once a month during the first year of life. During the second year the foster mother has to bring the child every second month. Poor mothers can apply for advice and assistance at any time during the first two years of their children's lives. A trained nurse assists by visiting the homes to see that the advice given is acted upon. From February 22nd to October 6th, 1906, Dr. Esser attended on 49 occasions, and was consulted by 89 foster mothers with regard to their charges, by 291 mothers on account of their legitimate infants, and, lastly, by 30 for their illegitimate children. In all, 1,313 consultations took place. Of the 410 infants, 126 were fed by breast, and in 38 the natural feeding was incorrectly carried out, the infants being suckled irregularly or too frequently; five meals a day were held sufficient, but in many cases the mothers could only be persuaded to reduce the number of feeds from ten or twelve to six or seven. Attention was paid also to the diet of the mothers. It was necessary to advise a discontinuance of the nursing in three cases, one of chronic nephritis and two of advanced phthisis. Pecuniary and material help was given to poor women who could not afford to stay at home to nurse their babies. Of 41 women who fed the babies on mixed diet, 11 cases were persuaded to leave off giving any other food than breast milk. The cause assigned for giving the mixed diet was generally that the child would not suck properly and the milk was insufficient, whereas in reality the infants were overfed. In the 30 other cases social difficulties or limited mammary secretion rendered it necessary to add to the natural diet of the infants in a large proportion. Of the 245 infants fed altogether artificially, obvious errors were made, especially over feeding; it was not uncommon to find women who considered that a weakly child should drink from 1½ to 2 litres of milk in twenty four hours. Esser proposes to get students to attend the consultations that they may learn how to give practical advice to mothers, and to give demonstrations to midwives. An infants' milk kitchen has been founded in connexion with the institute, and in it unimpeachable milk, mixed according to the requirements of each case, sterilized, and ready for use, is supplied, on a medical prescription, free to the women attending and on payment to persons who can afford to pay. He is very gratified with the results of his endeavour during the short time he has been able to administrate the institute. H. Doerfler in the same issue of the *Muenchener medizinische Wochenschrift* states that in

Weissenburg (Bavaria) nearly one-third of the infants died within the first year of life during the last ten years, 70 per cent. of the deaths being due to gastro-intestinal disturbances. He found it impossible to determine the frequency of breast feeding, but estimates it at less than 26 per cent. of all cases. An institute for the care of infants was inaugurated on July 26th, 1906; the two principles on which its regulations were framed were instruction and assistance with regard to nursing infants at the breast and the supply of an unimpeachable milk. A sister attached to the institute is required to visit every patient within twenty-four hours of delivery to persuade the mothers to nurse their babies. A prize of 10 marks is offered to each mother who nurses her baby and brings it up to the institute every fortnight for two months and 15 marks for three months. Every midwife is given 6d. for each woman she has attended during a confinement if the mother suckles her little one. In its annual report the institute publishes a list of midwives and giving the percentage of suckled babies which each has delivered. Every medical man belonging to the local medical society has agreed to hold free consultations in turn and to give advice to mothers with regard to nursing, and, when necessary, to artificial feeding. Rules have been drawn up and arrangements have been made for a reliable supply of milk to be distributed when required.

SCHOOL ABSENCE CERTIFICATES.

JUDGING from the sixteenth annual report of the Kent County Council Education Committee, its system of obtaining medical certificates respecting children kept away from school on the ground of ill-health is not working very happily. Nor is this on the whole remarkable. The regulations made by it some three years ago provide that one or more medical officers shall be selected by each local committee and his name notified to the Kent Education Committee. The school attendance officer for the district may, when he thinks fit, authorize this gentleman to examine any child as to whose real unfitness to attend school on account of ill-health the officer is not satisfied. The medical man, if he undertakes the duty, has to fill up a certificate, and as a rule receives a fee of 1s. only, though apparently in one district where the duty may entail a considerable journey a fee of 2s. 6d. is payable, provided always that the medical man actually pays a visit to the house of the child in question. Under the circumstances the Committee should scarcely be surprised that in some districts medical men have declined to do the work at all. It may possibly be worth the while of a medical man to fill in, for a shilling, a certificate that a child is too unwell to attend school, if he is already in attendance on that child; but it is not astonishing that medical men do not care to furnish certificates for such a trifle, when doing so entails a special examination of the child, whether seen at a surgery or at the parent's house. Another remark of the Committee is to the effect that in some districts the school attendance officers have ceased to authorize medical men to furnish certificates owing to the unsatisfactory results. As an instance in point it is related that one of these school attendance officers reported that a certain child was certified to be unfit to attend school for a long period, although its parents had openly stated that they wanted her to pick fruit, and she was seen taking part in running races. This is decidedly odd, for of course, there are conditions in which a child may be perfectly fit to engage either in the one occupation or the other and yet be totally unfitted to undergo the mental stress of school life without dangerous consequences. That school attendance officers, many of whom are merely small tradesmen with spare time on their hands or similarly ill-informed persons should not be able to appreciate this fact is, perhaps, not very unnatural, but that an august body such as an Education Committee should be equally dense, is almost humorous.

NATIONAL SANATORIUM, BENENDEN.

THE National Sanatorium at Benenden, near Cranbrook in Kent, erected by the National Association for the establishment and maintenance of sanatoriums for workers suffering from tuberculosis, was opened by Princess Christian on April 30th. This sanatorium when finished is to be something more than an additional sanatorium for Great Britain. It is the experimental starting-point of the movement among the working classes to prevent the losses in their ranks from tuberculosis. The buildings at Benenden will hold 200 patients, of whom two-thirds will be accommodated in small blocks of inexpensive construction, the whole being on a scale less expensive than anything hitherto attempted, although nothing essential to efficiency is sacrificed. The sanatorium will be self-maintaining, the necessary funds being provided by regular contribution from the affiliated friendly societies and trades unions at the rate of £65 a bed per annum. An interesting fact is that the employees of the Post Office have formed an organization of 40,000 members for the endowment of beds at Benenden for their staff. By the contribution of 2s. yearly by each member the new organization will be able to maintain sufficient beds for the cases that arise, to pay travelling expenses from any part of the country, and to assist necessitous cases. Meanwhile, the scheme provides for the patient's sick pay being handed to his family It is well known that one of the most serious objections to sanatorium treatment in the past has been the fact that patients after leaving return to the employment in the course of which they contracted the disease. and break down again. At Benenden the patient will be trained by a carefully-graduated series of tasks, and will be tested at full-time work on the After-Care Colony before discharge; the scheme of maintenance which allows the whole of the sick pay of the patient to go to the support of his family during his treatment will overcome the anxiety of working men to leave the institution before it is advisable for them to return home. The erection of this sanatorium at Benenden is a practical demonstration of the possibility of building an institution at a cost below anything hitherto attempted and of making it self-maintaining. The friendly societies under their present statutes cannot contribute capital towards the erection of such an institution, and the only means of providing the money was by voluntary subscription. In raising this money Princess Christian and her Special Appeal Committee have done noble service, and it is gratifying to notice that working men have freely contributed according to their means. The Benenden Sanatorium when completed will have cost £100 a bed, which is less than anything hitherto accomplished for permanent fireproof structures. The ceremony of formally inaugurating the completed portion of the sanatorium by Princess Christian was, unhappily, somewhat marred by the inclemency of the weather. Her Royal Highness was received by Sir Clifton and Lady Robinson, on behalf of the Special Appeal Committee, and in her tour of inspection was attended by Lord Camden, Sir William Bennett, Dr. Latham, Dr. Crossley, Dr. Heron, Mr. A. W. West, and others interested in the institution. The site selected for the sanatorium is on rising ground 6 miles from Cranbrook Station, 230 ft. above sea level, with an uninterrupted view to the south. The building is

surrounded by 250 acres of farm land, with two farms suitably arranged for the farm colony which is part of the scheme. The soil is lower greensand, and an ample and excellent supply of water has been obtained from an artesian well. The building is divided into three main sections, consisting of a central main block to accommodate 68 patients, an administration block with a dining hall and a laundry and electric light block. Pavilions, each for 10 patients, with a small recreation room, will be erected later. The main block is two stories in height, and is divided into two wings by a recreation room, the wings being inclined inwards at the outer extremities so as to afford shelter. There is a terrace running the whole length of this block. The water for the lavatories and baths is heated by steam, and the rooms by close anthracite stoves. The lavatory towers are cut off from the main building by cross-ventilated corridors. The drainage is on the septic tank system. The method of construction is entirely new for the building of sanatoriums, and combines economy with rapidity of construction. It is of steel framing throughout, the intermediate space between the stanchions and girders being filled in with Frazzi cement rough cast on the outside and plastered on the inside.

THE PERILS OF STERILIZATION.

Under conditions where it is inadvisable that a woman should bear children sterilization may be necessary. Certain methods have frequently been practised after Caesarean sections for narrow pelvis, excision of more or less of the Fallopian tube being the most satisfactory procedure. More recently barrenness has been secured by the free application of superheated steam to the uterine walls. This method is now known to us as the much-vaunted "Atmokausis," advocated by Pincus of Danzig, and not without its uses in the treatment of certain uterine diseases. Dr. P. Meyer, Assistant to Professor Strassmann of Berlin, has recently made public a case[1] which shows that the new method is both uncertain and perilous when employed for sterilization. A lady, aged 36, was admitted into a private nursing home, when in her twenty-second pregnancy, in September, 1906. She had only carried three children to term. The last labour at term occurred in 1896, on which occasion manual detachment of the placenta was necessary, the temperature was high during the puerperium, and the patient was confined to her bed for two months. The patient was troubled with epileptic attacks some time later. In October, 1905, the last of eighteen abortions occurred, and there was fever during convalescence. The patient very reasonably desired to be sterilized and atmokausis was applied by a distinguished authority, in December, 1905. Nevertheless, menstruation returned regularly until the end of April, 1906, when the patient became pregnant once more. Pains and very severe bleeding appeared in the fifth month. The os internum was very rigid and dilatation was required, yet the presentation could not be defined. About an inch above the internal os a sharp spur was found obstructing the way. Cornual pregnancy or tumour in the uterine wall was suspected, but the spur was broken down, and then a cavity containing a fetus was discovered. Its delivery demanded some complicated obstetrical manœuvres, the after-coming head had to be perforated at the occiput. In detaching the placenta the nature of the abnormal gestation became clear for the first time. The uterine walls were extremely hypertrophied on the right side and very thin on the left, where a pouch had developed for the lodgement of the fetus, leaving a considerable proportion of the uterine cavity empty throughout the pregnancy. The patient fortunately recovered, but her case does not speak favourably for atmokausis, as the method completely failed in its object.

[1] Ein Fall von Gravidität nach Sterilisation durch Atmokausis, *Zeitschrift für Geburtshülfe und Gynäkologie*, 1907, Bd. lx, p. 174, with three illustrations.

MALTA FEVER AND GOAT'S MILK.

Reports V, VI, and VII of the Mediterranean Fever Commission, a Commission appointed by the Admiralty, the War Office, and the civil government of Malta for the investigation of Mediterranean fever, under the supervision of an Advisory Committee of the Royal Society, have just been published. They bring the work of the Commission to an end, and very notable results have been achieved. The sum total of the many laborious researches by the different workers is that the ingestion of goat's milk, if not the only cause, is certainly the main channel of infection for man, and this result, with a summary of the epidemiological data based upon it, was ably discussed by Colonel Bruce in his recent address to the Epidemiological Society of London. A quotation from the introduction to Part VII shows what has already been done as a sequence of this brilliant discovery. "The epidemiologists are led "to believe that quite 70 per cent. of the cases are due "to the ingestion of goat's milk." "In their opinion, "ordinary contact with the sick, conveyance of "infection by biting insects, house flies, dust, drain "emanations, food (other than milk), and water "play a very subordinate part, if any, in setting up "Mediterranean fever in man. The excellent results "following the preventive measures directed against "goat's milk in barracks and hospitals also point to "milk being the chief factor. Among the soldiers this "resulted in a diminution of about 90 per cent. For "example, in the second half of 1905 there were "363 cases of Mediterranean fever, whereas in "the corresponding part of 1906 there were only "35 cases. Among the sailors there was also "as marked a fall in the number of cases. The "Naval Hospital had a bad reputation, as one-third of "the cases of fever occurring in the fleet at Malta could "be traced to residence in this hospital, either as "patients suffering from other diseases or among the "nursing staff. The goats supplying the hospital were "found to be infected, and since their milk was abso-"lutely forbidden not a single case of Malta fever has "occurred in or been traced to residence in this hos-"pital." These facts speak for themselves, and all that is required now is to deal with the Maltese goats. Though difficulties have at once cropped up, surely the Maltese Government, the Admiralty, and the War Office will not let the matter rest, now that they hold the means of prevention in their hands. Energy must be shown, and if it is, there should be practically no Malta fever in Malta in the course of the next few years.

A REMARKABLE EFFECT OF TOBACCO.

The members of a certain medical society in America had long been allowed to smoke the calumet of peace at their meetings, a custom which, like the liberal arts (in the Virgilian lines so dear to Colonel Newcome), softens the manners and does not permit them to be ferocious. But there came a time when fierce objection was raised to the practice. The situation was that of La Fontaine's fable:

> Deux coqs vivaient en paix:
> Une poule survint,
> Et voilà la guerre allumée.

Ladies were admitted to membership, strife was enkindled, and the pipe was put out. The smokers, being *ex hypothesi* men of peace, could make no stand in defence of their position. If we may judge from one specimen which has fortunately been preserved, the eloquence of the attacking party must have been

almost irresistible. A member delivered himself of a counterblast to tobacco as forcible as that of the sapient monarch who loved to be styled the British Solomon, ending with the following peroration: "Whenever I go home from this Society, I simply "cannot go in to my wife until I have taken off all "my clothes." The picture of the doctor thus compelled to reduce himself to the condition of the eminent divine who announced that he would wear no clothes, to distinguish him from his fellow Christians, seems to have been too much for the Society. Tobacco was forthwith tabooed for the future at its meetings. We congratulate the learned body on this heroic sacrifice to its sense of domestic decency.

INSTRUCTION IN INDUSTRIAL DISEASES.

IN a paper published recently in the *Glasgow Medical Journal*, Dr. James W. Allan maintains the thesis that there ought to be chairs for the teaching of industrial hygiene in universities and medical schools. It is certainly to be regretted that in Great Britain, which was the pioneer of labour legislation, so little provision has been made for the practical instruction of medical practitioners in industrial diseases—a subject of the greatest utility to them. It is only within the last few years that there have been founded schools of tropical medicine, as to the usefulness of which there is no doubt. Progress in medicine is sure but slow, and while the chariot waits human lives are lost. For decades woolsorters were dying in this country from pneumonia, the nature and cause of which were not understood until Dr. Bill of Bradford detected the *Bacillus anthracis* in the blood, and demonstrated the relationship between the disease and the work the patient had been following. Medical men engaged in private practice are brought into direct contact with workmen engaged in all kinds of occupation, and they should therefore have all facilities provided them for following up the problems of industrial diseases. A man's health is largely determined by the nature of his employment. To very few students is there given the opportunity of studying the practical side of this question. Apart from politics, the story of industrial legislation in this country is extremely instructive. The torch must now be passed on by the hand of medicine. Dr. Allan suggests that, in addition to lectures, large works might be visited. This would be most helpful. The inclusion of industrial diseases under the Workmen's Compensation Act, and the wide ramifications of the Act, will render it incumbent upon medical men to familiarize themselves with industrial diseases; but how and where can they do this at present? Universities and medical schools in large industrial centres will have to consider the question. London, with its wealth and variety of industries, might set the example, and make provision for theoretical and clinical instruction in industrial diseases.

STREET AMBULANCES IN LONDON.

THE new motor ambulance service for the City of London will be opened by the Lord Mayor on May 13th, when the telephone installation, which we understand is to be under the control of the police, will be inspected. The City at present only possesses one motor ambulance, so that the ceremony must be considered to be rather of the nature of the laying of a foundation stone than of the opening of a completed building. The City will still be very far from possessing an adequate establishment for dealing with street accidents and cases of sudden illness within its comparatively narrow boundaries, and the rest of London will be even still further behind. The Home Office Commission recently resumed its sittings, after a somewhat lengthy vacation, but its inquiry need not be prolonged, for the facts are already pretty well known and the questions open to discussion merely affect the application of recognized principles to the particular and somewhat peculiar circumstances of so large an inhabited area as is embraced in the County of London. There is, perhaps, now some reason to hope that within a measurable period of time London may have some such ambulance system as that which exists in Berlin, as described in our columns last week.

CONGRESS OF FRENCH PRACTITIONERS.

A CONGRESS of French practitioners was held in Paris on April 12th, 13th, and 14th. Among the questions discussed were the reform of the system of medical education, the overcrowding of the profession, and contract practice. The Congress passed a resolution that the teaching of medicine should be freed from the academic restrictions by which it is now confined to a special caste, and thrown open to all men of proved capacity. It was particularly urged that *agrégés* should be abolished and replaced by *Privatdocenten*, and that all teachers should be paid partly by the State but mostly by the students' fees. It was further suggested that the hospital should be the centre of clinical and therapeutic teaching. It was also resolved that it was desirable to establish post-graduate schools, and that a year, to be devoted to the study of special departments of practice, should be added to the curriculum. A resolution was passed that the choice of a doctor in cases of accident should be independent of workmen's associations. The Congress expressed itself strongly opposed to the granting of any reduction in the scale of fees adopted by the medical syndicate in each locality, to members of mutual benefit societies; such persons, it was held, should be charged in accordance with their social position. A resolution was passed that after January 1st, 1908, the fee for Sunday visits should be double that for week days. The Congress appointed a permanent vigilance committee to discuss any questions relating to the interests of the medical profession that might arise, and arrange further meetings.

PORT SUDAN.

PORT SUDAN is a name which conveys but little meaning to most of us at present, but the place is likely before very long to be a great deal before the public, as may be gathered from the long report on its present condition and trade which Mr. Hohler, Secretary to His Majesty's Agency at Cairo, sends to the Foreign Office. Unknown two years ago, it is now the terminus of the Sudan railways on the Red Sea coast 35 miles north of Suakin, and as such is destined to be the outlet of all the Sudan trade, and a good deal of that of Abyssinia and the Congo Free State. Its quays, now in course of construction, will be a mile and a half in length, and in its broad rectangular streets fine Government buildings are rapidly rising. There are already a number of Europeans among its population of 5,000, and there will, of course, be many more. Its sanitary and health conditions are, therefore, of importance, and are alluded to at some length by Mr. Hohler. The climate he describes as being "essentially bad and unsuited to "Europeans." Although no *Anopheles* are as yet known, there are fears that they may be introduced from the Nile Valley by the railway. "Simple fever" is common, generally assuming a severe form and leaving the patient extremely depressed and enfeebled. Sunstroke is particularly common. The heat is extreme, as might be expected in the Red Sea, and is rendered still more unbearable by the extreme dampness of the atmosphere. In the summer months even the night brings no relief, the temperature remaining almost uncharged, and sleep is almost impossible. It is inadvisable for Europeans to remain for two consecutive summers.

Possibly, however, a sanatorium may be instituted in the hills behind Suakin, where the conditions are totally different and a dry desert air rehabilitates the enfeebled coast dweller. Port Sudan is at present without good water, but there is a scheme for a proper supply from the hills 25 miles away. An infectious diseases hospital has already been built and a civil hospital is being erected. The railway takes the traveller from the coast to Khartum in twenty-two hours.

COLOURED DOCTORS IN AMERICA.

Jamestown, on the coast of Virginia, is the cradle of the United States. It was there that the famous Captain John Smith landed on May 13th, 1607. The memory of the event is to be celebrated in a tercentennial exposition. An interesting feature of the exposition will be an emergency hospital, under the direction of coloured physicians and attended by coloured nurses. The hospital building will include an exhibition room, in which a display of hospital records and supplies, pathological and bacteriological specimens will be on view. The exhibit is intended to show the progress of the negro race in the province of medical science and the art of healing.

The bicentenary of the birth of Linnaeus will be celebrated at the University of Upsala on May 25th. The University, it may be mentioned, was founded in 1477.

According to statistics recently published by the French Minister of Public Instruction, the total number of students in the universities and schools of higher studies in France in the academic year, 1906-7, is 38,197. Of these 33,399 are men and 1,364 women. There are besides 2,239 foreign male, and 1,195 foreign female students. The University of Paris alone has the names of 15,798 students on its books; of these 3,369 are students of medicine. In all the universities there are 7,501 male students and 796 female students of medicine.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

Medical Practice by Companies.—Lord Hylton moved the second reading of the Prohibition of Medical Practice by Companies Bill. The object of the Bill was to prohibit persons who were not by examination and registration legally qualified to practise medicine and surgery from carrying on business as medical practitioners by means of companies formed under the Joint Stock Companies Acts, under the shelter of which they were able to evade liabilities attaching to them as individuals. It had been found possible under the existing law for a medical practitioner whose name had by direction of the General Medical Council been erased from the *Medical Register* for crime or misconduct to form himself into a company and continue practising as a doctor with impunity. The Bill accordingly declared that whatever would be an offence under the Medical Acts when committed by an individual should also be an offence when committed by a number of persons formed and incorporated into a company. In 1900 Lord Chancellor Halsbury inserted into his Companies Bill two clauses which, in the opinion of the General Medical Council, would have put a stop to this practice, but unfortunately in the House of Commons the clauses were struck out for the reason that they were not germane to the Bill. He hoped their lordships would, in the interest of an honourable profession and for the protection of the poor, among whom these bogus medical companies mainly practised, read the Bill a second time. The Earl of Halsbury supported the Bill. The Earl of Crewe said that this Bill met something which, in the opinion of the Government, nearly approached a public scandal—namely, the possibility of evasion by unqualified persons of the law relating to medical practice. In one respect it was exceedingly drastic, because it not only dealt with proceedings by unqualified people, but it also prevented the formation of companies who would employ qualified doctors. That strong provision was defended on the ground that a doctor should be personally responsible for his acts, and not be able to shelter himself behind any company. The kind of doctor who would allow himself to be employed by a company would be one of the derelicts of the profession, and it was just as well not to encourage this sort of practice by companies. The Bill was read a second time and referred to a Select Committee. A similar Bill dealing with Dental Companies was also read a second time and referred to a Select Committee.

The Vaccination Bill.—On Tuesday Mr. Burns introduced his Bill to substitute a statutory declaration for the certificate required under Section 2 of the Vaccination Act 1898, of conscientious objection. The second reading was put down formally for Thursday.

The Vaccination Order, promised on February 14th, has not been issued as some questions of difficulty have arisen in settling the details of the order. Mr. Burns stated on Monday that he hoped the difficulties would be shortly surmounted and the Order issued.

Vaccination Fines.—Mr. Lupton called Mr. Gladstone's attention to a case of a man who was summoned under the Vaccination Acts, threatened with a warrant, and charged 8s. for the warrant which was not served. Mr. Gladstone said he had made inquiry into this case, and found that the defendant was summoned, that he did not obey the summons, and told the officer who served it that he did not intend to appear. He was then warned that a warrant might be issued, and on his failing to appear a warrant was accordingly made out and signed. Later in the day, when the court was over, he appeared, and out of consideration for him the justices who were present heard the case. He was ordered to pay a fee chargeable in respect of the warrant. There was no occasion for interference on the part of the Home Office.

Small-pox in Germany and Variolous Lymph.—Mr. Lupton questioned the President of the Local Government Board on Tuesday as to an epidemic of small-pox in Germany and the advisability of prohibiting the importation of vaccine from the Continent lest it was derived from variolous lymph. Mr. Burns said that he had no information as to there being an epidemic of small-pox in Germany, though he was aware that there had been some prevalence of the disease on the frontier at Metz. He had no authority to prohibit the importation of lymph from the Continent, and he might add that he understood that any vaccine of variolous origin which was current in Germany and was likely to be imported into this country would have been frequently passed through the calf. In answer to a further question quoting a report by Dr. Kelsch that vaccine in Germany was of variolous origin, and might be the cause of the Metz outbreak, Mr. Burns said that his attention had not been called to any such report by Dr. Kelsch as was referred to. It did not appear to be necessary to make inquiry as to the vaccine made in Germany for general consumption. He had no evidence that the outbreak at Metz was due to the cause suggested.

Phosphorus Poisoning. In the Lords last week the Earl of Lytton called attention to the death from necrosis recently reported from Messrs. Morelands, and asked His Majesty's Government whether, in view of the fact that phosphorus poisoning could not be prevented by the special regulations at present in force, it would reconsider its attitude towards the Convention of Berne prohibiting the use of yellow phosphorus. Six European States—namely, France, Germany, Italy, Holland, Denmark, and Switzerland—signed the Convention at Berne last September prohibiting the manufacture, importation, or use within their territories of matches made with the dangerous white or yellow phosphorus. Every kind of

match the public could require could be made without the use of this dangerous kind of phosphorus. The British Government, although it claimed to have the interests of the industrial classes at heart, would not join the other nations in their efforts to stamp out necrosis. Our Government said it would join only on condition that every other country which imported matches did the same. The American Constitution prevented the Federal Government entering into any treaty of this kind to bind the different States of the Union. The special regulations of the Home Office were not sufficient protection, because since these regulations came into force five cases of phosphorus poisoning had occurred here. Earl Beauchamp said the memoranda which had been laid before the House showed that the special rules now in force had had very satisfactory results. There had been only five cases of necrosis in the five years during which the special rules had been in operation. Three of the cases were mild, and the persons recovered and were able to find other employment. Two of the cases were fatal. It was probable that in the case referred to the disease was contracted before the special rules were made; because he was informed that necrosis lurked in the body for a considerable period before making its appearance. The Government was of opinion that the special rules had been successful, and it proposed to adhere to the position. It was following the example of six other States who were represented at the Berne Convention, also of Norway and Japan. The Home Secretary was, however, contemplating amendments which were specially designed to meet such a case as the one mentioned. Special arrangements would have to be made in regard to dental examination; and the Secretary of State proposed to frame a rule to prohibit tobacco chewing, which was said by doctors to have a bad effect upon those who worked in these factories.

Blood Poisoning from Calico Making.—Mr. Summerbell asked the Secretary of State for the Home Department on Tuesday if he was yet in a position to report the result of his investigations in regard to the death of Ann Wilson at Sunderland through blood poisoning, alleged to have been set up through the dressing used by manufacturers in the making of calico. Mr. Secretary Gladstone said that he had obtained a piece of the calico and had it subjected to analysis by an expert, who, after various experiments, reported that it was free from pathogenic organisms. The organisms found were common contaminations of any material which was exposed to air.

Lead Poisoning at the Dockyards. — Mr. Edmund Robertson informed Mr. Bramsdon that the numbers of cases of lead poisoning treated during the year 1906 was at Portsmouth 7, at Devonport and Keyham 5, at Chatham 2, at Pembroke 2, and none at Sheerness.

Poor-Law Children in Workhouses.—In answer to Mr. W. E. B. Priestley, Mr. John Burns stated that on January 1st, 1907, the numbers of pauper children relieved in workhouses and workhouse infirmaries in England and Wales were as follows: In London (not including insane and idiots) in workhouses, otherwise than in infirm wards, 1,046; outside London, 13,630—total, 14,676; in infirm wards or infirmaries in London, 2,045; outside London, 4,645—total, 6,690; insane and idiots in workhouses in London, 14; outside London, 302—total 316; making a total for London of 3,105; for outside of London, 18,577; and a grand total of 21 682 children. There were also 132 children chargeable to London unions in district sick asylums, and 797 children in the imbecile asylums belonging to the managers of the Metropolitan Asylum District. The number of children over 3 years of age chargeable to Poor-law unions in London in the workhouses on January 5th last was 446, and in infirmaries, 1,004. Similar information with regard to the rest of England and Wales was not available.

Poor-law Children.—Mr. John Burns informed Mr. Lewis Haslam last week that the total number of children who were entirely dependent on Poor-law relief could not be stated. To a very large extent children were relieved with their parents, who were not necessarily entirely dependent on the relief given them. He might, however, state that the number of children in England and Wales in receipt of relief on January last was 234,000. If from this total the children who had a parent living, and who received only some form of out-relief, were deducted, the number left was 71,641. Over 60,000 of them received indoor relief.

Poor-law Children in Separate Establishments.—Mr. Burns informed Sir George Scott Robertson last week that the number of children in separate establishments of the Guardians of Poor-law Unions in England and Wales on January 1st last was as follows: In district and separate schools in London 7,194, outside London 4,615, total 11,809; in cottage, scattered, and other homes, in London 4,584, outside London 11,305; total 15,889.

Poor-law Relief and Marriage Certificates.—Mr. Percy Alden having called attention to the practice of requiring the production of marriage certificates with case papers from married applicants in Kensington and Bethnal Green, Mr. John Burns said that applicants for relief were not required to furnish case papers. These papers were filled up by the relieving officer from the statements made to him. The case paper in use at Kensington showed whether the relieving officer had inspected the marriage certificate, but he understood that relief was not refused on the ground of its non-production. In the case of Bethnal Green, no applicant for relief was required to furnish a marriage certificate. He was informed, however, that persons in receipt of relief there were asked to state approximately the date and place of marriage. Information as to whether the applicant was married or not was found useful by the guardians for the purposes of their administration.

The Royal College of Physicians and Plague. — Dr. Rutherford asked what action had been taken by the Government in regard to the recommendations of the Royal College for dealing with plague in India. Mr. Secretary Morley replied that some delay, which he regretted, had occurred in this matter. The memorandum reached India at a time when the Government of India had called for and was awaiting reports by the local governments on the subject of plague remedies, based on the personal experience of their officers. These reports, which were very voluminous, were dealt with in a published resolution by the Government of India on January 17th, 1906, laying down in detail a complete policy for dealing with plague. This policy in its preventive features was in practical accordance with the memorandum of the Royal College of Physicians. The Government of India had since considered, in communication with the local governments, the recommendations of the memorandum for a special medical organization for dealing with plague. Their scheme had not yet been definitely formulated, but he understood that the sanitary service would be strengthened by employing a larger number of qualified natives of India. He would lay the memorandum on the table if moved for.

The Medical Officership to the Embassy of Tokio.—Sir William Collins asked the Secretary of State for Foreign Affairs whether an appointment to the medical officership to the British Embassy at Tokio was made in the early part of this year; if so, whether the vacancy was advertised; whether the gentleman appointed was a British subject; and, if not, whether he held any medical qualification recognized as registrable by the General Medical Council. Sir Edward Grey replied that there was no vacancy. The Medical Adviser to the Embassy had proceeded on leave and made arrangements for a competent substitute in his absence.

The Society of Apothecaries London Bill, which has already passed its stages in the Lords, was read a second time on Monday last in the Commons. The measure consists of a long preamble and seven short clauses. Its object is to enable the Society to grant to its licentiates the title of Licentiate in Medicine and Surgery. The fifth clause authorizes the entry of the new title on the *Medical Register*, and the sixth clause gives the Society power to restore names which have been struck off the list of licentiates. The Bill is promoted as a private Bill and seems likely to pass.

Canada.

The Fires at McGill University.

The burning of the medical building of McGill University brings with it a loss which cannot be estimated. The buildings were alone insured for $250,000, with $100,000 on the contents, but this will only begin to pay for their reconstruction. Following the fire in the Macdonald Engineering Building, the situation is one of gravity to McGill. The machinery and collections of models in the latter building, with the notes and work of the professors in charge, were indeed a grave loss, but in no way to be compared to the present disaster.

The whole of the old medical building erected in 1872, together with the new erected in 1901, was destroyed, the wing built in 1893 being partly saved. Owing to the zinc floor of the dissecting room forming a protective roof to the library, the majority of this large collection of books was saved—a fortunate result, as the library has the best collection of medical books on the continent. To enumerate the various articles destroyed would be endless, but among them are a series of paintings of the deans of the faculty, all the apparatus of the chemical and hygienic laboratories, several dozen microscopes and apparatus in the pathological laboratory, and, most serious of all, over two-thirds of the pathological museum and anatomical collection. The latter contained a complete set of Steyn's brain sections, Osler's collection of brains, models of the whole human body, frozen sections of the same, Cunninghame's casts of the head, Dr. Shepherd's large and rare collection of anomalies of the renal vessels and ureter and of the aorta and branches; this latter collection was unique in its way, and contained some extraordinary specimens. In addition, the comparative anatomy section was very complete, and contained numerous dissections of the semicircular canals of fishes by Dr. Shearer.

The pathological museum was the object of which the McGill graduate was most proud, containing, as it did, so many rare and unique specimens, and being, as it was, a *practical* museum, which was in daily use throughout the session. It contained a very fine collection of aneurysms and of cardiac conditions, some of which dated from 1823. The collection of calculi was unequalled on the continent, and the medico-legal museum was very complete. The classification of all the specimens, on the "Dewey" library system, had just been completed, and requests for new material had been issued. The students will for years miss this important addition to the teaching facilities, as it was the custom of all the professors to order up specimen after specimen from the museum during lectures; in addition, daily demonstrations and exhibitions were given by the Curator, Dr. Maud Abbott.

The private loss of Dr. Adami is greater than that of any of the other professors. Almost all his private books, microscopic slides, private pathological collection, and some, though not all, of his studies and research work have been burned. Dr. Rutton Professor of Chemistry, has suffered in the same way, as he kept almost the whole of his private library in the building. Dr. Klotz, who has been making research on arteriosclerosis, and whose recent publications have been among the best on the subject, finds that the work of two years has been swept away. The students have not lost very heavily, though several microscopes and note-books were destroyed. It is thought that the work of the session will not be interrupted much, as the majority of the laboratory courses and all of the anatomical work had been completed. A new building is to be started at once with the funds in hand and it is hoped that the work next September will not be unduly interfered with.

The Toronto Free Hospital for Consumptives.

The annual report of the Toronto Free Hospital for Consumptives (for 1906) is very satisfying to the friends who have given so much of charity labour to this charity. The object of the institution was to provide accommodation for those so far advanced in the disease that they cannot be received in the hospitals for incipient cases, such as that of Gravenhurst, and who are everywhere refused admittance to general hospitals on account of the natural surrounding fear of infection. It is on the same level as other hospitals so far as inspection by the Government is concerned, but receives only $1.50 a week for each patient in residence.

A new building was completed during the year, costing $18,000, and a morgue with some additions and improvements brought the building expense up to $20,000. During the year a debt of $16,000 was paid off by voluntary contribution, but the indebtedness is now $6,798 greater than a year ago, though the assets show an increase of $23,497. During the two years, 313 patients have been cared for at a cost of $20,579.14, and practically no contributions were made by the patients.

Plans have been prepared for the erection of a new sanatorium for pay patients, at a cost of $30,000, of which $20,000 has been provided by the gifts of Mr. R. Mulholland and Mr. H. C. Hammond. This is to accommodate those with the disease in an advanced form who are able to pay for their maintenance. From the report of the physician in charge, it appears that 41.8 per cent. of the patients treated were between the ages of 20 and 30, and 76.1 per cent. between 15 and 40. A very considerable proportion of those treated were foreigners, many of whom had been in Canada only a short time. Only 50 per cent. of the total number of patients had been born in Canada, and 35.8 per cent. were from Great Britain and Ireland; this emphasizes the necessity of close scrutiny of those accepted as immigrants. The list of occupations is varied, and only emphasizes the fact that consumption is a "house" disease. The average number of days' stay was as follows: Of those classed as improved, 117 days; much improved, 150 days; arrested, 235 days; apparently cured, 282 days. The average length of stay of all cases was 96.2 days.

Birmingham.

Growth in the Work of the Hospitals.

During the last twenty years there has been a very great increase in the number of patients treated at the Birmingham hospitals. From the annual reports of fourteen institutions it is seen that during last year the number of in-patients was 11,551, and out-patients 263 034, making the huge total of 274 585 patients. The population of Birmingham is estimated at 542,000, but there is a large district around, including a number of Midland towns, from which the patients are drawn. In the annual report of the Ear and Throat Hospital this is well seen for it is stated that 40 per cent. of the in-patients and 30 per cent. of the out-patients come from districts outside Birmingham.

With regard to the General Hospital there were 5,204 in-patients and 65,427 out-patients in 1906, as compared with 3,065 in-patients and 40,521 out-patients in 1886. During these years the annual expenditure has increased from £14,484 to £23,949 and the income from £15,207 to £25,054. The Jaffray Hospital, which is a branch of the General Hospital, shows a similar increase—136 patients in 1886, and 280 in 1906. The expenditure has increased from £2,105 to £3,609 and the income from £1,726 to £2,552.

At the Queen's Hospital during these twenty years, the in-patients have risen from 1,945 to 2,307, and the out-patients from 26,319 to 34,213. The income has increased from £6,635 to £10,584, and the expenditure from £7,823 to £11,655.

Other institutions show a corresponding increase, as can easily be seen in the following table:

	In-patients 1906.	In-patients 1886.	Out-patients 1906.	Out-patients 1886.	Expenditure 1906.	Expenditure 1886.	Income 1906.	Income 1886.
					£	£	£	£
Women's Hospital	744	233	19,748	1,259	6,139	1,773	5,785	1,428
Children's Hospital			6,591	20,420	1,000	5,050	10,486	1,792
[illegible]	132*	76	15,952*	15,771	5,359	4,242	6,311	4,032
Eye Hospital	1,119	1,017	10,192	12,792	7,477	1,338	8,961	4,979

* The in-patient department of the Children's Hospital was closed [illegible] and the new out-patients during the last [illegible] to be limited to a certain number daily.

The following institutions are carried on at an annual cost of about £3,000 or less: The Skin and Urinary

Hospital, Moseley Hall Convalescent Home, Orthopaedic and Spinal, Ear and Throat, and Dental Hospitals, and the Lying-in Charity. The fourteen institutions from which information has been obtained have a total expenditure of £83,729 per annum, and their incomes from annual subscriptions amount only to £30,196. A very large percentage of this money is collected from subscribers in Birmingham and its suburbs, but not nearly enough support is obtained from persons living in the Midland districts in proportion to the number of patients who come thence and receive treatment in the Birmingham hospitals. The Hospital Saturday Fund, by means of contributions from the working classes of the city and suburbs, supplies about £10,000 a year in support of the hospitals. Rebuilding and enlarging of the hospitals have been going on during recent years. The General Hospital was entirely rebuilt on a new site about nine years ago, and the Women's Hospital has just completed its first full year's work in the new buildings erected in Showell Green Lane. Large additions have been made to the Ear and Throat and also to the Orthopaedic and Spinal Hospitals. A large new wing is being added to the Queen's Hospital, and it is proposed to rebuild the Children's Hospital entirely. The General Dispensary has greatly extended its work during the last twenty years by the opening of branch establishments.

Public Health Lectures.

Dr. Robertson, the Medical Officer of Health, is giving a series of lectures upon public health at the University. There are to be five lectures, and the three already delivered have been greatly appreciated. During the winter months four health lectures are given weekly in different districts of the city, and attract large audiences. These lectures were established under the auspices of the Birmingham Athletic Institute. Other health lectures are given from time to time at the Midland Institute, and occasionally at the Young Men's Christian Association.

Derbyshire.

Isolation Hospitals.

The recent report of the County Medical Officer of Health (Dr. Sidney Barwise) on the isolation hospitals of Derbyshire, though primarily of interest to the Derbyshire sanitary authorities, is of considerable value to all concerned in the administration of these institutions. When the Isolation Hospitals Act was passed in 1893 there was only one permanent isolation hospital in the county—at Buxton. Since that date hospital districts have been established with populations of about 30,000, so that at the present time the county may be said to be fairly well provided with isolation accommodation. Dr. Barwise discusses at some length the value of isolation hospitals, and sets out the arguments which have been used both in favour of and against their establishment. The conclusions he has arrived at are:

1. That for stamping out enteric fever, especially in districts where the privy midden prevails, the isolation hospital is an absolute necessity; that nearly every case of enteric fever should be removed to hospital.
2. That in the absence of general vaccination and revaccination, isolation hospitals are equally necessary for dealing with small pox.
3. That the advantage of removing cases of scarlet fever (especially first cases diagnosed early) from overcrowded houses must be obvious. (The interference with elementary school work by cases nursed at home should not be overlooked.) That this advantage becomes a necessity when the cases are in the homes of dairymen, schoolmasters, dressmakers, and workers employed in the making of wearing apparel.
4. With regard to diphtheria, if the local authority provides antitoxin, as a rule only such cases should be removed as may be a great danger to the public if nursed at home—for example, cases in the families of schoolmasters, dairymen, etc. For such the hospital is a necessity.

Most hospital superintendents have realized how difficult it is to make a comparison of the cost of one hospital with others. The methods of book-keeping which are adopted vary to so great an extent that it is next to impossible to make any useful comparison. In this connexion Dr. Barwise has done good service by appending to his report a detailed classification of hospital expenses. He gives a list of some 250 items and indicates under which of 17 different headings each item should be placed.

Lancashire.

Food Poisoning in Wigan.

We have received from Dr. William Berry, Medical Officer of Health for Wigan, a report on certain cases of poisoning arising from potted tongues. It was first found that all the cases arose from one source—namely, from potted tongues sold by a butcher at one of the stalls in the market hall of Wigan. In the first cases investigated the symptoms appeared thirty-six hours after consumption; in three instances the attacks were severe, but the patients recovered after three or four days' illness. Dr. Berry has collected information from various medical men, and finds that in all 168 cases occurring in sixty houses have been observed. In addition to Wigan, some of these cases were detected in Adlington, Ince, Platt Bridge, Skelmersdale, and Standish. Portions of tongues, and of salt and saltpetre used for pickling, were sent to Dr. Warrington of Liverpool University, and were examined by him for the presence or absence of organisms connected with ptomaine poisoning. In certain tongues which had been submitted to the brining process but had not been cooked, the *Bacillus coli communis* and a somewhat similar but not identical organism were detected. In another tongue, which had been cooked but was in a bad state of preservation, the *Bacillus enteritidis* of Gaertner was found, and also an organism similar to *Bacillus coli*. These pathological organisms, Dr. Warrington reports, "may reasonably be assumed to be the cause of the symptoms produced." In commenting on these results, Dr. Berry suggests that greater care should be exercised in the brining process, and the same brine should not be used more than once, since one tongue which might happen to contain pathological bacteria would be sufficient to contaminate the whole number.

West Yorkshire.

Bradford Health Committee and Sterilized Milk.

A long discussion took place at a meeting of the Bradford Health Committee on April 24th on the subject of the milk dépôt. It was suggested that every precaution should be taken that the milk should be obtained under the most cleanly conditions, and bottled without sterilization at the farms. A subcommittee was appointed to consider the whole matter.

Guiseley District Council and the Medical Officership.

At the monthly meeting of this Council held on April 25th, the reappointment of the medical officer took place. Four votes were given for reappointment and three for advertising the office. This is the kind of action that makes so necessary the efforts of the British Medical Association to obtain security of tenure for these officials. An officer in the proper exercise of his duties is almost sure to offend some one or more individuals, and then an attempt is made to oust him from his office.

Housing of the Working Classes.

At a conference on this subject in Bradford Town Hall on April 24th under his presidency, the Mayor said that "there are kennels close to where I live that I would sooner sleep in than many places in the city of Bradford where our fellow-creatures are housed." The Chairman of the Health Committee said that Bradford was the sixth city on the list for overcrowding. It was a strange thing that there was no overcrowding at Preston, where the infantile death-rate was generally the lowest in the United Kingdom. A Committee was eventually appointed to go into the question.

The Bradford Medico-Chirurgical Society.

The annual dinner of this Society, held at the Midland Hotel, Bradford, on April 18th, was very well attended.

The guest of the evening was Professor Herbert R. Spencer, who previously to the dinner had given a lantern lecture on the physical signs and some of the graver complications of pregnancy. The band of the 2nd West Riding Royal Garrison Artillery Volunteers played during dinner. Several visitors were present from Leeds and neighbouring places, and a good many speeches were made. As usual, a considerable amount of badinage was directed at the "Honorary Gastronomer," the well-known and popular Honorary Secretary of the Yorkshire Branch of the Association, for the excellence of his culinary arrangements.

Menston Asylum.

In consequence of the constantly-increasing number of lunatics in the West Riding, it has been found necessary to make some additions to this already large asylum. A new block for chronic cases from the main institution, and built practically in keeping with the original buildings, is to be erected for 120 patients. The catering will be done from the main building. The building of this block, together with a similar block at Wakefield and extensions contemplated at Wadsley, is being carried out with the idea of staving off as long as possible the building of another big asylum in the West Riding.

Ireland.

Health Commission, Belfast.

Professor Lorrain Smith, M.D., formerly of Belfast, now of Manchester, who was examined on April 25th, said that he had investigated various problems connected with typhoid fever in Belfast, and had presented two reports, one in 1898, and the other in 1903; the chief fact was the rise in the typhoid rate since 1889; since that date it had been double what it had been in the previous eight years. The general death-rate from 1881 to 1888 was 25·2 per 1,000; from 1895 to 1902 it was 22.5 per 1,000, whereas the typhoid incidence had risen from 3.1 to 7.5. He referred to the great improvements in the cleansing of houses and in the substitution of water closets for privies. The housing accommodation in Belfast compared not unfavourably with that of Liverpool or Manchester. He submitted a number of tables which showed that filling-in ground and imperfect drainage had not been attended by a corresponding prevalence of typhoid. There was strong suspicion as to the shellfish gathered on contaminated areas; milk had caused some outbreaks, but not those he had mentioned. In Belfast 50 per cent. of the typhoid cases were isolated; in Glasgow 91 per cent.; he considered isolation an ideal method in typhoid fever. In the years when the disease was epidemic in Belfast, it was endemic in the Stoneyford area, and the presence of the disease in the catchment area was a serious danger. Immediately after the two important sanitary improvements of the introduction of a new water supply, and of the main drainage scheme in 1882 typhoid fever increased. The only way to deal with the Stoneyford area was either to buy the whole area or to abandon it.

Dr. Symmers, Musgrave Professor of Pathology in the Queen's College, said that he had been two years in Belfast, and, at the beginning of the present year, had entered into an agreement with the Corporation to make bacteriological examinations of water and milk; the number in the year was not to exceed 100, owing to the limited accommodation in the laboratory. He had no knowledge of the source of the samples brought to him, and he made no report unless he found something suspicious. He was examining, on an average, one specimen of water each week. He had found a suspicious organism in one sample of water, a bacillus which he had not seen before, but he could not say it was the typhoid bacillus, although the resemblance was close. For Belfast he thought that a daily examination should be made and a record kept. There should be a municipal laboratory.

Evidence of pollution of both the Woodburn and Stoneyford waters from the drainage of farmyards was given by sanitary officers and inspectors.

Sanatorium for Consumption in Co. Cork.

At a special meeting of the Cork Joint Hospital Board held on April 20th, a letter was read from the Local Government Board stating that the report had been received of the Chief Engineering Inspector, Mr. Cowan, and the Medical Inspector, Dr. Biggar, on the inquiry held by them into the petition of the Joint Board for a Provisional Order to enable it to acquire compulsorily certain lands known as the Mishall site for the purpose of providing a sanatorium for consumptives. Opposition to the proposal was offered at the inquiry by the Cork Corporation on the grounds that the adoption of the site would cause infection of the River Lee, from which the water supply of the city is taken, inasmuch as under the proposed system of drainage for the sanatorium the effluent would discharge into the River Dripsey, which flows into the Lee. It was also urged that pollution might be caused by the expectoration of such a large number of consumptives who would have access to the riverside.

The Local Government Board refuses to sanction the site, admitting candidly enough that the decision is based upon considerations other than the evidence given at the recent inquiry. As regards the Corporation's objection the Board states that the weight of expert evidence is very much against the view that the disease can be conveyed by water, and that by the exercise of proper precautions the danger of contamination from the drainage effluent might be avoided. The Board is also satisfied that the site in itself would be suitable from the point of view of salubrity, aspect, and situation; in other words, the Board admits that a satisfactory case has been made out by the promoters, but refuses the provisional order sought, mainly on the ground of the very strong opposition of the citizens of Cork expressed through their elective representatives. The association of ideas brought about by the placing of an institution of this character on the watershed of a river from which 100,000 people draw their supplies is not a pleasant one. The decision, at any rate, leaves the Joint Hospital Board where it was on the day it was constituted, nearly three years ago now. Two thousand pounds of public money has already been expended in a fruitless search for a suitable site, with the result that Cork is as far off as ever from seeing this institution provided. Probably no spot in the County of Cork will fulfil all the conditions of an ideal site for a consumptive sanatorium, and unless the Joint Hospital Board is prepared to look outside the county it will have to make up its mind to select a site against which some objection can be raised. That some members of the Joint Board feel the situation keenly may be judged from the public-spirited action of Mr. Brazier Creagle, who made a generous offer of a site, which experts informed him is suitable for the purpose, and a free gift of any quantity of land that may be required. The Board has appointed a Committee to inspect this site, and report as to its suitability, and it is earnestly hoped that at last the long-looked-for site may have been found.

Scotland.

Opening of the Summer Session at Edinburgh.

The summer session of the University and extra-academical medical classes opened on Wednesday, May 1st. The examinations in clinical medicine for the final M.B., Ch.B. began on May 3rd. Those in clinical surgery begin on May 20th.

Cerebro-spinal Meningitis in Scotland.

The Registrar-General for Scotland reports that in the week ending Saturday, April 27th, 37 deaths (the same number as in the preceding week) in eight principal towns of Scotland, were due to cerebro-spinal meningitis. Of these, 26 were in Glasgow, 8 in Edinburgh, 2 in Leith, and 1 in Dundee.

The medical officer of health for the City of Edinburgh reports that in the same week 10 cases were notified as suspicious cerebro-spinal meningitis; of these 6 had been removed to the City Hospital at Colinton Mains, bringing up the number of cases under observation to 22.

SPECIAL CORRESPONDENCE.

PARIS.

The Economical Organization of the Struggle against Tubercle —The House Distribution of Tubercle in Paris.—The Organization of Consultation for Infants throughout France.

AT the last meeting of the Académie de Médecine Professor Albert Robin described the working and the results of the Office Antituberculeux, which with M. Siegfried he created in 1905 at the Beaujon Hospital. The organization is inspired by the two following principles: (1) The combination in a single system of the education of the affected and the public, the treatment of the tuberculous, and help for the patients and their families; (2) the expenditure of as little money as possible, not to erect buildings, but to utilize existing organizations and to form of them a sort of federation, with exchange of help. The Assistance Publique granted the use of two rooms and lent tables and chairs. During 1905 the "Office" received 1,202 patients, including 204 children, and gave 4,385 consultations. Deducting 248 patients who were not tuberculous and 19 who were not indigent, the total number of patients was 935. The expenses were only 6,803 francs 94 centimes—that is, under 6s. per patient. They received medical treatment, medicines, raw meat, cod-liver oil, milk, clothes, and money to help to pay their rent; those who could derive benefit from sanatorium treatment were placed in the sanatorium at Angicourt belonging to the Assistance Publique, their families were protected by education as to the prophylaxis of tubercle and by disinfection; patients who were able to work were helped to find employment suited to their strength. All these remarkable results were due to reciprocal exchanges—for example, as a return for the 22 patients admitted to the Angicourt Sanatorium in 1905, the "Office" follows up, cares for, and helps patients discharged from the sanatorium cured or improved; during 1905 it received 39 such cases, of whom 22 attend regularly at the Beaujon Office, and 14 come at longer intervals to be examined; some have received monetary help, and several have been found employment. Thus the cure of 36 has been assured; though the Assistance Publique has had to pay the sanatorium treatment of 22 patients, it has been saved much money, for if the patients who were followed up by the "Office" had been left to themselves and allowed to relapse they would perforce have been in-patients in the hospitals of the Assistance Publique till the end of their days. From the results obtained at the Beaujon "Office" Professor Robin is convinced that if the Assistance Publique would create a similar organization in each Paris hospital it would free the wards of a large number of the tuberculous patients, and at the same time render more service to the patients and to the cause than all the extensive projects now under consideration, and at a comparatively small cost. It would suffice to appoint a doctor at each hospital to be responsible for the work. Each such "Office" could attend to 1,000 or 1,500 patients at an average cost of 15,000 francs (£600). For twenty "Offices" in the principal hospitals the cost would be 300,000 francs, a smaller sum than the revenue of the capital sum needed to carry out the plans accepted by the Assistance Publique; further, from this sum must be deducted the saving on the hospital treatment of the 20,000 to 30,000 tuberculous or pretuberculous cases who would no longer be in-patients in the hospitals as at present.

M. Roux presented to the Académie two reports by M. Juillerat to the Prefect of the Seine on the distribution of tubercle in houses in Paris. In 1906, 9,573 deaths from pulmonary tubercle were registered in Paris, and 9,578 in 1905. The 5,263 tuberculous houses noted last year furnished 29 per cent. of the total number of deaths, as against 28 per cent. in 1905. The mean mortality for suspicious houses remained the same as in 1905, that is, 6 50 per 1,000 inhabitants. The administration has taken measures to render these houses healthy, and an agreement has been come to with the various antituberculous dispensaries to indicate the tuberculous morbidity of the houses in Paris.

In order to diminish infantile mortality, M. Clemenceau, the Prime Minister and Minister of the Interior, has recently addressed to all the Prefects in France a circular calling on them to proceed with the least possible delay to the methodical organization of consultations for infants. To the late Professor Budin belonged the honour of founding the first consultation for infants in France; he devoted his life and energies to the extension of the system, and was able to show that in all the communes in which consultations for infants had been founded the infantile mortality had fallen enormously. It is due to the wonderful results thus obtained that M. Clemenceau has decided to make the measure general throughout the country.

CORRESPONDENCE.

THE CHARTER AND THE FUTURE CONSTITUTION OF THE ASSOCIATION.

SIR,—The letter by Dr. Bradshaw in your last issue seems to me to be very misleading, and one cannot help wondering if the writer possesses an exclusive history of the recent developments of the Association. As a member of both the Committees entrusted with the formation of the present constitution of the Association I utterly fail to recognize in Dr. Bradshaw's statement the reasons which guided those Committees in their work.

Dr. Bradshaw builds up a condemnation of the Division system by telling us that "in order to form the machinery for the election of the Representatives the present Divisions were made." If Dr. Bradshaw will look up the reports of the Constitution Committee he will see that the Divisions were created because it was felt by everybody—certainly by every member of that Committee—that a primary unit of the Association, smaller and more accessible than the Branch, was an absolute necessity if our organization was to be effective. This, I may safely say, was the starting point from which everything else arose, and from it proceeded quite naturally all the other machinery which has been set up.

Dr. Bradshaw declares the Divisions to be a failure, and thinks his opinion would be backed up by the Association generally if a vote were taken. If Dr. Bradshaw is drawing his conclusions from his local experience, one can only regret that the Lancashire and Cheshire Branch does not stand where it did when it was one of the most active and best organized Branches in the Association. No one is more willing than I to acknowledge that the Divisions are far from doing all they might, but I would not mind staking any reputation I have as an observer on the statement that for one man interested in the working of the Association in the old days there are now a dozen. Take this Branch, the North of England, as an example. Ten years ago we held three Branch meetings in the year, which were very pleasant as social reunions but the interest in them from the organizing point of view was confined to about half a dozen men, the officials, and those who had been or expected to be officials. Now we have eighteen Divisions, at least half of which are doing good work. The aggregate attendance at the meetings of the Divisions is far greater than we ever had at a Branch meeting in the old days. The Branch meetings themselves have not suffered; indeed, I should say the average attendance is about twice as great as in the old days. Our scientific work has not suffered, for whereas it was once confined to the three meetings of the Branch, we have now in addition four or five of our Divisions doing good scientific work themselves, and one Division—the Newcastle—every year organizes a scientific day which is far and away a bigger thing than we ever got in the old days. I am not telling these things to glorify the Branch to which I belong. We are far from doing all we might, but when I hear a member of Dr. Bradshaw's experience laying it down as a fact that the Divisions have been a failure it seems the best thing to turn to one's local experience.

Dr. Bradshaw asks us to go for a Charter which will do away with the Representative Meeting, and vest the whole administration once more in the hands of the Council. This seems to me a mistaken policy, and quite out of touch with the facts of the case. It is asking us to revert from a democratic system to a hybrid system, which has been tried in the balance and found wanting. Whatever the defects of the Representative Meeting, its

members come in touch with the rank and file in a way the Central Council never did. I think that only in about three or four Branches is the annual election of members of the Council more than a matter of form. If one mentions the Lancashire and Cheshire, the Metropolitan Counties, and the South Wales Branches one has about exhausted the districts in which more than a languid interest is taken in the representation on the Council.

This letter is written under great pressure of time, and I have not the opportunity of testing exactly Dr. Bradshaw's statement that "few gentlemen who have been Representatives one year are willing to undertake the office again." As one who has been a Representative on each occasion, I think Dr. Bradshaw is wrong in this statement, and that quite a good proportion of the Representatives "have been there and still would go."

Dr. Bradshaw winds up his letter by saying, "I repeat that the Representatives and the Divisions were only adopted as a *pis aller*, to meet the requirements of company law." I must repeat that this contradicts my vivid recollection of the proceedings not only of the Committees which formulated the new Constitution, but of that agitation which secured the appointment of the Constitution Committee. Dr. Bradshaw had better look up the report of that Committe and "verify his references." I think he will find that his recollection of those proceedings is about as far wrong as his diagnosis of the present condition of the Association, and of its temper in regard to the Charter. What the Association wants is to finish tinkering with the Constitution, and get quietly to business, but I feel certain it has no intention of repudiating its present policy of bringing its organization in touch with every practitioner, and of making itself equal as an effective organization with other great trade and professional organizations in the country.—I am, etc.,

Gateshead, April 30th. ALFRED COX.

SIR,—There can be no question that Dr. Bradshaw, in his letter dated April 22nd, has put into words thoughts which must have passed through the minds of many members of the Association during the past year or two. He urges us to weigh carefully the proposals as to the draft Charter before taking a decisive step which will, without doubt, bind the Association for many years to come. The bulk of his letter is taken up with arguments which go to show that it would be far wiser to leave the management of the Association in the hands of a Council which is directly elected by the Branches rather than in the hands of Representatives elected by the Divisions. He adds that he has no doubt that if a poll were taken of all the members of the Association, an overwhelming majority would declare that the Divisions had proved a failure and that the sooner they were abolished the better. I have heard these arguments expressed so often and so forcibly during the past year or two by men who have taken their full share in bringing the Association to its present prosperous condition and am so thoroughly in agreement with them that I can only hope that the Branches and Divisions will, even at this eleventh hour, carefully consider the advice so ably given by Dr. Bradshaw.

Is it, or is it not, a fact that in many parts of the country the Divisional meetings are so wretchedly attended that no serious attention ought to be given to resolutions passed at such meetings? If this is the case, it is hardly likely that Representatives of such Divisions will prove as capable or trustworthy workers for the Association as have members of Council chosen by the Branches in the past. We are told, too, that experience has already proved that in many instances, Representatives who have served one year are not willing to serve a second. If this be true, it is easy to see that in the future the work of the Association must fall entirely into the hands of a very few men who keep themselves in touch with everything that is going on.—I am, etc.,

Oxford, April 30th. WILLIAM COLLIER.

SIR,—In my opinion we ought to halt, and not push the proposed new charter too hurriedly. I can confirm Dr. Bradshaw's statement that the Divisions have proved a failure. There may be a few exceptions. At the recent annual meeting of the Rochdale Division only four were present. Two of us lived some distance away, and had to sacrifice a few hours for a fiasco of a meeting. Within twenty minutes' walk there were probably over twenty who could have attended had they been so disposed. We cannot get quarterly meetings. The Divisions are too small. Branch meetings do attract when held in a large town, with a good agenda of scientific subjects.

In the balance sheet for 1905 the expenses for Representative Meeting, Council, and Committees was £2 885 14s 8d. Of this large sum only £117 0s. 7d. was paid for railway fares for Representatives from the Divisions. The Representatives are legally entitled to their railway fares and out-of-pocket expenses as much as any member of the Council. Dr. Bradshaw truly says that few gentlemen who have been Representatives one year are willing to undertake the office again. Dr. Bradshaw does not give one of the chief reasons for this reluctance. The fact is the Representatives only get railway fares. Last year some of us were away for six days doing the business of the Association from 10 a.m. to 6 p.m., paying our own hotel expenses, and providing *locum tenens*. Is it right? Last year I volunteered to attend. The year before that the Bury and Rochdale had no Representative. Some Divisions pay the hotel expenses by a levy on the members of the Division, but this is objected to by some. Unless this question of equal treatment to members of the Council and Representatives is dealt with, I feel sure that the attendance of the latter will decline. I think the Representatives ought to be cut down to about fifty, and in addition to railway fares one guinea per day allowed when attending to the business of the Association. The average attendance would be probably four days, and the business should be done in London. There are many advantages in this system. The cost for each would be about £4 4s.—that is, 200 guineas a year, certainly not a large sum, when nearly £3 000 is spent on this department of the Association business.

There are some valuable suggestions by Dr. Rentoul which I hope will receive the attention they deserve at the Special Representative Meeting to be held in London on May 29th.—I am, etc.,

Bacup, April 30th. JOHN BROWN, M.D.

REPRESENTATION OF THE COLONIAL BRANCHES.

SIR,—The circumstances of the colonial members are so different from those in this country, that the problem of their satisfactory representation at the head quarters of the Association is probably to be solved in another way than that which may prove suitable here, and I wish to suggest that it may best be reached by a fundamental reconstruction of the Colonial Committee. Like the Scottish and Irish Committees, this could be responsible to the Council though not nominated by it; and the proposal I should like to put forward is that each Colonial Branch should have the right to appoint one or more representatives to the Colonial Committee. It would be well to require that these should have been members of the Branch concerned not more than five years previously. This plan would make the Colonial Committee more fully equipped with local knowledge than it can be under its present constitution.

The next part of the question which presents difficulty is that of the colonial members of the Council. Apart from a desire for uniformity of construction, I can think of no reason why, if the Colonial Branches agree, the election of the colonial members of the Council should not be made by the Colonial Committee. With the proviso that out of the seven or eight seats, which it has been suggested might fall to the Colonial Branches in a reduced Council, one at least should be held by a member from each of the great areas of Canada, Australia, South Africa, and Asia, this would be a perfectly safe arrangement. Personally, I hope that in any reduction of the Council the Representative Meeting will assign at least thirty seats to the representatives of the home members, because the experience I have had as member of Council and Committees has convinced me that any less number will make the organic relation of the Council and Committees more imperfect by the numerical difficulty of manning the Committees.—I am, etc.,

Dundee, April 30th. R. C. BUIST.

THE ELECTION TO THE SENATE OF THE UNIVERSITY OF LONDON.

SIR,—Quite apart from the statements and counter-statements concerning the changes in the curricula for degrees in medicine and surgery of the University of London with which the electorate has been bombarded of late, the most important matter for the teachers at the metropolitan medical schools to keep before them at the present time is the effort which is being made to force these schools, however unwillingly, into the concentration scheme.

Sir Thomas Barlow, in his address, has specifically stated that he recognizes, by the recent vote of the Faculty of Medicine, "that at present medical teachers in London are unwilling that a third centre shall be established;" and, though he personally much regrets this decision, he adds: "I should, however, feel myself bound, if elected, loyally to abide by it, and I should not consider it proper, even if it were possible, to force on a third centre, unless there were a decided and cordial adhesion of the majority of the London schools in its support."

The effect on the poll on Tuesday next of these assurances, especially in conjunction with Sir T. Barlow's personal popularity and professional high standing and influence, is calculated to be very considerable.

The list of Sir T. Barlow's Committee, which I have received this morning, contains, I see, the names of several graduates who are not in favour of concentration. Still, there are, no doubt, many whose adherence to the principle of voting according to their convictions, rather than in accordance with their personal attachment to an individual, will impel them to support one who is emphatically opposed to founding and endowing an institute of medical sciences at South Kensington for concentrating the teaching of the preliminary and intermediate sciences of the medical curriculum, rather than one who abandons this project only provisionally and with regret.

Will you allow me space to take exception to the articles and letters which have appeared in the JOURNAL, and which contain reproaches of disloyalty, jealousy, inconsistency, irresolution, etc., against those London teachers and graduates who are now opposed to and have voted against further concentration?

In defence of such voters, I would point out: First, there are many who throughout have disapproved of the recommendation of the Commissioners contained in Section 80 of the statutes of the University of London Act, 1898, and for the following reasons: (*a*) That the preliminary and intermediate subjects all require to be taught practically, not in large classes and necessarily under a very eminent professor, but in small classes with close personal touch between teacher and taught; (*b*) that class rooms and laboratories had not to be built afresh, but already existed, in the various schools; (*c*) that during the last fifteen years tens of thousands of pounds have been spent in secondary schools and other institutions in providing excellent and well-equipped laboratories for the teaching of the preliminary sciences, and that these schools have been approved, and are from time to time inspected by the licensing authorities; (*d*) that the preliminary science subjects are best studied for the medical profession, as they are for the army and other callings, before the student enters at special institutions for the study of the special subjects of those callings; (*e*) that (as has been forcibly stated by Sir E. Fry and others) it is not for the University of London or for any other university to enter into competition with constituent colleges and secondary schools; (*f*) that it is the duty of the University to cultivate research, and that the money which has been obtained and promised should be laid out on this purpose instead of on adding to, and competing with, the long list of institutions at which the preliminary and intermediate subjects of the medical curriculum are now taught; (*g*) that the will-o'-the-wisp object of trying to bring back by concentration the large entries of former years at the London medical schools should be abandoned, and the fact should be recognized that the provincial universities having medical schools, besides granting degrees, can and do now supply all the teaching requisite for the degrees.

Secondly, before March 19th last the views of the Medical Faculty at large had never been expressed. Only a very small percentage of the Faculty had taken part in passing the resolutions in favour of concentration. Since the publication of the report of Sir E. Fry's Commission on King Edward VII Hospital Fund, greater efforts have been made to force on the concentration scheme; and impressions have got abroad, rightly or wrongly, that when once the Medical Institute at South Kensington is founded greater efforts still will be made to compel all the medical schools in London to join in the concentration, and that those which refuse will be boycotted as far as possible, and put to disadvantage by future regulations of the University.

Such, and other reasons may well have had the effect of causing members of the Faculty to change their views, as well as of stirring up the previously indifferent members to give expression to theirs.

Moreover, the report of Sir E. Fry's commission reminds one that if the Medical Faculty has changed its opinion, it is not the only body which has done so. The recommendation in that report which stimulated the "Concentrationists" in the Senate to renewed and increased efforts, and the decision of the Council of the Fund—not to make any grant to any hospital which devotes a portion of its income in aid of its medical school—which was the outcome of that report, are quite opposed to the spirit of the original appeal letter (February 13th, 1897) issued by the King, when Prince of Wales and the first President of the Hospital Fund. In that letter it is stated:

> We must recall the fact that apart from the purely philanthropic work carried on in relief of our sick poor, we look to voluntary hospitals for the means of medical education and the advancement of medical science. Our hope is that by the aid of this Commemoration Fund we may be enabled to secure for these necessary institutions sufficient and permanent support.

Clearly the maintenance of the medical schools in their completeness must have been in the mind of the beneficent founder of the fund.

Surely it is unreasonable and unjust to reproach or to blame those who are strongly opposed to a scheme for voting against those who are in favour of the same. Personal proclivities, association in office, feelings of friendship, and close acquaintance, may all dispose one to vote for A. rather than B. But if A.'s views are opposed to, and B.'s are in consonance with our own, then we must face the fact that if we support A. we are assisting the cause we desire to defeat.—I am, etc.,

London, W., May 1st. HENRY MORRIS, M.A., M.B.Lond.

THE MEDICAL DEGREES OF THE UNIVERSITY OF LONDON.

SIR,—I feel that you and your readers must be tired of statistics regarding the medical examinations of the University of London, but I cannot allow certain statements in Dr. Calvert's letter, published in your last issue, to go unanswered. Dr. Calvert, in a pamphlet issued to the graduates, with Sir Thomas Barlow's address, quoted certain statistics and gave the number of candidates for the M.B., B.S. in the year 1905 as 175 and the number of passes as 112. It appeared to me that he obviously quoted from an official University document, which now lies before me, and in which this number of candidates is given for the year 1905 and the rejections as 65; while for the year 1906 the candidates are recorded as 275 and the rejections as 81 for that year.

In answering him I adopted his figures and method of calculation. I presume that Professor Whi e did the same. I think I showed that the conclusion he drew from these data—that there has been no lowering of the standard of the degrees—could, pursuing his own method of argument, be shown to be erroneous.

Dr. Calvert now shifts his ground, and having obtained a fresh set of statistics from the University calculated on another basis, adopts the number 253 as that of the candidates for the year 1905, and 264 for the year 1906. I am quite prepared to meet him on these figures also.

Candidates are now permitted to enter for the whole examination as formerly; but should they fail in one half (Group I) and pass in the other (Group II), they obtain credit for the portion in which they have passed and need only be re-examined in the other group; they may, however, present themselves in one group only. The number 253 that Dr. Calvert gives for 1905 is obtained

by adding together the number of candidates who have entered for the entire examination and the numbers of those who entered for Groups I and II separately.

It is obviously easier to pass an examination in two instalments than in one, yet Dr. Calvert counts those who have entered for but one group together with those who have taken the whole examination, and he then claims that those particular individuals who happen to have entered for the whole examination but succeeded in passing in one group only shall be considered to have failed, while those who took only one group—although it might be the same group—and passed, shall be counted as if they have passed the whole examination. By this extraordinary method of calculation he arrives at a percentage rejection of 36.3 for 1905, and 39.4 for 1906.

Of course the "lumping together" of candidates who have passed the whole examination with those who have only entered in one group totally vitiates any conclusion drawn from these figures; but even if they were accurate they are scarcely happy for his contention, as the average rejection for the first six years of the last decennium, when candidates had to take the M.B. as a whole, was 43.2.

Dr. Calvert offers as an alternative method of calculation that we should consider that those who have entered for the whole examination and failed in only one group have passed, and then arrives at the remarkably low percentage rejection of 26.9 for 1905, and 29.9 for 1906; but here again his figures fail to express accurately what has happened, as he again includes those who took but one group.

The M.D. statistics, however, are uncomplicated by these group-options; here a candidate either passes or fails entirely. The following statistics, which Dr. Calvert refrains from quoting, speak for themselves. The years 1903 and 1904 are abnormal, being transitional years; the full force of the new regulations was only felt in 1905 and 1906:

M.D.

Years.	Candidates.	Rejections.	Percentage Rejections.	
1897	64	32	50.0	
1898	66	27	40.9	
1899	71	29	40.8	
1900	60	21	42.0	Average 43.5
Examination				
1901	65	28	43.0	
1902	57	25	44.2	
Transitional years 1903	64	19	29.7	
Transitional years 1904	88	42	47.7	
1905	51	15	29.4	Average 20.7
1906	60	8	13.3	

Dr. Calvert claims that two years is too short a period on which to base a judgement. In a measure I agree with him, but it must be remembered that it is only during the last two years that the new regulations have been in full force, and in criticizing their effect we can only deal with such figures as we now possess.

His point about the transference of organic chemistry from the Intermediate to the Preliminary Scientific examination I have already fully dealt with in a pamphlet issued to the graduates, so will merely allude to my answer here.

In conclusion, let me say I largely agree with Dr. Mercier that the question of standard cannot be settled by statistics alone; but Dr. Calvert and those supporting Sir Thomas Barlow's candidature appealed in the first instance to statistics to show that there had been no lowering of the standard; and these statistics, when carefully examined, tend to prove exactly the opposite—namely, that the standard is distinctly lower than that which formerly obtained.—I am, etc.,

South Croydon, April 30th. A. PERCY ALLAN, M.D., B.S.

SIR,—In a letter published in the BRITISH MEDICAL JOURNAL of March 30th Dr. E. H. Starling says: "The methods of this machine which enjoys the name of the 'Graduates' Association,' are simple, and consist in the gradual replacement of men of independent views on the Senate by men whose sole claim to eminence will be the fact that they have a seat on the Senate, and who therefore, to preserve this eminence, will agree to vote on all questions as directed by the Association."

Further, in a circular issued to the registered members of Convocation on behalf of the University of London Graduates' Union, and signed by its General Secretary, Mr. H. J. Harris, B.A., it is stated: "Accordingly, the organization of the Union as a fighting body has not been pressed until recently, when the extreme attitude taken up by certain members of the Graduates' Association, and the attack which they have launched upon those who will not vote according to their orders, has made it necessary to organize the Union for the defence of the University against a spirit of narrow partizanship."

The absolutely false imputations contained in these statements has caused much pain and annoyance; and as these statements have been widely circulated, I feel it is only just that the following letter which I have received, signed by several members of the Senate who are either Vice-Presidents of the Association or whose candidature it has promoted, should be equally widely read.—I am, etc.,

London, E.C., April 30th. WALTER R. WARREN.

University of London,
April 27th, 1907.

Dear Mr. Warren,

It having been brought to our notice that a statement has been circulated to the effect that the Graduates' Association and those connected with it have required Convocation Senators to vote according to their orders, we wish emphatically to state that, during the time that we have been members of the Senate, no attempt has ever been made either by the Association or by any person connected with it to direct how we should vote; no pledge or statement of views other than that of general sympathy with its aims has ever been asked of us. While we are pleased that our views have proved to be in harmony with those of the large body of graduates constituting the Association, we should have been the first to resent any attempt, had such ever been made, to fetter our perfect freedom of action with regard to the numerous matters that come before the Senate. In no sense do we regard ourselves as delegates of the Association, but always as representatives of the graduates as a whole.

Yours faithfully,

CLIFFORD B. EDGAR, T. LAMBERT MEARS,
R. C. B. KERIN, WALTER PALMER,
C. W. KIMMINS, R. MULLINEUX WALMSLEY,
E. GRAHAM LITTLE, S. RUSSELL WELLS.
S. L. LONEY,

SIR,—Dr. Mercier's letter in support of Sir Thomas Barlow's candidature for the Senate, which appeared in your last issue, is the most cogent reinforcement of the opinion which I, with many others, hold, that it is a misfortune that the study of logic and psychology should have been removed from the compulsory subjects of the M.D. degree; if the brilliant style and intellectual distinction of this letter are in any way the outcome of the lifelong study of mind and its mysteries, then I for one regret exceedingly the omission from the final examination of a subject which forms the threshold of such study. And at the same time I cannot but rejoice that the candidate whom I have had the honour of nominating has passed his life in the practice of this branch of medicine.

But my admiration of Dr. Mercier must not restrain my criticism of his letter. Dr. Mercier in his first paragraph deprecates our hostility to foreign certificates in lieu of matriculation merely because they are "qualifications of strange and distant bodies." I would point out that in proportion as these bodies are "strange and distant," the difficulty of obtaining information of the value of their certificates increases, until the difficulty approximates to impossibility. Dr. Mercier himself admits that if Dr. Allan's statement that exemptions have passed the Senate without adequate information were true, "it would justify a change in the *personnel* of the Senate." The statement was categorical enough, and its correctness has not been challenged. The inference surely is that it cannot be challenged because it is true.

I am quite content to accept Dr. Mercier's ruling that "the proportion of passes to failures at an examination is a function of two variables—the difficulty of the examination and the efficiency of the preparation for it." Dr. Mercier would ascribe the recent undoubtedly increased percentage of passes in all the medical examinations to the operation of the second factor entirely—the increased efficiency of preparation. His sole reason for this judgement apparently consists in the present opinions of some of Sir Thomas Barlow's supporters who happen to have been examiners, and who are thus somewhat in the position of defendants—that the teaching at the medical schools has improved since the reconstitution of the University—from which dates the increased percentage of passes. But

during this very period the party who are supporting Sir Thomas Barlow have been clamouring from the housetops, as Dr. Leonard Hill pointed out in his forcible letter in your issue of April 20th, that the poverty of the equipment and teaching at the medical schools was responsible for the growing deficit of students in London—a condition of things which was, in fact, the main argument for "concentration." Surely, therefore, if opinions are evidence, there is a larger, maturer, and more disinterested volume of evidence against than for the view that the training of the medical student has improved; and it becomes possible—or, indeed, probable, as we claim—that the result is due to the other variable, the diminished difficulty of the examinations,

Dr. Mercier, in concluding, says he "would like to see every medical student in London present himself for examination at the University of London, and he would rejoice if every candidate were successful in obtaining his degree." This is, of course, a perfectly intelligible, legitimate, and kindly aspiration, on a par, in fact, with that of the good French King who desired that every subject should have a fowl in his pot on Sundays. But this reduction of the degree to the status of a school-leaving certificate, which many teachers join with Dr. Mercier in applauding (as is evident from the letter of Dr. F. J. Smith, immediately following Dr. Mercier's letter), would surely defeat in the end its own object—namely, to improve the position of the medical student. A degree is of no value in itself, but only because of the prestige which it at present carries; this prestige is due to the fact that some universities still refuse to truckle to a false and shortsighted sentimentalism, however kindly it may be, and uphold their standards. If the experiment is to be tried of a universal degree, to be claimed by the student as a necessary corollary of passing through the schools, we would suggest that some other university than our own—some university which already approaches more nearly to Dr. Mercier's "ideal" in this respect—should be selected for the experiment. But let the graduates of the University of London note how widespread and insistent is the attempt to realize—at their expense—this ideal; let them recognize how powerful are the forces which are arrayed against the small body of men in the University who are striving to resist this movement, and let them vote accordingly in this electoral contest.—I am, etc.,

London, W., April 29th. E. GRAHAM LITTLE, M.D.

SIR,—I have a boy at Epsom College who will become a medical student very shortly, so you may be sure I am following the correspondence and statistics published in the BRITISH MEDICAL JOURNAL during the last month respecting the training and examinations for the London University degree with interest. To my regret, when I qualified twenty-five years ago, I did not proceed to a degree but took the usual diplomas, which was then the custom in London. Along with my medical friends I am determined that my lad shall take a degree, and when I sent him to Epsom I asked the head master to work him up for the London University matriculation.

You may imagine, Sir, with what disappointment I have followed the discussion and letters in the JOURNAL respecting this degree. One of my friends, whose son was destined for London, has sent him to Manchester, where he says he will get everything he requires and with greater certainty. I am almost persuaded to do the same, much to my regret. I have no doubt the boy could matriculate in London in spite of the well-known tricky nature of the papers set, but what afterwards? Will he be as sure of as good a training there as can be got at other universities with more *compact* schools for getting through the preliminary part of the degree? I am afraid not.

If the London University wish to keep their degree select let them do so by all means, but they must face the certainty of having half their medical schools closed. Every year more students are finding out that the M.R.C.S., L.R.C.P., or L.S.A. are not sufficient qualifications to enable them to earn a living, and that they must take a degree in order to do so.

I ask you, Sir, why should Guy's hold out inducements for their students to proceed to Durham for their degree? This in itself answers the whole question.—I am, etc.,

AN HONORARY SECRETARY OF DIVISION, B.M.A.

April 28th.

THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

SIR,—One of your correspondents thinks the relation between general practitioners and consultants should be like that between solicitors and barristers. I have known this said before. May I point out the difference? There is a large amount of lucrative work for which a solicitor must employ a barrister. But the general practitioner is not obliged ever to call in a consultant. My experience is that the general practitioners who complain of consultants seeing their patients as they say "behind their backs," are mostly those who never advise a consultation, whose patients know they do not like consultations, and for that reason go to consultants without first telling them.—I am, etc.,

April 22nd. F.R.C.P.

SIR,—I have read the letters of "B." and "X." in the BRITISH MEDICAL JOURNAL of April 20th, and, curiously enough, agree with both of them. I am in practice in a well-known health resort as a general practitioner, but I specialize in aural, laryngeal, nasal, and ophthalmic work as well. I often treat patients of my colleagues for these special diseases without going into ethical formalities, but always refuse to treat them for general surgical, medical, and obstetric ailments at their own homes unless they request me to entirely take charge of them professionally—that is, "they wish to change their doctor." Here, I take it, I agree with "B." On the other hand, should a patient be treated at home by his or her medical man and require a second opinion, I think that the best plan is for a consulting physician, surgeon, or obstetrician to be called in from the next large centre or from London. Here I agree with "X." People who pay have a right to get what they pay for, and you cannot drive them; still I think much may be done by the British Medical Association with regard to educating not only the medical profession but the British public in the course that they both should pursue.—I am, etc.,

April 22nd. A HEALTH RESORT DOCTOR.

THE EFFECTS OF RESPIRATION ON THE CIRCULATION.

SIR,—In his article published on April 20th, p. 913, Sir James Barr makes the statement, in reference to the effect of inspiration on the pulse, that as it is impossible to produce a negative pressure within the thorax equal to the positive pressure within the aorta, so there can be no aspirating effect interfering with the course of the circulation. If the aorta and its branches were rigid, this statement, at first sight plausible, would be correct. But as they are expansible the effect of any alteration of pressure in the thorax, whether positive or negative, must be felt by these vessels. In the one case there would be partial collapse, and in the other case partial expansion. Sir James Barr appears to have fallen into the error of neglecting the consideration of the force opposing the pressure in the vessels—namely, the pressure which the arterial walls exert on the blood. There is normally equilibrium between the three forces—blood pressure, the pressure exerted by the vessel wall, and the negative pressure in the chest. Any alteration of the last factor would be counterbalanced by an alteration of one or both of the remaining factors, and this would result in expansion or collapse of the vessels. I consider the point of importance, not only from the point of view of the present discussion, but also because of the fact that if this position be not granted a reasonable hypothesis explaining the relative frequency of thoracic as compared to abdominal aneurysm falls to the ground. Such a hypothesis would attribute the frequency of thoracic aneurysm to the normal negative pressure in the chest. In support of the view that changes in intrathoracic pressure influence the pressure in the large thoracic blood vessels I would instance the fact that with a sudden rise of intrathoracic pressure the particular phase of the pulse beat then proceeding is affected, even where this phase is diastolic.—I am, etc.,

THOMAS LEWIS,
Medical Registrar, Seamen's Hospital, Greenwich.

April 20th.

REFINEMENT IN THE DIAGNOSIS OF PHTHISIS.

SIR,—The difficulty of diagnosing with any degree of accuracy the extent of tuberculous disease of the lungs by the ordinary methods of percussion, auscultation, etc., is well known, for one is constantly being reminded in the *post-mortem* room that by the time the disease can be detected by these means the area of the lung infected is nearly always found to be considerably greater than was suspected. In this connexion it is interesting to note the method that has recently been adopted at the Kelling Sanatorium for classifying cases of pulmonary tuberculosis. I quote from the medical officer's report contained in the annual report just issued of this institution, a copy of which I enclose. He says: "Instead of dividing the patients into febrile and afebrile, and these again into those with advanced disease, slight disease, long-standing disease, and recent disease, the simpler plan has been taken of classifying according to the area of the lung infected.

No. 1 cases: Those with disease extending over less than half of one lobe.
No. 2 cases: Those with disease extending over an area equal to half of one lobe.
No. 3 cases: Those with disease extending over an area equal to two halves of two lobes, or one whole lobe, and so on.

It would be extremely interesting and very advantageous to know by what means such precision in diagnosis is arrived at; and one naturally wonders which of the two lobes is referred to, for they are of very unequal size. Also in what way the little middle lobe of the right lung is to be dealt with. Suppose, for instance, that five-sixths of this lobe and one-sixteenth of the lower lobe of the opposite lung are found to be affected, into which category should the patient be placed?—I am, etc.,

Norwich. SYDNEY H. LONG, M.D.Camb.

"A POSSIBLE SOURCE OF DIPHTHERIA IN SCHOOLS."

SIR,—From recent correspondence in the BRITISH MEDICAL JOURNAL, I conclude that some importance is attached to the dry sweeping of schools as a possible cause of diphtheria in schools. Why not take a hint from the practical Germans? In many houses, such as hotels, etc., in Germany the floors are coated with paint, so as to be impermeable to water. Every morning the housemaid arrives, not with a sweeping brush and dust pan, but with a mop and a bucket of water. She rubs the floor with the wet mop, and, at any rate so far as she is concerned, not much dust is raised. I am not aware if any germicide is ever put into the water, but it certainly could be. Would not such a system to a great extent meet the point raised by Drs. Bond and Sommerville?—I am, etc.,

April. COMMON SENSE.

PUBLIC AND PRIVATE VACCINATION.

SIR,—Those who regard the operation of the Vaccination Acts as unfair and prejudicial to private practitioners appear to allege three principal grievances, namely:

1. The advertising of the Public Vaccinator, whose name appears on the vaccination certificate form given to the parent on registering a child's birth.

2. The non-supply of Government lymph to private practitioners.

3. The non payment by the State of private practitioners for vaccinating their own patients.

As to the remedies:

1. The objectionable advertising of the Public Vaccinator can be easily removed by the following method, namely, that the form given to the parent at the time of registering the birth should bear the name of the *Vaccination Officer*, instead of the Public Vaccinator, as that of the person with whom the parent should communicate when vaccination by the Public Vaccinator is desired. These requests would be sent by the Vaccination Officer to the Public Vaccinator on his weekly form "H." This solution has been suggested to me for general use, as it is the method frequently adopted by the parents in my own district.

2. As regards the second objection, the Medico-Political Committee reported that the Local Government Board was favourable to the supply of lymph for all primary vaccinations, and that the difficulties in the way are chiefly due to the opposition of the Treasury. Would not this opposition be removed if medical men expressed their willingness to pay for the supply of lymph for their private cases?

3. Government might, in response to a unanimous appeal by the profession, be prevailed upon to pay for all vaccinations conforming to their standard, the number of insertions and successful marks being detailed on each certificate.

If the profession is really desirous of these reforms, let it at the Annual Representative Meeting in July pass resolutions to that effect.—I am, etc.,

A. A. MACKEITH,
Southampton, April 26th. Public Vaccinator.

THE FEES OF PUBLIC VACCINATORS.

SIR,—As it appears quite certain that the President of the Local Government Board intends to reduce the fees of public vaccinators, I would suggest that every man holding that office should write to his M.P. and say that if the minimum fee is to be reduced the work connected therewith should also be lessened.—I am, etc.,

Cardiff. T. GARRETT HORDER.

INCOME TAX AND LIFE ASSURANCE.

SIR,—There is one aspect of the income tax question that appears to have escaped notice. It is with regard to one's life assurance premium. We shall now have ninepence in the pound on this sum allowed to us out of the income tax paid; but when the policy matures during life and the money is invested we shall have to pay one shilling in the pound on the income derived from it. This does not seem quite fair.—I am, etc.,

Heaton Chapel, April 28th. F. W. JORDAN.

THE COVENTRY DIVISION AND THE COVENTRY DISPENSARY.

SIR,—I have been asked by the Committee of the Coventry Division of the British Medical Association to address you with the object of obtaining the support of the profession in a matter of professional reform in Coventry.

This Division, which includes, with one exception, all the medical men practising in this city, has been supporting the majority of the staff of the Coventry Dispensary in their efforts to effect reforms in that institution, which, as your readers are aware, has not been conducted upon lines generally approved by the profession.

Failing in this endeavour, five out of the seven members of the staff of the dispensary have resigned, and our wish is that every legitimate means should be used to dissuade medical men from accepting the vacant appointments, which are now being advertised in the daily papers. We feel that the men who have resigned should be supported to the best of our ability, and the Division has passed a resolution by which professional recognition is to be refused to such medical men as may accept the appointments now resigned. I am, etc.,

F. FAULDER WHITE,
Coventry, April 30th. Chairman of the Coventry Division.

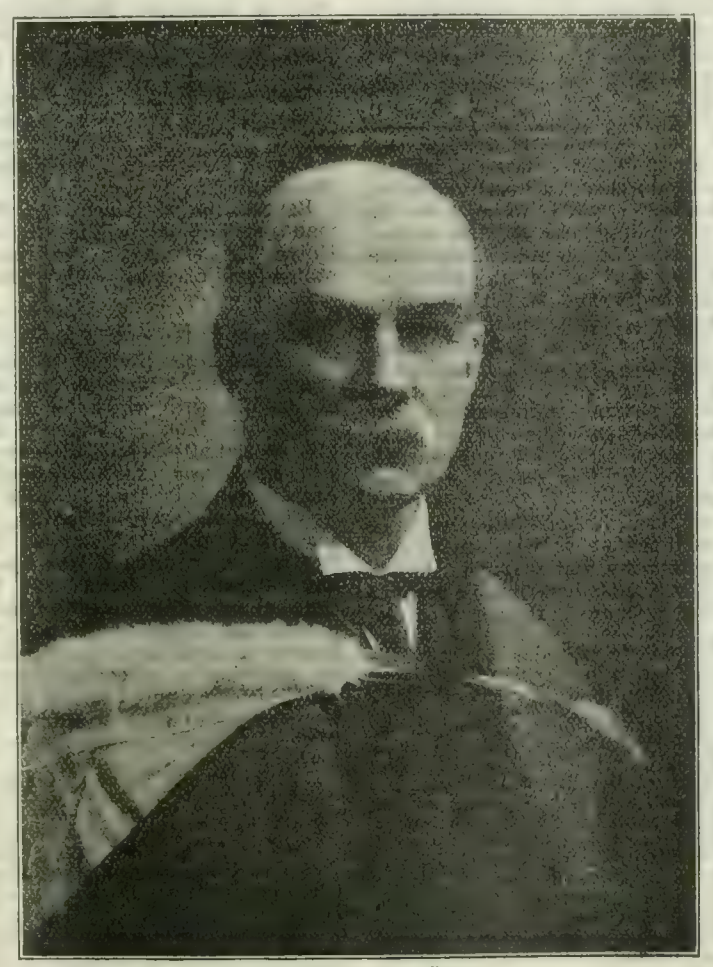
A POLISH EXPOSITION OF HYGIENE.—The tenth Congress of Polish Doctors and Scientists will be held this year at Lemberg some time between June 16th and July 24th. Connected with it there will be a scientific and medical exposition divided into sections as follows: I. Natural Science and Medicine, subdivided into the following groups: (*a*) Scientific and medical; (*b*) balneological; (*c*) pharmaceutical; (*d*) industrial chemistry; (*e*) medical instruments and apparatus. II. Hygiene, subdivided into groups as follows: (*a*) Hygiene of nutrition; (*b*) personal hygiene; (*c*) hospital administration; (*d*) training of youth; (*e*) hygiene of factories and workshops; (*f*) hygiene of the dwelling; (*g*) hygiene of clothes; (*h*) infectious diseases and their prevention; (*i*) hygiene of childhood; (*j*) public health. Foreign institutes and firms may take part in the scientific section of the exposition, but may only show such objects as will not interfere with Polish industries. Communications should be addressed to the Director of the Exposition, Dr. Kalikst Kryzanowski, Lemberg.

OBITUARY.

GEORGE ARMSTRONG PETERS, M.D., F.R.C.S.Eng.

The profession in Toronto and throughout Canada have suffered a most severe loss in the death of Dr. George Peters, which took place on March 13th, from angina pectoris. Born in 1859, in Eramosa, Ontario, he was in the prime of a most useful life when he succumbed to the strain of the varied activities with which his time was filled.

He was educated in Fergus Collegiate Institute, matriculating in the University of Toronto in 1882, from which he received the degree of M.B. in 1886. After graduation he continued his studies in the University and the General Hospital, and after a comparatively short time spent in England became F.R.C.S.Eng., being the first in Toronto to receive this honour. He was appointed Associate-Professor and afterwards full Professor of Surgery in the University Medical Faculty, and was Surgeon to the Toronto General Hospital and to the Victoria Hospital for Sick Children.



Dr. George Armstrong Peters.

As a surgeon Dr. Peters was distinguished by a combination of qualities which placed him easily in the first rank. Ability and knowledge gained by patient study, observation, and experiment, great mechanical skill, untiring energy and conscientious devotion and a most human sympathy were his, and to all these he added the originality and imagination of the artist, so that every operation was specially devised for the case in hand; what has been termed the surgical instinct was a pre-eminent feature in all his work. It was perhaps as a teacher of surgery that his talents were of most value; his clinics were always marked by forcible and clear-cut demonstration, with enthusiasm and a wealth and aptitude of illustration that fixed in the mind of the listener the salient points of the case under discussion and the rationale of the treatment suggested. In any medical college great teachers are not too numerous: a new country can ill spare such a man.

He had wide interests outside his work, and all that he undertook he did with his whole soul, and so with success. He was known as the best military horseman in the city, and was a prominent member of the Toronto Hunt and a daring cross country rider. He served first as an officer of the Governor-General's Body Guard, and later organized the Toronto Light Horse, to profit by the lessons of the Boer war, and was Lieutenant-Colonel in Command. He perfected an electric target for use in rifle shooting which is receiving favourable consideration by military experts in Great Britain. He wrote numerous papers on surgical subjects, and elaborated a method of making plaster casts (described in our columns in 1898, vol. ii, p. 621) and used it for making records of cases of deformity.

Though strong and athletic, he suffered from the results of too great strain and the high tension at which he always worked. About three years ago he suffered from anginal attacks, but after a prolonged rest he again resumed a great deal of his work, and, in fact, operated the day before his death.

The funeral, which was military, was attended by the Faculty and students of the Medical College, and indeed by almost all members of the profession in Toronto.

FRANCIS WILLIAM SMITH, M.D.Aberd.

We regret to announce the death on April 3rd of Dr. Francis William Smith at his residence in Harrogate. Dr. Smith was born in 1845, and graduated at Aberdeen University in 1868, where he held the post of House-Surgeon to the Royal Infirmary. He was for some years Medical Officer of Health to the Westbury Rural District. He took as his life-study the therapeutic properties of natural mineral waters; and whilst resident at Leamington he was conspicuous in the movement for reviving it as a spa, and became the author of a work on the *Leamington Waters*. For the last eight years of his life Dr. Smith carried on his work in Harrogate. His chief contributions to the medical journals were: The Leamington Chalybeate Waters in Faecal Anaemia; The Electrolytic Deposit of Sulphur from the Harrogate Sulphur Waters as a Therapeutic Agent; and The Electrolytic Transmission of Sulphur from the Harrogate Sulphur Waters through a Pig's Skin and its Therapeutic Value on the Human Subject. He was also the author of a work on the *Harrogate Waters, Baths and Climate*, published in 1899.

An old friend of Dr. Smith writes: I knew Dr. Francis Smith intimately from his student days onwards. He was always of the same character—earnest, confident, irrepressible and unceasing in work, worthily ambitious. His motto was "thoroughness." He threw all his power of mental concentration and all his wonderful capacity for treatment into every case. Patients appreciated this—believed and trusted in him, and remained loyal to him. He made and held a large practice in the three different parts of the country where he successively settled. Smith was little more than a lad when he commenced practice on his own account at Westbury; in a very few years he was chief magistrate of the borough. There being nothing further to accomplish in Wiltshire, he boldly moved to Leamington without partnership or purchase, wrote a little book on its waters, and before many years were over had one of the largest practices in the town. Success there appeared to have brought with it a sense of weariness, for he retired, as he said, to rest and take life easy at Harrogate, the climate of which doubtless attracted a man of his strong northern nature. But he had hardly begun to rest when his energy reasserted itself, and he plunged once more into work—this time as a consultant only, and with success. In the spring of 1906 he suffered from a severe attack of pulmonary congestion, from the effects

of which he never altogether recovered, and he died on April 3rd of cerebral thrombosis, to the grief of his many friends.

ROBERT HUGHES, M.D.,

PENMAENMAWR.

Dr. Robert Hughes of Penmaenmawr, widely known throughout North Wales, died on April 24th. He was the son of the late Mr. Hugh Hughes, quarry proprietor, Trefriw, and was one of four brothers, three of whom were members of the medical profession. He belonged to a literary family, and was first cousin of the Rev. Edward Jones, late rector of Llanfaircaereinion, editor of the Llanrwst edition of Goronwy Owen's works and writer of the brilliant critical essay which forms an introduction to that volume. Dr. Hughes was in his 82nd year, and was M.D.St. Andrews, M.R.C.S.Eng., L.S.A.Lond., and L.M.Dub. He was appointed Surgeon to the Penmaenmawr Quarries nearly half a century ago, but resigned the appointment when he retired from practice some ten years since. He had in the prime of life a very extensive and important practice, and attended some leading men of the age, such as the Right Hon. W. E. Gladstone and the late Archbishop Thompson, when staying at Penmaenmawr in the summer season. He was a skilful operator and the author of many literary contributions on various subjects. As a medical man he was looked upon as a leading practitioner in North Wales. It would be impossible to exaggerate the kindness of his heart in dealing with the poor in his profession. But his interest was by no means confined to his calling; he was an ardent Welshman, and was possessed of an accurate knowledge of the Welsh language, as well as of an extensive acquaintance with Welsh history and Welsh literature. For many years he was a member of the Local Board, and had filled the posts of Chairman and Vice-Chairman, and many years ago occupied the position of President of the North Wales Branch of the British Medical Association. He was a man of striking individuality, and formed his views on most subjects independently of party ties and traditions. He was a strong, tender-hearted, cultured, and gifted man, and his loss will be long and keenly felt by his many friends.

The funeral, which took place on April 27th, was large and representative, and he was laid to rest amidst universal manifestations of sympathy and respect. On the following day the Vicar (Rev. Canon Jones) in his sermon made the following touching reference to the deceased:

> He had chosen as his profession one that is perhaps second to none in its opportunities to benefit the race, to mitigate sorrow and suffering; and we may recognize with gratitude that the great body of its members are worthy of their vocation; they give their best in time and talent, in thought and sympathy, to defend human life from the thousand subtle and deadly foes that seek to compass its ruin, "the pestilence that walketh in darkness and the destruction that wasteth at noonday." Our departed brother had, by the help of strong natural abilities, culture, and experience attained to a high proficiency in his work. He followed his profession with passionate love, and observed its traditions with scrupulous jealousy. He was a man of strong personality, and possessed in a remarkable degree some of the most striking characteristics of his race. With all his force of character he was eminently tender-hearted, and it would be difficult to exaggerate his kindness to the poor among his patients during his lengthy professional career. He will be long and keenly missed by his many friends, and mostly by those who enjoyed to the last his fellowship and friendship.

PROFESSOR VON MOSETIG-MOORHOF,

UNIVERSITY OF VIENNA.

The news of the death of Professor von Mosetig-Moorhof, the distinguished surgeon of Vienna, who was drowned in the Danube in tragic circumstances on April 25th, will be heard with regret.

Albert, Ritter von Mosetig-Moorhof was born at Trieste on January 26th, 1838, and studied medicine at the University of Vienna, where he took the degree of Doctor of Medicine in 1861. In 1866 he was appointed Assistant Surgeon in Dumreicher's clinic, and in the same year he qualified as *Privatdocent* in Surgery. In 1874 he was appointed Surgeon to the Rudolph Institution, a post which he held till 1878, when he was transferred to the Wieden Hospital. In 1891 he became Surgeon to the General Hospital.

In 1875 von Mosetig-Moorhof was named Extraordinary Professor in the University of Vienna, and in 1889 he became Ordinary Professor. Soon afterwards the Emperor of Austria conferred upon him the title of Aulic Councillor. He served as a military surgeon in the Austro-Prussian war of 1866, and in the Franco-German war of 1870 in the Ambulance of the Corps Législatifs in Paris. In the Servo-Bulgarian war of 1885 he served in the Austro-Hungarian Ambulance at Belgrade. He embodied the large experience of war surgery thus gained in a course of lectures published in 1887.

To von Mosetig we owe the introduction of iodoform in the treatment of wounds, and especially in the surgery of diseased bones. He also devised a number of useful instruments. As an operator his dexterity of hand, and what may be called the finish of his style, were the admiration of his pupils.

In addition to the lectures on war surgery already mentioned, he was the author of a monograph on iodoform dressing which appeared in 1881, and of a handbook of surgical technique published in 1886, which has gone through four editions. Many other contributions to surgical literature from his pen appeared in the medical journals.

Von Mosetig was Surgeon-General of the German Order of Knights, and Chief Surgeon to the Volunteer Ambulance Society of Vienna. In these capacities he did much to diffuse a knowledge of the principles of first aid among the people.

Revered as a teacher, von Mosetig was beloved as a man by all who knew him. His death is mourned by the University of which he was an ornament, by his professional brethren, and by the public.

Professor Hugo Magnus of Breslau, whose death was announced in the British Medical Journal of April 27th, was a Silesian by birth, and was educated at the University of Breslau, with which he remained connected till his death. He took his degree in 1867, and at once began to give special attention to diseases of the eye. He qualified as *Privatdocent* of Ophthalmology in 1873, becoming Extraordinary Professor in 1883. He contributed largely to ophthalmological literature, especially on the colour sense and colour blindness. He was the author of a treatise on injuries of the eye, of which two editions have appeared. He was also the editor of a series of Ophthalmological Tables for students. Professor Magnus in his later years gave much time to the study of the history of medicine. In collaboration with Dr. Sudhoff he published a collection of treatises on the subject, to which he contributed several interesting monographs. He was 65 years of age.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Radcliffe Prize: Final Notice.

The Board of the Faculty of Medicine gives notice of the following conditions of the award for the Radcliffe Prize in the year 1907.

The prize, which is of the value of £50, will be awarded every second year for research in any branch of medical science comprised under the following heads: Human Anatomy, Physiology, Pharmacology, Pathology, Medicine, Surgery, Obstetrics, Gynaecology, Forensic Medicine, Hygiene.

The prize is open to all graduates of the University who shall have proceeded, or shall be proceeding, to a medical degree in the University. Candidates shall not have exceeded twelve years from the date of passing the last examination for the degree of Bachelor of Arts, and shall not, at the date of application, be Fellows on the Foundation of Dr. John Radcliffe.

Candidates shall send in their memoirs to the Registrar's Office on or before the first day of June, 1907.

No memoir for which any university prize has already been awarded shall be admitted to competition for the Radcliffe Prize, and the prize shall not be awarded more than once to the same candidate.

UNIVERSITY OF CAMBRIDGE.

DEGREES.

The following degrees were conferred on April 25th:

M.D.—G. S. Haynes, King's; J. G. Slade, Cla., L. Bousfield, Pemb.; G. W. de P. Nicholson, Jes.

M.B.—W. S. Treasawna, Sid. Suss.; J. M. P. Orell, H. Selw.

B.C.—W. L. Murphy, Joh.; W. S. Treasawna, Sid. Suss.; J. M. P. Orell, H. Selw.

George Henry Lewes Studentship in Physiology.

AN election to this studentship will take place in July. Applications should be addressed to Professor J. N. Langley, F.R.S., Hedgerley Lodge, Cambridge, not later than June 24th.

ROYAL UNIVERSITY OF IRELAND.

THE following candidates have been approved at the examinations indicated.

SECOND M.B., B.CH., B.A.O.—*J. Byrne, †J. Cullen, *A. V. J. Harrison, W. S. Haydock, *H. C. Malcolm, *W. Mooney, B.A., †D. V. S. Willis, J. S. Bellas, P. J. Campbell, J. J. Dennehy, Blanche G. C. Griffin, M. J. Hackett, J. Holland, T. H. Houston, G. E. Hull, M. C. Irwin, J. L. Jackson, B. McCullough, B.A., P. McGinnis, T. C. McMurray, P. J. Mockler, H. C. Mulhalland, A. F. N. Mullane, P. F. Murphy, M. J. O'Connor, W. H. O'Grady, W. F. O'Regan, W. Prendeville, T. W. Ruttledge, W. Stevenson, R. W. Vint, J. F. Walsh, H. W. White, T. Woulfe.

THIRD M.B., B.CH., B.A.O.—*J. A. Black, †J. A. Brown, *T. P. Carroll, *J. J. Gilmore *J. McCormick, *J. M. O'Connor, †T. Taylor, C. Alexander, F. Bradley, J. D. G. Burke, B. Byrne, S. Campbell, S. R. Campbell, E. N. Condy, N. Cunningham, E. P. Dewar, J. E. English, E. Forbes, W. A. Frost, J. W. Garry, D. J. Jackson, T. Kennedy, Caroline V. Lowe, M. J. McGrath, H. Newman, P. H. O'Connell, A. P. O'Connor, B.A., J. P. J. O'Connor, P. C. O'Donnell, J. J. O'Kelly, B.A., R. H. Robinson, W. H. Sheffield, S. J. Watson

FINAL M.B., B.CH., B.A.O.—*C. R. Harvey, *R. Hill, B.A., *J. J. Kearney, *V. J. McAllister, *R. V. Slattery, B.A., *O'C. Sullivan, †J. P. Waters, B.A., J. Barrett, J. W. Beirne, J. A. Boyd, D. Boylar, G. F. Campbell, N. M. Donnelly, F. T. Dowling, B.A., Jane M. Fulton, W. McKee, Charlotte E. Mitchell, J. B. Murphy, B.A., J. Nunan, P. O'Hart.

M.D.—R. J. Bethune, M. J. O'Flynn, H. E. S. Richards.

M.CH.—C. B. F. Tivy.

*Upper Pass, and qualified to sit for the examination for honours in one or more subjects of the examination.

†Upper Pass.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary quarterly comitia was held at the College on Thursday, April 25th, the President, Sir R. Douglas Powell, in the chair.

Lord Lister.

On the motion of the President, it was resolved by acclamation that an address be forwarded to Lord Lister, congratulating him on having celebrated his eightieth birthday, and expressing the high esteem in which he is held by the Fellows of the College.

Membership.

The following gentlemen were admitted Members of the College: Julius Meyer Bernstein, M.B.Lond., L.R.C.P., Wilfred Edgecombe, M.D.Lond., L.R.C.P., Daniel Caesar O'Connell Finigan, M.D.Berl., L.R.C.P., Archibald Montague Henry Gray, M.D.Lond., L.R.C.P., Thomas Lewis, M.B.Lond., L.R.C.P., Newman Neild, M.B.Vict., L.R.C.P., Clifford Sidney White, M.D.Lond., L.R.C.P.

Licences.

In conjunction with the Royal College of Surgeons, the Licence of the College was granted to 114 gentlemen.

Fellowship.

On the nomination of the Council, the following gentlemen were elected Fellows of the College: Daniel Colquhoun, M.D.Lond., Dunedin, New Zealand; James Barry Ball, M.D.Lond., 12, Upper Wimpole Street, W.; Arthur Shadwell, M.D.Oxon., Burnham, Maidenhead; Arthur Thomas Wilkinson, M.D.Lond., 22, St John's Street, Manchester; Edward Mansfield Brockbank, M.D.Vict., Northern Assurance Buildings, Albert Square, Manchester; William James Fenton, M.D.Camb., 58A, Wimpole Street, W.; George Edward Rennie, M.D.Lond., 159, Macquarie Street, Sydney; Edwin Bramwell, M.B.Edin., 23, Drumsheugh Gardens, Edinburgh; Andrew Duncan, M.D.Lond., 24, Chester Street, Grosvenor Place, S.W.; Robert Jones, M.D.Lond., Claybury Asylum, Essex; Thomas McCrae, M.D.Toronto, Johns Hopkins Hospital, Baltimore, U.S.A.; Herbert Stanley French, M.D.Oxon., 26, St. Thomas's Street, S.E.

Communications.

The following communications were received:

1. From the Secretary of the College of Surgeons, reporting proceedings of their Council on April 11th.

2. From the Geological Society of London, inviting the College to send a representative to take part in the centenary commemoration of the Society's foundation, September 26th to 28th next. It was left to the President to nominate a representative at the next Comitia.

Deprivation of Licence.

The Censors' Board having reported that Arthur Raynor had been convicted of felony, it was resolved that his name be expunged from the list of Licentiates of the College.

Representative on the Senate of the London University.

On the nomination of the Council, Dr. Frederick Taylor was elected as the representative of the College on the Senate of the University of London, in place of Dr. Allchin, whose term of office expires on May 14th.

Reports.

The following reports were received:

I. The Quarterly Report, dated April 18th, of the College Finance Committee.

II. From the Committee of Management, dated March 18th, recommending that:

(1) Regulation VIII be altered to the following:

"VIII. A candidate must present himself for examination in Parts I and II together (unless he claims exemption from one of them under the conditions of Paragraph XII) until he has reached the required standard to pass in both, or in one of these parts, but he will not be allowed to pass in one part unless he obtains at the same time half the number of marks required to pass in the other part. A candidate may take Parts III and IV separately, or he may present himself for the whole examination at one time."

(2) Paragraph XIII, section 2, of the regulations be altered as follows:

"The study of anatomy and physiology will not be recognized until the candidate has passed in two of the first three parts of the First Examination—namely, Chemistry, Physics, and Biology."

d. Eastbourne College and Sexey's School, Bruton, be added to the list of institutions recognized by the Examining Board in England for instruction in Chemistry and Physics.

The recommendations were approved and adopted.

III. From the Committee of Management, dated April 15th, 1907, on the subject of the teaching of midwifery, recommending that the regulations be altered so as to provide:

1. That every student shall himself conduct twenty labours.

2. That before conducting such twenty labours he be required: (*a*) To have held the office of medical clinical clerk and of surgical dresser at a recognized hospital during six months each; and (*b*) to have attended a course of practical instruction in midwifery.

3. That the certificate of having conducted the required number of cases be signed by a member of the staff of a lying-in hospital or of the maternity charity of a general hospital or by the dean of the medical school attached to the general hospital.

4. That every student be required to discharge the duties of clinical clerk in the gynaecological wards or out-patient department of a recognized hospital.

5. That every student be required to complete the curriculum of professional study before presenting himself for examination in midwifery and gynaecology.

IV. A further report from the Committee of Management of the same date, April 15th:

(1) The Committee reported that it had received from Dr. Theodore Dyke Acland an interesting and valuable report on the examinations of the Egyptian Medical School, on the professional education at the school, and on the hospital accommodation at Cairo. The Committee will in due course communicate with the Egyptian Medical School—in accordance with the authority conferred on them by the two Colleges—on subjects arising out of Dr. Acland's report. In the meantime, the Committee suggested that the Royal Colleges might express to Dr. Acland, the first assessor to the examinations of the Egyptian Medical School, its acknowledgement of his valuable services. A hearty vote of thanks to Dr. Acland was unanimously carried.

(2) The Committee proposed that three examiners in anatomy be appointed by the Royal College of Surgeons and one examiner by the Royal College of Physicians, and that each College should appoint two examiners in physiology. The proposal was accepted.

Library.

Books and other publications presented to the library during the past quarter were received and thanks passed to the donors.

CONJOINT BOARD IN SCOTLAND.

THE following candidates have been approved at the examinations indicated:

FIRST EXAMINATION (*Five Years' Course*).—T. E. Ferguson, C. Hunter, A. R. Henry, H. F. Williams, I. Das, P. Walsh, J. Scott, C. S. Ogilvy, W. W. M'Cowat. (*Four Years' Course*).—T. M. Jamieson.

SECOND EXAMINATION.—D. L. Hutton (with distinction), E. Averell, R. S. Watt, A. D. Macarthur, R. M. Danks, M. V. Walsh, H. M'Ilroy, R. Anderson.

THIRD EXAMINATION.—A. D. Woolf, H. W. Turner, J. McCall, J. T. G. Jones, A. M. Shah, E. Gibson, D. Welsh, I. Das, A. Davidson, M. E. Kayton, G. N. Braham.

FINAL EXAMINATION.—S. C. Jog, J. H. Patterson, O. D. Gunasekara, F. G. Allan, H. F. Watson, E. R. Harriott, A. A. S. Kats, Effie J. Cassels, Charlotte E. Pring, P. B. Mulabari, E. H. Smith, F. J. Breakell, M. R. Slack, H. G. Anderson, Ada G. B. Dias, H. K. Nanavati, L. D. Napier, W. F. F. Durr.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

THIRD PROFESSIONAL.—A. L. Clarke, B. W. Farrell, J. Farrell, J. P. Grainger, C. Greer (Victoria, Australia), J. Humphreys, C. Macauley, J. C. Murray, M. Power, M. J. Saunders, A. Sheridan, C. Stringer.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Borough of Jarrow.—Although the rate of infantile mortality (148 per 1,000) in the whole Borough of Jarrow in 1906 was 10 per 1,000 births below the average rate in the previous ten years, the rate in the North ward, where there is a population of 5,000 persons, was as high as 204 per 1,000. In the Borough there died 165 children under 1 year old, and of these no less than 41 were said to have died from premature birth. This high death-rate among young children would seem to call for special action on the part of the Jarrow Corporation.

Plympton St. Mary Rural District.—It is gratifying to find from Dr. S. Noy Scott's annual report that he was last year appointed Medical Officer of Health without reference to time. The detailed account of the cost of isolating a single case of small-pox which occurred early in the year shows that the neglect of vaccination and revaccination is an expensive luxury. In addition to the annual charges for the upkeep of the small-pox hospital, this one case cost £52.

Llanduff and Dinas Powis Rural District.—Dr. Richard Prichard considers that the question of a pure milk supply is an urgent one. He advocates the licensing of the milkers, and the making of regulations for the control of the distribution of milk. Any kind of coat, however dirty, is deemed to be suitable for the person handling the milk, and every time he indulges in the prevalent and reprehensible practice of dipping the measure into the churn he adds a quantity of filth and decomposable organic matter to the milk.

Surbiton Urban District.—The Surbiton District Council is to be commended for the action it has taken in connexion with the milk supply of the town. More than six years ago a veterinary inspector was appointed and he inspects every three months every cow in the district that is kept for trade purposes. An attempt has been made by the Council, though so far unsuccessfully, to induce the neighbouring sanitary authorities to take similar action.

Macclesfield Rural District.—When recording an outbreak of scarlet fever in one of the parishes of the Macclesfield Rural District, Dr. J. L. Rushton expresses the opinion that the proper way to deal with an epidemic of that sort in such a district is to close the public elementary schools, and to keep them closed. The isolation accommodation in the rural district appears to be limited to four beds in the Macclesfield Borough Hospital. Of the 131 cases of scarlet fever which occurred in the rural district during 1906, only 5 were removed to the hospital.

THE D.P.H. IN THE COLONIES.

M. L. writes: Your correspondent "N. S. W.," in the BRITISH MEDICAL JOURNAL of January 19th, 1907, p. 179, advises another correspondent "to clear out to the Colonies, where the D.P.H. is properly appreciated, and candidates in possession of such [sic] public health appointments are eagerly sought after." This certainly is the case with respect to appointments in the State Health Departments in the Australian States and New Zealand, where the recommending official head is himself a specialist in public health work, but it does not hold with local bodies in one State at least (Tasmania). One candidate for a city officership of health, with £150 per annum, filled up last year, was not only a D.P.H. (the only one among st a number of applicants), but was also a barrister. He was not only lowest in the voting, but had the pleasure of seeing his name published as an unsuccessful applicant when the appointment was announced. A subsequent public comment by one of the city fathers illuminated the position. "A chap like that can't be a *practical* man; he's had too much learnin'," quoth this Cato of the Antipodes. Australians who take the D.P.H., frequently do it for the use of paying 2 guineas to register it in England as an additional qualification when they intend to return to Australia. For this reason one has heard it sometimes argued that "so-and-so's D.P.H. is only a not himself a D.P.H.; that "so-and-so's D.P.H. is only a sort of half diploma given to Colonials after doing a part of the course, and it can't even be put on the English *Register*." The statement was apparently made in perfectly good faith. A great many of the older medical men in the Australian States little or nothing is known concerning its standing as a special [illegible] qualification unless they have had some [illegible] with it or other of the State Public Health [illegible] Members of other so-called learned profes[illegible] have, within the writer's knowledge, on more than one [illegible] translated the D.P.H. from a signed official notice [illegible] "Department of Public Health," and have used it accordingly as a postal address to any official connected with public health work, from a sanitary inspector to a town clerk. And it is alleged that a widely known and influential public man in a leading State, with whom an appointment to a Port Health Officership was being discussed, replied to the statement that a particular candidate was a D.P.H. with the astonishing remark that "these Marine Board [illegible] really could not be considered in making professional appointments"!

SUPERANNUATION.

DUBIOUS writes that he has been a district medical officer for thirty-six years, that he is now 60 years of age and quite capable of doing his work. He asks whether he can now claim retiring allowance under the Superannuation Act.

*** As our correspondent has not served for forty years and has not become permanently incapacitated for duty, he cannot at present claim superannuation allowance; to enable him to do this he must either have held office for forty years or be permanently incapacitated or have attained the full age of 65 years.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE BATH EYE INFIRMARY.

THE note of the latest annual report of Bath Eye Infirmary, an institution founded ninety-six years ago, is one of relief. Thanks to a large legacy, it is anticipated that it will be possible to provide more ample accommodation for in-patient work and improve the general structural arrangements throughout in several long-desired ways.

DONEGAL DISTRICT ASYLUM.

THE annual report of Dr. E. E. Moore, the Medical Superintendent of this Asylum, contains the statistical tables for the year 1905, prepared by Mr. Russell, clerk to the Asylum, and the financial accounts for the year ending March 31st, 1906. From the statistical tables we see that there were 693 patients in the Asylum on December 31st, 1904, and that there remained 704 on the corresponding date in 1905. There were 835 cases in all under care during the year and the average number daily resident was 692.

During the year 146 cases were admitted, of whom 113 were first admissions. Of the total, 62 cases were the subjects of first attacks within three and 21 more within twelve months of admission: in 22 the attacks were of more than twelve months duration on admission and 4 were congenital cases. The admissions were classified as to the forms of mental disorder into: Mania of all kinds 94, melancholia of all kinds 33, senile dementia 9, general paralysis of the insane 1, acquired epilepsy 2, and congenital or infantile defect 6. Concerning the probable causes of the insanities amongst the admissions alcoholic intemperance was assigned in 14, or 9·5 per cent., venereal disease in none, various bodily diseases in 10, moral causes 12, and in 50 no cause could be assigned. Hereditary influences were were ascertained in 51, or nearly 35 per cent., and congenital defect existed in 3. During the year 56 cases were discharged as recovered, giving a recovery rate on the admissions of 38·4 per cent., 26 as relieved, 5 as not improved and there were 48 deaths. The deaths, which give a death-rate on the average numbers resident of 7·0 per cent., were due in 9 cases to cerebro-spinal diseases, in 21 cases to chest diseases, including 14 deaths from phthisis pulmonalis, in 1 case to Bright's disease, in 10 cases to general diseases, including 1 death from typhoid fever, in 6 cases to old age, and in 1 case to suicide by drowning. The noteworthy features of the above list of deaths are that there were no deaths from either asylum dysentery or general paralysis, and that tuberculous disease accounted for over 29 per cent. of the total deaths. During the year there were 6 cases of erysipilas and 11 cases of pneumonia, in addition to the single case of typhoid fever mentioned above as having died. There were no fatal casualties worthy of mention. Dr. Moore's report contains a full account of a striking instance of sensational journalism in the shape of a fictitious account given in the *Donegal Vindicator* newspaper, headed "Bundoran Man Almost Buried Alive—Resurrection from the Coffin." In this newspaper the father of a patient, a young man in the asylum, is stated on evidence "which cannot be contraverted" (*sic*) to have received a telegram from the asylum authorities announcing his son's death. The father in asking to see his son's body was shown a coffin in the mortuary and the lid unscrewed in order that the father might have a last look at his son. "On taking off the lid, what was his amazement and consternation to see the corpse rise up out of the coffin, and in piteous tones ask him for God's sake take him away out of that place as he was receiving bad treatment." The young man is then stated to have been removed to a hospital, afterwards to a workhouse, and thence to his father's home, the enterprising journalist concluding "some one has blundered, and the affair is one which requires further investigation. In the meantime a young man, admittedly not sane [sic] at large, and consequently is a danger to the community." The matter was promptly put in the hands of the Medical Defence Union by Dr. Moore, and an ample apology and retraction was received from the editor of the newspaper for having published what he admitted was a base and groundless fabrication, no such person having died and no telegram having been sent to the father, but merely a letter to the father saying his son was ill. Needless to say the patient had made no such dramatic demand to be taken home.

THE International Anti-alcohol Congress will be held in Stockholm from July 28th to August 3rd.

Medico-Legal.

BONDS NOT TO PRACTISE IN AN AREA.

ASSISTANT writes with reference to the circumstances related by "Cornered" in the JOURNAL of April 6th, p. 843, to advise that assistants should always obtain a duplicate copy of an agreement with a principal, signed by the principal. He, however, considers that the custom of signing such bonds should be prohibited, urging that if a principal has more than he can do he should let some one else do the extra work as an independent practitioner. Our correspondent urges assistants to refuse absolutely to sign such bonds, but he appears to be mixing up two things—the advisability of employing assistants and the custom of requiring a bond from them if employed. So long as there are assistants there must, we think, be bonds.

PAYMENT OF *LOCUM TENENS*.

"OLD LOCUM" writes: As one who has done in my time much *locum* work I write to say that I have only once done a "*locum*" where stimulants were not provided, even in houses where the doctor was an abstainer. In some cases a variety of liquid refreshment was offered. In the single instance where stimulants were not provided, the fact was duly stated at the time of the engagement. In my opinion the provision of stimulants at meals is an undoubted custom in the profession, and should be regarded as a right by a *locum tenens* unless previous agreement gives this right up.

PERIPATETIC writes: My experience is that the laundry bill always accompanies the purified linen and in the face of so strong a hint I always discharged the account. As for stimulants I am invariably asked, "What do I drink?" My reply, to the delight of the hostess, is that while I discharge the work of another man I am a total abstainer. Unfortunately this is generally interpreted as covering mineral waters, soups, or those home-made beverages which I assumed would insult the house by purchasing on my own account. I would be glad of opinion on a more important item, Am I entitled to a reasonable sum to cover costs of cabs? On but one occasion have I ever been offered such consideration and that was in the North of England. This year I acted as a *locum* in Torquay for fourteen days at the rate of £3 3s. a week and return third railway fare. So far from my principal paying my cab expenses, when I was leaving he reminded me not to omit discharging the cabman's dues as he might be charged for it. If a *locum* wants a recent reference it is not wise to argue the point on such occasions, though I felt strongly, not on the matter of paying, but on getting the gratuitous hint. On this occasion my extra out-of-pocket expenses were: Cab from my residence to and from Paddington, 7s.; lunch and tips both ways of journey (even a *locum* wants lunch and railway servants tips), 7s.; cab to and from principal's residence Torquay, 5s.; tips to housemaids, 4s.; total, £1 3s. It happened my original engagement was for a week. My profit for that week was £2, but, no, I had to pay 4s. for obtaining the engagement and pay my washing bill beside.

CORONER AND DOCTOR.

I. N. Q. writes to us as follows: I was called to see a child who was found dead in bed. I reported the case to the coroner for preliminary inquiry, and I made a statement that I attended during confinement, and that the child died from "natural causes." The coroner, without holding an inquest, certified to the registrar that an inquest was unnecessary. The registrar registered the death, issued the burial order, and the body was interred; but how could the coroner ascertain the true cause of death without the certificate of a registered medical man and a *post-mortem* examination? If the coroner orders the death to be registered on the information ascertained by him from the medical man present only after death, and from the written reports of his officer and of the friends and neighbours of the deceased, our correspondent further inquires—is he not entitled to some fee or remuneration for the letter in which he states the child died from "natural causes?"

*** The coroner has wide discretionary power regarding the holding of an inquest; and unless that inquest is held in a formal manner, no fees or remuneration are allowable. Some medical men very often give their services to the State gratuitously, while others are more careful in rendering assistance without reasonable remuneration. The Coroners Bill drafted by the British Medical Association (SUPPLEMENT to the BRITISH MEDICAL JOURNAL, May 27th, 1905, p. 253) contains provision for the payment of a fee to the medical practitioner rendering the services described by our correspondent. Coroners in London are certainly more accurate in recording the exact cause of death in their verdicts than are some others who, with their juries, are content if they can return "Natural causes" only, and they occasionally dispense with medical evidence altogether.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL ARMY MEDICAL CORPS.

AN examination of candidates for not less than thirty commissions in the Royal Army Medical Corps will be held on July 25th next and following days. Applications to compete should be made to the Secretary, War Office, London, S.W., not later than July 15th, 1907, on which date the list will be closed. The presence of candidates will be required in London from July 23rd, 1907.

TENURE OF MEDICAL STAFF APPOINTMENTS IN INDIA.

THE Government of India has approved of the tenure of the undermentioned medical staff appointments at army and command head quarters being fixed at three years, extensible to five years if deemed expedient: Secretaries, Indian Medical Service and Royal Army Medical Corps, to the Principal Medical Officer, His Majesty's Forces in India; Sanitary Officer, army head quarters; Personal Assistant to Command Principal Medical Officer; Command Sanitary Officer; Staff Officer, Army Bearer Corps.

INDIAN MEDICAL SERVICE.

THE NUMBER OF CANDIDATES.

A JUNIOR I.M.S. OFFICER writes: For the competition for entry into the I.M.S. there are 25 qualified candidates for 23 vacancies; this means that there was practically no competition at all. The reason for the dearth of candidates must probably be due to a knowledge of the inadequate pay of the I.M.S. officers as compared with the pay of the other branches of the service in India. I append the rates of pay of the I.M.S., Forest, and Police. For the latter two services a lad has not to go through a scientific course prior to the competition, and hence has not to spend time and money qualifying before entering for competition.

Years of Service.	Forest.	Police.	I.M.S. Civil.	I.M.S. Military. Officiating	I.M.S. Military. Permanent Charge of Regiment.
4th	500	500	500	475	—
5th	540	500	500	475	—
6th	58	500	550	525	600
7th	620	500	550	525	600
8th	660	500	600	575	650
9th	700	700	600	575	650
10th	7:0	700	600	575	650
11th	800	700	650	625	70
12th	800	700	650	625	700
13th	900	800	750	725	800
14th	900	800	750	725	800
15th	1,000	800	750	725	800
16th	1,050	800	850	825	900
17th	1,100	900	850	825	900
18th	1,150	900	850	825	900
19th	1,200	900	850	825	900
20th	1,250	1,000	850	825	900

CLASS FOR INSTRUCTION IN MILITARY MEDICAL ORGANIZATION.—In consequence of the success which, in the West of London, attended the movement for initiating the formation of an organized army medical civilian reserve, it is proposed to hold another class this summer. The instruction will be given by specially experienced officers of the Royal Army Medical Corps at a convenient place for medical men residing in the metropolis. The importance of this class is increased by the certainty that trained civilian medical co-operation will have to form a part of the organization of the new "Territorial Army." Gentlemen desirous of joining this class are requested to send their names to the acting Honorary Secretary, Mr Herbert Chambers, 101, Goldhawk Road, W.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

ANSWERS.

A. L.—The Midwives Act does not apply to Scotland. The law does not require that a monthly nurse should possess a certificate or be registered as a midwife.

J. W. C.—We have not been able to find any information about the particular article mentioned in pharmaceutical publications. There are a number of such articles advertised for thin women, largely in ladies' and other magazines, and in most cases, probably all, the real treatment consists in massage, the material supplied being chiefly of use as a lubricant. There are several formulae for these, some being thin tragacanth pastes, others containing casein as basis, and others again being made with theobroma oil and agar-agar.

GENTIAN.—Lectures on ambulance should be paid for, just as other lectures to classes. There is a tendency to endeavour to get medical men to give these lectures gratuitously, on the plea that they lead to introductions which may bring patients. The principle is wrong, but so long as medical men are willing to give up their time and utilize their special knowledge without remuneration the organizers of these lectures will naturally take advantage of this disposition. Many county councils pay the lecturers on First Aid, and all should do so.

THE CIGARETTE HABIT.

B. D. feels interested in the patient of "Excess" who is anxious to break his habit of excessive cigarette smoking. He consumes thirty cigarettes per day, and yet has the moral courage to abstain from smoking entirely for a day at a time! Surely this is a most hopeful case and one that might be cured naturally and gradually on the following principle: Make 29 cigarettes per day the limit in the first week of treatment, 28 per day in the second week, 27 per day in the third week, and so on, one fewer per day each week until the desired moderation or abstinence is attained. The smokes shortly before meals should be the first to be omitted and the progress of restriction should continue from these backwards. The patient will only have to endure about one hour per day of painful restraint throughout the treatment. He must appreciate the fact that this one daily hour of effort will cure him. This gradual method will develop his power of resistance to the craving, and thus be far more satisfactory than any attempt to break one bad habit by replacing it with another.

LETTERS, NOTES, Etc.

REGISTRATION RETURNS OF LONDON MEDICAL SCHOOLS.

DR. WILLIAM HUNTER (London, W.) writes: In the list of names of the *seven* medical schools whose registration returns are dealt with in my article on London Medical Education in last week's issue, the name of St. Mary's Hospital was by an oversight omitted. The returns for this hospital are included in the London curve there given.

FEES TO MEDICAL OFFICERS IN POOR-LAW INSTITUTIONS WHEN AN INQUEST IS HELD.

DR. A. G. BATEMAN, General Secretary, Medical Defence Union, 4, Trafalgar Square, W.C., writes: In view of certain proceedings to be taken by the Medical Defence Union on behalf of its members, I have been directed to furnish a list of those county councils in Great Britain and Ireland which authorize payment by coroners to medical officers of Poor-law workhouses and infirmaries (whether such are attached or are a separate establishment) of fees when they are summoned under the Coroners Act to give medical evidence at inquest. May I ask, through your columns, the Secretaries of Divisions if they would kindly let me know whether such payments are made in their districts?

THE TREATMENT OF SCABIES BY BALSAM OF PERU.

DR. I. ALLAN (Walsall) writes, with reference to Major Porter's communication on the treatment of scabies by balsam of Peru in the BRITISH MEDICAL JOURNAL of March 30th, p. 743: I do not think such treatment should be undertaken recklessly. There have appeared in German literature records of some cases in which nephritis supervened after the use of balsam of Peru in the treatment of scabies, and one case terminated fatally. I have myself seen five cases of scabies treated by inunction with storax in which albuminuria was produced, but the albumen soon disappeared when the application was stopped. While I do not argue that the balsam preparations should never be used in treating scabies, I would urge that great care should be exercised when they are employed, that the urine should be daily tested for albumen, and if albuminuria is produced that they should be at once discontinued. In chronic intractable scabies the balsam preparations afford a useful means of stamping out the disease, and constitute a valuable addition to the therapeutic armamentarium; if the administration of these drugs is carefully supervised, and all due precautions taken, untoward results will rarely be met with.

THE TREATMENT OF SEPSIS.

DR. GEORGE M. AYLSWORTH of Collingwood, Canada, writes to recommend the use of a fluid extract of the root of *Echinacea angustifolia*, a plant growing in the Western States, and known by the trivial names of Black Samson or purple cone flower, in the treatment of sepsis. He has used it for fifteen years in all forms of blood dyscrasia, including one case of anthrax. He considers it as direct a specific as quinine is in malaria.

According to the *National Standard Dispensatory*, two plants are known under the name of purple cone flower (*Brauneria purpurea* and *Echinacea angustifolia*), and it is stated that the former is that supposed to be employed, though both are probably collected. "*Echinacea angustifolia*," it is there stated, "is said "to possess diaphoretic, sialagogue, and alterative properties. Its administration has been recommended in syphilitic and strumous conditions, and it is said to be especially useful in treating chronic ulcers which have not been benefited by the iodides or other alteratives. The freshly-scraped root has been employed by the Sioux Indians as a remedy for hydrophobia, snake poisoning, and septic conditions."

MOTOR CAR: COST OF RUNNING.

MR. WM. S. DICKIE, F.R.C.S. (Middlesbrough), sends the following statement of the cost of the first year's running of the car he has in use:

Car, 10 to 12-h.p., Coventry Humber, four-seated body.
Tyres, Dunlop non-skids, 760 mm. × 90 mm.
Weight unloaded, 18¼ cwt.
Capital expenditure, car, lamps, spares, £351 8*s*.
Mileage, 2,830.

Petrol, 194 gallons ...	...	£11 16 4	
Lubricants and lighting oil	...	4 13 10	
Overhaul, repairs, and adjustments	...	9 6 9	
Tyres	...	16 1 10	
Tyre repairs	...	3 15 3	
Garage	...	9 19 6	
Insurance	...	5 10 0	
Washing and cleaning ...	...	3 16 9	
Accumulators, charging ...	...	1 0 6	
Car duty	...	2 0 0	
Other expenses—tolls, tips, maps, carbide, renewals, etc. ...	...	20 17 10	
Running cost for year ...	...	...	£88 17 7
Interest on capital, £350, at 5 per cent.		...	17 10 0
Depreciation, say ...	...	...	100 0 0
Total cost of car for year	...	...	£206 7 7

Average miles per gallon of petrol, 14.5.
Tyres cost, 1.68d. per mile.
Petrol cost, 0.94d. per mile.
Lubricants cost, 0.4d per mile.

A RECORD IN BIRTHS.

What sporting men call the "record" in midwifery attendance would seem to be held by Frau Jellinghaus of Haspe in Westphalia, who is said to have played the part of Lucina at the birth of no fewer than 5,469 children. She is 81 and has been plying her trade for more than forty years. This gives an annual average of 136 cases.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

Eight lines and under	£0 4 0
Each additional line	0 0 6
A whole column	2 15 4
A page	8 0 0

An average line contains six words.

Advertisements should be delivered, addressed to the Manager, 6, Catherine Street, Strand, London, not later than first post on Wednesday morning preceding publication; and if not paid for at the time, should be accompanied by a reference.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

Remarks
ON THE
EARLY SYMPTOMS OF MENTAL DISORDER.

READ BEFORE THE LAMBETH DIVISION OF THE BRITISH MEDICAL ASSOCIATION.

BY W. H. B. STODDART, M.D., M.R.C.P.,
ASSISTANT PHYSICIAN, BETHLEM ROYAL HOSPITAL.

MR. CHAIRMAN AND GENTLEMEN,—I have thought that the subject which I have chosen would be of greater interest to you than any other because the *early* symptoms of mental disorder are those which occur in your own practice. The early symptoms have usually passed off before the patient is brought to the notice of a consulting physician. Yet it is important that mental disorder should be recognized in its early stages, so that treatment may be adopted with a view to cutting short the disease, if possible, and sparing the patient the stigma of certification and confinement in an asylum for the insane.

Consciousness, mentation, or whatever you like to call mind, is the faculty or function by which we become aware of our surroundings; and it is obvious that we can only become aware of our surroundings by means of sensations aroused by them. A man in whom no sensations can be aroused is unconscious, he has no consciousness; and *vice versa*, a conscious individual is constantly experiencing sensations.

DISORDERS OF SENSATION.

Disorder of sensation is a very common symptom of mental disorder; it is either excessive (hyperaesthesia) or deficient (anaesthesia). Hyperaesthesia occurs most frequently in maniacal states. If a patient suffering from acute mania be lightly touched with the point of a pin, he screams. His hearing is also more acute than usual; one such patient heard every word of a conversation between a nurse and myself at a distance of forty yards; another complained of the ringing of church bells, which I could only just hear by a strain of attention, and which his attendant could not hear at all. In these cases hyperaesthesia was a well-marked symptom; and it is to be inferred from them that slight general hyperaesthesia is sometimes to be regarded as an early symptom of mental disorder.

Anaesthesia occurs more frequently than hyperaesthesia. It is most commonly found as an early symptom in states of exhaustion, following acute fevers and prolonged mental anxiety or worry; and it is especially to be looked for in the hands, more particularly on the backs of the fingers. This anaesthesia may also be detected in some early cases of dementia praecox and in many cases of stupor. In the early stages there is no loss of *tactile* sensation; but if you prick the patient's hand with a pin and gradually travel up the forearm you will find that there is a definite line on the forearm, below which he does not experience pain on being pricked.

DISORDERS OF PERCEPTION.

Perception may be defined as the process by which various sensations combine with our memory images of previous experience in such a way as to lead us to cognize objects in our environment. If there is a cigar lying on the table and I look at it and see that it is a cigar, that is a process of perception—I have perceived a cigar.

There are three main disorders of this process—namely, illusion, hallucination, and imperception.

When there is a pencil on the table and I perceive it as a cigar, I experience an illusion. When there is nothing on the table and I see a cigar lying there, I experience an hallucination; and when a cigar lies on the table and I cannot tell what it is, I suffer from imperception.

Each of these disorders might form the subject of a separate paper; I can now touch upon them but briefly.

Perhaps the most common condition in which patients experience illusions is the delirium of fever. The pattern on the wall-paper shapes itself into grinning faces peering at the patient. A knock at the door is mistaken for the booming of cannon, the doctor is mistaken for the patient's father, and the nurse is an enemy in disguise.

Hallucinations are more frequent than illusions. They may affect any of the senses, and they are classified according to the sense which is affected. There are hallucinations of vision, hallucinations of hearing, hallucinations of smell, taste, and cutaneous sensation, hallucinations of static sense, of the muscular sense, and so forth.

Hallucinations of vision usually take the form of faces or flashes of light. Hallucinations of hearing are usually voices—especially the voices of unseen enemies. The most common hallucination of smell is probably the odour of decomposing animal matter or perhaps of something burning. It has been said that this is especially the case with women suffering from physical disease of the genital system.

But I believe the most common hallucination of all is one not referred to the special senses but to the abdomen. I refer to the so-called epigastric sensation. At Bethlem Hospital I once took a census with regard to the frequency of this sensation, and I found that 63 out of 240 patients suffered, or had suffered from such an hallucination, and of the remainder about 25 were unable to make reliable statements about the matter. Cases were excluded in which the sensation was due to indigestion or to constipation. The epigastric sensation is usually described by the patient as a sinking feeling about the epigastrium, but it may be a feeling of fullness or even of pain.

Such sensations occur not always in the epigastrium, but sometimes in the umbilical region, in the hypogastrium, or even in the external genitalia. They are occasionally referred to the chest (sternal region), and probably such symptoms as "globus hystericus," "neurotic spine," "hysterical hip," and "hysterical shoulder" are of the same nature.

I have demonstrated, I believe satisfactorily, that these sensations are due to slight anaesthesia of the limbs allowing the abdominal region to usurp consciousness. I have dwelt on them at some length because I believe that their recognition would be of great importance to the general practitioner. I know that many of these cases even in asylums, are erroneously treated for indigestion, and I believe that a large number of cases of supposed indigestion in general practice are in reality of this nature, and should be treated not for indigestion but for a neurosis.

The third disorder of perception—namely, imperception—is most commonly met with (apart from organic brain disease) in the insanities due to alcohol and arteriosclerosis. It also occurs in slighter degree in the insanity of exhaustion following acute physical illness, and in one form of dementia praecox.

I am still dealing with purely mental symptoms, which do not of necessity force themselves upon your notice—symptoms, in fact, which have to be looked for specially by an examination of the patient.

Some of Dean's rag toy-books for children, which I will pass round, form part of my armamentarium. With these books I examine for imperception by covering the name of some object represented therein and asking the patient what the object is. If he cannot recognize it correctly he is suffering from imperception. In the domain of hearing you may test the patient by telling him, in a monotone and without gesture, to perform some simple act. Suppose, for example, you say to him: "Put your left hand on your head," and he fails to grasp at once the meaning of such a simple sentence, he is suffering from imperception. Similarly, these patients are unable to recognize familiar odours, such as peppermint and cloves. It has further been demonstrated that they suffer (quite early) from a form of colour blindness—not the ordinary colour blindness, in which green and red cannot be distinguished from one another, but a form in which green and blue cannot be distinguished, and they invariably pick out the confusion colours from a batch of Holmgren's wools.

For the detection of slighter degrees of imperception I use another picture book for children. It is entitled *Proverbs Old Newly Told*. You will observe that I have effaced the proverb under those pictures which tell their tale well, and that you are able to recognize the proverb from the picture. When a patient cannot do this, he is suffering from a slight degree of imperception. These slight degrees of imperception are most frequently met with in early arteriopathic cases.

Imperative Ideas.

The only disorder of ideation to which I will refer is the imperative idea, the idea which cannot be driven from the mind. The simplest examples of this mental state are tunes running in the head. Mark Twain has made another instance classical, namely:

> Punch, conductor, punch with care,
> Punch in the presence of the passengare.

A form slightly more advanced than this is the imperative idea that one has placed letters in the wrong envelopes. One opens them and finds that they are all right. But again the idea occurs that in placing the letters back in their new envelopes one might not have been sufficiently careful. The idea haunts you, and you give way to it and open the envelopes again. This may occur several times more without crossing the border-line between sanity and insanity; but if it recurs so frequently that the letters never get posted, the border-line is crossed, and we have a case of obsessional insanity.

I once knew a curate who suffered from this form of insanity. Here is one of his obsessions: He would get the absurd idea that he had accidentally pushed some one into the inkpot. He knew and realized the absurdity and impossibility of such an occurrence, and for a time would resist the impulse to look into the inkpot and see if there was any one there; but no relief came until he had done so, and he could not get on with his work until he had satisfied himself on the matter. He would look into the inkpot, see that there was nobody there, and was then, and not till then, able to resume his occupation.

Disorders of Memory.

There are three disorders of memory to watch for, namely, amnesia, or loss of memory; hypermnesia, or excess of memory; and paramnesia, or erroneous memory. Let us consider these three disorders of memory in detail.

Loss of memory is a frequent symptom of many forms of mental disorder. Memory follows the ordinary rule of dissolution in that the most recently-acquired memories are the first to go. If you wish to test a man's memory do not ask him to relate incidents of his youth, but ask him what he has had for breakfast that morning, and verify his answer by asking some more reliable person whether his statements about the matter are correct. Another very good test which I am in the habit of using is to ask the patient the time when he has not seen a clock for an hour or so; a normal person is remarkably accurate in such estimation of time. It may be taken as a general rule that things are forgotten before actions, and ideas of things before ideas of actions. In the domain of language, the first words to be forgotten are proper names, then common nouns. The man cannot remember the names of his friends, and fails to recall the names of unfamiliar objects.

Hypermnesia, or excessive memory, occurs most frequently in certain cases of idiocy and in some cases of chronic mania. The term explains itself. A patient with this symptom is able to write out from memory a diary of his doings in previous years. In some cases he is also able to give a detailed account of the doings of others. One such patient at Prestwich could enumerate all the occasions when any given medical officer had played tennis since he entered the institution. I merely mention this symptom for the sake of completeness. It is usually in advanced cases that it is a striking symptom; but we may assume that it has its early beginnings in which the hypermnesia is less marked.

Paramnesia is a condition in which the patient remembers situations and incidents which have never occurred. It is almost limited to a form of alcoholism associated with peripheral neuritis, which is known as Korsakoff's disease.

There are two main varieties of paramnesia, which I prefer to call respectively illusions of memory and illusions of recognition. A bed-ridden patient suffering from illusions of memory will tell you that he has been out for a long walk in the park that morning. He believes this, and will recount numerous incidents which he supposes to have occurred in the course of the walk.

A patient suffering from illusions of recognition will tell you when he enters a nursing home, in which he has never been before, that he recognises the place, from some previous experience. This condition is not limited to the insane: many popular authors write of having experienced it. Such a person enters a village, where he cannot possibly have been before, and at once experiences a feeling of recognition—feels that he has been there before. This phenomenon has given rise to the absurd idea of pre-existence.

Disorders of Conduct.

All the symptoms we have so far considered are purely mental. By this I mean that they are experienced by the patient himself and by nobody else. An onlooker can know nothing of them unless the patient tells him about them, or unless they are elicited by a careful and often skilled examination.

I now come to the consideration of changes in the patient's conduct, which force themselves upon the notice of the most superficial observer.

It is possible that a stone may experience sensation, perception, ideation, and memory; it may even experience illusions and hallucinations, but in the absence of movement by which it might adapt itself to its environment we have no evidence that a stone has any mentation. Movement of some kind is the only external evidence of mentation, and disturbances of conduct are the only real external evidence of *disordered* mentation.

Instinct versus Volition.

It has hitherto been supposed that all movements associated with mentation take place through the medium of the pyramidal tracts; but I have pointed out that a very large number of movements take place through the medium of what I have called the cortico-rubro-spinal system. In other words there are two cortical motor tracts instead of one as has hitherto been supposed.

With the pyramidal tract you are all familiar; it subserves the function of voluntary and automatic acts. The cortico-rubro-spinal system consists of two sets of neurons, an upper set passing from all parts of the cortex to the red nucleus and a lower set passing from the red nucleus to the large motor cells in the anterior cornua of the cord. This system, as I have shown, subserves the function of emotional reaction and instinctive movement. Of these two motor systems the pyramidal is the more unstable. Under normal conditions, a person's pyramidal system has control of or has the power of inhibiting the activities of the cortico-rubro-spinal system. In other words, a normal person can volitionally, by means of will, control his instincts and emotions; but when degeneration takes place, he loses control of his instincts and emotions. He weeps or laughs inordinately at the most trivial incidents.

Loss of control of the instincts is an exceedingly interesting symptom to study; and it is to be observed that in mental dissolution the various instincts become dominant in the reverse order of their evolution. I cannot here enter into the whole question of the development of the instincts; but I would like to remind you that instincts develop in the child in the following order, to take a few examples:

Sucking, crying, grasping objects placed in the hand, smiling, handling objects and carrying them to the mouth, imitating sounds, sitting up, standing, walking, curiosity, inquisitiveness, cleanliness, destructiveness and constructiveness, emulation and rivalry. All these are instincts which develop before the tenth year, and I will not refer to them again; but I wish to direct your attention to the instincts which develop after this age.

The instinct to make collections of some sort of thing usually shows itself, at least in boys, about the tenth year. The instinct to eat, which develops at a very early age, becomes especially prominent from 10 years of age up to puberty. At this age the boy eats everything that is placed before him; there seems to be no possibility of satisfying his appetite, and he takes the greatest interest in the confectioner's shop.

The period between 12 and 15 is characterized by well-marked boastfulness and conceit. This generally develops into a feeling of power, general *bien etre*, and, if it is not soon under volitional control, a state of *simple mania*.

The sexual instinct appears shortly afterwards. Then follow the instincts of hunting, fishing, and shooting, stronger in man than in woman, for it is the man's natural duty to provide food for his family. In large towns these last instincts usually find an outlet in open-air games. Perhaps the last instinct to develop is the desire to spend money.

Now, in the various forms of mental dissolution, the first motor system to be affected is the volitional, the pyramidal system which is myelinized at least sixteen months after the instinctive cortico-rubro-spinal system.

The first symptom of mental disorder is loss of voluntary control of the instincts. The pyramidal system is unable to control the cortico-rubral. Accordingly, we find in the lightest grades of mental disorder that the patient has insufficient control of those instincts which were latest developed. The man is unable to maintain interest in his everyday routine occupation; he spends money recklessly, and he must be out-of-doors playing games. A latter-day exemplification of the out-of-door instinct is motoring. Motoring all day and every day is not uncommonly the first symptom of general paralysis. When dissolution is slightly more advanced he is a sexual libertine. Boastfulness, conceit, and a general sense of *bien-être* once more becomes prominent.

The eating instinct next gets out of hand, and the general paralytic bolts whole slices of meat without waiting to cut them up. This is so well recognized that all the general paralytics in establishments for the insane are fed on mince.

As dissolution proceeds, the collecting instinct once more becomes prominent. The general paralytic orders fifty watches, twenty pianos, and a dozen motor cars. At this stage the relatives commonly realize the true state of affairs, and the patient is sent to an asylum, where he takes to collecting rubbish. About a year ago I noticed in the daily paper an account of a man who had been in this state of dissolution for years; his house was so full of old newspapers that only a narrow gangway was left between the heaps in each room.

All these symptoms may be observed by a medical man without his being specially called in to examine his patient. The patient's friends fail to recognize that he is suffering from mental disorder, and I take it that it is the duty of a general practitioner, under such circumstances, to call upon his patient's friends and to give them his opinion without having been asked for it. It frequently happens that the widow of a general paralytic is left almost penniless, when she might have been left in fairly affluent circumstances, had her medical man called, informed her of the nature of her husband's malady and advised her how to put an end to his extravagances. You may always be sure that there is a great deal more going on behind the scenes than you are aware of.

Disorders of Emotion.

I now proceed to consider some disorders of emotion, for emotion and instincts are but different aspects of the same mental process. I have recently shown that the cortico-rubro-spinal system also plays an important rôle in connexion with the motor manifestations of the emotions, but I will not trouble you with the pathology of these conditions.

Excitement and depression out of proportion to the circumstances in which an individual is placed are common among the early symptoms of mental disorder. They may, of course, be easily recognized if a patient tells you how he feels; but how are you to recognize this abnormal excitement and depression when the patient says nothing to give you a clue? I know of no better method than that of noticing how your patients shake hands.

Most people shake hands from the elbow; but when a patient becomes unduly exalted or excited, he holds his head erect and shakes hands from the shoulder. When, on the other hand, he becomes unduly depressed, he droops his head and shakes hands from the wrist. These are frequently the early cases of mania and melancholia which many physicians, unfamiliar with mental disease, erroneously call borderland cases. Eccentrics, mattoids, and cranks are the true borderland cases.

More often, however, one finds that mania is called hysteria, and melancholia is called neurasthenia. Out of consideration for the patient and his friends, one would have no objection to the use of these euphemistic terms were it not that they frequently lead to erroneous treatment—treatment which, in the case of melancholia, too often leads to suicide.

Before leaving the subject of the hand-shake let me tell you about the hand-shake of dementia praecox. When a patient suffering from this disease shakes hands he usually extends all the digits, holds the hand stiffly, and pushes the tips of his fingers towards you. Then in many cases he pulls the hand away again before the hand-shake is over.

Of other disorders of the emotions, unjustified suspicion is the most important; it occurs in the early stages of paranoia and dementia paranoides. As may be supposed, it is a symptom which is usually concealed by the patient. The best physical sign of suspicion which I can give you is a peculiar restlessness of the eyes; the patient, during the course of a conversation, allows his gaze to dart from one point of your face to another two or three times a second. I have thought that this is the relic of an ancestral movement of the eyes in search for anticipated danger.

I am particularly anxious for the early recognition of paranoia for two reasons: One is that paranoia is regarded as an incurable disease; but, on the other hand, it is rarely recognized before it has become established, and therefore does not come under special care for some years after the onset. The earliest symptoms in most of my cases occurred five or six years before they came under my observation. The shortest history of a case of paranoia which I have encountered was of two and a half years' duration. What I am anxious to know is whether it is possible to arrest the course of this disease by correcting the patient's suspicious habit of thought in the early stages. The other reason for the early recognition of paranoia is that the disease is responsible for a large number of murders.

Morbid fears are not very common, but they are fairly well known to the general practitioner. I need only mention a few examples to remind you of the class of case to which I refer. Agoraphobia is a dread of open spaces. Claustrophobia is a fear of closed spaces and closed doors. Mysophobia is an insane dread of dirt or sometimes of vermin, microbes, etc. Acrophobia is a fear of heights, and so on *ad infinitum*.

Loss of control of emotional reaction in general is an early symptom of loss of will power. It occurs most typically in general paralysis, chronic alcoholism, and slight maniacal conditions. Such patients laugh or weep on the most trivial provocation, frequently for no apparent reason whatever.

On the other hand, loss of emotional reaction, or apathy, is commonly an early symptom of melancholia or dementia praecox, the difference between the two conditions being that a patient suffering from dementia praecox does not realize that he is apathetic, whereas a melancholiac is painfully conscious of this symptom. If you tell a melancholiac a good joke he does not laugh; if you tell him that his dearest friend or relative is dead, he only tells you that he does not seem to feel it. He realizes that his emotions are dead.

A still earlier symptom of melancholia and some other forms of mental disorder is loss of interest in routine work and inability to keep the attention fixed upon the object in hand. There is consequently an incapacity for routine work but not necessarily for all work. The moral imbecile, for example, will play games, paint pictures, write poetry, and perhaps play some musical instrument; in fact, he is a jack-of-all-trades, but he is incapable of the plod, plod, plod, which is necessary to success in his life's work.

Delusions.

Delusions scarcely come under the heading of early symptoms of mental disorder, but it is desirable that they should be recognized as early as possible. Failure to recognize delusions generally arises from the patient convincing his medical man of the truth of his statements.

In the absence of further evidence, who could deny a man's statement that he has led a wicked life? A man who worries about his past misdeeds may, however, be suspected of mental disorder *a priori*, for most renegades are utterly callous about the matter. Again, in the absence of a man's bankbook, who can deny that he has come in for two thousand a year, or that he is ruined? And yet again, when a patient complains to his medical man that his bowels never act, it is not unnatural that he should be treated in the first instance for constipation, and not for mental disorder.

Many such delusions would be detected, however, earlier than they are if practitioners would allow the

possibility of mental disorder to cross their mind more frequently.

Insomnia.

Lastly, let me mention the most common warning note of all, namely, sleeplessness. Loss of sleep is undoubtedly a mental disorder, should be treated as such, and should ever keep the medical man on the alert for some of the other symptoms to which I have referred in this paper.

Before leaving my subject, let me once more attempt to dispel any idea that it is the wish of those members of our profession who, like myself, have devoted their attention to the study of mental disease, to see the greater part of the population gathered into asylums for the insane. The main object which I have throughout had in view during the preparation of this paper is the importance of an early recognition of mental disorder, so that patients may be treated as far as possible in their own homes, and spared the stigma of certification and compulsory treatment in an asylum for the insane.

VICIOUS CIRCLES.*

By JAMIESON B. HURRY, M.A., M.D.,
READING.

The term "vicious circle" (*circulus vitiosus*) denotes a morbid condition in which cause and effect are so correlated that cause becomes effect, and effect becomes cause. *Ablata causa cessat effectus* and *ablato effectu cessat causa.*

Many such circles are met with in disease, as indeed might be expected from the complexity of the processes involved; the better those processes are understood, the more closely will they be found correlated, and the more often will reciprocal relations be observed.

The study of vicious circles is of considerable clinical value as contributing to accuracy in diagnosis and prognosis. Moreover, it assists treatment by directing attention to disease in its widest aspects (that is, to both its immediate and remote manifestations), and to the importance of cutting any link in the chain of morbid processes.

Physiological Circles.

By way of introduction some examples of physiological or healthy circles always operative in the body may be mentioned; from these examples it will be seen how frequently morbid processes are but exaggerations of physiological ones.

1. The processes of haemogenesis and haemolysis, by which the adjustment between the birth and destruction of blood corpuscles is effected, furnish an example of a healthy circle. The regulating apparatus is probably of the nature of a chemiotaxis, although this is still doubtful. At all events, a physiological polycythaemia or oligocythaemia is brought about according to requirements; inadequate compensation may give rise to a vicious circle.

2. Another example is found in the mechanism of respiration, where a reciprocal relation exists between the condition of the blood and the activity of the respiratory centre. That activity, as has recently been proved, is augmented if the tension of carbonic dioxide in the blood increases, and depressed as that tension falls. The carbonic dioxide acts as the hormone or chemical messenger.

3. The relation of the heart's beat to blood pressure is another illustration of a physiological circle, the rate of the beat being in inverse ratio to the vasomotor constriction. In other words, a rise of pressure diminishes while a fall of pressure increases the rate of the pulse, the adjustment being effected through the intervention of the central nervous system. In this way the arterial tone is maintained.

Two physiological circles associated with vision are of interest here, owing to their connexion with vicious circles.

4. The first is the relation between the size of the pupil and the amount of light falling on the retina. The brighter the light the greater the contraction of the iris; the greater the contraction, the fewer the rays of light transmitted.

5. The other example relates to the intraocular tension, which is governed by a self-regulating mechanism. In the main the tension depends on the arterial pressure. If, however, that pressure is abnormally raised, the outflow of the fluids of the eye through the lymph channels is so increased that the pressure is again reduced to a normal level. Conversely, if the intraocular pressure is diminished (for example, after an escape of aqueous fluid), more blood enters the ciliary body, and more fluid transudes into the eyeball, while less escapes. Such is the automatic mechanism by which the normal pressure is maintained.

6. A different form of healthy circle is met with in the case of an active-minded person, whose brain increases in size as a result of the intellectual activity, which growth leads in turn to further activity; and, again (7), during convalescence, where return of strength in the various organs invigorates the others, the assistance given being mutual.

Vicious Circles.

So varied is the pathology of vicious circles that some classification is necessary for closer study. The following grouping, based on etiology, will be found convenient:

Group I.—Organic Circles.

This group includes circles arising between two organs so interdependent that when the first is diseased and in difficulty, the second, becoming in turn affected, upsets the first, and vice versa.

An example of such a circle is frequently met with in acute pneumonia, the lungs and the heart being the organs reciprocally involved. Dilatation and consequent failure of the heart constitutes one of the chief dangers of pneumonia, due to the unusual effort needed to overcome the increased obstruction in the pulmonary circuit. This failure reacts unfavourably on the lungs by retarding the circulation through them, and as a result further work is thrown on the heart, whose nutrition is impaired and whose muscular power is already unequal to the demands made upon it. Thus heart and lungs reciprocally embarrass each other, and the vicious circle explains the fatal issue of many attacks of pneumonia. A similar relation may occur between the heart and the bronchial tubes in acute bronchitis. Emphysema and bronchitis supply another illustration of an organic vicious circle, as has been pointed out by West:[1]

> Though emphysema is commonly the result of bronchitis, still it also in turn leads to bronchitis, for the wasting of the alveoli and consequent destruction of vessels leads to obstruction to the circulation through the lungs, and, in the end, to dilatation of the right heart and systemic veins, and thus to congestion of the bronchi.

An example of an organic circle between the heart and liver, given by Mitchell Bruce,[2] is interesting as illustrating the vicarious assistance rendered to each other by the organs concerned:

> When the wall of the heart fails, the liver affords it temporary relief . . . by accommodating mechanically within it the blood that otherwise would have over-burdened the cardiac chambers. But the hepatic functions, and in their turn the stomach and bowels, which are dependent on the portal circulation, presently become deranged; and thereupon the heart is further weakened, and it may be finally undone by a set of conditions created by itself, and for its own immediate temporary advantage. The heart has paid dear for the accommodation. The day of reckoning has come. Bad has led to worse. A vicious circle is established—the penalty attending the accommodating process and the vicarious action by which one organ relieves another in distress.

This example also shows how a circle gradually widens. Primarily the heart and liver are alone involved; but the mischief spreads, and may extend to the systemic and portal systems and involve such remote organs as the kidneys and the brain.

In cases of aortic regurgitation a vicious circle may arise through the insufficient filling of the coronary arteries. Hence follow imperfect nutrition of the myocardium, weaker heart beats, increased regurgitation, and a still less adequate repletion of the coronaries, culminating in the sudden death caused by aortic regurgitation.

In another circle of less gravity the liver and stomach are the interdependent organs. Gastric catarrh leads to portal congestion, and this, again, reacts on the catarrh. The first disorder causes the second; the second in turn causes the first. Indeed, such reciprocal relations

* Read before the Reading Pathological Society, February 1907.

between the stomach and various other organs are by no means uncommon.

In arterio-sclerosis a double organic and progressive vicious circle is met with. Defective metabolism due to gout, alcohol, or other causes leads to increased peripheral resistance in the arterioles and capillaries, to which the left ventricle responds by increased contractile power. The consequent rise in blood pressure leads to thickening of the walls of the blood vessels and to hypertrophy of the cardiac muscle, which in turn react on, and raise, the blood pressure. Thus is the first circle complete. As a subsequent intercurrent and grave complication occur the obliterative changes in the coronary vessels which impair the nutrition of the myocardium. Thus the consequences of the hypertrophy of the heart are visited upon its own walls and complete the second circle, which begins and ends in the heart.

Pernicious anaemia also affords an interesting example of a double vicious circle. According to Stockman, the haemorrhagic tendency that accompanies severe anaemia converts the latter into pernicious anaemia by means of a vicious circle. In other words, the primary anaemia causes the repeated small haemorrhages, which react on the anaemia and ultimately destroy life. In regard to the second circle, the imperfectly-formed or embryonic blood discs produced in this disease are ruthlessly destroyed with those other discs which have played their part in the economy. This increased destruction of red discs again leads to their increased production, and thus, as Gilford[3] points out, a "vicious circle of bad workmanship, increased waste, and increased output is completed." Here the red bone marrow—or chief haemato-poietic organ—forms one factor; the blood itself, with the liver, kidneys, and spleen—or corpuscle-destroying organs—forms the other factor.

Group II.—Symptomatic Circles.

In this second group the circle is formed by a diseased organ and one or more symptoms, due to and aggravating the morbid processes. For example, adenoids, by obstructing the nasal passages, frequently lead to mouth breathing. The mouth-breathing provokes a further development of adenoids by throwing the nasal function out of action. The circle is constituted by the adenoids and the secondary mouth-breathing; the first factor produces the second, the second the first. Other examples are the following:

Dental caries leads to oral sepsis. Result of the sepsis—increased caries.

Pulmonary haemorrhage sets up coughing. Result of the coughing—increased haemorrhage.

Congestion of the bronchial tubes brings on paroxysms of coughing. Result of the coughing—increased congestion of the bronchi.

Irregular peristaltic action is a frequent cause of intussusception. Result of the intussusception—increased peristalsis.

Prolapse of the rectum excites tenesmus. Result of the tenesmus—increased prolapse.

Neglected constipation leads to dilatation of the rectum. Result of the dilatation—increased constipation.

Strangulated hernia gives rise to vomiting. Result of the vomiting—increased strangulation.

Urticaria provokes severe pruritus and scratching. Result of the scratching—increase of urticaria.

Obesity leads people to take insufficient exercise. Result—increased obesity. Again, obesity hampers movement and respiration, and thus hinders due aëration of the blood. Result—increased obesity.

In gout the local pain and inflammation often compel the sufferer to rest. Result of the rest, increase of gout.

Mitchell Bruce[4] draws attention to vicious circles set up by a group of diseases, in which recovery is incomplete, inasmuch as the affected part cannot be perfectly restored to the normal:

> The patient does not die, but he remains permanently damaged, disabled, delicate, and possibly in distress. Such is the termination of a proportion of cases of cerebral haemorrhage (hemiplegia), and of acute endocarditis (valvular disease of the heart). A part of the brain, a valve of the heart, is permanently damaged; the man is healthy but not sound. . . . The incompleteness of recovery is shown by a disposition to relapse, as in perityphlitis and gastric ulcer, by diminished resistance to the fresh disease. . . . In this way, amongst others, the vicious circle forms and widens.

Somewhat similar are the cases of dilatation of the heart, which so often causes death in beri-beri, as pointed out by Manson.[5]

> Once commenced, the cardiac dilatation tends to increase of itself; for the more the organ dilates, the more difficult does it become for it to contract, the greater the incompetency of the valves, and the more the blood stagnates in and over-distends it. The organ enters on a vicious pathological circle. Finally it becomes so distended that, like an over-stretched bladder, it loses the power to contract altogether.

Certain forms of gastric irritation and catarrh increase the appetite and cause a craving for food (boulimia, polyphagia). Food, however, taken under such circumstances further increases the irritation, the stomach being caught in a vicious circle.

An interesting condition arises where residues are retained in the bronchi, stomach or intestines, and serve as a nidus for fermentation processes. Chronic dilatation of the stomach (gastrectasis) may serve as an illustration. As a result of muscular paresis, insufficiency of hydrochloric acid, or pyloric obstruction, food is retained unduly long in the stomach, and undergoes bacterial fermentation. The gas and other products of the fermentation exert a distending force on the walls of the stomach, and thus aggravate the dilatation and gastritis to which they owed their origin. As a corollary of this condition a secondary circle arises, as Clifford Allbutt[6] has pointed out: "The difficulty in attaining anything like a reformation of the stomach seems to lie in the vicious circle between digestion and nutrition. The stomach suffers directly from its own insufficiency; and by failing to elaborate the means of repair it closes the door to its own restoration."

A vicious circle, sometimes ending fatally, may accompany an attack of vomiting in cardiac disease set up through the pneumogastric. Here the heart forms the first and the nervous vomiting the second link in the fatal chain of events. Yet another circle is sometimes formed in such cases of damaged heart in which the successful result of processes of compensation and repair depends on the emotional state and nervous tone of the sufferer. Unhappily the heart trouble often disturbs the equanimity so necessary to the processes of compensation, and this loss of equanimity reacts unfavourably on the heart.

Group III.—Infective Circles.

A familiar illustration of an infective circle is supplied by children suffering from oxyurides. The irritation and consequent scratching leads to portions of the worms and to their eggs being caught under the nails, conveyed to the mouth, and swallowed by the host. Thence the ova pass into the intestines and rapidly attain sexual maturity. In this way the irritation secures, by autoinfection, successive generations of the parasite.

Another example occurs in pulmonary tuberculosis, when the patient inoculates himself afresh with the sputa coughed up from the primary tuberculous region. In this way infective secretion derived from an apex frequently starts secondary foci in the lower lobes, in the apex of the opposite side, or in the larynx.

Manson[7] has drawn attention to an infective circle met with in the tropics:

> A considerable proportion of the population lives in a chronic state of semi-starvation hard for us to realize. Under such conditions the daily loss of blood which a few hundred ankylostomes entail is a serious matter, and may be all that is required to turn the scale, and start the vicious circle of famine degenerations.

The ravenous appetite which accompanies ankylostomiasis may lead to the formation of another circle, by accumulating the infection which reacts on the appetite.

Group IV.—Neurotic Circles.

To this group belong such vicious circles as are completed by two or more nervous conditions, without any evidence of organic disease.

In neurasthenia, for example, protracted and uncontrolled repose may set up a vicious circle by so deranging the digestive system and affecting the general health that all inclination for physical and mental exertion vanishes. Rest calls for further rest. Sometimes a sudden shock may be the *fons et origo mali*, inducing such a traumatic neurosis as has been described by Treves[8]:

> The patient is irritable and ill-tempered, suffers from palpitation, and cannot bear the least disturbance or noise; mental

occupation increases the discomfort in the head, he cannot concentrate his thoughts upon anything—himself excepted—for any length of time, and he complains, therefore, that he has lost his memory. Sight seems to fail him, because the effort of ciliary accommodation is soon followed by fatigue; he loses flesh and looks wasted, anxious and ill. Depression is the main and most prominent feature in this general state of malaise, and depression and despondency of mind are common. A vicious circle is soon established, in which loss of healthy nervous tone, both in the conscious life of the individual and in the unconscious and insentient working of the various inorganic processes of the animal economy, leads to serious derangement of function in the various parts of the system.

Not only may the happiness and usefulness of a life be ruined under such circumstances, but the circle often widens so as to include a mother, sister, or other relative of the sufferer, especially if the latter is of the female sex.

Nothing is more curious (writes Weir Mitchell[9]), nothing more sad and pitiful than these partnerships between the sick and selfish and the sound and over-loving. By slow but sure degrees the healthy life is absorbed by the sick life, in a manner more or less injurious to both, until, sometimes too late for remedy, the growth of the evil is seen by others. . . . A hysterical girl is (as Wendell Holmes has said) a vampire who sucks the blood of the healthy people about her.

In women morbid local and constitutional conditions may be so correlated that no improvement is possible until the circle can be broken. Herman[10] gives an illustration of this:

In chronic ovarian pain with neurasthenia effects follow one another in a vicious circle. The patient feels more severely the ovarian pain because her nervous system is too sensitive. The persistent ovarian pain keeps the nervous system weak and sensitive and further weakens it. In bad cases the vicious circle can only be broken by removing the ovaries.

Very protean, indeed, are the neuroses and psychoses associated now with the digestive, now with the cardiac, now with the sexual apparatus, and leading to reciprocal relations.

To this group belong cases of exaggerated reflex irritability of the central nervous system. Excessive and prolonged coughing, for example, may so irritate and exhaust the medullary centre as to pervert the reflex mechanism. The cough becomes uncontrollable, and persists even though the local irritation has ceased. Similar conditions accompany attacks of persisting vomiting and diarrhoea.

Another variety is met with in cases of serious illness where acute suffering and distress rob the sufferer of all cheerfulness and self-control. This loss of self-control and of that mastery which all human beings should retain over their own emotions and wants, adds greatly to the sensitiveness of pain and distress.

Group V.—Chemical Circles.

So little is known of the chemical correlations in the healthy body that our almost entire ignorance of what occurs in disease is not surprising. Future research will assuredly throw light on many more correlations than are as yet understood.

A chemical vicious circle occurs in diabetes mellitus, in reference to the two important conditions of polydipsia and polyuria. The polydipsia leads to dilution of the patient's blood, and thus promotes the excretion of sugar and the associated polyuria. The polyuria, on the other hand (by depriving the system of a large quantity of fluid), leads to greater concentration of the blood, and consequently to thirst and polydipsia.

A second chemical circle is formed in diabetes, based on the well-known observation that the greater the quantity of sugar excreted, the less becomes the tolerance for carbohydrates. On the other hand, the consumption of carbohydrate food diminishes the patient's power of dealing with it, and increases the sugar excretion.

Another example is met with when an incompetent heart fails to properly carry on the pulmonary circulation, so that the blood which is distributed to the myocardium by the coronaries is laden with impurities. The incompetency of the heart tends to keep the blood impure, while the impure blood in its turn impairs the nutrition of the heart and thus increases its incompetency. Cohnheim[11] points out an even graver condition which results when a persistent rise of temperature has depressed the motive power of a previously sound heart and thus led to an inadequate supply of pure arterial blood to the myocardium. The want of aërated blood further enfeebles the heart already unequal to its work, and as a result follows the collapse so often seen in acute febrile disease.

Group VI.—Mechanical Circles.

Mechanical vicious circles are formed when abnormal pressure or tension relations act and react reciprocally on each other. An example is met with in obstetrics when a retroverted gravid uterus becomes so impacted in the pelvis as to press on the urethra and cause retention of urine. The distended bladder increases the retroversion and the impaction; the retroversion increases the retention. Similar effects may be produced by myomata or other pelvic tumours. In ascites pressure on the renal veins may lead to ischuria, which in turn aggravates the ascites.

The surgeon may meet with this form of vicious circle in some of the attacks of urgent dyspnoea due to an enlarged thyroid, where this gland compresses the trachea bilaterally, and reduces the lumen to a scabbard-shaped antero-posterior slit (the *Säbelscheide* of the Germans). The dyspnoea, started perhaps by some casual effort, calls the supplementary respiratory muscles (especially the sterno-hyoid and sterno-thyroid) into action. These when contracted press the enlarged thyroid further against the trachea, diminishing the lumen more and more, and increasing the dyspnoea. Thus the two factors—the occluded trachea and the respiratory muscles—complete the circle, which may lead to a fatal result.[12]

Recurrent iritis, in the opinion of many oculists, tends to destroy vision by acting in a vicious circle. If an attack of iritis has led to the formation of synechiae, the healthy circle already alluded to is interfered with. The synechiae act as irritants by dragging on the sensitive iris, and thus give rise to further attacks of iritis and fresh synechiae.

Another illustration of interest to the ophthalmic surgeon occurs in glaucoma. It has been pointed out above how in the healthy eye the quantity of fluid secreted and excreted is so regulated as to maintain the intraocular tension at a uniform level. But in glaucoma vascular changes in the ciliary processes, by choking the circumlental space, contract the channels of communication, and thus interfere with the regulating mechanism. Hence the intraocular tension is raised, while the fluid, unable to escape, pushes forward the lens and iris and still further blocks the channel. Thus cause and effect act and react on each other until the intraocular tension is raised to an injurious degree.

Again, in paraphimosis the tense preputial skin and mucous membrane cause oedema of the strangulated glans, which oedema again increases the tension of the preputial band.

Group VII.—Artificial Circles.

To this group are relegated such vicious circles as do not arise in the ordinary course of disease, but have an artificial origin. Such are the circles associated with indulgence in alcohol, tobacco, opium, or similar narcotics (especially in neurasthenics), those produced by the injudicious administration of drugs, and those set up by spinal or other supports. For example, alcoholism frequently induces anorexia; this is followed by exhaustion, and tempts the victim to seek relief in further indulgence. Again, a miserable home drives a labourer to the public house and to alcoholism, with the result that he has less money than before to maintain his home, which consequently becomes still more miserable. In the case of chronic poisoning of infants by opiates, the child, when not under the influence of the sedative, is irritable and sleepless. Hence the mother finds an excuse for continuing the drug, and the vicious circle is complete.

Another artificial circle may be set up by tea, especially if it is infused long and drunk in large quantity, as in Ireland. When dyspeptic troubles and constipation follow, further recourse to tea is the usual remedy.

Gastralgia is occasionally treated by bismuth or similar sedatives, when a wiser plan would be to remove the irritant by an emetic or an aperient. The bismuth temporarily lulls the pain; as a result more of the same food is taken, and the gastralgia returns in an aggravated form.

Bromides, too lavishly used, have been responsible for many a case of vicious circle. Few drugs have a greater

tendency to depress the recuperative power of a disordered nervous system. Yet, especially in former days, bromides were extensively administered to cure the very conditions in which that recuperative power was lacking.

An artificial circle may also arise through the injudicious use of aperients in constipation. The constipation may be temporarily relieved; but the remote effect is frequently more obstinate constipation, requiring stronger aperients.

Another injudicious mode of treatment is met with in some cases of spinal weakness, where a mechanical support is relied upon, instead of physical exercises calculated to cure the muscular weakness. The support increases the spinal weakness, which in turn calls for more and more complete support. Applying the lesson to a much commoner article of attire than the spinal jacket, we may say that the corset creates the demand which it supplies.

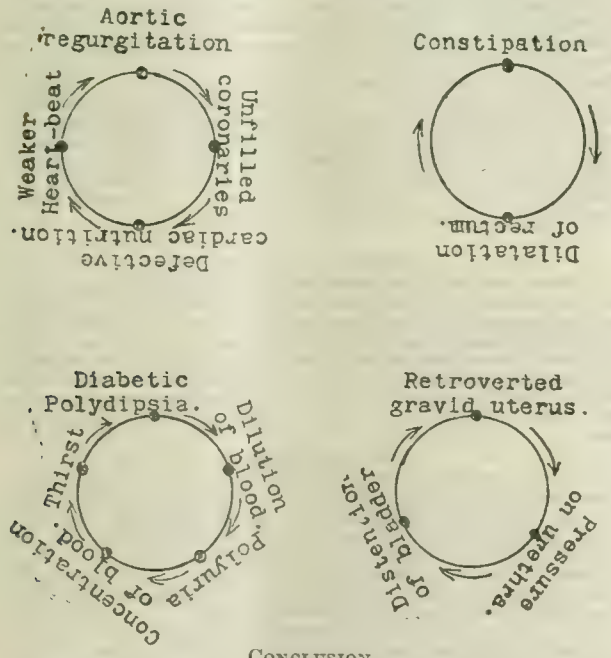
Group VIII.—Spurious Circles.

The term "vicious circle" has sometimes been applied to conditions where there is no reciprocal action between cause and effect. Such conditions, therefore, do not fall under the definition given above, but may be alluded to here for the sake of completeness.

A so-called "vicious circle" is occasionally met with after the operation of gastro-enterostomy, when the contents of the afferent end of the jejunum (that is, the segment above the artificial opening), instead of passing into the efferent segment, return through the artificial opening into the stomach and set up regurgitant vomiting. Or the contents of the stomach may pass into the afferent loop and back into the stomach instead of escaping through the efferent loop. A "short-circuiting," in fact, takes place, leading to grave difficulties for which a complementary entero-enterostomy may be required.

Other illustrations occur with a patent foramen ovale or other malformations of the heart, which permit of the direct communication of the arterial and venous system, with varicose aneurysm and aneurysmal varix.

The diagrams below may be of service, especially to teachers, in the analysis of a vicious circle into its component factors. The simplest circles have but two factors; in others four or five may be concerned.



CONCLUSION.

This is not the place to discuss the treatment of the vicious circles described above. But it may be pointed out that the watchful practitioner may sometimes prevent their development, if he is thoroughly acquainted with the course diseases tend to follow, and at the right moment gives such aid as will check the morbid processes at work. When once a circle has been formed, an exact diagnosis of the interacting forces is of primary importance. Such a trivial condition as a tender ovary or a movable kidney may constitute one of the links by which the patient is enchained, and may, if overlooked, perpetuate the disorder. At other times, as in the case of acute glaucoma, an erroneous diagnosis may lead to dire consequences. Generally speaking, vigorous measures will be required in view of the increased gravity of disease which is complicated by a vicious circle.

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ON THE DIFFERENTIAL DIAGNOSIS BETWEEN MÉNIÈRE'S DISEASE AND OTHER CASES EXHIBITING MÉNIÈRE'S COMPLEX OF SYMPTOMS;

WITH REMARKS ON THE PRACTICAL VALUE OF THE SETON IN OBSTINATE CASES OF BOTH CONDITIONS, TOGETHER WITH CASE ILLUSTRATING THE EXCELLENT RESULTS OBTAINED BY SETON IN THE LATTER CONDITION.*

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THE term "Ménière's disease" has now come to stand for one condition, and one condition alone. Prosper Ménière's[1] first case stands out in prominence alike for its clearness of description as for its originality in observation. Notwithstanding the vivid symptomatic picture which Ménière gave in the year 1861, there has been an indescribable confusion ever since between cases of true Ménière's disease and those exhibiting "Ménière's symptoms" arising from other causes; consequently the literature of the subject is exceedingly involved and obscure. No better means can be taken to illustrate this confusion than by giving statistics from one of our best ear hospitals in London. Dr. Wyatt Wingrave most kindly searched the records of the Central London Throat and Ear Hospital for me; the result is given in the table on page 1108.

In a letter accompanying this list Dr. Wingrave says:

I send you figures of Ménière's cases since 1884, the earliest register I can find. Unfortunately, but little discrimination has been made in diagnosis. The nomenclature, as you see, varies considerably, for example, Ménière's disease, labyrinthine disease with vertigo, labyrinthine disease with vertigo and tinnitus, labyrinthine inflammation, labyrinthine anaemia and aural vertigo. Such is the awful confusion, and only to make matters worse, the actual numbers are preposterous. The last ten years are more reliable and represent an approach to the truth. The earlier records, I feel sure, are worthless as a guide. You will notice that in three of the years no cases were recorded. We are now much more careful in diagnosis. Many of the cases recorded are doubtless middle ear in origin and not purely labyrinthine. I have not seen or heard of a genuine *pure labyrinthine* case for two years.

The above statement tallies with that of other careful observers. Frankl-Hochwart,[2] in surveying the whole field of medical literature was only able to collect 27 authenticated cases, while Gottstein[3] only met with 3 cases in a period of thirteen years. A little over two years ago I myself searched London, either personally or by proxy, for a case of Ménière's disease, but without success. Ménière's disease, therefore, it will be seen, is a rare disease, while cases exhibiting Ménière's symptoms are not by any means uncommon. As a clear diagnosis is essential to the right understanding of these conditions, I should like to point out the difference between Ménière's disease and those other conditions with which it is so frequently confused.

Ménière's Disease.	*Other Conditions Simulating Ménière's Disease.*
1. Occurs in subjects with normal auditory apparatus.	1. Occur in patients with previously affected auditory apparatus.
2. Sudden onset of symptoms.	2. Gradual onset of symptoms.
3. Auditory nerve deafness.	3. Deafness not as essential. If present, not of nerve origin to commence with.
4. Vertigo 5. Tinnitus 6. Vomiting	The so-called "Ménière's symptoms" which are common to both.

* Read before the Tottenham Branch of the British Medical Association, April 6th, 1907.

Year	Nomenclature.	No. of Cases.	No. of Cases of Ear Disease.
1884	Menière's disease	2	2,949
1885	,, ,,	26	2,993
1886	No record	—	—
1887	Labyrinthine disease with vertigo	15	2,200
1888	,, ,, ,,	82	2,500
1889	,, ,, ,,	31	2,100
1890	Labyrinthine inflammation with vertigo and tinnitus	94	3,310
1891	,, ,, ,, ,,	49	3,194
1892	,, ,, ,, ,,	30	2,562
1893	——	—	—
1894	,, ,, ,, ,,	20	3,700
1895	,, ,, ,, ,,	72	2,579
1896	Ménière's disease ... 3 Labyrinthine inflammation ... 58 Labyrinthine anaemia ... 1	62	4,012
1897	Menière's disease	11	7,078
1898	,, ,,	2	4,600
1899	,, ,,	4	5,500
1900	,, ,,	7	6,000
1901	,, ,,	2	4,000
1902	,, ,,	0	3,700
1903	Aural vertigo	7	5,000
1904	,, ,,	0	5,000
1905	,, ,,	0	4,700

Differential diagnosis, therefore, is established on two points: (1) Examination of the history of the case (whether onset of symptoms is sudden or gradual), and (2) by the tuning-fork (whether deafness is of nerve-origin or otherwise). The above symptomatic contrast is, of course, based on definite pathological conditions. In a paper[4] I published some two years ago I ventured to suggest a fresh classification of the causes that gave rise to Ménière's symptoms and which, in a measure, will explain the reason of the confusion that has occurred. It will not be irrelevant to quote this classification here.

CLASS I. *Primary Labyrinthine Lesion or Irritation.*

(*a*) An acute exudation or sudden haemorrhage into the labyrinth. This is the "(true) Menière's disease" of all authors.

(*b*) Chronic labyrinthine lesion, not due to the above causes. The causes of the cases of this class are usually obscure. This is the "Ménière's disease" of some authors and the "Ménière's symptoms" of others.

CLASS II. *Secondary Labyrinthine Source of Irritation.*

In this class of cases labyrinthine disturbance is produced by extra-labyrinthine causes. They are chiefly tympanic in origin. This is the "Menière's symptoms" of all writers.

It will be seen, therefore, that only cases of (true) Ménière's disease fall into Division (*a*) of Class I. Cases placed in Division (*b*) of Class I are those in which the symptoms develop gradually, and as there is nerve-deafness in these cases a differential diagnosis can only be established between them and Division (*a*) on the single point derived from the history of the case, namely, as to whether the onset of the symptoms was sudden or otherwise. If cases of acute Ménière's symptoms occurring in the course of some general disease like leucocythaemia be placed in Division (*a*) Class I (and I can see no reason why they should not be) it seems to me that probably the estimate, as stated by Frankl-Hochwart and suggested by Gottstein, is a good deal below the mark for cases of leucocythaemia naturally fall into the hands of the general physician rather than the specialist in otology, and might thus, perchance, not come under his notice.

Seven years ago a case of Menière's disease came under my own care. It was under my direct observation for a little over two years, during which time I tried, with much patience, every important drug that has been recommended to alleviate this distressing complaint, but to no purpose whatever. Driven to extremities I determined to see what a seton would do. I published this case in the *Lancet*,[5] and, on reference to it, it will be seen that while the seton was worn, together with keeping the patient at rest, away from his work, the result was remarkable. For two years further I followed the case, indirectly, by the kindness of the successor to my previous practice. My regret was great that the seton was removed too early. Six months, in my opinion, is the least time that it should be kept inserted. Notwithstanding the fact that the case was not entirely a success (owing, I am sure, to the too early removal of the seton), the result made me feel that as amelioration had been so great in this case of Ménière's disease it would be certain to have most beneficial results in cases of Ménière's symptoms, which were not by any means uncommon and exceedingly difficult to cure. I therefore determined to give the next case that might fall to my lot a trial by this treatment. After the publication of this case there appeared a letter[6] in the *Lancet* by Mr. Colin Campbell of Southport stating that he already had had success in a case of Ménière's symptoms after a four months' insertion. (I must mention that he used the words "Ménière's disease," but from his rendering of the case it was clearly one of Ménière's symptoms.) As the case had only been recorded in letter-form,[7] I regret I had missed seeing it before. This brings me to the important case I now wish to lay before you.

Before seeing the patient I had a letter from her dated October 9th, 1904, in which she told me a medical friend had informed her of a successful case I had had of aural vertigo, and that she also had been suffering from the same thing. She went on to say: "I have suffered from this distressing disease for more than three years, and have been treated by the first specialists in London without success. I am a hospital nurse, and have had to give up my work entirely since Christmas owing to the severity of the attacks. As I am dependent on what I earn for my living, I need not say how grateful I should be if I could be cured and resume my work. For ten weeks last winter I was treated in the National Hospital. The actual cautery was applied behind my ear every other day, but shortly after coming out of the hospital the attacks returned with increased severity."

Examination of Patient and Family History.

The patient was 41 years of age, a hospital nurse, as recorded above, and there was no organic disease. Her father "died at the age of 74 from paralysis" (cerebral haemorrhage). "His heart had been affected for a little over a year before this." Her mother "died of heart failure at the age of 83. She had diabetes for some years." The family consisted of two sons and three daughters. One of the sons died in infancy, and the other still lives, and is quite healthy at 47. Of the patient's two sisters, one died in infancy, and the other is now particularly strong and well at the age of 43. I can find no history of gout or rheumatism, nor can I trace any nerve instability, as insanity, migraine, epilepsy, or "fits."

Examination of Ears.

Both tympanic membranes were normal (no retraction observable), and the Eustachian tubes were permeable. A watch placed against the right ear could not be heard, nor could a loudly-vibrating tuning-fork when placed close to the auricle. When the latter was placed upon the mastoid process, it could be heard to the extent of 4. She could hear a watch at a distance of 2 ft. from the left ear. There was no tinnitus in this ear. Meatus —3, mastoid —3, vertex —3 (hears in left ear).

Previous History.

For the past three and a half years she had been suffering from Menière's complex of symptoms. One and a half years previously to this she had noticed she was gradually becoming deaf in the right ear and she had "singing," which was frequent but not continuous, in the same ear also. Her first attack of vertigo occurred in March, 1901. She awoke one morning at 5 a.m. not feeling well, and immediately she raised her head from the pillow giddiness came on. It was not severe, but it continued unceasingly for twelve hours. About 1 p.m. she vomited, and sickness continued for three or four hours. She took no food all that day, as she thought it was a bilious attack. Next day she felt better, and resumed her duty, continuing to nurse the case that was under her charge. (Since this date, if she moved her head suddenly either up or down or from side to side she has momentarily felt giddy.)

Four months after this occurred her second attack. She was just going out about 3 o'clock in the afternoon when she was suddenly seized with giddiness. The floor seemed to rise up. She staggered and would have fallen had she not leant against the wall to support herself. She vomited and was immediately obliged to lie down. The attack lasted about five hours, during which time she repeatedly vomited. Deafness was not in-

creased by this second attack. She thought that this second seizure was also due to biliousness.

Her third attack occurred at the Central London Throat and Ear Hospital about August, 1901. The floor again seemed to rise up. She reeled and would have fallen had she not caught hold of something. She vomited and had to be sent home in a cab. This attack lasted between three and four hours.

In December, 1901, and January, 1902, she had three attacks in five weeks. After this they began to occur at shorter intervals. They all commenced with giddiness, vomiting and retching; the tinnitus was not continuous, but occurred suddenly like "a railway whistle," not a day passing now without her having this last symptom.

In June, 1903, the attacks became much more severe. She remembers she had four attacks in seven weeks. A new symptom first manifested itself at that time, namely, a weight on the right mastoid process which compelled the head to follow, so that when an attack came on her head was drawn over to the right side.

In October, 1903, she had five attacks in three weeks. She has a vivid recollection of one of them. She was returning to London from the Isle of Wight. While crossing the Solent, although an excellent sailor and the sea quite calm, she staggered and would have fallen had she not clung to the gangway. A few minutes after the train had left Lymington vomiting came on. She was so ill at Brockenhurst that she was obliged to get out. A porter helped her to the waiting room, and the woman attendant in charge of that room refused to help her as she thought she was intoxicated. A medical man was sent for and she was taken to the District Nurses' Room, where she lay helpless for five or six hours.

In December, 1903, she had a series of attacks. She had been nursing a mental case for six days which she had found very trying. About three days after she left, the attacks began to come every day. She was sent to a case in the country, but had to be fetched home as an attack suddenly came on whilst she was standing by her patient's bed, and she fell forward on to the bed.

She was much upset by the untimely occurrence of this last attack, so betook herself to the National Hospital at Queen Square, and became an in-patient there for the next ten weeks. Her treatment there has already been referred to in the patient's first letter to me, quoted above. She tells me she had several attacks during the time she was in the hospital, but the giddiness was not severe while it lasted.

In July, 1904, she was staying at a convalescent home at Bognor. She was walking across the lawn, returning to the house, when a severe paroxysmal attack of vertigo suddenly came on. She fell and hurt the left side of her body and also grazed her left hand. She was helped into the house, where she lay prostrate for the next three days. This was the most severe attack she had ever had. She was giddy if she even moved in the least possible manner. The sickness lasted two days. Since this time she has had noises in her head every day, though they have not been continuous throughout the day. The noises she likens to "the whistling of trains and like the sound of putting a shell to the ear when the whistling is absent."

In October, 1904, when the patient first came to see me, her condition may be summed up in the following words:

1. She had had no bad attack for a little over two months, but the last attack had been the most severe she had experienced, and had quite unnerved her.

2. Subjective noises in the head were a constant daily annoyance to her.

3. If she moved her head either up or down or from side to side giddiness immediately ensued; and

4. She lived in hourly terror of a severe attack occurring, which together with the aforementioned symptoms had rendered her quite unable to follow her occupation. I think it will be admitted that such a condition called for immediate treatment. I recommended her to have a seton inserted in the neck, and to wear this for six months. The idea at first was not pleasant to her, and being informed by a previous adviser, to whom she had referred, that the seton would probably only do good while it was worn, and that he consequently could not recommend her to endure the discomfort it would produce, she was easily persuaded to abandon the idea. She then asked me if there was not anything else that I could suggest.

Just at this time I happened to be following a most interesting case of a lawyer's clerk, aged 44, who had been suffering from most distressing attacks of Ménière's symptoms for eight years, and who was quite unable to do any kind of work on account of the suddenness and severity of the attacks. This case was being treated by hypnotism, and the results as far as they had gone were so encouraging that I recommended a trial of this treatment in her case. She consented to this.

An attempt was made twice by a medical man to hypnotize her, but without any definite success, and the patient soon affirmed that she felt unfit to make weekly journeys to town to follow this treatment. [I may here state that the results of the case referred to above were a most brilliant success. The patient was only hypnotized three times, namely, September 29th, 1904, October 7th, and December 1st, which it will be seen only covered a period of two months, and he has now been free from attacks for the past two and a half years. I published the details of this case (the first recorded case of the kind) about two years ago in the *Medical Press and Circular*,[8] and lately, after waiting a couple of years to test the lasting value of hypnotic treatment as a remedial agent for such cases, I have published its remote effects in the same journal.[9]]

I may now pass over a length of time which was spent by the patient in going from one hospital to another in trying to procure alleviation from her attacks to January 6th, 1906, when I received a letter from her in which, referring to the time she had last consulted me, she says, "You then advised me to try a seton behind my ear for attacks of aural vertigo. I am so much worse now that I should be very grateful if you will still give the treatment a trial. I am having several attacks every day and dread going out, and I am obliged to do so sometimes as I live alone."

On January 13th, 1906, I inserted a seton. On January 19th she had a bad attack, and had to take to her bed. The seton with one exception remained *in situ* for six months. The exception alluded to was in April, when it came out. I had a letter on April 18th, 1906, in which she refers to the seton having come out, and says, "I want to have the seton put in, if possible, without much delay, as yesterday I had three attacks in twelve hours, and it looks as if they are coming back." I may say these attacks were not severe ones. I inserted a fresh seton immediately, and the attacks vanished like magic and did not return.

On September 30th, 1906, she wrote: "I returned to my room a few days ago and thought you would like to know that the good results of the seton are still lasting. I *never* have a severe attack now, and never any sickness with them, though I still have slight ones occasionally."

On January 17th, 1907, in reply to a letter I had written her asking how she was, she says: "In reply to your letter asking how I am at present, I am very pleased to tell you that the good results of the seton still remain, although it is now seven months since it was removed. The attacks of vertigo are still frequent, but so slight that they are not to be compared with those which, up to last January, made my life a burden to me. Previous to that time, as you know, they used to last for hours and were accompanied by violent vomiting and excessive prostration. Now they only last a few minutes, and there is never any vomiting. The seton, as you will remember, was inserted early in January, 1906, and from the 19th of that month until the present time I have *never* had one severe attack. I only hope that the success which you have had with me may induce other doctors to try the same remedy, so that other sufferers may receive the same benefit."

This case appears to me to be of particular interest for the two following reasons: First, it seems to me to be of special practical importance to the general practitioner. On the one hand, the patient, having suffered long from persistent symptoms of no ordinary magnitude, is willing, in the end, to try anything to get alleviation, so that the somewhat formidable suggestion of wearing a seton for six months (which, after all, is not at all a hardship, but perfectly comfortable when in working order) melts away, and appears as nothing beside the really risky operative measures that are often suggested to give relief. On the other hand, the seton is so easily applied and managed that there can hardly be a practitioner existing, however diffident he may be in matters surgical, who cannot insert and follow a seton for a period of six months. In the above-mentioned case the patient was offered operative interference on the labyrinth, and the seriousness of this was hardly minimized to the patient when she was told that the surgeon in question would only attempt the operation after receiving from her a written statement giving him full permission. Secondly, the note that was struck by one specialist, namely, that the seton would probably only give relief while worn and have no further lasting effect, is only the idea generally prevalent among such as ever give the seton a thought. It is so long since the seton was used, that, like its sister Bleeding, its charms have been completely forgotten, and we medical men of the present day are inclined to regard it as perhaps an excellent temporary counter-irritant, but nothing more. This case alone will prove the fallacy of this idea. My own belief is that it has a far greater effect than either counter-irritation or even "suggestion," powerful though both of these factors are in the healing art, but I feel convinced that it has a direct action on the vasomotor system of the area affected. I believe that many of these cases of Ménière's symptoms are due to hyperaemia of the vessels of the labyrinth, and that the seton acting continuously for a prolonged time, will, by reflex action, influence the vasomotor nerves of the affected part when in near proximity to it, and thus convert a chronic vaso-dilatation of those vessels into one of normal tone. This is partly proved by the fact that severe tinnitus may be often lessened or stopped entirely by pressure on the vertebral artery. I may

be right or I may be wrong, but, at any rate, I think you will all agree with me that the curing of this persistent case of Ménière's symptoms by the simple insertion of a seton when all other methods of treatment had been well tried and proved failures, is well worthy of a trial, and I trust that you, gentlemen, will not wait long when a case of this kind next falls to your lot, before persuading your patient to seize upon this valuable remedy.

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NINE CASES OF CARBOLIC ACID GANGRENE:

WITH SHORT NOTES.

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IT has been known for many years that gangrene occasionally results from the application of a carbolic dressing to a finger or toe, and reference to the literature upon this form of gangrene, or rather this method of production of gangrene, shows a fairly large number of instances of this unfortunate accident. Dr. Leusser[1] states that as early as 1871 Tillmann reported three cases of gangrene due to carbolic acid, but that the condition had been generally overlooked, as, when seen after the application of a carbolic dressing, it was supposed to have been due to the injury or disease, and not to the action of the carbolic. He collected 34 cases, in which the strength of the solutions used had varied from 2 per cent. to practically liquid carbolic. Dr. Harrington[2] saw 18 cases in five years, and, including these, collected a series of 132 cases. He remarks that "the facts are: An aqueous solution of carbolic (1 to 5 per cent.) if applied to an extremity, as a finger or toe, for a number of hours in the form of a moist dressing or poultice may produce gangrene." Probably many instances of this condition have been seen by medical men who have not reported them, and by now, no doubt, the profession generally is on the alert to prevent their occurrence by avoiding the use of carbolic dressings to such terminal parts as fingers and toes, or by using very weak solutions.

Carbolic acid has, however, been for many years almost a household remedy in the treatment of injuries. Doctors have used it so much that, as Leusser says, people believe it to be a specific healing remedy, and it is quite common to find carbolic acid among the medicines kept in the medical cupboard with which so many houses are provided. Midwives, ambulance pupils, and others believe in its virtues, but are unaware of its risks when applied to injured or poisoned fingers. That such risks exist has been brought all too prominently before me during the past year, as I have seen, from this cause, five cases of gangrene of the finger in a period of six weeks, and, a month or two afterwards, a sixth case in which two fingers were gangrenous. As a warning to those who are perhaps aware that such an accident may result from the use of even weak solutions, but who do not know that it is less uncommon than they suppose, and to those who have not had the subject brought before them, I trust I am justified in shortly reporting these cases which I have seen. These are nine in number, namely:

1. A boy, 12 years of age, got a fish hook into his finger. A dressing with carbolic acid (1 in 20) was wrapped round it. In twenty-four hours the terminal and second phalanges were dead and amputation was required.

2. A young man of 20 had a trivial cut on the forefinger. A dressing with carbolic lotion (1 in 20) was applied and renewed two or three times in the course of a few hours. The skin became quite black. At points the whole thickness was destroyed but amputation was not needed.

3. A middle-aged man had a septic finger. By mistake pure liquid carbolic acid upon lint was applied. Amputation was required. The dressing was in position for eight hours.

4. A young man of 26, with a small septic area upon finger, had a dressing moistened with carbolic lotion (1 in 20) applied for twelve hours. Gangrene resulted and amputation was needed.

5. A boy, aged 13 years, cut his thumb, and a dressing with carbolic lotion of unknown strength was applied and left in position for twenty-four hours, at the end of which time the terminal phalanx was gangrenous. As the limit of the dead tissue was not easily determined I advised delay in amputation. The patient did not return to see me until spontaneous separation through the joint had occurred.

6. A sailor, aged 29 years, cut his finger. The captain of the ship applied carbolic ointment of unknown strength, and gangrene resulted, necessitating amputation.

7. A girl, aged 11 years, had carbolic of unknown strength applied in a dressing to a finger. Gangrene resulted which necessitated amputation.

8. A man, aged 31, had an injury to the soft parts over the second phalanx of the middle finger, rather more severe than in the other cases. A dressing moistened with carbolic lotion of unknown strength was wrapped round it, not, however, including the terminal portion of the finger. Death of the soft parts down to the bone resulted, but the tissues over the terminal phalanx retained their vitality.

9. A girl, aged 18 years, cut very slightly the middle and ring fingers of the left hand. A dressing with, probably, pure carbolic was applied for eight hours. Gangrene resulted, and amputation was required.

Probably pure liquid carbolic was used in at least two of these cases, and a strong solution in two others, but in at least four of the others the preparation used was not more than 5 per cent. In none was a waterproof covering used; in none was there anything to make me suspect that constriction by a bandage was a possible explanation of the gangrene; in every case the original injury or sepsis was, at most, trivial in degree.

In two cases the gangrene was limited to a part of the finger proximal to healthy tissue. This, to judge from reported cases, is unusual, but the explanation of gangrene in these cases may be that in the one (Case 8) the dressing was applied round the middle of the finger and did not include the tip, while in the other (Case 2) complete destruction of the soft tissues was not produced, but only destruction of the cuticle, and at one or two points the whole thickness of the skin.

The appearance of the gangrenous part in such cases is characteristic. The skin at first is dry, wrinkled, and greyish-white in colour; later it becomes darker and more shrivelled. At the junction of the living and dead tissue there is some hyperaemia, and eventually a line of demarcation forms. As it is difficult to tell how much is actually destroyed, it is proper to wait for the line of demarcation before amputation is performed. In no one of the cases I have seen has there been any swelling of the proximal part, but such swelling has been described in some cases. The condition is, as a rule, similar to a typical case of dry gangrene.

That pure carbolic is able to destroy tissue just as many other acids do is well recognized, but that weak solutions, 1 or 2 per cent., can cause gangrene is not so generally known. A few well-authenticated instances of gangrene from the application of such weak solutions have, however, been observed. In some of these a cloth had been saturated with the solution and applied to a finger just as an ordinary water dressing might have been. No constriction of the part had been caused, and no waterproof covering had been placed over the dressing, and yet after some hours complete death of the finger had resulted. Various explanations have been suggested to explain why gangrene occurs. At first it was supposed to be unassociated with the dressing, and due to the wound or disease (frequently a poisoned wound) for which the dressing was used. This was, however, not a satisfactory explanation, as the gangrene was seen to occur in cases of very trivial cuts or slight superficial injuries. Frankenburger believed he proved, by experimental work, that by repeated dressings with weak carbolic acid a direct injury to the blood corpuscles was produced, and stasis and blocking of the vessels resulted, followed by thrombosis; that the capillaries being first affected, then the veins, and, lastly, the arterioles, the result was the part died. Even if this be so, we are still left in ignorance why gangrene should only occasionally be produced, and a further explanation is needed. It has been suggested that some individuals have an idiosyncrasy, and are locally much more susceptible to the hurtful action of carbolic acid than others, and that in them stasis followed by thrombosis occurs more readily, and gangrene results. It is the fact that the portion which becomes gangrenous is generally a terminal part of the body—for example, a finger or a toe. That age, sex, or the physical condition of patients do not apparently influence the production of the condition is seen when we note that it occurs at any age, in either sex, and in those who are in perfect health.

In the present state of our knowledge of the subject it would seem that the theory of idiosyncrasy must be accepted as the most reasonable explanation of carbolic gangrene occurring in the few, while the majority escape, if we remember the enormous number of patients in whom the application of carbolic dressings used to be adopted, and yet the relatively small number of cases of carbolic gangrene which have been reported. This is still more probable if we recall that a few years ago the use of dressings soaked in 2½ or 5 per cent. carbolic lotion with waterproof coverings were much in vogue, more particularly in the treatment of septic fingers.

It is not my desire to make too much of these cases, but it is undoubtedly the fact that very sad accidents occur, and that we cannot foretell when in this simple way a man may be severely handicapped for life. If we had no other means of treating wounds or localized sepsis we should be justified in using carbolic dressings in their treatment, but there are other equally good methods which are free from risk. The doctor in prescribing, the chemist in dispensing carbolic acid in any form, should warn patients that it is a dangerous substance, and that it cannot be used as a dressing to a finger or toe with impunity.

Personally I deprecate the use of such a dressing to a finger under any circumstances.

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AN EARLY SPECIMEN OF TOTAL ENUCLEATION OF THE PROSTATE REMOVED BY THE LATE MR. McGILL.

BY J. A. CAIRNS FORSYTH, M.Sc., M.B., CH.B.

THERE has been considerable discussion of late as to the nature of the operations on the prostate gland performed by the late Mr. McGill. It is urged by some that all his operations were only partial prostatectomies in which hypertrophied portions of the gland, especially the so-called "middle lobe," were removed piecemeal, and that enucleation as a whole was never practised.

The specimens exhibited by Mr. McGill at the Leeds Meeting of the British Medical Association in 1888 are preserved in the museum of the Leeds School of Medicine. An examination of these shows that the above statement



Fig. 1.—View of upper surface of prostate.

is true in the great majority of cases. Most of the preparations consist of fragments of prostate gland snipped out with scissors or torn off with forceps. In several cases larger masses, presumably adenomata, have been enucleated.

There is one specimen, however, which is undoubtedly a complete enucleation. Its number in the museum is F 150. The description in the catalogue states that it was removed in 1888 from "J. H., aet. 73. The portion of prostate surrounding the urethra laterally and below was removed in one piece."

The accompanying photographs of the preparation, which are two-thirds natural size, give views of the upper surface (Fig. 1) and under surface (Fig. 2) of the specimen, a piece of glass tubing having been passed through the urethra. The upper surface is smooth, the separation in this region having been very clean. On the under surface the two lobes have been partly separated in the middle line. The specimen weighs 2 oz. It is evident from the photographs that the specimen is what is now termed a



Fig. 2.—View of under surface of prostate.

complete enucleation of the prostate, and has been acknowledged as such by other observers.

Another similar and somewhat larger specimen, removed by the late Mr. Atkinson about the same time, was also preserved in the museum. Unfortunately that specimen cannot now be found.

The claim that McGill and others had performed the operation of total prostatectomy in the late Eighties was no doubt based on the knowledge that this and other specimens existed, and it seems advisable that a description of what was probably McGill's first specimen should be published.

The Oliver-Sharpey Lectures

ON

NEW FACTS IN RELATION TO THE PROCESSES OF

NERVOUS DEGENERATION AND REGENERATION.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS, LONDON, APRIL 29TH AND 30TH,

BY W. D. HALLIBURTON, M.D., LL.D., F.R.S., F.R.C.P.,

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LECTURE II.

REGENERATION OF NERVES.

THE chemical meaning of nervous degeneration, to which I alluded in the first lecture, was studied by Mott and myself in correlation with the anatomical appearances which are observable by the microscope. We found it impossible to study this question without taking into account the closely-related subject of nerve regeneration. From the microscopic study of the distal portions of divided nerve trunks, we arrived at the conclusion that the activity of the neurilemmal cells has some relation to the development of the new nerve fibres. At any early stage in degeneration their nuclei multiply; later they participate with phagocytes in the removal of the broken-up myelin droplets; subsequently they elongate, and becoming connected end to end lead to the formation of what some have termed "embryonic nerve fibres." These three stages are illustrated by the drawings from microphotographs shown in Figs. 5, 6, and 7.

We were, however, extremely doubtful whether this appearance really indicated the formation of real nerve fibres capable of conducting impulses, and felt that such

incomplete observations could not be considered as serious objections to the view of those who from Waller onwards have taught that the axis cylinder is a branch of a nerve cell which grows towards the periphery.

In the further investigation of the problem, Mr. Arthur Edmunds joined Mott and myself, and we arrived finally at the conclusion similar to that which Howell and Huber reached fifteen years ago, that, although the peripheral structures are active in preparing the scaffolding, the axis cylinder which is the essential portion of a nerve fibre, has an exclusively central origin.

Before I present to you the evidence on which this conclusion is based, I must allude first to the work of other observers; for since our investigation started, the subject has risen into some prominence. Some workers, such as

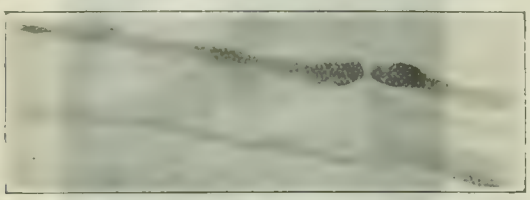


Fig. 6.—Degenerated nerve fibre in cat's sciatic nerve eight days after the nerve had been cut, showing division of a neurilemmal nucleus. The preparation was stained with logwood, and the drawing is made from Mott's photomicrograph of the preparation by Miss Helen Kelley.

Purves Stewart and Ballance in this country, and Bethe in Germany, have advanced the view that the new fibres have a peripheral origin, while others, such as Langley and Anderson, and S. Ramon Cajal, have defended the older Wallerian doctrine.

In a preliminary notice which we published a year or two ago of our own work, we suggested that the manifest activity of the neurilemmal cells is related nutritionally to the successful repair of a divided nerve, for in situations like the central nervous system, where the neurilemma is non-existent, not only is the removal of degenerated myelin a very slow process, but, as is well known, regeneration does not occur. When the nerve is regenerated and conducts impulses, the strands of neurilemmal cells are seen to be situated outside the new axis



Fig. 9.—Degenerated bundle of nerve fibres in longitudinal section, [illegible] days after the nerve had been cut. Many of the neurilemmal cells are seen filled with oil droplets stained black by Marchi's reagent, and especially exaggerated at places where the nerve is in the process of degenerated myelin. (Photomicrograph by Mott, drawing by H. Kelley.)

cylinder, and in longitudinal view the latter is thus often concealed; but on transverse section the axis cylinder is seen to be quite distinct within the sheath, although the neurilemmal nuclei retain an abnormal thickness for some time (see Fig. 8).

Professor Graham Kerr, in his recent study of the development of motor nerves, has in an entirely independent manner supported this view of the nutritional importance of the neurilemmal sheath. In the fish, *Lepidosteus*, that he has mainly studied, the early motor nerve fibres are at first naked, but later masses of nucleated mesenchymatous protoplasm apply themselves to the nerve trunk, and gradually spread over it. As development goes on, the yolk in these masses is used up, their protoplasm becomes less and less conspicuous, and eventually is only to be detected in the immediate vicinity of the nuclei. It is thus clear that the great function of the sheath is as a nutritive organ. Kerr points out that the main function of nuclei apart from reproduction is to control cytoplasmic metabolism, and that the nuclei of the sheath are able to exercise this control over the active metabolism of the developing nerve trunk which is destitute of nuclei of its own. Connected with this relation is no doubt the active multipli-

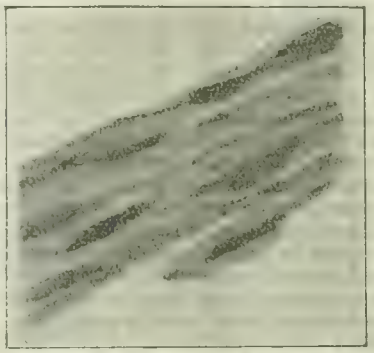


Fig. 7.—Longitudinal view of nerve fibre in cat's sciatic nerve forty-four days after the nerve had been cut. By this time absorption of the degenerated myelin was complete, and the neurilemmal cells have elongated, and in parts joined end to end as described in the text. (Photomicrograph by Mott, drawing by H. Kelley.)

cation of these nuclei observed in early stages of nerve regeneration. Whether this control is able to act so far as to produce true nerve fibrillae in a regenerating fibre, as Kerr further suggests, I am inclined to doubt, for we have never seen anything of the nature of an axis cylinder or neuro-fibrillae in the peripheral segment of a divided nerve, provided connexion with the central end is successfully prevented. I am also unable to accept his view that the original nerve trunk exists from the first as a link which increases in length as the animal grows. It is impossible on such a hypothesis to explain how a gap an inch or more long can be bridged across when one excises, as we have done in some of our experiments, a portion of nerve of that length. The union that occurs, often very rapidly, even when the ends are not sutured together, must be due to growth of nerve fibres from the central to the peripheral stump, or in the reverse direction. It is also on *a priori* grounds most improbable that the mesoblastic cells which make up the neurilemma could give

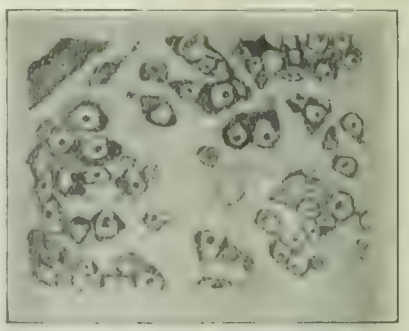


Fig. 8.—Transverse section of regenerated nerve bundle of cat's sciatic nerve, 103 days after the nerve had been cut. The new nerve fibres are much smaller in diameter than those they replaced. The abnormal thickness of the neurilemmal nuclei referred to in the text is well shown in many of the fibres. The preparation was stained with logwood, and photographed by Dr. Mott, the drawing from the photograph was made, as in preceding figures, by Miss Kelley.

rise to such a highly-specialized structure as the axis cylinder, which so far as is known is exclusively epiblastic in origin.

The propositions maintained by Waller namely, the integrity of the central end of a cut nerve, the degeneration of the peripheral segment, and its regeneration by means of fibres growing out distalwards from the central stump were questioned a few years later by Vulpian and Philippeaux. These observers cut nerves in various animals, mainly young ones, excising long portions to prevent union with the central end. Some months later they were surprised to find that the peripheral ends had regenerated and were excitable; to this phenomenon they gave the name of "autogenetic regeneration." These results were regarded with so much scepticism

by most writers that some years later Vulpian repeated his experiments. He obtained the same results as before, but this time put forward a new explanation; in fact, he adopted the Wallerian doctrine, because he found that connexion with the central nervous system had been re-established by means of fibres growing into the peripheral stump from other nerves in the neighbourhood. This connexion he had missed in his earlier work. He had also, with Philippeaux, observed regeneration in portions of a nerve transplanted under the skin of the abdomen, but as a result of his later work explained this in the same way.

In the revival of the controversy that has taken place within the last few years the position of the disputants has been almost exactly the same as that occupied by Waller and Vulpian more than half a century ago.

The evidence which Ballance and Purves Stewart have advanced in favour of autogenesis is purely histological. In the absence of any proof that the so-called nerve fibres are excitable and capable of conducting impulses I regard it as probable that these observers have mistaken for nerve fibres the chains of neurilemmal cells which undoubtedly form in the peripheral portions of divided nerve trunks.

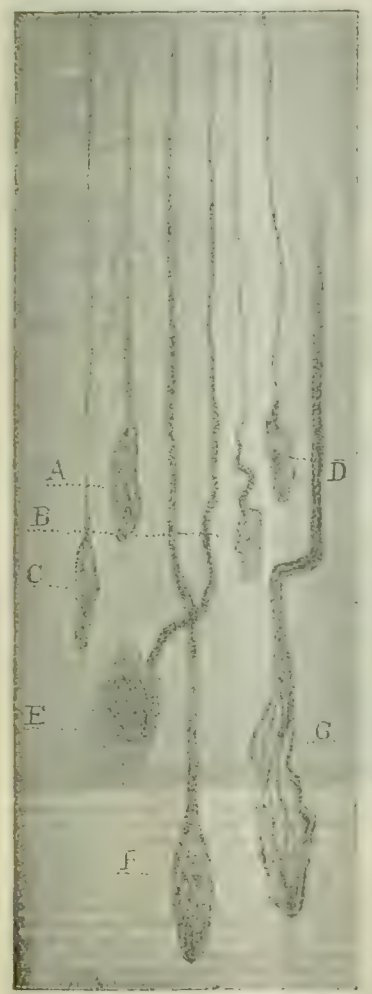


Fig. 9.—Olive-shaped swellings at the ends of nerve fibres growing downwards from the central end, twenty one days after the nerve had been divided. Differences in the external form of these swellings will be noticed. (Marinesco.)

Bethe is at present the most prominent supporter of the autogenetic theory. He finds that the peripheral segments of cut nerves are in young animals after a time excitable without union with the central ends. He does not, however, exclude the fallacy which underlay the old experiments of Vulpian and Philippeaux, and which has been more recently pointed out by Langley and Anderson. These observers showed that in spite of any obvious connecting strand with the central end, new nerve fibres find their way, often by devious channels, into the peripheral stump from nerves in skin and muscle cut through in the operation.

At the commencement of their work Langley and Anderson thought they had obtained evidence of purely peripheral regeneration, and it was not until they carried out careful dissections that they convinced themselves that union with the central nervous system had occurred in the manner just mentioned. They, therefore, once more cut the central portion of the nerve, and of any other nerves which might possibly have established a connexion with the peripheral segment of the nerve they had under observation. The second operation would cause degeneration of the fibres which had established a central connexion, and leave intact any fibres which had regenerated autogenetically. Even this was not always sufficient to prevent reunion once again of the peripheral end with the central nervous system. But in cases of success no autogenetically-formed nerve fibres were found. Eight to twelve days after the second operation no sound medullated fibres were found in the peripheral end, and the nerve was quite inexcitable.

These experiments, like Bethe's, were mostly performed upon young animals—kittens and rabbits—and in some, after a period of nearly two years no trace of autogenetically-formed nerve fibres could be detected. All the medullated nerve fibres found in the peripheral end of a cut nerve, which had been sutured to the central end, degenerated when the central end was again cut nearer the spinal cord; in other words, all the nerve fibres were fibres which were connected with the central nervous system. If the regeneration had been autogenetic, this would mean that every one of them had become united with the end of a nerve fibre in the central stump; on the autogenetic theory this is highly unlikely, whereas it is quite simply accounted for on Wallerian lines. If the number of medullated fibres in the peripheral end was small, then the connexion with the central end was found to be slight. If no connexion occurred, then medullated nerve fibres were entirely absent. Bethe admits a variability in the number of medullated fibres, and this again, though easily explicable on the view that such fibres come from the central end, is not accounted for at all by the autogenetic theory.

Langley and Anderson further point out that Bethe admits age to be an important factor in the case; in adult animals he has little or no proof of autogenetic regeneration. This is a very weak point, for surely the difference is due to the greater ease with which reunion with central nerves occurs in young and growing animals.

Lugaro objects to Bethe's views on much the same lines as Langley and Anderson, and in his latest paper has shown that regeneration of nerves connected with the lower part of the spinal cord does not occur after the lumbosacral region of the cord has been extirpated. This is a very striking piece of evidence on the dependence of the growth of fibres on the activity of the cells of the central nervous system with which they are connected.

Cajal, from the histological point of view, has made a very complete rejoinder to Bethe's work. He has also controlled his results by noting the effect of stimulating the nerves.



Fig. 10.—Spiral form often seen in regenerating nerve fibres. A, Large myelinated fibre; B, fine fibre; C, fibre of intermediate size; M, terminal swelling of the fibre which has become contorted; N, group of terminal swellings. (Rabbit's nerve twenty days after section. Marinesco.)

By the help of his new silver method he comes to the conclusion that the new formation of nerve fibres in the peripheral stump is exclusively due to growth from the central end. He describes the long and often contorted course of these growing fibres in the swelling at the cut central end, and shows that they ultimately reach their goal—the peripheral stump—in time, and in spite of all hindrances. The greater the obstacles interposed, the later does the union and consequent regeneration in the peripheral end occur. He also calls attention to the olive-shaped swelling at the free end of each growing axis cylinder. These are also figured by Marinesco.

I am indebted to the kindness of Professor Marinesco for Figs. 9 and 10. Fig. 9 illustrates the swelling at the termination of growing axons, and Fig. 10 the convoluted course of the new fibres which is so frequently seen.

Marinesco has passed through the phase so often seen in those who have attacked the problem of nerve repair. He was never a thorough believer in Bethe's views, but in his earlier publications felt obliged to admit that some of his preparations afforded evidence of auto-regeneration. In his last published paper he has recanted these views, and is now convinced that auto-regeneration does not take place. I reproduce two very striking illustrations from the numerous figures which he has published. The preparations were stained by Cajal's new method, and the reproductions (Figs. 11 and 12) require no comment; they speak for themselves, and ought to carry conviction to those who believe in the autogenetic theory that the Wallerian view is the only possible one to adopt. Marinesco does not believe that the neurilemmal cells act as phagocytes, but otherwise he ranges himself by the side of Cajal and ourselves.

Many surgeons have been steadfast upholders of the autogenetic theory, because they have found that in man (including adults, in spite of Bethe) sensation may rapidly return after freshening up and suturing together the ends of a nerve which had been divided a long time previously. Such clinical observations would be valuable evidence in favour of the "peripheral theory," if it were entirely trustworthy. Mr. A. Edmunds, then surgical registrar at King's College Hospital, had recently the opportunity of observing carefully one of these cases, and it throws a useful light on the subject. A short time after the operation the patient stated he was able to feel, but these sensations rapidly subsided, and sensation did not really return until months later. The preliminary sensations were doubtless subjective; the irritation of the nerve fibres in the scar lasted some hours, and the sensations so produced were referred by the patient's mind to the original terminals of the fibres

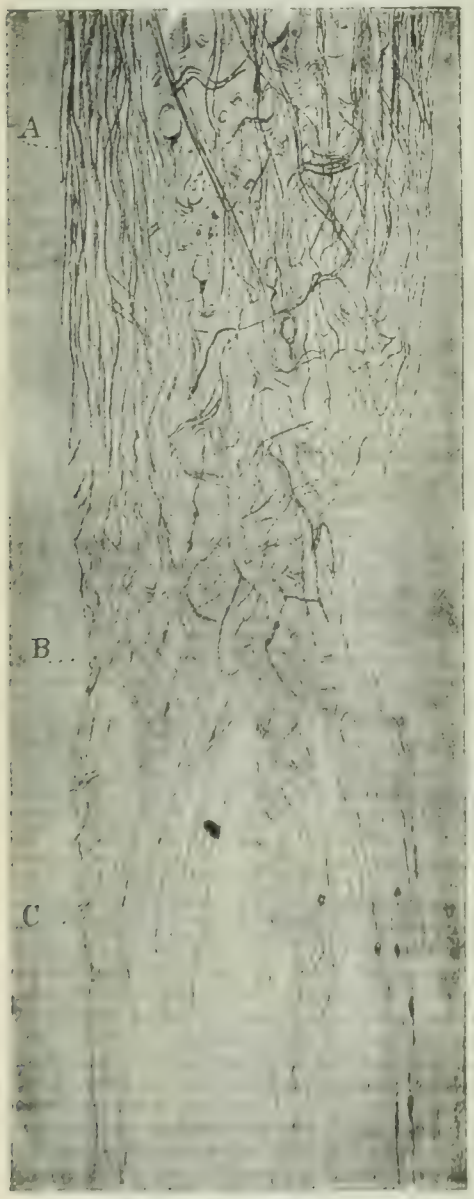


Fig. 11.—Longitudinal section of sciatic nerve of [illegible] days after the nerve had been [illegible]. [illegible] already taken place. A the extremity of the central end (A proximal to this are the [illegible] B the cicatrix of union where the new fibres are seen in great numbers, and taking an irregular course. Into C, the peripheral end, many fibres have already penetrated. m, m', m'', etc., are the terminal swellings of fibres growing from the central stump, and directed towards the periphery, except in the case of m'', where the twisting of the new fibre in its efforts to grow had at the time when the animal was killed directed the termination backwards. (Marinesco.)

At the meeting of the British Medical Association in Oxford in 1904, Dr. Kennedy of Glasgow brought forward a number of cases in support of the autogenetic theory. Here, again, the genuineness of the early recovery is doubtful, because no care appears to have been taken to distinguish real cutaneous from deep sensibility. Head and Sherren have also recorded a number of surgical cases, but they found no evidence of early recovery; they showed by very careful work that the deep sensibility of the subjacent parts, such as would be excited by the pressure even of the finger, is entirely independent of cutaneous sensation. The fibres subserving this form of sensation run with the motor nerves, and are not destroyed by division of all the nerves to the skin.

The difficulty of obtaining absolutely trustworthy evidence from patients themselves, induced Head to combine with his experiments on animals and his observations on patients an experiment on one of the sensory nerves of his own arm. This experiment gave an opportunity for the study of the phenomena by a trained observer upon himself. He certainly experienced no early return of function, and the date at which sensation did come back coincides closely with the dates obtained in animals by physiologists for the reappearance of new fibres. He has further made the interesting suggestion that the first kind of sensation to return and which is of a vague nature (termed *protopathic*) is associated with the activity of the fine medullated nerve fibres which replace the degenerated ones at an early stage. Return of protopathic sensibility begins about the eightieth day. The more elaborate sensations and power to accurately localize them return at a much later date, and this *epicritic sensibility*, as Head terms it, is usually not perfect until months or even years after the regeneration started. By this time, as was shown by experiments on animals, the fine nerve fibres which subserve protopathic sensation are largely admixed with a later growth of larger nerve fibres, and he believes epicritic sensation is subserved by these.

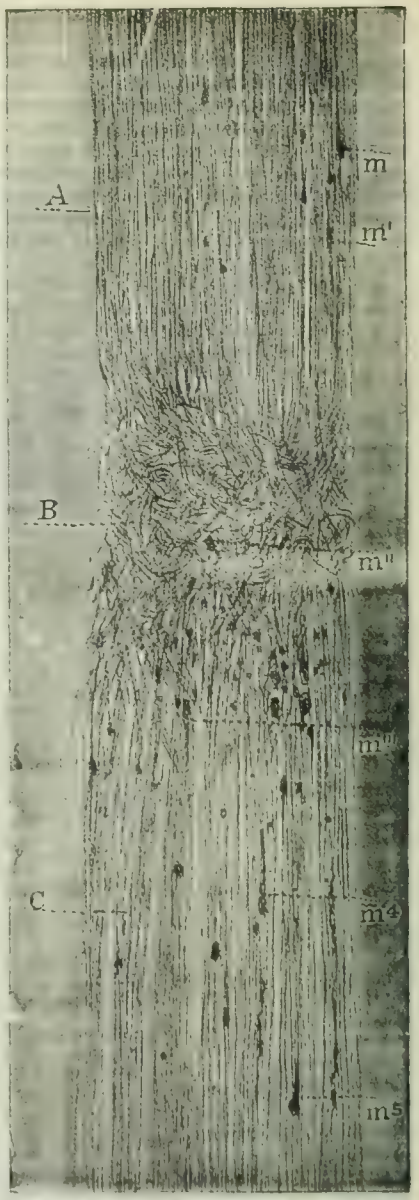


Fig. 12.—Longitudinal section of vagus nerve of dog, twenty-one days after the nerve had been divided. A more advanced condition than that shown in Fig. 11. A is the central end, B the cicatrix of union where the new fibres are seen in great numbers, and taking an irregular course. Into C, the peripheral end, many fibres have already successfully penetrated. m, m', m'', etc., are the terminal swellings of fibres growing from the central stump, and directed towards the periphery, except in the case of m'', where the twisting of the new fibre in its efforts to grow had at the time when the animal was killed directed the termination backwards. (Marinesco.)

After this long introduction let me now pass on to describe the

experiments which have been carried out by Mott, Edmunds, and myself. Every piece of confirmatory evidence is useful if the upholders of the autogenetic theory are to be convinced they are wrong. In some directions, moreover, our experiments have approached the problem in rather a different way from that followed by other workers. I will arrange what I have to say under five headings:

(1) *Experiments in which Union of Central and Peripheral Ends was Prevented.*

We had noticed early in the investigation that the excision of an inch or so of a nerve was entirely inefficient to prevent union of its two ends together; we were also aware of the danger (pointed out by Vulpian in his later work, and by Langley and Anderson, and Lugaro more recently) that the peripheral end may be invaded by nerve fibres growing into it from the nerves in skin and muscles divided in the operation.

We therefore made extremely small incisions, and the parts were separated from the nerve trunks by the handle of the scalpel, and with as little cutting as possible. In cats one incision over the buttock allowed us to divide the sciatic nerve high up; another in the ham enabled us to divide the two popliteal nerves. The intervening portion of the sciatic nerve, about 4 in. or 5 in. long, could then be easily pulled out. Additional security to prevent union with central fibres was in some cases obtained by enclosing the upper end of each popliteal nerve in closed caps made out of small sterilized drainage tubes about $\frac{1}{2}$ in. long. A period of 100 to 150 days was then allowed to elapse in order that if regeneration was going to occur in the peripheral segments of the nerve it might

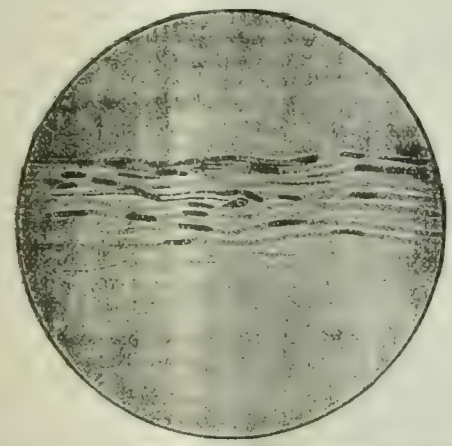


Fig. 13.—Low power view of the appearances presented in a piece of nerve, transplanted into peritoneum 150 days previously. (A. Edmunds.)

have an opportunity of doing so. At the end of this time the animal was again anaesthetized and the nerves tested by electrical stimulation. In all cases they were entirely inexcitable to strong faradic currents, and the wasted muscles supplied by these nerves had also largely lost their power of response to this form of stimulation. To the naked eye the nerves were pale. The animals were then killed and the nerves subjected to microscopical investigation, but they were found to show no trace of regeneration. The chains of neurilemmal cells, without a sign of either axis cylinder or medullary sheath, were all that could be seen, and in those cases of later date where the nerves had been placed in tubes it was very difficult to recognize any nervous structure whatever in the pieces actually enclosed within the tubes.

(2) *Experiments on Transplanted Pieces of Nerve.*

As I have already stated, Vulpian and Philippeaux transplanted pieces of nerve under the skin of the abdomen, and observed in them what they at first thought was evidence of auto-regeneration, a conclusion subsequently withdrawn by Vulpian. Similar experiments, recently published by Kennedy, are regarded by him as proving absolutely conclusively the autogenetic origin of nerve fibres. He excised a portion of the sciatic nerve and transplanted it into the subcutaneous tissues of the same animal. Six months later he killed the animal and examined the nerve which had been transplanted. He found among a number of degenerated fibres some which were definitely formed with a medullary sheath showing distinct nodes of Ranvier. He concluded that these fibres had been formed by the tissues of the excised portion of nerve.

He conceives objectors to this deduction maintaining that these nerve fibres have grown into the sheaths of the transplanted nerve from cutaneous nerves divided in the course of the operation, and meets this objection as follows:

"Such an explanation is, I think, far-fetched, and assumes an extraordinary affinity between the supposed young nerve fibres and the old nerve trunk, an affinity which, if established, would, I am sure, secure almost certain spontaneous union of nerve trunks after division, unless very extraordinary barriers were placed between the divided ends.

"The number of cases, however, in which secondary suture has to be performed shows that divided nerves cannot be confidently left to Nature to repair, which I am sure might almost uniformly be the case did such strong affinity between young nerve fibres and the distal degenerated segment exist."

It has, however, been shown that a large nerve trunk on division curls up at the end, forming a contorted leash of fibres. Further, a nerve trunk on division retracts, and a considerable amount of scar tissue is formed. This cicatricial tissue by the time the nerve has begun to regenerate has become dense fibrous tissue. In the case of nerve trunks, therefore, "extraordinary barriers" are the rule. Moreover, in spite of such barriers, spontaneous union often occurs, and in animals when the cut is made more cleanly than occurs in an accident in man, and when antiseptics are used, the amount of cicatricial tissue formed is less, and union may be confidently anticipated without suture, either immediate or secondary. In the case of small nerve trunks the case is also different; for example, after operations involving extensive skin incisions anaesthesia is always found on one side of the incision, varying in extent according to the direction of the incision and the number of cutaneous nerves divided. It is, however, the rule for these anaesthetic areas to completely recover.

Again, when a longitudinal incision is made through the rectus abdominis muscle, it is very rare to find any permanent paralysis of portions of the muscle, although division of its nerves must be very common. Temporary paralysis, of course, must take place, but there is so little fear of ultimate paralysis and atrophy of the muscle, that many surgeons prefer an

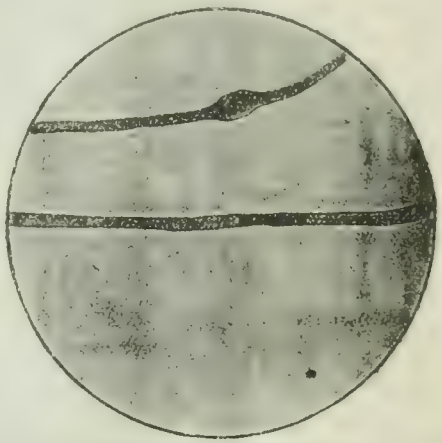


Fig. 14.—Higher power view of two of the fibres. (A. Edmunds.)

incision through the rectus to any other method of performing laparotomy.

To further study this point we repeated Kennedy's experiment, with the variation that a portion of a nerve was not only inserted underneath the skin, but a similar portion was inserted into the peritoneal cavity. The portion of sciatic nerve which had been previously removed from the same animal was laid on the anterior stomach wall. A row of Lembert sutures of catgut were then passed so as completely to enclose it in a sheath of stomach wall lined by peritoneum. In this way there was no possibility of nerve fibres growing in from the skin, and but little possibility of their coming from the stomach. As a control experiment a wisp of catgut was enveloped in the stomach wall in a precisely similar manner. After 150 days the animals were killed and the nerves examined.

In those cases where the nutrition of the nerve had been effectually maintained, the nerve could be readily seen both in the stomach wall and under the skin. It was thinner and more transparent than when it was inserted. It was examined in teased specimens and in sections.

Each fibre looks like a long tube; there is no trace of a medullary sheath, neuro-fibrillae, or axis cylinder. At the point where a nucleus is situated there is usually no increase in the diameter of the fibre, the nucleus being either central or projecting into a central lumen. In some fibres, on the other hand, there is a distinct swelling at the site of the nucleus, and a considerable amount of protoplasm accumulated around it. These appearances are illustrated in Figures 13 and 14. They are merely those which have been so often described in the peripheral segment of a divided nerve in which regeneration has not occurred, and which all observers agree is due to neurilemmal activity.

In cases where the nerve had been transplanted under the peritoneum, in which situation invasion by neighbouring nerves is nearly impossible, no medullated fibres could be found. In those cases where the nerve was transplanted under the skin careful search revealed the presence of a few medullated fibres. It is difficult to explain the paucity of these fibres on Kennedy's hypothesis that they have formed autogenetically, seeing all the fibres were under precisely the

same conditions: but it is easy to account for it if our view is adopted that the well-formed fibres were a few stray ones which had grown into the transplanted bundle from nerves cut through in the operation. The next figure (Fig. 15) illustrates how a blood vessel breaks through the sheath into the substance of a degenerated nerve bundle, and from this it is a very small step to the irruption of nerve fibres into the interior of a transplanted nerve.

The connective tissue between and around the bundles of nerve fibres retains its normal relationship, but any structure of a similar shape becomes enclosed in a fibrous sheath unless it is completely absorbed. This is well illustrated in Fig. 16, which shows a transverse section of a strand of catgut which had been enveloped in the stomach wall; the connective tissue is seen to be organized around the catgut threads, forming a framework which strongly suggests the sheath of nerve fasciculi.

Marinesco has shown that if a transplanted nerve is obtained from another species of animal (hetero-transplantation) it does not undergo the usual Wallerian changes, but is completely necrosed, just as the blood corpuscles of one animal are destroyed by the body fluids of another. The surgical method sometimes adopted of employing an animal's nerve to assist the regeneration of an excised portion of nerve in man is, therefore, rather a hindrance than a help.

(3) *Experiments on the Degeneration of Regenerated Fibres.*

We performed these experiments at the suggestion of Professor Gotch. A large nerve was divided in an animal and the ends sutured together with sterilized silk. After a sufficient length of time had elapsed, restoration of function led us to suppose that regeneration had occurred. A second operation was then performed in each case. The animal was anaesthetized, and the nerve was exposed; the union of the two ends was found to have been accomplished, and the nerve was excitable both above and below the junction. A piece of nerve about half an inch long was then excised an inch or so below the junction. On histological examination of this all traces of degenerated products were found to have disappeared and it was made up of fine nerve fibres, many of which had acquired a delicate medullary sheath. After this second operation the wound was closed and the animal allowed to live 10 days longer, it was then killed, and the nerve both below and above the second cut was examined. No degeneration was found in the nerve fibres above the second lesion, but Wallerian degeneration was shown by the Marchi method to have occurred in the medullated fibres of the peripheral portion which was quite inexcitable. The direction of degeneration is the direction of growth, so this experiment shows that the growth of the nerve fibres had not started from the periphery centralwards, but in the reverse direction. Fig. 17 is from a drawing of the degeneration terminating in proliferation of the peripheral segment after the second operation.

We noted an interesting point in these experiments which illustrates the great rate at which the regenerating fibres grow. Although only ten days had elapsed between the second operation and the killing of the animal, and although quite half an inch of nerve had been excised and no efforts made to approximate the ends, yet there was usually a well-marked strand of union uniting the two segments.

We think that these experiments, taken in conjunction with the somewhat similar experiment already alluded to in the work of Langley and Anderson, in which, after union of the two ends of a divided nerve, degeneration in the regenerated fibres sets in after a second operation of dividing the central end of the nerve nearer the spinal cord, conclusively prove the regenerated fibres to be in anatomical continuity with the fibres in the central end, and so with the central nervous system. They thus serve to prove the doctrine that the regenerated fibres have grown from those in the central stump.

At the time that we undertook these experiments we were under the impression that they had never been previously performed. But on looking up the literature we find this is not the case. Like so much of the present work set going by the revival of the autogenetic theory, this experiment has also been performed by others. As long ago as 1859 Philippeaux and Vulpian did it, and obtained the same result as we have; we can hardly doubt that this formed one of the factors that later led Vulpian to abandon the autogenetic theory.

(4) *Experiments on the Rate of Medullation in Regenerating Nerves.*

Another very important piece of evidence which supports the general view I am advocating was obtained by examining regenerated nerve fibres in various parts of their course.

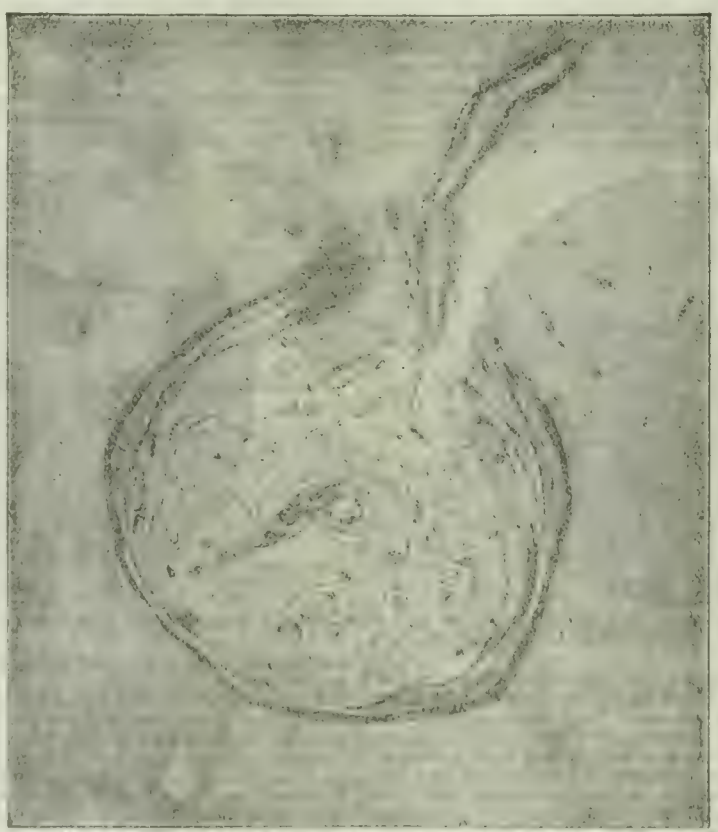


Fig. 15.—A vessel breaking through the sheath and entering a degenerated transplanted nerve as described in the text. 250 diameters. Drawn by Miss Kelley from Mr Edmunds' preparation.

There is always a noticeable difference between the amount of medullation in the regeneration of motor and sensory nerves, that in the latter advancing more rapidly. It was therefore necessary for us to examine the same bundle of fibres in different parts of their course. In specimens obtained from 80 to 90 days after the nerve had been cut the peripheral portions near the junction contained numerous myelinated fibres, whereas some inches lower down myelination was less distinct and the number of fibres which had been invested with a medullary sheath much fewer in number. We illustrated these appearances by coloured drawings in our paper recently read before the Royal Society.

It can hardly be doubted that the medullary sheath is a developmental appendage of the axis cylinder; it appears in the fibres of the central nervous system, where the neurilemma is absent; it degenerates with the axis cylinder when a nerve fibre is cut, and completeness of function is associated with its appearance in development and with its reappearance in regeneration.

I therefore think we are justified in concluding that the late appearance of this sheath in those portions of the regenerating fibres which are most distant from the place where the nerve was originally cut, is a conclusive piece of evidence in favour of the view that the new nerve fibres have grown from the central end in a peripheral direction.

(5) *Experiments on the Influence of Stimulus on Regeneration.*

These experiments were performed on Rhesus monkeys. A monkey's arm was rendered immobile by the division of a number of the upper posterior roots on one side. In order to be perfectly certain, we usually divided from the second cervical to the second or third thoracic roots inclusive. The anterior cornual cells from which the corresponding motor fibres originate are thus not subjected to stimuli from the periphery, and, as Mott and Sherrington were the first to show, the arm is more or less paralysed as if the anterior roots had been cut. We have, however, again noticed in some of these animals under the influence of strong emotion that some efforts were made to move the paralysed limb. These efforts are ineffectual

and are limited to associated movements in the upper segment of the limb; fine movements were never noticed. When the animal is living in its cage under ordinary conditions it makes no effort to move the limb, which, when a sufficient number of roots have been entirely cut through, hangs helpless like a flail.

After the healing of the neck wound produced by the cutting of the posterior nerve roots was accomplished, a matter usually of one or two weeks, a large nerve in the arm was then divided and the ends sutured together. The corresponding nerve was cut and sutured on the non-paralysed side as a control experiment. The animal was finally killed; the interval between the operation and death varied in different experiments, but the best time for making the observation we finally determined to be between 60 and 70 days after the nerves had been cut. This is a date when regeneration is perfectly evident, but not too far advanced; it, therefore, permits of comparative observations on the amount of regeneration.

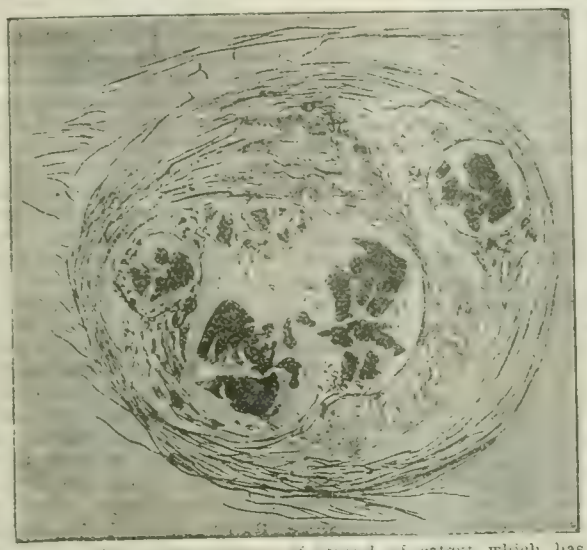


Fig. 16.—Transverse section of strand of catgut which has become surrounded by a sheath of connective tissue, after being transplanted to beneath the peritoneum, as described in the text. (A. Edmunds.)

Union of the divided nerves occurs on both sides of the body, and in our early experiments the nerve on the side corresponding to that on which the posterior nerve roots had been divided was found to be the less excitable to the faradic current. Histologically this nerve showed a looser texture, and new nerve fibres, though present, were less numerous than on the control side.

In these early experiments also we found that the posterior cornual cells in the cervical region were atrophied and that there was a considerable overgrowth of neuroglia tissue in the posterior horn.

Further examination of these spinal cords showed, however, that there had been a considerable number of small haemorrhages, sufficient in some cases to cause degeneration in various descending tracts in the cord. It, therefore, became quite possible to explain the effects observed by this complication.

In several of the later experiments in which cord haemorrhages did not occur to any great extent we have been unable to detect any marked changes in the anterior or posterior cornual cells, or any difference to stimulation or in microscopic structure between the regenerated nerves of the two sides.

This conclusion fits in with some experiments of H. K. Anderson: he showed that in developing animals section of all the posterior roots connected with a limb exercised no retarding influence on the development of the corresponding anterior roots.

Warrington has stated that when posterior nerve roots are cut, the anterior horn cells undergo the chromatolytic change associated with inactivity; after some time (30 to 74 days) chromatolysis disappears, but the total number of cells on the side of the lesion is lessened; after periods of 150 to 223 days from the initial lesion, the wasting of the grey matter is very marked. We have never observed these changes even although in one case the cord was examined in an animal killed 17 days after the division of the roots. At any rate, it was not possible by looking at the anterior nerve cells of the two sides to tell which was the side on which posterior roots had been divided.

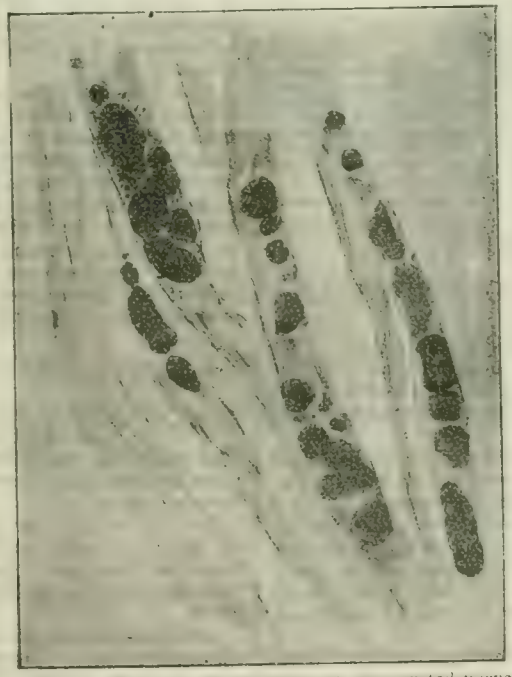


Fig. 17.—Wallerian degeneration of regenerated nerve fibres in a cat. Marchi method of staining. 520 diameters. (Drawn from a teased preparation made by Dr. Mott by Miss Kelley.)

In further experiments we sought to cut off the cerebral influence by removing the cortical arm area of the opposite side in addition to dividing posterior roots. In this case also the regenerated nerves of the two sides were equally responsive to stimulation, and histological evidence of any marked difference between them was also lacking.

Finally, we still further reduced the action of innervation currents on the anterior cornual neurons by cutting off the stimuli which enter by the posterior roots, as well as those which descend from the brain. The latter was accomplished by combining either a semisection or a complete transection of the cord in the mid-thoracic region with the division of the posterior nerve roots which correspond to the lower limb of one side. The two sciatic nerves were then divided and sutured and, as before, an interval was allowed to elapse until these nerves regenerated. Here, again, the result was negative. Both nerves regenerated equally well, and both were equally responsive to excitation.

It is, therefore, quite evident that the paths which even under these circumstances remain open (commissural and association tracts) are sufficient to maintain the activity of the anterior cornual cells in the sprouting forth of new axons in a peripheral nerve although they may be insufficient to induce those cells to send effective impulses along them.

It is also evident that in order to reduce the activity of the anterior nerve cells to a sufficient degree to prevent the regeneration of their axons, it would be necessary to insulate a group of them so as to prevent all impulses reaching them from every part of the nervous system. We did not see our way to accomplish such an operation without interfering with the blood supply of such an island of cord matter.

The nearest approach we have obtained to such a condition of things is to be found in those early experiments in which haemorrhages and neuroglial overgrowth occurred as a complication. Here certainly the diminution in the number of regenerated fibres points to a reduced activity, or, it may be, destruction of some of the anterior cornual elements, but in either case these experiments, so far as they go, are in favour of the view that new nerve fibres grow from central axons, and are not formed autogenetically.

General Conclusions.

I put forward the foregoing five sets of experiments as a contribution to the discussion now in progress as to whether the regeneration of nerve fibres is autogenetic or not. These experimental methods approach the subject in different ways, and in no one case was any evidence forthcoming of autoregeneration.

The facts recorded, taken in conjunction with those published by such observers as Cajal and Langley and Anderson, form, on the other hand, strong pieces of evidence in favour of the Wallerian doctrine that new nerve fibres are growths from the central ends of divided nerve trunks. The experimental facts recorded by those who, like Bethe and Kennedy, hold the opposite view are susceptible of easy explanation, mainly on the lines emphasized by Langley and Anderson of accidental and unnoticed connexion of the peripheral segments with the central nervous system by means of other nerves cut through in the operation. If such connexion is effectually prevented, real regeneration of structure and restoration of function never occurs.

Moreover, the regenerated fibres always degenerate in a peripheral direction, and in a peripheral direction only, when the link that binds them to the central nervous system is again severed. Perhaps the most striking of the new facts I have mentioned is in reference to the

development of the medullary sheath; this appendage of the axis cylinder appears earliest at situations near the point where the ends of a nerve have been joined together, and reaches the distal portions later.

What takes place in the peripheral segment of a divided nerve is a multiplication, elongation and union into long chains of the neurilemmal cells. The same change is even more vigorous at the central termination of the cut nerve; and the view of the phagocytic and nutritive function which we attribute to this sheath has been supported independently by some striking observations of Graham Kerr to which I have fully referred. At the central end this nutritive function is effective and provides for the nourishment of the actively-lengthening axis cylinders. At the peripheral end, unless the axons reach it, it is ineffective in so far as any real new formation of nerve-fibres is concerned. If, however, the axons reach the peripheral segment, the work of the neurilemmal cells has not been useless, for they provide the supporting and nutritive elements necessary for continued and successful growth. The neurilemmal activity appears to be essential, for without it, as in the central nervous system, regeneration does not take place.

Note.

Since this lecture was prepared for publication, Dr. Bethe has sent me a copy of his latest paper on regeneration (*Pflüger's Archiv*, vol. 116, p. 385, 1907), in which he defends his views. He now admits that in adult animals no regeneration of medullated fibres occurs autogenetically; he does not, however, state at what age animals lose their power of autogenetic regeneration, nor explain how it is that after a certain date an animal repairs a divided nerve in the exactly contrary manner to that it would have adopted if the nerve had been cut before that date. He also again admits that a regenerated nerve when cut degenerates in a peripheral direction only, but denies that degeneration has anything to do with direction of growth. He further states that on one or two points we had misquoted him in our Royal Society paper; for this we can only express our regret, and in the present lecture I have rectified the error. The paper is largely polemical, and is directed against Cajal, Marinesco, and others as well as ourselves. I can, however, find no fresh work in it sufficient to convince me that autogenetic regeneration of nerve ever takes place.

REFERENCES.

The chief references to the original work done on this subject are given in a paper by Mott, Edmunds, and myself in the *Proceedings of the Royal Society*, B, vol. lxxviii, 1906, p. 259. The principal papers which have since appeared are the following: E. Lugaro, *Neurol. Centralbl.*, xxv, 17, p. 756; G. Marinesco, *J. f. Psychologie und Neurologie*, vol. vii, p. 133, 1906. Perroncito, *Boll. d. Soc. Medico-Chirurgica di Pavia*, 1905. All three papers defend the Wallerian doctrine. The following paper by Warrington, *Jour. of Physiol.*, xxx, 505, 1904, was not mentioned in our Royal Society paper. Bruening, *Archiv f. Anat. und Physiol.*, Physiol. Abth., 1905, p. 251, confirms Warrington's views.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

SPIRILLOSIS OF DOMESTIC FOWLS.

IN connexion with Dr. Balfour's note in the BRITISH MEDICAL JOURNAL of March 30th on spirillosis of fowls in the Soudan, it may be of interest to record the fact that this disease also occurs in India.

During the last month I have found spirilla in the blood of three chickens, two belonging to an English lady in this station, the third being a hen from the bazaar. All the three chickens died. The spirilla were fairly plentiful in the peripheral blood of the first two chickens, many "tangles" being seen. The third fowl was not examined until some hours after death, and I only found four spirilla in a large smear from blood in one of the great thoracic veins.

Practically all the hen houses here are infested with ticks of the *Argas* family, and I am endeavouring to trace the spirilla in them. I think, however, that the spirillosis is uncommon, and that, consequently, only a very small proportion of ticks will prove to be infected.

Agar is forty-one miles from the nearest railway station, and it is practically certain that, for the last twelve months at least, there has been no importation of fowls, except from surrounding villages; from which it would appear that fowl spirillosis is endemic in Central India.

As far as I know, this is the first record of this disease in India.

M. FOSTER READEY, M.B.Lond., D.P.H.,
Agar, Malwa, C.I. Lieut. I.M.S.

A NOTE ON STERILITY IN MAN.

IT is only in recent times that the subject of sterility as distinguished from impotence in man has received much consideration. The late Dr. Matthews Duncan, it is true, called attention to the matter in the Goulstonian Lectures in 1883; and again[1] six years later he wrote:

> Enlarged experience and inquiry make me more and more convinced of the greatness of the part played by the male. . . . It is a good rule to subject a woman to no prolonged, painful, or dangerous treatment for sterility unless assured of the potency of the male as regards connexion and as regards the semen.

But although anxiety concerning mechanical potency is common, it seems to be comparatively rare for a man before marriage to seek information about his capacity for procreation. The proportion of sterile marriages in which the husband is at fault has been variously estimated by different observers as from 10 to 25 per cent., and by some even higher than this. Thus male sterility is obviously a factor, though to what extent is at present unknown, in the declining birth-rate.

The malady responsible for the majority of cases of acquired sterility appears to be gonorrhoea, and in many of them through azoospermia following double epididymitis. But it seems hardly to be sufficiently realized that double epididymitis is not necessary for the production of azoospermia, for, as I have myself observed, epididymitis apparently limited to one side may be followed by azoospermia, while double epididymitis may not be so followed. Even one-sided epididymitis is not a necessary antecedent, for, as is well known, inflammation may attack the vas deferens to a greater or less extent without reaching the epididymis, and judging by facts that have been recorded, and other circumstances, it seems probable that morbid changes limited to the pelvic portion of the vasa deferentia may cause sterility without giving rise to symptoms other than those which are usually attributed to posterior urethritis.

Besides gonorrhoea there are, of course, many other causes of acquired sterility, temporary or permanent. Among them may be mentioned syphilis, tuberculosis, mumps and some other infectious fevers, and traumatism of various kinds and degrees, including certain surgical operations. To these must now be added exposure to the influence of the Roentgen rays, whether as patient or as operator.

The practical outcome seems to be that any man who has any sexual defect or malformation, or who has suffered from any disease or injury of the genito-urinary organs, even though apparently trivial or one-sided, and although his copulative power may be unimpaired, should be looked upon as possibly sterile until some sort of evidence to the contrary has been obtained. When marriage turns out to be sterile, it seems only reasonable that, unless the wife is obviously at fault, the condition of the man should be determined before the more complicated examination of the woman is undertaken.

ARTHUR COOPER,
London, W. Consulting Surgeon to the Westminster General Dispensary.

STRANGULATED HERNIA IN AN INFANT: LOCAL ANAESTHESIA: RECOVERY.

THE patient in the following case was a male child, aged 6 weeks, breast fed, previously healthy, and not known to have a hernia.

The day before I saw it it had been "fretty," had refused to take the breast, and had been vomiting a good deal; there had been no proper action of the bowels, and on the previous night a swelling had been noticed in the right groin.

On examination a swelling was found in the right inguinal region, presenting the characteristics of a strangulated hernia. The abdomen was greatly distended and tympanitic on percussion, and the child itself very pinched and its pulse very feeble. Under local anaesthesia operation was at once performed, the sac being found to contain a large coil of small intestine along with the caecum and appendix. The greatly distended small intestine was very dark in colour, but its appearance improved after the constriction had been divided. All the contents of the sac were returned and the operation completed by a radical method. The child made an uneventful recovery.

[1] Clinical Lecture on Sterility, by J. Matthews Duncan, M.D., *Lancet*, March 23rd, 1889, p. 585.

The following points seem to me to make the case worthy of mention:

(1) The comparative rarity of a strangulated hernia in so young a child. (2) The extreme rarity of both small and large bowel, including caecum and appendix, being found in such a case. (3) The fact that the operation was successful although it was done without any assistance whatsoever, and in a small farm kitchen, circumstances not conducive to a perfect aseptic technique.

ALEX. MITCHELL, M.B., Ch.B.Aberd.

Old Rayne, Aberdeenshire.

SECRETION OF MILK IN THE AXILLA.

SUPERNUMERARY nipples and axillary mammae are probably not so rare as supposed. I have a patient who has a well-marked gland on each side quite distinct from the principal mammary gland and extending to the axilla. Each of these glands has a distinct nipple, only about the size of a pin's head, in the non-puerperal state, but enlarging to three or four times that size in the puerperium. There is always a free discharge of milk from these nipples during the puerperium, and on one or two occasions the glands have become painful and swollen until the flow of milk was encouraged. Until I saw the article in the BRITISH MEDICAL JOURNAL of January 19th, p. 164, I did not know that they were of sufficient interest to be worth recording.

Melbourne. HORACE P. GODFREY, M.B., F.R.C.S.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

SUNDERLAND INFIRMARY.

FOREIGN BODY IN APPENDIX ABSCESS.

(By W. PERCY BLUMER, F.R.C.S.Edin., Honorary Surgeon.)

THE memorandum by Mr. Sheen of Cardiff in the JOURNAL for April 13th, describing the discovery of a flat splinter of wood in the interior of an appendix abscess, prompts the relation of the following case. The patient, a little girl aged 6, was sent into the Sunderland Infirmary by Dr. Beveridge, with a swelling in the right iliac fossa, on December 1st, 1906.

History.—For six or seven weeks she had complained of pain in her right side, sometimes better and sometimes worse, but she had not been confined to bed until a day or so before admission. There had never been any vomiting. The bowels had been kept regular by aperients.

On admission she appeared a healthy child, well nourished, and was in no pain. Temperature 101°, pulse 100. There was a tense, slightly fluctuating swelling in the right iliac fossa, extending upwards and backwards towards the loin. It caused only very slight pain on palpation, and had only been noticed for two days.

Operation.—On opening the abdomen an abscess over the appendix area was evacuated and drained. It extended behind and to the outer side of the caecum. There were many pockets, formed by strong adhesions, all containing pus. No appendix could be found. The general peritoneal cavity was quite shut off by dense adhesions. An ordinary large-sized pin—quite black—was found loose in the abscess cavity. The child was quite comfortable and intelligent on the day following the operation. On the second day she became drowsy, and very irritable when disturbed. Temperature 97°, pulse 120. The abscess was draining well. On the evening of the following day the child became very weak, and died in a convulsion.

Post-mortem Examination.—The abscess cavity was found completely cut off from the general peritoneal cavity by very dense adhesions. No appendix could be distinguished, its site being in the midst of a dense mass of fibrous tissue. There was no peritonitis. All the other organs appeared healthy except the liver, which was fatty.

REMARKS.—As no information with regard to the pin could be obtained from mother or child, we came to the conclusion that it must have been swallowed either with food or otherwise, and gradually found its way down to the appendix, where it became embedded. It eventually pierced the appendix and caused the abscess. It is remarkable how the child was able to run about and attend school even up to a day or two before admission, and had only been seen once by Dr. Beveridge. I am indebted to Dr. Lionel H. Booth, my house-surgeon, for notes of the case.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH.

PATHOLOGICAL AND CLINICAL SECTION.

Birmingham, Friday, April 26th, 1907.

THOMAS NELSON, M.D., in the Chair.

Election of Officers.—Mr. J. T. J. Morrison was elected Chairman for the ensuing session. Dr. Smallwood Savage and Mr. Leonard Gamgee were elected Honorary Secretaries.

Festinating Speech.—Dr. STANLEY BARNES showed a case of festinating speech in paralysis agitans.

Tonic Muscular Spasms.—Dr. SAWYER showed a case of tonic muscular spasms, very similar to those found in tetany, occurring in a single woman, aged 49. She had had the attacks very frequently during the last twenty-two years; some had lasted as long as one month. The hands were chiefly affected, and assumed the position usually seen in tetany. The muscular spasms were so severe at times that the patient could not use her hands. They were worse on waking in the morning, and much better when the hands were cold. During the attack any attempt to use the hands made the condition worse. There were also sometimes muscular spasms in the face, arms, feet, and legs. There were no other signs of tetany; Chvostek's symptom and Trousseau's phenomenon were absent. When younger, she had had dysmenorrhoea, and had suffered slightly with constipation. There seemed to be no gastro-intestinal affection, and renal disease was not present. The patient was a very excitable and nervous woman, and had had two or three "fits" when young. Dr. Sawyer did not consider the case to be one of true tetany, but a condition of pseudo-tetany of hysterical origin.

Opsonic Treatment of Actinomycosis of Lungs.—Dr. WYNN showed a case of actinomycosis (streptothricosis) of the lungs treated by the opsonic method. The patient was a boy, aged 14, who in November, 1906, began to complain of pain in the left side of the chest, paroxysmal cough, and abundant offensive sputum. On December 19th he was admitted to the Birmingham General Hospital with an empyema pointing just below and outside the left nipple. This was opened, and 8 oz. of offensive pus evacuated. A portion of the seventh rib was excised. With the finger a ragged cavity passing up towards the axilla could be felt. It was difficult to determine whether this cavity was in the pleura or the lung. The pus from the empyema and the sputum was green, and contained enormous numbers of small brownish-yellow granules, which, on examination under the microscope, showed a network of mycelial threads. Cultures of the organism were made on agar and blood serum, and from these cultures a vaccine was prepared by drying and sterilizing the growth at 60° C., and then grinding it up in normal saline containing a little glycerine. The vaccine was standardized by weight; 4 c.cm. of the emulsion containing 4 mg. of actinomycotin. This was diluted a thousand times, and the dose used for inoculation was 0.001 mg. An attempt was made to estimate the opsonic index by using young cultures and grinding up finely in an agate mortar. Before treatment the opsonic index stood approximately at 0.3. Inoculations were given on January 8th and 18th, February 11th and 25th, and March 11th and 27th—in all, six inoculations. The highest opsonic index obtained was 1.7, but obviously this could not be estimated with the accuracy of the tuberculo-opsonic index. The patient, who was previously very ill, now looked healthy and robust. In three months his weight increased from 4 st. 8 lb. to 6 st. No sputum was coughed up a week after the first inoculation, the cough disappeared, and the sinus rapidly healed. The temperature, previously fluctuating with evening rises to 100° and 102°, sank the day after the first inoculation to normal. The liver, which was enlarged and tender and felt 3 in. below the ribs, gradually receded and could not now be felt. At the present time examination showed the existence of thickened pleura and a cavity in the lung at the left base. The cavity was dry and had given no adventitious sounds for a month. The patient was still under treatment.

Kidneys in Obstructive Suppression of Urine. — Mr. Gamgee showed the kidneys of a patient who suffered from obstructive suppression of urine. A man aged 56, five years ago had an attack of haematuria, but with no accompanying pain. Eighteen months ago he had an attack of haematuria lasting ten days, and during this attack he had some pain in the right renal region. When the condition seemed to be subsiding, he had absolute suppression of urine for three days. At the end of the first week in March, 1907, he had absolute suppression for forty-eight hours, and during the forty-eight hours following this he passed 8 quarts of urine. On March 30th the right kidney was cut down upon, there having again been suppression for forty-eight hours, with the accompaniment of pain and tenderness over the right kidney. The kidney, which was much enlarged, was incised, and about 2 to 3 ounces of pent-up urine let out from the pelvis, while a stone, about the size of a date stone, was found wedged at the junction of the pelvis and ureter. This was removed. The patient had free drainage of urine from the wound, but died at the end of thirty-six hours. At the *post-mortem* examination the left kidney was found to be atrophied, there being hardly any kidney substance left. There was no other stone present in the right kidney.

Hystero-Myomectomy.—Mr. John W. Taylor showed three specimens of myoma removed by hystero-myomectomy, and one removed by myomectomy after abdominal hysterotomy and enucleation. The history of the last case showed that even a fairly large myoma might be removed safely in this way provided the bed of the tumour could be satisfactorily sutured together so as to leave no "dead spaces." In this case the sutures were sterilized silk, and passed by a perineum needle with large curve.

Haematoporphyrinuria.—Mr. L. C. S. Brougheton read notes from a case of haematoporphyrinuria occurring in a man aged 47, who died suddenly from post-diphtheritic paralysis. The urine was of a deep port-wine colour, and showed the absorption bands of alkaline haematoporphyrin. Dextrose and albumen were absent, as also were urobilin and indican. An extract from the urine was shown, and examined with the spectroscope. The colour of the urine was not all due to haematoporphyrin, as its removal made but little difference to the colour, a fact first observed by Hammarsten. This unknown pigment was also shown, but gave no absorption bands. There was no haemolysis. Examination of the blood showed: Haemoglobin, 90 per cent.; erythrocytes, 4,900,000; leucocytes, 14,600. No *post-mortem* examination was obtainable. The patient had been taking trional and veronal. Stress was laid on the importance of watching the urines of patients taking these drugs, as also sulphonal and tetronal.

Mediastinal Growth.—Dr. Walter Jordan showed a large mediastinal growth from a man aged 56, who was admitted into the workhouse infirmary complaining of cough, shortness of breath, and pains in the chest. He was much wasted, and his voice was hoarse. Physical examination showed dullness behind the manubrium, with loud bronchial breathing and loud heart sounds. Mediastinal growth was diagnosed. In the next three weeks murmurs both basal and apical developed, and a month after admission a marked pericardial rub was heard. A fortnight later the patient died of acute dyspnoea. The growth was found at the base of the heart, pushing into the auricles, and extending up to behind the left sterno-clavicular joint around the vessels. Marked pericarditis, with no effusion, was found. Considering the size of the growth, it is remarkable that the pressure symptoms were so few.

ULSTER BRANCH.

Londonderry, Saturday, April 27th, 1907.

A. E. Brownrigg, M.D. (Derry), Vice-President, in the Chair.

Cerebro-spinal Meningitis.—Dr. Campbell Lyon Allen (Acting Physician to the Belfast Fever Hospital) opened a discussion on cerebro-spinal meningitis. He said he had seen 110 cases in hospital, all but 5 within the last three months. The mortality worked out at about 60 per cent., the onset was the same in every case, and vomiting quickly followed by delirium of the mania type was practically constant. There were nearly always more or less delirium. Convulsions at the start were only seen in one or two cases, though later in the disease they were more common. In the majority of the earlier cases the diagnosis was confirmed by lumbar puncture, but now the clinical diagnosis was so certain that it was seldom resorted to. The subsequent course varied greatly, and temperature was no guide either to diagnosis or prognosis. Some of the worst cases came in with a normal temperature, rising to 105° and even in one case to 108° before death, which in these cases generally occurred within two or three days of admission. Other cases of severe fulminant attacks had also been admitted on the first day with temperatures of 104° or more, steadily falling to normal before death. In ordinary attacks the temperature was most irregular. The purpuric eruption generally associated with the disease was only present in less than 10 per cent. Herpes was very common, appearing in 20 per cent., nearly always on the fourth day, and frequently in large patches. A scarlatiniform eruption appeared in 3 cases in the second week, without access of temperature or throat symptoms. Nasal discharge was only occasional. A slight general enlargement of the glands was almost constant. As regards treatment, various serums were tried. Kolle's was used in 44 cases, often pushed to larger doses than recommended; the mortality was 66 per cent. Ruppell's serum was used in 4 cases with 4 deaths. Dr. Robb was of opinion that the serums had no effect in any way. Burroughs and Wellcome's serum was now being tried extensively, but so far the results were not very encouraging. Hot baths frequently repeated gave considerable relief, as did ice to the head and upper spine. Drugs were of little benefit, though opium and phenacetin were of use. Dr. Calwell (Belfast) said that he had seen 5 cases, and described some of the more important symptoms in reference to diagnosis. Dr. J. Singleton Darling (Lurgan) had seen 7 cases in his district, in several of which there seemed to be a possibility of the infection having been conveyed by secondhand clothes which had been recently purchased. In the absence of Professor Symmers, Dr. Darling gave some account of the pathological appearances, and showed specimens of the brain and cord from 2 cases. Dr. W. B. McQuitty (Belfast) had seen 7 cases also, and discussed the diagnosis. Dr. Cecil Shaw (Belfast) spoke of the eye and ear complications, and described a case of a lad of 13 who had recovered after three months' illness, but had lost the sight of one eye by purulent iritis, and was almost totally deaf in both ears. Dr. Warnock (Donegal), Colonel Smith, I.M.S., and the Chairman having spoken, Dr. Robb replied and answered several questions. He had not formed any definite opinion as to the mode of infection, but in several cases he thought there was some evidence in favour of a food infection. Where, as in one instance in the Belfast epidemic, four members of a family took ill within about twelve hours, he did not think infection carried by clothes was likely to be the cause. As regards the prognosis, he had not seen any case recover with mental defect with one doubtful exception, where the patient, a small boy, was deaf, and seemed rather stupid, though this might be due to the deafness. In the earlier cases there was no deafness, but in the later ones there had been some 6 or 8 cases of deafness.

Selection of an Anaesthetic.

Dr. [illegible] Graham (Derry) read a paper on the selection of an anaesthetic. He did not advocate the claims of any special [illegible], but discussed the suitability of each in various circumstances, and pointed out the conditions to be taken into consideration in choosing the anaesthetic.

Case.

Dr. [illegible] showed a case of Kaposi's disease (xeroderma pigmentosum).

Specimen.

Mr. F. [illegible]one (Belfast) showed a pregnant uterus removed for fibromyoma, and a kidney from a case of calculous pyonephrosis.

Papers Postponed.

Papers by Dr. Calwell, Dr. J. C. Cooke, Dr. McQuitty, and Mr. E. [illegible] were postponed till the next meeting.

Portadown Branch. North Cumberland Division. A meeting held at Penrith on April 12th, Dr. Graham Crombie in the chair, Dr. Edmeston of Penrith read a paper entitled, Influenzal Cerebro-spinal Meningitis: Temperature, 107·8°. Lumbar Puncture: Recovery. A B.,

a strong, active, and healthy woman, staid and anything but neurotic, who had been nursing her household of two children through influenza, began one Sunday night, about 9 p.m., to feel tired, with headache and pains in the lumbar region and joints. She went to bed, and about 3 a.m. sent to Dr. Edington asking for medicine. At 11 a.m. next morning he received an urgent message to see patient. On arriving he found her in bed, not pale or terrorized, as was most usual, but flushed, smiling, and very surprisingly happy, saying that she was "all right" and only hot. He noticed nothing in her speech, but her eyelids and angles of her mouth showed tremors. The pupils were dilated, and head markedly retracted. When she moved her head she cried out with pain, and said that she was giddy and felt sick. On taking her temperature he was surprised to find it 106°, and the pulse 160. Forty grains of sodium salicylate were then given, but her temperature still continued to rise, till it reached 106.8°. This was followed by facial contortions, vomiting, and spinal convulsions, with arms crossing and hands clenched; opisthotonos. The temperature was now 107.2°. The respirations became very low in the convulsions. On the arrival of Dr. Macdonald, at 1.30 p.m., the temperature was 107.8°. Ice was applied to the spine, and the patient sponged with ether; the temperature then fell to 105.5°. Lumbar puncture was then performed, and 3 drachms of fluid drawn off; the temperature fell to 103°; the pulse, however, remained at 160. Convulsions continued, and the urine and faeces were passed involuntarily. At 5 p.m. the temperature began to rise again to 105° and over. Lumbar puncture was performed a second time, and 6 drachms drawn off with very marked results. The temperature came down to 102°, and pulse 120. The convulsions, however, continued. Half a grain of morphine was given subcutaneously with good result. The next morning the temperature was normal, pulse 96, and no convulsions. The patient made an uninterrupted recovery, with the exception of a slight rise of temperature on the third day. She, however, had loss of memory for all events during the current year.—Dr. DODGSON of Southwaite read notes of a case of actinomycosis and showed the patient. G. T., a lad aged 21, began to fail in health in June, 1906. He complained of sore throat and pains in the back of his head. He was listless and depressed, had a poor appetite, and his relations noticed that he was getting thinner and generally failing. On November 16th of last year he consulted Dr. Powers, his predecessor, to whom he was indebted for the earlier notes of the case. His condition at that time was as follows:. There was pain and swelling in the floor of the mouth and difficulty in swallowing; temperature 102° F. The swelling was visible from the outside, under the chin and to the inner side of the inferior maxilla. The swelling at this time was limited to the right side. On examination the swelling was found to consist of two portions, corresponding exactly in position to the sublingual and submaxillary glands of the right side and with a definite division between them. Under the tongue the mucous membrane about the fraenum was raised to a level with the top of the alveolus. The point of greatest tenderness was in the floor of the mouth opposite the socket of the first or second molar, in which was an old stump, which was extracted. At first hot fomentations with belladonna were applied externally, and steam was inhaled. This gave slight relief; a few days later, a small quantity of pus was evacuated from the original point of greatest tenderness, and for a few days after there was a slight escape of thin pus from this opening, in which a probe could be passed for about ¾ in. No great relief followed, the swelling continued to increase, saliva was continually flowing from the mouth owing to pain in swallowing. Dr. Maclaren was at this juncture called into consultation, and he and his son operated on November 3rd. With a gag in the mouth an incision was made deeply into the floor of the mouth, parallel and close to the inner edge of the alveolus, about an inch in length. A small quantity of pus escaped from this incision. A counter opening was made outside immediately *behind* the facial artery on the left side, and a probe passed through, the channel, therefore, lying *above* the facial artery, one incision (the inner) being in *front* of and the other (the outer) being *behind* that vessel. A gauze plug was then passed through the channel. This was changed the next day, and afterwards a silk drain kept in for a week, then left out for a day or two, but reinserted and kept in for several weeks. No very great lessening of the swelling resulted, although there was considerably less discomfort. Shortly after this the swelling began to project across the middle line, although the glands on the right side remained free. During all this time there had been considerable loss of flesh, although the patient had always been thin. Only a very moderate amount of food of a liquid nature could be taken. The patient got up daily, but spent most of his time on a sofa; he was very despondent and depressed, and slept badly. A week or so after this, about November 28th, pus pointed, and was evacuated at several points under the chin, and there was a considerable amount of brawny swelling and extreme tenderness, as far back and a trifle beyond the hyoid bone. The evacuation of pus on the many occasions never gave the relief that might have been expected. Iodine and similar counter irritants were applied to the outside of the swellings, with no benefit, but rather increased discomfort to the patient. As regards medicinal treatment, up to this time the patient had been having small doses of quinine and hydrobromic acid. On December 29th he was put on a diuretic mixture, and weak mercurial ointment was rubbed into the swellings. On January 9th of this year he was put on 7½ grain doses of potassium iodide, thrice daily, the mercurial inunction, which the patient thought did good, being kept up. He was kept on this mixture for a fortnight and seemed to improve slightly. The exact diagnosis of the case was still uncertain, it lay between tubercle and actinomycosis. As there was now a fairly frequent discharge of pus, some was collected and sent away for expert microscopical examination. The report stated that the ray fungus, or *Streptothrix actinomyces*, was present, thus clinching the diagnosis of actinomycosis. The future treatment consisted in gradually increasing the dosage of potassium iodide, until 60 grains a day were taken. He stood the treatment well, at no time exhibiting any sign of iodism. In a period of fifty-seven days he took 2,120 grains of potassium iodide, giving an average of 37 grains per day, and to date has taken 3,400 grains. In a case of actinomycosis of lung reported by Dr. R. Knox of Highgate five years ago, the patient took 103 grains daily, or 16,320 in five months. On February 14th the patient's condition was greatly improved, he looked much better, slept and ate well, and spent all available time in the sunshine. He has gradually improved up to the present time; he is doing hard farm work, and his weight shows an increase of nearly 14 lb. since he began to be ill. The swellings under his jaws and chin have vanished; there is still a slight superficial hardness and swelling low down on the left side of neck about the middle line at the level of the hyoid bone, which occasionally discharges a little. The characteristic "sulphur granules" could easily be seen in the pus in February. Inquiries were made as to the possible mode of infection of this patient. After much cross-examination, it was found that in the early summer and late spring they had a calf at the boy's home which was ill and at one time exhibited what is known in America according to Osler as "big jaw." The calf lingered on for some time, but eventually died. The patient for some time had attended solely to the feeding and care of this calf. This seemed to be the probable source of infection, the patient probably eating his meals after attending to the calf without previously washing his hands.—Dr. LOCKERBIE reported a case of haemorrhage from a duodenal ulcer in a patient undergoing treatment for fractured femur. The patient had been in the medical wards of the Cumberland Infirmary in April, 1904, when he was treated for chronic dyspepsia and gastric dilatation. On November 22nd, 1906, he fell from a ladder and fractured his right femur at the junction of the middle and upper third. Great difficulty was experienced in overcoming the displacement. Two days after admission he became slightly jaundiced, and had an attack of diarrhoea with general abdominal uneasiness. On November 28th the stomach was washed out, with great relief to the patient. On November 29th he passed a large tarry stool. The gastric lavage was abandoned and rectal feeding commenced, with small quantities of peptonized milk given by the mouth. From this [illegible] all symptoms rapidly disappeared. December 6th. The patient was chloroformed, and the two ends of the femur wired. He stood the operation well, and the following day was very comfortable. December 8th. He has [illegible] fair

collapse, restlessness, and again passed numerous tarry stools. From this condition he never rallied, and died shortly after midnight. A *post-mortem* examination was made on November 9th. On opening the abdomen the contents of the upper part were found to be very densely matted together by adhesions. The stomach was large, and showed well-marked hourglass contraction, the cardiac sac of which was itself larger than the normal. The pyloric sac was entirely to the left of the mid-line. The adhesions were between stomach and liver, spleen, duodenum, pancreas. The bowel lower down was quite free. The alimentary canal from lower end of oesophagus to rectum was removed and examined. There was not much blood in the small intestine, but the entire colon was distended with dark blood. On opening the duodenum an ulcer about the size of a sixpence was found on posterior wall of first part, round in shape and with a punched-out appearance, its base being formed by the head of the pancreas. On the base of the ulcer there was a small artery which had been divided in the centre by the process of ulceration, showing the open lumen at two points, from which the fatal haemorrhage had taken place.

South-Eastern Branch: Brighton Division.—At a meeting held on April 25th, Dr. W. A. Hollis in the chair, Dr. Bailey showed a man, aged 64, suffering from paralysis of the left serratus magnus.—Mr. A. J. Martineau showed a case of naso-pharyngeal polypus. The patient was a man aged 20, who had complained of deafness and nasal obstruction for "years." For the last eighteen months he had noticed a tumour in the throat. On examination a large polypus was seen hanging below the velum palati. After cocaining the nose the stalk of the polypus was seen arising from the middle meatus on the right side. The growth was snared under chloroform. When the large one was removed a second was found arising from the same spot. This looped round the septum and passed forward into the opposite choana. This was pulled out by the post-nasal forceps. A mass of adenoids and an enlarged posterior end of the inferior turbinal on the left side were also removed. Nasal obstruction, which was absolute, was completely relieved by operation. Mr. Martineau said this variety of polypus apparently arose from the maxillary antrum. What the condition of the antrum was was difficult to say. It was more translucent on the diseased side. There was no ethmoidal disease, and the polyp was usually single and unilateral. It probably started from an oedematous swelling of the mucous membrane of the antrum, from which a process was protruded through the natural opening. It would be noted that the mucous membrane over the extremity of the polypus was stratified where it had been exposed to the air. Also that it had been moved by the structures with which it had been in contact, for example, the septum, the velum palati, etc. There was no history of antrum trouble, and the teeth were good.

REPORTS OF SOCIETIES.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Dr. Hunter in the Chair.

Wednesday, May 1st, 1907.

Extra-Systole.

Dr. W. T. Ritchie gave an account of the results of his investigations into the varieties of extra-systole and their differentiation. An extra-systole, he said, was evidence of the heart's response to a heterotopic stimulus and by analysis of graphic records of the sequence in which the auricles and ventricles contracted and of the time interval between such contractions might be deduced the initial point of heterotopic stimulation. With this initial point as the determining factor, three main varieties of extra-systole might be recognized, namely, the auricular, the auriculo-ventricular, and the ventricular. When an auriculo-ventricular extra-systole occurred the auricular beat, as well as the ventricular, might be premature, and the former might then precede, coincide with, or follow the latter, according to the portion of the auriculo-ventricular bundle first stimulated. The auricular beat preceded the ventricular in the case of supranodal and nodal auriculo-ventricular extra-systoles. When the mid-point—probably the main stem of the bundle—was the initial point, the auricular and ventricular beats coincided. In other cases of infranodal auriculo-ventricular extra-systole in which the ventricular beat preceded the auricular, the heterotopic stimulation probably proceeded from the ventricular ramifications of the auriculo-ventricular bundle. In the latter instance the auricular extra-systolic wave might be premature, or the auricular rhythm might be unaltered. In conclusion, he described cases in which continued cardiac irregularity resulted from auriculo-ventricular extra-systoles.

Dr. Gibson thought Dr. Ritchie had carried his conclusions as to the causes and varieties of extra-systole further than those of other investigators. He himself favoured the neurogenic theory of cardiac movement.

Intubation of the Larynx.

Dr. C. B. Ker, in a paper on this subject, said that his results had greatly improved since he began nasal feeding as a routine practice in all cases of intubation. He also found a vulcanite tube greatly preferable to one of metal. Since the autumn of 1904 he had employed intubation in 70 cases, with a death-rate of 27 per cent. Eighteen required a secondary tracheotomy, and of these 10 died. In the whole series of cases, only one patient died while being intubated. The time for which the tube was worn varied from twenty-four hours to twenty-nine days. The operation was more difficult than tracheotomy, and during its performance the patient should always be recumbent, and the tube always be attached to a silk-covered wire strapped to the cheek, so that even an unskilled person could remove the tube if necessary. In country practice every case of laryngeal diphtheria might advantageously be intubated as soon as diphtheria was diagnosed, but if the obstruction was already marked tracheotomy would be probably the safer procedure. Early intubation gave the antitoxin time to act and lessened the risk of leaving a patient unattended while suffering from a disease which at any moment might produce severe dyspnoea and death.

Mr. Cathcart agreed that tracheotomy was easier to perform than intubation; furthermore, if an intubation tube were coughed up it required a skilled practitioner to replace it, whereas a tracheotomy tube could be reinserted by a nurse. Another disadvantage of the operation was the difficulty of teaching students how to perform it. Instruction on the cadaver was of little use.

PATHOLOGICAL SOCIETY OF LONDON.

Dr. P. H. Pye-Smith, F.R.S., President, in the Chair.

Tuesday, May 7th, 1907.

The Morbid Histology of the Adrenals.

Drs. F. A. Bainbridge and P. R. Parkinson recounted some observations upon the above subject. Mott and Halliburton had found already that in cases of death from exhausting diseases the adrenalin present in the adrenals was diminished or absent. The authors had extended these observations; they had examined the adrenals in the cases of 50 adults dying from various diseases. The glands were placed in Cohn's fluid for twenty-four hours and afterwards stained with Scharlach or Sudan III; by this method the chromaffinic substance and the fat were demonstrated. They relied upon this demonstration of the amount of chromaffinic granules in the cells of the medulla, and did not carry out the physiological test. No appreciable loss of the substance occurred during twenty-four hours following death, as told by control experiments in animals. Adrenalin was always being given off, especially if the splanchnics were stimulated. The conclusions drawn from their work were that in cases of acute infection and rapid death adrenalin was absent in the medulla; this applied also to cases of death from shock and from peritonitis, when, in short, the blood pressure was low. On the contrary, in chronic diseases, such as phthisis, adrenalin was to be found in the medulla. In cases of high blood pressure adrenalin was present and distinctly increased. No overgrowth of the cortex or the presence of cortical adenomata was observed under these circumstances, and the authors did

not regard the cortex as playing any part in the process. In had been stated that the increased tension was due to toxic conditions, and that the excess of adrenalin in the medullary cells indicated only an accumulation of unutilized material. The authors did not dogmatize in regard to the two views.

INOCULATED SYPHILIS IN THE CHIMPANZEE.

Professor A. S. GRÜNBAUM recorded an example of the above. The animal (as shown by tuberculin injection) was tuberculous before the experiment. It was inoculated in the usual way by rubbing a freshly-excised chancre over a scarified surface above the eyebrow. After fourteen days there was a slight local duskiness and swelling. An eruption, suggestive of condylomata, developed at the anus. Some enlargement of the lymphatic glands in relation with the site of infection also took place. Nine months after the infection, a fit of Jacksonian epilepsy occurred, the limbs and speech-centre being affected. The animal was killed eleven months from the date of experiment, as it developed a tuberculous diarrhoea. After death, minute haemorrhages were seen in the cerebral cortex, chiefly of the right hemisphere. These the author regarded as due to thrombosis. The vessels of the base were fibrosed. Both testicles exhibited a typical fibrosis to the naked eye and beneath the microscope. The mesenteric glands were tuberculous.

A RARE VARIETY OF CARDIAC DEGENERATION.

Dr. W. O. MEEK showed this specimen, which came from a woman aged 34, who had died from chronic pulmonary tuberculosis. The pericardium was healthy, but in the heart muscle there were several yellowish shotty foci and streaks, which on microscopic investigation proved to be due to calcification of the proper muscle fibres. The fibres could be seen with the granules inside; no carbonic acid was evolved by acid. The coronary vessels were pervious, and there was no atheroma of the arterial system.

Mr. S. G. SHATTOCK had once seen a disseminated calcification of the myocardium, but here the change was associated with a dense fibrosis. In Dr. Meek's case the pathogenesis baffled explanation.

OBSTETRICAL SOCIETY OF LONDON.

Dr. HERBERT R. SPENCER, President, in the Chair.

Wednesday, May 1st, 1907.

RUPTURE OF THE BLADDER.

DR. C. R. PORTER narrated a case of intraperitoneal rupture of the bladder occurring during labour:

The patient, a primipara, aged 32, who had never complained of previous bladder trouble of any kind, was seen forty-eight hours before labour had really commenced, on account of vague pains referred chiefly to the sacral region, and which were thought by the patient to be labour pains. There was then no undue distension of the bladder to be made out by abdominal examination. Urine had been passed that day. Two days later labour pains started in earnest, but medical aid was not summoned until twelve hours had elapsed. The nurse in attendance gave a history that labour had been progressing in the ordinary way for about twelve hours, when, during a pain, the patient suddenly cried out that "something had given way inside" and from that moment became very ill indeed. When seen the patient looked very ill, the pulse was very rapid, the tongue dry, and the abdomen was much distended and tympanitic. Ordinary labour pains were not to be distinguished from the acute general abdominal pain complained of, though some contractions of the uterus were still to be made out. The child was lying in the first vertex position, the os uteri fully dilated, and the head well down in the pelvis. Labour was not apparently obstructed except by the absence of efficient uterine contractions. It was thought that some grave intraperitoneal catastrophe had complicated labour, and in view of the serious condition of the patient chloroform was at once administered, and a full-term, well-nourished male child was easily delivered with forceps. After some *post-partum* haemorrhage the uterus contracted down well. The umbilical cord was nearly pulseless on delivery and the child died in about an hour.

The abdominal pain ceased to be complained of after delivery, but in view of her general condition, and of the fact that she passed no urine, she was removed to hospital, eight miles distant, twenty-four hours after delivery. At the operation then performed, a small vertical rent about 1½ in. long was found in the upper and posterior aspect of the bladder to the right of the middle line. The patient died about six hours later. No autopsy was allowed.

MALIGNANT VAGINAL POLYPUS.

Mr. ALBAN DORAN narrated the following case:

A married uniparous woman, aged 40, suffered from rigors and sweats in September, 1906. A mass was detected in the vagina, and a small tumour in the right iliac fossa. The vaginal growth was a racemose body, attached by a well-defined pedicle to the lower part of the anterior wall of the vagina; its lobules, more or less necrosed, were shed from time to time. Three sessile growths lay in the posterior wall, the mucosa over one was pigmented. In November the author removed the abdominal tumour, which proved to be a malignant adrenal growth in the upper part of the right kidney. The patient declined to allow a second operation for the extirpation of the vaginal growths; lobules of the pedunculated tumour continued to come away. She survived the nephrectomy three months. After death secondary deposits were discovered in the liver and right lung; their presence in the lung had been diagnosed before death.

On microscopical examination it was found that the vaginal tumours, as well as the growths in the liver and lung were of the adrenal type, and therefore secondary to the tumour in the kidney.

Dr. BECKETT OVERY described a similar case, in which a polypoid mass had been found attached to the anterior vaginal wall. This was removed, and a large tumour in the right side of the abdomen was discovered. Two months later the vaginal growth had recurred, and it was again removed. The patient died a month later. The *post-mortem* examination showed that the abdominal tumour was primary and was a malignant adrenal tumour starting in an adrenal rest. There were numerous secondary deposits in the liver and lungs, sections of which showed more or less typical adrenal tissue.

SPECIMENS.

Mr. J. BLAND-SUTTON showed a uterus four years after Caesarean section, in which the sutures used to close the uterus at the time of the operation were still visible.

Dr. LEWERS showed two specimens of cancer of the cervix removed by operation, one twenty years ago and one eleven years ago, the patients at the present time remaining free from recurrence.

Dr. MAY THORNE showed a uterus removed by operation, in which there was a villous malignant tumour as well as a fibroid undergoing sarcomatous change.

DERMATOLOGICAL SOCIETY OF LONDON.—At a meeting on April 10th, Dr. T. COLCOTT FOX in the chair, the following were among the cases shown:—Dr. WILFRID FOX: A man, aged 42, who had had syphilis fourteen years previously. He had lived much in South America, where the disease for which he was shown had appeared about six years ago. He was now extensively covered with a small papulo-pustular eruption which was particularly marked on the back of the thighs. These lesions recalled the papulo-pustules of acne scrofulosorum, and a section from one such lesion showed a cellular infiltration about the blood vessels with numerous plasma cells, an appearance which was suggestive of tuberculosis. The general opinion was in favour of a diagnosis of tuberculides. Dr. GRAHAM LITTLE: A lady who had lived in China for eleven years, and during the past year had developed a pigmented eruption upon the neck, the arms, legs, and abdomen. There was no history of any preceding eruption, there were no subjective symptoms except moderate itching, the mucous membranes were not involved. No swellings or alterations in the nerve trunks could be detected. It was considered impossible to come to any decision as to the character of the eruption in its present condition. Dr. COLCOTT FOX: A case of *Lupus vulgaris* dating from an attack of measles at the age of 2 years. The patient was now a boy of about 10, and had recently developed a follicular eruption which the exhibitor was inclined to regard as a miliary tuberculide of the nature of lichen scrofulosorum. Dr. H. G. ADAMSON: A child with a reddened, shiny, soft, congenital tumour the size of half a crown. In some respects this resembled a lymphangioma, but the consensus of opinion favoured the diagnosis of soft mole.

REVIEWS.

TUMOURS OF THE CENTRAL NERVOUS SYSTEM. Under the title of Contributions to the Diagnosis and Treatment of Tumours of the Central Nervous System, Professor D. H. OPPENHEIM publishes the notes of 14 cases of tumour of the brain and 15 cases diagnosed as tumours of spinal meninges, in each of which an exploratory operation was recommended and performed.[1] Although the regional diagnosis throughout is shown to have reached a high degree of excellency, the operation results can hardly be considered very encouraging. Out of 27 cases of tumor cerebri which have come under the notice of Dr. Oppenheim since the publication of his excellent monograph on brain tumours in Nothnagel's *Handbook* (1902), 3 cases (11.1 per cent.) may be considered to have been cured by operation. On 3 cases operation was only undertaken as a palliative measure; in 6 cases (22.2 per cent.) improvement followed surgical treatment, while in the remaining 55.5 per cent. the result was disappointing, for either the patient died from the operation or the tumour could not be entirely removed. It must, however, be taken into consideration that in 12 of these 27 cases the tumour was situated in the posterior fossa, the most unfavourable of all places for removal. The account of the cases shows that every precaution was taken and much care and thought expended before operation was recommended, and the results probably represent more nearly those obtained by the majority of surgeons than the more optimistic writers would have us believe. We can quite endorse Professor Oppenheim's statement that the operative treatment of tumor cerebri remains one of the most difficult and thankless tasks that the surgeon has to discharge. Among the 15 cases of tumour of the spinal meninges, the first 9 quoted gave excellent results, 4 out of the 9 showing complete recovery after removal of the growth. In the last 6 cases described—although, as Dr. Oppenheim says, he is showing the other side of the picture—the result of surgical interference is not discouraging. In 2 of the cases operation was fatal, 3 cases remained practically unchanged, and 1 showed some improvement. Three of these latter cases exhibited a condition described as "sero-spinal meningitis," a localized inflammation which cannot as yet be said to have come into recognition as a distinct entity, but we can well believe that it may give rise to pressure symptoms indistinguishable from those produced by a tumour of the meninges. In these cases it is possible that puncture and withdrawal of the fluid would give good results with less risk, but in the present state of knowledge the impossibility of differential diagnosis between sero-spinal or other localized forms of meningitis and new growth makes laminectomy the only safe course. Dr. Oppenheim points out that in tumours situated in the spinal canal, as in the case of intracranial tumours, an early exploratory operation is indicated, as soon as the condition is diagnosed surgical treatment should be advised, since in waiting for confirmatory evidence the risk to the patient is increased, and the chance of successful removal lessened. This book is a valuable contribution to neurology by a most distinguished and experienced neurologist; it is well illustrated with figures in the text, two coloured plates, and four tables of photographs.

M. Duret's book on intracranial tumours[2] is, he tells us, the expansion of a communication he made on the subject to the French Surgical Congress in 1903, and it is one which will consider worthy to rank with the works of Bruns and Oppenheim, of von Bergmann and Allen Starr. Of the four parts into which it is divided the first section consists of a study of the general symptoms of encephalic tumours—headache, vomiting, papilloma, and the chief motor, sensory, and psychic disturbances. The second part relates to the localizing symptoms of tumours of the frontal lobe with their psychical, convulsive and psycho-paralytic manifestations; of the Rolandic areas with their palsies and sensory phenomena; of the parietal lobe with their profound disturbances of sensibility; of the occipital lobe with hemianopsia; of the temporo-sphenoidal lobe with sensory aphasia; of the internal aspect of the hemispheres, the corpus callosum, the basal ganglia, the corpora quadrigemina, the pineal gland, the cerebellum, and other clinically-distinguishable localities. The third part is devoted to a broad view of diagnosis, symptomatic, differential, topographical, and pathological. The fourth part, to which is allotted 150 of the total 800 odd pages, consists of the surgical section of the book, and it is followed and completed by a tabulated analysis of the clinical facts and results in 400 cases of intracranial tumour that have come to operation and have been recorded for the most part in current literature. M. Duret's book is a monumental work. It is too large and too good for small criticisms, and appreciative recognition of its scientific, and, in a wide sense, its artistic value is all that is possible under the circumstances. It is essentially practical throughout, as would be expected from the distinguished surgeon; although packed with detail, no one, we think, could say that it is overburdened; it is certainly not over-elaborated. A careful study of the book justifies the statement that its matter is sound; the facts are clearly arranged and helpfully classified, and the illustrations are adequate. Even in such points as would be considered medical, for example, the differentiation of symptoms due to Bright's disease from corresponding symptoms often associated with cerebral tumour, the requirements of the position are well and faithfully met. Perhaps the most striking parts are those concerned with regional diagnosis. As to the purely surgical part of the book, it is of course thoroughly up to date, but the recommendations in regard to the manifold instruments to be used in brain operations will probably strike an English reader as lacking in simplicity, but the treatment of the whole subject, palliative and, if it may be, curative, is thoroughly broad and philosophic. It would indeed be difficult to say whether the greater value of the book attaches to the question of diagnosis, or, putting out of account the favourableness or otherwise of the results of operation, the question of surgical treatment. That the cases are by no means hopeless the analytical tables that complete the book sufficiently attest.

[1] *Beiträge zur Diagnostik und Therapie der Geschwülste im Bereich des Nervensystems.* Von Professor Dr. H. Oppenheim. Berlin: Louis Wolff and Co. 1907. (Imp. roy. 8vo, pp. 424.)

[2] *Traité des Tumeurs de l'Encéphale.* Par Dr. H. Duret. Paris: Félix Alcan. 1907. (Roy. 8vo, pp. 875, 207 illustrations. Fr. 25.)

ALCOHOLISM.

DRS. RAIF AND LAQUER have collected in their treatise *Die Trunksucht und ihre Abwehr* (intemperance and its remedy)[3] a number of interesting facts. The first part of the work summarizes existing knowledge of the physiological action of alcohol; in the second, the relation between the consumption of alcoholic beverages, pauperism, crime, and other social evils, is illustrated by statistics of all civilized nations, and in the third section various prophylactic measures are discussed.

In view of the complex nature of the problems discussed, we think the authors may be congratulated on the way in which they have performed an arduous task. The disastrous consequences of excessive indulgence in alcohol are so well known to the profession that in reviewing a book of this kind one is tempted to emphasize its shortcomings more than its merits, and we may therefore refer to a few points which might be improved in subsequent editions.

In discussing the actual dose of alcohol which is to be regarded as deleterious, the authors say (p. 26):

> Only very small quantities taken at rare intervals are without after-effects upon the organism. If it be regularly consumed, even in small quantities—which in the course of time have to be increased in order to produce the same euphoric influence as before—toxic effects are not absent; they first make themselves known, even in an apparently normal state of health—a point we wish to emphasize by the fact that without its ingestion ordinary normal physiological functions are not performed in the accustomed fashion for example, appetite, sleep, etc.

It may be doubted whether it is politic to apply such a criterion of toxicity to alcohol, since it might, within the experience of the person sought to be convinced, condemn

[3] *Die Trunksucht und ihre Bekämpfung. Beiträge zum gegenwärtigen Stande der Alkoholfrage.* Von Dr. A. Baer und Dr. B. Laquer. [The Drink Craving and its Prevention. Contributions to the Present State of the Alcohol Question.] Second Edition. Berlin: Urban and Schwarzenberg. 1907. (Roy. 8vo, pp. 242. M. 6.)

also many articles of diet in regular use. Much the same sort of statement is made by vegetarians about meat. Indeed, the violation of any long-established routine—for example, changing the hour of dinner, is, in many persons, followed by a temporary disturbance of sleep and appetite.

The most serious defect in the book is that the statistics contained in the second and third parts, although supplying valuable matter for further investigation, are not sufficiently analysed to permit of satisfactory deductions. For instance, figures quoted from the Registrar-General's Report for 1902 show that the number of deaths in England ascribed to alcoholism has doubled in twenty-five years (1876–1880, 42.4 per million; 1896–1900, 85.8). We are not given strictly comparable data for the annual consumption of alcohol, but taking the years 1885–1903, we find that this does not show a corresponding increase. The values are: 1885, 9.9 litres a head of absolute alcohol; 1900, 11.4. Taking the three main classes of intoxicants, we have: wine (13 per cent. alcohol), 1885, 1.7 litres; 1900, 1.9; beer (5 per cent.), 1885, 123.1; 1900, 143.6; spirits (50 per cent.), 1885, 4.4; 1900, 5.0. The increase is appreciable, but not sufficient to account for the mortality figures. The conclusion is that a more exact quantitative statistical investigation must be made as to the true relation between the variables. A similar criticism can be passed on most of the statistical treatment.

In the chapter on Alcoholism and Racial Degeneration the authors make statements which are questionable. For instance (p. 91):

> Since the highly degenerate offspring of drunkards are eliminated sooner or later, in the long run the ordinary (*mittelmässige*) individual consumption of alcohol, with its less severe degenerative and regeneration-inhibiting effects, has practically the most important influence on heredity and variability, and so much the more since an ordinary consumption does not markedly influence fertility, and the percentage of the non-selectively affected relatively to the selectively affected is markedly greater than in the case of drunkards. . . . From the point of view of racial hygiene we must first cope with moderate, and in the second place with immoderate, drinking.

Before these statements can be accepted statistical proof must be given that such degeneration is inherited. In other words, the transmission of an acquired character of the least favourable sort for inheritance would have to be proved. The statistics quoted from Legrain and Plant do not demonstrate these alleged facts. That there is a high percentage of epileptics among the offspring of alcoholics may be interpreted in at least two ways. The type of individual that drinks to excess *may* be different from that of the general population—a fact of which those who are in favour of total abolition must make effective use. The suggestion that epilepsy can be induced in a normal person by alcoholic excess, and that this condition will be transmitted to his descendants, is not borne out by any evidence to be found in the work before us.

Interesting figures are given showing the average expenditure on alcohol in different working-class families. Thus, in 908 Berlin families 6.74 per cent., and in 11,156 American families 1.62 per cent., of the total earnings were spent on alcoholic beverages. The authors attribute this striking difference, in large part, to a widespread belief among German artisans that beer is "*flüssiges Brot*."

The last section of the book, dealing with prophylaxis, is perhaps the best. The efforts of temperance societies, hygienic instruction in schools, legal regulation of the drink trade, and the attitude adopted by the State with regard to habitual inebriates, are carefully discussed. The authors think highly of the "Gothenburg System," its practical working and results being lucidly described. With reference to inebriate homes, as Drs. Baer and Laquer remark, the public interest demands that such institutions should always be under medical control.

THE FUNCTIONS OF FOOD IN THE BODY.[4]

IN a pamphlet with this title, Dr. RABAGLIATI of Bradford discusses the question of the source of bodily energy and heat. In opposition to views widely held, Dr. Rabagliati contends that the work done by the body, and probably also the heat of the body, do not depend on the food assimilated, whose sole function is to repair waste, but are instead drawn from "the unlimited stores of energy in which we live, move, and have our being." Of the ultimate source of vital energy, or bio-dynamics as he prefers to name it, he confesses his ignorance, but he thinks that we draw on these stores not from the dining-room but from or through sleep. "It is during sleep," he says, "it seems to me that our bodies charge or are charged with the vital energy or bio-dynamic, which seems to me to be the immediate efficient cause of the work done through the body." Dr. Rabagliati, who for many years has been convinced that man habitually, and to his own serious detriment, eats too much, seeks to prove the inadequacy of the theory that food is the fount of bodily energy from observations on fasting people. For the details of these observations we must refer readers to the pamphlet itself, but he attempts to show that in these people the tissue consumption, as evidenced by bodily waste, was quite insufficient to provide merely the 2,000 calories per diem which even a starving man is stated to emit in the form of heat loss, that is, "if it is not assumed that a man's [living] general tissues will have a greater calorie value than an equal weight of [dead] bovine tissue." The words in brackets are our own, and indicate a weak spot in Dr. Rabagliati's inferences from his observations, and at the same time the insoluble riddle of the whole matter, the secret of life. Regarding the essay as a whole, there appear to be several places in which the author's position is inconsistent with his platform of idealistic monism, and in discussing nervous energy and heat he leaves so much out of account that he cannot be said to attack the problem but only to affirm his own views. Nevertheless, assuming that Spencer was right in saying that the "transformation of ethereal undulations into certain molecular rearrangements of an unstable kind, on the overthrow of which the stored-up forces are liberated in new forms, is a process that underlies all organic phenomena," the question is still left open whether these molecular rearrangements may not be effected directly by so far unrecognized activities as well as through the recognized channels. Dr. Rabagliati's pamphlet is original and thoughtful, and is a too rare endeavour to relate everyday phenomena to what appear to be fundamental truths. It is to be remembered, however, that these same fundamentals are really abstract concepts, and that the term "energy" is an abstraction, a convenient and, within limits, valid abstraction, from certain material changes which fall within our experience. Truth is a two-edged sword, and this consideration cuts two ways—on the one hand, against those who, thinking largely in abstract terms, are too prone to endow these abstractions with concrete attributes—we may take as an instance the author's "synoidal-anthropino-bio-dynamic"—and thus artificially exclude other unknown but possible factors; and, on the other hand, against those with whom Dr. Rabagliati principally finds fault, who believe only in that which can be weighed in the chemist's balance. Whilst, therefore, we cannot accept Dr. Rabagliati's conclusions as anything but interesting philosophical speculations on what is conveniently termed "vital energy," we would deprecate any offhand dismissal of the idea that the working power of the living organism may be recruited not only indirectly through ingested and inspired material, but also directly from solar and terrestrial activities. Remembering the influence of solar rays upon the chlorophyll of plants, the recent discoveries in the phenomena of radio-activity, and still further bearing in mind that in all probability the difference between the high and low tides of working power is merely one of molecular redistribution, he will be a bold man who will deny this possibility; but from whence is the proof forthcoming?

[4] *The Functions of Food in the Body.* By A. Rabagliati, M.A., M.D. London: Elliot Stock. 1907. (Pp. 46.)

PROSTATECTOMY.

IN presenting a report on fifty-five cases of prostatectomy,[5] perineal and transvesical, Dr. ALBERT CASTAÑO of Buenos Aires makes some interesting remarks on the comparative advantages of these two methods of removing the prostate. Forty of the cases were operated on by the perineal route, fifteen by the suprapubic. There were three deaths in the first group and one in the second. Dr. Castaño considers that under most circumstances the transvesical operation

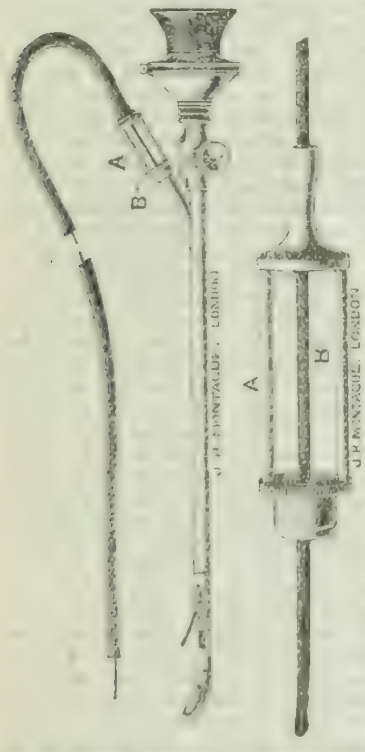
[5] *Prostatectomie Périnéale et Prostatectomie Transvésicale . . . Valeur de Chacune : Etude comparée des deux Méthodes.* Par Albert Castaño. Buenos Aires: A. Etcheparebarda. 1906. (Demy 8vo, pp. 49. Plates 4.)

is superior to the perineal. It is easier to perform, and allows a complete exploration of the bladder, almost impossible by the perineal route, especially in fat subjects, while the return to a satisfactory functional capacity of the bladder is more rapid. The one advantage which he admits in perineal prostatectomy is the better drainage after operation, and he therefore thinks that in urgent cases, in which it is impossible to disinfect the bladder satisfactorily, this route is to be preferred. The rectum, he says, is almost always damaged in the perineal operation, an accident which is impossible in the transvesical. Dr. Castaño has found it impossible to follow Freyer in making the incision through the bladder mucous membrane with his nail; he uses the bistoury, makes an incision about 1 cm. in length, and then introduces his finger. It is interesting and useful to read the personal experiences and difficulties of a surgeon candidly related as they are in this essay. Dr. Castaño is to be complimented on his successful series of cases and on his lucid comparison of the alternative methods.

MEDICAL AND SURGICAL APPLIANCES.

Aseptic Ureteral Catheterization Sheath.

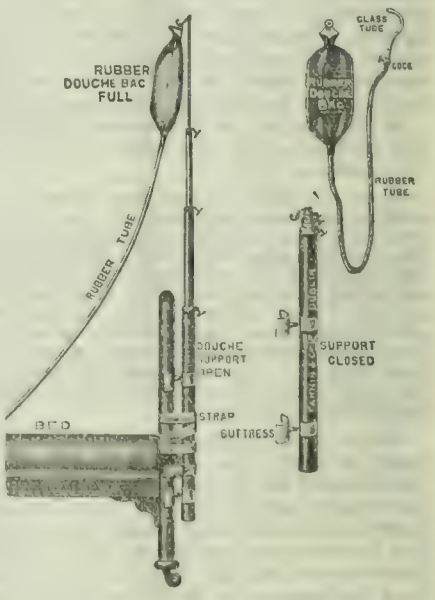
MR. R. J. WILLAN, M.B., B.S.Durh. (Senior House-Surgeon, St. Peter's Hospital for Stone, London), has designed the apparatus illustrated in the accompanying drawing. This comprises two detachable portions—namely, metal and rubber. The metal one consists of a perforated screw cap and a conical-shaped portion, with broad base and funnelled apex; these are fixed to one another by two thin side rods (A). The screw cap is a replica of the one on the upper end of the compartment for transmitting the ureteral catheter of the Nitze catheterization cystoscope. A piece of rubber tubing, 22 in. long and with a bore of ⅛ in., completes the apparatus. The rubber tubing is made to slip over the bulbous bell-mouthed apex of the cone, and the whole is screwed on to the cystoscope. The ureteral catheter having been introduced into the rubber tubing the catheter is pushed onwards. Owing to the funnel-shaped apex of the metal portion the catheter readily enters the lumen of the cone, reappears between the two metal connecting rods, and negotiates the orifice leading into the ureteral compartment of the cystoscope. When the *vis a tergo* has introduced the catheter as far as possible, it is grasped between the thumb and index finger of the right hand and pushed onwards as required.



The advantages claimed for this sheath are that it is simple in itself, the present real dangers from sepsis owing to the catheter touching the operator's face, hair, and being breathed upon are avoided. It is easily sterilized, for both rubber and metal portions will boil. Except for the end remote from the tip, there is no need to handle the ureteral catheter until it is well inside the cystoscope. The rubber tubing can lie anywhere over the cystoscopist's shoulder, in between the patient's legs, etc. Without this addition there is a great liability for the catheter to double up at point of handling when it is being pushed onwards, the opposing thumb and index finger slide up and down the side rods and give the necessary support. It is necessary to use a lubricant for the rubber tubing in order to make the catheter travel more easily; the best is paroleine, made by Messrs. Burroughs and Wellcome, and as this has now replaced glycerine as a urethral lubricant it is always handy; it may be introduced by a sterilized pipette. It is always as well to have a few spare washers in the cystoscope box, for when the sheath is being sterilized this washer in the screw cap is apt to boil out and be lost. The cable attachment to the cystoscope should point upwards, so as not to be in the way of the sheath during manipulation. Gum elastic tubing has been tried in place of the rubber, but the latter is more suitable. A spring arrangement for grasping the catheter while it is being pushed onwards, so that the fingers may not come in contact with it at all, was too complicated. In lieu of this the hands must of course be efficiently sterilized before touching the catheter. The illustration also shows Mr. John Pardoe's most excellent eyepiece fitted to the cystoscope. The sheath may be obtained from Mr. J. H. Montague, 69, New Bond Street, London, W.

Aseptic Douche Standard.

Dr. C. B. PASLEY (Dublin) writes: The want of a suitable support for holding a douche can, an implement so frequently needed after midwifery and all surgical operations, has often occurred to me—one that will combine strength, lightness, and compactness, and is suitable for fixing to such universally used objects as a bed or chair, thereby enabling one to dispense with the jug and Rotunda douche elevated in the arms of a midwife. The apparatus here described has been thoroughly tested by me and found satisfactory. The douche support consists of four aluminium tubes, the smallest of which telescope into one another, having a hook at the end. When drawn out the various sections are fixed rigidly by light spring clamps. Two buttresses are fixed to the lowest tube, to cause the stand to clear any uneven projection on the leg of a bed or chair, and so stand upright. A strap fixes the support when in position. The total weight of the support is only 1½ lb. The length varies with requirements, and can easily be made to fit into a large midwifery bag, together with a sterilizer full of instruments. The cost is estimated at 25s. The irrigator suggested is of American vulcanized rubber, capable of holding quite two quarts of water, and is suspended from the hook at the top of the douche support, but the stand is readily applicable to any form of irrigator. The whole apparatus, can, tube, etc., is easily boiled and so rendered aseptic. The support has been correctly made to my design by Messrs. Fannin and Co., 41, Grafton Street, Dublin, and it is proposed to call it the "Dublin" Douche Support.



TERCENTENARY OF GIESSEN. The University of Giessen which to Englishmen is probably best known as the place where Justus von Liebig worked and taught—will celebrate the tercentenary of its foundation this year. The ceremonies and festivities will take place on July 31st and three following days. The Hesse Legislative Chamber has voted a sum of 30,000 marks towards the expenses.

DEAF MUTES IN RUSSIA. In the general census of the Russian population taken in 1897, 158,759 persons 88,470 males and 77,350 females are registered as deaf-mutes. Of the whole number 136,153 belonged to Russia in Europe, 12,034 to Poland, and the rest to Russia in Asia. Among those classified as deaf-mutes there were 34,246 who were dumb without being deaf. Of the whole number of deaf-mutes 34,192 were of school age, that is to say, between 10 and 19; of these only 2,200 received any education. In Russia the training of deaf-mutes is mainly left to private enterprise. There are, however, institutions at St. Petersburg, Moscow, Warsaw, and Kasan which receive subventions from the State.

THE POLICY OF THE UNIVERSITY OF LONDON IN RELATION TO LONDON MEDICAL EDUCATION AND MEDICAL SCIENCE.

By WILLIAM HUNTER, M.D.Edin.,

Fellow of the Royal College of Physicians of London; Teacher in Pathology in the University of London; Recent Examiner in Medicine in the University of Glasgow; and former Research Student of the University of Cambridge.

(*Continued from* BRITISH MEDICAL JOURNAL, *April 27th, p. 1008*).

II.

EFFECTS OF UNIVERSITY POLICIES ON THE NUMBER OF STUDENTS ENTERING THROUGH THE DIFFERENT UNIVERSITY CENTRES OF ENGLAND AND SCOTLAND.

SINCE the policies pursued in the three great University centres of London, Edinburgh, and Cambridge present distinctive features, the policy of the University of London in relation to medical education was in my last article inferentially contrasted with that of the two great Universities of Edinburgh and of Cambridge, by whose prosperity that of London has undoubtedly been most affected. The comparison with Cambridge in particular was specially invited by the original basis of the "University of London," namely, that it was:

"A Board of examiners to perform all the functions of the examiners in the Senate of Cambridge, this body to be termed the 'University of London'" (1835).

It was further invited by the additional important statute passed in 1854:

"To extend the rights enjoyed by the graduates of Oxford and Cambridge in respect to the practice of physic to the graduates of the University of London"—an act by which the degree of M.B. in the University of London became recognized as a licence to practise—and the University was placed on the same terms as other universities.

The comparison was further invited by the last Charter of the University of London (1898), by which the various medical schools in London were affiliated to the University of London and recognized as "constituent colleges" of the University, in much the same way, it is alleged, as the various colleges of Cambridge, while financially independent, are related to the University of Cambridge—but erroneously, so alleged, since in Cambridge the University provides all the laboratories and expenses required for medical education, while in London the University leaves everything to its medical schools.

COURSE OF MEDICAL EDUCATION IN THE CHIEF MEDICAL SCHOOLS, 1866-1906.

The relative positions of the three Universities in regard to the numbers of medical students on which it was possible for them to exercise their particular University educational policy can be judged from the figures available from 1866-9 onwards, given in my last article, and now reduced to five yearly averages both as regards numbers and percentages.

The curves in *Chart 1*, based on five-yearly averages, differ little (as I knew from the larger chart of forty years which I had prepared would be the case) from those given in the former chart, based on each fifth year. I have added to this chart two curves above the one for the eleven London schools—one for the London School for Women, the upper one for various secondary schools and technical institutes, which recent policy of the Conjoint Board has recognized as places where medical students may register and take the first year of their medical studies. Whatever its object was, this policy has not been justified by success even to the secondary schools. Its net effect was to inflict further serious injury on the London hospitals, since it withdrew from them straight away (1895-99) more than one-sixth (fifty-nine yearly) of the number of students who might otherwise have entered them for their first year of study. As the result shows, these students are now registering neither in the secondary schools nor in the London hospitals, but are going elsewhere—to other university centres.

Chart 2 is the most instructive of all, since its curves are altogether independent of the numbers of students entering the profession. They represent solely the percentage of these students registering at the different centres. They show in a striking way that while other schools have from time to time risen or fallen as the result of each other's competition, the curve of the London schools has had an almost uniform downward course for thirty or forty years, and that this percentage decrease on their part began, and has steadily continued, even when the number of their students (Chart 1) was at its highest. At no period have the London schools ever materially encroached on other schools.

The following are the *eleven London Schools* referred to: Charing Cross; Guy's; King's College; London; Middlesex; St. Bartholomew's; St. George's; St. Mary's; St. Thomas's; University College; and Westminster.

Seven Provincial Universities are: University College, Bristol; Universities of Durham, Birmingham, Liverpool, Leeds, Manchester, and Sheffield.

RELATION OF THE REGISTRATION DATA TO SO-CALLED "ENTRIES" INTO THE LONDON SCHOOLS.

The figures given are the official registration data regarding "the place and date of commencement of medical study," and give information as to the place selected in the first instance by parents for their boys to enter the medical profession. They do not refer, *it must be noted*, to the actual number of students who may enter medical schools at some later period for some portion of their studies.

In other words, the work done—for example, by the London schools in medical education—must not be judged by the numbers entering for their whole curriculum of study, a subject that will be dealt with afterwards.

But the data supplied by these figures have a definite importance in connexion with the prosperity of medical education in London, for the double reason: (1) Any marked reduction in the number of students entering the medical schools of London for their whole curriculum of study must necessarily reduce the income—unlike other schools, *the only income*—available for the support of most of them; (2) their expenditure is in no way reduced by any falling off in the number of such students, since the schools have to keep the same laboratories and the same staff of lecturers as would suffice for a much larger number.

The information supplied by these data is not confined, however, to the London schools, but throws interesting light on the prosperity of medical education in other centres, and incidentally on the causes affecting the present condition of the London schools.

As stated, these registration figures do not correspond to the figures of so-called "Entries" in the London schools during the corresponding years.

These latter "Entries" include not only students entering the schools for their whole curriculum, but also students from Cambridge, Oxford, and other schools entering these schools for the later (clinical) part of their course, or for shorter courses of study.

These "Entries" returns are so unequally estimated for different hospitals and schools, and so unreliable that they have for the last year or two been discontinued. They have no official character or comparative value, such as belong to the official registration returns which relate to one class of facts, "Date and Place of Commencement of Medical Study"—as duly written out by the student himself, and certified by the official of the school.

I have tested the correctness of these registration returns in various ways, including a comparison with the above-mentioned "Entries" into the London schools, and find that their figures and curves give an accurate picture of the relative prosperity of various schools at the different periods.

Thus, the total number of "Entries" into the London schools (not including the School for Women) during the five years 1896-1900, as given by Mr. Butlin from the BRITISH MEDICAL JOURNAL returns, was 2,516. This presumably included: (1) The students registering in London for their whole curriculum; (2) those entering from Cambridge, Oxford, and other schools for their later studies; (3) those entering from secondary schools and institutes where they had originally registered and taken a portion or all of their first year of study.

The important point is that the registration returns err, if at all, on the side of excess.

But the best test of the reliability of these registration

data as a measure—the only official one—of the relative prosperity of various schools is that the variations they show in number, especially the high figure before the Nineties, and the sharp fall since 1895, exactly correspond with what is the general knowledge of all acquainted with medical education in London during these periods.

According to Mr. Butlin's figures the London "Entries" in the period 1896-1900 were 878 fewer than in the period 1879-83, an annual average falling of 175 "Entries." The total increase of provincial "Entries" during the same period was 596, an annual average increase of 120 "Entries."

TABLE I.—*London, Edinburgh, and Cambridge (Five-Yearly Averages).*

Period.	Average Number of Medical Students Registered.						Percentage of Average of Total Registered for England and Scotland.		
	Average Number for England and Scotland.	London.			Edinburgh.	Cambridge.	Eleven London Schools.	Edinburgh.	Cambridge Univ.
		Eleven Schools.	Schools for Women.	Secondary Schools and Institutes.					
1866-9 ... (4 years)	775	315	—	—	76+	16	40.6	10.0	2.1
1870-74 ...	961	374	—	—	152+	20	39.3	15.9	2.1
1875-9 ...	1257	440	—	—	209+	39	35.0	16.6	3.1
1880-4 ...	1513	430	[illegible]	—	294	79	28.4	19.4	5.2
1885-9 ...	1672	430	19	1	318	97	25.7	19.0	5.7
1890-4 ...	1638	425	32	4	247	129	25.8	15.0	7.8
1895-9 ...	1432	352	36	59	234	132	24.5	16 3	9.2
1900-4 ...	1221	247	21	26	235	112	20.2	19.2	9.1
1905-6 ... (2 years)	1140	237	16	13	226	110	23.7*	19.8	9.6

* Total inclusive of School for Women, Secondary Schools, and Institutes, 23.2.

TABLE II.—*Number and Percentage of Registrations in Seven English Provincial Universities, Oxford, Glasgow, and Aberdeen.*

Period.	Average Number of Students Registered.				Percentage of Average of Total Registrations for England and Scotland.			
	Seven English Provincial Universities.	Oxford	Glasgow.	Aberdeen	Seven English Provincial Universities.	Oxford	Glasgow	Aberdeen.
1866-9 ...	—		[illegible]		—	—	9 0	—
1870-4 ...	—		82		—		9.6	—
1875-9 ...	—		[illegible]		—		6 0	—
1880-4 ...	186	—	[illegible]	75	12 2	—	8.9	4.9
1885-9 ...	208		[illegible]	82	12 4		9.2	4.9
1890-4 ...	210	22	130	78	12 8	1.3	7.8	4 3
1895-9 ...	196	29	102	65	13 8	2.0	7.1	3.9
1900-4 ...	157	21	[illegible]	61	12.8	1.7	8 5	5.4
1905-6 ...	158	23	[illegible]	70	13.8	2 0	9.3	6 4

NUMBER AND PERCENTAGE OF LONDON UNIVERSITY MATRICULATED STUDENTS IN THE TOTAL REGISTERING IN THE ELEVEN LONDON SCHOOLS.

I have had difficulty in ascertaining the number of London University matriculated students who have registered in the London medical schools for their whole period of study. I have only been able to get this information by going through the whole lists of students registered in Great Britain and Ireland from year to year. I have therefore confined this examination to every fifth year from 1870 onwards. The proportion of University matriculated students to the total number of students registering in the 11 London schools every fifth year from 1870 onwards is given in the following table:

TABLE III.—*Number and Percentages of University and Non-University Students Registering in the Eleven London Schools, 1870-1906.*

Year.	Total Number Registering in London Schools.	Number and Percentage of Matriculated University Students Registering in Eleven London Schools.			Percentage of Non-matriculated Students Registering in Eleven London Schools.
		Number.	Percentage of London Students.	Percentage of English and Scottish Registrations.	
1870	350	43	12.2	4.8	87.6
1875	361	62	17.1	5.9	82.9
1880	476	91	19.0	5.7	81.0
1885	427	99	23.1	6.3	76.9
1890	416	123	29.5	7.6	70.5
1895	418	117	27.9	7.6	72.1
1900	253	69	27.2	5.4	72.8
1906	253	87	34.0	7.5	66.0

VARIATIONS IN THE INDIVIDUAL LONDON HOSPITALS.

The fall of about 200 in the number of students registering each year in London has been distributed among 11 schools, and represents an average fall of about 18 for each school; or, allowing for a five years or six years' course, a fall of about 100 students attending each school.

For a large university already well equipped and endowed, and with well-paid professors, this loss, however noticeable, would not materially affect the maintenance of the medical schools or of its professors. But the case is otherwise with schools absolutely unendowed and self-supporting, as most of the London schools are, and dependent on the fees of their students for their maintenance and for the salaries of their scientific teachers.

In the case of the London schools, however, the effect of the general decline in the number of London students entering for their whole course has been much greater than that above noted, for the fall has not affected them all in equal degree or at the same time.

The analyses I have prepared relating to the movements of students to and from all the London hospitals during the past forty years of their history reveal most remarkable variations in the numbers of their students at different periods, and sometimes even from year to year.

A sudden rise in one school from 50 to over 90 in one period is followed five years later by a fall to 60 or 70. In several others the fall is continuous and steady from year to year without interruption; others show variations of more or less striking character at shorter intervals.

Nor are these variations specially found in the smaller schools; on the contrary, they have affected the largest schools in even greater degree than the smaller, some of which have maintained a relatively uniform position.

There is no feature of the medical education in London which more denotes the unsatisfactory conditions under which it is now conducted than this one; none more likely, unless corrected by collective agreement and reform on the part of the hospitals, and by change in the policy of the University, to inflict a permanent and irremediable injury to the cause of medical education than this one.

RESULTS.

The final result of forty years' history is, then, the following:

Cambridge, starting lowest (2.1 per cent.) and latest (1875-85) in the race, and without the hospital facilities necessary for its students, has, as the result of a definite *educational* policy, steadily increased, till it now attracts nearly 10 per cent. of all English and Scottish medical students desiring to enter the medical profession. This increase has been entirely at the expense of London.

Edinburgh, starting in a better position (of already educating 10 per cent. in the University alone), with a

CHART 1.—*Showing the average numbers registering (five-yearly averages).*

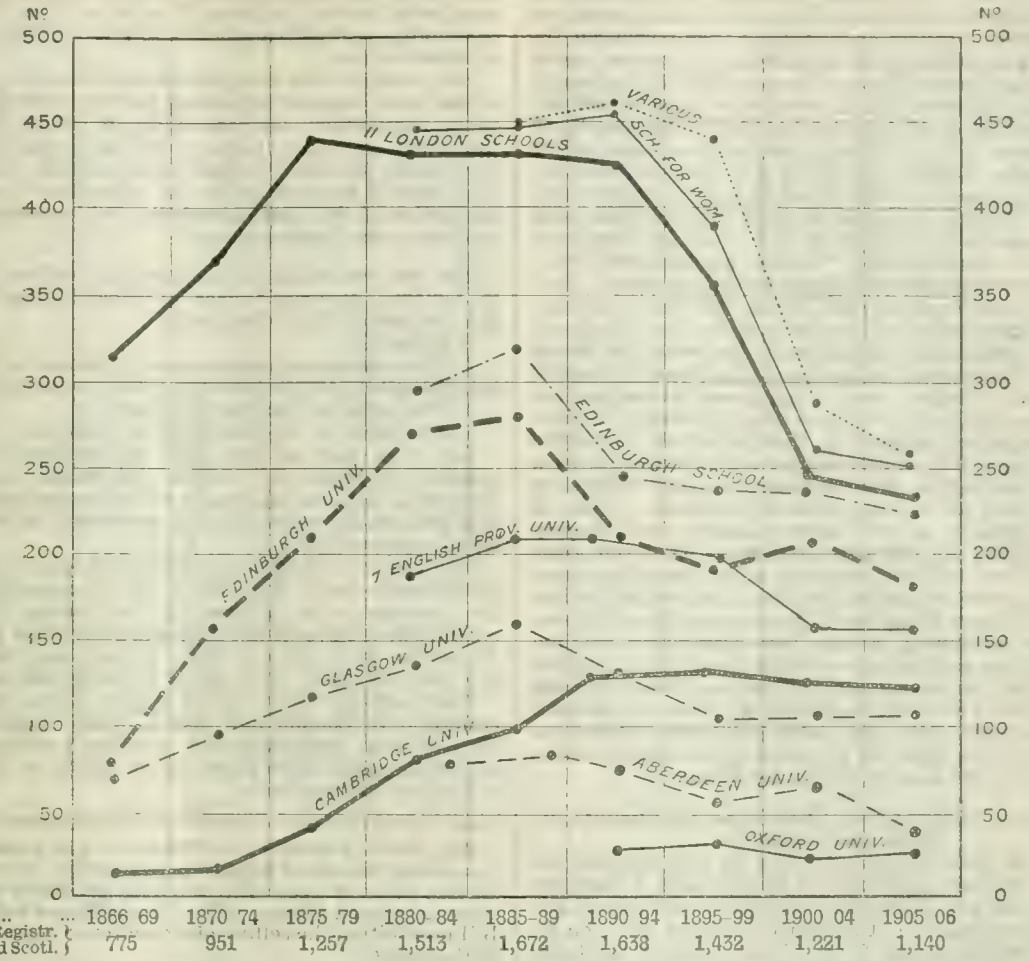
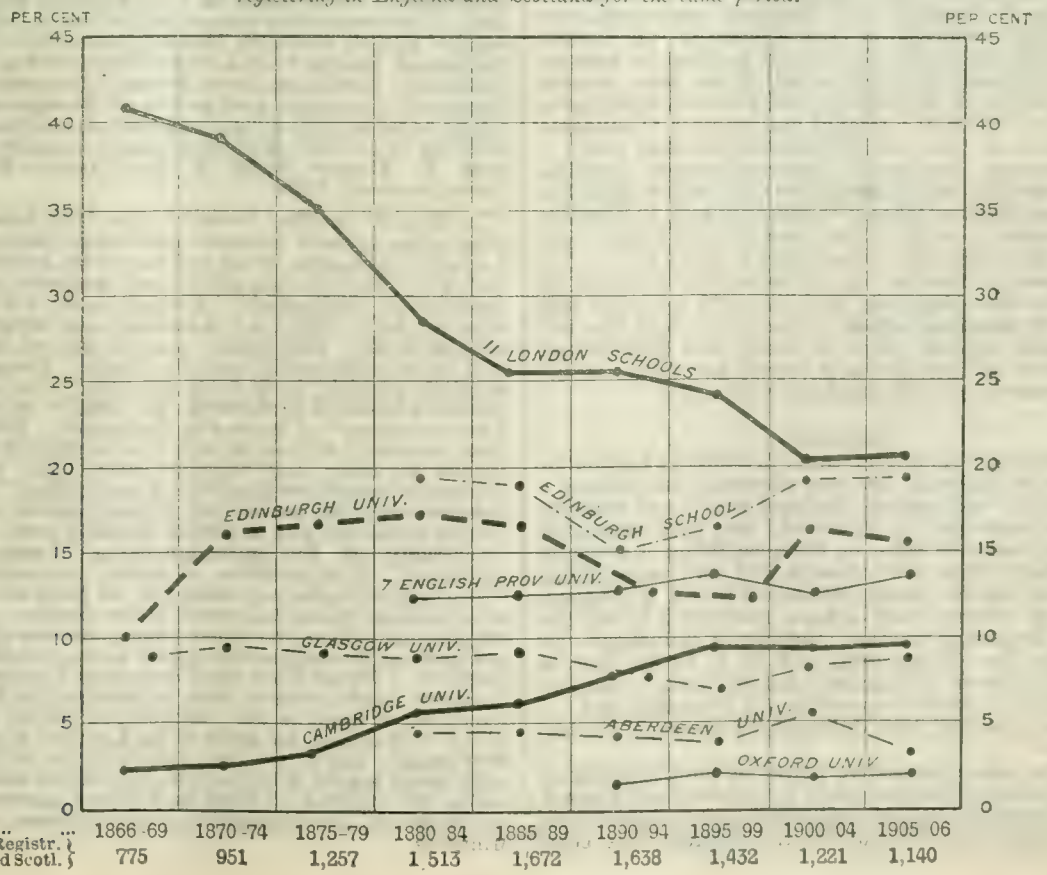


CHART 2.—*Showing the percentages of these averages to the average number of medical students registering in England and Scotland for the same period.*



well-established "Edinburgh tradition" in teaching as her most valuable asset, but with teaching accommodation (in the old University) and hospital accommodation (in the old Royal Infirmary) of an inadequate character, made a remarkable sudden forward bound (1870-74) to nearly 16 per cent., increased this to over 19 per cent. in 1880-84; then, after a fall to 15 per cent. in 1890-94 (due largely, as Chart 2 shows, to the increasing competition of Cambridge and the seven English provincial university schools), recovers its loss, and ends with about 20 per cent. of the total.

London, started in by far the best position (with over 40 per cent. of the total students of England and Scotland) —with her well-established "London hospital tradition"; with no fewer than eleven hospital schools, some of them among the most famous in the world; with the encouragement and reputation at its back of the two oldest and most distinguished Royal Colleges in the world (the Royal College of Surgeons of England and the Royal College of Physicians of London); and lastly, placed in the position (by the foundation of the "University of London" in 1835, and its important statute in 1854, by which its degree was recognized, like that of Oxford and Cambridge, as a licence to practise) to offer its students a good university degree as well as a great medical education. With all these advantages in its favour, London has steadily declined (Chart 2), and now attracts to its eleven great medical schools for their complete education a little over 20 per cent. new students; or, including the London Medical School for Women, 22 per cent. Moreover, as Chart 2 shows, while other university schools have from time to time encroached on each other—notably Cambridge and the seven English provincial universities on Edinburgh and Glasgow, 1890-4 and 1895-9—and all of them on London, at no period during the past forty years has London encroached on them with the single exception (creditable to that school) of the London School for Women.

Proportion of University and Non-University Students in London and Edinburgh.

Striking as these figures are, they do not exhaust the degree of contrast between the London and Edinburgh schools, or the two Univerities associated with them. For while in Edinburgh the University students have on an average contributed from 80 to 90 per cent. of the total, and have during the past 25 years contributed from 17.6 to 15 per cent. of the total number of medical students registering in England and Scotland each year, the matriculated students of the University of London registering in the 11 London schools have on an average (of each fifth year) been only about 25 per cent., varying from 12 per cent. to 34 per cent., and have only constituted from 4.8 to 7.6 of the total of the number of students registering in England and Scotland for the same year.

The average number of non-matriculated ("extramural") students in Edinburgh has thus varied from 7 to 20 per cent., the two schools—University and Extramural —supplementing each other from time to time, and keeping their total high. (See Chart 1, 1895-9.)

The average number of non-university students in London has been anything from 87 to 66 per cent. (see Table III), averaging about 78 per cent., and the two schools have together fallen to nearly half their former number, and to one-half their former percentage of the total registrations for England and Scotland.

Conclusions.

The distinctive policy of the University of Edinburgh (of not only educating her own students, but allowing a large band of "extramural" teachers to help and compete with her professors in this work) has been associated with, and been the cause of, the great influx of students to Edinburgh from 1870 onwards, and her prosperity has maintained that of a strong extramural school of teachers. University students have always constituted by far the greatest proportion of the students of Edinburgh—on an average over 60 per cent., and 15 to 17 per cent. of the total students of England and Scotland. She has held herself entirely responsible for educating and, if successful, granting her University degrees to all her students.

The even more distinctive policy of the University of London (merely examining and non-educational) has not only not been the cause of any influx of medical students to the London schools, but, on the contrary, has been associated with a reduction of nearly one-half (200) in the number of students entering these schools for their whole curriculum, and with a great diminution in the prosperity of these schools.

Her students have always constituted a small proportion of the total number registering in these schools for their whole curriculum—only one-eighth to one-third—averaging about one-fourth (25 per cent.), and only 5 to 7 per cent. of the total for England and Scotland. She has not held herself responsible for the education of even this proportion of the London students, but has entrusted this entirely to the London schools.

The problem which all interested in medical education in London have now to face is, What is responsible for this deplorable state of matters?

Is it due to:

1. The character of the education given, or the particular inter-hospital policy followed, by the London schools.
2. The policy of the Conjoint Board.
3. The policy of the University of London.

Let it be said at once that the problem which the present condition of medical education in London presents is not one that can be settled by futile recrimination between the various bodies concerned as to which is chiefly responsible.

Still less is it the problem which—judging from recent controversy—many consider it to be—namely, whether the percentage of failures in the London University examinations have within the past two or three years been 3 or 4 per cent. above or below (50 per cent.) that in the few previous years. It is one of a totally different nature.

That problem is the great public cause of medical education in London and justice to the London student, both of them profoundly and injuriously affected by the conditions which have prevailed for thirty or forty years, and which still continue.

THE State Assembly of Wisconsin has passed a Bill forbidding the sale of tobacco in any form in persons under sixteen years of age. The Bill also prohibits the use of tobacco by such minors. The Illinois House has passed a Bill prohibiting the selling of cigarettes or cigarette papers in that State.

THE next expedition of "E. M. I.," a kind of post-graduate touring association, begins on August 7th and ends August 23rd. The party, after assembling at Nancy, will cast a medical eye on Stuttgart, Munich, Nuremberg, Carlsbad, Marienbad, Prague, Vienna, Buda-Pest, Salzburg, Gastein, Innsbruck, Zurich, and Swiss Baden, finally separating at Besançon. It seems a good deal to get through in so short a time as sixteen days, but doubtless should prove an interesting expedition. Further information can be obtained from M. Etienne Bazot, 8, Rue Francois-Millet, 16, Arrondissement, Paris.

IN PRAISE OF MR. LUPTON. The May issue of the *Vaccination Inquirer* contains an amusing article on "Mr. Lupton's Courageous Work and the Cruel Indifference of M.P.'s'." There is this pitiful and pathetic appeal to members of Parliament: "Colleagues, do not laugh at him, for he is right; he is calling your attention to a colossal fraud." This rather reminds one of the notice said to be occasionally seen out West: "Please do not shoot the pianist; he is doing his best." The article is evidently intended to encourage Mr. Lupton to pursue his "noble conduct" of the case in Parliament. Referring to him, it says: "All honour, and thanks upon thanks and thanks to him; and blessings even upon what our opponents are pleased to call his eccentricities!" One of these eccentricities consists in repeated attacks upon the honour of medical men as seen in the daily press. Another eccentricity is the mirth-provoking "rather lurid pathology," in extenuation of which the article says: "Mr. Lupton's pathology cannot be too lurid for us," . . . an admission which does credit to the *Inquirer*. Another eccentricity is the circulation among electors of guesses and home made calculations which cannot be reasonably defended. For all these the *Vaccination Inquirer* returns its many thanks, and on them pronounces its blessings. Exception is taken to the "stereotyped official answers" which, it is alleged, are given to Mr. Lupton's questions in Parliament. The only satisfactory solution of this difficulty would appear to be the introduction of a short Bill to enable Mr. Lupton to hand in his own answers to his questions at the time when he addresses them to Ministers.

"HUMOURS OF ANTIVIVISECTIONISM."

WE have received the following letter from Miss B. E. Kidd, Secretary, British Union for Abolition of Vivisection (32, Charing Cross, S.W.):

As my name is quoted in an article appearing under the above heading in your issue of May 4th, may I claim the privilege of an explanation?

In a speech which I delivered at Sheffield on April 26th I stated the following facts: The Home Secretary having placed on the Royal Commission certain licensed vivisectors and well-known scientific upholders of the practice, Mr. Smeaton, M.P., approached him with the reasonable request that a medical representative of the anti-vivisection cause should be also included. The Home Secretary replied that "He would not appoint any one deeply committed to the other side." Mr. Smeaton received no answer to his rejoinder that licensed vivisectors being of necessity "deeply committed" to the vivisectionist position, the constitution of the Commission could hardly be accepted as satisfactory by antivivisectionists. This conversation was repeated by Mr. Smeaton at a meeting of the British Union in the Queen's Hall on December 11th, 1906. My statement at Sheffield was thus amply justified.

I observe, further, that you have accepted the error of the reporter of a Hereford paper, who has credited our Honorary Secretary, Dr. Hadwen, with mentioning Professor Starling as a member of the Commission. Dr. Hadwen's public utterances criticizing the Commission in detail, and his exposure, in particular, of Dr. Gaskell's experiments, are so well known that it seemed to me superfluous to correct the reporter's obvious mistake when I saw it.

We may remind Miss Kidd that the Home Secretary, as reported in the *Times* of October 26th, 1906, stated, in reply to Mr. O'Grady, that of the ten Commissioners, four, including two distinguished medical men, were suggested to him by the Antivivisection Society. Again, we ask, does she mean to imply that Colonel Lockwood, Mr. Tomkinson, and Dr. George Wilson are not "deeply committed" to the antivivisectionist side? Unless she can answer this question in the affirmative, her statement at Sheffield is certainly not justified. As for Dr. Hadwen, even if the responsibility for the erroneous statement about Professor Starling attributed to him by the *Hereford Times* is to be placed on that convenient scapegoat, the reporter, will Miss Kidd justify the statement which appears in the same speech, that "the Commission was packed with men absolutely committed to vivisection"? In a speech delivered at Wolverhampton on October 4th, a report of which appeared in the *Morning Post* of the following day, Dr. Hadwen enumerated three members of the Commission who had held licences for vivisection. As three of the Commissioners have expressed strong views against experimentation on animals, it is equally open to us to describe the Commission as packed with men absolutely committed to antivivisection.

INTERNATIONAL CONGRESS OF HYGIENE.

As has already been announced in the JOURNAL, the Fourteenth Congress of Hygiene and Demography will be held in Berlin this year in the last week of September (23rd to 29th). We are pleased to learn from the Secretary-General, Dr. Nietner, that the arrangements are progressing satisfactorily, and that everything gives promise of a highly successful meeting. In accordance with Dr. Nietner's request, we publish the following interesting statement:

"*The Exposition, which is projected to take place on occasion of the XIVth International Congress for Hygiene and Demography*, promises to become very interesting. The participation of the scientific Institutes, of State and Common authorities, as well as of the private industry is a very active and lively one, thus we are able to grant the members of the Congress an accomplished view of the present state of the Hygiene in scientifical and in practical way. The fight against infectious diseases, principally the colonial and tropical diseases, the Hygiene works of State and Commons, aspecially the Care of infants, the provising of good drinking water, the removal of waste, the Hygiene in schools will be represented in an exhaustive and interesting manner. In consideration of the high importance which the Hygiene has gained on the private and public life, it has been resolved to open the Exposition, which is to be held in the "Reichstag," still after closure of the Congress up to the End of September. All persons interested will have so full opportunity to make themselves acquainted with the measures and means of this part of the medicine to which we may prescribe the diminuation of the general mortality and the considerable increasing of the average age during the last ten years."

We suppose a translation is scarcely necessary; but we may, perhaps, be allowed, like Mr. Chucks, "to insinuate in the most delicate manner, just to hint," that before issuing the document the Secretary-General of the Congress might with advantage have submitted it to an English eye for revision. We make this suggestion with due deference, as our German friends, who claim Shakespeare as their own, seldom attempt to hide their belief that they know our language better than those to the manner born. After all, it is a harmless delusion, which often adds to the gaiety of the English nation.

MOTOR CARS FOR MEDICAL MEN.

COST OF RUNNING.

SPARKING PLUG writes: Mr. Wm. S. Dickie's letter in the BRITISH MEDICAL JOURNAL of May 4th, 1907, furnishes food for reflection, and his figures may then serve both as helps and warnings.

Let us give him, for the sake of symmetry, 170 miles, and make his mileage an even 3,000, instead of 2,830; and, for the same reason, allow him the odd £6 7s. 7d., so as to reduce his expenses to a round £200. We then get the result that he has averaged 15 miles for each £1 expended, or a cost of 1s. 4d. a mile. (Parenthetically, patients in the country do not expect to pay much more than 1s. per mile.)

Now, 3,000 miles a year will allow for sixty-five days' holiday, and then averages 10 miles only a day; or, if only Sundays be deducted, 9½ miles for each weekday; or, if neither Sundays nor holidays be taken, 8⅓ miles daily, a distance a man can do comfortably on foot, or at which a horse, pony, or donkey would laugh.

Again in a similar semi-accurate way let us allow £26 a year for the food of a horse, £4 for shoeing and veterinary, and as the motor is a four-seated one let us also set aside £30 for the hire of a victoria, brougham, or landaulet, with harness, and for stable rent, depreciation of horse, etc., another £30. We shall then have an outlay of £90 for the 3,000 miles, giving an average 33⅓ miles for each £1 expended, or a cost of less than 7½d. a mile.

I will not "pile up the agony," but I think it is time that the true facts were put before the young and impecunious members of our poor profession, and as I some years ago wrote to you belauding the motor car I will some day send you, by way of apology, for publication the results of a personal experience of a mileage of more than 10,000 a year for three years with an expenditure which compares disastrously with that of a large stable and which can only be justified by balancing it against the cost of other luxuries as gambling, drinking, hunting, etc., which are not indulged in by me.

WILLIAM ROBERTSON, M.D. (M.O.H., Leith), writes: I was more than pleased with your contributor's concluding comments in his last article. I refer to the vexed questions of payment and delivery. Some very radical alteration will require to be made in order to do away with the unbusiness-like principle at present in vogue. This in brief is what happens. A. chooses a car after much deliberation. He writes to the agents, who respond with a delightfully frank letter to the effect that they will be glad to book the order when a third of the price of the car is forwarded to them. The car will be delivered in six weeks. The weeks are multiplied, and two or more months may elapse. A. becomes irritable and cross, but more plausible letters are the responses to his vexation. At last A. is told that his car is ready to be dispatched, and when the balance of payment is sent the car will be packed off to its destination. The car arrives. It requires tuning up. *This* is wrong, *that* is loose, and another part is sent which is not in accordance with the specification. If it were a suit of clothes or any other article, it would be returned to be made right. But what of the car? A. writes to the agents. The reply is different in tone now. The money is in the agent's hands and he begins to bluff poor A. This style of thing has been going on now for some years, and your contributor has done excellent service to intending purchasers by calling serious attention to it.

Any large firm in London (apart from motor car sellers) will credit me if I order goods to the extent of one or more hundred pounds. I give a security and that is sufficient. Why is a security not enough in the case of pur-

chasing a motor car? If the agent is not satisfied with the security he has his own remedy.

Before concluding his excellent and practical articles, your contributor might see fit to draw up a suggested form of agreement to cover payment and timeous delivery. There are at least a dozen different cars now being made, any one of which would be found to give satisfaction to a medical man. If the maker of the car first chosen cannot guarantee delivery in reasonable time, the purchaser can pass on. The first enterprising firm that will come along with a sporting offer to take payment on delivery will reap a golden harvest. The makers can easily protect themselves by a well-worded form of agreement.

Will you, in conclusion, let me say, in answer to those (many they are) who write about the car I spoke so well of last year, that I ran it over 7,000 miles, had two punctures, and never spent a penny piece in repairs. I sold the car and ordered another of the same make, but a little more powerful. I still say there are many good doctor's cars on the market, but few any better than that I wrote about. But on no account order this type of car unless delivery be guaranteed within a specified time. My car was ordered in February, delivery was promised on March 19th, and from week to week I have been put off.

THE MIDWIVES ACT.

WEST SUSSEX

A REPORT of the Midwives Committee of the County Council, recently presented, stated that the Committee had had before it the quarterly report by the Inspector of Midwives. That official pointed out that since November 9th, 1906, the number of practising midwives had increased from 70 to 87. Of the increased number, 12 were bona-fide midwives who had either never notified or had their names erased from the list as only taking doctors' cases, and the other 5 were trained nurses. There were also 7 other midwives whose names were on the midwives' roll, but who were not practising at present, only taking monthly nursing under doctors. These added to the number of the other midwives, brought the total number of midwives under the inspector's supervision this past year to 94. Taken as a whole for the past year, the work and conduct of the midwives in the West Sussex district had been highly satisfactory. A letter was read from the Town Clerk of Chichester, stating that the attention of the Town Council had been drawn by their medical officer of health to the fact that some midwives were accustomed to advise the burial of stillborn children in places other than burial grounds, and expressing a hope that the Committee might be able to do something to prevent this objectionable practice. The inspector was instructed to call the attention of midwives to the undesirability of their giving such advice. The report was approved without discussion.

LITERARY NOTES.

To the *Cornhill* for May Mr. Leonard Huxley, biographer of his famous father, contributes an interesting article entitled "A Great Darwinian and His Friends." The great Darwinian is Sir Joseph Dalton Hooker, the illustrious botanist whom we are proud to claim as a member of the medical profession. Born in 1817, he is still with us. His father, Sir William Hooker, was also a great botanist, and like his son was Director of the Royal Gardens at Kew. Joseph Hooker received his training at Glasgow, proceeding to the University from the High School. After taking his degree he, at the age of 21, entered the medical service of the navy, and joined Sir James Ross's Antarctic Expedition. His report on the botany of the southern regions won immediate recognition for its thoroughness and insight. The knowledge which he thus gained of the swarming, minute vegetable life of the Southern Ocean which supported the creatures, and his grasp of the problem of distribution, was of the greatest service when he came to grapple with the question of natural selection and the origin of species in association with Darwin. Within four years of his return from the Antarctic Hooker went to the Himalayas, making a collection of the flora of these mountains. Botanical research being diversified by imprisonment at the hands of the Rajah of Sikkim. In 1860 he visited Syria to investigate the oak trees of that region; in 1871 he explored botanically the Atlas and other ranges of the Atlas Mountains in company with John Ball, a botanist, who was the first President of the Alpine Club. He was Darwin's closest and oldest friend, and was the earliest confidant of his great conception. Mr. Huxley gives an account of the famous X Club, which consisted of nine members, of whom it was said that between them they could have managed to contribute most of the articles to a scientific encyclopaedia. In addition to Hooker, Huxley, Tyndall, and Herbert Spencer, there were Lord Avebury, George Busk, Edward Frankland, Thomas Archer Hirst, and William Spottiswoode. At their meetings they did not always discuss science and philosophy, as may be gathered from the following record of one of them: "Talked politics, scandal, and the three classes of witnesses—liars, d——d liars, and experts." It is a pity there was no Boswell at the meetings of the X Club.

In the *St. Bartholomew's Hospital Journal* for March Dr. J. A. Nixon tells the story of John Mapletoft, who translated Sydenham's works into Latin. He was of cavalier stock, and was the grandnephew of Nicholas Ferrar, the founder of the quasi-monastic community at Little Gidding, which is familiar to readers of *John Inglesant*. Mapletoft was born in 1631, educated at Westminster under the famous Dr. Busby, and Trinity, Cambridge, and, as was usual in those days, studied medicine in Italy. At Westminster, Mapletoft formed a lasting friendship with John Locke, philosopher and physician. Mapletoft was closely associated with Sydenham, who in 1675 speaks of him as *amicissimus mihi vir*, and to him is dedicated the first edition of the English Hippocrates's *Observationes Medicae*, which was published in 1685. He was for a time Gresham Professor of Physic in London, but he resigned that position in 1679 and entered the Church. In 1682 he was appointed to the living of Braybrooke in Northamptonshire. Three years later he was appointed to St. Lawrence Jewry in London. He died in 1720 in his 90th year. He was a founder of the Society for the Propagation of the Gospel. Locke's feeling towards Mapletoft is shown by what he wrote to him on his entering into Holy Orders: "I like our calling the worse since you have quitted it."

Although in the fifth century before Christ Pindar had declared water to be the best of things, we are perhaps a little apt to think that the hygienic effect of water drinking is a modern discovery. Yet there is the immortal figure of Dr. Sangrado to testify that in the eighteenth century the therapeutic virtues of that element did not lack a prophet. The *Chronique Médicale* has unearthed the fact that a farce entitled *Le Dr. Sangrado*, by M. Anseaume and an unnamed collaborator, was played for the first time at the fair of Saint Germain on February 13th, 1758. In it occurs a song of which the following is a verse:

Pour guérir toute maladie,
Migraine, goutte, apoplexie,
Apprenez un moyen nouveau:
Buvez de l'eau, buvez de l'eau.
De ce breuvage,
Faites usage,
J'en garantis l'effet certain.
Pour l'asthmatique,
Pour l'hydropique,
Ce spécifique est souverain.

Theses in praise of the hygienic properties of wine were common enough in the old medical faculty of Paris. Was the "great unknown" who collaborated with M. Anseaume a physician who chose this mode of uttering a counterblast?

The *Spectator* of May 4th publishes an elegy by Mr. Wilfred Campbell on William Henry Drummond, the Canadian doctor-poet, whose death was recently announced in the JOURNAL. We quote some of the lines:

Man ne'er had kindlier comrade,
Nor earth more noble son,
Earth's peoples truer singer,
Than he whose race is run.
* * * * *
And the folk of the homely patois
Will know his gentle no more,
* * * *
For out on the shining water
He has launched the shadow canoe
With Love and the soul of his little dead son,
His paddlemen safe and true.
* * * *
He leaves a vacant place in our song
No other singer can fill.

He who gave us to joyance,
And all our doubtings and fears
Those dear departures of a people,
Interwoven with laughter and tears.

MOTORS FOR MEDICAL MEN.

[FROM A CORRESPONDENT.]

(Continued from page 1072.)

HINTS ON DRIVING.

As it will be necessary for the novice to take a few practical lessons on the driving of a car before attempting to do so by himself it would serve no useful purpose to give minute directions on ordinary manipulations, but it may be of service to touch upon a few of the points in which beginners, and even drivers of some experience, are apt to be deficient.

Economy in Driving.

The first injunction is to drive invariably so as to spare both machinery and tyres as much as possible. This the professional chauffeur rarely does. If your car will start away on its top or on its second speed, never do so, but invariably start on the lowest speed, and very gradually. For not only is the work of moving the car from standing much heavier than that of maintaining it in motion, but the engine and all parts in front of the gear case lose the mechanical advantage of being geared down, and the strain upon them would be three or four times as great as it need be. Moreover, as the work is transmitted through the friction of a small area of the tyre on the ground, quick starting means quick wear of tyres. Similarly in stopping, if the car is stopped by means of its brakes when running at a fair speed, quite unnecessary wear is put upon the tyres; the speed should be so calculated that the car runs to a stand at the desired point. This does not look showy, but it is the essence of good driving.

When running down a hill of any length the ignition should be cut off; if the hill is not steep the clutch will have to be kept out, but of course will have to be let in again, very gradually, as the bottom of the hill is approached, or the engine will have stopped, and will not start again. If the hill is steep enough to render some braking desirable, then let the clutch in with the ignition cut off, and the engine working against its compression will act as a gentle and regular brake; if the highest gear is in the braking effect will be slight, but if the lowest gear is in the effect will be strong. This helps to cool the engine, which is often desirable in a long run.

Changing Gears.

Where gears of the sliding type are used, two cog wheels, which are both revolving, have to engage with one another. It is only possible to do this without damage to their teeth if the wheels which are going into mesh are, at the moment, revolving at about the same speed. Now, on the lowest gear, when the car is running slowest the engine is running fastest, and consequently the first motion shaft is revolving a great deal faster than the second motion shaft; on the top speed they are revolving at the same pace, and on the second speed the first motion shaft is revolving faster than the second motion shaft, though not so much faster. Therefore, in changing from the first to the second speed, or from the second to the top speed, in order to get the wheels to mesh kindly, it is necessary to get the first motion shaft to revolve more slowly or the second motion shaft to revolve more quickly; the latter we have no means of doing, as it will always be revolving according to the pace at which the car is moving, so we must slow down the first motion shaft. When the clutch is taken out and the change-speed lever moved to a position intermediate between the engagement of two gears, there is no longer anything to drive the first motion shaft, and it will in time run to a standstill, the time in which this will happen varying considerably in different cars. What we have to do, therefore, is to give the first motion shaft time enough to slow down to the pace of the second motion shaft and no more. Hence we may formulate this rule: In changing from a low to a higher speed take the clutch out fully and move the change-speed lever with a certain steady deliberation—exactly how slowly must be found out by experiment.

In changing from a high speed to a lower one exactly the converse condition of things obtains. Here the first motion shaft is wanted to run fast, hence the clutch must not be kept out long—in fact, needs little more than a tap with the toe at the moment of moving the speed lever. The change of the lever must also be done quickly; hence, in changing speed down, do it as quickly as possible. Indeed, in some cars the slowing of the first motion shaft is so rapid that in changing speed down the clutch must be let in again quite simultaneously with the arrival of the lever at its notch; but in this respect, again, the idiosyncrasies of the particular car must be studied.

The only other general rule which can be laid down is that when about to change speed the car should be brought to run at about the speed appropriate to the gear into which it is to go. Thus in changing from the first speed to a higher speed the car should be made to run rather fast for the first gear, and the same thing or its converse will apply to all changes.

Skilful changing of gears greatly prolongs the life of the gear wheels, and how not to do it is exemplified every day by the drivers of the motor omnibuses in London, whose gears may generally be heard to go in with a horrid clash. If it is done well it should in most cars be absolutely silent, and the occupants of the car should not know that gears have been changed, for if the car is running at a proper pace for the change there should be no abrupt alteration in its pace. In ascending a hill the change to a lower gear should be made as soon as ever the engines begin to flag, and it should not be postponed till the car will no longer go at all on the gear in use. For beginners it is a wise precaution to let down the sprag on hills of any severity, and then, if by chance the gear should be missed, the car will not run backwards, and restarting, if it comes to a standstill, will be rendered easy; it is not easy to restart if the car has stopped and has to be held stationary by its brakes, for it is difficult to let off the brakes at precisely the moment when the engine begins to pull on letting in the clutch.

The Turning of Corners.

Nothing shows the ignorant driver more certainly than taking sharp corners at too high a speed. It has been calculated that in taking a right angle turn in a narrow road, that is to say in a road in which there is not width enough to increase the radius of the curve by using the whole width of the road and shaving the corner close, a car of average weight running at thirty miles an hour is close upon the point where it would overturn by centrifugal force. It is not to be supposed that any one would take such a corner at such a speed, but the knowledge of the fact is none the less useful. For consider what it means in the way of strains and stresses upon the frame, the springs, and the mechanism generally. It means that long before this point of upsetting is reached almost the whole weight of the car will be borne on the wheels of one side; that the differential gearing will be put into use to an extent for which it is not designed, and that there is a good chance of the wheels of one side sliding laterally to the great detriment of the tyres. Moreover, the heavy body of the car will by virtue of its momentum be trying to go on in its old direction, while the wheels are taking the curve. The car body is dragged round through its springs, which are so constructed as to be strong for vertical stresses, but weak to resist lateral stresses, and if a car taking a corner too fast be watched from behind the body will be seen to move laterally on its springs. Moreover the wheels themselves, like the springs, are not very strong against lateral stress, and may break.

Side Slip.

Of course there is also under these circumstances the danger of side slip, intensified alike by the fact that the weight and the driving power are each for the time being on one side only, and the forward momentum of the car is making it strive to maintain its old direction.

Whilst on the subject of side slip, it is to be observed that when a wheel side slips it ceases to revolve, and to counteract a side slip one has to induce the slipping wheel to revolve again. Now, the only way to persuade it to do so is to turn it in such a way that it can revolve in the direction in which it is sliding, and this is a difficult thing to do, because it is opposed to one's natural instinct. If the slip is the left, then the front wheels should be brought round to the left to give them the chance to start revolving, and then at once brought back to the opposite side, in order to steer the car into its normal course again. But when one finds the car going to the left the natural instinct is to at once turn the front wheels to the right, which will render it well-nigh impossible for

them to start revolving again, as they will be travelling sideways.

It is little or no use to apply the brakes: it may cause or intensify the slipping action. Therefore, if the car is felt to be slipping, take the clutch out, release the brakes if they are on, and, if you can remember to do so, turn the steering wheel quickly, as though you desired to go in the direction in which you are slipping, and then, if in traffic or where you have no room, turn it back more gradually. If the wheels have begun to revolve again, they will probably bite and the car obey its steering wheel. But if there is plenty of room, and the car is not going too fast, it may sometimes suffice to let it follow its own sweet will, and, when it has done, start steering it again.

There is little fear of side slip while the car is going straight; it is when it is called upon to change its direction that it happens. Therefore it is necessary to steer very straight on a greasy road, so that no quick alteration of direction is called for, to take turns with extra slowness, and always with the clutch out, and to let the clutch in again very gradually.

In taking any sharp corner or considerable curve the clutch should always be eased out; the forward momentum of the hinder end of the car is quite enough to have to overcome without adding to it the forward impulse of the drive.

As has already been mentioned, there are many non-skid devices, most of them more or less efficient, none of them from every point of view quite satisfactory, and all of them adding to the expense of tyres. Nevertheless, in wet, slippery weather some form of non-skid is to be recommended as the lesser of two evils; in dry weather they may well be dispensed with. They are a considerable protection against punctures, but are themselves less durable than good rubber tyres, so that they are not economical; on the contrary, they add to the tyres bill materially.

The modern type of non-skid in which the steel studs are vulcanized into the rubber of the tread are very good when new, but they do not wear well. The studs become loose, come out, and admit wet to the canvas, which perishes. Detachable non-skids are more economical, as they can be removed in dry weather, and, in the writer's opinion, are, if economy is to be studied, to be preferred to any fixed non-skid as yet introduced.

The Regulation of Speed.

There are two ways in which the speed may be controlled, the one by the timing of the ignition, the other by the regulation of the supply of explosive charge.

As has already been explained, to run the car slowly by retarding the ignition is very wasteful; it means that every charge is burnt with poor compression and perhaps not fully burnt in the time available for the piston stroke. Hence retarded ignition should be for occasional use only, as, for instance, when the car is standing still with the engine running, and it is desired to quiet it and only just keep it running.

The other means—the diminution of the explosive charge—is the proper means of regulation. It does not follow that the more the throttle is closed the less petrol will be used. If the throttle is too much closed, the wastefulness of poor compression comes in again, for the charge is "wire drawn" and is not bulky enough to give the required number of pounds per square inch. Here the usefulness of extra air inlets not controlled by the throttle comes in; the extra air, though not wanted for combustion, is wanted for compression.

To start the engine a richer charge is wanted than is needed or is indeed desirable when it is running; that is to say, for starting a charge just rightly proportioned for complete combustion is wanted. But when running a charge rightly proportioned *plus* some extra air for compression purposes is what is most economical. Good compression is of all things most necessary for economy in running, and it may be roughly judged by the resistance felt in turning the starting handle: a more precise method can easily be adopted whenever there are compression taps on the top of the cylinders. With the help of some india-rubber the little pressure gauges sold for ascertaining the pressure of air in the tyres will serve if held on to the compression taps whilst some one else turns the starting handle. A pressure of at least 60 lb. should be shown. But, as has been fully explained before, good compression is of no avail if the effective firing of the charge does not take place whilst the compression is at its best. Hence, in order to secure the best results, the control for advancing or retarding the spark should be separate from the control of the charge—that is, not linked up with anything else. It would be too much to assert absolutely that the results of the various contrivances for rendering this more or less automatic, so as to free the driver from having to attend to it, are all very extravagant; in fact, the writer has too little practical experience of them to make so definite a statement, but it seems highly improbable that they can secure the same results as an intelligent driver in this respect. There, indeed, can be no shadow of doubt that every charge burnt without the ignition being advanced as far as possible without causing knocking is a charge burnt wastefully. Most, if not all, cars run with the greatest economy when at nearly their best pace, and restarting consumes a disproportionate amount of petrol. So also does hill climbing: hence the medical motorist, as has been pointed out by a correspondent, cannot hope to keep his petrol consumption per mile down to the level attainable in long non-stop runs.

"Popping" in the Carburettor.

Every motorist knows that explosions in the carburettor are an indication that the mixture supplied to the cylinders is too weak, but few understand the cause of its happening. When a normal charge is exploded in a long glass tube by a spark at one end, the flame is seen to rush along the tube in a small fraction of a second, and all is over; when, however, a very weak charge is similarly fired, the flame wanders about irregularly, perhaps passing down one side of the tube and back along the other, and the flame is not extinguished for a considerable period. When a weak charge is fired in a cylinder, the same thing happens—the flame wanders about, lingers in the recesses of the firing chamber about the valves (see Fig. 1, British Medical Journal, April 13th, page 884), and is not out when the inlet valve opens for the admission of the fresh charge. Hence this is fired as soon as it enters without waiting for the spark, and, as the inlet valve is open, the flame is communicated to the contents of the carburettor. The explosion in the carburettor is usually not very violent, for the charges are weak, and are not under compression; in fact, may be at less than atmospheric pressure, owing to the suction of the engine, and the popping generally does not matter, but merely serves as a warning to increase the strength or amount of the charge; but occasionally, particularly if it happens just after the carburettor has been flooded and there is some petrol outside it, this may catch fire and make a considerable blaze. Should this happen, *on no account stop the engine.* Put the speed lever into the neutral position, turn off, by means of the tap, the further supply of petrol from the tank to the carburettor and race the engine, so as to use up as quickly as possible the petrol already in the carburettor. It is of no use to pour water upon it; that will only float the burning petrol about. The flame can, however, be smothered with a coat or rug or with sand or earth. If these directions are followed, little harm is likely to be done, beyond some scorching of paint and, perhaps, damage to insulating rubber of the electric connexions. The commonest mistake committed in the flurry of the moment is to stop the engine, and so leave all the petrol already in the float chamber to burn itself out; of course, the cutting off of further supplies is the very first thing to be done.

Slipping the Clutch.

It is sometimes convenient, especially when driving in traffic, to moderate the pace of the car by allowing the clutch to slip—that is to say, making a pressure on the clutch pedal sufficient nearly to release it without quite doing so. But it should be remembered that this is not very good for a leather-faced clutch; the surfaces rubbing may become glazed, or even a little burnt by the heat developed. Hence it is better to keep repeatedly taking it just out completely and letting it in again gently, rather than to so hold it that it is continuously slipping. With clutches of the metal disc friction type, however, this objection does not apply so much, and they may be allowed to slip in moderation without detriment.

Another condition under which the clutch may be eased off a little is when climbing a hill which has been nearly

surmounted, but which cannot, without stopping the engine, be quite surmounted without change of gear; if the clutch be eased so as to let the engine run light for a moment and gather speed, and the clutch then let in gently, it is often possible to coax it over the brow without changing gears; but this also should be done sparingly, and with discretion.

The same thing applies when a change to a higher gear has been made a little prematurely, and the engine flags or begins to knock from the spark being too much advanced for the pace at which the engine is running; easing the clutch to let the engine run faster, and then letting it in again, may save having to change gears.

THE BREWTNALL RADIATOR.

THE writer of the notes on motor cars has had no experience of this radiator, but it appears to be designed on sound principles, and might be expected to give better results than radiators in which the water and the air are less broken up. In districts where the water gives rise to much incrustation, the ease with which the tubes can be cleaned would be a great advantage. The only doubt as to its construction which suggests itself is whether the more numerous joints which exist in it would remain watertight; some of them appear to be rather large surfaces to keep watertight.

MEDICAL NEWS.

THE Ophthalmological Society of the United Kingdom has arranged to hold its next meeting in Edinburgh on May 25th. Card specimens and cases will be on view at 9.30 a.m., and the chair will be taken at 10 o'clock.

SIR ISAMBARD OWEN, Deputy Chancellor of the University of Wales, will preside at the fourth Welsh Medical Dinner at the Criterion Restaurant, London, on May 31st. Further particulars can be obtained from Mr. J. Howell Evans, F.R.C.S., 63, Grosvenor Street, London, W.

THE summer session of lectures at the Hospital for Sick Children, Great Ormond Street, W.C., will commence on Thursday next, when Mr. Waugh will lecture on Hip Disease in Children, at 4 p.m. The lectures, which are given each Thursday at the same hour, are free to medical practitioners.

WE are asked to state that the laboratories to which reference was made on April 27th in connexion with the Milan Exhibition are known as the Wellcome Physiological Research Laboratories. They are quite distinct from the business of Messrs. Burroughs, Wellcome, and Co., and under separate control.

THE new Gresham Professor of Medicine, Dr. F. M. Sandwith, will give four introductory lectures, on Tuesday, May 14th, and the three following days, at 6 p.m., at Gresham College, E.C. The first two lectures will deal with Sir Thomas Gresham and his times, the third with influenza, and the fourth with cerebro-spinal fever.

THE Committee of the Eversfield Chest Hospital, St. Leonards-on-Sea, has under consideration the advisability of increasing the accommodation, enlarging the out-patient department, and considerably widening the existing balconies, so that more patients may undergo the open-air treatment. Plans have been prepared, and a donation of £1,000 towards the cost of the project has already been promised.

A DEBATE on the question, Is vivisection necessary to the advancement of science and medicine, and is its practice in accordance with claims of morality and the further development of altruism? between Professor W. D. Halliburton and Miss Lind-af-Hageby will take place at the Portman Rooms, Baker Street, W., on Thursday, May 16th, at 8 p.m. The chair will be taken by Sir David Brynmor-Jones, K.C., M.P. Admission is free.

A MEETING of the Medico-Psychological Association of Great Britain and Ireland will be held at the rooms of the Medical Society, Chandos Street, London, W., under the presidency of Dr. Robert Jones, on Thursday next at 3 p.m. After the transaction of general business, Drs. W. Ford Robertson and G. Douglas McRae will give a demonstration on further bacteriological and experimental investigations into the pathology of general paralysis, and Dr. Henry Devine will read a paper on a case of katatonia in a congenital deaf-mute.

ABOUT a year ago we drew attention to a new form of bed called the equipoise, which seemed to have unusual merits, and in the ordinary course of things should say no more about it. Since then, however, the manufacturers, having studied an article by Dr. Murray MacClaren, on the value of posture in medicine and surgery, published in these columns on November 10th last year, have sent us a letter in which each of the positions described in that article is illustrated by a picture of a patient on one of these beds. This letter we have no space to publish, but the aptness of the pictures may be acknowledged. Curiously enough no reference is made in the letter to the real strength of the contrivance—the fact that the patient can place, and maintain himself, in any position he pleases, and is thus independent of pulleys and bedrests.

THE American Mosquito Extermination Society held its fourth annual meeting in New York in April. Dr. O. L. Howard of Washington, and Dr. E. Porter Felt, the New York State Entomologist, reported the results obtained from the efforts made to check the multiplication of mosquitos in certain parts of the United States and other countries. The complete extermination of the insects was declared to be simply a question of money combined with an enlightened public spirit.

DEATH FROM ETHYL CHLORIDE.—An inquest was held in Southwark on April 26th on the body of a male child, aged 9, which had died in Guy's Hospital during an operation for appendicitis under ethyl chloride anaesthesia. The medical evidence given was to the effect that the dose of ethyl chloride administered was 3 c.cm.; *post mortem* the child was found to be in poor condition and to have fatty degeneration of the heart. Dr. Waldo, the coroner, remarked that he knew of 22 deaths from ethyl chloride, and that he had himself held four inquiries in the Southwark court into fatalities following the use of this drug.

SMALL-POX AT METZ.—Herr Geheimrat Dr. Pawolleck of Metz has kindly supplied a statement of the prevalence of small-pox in Metz, as to which a question was asked recently in the House of Commons. In the city of Metz the disease has assumed the proportions of an epidemic outbreak. The small-pox deaths in Metz, which in the three years 1904-6 were 1, 2, and 8 respectively, have risen to 24 since the beginning of the present year, besides 5 more in the surrounding district. The number of cases in Metz since January 1st of this year is stated to be 85 with 24 deaths, showing the remarkably high fatality of 28 per cent. Until we know the proportion of the vaccinated amongst the fatal cases, and the extent of small-pox in the neighbouring part of France, we can make no further comment on these figures. The Imperial Health Office in Berlin makes a special inquiry into all such epidemics on the spot, and the results are ultimately published.

FOREIGN DOCTORS IN JAPAN.—By a recent ordinance, the Japanese Government has granted to foreign doctors belonging to countries which allow Japanese practitioners to practise within their territory the right to exercise their profession in Japan. All that will be required of them is to have their diplomas officially recognized by the Minister of the Interior. Japanese doctors holding diplomas of foreign universities will also be allowed to practise on the same condition. Dr. MacAlister, in his presidential address at the opening meeting of the General Medical Council in November, stated that the Executive Committee had had before it some additional information respecting medical qualifications in Japan other than those conferred by the University of Tokyo. The Committee is to report on the subject to the Council.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 6, Catherine Street, London, W.C., on April 26th, Dr. de Havilland Hall in the chair. The claim records presented showed that the epidemic of influenza which has so largely increased the sickness experience of the early part of the year is now much diminished. During the month of April, although a considerable amount of sickness pay has been disbursed for claims arising from influenza, the members claiming were in many cases incapacitated by the sequelae of the malady only, and, judging from the previous experience of the Society, this may be taken as satisfactory evidence of the decline of the epidemic. The Committee examined the draft of the report for the year 1906, which will be presented to the members at the annual general meeting, to be held at the rooms of the Medical Society, 11, Chandos Street, Cavendish Square, W., on May 23rd. The business of the Society during last year has been very successful, and has produced a substantial increase in the funds, which now amount to over £200,000. This sum has been accumulated in twenty-three years—the Society having started operations in 1884—and is good evidence that the business was founded on a sure plan and has been carefully and economically carried on. Prospectuses and all further particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

British Medical Journal.

SATURDAY, MAY 11th, 1907.

LIABILITIES OF MEDICAL MEN UNDER THE WORKMEN'S COMPENSATION ACT.

We make no apology for recurring to the subject of the risks to members of the medical profession, especially those engaged in general practice, arising under the Workmen's Compensation Act which comes into force on July 1st next, and of again calling attention to the arrangements which the Medical Insurance Committee has made with the Guardian Assurance Company, Limited; for many questions have already been received illustrative of the special circumstances, with their attendant liabilities more or less peculiar to medical practice. It may take some little time before all the points which must arise as different cases come up for consideration can be so completely settled that the results can be reduced to general principles; but a great deal has already been done in this direction, and we feel confident that the Company, which has been established for more than eighty years, is anxious to meet the needs of the profession, and will be able and ready to deal with all special circumstances in a liberal and comprehensive spirit.

Among the questions addressed to the Medical Insurance Committee by medical men who have read the article and advertisement published in the Journal of last week, it is not surprising to find that several have reference to the matter of locum tenents. As has already been pointed out, it is clear that the word "workman" in the Act includes a duly qualified medical practitioner permanently employed to assist a principal provided that his remuneration, including board and lodging where they are provided, does not exceed £250 a year; there is, therefore, no question that medical assistants will be entitled to compensation under the Act, provided their remuneration does not exceed the amount mentioned. But we have all along been advised that the definition of "workman" in Clause 13 does include a medical practitioner acting as a locum tenent; the words are: "'Workman' does not include any person . . . "whose employment is of a casual nature and who "is employed otherwise than for the purposes of the "employer's trade or busines, . . . but, save as afore-"said, means any person who has entered into or "works under a contract of service or apprenticeship "with an employer, whether by way of manual labour, "clerical work, or otherwise, and whether the contract "is expressed or implied, is oral or in writing." As at present advised, we must adhere to the opinion that a locum tenent, being a person employed for the purpose of the employer's business, does not come under this exception. Moreover, on the point of remuneration it must be remembered that though a locum tenent when employed may be paid at a weekly rate which amounts to more than £250 a year, board and lodgings taken into account, yet as he probably would not be engaged continuously throughout the year, his total earnings would not amount to more than £250 a year. We admit that the point may be arguable, but until it has been decided by a court of law the only prudent course is to insure against the risk. This can be done under the scheme published in the advertisement at page 8 of advertisements, and the premium, where no other assistance is employed in the practice than a locum tenent for a few weeks in the year, would not be more than 5s. Where a dispenser or medicine boy is also employed, the amount of the premium would be adjusted in proportion to the total sum paid in salary and wages at the rate of 10s. per cent.; this applies to all assistance required in the conduct of the practice, as distinguished from domestic service, except a trained nurse, for whom the premium would be at the rate of 7s. 6d. per cent.

To illustrate the point we may take a concrete instance. A medical man employs a dispenser permanently at £70 per annum, a boy at £8 a year, and a locum tenent for two or three weeks during the year at 4 guineas a week. His total expenditure on assistance in his practice is therefore about £90 a year; he can insure against all risks of accidents of employment to these three employees for 10s. a year. Should he during the year for any reason engage a locum tenent for an unusually long period, so that his expenditure on assistance in his practice exceeded £100 he would at the end of the year pay an additional amount equal to 10s. per cent. on the increased expenditure; if, for instance, he paid salaries and wages amounting altogether to £125 during any one year, he would be called upon to pay 2s. 6d. in addition to the 10s. he had paid at the beginning of the year.

In connexion with the employment of boys and lads, it will be well to call attention to a provision in the Act which may be of importance to medical men; if the employee is under 21 and his average weekly earnings are less than 20s., the weekly payment must equal the weekly wage he is earning, not exceeding 10s., but when the amount of the weekly payment is reviewed regard will be had to the amount which he might have been earning at the date of the review if he had remained uninjured, and the weekly payment may then be increased to an amount not exceeding £1, and apparently the lump sum to be paid to redeem this weekly payment will be increased correspondingly.

It has been asked whether a housekeeper employed to look after a surgery or a branch surgery would come under the Act. We are advised that there can be no doubt that such an employee would be entitled to compensation, and the full legal liability can be insured against at the premium for an ordinary domestic servant, namely, 2s. 6d. The premium charged to cover occasional labour in connexion with domestic service would include charwomen and an occasional gardener employed, say, once a month in the summer. The occasional employment of a gardener, window cleaner, sweep, or charwoman would be insured at a fixed sum of 2s. 6d. per annum, to cover all casual employment of this nature; the same premium would be charged for a boy employed sometimes continuously and sometimes only two days a week.

The premium to cover legal liability in respect of a governess receiving a salary of £50 per annum would be 3s. 6d. a year.

It has been asked whether a medical man who has a quarterly or annual contract with a jobmaster to be supplied with a carriage for daily use incurs any liability under the Workmen's Compensation Act in respect of the driver. The question is a somewhat difficult one to answer, as much depends upon the terms

upon which the carriage is hired. We should suggest that medical men who hire in this way ought to satisfy themselves that the jobmaster insures his own employees, in which event he should be asked to give a written undertaking releasing the practitioner from any liability.

The policy issued by the Guardian Assurance Company covers all costs of litigation incidental to improper claims which may have to be resisted. This is a most important point to bear in mind, for a certain time must elapse before the courts will have decided doubtful points arising under the Act, and they are not likely to be few.

EXPERIMENTAL INVESTIGATION OF CEREBRO-SPINAL FEVER.

IN the *Journal of Experimental Medicine* (vol. ix, No. 2, 1907) Dr. Simon Flexner of New York publishes three articles relating his recent investigations on the *Diplococcus intracellularis* of epidemic cerebro-spinal meningitis. His articles deal with the biological properties of the organism, its pathogenic effects upon experimental animals, and the possibility of treating the disease by serumtherapy.

He finds that the difficulties of cultivating the organism are greatly reduced if, as suggested by Dr. W. H. Park, sheep serum is used instead of human serum. Sheep serum-water, prepared according to the method of Hiss, is mixed with a beef infusion agar-agar containing 2 per cent. of glucose. The serum-water is added to the sterile and melted agar; the amount used need not exceed $\frac{1}{20}$th to $\frac{1}{10}$th of the volume of the agar. It is well known that, particularly in early generations, the diplococcus very readily dies out unless it is frequently subcultured. Dr. Flexner has observed that its vitality is greatly increased by the addition of a calcium salt to the medium. "If calcium carbonate is added to the "sheep serum-water agar, a given culture will survive "many weeks. A rough experiment showed that at the "end of five weeks a strain which otherwise survives, "on the medium minus the calcium salt, only two, "three, or four days, was still alive and able to yield "abundant subcultures."

As tested upon ordinary laboratory animals, the virulence of the *Diplococcus intracellularis* is variable and, on the whole, low. With guinea-pigs inoculated intraperitoneally the result depends upon several conditions, including the quantity of cocci injected, their virulence, and the susceptibility of the animal. When the infection proves fatal in eighteen hours or less the guinea-pigs develop a peritoneal exudate which is poor in leucocytes, whereas the animals which survive for a somewhat longer period—twenty-four to thirty-six hours—generally exhibit a turbid exudate rich in leucocytes. In considering the way in which the micrococcus causes the death of guinea-pigs, Dr. Flexner arrives at the conclusion that the fatal effect is produced by a poison liberated from the bacterial bodies, probably through their disintegration, and is not attributable to a secreted extracellular poison. "Multiplica-"tion on the part of the diplococci is not at all essential "to the production of the peculiar symptoms and "lesions. Even though multiplication of the virulent "diplococci does take place, it is still likely that the "toxic action is caused by the diplococci which have "suffered dissolution." Dr. Flexner bases this opinion on experiments which have demonstrated the toxic action both of cultures killed by heat and of the autolyzed fluids of cultures.

In a second article the experimental production of cerebro-spinal meningitis in monkeys (*Macacus rhesus* and other varieties) is described. Cultures were inoculated into the spinal cord by lumbar puncture, and the animals, it was found, could be infected without great difficulty with the production of the pathological conditions seen in the disease in man. The diplococci, when introduced into the lower end of the spinal canal, "dis-"tribute themselves in a few hours through the meninges, "and excite an acute inflammation, the exudate of which "accumulates chiefly in the lower spinal meninges and "the meninges of the base of the brain." Dr. Flexner calls special attention to the uniformity with which the exudate is found at the base of the brain, and the rarity of its appearance in equally great amounts over the convexity. The distribution of the exudate after experimental infection has led him to doubt the validity of the theory that this localization of the inflammation in man is due to the entrance of the infective agent by way of the nasal passages. "The inflammation of the "meninges extends in monkeys into the membranes "covering the olfactory lobes and along the dura mater "into the ethmoid plate and nasal mucosa. The nasal "mucous membrane is found, in many instances, to be "inflamed and beset with haemorrhage." These observations show that, in fatal cases of the human disease, the identification of the organisms in the nasal passages does not conclusively prove that this situation was their portal of entry. Comparing the experimental lesions produced in monkeys with the naturally developed lesions in man, Dr. Flexner observes that under both conditions encephalitic abscesses and haemorrhages occur; there is a proliferation of cells in the connective tissue spaces; and other points in common are the presence of acute endarteritis, inflammation of the dorsal root ganglia, internal hydrocephalus, and a relatively small amount of fibrinous deposit.

With regard to his efforts to obtain an efficacious antiserum, Dr. Flexner admits that his experimental tests "were not sufficiently constant and striking to "make this mode of treatment of human cases of "cerebro-spinal meningitis of very hopeful augury." But at the same time he holds out the prospect that future research may discover an appropriate means of immunization whereby a more active antiserum may be produced, and may be used for inoculation either intraspinously or possibly by the intravenous or subcutaneous methods.

THE ROYAL SOCIETY *CONVERSAZIONE*.

THE Royal Society *conversazione* held on Wednesday evening was no less interesting than those of previous years, though there was little of purely pathological interest. The only exhibit which dealt directly with a subject of professional interest was a collection of skiagraphs shown by Dr. Robert Knox and Mr. G. Pearce to illustrate the advantage of reducing the time of exposure. The advantages were a considerably increased clearness of definition, which is apparently due to the reduced frequency of movement of the various organs, and the lessened risk to the patient from the action of the rays. These results have been made possible by an improved apparatus, by which the time of exposure is lowered to from one to seven seconds. The electrolytic interrupter is worked from high tension electric light mains. The core of the coil consists of transformer plates, while the size of the primary wire and its number of turns is unusually large. The secondary is smaller than usual. The current is rendered unidirectional by a rectifier placed in series with the *x*-ray tube.

Professor Poulton showed cases of butterflies illustrating what is perhaps the most remarkable case of mimicry yet demonstrated; the specimens were those of Mr. Leigh, of Durban, who in 1906 succeeded in breeding from a single butterfly 28 specimens (14 male and 14 female). The latter were differentiated into three distinct types, which mimicked the external form of totally different poisonous varieties common in South Africa, and in fact showed all the forms which the special genus is known to assume. Dr. F. A. Dixey brought specimens to show that butterflies exhibit dimorphism according to the nature of the season in which they emerge. In the dry weather of tropical climates, when the conditions of life are especially adverse, the butterflies assume a colouring markedly modified, or, indeed, entirely different from that which characterizes them in wet weather. The stress of living in the former case leads to modification on cryptic or imitative lines. In some of the specimens the wet weather forms had made no attempt to assume the protective garb of a poisonous variety, in others the modification in this direction was markedly less complete than in the dry weather form. Mr. Fantham was responsible for some interesting microscopic preparations of *Spirochaeta balbianii* from the crystalline style and intestine of the oyster, an allied form to the *Spirochaeta obermeieri* of relapsing fever. Mr. Fantham has shown that the parasite contains no true flagella, but that the appearance is really a *post-mortem* effect, the apparent flagella being due to the disintegration of a membrane which apparently aids the organism in directing its locomotion. Professor Bottomley's exhibits of the fixation of nitrogen by leguminous and other plants bids fair to be the early stage of a work of epoch-making import. He showed the great increase of growth due to the inoculation of leguminous plants, but the novelty of his work lies in the fact that he has been able to induce plants of other orders to fix the nitrogen of the atmosphere in a similar manner. He has succeeded in proving that the bacteria isolated from the leguminosae can act by themselves in this way on the soil. Mr. Douglas Rudge showed the action of a number of metallic salts on the gelatine ordinarily used in bacteriological experiments. He has succeeded in producing with lead, barium, strontium, and radium an effect which Mr. Burke originally believed to be a specific characteristic of the element radium. The form of the apparent cells very closely resembles that of starch granules, and Mr. Rudge explains it as being due to the slow formation of apparent cells around a minute precipitate of the sulphate of the salt. The "cells" in his opinion are probably due to the dehydration of the gelatine or to some other similar effect. Mr. Ulrich Behn gave a most interesting demonstration of the danger of using too small apertures in the diaphragm of a high magnification microscope. According to Abbe's theory microscopic images cease to be correct if a sensible part of the light proceeding from the object is lost. Mr. Behn demonstrated that by shading off portions of the light in different ways it was possible to obtain perfectly sharp images of a grating placed in the field showing many times more than the number of lines contained in the original. The demonstration was a not unneeded warning against placing too great a reliance on evidence which is based on purely microscopic evidence in which the magnification has been pushed to a high value. The camera which was exhibited by Dr. J. R. Milne should prove invaluable in a number of research operations. It is so arranged that it will automatically take some eighty photographs of the Vernier scale of any instrument on a single photographic plate, thus saving the strain of the eyes of reading the Vernier under the difficult conditions which usually obtain, and also ensuring a much greater accuracy of observation. Among other exhibits may be mentioned the skull of a South African Saurian, being the first complete specimen of a fossil reptile with developed teeth, with the whole skeleton available, and dating back to the period of the English coal measures (Professor H. G. Seeley, F.R.S.), and a cordoned bucket or cyst of bronze found last month at Weybridge, and strongly tending to prove the existence of trade relations between this country and Italy during the eighth century before Christ (Mr. W. Dale). The examples of the latest instruments made out of silica ware by Messrs. Johnson, Matthey and Co., and the Thermal Syndicate, Limited, illustrated in a very striking way the very great advance that has been made of recent years in its preparation and manufacture. Mr. Louis Brennan, C.B., showed and explained a working model of a mono-railway in which the stability of the carriages was maintained by gyroscopes. Dr. C. G. Seligmann gave a cinematograph exhibition of native dances taken during the Daniels' ethnographical expedition to British New Guinea; and Dr. Hele Shaw, F.R.S., gave a short address on aërial gliding, illustrated by photographs, the cinematograph, and some simple experiments.

UNITED SERVICES MEDICAL SOCIETY.

It was announced in the British Medical Journal not long ago that a society of military medicine had been formed in France. The good example of our neighbours is about to be followed here. On May 2nd a meeting was held at the Royal United Service Institution to consider the expediency of forming a United Services Medical Society. The meeting was largely attended by medical officers of the navy and army, and a few representatives of the volunteer medical services were present. The chair was taken by Inspector-General Herbert MacKay Ellis, Director-General of the Medical Department of the Navy, who stated that it was thought desirable to found a society whose members should belong to the medical departments of all the combatant services of the State. The initiation of the movement had come from Sir Alfred Keogh, and the present time was opportune for the purpose. Communications had been sent out to the navy, the army, the Indian army, and the volunteers, and the proposal had been very well received. Hitherto each branch had pursued its researches and aims on its own lines, and it was felt that if they had been amalgamated a great deal of time would not have been wasted. It was hoped that the Society would afford the necessary means of co-operation. The objects of the new body, which would be called "The United Services Medical Society," were: (1) The furtherance of sciences which bear upon the preservation of the health of forces afloat and ashore, at home and abroad, in war and in peace. (2) The study of diseases and injuries incidental to the life of sailors and soldiers under the varying conditions of climate, locality, and circumstances to which they are exposed in the performance of their duties and the treatment of the same. (3) The study of organizations, methods, and apparatus for the amelioration of the condition of the wounded in war. (4) All matters which come within the scope of the technical duties of naval and military medical officers. Inspector-General Ellis added that the membership of the Society would consist of medical officers of the navy, British and Indian armies, and the Auxiliary and Colonial Forces, on the active or retired lists, who should be admitted without ballot upon application to the Council. Persons of distinction in sciences of which the Society took cognizance, medical officers of foreign navies and armies, and other persons whose affiliation to the Society might seem to the Council to be of advantage to the Society, would be invited by the Council to become associate members. The medical members of the Consultative Board of the Naval

Medical Service, and the Advisory Board of the Army Medical Service, would be *ex-officio* associate members. The ordinary meetings would be held monthly, by permission, in the Royal Army Medical College, and the papers read would be published. The Society would be managed by a Council, consisting of a president, to be elected annually, and eight members—two from the navy, two from the army, two from the Indian army, and two from the auxiliary forces; also four *ex-officio* members—namely, the Director-General, Naval Medical Service; the Director-General, Army Medical Service; the President of the Medical Board at the India Office, and the Commandant, Royal Army Medical College. The Chairman then formally put the motion that the society should be formed, and the proposed constitution provisionally accepted; this was seconded by Surgeon-General Sir Thomas Gallwey, P.M.O. Aldershot, and passed unanimously. On the motion of Sir Alfred Keogh, Director-General Army Medical Service, seconded by Surgeon-General A. M. Branfoot, C.I.E., retired Indian Medical Service, the Chairman was elected President of the Society for one year. Fleet Surgeon W. W. Pryn and Lieutenant-Colonel C. H. Melville were appointed Honorary Secretaries, and Lieutenant-Colonel D. Wardrop Honorary Treasurer. The following eight officers, representing the different services, were elected by the Society to form the Council: Fleet Surgeon Craig, Fleet Surgeon Dalton, for the navy; Major Holt and Lieutenant-Colonel Cottell, for the army; Lieutenant-Colonel Sir R. Havelock Charles, Lieutenant-Colonel Freyer, for the Indian army; Lieutenant-Colonel Sir James Clark, and Lieutenant-Colonel Valentine Matthews, for the auxiliary forces. In the name of the British Medical Association, which has always taken a warm interest in the welfare and efficiency of the services, we wish success to the United Services Medical Society.

SLEEPING SICKNESS EXPEDITION.

THE Liverpool School of Tropical Medicine has sent out an expedition to Central Africa to study sleeping sickness and advise on means by which it can be prevented from spreading into regions not yet infected. The expedition, which consists of Dr. Allan Kinghorn and Mr. R. Eustace Montgomery, will visit British East Africa, British Central Africa, Rhodesia, the Portuguese territories, and the Congo Free State, and may be absent for two years. The British Government, the British South Africa Company, the Congo Free State, the Portuguese Government, the Tanganyika Concessions, the African Lakes Corporation, and others interested are co-operating. The Cape Government are giving free transport over their lines, and much other valuable assistance is being rendered. Sir Alfred Jones, President of the school, gave a farewell banquet to the expedition, at which he read a message from the Earl of Derby, Chancellor of Liverpool University, wishing it Godspeed. Lord Elgin also sent a message wishing all possible success to the expedition, and adding: "No greater practical benefit could be achieved "than the discovery of means of arresting the "development of the terrible malady of sleep-"ing sickness." After giving the substance of a communication from Mr. Joseph Chamberlain, who expressed his admiration for the efforts made by Liverpool to combat sleeping sickness, Sir Alfred Jones went on to say that they had spent £80,000 in this work, and the results had been marvellous. They had sent out twenty-two expeditions, and had dealt with all sorts of diseases. They were now organizing another expedition to study blackwater fever; it would be dispatched in August next, and much was expected from it. Dr. Kinghorn said that with regard to sleeping sickness, they were convinced that it might easily spread into Rhodesia and other parts of our Southern territory. Their object was not only to fight sleeping sickness in British territory, but to work out some scheme to prevent its spread. That meant that they must work out the destruction of the tsetse fly, and they hoped that a new cure would be found in the near future. Mr. Montgomery remarked that if sleeping sickness got a footing in India it was difficult to say what might happen. Sir Edward Russell, speaking on behalf of the public, expressed the great gratification they all felt at what had already taken place in connexion with the Liverpool School of Tropical Medicine. There could be no better tonic for the public mind than the scientific discoveries of the present time. Even the commonest man in the street was a totally different being—an abler being and an abler man and a man with a better moral—if placed by the newspapers in possession of the fact that things were being done by science for the betterment of human beings. Professor Carter, Dr. Todd, Lord Mountmorres, and others also spoke.

LEAD AND ARSENIC IN TARTARIC ACID, CITRIC ACID, AND CREAM OF TARTAR.

IN consequence of representations made to the Local Government Board that certain manufacturers and importers refused to give any guarantee of purity in respect of lead and arsenic in the tartaric acid which they sold, the Board directed inquiries to be made on the subject of the contamination of tartaric acid with these impurities and the measures adopted to guard against the use of such impure acid. The report of Dr. A. W. J. MacFadden to the Board on the subject has recently been issued. It was thought advisable to extend the inquiry to citric acid and potassium bitartrate, since all these substances are liable to contamination from similar causes, and all alike are largely employed in domestic articles of food and drink as well as in medicine. The lead in these acids is derived from the lead linings of the pans in which the earlier stages of manufacture are performed, and arsenic from the sulphuric acid, of which the report states that as much as 190 lb. may be used to produce 112 lb. of tartaric acid. Inquiries showed that the amounts consumed annually in this country are approximately as follows: Tartaric acid, home manufacture 1,300 tons, imported 1,800 tons; citric acid, home manufacture 800 tons, imported 200 tons; cream of tartar 3,000 tons, practically all imported. Fifty selected samples of tartaric acid and cream of tartar from known sources were submitted to analysis in the Government laboratories, and the results are set forth in tables in the Report; they may be summarized by saying that the English samples showed no arsenic, and in no case more lead than 0.002 per cent.; in nearly half the foreign samples this figure was exceeded, the worst sample being a tartaric acid from Germany containing 0.0062 per cent., while the largest amount of arsenic, 0.0008 per cent., was in a sample of Spanish acid. The specimens examined did not include any of the "commercial "tartaric acid," which is referred to as occasionally appearing on the market, and it is evident that the samples of cream of tartar, also, are not entirely representative, prosecutions under the Sale of Food and Drugs Act during recent years having occasionally shown the occurrence of 5 grains or even more of lead per pound. It is pointed out in the report that the requirements of the *Pharmacopoeia* as regards these impurities are far from satisfactory; in the 1898 edition the test for lead was so described, that a small amount of iron—a harmless impurity—might have led to the rejection of a sample (this was corrected in the second impression of the work, a fact that Dr. MacFadden appears to have overlooked), and the test prescribed in 1885, which is of extreme vagueness, has remained in use as giving a

commercial standard; arsenic is merely mentioned among other impurities from which tartaric acid should be free, but no severe test is ordered, and no limit is laid down as to the amount that may be passed; it is not even mentioned in connexion with citric acid or cream of tartar. It appears, however, that in actual practice satisfactory limits for both lead and arsenic in cream of tartar have come to be fairly generally recognized both by manufacturers and analysts; these limits are 0.002 per cent. of metallic lead (approximately $\frac{1}{4}$ grain per pound) and 0.00014 per cent. of arsenious oxide ($\frac{1}{10}$ grain per pound), the latter figure being based on the recommendations of the Royal Commission on Arsenical Poisoning. Experience shows that this degree of purity is attainable in practice, not only for cream of tartar but also for citric and tartaric acids, and it is recommended that these limits should be adopted for all three articles, and that, while "it should be the "aim of the manufacturer to exclude both these sub-"stances from articles of food and food ingredients.... "minute amounts of lead and arsenic (arsenious oxide) "below 0.002 per cent. and 0.00014 per cent. respectively "would not be sufficient to justify their condemnation." By implication, of course, amounts above those named should be regarded as rendering the articles unfit for use in food or medicine. Probably no fault can be found with this conclusion; maximum limits for impurities practically always present in traces are greatly to be desired in all cases. Doubtless the recommendations here put forward will carry due weight with the Committee of the General Medical Council that will be responsible for the next *Pharmacopoeia*, and meanwhile they will have a useful influence on any future prosecutions that may occur under the Sale of Food and Drugs Act.

ALCOHOLISM AND DEGENERATION.

In consequence of the proposal that children under 14 should be excluded by legislation from entering public-houses, the consulting medical staff of the National Association for the Feeble Minded, comprising a number of experts practically acquainted with the conditions of feeble-mindedness, recently discussed the relations subsisting between parental alcoholism and physical and mental deterioration in the offspring. Etiological statistics gathered from large institutions for imbeciles on the one hand, and from centres for special instruction of defective children on the other, were contributed by various members; and, although considerable divergence of views became apparent in the course of the discussion, those present at the meeting felt justified in adopting, as a fair expression of the general interpretation of the statistics before them, the following statements: (1) That parental intemperance is a large factor in the degeneracy of offspring, both mental and physical. (2) That parental intemperance (*per se*) is not so large a factor as has been sometimes assumed in the causation of congenital mental defect; but that, in combination with other heritable taints—for example, tuberculous, neurotic, insane, and syphilitic—alcoholism is a prevalent, though not altogether predominant, cause of idiocy, imbecility, and feeble-mindedness. Parental intemperance is sometimes a consequence of a neurotic or insane heredity, and such heredity must be taken into account in estimating the influence of the alcoholism. In making these general pronouncements, the Committee felt that, from the scientific standpoint, caution was necessary in estimating at their true nature the various concurrent and contributory factors that are usually found to exist when a complete investigation of the family history of a feeble-minded child is practicable. The influence of alcoholism in producing mental and nervous instability in progenitors more remote than the actual parents has also to be reckoned with, so that the determination of the exact part played by alcohol in the production of mental defect is a somewhat complicated problem. On the one hand, the prevalence of mental enfeeblement in the portions of our population degraded by drinking habits is attested by statistics gathered from the special schools of certain localities; on the other, there is evidence that, apart from alcohol, there are, under the conditions of modern life, causes operative which tend to imperil, perhaps in a greater degree than in the past, the due development of brain and nervous system in the offspring of over-strained parents. However this may be, there seems no doubt that environment in early years is a matter of much importance in influencing mental development or retardation in the child, and the committee had no difficulty in recording their unanimous opinion "that, "on general grounds, the presence [in public-houses] of "children under 14 years of age (particularly of children "in arms) is highly objectionable, and should be pro-"hibited. The imbibition of alcohol by such persons "undoubted has a tendency to interfere with nutrition, "particularly of the nervous system."

CEREBRO-SPINAL FEVER IN INDIA.

In a *Report on Epidemic Cerebro-spinal Meningitis in India*[1] Captain Robertson-Milne shows that in India the disease is well known, both in its epidemic and its sporadic forms, and is "clinically, bacteriologically, and "epidemiologically identical with the malady as it has "been observed in other countries." It is a disease which is particularly liable to attack prisoners in gaols, and in some of these institutions has continued, for some unexplained reason, to prevail irregularly for prolonged periods. The usual course of these outbreaks is described as follows: "The first case is followed by "another after an interval of some ten to twenty days. "Five or six days may then elapse before the third "attack takes place, and then at gradually shorter "intervals cases occur in different parts of the gaol, and "frequently in men unassociated either at their work "or otherwise. A period of maximal intensity is soon "reached, during which there may be as many as "sixteen or eighteen attacks within ten days. After "this the disease shows signs of abatement; the cases "become fewer; the intervals between their incidence "longer; and the outbreak terminates in a similar "manner to that in which it commenced." Captain Robertson-Milne's report is an interesting historical, clinical, and pathological study of the disease as it occurs in India, though, like observers in other countries, he finds that the difficult questions concerning its etiology and prevention are very far from being fully elucidated.

CANCER IN MICE.

From a paper recently communicated to the Royal Society it appears that Drs. Bashford, Murray, and Cramer are still busily engaged in the investigation of carcinomata peculiar to mice. In the article before us they report their observations on the natural and induced resistance of mice to the growth of cancer. They draw a distinction between the conditions of origin of a sporadic tumour and the conditions of carcinomatous growth in mice, and also insist on the importance both of natural variations in the resistance of mice to inoculation and of inherent variations in the energy of growth of the tumour cells. After preliminary observations on these matters, they bring forward evidence to show that mice in which a growing carcinoma

[1] *Report on Epidemic Cerebro-spinal Meningitis in India.* By Captain C. J. E. Robertson-Milne, M.B., I.M.S. Calcutta: Office of the Superintendent of Government Printing, 1906. (Roy. 8vo, pp. 67. 1s. 6d.)

has been spontaneously absorbed may be completely protected against subsequent inoculation of the same growth, and to a lesser extent against other and different growths. Protection also follows absorption of tumours after exposure to radium. They also find that protection may be induced or, when naturally present, enhanced by the inoculation of tumour material when no growth has resulted. The protection is specific in character, and has only been induced in mice by the inoculation of mouse tumours, and not by those of strange species. This specificity, the authors consider, has an important bearing on the nature of cancer. Furthermore, they find that protection can be induced by the inoculation of normal mouse tissues, and particularly by the inoculation of blood.

THE TREATMENT OF TRYPANOSOMIASIS.

IN continuation of their work on the treatment of trypanosomiasis by the benzidine colours,[1] MM. Nicolle and Mesnil, in conjunction with M. Aubert, have investigated the action of these bodies and arsenical compounds upon rats and monkeys experimentally infected with the organism of sleeping sickness, *Trypanosoma gambiense*.[2] Having found in their preliminary experiments that the colour Ph and atoxyl showed a marked superiority over other compounds, they concentrated their attention upon these two chemicals, with the object of arriving at a rational method of treating the experimental infection. When only one dose was administered complete disappearance of the trypanosomes was never brought about by the colour Ph, and only rarely by the injection of atoxyl. Repeated treatment was therefore essential. The question then arose whether it would be better to wait for a relapse, confirmed by microscopic examination, before repeating the dose, or to administer several in succession before there was time for relapse to occur. In favour of the former method there was the consideration that it might be inadvisable to overload the animal's organism with toxic products, the excess of which might be of no therapeutic utility; and, on the other hand, it was theoretically possible that the latter method might prevent the occurrence of relapses. The investigators have tested both methods, treating some of their experimental animals with Ph and others with atoxyl; and, in the case of some animals, they used the two drugs alternately. With each method of procedure they have obtained beneficial results both with rats and monkeys, and with the latter class of animals they have found that the treatment was most satisfactory with atoxyl or with Ph and atoxyl in alternate doses. The results of their experiments upon rats showed that when treated with either drug, by either method, these animals could be kept alive for a period extending in some experiments to eight or nine months. In some of the rats there was a continuous absence of trypanosomes for several months, but in others there was recurrence, and in one instance recurrence occurred after the parasites had been absent from the peripheral blood for six months. The authors attach particular interest to these late relapses, which show that a subacute can be transformed into a chronic disease under the influence of treatment and also afford a significant illustration of the caution which ought to be observed before a case of human trypanosomiasis can be declared to be cured. In the case of monkeys the substantial value of the treatment appears to be less open to doubt. The longest period after which a recurrence was observed was ninety-eight days, and this was an exceptional instance and arose in an animal not submitted to treatment for the prevention of relapses. In the case of eight monkeys, five months or longer have elapsed since the last treatment without the reappearance of trypanosomes in the blood, which was subjected to repeated microscopic examination. The blood of two of these animals in doses of 8 c.cm., failed to infect rats; and the blood and emulsified organs of another animal failed to produce infection when inoculated into a dog. These eight monkeys, therefore, appear to have been cured, but the authors refrain from expressing absolute certitude on the point until the six animals which are still alive have been kept under observation for a longer period. They urge that in considering the significance of these experiments with a view to the treatment of human sleeping sickness, it is important to remember that in experimental infections the second phase of the human disease, when the parasites have invaded the cerebro-spinal fluid, is only rarely produced. It is, therefore, far from certain whether these therapeutic agents are capable of completely curing the human infection, and some years must elapse before a final opinion can be pronounced as to the efficacy of the treatment.

[1] BRITISH MEDICAL JOURNAL, December 22nd, 1906, p. 1777.
[2] *Ann. de l'Inst. Pasteur*, January, 1907.

FORCEPS IN ABDOMINAL CAVITY.

THE fate of a patient bearing a forgotten forceps in the peritoneal cavity is very uncertain, as may be seen in Neugebauer's carefully-collected records of cases of this kind of accident. Dr. Stewart recorded in the JOURNAL on February 9th last a case in which forceps were successfully removed ten and a half years after the operation at which they were overlooked, and Professor Gruzdew of Kazan has recently reported an instance in which the patient was lucky, and the localization of the instrument easy.[1] A country woman aged 58 came under his care on account of abdominal pains which she ascribed to a foreign body, which could be felt through the parietes. Seven years previously a large ovarian cyst had been removed by an operator of repute aided by good assistants and nurses. Convalescence was speedy and for a year the patient enjoyed comfort, then pains set in, which steadily increased until they had recently become localized. A sharp hard point, evidently part of a forceps, could be felt about ¾ in. to the right of the abdominal cicatrix. One handle could be felt in Douglas's pouch. Tenderness and induration of surrounding structures was definable between the handle and the point. There was a small sinus in the abdominal integuments in front of the projecting point. Dr. Gruzdew laid open Douglas's pouch whilst an assistant kept the handle steady, with one finger passed into the rectum. The operator had no difficulty in catching hold of the bows of the forceps and withdrawing the whole instrument. Douglas's pouch was packed with sterilized gauze, and the sinus in the parietes, which had smooth walls and diverticuli, and proved slow to heal, was stuffed with iodoform gauze. The pains soon disappeared and the patient was restored to health and comfort. The instrument was a Ferrier's clamp-forceps 8½ in. long; the handle was 2¾ in. in breadth. The most important features about the condition of the instrument were, first, the fact that it was closed, so as to offer relatively little difficulty in extraction; and, secondly, the condition of its surface, completely covered except at the point with a thick layer of highly-organized lymph which contained distinct blood vessels. Yet when the operator explored the pelvic viscera with his finger after the extraction of the forceps he could detect no adhesions nor exudation. Thus this patient was uncommonly lucky. Dr. Gruzdew dwells on similar cases, and on others where the patient

[1] Beitrag zur Frage der Fremdkörper in der Bauchhöhle und über das Verhalten des Bauchfelles den Fremdkörpern gegenüber. *Zentralbl. f. Gynäk.*, No. 46, 1906.

was not so fortunate, and refers to Howard Kelly and Houzel's recent writings on precautions against accidents of this class.

THE INCREASE OF THE ASYLUM POPULATION.

IN order to estimate the probable requirements of the county of Kent as regards asylum accommodation, and also in view of the great public interest evinced of late in the increase in insanity, Dr. H. Wolseley Lewis, the Medical Superintendent of the Barming Heath Asylum for West Kent, furnishes in the annual report of the Kent County Asylums' Committee for 1906, first, a statement of the rate of increase in the asylum population in Kent county, and, secondly, a report upon the increase of fresh cases in West Kent. The former, covering the vicennium 1886 to 1905, shows wide fluctuations from year to year, varying from — 500 in 1889 to + 178 in 1904, but on the whole showing an increase which warrants the assumption that an increase of 50 beds per annum will be necessary in the future. The second statement covers the same period of twenty years, is divided into four quinquennial periods, and distinguishes between first admissions and relapses. Comparison of the figures of first admissions and those of relapses is highly significant, for whilst the first admissions are fairly constant, being 349 for the quinquennium 1891-1895, 344 for 1896 1900, and 342 for 1901-1935, the relapses were 36 for 1891-1895, 39.4 for 1896-1900, and no less than 54.2 for 1901-1905. At the same time the West Kent asylum population has increased by 583, or 38 8 per annum. That is, to quote Dr. Wolseley Lewis, "the type of admissions "is changing; in other words, our population is being "augmented by ever-increasing numbers of hopeless "senile dements who come here to spend the last years "of their lives, and of young irrecoverable cases, the "predisposing cause of whose condition is a strong "hereditary taint." Dr. Lewis here, of course, refers entirely to West Kent, but one at least of the two factors pointed out in the sentence quoted holds good generally all over the country. In all districts medical superintendents of asylums are recording a steadily-increasing proportion of simple senile dements among the admissions, and there seems to be no doubt that this one cause is very largely answerable for the increasing ratio to the general population of the certified insane. How long this state of affairs, with its coincident occupation of valuable infirmary space by cases which are hopelessly incurable on admission, will continue is very largely a question for the ratepayers, but forecasts, such as this of Dr. Lewis, showing a probable necessary provision of fifty new beds a year for Kent county at a cost, we presume, merely in buildings, of between £10,000 and £15,000 per annum, may help to impress on the public mind the need for some simpler and less expensive form of provision for these cases.

THE CHANNEL TUNNEL.

WE were under the impression that the project of creating a land passage between England and France had recently been killed by the Government, but the formidable array of documents sent us by the Literary Secretary of the Channel Company, Limited, makes it obvious that its animation is but very partially suspended. Doubtless the existence of a Channel Tunnel might be of advantage to a certain number of the wealthier class of invalids anxious to proceed abroad, and probably the medical profession as a whole would, with other classes, benefit from an increased influx of those foreigners to whom at present a visit to England seems an insufficient return for an hour's misery in crossing the Channel. Beyond this the medical interests of the question seem but small, and in any case they will count but little in the acceptance or final dismissal of the idea. The documents include a pictorial description of the geological strata through which the passage would lie, and from this it appears that the tunnel would pass from one side to the other in the lower or grey chalk, and at a distance from the lower surface of the sea varying between 90 and 175 feet. The tunnel would be double, or in other words, there would be two tubes, and a third or drainage tube, communicating at intervals; the former would closely resemble the tubes recently opened in London, and have an internal diameter of 18 ft. net. The ventilation, which is a point of medical interest, would be effected by driving in air in the same direction as the moving train, or, in other words, always westward in one tube, always eastward in the other. Supposing one electrically-driven train with 500 passengers to enter the tube every ten minutes, the amount of air calculated to be required is 45,000 cubic feet a minute, which would be driven in at the head of each tube at a velocity of 6 feet a second. In keeping the air of the tubes fresh and pure the engineers see no real difficulty; the problem is far less formidable than those which are habitually overcome in coal and other mines with long, winding, and obstructed airways. One point which we do not remember to have seen mentioned elsewhere is that it is proposed to arrange the electric currents in such fashion that the trains can only pass the centre point of each tube at the will of the operators in the country to which it is proceeding. Reasons are also supplied for believing that the completion of the tube would, under certain circumstances, greatly lessen the risk of a shortage in the food supply in time of war. This, if correct, should certainly make the success of the project a subject of pious aspiration on the part of the medical profession, for even a slight rise in the price of provisions would be immediately felt by all but the richest patients, and greatly increase the difficulties of medical men in coping with disease.

THE NEW PENTACLE OF REJUVENESCENCE.

A GERMAN doctor has discoverd a means of restoring lost youth to ladies more potent than Cagliostro's famous pentacle of rejuvenescence. He advertised that in two days he could rejuvenate the most decrepit hag. This naturally brought a crowd of ancient dames to his house. At the first interview, after careful auscultation, he invited each patient to write her surname, christian name, and age on a piece of paper. The ages to which the poor ladies pleaded guilty varied considerably, but all, in Stock exchange phrase, "ruled high." The doctor undertook to give each patient the promised elixir on the next day but one, as time was required to adjust its strength to the individual power of resistance. When the great day came all the patients turned up in a state of animated expectancy. It turned out, however, that the doctor had unfortunately mislaid the papers containing the confessions of age; he said a new set, therefore, would be required. He added casually that it was well they should know that the oldest among them must allow herself to be burnt as a holocaust for the good of the rest, as the basis of the remedy was human ash. The next day all the women brought back their papers, when it was found that each of them had taken at least a score of years off the age previously admitted. Then the doctor, pretending to have found the first papers, called them to witness that he had kept his word, inasmuch as in forty-eight hours they had all become many years younger. He asked for his fee, but what he got is not recorded. We venture to think that most women would say he deserved the fate which Orpheus suffered at the hands of the Eumenides.

IS CONSERVATIVE TREATMENT OF THE OVARIES OVERDONE?

WE all know how widely removal of inflamed ovaries was practised twenty years ago, often with disastrous consequences. The ovaries at that same era were extensively removed in cases of fibroid with a view to check haemorrhages or the growth of the uterine tumour. At the present date there is a pronounced tendency to treat inflammation of the ovaries by therapeutical rather than surgical methods, and whilst uterine fibroids are extensively removed, most operators save the ovaries provided that they be not diseased. Professor J. W. Bovée of Washington, on the strength of long experience, considers that this reaction in favour of saving the ovaries is becoming excessive.[1] He deliberately expresses scepticism about the internal secretion of the ovary. "Other than by analogy we "have no proof of such ovarian function." In the case of the thyroid and suprarenal glands, he continues, the proof that they produce definite compounds with definite effects when used as drugs cannot be disputed. Up to the present, on the other hand, substances isolated from ovarian and testicular tissue have been found valueless for therapeutic purposes. Clinical evidence shows that the ovarian function is comparatively of small moment after the fortieth year of life. Turning to the application of these views to treatment, Dr. Bovée adds that conservative treatment of the ovaries when the uterus is removed turns out to be more than questionable. His recent experience leads him to lay down certain principles. In the first place, the existence of an ovarian secretion has not been proven, and therefore should not act as a bar to oöphorectomy. Secondly, in all cases of removal of the uterus or its body for disease in women of more than 40 years the ovaries had best be removed—a very definite statement which, when we remember Dr. Bovée's authority, deserves much consideration, though it will not be universally accepted by contemporary gynaecologists. Thirdly, as 5 per cent. of malignancy exists in the cases of uterine fibroids submitted to operation, and in 30 per cent. marked complications of the appendages are present, sparing the ovaries when partial or complete hysterectomy is performed is hazardous to the future well-being of the patient. Fourthly, in malignant disease of the uterus in which radical surgery is indicated, removal of both ovaries is imperative. Fifthly, the indications for removal of the ovaries when partial or complete hysterectomy is done are, according to Dr. Bovée, increasing instead of diminishing. In conclusion, he insists that when ovarian growths of a bilateral nature complicate the hysterectomy, both ovaries should be removed though one seems normal. This is Pfannenstiel's law in respect to ovariotomy for papilloma and other forms of tumour, which are as a rule, even to the naked eye, bilateral. We must suspend our judgement about Dr. Bovée's views, allowing that much remains to be learnt. Above all, long after-histories of panhysterectomy and subtotal hysterectomy, with careful analyses of the treatment of the ovaries and the results, are much to be desired.

[1] "Should the Ovaries be Removed when Hysterectomy or Removal of the Body of the Uterus is Done?" *Amer. Journ. Obstet.*, March, 1907, p. 376.

FOOT BINDING.

ARGUING from the particular to the general, always risky, is likely to be particularly misleading when in the case of a vast territory and a teeming population of complex civilization and multiple origin, an attempt is made to deduce the mental condition of the many from the known aspirations of a few individuals. Still there is evidence from many quarters that a ferment is at work in China, the latest witness being Mrs. Archibald Little, in the *Review of the Far East*. Veneration of learning amongst the Chinese has always struck Europeans, and the new ferment seems merely a variety of this attribute. The difference is that the learning now desired is not that hitherto esteemed, but a knowledge of the ways of the West coupled with a desire to imitate its customs and modes of life. What is learnt is comparatively of indifference so long as it is something new; a somewhat chaotic and undesirable state of affairs. Chinese girls in particular would appear to be throwing themselves with not less ardour into learning to knit comforters, or to work sewing machines, than into the study of Western medicine or the elements of the English language. There are places, too, in which the ferment has already so far played its part as to have affected social customs. Thus in such areas girls are allowed to go out unescorted, and the pupils of schools, attended by the children of wealthy persons, are permitted to give school performances in public and to mix freely with young people of the opposite sex. In China, where until four or five years ago, etiquette on such matters was extremely exacting, this change is remarkable, and it may be doubted if it has not been too abrupt to be altogether wise. Those elementary ideas, which in Europe make free mingling of the sexes comparatively innocuous, in China do not exist at all, and until they have been developed the social results are likely to be not altogether favourable to future progress. However, as time goes on, there will be greater discrimination in educational objectives, and from this the generation which springs from the present race of half-educated Chinese girls will benefit. In any case, one movement of a desirable kind originating in European teaching seems already to have been successful—namely, that of the Tien-Tsu-Hui, or Antifoot-binding Society. Its success is somewhat curiously ascribed by Mrs. Little to a patriotic desire among Chinese girls to become the mothers of brave, strong men. In this thought there seems a certain lack of sequence, since an incapacity to walk with great freedom is not necessarily inconsistent with healthy motherhood and the production of admirable children, but in any case the success of the Society is to be welcomed. That the fashion of leaving the female foot to develop on natural lines has been so long in arriving should not cause too much surprise, for even in Europe feminine humanity cannot preen itself greatly on its good sense in the same connexion. It is only of comparatively recent years that women of the upper classes have begun to shoe themselves sensibly, and the change is still so recent that even now the number of boot manufacturers who can turn out a lady's boot which conforms to the anatomical shape of the human foot, and is also neat and strong, is comparatively limited. The average ladies' bootmaker seems incapable of making anything which is neither a square-toed, heavy monstrosity nor a bunion-producing machine, which, by forcing the great toe outwards towards the middle line, makes real enjoyment of what is for women a singularly healthy form of exercise quite impossible.

A LEAGUE AGAINST DEATH.

IN these days of leagues against consumption, cancer, and other ills of the flesh, it was to be expected that a league should be formed against death. We learn, therefore, with no particular surprise that a Society has been formed in Iowa for the highly useful and praiseworthy purpose of preventing illness and death. Already several hundreds of persons have joined. A condition of membership is that every one on admission must sign a pledge that he or she will continually assert that it is nothing but custom and habit of thought that causes people to be sick, grow old, or die.

Any member who is reported sick from any disease and is confined to his bed for a continuous period of three days is to be fined for the first offence. For a second offence he is to be suspended from membership; a third offence entails expulsion from the Society. It is a beautiful idea, no doubt, that the secret of perpetual youth is, after all, so simple a matter, and that the way to make one's days not merely long in the land, but everlasting, is to protest that dying is nothing more than a bad habit. That stern magistrate, the late Sir Peter Laurie, once expressed his determination to put down suicide; the new Society goes beyond that comparatively modest proposal, and is resolved to put down death. Nor is it the hideous immortality of the Struldbrug that it holds out to its members; if they "intend their minds," to use Newton's phrase, with sufficient force in that direction, cruel age will never claw them in its clutch. This is a potentiality beyond the dreams of Christian Science, for whether Mrs. Eddy is, or is not, decrepit in mind, even believers do not deny that in her bodily frame she is written down old with all the characters of age. The Society does well to have large aspirations; if these do not abolish sickness, they, at least, will promote happiness while they last. But although the custom of dying is one which might well be said to be more honoured in the breach than the observance, we fear it is so deeply ingrained in the human race that its eradication will prove a harder undertaking than the Society appears to imagine.

Professor August Bier of Bonn has accepted a call to the Chair of Surgery in the University of Berlin, vacant by the death of Professor Ernst von Bergmann.

Members are reminded that Wednesday next, May 15th, is the last day on which applications for Scientific Grants and the Research Scholarships of the Association can be received. Further information will be found at p. 265 of the Supplement.

The Wightman Lecture of the Society for the Study of Diseases in Children will be delivered on Friday, May 17th, at 5 p.m., at 11, Chandos Street, Cavendish Square, W., by Dr. Frederick Taylor, who has chosen for his subject pneumonia in children.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Irish Council Bill, introduced by Mr. Birrell on Tuesday last, proposes to put 8 of the 45 Administrative Boards in Ireland under the Central Representative Council to be created under the Bill. Among these Boards is the Local Government Board. As the Irish Council is to consist of 82 elected members chosen by the Local Government Board electors and 24 members nominated by the King and, after the Council's first period of office, by the Lord Lieutenant, the majority on the Council will be elected by the same persons who at present elect the county councils.

Shop Hours. Last week the House of Commons carried unanimously a resolution affirming "that drastic legislation with regard to the closing of shops and the hours of shop assistants is required." Mr. Shackleton, in moving the resolution, pointed out how completely the Shop Hours Act had failed, and Mr. Seddon, an old grocer's assistant, in seconding, gave some graphic details of the hardships borne by shop assistants. In accepting the resolution on behalf of the Government, the Home Secretary said the working of the Act of 1904 had certainly not been satisfactory. The total number of closing orders under that Act for England and Wales were only 112 [illegible] affected 9,000 shops, and, perhaps, 15,000 persons out of a possible total of some 800,000. Of the 112 orders 92 affected one trade only, and there were only 20 which concerned more than one trade. In districts where the Act was most seriously needed it had been practically inoperative. In particular this was true of London and many large towns. Out of some 406 local authorities only 112 had made orders, so that nothing had been done by 364 local authorities. It was extraordinary that the 800,000 people in England and Wales whose claims were admitted in 1904 had no power to set the law in motion. He agreed that in England and Wales the Act was woefully unsound. In Scotland it had met with success, because, although there were only 20 Scottish orders, 12 of them were of a large and composite character. That success suggested that a good deal might be made of this Act in England and Wales if proper machinery was provided, and there was an honest intention to work it. He admitted that a case for amending the Act had been made out; but he could not commit himself as to the date when that could be done.

The Origin of Meat Consumed in England.—In answer to a question by Sir W. Ball, Sir Edward Strachey stated last week that the number of cattle imported from the United States into the United Kingdom in 1906 was 393,837, representing approximately 2,650,000 cwt. of beef. The total imports of fresh beef in 1906 from the United States were 2,426,644 cwt., and from Argentina 2,795,913. It was not possible to calculate the consumption of meat in England separately, but, adopting the estimates made by a Committee of the Royal Statistical Society and accepted by the Royal Commission on the Supply of Food and Raw Material in Time of War, the total consumption of beef in the United Kingdom in 1906 was approximately 1,100,000 tons. Of this total, the supply from the United States and Argentina would amount to 36 per cent.

Small-pox at Devonport. Mr. Lupton asked the Secretary to the Admiralty if a second-class domestic serving on H.M.S. *Defiance* at Devonport had been taken ill of small-pox; if so, would he say whether the patient was vaccinated; and, if so, upon what date? Mr. Edmund Robertson answered that a second-class domestic serving in H.M.S. *Defiance* had been attacked with small-pox. He was vaccinated as an infant, but the actual date was not known. He was not revaccinated. He was suffering from an attack of modified small-pox, such as followed ordinarily in persons partially protected by infantile vaccination.

The Maintenance of Lunatics and Imbeciles in Workhouses. Mr. William Pearce asked the President of the Local Government Board if he would introduce legislation, extending the grant of 4s. weekly now made under the Local Government Act, 1888, in respect of each lunatic maintained in a lunatic asylum, to imbeciles and lunatics certified for treatment in workhouses. Mr. John Burns replied that some extension of the grant in the direction desired was recommended by the Royal Commission on Local Taxation, subject to certain conditions. The matter would receive consideration when the question of local taxation was dealt with by the Government; but he could not promise to introduce legislation with regard to it at the present time.

The Public Health Officers Bill has been put down for second reading on June 11th.

The Whitsuntide recess will begin on Thursday, May 16th, and continue until Thursday, May 23rd. The House will thus leave off on a Supply day and begin work with the discussion of Supply after the holidays. The arrangements made last week contemplated the passing of the time-limit resolution for the Committee stage of the Army Bill, and the introduction of the Irish Council Bill in the first two days of the present week, and the report of the financial resolutions of the Budget on the Wednesday. Monday, May 13th, and the following day, will be devoted to the Finance Bill. On the Wednesday the debate on the Government for the holidays will take place, and on the last day before the Scotch Estimates will be taken. Some of the smaller Government measures will be pushed forward a stage if possible.

Newcastle-upon-Tyne.

RECONSTITUTION OF DURHAM UNIVERSITY.

Draft Bill Carried at Convocation.

AT a Convocation at Durham University on April 27th various degrees in medicine and surgery were conferred. The draft Bill for the reconstitution of the University was then introduced for discussion by Sir Isambard Owen, who spoke of the necessity of the change and of the benefits that will accrue to all the faculties of the University by the federation proposed. If the scheme is carried through Parliament the Newcastle Colleges of Medicine and Science will figure more prominently in the management of university matters than hitherto. To many of the theological partisans the draft Bill does not commend itself, and yet, as pointed out by its spokesman, there is nothing in the Bill that will injure Durham as Durham, for she will retain all that at present belongs to her. On the motion being submitted to Convocation it was carried by a majority of sixteen. Of this subject we shall hear more later on.

ROYAL VICTORIA INFIRMARY.

Several changes, administrative and other, have taken place at the Royal Victoria Infirmary. To the post of Director of the Bacteriological Department Mr. Herbert I. Slade, M.B., B.S., has been appointed. From the position of Senior House-Physician Dr. W. Hume has retired, and is succeeded by Dr. H. Drummond.

The increasing amount of supervision required in connexion with clinical teaching in the infirmary and the direction of the course of studies for medical students, accompanied by a change in the *personnel* of the resident staff and in the duties hitherto discharged by the Senior House-Physician, have necessitated the creation of a new appointment connected with the teaching in the Royal Victoria Infirmary. To this office Dr. Thomas Beattie has been appointed with the title of Dean. All inquiries regarding educational facilities, students' appointments, etc., should be directed to Dr. Beattie.

West Yorkshire.

BRADFORD ROYAL INFIRMARY AND "RECOMMENDATIONS."

AT a meeting of the Infirmary Board held on May 3rd the following alteration of rules in connexion with the issue of recommendations by donors and subscribers were adopted:

(1) An individual donor of £1,000 shall be entitled to endow a bed specially named, and to the office of Vice-President.

(2) An individual donation of £500 entitles to the endowment of a cot specially named, and the office of Vice-President.

(3) An individual donation of £50 and upwards entitles to the office of Vice-President.

(4) Donors shall be entitled to grant one recommendation each year in respect of each donation of £10.

(5) Annual subscribers shall be entitled to grant two recommendations each year in respect of each sum of £1 1s. annually subscribed.

It was stated that the alteration in the rule respecting the recommendations for subscribers had been made to prevent abuse, as recommendations had been used for improper purposes. The question of recommendations has been considered by the medical profession of Bradford on several occasions, and the opinion has been expressed that it would have been better to abolish them. They undoubtedly lead to abuse, and are not used at the Children's Hospital or St. Catherine's Home. But the infirmary authorities have had to find a *via media*, and have now introduced the policy of restricting the number of recommendations. Possibly in the not too remote future they may find it feasible to abolish them altogether.

SEQUEL TO A BRADFORD SANITARY PROSECUTION.

A point of great interest to local health authorities was decided in the Court of King's Bench on April 29th. The Bradford sanitary inspector laid a complaint last November in the Bradford City Court that certain houses were not provided with sufficient watercloset accommodation under the Bradford Improvement Act, 1873. Conviction followed on the ground that the provisions of the Act had not been complied with in accordance with due notice by the Town Clerk. An appeal was made to the higher court that the conviction was wrong in law, as the Bradford Improvement Act went beyond the Public Health Act, the requirements of which had been fulfilled. The Lord Chief Justice, in giving judgement, said that he was of opinion that the local Act was intended to give more power to the local authorities than did the Public Health Act, and dismissed the appeal.

THE SMOKE NUISANCE IN BRADFORD.

Manufacturing firms are being frequently brought before the local magistrates in Bradford for emitting an inordinate amount of smoke from mill chimneys. A small fine is imposed which does not appear to act as a deterrent. Methods of consuming the greater part of the smoke exist, but difficulty appears to be found in getting the manufacturers to go to the trouble and expense of adopting them. Until the penalties are made much more serious than at present there is little hope that the abuse will be abolished. The dense smoke is most injurious to health, and it is to be hoped that the local authorities will soon take such action as to compel the more careful carrying out of the local by-laws.

Ireland.

HEALTH COMMISSION, BELFAST.

THE Commission has been engaged in a continuation of the investigation into the purity of the water supply. All details as regards the supply, the laws, the various catchment areas, and the involved plan of distribution were produced, and Drs. A. C. Houston (London), M. H. Gordon (London), and Professor Franklin, F.R.S. (Birmingham) gave evidence as regards their examination of the water on behalf of the Water Commissioners. Professor Franklin had been supplied about every three months with samples of water by the Water Commissioners, which he reported on. Dr. Letts (Professor of Chemistry in the Queen's College), Dr. Alexander (Knocknadonagh), and Dr. Gaussen (Dunmurry) were also examined.

The impression conveyed to the general reader is that the Mourne supply is a first-class one; that the supply both from Stoneyford and Woodburn is second-class, and open to strong suspicion of human as well as bovine faecal contamination; and that the various by-washes, filters, and storage are all good, but are liable to fail, especially under exceptional circumstances. It is also perfectly clear that an enormous sum of money has been spent in trying to convert bad catchment areas into good, and that this sum would have been nearly sufficient to complete the Mourne scheme, which all agree in pronouncing a first-class supply. There is no moral doubt that typhoid excreta have obtained access in the past probably to both the Stoneyford and Woodburn supplies; whether the storage and filtration can prevent this contamination from being a source of danger to the consumer may be a matter for water experts, but as long as some of the problems of bacteriology are in such a kaleidoscopic state the man in the street demands a pure catchment area. All the witnesses agreed with Professor Symmers as to the paramount importance of much more frequent, even daily, examination of the water.

SANATORIUM FOR CONSUMPTION IN CORK.

The annual meeting of the Cork Joint Hospital Board was held on May 4th, and, after the election of a chairman for the ensuing year, the report of the Committee appointed to inspect the free site offered by Mr. Langley Brazier Creagh was brought forward, and proved highly satisfactory. The proposed site is at Streamhill, four miles from Buttevant railway station, and three and a half miles from Doneraile; it is on the Ballyhoura range of hills to the east of Ballywonear, at an altitude of 450 ft. or more. There is excellent shelter, a southern aspect, a dry, sandy soil, and an abundant water supply. There are no dwelling-houses or public-houses in the immediate vicinity. The Committee added: "The site appears to us a most desirable one, and we think that the thanks, not only of the Joint Hospital Board, but of all those in

the county who are interested in the erection of a sanatorium for consumptives, are due to Mr. Brazier Creagh for his kind and generous offer." It was arranged that the Local Government Board should be asked to send an inspector to visit the site and report upon it. Much satisfaction is felt in local circles at the happy turn events have taken, and it is hoped that the much-needed and long-looked-for sanatorium is at last within near reach of those needing its assistance.

Scotland.

CEREBRO-SPINAL MENINGITIS.

ELEVEN cases were notified to the Edinburgh Medical Officer of Health as being suspected cerebro-spinal meningitis in the week ending midday, May 4th, and 10 of these were removed to the City Hospital; 6 deaths have occurred during the week, and 25 cases remain under observation.

The Registrar-General for Scotland reports that in the week ending Saturday, May 4th, 45 deaths were due to cerebro-spinal meningitis in eight principal towns of Scotland, or 8 more than in the preceding week. Of these, 30 were in Glasgow, 7 in Edinburgh, 4 in Leith, 3 in Dundee, and 1 in Paisley.

THE NEW WING OF THE SAMARITAN HOSPITAL, GLASGOW.

Last week the new wing and extension of the Samaritan Hospital were opened by Lady Blytheswood. The ward in the low floor of the new wing has been named the Alice Mary Corbett Ward, and that on the upper flat the Catherine Stobo Gibson Ward. The new wards bring up the available accommodation to some eighty-six beds. The hospital began about twenty years ago in a very small way, but has rapidly developed, so that it is now one of the largest in the kingdom devoted entirely to the treatment of women's diseases.

NEW MEDICAL SOCIETY AT GREENOCK.

The medical practitioners of Greenock have formed a new society to be known as the Greenock Faculty of Medicine, the object of which is to promote friendly intercourse among the members and to further professional interests by the reading of papers and by demonstrations. Sir Hector Cameron of Glasgow has been elected Honorary President. The Secretary is Dr. William Allan.

India.

PLAGUE NEAR DARJEELING.

Death of Captain Swanzy.

With deep regret we have to announce the sudden death of Captain Swanzy, R.A.M.C., one of the most popular and promising of the young officers of his corps. The circumstances were exceptionally tragic, and Captain Swanzy's name must be added to the already long list of the members of his service who have sacrificed their lives in the performance of their duty. Deep sympathy is felt for his young widow who is left with an infant to mourn her loss, and the medical profession all over the world will have an added regret for his untimely death from the fact that his father is a distinguished medical man, Mr. Swanzy of Dublin.

According to the most reliable accounts, the following is the history of the outbreak of plague during the course of which Captain Swanzy contracted the infection. Towards the end of March an Indian from the plains arrived at Ghoom, a railway station about three miles south of Darjeeling, and there died, having, it is said, evidently come mad and thrown himself into a ravine. Two men of the sweeper caste removed the body, and in a very few days both of them became ill, and were seized with a sudden illness which rapidly proved fatal. They were attended by a military hospital assistant of the cantonment of Jalapahar, which lies between Darjeeling and Ghoom, and which is really a part of Darjeeling. It is doubtful whether he realized the nature of the disease, though at the time there were persistent rumours that two deaths from suspected plague had occurred at Ghoom. Soon the hospital assistant himself fell ill, and died as suddenly as the others. He was attended by Captain Swanzy, and unfortunately the nature of the disease became only too clearly manifest, for not only Captain Swanzy but a native hospital assistant were seized with unmistakable pneumonic plague of great virulence. In less than a fortnight there were four generations of infection, all the cases proving rapidly fatal, so that it is not to be wondered at that there was something like consternation among the residents of Darjeeling at the sudden appearance of plague in its most virulent form in their immediate vicinity. Up till now Darjeeling has been free from plague, and as it is the hill sanatorium of Bengal and the seat of the Bengal Government in the hot weather, an outbreak would be a most serious matter. The medical and sanitary officers were promptly on the spot, and all possible precautions were taken as soon as the nature of the disease was known, and fortunately the efforts appear to have been attended with success, as a week has now elapsed without any more cases being reported.

It is said that there are very few rats in Darjeeling, and, if so, it is a very fortunate circumstance, as it becomes exceedingly difficult to deal with an outbreak of plague when the disease becomes epizootic among the rats. Apparently the direct infection has been thoroughly dealt with, and if the rats have not become affected, there is every reason to hope that the outbreak in Jalapahar is at an end.

THE INDIAN MEDICAL SERVICE.

Those who contemplate entering the Indian Medical Service should obtain copies of the April and following numbers of the *Indian Medical Gazette*, in which will appear a series of articles on the Indian Medical Service by Colonel D. G. Crawford, Civil Surgeon of Hoogly. This series was written by request of the former President of the Medical Board of the India Office for the information of intending candidates, but as the present President was of opinion that the standard of qualifications of intending competitors was as high as could be expected he did not approve of the publication of the pamphlet. None the less, the articles will contain information regarding the service which will be the most complete and up to date available, and as they are written by one who has made a special study of all that concerns the Service, they cannot fail to be of the utmost interest to young medical men who are casting about for something to do.

Remembering the character of the competition at the last examination, one would be justified in expressing mild surprise at the view of the President of the Medical Board, as there did not appear to be anything like the same competition for places that there was formerly.

THE HEALTH OFFICERSHIP OF CALCUTTA.

Judging by a note in one of the best informed of the Indian papers, it would appear that there is not so much competition for the post of Health Officer of Calcutta as might be expected, considering the salary offered, and the paper remarks that it seems that there is an impression among medical men that the present incumbent has not been well treated, and that in consequence of this impression the right class of candidates is not coming forward. There is little doubt that the paper has hit the nail on the head, for there is a distinct impression that the present health officer owes the loss of his post rather to his honesty and straightforwardness than to any lack of efficiency.

INTERNATIONAL LARYNGO-RHINOLOGICAL CONGRESS. The International Laryngological and Rhinological Congress (Turck and Czermak Memorial Festival) is to take place in Vienna from April 21st to 25th, 1908. In connexion with it there will be an exhibition of objects connected with laryngology, rhinology, œsophagoscopy and bronchoscopy, instruments for examination, operation, and treatment, tubes, electro-medical and illuminating apparatus, together with preparations, manuscripts, books, and drawings. Communications, accompanied by an exact description of the objects to be exhibited, should be addressed, not later than December 31st, 1907, to the Secretary of the Congress, Professor Dr Michael Grabower, Wien, IX. Garnisongasse 10. Exhibits should be sent at latest by February 15th, 1908, and addressed as follows: "Herrn Ober-Ingenieur Jarosche, Inspektor des k. k. Universitätsgebäudes in Wien. All objects will be insured against robbery, fire, and damage. The import and export of exhibits has been declared duty free by the Government authorities. For any further information exhibitors should apply to the Secretary.

SPECIAL CORRESPONDENCE.

VIENNA.

Pay Hospital Scheme.—Cerebro-spinal Fever.—Whooping-cough and its Relation to Influenza.—Wrestling and the Heart.—A System of District Nursing.

THE Managing Board of the State hospitals, the number of which in Vienna alone is eleven, has devised a new scheme for increasing the funds of these institutions. The object is praiseworthy, but the manner in which it is proposed to attain it is arousing great opposition on the part of the medical profession. It is proposed to set aside a number of beds in each ward for patients who can pay at least 5s. daily. The payment for the other beds, occupied by the poor patients, is about 1s. 10d. or 2s., and this charge has to be defrayed either by the Government or by the ratepayers. Special wards, with only one bed in each apartment, are also to be established; the charge for these is fixed at 8s. 6d. The profession objects to the scheme because only members of the hospital staff are allowed to treat this class of patients; thus the doctor, when he sends the patient to the hospital, may lose contact with him entirely. Such conditions do not prevail in the private pay hospitals, so that the majority of the practitioners derive a good proportion of their income from patients in these institutions, which are known here by the name *Zahlstock* or sanatoriums. The Practitioners' Organization and other medical bodies have protested against the scheme, but the sole result of the protests so far is that the scheme has only been referred to a Committee for further consideration.

The epidemic of cerebro spinal meningitis, which was notified last winter, has been more or less active ever since, and an exacerbation occurred in the course of last month. The number of cases was given in the report of the Board of Health as 112, but that figure is not quite correct, as some cases of such are known to have occurred without the true cause being notified. Experiments are still going on with the preparation known as "pyocyanase," a product of the metabolism of the *Bacillus pyocyaneus*, which has the property of destroying the *Diplococcus meningitidis* within forty-eight hours. Although it is not quite clear whether it kills the microbe or makes the tissues more resistant, it has been employed in numerous cases as a prophylactic. The naso-pharyngeal mucosa is brushed with a swab of cotton dipped into the liquid, or a few drops of the substance are introduced into each nostril. By this means a spread of the infection amongst the friends or relations of the patients may be averted with comparative safety. The treatment of developed meningitis adopted here mostly consists in repeated lumbar puncture—every other day if required—and protracted hot baths. The mortality has varied between 20 and 45 per cent., but no definite figure can be arrived at.

At a recent meeting of the Vienna Medical Society, Professor Albrecht gave details in regard to his bacteriological investigation of pertussis and the experiments on rabbits based thereon. He obtained his material from 200 children, in which fatal pneumonia, coming on after whooping-cough, was diagnosed, and from the sputum of 70 children actually suffering from whooping-cough. In all these cases the *Bacillus pertussis* (Eppendorf) was present. Professor Albrecht believes this organism to be identical with the *Bacillus influenzae*, from which it cannot be distinguished morphologically or biologically. He has found it also in all the abscesses complicating pertussis, in the bronchitis and pneumoniae of children after measles, diphtheria, and common influenza. In no case was any difference found between the organism obtained in culture from usual influenza and the organism of the above-mentioned diseases. Rabbits were then immunized with this influenza-pertussis bacillus, and their blood showed a high agglutination index. In the course of these experiments some very interesting observations were made. Several times the result of the intravenous injection of the bacillus broth was an endocarditis of the mitral valves. Furthermore, the heart muscle and the liver appeared sometimes yellow, and from the endocarditic parts and the degenerated muscles and the liver enormous masses of the genuine *Bacillus influenzae* could be obtained. These facts seem to explain why after influenza such grave lesions of the heart are sometimes observed in spite of the insignificant foci of the disease. There appears to exist a special affinity between the toxins of the bacillus and the cells of the organs affected. The vitality of the child who is the subject of whooping-cough is impaired by these toxins taking a firm hold on the heart muscle, and a complicating pneumonia easily kills the patient.

A series of very important observations has been made by Dr. Selig on a number of professional wrestlers as to the influence of heavy muscular exertion upon heart and kidney. The subjects of the observations were men who, for periods ranging between ten and twenty-five years had been engaged in heavy work as wrestlers and public champions. Psychical emotions also played a rôle in these engagements, because the honour, and, besides that, substantial purses, were the prize of the winners. The results of the examination were the following: The pulse-rate increased very quickly, and went up by 40 to 50 beats per minute, once even it bounded from 70 to 180! but no definite ratio could be made out between the increase of the pulse-rate and the amount of the work done, since in some men the pulse quickly reached its maximum, whilst in others even heavy exertion produced but a slight rise of the pulse-rate. A more definite condition could be found as regards the blood pressure. This invariably fell by 50 to 60 mm.; it reached as low as 30 to 40 mm. after a few minutes' heavy wrestling. The ratio of breathing was 50 to 65 per minute. A more definite point to be settled was the supposed dilatation of the heart. Several times the dull percussion sounds of the heart reached the right sternal margin, and the apex beat was felt outside the nipple line, but such phenomena quickly passed off after a few seconds' rest. Examination of the heart by means of *x* rays during the stage of supposed acute dilatation revealed no actual dilatation or enlargement of that organ, the heart being otherwise healthy. As regards the kidney, that was during exertion nearly always affected in such a way as to indicate acute congestion, with numerous casts and epithelial detritus. But after a few minutes' rest nothing abnormal could be found in the organ if it was formerly healthy.

District nursing is the latest addition to the charitable institutions of Vienna. A number of medical men combined some time ago to ensure for such patients in want of skilled help who could not be received in hospitals, the services of nurses without payment. The movement was supported by numerous corporations, and the nursing of the poor has become a very useful help for the hospitals, which comes very handy in cases of overcrowding of these institutions. The county of Lower Austria has now taken up the matter, and the Diet has ordered the expenses to be paid by its exchequer, so that a district nursing service is now an official institution, governed by official men, and its services are free to all needy and bedridden patients, especially to women during and after labour.

CORRESPONDENCE.

THE CHARTER AND THE CONSTITUTION.

SIR,—I am sure that there must be a very large number of members of our Association who will be inclined to agree with Dr. Bradshaw, if not *in toto*, at any rate in so far that they are convinced by his logic that our present method of government by a House of Commons elected annually to sit for three or four days is distinctly unsatisfactory.

Last year I ventured to address a letter to you which was written while the Representatives were in session and while the impression made on my mind by conversation with several of them was still fresh. I then urged that our present constitution, with Representatives elected on snatch votes and invested with almost plenary powers, was an expensive mistake. Time and experience of results have not altered my opinion, nor can I think that it has altered the opinion of those with whom I conversed.

Far be it from me to deny the immense amount of most excellent work that our house of Representatives has done, but, all the same, I feel that this work has been done by an unsatisfactory and expensive process which might, I am sure, be very much improved upon.

I recently had a conversation with the President of my own Division on the subject, and while his arguments

compelled me to admit that we have arrived at that period of corporate growth when some form of direct representation is a necessity, so that each humble member can feel that he has a say in the laws that govern us, I could not go so far as to think that his process of educating the profession in political wisdom was a permissible one if it could be avoided; his process being summed up thus: "Yes, Smith, we shall let the present misrepresentation—on personal voting strength—go on till it lands us in some fearful predicament. We shall then wake up and attend meetings and see that we are represented in ideas and not merely by votes in scantily attended meetings." Now, Sir, it seems to me that the predicament above referred to is fast approaching, in the shape not of actual bankruptcy perhaps, for I suppose we shall always be able to pay our just debts, but of such a financial position that we shall have to raise the subscription to an amount beyond that of, say, the *Lancet*, and this will lead in all probability to the resignation of a large number of those who only belong to us for the sake of the JOURNAL—how large this is may be estimated differently by different minds, but many believe it *very* large. This I consider would be a serious calamity, for I would like to see every member of the profession join us, the good for example sake, the indifferent for their own sake, and the bad that we may be able to exert some good influence on them.

It is no use thus criticizing present institutions unless one is prepared with a proposal to remedy the defects criticised.

I am not sure whether Dr. Bradshaw's proposal as it stands is the best way in which we can attain to real representative government, but surely it is not beyond our powers to ascertain whether, in the opinion of the majority of us, it is so or not. My own ideas would run on the following lines: Let the Divisions remain as they are, with their present powers of dealing with purely local matters (social, reading of papers, etc.). I do not think that we need extinguish them. Give them greater representation on the Branch Councils, and make these the first court of appeal on all matters reaching beyond the province of single Divisions. At the head of the Association put the Council, with full powers of dealing with money as suggested by Dr. Bradshaw; let this Council remain as at present so far as its composition is concerned (it might be slightly increased in numbers), but make it more strictly representative by allowing each Division to *nominate* as many members as the whole Branch can elect, and then let the whole Branch elect its representatives from those so nominated, and let the election be done by voting paper and not by personal attendance. Let this be the legislative and executive body, let it initiate what business it likes, but let it not be compelled to consider referred business except that which comes to it from a Branch through the Council of that Branch. It will be seen that this proposal is not quite identical with Dr. Bradshaw's, though very nearly so; its weak point resides in the name of "Council," which seems to deprive the Divisions of their right to representation. I would therefore suggest for it a new name, but one that is true in fact, and call it the "Representative Council."

Now whether my suggestion or Dr. Bradshaw's be the better, I believe that modifications of one or the other or between the two would actually be supported by a majority of the Association if a poll were taken, and I would suggest that a simple voting paper be prepared and sent to every member of the Association, that those who do not reply within a fortnight be served with a second paper, and that this process be repeated until we get at least 10,000 replies, and that then the process be considered complete, though of course, if more than 10,000 replies are obtained on the first circular so much the better, there is no need for a second one; this method is cheaper and more reliable than referring the Charter piecemeal and as a whole to the Divisions, because the man who cannot attend a meeting can vote, and may be persuaded to vote, and, I think should be allowed to vote, in all Association matters (where impersonation cannot be in question) for so many professional and other accidents may prevent attendance.

The questions on the paper might be:

1 Are you in favour of the present form of Government by two bodies, namely:

(*a*) A House of Representatives elected by Divisions with legislative powers, and

(*b*) A House of Representatives elected by Branches with more or less purely executive functions?

or—

2 Would you prefer to be governed by one House of Representatives with both legislative and executive functions and elected by Divisions united into Branches (= the present Council in effect).

Whatever the replies might be to such a circular, we should at any rate feel that our Charter might then be applied for with a solution of the government difficulty that had the sanction of a solid majority of the members, a sanction which was never obtained for the present constitution, which was forced on a silently protesting majority by a more active minority.—I am, etc.,

London, W., May 5th. FRED. J. SMITH.

SIR,—Dr. F. J. Smith has been good enough to send me a copy of a letter he is addressing to you, and to ask me to make comments on it for publication in the JOURNAL.

Dr. Smith has rightly pointed out the danger of any policy on the part of the Association which would necessitate the raising of the subscription. Those whose interest in the Association is confined to the JOURNAL would undoubtedly resign, if not at once, before many years, and there would be a great difficulty in persuading the younger members of the profession to join at all. There would thus be a diminishing circulation of the JOURNAL, and the receipts from advertisements would fall off in proportion. The loss of income would probably more than countervail the increased subscription, and the influence of the Association, which it enjoys by virtue of its extensive membership, would be greatly lessened.

Dr. Smith's proposals are in the main on the same lines as my own; but whereas I propose that Divisions should be merely voluntary aggregates of members for local purposes, he would make them the basis of the elections to the Central Council. This would necessitate the perpetuation of the system, which is found to be so irksome, of having the large cities—such as Liverpool—split up into Divisions, in order that the members in the cities should be able to exercise the same voting power as those in the sparsely-populated districts. The members in Liverpool and Birkenhead are most anxious to amalgamate the Divisions so that they could all meet together for discussion; but naturally they are not prepared to form one Division whereby they would only have the right to send one "representative" to the annual meeting instead of the six whom they send at present.

Divisions are, I believe, most successful in the smaller centres where there is no medical society in existence. I think that a plan might be devised by which a minimum of, say, fifty members residing in a district should, if they so desired, be empowered to form themselves into a Division, which should receive as at present a capitation grant from the Branch, and should be entitled to send one member to the Branch Council. The remainder of the Branch Council might be balloted for by the members at large.

I think that Dr. Smith's proposal to take a poll of the members as regards the method of government is deserving of careful consideration.

As regards Dr. Cox's criticism of my letter, I am not concerned to consider all that may have been in the minds of the members of the Constitution Committee when they drew up the present constitution. As was stated in a leading article in the BRITISH MEDICAL JOURNAL of February 16th, 1901, the immediate cause of the new constitution was to be found in the legal opinion expressed by Mr. Beaufort Palmer as to the position of the Council in relation to the Annual General Meeting. The danger pointed out by Mr. Palmer was to be obviated by giving a representative character to the annual meeting, and the basis of representation agreed on was the Division. The hope was also expressed—a hope which, I fear, has scarcely been realized—that the existence of Divisions would promote the interchange of views of members; but the method of giving effect to those views was to be by choosing a delegate who would be instructed to support the views of his constituents at the annual meeting. Whatever the intentions of the Committee may have been, the fact remains that the Divisions, especially those in large towns, were planned out in such a manner as to secure the right to return as many delegates as possible; and there are at present Divisions

which would gladly amalgamate were it not that by so doing their number of delegates would be diminished. I am altogether in favour of having Divisions where they are desired and are likely to promote the intercourse of the members; but I should like them to be voluntary, and not forced upon localities where there is no need for them, and where they are not appreciated.—I am, etc,

Liverpool, May 6th. THOS. R. BRADSHAW.

SIR,—The letter of Dr. Bradshaw in your issue of April 27th on the subject of the Charter and the future constitution of the Association was most opportune, and, although I cannot agree with the conclusions he arrives at when discussing this important subject, I am glad that it was written; for it sets forth in an able manner views which apparently find favour in some quarters, and which it is well should be fully debated before the step is taken by which the Association is permanently committed to its new departure on the acquisition of a Charter.

Apparently, the gist of his argument is that the whole administration of the Association should be vested "in the hands of the Council," and that "the Representative Body, as at present constituted, is a body scarcely fitted to exercise such an . . . authority."

Any one who knows anything of the views of those who take a great interest in the conduct of the affairs of the Association is aware that there is a division of opinion on this subject of its government. There are those who hold that a Council chosen by the Branches should hold supreme control; and there are others who think that this supreme control should be exercised by the larger body of Representatives who are elected by the Divisions. Let me deal with this question first of all. To start with, I would say that with the new departure in the formation of Divisions, and a meeting of the Representatives of those Divisions, coincided, or went in accordance with, a new departure in the methods and aims of the Association itself. Up to this change in its constitution the Association hardly concerned itself with any questions other than those of science, and its annual meetings only concerned themselves with sectional work, combined with a pleasant holiday. Although from time to time voices were heard calling for the consideration of matters concerning the general welfare of medical men, these voices were as from men crying in the wilderness.

The whole profession of medicine was, and is, passing through a period of evolution; for sanitary science was calling for the appointment of medical officers of health to supervise county and municipal arrangements; hospitals were everywhere increasingly catering for the medical care of the populace, to the detriment of the interests of general practitioners; and many other economic problems were arising on which it was, and is, imperative that an authoritative opinion should be given from an authoritative body, within the profession to the State, and to the public at large.

What losses our profession has sustained in the absence of this voice of authority can be seen by reading the Medical Acts Amendment Bill which the British Medical Association seeks to place on the Statute Book. In the absence of this voice the Governments of the day have had nowhere to turn to in framing their various enactments, and the consequence is that new offices have been created without their occupants having that fixity of tenure which is necessary if the duties are to be properly fulfilled; quacks have been granted a charmed existence, and have been almost blessed by Chancellors of the Exchequer because of the protective three-halfpenny stamp affixed to their nostrums, whereby the Inland Revenue profits; and the very death certificates, which we are compelled to give gratis, are used by the registrars of deaths as an augmentation of their salaries, when they are copied by these officials for the use of insurance societies.

I need not, surely, develop this theme. Everywhere, until the new development of the Association, the inchoate and unorganized members of our calling had to stand aside helplessly, while other callings were receiving proper treatment from the State because by the union of their members they were able to force the State to consider their demands. "Heaven helps those who help themselves." Now, all this apathy has gone since the creation of the Representative system: and some men complain because the change has involved us in a more costly mode of living, as an association, than heretofore, forgetting that work of this sort cannot be done without considerable expenditure, and ignoring also the fact that this work never was done under the old constitution.

But Dr. Bradshaw has little confidence in the Representative Body, alleging, *inter alia*, that "its members . . . are chosen, as a rule, not so much on account of any special knowledge of, or fitness for, the work, but because they happen to be going to the annual meeting," adding "as a matter of fact, I find now that few gentlemen who have been Representatives one year are willing to undertake the office again." Has he examined, I may ask, the returns of Representatives before making this assertion? Unfortunately, I cannot at present put my hand upon my copy of the minutes of the Annual Representative Meeting which was held in Swansea, but I have by me those of the meetings of 1894-5-6. Taking the last one held in London, I find the names of 128 gentlemen, and, going over the lists of the other mentioned years in comparison with it, I find that of those 128, 44 had served three years in succession, 41 had served twice, and 43 had served once; and of these 43 several were deputies for members who were absent from illness or other causes, and a few were from our colonies and distant possessions. If Dr. Bradshaw will look to the qualifications and status of the Representatives he will be very pleased with what he finds in that respect. Being very proud of belonging to that body, of which I have been a member from its formation, I have taken the trouble to go over the qualifications of those gentlemen who were present at the last meeting in London. Of the 117 who were there I find that 82 were graduates of universities—in many cases in arts and science as well as in medicine, and with additional qualifications as Fellows of Royal Colleges of Physicians and Surgeons and in State Medicine—27 had graduated with honours, and 3 possessed the Fellowship of the Royal College of Surgeons without being graduates. A perusal of the list also shows one that these men are by no means chosen by hap or hazard, but that, on the contrary, they are truly representative of the districts which have appointed them. They combine to form a body whose debates are carried on in an admirable manner, and the men they appoint to their Committees are of an earnest and wholehearted type, who bring to the consideration of the questions brought before them sound judgement, the result of practical experience of public affairs. Were the Branches to cease electing the Council to-morrow, I do not doubt but that members of the Association who have hitherto governed it from those units would, should they desire to do so, be elected Representatives of Divisions as the former Representatives fall off.

As Dr. Bradshaw has argued the matter from a Parliamentary standpoint, taking as a premise the present constitution and government of the Association, I will follow him on the lines he has chosen. What would be thought nowadays of a country being governed by a House of Commons, for debate, with a Cabinet overlooking it, the members of which are returned on a different franchise and by larger areas comprising the same electoral districts which have already sent members to the Representative Assembly? Thinking the matter carefully over, I have come to the conclusion that others have arrived at, namely, that the true method of government is by Representative Meeting, and by a Council, chosen as a Cabinet would be in Parliamentary life, from that Representative Meeting. Once chosen, the men who formed that Council would meet at frequent intervals, just as the present members of Council do. So constituted I can adopt as a description of its work and the results of its work, the very words of Dr. Bradshaw, slightly altering them for my purpose, "the work" would be "continuous and therefore interesting, and the position one" conferring "a distinction on its holder, who" would be "incited by an honourable ambition to deserve well of his" Division "in the hope that the honour" would "be renewed."

I may say that Sir Victor Horsley proposed at the last Representative Meeting that the Council should be chosen entirely from the Representative Body, and that I carried an amendment that it should be, as to two-thirds from the Branches, and one third by the Representative Body, due regard being had to geographical distribution of its members. Since that meeting the Organization Com-

mittee has been sitting, and various schemes for the election of the Central Council have been formulated. These schemes will be found at page 149 of the SUPPLEMENT of the BRITISH MEDICAL JOURNAL of April 6th. Scheme V, "prepared by another member of the Organization Committee," to which I particularly direct the attention of our members, appears to me to be an ideal one, and I do not hesitate to say that it has all my support. Had such a scheme been foreshadowed at the last Representative Meeting, I should have declared for it, as I had no mandate on the subject from my Division.—I am, etc.,

Swansea, May 6th. H. A. LATIMER.

SIR,—I should like to draw attention to a couple of sentences in a letter by Dr. J. Brown of Bacup which appear in your issue of May 4th. He says:

> The Representatives are legally entitled to their railway fares and out-of-pocket expenses as much as any member of the Council . . . . The fact is, Representatives only get railway fares.

This clearly implies that the Council get their full expenses and that Representatives do not. Surely this is an excellent example of the want of knowledge of the laws and of the detail management of the affairs of the Association on the part of one who is a "Representative."

I know a member of Council who is also a member of two committees, and who requires to attend their meetings about twelve times in the year. On each occasion, as he travels from a distance, he is obliged to be from home two nights and one day if willing to travel all night, or three days and two nights if he insists on travelling by day. In all he spends from twenty to thirty days a year on Association business and travel in connexion therewith. By the laws of the Association his railway fares alone are refunded to him. Or consider the Chairman of Council, who often requires to spend two days or more in a week in London, and to enable him to do this the Association gives him a season ticket and no more. But what are his services or the services of any member of Council compared to those of a Representative? Think what would happen were the Representatives to decline to represent the Divisions—Divisions that Dr. Brown tells us are a failure! In this I agree with him.

I would not have referred to these sordid details were it not for a desire to plead with the Association to consider the hard case of the unfortunate Representative. Can we not do something more for him in return for his arduous labours? Why should we not arrange for and supply a *locum* for each Representative once a year while he is performing his important duties? The members of Council, of course, are amply repaid for all that they sacrifice in the interests of their profession by the gratifying knowledge that they have the confidence of the members of the Association, as well as their thanks, with perhaps the exception of a few members who are quite likely to be met at the Representative Meeting.

With the first part of Dr. Brown's letter on the Charter I am delighted to agree. I will not take up further space in trying to discuss the many important points in the Charter, for the admirable letters of Dr. Bradshaw and Dr. Collier already put the most vital points with sufficient prominence before our members. It were well that it should be realized that a very considerable number in the Association think with them.—I am, etc.,

Edinburgh, May 5th. R. MCKENZIE JOHNSTON.

SIR,—Dr. Bradshaw has raised the question of why the unit of organization of the British Medical Association was made a small Division by the new constitution instead of a large Branch as under the old constitution; and is entirely wrong in his answer.

Dr. Cox has already pointed this out in his letter. As I had a very great deal to do with the agitation which led up to the appointment of the Constitution Committee at Ipswich in 1899 and which had previously helped to secure the rejection of the Central Council's scheme of reorganization, I am able to give a specific answer to the question.

That agitation commenced in 1899 with a meeting of the Ashton-under-Lyne and District Medical Society, which was addressed by Dr. Eaton Gaylard, at that time a prominent member of the Manchester Medical Guild. His subject was "Medical Organization," and at the end of his address I proposed a resolution, which was carried, to the effect "that it was desirable that a federation of all local medical societies in the country should be formed, with an annual conference on the lines of the National Union of Teachers." A further resolution asking the Medical Guild of Manchester to attempt such an organization was also carried.

The Guild took a favourable view of the matter, as, indeed, it could scarcely do otherwise, as some such idea had been in the minds of its founders. It guaranteed the preliminary expenses and organized a conference of delegates at Manchester, which was held on May 1st, 2nd, and 3rd, 1900. The delegates assembled represented six Branches and the Council of the British Medical Association and thirty-six other medical societies from all parts of the country. That conference was intended to be a demonstration of the value of small units and of the principle of delegation, and at it the following resolution was passed:

> That, in the opinion of this Conference, no scheme of medical organization can be considered satisfactory unless it provides the following machinery:
> 1. Local or district associations formed wholly or partly for the discussion of medico-ethical and medico-political topics, to which all registered medical practitioners in the locality who agree to conform to the rules of the association shall have the right to belong, such associations to be formed for the purpose where not already existing.
> 2. An annual conference of delegates from these associations.
> 3. A central executive committee, which shall be nominated and elected by the local associations, etc.

This resolution was proposed by myself, and seconded by Dr. Nash, representing the Accrington Medical Guild. In doing so, I laid stress upon the necessity of having the unit so small that a man could easily get to its meetings after his day's work was done, and pointed out how impossible it was for a man to do this in a Branch covering an area of 100 miles by 50, as the Lancashire and Cheshire Branch did at that time. The same point was laid stress on by other speakers, and the resolution was unanimously carried.

Dr. Cox, representing Gateshead Medical Association, seconded by Dr. Brassey Brierley, representing the Manchester Medico-Ethical Association, then secured the unanimous assent of the Conference to a resolution which contained the following words:

> That the size, position, and wealth of the British Medical Association make it the most suitable national medical organization, and that the efforts of all medico-ethical and similar associations, and of the conference should be directed to the conversion of the British Medical Association into an energetic body really representative of the profession.

Finally, a third resolution, appointing a Committee to lay these resolutions before the Council of the British Medical Association, was passed at the instance of Dr. Wolstenholme, seconded by Dr. Addenbrooke, who represented the Kidderminster Medical Society.

That Committee carried this resolution into effect at the Annual Meeting of the Association at Ipswich, and in the speeches before the Council by myself, Dr. Smith Whitaker, and Dr. Wolstenholme, stress was again laid on the necessity of small units and of the principle of delegation.

The conference at Manchester had been opened on the first day by Mr. (now Sir) Victor Horsley, and he expressed to me his satisfaction with the meeting and his conversion to the principle of delegation, and I believe he gave his support to these principles throughout the subsequent proceedings of the Constitution Committee which was appointed on his initiative at Ipswich by the General Meeting. He also secured the election to that Committee of several gentlemen who had taken a prominent part at the Manchester Conference, and one of these gentlemen is now the Medical Secretary of the Association. I know that throughout the proceedings of the Constitution Committee these two principles had to be keenly fought for, and were won on the grounds of the convenience of members and their effective representation at the Annual Meeting.

I think that this bit of ancient history proves that the Divisions were intended to be the real working units of

the Association, and, as a matter of fact, the real power of the Association resides there. The Branches have no control over the Divisions. The word "Division" is, perhaps, a bad name for the units, as it gives rise to the impression that they are Divisions of the Branches, while they are really Divisions of the Association, and Branches are groups of Divisions. That erroneous idea is also fostered by the fact that certain powers in the election of the Central Council and the distribution of money are conferred on them, but these had to be acquiesced in by the reform members of the Constitution Committee in order to gain their other and more important points.

I conclude this, I fear, lengthy letter by warning the members of the Association against tampering with the Divisions and the powers and character of the Representative Meeting. Such a course means putting back the "hands of the clock" and restoring power to bands of irresponsible agitators, who will do no good for the general practitioner. At the same time I impress upon the general practitioner the fact that the Association is now his Association and that it is an instrument of vast power for his own good if he will only rouse himself from his apathy and use it. In the past the Association has given the general practitioner the impression that it did not concern itself with his interests and affairs. In other words the Association has got a very bad name with general practitioners, and it will take a few years to live it down. I always said it would take ten years for the new constitution to get into real working order and for members to find out what power and influence for good they have through its Divisions and Representative Meetings. Four years have not yet gone. The success or failure rests with the members themselves who must really recognize that it is not a feeding-bottle from which they may suck all sorts of good things while lying on their backs and with the Central Council acting as nurse and replenishing it, but that it is an instrument which to be of any value must be used by themselves for themselves.—I am, etc.,

Ashton-under-Lyne, May 6th. SAMUEL CRAWSHAW.

SIR,—In my letter in the BRITISH MEDICAL JOURNAL of May 4th I was under the opinion that the Representatives of the Branches received their railway fares and hotel expenses (when compelled, owing to distance, to stay in town). Some of your readers have informed me that they only receive their railway expenses, so that the Representatives of Divisions receive equal treatment. Personally, I should be glad to pay my quota, so that any member who is compelled to stay in town overnight shall receive hotel expenses. I am glad to find that some of the Divisions whose Representatives live long distances from London have made a voluntary levy on its members, so that they may be paid one guinea a day for out-of-pocket expenses; also, one more of the Branches pays its Representatives one guinea a day.

In the SUPPLEMENT for last Saturday, p. 235, paragraph 12, the Treasurer gives an estimate of income and expenditure for 1907. May I urge all our members to read it most carefully? If so, I think they will agree with me that the Charter should be deferred for at least two years, on financial grounds alone. We have not yet taken the decisive step.

There are many important points which need careful consideration in regard to the constitution, etc., of the Association. The Treasurer says "We are faced by grave financial responsibilities," etc. "The seriousness of the position is emphasized by the rebuilding of the premises." "If the bank rate, etc, will represent £2,000 for interest and borrowed money." We are going in for new premises, to cost about £40,000, and must borrow from the bankers. Our assets are stated to be £103,644 11s. 11d. over liabilities. Only about £14,500 is *realizable*.

I am sorry to see the expenses for Representative Meeting, Council, and Committees has now reached the sum of £3,500 for 1907. Would it not be wise to cut down the number of the Representatives from the Branches to about 25 to 30, and the Divisions to 40 to 50? We might then be able to do the work better; also able to pay hotel expenses of members who are compelled, owing to distance, to stay in town, to do an important business.—I am, etc.,

Bacup, May 6th. JNO. BROWN.

SIR,—The business put down for the Annual Representative Meeting at Exeter in July includes, as last year, the balance sheet. If you refer to By-law 34, you will see that the balance-sheet and financial statement are to be presented to the Annual General Meeting, and all that come before the Representative Meeting are the estimate of the coming year and the Council's report of the general state, etc. As I pointed out not long ago (November 3rd, 1906), the neglect of this clear division of functions caused last year a great waste of time. The Representative Meeting have nothing to do with finance—so little, that apparently they may pass any resolution involving expense without once referring to the Finance Committee.

In his letter last week Dr. Alfred Cox suggests or insinuates that the "administration" is a function of the Representative Meeting. I think this has been from the beginning, and is now, in the hands of the Council. Is it not so?

The election of the Central Council is purely democratic, "voting papers sent to every member." Every single member is elected to the Council by the direct votes of the members. The election of co-opted members does not destroy the democratic character of the Council. The only blot upon the system is the presence of the Chairman of Representative Meetings. It is an anomaly which should be wiped out at the earliest opportunity.

Election of the Central Council by Representatives would be government by oligarchy—by the few. How few is thus made evident. The quorum last year was 72; therefore fewer than 40 men can appoint the whole Council (as proposed by some). Their sensible course would be to appoint themselves, which is, no doubt, what they intend to do.

It is not essential for the Representative to belong to the Division that elects him. As it is so necessary that *every Division* should be represented at the special meeting, it would be well that, failing a local Representative, or as his deputy, some one in the metropolitan area might be invited to act instead. He receives the paper of resolutions passed by the Division and votes accordingly.—I am, etc.,

London, W., May 4th. GEORGE CRICHTON.

SIR,—I should like to support Dr. Alfred Cox's contention that Dr. Bradshaw is wrong in his statement that "few gentlemen who have been Representatives one year are willing to undertake the office again."

Of 146 Representatives who attended the annual meeting in 1904, 61 returned in 1905, and 53 in 1906; and 71 Representatives returned in 1906 of those who attended the annual meeting in 1905.—I am, etc.,

Wrexham, May 6th. E. D. EVANS.

THE MEDICAL DEGREES OF THE UNIVERSITY OF LONDON.

SIR,—Now that the Senatorial election is over and the hubbub is subsided, with the thunder of the captains and the shouting, it is worth while to examine the position with more care than was possible in the heat and dust of the combat. For this task I have the sole qualification of an impartial disapproval of both sides. The spokesmen of both the antagonist associations displayed what seemed to me unnecessary acrimony, and both made assertions that could not be substantiated. Among the charges and counter-charges, I had considerable difficulty in discovering what was the real difference between the candidates, and having at length as I think discovered it, I propose to set it forth as plainly as I can for the assistance of those who may still be in the same difficulty.

Among the five reasons urged upon me for voting for one of the candidates, I find only a portion of one that would not equally justify me in voting for the other. Compressing these reasons out of consideration for your space, they are as follows: I am to vote for Professor White because—

1. He is opposed to the "third centre." So, for the present, is Sir Thomas Barlow.
2. He is a teacher in the University. So is Sir Thomas Barlow.
3. He desires to see the University flourish. So, I believe, does Sir Thomas Barlow.
4. He is opposed to the increased financial cost of the degrees. So are we all; but this is a matter of domestic economy which must be left to the discretion of those who manage the University finances. It might justify a repre-

sentation to the Senate; it could not justify the reconstitution of that body.

So that the title of Professor White to displace Sir Thomas Barlow rests solely upon the third reason, which is as follows:

> Because he (Mr. White) is strenuously opposed to the recent changes, which have affected the reputation of our degrees, and believes that the prosperity of the London Schools will be best promoted by maintaining a high standard.

If there is any difference between the candidates it is to be found in this reason. We may cut out the statement that the reputation of the degrees has been affected, for it is devoid of proof and of evidence; and we may cut out the desire to maintain a high standard (of the degrees, I suppose, not of the schools) since Sir Thomas Barlow also expresses this desire. There then remains, as the sole difference between the candidates, the opposition to "the recent changes" on the part of Professor White.

What changes are meant there is no reference in the Reason to show, and for them we have to look to other utterances of Professor White and the Graduates' Association. From these I gather that there is a general dissatisfaction with the changes that have followed on the reconstitution of the University, and that this dissatisfaction is especially keen with respect to certain specific changes of which mention is made in the various circulars. I am not quite sure whether the Graduates' Association desires to return to the state of things that existed before the reconstitution of the University, but as far as I can gather this is their wish. Yet that state of things was found so intolerable that Royal Commissions were demanded and obtained to put an end to it. The step cannot be retraced, though no doubt the new departure can be obstructed and retarded.

The specific changes, to which objection is taken, were all consequences of the reconstruction of the University. It would take too long to examine them all, so I choose three only as representatives. One is the acceptance of pass certificates of other examinations in lieu of matriculation. It is assumed that this is undesirable; but, if we may judge by the circulars issued by both sides in this dispute, it is certain that matriculation does not ensure a correct use of the English language by matriculated graduates; and, therefore, it would seem that other examinations in lieu of matriculation should be welcomed rather than discouraged. In the second place, there are now men in the medical schools of London, men of brilliant ability, who would be a credit and an honour to the London University, but that, from want of means or of guidance, they omitted to matriculate at the beginning of their career, and have never since had the time or opportunity to go back to school for the purpose. "The Imperial character of the University," says Professor White, "must be maintained at all costs." I did not know it was in peril until I discovered that a section of the graduates was trying to narrow the portal of entrance.

Another of the recent changes that are opposed by Professor White is "the too great substitution of theses or imperfect research in lieu of examination." Of course, if the substitution of theses for examination is "too great," it is wrong; but is it too great? Is it great? What is the evidence? How many candidates have been exempted from how much of how many examinations by presentation of a thesis? What are the statistics? Were the statistics known to Mr. White when he wrote that sentence, or was "too great" a phrase of mere prejudiced denunciation? What is an imperfect research? Has any imperfect research ever been accepted in lieu of any part of any examination? On what facts has Mr. White founded his serious accusations against the examiners? As an examiner, I call upon him to substantiate his charges, which I say are calumnious.

A third recent change, deprecated by Professor White, is the introduction into the course of an undue multiplicity of options. Well, sir, Procrustes is dead, and I thought his methods were obsolete. Since his time, many attempts have been made to run all human minds into the same mould and turn them out the same shape; and they have mostly failed. Innocent III. succeeded in stifling options in his time, but they have revived since. Torquemada objected to options, but his objections have been overruled. The human mind is manifold, and ability shows itself in many ways; is it the function of a university to discourage every mode of ability but one? Carry out to the end the prohibition of options, and we must go back to the trivium and the quadrivium. Is this the aim of the Graduates' Association?

What is the harm of options? They, at any rate, do not lower the standard. But they do tend to attract more candidates, and to increase the number of graduates. This is their only effect, and this, too, is the effect of the other recent changes to which exception is taken. Is this, then, the root of the action of the Graduates' Association? The more one examines their literature the more it seems so. Dr. Percy Allan in his last circular repeats with dismay that the number of successful candidates is increasing. He does not consider the reasons of the increase. They do not appear to matter. It is the increase itself that he insists upon. He quotes my aspiration, that every medical student in London should enter the University, and every candidate succeed in obtaining his degree; and he calls for votes for Professor White "to frustrate the realization of such an ideal." I did not propose to lower the standard; I desired to popularize the degrees; and so to desire is according to Dr. Graham Little, "to truckle to a false and short-sighted sentimentalism." It seems, therefore, that new graduates are not wanted in the London University. We see a large body of its graduates combining to protest against a heavy pass list, to make its degrees more difficult of access, to keep new graduates out. Sir, I am reminded of those merchants who, in times of scarcity, destroy good corn in order to maintain the price of bread. This, then, when stripped naked, is, as it seems to me, the policy of the Graduates' Association. It is thus that the most liberal University in the world is to be conducted. These be thy gods, O Israel!—I am, etc.,

London, W., May 7th. CHAS. MERCIER.

SIR,—With reference to the controversy regarding the standard of the medical examinations of the University of London, I may perhaps be allowed to express an opinion, as one who has entered for the M.B. examination under the old regulations, and for the M.B., B.S. examination under the new.

It is obvious that the statistics alone do not offer a sufficient guide. A far better test is to compare the quality of the questions set, the number of failing subjects in the two examinations, and how these subjects have to be passed. On doing this it will be found that in medicine the questions have become decidedly more difficult, and that wider reading for this subject is requisite. The clinical examination is in difficulty much the same as formerly. There is now a special paper in pathology and a severe practical examination. It is an additional failing subject. The old M.B. required a very limited knowledge of pathology; two questions only were set in it, in a mixed paper. It was not a failing subject. The questions in forensic medicine are much the same—if anything, somewhat harder. In addition, there are now three questions in hygiene, and to answer these a far more specialized knowledge is required than was necessary for the "hygiene" questions in the old mixed paper.

The surgery of the old M.B does not, of course, bear comparison with that of the present examination. There is now an additional paper in surgical anatomy and surgical pathology, and I would refer any one who wishes to test its difficulty to the paper set last November in these subjects. The midwifery paper is certainly more difficult than formerly.

The conclusion to be drawn is that, although the examination has been split into two groups, a higher standard of knowledge is requisite for the individual subjects. Formerly there were four failing subjects, all of which had to be passed at one time; now there are five failing subjects, only three of which need be passed together. Whether it is more difficult to pass four subjects at once or five subjects in groups of three and two I will not discuss. What I have no hesitation in declaring is that the present M.B., B.S. examination is a far better test of medical education than was the old M.B. examination, which, although excellent in many respects, was sadly deficient as a test of knowledge in surgery, pathology, and hygiene.

Further, let me add that it is a gross injustice to the men who have passed the present M.B., B.S. examination to suggest that this is not equal in difficulty to that of

the old M.B. As to whether it is equal to the old M.B. *plus* the old B.S. examination I will express no opinion. I believe that in these days far more men coach for the M.B., B.S. than was formerly the case, and this of itself explains the increased percentage of passes—if it has increased.

I hear it is nearly the invariable rule to coach for the M.D., but the real explanation of the reduced failures here is that, owing to the enormously increased fee, no man now enters for the examination unless he is practically certain of passing. I regret that no one in the recent dispute has denounced the unwarrantable action of the Senate in raising the fee for the M.D. at one bound from £5 for the first attempt, and £2 10s. for subsequent ones, to £20 for each entry. By this action many men of limited means are simply precluded from ever attempting to take the degree.—I am, etc.,

May 6th. M.B., B.S. (1906).

EDUCATION OF MEDICAL STUDENTS IN ENGLAND.

SIR,—In reply to an "Honorary Secretary of Division" (BRITISH MEDICAL JOURNAL, May 4th), in my opinion there is no education in England better than that given at Epsom College to fit a lad for the study of medicine, and there is no university in England better than that of Cambridge in which to take his degree or to fit him also for social duties or to fight the battle of life.

I was educated at Epsom College, and my two sons hold degrees from Cambridge.—I am, etc.,

Ashton-on-Mersey, May 6th. CHARLES J. RENSHAW, M.D.

THE EFFECTS OF RESPIRATION ON THE CIRCULATION.

SIR,—I can assure Dr. Lewis that my statement "that it is impossible to produce a negative pressure within the thorax equal to the positive pressure within the aorta, so there can be no aspirating effect interfering with the ordinary course of the circulation," is absolutely correct. I have made observations on as good chests as any which Dr. Lewis can produce, and that is the invariable rule; there is no exception in a living individual. It is no question of plausibility, it is merely a question of absolute accuracy.

Of course every one knows that a healthy aorta expands and contracts according to the variations in pressure, but what has that got to do with the *course of the circulation?* About the greatest negative pressure which a powerful chest can produce in Müller's experiment is about 100 mm. of mercury, and in *such* an individual the positive diastolic pressure in the aorta and its branches never falls so low. Therefore, under *such* circumstances, the pressure in the thoracic aorta may be stated as follows:

The atmospheric pressure within the thorax = 760 − 100 = 660 mm. of Hg. If you add to this the diastolic pressure in the aorta, say 130 mm. of Hg, you get a pressure of 790 mm. of Hg on the blood in the aorta opposed to an extrathoracic atmospheric pressure of 760 mm. of Hg. You have thus a positive pressure of 30 millimetres of mercury even during diastole, driving on the blood in the aorta in its usual course. Of course the greatest velocity of the blood in the aorta is during systole. When speaking of defective filling of the arteries at their central ends, it would have served my purpose to have assumed that the blood was retained in the aorta and its thoracic branches by a negative intrathoracic pressure, but I should never attempt to bolster up any theory by an inaccuracy. The diminished velocity of the blood in the aorta, which like any other fluid travels in the direction of least resistance, will lessen the supply to the peripheral vessels, but it in no way alters the *normal course* of the circulation. I feel that I must apologize to the general intelligence of your readers for entering into these rudimentary facts, which I did not mention in my paper because I never dreamt that any one would require such education.

Sir James Barr appears to have fallen into the error of neglecting the force opposing the pressure in the vessels—namely, the pressure which the arterial walls exert on the blood.

What next? In these days of elastic tyres I thought that every child knew that the fluid within the tube was compressed by a force equal to that which it exercised, and to be told by Dr. Lewis that I had fallen into or could fall into such an error really sorely tries my patience with him.

There is normally equilibrium between the three forces—blood pressure, the pressure exerted by the vessel wall, and the negative pressure in the chest.

Does he really mean that these three forces (two of them positive and one negative) are normally equal to one another, if so, he had better let us have the proofs? We are not now discussing the question of thoracic aneurysm, but when he deals with the subject I may have something to say. In the meantime I should strongly commend to Dr. Lewis the lines of Prior, and I would remind him that in a scientific training accuracy in thought and expression is primarily essential.—I am, etc.,

Liverpool, May 4th. JAMES BARR.

INFLUENCE OF AN EXCESSIVE MEAT DIET ON FERTILITY.

SIR,—Perhaps you will kindly allow me space to reply to the interesting letter on the above subject by Dr. King in your issue of April 27th.

Dr. King points out that well-authenticated facts as to the diet and fertility of the Boer population "controvert any theory holding that meat *per se* diminishes fecundity." I quite agree with him, but would like to point out that no such theory was propounded in my communication.

Prior to the publication of my paper I was fully aware of facts similar to those given by Dr. King. We have the authority of Darwin for the statement that among Indians in the Pampas, who live very largely on a flesh diet, the degree of fecundity is very high.

The subject of diet cannot be considered without reference to the environment and habits of the people. The open-air life and active exercise of the Boer women are in a marked contrast to the conditions generally obtaining in this country, and it may well be that the large amount of meat which the Boers consume cannot be regarded as "an excessive meat diet."

In my experiments on rats in confinement the quantity of meat in the diet was certainly excessive and its use undoubtedly diminished fertility. This fact taken in conjunction with the great increase in the consumption of animal food mentioned in my paper, led me to suggest that this latter might be one of the causes of the diminishing birth-rate and of the diminished powers of lactation at the present day.

The facts stated by Dr. King are in no way incompatible with this theory.—I am, etc.,

Edinburgh, May 4th. B. P. WATSON.

A POSSIBLE SOURCE OF DIPHTHERIA IN SCHOOLS.

SIR,—The dust of schoolrooms is not only a very active source of diphtheria but also of other diseases, as "Common Sense" can demonstrate if he will only take cultures from dust that is to be found on the desks, walls, and floors. Roughly sweeping schoolrooms is not only dangerous to health but is also very costly to the ratepayer.

The present system of payment for elementary education from the Imperial exchequer is based upon the number of attendances. Bad attendance means less money from the public purse; any deficit has to be met locally. How serious this shortage of attendance is is evident when we realize that the average attendance between Christmas and Easter often sinks from 96 to 63 per cent.; that is during the period when the sun's power is at its minimum and the general dirt and mud at their maximum.

Recently I had some correspondence on the subject with our county education authority; I pointed out how year by year between Christmas and Easter the minimum of attendances was reached, chiefly attributable to preventable diseases, and how cultures made from the dust of these schoolrooms proved the presence of mischief. I suggested general medical examination of the children, and spraying the floors, walls, and furniture with a germicide. They, in their wisdom, have placed the matter for report into the hands of their teacher of science.

The longer I live the more certain I am that the bacteria of preventable diseases, especially of those which favour the respiratory tract, continue active long after apparent convalescence. I believe that not only the best but in the end far the cheaper course would be for each county council to appoint a medical adviser.—I am, etc.,

Bletchley, May 6th. P. B. GILES.

THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

SIR,—Those who are conducting their consulting practices so as to make their relations to general practitioners analogous to the relations which subsist betwen barristers and solicitors, recognize, I think, that there are, and, apparently, always must be, differences in the two professions. So far, however, as I understand the position, these differences only accentuate the necessity for extending this plan of practice in medicine. The gravity of the issues we deal with, life and health as contrasted with mere money, the obscurity of our problems which can often be solved only by death and not by the decision of a judge in a higher court, make it our duty to put no unnecessary obstacle in the way of patients obtaining the consultations which "F.R.C.P." rightly says some practitioners never advise. It is just because, as "F.R.C.P." says, the general practitioner is not obliged ever to call in a consultant that in the interest of the public every encouragement should be given him to do so without obligation.

It might be urged that because a solicitor is obliged to employ a barrister in a certain class of lucrative work the barrister might safely compete with the solicitor and appeal directly to the public for all other classes of work. But every barrister knows quite well that if he takes directly from the public work which he can legally carry through without the co-operation of a solicitor, he will be used by no solicitors, either for the work they may, or the work they must, share with a member of the other branch of the profession. Can it be doubted that when there are a sufficient number of *pure* consultants to choose from general practitioners will select one practising in this way in preference to one who is likely to become a serious rival for the patronage of their wealthier patients? That the medical profession will thus have a much greater "say" in the choice of the consultant is all to the good. Patients cannot choose the most suitable consultant for their special ailments or temperaments, and we should, by the plan proposed, be saved the spectacle of good physicians and surgeons overwhelmed with routine work, often trivial and unsuitable, so that their services to science are hampered, whilst others equally competent are practically neglected by the public.

The fact that "F.R.C.P." has heard the statement that our relations should be like those between barristers and solicitors made before should encourage him to ponder more deeply upon the proposal now that it is officially put forward by the Ethical Committee as a possible arrangement for the consideration of the Divisions. I hope that I have shown him, and others who think with him, that the acceptance of independent practice by consultants, is undoubtedly one of the chief causes that lead many practitioners to wish to have second opinions as seldom as possible. Thus is a vicious circle established which, it is hoped, may now be broken by the concerted action of the profession. If consultants are taking advantage of their privileges in hospital work and gaining the special experience which should be valuable to their colleagues engrossed in general practice, surely it is desirable to make this experience as freely available to them as possible. I am, etc.,

May 4th X.

SIR,—It seems to me that in drawing up rules of conduct where the interests of general practitioners or consultants and patients may conflict, it is well to make them elastic, as otherwise grievous injury may be done to one class or another. It is no doubt better, as a rule, that a patient should see a consultant along with his own medical practitioner, for he thus gets the benefit of the consultant's opinion often wisely modified by the practitioner who has watched his case. At the same time, a rule that a patient should in no case see a consultant without his ordinary medical attendant would be in many instances impossible to carry out. For example, I see a number of patients at intervals of six months to three years or more who have no regular medical attendant, inasmuch as they are perfectly well and have not needed one, but who like to have a general overhaul every now and again so that they may lay their plans for the future. Many other patients pass through London on their way from one hemisphere to another, and wish to be examined in order to know whether a man, for example, who has been mining for a number of years in South Africa is likely to stand some work he proposes to take up in China, or whether the health of a man from India will bear the frosts of a Canadian winter. These men have no medical attendant, or if they have had one in the place from which they have come they will probably never see him again.

There are in practice very many men who are anxious to do the utmost for their patients, and are willing to call in a consultant whenever they think their patients may benefit thereby. But there are others who think themselves all-sufficient, and strongly object to their patients obtaining any other opinion than their own. Not infrequently the patients of such men choose to consider that for the time being they are no longer under medical care at all, and come to a consultant for an opinion, telling him that they have no medical attendant. They dislike to change, but if deprived of the possibility of getting another opinion, they would rather change their medical attendant, and this change might be to the disadvantage of both.

A plan which I have followed for a good many years now seems to offer certain advantages. On the appointment card which is sent out to each patient I have the following sentence lithographed:

> To prevent misunderstanding, I may mention that my fee for consultation is three guineas, unless the patient is accompanied by his or her doctor, when my fee is two guineas.

It is interesting to note how many patients who have announced beforehand that they have no medical attendant find out on receipt of this card that they have a medical attendant whom they can bring with them. To those who come alone I explain the reason why an extra charge is made—namely, that it is less trouble to me to see them along with their medical man, and that in their own interests they ought to allow me to write to him, so that he may carry out the treatment and save them the trouble and expense of again coming to see me and paying a high fee. The greater number of them see it in this light, and in very many cases I have been able to soothe down the irritation of patients felt against their medical attendant and restore their confidence in him. I do not claim that this plan is perfect, but I think it is better than that which is followed by some men, who charge an extra fee for patients who are accompanied by their own doctor, a plan which tends to discourage consultation in the proper sense of the term.—I am, etc.,

May 7th A LONDON CONSULTANT.

TOTAL ENUCLEATION OF THE PROSTATE.

SIR,—The position of the anonymous correspondent armed with a personal challenge is well understood. As a rule, he is while anonymous ignored. Should he ultimately reveal his identity, the feelings with which he is regarded by the average man are not always of the kindliest.

In his letter in the JOURNAL of April 20th "F.R.C.S." deals with a matter in which, at the present juncture, no *locus* can be accorded to irresponsible anonymity, even when backed by evidence of some knowledge of the subject dealt with. Whether such evidence exists in "F.R.C.S.'s" letter may be left to others to judge.

The sole reason for making an exception of "F.R.C.S." and dealing with his letter is that he has written better than he knew. He has unintentionally raised afresh one of the main questions of the subject. He says Mr. Freyer challenges his critics to "produce a single specimen of a prostate removed as he recommends." One of the chief difficulties in dealing with Mr. Freyer is to learn what the method which he recommends and desires to label as his own really is. Does "F.R.C.S." know? Mr. Freyer's "methods of prostatectomy" multiply rapidly. His last paper, as I pointed out in the JOURNAL four weeks ago, contains yet a new one. Up to now he has recommended (1) a perineal method (ten years old when he "discovered" it in 1900), (2) an "extirpation" of the prostate "in its capsule" (1901); (3) a removal of the prostate entire while leaving the urethra intact (1901). Finding that his critics were correct in asserting the absurdity of the last two ideas, Mr. Freyer made yet another change of position, and is now discovered as the claimant to two further "new" operations. In method (4) "extirpation *in* its capsule" has become the old-fashioned "enucleation" *from* its capsule. In method (5) the

urethra is brought away with the prostate (as, indeed, despite Mr. Freyer's assertions, it had always been in his hands, so far as his publications enabled his critics to judge). The difficulties in defining Mr. Freyer's position have been in large part due to the impossibility of understanding his statements as to his achievements. It would appear that efforts to that end have been wasted; that, in fact, Mr. Freyer did not do what he said, and believed, he did. What he really has done, and what he wishes us to accept as his method of operating, "F.R.C.S.'s" letter may have helped to define, in drawing attention to the existing confusion.

As your readers are aware, Mr. Freyer's challengers include many well-known surgeons. With reference to removal of the whole prostate, the position of matters in my own case is this: In 1901, when Mr. Freyer's claims were first published, I was one of many who promptly repudiated them. Like others, I had previously removed the whole prostate, and I pointed to two descriptions of the operation which I had published as far back as 1894—and it was not new then. In my letters in the JOURNAL in 1901 I stated that I had in my possession several complete prostates which I had removed by operation. Of these I selected one as showing the "capsule" described by Mr. Freyer, and included a photograph of it in my letter. Mr. Freyer ignored both my specimen and my references to complete removal of the prostate in 1894. When in 1905 I published photographs of two more of the specimens I had referred to in 1901, Mr. Freyer found refuge in assuming an astounding position with reference to preserved specimens which places out of court all previously excised prostates, his own specimens included.—I am, etc.,

Glasgow, April 22nd. JAMES H. NICOLL.

INFILTRATION ANAESTHESIA.

SIR,—Dr. D. Leighton Davies, in your issue of April 27th, who finds so much to criticize in my short contribution on this subject in the BRITISH MEDICAL JOURNAL of March 23rd, has missed the essential point. My paper was on *infiltration anaesthesia*. The method of local anaesthesia employed by Dr. Davies, and based on Mr. Barker's practice (whose paper I had not overlooked), consists rather of massive subcutaneous injections without infiltration of the dermis.

I can assure Dr. Davies that if he will first anaesthetize the dermis in the *antiquated* manner described in my paper he will obtain a satisfactory analgesia without waiting the thirty minutes which he deems necessary.

The minute phenol droplets, applied to the surface with a small probe, serve an exceedingly useful purpose, and, it seems scarcely necessary to point out, are entirely innocuous.

It may be a meritorious proceeding for the surgeon to prepare his own solutions. Of late, I confess, I have not done so; but, as in the case of chloroform, antitoxin, and other articles, I have obtained commercially a very satisfactory material.

In conclusion, I must congratulate Dr. Davies, who states that at the present time he seldom uses a general anaesthetic, on the state of perfection he has attained with local anaesthesia. For my part, general anaesthesia is still the mainstay in my surgical work, although I substitute infiltration whenever feasible.—I am, etc.,

Torquay, April 30th. GILBERT J. ARNOLD.

THE SPECIFIC GRAVITY OF THE BLOOD IN CHLOROSIS.

SIR,—Dr. Lloyd Jones has pointed out to me a mistake in my article on the Clinical Value of Blood Examination published in the BRITISH MEDICAL JOURNAL of April 27th, p. 974. I stated that the specific gravity of the *blood* in chlorosis is *unaltered*: it should read the specific gravity of the *plasma* in chlorosis is *unaltered*, a fact which was established some fifteen years ago by Dr. Lloyd Jones.—I am, etc.,

London, W., May 3rd. H. BATTY SHAW.

PHARYNGO-KERATOSIS TREATED BY APPLICATIONS OF SALICYLIC ACID IN SULPHORICINATE OF SODA.

SIR,—In the report of a case illustrating the above, which I brought before the Laryngological Society at its last meeting, a very important fact, and indeed the one which gave the main value to the case, was omitted. This was to the effect that the condition—best known as pharyngo-mycosis—was well marked on both tonsils, but that after the patient had made a daily application of a 10 per cent. solution of salicylic acid in sulphoricinate of soda to her right tonsil only, a slow but steady diminution in the size and in the consistency of the spots on it was observed after a few weeks. The other tonsil remained as before until the same application was made to it also. This rigid experimental test showed incontrovertibly that the improvement was due to the application and not to any coincidental spontaneous disappearance such as we know to take place from time to time in this disease. It is generally agreed that the condition is really one of no importance, and if a patient can be persuaded to disregard it, so much the better; for those, however, who are impatient of the condition, it is gratifying that there should be a method of treatment which has an unmistakable action on the keratotic condition and which can be placed in their own hands. The action is, of course, analogous to that of salicylic acid upon warts, corns and similar conditions, and the sulphoricinate of soda seems to be the vehicle with which it can be incorporated so as to be as unirritating as possible. In view of the policy I have above described of dissuading patients from submitting to treatment for this condition, the opportunities for observing the effect of such treatment are obviously very few.—I am, etc.,

London, W., May 3rd. DUNDAS GRANT.

QUEEN'S JUBILEE HOSPITAL.

SIR,—As you have obligingly opened your columns to me in this matter, I forward a letter which, though written previous to the appearance of Dr. Walsh's answer to your remarks in the JOURNAL of April 20th, appears to be still called for.

I note that you have shifted the responsibility for your remarks from the correspondent who pressed his views on your notice to the shoulders of the Chairman and responsible speakers at the meeting held on March 16th last.

I am not aware that any person, responsible or otherwise, stated at that meeting that the position of those connected with the Kensington General Hospital was an invidious one; that it was or was not highly esteemed by the profession and laity of the locality, or that the fact that it had been helped financially in the way stated, laid it and those so helping open to misinterpretation on the question of their philanthropy.

These are all suggestions arising apparently in your mind or in that of your pressing correspondent.—I am, etc.,

JAMES R. ANDREW CLARK,
Chairman, Board of Management.

Kensington General Hospital,
Earl's Court, S.W.,
May 4th, 1907.

Kensington General Hospital,
Earl's Court, S.W.,
4th May, 1907.

Sir,

Referring to your remarks in the JOURNAL of the 20th inst., headed "The Queen's Jubilee Hospital."

I know there is a tendency in the present day for certain people, generally from some selfish personal motive, to kick the man who is down, but I confess I was not prepared to find an old-established journal of repute following such a lead, and for no very obvious reason, unless to enable the correspondent who presses his views on your notice to place them before the public anonymously.

The question as to whether a hospital is of benefit to a given district is best determined by the amount of relief it affords in that district—a matter which, judging from your remarks, you have not inquired into.

The statement that the hospital was dependent for the payment of its bills from day to day on some of the members of the medical staff is correct in so far that it has occurred on two or more occasions, but the moneys thus advanced were accepted as a temporary loan only, and repaid immediately the necessary funds are available.

I believe I am correct in saying that paying patients, both in and out, are not unknown to other hospitals in the metropolis without adverse criticism being indulged in on this account. The sole reason for the temporary introduction of this system into the Kensington General Hospital is to enable that institution, if possible, to pay off the liabilities which

have accumulated during past years, owing to want of support from the well-to-do residents of the districts that the hospital relieves.

That the condition of affairs is lamentable is only too true, but not because there is no need for a hospital in this district, and not because it is conducted on improper lines, as your remarks suggest.

If, Sir, you had taken the trouble to make some inquiries regarding this hospital from some one or other of the gentlemen now united together in an endeavour to restore its credit and place it in a position to do good and serviceable work in a district which they are satisfied is in need of it, these facts might have been made clear to you.

You would only have been exercising the fairness characteristic of most Englishmen in hearing both sides of the question, and would not have laid yourself open to the charge of uncharitable prejudice which those behind the scenes are reluctantly compelled to impute to you.

I enclose a list of the President, Vice-President, and others connected with the hospital at the present time for your information, and I shall be obliged if, in ordinary fairness to the hospital, you will insert this answer to your remarks in the JOURNAL at the earliest convenience.

I remain, Sir,
Yours faithfully,
JAMES R. ANDREW CLARK,
Chairman, Board of Management.

*** The remarks in question were, it seems to us, legitimate inferences from the occurrences at the annual meeting on March 16th, and the statements made by its Chairman.

THE FEE OF PUBLIC VACCINATORS.

SIR,—Dr. Horder's advice is very good, but I think it would be a still better plan for every public vaccinator to write to his Member of Parliament, and enclose a copy of the summary of duly certified replies received from 290 public vaccinators, and obtainable from the Organizing Secretary of the Association of Public Vaccinators, No. 1, Mitre Court Buildings, E.C. It contains a lot of useful information. I am sending a copy to my member, and shall try and arrange, if possible, for him to come and talk the matter over with me if he is in the district. The summary puts in a very concise way the amount of work a public vaccinator has to do for his fee; which probably very few M.P.'s realize. It would be a good plan, too, to specially bring before their notice the sacrifice a doctor has to make in his private practice when taking up the appointment of a public vaccinator.—I am, etc.,

PUBLIC VACCINATOR.

May 4th.

PRACTICE IN SOUTH AFRICA.

THE Editor has received the following telegram, dated Pietermaritzburg, May 3rd:

Regarding Darley Hartley's letter (BRITISH MEDICAL JOURNAL, April 6th, p. 839), no openings for practitioners in Natal. Letter following.

BRANCH SECRETARY.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

INDIAN MEDICAL SERVICE.

STUDY LEAVE IN I.M.S.

CAPTAIN writes: In your issue of March 23rd, p. 714, I was glad to see an article calling attention to study leave for the I.M.S. G.G.O., No. 1047 of 1907 says that "this leave will be treated as extra furlough, and will count as service in India." No provision or order was made for a larger percentage of officers to be absent, and this leave, unless taken in the place of ordinary furlough, is unobtainable anyhow in the Northern Command. Furlough is very hard to get, service in India averaging six and a half years before a year's furlough comes, and after an exile of six and a half years few want to spend five days a week going round a hospital, which most of us are at present compelled to do lest we get left behind. By an order published in January last the number of regimental officers on combined leave absent at one time from the regiment was increased from four to five, so that the regimental commandant officer gets home after two years in India. This makes it very galling for the doctor, who sees all his brother officers have three turns of furlough to his own one. That our furlough is unnecessarily restricted can be seen in almost every station, when, in these quiet times of peace, three doctors do the work hardly sufficient for one.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

GOSPORT WATER SUPPLY.

GOSPORT, that semiamphibious annexe of Portsmouth, though not a great town in itself, is so important a naval and military centre that it must be a matter for general congratulation that its drinking water difficulties are at length at an end. Attention was drawn to then existing defects in these columns on several occasions in the early part of 1903, and for some time afterwards the outcome was not easy to foresee. For a year or two previously the amount of chlorides in the water had been noted to be increasing, and at the time when we referred to the matter the general quality of the water was certainly not desirable. Whether from a bacteriological standpoint there was any grave complaint to be made was a matter of dispute, but it was incontestible that the proportion of chlorides was far too high. The source of the chlorides was not clear, the company not a very wealthy one, and the means by which a better supply could be obtained not very obvious. In the event, however, the company arose to the occasion admirably. The origin of the chlorides was tracked by Mr. Hildred, the company's engineer and secretary, to infiltration from the sea in the neighbourhood of the company's principal supply at Foxbury, and on his advice the radical step was adopted of abandoning this supply and trying to find one elsewhere to take its place. One was at length found at Soberton, and the work connected with it is now complete. It has entailed pipe laying for a distance of nine miles and an exceedingly heavy outlay, but has resulted in a supply of water which analysis made by Dr. J. C. Thresh shows to be a typical chalk water of the highest organic purity, free from excess of saline matter, and of only moderate hardness (permanent, 3.5; temporary, 11.2). The whole of the new works, which include a covered service reservoir at Gravel Hill, in the parish of Shedfield, are not yet complete, but the use of the water was commenced on April 24th.

DUTIES OF WORKHOUSE MEDICAL OFFICERS.

R. J. H. writes as follows: Does it come within the duties of a workhouse medical officer to attend a person—brought to workhouse infirmary by the guardian of the parish and not by the overseer, who refused to do so—who on admission has in his possession upwards of £3, and is receiving from a friendly society of which he is a member the sum of 10s. weekly during his disablement? The guardians at their last meeting agreed to keep the man in the infirmary until his recovery, on his consenting to pay 5s. weekly for his maintenance. The guardian when asked by the chairman why he brought him said the man, who was 67 years of age and single, was lodging at a public-house, and as the doctor who was attending him said he would not live a week the landlord wished to get rid of him, and as private lodgings could not be obtained for him in the parish it was thought that the best place for the patient was the workhouse infirmary.

*** This man appears to have gained admission to the workhouse infirmary by a most irregular and improper process, as the guardian who took him there was when so engaged acting *ultra vires*—and as we consider illegally. We are consequently not surprised to find our correspondent raising the question as to his own duty in reference to a patient who cannot by any stretch of imagination be correctly regarded as a destitute person. Notwithstanding this irregularity of admission and subsequent improper detention in the workhouse infirmary with the sanction of the Board of Guardians, we doubt whether our correspondent has any remedy for this abuse of his professional office, as by Consolidated Order of July, 1847 (Art. 207, No. 2), it is the duty of a workhouse medical officer "to attend duly and punctually upon *all poor persons in the workhouse* requiring medical attendance, and according to his agreement to supply the requisite medicines to such persons." We should advise the medical officer to comply with this regulation (he might endanger his position by declining), but to raise a protest against having to do so, by writing, to the Board on the hardship of the case, or to their clerk if the Board has not an early sitting. It may, perhaps, be argued that the patient in question is a "poor person" and consequently entitled to the professional services of the medical officer of the workhouse, but even if this be granted, he was not destitute when he was taken there and admitted, nor could he have been so when the Board sanctioned his detention there on the terms stated.

OBITUARY.

EDWARD MARKHAM SKERRITT, M.D., F.R.C.P.LOND.,

VICE-PRESIDENT (LATE TREASURER), BRITISH MEDICAL ASSOCIATION; EMERITUS PROFESSOR OF MEDICINE, UNIVERSITY COLLEGE, BRISTOL; AND SENIOR PHYSICIAN, BRISTOL GENERAL HOSPITAL.

WE had the sorrowful duty last week of announcing the premature death, from heart failure after pneumonia, of Dr. Markham Skerritt of Bristol, formerly Treasurer of the British Medical Association. We are able by the kindness of friends to give some account of his strenuous career.

Edward Markham Skerritt was born at Chelsea on December 30th, 1848, his parents being Mr. James Skerritt and Mary Delia his wife. He was given the name of Edward after his father's brother, and he was called Markham to associate him with his father's property, on part of which now stands Markham Square. His parents were Dissenters, and came of a Puritan stock, and some will think that they can trace in Markham Skerritt the influence of this inheritance of a rugged righteousness. He was sent for a short time to Mill Hill School, but in 1863 his parents moved from Chelsea to Wokingham, and it was more convenient to send him to Amersham Hall School, which had recently moved from Amersham to Caversham. To this school, which was conducted by Mr. E. West, many prominent Dissenters sent their sons, and among young Skerritt's schoolfellows were Mr. Birrell, Dr. W. S. Greenfield, Mr. J. W. Lord, Mr. Buckston Browne, and many others who have since gained distinction in various walks of life; the present Master of the Rolls had just left the school when Skerritt entered. His early education was in an atmosphere of robust and vigorous Liberalism, combined with a good deal of self-repression. On leaving school he matriculated at the University of London (1866), and then continued his arts course at University College, and graduated B.A.Lond. in 1868. In the following year he passed his Prelim. Sci. M.B. Examination, and in October, 1869, entered University College as a medical student. That school was just then in a very prosperous and vigorous state, its classes were full and attracted a large proportion of the ablest students of medicine in London. It would be invidious to mention names, but he curious in such matters can easily discover that many of Skerritt's fellow students have come to the very forefront of their profession and are to be found not only on the staff of his Alma Mater but also on the staffs of other hospitals in London and in the provinces. Pitted against such competitors Skerritt easily held his own and from the first was recognized as one of the ablest men of his period. With ability he combined unflagging industry and a singularly methodical and orderly habit of mind. He acquired knowledge readily, but he also learnt accurately, and what he once acquired he retained. With such gifts, of course he won prizes and class distinctions; he passed his examinations for the degrees of M.B., B.S. at the earliest moments, and carried off three university gold medals—for Physiology, Medicine and Obstetric Medicine. In 1874 he graduated M.D.



At the hospital he served as Sir John Erichsen's House-Surgeon and Sir William Jenner's House-Physician, and those who knew them both can well appreciate how much the genius of the great physician and clinical teacher impressed itself upon his young assistant. Skerritt won the Atkinson-Morley Surgical Scholarship, which was the highest surgical prize open to him. As a mark of his distinction as a student he was elected a Fellow of University College. Skerritt was a very reserved man, courteous to all, and easy to become acquainted with, but difficult to know! He was, however, liked by all his fellow students; they admired his ability, they were attracted by his simple straightforwardness, and, with the quick perception of youth, they saw that beneath his reserve of manner he hid a warm and generous heart.

Early in 1875 there was a vacancy for a physician at the General Hospital, Bristol, and Skerritt determined to compete for it; he had to make a personal canvass of the Governors, who very wisely elected him, and he has served them with unsurpassed loyalty for thirty-two years.

The following account of Markham Skerritt's life in Bristol is from the pen of an old friend and colleague:

It would be difficult to exaggerate the deep feelings of sorrow and regret that spread over medical circles in Bristol when it became known that Dr. Markham Skerritt was dead. His illness was of such short duration that many of his friends had not heard of it, so that his death was a great shock and surprise to them. His somewhat spare but lithe and wiry figure was so familiar as he drove or bicycled through the streets of our city on the almost ceaseless round of his very busy life, that it is hard to realize that we shall see him no more. But his work remains as an example which all might worthily follow. The writer of these notes desires to speak only of his personal characteristics as they appeared to a friend and colleague of more than thirty years, and to give a brief summary of his professional life in Bristol; but even this, if adequately recorded, would be long to tell, as it would involve a recital of the medical history of Bristol since 1875, Dr. Skerritt having been associated with, and generally taking a leading part in, all movements tending to promote the progress of medicine and the welfare of the various institutions and societies with which he was connected. When Dr. Skerritt first came to Bristol a young and unknown man, to start in practice as a physician, the outlook was not very encouraging, as the field seemed fully occupied, but he was hopeful, and became some years before his death one of the mos

successful and best-known physicians in the West of England; there are few men in this locality who will be more widely missed or who were more universally respected and esteemed than Markham Skerritt. As far as can be seen, he owed his success entirely to himself, his genuine merit, his great industry and perseverance, his strict probity, and sound common sense. His great success was not due to any adventitious causes; though pleasant in address, he was not of commanding presence; he was by nature rather reserved in manner to strangers; he cultivated no so-called bedside manner, but was to his patients, as he was to all who knew him, plain, straightforward, and natural, and his patients and those who sought his advice in consultation always felt that he was giving them of his best; nor did he cultivate to any great extent those social amenities which some men find so serviceable, though to his medical friends he was a kind and genial host at the not infrequent dinners he used to give before the Branch and other medical meetings, and many of us have pleasant recollections of his generous and refined hospitality.

Dr. Skerritt had no eccentricities, and nothing in outward demeanour to distinguish him from the most ordinary of men; he was modest and unassertive, but those who knew him were aware that he had definite opinions on most subjects, and that when he had once formed them he held to them with persistency and quiet determination. His perfect integrity and steadfastness of purpose in all that he undertook were among his leading characteristics. He was a most loyal colleague and trustworthy friend; his sound and impartial judgement, coupled with his large experience of men and affairs, caused him to be frequently appealed to by his medical brethren when they were in doubt or difficulty as to some line of conduct; probably few men ever gained a larger share of all-round confidence among his peers than did Markham Skerritt.

Dr. Skerritt was appointed Physician to the Bristol General Hospital in 1875, and was Senior Physician at the time of his death. During this period of thirty-two years he was a person of great influence and power in that institution; he saw many and great changes in the extension of the hospital and in the reconstitution of the staff, taking a large share in the work these changes involved, particularly in the establishment of special departments, the necessity for which was not so fully recognized then as now.

As a clinical teacher he early acquired a considerable reputation, and soon had a following of every available student; there must be many generations of old Bristol students who have a grateful recollection of the benefits of his instruction, and the earnestness and thoroughness with which he imparted it. His influence for good with the students in all ways could not well be over estimated. Dr. Skerritt was for more than a quarter of a century actively connected with the Bristol Medical School, first as Lecturer on Pathology for a short period, and afterwards to nearly the close of his life as Lecturer or Professor of Medicine, only retiring less than two years ago, when a great sorrow came upon him by the death of his daughter and only child, the Council of University College conferring upon him the distinction of electing him Emeritus Professor. As a lecturer Dr. Skerritt was clear and precise, giving the students just what they required, and they listened to him with attention, appreciation, and profit.

Dr. Skerritt was for a great many years Secretary to the old Bristol Medical School, and when it was incorporated with University College he became the first Dean of the Medical Faculty. These offices were no sinecure, and gave him an enormous amount of work, as the negotiations for incorporation extended over some years, and it is not too much to say that to him more than to any other individual it is due that the medical school is now an integral part of Bristol University College. As Dean, Dr. Skerritt was *ex officio* a member of the Council of the College, and on all matters medical was *the* authority, but his knowledge of business, his sound judgement, and shrewd common sense made him a valuable member of the Council in all that related to the welfare of the College. So far as his public appointments were concerned, no doubt the great work of his life was in connexion with the hospital and medical school, in both of which institutions he will be long and freshly remembered. He held every office which the local profession had to offer. He was President of the Bath and Bristol Branch of the British Medical Association, President of the Bristol Medico-Chirurgical Society, and for many years Honorary Physician to the Clergy Daughters' School; he was on the Executive Committee of the Winsley Sanatorium, which brought much arduous and responsible work, but he did not mind this, as he was an ardent advocate for open air, and in his own person carried this to an extent that to most of us would mean discomfort. He was one of the Committee of the Bristol Nurses' Institute and Nursing Home, and up to the time of his death a member of the Bristol Medical Reading Society—a very old society; he was present only three weeks ago at a dinner given in celebration of its centenary, and the writer spent a very pleasant evening, sitting next him, discoursing of many subjects, but especially of the changes we had both seen and of the uncertainty of things in general, and I remember that we remarked that one thing at least was certain—namely, that none of us would be there a hundred years hence; but we little thought he would be the first of that merry party to pass away—but so it was.

Markham Skerritt lived a most strenuous life, never sparing himself or taking that rest and quiet which most men in his easy circumstances would have taken long ago. He had probably the largest consulting practice in the West of England, enjoying to a remarkable degree the confidence and esteem of the public and in a still more remarkable degree that of his professional brethren.

He was buried on May 2nd at Redland Green, amids

every manifestation of sadness and regret. The first part of the service was held at St. Paul's Church, Clifton, which was filled by those anxious to pay a last tribute of respect to one from whom many of them had received so much.

Among those present were the Dean of Bristol, many members of the Medical Faculty of University College, Bristol, and of the profession in the city and neighbourhood, and the Chairman and Vice-Chairman and members of the resident staff of the Bristol General Hospital. The British Medical Association was represented by Dr. Radcliffe Crocker, Treasurer, and Mr. Guy Elliston, General Secretary; the Clergy Daughters' School by Canon Wallace; and University College, Bristol, by the Principal and several professors. The Vicar, in a short address, said that no man was more loved than a physician who did his duty faithfully and tenderly, and he who was mourned that day was renowned for his science and skill and honoured and loved for the beauty of his character. Dr. Skerritt, he said, "wore the white flower of a blameless life." Another line from the same poem from which the quotation is taken may appropriately be used here, as all who knew Dr. Skerritt knew him to be

Modest, kindly, all-accomplished, wise.

It may, perhaps, be permitted to one who knew Markham Skerritt very much less well than those who have written what appears above, but one who knew him in more than one capacity for many years, to say that the portrait which his friends have drawn with loving hands seems a little to miss one characteristic. He had, as has been said, a somewhat reserved, even dry manner, but one had not to be long in his company to perceive that he possessed to an eminent degree the saving grace of humour. His quickness to see the amusing side of some incident in debate was only equalled by the shrewd judgement with which he found a way out of the difficulty. And this appreciation of humour seemed to unlock his heart to those who perceived it, telling them that under the reserved outside there beat a very human heart, alive to the hopes, and not unsympathetic with the weaknesses, of human nature.

Dr. Skerritt's chief recreation was hunting; for many years he not only hunted regularly during the winter months with the Duke of Beaufort's hounds and others near home, but went every summer to Exmoor to enjoy stag hunting. He was an excellent judge of horses and an admirable horseman, riding with courage tempered with discretion; while throwing himself into a run with the utmost zest, he never failed in the courtesies of a true sportsman.

Mr. W. M. BEAUMONT (Bath), one of the Honorary Secretaries of the Bath and Bristol Branch, writes: To those of us who have worked with Dr. Skerritt for the last sixteen years the intimation of his death comes with a shock so suddenly paralysing that we realize at once how great is our loss. He on whose counsel we have been accustomed to rely, he whose advice was always sound and kindly, and he whose judgement ever leaned to mercy's side, has gone for ever from the Council of our Branch.

It was in 1875 that Dr. Markham Skerritt joined the Bath and Bristol Branch of the British Medical Association, and during the following year he read papers on emphysema treated by Lister's method, rheumatic hyperpyrexia, rupture of the spleen, and he joined in a discussion on antiseptic surgery. In the following year he opened a discussion on the treatment of acute rheumatism, and ever since Dr. Skerritt has been to the front with able and interesting papers. When a vacancy for an honorary secretary of the Branch occurred in 1880 Dr. Skerritt was the member clearly marked out for the position, and he received the unanimous support of his colleagues. His co-secretary was the late Mr. Fowler of Bath, and afterwards Mr. R. J. H. Scott, in co-operation with both of whom the work of the Branch was carried on most successfully and harmoniously. Mr. Scott resigned the secretaryship of the Bath District in 1891, and when the writer of these reminiscences came into office he found a thriving and energetic Branch, or rather two Branches, linked together by bonds of mutual respect: the one, Bristol, largely represented by the keen and active teachers in its flourishing medical school; the other, Bath, represented by the practitioners in an up-to date hydrotherapeutical spa. The interests of two such widely-differing constituencies might seem to be too incongruous, but it speaks much for the combined Council of Bath and Bristol that in the long years of partnership dating from 1845 there has never been any serious disagreement, but both have worked harmoniously together. This success, in recent years, was the result, in no small measure, of the influence of Dr. Skerritt on the Council.

Whether as member of the local Council, or as Secretary, or as Representative on the General Council, or as President of the Branch (1896), or as Treasurer of the Association, his whole heart was in the work. His energy and force of character were aided by a head so clear and level that the impress which he has left on the Branch, as well as on the Association as a whole, is marked by the soundness of his judgement and by the wisdom of his business capacity.

In the local council his opinion carried much weight, in consequence of his judicial method of expressing himself. Never a voluminous speaker, he always seemed able to state his views in few words. His speech reminded one of the summing-up of a judge; both sides of the question were duly and fairly dealt with, whilst the final impression left on the mind of the hearer made it quite clear what was the view of the speaker.

He had high ideals of medical ethics, and the strictest integrity; his advice was always in consonance with the best, perhaps the old-fashioned, traditions of the duties of members of the profession to the public and to one another.

The Association has lost a member who was the soul of honour, the Branch a friend who was ever faithful and true, the Bath and Bristol Council a colleague who was always generous and loyal. His place in our council chamber is empty, and with sorrowful hearts we say farewell to one who has left us before his time.

Dr. J. MICHELL CLARKE, who succeeded Dr. Skerritt as Honorary Secretary of the Bristol section of the Bath and Bristol Branch, adds the following words to Mr. Beaumont's appreciation: Dr. Markham Skerritt was a most able and energetic Secretary, and under his fostering care the Branch increased in numbers and in prosperity. He had its best interests always at heart, and a profound knowledge of the laws of the British Medical Association, so that in a short time the Council learned to rely on Dr. Skerritt's knowledge and judgement in all matters concerning the Association. His excellent judgement and sound sense was particularly valuable in any ethical questions that arose. Dr. Skerritt was always careful to see justice done, and to weigh all the evidence before arriving at a conclusion; but when he had once made up his mind as to the right course, he showed no hesitancy or indecision. On resigning the Honorary Secretaryship in 1894, Dr. Skerritt was elected President, and filled the chair with much distinction; his Presidential address was an exceedingly interesting one, dealing with the work of the Association. He represented the Branch on the Council of the Association for a number of years. Dr. Skerritt read many papers at the Branch meetings, which were marked by the qualities of wide clinical knowledge and ripe experience; he was an excellent debater, and took a prominent part in any discussion that arose. He was a very regular attendant at the meetings of the Branch, and always gained the attention of his audience.

Dr. Skerritt first became a member of the Central Council of the British Medical Association in 1884, when he was elected one of the representatives of the Bath and Bristol Branch. He was re-elected year by year until in 1902 his eminent services commended him to the Association for election to the honourable and onerous office of Treasurer. In 1904, having held that position for the usual period of three years, he was elected Vice-President of the Association, and continued to be, as Past Treasurer, a member of the Central Council, the meetings of which he did not fail to attend with his accustomed regularity. He was not a frequent speaker, but his intervention was always effective, owing to the clearness and conciseness of his utterances and the obvious impartiality of his arguments. He served on many committees, and was present at the last meetings of the Journal and Finance Committee and of the Council. Dr. Markham Skerritt was always a true friend of the

Association, in the objects and future of which he thoroughly believed. He was honorary local secretary of the successful annual meeting in Bristol in 1894, and Vice-President of the Section of Medicine. He was again Vice-President of the same Section at the annual meeting in London in 1895, and had previously been secretary of the Section at the annual meeting at Cardiff in 1885.

Dr. Skerritt became M.R.C.P.Lond. in 1876, and was elected a Fellow in 1885; at the time of his death he was a member of the Council of the College. In 1897 he gave the Bradshaw Lecture on Prognosis in Heart Disease.* He was not a voluminous writer, compiled no textbook, and wrote no monograph; of the few articles he published, most had to do with diseases of the heart and lungs, and for some years he contributed an annual summary of the progress of knowledge of these diseases to Cassell's *Year Book of Treatment*.

In June, 1875, Dr. Markham Skerritt married the eldest daughter of Mr. John Heelas of Wokingham. He had one daughter born in 1880, to whom he was most devotedly attached. In September, 1905, she died after only a few hours' illness, and only those who knew Skerritt most intimately could realize how intensely he suffered from this sorrow and how profoundly it altered the tenour of his life. His widow compels the respect and admiration, as well as sympathy, of all who know her by the courage with which she bears the sorrows that have befallen her.

Mr. Andrew Clark, who was Chairman of the Central Council during the three years for which Dr. Skerritt served as Treasurer of the Association, writes: In response to the Editor's request, I am pleased to add my testimony of Dr. Skerritt's worth, especially from the administrative point of view of the Association. A most pleasant colleague to work with, we were associated as chief officers of the Association during three eventful years, those immediately following the reconstitution. He was always ready with his support and advice whenever difficult questions arose or precedents had to be made, and willingly undertook as many journeys to London as were necessary in the interests of the Association. His special department was the treasury, and I can testify to his zealousness in guarding the finances and scrutinizing every demand for payment that was made to him; with a revenue of over £50,000 in each year, this is no small matter. His quarterly statements of cash received and expended were clear and concise, and did not elicit many comments from either the Journal and Finance Committee or the Council. He was an active worker on the Premises Committee, and many of the improvements which will be found in the new premises were his suggestion, for he always had an eye to efficiency with economy. Since the termination of his period of office he has been a regular attendant at the Council and several Committees, and is one the Association can ill spare at the present time.

We have received the following from the Chairman of the Committee of the Bristol General Hospital: In consequence of the absence from England of the President of the hospital, Mr. William Proctor Baker, it is only partially practicable to represent the services rendered to the institution by the late Dr. Markham Skerritt, as he is the only member of the Committee whose active connexion with the hospital has been wholly concurrent. This dated from 1875, when Dr. Skerritt was first elected one of its Honorary Physicians, a post to which he was three times re-elected, and which he was still holding at the time of his lamented death. During the greater part of this long tenure of office, namely, since 1881, he was Senior Physician, and consequently from that date took the leading part in all professional and other matters connected with the administration of the medical side, as well as in other matters, during the times when he was periodically a member of the Committee of Management as one of the representatives of the honorary staff. It is more for his colleagues on the honorary staff than for the Committee to speak of his skill and judgement as a physician; but the latter can speak with the warmest appreciation of him as a valued colleague and helper in many matters connected with the hospital and as one who ever had its best interests at heart. His care was not limited to his patients in the wards, but the best of his skill was always gladly and ungrudgingly given to any member of the nursing staff who needed medical attention, while in other directions he often gave most valuable help—as, for instance, by the care and judgement he brought to bear upon the revising and consolidation a few years ago of the rules of the hospital, he being at that time a member of the subcommittee to which the matter was entrusted. Of the extent of the loss which in common with so many others this hospital has sustained by his, it may almost be said, sudden death it is difficult to speak, particularly at the present time, when his sound judgement, good sense, and courteous manner would have been found so useful. The Committee rejoice to think that the memories which they one and all will retain of Edward Markham Skerritt are those of respect, gratitude, and esteem.

Professor Saundby, Birmingham (formerly President of the Central Council of the Association), writes: I knew Dr. Markham Skerritt as a colleague on the Council of the Association during many years, and was closely associated with him in its work. I have heard of his death with great regret and feel that the Association has lost a faithful supporter, and the members of Council a wise, patient, and experienced colleague. He had the supreme merit of calmness, so that he viewed all matters that came before him in the work of the Association dispassionately, and, being able to give ready and clear expression to his views, he would have made one of the best presidents of the Council had he happened to have been chosen; but if in the position of Treasurer he was not so much at home, he in no respect failed adequately to fulfil its important duties. I look back upon our connexion for many years without being able to recall a single occasion on which we differed in other than the most friendly manner, and I believe he was from first to last liked and respected by all who worked with him on the Council.

Dr. J. Farrant Fry (St. Leonards-on-Sea), ex-President of the South Wales and Monmouthshire Branch, writes: Markham Skerritt must have had a host of medical friends who will deeply regret his death, especially in the West. For many years I had frequent opportunities of appreciating his worth as a consultant, who always cheered his patient, increased the patient's confidence in the medical attendant, and had the happiest way of suggesting a line of treatment which his vast experience and acumen dictated. More than once has he turned up for a consultation in his light overcoat, which "I dare not take off," because he had come straight from the hunting field. Greig Smith will always live in my memory as one of the most delightful surgeons it has been my lot to meet, and Markham Skerritt was his equal as a physician. It will be difficult for Bristol to replace two such able and distinguished members of our profession.

Dr. James Stewart, B.A., F.R.C.P.Ed., writes: Thrown closely as I was into contact with Markham Skerritt during my thirty years' residence near Bristol, I had unique opportunities of estimating his character and capabilities. He was Consulting Physician to my Home for Inebriates during all those years as well as my intimate personal friend, and he also attended the members of my family when his services were required. Like every other medical brother who had occasion to seek his aid, I always found him both ready and willing to give his professional services promptly, carefully, and generously. Soon after Skerritt's arrival in Clifton he was marked out by the members of the Bath and Bristol Branch as one singularly fitted for the position of Honorary Secretary. His punctuality, his courtesy, and his thoroughness earned our warmest gratitude. To the services he rendered at head quarters and to the whole-hearted energy he threw into his work as member of the Central Council and as Treasurer, testimony will doubtless be borne by others. For myself, I may say that, during the forty years I have been in the profession, I have never known any physician more universally respected or esteemed, nor one in whom more implicit trust was placed by his medical brethren. Frequently have I heard general practitioners say, "Skerritt's opinion is a sound one in a difficult or serious case, and moreover you need have

* British Medical Journal, November 6th, 1897, p. 1327.

no fear that he will not act as an honourable consultant always should." Of his private character and of his qualities of head and heart no one could speak too highly. For so accomplished a physician, his modesty was remarkable. He was a most devoted husband and father. Personally, I never had a kinder, a more loyal, or more esteemed friend. Skerritt was indeed a Christian gentleman of the highest type. The sympathies of all of us will go out in a peculiarly warm manner to his afflicted widow in her irreparable loss and sad bereavement.

THE following lines have been sent to us by one who describes himself as "a G.P. unknown to fame, whose name is of no importance, who had a great regard for the late Dr. Skerritt."

IN MEMORIAM.

We, doctors, in this city of the west,
Who held him dear, who knew him kindly, wise,
Loyal and true—we mourn the man who lies,
Struck down by blund'ring death. He was our best,
The man we turned to most, did his behest
Most often, in our warfare against woe
Of mortal flesh; and now he lieth low,
Whom many an anguished wife and mother blest.
Did he, we wonder, know, did he surmise,
With his shrewd smile wrinkling his lips and eyes,
And his clear caution weighing every side,
How strong we felt when he was there to guide?
Alas! he cannot know, unless above
He hears our mourning and can tell our love.

Bristol, April 30th.

JONATHAN F. C. H. MACREADY, F.R.C.S.,

CONSULTING SURGEON TO THE GREAT NORTHERN CENTRAL HOSPITAL.

THE death of Mr. Macready, which took place on April 29th as the result of a cerebral haemorrhage three days previously, has deprived several public institutions of a valued adviser and a wide circle of old colleagues and friends of one who commanded both respect and affection.

Born in 1850, the youngest son of the great actor, by his first wife, Jonathan Macready was educated under the eye of his father, who had retired from the stage in 1851. The paternal discipline was strict, and inculcated a high sense of duty upon a somewhat shy and retiring disposition. On entering the profession as a student at St. Bartholomew's Hospital, young Macready was soon recognized as a man of more than ordinary promise. The influence of Sir James Paget and Sir William Savory was strongly impressed upon him, and from them he acquired not only surgical wisdom, but no small share of the graceful eloquence with which they clothed their thoughts in lectures and addresses. In this he was aided by the careful training in elocution derived from his distinguished father.

He was appointed Surgeon to the Great Northern Hospital in 1878, and, being closely associated with Mr. William Adams, he acquired a special interest in orthopaedic surgery, and was particularly successful in dealing with contractions of the palmar fascia. He became Surgeon to the Truss Society, and made a close study of hernia, and his large work on the subject is well known. As Surgeon to the Convalescent Homes of the Merchant Taylors' Company his sound judgement was greatly appreciated, and at the Victoria Park Chest Hospital and the Cheyne Hospital for Children his services were always available when sought for. He contributed in no small degree to the rise of the Great Northern Hospital, to which he was Senior Surgeon for fifteen years and an active member of the Committee of Management for twenty-three years. Possessing the valuable qualities of reticence when silence was most eloquent and of eloquence when occasion demanded it, his opinion and counsel proved of the greatest service when, in 1888, the hospital was transplanted into a new district and, like all new institutions, had to prove its claim to be respected.

The many physicians and surgeons who have held office upon its staff and have passed to those of the teaching schools, in common with all his present colleagues, both medical and lay, will cherish their recollection of the gentle, courteous, and dignified surgeon whose sound judgement was ever at hand to solve the various difficulties that are apt to arise in a young and rising community. The kindly acts and unostentatious aid that he rendered to so many in a humbler sphere, although unrecorded, will not be forgotten.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Examinations.

THE following candidates have now been approved in all three subjects of the examination indicated:

THIRD M.B. (*Part II.*)—F. O. Arnold, B.A., Trin.; P. H. Bahr, B.A., Trin.; G. B. Bartlett, B.A., Sid. Suss.; H. Beckton, M.A., Cla.; R. Burgess, B.A., Cai.; S. P. Chan, B.A., Cai.; S. Churchill, B.A., Trin.; A. I. Cooke, B.A., Cai.; A. T. Densham, B.A., Joh.; A. N. Dickson, Down., H. Dimock, B.A., Sid. Suss.; C. W. Greene, B.A., Emm.; G. F. Greenwood, B.A., Sid. Suss.; C. L. M. Jones, B.A., King's; A. R. Jordan, B.A., Cla.; B. T. Lang, B.A., Trin.; R. B. Lloyd, B.A., Emm.; L. H. L. Mackenzie, B.A., Trin.; R. G. Markham, B.A., Cai.; H. F. Marris, M.A., Cai.; J. H. B. Martin, B.A., Emm.; L. Nicholls, B.A., Down.; C. W. Ponder, M.A., Emm.; J. H. Pratt, B.A., Trin.; O. L. Scarborough, M.A., Joh.; A. L. Singer, B.A., King's; E. F. Skinner, M.A., Corp.; A. C. H. Suhr, B.A., Cai.; C. B. Ticehurst, B.A., Joh.; C. Tylor, B.A., Cai.; J. A. Venning, B.A., Trin.; B. Wahby, non-coll.; R. R. Walker, B.A., Joh.; A. B. Wilson, B.A., Pemb.; R. F. Young, B.A., Christs.

Professor Nuttall will deliver his inaugural lecture in the Anatomical Theatre on Wednesday, May 22nd, at 4.30 p.m.

Owing to the increase in the work of the Chemical Department, the Syndicate recommend an extension of the Chemical Laboratory at the estimated cost of £13,500.

Professor Newton has deputed Mr. Bateson, of St. John's College, to lecture for him during the ensuing academic year.

UNIVERSITY OF LONDON.

CONVOCATION.

A GENERAL meeting of Convocation was held at the University on May 7th; Sir E. H. BUSK, Chairman, presided.

Sir E. H. Busk and Mr. H. E. Allen were respectively re-elected Chairman and Clerk of Convocation.

Report of the Standing Committee.—Dr. T. L. MEARS presented the report, and moved its reception, and the resolution was adopted.

Lord Lister.—Dr. AMAND ROUTH proposed the following resolution recommended by the Standing Committee:

That a vote of congratulation be conveyed to Lord Lister, a graduate of this University, on his attaining his eightieth birthday.

Mr. G. EASTES, M.B., seconded the proposal, which was carried unanimously.

Appointments to Governing Bodies.—Mr. L. F. WINTLE proposed:

That the Senate be respectfully requested to consider the desirability of graduates of the University appointed to represent the University on other bodies being members of Convocation.

This was duly carried.

Business Adjourned from January 18th, 1907.—Certain business which could not be considered at the previous meeting of Convocation was reported by the Annual Committee. Dr. MEARS, who presented the report and moved its adoption, stated that the paragraphs referring to the incorporation of University College, University College Hospital, and University College Boys' School, the opening of the University library, and the election of a member of the Senate by the graduates in Divinity, which were all now accomplished, had consequently lost some of their interest. The Union Society of the University had started on its career of usefulness, and he hoped it might eventually rival the corresponding Union Societies of Oxford and Cambridge. In one respect it differed from each of the older societies—namely, that ladies were admitted to its membership.

University Colours.—The Committee appointed to consider this question recommended that red, white, and blue should be the University colours, red being given the principal place. They also submitted a sample of the blazer and ribbon for hatband to the meeting, and recommended their adoption, and that the colours for the tie should be in the same proportions as those in the ribbon, but arranged diagonally.

Dr. MEARS moved that the blazer and hatband be approved, which was duly carried.

Mode of Election of Members of the Senate—Dr. R. MAGUIRE moved:

That the standing order relating to this matter be referred to the Standing Committee for consideration and report.

This resolution was adopted.

Annual Athletic Sports.—Mr. WHITEHEAD mentioned that it was desirable to have challenge cups for presentation to the winners of certain sports. Last year Lady Busk had given such a cup. This year a lady had promised one if other ladies could be found to offer five other cups; and he hoped to receive shortly the names of ladies willing to assist in this manner.

Election to the Senate.—Sir T. Barlow, Bart., M.D., was elected by the graduates in medicine and in surgery. Dr. C. W. Kimmins, Dr. S. R. Wells, and Mr. J. Wade, D.Sc., were elected by the graduates in science.

The Standing Committee.—The following graduates, Dr. R. Maguire, Dr. H. J. Scharlieb, and Dr. W. H. Willcox, were re-elected members of the Committee in the Faculty of Medicine.

UNIVERSITY COLLEGE.

The Mercers' Company lectures were commenced on May 10th by Dr. E. H. Starling, F.R.S., the subject being the

internal media of the body and their relation to the tissue. The lectures will be continued on Fridays at 5 p.m. Dr. W. Page May delivered on May 8th the first of a series of lectures, to be continued on Wednesdays at 5 p.m., the subject being the arrangement and functions of certain structures in the central nervous system.

UNIVERSITY OF EDINBURGH.

General Council.

The statutory half-yearly meeting was held in the Examination Hall on May 1st, Principal Sir William Turner in the chair.

The Business Committee recorded with great regret the sudden death on January 11th, of Mr. Hope Finlay, who was present at the last meeting of General Council and at a subsequent meeting of Business Committee. For many years he had given loyal service to the University.

The Committee recommended the General Council to revert to a former practice, and to authorize the distribution to the press and to the General Councils of the other Scottish universities of prints of the reports of committees, etc., simultaneously with the posting of copies to members of General Council. This was agreed to.

The Committee also reported that the accumulate provision made by the Carnegie Trust towards the endowment of modern languages in Edinburgh University would, at the close of the current year, amount to £10,000. The income of this, when added to the moneys already available for the salaries of the lecturers in French and German, should enable the chairs to be set up. The Committee recommended that the General Council represent to the University Court the desirability of now framing an ordinance. Should there be any hesitation as to the financial preparedness of the University for the step, qualifying words could be introduced under which the Court would not be required to erect the chairs until satisfied that the funds were inadequate.

On the subject of the Degree of Bachelor of Pharmacy, the Committee advised the General Council to approve of the Draft Ordinance generally, subject to certain suggestions, and to ask the University Court to consider the points raised in the report. The Subcommittee appointed to enquire and report thought that the institution of a separate degree, as distinct from the degrees in Science, was the wisest course, and more suitable to the actual requirements of the pharmaceutical calling. Consequently the scheme was allied to the Faculty of Medicine, and not as in Glasgow to the Faculty of Science; and it was anticipated that on the analogy of the medical curriculum the scope of instruction and examination would cover the practical as well as the scientific requirements of the pharmacist. The following is a summary of the leading features of the draft Ordinance:

1. An entrance examination on matriculation standard and on the standard of the Medical Preliminary examination, having Greek as an alternative subject to French or German; (2) three years' attendance in eight courses, five of which must be taken in the University of Edinburgh; 3. a first examination in botany, zoology, physics, and chemistry, identical with the First Professional in Medicine; (4) a final examination "on a higher standard" in chemistry, botany, materia medica, and pharmacy, and (5) prior to the final, candidates must be registered chemists and druggists or graduates in medicine. The General Council approved of the recommendation of the Business Committee.

Number of Matriculated Students.

The total number of matriculated students in the Faculties of Medicine and Science during the undernoted ten sessions was as follows:

	1897-8.	1898-9.	1899-00.	1900-1.	1901-2.	1902-3.	1903-4.	1904-5.	1905-6.	1906-7.
Medicine	1,[illegible]	1,[illegible]	1,[illegible]	1,[illegible]	[illegible],75	1,305	1,177	1,187	1,[illegible]	1,482
Science	[illegible]	[illegible]	169	151	170	161	196	229	245	290

UNIVERSITY OF BIRMINGHAM.

Post-graduate Lectures.

The following post-graduate lectures, open to members of the medical profession and students of medicine, will be delivered in the Faculty of Medicine during the summer session at 5 p.m. on each day: May 15th, The Widal Reaction, its Present Position and Value, by Professor Leith; May 30th, The Bacteriological Diagnosis of Diphtheria, by Dr. C. J. Lewis; June 6th, Eye Operations, by Dr. J. Miller; and June 13th, The Natural Protective Methods against Infectious Diseases, by Dr. Lyon Peterson.

UNIVERSITY OF DURHAM.

Degrees.

The following degrees and diplomas were conferred on April 27th:

M.D.—R. S. Hodgkinson, A. E. Radcliffe, S. Roberts, F. R. Scott, A. A. [illegible].

M.B.—H. H. Blake, G. I. Cumberlege, W. M. Emmerson, S. Havelock, B.Sc., T. D. Miller, D. Ranken, H. B. Stephenson, N. Spedding, R. W. Swayne, H. H. Whaite.

B.S.—H. H. Blake, G. I. Cumberlege, W. M. Emmerson, S. Havelock, B.Sc., T. D. Miller, D. Ranken, H. B. Stephenson, N. Spedding, R. W. Swayne, H. H. Whaite.

D.P.H.—E. G. D. Benson.

The following candidates have been approved in Pathology, Medical Jurisprudence, Public Health, and Elementary Bacteriology:

*E. C. Braithwaite, L. F. Browne, C. E. L. Burman, J. Everidge, R. C. H. Francis, A. C. Greene, H. C. Kellgren, R. V. Khedkar, H. R. McAleenan, F. Rahtkens, E. F. Waddington.

* First class honours.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

SUPERSESSION.

A practitioner, A., had been in attendance for several months upon a patient X. X. then called upon practitioner B. requesting advice. B. refused to see him professionally, explaining that it is his rule never to see professionally a patient upon whom another practitioner is in attendance, but stating that he will be pleased to see the patient with A. Several days later X. called again upon B. stating that he (X.) has decided to change his doctor. B. told X. to inform A. of his decision, which he did, and B. examined and prescribed for X. A. complains that his fee should have been paid before B. began attendance upon X. Did B. act correctly?

*** B. acted correctly in accordance with the practice followed in this country. The rule that the superseding practitioner should see that his predecessor has been paid before assuming charge of the case is said to be followed in France, and there is something to be said for it, as patients sometimes change their doctor for no better reason than because they do not wish to pay him.

COUNTY MEDICAL OFFICERS AND DISTRICT MEDICAL OFFICERS OF HEALTH.

Senex.—We should advise our correspondent, before he assumes that any wilful discourtesy has been shown to him, to write to the County Medical Officer for an explanation. We quite agree that county medical officers should not ignore their colleagues in charge of districts, as it is in the interests of the public health that there should be proper co-operation between central and local bodies and their officers.

Medico-Legal.

CHARGES OF NEGLIGENCE.

Middlebrook *v.* McCulloch.

In this case, which was heard by His Honour Judge Willis, K.C., on April 19th, an action was brought by Dr. Middlebrook of Eltham to recover the sum of £3 12s. 6d. for fees. The claim was admitted, but the defendant counter-claimed for damages for careless treatment and faulty diagnosis of his wife's illness, alleging that she met her death through this cause.

Mr. Mathew, instructed by the Solicitors to the London and Counties Medical Protection Society, represented the plaintiff; Mr. Walton, solicitor, appeared for the defendant.

In support of his counter claim, the defendant said that he called in Dr. Middlebrook in November, 1901, and had been told by him that his wife was suffering from overwork and had gall stones and a growth, but the fact that she had Bright's disease was not mentioned. Another doctor (Dr. Rice) who was called in pronounced it to be Bright's disease. In cross-examination witness admitted that he never complained of the treatment.

Dr. Rice was called in support of the counter-claim.

Dr. Middlebrook, in giving evidence, said that he diagnosed the deceased to be suffering from Bright's disease, and so treated her. He produced his notes of the case in support of this statement. He may not have mentioned the fact that she was Bright's disease.

His Honour, in giving judgement, said that the counter-claim ought never to have been brought. Nothing that Dr. Rice had said in any way supported the accusation brought against Dr. Middlebrook. It was a monstrous claim that should never have been persisted in. He wished it to go forward that in his view Dr. Middlebrook's treatment of the deceased was skilful and proper, and there was not the slightest evidence to show that any one of the defendant's statements was justified.

HOPE AND CURRIE *v.* CRIER.

THIS case which was heard in the King's Bench Division on May 7th (before the Lord Chief Justice and a special jury), involved a claim for £28 13s. in respect of fees for medical attendance on the defendant's wife.

Mr. McCall, K.C., and Mr. Neilson, instructed by the solicitors of the London and Counties Medical Probation Society, appeared for the plaintiffs. Mr. Farleigh represented the defendant.

It appeared that nearly a year ago the defendant brought an action against the plaintiffs for negligence, alleging that Dr. Currie had attended Mrs. Crier in her confinement at a time when he was also attending a scarlet-fever patient, with the result that she became infected. The jury in that case found that there had been no negligence, and their verdict was upheld by the Court of Appeal. The plaintiffs now sued for the fees due in respect of such attendance. The defence was (*a*) that the plaintiffs had agreed not to attend any scarlet-fever patient while attending on Mrs. Crier, and (*b*) that Dr. Currie had brought about his services to Mrs. Crier through fraudulent misrepresentation.

Dr. Currie, in giving evidence, denied entering into any fresh contract with Mr. Crier. He was not attending any scarlet fever patients at the time he went to see Mrs. Crier, but did subsequently do so. Mr. Crier said he asked Dr. Currie at the time of his wife's illness if he was attending any scarlet fever cases, saying, "I will not have any risks any run with my wife."

The Lord Chief Justice declined to have the charge of negligence tried over again. He said there was no evidence of a special contract of any kind. The jury would decide as to the amount of the bill.

After a short consultation, the jury reduced the amount of the claim to £21 13s., the foreman stating that they did so without any reflection upon Dr. Currie.

CORONER AND MEDICAL WITNESS.

ABACUS writes as follows: Dr. A. was called to see a man who had poisoned his finger. Ultimately amputation of the finger became necessary. Dr. A. called in Dr. B. to administer chloroform. The patient died from syncope during the early stage of the administration. At the inquest Dr. B., who administered the chloroform, was subpoenaed to attend the inquest, and Dr. A. accompanied him to give evidence if necessary. At the inquest the coroner decided to call Dr. A., as he could speak best as to the patient's condition. Dr. A. was sworn and gave evidence, and then Dr. B. was also sworn and gave evidence supplementing Dr. A.'s evidence in several important particulars. The coroner remarked that he was "only calling one doctor," and in the end decided that Dr. B. was entitled to be paid, he having been subpoenaed, but declined to pay Dr. A. anything. Has Dr. A. any claim against the coroner? Should not both have been paid, both having been sworn and given evidence?

*** Both medical officers should have been paid by law, both having been sworn before the court and their evidence taken. No doubt, if Dr. A. writes to the coroner and claims his fee under the Medical Witness Act, he will obtain it. If the coroner still refuses, a summons in the county court will be the next proceeding.

LOCUM TENENS.—It is difficult to advise definitely without knowing the actual facts on which our correspondent relies as justifying the course suggested, but, under any circumstances, there would always be risk of legal action for slander.

HOSPITAL AND DISPENSARY MANAGEMENT.

TOTTENHAM HOSPITAL.

THE Prince of Wales, who was accompanied by the Princess of Wales, opened the new wards and operating theatre of the Tottenham Hospital on May 7th. Their Royal Highnesses were received by Princess Louise Duchess of Argyll, the President of the Hospital; the Chairman, Sir F. Cory-Wright; Sir James Reid, and Mr. James Langton. In response to an address of welcome read by Sir F. Cory-Wright, the Prince of Wales expressed his pleasure at being present, and congratulated all concerned in bringing the institution up to the standard of the other large London hospitals. He then announced that by the express wish of the governors the hospital would be called in future "The Prince of Wales's General Hospital, Tottenham," and concluded by declaring the new buildings open. The Royal visitors proceeded to inspect the new wards and operating theatre before their departure.

The hospital originally contained 73 beds; now it holds 120. The extensions just completed under the direction of the architects to the hospital, Messrs. Rowland-Plumbe and Harvey, consist of a new wing of three floors, with an operating theatre over. The buildings throughout are constructed of fire-resisting materials, the floors are finished with cement and covered with linoleum, the rounded angle between the floors and the walls being formed in Diespeker's mosaic. The sanitary spurs to the wards are cut off by means of ventilating corridors which are treated as bridges with ventilating openings over. The water-closets are of the "Corbel" pattern, built into the wall and quite clear of the floor. The baths have a plinth all round them so as to obviate the collection of dust underneath. The operating theatre, surgeon's room, and anaesthetizing room have marble mosaic floors, continued up with rounded skirting on to the walls as a dado for about 5 ft. Nearly all the fittings in the theatre stand clear of the walls, and those over the sinks are of the combined pattern, giving hot or cold or tepid water as required.

Following on the opening of the new wards and operating theatre by Their Royal Highnesses the Prince and Princess of Wales, a successful *conversazione* was held on the evening of May 7th by the teaching staff of the North-East London Post-Graduate College. It was largely attended by the members of the post-graduate school and by the medical men of the North and North-East London districts. The guests were received by Mr. and Mrs. John Langton. Besides exhibits of medical and surgical apparatus and appliances, arranged by the *Medical Magazine*, there were *x*-ray and high-frequency current demonstrations and others of scientific and general interest. Music was provided by the Hospital Orchestral Society, and an opportunity was afforded of inspecting the new theatre and wards and other departments of the hospital.

COUNTY OF KENT.

Barming Heath Asylum.

THE annual report of Dr. H. Wolseley Lewis, the Medical Superintendent, states that on January 1st, 1906, there were 1,489 patients at this asylum, and on December 31st, 1906, there were 1,511. During the year 407 were admitted, of whom 297 were first admissions. Of the total number the attack was a first attack in 228, in 142 either a not-first attack or a first attack of more than twelve months' duration, in 19 the condition was congenital and in 18 more of unknown duration. The admisssons were classified as to the forms of mental disorder into: Mania of all kinds, 126; melancholia of all kinds, 145; dementia, 68; general paralysis, 22; acquired epilepsy, 20, and congenital or infantile defect, 26. As to the probable causes of the insanities, alcoholic intemperance was assigned in 44, or 10.8 per cent., venereal disease in 19, previous attacks in 84, old age, the menopause and puberty in 73, moral causes in 42, parturition and the puerperal state in 15, and various bodily diseases in 41. A family history of phthisis was obtained in 85, or over 20 per cent.; hereditary influences, direct or collateral, were ascertained in 112, or over 27 per cent., and congenital defect existed in a further 22. During the year 156 were discharged as recovered, giving a recovery-rate on the admissions of 41.3 per cent., 11 as relieved and 32 not improved. During the year 186 died, giving a percentage death-rate on the average numbers resident of 12.4, the deaths being due in 35 to cerebro-spinal diseases including 22 from general paralysis, in 40 to cardio-valvular diseases, in 63 to pulmonary diseases including 31 deaths from consumption; in 32 to senile decay, and in 14 to abdominal and general disease including 2 cases of tuberculous and 1 of typhoid fever. There were also 2 cases of suicide.

Chartham Asylum.

The report of Dr. G. C. Fitzgerald, the Medical Superintendent of this, the sister asylum to Barming Heath, shows that on January 1st, 1906, there were 1,061 patients in residence, and that on January 1st, 1907, there were 1,039, giving an actual decrease of 22. During the year 226 were admitted, of whom 199 were first admissions. Of the total admissions, in 111 the attack was a first attack, and in 45 a not-first attack within one year of admission; in 55 whether first or not first, the attacks were of more than twelve months' duration; in 13 the illness was of congenital origin, and 2 were not insane on admission. They were classified as to the forms of mental disorder into: Mania of all kinds, 96; melancholia of all kinds, 51; dementia, 40; general paralysis, 14; epilepsy, 9; and congenital or infantile defect, 16. Of the various etiological facts assigned in the admissions the following are the principal: Alcoholic intemperance in 32, or 14 per cent.; venereal disease in 5; moral causes in 43; old age, adolescence, and the menopause in 34; previous attacks in 47; various bodily diseases in 9; epilepsy in 10; and in 18 more no cause was assigned. Hereditary influences were ascertained in 60, or over 26 per cent., and congenital defect in a further 12.

During the year 85 were discharged as recovered, giving a recovery rate on the admissions of 40.37; 12 as relieved, 18 as not improved, and 2 as not insane. There were 131 deaths during the year, giving a death-rate on the average number resident of 12.44, the deaths being due in 45 to cerebro-spinal diseases, including 12 from general paralysis; in 14 to cardio-valvular diseases; in 39 to pulmonary diseases, including 22 from consumption; in 10 to general diseases, in 19 to old age, and in 4 to abdominal diseases.

The Commissioners in Lunacy visited this asylum and that at Barming Heath, in both leaving favourable reports as to the condition of the asylum and general management.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR, 2631, Gerrard. GENERAL SECRETARY AND MANAGER, 2630, Gerrard.

QUERIES.

C. S. will be obliged for any information as to the latest literature on puerperal fever and puerperal insanity.

LOST wishes to know the pathological condition of "beat knee," and what is the appearance of a knee under that condition.

FRENKEL'S TREATMENT OF ATAXIA.

H. J. asks to be recommended an establishment in this country for the teaching of walking to tabetics on Dr. Frenkel's method or an exhaustive account of the method.

*** We are unable to recommend an establishment such as that to which he refers. He would probably obtain most of the information he requires from the English translation of Dr. H. S. Frenkel's *Treatment of Tabetic Ataxia by the Aid of Gymnastic Exercise*, by Dr. L. Freyberger (Rebman, 12s. 6d. net.)

THE PERCENTAGE OF MEN WITH HERNIA.

C. D. R. asks for information as to the percentage of men in this country, of the working age, who suffer from hernia, and adds: I believe it is a fact that some, if not all, of the insurance companies will refuse to insure men so afflicted under the Workmen's Compensation Act, which comes into force next July. In this case it would surely throw a large number of able-bodied men out of work and entail a serious burden on the ratepayers.

*** In this country it is very difficult, if not impossible, to obtain any reliable figures as to the percentage of men of the working age who suffer from hernia. In countries in which military conscription is in force, attempts have been made to determine this percentage in subjects of about the age of 21 years. The published results, however, give very little help, as they vary to a considerable degree, the rejections on account of hernia being about 12.8 per 1,000 in France and 26 per 1,000 in Switzerland. It would not be far wrong, we think, to estimate the prevalence of ruptured males in this country as 1 in from 15 to 20, but this prevalence would be greater in the working classes and vary very much within these limits in some occupations. In most instances the subject of a hernia can, we believe, readily obtain relief from the disabilities referred to by submitting himself to operative treatment for radical cure.

A CASE FOR PROGNOSIS.

PERPLEXED seeks suggestions as to the etiology and prognosis of the following case. The wife of the patient on waking on January 17th found her husband, a healthy, abstemious mason, aged 61, twitching and unable to answer her. "Perplexed" on his arrival noted great restlessness, attempts to get out of bed, a pale face, pupils irresponsive to light, but otherwise normal; temperature normal, pulse 60; inability to put out the tongue, but ability to answer "yes" or "no" to shouted questions. A catheter drew off about a pint of acid urine, free from albumen and sugar, sp. gr. 1030. Similar urine was withdrawn night and morning during the next forty-eight hours. The bowels, not moved by croton oil [illegible] responded at last to castor oil and a soap enema passed through a long rectal tube. Unconsciousness passed away after forty-eight hours, but returned after a few hours, and lasted fifteen further hours. After this the patient recovered slowly, and worked occasionally. He was observed to twitch sometimes during sleep, and appeared dull, but only complained of heaviness in the head. He lived chiefly on milk, and repeated examination showed nothing abnormal in the urine or in the patient beyond what has been noted. Matters continued thus until April 16th, when he was again found in the morning unable to speak. This time "Perplexed" found him more restless than before, kicking the bedclothes, and singing snatches of hymns. The left pupil was smaller than the right, but except in these two particulars the conditions were the same as on the previous occasion. This time he recovered consciousness in forty-eight hours.

ANSWERS.

CARBOLIC.—Messrs. Macmillan and Co. publish a good portrait of Lord Lister, suitable for framing, price 5s.

DEAFNESS AFTER TYPHOID FEVER.

F. S. Z.—The deafness occasioned by typhoid fever is sometimes of the nature of a catarrh of the middle ear, but sometimes also a "nerve deafness." In the absence of detail it is impossible to give definite advice, but speaking generally it would probably be quite safe to give strychnine in increasing doses and to try the effect of inflation by Politzer's method.

MEDICAL EXAMINATION AND LIFE POLICIES.

T. D. P.—Judging from the number of communications we receive with regard to circular letters from life assurance companies asking medical men to become medical examiners and at the same time inviting them to take out a life policy with the company, this form of canvassing must be meeting with a considerable amount of success. We have no wish to prejudice companies employing agents who resort to this plan, but we think it well to point out that a person proposing to effect life assurance should inquire very carefully into the standing of the office, and the amount of its resources to meet possible claims. Capital subscribed but not paid up may, of course, be taken into consideration, but it must be remembered that uncalled capital does not, when called, always yield its face value. In some of the circulars we have seen the agent hints that the amount of fees likely to accrue from medical examinations will cover or more than cover the doctor's policy, in none, however, is there any specific undertaking to this effect and the circumstances under which the agent can give such an undertaking must be very exceptional; in a matter so important as life assurance too much care cannot be taken in selecting an office.

LETTERS, NOTES, Etc.

HAEMORRHAGE FROM THE CORD.

DR. GEORGE W. R. DARBS (London, E.C.) writes: A case of some interest has come my way which, with the consent of a Spanish confrère, I wish briefly to record. A lady had lost three children—she was a resident in Spain on all three occasions—from haemorrhage on the cord separating. A fourth child has been born, and is now alive and well. The separation of the cord was waited for, and, haemorrhage duly appearing, the separation was expedited with scissors, and the wound painted over with adrenalin 5 parts and vernisol 95 parts. There was no further haemorrhage.

THE TREATMENT OF SCABIES BY BALSAM OF PERU.

MAJOR J. W. PORTER, R.A.M.C. (Colchester) writes: I am obliged to your correspondents for their letters calling attention to possible albuminuria after this application, a fact of which I was not aware. I now make it a rule to test the urine for albumen before applying the remedy, and also on the day after. I have lately ordered the patients a hot bath with plenty of soap twenty-four hours after the balsam has been applied. So far there have been no relapses, and it would therefore appear that the acaris is killed, as well as the ova, within the first few hours after the application. This being so, the objections to the use of this certain cure for scabies would appear to be reduced to a minimum.

ERRATUM.—The price of the *City of London Directory*, to which favourable attention was directed in these columns on April 27th, is 12s. 6d., and not as before stated. The work is published at the offices of the *City Press*, 148, Aldersgate Street, E.C.

IN the review of Dr. E. Friedrich's book, *Die Seereisen zu Heil und Erholungszwecken*, published in the BRITISH MEDICAL JOURNAL of April 6th, 1907, page 816, the name of the author was incorrectly printed as Friedreich.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

Eight lines and under	...	...	£0 4 0
Each additional line	...	...	0 0 6
A whole column	...	...	2 15 4
A page	...	...	8 0 0

An average line contains six words.

Advertisements should be delivered, addressed to the Manager, 6, Catherine Street, Strand, London, not later than first post on Wednesday morning preceding publication, and if not paid for at the time, should be accompanied by a reference.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Remarks ON CHRONIC SPLENOMEGALIC POLYCYTHAEMIA.*

BY

ROBERT SAUNDBY, M.D., M.Sc., LL.D., F.R.C.P.,

PROFESSOR OF MEDICINE IN THE UNIVERSITY OF BIRMINGHAM; PHYSICIAN TO THE GENERAL HOSPITAL.

THE disease, which has been called by various names, but which at least temporarily we may agree to call by the name given it by Dr. Parkes Weber, "chronic megalosplenic polycythaemia," may be defined as a chronic progressive asthenia, characterized by debility, high blood pressure, general redness or cyanosis of the skin, splenic enlargement, polycythaemia affecting the red cells with proportional rise in the percentage of the haemoglobin the specific gravity and the viscosity of the blood, but without any increase of the white cells.

There may be periods of remission during which the subjective symptoms disappear and the patient feels well. Later cyanosis, dyspnoea, oedema of the lower extremities, dilatation of the heart, enlargement of the liver and albuminuria occur, and may be associated with mental depression or dullness, apathy and drowsiness.

The course appears to extend over many years (seven or eight), but the tendency is to terminate ultimately by gradual heart failure or by cerebral haemorrhage. Out of 56 recorded cases, 26 were males and 20 females. The oldest case reported was 61 (Hall, female), the youngest 20 (Ascoli, male); the average age was 43.

It has only attracted attention during the last few years, and its history may be briefly related. So long ago as 1892 Professor Vaquez, working at the blood condition in cyanosis due to congenital disease of the heart, came across a case which he published under the impression that the cyanosis depended upon a congenital heart lesion. There was enlargement of the liver and spleen. The red corpuscles were increased in number and there was a proportional rise in the haemoglobin, but it was not until 1895 that he discovered at the death of the patient the absence of any cardiac affection. In 1899 Widal and Rendu brought forward a case of a man who had an enlarged spleen, marked cyanosis, and polycythaemia. After death the heart was normal, but the spleen was tuberculous and contained large caseated areas, and the bone marrow showed nucleated red cells pointing to hyperactivity. In the same year Cabot of Boston published 3 cases in the *Boston Medical and Surgical Journal*, and another case was published in 1901 in the same journal by McKeen.

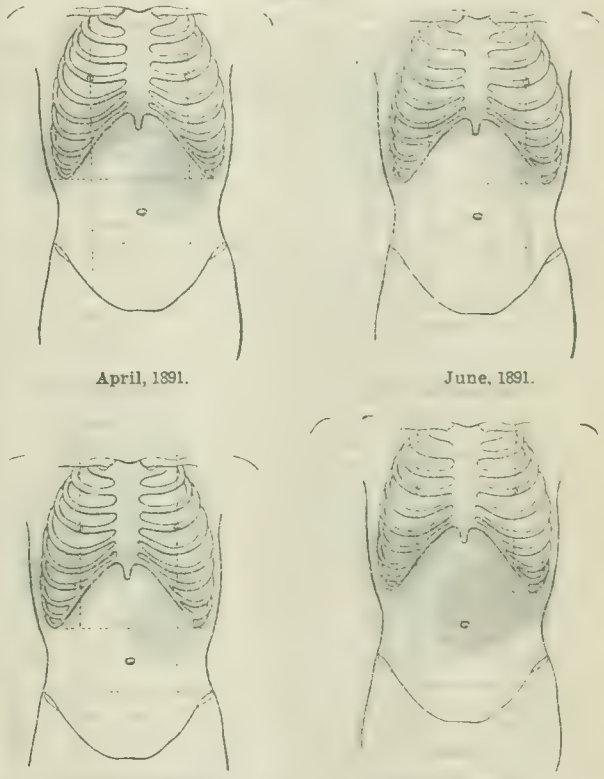
CASE I.

On April 24th, 1891, during the course of an influenza epidemic, a man named T. H., silversmith, aged 48, was admitted under my care, complaining of pains all over the body, especially in the abdomen, and of general illness. His evening temperature was 102° F.; pulse, 96; respirations, 24; and he said that his present illness had commenced only four days previously. We attributed, and probably rightly enough, these acute symptoms to an attack of the prevailing epidemic, but we discovered that his spleen was enlarged down to the umbilicus (as shown in the diagram), although there was nothing in his history to explain its enlargement. He was discharged on May 16th, although still weak, and had to be readmitted on June 9th, when his temperature in the evening was again as high as 101°. He complained of great weakness, inability to work, and said he could scarcely get about. On examination the spleen was found to have diminished greatly in size (as shown in the diagram). We regarded the asthenia as still a probable result of influenza, and sent him to the sanatorium for fourteen days.

According to his own account he recovered completely, and remained well until 1897, when he again began to suffer from great weakness with pain in the abdomen, made easier by lying down. Towards the end of the year he became so ill that he gave up his work, and on January 29th, 1898, he attended at the hospital as an out-patient, where he was seen by Dr. Russell, who had been resident medical officer when he was an out-patient seven years previously. Dr. Russell remembered him, and being glad of the opportunity to follow up a case which had been somewhat of a mystery, he directed him to be admitted under me. The patient complained chiefly of pains all over him, but especially in the right side and in the head, of a fortnight's duration; but lately he had been getting weaker and thinner, so that he could hardly stand and could not walk to his work; about a fortnight before, having had occasion to get out of bed, he fell on the floor and lay there all night, unable to get up; since that time he had remained altogether in bed, although with the aid of an omnibus he had been able to get to the hospital.

When we saw him the most striking feature in his appearance was the very marked cyanosis. The skin of his face was deeply congested and cyanosed; his nose was enlarged, thickened, very blue, and covered with dilated veins; his ears, lips, and cheeks were blue; his fingers were slightly clubbed, with incurved nails; the skin of the arms and hands was thin, soft, and cold, while around the joints it was bright red. He looked very depressed; his memory was evidently failing, as he was unable to recollect events in his history which had been recorded in our notes on his previous stay in the hospital; his speech was slow, thick, and mumbling, and he is described by the clerk who took the notes as "like a man the worse for drink." His tongue was very red; his teeth were mostly missing; his liver was ½ in. below the costal margin; the spleen reached to the middle line and to the level of the umbilicus, and was hard but not tender. The heart was not enlarged; pulse 96; tension "higher than normal"; vessels everywhere very prominent and thickened; knee-jerks absent.

Case I.



April, 1891. June, 1891. March, 1898. April, 1898.

Blood:	Red Corpuscles.	Haemoglobin.	Leucocytes.	Spectrum.
February 5th	8,540,000	140 %	Not increased	Normal
February 8th	8,833,000	—	—	—
February 13th	8,485,000	—	—	—
February 18th	9,260,000	—	—	—
March 8th	8,900,000	140 %	Not increased	-

He was sent out on March 20th, but readmitted on March 24th, and when he was seen he was found to be deeply cyanosed and jaundiced, drowsy, apathetic, and passing his urine in the bed. The fingers, ears, cheeks, nose, and skin of his back are described as being of a purplish colour; temperature 99°. In spite of the jaundice, the urine contained no bile, and, according to Dr. Powell White, now of Manchester, then Resident

*Read before the Birmingham Branch of the British Medical Association, March 14th, 1907.

Pathologist to the General Hospital, there were no abnormal pigments in the urine, and the stools were dark brown. The red blood corpuscles numbered 7,360,000; the spleen was rather smaller (as shown in diagram). On April 2nd a note is made that "the abdominal tumour (spleen) seems to be increasing in size and extends now to the right of the middle line" (see diagram). I would draw your attention to the remarkable variation in the size of the spleen, which has also been noticed in the case to be shown to-day. The patient grew gradually more drowsy and more intensely cyanosed, but the jaundice was less marked. He died on April 9th.

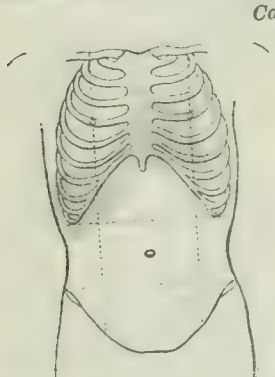
At the *post-mortem* examination nothing was found to throw any light upon the case; the heart was somewhat enlarged with "old disease of the mitral valve"; the internal organs were congested; the spleen weighed 48 oz., but on section appeared normal. The marrow of the femur was examined and showed no naked-eye change, but was not examined microscopically.

Four years afterwards Dr. Russell published this case, and by so doing acquired the right to claim it as the first example of the condition which had been observed in this country.

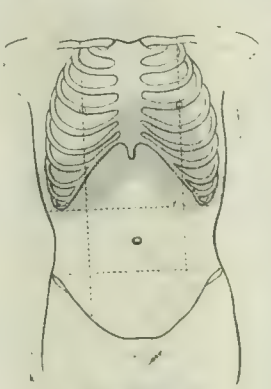
CASE II.

The patient I propose to show you to-day, G. Y., came originally under my care on February 23rd, 1905, complaining

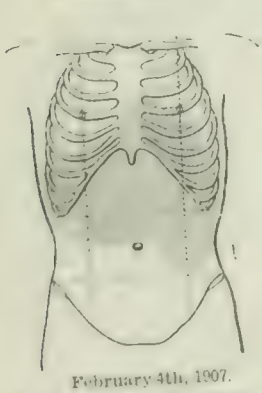
Case II.



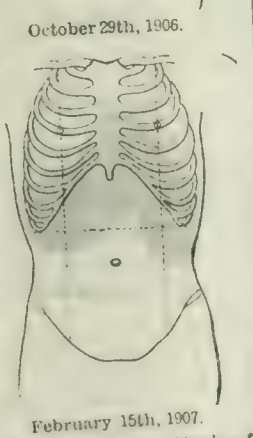
February 2nd, 1905.



October 29th, 1906.



February 4th, 1907.



February 15th, 1907.

of swelling of his legs, which had followed an attack of influenza four months previously. At that time it was noted he had a ruddy complexion, that his tongue was coated and "blue," and that there was universal reddish congestion of the skin. On standing up the congestion of his legs was more marked, and the veins became distended with blood. He complained a good deal of pains in his legs and walked with great difficulty. There was no enlargement of the spleen, and no blood count was made at the time, in fact, the case was regarded as being possibly due to thrombosis of the inferior vena cava following influenza. After a week's rest in bed the swelling of the legs disappeared, but they remained painful up to the time of his leaving the hospital on March 26th. Although better he was never able to resume work, and he continued to attend as an out patient under Dr. Russell. He was readmitted in March, 1906, for a return of the swelling of the legs with inability to walk, and he had lately noticed swelling of the abdomen.

Up to the commencement of this illness he had always enjoyed good health and had had plenty of good food. He used to drink three pints of beer a day and sometimes more, and smoked about half an ounce of tobacco a day. There was nothing in his family history to suggest tubercle.

At that time he is described as presenting a florid appearance, the veins of his forehead being prominent; as he lay in bed he sighed occasionally, and seemed short of breath when speaking. There was oedema of the walls of the chest and abdomen as high as the axillae, and the legs were swollen, the skin being shiny and bluish-red. On standing up the veins of the legs became distended with blood; knee-jerks absent. The heart's apex was 2 in. outside the line of the nipple, the sounds were pure, the pulse regular, 80, and the blood pressure 170. His liver reached halfway to the umbilicus, and the spleen could be felt below the costal border. The urine contained a trace of albumen; ophthalmoscopic examination of the eyes showed only fullness of the retinal veins. Examination of the blood showed:

Red blood corpuscles 8,320,000.
Viscosity, mean of three estimates by Dr. J. H. Watson 9·4 (normal blood 4 to 5).
Haemoglobin 140 per cent.
Differential count normal.

He was treated mainly by rest, and ultimately made an out patient on June 6th.

Late in October the legs were very much swollen. He was advised to rest as much as possible, and readmitted on October 26th, by which time the oedema had gone. The displacement of the apex beat had become more marked, being 1 in. beyond the line of the nipple. The first sound described as obscure and the second as sharp; pulse 84, giving the blunt-headed curve of high tension; blood pressure 180.

Blood Count.	Red.	White
October 27th	7,600,000 ...	7,000
November 18th	8,400,000 ...	9,000
November 24th	9,200,000 ...	11,000
December 7th	8,400,000 ...	—
December 16th	8,600,000 ...	—
December 24th	8,500,000 ...	—
January 6th	8,200,000 ...	—
January 27th	7,144,000 ...	10,200
February 6th	7,896,000 ...	—

No abnormal red cells; differential count of leucocytes normal.

Haemoglobin		
...	December 11th ...	190
,, ...	January 4th ...	180
,, ...	January 27th ...	160

Specific gravity, taken several times, November 25th, 10 two other occasions, 1075; haemolysis 40.

Blood coagulation, January 6th, 8 min.; January 15th, 10½ m

Both liver and spleen were considerably enlarged and ea felt below the costal border, but varied in size from tim time (as shown in the diagrams).

The urine always contained albumen, which was ser albumen and not globulin; the daily amount of urea was an average 370 grains; urobilin was generally absent, but present on November 15th (Mr. L. C. S. Broughton); a la quantity of indican was always present; there was no blo casts were repeatedly looked for, but never found. V marked dermographism was always present. He was discha on January 8th of the present year, and readmitted for fur examination on January 27th.

His treatment has varied from time to time, according to wavering views as to the cause of the disease. At firs was kept in bed, and when his legs were weak farad was used for the muscles. He has been given iron, arse digitalis, adrenalin chloride, quinine, diuretin, and he been bled to 12 oz. with temporary relief. His colon has irrigated systematically with large quantities (5 to 6 pint water, which for some time contained 5 grains of al naphthol to the quart; the only noticeable effect of this means was to reduce the quantity of indican in his u which was persistently present.

We have lately been keeping him upon four-hourly d (¼ grain) of erythrol tetranitrate, in the hope that we m relax the spasm of his arterioles, but without much benef that it is to be feared the vessels have become thickened narrow. We have also tried the administration of vineg ½ oz. doses three times a day, in order to test the po belief that vinegar drinking makes people pale. The res to be seen in the blood count made within the last few da

March 10th. Red cells, 6,800,000; haemoglobin, coagulation time, 8 minutes; haemolysis, 42; blood pres 130

March 13th. Red cells, 7,440,000; leucocytes, 11,800; h globin, 165; specific gravity, 1075; blood pressure, pulse, 72.

Although the red cells show some diminution the num not materially less than it has been previously, and c with certainty be attributed to the treatment. The red in blood pressure is undoubtedly due to the use of ery The interval after the dose was on March 10th 30 mi and on March 13th 135 minutes. So far there is no ev that the vinegar has produced much effect, and it is a doubtful whether the patient would be benefited if we administer a remedy which favoured the destruction red blood cells, but it seemed worth while to test the p belief.

I should like, before concluding this account, to emp the fact that no abnormal red cells have ever been s either of my cases.

In 1902 Dr. Pierre Quiserne, a pupil of Professor V published his thesis for the doctorate upon this s and collected together a number of cases with other mation bearing on the subject. Some of these case

brought before the Association of American Physicians in 1903 by Professor William Osler, and in 1904 he published a paper in the BRITISH MEDICAL JOURNAL, in which he summarized 17 cases and pointed out that while some were undoubtedly associated with tubercle of the spleen, others were not so affected, and that the disease could not rest upon that foundation. He suggested the desirability of carefully studying the heart, the lungs, and the specific gravity and viscosity of the blood in these cases, as he expressed his belief that the cyanosis probably depends upon the increased difficulty of the flow of blood through the capillaries

In 1904 Drs. Parkes Weber and J. H. Watson published a carefully-noted case, with *post-mortem* examination, in which they found evidence of proliferation of the bone marrow, a condition regarded by them as primary and the cause of the disease.

In 1905 Drs. Begg and Bulmore reported a case in the *Edinburgh Medical Journal*. Dr. Parkes Weber has since published a very elaborate study of the clinical features of another case, and Dr. R. Hutchison and Dr. Miller have published the notes of a case (1906) that died in the London Hospital where the occurrence of proliferating bone marrow was also observed.

The condition was the subject of a discussion at the Berlin Medical Society last winter, being introduced by Professor Senator, who accepted the bone-marrow theory of its origin. This brings the subject sufficiently up-to-date for our present purpose.

The various theories to account for the phenomena that have been put forward are:

1. *Primary Over-production of Red Cells in the Bone Marrow.*—This was originally observed by Widal and Rendu in 1899, and is supported by Breuer (1903), Parkes Weber and Watson (1904), Türk (1904), and Senator (1906); the last suggested that diminished destruction may also play some part. This theory rests on the fact that the bone marrow in several cases has shown signs of proliferation, but this may be seen in the compensatory polycythaemia of congenital heart disease (E. Weil).

2. *Stasis.*—This explanation is accepted by Reckzeh (1905), Grawitz and Lommel (1906). They do not state how it is produced, although the presumption is that Grawitz would refer it to vaso-constriction, and Lommel speaks of "viscosity." If by stasis is meant the obstruction to the circulation caused by arterial hypertonicity or vascular spasm, then it is with them that I desire to range myself, and I will proceed to give in detail the evidences of the existence of this vascular spasm, and the proof of its being a sufficient cause of the changes observed in the blood and the other dependent symptoms.

3. *Diminished Respiratory Capacity of the Blood.*—This is the theory of J. Bence and Koranyi; Parkes Weber says that Boycott endeavoured to ascertain the respiratory capacity of the blood in two cases, and found it in one equal to, and in the other 10 per cent. greater than, normal, but Parkes Weber rightly observes that if it were proportional to the number of red blood corpuscles present it would have been much greater than normal, and the results so far as they go indicate that the individual blood corpuscles possess a diminished respiratory power.

4. *Diminished Destructibility of Red Blood Corpuscles.*—No one has been so bold as to put forward this explanation for the entire increase in the number of red cells, but it was suggested as possibly playing some part in the result by Gibson, Parkes Weber, Watson, and by Senator, but Gibson subsequently receded from his position in a published letter, and in a subsequent case which was examined for Dr. Parkes Weber by Sir A. E. Wright the haemolytic index was said to be normal. As the condition is certainly competent to play an important part did it really exist, it seemed worth while to test it thoroughly, and in order to do so I adopted a method described by M. Ribierre in his thesis on haemolysis and the measure of globular resistance applied to the study of the globular resistance in jaundice. A 0.50 per cent. solution of chloride of sodium in distilled water is placed in a series of little tubes; the first contains fifty drops; the second forty-eight drops with two of distilled water; the third forty-six drops with four of distilled water, and so on, each tube containing two drops less of salt solution and two drops more of distilled water. Into each tube is placed the same quantity of diluted blood. Normally haemolysis commences in the tube containing forty-four drops of salt solution, and is complete in five or six tubes. In jaundice, however, the resistance is increased, and commences in the tube containing thirty-eight or thirty-six drops. In some blood diseases, however, haemolysis, or the tendency to haemolysis, may be so great that the percentage of salt solution must be 0.60 or 0.70.

We have at present in the hospital a man named F. H., aged 48, suffering from obstructive jaundice. His red blood cells are 4,420,000, and the leucocytes 8,600. His haemolytic index is from 0.38 to 0.32, so that there is a considerable reduction of the destructibility of the red cells but no corresponding increase in their number. On the other hand Dr. Mackey has made several estimations of the haemolytic index in G. Y.'s case and has found it on each occasion to be 0.40, so that there does not appear to be any notable diminution of destructibility, certainly not anything that could be invoked to play an important part in the production of polycythaemia. I ought to mention that the quantity of blood used from G. Y. in these estimations has been proportionally less than normal blood and in accordance with the amount of haemoglobin present.

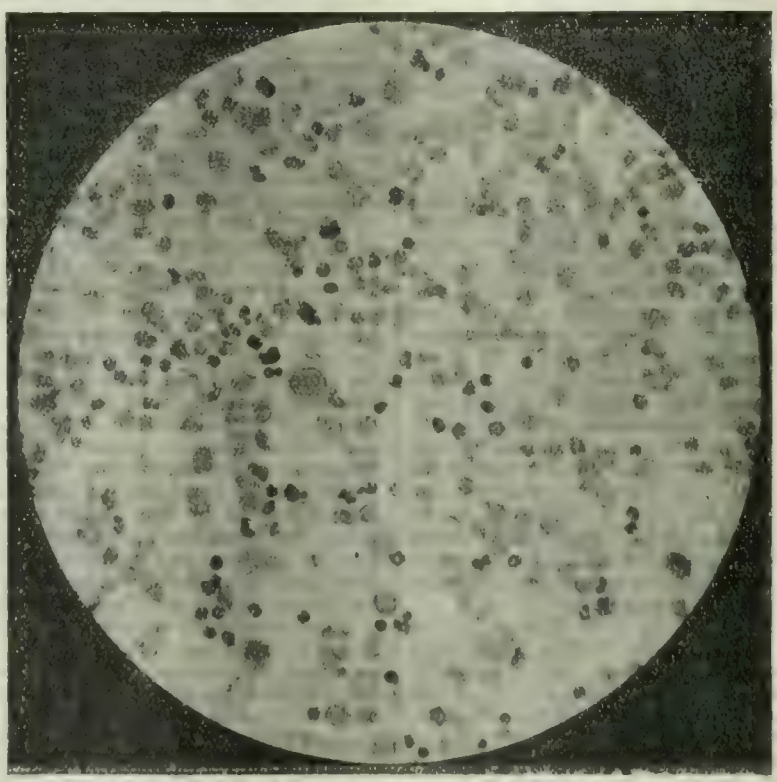
The name "polycythaemia" has, of course, been given to this disease on account of the great increase of the red cells of the blood, which is found on examining a suitably diluted drop of blood taken in the ordinary way and with the usual precautions from the lobe of the ear. But it has been found that an abnormally high blood count, equal to that which has been seen in these cases, may be met with in various conditions. In the first place, Malassez proved that venous or capillary blood is richer in corpuscles than arterial blood, and he insists upon the influence of the vasomotor system in determining the richness of the blood in cells and haemoglobin. Further, as might be expected, the venous blood returning from a gland where the blood has parted with a considerable quantity of water, shows marked polycythaemia. Thirdly, the effect of vasomotor changes was demonstrated by Zuntz and Cohnstein, who showed that, while section of the cord high up leads in a few minutes to a fall in the number of red cells from 5,000,000 to 3,000,000, stimulation of the cord determines an afflux of cells, so that the capillaries of the skin become gorged with blood and the cells are so packed together as to cause stasis by arrest of the circulation. The influence of the vasomotor system in producing concentration of the blood is also supported by the results obtained by Grawitz, who found that when the vasomotor nerves were stimulated by cold or friction, the specific gravity of the blood was increased. Finally, there is a curious experiment described by Cheron: When to an anaemic and neurasthenic subject is administered an injection of a simple artificial serum (from 5 to 10 c.cm. of a 1 per cent. chloride of sodium solution), the number of blood corpuscles having been first counted, the proportion of haemoglobin ascertained, and the arterial tension measured, the result is: (1) A marked increase in the arterial tension; (2) an increase in the number of blood corpuscles, which frequently amounts to the addition of one-fifth, one-fourth, or even one-third of the original number, according to circumstances. Under the influence of the stimulation by the hypodermic injection of the entire circulatory apparatus through the central nervous system the blood vessels are contracted, their capacity is lessened, the liquid portion of the blood is squeezed out into the perivascular tissues, and the red blood corpuscles, circulating in a much smaller quantity of liquid, appear to be much more numerous in a given space. We have repeated this experiment several times with definite positive results.

In such circumstances no one can suppose that there is a sudden enormous overproduction of the red cells, amounting in some cases to double the normal number; but the polycythaemia is due to local concentration of the blood, and is therefore spoken of as being apparent and not real. Permanent and real polycythaemia has been observed in congenital heart disease (Vaquez, Gibson, Weil), in stenosis of the trachea or larynx (Labbé, Quiserne), in the blood of persons living at high elevations; in all these circumstances it is supposed to be due to impaired haematosis—or, in other words, is compensatory to diminished supply of oxygen to the tissues. These clinical results have been confirmed experimentally by compressing the trachea (Vaquez, Sellier), by causing partial pneumothorax (Auscher and

Lapique), and by diminished supply of oxygen (Sellier), while conversely, in pure oxygen the number of red cells falls rapidly (Regnard).

There are two questions that must be answered respecting the polycythaemia in the present group of cases—first, have we to do with a *real* increase in the total number of red cells in the body, or is this only apparent and the consequence of the accumulation of red cells in the capillaries of the skin? secondly, if it is *real*, is this increase of red cells *primary* or secondary to some other condition?

The strongest arguments in favour of the reality of the increase are (1) that the total mass of the blood is increased, and (2) that the marrow of the long bones is in a state of unusual functional activity. The estimation of the total mass of the blood was made by Professor Haldane on two occasions in one of Parkes Weber's cases, when it was found to be nearly double the normal amount. The method adopted is that invented by Professor Haldane and Professor Lorrain Smith; it is based on the determination of the quantity of carbonic oxide required to saturate the whole of the blood; for example, if it is known that it requires x quantity of carbonic oxide to saturate a unit of blood, and it is found that an individual requires to inspire 50 x in order to determine a certain colour change in a drop of his blood, the total quantity of his blood will be equal to 50 units. If, as these authors say, the saturation of the blood occurs practically instantaneously, and that it is easy to measure the amount of gas required, their conclusions seem to be logically correct. I have not been able to get G. Y.'s blood examined by this method, but it is most desirable that there should be other determinations made, as it is at least unsatisfactory to allow such an important conclusion to rest upon the data of one case.



Photograph of film of bone marrow from femur of child, aged 4, with cyanosis and congenital heart disease, showing numerous nucleated red cells and myelocytes. × 570, haematoxylin-eosin.

The accompanying drawing is from a photograph of films of the bone marrow prepared by Dr. James Miller from a case of cyanosis and congenital heart disease in a child aged 4, who had been under the care of Dr. Stacey Wilson in the General Hospital.

The marrow was taken from the centre of the shaft of the femur, stained with haematoxylin-eosin, and is multiplied 570 diameters. It shows numerous red nucleated cells with small deeply stained nuclei, numerous myelocytes and large cells with large pale nuclei, and also several eosinophile myelocytes with coarse granules in their protoplasm. Dr. Miller adds in his note that the presence of actively functioning red marrow in the shaft of the long bone is in the adult an abnormal condition, while in the child at birth red marrow is normally present and is gradually replaced by the yellow fatty marrow characteristic of the adult, but so far as he has been able to investigate the question active red marrow is present in the shaft of the femur up to the age of 4.

The reason for considering the blood change to be primary appears to be so far as I can follow Dr. Parkes Weber and those who agree with him that the proliferation of the bone marrow must be primary because no other lesion present could determine it as a functional reaction or compensation, as in congenital heart disease.

This overlooks or underrates the importance of the stagnation in the capillary circulation with dilatation of all the small blood vessels of the skin, the fullness and increased pressure in the subcutaneous veins, which are not the consequence of polycythaemia, as is proved by their absence in that which occurs in high places. If, on the other hand, they indicate, as I believe they do, impaired peripheral circulation, defective supply of arterial blood, a generalized "asphyxia" of the skin, there is a sufficient cause to explain the compensatory reaction of the bone marrow.

The condition of this patient's skin may be compared to the red face of the coachman, of which the accepted explanation is that under the influence of constant stimulation by cold, perhaps aided by alcohol, the middle-sized arteries are contracted, while the capillaries are dilated and engorged with blood. Wherever this occurs there is increase of red blood corpuscles, of haemoglobin and of specific gravity, with necessarily greater viscosity, so that not only is the force of the heart partially shut off by the stopcock action of the middle-sized vessels, but the condition of the blood must obstruct its flow through the capillaries. The immediate local effect is "asphyxia" of the skin, but this ultimately stimulates the bone marrow to abnormal activity, increases the number of red cells, raises the specific gravity and viscosity of the blood, and creates a vicious circle by which the existing conditions are aggravated and the difficulties under which the heart maintains the circulation are perpetuated.

It will be seen from the figures given in the notes of G. Y.'s case, that the leucocytes showed no increase, but were proportionately rather diminished. But in the discussion which took place at the Berlin Medical Society, Senator is reported to have spoken of an increased formation of leucocytes; the absence of this increase is to a certain extent opposed to the hypothesis of primary functional activity of the bone marrow; for there is no reason why a primary affection should not extend to both kinds of blood cell; if, however, the formation of new red cells were a compensatory effort in the presence of impaired haematosis, it is in accordance with analogy that Nature would supply the kind of cell required and no other.

If it must be admitted that there is no direct evidence of the polycythaemia being primary, and if the main argument relied upon is the alleged absence of any other sufficient independent cause which could constitute a hindrance to the circulation, we must inquire how far this latter statement is true.

The *post-mortem* examination of our first case showed that the heart was enlarged with old mitral valvular disease, and thickening of the left ventricle (Dr. Russell is sure that there was no marked disease of the valve); the present case shows evidence of cardiac dilatation; in Parkes Weber's first case there was some hypertrophy of the left

ventricle with atheroma of the aorta and aortic valve; and in Hutchison and Miller's case the heart was enlarged and the myocardium fibrous; yet none of these changes is of sufficient magnitude to account for the stagnation of blood in the capillaries, and we must look elsewhere for an adequate explanation. There is an entire absence of any evidence of obstruction to the return of the venous blood to the heart, such as would account for the distension of the veins and the sluggishness of the venous circulation.

The cause must be looked for in deficient *vis a tergo*; in other words, the action of the heart is either insufficient or is in some way hindered from exercising its full influence upon the blood in the capillaries and the veins. That the force of the heart's action is not deficient is proved by the high blood pressure present in all cases where it has been recorded.

	Pulse Rate.	Blood Pressure.
Saundby, Case II ...	... 80 ...	... 170–180
Parkes Weber, Case I	... 65 ...	... 140–170
Parkes Weber, Case II	... 80–90 ...	... 152–157
Hutchison and Miller	... 50–60 ...	... 130–145

This increase of the blood pressure can be attributed to vasomotor action, giving rise to spasm, and later on, through its persistence, to thickening of the middle-sized arteries. Of this thickening there is also a certain amount of *post-mortem* evidence. In Parkes Weber's first case he says all the medium-sized arteries seemed somewhat thickened, and the microscopical report says transverse sections of both right and left radial arteries seemed to show a decided relative increase in the size of the muscular coat, all due allowance being made for shrinkage during preparation of the specimens; Hutchison and Miller also found great thickening of the adventitia of the arterioles of the heart's walls. But there is a good deal of further clinical evidence of vasomotor disturbance; in the first place there is the universal redness of the skin, and it is of some importance to bear in mind that the appearance is constantly described as rather florid or ruddy than cyanosed, and that the latter expression seems only to be used in the description of the later stages, or where cold or some other temporary cause still further increases the stagnation. In addition to this universal redness of the skin is the influence of position upon it, so that the dependent parts become sometimes absolutely purple, as in the description of H.'s condition (Case I), when he was admitted finally just before his death. The occurrence of erythromelalgia can hardly be regarded as simply a coincidence, for it has been noted by Parkes Weber, Cabot, Türk, Collins, and Weintraud, and this condition is generally admitted to depend upon vasomotor disturbance; also there is in G. Y.'s case well-marked dermographism, another vasomotor phenomenon.

CONCLUSION.

It is right that I should try to formulate my own conclusion as to the nature of this disease. I have explained that I cannot accept the view that it is a primary disease of the bone marrow or of the spleen, or that sufficient changes have been met with in the hearts of these cases to make it reasonable to suppose that the defect lies there. I have adopted the view that the mechanism of the obstruction to the circulation is the narrowing of the middle-sized arteries and arterioles—a condition which originally is no doubt nervous and depending upon vasomotor spasm, but which in course of time becomes organic from thickening of the muscular and fibrous coats. This vasomotor derangement is a neurosis associated with a general neurasthenic condition which certainly, in some cases, seems to have been caused by an attack of influenza. I think it will be admitted by every one who has carefully watched the results of the epidemics of influenza during the last seventeen years that the toxins of influenza are responsible for many disturbances as grave as this, and that in adding one more to the accusations against it its defenders cannot plead that it is either innocent of evil or incapable of producing as dire results. However, I by no means wish to limit myself to influenza as the only possible explanation of the origin of this disease. The toxins of many other infections may, under certain circumstances, be equally injurious; yet it may be noted that its history exactly coincides in time with that of the recent revival of epidemic influenza.

To summarize what has gone before, I may say that I believe the condition to be a cerebro-spinal neurasthenia, causing vasomotor spasm, with engorgement of the capillary and venous circulation and congestion of the internal organs, especially of the liver and spleen, with muscular weakness, loss of knee-jerks, and mental impairment, shown by loss of memory, apathy, and drowsiness.

[I desire to express to my friend and colleague, Dr. James W. Russell, my thanks for assistance received by directing my attention to several papers I should otherwise have overlooked, and to place on record the fact that it is entirely due to him that the first case did not remain lost to sight among a mass of notes, for although I took a considerable interest in it at the time, I had not thought of publishing it and had forgotten it. I must also add my acknowledgement of the ingenuity, zeal, and ability shown by Dr. Mackey, the present Resident Medical Officer at the General Hospital, in carrying out the very large number of clinical observations that have been made in this case, the extent of which is imperfectly indicated in the brief summary I have read. I must also thank Mr. L. C. S. Broughton for several careful chemical and spectroscopic reports on the pigments present in the urine.]

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A CASE OF SPLENIC LEUKAEMIA COMPLICATED WITH GOUT AND ALBUMINURIA.

By GEORGE PARKER, M.D.,
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INSTANCES of leukaemia with fulminating attacks of uratosis are sufficiently rare to justify an account of a well-marked case.

The patient, aged, 35, a fitter by trade, has been under treatment for eighteen months for splenic leukaemia with frequently-recurring joint troubles. In May, 1901, he was attacked by malaria while at a port in the United States. A year or two afterwards he was laid up suddenly with pains in the knee which came on after a heavy turn of night work. In January, 1905, he was admitted as an in-patient at the General Hospital, Bristol, with pyrexia, joint pains, marked anaemia and breathlessness. The big toe, ankle, and right knee were red, painful, and swollen, while the wrist, elbow, and fingers were also slightly affected. The urine was 1010, acid, and showed a trace of albumen, but no sugar. The retinal discs were normal. The spleen reached below the umbilicus, and a blood count showed red cells 2,610,000, white 223,200, and numerous myelocytes. There was a systolic murmur at the apex of the heart. The lungs were normal except for slight dulness at the bases. There was no tenderness over the sternum.

Under treatment by sodium cacodylate the red cells rose by March 21st to 3,260,000, the white fell to 71,000. The haemoglobin reached 48 per cent., but the myelocytes remained as high as 26 per cent. Treatment by the Roentgen rays was kindly undertaken by Dr. W. Kenneth Wills, and steady improvement followed. The spleen decreased in size, the blood became practically normal except that 3.2 per cent. of myelocytes were still present, and in June he resumed work, but came up for the *x* ray treatment periodically till November. In February, 1906, he relapsed, and again came under treatment; the leucocytes now reached 134,000 and the myelocytes 27 per cent. By April the white cells had fallen to 33,000 and the myelocytes to 12 per cent. The spleen later on diminished and could no longer be felt below the ribs.

Frequent slight attacks of arthritis have occurred during all this time in various joints. There is no marked deformity, but slight creaking in the right knee and a deposit of urates along the extensor tendons of both index fingers near the proximal interphalangeal joints. One of these discharged for a time. In March a tophus found on the right ear was punctured. The contents proved to be sodium urate. After an inflammatory attack the joints show a fine desquamation. Colchicum, thyminic acid, and other remedies have been employed, and appear to hasten the termination of an attack.

For some time there was reasonable doubt as to the nature of the arthritis. Garrod's serum test was tried unsuccessfully. The moderate pyrexia at first and the transference of attacks from joint to joint was in favour of true rheumatism. However, when urate deposit were found the question was settled. He can give no history of gout in his family, and never suffered from serious illness before the malaria. As to the examination of the kidney trouble, he has no recollection of scarlatina as a child. As a fitter he has constantly used red and white lead in his work, but remembers no attack of colic, and his gums show no blue line. The heart is slightly enlarged, the apex is external to the nipple line, the aortic second sound is accentuated, and there is a systolic murmur at the apex. The systolic blood pressure is 110 mm., and the vessels seem healthy. The liver dulness extends from the costal arch to about a couple of inches below the costal margin.

The urine is clear, acid, has rarely any deposit, and has always shown a definite cloud of albumen. The quantity varies between 30 and 50 oz., and the specific gravity between 1010 and 1020; numerous granular and a few hyaline and fatty casts have been noted. No prolonged examination of the other constituents has been made, but I may give one report made during a period when the gout was quiescent:

"Quantity of urine 48 oz., urea 1.3 per cent., so that the total excreted was 272.6 grains of urea. The nitrogen represented by the purin bodies was found to be 0.0286 per cent., which gives 5.99 grains of purin nitrogen in twenty-four hours." During an attack the urea was 205 grains and the purin nitrogen 3.8 grains.

A severe inflammatory attack of gout occurred during May, 1906, when he had gone home to resume work; many joints were affected, and fresh uratic deposits appeared.

Blood Counts.

	Feb. 3, 1905.	Feb. 25, 1905.	March 21, 1905.	April 17, 1905.
Red cells	2,610,000	—	3,260,000	3,460,000
White cells	223,000	82,000	71,000	61,200
Polymorphonuclears ...	34.2	10	49	65
Myelocytes	25.2	79	30.4	15.8
Basophiles	16.6	—	10.2	4.4
Nucleated red cells ..	3.8	4.0	0.2	1.6
Haemoglobin	—	—	48	—

	June 7, 1905.	Sept. 12, 1905.	Sept. 19, 1905.
Red cells	4,850,000	3,540,000	3,750,000
White cells	20,000	67,000	44,800
Polymorphonuclears ...	77.8	-	—
Myelocytes	3.2	—	—
Basophiles	6.2	—	—
Nucleated red cells ...	—	—	—
Haemoglobin	60	—	52 per cent.

	Feb. 14, 1906.	Feb. 26, 1906.	March 3, 1906.	March 27, 1906.	April 10, 1906.
Red cells	3,230,000	2,310,000	3,040,000	3,400,000	3,310,000
White cells	134,000	116,000	108,000	140,000	68,000
Polymorphonuclears.	51	44	53.2	48	66
Myelocytes	27	29	25	32	12
Basophiles	0.8	0.6	1.6	1.2	3
Nucleated red cells ...	-	-	-	—	—
Haemoglobin	50	40	55	55	60

The interest of the case depends largely on the importance we attach to the retention theory of gout. Garrod laid down that during acute gout uric acid exists in the blood in excess, and that very little appears then in the urine. As the attack passes off, it reappears in the urine, and sometimes in large amounts, but during the quiet intervals the excretion is deficient. This retention of uric acid by the kidneys forms an essential feature of gout. In leukaemia there is an excess of urates in the blood unequalled in any other condition except gout and temporary states such as pneumonia. Why then, it was asked, do we not get a deposit of urates and other symptoms of gout in leukaemia? Simply because the kidneys there are active, and the uric acid excretion is vigorous. The so-called quadriurates have not time to change into the gelatinous biurate, and this into the crystalline form. It is certainly curious that cases of gout combined with leukaemia are decidedly rare. I have only found three recorded one mentioned by Roberts and two by Duckworth, but in two of the three gout had existed long before. Roberts says: "I am not aware that any case has been recorded in which gout supervened as a clear consequence and result of splenic leukaemia. In the present instance the evidence as to priority is not clear. The patient had first an attack of malaria, which is well known to be a precursor of leukaemia. Gowers, for instance, found a history of malaria in 20 per cent. A year later he was attacked by

gout. He cannot, of course, tell us whether the leukaemia began before or after that. The breathlessness of the advanced stage certainly came on later.

If we look on the kidney trouble, the gout, and the leukaemia as all following upon the malaria, there would on Garrod's theory be reason to consider the gout as the result of the failure of the kidneys to excrete the enormous amount of uric acid produced by the leukaemia. It is certain that xanthin bodies are found in great quantity in the blood of leukaemics, and their urine, which is generally free from albumen, shows a great excretion of the purin bodies, and a notable excess of uric acid, even 1½ gram daily and upwards, while the urea is little altered. This patient's excretion is very scanty for a leukaemic.

It is open to us to say that the essence of gout does not consist in the retention of uric acid and its deposition in the joints when it is in excess. In short, we may call this process a uratosis, and think of gout as a toxaemia together with an inflammatory reaction which causes the precipitation of uric acid, or shows in some cases no arthritic symptoms. This is after all akin to the old idea of "suppressed gout," but in the present case we have an excess of urates in the blood together with damaged kidneys. Why, then, were they not deposited quietly without inflammatory symptoms, or what was the cause of the inflammation which, according to the toxin theory, preceded and led to their deposition?

We know that in some forms of kidney disease uric acid is found in excess in the blood. Von Jaksch found this was the case in nine patients out of twelve, and the effect of lead in southern England in producing both kidney disease and gout is well known. I say in southern England[1] for, as Ewart and others point out, lead does not produce gout in Scotland and the north, so that the gout of lead workers must include some other factor. It may be said, too, that retention of uric acid cannot be the sole cause, otherwise gout would be far more frequent in ordinary Bright's disease; and, again, in typical gout the kidney trouble is not always that of advanced or even of definite structural disease. Still, the fact remains that in gouty persons the excretion of the endogenous purin bodies is distinctly low, and when a diet rich in purins is given the excretion does not rise to the extent it does in the healthy, while in an attack of acute gout it fails still more. We know that renal impermeability is not always the same as structural disease, though they coincide in some cases.

If cases of leukaemia, with their huge excess of endogenous purins, can be shown to produce the symptoms of gout when some forms of kidney disease are present, and only then, there is much reason to think that gout depends in some degree on renal failure. On the other hand, there may be in gout some peculiarity of the purin bodies which renders them difficult of excretion. In that case we may yet meet with gout and leukaemia in the presence of healthy kidneys, and the present patient's condition will then be held to be merely accidental. Without attaching too much weight to an isolated case, it is still significant that no one appears to have met with gout or uratosis combined with leukaemia when the kidneys were healthy.

For the careful blood enumerations I am indebted to Messrs. Fred. Leighton and Short.

LOCAL ANAESTHESIA BY NOVOCAIN.

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EVERY year the sphere of local anaesthesia is widening. Its use is no longer confined to minor surgery, and general anaesthesia has ceased to be an essential for major operations. Recently great advances have been made in the technique of injection of local anaesthetics; much has been done to ensure their purity, and we have learned the value of combining them with drugs which have a vaso-constrictor influence. Chemists are constantly endeavouring to produce a substance which is anaesthetic but yet non-irritant and non-toxic. Cocaine is an excellent anaesthetic, but it is not safe. There is always an element of uncertainty in its action; with some patients it produces a condition of painful or pleasurable excitement, with others a dangerous degree of respiratory and cardiac depression. Moreover, it often causes destructive changes in the tissues at the seat of injection. Eucaine is more constant in its action, but it is much less potent. Stovaine was an advance on the older anaesthetics, but it, also, is not without general toxic and local irritant action.

In dentistry the use of drugs which are liable to exert a general toxic action is greatly to be deprecated. It is also most undesirable to introduce irritating substances into the gums for the purpose of ensuring painless extraction, for the mouth is a very septic cavity and any lowering of the tissue vitality may determine sloughing. Twenty years' experience did not give me either certainty or confidence in the older local anaesthetics, for failures sometimes occurred in a most unexpected and disconcerting fashion. Since December 5th, 1906, I have made extensive use of a new synthetic compound called novocain, a combination of an ethyl ester of para-amido-benzoyl with the active principle of suprarenal extract.

I first administered it to a clergyman who preferred not to take nitrous oxide gas, and who wished me to use cocaine. As I thought he was not a suitable patient for that drug I explained to him that I had a new substance which I had been told was safer and more efficacious. The tooth was a left superior wisdom, very much broken down, and quite firm; as the position was not an easy one, I had to use the mouth mirror to enable me accurately to insert the needle. The patient was delighted with the result, and declared the pain of extraction was very slight. Considering the difficulty of the injection, I was encouraged to proceed to an exhaustive trial of the drug. I did not specially select my cases. They were all either unsuited or unwilling for general anaesthesia. The following are a few of my most interesting experiences:

CASE XIV.

A medical man with a fractured left superior first molar declined "gas," and I am very glad he did, for I could not have extracted his tooth within the time one gets with a "gas" anaesthesia. I believe this was the most difficult extraction I have ever done. The crown broke off level with the gum in such a way that the palatine blade had to impinge on an inclined plane, with the result that I could not move the tooth outwards owing to slipping of the inner blade. I tried several times; between each attempt I expressed my regret, while he smilingly reassured me that he felt nothing. Eventually the roots separated, but even then I had difficulty owing to their curves. Afterwards he said he had felt nothing till the last root was being extracted. One injection of ½ grain had ensured complete anaesthesia for almost twenty minutes.

CASE XII.

This patient was very neurotic and her teeth were very firmly fixed. In 1894, when she first came under my care, the futility of "gas" anaesthesia in such cases was distressingly borne in upon me. I subsequently removed the remaining teeth then requiring extraction under ether, but the patient was considerably collapsed for some hours after the anaesthetic. In February, 1907, I painlessly extracted at three sittings all her superior premolars, canines, and incisors with the aid of novocain. There were no untoward after-effects whatsoever.

CASE XXI.

This patient was a surgeon who, in the hard palate, had, arising from a first left superior molar, an abscess which was extremely sensitive to the slightest touch. A 10 per cent. solution of novocain was kept for six minutes in apposition to the surface of the abscess, which was then incised. There was absolutely no pain; the patient said the sensation of the knife cutting the abscess wall was distinctly pleasant. This case indicates the value of novocain for other than purely dental operations.

CASE XLII.

This patient was a medical man, whose left superior wisdom tooth presented the following condition: In the buccal roots the nerve was alive and hypersensitive; in the palatal root the nerve was dead and septic. I used novocain pressure anaesthesia, and painlessly drilled out the live nerve. Thus I was able painlessly to perform one of the most agonizing operations in dentistry. Sometimes I have applied novocain by pressure to live nerves and then immediately removed them without pain, but, owing to the position of the cavity, the application may be very difficult, and the procedure is not always possible.

As I gained experience my initial diffidence in the use of the drug gave way to complete confidence. Standing before a mirror, I have injected novocain into my own gum and painlessly removed a firm and offending right inferior incisor.

As my further experience of this drug has been consistently satisfactory, and as most of my 70 cases, mainly uncomplicated extractions, were uniformly successful, I need not enter into their details; but I had two very instructive failures:

Case xvii

This patient had an alveolar abscess in connexion with a somewhat loose tooth. I could not inject much of the fluid without causing considerable discomfort. This was an early case. I have since improved my technique. Under similar circumstances, I would first anaesthetize the gum by applying to it a 10 per cent. solution of novocain before I began the injection.

Case viii.

This patient, aged about 55, had always hitherto had nitrous oxide gas. I injected novocain around the left inferior first molar, which I then extracted absolutely without pain. Two days later he wished to have a left inferior second bicuspid root removed in the same way. I injected novocain into the gum around it. The tissues were loose from inflammatory changes, and fluid penetrated easily and some escaped by the adjacent empty socket. The patient wished he had had "gas."

I had previously observed that on injection with novocain the gum became blanched and of a cheesy consistency. Neither of these changes were observed in Case viii. I consider them to be the index of successful application, for they show that the drug has concentrated its action at the site of injection, and has not become diffused through the tissues or absorbed into the lymphatics. I would never now attempt an extraction in absence of blanching of the gum.

In no case in which I have used novocain have I had the slightest anxiety about the condition of the patient; there has been no shock, fainting, perspiration, nor collapse, and the patients have felt no after ill-effects. Where possible I advise the patients to take food before the extraction, because I think that after food they are in a condition better able to resist shock. From my experience, I am of opinion that where novocain fails to anaesthetize a part it is owing to imperfect application of the drug. When the gum is swollen from inflammatory exudation, it is most difficult to get the blanching and cheese-like consistency. The same difficulty may be experienced where the gum over the alveolus is unusually thin. My procedure is as follows:

1. I give the patient half a pint of warm carbolic lotion with which vigorously to wash out the mouth so as to reduce its septicity.

2. The all-metal hypodermic syringe (with vulcanized "vela" rubber packing), needle, glass measure, glass mortar, glass mixer, are all placed in hot water to raise the temperature to that of the patient.

3. If the patient is neurotic, a swab containing a 5 per cent. solution of novocain is put on the gum for five minutes, so as to render the latter insensitive to the insertion of the needle.

4. One or two novocain suprarenin tablets, each containing ½ grain of novocain, are dissolved in 33 minims of hot water to make either a 1 or 2 per cent. solution respectively.

5. Hot water is passed through the syringe and needle, the novocain solution is drawn up into the syringe, and the syringe inverted to allow the air bubbles to rise into the needle, from which they are easily displaced by pressing the piston.

6. If an upper tooth, for example, is to be extracted, the needle is inserted into the gum ¼ in. above the cervical margin, and a drop or two of the novocain solution is forced in; I keep the needle in position a few seconds to allow the anaesthetic to act before forcing any more fluid into the tissue. After forcing in the solution the needle should not be immediately removed, because if this is done then, owing to the pressure being greater in the gum than outside, some of the fluid will escape. If the position selected is a good one (between the roots is better than over them) the gum will gradually blanch and become the consistency of cheese. The needle should then be removed and again inserted just inside the periphery of the blanching and so on, till the whole of the gum on both sides of the tooth is anaesthetized. I do not hurry the injection, but take about three to five minutes for the process. The tooth can then be extracted. I have so far never used more than three tablets (1 grain novocain) at one sitting.

I use an all-metal syringe with a solid piston of uniform diameter throughout its length. It is called the Imperial syringe, and can be obtained at the dépôts. The packing should be vulcanized "vela" rubber, not leather. The needles are boiled immediately after using, and kept in absolute alcohol till again required. They are screwed on to the nozzle of the syringe with a wrench, so that the junction is very tight; by this means fluid cannot escape at the junction of needle and syringe, as it usually does in most of the other syringes. For painless injection a Schimmel needle is almost a necessity. It is as superior to the ordinary hypodermic needle as the new tooth forceps are to the old. I make up my solutions fresh for each patient; there is no safety in a stock solution.

In conclusion I might summarize the advantages of novocain as follows:

1. It produces a perfect local anaesthesia.
2. The duration of the anaesthesia is longer than that of cocaine.
3. Even in strong solutions it does not irritate the tissues.
4. It is at least equal to cocaine in anaesthetic power.
5. It is many times less toxic than cocaine, in comparison with which it can be used in larger doses with perfect safety.
6. It is very constant in its action.
7. It does not produce shock, cardiac or respiratory failure, after-pain, nor sloughing of the gum.
8. It can be given immediately after food.
9. It is not a secret preparation, but a substance of known and definite chemical composition.
10. It is cheaper than most proprietary anaesthetic preparations.

I do not say that novocain should always be used in preference to "gas"—in children and in hypersensitive patients "gas" has obvious advantages; but on the other hand where patients are afraid of "gas," where from the physical condition of the patient or from any other cause "gas" is contraindicated, or where the extraction is likely to be prolonged, and the solution can be perfectly injected, I think that the safest and most perfect of known local anaesthetics should be used, and that drug, in my opinion, is novocain.

REGENERATION OF NERVES WITH REGARD TO THE SURGICAL TREATMENT OF CERTAIN PARALYSES.

By C. J. BOND, F.R.C.S.,

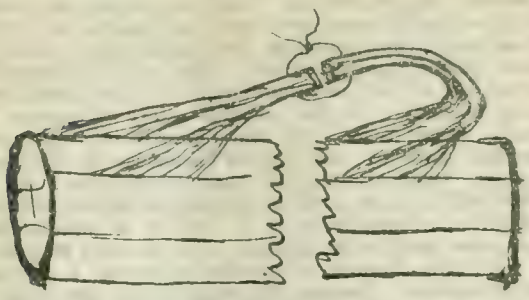
Surgeon to the Leicester Infirmary.

I have read with much interest the report in the British Medical Journal of April 27th by Mr. Basil Kilvington on an investigation on the regeneration of nerves with regard to the surgical treatment of certain paralyses, in which, after describing experiments on animals, he refers to the surgical possibilities of intraspinal nerve crossing, and records an attempt to carry out intraspinal anastomosis in the human subject, which unfortunately, owing to the presence of cicatricial tissue, had to be abandoned.

Mr. Kilvington's observations, founded on experimental work, appear to me to be a valuable attempt to open up a new line of treatment, and one affording further possibilities of benefit in cases of a hitherto peculiarly hopeless character; and in connexion with this subject I wish to record the following facts:

On March 29th, 1904, I performed the following operation on a patient at the Leicester Infirmary. A man, aged 46, had been struck in the back by the buffer of an engine twenty days previously, and sustained a fracture dislocation of the lowest dorsal and first lumbar vertebræ, with crushing of the cord and complete paraplegia. Laminectomy was performed, the neural arches of the last two dorsal and first two lumbar vertebræ being removed, and the dura mater laid freely open. Finding that (as was expected) the cord was completely divided, and acting on a previously-considered plan, I divided the last dorsal nerve roots intact above the crush on the right side as low down as possible before their exit through the theca, and also similarly divided the first lumbar nerve roots intact below the disorganized portion of cord, also within the theca canal, and turning these latter upwards I united the cut

proximal ends to the out proximal ends of the dorsal nerve-roots previously divided, thus—



A corresponding junction was also made in the left side. It was hoped that by so doing a path might be provided for the possible transference of nerve impulses—afferent, efferent, and trophic—across the gap caused by the crushed portion of the cord.

The patient recovered from the operation and the wound healed. He remained in the hospital until June 24th, when he left for his home, where he died seven weeks later, and unfortunately no *post-mortem* examination was obtained. During the three months of his stay in the hospital there was no evidence of any return of voluntary movement, though there was a transitory alteration in the level of the anaesthetic area. The bladder condition remained as before.

I have not previously recorded this case as I felt that some preliminary experimental observations on animals were necessary. These Mr. Kilvington has now undertaken.

I am of course aware that the operation performed by him on dogs was undertaken with the object of establishing a direct connexion between the cord above the level of the sacral nerves and the peripheral nerves innervating the bladder and rectum, and that successful innervation of these viscera was thus brought about. The question arises whether, in addition to the possibility of successfully re-establishing this direct innervation of viscera in the human subject, it may not be possible by nerve anastomosis to provide a by-pass for the transference of nerve currents from the portion of cord above the crush to that below and vice versa. The question of the position of the nerve section and anastomosis in reference to the posterior root ganglion is, as Mr. Kilvington points out, very important. In my case the nerves were joined within the thecal canal.

MORPHINOMANIA TREATED SUCCESSFULLY WITH ATROPINE AND STRYCHNINE.*

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DURING the past year I have been treating a case of morphine habit of over thirty years' standing, and as I believe that he is now completely cured I think that a description of the case and the treatment pursued may interest you.

He made his first acquaintance with the drug through joining an opium-smoking club in London, and soon began to appreciate the brilliancy and activity of thought that it caused, and then to use it systematically to further him in business. In about four years the craving had become established. He made many voluntary efforts to free himself from the habit, but without success; on one occasion he placed himself in the hands of a medical man, who relieved the craving to a certain extent, but in about a year and a half he broke down again. He also became an alcoholic in his endeavours to stave off the stage of depression, but during the past few years he found that alcohol had not the desired effect, often making him even more depressed, and so he has taken less than formerly.

His usual allowance of opium latterly had been two wineglassfuls of laudanum in the day, and when he had to get on without it he felt intensely irritable, restless, and miserable. He slept wretchedly, he says hardly an hour in the twenty-four, and that little disturbed by flashes of light, sounds of bells, and by people coming up the stairs and into his room, and, when he was very bad, close up to his bed, causing him intense terror.

His appearance was not typical; instead of being emaciated and having a pale, pasty complexion and dilated pupils, he was stout, indeed somewhat corpulent, had a high rather congested colour, and his pupils were contracted though not to pin points. His expression was wild and staring, his gait shuffling and uncertain, and his manner restless; intention tremors were present in writing and other fine movements, and he was subject to short lapses of memory. His disregard for his appearance and dress was like that of the chronic drunkard, and he was hardly able to earn sufficient to keep him from want. When I first saw him he had been without opium for a fortnight, he was intensely miserable and depressed, had been practically without sleep for some nights, and had intense headache. He told me that if I could not give him relief from his misery there would be nothing for him but to do away with himself.

What books I have been able to consult on the subject agree that the essentials of treatment are complete rest; careful dieting, thorough supervision and gradual withdrawal of the opium.

In this case none of these were available; he was in lodgings where I could not exercise any control or supervision, he had to work for his scanty living, and, as I found out a couple of months later, was often in want of the bare necessaries of life during treatment.

The drugs recommended are many and varied and of widely-differing physiological action, such as strychnine, cannabis indica, valerian, caffeine, bromides, sodium phosphate, atropine, and coal-tar derivatives. I had read in Dr. McBride's article on the treatment of alcoholism, published in the BRITISH MEDICAL JOURNAL in April, 1904, that he considered the hypodermic administration of atropine and strychnine to be beneficial in the treatment of morphinomania as well as of alcoholism, and, as it had proved successful in my hands in the treatment of alcoholics, I determined to give it a trial in this case.

I began with atropine sulphate $\frac{1}{100}$ grain and strychnine nitrate $\frac{1}{60}$ grain three times a day, increasing as rapidly as he would bear, till on the eighth day he got atropine sulphate $\frac{1}{50}$ grain and strychnine nitrate $\frac{1}{30}$ grain, but I had to reduce the atropine to $\frac{1}{60}$ grain in a short time. I also prescribed a cinchona mixture, but he did not take this regularly or for long.

The treatment benefited him immediately, and the first thing he noticed was relief from headache and improvement in his rest at night. The effect here was curious and interesting; he had been disturbed and frightened by sounds of bells and by people entering the room and coming close to him. After the first day the bells sounded fainter and the people only came to his door; the next night he hardly noticed the bells and the people seemed to be on the stairs, the next night in the hall, and then they ceased to trouble him. By the fifth day he felt a distaste for alcohol and was distinctly less miserable, and by the fourteenth day had not the slightest desire for opium, was quite hopeful, and beginning to take some interest in his appearance; his gait also had improved; he had lost the wild, staring expression, and was getting two to three hours' refreshing sleep at night.

It is recommended that opium should be withdrawn gradually in order to avoid as far as possible the usual distressing attacks of vomiting and diarrhoea. In this case it had been withdrawn suddenly and completely, and on the fourth day of treatment he complained of nausea and vomiting, and the next day of diarrhoea. These caused him great suffering as time went on; he was sometimes disturbed eighteen and twenty times during the night, and the vomiting was so violent as to cause haemorrhage. His weight diminished rapidly, and at one time he became so weak that I was somewhat alarmed at his condition.

Morphinomaniacs are said to bear atropine better than alcoholics, but I did not find it so in this case. Early in June I reduced the dose of atropine, and on June 20th stopped it altogether, but kept up full doses of strychnine for some time longer on account of his weak condition. By the end of June he was putting on weight again, his memory was improving rapidly, he slept soundly for about four hours each night (nearly his normal amount), had lost all abnormal depression, and took some pride in

* Read before the South-Eastern of Ireland Branch of the British Medical Association.

his dress. Since then he has improved steadily in every respect, he has regained what he lost in weight, notwithstanding attacks of diarrhoea and vomiting when the weather is cold or he is worried; he can do a full day's work without distress, is neat and clean in appearance, and has had no return of craving for opium or for alcohol.

It seems to me that this case illustrates how very strong an effect atropine has as an antidote to opium. Every circumstance was against the success of treatment except the patient's own earnest desire to be cured. I have seen him frequently since treatment was completed, and feel satisfied that so far it has been perfectly successful, and promises to prove permanently so.

THE PHYSIOLOGICAL ACTION OF WHISKY ON THE CIRCULATION.

BY

F. J. CHARTERIS, M.B., and E. P. CATHCART, M.D.

(From the Pharmacological Laboratory, Glasgow University.)

THE action of alcohol upon the circulation, and more especially the influence which it exerts in diseased conditions has long been a subject of dispute. Briefly it may be stated that two views have been advanced: (1) That alcohol in suitable doses acts as a stimulant; and (2) that the action of alcohol is always depressant. The supporters of both views agree on one point, namely, that to a certain extent alcohol is burnt up in the body tissues, and thus to a limited degree acts as a food.

Although these views are still under dispute, it seems from the careful investigations of recent observers that the statement regarding the depressant action of alcohol upon the highest nerve centres is probably correct.

As regards the effect of alcohol in medicinal doses on the blood pressure, it is generally held that in healthy individuals there is practically no action. The elaborate investigations of Cabot upon a large number of patients suffering from enteric fever show that any influence which alcohol exerts in this disease upon the circulation, respiration, and excretion of urea is of a very transitory nature The same point is brought out in the recent work of Martin Kochmann.[1] It is not meant, however, that alcohol has no action upon the circulation, as witness, for example, the cutaneous flushing which it produces. Still the general pressure is not lowered, and therefore there must be another effect produced in some other vascular region. To account for this apparent slight action, Meltzer has suggested that probably a constricting influence is exerted on the vessels in the area supplied by the splanchnic nerves—that is, within the abdominal cavity. Alcohol, according to this observer, does good in so far as it leads to a redistribution of the blood in diseased conditions.

Very little is known about the action of the various wines and spirits commonly used in practice as compared with that of pure alcohol, with which the pharmacological experiments mentioned above have been carried out. In this country the favourite alcoholic stimulants are whisky, brandy, port wine, and champagne, and of these probably whisky is most frequently employed. It is, therefore, of interest to know (1) what is the nature of its action, and (2) whether it is a generic action, or whether it depends on the character of the whisky employed. A recent law case in England has shown that, technically, there is a difficulty in determining what constitutes whisky. In Scotland it is popularly understood that pot still whisky is the true product, and that patent still products are not genuine whiskies. The pot still whisky is more complex in its character, and contains secondary ethereal products which may conceivably alter the alcoholic action; whereas the patent still product is a much purer substance, and is much more cheaply produced. Our attention was drawn to this question by the somewhat irrelevant evidence adduced to show that there was a distinct difference in action between the two products. One gentleman (not a pharmacologist) stated in evidence that a difference in action could be demonstrated on animals. He said that a pot monkey, when made drunk with pot still whisky, "behaved like a gentleman, whereas, when intoxicated with patent still whisky, "its conduct was that of a beast."

A comparative investigation into the action of pot and patent still whiskies seemed the most likely method of determining any difference. With this object we tested upon three healthy men, practically abstainers, the effect produced upon the circulation by corresponding doses of absolute alcohol and of whisky. The action was studied upon the rate of the pulse and upon the peripheral tension as measured in the brachial artery by means of Martin's modification of the Riva-Rocci sphygmomanometer and in the digital arteries by Gärtner's tonometer. The dose given corresponded to 1 oz. of absolute alcohol, and sufficient water was added to make the dilution of alcohol 1 in 4. While no special importance was paid to the mental effect, we may state that as a rule this amount of alcohol produced a distinct sedative action. During the experiment the subject remained seated in a chair and was allowed neither to speak nor move. The investigations were carried out at different periods of the day, and at varying intervals after food. A sufficient number of blank experiments was done to show that under similar conditions without alcohol the alterations in pulse and pressure were almost *nil*. Thus in a blank experiment upon one of the subjects four observations showed that in 25 minutes the pulse-rate only varied two or three beats whilst the pressure in the digital arteries varied to the extent of only a decimal point, ranging between 4.0 and 4.1 as estimated by Gärtner's instrument. The readings of another blank experiment on the same man, in which the pressure was estimated by the Riva-Rocci instrument, were:

Time.	Pressure.	Pulse.
7.16	105	76
7.23	105	78
7.27	106	78
7.37	106	75
7.40	106	77
7.50	105	75

Our control experiments demonstrate that the pulse shows slightly more variation than the blood pressure, but such alterations are very trifling.

The normal variation having been fixed we proceeded to test the effects of drinking 2 oz. of whisky mixed with 2 oz. of water. A typical experiment is reproduced for each form of whisky, all three observations being made upon the same man.

The results obtained on the other two healthy subjects varied only very slightly from those shown in the accompanying table (page 1175). From the three series of observations (several of which were duplicated) composite charts were drawn out for each form of alcohol.

Whisky S has very little action on the circulatory system. The pulse-rate rises slowly from the commencement, then slowly sinks to the former level, or perhaps a little higher. The pressure is somewhat reduced. This whisky has perhaps a greater soporific action than either A or C.

Whisky A in all three individuals caused a slight increase in the pulse-rate within the first ten minutes, followed by a fall to normal or slightly below normal. The blood pressure is seen to correspond with the pulse. When the pulse-rate increases the pressure rises, and vice versa.

Whisky C does not bring about an increase in the pulse-rate. In all three men the pulse rate is not more frequent, but in all three there is a slight rise in the pressure, as is brought out in the composite chart. In only one instance was a transitory rise of pulse-rate noted, where it was probably due to direct irritation, as in this instance the swallowing of the alcohol brought on a fit of coughing.

Absolute alcohol produces a very constant action upon all three men. No well-marked preliminary increase of pulse is noted. The pulse falls in rate by a few beats, and with this there is a slight reduction in pressure.

In general terms it may be stated that the effect upon the pulse and pressure of all three alcoholic preparations, in the above dosage, is very slight, and that after the first ten minutes practically no difference can be detected

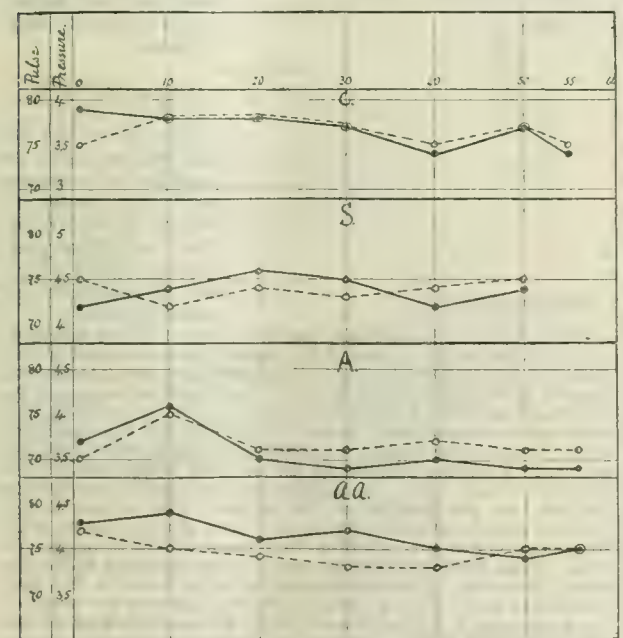
Whisky S.			Whisky A.			Whisky C.			Absolute Alcohol.		
Time.	Pressure.	Pulse.	Time.	Pressure.	Pulse.	Time.	Pressure.	Pulse.	Time.	Pressure.	Pulse.
12 50	105	68	11.48	92	56	4.50	—	63	4 20	106	80
12 55	104	68	11 55	92	56	4.53	102	—	4.26	104	78
1.0	104	67	11.58	92	56	4.55	—	64	4.35	104	79
1.2	2 oz. + 2 oz. water		12.2	2 oz. + 2 oz. water		4.58	102	—	4.36	1 oz. + 3 oz. water.	
1.5	88	63	12.6	88	62	5.0	2 oz. + 2 oz. water		4.42	104	80
1.10	102	67	12 12	94	60	5.4	106	65	4.45	104	80
1.22 *	106	68	12 19	94	60	5.12	104	60	4.53	102	76
1.25	104	67	12.25	92	58	5.20	100	58	5.0	100	75
1.32	102	62	12.33	94	62†	5.27	102	60	5.7	98	76
1.39	104	65	12.40	92	65	5.35	102	60	5.12	102	78
1.45	104	64	12.46	92	58	5.42	104	58	5.23	100	76
1.50	103	63	12 54	94	57	5.47	102	58	5.29	100	74
—	—	—	—	—	—	5.57	102	58	5.42	102	73
—	—	—	—	—	—	6.3	102	62	—	—	—

* Sleepy. † Spoke.

The whiskies tested were guaranteed samples of their particular brands. Whisky S was a pure malt pot-still whisky. Whisky A was a pure uncoloured patent-still whisky. Whisky C was also a pure patent-still product, but coloured. The two patent-still whiskies were amongst those which are most in demand. The alcoholic content of these various whiskies was respectively: S, 47 per cent. by volume; A, 58 per cent. by volume; C, 48 per cent. by volume; absolute alcohol, 95·99 per cent. For purposes of experiment we regarded, from these figures, 2 oz. of whisky as equal to 1 oz. of absolute alcohol.

between the action of absolute alcohol and the whiskies examined. In other words, the action of whisky on the pulse and pressure depends upon its alcoholic content and not upon any special body distilled over either in the process employed in the manufacture of pot-still whisky or in that used in the preparation of the patent-still whisky.

We performed a limited number of experiments of a similar comparative type on patients suffering from pneumonia, the classical instance of a disease in which alcohol



Composite charts for whiskies C.S.A and absolute alcohol. Time in minutes; pressure taken by Gärtner's tonometer; pulse —— pressure - - - -

is exhibited for its stimulating action. A recent German writer[4] has emphasized the fact that most clinicians in Germany who use the drug for its stimulating action have no clear conception of the guiding principles underlying its use. Probably no better rule is available than the old dictum that so long as alcohol reduces the pulse-rate, steadies the heart, and increases its tone, the drug is doing good. Incidentally we may point out that in cases of great cardiac embarrassment we did not find any reduction in pressure. Our observations in pneumonia, as far as they go, under these conditions would seem to point rather to a slight increase in length of action of alcohol than to any essential difference in effect from that produced on the normal circulatory system.

Finally, an attempt was made by intravenous injection in rabbits to detect any difference in action of these various alcohols on the blood pressure measured at the carotid artery. Here, again, no distinct difference could be observed.

In conclusion, we wish to offer Dr. R. May our best thanks for his assistance in this investigation.

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CALCIUM SALTS IN THE TREATMENT OF CERTAIN TYPES OF PNEUMONIA.

BY J. DOUGLAS CREE, M.D.,
HAMPSTEAD.

As we appear to be in danger of a boom in calcium salts in the treatment of pneumonia, and as, in my opinion, the withholding of them in certain types of cases may be quite as important as their administration in other types, I venture to give a short account of two cases of pneumonia treated by me in April, 1903. The types of the two cases, or perhaps it would be more accurate to say, the two soils in which the disease grew, were in marked contrast.

CASE I.—*The Haemorrhagic Type.*

A married woman, aged 38, of stout build, had pneumonia of the right base, and on the evening of the fourth day of the disease her chances of recovery appeared to be small. She could only breathe when propped up high with pillows; respirations were shallow and 42 to the minute; she was cyanosed; had an almost incessant cough and was expectorating a large quantity of watery, haemorrhagic sputum (upwards of one pint in 24 hours); she was vomiting after medicine and food; her temperature was 102.4°; her pulse was small, of low tension and 122; her urine contained albumen; she was obviously becoming weaker.

The drugs that had been administered to her were ammonia, digitalis, strychnine, and brandy; her diet had consisted of milk, beef-tea, meat extracts, etc.

The picture that the woman presented to my mind was that of one drowning in her own excretions rather than that of one dying from a toxaemia. She was of the hydraemic type, and I considered her condition to be due to an insufficiency in the coagulability of the blood. Reasoning upon these lines, I observed the effect of the next dose of brandy upon her, when, as I noticed an increased difficulty in respiration and an increase of the sputum shortly after its administration, I felt confirmed in my opinion, and altered my previous treatment. The diet was restricted to milk, at first by the rectum, and afterwards by the mouth. The brandy and the other drugs were stopped, and she was given 20 grains of calcium

chloride in water by the mouth. The calcium chloride was retained, and was continued in 10 grain doses each hour for the first twelve hours, and then reduced to every four hours. Her condition next day (twelve hours after the first dose of calcium chloride) showed considerable improvement. The frequency of pulse and respirations was about the same, 126 and 40, but she had lost the cyanosis and was breathing easier and deeper, and the tension of the pulse had improved; vomiting had ceased, and the temperature was 101°. The greatest improvement was in the sputum. Its quantity was reduced by about one-half. It was thicker, and its bright haemorrhagic appearance had become a dull rusty tint.

After this the disease ran a normal course; the temperature never went above 101°, and the case terminated by a not very well-marked crisis beginning in the evening of the seventh day.

Case II.—*The Dry Type.*

A tall, slight, unmarried woman, aged 25, a *masseuse* by occupation, had double basic pneumonia commencing in the left lung and followed a few days afterwards by involvement of the right lung. Through the whole attack the disease ran a dry course. The physical signs were those of consolidation, the percussion note being markedly board-like in character until resolution took place by way of the lymphatics. There was practically no cough, and there was no sputum. The general condition of the woman was good throughout the attack; her temperature never went above 101°; she had no difficulty in respiration, its highest recorded rate was 28; the highest pulse-rate was 84. It was not until the fourth day, when the right lobe became involved, that, owing to the second cardiac sound becoming accentuated, ammonia, strychnine, and brandy were administered.

In this case, fearing thrombosis, the aim of my treatment was to decrease, or at least prevent any further increase in, the coagulability of the blood. For diet she was given soups, meat extracts, jellies, bread and butter, tea; she was allowed fruit, and was encouraged to drink fresh lemon juice in water to quench thirst. Milk in any form was denied. Medicinally, except for the ammonia, strychnine, and brandy after the fourth day, she had nothing but potassium citrate.

There was a crisis on the eighth day, the temperature dropping to 99·2°, where it remained for a couple more days, owing, no doubt, to a mild attack of follicular tonsillitis which followed the pneumonia.

In Case I I consider the benefit of the calcium chloride was due to its action upon the blood. By increasing its coagulability, the serous haemorrhage was lessened, and more space thereby given for respiration and the elimination of CO_2. The reduced temperature and the improved blood tension were due, in my opinion, to the same cause. Beyond these effects the calcium salt had no influence upon the course of the pneumonia itself, which ran on to its natural termination.

In Case II the woman did not get any thrombosis, but whether she would have done so if treated with a milk diet and calcium salts, of course it is impossible to say. Anyhow I saw no reason for the administration of calcium, and one reason against it.

There were two other points of interest in the above cases. Case I had had several attacks of urticaria, and Case II had been in the habit for the three or four years preceding her illness of drinking a pint of milk every day. This latter fact does not conform to the opinion that the long continued administration of calcium delays the coagulability of the blood. My regret is that I made no exact experiments as to the coagulability of the blood in the two cases at the time.

Judging from the light of further experience, I think that until the time arrives when we shall be able to administer a suitable anti-trypsine, our treatment of pneumonia must remain symptomatic; its object being, if one may so express it, to keep the patients alive until Nature has cured the disease. In the symptomatic treatment of pneumonia, calcium is a valuable drug in the haemorrhagic type of cases; but in the dry type of cases personally I should fear to use it, and, as it is in this type we more often fear death from toxaemia, it is, in my opinion, more rational to prescribe citrate of sodium or potassium, owing to their power of increasing the alkalinity as well as the fluidity of the blood. In the type of cases where heart failure is feared, unless there is a special call for calcium, I consider that there are other drugs of more value.

NEW METHOD OF ISOLATING THE BACILLUS TYPHOSUS FROM INFECTED WATER.

By W. JAMES WILSON, B.A., M.B., D.P.H. Camb.,

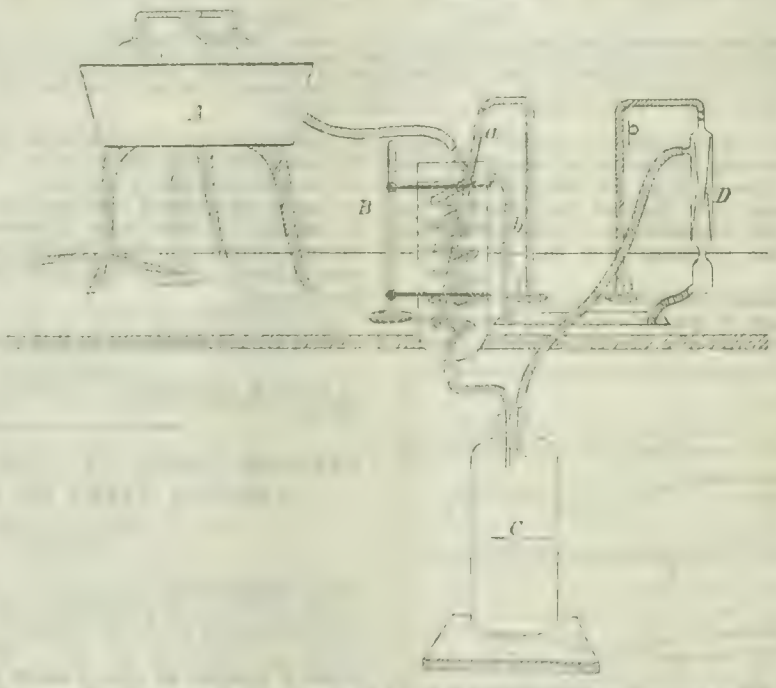
RIDDELL DEMONSTRATOR IN PATHOLOGY AND BACTERIOLOGY; JOINT LECTURER ON SANITARY SCIENCE QUEEN'S COLLEGE, BELFAST.

(From the Pathological Laboratory, Queen's College, Belfast.)

A full account of the methods used to isolate the *Bacillus typhosus* from infected water is given in a paper by H. S. Willson in the *Journal of Hygiene*, October, 1905. Therefore I do not propose to compare them systematically with the method about to be described; suffice it to say that most of them have been tried in this laboratory, and have not given satisfactory results. This criticism applies especially to the various precipitation methods, Hoffmann and Ficker's enrichment method being far superior to any of them.

Apparatus for Evaporation.

The principle of the method here in question is to evaporate water under reduced pressure. The accompanying sketch shows how the evaporation is accomplished.



A is a water bath maintained at 37° to 40° C. This temperature can be easily obtained by regulating the height of the flame of the Bunsen burner. No special gas regulator is required, though Reichert's may be used with advantage. In the bath are two Winchester quart bottles containing the water to be examined. Rubber corks fit into the necks of these bottles and should be so shaped that they will not be driven in when the pressure in the interior of the bottle is reduced. These corks are perforated by glass tubes which project into the interior of the bottles. The surface of the water should be at least 4 in. from the end of these tubes, so as to prevent the water bubbling into them when it begins to boil. These tubes are bent at an angle immediately above the top of the corks. The advantage of an acute bend is that the condensed water finds a suitable gradient towards the worm of the condenser B, with which the tubes are connected by means of a T shaped glass junction and rubber pressure tubing. Through the glass vessel surrounding the worm there is a continual flow of cold water, entering by the pipe *a* and leaving by the pipe *b*. The worm is connected with a large bottle C, which is also connected with a water filter pump D, which is secured to a pipe *p* coming from the main by means of stout tubing bruised with cloth, cord and wire. By this means a partial vacuum is obtained in the bottles and the water readily boils at 37° C. The vapour readily condenses and the distillate is collected in C. It requires twenty one to twenty two hours to evaporate a litre of water.

After starting the process it needs no further attention till the end is almost reached, when one should be at hand to stop it at the proper moment.

One filter pump can only deal efficiently with one or two bottles, if more are connected up with it the distillation process is proportionately slowed.

It has been found that when the *Bacillus typhosus* is introduced into the bottles it is not destroyed by this treatment, but that multiplication occurs, and that this multiplication can be stimulated still further by the addition of 10 c.cm. of broth to the litre of water.

The residual water is put on Conradi-Drigalski plates (not adding more than ½ c.cm. to each plate), and smeared over them with a T-shaped glass rod. The more Conradi-Drigalski plates used and the more of the residual water examined, the better is the chance of finding the typhoid bacillus. However, such an amount of multiplication occurs that if the typhoid bacillus was present it will be found in 1 to 2 c.cm. of the residue.

The more or less anaërobic conditions prevailing and the high temperature favour the development of the typhoid bacillus, and are inhibitory to many water organisms.

After the water has been spread over the plates they are dried at 37° C. in the incubator, the covers put on, and the plates are inverted. It is best to stop the evaporation when 20 c.cm. of water remain in the bottle. If the evaporation is carried further the precipitated flocculent matter and the high concentration of salts may interfere with the growth of the colonies on the Conradi-Drigalski plates. I may add, however that after evaporating to dryness, and then adding a few c.cm. of water to the bottle, and shaking and then transferring to Conradi-Drigalski plates, colonies of typhoid bacilli have developed.

Method of Ascertaining the Number of Bacilli added to the Water.

To judge of the efficiency of the method it is necessary to know the number of bacilli added to the bottles. For this purpose I have been in the habit of adding, by means of a fine capillary pipette, two drops of a 24-hours broth culture of the *Bacillus typhosus* to 100 c.cm. of sterile water in a flask; then, after shaking, taking 1 c.cm. of this and adding it to a second 100 c.cm.; then 1 c.cm. of this is added to a third 100 c.cm. After shaking, 1 c.cm. is taken from the last dilution and distributed over four Conradi-Drigalski plates, and at the same time 1 c.cm. is added to 1 litre of water. The number of colonies that develop on the plates gives approximately the number of bacilli added to the water.

Experiment.

To 1 litre of sterile tap water were added 10 c.cm. broth and seventeen typhoid bacilli. The evaporation was completed in twenty-two hours, 28 c.cm. being left in the bottle; 1 c.cm. of this residue was distributed over four Conradi-Drigalski plates. Forty-eight colonies developed on these plates. Therefore $28 \times 48 = 1344$ = number of bacilli in bottle at end of process. And as there were seventeen bacilli present at the commencement there had been thus an 80-fold increase. The bacilli were proved to be typhoid bacilli by cultural and agglutination tests.

In this experiment sterile water was used, so that other organisms giving blue colonies on the Conradi-Drigalski plates might not be counted as typhoid. In other experiments ordinary tap water was used with equally satisfactory results. I have recovered the typhoid bacilli where as few as two have been added to a litre of water. The salts present in ordinary water do not, even in concentrated solution, destroy the typhoid bacillus.

Belfast tap water is a moderately hard water. A chemical examination gave the following result:

Free ammonia	0·001	part per 100,000
Albuminoid ammonia	0·020	,,
Total solids	15	parts per 100,000
Total hardness	7	,,
Chlorine	1 to 3	,,

From some preliminary experiments it seems that the presence of *B. coli communis* does not interfere with the usefulness of the method; but it can especially be recommended where an attempt is made to isolate the typhoid bacillus from a suspected water which, according to ordinary standards, might be deemed free from pollution.

Finally, my best thanks are due to Professor Symmers for the interest he has taken in the method, and to Dr. Rankin for sketching the apparatus.

UNDER the will of the late Mr. William Guiver Wright, of Paddington, which has now been proved, St. Mary's Hospital, Paddington, receives a sum of £200.

THE SCIENCE COMMITTEE

OF THE

British Medical Association.

REPORT CI.

THE STRUCTURE AND SECRETION OF THE PARATHYROID GLANDS IN MAN.*

By DAVID FORSYTH, M.D., M.R.C.P.,

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(From the Physiological Laboratory, Guy's Hospital, and the Pathological Laboratory, Charing Cross Hospital.)

[The expenses of this Research were defrayed in part by a grant by the Science Committee of the British Medical Association, in part by a grant from the Royal Society to Dr. Pembrey.]

THE histology of the parathyroid glands has already received attention from previous observers. In his original paper, Sandström[1] described it with detail and accuracy as far as he went. After pointing out how varied were the appearances presented by sections of the glands, he proceeded to recognise three main types. In the first the cells were arranged in a continuous mass; in the second the structure was more open, consisting of a reticulum of cells, the meshes of which were occupied by blood vessels; while the last type showed an arrangement of cells to form small vesicles, in some of which were drops of a substance possessing the staining properties of colloid.

While confirming the Swedish anatomist's work, Welsh[2] carried the subject further. He described four types: (1) The cells form a uniform mass, their protoplasm taking little if any stain, and there being but slight degree of vascularity. (2) The cell masses show a tendency to break up into anastomosing columns, between which are capillaries borne in a fine connective tissue stroma; the protoplasm stains somewhat more deeply than before. (3) The cells form branching columns between which lies a fine or dense stroma bearing blood vessels. These cells are larger and faintly staining. (4) The cells are arranged in a single layer around a central lumen to form definite acini. These cells are large, with protoplasm staining variously, and the lumen is usually occupied by a small globular mass of colloidal substance. Welsh specially notes that commonly several types coexist in one gland.

More important than this recognition of types is his description of what he terms "oxyphile cells." These he mentions as occurring in a very large proportion of cases, though not in all, and never attaining the same abundance as the above-mentioned cells ("principal cells"). They have a relatively large amount of protoplasm, which is usually full of fine oxyphile granules, and he thought he recognized differences between the nuclei of the two varieties of cells, those of the oxyphile being smaller, more nearly circular, and with their chromatin more densely plaited. According to their grouping he makes four types of these cells also. They occur as: (1) Uniform masses forming islets scattered irregularly through the gland; (2) anastomosing columns; (3) cells either singly or in groups of twos and threes; (4) cells forming definite acini, the lumina of which are occupied by colloid material—a very exceptional type. He does not offer any explanation of these cells, nor does he discuss their relation to the so-called principal cells.

In a preliminary communication to the Physiological Society in 1906, the cardinal points of the present paper were recorded. It will be found that while the following account corroborates the work of both Sandström and Welsh, certain hitherto undescribed points in the histology of the gland are brought forward, more especially as regards the interpretation of the two varieties of cells, and the nature of the secretion, and therefore of the function, of the parathyroids.

I.—STRUCTURE OF THE PARATHYROIDS.

The parathyroid is enclosed in a thin connective tissue capsule, from the deep surface of which delicate trabeculae

*From a paper read before the Pathological Society of London February 19th, 1907.

pierce the interior of the gland, branching and uniting till the whole structure is cut up into small compartments polyhedral in section. This framework encloses in its mesh the cellular elements of the organ, and carries a rich vascular and lymphatic supply. In some specimens the connective tissue is increased in places, so that fairly strong septa are seen dividing the gland. In others the processes are so fine as scarcely to be discernible except under high magnifications.

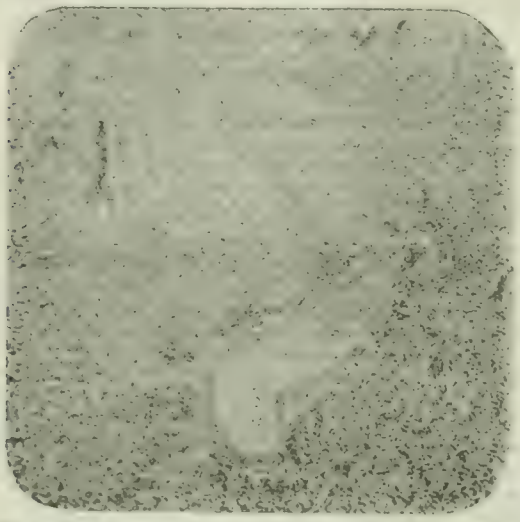


Fig. 1.—Showing continuous mass of parathyroid cells; fat spaces absent.

The blood vessels which come from or drain into the adjacent branches of the carotid arteries and internal jugular vein respectively form a lavish network of capillaries throughout the organ, accepting as they run the support of the trabeculae. Not infrequently, however, the small vessels venture away from this shelter, and are seen lying among the cells; but for the most part there is no intercellular vascular plexus, and in many specimens large masses of cells are found unpenetrated by any blood vessel.

The lymphatic drainage of the gland is likewise free. In its finer ramifications it is traced with difficulty, but it

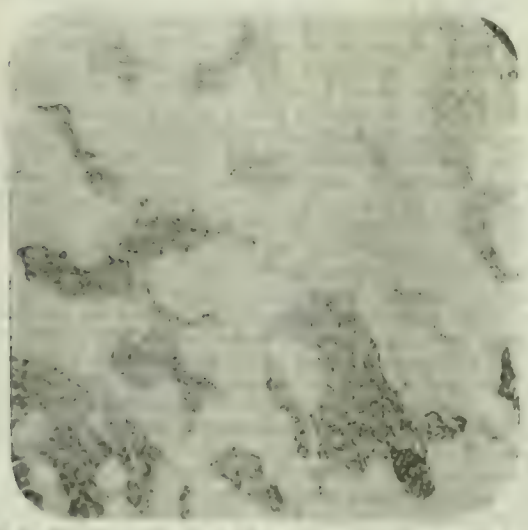


Fig. 2.—Showing collections of parathyroid cells separated by [illegible] tissue.

begins as minute intercellular spaces, which drain into lymphatic capillaries. These, like the blood capillaries, may run in the connective tissue framework, and as they pass along the trabeculae gradually advance towards the surface, and at the same time unite to form larger channels, until finally they emerge from the gland as one rarely as more than one main lymphatic vessel. It is common for this latter to meander for some little distance over the capsule before quitting the gland.

The cellular structure of the parathyroid can be appreciated only after an examination of many sections of many glands. Points which are obscure or absent in one specimen show clearly in another, and often a riddle set by some peculiarity of structure in this section finds its ready solution in that. It is supererogatory and confusing to indulge in a classification into types. The parathyroid has but one structure, and its variations are but expressions either of altered connective-tissue contents or of changing activity. It has already been noted how the framework may vary, and this alone is responsible for

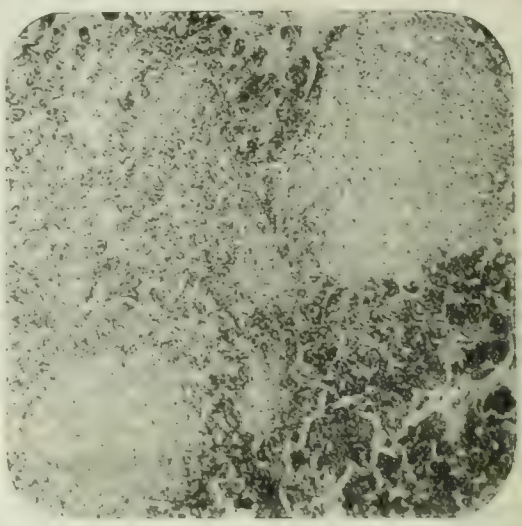


Fig. 3.—Showing active and inactive parathyroid cells. At the top right-hand corner is a large mass of resting oxyphile cells; another mass lies in the bottom left hand corner, and three or four smaller clusters appear elsewhere. The dark cells with no oxyphile protoplasm represent the fatigued stage.

many differences. Most often wide divergences of appearance are introduced by the admixture of fat with the gland tissue. This fat may be entirely absent; it may occur as a few isolated fat spaces; these spaces may be in clusters, or finally whole fields may show fatty tissue, with scarcely any of the proper cellular element. The extent to which this cause alone accounts for differences between specimens is readily understood by comparing slides illustrating the two extremes. In the one containing no fat the cells from end to end

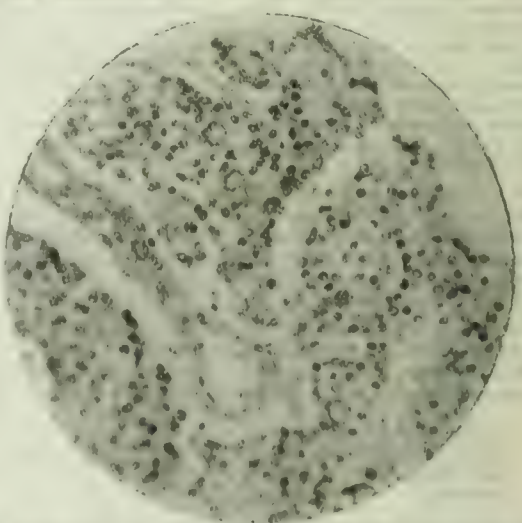


Fig. 4.—Showing many drops of colloid secretion lying irregularly among the parathyroid cells.

of the section are massed in a solid phalanx; in the other the large amount of fat confers a texture more open than the fattest of bone marrows (Figs. 1 and 2). Yet with all this alteration in non essentials the parathyroid cells repeat their peculiarities of structure over and over again, and such variations as they undergo are always dependent on functional activity, usually on alternating rest and fatigue. The parathyroid cells in the elaboration of their secretion pass through the transformation to which, as Langley has shown, glandular cells are subject; and in the matter of the histological changes

sociated with their secretion, the parathyroids fall to line with the other glands of the body.

The cells lie in the compartments made by the abecular meshwork, and these spaces are filled by a rying number of cells arranged without order. Accordng to the sectional outline of each mesh so will the ump of contained cells be circular, oval or columnar, ngle or branching. The impression obtained of a section nder low power depends on the prominence of this com-

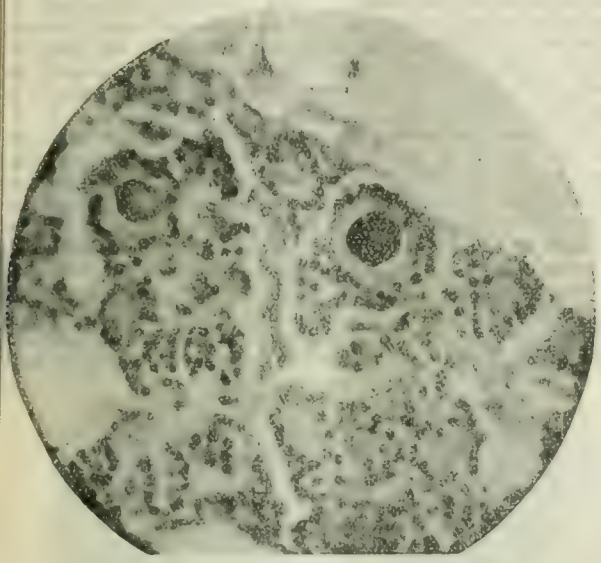


Fig. 5.—Showing two colloid containing vesicles.

partition, the fields consisting of an apparently continuous mass of cells when the trabeculae are slight, of definitely isolated clumps when the septa are coarse. Naturally so delicate a structure as the parathyroid occasionally suffers in process of preparation and the soft protoplasmic cells may shrink. This results in the appearance of a clear space round each cluster of cells, between it and the limiting trabeculae. The mosaic character thus imparted to the section—each group of cells set in a clear back-

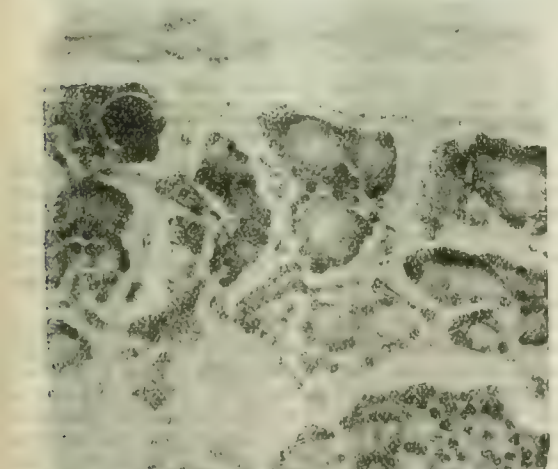


Fig 6.—Showing much colloid secretion. Most of the drops lie in definite vesicles. The resemblance to normal thyroid tissue should be noted.

ground—is probably wholly factitious and is not seen in more successful preparations.

The cellular elements proper are found to approximate to the so-called "embryonic type." They are polyhedral in shape, each being modelled by its neighbours, and presenting at or near its centre a nucleus surrounded by an amount of protoplasm depending on the condition of the cell. The nucleus, which stains readily though with varying intensity with basic dyes, shows a marked chromatin skein, which in some cells is more closely woven than in others. The protoplasm varies extensively with its functional activity. In a cell which has just ceased secreting it is comparatively small in amount and stains faintly or not at all with acid dyes. Later it grows more eosinophile, and appears of a pale pink, with perhaps a dubiously granular texture. Further rest leads to progressive changes, until the fully-rested cells ready to secrete again show a considerable increase in the amount of protoplasm and a marked affinity for eosin, with which

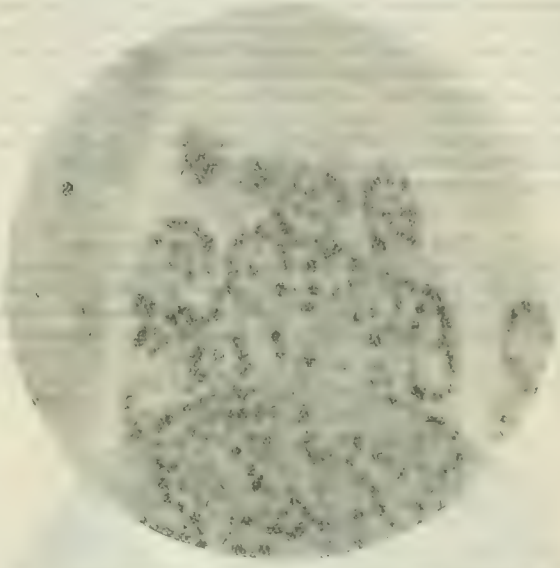


Fig. 7.—Showing stages in the arrangement of parathyroid cells to form regular vesicles.

stain they colour so vividly as at once to arrest the eye in any field in which they occur. Even under a low power, but more clearly under a high, the protoplasm is seen to be crammed with oxyphile granules. In the last stage the granules are extruded into the surrounding lymph space and the cell assumes its fatigued characters, again to perform its functional cycle.

It is not all the cells in a gland, nor even all the cells in any field, that show the same stage of activity. It may

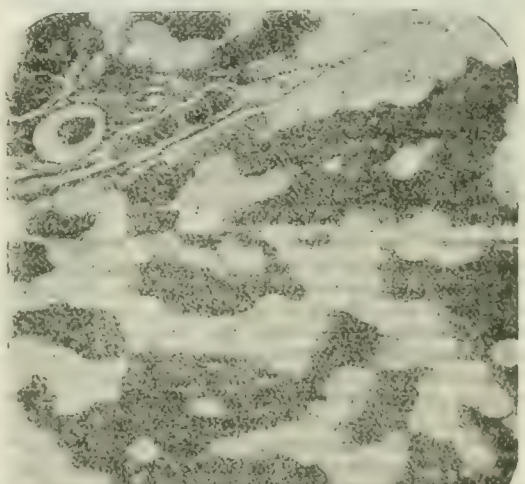


Fig. 8.—Showing a small lymphatic capillary containing colloid.

be that no sign of activity can be found. Slightly more common is it for the whole field to consist of the distended oxyphile cells. Most frequently cells at every stage between rest and fatigue can be readily identified. Unlike other glands, such as the pancreas or the submaxillary, where the call for active functioning is intermittent and allows reciprocal periods of rest, there is, from the ductless glands, a constant demand for secretion. These organs must be unceasingly adding their quota to the blood stream, and we should therefore expect to find cells pregnant with secretion side by side with

others exhausted or in process of recovery. A study of but few specimens is needed to corroborate this presumption. The large eosinophile cell occurs in varied connexions. Grouped with many others, it may form clusters big or little. It may lie in small association with three or four of its fellows. It may stand isolated. For the same reason cells of intermediate type can be found, though these, from their less bright hue, require more careful seeking out. With similar irregularity of distribution occur the pale-staining fatigued cells. The appearance, therefore, of a parathyroid gland changes from field to field; and when it is remembered how the stroma and fat vary, it will be realized how apparently widely apart are the histological features of different glands. Yet the underlying explanation—that the gland cells require a rhythm of activity and rest no less than do the cells elsewhere in the body—harmonizes their varied features and arrangements, and enables a clear conception of their structure to be formed (Fig. 3).

II.—The Secretion of the Parathyroids.

The presence in the parathyroid of minute drops of a colloid-like material has been noted by many, but none has fully interpreted their meaning, while on the secretion as a whole the literature is silent. This is a matter

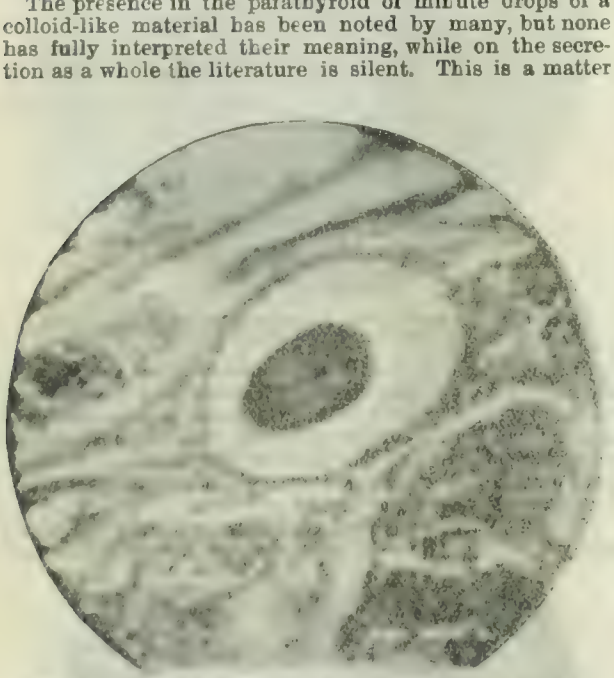


Fig. 9.—Showing a medium-sized lymphatic channel lined by pavement endothelium and containing colloid.

for surprise, for the human parathyroid so often contains secretion that one would have expected its recognition to have been made earlier.

As regards the different macroscopic appearances of active and resting glands, it is not often possible to decide on the vigour of secretion by naked-eye examination alone. It will sometimes be found that the more darkly-coloured glands—those with the brown of a normal thyroid—represent an active state, while the pale pink bodies contain but little secretion. This distinction, however, is not infallible. Microscopically the examination of one section of any gland sometimes makes it possible to form an idea of the amount of secretion that will be found in subsequent sections. It may be noted as a general rule—subject, however, to exceptions—that the presence of many large clumps of active cells gives promise of plentiful secretion.

The present series provided examples of every stage in the secreting process, from the extrusion of the protoplasmic granules to the draining away of the secretion from the gland.

It has already been shown how the oxyphile cell, distended by its granules, extrudes them into the lymphatic space around. The secretion, as it leaves the cell and for some time afterwards, retains its granularity. The small amounts that lie between the cells are not readily identified under low powers, but with a ⅙ in. objective they are not difficult to discover. This secretion may now find its way into the neighbouring lymphatic capillaries, but frequently the products of adjoining cells aggregate to form minute drops of colloid lying in the midst of the cells (Fig. 4). The colloid is often found thus scattered, but there is another position the drop may assume relative to the cells. It is of common occurrence for the secretion to lie among cells grouped more or less regularly around. Naturally a drop is more likely to appear in the centre of a cell clump than near its boundary, since the former position is the nearest point to the greatest number of cells, and will therefore present most facilities for the aggregation of the colloid. Thus it comes that a drop of fair size is seen in the middle of a compartment, having pushed open the cells so that they appear to be grouped in a layer, one or more than one deep, around a central lumen. In this way a vesicle comparable to a thyroid vesicle comes into being (Fig. 5).

In some specimens the colloid will collect to one side of the centre, in which case the lumen lies eccentrically and will be bounded by more cells on one side than on the other; but by far the commonest result, at any rate in compartments containing small masses of cells, is for the colloid to occupy a central space bounded on all sides by a single layer of cells, beyond which comes the limiting trabecula (Fig. 6). With a sufficiently large series of specimens there is no difficulty in recognizing every variety of structure, from the continuous mass of cells to the fully formed vesicle lined by cells as regularly as any

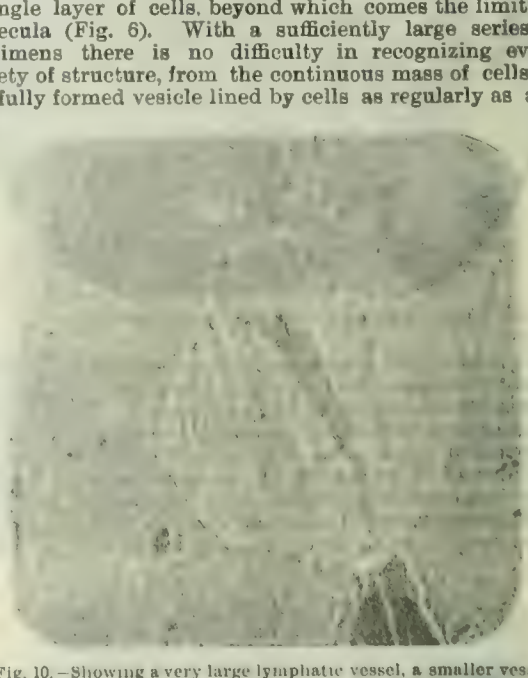


Fig. 10.—Showing a very large lymphatic vessel, a smaller vessel about to open into it, and numerous lymphatic capillaries, all containing colloid. Serial sections proved that all these lymphatics finally poured their secretion into the main vessel.

thyroid vesicle (Fig. 7). Such cells subjected to mutual lateral pressure soon lose their polyhedral outline and become regular cubical epithelium. In the smallest of vesicles, where each cell occupies no inconsiderable segment of a circle, its shape is correspondingly modified, being broader at its base and tapering towards the lumen.

At this stage of the process of secretion the granules of the colloid have frequently merged their individuality and a homogeneous mass results. A ⅙ in. objective, however, will often reveal granularity where a ⅓ in. is useless. Whether the secretion lies as scattered granules among the cells or as a drop in a vesicle, it passes into the lymphatics of the gland and trends to the surface, the smaller lymphatics uniting to form larger. Finally, it can be found as already mentioned, lying on or in the capsule contained in a large lymphatic lined by the usual pavement endothelium. Along this channel it is led away from the gland (Figs. 8, 9, 10).

It is of interest to note that the cortex of the gland sometimes stains more deeply than the medullary tissue and that drops of colloid and regular vesicles are met with more frequently near the surface than elsewhere. The latter occurrence is probably due to the flow of colloid being towards the cortex. The nearer the surface the more abundant will the secretion be, and consequently the superficial lymphatic spaces and vessels will be more liable to distension and fuller of secretion than those more deeply situated. Whether the deeply-staining cortex

bespeaks a more vigorous activity is not so certain, though this seems probable.*

It is desirable to emphasize the fact that neither by its appearance nor by its microchemical properties was it possible to distinguish parathyroid colloid from thyroid colloid. The two appear identical. Both may be granular, both may be homogeneous. In a thyroid vesicle the central part of the colloid is often homogeneous while the more recently elaborated secretion near the lining cells is granular. It has already been shown that the parathyroid colloid in its earlier stages is granular but later loses this property.

Both thyroid colloid and parathyroid colloid behave similarly to stains. Though both are usually oxyphile, thyroid colloid will occasionally stain with basic as well as with acid dyes—treated with haematoxylin and eosin a deep purple results. Parathyroid colloid is sometimes found to possess this peculiarity.

In the paraffin process thyroid colloid is apt to become hard and to tear before the razor into characteristic strips, the edges of which tend to crinkle. The larger collections of parathyroid colloid behave identically.

THE INFANTILE PARATHYROID.

There remains to notice a difference between the parathyroid as described above and the gland at or shortly after birth.

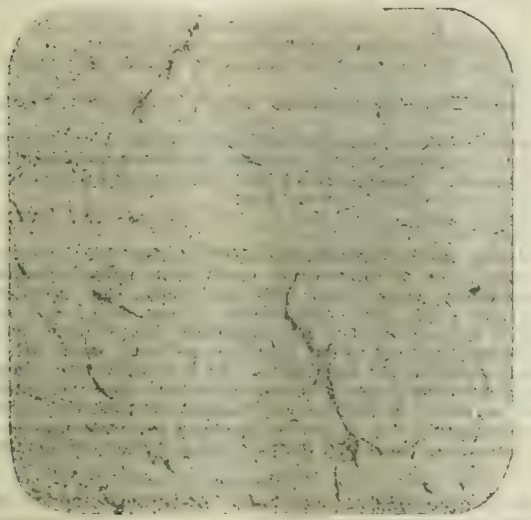


Fig. 11.—Infantile parathyroid gland, showing complete absence of all signs of functional activity.

Sections of the gland at this age present an immature appearance in contrast to that attained at a slightly later period. The parathyroid in an infant shows a connective tissue stroma similar in arrangement to that of an adult, but the trabeculae, although delicate, are less masked by the cells and therefore more distinct. These latter wholly fill the compartments and present a uniform aspect of inactivity, the protoplasm being comparatively large in amount but staining scarcely at all with acid dyes. As a result the cell walls are distinct. Cells in an active stage are wholly or almost wholly absent and no deposit of fat can be seen (Fig. 11).

The characteristics of the infantile parathyroid may persist till as late as the third or fourth year, and in one girl of 7 all the parathyroids were infantile. In these later examples, however, it is usual to see signs of awakening activity as marked by a greater affinity of certain cells for eosin. On the other hand, active parathyroids were found in a baby of 3 months. This specimen had none of the above peculiarities except an unwonted prominence of the connective tissue, and it showed the cells broken up into clumps and columns as in an adult. Once, in an infant of 6 days, the presence of many moderately active cells was noted, while in a baby of 3 months and in another of 11 months a drop of colloid was found, but this is exceptional.

CONCLUSIONS.

1. The parathyroid gland, like other glands, presents the histological variations of activity and rest. The so-called oxyphile cells are cells distended with granular secretion, and the so called principal cells represent the exhausted stage. Intermediate forms are common.

2. The granular secretion of the cells is extruded into the surrounding lymphatic spaces and often the product of many cells runs together to form a drop. This may either lie in an irregular space between the cells or occupy a central position around which the cells are grouped to form a vesicle. In either case the secretion passes into the smaller lymphatic vessels and gradually flows along larger vessels to reach the surface, whence it drains away from the gland.

3. The secretion of the parathyroid, both in its physical characters and in its microchemical reactions, appears indistinguishable from the colloid of the thyroid.

4. During the first few months of life the parathyroid glands show few if any signs of activity. By the end of the third month at latest colloid secretion may be found, though the infantile type may persist for some years.

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[1] Sandström, Lakareföreningens Förhandlingar, Upsala, 1880 (Abstract in Schmidt's *Jahrbüch*, 1880.) [2] Welsh, *Journ. Anat. and Physiol.*, 1898.

* I have found in not a few animals (for example, the two-spotted paradoxure, the Beatrix antelope, the suricate, the fat-tailed desert mouse) the thyroid to be as much or more parathyroid than thyroid in structure, and in these instances thyroid characters predominated at the surface, gradually giving place to a parathyroid structure deeper down. Further, in a young four-horned antelope a parathyroid was found in which the whole of the cortex had already become definitely thyroidal, and the change was clearly spreading more deeply. A full description of these glands will be given in the *Journal of Anatomy and Physiology* in the course of a paper on the comparative anatomy and physiology of the thyroid and parathyroid glands in mammals and birds.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

ACUTE CYSTITIS IN INFANT TREATED WITH HELMITOL.

ON December 21st, 1906, I was called to see E. S., a twin, aged 7 months. I found him with a temperature of 103.6°, and no definite symptoms except persistent vomiting and swollen gums, with a purple patch about the size of the head of a small nail on the upper one. On making inquiries, the mother told me that he was passing very little urine. The urine was loaded with albumen (only). I diagnosed infantile scurvy with renal symptoms, and the diagnosis was confirmed by the other twin developing infantile scurvy shortly afterwards. Under suitable treatment the patient made rapid progress, and on January 1st, 1907, the temperature was normal. I was under the impression he was over his troubles, but on the following day I was called in again, to find him with a temperature of 103.4°.

For the next fourteen days, in spite of frequent ice-cloths to the head, cold sponging, etc., and also the most devoted attention and care of the mother and nurses, there was no improvement, the temperature oscillating from 104° to 100°, coming down to normal on two occasions for a very short time. He had, however, developed, in addition to the already-mentioned condition, gastro-enteritis and bronchopneumonia. On January 12th he began to pass pus and blood with his urine, and seemed to feel great relief when he had done so. He showed symptoms of intense pain on pressure being made over the bladder. I now determined to try helmitol, giving 1 grain every three hours. In twenty-four hours the temperature came down to normal, and remained there. In forty-eight hours the pus had entirely disappeared. I persisted with the helmitol for three days more, during which time he passed astonishing quantities of urine. I was, of course, unable to estimate the amount, but the mother was certain he was passing three or four times the normal quantity. From this time onward he made steady progress, although his eventual recovery was somewhat retarded by an attack of whooping-cough.

The scorbutic condition I treated exactly on the lines suggested by Dr. G. F. Still in the BRITISH MEDICAL JOURNAL of July 28th, 1906, p. 186, the nurses being much taken aback at being told to give mashed potatoes to an infant of 7 months.

Sparkhill. J. ATTRIDGE WILLIAMS, M.D.

A CASE OF INFANTICIDE.

It is generally admitted that child murder is a crime often found difficult of proof, and that in consequence many actually guilty of the offence escape the meshes of the law. The criminal in the following case was brought to the Bar, and conviction followed, and for this and other reasons it is worthy of being recorded.

Somewhat early on a bitterly cold Saturday night in November last, in a densely-populated working-class street, and in the full flare of the electric light, a perfectly nude female infant was discovered lying on the pavement, having been thrown (as was afterwards fully proven to the satisfaction of a jury) from a window on the first floor, the height of which from the ground was 14 ft. 3 in. The infant was in a state of collapse, and was carried by neighbours into an adjoining house. The police were communicated with, and medical help at once obtained. It was then seen that the child was newly-born, there being still attached to the umbilicus about 15 in. of cord, which had been forcibly torn across and left untied. The infant was removed to the parish hospital, where she died six hours later.

On the following Monday, by order of the Procurator Fiscal, a *post-mortem* examination was made at the police mortuary. The length of the body was 18½ in., the weight 5 lb. 7½ oz., the finger and toe nails well developed, and the scalp covered with hair. No external marks of violence were present on the body, but the scalp all over felt soft. In the left parietal region there was a non-discoloured swelling the size of half a walnut. On reflecting the scalp there was found in its areolar tissue, over almost its entire extent, but most markedly in the left parietal area, a copious effusion of dark-coloured coagulated blood. The left parietal bone presented a somewhat depressed stellate fracture, radiating from a point situated about midway near its lower border. Of the three fissures, one extended upwards to the sagittal suture for a distance of 2 in., a second reached forward to the frontal bone for 1 in., and the third ran towards the occiput for 1½ in. There was a considerable congestion of the brain substance, and the upper and external surfaces of both hemispheres. Nothing further abnormal was noted.

The conclusions arrived at were (1) that the deceased had been born at or near full term, and (2) that death had resulted from fracture of the skull due to direct violence.

The special defence of the accused was an alibi, but, failing to prove this, counsel argued that the fracture had occurred in the maternal passages or in the act of birth. The torn cord certainly favoured the latter view, only the rupture had taken place 15 in. from the navel, instead of the usual 1 or 2 in.; moreover, the severe scalp injury was not consistent with accidental fracture.

In addition to the conviction of the accused, two points of interest are to be noted: that it was the father (a widower with five children) and *not* the mother (his young housekeeper) who was called upon to answer for the crime; and the entire absence of all external injury on the deceased after being thrown from such a height. The accused was tried at the High Court of Justiciary, charged with murder, but found guilty of culpable homicide, and sentenced to ten years' penal servitude.

The calvaria was exhibited at the combined meeting of the Edinburgh and other Scottish Branches of the British Medical Association on February 22nd, and is now in the University (Forensic) Museum.

Beside myself, the Crown "production" at the trial was Dr. Murray Wood, who, living in the vicinity, was in the first instance called upon by the police to attend the injured child, pending my arrival from a distance, and afterwards was associated with me in making the *post-mortem* examination.

O. H. Garland, M.D., F.R.C.P.Edin.,
Surgeon to the Leith Police, etc.

South African Medical Congress. The South African Medical Congress will meet at Pretoria this year during the week commencing October 14th. There will be sections of surgery, medicine, gynæcology and obstetrics, public health, eye, ear nose and throat. There will also be a section for "special subjects" not included in the other sections, for the discussion of communications embodying the results of original work in connexion with various diseases. It will also include dental surgery this year for the first time.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

BIRMINGHAM GENERAL HOSPITAL.

A CASE OF EMPYEMA WITH A REMARKABLE LEUCOCYTOSIS.

(Reported by E. L. Bunting, M.B., Ch.B., House-Surgeon for Special Departments.)

The patient in the following case, a girl aged 6, was admitted on March 21st, under the care of Dr. Saundby, to whom I am indebted for permission to publish the following notes. She had had pneumonia ten days before.

State on Admission.

The right chest was dull from apex to base, vocal fremitus and vocal resonance were absent, and breath sounds were almost absent. An exploring needle drew off pus. The temperature was 103.4°, the pulse 168, and a blood count showed 41,500 leucocytes per c.cm. Two hours later a pint of pus was evacuated from the right pleural cavity, and bacteriological examination revealed the presence of pneumococcus and *Streptococcus pyogenes*.

Progress

The following notes indicate the after-history:

March 22nd.—Temperature1 01.6°, pulse 160; leucocytes, 53,600.

March 23rd.—Temperature 101.8°, pulse 156; leucocytes, 66,700.

March 24th.—Temperature 100.4°, pulse 170; leucocytes, 75,000. A large patch of bronchial breathing was found at the right apex. The empyema cavity was explored with a syringe, but no collection of pus was found.

March 25th.—Temperature 100°, pulse 168; leucocytes, 140,000.

March 26th.—Temperature 100°, pulse 156; leucocytes, 214,000. On a differential count the polymorphonuclear neutrophile cells were 82.2 per cent., the lymphocytes 14.8 per cent., the hyaline cells 2.8 per cent., and eosinophiles 0 2 per cent. No abnormal forms were seen. I repeated the last count (214,000) an hour later, Dr. L. G. Mackey witnessing the details. At his suggestion I took the blood from the patient's thumb instead of from the lobe of the ear, in order to obviate any suggestion that the enormous leucocytosis found might be largely a local one due to some inflammation caused by the previous punctures of the ear.

Result.

Death occurred five hours later. At the *post-mortem* examination no collection of pus was found in the empyema cavity into which the tube had been inserted. There was a shut-off interlobar collection of about an ounce of pus. The whole right lung was solid from recent pneumonia; at its base was a yellowish grey necrotic area of lung tissue, resembling an abscess cavity, and about the size of a Tangerine orange. The left lung showed early bronchopneumonia and early pleurisy.

Remarks.

This case seems to be worth recording on account of the extraordinarily high leucocytosis exhibited. Neither in my own experience nor in the literature on the subject of leucocytosis have I found a leucocyte count even approaching that noted at the last observation, apart from spleno-medullary leucocythæmia. It showed how intense was the toxæmia and how great the girl's reaction power; that the source of toxæmia had not been removed by the evacuation of the pus from the pleural cavity was evident from the manner in which the leucocytosis advanced, instead of receding. The polymorphonuclear percentage, though considerably increased, does not at first sight seem to be in keeping with the degree of toxæmia which was evidently present. One must, however, take into consideration the fact that in a child of 6 the normal percentage of lymphocytes is about 38,[1] as compared with the adult maximum normal percentage of 25.

The counts were performed with the Thoma-Zeiss leucocytometer, with a dilution of 1 in 20. The films were stained with Jenner's stain.

[1] *Arch. of Pediat.*, 1906, p. 669 (Wile).

Madame A. S. Panchenkova of Odessa has given 100,000 roubles for the establishment of a home and out-patient department for nervous diseases in that city.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. WARRINGTON HAWARD, F.R.C.S., President, in the Chair.

Tuesday, May 14th, 1907.

FRACTURES OF THE ODONTOID PROCESS OF THE AXIS.

MR. E. M. CORNER contributed this paper, which was read by Mr. STEPHEN PAGET, the Junior Honorary Secretary. It was based on an examination of all specimens which could be found in the various museums of the British Isles. From the specimens and their histories and other recorded cases, fatal and non-fatal, it was concluded that there was no reason why a man should not fracture his odontoid process (as could be proved by the *x* rays, especially when the skiagraph could be taken through the open mouth), and recover without any spinal cord symptoms such as paralysis or anaesthesia, in fact, with no more discomfort than that of a stiff and painful neck. It would seem that there was more danger, except in cases which had spinal symptoms, from overlooking the fracture than from the injury itself. This was the happy side of the clinical picture. The other was the penalty of instant death, which was sometimes exacted if the injury were overlooked. In fact, fractures of the odontoid process fell into line with what he had contended was the case with regard to other fractures of the upper cervical spine—namely, that the subjects might have no more symptoms than a stiff and painful neck. So that one could go further and generalize that all cases of injury to the neck should be skiagraphed and examined by a skilled radiographer—for it was easy for one unskilled in the interpretation of spinal skiagraphs to overlook the injury—so as to avoid the risks of overlooking a fracture.

The PRESIDENT remarked on the importance of recognizing the frequency of the condition. Another important fact was that a patient might have a fracture of his odontoid process, and, after a few days of discomfort, go about his ordinary active work for months and then die suddenly. Two cases were alluded to, in which sudden death occurred after an interval of several months of active employment. He also referred to a case of extensive disease of the odontoid process, in which the only symptom was wry-neck. The patient, a child, recovered from this, but tuberculous meningitis developed, and at the necropsy a mere spicule of bone was found to represent the odontoid process. The moral of the paper was that a skiagraph should be taken in doubtful cases, and preferably through the mouth.

Dr. A. J. WHITING remarked on the contrast between the clinical picture as regards nervous symptoms of the cases with fracture of the odontoid process, in which there was either sudden death or practical immunity of the cord, and those with fracture-dislocation of the lower cervical spine. The latter meant usually complete paralysis of all four limbs and of the sphincters, with life, of a sort, for many months. It would almost seem, even keeping in mind the matter of sudden death, that the upper cervical cases were better off. The transverse ligament of the atlas probably protected the upper vital part of the cord. But the absence of nervous symptoms with recognized fracture did not contraindicate the possibility of sudden death later.

CLINICAL SOCIETY OF LONDON.

H. H. CLUTTON, M.A., M.C., F.R.C.S., President, in the Chair.

Friday, May 10th, 1907.

GASTRO-ENTEROSTOMY FOR CHRONIC GASTRIC ULCER.

MR. J. SHERREN described the case of a man, aged 46, admitted to Poplar Hospital, October, 1904, with gastric symptoms of six years' duration, and severe pain that had lasted nine months and prevented him from taking solid food. An operation being performed, a large ulcer was found on the lesser curvature. Posterior gastro-enterostomy being impossible on account of adhesions, the anterior operation was done, with no loop. Great improvement ensued, but twenty-two months later melancholia developed, and the patient cut his throat. At the autopsy the stomach was found to be only adherent to the pancreas. The gastro-enterostomy opening admitted two fingers; the pylorus was patent. The ulcer, examined microscopically, had healed completely. Mr. Sherren commented on the good results obtained through gastro-enterostomy, even when the ulcer was distant from the pylorus, so that excision was not the operation of choice even in such cases.

The PRESIDENT asked if Mayo's method of fixing the jejunum, so as to make it descend from left to right, had been adopted. He had used it as a routine measure for eighteen months.

Mr. SHERREN replied in the negative; he had tried the method, but had abandoned it.

WIDAL'S REACTION AFTER TYPHOID FEVER.

Drs. H. FRENCH and M. LOUISSON contributed this paper, in which they noted the extent to which Widal's reaction persisted after recovery from typhoid. They had traced 135 patients who had, whilst in Guy's Hospital with typhoid, given Widal's reaction, the standard being clumping within half an hour in a dilution of 1 in 200. The test was repeated in these patients at periods after the illness varying from two months to ten years. They found that: (1) In 7·5 per cent. of cases a complete reaction was obtained, in 22·5 per cent. an incomplete one, and in 70 per cent. no reaction. (2) The interval elapsed after the illness made comparatively little difference; it almost seemed as if the cases that persisted at all persisted indefinitely; several cases lasted eight years. (3) A complete reaction was present in 11 per cent. of men, in none of women. (4) Suppurative complications made it slightly more probable that the agglutinative power would persist. (5) Age bore no relation to the likelihood of persistence.

The PRESIDENT had found the bacilli present in bone complications three years after the fever.

Dr. HERRINGHAM commented on the bearing of the paper on second attacks of specific fevers. Usually these bore no relation to the severity of the first attacks, or age, or sex; but with measles and scarlet fever women were more liable to second attacks, and after typhoid, men. There was also the varying liability of different families to typhoid. Should we ever understand natural immunity?

Dr. W. H. BROOK (Lincoln) spoke, and

Dr. FRENCH, in reply, said he did not know how long the bacilli lasted in the urine. Possibly the persistence of bacilli was correlated with persistence of agglutinative power.

PRECOCIOUS OBESITY AND HIRSUTIES.

Drs. L. GUTHRIE and W. D'ESTE EMERY described two cases: (1) A boy, aged 4¾ years, 36 in. high, and weighing over 4 st., had a general growth of hair, but the genital organs were not developed. There was general obesity, especially of the cheeks and mammae. After death from pulmonary tuberculosis, a hypernephroma was found on the left side; microscopically it consisted chiefly of necrobiotic cortical adrenal tissue; many giant cells were present. It was probably a carcinoma, but without infiltration or metastasis. (2) A girl, aged 3½ years, 30 in. high, and weighing 37 lb., in three months had grown 1 in. and gained 6 lb. She measured 26 in. round the abdomen, 13 in. round the thigh; had general obesity with pendulous mammae, and the appearance of a woman aged 50. The cheeks were bloated and blotchy. There were lineae gravidarum on the thighs. Hair grew on the pubes at the age of 3, but the sexual organs were not developed. At the autopsy no growth was found, but the adrenals were not examined microscopically. In both cases the pulse was very intermittent, the intelligence good. The cases collected by Bulloch and Sequeira were noticed, stress being laid on the general obesity of the majority of them; nine of the cases were girls, and two boys. In twelve cases the growth was on the left side, in two on the right.

Dr. R. T. HEWLETT described the case of a boy, aged 4, with overgrowth of hair (after the age of 2), 3 ft. 7½ in. high, weighing 3 st. 12 lb., mentally bright, and with remarkable muscular development. The circumference of his thigh was 16 in.; that of his chest 27 in. The voice broke at the age of 4; the lower femoral epiphyses were united. He had erections and nocturnal emissions, and an enormous appetite, so that he required twice the amount of food usually allowed to the men in the workhouse of which he was an inmate.

Mr. RAYMOND JOHNSON referred to the case of a schoolboy, aged 14, with enormous muscular development and

hirsuties. He beat all other boys in his school in every kind of athletics, and had had to slave daily since he was 10. Up to that age nothing abnormal in him had been noticed. A malignant growth then appeared in the abdomen, with secondary deposits in the liver which, after death, weighed 15 lb. The growth was a perithelioma of the adrenal.

Mr. J. Malcolm remembered the case of a woman from whom both ovaries had been removed, and from whom Mr. Knowsley Thornton afterwards took away a large adrenal tumour. The chest was then covered with hard, coarse hair, and the patient had to be shaved daily. It was considered to be a manly development after the removal of the ovaries.

Dr. Parkes Weber grouped the cases in two classes: (1) Those with great muscular development—the infant Hercules type; (2) those with precocious obesity. Those of this latter class had changes in the skin and a blotchy appearance, and were thus separable from cases of simple extreme obesity. Precocious obesity occurred as often in girls as in boys, but the "infant Hercules" were always males. He did not know the cause of these abnormalities; certainly hypernephroma was not found in all. An Italian case was recorded of a boy with a beard and tumour of the testicle; the testicle being removed, the hair fell out and obesity ceased. Possibly the tumour was a hypernephroma connected with the testicle rather than the kidney.

Mr. W. G. Spencer pointed out that further investigation of these cases was desirable: apparently normal organs should be microscoped, whilst extra search might reveal portions of adrenal tissue in unusual positions in the sexual organs.

EDINBURGH OBSTETRICAL SOCIETY.

Dr. J. W. Ballantyne, President, in the Chair.

Wednesday, May 8th, 1907.

Epilepsy and Puerperal Eclampsia.

Professor Jardine (Glasgow) narrated a case in which a healthy 3 para, aged 27, with a family but no personal history of epilepsy, died on the third day after confinement after a succession of 774 epileptic seizures, most marked on the right side. Abundance of urine was excreted during the whole period, and only on the third day was a very faint trace of albumen detected. On *post-mortem* examination the superficial vessels of the brain were found to be markedly engorged, especially on the left side. No gross lesion of the brain could be detected on macroscopic or microscopic examination. The kidneys showed evidence of old parenchymatous nephritis. The child, weighing 7¾ lb., was born asphyxiated but was easily resuscitated. Its colour, however, never became quite satisfactory; the arms and legs remained markedly cyanosed. It lived for three days, and during this time its body was constantly in a condition of greater or less rigidity. This was at times so marked, that the infant could be lifted by placing one hand under the head and the other under the heels. When the attacks of rigidity came on it emitted a peculiar distressful cry and then became very cyanosed. Its urine contained a considerable amount of albumen. The author observed that the presence of albuminuria did not necessarily form the main element in the differential diagnosis between eclampsia and epilepsy.

Dr. Haultain believed that epilepsy might arise during the puerperium from eclampsia. Eclampsia could not occur without albuminuria and marked diminution in the quantity of urine excreted.

Dr. Hall Edwards had seen eclampsia without albuminuria, but in all such cases the quantity of urea was much diminished. In his experience epilepsy had been aggravated by pregnancy.

Bilateral Ovarian Dermoids.

Dr. Malcolm Campbell narrated a case of bilateral ovarian dermoid in a patient aged 32 years, 5 para. Previous to admission to hospital she had had amenorrhœa for three months. On admission she complained of severe pain in the lower part of the abdomen and on the right side: the pain was attributed to the presence of a tumour which had been noticed for the first time six months previous to her admission. Laparotomy was performed, and a right-sided ovarian cyst was removed. The cyst was about the size of a fœtal skull, and was attached by a long pedicle. On the left side an ovarian tumour the size of a hen's egg was discovered and removed. Both tumours on section proved to be ovarian dermoids. After the operation all pelvic symptoms disappeared, and six months later the patient was delivered of a full-time healthy child.

LIVERPOOL MEDICAL INSTITUTION.

Mr. Frank T. Paul, F.R.C.S., President, in the Chair.

Thursday, May 2nd, 1907.

Nucleo-Albuminuria.

Dr. T. R. Bradshaw related the case of a lad, aged 17, in whom nucleo albumin in large amount was mistaken for myelopathic albumose. The patient when seen was greatly emaciated and exhausted, and died in about a week. The urine contained about 1 per mille of a proteid body, which gave a turbidity when the urine was gently warmed with acetic acid, and which coagulated with hydrochloric acid. There was a remarkable deformity of the sacrum and tenderness over the upper ribs. The *post-mortem* examination showed extensive matting of the intestines from tuberculous peritonitis, marked lordosis, and inflamed glands under the pectorals. The bone substance was normal. After removing the urinary salts by dialysis, the proteid was found to be precipitated by a trace of acetic acid and gave the other reactions of nucleo-albumin. The significance of nucleo-albuminuria was not understood.

Dr. Hubert Armstrong remarked that nucleo-albumin occurred in the urine of children with some frequency. Precipitating with acetic acid in either hot or cold solutions, nucleo-albumin was occasionally mistaken for serum-albumin when the acid was not added to the urine until after boiling. In none of the cases he had seen could he attach any clinical significance to the presence of nucleo-albuminuria.

Intra-tracheal Injections.

Mr. Colin Campbell and Dr. Masson described a case of long-standing bronchiolectasis which had been successfully treated by intratracheal injections of a 9 per cent. solution of izal and glycerine. The treatment was commenced in May, 1906, and continued until December. About 2½ oz. of the solution mentioned were administered daily. While not liking the word "cure," Mr. Campbell claimed that it looked as if the patient had been cured. He had spent the last winter at work on his farm instead of in bed, had gained 16 lb. in weight without any attempt at fattening: the clubbing of the fingers had disappeared, there was no cough, and no expectoration.

At the request of the President, Sir James Barr examined the patient, and reported that he agreed with Mr. Campbell's estimate of the effect of the treatment.

Cerebro-spinal Meningitis.

Drs. C. Rundle and W. S. Williams gave a full account of a case of cerebro-spinal meningitis treated by a vaccine prepared by inoculating the micrococcus from the cerebro-spinal fluid, cultivating it, and using it as a vaccine. The opsonic index was first determined on the twenty-third day of the disease, and the vaccine first administered on the twenty-seventh day, and for the fifth and last on the fifty-first day. The authors did not claim that the recovery of a single case was to be regarded as proof of the efficacy of the vaccine, but suggested that since the patient, then almost in extremis, began to recover from the date of the first administration of the vaccine, the case was at least encouraging.

Renal and Ureteral Calculi.

Mr. W. Thelwall Thomas detailed a series of cases of renal calculi operated on since 1904. Skiagraphs had proved of great service, and helped to locate even tiny calculi. The most common symptom had been pain in the back of a dull aching character; this occurred in 17 cases, typical renal colic only occurring in 9. The prone position was adopted during operation in all cases, and Edebohls's cushion rendered great assistance. Evisceration of the kidney was resorted to when possible, and the pedicle clamped before incising the kidney substance. The kidney had to be removed in 3 cases on account of haemorrhage. Death occurred in 1 case of nephrectomy for tubercle and stone, and in another from pneumonia.

after the wound had healed. He also described 4 cases of ureteral calculi and 7 cases of renal tumour.

Mr. G. G. HAMILTON pointed out that after all a calculus of nephritic origin was a "symptom" just as was a gall stone, and depended on the state of the lining membrane and the presence of micro-organisms. A prone position similar to that advocated by Edebohls had been found the best for many years at the Royal Infirmary. The difficulty in the interpretation of *x*-ray shadows arose from the occurrence of calcareous plates on arteries and of calcareous glands. In one of his cases the passage of a ureteral catheter which threw a shadow cleared up the diagnosis.

Mr. C. THURSTAN HOLLAND drew attention to the difficulties in the *x*-ray diagnosis of kidney stones, with especial reference to the shadows caused by calcareous glands; pointing out that such shadows might occur in any part of the stone area. At the present time, however, the *x*-ray appearances were so valuable that it was unjustifiable, given any symptom which raised the question of stone, to continue medical or surgical treatment without having a complete and satisfactory *x*-ray examination of the whole urinary tract, further treatment being based upon that examination.

Dr. J. HILL ABRAM said that success could be obtained in some cases by the free drinking of certain waters, although he agreed with Mr. Thomas that the solvent action was practically *nil*—at any rate, in the body. He had also seen expulsion of the calculus under the belladonna treatment recommended by Dr. Murray, senr., of Newcastle. He was struck with the large proportion of Mr. Thomas's cases in which pain in the back was the only symptom; he could add two similar cases from his own experience, one of exceptional interest, inasmuch as jaundice had been present on one occasion. These cases strongly emphasized the value and importance of *x*-ray examination in all cases of persistent lumbar pain.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on May 3rd, Dr. J. LINDSAY STEVEN, President, in the chair, the following were among the exhibits and proceedings:—Dr. JAMES ADAM: (1) A patient with *Atrophic rhinitis* treated by paraffin injection. There had been purulent discharge since childhood, with crusting, etc.; solid paraffin (melting point 45° C.) was injected in quantities of about 1 c.cm. at a time. Sudermann's sucker was used instead of massage before injection. (2) A patient with tuberculous lesions of the inferior turbinal, soft palate, pharynx, larynx, tongue, cervical glands, and metacarpal bones. Both inferior turbinal bones were thickened and the right ulcerated. The soft palate was ulcerated and there was a small ulcer at the back of the tongue. The epiglottis was greatly thickened as were also the ventricular bands and the arytenoids. By injection of T.R. his opsonic index was raised from 0.63 to 0.94. Lactic acid was applied to the inferior turbinals with benefit. The patient was still working. (3) A girl, aged 22, with chronic oedema of the face, who had suffered from scab formation at orifice of left nostril five years ago. A swelling started at the inner canthus of left eye and gradually extended down to the level of the mouth and beyond the eyebrow. The inferior turbinal was very greatly swollen. The crusts were removed with peroxide of hydrogen and nitrate of silver was applied. The turbinal swelling was reduced. Iodide of potassium and thyroid extract were given. The oedema disappeared in two months. Dr. ARCH. YOUNG: A girl, aged 10 years, with subspinous dislocation of the head of the left humerus, resultant upon injury at birth. The birth was a difficult one, in which chloroform had to be administered and forcible means taken. Neither the anatomical relations nor the radiographic findings gave countenance to a diagnosis of true congenital dislocation, and the completeness of the displacement, with the now almost normal condition of all muscles of the affected limb (except those actually stretched over the displaced head—namely, the infraspinatus and teres minor) seemed to negative the view that the displacement might be secondary to injury to the brachial plexus. The position of the arm was characteristic, and the whole extremity was shortened to the extent of several centimetres, the greater part of the shortening being directly due to the displacement of the humeral head. A point of great interest in the case was the strikingly free range of movement. Dr. W. B. INGLIS POLLOCK, in a paper on the *Relationship of myopia to school work*, stated that his investigations among school children showed that myopia occurred in 1.7 per cent. at 5 years of age, 8.5 per cent. at 13, 25 per cent. at 18, while about 50 per cent. of medical students were near-sighted. The condition was often progressive. Almost all myopia originated during school life, being due to the yielding eye of childhood. Dr. G. A. ALLAN: Notes of a case of primary scirrhous carcinoma in the left main bronchus. There were a few isolated nodules in the lungs, and the pericardium was directly infiltrated. The pleura was thickened, and contained a few tumour masses. Nodules were also found in the thyroid, and cervical and mediastinal glands.

BRITISH GYNAECOLOGICAL SOCIETY.—At a meeting held on May 9th, Dr. HEYWOOD SMITH in the chair, Dr. A. E. GILES read a paper on the surgical treatment of inflammatory diseases of the uterine appendages, based on a series of 120 cases. His experience was that salpingostomy was of little value when the tubes were occluded by inflammation. In separating adhesions it was easier to work from above at first and then from below, afterwards isolating the outer extremity of the broad ligament and clamping the ovarian arteries. The uterus tended to become retroverted after removal of the tubes, and therefore ought to be fixed to the abdominal wall. In tuberculous salpingitis with hydroperitoneum, flushing was advised, but not otherwise. Drainage was best avoided in tuberculous lesions, but to be used when there was a tendency to oozing or when the bowel was damaged. In acute septic peritonitis a large rubber drain was employed, but in other conditions gauze was inserted for forty-eight hours when necessary. The value of Fowler's position, aided by repeated injections of saline solutions, was emphasized. Dr. J. J. MACAN was disappointed to find the author so strongly recommended abdominal rather than vaginal drainage. Instead of simple section of diseased tubes, he preferred excision from the cornu of the uterus. The danger of peritonism was much less when calomel was given early after the operation. Mr. CHARLES RYALL discarded suprapubic for vaginal drainage some years ago. The danger from sepsis was small, and did not occur in suitable conditions. Dr. SMALLWOOD SAVAGE believed that cases of acute pyosalpinx should be treated by vaginal incision and drainage, as in some cases so treated both tubes and ovaries would resume their normal functions. He advocated the use of mercury and iodides in some cases before resorting to operation. Dr. MACNAUGHTON-JONES agreed that haematosalpinx occurred apart from ectopic gestation. It was remarkable that three out of the seven deaths were due to septic peritonitis. It was most important to cover all raw surfaces with peritoneum. He urged the necessity of increasing the resistance of patients so far as possible. In the whole series the vermiform appendix had been removed only four or five times, which was remarkable. Dr. R. T. SMITH considered the *post partum* cases might have been reported in full, as it was important to know whether the abscesses existed before labour. Serumtherapy might have been adopted in some of the cases. It was not justifiable to operate on tubal disease before a year or more of general treatment. Hernia had become rarer since the abdominal wound was sutured in layers. Dr. HEYWOOD SMITH preferred abdominal drainage to vaginal. It was not necessary to remove the uterus in inflammatory diseases of the appendages. Dr. GILES replied.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At a meeting on April 10th, Dr. A. HILL GRIFFITH, President, in the chair, Drs. MILLIGAN and L. SEWELL made a short communication upon the various routes of pathogenic invasion in cases of intracranial sepsis secondary to suppurative middle-ear disease.—Dr. LORRAIN SMITH gave a demonstration of a number of specimens illustrative of the pathology of inflammation and ulceration of the intestine, including a case of poisoning by corrosive sublimate, in which the patient had swallowed three tabloids each containing 5 grains of corrosive sublimate. The lesions consisted of a local area of inflammation near the cardiac end of the stomach in which a nodular swelling was found

with a necrotic surface. The small intestine was less affected than the large intestine. The caecum and colon showed intense hyperaemia but no ulceration. He also showed a number of specimens illustrating the various forms of intestinal inflammation met with in Bright's disease. In dealing with some experimental work on the elimination of mercurial poisons, it was shown that inflammation of the mucous membrane of the intestine might occur in cases in which the mercurial salt had been administered by an application on the skin surface. It was also pointed out that a simultaneous disturbance of the bacterial regulation of the intestine might form an important element in the causation of the inflammatory conditions.

Society for the Study of Disease in Children.—At a meeting on May 3rd, Dr. T. R. Whipham in the chair, the following were among the exhibits:—Dr. C. O. Hawthorne: (1) A boy, aged 11, with *Dextrocardia and valvular disease*. The cardiac dullness was on the right side, and the heart's impulse below the right nipple; here was heard a systolic murmur which was conducted round the right side of the chest. A skiagram could not be obtained. (2) A child with symmetrical congenital deformity of the ears, and deficient hearing. Mr. Hugh Lett: A baby, aged 7 months, with *Multiple fractures* of the bones noticed at birth; skiagraphs showed old fractures surrounded with callus. There was hydrocephalus, and some evidence of rickets. The family history was good, but the mother had been in delicate health during pregnancy, and had two bad falls during the seventh month. Dr. F. W. Higgs: (1) A girl, aged 8, with *Monoplegia*, probably due to embolism of a cortical artery. She had had chorea and rheumatism a year ago, and then developed mitral regurgitation. Five weeks ago paralysis of the left arm occurred during sleep; there was no other paralysis. Partial recovery had occurred in the following order: Flexors of fingers and wrist, supraspinatus, flexors of elbow, extensors of fingers. (2) A boy, aged 3, who while recovering from whooping cough about two years ago, developed pain and swelling in certain joints. The lesions had persisted in subacute form, and when shown affected the wrists, ankles, knees, and cervical vertebrae; the spleen and glands were not enlarged; the disease was evidently toxaemic. Dr. Porter Parkinson: A case of *Cerebral tumour* after craniotomy. The optic neuritis, previously very intense, had disappeared, and with it the weakness of sight, headache, vomiting, and convulsions, while the paralysis had improved in the face and arm; the tumour was probably a subcortical glioma. Dr. D. C. L. Fitzwilliams: A boy, aged 10 years, with *Multiple exostoses* on the long bones, ribs, scapulae, and clavicles. He was the youngest of a family of seven: the mother and all the children had similar growths but had suffered no inconvenience, and they had not increased after the first few years of life. Dr. W. Lwart: A boy, aged 6, with old-standing spinal caries, causing much weakness of the legs and back. He had received much benefit from extension on a "sliding mattress," and by exercise on the "all fours exercise." Dr. T. R. Whipham: A girl, aged 1, with *Morbus cordis*, who at one time gave a blood count of 7,600,000 red blood corpuscles, and was subject to epistaxis. The heart was enlarged, and there was a thrill at the apex and at the aortic base, and presystolic and systolic murmurs at the apex and a rough aortic systolic murmur. The second sound was absent except at the pulmonary base, where it could be faintly heard. There was no cyanosis or clubbing: there was probably aortic stenosis and congenital narrowing of the aorta. Mr. Lockhart Mummery: A boy, aged 3 months, with *Erb's paralysis* in the left arm due to a difficult labour. Apparently the posterior cords of the brachial plexus had been ruptured causing paralysis and electrical changes of the flexor and extensor muscles except the flexor sublimis digitorum. There were some adhesions in the shoulder-joint.

The medical officers of schools at Meiningen are to be congratulated on the initiation of a plan for the diffusion of education in matters of health which appears to be big with the promise of far reaching result. They have decided to give an annual course of three lectures on hygiene to the parents of the school children. The chief difficulty will be to get them to attend.

REVIEWS.

EATING AND OVER-EATING.

The handbook on *Food and Hygiene* compiled by Dr. William Tibbles[1] contains a great deal of sound information which, if in parts a little old-fashioned, is on the whole trustworthy, well arranged, and written in a clear, straightforward, and plain style. Although he ignores Chittenden he gives Atwater's results, and prints many valuable tables which have been previously published but are useful in a book of this kind. The early chapters deal with the classification, assimilation, and absorption of food, and the construction of special dietaries. We notice on page 24 the statement that "bread is easier to digest than meat," a dictum with which perhaps many persons agree, but we seriously doubt its truth provided that the meat is finely divided before it reaches the stomach. Of course the dogma of Moleschott quoted on p. 34, that the quantity of proteid cannot be safely reduced below that required to supply 300 grains of urea, can no longer be accepted as indisputable. It is possible that the printers are responsible for giving 12 30 as the universal hour of dinner in Germany; on page 104 Cornari should be Cornaro. With respect to cheese (p. 163), there can be no doubt of its dietetic value, but it is not well digested at the end of a heavy meat meal, while if eaten after light pudding and fruit it is quite well borne. It can hardly be truly said that banana flour contains "a good proportion of nitrogenous material" in face of the analysis given on the same page, where the quantity of proteid is only 3.55 per cent., for its poverty in nitrogen is striking when compared with that of wheat flour (8 to 11 per cent.), oatmeal (12 to 15 per cent.), or even rice (5 per cent.); it may be compared with arrowroot, which owes its popularity more to its extreme palatability than to its nutritive properties. We have never seen "very palatable bread" made from Iceland moss; the result of soaking and cooking is to make of it a gelatinous mass that might be called a pudding or even cake, but to which few would apply the term bread. The power of coca, as we get it in this country, to prevent fatigue, or to remove it, has not been well established, and no importance is now attached to the experiments of Sir Robert Christison; cocaine is perhaps one of the most valuable drugs we possess for producing local anaesthesia, but its reputation as a tonic has greatly diminished. On the other hand, the extent to which opium is used in small quantities throughout the East without the evil consequences which he attributes to it is ignored. The general remarks upon alcohol are to be commended, while there is an immense amount of information concerning its various forms which must have been compiled from many sources. His industry in collecting information leads him perhaps to unnecessary multiplication, as for instance where he describes mud-baths, under the varieties of mud-baths, moor-baths, bog-baths, and slime-baths! His account of the different health resorts seems to have been derived from the writings of those whose interest it is to mention everything in their favour and to suppress defects—for example, it is certainly not true that snow is unknown in Algiers. If lemon water or lemon juice is a "sedative to the heart and reduces the rapidity and force of the pulse" it is not generally known, and we should have been told the dose required to produce these physiological effects. However, we have no desire to quarrel with a statement which may be true for all that we know, and we repeat in concluding this notice, that the book is one which contains much useful and well-arranged information.

In his monograph on gout as the result of "super-alimentation," Dr. Pascault sustains his main thesis with considerable literary ability, but his style is not free from exaggeration, and the book contains a good deal of padding. It is one of a series written to support the peculiar doctrines taught by Dr. Glénard of Vichy, which did not attract us and have been previously discussed in

[1] *Food and Hygiene. An Elementary Treatise upon Dietetics and Hygienic Treatment.* By William Tibbles, L.L.D., L.R.C.P., M.R.C.S., L.S.A. London: Bohman Limited. 1907. (Demy 8vo, pp. 359, 8s.)

[2] *La Suralimentation. Goutte et Surmenage Gastrique.* [Gout as the Result of Super-alimentation.] Par le Dr L. Pascault. Paris: A. Maloine. 1907. (Crown 8vo, pp. 358. Fr. 4.)

these columns. While we believe that superalimentation is the principal cause of gout, we cannot follow the author in his description of the mode in which a superabundant diet pursued for several generations results in neurasthenia; at least, that is not the pathological course seen in this country. We believe Dr. Pascault is right in saying that meat as an article of diet promotes appetite, and is in itself a cause of excessive eating, while the *akoria* of the gouty, which is indubitably one of the causes of obesity, may also have the same explanation. But if we may admit the prevalence of habitual excessive eating, we should also recognize that comparatively few evils follow from it until after middle age is passed, when the power of the body to consume large quantities of food diminishes more or less rapidly, and the surplus becomes stored up as fat. If it were more generally accepted that obesity is an unnecessary deformity, due to careless living; and if each man and woman could be got to feel that it is his duty to keep the body in as healthy and perfect a form as possible, and to look on growing obesity as an indication that more food is being eaten than is required, the standard of the national health would be raised and the average duration of life prolonged. It is no longer considered polite to get drunk, and personal cleanliness is regarded as almost the highest moral obligation. If we compare this state of things with that of our grandfathers, we may hope that in a few more generations men and women will be as much ashamed of unwieldy corpulence and gout as they are now of drunkenness and dirt.

THE CHEMISTRY OF DIGESTIVE DISEASES.

THE book on the *Chemical Investigation of Gastric and Intestinal Diseases*[3] by Professor VAUGHAN HARLEY and Dr. FRANCIS W. GOODBODY fulfils the indication of its title by affording a complete account of the various methods now employed by those who have paid most attention to these chemical investigations. As the authors very well express it:

> The idea that any one chemical factor is pathognomonic of any special condition must also be at once put aside. The diagnosis of carcinoma of the stomach from the absence of free hydrochloric acid in the gastric secretion has now to be regarded as non-conclusive, unless the history and physical signs support the diagnosis. This is analogous to the fact that the presence of albumen in the urine is not pathognomonic of Bright's disease, unless one has negatived its attribution to cardiac, digestive, or other causes, and has, in support of the Bright's disease theory, various other symptoms with possibly other chemical results which point in that direction. The fact that albumen is not pathognomonic of Bright's disease does not, however, detract from the value of the urine analysis.

It is, however, quite possible to overestimate the importance of the conclusions which can be drawn with any degree of certainty from the quantatitive examinations which take up a large part of this book. For example, the results of the estimation of the amount of acids present in the gastric contents, even when this is done with the utmost care, and the hydrochloric acid distinguished from the organic acids present, are misleading. It is an everyday experience of those who undertake these investigations that they do not correspond to the other clinical symptoms, and Rubow has pointed out that the degree of acidity must depend upon the amount of gastric contents present. More than half the book is taken up with the examination of the faeces—a subject which has undoubtedly been much neglected in England, but which is still hardly of sufficient practical importance to claim much attention from general practitioners, and for the most part needs a laboratory for its performance. We doubt whether any distinct difference exists between what the authors persistently call "mucus" colitis and membranous colitis; if there be such a difference, it is not made clear by the description, although they are discussed in separate sections and divided one from the other by that on ulcerative colitis. None of the clinical descriptions strike us as being adequate. They might have been left out of a book whose main purpose is to describe the clinical chemistry of stomach contents and faeces.

[3] *The Chemical Investigation of Gastric and Intestinal Diseases by the Aid of Test Meals.* By Vaughan Harley, M.D.Edin., and Francis W. Goodbody, M.D.Dubl. London: Edward Arnold. 1906. (Demy 8vo. pp. 261. 8s. 6d.)

The little book on the pathological evolution of stomach digestion, by Professor GEORGES HAYEM,[4] cannot add much to the reputation of a teacher who for a generation has been regarded with admiration and respect. Professor Hayem seems to complain that the profession has neglected a former book of his, published in collaboration with Dr. J. Winter, called *Du Chimisme Stomacal* (Paris, 1891), which is unfortunately unknown to us, but an acquaintance with it seems to be essential for an intelligent appreciation of the methods described in the present work. Nevertheless, except that he uses a special terminology of which the key is not given, and that we are told nothing of the methods or procedures by which he arrives at his quantitative results, his plan broadly does not seem to differ greatly from that generally followed by physicians who study the secretory and motor functions of the stomach, and, in spite of the depreciatory remarks which Professor Hayem applies to all but his own methods, he seems to owe a considerable debt to his predecessors. Yet it is true that in some respects Professor Hayem pursues a method of his own in which he has few followers, for (on page 9) he explains that it may be necessary to extract a test meal every half-hour, and he has sometimes made as many as seven or eight successive extractions, but that in ordinary cases four may be sufficient! Much should certainly be revealed by a method that involves such sacrifices on the part of physician and patient as seven or eight consecutive withdrawals of test meals at half-hourly intervals! But, so far as we can make out, the information so obtained is of no great practical value. The importance of the examination of the fasting stomach is generally recognized, but if Professor Hayem is correct in supposing that the presence of undigested particles of food cannot be relied upon to prove the existence of pyloric obstruction, the solid ground seems to crumble away from beneath our feet. We believe he is entirely wrong in thinking that such stasis is found in gastroplegia or advanced atony, but this may be to some extent a question of time; he omits to say after how many hours' interval he examines the stomach, and merely contents himself with saying "*le matin à jeune.*" In our experience, extending over hundreds of cases, after a twelve hours' fast the stomach never contains undigested particles of food unless there is some obstruction to the discharge of its contents. He severely criticizes Reichmann's description of gastrosuccorrhoea, and says that in all such cases he has found pyloric or subpyloric stenosis; every one admits that there has been considerable confusion of different conditions under a common name, yet we doubt whether much can be gained by the addition of the beautiful word "gastrochronorrhoea" (!) invented by Professor Hayem to indicate the continuous secretion of gastric juice after the termination of digestion.

The two bulky volumes of collected essays on digestion,[5] published by I. BOAS of Berlin and his pupils, Hári, Kelling, Schmilinsky, Elsner, Maybaum, Reitzenstein, Landauer, Zweig. Oppler, Cohnheim, Korn, Ury, Gockel, Plitek, Schloss, Basch, Schorlemmer, Alexander, Ackerlund, Skaller, Lilienthal, Ehrenreich, Gans, Meyer, and Hirsch, include no less than 126 papers produced during the last twenty years, and undoubtedly represent a large amount of excellent clinical work. It may be questioned whether it was worth while to republish them except as an historical monument, but many who are interested in the subject of diseases of the stomach may be glad to possess in this convenient form a collection of such interest and importance. There are few questions relating to diseases of the alimentary canal which are not discussed in these volumes, and although the essays are not of equal merit they contribute facts and indicate the nodal points of problems which have not wholly ceased to be matters of controversy since they were written. Some of them should be better known in this country than they are; for example, Elsner's paper on the fallacious character of splashing sounds as a

[4] *Les Evolutions pathologiques de la digestion stomacale.* Par Georges Hayem. Paris: Masson et Cie. 1907. (Crown 8vo. pp. 340.)

[5] *Gesammelte Beiträge aus dem Gebiete der Physiologie, Pathologie, und Therapie der Verdauung.* Von Dr. I. Boas und Seinen Schülern, 1886-1906. Herausgegeben von Dr. I. Boas. Zwei Bände. Mit zahlreichen Textabbildungen, Tabellen und 4 Tafeln. Berlin: S. Karger. 1906. [Collected Essays on the Physiology, Pathology, and Therapeutics of Digestion, 1886-1906. Edited by Dr. I. Boas. Two volumes with numerous illustrations, tables, and four plates. Berlin: S. Karger. (1906).]

sign of atonic dilatation of the stomach, and Boas on the detection and diagnostic value of "occult" bleeding from the stomach and bowel. Korn's paper on spastic pyloric stenosis is not so satisfactory, as his cases turned out eventually to be organic, and although at one stage they may have been spastic, the opinion that this transformation takes place, although generally entertained by many who possess an intimate knowledge of diseases of the stomach, yet awaits a more convincing demonstration than any one has so far succeeded in giving.

HUMAN AND BOVINE TUBERCULOSIS.

Dr. Batier's book on the unity of human and animal tuberculosis[6] is based on an extensive study of the recent literature devoted to this subject. As the title of his work implies, it has been the main purpose of the author to collect and systematize the vast amount of evidence, largely experimental, which has recently been accumulated in favour of the view that tuberculosis in animals and man is one and the same disease. The alleged morphological and histological differences between human and bovine bacilli are discussed, and it is shown that these characters are not sufficiently constant to justify a demarcation of the organisms into two clearly separable types. A comparison is made of the pathogenic effects of human and bovine bacilli on the guinea-pig, dog cat, rabbit, and bovine; and the experimental evidence obtained from these animals is, in the opinion of the author, confirmatory of the view that bacilli derived from human and bovine sources are essentially the same micro-organism. Whilst admitting that bovine bacilli are, in the majority of cases, more virulent than human bacilli for some animals, in particular the rabbit and the bovine, Dr. Batier points out that this rule is not universally true, since viruses of human origin have been investigated which have proved to be fully equal to bovine viruses in their virulence for these animals. Such cases would be explained by pathologists who support the "dualistic" theory—like Kossel, Weber, and Heuss—on the ground that amongst bacilli of human origin strains are sometimes met with which belong to the "bovine type." But, as against this theory, Dr. Batier maintains that the tubercle bacilli obtained from the human body do not fall into two clearly separable types; transitional varieties occur which are intermediate in their degree of virulence both for the rabbit and the bovine. He also argues that the "two types" theory is incompatible with the experimental facts which have established the possibility of exalting or diminishing the virulence of a particular strain of bacilli. In Chapters V and VI Dr. Batier discusses avian tuberculosis and the tuberculosis of cold-blooded animals. Under natural conditions it is not likely that birds are often infected from man or man from birds, but experiments are quoted showing that avian bacilli have been transformed into bacilli possessing the characters of those naturally found in mammals, or vice versa. Dr. Batier has written an interesting book, but its weak point is that, though obviously anxious to state his opponents' case fairly, he writes too much with the air of a special pleader. He is dominated by an enthusiastic desire to discover "unity" everywhere. If he had said much less about it, and had laid a little more emphasis on (1) the very marked differences in experimental virulence which certainly exist between the typical bovine bacillus and many strains of human bacilli, and (2) the stability in bacteriological characteristics which is usually, though not always, a feature of the tubercle bacillus, his arguments might have carried greater weight.

TUBERCLE BACILLI IN PLEURAL EFFUSIONS.

A monograph recently published by Dr. Cartier[7] in Paris presents an interesting account of a series of experiments undertaken by him to demonstrate the presence of tubercle bacilli and other organisms in sero-fibrinous pleuritic fluid in suspected tuberculous cases. These experiments amplify the work done in 1903 by Dr. Andre Jousset (*Sem. Méd.*, January 21st, 1903), who employed a method of investigation by means of which he had obtained a very high proportion of positive results. The difficulty of detecting micro-organisms in large bodies of pleuritic fluid has always been manifest, but Dr. Cartier, following Jousset, overcomes it by the process of allowing the serous fluid to form a clot, draining the clot on a cloth surface until it has become fairly dry, digesting the clot with a fixed proportion of gastric juice, and finally centrifugalizing the digested mass. Minute fragments from the surface of the cloth and tubercle bacilli are found to be collected together in the end of the tube, and can be examined by the microscope in the usual way. In the monograph before us an account is given of previous work in this direction, together with a series of criticisms thereon, but the greater part is occupied by a record of individual observations to explain the marked variation in the degree of virulence of different samples of serum drawn from the pleura of tuberculous subjects, and also of serum from the same subject at different periods. Incidentally it is interesting to note that very positive results have been obtained from time to time by the use of such serum in lieu of Koch's original tuberculin. The term "inoscopy" is applied to the process of examination of the digested fibrinous clot, and, in the majority of the cases quoted, a direct correspondence is shown between the visible presence of the bacilli and the infective action of the fluid upon the guinea-pig. No positive proportion could, however, be made out between the number of bacilli present and the infectiveness of the fluid injected. That pleuritic fluids may possess virulent toxic as well as tuberculogenic properties is clearly shown, and the line of investigation will doubtless be followed up more closely. Dr. Cartier's account is written clearly and concisely, and is worthy of special attention. The method is new, and may lead to a good deal of fresh light being thrown upon a subject that is by no means exhausted.

TUMOURS, INNOCENT AND MALIGNANT.

Mr Cathcart puts forward a plea for *The Essential Similarity of Innocent and Malignant Tumours*.[8] He maintains that if we take any large and representative collection of tumours and arrange them properly we can pass by a gradual and uninterrupted transition from the tumours at the one end of the series which are obviously innocent to the tumours at the other end which are manifestly of a malignant nature. Between the two extremes the gap will be completely bridged by tumours showing intermediate stages between the innocent and the malignant type. This transition is exemplified by a detailed study of bone tumours, illustrated by an excellent series of reproductions from photographs. It is also pointed out that in many other regions of the body, such as the mamma, the testis, the thyroid gland, the parotid gland, and the ovary, tumours may occur which are partly innocent and partly malignant in character. Moreover, apparently innocent tumours may give rise to metastases or may at a later period of their development assume characters which are undoubtedly malignant. Having arrived at the conclusion that innocent and malignant tumours are essentially similar, Mr. Cathcart maintains that no theory of the causation of tumour growth can be regarded as satisfactory which does not apply equally to both classes. He therefore considers that recent investigations undertaken to discover the cause and cure of cancer are not likely, unless by accident, to lead to helpful results so long as they proceed on the assumption that cancer is a disease by itself. Facts of the order recorded by Mr Cathcart are well known to all pathologists. Cases are not infrequently observed in which it may be difficult, or even impossible, to decide either clinically or by microscopic examination whether a particular new growth is "innocent" or "malignant"; and it is also a not uncommon experience that growths apparently innocent in their earlier stages of development may afterwards assume undoubtedly malignant characters. But when all is said there is a very big difference in the great majority of cases, which is appreciated alike by the patient, the medical attendant, and the pathologist, between innocent and

[6] *L'Unité de la Tuberculose Humaine et Tuberculoses Animales. De l'un Unicité Parasitaire*. By Gabriel Batier. Paris: Felix Alcan. 1907. (Roy. 8vo, pp. 316.)

[7] *Le Diagnostic de la Pleurésie Séro-Fibrineuse Tuberculeuse. Examen microscopique et biologique du Sérum Sanguin dans la Pleurésie Tuberculeuse*. By M. Paul Cartier. Paris: G. Steinheil. 1907. (Roy. 8vo, pp. [illegible].)

[8] *The Essential Similarity of Innocent and Malignant Tumours. A Study of Tumour Growth*. By Charles W. Cathcart, M.A., M.B., C.M. Edin., F.R.C.S. Eng. and Edin. London: Simpkin, Marshall, Hamilton, Kent and Co. 1907. (Imp. 8vo, pp. 79. With 86 illustrations. 9s. 6d.)

malignant neoplasms. Mr. Cathcart must, of course, recognize this, however much he may insist upon the importance of intermediate types. His divergence from current opinion is probably not so great as would appear at first sight. Perhaps he is ill-advised in his choice of the words "essential similarity." If he would modify them a little, and adopt some more cautious phrase, such as "important points of resemblance," or "underlying unity," he would find himself more in harmony with the many able investigators who are endeavouring, as strenuously as he is himself, to throw further light on the cancer problem.

THE HISTORY OF CHEMISTRY.

MR. ARMITAGE'S aim in writing his *History of Chemistry*[9] was ambitious. He has set himself to reform the chemists, being impressed with the idea that their ignorance of scientific history is responsible for many failures. Thus, at the beginning of the tenth chapter he has definitely stated the benevolent intention which animates him throughout: "For younger men in particular," he says, "for older men in particular, should the following paragraphs have value. They may give new life to the latter and a sense of fresh opportunities to the former." After reading Mr. Armitage's book, however, from this standpoint, we cannot pronounce it to be satisfactory; for the author follows the general lines of Ernst von Meyer's encyclopaedic work, and where he differs from his model it is to his disadvantage. In addition to errors in the spelling of proper names, such as Van t'Hoff, De la Rive, Beaume, Pelowze, and others, which Messrs. Longman's reader should surely have corrected, the author's treatment shows unmistakable signs of haste. His book lacks unity, some parts of it being written in a style at once florid and ill-constructed, and others being both bald and commonplace. To say that the "law of volumes was a *deus ex machinâ* . . . which helped to cut the Gordian knot of the relationship between the weights of atoms and the minimum weights of analysis" is a statement as much out of place in a history of chemistry as it would be anywhere except in an English grammar as a peculiarly harsh and discordant example of mixed metaphor. And this is but one example of many. That the formula for chlorine is repeatedly written "Ch" (pp. 160-1), and that the ratios 1 : 16 and 0.5 : 0.8 are stated to be identical (p. 176), are clearly printer's errors; but the printer can hardly be blamed for attributing to Vauquelin the separation of iridium, and thus anticipating the element's discovery by some fifty years. On page 254 we read that Berzelius attacked Turner's practice of reducing all weighings to vacuum standard as being an example of "straining gnats and swallowing camels." Apart from these blemishes, however, it is not easy to see for whom Mr. Armitage's book is written. While it assumes too much to make it satisfactory as a school textbook, it is neither sufficiently comprehensive to serve as a minor book of reference nor sufficiently attractive to prove of popular interest. This is the more to be regretted, as there is a real want in the schools for a book of the sort, and the lay public is waiting for a new history of chemistry which should give them a reasonable account of the recent achievements of the chemist, without requiring from them more than a superficial knowledge of chemical technicalities.

NOTES ON BOOKS.

THERE is certainly room for Mr. PAGE'S unpretentious little book entitled *Elements of Physics for Medical Students*.[10] The author has treated his subject essentially from the experimental and practical standpoint, and has wisely devoted a considerable amount of space to the more important parts of electricity and magnetism. It is satisfactory to notice that he has emphasized especially those portions of the subject which will be of use to the student when learning physiology. Occasionally too much knowledge has been assumed. Surely Mr. Page must be aware that his readers will in many cases have only the vaguest recollection of trigonometrical ratios. A paragraph on these might well have been inserted in his Appendix. There are places, too, where clearness has been sacrificed to brevity, as in the author's account of the "Post Office box," but this is unusual. The printed matter has been lavishly illustrated with diagrams, and the author's descriptions go to the point with admirable directness. A good feature of the book is the collection of practical exercises in Part VI, and in this especially the short section on measurements. The work should prove useful to students in supplementing their regular lecture course.

In his pamphlet on *The Prevention of Cancer*,[11] Mr. KEETLEY endeavours to show that the grounds for attributing cancer to some living micro-organism are "overwhelmingly strong." For the prevention of cancer he advises (1) the sterilization of food; (2) the destruction of discharges from ulcerations, especially if cancerous; (3) the prompt excision of cancerous tumours or ulcers; (4) "the avoidance of physical familiarity except with those who are nearest and dearest to us"; (5) abstinence from alcohol, tobacco, and from foods leaving waste products difficult to eliminate; (6) personal cleanliness; and (7) "a clean house."

Among the many hobbies in which medical men very wisely indulge, the collection of gems is one. It is not a common hobby, and is rather expensive, but the collector may salve his conscience by the reflection that if he buys judiciously, his treasures are more likely to increase than to decline in market value. We may, therefore, take the opportunity of calling attention to the volume entitled *The Gem-Cutter's Craft*,[12] by LEOPOLD CLAREMONT, a member of a well-known medical family. The identification and nomenclature of gems, and their cutting and polishing, are discussed in the earlier chapters, and, as the author is not only an expert but a practical gem-cutter, the information may be relied upon. Then follow chapters on commercial value, and the effect of fashion on it, and notes on the history and the folklore of precious stones. The bulk of the book is occupied by detailed descriptions of the varieties, from the diamond to lapis-lazuli, and there is a useful chapter on imitations. The book contains many photographs throughout the section on diamond cutting, and is very fully illustrated in this way. In appendices are given a table of characteristics and localities of the principal precious stones, directions for taking specific gravity, and a bibliography. Lastly, there is a good index, so that the author may be heartily congratulated on the way in which the book has been prepared for the press.

The little book on *Toxins and Venoms*,[13] by Signor EM. POZZI-ESCOT, translated by Dr. COHN, deals with an extremely wide range of subjects. Part I discusses the general properties of ptomaines, leucomaines, bacterial toxins, and antitoxins, whilst Part II tells us something about the specific characters of vegetable toxins, such as abrin, oricin, and the toxins from mushrooms, animal toxins, including those of alimentary, urinary, and suprarenal origin, and the special bacterial toxins. The book concludes with a chapter on the venoms of snakes and other animals. All this matter is crammed into a small volume of a hundred pages. To persons who are content with a smattering of knowledge perhaps the book may appeal, but it can hardly be of service to any one who seriously desires to understand these extremely difficult and complicated subjects.

Sir HECTOR CAMERON has published in a small volume of 100 pages the lectures on the *Evolution of Wound Treatment during the Last Forty Years*,[14] which were printed in the BRITISH MEDICAL JOURNAL of April 6th, 1907. He has done well to do this, for the lectures were a contribution of permanent value to the history of surgery.

[9] *A History of Chemistry*. By F. P. Armitage, M.A., F.C.S. London: Longmans, Green and Co. 1906. (Demy 8vo, pp. 286. 6s.)

[10] *Elements of Physics for Medical Students*. By F. J. M. Page, B.Sc., A.I.C. London: Cassell and Co., Limited. 1907. (Pott 8vo, pp. 304. 6s.)

[11] *The Prevention of Cancer and its Relation to that of some other Disease and Calamities*. By C. B. Keetley, F.R.C.S. London: Baillière, Tindall, and Cox. 1907. (Demy 8vo, pp. 39. 1s.)

[12] *The Gem-Cutter's Craft*. By Leopold Claremont. London: G. Bell and Sons. 1906. (Roy. 8vo, pp. 312. 15s.)

[13] *The Toxins and Venoms and their Antibodies*. By Em. Pozzi-Escot. Authorized translation by Alfred J. Cohn, Phar.D. London: Chapman and Hall. 1906. (Cr. 8vo, pp. 101. 4s. 6d.)

[14] Glasgow: J. MacLehose and Sons. 1907. (Post 8vo.)

THE late Lieutenant-General George Edward Baynes, of Hayward's Heath, who died on December 29th, 1906, left £1,000 each to Guy's Hospital and the Royal Hospital for Incurables in Putney, and made King Edward's Hospital Fund for London his residuary legatee. The residuary estate seems to be a little over £20,000.

MOTORS FOR MEDICAL MEN.

[From a Correspondent.]

(Concluded from page 1175.)

On Steering.

It is a good rule always to keep the eyes fixed on the road as far ahead as possible; this is not merely in order to have the earliest cognisance of obstacles, but because by so doing you will steer straighter and more evenly than if you look at the road nearer at hand. Always use the minimum deflection of the steering wheel which will answer the purpose; it is bad steering to move it abruptly and then have to meet a swerve by reversal of the movement. When the car is in the coach-house or in a garage, or at another time when the car is stationary, avoid moving the steering wheel, as unnecessary strain and wear upon the worm and segment is caused thereby. If the car is pushed forwards or backwards, and is in motion ever so little, the work of pulling the front wheels round is eased immensely. The attendants in garages are great offenders in this way.

The joints of the steering gear should be protected by sewing or lashing leather casings over them, which should be opened from time to time and grease inserted. It is well to practise driving backwards; for some reason or other, one has a tendency to oversteer when running backwards, and the ability to steer well backwards may sometimes save a bad accident, if from any cause the car runs away backwards down a hill.

The Care of the Brakes.

From time to time jack up both back wheels and apply the hand-brake moderately, then test the resistance of each wheel to being turned, and if it is not equal, adjust the brakes till it is. Inequality in the action of the brakes may not be much felt under normal conditions, but on a greasy road it conduces to side slip, and if in an emergency the brakes are applied hard and suddenly, may cause a dangerous swerve. When the brakes are fully on, it should be impossible to turn the wheels by hand, but the momentum of the car will turn them in descending a hill, though the hand cannot do so. It is never necessary to lock the wheels absolutely; a much stronger braking effect is produced when the wheels are revolving more slowly than the run of the car than when they are skidded.

Lubrication.

The makers generally furnish directions as to the amount of lubrication and the places which have to receive separate attention, but in general terms it may be said that with a new car some degree of overlubrication, even though it causes a sooty exhaust and soots up the sparking plugs, is advisable. After the working parts have, so to speak, "found themselves," it is no longer advantageous but the contrary. Still, at all times, overlubrication with its attendant disadvantages is to be preferred to any underlubrication. Some parts are rather apt, even with experienced motorists, to receive less attention in this respect than they require. For instance, the shackles of the springs, for the oiling of which provision is not invariably made, should be frequently oiled. And it is apt to be forgotten that the leaves of the springs work upon one another, and a little grease should be insinuated between them with a thin spatula from time to time.

Punctures and Burst Tyres.

The annoyance of a deflated tyre comes sooner or later to every one and under the most favourable circumstances means a delay of half an hour at least. Moreover, no effectual repair can be done on the road, as nothing short of vulcanization makes a really lasting repair of anything more than the smallest punctures. As solid tyres are not at present to be recommended many people now carry a Stepney wheel. This is a metal rim on which is carried fully inflated and ready for use a spare tyre. This rim is attached to the fixed rim of the wheel by means of claws which lie in between the rim and the edge of the deflated tyre, one or two of these hooks being furnished with screws for tightening them up after the wheel is in place. Nothing is done to the damaged tyre, and the Stepney wheel with its tyre lies by its side and carries the weight. It can be attached in five or ten minutes, and is perfectly efficient to take the car any moderate distance, while the old tyre is held off the ground and suffers no damage. To run on a deflated tyre even a couple of miles may, and often does, do irreparable harm to the tyre.

Imperfect Working of the Car.

The very best of cars will at times give a little trouble, and though with a new car the motorist may be fortunate enough to escape any derangements for a long time, it is necessary to be prepared for them, and to be able to diagnose the difficulty and remedy it speedily. It must not be thought from this that the modern car is an unreliable machine; for example, the writer has motored some eleven thousand miles, and only twice has his car failed to bring him home. On each occasion it was a breakage of parts not expensive nor difficult to replace, but new parts were a necessity. With these exceptions, and excluding punctures, he has experienced only one material delay of an hour, most of which time was spent in discovering an obscure ignition trouble, which took much longer to find than to remedy. It would be impossible to enter at length into all the little derangements which might possibly turn up, but a few, more or less in their order of frequency, may be mentioned.

The Engine Works, but with a Material Deficiency of Power.

The cause may be (*a*) the ignition, (*b*) the compression, (*c*) over-heating of the engine, (*d*) an ill proportioned mixture.

(*a*) *Faulty Ignition.*

Very likely the accumulators or the primary batteries, whichever are employed, are run down; test them with a voltmeter and see if it registers a full four volts. It may be that the sparking plugs are sooted up so as to be more or less completely short circuited, and then either there is no spark or it occurs irregularly.

It may be that the trembler contacts of the coil are pitted and roughened, so that they make bad contacts; smooth them with a file or small hammer, and adjust the trembler to give a note like the buzz of an angry wasp, or even a slightly higher pitched note. Or some contact may have worked loose, or the insulation have perished through oil getting upon it, or through friction or through heat.

Take out each sparking plug, connect it again with its wire and lay it somewhere on the engine so that its outer part makes good metallic contact or "earth"; turn the starting handle and see if good and regular sparks occur. Having eliminated the ignition, the commonest of all minor troubles, look for

(*b*) *Faulty Compression.*

The resistance offered to turning the starting handle will give a fair idea of the state of compression; if it is poor, it is probably the fault of the valves, which do not close tight. They may be pitted by wear, in which case they will want grinding into their seats—a tedious but not difficult operation—with a little fine emery and oil. Or they may only be dirty, and choked with carbonized oil: a wash with a little paraffin or with petrol will set this right. Sometimes the stem of the valve gets gummy with oil, and the spring returns the valve to its seat only slowly instead of promptly; this can be seen by watching the valves while the handle is turned. Or there may be a leaky joint where the sparking plugs are screwed in.

If the valves and plugs are right the fault may lie in the piston rings, or even in a cracked piston—an uncommon accident. The piston rings may be stuck with old oil; the remedy is to inject some paraffin or petrol into the cylinder, and work the starting handle. Or there may be a deficiency of oil about the rings; or a piston ring may be broken, a thing difficult to diagnose with certainty without taking off the cylinder. With a cracked piston ring a hiss is heard during the compression stroke.

(*c*) *Overheating.*

The engine may be overheated, as after climbing a long, steep hill. When the engine is excessively hot the first portion of the incoming charge is expanded so much and so quickly that the remainder of the charge cannot get in, so that the engine is starved. Sometimes an overhot engine, from causes not fully understood, loses compression to a large extent. It is possible that the piston and

the cylinder walls may not expand equally, or, again, it is possible that the cylinder having attachments to its water jacket, and so, not being uniform on all sides, may, in expanding beyond its usual point, go out of shape, and thus temporarily destroy the fit of the piston. The only remedy for a heated engine is to wait until it cools; it is not safe to empty out the water, and replace it with cold water, as the cylinder might be cracked by sudden, and perhaps unequal, contraction.

(d) An Ill-Proportioned Mixture.

If the mixture is too rich in petrol an equally bad effect is produced as by one that is too weak. To discover in which direction the fault lies set the engine running and depress the float so as to very slightly flood the carburettor; if this improves matters then the charge has been too weak. If it does not, then hold the float up and see if the engine runs faster with its petrol supply diminished; if it does, then most probably the float needle has become worn and does not close the inlet; it will want grinding in like a valve. But perhaps neither makes any difference to the running of the engine. In that case most likely some dirt has got into the path of the petrol and chokes it. Try if the float chamber floods easily and quickly; if so, the main petrol supply is all right, and the stoppage may be between the float chamber and the jet, or in the fine holes of the jet itself; that all are clear must be ascertained. Petrol as sold is by no means free from dirt, and particles of fluff sometimes find their way in from unknown sources. They are apt to give rise to puzzling results, as they may sometimes fall away from an orifice, and then be sucked back into it, so that perhaps the engine will run all right for a time and then stop or fall off in power; a petrol filter on the way to the float chamber is a useful addition to a car, if not already fitted.

THE ENGINE WILL NOT START.

As has already been mentioned, ignition troubles are the most frequent, but when the engine refuses to start it is more often another cause which is at work.

The suction obtainable by turning the starting handle is far less than that exercised by the engine running, and is, with many carburettors, insufficient to suck the petrol through the jet. For this reason we flood the carburettor, but a flooded carburettor merely has petrol flowing through the jet and running down its sides; the petrol does not issue in the form of spray. Hence, at times, particularly in very cold weather, no adequate explosive charge is drawn in. Several remedies may be tried: filling the water tank with hot water instead of cold will sometimes remove the difficulty, or petrol may be introduced direct into the cylinders, injecting a few drops by means of a bicycle oiling syringe into the compression taps, or it may be introduced into the carburettor through the extra air inlet. It may be necessary partly to close the air inlets if the engine is still obstinate, so as to get a richer mixture. Another resource is to wrap cloths dipped in very hot water round the carburettor so as to warm it up thoroughly. Of course, poor compression adds to the trouble of starting the engine. Where a magneto only is fitted it is sometimes difficult to turn the starting handle fast enough to generate a good current in the primary winding, and for this reason, if there is accumulator ignition as well, it is easier to start on this. Magnetos differ a good deal in this respect; with one car in the writer's possession it is quite easy to start on the magneto; with the other, it is wellnigh impossible, without considerable labour.

THE ENGINE STARTS BUT STOPS AGAIN.

This is nearly always the result of its getting a bad charge, some of the causes of which have already been touched upon. Many engines do not run well until warm, so that running the engine idle for a few minutes will sometimes set things right.

But sometimes the fault lies in the commutator; those which make contact by means of a roller held to its work by a spring will, when worn unevenly, sometimes make good contact when revolved slowly, but jump and miss their contact pieces when running fast, so that the commutator should be examined if this difficulty is met.

Another puzzling source of trouble is the occasional but not constant short circuiting of the current. It may happen that the insulation is rubbed through somewhere or is otherwise faulty, and does not touch anything when the engine is started, but comes into intermittent contact with some metal when jarred by the engine running fast; the same thing may happen with a loose connexion.

THE METHOD OF EXCLUSION.

It would be impossible at any moderate length to go through all of the difficulties which may crop up, and only some of those which may puzzle the novice have been mentioned. But in any case of difficulty set to work methodically to eliminate one possible cause after another. Unfortunately, the symptoms of failing or flagging engines due to a variety of causes are not very dissimilar, so that although an experienced motorist may sometimes make a good guess and go straight to the source of the trouble, it will often happen that there is nothing for it but to go step by step through possible causes, always remembering, in the absence of any distinct indication, to commence by seeing that the ignition is faultless.

And in concluding these notes the writer would once again urge medical motorists to learn their machine thoroughly and to drive it themselves as much as possible; it will afford an endless source of interest and pleasure, besides conducing greatly to economy.

The way to avoid breakdown on the road is to keep the car always up to its best: to spend a few minutes before starting out in seeing that everything is right, and occasionally to make a more detailed examination of the more important working parts.

THE POLICY OF THE UNIVERSITY OF LONDON IN RELATION TO LONDON MEDICAL EDUCATION AND MEDICAL SCIENCE.

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(*Continued from* BRITISH MEDICAL JOURNAL, *May 11th, p. 1130.*)

III.

FACTORS CONCERNED IN PRODUCING THESE RESULTS.

THIS falling-off in the numbers entering the London schools for their entire education—from 40 per cent. to 20 per cent.—may well be a subject for serious consideration by those interested in London medical education. But if fully faced, it need not be regarded as a "crisis"; still less need its full consideration "threaten the disintegration" of the University of London, which desires so much to help the cause of medical education. It is more likely to effect what the University itself and all interested in London medical education desire—namely, to "promote the integration" of the University as a really teaching university instead of being, as hitherto, that unique and anomalous institution, an "examining" university.

1. DIMINISHED ENTRY INTO THE MEDICAL PROFESSION.

The percentage figures (see Chart 2, London curve, in BRITISH MEDICAL JOURNAL, May 11th, p. 1129) show clearly that the fall has been steadily going on for the past thirty-five years. It has only been masked from view by the larger number of students entering the medical profession between the years 1880 and 1891—an influx suddenly arrested in 1892 by the introduction of the five years' curriculum, instead of the four years' curriculum up to that time in operation. The effect of this change on the numbers registering is, in the yearly charts I have prepared, immediately seen in nearly every school, from 1892 onwards (Cambridge alone excepted), but became fully manifest in all of them from 1894 onwards (Cambridge again least affected). The chief centres affected were Glasgow University, its numbers falling from 172 in 1891, to 136 in 1892, and 101 in 1893; and Edinburgh University, its numbers falling from 244 in 1891 to 179 in 1892, and to 154 in 1894. In the case of London, the effect of this change became very manifest from 1895 onwards, and still more so from 1898 (when the number was 356) to 1901 (when the number was at its lowest, 222). Some part of the numerical fall in the

London schools is due, then, to causes affecting the prosperity of all the schools—namely, the lessened number of students entering the medical profession. The number for England and Scotland (1905-6) was 1,140, as compared with 1,638 (1890-4), and 1,672 (1885-9).

2. Competition of other Schools.

But while this is so, a study of the numerical chart (Chart 1), and still more of the percentage chart (Chart 2), shows that London has been far more affected by the steady encroachment of other schools, both English and Scottish. The chief competitors have been Cambridge University, which has withdrawn over 7 per cent. of the total students entering in England and Scotland; and Edinburgh, which has withdrawn another 10 per cent. The view widely entertained and often expressed that the present state of affairs in the London schools is due to the withdrawal of its students by the new English provincial universities is to this extent true—that, as the curve for these schools (Chart 1) shows, the notable fall which occurred in London and in Edinburgh between 1890 and 1899 did not appreciably affect the provincial schools, either as regards number (Chart 1), and still less as regards the percentage (Chart 2). On the contrary, a striking feature of the provincial schools has been the steady position they have maintained during the last twenty-five years. The extreme variation has been 12.2 per cent. and 13.8 per cent. of the total. The same remark applies to the University of Glasgow and to the University of Aberdeen. They have maintained for twenty-five years a remarkably uniform and steady position, Glasgow registering about 9 per cent. of the total students registered in England and Scotland (with its other schools about 10 to 11 per cent.), and Aberdeen showing a slight falling off, but still registering on an average between 4 and 5 per cent.

3. Public Interest in and Adequate Endowment of Medical Education.

The effect of these two factors is also demonstrated incidentally in the relative prosperities of the individual schools; even while their histories also illustrate that prosperity in medical education is not simply a commercial matter of "so much money, so much result," as is sometimes loosely but quite erroneously asserted or suggested. Nothing but such public interest with corresponding efforts in supplying and equipping proper laboratories, schools, and in some cases (for example, Glasgow University and Edinburgh University) even hospitals, can explain the steady position maintained by so many of the smaller schools throughout the past twenty-five years, in spite of the many attractions offered their students by larger and more renowned schools.

Victoria University, Manchester, the largest of these universities, owes its origin and present position to the munificent endowment which created Owens College. It is the third English University for Medicine. It is by far the largest of the seven great provincial universities, its registered entries during the ten years (1888 to 1899) averaging no fewer than 76. Affected like all others by the diminished entry into the medical profession, it fell in 1900-6 to an average of 50. But its position as the chief great provincial university has been fully maintained. It registers over 31 per cent. of the students entering the seven provincial universities as compared with Liverpool 20 per cent., Durham 15 per cent., Leeds 12 per cent., and Birmingham 10 per cent. The later remarkable development of Liverpool, which in the short period of a decade has left a permanent mark on the development of the great science of tropical medicine, is the direct outcome of the public interest taken in medical education and the public-spirited action of its citizens in building, equipping, and endowing its great laboratories. The same applies to the other, both older and more recently founded universities and university colleges of Durham, Birmingham, Leeds, Bristol, Cardiff, and Sheffield.

The Task of the London Medical Schools.

But here again the history of individual universities, and of individual hospitals in the case of London, conclusively shows that endowment alone, apart from the particular policy adopted in education, is not sufficient either to create a great school of medicine, or enable it to maintain the relative position already attained among other schools. This conclusion is of particular importance in relation to the present position of medical education in London. It may be doubted whether in any great metropolis in the world there is less public interest in medical education or less adequate endowment of such education than in London. But for the munificence which gave endowment to a few of its great hospitals—to St. Bartholomew's, to Guy's, to St. Thomas's—it may be said that endowment of London medical education does not exist. If it had not been for the public spirit of the hospital authorities, in at once encouraging and benefiting by the formation of schools in connexion with their hospitals, it may without contradiction be said that medical education in London would have never attained the commanding position it once held (attracting 40 per cent. of all students entering the profession). Nor would it in the face of the powerful competition that has developed during the past twenty-five years continue to attract the proportion (still a large one) of 20 to 34 per cent., as it does. These London hospitals and medical schools have really for years discharged a great public duty in the cause of medical education for the whole kingdom. With two or three exceptions, they have discharged it without the slightest endowment either for the equipment of laboratories or the provision and payment of teachers, such as all universities have made it their chief purpose and function to provide. In so doing they have upheld the cause and importance of medical education in London in times when the public interest in it has been *nil*. They continue to discharge their duty under increasing difficulties, arising partly from the successful and increasing competition of other universities—in which medical education is made a primary duty—adequately endowed and provided for; partly from their own historic, independent, and detached development, and isolated policy; but most of all from the character of the university policy governing the granting of degrees to the students they educate. If the true position of things is realized and fully faced, not in any detached way as it may affect one or other school, but in a broad spirit commensurate with the great interests involved—to wit, the whole cause of medical education in London and the duty still resting with London of educating completely or partially one-fifth to one-third of those entering the medical profession—if this is done, I see no reason for regarding the present condition of affairs as a "crisis." I should be rather disposed to welcome it as serving to draw attention to an unsatisfactory condition of things which has existed and grown steadily worse for over forty years—a *University Policy* adopted by the University in examination and in granting degrees to their students—thoroughly unsound from whatever point of view it may be considered—whether in relation to the cause of medical education in London (still a great cause), the credit of the University of London, the efficient and successful work of its schools, and lastly, but most important of all, simple justice to its London students. As the figures I have given conclusively show, medical students are being driven out of London year by year in increasing numbers, to seek and obtain in other university centres not only the medical education but also the university degree which these universities offer them.

The extent to which this great falling off in the number of medical students entering on their professional studies through the London medical schools has added to the difficulties which these schools have to contend with has already been seen.

It may here be stated briefly that but for the partial relief for the relief is only partial afforded them by the steady success of the Cambridge Medical School, which sends to London for the latter half of their education the 9 per cent. of medical students which it now educates, the London medical schools and London medical education would be even harder hit than they at present are.

But this addition of 9 per cent. to their number—or of the further 2 or 3 or 4 per cent. which they may get from Oxford and other schools—however much it may aid the task of medical education which they discharge, only brings out into stronger relief the contrast between the policy adopted by the University of London and that of Cambridge. For it is that policy that is originally responsible for the loss of this percentage (10 per cent.) to the London schools. Every policy must be judged by its

results. The adoption of a particular policy by Cambridge serves, despite the cost of education, to withdraw one-quarter to one-half of the students who formerly began in the London medical schools, while the policy of the University of London fails to retain these for London and a London degree.

That policy, while professedly aiming at a higher standard of medical attainment on the part of its graduates, and animated by a burning—often termed Imperial—desire to promote all forms of education, including that of medical science, has, in virtue of its original constitution, been, perforce, obliged *to leave the actual duty of such education* to others—and, in the case of London, to its medical schools.

And the standard set up is not so much one of medical and scientific attainments (although such is included), but a kind of preliminary knowledge of an arbitrary, useless, and pedantic character. If essential to entrance upon other learned professions, it would most effectually deplete the Bench, the Bar, the Church, the Law, or any other profession that could be selected, except that of a schoolmaster and university coach.

UNIVERSITY POLICY.

A university policy so anomalous, so new to all university experience in the history of medical education—one which leaves all the *education* (the true object, surely, of every university) to others and confines itself merely to examining the products of other people's work—such a policy could only be justified by success of its *examinational system.*

(1) MATRICULATION EXAMINATION.

The existing examination system effectually deters most students from even attempting to enter the Faculty of Medicine, not by the *standard*, but by the *character* of the knowledge required, utterly unsuited, as it is, to anything required by their subsequent work. It asks from its medical candidates as a criterion of their fitness to enter its Faculty of Medicine such questions as:

1. "Enumerate the pronominal and adverbial forms derived from the stem of 'here,' and show generally how each comes to have its present meaning";

2 "Describe in ten octosyllabic couplets a sunrise or a sunset."

3. "Give instances of the influence of accent on vowel sounds in compound words."

4. "Give some account of the letter H, and what it stands for. Mention some words in which it has disappeared, some in which though written it is not pronounced by educated people, some in which it used not to be pronounced but now is."

5. "Write a concise essay of about two and a half to three pages (500 words) on such subjects as:

The balance of power among European States (1) in Europe, (2) in other parts of the world;

The history, political and physical geography, climate, etc., of an important English colony (for example, India, Canada, or Australia).

The development of religious toleration in England.

The history of our relations with France in the fifteenth century.

Religious movements in England since the Reformation.

Scientific advance in the nineteenth century.

The historic towns of England.

A sketch of British rule in India.

The Roman dynasty.

(June, 1906). Write an essay of two and a half pages on one of the following:

(1) The Danish Invasions of England.

(2) The Political Institutions of the Saxons and Normans.

(3) The relations between England and Scotland in the Thirteenth Century.

(4) The Cotton and Woollen Manufactures in the United Kingdom.

(5) The Mountains and Rivers in the West of Europe.

(6) The Chief Exports and Imports of Canada and Australia.

6. "In what years in the present century has the 29th of February fallen on a Sunday?"

7. "Find how many different integers, besides unity, divide 9009 without a remainder."

8. "A hollow closed cubical box is made of iron, and is 2 in. thick, the external edge being 4 ft. long; it being given that iron weighs 7.112 times as much as water, and that a cubic foot of water weighs 1,000 oz., find in tons the weight of the box."

9. "Explain why all the fractions $\frac{1}{7}$, $\frac{2}{7}$, $\frac{3}{7}$, $\frac{4}{7}$, $\frac{5}{7}$, $\frac{6}{7}$, when reduced to recurring decimals contain the same digits in the same order.

10. Divide .00012 by the product of .002$\dot{1}$ and .$\dot{5}23809\dot{5}$.

The above samples are only a few selected at random from papers during the past few years. They could be multiplied indefinitely. They illustrate the *spirit* underlying the Matriculation Examination of the University of London.

I am here concerned with it only in relation to medical education—an education demanding as its chief feature the careful training over a term of years of the powers of observation and judgement. So far as medical education is concerned, the criticism recently passed on it by one of its own graduates is amply deserved: "The worst examination which the witlessness of man outside of China has ever contrived—radically wrong in conception, pedantic in its syllabus, and conducted with complete disregard of the interests of learning or common sense—the natural prey of the crammers—a series of obstacles designed not to test the candidates' capacity or knowledge, but merely to circumvent the crammers."

Upon such a spirit and such a system of examination no university can be built.

The following table (Table IV) shows that so far as medical education is concerned this fact is becoming more and more realized.

The *percentage* of matriculated students registering as medical students has heavily fallen during the past twenty-five years—from 20 per cent. in 1890 to 5 per cent. in 1905; and the *number* of such students has fallen from 273 in 1895 to 152 in 1905:

TABLE IV.—*Results of the Matriculation Examination.*

Year.	Number of Candidates.	Number Passed.	Number and Percentage of Matriculated Students Registering as Medical Students.	Number of these Registering in Eleven London Hospitals.
1880	1,400	680	137 (20 per cent.)	91
1885...	1,900	1,094	181 (16.5 per cent.)	99
1890	2,762	1,278	226 (17.6 per cent.)	123
1895	3,420	1,710	273 (15.9 per cent.)	117
1900	4,341	1,917	218 (11.3 per cent.)	69
1901...	4,198	2,121	167 (7.8 per cent.)	77
1902...	5,106	2,426	182 (7.5 per cent.)	—
1903	5,929	2,821	182 (6.4 per cent.)	—
1904	6,708	3,255	179 (5.4 per cent.)	—
1905...	6,718	2,824	152 (5.3 per cent.)	70

Such is the outcome of the examination policy and system of the University of London, 1838–1905, in relation to medical education. Such a system may have much that is commendable. But it is a system in its essence and in its results so false to the real requirements and objects of medical education that it is not surprising that it should not have contributed to the prosperity of medical education in the centre where such a university spirit prevails.

(2) PROFESSIONAL EXAMINATIONS.

As the result shows, the same spirit extends to the conduct of all the subsequent professional examinations.

If there is any merit in the matriculation examination, the result must be that the University of London succeeds in securing a particularly well-educated and intelligent set of men as its undergraduates in medicine, subsequent education of whom any University might well be proud to undertake. As has been seen, however, the University of London leaves them to procure their medical education

where they like, at the cost of other institutions and schools.

The following shows the place of study selected by the successful candidates in the *Preliminary Scientific* examination held in January, 1907:

Part I.—Out of 80 successful candidates, no fewer than 19 received their preliminary scientific training in the following institutions:

University Tutorial College	4
University Tutorial College and Birkbeck Institute ...	1
"Private study"	3
Derby Municipal Technical College	1
Cheltenham	1
Epsom College (and London Hospital)	3
University College, Bristol (and Guy's)	1
University of Liverpool	2
University of Birmingham	1
Victoria University, Manchester	1
University of Leeds	1

Part II.—Out of a total of 35 successful candidates, no fewer than 14 received their education in schools other than the London hospitals.

Intermediate Examination.

Out of 55 successful candidates 11 received their education in other than London schools:

University College, Cardiff	4
Victoria University	3
University of Leeds	3
University of Birmingham	1

It is difficult to understand how the interests of the University of London or of medical education and science can be advanced by allowing no fewer than one-sixth (13 out of 80) of their future graduates to receive their preliminary scientific training in tutorial institutes and "private study."

The following shows the results of the professional examinations:

1899-1905.	Number of Candidates.	Number Passed.	Percentage Rejected.
Preliminary Scientific ...	1,890	983	48
Intermediate	1,682	1,096	35
M.B.	1,367	781	43

In any other university, the fact that after going through the educational course which the University in its wisdom deems sufficient no fewer than 40 to 50 per cent. always fail to pass their examination, would be a sound reason for holding an official court of inquiry into the capacity of the professors responsible for such a waste of their students' time. The University of London has, however, no power of control over and no power of dismissal of the teachers (all over the country) whom it relies upon to educate its students. It possesses, however, the power to infuse a different spirit into its policy, and thereby materially promote both the interests and usefulness of the Faculty of Medicine in relation not only to London medical education, but also to medical education and science as a whole. This can be done not by any change involving *lowering* of its standard, but merely by changes showing a truer appreciation of the most urgent requirements of medical education and medical science in London.

IV.

MODIFICATIONS OF UNIVERSITY POLICY SUGGESTED BY FOREGOING FACTS AND CONSIDERATIONS.

Concentration is indeed called for, in the interests of university medical education in London. But the first direction that *Concentration* must take must be one of *endeavour* on the part of all concerned to remove the obstacles which at present (1) effectually deter students from entering the Faculty of Medicine at all; (2) and at the same time inflict a serious injury to medical education in London by driving out year by year its students to other schools to get the university degree which not only they but the public more and more require as a stamp of successful medical education.

Good as the material may be which the University now admits into its Faculty of Medicine as undergraduates, no less good and far more abundant is the material which it yearly rejects or repels by the *character* of its entrance examination. For medical attainment is a plant of slow growth. It can grow out of soils less artificially manured than that which (by combined ingenuity) crammers and examiners consider necessary for its development. The education which enables a boy of 16 or 17 to "write ten octosyllabic couplets on a sunrise or a sunset," or "give an account of the letter H," or "state in what years of the present century the 29th of February has fallen on a Sunday," is not necessarily the one which teachers of medicine find best fitted to develop the peculiar faculties of observation and judgement in medical education.

It is in the power of the University to free university medical education in London from the chief incubus—for it is the chief one—pressing so heavily on London medical education during the past forty years; from the cause—for it is the chief cause—depleting year by year its schools. It can recognize what all other universities have recognized—that the character of the knowledge required by a student prior to entrance upon medical studies is not the same as that required by one entering upon the study of arts, or classics, or science.

The boy who at the age of 17 to 20 has not shown some recognizable capacity for classics or mathematics is not likely to develop that capacity at a later date, however long he may study. The capacity which a boy may have for medical studies—possibly for the highest attainments in such studies—is an absolutely unknown quantity at the age of 16 or 17, and may remain unknown for 10, 15, or 20 years later. Since, then, the course he has to run is so much longer (and requires careful development of other powers and faculties) why burden him at the outset with unnecessary and useless equipment?

If this be admitted—and no lowering of standard, but only sound common sense, seems to be involved in the admission—it is quite possible, and compatible with the highest standard of university medical education, to devise an entrance examination for the Faculty of Medicine more adapted to the future needs of the medical student, and less the sport of crammers and examiners than the one now existing.

Till this is done all efforts to remedy the present unsatisfactory conditions of university medical education in London are doomed—and rightly doomed—to failure. For, however imposing the superstructure may be—however great may be the efforts made in other directions (afterwards to be considered) to promote such education—the basis of the whole superstructure will remain as it now is.

That basis is, that the University leaves the responsibility of educating its students to others; and the students admitted into its Faculty of Medicine are only those deemed suitable for admission by a set of examiners and crammers whose chief aim it seems to be to outwit each other without the slightest regard to the important interests of medical education or the credit of the University, both of which they sacrifice.

Under the will of the late Mr. John Thomson of Tunbridge Wells each of the following institutions receives a bequest of £1,000: St. Bartholomew's, Guy's, the London, Westminster, King's College, St. George's, Charing Cross, the Middlesex, St. Mary's, University College, the Brompton Cancer Hospital, St. Thomas's, the Royal Free, the Great Northern, the West London, the National Hospital for the Paralysed and Epileptic, the Royal London Ophthalmic Institution, the Hospital for Consumption and Diseases of the Chest, Ventnor; the Brompton Consumption Hospital; the Hospital for Sick Children, Great Ormond Street; the Victoria Hospital for Children, Chelsea; the General Hospital, Tunbridge Wells; and the Royal Hospital for Incurables, Putney. Sums of £500 each are left to the Earlswood Asylum for Idiots and the City of London Hospital for Diseases of the Chest; and £250 each to the Surgical Aid Society and the Eye and Ear Hospital, Tunbridge Wells; also £150 to the Tunbridge Wells and Rusthall Dispensary. A number of Glasgow institutions, including the Royal Infirmary, the Western Infirmary, the Victoria Infirmary, the Cancer Hospital for Sick Children, and the Hospital for Skin Disease, are also left considerable sums. The residue of the estate, which would appear to be about £20,000, is directed to be divided between Guy's Hospital, St. Mary's, Westminster Hospital, the Glasgow Royal Infirmary, and the General Hospital, Tunbridge Wells.

ROYAL COMMISSION ON VIVISECTION.

SECOND REPORT.

AN appendix to the second report of the Royal Commission on Vivisection, dated April 15th, has just been issued.* It contains minutes of the evidence taken during February and March.

Evidence of Mr. W. H. Power, C.B., F.R.S.

Mr. W. H. Power, Medical Officer of the Local Government Board, said the Board had no laboratories of its own; at one time the Board used to hire laboratories for its pathological work, but of late years it had made an agreement with each of the investigators which covered not only his personal remuneration, but his working laboratory expenses, and he had to make his own arrangements with some public laboratory in which he carried on his work. It employed several gentlemen. One, Dr. Sydney Martin, worked at University College Laboratory; two worked at the laboratory at St. Bartholomew's Hospital; and one was working at the Lister Institute. It was piece-work. He did not operate himself, but considered the work to be done, and continued it to a certain extent, and arranged with the actual investigator, estimating its cost and the number of animals, and the sort of animals that would be used. It was the investigator's business to get a licence for himself and for the laboratory, if necessary, where he worked, and to get the necessary certificates. That was done between him and the Home Office. Mr. Power did not personally superintend the work, to see whether the investigator conformed to the Act, but he looked very strictly after the result, as to what the several experiments were, and got a full report from him of all the work he had undertaken. This appeared in the medical officer's annual report, which was laid before Parliament. Usually the witness commented upon the work of each operator. A letter was always sent to scientific workers for the Board, in which the following passage occurred:

> I am to remind you that no experiments on living animals are to be conducted at the cost of the State without the employment of anaesthetics in the case of painful operations, nor without a report to me from time to time explaining the object of any such experiments made by you, and showing their necessity for the purpose of discovery.

Most of the operations done for the Board were mere pricks or feedings, but in the particular instance of a test of blood pressure or anything of that kind where anaesthetics would be required, or a dog or cat used, the witness expected to be informed of it by the investigator before he undertook it. He would expect to be informed about a painful cutting operation. The studies now undertaken for the Local Government Board in this connexion were of two classes—investigation of problems the prompt solution or provisional solution of which promised to be of immediate administrative advantage to the Board in the exercise of its public-health functions; and studies which from their nature could not be carried out by the Board's inspectors. The studies promised rapid results, but required systematic and continuous labour extending over considerable periods of time. Besides himself there were two assistant medical officers and thirteen medical inspectors. Asked if there had recently been any great increase in the number of experiments upon animals that the Board had collected, the witness said he did not think that from year to year there had been a very large difference. He had made a note of one year, 1901. They appeared to have used in that year 294 animals out of between 6,000 and 7,000 used in the country generally. That figure was got from the Home Office return. The animals used were almost wholly mice, rats, guinea-pigs, and rabbits. Occasionally there had been a dog or a cat. In reply to further questions, the witness said he should think 80 or 90 per cent. of the experiments would be subcutaneous inoculations. Occasionally there was intravenous injection, and sometimes there was a mere cutaneous scratching, but he thought the very minor ones were about 90 per cent. He thought it would be 98 per cent., inclusive of feeding. It was no part of the duty of the Local Government Board to try to discover remedies. In reply to further questions, Mr. Power said he would not like to say that in the present day, at all events, the aggregation of children in schools had very largely conduced to the maintenance of diphtheria mortality, nor with keeping up the disease in the country. Insanitary circumstances appeared to have very much less to do with the dissemination and maintenance of diphtheria than with many other diseases. Diphtheria seemed to be almost independent of them. In reply to Sir William Collins, Mr. Power said the Local Government Board had never used Wright's antityphoid serum. The Board did not supply the serum, and had not given the public authorities any special facilities about it. No serum, except the diphtheria antitoxin, had been very largely used here, and the diphtheria antitoxin had not been so largely used as, perhaps, it might have been. Asked from what source the Local Government Board vaccine lymph was derived, he said when it was started he believed it was obtained in the first instance from Cologne, but what was the exact source of it there was not very certain; it was alleged at the time that it was from casual cow-pox. Since that day the lymph had been renewed again and again, and always from the Continent; and what the remote source of any vaccine from the Continent was now, he should think it was almost impossible to say; probably a good deal or it was variolous. It was very largely still simply Cologne lymph, and that lymph had only been kept going, he understood, by frequent retrovaccination from human bodies to calves. All the lymphs that had a direct so-called cow-pox origin were liable to become inactive and to require constant retrovaccination, and even then they were found to be not altogether satisfactory. It was believed at the time they adopted the Cologne source that they were going to get the natural cow-pox to start with, and none satisfactory was forthcoming at home. He believed that Cologne lymph was taken as representing most nearly at that day current lymph arisen from the casual cow-pox. In reply to further questions he could not say that the lymph now in use was not of variolous origin. All he could say that it was passed by a great many removes, and with perfectly satisfactory results so far as the anatomical appearances were concerned, through a series of calves before it was allowed to pass into circulation. It reacted uniformly effectively on the calf. They would not think of allowing to be used in the public service a lymph admittedly only recently derived from a variolous source, whether directly from the human being or through a monkey, and then on the calf. Asked if Dr. Copeman had not endeavoured to raise a stock of vaccine lymph by putting through a certain process scabs derived from small-pox patients, he said he thought so. He tried a variety of ways; passing it intermediately through monkeys as well as directly in the calf. No lymph that Dr. Copeman produced had been used either for calf vaccination or for infant vaccination by the Board. Asked if he could say whether it was or was not used for the vaccination of children, Mr. Power replied that he could not say what Dr. Copeman did with it. He did not try it on any children for whom the Board was responsible. He thought that ultimately the lymph probably was used upon children, but not with the authority of the Board. In reply to Dr. George Wilson, the witness said Jenner's vaccine was supposed to manufacture locally at the point of the arm in which it was inserted a chemical substance which was subsequently disseminated through the tissues, whereas the preventive of modern days was obtained by manufacture of a chemical substance in artificial culture outside the animal body, for subsequent administration by injection into the body to be protected. Asked if it was within his knowledge that medical men who were constantly seeing cases of diphtheria protected themselves against contracting the disease, he said he thought they relied on that amount of immunity which seemed to grow with increase of age, believing that they were less liable as they grew older; or, perhaps, they thought that they had got a protection from some previous diphtheria or quasi-diphtheria. He did not think they took the serum.

Evidence of Professor A. R. Cushny.

Dr. A. R. Cushny, Professor of Pharmacology and Materia Medica in University College, London, said his work was generally directed to elucidating the action of

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drugs, particularly new drugs, not toxins so much as chemical drugs and plant drugs, not the actual animal toxins. He desired to explain the influence which the experimental method in pharmacology had exercised on therapeutics in the course of the last half century, during which the study of pharmacology had been carried on by the examination of animals. His object was to explain the way in which drugs acted in patients when one could not see how they acted, by examination of their effects on animals either in health or disease, particularly in health. Animal experimentation had added very little to the knowledge of the effects of purgatives, which, of course, were perfectly obvious, and also comparatively little to the action of emetics, except in adding one or two. Drugs, for example, which acted upon the brain, or acted upon the heart, or acted upon the liver or kidney, which had not such obvious effects had been really worked out in detail by experiments on animals. Digitalis was introduced into medicine about 1785 by Withering, who found that it was a remedy for dropsy; and it was used in dropsy, without any comprehension how it acted, for a good many years. They showed by experimental methods that one effect of digitalis was to raise the blood pressure to a marked extent, which was the worst treatment possible in aneurysm. Traube's work in physiology was largely suggested by his clinical work; and he went to work out how digitalis acted, because he evidently failed to do so in his patients. Brunton's interests were always clinical, and he went to animals in order to explain the problems he could not solve in patients. The danger of trusting exclusively to clinical examination for therapeutic advance might be exemplified by the same drug. It was undoubtedly of value in certain forms of pneumonia, and was useless or deleterious in others. The heart action discovered by experimental methods, however, directed the clinician's attention to this phase of pneumonia in relation to digitalis, and he found that the statistics of cases of pneumonia in which the heart was involved were improved by digitalis. For many years lead had been used to arrest haemorrhage from the lungs, the lead being given by the stomach, generally in the form of pills. Its efficacy was unquestioned, apparently, by physicians until experimental inquiry elicited the fact that lead was only absorbed in small quantities and very slowly. Lead was given to animals, and it was looked for in the urine and not found there; practically the whole of the lead could be recovered from the bowel; there was no lead practically excreted, and there was no lead found in the blood when it was examined after lead had been given in animals. There was no sign of this discovery being in process of being made by clinical observation. Many old drugs had been discarded as the result of experimental inquiries, while others had proved to have properties previously unsuspected. The physician now had a much clearer view of what his remedies could do, and prescribed with a definite purpose, while formerly he could apply them only on the general knowledge that they were followed by favourable symptoms in some cases resembling more or less closely the one in hand. The experimental method had so defined the action of a drug that it could be applied much more accurately than before. An immense expansion of the resources of the therapeutist had occurred as the direct result of experimental inquiry. As instances he mentioned several groups; the first was the soporifics. The first of these to be discovered was chloral. In 1868 Liebreich took up a problem of purely scientific interest—namely, whether "a substance is broken up into its constituent parts before it is oxidized." For that purpose he injected trichloracetic acid and chloral into frogs and rabbits. These two bodies had never been used in therapeutics or in experiments before, and nothing was known of their effects on the organism. Liebreich was so interested in the effects of chloral in causing sleep in animals that he devoted his attention to a long series of experiments on its soporific action in animals. He tried it in a number of cases in order to combat sleeplessness, and the result of the experiments was to introduce chloral as a safe and useful soporific, and it had been adopted generally in medicine. Another soporific was sulphonal. While Baumann and Kast were examining the changes in organic sulphur compounds in the body their attention was attracted to the action of a group of bodies—the disulphones—on a dog, which went to sleep and only regained its normal condition a number of hours afterwards. Kast examined this phenomenon in a long series of experiments on different animals, and then tested the effect on man. The successful results induced him to introduce into therapeutics the very valuable hypnotic sulphonal. Later, comparisons of the effects on animals led Kast to prefer the analogous compounds trional and tetronal as somewhat better, and they had also been used in therapeutics. In 1881 Cervello examined the effects by a number of bodies on animals, among them paraldehyd. He expected this compound to act like aldehyd, and was much surprised to find it caused sleep. He advised its use in medicine, and it was now included in most pharmacopoeias, including the British. Crum Brown and Fraser were the first to point out as the result of animal experiments that bodies resembling each other in chemical composition often induced somewhat similar effects in the animal body, and the discovery of these sleep-compelling compounds suggested the view that all bodies of a chemical composition similar to them would act as useful hypnotics. As a matter of fact, this was only partially true. Each body had to be tested on animals to find whether it had hypnotic properties which could be utilized in practice, and comparatively few had stood the test. Liebreich's introduction of chloral had, however, proved to be the first of a very considerable group, all introduced into medicine by the same way of animal experimentation. These were amylene hydrate, urethane, hedonal, neuronal, chloretone, isopral, chloral-amide, chloralose, bromoform, and last of all, perhaps the best of the series, veronal and proponal. No soporific had been introduced in the last forty years except by means of animal experiment. These substances could not have been introduced without experiment on animals. For example, if one took paraldehyd, an ordinary dose would be 4 or 5 c.cm., say, and if one started with the latest member of the series, veronal, in the same dose, it would be poisonous. The dose of veronal would be only about a tenth of the dose of paraldehyd, and it might be very dangerous. In small doses these drugs in human beings caused sleep; in large doses they acted as anaesthetics. The whole of these drugs were poisonous in large doses, and when they were invented one did not know what was a large and what was a small dose. Professor Cushny went on to speak of local anaesthetics. Over thirty years had passed since the introduction of the general anaesthetics, ether and chloroform, when Von Anrep examined the effects of a new alkaloid, cocaine, on animals. All that was known of the coca plant was its traditional power of preventing fatigue and hunger. Von Anrep noted that cocaine induced local insensibility to pain, and stated at the end of his paper that he had "intended, after the examination of the physiological action of cocaine on animals, to investigate its effects on man; other occupations have made that impossible for me as yet. But I would recommend cocaine as a local anaesthetic." His words passed unheeded, and he died shortly afterwards without realizing the importance of his discovery. In 1884, Koller, an ophthalmologist of Vienna, tested the anaesthetizing properties of cocaine on the eyes of guinea-pigs, rabbits, and dogs. He found that a few drops of a 2 per cent. solution applied to the eye removed sensibility to pain in the organ, while inducing no general symptoms. The eye could be touched or scratched without the least symptom of pain. He used in man the same solution and the same method as he had learned was successful in animals, and the result was the introduction into medicine of a new method of relieving pain and permitting of operations, the value of which was recognized by every surgeon and practitioner of medicine. But the use of cocaine was soon found to be attended with certain drawbacks; it could not be sterilized very easily, and a number of grave cases of poisoning occurred. Substitutes were therefore sought for which should combine its anaesthetizing properties with a less poisonous action. Their toxicity had, of course, to be tested on animals of all kinds. As a result of these experiments eucain was introduced by Vinci, and had since been followed by anaesthesin, novocain, acoin, stovain, alypin, and others, which appeared to be less toxic, but were still capable of much improvement. No local anaesthetic had been discovered except by means of experiments on animals. Another

large group of remedies which were introduced by means of experiments on animals was the antipyretics—antipyrin, antifebrin, and phenacetin. The first antipyretic which had succeeded in maintaining its foothold in therapeutics was antipyrin, which was recommended by Filehne on the ground that it reduced the temperature in animals in fever by artificial infection. Antipyrin was soon followed by antifebrin or acetanilid, which was recommended by Cahn and Hepp, from their results in animal experiments. Examination of the changes undergone by antifebrin in the tissues of animals suggested that bodies of a certain chemical composition (paramidophenols) would also elicit this action, and phenacetin was soon introduced, to be followed by a large number of similar bodies. Each of these had to be tested in animals before being used in therapeutics, as it was found that though many paramidophenols were antipyretics, some were inactive, and others elicited undesirable symptoms. Among those available might be named phenacetin, analgin, thermifugin, antithermin, salipyrin, exalgin, lactophenin, malakin, saliphen, salophen, apolysin, citrophen, kryofin, phenocoll, salocoll, euphorin, thermodin. Proceeding, Professor Cushing said the experiments of Fraser on animals first demonstrated the action of physostigmin or eserin on the eye, and led to his examining whether the same results could be obtained in man. The success attending these experiments led to the introduction of that drug into ophthalmic therapeutics, notably in the treatment of glaucoma. Glaucoma appeared to be due to an increased pressure in the interior of the eyeball and physostigmin reduced that pressure. Sir Robert Christison had experimented on himself with Calabar bean from which physostigmin came and almost died of the experiment. Fraser adopted the safe plan of trying it on animals, and discovered its effect on the eye. The fifth group was cardiac tonics. An African arrow poison was sent to Sir Thomas Fraser as an object of toxicological interest, and the examination of its effects in animals led him to the discovery of strophanthus, which had since been used widely, and was contained in most pharmacopoeias. It was used instead of digitalis in certain conditions. Several other cardiac tonics had been introduced into therapeutics, and had had more or less vogue—helleborus niger, convallaria, and so on. The sixth group was vascular dilators, of which the first was amyl nitrite. An observation made by Gamgee in the course of some experiments on the effects of drugs on the blood pressure in animals formed the ground on which Lauder Brunton was induced to try it as a remedy in angina pectoris. These experiments, and those subsequently performed by Brunton and others, showed that the substance exercised a powerful influence on the walls of the vessels and thus reduced the blood pressure. Brunton's inference was that it would reduce the blood pressure and relieve suffering in patients in whom he had observed a very high pulse tension, as in angina pectoris. The immediate relief given by nitrite of amyl in angina pectoris had been testified to by thousands of patients and physicians, and amyl nitrite was now recognized by all the pharmacopoeias. Soon afterwards nitroglycerine and nitrite of sodium were introduced on similar grounds, each having been tested on animals, and more lately erythroltetranitrate and other nitrites and nitrates had similarly been advocated in therapeutics. No vascular dilator had been discovered except by means of animal experiment. The seventh group was vascular contractors. Oliver and Schäfer and Szymonowicz discovered simultaneously, in the course of experiments on animals, that the extract of suprarenal gland exerted an extraordinary action on the vessel walls. That observation was followed almost immediately by the introduction of the extract into therapeutics to induce local constriction of the vessels in inflammatory conditions and in haemorrhage. Soon the active constituent, adrenalin, was isolated, and a solution of this body had since been used throughout the civilized world. The eighth group of drugs was diuretics, the first of which was caffein. Caffein had been used occasionally in medicine, but its action and usefulness were misunderstood, as it was generally supposed to be a cardiac tonic. Von Schroeder first vindicated for it a position in therapeutics as a pure diuretic by his researches on animals, and its use had since been much extended. Von Schroeder found out that caffein was somewhat uncertain in its action owing to a secondary effect it exerted on the circulation, and advocated in its stead the use of the nearly related substance theobromin as a more powerful and more certain diuretic. Theobromin had not been investigated before, either in animals or in man. Since von Schroeder's experiments, it had been used very extensively in therapeutics, either as theobromin or in diuretin and similar bodies. The ninth group was urinary disinfectants. Nicolaier, in 1894, introduced urotropin into therapeutics, stating that "on the basis of experiments with urotropin, which indicated that only very large doses induce symptoms, and that these disappear as soon as the treatment is stopped, I thought it safe to try its effect on man." This drug was followed by a number of other remedies of similar constitution, which had been used more or less for their effect in gravel and other conditions. Some of the older remedies had been modified by chemical manipulations, and the products had been advocated in medicine after preliminary trials on animals. As examples might be cited heroin and dionin from morphine, euquiin from quinine, and aspirin from salicylic acid. The chemist formed, perhaps, twenty different compounds from morphine, and sent them to the pharmacologists to investigate which of them were useful. The pharmacologist investigated their effects on animals, and selected one or two; but before they were mentioned in medicine they were all subjected to trial on animals. Coming to antiseptics, the witness said the local antiseptic action, such as that of carbolic acid, could not be tested in animals, but only on living microbes. But as soon as it was realized that, in addition to their local action, they might prove poisonous by absorption into the general system, they became the subject of animal experiment. New antiseptics were advocated on the ground that they were less poisonous to the higher animals, and therefore to man. Examples were the creosols (such as lysol), thymol, and many substitutes for iodoform. The most powerful disinfectant introduced of recent years was formaldehyd, and Aronson, before advocating its use, tested whether it could be safely applied by exposing animals to its vapours for several hours, and also by injecting it hypodermically. The twelfth group was the general anaesthetics. A number of new anaesthetics had been examined in experiments on animals, and though none of them had ousted ether and chloroform from their positions, they had enjoyed a certain limited popularity—pental, ethyl chlorid, ethyl bromid. Then there were the emetics. In 1869, Matthiesson and Wright formed apomorphine from morphine, and Wickham Legge found from experiments on animals that it possessed powerful emetic properties when injected hypodermically. It soon found a place in the pharmacopoeias, and had retained it as the most reliable and most convenient method of causing vomiting and evacuating the stomach in cases of poisoning. Finally, Dr. Cushny mentioned the preparations of the thyroid gland. The list by no means exhausted the new drugs introduced by means of the experimental method in the last twenty-five years. He excluded the discovery of the local antiseptics, such as carbolic acid, iodoform, and salicylic acid, which were used to act not on the patient, but on his parasites, and whose usefulness could therefore be discovered only by applying it to these parasites. Apart from these, he found that in the last forty years, during which the experimental method had been so fruitful in valuable remedies, the only drug of even mediocre importance introduced by other methods was pilocarpin, a sudorific occasionally employed in dropsy, which was introduced in 1874, from its being used by the South Americans as a sudorific. Another service which the method of animal experiment had done therapeutics was in the sifting out of valueless drugs. The cruder drugs had been in many instances replaced by purer principles extracted from them, but these principles had all to be tested before they could be known to possess the virtues of the crude drug. This might be exemplified by the present position of ergot, which had been in use for many centuries for its effect in causing contraction of the womb and arresting haemorrhage in labour. Ergot had always suffered from the fact that it was uncertain in action, some extracts appearing devoid of any influence on the uterus, while others had undoubted value. Attempts had been made for many years to obtain a more satisfactory

body by isolating the active principle of ergot. Within the last year a German chemist had put on the market an apparently pure substance, clavin, which he supposed to be the essential factor in ergot. This view might be tested in two ways. Clavin might be injected into women in labour who showed signs of haemorrhage, and in course of years doubtless the question whether the clavin was a valuable addition to therapeutics, an inert body or a poison, might be determined. On the other hand, the effect of ergot on the uterus of animals was quite well known, and half a dozen experiments on anaesthetized animals would suffice to settle the question. As a matter of fact, clavin had proved quite inert in three experiments in which he had tested it. Another direction in which animal experiments had proved of the greatest importance was in discovering and testing remedies to be employed in cases of poisoning. Poisoning occurred so rarely, that in practice it was impossible to test the value of antidotes; and even when a patient recovered after the giving of an antidote, the question always arose whether the quantity of poison taken was really a fatal dose, whether vomiting or slow absorption or some other factor was not really responsible for the recovery. In animals, on the other hand, the exact dose required to kill might be ascertained, and the effect of antidotes might then be examined with accuracy. In this way many supposed antidotal measures had been shown to be valueless, or worse, through the waste of time which their administration involved. On the other hand, the value of the anaesthetics and hypnotics in convulsive poisoning had been demonstrated; the usefulness of the atropine treatment in opium poisoning, and its limitations, had been satisfactorily established; atropine had been shown to be the treatment in cases of pilocarpin poisoning, and in some forms of mushroom poisoning. Dogs, cats, guinea-pigs, frogs, rats, mice, and rabbits were used in certain classes of cases: comparatively seldom horses; and monkeys occasionally. Certain species were used for specific purposes, but an examination of the action of drugs confined to one species was quite insufficient to permit of inferences as to their therapeutic value. For example, theocine was examined in rabbits, and found an admirable diuretic, but a few experiments on dogs showed it to be inadmissible in therapeutics through its gastric action. Rabbits and guinea-pigs were largely employed to find the general action and the toxic dose per unit of body-weight. In testing whether a new drug was poisonous they would first employ these animals because they could be obtained in large numbers of approximately equal weight. The general effects on the circulation, and any narcotic effect, might also be determined in the rabbit. Cats were used specially in investigations on the actions on the stomach and intestine, and to a certain extent on the circulation. Dogs were employed to ascertain the details of the circulatory action, the way and form of excretion, and the changes which drugs induced in the metabolism. The details of the effects on the intestines and stomach, and the action on the secretory glands proper, could be ascertained only by experiments on the dog, because other animals were too small to permit of the necessary manipulations, and also because the reaction of these organs in the dog approximated most closely that of man. And when observations had to be carried on for some time (for example, the effect of drugs on the bile secretion) the dog was the only animal available, because rabbits could not be kept in a normal condition, and cats would not permit the necessary handling. Dogs were also very much less liable to suffer from septic infection. He had never observed suppuration in a dog from operation. Aseptic treatment was more successful in the dog than in man. It was extremely important that the absorption and excretion of a drug should be ascertained before it was used in therapeutics. Otherwise the physician might continue the administration while the drug was still present in the tissues, until it accumulated in sufficient quantity to induce poisonous effects. But the rate of excretion could be ascertained only in dogs. In reply to further questions, the witness said a certain number of demonstrations were necessary in order that students might see the character and the action of drugs, that it was not some mystic power that cured disease, but that drugs acted directly upon certain organs. It was quite impossible to describe the effects of central nervous stimulants, for example, in such a way as to give the student a clear idea how they differ in effect. In the case of heart tonics, the relative importance of the different factors involved could only be shown by actual demonstration on animals. The absence of such teaching in the past had undoubtedly led to quite erroneous conceptions of the action of these drugs, and to many of them being classified together which differed in important features of their action, and were indicated in quite different conditions of disease. The experiments he advocated would all be done under anaesthetics, and the animal would be killed before it recovered. Absolutely no pain was caused. In reply to further questions, the witness said his experience had been that the animals under licence or under a demonstration certificate were always completely anaesthetized, and were destroyed before they recovered consciousness. Proceeding to speak of the standardization of drugs, Dr. Cushny said the strength of most drugs used in medicine could be ascertained by chemical methods—for example, the amount of morphine in opium and its preparations. These methods were not available in certain cases—notably in the group of cardiac tonics, including digitalis and strophanthus, in which the active principles were imperfectly known, and could not be assayed quantitatively. The strength of tincture of digitalis dispensed was quite indefinite up to a few years ago, and tinctures prepared by different druggists varied as much as 1 to 4 in strength. In addition to the quantitative standardization, it was necessary to perform one or more qualitative estimates, because some preparations of digitalis, while arresting the frog's heart, exercised an unfavourable influence on other parts of the circulatory system. For this purpose the experiments were performed on the dog, in which the reaction of the circulation to digitalis resembled that in man more closely than in any other animal he had examined. The activity of strophanthus and squill was determined in the same way; that of ergot was found by experiments on cats, rabbits, and dogs; cannabis indica was assayed in the dog, which reacted much more exactly than the cat or rabbit; adrenalin and products of the suprarenal gland also were assayed on the dog. The importance of standardization of these drugs could easily be understood. For example, he had found that of two tinctures of digitalis supplied by a perfectly reliable firm, the one was four times as strong as the other. If a patient were treated with the weaker for some time in the increasing doses which would be necessary to elicit the therapeutic effect, and then the treatment was inadvertently continued with the stronger in the same dose, the results might easily be disastrous. In the case of ergot the conditions were even worse, for much of this drug on the market was practically inert, and the preparations, of course, valueless. A physician might thus depend, in an emergency, on the action of a drug which was without action. The witness reminded the Commissioners that ergot was very largely used in cases of haemorrhage in childbirth, in which it was absolutely essential to lose no time and to be certain of one's remedies if the woman's life was to be saved. In regard to another drug, cannabis indica, he had personal knowledge that 20,000 lb. of it were offered for sale to a firm which, before closing the deal, had a sample tested on animals, and, finding it inactive, refused the consignment. This firm informed him that since the introduction of physiological assay, "we have had practically no complaints whatever as to the inefficiency of products of cannabis indica, quite a contrast to our experience previous to this time." Asked by Sir William Collins if there was any experiment on animals for pharmacological research which could not be done under anaesthetics, the witness said certain experiments could not be done under anaesthetics satisfactorily. For example, in comparing cocain with eucain, the point it was desired to find was the relative poisonousness of the two, and one had to inject cocain into one rabbit and eucain into another, and see which was more fatal. That could not be done under an anaesthetic. Asked if there was any research of a pharmacological character upon living animals which he would require to carry out involving a considerable surgical operation which could not be done under anaesthetics, he answered in the negative. His experience of the working of the Act was comparatively limited, because he had only worked in this

country for about two years. Roughly speaking, he had witnessed about 100 experiments. Asked if he could suggest any alteration in the present system of granting licences, he said the only criticism he had to make was that there seemed an unnecessary difficulty in the licensees getting certificates. The certificate was too defined. For example, he had a number of certificates which permitted him to inject drugs into rabbits, cats, and frogs, and now he had had a message the other day from the Lister Institute that they wanted him to examine a drug, which they had found to be poisonous, in rats. In order to do this he had to get another certificate from the Home Office. He thought the Home Office might allow the head of a department to enjoy the use of licences without more ado instead of having so much correspondence. It should be possible for experienced licensees to have all the certificates thrown in. Asked if he did not think that the habit of closer clinical observations suffered rather from the fact that a student thought he could gain the knowledge required in an easier way by witnessing experiments on the living animal, he said he would put it the other way: that a student learnt in his pharmacological class the detailed action upon animals and then went to the bedside and saw whether he could follow those observations in the human patient. Asked if he believed that opposition to vivisection was founded entirely on misconception on the part of sentimental or well-wishing people, the witness said he thought the opposition had a certain amount of sentiment about it. He did not think there was any ground for the accusation of cruelty, but there was ground for what was really the origin of the whole thing—namely, the fear of blood. These people had exactly the same shuddering sensation when they saw a butcher's shop, and they imagined that laboratories were filled with those things and with the shrieking of animals, and accordingly they raised their voices against them. He would say that the statement that cruelty occurred in laboratories in England at the present time was grounded on misconception, and was false. In reply to further questions, the witness said it was quite impossible to make most scientific investigations by observations on a sick person. In reply to further questions, the witness said he thought any ordinary dose of curare, such as was used to throw the muscles out of action, had not any effect upon the central nervous system to paralyse sensation. What was the effect in very large doses he thought was not quite determined. He did not think curare was much used by experimenters anywhere. As a matter of fact, at the present time much of the curare they got failed to paralyse muscles or anything. He tried to get it in a number of places a few years ago, and could not get any that would paralyse the muscles at all. It was the old South American arrow poison, drawn from a plant of the strychnos genus. It was never used at all in this country without another anaesthetic. He agreed that when trying an unknown substance a prudent man would see how big a dose an animal would bear before he went on to give any dose to a man. One took the body weight, and then, if one was going to apply the substance to a patient by the body weight, he would divide the result by 10. In reply to further questions, he said he had been teaching pharmacology before coming to University College two years ago; he had taught at the University of Michigan. He did not think there was any law as to experiments in the United States. In Michigan, at any rate, there was not. He never saw any abuse of animals in Michigan. In reply to further questions, he said he was quite satisfied that in the physiological experiments he had seen the animal was kept completely anaesthetized. In reply to further questions, he said one could keep a dog under perfect anaesthesia for six or eight hours without the dog dying or ever recovering consciousness. He had no experience in anaesthetizing monkeys, but he thought he would undertake to keep a monkey anaesthetized for as many hours as he wanted to do so. Dogs exhibited no signs of apprehension in the laboratory. Asked about experiments on man for the purpose of investigating the activity of drugs, the witness said he thought that almost every man who was going to introduce a drug, first, after investigating its action on rabbits, dogs, frogs, and so on, tried it on himself before trying it on a patient; if he found it acted upon himself he went on to use it in medicine. There had been some examples of drugs introduced not through animal experimentation, but through experiments on man, which have rather discouraged other investigators from following that method. Besides the case of Christison already mentioned, there was that of Koeppe, who tried the effects of digitoxin on himself, and was despaired of for twenty-hours; and a third was in the investigation of chloroform. He was told that Simpson, Matthews Duncan, and Keith investigated the question of a number of those remedies; chloroform turned out to be one of them. Another one which they investigated before they took up chloroform was prussic acid, and it was simply a chance that they did not inhale prussic acid, but put their hands into it instead of inhaling it. In reply to further questions, the witness said he used morphine very frequently. He generally used it with another anaesthetic, but he had used it alone. There was no question about its anaesthetic effects, because it had recently become a fashionable anaesthetic in man. He was reading just the other day a series of statistics by Wood, which gave the statistics of 1,800 and some odd cases of anaesthesia by morphine and hyoscin administered by doctors recently for surgical operations in over 1,800 cases, and his only objection to the method was that it was more fatal; the statistics were worse than those under chloroform anaesthesia.

(To be continued.)

MOTOR CARS FOR MEDICAL MEN.

REAR LIGHTS.

DR. HILTON SKINNER (Hayes, Kent) writes: I notice in your issue of March 30th that Dr. H. E. B. Bruce Porter is at a loss to understand why it is compulsory for the fastest vehicles to carry a red rear light "*to prevent them being run into.*" The Act required this rear light because motor cars are the only thing on the road capable of reversing at over a walking pace. As cars frequently do this when backing out of side-roads down which they have run to turn round, any one who has driven much at night will agree that it was a necessary condition. If horse drivers can proceed without trouble at from eight to ten miles with candle lamps, surely motorists with their powerful head lights can go a useful pace without bothering slow vehicles to rear lights. There are things on the road such as pedestrians; some may be deaf, others drunk; loose cattle, fallen trees, etc., all of which will remain unlighted. General rear lighting will tend to make some motorists less careful than they have been in the past. If slow vehicles are to carry rear lights, I think they should be some other colour than red.

Dr. R. J. BOWDEN (Ramsgate) writes: I have been rather surprised by some of the letters which have lately appeared in your columns as they seem to indicate that the cost of motoring is considerably higher than in reality it need be, and also that the modern motor car is not so reliable as (with fair treatment) it really is.

For three years I have driven a motor car regularly, and have now covered about 13,000 miles. My expenses to date are:

	£	s.	d.
Petrol	29	14	8
Oil and grease... ...	13	16	3
Tyres	44	8	1
Repairs and replacements ...	4	11	0
Electricity	5	12	3
Licences, registration, etc. ...	9	1	0
	£107	3	5

So these expenses amount to about £36 per annum, or about 2d. per mile.

I have had two cars. My first was a little one of French make; it ran like clockwork from first to last, and I only parted with it because I wanted a larger car. My present one is of English make, and this also has never given me the least anxiety. I have never felt the need of a reserve car as some of your correspondents recommend. During my three years of motoring I can only remember one occasion on which the car was not available when required. This was due to a damaged tyre. Not on one single occasion have I failed to complete a journey, and I have never

been seriously delayed on the road through any fault of the car.

The question of depreciation is a difficult one to decide; in neither of my own cars have I noticed any depreciation whatever. They have seemed rather to improve with use. I know of a small car which has been driven 40,000 miles, and it seems very little the worse for wear.

It must be clearly understood that the cost of running a car, its reliability, and its length of life are matters which depend very largely indeed on the owner himself. To the beginner I would make three recommendations:

1. Attend most carefully to the lubrication of every part.

2. Avoid jars to the mechanism (*a*) by letting the clutch in gently; (*b*) by not using the brakes more than necessary.

3. Do not make a practice of driving the engine at its utmost speed.

If he is prepared to give due attention to these points, a medical man need have no fear in exchanging his horse for a motor car, while the advantages of the latter (especially in a country practice) are too obvious to need mentioning. I shall be pleased to give further particulars of my motoring experiences to any medical man who may be interested in the matter.

EXPENSES OF MOTOR CAR FOR THREE YEARS.

C. D. R. writes: Having run a motor for the past three years, I am pleased to give my experience to other readers of the BRITISH MEDICAL JOURNAL. My first car was a 6-h.p. single-cylinder Vauxhall. I had it for one and a half years, and the total cost of running during that time was 13s. 6d. per week. My second, present car is a 6-8-h.p. two-cylinder French car; total cost of running, £48 for the past year. These figures include petrol, repairs, tyres, and every penny laid out on car during the times given. The first six months' cost of running my present car I have not given, as the car was delivered to me by the agents in a disgraceful state—timing wrong, paint wrong, and nearly everything as it should not be. I strongly advise all medical men to have a trial on the car they are about to purchase, and not on a "trial" car, and to inspect the car personally before taking delivery. I have not included depreciation in my figures. I do all cleaning, etc., myself. Last year I covered between five and six thousand miles on the car. I have on the front wheels of my present car two of the tyres that were on my former car when delivered; they were retreaded once and are still good. They are of the make Dunlop, which I have found far and away in front of any others I have tried. They have worn out two pairs of foreign-made tyres—supposed to be reinforced. During my three years' motoring I have only had to walk home twice. Having kept horses for several years, I have had horses fail me oftener in a month than the motor in a year.

To run a motor cheaply, look after it yourself and understand its internal arrangements, also drive yourself and save tyres and gears.

COST OF RUNNING.

JEHU writes: I notice "Sparking Plug" contrasts the cost of motor cars with that of a horse and carriage in the JOURNAL for May 11th. His figures are: Food for a horse £26, shoeing and veterinary £4, hire of carriage £30, rent of stable and depreciation of horse £30. I should like to ask him whether he proposes to have the animal groomed, and if so, by whom? Whether he proposes to give it bedding? And who is to drive? I submit the following rough estimate is much nearer the correct figure:

Initial cost			
Horse	... £40	0	0
Harness	... 10	0	0
Carriage	... 120	0	0
			£170 0 0
Current cost			
Wages of groom, coachman	... £52	0	0
Livery and taxes ...	... 8	0	0
Food and litter	... 33	0	0
Shoeing, vet., repairs, rugs, etc.	... 17	0	0
Rent	... 15	0	0
			£125 0 0
15 per cent. depreciation on £170	... £25	10	0
5 per cent. interest on £170	... 8	10	0
			34 0 0
			£159 0 0

This gives on 7,000 miles a year a cost of a little over 1s. a mile. If the carriage is hired at £30 a year, some of these figures can be reduced, and I estimate the yearly outlay at something over £140 a year.

THE GEAR CASE AND ITS CONTENTS.

THE MANAGER OF THE ANGLO AMERICAN MOTOR CAR COMPANY writes: In the issue of the BRITISH MEDICAL JOURNAL of April 27th, a writer on motors, dealing with the subject of the "gear case and its contents," says: "One objection to the use of the epicyclic system was that the internally cut teeth of the outer case wear out quickly, but the Adams-Hewitt Company have now constructed an epicyclic gear in which all the wheels are externally toothed, and they claim to have thus constructed a durable epicyclic gear." This statement is quite wrong, as the internally cut teeth of an epicyclic gear practically show no wear at all after use, and the simple reason is that they have much lower tooth strain than do the teeth in an encyclic gear without the internal rack. The secret of the internally cut teeth is to lower the tooth strains and consequently do away with the wear. Again, we would call attention to the fact that the Adams-Hewitt car has *not* an epicyclic gear at all, except in the reverse movement.

We are prepared to show the gear of a Cadillac car that has run over 50,000 miles with internally cut teeth, where there is no sign of wear at all. Also to show dozens of gears from Cadillac cars which have run shorter distances, to prove that there is no wear.

As several doctors owning Cadillac cars have written to us on the subject, we should feel obliged if you could see your way to publishing this letter. Our offer to show gears with internally cut teeth, which show no sign of wear after thousands of miles running, is open to any medical man who may apply to us.

Our largest competitors, who have tried gears without an internal rack, recently applied to us for a licence to make the Cadillac patent gear, as a last resource after trying all other systems. This is perhaps the best answer that could be given to the question.

We can say from experience that the success of the epicyclic gear *depends on the tooth rack* to give it silence and long life.

We have also received a letter from Dr. Middleton Martin, who owns a Cadillac car with which he expresses entire satisfaction. Although the car has as yet run only 1,300 miles, the district is a very hilly one and there is a severe daily hill climb home; the epicyclic gears remain quite silent, which may be taken as evidence of no material wear.

HUMOURS OF ANTIVIVISECTIONISM.

WE have received the following letter from Miss B. E. Kidd, Secretary, British Union for Abolition of Vivisection, 32, Charing Cross, S.W.:

I believe it is true that a society which works for the further restriction of vivisection recommended to the Home Secretary the names of certain medical members of the Royal Commission who are not avowed antivivisectionists. This is, indeed, one of the "humours of antivivisectionism," but the British Union, which stands for the abolition, not for the restriction, of the practice is not responsible for it.

As you challenge me to reply to your question regarding certain Commissioners, I must perforce descend from the general to the personal. Dr. George Wilson, although he has made certain statements favourable to our views, was careful to add on the occasion of making them, "I have not allied myself with the antivivisectionists," and should he declare himself in favour of the abolition of vivisection I, for one should be extremely surprised. The other two gentlemen whom you name, being busy members of Parliament with a general sympathy in our favour, are not capable of entering into the intricacies of the medical and scientific aspects of the case, which chiefly occupy the time of the Commission.

It is quite true that, so far as competent cross-examination of witnesses goes, the Commission is "packed," and a perusal of the published reports will show unmistakably that other Commissioners, besides those who have actually held licences, are already deeply biassed in favour of vivisection. The position of Sir William Church, for instance, with regard to the Cancer Research Fund, has "committed" him to vivisection long before the Commission was appointed, and the position of Sir Mackenzie Chalmers in the Home Office may be said to have committed him equally to a favourable view of the manner in which the Act is administered. No reasonable person will contend that two members of Parliament (one of whom described himself very shortly before the Commission as in the position of "a man in the street" with regard to the question, and the other of whom is a restrictionist) supply a fair balance to the expert upholders of vivisection who have been placed on the Commission.

We venture to suggest that the lack of "competent cross-examination" on her side which Miss Kidd deplores is due not to any deficiencies in the antivivisectionists on the Commission, but to the inherent weakness of the cause they represent.

AN Austrian Society for the Repression of Venereal Diseases has recently been formed. The first meeting, which was largely attended, was held in Vienna on April 25th, when the statutes were formally adopted. Addresses were delivered by Professors S. Ehrmann, Adolf Stöhr, and Ernst Finger.

LITERARY NOTES.

IT is in contemplation to found an Italian society for the critical study of the history of the medical sciences. A meeting will be held at Perugia later in the summer to discuss the adoption of the statutes and elect a committee of direction. Professor Guido Baccelli is President of the Provisional Organizing Committee; Professor P. Giacosa (Turin) is Vice-President; and Professor D. Barduzzi (Siena), Secretary.

The Charaka Club of New York has recently issued a second volume of its proceedings. The club was organized in 1898, by a number of medical men interested in the literary, artistic, and historical aspects of medicine. The first volume met with so favourable a reception that the members have been encouraged to publish a second. Among the contents are a poem by Dr. Weir Mitchell, entitled Books and the Man; papers on Fracastorius by Professor Osler; on Charaka and his Times, by Dr. Smith Ely Jelliffe, equally distinguished as a neurologist and a medical journalist; on the King's touch for scrofula, by Dr. J. S. Billings; on the medicine of Horace, by Dr. C. L. Dana; and on the diseases of learned men, by Dr. W. B. James. Only a limited edition is published. Copies can be procured from Messrs. Williams and Norgate; the price is 15s. 6d.

A new periodical entitled *Zeitschrift für Religionspsychologie*, which will deal specially with questions on the borderland between theology and medicine, has recently been founded. It is published by Karl Marhold, of Halle, under the direction of Dr. Johannes Bresler of Lublinitz in Silesia, and Pastor Gustav Vorbrodt of Alt Jessnitz. The new journal takes for its province such matters as the development of religious life in both sexes and at various ages, and the influence thereon of bodily disease, climate, alcohol, misery, confinement, etc.; the anomalies of the religious life, such as supernormal exultation and subnormal moral weakness and depression, and the expression of both these conditions in the form of mental disorder, religious training, and the formulation of the laws of a healthy religion. The first number contains papers by S. Freud on compulsion and religious practice, by Vorbrodt on religious psychology in the Bible, and by Bresler on the religious sense of guilt.

The American Medical Editors' Association will hold its thirty-eighth annual meeting at Atlantic City on June 1st and 3rd. The President, Dr. James Evelyn Pilcher, will deliver an address on the future of medical journalism—a subject which will also be discussed by a number of other speakers.

John Feckenham, the last Abbot of Westmins'er, was a man of such benevolence that, according to Fuller, "he relieved the poor wheresoever he came; so that flies flock not thicker about spilt honey than the beggars constantly crowded about him." He is a notable figure in the ecclesiastical history of Elizabeth's reign; and to us he is interesting as the author of a code of instructions for patients using the healing waters of Bath. He went to Bath as a patient in 1575, when his health, after long imprisonment in the Tower and the Marshalsea, had given way. While there he was the guest of Dr. Ruben Sherwood, who, although a "Popish recusant," seems to have been allowed to practise his profession. For a knowledge of the booklet to which reference has been made, we are indebted to an interesting paper by Abbot Gasquet which appeared in the *Downside Review* for Christmas, 1906. The MS. is in the British Museum, and at the beginning there is a note to the effect that "This book of Sovereign medicines against the most common and known diseases both of men and women was by good proofe and long experience collected of Mr. Doctor Fecknam, late Abbot of Westminster, and that chiefly for the poore, which hathe not at alle tymes the learned phisitions at hand." Many of the remedies are old receipts such as used to be preserved among family records in the old days. The "prescriptions and rules to be observed at the Bathe" are more interesting. The patient is enjoined on his first coming to rest and quiet his body after his journeying for the space of a day or two. He is told when to bathe:

The best time in the daie to go into the bathes is in the morning an houre or half an houre after the sunne riseing, or there about, in the most quiet time. And when you shall feel your stomache well and quiet and that your meet is well digested and have rested well the night before. But before you goe into this bath you must walke an houre at the leaste in your chamber or else where.

Then come directions how long to remain in the water, and what to do if overcome by faintness:

You may tarry in the crosse bathe an houre and a halfe att a tyme after the firste bathinge. And in the Kynge's Bathe you may tarry after the first batheinges at one time half an houre or 3 quarters of an houre. But in any wyse tarry at no time antyll you be faynt, or that yor strength fayld you.

And yf at any time you be faynt in the bath when you may drynke some ale warmed with a taste or any other suppinge, or green ginger, or yf need be aqua composita metheridate the bignes of a nut kernell at a time either by itself or mixed with ale or other liquor.

Great care must be taken not to catch cold:

When you forth of any of the Bathes se that you cover your head very well and dry of the water of your bodie with warme clothes and then put on a warm shert and a mantle or some warm gowns for taking of cold and so go straight way to warmed bed and sweat ther yf you can and wype off the sweat diligently and after that you may sleepe a whyle, but you myst not drynke anything until dinner tyme, except you be very faint and then you may take a little sugar candie or a few rasons or a little thin broath but small quantitie to slake your thirste onlie, because it is not good to eat or drynke by or by after the bathe untill you have slept a little yf you can.

After that you have sweat and slept enough and be clearly delivered fro the heat that you had in the bathe and in your bedd, then you may ryse and walk a lytle and so go to your dynner, for by mesureable walking the evill vapers and wyndines of the stomache that are take in the Bathe be driven away and utterlie voyded.

The patient must feed well:

Let your bread bee of good sweet wheate and of one dayes bakeinge or ii at the most, and your meat well boylled or rosted. And specially let these be your meates, mutton, veale, chicken, rabbet, capon, fesaunt, Patrich, or the like.

You may eat also fresh water fish, so it be not muddie as eles and the like, refraining all salt fish as lyng, haberdyne, &c. Avoyd all frutes and rare herbs, salletts and the lyke.

Apparell your bodie accordinge to the coldness of the wether and the temperature of the eyre, but in any wyse take no cold.

And yf you bathe agayne in the after noune or att after Dinner then take a very lyght dinner as a cople of potched eggs, a caudell or some thine broath with a chicken, and then 4 or 5 hours after your dynner so taken you may bathe agayne, and in any wyse tarrie not so longe in the bathe as you did in the fore noone.

The good Abbot evidently believed in the doctrine taught later by a certain Friar of Orders Grey, who sang:

Who leads a good life
Is sure to live well.

MEDICAL NEWS.

THE third general meeting of the Hungarian Ophthalmological Association will be held at Buda-Pesth on May 18th and 19th.

DR. TEIZO IWAI, Physician to His Imperial Highness Prince Fushimi of Japan, has been appointed an Honorary Member of the Fourth Class of the Royal Victorian Order.

THE next meeting of the Pathological Society of Great Britain and Ireland will be held in the Department of Pathology, University of Edinburgh, on Saturday, June 8th.

THE annual dinner of the Post-Graduate College and of the past and present members of the West London Hospital will be held at the Trocadero Restaurant, Piccadilly Circus, on Wednesday, June 12th, at 7.30 p.m., Mr. Lloyd Williams in the chair. Tickets can be obtained on application to the Honorary Secretary, Mr. L. A. Bidwell, 15, Upper Wimpole Street, W.

AT a meeting of the British Electro-Therapeutic Society on Friday next Dr. Doumer of Lille will read a paper on the fundamental principles of electrotherapy. This will be the last meeting of the Society in its present guise, as it is one of those which have resolved to throw in their lot with the new Royal Society of Medicine.

PRINCIPAL DONALD MACALISTER, M.D., LL.D., D.C.L., will preside at a dinner of the Glasgow University Club, London, to be given in the Trocadero Restaurant, Piccadilly, W., on Friday, May 31st, at 7.15 for 7.30 p.m. Application for tickets should be made to the Honorary Secretary, 63, Harley Street, W. It is anticipated that the Right Hon. Lord Kelvin, O.M., K.C.V.O., President of the Club, will be present.

The new out-patient department of the London Temperance Hospital was opened on May 14th by Princess Louise.

The annual general meeting of the Asylum Workers' Association will be held at the Medical Society's house, 11, Chandos Street, W., on May 29th. Sir William J. Collins, M.P., will take the chair at 4 p.m.

From the current issue of the *Midwives Record*, a vigorous little by-product of the Midwives Act, it would appear that midwives are busily engaged in the formation of a defence union. To membership of this body all those whose names are to be found on the roll of the Central Midwives Board will be eligible; its objects are somewhat vaguely stated to be Protection and Defence.

The Royal Sanitary Institute intends to hold a provincial meeting at Plymouth on May 31st. On the evening of that day, Colonel J. Lane Notter in the chair, a discussion on Infantile Mortality will be opened by Major R. J. Blackburn, R.A.M.C., who will be followed by Drs. H. B. Mapleton of Newton Abbot, S. Noy Scott of Plympton St. Mary, F. M. Williams of Plymouth, Mr. W. B. Swain, chairman of the sanitary committee of the same town, and others. The following day will be given up to excursions.

The lecture arrangements at the Royal Institute of Public Health for the summer session are as follows: The Harben Lectures will be delivered by Professor Paul Ehrlich, Director of the Royal Institute of Experimental Therapeutics at Frankfort, on June 5th, 7th, and 11th, at 5 p.m. each day, the subject being experimental researches on specific therapeutics. Lectures will be delivered at the same hour on each Thursday from May 23rd to June 20th, both days inclusive, on the Veterinary Aspects of the Tuberculosis Problem, by Professor J. Penberthy, F.R.C.V.S.; on the Problem of a Pure Milk Supply, by Professor R. T. Hewlett; on Blood Immunity, by Professor G. Sims Woodhead; on the Treatment of Infectious Diseases regarded from the point of view of hospital administration, by Dr. E. W. Goodall, Medical Superintendent of the Homerton Fever Hospital; and on the Development of Africa, as a problem of comparative pathology, by Dr. L. W. Sambon. The lectures are all free.

Provident Dispensaries of London.—A meeting last week of delegates from twenty-three provident dispensaries of London, from the provident department of the Metropolitan Hospital, and from the Metropolitan Provident Medical Association, resulted in the adoption of the following resolution: "That co-operation between all the provident dispensaries of London is desirable, whereby their aims and work may be advanced, reciprocal action between them and hospitals be promoted, and the transference of members from one dispensary to another be made more general." To carry out the objects in view a provisional committee was subsequently elected with power to arrange for the appointment of a consultative council, representative of all the provident dispensaries of London.

Middlesex Hospital Festival Dinner.—The Middlesex Hospital Festival Dinner was held on May 10th at Prince's Restaurant, Piccadilly, the Duke of Connaught in the chair. Amongst those present were: Prince Francis of Teck, the Duke of Northumberland, the Earl of Derby, the Earl of Latham, Lord Cheylesmore, Lord Sandhurst, Lord Rothschild, Sir R. Douglas Powell, Mr. Henry Morris, Sir G. Anderson Critchett, Mr. Andrew Clark, and Dr. J. K. Fowler. The Chairman, in proposing "The Middlesex Hospital," referred to the work carried on there during the last 150 years, and detailed various statistics dealing with the number of patients treated. Lord Cheylesmore, in reply, pointed out that Sir R. D. Powell, the President of the Royal College of Physicians of London, and Mr Henry Morris, President of the Royal College of Surgeons of England, were Middlesex Hospital men. Dr. J. K. Fowler, who also responded, said that the general hospitals of London were of use to the whole community, because they were the centres of medical education. Mr. Andrew Clark, who was also called upon to acknowledge the toast, made some interesting remarks on the amount of money spent on the surgical side of the hospital, and among other examples quoted the institution of the x-ray department as one of the necessary additions that had been provided by the Board of Management. Other speakers were the Earl of Derby, the Duke of Northumberland, and Sir T. H. Brooke Hitching. The announcement that the donation list amounted to £6,500 was received with enthusiastic applause.

British Medical Temperance Association.—The thirty-first annual meeting was held at 20, Hanover Square, W., on May 7th. The report showed 621 members and 150 student associates. The Association had been reorganized during the past year by the dissolution of the Scotch and Irish branches and the formation of eleven new branches in provincial centres having medical schools—namely, Belfast, Bristol, Cardiff, Dublin, Dundee, Edinburgh, Glasgow, Leeds, Liverpool, Manchester, and Newcastle-on-Tyne—with a special view to work among the medical students. After refreshments, Professor Sims Woodhead, the President, gave an address on the medical justification of total abstinence. He said that till recently they thought they had enough evidence to carry conviction; but recent events had shown that some were not yet convinced. For the assertions in the recent manifesto no specific evidence was given, but only "universal experience." He thought that these medical men did not know that they were to be used as cats'-paws to draw out the chestnuts for some one else, and that their words would be put up in every public house. Some of them were, however, better in their practice. He could name one who only gave 3½d. worth of alcohol per patient in his hospital in one year, while the average of the whole was 4s. 7½d. The expenditure in most hospitals had gone down considerably, and evidently they used to give too much years ago, or gave too little now. Alcohol increased the output of nitrogen at first, but equilibrium was soon re-established, and this tolerance was due to a structural change in the brain, owing to which drinkers required more chloroform to produce anaesthesia. Such a change was not likely to be beneficial. Alcohol was said to increase gastric secretion; so it did, but the increase was due to mucus and hydrochloric acid, and there was no increase of pepsine; in this it differed from food. Alcohol used to be considered absolutely necessary in fevers, but was not now; it was often given as a last resource, and then chiefly as a traditional practice. Alcohol was not used as food while the body could get other things—that is, under natural conditions. Glucose was a better stimulant, and a real food to the heart. Among subsequent speakers were Dr. C. R. Drysdale, Dr. W. McAfee, Dr. Claude Taylor, and Dr. Rushbrooke.

Society for Relief of Widows and Orphans of Medical Men.—The annual general meeting of this Society was held on May 9th, Dr. Blandford, President, in the chair. Fourteen members were present. One Vice-President and six Directors were elected to fill the vacancies in the Court. A cordial vote of thanks was passed to the editors of the medical journals for their courtesy in publishing the reports of the meetings of the Society, and endeavouring to make it better known to the members of the medical profession. The report for 1906, which was adopted, stated that during the past year 10 new members were elected, 9 died, and 1 resigned. The Society consists at the present time of 1 honorary, 140 life, and 145 paying members, making a total of 286, which, considering the number of medical men who are eligible for membership, is but a very small proportion. The invested funds of the Society amount to £98,960, from which is derived in interest the sum of £3,114 4s. 11d.; £334 19s. was received in subscriptions and donations. The working expenses for the year were £217 10s. 5d. Amongst the annuitants of the charity—namely, 54 widows and 21 orphans—the sum of £3,268 10s. was distributed, each widow receiving on an average £50 and £10 extra at Christmas, and each orphan £10 and £3 extra at Christmas. The Copeland Fund is a special fund, which enables the Society to grant to any widow or orphan already in receipt of the Society's ordinary relief extraordinary relief in special circumstances of unusual distress, such as blindness, paralysis, insanity, severe disabling accident, or grave permanent disease, and to continue such extra relief in the case of orphans beyond the age of 16 or 18 years (at which, under the Society's existing by-laws, the ordinary relief ceases), for such further period as the Court of Directors may think fit. During the year 6 widows in receipt of grants died. One, whose husband had paid a life subscription fee of £21, received £900; another, whose husband had paid the maximum amount in annual subscriptions—namely, £52 10s.—received £697; the remaining 4 widows had received on an average £600 each. Five new widows were elected during the year, and on December 31st there were 47 widows and 20 orphans in receipt of grants. One of the widows has been on the books since 1854, and has already received over £2,000. Membership is open to any registered practitioner who at the time of his election is resident within a twenty-mile radius of Charing Cross. Should any member remove beyond the limits of the Society, he may nevertheless continue to be a member. The annual subscription is two guineas; every member who shall have paid this sum for twenty-five years shall be a member for life. Life membership may also be obtained by the payment of one sum, varying with the age of the applicant. Further particulars and application forms may be obtained from the Secretary at the offices of the Society, 11, Chandos Street, Cavendish Square, W.

British Medical Journal.

SATURDAY, MAY 18TH, 1907.

PHARMACOLOGY AND EXPERIMENTAL RESEARCH.

ELSEWHERE there appears an abstract of the evidence given before the Royal Commission on Vivisection by Dr. A. R. Cushny, Professor of Pharmacology and Materia Medica in University College, London. So remarkable is that evidence that we are sorry that considerations of space prevent its publication in full. But all should read the detailed report for themselves, as it is only thus that the full force of the evidence can be appreciated. It shows in the most striking manner the enormous debt which the art of healing owes to experiments on animals, and it must carry conviction to every unbiassed mind. Until less than fifty years ago practically the only way of testing the effect of remedies was by clinical observation, in other words, by experiments on human beings. There are, indeed, legends that the use of the enema was borrowed from the practice of the Egyptian ibis, and that the febrifuge effect of cinchona bark was first noted by the accidental observation of sick dogs which cured themselves by drinking water from pools into which fragments of the bark had dropped. But, apart from their legendary character, such observations were purely accidental, and however suggestive they might be, they could not form the basis of scientific deductions. The whole pharmacopoeia, therefore, as far as it had any therapeutic value, was built upon experiments made upon man. One has only to glance at the old formularies to see that they consisted mainly of substances which, when not disgusting or absolutely inert, were credited with mythical properties on the strength of some fanciful resemblance to some part of the body, imaginary analogy, or mere superstition. It is scarcely surprising, therefore, that the sheet anchor of therapeutics was for so many centuries purging, reinforced by bleeding. The effects of purgatives and emetics were too obvious to escape notice, and the experiments with these substances were made on so vast a scale that physicians had every opportunity of learning whatever differences there might be in their mode of action.

It was far otherwise with drugs of which the effect was not so readily appreciable by the senses. The action of substances on the brain, the nervous system, the heart, the liver, and the kidney could be worked out only by experiment on animals, unless scientific investigators were bold enough to put them to the test on themselves. This they have never been backward in doing, even at the risk of their lives. Thus Morton, the discoverer of ether anaesthesia, experimented on himself, as did Simpson and his assistants with chloroform. Sir Robert Christison nearly killed himself by experimenting with Calabar bean. Pharmacological literature, indeed, is full of instances in which physicians have tested the effect of new drugs on themselves. To such experiments we imagine the antivivisectionists would offer no objection. It is remarkable, however, that when they urge, as they are in the habit of doing, that all discoveries likely to be useful in medicine can be made by observations on sick persons, they fail to realize that they are in fact recommending what they would call human vivisection.

If a new substance appears to possess remedial properties, it is right that its effect, its mode of action, the mode of administration, its limitations and drawbacks, should be precisely determined. Until this has been done the use of it necessarily justifies Voltaire's jibe at medicine, that the physician strikes blindly now at the disease, now at the patient. It is in the interest not of man alone, but of his "poor relations" themselves, who within certain well-defined limits of variation are "subject to the same diseases, healed by "the same means." In them the properties of a new substance can be more accurately studied. Either such experiments must be made, or no progress can be made in the healing art. For the antivivisectionist there is no escape from this dilemma; the more fanatical among them would accept the position—at any rate, till they fell ill. When they declare that they would not avail themselves of any remedy for which we are indebted to vivisection, it may be assumed that they do not know how large a part of the weaponry of modern medicine falls under the ban.

Scientific pharmacology, therefore, must be founded on experiments *in anima vili*. To save the feelings of the sensitive philozoist it may be well to explain that this much-misunderstood phrase implies no expression of opinion as to the relative nobility of the soul of man and that of the dog; it only means that the life of a beast is, in the present state of human evolution, cheaper than that of a man. By such experiments, controlled, of course, by clinical observation, whatever scientific knowledge of the action of drugs physicians now have has been acquired.

One of the most striking of many examples of this cited by Professor Cushny is the growth of our knowledge as to digitalis. Introduced as a remedy for dropsy by Withering as long ago as in 1785, it continued to be used altogether empirically for three-quarters of a century, and in 1860 was actually recommended as likely to be beneficial in aneurysm, in the belief that it weakened the force of the heart. The mode of its action was, in fact, unknown till it was shown experimentally by Traube, Brunton, and others that it increased the blood pressure, and was therefore contraindicated in conditions where such an increase would be harmful Then for many years lead had been used to stop bleeding from the lungs; it was given by the stomach, mostly in the form of pills. Its efficacy was unquestioned by the profession generally till experimental inquiry showed that the metal is absorbed only in small quantities and very slowly. This fact, says Dr. Cushny, aroused clinicians to a more careful analysis of the cases in which they had been in the habit of using the substance, and the result was that it was found that it was not the lead but the opium given with it which was the efficient principle in arresting the haemorrhage.

These examples illustrate the usefulness of experimental research in enabling the physician to administer medicines with a precise knowledge of their action, and to reject drugs that are worthless. But it has a much wider sphere of utility in determining the value of new remedies. Modern chemistry is ceaselessly forging new weapons; all these must be thoroughly tested before they are placed in the hands of the physician. In this way suffering mankind has been endowed with the priceless boon of drugs that, used under proper guidance, bring rest to the worn brain. Chloral, sulphonal, paraldehyd, hedonal, veronal, and the many other "drowsy syrups" which have taken the place of

poppy and mandragora, are the gifts of "vivisection." As Dr. Cushny says, "no soporific has been introduced in the last forty years except by means of "animal experiment."

To animal experiment, too, we owe the introduction of local anaesthetics. Professor Cushny tells how cocaine, which has caused a revolution in some provinces of surgery, was first tested on animals by von Anrep, who did not live to try its effect in man; this was done by Koller after experiments on animals. As local anaesthesia is coming to play an increasingly important part in surgical practice, it must be counted to "vivisection" for righteousness that, as Dr. Cushny says, "no local "anaesthetic has been discovered except by means of "experiments on animals." Other groups of remedies for which medicine is indebted to experimental research are antipyretics; certain cardiac tonics, notably strophanthus; vascular dilators, such as amyl nitrite; vascular contractors, like adrenalin; certain diuretics, such as caffein and theobromin; and various general anaesthetics. Dr. Cushny says that, apart from local antiseptics, such as carbolic acid, iodoform, and salicylic acid—the usefulness of which could be discovered only by testing on the parasites which they have the property of destroying—the only drug of even mediocre importance which in the last forty years has been introduced by other methods than animal experiment is pilocarpin. The standardization of drugs, which is of such importance in regard to efficacy, and also to the safety of the patient, is now based on animal experimentation.

Investigators are often taunted with the fact that their researches have no direct bearing on practice. Science, which is the search of truth for its own sake, has no directly utilitarian aims. But incidentally Dr. Cushny shows that some of the most useful additions to our therapeutic resources have been made in the course of purely scientific inquiries. Thus Liebreich found that chloral causes sleep when he was seeking for an answer to the question, seemingly very remote from the sphere of therapeutics, namely, whether "a substance is broken "up into its constituent parts before it is oxidized." Baumann and Kast discovered sulphonal and its soporific effect when working at a problem of physiological chemistry, the changes that take place in organic sulphur compounds within the body. Had these investigators been prevented by foolish legislation from following up the results to which their "scientific "curiosity" fortunately led them, discoveries of the greatest value to human sufferers would have been lost

ANTHROPOMETRY OF THE INSANE.

With the object of focussing our knowledge of British anthropometric characters, the Henderson Trust of Edinburgh has entertained a scheme for the making of a complete anthropometric survey of the Scottish nation. Dr. Macpherson, Commissioner in Lunacy having pointed out the importance of applying such an examination to the inmates of asylums, a survey of the Scottish insane population was made by Mr. J. F. Tocher, and the data collected have been issued by the Henderson Trust in the form of a report. This report is printed *in extenso* as a supplement to the current number of *Biometrika*, and is accompanied by a memoir, in which the information is carefully analysed with the help of those refined statistical methods for which we are indebted to Professor Karl Pearson and his pupils.

[1] The Anthropometric Characteristics of the Inmates of Asylums in Scotland, by J. F. Tocher. *Biometrika*, vol. v., pt. iii., pp. 292-350.

The fundamental problem in an inquiry of this sort is an attempt to answer the question, Does the insane population differ physically from the sane population? Unfortunately the material obtained does not comprise all the necessary elements of a solution, because no correspondingly complete survey of the sane inhabitants has been carried out. By utilizing some local series of measurements, and also by means of deductions from observations made on large numbers of Scottish children in respect of characters—hair and eye colour—whose rate of change with age can be approximately measured, the following conclusions appear justifiable.

The mean stature of the Scottish insane is significantly less than that of the sane population in any district measured. In the colours of hair and eyes marked differences exist. "On an average the 'general "'insane' population of Scotland is lighter-eyed and "darker-haired than the sane population." For instance, the correlation between light eyes and insanity was 0.6952, the coefficient being more than five times as large as its "probable error"; similarly, the correlation between red hair and insanity is significantly negative (−0.5824). As the author remarks, "these are mere "statistical facts, and no explanation is offered as to "how or why presence or absence of pigment comes to "be associated, as it is here found to be, with insanity." In the one local district (Aberdeen) in which data for a direct comparison between the adult sane and adult insane population were available, the conclusions just quoted were confirmed.

The next question is as to whether the insane form a homogeneous population. It was found that with the doubtful exception of head length the distributions of the characters measured were distinctly skew. Much of the asymmetry found could be accounted for by supposing the insane population to be heterogeneous and the supposition is confirmed by evaluation of the interlocal constants. The South-west of Scotland (excluding Glasgow) is long-headed, the North-east short-headed. The North is broad-headed, while Glasgow, Edinburgh, and the populous centres surrounding them are narrow-headed. In the large towns (except Edinburgh) the population is microcephalic, in the Scottish Midlands (excluding towns) macrocephalic. The rest of the country approximates to the average size (mesocephalic). No significant difference between males and females in the variability of the characters measured was detected, with the possible exception of head-height, in which males are slightly more variable.

A comparison was also instituted between the insane population and a series of habitual criminals. Very marked discrepancies were noted, the criminals being on the average larger-headed and shorter men than the insane. Were the criminals and lunatics drawn from a stock containing proportionally the same racial elements, this would suggest that they are derived from physically different sections of the community. But if it be true that 35 per cent. of habitual Scottish criminals are of Irish extraction, the problem cannot be solved until more is known regarding the physical characters of both races.

It will be apparent from this summary of some of the more interesting results that Mr. Tocher's memoir is full of valuable anthropometric information. He has carried out a laborious, painstaking, and accurate research, the results of which, together with the material upon which the results are based, will be of permanent value to future workers. It is most desirable that such an investigation should be extended to the remaining parts of the United Kingdom. Until

this and similar work has been done, hypotheses regarding national degeneration cannot be said to rest on sufficient data.

PROPOSED CHANGES IN INCOME TAX LAW.

WE have received several letters, which we are unable to publish in full, on the subject of income tax. The Income Tax Adjustment Agency considers that a protest should be made against several proposed changes in the law. Those affecting the medical profession are: (1) the transfer of employments not already assessed under Schedule E to that schedule; (2) the repeal of the 133rd section of the Income Tax Act, 1842; and (3) the assessment of the profits of new businesses on the actual profits made year by year for a period of three years, and not on the average profits as at present. The first proposal, although carried in the House of Commons in Committee of Ways and Means, as a Budget resolution, was "disagreed to" on report, and does not appear in the Finance Bill. It is therefore unlikely that it will be proceeded with. The proposal to repeal the 133rd section of the Act of 1842 has aroused considerable opposition, and Mr. Hallett Fry joins with the Income Tax Adjustment Agency in protesting against it. Mr. Fry shows by an example that this section comes to the aid of a taxpayer who has had a bad year, enabling him to claim relief a year earlier than would be the case if he waited for the reduction in profits to operate in the ordinary way by entering into the average calculation on which the liability is computed. The chief reason given in favour of the repeal of the section is that it operates in a one-sided manner, as was explained by Mr. Asquith in answering a question in the House of Commons last week. He said, "Its effect . . . is "that the average ceases to be an average, as under it "traders escape from the result of averaging when it "tells against them, but obtain the benefit when "it results in their favour." Section 134 of the Act of 1842 and Section 23 of the Act of 1890 allow the Income-Tax Commissioners to adjust an assessment when the profits have fallen off from some specific cause, or when there is an actual loss, and these provisions will, no doubt, be invoked to temper any cases of hardship arising from the repeal of the 133rd section. The proposal to assess new businesses for three years on the actual profits made year by year instead of on an average, is objected to by the Income-tax Adjustment Agency, but does not seem altogether unreasonable. An instance is given in which the first four years' profits are £300, £600, £900, and £100 respectively, and it is shown that the taxpayer, having paid for three years on the sums actually made, would in the fourth year be charged under the average system on £500 more than his profits. It is not difficult to select particular instances in which any rule will operate harshly, but the weakness of the figures quoted is that they involve the assumption that the profits which up to the third year have increased year by year, will suddenly drop to £100 in the fourth year. Had they continued to increase, and been £1,200 instead of £100 in the fourth year, the taxpayer would be charged on £600 *less* than his actual profits. In a later letter, Mr. Fry, who writes from 2, Cloisters, Temple, E.C., suggests the formation of an income-tax reform and reduction league. He says: "Were such a league "started I imagine its objects (*inter alia*) might be:—(1) "To advocate a reduction in the rate of Income Tax. (2) "To impress upon successive Governments the necessity "for the reform of the incidence of the tax. (3) To "collect data as to irregularities in the incidence and to "lend the assistance of the league in the rectification of "abuses." He asks persons sympathizing with the objects of the suggested league to communicate with him, or send him their cards.

AN HONOUR FROM THE KING.

THE "royal augmentation" in their coats of arms recently granted by the King as a special honour to Sir Frederick Treves and Sir Francis Laking, as stated in the BRITISH MEDICAL JOURNAL of April 13th, seems to excite a considerable amount of interest. In the JOURNAL of April 20th a correspondent signing himself "Arma Virumque" took exception to the statement that this honour is without precedent. He said that "augmentations" of a similar kind had been granted to Gideon Delaune, apothecary to James I, to Sir Henry Halford, to Sir James Clark, to Sir Thomas Barlow, and to Sir John Williams. From a communication from the Garter King of Arms which appears in the *Illustrated London News* of May 11th, however, we gather that in the strict heraldic sense this special honour was not granted to the three last-named physicians. The Garter King of Arms gives illustrations of the "honourable augmenta-"tions" granted by English royalty to "physicians." Only five are figured; the persons so honoured having been, in addition to Sir Frederick Treves and Sir Francis Laking, Gideon Delaune, Sir Henry Halford, and Sir William Gull. We have it, therefore, on the authority of the Garter King of Arms that these are all the "honourable augmentations" that have been granted to medical men. It appears from the drawing that Gideon Delaune is the only person besides Sir Frederick Treves and Sir Francis Laking who had an augmentation from the Royal shield. We find, however, that Delaune was not a member of the medical profession, but an apothecary. The inscription under his portrait over the fireplace in the Court Room of the Apothecaries' Hall styles him "Gideon De Laune, Armiger, "Serenissimae Annae Regis Jacobi primi uxoris "Pharmacopaeius ac hujus Societatis quondam Ma-"gister nec non Benefactor dignissimus." He was not, as has sometimes been stated, the founder of the Apothecaries' Society, but he was one of its earliest Masters. The Apothecaries were incorporated as a separate body in 1617, and it was not till more than a century later that they began to prescribe as well as dispense medicines. De Laune, therefore, was not a physician but a druggist. Though it may not have been an "augmentation" in the technical sense of the word, it may interest some readers to learn of another case in which an addition to a coat of arms was granted by the Sovereign to a doctor. Writing in the *Westmorland Gazette* of May 4th the Vicar of Witherslack, the Rev. W. H. Scotter, says: "Visitors to Witherslack "Church will recognize in the arms of the Barwick "family shown on the two hatchments over the west "door, as well as in the window and over the old priest's "door in the south wall, the prominent red rose. This was "granted by King Charles II. by special royal warrant "to Dr. Peter Barwick, his Majesty's Physician (brother "of Dean Barwick, the founder of the charity), both of "whom were born in Witherslack, in recognition of the "'personal services and loyalty shown to the royal "'cause during the terrible years 1647—1650.' The "family of Barwick were granted the use of 'the red "'rose as an addition to their crest.' This statement is "given in the preface to the life of Dean Barwick—one "of the few copies of which is preserved in the vestry "of this church."

PROPORTIONAL REPRESENTATION.

THE activity of the Proportional Representation Society continues to attract public attention, and some progress is evidently expected from the consideration of the Municipal Representation Bill, which has reached its Committee stage in the Upper House. In the BRITISH MEDICAL JOURNAL of April 15th, p. 894, the system described as the "single transferable vote," as advocated by the Society, was briefly explained. Speaking before a meeting at the Mechanics' Institute

of Stockport, Lord Courtney pointed out that although the system was devised some forty years ago by John Stuart Mill, and although it has not made much headway in public favour during the greater part of these years, the "discovery" was one of great importance. It is always difficult to get rid of old fallacies, and even when a faulty system has been replaced by a better one, the former mostly dies hard, and has a tendency to turn up at odd times, after it had been thought to be securely buried. Proportional representation has been adopted in some countries, and Lord Courtney believes that in time it will be adopted everywhere. An ideal political condition of things can be attained only by a true system of self-government, and while the solution of this problem is not difficult when the community is a small one and when its limits are narrow, many obstacles stand in the way where wide areas and large populations are involved. Thus meetings to which the whole local population can be invited to discuss specific matters, as, for example, in a small town, overcomes the difficulty of indirect self-government. But in a community which is large and which occupies an extended area it becomes necessary to have representation. Representative government, to deserve its name, must realize the principle of government of the people, by the people, for the people. It must allow of voices being heard, not directly, but through persons authorized and capable of repeating communications from the people outside. The wants without must be felt by those within. This practically means that all sections must be represented. Lord Courtney proceeded to give examples of the failure to comply with these requirements under the present method of electing representatives. He showed how it often occurs that in three constituencies a large majority of those voting may belong to a party which returns only one or may be even no candidate. He instances cases in which the election returns revealed a sad want of consistency, where Conservatives slipped in in the face of a majority of Liberal voters, or where the Labour party failed to obtain a proportional number of seats. The last general election revealed this inconsistency with particular clearness. The Liberal and Labour electors together were to the Conservative electors about the proportion of 5 to 4; yet the members returned by the former are to the members of the latter in proportion of 3 to 1. Another flagrant example is to be found in the election of 1895, at which the Home Rule voters were some 25,000 ahead of the Unionist voters in numbers, but the members returned were 279 Unionists and 702 Home Rulers. Next Lord Courtney pointed out that many a man holds sound views of political matters, which, however, do not coincide with the two great parties which propose to put up candidates. Such a man has no chance of being heard or of having a fair candidature under the present condition of things, and yet it may be much in the interest of the public to secure the services of the independent man. These and many other defects prove the inadequacy of the present system. Lord Courtney is convinced that the only remedy is to be found in doing away with single member constituencies and in replacing them by constituencies returning three or more members, while the electors are restricted from giving an effective vote to more than one candidate. In other words, he recommended the single transferable vote system, and, in order to demonstrate to his audience the practicability of this system, he instituted an imaginary election, conducted on the lines accepted by the Society.

SANATORIUMS FOR WORKING MEN.

The Prince of Wales presided at the dinner of the National Association for the Establishment and Maintenance of Sanatoria for Workers Suffering from Tuberculosis, held at the Hotel Cecil, London, on May 14th. The response to an elequent speech from the Prince of Wales was an announcement at the end of the dinner by the Honorary Architect of the Association, Mr. A. William West, that the subscription list amounted to £13,261. In the course of his remarks proposing the toast of "The Association," the Prince of Wales said that the scheme was to enable the working man to pay for his own cure, and so render himself independent of charity. The movement owed its initiation to a deputation from the National Society for the Prevention of Tuberculosis to the Hospital Saturday Fund; this resulted in the formation of the National Association for the Establishment and Maintenance of Sanatoria for Workers Suffering from Tuberculosis. Although friendly societies could legally maintain beds in sanatoriums, they could not draw upon their capital to build these institutions, so an appeal was made to the public, and the National Sanatorium at Benenden was built, and, if it should prove to be financially successful, it was hoped that the friendly societies might consider themselves justified in applying for powers to build their own sanatoriums out of their invested funds. The maintenance of the beds at Benenden was guaranteed without any further calls upon the public. The treatment aimed at giving the patients "double rations of food and rest and half rations of work." The farm colony part of the scheme enabled the patient to be retained for an after-cure, and to be gradually hardened, so that on his discharge he could resume full work. During the treatment the sick pay of the patient would be paid to his wife and family. The project was an ideal work of benevolence, the highest and best form of co-operation, for it helped those who made an effort to help themselves. The Prince of Wales was enthusiastically cheered at the end of his speech, which was acknowledged on behalf of the Association by Mr. Garland and Mr. Bunn.

INSANITARY RESTAURANTS.

Some years ago the practice of making special inspections of restaurants and other places in which food is cooked and sold to the public was commenced in the city of London and has since been followed in the city of Westminster, with results which show the wisdom of the medical officers of health concerned in either case. In the latest report on the subject, Dr. F. G. Allan shows that in no less than 57 out of 96 restaurants in the city of Westminster recently examined by his orders sanitary defects of a more or less serious kind were discovered. In eight cases the water-closets in use communicated directly with the kitchens, the larders, or the dining rooms; while in six others they did not work properly, and three were dirty, and two had no external ventilation. In eight other places food was habitually stored in places in which it was liable to contamination. In other of the eating houses the kitchens were found in a generally dirty condition, with walls and floors greatly in need of thorough cleansing, refuse bins without covers; obstructed gulleys, and various drainage defects of a more technical character. The latter revelations are, perhaps, less likely to create revolt in the minds of the public than the former; but it ought not to be forgotten that the cleanest cook may succumb to the difficulties in his way if working in unfavourable surroundings, and that those kitchen employees who have no innate love of cleanliness, and who possibly form the majority of all staffs, are not likely to be checked in unpleasant habits when working for masters content to put up with dirty premises. Some few years ago the condition of the public restaurants was relatively of less importance than at the present day. At that time not only were casual visitors to London fewer, but of the whole army of clerks and other workers within the metropolis, the

great majority brought their food with them from their own homes. But this is no longer the case. Many hundreds of thousands of workers, apart from evening diners, now depend entirely upon restaurants and teashops for their midday meal. The upkeep of these establishments, therefore, cannot receive too much attention on the part of the medical officers of health. Even as seen by the customer's eye, defects in administration and of a more or less nasty character may often be noted by those who are observant; and in places in which anything defective in the serving of meals is to be observed, there is strong ground for suspicion that things behind the scenes are still less adequately supervised. One custom followed by many of the teashops has already been condemned in these columns, and is so particularly unpleasant as to be worth noting again. This is the practice of placing trays of pastry on small tables, leaving customers to select what they will. Those seated at these tables are often engaged in conversation, and coughs and sneezes are not uncommon; it needs but little knowledge of bacteriology to recognize that under such circumstances the chance of the pastry becoming infected with disease-bearing germs is not inconsiderable. Recent investigations at Lille have indicated reasons for believing that tubercle is perhaps more often contracted by ingestion than by inhalation, and this makes it conceivable that many cases of phthisis of obscure causation may really be due to infected cakes sold in teashops. For all that science can say to the contrary, the same considerations may apply to influenza and common colds, and in any case the practice is filthy and should be abandoned.

LABOUR LEGISLATION.

AT the second annual meeting of the British Association for Labour Legislation, Mr. Herbert Samuel, M.P., Under-Secretary of State, Home Office, was the principal speaker. The chair was occupied by Professor Thomas Oliver, Newcastle-upon-Tyne, who drew attention to the excellent work the Society had done during the last two years, and the important part it had played in leading up to the meeting at Berne last year of representatives of various Governments to discuss industrial questions. In his address Mr. Samuel alluded to the Workmen's Compensation Act, and spoke of it as being a measure of greater extensiveness than in any other country. He reviewed the work done at the Berne Conference, and justified the attitude taken up by the British delegates in regard to the use of white phosphorus in lucifer-match making. Mr. Samuel subsequently gave an outline of probable future legislation. At the close of the address a resolution expressing the sympathy of the meeting with the movement towards international agreements on labour legislation was proposed by the Earl of Lytton, seconded by Sir Hamilton Freer-Smith, and carried unanimously.

STREET ACCIDENTS.

THE City of London took a distinct step forward in civilization this week when for the first time in its history an ambulance connected with a series of call boxes was brought into action. The event was made the occasion of a little ceremony on Monday last, when, at the temporary station on the ground which St. Bartholomew's Hospital has acquired for its new buildings, Sir Alfred Newton, Chairman of the Police Committee, explained how the paraphernalia on view had come into being, and the general scheme of which it forms a part. A call was then received from the head quarters of the City Police, and the ambulance swiftly started on its way to pick up the supposed injured person. Meantime those present walked across to the receiving room entrance in time to witness its return from Old Jewry, and the careful removal of a well-bandaged patient into the surgery, there to be treated *secundum artem*. The little tragedy was well acted, and promised well for the future of the system. The shed in which the ambulance is at present lodged is merely a temporary structure; its permanent home will be under the new pathological block of the hospital, now rapidly approaching completion. When in its permanent home it is possible that the hospital authorities may arrange for a senior student habitually to accompany the ambulance on its journeys; but the system to be followed meantime seems likely to meet the needs of the great majority of cases. Attached to the station will be three trained attendants, each on duty for eight hours, as well as three drivers, and one of these will proceed with the ambulance on every journey, being accompanied on the return journey by the police officer who has given the call. The places from which the calls can be given are 52 in number, and, as a map supplied shows, are fairly well distributed over the whole of the city. In their selection preference has been given to those spots at which experience shows accidents most frequently occur. Every city constable when he goes on duty will take with him a key to the call boxes, and on an accident occurring will warn the police head quarters in Old Jewry, and the latter the ambulance station at St. Bartholomew's Hospital. The whole of the City Police, with the exception of a few recruits who have not yet passed their examination, hold first-aid certificates, and pending the arrival of the ambulance, the officer in charge of the case will give it such attention as circumstances seem to suggest and permit. The ambulance is an 8-horse-power electromotor vehicle with stretcher accommodation for two injured individuals and a similar number of attendants, and is provided with an ample assortment of appliances; it seemed to run very smoothly, and was altogether well turned out. Later on, if this first St. Bartholomew's station works satisfactorily, it is intended to provide two others more in the east of the city. Although electromobile vehicles have taken the place of the horse-drawn ambulances, at first proposed, the scheme as it stands seems identical with that originally devised for the Police Committee by Captain Knott Bower, the Commissioner of City Police, in 1903. Its fruition may seem to have been tardy, but those who have studied all the questions involved well know how great have been the difficulties to be overcome.

PROFESSIONAL EARNINGS OF FRENCH DOCTORS.

VISCOUNT GEORGES D'AVENEL, who has for some time past been contributing to the *Revue des Deux Mondes* a series of careful studies of the condition of the wealthier classes in France during the past seven centuries, deals in a recent issue with the fees of physicians and surgeons. He begins with some economic reflections on the relation between intellectual work and the payment which it commands, and he shows that the value of such work in terms of money is not fixed by the esteem in which the workers are held but by the need the public has of their services, or the enjoyment it expects to derive from them. Although the liberal professions have, as a whole, risen in the social scale, within the ranks of each there is greater inequality than heretofore, a few earning much larger incomes than could have been earned in former days, while many make a bare livelihood. The differences are the result of the inevitable operation of economic laws, and as M. d'Avenel points out, notwithstanding political changes the pecuniary favours of the citizens of the French Republic are not distributed with any greater discrimination than those of kings under the old *régime*. The modern man of the middle class is more liberal than the great man of a former day because he is

wealthier, and the conditions of practice are less oppressive because it is less of a personal servitude than was the case in the Middle Ages, when the doctor to earn a sure living had to attach himself to some powerful patron. The "leeches" of princes received annual salaries varying from £90, which the Count of Savoy gave his physician in 1401, to £880, which Charles the Wise gave his surgeon. Queen Anne of Brittany in 1498 paid her first physician £780, and in 1380 the medical adviser of an Infant of Aragon received £584. These amounts, however, were quite exceptional; the average rate of salary received by the physicians of princes was from £160 to £320. Thus the first "Master "in Medicine and Physician" to the Duke of Burgundy received £280, and the second £228. The Duke of Berry in 1397 paid his physician £240; Queen Isabeau of Bavaria gave hers £232. In 1501 the physician-in-ordinary and the surgeon to the Archduke King of Spain each got £268. On the other hand, in 1445 the Duke of Orleans gave his doctor only a trifle over £180; this was an advance on the salary given by his ancestor in 1360, which was only about £65. The Count de Nevers gave £96, while lords of lesser degree paid their physicians from £40 to £60. In 1342 the physician of the Bishop of Troyes received only about £35. To prevent misunderstanding, it should be stated that in every instance M. d'Avenel's figures represent the modern equivalents of the actual sums paid. Sometimes the doctor was fortunate in a patron who paid him in Church preferment. In 1435 Jean Lavantage, first physician to Duke Philip the Good of Burgundy, was made provost of the chapter of Saint-Pierre at Lille; afterwards that benefice became a kind of appanage of the office. In those days physicians were often clerics. A physician who gained the confidence of a prince had many opportunities of enriching himself. Louis the Eleventh's doctor, Jacques Coictier, became President of the Chambre des Comptes, and was so wealthy that he was able to give £96,000 to Charles the Eighth for protection against his enemies when the death of Louis left him exposed to their machinations. Jean de l'Hôpital, physician to the Constable de Bourbon, received valuable appointments and large gifts of land from his master. D'Aquin, first physician to Louis the Fourteenth, had from his office an income of £7,000; the appointment was sold for £8,400. The Sun-King was extraordinarily liberal to his doctors; after the historic operation for fistula in 1687 he distributed among them £60,000, of which Félix, the operator, got £28,000. Under Henry the Fourth an ordinary fee for a physician's visit was a coin of the value of about one and a half francs. Regents of the Faculty got 10 francs, and when called in consultation in the case of a great personage, such as the Minister Colbert, they each received a louis of 10 livres, equivalent to 37 francs at the present day. In the eighteenth and the earlier part of the nineteenth centuries, the fee for a visit in provincial towns was from a franc and a half, or even 70 centimes, to 3 or 4 francs; in Paris, physicians of reputation received from 5 to 14 francs. At the present day in the provinces the fee for a visit is from 3 to 5 francs, with an additional franc per kilometre of distance from the doctor's house. In Paris the fees vary from 3 francs in the workmen's quarters to 5 francs in the better parts of the town. The modern doctor not only receives more money for his visits, but he visits much more than his predecessor in the two previous centuries. A general practitioner in Paris in a good quarter often earns £1,200 a year. There are some two hundred who earn £1,000 a year; four to five hundred who make from £600 to £800, and two thousand who earn from £320 to £600. In the provinces, except in the case of beginners, the minimum seldom falls below £400 for a doctor who has a horse and carriage to command. Those who have a considerable reputation and who work hard may make from £800 to £1,200 a year. For consultations the usual fee to hospital physicians and surgeons is £2, and to those who have the title of "professor" £4. In the consulting ranks there are some forty in Paris who earn from £4,000 to £8,000 a year, or an average of £6,000—that is to say, as much as the first physician to Louis the Fourteenth, eight times as much as that of Queen Anne under Louis the Twelfth, and twenty to twenty-five times more than the physicians of John the Fearless, the Duke of Burgundy, or of Queen Isabeau, wife of Charles the Sixth. The leading physicians do not make more than £8,000 a year, but there are at present ten surgeons whose professional income is estimated at £24,000. Fees for operations range from £80 to £400. Taking the hospital surgeons of Paris as a whole, their earnings range from £2,000 to £4,000 a year. In the provinces some surgeons make £4,000 a year; in the larger towns there are a few specialists who earn on the average £800 a year.

SUNDAY REST.

In these islands, where Sunday is generally regarded as a day of rest, probably most medical men on that day manage to obtain some degree of relaxation from their daily toil. Nevertheless, it is by no means sure that a movement such as is now in progress on the Continent might not well find its counterpart in many parts of England. Sunday closing, recently enforced upon shopkeepers in France by a much contested law, seems to have engendered amongst medical men in France and elsewhere an active desire to obtain the benefits of an analogous closing for themselves. And in this there is much sound sense, for if it be true that it is to the interest of the community that every worker should be released from labour at least one day in seven, it must be doubly true of the medical man, for whom the day's work never ends and whose night's rest is often interrupted. Of course, in any attempt to promote the comfort and well-being of individual medical men, the needs and reasonable desires of their possible patients must be duly consulted. It is his recognition of this limitation which makes a recent consideration of the problem by Dr. Ravon of St. Etienne[1] of real interest. Obviously among the points to be determined are to what extent are the demands for Sunday labour at present made on medical men really legitimate, how far should medical men in their own interest comply with them, and what period of rest should they endeavour to obtain. His conclusion on the first point, based on a long investigation of his own practice, is that only about 25 per cent. of the visits requested by patients on Sundays are really necessary; and that the other patients summon their medical attendant on Sunday rather than on the preceding Saturday or the following Monday, simply because the idea of a medical man requiring a Sunday rest has never occurred to them. In regard to the other points, he considers that if a medical man devoted the whole morning of every Sunday and public holiday to work and the rest of the day to some other occupation, the needs both of his practice regarded as a business enterprise and his own well-being would be duly met. It does not seem to him that an amelioration of the present conditions would be difficult if medical men set to work to bring it about. They should first educate the public into taking a proper view of matters; and, secondly, arrange among themselves to take it in turns to remain on duty on Sundays and public holidays to attend to the needs of persons who, owing to accident or the like, require a Sunday visit at other times than in the morning. To this end he would have the medical societies established in different localities publish from time to time in local journals a notification to the effect that all visits paid by request after midday on Sunday and holidays will

[1] *Gazette Médicale Belge*, April 18th.

be charged at the rate of night visits, and on each Saturday an advertisement in the local paper stating that the names of the medical men who will be available on the succeeding day after twelve o'clock can be found at the police station, or in some other place which is constantly open. Steps in this direction, it may be noted, have already been taken in some parts of Germany, but with what success we do not know, and similar measures have for a considerable time been in vogue amongst chemists in many parts of France.

INSANITY IN MURDER TRIALS.

WE learn from the *Medical Record* that Senator Agnew has introduced in the New York State Senate a Bill adding a new section to the criminal code relating to the insanity of a defendant indicted for a felony. It is provided that either the defendant's attorneys or the District Attorney may apply to any justice of the court in which the indictment is pending for an order committing the defendant to a State hospital for the insane for observation. The motion must be based upon affidavits, executed by two duly-qualified examiners in lunacy, which must show that a personal examination within ten days before the notice of motion satisfied the examiners that the defendant was insane. If the judge be satisfied that the interests of justice so require, he shall make an order committing the defendant to a State hospital for the insane for observation for a period of not less than three, nor more than six, weeks. The superintendent of the hospital or the physician in charge of the defendant shall report to the Court at the end of three weeks the results of the observation, and should the defendant be detained in the hospital for more than three weeks a second report shall be made when he is returned from the hospital. Another Bill introduced by a member of the Assembly provides that in any criminal action wherein the issue of insanity is involved no evidence of statements made to the person alleged to be or to have been insane by a third party, shall be introduced as showing or tending to show such insanity, or as aggravating such insanity unless the facts alleged to have been narrated be first proved.

SLOUGHING AND DISCHARGE OF CAUTERIZED CANCEROUS UTERUS.

ABOUT twenty-five years ago Marion Sims strongly advocated the use of chloride of zinc for uterine cancer. He claimed good results, but the method was not without danger. Sir Spencer Wells attended a patient who had undergone this treatment at the hands of another specialist. He removed from the vagina a sloughy mass, which was found to consist of the greater part of the interior of the uterus, including about half the thickness of its muscular portion. This slough is preserved in the Museum of the Royal College of Surgeons. The patient survived the discharge of the sloughy uterus for several months, but no further clinical history of the case has been preserved. Fraenkel advocated and practised the chloride of zinc treatment at least as late as 1888, and it is still employed where the malignant disease is too advanced to allow of even the very thorough radical surgery of Howard, Kelly, and Wertheim. Quite recently Dr. Albert Blau, assistant in Chróbak's clinic, has published a case similar to that above described.[1] A woman aged 64 was found to be suffering from cancer of the body of the uterus and cervix, complicated by pyometra and infiltration of the parametrium. The pus was emptied out of the uterine cavity, which was drained with a rubber tube for a few days. The disease was held to be too advanced to allow of a radical operation, although the parametric infiltration seemed inflammatory in character. Gauze soaked in a 30 per cent. solution of chloride of zinc was packed into the uterine cavity. It was removed fourteen hours later, as the patient complained of burning pains. Eight days later, after free vaginal discharge, a sloughy mass was found in the vagina. It was easily extracted with the aid of a forceps, as it had set itself free from all its connexions. The mass bore all the characters of the body of the uterus, sac-like owing to previous distension with pus, and its outer surface was quite smooth as though covered with the normal serous coat. Much unaltered muscular tissue, infiltrated at many points with cancer, was discovered on microscopical examination. A few days later the pelvis was explored; at the upper extremity of the vagina was a cavity large enough to lodge a bantam's egg. It was perfectly smooth, and seemed as though lined with a very smooth membrane, through which intestine could be easily defined. Two months later the patient was in good health and free from discomfort.

[1] Spontane Ausstossung des karzinomatösen Uterus nach Aetzung mit Chlorzink. *Zentralb. f. Gyn.*, No. 4. 1907, p. 97.

PLAGUE IN RUSSIA.

IN his *History of Plague Epidemics in Russia*,[1] Dr. Dörbeck gives a concise account of what is known concerning various outbreaks of the disease from the time of the foundation of the empire up to the present date. The various epidemics which visited Russia before the year 1352 have not been recorded with sufficient precision to admit of accurate diagnosis, and their nature must therefore remain unknown. The first epidemic of plague admitting of certain identification is the Black Death, which broke out in Russia in 1352. It apparently originated in Eastern Asia, and then, travelling by way of Western Asia and Asia Minor, spread over Europe and the north of Africa. In Europe the disease first made its appearance in the Crimea, and then, following the coast-line of the Black Sea, overran Turkey, Greece, Italy, and the whole of the west and north-west of Europe. Thence it made its way to Russia, breaking out first in Pskow, then in Novgorod, and subsequently spreading over the whole of the kingdom. From the time of this outbreak down to the seventeenth century, Russia was frequently visited by the plague, which assumed sometimes the bubonic and sometimes the pulmonary form; or both types might make their appearance simultaneously. These visitations generally came from the west; they varied in severity, extent, and duration, and generally disappeared of their own accord. For the seventeenth century the historical records are not very clear, but there appears to have been a severe epidemic of plague during the years 1654–57. In the eighteenth century the disease again made its appearance, but the epidemics were less devastating and more strictly localized. Almost all the epidemics of this period, and also those of the first half of the nineteenth century, were introduced from Turkey, with the exceptions of the outbreaks of 1710 and 1727–28, which apparently originated from Poland and Persia respectively. The introduction of the disease was favoured by the wars with Turkey in the years 1738, 1769–71, and 1828–9, and it was found that when outbreaks arose in time of war they spread with exceptional rapidity and involved very heavy loss of life. Since the year 1878 the epidemics of plague in Russia have been limited and brief, but outbreaks have often occurred in the Government of Astrachan, apparently because this district is particularly liable to be infected by the nomadic tribes which are in communication with Oriental centres where plague is endemic.

[1] *Geschichte der Pestepidemieen in Russland.* Von Dr F. Dörbeck. Heft xviii. Abhandlungen zur Geschichte der Medizin. Herausgegeben von Professor Hugo Magnus. Breslau: J. U. Kern. 1906. (Med. 8vo, pp. 220. M.6.)

Sir Victor Horsley has been elected an honorary member of the Russian Surgical Society.

The next session of the General Medical Council will commence on Tuesday, May 28th, the President, Dr. Donald MacAlister, taking the chair at 2 p.m.

Professor Wolfram C. Fuchs of Chicago has died of cancer, induced, it is believed, by continual exposure to the *x* rays. About three years ago the disease began in the hands, which had been severely burnt. Notwithstanding repeated operations, it recurred persistently, and finally attacked the trunk and internal organs. This makes the fifth death from a like cause reported in the United States.

Three Paris medical societies — the Société de Médecine et de Chirurgie Pratiques, the Société de Médecine de Paris, and the Société Médico-Chirurgicale —have combined together under the title of Société de Médecine. The Société de Médecine, which was founded in 1796, has a membership of 558. The first meeting of the new Society was held on May 14th under the presidency of Dr. Paul Coudray.

A special general meeting of the Metropolitan Counties Branch will be held on Thursday, June 6th, at St. James's Vestry Hall, Piccadilly, at 4 30 p.m., to discuss the advisability of constituting a central hospital authority for London. Dr. Knowsley Sibley will submit, on behalf of the Westminster Division, the following resolution:

> That, in the opinion of this meeting of the Metropolitan Counties Branch of the British Medical Association, it is desirable, with a view of abating the present abuse of hospital charity, that a central hospital authority for London be constituted upon which the medical profession is adequately represented.

If this resolution is approved by the meeting, the Branch Council will be asked by further resolutions to appoint a Committee and provide the funds necessary for the promotion of this object. Those who desire to join in the discussion are requested to send their names to Dr. F. J. McCann, 5, Curzon Street, Mayfair, W., Secretary, Westminster Division.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

Medical Inspection of School Children.—On Thursday in last week Mr. Ramsay Macdonald (Leicester) asked the President of the Board of Education whether he proposed to create a medical department in connexion with the Board of Education so as to supervise and co-ordinate local work done in connexion with the medical inspection of school children, and whether, in order to create such a department legislation was necessary. Mr. McKenna in reply expressed regret that he could not as yet add anything to the answer which he gave on March 15th, to the effect that it would be premature to decide what machinery would be required by the Board of Education on the Education (Administrative Provisions) Bill becoming law. He was fully alive to the importance of this question. The staff of the Board of Education could be increased with the consent of the Treasury without legislation. The Board's staff already included two medical men. In reply to Mr. Wedgwood, who asked as to the expert advice on which the Board intended to act, Mr. McKenna said that the whole subject at the time of last year's Bill was considered by experts whose names were too numerous to mention. In answer to a further question, Mr. McKenna said that Mr. Wedgwood was not entitled to say that the clause dealing with the medical inspection of school children was added in opposition to the wishes of the Government. It is understood that the matter will not be allowed to drop, and every effort will be made, probably by Labour members, to add the following clause to the Bill of this year: "These powers and duties shall be administered under the supervision of the Board of Education, and for the purposes of subsection (b) a Medical Department shall be constituted at the Board of Education to advise the Minister of Education directly concerning the medical aspect of all educational matters and to report annually."

Royal College of Surgeons of England.—Sir William Collins asked the Prime Minister whether he had now considered the memorial presented to him last session on behalf of the members of the Royal College of Surgeons of England, asking him to take such steps as might secure to members some voice in the management of the College and its property; whether any representations had been made by the Privy Council to the College of Surgeons, and with what result; and whether he would lay upon the table of the House copies of any communications which had passed. Sir Henry Campbell-Bannerman replied that the memorial mentioned was transmitted to the Council of the College by the Lord President; and, subsequently to the receipt of their observations thereon, Lord Crewe saw a deputation from the society of members. The society had since furnished a rejoinder to the observations of the Council, which had been forwarded to that body with an intimation that the Lord President was willing to receive a deputation from them in due course.

Factory and Workshops Bill.—Lord Beauchamp, in moving the second reading of this Bill in the House of Lords, said the main object of the measure was to apply the Act of 1901 to laundries. The Bill brought all the laundries under the Act of 1901, and they would be inspected; it regulated the hours of the employment of women and young children in laundries, and included a number of special regulations as to temperature in ironing rooms, for carrying away steam, and for draining floors. It also applied the law to institutions where work was carried on which formed no part of the manual labour incidental to the institution. There were institutions connected with the Church of England and with Roman Catholics where philanthropic and educational work was carried on; and it was the intention of the Government as far as they could to meet the wishes of the management of those institutions, for they were carried on on somewhat different lines from ordinary commercial lines. The Archbishop of Canterbury, in supporting the second reading, said he had always been in favour of the inspection of laundries of charitable institutions, and he thought it might be to their own advantage. Lord Hylton said it was especially desirable, where dangerous machinery was employed in an institutional laundry, that that part of the work should be under the authority whose duty it was to inspect machinery. The Bill was read a second time.

The Public Health Bill was read a second time in the House of Commons on May 14th.

Opposition to Bills.—Sir John Batty Tuke has given notice, on the second reading of the Vaccination Bill, to move that it be read a second time upon this day six months, and Mr. Annan Bryce has given a similar notice with reference to the Nurses' Registration Bill.

Qualifications of Medical Officer at Tokio.—Sir William Collins asked the Secretary of State for Foreign Affairs whether the medical officer to the British Embassy at Tokio was a British subject, and whether he was a legally-qualified medical practitioner within the meaning of the Medical Acts. Sir Edward Grey's reply was generally in the negative; but he pointed out that the officer in question was thoroughly competent, and had the Embassy insisted upon the qualifications mentioned they would have had to go without a medical officer for some time.

Plague Deaths in India.—Mr. Morley, in reply to a question by Dr. Rutherford, stated that the number of deaths from plague in India during April, 1907, and the total from September, 1906, to the end of April, 1907, were 51,003 and 5,56,699 respectively.

Scotland.

SCOTTISH ASSOCIATION OF MEDICAL WOMEN.

A special meeting of the Scottish Association of Medical Women was held in Edinburgh on Saturday, May 11th, when a debate took place on the remuneration of posts held by medical women.

In the course of the discussion various cases were cited in which medical women were holding posts at insufficient salaries, and it was pointed out that there was a tendency on the part of public bodies, as well as among private practitioners when opening posts to medical women, to fix the rate of remuneration at a lower level than would be considered sufficient in the case of medical men.

After considerable discussion a motion was carried to the effect that in the opinion of the Association it was undesirable that women should accept posts at a lower salary than that offered to men previously holding the same, and that in the case of new posts the Association considered it detrimental to the interests of the profession that such posts should be taken by medical women at salaries which would not be accepted by men.

A discussion also took place on the desirability of forming a Central Information Bureau for the benefit of women graduates in medicine, and it was decided to appoint a Committee to consider whether such a scheme were practicable.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

For the week ending mid-day Saturday, May 11th, the Medical Officer of Health for the city of Edinburgh reports that 5 cases were notified as suspected cerebro-spinal meningitis, of which 3 were removed to the City Hospital at Colinton Mains. Six deaths occurred during the week, and 20 cases remain under observation.

The Registrar-General for Scotland reports that in the week ending Saturday, May 11th, in eight principal towns of Scotland, 31 deaths were due to cerebro-spinal meningitis, which is 14 fewer than in the previous week. Of the total 18 were in Glasgow, 6 in Edinburgh, 4 in Leith, 2 in Paisley, and 1 in Dundee.

EDINBURGH ROYAL INFIRMARY.

At a meeting of the managers on Monday, May 13th, the following appointments were made for five months as from May 1st: J. Malcolm Christie, M.B., Ch.B., Clinical Assistant to Mr. J. M. Cotterill, and Arthur Percy Wall, M.B., Ch.B., Clinical Assistant to Mr. N. T. Brewis.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

The following gentlemen have been elected officers for the session 1907-8: *President*, Dr. J. Walker Downie; *Vice-Presidents*, Dr. R. Barclay Ness and Dr. Joshua Ferguson; *Treasurer*, Dr. Alfred A. Young; *Editorial Secretary*, Dr. James Scott; *General Secretary*, Dr. Archibald Young; *Councillors: Section of Medicine*, Dr. N. McNair, Dr. William Grant, Dr. John Brownlee, and Dr. Donald MacAlister; *Section of Surgery*, Dr. Jas. Laurie, Dr. J. G. Connal, Dr. Alex. McLennan, and Dr. M. L. Taylor; *Section of Pathology*, Dr. Leslie Buchanan, Dr. R. Bruce Young, Dr. Leonard Findlay, and Dr. John Anderson; *Section of Obstetrics*, Dr. Robert Jardine, Dr. S. J. Cameron, Dr. John Lindsay, and Dr. Wm. D. McFarlane.

GOVAN DISTRICT ASYLUM.

In his annual report on the Govan District Asylum, the Superintendent, Dr. W. R. Watson, discusses the value which can be given to the ordinary table of probable causes of insanity which figures in all reports of asylums. His contention is that the present method of assigning causes is fallacious and worthless. The etiology of insanity is still in an uncertain stage. Indeed, it is only in recent years that the subject has emerged from the region of irresponsible conjecture, and even yet the elementary fallacy of confusing symptoms with cause and failing to distinguish between *post* and *propter* is constantly met with. He illustrates his contention by reference to the arguments adduced to prove that alcohol is a potent cause of insanity and racial degeneracy. He is careful to point out that he neither asserts nor denies the statement, but he insists that the available evidence is inadequate. On analysis the current reasoning practically amounts to this: "In a certain proportion of cases of insanity there is a previous history of alcoholic excess, therefore that percentage of cases is caused by alcohol." He argues that this is absurd and a control experiment is necessary to determine, first of all, how many of the general population are addicted to alcohol, and, secondly, what proportion of drunkards become insane. Even then we should have to find out further, first, in how many of the cases the alcoholism was merely a symptom of pre-existing, though unrecognized, insanity; secondly, how many of the patients were instances of a predisposition to insanity, in which the mental breakdown had been aggravated or precipitated by alcohol; and thirdly, how many had originally been normal individuals rendered alcoholic by environment, and had become insane in consequence. This third class alone is that in which insanity can be ascribed unreservedly to alcoholism, and is also the only one in which the question is of great sociological value. Nearly all the other etiological factors are open to the same lines of criticism, so that Dr. Watson holds that the stage reached at present is only that in which reliable data are being collected, the period when generalizations upon the causes of insanity can be made being far distant. Dr. Watson, therefore, uses a table of a special type, in which the associated conditions are recorded, as far as they can be ascertained, under the headings "existent associated conditions" and "pre-existent associated conditions," instead of the ordinary classification of "probable causes."

Ireland.

IRISH MEDICAL ASSOCIATION.

THE annual meeting of the Irish Medical Association will be held in the Railway Hotel, Portrush, on Wednesday, June 5th, at 3 p.m. The dinner will take place on the same evening, and next day there will be an excursion to Giant's Causeway, on the invitation of the Londonderry and North Antrim Branch and other Northern members. There will also be an excursion to Derry.

THE KING'S CORONATION NATIONAL FUND FOR NURSES IN IRELAND.

Mr. R. H. Swanzy, President of the Royal College of Surgeons, presided over the annual meeting of the friends of this Society on Monday, May 13th. There was a large attendance of nurses. The report showed that £3,769 8s. 3d. had been invested in Midland Two and a Half per Cent. debentures, representing £4,703 18s. 6d., and cash in bank was £60 14s. 4d. Two nurses had been helped during the year, and no applicant had been refused. The speakers were: Dr. James Little, Dr. J. O'Carroll, Dr. M. F. Cox, Miss A. M. McDonnell, Miss Kelly, Sir Andrew Reed, Miss Shuter, Mr. Jephson, Sir W. Thomson, and Mr. Swanzy.

TRINITY COLLEGE, DUBLIN.

Three years have now elapsed since Trinity College started its first post-graduate course of instruction, and the results have been so satisfactory that work of the sort will presumably now take a permanent place in the medical life of Dublin. The syllabus of the fourth annual course in connexion with the School of Physic in Trinity College lies before us. It is similar to its predecessors in appearance, and the classes are arranged on those lines which gave so much satisfaction in the previous years. Work commences at 8.30 a.m., and on most days the classes are continued till 5.30 p.m. There is an interval for lunch from 2.15 to 3. As before, arrangements have been made by which a limited number of the members of the class can reside in college rooms and dine on commons at an inclusive cost of £1 1s. per week. All the advantages and privileges of the course are open to any qualified man. The composite fee for the entire course is £5 5s., and for this sum each member is entitled to attend all the classes or such of them as he desires.

The date fixed for the commencement of the course is June 17th, and it will last till July 6th. The honorary secretary is Dr. Parsons, who will be happy to afford further particulars if application be made to him.

WOMEN'S NATIONAL HEALTH ASSOCIATION OF IRELAND.

The Countess of Aberdeen, the gifted wife of the present Irish Viceroy who did so much for Ireland by founding the Irish Industries Association, of which she is still President, has just established another organization—the Women's National Health Association of Ireland—which should likewise be of incalculable value to that country. The objects of this new association are:

1. To arouse public opinion, and especially that of the women of Ireland, to a sense of responsibility regarding the public health.

2. To spread the knowledge of what may be done in every home and by every householder to guard against disease, and to eradicate it when it appears.

3. To promote the upbringing of a healthy and vigorous race.

The health problems which first demand the earnest consideration of the Association are:

1. *Consumption*.—How an organized effort can be made to stamp out the preventable disease of consumption, and how the active co-operation of women of all classes can be engaged to this end. According to the latest figures furnished by the Registrar-General, 16 out of every 100 deaths in Ireland are due to tuberculosis.

2. *Infantile Mortality*.—How to combat the causes leading to an infantile mortality which, according to the Registrar-General's latest figures, carries off 95 out of every 1,000 children born in Ireland before they have reached the age of 1 year.

3. *Milk Supply*.—How the system of providing and distributing milk can be controlled with a view to the health both of infants and of the population at large. In an agricultural country like Ireland this question is of peculiar importance, and the community at large must be aroused to the necessity of demanding efficient control and inspection of farms and dairies, and of the places where the milk is kept and sold, both in town and country. The second report of the Royal Commission on Tuberculosis has made this a most pressing subject, inasmuch as the Commissioners report that it is their unanimous opinion that the disease as it presents itself in animals and in man is one and the same, and may be reciprocally communicated.

School Hygiene.

(*a*) How to promote the teaching of elementary hygiene and domestic science in primary schools, and the training of teachers to give instruction in these subjects.

(*b*) How to make the general public realize the insanitary conditions under which the children attending many of the national schools have to pursue their education. This is set forth in no uncertain manner by the Commissioners of National Education both in their last and previous annual reports, and must be a matter of the gravest concern to every parent as well as to the country at large.

(*c*) How to promote the inspection of children in elementary schools by trained district nurses. The system whereby trained district nurses visit, at stated intervals, the primary schools in order to attend to any small ailments, cuts, bruises, etc., and to detect premonitory symptoms of illness, skin disease, or eye and ear affections, has been found of the greatest service in a number of districts where it has been put in force.

Constitution.

Article I.—The Association shall carry out its work by means of local Branches to be formed in all parts of the country, and which shall be affiliated to a central council, which shall meet annually or oftener if required, in Dublin.

Article II.—The central council or governing body of the Association shall consist of a president, vice-presidents, secretaries, and treasurer, together with representatives from every local Branch elected by each Branch according to the number of members belonging to the Branch, say one member of council for each fifty or a hundred members. The central council shall have the power of co-opting a certain specified number of extra members having special knowledge or experience likely to assist them in their work.

Article III.—The officers of the Society shall be elected at the annual meeting of the Association.

Conditions of Membership.

All women living in Ireland are cordially invited to become members of the above Association.

Those joining the Association are asked to pledge themselves to do all in their power to carry out the aims of the Association both in their own homes and by their personal influence. It is hoped that they will take advantage of every opportunity of informing themselves regarding those principles of health on which so much light is constantly shed by the work of medical men and others, and that they will then take an opportunity, either personally or in co-operation with others, of spreading this knowledge amongst the homes of the people.

At the inaugural meeting, held in Dublin on March 15th, a provisional Committee was appointed, of which Her Excellency the Countess of Aberdeen is President and Honorary Treasurer, and Mrs. Rushton, 58a, Rathmines Road, Dublin, has been selected as Organizing Secretary. An excellent memorandum has been published, giving suggestions for forming local branches of the Association and also indications of the means whereby the aims of the Society can be advanced. We commend this most useful Association, which forms a platform on which, apart from any question of religion or of politics, people of every type can meet, bound together by one patriotic desire—to improve the health conditions of their country. We are glad to know that steps are being taken to form Branches in various parts of Ireland, and we shall follow the development of this new movement with keenest interest.

POST GRADUATE STUDY.

A new enterprise is in view in Dublin, where, with the sanction of the President and Council of the Royal College of Surgeons, arrangements have now been completed for two courses of post-graduate study as an annual event. Those to whom the project owes its existence have been successful in drawing into the scheme the majority of the hospitals, general as well as special, so that the amount of clinical material available will be very large. The first course is to include twenty days' work, beginning on June 10th and ending on July 2nd, both days inclusive. Each day will be mapped out into four sections with half an hour's interval between each of them, so that an energetic student would be able, if he pleased, to cover in the time the whole range of practical medicine and surgery. In addition to the more ordinary subjects, courses on anatomy and operations on the cadaver are included on the syllabus. The second begins in the autumn on September 23rd and terminates on October 15th. The fee for each course is £5 5s., in return for which the student will receive a ticket entitling him to admission to every lecture and demonstration set forth in the syllabus as well as to the ordinary clinics of the hospitals. In order that the work may be thoroughly practical the students will be divided into groups of small size.

PROPOSED TUBERCULOSIS DISPENSARY FOR BELFAST.

At the monthly meeting of the City Council on May 1st the Medical Officer of Health reported that the death-rate of the city for the month had been 23·2; there had been a fall as compared with the corresponding period for last year in the mortality from all forms of disease.

A Subcommittee of the Public Health Committee reported that it recommended the renting of a house in which to establish a central tuberculosis dispensary, with a medical officer in charge, whose duty it would be to deal solely with consumptive patients. This procedure has already evoked correspondence in the public press. With the Health Commission still sitting, and the ink of some of the evidence dealing with tuberculous disease scarcely dry, it seems at least discourteous to the Commission and absolute obtuseness to the possible value of any suggestion to take such a step. The negotiations with the Forster Green Hospital have twice fallen through, and so patients cannot be sent there; there is no probability of a suitable sanatorium being erected within several years; apparently there is only the Poor-law sanatorium, about which there may be legal as well as social difficulties. The expense will be heavy, and no consideration has been devoted to making use of those institutions which are already in existence; this would be a much cheaper plan. All the witnesses, so far, have recommended a public advisory committee to aid the Health Committee in its arduous work of tackling this momentous problem, but the hint has not so far been taken. If ever there was a matter not to be rushed, this is one; it is bound to fail, as previous projects of the Committee to prevent consumption have failed, if it does not command popular and general support; this beginning seems to be even more ill advised than its predecessors, although the object and broad principle receive universal support.

West Yorkshire.

Dewsbury Joint Hospital Board.

The annual meeting of this Board was held during the past week. A letter was read from the Local Government Board in which the Board stated that it could not but regard the scale of fees suggested by the Dewsbury Board as unduly high. It was, however, prepared to issue a provisional order amending the arrangements for meeting the charges for maintenance of patients in the hospital to the following scale: Small-pox, 4s. to 5s. per day per patient; enteric fever or diphtheria, 3s. to 2s. 6d.; scarlet fever or other diseases, 2s. to 2s. 6d. After some opposition these terms were eventually approved.

Death of the Bradford Police Surgeon.

The death of Mr. Samuel Lodge, the Bradford Police Surgeon, which took place on May 9th, removes a notable figure from the West Riding. Mr. Lodge carried on an extensive practice and his official duties up to a few months ago and was 83 years old at the time of his death. Practically a self-made man and taking his qualifications later in life than it is usual to do, Mr. Lodge exhibited an indomitable and restless energy almost up to the very end. His striking personality and physiognomy were almost as familiar in the Leeds Assize Courts as in the Bradford Courts, and he was frequently complimented on the admirable way in which he gave evidence.

Divisional Police Surgeons in Bradford.

The Watch Committee of the Bradford Corporation has decided to recommend to the City Council that in future the Police Surgeonship, recently held by Dr. Lodge, shall not be held by one medical man, but that the work shall be divided. It is proposed to create the following appointments, the cost of which will be about equal to the amount hitherto paid: A chief police surgeon, at a salary of £120 per annum; three divisional surgeons, at a salary of £50 per annum each; and four subdivisional surgeons—one each for Idle, Wyke, Tong, and Thornton—at a fee of 10s. per annum per man stationed in those districts.

Health of Batley.

The Batley Medical Officer, in his report for the past year, states that the birth-rate (27.1 per 1,000) is 1.8 below the average for the last ten years, but higher than that of the past three years. The death rate (16.9) is the lowest for the past thirty years. The infantile death-rate of 182 per 1,000 children born is, as in many of the industrial centres, deplorably high, and the medical officer suggests that a health visitor to instruct mothers should be appointed.

Birmingham.

Report of the Public Analyst.

In the annual report of the Birmingham Health Committee, Mr. J. F. Liverseege, the public analyst, states that 2,770 samples were submitted to him for analysis during the year. There were 763 samples of milk examined, and 5 per cent. of these were found to be adulterated with preservatives; 2 per cent. were due to boric acid, and 3 per cent. to formic aldehyde. Prosecutions for the use of preservatives were instituted in 15 samples, and in every case a fine was inflicted. The adulteration of milk by watering or by the removal of fat was found in 10.3 per cent. of the samples. One sample of cream bought informally had been adulterated with starch in order to make it appear richer. Of 516 samples of butter, 72 were adulterated with foreign fat, and 4 contained more than 0.5 per cent. of preservatives in the form of boric acid. The adulteration by preservatives was lower than in the four previous years. One sample of black-currant jam and one of raspberry jam had been adulterated with salicylic acid, and one sample of raspberry jam had been artificially coloured with a coal-tar dye. Forty-two prosecutions were instituted for milk adulteration, and in 35 cases fines were inflicted; for the adulteration of butter 33 prosecutions were instituted, and in 26 of these fines were inflicted. The samples were first bought informally, and when any adulteration was found in them a second sample was bought from the vendors, who were informed that it would be analysed. Only upon the adulteration occurring in the samples bought in the second way was it legally possible to prosecute the vendors.

Open Spaces Association.

The Executive Committee of the Open Spaces Association is very active in its work. It has been decided to endeavour to raise the necessary funds for acquiring 20 acres of land in what is known as the "Black Patch," in order to preserve it as an open space and playground. The Association has the chance of purchasing the property at a considerably lower price than it would be offered to other intending purchasers, and the two vendors have also promised £500 each. In addition to this it will be necessary for the Association to raise about £9,000. It has also been decided to acquire three other smaller open spaces on the opposite side of the city, in neighbourhoods which are already thickly populated. The Association will issue very shortly an appeal for money, containing full particulars of these proposed purchases.

North Staffordshire.

Potters' Asthma and Compensation.

A general meeting of pottery manufacturers, convened by the Joint Committee of Manufacturers, was held at Stoke on May 9th, to consider the proposal of the Home Office to include within the scope of the new Workmen's Compensation Act, which comes in force on July 1st, the disease commonly known as "potters' asthma." It was stated that the Joint Committee had come to the conclusion that the difficulties of distinguishing this complaint from ordinary pulmonary disease were such as to make its inclusion in the schedule of diseases for which compensation was payable a matter of the utmost gravity for employers and operatives alike, and one which might lead to a disastrous disturbance of the industry. A resolution was passed that in the opinion of the meeting the proposal to schedule potters' fibrosis would, if carried into effect, be a further serious and needless burden on an important industry. The disability caused by the inhalation of clay dust among pottery workers has been steadily diminishing for many years, owing to improved workshop conditions and the provisions of the Factory Acts regulating the age at which work may be commenced, and it can no longer be regarded as a serious risk to the worker. Speakers pointed out that as employers they might be placed in an extraordinary and cruel dilemma; they might be compelled to have all their workpeople medically examined and then to consider, for their own protection, which of those workers they could afford to employ, and which it would be necessary, in self-protection, to remove from the industry for which their physical constitution has made them unfit; and this was a position in which they as manufacturers dreaded to be placed. They might be compelled to part with many of their best workmen because these had commenced work when they were young, when conditions were less favourable than to-day. If compensation were given for a problematical advantage to a few workmen the entire living and occupation of many times that number would be jeopardized. The present powers of the Home Secretary were sufficient for him to insist on the work being so carried out that no fresh cases of potter's fibrosis would possibly arise.

A further resolution was passed to the effect that the meeting urged upon the Home Secretary the importance of the view that the disease should be dealt with by methods of prevention rather than compensation, as the former were steadily becoming more and more effective, while the latter would lead to disastrous results for both employers and workpeople.

South Wales.

Ebbw Vale Sanitation.

The report of Dr. Farrar, Local Government Board Inspector, upon the sanitary conditions of Ebbw Vale, has just been issued. Dealing with the housing question,

Dr. Farrar states that the district is in a state of transition; a considerable amount of squalid and insanitary property still exists, but a large number of well-planned and well-built artisan houses have been erected during the past ten years. Certain houses in portions of the district, especially Beaufort, are badly ventilated, but the Council, when the leases fall in, are determined to compel the owners to demolish them, and he expects that in about five years' time the housing conditions of Ebbw Vale will give little ground for adverse comment. He considers it desirable that owners of house property should induce their tenants to plant and cultivate the garden plots which are, in the majority of cases, attached to houses, and as the competition for houses is so keen throughout the district, it would be quite practicable to insist upon this as a condition of occupancy. Referring to the drainage, he says that the Ebbw River is grossly polluted with domestic sewage, and the drainage conditions are not what they might be, especially in Beaufort. The scavenging was certainly very much better done by the Council's own workmen than by those employed by contractors, and, in the opinion of the surveyor, it could also be carried out directly by the Council in the outlying districts, which at present are let to contractors. After comparing the cost of scavenging by the Council and contractors, he says that in any case the superior efficiency of work done under the direct control of the Council would justify a slightly higher expenditure.

As regards the elementary schools, Dr. Farrar says that there is some overcrowding, especially in the infants' departments, and a regrettable tendency on the part of mothers to evade their natural responsibilities by utilizing infants' schools as *crèches*. Although some of the schools are not in a very good sanitary condition, and much overcrowding prevails, yet the children attending the Ebbw Vale schools have, on the whole, a remarkably healthy and robust appearance, although he noticed a few cases of inflammation of the eyelids.

Dealing with the sanitary administration of the district, Dr. Farrar, in the interest of efficient sanitary administration in the Ebbw Vale and adjacent districts, strongly recommends that the Ebbw Vale Urban District Council should, if possible, enter into a combination with some of the adjoining urban districts to appoint a whole-time medical officer of health. The facilities of communication offered by the Great Western and London and North Western Railways were such that a medical officer of health resident at either Brynmawr or Ebbw Vale could efficiently supervise the sanitary administration of the following urban districts, all or some of them, namely, Brynmawr, Nantyglo, and Blaina, Tredegar, Ebbw Vale, Abertillery, Bedwellty, Risca, and Abercarn. Dr. Farrar makes the following recommendations:

That prompt attention should be paid to the matter of sewerage and drainage in certain parts of the district, particularly Beaufort;

That all the scavenging of the district should be carried out directly by the Council;

That the Council should acquire a destructor, and abolish the tips now in use;

That the successful efforts hitherto made should be continued to improve existing house accommodation, and to bring a number of dwellings up to a level with the requirements of the district.

With reference to Dr. Farrar's recommendation for the appointment of a whole-time medical officer of health, the Abertillery Council has taken steps to convene a conference with representatives of the Nantyglo and Blaina and the Ebbw Vale councils to discuss the matter. The three councils have been informed by the Local Government Board that the sanctioning of the reappointment of the present medical officers would only be granted provisionally and on condition that the councils took steps in the matter.

THE fortieth annual meeting of the Canadian Medical Association will be held at Montreal, September 11th, 12th, and 13th, under the presidency of Dr. Alexander McPhedran of Toronto.

JAPAN AND THE RED CROSS CONFERENCE. The Japanese Red Cross Society will be represented at the forthcoming Conference of the Red Cross Societies by Baron Takeo Ozawa and Dr. Sagen Ariga. The delegates from the Japanese Government will be Surgeon-Major Kasai, Colonel Gori Shibi, and Surgeon-Major Kawamishi.

SPECIAL CORRESPONDENCE.

PARIS.

Académie de Médecine: Report of Commission on Typhoid Fever and Gastro-intestinal Infection from Oysters.

AT the last meeting of the Académie de Médecine Professor Netter made a very full report on typhoid fever and infectious accidents following the ingestion of oysters and the measures to be taken to prevent their recurrence. On February 5th Professor Netter made a communication to the Académie on typhoid fever and gastro-intestinal troubles following the eating of oysters from Cette. A special Commission was appointed, consisting of MM. Chantemesse, Chatin, Edmond, Perrier, Vaillard, and Netter as reporter (vide BRITISH MEDICAL JOURNAL, February 16th). To the 120 cases contained in his first communication Professor Netter is now able to add 155 new cases. No fewer than 262 cases of gastro-intestinal infection, including 63 cases of typhoid, were traced in less than five months—from September, 1906, to January, 1907—all having their origin in oysters bought in Cette. This figure is much below the actual reality, for from October 1st, 1906, to January 31st, 1907, from the railway station at Cette 390 tons of oysters were sent away by express train, and 749 tons of oysters by slow trains, to stations on the coast of France where there are existing oyster beds. The list of cases described occurred in thirty different localities in France and two abroad (Geneva and London). After describing the epidemics of Winchester, Southampton, Middletown (Connecticut), and Sables d'Oloure in France, and experiments proving that oysters can take up and keep pathogenic bacteria for a certain time, the special Commission recommends certain measures to be taken to prevent the contamination of oysters, directly or indirectly, either at the oyster bed or from the time the oysters are collected till their arrival at the table of the consumer. The maritime authorities should institute an inquiry which shall be topographical, chemical, and bacteriological, which should include all oyster beds, whether they be natural beds, or artificially made for rearing, fattening, or keeping oysters prior to their being gathered for sale. Those beds only should be allowed which are recognized on inquiry as healthy, or in which the required measures have been put into operation, and these beds should be under regular inspection. Regulations forbidding the pollution of water courses should be strictly applied by municipalities in the neighbourhood of oyster beds.

Natural beds in which the sanitary conditions are doubtful shall only be authorized to be dragged during the season when there is no danger of the oysters being sold. Those oysters can then be taken away by owners of oyster beds and left for a sufficient length of time to assure the oysters being cleansed. The transport and the sale of these oysters shall be under inspection, to prevent contamination in transit, or at the wholesale or retail establishments. Foreign oysters shall not be allowed to enter the country, unless grown under similar restrictions as French oysters, and shall be provided with a certificate indicating their origin. The discussion and vote on these conclusions will take place at the next meeting of the Académie.

CORRESPONDENCE.

THE CHARTER AND THE CONSTITUTION.

SIR, At the risk of still further increasing the correspondence you have already received on this subject I cannot let Dr. Bradshaw's letter in your last issue pass without a protest.

He says "Whatever the intentions of the Committee may have been, the fact remains that the Divisions, especially those in large towns, were planned out in such a manner as to secure the right to return as many delegates as possible."

Dr. Bradshaw is no doubt entitled to speak for Liverpool and perhaps also for a neighbouring city, but I cannot think that this was the motive which actuated the members of the Association in other parts of the kingdom in planning out the Divisions. If such a consideration was this was the ideal present to the minds of the members

rally at the time of the reconstitution, no wonder the hinery of the Association has croaked and groaned since, and requires readjustment.

any rate, I am glad to say in Birmingham the bers took no thought of this. It was their opinion it would be a political mistake to divide the city, and the voice of the profession united in one local body ld carry more weight in imperial, municipal, and ical politics than if we had had six such Divisions as rpool has.

r. Bradshaw adds further "that there are at present sions which would gladly amalgamate were it not by so doing their number of delegates would be inished." I suppose it would be futile to ask for the es of these Divisions, so that a little missionary work ht be undertaken to arouse them from their lethargic lition, and to point out to them that to have a Repre- ative is not the sole reason for their existence, and if they have anything of importance to bring before Representative Body, they lose nothing by having one resentative instead of two, as there is always power to and a vote by card.

lay I, in conclusion, say that, however much Dr. dshaw's opinions are at variance with my own, I agree Dr. Latimer in thinking that his letter comes at an ortune moment, and has initiated a most useful respondence, and that Dr. F. J. Smith's proposal for a of the members as to the future form of government ne that I trust may be realized by the Council in the n of a referendum.—I am, etc,

rmingham, May 13th. E. D. KIRBY.

IR,—I think it is fortunate that members having such ensive experience of the Association as Drs. Bradshaw F. J. Smith should have called attention to the gerous proposals contained in the draft Charter.

o one for a moment doubts the ability and the nding of the gentlemen who are annually sent up as Representatives. There is no occasion for giving timonials to such gentlemen.

he point of great importance to the future prosperity the Association is whether the members are willing to mit to two governing bodies instead of one. To anyone o has followed the building up of the new constitution s perfectly manifest that the originators of the scheme l never be satisfied until the whole power of the Asso- tion is vested in the hands of the Representative Body. t can Dr. Cox or Dr. Crawshaw give us any good reason y the Council, which is as truly representative as the ly which usurps that name, should be superseded?

Every member has at the present moment the oppor- nity of voting for a member of the Council. If he and fellow members are content to let things slide and not up any opposition to the re-election of his member, ely they and not the Constitution must be blamed. at in the past members have not (for various reasons) d the courage either to nominate fresh men, or to call on the old members to give an account of their steward- p, is perfectly true. That this has happened is only e to the apathy of the members generally, and is not e to any defect in the constitution of the Association. will admit that the Central Council have not moved h the times. We have all felt that their proceedings uld have been more fully reported, and should have en made available for report in the medical press. They uld also have seen the necessity of electing from their dy a smaller body to act as an executive. It is said ere is wisdom in a multitude of counsellors; it is also dent that there is considerable expense connected rewith. If I may be allowed to say so, I think the sociation has undertaken too many things to be able to complish any particular one in a business-like way. ke some Governments, they refer matters to a committee report upon.

Whatever happens, let us have one supreme governing dy. If we find the members of it are not capable of rrying out our demands, let us nominate others who ll promise to carry out our wishes. It is quite time the sociation emerged from the melting pot. Issues of ave moment are before us, and we cannot afford to be nstantly tinkering with our Constitution.—I am, etc.,

ardiff, May 11th. T. GARRETT HORDER.

SIR,—We feel compelled to raise a protest against opinions and statements given in some of the recent letters on this subject. It has been stated that the Divisions have proved a failure and that the sooner they are abolished the better. There is no proof given by Dr. Bradshaw for this statement.

The interest taken in the work of the Association was formerly limited to a very small fraction of the members. Since the formation of the Divisions, this interest has spread and is spreading steadily. It is true that the attendance at Divisional meetings in some districts is deplorably small, yet those who do attend take an active part in the work of the Association, whilst under the old régime they kept completely aloof. And though each Division may contain only a few active members, these collectively far outnumber those previously interested.

The Representatives work under great difficulties, both owing to the unusual claim on their time and expenses, the days running consecutively, in contradistinction to the work of the Council and Committees. In spite of this we find that the Representative Body is not, as many writers say, constituted of fresh men each year.

In his letter of April 27th, Dr. Bradshaw states: "as a matter of fact I find now that few gentlemen who have been Representatives one year are willing to take the office again." Drs. Collier and Brown simply reiterate this statement in their letters of May 4th. We have carefully examined the minutes of the Representatives' meetings held, and find the above assertion is entirely erroneous and misleading. The complete figures of attendances of Representatives are as follows:

	1903.	1904.	1905.	1906.
Number of Representatives who attended 1 year only ...	47	40	30	44
Number who attended 2 years	31	39	42	41
Number who attended 3 years	17	27	27	20
Number who attended 4 years	40	40	40	40
Total number of Representatives ...	135	145	139	145

The table for 1903 is taken from the SUPPLEMENT of July 25th, 1903, p. 179, and for the three subsequent years from the minutes of the Annual Representative Meetings, colonial representatives only being omitted.

It must be borne in mind that the Divisions have been in existence only for four years. The instillation of interest in the Association into the overwhelmingly large mass of inert members is naturally of slow growth, and requires hard work on the part of the few enthusiasts, but it is growing.

A glance at the present list of nominations for the Lancashire and Cheshire Branch Representatives on the Central Council shows that out of the seven candidates three have been nominated not only by individual members but by various Divisions as well. This shows that the interest in the work of the Association is beginning to spread into the constituencies. This is a welcome sign of actual development of life and of promising healthy growth, in contrast to the old mode of election, where generally one or two men nominated a few friends and collected support from members who took no interest whatever in the matter.

We are strongly in favour of the present system of Divisions.

We feel it would be reckless to discontinue their existence after so short a time, as the rank and file of the members would thereby again be thrown out of touch with the work and aspirations of the Association.

In this district it has been felt that it would be advantageous for the local Divisions to meet together to discuss important points, especially those of local interest, but under the distinct understanding that this must on no account interfere with the autonomy and integrity of each separate Division.—We are, etc.,

KARL GROSSMANN,
Representative 1903, 1904, 1905, 1906.

A. GORDON GULLAN,
Liverpool, May 9th. Representative 1904 and 1905.

THE MEDICAL DEGREES OF THE UNIVERSITY OF LONDON.

SIR,—Might I suggest whilst all this "squabbling" is taking place with respect to the London M.D, that students who desire a university degree should go to Oxford or Cambridge? Here they could get a degree with comparative ease and have the prestige also of an ancient university. M.D.Cantab., F.R.C.P.Lond., would do equally as well as M.D.Lond, F.R.C.P.Lond., and could be much more easily obtained. Let the Londoners fight on. I can also speak from experience as to the cost of the two degrees. Living in London is equally as expensive nowadays as at the older universities.—I am, etc.,

May 2nd. DEVON.

A DEGREE IN MEDICINE FOR THE AVERAGE LONDON STUDENT.

SIR,—At the recent senatorial elections of the London University the Graduates' Association carried by large majorities four of the five contested vacancies, and in the other two instances its candidates were elected unopposed. It must also be remembered that the Association won both seats which fell vacant in October last. I was not returned on Tuesday last, but since I came out Sir Thomas Barlow has renounced, for a time at least, the concentration scheme, and the Union has pledged itself to maintain the standard of the degrees. These were the two main planks of my platform. Our object is therefore attained, and I heartily thank the 343 medical members of Convocation who supported me with their votes and influence. With the present Senate there will be no lowering of the standard. How, then, is the average medical student in London to obtain a degree? It seems possible in one of two ways: (1) By reciprocity in the matter of examinations between the London University and the Universities of the Provinces and Colonies; or (2) by the adoption of the one portal system carrying with it a degree or the title of "Doctor."—I am, etc.,

London, W., May 13th. ERNEST W. WHITE.

DR. WILLIAM HUNTER'S STATISTICS.

SIR,—May I, on behalf of statisticians in general, express our gratitude to Dr. William Hunter for his recent contributions to statistical theory and practice?

I can best show the magnitude of our debt by outlining the procedure we should have been compelled to adopt had not Dr. Hunter discovered a more excellent way.

We should first have tried to satisfy ourselves that the requirements for registration have not changed in forty years, so as to be sure that the returns are comparable from that point of view. In analysing the figures we should never have dreamed that it was possible to construct "curves" which "are altogether independent of the number of students entering the profession." Indeed, we should have wanted to calculate the "probable errors" of the constants obtained from subsamples, and this involves much arithmetic. When we had done all this and determined the actual change in distribution of medical students, we should have been very cautious in drawing conclusions. We might, for instance, have thought it just possible that the enormous development of industrial towns outside London, and the consequent growth of their universities, together with great reforms at the older collegiate institutions, *must* diminish, relatively, the proportion of those educated in the London schools, whatever be the "policy" of the metropolitan university.

Dr Hunter has not only freed us from the necessity of carrying out a most tedious investigation, but has also shown us how to arrive at conclusions with intuitive rapidity.

I dare say some few statisticians will feel a little temporary irritation at being so far outdistanced by one who has never stooped to the drudgery of biometric methods; but I would remind them that few have enjoyed the advantage of being connected with no less than four great universities and advise them to write on pathology, to which science they may perhaps make contributions as original as, although less important than, those of Dr. Hunter to statistics.—I am, etc.,

May 13th. STATISTICIAN.

THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

SIR,—I am much pleased that this subject is bei discussed in the JOURNAL. We should have more these discussions. It would help to clear the atmosphe of noxious vapours, and possibly make some members the profession ashamed of themselves.

I agree with most of what "Antiseptic" says, but the is one phase of the question which I have not yet se discussed. In the great majority of medical practic over the country there is little chance of getting a pr consultant. One must take a general practitioner whom the patient or his friends have confidence. Hen the position of the medical attendant becomes delica and often precarious. He is called upon to take a ri into consultation who he knows too well will do eve thing in his power to step into his shoes. I think m of my readers who have been long in practice have co across such men. They generally have their agents eve where, ready to put in a good word for their employe and urge how necessary it is that they should be co sulted in this and every case. If the ordinary attenda refuses to meet them, he will most likely receive a c note from the patient or his friends saying that l services are no longer required, said note being oft dictated by the "clever" consultant. If, on the oth hand, he agrees to meet the "clever" man, the result the long run will be the same. The friends are assur with many signs of grief for the poor sufferer, that t case was wrongly treated, and had he been called in ea enough he would have saved the life. This is wh happens when the case is hopeless—such as cancer, l stage of consumption, etc.

These are no imaginary cases. The sad part of t business is that the public will believe in these perso Of course, they always get credit for being exceedin "clever," but the public do not seem to see the moral e that underlies this game. But the point is, what can done in such cases? Not long ago we all got a circu notice from the General Medical Council reminding us the dangers of "advertising and canvassing." What p sible form of advertising and canvassing could be m "contrary to the public interest and discreditable to t profession of medicine," as the circular puts it, than wh I have described?

I should like this phase of the question to be thoroug discussed in your pages, and also brought up at meetin of the Branches. This alone may have the effect putting a stop, so far, to some evil practices which I kn are doing much harm to some of the best members of c profession, and which are certainly "contrary to the pub interest."—I am, etc.,

April 3rd. SANITAS.

PRACTICE BY COMPANIES.

SIR,—Lord Hylton's Bills may become law, but th will then fail to have any appreciable effect upon t gigantic and growing system of fraudulent medi practice. Not 5 per cent. of quacks practise under t cloak of the Companies Acts. There are many oth ways as safe and convenient. To illustrate this I se enclosed two advertisements from the same recent iss of the *Times*—from the leading journal which a f years ago was the champion of the profession a the avowed enemy of quackery and one from a coun paper. Scores of the same kind of puffs are be found in London and provincial papers. artful wording and often the use of the na of a bogus doctor these announcements lead simp and educated readers alike to take the quack for a high qualified medical man. An unqualified pretender can under any pretext practise as a solicitor; he cannot w impunity in letters or circulars use words remotely imp ing that he is qualified. The statute is clear, and nev leaves a doubt in the mind of magistrates. Similar legis tion is possible for the medical profession, and is mu more urgently needed for the protection of the public th for the advantage of the practitioner. Medical quacke being the safest, is becoming the most attractive field the operations of cynical knavery. It affords large incom to numbers of vulgar impostors, and vast wealth to ma clever adventurers. The *Lancet's* recent figures show th no less a sum than £2,764,557 was expended in o

in quack nostrums. At least £1,500,000 is spent ually in quack advertisements. In one of its dical leaders on this subject a few years ago the deplored "the enormous expenditure upon quacks quack medicines, which undermines the health of so victims, and brings about the still greater evil of taining in luxury the most complete and finished of mpostors parasitic upon modern civilization." The unfortunately has now put itself into a position in h it can no longer help to abate the evils it formerly unced, and the rest of the press is still more com- ly silenced. The story, as I have so often urged, can ffectually told now only through the medium of a l Commission. A Commission would be granted if anded by the united voice of the profession. To ask for isfactory measure of medical law reform before estab- ng an unquestionable case would be almost as useful o call spirits from the vasty deep—they will not er when you call on them.—I am, etc.,

don, W., May 11th. HENRY SEWILL.

A CARD SYSTEM FOR THE VISITING LIST.

,—May I be allowed through your columns to assist e who find the keeping and preparation of their ing lists an irksome procedure? For a short time— sufficiently long to appreciate the value of the od—I have adopted a plan which I consider saves one way or another anything from half an hour to our each day.

have given up entirely the old form of visiting list, have adopted a system of preparing my list by cards. patient who requires to be visited has apportioned m a card about the size of a post-card. On one side ritten the prescription and any memoranda, on the r the date of the first visit, at the end of which I jot the date of the next visit to be made, or, if no er visits are necessary, this is indicated. I also down at the same time the fee to be charged. On eturn home the dispenser gets the cards and makes he medicines, and after this sorts the cards out to dates mentioned for the subsequent visits to be e, after which he places them in their proper places Letts's office reminder, and all I have to do is each ing to pick up the batch of cards for the day and ut. Thus I have no list to prepare and yet always prescriptions and memoranda to hand each day.

further advantage—and no inconsiderable one—is that ver have a monthly visiting list to book up in the r, as the cards fall out as the visiting of a patient inates, and they can be booked up daily. The cost ot more than that of a half-guinea visiting list. 's office reminder costs about 3s. 6d. and is perpetual. cards cost about 5s. per 1,000, and 2,000 per annum satisfy most of us.

nope others will try the same plan, which, if not new I must be new to most, as I am sure, once adopted, system is not likely to pass into obscurity.—I am,

mouth, May 7th. H. B. PALMER.

THE EFFECTS OF RESPIRATION ON THE CIRCULATION.

R,—As Sir James Barr in his letter of May 11th, ts the interpretation of the word "course" to the ction of the blood flow, I withdraw the word correct" and substitute for it "unproven." He eeds, in an example, to give his reasons for believ- that a fall of intrathoracic pressure of 100 mm. Hg not interfere with the direction of the onflow of d. His words are as follows: "The atmospheric sure within the thorax = 760 — 100 = 660 mm. Ig. If you add to this the diastolic pressure in aorta, say 130 mm. Hg, you get a pressure of mm. Hg on the blood in the aorta opposed to an extra- acic atmospheric pressure of 760 mm. Hg. You have a positive pressure of 30 mm. of mercury even during tole, driving on the blood in the aorta in its usual se." For the sake of argument I will accept Sir James 's hypothetical experiment and figures. He assumes in this experiment the pressure in the aorta will fall diastolic pressure at 130 to 30 mm. Hg. The only ible case in which this could occur would be that in h an instantaneous fall in intrathoracic pressure took place. But it must be remembered that this assumption can only apply to intrathoracic arteries. If we assume, as we must from his example, that the fall is instantaneous, we must also assume that the pressure in extrathoracic arteries will be at this instant 130 mm. There will consequently be a head of pressure of 100 mm., or thereabout, tending to force the blood back into the chest. I am perfectly aware that in Müller's experiment the change in pressure is not instantaneous, but it matters little, for the onus lies with him to prove that when the intrathoracic arterial pressure is lowered, the extrathoracic arterial pressure is at the same time lowered to a greater extent. There is no reason to believe that such is the case.

Finally, I have yet to learn, when a statement is made that three forces are in equilibrium, that this amounts to a statement that the three forces are equal.—I am, etc.,

THOMAS LEWIS,
Medical Registrar, Seamen's Hospital, Greenwich.

May 11th.

RUMINATION IN MAN.

SIR,—I have received a very interesting note from a Munich doctor ("K. P.") giving me an account of his own experience of rumination which is worth recording. From the age of 12 years "K. P." ruminated regularly. The food returned shortly, or one or two hours, after a meal, and without any unpleasant sensations. He remasticated and reswallowed the food with enjoyment. There never was any unpleasant taste or any discomfort about the process, and he always enjoyed good health. At 28 years of age he married. His wife was surprised at her husband's unusual habit, which she considered to be unaesthetic (*unästhetisch*). "K. P." then discovered that he was host to a tape-worm. He was treated for, and relieved of, the presence of the worm at 30 years of age, and has never ruminated since then. He is now 40, and so has been quite free from the condition, and also perfectly well, for ten years.

This is the only instance I know of the association of an intestinal parasite with merycism. I shall be very glad to hear of any other cases of rumination in man.—I am, etc.,

Manchester, May 1st. E. M. BROCKBANK.

HOSPITAL AND DISPENSARY MANAGEMENT.

QUEEN CHARLOTTE'S HOSPITAL, LONDON.

THE report presented to the annual meeting of this hospital stated that 1,704 patients had been received into the hospital during the past year, and 1 886 had been attended and nursed in their own homes. To the convalescent home 138 patients had been admitted. Of the midwives and monthly nurses trained during the year 107 had passed the examination of the Central Midwives Board. In addition, 24 students and 35 qualified practitioners had attended the practice of the hospital. The Chairman, in moving the adoption of the report, referred to the continued increase in the number of patients and as a consequence in the number of nurses also, which necessitated the enlargement of the nurses' home. He added that Queen Charlotte's is the only lying-in hospital in London which admits medical students to its practice. From the clinical report it would appear that the in-patient mortality on a total of some 1,704 mothers delivered during the year was 0 58 per cent. Of the deaths one was due to heart disease, another to heart disease complicated by double pneumonia and placenta praevia, and only one to septicaemia, the source of infection in that apparently not being ascertainable. As regards maternal morbidity the rule of this institution is to regard every case in which the temperature rises even once above 100° F. as one of morbidity. Judged by this severe standard there were altogether 360 cases in which the lying-in period was abnormal. Examined in detail the figures seem to show, even when all other conditions are similar, a primipara is more liable to elevation of temperature than a multipara. The infantile mortality was 7 5 per cent. on 1,730 infants born; if, however, those cases in which a premature infant was either born dead or died after delivery, and also nineteen cases in which full-time infants were born suffering from some condition incompatible with life, are deducted, the total mortality among the children is reduced to 44, or a rate of 2.6 per cent.

SUICIDE IN JAPAN. The "happy dispatch" is becoming increasingly common in Japan. During 1904 the number of persons who committed suicide was 10,100. Of these, 6,200 were men and 3,900 women. These figures show an increase, as compared with 1890, of 14.5 per cent. in the case of men and 16 per cent. in that of women. Hanging and drowning are the favourite methods.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Medical Chairs in the University.

IN a congregation held on Tuesday, May 7th, the forms of statutes establishing a Professorship in Human Anatomy and a Professorship in Pathology were promulgated and the preambles thereof approved *nemine contradicente.*

Certificate in Anaesthetics.

The Board of the Faculty of Medicine will, on and after Trinity Term, 1908, require from candidates for the Final B.M. Examination, in addition to the certificates already required, a certificate showing attendance on a course of practical instruction in the administration of anaesthetics in a hospital approved by the Board.

UNIVERSITY OF CAMBRIDGE.

DEGREES.

THE following degrees were conferred on May 9th:

M.D.—D. W. Carr, Trin.; G. W. Micklethwait, Trin.

M.B.—W. L. Murphy, Joh.

B.C.—W. E. Lee, Trin.; J. H. Pratt, Trin.; R. R. Walker, Joh.; A. R. Jordan, Clare; S. P. Chan, Gonv. and Cai.; R. G. Markham, Gonv. and Cai.; H. J. Fardon, Christ's; R. B. Lloyd, Emm.; J. H. B. Martin, Emm.

UNIVERSITY OF LONDON.

PRESENTATION DAY.

THERE was a crowded audience of men and women graduates and others in the great Hall of the University on May 8th. The Chancellor (Lord Rosebery) presided. The report on the work of the last year was read by the Principal (Sir A. Rücker). It referred to the importance of the union accomplished by the incorporation of University College in the University in January last, and to the success which had attended the visit paid to the University by the University of Paris last year. A return visit would be paid by the University of London to Paris in Whitsun week.

The Chancellor, addressing the audience, said that he recently was apparently a candidate for the Chancellorship of the University of Oxford. There never had been the slightest question of his election to that post; he had simply lent his name, rightly or wrongly, to a movement of protest, rather than of contest, in the University of Oxford. He had never for a moment thought of severing his connexion with the University of London; and no one of its members excelled himself in devotion to its interests. The University had lost two staunch friends by the death of Lord Davey, Chairman of the Royal Commission by which the University was placed on its present basis, and of Sir Michael Foster, its late representative in Parliament. On the other hand, a graduate of the University and member of the Senate, Mr. Justice Cozens-Hardy, had been raised to the position of Master of the Rolls. The University exhibited almost monotonous prosperity and efficiency. The entries to their ranks had increased from 1,854 in 1899-1900 to 3,041 in 1906-7, or 63 per cent. The percentage of failures at the matriculation examination was still 60 per cent. The number of internal students was growing yearly; and the incorporation of King's College would take place as soon as certain pecuniary difficulties were surmounted. The University had been benefited by great benefactions in the past; he rather doubted if there would be the same facility for them in the future. Those benefactions had largely come from fortunes built up in South Africa; he was sceptical if colossal fortunes were now being made in that country. There was further a movement in this country against superfluity of wealth, from which benefactions were produced; it was possible to "kill the bird that laid the golden eggs." If the State took to itself the vast sources of affluence from superfluous wealth it would also have to undertake the responsibilities which had hitherto fallen on that superfluity. The benefactions received by the University this last year had exceeded £1,000 per week; and amongst the benefactors were the generous and single-minded Mr. Belt, who had bequeathed £25,000 to the University; the Goldsmiths' Company, who had a supreme advantage over individual benefactors in that they could not die; Mr. Martin White, and others. He hailed, too, the movement started by the students themselves, which would close that day, for the first time in their history, by a solemn service of gratitude to the Almighty in Westminster Abbey. It was right and meet that they should proceed to that historic shrine and offer up their thanks for blessings vouchsafed to them, and their prayers that their career might not be unworthy of that University nor of the empire in which it was the central educational point.

The candidates for degrees and honours were then presented to the Chancellor, this being the first occasion on which the degree of D.D. had been conferred.

Service in Westminster Abbey.

At a special service, promoted by an undergraduate committee, and held at 6 p.m. in Westminster Abbey, the procession included the Chancellor, the Vice-Chancellor (Sir E. Busk), the member for the University Sir P. Magnus), the Principal, Lord Reay, Sir H. Fawcett, and a large number of the members of the University. Before the service Sir Frederi Bridge played a selection on the organ. The hymns were "O G of Bethel" and "Praise, my soul, the King of Heaven." T anthem was "Wherewithal shall a young man cleanse his way The sermon was preached by the Dean, who welcomed the la gathering of students and their seniors. He thanked God t that ancient abbey church, which had so long stood for consecration of the highest human gifts, should declare afr its attractive power in the midst of our modern life, gather within its historic walls so many of the choic elements of the intellectual progress of London, together w such a representation of that young life on whose t development and self-education the future of Engla depended.

UNIVERSITY COLLEGE.

The electors will shortly proceed to elect a Sharpey Physi gical Scholar in place of Dr. J. M. Hamill, who has resign The scholar will receive an emolument of £150 a year. Ca dates must have attended one or more classes in the Fac of Medical Sciences or of Science in the College.

As the purpose of the scholarship is to give those intend to qualify themselves for physiological or patholog work, whether as teachers or investigators, the opportunit acquiring the requisite knowledge and skill, the holder of scholarship is expected to devote his whole time to his du in the laboratory.

Under the terms of the endowment the Sharpley Schol required to assist throughout the session in the teachin the students in the class of practical physiology, and wi required, aid the Professor of Physiology in the condu physiological inquiries. The appointment of the scholar will be for one year, but the holder of the scholarshi eligible for re-election.

Full particulars of the scholarship can be obtaine application to the Secretary of the College, or to Prof Starling. Applications should be made by letter only, before June 16th.

UNIVERSITY OF EDINBURGH.

THE following candidates have been approved at the exam tions indicated:

FIRST M.B., C.M.—J. A. Andrews, P. W. Bedford, B. J. W. Benn P. N. Berry, Charlotte M. Birnie, J. R. Boyd, U. F. F. Br C. E. H. Browne, H. M. Buchanan, *F. D. Cairns, E Cameron, *W. Campbell, E. R. Carlos, T. Caul, Anna C G. J. Cillie, A. Cochrane, Lilian Cook, D. H. D. Cran, May F Davidson, R. Dow, W. E. Fitzgerald, H. H. C. Fuller Galletly, K. A. Gilchrist, J. P. Glyn, C. W. Graham, A. C. H J. Hewat, S. Hodkinson, N. J. Holmeyr, B.A., J. Honey J. L. Huggan, W. H. Irving, A. Jassinowsky, H. A. Khi Langwill, J. J. Levin, T. Lindsay, R. B. Llewellyn, F. M. Eva M. Lyon, E. F. G. M'Auliffe, *G. N. M'Diarmid, Mackay, R. M'Laren, N. G. M'Lean, *P. M'Nab, I Macrae, W. C. B. Meyer, Lucy M. Muir, F. D. Pa L. T. Poole, S. H. Pugh, K. A. Rao, A. B. Robertson, Robinson, H. A. Von Roun, C. M. Rout, E. St. J. Seelly, Sellar, R. G. Shaw, S. F. Silberbauer, W. F. W. Sim, W Small, B. H. H. Spence, H. H. Stewart, R. M. Stewart, J. Ta J. H. Tennent, C. M. R. Thatcher, P. H. du Toit, F. L. Tul Mary B. Walker, S. J. A. Hall Walsh, F. H. C. Watso Watson, J. H. Watson, T. C. Welsh, L. S. Willox, N. C. You

SECOND M.B., C.M.—D. C. Adam, T. A. Adams, D. Aiken, Allsopp, A. Archibald, Alice E. M. Babington, T. H. Bal Eveline R. Benjamin, W. M. Biden, T. C. Borthwick, F. Brodziak, G. S. Brown, A. N. Bruce, B.Sc., W. F. Buist, Burgess, B. N. Burjorjee, *A. W. Burton, Sarah E. Buyers, Campbell, L. Cassidy, J. Cathcart, G. L. Cawkwell, Chamberlain, P. H. Chauvin, B. R. Chopra, F. M. Chr N. A. Coward, J. Crocket, Lucy E. Davies, J. K. M. D Adelaide A. Dreaver, J. W. C. Drever, F. A. Duffield, *A. M. E W. C. Fragoso, E. L. Galletly, C. Gamble, Mary M. Gar G. H. Garnett, A. W. Gill, T. J. Gilmore, D. M'D. Grant, Latimer Greene, S. C. Sen Gupta, A. G. Hamilton, E Hamilton, H. F. Hamilton, *R. C. Harkness, J. B. Hay J. Henderson, G. R. Inglis, Flora Innes, W. C. Ja A. M. Jones, Sir E. King, J. H. Lawry, D. C. Lee, Lewis, H. Lipetz, W. R. Logan, M. A. V. Loots, C. L. Mary Low, M.A., H. F. Lumsden, Alexandra B. Mac C. D. M'Carrol, A. J. M'Connell, W. Macdonald, G. E. G. M J. C. Mackenzie, D. Macklinnon, A. G. MacLeod, D. M' R. C. MacQueen, J. Malloch, T. H. R. Mathewson, W. M. Mc W. Messer, E. L. Middleton, L. M. V. Mitchell, J. Montg S. P. Moore, J. A. Mortimer, J. M. Moyes, C. C. Murray, K. J. G. Nicholson, M.A., F. H. Noronha, J. Ong, M.A., J Oxley, J. J. Pace, S. P. P. Proctor, J. Renwick, *D. G. Robe W. S. Robertson, D. M. Ross, Marguerite Ross, W. Ross, R. P. Rosser, P. Rotkowski, A. C. Russell, C. M. Sel Jessie A. Scott, J. J. M. Shaw, M.A., J. C. Simpson, K. Sin G. H. Sinclair, Gertrude M. Smith, H. F. Smith, B.A., Smyth, J. Sprent, B.Sc., W. Stewart, C. P. A. Strat J. Swan, H. W. Teague, J. A. Thompson, W. S. Thomson, Watson, T. Welsh, J. P. Whetter, E. A. Williams, *J. D. W W. Brand, H. M. Carlyle, J. C. Fennent

THIRD M.B., C.M.—R. C. Alexander, H. M. Anderson, Mar Archibald, M.A., Margaret W. Bartholomew, *Lydia de Bateman, G. L. Batta, J. Black, H. Blyth, A. M. Boso, W. J. Brander, F. S. Brennan, B. S. Browne, J. A. Browne, Brydon, J. T. Carson, Jean G. Cathels, T. J. P. Charles, Chrystall, D. G. Cooper, H. S. Cormack, F. G. Cowan, Craig, Emilie C. Creasey, G. H. Dart, F. J. Davidson, Deschars, J. T. Dickson, Joanna M. F. Drake, W. J. D A. L. Dykes, W. G. Evans, *J. Findlay, W. Fleming, *K. T. Gardiner, *A. Gibson, M.A., A. I. Girdwood, R. L. Gu J. A. Gordon, P. Gorrie, J. C. B. Grant, P. W. Greaves, Hackett, J. K. Hamilton, M.A., R. Hannah, F. W. Hay, M. Henderson, H. Hutson, J. D. Ingram, F. E. Jardin, Jervis, W. W. Johns, H. E. Johnson, J. V. Kerve, A. W. K

E. W. Kirk, R. A. Krause, F. R. Laing, C. L. Laurent, H. R. Lawrence, A. J. B. Leckie, M. A. Lindsay, V. D. O. Logan, J. Lorimer, J. C. Lorraine, H. B. Low, K. F. D. MacGregor, *K. Mackenzie, A. C. M'Killop, W. M. Macnab, D. Macnair, E. R. D. Maconochie, A. C. Mallace, M.A., *J. Marshall, W. J. F. Mayne, J. A. Mitchell, J. B. de W. Moloney, Katherine B. A. Nelson, C. T. Newton, I. A. van Nickerk, E. F. W. Nixey, A. C. Norman, A. B. Pearson, J. H. H. Pearson, J. H. Peek, Laura W. Pugh, K. A. Rahman, E. M. Reid, J. J. van Rensburg, C. L. D. Roberts, D. H. Russell, *J. Scott, F. Shannon, J. T. Simson, E. W. Smerdon, W. B. Somers, G. S. Sowden, M.A., J. E. Spence, J. W. Stirling, W. Stobie, E. A. Strachan, A. Tait, G. P. Taylor, Eleanor M. Thompson, J. G. Thomson, M.A., *J. J. Thomson, R. W. Lang Todd, B.Sc., *R. Verel, F. H. de Villiers, A. A. Wallbrugh, E. A. Walker, W. Oliphant Walker, H. S. Wallace, L. E. B. Ward, F. K. te Water, *F. W. Waterworth, A. P. Watson, M.A., H. B. Watson, M.A., H. L. W. Wemyss, A. White, D. J. Williamson, E. D. Wilmott, G. G. Wray, A. G. Yates, M.A., W. A. Young.

* With distinction. † Under old regulations.

ROYAL UNIVERSITY OF IRELAND.

AT a meeting of the Senate on May 9th the report of the Standing Committee on the recent medical examinations was considered and passes, honours, and exhibitions awarded.

Sir Christopher Nixon, Bart., was unanimously re-elected representative of the University on the General Medical Council, on the motion of Dr. Windle, seconded by Dr. Leslie.

On the recommendation of the Standing Committee, it was unanimously resolved to confer *honoris causâ* the degree of LL.D. upon Dr. Windle, President, Queen's College, Cork, and upon the Right Rev. Monsignor Mannix, President, St. Patrick's College, Maynooth.

DEGREES.

The following degrees were conferred:

In the Faculty of Medicine.

M.D.—R. J. Bethune, M. J. O'Flynn, H. E. S. Richards.
M.CH.—C. B. F. Tivy.
M.B., B.CH., B.A.O.—V. J. McAllister, C. R. Harvey, R. Hill, B.A., R. V. Slattery, B.A., J. J. Kearney, O'C. Sullivan, J. P. Waters, B.A., J. Barrett, J. W. Bourne, J. A. Boyd, D. Boylan, G. F. Campbell, J. M. A. Costello, N. M. Donnelly, F. F. Dowling, B.A., Jane M. Fulton, W. McKee, Charlotte E. Mitchell, J. B. Murphy, B.A., J. Nunan, P. O'Hart.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held at the College on Thursday, May 9th; the President, Sir R. Douglas Powell, in the chair.

Announcements.

The President announced that he had personally interviewed Lord Lister, who desired that his warm and sincere thanks should be conveyed to the Fellows for the honour paid him in their recent memorial of congratulation on his having attained his eightieth birthday.

Geological Society of London.

The President announced that he had nominated Dr. Grabham of Madeira to represent the College at the forthcoming centenary anniversary of the London Geological Society in September next.

Fellowship

James Barry Ball, M.D.Lond., Arthur Thomas Wilkinson, M.D.Lond., Edward Mansfield Brockbank, M.D.Vict., William James Fenton, M.D.Cantab., Edwin Bramwell, M.B.Edin., Andrew Duncan, M.D.Lond., Robert Jones, M.D.Lond., and Herbert Stanley French, M.D.Oxon., who were elected at the last Comitia, were admitted Fellows of the College.

Communications.

The following communications were received:

1. From the Managing Director of the *Practitioner*, asking permission to photograph the portrait of Sir William Jenner, Bart., in the possession of the College for publication in that journal. Leave was granted, subject to the sanction of Lady Jenner being obtained.

2. From the Chairman of the Semmelweis Memorial Committee at Buda-Pesth, thanking the College for its interest and support in the matter, and enclosing for acceptation a medal struck to commemorate the institution of the memorial. The gift was accepted, and thanks passed to the donors.

3. From Dr. Charlton Bastian, resigning his office as a curator of the museum. On the motion of the President, a cordial vote of thanks was passed to Dr. Bastian for his long and valuable services, and Dr. William Hunter was elected his successor.

Admission of Women to the Examinations of the College.

A petition was received from the London School of Medicine for Women praying for admission of women to the examinations of the College. Discussion of the petition was deferred to a future comitia.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ORDINARY COUNCIL, MAY 9TH, 1907.

Issue of Diplomas.

DIPLOMAS of membership were issued to 110 candidates found qualified at the recent examination.

The Teaching of Midwifery.

A report of the Committee of Management on the above subject was approved, adopted, and entered on the minutes. The report recommends as follows:

1. That before conducting the required 20 labours, every student should be required to discharge the duties of medical clinical clerk and of surgical dresser for six months each, and that he should also be required to attend the course of practical instruction in midwifery.
2. That it is desirable, though not at present practicable, for every student to obtain a definite part of his teaching in practical midwifery in the wards of a lying-in hospital or in the lying-in ward of a general hospital.
3. That every student should be required to discharge the duties of clinical clerk in the gynaecological wards or out-patient department of a recognized hospital during three months.
4. That no student should be allowed to enter for the examination in midwifery until he has completed the course of instruction necessary for all the subjects of the final examination.

The Committee, therefore, recommend that the Regulations of the Examining Board in England be altered so as to provide:

1. That every student shall himself conduct 20 labours.
2. That before conducting such 20 labours he be required: (*a*) to have held the office of medical clinical clerk and of surgical dresser at a recognized hospital during six months each; and (*b*) to have attended a course of practical instruction in midwifery.
3. That the certificate of having conducted the required number of cases be signed by a member of the staff of a lying-in hospital or of the maternity charity of a general hospital, or by the dean of the medical school attached to the general hospital.
4. That every student be required to discharge the duties of clinical clerk in the gynaecological wards or out-patient department of a recognized hospital.
5. That every student be required to complete the curriculum of professional study before presenting himself for examination in midwifery and gynaecology.

Lord Lister.

A letter was read from Lord Lister in answer to that sent by the Council in reference to the celebration of the eightieth anniversary of his birth, thanking the Council for their congratulations.

John Hunter's Lectures.

A vote of thanks was passed to Dr. Thomas James Walker, of Peterborough, for his presentation to the College of a volume of original notes of John Hunter's lectures, taken by Mr. Hopkinson.

The Egyptian Medical School.

The Committee of Management reported that they had received from Dr. Theodore Dyke Acland an interesting and valuable report on the examinations of the Egyptian Medical School, on the professional education at that school, and on the hospital accommodation at Cairo. The Committee will in due course communicate with the Egyptian Medical School (in accordance with the authority conferred upon them by the two Colleges) on subjects arising out of Dr. Acland's report, but, in the meantime, the Committee suggested that the Royal Colleges might express to Dr. Acland, the first Assessor to the Examinations of the Egyptian Medical School, their acknowledgement of his valuable services.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on Tuesday, May 7th, 1907, Dr. Underhill, President, in the chair.

Admission to the Membership.

Robert Dods Brown, M.D., D.P.H., Edinburgh, was admitted by ballot to the membership of the College after examination.

Admission to the Licence.

The Registrar reported that since the last quarterly meeting forty-one persons had obtained the licence of the College by examination.

Annual Report Regarding the Laboratory.

The Curator submitted his Report for the last year regarding the research and reporting work undertaken in the Laboratory during the year and the expenditure incurred. The Report showed that 28 workers had been engaged in research, that 2,731 specimens had been reported on, being an increase of 252 on the number for the previous year, and that the expenditure had amounted to £1,458 6s. 3½d. The report was adopted by the College.

Election of Representative in the General Medical Council.

Sir John Batty Tuke was unanimously re-elected representative of the College in the General Medical Council for a period of five years from 7th May, 1907.

Conjoint Committee of Management of Triple Qualification.

Dr. John Playfair was re-elected as Representative of the College on the Conjoint Committee of Management of the Triple Qualification.

Appointment of Morison Lecturer.

It was intimated that Dr. Lewis C. Bruce had been appointed Morison Lecturer for the ensuing session.

Recognition of Lecturer.

Dr. Harry Rainy, F.R.C.P.E., was recognized as a lecturer on Practice of Physic.

Freeland-Barbour Fellowship.

The Freeland-Barbour Fellowship was awarded to Mr. Ninian Bruce, B.Sc.

Expulsion of Licentiate.

By vote of the College, Edmund McDonnell, a Licentiate of the College, was expelled from the College and deprived of his licence to practise, as granted by the College, and of all his rights and privileges as Licentiate.

CONJOINT BOARD IN ENGLAND.

THE Council of the Royal College of Surgeons on May 9th, 1907, conferred diplomas of M.R.C.S. upon the undermentioned gentlemen, who have completed the Final Examination in Medicine, Surgery, and Midwifery of the Examining Board in England, the Royal College of Physicians having conferred its licence upon the same candidates on April 25th last:

G. H. Adam, F. O. Arnold, H. T. Ashby, P. H. Bahr, H. J. Beddow, R. C. P. Berryman, J. Birch, R. E. Brayne, J. Browne, C. W. G. Bryan, M. B. S. Button, H. V. B. Byatt, W. J. Chapman, P. J. Chissell, S. Churchill, E. B. Clayton, H. C. Colyer, P. S. Connellan, P. A. Creux, T. H. Davies, A. H. T. Davis, H. E. T. Dawes, G. Denholme, A. T. Densham, H. Dimock, M. M. Earle, H. R. Elliott, C. A. Ellis, W. A. Fairclough, J. H. Farbstein, M. Fawkes, N. Flower, W. E. L. Fowler, C. H. S. Frankau, W. D. Frew, P. C. Garrett, H. Gibson, W. S. Gibson, A. S. Graham, G. Graham, W. R. Greening, F. W. W. Griffin, R. E. V. Hale, H. McC. Hanschell, R. N. Hartley, L. C. Hayes, A. W. Hayward, C. E. K. Herepath, G. A. F. Heyworth, W. de M. Hill, H. Houwink, R. de S. Illesinghe, C. G. Jarvis, R. S. Jenkins, W. G. Jones, A. J. Kendrew, S. Krestin, M. Leckie, H. H. Leeson, W. S. Leicester, R. L. Ley, C. Loddiges, W. Lovell, F. B. Lowe, J. B. Macalpine, C. F. F. McDowall, E. L. Marchant, W. B. Martin, J. H. Mayston, B. B. Metcalf, H. L. Morgan, E. L. R. Norton, H. S. Ollerhead, A. O'Neill, G. L. Parsons, B. T. Parsons-Smith, W. Patey, S. Paulin, C. A. Pemberton, E. C. Pope, O. C. W. Prausnitz, G. Price, J. L. Rankine, J. A. Renshaw, K. Robinson, C. F. Rumsey, A. L. Sachs, L. St. Vincent Welch, J. Selfe, E. A. Shirvell, A. L. Singer, W. F. Skinner, F. G. Snoad, E. C. Sparrow, L. D. Stamp, F. Standish, G. Stone, A. A. Straton, J. R. Sutherland, R. E. Todd, S. S. Vazifdar, J. L. Walker, N. H. Walker, R. R. Walker, H. G. Webb, H. B. Weir, H. B. Wickham, J. W. J. Willcox, C. L. Williamson, L. A. Wilson.

The Royal College of Physicians has also conferred its licence upon the following gentlemen, who had already received their M.R.C.S. diploma:

R. D. Brown, H. O. Howitt, C. G. McGreer, and C. E. Waldron.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examinations indicated:

FINAL PROFESSIONAL.—M. J. Ahern, A. P. Barrett, R. M. Bronté, Kathleen Dillon, *T. D'Alton, J. B. Kelly, R. Martin, J. E. Moffatt, E. R. H. MacManus, J. P. O'Kane, K. O'Kelly, R. S. Stephens, N. K. Tasher.

PART II.—*Captain R. B. Ainsworth, R.A.M.C., Captain S. Adye-Curran, R.A.M.C., E. F. Flood, Major B. Forde, R.A.M.C., F. C. Smith.

* With honours.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

THE ETHICS OF CONSULTATION.

A STICKLER FOR ETIQUETTE writes: After a certain date I intend visiting private patients only in consultation with another medical practitioner. I am desirous of conveying this information to the profession in the large town in which I practise and the immediate neighbourhood. How would you advise me to do this so as best to avoid any breach of etiquette? I may say I have held the appointments of physician to a hospital for many years, and am now on the consulting staff.

*** We should advise our correspondent to allow his actions to speak for themselves, and not to attempt anything in the nature of a circular to the profession, which would have all the appearance of an advertisement.

STARTING IN PRACTICE.

INQUIRER.—To buy an introduction is often a sounder way of getting a practice than to endeavour to make one without any assistance, but the latter course is quite legitimate and in accordance with medical etiquette. If our correspondent chooses to start in practice in the place that has taken his fancy, he has a perfect right to do so, and need not be afraid of his conduct being considered bad "form."

GRATUITOUS ATTENDANCE UPON THE WIDOW AND CHILDREN OF A MEDICAL PRACTITIONER.

VERAX.—The widow of a medical practitioner who is in good circumstances has no claim to gratuitous medical attendance.

Medico-Legal.

INFRINGEMENT OF THE MEDICAL ACTS BY LIMITED LIABILITY COMPANIES.

X. Y. Z. encloses a copy of the *Wednesday Herald* for May 8th, 1907, a newspaper which apparently circulates in the north of London, in order to draw our attention to an advertisement issued by a company calling itself "Tasker Keys, Limited." The advertisement consists of the following lines, which we give in full:

"Qualified and Consulting Chemists.
Years of Medical and Surgical Experience.
Advice Free Daily.
No Case Undertaken Unless Cure Guaranteed.
Also Nervous and Skin Diseases a Speciality.
487, High Road, Tottenham, N."

Our correspondent points out that this is either a case of a limited liability company of chemists advertising for medical and surgical practice which should bring any qualified chemists employed by it under the discipline of the Pharmaceutical Society; or, if there is a qualified medical practitioner engaged, the case would be one for the General Medical Council. It is an example of the way in which the Limited Liability Act is used for improper purpose, and illustrates the need for the reforming legislation now before the House of Lords.

PRINCIPAL AND LOCUM TENENTS.

A CORRESPONDENT writes that he recently went away from his practice, leaving a locum tenent in charge. A fortnight later he had to return on account of the locum tenent being down with pneumonia. Another locum tenent had to be engaged and the former to be nursed at his house, and up to the present both the patient and his wife, who has been attending to him, have been living there at his expense. He wishes to know whether he is bound to pay the locum tenent the fee of 4 guineas a week while he has been disabled, and, if so, whether he can deduct from the amount the expense he has been put to in keeping him at his house.

*** He is only legally bound to pay the 4 guineas a week up to the time of the disablement of the locum tenent. The latter could not fulfil his contract, and can, therefore, only claim a *quantum meruit* with regard to that portion of it which he carried out. With regard to the expense incurred in nursing him, it is doubtful whether the principal is responsible, but most practitioners would be inclined to be liberal under the circumstances.

PAYMENT OF LOCUM TENENTS.

COUNTRY DOCTOR writes: In spite of your assertion (BRITISH MEDICAL JOURNAL, April 27th, p. 1035) that it cannot be said to be customary for a principal to pay for the locum tenent's washing, and in spite of "Peripatetic's" remarks, there is no doubt whatever that the contrary is the case. Your correspondent "Locum," during a large experience, has only once been asked to pay for washing. My "friend" whom I quoted in my former letter during five years' locum work has only twice been asked to pay, and all the medical men (some twelve or thirteen) whom I have recently asked have all without exception told me that they never ask the locum tenent to pay, and would not think it right to do so. There is no doubt that so far as a locum tenent is concerned "all found" should include washing and alcohol, and in nine cases out of ten does so.

M.D. CANTAB. writes: As one who has been forced by ill health to do a large number of locum tenentships, may I give my opinions on the points raised? First, stimulants should be included in "board." I have never had any trouble on this subject, although, as a rule, I do not touch them when acting as a locum tenent. Secondly, all expenses, from door to door, should be paid by the principal, the expenses of the return journey being estimated at the same as the first journey. Tips to the principal's servants should not be included. Thirdly, washing bills should be paid by the locum tenent. A more important point than these, in my opinion, is best given by an illustration: A. asks me to do

his work for three weeks in a town in the West of England. He writes: "As I want to leave early Tuesday morning, can you come down on Monday, so that I can talk over cases with you?" This means that Monday morning is spent in packing and the rest of the day in travelling and receiving directions about the work, and sometimes being taken round by the principal to see severe or important cases. On the Tuesday three weeks the principal returns, arriving home too late for me to get back to town, consequently I leave the next morning. The principal makes out a cheque, estimating the work done as three weeks and ignoring the extra three days. This is the chief point of difference between the principal and the locum tenent, as so many principals do not recognize that a locum tenent should be paid not only for the time actually spent in the house, but also for the time spent in travelling.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Rotherham.—A very valuable feature in the annual report of Dr. Alfred Robinson, the medical officer of health for the county borough of Rotherham, is the large number of tables giving statistical information spreading over a long series of years. In some cases they go back over thirty years. A very instructive table refers to the incidence of scarlet fever during the past twenty years. From this it appears that scarlet fever has been isolated in hospital in Rotherham for about seven years. During those seven years the case-mortality has been 3 per cent., and during the seven pre-hospital years it was 6 per cent. On the other hand, the number of cases notified or ascertained averaged, in the seven pre-hospital years, 197, and in the seven hospital years 374. An epidemic of measles in the latter half of 1906 caused 40 deaths, and the investigation in some detail of the outbreak has led Dr. Robinson to come to the conclusion that as the vast majority of children take measles before they reach the age of 6, it may be assumed for the questions of school attendance that there is little danger to others in allowing children from measles-infected houses to continue at school if their classmates are of the age of 6 and upwards. He considers that ordinary domestic cleansing suffices for disinfection after measles, and he thinks that a certain proportion of cases of measles of the worst type might with advantage be treated in isolation hospitals. Dr. Robinson has a sorry tale to tell of the conditions of midwives' practice in Rotherham, although, by an obvious printer's error, he is made to appear quite satisfied with it. Of the 23 midwives on the roll, only 1 had been efficiently trained. The majority of the women were of the lowest class, and, with few exceptions, dirty in the extreme. They had no washable dresses, no apparatus, and no conception of the importance of cleanliness. All but 4 were quite illiterate and unable to fill up registers and books. One woman said it was no use sending any written instructions, as she could not read them, and another, when told to purchase a thermometer went out and bought a weather barometer. During 1906, 5 midwives were suspended—a proceeding which Dr. Robinson thinks is better than removal from the roll, for then no further supervision can be exercised over them.

MEDICAL OFFICERS OF HEALTH AND SANITARY INSPECTORS.

W. B. C.—The duties of an inspector of nuisances are set out in Article 19 of an Order of the Local Government Board dated March 23rd, 1891. Section 10 says: "He shall, subject to the directions of the sanitary authority, attend to the instructions of the medical officer of health with respect to any measures which can be lawfully taken by an inspector of nuisances under the Public Health Act, 1875, or under any other statute or statutes, for preventing the spread of any contagious, infectious, or epidemic disease of a dangerous character." Section 15 says: ". . . he shall observe and execute all the lawful orders and directions of the sanitary authority . . . applicable to his office." There ought to be no difficulty in getting a house recently occupied by a phthisical patient disinfected by an inspector of nuisances.

BRITISH ASSOCIATION.—The British Association for the Advancement of Science will hold its seventy-seventh annual meeting at Leicester this year. The inaugural meeting will be held on Wednesday, July 31st, when the President-elect, Sir David Gill, K.C.B., LL.D., D.Sc., F.R.S., formerly His Majesty's Astronomer at the Cape of Good Hope, will assume the Presidency and deliver an address. The concluding meeting will take place on Wednesday, August 7th. The Sections are: (*a*) Mathematical and Physical Science; (*b*) Chemistry; (*c*) Geology; (*d*) Zoology; (*e*) Geography; (*f*) Economic Science and Statistics; (*g*) Engineering; (*h*) Anthropology; (*i*) Physiology; (*k*) Botany; (*l*) Educational Science. Dr. A. D. Waller is President of the Section of Physiology, Professor Gotch and Mr. C. J. Bond being Vice-Presidents.

OBITUARY.

ROBERT BARNES, M.D., F.R.C.P., F.R.C.S.,

CONSULTING PHYSICIAN TO ST. GEORGE'S HOSPITAL.

WE regret to have to record the death of this eminent obstetrician, whose personality and teaching were so familiar to a passing generation of men skilled in his art and learned in his science. He had reached his ninetieth year and suddenly expired at his home at Eastbourne on Sunday last. He had an attack of cerebral thrombosis a month ago, and never thoroughly recovered, although he came up to London once, and was able to drive out every day up till May 9th. On the next day he had a relapse, and died suddenly on May 12th. He retained much vigour almost to the last, having visited an old scene of his labours in London for business purposes within the present month.

Robert Barnes, son of Phillip Barnes, founder of the Royal Botanic Society of London, was born at Norwich on September 4th, 1817. He came of an old Norfolk family, and one of his ancestors, Robert Barnes, suffered death by burning during the Marian persecution.

At the age of 9 he went with his brother Philip to school at Bruges, where he remained for several years, leaving at the outbreak of the revolution which separated Belgium from the Kingdom of the Netherlands in 1830. When 15 years of age, he was apprenticed to Richard Griffin, founder of an association of Poor-law medical officers, and surgeon to the Old Man's Hospital, Norwich.

In due course he proceeded to University College, and received the diploma of M.D.Lond. in 1848, fifty-nine years ago. He also studied at St. George's Hospital and, after qualification, in Paris. He was made a Fellow of the Royal College of Surgeons by election in 1883, whilst he was for many years intimately associated with the College of Physicians. In 1859 he was elected a Fellow. In 1873 he delivered the Lumleian Lectures on Convulsive Diseases of Women.

After qualification Dr. Barnes practised for several years at Notting Hill. His taste for obstetrics was developed early. For a time he lectured on midwifery at the long extinct Hunterian School of Medicine, and he became Obstetric Surgeon to the Western General Dispensary, and after holding other small appointments was elected Assistant Obstetric Physician at the London Hospital, where he had the honour of succeeding Ramsbotham in the senior appointment. He transferred himself later on to St. Thomas's Hospital, and lastly ended his hospital career as Obstetric Physician to St. George's.

Robert Barnes was an active teacher and soon came to the front as the author of standard works, chiefly based on previous lectures at the medical schools to which he was attached. On his works, therefore, and his papers submitted to societies, we may dwell for awhile.

His Lettsomian Lectures, delivered in 1857 before the Medical Society on The Physiology and Treatment of Placenta Praevia were well received, but his fame was established by his Lectures on Obstetric Operations, including the Treatment of Haemorrhages, delivered at St. Thomas's Hospital, and his *Clinical History of the Medical and Surgical Diseases of Women*. The former showed great clinical research and knowledge of physics, whilst *Diseases of Women* stands in medical libraries as a connecting link between the days of Robert Lee and Bennett, and the era of operating gynaecologists. Its greatest merit, perhaps, was the stress which its author lay on the morbid anatomy of the genital tract, a subject all but absolutely neglected in his days, but now widely studied. Who has not seen his drawings of fibroids and obstructed Fallopian tubes, copied repeatedly out of *Diseases of Women* into a second generation of British and American textbooks? Barnes did not dwell too much on pessaries and caustics, nor did he lay stress on the subtleties of the microscope which the student cannot always be expected to master.

In 1884, with the co-operation of his son Dr. Fancourt Barnes, he issued a two-volume work on *Obstetric Medicine and Surgery*, which was not up to the level of the two standard works just mentioned, owing, it would seem, to hurried preparation.

We will now turn to another sphere where Barnes made himself a name.

Robert Barnes took a part in the foundation of both the

societies designed for the promotion of midwifery and the diseases of women, and lived to see them united and merged into the Royal Society of Medicine, although he was not fated to witness that august association, still but a thing of high promise, fully evolved and in working order. That time has not come yet. Only a fortnight ago, in the first week of this month, Dr. Barnes called at 20, Hanover Square, and made inquiries about the library and museum of the Obstetrical Society.

On December 16th, 1858, under the presidency of Dr. Rigby, the inaugural meeting of the Obstetrical Society of London was held at the Freemasons' Tavern. Dr. Barnes, seconded by Dr. Metcalfe Babington, moved and carried a resolution that all legally qualified medical practitioners should be eligible for election as ordinary Fellows of the Society. During its first session he read two papers one a series of notes on cases of placenta prævia, the second a good clinical memoir, worthy of imitation, on the Risk to Life of First and Subsequent Pregnancies. From that date down to 1883 he contributed no fewer than thirty-two papers to the Society of which he was one of the principal founders. It is remarkable that the first memoir which he ever read before a society was one of his best, and we may place in the same rank the last which he ever submitted to the Obstetrical Society, a contribution on the mechanism of labour to which we will again refer.

Dr. Robert Barnes was an effective debater and a hard hitter. He played a very prominent part in refusing to examine women for the long-extinct Licentiate of Midwifery of the Royal College of Surgeons, and afterwards claimed the chief credit of having brought about the suppression of the examinations for that diploma in 1876. His claim was disputed, unfairly in his opinion, and he did not agree with the views and action of some of the juniors who were springing up towards the end of the Seventies. Other younger men, on the other hand, were in complete accord with him. In consequence the dissidents established another Society. Exactly twenty-six years after he had been present at the inaugural meeting of the Obstetrical Society Dr. Barnes once more found himself taking part in a similar ceremony. On December 27th, 1884, under the presidency of Dr. C. H. F. Routh, a meeting was held in the rooms of the Medical Society of London. Robert Barnes had the honour of moving the resolution: "That a Gynaecological Society be now founded, to be called the British Gynaecological Society." The resolution, seconded by Dr. Heywood Smith, was, of course, carried unanimously. Dr. Barnes was made Honorary President of the new Society, in which to the last he took great interest. At the present date it must seem old to those too young to have passed through the events which brought about the schism in 1884 to learn that one of the main causes of dispute was the question of ovariotomy. The older obstetricians mostly preferred to leave abdominal surgery to the surgeons, but Barnes, following the example of Tyler Smith, joined with the younger school, who have gained the day, as at present nearly all the obstetric physicians at the medical schools perform ovariotomy and all other surgical operations within the range of obstetrics and gynæcology. Into the merits of the whole question as viewed by obstetricians and by surgeons respectively we need not enter; all we have to say is that Robert Barnes was one of the most strenuous advocates of the cause which triumphed.

Of the numerous communications which Robert Barnes read before medical societies, the first, by no means the least important, was entitled On Fatty Degeneration of the Placenta and the Influence of this Disease in Producing Abortion, Death of the Fœtus, Hæmorrhage, and Premature Labour. It was read at a meeting of the Royal Medical and Chirurgical Society on May 15th, 1851 — six years over half a century ago! It gave rise to a very animated discussion, in which Drs. Quain, C. J. B. Williams, Robert Lee, and Mr. Streeter took part, and it established its author's reputation as an authority on the minute pathology of obstetrics, a subject now so well worked but then all but a blank page. The last paper of importance prepared by the deceased obstetrician was read at a very large meeting of the Obstetrical Society on December 5th, 1883. The subject was the Mechanism of Labour, more especially with reference to Naegele's Obliquity and the Influence of the Lumbo-sacral Curve. It gave rise to a spirited discussion between the author and his famous rival, Dr. Matthews Duncan, whom he was fated to survive for so many years. The battle waged round "the curve of the false promontory"—a name then very familiar in obstetrical polemics. For convenience the name of the deceased was given to it, so Robert Barnes will always be remembered as the eponymous hero of "Barnes's curve." In the discussion, marked throughout by great earnestness, Drs. Gervis, Galabin, Champneys, and Roper took an active part. The paper and discussion, as they are to be found complete and unabbreviated in the twenty-fifth volume of the *Transactions of the Obstetrical Society of London*, deserve perusal, if only as a good sample of the pleading of a mature authority and the legitimate criticism it may meet from his peers. A few years previously, when Dr. Barnes was already mature, he read before the same Society, of which Dr. Matthews Duncan was then President, a scholarly and practical essay on missed labour, which did good service in turning the attention of younger men, with more material at their command, to a subject of high importance. Oldham was the inventor of the term, but to Barnes must be awarded the credit of having defined it clearly. He was always particular about nomenclature, and will be remembered as the originator of the name "ectopic gestation"—as shorter and more precise than "extrauterine pregnancy."

Dr. Robert Barnes spoke idiomatic French with great fluency; at the Geneva meeting of the International Congress of Gynaecology in 1896, and, we understand, on other occasions, he addressed meetings in that language. He was honorary member of many learned foreign societies and associations.

Dr. Barnes was twice married. By his first wife he had a son, Dr. R. S. Fancourt Barnes, who at the present moment is stricken with a very severe illness, and two daughters. By his second wife he had a son and a daughter, both of whom, as well as the widow, survive.

PAUL POIRIER, M.D.,

PROFESSOR OF ANATOMY IN THE UNIVERSITY OF PARIS.

MANY members of the medical profession in this country will learn with keen regret of the death of Professor Poirier. He had suffered for some months from an internal affection, which the resources of medical art were powerless to relieve. He was under no illusion as to his condition, but looked forward with calm courage to the inevitable end. He was under the care of Dr. Chauffard and his own pupil, M. Cunéo, and had the advantage of the ministrations of Dr. Paul Sollier and Madame Sollier, also a doctor of medicine, in whose nursing home at Boulogne he died on May 2nd. The *post-mortem* examination revealed malignant disease of the pancreas. He was buried at his native place on May 7th.

Paul Poirier was born at Granville on February 7th, 1853, and had, therefore, not long completed his 54th year. He was of humble origin, a fact of which he was so far from being ashamed that he always showed special sympathy for the poor and lowly. He was the architect of his own fortunes, and his advance was extraordinarily rapid. He took his Doctor's degree in 1883, the subject of his thesis being the development of the limbs in man. Already he had begun to devote himself to the teaching of anatomy, which was to be a large part of his life-work. Appointed Demonstrator in 1880, he became Prosector in 1883, *Professeur Agrégé* in 1886, *Chef des Travaux anatomiques* in 1857, and on the retirement of Professor Farabeuf in 1902 he succeeded to the Chair. He was recognized as the foremost anatomist of France, and was the author of a *Traité d'Anatomie Médico-Chirurgicale* which appeared in 1892; of a series of fifteen lectures on practical anatomy published in 1895, and of many other contributions to scientific literature. His chief work was the *Traité d'Anatomie Humaine* (1892-1902), produced in collaboration with Professor Charpy of Toulouse and some twenty other anatomists. This has replaced the great work of Sappey, and is one of the most important monuments of French science.

In the meantime Poirier had not neglected surgery. Appointed Surgeon to the Hospitals in 1886 he was at the time of his death Surgeon to Larboisière, and held a leading position in the French surgical world. He was one of the surgeons who attended the late M. Waldeck-Rousseau and had many other distinguished persons

among his patients. As a surgeon he was conservative and averse from operation unless it seemed to him absolutely necessary. Nevertheless, when appeal had to be made to the *ultima ratio* of the knife, he used it with the utmost boldness, and he had a great reputation as an operator.

One of the last acts of his public life was the foundation a few months ago of a league against cancer. It may be remembered that when he preached this crusade at the Academy of Medicine his eloquence moved a wealthy pupil, Dr. Henri de Rothschild, to hand him on the spot a cheque for £4,000 for the purposes of the league.

Poirier's power of work was extraordinary and the number and variety of his interests made people wonder how he found time for all he got through in the course of a day. He would operate at the hospital in the morning, afterwards deliver a lecture, then visit an exhibition of pictures, read the most recent communications to the learned societies, and after a hurried dinner, return to the anatomy rooms to examine dissections by his pupils, and return home to make notes and correct proofs often till far on in the night. And in all the stress of this crowded life he found time to put in an appearance at so many social functions that people wondered when he found time for work. The secret was that in reality he gave very little time to society, only showing himself for a few moments in various places. His favourite relaxation was shooting, which he indulged in on Sundays and holidays. Professor Poirier was a conspicuous figure, not only in the scientific but in the social world of Paris. He had in a degree exceptional even for a Frenchman the gift of graceful and telling speech. Brilliant as a lecturer, he shone no less brightly as a conversationalist, talking well on the most diverse subjects. He was a charming companion, as those who met him in London and in Paris when the profession in the two countries was cementing the *entente cordiale* can testify. His intellectual outlook was of the widest, taking in politics, literature, and art as well as science. He was to be seen every day, always faultlessly dressed, with a flower in his buttonhole, driving his motor through the streets of Paris.

Professor Poirier was beloved by his patients for the kindness of his heart, and the unfailing gentleness and consideration with which he treated them. Mindful of his own early struggles, he was always helpful to students. He was eminently fair as an examiner, a virtue which seems to be particularly appreciated in France. By his colleagues he was highly esteemed for his moral qualities as well as his scientific eminence, and by those admitted to his intimacy he was regarded with warm affection. He was a man of absolute integrity, but withal a man of the world, and his advice was often sought in the difficulties both of private and professional life. Though naturally courteous, he could be almost brutally frank when the occasion seemed to call for the free expression of opinion. As was said of him by one who knew him well, he preferred to lose one friend rather than deceive two.

By his will Professor Poirier left £20,000 to Dr. Henry de Rothschild for the foundation of a hospital at Granville. The institution is to be built and organized in accordance with the ideas of the late Professor Budin; it is intended principally for the study of questions relating to maternity and the care of infants. A sum of £800 was left to be divided among his servants, and his automobile was bequeathed to his chauffeur.

FREDERICK WILLIAM STORRY, M.R.C.S.Eng., L.R.C.P.Edin.,

SENIOR HONORARY SURGEON TO STROUD GENERAL HOSPITAL.

THE intelligence of the death of Mr. F. W. Storry has been received throughout Stroud and the district with feelings of the greatest sorrow. In January last, after some months of indifferent health, he contracted an attack of influenza, which led to cardiac weakness, and, though with great pluck he continued for a time to follow his busy professional life, he was soon compelled to abandon work, and, accompanied by Mrs. Storry, he left home during the second week in March for the Riviera, hoping that complete rest and the warm sunshine of the South would enable him to recuperate; at first he seemed to gain in strength, but the improvement was not maintained, and on March 31st he passed peacefully away from heart failure, at the Hotel de Louvre, Mentone, where he was staying.

Frederick W. Storry was the son of the late Colonel Storry, of the Bank, Howden, East Yorks, and was born on March 13th, 1856. After qualifying in 1878 he held an appointment in the Leeds General Infirmary. The following year he was made House-Surgeon to the Stroud General Hospital, and held that post until October, 1881, when he resigned to join the late Dr. G. R. Cubitt of Stroud in partnership. A month later Mr. Storry was appointed Honorary Surgeon to the Stroud General Hospital. Gifted with a natural enthusiasm for surgery, he was quick to adopt the principles of the aseptic treatment then in its infancy, and soon gained the well-deserved reputation of being a bold and successful operator. His fame as a surgeon, and his sound practical knowledge, enabled him to win the confidence of his patients in a remarkable degree, and he became one of the busiest and most hard-working practitioners in the district. Notwithstanding his strenuous life he continued to take the keenest interest in the welfare of the Stroud Hospital, and his name will ever be held in the highest esteem for the invaluable services he so cheerfully rendered to that institution.

He was a Past-President of the Gloucestershire Branch of the British Medical Association, and took an active part in the management of its affairs, being a member of the Council at the time of his death.

A man of fine physique and possessed of a genial and hospitable temperament, he made a wide circle of friends, by all of whom his untimely death will be long and keenly felt, and the greatest sympathy will be extended to Mrs. Storry and the son and daughter whom he leaves.

The funeral took place at the cemetery at Mentone—a beautiful spot, and the last resting place of many English who have died away from their native land.

THE death occurred at the London Hospital on April 28th of Dr. WALTER HUGH PATERSON, one of the oldest and best known practitioners in the south of Lincolnshire. Dr. Paterson's health had been failing for some years and quite recently it was found that he was suffering from an epithelioma of the tongue. An extensive operation was performed on April 24th, which was borne with great fortitude. Unfortunately, when there seemed every prospect of a speedy convalescence, aspiration pneumonia supervened, and quickly proved fatal. Dr. Paterson was 61 years of age. He took the M.B., C.M. degrees of Edinburgh in 1868, and graduated M.D. 1870. He practised in Brigg until 1880, when he went to Grantham on the death of his brother-in-law, Dr. Charles Robbs, and continued in practice in that town for a period of twenty-seven years. He was for many years Honorary Surgeon to the Grantham Hospital, Medical Officer to the Borough Police, and Certifying Factory Surgeon. Quite recently he was appointed Medical Referee under the Workmen's Compensation Act, to the County Courts in the neighbouring counties, on the death of the late Dr. Newman of Stamford. Somewhat reserved by nature, Dr. Paterson had many qualities which endeared him to his friends; he was a man of decided opinions, ever characterized by human sympathy, and had a love of animals. Professionally he was much esteemed by his colleagues, and many patients who appreciated his quiet but devoted services now deplore his death. Dr. Paterson leaves a widow, a son and ten daughters, who have the deep sympathy of the neighbourhood in their sad loss.

AT the age of 83 Dr. ROBERT HAMILTON RAMSAY of Duncan House, Torquay, passed away on May 4th, after a short illness. Dr. Ramsay, who took up the study of medicine at a later age than most men, passed his student days between Edinburgh and Glasgow, becoming M.D., C.M.Glasg., in 1862. He held several resident posts in the Royal infirmaries of each city, and, as the oldest of Lord's Lister's house surgeons, had the honour of presenting the address received by Lord Lister from his old pupils on the occasion of his being raised to the peerage in 1897. During his residence at Torquay, which extended over more than forty years, Dr. Ramsay played an active part in the fortunes of many local enterprises, and was held in high esteem by all classes. His chief hobby was gardening, a subject on which he was a great authority. He made a special study of subtropical plants, and his collection had been on several occasions visited by the Queen and other distinguished persons.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

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COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National) —

EDITOR, 2631, Gerrard. GENERAL SECRETARY AND MANAGER, 2630, Gerrard.

QUERIES.

"BROOKE" will feel greatly obliged for any information relating to the treatment of alopecia areata.

CYCLIST would feel obliged if any of our readers who have had any experience with "La Motosacoche" can tell him how it answers.

"X. Y. Z." would be obliged for any information as to the existing English, French, or German literature on the medical and surgical aspects of accident and sickness assurance.

DR HOWELL (Middlesbrough) would be glad to hear from any member who "knows the ropes" as to the most advantageous way of spending a ten days' holiday in Norway, apart from the personally conducted tour, and well off the beaten track.

F.R.C.S.I. will be grateful for information as to the most successful up-to-date treatment, or where to obtain such, of the morphine habit, where the patient objects to enter a home or retreat.

H. N. R. has writer's cramp occasionally, which he is unable to account for, but which came on gradually after a mild second attack of influenza. He has recently met a doctor who had identical symptoms after influenza, and ascribes them to that cause. Is influenza recognized as a possible cause of this annoying affection, and if so, what is the prognosis?

P. A. asks for suggestions as to the treatment of a patient, a man in good position, abstemious, fond of exercise and fresh air, who suffers from frequent severe attacks of cramp in the leg and thigh muscles. They come on at night and are intensely painful, rendering him helpless for a time sometimes, but are not always traceable to over-fatigue or indigestion.

"DAMASCUS," being so situated that there is no possibility of consultation, seeks suggestions as to the diagnosis and treatment of the following case: A. F., a healthy-looking woman, 36 years of age, consulted me on account of painful "cramps" of the right arm, the first of which occurred in October, 1906. Recently the cramps have become more frequent and severe. I have had no opportunity of personally observing a "cramp," but from her description I gather that the arm is adducted to the side, the elbow, wrist, and fingers (more particularly the third, fourth, and fifth) are strongly flexed, and the forearm is pronated. The spasm lasts about five minutes, is acutely painful, and leaves the arm practically powerless for some hours after the seizure. An examination of the spine reveals a displacement of the seventh dorsal vertebra—evidently the result of an old fracture. There is no tenderness over spine, and movement is quite normal, except in the cervical region, where rotation is somewhat limited, especially to the right side. She says that she has a swelling over the spinous processes of the third and fourth cervical vertebræ when tired. There is no wasting of the muscles of the arm, no anæsthesia or hyperæsthesia; reflexes normal, though knee-jerks are somewhat exaggerated. There appears to be some tenderness over the course of the ulnar nerve. No other abnormality detected. She gives the following "history." At age of 12 years she fell down some stone steps and injured her spine in the middle of the back, causing paraplegia of three months' duration. Whilst still suffering from "paralysis" she had an attack of "acute cerebro-spinal meningitis," and her life was "despaired of." However she eventually made a complete recovery and from that date until October 1906, has enjoyed excellent health.

[illegible] LAS

[illegible] who recently sold his horse and trap and bought a motor car in its place, included the sum received for the former in his receipts. He inquires whether he is entitled to treat the cost of the car as an expense for income-tax purposes.

*** Our correspondent is entitled to claim as an expense, not the whole cost of the motor car, but only such a sum as represents the cost of replacing the horse and trap with another of similar type. The difference between the cost of the car and that of a horse and trap would be regarded as an outlay of capital, for which no allowance is made.

THE PERILS OF STERILIZATION.

DR. ALEXANDER DUKE (London, W.) writes: The plan of sterilization by superheated steam applied to the uterine cavity has been shown by the case alluded to in the issue of the JOURNAL for May 4th to be both uncertain and perilous. I imagine a far more simple plan would be to amputate the cervix uteri on a level with the vaginal roof. My reason for offering this suggestion is, I have been told of several child-bearing women who, having had the cervix amputated for extreme laceration, cease to bear children or prove pregnant. It would be well worth obtaining statistics as to the truth of this statement, as, if found to be correct, it would supplant the more dangerous proceedings of "atmokausis" and ligaturing the Fallopian tubes.

ANSWERS.

DR. J. M.: Our correspondent is liable to pay income tax on his total income, that is, on £350 in all, less the statutory abatement of £160.

A. B.—The method at present adopted is effective. The appliances can be got through almost any chemist. The subject is dealt with in Dr. Herman's book on *Diseases of Women*.

H.—The case would appear to be one of well-developed pyorrhœa alveolaris. Perhaps the best course to adopt would be to treat each tooth separately with a solution of 1 to 20 carbolic acid, pressing small plugs of cotton-wool dipped in the solution well down between the gum and tooth. This process should be repeated every second or third day and a mouth wash of myrrh and borax prescribed. The latter should be used by the patient after each repast, the teeth being cleaned as a preliminary with a soft brush.

LETTERS, NOTES, ETC.

THE LATE DR. MARKHAM SKERRITT.

DR D. RHYS JONES (Cardiff) writes: About twenty years ago I was attending a child of a lady who had seen better days—and worse—in North London. She mentioned to me that she had taken one of her children some years previously to the Bristol Hospital to Dr. Skerritt. He told her that the child was too ill to take out and that he would see it at her home. He did so, and also handed her a five-pound note, apologizing that he had sometimes more money than he knew what to do with.

MOTOR TRICYCLES.

CALUMBA writes: I shall be glad to hear from any members who have been using motor tricycles what their experience is. I live in the country where roads are good and not very hilly, and I keep one horse. I should like to know the name of a reliable machine, and what the usual difficulties are.

*** The communications published in the JOURNAL have referred to motor bicycles.

THE TEETOTAL CONSCIENCE.

WE are indebted to a very eminent physician for the following story. A lady who works for the Charity Organization Society was lately paying a visit to a poor woman who had been a great drunkard, but being reformed had signed the pledge and wore a blue ribbon. In spite of her vow she was occasionally overcome by her former habit, and unfortunately a lapse of this kind happened on the day of the lady's visit. The latter, seeing the reformed one rather the worse for drink, began to upbraid her, when her daughter broke in and exclaimed: "Well, Miss, I must say this for mother—that when she goes on like this she always takes out the blue ribbon."

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A Clinical Lecture

ON

HEART DISEASE IN RELATION TO PREGNANCY AND LABOUR.

DELIVERED AT UNIVERSITY COLLEGE HOSPITAL.

BY G. F. BLACKER, M.D., F.R.C.P., F.R.C.S.,
OBSTETRIC PHYSICIAN TO THE HOSPITAL.

I HAVE chosen as the subject of this lecture heart disease complicating pregnancy and labour: first, because it is an important matter, and of not infrequent occurrence; and, secondly, because the teaching in some of the current textbooks is, I venture to think, erroneous, in that it exaggerates the danger and the mortality arising from this complication of labour.

EFFECT OF PREGNANCY ON THE HEART.

Before we consider the changes which occur in the heart in cases of heart disease complicating pregnancy, we must pass in review briefly the changes which occur in pregnancy in the normal heart. It has been said that the heart undergoes hypertrophy during pregnancy, and this assertion is based on the supposed fact that there is thickening of the wall of the left ventricle, some increase in the weight of the heart, a displacement of the apex beat, an increase in the loudness of the heart sounds, and the production of murmurs over the cardiac area. And, further, it is assumed that the amount of work to be done by the heart during pregnancy is increased. These assertions have not been allowed to pass unchallenged, and it is still a matter of argument whether the heart really does hypertrophy during pregnancy. In the first place, it is necessary to remember that the observations as to the thickening of the wall of the left ventricle have been made on patients who have died of various diseases, and in many instances not with scientific accuracy, and no regard has been paid to the relation of the weight of the heart to the weight and size of the individual, which is, of course, an important factor. Moreover, in a number of cases no such thickening of the walls of the left ventricle has been found to be present on *post-mortem* examination. Any conclusion based on the occurrence of murmurs over the cardiac area in a case of normal pregnancy is untrustworthy as evidence of hypertrophy, because such murmurs may be produced by changes in the blood or by dilatation of the cavities of the heart. And, further than this, you must remember that such murmurs are not present in more that 4 per cent. of pregnant women. You must also bear in mind the fact that if the apex beat is displaced it is not in itself evidence of hypertrophy, because displacement of the apex beat during pregnancy is to a large extent dependent on the changes which occur in the shape of the thorax. It has been shown by *x*-ray photographs that while in the latter months of pregnancy the long axis of the heart is placed to a very large extent transversely in women with short squat figures, in tall women or women of normal height it is but slightly displaced. Further, in many of these cases the apex beat is produced not by the left ventricle but by the dilated right ventricle. Any attempt to ascertain the exact extent of the cardiac dullness or its increase during pregnancy by percussion is a difficult matter, because of the development of fat and of the mammae in pregnant women. The area of cardiac dullness is increased, but that may well be due to dilatation of the heart if it be not due to the displacement of the heart's axis, which undoubtedly occurs in ordinary pregnancy.

The view that increased work is thrown upon the heart during pregnancy, although probable, is not proved. It is supposed that the interposition of the placental circulation increases the amount of the work done by the heart, that the changes in the shape of the thorax tend to throw an increased strain on the right side of the heart and increase the amount of work done by the right side. Probably there is an increase in the total amount of blood in the woman's body, and an increase in the respiratory changes occurring in the placenta; further than this there is the necessity of getting rid of an increased amount of waste materia', produced partly by the mother and partly by the fetus, and this, it is said, shows that an increased amount of work is thrown on the heart even in a normal pregnancy. But much of the strain is thrown upon the right side of the heart as well as upon the left side, and therefore it cannot be taken as complete proof of the occurrence of hypertrophy of the left ventricle during pregnancy. On the other hand, many observers maintain that the heart is not hypertrophied at all in pregnancy, but that it undergoes dilatation, and that the dilatation affects mainly the right side of the heart. This view of the dilatation and weakening of the heart, is supposed to be supported by the fact that this organ, often quite early in pregnancy, tends to fail in an otherwise healthy woman, that is to say, that any extra demand made on the heart in the early months of pregnancy is responded to less readily than in a healthy non-pregnant woman. Further proof of dilatation is that the tracings of the apex beat demonstrate it to be due often to an over-distended right ventricle, and not to a hypertrophied left ventricle. The constant presence of overfullness of the jugular veins in the neck, the irregularity of the pulse, the occurrence of heart failure not infrequently during pregnancy, and, most important of all, the fact that dilatation of the heart cavities, and not hypertrophy of the left ventricle, have been found in a large number of cases *post mortem*, tend to confirm this view. So that the old idea that the heart normally hypertrophies during pregnancy, is not proved beyond any possibility of doubt. It is probable that in some cases hypertrophy of the heart is the chief change which occurs, while in some there is dilatation rather than hypertrophy, and in others there is hypertrophy of the left ventricle and dilatation of the right side of the heart. It also appears certain that in some healthy women, at any rate, neither dilatation nor hypertrophy of the heart occurs during pregnancy.

CHANGES IN BLOOD AND BLOOD PRESSURE.

There are no characteristic or important changes to be met with in the pulse of pregnant women. The question as to whether the blood pressure is raised is one about which there is a great deal of difference of opinion; but, on the whole, the evidence is in favour of the view that the blood pressure is raised above the normal. Most observers are agreed that in the first half of pregnancy there is no rise of the blood pressure. In the second half there is a gradual rise, and this rise reaches its maximum towards the end of pregnancy. During the second stage of labour there is a further marked rise, which reaches its maximum just before the birth of the child. Immediately after delivery there is a very marked fall of the blood pressure to below the normal. This fall continues until the expulsion of the placenta has been accomplished, when the pressure tends to rise a little. As a rule, however, it remains subnormal until about the fifth day of the puerperium, after which it attains the normal mean again. This fall of blood pressure immediately after the second stage of labour is very important, and although there is, as I have mentioned, a good deal of difference of opinion, yet I think we may regard the above description as an accurate account of the alterations which occur in the blood pressure of an otherwise healthy woman during pregnancy, labour, and the puerperium.

With regard to the changes in the blood itself during pregnancy, the total amount of the blood has been found by experiment to be increased in pregnant animals; this, however, has not been directly demonstrated in pregnant women. There is no other change in the blood in pregnant women of much importance except the presence of a physiological leucocytosis, the so-called leucocytosis of pregnancy. The red corpuscles are normal in number and size. The specific gravity and the freezing point of the blood are normal. The alkalinity of the blood is a little diminished, and, as I have said, there is a definite leucocytosis in every woman towards the end of pregnancy.

We may conclude, then, that there is no marked change in the pulse; there is sometimes hypertrophy of the heart, sometimes dilatation and hypertrophy, and in a certain number of cases there is no change in the heart at all; and that during normal pregnancy there is an increased strain thrown upon the heart muscle and increased demands upon the functions of the heart. As a result of this you will find in many cases, quite early in pregnancy, long before the uterus can exert pressure on the

diaphragm, or before there can be any increased amount of work thrown on the heart owing to the development of the fetus, that the heart tends to fail in otherwise healthy women. The increased amount of work performed by the heart during pregnancy affects chiefly the right side of the heart, and this is due to the changes which occur in the thorax and lungs during pregnancy. The capacity of the thorax and the vital capacity of the lungs is not diminished in any way, but there is a definite alteration in the shape of the thorax; the circumference at the base is considerably increased, and there is an alteration in the height of the diaphragm compared with the normal. There is also marked limitation in the movements of the bony walls of the thorax. The natural result of this is a tendency to congestion and oedema of the bases of the lungs. And this in its turn throws an increased strain on the pulmonary circulation. You will find in the majority of pregnant women, on examining the chest in the latter weeks of their pregnancy, especially in those who are accustomed to spend much time lying down, physical signs of a slight degree of oedema at the bases of the lungs. In the same way increased work is probably done by the liver and the kidneys of the woman during pregnancy in order to deal with the increased amount of excretory products produced by the increased tissue metabolism of the mother and the fetus. It is also probable that if there is any failure in the functions of the liver or of the kidneys or of either, an accumulation of toxic materials occurs in the blood of the mother, and these poisonous bodies may exert an injurious effect on the heart, and play some part in producing the fatty degeneration of the heart which occurs not uncommonly in pregnancy.

We may say, then, that a pregnant woman, in view of the increased demands made upon her heart by her condition, is on the borderline of a possible breakdown. And if that is the case in otherwise healthy pregnant women, the heart is still more likely to fail in a woman who is suffering from *some* form of heart disease, whether it be a valvular lesion or a degenerative change in the heart muscle. It is, however, certain that the majority of cases of valvular disease of the heart complicated by pregnancy do perfectly well, and pass through their labour and puerperium with no symptoms. But severe cases of heart disease in pregnant women undoubtedly present dangerous symptoms from time to time, and there can be no question but that pregnancy constitutes an increased danger to a woman who has a severe valvular lesion of the heart. Slight degrees of valvular affection very frequently accompany pregnancy, but severe cases are not met with very commonly. I have collected from the literature 131 cases of severe heart disease occurring in 55,000 cases of labour, or a proportion of about 1 case in every 400 cases of labour. Probably slight cases of heart disease with pregnancy occur more frequently than this. Cases of mitral disease form the majority, for while it is easy to collect the records of a number of such cases, aortic disease complicating pregnancy seldom occurs. Dr. A. Gray examined for me the case-books for the past six years of the medical wards, and I was only able to find 27 cases of aortic disease. Seventeen of these were in young unmarried women, and only 10 occurred in married women. In some of these cases the women were virgins, whilst in those in which an obstetrical history was given it was not sufficiently detailed to afford information of any value as regards the course of the pregnancies and labours.

Special Dangers of Heart Disease and Pregnancy.

Now, supposing a patient becomes pregnant who has a valvular lesion of the heart, what are the special dangers which are likely to occur during pregnancy, during labour, and during the puerperium. During the course of the pregnancy the two main dangers will be failure of compensation, and the occurrence of degenerative changes in the heart muscle with consequent cardiac failure. Failure of compensation does not occur in the majority of cases of valvular lesion complicated by pregnancy, because as a rule the compensation is sufficient to meet the increased demands thrown on the heart by the pregnancy and the patient consequently does not show symptoms. If symptoms do occur, they are those which are met with in ordinary cases of decompensated heart disease. The symptoms may be quite easy in the pregnancy, even in the first three months, and the patient may complain of pain at the heart, palpitations, shortness of breath, and swelling of the extremities. In more severe cases there is likely to be marked dyspnoea, albuminuria, oedema of the lungs, with cough and perhaps haemoptysis and sleeplessness.

A good example of the ordinary course of a case of double mitral disease complicated by pregnancy is afforded by the history of a patient who was under treatment in Ward III not long ago. She was a woman aged 32, who had had six children, three of them having been born prematurely. She had suffered from rheumatic fever at the age of 10, and again at the age of 18. She was eight months pregnant when admitted, and on examination she was found to have a double mitral murmur, with oedema of the legs, marked dyspnoea, the respiratory rate being 30 to 40 per minute, and slight albuminuria. Under ordinary medicinal treatment, and rest in bed, she rapidly improved, and lost all her symptoms. That is what usually happens in the majority of cases of valvular disease complicated by pregnancy, where the failure of compensation is but slight.

This patient was a very poor woman, with a poor home; and as we were anxious that she should be delivered before her discharge from the hospital, for fear the symptoms might recur if she was allowed to return home, we induced labour at the thirty-eighth week by the introduction of bougies into the uterus. The child unfortunately was born dead, and presented the appearance of having been dead some little time. The mother did well, and on her discharge the systolic murmur had disappeared, but the presystolic murmur was still present.

This is a typical example of double mitral disease complicating pregnancy but yielding to ordinary treatment. You must, however, bear in mind that in this case labour was induced not on account of the patient's symptoms but to avoid the danger of a relapse after she had left the hospital during the time she was waiting for her confinement. If a patient develops failure of compensation she is likely to present, besides the symptoms due to her heart disease, special symptoms referable to the pelvic organs. For instance, in cases in which the failure affects mainly the left side of the heart, abortion is very likely to occur. I have here an interesting specimen of a frozen section of the uterus at the tenth week of pregnancy, from the case of a girl who died of mitral disease. You will notice that haemorrhages have occurred into the placenta, the decidua vera and the decidua reflexa. As the result of the failure of the systemic circulation the nutrition of the walls of the small arterioles suffers, and small haemorrhages occur, especially in the soft decidua of the uterus, with a tendency to resulting abortion. This accident is probably more frequent in pregnant women with heart disease than it is in healthy women. Some observers assert that abortion does not occur more frequently in these cases, but on the whole I think it does. Out of 80 recorded cases of pregnancy complicated by heart disease with symptoms, 35, or 44 per cent. of the patients, aborted. The frequency of the occurrence of abortions in general is about 20 per cent., so that in this series of 80 cases the percentage was twice as great.

On the other hand, French and Hicks, in a series of 58 cases of mitral disease with pregnancy admitted into Guy's Hospital, found only 5·5 per cent. of abortions. I think, however, we may certainly conclude that there is an increased tendency for women to abort when their pregnancy is complicated by valvular disease of the heart with failure of the left ventricle. If the failure affects the right side of the heart, the patient is likely to develop congestion and venous stasis in the pelvis as in other parts of the body and is liable to the occurrence of menorrhagia and of premature labour.

The second danger, which occurs occasionally during pregnancy, is sudden cardiac failure due to degenerative changes in the heart muscle. There can be no doubt, as it has been shown by *post-mortem* examination, that in a certain number of instances during pregnancy fatty degeneration of the heart muscle occurs. And occasionally you may meet with a case in which a woman during pregnancy dies of cardiac failure due to degenerative changes in the heart muscle, with or without any valvular lesion. If such degenerative changes in the heart muscle are present in a patient during pregnancy, then any undue strain, whether it be physical or mental, is likely to bring about heart failure. Death during pregnancy from such

a cause is uncommon. Porak, however, has recorded 5 cases ending fatally during pregnancy, of 88 cases of heart disease and pregnancy, and Baranger has shown that fatty degeneration and small haemorrhages may be found in the myocardium, and especially in the papillary muscles, in these cases.

CARDIAC FAILURE DURING LABOUR.

Death from cardiac failure during labour is very uncommon. It may be the result of apoplexy, embolism, or heart failure, and it is no doubt favoured by the rise in the blood pressure which occurs during the straining efforts of the second stage of labour and by the mental anxiety which may accompany the process of delivery. But such cases are very infrequent. Quite recently, however, I have had a case of this kind in which cardiac failure commenced during labour, and in which the patient died immediately after labour was accomplished. She was a woman 26 years of age, who had had one child. The pelvis was contracted, and in the first pregnancy delivery had to be effected by craniotomy. She took the anaesthetic (chloroform) badly on this occasion, and after delivery there was marked collapse. In the second pregnancy labour was induced at the thirty-fourth week of gestation. The presentation was a breech, and an attempt at cephalic version was made under chloroform, which proved unsuccessful even with the patient in the inverted position. As during the inversion marked cyanosis developed I desisted from the attempt to turn the child, and contented myself with passing bougies into the uterus. This was done at 10 a.m. without any difficulty and without any haemorrhage. The patient soon came round from the anaesthetic, and at 2 p.m. had a good pulse and was cheerful and well. About 2.30 p.m. labour pains commenced, and some *ante-partum* haemorrhage occurred. This continued to a slight degree until about 5 p.m. At this time the patient became rather collapsed and the pulse became rapid and feeble.

At 6 p.m., when I saw her, the pulse was very rapid and small, she was very pale, and complained of pain in the epigastrium. The second stage of labour was well advanced, and the haemorrhage had entirely ceased. The breech was presenting, and there was no sign of haemorrhage into the uterus or into the abdomen. The patient's condition gradually became worse, and the cardiac failure more pronounced, with dyspnoea and finally some air hunger. The pulse never recovered, although hypodermic injections of ether and strychnine were given, and saline fluid with brandy was transfused into a vein. I have never seen a case of severe haemorrhage in which saline transfusion did not produce temporary improvement and some change in the pulse; but in this case it had no effect whatever, and there was no doubt the heart's action was extremely feeble. As the condition of the patient did not improve, and we thought there might be some intra-uterine haemorrhage, it was decided, as a last resort, to empty the uterus. A leg was brought down, the body delivered by traction, and the after-coming head perforated, as there was some delay at the brim of the pelvis, the delivery being accomplished within a few minutes. The condition of the heart, however, did not improve, and the patient died half an hour after the birth of the child, before the delivery of the placenta. Unfortunately a *post-mortem* examination was not allowed. There can, I think, be no doubt that the patient died from heart failure, predisposed to by the *ante-partum* haemorrhage which occurred during the first stage of labour, and due probably to degenerative changes in the heart muscle. The patient was a nervous delicate woman, and, as I have mentioned, suffered from an excessive degree of shock after her first confinement. There were no symptoms or signs of any abdominal trouble, beyond the pain in the epigastrium, which might have been cardiac, and no sign of haemorrhage into the abdomen or into the uterus.

THE RISK OF HEART FAILURE AFTER DELIVERY.

Supposing that a patient with heart disease escapes the dangers of pregnancy and the smaller danger of labour, what are the risks of her condition after delivery has taken place? The heart may give out in one of three ways after parturition. Immediately after the birth of the child cardiac failure may occur, and this may be brought about by over-distension of the right side of the heart, with resulting paralysis, or by the blood accumulating in the large abdominal veins in consequence of the rapid fall in the blood pressure. No doubt in the majority of cases the failure is due to over-distension of the right side of the heart and cardiac paralysis occurs with cyanosis and urgent dyspnoea. In other cases it is due to the accumulation of blood in the abdominal veins, very little blood finding its way to the heart, and the hypertrophied and dilated heart failing because of the small amount of blood which is returned to it. Berry Hart has observed seven cases of death from mitral stenosis all with symptoms of over-distension of the right side, and in one case *post-mortem* examination showed the right side of the heart over-distended and filled with blood, and the left side contracted and empty. The patient died of cardiac paralysis, the result of over-distension of the right side. The third way in which cardiac failure may occur is some days after delivery, no doubt from degenerative changes in the heart muscle and from a failure on the part of the diseased heart to recover from the strain of labour. So that after her confinement a woman may die from heart failure brought about in one or other of these three ways.

Recently I have had a case of death after delivery from cardiac failure, in consequence probably of blood accumulating in the abdominal veins. The patient was 38 years of age, and she had had six children and one miscarriage. She had a severe attack of influenza with some cardiac weakness five weeks before her confinement, and had only recovered from this a week before her delivery took place. The labour was precipitate, a very large child being delivered in two or three pieces, after the membranes ruptured. Immediately after the delivery of the child the patient became markedly collapsed, and the pulse began to fail. There was no haemorrhage, external or internal, and the uterus contracted well. Injection of strychnine and ether, and the administration of oxygen produced but very temporary improvement. The pulse became weaker and weaker, the patient became extremely blanched, and developed faintness, marked dyspnoea, air hunger, and precordial pain, dying two and a half hours after the delivery of the child. I think the death in this case may rightly be attributed to the failure of a heart weakened by a recent severe attack of influenza, and brought about by the sudden fall in the blood pressure accompanying a precipitate labour, and the consequent accumulation of the blood in the large veins of the abdomen. The extreme pallor of these patients seems to indicate that they are bleeding, as has been said, into their own veins. On the other hand, the patients who die from failure of the heart from over-distension of the right side become cyanosed and have dyspnoea. The third way, as I have mentioned, in which patients may die is from gradual heart failure developing some days after delivery.

Some years ago I had a case in which the patient died on the tenth day after her confinement with cerebral symptoms the result of extreme cardiac weakness following delivery. She was a woman of 41 years of age, who had had five children and one miscarriage. She was a very fat and rather unhealthy patient. I only saw her for the first time in the second stage of labour, and found a shoulder presentation with a prolapsed cord. Chloroform was administered, internal version was performed, and a large child 10 lb. in weight, was delivered as quickly as possible. The child was born alive and lived, but immediately after delivery the mother became very markedly collapsed, the pulse failed altogether, and the heart sounds could hardly be heard. There was no *post-partum* haemorrhage, the uterus contracting down well, and there had been no *ante-partum* haemorrhage. The patient's condition was so grave—she was practically moribund—that it was deemed advisable not to attempt to express the placenta. A few hours after delivery Sir John Williams saw the case, and recommended, in view of the patient's very grave condition, that the placenta should be left *in situ* for the present, as the uterus was well contracted and there was no haemorrhage. The patient remained in an extremely critical condition for three days, but under the repeated administration of strychnine and brandy hypodermically she gradually recovered, and the heart condition slowly improved. The temperature on the fourth day rose to 105°, and the discharge from the vagina—the placenta being still in the uterus—became a little smelly. Ether and oxygen

was accordingly administered, the placenta removed with the hand, and the uterus washed out with 1 per cent. lysol solution. A careful examination of the interior of the uterus failed to discover any signs of a tear in the cervix or in the body. The pulse gradually improved and the temperature returned to normal. On the tenth day, when convalescence was thought to be established, the patient was suddenly seized with very severe pain in the head and right side of the neck, so acute that morphine had to be administered. She became comatose, had stertorous breathing, with pin-point pupils, and died a few hours after the first onset of the pain. Unfortunately no *post-mortem* examination was allowed, and whether the patient died of a cerebral embolus or of cerebral thrombosis remains undetermined. At any rate, whatever the actual cause of death, it was no doubt secondary to the extreme cardiac weakness which was present during the ten days that she lived after her confinement.

There is another possible sequel of cardiac failure following delivery, and that is a tendency to the retention in the body of various toxic materials as a result of the enfeebled circulation and a failure of the excretory functions of the liver and kidneys. This may lead to other complications, such as albuminuria, may predispose the patient to develop septic intoxication or septic infection, and, as I have already mentioned, may be a cause of degenerative changes in the heart muscle.

Prognosis of these Cases.

Now we pass on to discuss the prophylactic treatment of these cases. How can we avoid these special dangers, or if they do occur how shall they be treated? Let us consider the mortality of cases of heart disease complicated by pregnancy and the prognosis in any given case. As I have told you, there is a tendency at the present time to exaggerate the badness of the prognosis, or, in other words, to overstate the mortality from this condition, and that is due to the fact that Angus Macdonald, who first called attention to the dangers produced by heart disease complicating pregnancy, had an altogether exceptional mortality in the cases he described. Out of 14 cases which he had either observed or collected he had a mortality of 9, or 64 per cent. Much of the teaching current at the present time is based upon these figures, and it is not uncommon to find in textbooks the statement that the mortality of heart disease complicating pregnancy is 40 to 50 per cent. There can, I think, be no doubt but that this is an entirely erroneous estimate. Drs. Hicks and French, to clear up this point, have analysed the obstetric histories of 300 consecutive cases of mitral disease admitted into Guy's Hospital during the last twenty years. As a result of their investigations they came to the following definite conclusions: First, that comparatively few of these women are sterile; secondly, that these women are not particularly liable to abort. But, as we have said, this is probably not a correct conclusion, and it must be remembered that in many of the cases the histories upon this point were inconclusive. The third conclusion is that the majority of such patients bear children quite well. In other words, the majority of patients with valvular disease of the heart pass through their pregnancy, labour, and puerperium with few or no symptoms, and make a good recovery. Their conclusions were based upon 300 consecutive cases, and they found that the mortality, either immediate or within three months—and it is obvious that not only the immediate mortality must be considered but also that for the following two or three months, since the women may die later on as a result of their labour—was 13.9 per cent. I have collected 453 cases from the literature, of whom 53, or 12 per cent. died, including Macdonald's and Berry Hart's cases, the latter having lost 7 out of 8 patients, so that we may estimate the average death-rate of cases of valvular disease complicating pregnancy as about 12 per cent. The mortality-rate naturally depends on the variety of the heart disease to some extent, but mainly on the condition of the heart muscle. The nature of the valvular lesion is not of much importance; it is the condition of the heart muscle which must be taken into account. If the valvular lesion is well compensated, the heart muscle healthy, and the blood pressure normal, the danger to the patient is very small indeed. If the heart muscle is degenerated, or there is insufficient compensation, the danger is great.

Treub has recorded the results of 24 cases of heart disease complicating pregnancy under his care; of 6 cases of valvular disease of the heart with no symptoms all recovered; of 14 cases of uncompensated valvular disease 1 died, while of 4 cases of endocarditis and myocarditis complicating pregnancy all the patients died. These results afford a very good illustration of the important fact that the danger and the death-rate depends mainly on the condition of the heart muscle, and not so much on the nature of the valvular lesion. If the patient has endocarditis or marked degenerative changes in the heart muscle, the mortality may well be 100 per cent., and very probably will be over 50 per cent.

Obstetrical Treatment.

What is the best treatment of these cases? Hicks and French maintain that the treatment of a case of pregnancy complicated by heart disease is to treat the heart disease, and that you need take no account of the pregnancy. And that conclusion being in large part a corrrect one, we will not waste time by considering in detail the treatment of the heart disease, but will discuss the obstetrical treatment, and mainly the question whether it is desirable to carry out any treatment of the pregnancy besides that directed to the condition of the heart.

If you have a patient suffering from heart disease complicating pregnancy, you will place the patient at rest in bed, treating the heart condition by such rest or by the administration of heart or general tonics. Above all things, you will insist upon absolute rest in bed in the worst cases. Is it, however, ever advisable or justifiable to treat these cases by the induction of abortion or by the induction of premature labour? Is the contention of Hicks and French wholly correct that you need treat the heart, and the heart only, or is it necessary sometimes to cut short the pregnancy? I believe it is, and that in many cases the correct treatment is not only to treat the cardiac symptoms, but to relieve the patient of the strain produced on the heart by the pregnancy by the induction of abortion in some cases, or by the induction of premature labour in others. And I am of opinion that there are more cases in which the induction of abortion or of premature labour is good treatment than is generally supposed. It may be said that the immediate danger is increased by the induction of abortion or of premature labour, because, as I have pointed out, the danger after delivery is greater than that during pregnancy and labour. Therefore, you may from time to time, as in other severe diseases complicating pregnancy, such as albuminuria, meet with cases in which the result of inducing premature labour is markedly to increase the danger to the patient for the time being. But, in the majority of cases, if such interference is really necessary, you will by its adoption improve the patient's condition, and not make it worse.

The following case is a good illustration of the class of case in which abortion should be induced. The patient, a woman aged 32, had had two children and three miscarriages. She was suffering from double mitral disease, with marked dyspnœa, œdema of the lungs, cough, and haemoptysis, and was markedly anaemic. Considerable improvement took place with complete rest in bed and medicinal treatment, but the cough continued to be very troublesome. The œdema of the lungs did not clear up entirely, and after a time her general condition remained stationary. As she did not continue to improve, and as she was five months pregnant, so that she had a prospect of another four months before her confinement could be expected, in which the strain on the heart would continue to increase, I decided to induce abortion by the rapid method under anæsthesia. The cervix was accordingly dilated under ether to No. 26 Hegar's dilator, and then to a diameter of three and one-fifth inches by Bossi's dilator, and the uterus emptied. A considerable degree of hydramnios was present. After delivery the symptoms rapidly improved, the cough ceased, the physical signs of congestion and œdema of the lungs disappeared, and the general condition improved very markedly. In such a case as this the induction of abortion is justifiable and occasionally necessary. If I may recapitulate the reasons why in this case we induced abortion they were: first, that the patient had marked symptoms of failure of compensation as early as the fifth month, and, secondly, that these symptoms, although they were improved by rest in bed and medicine, did not entirely disappear. We

hought further that the strain of another four months of pregnancy, increasing, as inevitably it must, during the latter part of the term, would be too much for the weakened heart, and that, therefore, it was justifiable to terminate the pregnancy. If you decide to induce abortion in one of these cases, then the best method is to give an anaesthetic, to dilate the cervix, and to empty the uterus at one sitting. The class of case, then, in which abortion should be induced, is that in which ordinary medicinal treatment has produced no or only very little improvement in the general symptoms, and in which no further improvement in the cardiac condition is likely, so that it is essential that the strain of a long pregnancy should be avoided if possible. The following case is an illustration of the class in which premature labour may be induced. The patient was 25 years of age, a primipara with double aortic disease. She had some oedema of the legs, was markedly anaemic, and had severe syncopal attacks from time to time. With treatment by rest in bed and medicine she improved considerably, but when she got out of bed and about she had further syncopal attacks, so that her condition was not quite satisfactory. We tided her over her difficulties as long as possible, but at the thirty-eighth week I determined to induce labour because the syncopal attacks were still rather frequent, and it was therefore thought best to put an end to the pregnancy. A Champetier de Ribes's bag was introduced under an anaesthetic, and when the first stage was completed the patient was delivered under ether with forceps. The child is alive; the mother did well, and at the present time has lost all her cardiac symptoms. Some authors hold that the induction of premature labour increases the danger to the patient; but I do not think that this is so, because if you induce premature labour you can make arrangements to carry out the delivery in the best conditions and with the advantage of skilled assistance. I think, then, that in the case of patients who do not improve under ordinary medicinal treatment, it is wiser to terminate the pregnancy rather than to let the patient go on to full term. This does not agree with the conclusions of Hicks and French based upon the obstetrical histories of their 300 cases. They contend that the induction of premature labour is not necessary, since the great majority of their patients bore a considerable number of children with little or no danger. No doubt that is true of the general run of cases; just as it is true that the majority of cases of valvular heart disease complicated by pregnancy do very well with ordinary medicinal treatment. But you will meet with exceptional cases from time to time which require not only medicinal treatment, but, in order to lessen the strain thrown upon the overburdened heart, require, further than this, the induction of abortion or of premature labour.

Conduct of the Labour.

The treatment of the condition at the time of the patient's confinement is of some importance. You must guard against the risk of cardiac failure, and if there are signs after the delivery of the child that the right side of the heart is over-distended, you should encourage *post-partum* haemorrhage, or you should actually bleed the patient. Such a mode of treatment undoubtedly yields good results where there are symptoms of over-distension of the right side of the heart and consequently danger of paralysis. Where the patient is pallid and the pulse very small, with no signs of over-distension on the right side, and where it is probable, therefore, that the blood is accumulating in the abdominal veins, the intra-abdominal pressure should be maintained at the time of delivery by the use of a sandbag or a tight binder, and appropriate means must be taken to stimulate the heart's action.

The Prohibition of Marriage.

There remains now for our consideration only one question, and that is the truth of the dictum laid down in many books, that a patient with heart disease should not marry, or if she does marry she should not have children, or if she does have children she should not suckle them. Such a dictum, you will agree, is too sweeping. The majority of women with heart disease pass through their pregnancy and confinement with perfect safety and have no symptoms, and therefore it is not right to say that a young woman who has heart disease should never marry. If her heart disease is compensated and there are no symptoms, she may marry. Cardiac failure probably will occur sooner or later, as Hicks and French point out, whether she becomes pregnant or not. The bad effect produced on the heart by pregnancy is, on the whole, not sufficiently marked to justify you in advising a patient strongly that she should not marry. It is true that if she marries it will be better for her not to have children, and it is true that if she does have a child she should not suckle, but it is not right that a woman with heart disease should be forbidden to marry. Although the danger is undoubted, and the mortality is as high as 12 per cent., yet it has been exaggerated, and the majority of these patients do perfectly well, and run no very great extra risk. So that a young girl with heart disease which is compensated, and which is not complicated by any accompanying disease of the lungs or other viscera, may be permitted to marry. Her heart will probably fail sooner or later, whether she marries or not, but whether the time of the onset of such failure of the heart will be precipitated by child bearing is a matter which admits of argument. There probably will be some precipitation, but it is doubtful whether the risk of this is so marked as to justify you in denying her the right to marry.

EFFECTS OF DIET ON THE DEVELOPMENT AND STRUCTURE OF THE UTERUS.

BY

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THE alarming and persistent decline in the birth-rate is a matter of national interest the importance of which can hardly be over-estimated. The purely medical aspect of this question is, however, exceedingly difficult of approach, since social factors and social selfishness have undoubtedly a material influence. During the last generation, however, there has undoubtedly been a marked change in the relative proportions of the constituents of the average man's diet. Can such a change of diet have any influence on the birth-rate?

The following investigation was undertaken to discover what changes, if any, were produced in the development and structure of the uterus by various diets.

The animals employed in the research were rats. The uteri of 86 animals were examined both macroscopically and microscopically. The tissue for microscopic examination was removed in all cases from, as nearly as possible, the same area, the junction of the distal and mid thirds of the uterus.

Eight wild rats, in various stages of development, from the immature to the adult animal, were examined in order to form an opinion as to the structure of the uterus in animals living, presumably, under natural conditions.

The remaining animals were divided into five series, namely:

(*a*) A series of 13 animals fed, from weaning, for periods of from nine to fourteen weeks on an exclusively milk diet. In one section of this series plain milk was used; in another, Pasteurized milk; in the third, sterilized milk.

(*b*) A series of 27 animals fed for periods of from twenty-one days to nine months on bread soaked in milk.

(*c*) A series of 11 animals fed for periods of from four to fourteen weeks on a rice diet.

(*d*) A series of 5 animals fed for varying periods on a diet of porridge or oats.

(*e*) A series of 22 animals fed for periods of from twenty days to eight months on a raw meat diet.

In the cases of the raw meat and rice diets, some animals were put on the diet as soon as weaned, others after they had reached various stages of development.

The uterus of the adult wild rat is lined by columnar epithelium. There are glands lined by epithelium which varies from low cubical to columnar in type. The mucous coat is bounded externally by a muscular coat. In the mucous layer three varieties of cells are found:

1. A cell with a large round or oval, relatively faintly-staining nucleus. This appears to be a young connective tissue type of cell.

2. A cell with a small, round, darkly-staining nucleus, comparable to a lymphoid cell.

3. A cell with an elongated, very darkly-staining nucleus, similar to cells got in fibrous tissue.

In the wild rat the large cells are most numerous (Fig. 1). In the wild rat the cells of the other types are few in number, and are chiefly found in the part of the mucosa near the muscular coat.

From the examination of this series of 86 animals it is evident that in animals of the same age and approximately of the same weight, living under similar conditions, the uteri may vary within a limited range in size and development. The muscular coat is relatively uniform.

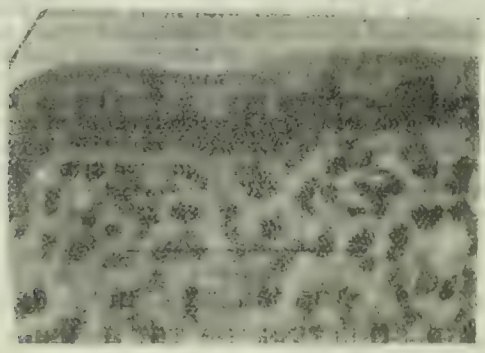


Fig. 1.—Mucosa of adult wild rat, showing predominance of large type of cells (× 500).

The mucosa shows the greatest variations. While in most cases the epithelium lining the cavity is columnar, in some it is cubical; there are also found marked variations as to the position of the nucleus and its staining reactions.

The animals fed on milk and bread soaked in milk approximate most nearly to the type of structure got in the wild rat (Figs. 1 and 2. In the other groups, fed on what we may term "abnormal diets," namely, rice, porridge, oats or raw meat, there is found a relatively constant departure from the normal. The type of change is common to all abnormal diets; its severity varies.

The severity of the changes induced are found to be in proportion to the ages of the animals at the time when the abnormal diet was begun. The changes are most marked in the animals put on the diet at weaning; they are less marked the more mature the animal at the time of the commencement of the abnormal diet. In a fully-developed animal, any abnormal diet may fail to

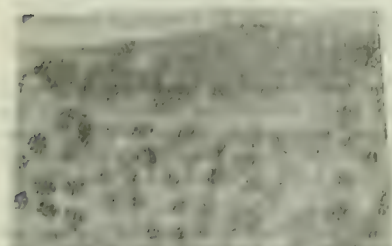


Fig. 2.—Mucosa of uterus of young rat fed from weaning on bread and milk (× 500).



Fig. 3.—Section of uterus of young rat aged 8 weeks, fed from weaning on ox-flesh (× 20).

maternally change either the size or structure of the uterus.

In regard to the development of the uterus, an abnormal diet appears to arrest the growth of the uterus; compare Figs. 1 and 3, also Figs. 2 and 3. This arrest of development is most marked in animals fed from weaning on ox-flesh, but is also very well seen in animals fed on rice or on porridge or oats.

In regard to structure, all the abnormal diets led to a diminution of the number of the large connective tissue type of cells, and a relative increase in the small cells. This change, which may be described as a fibrosis (compare Fig. 7 with Figs. 1 and 2), was most marked in animals fed from weaning on an ox-flesh diet for periods of from four to five months; in this group of animals none became pregnant, while controls, from the same litters, fed on bread and milk, all had young.

From these observations it seems justifiable to state:

1. The use of a non-physiological diet—for example, exclusive flesh, rice, or porridge—induces in the great majority of cases a modification in the structure of the

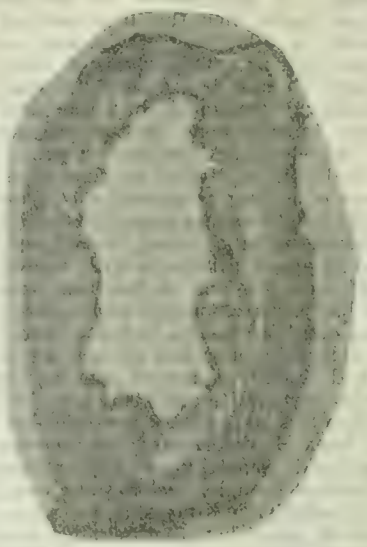


Fig. 4.—Section of uterus of young rat aged 10 weeks, from same litter as Fig. 5, fed from weaning on bread soaked in milk (× 20).



Fig. 5.—Section of uterus of adult rat aged 7 months, fed on raw meat (× 20).

uterine mucous membrane. This modification consists in a diminution in the number of the large connective tissue type of cells, which appear to be important constituents in a physiologically active mucosa.



Fig. 6.—Section of uterus of adult rat aged 7 months fed on bread and milk (× 20).

2. The structural change is most profound in animals fed from weaning on an exclusively ox-flesh diet. In such animals the development of the uterus is also most interfered with.



Fig. 7.—Mucosa of adult meat-fed rat, showing marked fibrotic change (× 500).

3. The structural change in 2 is associated with sterility. Chalmers Watson, to whom I am indebted for much of the material used in this investigation, pointed out that a meat diet, if begun at weaning, almost invariably led to sterility. The present investigation shows that the

sterility is probably due to the structural and developmental abnormalities in the uterus induced by the abnormal diet. It has been shown [2] that the consumption of meat per head in this country is to-day almost seventeen times as great as it was in 1850. During the same period the fall in the birth-rate has been most marked.

While it would be unwarrantable to attempt to found any theories in regard to the falling birth-rate on the results of this limited experiment, yet, when we add to the above facts the further consideration that the diminished birth-rate is most marked in the better-off classes of society—that is, among the very classes whose means permit of an unrestricted use of the more expensive meat diet—it is evident that the food factor is one which is at least worthy of consideration in dealing with the great question of the falling birth-rate.

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A CASE OF SUDDEN DEATH AT THE CLIMACTERIC.*

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ON August 3rd, 1906, I was hastily summoned to see a woman who was said to be in a fit. I was on the spot within a few minutes, reaching the house at 9.10 a.m. I found her lying supine on a sofa dead.

She was a highly-respectable woman, aged 45 years. The history of this fatal attack was as follows: She rose as usual at 5.30 a.m. on the morning of her death, and attended to the requirements of the house, taking only a cup of tea with her husband, who left for work at 6 a.m. She was quite cheerful and complained of nothing. Her next door neighbour saw her at 7.20 a.m., and remarked that she looked "faint and rather bad"—lately a not unusual thing with her, as she knew the "change of life" was about her. She said she began to "feel queer" about 7 a.m. Her neighbour gave her some hot tea at 7.30 a.m., which was quickly vomited. Smelling salts were administered as she continued to feel faint, and eventually her husband was sent for. Although so faint she was cheerful, and quite thought she would soon be feeling better; she retched two or three times but brought nothing up after the first vomit. At 8.45 a.m. she seemed to change suddenly; the hands became clenched, the face somewhat dusky, and the nails discoloured; she said she felt very cold and she looked as if a "fit" were impending. A few minutes later, and quite suddenly she changed again for the worse, became unconscious, gave three blowing expirations, and then seemed as dead. When questioned as to why I was not sent for sooner, the neighbour said she had seen her in many previous attacks quite as bad as, or even worse than, this one, except for the sudden and unlooked-for change at the end.

The recent history of this woman was thus: For the last year she had suffered from occasional severe headache; for the last six months she had been subject to "fainting turns," with frequent retching, such attacks lasting half an hour to an hour, when she would be all right again; the attacks always occurred early in the morning. The frequent flushes and cold sweats of the climacteric were experienced, and irregular catamenia, of late every two weeks or so, not much loss, but extending over a longer period than normally. The last menstrual period was a week previous to the fatal attack. She was a healthy, cheerful, bright, and happy woman. She had borne seven children, five now living. Her father died suddenly at the age of 60.

The autopsy revealed nothing, all organs and structures being normal, with no signs of internal haemorrhage or of poisoning.

The following points are especially worthy of note: (1) The fatal attack occurred during the climacteric; (2) attacks of a similar nature (except for the fatal termination) had occurred before; (3) the attacks were always in the morning; and (4) absence of any signs of disease *post mortem*.

It is a well-known fact that the nervous organization of most women is put to a considerable strain during the climacteric, and attacks similar to the one recounted above are common enough, being reflex in origin, and always occurring early in the morning, in which respect the attacks are analogous to the vomiting of pregnancy. Whereas the symptoms associated with the climacteric are not usually of a serious character, I take it as quite within the bounds of possibility for an attack such as I have described, and originating in the genital organs, to so act reflexly that the balance would turn towards death instead of towards recovery. For have we not in this case the evidence of the neighbour who said that she had seen the deceased in attacks worse than this last fatal one, except for the immediate change at the end? Yet from these sufficiently serious attacks she had always previously recovered. Be it noted that this change at the end of the attack was a matter of a few seconds—it was truly a case of *sudden* death. The negative result of the autopsy also supports me in this solution of the cause of death. In my evidence at the inquest I gave as the cause of death "asthenic syncope immediately dependent upon the climacteric." Such a cause of death, although rare, seemed to me to be so obvious that subsequently I was indeed surprised to find no record whatever of any similar case; after searching numerous authorities, I have failed entirely to discover that the climacteric has been held to account for sudden death; hence my paper with a view to ascertaining the opinion of others.

* Abstract of a paper read before the Medico-Legal Society, March 12th, 1907.

A NOTE ON THE USE OF THE BLUNT HOOK.

BY J. EDWARD GODSON, M.B., B.CH.BIRM.

THE point I desire chiefly to emphasize in the following report is the comparative ease with which delivery was effected with the blunt hook in a case which presented elements of great difficulty. As a matter of fact, I doubt if any other means could have been successfully employed without recourse to anaesthesia, and this, too, where the use of chloroform was practically inhibited.

Mrs. G., an 8-para, with advanced mitral disease, commenced labour on April 4th, 1907, and after several pains the membranes ruptured and the waters escaped in one gush. The pains then abated, but continued at intervals of about an hour. Her last two confinements had been prolonged and severe; the sixth a shoulder presentation, the seventh a vertex terminated by high forceps extraction. In her case there were several causes inevitably tending to produce difficult labour: constitutional debility, uterine inertia, swelling and oedema of the soft parts, and above all marked contraction of the A.P. diameter at the brim produced by projection of the sacral promontory.

I was called to see her on April 5th, and found the os uteri the size of a sixpence, the soft parts very oedematous, and a breech presentation (abdomino-anterior position) with the legs fully extended on the trunk. As labour was progressing naturally, I judged it unwise to interfere at this stage, and contented myself with watching her closely during the next forty-eight hours. The general condition continued good, the uterine pains were hesitating, long-delayed, and inadequate, the dilatation of the os was progressive but tardy, and there was a free escape of meconium. On April 7th the patient was in much the same condition, but suffering from want of sleep and inability to take nourishment, while the uterine contractions still came at half-hourly to hourly intervals, and the oedematous os would now admit the tips of four fingers. After some hesitation I determined to leave her yet awhile, being chiefly influenced by the long-interval character of the pains, the desirability of further modelling and descent of the breech, the danger of chloroform with the heart so faulty, and the difficulty of working without it in so confined a space, and with the presentation so high up. The rectum was emptied by enema, the vagina washed out with antiseptic douches, four 5-grain doses of quinine were given every four hours to whip the uterus into quicker action, and liquid food was administered regularly. Under this treatment the pains became more frequent, and the os was fully dilated by 10 p.m., but to counteract these advantages the patient had an alarming attack of syncope, and the breech became impacted. I tried to break up the presentation and bring down a leg, but found this even more impossible now than it had been at an earlier stage. An attempt to get a fillet over the thigh was equally unsuccessful; while the forceps were easy to apply and equally easy to withdraw, as they failed to obtain an efficient grip.

The blunt hook remained as a final resource, the instrument to hand being of an obsolete pattern with an internal diameter of 1⅜ in. A small hook is easier to use than a large one, but possesses certain dangers and disadvantages of its own; the device by which I have attempted to overcome these will be mentioned later on. I applied the instrument without difficulty, and extraction of the breech followed with greater readiness than might have been anticipated. The shoulders, the most massive I have ever seen in a newborn child, caused considerable delay, but this did not matter much as the child had evidently been dead for several days. The final stage of delivery was concluded without trouble.

The child was a male, at full term. It had an offensive odour, and large surfaces were denuded of epidermis. It was 12 lb. in weight and 23 in. long. The bones of the skull were strong and normally ossified; the occipito-frontal circumference was 15 in., the occipito-mental diameter was 6 in. while the biparietal was 4.50 in. The circumference of th

shoulders was 20 in.; of the thorax at the nipples 15.35 in.; of the abdomen at the umbilicus 15 in.; while the bitrochanteric circumference was 15.50 in. In weight, length, and girth it nearly approximated the standard for children in their fourth month, so greatly did it exceed in these particulars the average newborn infant.

The blunt hook is a perfectly safe instrument—except in the hands of the clumsy or ignorant—as far as the mother is concerned. If the child is known to be dead its use is practically free from all danger, but if the child is still alive, then it must be employed with care lest it produce several undesirable results, such as fracture or dislocation of the femur, injury to the genitalia, laceration of the skin of the thigh, or damage to the femoral blood vessels. A large hook is more unlikely to do mischief of this kind than a small one, but it is less easy to apply, less safe for the mother, more difficult to manipulate, and takes and retains a less firm and accurate hold. Moreover, the small hook is the one most generally in the possession either of the purchaser of the wholesale outfit or of the inheritor of ancestral implements. Personally I always use a small instrument, but have attempted to obviate its disadvantages by employing a short second shank made to screw into the free end of the original hook. This device may appear somewhat clumsy, but I have found it satisfactory in practice, as it provides against the chief dangers, converts the hook into a steel vectis, and allows of greater latitude in the direction of the applied extractive force.

The free end of the hook constitutes the chief element of danger in prudent hands, and when the second shank is screwed into position this free end is obviously obliterated. Needless to say, the "blunt hook" should never be employed except in those difficult cases in which Nature has proved inadequate, and when other less stringent means have failed to effect delivery.

A CASE OF EXTRAUTERINE PREGNANCY IN WHICH UNUSUALLY EARLY RUPTURE OF THE GRAVID TUBE OCCURRED.

By J. NIGEL STARK, M.D., F.F.P.S.G.,

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Extrauterine pregnancy is a condition of so much interest on account of its scientific as well as of its practical problems that it appeals to all members of the medical profession. It assumes so many forms and varieties and so many accidents and changes may occur, that any case presenting unusual features deserves record. In the one to be narrated there can be no doubt as to the diagnosis, the rent in the tube being large and clearly visible after the abdomen was opened, and its interest lies in the fact that the rupture took place at an unusually early date, earlier than in any other case of which I have been able to discover a report after little more than a week's gestation.

History.

At ¼ 15 a.m. on May 29th, 1906, I received a telephonic communication from Dr. J. Barr Stevens of Renfrew, and as a result I was very soon driving with all speed to Renfrew, where I found Dr Stevens in anxious attendance upon a lady. She was in a state of collapse, the lips and cheeks were blanched, the pulse was about 130 and soft and thready, the voice was faint and weak, she spoke with an effort; in fact, there were all the symptoms of shock and haemorrhage. The history obtained then, supplemented by what I learned at later dates, was that the patient, aged 30, had been married two years and had never been pregnant. Menstruation had begun at the age of 14, had from the first always been of the twenty-eight day type, had continued for six days, and had been unattended with pain or any discomfort. Since her marriage no change had happened, her health had been perfect, and especially there had never been any pelvic disorder. The last menstruation had begun on May 6th, had continued as usual for six days, in every respect had been normal, and had presented the same phenomena as usual. For a week afterwards no coitus took place, recalling that fact the patient was very emphatic, so that we can date its occurrence as being on May 13th, that is nine days before the onset of her illness. During May 14th she was in her ordinary good health, and went about her household duties as usual. About 6 p.m. she suddenly felt a severe pain in the front of the abdomen, which continued for, she thinks, a minute or two, and was succeeded by nausea and vomiting. She lay down upon a sofa, and after a short time she rose, and the bowels moved twice loosely. After this she felt very faint and sick, and was put to bed in a semi-conscious condition. Dr. Stevens was obliged to employ every method to keep her alive, injecting strychnine and digitalin hypodermically, giving stimulants by the mouth, and raising the lower part of the body.

It was not possible to make a very thorough examination when I saw the patient. She made no complaint of pain anywhere, but she felt, as she looked, exhausted and collapsed. Some tenderness was experienced upon palpation of the lower half of the abdomen, and percussion showed dullness in that part, reaching well into the flanks. Vaginal examination revealed no change in the cervix from normal; there was no bulging in the lateral fornices nor behind the uterus, and, as far as could be made out from bimanual examination, imperfectly performed on account of pain, the uterus was not enlarged. A little pain was complained of when I made pressure in the left lateral fornix under the site of the Fallopian tube. The breasts were in every detail absolutely virginal.

It was very apparent that the condition was that of internal haemorrhage of a serious nature, and, in spite of the want of evidence as to pregnancy, I stated that my opinion was that we had to deal with the intraperitoneal rupture of a tubal gestation. After waiting and watching for more than an hour, we concluded that the bleeding had ceased for a time, and that an operation, not being urgently required, could be safely deferred to a more suitable time and place. Later on in the day, therefore, an ambulance wagon safely removed the patient, under the personal supervision of Dr. Stevens, to a private nursing home in Glasgow. She rallied to a slight degree, and, carefully watched, passed the night in safety. I delayed in order to allow her to recover from the shock and collapse, as well as to permit the abdominal wall to be prepared for operation, while I was, of course, ready to operate at once in the event of any alarming symptoms appearing.

Operation.

On the next forenoon (May 30th) I opened the abdomen. The dark clotted blood which could be seen beneath the peritoneum spurted out immediately on the latter being divided. Large clots filled up the lower abdomen and lay among the coils of intestines, and when they were cleared out fresh blood could be seen welling up from the pelvis. The Trendelenburg position permitted us then to discover that the bleeding was from a ragged-edged opening fully half an inch in length, situated in the upper surface of the left tube. I at once controlled the bleeding and removed the tube, but with some difficulty, as I was obliged to tie and stitch in the tear, it being so near the junction of tube and uterus while not actually implicating the latter. This unfortunately destroyed the portion of the tube in which the rent had been situated, and consequently only healthy tube was left for microscopical examination. The tissues of the tube at the rent were so friable that one could have imagined that the opening had been formed from below upwards by the action of some corrosive poison, which, in forcing its way outwards, had eaten away the tissues, destroying those in its path, and disintegrating those near at hand. On examination of the right ovary it was found to be enlarged by a cyst to the size of a cricket ball. We examined it carefully, and, finding that the ovary was practically all cyst, with Dr. Stevens's full assent, I very reluctantly removed it. No normal ovarian tissue could be felt or seen; resection was therefore impossible.

After-History.

The patient made a very good recovery, and went home in less than four weeks.

The principal feature of interest in this case is the date of rupture of the tube. Usually it occurs about the sixth to the tenth week. In the *British Gynaecological Journal* for May, 1904, Dr. William Duncan reported a case in which rupture had taken place on the nineteenth day, and he said that, so far as he could ascertain, only one other case had been recorded in which there had been rupture at as early a date. That was one in which it was said to have been on the fifteenth day. The patient was a multipara and had not missed a period. Though internal haemorrhage was diagnosed no operation was performed, and only after death was the ruptured tubal gestation discovered. Dr. Duncan's patient had had previous miscarriages, in the other case the patient was a multipara, and it is conceivable that in neither of these women was menstruation absolutely always regular. The patient on whom I operated had never previously been pregnant. Her menstrual periods recurred every twenty-eight days ("to the day," as she told me), and the one in May appeared on the day expected, was in every respect exactly like all those which had preceded it, and continued till the 12th of the month. I was assured that there was no coitus until exactly a week after that date. That brings us to the 19th, and the rupture took place on the evening of the 23th, nine days later. So far as I know this forms a record.

The amount of blood which was lost was enormous, and one could not but be amazed at its quantity as well as at the large size of the opening in the tube. Over and over again I have operated upon tubes distended to an enormous size by pus, and yet in which no rupture had occurred. Certainly at such an early date the cause of rupture could not be ascribed to over-distension of the tube, and when we looked on the everted, ragged edges of the gap we seemed to find clinical corroboration of the evidence brought forward by Herzog and others. They consider that one of the chief factors in the production of early rupture in tubal gestation is the action of the syncytium, which displays greater phagocytic properties, that is, greater penetrating powers, than it does in normal uterine pregnancy. In the latter instance the muscular coat affords an insurmountable obstacle, while in tubal pregnancy it is hardly present at all. So continuously destructive is the action of the syncytial cells upon the wall of the tube that Werth compares the condition to a malignant process, which in every case requires to be treated as such.

With respect to the amount of bleeding which had taken place, this was due in part to the position of the rupture. The nearer it approaches the uterine end of the tube the greater is the haemorrhage.

As to the diagnosis in these cases, it may not be possible to be absolutely dogmatic. When menstruation has been quite regular and no period has been missed, when there have been no symptoms such as nausea or sickness, and when the breasts are virginal in appearance, the practitioner is liable to be thrown off his guard. Rupture of an ovarian, tubal, or appendical abscess, and acute torsion of the pedicle of an ovarian cyst may cause sudden and severe pain followed by shock. But there is then usually no pallor such as accompanies loss of blood, and there is probably a history of previous ill-health or abdominal swelling. The rupture of a gravid tube at a very early date of pregnancy generally occurs in a woman in a state of good health, while the pallor that follows it in serious cases is strikingly apparent. One need, therefore, have no great hesitation in diagnosing as ruptured extrauterine pregnancy a case presenting signs and symptoms similar to those described, even when the proofs of pregnancy are entirely absent.

The treatment consists, of course, in opening the abdomen and securing the bleeding points as soon as possible. But each case requires separate judgement. I would have operated whenever I saw the patient, had we believed that the bleeding was continuing so actively as to render death imminent; but being convinced that it had ceased, even although only temporarily, I am sure that we adopted the best method of treatment—waiting until the shock had passed away, and operating before the recurrence of another haemorrhage. The result was eminently satisfactory. During the operation ether was administered, the technique was carried through as rapidly as possible, and, before the patient was removed from the table, saline fluid was transfused under one of the breasts. For a day or two the pulse was feeble, but after then no anxiety was felt as to the issue of the case. The wound healed without trouble, and the patient is now going about in perfect health.

ON THE MICRO-ORGANISM ISOLATED FROM ACUTE RHEUMATISM,

AND ITS RELATION TO OTHER MEMBERS OF THE STREPTOCOCCUS GROUP.*

BY E. W. A. WALKER,

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THAT acute rheumatism, or rheumatic fever as it is commonly called, is an infective disease, will hardly be questioned at the present day. It conforms in all respects to the type of an acute infective fever. Its rapid onset, with pyrexia; its fairly definite course, apart from complications; its seasonal variation, its apparent endemicity in certain areas, and the occurrence of well-recognized epidemics, as shown by Newsholme, all tend to the conclusion of an infective origin. Moreover, a certain number of cases have been recorded, though they are comparatively few, in which there appeared to be evidence of transmission of infection from one individual to another. Doubt has been thrown on the value of the evidence in these cases, which occurred chiefly among blood relations; but that such cases should have been recorded at all is, I think, a somewhat striking fact. The disease is clearly one against which the natural resistance of a large proportion of individuals is high, as compared, for example, with such acute fevers as scarlatina or diphtheria, so that under ordinary circumstances they exhibit no susceptibility to it. And it is also one in which the nature and the situation of the lesions are unfavourable to the liberation and dissemination of an infective agent. If also, as I believe to be the case, the infective agent is one of low vitality outside the living body, it is not surprising that the infectiousness of the disease is practically negligible.

Various bacteria have been described by different observers as the causal agents of this disease. Thus, Achalme in 1891 described an anaërobic spore-bearing bacillus, which he had isolated from cases of acute rheumatic fever. Beside Achalme's cases this bacillus was obtained from a number of rheumatic patients by Thiroloix, Coyon, and others, and once by Hewlett of King's College. It is, however, now generally admitted to have been an accidental finding; and it is probably identical with the *Bacillus enteritidis sporogenes* of Klein.

In a certain number of cases also staphylococci have been described, but these have been for the most part isolated cases. In some of them the diagnosis of acute rheumatism appears to have been somewhat uncertain, and others of them were clearly cases of pyaemia; thus, one case recorded by Guttmann had multiple abscesses in the kidneys, muscles, and pericardium. It would indeed be very curious, if a staphylococcus were in reality the cause of acute rheumatism, that the connexion of so robust and so readily isolated an organism had not long ago been clearly established. And it would be very odd that rheumatic lesions suppurate with such very extreme rarity as is the case were their causal agent an organism so pre-eminently prone to pus formation. These cases are, therefore, generally agreed to have presented either accidental findings, or terminal infections, or cases of mistaken diagnosis.

Within the last decade a good deal of attention has been directed to the possible relation of streptococci, or *a* streptococcus, to acute rheumatism.

More than thirty years ago—in 1875—Klebs observed cocci ("monadina") in the cardiac valves in rheumatic fever. And Popoff, in 1887, isolated a micrococcus from the blood of a case of rheumatic fever, and found that on injection into rabbits it caused arthritis, endocarditis, and pericarditis. Following Popoff's observations, Netter, Kraus, G. Lion, and Buday have all found streptococci in rheumatic fever. In 1894 Professor Dana isolated a diplostreptococcus from the meninges of a fatal case of acute rheumatic chorea. And Riva also demonstrated streptococci in acute rheumatism. Triboulet and Coyon described a diplococcus in rheumatic lesions; and Apert and Triboulet isolated the organism from 11 cases of rheumatic fever in 1898. Lastly, in 1899, Wassermann, Westphal, and Malkoff obtained a diplostreptococcus from a fatal case of rheumatic chorea, and found that on injection into rabbits it gave rise with constancy to a condition of acute polyarthritis.

In 1900 the subject was seriously attacked by English workers; and in that year Poynton and Paine announced that they had obtained a diplococcus in eleven successive cases of acute rheumatism—five times in pure culture. They described the organism in some detail, and supported their contention as to its causal relation to the disease by the results of animal inoculations, which had yielded in rabbits acute non-suppurative polyarthritis, endocarditis with vegetations, pericarditis, and on one or two occasions a condition which they regarded as comparable to chorea.

Since their original paper in 1900, Poynton and Paine have continued their investigations with the greatest perseverance, and have now isolated the organism on, I believe, some 29 or 30 separate occasions. Von Leyden and Fritz Meyer also claim to have shown the association of a streptococcus with acute rheumatism.

This, broadly speaking, was the state of the case in favour of the constant presence of a diplostreptococcus and

* A paper read before the Oxford Medical Society.

its causal relation to rheumatic fever, when, in association with my friend Dr. R. M. Beaton, I began to interest myself in its investigation. Subsequently I also undertook, with the assistance of Mr. Ryffel, of Guy's Hospital, to work at the subject from the chemical side. The main outlines of the results which we obtained were published in two Preliminary Notes in the British Medical Journal, but unfortunately my return to Oxford in 1903 led to a pressure of other work which prevented the preparation of the detailed account of our experiments that I had intended to publish, until it was too late to be of any special interest.

In December, 1903, however, Dr. Vernon Shaw published a detailed account of experiments which he had made with cultures of the organism in question obtained respectively from Kral (Wassermann's organism), from Poynton, and from myself, leading him to the conclusion that the various organisms were *identical*, and were the causal agents of a condition in animals which exhibited the salient features of acute rheumatism of man.

Still more recently, in 1904, Professor Beattie found the same organism in two cases of acute rheumatism, isolating it in pure culture from the second case, and obtaining with it positive results in three rabbits.

Dr. Beaton and I had begun to work at the subject in January, 1901, and had addressed ourselves in the first case to the question whether we could with constancy obtain any micro-organism from rheumatic cases. In the result we isolated a streptococcus from 15 cases, from 10 of which we obtained it in pure culture. Of the other 5 cases, in 2 the original cultures were contaminated with the *Staphylococcus albus* from the skin, and in the other 3, which were *post-mortem* specimens, with a motile bacillus which we took to be the *Bacterium coli* but did not work out in detail. In 8 of the cases the organism was isolated from the *living* subject; in the other 7 it was found in the heart's blood *post mortem*.

Having found the organism in question, we proceeded to examine its cultural and microscopic characters, growing it on a number of different media, and comparing it with cultures of an ordinary streptococcus from a case of septicaemia grown on the same media. It at once appeared that neither the microscopic nor the cultural characters on ordinary media afforded any reliable criteria by which this organism could be distinguished from other members of the streptococcus group. Compared with the streptococcus from septicaemia it grew rather more freely, especially on gelatine at the room temperature—it formed acid more rapidly and in greater amount, and it clotted milk some days earlier than the latter. But we had no hesitation in saying that, so far as its appearance and cultural characters went, the organism would undoubtedly be classed as an ordinary streptococcus if handed without comment to an expert bacteriologist. We therefore proposed to avoid the term "diplococcus" (which had been somewhat emphasized by Paine and Poynton) as one that might conceivably occasion some misunderstanding, and lead to the organism being unrecognized when met with by other workers, and we referred to it for convenience as the *Micrococcus rheumaticus*. At the same time we noted that, as stated by Poynton, this organism, when growing in the tissues of an animal, tends to lie in pairs, or in quite short chains; and that in cultures on the ordinary media, and especially when only recently isolated from the body, it commonly presents the same arrangement. This, however, can very frequently be noted in the case of other streptococci also, and is therefore of comparatively small importance. On the other hand, we found that when grown in milk, or in fluid media of unusual alkalinity, the micrococcus often extended itself into chains of considerable and, it might be, even of remarkable length.

Up to this point, therefore, we could not *distinguish* the micro-organism from other streptococci. But we had *found* a streptococcus in fifteen cases of acute rheumatism.

We next proceeded to test its pathogenic action, using three different specimens (one from an acute rheumatism with endocarditis, a second from a chorea dying of heart failure, and the third from the urine of an acute rheumatic chorea), and inoculating altogether 17 rabbits. The three specimens employed had been obtained in *pure* culture in the original cultivations, and in our experiments they gave the following effects in the rabbits: Fever and acute arthritis in all cases, and in some cases in addition pericarditis or endocarditis, or both. After large doses death eventually ensued, but never pyaemia. With smaller doses the arthritis and suspected cardiac lesions, if any, recovered. After recovery a fresh inoculation usually caused a recurrence of the condition, and in one rabbit we produced at intervals four successive attacks. It has been quite properly objected by Cole that we did not publish the protocols of our animal experiments, and I have explained to you how that was prevented. But Dr. Shaw, using our organisms, as well as others, obtained polyarthritis, pericarditis, vegetative endocarditis, visceral infarctions, and in two cases an acute iritis; and not only published his protocols in full but also exhibited the specimens at the British Medical Association meeting in Oxford; and a number of them have, I believe, since been placed in the museum of the Royal College of Surgeons.

It appears, therefore, that the organism which we had isolated was capable of producing in animals the morbid lesions of acute rheumatism, just as did Wassermann's and Poynton's organisms; and that it did not, even when administered in doses which produced a fatal septicaemia, ever lead to the formation of pyaemic abscesses, as is frequently the case in ordinary streptococcal septicaemias.

Cole of the Johns Hopkins Hospital, writing in 1904, based a strong criticism of the whole position on experiments in which he had shown that other streptococci from various sources could on injection cause arthritis and endocarditis in rabbits. This was, however, already quite well known; and while we had attached a good deal of weight to the fact that the condition which we produced in rabbits, and still more the condition which we saw in two monkeys inoculated by Shaw, appeared to us to be more like acute rheumatism and less like any ordinary streptococcus septicaemia, as well as to the fact that among all the rabbits inoculated by Paine and Poynton, Shaw, and ourselves, pyaemia had never been noted, even in the fatal cases, yet we had endeavoured to make it clear in our first note that up to this point the micro-organism with which we were dealing could not, in our opinion, be specifically distinguished from other members of the streptococcus group.

At this point, therefore, having found an organism, and having shown that it was capable of producing lesions similar to those of acute rheumatism, Beaton and I endeavoured to attack the question whether the micrococcus was or was not distinguishable in any way from ordinary streptococcal forms.

Now Marmorek had shown that if a fluid medium in which streptococci of human origin had been grown were filtered free from micro-organisms, and again employed as a culture medium, bacteria in general could flourish in the fluid, while human streptococci were entirely unable to do so. This appeared to afford the test for which we were seeking, and on applying it we found at once that the rheumatic micrococcus grew abundantly in the fluid, whilst several other streptococci which we tested refused to grow. Accordingly we stated our opinion that "if the result be confirmed by other workers, the specificity of the *Micrococcus rheumaticus* will be established."

Pursuing the subject in my later note published with Mr. Ryffel, I stated four points of apparent difference which we had observed between this organism and other streptococci that we had been able to examine, and these differences we claimed to be "strongly suggestive of the specific nature of the micro-organism concerned." These were as follows:

1. A greenish-brown discoloration produced in a blood-agar culture, due apparently to a reduction of haemoglobin to haemochromogen.
2. The growth obtained on using Marmorek's test.
3. The faculty of growing in very alkaline media.
4. The production of considerable quantities of acid. And we also noted its very rapid haemolytic action on red corpuscles.

But grave doubt was thrown on the value of Marmorek's test by the work of Meyer and of Aronsohn in 1902; and in 1903 Schottmüller showed that various streptococci can produce the colour change in blood above referred to. The acid production, therefore, remains *alone* at present as a distinctive characteristic of the streptococcus which we obtained from rheumatism. But I am not aware that up to the present the production of the particular acids in

question, in anything approaching the same quantity, has been recorded in the case of any other streptococcus.

Having ascertained that the acids formed belonged to the fatty acid series, Ryffel and I grew the rheumatic micro-organism for definite periods in highly alkaline fluid media of known alkalinity and then determined their volatile fatty acids. We found considerable, and approximately equal, quantities of formic acid and another fatty acid (which afterwards proved to be acetic acid), together with a very small amount of higher fatty acids, which were solid at the room temperature. And the amount of acid thus accounted for corresponded closely to the total change in the reaction of the culture fluid. A litre of culture several times yielded us about ½ gram of formic acid. These analyses I repeated independently and confirmed here in Oxford on my return; and quite recently I have obtained similar results with a culture of Paine and Poynton's organism, which they kindly sent me for comparison (though the amount of acid is less).

I have not examined very many other streptococci for formic acid production, the method being very long and tedious; but those which I have examined (five different strains) only produced very small amounts of the acid. I therefore feel entitled to maintain the statement made by Ryffel and myself that the formic acid production "*may* constitute a means of differentiation between the rheumatic micro-organism and other members of the streptococcus group." And I hope to be able to pursue the subject to a more definite conclusion.

The method which I am now employing is as follows: The culture is made alkaline and evaporated to dryness by gentle heating. Absolute alcohol is added to the precipite and subsequently acidified with phosphoric acid.

The acid alcohol extract is poured off (leaving peptone and other substances behind). It is then made alkaline with NaOH and the alcohol distilled off.

The new precipitate is extracted with ether after acidification with H_3PO_4. The ether extract is shaken up with strong NaOH solution, and the ether driven off by heat.

The remaining solution is acidified with dilute sulphuric acid, and the fatty acids separated by distillation. The total acids are then determined by weighing in the form of sodium salts, and the amount of formic acid by the reduction of corrosive sublimate to calomel.

Following up this line of inquiry, Ryffel and I proceeded next to examine the urine in cases of acute rheumatism. And here again we found the presence of a considerable amount of formic acid. Ryffel's figures showed quantities of formic acid up to 0·2 gram (and in one case 0.25 gram) in a day's urine; while the total fatty acids of the urine in health (among them formic acid) amount to no more than 0.05 gram per day, according to von Jaksch. The effect of treatment with salicylates was to cause a rapid fall in the formic acid excretion. Unfortunately the work was interrupted at this stage, before we had been able to decide the essential question whether other febrile illnesses were or were not also accompanied by a similar excretion of formic acid. But my friend Dr. Hertz has lately undertaken the investigation of this point, and also the examination of the familiar acid sweats of rheumatic fever.

Summarizing the case in favour of the micro-organism in question as the probable cause of acute rheumatism in man, it may be stated that this organism has been isolated in pure culture from subjects of the disease, both during life and on *post-mortem* examination, by a succession of observers on a relatively large number of occasions; that it has been seen microscopically in rheumatic lesions—in the synovial membrane of joints in the cardiac valves, and in the meninges in cases of acute rheumatic chorea; and that it was both seen in a rheumatic nodule, and cultivated from it in pure culture by Paine and Poynton. On injection into animals it produces morbid lesions similar to those of acute rheumatism. It has the appearances and general cultural characters of a streptococcus. But it produces in considerable amount an acid, formic acid, which is not known to be produced in like amount by streptococci from any other source. And this appears to afford a specific distinction.

On the other hand, various objections have been raised against the acceptance of this micro-organism as the cause of rheumatism.

A considerable number of competent observers have entirely failed to find any micro-organisms in acute rheumatism. And here I must refer especially to the recent careful investigation carried out by Bulloch and Thompson, to which I attach great weight, and which gave entirely negative results in 14 cases examined during life, and about 20 cases examined after death. Cole, Philip, and others also have similarly failed to find any micro-organisms in the cases which they examined.

Accordingly it is suggested that the organism which I have discussed was either a contamination or a terminal and agonal infection, or a secondary infection.

The first suggestion is an obvious and convenient argument, and can only be met by endeavouring to multiply the number of observers, and the number of positive results. The other two are open to a more direct discussion; and they require a very serious consideration.

Against the terminal infection theory is the fact that the organism has been isolated *during life* in a number of cases, and that these patients were not dying at the time of examination.

The third suggestion is that the organism was the occasion of a secondary infection superposed on the rheumatism. And it is pointed out, quite justly, that in the *post-mortem* examination of cases with pericarditis, or endocarditis, or both, the number of positive results is higher than in the cases in which these lesions are absent, the conclusion being that the micro-organisms in question may, perhaps, be the causal agent in these further stages. The position which one takes with regard to this suggestion must, I think, depend entirely on one's own conception of acute rheumatism. If pericarditis, endocarditis, subcutaneous nodules, and chorea occurring in association with rheumatic fever, are all due to a secondary infection with this streptococcus; then I should willingly admit the view in question. At the same time, I must confess that if these conditions be not acute rheumatism, but a further infection with an independent causal agent of their own, I do not know what remains to us of the disease acute rheumatism, except the fever, and perhaps the arthritis—neither of which, according to leading clinical authorities, is necessarily a marked feature of typical acute rheumatism of children.

There remains one further view, namely, that rheumatic fever is an "attenuated" septicaemia due to debilitated pyogenetic cocci—a view which is strenuously held by several German workers, and notably by Singer.

But this again is, I think, sufficiently answered by the clinical evidence and by the definite opinion of the most experienced clinicians that acute rheumatism is a definite entity, distinguishable and distinct from ordinary septicaemias; and I find it very hard to picture to myself the way in which an "attenuated" micro-organism is supposed to act when it causes high pyrexia and rapid death in acutely fatal cases, such as undoubtedly occur from time to time.

Accordingly, while I am well aware that the case in favour of the *Micrococcus rheumaticus* is *non-proven*, and appears in some respects, perhaps, less favourable at the moment than it did four or five years ago, neither do I think that the evidence against it is at all conclusive; and, for the present, at any rate, I see no reason to abandon positive results in favour of purely negative evidence. Accordingly, I am inclined to claim this micro-organism as a distinct variety of streptococcus.

Andrews, who has lately applied the ingenious tests devised by Gordon, in an exhaustive attempt to define the outlines of a classification of streptococci, found that the only two specimens of *Micrococcus rheumaticus* which he had been able to obtain for examination belonged respectively to the salivary and faecal types in his classification—organisms likely to be found in terminal infections. But this statement cannot be regarded as entirely conclusive, since he does not appear to have tested the haemolytic power of the two strains in question. And he says in his paper that "such cases of salivary and faecal streptococci as I have tested showed no haemolytic power." On the other hand, the *Micrococcus rheumaticus* exhibits very striking haemolytic action in test-tube experiments.

From the clinical standpoint acute rheumatism is a disease *sui generis*, and is, therefore, doubtless due to a single definite infective micro-organism. But before this can be regarded as in any way established probably the whole question must be reinvestigated *ab initio*. First, it

must be shown that the micro-organism can by suitable methods be obtained from a long series of cases, which must be chosen with due regard to their acuteness and their freedom from suspicion of complications; and secondly, it must be clearly demonstrated that the organism itself is a distinct and definite variety of streptococcus.

A CASE OF RETROPHARYNGEAL FIBROMA.

By N. B. ODGERS, M.A., M.Ch.Oxon., F.R.C.S.Eng.,
ASSISTANT SURGEON, NORTHAMPTON GENERAL HOSPITAL.

Simple tumours growing in or behind the walls of the pharynx seem to be of such rarity that I think the following case is worth recording. I have succeeded in finding less than half a dozen in the literature similar to my own, while neither the College of Surgeons Museum nor those of the London hospitals contain a like specimen.

History.

A lady, aged 31, was sent to me by Dr. Stone, of Northampton, on August 3rd, 1906. Since Easter, 1904, she had been unable to breathe through her nose and had had some difficulty in swallowing. In May, 1906, she had two attacks of epistaxis; she had never been deaf. She did not think that during the last twelve months, at all events, the tumour had increased in size. On looking into her mouth, behind the right side of the posterior pharyngeal wall was a pyriform swelling, firm, regular, and well defined; the mucous membrane over it was stretched and thin but not involved. It reached to just beyond the middle line; it extended upwards to the lower border of the atlas, while its lower limit was determined by the upper border of the fifth cervical vertebra. It bulged forward the soft palate and the right posterior faucial pillar and filled two-thirds of the nasopharynx. A finger could be swept all round it except along its outer border. Grasped with the finger and thumb it was freely movable laterally on the vertebral column, while the mucous membrane could be pinched up over it.

Operation.

A six weeks' course of iodide and mercury had no effect upon it, and on October 30th I operated. Chloroform being given, the head was brought well over the edge of the table and Mr. Whitehead's gag was inserted. With the soft palate drawn gently forward with a small pair of tongue forceps, a longitudinal incision was made through the mucous membrane over the tumour, and the latter was then readily enucleated with the finger, assisted by two or three snips of scissors, curved on the flat. The haemorrhage, brisk for an instant, stopped almost immediately, and the mucous membrane was then sutured by two medium catgut sutures mounted on Mr. Arbuthnot Lane's cleft palate needle holder. Her convalescence was uneventful, rectal feeding being enforced for the first forty-eight hours.

The tumour when removed was the size of a hen's egg, and the following is the report of the Clinical Research Association, who examined it microscopically: "This tumour is an angio-fibroma with a more or less definite capsule; the vessels are chiefly capillary, but there are many large venous channels at the periphery. The stroma is richly nucleated in places, but it is forming fibrous tissue, and we do not observe any definite indications of sarcoma in the sections."

The first description of fibrous tumours in this region was published, in so far as I can ascertain, by Mr. Syme[1] in 1856. He mentions having operated on 4 such cases, but all of them originated in the neighbourhood of the faucial pillars rather than in the posterior pharyngeal wall. In 1857 Dr. Busch[2] recorded 3 cases of retropharyngeal tumour, and his authority is referred to in the only detailed account I could find of them in any textbook namely, that in v. Bergmann's *System of Practical Surgery*. His first case was that of a man, aged 34, who gave a fourteen years' history of alteration in voice; for eight years he had been conscious of a mass behind the angle of the left lower jaw, and for six months had noticed a tumour in his mouth. This was the size of a goose's egg and well defined. Fearing haemorrhage, Dr. Busch first tied the left external carotid, and then, without an anaesthetic, split the soft palate and enucleated the tumour after incising the mucous membrane. On section, he says, the growth was a sarcoma with a good connective tissue capsule or a soft fibroma, with some portions of cartilage and some fatty degeneration. From the length of the history and the ease with which it was shelled out it would appear to be similar to my own case.

His second case occurred in a man, aged 70, who gave only a year's history. The mucous membrane was ulcerated over the tumour, and although this was enucleated as readily as the first, and was like it on section, the involvement of the mucous membrane suggests malignancy. The third case he mentions was undoubtedly a sarcoma. Another similar tumour was reported by Dr. Ficano[3] in 1895, but unfortunately I have been unable to verify the reference I found to his article.



Other benign growths have been described by Dr. Roe,[4] who in 1894 removed a fibro-lipoma from the pharyngeal wall, and by Dr. Frederick Taylor,[5] who in 1876 had a case of a retropharyngeal lipoma, the specimen of which is in the Guy's Hospital museum.

With regard to the origin of these tumours, Dr. Busch describes them as growing from the pharyngeal aponeurosis. They should, therefore, be styled "pharyngeal" rather than "retropharyngeal." I confess that, before reading his article, I myself thought my specimen sprang from the connective tissue of the retropharyngeal space.

The accompanying photograph was taken unfortunately after the tumour had been in formalin for some two months, and had shrunk somewhat.

I saw the patient again in February. There is no sign of anything like a recurrence of the tumour.

References.

1 J. Syme, *Lancet*, vol. i, 1856, p. 16, Fibrous Tumours of the Fauces. 2 W. Busch, *Annalen des Charité Krankenhauses*, Acht Jahrg., I Heft, 1857, Ueber Retropharyngealgeschwülste. 3 G. Ficano, *Boll. d. mal. d. orecchio d. gola e. d. naso*, Firenze, 1895, xiii, 145, Fibroma della pareta posteriore della faringi. 4 J. O. Roe, *Journ. Amer. Med. Assoc.*, Chicago, 1894, xxiii, p. 491, Fibro-lipoma of Pharynx. 5 F. Taylor, *Lancet*, vol. ii, 1876, p. 885.

EPITHELIOMA OF THE LARYNX IN A YOUNG MAN.

By HAROLD BARWELL, M.B.Lond., F.R.C.S.Eng.,
SURGEON FOR DISEASES OF THE THROAT, ST. GEORGE'S HOSPITAL; LARYNGOLOGIST, MOUNT VERNON HOSPITAL FOR CONSUMPTION.

This case appears to be worth recording, as it presents several very unusual features.

The patient was a hawker, aged 27. He came to the throat department of St. George's Hospital in June, 1906, complaining of gradually increasing difficulty in swallowing, together with shortness of breath. These symptoms had been noticed for about two months; the dysphagia was not extreme, for he could take a normal quantity of soft food; there was some inspiratory stridor on deep inspiration, but the voice was very little affected, being only slightly hoarse. He was unable to work on account of the dyspnoea which came on with active exertion, but otherwise the general health was fairly good; he denied syphilis and no signs of the disease were to be discovered. The cervical glands were not enlarged, but a slight fullness could be detected about the right ala of the thyroid cartilage.

On examination of the larynx a large rounded swelling was seen to occupy the right lateral wall; internally it filled a large part of the lumen of the larynx and concealed both vocal cords, while externally it bulged into the right pyriform fossa and vallecula. It was situated below the level of the right arytenoepiglottidean fold, which projected above the mass and appeared in the mirror to bisect it. The diagnosis appeared to me to lie between gumma and perichondritis of the thyroid cartilage. I therefore ordered mercury and potassium iodide, the latter in doses of 30 grains three times a day well diluted with water, and warned him to come to hospital at once should the dyspnoea get worse.

Under this treatment the dysphagia improved, but the tumour did not alter appreciably in size, and the patient reported several attacks of dyspnoea; the last of these was so severe that he was admitted to the hospital on the night of August 28th, and tracheotomy performed. I then gave intramuscular injections of benzoate of mercury on alternate days in doses of ¼ to ½ grain, and at the same time I clipped away at several sittings a considerable part of the growth projecting into the larynx; in this way the dyspnoea was relieved so that he would wear a plug continually in his tracheotomy tube, but the main mass of the tumour appeared slightly larger and the swelling in the neck over the thyroid cartilage was more apparent; antisyphilitic treatment was, therefore, omitted. Microscopical examination of the fragments clipped away

showed only the normal tissue in a state of chronic inflammation, and there was no sign either of tubercle or of new growth. The patient was shown at the British Laryngological Association in November, and opinions were expressed suggesting perichondritis of the thyroid cartilage, malignant disease, and tuberculosis. My own opinion was in favour of perichondritis, possibly tuberculous in origin, as a primary form of tuberculous perichondritis of the thyroid cartilage is well recognized.

On December 5th I cut down on the external swelling in the neck, which was now tense and fluctuating; I found a large cavity beneath the perichondrium communicating, by a hole in the right thyroid ala large enough to admit the finger, with a similar cavity within the larynx. The entire cavity was filled with pale friable material resembling granulation tissue, but there was no pus; the cavity was thoroughly evacuated and scraped, and a tube inserted.

In a few days I removed both drainage tube and tracheotomy tube, and both wounds healed rapidly; there was now no dyspnoea, but considerable swelling was still visible with the laryngoscope.

Examination of the material from the cavity showed that it was almost entirely composed of masses and columns of epithelial cells without cell nests. As the case was now definitely one of epithelioma, and the patient was anxious for operation, I decided to remove the right half of the larynx, the growth being limited to that side. Total laryngectomy has a lower mortality, but appeared to me to be inadvisable in so young a patient, as it would leave him incapable of earning a living.

Accordingly I operated on January 28th, 1907, and, after a low tracheotomy, removed the right half of the larynx with the epiglottis. The operation was rendered difficult by the size of the tumour in the neck and the scars of the former tracheotomy and exploratory incisions, but the patient bore it well; his condition remained satisfactory until the sixth day, when there was a sudden rise of temperature, and he died on the eighth day of pneumonia.

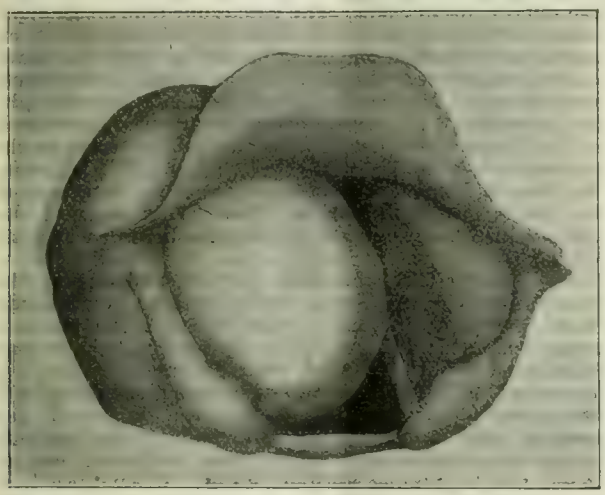


Fig. 1.—Laryngoscopic appearance in September, 1906.

Two features in this case are of special interest. The first is the age of the patient—namely, 27. Of 50 cases reported by Butlin,[1] only 1 occurred below the age of 28, and that was a remarkable case of epithelioma in a boy aged 3; there was, however, a somewhat large proportion—namely, 4 cases—between the ages of 28 and 30. The other point is of great importance in relation to the question of the intralaryngeal removal of portions of growth for examination. I refer to the deep situation of the neoplasm, which penetrated the thyroid cartilage without reaching the surface of the laryngeal lumen. A very considerable portion of the mass which projected into the larynx was clipped away to relieve the dyspnoea; nevertheless, microscopical examination showed that only normal tissues were included in the section, and no sign of malignant growth, or, indeed, of any neoplasm, could be detected.

REFERENCE.
[1] *Malignant Disease of the Larynx*, 1883.

A PROPOSAL that women should be eligible for appointment on the medical staff of lazarettos and hospitals and as provincial medical officers passed both chambers of the Swedish Legislature on February 13th.

SARATOFF has been definitively chosen as the seat of the new Russian University which is to replace that of Warsaw. The statutes will shortly be submitted to the Duma for approval.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

WANDERING SPLEEN.

THE patient in the following case, a servant girl, aged 21, stated that three months previously she had noticed a swelling in her abdomen. At first confined to the right iliac region, it rapidly increased in size, and a fortnight later she began to suffer considerable pain in the abdomen and back. She continued in service, and although growing paler and thinner and almost constantly suffering, she was able to do her work up till a week before consulting me. The sickness then became much more severe and persistent, all food being almost immediately vomited.

State on Examination.

The abdomen had the appearance of a six months pregnancy. On palpation the swelling was found to be easily movable, and it was easy to pass the fingers down behind it from above. On the upper margin a sulcus could be felt like the notch in a spleen. The girl denied all possibility of pregnancy, and except that the areolae were of a somewhat dark colour, the breasts were normal and no colostrum was present. Menstruation had been regular, the last period having ended fourteen days previously. The temperature was normal, the pulse weak and rapid. On vaginal examination a mass could be felt in the right fornix, and the uterus was apparently quite separate from it and of normal size. Dr. Fenn also saw her, and we made the diagnosis of an ovarian tumour with a twisted pedicle, and decided to send her to the infirmary, whither she was removed the next day.

Operation.

For the notes of the case after admission to hospital I am indebted to Dr. Brown and the house-surgeons. Shortly after admission the temperature rose to 101° and the pulse to 120, being very feeble. She looked very collapsed, and it was decided to operate. On opening the abdomen the mass was found to be a large and congested spleen with a long pedicle, which had become twisted. It was replaced in position and the wound sewn up.

RESULT.

The wound healed by first intention, but five days later signs of thrombosis developed in the veins of the left leg. This gradually disappeared, and a month later she was able to get up. At the end of a week, however, she collapsed suddenly, and died within six hours. At the *post-mortem* examination the spleen, still considerably enlarged, was found to be firmly adherent to the peritoneum and in good position. The cause of death was thrombosis of the mesenteric veins. The extreme degree of mobility of the spleen, together with the fact that a wrong diagnosis of ovarian tumour with twisted pedicle was made, seems to me to render the case worth publishing.

Southport. ARTHUR J. LEWIS, M.D.Edin.

DELAYED CHLOROFORM POISONING.

ON reading reports of delayed chloroform poisoning one is apt to find in it an explanation for all deaths following operation where the actual cause is not clear. Two deaths which occurred recently with me were sufficiently obscure to make me wonder if they were not due to acetone poisoning, and seem worthy of record.

Case I was a woman aged 66, on whom I operated for strangulated umbilical hernia on December 16th, 1906, and who died on the 22nd of the same month without apparent cause. At the operation the bowel was found to be congested, but not in dangerous condition; there was also a considerable mass of adherent omentum which had to be removed; but she seemed to recover from the operation very well, and on the 20th had a temperature of 100.6° and a pulse of 96. There was only very slight vomiting and the bowels had moved well several times. During the next two days, however, she gradually got worse, coma setting in and vomiting becoming very severe; latterly the vomited matter consisted almost wholly of blood. There was never any abdominal distension or sign of peritonitis.

No *post-mortem* examination was permitted, and the cause of death was supposed to have been spreading thrombosis of the mesenteric vessels.

Case II was a man, aged 40, suffering from a suppurating ear with a sinus discharging behind the ear accompanied by rigors and a temperature running as high as 105°. I cleared out the mastoid on January 26th, but found very little pus. Two days later a severe haematemesis occurred and jaundice appeared. As the rigors still continued I operated again, opening up the

meninges; there was a bead of pus outside the dura, but nothing in the temporo-sphenoidal lobe or the lateral sinus. The rigors ceased, but the patient sank into a comatose state, so suggestive of diabetic coma that I tested the urine for sugar, with negative results. The haematemesis increased after the second operation, and he died on February 2nd. *Post-mortem* no septic focus was found in the brain or other parts of the body, but a marked fatty degeneration of the liver, heart and kidneys was present, while the kidneys were also much congested. A marked, superficial, and apparently recent ulceration of the gastric mucous membrane was found, but otherwise nothing abnormal.

Remarks.—The lack of a *post-mortem* examination in the first case makes it of little value, but in the second case the amount of fatty change was striking, considering the lack of a septic focus and the fact that the patient was a very athletic man, and that up to the commencement of his last illness, two weeks before the first operation, he had never had any difficulty referable to his heart. The occurrence of haematemesis in both cases is also of interest.

R. Ramsey, M.B., F.R.C.S.Edin.
Dispensary Surgeon, Glasgow Royal Infirmary.

UNNOTICED LATERAL CURVATURE.

I have often been surprised, during the many years I have given special attention to the physical development of children and young adults, to find how seldom deformities of the back are recognized by the family physician, unless his attention be called to the condition by the patient's mother. Frequently I am consulted by a mother in regard to some faulty attitude on the part of her daughter or son, on account of "one shoulder drooping," "both shoulder blades prominent," "one hip sticking out," etc. On examination a lateral curvature of the spine is easily discovered. Too frequently the deformity is so marked that a cure is impossible, the bodies of the vertebrae having become altered in shape. Had such a child been properly treated, say at 8 or 9 years of age, when the slight deformity was due to simple muscular weakness, the gross and permanent deformity might have been avoided. Again, I am occasionally told by mothers that when the doctor has been spoken to on the subject his reply was that the child would "grow out of it." Whoever saw a child "grow out" of a lateral curvature without careful and appropriate treatment? As an alternative a poroplastic jacket is frequently suggested. But this, by freeing the spinal muscles from responsibility and movement, simply encourages the deformity to become more marked. I would, therefore, venture to urge my medical brethren to be on the look-out for "a drooping shoulder," chiefly the right, and when this is observed, to ask permission of the mother to expose and examine the child's back. In nine cases out of ten it will be found that a lateral curvature exists. Suitable medical gymnastics under medical supervision, and not merely under the care of an unqualified man or woman, will, as a rule, cure early cases, or will, at any rate, either lessen the deformity or deprive it of its more obvious and conspicuous proportions.

Glasgow. W. F. Somerville, M.D.

TUBERCLE AND ERYSIPELAS.

I was called some months ago to see a child 3 years old who was suffering from enlargement of the glands of the neck. The posterior cervical group was chiefly affected, and there was no difficulty in diagnosing an ordinary tuberculous adenitis. There was no improvement after a month's medicinal treatment, together with the application of a liniment containing potassium iodide; in fact, one of the glands near the surface seemed to be softening rapidly, so that I decided to remove them. The operation, however, had to be postponed, as the child suddenly developed an attack of facial erysipelas, which started just over the most prominent part of the glandular swelling; possibly the streptococcus gained entrance here through some abrasion caused by the rubbing. The erysipelas pursued a favourable course; it spread all over the face, the only bad symptom being albuminuria, which did not last long. The interesting point was that during the attack the enlarged glands, which formed a very prominent tumour, entirely disappeared.

I do not remember to have met with a similar case before, and should be interested to hear of others.

Richmond, Yorks. C. B. Whitehead, M.B.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.

RUPTURE OF THE RIGHT BRONCHUS BY INJURY.

(By Colin King, M.A., B.C.Cantab., M.R.C.S., L.R.C.P., House-Physician.)

A girl, aged 4 years, was admitted under the care of Mr. H. F. Waterhouse on January 15th, at 4 p.m. An hour before admission the child had been knocked down by a brougham, rubber tyred. Whilst on the way to the hospital she had coughed up blood several times. On admission the child was very collapsed, the temperature being subnormal, and the pulse running; there was no cyanosis, and the respiration-rate was 28 per minute.

The fifth to eighth ribs were found to be fractured on the left side, the ribs on the right side being intact. It was noticed that the movement on the right side of the chest was very deficient, respiration being mainly carried on by the left (the injured side). The percussion note on the right side of the chest had a very drum-like character, and on auscultation marked amphoric breathing could be heard over the same area; the signs on the left side of the chest were normal. The patient lay in bed on the right side. As any attempt at moving caused haemoptysis, the back of the lungs could not be examined; blood was brought up four times on the day of admission. The following day the child was fairly comfortable, having slept most of the night; the respiration had, however, risen to 48, the temperature had returned to normal; there was still no cyanosis.

On January 17th, the third day after admission, the child seemed much worse. The pulse and temperature were rising, and cyanosis was present; the physical signs remained the same. The right pleural cavity was considered to be distended with air under a positive pressure. With a view to relieving this the right side of the chest was punctured below the angle of the scapula with a fine trocar and cannula, the cannula being connected with a rubber tube, the distal end of which was kept under sterilized water. When turned on to the left side preparatory to making the puncture, the child coughed up a large quantity of red blood, none having been ejected during the previous twenty-four hours. The result of the puncture was an escape of air which bubbled up through the water; for the first few seconds the escape was continuous during both expiration and inspiration, but after a few seconds the air escaped during expiration only. During inspiration there was no negative pressure, as evidenced by the fact that water did not tend to be sucked up the tube. After a few minutes the cannula was removed, and the puncture sealed with gauze and collodion. During the day the child rapidly became worse, and died at 10 p.m., fifty-five hours after the accident.

Necropsy.

A *post-mortem* examination was made on January 19th. When the body was moved on to the left side there was a gush of blood from the mouth.

On opening the thorax the right pleural cavity presented the appearance of a large open space, the lung being completely collapsed. The pleural cavity contained about 2 oz. of blood. There was no laceration of the parietal or visceral pleurae except for a small rent over the root of the lung. On the left side the pleurae were intact.

The right lung was completely collapsed and airless, all portions sinking in water. There was a complete transverse rupture of the right main bronchus ¾ in. from the bifurcation of the trachea. The pulmonary artery and vein were intact. The left lung was normal.

The fifth, sixth, seventh, and eighth ribs on the left side were fractured at a point just external to their articulation with the transverse processes of the vertebrae; there was no displacement of the fractured ends, and no laceration of the surrounding structures; on the right side no ribs were broken; no other injuries were found, and all the other organs were healthy.

REPORTS OF SOCIETIES.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Dr. F. C. MARTLEY, President, in the Chair.

Friday, April 19th, 1907.

THE STATE AND SYPHILIS.

DR. SEYMOUR STRITCH, in a paper on the above subject, endeavoured to show that the time had come for an active crusade to be formulated by the Government and people against syphilis. He adduced figures to prove that the cost to the nation of venereal diseases in the army, navy and Government departments amounted annually to £3,000,000; making allowances for superannuations and for sick leave occasioned indirectly through these diseases, though not appearing in the returns as such, a more accurate estimate of this loss would, he thought, be £7,000,000. The loss to the nation from death and disablement should be considered, from the point of view not only of syphilis, but also of all those scrofulous and tuberculous diseases which might be traceable to it (cancer of the tongue, throat, leucoplasia, etc.). The hygiene of syphilis might be dealt with from the basis of a trihedron supporting the principle of morality, sociality, and legislation. The first of these was more within the province of the Church than that of medicine, and he therefore resigned it into its hands. Socially, the disease might be combated by improving the environment of young men in business and in the services. Domestically, an endeavour to make the home attractions more pleasant than the seductions of the city should be the anxious endeavour of parents. By fathers retaining the confidences of their sons they could observe the bent of their minds, and by tactful insinuations create by suggestions the necessary antidote. The *morale* of the nursery should not be neglected owing to morbid curiosity of young nurses. Circumcision was worthy of being adopted universally. Boys should be encouraged to acknowledge any slip to their fathers. Lectures should be given in schools and ambulance classes on the dangers of venereal disease. He considered the Contagious Diseases Acts fulfilled their purpose, but for the general good they should not be applied piecemeal but throughout the Empire. Given free dispensaries for men in each quarter of a city, the notification of the disease and punishment of those to whom its spread was traced, together with the compulsory detention and segregation of prostitutes whilst in an infectious condition, and the inclusion by the General Medical Council of dermatology and syphilis among subjects requiring evidence of special study during the curriculum of students, syphilis would become of but sporadic importance.

Colonel BUTT, R.A.M.C., said his experience of the disease had been limited to the army, but he had often thought that the medical profession did not look at the matter as it ought, and that they, in common with the general public, did not look facts in the face and recognize that, notwithstanding all sorts of moral and educational influences, things were much the same as they had been in the past. Legislation was required for a section of the community who would not submit themselves to self-control. The State would be guided in the matter largely by the opinion of the medical profession, and yet the whole subject bristled with controversy, largely as the result of ignorance. No advance could be made towards stamping out the scourge until every member of the profession took a whole-hearted interest in it. His own experience of his last three years in India had led him to the conviction that the disease could be stamped out. During that period, in a garrison of 1,000 men, he had not one new case of syphilis, although there were many prostitutes living on the confines of the garrison; nor did any of the latter contract syphilis, although the number of syphilitics in the garrison never fell below 100. The accomplishment of this was made easy for him by the magistrates, officers commanding, and his brother medical officers working with the one desire of stamping out the disease. They induced the soldiers to believe that they could benefit them by submitting to treatment. There was no stigma attached to women who suffered from venereal diseases going into the cantonment general hospitals, and the native women attendants were got to explain to the women the benefits of treatment. The result was, he thought, strong presumptive evidence in support of his contention that, so long as local manifestations of the disease had been removed and the treatment was continued, the disease could not be communicated. By treating syphilis patients as sufferers rather than offenders they could be got to submit to treatment, and thus they would go a long way towards controlling what he considered a preventable disease.

Dr. HENRY FITZGIBBON said the difficulty which had always existed in dealing with patients in the Lock Hospital had been the absence of controlling power to get patients to remain under treatment. The tendency with the patients was to think that they were cured as soon as the disease was out of sight. Power was required to keep prostitutes in hospital as long as there was active syphilis present, and to keep them under observation and treatment as extern patients afterwards. There was also a difficulty in connexion with young men who had not the means to pay for treatment, and who had no encouragement to go to general hospitals.

Major BROWN, R.A.M.C., said that although unable to connect syphilis and tuberculosis, as suggested by Dr. Stritch, he had always found that when syphilis was contracted by a patient with tuberculosis he went from bad to worse, no matter what the treatment was, unless it was applied early. As regards prevention, keeping boys at home was an excellent method, if it could be done; but a better plan was to protect them when they went abroad by legislating for them, and legislation meant bringing back the Contagious Diseases Act. The majority were not open to moral suasion. Syphilis, of course, could be contracted in many ways, and there should be some place where it could be cured. Women, however, who practised as prostitutes were not open to moral suasion, and the only way was to compel them to remain in hospital or to report to a doctor until they could be certified as free from the disease. Their efforts to stamp out the disease in the army did not seem to have had much effect. In Dublin, in 1906, the constant sick from syphilis were 2.93 per 1,000, while in 1866 it was 1.72.

Dr. PUGIN MELDON said that one of the first difficulties in curtailing syphilis was the difficulty of diagnosing it early. A further difficulty was that of keeping prostitutes in the hospital. They went in readily enough as long as they were sore, but they went out in a short time and became infectious. This was the case with the very large percentage of patients who were also heavy drinkers. Soliciting in the streets should, he considered, be made illegal, and the punishment should depend on whether they were suffering from venereal disease or not. If suffering from disease, they should be confined in a lock ward or hospital, or in special prison wards, until cured, or allowed out on a ticket-of-leave principle. Any man who had connexion with another individual while suffering from syphilis ought to be severely punished. The great difficulty in the way of legislative measures was the opinion of the public that the more syphilis was stamped out the more prostitution there would be. Their business, however, as medical men, was to check disease in every form. The presentation of the financial side of the question, as mentioned by Dr. Stritch, might smooth over the obstacle of public opinion.

Dr. KIRKPATRICK said the question of State interference was as old as history. So far back as 1162 Parliament interfered for the regulation of brothels. If the public knew more of the history of the disease and the efforts which had been made to stamp it out, the work of the medical profession at present would be much lessened. There seemed to be a general idea among the public that there was no regulation for State interference with venereal disease in Dublin. That was a mistake. Under the Act of Parliament, 5 Vict., c. 24, the police dealt very severely with prostitutes and soliciting, and in the Act, 48 and 49 Vict., there were very stringent regulations for the suppression of brothels. He had received from the Commissioner of Police a table showing the number of women proceeded against during the last five years, 601 being dealt with in 1906. During the same period twenty brothels had been suppressed in each year. This afforded them a starting ground for an active crusade against the disease. It was not always, as was urged, a merited disease, and he had only recently seen the case of a woman who had been infected by her husband as the result of his

contracting the disease during her pregnancy, and she had infected her child. The morbidity and mortality of the disease justified them in urging the State to interfere in the matter just as it was interfering in diseases that cost the State insignificant numbers of lives compared with syphilis. The sentiment of the country was against the official registration of prostitutes, and he would rather follow the suggestion that the laws at present in force should be used against solicitation, and a man who could be proved to have infected a woman with syphilis should be liable to similar punishment.

Colonel Burtchaell said he had been in several American cities where prostitution was rampant, although the police arrangements absolutely prevented soliciting. If the prostitutes did not find the men, the men would find the prostitutes. The State legislated for zymotic diseases, but they were diseases of innocent people. Syphilis, however, was due to a voluntary act. If legislation was enacted, it should be equally severe on the man and the woman, and he thought there should be some restriction on the marriage of syphilitics.

Dr. Winter said that the debate showed that the profession were not of one mind. Their policy should go along three main lines: (1) They should educate the people, and to do so they must first educate themselves; then (2) they could proceed to agitate for State interference; having agitated sufficiently, they could then (3) proceed to try to get the State to act. In the prevention of the disease there was the difficulty that young men could not get away from their employment continuously to attend hospital, and it occurred to him that a possible aid would be for some of the hospitals to start an evening dispensary for men. He believed they would remain under treatment if allowed. He did not think the police could be very active against soliciting.

Dr. Stritch replied.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGAL SOCIETY.

Dr. E. O. Croft (Leeds), President, in the Chair.

Friday, May 10th, 1907.

Albuminuria and Pregnancy.

The President, in introducing a discussion on the treatment of albuminuria and eclampsia of pregnancy, said materials for a scientific basis of classification of the causes and indications for treatment of eclampsia were not yet at hand. Further advances must be made by the pathologist and obstetrician in conjunction. The present position was somewhat more advanced than that of twenty years ago, in that more attention was paid to the presence of some unknown toxaemic condition, and attempts were made to deal with it directly. When pregnancy was associated with pre-existing nephritis, it should not be interrupted until very thorough general treatment had been adopted, as many cases improved rapidly, the pregnancy being completed without serious trouble. In considering albuminuria of pregnancy apart from eclampsia, he urged the importance of complete recumbency, warmth, milk diet, and eliminative measures. The pregnancy need not be interrupted until indications were present that the disease was not under control. In the treatment of the pre-eclamptic state, vigorous rectal and gastric lavage, followed by saline injections and hot packs, were useful aids. Pilocarpine might also have its use in this stage, but it was dangerous during the eclamptic attack. Diaphoresis was more safely produced by the hot pack. The treatment of the eclamptic attack should be directed towards (1) the elimination of the poison, (2) controlling the actual convulsions, (3) the obstetric procedures for emptying the uterus. He asked for opinions on venesection followed by saline infusion, intravenous or subcutaneous. He approved of these, as well as purgation by saline rectal injections and subsequent lavage. He had not found thyroid extract effectual; for pyrexia he preferred the application of cold to antipyretic drugs. Control of the convulsions by chloroform as a routine practice required reconsideration. He did not agree with its prolonged administration. Morphine in many cases controlled the convulsions, but he doubted whether it should be given when coma was well marked. Regarding obstetric measures, he did not favour *accouchement forcé*, nor was Caesarean section in his opinion ever necessary. Rupture of the membranes, dilatation of the cervix—preferably with the fingers if the dilatation did not occur naturally—and accelerative measures, forceps rather than version, was good practice. Mechanical dilators on the Bossi principle were clumsy and dangerous substitutes for the trained and sensitive fingers of the obstetrician.

Dr. J. B. Hellier (Leeds) advocated all measures directed toward the elimination of the toxin. He was in favour of the interruption of pregnancy as removing the exciting cause of the toxaemia, but did not believe in the rapid dilatation of the cervix and evacuation of the uterus.

Dr. Lloyd Roberts (Manchester), in treating the albuminuria of pregnancy, advocated intestinal antiseptics—for example, calomel or grey powder and saline purgatives—with the object of preventing autointoxication from the alimentary canal. He would encourage the onset of labour when, in spite of prolonged treatment, the albuminuria increased or marked symptoms supervened. Coma and intermittent cardiac action he regarded as indication for the employment of more prompt measures.

Dr. Stookes (Liverpool) thought there was no distinct advance in the treatment of eclampsia. He referred to Ramsbotham's obstetric table from 1828 to 1850, including 48,776 cases with 220 deaths, a mortality of 4.5 per 1,000, which was rather less than that of England and Wales at present. In this table were 43 cases of convulsions before and after delivery (1.1 per 1,000), with only 3 deaths. Now, at the Liverpool Lying-in Hospital between the years of 1886 and 1905, out of 3,818 admissions there had been 52 cases of uraemia and eclampsia, and of these 22 had died, or 42 per cent. The incidence was the more interesting, as 39 of the 52 cases had occurred during the last ten years. The increase in this disease was due, he thought, to increase in intestinal affections. Food played a very important rôle in the causation of the latter. For the pregnant woman he advocated routine and careful attention to the cleansing of the alimentary canal. He believed in the free use of gastric and rectal lavage and saline injections into the subcutaneous tissues, and objected to the introduction of labour in the pre-eclamptic condition. He had not found thyroid extract of much value. In the eclamptic stage he preferred to treat symptoms, and allow labour to come on, if possible, spontaneously.

Dr. Walter (Manchester) said that in the treatment of eclampsia he had found morphine useful. In one case, in which ten fits had occurred during the night, the patient was admitted into hospital; ½ grain of morphine was administered. The patient slept twelve hours; no more fits occurred. Aperients, saline, and diaphoretics were also given. On the tenth day all albumen had disappeared, and the patient returned home. Two days later she was readmitted in labour, and delivered by forceps of a living child without any recurrence of albumen or fits. In most cases of eclampsia he advocated emptying the uterus without delay, commencing, if necessary, with Hegar's dilators, then Champetier de Ribes's bag, and, when possible, using forceps rather than version. If ¼ grain of morphine was given first, he believed less chloroform was needed. Saline injections, purgatives, and diaphoretics were essential. He had seen but very temporary benefit from venesection, and had not tried incision of the cervix or vaginal Caesarean section.

Dr. Croft replied.

Specimens.

The President showed a microscopical specimen from a case of *Primary carcinoma* of the urethra removed from a married woman, aged 37, who had complained of painful micturition, with soreness and irritation, for several months. The growth occupied the posterior lip of the meatus urinarius and extended three-quarters of an inch down the urethra, destroying the urethro-vaginal septum. Enlarged glands were present in both groins. Complete removal was impossible.

Dr. Hellier (Leeds) exhibited a specimen of *Tubal mole* removed from a nulliparous woman, aged 30, who had been married four years. Menstruation ceased on February 12th, and on April 7th she was seized with severe abdominal pain accompanied by a red discharge. The uterus was somewhat enlarged, and there was a swelling in the left posterior quadrant of the pelvis. Abdominal section was performed on April 11th, and free, dark blood was found in the peritoneal cavity. The left Fallopian tube measured 4 in. by 2 in., and was occupied by blood clot, in which chorionic villi were found.

Medical Society of London.—At a meeting on May 13th, Sir Edgcombe Venning in the chair, Dr. Hector Mackenzie, in a paper on mobility of the kidneys, said that his investigation included the examination of the abdomen of nearly 4,000 persons. Kidneys were often abnormally movable without giving rise to any inconvenience. The majority of cases of movable kidney required no treatment directed to that condition. He described his method of examination as follows:

The patient lies on the couch perfectly flat on the back, the head as low as the shoulders and the legs extended. The examiner sits on the right of the patient when examining the right side, and on the left when examining the left. The examiner first gently palpates the right side of the abdomen with the right hand from below upwards. If he finds all normal, he then places the left hand behind under the back below the last rib, and makes firm pressure upwards; the right hand is then placed flat on the abdomen in front, and palpation is made between the two hands; often the kidney can then be felt between them. The patient is at this stage asked to take a series of long deep breaths, and the lower end of the kidney will then likely be felt to descend with inspiration. In cases where there is abnormal mobility you feel the kidney descend so far that you can slip the upper border of the right hand above the upper end of the kidney. By putting forward the thumb of the left hand you can then fix the kidney in its descended position, and release the right hand, which can be employed to palpate the whole of the organ, and determine the extreme limits of its mobility. When you remove the thumb of the left hand the kidney can be felt to slip back into its position. A similar investigation is made on the left side, the hands being reversed.

He further defined a movable kidney as one in which he had "been able to get completely above the upper end of the kidney." When able to feel the greater part of the kidney, but unable to get above it, he called the case one of "palpable kidney." Dealing with his 2,801 women of all ages on these lines, he found the kidneys "palpable" in 16 per cent., and "movable" in 18 4 per cent. In 1,067 males the figures were 2 3 per cent. with palpable kidneys, and 1 per cent. with movable kidneys.—Dr. Walter Broadbent read a paper on some heart affections without murmurs, in which he dealt with myocarditis, cloudy swelling, and fatty degeneration, and emphasized the serious importance of changes in the condition of the heart wall, and the great danger of tympanitic distension of the stomach in acute illness, or where the heart was weak from any other cause.

South-West London Medical Society.—At a meeting on May 8th, Dr. Dickinson, Vice-President, in the chair, Dr. Purves Stewart, in an address on the cerebro-spinal fluid and its diagnostic and therapeutic significance, mentioned tuberculous meningitis, cerebral tumours, persistent tinnitus, fracture of the skull, uraemic coma, tetanus, and strychnine poisoning as being all conditions in which lumbar puncture was sometimes of benefit. As a medium for the production of anaesthesia, the spinal canal should be reserved for special cases where the use of a general anaesthetic was dangerous. Mr. C. Ryall said he found novocain the most efficient agent in the production of spinal anaesthesia, and recommended that the puncture be made as high as the second lumbar interspace, and that a portion of the fluid be withdrawn before the injection of novocain. Among other operations which he had performed under such anaesthesia, he instanced hysterectomy, excision of rectum, and amputation of the thigh, each of them cases in which a general anaesthetic was contra-indicated.

Under the will of the late Mrs. Stephanie Roper of Hampstead, formerly in business as a Court dressmaker, Middlesex Hospital receives 1,000 guineas and the following institutions £1,000 each: Charing Cross Hospital, Mount Vernon Hospital for Consumption, Victoria Hospital for Children, Chelsea; Guy's Hospital; St. Mary's Hospital, Paddington; and Hampstead Hospital and Nursing Institute. To the Kilburn Dispensary, the Brompton Hospital for Consumption, the French Hospital, Shaftesbury Avenue, and the Royal Hospital for Incurables are bequeathed sums of £500 each. The Freidenheim Hospital for the Dying and the Surgical Aid Society also benefit each to the extent of £250. The first-named institutions are also made residuary legatees, and will probably divide some £15,000 more between them.

REVIEWS.

THE MODERN NURSE.

There are happily still among us many who remember the coming of the modern nurse. In those days the wards in our hospitals were managed by middle-aged and old women, some of much experience and all of little training, but who had a large share of the divine instinct of motherhood which made many of them tender and careful nurses. Their knowledge from a scientific standard was infinitesimal, but they were perhaps on this account all the more accurate and painstaking in their obedience to the doctor. When one recalls the old ward nurses and the private nurses of the Fifties and Sixties, one is lost in wonder at the slow evolution of the class—at the years it took to replace the Sarah Gamps and Betsy Priggs by the trim and tidy figure of the modern probationer. It was all a matter of organization.

In her excellent book, *The History of Nursing in the British Empire*,[1] Miss Sarah Tooley points out that the first nursing sisterhoods were the outcome of religious devotion, and that the *hospitalières*, or nursing sisters, who served in the first hospitals or sick-houses, were organized under the Augustine rule. In the religious houses the abbesses were mostly skilled in the nursing and treatment of disease, and taught and trained their novices; while the Knights of Malta, unlike the Knights Templars, had women as assistants in their hospitals for the sick. Later on the Grey Sisters, under the Franciscan Order, were constituted as lay sisters and trained for three years; they visited and tended the sick in hospitals and in their own homes. In Flanders there sprang up a similar nursing sisterhood, called the Béguines, and in Germany there was the nursing order of Sisters of St. Elizabeth, who were skilled in making up remedies, and so served as dispensers as well as nurses. In these and other ways for about a thousand years the nursing profession was organized in connexion with religious orders, and reached its supreme success in the scheme of St. Vincent de Paul, which started the Sisters of Charity, first at Châtillon and afterwards at Paris. Under the influence of that remarkable man nursing became a fashionable hobby in France in the seventeenth century. In the course of twenty years after its foundation in 1633 this organization had spread all over Europe, and had established some two hundred houses and hospitals for their beneficent work. They trained sisters, not cloistered nuns, who visited the sick everywhere, taught to be in the world but not of it. They worked in town and country, on the battlefield and in the slums. They survived the French Revolution, and in 1848, when the first faint dawn of nursing reform began in England, there were some 12,000 women at work in the organizations of St. Vincent de Paul. They nursed the French soldiers in the Crimea, and from their example came the idea which led Florence Nightingale to begin her noble work.

While this development of nursing had gone on among our neighbours across the Channel, the closing of the religious houses at the time of the Reformation (1525 40) had checked the development of nursing as a calling in England. Before this great religious revolution there had been nurses at St. Bartholomew's Hospital in London under Augustine rule, and also at St. Thomas's a little later on. But when the monasteries fell, their conventual infirmaries and hospitals were closed to the poor, and nursing was only recognized apart from religious orders. This gave a distinct set back to the art of sick attendance, for the regular training and discipline of the old system was lost. Nursing became a calling recruited at hazard, instead of a profession more or less carefully trained and ordered. When the London hospitals were reconstituted, the nursing staff consisted of sisters with nurses under them. A matron now appeared for the first time as mistress over the new order of nurses. The new order of sick attendants, however, steadily declined in character and status. There was no standard for training, no religious motive to attract the richer classes, and so the work fell more and more into the hands of uneducated women, until at the beginning of the nineteenth century

[1] *The History of Nursing in the British Empire*. By Sarah A. Tooley, author of the *Life of Florence Nightingale*, etc.; with 57 illustrations. London: S. H. Bousfield and Co. 1906. (Demy 8vo, pp. 392. 7s. 6d.)

the nurses in hospitals and kindred institutions had become a blot on our social system.

Dr. Gooch in 1825, in a series of letters published in "the correspondence of Robert Southey," made a remarkable attempt to institute proper training and selection for the nursing profession, but nothing came of it. In the meantime a remarkable experiment was started at Kaiserswerth, now Düsseldorf, in 1836, for the training of Protestant deaconesses to attend the sick. It became the first training school for nurses, and had world-wide influence. It was there that Elizabeth Troy was inspired to start the first institution in England for the training of nurses, and it was at Kaiserswerth that Florence Nightingale was trained. Mrs. Fry's Nursing Home was founded in 1840, and started in Raven Row, Whitechapel, as the Institution of Nursing Sisters. The probationers, as they were called, were trained for sisters by sending them to Guy's and the London Hospital to learn their work. Queen Alexandra is to-day its President, and it still goes on doing invaluable service in training nurses who now take three years to learn their duties instead of the three months at first considered sufficient.

In 1843 *Martin Chuzzlewit* appeared, and the great novelist with a few deft touches of his magic pen stirred public interest in the nursing question. Henceforward the reform of the nurses' calling became a public duty. St. John's Home was founded by three celebrated King's College men—Bowman, Todd, and Arthur Farre—and thus a Protestant order of nursing sisters was started. The beginning of the modern system of hospital nursing was made when these sisters took charge of the nursing at King's College Hospital. The old type of ward nurse could not last long in face of this competition, and slowly but surely the incompetent and careless were replaced by the skilful trained nurses of the modern type. A great fund, amounting to some £48,000, raised as a national tribute to Florence Nightingale, was devoted to a Training School for Hospital Nurses in connexion with St. Thomas's Hospital, and year by year the movement spread. In 1862 Liverpool, under the leadership of the late William Rathbone, adopted the system, and extended it to the training of probationers to act as district nurses. Edinburgh and Glasgow and Dublin followed later, and in 1880 the London Hospital started the largest training school in the kingdom.

Sir James Paget, writing in 1885 about St. Bartholomew's, gave a summary of the changes effected:

> In the nursing department there is the greatest and happiest contrast of all. It is true that some fifty years ago there were some excellent nurses, especially among the sisters in the medical wards, where everything was more gentle and more orderly than in the surgical. There were some good surgical sisters too. They had none of the modern art; they could not have kept a chart, or skilfully taken the temperature; but they had an admirable sagacity, and a sort of rough practical knowledge, which were nearly as good as any acquired skill. The ordinary nurses were for the most part rough, dull, unobservant, and untaught women; of the best it could only be said that they were kindly and attentive in doing what they were told to do.

Miss Tooley tells the whole story in a very interesting and complete way. A series of chapters are devoted to special aspects of the nursing question. The creation of the military and nursing services, the reform of nursing in asylums, private nursing, district nursing, the Queen's nurses, midwifery and monthly nursing, massage, and colonial and Indian nursing are all treated very thoroughly in separate chapters. There is one chapter which deserves special notice because it deals with Poor-law nursing. It was in the workhouse infirmaries that the worst types of the old nurses flourished, and the reform was largely due to the work begun by Miss Twining and the late Dr. Joseph Rogers in the Strand Union. They together exposed the shocking abuses of unpaid and unskilled nursing among the pauper sick, and raised this question to be one of first-class public importance. Mr. Ernest Hart in the *Lancet*, and afterwards in the BRITISH MEDICAL JOURNAL, gave throughout his active life valuable help in this reforming movement, which has resulted in making it possible to include some of the Poor-law wards of to-day among the best examples of good nursing and well-ordered hospitals. The last chapter of Miss Tooley's admirable book is devoted to organization and registration. It shows how the first profession for women incorporated by Royal Charter still requires State registration to crown development. It seems an obvious truth that the public should be enabled by the Legislature to have the means of distinguishing the qualified from the unqualified nurse. The profession of nurse, moreover, requires for its discipline and protection some governing body to regulate its education and maintain its status. This consummation is delayed only by the rivalries of opposing societies. Whenever they can agree among themselves, the trained nurse of the United Kingdom will soon secure the State recognition which is a public even more than a professional want.

A TRIBUTE TO PROFESSOR V. BERGMANN.

THE thirty-fifth publication issued by the Prussian Army Medical Department[2] is dedicated to Ernst von Bergmann in honour of his 70th birthday on December 16th, 1906. The preface shows how many were the claims to distinction possessed by this foremost of German surgeons, who was to survive only by three short months the birthday so appropriately celebrated. It is high praise to say that this report is worthy of the occasion celebrated. There are thirty-five papers in all, but it is only possible here to notice a few, and among them several notable articles by officers of the Prussian Army Medical Corps.

The first paper, by Dr. Rochs and Dr. Coste, is on the subject of traumatic joint and testicular tuberculosis. Ten cases of each condition with a traumatic clinical history are related; in both series the connexion between slight injuries and the onset of the specific disease was obvious, and the authors discuss the pathology of the association. Professor Gessler, in the second paper, relates an instance of the rare internal hernia into the fossa ileo-appendicularis. Two important contributions are those of Dr. Vollrath and Dr. Graf on the subject of traumatic myositis ossificans; both relate cases and discuss the pathology of the formation of bone in muscle following injury.

Of great interest is a paper by Dr. Fritz Kayser on the rare and obscure condition, acute dilatation of the stomach. Three cases are recorded. In the first the condition followed a dietetic indiscretion in an old man of 71, and ended fatally after the stomach was opened just above Poupart's ligament, under the impression that it was a distended coil of small bowel. The second case was that of a woman of 20, with the typical symptoms of the disease, apparently due to eating unsound meat; these suddenly disappeared on the tenth day of illness, and the patient recovered. In the third case the cause was the drinking of a quantity of buttermilk by a patient in the early stage of convalescence from a severe abdominal operation; death occurred on the second day. Dr. Kayser discusses the etiology and treatment of the condition in a most instructive manner.

Another comprehensive paper is that by Dr. J. Schiff on congenital elevation of the scapula; he gives photographs of and describes seven original cases, a notable addition to those already recorded. Dr. Neuhaus describes a case of wound of the heart with extreme haemopericardium, with recovery under expectant treatment; he also records some experiments on heart wounds performed on dogs.

Other important contributions are on mesenteric cysts by Dr. Wegner, on traumatic oedema by Dr. Thole, on the relation of cerebral tumour and injury by Dr. Rauschke, on a case of myoma of the stomach by Dr. Berger, and on tumours of the splenic region by Dr. Dege. Several of these papers contribute in an important manner to their subject, and the volume as a whole is one that should be added to all surgical libraries.

[2] Arbeiten aus dem Gebiete des Militär-Sanitätswesens herausgegeben von der Medicinal-Abtheilung des Königlich Preussischen Kriegs-Ministeriums. Publications on Military Hygiene issued by the Medical Department of the Prussian Ministry for War. Part 35. Berlin: A. Hirschwald. 1906. (Demy 8vo, pp. 625, 8 plates and numerous figures. M. 16.)

NEUROLOGY.

DR. OTFRID FÖRSTER,[3] of the University of Breslau, has made a careful and thorough study of the muscular contractures and rigidities that occur in affections of the pyramidal tracts, especially in conditions of spastic

[3] Die Localisation der Erkrankungen der Pyramidenbahn [Localisation in Diseases of the Pyramidal Tract]. Von Dr. Otfrid Förster. Berlin: S. Karger. 1906. London: Williams and Norgate. (Demy 8vo, pp. 6. M. 1.60.)

paralysis, hemiplegic and paraplegic alike. The inhibitory influences which pass along these tracts are, he says, more sensitive and more quickly interfered with than the motor impulses, and he practically adopts the view, long ago advanced by Dr. Hughlings Jackson, that the source of muscular rigidity, or even tonicity, is in the cerebellum, the influence of which is kept normally in check by these inhibitory impulses emanating from the cerebral cortex and passing to the lower motor centres by way of the pyramidal tracts—that is Dr. Jackson's view of the "unantagonized cerebellar influx." Dr. Förster well differentiates the varying degree of contracture in different sets of muscles in spastic paralysis from the rigidity sequential on irritative cerebral lesions where the different groups of muscles are equally affected, but he does not seem to distinguish between different factors in late rigidity, and in the contractures depending on long-continued faulty posture of limbs—that part of the rigidity, in fact, which depends on structural changes in the muscle itself, which is probably the main reason why it does not disappear under the administration of a general anaesthetic. Contracture is—and, according to his view, if we understand it aright, is alone—a subcortical fixation reflex, an intensification of the normal fixation reflex, of the normal resistance which each muscle reflexly opposes to its extension, the effect of which is well seen physiologically, he maintains, in the posture and limb fixation of the fetus *in utero*. The reason he suggests for some muscle groups undergoing contracture more rapidly than others is that the former are more concerned with maintaining the fixed position of limbs than with locomotion. He sees an almost complete analogy between the rigidity of spastic paralysis and that of paralysis agitans, and that due to senile arterio-sclerosis, and he goes far to establish this position. In paralysis agitans, he says, the difficulty consists in a failure to shut off the strong fixation reflex preliminary to carrying out any active movement, and this failure he ascribes to interference with cortico-cerebellar tracts. Dr. Förster has given to medical science an interesting, suggestive, and sound piece of work for which he deserves thanks.

It was with great satisfaction that an opinion as to the merits of Dr. ALLEN STARR'S *Organic Nervous Diseases*, the first edition of the present work, was expressed. It could hardly have been higher. Hopeful anticipations were at the same time expressed that the completion of the work, by the inclusion of chapters on the functional nervous disease would render it one of the very best neurological textbooks of the day. The completion has been carried out in the second edition, *Organic and Functional Nervous Diseases*,[4] but we must frankly, if regretfully, say that it is disappointing. To begin with, the addition is very short—only 85 out of a total of 798 pages. This is partly to be explained by the exclusion of such conditions as acromegaly, myxoedema, exophthalmic goître, of a whole group of trophic disorders, and such angio-neuroses as acroparaesthesia, angio-neurotic oedema, and Raynaud's disease. There is no amplified treatment of the diagnosis of functional nervous disease as such apart from that contained in the section on hysteria. The remarks on many of the subjects are sound enough, and those on all are clear and in the main practical, but the whole group is discussed on a much lower plane than the group of organic diseases. A comparison of the chapter on epilepsy with his well-known work on brain tumours is little short of distressing. As alleged causes of epilepsy, 26 *quasi*-diseased condition are given, including "fright" in 119 instances, invalidism in 49, mental strain in 36, menstrual disorder in 24, childbirth in 24, infantile palsy in 19, physical strain in 11, and indigestion in 10. The conclusion seems inevitable that Dr. Starr has not the same degree of interest in functional as in organic nervous disease, and yet in spite of that the book should be read for its 700 pages of masterly treatment of the latter.

Twenty-two eminent American neurologists and ophthalmologists have combined in the production of a book called by its editors, Dr. W. CAMPBELL POSEY and Dr. W. G. SPILLER, *The Eye and Nervous System: their Diagnostic Relations*,[5] with the avowed intention of covering the ground where neurology and ophthalmology meet. The scope of the book is very wide, wider even than the title would suggest, for it includes what many would consider pure ophthalmology, such as the structure and optical properties of the eye, and pure neurology, as, for instance, bulbar and pseudobulbar diseases, Friedreich's disease, paralysis agitans, chorea, and epilepsy; moreover, it includes also what many would consider pure surgery, as the operative treatment of facial palsy and trigeminal neuralgia. Still, wide though it is, the subject matter is relevant; there is no skimping, the defect of the book is rather diffuseness; the explanation of these apparently paradoxical statements being that the matter is copious and relevant to the subjects discussed if the subjects chosen are not always quite relevant to the main idea of the book. The first 400 pages deal with the anatomy, physiology, and pathology of the eye; the following 500 pages with nervous diseases in which eye changes are sometimes prominent or of importance. Where it concerns the eye and vision directly, the book is likely to prove highly satisfying; where it does not, as, for example, in the last and penultimate chapters, on tremors, reflexes, and gaits, and on degeneration respectively, it is only likely to prove satisfying where the reader has an inkling of what he is likely to find. The references to cases in American, British, and foreign literature are very plentiful and well chosen, and the illustrations, coloured and otherwise, are in the main excellent.

To physiologists, and especially perhaps the more learned and expert even of them, Professor MORAT'S *Physiology of the Nervous System*,[6] an authorized English edition of which, translated and edited by the late Dr. H. W. SYERS, has appeared, may be highly welcome and useful. For the medical practitioner the book is hardly to be recommended, if for no other reason than the inadequacy of its matter when it touches on clinical subjects. It is only fair to say that to attempt the translation was a task of colossal difficulty, and taking this into consideration the work was well done.

Dr. NOLDA, who has spent many years in practice in Alpine resorts, has written a short essay[7] on the results of treatment at high altitudes, founded on the observation of some 3,000 nervous cases; over 2,000 were cases of neurasthenia, but there were many examples also of hysteria, mild melancholia, some of Graves's disease, and a few cases of epilepsy. He is able to speak very favourably of the effect of living at high levels in the majority of cases; in about 90 per cent. of the neurasthenics the improvement was marked and immediate, the symptoms of head pain or pressure, sleeplessness, lassitude and cardiac arrhythmia disappearing within at most fourteen days, and headache and vertigo often on the first day. The important contraindications for this treatment are, he says, heart disease with angina pectoris, severe myocardial degeneration, uncompensated valvular disease, and marked dilatation or hypertrophy. In hay fever, also, he has found excellent results, about 70 per cent. finding immediate relief. An interesting point, he mentions, is that all drugs, particularly opium and its alkaloids, require the most careful administration at high levels, all having more effect and consequently requiring exhibition in very small doses.

HEREDITY AND MENTAL DISEASE.

The author of *Degeneration in Families*, or "Observations in a Lunatic Asylum,"[8] a translation from the Danish, is the Medical Superintendent of the Middelfart Asylum near Funen, Denmark; he has interested himself for some years in a study which, if carried out on a sufficiently wide basis over a prolonged period, would almost certainly lead to valuable information; that is, he has been at great

[4] *Organic and Functional Nervous Diseases.* By M. Allen Starr, M.D. Second edition. London: Baillière, Tindall, and Co. 1907. (Royal 8vo, pp. 824. 25s.)

[5] *The Eye and Nervous System: their Diagnostic Relations.* By Various Authors. Edited by W. Campbell Posey, M.D., and William G. Spiller, M.D. Philadelphia and London: J. B. Lippincott Co. 1906. (Demy 8vo, pp. 928. —s.)

[6] *Physiology of the Nervous System.* By J. P. Morat. Authorized English edition translated and edited by H. W. Syers, M.A., M.D. London: A. Constable and Co. 1907. (Demy 8vo, pp. 680. 31s. 6d.)

[7] *Ueber die Indikationen der Hochgebirgskuren zur Nervenkur.* (The Mountain Cure of Nervous Disorders.) By Dr. A. Nolda. (St. Moritz.) Abhandl. d. Geb. der Nerven- und Geisteskrankheiten, Bd. vii., Hft. 5, p. 16. Halle-a-S.: Carl Marhold. 1906.)

[8] *Degeneration in Families.* By F. Lange, M.D. Authorized translation from the Danish by C. Clir. Sonne. London: Henry Kimpton. 1907. (Cr. 8vo, pp. 207. 3s. 6d.)

pains to trace the near and distant blood relatives of his patients, collateral and ascending, to discover their origin, history, attainments, aptitudes and failings, and connote these with the psychic characters of the inmates of his asylum. On the strength of his researches he has come to certain general conclusions, which he maintains to be of importance. His material is certainly and admittedly small, but some of the results of his inquiries are as certainly striking. First of all he examined his material from the points of view of inheritance from (*a*) mentally diseased, (*b*) from an epileptic, and (*c*) from an alcoholic ancestry; in each of these regarding the total and not merely the asylum descendants. No one of these, however, forms the *punctum saiiens* of his argument. This last, the principal result of his fifteen years' investigation into family histories, is concerned with 44 families, dubbed by the author his "Great Families," which have supplied in all 77 patients to this one asylum in less than 20 years, and in addition have produced 358 "distinctly abnormal cases of a neuropathic nature within the ascending family lines of these patients or their very nearest lateral branches," making a total of 428 well-defined maladies within the 44 families in the course of a few generations. In marked contrast with the first three groups (*a*, *b*, and *c*) he finds his patients from these Great Families to be as a rule decidedly intelligent and cultured. But the extraordinary result of his inquiries is that, looking at the extra-asylum members of these families, a very unusual proportion of highly-distinguished persons is to be found. These include: Two cabinet ministers, an ambassador, three bishops, eight other prominent clergymen, three generals, three admirals, nine university professors, a large number of other highly-placed officials, twenty poets distributed over a space of a century and some of them of the highest rank, twenty-four artists (painters, sculptors, musicians, etc.), about half of whom are known all over the country. In twenty-eight of these Great Families, with whom only Dr. LANGE has extensive and complete information, seventy-two individuals have reached prominent positions through special personal intellectual ability. With regard to the asylum members of these families he has not found severe devastating forms of disease but rather the lighter, frequently and easily recurrent forms of mental affection. Speaking generally, these families were old families, in the sense that they had been removed for generations from the soil and had already attained to superior social position when mental disease overtook some of their members. That is, he says, "it is a case of the ripe fruit, which drops from its branch when its time has come." Thus, for Dr. Lange, a family is like an individual, in that it shows the same stages of youth, maturity, and senile decay. At any of these stages individual members, single offshoots of the genealogical tree, may be diseased, but most numerously in the ripe fruit. With this psychic deterioration there is, according to Dr. Lange, a bodily degeneration, evidenced by what he calls the "uratic degeneration," a term which explains itself, distinct manifestations of which he found diffused throughout his Great Families. The book abounds in faults. It is floridly prolix where it might have been simple and scientifically exact, the material is neither appropriately grouped nor indexed, and the argument abounds in question-begging statements, such as that "one child, the offspring of connubial bliss during intoxication, may perhaps be sufficient for turning the scale and reversing the destinies of a whole family." Nevertheless, the author's careful inquiry into the forty-four families is of decided interest, and seems to show by an analysis of family histories that a certain truth is contained in the frequently encountered statement that genius and insanity are allied. But the author's gravest fault is that he does not explain what for the purpose of his investigations is implied by the term "family." From the legal point of view, and also in ordinary parlance, every one belongs to a "family," which is determined in civilized countries by agnatic succession—that is, from father to son—but from the point of view of the transmission of bodily and mental characters only cognatic succession, through both sides of the house, is valid. This necessarily admits only of degrees of relationship and entails the very large submergence of the "family" in the tribe or race within which the arbitrary limits enclosing a family have to be drawn, which limits should be explicitly stated in any scientific treatise dealing with this subject.

While Dr. Lange attempts to trace an inevitable degenerative process in certain families with particular reference to their mutual decadence, Dr. CONTET, on the other hand, in a work published recently in Paris,[9] whilst tacitly admitting a process of degeneration in certain stocks (he does not use the term "family" with the restricted connotation of Dr. Lange), insists on the plasticity of the human organism in response to changes in the environment, and the consequent possibility of a regenerative process ensuing upon the institution of proper prophylactic measures. Dr. Contet is thus at feud with the pessimistic views of many modern writers who regard the appearance, early or late, of the manifestations of a morbid heredity as necessary and ineluctable, a doctrine which he considers likely to result in either a dangerous scepticism or a resigned fatalism. Dr. Contet does not restrict his book to any particular branch of preventive medicine, but treats of the whole subject on broad lines. The work is divided into two parts, the first part, entitled *La Notion de Régénération*, giving an account of the various adaptations of the living organism to external changes, the racial acquisiton of immunity to pathogenic organisms, and "the frequent transmission of modifications produced in the cellular function of descendants by the diseases of their generators." The transmission of acquired characters is thus the principal support of the author's contentions. The second and larger part of the book is concerned with prophylaxis so far as hereditary influences are concerned. He divides the various modifications necessary for man's proper adaptation to his environment into two kinds, cosmic and social, and it is against the latter that he principally inveighs. In condemning alcoholism, he maintains that this is a tangible symptomatic manifestation of latent troubles of the social organism, and "that it is therefore of little use to interdict the manufacture or sale of this or that beverage, whilst leaving the actual conditions which are producing the desire for alcohol untouched." In general, Dr. Contet's remarks, though neither striking nor novel, are eminently sane and practical, and such as will commend themselves to the medical profession at large.

NOTES ON BOOKS.

WE have received a copy of a French translation of the fifth edition of Dr. THRESH'S book, *A Simple Method of Water Analysis*, published by Messrs. J. A. Churchill, and obtainable from Messrs. Burroughs, Wellcome, and Co. The translators, MM. MAGNIER of Maréville and G. THIRY of Nancy, express their obligation to Dr. Thresh for the trouble he gave himself in supervising their translation of his work; so presumably the latter is satisfied with the form in which his thoughts have been represented. Otherwise the expression *membre de l'Office médical de salubrité du Comté*, considered as a representation of the fact that Dr. Thresh is the executive officer of the Public Health Committee of the Essex County Council, would have tempted us to say, as Count Smorltork said of the word "poltick," that it "surprise by himself."

A copy of *A Nursing Guide*, published by Ash and Co., of Southwark, S.E., at 1s. 6d., which has reached us in the fourth issue, is a useful little volume which started life as a handbook for the Nursing League of Guy's Hospital. Since it contains a register of all nurses trained at Guy's, it is still in some sense a special publication but should be found useful by nurses wherever trained. It supplies a good deal of information of a practical character, some of which we do not remember to have seen elsewhere, as to what nurses can and should do for the benefit of their employers and in their own financial interest; and a useful summary of the duties involved in various lines of life, outside of pure nursing, which are now open to trained nurses.

[9] *La Régénération des Familles et Races tarées*. Prophylaxie et Hygiène thérapeutique de l'Hérédité morbide. (The Regeneration of Families. By Dr. E. Contet. Paris: Vigot Frères. 1906. (Cr. 8vo, pp. 176. Fr. 2.50.)

A GENERAL meeting of the British Balneological and Climatological Society will be held at 20, Hanover Square, W., on May 30th, at 5.30 p.m. At 6 p.m. an address, entitled "Air, Water and Situation," will be delivered by Dr. Norman Moore. The annual dinner will take place the same evening in the Balmoral Rooms, Trocadero Restaurant, Piccadilly, at 7.30.

BRITISH MEDICINE IN INDIA.

On the pedestal of the statue of Lord William Bentinck, the first Governor General of India, at Calcutta, there is inscribed the following splendid tribute to the enlightenment of his rule:

TO

WILLIAM CAVENDISH BENTINCK,

WHO, DURING SEVEN YEARS, RULED INDIA WITH EMINENT PRUDENCE, INTEGRITY, AND BENEVOLENCE:
WHO, PLACED AT THE HEAD OF A GREAT EMPIRE, NEVER LAID ASIDE
THE SIMPLICITY AND MODERATION OF A PRIVATE CITIZEN:
WHO INFUSED INTO ORIENTAL DESPOTISM THE SPIRIT OF BRITISH FREEDOM:
WHO NEVER FORGOT THAT THE END OF GOVERNMENT IS THE HAPPINESS OF THE GOVERNED:
WHO ABOLISHED CRUEL RITES:
WHO EFFACED HUMILIATING DISTINCTIONS:
WHO GAVE LIBERTY TO THE EXPRESSION OF PUBLIC OPINION:
WHOSE CONSTANT STUDY IT WAS TO ELEVATE THE INTELLECTUAL
AND MORAL CHARACTER OF THE NATIONS COMMITTED TO HIS CHARGE:

THIS MONUMENT
WAS ERECTED BY MEN,
WHO, DIFFERING IN RACE, IN MANNERS, IN LANGUAGE,
AND IN RELIGION,
CHERISH WITH EQUAL VENERATION AND GRATITUDE,
THE MEMORY OF HIS WISE, UPRIGHT,
AND PATERNAL ADMINISTRATION.

The inscription is by Macaulay, whose breadth of outlook and personal experience as a Member of the Supreme Council of India made him especially fitted to estimate the work of so sagacious a ruler. There could surely be no more striking instance of the want of appreciation by statesmen of the importance of medicine as a civilizing influence than the fact that Macaulay does not think one of the wisest acts of Lord William Bentinck's rule worth mention. Lord William's principal aim was the introduction into India of a broad system of general education on English lines that should satisfy the aspirations for intellectual progress of the more advanced sections of the Indian people. It was as a part of the movement initiated by him for the higher education of the natives of India that the Calcutta Medical College was founded in 1835, and it is possible that in doing this, he builded better than he knew. Our Indian Empire owes its beginning and its expansion largely to men who were able to carry the blessings of Western medicine to a people whose traditional art of healing was for the most part a mass of superstitions.

The ancient medicine of India was believed to be of divine revelation and was known by the collective title of Ayur Veda. During the period of Buddhist ascendancy (250 B.C. to 750 A.D.) the public hospitals which the Buddhist princes established in every city were the great schools of medicine. To that period belong the works of Charaka and Susruta. Diseases were classified in ten groups, those affecting (1) the humours, (2) the general system, including fevers, (3 to 9) the several organs and parts of the body, and (10) trivial complaints. The materia medica of the early Hindus was vast and varied. They amputated and performed other operations, and were skilled in midwifery. With the decay of Buddhism the hospitals passed away, and the Brahmans left medicine to the Vaidyas, a lower caste. Hindu medicine is now represented by the practice of the village kabiraj, whose professional equipment consists of a knowledge of some jumbled fragments of Sanskrit texts and a miscellaneous pharmacopoeia, supplemented by spells and fasts. The Mohammedan conquests brought in a new school of foreign doctors or hakims, whose art was derived indirectly from the Greeks, and who ministered to the Mohammedan princes and nobles of India. Their system is called Youani or Unani.

THE CALCUTTA MEDICAL COLLEGE.

The foundation of the Calcutta Medical College marked the dawn of a new era. All the knowledge and skill of the West was thrown freely open to the peoples of India, without distinction of race or caste. How splendidly the seed sown by Lord William Bentinck has grown and fructified is shown not only by the great development of the Calcutta College itself, but by the others at Lahore, Madras,* and Bombay, which are, at least in a figurative sense, its offshoots. At present the establishment of a similar college at Lucknow is under consideration. No greater thing was done by Lord William Bentinck for the promotion of the welfare of the many peoples of the vast empire under his rule than the foundation of the Calcutta Medical College, which was his parting gift to India.

Among the first results of its foundation was the abolition of institutions in which the Vedic and Unani systems of medicine were taught. A report dated 1839 gives us a glimpse of the College as it then was. It says: "The buildings comprised a very spacious and handsome theatre, capable of containing 500 persons, apartments for the purposes of practical anatomy, a laboratory, museum, and a library and hospital." The first Professor of Anatomy was Dr. H. H. Goodeve, who was also Professor of Medicine and Physician to the Hospital. Under his personal supervision dissections were regularly and systematically introduced. "Since that period," the report goes on to say, "this most necessary part of medical education has been pursued with unremitting zeal by the students, and the dissecting rooms of the Medical College of Bengal are not surpassed by similar establishments in any part of the world. One of the strongest prejudices of the Hindus has thus been overcome, and the first and most important step to a rational system of medicine in the East has been accomplished." These rooms existed till about 1895, and Sir Richard Havelock Charles, in an interesting paper read by him at the annual meeting of the British Medical Association held at Portsmouth in 1899, tells us that they "furnished a sad picture of what in 1839 was considered so very fine." Sir Richard, who not long ago retired after twenty-five years' service in India, was Professor of Surgical and Descriptive Anatomy in the College, and Surgeon to the hospital attached thereto. Gifted with the breadth of sympathy which makes a man's heart thrill in harmony with the "still sad music of humanity" through all the deadening obstructions of race, language, and creed, he gained the confidence of native students and patients in a very unusual degree. It has been the good fortune of the College that ever since its foundation it has had among its teachers, such as Goodeve, Fayrer, McConnell, and the Macnamaras (to mention only men of the past), men distinguished not less for their sympathy with the people of India than by their scientific knowledge.

One of the difficulties in the way was the Hindu prejudice against touching dead bodies. The names of the students of the first class who broke through the bonds of prejudice and dared to study anatomy in the book of Nature have been preserved. They were eleven in number, and all passed an examination for a diploma in 1838. They had to work under conditions which might have deterred less eager students. As the methods of embalming at that time were very imperfect, the rapid decomposition of bodies produced by the Indian climate made dissection peculiarly difficult and revolting. From a report presented by Sir Richard Havelock Charles to the Indian Government on his transfer to the Calcutta Medical College from Lahore in 1894, an idea may be formed of the conditions under which anatomy had even at that time to be studied at Calcutta by Babus. The rooms were totally inadequate for the accommodation of the students. "The cutting up of the body as carried out is a loathsome horror, the rooms are charnel houses, reeking with a sickening stench. The only feeling a beginner can have is how best to avoid this nightmare and scamp his work."

In 1895 the anatomical department at Calcutta was rebuilt, and an entirely new order of things was established. As is the lot of all reformers, Havelock Charles had to fight against the indifference of a Government which cared nothing about such things. But, following the example of the importunate widow in the Gospel, he gave those in authority no rest till he obtained grants for the establishment of proper dissecting rooms and museums in Lahore as well as in Calcutta. The Calcutta anatomical department, which cost about £10,000, is admirably suited for its purpose. The dissecting room is a lofty, well-lighted iron and brick building, covering an area of 9,000 square feet. It has a

* The Madras Hospital is the oldest in India, having been founded in the latter part of the seventeenth century.

white marble floor, and on the walls dado six feet high of white glazed tiles. Round the whole building runs a gallery floored with the same materials as the main room, and having a similar dado. In the building are three tiers of windows—one in the lower portion of the building, one in the gallery, and one just below the roof. They are covered with wire gauze, and they can always be kept open. Besides being aired in this way, the building is also excellently ventilated at the roof. A plentiful supply of water is laid on, and the floor and walls can be flushed with a hose as often as may be necessary. There are six marble lavatories for the use of students. Running round the walls are brass rails, from which hang the plates of Ellis, Wood, and Maclise, and Braune's sections, all framed and glazed. The dissecting tables are of white marble and have white enamelled iron legs, with arrangements for catching dripping liquids. Attached to the main dissecting room is a special one for female students; it is equipped in the same style. There is also a prosector's room furnished with all necessary apparatus.

Adjacent to this block is the museum, which has an area of 3,000 sq. ft. It contains an excellent collection of wax models, plaster casts, and preparations representing dissections and sections of every organ and region of the body. There is a bone room, furnished with a very complete set of coloured osteology, and plates on the walls. Lastly, there is a collection of skulls illustrative of the craniology of Northern India. Opening off the dissecting room is a yard roofed in with netting to keep off crows and kites; its floor is made of polished blocks of cement. In this yard is the embalming room, where there are four marble tables for the bodies. The lecture room opens on the dissecting room, and can seat 500. The floor is of marble, and in the area are marble tables for the display of subjects during lecture. There are the usual skeleton screens for lecture diagrams, as well as a large revolving slate blackboard for drawings in chalks. The room is lighted from the roof. In short, in place of the clumsy and ill-ventilated structure of 1835, there are lofty, well-lighted, and thoroughly well-ventilated buildings, fitted up in accordance with the requirements of modern scientific teaching.

Anatomical work in India is facilitated by an abundant supply of material for dissection. The anatomical class in 1899 numbered 410 students. Every one is required to dissect the whole body twice before he can get a certificate. Sir Richard Havelock Charles points out that the anatomy of the Asiatic has not yet been thoroughly worked out. The almost uncanny pliancy of the body of the Asiatic, the flexibility of his joints, and the deftness combined with a strength that seems incongruous in the slender frame—qualities which the British public has marvelled at in His Highness the Jam of Nawanagar—would seem *a priori* to point to some difference of structure. And in fact Charles has shown that in many bones and joints the Asiatic structure differs from that of the European; he has also made other observations on the muscles and ligaments. There is doubtless much more to be discovered in this almost untrodden field of research; it is a line of investigation that cannot fail to be fruitful of results of high importance, not only to science, but to the growth of better understanding between ourselves and our Indian fellow subjects. If Kipling's pessimistic prophecy—

> Oh East is East, and West is West,
> And never the twain may meet,

is to be falsified, that desirable consummation will be greatly helped by fuller knowledge of the frame of the Oriental and the peculiarities of its mechanism and working, and of the conditions—climatic, physical, ethnological, social, and religious—which make up his heredity and his environment. As Charles says: "The methods of the Asiatic are not always understood by the European, and the manners of the inhabitants of the West at times stink in the nostrils of the dwellers in Cathay." It has been well said *Tout comprendre c'est tout pardonner*, and medical science, which deals with the elemental factors of man's being, is the surest way to such an understanding as will lead at least to mutual toleration. Charles concluded his paper with the following words: "I think it will be admitted that the money Government has spent upon Lahore and Calcutta will be in the end amply repaid, not only by the influence for good that a proper course of practical anatomy always has on students; but will help, by example, in furthering the building of laboratories and museums for the various branches of medical study, as the benefits derived in the anatomical side become manifest even to those who will not see." The hope then expressed, which at the time seemed to those in power too ambitious, has already been to a large extent fulfilled. The College has now laboratories of bacteriology and physiology equal to any in Europe, and a magnificent chemical laboratory. As yet there is none for pharmacology.

The Hospital.

Attached to the College is a hospital which must be distinguished from the General Hospital of Calcutta. The former is attached to a large medical school; it is intended for the treatment of native and European patients and for the instruction of students of all kinds—male, female, European, and Asiatic. The General Hospital is for the reception of European sailors and poor white patients. There are clinical laboratories in connexion with each ward. A surgical annexe with eighty beds is in process of construction, and will be completed in about eighteen months. When the Prince of Wales was in Calcutta in 1901, notwithstanding the manifold demands on his time, he insisted on visiting the hospital. His Royal Highness, who was accompanied by Sir Richard Havelock Charles, showed a keen and intelligent interest in the institution, asking questions about expenditure, and generally showing his familiarity with hospital administration. So pleased, indeed, was His Royal Highness with what he saw that he assigned to the hospital a considerable proportion of a sum which had been given him to be used for such purposes. The Prince also expressed a sympathetic interest in the medical profession and its work, His attitude was in sharp contrast with the indifference in regard to medical affairs and the jealousy of the profession which run through Indian officialdom from the lowest ranks to the highest.

Within the walls of the hospital the rules of caste in which the whole system of native life is swathed, as in mummy bandages, are suspended. There the high class Brahmin may be seen performing menial offices for poor sufferers whom it would be defilement for him to touch elsewhere. Havelock Charles taught his students that the hospital was to be regarded as a place, like the Temple of Juggernaut, where all are equal whilst in its sacred precincts. It is not surprising that the future Emperor of India should have taken special interest in a place where was to be seen so wonderful an example of the power of medicine to break the bondage of immemorial tradition.

A striking proof of the essential unity of medicine throughout the ages and under all superficial differences of race and creed is afforded by a tablet which Sir Richard Havelock Charles had put up in the entrance hall of the hospital. It occupies nearly the whole of one wall, and is inscribed, as may be seen from the reduced copy here given, with the original texts and English translations of the great codes of medical ethics, Western and Oriental.

The famous Hippocratic (Unani) oath is still accepted as embodying the fundamental principles of medical ethics. The Vedic is fuller, and in some respects, notably in regard to fees and the doctor's dealings with patients, it preaches a larger humanity. There is, however, a curious touch of Oriental despotism in the paragraph which enjoins that medicines should never be administered to those who are under the displeasure of the King. The injunction that persons of exceedingly perverse or wicked disposition are to be looked upon as not entitled to the benefits of medicine might perhaps be paralleled in ecclesiastical ordinances of the Middle Ages, when doctors were forbidden to continue attendance on patients who allowed the third day of a serious illness to pass without confessing their sins, and in the harshness with which sufferers from venereal disease were treated in European hospitals even in modern days. The injunction that medicines are not to be administered to those who are exceedingly poor appears to be so much out of harmony with the other enjoining the doctor not even for his life's sake to extort the substance of his patients, that one wonders whether it may not have some esoteric meaning.

It has been suggested that courses of lectures on professional ethics should be added to the medical curriculum. Would not a Table of the Law placed in every hospital where it would always be before the eyes of the students—and of the staff—be at once a simpler and a more effective method

The Spirit of the Schools of Medicine.

British

Do unto others as you would they should do unto you.

Vedic.

Thus said the illustrious son of Atri: If an intelligent man, impelled by proper reasons, desires to become a physician, the following should be the qualifications of him that should be selected as preceptor. He should be —

One whose doubts have been all cleared in respect of medical Scriptures—possessed of experience—clever in the practice of his profession—compassionate towards those who approach him—clean in person and clothing—whose heart and hand in surgery—possessed of all the implements of his profession with his organs of sense perfect—conversant with nature—the knowledge of medicine become supplemented with a knowledge of other branches of study—without enmity—of a peaceful disposition—capable of bearing privations and pain—well affected towards disciples and disposed to teach them—capable of communicating his ideas—

Approaching such a preceptor, the pupil should attend on him with heedfulness like one reverencing one's sacrificial fire, or one's deity, or one's king, or one's father, or one's patron.

The Preceptor should examine his pupil who should be of a mild disposition—noble by nature—not mean in acts—with eyes neither red nor yellow—strong-set—tongue thin, red and not clumsy—teeth and lips without deformity—voice of good tone—possessed of intelligence—free from pride—endowed with a large understanding—with a power of judgment and memory—having a liberal mind—belonging to a medical family—devoted to truth—without defects in his limbs having all his senses perfect—disposed to gratitude—free from haughtiness—of a truthful disposition—free from the faults of "Vyasana"—not prone to wrath—endowed with purity of behaviour and compassion for all—devotedly attached to the study of medicine—free from capacity—without envy—seeking the good of all creatures—prepared to obey all a preceptor's commands and attached to him.

Unto one adorned with such qualifications the preceptor should say: Thou shouldst always regard me as the foremost of persons—as Medical Science itself—as myself—as one born to me—bearing thyself in a way that is agreeable and beneficial to me—behaving as a son, as a slave, as a suppliant, towards me whilst being taught by me.

Thou shouldst be free from impatience and always attentive, doing everything with a mind concentrated upon the work—behaving with humility and acting after reflection—never murmuring or finding fault with thy instructors but willingly carrying out my orders.

Thou shouldst with thy whole heart strive to bring about the cure of those that are ill—not even for thy life's sake attempting their substance. Thou shouldst not, even in imagination, know another man's wife, and similarly thou shouldst not appropriate the possessions of others.

Thou shouldst never administer medicines unto those that have incurred the displeasure of the king or those that are ill-disposed towards him or those that have incurred the displeasure of the great, or those bearing ill-will towards them. Such a one should not administer medicines to those that are of exceedingly perverse or wicked disposition, or those that are exceedingly poor, or those that never vindicate their character when it is aspersed, or those that are on the point of death or those that have not their masters near them, or those women that have not their husbands or other guardians near them.

Thou shouldst never gossip of the practices of a patient's house. Even if possessed of sufficient knowledge thou shouldst not boast of that knowledge.

There is no end in the Science of Medicine. Hence heedfully and carefully thou shouldst devote thyself to understanding thyself as I direct and without feeling of humiliation acquiring practice in the Art.

Unto men, possessed of intelligence, the entire world acts as a preceptor. Unto men, destitute of intelligence, the entire world occupies the position of an enemy.

The Preceptor saying these words, the pupil should answer, "Yes." If the pupil does as he is commanded then should he be accepted. If he behaves otherwise he should be rejected as unworthy.

इति स्मराह भगवानात्रेयः । बुद्धिमान् पुरुषस्तर्कनात् भिषग्वृत्तमुपः आचार्यं परीक्षेत तदाज्ञा पर्यवदातमनसं परिपृच्छ्यमानं तत्त्वं शरीरं प्रति जितक्लमं दक्षकरणवन्तं सर्वेन्द्रियोपपन्नं प्रकृतिस्थं प्रतिपत्तिज्ञमनुपरुद्धविद्यमनुरूपं श्रमक्षमं क्रमोपनं क्लेशसहं शिष्यवत्सलमनसूयकमध्यापकं शास्त्रानसूयमपि ब्रूयात् शुक्लो भावार्थः स्वस्तेऽस्मानंतो मेघ इव प्रजासुखैः सुशिष्यमाप्तं वेद्यगुणैः समादधति ।

तमुक्तवन्तमिरावधिषु पर्यवदातेन्द्रियज्ञं देवलज्ञं राजवैद्यं पितृवत् मातृवच्चाभ्यवक्षम् ।

एवमाचार्ये कृतबुद्धिरन्तेवासी शिष्यमाप्तिः परीक्षेत सदाज्ञा यशात्मा आर्यप्रकृतिमुपसृतकर्मसंक्रमः शुद्धकुलमूर्तिजनसंवर्तः तनुहिमरजस्कत्वं शक्तिमत्तनुत्वं धृतिमत्त्वमनवद्यहृदयं मेधावित्वं वितर्कस्मृतिमत्त्वमुहापोहतत्त्वज्ञानसमर्थता तद्विद्याद्यात्तं तत्त्वाभिनिवेशित्वमुपधुक्षुषु यथाप्रदेशेन्द्रियं नियतमनुद्धतमुपधनिनं क्षोभक्षोभानुरागहर्षादिलोभेष्वदयम् यथापनमिथ्यात्वमुपधर्मविज्ञानकर्मदर्शने चानध्यवसेयेषु अतृष्यमनसूयं सर्वभूतहितेप्सितमुपधाचार्यसंयोगिभिः प्रतिकरमनुरक्तम् ।

एवं गुणसमुदितमाचार्यमुपसृत्याब्रूयात् – भगवन्नहं भवदधीनमग्निमुपचितमुद्वहिष्यामि च ब्रह्मचर्यमित्यथ । पुत्रवद्गावदर्थिवत्संपादनानुरक्तलोकं । अनुलोमेनाग्निनामान्तमनसः विनीतोनारिष्यावेदकारिज्ञानसूयकेन न चाभ्यनुज्ञातेन प्रविचरितव्यम् अनुज्ञातेन च प्रतिचरता । सर्वात्मना चाचार्यासात्मोरपि ब्रूयतिमत्यम् । ओजितहेमोरपि चानुरोधो नतिरोधव्यम् । मनसापि परस्त्रियो नाभिगमयोद्यः । तथा सर्वत्रैव परस्वम् । नच कदाचिदात्महितानां राजदेहिषां वा महाजनद्विषां महाजनद्विषां वा वेद्यमनुविधातव्यम् । एवं ब्रह्मचर्यमधिकृतमुद्वहः चतुरोलंकारोपचारानाममनवद्यप्रतिकारादीनां सुसूर्षतां च सर्वेषामद्विरिक्तिरागाणां स्त्रीणामनपत्यानां वा । नचानुकूलमदृष्टयो बहिर्विकारयितव्याः । ज्ञानदर्शनाविव नार्यर्थमात्मनो जातं विकल्पितव्यम् । वयेव हि मृतसमापुर्वैद्यः यं तस्मादप्रयतः प्रकृतिविकारमभिलिप्सु मन्त्रेत् । तदेवं कार्यमेवं सूत्रयं दृढ़ज्ञ चोदयन्ब्रूयात परंपोऽप्यथयितव्यम् । कृतज्ञो हि लोको बुद्धिमतामाचार्यः शत्रुवाबुद्धिमताम् ।

एवं ब्रुवति चाचार्ये शिष्यस्तथेति ब्रूयात् । यथोक्तमेव च कुर्यात्प्रत्याप्तो ज्ञेयः अतोऽन्यथा त्वनवस्थाः ॥

Unani.

I swear by Apollo the Physician and Aesculapius and Hygeia and Panacea, while I take to witness all the gods and goddesses that I shall fulfil, according to my ability and judgment this oath and this covenant:

That I shall esteem my teacher in the art as I do my parents and contribute towards his substance, and share my goods with him if he is in need, and regard his offspring as my own brothers and teach them this art, if they wish to study it, and impart its general precepts and oral lessons and all the rest of the science to my sons and those of my teachers and to students who have been registered and sworn according to the law of medicine, but to none other.

I will follow that dietetic regimen for the benefit of the sick according to my ability and my judgment, and will withhold them when it would be for their injury and hurt.

I will not administer a deadly drug to anyone though entreated thereto, nor will I suggest any such advice.

In like manner I will not give a woman a pessary to procure abortion.

Purely and holily will I live and practise my art.

Nor will I use the knife on those suffering from stone, but will leave them to specialists in this operation.

Into whatever house I enter I will go with the object of helping the sick, holding aloof from all voluntary and hurtful wrongdoing, and from licentious practices, whether with women or with men free or bond, and regarding the things I see or hear in the exercise of my art, or indeed even outside it in my intercourse with men, which ought not to be divulged, I will keep silence regarding them as involving secrets.

If then I fulfil this oath and violate it not, may it be granted to me to enjoy the fruits of my art both in honour for all men for evermore; but, if I transgress it and commit perjury, may the contrary befall me.

ΟΜΝΥΜΙ ΑΠΟΛΛΩΝΑ ΙΗΤΡΟΝ ΚΑΙ ΑΣΚΛΗΠΙΟΝ ΚΑΙ ΥΓΕΙΑΝ ΚΑΙ ΠΑΝΑΚΕΙΑΝ ΚΑΙ ΘΕΟΥΣ ΠΑΝΤΑΣ ΚΑΙ ΠΑΣΑΣ ΙΣΤΟΡΑΣ ΠΟΙΕΥΜΕΝΟΣ ΕΠΙΤΕΛΕΑ ΠΟΙΗΣΕΙΝ ΚΑΤΑ ΔΥΝΑΜΙΝ ΚΑΙ ΚΡΙΣΙΝ ΕΜΗΝ ΟΡΚΟΝ ΤΟΝΔΕ ΚΑΙ ΣΥΓΓΡΑΦΗΝ ΤΗΝΔΕ ΠΡΗΣΕΣΘΑΙ· ΜΗΝ ΤΟΝ ΔΙΔΑΞΑΝΤΑ ΜΕ ΤΗΝ ΤΕΧΝΗΝ ΤΑΥΤΗΝ ΙΣΑ ΚΑΙ ΓΕΝΕΤΗΣΙΝ ΕΜΟΙΣΙ ΚΑΙ ΒΙΟΥ ΚΟΙΝΩΝΗΣΟΜΑΙ ΚΑΙ ΧΡΕΩΝ ΧΡΗΖΟΝΤΙ ΜΕΤΑΔΟΣΙΝ ΠΟΙΗΣΕΣΘΑΙ ΚΑΙ ΓΕΝΟΣ ΤΟ ΤΕ ΤΟΥΤΟΥ ΑΔΕΛΦΟΙΣ ΙΣΟΝ ΕΠΙΚΡΙΝΕΙΝ ΑΡΡΕΣΙ ΚΑΙ ΔΙΔΑΞΕΙΝ ΤΗΝ ΤΕΧΝΗΝ ΤΑΥΤΗΝ ΗΝ ΧΡΗΙΖΩΣΙ ΜΑΝΘΑΝΕΙΝ ΑΝΕΥ ΜΙΣΘΟΥ ΚΑΙ ΣΥΓΓΡΑΦΗΣ ΠΑΡΑΓΓΕΛΙΗΣ ΤΕ ΚΑΙ ΑΚΡΟΗΣΕΩΣ ΠΑΝΤΙ ΤΩΙ ΥΙΩΙ ΤΕ ΕΜΟΙΩΙ ΚΑΙ ΤΟΙΣΙ ΤΟΥ ΕΜΟΥ ΔΙΔΑΞΑΝΤΟΣ ΚΑΙ ΜΑΘΗΤΑΙΣΙ ΣΥΓΓΕΓΡΑΜΜΕΝΟΙΣΙ ΤΕ ΚΑΙ ΟΡΚΙΣΜΕΝΟΙΣ ΝΟΜΩΙ ΙΗΤΡΙΚΩΙ ΑΛΛΩ ΔΕ ΟΥΔΕΝΙ

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ΟΡΚΟΝ ΟΥΝ ΜΟΙ ΤΟΝΔΕ ΕΠΙΤΕΛΕΑ ΠΟΙΟΥΝΤΙ ΚΑΙ ΜΗ ΕΝΥΧΟΝΤΙ ΕΜΠΕΔΟΝ ΕΙΝΑΙ ΕΔΕΣΘΑΙ ΚΑΙ ΜΟΙ ΚΑΙ ΒΙΟΥΝΤΙ ΔΟΞΑΖΟΜΕΝΟΙΣΙ ΠΑΡΑ ΠΑΣΙΝ ΑΝΘΡΩΠΟΙΣ ΕΙΣ ΤΟΝ ΑΕΙ ΧΡΟΝΟΝ· ΠΑΡΑΒΑΙΝΟΝΤΙ ΔΕ ΚΑΙ ΕΠΙΟΡΚΟΥΝΤΙ ΤΑΝΑΝΤΙΑ ΤΟΥΤΟΙΣΙΝ

of impressing on them the great rules of professional conduct?

Medical Empire Builders.

It is not only the material benefits conferred by scientific medicine that make it a potent instrument of civilization. The knowledge of the workings of the human body is a key which opens the innermost recesses of the human soul. Bodily ill is the touch of nature which makes the whole world kin; by virtue of their training, therefore, doctors are specially qualified to understand native races and to acquire their confidence. Hence it is not surprising that in the expansion of our Empire a large part has been played by members of the medical profession. In their various ways this was done by Mungo Park, by David Livingstone, by Rutherford Alcock, by Leander Starr Jameson, and many others. In the history of our Indian Empire the record of the work of doctors is writ large. To medical men is due the creation of the Telegraphs, Post Office, Forests, Mints, and Geology Departments. Indeed, if tradition does not lie, the Empire owes its very foundation to a doctor.

General Boughton.

Somewhere about 1636 Gabriel Boughton, Surgeon of the East India Company's ship *Hopewell*, is said to have cured a daughter of the Emperor Shah Jehan of the effects of a burn, and, when asked by the grateful monarch to name his reward, begged that his countrymen might be granted the privileges of trading in Bengal without payment of any duties and of establishing factories in that country. Here an extract from an article entitled "Surgeon in India: Past and Present," contributed by Dodwell and Miles to the *Calcutta Review* in 1854 (vol. xxiii), may appropriately find a place:

In the earlier pages of Sir Thomas Roe's narrative allusion is made to one of his suite, Mr. Boughton, who evidently must have been the Surgeon to the embassy (he was certainly not the chaplain), as, upon their touching at Tamara, on the coast of Arabia, on their passage out, it appears that he alone was allowed to visit the house of the Mussulman King, where he was treated with "cahu," a black liquor, drank as hot as could be endured, and which is supposed to have been coffee. No further allusion is made to Boughton in Sir Thomas's narrative: but the name not being a common one, and it being difficult to believe that two surgeons of high repute of that name were attached to the Company's service, nearly at the same period, it may not be unfair to guess that this was the Gabriel Boughton who, some say in the year 1636, others in 1644, when surgeon of the Company's ship *Hopewell*, was chosen by the Council at Surat as the person best qualified to attend the daughter of the Emperor Shah Jehan, who had been frightfully burnt by the accidental ignition of her clothes, and for whose relief, all native skill having failed, her royal father had, by the recommendation of Vizier Assad Khan (probably "Asaph Chan," the minister who is so frequently alluded to by Sir Thomas Roe, and who must have been well acquainted with the Surgeon to the Embassy) sent an express, requesting the aid of an English surgeon. Repairing to the Emperor's camp in the Deccan, he cured the Princess, and was desired by the grateful Emperor to name his reward. Standing, probably alone in the world, but with a heart overflowing with generous and patriotic feeling, this noble gentleman requested that his masters, the Company, might be granted the long sought for and often denied privilege of establishing factories in Bengal, and of trading there free of all taxation. This boon, which Jehanjire had distinctly, nay almost rudely, refused to King James I and to the Company through their Ambassador, Shah Jehan at once conceded to the humble surgeon of one of the Company's vessels.

Repairing to Bengal with a view to secure and carry out the privileges thus granted, Boughton visited Rajmahal (this was nearly about the time at which Goa was deserted), where he was honourably entertained by Sultan Sujah, Subadar of Bengal, the Emperor's third son, and where he gained additional credit and goodwill by curing one of the ladies of the Prince's harem of a disease in the side, and consequently obtained the fullest aid in establishing the Company's trade in Bengal. Upon Boughton's information persons were sent out by the Company to occupy the new ports. The Prince desired Mr. Boughton to send for these gentlemen, and on their arrival received permission to establish factories at Hughly and Balasore in addition to that at Pipley, which had already been thrown open by the Emperor's firman.

We wish we could add that Boughton received the full reward of his generosity in living to see his Masters' power firmly grounded in Bengal as the foundation of the mightiest colony that the world has ever known, and in dying under his father's roof tree with tall sons and fair daughters around his bed. This, however, was not to be. He died in India not long after the opening of the ports.

The tradition that Boughton cured the Emperor's daughter, though consecrated by the acceptance of serious writers, notably by Major Stewart the historian of Bengal, has not in these days of historical iconoclasm escaped criticism. Sir Henry Yule, in his edition of the diary of William Hedges, Agent-Governor of Bengal from 1681 to 1683, issued under the auspices of the Hakluyt Society, shows from the records of the India Office that a firman giving the Company a concession to trade freely in Bengal was granted by the Great Mogul in the beginning of 1634. It would seem that it was not till several years later that Gabriel Boughton was sent to the Court of Shah Suja, the Emperor's son, who was Viceroy of Bengal. This may be gathered from an official letter addressed by the President and Council of the East India Company to the London Directors on January 3rd, 1644. The English surgeon gave great satisfaction to his royal patients, who were evidently eager to show their gratitude. That he did not use his opportunities solely for his own profit is shown by the following passage which occurs in a letter of instructions for Bridgeman, the chief factor, and his subordinate agents at Balasore and Hukely:

You know how necessary it will bee for the better carrying on the trade of these parts to have the Prince's ffirman and that Mr. Gabriel Boughton, Chirurgeon to the Prince, promises concerning the same. To putt matters out of doubt it is necessary that you forthwith . . . proceed to Rajmahal . . . where being come, consult with Mr. Boughton about the business, who hath the whole contents of the Dutches last ffirman, and together endeavour (if possible) that (according to Mr. Boughton's promise) the Company may have such a ffirman granted as may outstrip the Dutch in point of Priviledge and freedome, that so they may not have cause any longer to boast of theirs. You know what I have written to Mr. Boughton about it, who (without doubt) will bee very faithfull in the busines, and strive that the same may be procured, with as little charge as may be to the Company . . . according to his owne advice in his last to me.

Even when the accretion of myth has been removed to the fullest extent, therefore, there remains sufficient evidence to show that Boughton's influence in high places was considered of very great importance by the Company. Owing largely to the concession he was, in 1645 or thereabouts, able to obtain for it, it got a secure footing in India and laid the foundation of the mighty empire we see.*

William Hamilton.

Another surgeon whose professional skill was equally useful in promoting British ascendancy in India was William Hamilton. Born in Lanarkshire towards the end of the seventeenth century, he seems to have studied at the University of Glasgow. Being of an adventurous disposition, he entered the East India Company's service in 1709, and early in the following year sailed as surgeon in the *Sherborne*, a small frigate carrying twenty-two guns. The captain was unpopular, and his crew left him in the lurch more than once on the voyage out. Hamilton himself deserted at Cuddalore, and made his way in a boat to Madras. He was ordered by the Council to rejoin his ship, but escaped to Calcutta. The authorities there do not seem to have viewed his misconduct with very severe eyes, for at the end of 1711 he was appointed second surgeon to the Agency. In the early part of 1714 he accompanied the Embassy, of which John Surman was chief, to the Court of the Great Mogul, Furrukh-Siyar, at Delhi. To Hamilton it was due that the mission was not a failure. The Embassy took more than a year to reach its destination. In a well-documented article by Lieutenant-Colonel D. G. Crawford, of the Indian Medical Service, which appeared in the *Indian Medical Gazette* of January, 1907, some passages relating to Hamilton are quoted from official letters written by members of the Embassy, which were published in J. Talboys Wheeler's *Early Records of British India*. On October 6th, 1715, they write:

We designed to have presented our petition on the first good opportunity, but His Majesty's indisposition continuing, and Mr. Hamilton having undertaken to cure him, it has been thought advisable by our friends, as well as by ourselves, to defer delivering it till such time as it shall please God that His Majesty in some measure returns to his former state of health, which advice we intend to follow, considering that, whilst he is in so much pain, it can be but a very indifferent opportunity to beg favours of him. The first distemper the doctor took him in hand for was swellings in his groin, which, thanks be to God, he is in a fair way of curing; but within

* The available evidence about Gabriel Boughton is critically reviewed in an interesting paper by Dr. Andrew Cassels Brown of Rock Ferry, entitled Two Forgotten Medical Worthies, which appeared in the *Edinburgh Medical Journal* of April, 1907.

these few days last past he has been taken with a violent pain which is likely to come to a fistula; it hinders His Majesty from coming out, so naturally puts a stop to all manner of business, wherefore we must have patience perforce.

On December 7th, 1715, Surman reports the successful results of Hamilton's treatment of the Emperor:

We write your Honours the welcome news of the King's recovery. As a clear demonstration to the world he washed himself on the 23rd ultimo, and accordingly received the congratulations of the whole Court. As a reward for Mr. Hamilton's care and success, the King was pleased on the 30th to give him in public, viz., a vest, a culgee* set with precious stones, two diamond rings, an elephant, horse, and 5,000 rupees; besides ordering at the same time all his small instruments to be made in gold, with gold buttons for his coat and waistcoat, and brushes set with jewels. The same day Khoja Serhaud received an elephant and vest for his attendance on this occasion.

The Embassy was, however, detained at Delhi for a year and a half longer. At last its members were received in a farewell audience on May 23rd, 1717, when to their consternation the Emperor announced his intention of keeping Hamilton permanently attached to his person. After a time the surgeon was with difficulty allowed to go on undertaking to come back to Delhi after a visit to his native land. The following is the account of the matter given in a letter from Delhi dated June 7th, 1717:

The 23rd ultimo John Surman received from His Majesty a horse and cunger† as was preappointed, and on the 30th ultimo we were sent for by Khan Dauran to receive our dispatches, which we had accordingly; a serpaw‡ and culgee being given to John Surman, and serpaws to Serhaud and Edward Stephenson, as likewise to the rest of our companions. We were ordered to pass, one by one, to our obeisance, then to move from the Dewan. We did so. But when it came to Mr. Hamilton's turn, he was told the King had granted him a vest as a mark of his favour, but not for his dispatch. So he was ordered up to his standing again. Whilst he was performing this the King got up. We were highly surprised at this unexpected motion, not having the least notice of it till that minute, either from our patron or any of authority, it being near a twelvemonth since Mr. Hamilton had been in private with His Majesty, and in all this time not the least notice taken. We were very much concerned at his detainment, and the more because we were assured of his firm aversion to accepting the service, even with all its charms of vast pay, honour, etc.; that if the King did detain him by force, if he outlived the trouble of his esteeming imprisonment, he might be endeavouring at an escape, which every way had its ill consequences.

To free our Honourable Masters from any damages that might accrue to them from the passionate temper of the King, our patron Khan Dauran was applied to for leave, twice or thrice; but he positively denied to speak, or even have a hand in this business, till our friend Sayyid Sallabut Khan had an opportunity to lay the case open to him, when he ordered us to speak to the Vizier, and if by any means we could gain him to intercede, that he would back it.

We made a visit to the Vizier the 6th instant, and laid the case open to him in a petition from Mr. Hamilton, of how little service he could be without any physic, language, or experience in the country medicines, or their names; besides which the heart-breaking distractions of being parted from his wife and children would be insupportable, and entirely take away his qualifications for the King's service; that under the favour of His Majesty's clemency, with the utmost submission, he desired that he might have leave to depart with us. From ourselves we informed the Vizier that we should have esteemed this a very great honour, but finding the doctor under these troubles not to be persuaded, we were obliged to lay the case before His Majesty, and we humbly desired he would use his intercessions to the King, that His Majesty might be prevailed upon to despatch him. The good Vizier readily offered to use his utmost endeavours; and since the case was so, the business was to gain the doctor's despatch without displeasing the King; and he ordered a petition to be drawn up to His Majesty in the same form as that given to himself. It was sent him, and the Vizier was as good as his word; writing a very pathetic address to His Majesty, enforcing Mr. Hamilton's reasons and backing them with his own opinion, that it was better to let him go. The King returned an answer which came on the 6th, as follows:

"Since he is privy to my disease, and perfectly understands his business, I would very fain have kept him, and given him whatsoever he should have asked. But seeing he cannot be brought on any terms to be content, I agree to it; and on condition that after he has gone to Europe and procured such medicines as are not to be got here, and seen his wife and children, he returns to visit the Court once more, let him go."

We hope in God the troublesome business is now blown over.

From this document it may be inferred that Hamilton's release was procured by what casuists of the laxer sort call a "pious fraud." The wife and children by the mention of whom the heart of the Imperial patient was touched were mere heirs of his or his companions' invention. The surgeon was not, in Bardolph's phrase, "accommodated" with a wife, but had pledged his troth to a fair cousin in Scotland, whom he had told a little time before to look for his coming home "rich and famous." Alas for the

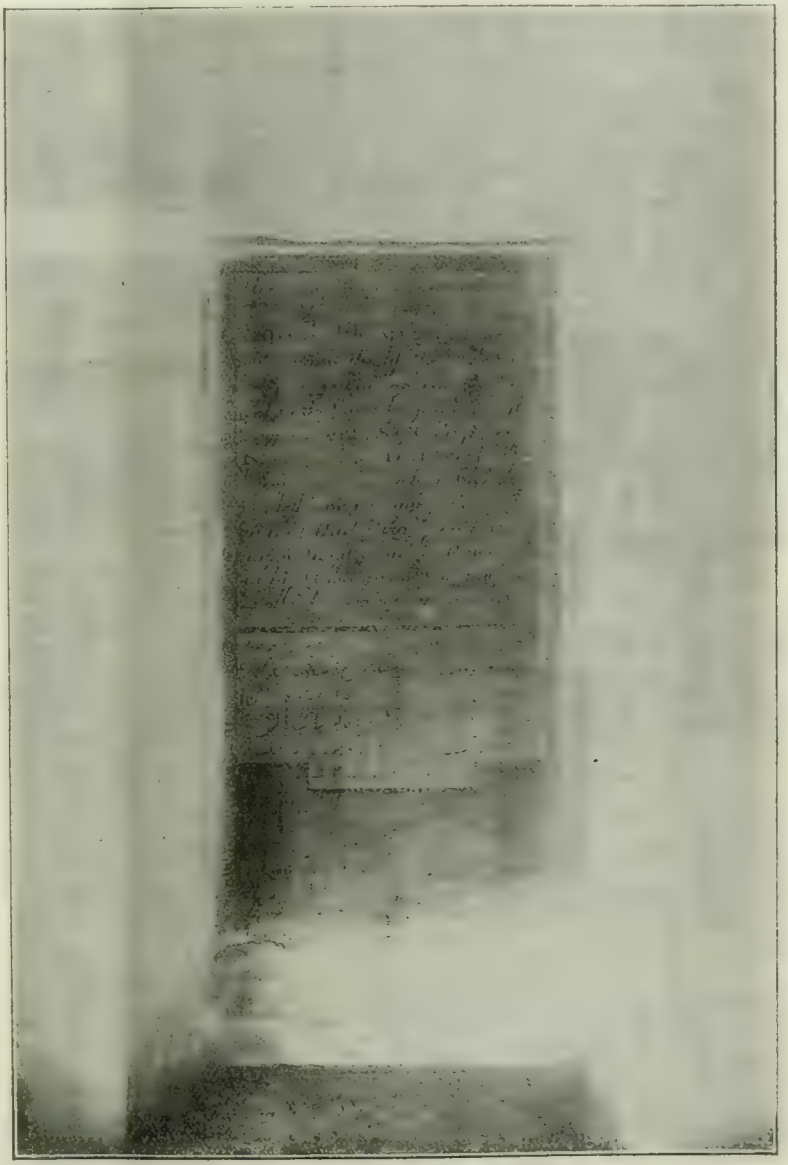


Fig. 1.—Tombstone to William Hamilton.

* Culgee (kalghi), a turban ornament.
† Cunger (khanjar) a dagger.
‡ Serpaw (Sar-o-pa) a vest, given as a mark of honour, or Khil'at.

vanity of human wishes! he died soon after his return to Calcutta.

Hamilton was buried in the old churchyard of Calcutta, where St. John's Church now stands. When the ground was cleared for the building of the church in 1787, his tombstone, which had fallen down and been covered with earth, came to light. It was set up in the mausoleum at the north-west corner of the ground, where it may yet be seen. It is a granite slab, 6 ft. high and 3 ft. wide, on which are two epitaphs carved in relief, one in English above and one in Urdu below. The former runs as follows:

Under this Stone Lyes interred the body of William Hamilton, Surgeon, who departed this life the 4th December, 1717 his Memory ought to be dear to this Nation, for the Credit he gained ye English in curing *Ferrucksear*, the present King of Indostan, of a malignant distemper, by which he made his own Name famous at the Court of that Great Monarch; and without doubt will perpetuate his Memory, as well in Great Britain as all other Nations in Europe.

The other, literally translated, is to the following effect:

William Hamilton, Physician, servant of the English Company, who had gone along with the English Ambassador to the illustrious presence and had raised his name high in the four quarters of the world by reason of the cure of the King of Kings the Asylum of the World, Muhammad Farukh Siyar the Victorious, with a thousand difficulties having obtained, from the Court of the Asylum of the World, leave of absence to his native land, by the decree of God on the [illegible] December, 1717, died in Calcutta, and in this place was buried.

A pathetic testimony to the faith of the Indian Emperor in his English doctor is the fact that Farukh Siyar could not believe that Hamilton was really dead, and sent an officer to see whether the report was true. To this officer is attributed the authorship of the Urdu inscription.



The Mausoleum in Circular Road St. John's Churchyard containing the Stone to the Memory of William Hamilton.

A writer in an English journal of Queen Victoria's funerals says as to the small amount of woollen with which hatbands are manufactured: "It is affected by the conduct of Hamilton's employers. We will leave Sir William Foster to tell that part of the story."

As a matter of fact, when he was curing the Delhi Emperor at the cost of his own life, Hamilton went cap in hand to the Company for the smallest patent to enable him to trade in a few articles on the other side of the Hooghly. [illegible] London, Henry Frowde, 1907, p. 11.

globe, done away with his appointment, and ordered "the discharge of Dr. Hamilton on his return from Court." From this ingratitude the Directors were spared, partly by the fear of losing Hamilton's influence with the Emperor, and partly by Hamilton's death. They wrote grudgingly in their Bengal despatch of January, 1717: "Finding by the letters before us how successful he has been in curing the Great Mogul, which very probably will help forward our negotiations and get an easier grant of some of our requests, we now say that, if Dr. Hamilton shall desire a continuance in our service, you readily consent to it, and let him see you are sensible of the benefit accruing to us, if you find he any hath, by his undertaking and accomplishing that cure."

Truly one knows not which to wonder at most—the folly or the meanness of the Company.

The legend of Hamilton in its popularly accepted form is told by Colonel Tod in his *History of Western Rajputana* published in 1829. That author, however, guards his narrative with the saving clause: "If history has correctly preserved the transaction," and there is, as Touchstone says, "much virtue in If." It will be noted that while acknowledgement of his services is made in the inscriptions on Hamilton's tombstone, they are silent as to any Imperial concessions having been made as a reward for them. Perhaps, as Busteed† hints, the circumstances referred to in the following extract from a letter of the Court of Directors (February, 1766) may help to explain the absence of documentary evidence on the subject:

An original letter from the chief and others at Patna, and *a leaf torn out of the original diary of Mr. Surman's Embassy to the Great Mogul*, were picked up in a public necessary house which the writers make use of, and are now in our hands, where (sic) we are informed many fragments of papers of great importance have likewise been seen (Selections from Records of Government, page 71).

This certainly suggests that there is a fine field for the Herbert Compton in the history of the beginnings of our Indian Empire. It may at any rate be inferred that too much importance should not be attached in tracing the origin of traditions to the absence of contemporary documents. When the necessary discount is made for the lack of confirmatory evidence, it is strange that such a man as William Hamilton has no place in our literary Valhalla, the *Dictionary of National Biography*.

During the visit of the Prince of Wales to the Calcutta Medical College Hospital, Sir Richard Havelock Charles took the opportunity of showing His Royal Highness

† Echoes of Old Calcutta.

the tomb of Hamilton, rightly thinking that he would be interested in seeing the last resting place of one of the founders of the Indian Empire.

Michael Cheese.

The attention of the Prince was also called to the tomb of Michael Cheese, which is inside the church. The following is a copy of the inscription:

Sacred to the Memory of the late Michael Cheese, Esqre., Surgeon on the Honble. Company's Bengal Establishment and Garrison Surgeon of Fort William. Dedicated by Public Contribution in token of the high and well-merited esteem of this community for the enlarged and practical philanthropy of that Gentleman's character. Perhaps never had the remains of a Christian in India been followed to their tomb with more heartfelt and expressed regret than were manifested by the numerous assemblage of all classes of the society of this place, who attended his funeral, on the 15th of January, 1816. He had long exercised his professional talent with an ability which did honour to him as a practitioner of medicine, and with a munificence worthy of the religion he professed. If a change of air, or expensive nutriments were desirable, but could not be afforded from the resources of the patient, Mr. Cheese supplied the means; and when all human endeavours proved unavailing, his purse was ever open to clothe and support the destitute mourners. In the society of equa's such was also the cheerful benignity of his manners, that he was ever a welcome guest alike to the children and to the heads of the family.

Surely no man could have a nobler ambition than to deserve so splendid an epitaph. It makes our regret the keener that we are unable to give any particulars of the career of one of whom both his profession and his country may well be proud. Here, again, there is a *hiatus valde deflendus* in the *Dictionary of National Biography*. All we have been able to discover from a search in the records preserved in the India Office is that Cheese went out to India as assistant surgeon on September 21st, 1792; was appointed surgeon on November 8th, 1806; and died at Fort William on January 14th, 1816, aged 58.



Fig. 3.—Monument to Michael Cheese in St. John's Church, Calcutta.

John Zephaniah Holwell.

Another monument visited by the Prince of Wales on the same occasion was that of Holwell in Dalhousie Square. It is shown in Fig. 4. It was erected by Lord Curzon in memory of the persons who perished in the "Black Hole" and in the siege of Calcutta, in which Holwell played a prominent part. The inscriptions on the sides, copies of which are appended, tell at once the story of the victims and of their memorial.

HOLWELL MONUMENT.

West.

This monument has been erected by Lord Curzon, Viceroy and Governor-General of India, in the year 1902. Upon the site and in reproduction of the design of the original monument to the memory of the 123 persons who perished in the Black Hole Prison of Old Fort William on the night of the 20th of June, 1756. The former memorial was raised by their surviving fellow-sufferer, J. Z. Holwell, Governor of Fort William, on the spot where the bodies of the dead had been thrown into the ditch of the ravelin. It was removed in 1821.

North.

The names inscribed on the tablet on the reverse side of this are the names of those persons who are known to have been killed or to have died of their wounds during the siege of Calcutta in June, 1756, and who either did not survive to enter the Black Hole prison or afterwards succumbed to its effects.

South.

To the memory of Peter Smith, Thomas Blagg, John Francis Pickard, John Pickering, Michael Collongs, Thomas Best, Ralph Thoresby, Charles Smith, Robert Wilkinson, Henry Stopford, William Stopford, Thomas Purnell, Robert Talbot, William Tidecomb, Daniel Macpherson, John Johnson, and Messrs. Whitby, Surman, Bruce, Montrong, and Janniko, who perished during the siege of Calcutta.

East.

The names of those who perished in the Black Hole prison inscribed upon the reverse side of this monument are in excess of the list recorded by Governor Holwell upon the original monument. The additional names and the Christian names of the remainder have been recovered from oblivion by reference to contemporary documents.

North-West.

To the memory of Edward Eyre, William Baillie, Rev. Jervas Bellamy, John Geuks, Roger Revely, John Carse, John Law, Thomas Coles, James Vahcourt, John Jebb, Richard Toriano, Edward Page, Stephen Page, William Gunb, John Street, Alynur Harrod, Patrick Johnstone, George Ballard, Nathan Drake, William Knapton, Francis Gosling, Robert Byng, John Dodd, Stair Dalrymple, David Clayton, John Buchanan, and Lawrence Witherington, who perished in the Black Hole prison.

South-West.

To the memory of Richard Bishop, Francis Hayes, Collin Simpson, John Bellamy, William Scot, Henry Hastings, Charles Wedderburn, William Dumbleton, Bernard Abraham, William Cartwright, Jacob Bleau, Henry Hunt, Michael Osborne, Peter Carey, Thomas Leach, Francis Stevenson, James Guy, James Porter, William Parker, Eleanor Weston, and Messrs. Cocker, Bendal, Atkinson, Jenning, Reid, Barnet, Frere, Wilson, Burton, Lyon, Hillier, Tilley, Alsop, who perished in the Black Hole prison.

John Zephaniah Holwell was born in 1711. He was the son of a London merchant and the grandson of John Holwell, Astronomer Royal and Surveyor of Crown Lands,

towards the close of the seventeenth century, who had been preceptor to the ill-fated Duke of Monmouth and had been sent to lay down a plan of New York. He was first trained for commerce, but disliking the pursuit he was apprenticed to a surgeon in Southwark, and afterwards placed under the care of Andrew Cooper, Senior Surgeon to Guy's Hospital. On escaping from the bonds of pupilage he got a berth as surgeon's mate on board an Indiaman and arrived at Calcutta in 1732. After making several voyages in the Company's ships he got an appointment on shore. He was twice in medical charge of the military force which annually left Calcutta for the Patna Factory; on these occasions he had the rank of Surgeon-Major. After serving a short time as Surgeon to the Factory at Dakkah he returned at the end of 1736 to Calcutta, where he was elected Alderman in the Mayor's Court. About 1740 he was appointed Assistant Surgeon to the Hospital, and in no long time he rose to be Principal Surgeon to the Presidency.

In 1848 ill health compelled him to return to England. He had no intention of returning to India, but he had for two years in succession served the office of Mayor of Calcutta, and on the voyage to England he busied himself in drawing up a plan for the reform of abuses in the Zemindar's Court of that town. He laid his plan before the Directors of the Company, who were so pleased with it that they appointed him perpetual Zemindar, a post which carried with it fiscal and magisterial duties, and twelfth in Council. Holwell, who by this time had "found that money does not go so far in England as he fondly imagined," accepted the offer and returned to Calcutta in 1751 as a covenanted civilian. His scheme of reform proved so successful that his salary was raised from 2,000 to 6,000 rupees and he rose to a higher place in the Council.



Fig. 4. Holwell Monument, Calcutta.

Thenceforth Holwell appears to have given himself entirely to the work of administration and government. The crisis of his life came in 1756, when Calcutta was sacked by Siraj ud Dawla, the Nawab of Bengal. The garrison was quite unprepared for a siege, and the Governor and the chief officers, military as well as civil, fled from the doomed city. The remnant of the garrison at once called upon Holwell to take the command. Under his inspiration and direction the little garrison made a gallant defence, which might have been successful had their fugitive comrades had the courage to come to the rescue. But "not one," says Busteed,* "would stir to help their countrymen, neither the Governor who forsook his trust, nor the officers who deserted their men, nor the cowardly sailors skulking in their ships, who one and all abandoned their comrades and so callously left them to their fate, with a perfect consciousness what their fate would be." When the place fell, 146 prisoners "of all sorts and conditions, black, brown, and white, many of them wounded and all greatly exhausted," were shut up in a prison in the barracks called by the soldiers the "Black Hole." It was scarcely twenty feet square and had but two small windows. After a night of indescribable horror, only 23 were found alive in the morning. Among these was Holwell. Nothing could more strikingly show the influence which his strong personality gave him than the fact that his fellow prisoners, despite their own sufferings, obeyed him and treated him with special regard. He was believed at one time to be dead, but as soon as they heard him calling out for water, they, in his own words, "had still the respect and tenderness for me to cry out, 'Give him water, give him water!' nor would one of them at the window attempt to touch it till I had drunk." Holwell's sufferings did not end with his release from the Black Hole. With three of his companions he was sent, heavily ironed, in an open, leaky boat, to Murshidábád. The journey occupied a fortnight, and Holwell, though himself in extreme pain, had to tend and feed his still more helpless companions. They were released at the intercession of the Begum, the Nawab's grandmother, who remembered with gratitude the fairness with which Holwell treated natives brought before his Court. Broken in health, Holwell was sent home in February, 1757.

In consideration of his service, he was nominated by the Court of Directors to return to Bengal as successor to Clive. This honour, however, he declined. On returning to Calcutta he found himself fourth in Council, and in 1759 he became second. By virtue of this position he succeeded Clive as temporary Governor on the latter's proceeding to Europe in February, 1760. He held the governorship only a few months, resigning his appointment and returning home later in the same year. He was a capable administrator, and during his tenure of office increased the revenue of his Zemindary by £12,000, and checked a number of frauds. In his retirement Governor Holwell devoted much of his time to writing on historical, philosophical, and social science subjects. On his way home, after the siege of Calcutta, he had written his famous "Narrative," in which the horrors of the Black Hole are vividly described. Another well-known work of his is entitled, *Interesting Historical Events Relative to the Province of Bengal, etc.* He was the first European to devote attention to the antiquities of the Hindus, and wrote a book on their "Mythology, Cosmogony, Fasts, and Festivities." Voltaire speaks of his writings on these subjects with enthusiastic appreciation.

Holwell died at Pinner, near Harrow, November 5th, 1798. The *Gentleman's Magazine*, in noticing his death, says that he was one "in whom brilliancy of talents, benignity of spirit, social vivacity, and suavity of manners were so eminently united as to render him the most amiable of men."

Holwell erected at his own expense a monument in Calcutta in memory of those who died in the Black Hole. It was placed over their grave in Calcutta; inscribed on a

* *History of Old Calcutta.*

stone tablet on its front were the names of forty-eight of those buried there. The monument was allowed to fall into decay; so complete was the ruin that no trace was left even of the memorial tablet. As already said, a stately memorial has been erected in its place by Lord Curzon.

To Holwell British India owes much. Not only was he, as Orme, who wrote soon after the siege of Calcutta, calls him, "the gallant defender of the fort and the asserter of the reputation of the nation," but he was a man of high administrative ability and noble character. His public services earned for him but scanty recognition in his life, and in death he has been forgotten by most of his countrymen. It is the lot of most men who have laboured for the welfare rather than for the wholesale extermination of their fellows. But the name of John Zephaniah Holwell should ever be held in honour by members of the profession which he first chose for himself, and which doubtless helped to make him what he was.

MEDICINAL AND DIETETIC PREPARATIONS.

Cider and Perry.

CIDER and, to a less extent, perry, are the chief drinks of the country in several different parts of England as well as in the north of France, and, judging from ordinary observation, they would seem to be becoming more and more used at the tables of the well-to-do and in clubs. It will be interesting, therefore, to our readers to have some authoritative information with regard to their composition and alcoholic strength. A number of samples of cider and one of perry, manufactured by W. GAYMER AND SON, of Attleborough, Norfolk, have been analysed recently for us, and the results are given in the following table:

Percentages: Alcohol by Volume, all Others by Weight.

Quality.	Alcohol.	Total Solids, or "Extract."	Invert Sugar.	Non-volatile Acidity reckoned as Malic Acid.	Volatile Acidity, reckoned as Acetic Acid.	Ash.
Extra dry ...	9.28	4.14	2.25	0.22	0.26	0.27
Old natural ...	7.88	5.72	4.53	0.22	0.23	0.23
Natural ...	4.71	6.55	4.95	0.21	0.24	0.28
Very dry ...	6.57	6.65	4.86	0.47	0.24	0.29
Dry	5.85	7.02	5.53	0.45	0.22	0.25
Medium ..	6.30	5.84	4.37	0.19	0.20	0.20
Sweet	4.80	7.09	6.03	0.11	0.24	0.15
Perry	5.38	7.97	5.36	0.37	0.14	0.28

All the beverages analysed were of the sparkling variety, supplied in bottle. It will be seen that the alcoholic strength varies inversely with the total solids or extract, the greater part of which would appear to be sugar. This is, perhaps, rather unfortunate, as to many persons the drier samples would be more palatable than the sweeter; the acidity, both volatile and non-volatile, also varies a good deal.

Phosphite of Creosote.

In a communication to the *Société Internationale de la Tuberculose*, Dr. S. BERNHEIM has reviewed the use of some combinations of creosote and phosphorus in tuberculosis, and recorded his experience with both phosphate and phosphite of creosote. Various authorities are quoted on the association of phosphaturia with tuberculosis, and the importance of supplying the organism with phosphorus is insisted on as part of the treatment of this disease. In an earlier publication Dr. Bernheim had strongly favoured phosphate of creosote, and regarded the phosphite as of much less value; further experience, however, has led him to reverse this view. The phosphate is stated to accumulate in the system to such an extent that it is necessary to interrupt its administration at intervals; multiple neuritis appears frequently to result, and although Dr. Bernheim at first regarded this as being due to the administration of arsenic with the creosote compound, he has since found it to be of common occurrence where no arsenic is given, and considers that it is fully established as one of the consequences of the exhibition of creosote phosphate. On the other hand, extended experience with phosphite of creosote has convinced him and other workers that it is of very high value. This compound consists of the phosphorous esters of the phenols of creosote, containing 9.5 per cent. of phosphorus and 90 per cent. of creosote; in an alkaline medium it readily undergoes hydrolysis, forming creosote and phosphite of the alkali. Dr. Bernheim describes its action as being essentially that of creosote, together with a tonic and sedative action on the nervous system; the toxicity of the drug is stated to be very slight, and no accumulation in the system was found to occur. Phosphite of creosote is manufactured by Messrs. Clin and Co., Paris, under the proprietary name of "Phosphotal," and we have examined samples of capsules of the drug and solution for hypodermic use, submitted by this firm. The capsules contain a dose of 2 decigrams (3 grains), and in order to protect the medicament in the stomach, the envelope is made of a gelatinous material which does not dissolve in an acid, but breaks down in an alkaline medium. This is considered necessary, as although the drug itself requires alkali for its hydrolysis into its constituents, it is stated to be hydrolysed in the stomach in some cases of gastric disturbance. The hypodermic injection consists of a solution of phosphotal in sterilized oil, and is supplied in sealed glass tubes each containing 1 decigram (1½ grain) of the medicament. Examination of these products showed them to contain, as claimed, the phosphorous esters of creosote, with practically no phosphoric acid. Phosphotal is also supplied in the form of an emulsion for administration by the mouth, and phosphite of guaiacol is also prepared.

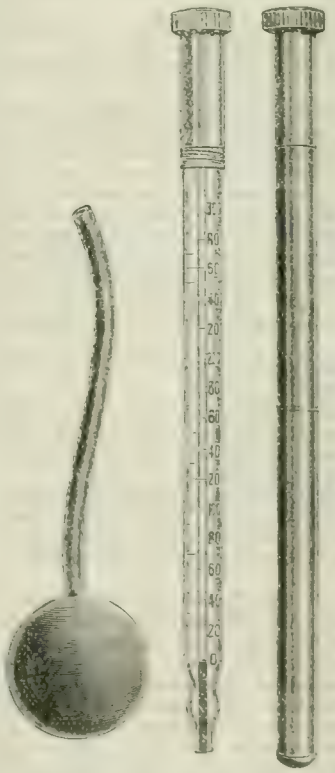
Bensdorp's Royal Dutch Cocoa.

We have received a sample of the cocoa manufactured by Messrs. BENSDORP AND CO. (Amsterdam), and have submitted the same to examination. It is a genuine cocoa of excellent flavour, free from arrowroot or any such addition. Analysis showed it to contain 22.5 per cent. of nitrogenous constituents, and 29.5 per cent. of fat, both these figures being considerably above the average of the various cocoas on the market. It belongs to the class of "soluble" cocoas, containing a small proportion of alkali, which causes more complete emulsification of the fat when prepared as a beverage.

MEDICAL AND SURGICAL APPLIANCES.

New Hill-Barnard Sphygmometer.

DR. LEONARD HILL, F.R.S. (Lecturer on Physiology, London Hospital), writes: The importance of measuring the blood pressure in the same routine way as the body temperature has now gained general recognition. I have striven, and I think successfully, to modify the Hill-Barnard sphygmometer into an instrument which can be carried and used as conveniently and accurately as the clinical thermometer. The new sphygmometer, is based on a form contrived by us in 1897, and is made by Mr. J. Hicks, of 8, Hatton Garden, E.C. It consists of a gauge and a flaccid rubber ball, covered with silk, and connected to the gauge by a few inches of rubber tubing. The gauge is formed of a straight glass tube, and is carried, when not in use, in a metal case, like that of a clinical thermometer. The glass tube is closed at the upper end by a metal cap pierced by a small hole. The hole is closed by a screw and leather washer moistened with glycerine. A fluid meniscus is introduced within the gauge by placing the lower and open end in water and opening the screw tap. As soon as the meniscus has risen to the



zero mark the tap is closed. The rubber ball, which is about 1½ in. in diameter, is distended with air and connected to the gauge. The ball is covered by the palm of one hand and pressed down upon the radial artery of the patient, whose arm must be supported at the level of the heart in a suitable position. The radial pulse is felt by the fingers of the other hand, peripherally to the rubber ball. The pressure indicated by the gauge is read when the radial pulse is obliterated. This gives the maximal systolic pressure. The gauge is empirically graduated in millimetres of mercury.

By enclosing the ball with the palm of the hand and pressing it with increasing force upon the radial artery it is possible to obtain the maximal pulsation index which gives the diastolic pressure, according to Howell and Erlanger, rather than the mean pressure. With this same gauge the Hill-Barnard armlet and a syringe bulb can be used in place of the rubber ball. The maximal pulsation pressure can then be obtained, as well as the obliteration pressure, by applying the armlet to the brachial artery.

The accuracy of the rubber-ball method is shown by the fact that the same systolic pressure is obtained with it as with the armlet method. The accuracy depends on the size and flaccidity of the ball. It moulds itself to the parts of the tissues, and the rubber bag is not stiff enough to exert any appreciable pressure itself. The ball, enclosed in silk and covered by the hand, exactly takes the place of the armlet. Von Basch and Dr. C. J. Martin have shown experimentally that the pressure required to flatten even a degenerated empty artery is negligible—2-7 mm. Hg (British Medical Journal, April 22nd, 1905).

The venous pressure can be obtained with this new gauge by using the method of H. von Recklinghausen. A small flaccid and flat rubber bag is taken, with a circular hole punched through it; the bag is moistened with glycerine, placed over a vein, and covered with a glass slide which is held in position. The skin, slide, and glycerine convert the bag into an air-tight cavity. The bag is connected by a tube to the gauge and syringe bulb. The pressure is noted which just obliterates the vein. The vein can be observed through the glass slide which covers the hole in the bag. To obtain the capillary pressure, von Recklinghausen reads the pressure both when the skin blanches and begins to flush again, as the pressure respectively is raised or lowered, but this index does not seem to me to be a sharp one.

The advantages of the new sphygmometer are these:

1. Simplicity and accuracy. The gauge cannot alter or go wrong. The fluid meniscus is set easily at zero. The obliteration pressure accurately gives us the systolic pressure.

2. Convenience in use. The patient's arm need not be bared, and the discomfort of the armlet is avoided.

3. Portability. The gauge and rubber ball can go easily into a waistcoat pocket.

Note. The armlet or cuff method of obtaining the blood pressure in man has been generally accepted and used in all countries. It was invented independently by Riva-Rocci and H. Barnard and myself. According to Dr. C. J. Martin Riva-Rocci had precedence in publication, describing his instrument in the *Gaz. Medica di Torino*, 1896-7. This paper is not in the College of Surgeons Library, and I have never seen it. Our paper was delayed in publication and appeared in the British Medical Journal, 1903. It is only fair that the credit of this invention should be given to Riva-Rocci and to H. Barnard and myself.

I am indebted to Dr. Otto Glasbrook for advice while contriving the new instrument.

The Governor of Pennsylvania has vetoed the Bill recently passed by the State Legislature creating a State examining board composed of osteopaths.

The States of Connecticut, Colorado, Indiana, Maryland, New Jersey, New York, North Carolina, and Virginia have laws for the registration of nurses, and a Bill providing for such registration is now before the State Legislature of Minnesota.

At a recent sitting of the Bohemian Parliament, Professor Rieger (Jaroslav), pleaded strongly for some improvement in the position of medical officers of communal districts and public institutions. He described the remuneration of the medical profession in Bohemia as deplorable. He said that of 6,500 practitioners in the whole country, only 1,952 have an income sufficient in amount to be taxable, this means that there are no under 1,200 crowns (about £50). Of these subject to assessment, 1,771 have an income varying from 1,200 to 2,400 crowns (about £116 to £41). Only 231 earn more than 3,600 a year.

PREVENTION OF CONSUMPTION.

Worcestershire Association for the Prevention of Consumption.

The fourth annual report of the Knightwick Sanatorium leaves no room for doubt as to the necessity of a sanatorium for the treatment of consumption for Worcestershire. During the four years of its existence 450 applications for admission have been received, but with only 22 beds (14 for men and 8 for women) it has been impossible to find accommodation for all cases.

The Committee appeals for the necessary assistance to enable it to provide additional beds, and as it reports that it has been able to purchase the sanatorium and grounds there is ample justification for the appeal for extension. During the year 1906, 75 cases were under treatment in the sanatorium, and the results show continued grounds for satisfaction. A valuable extension of the work of a sanatorium for the working classes is being organized by the Committee in the form of local after-care committees, who will endeavour to find suitable employment for discharged patients and to provide temporary financial help for the families until the bread-winner is able to resume full work.

In a review of the four years' work it is stated that of the early cases treated no less than 94 per cent. are (and have been in some cases for nearly four years) in good health, and 82 per cent. of these cases are at work. It, however, unfortunately appears that only 42 per cent. of the total cases admitted in four years are classified as "early," thus showing that one difficulty of nearly all sanatoriums is experienced at Knightwick also. According to the rules of the institution no person under the age of 14 years is eligible for admission. The Committee hopes that some provision for the admission of children may be made before long.

Adirondack Cottage Sanatorium, Saranac Lake.

The excellent work started by Dr. Trudeau at Saranac Lake has now been carried on for twenty-two years. During that time the sanatorium has grown to such an extent that whereas in 1885 only six patients were discharged, 176 were discharged during the year covered by the last annual report.

The usefulness of Dr. Trudeau's work is not limited to the resident patients, and the work done by the sanatorium during the past year is thus briefly summed up: The out-patient department has given advice to patients on 2,153 occasions, while in the institution 281 patients have been treated. To 227 of these it has furnished the best possible means of restoration to health at a nominal cost, and to 54 entirely free of cost to them.

During 1906 an epidemic of diphtheria, introduced by a new employee, caused great anxiety to the staff and a heavy financial loss to the institution. Fortunately, however, no death occurred amongst the fourteen persons attacked.

The employment of tuberculin in a limited number of cases used every year since its discovery by Koch in 1890, has been continued this year. "A comparison of 139 cases treated with tuberculin and 690 untreated and discharged during the past fifteen years, shows that 18 to 25 per cent. more of the treated are living to-day than of the untreated." This statement seems to require some explanation as to how the cases taken for comparison were selected out of the 1,952 cases which appear to have been under treatment during these fifteen years and regarding 1,663 of whom information up to date has apparently been obtained.

A very full tabular report of over 400 cases has been prepared by Dr. Lawrason Brown in accordance with the suggestions of the National Association for the Study and Prevention of Tuberculosis. This is in continuation of a similar report drawn up last year, and should prove very useful. It seems strange to find the term "incipient" applied to the case of a man with three years' history and tubercle bacilli discoverable in the sputum. At the end of this medical supplement, which is bound up separately from the report, there is a very interesting and instructive table showing the present condition of all the patients who have been discharged from the sanatorium since 1885.

A DEBATE ON VIVISECTION.

A DEBATE was held under the auspices of the Organizing Committee for Miss Lind-af-Hageby's Antivivisection Lectures and Debates on Thursday, May 16th, at the Portman Rooms, Baker Street, W., the subject being "Is Vivisection Necessary to the Advancement of Science and Medicine, and is its Practice in Accordance with the Claims of Morality and the further Development of Altruism?"

The chair was occupied by Sir DAVID BRYNMOR-JONES, K.C., M.P., and the admission was free. The large room was filled to overflowing, and the proceedings were frequently interrupted by cheering and interjections from various parts of the hall.

After some introductory remarks by the CHAIRMAN,

Miss LIND-AF-HAGEBY opened on the negative side. She said vivisection was no new thing; it was practised by the ancients, so-called anatomists, of the Alexandrian school, and it had come down to posterity that Herophilus dissected 600 criminals. In Italy, according to the researches of Professor Andreozzi, between 1545 and 1570 thirteen criminals were sent to Pisa by the Tuscan Government and were vivisected. In the judgement as to whether vivisection was an indispensable method, and in the proper consideration of its merits and demerits, it was essential that one should bear in mind that hundreds and thousands of vivisections had been performed in ancient times without bringing about great or important discoveries. During the first period of the revival of vivisection some sixty years ago the experiments were considerably more crude than they were at the present moment. The infliction of pain was thought but little of, and it was contended that science had a right to inflict any amount of pain for scientific purposes. The excuses now made for vivisection were altogether different. The first part of the question for discussion was whether vivisection was necessary to the advancement of science, and she answered that question in the negative. Her first scientific reason against vivisection was the extreme divergence in the results which were obtained by experiments on different animals. Sometimes one saw a frank admission, like that which Professor Starling had made before the present Royal Commission, of the fact that the final experiment must always be made on man. If that were so the whole utilitarian argument fell to the ground. Every physiologist knew that every living organism possessed a physiology of its own, and that therefore the results of experiments upon one kind of animals, one species, could not be applied to another. Those differences were nowhere seen more clearly than in pharmacological research. The second great objection, from the scientific point of view, was the method of setting up disease and abnormal conditions, whilst physiology, the science of normal health, was being studied. The vivisector had to contend with two difficult conditions—either he must have pain, which vitiated the experiment, or he must have anaesthesia, which likewise vitiated it. The vivisectors were beginning more and more to see that fallacy. The fundamental fault of vivisection as a scientific method was that it had forgotten, and constantly forgot, the unity of the organism, the correlation of function, the mysterious and delicate harmony of the body as a whole, and it was only when physiology grew more philosophical that it would be raised to the rank of a more exact science than it was at present. She had not had time to go into what, philosophically and psychologically, was closely connected with the subject, namely the vitalistic view, the new vitalism, or that view of physiology which did not admit that all physiological phenomena could be explained on a basis of chemistry and physiology only. She believed that vivisection as a scientific method would be discarded by the twentieth century. On coming to the relation between vivisection and medicine one came to a subject which was so wide, so complicated, and so full of side issues that it was impossible for her, in a few moments, to do that subject justice. It was clear to all who used their eyes, that one of the most prominent features of the development of medicine was the decline of drugging, the decline of coarse medication, and also that there were two great tendencies in modern medicine which were signs of the future. One was the prevention of disease by sanitation. Another tendency was the introduction of more natural methods of healing, such as by electricity, by light, the Finsen light and x rays, by all the lighter, more natural and less coarse methods which had been such a prominent feature in the development during the last twenty-five years. More attention was now paid to diet than had ever been paid before, more attention was now paid to the rules of health and to physical culture. She maintained that vivisection would be less and less needed in the science of medicine as those two tendencies were at work and as those tendencies changed. There were certain questions which were of paramount importance to the health of humanity, and the investigation of which by vivisectional methods was of paramount importance to the believers in vivisection. She referred to the question whether bovine tuberculosis was transmissible to the human subject. In 1901 a new Royal Commission on Tuberculosis was appointed, and that Commission had now sat for some six years. It has just presented another report. That question concerning the transmissibility of bovine tuberculosis to man was one which could be settled in a very easy manner. Inject ten imbeciles, ten lunatics. [Shame!] She begged her audience to wait a minute. But the Royal Commission on Tuberculosis had sat for six years, and investigated the question by a great number of experiments on the lower animals. She wanted to ask the upholders of vivisection why that question had not been settled in what seemed to have been the only rational and natural way. The answer was because such a method of settling that highly important question would be immoral, and therefore nobody dare stand up and advocate it. If those who believed in vivisection agreed that that was the reason why that plea was not put forward, and why that Royal Commission had, from the purely scientific point of view, wasted time year in and year out on experiments on the lower animals, whereas it could only be satisfactorily and quickly settled by experiments on human beings, then everyone would agree with her that moral considerations were all-powerful, and that moral considerations were allowed to check vivisection. There was really no scientific and no medical aspect of the question, the question was purely and solely a moral one. Throughout the evolution of social morality there was one thin red thread which was very conspicuous—namely, that wherever mankind had judged of the rights and wrongs of a thing, there had been what she might term the lower immediate utility point of view, which it had been necessary to put aside for the greater and higher and further utility, and moral victories had always ultimately been victorious and triumphed on the physical and the material plane. If the ultimate was to reach a state where mankind was governed by the cultivated instincts of doing only to others what they would have done to themselves, then vivisection was doomed to extinction, and the result would be the production of a humanity which was merely wholly and intellectually sane.

Professor HALLIBURTON said that one of the disadvantages under which he laboured was that he had nothing sensational to place before his audience. There were some people who would believe a story, themselves not knowing anything about the rules of evidence, on very flimsy grounds, and the more horrible or the more unlikely the story, the more likely were some people to believe it. It had been said that physiology was an incomplete science. That was admitted by everybody. It was the fault which physiologists were doing their best to render a fault no longer. The whole of the agitation against vivisection rested upon the conception that it was cruel and therefore immoral. When death and disease were no more, then there would be no need for remedies, and that would be the time when experimental methods would be extinct. It was not, however, until those days arrived in the far and distant future, that Miss Hageby's prophecy was likely to be fulfilled. Did Miss Hageby know that the first to protest against cruelty in experimentation were the members of the medical profession? If one studied the medical newspapers between the years 1865 and 1870, it would be seen that the language employed there in reference to experiments which could not be defended was almost as vigorous as that which was being put forward by the various societies which were struggling in the hopeless task of abolishing experimentation. Vivisection was not cruel; as a rule it

was not even painful. The use of anaesthetics in every operation except those which needed no more than a needle prick, was universal in this country, and the whole of the antivivisection crusade was based upon suspicion. The Parliament which passed the Act, the Home Secretaries who for the last thirty years had administered it, the inspectors who worked under the supervision of the Home Office, the Association for the Advancement of Medicine by Research who carefully considered every application—and in that way a great modification in the proposed experiments was produced—and the experimenters themselves, of course, felt the brunt of the suspicion. Why on earth should experimenters want to do away with anaesthetics? He thought the experience of the man in the street was that a cruel doctor was as rare as a swearing parson. They to whom he had alluded had no object in breaking the law, and they had no object in dispensing with anaesthetics. One sometimes had quoted against one the phrase "light anaesthesia." But that was an anaesthesia under which surgical operations were performed. Light anaesthesia did not mean that the animal felt pain any more than light anaesthesia under which a person had a tooth extracted meant that he felt the extracting forceps of the dentist. Curare was another bugbear of the antivivisectionist, but curare was not used as an anaesthetic. It could not now be procured pure, and when used it was always in conjunction with a true anaesthetic, and observations on the pulse and on the heart were quite sufficient to enable the experimenter to know whether an animal was completely anaesthetized or not. Curare might be an anaesthetic; he did not yet know, but there was no proof yet one way or the other. Physiologists had loyally accepted the provisions of the Act, which said that curare was not to be regarded as an anaesthetic, and on those rare occasions when it was absolutely necessary to use it a real anaesthetic was employed in addition. When he was speaking about inspectors just now he heard a voice say, "They never see any," and another voice said, "Sir Thornley Stoker." If the present inspectors paid but few visits, Sir Thornley Stoker was still remarkable, because he paid hardly any at all, and all his statements were based on the supposition that the Act was carried out correctly in Ireland. He had in his possession a letter from Professor W. H. Thompson of Dublin, who said:

> I know that no visits were paid to the physiological laboratory during the years 1902, 1903, 1904, 1905, and 1906, and it is also a fact that the pathological labaratory has not been visited for a somewhat longer period.

What did Sir Thornley Stoker say in reply to that? He said he spoke generally and not in reference to any particular laboratory. If he had not been into the school in question it was because he knew that all was regular and in order there. Professor Halliburton went on to say that he had had some difficulty in finding a satisfactory definition of "cruelty," but he would take one for the time being which was laid down by two of our great judges. Lord Chief Justice Coleridge commenced his argument by considering what was meant by cruelty. It was a case of dishorning of cattle. The excuse for that practice was that more cattle could be packed into a truck if they were dishorned. The Lord Chief Justice said the mere infliction of pain, even of extreme pain, was not sufficient to constitute cruelty. Men constantly inflicted pain upon one another or on the brute creation for the purpose of medicine or surgery, or under the sanction of Acts by way of punishment which was lawful, and in such cases it might be reasonably necessary. Mr. Justice Hawkins, another eminent antivivisectionist, who sat with him, quite agreed with that definition of cruelty. The decision was that the dishorning of cattle was cruel because it was unnecessary. Professor Halliburton said that definition did not appeal to him; it savoured much too little of what he would call the milk of human kindness; it took into account too much the utilitarian and pecuniary benefit that would result. But if in the pursuit of knowledge and in the struggle against the sufferings which were seen all around in the world it was necessary to do experiments upon animals in order that the final experiment upon man, as Miss Hageby put it, might be performed, it must be remembered that the final experiment upon man was the application of what had been found. He would mention one or two cases: First, diphtheria. Owing to the discovery of an antitoxin to that disease the number of deaths per cent. from diphtheria had very greatly diminished. He would give the statistics from the Metropolitan Asylums Board Hospitals dealing with over 11,000 cases. In the years before the antitoxin treatment the percentage mortality varied from 59 per cent. to 30 per cent. In the first year of the antitoxin treatment it dropped from 29 per cent. to 22 per cent., and in the next year to 21 per cent. He would not give every year, but there was a steady diminution until 1905-6, which was the last for which he had any statistics, and then the percentage was only 8.3. He would read from the report of Dr. Foord Caiger, one of the principal medical officers of the Metropolitan Asylums Board. In that report he said the number of tracheotomies was now less than half what it used to be, and instead of the spectacle of a number of patients in great distress with swollen necks and blocked-up noses, fretful and crying, such cases were now quite the exception, and in the few which one did come across, the condition lasted only a comparatively short time. It was quite unusual for a nurse to stay very long in charge of one of the diphtheria wards, because she found the work so depressing. But now these diphtheria wards were the most popular in the hospital, a change which was owing to the general aspect of the patient and the greatly reduced mortality. The greater number of his audience lived in happy, healthy homes, disease with them was but an incident, a painful incident, and death came but occasionally to their households. But with the medical man he was looking at disease and death every day, and all day long, and therefore could it be wondered at that he yearned to do something to relieve suffering humanity? Could it be wondered at that he also took into account the diseases from which animals suffered, and tried to alleviate those too? Take the case of rinderpest. That, owing to the pathological researches of Professor Koch, had been practically exterminated in South Africa. Antivivisectionists looked at the few poor rabbits which had had the disease transmitted to them by inoculation, but they did not look beyond to the millions, or, at all events, hundreds of thousands of the cattle which were dying year by year. He admitted it was a choice of evils; but surely the disease might go on from generation to generation, and therefore was the attempt to stop it not to be made because of sacrificing a few animals for experimentation? That would come home to his audience when they were ill themselves. There was an immense amount of hypocrisy incidental to that antivivisection movement. And yet what was done was done with the highest motives on which a man could do anything in this world, and without any hope of pecuniary reward. They had been told by Miss Hageby that attention to diet and attention to hygiene were of great importance. But how were the laws of hygiene learnt without bacteriology? One sometimes heard the remark that cleanliness was next to godliness, but what was known about true cleanliness until bacteria were discovered? Then as to diet, how was the knowledge concerning the action of different materials in the diet ascertained until people made experiments upon themselves and upon animals also? He wondered whether his audience knew what spaying meant, the removal of ovaries, an operation which was done in many women and with very beneficial results. It was done under antiseptic precautions and they had learnt all about anaesthetics and antiseptics by experimentation first upon the lower animals. Yet that operation was done in animals by people who were not physiologists, and the corresponding operation on the male was also done in tens of thousands of cases in this country by farm labourers without any anaesthetics, in order to make mutton tender. When people wanted to use animals for their convenience, such as for the 'bus and 'bus horses did not live long—and when people wanted to use animals for their sustenance, no attention was paid to Chicago horrors, nor yet when women wanted to use animals for their adornment. He went to a lecture by Miss Hageby in the winter time, and they were nearly all antivivisectionist friends there, and he never saw such a display of ospreys in his life. He was showing that there was so much inconsistency in those who opposed vivisection, that when one came to serious arguments about the subject, it was very difficult to argue with such people at all. Miss Hageby, who advised physiologists how to do their

work, and advised the medical profession how to do its work, did not know of, or, at all events, sneered at, such things as reflex action. One might as well argue with an engineer who denied the existence of electricity as with people on this subject who denied the existence of reflex action in an animal, and many similar things of the same kind. Before he concluded he desired to draw a lesson from all that. He held his watch in his hand, and he wished he had the imagination and the pen of a Kipling so that he might, as it were, write a little story of what the various wheels were saying to each other inside that little mechanism. Each one might be proud to say, "I am more important than you," and so on, but every wheel was necessary to the whole. And so it was in medical and physiological work. Some vivisection experiments upon animals might be likened to the mainspring of the watch, the others might be likened to a small wheel, but, still, each was as necessary as the rest; chemical investigation was necessary, microscopical investigation was necessary, observation at the bedside was necessary, as well as observation *post mortem*—all those had to work together, for without such unity the whole organism or machine could not do its work. So it was with physiological discovery. Vivisection might play a big part in one and a small part in another, but every part was absolutely necessary.

Mr. STEPHEN COLERIDGE said he wished to speak because Professor Halliburton had alluded to a definition of cruelty given by his father, and he pointed out that when he uttered these words he was delivering a judgement, and he was citing the definition of cruelty in a certain Act of Parliament; it was not a deliverance of his own views about cruelty. But in spite of his having to interpret an Act of Parliament which he might not personally have agreed with, he apparently managed to condemn the people who dishorned cattle. Professor Halliburton had said that a cruel doctor was as rare as a swearing parson. He (Mr. Coleridge) had never said that any doctor was cruel, and he had not attacked doctors. He regarded physiologists as a class altogether apart from doctors. He asked Dr. Halliburton to do his best to help him make other physiologists as humane as himself; that was all his Bill was before Parliament to enforce—it was an Act to enforce upon physiologists who were not as humane as Dr. Halliburton and others the humanity they themselves professed.

After several other speakers had made remarks, Miss HAGEBY, in reply, said Professor Halliburton asked why physiologists should want to experiment without anaesthetics. Her answer was that anaesthetics often interfered with the results of physiological experiments. If time permitted, she could have quoted to them twenty textbooks which more or less expressed the same truth, that physiological experiments were frustrated by anaesthetics, and there were textbooks which warned against the production of too deep anaesthesia. One of them was *Essentials of Experimental Physiology*, by Dr. Brodie, a textbook which did not even refrain from describing experiments without anaesthetics. Also there was Professor Starling's *Elements of Human Physiology*. She did not believe it was a fact that surgeons operated under light anaesthesia. In fact in 1902 there were some letters to that effect published in the *Times*, and there was a letter by Mr. Edmund Owen on March 12th or 15th, in which he said there were certain operations which could not be performed under deep anaesthesia, certain operations on the throat, the tongue, and so on. But he implied that all other experiments were carried out under complete surgical anaesthesia. Mr. Owen ended his letter by these remarkable words: "What is the necessity of laying bare to the public these horrors?" Why horrors if incomplete anaesthesia meant complete loss of consciousness? Professor Halliburton had said the delicate apparatus used in experiments would break if the animals struggled. In the trial Bayliss *v.* Coleridge it was stated by the vivisectors that there were considerable movements in the dog—movements which it was true were referred to as being unconscious from their point of view, but nevertheless the movements of chorea—and some of the witnesses for the vivisection side said those movements were very forcible. Why did not the apparatus break? The answer was simply that there was plenty of indiarubber tubing which connected the glass tubes, and there would be very much movement required before such an apparatus would break. Then there had been the usual sentiment from the vivisectionist side—that of the dying child. She spoke for a considerable section of antivivisectionists when she said that they did not consciously accept a friend of vivisection, nor were they terrified into moral cowardice when they were ill and when their children were ill. Professor Halliburton said hygiene was not possible without bacteriology, but she begged to differ; it was sanitary engineering which had rid the world of the cesspools inside houses which disgraced London only fifty years ago, and the back-to-back houses which were the cause of so much filth and want of ventilation and which were the causes of much disease and many epidemics. Professor Halliburton had stated that she denied reflex action, but she had never been responsible for such an absurd statement. Antivivisection was not a hopeless cause. That little fraction of the community who would defend it, and go on defending it, either with noisy or irresponsible shouts or with appeals to pure selfishness and pure egotism, were on the losing side, and she was on the side of humanity and on the winning side.

Professor HALLIBURTON, in reply, said the usual method, which had been fairly successful in the past with a public even more incapable of forming an opinion than those who had taken a few lessons in physiology, was to start a story, the more unlikely the better, and although it might be contradicted, hope that the contradiction would not be seen. There was the story of the Gower Street dog running about with a tracheotomy tube in its throat, there was the story which the *Tribune* was inveigled into publishing about a cat which jumped off Professor Starling's operating table. The newspaper had to apologize for that. There was a series of stories which were brought forward in the evidence by Mrs. Cook at the Antivivisection Commission, and a review said of those that almost every one of Mrs. Cook's horrifying cases seemed, when examined, to melt away. Yet those horrifying cases were still published in the appeals which were made by some of the antivivisection societies. There was a story which had been recently published, and which appeared in the last number of the *Animals' Friend*. From the evidence given by Sir Thornley Stoker, it appeared that he said:

> I have been told by reliable observers and physiologists that a monkey evinces the most acute sense of fear when it is brought into the room where it is going to be operated upon, and shows a great degree of terror. Professor Purser, late Professor of Physiology of Dublin, is my informant on that point.

He would read Professor Purser's remarks about that:

> I can confidently state that I never told Sir Thornley Stoker that monkeys showed terror when brought into the operating room. The only explanation I can state is that I may have described to him the demonstration which I saw Professor Ferrier give in King's College in 1881 on the occasion of the meeting in London of the National Medical Congress. The monkey shown was believed to be dead. To demonstrate this, a pistol was fired off behind the animal, who did not even turn his head or take any notice, but some other monkeys, who were on the other side of the room, were manifestly startled. The experiment was so striking that I spoke of it to several persons, and I may have mentioned it to Sir Thornley Stoker, but I can confidently say that monkeys never showed terror previous to taking the anaesthetic.

Still, that story was being published in the journals devoted to antivivisection and probably would continue to be published. There had been stories about the baking and freezing of animals, and he remembered some of those were published in connexion with Professor Langley's work, until it was discovered that the parts of the animal that he had baked and frozen were parts of dead animal which he was embedding in paraffin, and using on a freezing microtome so as to obtain sections. Still, that statement was being repeated, and the correction, of course, was not likely to be seen. Another point in connexion with the antivivisection movement was the abuse, not so violent as it used to be, which was levelled against men who were as good, if not better, than the antivivisectionists themselves. (Cheers.) He would take the case of Lord Lister. (Cheers and "He is a brute.") He was a man who had done more good with his little finger than the whole crowd in that room put together in the whole of their lives. And yet he was a man whom many of those present did not hesitate to call a torturer. There had been an example that evening in the attacking of Sir Lauder Brunton. He (Professor Halliburton) hoped

he had in his own composition a little of the milk of human kindness, but those who knew Sir Lauder Brunton knew that he was clotted cream from top to toe. He would say a word about the few medical men who differed from the rest of their fellows in being antivivisectionists. They were extremely few in number, and he said most deliberately and with the calmest conviction, that whenever a medical man posed as an antivivisectionist, he was at variance with the vast majority of his fellows, and against all that was best and wisest in the great profession of mercy which was known as the medical profession. Some might act in that way from love of notoriety, or from the mere sake of being peculiar. Luckily, they were few in number. But there might be some honest ones among them, if one stretched the word "honest" to its utmost capacity. But all such—and their motives he left to their consciences—were either consciously or unconsciously impostors. Every time a doctor felt the pulse he must know, or he ought to know, that the meaning of the pulse was made out by experiments on animals from the dawn of the knowledge of the circulation onwards to that day. There were instruments to-day, the outcome of experiments on animals, by means of which the pressure of the blood and of the pulse could be accurately measured and the condition of the heart and kidneys correctly diagnosed, and so correct indications for treatment could be obtained. If the medical man did not use those methods and many others which might be enumerated, he was imposing on his patients. Still less had he the right to act as a safe medical adviser if he refused to use anaesthetics and antiseptics or the new remedies, of which antitoxin might be taken as a type; such a man calling himself a doctor was a danger to the community. He had already said that antivivisectionists had become less violent of recent years; they now reserved their pet epithets for their antivivisection parties. But a house divided against itself could never stand. He would merely say, in conclusion, that the antivivisectionist cause was hopeless. His hearers had probably heard of Mrs. Partington trying to keep back the tide with her mop. Well, the antivivisectionists might wave their mops; they might publish their little pamphlets; but it would have no effect in stopping the great inrush of knowledge, and, consequently, the agencies for the relief of human suffering which that knowledge would bring with it. (Loud cheers, accompanied by the singing of "For he's a jolly good fellow.")

The Chairman then appointed tellers to assist him in the count, and put the matter to the vote twice, when he declared that the "Noes" had it.

THE MILK SUPPLY.

The Milk Supply of the London Children's Hospitals.

M.O.H. writes: Under the above heading is published in the British Medical Journal of May 4th a list of resolutions adopted by the representatives of the lay Boards and medical staffs of the London Children's Hospitals. One had heard of a deputation (this is an age of deputations) to the Local Government Board, and of certain free but indefinite expressions of what ought to be done to secure pure milk in a natural state, and we medical officers of health were waiting breathlessly for the specific directions of the London physicians to guide us in our difficult duties, because their superior knowledge and authority upon this subject could not, of course, be questioned.

The resolutions begin well with 'The milk shall be pure." This is in the imperative mood, but nothing that follows is indicative of a method of securing pure milk. The milk is to be strained, refrigerated, canned and sealed at the farm, and delivered at the hospitals within twenty-four hours of milking, and it is advised that it be submitted to bacteriological examination once a week. We know that straining will remove the more gross particles of filth, but the finer will go through the meshes and remain in the milk. We also know so well what the milk will certainly contain after twenty-four hours' incubation in summer weather, that it seems a waste of means on the part of the managers of these hospitals to have experiments made to ascertain it anew.

The refrigeration, in the absence of ice or a freezing chamber or chemical freezing mixture at the farm, cannot go far below 60° F. in summer time. It is to be presumed from this that small farms are not to be patronized. The hospitals are also going a long way off for their milk, perhaps being bound by sentiment to farms from which the milk has hitherto come. Why else allow twenty-four hours between the milking and the delivery? They are not dealing with the entire milk supply of London, a great part of which must come from far away and have to stand in railway stations during part of the night. There seems no reason at all why the milk should not be delivered to them within six hours of milking at longest, since it need not come from further than ten or fifteen miles away, and the milk of the afternoon milking could easily be delivered at the hospitals in the early evening of the same day, and this might be made a *sine qua non*.

The cows supplying the milk are to be in a good state of health, and this is to be guaranteed by the certificate of a veterinary surgeon to that effect, which is to be repeated at intervals not longer than once in three months. Presumably the veterinary surgeon will be an employee of the hospital boards; but even so, one wonders upon what clinical evidence the certificate will be founded. In reference to tuberculosis, for instance, the fact seems to have escaped the recognition of the gentlemen who adopted these resolutions that most grossly developed and widely disseminated tuberculosis in the bovine generally escapes diagnosis until the animal is brought to the slaughter-house, and this *post-mortem* diagnosis is of rather frequent occurrence in places where a public abbatoir is in use. Is it going to be an instruction to the hospital's veterinary surgeon to test with tuberculin—or what?

The milk is to be of such quality as to contain not less than 3.5 per cent. of butter fat. This cannot be guaranteed without frequently testing the milk, nor upon certain seasons and occasions without adding cream, which is a very undesirable practice. There is a ready method now of estimating the quantity of fat in milk by means of a centrifuge, but it is not at all a desirable thing, in these days of low compulsory standards, to encourage farmers to have this machine at hand to estimate the fat in their milk, for reasons which need not be further expressed. It would, on the whole, be better to take the natural milk and leave the proportion of fat to providence.

In your comments upon these resolutions you say that it is a pity, perhaps, that these hospitals were not consulted before the establishment of the present system of milk dépôts by municipal authorities. May I be allowed to lay emphasis upon the "perhaps"? The milk dépôts are superintended by men of special training and experience—I mean the medical officers of health. They ought to be possessed of the best knowledge of milk production, and of the diseases which milk produces, and the general desirability or otherwise of sterilizing the milk at the dépôts. I gather that most of them are much more deeply impressed with the dangers that attach to the consumption of raw milk than with those pertaining to the consumption of sterilized milk, and that the results of the observations upon the use of sterilized milk of those who have been instrumental in establishing the public provision of food for infants is in the main very satisfactory. The children fed need to be watched, and sometimes a change of food is indicated, but this would be required with any food. It does not appear to be desirable nor practicable to use other than sterilized milk at milk dépôts as a general practice, and possibly after further contemplation of all the *pros* and *cons* even the authors of this list of resolutions may arrive at the conclusion that it will be well to get the milk delivered as quickly as possible at the hospitals and sterilize it there.

*** We are disposed to agree that the period of twenty-four hours is too long for safety, and longer than is necessary even in London, but it is given as a maximum which must not be exceeded. We will withdraw "perhaps," and express the definite opinion that the hospitals, and especially the children's hospitals, ought to have been consulted by the different municipal authorities before establishing their present systems of milk dépôts. It is unfortunately true that many medical officers of health are more deeply impressed by the dangers attached to the consumption of raw milk than with those pertaining to the consumption of sterilized milk, and it is for this very reason that we are disposed to urge that the authorities of children's hospitals, and especially the medical staff of

such hospitals, should, whenever opportunity occurs, be consulted by the municipal authorities. It may seem very revolutionary to our correspondent, but we would maintain that the medical officer of health is not the proper person to superintend a milk dépôt. It should be superintended by a practitioner, or staff of practitioners, who can give sufficient time and attention to the individual management of cases; in many instances, but not, of course, in all, this can best be done through a hospital. Foreign experience in France, in Germany, and in Belgium, is all in favour of this view.

MILK-BORNE DISEASES.

PARISH DOCTOR writes:—In connexion with the local Government Board inquiry about to be held at Sheffield relating to an epidemic of scarlet fever which was caused, as alleged, by contaminated milk from one farm—125 persons, of whom 124 used the milk, having suffered from the disease, with 5 deaths—it has been suggested that all dairy farmers should be compelled by law to notify to the medical officer of health, or to any other medical man, all cases of illness on the farm which are accompanied by such symptoms as "sore throat," "diarrhoea," or "feverishness." Proper steps could then be taken to isolate all cases of scarlet fever, diphtheria, and typhoid fever. The enactment would apply not only to the employer but the employees on the farm or in the dairy, etc.

MEDICAL DEFENCE UNION.

THE annual general meeting of the Medical Defence Union was held at the Midland Hotel, Manchester, on Thursday, May 16th, at 4 p.m.

There was a good attendance of members of the Union and members of the Council. The chair was taken by Dr. STAMFORD FELCE, in the unavoidable absence through illness of the President, Dr. Elliston, J.P.

ANNUAL REPORT.

The Council of the Medical Defence Union, in its report for the year 1906, states that the membership was brought up during the year by approved applications for admission to 7,042. This, in view of the fact that membership is absolutely restricted to those practising in the British isles, is regarded as a very fair proportion of the possible total. Many applications from dentists for admission were received, but were necessarily refused in the case of those who did not possess a registrable diploma in medicine or surgery as well as a dental qualification. The year witnessed the inauguration of an annual dinner, the first of the series being held in Birmingham on May 17th, on the occasion of the annual meeting. Hitherto the annual meetings have been held in London, but an intention is indicated to make it the rule to hold them in future in provincial centres. The elections for the year resulted in the reappointment of Dr. Elliston, J.P., as President; of Dr. Wethered as honorary treasurer; of Dr. Vincent James as honorary secretary; and of Mr. W. E. Hempson and Mr. A. C. Bateman as solicitor and general secretary respectively.

Work Done.

The number of applications to the Association for aid and advice were numerous, but the great majority were dealt with by the General Secretary; the remainder, 193 in number, were referred to the solicitor, who dealt with them at an average legal expense per member of 6s. 1d. These law costs the Council regards as heavy, but on the other hand it points out that the success of the Union has been entirely due to the fact that the best legal talent available is always placed at the services of members when litigation is involved; the expenditure has in every case been justified, and the Council feels assured that a cheese-paring policy would never have resulted in making the Union the power that at present it is.

Discussing the general work performed by the Union, the report says that experience gained in certain cases which it has brought before the General Medical Council has led to the formation of the opinion that a domestic tribunal of that character is not the best constituted authority to deal with professional offences. Not only is its procedure unwieldy but its constitution is faulty, consisting as it does of a bench of between 30 and 35 judges, with no power to take evidence on oath or to issue subpoenas to compel the attendance of witnesses. The successful conduct of cases before this body is also a matter of undue difficulty, for apparently it recognizes no precedents and evidence of a kind which at one time is admitted without question is on another occasion rejected. Hence every case brought before it has to be conducted as if it stood entirely alone. Another complaint made is that, even if a charge is successfully "proved to the satisfaction of the Council" and the name of the offender removed from the *Register*, it is quite possible that the name may be restored again at the next session of the Council, although the offences of which complaint was originally and successfully made were both numerous and great. Moreover, such restoration takes place *in camerâ*, and without the original complainants having any right to appear and "show cause" against the restoration.

Finances.

Appended to the Council's report is one by the solicitor, in which an account is given in general terms of some of the more interesting legal incidents of the year. A further enclosure is a report by the Finance Committee, from which it would appear that the assets of the Association balance liabilities by some £1,500. The total expenditure for the year, including a purchase of stock to the amount of £500, was £4,142. The Council points out that although it has no large reserve fund, it has never hitherto proved necessary to make any call upon the guarantors, nor does it imagine that any occasion to do so will arise in the immediate future, as the funds in existence are ample to deal with all liabilities in prospect; nevertheless, it is being considered whether it would not be right to raise the entrance fee from 10s. to £1.

In formally moving the adoption of the report Dr. FELCE adverted to the great scope of work carried out during the year, done not only for members of the Union but indirectly for the whole profession. He commented upon the multifarious cases dealt with, involving not only libel and slander actions, malpraxis cases, but also disputes between members of the profession and satisfactorily dealt with by arbitration. He pointed out that the medical profession was singularly prone to attack by unscrupulous persons, who, in spite of their impecuniosity, never seemed to find any difficulty in securing the services of solicitors and counsel, although unable when their case was lost to pay costs incurred by the successful defence. Medical practice led to worry, and that worry was likely to be increased when practitioners were threatened with actions for alleged negligence. The work of the Union, however was directed to take such worries off the shoulders of their members and to relieve the anxiety consequent upon litigation. No man, however high in repute in the profession, could safely say that he was above attack—consultants as well as general practitioners had to seek the advise and protection of the Union. He regretted to have to say that a great many cases brought before the Union proved that litigation was often brought about by the unwise criticism of the treatment of patients by the medical men called in "after the event." It ought to be remembered by all men that evil is wrought by want of thought, and that the greatest care should be exercised before condemning, even by faint praise, the course adopted in medical treatment by another. Undoubtedly encouragement was in many instances given to would-be litigants by incautious remarks made by those they consulted. If medical men would be only true to one another, a source of malpraxis actions would be cut off. Dr. Felce also commented upon various other features of the report, regretting that the seats won at the last General Medical Council had lost the Union the valuable services of Dr. Langley Browne and Dr. Latimer. He concluded by moving the adoption of the report.

This resolution was seconded by Dr. HORDER of Cardiff, and carried unanimously.

Various members asked questions and spoke to the value of the work done by the Union. Other formal resolutions were passed unanimously.

COUNCIL.

The retiring members of Council, Dr. Roche Lynch, Dr. Mackeith and Dr. F. J. Wethered, were all re-elected.

Mr. HEMPSON, the Solicitor to the Union, explained the legal position of a case in which the medical profession in Lancashire was greatly interested and reported that the Council had decided to take certain action.

The meeting concluded by a cordial vote of thanks to the Council and the official Executive.

Dinner.

A dinner followed the meeting, at which the members of the Council present were generously entertained by Dr. Dreschfeld, F.R.C.P., who took the chair. Many members of the profession in Manchester were present, and, thanks to the genial host and excellent arrangements made by the Honorary Secretary of the Dinner Committee (Dr. Sawers Scott), a very pleasant evening resulted.

The plan adopted by the Council of making the annual meetings an opportunity for provincial members to consult with the Council by holding such meetings at various provincial centres was warmly approved as making for successful recruiting and bringing members in touch with the Executive.

LITERARY NOTES.

Mr. Edward Stanford will shortly publish a new edition of his *Geological Atlas*, which will deal with Great Britain and Ireland in place of Great Britain alone as formerly. The maps and text have been revised, and among the new features is a full list of the figured fossils, with indications of their zoological position and range in time.

In the *Indian Medical Gazette* for April, Lieutenant-Colonel D. G. Crawford, I.M.S., begins a sketch of the history of the Indian Medical Service; further instalments are to be published during the next few months. The first ships sent out to India in 1600 carried surgeons. John Woodall, surgeon to St. Bartholomew's Hospital from 1616 to his death in 1653, was employed by the Company as their "Generall Chirurgeon." His duties appear to have consisted chiefly in the selection of medical officers for the Company's ships trading with India. He drew up regulations for their guidance, and in 1617 published a work for their use, entitled, *The Surgion's Mate, or a Treatise Discovering Faithfully the Due Contents of the Surgion's Chest.* From an early date the Company's settlements and factories in the East were provided with medical officers. The surgeons thus appointed were not combined into a regular service. It was not until some time after the middle of the eighteenth century that the Indian Medical Service was constituted. An order, dated October 20th, 1763, directed the formation of the service by the combination into one body of the various medical officers then serving the Company in each Presidency. Before that time the surgeons appointed to the settlements and factories in India were civilians. Up to the time of the French wars in the middle of the eighteenth century, the East India Company had practically no standing army. It was partly the necessity of providing medical officers for the Company's troops then serving in the field, which led to the formation of a regular medical service, which was primarily military, though from the first many of its members held civil appointments. For twenty-four years the service was without any definite head, though the senior surgeon in each Presidency had some vague advisory powers as to the control of the junior officers serving under him. In 1786 authority over the Bengal Medical Service was delegated to a Medical Board. Similar Boards were constituted in Madras and Bombay about the same time. At first the Medical Boards did little more than supervise the medical staff of the Presidency towns; gradually they developed into bodies holding authority over the whole service, and advising Government in all medical matters. But, up to the end of their existence, in 1857, they remained rather consultative than administrative bodies. After the suppression of the Mutiny, when the Government of India was transferred from the Company to the Crown, the fate of the Indian Medical Service was in the balance for several years. From 1860 to 1865 no new admissions to the service took place. During that time it seemed most probable that the Indian Medical Service would be amalgamated with the Army Medical Department; and for some years the officers of the Indian Medical Service and those of the Army Medical Department serving in India were employed indiscriminately with both British and native troops, and in civil employment. The final decision came to was that the Indian Medical Service should be kept up under much the same conditions as before, the Queen's troops being, as regards medical charge, under officers of the Army Medical Department, while officers of the Indian Medical Service in military employment had charge of native troops only. This decision was announced by the Royal Warrant of November 7th, 1864. We hope Lieutenant-Colonel Crawford will find time to produce *The History of the Indian Medical Service*, on which we understand he has for some time been at work.

In the *St. Louis Courier of Medicine* for April Dr. A. H. Ohmann-Dumesnil describes a statuette of reputed Aztec origin now in his possession which he looks upon as intended to represent a sufferer from leprosy. The figure, of which he gives a photograph, came from Ameca, in the State of Jalisco, Mexico, through which runs the chain of Sierra Madre Mountains. It was the property of an old woman who said she had had it for forty-five years; the previous history of the figure is undiscoverable. It represents a human figure, not of pure Aztec type, in a sitting posture; it is fairly well modelled. The back of the head and body is flattened, suggesting that it was made to be placed against a wall, possibly of a temple, like an *ex-voto*. The Aztec forehead, he says, formed a continuous line with the nose, and was markedly retreating, whereas the statuette has a rounded or convex forehead which is not retreating. Dr. Ohmann-Dumesnil is inclined to believe that a Spaniard's head may have been used for a model. At the time of the invasion by Cortes the Spaniards were naturally hated by the natives, who might therefore give a Spanish character to the head of a victim of a loathsome disease. The figure is evidently that of a woman, though, according to the practice of Aztec sculptors, no genitalia are shown; there are, however, atrophied mammae, and the umbilicus stands out on the surface of the abdomen, a feature which was an attribute of women in Aztec statuary. The fingers are mutilated, the ears are enlarged, there is no indication of hair on the head or elsewhere; while the drawn mouth, staring eyes, and strained position are indicative of pain. The symptoms represented, he says, can be easily recognized as those characteristic of lepra mutilans. From an artistic point of view, the work is rather crude, yet it compares very favourably with similar work by other primitive peoples. The salient points are well brought out, and there is no tendency to exaggerate. The appearances are true to nature. The interest of the figure from a medical point of view is that it shows that leprosy at the time it was wrought was essentially the same in its manifestations as it is to-day. It would be interesting to know the date of the statuette, as this would throw some light as to the existence of leprosy among the old peoples of the American Continent; but here our author does not help us, for while he thinks it may have been modelled from a Spanish subject, he elsewhere speaks of it as very ancient.

The *St. Bartholomew's Hospital Journal* for May contains some interesting notes by Dr. Hubert Stanley on old books in the library of the East Sussex Medico-Chirurgical Society. Among these one of the most interesting is John Halle's *Historiall Expostulation against the Beastlye Abusers, both of Chirurgerie and Physicke, in our tyme, with a Goodlye Doctrine necessary to be marked and followed by all true Chirurgiens*, written in 1564. The quacks of the day were a herd of low-bred ignorant scoundrels, and John Halle exposes their urinoscopical examinations, their nefarious practices, their combination of magic, divination, and physic. He calls them the very "caterpyliers of the profession." He says they run about the country like "pedlars, tynkers, ratte catchers, and very vacabounde." He tells of one William, a shoemaker, who came into Kent pretending to cure all manner of sore eyes. In one case Halle asked William what was the cause of the infirmity.

He said he could not tell, but that he would heal it he doubted not. Then I asked him whether he were a surgeon or physician, and he answered, "No, he was a shoemaker; but he could heal all manner of sore eyes." I asked him where he learnt that. He sayd that was no matter. "Well," saydo I, "seeing that you heal sore eyes, what is an eye, whereof is it made, of what members or partes is it composed?" and he said he knew not that. Then I asked him if a man were worthy to be a shoemaker or so called that knew not how or whereof a shoe was made. He answered, "No; he was not worthy." "Then," saydo I, "how dare you work upon such a precious and intricate member of man as is the eye, seeing that you know not the nature thereof, or why, or by what means it doth see more than a man's nose or his hand doth?" He answered that, though he could not tell all this, yet could he

heal all manner of sore eyes; and so on with many more of the same sort.

Halle put "the goodlye doctrine, for the behaviour of a true chyrurgien to his patient, and of one chyrurgien to another," into verse that it might be easy to learn and "apte to be remembered." It is really a code of professional conduct which we think many may be interested to read:

Hark and draw near ye younge studentes,
Your eares lok[illegible] ye unclose;
The worthy art chirurgerie,
That practise do propose.

And marke what the greate masters saye,
That here before have wroughte,
And did to their disciples leave
In wrytinge what they taughte.

When thou art callde at any time
A patient to see,
And dost perceave the cure too greate
And ponderous for thee.

See that thou laye disdeyne aside
And pride of thine own skill,
And think no shame counsell to take,
But rather with good wyll.

Get one or two of experte men
To help thee in that need;
And make them partakers wyth thee
In that work to procede.

But one thing note when two or more
Together joygned be.
About the paynfull patient
See that ye doe agree.

See that no discorde do arise
And be at no debate,
For that shall sore discomforte hym
That is in sycke estate.

With one consent uniformlye
Comforte the wounded man,
But unto some good frende of hys
Expresse all that you can.

And let them know the daunger greate
That like is to succede;
Prognosticatinge wittilye,
And in convenient spede.

See that for goulde or covetise
Ye take no thing in hande,
Which incurable for to be
Ye doe well to understand.

Looke of thyselfe in anyewise
Thou make nor praise nor boste,
For that shall turne to thy dispraise
When thou doste use it most.

See thou dispraise none other man
His error tho' you knowe
For sure another for thy plage
Shall thee like curtsye show.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ended April 13th and 20th the fresh cases of plague in India numbered 87,561 and 86,000, and the deaths from the disease amounted to 75,472 and 76,000 respectively. The mortality in the different provinces where plague chiefly prevails during the weeks in question, was: In Bombay Presidency, 2,981 and 2,000; Bengal, 7,092 and 6,000; United Provinces, 23,948 and 19,000; Punjab, 39,084 and 47,000.

Plague also prevails in the Central Provinces, where 1,218 deaths from the disease were reported during the week ended April 13th. In the Madras Presidency there occurred 5 deaths from plague, in Burmah 277, in East Bengal and Assam 1 during the same week.

During the week ended April 25th there were 511 seizures and 447 deaths from plague in the City of Bombay.

The annual mortality from plague in India since 1896 has been as follows: 1,704 (1896), 56,000 (1897), 118,000 (1898), 135,000 (1899), 93,000 (1900), 274,000 (1901), 577,000 (1902), 851,000 (1903), 1,022,000 (1904), 951,000 (1905), 332,000 (1906). During the first three months of 1907 no fewer than 495,000 persons died of plague in India, by far the heaviest mortality yet recorded. Up to 1901 the greatest mortality prevailed in the Bombay Presidency, but subsequently the Punjab suffered most.

AUSTRALIA.

Queensland, Brisbane.—During the weeks ended March 30th and April 6th no fresh cases of plague were reported in Brisbane. The last case of plague was reported on March 17th. On April 6th, 4 cases of plague remained under treatment. The number of cases of plague during the present outbreak amount to 25 in all.

No plague in any other part of Queensland during the week in question. The last plague-infected rat was found on March 9th, 1907.

MAURITIUS.

During the week ended May 2nd no fresh case of plague was reported in Mauritius.

HONG KONG.

During the weeks ended April 27th, May 4th and 11th the fresh cases of plague in Hong Kong numbered 1, 4, and 15; the deaths from the disease amounted to 1, 4, and 10 respectively.

MEDICAL NEWS.

THE Medical Society of London will give its annual *conversazione* on Monday next at its house in Chandos Street, Cavendish Square. The principal event of the evening will be an address at 9 p.m. by Dr. Gibson of Edinburgh, on the cause of the heart beat.

ON the initiative of Professor Ottolenghi, a numerously attended meeting of medical practitioners, advocates, magistrates, and functionaries was recently held in Rome to discuss the expediency of establishing a medico-legal society. It was decided to take steps to carry the scheme into effect.

THE annual report of the Metropolitan Asylums Board which was published last week is a closely-written volume of 350 pages interspersed with numerous tables of statistics. It includes, as usual, a number of appendices signed by the various executive medical officers of the Board, many of which are of considerable interest. Some further allusion to its contents will be made in a later issue.

A PARAGRAPH in a recent issue of the *Coventry Herald* states that three medical men have been appointed to the posts recently rendered vacant in consequence of the objections raised by the medical profession in the locality to the administration of the Coventry Provident Dispensary. The address of one of the practitioners concerned is given at Coventry; this, however, is misleading, as we understand that he merely took rooms in a lodging-house in Coventry a few weeks ago.

NATIONAL HEALTH SOCIETY.—H.R.H. Princess Christian will present the diplomas, medals, and certificates of the Society to successful candidates at Grosvenor House (by kind permission of the Duke of Westminster) on Tuesday, June 11th, at 3 p.m. The Earl of Derby will take the chair, and the Bishop of Ripon, Sir Frederick Treves (Chairman of the Committee), and other distinguished speakers will take part in the proceedings.

THE Epidemiological Society will hold its last meeting on Friday next, two papers being read by Professor Axel Holst and Dr. Theodor Frolich, both of Christiania University. In the first paper Professor Holst, who is Foreign Secretary for Norway, will detail the results of a study of beri-beri as it occurs on board ship. The second paper, of which the Norwegian epidemiologists mentioned are joint authors, discusses Eijkman's polyneuritis and the occurrence of scurvy in guinea-pigs.

CONFERENCE ON TUBERCULOSIS.—A conference of representatives of the City and metropolitan borough councils on the question of taking measures to limit the spread of pulmonary tuberculosis (consumption) will be held in the Town Hall, Paddington, on Thursday, June 6th, at 3 p.m. Councillor Dr. W. J. Nolan (Paddington) will propose: (*a*) That it is desirable that the notification of pulmonary tuberculosis (consumption) should be compulsory; (*b*) that application be made to the Local Government Board for an order to be made to include pulmonary tuberculosis (consumption) among the diseases to be notified under Section 55 of the Public Health (London) Act, 1891, and to extend the provisions of the following sections of that Act to pulmonary tuberculosis (consumption) in regard to the cleansing and disinfecting of premises, the disinfection of bedding, the disinfection of infectious rubbish thrown into ashpits, the penalties on letting houses in which infected persons have been lodging, on persons letting houses making false statements as to infectious disease, and penalty on ceasing to occupy house without disinfection or notice to owner, or making false answer. The representative of the Poplar Borough Council will move, on behalf of that body, that in the opinion of the conference it is desirable, in order to limit the spread of pulmonary tuberculosis, provision should be made for public inspection and control at its several sources of the milk supply of London. Councillor Dr. W. J. Nolan (Paddington) will propose that the President of the Local Government Board be asked to receive a deputation from the conference in support of the resolutions.

British Medical Journal.

SATURDAY, MAY 25TH, 1907.

THE CHARTERS OF MEDICAL ETHICS.

On another page is reproduced a tablet set up by Sir Richard Havelock Charles in the Hospital of the Medical College at Calcutta on which are inscribed the great ethical codes which have from time immemorial governed the professional conduct of medical practitioners in the West and in the East. The British code, which is summarized in the maxim "Do unto "others as you would they should do unto you," embodies the essence of all morality as between man and man, and in the sphere of medicine it applies with equal force to the relations between doctors and patients and to those of doctors with each other. Whoso acts always in the spirit of that maxim may truly be said to keep the whole law. If it were universally acted upon, there would still doubtless be complaints from patients —for the sick man is often unreasonable—but there would be none of those disputes between brethren which are so painful to all who have a proper sense of professional dignity, and which tend to lower the whole body in the esteem of the public. The so-called Hippocratic oath has for more than 2,000 years been the foundation of all rules for the professional conduct of doctors in the West, and it forms the basis of such oaths as are still administered to candidates on their admission within the sanctuary of medicine. It is, in the original sense of the word, the "sacrament" by which the young doctor pledges himself to discharge in a spirit of loyalty, both to his patients and to his profession, the new duties and responsibilities he is taking upon himself. A comparison between it and the Hindu code may be interesting. In dealing with Oriental works of medicine, one is confronted at the outset by a serious obstacle in the difficulty of fixing their dates. On this point experts of equal authority differ to the extent of many centuries. The two principal authors, Charaka and Susruta, have been assigned to the eleventh and twelfth centuries, but there is ground for believing that Susruta wrote in the first centuries of our era, while Charaka is assigned with confidence by M. Sylvain Lévi, Professor of Sanskrit at the Sorbonne, to the first century. He seems to have been the private physician of Kanishka, an Indo-Scythian king of that period. The influence of Greek medicine which some scholars say can be traced in the doctrines of Charaka, are easily explained, if he lived at the court of an Indo Scythian monarch at a time when Hellenism was leavening the old Brahmanic civilization.

The authorship of the "Hippocratic" oath is unknown, but it is generally regarded as the most ancient of the records of the family of the Asclepiadæ. Its sacerdotal character makes it probable that it is the final expression of an antique formula which had a priestly origin and in the course of time passed from the temple to the school. Von Oefele, who believes that Greek medicine was at least partly derived from that of Egypt, expresses the opinion that the Hippocratic oath is of Egyptian origin. His argument is that the narrow spirit of caste reserving the teaching of medicine to certain privileged families is foreign to the free thought of Greece. His view is that the Greeks who went to study medicine in Egypt had to submit there to ceremonies of initiation or investiture, which they afterwards introduced in an appropriately altered form into their own country. The Indian oath is more obviously and definitely religious in character. It had to be taken by the candidate, not at the end of his studies, but before he was allowed to begin them. It was, therefore, part of a solemn rite of initiation which was not peculiar to medicine, but a traditional custom of the Hindus. This makes the points of similarity between the two ethical codes all the more striking, and the resemblances would probably be found to be still closer if the full ritual of the admission of Greek neophytes to the full status of practitioners had been preserved.

On the other hand, there are some notable differences. While the Hindu physician swore that he would take no fee from the poor, the Greek doctor only bound himself to treat his masters and relatives gratuitously. The form of the Hindu oath given by Susruta imposes upon the practitioner much larger obligations of this kind than that of Charaka, the doctor taking upon himself the solemn duty to treat gratuitously with his own remedies all Brahmins, spiritual directors, poor persons, friends, neighbours, men devoted to piety, orphans, and persons coming to him from a distance, as if they were his friends. So comprehensive, in fact, is the obligation that one wonders to what class of persons the physician could look for his means of livelihood. In the Greek and the Hindu oath the injunctions as to the respect to be shown to women are practically identical; but here Charaka is stricter, for he adds that the doctor must not have any dealings with women in the absence of their husbands or guardians, nor accept any presents from them without the consent of one or other. Again, in regard to the rule of medical secrecy, Charaka is fuller. Not only must the things which the doctor sees in the house not be divulged, but nothing must be said as to the probable termination of the illness if this is likely to be hurtful to him or to any other person. Again, as regards devotion to the patient's interest, Charaka says the doctor must devote himself entirely to the good of the person under his care, and, even were his own life in danger, he must not consent to do harm to a patient. It must be noted that the terms of the Hippocratic oath should be supplemented by many passages in the Hippocratic writings, in which incidental mention is made of the duties of physicians to patients. These help to fill up what appear to be important omissions in the oath. It is interesting to compare the old Hindu oath with that which the modern Egyptian doctor has to take when he is about to enter on the practice of his profession. We take the text from the *Lancet*, which published it some years ago. "I swear in the name of God the Most "High, and of His sublime prophet, Mohammed, whose "glory may God increase, to be faithful to the laws of "honour, honesty, and benevolence in the practice of "medicine. I will attend to the poor gratuitously and "will never exact too high a fee for my work. Admitted "into the privacy of a house, my eyes will not perceive "what takes place; my tongue will guard the secrets "confided to me. My art shall not serve to corrupt, nor "to assist crime, and I will not yield, under any pretext "or persuasion, to prescribing any poison to any one. "I will neither give nor prescribe to any pregnant "woman poisonous drugs capable of provoking or pro-"ducing an abortion. Ever respectful and grateful to "my masters, I will hand on to their children the

'instructions which I have received from their fathers. 'May I be respected by men if I remain faithful to my 'vow. If not, may I be covered with shame and 'despised. God is witness to what I have said. The 'oath is finished."

With regard to the passage in the Hippocratic oath in which the practitioner undertakes not to cut for stone, it may be pointed out that some authorities hold that the proper translation of the words is: "I will 'not perform castration even on those who suffer from "stone, but will leave that to specialists." Whether this be so or not, it is certain that the operation for stone and that for hernia was left to surgeons of a lower grade called *incisores* almost till the beginning of the eighteenth century.

The oaths taken by candidates on admission to the doctor's degree in mediaeval universities were concerned with the upholding of the dignity of physic as against surgery and pharmacy, and with maintaining the privileges of the university, much more than with medical ethics. Molière's burlesque in the *Malade Imaginaire* is scarcely a travesty of the oath imposed by the University of Paris.

Of modern oaths, that which used to be taken by doctors in the Netherlands may serve as a specimen:

> Testor Deum omnipotentem (sancte promitto) me in curandis aegris, diaetam aliaque remedia, quantum ingenii viribus assequar, ex artis regulis ad aegrotantium salutem et commodum commendaturum; nec prece, nec pretio aliave de causa pharmacum noxium cuiquam propinaturum, nec gravidae abortum procuraturum. Audita vel visa inter curandum, nisi republicae ea efferri intersit, silentio suppressurum; in examine autem forensi ad judicem fideliter relaturum quid actum, quid repertum sit, et de indole mali ex animi sententia religiose pronuntiaturum, etc.

This, it will be seen, is in its essential features the old Hippocratic formula, with some expansion in the direction of regard for the public weal. Oaths of a like tenor are still administered in many universities as a part of the graduation ceremony. But as professional relations have become more complex a "development" has naturally taken place in medical ethics similar to that which is described by theologians in the case of dogma. The whole duty of medical man can no longer be packed into a short formulary. But the fundamental principles of professional conduct still remain those embodied in the old Vedic and Hippocratic oaths.

A HOPELESS CAUSE.

WE think it would be well if representatives of science were more often to leave their laboratories and descend into the arena in defence of vivisection. At present almost the only opportunities the public has of learning anything about the subject come from its enemies. All praise, therefore, to Professor Halliburton for coming forward against that professional champion of obscurantism, Miss Lind-af-Hageby. A report of the debate, which took place at the Portman Rooms on May 16th, will be found at p. 1255. The audience, which filled the room almost to the limit of its capacity, took the keenest interest in the thrusts and passes of the disputants. It is a pity, however, that the manifestations of feeling sometimes took the form of noisy interruptions, but the statements of certain newspapers that the uproar was all on the side of a rowdy party of medical students are simply false. It is true that these young men showed greater lung power than their opponents, who were to a large extent women; but the latter fully made up in shrillness what was wanting in volume of sound, and their interpellations were of a decidedly more spiteful character than those of the students. We think it a pity that in these debates the speakers should not be allowed to state their case without attempts to shout them down. But, for the students, the plea in mitigation may be put forward that not only is a cause with which they are naturally in sympathy outrageously—and it is to be feared, often wilfully—misrepresented, but teachers whom they hold in honour, and whom they know to be humane English gentlemen, are persistently vilified and insulted, while they themselves are described as ruffians who gloat over the sufferings of tortured animals, and treat their cries and writhings as "fun."

We do not propose to go over the ground traversed by the disputants; it is by this time familiar enough to our readers, and there was little in the debate that calls for comment. The debate turned on two distinct questions: Is vivisection necessary? and Is it justifiable from a moral point of view? On the former of these points there can really be no discussion among persons who know what they are talking about, and the debate between Professor Halliburton and Miss Lind-af-Hageby was like a struggle between light and darkness. To vivisection we owe whatever knowledge worthy of the name we have of the facts that lie at the foundation of medicine; and it is this direct first-hand knowledge that is gradually transforming the art of healing into an exact science. The Swedish lady foretold that the twentieth century would see the end of vivisection. It is proverbially dangerous to indulge in prophecy, and this prediction reminds us of the worthy people in the middle of the nineteenth century when the discovery of anaesthesia was announced, who assured the world that in a year or two nothing more would be heard of this new-fangled nonsense.

There is another analogy between the denunciation of anaesthesia and that of vivisection, in that the opposition was in both cases based on moral considerations. Anaesthesia was declared to be impious as violating the ordinance of a beneficent Creator, who had made pain a part of the scheme of the universe. Now, anti-vivisectionists argue that no matter what pain man may have to endure, he has no right to seek relief from experiments on animals. He must die of tuberculosis rather than sacrifice a guinea-pig; he must shiver with malaria rather than "torture" a mosquito; he must see his child die in the horrible throes of diphtheria rather than allow a little blood to be drawn from a horse. This curiously perverted ethical sentiment finds its full expression in the cult of the dog which is pampered by sentimental persons who allow human beings to starve, or, worse still, to work themselves to death for them in noisome dens under conditions in which they would not suffer an animal to live. A sane morality teaches that a human being is of more account not only than many sparrows, but of a wilderness of monkeys and all the dogs and cats in the world. From the moral as well as the scientific point of view, therefore, we hold that man has the fullest right to seek to discover truth by vivisectional experiment, provided, of course, he takes every care not to cause needless pain to the animals which he uses. The moral blindness of persons who call a benefactor of his kind like Lord Lister a "brute," as some did the other night, can be explained only by the charitable hypothesis of dense ignorance. But ignorance when wilful is immoral, and we ask our anti-vivisectionist friends seriously to consider what they are doing in denouncing as monsters of cruelty men who devote themselves to work for the good of

mankind, work which is so poorly paid that it may truly be said in regard to it that virtue is its own reward.

The antivivisectionist agitation, so far from gaining strength, has evidently been becoming weaker for some time past. This doubtless accounts for the increasing violence of the language of its supporters and for their frenzied efforts to capture the "man in the street." Moreover, their house is divided against itself, and is slowly but surely falling to pieces. Their parlous state is amusingly shown by the joy expressed at the recent acquisition of a medical recruit in the person of Dr. Herbert Snow. That interesting "convert" was exhibited at the annual meeting of the British Union for the Abolition of Vivisection held on May 16th, with something of the triumph with which a saved sinner is shown at a revival meeting. His new allies have doubtless seen to it that Dr. Snow, who, by his own confession to the Royal Commission, had never read the Act the abolition of which he professes to long for, has now made himself a little better acquainted with the subject on which he is offered to the public as an authority.

Such ignorance appears to be by no means uncommon among the opponents of vivisection. At a meeting of the Hampstead and District Branch of the National Antivivisection Society held not long ago, the Mayor of Hampstead, while declaring that he was persuaded that the objects of the Society were excellent, confessed that "like many others whose sympathies were with the Society and its work," his interest had been rather languid and perhaps passive. He went on to show how closely he had studied the question by complaining that the Royal Commission on Vivisection was keeping the evidence from the public! We suspect that those who know more about the matter than his Worship would be thankful if the evidence—at least, that of the antivivisectionist witnesses—were kept back, for it is cutting away the ground from under their feet. Those who stand for science have no reason to fear publicity; but the deadly bacillus of ignorance is killed by light. Antivivisectionism is indeed, as Professor Halliburton said, a hopeless cause.

DEMONOLOGY AND DISEASE.

THE earliest conception of disease seems to have been that evil spirits for the time being took possession of the body. This general notion expressed itself in various ways. When the manifestations of a disease were sufficiently characteristic to stamp it with an individuality of its own it was attributed to the machinations of a particular demon. This belief lingered into times well within the range of recorded history, and, indeed, traces of it survive in civilized countries at the present day. The Hindus built temples to the Goddess of Small pox a fact used with deadly effect by Edmund Burke in his impeachment of Warren Hastings, whose apologists had pointed to the temples erected in his honour by the natives as evidence of the mildness of his rule. The Romans had no fewer than three shrines dedicated to the Goddess of Fever, which was doubtless malaria. At the present day there is a church in Rome dedicated to Our Lady of Fever, which is a lineal descendant of these shrines. Another belief was that the demon of disease was introduced by evil-disposed persons by means of magic. Again, in different races or tribes are found such beliefs as that disease is caused by ghosts of the dead, or by the spirits of animals killed in hunting invading the living. These notions must be carefully distinguished from the later concept that disease is a punishment inflicted by an angry Deity.

This notion of the causation of disease naturally led to methods of treatment directed to the dislodgement of the demoniac intruder. Sometimes a hole was bored in the sick person's skull to provide an outlet by which the evil spirit might escape. But the most common plan of expelling the disease demon was to make his usurped abode as uncomfortable as possible. The patient was beaten, starved, smoked with evil-smelling substances, and drenched with every foul thing that the savage imagination could conceive. The fumigation method is illustrated by the story in the *Apocrypha*, in which Tobias is said to have freed his bride from the embarrassing attentions of the wicked spirit which had slain her previous husband by taking the ashes of the perfumes placing thereon the heart and liver of a fish, and "making a smoke therewith, the which smell, when "the evil spirit had smelled, he fled into the utmost "parts of Egypt."

Sometimes, as in certain East Indian islands in our own day, demons suspected of causing epidemics were lured away by stratagem. The image of a man is placed in a small boat provisioned for a long voyage, and set afloat to drift whithersoever the wind and tide may carry it, and as it is being launched the people cry, "O sickness, go from here; turn back; what do you "here in this poor land?"[1]

Even in our own land, which so many of us believe has the privilege of a special illumination from heaven, we have it on the authority of no less a person than Sir Arthur Mitchell, formerly one of the Scottish Commissioners for Lunacy, that a cure for epilepsy is sought for in a propitiatory sacrifice to the spirit which causes the disease. On the spot where the patient falls a black cock was burned alive, along with a lock of the patient's hair and some parings of his nails. Mitchell says that this sacrifice was openly offered shortly before he wrote[2] in a growing town in Scotland, with six churches and ten schools for a population of about 4,000, and on a railway line. The beating out of evil spirits, in which some ingenious persons discern the beginning of massage, was used in comparatively modern days in the exorcisms which were practised on the supposed victims of demoniacal possession. With what cruelty these poor sufferers from hysteria, hystero-epilepsy, and other conditions grouped by modern medicine under the head of neuroses, were treated may be read by the curious in the records of the possessed nuns of Loudun, in what French writers call the "*grand siècle*" when the Sun King reigned over France.[3]

A relic of the same concept of the origin of disease is perhaps to be seen in the brutal treatment that used to be the lot of unhappy victims of mental disease till their chains were struck off by Pinel, and the gyves, manacles, iron frames, "gyrators," "tranquillizing "chairs," and other instruments of torture by which they were restrained were finally abolished by the efforts of Tuke and Conolly.

In the matter of medication, too, the system of ejecting the trespassing spirit by making the quarters in which he had established himself as far as possible uninhabitable, persisted long after the belief on which it was originally founded had died out, and is not even now entirely extinct. The horrible concoctions prescribed by doctors in the Middle Ages might seem to have been intended for the forcible eviction of evil spirits. Mediæval pharmacy is fairly represented by the contents of the witches' cauldron in *Macbeth*.

[1] J. G. Frazer, *The Golden Bough*, vol. ii, p. 186.

[2] On Various Superstitions in the South-west Highlands and Islands of Scotland, especially in Relation to Lunacy, from *Proceedings of the Antiquarian Society of Scotland*, vol. iv, 1863.

[3] See Bourneville's *Bibliothèque Diabolique*. Paris: Félix Alcan, 1885, 1886, 1890, 1896.

Marvellous virtues were attributed to mummy powder. Human fat was held to be the sovranest thing on earth for rheumatism; a brisk trade in it was driven by the mangman, among whose perquisites it was. This commodity is still an article of commerce in certain parts of France, the raw material being got from the dissecting rooms, and it is said still to be asked for occasionally in Germany. The human skull, particularly if taken from the gibbet, was credited with potent curative properties. In Philemon Holland's translation of Pliny's *Natural History* we read:

"And yet see what *Democritus*, one of them, hath done? There be extant at this day books of his enditing and perusing, wherein you shall read, That the scull of a wicked malefactor is in some cases better than that of an honest person, and in other, That of a friend and guest, preferred before a straunger." "As for *Apollonius*, another of that brood, hee hath written, That if the gumbs be scarrified with the tooth of a man violently slaine, it is a most effectuall and prefant remedie for the toothach. *Artemon* had no better receipt for the falling sicknesse than to draw up water out of a fountaine in the night season, and to give the same unto the Patient to drinke in the braine-pan of a man who died some violent death, so he were not burnt. And Antheus tooke the scull of one that had been hanged, and made pills thereof, which hee ministred unto those who were bitten by a mad dog for a sovraigne remedy."

Even at the present day the same substance is employed in the Philippine Islands, and not long ago an American doctor reported in one of the leading medical journals of the United States a case of asthma, in which after his own remedies had failed, a cure was effected by a powdered human bone taken from a public cemetery. Preparations that might seem to have been devised for the delectation of ghouls are described in a French *Pharmacopée Universelle* published in Paris so late as 1698, and powdered mummy was still quoted in Medicinal Catalogues in 1719. Of the filthier ingredients of mediaeval prescription we prefer not to speak. Even at the present day the faith of hospital patients in the efficacy of the physic given them is often in direct proportion to its nastiness; in this the student of anthropology may perhaps see a survival of the old belief that the aim of medicine is to drive out the devil who is the cause of the disease.

The demonological theory of disease held sway over the minds of men for thousands of years. If it cannot exactly be called a *jolie hypothèse*, as the French philosopher called the existence of God, at any rate, like that pretty hypothesis, it supplied a convenient explanation of many things. But if the simple pathology of primitive man causes us amusement, the smile dies on our lips when we reflect on the appalling consequences of that belief translated into action. It was the notion that disease was caused by demons that led to the belief in witchcraft, which survived in full vigour till the seventeenth century, and is not by any means extinct in this century of light. The belief in witchcraft caused the persecution and judicial murder of countless human beings, chiefly old women, guilty of nothing worse than eccentricity or madness. The medical profession may justly pride itself on the fact that to the teaching of some of its members the abolition of atrocities which make the heart sick was mainly due.

The names of our countryman, Reginald Scott, and his German contemporary, Johannes Wier, deserve a place in medical history side by side with those of the greatest discoverers, because their enlightenment and courage were the means of delivering the human race from one of the most execrable of superstitions. What courage was needed to expose the damnable error of witchcraft may be gathered from the fact that Reginald Scott's book, published in 1584, was burnt by order of James I, while Wier was denounced by men of the highest position as the "wicked" man who dared to defend the most hateful of created beings. They said it was impossible for any one who had the honour of God at heart to read his "blasphemies" without being carried away by righteous anger. In the sixteenth century such opinions held by men who had the power to give practical effect to them too often took the concrete form of the torture chamber and the stake. It is with regret and something of shame that one recalls the fact that nearly a century after Wier had pleaded for mercy towards the "poor demented and "deluded old women," a physician who is one of the glories of English literature—Sir Thomas Browne—gave evidence in a court of law which helped to bring about the burning of two harmless women for witchcraft.

Witchcraft is by no means dead yet, and as readers of J. K. Huysmans know, "Satanism" with the "black "mass" and the like superstitions have still a fascination for minds of a certain kind of morbid culture. With these things the demoniac theory of disease has a close affinity. The same superstition survives in another form in the doctrines held by many at the present day that disease is the result of sin, and that sickness is in itself sinful. From this teaching springs the rank growth of quackery which chokes the good seed of truth in the minds of so many of those to whom the higher education has failed to teach the right use of their reason.

THE COVENTRY DISPENSARY.

Since we last drew attention, some three weeks ago, to the Coventry Dispensary and to the efforts being made for its reform, there has been no material change in the position locally; but a very important development in connexion with the matter has taken place elsewhere. As will be seen from a detailed account published in this week's Supplement, the Central Division of the Birmingham Branch of the British Medical Association has now, after full consideration, adopted a resolution which will make it impossible for medical men in Birmingham, whether consultants or in general practice, to give their countenance in any wise to medical men who may be members of the medical staff of the Coventry Provident Dispensary after June 24th—always supposing that in the meantime the management of the Dispensary is not altered in such manner as to meet with the approval both of the Coventry and Central Divisions. It is right, of course, that such proviso should have been made, but we are doubtful if, in the short interval that remains before the date mentioned, any real reform will be brought about, for the profession in Coventry has been exceedingly long suffering and reasonable in its requests, and the managers of the institution have hitherto obstinately refused to fall in with its views in any way whatever. It is unlikely, therefore, that there will be any change of front on their part at the eleventh hour, or until they have been made to feel the full force of what deafness to a well-considered application by representatives of the medical profession really entails. This it is that makes it so desirable that the resolution adopted at Birmingham should be widely known. The source from which Coventry naturally draws medical assistance in the form of consultants is Birmingham. Hence any medical man elsewhere who, whether

acting habitually or occasionally as a consultant, is requested after June 24th to visit Coventry, either by the managers of the Provident Dispensary, or by a medical man on the staff of that institution, may take it for granted that he is asked to attend because Birmingham consultants, in virtue of the resolution to which attention has been drawn, have declined to do so. As will be seen on reference to the Supplement, the resolution was passed at a special meeting summoned to consider a report upon the whole matter which the Executive Committee had been asked to supply. It was, therefore, no hurried resolution, but a self-denying ordinance deliberately passed after full consideration of the whole matter. Its passage, under the circumstances, is a further proof of the justice of the quarrel of the medical profession in Coventry with the Dispensary managers, and it would be a pity if the effect of so public-spirited an action were minimized, unwittingly or carelessly, by consultants in other towns stepping into the breach and doing work which Birmingham has thought it right to refuse in advance to undertake.

MEDICAL DEFENCE.

In the British Medical Journal for April 27th an account was published, on page 1000, of the proceedings at the annual general meeting of the London and Counties Medical Protection Society, and in the present issue, on page 1259, will be found a full report of the corresponding event in the history of its coadjutor, the Medical Defence Union. Whether taken together or separately, these accounts show clearly the ample scope that exists for the energies of such societies; what valuable work for individuals, and indirectly for the profession at large, they may and do perform; and the increasing extent to which medical men are recognizing the advantages of membership of one or other of them. This is as it should be, for, apart from disputes liable to arise in the course of work between brother practitioners, which may easily be settled on reference to the judgement of a body of which they are both members, the profession of medicine is undoubtedly one which, above all others, exposes those who pursue it to attack. The meeting of a charge brought against him by one of the public must in any case be a source of annoyance and loss of time to a practitioner, and under ordinary circumstances may entail enormous financial loss, if not professional ruin; and this is particularly likely to be the case when the charge is one of malpraxis, or when statements of a gravely libellous nature are made. It is true that membership of a defence society may not entirely remove from any medical man all such danger and loss; but it goes very far in that direction even if an action is actually brought against him; and, what is almost equally important, the fact that he belongs to a defence society diminishes very greatly the chances of any action against him ever having seriously to be fought out at all. The existence of these societies is now becoming very well known among the general public, and many solicitors and others who at an earlier date would not have hesitated to press forward charges against an individual are less inclined to do so when they know that behind him is a powerful body whose executive officers are well versed in the art of meeting what are very often nothing more than blackmailing charges. In the circumstances, it would seem folly for any medical man engaged in practice to neglect to protect himself so far as he may by joining one or other of the societies, so it is not remarkable that the membership of both is growing. That of the Medical Defence Union has now reached over 7,000, a number which is justly regarded as a very fair proportion of the possible total, for, of course, the number of medical men who are in practice within the British Isles is very much less than the total number of names on the *Medical Register*, and it is only to those who are in practice in England, Scotland, Ireland, and Wales, that membership of the Society is open. Another interesting point in the report is the fact that although the legal expenses incurred are comparatively high, being equal last year to about two-thirds of the sum received in the form of annual subscriptions, it has never yet proved necessary to call upon the guarantors for their assistance; and this in the future seems less likely than ever to be the case, for a reserve fund appears to be now accumulating owing to the introduction some time ago of an entrance fee of 10s., payable by all new members.

ANNUAL DINNER OF THE ROYAL SANITARY INSTITUTE.

The dinner of the Royal Sanitary Institute, which since 1898 has become an annual function, was held in the Langham Hotel on May 15th. The chair was occupied by the Duke of Northumberland, who succeeded the Duke of Cambridge as President of the Institute in 1904. There were also present Major-General Right Hon. Lord Cheylesmore, Mr. H. D. Searles-Wood, F.R.I.B.A., Chairman of the Council; Sir Francis Sharp Powell, Sir Lauder Brunton, Sir John McFadyean, Sir Shirley F Murphy, Surgeon-General Sir Alfred H. Keogh, Sir James Crichton-Browne, Sir Thomas Brooke-Hitching, the Mayor of Brighton (Dr. H. Gervis), the Chairman of the Health Committee, London County Council (Dr E B. Forman), Colonel J. Lane Notter, Professor Bostock Hill, Professor H. R. Kenwood, Dr. Meredith Richards, Mr. A. Wynter Blyth, Dr. George Reid, Dr. P. Boobbyer, Dr. H. Handford, Dr. Louis Parkes, and Dr. W Collingridge, and others. Sir Thomas Brooke-Hitching proposed the toast of "The Houses of Parliament," which was responded to by Lord Cheylesmore and Sir Francis Powell. The latter pointed out how greatly the Royal Sanitary Institute had influenced legislation in regard to public health. The housing of the people brought problems of its own, but sanitarians were not satisfied with merely confining their considerations to sanitary conditions, but sought to elevate the people morally as well as physically. A new feature in sanitary work was the recognition that there was a connexion between the feeding of children and their education. In referring to the legislative work of the session, Sir Francis Powell spoke of Mr. Burns as a Minister whose heart was thoroughly in his work, and who was bent upon improving the sanitary surroundings of the people. The Duke of Northumberland proposed the toast of "The Royal Sanitary Institute," and in doing so spoke of the lack of proper housing accommodation in the country districts. In this connexion the Institute has done good work in giving a prize for the best account of domestic labour-saving appliances. Mr. Searles Wood, in responding, said that there were in this country about 5,000 appointments which ought to be held by holders of certificates from the institute, and, although it might appear that in the 800 candidates who annually presented themselves for examination they were overstocking the market with applicants for these appointments, they must look upon each candidate as a sanitary missionary in his own domestic and social circle. The toast of "The Visitors" was proposed by Sir Aston Webb, and, in responding, Colonel Sir Charles Watson made the rather startling statement that the War office, and not civilians, had started the great sanitary crusade in this country. He referred to the great work of Sidney Herbert and the Commission of 1857 apparently forgetting that the Towns Improvement Clauses Act was passed ten years earlier, and that it followed the report of the Health of Towns Commission.

THE PREVENTION OF CONSUMPTION.

THE National Association for the Prevention of Consumption and other Forms of Tuberculosis held its eighth annual meeting on May 7th, the Earl of Derby in the chair. Among those present were: Sir Constantine Holman, Sir Ernest Clarke, Dr. Alfred Hillier, Dr. Nathan Raw, Dr. Theodore Williams, Dr. T. D. Acland, and Dr. J. J. Perkins, Honorary Secretary. The report of the Council for the past year stated that the expenditure had exceeded the income by £143. A very small increase of income would greatly enlarge the field of operations. The report of the Royal Commission on Tuberculosis was a subject of peculiar gratification to the Association, as it confirmed the position which it had always taken, and proved the possibility of infection by articles of food, such as meat and milk. Legislation must follow, and one of the great dangers to child-life would be removed. Incidentally this was likely to lead to the better provision of pure milk generally, and thus help to sweep away other diseases of young life and tend to improve the national physique. The Council hoped to be allowed to send a deputation on the subject to wait on the Local Government Board. Lord Derby, in moving the adoption of the report, said that since the movement for the prevention of tuberculosis had been initiated a great advance had been made, and more general interest was now taken in combating the disease. Sanatoriums had been erected in various parts of the country; and if they could persuade public bodies to take such steps as would keep the homes and workshops of the workers of the country in a sanitary and healthy condition, something more would be done to mitigate the evil. Sir Herbert Maxwell seconded the motion, which was adopted. Sir James Blyth moved that immediate steps should be taken by the Legislature in formulating measures for the protection of the public on the lines suggested by the Royal Commission on Tuberculosis. He believed that the Government was inclined to help in the matter, as Mr. Burns had indicated to him that it would do something. Dr. Nathan Raw of Liverpool seconded the resolution, which was unanimously adopted.

A SURGICAL HOME OF RECOVERY.

A MEETING was held at the Mansion House on May 8th under the presidency of Alderman Sir Walter Vaughan Morgan, in aid of the movement for the establishment of a "home of recovery" for surgical patients who when discharged from hospitals as convalescent required a further period of surgical care. Among those present were Mr. Mayo Robson, Mr. Stephen Paget, and Sir Alfred Fripp, with representatives of the seven London hospitals supporting the movement. To the Committee formed with this object in view Charing Cross, Guy's, University College, Middlesex, London, King's College, and St. Thomas's Hospitals had elected representatives, and it was proposed to erect and endow a home of recovery in which, on the recommendation of these general hospitals the surgical treatment of convalescents could be effectively carried on. The home had been incorporated under a trust, the President of which was Her Royal Highness Princess Louise Duchess of Argyll. The Chairman pointed out that though many of the hospitals possessed convalescent homes these were unable to admit patients unless they were actually convalescent. There was, therefore, plenty of room for the home of recovery. The committee had wisely decided not to start the home until it could see its way to building a suitable home and to keep it going. For this an appeal for £30,000 was being made. Mr. Mayo Robson moved a resolution approving the objects of the home of recovery, as described in its trust deed, and expressing the hope that the committee would meet with adequate support in its efforts to alleviate much unnecessary suffering in cases unavoidably discharged from London hospitals in order to make room for more urgent cases awaiting admission. Sir Alfred Fripp seconded, and the resolution was unanimously carried.

THE TEETH OF THE NATION.

AT its annual session, which has been in progress at Cardiff this week, the British Dental Association devoted much of its time to a consideration of the means by which the teeth of the nation might be improved. It is a subject which only of late years has attracted any attention at all, and the importance attached to it by the public at large is still far less than it should be. How grave a national risk defective teeth may become was sufficiently evidenced by the enormous wastage during the South African war owing to the number of men who lacked sufficient teeth to masticate ordinary food, and to the same cause is due a large proportion, if not the majority, of the rejections of otherwise suitable army recruits at the present time. Besides this, the effect on the national physique, quite apart from fitness for military service, has to be considered. Without adopting the extreme views as to the effect of carious teeth on the general health which have been put forward in some quarters, it is indubitable that dyspepsia is not only a consequence but a cause of ill health, and it is almost equally incontestable that dyspepsia would be much less prevalent in this country than it is if defective teeth were not so exceedingly common. Obviously, however, the evil cannot reasonably, from a national point of view, be attacked by dealing with the mouths of adult patients, except in the case of bodies such as soldiers. Nor it is feasible to obviate the evil by removing its cause, for in the present state of knowledge the reason why the teeth of the present and rising generation are so much more prone to decay than were apparently those of their early forefathers must be regarded as a moot point. What, however, can be done is to educate the people to regard the care of the teeth as a matter of the highest importance and check decay in the teeth of children at school ages. As to the extent to which caries exists amongst school children, the results of several interesting investigations were recorded at the meeting at Cardiff, all of them fully confirming the views on the subject expressed a year or two ago by Dr. Kerr, of the London County Council. Figures were brought forward which indicate that not more than 3 per cent. of all children of school age have sound teeth. Various suggestions of a practical nature were made as to what might be done in the matter, and it was shown that in an increasing number of centres the school authorities and others are taking up the question seriously. The estimates of what it would cost to provide skilled attention for the teeth of all children in elementary schools varied a good deal. One estimate, which seemed to be well thought out, placed the expenditure at £1,200,000 a year. This, it was suggested, should be treated as a national charge, and not allowed to fall on the shoulders of local ratepayers.

MEDICINE AND THE MACCABAEANS.

THE Maccabaeans, a society united primarily by the bond of the Jewish faith and secondarily by adherence to one of the learned professions—art, science, or literature—gave a dinner in honour of the medical profession on Wednesday night, at the Wharncliffe Rooms, Hotel Great Central. Dr. Bertram Abrahams occupied the chair, and about 170 members and guests were present. Among these were Sir R. Douglas Powell, President of the Royal College of Physicians; Mr. Henry Morris, President of the Royal College of Surgeons; Dr. Donald MacAlister

President of the General Medical Council; Sir A. K. Keogh, Director-General of the Army Medical Department; Professor Clifford Allbutt; Dr. W. H. Willcox, one of the official analysts to the Home Office; Sir Shirley Murphy, Medical Officer of the London County Council; Sir William Selby Church, Sir Frederick Treves, Sir John Batty Tuke, M.P., Dr. W. H. Allchin, Sir Anderson Critchett, Sir Stephen Mackenzie, Sir John Tweedy, and many others. It will be seen, therefore, that the assembly was truly representative of all branches of the profession in whose honour the dinner was held. Dr. Bertram Abrahams in proposing "The Medical Profession," expressed his regret that so many of his co-religionists took up destructive professions like the army and the law to a neglect of medicine; there were only three Jews on the consulting staffs of the great London hospitals. Sir Douglas Powell—one of those who acknowledged the toast—in speaking of the high aims of the medical profession, expressed a belief that the report of the Commission on Vivisection would disprove a great many of the false ideas and false statements which had long been current in regard to the humanity of the medical profession. Mr. Henry Morris in a lively speech displayed great intimacy with the history of medicine in early, almost pre-historic days. He claimed that many of the complimentary passages which he quoted from early Hebrew and Greek writings, though ostensibly relating to the physician, really referred to the surgeon. He also brought forward the Hummurabi code in evidence of the position of medicine B.C. 2150, and pointed out the way in which its regulations might be used as arguments on either side of the great alcohol question in all its aspects, medical, social and political. The proceedings did not conclude until a very late hour, the last toast of the evening being one to "The Chairman," which was proposed by Sir John Tweedy and duly acknowledged.

CONVALESCENT HOMES ASSOCIATION.

The second annual meeting of the Convalescent Homes Association was held, at 32, Sackville Street, W., on May 16th, Sir William Church, Bart., in the chair. Among those present were Miss Alice Gladstone, Dr. S. H. Habershon, and Mr. A. Willett. The second annual report was received and adopted. It presented a record of satisfactory progress. This year a number of special surgical beds had been made available without any appeal for monetary assistance from the public—viz., 20 beds (10 for men and 10 for women) at the Bexhill Homes of the Metropolitan Convalescent Institute, opened in June, 1906; 9 at Mrs. Gladstone's Home for Men and Boys; 6 at the Baroness de Hirsch's Home for the Jews, in July, 1906, together with some previously opened. In face of the alleged urgent need for further provision for convalescents recovering from operation, it was a striking fact that these new surgical beds were not yet fully occupied. It was suggested that one reason might, perhaps, be that very few of them were free, and that the Hospital Samaritan Funds were not able to support the expense. At the same time, it was believed that were their existence more widely known to the medical profession as well as to the public, there would be no lack of applicants for the beds. In October last, the Association having been requested to make some attempt to provide for children suffering from chronic surgical diseases, a petition was prepared and presented to the Parks Committee of the London County Council by a deputation. The petition applied for the use of one of the mansions in the public parks in possession of the Council. The Parks Committee did not, however, see its way to make any promise in the matter, and the Executive Committee considered it would not be desirable to take further steps in this direction at present. The munificent gift of £1,000 received from Mr. and Mrs. Bischoffscheim in December, 1906, had served to render the Association a little more independent of the subscriptions derived from the various hospitals and homes which had, so far, been barely adequate to pay for the necessary working expenses. The sum had been invested in the names of the Treasurer and Honorary Secretaries as Trustees. During the year a list of "frequent inmates and undesirables" had been compiled for private circulation among members. The membership of the Convalescent Homes Association now includes six hospitals and sixteen convalescent institutions, representing nineteen homes.

MATRIMONIAL STERILIZATION.

Zola said, in *Fécondité*, that there were twenty thousand women in France who for their own purposes had submitted to be unsexed. Even if this estimate, and the statements to the same effect by Léon Daudet, in *Les Morticoles*, and by Camille Pert, in *Les Florifères*, be greatly exaggerated, it is certain that a large number of French women who wish to escape from the burden of motherhood find operators unscrupulous enough to "sterilize" them. The following story, which is told of Tillaux, shows how much a matter of course such proposals must seem in a certain class of Parisian society. A married couple were one day shown into his consulting room. The lady explained the situation, saying that her husband and she were so entirely wrapt up in each other that they were anxious their matrimonial bliss should not be interrupted by the tiresome presence of a third person in the form of a child; wherefore, she added, lowering her voice, her husband had advised her to place herself in the skilful and discreet hands of the distinguished surgeon. Tillaux was taken aback for a moment, but instantly recovering himself, turned to the husband, who was smiling approval of his wife's words, and said to him: "That is a very happy idea of "yours, sir; but as the operation is much easier, less "dangerous, and more efficacious when done on the "man, I am willing, if you wish, to perform it on you!" Needless to say, the offer was declined. The witty surgeon must have felt a malicious pleasure in seeing the selfish husband go forth a beaten, if not a better, man.

NAVY AND ARMY MALE NURSING ASSOCIATION.

A meeting to inaugurate a Navy and Army Male Nursing Association will be held by kind permission of Lady Martin at 10, Hill Street, Mayfair, on Monday, June 3rd, at 3.15 p.m. The speakers will be Inspector-General Herbert Ellis, Director of the Medical Department of the Admiralty; Surgeon-General Sir Alfred Keogh, Director-General of the Army Medical Service; Sir Frederick Treves; Sir Richard Douglas Powell, President of the Royal College of Physicians of London; and Mr. Henry Morris, President of the Royal College of Surgeons of England. The primary object of the scheme—the suggestion of which is due to Miss Ethel McCaul—is to enable First-class Orderlies to find employment in civil nursing on leaving the services. It is further hoped that it will provide a trustworthy nursing reserve for the country, as every member of the Association would pledge himself to serve again in time of war. The need of such a reserve is proved by past experience, for during the South African war the country was scoured for male nurses, and the Army Medical Service had to depend on undisciplined and often untrained men, who had to be hurriedly engaged at the most expensive scale of remuneration. The sum of £500 is required to start the organization; a sum of £100 has been promised if £400 more can be collected. It may be added that the movement has the patronage of the Right Hon. R. B. Haldane, Secretary of State for War.

INTERNATIONAL CONGRESS OF HYGIENE.

WE are asked to state that the German steamship companies, Norddeutscher Lloyd and the Hamburg-Amerika Lines, have agreed to allow to members proceeding to the Fourteenth International Congress of Hygiene and Demography, to be held at Berlin, September 23rd to 29th, a reduction on the price of tickets on various lines. The office of the Hamburg-Amerika Line in Berlin has kindly undertaken to procure rooms for members in different hotels. Detailed information concerning tickets, etc., may be obtained from the Bureau of the Congress, Eichhornster 9, Berlin, N.W.

MEDICINE AND THE "BAR."

IT is not altogether uncommon nowadays for doctors to study the law, and the number of medical barristers is steadily increasing, but a new combination of medicine with the "bar" seems to have been initiated in Switzerland. The following is a translation of an advertisement which recently appeared in a Swiss newspaper: "Hotel in a most picturesque site, a distance of a "hundred metres from a police station. A physician is "attached to the establishment in which an abundantly "supplied English bar presents such attractions that "very few customers leave it of their own free-will." This statement lends significance to the hint as to the convenient proximity of the police station. But not many hotel keepers are so thoughtful as to offer the bane with the antidote by placing the services of a doctor at the disposal of their patrons. This was doubtless considered necessary in view of the dangerous seductiveness of a bar which very few customers are able to leave without assistance. It is gratifying to know that medical skill is so highly appreciated in an enlightened country like Switzerland. We cannot help hoping, however, that the doctor is not English, like the bar of which he is the tutelary deity.

A NEW ENDOWMENT FOR OXFORD.

THE University of Oxford in general and Pembroke College have reason to rejoice in the foundation of a new scholarship in medicine, owing to the liberality of Dr. Charles Theodore Williams. It is to be adjudged after open competition, natural science forming the predominant part of the examination. All candidates will be obliged to state in writing their intention to proceed to medical and surgical degrees in the University of Oxford, and to practise medicine or surgery. The scholarship is of the value of £100 a year, and tenable for four years under ordinary circumstances. In exceptional cases it may, if the Master and Fellows of Pembroke College so determine, be held for a fifth year, such year not necessarily being passed at Oxford. There is already a medical fellowship at Pembroke, and towards this the new scholarship may well smooth the path. The regulations respecting the scholarship seem calculated to ensure that the holder shall eventually become a practising physician or surgeon, and not remain simply a student of pure science: this, it is understood, is Dr. Theodore Williams's desire, and with the idea underlying it a great many people will be in sympathy.

THE honorary freedom of the City of London is to be conferred on Lord Lister. The proposal will come formally before the Corporation probably at its first meeting after the Whitsun recess.

THE King of Spain has conferred upon Dr. Gutierrez, the physician in attendance upon the Queen of Spain in her recent confinement, the title of Marquis San Diego and the Grand Cross of the Order of Isabella the Catholic.

A DEPUTATION recently waited upon the Government of Cape Colony to urge the appointment of a Commission on Tuberculosis. The Colonial Secretary suggested joint action by the local bodies and governments in order to deal with the more urgent cases requiring segregation. He added that the disease was very prevalent in spite of the climate, especially among coloured people.

A CONFERENCE of charity organization societies is to be held at Norwich on June 3rd, 4th, 5th, and 6th. The meetings on Tuesday, the 4th, and Wednesday, the 5th, will be open to the public. On the 4th a paper on Provident Medical Associations will be read by Dr. Gray, Chairman of the Medical Subcommittee of the London Charity Organization Society, and a discussion on the subject will be opened by Dr. Beverley. On the 5th, at 10 30 a.m., a paper on the Work of the School of Sociology will be read by C. S. Loch, D.C.L., Secretary to the Council of the London Charity Organization Society. In the evening, at 8 p.m., a paper on Preventive Measures and Home Treatment for Consumption will be read by Dr. W. B. Knobel, Honorary Secretary of the Malvern Charity Organization Society. A discussion on the subject will be opened by Dr. Burton-Fanning.

IT is with deep regret that we have to announce the death of Dr. Joseph Groves of Carisbrooke, which took place after a painful illness on May 21st. Dr. Groves, who was in his 68th year, had for many years been a prominent figure in the medical profession of the Isle of Wight. He was Medical Officer for the Isle of Wight Rural District for more than twenty years, and played a leading part in the furtherance of many reforms. He was an ex-President of the Incorporated Society of Medical Officers of Public Health, and had been President of the Southern Branch of the British Medical Association. He had long been a member of the Council of the Association, in which his sound judgement and manly personality will be greatly missed. We hope to publish a full obituary notice in a later issue.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Prohibition of Medical Practice by Companies Bill and Dental Companies (Restrictions of Practice) Bill.—The following lords were named of the Select Committee on these Bills; Viscount Falkland, Viscount Knutsford, Lord Hylton, Lord Ludlow, and Lord Colebrook.

Medical Inspection of School Children.—Mr. G. H. Roberts, for Mr. J. R. Macdonald, asked the President of the Board of Education if his attention had been called to the evidence given before the Departmental Committee on the medical inspection of school children, showing that the existing methods of inspection lacked uniformity and co-ordination, and were, in many instances, of little value, and whether he proposed to issue, for the guidance of the authorities and their inspectors, a memorandum of suggestions. Mr. McKenna, in reply, said he thought there could be no doubt that when the Administrative Provisions Bill became law, some guidance and advice from the Board of Education as to the methods of inspection, and the classification of results would be necessary. How to secure the maximum of advantage from a general system of medical inspection, consistently with securing the smooth working of the scheme and the co-operation of local authorities, was a matter which required and was receiving careful consideration, but he was not yet in a position to make any statement.

Ireland.

THE HEALTH COMMISSION, BELFAST.

THE Special Health Commission has been sitting all the week, and much important evidence has been given. Mr. George Ward, Executive Sanitary Officer, gave an account of his department and its working. He pointed out how seriously it was undermanned, and that one of his inspectors had not completed the round of his district since 1901. He was of opinion that though at present there was no effective systematic inspection, it was quite possible to adopt a system by which information of nuisances could be brought to the City Hall. The Chairman of the Commission said that it seemed to him that the whole organization of the department required reconsideration. The witness said that there was a scheme under consideration, which he outlined. The building inspectors were under the control of the Surveyor's Department; the sanitary inspectors were under him; he was responsible to his Committee (that is, the Health Committee); the medical superintendent officer of health was the chief sanitary officer, and the witness had a feeling that he was his subordinate or assistant; but in the laying of drains or describing how work should be done he would not consult the medical superintendent officer of health—they would co-operate together.

This evidence bears out the allegation of want of definiteness in the relationships of the officers in the Health Department which has been insisted on in these columns for many years. It would appear that the district medical officers of health and the executive sanitary officer are in some ways independent of the superintendent medical officer of health.

COUNTY ANTRIM INFIRMARY: ANNUAL REPORT.

This annual report shows that there were 376 intern and 454 extern patients treated during last year, with 17 deaths; there were 149 operations, of which 5 were fatal. Dr. St.George, the attending surgeon, in his report, draws attention to the sterilizing chamber built by Mr. H. M. Barbour for the operation theatre, and to the complete *x*-ray installation which has been presented by the Barbour family for the use of the infirmary and of the neighbouring medical men. These two improvements will be a great boon, bringing the equipment up to date, and forms a fitting ending to the many and greatly-needed renovations that were brought to such a successful termination last year.

POST-GRADUATE CLASS IN THE ROYAL VICTORIA HOSPITAL.

A post-graduate class on similar lines to that which proved so successful last year will be held this year. It consisted chiefly of demonstrations both at the bedside and in the laboratories. This year it will commence on July 1st and terminate on the 14th. Mr. Fullerton, 30, University Road, Belfast, is the Honorary Secretary.

Scotland.

EDINBURGH POST-GRADUATE VACATION COURSE IN MEDICINE.

THE success of the three weeks' course of post graduate instruction held in Edinburgh last autumn under the auspices of the University and Royal Colleges exceeded the most sanguine anticipations of its promoters. In arranging for a similar course to be held in September of this year the Executive Committee has carefully considered all proposals received as to suggested improvements. Among the more important changes are the following: The duration of the course is to be extended to four weeks, each fortnight being more or less complete in itself; all the practical classes are to be strictly limited; a number of additional subjects for which there was a demand last year have been introduced into the syllabus; the more important classes will meet daily instead of two or three times a week as was the case last year. It is interesting to note the way in which the post graduate question has come to be regarded during the last few months. A number of those who viewed last year's scheme with lukewarm interest are now convinced that Edinburgh possesses immense advantages as a centre for post-graduate work. In the syllabus for the September course, which has just been issued, an announcement is made that arrangements have been made for conducting post-graduate classes from October to Christmas, and that a syllabus of these classes will be ready for issue at the end of June.

EPIDEMIC CEREBRO-SPINAL MENINGITIS IN EDINBURGH.

During the week ending mid-day, Saturday, May 18th, two cases were notified to the medical officer of health of Edinburgh as suspicious cerebro-spinal meningitis, of which one has been removed to the City Hospital at Colinton Mains. Five deaths had occurred during the week, and sixteen cases remained under observation.

EDINBURGH ROYAL INFIRMARY RESIDENTS' CLUB.

The annual general meeting of the Club will take place in the Caledonian Station Hotel, Edinburgh, on Friday, June 28th, at 6.30 p.m. The thirteenth annual dinner will be held at 7 p.m., when David Christison, Esq., M.D., LL.D., the President of the Club, will occupy the chair. Members intending to be present must send their names to the Secretary on or before June 25th.

Birmingham.

THE GENERAL HOSPITAL.

THE Statistical Report of the In-patients of the General Hospital for 1906 has just been issued. The number of medical patients treated to a termination during the year was 1,419. Of these 551 were cured, 536 relieved, 39 unrelieved, 224 died, and 67 were transferred to the surgical wards. There were 773 male and 646 female patients. There were 25 deaths from acute gastro-enteritis and 14 from marasmus; lobar pneumonia accounted for 13, and broncho-pneumonia for 17; chronic nephritis caused 13 deaths, cerebral haemorrhage 12, and enteric fever 8; 10 cases were brought in dead. There were 3,479 patients treated to a termination on the surgical side, and of these 2,117 were males and 1,362 were females. The results of treatment were: cured 2 509, relieved 760, unrelieved 86. There were 324 deaths. There were 119 cases of carcinoma, and of these 29 were of the breast, 29 of the rectum, 9 of the stomach, 7 of the œsophagus, 7 of the tongue, 9 of the lips, 6 of the cervix uteri, 4 of the liver, 4 of the urinary bladder, 8 of the intestinal tract, and 1 of the larynx, thyroid, scrotum, and pancreas, and 3 not classified. There were 135 cases of recurrent appendicitis with one death, and 101 cases of suppurative appendicitis with 24 deaths. There were 377 cases of simple fractures and 93 of compound fractures treated as in-patients. In the gynaecological department there were 233 cases treated to a termination, and of these 172 were cured, 42 relieved, 2 unrelieved, and 17 died. The registered number of the administrations of anaesthetics was 3,206: Et_2O, was administered alone, 1,221; chloroform, 608; ether, 82; ethyl chloride, 478; nitrous oxide, 336; while in the remaining cases the different general anaesthetics were administered either in mixture or in sequence. One patient died during anaesthesia by chloroform, followed by Et_2O. The number of cases treated in the Dental Department was 565.

At the Jaffray Branch Hospital the total number treated during the year was 280. Of these, 139 were discharged cured, 39 much relieved, 15 relieved, 10 unrelieved, 16 died, 8 were transferred to the General Hospital, and 55 were remaining in the hospital at the end of the year.

BIRMINGHAM MEDICAL BENEVOLENT SOCIETY.

The eighty-fifth annual meeting of the Medical Benevolent Society was held on May 16th. The work of the Society has been most satisfactory during the past year. The granting of relief to those who are in need of assistance has been accomplished, as usual, in a quiet unostentatious manner. The invested funds now amount to £15,940, and this, together with a balance of £126 at the bank, makes a total of £16,066. The annual value of the grants ranged from £18 to £36, and the sum expended in this way was £715. In addition to this, £5 was given from the emergency fund to the widow of a medical man in urgent need of help. There were twenty-two annuitants on the books at the commencement of the year. Three died during the year and four were added to the list, making a total of twenty-three at the end of the year. The total

number of benefit members at the end of the year was 394. At the annual meeting Dr. E. B. Whitcombe was elected President, Dr. Malet President-elect, and Drs. Agar and Purslow were appointed Vice-Presidents. Mr. Haslam, who has been Honorary Secretary for the past sixteen years, resigned this post, and Dr. J. E. H. Sawyer was elected in his place. Mr. Haslam has worked most enthusiastically for the Society during his years of office, and the present satisfactory position of the Society is almost entirely due to his energies. He has been elected Treasurer together with Mr. F. Marsh. Sir Thomas Chavasse, Dr. Malins, and Dr. A. S. Underhill were elected to fill three vacancies on the Court of Directors. There are a very large number of practitioners in the district who have not yet availed themselves of the advantages of membership of the Society, and it is sincerely hoped that all those who are interested in the welfare of their professional friends who are not members, will make an effort to induce them to join.

BEQUESTS TO MEDICAL CHARITIES.

The medical charities in Birmingham benefit to the extent of £7,450 under the will of the late Miss Sarah Maria Stokes, of Edgbaston. The General Hospital, the Queen's Hospital, the General Institution for the Blind, and the Ear and Throat Hospital will receive £1,000 each. The Children's Hospital, the Women's Hospital, the Eye Hospital, the Orthopaedic Hospital, the General Dispensary, and the Birmingham and Midland Counties Idiot Asylum will receive £500 each. The late Mr. Joshua Williams, of Edgbaston and Bournemouth, has bequeathed £1,000 to the Sunday Hospital Committee, £500 to the General Hospital, £250 to the Queen's Hospital, and £200 to the Women's Hospital.

THE INGLEBY LECTURES.

The Ingleby Lectures at the University of Birmingham were delivered by Dr. Thomas Wilson, Obstetric Officer to the General Hospital, on May 9th and 16th, the subject treated being "Inflammations of the Uterine Appendages." These lectures were instituted in 1876 in connexion with the Queen's College, and were established for the purpose of promoting the advance of obstetric medicine. Dr. Ingleby was the first medical man to confine himself to this branch of medicine in Birmingham.

West Yorkshire.

REPORT OF THE WAKEFIELD MEDICAL OFFICER OF HEALTH.

In his report for 1906, Dr. Gibson, Medical Officer of Health for Wakefield, states that the birth-rate for 1906 was 23.2 per 1,000—the lowest on record for the city—compared with a rate of 27 per 1,000 for England and Wales. The infantile birth-rate is 127 per 1,000 births, against 133 for England and Wales. In his comments on the declining birth-rate, Dr. Gibson says that there are now fewer children born per marriage; there is an increasing tendency to postpone the marriage age and so curtail the child-bearing period; and there is a greater proportion of unmarried women in the population. One satisfactory feature of the report is the statement that fewer illegitimate children are now born than formerly. Dr. Gibson seems to consider that no practical measure, legislative or administrative, is likely to be of any use in retarding the diminishing birth-rate. Like most other observers, he has come to the conclusion that we must counterbalance the lessened birth-rate by diminishing the infantile mortality.

A NEW BRANCH OF THE LEEDS DISPENSARY.

A new branch of the Leeds Dispensary, on the south side of the river Aire, was opened on May 14th. A southern dispensary has been carried on independently for some years, but two years ago it was incorporated with and became a branch of the Leeds Public Dispensary. An adjoining house has now been purchased, doubling the accommodation, and it was the completion of these alterations which was made the occasion for the formal opening. This dispensary is in the heart of a great working class community and does an enormous work, there being over 10,000 new cases and 30,000 attendances last year. But, financially, it is a great drain on the parent dispensary, costing annually some £800, whilst the subscriptions from South Leeds are less than £100 per annum.

South Wales.

EFFECTIVE ISOLATION.

A NEW administrative wing was opened recently at the Isolation Hospital, Garngoch Common, near Gorseinon. The buildings were designed by the Council's engineer, Mr. T. Trevor Williams, who was warmly complimented by those present on the admirable manner in which the buildings had been designed, constructed, and equipped. After a minute inspection of the hospital, the company were entertained at luncheon. Major Lewis, as host, presided, and he was supported by Sir John T. D. Llewelyn, Bart., Mr. Glynn Price (Chairman of the Board of Guardians), Dr. W. Williams (County Medical Officer), Dr. Eben Davies (M.O.H. Swansea), Dr. Trafford Mitchell (M.O.H. Swansea Rural District), and others. Sir John Llewelyn submitted the toast of Major Lewis, "our esteemed Chairman of last year." Sir John said it was his pleasant duty to now ask him to declare open the administrative block. He remarked that the site was a wild one, but it was central, and it could at least be claimed that it had abundance of fresh air. The toast was enthusiastically received. Major Lewis then declared the new administrative block open. The District Council, said Major Lewis, had been pressed for years by the County Council to erect the hospital, but for some time the majority of the Council were against it, because the cases that occurred could then be dealt with in the Swansea Fever Hospital. Things had, however, changed. The hospital had been built, and the Council had quickly had occasion to see the necessity for it, and it had already done a vast amount of good. Now the Council had gone a step further, and fixed on a site for a small-pox hospital, made a road to it, put the foundations down, and arranged for the building. Dr. Trafford Mitchell, the medical officer of health, gave an interesting account of the work of the hospital. When it was first opened patients were few. Last year its necessity was so marked that 132 patients were treated in it, but there had been only 3 deaths. This year there had already been 81 patients under treatment. Dr. W. Williams, discussing the isolation question generally, said it had been under consideration in the county for over ten years. In 1895 there were to meet the needs of the 500,000 inhabitants only a few temporary hospitals. Now there were 18, in which 500 cases of infectious diseases could be isolated. In addition, there were 11 small-pox hospitals in which between 60 and 80 cases could be isolated. The Garngoch Hospital was not the sort of hospital the county authorities asked should be built, but he was very satisfied with it, and dared say that it would stand from thirty to thirty-five years. He felt sure that the place would be exceedingly cold in the winter months, though in summer it would do very well indeed. The administrative block was a splendid building, which reflected great credit on the council's district surveyor. Prevention, proceeded Dr. Williams, was better than cure, and in this direction he advocated good houses, good and pure water supply, and adequate means of sewage disposal. Some months ago the question of consumption amongst the poor had been brought before the county council, but up to the present it had not taken up the matter seriously. Some people thought the whole solution was in providing good houses for the working classes. It was not; they must have good and proper food, medical treatment, and other things. To prevent consumption the enemy must be attacked right along the line, beginning in the school and continuing in the workshop.

India.

THE PASTEUR INSTITUTE, KASAULI.

THE sixth annual report of the Pasteur Institute of India, Kasauli, is the work of Captains W. F. Harvey and A. McKendrick, both of the Indian Medical Service, and respectively Officiating Director and Officiating Assistant Director of the Institute. They bring its history up to the end of the last year in which it is likely to stand alone

as the sole establishment in India primarily devoted to the treatment of persons believed to be in danger of development of hydrophobia. From the beginning the number of patients seeking assistance has constantly increased, and last year reached a total of 1,262 persons. Of these, however, some 117 were not inoculated, since for certain reasons it was concluded that they did not stand in need of treatment. These were that the animal which bit them had lived ten days after doing so, and at the lapse of that period was still in good health; under such circumstances the authors of the report consider that no danger to the persons bitten exists. Another institute is now to be founded at Canoor, in Southern India; but it is not anticipated that the numbers of applicants for treatment at Kasauli will—at any rate for some time to come—materially diminish, for those who have hitherto taken the long journey to Kasauli do not, it is estimated, represent more than about 25 or 30 per cent. of all those who are bitten by rabid animals. The statistics included in the report conveniently cover all the work done in the past five years, the first year being omitted as the cases at that time were not classified. It would appear that among Anglo-Indians the number of failures has been even smaller than in most Pasteur institutions elsewhere, and among Indians slightly greater. The latter circumstance, owing to the small amount of clothing worn by natives, and certain other factors, is readily comprehensible. The added danger of bites on the bare skin is so great that the authors consider the patients should almost always receive intensive treatment. In respect of general bacteriological work and the preparation of antiserums the Kasauli Institute has now been relieved by the Central Institute, but its laboratories still make examinations of clinical material and perform a good deal of research work under the title of the Provincial Laboratory of the Punjab.

The late Captain Swanzy.

In the British Medical Journal of May 11th, p. 1146, reference was made to the lamented death from plague in India of Captain H. H. Swanzy, R.A.M.C. It was stated that the late Captain Swanzy was a son of Mr. H. R. Swanzy of Dublin, President of the Royal College of Surgeons in Ireland, but we understand that this was a mistake, Captain Swanzy having been a distant cousin only of the distinguished Dublin ophthalmologist.

Infant Mortality.

A somewhat novel method of dealing with the question of infant mortality was tried in Rangoon recently. This was a baby show, with prizes for the biggest and healthiest babies, and, to judge by the reports, the function was most successful, the Burmese—fathers, mothers, and even babies—having entered into the spirit of the thing. It is rather doubtful whether such shows would be successful in India generally, but for countries where the people are of a corresponding temperament to the Burmese it is possible that much good might be done by holding shows, and taking advantage of the opportunity to instruct the mothers regarding the care of their children. The infant mortality in India generally is enormous, but, as in the case of so many other health problems in India, the prejudices of the people raise an insurmountable barrier to reform.

The Prevention of Plague.

It is announced that the Home Government is going to take steps for the prevention of plague in India, and that the chief feature of the scheme will be the employment of a large staff of native doctors of a good class. No mention is made as to the extent to which the staff is to be under European supervision; if it is proposed to dispense with Europeans, there will be an excellent opportunity for arriving at an opinion as to the value of the work done by well-qualified Indian doctors when left to their own resources.

Canada.

Adulteration of Food.

The annual report for the fiscal year 1905-6 of the Department of Inland Revenue with respect to the adulteration of food was laid on the table in the Dominion House of Commons on April 3rd. A summary statement of collected samples analysed by the staff of the department at Ottawa shows that, of a total of 2,095 samples, 1,304 were found genuine, 402 doubtful, and 389 adulterated. Of the samples found adulterated, 116 were pepper, 14 tincture of ginger, 16 olive oil, 82 fruit preserves, and 147 maple syrup. This last-mentioned commodity shows the highest ratio of adulteration, nearly 50 per cent. of the samples analysed being found adulterated; 322 samples of canned meat were analysed, and only 4 were not marked genuine.

Professor F. Müller of Munich.

Of great interest to the Montreal medical profession has been the recent visit of Professor F. Müller of Munich, and every opportunity of hearing him has been seized with eagerness. Of all the German professors of recent years few have such a hold upon the medical men of America as Dr. Müller. His social bearing and command of the English language, together with the profound wisdom and judgement which he has acquired first at Marburg, then at Basle, and finally at Munich, have combined to place him in the front rank of teachers, and in consequence the student on this side of the ocean has begun to appreciate the benefit of the smaller cities of Europe as places for study for more than one reason. Professor Müller, on April 2nd, lectured at the Royal Victoria Hospital on leukaemia in a very interesting and comprehensive way, and in the evening gave a lantern demonstration and lecture on multiple sclerosis, beautifully illustrated with slides from the brain and cord. He was then entertained at the German Club, and on the following day gave a clinic on pneumonia at the General Hospital, dwelling particularly on the excretion of chlorides in this disease. After being entertained at the St. James's Club and Mount Royal Club by various members of the Faculty of Medicine Professor Müller left for Toronto where he delivered a similar series of lectures.

Lady Victoria Grenfell Memorial.

Subscriptions are being received in Ottawa to endow a child's cot in one of the Ottawa hospitals as a memorial to the late Lady Victoria Grenfell, eldest daughter of Earl Grey.

SPECIAL CORRESPONDENCE.

VIENNA.

Examination of School Children.—Health of Vienna.

A series of very interesting examinations of school children has recently been completed, and the results are worthy of attention, as they illustrate the absolute necessity of the school doctor. Three different elementary schools in Vienna, each having about 390 children (boys and girls), were selected. The social standing of the parents was shown by the fact that one school excluded solely children of the working class, the other children of the middle class (tradesmen, civil service, municipal officers), while the third school is frequented by a very mixed population. The children examined were between the 6th and the 14th year of their age. Fully 92 per cent. of the children had more or less carious teeth; in fact, not more than 70 children out of 1,200 were in this respect in a normal condition. A very high percentage of disease of the respiratory system was found especially in the lower class children. There was pulmonary phthisis on one side only in 12 per cent., on both sides in 1 per cent., and bronchitic manifestations in 7 per cent., besides adenoids, enlarged tonsils, and chronic nasal catarrh, which could be found in about 40 per cent. of all children. Cardiac mischief was detected in 3 per cent., mostly of a rheumatic nature following on articular rheumatism, but 3 cases of congenital heart disease were found in one school. Twelve per cent. of all children suffered from general debility, shown by anaemia; and "glands" in the neck were manifest, especially between the age of 6 and 12 years, in 7 per cent. The ears were affected in about 16 per cent.; this was partly due to adenoids, partly to the sequelae of measles or scarlatina. Lately, "running ears" have been especially looked for by the teacher, and the child gets, if such be the case, a letter to take home, containing the advice to have the disease treated. The condition of the eyes seems to have been exceptionally good, for nothing is

said of grave diseases, and only a few of the children suffered from conjunctivitis or weak eyesight. At any rate, the results of the investigation, which have been published in a graphic address by Director Bayer, are the best argument for those who are not satisfied with a casual examination of the children by their doctor, but advocate the appointment of specially qualified school doctors.

The health report for the last half of the month of April shows in a marked degree the influence of the continuous wet and misty weather which Central Europe has experienced since the New Year. In the latter part of April infectious diseases begin to subside, but this year measles, whooping-cough, and scarlet fever reached a maximum; only influenza was a little less prevalent. Intestinal disorders have been remarkably few, and not a single case of typhoid or dysentery has been reported, whilst cholera has not been known of here for two years. The general mortality has sunk to 20.8 per mille, indicating a slow but steady decline from the 21.5 per mille of March. The main cause of the increased mortality at that time was the debility of old age; of the 1,559 deceased, 520 were more than 65 years of age, and these succumbed mostly to influenza, bronchitis, and senile diseases; the deaths of infants under 12 months old numbered 725.

CORRESPONDENCE.

THE CHARTER.

SIR,—As one who has taken an active part in the Association for many years and feels most deeply in its welfare, I should like to urge great caution in pushing forward the Charter, especially in a form which is evidently not acceptable to a large section of the members. It seems to me the safest course for the Representative Body to adopt next week would be to adopt the resolution of the Dublin Division and to postpone the consideration of the Charter for the present.—I am, etc.,

Liverpool, May 22nd. JAMES BARR.

SIR,—I have read with great interest the voluminous correspondence called forth by my letter published in the JOURNAL of April 27th, but I have met with nothing in it to induce me to modify the main contentions which I put forward—namely, that the Representative Body is not the best fitted to be the undisputed authority in the Association; and, that in the event of a Charter being applied for it should be so framed that the supreme authority should be vested in the Council elected, as at present, by the Branches.

My critics have not attempted to show that the Representative Body, during the four years of its existence, has proved itself a more efficient governing body than the Council, under the management of which the Association has grown and prospered for many years. They have been mostly concerned with attacking, with only indifferent success, some of the statements I advanced in support of my main propositions. Mr. E. D. Evans maintains that I was in error in believing that few of those who have been Representatives one year are willing to undertake the office again; and he produces figures to show that as a matter of fact nearly half the members elected one year have generally been elected again the following year. Whether they undertook the office "willingly," or whether they felt bound in honour not to relinquish it after one year's service, does not appear. The really significant fact brought out by Mr. Evans's figures is this: that either *half the Representatives decline to serve again*, or the Divisions have elected as Representatives *gentlemen in whom they have so little confidence that they are not disposed to elect them a second time.* I leave Mr. Evans to extricate himself as best he can from the horns of this dilemma.

Dr. Grossmann's and Dr. Gullan's figures place the matter in a somewhat different light. They show that at the Representative Meeting of 1906 there were forty members (27.6 per cent. of the whole) who have belonged to the body during the whole four years of its existence.

But the figures also show that these old members were outnumbered even by the members who appeared there for the first time, who amounted to 44, or 30 per cent. of the whole. If the gallant band of 40 (to whom Dr. Gullan tells us he does *not* belong) were a majority in the Representative Body, my criticism would be to a great extent disarmed; but knowing, as I do, their self-sacrifice in giving up their time to this work and their knowledge of and devotion to the Association, I can only regret that they should be placed in a position in which they at best form a respectable minority. The proper place for gentlemen of this type is, I maintain, on the Council, which I would gladly see enlarged to receive them. I thank Mr. Evans, Dr. Grossmann, and Dr. Gullan for supplying me with the actual figures, and I hasten to correct any false impression my letter may have given rise to and to acknowledge that, whether willingly or not, nearly 50 per cent. of the Representatives do accept office for more than one year.

The rest of Dr. Grossmann's and Dr. Gullan's letter is in praise—faint praise—of the Association under its present Constitution in contrast to what it was under the old. They say that the interest taken in the work of the Association was formerly limited to a very small fraction of the members, but that since the formation of the Divisions the interest has spread and is spreading steadily. There may be a steady spread, as, indeed, there was before; but what are we to think of its velocity when they tell us, as if it were a matter for congratulation, that, after nearly five years of "Divisions," the interest in the work of the Association is "beginning" to spread into the constituencies. Then they would have us believe that in the old mode of election (whatever they imagine that to have been) one or two nominated a few friends and collected support from members who took no interest whatever in the matter. If their own interest in the work of the Association were somewhat more mature than it apparently is, they would not have put their names to such a travesty of the facts. However, to adopt their own formula, there is no proof given by Dr. Grossmann and Dr. Gullan of their statements, and there are those living, of whom my friend Dr. Grossmann is one, who can remember the time when the annual elections aroused an enthusiasm such as has never been excited since the new Constitution was adopted.

Dr. Crawshaw believes that it will take ten years for members to find out what power and influence for good they have through the Divisions and Representative Meeting. There I entirely agree with him. But what if at the end of the ten years we find that the power and influence amount to nothing at all? What amount of good have members derived from the Association during the last four years that they could not have derived from it equally well under the old Constitution? When the ten years are completed, will it not be time enough to think of promoting the Representative Body, whose powers for good—or evil—we admit are still largely an unknown quantity, to the position of sole arbitrator of the destinies of our great Association?

One point at least has been made clear by the correspondence which has taken place and by the amendments to the draft Charter of which notice has been given, and that is that if the changes embodied in the Charter are carried at the Representative Meeting next week, it will only be done by a majority using its power to coerce a strong and influential minority. Before adopting such a proceeding I should urge on the advocates of change to ask themselves whether, in a voluntary association such as ours, such a Pyrrhic victory is worth the gaining.

I have not gone into the question of whether the funds of the Association are sufficient at the present time to justify us in incurring the outlay involved in the promotion of the Charter. For my own part I do not see where the available funds lie. On this point I hope the meeting will obtain definite information.

Whether the Charter is proceeded with at once or whether, as proposed by some, its consideration is postponed, I trust that before we go to the Privy Council we shall be able to embody in the Charter a *modus vivendi* to which we can all give our loyal adherence.—I am, etc.,

Liverpool, May 20th. THOS. R. BRADSHAW.

SIR,—Drs. Grossmann and Gullan, in their letter of last week, give figures which go to prove that the number of gentlemen willing to again act as Representatives is larger than some had estimated; this, too, in spite of the fact that "they work under great difficulties, both owing to the unusual claim on their time and expenses, the days running consecutively, in contradistinction to the work of the Council and Committees." Dr. Johnston, in reply to my letter, evidently disagrees with Drs. Grossmann and

Gullan as to the *unusual* claim on their time and expenses as compared with the Council, and he suggests that we might come to their relief in providing locum tenents. I have gone carefully through the list of the members of the Council, and find that nearly three-fourths are consulting surgeons and physicians, specialists, professors, teachers, and examiners in the universities, retired doctors. Less than twenty are general practitioners; of these some are leading men and able to get away for a few hours to attend Council or Committee meetings; nearly all are within three hours by train of London. Now, consider points of comparison and contrasts. Representatives of Divisions are for the most part general practitioners. The majority of the Representatives are more than three hours from London. Also the meetings average over three consecutive days, usually lasting from 10 a.m. to 6 p.m. Then two extra days must be allowed for Representatives coming from Ireland, Scotland, and the remoter parts of England and Wales, so that it averages over five days away from practice. To pay bare travelling expenses does not meet with my approval. Some of the Representatives are not in the financial position that we ought to expect them to do our business at such a sacrifice. Through the Medical Secretary I have been favoured with the following facts: (1) That the Council created 595 Representatives for the four years 1903 to 1906. This averages 149 each year. (2) Members present for the four years, 511; averages 128 per year. (3) Average Divisions unrepresented 21 per year—that is about one-seventh. (4) Total days for four years, 13; to this must be added two days for Representatives for each meeting for those coming from a distance.

In regard to the members of the Council I believe many would object to receive anything beyond railway fares. There are a few who do receive out-of-pocket expenses, but not from the funds of the Association. From the figures given, about one-seventh, or over twenty Divisions, are practically disfranchised. No Representative nor deputy attended. If reasonable expenses were allowed, I believe we should get better attendance. Under the new Charter we must make it possible to pay reasonable expenses of the Representatives of Divisions, especially to those who come from Ireland, Scotland, and remoter parts of England and Wales. Section IX of the Ordinances, Clause 23, must be altered so that it shall read "reasonable expenses" (this includes railway fares) "of Representatives of Divisions shall or may be paid." This clause would be better in the By-laws. If the funds of the Association could not bear the strain, then it need not be paid. The clause leaves it open. If the number of Representatives were reduced to one-half, the "reasonable expenses" of, say, 70 would not be great. Possibly not more than what we saved in not publishing the *Year Book*. All Representatives, whether for Branches or Divisions, should, if the funds will permit, be allowed one guinea per day after first day of meeting. It will be a mistake to keep Clause 23, Section IX of the Ordinances in the Charter. We ought to make it possible for the best men to attend to our business whatever their financial positions may be.—I am, etc.,

Bangor, May 20th. JNO. BROWN.

SIR,—I have no doubt that very many members of the Association will be desirous of thanking Drs. Grossmann and Gullan for their timely quotation of facts in disproof of the curious statement of Dr. Bradshaw as to the attendance of Representatives, which was so welcomed by Drs. Collier and Brown. But even the figures cited by Drs. Grossmann and Gullan will not convey to members who have not been present at Representative Meetings any inkling of the spirit of enthusiasm and self-sacrifice which on the whole pervades them.

It is especially fortunate that this misstatement should have been thus nailed to the counter, because it is typical of so much that has been said and written in the way of detraction of the Divisions and their influence, and therefore indirectly in detraction of the new Constitution. It is impossible for a thoughtful member of the rank and file of the Association to resist the conclusion that certain representatives of the "powers that were" acquiesced perforce in the new order of things, but that seeing the power about to depart from them, they are raising the banner of reaction, they are warning the rank and file against the Representative Body that is, against themselves. The fact is that the proposed Charter will crystallize the new Constitution, and certain of those who have known the taste of power prefer that the Association should remain amorphous. Hence the belittling of the Divisions, and hence the cry that their Representatives are representative of no one.

Granted that there are scores of Divisions still asleep, is that a reason for condemning the whole system? The Divisions that are awake have done more for themselves and the medical profession at large than ever the Association did before their creation. In the old days the Association was the hobby of the few. We of the rank and file, who could not afford the time or the money to attend annual meetings or Branch meetings, knew of the existence of the Association only as publishers of the JOURNAL. We busied ourselves in organizing little local societies, which did excellent work among ourselves, but remained as tender blossoms ready for the heel of any organized section of the public to trample on. Now, the whole machinery of the Association is ready to the hand of any Division that requires it, and it is only a matter of time until Division after Division wakes up for its own sake, and the other Divisions are aroused by them for the defence of the whole body. I would ask any member of the Association this question: Whether, supposing he and his colleagues were involved in a dispute with any organized public body, he would prefer to appeal for the support of the Association through his Branch as it existed in the old days to the Central Council, or directly through his Representative to the Representative Meeting? If he finds any difficulty in answering the question I would refer him to what has been done in the cases of the Ebbw Vale dispute and the Leigh Infirmary difficulty among other instances. Some of us in Lancashire and Cheshire know our Branch Council as a body which has hoarded up some four or five hundred pounds, while we as Divisions have, in at least one case, been unable to obtain even punctual payment of the miserable pittance allotted to us; and yet we are now being asked to return the exponents of this policy to the Central Council in order that they may destroy the new Constitution, which has already breathed a little life into the old valley of dry bones.—I am, etc.,

Leigh, Lancs., May 20th. FRED. E. WYNNE, M.B.

SIR,—I was unable to bring up this suggestion before my Division meeting, but I hope some other Division will instruct their Representative to take a vote thereon.

"That the elections of Representatives and of Councillors be conducted from the Central Office, on whom the clerical work and expense should naturally fall."

—I am, etc.,

May 21st. SECRETARY OF A DIVISION.

"BIOMETRIC METHODS" AND UNIVERSITY MEDICAL EDUCATION.

SIR,—"Statistician," in his letter to you last week, does me more than justice. I have made no attempt to contribute to the science of "biometric methods." But I gladly welcome his help. If by such methods—by "much arithmetic and the calculation of the 'probable errors' of the constants obtained from subsamples"—he can show that University medical education in London is in a satisfactory and prosperous condition, he will earn the gratitude of all London teachers.

"Biometric methods," as expounded by "Statistician," must be fearsome things to live with—sort of statistical "Fat Boys" whose only pleasure in life it is "to make your flesh creep." And yet, on closer acquaintance, not so fearsome, but carrying wonderful comfort to the distressed bosom, whether educational or financial.

If your income falls from £500 to £250 a year, you must not worry about it; still less, say that it is £250 a year less than before; least of all, say that it is only one-half its former amount. For by "much arithmetic and the calculation of the 'probable errors' of the constants obtained from subsamples," it can easily be shown that having regard to the birth-rate and death-rate of the preceding forty years, the variations in the population, the amount of our exports and imports; the emigration, employment, and Poor-law statistics, and the present condition of the building trade having regard to all these, and (quite incidentally) to the *greater energy* ("great reforms") of

your rivals and the *want of energy* (absence of reform) on your own part, your reduced income is precisely and "biometrically" what it should be! Q.E.D.

The latter—incidental and from a biometric point of view natural—conclusion is precisely the important one arrived at in the articles referred to—namely, that "great reforms at the older collegiate institutions" have led to their prosperity, while absence of the necessary reforms in London university medical education has led to the present condition in London. At the same time, the other "biometric" conclusion, "arrived at with intuitive rapidity"—that "the enormous development of industrial towns outside London, and consequent growth of their universities, *must* naturally diminish the percentage in the London schools"—is shown to be without basis; for, alas! the actual figures show that no such growth has taken place. The percentage entering these provincial schools is much the same as it was 25 years ago, while that in the London schools has fallen from 40 to 20 per cent.

It would almost seem, therefore, that something may, after all, be shown in favour of the slow, tedious "pathological" methods I have employed. Their object has been to reveal causes *with a view to their removal.* If these causes are, as appears to be the case, the want of "great reforms," the sooner such reforms are instituted the better.—I am, etc.,

London, W., May 21st. WILLIAM HUNTER.

THE NOTIFICATION OF LIVEBORN AND STILLBORN CHILDREN.

SIR,—The fact that a Bill to provide for the notification (not the registration) of livebirths and of stillbirths was introduced into the House of Commons on April 23rd, and that it has been read a second time last week, shows that earnest thinkers are beginning to see that the lives of infants are really of some national value. The Bill provides for the notification to take place within twenty-four hours after birth to the medical officer of "the district."

There are some serious omissions in this Bill, and if they are not attended to the Bill, if it pass, will give rise to much legal disputation. They are as follows:

First, the Bill provides that the person who must notify is the father, or, in his absence, "any person in attendance upon the mother at the time of the birth or within six hours thereafter." I would suggest that *the mother* be also called upon to notify the fact of birth. Secondly, it may happen that the physician may be the only person present; and if this work of notification be thrust upon physicians, a clause should be inserted providing for the payment of a fee of 2s. 6d. For years we have been protesting against having to grant medical certificates of the cause of death without a fee. Why increase the trouble? Thirdly, in Clause 1, line 11, it is proposed that the notification be sent or given to the medical officer of "the district." Would it not be better to use the words "of the urban or rural sanitary authority"? Fourthly, Clause 1 (2) proposes that the notification be sent by "prepaid letter or postcard." Will this not be a tax upon the poorer people? Why not allow free postage in such cases? Fifthly, in Clause 1 (6) no definition of a stillborn child is given. This is a serious omission. I therefore propose that the following be added: "A stillborn child—for the purpose of this Act—shall be a child having the outward form of a child, or one in which the sex of the child can be determined by outward appearance, and where no sign of life has been observed (by any person present at the birth) after the child has been completely born."

I would also suggest that a clause similar to that of Section 26 of the Scottish Registration of Births Act, 1854, be inserted, and to run as follows:

When any woman is delivered of a liveborn or of a stillborn child in a locality which is not her usual place of residence, and when the fact of birth is notified to the medical officer of health of the locality in which the birth took place, the said medical officer shall forthwith notify the medical officer of the district which has been the usual place of domicile of the mother of the fact of birth, with the name and address of the mother.

I suggest this so that a stop may be put to the present system of women about to be confined of illegitimate infants leaving their place of residence and going to some other city or place.

The Bill is backed by Lord R. Cecil, Mr. Lyttelton, Mr. Shackleton, Mr. Verney, Mr. Gulland, Mr. Masterman, Mr. Sherwell, and Mr. Tennant. I would suggest that all physicians practically interested in this Bill communicate at once with their M.P.'s, sending them a copy of my remarks and asking them to support these proposed amendments. A copy of the Bill can be obtained by any one from Eyre and Spottiswoode, East Harding Street, London, E.C., for 1d.—I am, etc.,

Liverpool, May 12th. R. R. RENTOUL.

THE EFFECTS OF RESPIRATION ON THE CIRCULATION.

SIR,—I thought that I had finished with Dr. Lewis, but as that does not seem to be the case, and as my time and your space must really be of some value, I shall make this letter so explicit that a wayfaring man, though a fool, cannot err therein, and so I hope it will be the last I shall have to write on this subject.

Dr. Lewis, in his reply, withdraws the word "incorrect," a word, by the way, which is not once used in his letter of May 4th, so what can any one think of the accuracy of a man who does not even quote himself correctly, and he very generously gives me a verdict of "unproven." If he had been a Scotchman he would have said "not proven." Well, I have proven to my own satisfaction, and I hope to the satisfaction of the majority of your readers, that the pressure in the thoracic aorta does not fall so low as that in the extrathoracic arteries, so I shall not waste any more words on this point at present.

He accepts my "hypothetical experiment and figures" for the sake of argument, for which purpose, of course, they were put forth, and then he jumps to the conclusion without any rhyme or reason that "the only possible case in which this (a great fall in the pressure in the aorta) could occur would be that in which an instantaneous fall in intrathoracic pressure took place." What difference in effect can there be whether an intrathoracic pressure fall of 100 mm. of Hg occurs in the twinkling of an eye or takes a good many seconds over it? As a matter of fact, there is no instantaneous fall of intrathoracic pressure, as no one—at least no one that I know—inspires or can inspire instantaneously, so his assumptions—to which I strongly object to him fathering on me—are not only gratuitous but also erroneous.

"If we assume, as we must from his example, that the fall is instantaneous, we must also assume that the pressure in extrathoracic arteries will be at this instant 130 mm. There will consequently be a head of pressure of 100 mm., or thereabouts, tending to force the blood back into the chest." I would feel much obliged if he would give quotations from my paper instead of telling us what he imagines I should say to suit his argument, an argument which has got no basis either on fact or on logic. There is no instantaneous fall of pressure, and I never said or assumed, or imagined, or dreamt that there was. There is a slight negative pressure at the root of the aorta at the end of systole which is reduced to a minimum by the elasticity of the artery, and when the valve is intact this is the only period when there is any disturbance in the pressure-gradient from the root of the aorta to the periphery; the atmospheric pressure is an ever-present but constantly varying force which—except in a perfect vacuum, if there be such—cannot be suspended, or destroyed, or abolished, or annihilated for the ten-millionth part of a second, and its pressure on the extrathoracic vessels must always, constantly, instantaneously, morning noon and night act in the direction of the pressure-gradient driving the blood onwards from the greater to the smaller arteries, through the capillaries into the capacious veins, and in them still onwards owing to the gradual fall of venous pressure from the periphery to the chest.

"The onus lies with him to prove that where the intrathoracic pressure is lowered the extrathoracic pressure is at the same time lowered to a greater extent. There is no reason to believe that such is the case." I would say that there is no reason to believe otherwise, and neither Dr. Lewis nor any one else has ever produced any evidence to the contrary. In my paper which he criticizes I gave an example where the pressure in the radial artery fell to nil for half a minute, and I will not "assume" that even Dr. Lewis—on whom evidence seems somewhat wasted—will contend that the pressure in the aorta was less than

that. The life of the arteries is short enough for most of us, but if the pressure gradient were in fact rather than in assumption frequently and greatly disturbed by inspiration, Müller's experiment, etc., as is assumed by Dr. Lewis, the allotted span of life would fall as low or lower than it usually is in cases of free aortic regurgitation.

Thank God, no amateur physicist was consulted at the Creation. Dr. Lewis seems to utterly ignore the pressure-gradient and the state of repletion of the vessels. In a recent paper in the *Journal of Physiology*, October 29th, 1906, he assumed because a wave passed a block of 140 mm. of Hg in the right brachial artery, therefore the pressure in the left radial was equally high, although his own pulse tracings showed that the vessel was not half filled, the systolic portion of the curve was very short, and the tension in the vessel low. I would strongly advise him to cease adapting his facts to suit his theories.

"Finally, I have yet to learn, when a statement is made that three forces are in equilibrium, that this amounts to a statement that the three forces are equal." Well, the sooner he begins to learn the better, as I am wearied teaching such an inapt pupil. I was anxious for his proofs that two positive and one negative forces were normally in equilibrium and as I assume that it will take him some time to learn that out of any work on physics, I am afraid I shall have to wait to the Greek Kalends for his proofs. One pound at the end of a lever might balance fifty at the other end, the weights would be different but the forces equal and the equilibrium stable. Unequal forces, notwithstanding Dr. Lewis, cannot produce equilibrium either normally or abnormally.—I am, etc.,

Liverpool, May 13th. JAMES BARR.

THE TREATMENT OF SYPHILIS.

SIR,—With reference to your correspondent's remarks in your issue of April 27th last (p. 1030, col. 2), I am certainly in favour of intramuscular injections of grey oil, but only in selected individuals, for it is not a method to employ in a haphazard and routine manner. I particularly insisted on this point in my paper,[1] enumerating conditions in which this mode of treatment was absolutely contraindicated. I am quite aware that there have been complications as a result of injections, a fact I referred to also. But if these recorded instances be examined critically, it will be found either that the patients were not suitable ones, as is sometimes the case in hospital practice, or that the details were not kept in view. In private work, on account of the good hygiene and social circumstances, it is a different matter, so much so that owing to the convenience of a weekly injection and other reasons, patients, especially busy men, much prefer it to pills, mixtures, and inunctions, the value of which I do not deny. Indeed, I employ them all in accordance with the kind of patient to be treated. I repeat that I do not recommend or carry out intramuscular injections (whether of insoluble or soluble salts) in every instance. In bad cases it must not be forgotten either that the syphilitic infection needs to be tackled energetically, especially when the brain, spinal cord, eyes, etc., are threatened. Here it is that intramuscular injections are so valuable. When pushed in the early stages and administered in suitable maximum doses, as advocated by Dubois and also by Queyrat, they may prove to be the means of preventing general paralysis and tabes.

At the special meeting of the Société Française de Dermatologie convened to consider this very subject of intramuscular injections of grey oil, under the presidency of Professor Fournier (February 21st, 1907) the value of the method was almost unanimously admitted. I was not able to attend the meeting, but I am informed that Professor Fournier was in favour of the method, in proper cases of course.

Owing to their slow elimination, lipiodol and iodipin have proved useful, giving better results than iodide of potassium in some cases. But I need scarcely say that in all stages of syphilis mercury is the basis of treatment.

With regard to the value of antisyphilitic serum, my paper, I may say, was prepared for the November 8th meeting of the Hampstead Medical Society, so that some of the work of Metchnikoff and Roux is not included. As to this, however, we are still in the laboratory and experimental stage, so that it does not at present at any rate come into the domain of practical therapeutics, but is still much in the same position it was when I wrote my paper.

Prophylaxis is a term that can be used in a wide sense to apply to the inunction of calomel ointment as recommended by Metchnikoff.—I am, etc.,

London, W., May 15th. GEORGE PERNET.

[1] British Medical Journal, March 9th, p. 542, cols. 1 and 2.

A POSSIBLE SOURCE OF DIPHTHERIA IN SCHOOLS.

SIR,—The suggestion of "Common Sense," in the JOURNAL of May 4th, to prevent the raising of dust in elementary schools by the practice of dry-sweeping the floors by painting them and then mopping them with a bucket of water, is open to some objections. I know of no means by which *paint* can be applied to a floor in such a way that it will not wear off by the friction of soles and leave the boards as bare as before. A better plan would be to saturate the surface with a mixture of paraffin-wax and beeswax driven in by heat. But this, though an admirable way of treating boards to render them impermeable to water, is, I fear, more expensive than the managers of most non-provided schools, or even of provided ones in some localities, would care to adopt.

The difficulty about mopping is that to mop properly—that is, without leaving the floor too wet, which is not desirable—requires that the mop should be rotated to rinse it, which can only be done in the open air, thus involving extra trouble.

Altogether, as a cheap, easily-adopted, and at the same time effectual method of getting rid of dust from floors, I do not think that sweeping, with previous sprinkling of sawdust damped by a dilute solution of an efficient disinfectant, can be beaten, unless it is by a mechanical carpet sweeper.—I am, etc.,

Gloucester, May 20th. FRANCIS T. BOND.

THE CLIMATIC TREATMENT OF TUBERCULOSIS.

SIR,—The recent discussion on the treatment of tuberculosis at marine stations, at the Balneological and Climatological Society's meeting, evoked a sharp conflict of opinion as to the respective merits of moorland and seaside resorts for the treatment of tuberculous patients. As is usually the case, personal bias was shown according to whether the speaker practised at an inland watering place or at a marine station. The cobbler thinks that there is nothing like leather! Truth lies on both sides. Both moorland and sea air have their advantages according to the time of the year, and the latitude of the place must be taken into consideration.

I have never been to a seaside place in the summer which was as bracing as is a moorland health resort. I know that when practising at a southern seaport it was the invariable custom to send our patients to the moors and downs to be braced up and invigorated in the summer months. Tuberculous patients do remarkably well browsing amongst the heather. They eat and sleep well, and do not know what it is to have a liver. Many patients have dyspepsia and cannot sleep when near the sea. For choice I would send a tuberculous patient to the moors in the spring, summer, and autumn months, and to the seaside resorts on the west coast and southern stations for the winter. My own experience is that patients gain ground on the moors, and hold their own at the seaside.

When a patient wants a change of scene from the moor, then a visit to the East Coast is to be preferred to the West, as all the West Coast stations are relaxing in the summer. The time of the year is often left out of consideration when the question of a bracing air is discussed. In August even the moors are only comparatively bracing, temperature being an important factor in determining the tonic virtues of air. Northern stations, whether inland or coast, are more bracing than Southern *pari passu*. These very elementary observations on choice of climate are often lost sight of in discussion.—I am, etc.,

Ilkley, April 29th. AUGUSTUS H. BAMPTON.

On May 5th a monument to Antoine Gailleton, Senior Surgeon to the Antiquaille Hospital and Professor in the Medical Faculty of the University of Lyons, was unveiled in the Loyasse Cemetery of that city. Professor Gailleton was a distinguished surgeon and the founder of the *Lyon Médical*. He was mayor of Lyons for many years.

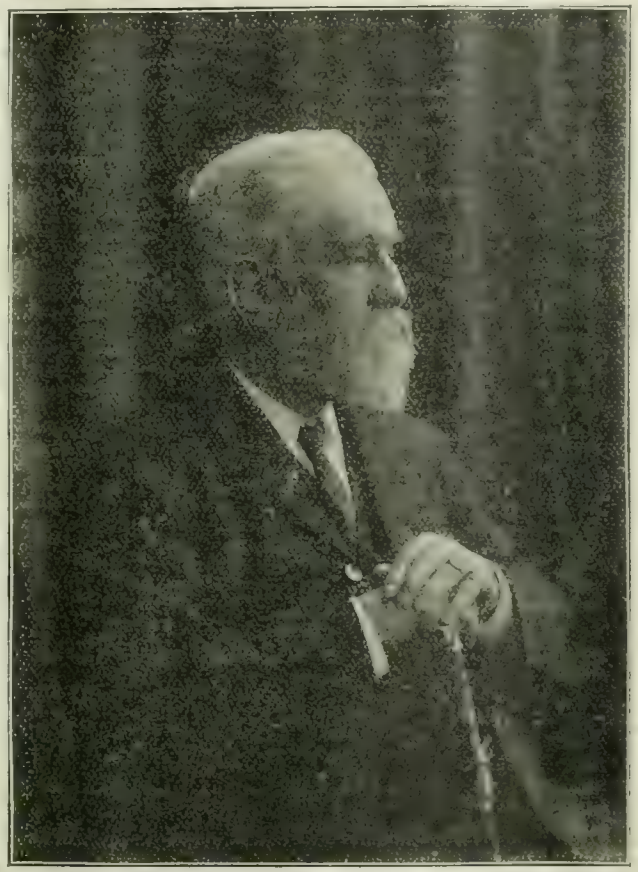
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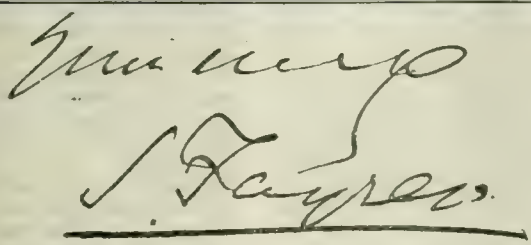
SIR JOSEPH FAYRER, BART., K.C.S.I., M.D., LL.D., F.R.C.P., F.R.C.S., F.R.S.,

HONORARY PHYSICIAN (MILITARY), AND PHYSICIAN EXTRAORDINARY TO THE KING.

In Sir Joseph Fayrer, whose death at Falmouth on May 21st we record with the deepest regret, there passed away from among us a man whose name was a household word among his countrymen. To the public for many years he was the most conspicuous representative of the Indian Medical Service, and he will always live in the history of India owing to the prominent part which he played in the siege of Lucknow, and in other eventful occurrences during his long period of service in the East. Few have had a more crowded life than his, and of few could it be said with greater truth that he has gone from us full of years and of honours.

Joseph Fayrer was the second son of a family of eight, and was born at Plymouth on December 6th, 1824: he was, therefore, in his 83rd year. His father was an officer in the navy who had served under Lord Cochrane, having Marryat among his messmates. His mother was the daughter of a Lancashire gentleman named Wilkinson; she was descended on the female side from John Copeland, who took David, King of Scots, prisoner at the battle of Neville's Cross. Fayrer says in his autobiography that his earliest recollections were of Kendal and Ambleside; he knew Wordsworth, Hartley, Coleridge, and John Wilson, better known to fame, perhaps, as "Christopher North." His father being appointed to command a steam packet, sailing between Portpatrick and Donaghadee in Ireland, young Fayrer had opportunities of becoming acquainted with Galloway. His first school was at Dalrymple in Ayrshire. When he was 14 the family moved to Liverpool, where he was sent to a day school. He took special delight in natural science, and began to devise experiments on his own account. He was also fond of drawing, and relates that the American statesman, Daniel Webster, said on seeing his drawing of an Arab horse, "Sir, you draw horses so well, you ought to have horses to draw you." An old shipmate of his father offered to take him as a midshipman, but this proposal was vetoed by his father. In 1840 he began to study engineering, and went daily to a factory. When he was 16 he longed to go to sea, and being then too old for the navy his father got him appointed to the West Indian Mail Steampacket Service. He made three voyages, visiting among other places the West Indies, South America, and Havana. On the completion of his third voyage, having been just a year at sea, he gave up the career, seeing in it no reasonable prospect of success. In 1843 he accompanied his father to Bermuda. He was then 19 and was becoming anxious about his future. His line of life was determined for him by accident. Not long after they had been established in Bermuda, the island was visited by a severe epidemic of yellow fever. Young Fayrer had friends among the naval and military medical officers, and was strongly impressed, by what he saw during the epidemic, with the importance of the medical profession. He determined to enter the service as a doctor, and obtained leave to work in the dispensary of the naval hospital. There he made his first acquaintance with drugs, and he watched the practice in the wards. He made himself familiar with the bones, and his medical friends taught him what anatomy they could when making *post-mortem* examinations.





In 1844 he went to London and entered at Charing Cross Hospital. Among his fellow students was Thomas Henry Huxley, with whom he contracted an intimate friendship. In due course he was appointed House-Surgeon to the Westminster Ophthalmic Hospital under Guthrie. In 1847 he became a Member of the Royal College of Surgeons, and through the influence of Guthrie he got a commission in the navy. It may be said here that before this Fayrer had induced Huxley to enter the service. In the "Chapter of Autobiography" prefixed to his *Essays* Huxley says:

> It was in the early spring of 1846 that, having finished my obligatory medical studies and passed the first M.B. examination at the London University—though I was still too young to qualify at the College of Surgeons—I was talking to a fellow student (the present eminent physician, Sir Joseph Fayrer), and wondering what I should do to meet the imperative necessity of earning my own bread, when my friend suggested that I should write to Sir William Burnett, at that time Director-General for the Medical Service of the Navy, for an appointment.

When Fayrer joined Haslar in 1847, Sir John Richardson was the head of the medical department of the hospital. One of the assistant surgeons was Andrew Clark, afterwards President of the College of Physicians. Fayrer had been but a short time at Haslar when he was invited by Lord Mountedgecumbe to accompany him on his travels for a year. To enable him to accept this invitation, he was obliged temporarily to resign his commission. In company with his patron, Fayrer visited Germany, Switzerland, and Italy. He mentions that at the University of Pavia he saw the head of Scarpa preserved in spirit. Finally the party settled at Palermo, where he attended lectures at the University. They had not been long there before political troubles broke out between the Sicilians and the Neapolitans. There was fighting in the streets, and Fayrer had the opportunity of doing his first operation, an amputation of the thigh. He says he "got over it pretty well." He was very busy for some time attending to the wounded, and was presented by the Provisional Committee with a decoration which was useful in preventing his being shot by the insurgents. The Provisional Government also offered him any position as a medical officer he liked; but he declined. From Palermo the party went to Rome, where they arrived in April, 1848. One of the first things he did

...s to visit the hospitals. He entered as a student at the University, and acquired a good knowledge of Italian, in which language, "helped out with Latin and French," he was able to pass an examination for the doctor's degree. In February, 1849, he was formally admitted M.D., being, he says, the first Protestant so privileged. While in Rome Fayrer gave a good deal of attention to art and antiquities, and made the acquaintance of Gibson the sculptor. He also saw a good deal of Roman society, which is the most exclusive in Europe, and made English friends who were of the greatest use to him afterwards. Among the persons whose acquaintance he made was Cardinal Mezzofanti, the famous linguist. He was present on November 15th, 1848, in the crowd near the National Assembly when the minister Rossi was stabbed as he ascended the staircase of the Chamber of Deputies; and he was in Rome in the following February when the Republic was declared. When the French appeared upon the scene he went out to see the fighting, and was introduced to Garibaldi. Soon afterwards Lady Malcolm told him she had asked for an Indian appointment for him, but his offer he declined, being unwilling to leave Lord Mountedgecumbe till he had seen him safe back in England.

The party left Rome on May 8th, 1849, and travelled back through Italy. On reaching England they found that an epidemic of cholera was raging; it was very severe at Plymouth, which was looked upon as a city of the plague. At the time Fayrer had practically made up his mind not to remain in the navy. Through the influence of Lord Mountedgecumbe he got a commission in the Artillery. When he had been about four months in the Artillery he was informed that, owing to a reduction in the numbers he would have to be superannuated. Then his friends came to the rescue, and, awaiting [illegible] the future [illegible] a letter from Lady Malcolm [illegible] not [illegible] of an Indian [illegible] from a [illegible]

Fayrer [illegible] to [illegible] and on June 9th, 1850, [illegible] left [illegible] [illegible] the voyage out the young [illegible] were inseparable, and [illegible] help [illegible] to [illegible] the mutiny. On October [illegible] he arrived at Fort William, and the Indian [illegible] [illegible] to the civil station of [illegible] and to the medical charge of a troop of [illegible] [illegible] [illegible]

camels, and wild animals, and the artillery department were placed under Fayrer's supervision. The annexation entailed upon him much more work in other directions. Jails were formed, and with them jail hospitals. These soon became crowded, and there was much sickness and mortality. All this gave him great anxiety, for sanitary science was in its infancy, and there were many difficulties about sanitation and diet. He reorganized the arrangements of the Post Office, which was now made to extend over the whole province. Fayrer relates some stories illustrating his professional life at this time. One of these may be quoted:

It was reported to me that one of the queens, the third in position, was dangerously ill, and that the hakims despaired of her. I was requested by the king, through the Resident, to see the sick lady, and accordingly went to the Chutter Munzil Palace, where I was received in great state and was taken to the sick room. The chief eunuch, Bashir ud Dowlah, and others, with a number of female attendants, were present. A cashmere shawl was stretched across the room, behind which the Begum was seated. I immediately said that unless the purdah were removed nothing could be done. They made no difficulty, as it was "hakim ka hukm," and there was the lady seated upon a silver charpoy, enveloped in shawls. This was no better than a purdah. However, I knew patience was necessary, so I took a seat by the figure, Bashir ud Dowlah talking to her, telling her that without seeing her nothing could be done, she giving faint and muffled replies from the depths of the shawls. At last she put out her hand for me to feel her pulse; but immediately I attempted to touch her wrist, she wriggled off the charpoy and waddled out of the room, wrapped up in her shawls. The interview was over for that day. Profuse apologies were made, and I was asked to make allowances for feminine weakness. The next morning I went again; the same scene was repeated, and the confusion of the attendants was extreme. Meanwhile, I had arrived at the conclusion that the lady who was so very active could not be so very ill! On my third visit I made progress, and was allowed to see her face and her tongue and to ascertain something of the nature of her case. The next time she laid aside her shawls and her veil, and we sat and talked face to face, she having got over her shyness. She was very loquacious, talked like a child, and seemed very pleased with her freedom. She was a nice-looking girl of 24 or 25. After this she was constantly asking me to go and see her. In a few days she consented to submit to an operation (paracentesis), which I performed. She got much better, and the hakims declared shortly afterwards that she had quite recovered. The result of this was that the king in durbar ordered an honorarium of 20 000 rupees to be sent to me. I received 3,000! He sent me a beautiful sword with a Damascene blade and silver and ivory handle, some magnificent shawls, two long and one square, what is called a "doshala rumal," a splendid piece of Cashmere work very heavily embroidered in gold, which I subsequently gave to the Museum in Edinburgh, and a young Arab horse. I was also presented with a silver seal with the following title engraved on it: "Mualji ud Dowlah, Hazik ul Mulk, Dr Joseph Fayrer, Bahadur, Hikmat Jung." These were sent officially through the Resident. The Arab turned out a great beauty. I kept him all through the siege, and left him at Allahabad with an officer on my way home. He was skin and bone from starvation, and I was glad to find him a good master.

In the spring of 1857 came the first grumblings of the storm that was about to break over India. The siege of Lucknow belongs to history, and the story need not be told here. A full account of it may be read in his *Recollections of My Life*. "Dr. Fayrer's House" was one of the central points in the defence; it was at once a fortress and a hospital. The anxiety of the time was intense. For a time Fayrer continued performing his routine professional work, which became more onerous, as many civilians, staff officers, and others were added to their numbers. In addition to the enemy without, there were threatenings of small pox and cholera within, but on the whole they were remarkably free from epidemics. They were uncertain of all natives, even of those of their own household. They lived for a time in constant expectation of an outbreak, and on May 30th it came. By June 1st civil government had almost been replaced by martial law. The Residency was besieged, and on July 2nd Lawrence, the Resident, was mortally wounded. The following is Fayrer's account of the tragedy:

I went and found Sir Henry Lawrence lying as above described, with several officers about him. I saw he was seriously injured, for he was pale, his voice was low, he was semi-collapsed, and was talking in a hurried and excited manner. He begged me to tell him how long he had to live. On examining the wound I found that the muscles and integuments of the hip were lacerated, and upper part of the thigh bone being comminuted. In his enfeebled and exhausted condition I knew that so serious a wound must soon prove fatal, and said I thought he might live forty-eight hours. I did what was possible to arrest haemorrhage there was not much—to alleviate pain, and relieve the condition of shock. It was a very trying time. The Residency was already much injured by heavy shot and shell, the room we were in was knocked almost to pieces, while round shot were striking the house frequently: the whole force of the enemy's fire seemed to be concentrated on it. Fearing that more might be killed, we carried him as carefully and tenderly as we could to my house, and laid him on a bed in the deep front veranda. The fire was not so heavy at my house at that moment, and we placed him where there was shelter. His bed was soon surrounded by his sorrowing friends. The enemy must have found out what had happened, for he was scarcely there when a most fiendish fire was rained upon my house, and both round shot and musketry came fast and furiously. The principal officers were soon about him, and knowing he was dying, he directed Colonel Inglis to assume command of the troops, and Major Banks, the Commissioner of Lucknow, to succeed him in the duties of Chief Commissioner. He was perfectly clear and collected, though much exhausted, and gave full directions as to what he wished to be done. He most earnestly adjured us never to surrender or treat with the enemy, and to do everything possible to protect the women and children, to economize provisions, and defend the Residency to the last or until relief should arrive. He took leave of us all in the most affecting manner, spoke most humbly of himself and all that he had done, and expressed a desire that the only epitaph on his tomb should be, "Here lies Henry Lawrence, who tried to do his duty." He reproached himself for what he called his shortcomings, but said he had endeavoured to do his best. Partridge and I examined the wound thoroughly under chloroform, and found it so grave, extending into the pelvis, that nothing could be done but try to relieve pain and sustain the failing strength. He remained sensible for a long time, and was closely watched by his nephew, George Lawrence, with the chaplain (Mr. Harris) and some of the ladies. We removed him to the inner room after a time, as the veranda became more and more exposed to fire. I was with him constantly and at the last, doing what I could with chloroform and otherwise to relieve him. He ultimately became unconscious from exhaustion, and died on the morning of the 4th, and was buried the same evening in the Residency churchyard in the grave with the other dead of that day. The death of our excellent chief threw a gloom over all.

In the middle of July Fayrer records that his house, which sheltered twenty-six persons, was becoming frightfully dilapidated with shot and shell, and some parts of the walls were crumbling away under the increasing musketry fire. It was in a most exposed position just overlooking the Bailey-guard Gate, which was a marked point of attack. The musketry and two guns in his house firing grape and round shot were constantly at work. Fayrer himself took an active part in the defence, besides ministering to the sick and wounded and doing all he could to keep up the spirits of his little garrison of eight men. He had a heavy cavalry sabre sharpened and pointed, with a leather thong to wind round his wrist, which hung up ready if the enemy got in. He was quite determined that they should not take him alive, and that he would kill as many of them as he could before they killed him; but the garrison always hoped that relief would come, and that they would live through the siege. Some men asked him to give them poison for their wives if the enemy should get in; this he absolutely refused to do. In returning to his garrison one day he was struck by a spent bullet in the shin, which caused great pain and severe contusion. His wife had a narrow escape from the bursting of a shell, and his eldest son, then a boy, was struck by a bullet, which remained in his leg through all his life. Great privations had to be endured and we are told became medical comforts. Tobacco was almost exhausted, a cigar was worth its weight in silver. Dysentery, cholera, and pyaemia raged among the little garrison. Death was all around them in the most painful forms. At last, on September 25th, Outram and Havelock, both wounded, entered the palace with some Fayrer dressed their wounds and made them as comfortable as possible under his roof. Outram assumed the supreme command, and quartered himself with his staff in Fayrer's house. The siege continued, but notwithstanding the lowness of the rations, the health of the garrison was fairly good. In November the relief was finally effected, and the survivors went into camp. He had still plenty to do in looking after the sick and wounded. Among the sick was Havelock, who died of dysentery on November 24th. For his services Fayrer received the thanks of the

Government, and on September 7th, 1858, he was promoted to the brevet rank of Surgeon, received war batta and twelve months' prize money. He was also allowed to count a year's service towards retirement, and received a medal and clasp for the defence of the Residency. All the prize money and batta which he received for Burmah and Lucknow he handed over to the Medical Benevolent College, Epsom.

In March, 1858, Fayrer returned to England in broken health. With characteristic energy he went to Edinburgh to work for the degree of M.D. He matriculated, furbished up his classics for the preliminary examination, entered the botany and medical jurisprudence classes, worked at analytical chemistry and anatomy, and was a most regular attendant at the clinics of Syme and Hughes Bennett. He worked hard attending lectures and hospital from 8 a.m. till evening, and read till past midnight. He was elected a Fellow of the Edinburgh College of Surgeons, and on the strength of certain meteorological work, a Fellow of the Royal Society of Edinburgh, and in March, 1859, he received his doctor's degree after a special examination, to which he was admitted in order to allow him to return to India. He had been offered the Chair of Surgery in the Medical College Hospital of Calcutta. On April 29th, after an absence of fourteen months, he took up the appointment, being then 34 years of age. In Calcutta, besides clinical lectures, he had to give courses of operative surgery, and he undertook in addition a complete revision of his anatomical knowledge by dissection. His operations at the hospital were very numerous, and he began to engage in private practice. He was much occupied with investigations with regard to septic poisoning, pyaemia, and osteomyelitis—conditions which had not previously described in India, though very rife in that country. He began also to write officially on the defects of structure and sanitary arrangements that made the hospitals unhealthy. By degrees his private practice in Calcutta increased considerably. As he says:

> The work of a doctor in Calcutta is exceedingly heavy; he is physician, surgeon, general practitioner, and everything else, and of course has many other duties to perform, and a great deal of this work is absolutely unremunerative. The expenses of living—horses, carriages, house rent—are very great. My usual routine was as follows: Up at gun-fire, a long ride if I had several horses, chota haziri, important cases at their own homes, visit to the hospital wards, operations, clinical lecture; in the early mornings in the cold season I often worked at anatomy; breakfast at about ten, patients at home, then out to visit patients, lunch at about one o'clock, back to the college to lecture at 2 p.m. three times a week, then a drive with my wife, or a ride, dinner at eight, then more patients to visit, then to bed, from which I was not unfrequently summoned; besides this, casual urgent cases that came at all hours.

In 1861 he was elected a member of the Council of the Asiatic Society of Bengal, and shortly afterwards a Fellow of the University of Calcutta. Later he was gazetted surgeon to the Calcutta Volunteers. At a meeting of the Council of the Asiatic Society he proposed that an ethnological investigation of the Indian races should be set on foot, and measures for its prosecution were instituted. Although the project was never fully realized, it produced some valuable reports on the different tribes in Bengal by Colonel Dalton.

In 1867 Fayrer was elected President of the Asiatic Society of Bengal, having previously been made a Trustee of the Indian Museum. He proposed a scheme for a zoological society and gardens in Calcutta, but the project fell into abeyance for a time for lack of funds. When in India with the Prince of Wales, now Edward VII, in 1875 he had the satisfaction of seeing the gardens opened by His Royal Highness.

Fayrer was for a time Surgeon to Lord Mayo, and the Viceroy frequently consulted him on all medical matters connected with the service or the hospitals in Calcutta. In 1869 he became a Companion of the Order of the Star of India. He was President of the Faculty of Medicine of the University, and to his other duties had been added those of a Justice of the Peace. Much of his time was occupied with researches into snake poisoning. He offered the results of his researches on venomous snakes to the Indian Government, which, early in the following year, defrayed the cost of the publication of the book.

At the beginning of 1870, Fayrer accompanied the Duke of Edinburgh on his travels through the North-West of India, and His Royal Highness, on parting, presented him with a beautiful ring, and subsequently appointed him his Physician in Ordinary.

In 1871 he was appointed Honorary Physician to Queen Victoria. In April of the same year Lord Mayo invited him to accompany him in an expedition into the Terai. After the murder of the Viceroy, Fayrer superintended the arrangements for the transport of the body to Ireland, and for his services in this matter the Government of India presented him with a beautiful case filled with goblets, and two cups inlaid with gold bearing a suitable inscription.

In 1872 Fayrer, broken in health, left India, in which, though he did not know it, his official career was at an end. He was elected a Fellow of the Royal College of Physicians in London, and in 1873 was appointed a member of the Medical Board at the India Office. In the following year he succeeded Sir Ranald Martin as President of the Board, retiring from the effective Indian Service on a pension. He had retired as Deputy Surgeon-General, but was now gazetted as a Surgeon-General.

In 1875 Fayrer accompanied the then Prince of Wales on his visit to India. He was received with great cordiality by his old students and friends at Calcutta and other parts of India. In the Terai he met with an accident in an elephant hunt, his horse stepping into a pit in the grass and throwing him violently. The accident had no serious consequences. On his return to England he was appointed Honorary Physician to the Prince of Wales.

In 1876 Fayrer was elected a Fellow of the Royal Society, signing his name on the roll immediately after that of the Emperor of Brazil; he became a member of the Council of the Society in 1895. In 1878 he was elected a Fellow of the Royal College of Surgeons of England, and in the same year the University of Edinburgh conferred upon him the honorary degree of LL.D. In 1890 he received a similar honour from the University of St. Andrews. In 1879 he was elected President of the Epidemiological Society. In 1882 he delivered the Croonian Lectures at the College of Physicians, taking as his subject the climate and fevers of India. The lectures were subsequently published in a volume. Fayrer was frequently consulted by Government as to medical matters, and represented India at the International Cholera Conference held in Rome in 1884.

He was President of the Section of Preventive Medicine in the Congress of Hygiene and Demography held in London in 1891. He represented the College of Physicians at the tercentenary of Galileo held at Padua in 1892, and made a speech in Italian. At the end of 1894 he resigned his seat on the Medical Board of India. On that occasion a very favourable dispatch concerning him was received from the Indian Government. In January, 1896, a baronetcy was conferred upon him.

The last years of Fayrer's life were spent in retirement at Falmouth. He was fond of yachting, and found there, in addition to an agreeable climate, opportunities of indulging his favourite amusement. He was a man of wide reading and varied culture, and was particularly familiar with Italian literature. He had, therefore, abundant resources in himself, and he had the honour, love, and troops of friends which should accompany old age.

In later days he suffered much from the infirmities of age, and to the burden of years was added a load of complicated disease, which he bore with unflinching fortitude. A well-known physician who saw him a week before his death writes:

> He was one of the noblest natures I ever knew, and always cultivating the loftiest ideals in life. I felt a better man after the inspiration of his presence and converse. He kept us all to our duties, whether royalty, the public, or the medical profession, and did his own duty manfully to the last. It will ever be my pride that I enjoyed the friendship of such a man.

Honours and distinctions were showered on Fayrer. Beside those which have been mentioned in the course of the present record, he was a Knight Commander of the Civil Star of India, a Knight of Grace of the Order of St. John of Jerusalem, a Doctor of Philosophy of the University of Padua, a Foreign Associate of the Paris Academy of Medicine, a Foreign Corresponding Member of the Royal Academy of Science of Lisbon, an Honorary Member of the Royal Academy of Medicine of Rome, a Fellow of the Academy of Science

of the College of Physicians of Philadelphia. He was the author of a number of valuable contributions to medical literature. Among them may be mentioned *Clinical Surgery in India* (1866); *Clinical and Pathological Observations in India* (1873); *Dysentery, Diarrhoea, etc.* (1881); *Climate and Fevers of India* (1882); *Epidemiology of Cholera* (1888); *The Preservation of Health in India* (1894); *A Biography of Sir Ranald Martin* (1897). His best known works are the beautifully illustrated monograph, *Thanatophidia of India*; and his *Recollections of My Life* (1900), on which this account of his career is founded. He was also the author of the articles on Tropical Abscess of Liver, in Murchison's *Lectures on Diseases of Liver* (third edition); of the articles on Liver Abscess, Tropical Diarrhoea, and Sunstroke, in Davidson's *Hygiene of Warm Climates*; of the articles on Sunstroke, and on the Climate and Fevers of India, in *Allbutt's System of Medicine*; to our own columns he contributed a paper on Hill Stations of India as Health Resorts, in 1900.

Sir Joseph Fayrer married the daughter of Brigadier-General A. Spens in 1855. His eldest son, who was Secretary of the Indian Midland Railway Company, died unmarried in 1904, and he is succeeded in the baronetcy by Lieutenant-Colonel Joseph Fayrer, R.A.M.C., Medical Officer of the Duke of York's Royal Military School, who was born in 1859. Sir Joseph Fayrer leaves three younger sons—Lieutenant-Colonel J. O. S. Fayrer, late of the 5th Gurkha Rifle Regiment; Mr. H. W. S. Fayrer; and Captain F. D. S. Fayrer, of the Indian Medical Service—and one daughter, the wife of the Rev. K. A. Edgell, a second daughter, Mrs. Herries, of Spottes, having died fifteen years ago.

WITH much regret we announce the death of Dr. CHARLES FÉRÉ, Physician to the Bicêtre, and one of the most distinguished pupils of Charcot. Dr. Féré, who was 54 years of age, took his doctor's degree at Paris in 1882, the subject of his inaugural thesis being the functional disturbances of vision by cerebral lesions (crossed amblyopia and hemianopsia). To the study of neuropathology he gave his scientific life. For the last twenty years his laboratory at the Bicêtre has been a shrine visited by a constant flow of scientific pilgrims from all parts of France and from foreign countries. Féré's investigations ranged over a wide area, including biology as well as medicine in the largest sense of the term. He studied the problems of heredity, evolution, and degeneration from every point of view, bringing morbid anatomy, physiological and pathological experiment and clinical observation to bear on the points under investigation. This largeness of scope gives a special completeness to his researches. He embodied the results in his valuable books on the neuropathic family, degeneration and criminality, the pathology of the emotions, animal magnetism, the evolution and dissolution of the sexual instinct, the disorders of the intellect, and the family treatment of the insane. He wrote much besides on epilepsy, hysteria, morphinomania, alcoholism, muscular fatigue, the physiology of voluntary movements, the reaction time between sensation and movement, and many other subjects. Dr. Féré was a man of amiable character, and particularly courteous to all who sought information from him.

DR. GUSTAVE SCHOENBERG, who died recently at Philadelphia at the age of 81, was a native of Prussia, and a descendant of the Dukes of Schoenberg. He took his Doctor's degree at Berlin in 1848, and went to the United States in 1860. In 1873, he went to Japan, and in the following year he was appointed Surgeon-in-Chief of the Mikado's army. During his sojourn in the East, he visited Formosa, being one of the first white men who explored that region. He is also said to have penetrated into many parts of China which till then had been closed to foreigners.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

APPROACHING EXAMINATIONS.

THE examinations for the Degree of Bachelor of Medicine will commence in the Examination Schools on Thursday, June 20th.

That for the Degree of Master in Surgery will commence a week later in the Medical Department at the Museum on Thursday, June 27th, at 10 a.m. Notice is given that candidates, if they be not already members of the surgical staff of a recognized hospital, must produce a certificate, countersigned by the Regius Professor of Medicine, of having acted in such a hospital as dresser or house-surgeon for six months.

Names of candidates, either by letter or from the candidates in person, will be received by the Assistant Registrar, at the University Registry, Old Clarendon Building, at any time not later than 10.30 a.m. on Friday, June 7th.

The statutable fee (£5) must be paid by the candidate on entering his name, and a certificate from the proper officer of a college or hall, or from the Censor of Non-Collegiate Students, stating that the candidate's name is then on the books, must be given in at the same time.

Diploma in Public Health.

The examination for 1907, under new regulations, will commence on Tuesday, November 19th, at 10 a.m., in the Examination Schools, and will be held in two parts. Both parts may be taken together at the same examination, or they may be taken at separate examinations; but no one will be deemed to have satisfied the examiners in Part II unless he has satisfied the examiners in the subjects of Part I.

The fee for admission to each part is £5.

A diploma is issued to every candidate who has passed in both parts of the examination, but no diploma or certificate is given under any other circumstances.

Names must be entered by 10.30 a.m. on Tuesday, October 29th.

Full particulars are published in the *University Gazette* of April 26th, and may be obtained from the Assistant Registrar, Clarendon Building.

Examinations for scholarships in natural science at Balliol and Brasenose Colleges, Christ Church, and St. John's College will take place on July 2nd.

EDINBURGH UNIVERSITY COURT.

THE Edinburgh University Court met on Monday, May 13th, when there were present: Principal Sir William Turner (in the chair), the Hon. Lord Stormonth Darling, the Hon. Lord Dundas, Bailie Menzies, Dr. Joseph Bell, Dr. D. F. Lowe, Mr. J. Campbell Lorimer, Professor Sir Thomas Fraser, Professor Crum Brown, Professor Rankine, Professor Pringle Pattison, and Dr. R. Mackenzie Johnston.

It was agreed to recognize Dr. William Robertson (Edinburgh) and Dr. J. Malcolm Farquharson (Edinburgh) as Extra-academical teachers whose courses of instruction in public health and diseases of the ear, nose, and throat respectively should qualify for graduation in medicine.

Grants recommended by the Senatus from the income of the Earl of Moray Endowment for purposes of original research were approved.

The University Court's Draft Ordinance (Regulations for the Degree of Bachelor of Pharmacy) was submitted and approved.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

THE following gentlemen, having passed the requisite examinations, were, at a meeting on May 16th, admitted ordinary Fellows:

A. G. Bate, Brighton; J. H. M. Bell, Edinburgh; T. W. Eden, London, W.; W. Hume, Edinburgh; B. Ingram, Edinburgh; E. C. Lomas, D.S.O., Fleet Surgeon, Royal Navy; F. W. Lundie, Edinburgh; E. C. E. O'Leary, Staff Surgeon, Royal Navy; W. H. Parkes, Auckland, N.Z.; A. M. Pollock, Glasgow; C. H. Thomas, Toronto; R. S. Roper, London, W.; C. R. Whittaker, Edinburgh; J. C. Wilson, London, N.W.

The medal and set of books presented to the College by Colonel William Lorimer Bathgate in memory of his late father, William McPhune Bathgate, F.R.C.S.E., Lecturer on Materia Medica in the Extra-Academical School, was awarded, after the usual winter session competitive written examination in materia medica, etc., to Miss Alice E. M. Babington, B.A., Greenfort, Fahan, co. Donegal.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

DIPLOMA OF FELLOW.

THE following candidates have been approved at examination indicated:

FIRST PROFESSIONAL EXAMINATION.—G. C. Adeney, St. Thomas's; W. Appleyard, University College; A. L. Candler, St. Bartholomew's; H. Chitty, University College; G. H. Colt, Cambridge and St. Bartholomew's; P. T. Cromble, Belfast; E. A. Dorrel, Bristol and St. Bartholomew's; A. P. Fry, St. Bartholomew's; W. W. Holztmann, London; C. W. M. Hope, King's College; W. Johnson, Guy's; J. L. Johnston, Guy's; H. B. Kent, Guy's; A. Kinder, New Zealand and London; J. C. Lyth, Leeds; J. A. McCollum, Toronto and King's College; M. McCan, King's College and Belfast; F. E. McKenty, McGill; R. H. Mawhood, St. Bartholomew's; R. D. Maxwell, London; E. B. Morley, London; K. M. Pardhy, King's College and Birmingham; G. H. Pooley, Cambridge and St. George's; J. W. Power, Sydney and London; F. C. Pybus, Durham; P. B. Roth, Aberdeen and London; H. C. G. Semon, Oxford, University College, and King's College; G. C. E. Simpson, Cambridge and St. Bartholomew's; H. S. Souttar, Oxford and London; J. C. Stewart, Durham and King's College; E. P. Stibbe, Charing Cross; H. Sutton, Melbourne; H. L. Tasker, University College; H. A. Treadgold, Cambridge; W. W. Treves, Cambridge and London; C. Walker, Birmingham; G. E. Wilson, Toronto and London.

HOSPITAL AND DISPENSARY MANAGEMENT.

SMALL HOSPITAL.

Dr. Joseph Smyth (Greenawn, Gowra, Naas) writes: In response to your invitation in the Journal of March 16th, p. 663, I send a suggested sketch plan of a small hospital with 34 beds. The cost at 6d. per cube works out at about £97 a bed. The size may be reduced by 4 or 8 beds without disturbing the plan, or it may be at any time economically extended. The floors for males and females are aërially disconnected, and have separate external entrances. Both are aërially disconnected from the kitchen. The ward doors permit the wheeling of the patients' beds on to the verandahs. The wearing clothes of patients when in bed are kept conveniently outside the wards in a dry place. Each ward is entered separately from the hall; the stairs have no turnings. The small operation room is lighted from the top, is heated with hot water from the kitchen-range boiler, and has separate entrances from the male and female wards. The sleeping rooms of the nurses and attendants are in a third story over the central hall. The maternity ward with two beds is over the nurses' sitting room, and would be larger than it.



Index to Plan.

1. Mortuary.
2. Washhouse with top vent.
3. Store.
4. Larder.
5. Milk.
6. Cooked food.
7. Pantry.
8. Scullery.
9. Coals.
10. Kitchen with top light and vent.
11. Drying horses.
12. Ironing room.
13. Linen room.
14. Operation room with top light.
15. Elevator.
16. Stairs and hall.
17. W.C.
18. Surgery.
19. Bath room.
20. Nurses' sitting room.
21. Male hall and day room.
22. Stove.
23. Ward press.
24. Ward press.
25. Dormitory.
26. Dormitory.
27. W.C.
28. Lavatory.
29. Clothes.
30. Ward.
31. Verandah.
32. Ward.
33. Clothes.
34. Lavatory.
35. W.C.
36. Servants' w.c.

Note nurses' and attendants' sleeping apartments over Hall No. 21.

Ground floor: Male wards, 11 ft. high. Second floor: Female wards, 10 ft. high. Third floor: Nurses and attendants. 16 male beds; 16 female and children's beds; 2 maternity beds; 9 ft. wall space per bed; 9½ sq. ft. floor space per bed: **1,039½ cubic ft. per bed.**

Medico-Legal.

A QUESTION OF FEES.

In the King's Bench Division, on May 15th, an action was tried in which Mr. C. H. Fagge, Assistant Surgeon of Guy's Hospital, claimed £52 10s. as a fee for the performance of an operation on the defendant's child for the relief of an acute mastoid abscess brought about by measles. The defendant paid £26 guineas into court as being more than sufficient to satisfy any just claim. In the event the Court decided in favour of the plaintiff, awarding him the full sum claimed and the costs of the action.

According to a report in the *Times* and other papers, Mr. Fagge, in the evidence, said that he had visited the patient at her home in response to a telephone message on a Saturday. [illegible] and after consultation with the medical man in charge of the case and his partner, and after receiving the permission of the defendant, he operated forthwith, having been the first time and received a portion of it. The operation was completely successful, and in default of its performance either immediately or within a few days' time, the child would not have lived. After

got the evidence of general practitioners able to say from their own knowledge what had been charged in similar cases. On that point they had the evidence of Dr. Blatherwick, who said that a fee even double that actually charged would not have been unusual. Of course the defendant might have asked beforehand as to the fee, but even if he had done so the answer would probably have been that it was impossible to say until it was seen what the operation really involved. The defendant, in short, had not succeeded in displacing the evidence for the plaintiff, or in showing that the fee asked was unfair and unreasonable, so judgement must be given against him.

A CORONER ON QUACKS.

AT a recent inquest in Dewsbury the Coroner, Mr. P. P. Maitland, made some emphatic remarks as to the harm done by irregular practitioners of medicine and by quack medicine vendors and the like, and on the folly of the people in allowing themselves to be gulled by them, and since what he had to say attracted considerable attention in the local press the success of these gentry, who in Yorkshire and the Midlands are particularly active, may for a time be partly checked. In the case which excited his indignation there was nothing for the most part of a very unusual nature. The deceased, a man suffering from cirrhosis of the liver, was for a short time under the care of a medical man, and during that period his condition improved. He was then persuaded by an agent of the "Dr. Hall's Hygiene Company" to visit Manchester, where he received some medicine from "Dr. Hall." He became worse and died some weeks later, the immediate cause of death being ascites. In the course of his concluding remarks the Coroner expressed surprise that the medical authorities, and especially the British Medical Association, did not take steps to put an end to the proceedings of the persons in question, and received from Dr. Wilkinson, the medical man engaged in the case, an explanation of the difficulties which the law as it at present stands throws in the way of successful action of the kind indicated by whomever undertaken. With unconscious humour the *Dewsbury Reporter* placed at the bottom of its two columns account of the inquest a displayed advertisement of "Pink Pills for Pale People."

BEE-KEEPERS' LIABILITIES.

Is a man who keeps a beehive in his garden liable for the damage which these insects may do to the property of other persons? A case which was recently heard in Ontario throws some light on the question. The defendant kept from 160 to 170 hives of bees, and it was estimated that the strength of a hive was from 15,000 to 50,000 bees. The hives were located in a small yard near the highway, while across the highway was the plaintiff's field of oats, and beyond it again was his field of buckwheat in blossom, to which the bees resorted for honey. One day the plaintiff entered the field to cut his oats, when he and his pair of horses were attacked by the bees. The plaintiff made his escape only by partly immersing himself in a neighbouring pool of water and covering the exposed parts of his body with mud. One of the horses died almost immediately in the field from the effect of the stings, and the other succumbed within two or three days. The plaintiff described the attacking bees as being in clouds, and estimated that there were more than 4 bushels of them on the horses and in the air about them. The jury found for the plaintiff, and judgement was entered accordingly. An appeal was lodged on the ground that there was no evidence that the bees were of a vicious nature, and that the defendant had been guilty of no negligence. The Court held that it was unnecessary for the plaintiff to show that the defendant knew the bees to be vicious, and held that the defendant was liable on the principle of *sic utere tuo ut alienum non laedas*.

We recall a case which was noted in these columns where an Irish farmer was held liable in circumstances very similar to the above. Those who keep bees should take warning by the above declaration of the law, which, we are credibly informed, would hold good in England.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE NUMBER OF GREENWICH HOSPITAL PENSIONS.

THE *London Gazette* of May 14th contains an Order in Council fixing the number of Greenwich Hospital pensions established for officers of the ranks named, in lieu of those fixed by the Order in Council of January 29th, 1900, as follows: Staff Commanders and Navigating Lieutenants, 11; Fleet Surgeons and Staff Surgeons, 13; Chief Gunners, Chief Boatswains, Chief Signal Boatswains, and Chief Carpenters, 23. This rearrangement will be carried out on the occurrence of vacancies in such manner as the Admiralty may determine. Clause 11, Section 9, of the Order in Council of February 22nd, 1870, under which an officer is required to relinquish the Naval or Greenwich Hospital Pension of which he may be in receipt, on being advanced in rank on the retired list, is cancelled, such cancellation to have retrospective effect as regards cases in which this regulation has been contravened in respect of Greenwich Hospital Pensions.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2831, Gerrard.	2830, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

ERGOT asks: What is the cause of persistent sneezing, and can any of my colleagues suggest any treatment for same?

THEINE writes: Could I be told of a digestive tea? I have a patient who has weak digestive powers, and who is addicted to tea drinking, although not immoderately, and she finds that ordinary tea causes unpleasant gastric symptoms.

CORNISH would feel obliged for information as to treatment in sea-sickness. Is Limtner's validol of any real benefit? The patient in question has never been able to travel by sea without being extremely sea-sick.

J. D. asks for information as to the newest or most satisfactory method of treating sciatica apart from nerve-stretching. Aspirin has given more relief than any other method, but has not cured the patient.

EAR DISEASE AND THE NAVY.

F. S. J. writes: I should be greatly obliged if you would tell me if the following conditions would disqualify a boy, aged 13, from entering the Royal Navy in any or all of its various branches. He has a perforation of one tympanic membrane and deafness on that side. He has no discharge from the ear, and never has had. He is not apparently deaf, and it was only discovered accidentally. General health and development are perfect in every way.

*** The defect, as described, would disqualify for entering the navy in any of its branches.

ANNUITIES AND DAMAGED LIVES.

J. D. L. writes: Can you give me the name of any office which grants annuities to damaged lives? My patient has a bad family history, has a fatty dilated heart, is 55 years of age, and is not sparing in the use of alcohol. Having some £1,500 left to him, I have advised the purchase of an annuity.

*** So far as we know all assurance offices in granting annuities assume that the applicant is an average life. They have not yet taken to rate down damaged lives for annuities, as they rate up similar lives for life assurance.

ANSWERS.

J. W. M. may consult the textbooks on forensic medicine. The condition referred to does not entail any legal consequences.

CRAMP IN MUSCLES OF LOWER LIMB.

C. M. writes, in answer to "P. A.'s" query in the BRITISH MEDICAL JOURNAL of May 18th: I had a case three years ago exactly similar to the one described by "P. A." in the JOURNAL of the 18th inst. Examination of the urine revealed the presence of a large quantity of sugar. After careful dieting and the administration of a small dose of sod. salicyl. at bed time the symptoms entirely disappeared.

DR. BALMANNO SQUIRE (London) writes: "P. A." does not state the age of the man, nor does he say what he means by "abstemious," nor does he relate whether the man smoked or not, and yet these things are pertinent. The cause, or part cause, is probably flatulence. A person may be much incommoded by wind and not know it save by the test of exorcising it by means of a carminative. Not that wind will cause cramp in everyone; there must be a something added,

and what that may be I know not. Still the expulsion of wind in an adequate manner is followed, in most cases, by the absolute cessation of cramp in the thigh and leg within about a quarter of an hour after the swallowing of a fairly pungent carminative. There is another kind of cramp attended with exquisite pain which is also produced in part by flatus, and that is spasm of the sphincter ani. This is also completely and speedily relieved by taking a carminative. Why the same cause—flatus—should produce, in some persons, spasm of the anus and, in others, spasm of the thigh and leg muscles, I do not know. If a person is in a hotel and remote from a chemist, the readiest remedy (and a very efficient one) will be a liqueur glassful of "crême de menthe," which is a sufficiently strong preparation of peppermint to act very efficiently. The reason that these spasms come on at night—as related by "P. A."—is the more considerable accumulation of wind in the night-time. A very effectual carminative for the relief of the cramp is the following:

℞ Tinct. cardam. comp. ... ... ℥ xiv
Spirit. chloroform. ... ... ℥ iv
Spirit. ammon. comp. ... ... ℥ vj

Mix. Two fluid drachms with an equal quantity of water for a dose. Inasmuch as the "crême de menthe" and equally the other carminative are pretty strong things to swallow, they should be sipped and not gulped.

Motor Tricycles.

Dr. A. M. Barraclough (Sheffield) writes: In the Journal of May 18th "Calumba" asks for experiences of motor tricycle for medical practice. My present machine is a Quadrant tricar, which, when the front seat is removed, as mine mostly is (an operation which can be performed in two minutes), may be regarded as a motor tricycle. I use this in my practice practically every day in a very hilly district where some of the roads are very bad. I formerly rode a motor bicycle, and below I give what I consider the relative advantages and disadvantages of motor bicycle and tricycle.

Advantages of Tricycle.—(1) *Greater Safety:* It may be driven over roads in any degree of greasiness and also at a fair speed round corners without risk of upset. I once had a nasty fall in mounting my motor bicycle when the roads were covered with a thin sheet of ice. There is not this risk with the tricycle. Then, again, I can drive my machine in many places where I would not risk my neck on a motor bicycle. (2) The tricycle will stand alone. This is a great advantage when paying visits. With the bicycle either the stand has to be let down or the bicycle has to be carefully propped against something and that something is not always handy. (3) With a Quadrant tricar it is an exceedingly simple matter to attach or detach the front seat; it is only a matter of screwing or unscrewing three nuts.

Advantages of Bicycle.—(1) Greater speed. (2) Less vibration—unless the tricycle be very well sprung. (3) Less petrol consumption. (4) Less expense in tyres—on account of less weight and one track in place of three.

I consider a two-speed gear a necessity on a motor tricycle, and it should, of course, have a starting handle.

I think a non-skid band on the rear tyre also a necessity on a motor tricycle if it is to be driven over greasy roads. The experience which led me to fit one to mine was as follows: I had been for a run of about twenty miles on a summer day when the roads were in fair condition. As I was returning a fine drizzling rain came on, and as I neared home the road became very slimy. As I was descending White Lane Hill (see *Contour Road Book*) I applied my brakes and actually locked the back wheel, and the machine went sliding bodily sideways down the hill. Since I had a non-skid band fitted I have not had any similar experience. For this same reason I consider that the brakes on the front wheels should be at least 8 in. in diameter. This makes the steering while descending hills much more easy. If there are any special points on which "Calumba" desires further information, I shall be pleased to give it if I can.

Taking everything into consideration, I think the case can be fairly summed up as follows: That the motor bicycle is much the more enjoyable form of vehicle in summer and on good roads, and the tricycle is much the safer and more reliable in winter and on bad roads.

Dr. W. Black Jones (Llangammarch Wells) writes: In answer to "Calumba's" question in your issue of May 18th, he would find the Phœnix Trimo very satisfactory. I have used this machine for about three years, and have found it most reliable. I generally detach the fore car, and use it as a tricycle. I can then carry a large bag in front. There is no tendency to side slip. I am frequently out in bad weather and very muddy roads.

LETTERS, NOTES, Etc.

Local Anæsthesia for Extraction of Teeth.

Mr. F. Burgess (Kodaikanal, Madras) writes: If Dr. Thomas D. Luke refers to my letter in the Journal of March 9th he will see that he has misread it. I spoke of giving 10 minims of a 10 per cent. solution of cocaine, in divided doses of 5 minims at an interval of five minutes. If giddiness or respiratory oppression occur the second dose can be withheld. There is a certain amount of risk, of course, and a patient not suitable for a general anæsthetic should not ordinarily be given cocaine; but I consider the risk is only increased by insufficient dosage, as you have in addition the further cardiac depressant element of shock from fright and pain to contend with. Twenty minims of a weak solution repeatedly given in small doses would no doubt be useful for several teeth; but I should like to know how Dr. Luke succeeds in getting that volume into the gums of one tooth. I might also call his attention to the fact that I recommended an endermic not a hypodermic syringe for the injection. Beyond a slight temporary feeling of exhilaration, the injection of 8 to 10 minims of 10 per cent. solution for extraction of teeth, etc., on three occasions has had no other effect on myself. In one case, a delicate European lady, slight symptoms of depression followed a full dose, pushed, as I did not succeed in inducing anæsthesia with less; but in this case cocaine was selected as she had previously taken chloroform badly.

Calcium Iodide in the Treatment of Ulcers.

J. D. writes: I read the report of treatment of ulcers by calcium iodide. I have put two patients only on the treatment, administering only 3 grain doses, and find considerable gastric irritation the result, so that the treatment had to be entirely suspended.

Hospital Abuse.

Disgusted writes: About the end of March my attention was drawn to a baby in my surgery by being asked if I did not think such baby was a fine one for ten days old. Upon looking at the child I saw that it was suffering from a very advanced stomatitis, and expressed an opinion that medical treatment was really requisite. "It's only the thrush," was the rejoinder, and my advice was ignored. A few days later I inquired as to how the child was, and was told that it was about the same and that no treatment had been adopted. Fourteen days elapsed, when I heard the child had been taken into Great Ormond Street Hospital in a very emaciated condition. To-night (May 7th) I am informed that the child is not only dead, but has been buried by the said hospital authorities, the proposition to bury coming from the latter, and that the parents could pay back the cost of such burial in weekly instalments of 2s. 6d. What appears to me the most disquieting features in this transaction, showing that few, if any, inquiries are made, are: (1) The mother accepts treatment at the lying-in hospital, and on an average earns 12s. a week; (2) the father is an engineer in charge of the engine-room to a well-known City firm, earning fair wages; (3) rental of rooms, 8s. 6d. a week. In my opinion, they are not the class of people who should be received with open arms at any hospital. If these facts are true, it is quite time the general body of practitioners should at once unite to resist this misuse of funds subscribed by the philanthropic and the degradation to which the profession is fast succumbing. No wonder medical men in the poorer districts with such competition opposed to them find it increasingly difficult to make both ends meet.

Hydrocephalus.

Mr. A. M. de Silva, F.R.C.S.Eng., Lecturer on Anatomy, Ceylon Medical College, writes: R.N., a girl aged 12, was admitted into the General Hospital, Colombo, for hydrocephalus and inability to walk. Well-marked hydrocephalus was present; the circumference horizontally at the centre of the forehead being 26½ in., and the vertical circumference at the posterior margin of angle of lower jaw 27 in. There was paresis and extreme atrophy of both lower extremities, the patient being unable to stand up unassisted. Knee-jerks were exaggerated, and ankle clonus and Babinski's sign present. Both feet were in a condition of talipes equino-valgus. There was no evidence of spina bifida. Incontinence of urine and faeces were also present, and occasioned patient a good deal of inconvenience. The eyes, from what could be seen, showed microphthalmia, coloboma iridis, anterior synechiæ and corneal scars, but doubtless there were other and deeper congenital defects present. It is interesting to note that in spite of all these disabilities the patient was a bright intelligent girl, and, for a girl of her age in Ceylon, could read well. Operative interference was declined. Mercury and iodides made no difference to her condition.

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Remarks
ON
HERNIA—PARTICULARLY IN CHILDREN.

ABSTRACT OF A PAPER READ BEFORE THE GLOUCESTERSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION, MAY 16TH, 1907,

BY EDMUND OWEN, LL.D., F.R.C.S.,
VICE-PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS.

I AM going to begin by asking you to turn over with me some of the leaves of the "Chirurgical Works" of the illustrious Percivall Pott, John Hunter's teacher and professional rival. A man who, as a practical surgeon, was as illustrious as Hunter was as a scientific one. You cannot have time, of course, to read much of this old-world literature; all the same, it is very interesting reading, especially if one is not in a hurry; but hurry is inseparable from professional life at the present day—telegraphs, motor cars, and telephones break in upon one's leisure, and scarcely give one time even to burst the wrapper of his Saturday's BRITISH MEDICAL JOURNAL. And if we do manage to look through the JOURNAL, our attention is likely to be caught by the report of some extraordinarily rare case in which a surgeon short-circuited the duodenum to the sigmoid colon. Every detail is explained with such enthusiasm and satisfaction that it comes as no surprise that, when, on the third day, the *post-mortem* examination was made, there was not a trace of any leakage at the splice. The fact of there being a reference to a *post-mortem* examination showed that the surgeon was anxious that one should not draw an entirely wrong conclusion as to the final issue of his successful work. The diligent reader of his Saturday's JOURNAL can hardly have failed to be struck by the slight association which now exists between the performance of surgical operations and the report of *post-mortem* examinations. One reason for this may be that the operating surgeon must, in the cause of asepticity, keep as far as possible from the mortuary, and a second may be that his patients do not die—or, if they do, that the operation was so thoroughly carried out that an autopsy could not make any fresh revelations—so it was neither reported nor made; and if there still is meaning in the words *nec silet mors* it applies almost entirely to *medical* cases. The physician does not pretend to have but a nodding acquaintance with the high priest of the mortuary. He continues to make his regular visit to the *post-mortem* room, forcing Death himself to give up his secrets, and delighting to unravel them before the students whom he has brought down from the side of the empty bed. The mortuary has for the physician charms which the present-day surgeon either fails to find or is disinclined to seek.

Man is the highest type of animal, and an individual with his testes still within the abdominal cavity would be a poor creature. And when we look at that enormous, hulking beast the elephant, we think that he, with permanently undescended testes, and without even an apologetic scrotum, is, as an animal, of not much account. It is because of the arrangements made for the descent of the testes in man that a "weakness" persists in the inguinal regions. If the testicle is free to pass from abdomen to scrotum, to and fro, what is there to prevent a tail of omentum or an empty knuckle of intestine doing the same? Before birth that tubular passage of peritoneum, down which the omentum so easily slips, ought to have undergone obliteration; but development is often delayed, so that an inguinal hernia is of common occurrence, particularly in boys, for the round ligament is but a poor structure compared with the spermatic cord, and arrangements for its passage to the outside of the abdomen are inconsiderable. If the body of the ruptured child could be kept hanging head downwards like a torpid bat, or even in the horizontal position like a calf or a foal, the hernia would soon cease to come down. When Pott is speaking of this communication between the tunica vaginalis and the belly cavity, he goes on to allude to the occurrence of congenital or, as he calls it, a "congenial" hernia.

In young children this descent happens most frequently when the child strains in crying or in expelling faeces; as soon as the effort ceases, and the child is quiet, the part generally returns up again. The nurses call it "wind," and it is at first most frequently neglected, as the child is not apparently injured by it, and few people are sufficiently aware of its possible consequences.

His opinion was that almost always the hernia of children is down into this open process. He makes no guess, and he does not insist that it is so:—

> I will not say positively that all those ruptures which appear in the scrotum of very young children are "congenial," but all those which I have had an opportunity of examining have proved so.

And the experience of every anatomist and operating surgeon confirms this view. But after Pott had made the statement he gently thrusts his sword into the opinion of "the late Mr. Cheselden" that the hernial sac "was not an elongation of the peritoneum, but was produced by mere pressure of the common cellular membrane." Cheselden, Pott, and Hunter, whose names I have thus mentioned, were three illustrious contemporaries, and their portraits hang to-day side by side in the Council Room of the Royal College of Surgeons. Joshua Reynolds's glorious portrait of Hunter is in the middle of the wall; on his right is the charming presentment of Pott, by Romney ("the man in Cavendish Square," as Reynolds rather impolitely called him), and next to him is the delightful picture of Cheselden.

If a newly-born child were found to have an inguinal rupture, and the surgeon could manage absolutely to prevent the omentum coming into the funicular process for a few weeks, the natural obliteration of the sac would duly take place and the cure of the hernia would be effected. And if the obliteration is not brought about, and the child has any cause for straining, hernia is almost certain to occur and recur.

When Pott is speaking of the treatment of a case in which the bowel has not only come down into the passage, but is so swollen and big—strangulated, in fact—that it cannot be got back again, he says:

> The posture of the body and the disposition of the lower limbs may be made very assistant when the difficulty is considerable; the nearer the posture approaches to what is commonly called standing on the head the better, as it causes the whole packet of small intestines to hang, as it were, by the strangulated portion, and may thereby disengage it.

Now, kindly carry your eye to the funicular process of peritoneum whilst the infant is slung up by its feet; omentum can no more drop into it than the fluid can run up the spout of the coffee-pot as it stands upon the breakfast table. You will tell me, perhaps, that in practice this cannot be carried out; that the mother would deem the position of her inverted infant unnatural or even cruel, and that she would scarcely permit it; that it is too dreadful for her to see her baby upside down. But if it does not distress or disturb the child, I really do not think it need alarm the mother. Having the infant in that position and the hernia being returned, a pad may be firmly fixed over the inguinal canal by means of a domette roller bandage or by a broad band of adhesive (waterproof) strapping, which may be brought round the thighs. If a well-fitting truss is at hand, so much the better. Probably the infant had a truss before, and it did not do what was expected of it; now it may have a fair chance if the child is kept inverted. But I will go back to the strapping, and will say that if a band of it, a couple of inches wide, is firmly drawn round the pelvic zone of the child and over a firm pad laid upon the empty inguinal canal, it is almost impossible for the hernia to come out of the abdomen; and if, after this, the child's legs are tied together, and he is hung up with his head or shoulders just resting upon the pillow, the surgeon is absolutely master of the situation. The child thus slung and made comfortable will probably enjoy a peaceful slumber.

The worst thing that the mother or nurse can do for a ruptured child is to take it up and nurse it each time it cries, because this causes the omentum or bowel at once to fall against the top end of the funicular process, and if she has the sense simply to turn the infant over in its cot and to give it a pat of encouragement, she will spare herself much needless worry, and save her husband from many a wretched night. Every infant should be taught the elements of discipline even in early cradle-life. It is

surprising what a clever mother or nurse can do in this respect. But, in my experience, comparatively few women are either willing or able to undertake this early disciplinary education. Too many of them seem to be under the impression that indulgence is the same thing as kindness.

If, for one reason or another, it is found impracticable to have the child hanging up by his legs, at any rate he can be kept more or less in the inverted position. He can be fixed, for instance, on a small stretcher, which can be tilted so that his head is always low. In some way or another arrangement can be made which will have the effect of keeping his pelvis higher than his chest, and the higher the better. This is, in fact, the adoption of the Trendelenburg position, which in operative work upon the interior of the pelvis proves so useful. This being done, and the inguinal canal being blockaded by a firm pad beneath strapping, attention must be directed to lessening the intra-abdominal pressure. The intra-abdominal tension may be continuously or intermittently excessive, and it is above all things necessary to diminish it. One might speak of it after the manner in which the ophthalmic surgeon speaks of the tension in the eyeball in glaucoma, and call it T + 1, or T + 2. Some of these children with inguinal hernia, indeed, have a belly tension which might be described as T + 3, or even 4.

There is one matter in which the subject of hernia has undergone an agreeable change in the last half-century. Surgery has now made it her special business to look after, operate upon, and cure the ruptured individual, but not long since a large proportion of these cases drifted hopelessly over to the quacks. Pott said, in the preface to his "Chirurgical Works," when speaking of rupture: "It has in all times, from the most ancient down to the present, rendered those who labour under it subject to the most iniquitous frauds and impositions." And as he writes he takes it upon himself to be the champion for the medical profession of his day. He says that though its members were often most unjustly accused when they were doing their best—and doing it very well—still there was plenty of room for further improvements in connexion with the treatment of hernia, and that this would in due course be obtained "by a sedulous application to anatomy, by the frequent examination of dead morbid bodies, and by making such experiments on the living as they had reason to think would prove beneficial." And Pott's forecast has been found correct. Surgery of to-day has rescued most of the ruptured individuals from the claws of the impostor, but there are evidently plenty of people left who are under the belief that the quack, because of his very ignorance, is better able to deal with a hernia than is a man who has worked at the anatomy and studied the surgery of the inguinal region. The advertisement columns of most of our papers show that the rupture curer still exists—the man who promises to *cure* rupture without operating, either by means of some "electric" truss or belt, or by the application of some apparatus, the marvellous secret of which rests only with himself. These quacks ought to be got rid of once and for all, and without further delay; no man should be allowed to hold himself forth as willing and able to treat people for gain, unless by study and by examinations he has duly qualified himself for that work. And I think that we should also agree in insisting that if the General Medical Council, to whom we have paid a considerable fee for registration, has not the power to stop irregular medical practice, it ought to do its best to obtain such power, and to put it into execution with vigour and determination. The members of the profession to which we have the honour to belong are far too patient and long-suffering. I wonder what would be the exact procedure adopted by the lawyers if an unqualified and unauthorized man advertised the fact that he was ready to advise for pain in legal matters. There would be a short way for impostors in law, we may be sure, because every one recognizes the fact that it is a serious matter to deal without due circumspection, care, and authority when the *property* of the individual is at stake: though if it is only a question of his *life* or *health* anything will do—a rupture curer, a cancer curer, a faith healer, a Christian Scientist [illegible], a crockery will serve!

In the way of investigation of the case, the first thing to be done is to inquire as to the feeding of the child. Very likely he is being reared on some vaunted patent food—something which the mother or grandmother has seen advertised upon a hoarding, or puffed by reproductions of specious photographs in her daily paper, or within the cover of some magazine, or recommended in a haphazard way by some interfering friend. Perhaps, even, some injudicious medical acquaintance has been indiscreet enough to interfere in somebody else's territory by making a suggestion to the mother when he happened to meet her in the street. Irresponsible advice of that sort is called in America "kerbstone prescribing." It is not unknown in this country; people do not always mind their own business as they should. The kerbstone prescription is very apt to relate to some patent food or proprietary medicine.

There never was a time when quackery in diets, foods, drinks, and drugs was as rampant as now. And I believe that it would be a marvellously good thing if every patent food, meat essence, tabloid, "natural" purgative, capsule, and cachet could be swept clean off the face of the earth, and we could go back to the foods and the drugs that were used in Pott's time.

The enterprising drug-man appoints a business-minded physiologist and a commercial chemist to work in his laboratory, and instructs them to prepare foods and medicines (or the two combined) such as he can advertise as being necessary for the preservation of health and happiness. And he keeps on advertising them until the public begin to believe that they must really be necessary. And the doctor sometimes thinks it better to imply that he does not dissent from this belief than to express objection to it. It is always easier to say "Yes" than "No."

One of the characteristics of our times is the habit which people have acquired of prescribing for themselves and taking medicines. Go into a friend's dressing room and look at his washstand; it is covered with bottles, boxes, and pots containing drugs. And, in addition to the pharmaceutic display upon his washstand, there are, I warrant, stock bottles upon his mantelpiece or in the cupboard.

As regards foods for invalids—if *you* were ill, would you wish to have soup, beef-tea, or chicken jelly made under the supervision of your wife in her own kitchen, or would you ask that a messenger should be sent to the nearest stores for a bottle, pot, or tin of the stuff or essence which the proprietor had in stock? If *fresh food* is needful for a person when he is well, still more so is it wanted when he is ill. This question of foods for the sick room is now left too much to the nurse. The doctor has, perhaps, no particular interest in the matter, so the nurse says, "Shall we send out for some of the "Liquid Leather" brand, or shall I get a tin of fresh-made creatinine? Some practitioners, I repeat, take very little interest in it, and the nurse knows all about it, having attended lectures on the subject given by the matron or house-surgeon; so she is allowed to send out for certain small pots or tins, the contents of which she can mix as skilfully as she can take a temperature or arrange a draw-sheet. But as regards good, fresh, wholesome sick-room cooking, she is apt to know very little. She has been brought up in this dietetic faith, and she sticks to it. I think that one reason for her getting in a store of preserved shop food, as opposed to fresh kitchen food, is that she may be independent of the cook and the kitchen. She may have had in other cases sad experience of diets sent up to the sick-room from the kitchen, of greasy beef-tea, of burnt milk, of unstiff jelly, of over salted soup, and what not, and she wishes to give the *best* to her patient without creating domestic disturbance and without delay. I should think that some of those essences or extracts are little less than excrementitious substances which the death of the animal saved from being wasted. It is all very well for the commercial or physiological chemists to tell us that they are "invaluable"; I refuse to accept their not impartial statement. And I cannot help turning in wistful memory to the times of Pott, when people did not take medicine when they were well, and who, when they were ill, lived on fresh, wholesome food, prepared by a clean-handed cook with the help of a tidy stillroom maid in a white apron and in an atmosphere of lavender.

I have the good fortune to be surgeon at a place where the delicate art of cooking is understood, respected, and practised—the French Hospital—where the nursing and

e cooking are done by French Nuns, and where good omen think that they can serve God as well in the reful preparation of a consommé, of snow eggs, of a ragoût of an omelette, as in any other occupation of life. And ould that every woman were imbued with similar principles! What a pity it is that English women do not ke greater interest in matters culinary! I am sure that od cooking and civilization go hand in hand, and that, least as regards cooking, the general run of English omen are hopelessly uncivilized.

The child's intra-abdominal pressure must be reduced we are to arrange for the permanent return of the prosed bowel without operation—and operation at the esent is out of the question. If we were to operate on at distended boy we should be very apt to be disppointed. The distension is chiefly caused by the esence of a large amount of gas in the bowel, due to the ecomposition of improper food. The nurse, therefore, ad some justification in calling the hernia a "wind upture." I do not suggest, of course, that a present-day urse would use such an unclassical expression, or that e would call it a "congenial" hernia, as Pott did; she ould have the names right. The old-fashioned nurse ad noticed, I dare say, that the child had been a good eal troubled with wind; that his belly was blown out, ad that when he cried the hernia came down; ad I do not think that her name for it was bad one. Jenner told us that each time we e a sick child we are not at once to think f grey powder; there is something better than that r the condition in question—namely, the old-fashioned ixture of rhubarb and soda, with a few drops of syrup of inger and oil of peppermint. Two or three times a day a easpoonful of this mixture should be given, and in a hort while, after a judicious amount of purging, there ill be a great improvement in the motions; the child ill be happier, and there will be much less distension. hen, having diminished the quantity of the mixture, nd, perhaps, having increased the amount of the soda, he medicine may with advantage be continued for two or hree weeks. How, it may be asked, are the evacuations o be managed if the child is, more or less, upside down? here is really no difficulty about this; a clever nurse an easily arrange it, and there is no objection to the hild being occasionally laid flat, if need be, the nurse eeping her fingers pressed over the inguinal canal.

As regards the child's dietary, there may be at first good deal of difficulty. At any rate, all patent foods are o be stopped, and in their place are to be given cow's nilk and water (with or without lime water); bread jelly; ounded, underdone meat; fresh vegetables in pulp or *urée*; breadcrumbs and gravy; clear soup, or something lse from the kitchen, fresh and nicely cooked, according o age and needs. As the child grows he may be given hard crust, the drumstick of a chicken to amuse himself vith and suck, or something else of that sort.

We need not follow the details of the treatment of this uptured child; I have suggested enough to show on what ines the treatment is to be carried out. And here may I ay that a child with anal prolapse is also to be treated nuch in the same way, only for him the strapping is to be rought across the buttocks, so as to keep the gluteal olds close together and to prevent all chance of straining. For, in these cases, straining acts and reacts; the more he child strains the more he wants to strain. The thing s not to *stop* straining, but to prevent it altogether—never to let it *begin*.

There is another matter to which I must here refer, hough it does not come under the heading of drug or liet; it is to that pernicious habit of sucking at an indiarubber teat, the so-called "comforter." I do not know where the teat came from originally; very likely it was an importation with toys from Germany. The habit of sucking this wretched, septic object is bad for the child's gums, for his plastic maxillae, for his salivary glands, and for his digestive apparatus in general. The horse which is constantly gnawing at his manger, the "crib-biter," fills itself with wind and is never in proper condition. And so it is apt to be with these teat-sucking children. The young mother allows the teat because it is supplied in the infant's "outfit," and she thinks it to be as necessary as the flannel belly-band or the feeding bottle. And the medical man is apt to raise no objection to it because the custom is now widely established; he ought to wage a ceaseless war against it because, though but a little thing, it is very harmful.

THE RADICAL OPERATION.

When once a piece of omentum or bowel has found a passage into the scrotum, it is difficult to prevent its constant descent. There is the well-lubricated funicular process, and there, against its open, upper end, is a piece of moist, semi fluid omentum ready to drop into it. If, however, a well-fitting truss be constantly worn, night and day, there is a great likelihood that the help thus given may suffice to finish off the developmental deficiency. There must be no hurry, however; the truss will have to be worn for at least a couple of years so as to make things safe.

In days gone by there used to be two complicated operations, which were occasionally employed with the view of producing the radical cure, Würtzer's and Wood's. In each of them a strong needle on a handle was made to carry a thick suture in such a way as to fence-in the inguinal canal. But in each method the operator was working more or less in the dark; when the point of his needle had left the guidance of the finger and had entered the tissues of the abdominal wall, he could not be certain that it would not damage some important structure. And the story used to go that when Wood was practising his operation at King's College Hospital and his colleague, Fergusson, wished to try it, on his first attempt the appearance of the needle and of the suture gave undoubted evidence of the fact that a piece of bowel had been transfixed high up in the inguinal region.

In the pre-Listerian days surgeons were shy of making an incision lest suppuration—or, rather, lest erysipelas or pyaemia—should ensue. Of mere suppuration they had no dread—of good, honest suppuration with its "laudable" pus. Discharge of that sort from a wound they regarded with no unfriendly eye, but of certain thin, ill-smelling discharges associated with the formation of blebs upon the skin, or with the evolution of gas beneath it, they stood in mortal dread; so they declined to make a direct incision if they could fairly accomplish what they desired by a prick, a nick, or a puncture. Thus, they sutured the weak inguinal canal through a mere puncture of the skin; they removed a loose cartilage from the knee-joint—if at all—by a subcutaneous incision, and in two stages; a contracted tendon was divided only through a punctured wound, and the boldest treatment which was practised for a recurrent hydrocele was through a slender cannula. And if the principle of Banks's or Bassini's operation had been revealed to Pott, he could scarce have practised it, for fear of inviting calamitous results. It has been said that the time produces the man; with equal truth it may be affirmed that the time produces the method. And it is almost certain that the methods of Banks and Bassini would not have been heard of even at the present day if Lister had not lived. So that when one is trying to set forth to some lay mind how it is that Lister's work is of such priceless value to mankind, he may truly say that to his teaching is due almost every advance that has been made in recent years in operative surgery. That, but for him, operative surgery would still be what it was when Pott left it, and when Liston and Fergusson practised it. I mention Liston and Fergusson as worthy successors to Pott—they were truly the men of their day; and it is not unlikely that if they had come a half a century later, giants though they were, their work might not have attracted as much attention and respect as it did.

Let us suppose that the palliative treatment of the ruptured child has had a full and fair trial. That the dyspepsia has been cured, and that in every respect there is a great improvement, but that, notwithstanding this, the hernia still comes down now and then, that there is sometimes difficulty in reducing it, that, in short, things are not yet quite satisfactory. I am going to suggest that the hernia is upon the *right* side. When it is down let the surgeon feel it carefully between his fingers and thumb, trying to make out the presence in the scrotum of the vermiform appendix. This can sometimes be done. It is a hernia of the caecum and appendix, and it is often very unmanageable. It comes down rather "in a lump," and is not easily got back again, as a hernia of the small intestine or omentum generally is. Pott knew all about that sort of hernia, and this is what he says:

That a protrusion of a part of the caecum is rare is not true, for it happens very frequently. From what has fallen within my observation in frequently performing the operation for a strangulated rupture, it has appeared to me that the greater number of those in whom it has become necessary have consisted of the caecum with its appendicula.

And then he remarks that the irregular figure of this part of the intestinal canal seems a likely reason for the difficulty which is often met with in the attempt to reduce it without operation. It is often difficult to keep up, and, when down, it is often a difficult matter to get it up. It is strange how widely different the personal experience of different surgeons in general work may be, one seeing one class of cases and another the other. I confess that I have not found the caecum and appendix in the sac in a large proportion of the cases on which I have operated for strangulation. Still, they are by no means uncommonly met with in the most troublesome forms of reducible hernia of the right side in children. And their obstinacy renders these cases very fit ones for operative treatment.

The association of an imperfectly-developed and undescended testis with an inguinal hernia makes the line of treatment clear. An undescended testis is very often an undeveloped one. For sentimental reasons the individual or his parents may be anxious to have it preserved, but the better course is to make a clean sweep of the peritoneal pouch and the testis, and to sew up the inguinal canal completely. The most anxious and difficult cases are those in which the hernial sac is associated with a testicle of fair size but of imperfect descent. In these circumstances the surgeon, having removed the sac and loosened the connexions of the cord, may try to bring down the testis into the scrotum, fixing it by a strong suture to the depths of the scrotum, or even bringing the suture through the scrotum to attach it to the inner side of the thigh. I must confess, however, that my experience with effecting the artificial descent of the testis has not been highly satisfactory. I have found that a testis which has been thus brought down very rarely continues to occupy a normal, scrotal position; and, seeing how remarkably successful the case turns out in which the testis has been removed and the canal blockaded, I deem it to be more than doubtful if it is worth while adopting the conservative line of treatment unless the testis is of fair size, and unless it is content to lie at the bottom of the scrotum with little or no drag upon the cord. To cure a boy of his hernia but to leave his testicle only just outside the external abdominal ring, where it is fully exposed to injury, is not perfect surgery.

Pott begins one section of his work on hernia with these words:

> The cure of a rupture is either perfect (called also radical) or imperfect, which is called palliative.

But surgeons are sometimes inclined no longer to make this very proper distinction, and are apt to say, "I will do a *radical cure* for it." What they really mean is that they will do a radical *operation* upon the hernia, which they had every reason to hope would prove a radical *cure*. It matters not who the operator is, or what method of procedure he adopts, he cannot guarantee that the hernia will not afterwards come down again. And thus it sometimes happens that serious disappointment follows free promises. Skilful as he may be as an operator, and careful as he may be with detail, he must not, he cannot, guarantee that his operation shall prove a *radical cure*. When Shylock was discussing with Bassanio the probability of the safe arrival home of the argosies of Antonio, he suggestively alluded to the perils of waters, winds, and rocks. "Ships are but boards, and sailors are but men," said he. And although there could be little doubt as to their welcome return to the Venetian port and of the security of Antonio's bond, still absolute *certainty* was lacking. Pott takes Antonio's line, and says "this uncertainty of event being dependent on causes which a surgeon can neither foresee nor direct with any tolerable degree of certainty, should warn him against being too forward in making a promise." Yes, even in the year of grace 1907 "surgeons are but men," and when they talk of a radical operation as if it were just the same thing as a *cure* they are presuming.

I will go back to the inguinal hernia which, for one reason or another, had not been cured by the truss treatment. After due preparation, the surgeon proceeds to operate, making his incision in the inguinal, rather than in the scrotal, region, as it is easier to keep the higher wound aseptic, scrotal incisions being apt to prove unfortunate. Having traversed the superficial structures he exposes the aponeurosis of the external oblique muscle, the lower fibres of which he separates at the external abdominal ring. Then, still working with a pair of dissecting forceps and a stiff probe, he traverses the cremaster muscle and the transversalis fascia. And so he arrives at the spermatic cord, with, perhaps, the funicular process of peritoneum, or the sac, in front of it, without having cut any muscular or aponeurotic tissue. If he contented himself with isolating this peritoneal sac and tying its neck (pulling it down the better to effect its high occlusion), and then with merely closing the wound, there would be no further recurrence of hernia in nine cases out of ten, or in nineteen out of twenty. By this I mean that the secure obliteration of the lubricated peritoneal canal would generally suffice to cure the patient of his hernia. There are various ways of dealing with it, but there is one essential feature in the procedure: it must be obliterated quite high up, so as not to leave any depression or dimple upon its intra-abdominal aspect. I do not think that it matters what is done with the piece of the sac below the ligature. It may be cut off, or brought up and used for plugging the canal, or what not. Personally, I prefer to cut it off. Some surgeons insist on laying open this sac before securing its neck. They like to pass their finger up into the abdomen to make absolutely certain that the highest part of the sac is empty. Well, let it be done if desired, but if the neck of the sac is caught between the finger and thumb, and thus held whilst the ligature is being tightened, there is no fear of anything being damaged within the sac. Other surgeons like to pass up a finger to find the slippery tail of omentum which has been in the habit of running down into the sac. They believe that if they can tie and remove this tail they can make their operation the more perfect. I do not think that there is much in this, for if the neck of the sac is securely tied there is no chance of the omental tag coming down. Lastly, some operators like to transfix the neck of the sac with a needle, and perhaps to carry the ends of the suture somewhere up above Poupart's ligament. All these things are individual peculiarities; they are not essentials. The one essential, as I said just now, is to tie the neck of the sac quite high up; to tie it so that the ligature does not slip off the stump (if the sac is cut away), and to be certain that the neck of the sac is empty when the tie is made.

The second part of the operation consists in bringing together the sides of the inguinal canal. And may I say a few words about the anatomy of this canal? When the ureter is finding its way into the bladder it runs for a certain distance between the muscular and mucous walls, so that when the bladder is full the sides of the ureter may be pressed closely together, and there may be no chance of urine finding its way up into the ureter. The fuller the bladder the more tightly is the ureter compressed. Thus, the entrance of the ureter into the bladder is valve-like. There is a similar arrangement in connexion with the passage of the spermatic cord through the abdominal wall. If the cord ran straight from behind forwards the risk of hernia would be very great; it is, therefore, made to pass out obliquely under the arched border of the transversalis muscle, beneath the cremasteric fibres of the internal oblique, in front of the conjoined tendon of internal oblique and transversalis, and behind the aponeurotic fibres which connect the two pillars of the external abdominal ring. Each time, therefore, that strain is put upon the abdominal muscles, as when the child cries or vomits, the muscular fibres about the canal crowd together, and, compressing the cord, do their best to block the passage against the descent of omentum or bowel. But if a hernia has once found its way down the funicular process, the valve-like arrangement of the canal is ruined. The arched border of the transversalis muscle is thrust rudely upwards, the cremaster is pushed forwards, the conjoined tendon inwards, and the intercolumnar fascia forwards; the canal has lost its virginity. For the surgeon, then, simply to close the top of the funicular process may not be sufficient; the passage through the abdominal wall must also be tightened up. And this, in my opinion, is best done by lacing the parts together by one, two, three, or four strong stitches. To do this the

surgeon thrusts the tip of his left index finger up the canal, and by it he guides the end of a blunt aneurysm needle, which he makes to traverse all three muscles on the inner, and then on the outer, side of the canal. One suture may sometimes suffice; but, if on pulling upon its ends, it is found that there is still more than enough room left along the canal for the passage of the cord, the surgeon withdraws his finger a little, and passes a second, or perhaps a third, suture, by which he transfixes the conjoined tendon on the inner side, and the strong tissues just above Poupart's ligament on the outer side. All these pass, of course, in front of the cord, and, having tied them, the surgeon satisfies himself that there is enough room left at the external ring for the easy passage of the elements of the spermatic cord. After this, nothing remains but to close the surface wound and apply the dressings.

As regards the material for suturing the canal, I have yet to learn that there is anything better than silk, and so also for the skin wound.

The alternative to palliative treatment being, then, an operation by an open incision, the ligation and removal of the sac, and the closing of the inguinal canal by suturing, three questions may be asked:

1. What are the risks of the operation?
2. What chances are there that the radical operation may prove a failure?
3. What are the time limits as regards its early performance?

The first is easily answered: The risks inseparable from the operation are so small that they may be almost disregarded. At any rate, they are less than those which the child would run if no operation is done, for, in an unmanageable or troublesome case, the chances of the occurrence of sudden strangulation are considerable, if not serious.

I have no actual statistics to give in connexion with the risks of the operation. Indeed, I have so often made apparently disrespectful remarks about statistic-working surgeons, of their short memory for unsatisfactory cases, and of their aptness to deal rather with good results, that even if I had a spotless sheet of tables of operation for the cure of reducible hernias (which I have not), I should be afraid to show it. But recently I was at Newcastle-on-Tyne, and was talking to Professor Page about operative results in general and of "radical cures" of hernia in particular; and he told me that last year his colleagues at the General Hospital had performed the radical operation in 241 cases of inguinal hernia without a death. That is enough for my purpose; if 241 operations can be done without a fatality, the risks of that procedure must surely be small enough to be disregarded.

Second, as regards the chance of the radical operation being a failure. If a surgeon said that he did not remember a single failure in all his cases, he might be speaking absolute truth, for "surgeons are but men," and their memories are thus sometimes strangely cribriform. But I have had interesting conversation on the subject of *failures* with one of the surgeons to the Truss Society, and his experience of the after-results of operations for "radical cure" are not such as operators might altogether have expected. It is a thousand pities that the operation is called the *radical cure*; it is not always a cure.

Lastly, as to the time limit. One surgeon may say that he would not operate before this age and another before that. Each patient should be considered on its own merits, and the admission of an age-limit might be the cause of the benefits of the operation being refused to a most proper case for the simple but inadequate reason that the child was still very young.

ANTIVIVISECTION IN AMERICA. — We learn from the *Medical Record* that an Act to prevent vivisection and animal experimentation of any kind, either for demonstration in physiology, for scientific research, or for any purpose whatever, which had been quietly introduced into the Pennsylvania Legislature and had already passed the second reading, was summarily withdrawn from the calendar on the personal appeal of a group of distinguished medical men headed by Dr. Weir Mitchell of Philadelphia. Dr. Mitchell pointed out, among other things, that by the provisions of the proposed Act it would be impossible to prepare in the State virus for vaccination and also diphtheria antitoxin, as well as to perform various operations on animals common in the farming industry.

An Address
ON THE
OPERATION FOR REMOVAL OF THE ENTIRE RECTUM AND NEIGHBOURING LYMPHATIC AREA FOR CARCINOMA.*

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THE results of the treatment for carcinoma of the rectum are in many ways far from satisfactory, more especially when we compare them with the results obtained from operations upon cancer in some other parts of the body, notably in cancer of the breast and uterus.

The chief reasons for this are: That the condition of the patient after the operation for excision of a rectal growth is in many cases unsatisfactory as regards the function of defaecation, and that sepsis with all its attendant consequences occurs in the wound.

I am leaving out of account the very large proportion of cases which are seen too late to be operated upon at all, which is certainly not the least unsatisfactory side of the treatment of rectal cancer, and can only be cured by earlier diagnosis.

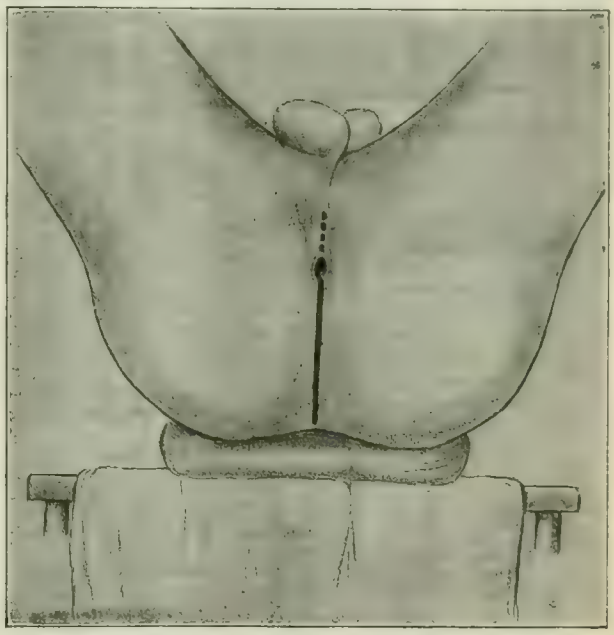


Fig. 1.—The dotted line shows how the incision may be extended forwards if there is not room enough.

From the patient's point of view, the restoration of the parts so as to obtain good functional control is of the greatest importance. Whether the patient be left after operation with a colotomy aperture or a perineal anus, he expects to have good control over his evacuations, and he will never be contented with any result, however successful as regards freedom from recurrence of the growth, which falls short of this.

To turn to the second point, it is quite obvious that the operation for excision of the rectum can never be satisfactory until we can obtain aseptic healing of the wound after operation. This has been the great difficulty all along, and at the present time most operators look upon excision of the rectum as an operation which must necessarily result in a septic wound.

Sepsis in the wound is accountable for nearly 80 per cent. of the mortality from excision of the rectum; and, apart from this, it necessarily means healing by granulation; and if the bowel is restored, a great deal of fibrous tissue will be left to contract and interfere with the new rectal passage.

PRELIMINARY COLOTOMY.

The great object, therefore, to be aimed at in the technique of the operation is aseptic healing. There are

* Paper read before the Leicester Medical Society.

many circumstances which render this notoriously difficult of attainment. The circumstance which most of all militates against aseptic healing is the passage of faecal material over the wound area after the operation, and it is quite certain that no operation in which this source of contamination is not avoided can possibly be considered perfect. In order to prevent this undesirable complication, many eminent authorities have advised that a preliminary colotomy should always be performed in order completely to deflect the faecal current from the wound area. The colotomy is usually performed a week or more previous to the radical operation, and the portion of bowel between the colotomy and the anus is thoroughly washed out with antiseptics for some days prior to operation. Preliminary colotomy renders the operation easier, and greatly increases the chances of obtaining aseptic healing in the wound. The objection to it is that if the stump of the bowel is brought down and stitched to the anus after performing the radical operation, in order subsequently to render the perineal anus functional the colotomy must be closed. The patient in a successful case

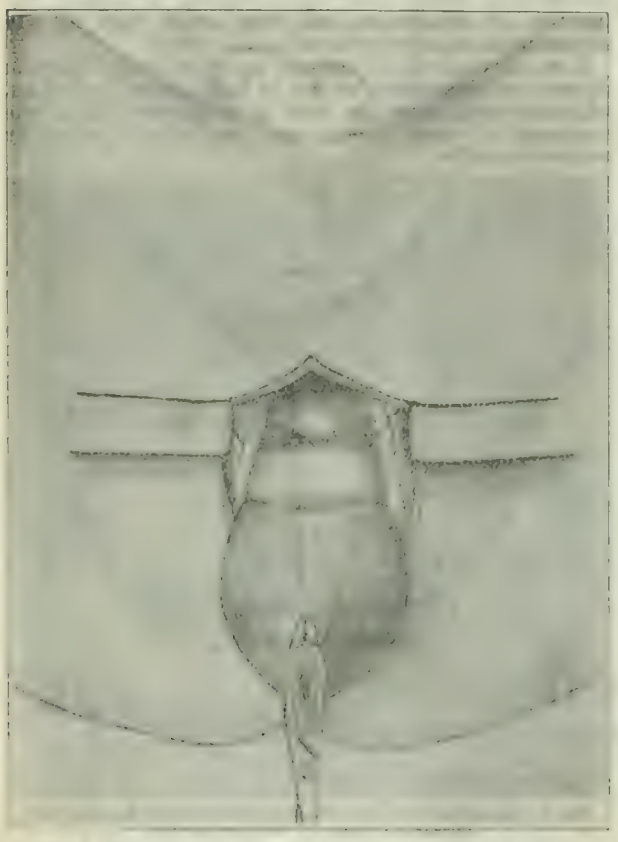


Fig. 4.—The peritoneum and prostate are exposed, and the [illegible] being cut through.

will therefore have to undergo three operations, and the closure of the colotomy would not always be an easy operation. This is, however, of minor importance compared to the increase in the safety of the operation obtained by aseptic healing. I cannot, however, agree with those who advocate preliminary colotomy in *all* cases.

In many cases of cancer of the rectum there is no serious narrowing of the bowel lumen by the growth, and in such cases it is possible by suitable methods so to empty the bowel that one can be morally certain no faecal material will find its way into the lower bowel for some days after the operation, and the bowels can be prevented from acting for six or seven days. In such cases preliminary colotomy is quite unnecessary if the operation is performed in the manner I am advocating here.

In those cases of cancer of the rectum in which marked narrowing of the bowel lumen at the position of the growth exists there is almost certain to be faecal accumulation in the bowel above the site of stricture, and it is usually impossible to be certain that the descending colon and sigmoid flexure are empty, however thoroughly aperients and enemata are used. In such cases, therefore, I think preliminary colotomy should always be performed.

At the time when the colotomy is performed an opportunity is afforded of examining the growth from above and of ascertaining whether there is any secondary gland enlargement, and, if so, to what extent. The length of the sigmoid mesentery can also be examined, and this is an important point in the operation if the original condition of the parts is to be restored. In all cases in which inguinal colotomy is performed previous to excision, it is important that the portion of sigmoid chosen for the colotomy should be as far away from the rectum as possible, otherwise the colotomy will prevent the stump of the bowel from being brought down after excision.

To sum up with regard to preliminary colotomy. Preliminary colotomy should always be performed when it is not certain that the bowel above the growth can be effectually emptied and the bowel is strictured. It should also be performed in all cases in which the sphincter muscles are involved and require removal.

Preliminary colotomy need not be performed when

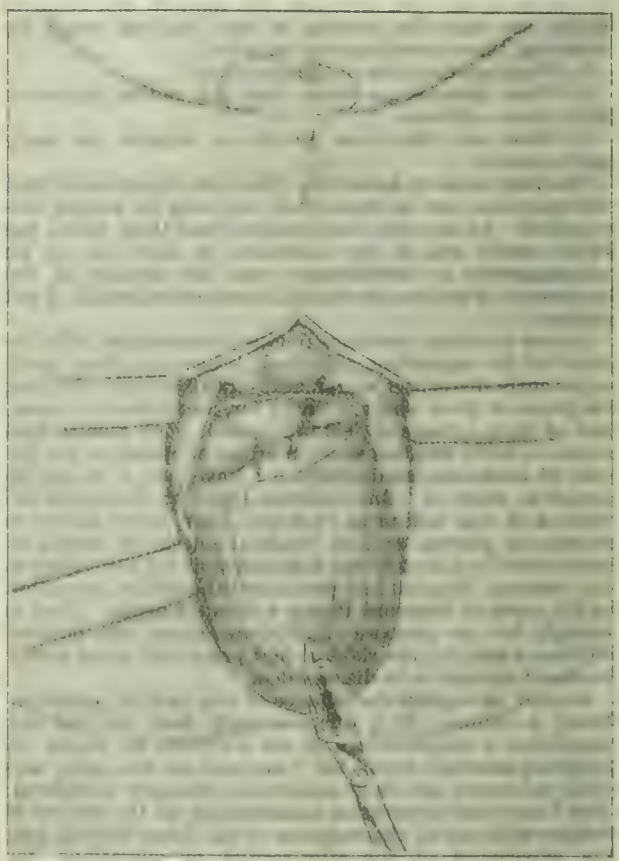


Fig. 5.—The peritoneum opened and in process of being divided laterally from the rectum.

there is no stricture and there is good reason to suppose that the upper bowel can be effectually evacuated.

When owing to their being involved in the growth it is necessary to remove the sphincter muscles, a *permanent* inguinal colotomy should always be performed. For I am quite certain that a patient with a properly-made inguinal colotomy is far better circumstanced than one who has a faecal fistula in the perineum.

PREPARATION OF THE PATIENT.

The bowels are first well emptied by a good dose of castor oil at least three days before the operation. In those cases where there is some narrowing of the lumen of the bowel by the growth, a little tincture of opium is added to the castor oil, as it is found that this enables it to act more effectually by relieving any spasm at the site of the stricture.

In old persons, or those much weakened by exhausting diarrhoea, it is important not to purge too freely, especially just prior to operation, as it increases the liability to shock. After the castor oil a good dose of salts should be administered to further wash out the bowel, and then

til the operation two or three days later no aperient ould be given, but the bowels washed out daily with a ap-and-water enema. A diet should be given which, hile it ensures as much nutritional effect as possible, ll leave little or no residue after digestion. On the day operation the bowel should be washed out with a warm-ter enema (to which me sodium bicarbonate ay with advantage be ded) about four hours evious to operation. A se of tincture of opium an injection of morphine given four or five hours fore operation, and a podermic of morphine st before commencing e operation. This has e advantage of quieting ristaltic movements and eventing any tendency r the bowels to act. It is so, I am convinced, of eat service in preventing e development of shock ring the operation; it lps to allay the patient's ars, it quietens the nerve ntres, and renders the aesthesia smoother and sier, while a smaller antity of ether is re-ired to maintain an-sthesia.

The anaesthetic is an portant point, and loroform should be oided, ether anaesthesia ing maintained through-t or C.E. mixture given ter the first half-hour. do not allow the patient be starved before operation, but believe in allowing a ht and easily digested breakfast a few hours before.

The parts are shaved and the whole skin of the perineum, crum, and buttocks are cleaned up as carefully as for an dominal section. If there is any ulceration of the owth, iodoform suppositories are given three times day for some time previous to operation.

THE OPERATION.

The patient is placed in e lithotomy position and small hard cushion is aced under the sacrum as to raise the buttocks ell above the table; this akes the wound much ore accessible than if the atient's sacrum is resting the table, and at the me time prevents the testines prolapsing when e peritoneum is opened. good forehead lamp is great help during the eration.

The first step in the eration, for which the rgeon should wear india-ubber gloves, is to dissect p a cuff of mucous membrane from the anal canal, r about 2 in. in the same ay as in Whitehead's eration (scissors are used r this and are then put aside and not again used). he rectum is then either closed by a clamp and the portion of mucous membrane below the clamp sterilized with ure carbolic or is closed with a purse-string suture. I refer the former method, as it enables one to pull on the ectum if necessary.

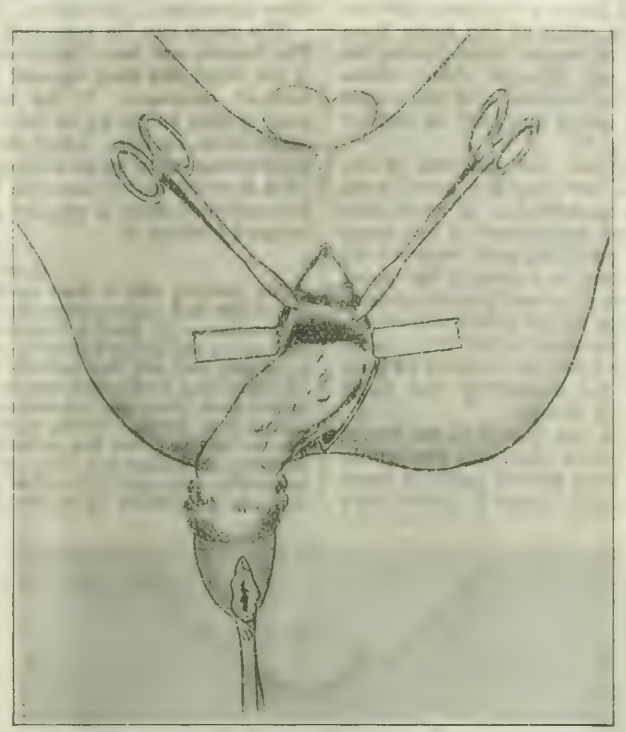


Fig. 4.—The rectum is now only held by the meso-rectum and mesentery of the sigmoid. The clips are on the anterior part of the divided peritoneum.

The next step is to clean the whole area of operation most carefully, and discard the gloves which have been worn during its first stage. An incision is now made through the sphincters posteriorly, and carried backwards to a little beyond the base of the coccyx, which is next removed. The posterior rectal space is then opened up and the rectum and all the glands, cellular tissue and lymphatics peeled off the sacrum with the finger in one piece.

The levator ani on each side is pulled down by passing a finger behind the muscle and divided close to the rectum. Next, attention is turned to the separation of the rectum in front from the prostate and urethra, or in the female from the vagina. This is a difficult step in the operation, as one cannot have a finger in the rectum to guide one in making the dissection, and it is very easy to open either the rectum, urethra, or vagina.

As soon as the peritoneal cul-de-sac is reached it is opened and the attachments of the peritoneum to the rectum divided first on one side and then on the other, care being taken to keep as close to the rectum as possible, so as to avoid injury to the ureters. The rectum is now free in front and at the sides, except for some fascial attachments which are easily divided. The rectum will now come down several inches, and is only attached by the meso-rectum (see Fig. 4). The next step is to divide this. This is best done by applying a clamp to the meso-rectum, as near as possible to the sacrum, and dividing the meso-rectum in front of the clamp. The rectum now comes down freely, and the sigmoid comes into view. The next step is to divide the meso-sigmoid until a portion of the sigmoid is reached which has a sufficiently long mesentery to reach the anus easily and without dragging (see Fig. 5). This may be anywhere from 3 in. to 6 in. above the junction of the sigmoid with the rectum. The meso-sigmoid is clamped and divided until a sufficiently long piece of mesentery is found. The whole of the rectum and growth are now right outside the wound, and the next step is to repair the parts. First, the clamps have to be tied off, and this is sometimes difficult, as they are a considerable distance from the surface, and it is not easy to pass a ligature round their upper ends. Also no mistake must be made, as there are large vessels in them, and haemorrhage might be difficult to control in so deep a wound.

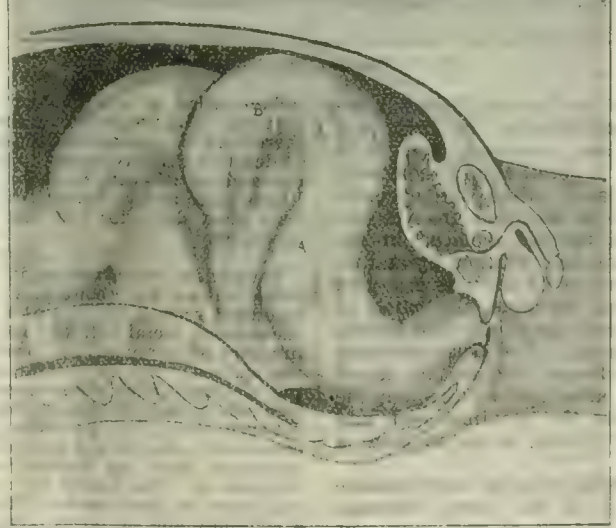


Fig. 5.—Diagram to show the importance of dividing the sigmoid mesentery for some distance. The portion of bowel at A cannot be brought down to the anus owing to the shortness of the mesentery, but the part B can be.

The peritoneal floor of the pelvis is now restored by stitching the peritoneum all round to the sides and front of the sigmoid. (If it is desirable to hasten the operation, this step may be dispensed with.) Some sterilized gauze

is next placed in the wound to further protect the peritoneum, and its end brought out at the posterior part of the wound. The rest of the wound is sewn up completely and the sphincters carefully brought together and sutured. I now smear the whole of the wound and portion of sigmoid nearest to it with sterilized iodoform ointment. This seals up all the lymphatics, and forms a complete protection to the wound from infection, while at the same time it does not prevent any blood or serum from finding its way out. The bowel is now cut through about three-quarters of an inch from the sphincters and the edges roughly stitched to the skin all round and half an inch or more from the skin edge (see Fig. 6).

The object of this is to separate the junction of the skin edge and the peritoneum covering the bowel from the septic edge of the mucous membrane. A week after the operation the extra mucous membrane is cut away with scissors. This is quite painless, and requires no anaesthetic. It is very important in choosing the point at which the bowel is to be divided, to see that the mesentery or meso-sigmoid comes quite to the point of division, and is not on the stretch. The anastomosis of the vessels in the bowel is so bad that if the bowel be divided an inch or more away from the edge of the mesentery, the piece without a mesentery will probably slough.

A short piece of rubber tube is now placed in the bowel opening, and gauze is packed round this, and the whole area of the wound covered in with gauze; lastly, a large triangular sterilized pad of Gamgee tissue is placed over the sacrum and perineum. To the base of this pad tapes are attached which go round the waist, and in front the apex of the pad is brought between the legs and attached to the waist straps. The rubber tube in the bowel is brought through the pad so as to give a free exit for flatus.

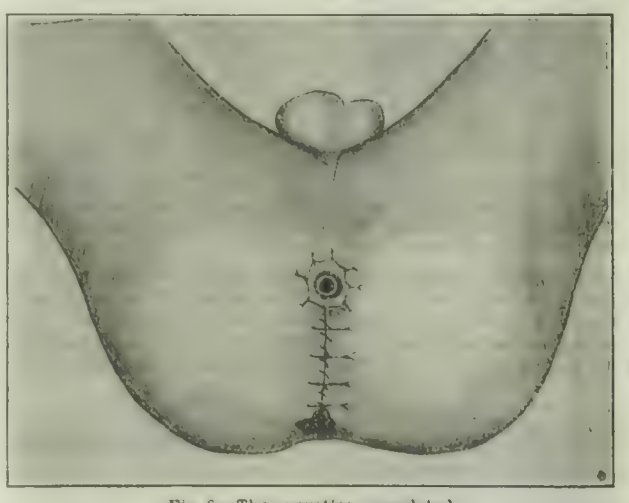


Fig. 6.—The operation completed.

This operation is suitable for any growth of the rectum, except that in a few situated very high up at the junction with the sigmoid it may be necessary to open the abdomen first and separate the growth and divide the mesentery from above, the abdominal wound being then closed, and the operation completed as has been described. There are two conditions, however, which require some modification of this procedure. If the sphincters are involved, and it is necessary to remove them, a preliminary colotomy should be performed, and later, when the excision is done, after removal of the rectum and growth, the end of the sigmoid is closed up and replaced in the pelvis, the perineum being completely stitched up and no opening left. If there is no portion of the mesentery of the sigmoid long enough to reach the anus, the whole of the bowel and rectum are pushed back into the pelvis, and the perineal wound is sewn up. The usual colotomy incision is then made in the abdomen, the rectum found and pulled out through it, and after cutting through the bowel a Paul's tube is tied into the proximal end, and attached to the edges of the wound, so as to form a permanent artificial anus.

If time will allow of it a valvular opening may be made by pulling the proximal end of the bowel through between the muscles in the abdominal wall, and out through a small opening in the skin some two inches from the first opening, which can then be closed.

AFTER TREATMENT.

The patient should be nursed on the side for the first forty-eight hours if possible, and the dressings should be changed daily, as they are very liable to get displaced and soiled.

The patient should be sat up as soon as possible; this is best managed by having a bedrest at the back, and a good hard cushion or bolster under the thighs to take the weight off the buttocks. This is particularly important in old people. It is very important to avoid retention of urine, and it is a good plan to pass a catheter for the first few days to ensure there being no residual urine. In women regular catheterization for three or four days after operation is advisable.

The gauze can be removed on the third or fourth day. The bowels are best kept confined by morphine for five or six days, and then opened by castor oil by the mouth and oil enemata. If the wound heals aseptically the patient may be got up at the end of a fortnight, or in some cases even earlier. After the first week the bowels are kept acting daily by an enema first thing in the morning. This is much better than the use of aperients, and should be continued until a regular action of the bowels can be secured without it.

CASE I.

The patient was a man aged 67. He had suffered from diarrhoea and constipation for about fourteen months before admission to St. Mark's Hospital. The growth involved the sphincters and lower half of the rectum, it was movable but of large size, and not very suitable for removal. A left inguinal colotomy was performed, and at the same time it was ascertained that there was no secondary gland enlargement in the abdomen or pelvis. Owing to the size of the growth excision was not advised, but the patient was very anxious to have it removed, and after the risks of the operation were explained to him, he expressed himself as willing to take the risk if there was any possibility of removing the growth. Under these circumstances it was decided to attempt excision of the rectum. The operation was performed three weeks after the colotomy, and, in the meantime, the patient was fed up and the bowels irrigated daily. The growth proved to be more extensive than was anticipated, and some difficulty was experienced in getting it out of the pelvis. The whole rectum and growth were removed and the sigmoid brought down and sutured to the skin edges. The perineal wound being partly closed with stitches. The patient did well after the operation, but in the course of the next few days he developed an acute cystitis, with retention. The cystitis became worse, and he died six days after the operation. At the *post-mortem* examination he was found to have acute inflammation of the bladder and acute nephritis in both kidneys. The condition of the wound was satisfactory, and there were no secondary deposits in the abdomen. The cause of death in this case seems to have been retention with overflow and cystitis with secondary inflammation of the kidneys. I have since always made it a practice to pass a catheter at least once daily for the first two or three days after the operation.

CASE II.

The patient was a man aged 56. He had had symptoms of rectal cancer for about four months. There was a large ulcerated growth the size of a four-shilling piece, situated on the anterior rectal wall and involving the sphincters. A preliminary colotomy was performed, and a week later the rectum was excised. The sphincters in this case were removed with the rectum. After the rectum had been separated up to the sigmoid it was divided at its junction with the sigmoid between clamp forceps. The end of the sigmoid was then closed with stitches and pushed back into the abdomen. The peritoneal floor was restored and the perineum was partly stitched up. The wound did not heal by first intention, but was healed in three weeks. This patient left the hospital with a colotomy and no opening at all in the perineum. I have seen him several times since the operation, and he has remained in good health and has no trouble with the colotomy. It is now about two and a half years since the operation.

CASE III.

The patient was a man, aged 37, who was sent to me by Dr. Dowdney. He had had symptoms of rectal trouble for about two years. He had a large growth in the rectum, the lower end of which was about 2½ in. from the anus. It was freely movable, and there was no evidence of secondary growths. He was very anxious to have the growth removed. I performed a preliminary colotomy and examined the growth

from above; finding it could be removed, I proceeded at once to excise it from the perineum. The whole rectum was removed and about 4 in. of the sigmoid flexure. The sigmoid was brought down and stitched to the sphincters. The wound was stitched up except for a small opening where the gauze was brought out at the back. The patient made a good recovery and was about again one month after operation. Six weeks after the operation he could expel a bougie from the new rectum and had good sphincteric control. A year later I closed the colotomy opening and his bowels now act in the normal manner. It is now over two years since the operation and he is quite well.

CASE IV.

The patient was a lady aged 33. She had had blood in the stools for a little over a year. There was a large soft ulcerated tumour about 2 in. from the anus. It was freely movable, and about 3 in. in diameter. The whole rectum and cellular tissue in the hollow of the sacrum were removed, together with 2 or 3 in. of the sigmoid flexure. The sigmoid was brought down and attached to the sphincters. There was some shock after the operation, which, however, soon passed off. The bowels were opened on the sixth day with castor oil. The wound healed by first intention, and there was no rise of temperature after the first twenty-four hours. The patient left the nursing home under three weeks from the operation and returned to her home. She has perfect control over the bowels, though at first she complained of some difficulty in feeling when the bowel was going to act, owing to lack of sensation in the anus. This is now better, and control is perfect. This patient married two years after operation.

I have performed this operation successfully in four more cases during the last eighteen months, and all the patients have perfect faecal control.

This operation is a modification of Quénu's perineal operation for excision of the rectum, but Quénu did not advocate removal of the entire rectum.

It also somewhat resembles Sir Charles Ball's abdomino-perineal operation, but the whole operation is performed from the perineum.

I was very much interested at the annual meeting of the British Medical Association to find that M. Henri Hartmann of Paris has for some years been performing a similar operation. He has performed 12 of these operations without a death, and with only three recurrences up to the time of writing his paper.

The chief point in the operation to my mind is the complete removal of the entire rectum in all cases of carcinoma of that organ. By this method of operating the whole of the rectum, the glands in the hollow of the sacrum, and the attached cellular tissue are removed in one piece, and there is thus a much greater probability of eradicating the disease. The local removal of malignant disease has never been very satisfactory, and the excellent results which have been obtained in recent years in the treatment of cancer of the breast and uterus date from the time when surgeons recognized the importance of removing the entire organ *en masse* when any part of it was affected with cancer.

In the case of the rectum this is not only possible, but it enables us to perform the operation aseptically, and to restore the parts better than if a portion of the rectum only is removed. The sigmoid flexure is, I believe, much more suitable for plastic operations than the rectum.

The rectum is normally a more or less fixed tube, and is therefore unsuitable for such operations as resection and anastomosis or for bringing down the stump after partial amputation and stitching to the sphincters. The sigmoid, however, is a freely movable organ, and is particularly well suited to any form of plastic operation.

Sloughing of portions of the bowel, which is often so troublesome when the stump of the rectum is used to form the new anus, will not occur if the sigmoid is used, providing that care is taken to see that the bowel is still provided with a mesenteric attachment down to the divided edge.

The advantages of this operation are:

1. That the entire rectum and growth, cellular tissue and lymphatics, are removed *en masse*.

2. That it renders it possible for the operation to be performed aseptically and for the wound to be kept clean after the operation.

3. That it enables the normal opening of the bowel to be restored in almost all the cases that do not necessitate removal of the sphincters.

4. That it permits of the removal of more extensive growths than either the perineal or Kraske methods.

5. That there is none of the mutilation of the pelvis which is a necessary accompaniment of the Kraske operation—the removal of the coccyx does not seem to cause any subsequent inconvenience.

CONTROL OVER DEFAECATION AFTER OPERATION.

From the patient's point of view this is perhaps the most important point in the operation for excision of the rectum.

After this operation the sphincters rapidly recover their function; but at first, owing to complete absence of sensation in the new rectum, the patient is not conscious of the presence of faeces in the lower bowel, and partial incontinence results from this cause. In a very few weeks, however, a certain amount of sensation at the anus is established, and the patient is easily able to tell when the bowel is full, and to control the action of the bowels in the ordinary way.

The normal rectum is an organ specially designed for the expulsion of faeces, and when it has been partly or entirely removed this function is not readily established in the new rectum.

In Case IV the patient suffers from constipation unless an enema is used daily; this is, however, but a slight inconvenience, considering the nature of the operation, and I believe that in time it will improve, and the enema be dispensed with.

As compared with many of the older operations for excision, this method of bringing down the sigmoid instead of utilizing the stump of the rectum is a great advance. There is none of the risk of obstinate stricture necessitating the constant use of bougies, which was so common after the old operations.

The point of greatest importance in this operation, however, is, I consider, that it makes it possible for excision of the rectum to be performed aseptically, thus diminishing the risks to the patient's life, and greatly improving the results which can be obtained. It enables the operation of excision of the rectum to be brought more into line with other operations for cancer.

The number of operations are too few to enable any conclusions to be drawn with regard to recurrence, and I have not brought them to your notice with that object, but only as illustrations to this paper to show what can be done by the operation and the condition of the patient that results from it. There can, however, be little doubt that the more extensively the growth is removed, the better will the results be as regards recurrence.

The operation is not easy, and a thorough knowledge of the anatomy of the rectum and posterior pelvis is essential before attempting it. I performed it several times on the dead subject before attempting it in the living, and I believe this to be wise practice.

The most scrupulous care in aseptic technique is essential, as the peritoneal cavity and pelvic cellular spaces are widely opened, and serious consequences may follow any infection reaching these structures.

SQUAMOUS-CELLED CARCINOMA OF THE STOMACH AND OESOPHAGUS

IMITATING TUBERCULOUS ULCERATION OF THE INTESTINE.

BY

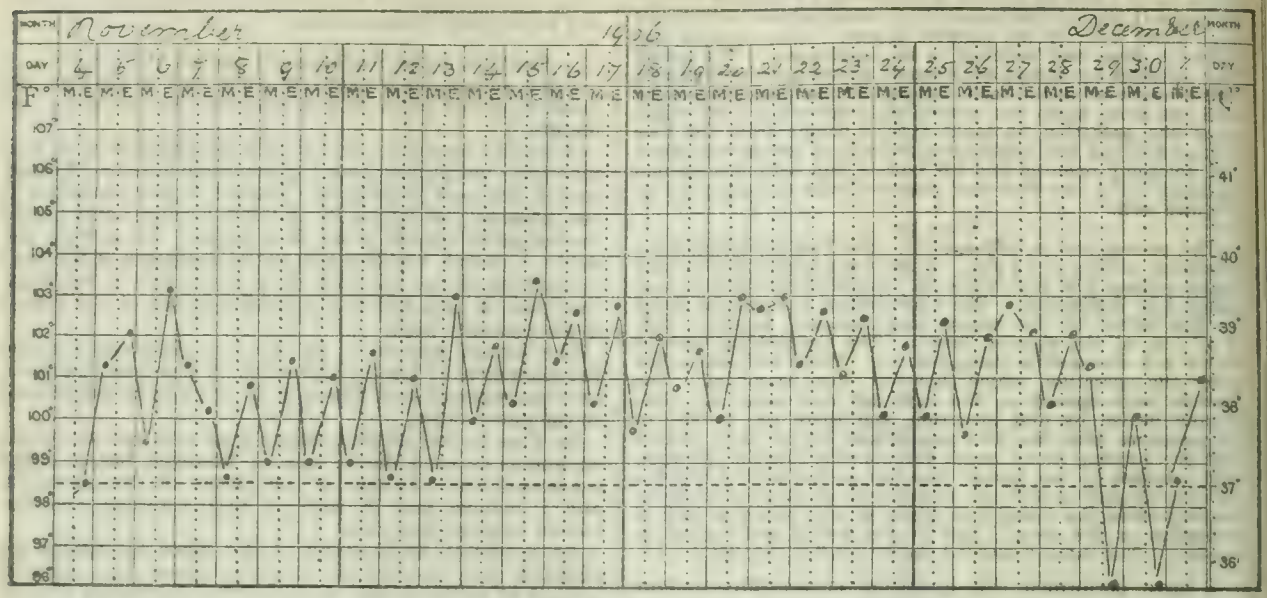
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THE points of peculiar interest about this case are: (1) A large squamous-celled carcinomatous ulcer, having all the naked-eye appearances of a primary growth, in the stomach associated with a smaller and apparently more recent growth in the oesophagus; (2) repeated intestinal haemorrhages without haematemesis, which, taken in conjunction with the presence of acid-fast bacilli in the material thought at the time to be sputum, gave rise to a diagnosis of tuberculous ulceration of the intestine.

A painter, aged 40 years, was admitted to St. George's Hospital on November 4th, 1906, having passed a pint of black blood by the bowel the day before. For some time previously he had been feeling out of health and had had vague pains in the abdomen, but had not suffered from indigestion or loss of appetite. At no time either before or after admission was there any difficulty in swallowing.


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adenomas, collected by Borst, lined by keratinizing epithelial cells. There has been considerable discussion whether this exceptional squamous-celled character in growths arising primarily in mucous membranes of the gall bladder and stomach is due (1) to metaplasia of the epithelium as the result of chronic irritation, or (2) to the presence of a "rest" or isolated area of squamous epithelium the result of some irregularity of development. In the case of squamous-celled carcinoma of the gall bladder, which is a considerable distance from any squamous-celled surface, the first explanation would appear to be the more probable, though Deetz did not find any evidence of squamous-celled metaplasia in an examination of 300 gall bladders, and Ribbert inclines to the view of an aberrant germinal deposit, while in the case of organs in communication with squamous-clad surfaces, such as the stomach, uterus, and breast, the second explanation would appear the easier. As bearing on this it may be pointed out that at least six cases of columnar-celled carcinoma of the oesophagus are on record (Hewlett), and that this can be explained by the *Anlage* hypothesis. On the other hand, it has been shown experimentally by Fütterer that squamous-celled metaplasia can be produced by irritation, and in a case of primary columnar-celled carcinoma of the stomach, recorded by Dr. Trevor and one of us, metaplasia in the growth had led to islands of squamous-celled growth.

In view of its rather complicated character we do not assert that the present case should be regarded as a primary squamous-celled carcinoma of the stomach. For although the carcinomatous ulcer in that organ has all the naked eye appearances of being the older, and that in the oesophagus of being the more recent, the most obvious view is that the primary growth remained small, and that the secondary (or ? implantation) growth grew rapidly. Another interpretation, that the primary oesophageal tumour gave rise to a secondary growth in the left lobe of the liver which spread to the stomach and so led to the malignant ulcer, and thus to the gangrenous cavity in the liver, did not appear probable either from the naked eye or microscopical appearances, the wall of the liver abscess not showing growth.

This anatomical condition appears to be worth recording as a contribution to the literature of carcinoma of the stomach.

The acid-fast bacilli which were reported to be tubercle bacilli formed the subject of a communication by Dr. Slater to the Pathological Society of London on February 5th, 1907, from which a few details are, by his kindness, appended. The material sent to him "contained large numbers of acid-fast bacilli resisting decolorization by absolute alcohol for two hours; these occurred in large groups, though there were a good many isolated bacilli which in many respects resembled *B. tuberculosis*. They were, however, in many cases unusually long, sinuous, and lacking in any beading, and were sufficiently unusual to cause me to show the specimens to other workers in my laboratory, and to note their characters in my own report. The organisms resembled bacilli that are occasionally met with in putrefying sputum and retain the red stain to a certain extent, but these were brilliantly stained, and resisted absolute alcohol for two hours. With some misgivings, however, I reported that tubercle bacilli were present. After the patient's death these bacilli were found in smears from the ulcerated surface of the gastric growth, and also in the superficial portion of a section through the sound non-ulcerated edge of the growth, but nowhere else. Attempts at cultivation not having been possible in this case, I can only suggest that these bacilli were probably similar to the acid-fast tubercle-like bacilli which have been described in faeces and sewage. The point of clinical interest lies in the presumption that these organisms from the stomach gained access to material which had the characters of sputum, and so became the source, though probably a very rare source, of a possible error in diagnosis."



Squamous-celled carcinoma of stomach and oesophagus. The growth in the oesophagus is smaller and to the naked eye looks secondary. The carcinomatous ulcer in the stomach does not invade the cardiac orifice; it opens into a suppurating cavity in the left lobe of the liver.

It may safely be assumed that these acid-fast bacilli were enabled to grow in the stomach on account of the ulcerating carcinoma and probably—though of this there is, of course, no positive evidence—from the absence of free hydrochloric acid. In this connexion it is interesting to refer to the cases of caseous masses in the livers of patients with carcinoma of the stomach recorded by Craven Moore and Clement. Tubercle bacilli were not found in these two cases, so it is conceivable that the caseous masses in the liver were due to other bacilli, such as that described by Klein in Thames and Lee water, which produced caseous masses in the liver of animals. As bearing on these observations, the secondary nodules in our case were examined microscopically, but were found to be carcinomatous.

Clinical.—As already pointed out, the diagnosis of the cause of intestinal haemorrhage in this case was beset with difficulties—ambulatory enteric fever, duodenal ulcer, and tuberculous ulcers of the intestine being successively thought of. When the expectorated material was reported to contain tubercle bacilli, the fever, emaciation,

and intestinal haemorrhage were regarded as the result of tuberculous ulceration of the intestines, and probably of tuberculosis more or less generalized throughout the body. Tuberculous ulceration of the intestines is, in our experience at least, hardly ever accompanied by profuse intestinal haemorrhage; but Professor Osler speaks of having had several fatal cases from this cause. The occurrence of profuse haemorrhage of the stomach without haematemesis was presumably explained by the pressure exerted by the growth against the cardiac orifice, and to some extent by the presence of the oesophageal growth, conditions which would make vomiting impossible. Much stress cannot be laid on the obstructive influence of the latter, inasmuch as there was at no time any recognizable dysphagia. The same argument might, indeed, be raised with regard to the gastric growth; but it seems reasonable to believe that the gastric growth, which did not quite reach the cardiac orifice, did not obstruct that orifice when the stomach was passive, but that in vigorous contraction of the stomach, such as would induce vomiting in a healthy person, the cardiac orifice became obstructed by the pressure of the growth. In other words, that the obstruction was valvular.

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TWO CASES OF MULTIPLE INTESTINAL OBSTRUCTION.

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In the first of these cases the patient, a night watchman, aged 81, stated that though for some years he had been subject to bronchitis in winter and for many years had a left inguinal hernia, he had been a very healthy man, the hernia giving no trouble. About 8 p.m. on the evening preceding his admission the patient, being then on duty, was suddenly, and without apparent cause, seized with severe abdominal pain. He was taken home. Vomiting commenced shortly afterwards and continued, pain later on being felt in the hernia and over the abdomen.

State on Admission.—He was in fair condition; pulse about 100, with occasional irregularities; temperature normal; marked faecal vomiting was present. The abdomen was much distended and tense; the large left inguinal hernia present was firm, painful, irreducible, dull on percussion, and had no impulse on coughing.

Operation.—Under chloroform the hernia was cut down on, and on opening the sac a large quantity of clear serous fluid escaped; there was a loop of bowel in the sac, slightly distended and red, but having no marked appearance of strangulation; the ring was wide and the bowel easily returned. As this did not seem to afford sufficient explanation of such marked faecal vomiting, a median laparotomy was performed, distended small bowel presented, and this, on being followed down, led to a loop of ileum fixed tightly behind the caecum, evidently being of the nature of an internal hernia; this loop was almost black in colour, but on reduction appeared viable, so the abdomen was closed and the patient put back to bed.

Second Operation.—Faecal vomiting continued all night, and, as the patient was rapidly sinking, the abdomen was again opened in the morning eight hours having elapsed since the former operation. Another impacted and strangulated internal hernia was discovered, this time up in the region of the splenic flexure, where the bowel had got caught in a peritoneal pocket; this bowel was also nearly black, but was treated by simply replacing it in the abdomen.

Result.—After this the vomiting ceased, and in six hours the bowels moved. The patient remained free from pain, his temperature kept from 98° to 100°, his pulse improved, and the day following operation his bowels moved again. On the fourth day his cough became very troublesome, and a dull patch was detected in one lung. This increased, and he died on the eighth day after the last operation. The following notes were made at the autopsy:

The body is that of an emaciated old man, and the arteries show signs of senile degeneration; there is an operation wound over the left inguinal region, which is almost healed; there is also one over the middle line of the abdomen, below the umbilicus; this one, though quite aseptic, shows very little healing change; the bowel throughout is in good condition; both lungs are in a state of hypostatic pneumonia, consolidation being marked at both bases. There was nothing of note in the other organs.

The second patient, a hammer boy, aged 18, stated that he had always been healthy, but seven years ago had been run over by a van, and had his abdomen injured. After this he was in hospital for eight weeks, but eventually made a perfect recovery.

On July 17th, eight days before admission to the infirmary, he was away for a day's trip, and next morning felt sick and had some abdominal pain; it was thought to be due to what he had eaten the day before. In the evening severe vomiting commenced, and had continued till admission. For the last forty-eight hours it had been faecal in character. Two enemata were given on the 19th with fair result, but since then the bowels had never acted, nothing whatever had been retained, and abdominal pain was excessive.

State on Admission.—He was in a desperate condition; his pulse very weak and about 104 in rate; his temperature 99°; very marked faecal vomiting was present; the abdomen was not markedly distended and no local tumour could be felt.

Operation.—Under chloroform an incision was made in the middle line, somewhat distended small intestine presented, and on following this down it was found to go in at the foramen of Winslow; almost 3 ft. of bowel was pulled out through this foramen; at one part there was a slight mark of constriction, but there was nothing which seemed sufficient to account for the symptoms, so a further search was made and a long, inflamed appendix was discovered twisted firmly round a part of the small intestine and evidently completely blocking it. The adhesions were broken through and the appendix removed; the small bowel thus freed was about 6 in. away from the ileo-caecal valve, and it was much congested.

Result.—He lived about six hours after the operation, and during that time his bowels moved slightly; however, there was no proper rally. At the autopsy the following was observed: There was no marked distension of bowel, no obstruction, intense congestion of a part of the lower end of the jejunum, which had a haemorrhagic appearance in places, no peritonitis nor ulceration of bowel. In the appendix region there was also marked congestion involving the stump of appendix and caput and especially the lower end of the ileum; inside the bowel at this part there was congestion of the Peyer's patches, without ulceration, also enlarged retroperitoneal glands were felt. The other organs showed no marked pathological lesion.

Remarks. In both these cases there seems no doubt that the vomiting and peristalsis induced by the primary obstruction were the causes which induced the secondary herniae. This possibility should be remembered, for in any violent vomiting we have a predisposing cause for an obstruction. If, therefore, we find what appears to be an insufficient obstruction, or in cases where an operation has not seemingly relieved the obstruction, the possibility of a second one must be borne in mind. As these secondary obstructions may not be very tight, and may resolve themselves with the general relaxation at death, it is possible that they account for some of the cases of so-called paralysis of the bowel where no peritonitis or obstruction is found after death.

My thanks are due to Dr. Adams for permission to treat these cases in his ward and also to publish the results.

TWO NEW GENERA OF NEMATODES OCCASIONALLY PARASITIC IN MAN.

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The helminthic affections of man are in not a few instances cases of accidental or occasional parasitism, the normal host being one of the domesticated lower animals more or less closely associated with him. Thus, *Fasciola hepatica*, *Dicrocoelium lanceatum* and *Opisthorchis felineus* among the Trematoda, *Eustrongylus gigas*, *Ascaris mystax*, and *Strongylus longe vaginatus* among Nematodes, and the

Cestode larva Echinococcus, are known to produce in man all the pathological effects their presence incites in their proper hosts. Probably, also, as to some extent adventitious, we may likewise regard *Paragonimus westermanii*, *Schistosomum japonicum*, and *Trichinella spiralis*.

It is obvious, then, that in order to understand the nature and the relationships of the human parasites we must acquire intimate knowledge of the structure and life-histories of those of the lower animals. This is aptly illustrated by a comparative study of the *Ascaris mystax*, a parasite that has been reported but seldom in man, and that infests our domestic cats and dogs, and, according to the literature, most of the carnivora.

It is somewhat surprising, in view of the number and intimacy of pet cats and dogs in the home, that there are only nine records of the occurrence of cases of human infection: two in Ireland, England, and Germany; and one in Denmark, Hungary, and North America. This is possibly more on account of the parasite having been mistaken for an immature *Ascaris lumbricoides* than of its great rarity.

The most outstanding feature by which an *Ascaris mystax* can be easily distinguished with the unaided eye is the spatulate shape of the head produced by two lateral membranous expansions of the cuticle, and it is because of these that the parasite has been designated the "winged" ascaris. The value of these structures as indicative of specific differences between the "winged" ascarids of various hosts has been much discussed and differed upon for the last hundred years. In his monograph of the genus Ascaris, published in 1896, Stossich included in his list of the synonyms of this parasite no less than fifteen other specific names; some of these date from the period when it was considered that a different host was a sufficient guarantee for the specificity of the parasite, but many were based upon the shape of the alae. It was upon this character mainly that that profound observer, Rudolphi, who has been aptly named the Linnaeus of Helminthology, based the differentiation of the species *leptoptera* (from the lion), *marginata* (from the dog), *mystax* (from the cat) and *triquetra* (from the fox), in his "Capite Alato" subsection of the genus Ascaris.

When Bellingham first found the *Ascaris mystax* in man he described it as a new species under the name *Ascaris alata*, because of differences he noted in the outline of the alae as compared with those of the "winged" ascaris of the cat. Cobbold, however, from an examination of similar worms from another case, concluded that the differences were merely variations occurring in individuals of the same species. This opinion became very generally accepted, and its application has gradually been extended until at the present time the winged ascaris of the dog (*A. marginata*, Rudolphi), of the cat (*A. mystax*), and of the fox (*A. triquetra*) are all regarded as belonging to the same species, *Ascaris mystax*, or, as the nomenclaturists have it, *Ascaris canis*. This is the view adopted, as far as I can gather from their recent writings, by Blanchard, Railliet, Neumann, Braun, and Stiles.

Through the courtesy of the authorities of the Egyptian Government School of Medicine I had the privilege of working for several months of last year under Professor Looss in his laboratory at Cairo, and whilst so engaged came across, in a quantity of *Ascaris lumbricoides* sent from the *post-mortem* room of the Kasr-Ainy Hospital, four smaller forms differing from young *lumbricoides* in their peculiar firmness and resilience, and, on closer examination, in the spatulate outline of the anterior end of the body, and I concluded, for the nonce, that this was another case of *Ascaris mystax* in man. But on more carefully examining the anterior end of one of the specimens under a higher power of the microscope I was struck by the fact that the alae appeared rather linear, and did not bulge posteriorly in the manner of the typical *Ascaris mystax* of the cat. On the other hand, they were apparently identical with other specimens of ascaris that had been obtained some time previously from a dog. From a comparison of a large number of examples from the cat and from the dog, I became convinced that these differences in outline were not merely individual variations, but distinctive of two separate species.

With specimens cleared by the method elaborated by Dr. Looss I was able to determine the existence of other and hitherto unnoticed differences in external and internal structure correlated with those exhibited by the alae of the two forms. Indeed, it became apparent that they could scarcely be included in the same natural genus, for several of the dividing characters were those of generic import.

This inference was fully borne out by an examination of samples of so-called *Ascaris mystax* from other carnivores. It was easy to range these into two groups, namely, those showing essentially the same internal anatomy as the true *Ascaris mystax*—that is, of the cat—and those agreeing similarly with the *Ascaris mystax vel marginata* of the dog. When such an arrangement had been made it was still a matter of little difficulty to distinguish the various species from one another, by other structurally less important characters, these being in fact those relied on more than a hundred years ago by Rudolphi, and, in addition, the contours of the lip structures and the oesophagus. We have, then, in the winged ascarides not merely two or more varieties of one species, but, to my thinking, several species belonging to two distinct genera, *both* of which are characterized by the presence of lateral expansions of the cuticle at the anterior end of the body. For these genera I propose the following names:

Belascaris, n.g. 1907, having as type *Ascaris mystax* (Zeder), and showing in all the species of the genus the following characters, collectively and individually: Anterior end of the body in preserved specimens bent ventrally. Cuticle coarsely striated. Oesophagus with distinct bulbous portion posteriorly containing nuclei of oesophageal glands. Tail of the male probular—that is, having an outline similar to that of a closed fist with the forefinger semiextended. On the bulging portion immediately behind the anus is a pair of single papillae with sunken caps, and on the finger-like tail two further pairs ventrally and two laterally, the tips of which apparently, from preserved specimens, support a slight expansion of cuticle. The coils of the testis are situated in the anterior half of the body cavity, differing in the various species in the limit of their forward extension. There is a remarkably long "vesicula seminalis" and short ejaculatory duct. In the female the genital opening is situated in the anterior part of the body, and the eggs have a corrugated shell.

To this genus belong *Ascaris mystax* (Zeder), *Ascaris triquetra* (Rudolphi's type specimens), and also a large new species from the Egyptian fox. From the brief published descriptions of *Ascaris globulus* (v. Linstow) this species may be ascribed to the genus, as may also *Ascaris leptoptera* (Rudolphi).

Toxascaris, n.g. 1907. Type *Ascaris leonina* (v. Linstow) has the following distinctive characters common to the various species: The anterior end of the body is, in preserved specimens, bent dorsally. The cuticle is finely striated. The oesophagus is simple and opens directly into the intestine without any intervening bulbous portion. The palps of the lips are distinctly club-shaped terminally. In the male the tail tapers to an acicular tip without any ventral retrusion behind the anus. The post-anal papillae are arranged in two groups, a ventral set of paired papillae continuous in line with the preanal row on each side of the body, and a lateral set, arranged as it were one at each corner of a triangle on the outer aspect of the tail. In all there are six pairs of post-anal papillae, three lateral and three ventral, and of the ventral the pair succeeding the anus is double. The coils of the testis lie in the anterior part of the posterior half of the body. The tubular seminal vesicle is long, though short relative to that in *Belascaris*. The ejaculatory duct remains short. The genital opening in the female is found at about the centre of the body and the eggs are oval and have a smooth capsule.

The genus thus defined comprises the species: *Ascaris marginata* (Rudolphi), *Ascaris leonina* (v. Linstow), *Ascaris tigridis* (Gmelin), and a further species from the Sudan not yet published.

The definition and illustration of the various characters distinguishing the carnivore species of these genera from one another can be more appropriately dealt with in another place as being of purely zoological interest. The object of the present note is to record, apparently for the first time, the occurrence of the "dog" ascaris as a human parasite as well as the "cat" ascaris, and to show that a study of the minuter structure of the ascarids of carnivores reveals the fact not only that those of the cat and of the dog are undoubtedly specifically distinct, but that they actually belong to different genera. It gives me, too, an earlier opportunity than the fuller publication of my work there could possibly have afforded to acknowledge the very generous facilities put in my way by the director and the staff of the Government School of Medicine at Cairo, and to express my gratitude to Dr. Looss, the

Professor of Helminthology, for the unselfish way in which he, at the expense of much time and patience, initiated me into those special methods of work and thought that in his hands have already so greatly enriched helminthological literature.

THE X-RAY TREATMENT OF RINGWORM OF THE SCALP:

SINGULAR COINCIDENCE OF MEASLES WITH THE DEFLUVIUM OF THE HAIR.

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THE *x*-ray treatment of ringworm of the scalp has now passed through the experimental stage, and become recognized as the most rapidly effective mode of treating the disease, and if properly done by recent methods, it has been shown to be comparatively free from risks. The so-called single exposure method, thanks to the work of Sabouraud and others, has replaced the more uncertain method of repeated exposures and fractional dosage. So certain and well regulated has the dosage become, that the operator now expects the defluvium of the hair from the exposed area to take place on about the sixteenth day without any marked inflammatory disturbance, only occasionally a transient hyperaemia for a few days before the hairs fall out. Consequently, when any marked hyperaemia occurs, it is naturally a source of great anxiety, suggesting the possibility of an overdosage of the rays, or the previous employment of some irritant to the scalp such as tincture of iodine. Recently I had the alarming experience of an erythema occurring on the exposed areas in the scalps of two boys just as the hair was falling out, which was so marked as to cause considerable anxiety, but which turned out to be due to the singular coincidence of an eruption of measles with the defluvium of the hair. This unusual experience seems to be worthy of recording.

Towards the end of last October, two boys, aged respectively 9 and 4 years, suffering from small-spored ringworm of the scalp, were sent up to me from the country for *x*-ray treatment. In both of them an eruption of measles appeared on the exposed areas of the scalp as the hair was falling out. The following are brief notes of the cases:

CASE I.—Aged 9 years. Suffering from tinea tonsurans due to *Microsporon audouini*. The patches of ringworm were confined to the frontal and occipital regions, and could be included in two exposures with a circular localizer of 7 cm. diameter. The exposures were given on October 27th. On November 14th the hair had begun to fall out from the exposed areas and it was noted that the skin of both areas presented a vivid erythema. This erythema was not of the mild diffuse type usually associated with the falling out of the hair, but was mottled in character and consisted of irregularly-shaped red macules, or slightly raised lesions, somewhat deeper in tint in the centre and varying in size from a pin's head to about ¼ in. in diameter. The presence of the eruption was not associated with any itching. At the same time it was noticed that the boy was out of sorts, he complained of headache and coryza, and had a temperature of 101° F. He was sent to bed and next morning a typical measles rash had developed on the forehead, behind the ears, on the sides of the neck, and was rapidly spreading on to the chest and back. I saw the case again on November 20th in consultation with Dr. Owen Lankester, and found that the measles rash had disappeared and that the hyperaemia had gone from the exposed areas, which were quite bald and the ringworm cured. An interesting point about the case was that the measles eruption was first noticed on the exposed areas where the hair was falling out, and was not present to any extent elsewhere on the scalp. The hair had begun to grow by the middle of January, and he was allowed to return to school.

CASE II.—Boy, aged 4 years, younger brother of other case, suffering from extensive tinea tonsurans due to *Microsporon audouini*. The ringworm was much more widely distributed than in the former case, and it was necessary to give eight single exposures of area 7 cm. in diameter to include it all. One small patch of ringworm had to be excluded from the *x*-ray exposure as it had been irritated by previous treatment. The exposures were given on October 26th, 31st, and November 1st. On November 14th the hair had begun to come out of the areas that had been exposed, and a mottled erythema associated with the same general symptoms as affected the elder brother had also appeared, but they were much more severe in character. Next day the rash, or patches of it, had become generalized over the skin. On November 16th the measles rash had disappeared, and the exposed areas were bald. The case was not quite so satisfactory as the previous one, as the unexposed patch had to be needled on several occasions with croton oil, and also a few stumps which had been left between two contiguous exposed areas. The hair had begun to grow by the middle of January.

These cases were of great interest, on account of the measles eruption appearing on the areas rendered temporarily bald by the *x* rays. When the eruption was first seen in this situation, in spite of the catarrh and temperature associated with it, the possibility of its being measles did not occur to me, and some unusual form of *x*-ray dermatitis suggested itself. This anxiety regarding the cases was, however, dispelled next morning when the eruption had come out fully.

A PLEA FOR THE USE OF TUBERCULIN WITHIN AND WITHOUT SANATORIUMS.

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INFECTIOUS diseases of specific origin are the result of an affinity existing between the specific cause or its product or both and the tissue elements of the man or animal. The result of the disease depends on the action and reaction of these two essential factors. If the specific cause is very virulent or very abundant, it overpowers the vitality of the invaded tissues and destroys the organism. On the other hand, the resisting energy of the tissues may overpower the agents of disease and either destroy them or neutralize their dangerous products. Tubercle bacilli, the specific cause of all forms of tuberculosis, manifest a remarkable affinity for certain parts of the human body, notably the lungs, and the result of tuberculous disease of the lungs depends on the virulence and number of tubercle bacilli and the resisting energy of the invaded tissues.

In the treatment of such an infectious disease there are two rational methods—one directed against the specific cause and therefore called specific, the other aiming rather at strengthening the resisting energy of the invaded tissues. These two distinct methods of specific and general treatment should be combined if we wish to get the best results.

The specific method of treating pulmonary tuberculosis consists essentially in the use of tuberculin in its various forms, which helps to destroy the bacillus and to neutralize its toxic effects. This method is in fact a process of active immunization entirely different to the antitoxic treatment of diphtheria, in which the antitoxin is supplied ready made. In principle there is no difference between the tuberculin treatment for the purpose of curing tuberculosis and the use of Haffkine's fluid or similar agents for the purpose of preventing for a short time such diseases as plague, cholera or typhoid fever. If, then, the method is advocated in order to protect a healthy person against a disease, which in a mathematical sense he has a very small chance of contracting, it is not unreasonable to urge the use of the method if it offers even a small chance of cure to one who has already fallen a victim to the disease. Those who have used and advocated the use of specific prophylactic fluids containing germ products for the prevention of plague cannot with any show of consistency oppose the use of tuberculin, which is, after all, merely a vegetable product of the living tubercle bacillus. Many are, in their ignorance guilty of this strange inconsistency. On the other hand, I may disarm some opposition by saying at the outset that the extraneous use of tuberculin is not the one only indispensable means of curing tuberculosis, even in an anatomical sense. We know of no disease in which death is inevitable. Always some individuals are ordained by Nature or strong enough to survive an attack of the most virulent disease. Plague does not kill all its victims; nor yet tetanus or anthrax. This power to resist lies in the tissues. Let us go a little further. This power to resist depends upon the ability of the tissues to produce a sufficiency of antibodies which either kill the specific agency or render their products harmless. It is too often forgotten that the very end and cause of the production of these antibodies in the tissues is the specific cause of the disease. *The disease uses its own cure by means of its own cause.* Not only the disease but even the mechanism of immunity

that cures it, are both the results of the living germ through its specific products. Except in this way no infectious disease cures itself or protects against itself. Even when we seek to strengthen the energy of tissue so that the disease may be resisted, we are blindly assisting Nature to work a cure in Nature's own way. In pulmonary tuberculosis sanatorium treatment, open air treatment, the rest cure, and other methods act by stimulating the system to evolve the mechanism of immunity in response to the action of the products of the tubercle bacilli in the tissues, the most important of which is tuberculin. It may be a shock to some of the advocates of sanatorium treatment to hear that they themselves, without knowing it, have been innocently vaunting the efficacy of tuberculin in the treatment of tuberculosis. On the other hand, those who advocate the artificial supplementing of Nature's own direct weapon of defence are quite consistent in upholding the value of other methods, especially sanatorium treatment. Daily experience tells us that pulmonary tuberculosis is a disease that too often fails to work out its own cure. Some fault in the mechanism of immunity allows the germ to continue its work of destruction or, maybe, to lie in ambush for months and years. The whole purpose of treatment is to stimulate the tissues to build up and finish the mechanism of immunity, so that the tissues shall no longer be at the mercy of the tubercle bacillus. *A priori* it seems logical to stimulate the mechanism by means of the specific products, called tuberculin. *A posteriori* other methods evolved through empiricism are vaunted as the *ne plus ultra*, and specific methods are held to be superfluous.

Unfortunately, there is no royal road to an accurate estimate of the value of treatment in a disease so irregular in its onset, so complicated in its nature, and so variable in its course as pulmonary tuberculosis, and the best of us may hardly avoid the pitfalls of inconsequent and circuitous reasoning. Least of all can we judge of the effects of treatment if we report and exhibit our immediate successes. Those who have had a large field for observation are at times staggered at the vagaries of this disease. The science of recent years, especially through the labours of Vagedes and Kossel, working under the inspiration of Koch, tells us in unmistakable language that one of the chief causes of variation has been largely ignored—the variable virulence of the essential factor, the tubercle bacillus. In the old days the natural explanation of the variable course of pulmonary tuberculosis was found in the overrated element of predisposition. The tendency of the old school is still to labour the question of predisposition. The tendency of the new school of heretics is rather to give due weight to the definite, tangible, and measurable factor—the infective agent in all its variations and vicissitudes. Naegeli's statistics would seem to show that we are all predisposed. "*Jedermann ist ein bisschen tuberculös.*" The strongest athlete in the heyday of health and youth may be just as little immune as the slender, weakly factory girl with the flat chest and the so-called phthisical habit. The former may succumb to rapid and acute phthisis; the latter may show only an inert localized lesion. Predisposition at least is a quality that cannot be estimated, nor yet eliminated.

It is difficult beyond ordinary comprehension to give a right value to the effect of any method of treatment in a disease that runs such a variable course as pulmonary tuberculosis. The disease may exist for months and years without arresting the attention of patient or physician. It may become quiescent at any time; it may relapse after months or years; it may reach a serious stage involving the greater part of a lobe, and then end in perfect restoration of health. In spite of treatment of any and every kind, the disease may never relent: the victim knows no respite till death. Without any treatment, the disease may come to a standstill and never again disturb the health. The most affectionate regard for logic may not restrain us from attributing success to our own small efforts and failures to the vagaries of the disease. Our memories seize fast hold of successes; we leave others to record our failures, or leave them unrecorded. Let us adopt what measures we may, more or less failure is the rule, and yet we place a high value on many of our methods. In no other disease is it so difficult to estimate fairly the effect of treatment upon the course of the disease as it is in pulmonary tuberculosis. One sees cases of pulmonary tuberculosis, even complicated with tuberculous ulceration of the larynx or epiglottis, get well of themselves without any special treatment, without sanatorium treatment, without injections of any sort, without local application.

In the first place, early diagnosis is the key to successful treatment. In the early stages the lesion of active or latent tuberculosis may produce physical signs like those of obsolete foci, and tubercle bacilli may not yet have escaped from the tissues. Obsolete lesions are not tuberculous, but post-tuberculous. How can the physician attempt to unravel the mystery of these various lesions? If the tubercle bacilli have disappeared there can be no tuberculosis, and if there is no active tuberculosis there is no reaction to tuberculin. That is a vital point. Tuberculin alone gives the clue whether the lesion is active or inert. If the focus is inert it may harbour tubercle bacilli that will become active at some future time. Yet, if the tuberculin reaction fails, it is likely that the tubercle bacilli are so surrounded that the tissues can themselves destroy the bacilli. On the other hand, a reaction to tuberculin proves that the lesion is not inert. This reaction is a danger signal of the first importance. It warns the physician of a danger hidden from sight, like the fog signal warns the sailor of a danger in a mist which the eye cannot penetrate. By the systematic use of tuberculin we may learn the true nature of many of those lesions which Naegeli too readily assumed to be tuberculous. Many of these lesions may be merely passive—quiescent, but still ready to be kindled into activity by inflammations or other infections. Sad to say, these closed lesions thus neglected may become the source of the acute and rapidly-progressing forms that develop in early adolescence. Now, if these terrible disasters may happen, there has been no cure, even though the lesion is for a time closed and inert. By no other way than by the systematic use of tuberculin can we distinguish these latent cases from absolute cures; and if tuberculin is not used, no one has a right to use the term *cure*. If the tuberculin test is negative, and again after an interval of three months or six months again negative, there is some certainty that a cure has been accomplished. When the prejudice against tuberculin has died its natural and inevitable death, one of the most valuable uses of tuberculin will be found in determining the effect of treatment of any and every sort. Meanwhile, except by those who use the test, the term *cure* must be avoided.

It is satisfactory to note that the Tuberculosis Congress in London, 1901, deliberately adopted the opinion that tuberculin was an invaluable agent in diagnosis. The education of English opinion needed ten years before the truth of Koch's original statement was recognized.

Sanatoriums cannot dispense with tuberculin as a diagnostic agent, and gradually tuberculin is taking its right place in all the sanatoriums of Germany. If tuberculin is not used, mistakes must occur. True cases of tuberculosis are overlooked, and, on the other hand, there is the risk of condemning a man to an expensive and irksome course of treatment for a disease which he has not got. In one year Weicker rejected 48 spurious cases already diagnosed by good examiners as early cases. In the eager chase after early cases, otherwise trustworthy examiners may condemn to sanatorium treatment many cases in which the diagnosis rests not upon trustworthy evidence, such as tubercle bacilli in the sputum or a definite reaction to tuberculin, but rather upon the subjective impressions of the observer as to the character of respiratory movement or auscultatory signs. The tuberculin test alone can save the profession from the Yes-No diagnosis. But for the tuberculin test Weicker might have greatly improved his statistics by including the rejected cases, and ultimately *recorded them as cases of cured tuberculosis!* Christian Science can do as much for these cases as the best sanatoriums. Let us take care we give no such chances to the Christian Scientists to show their skill. It is an easy offhand criticism to offer that tuberculin in diagnosis may lead to the inclusion of cases of latent tuberculosis that may never further develop. The same may be said of many of the cases upon which the statistics of sanatoriums are based. Who will dare to say that it will not develop if a reaction to tuberculin occurs? On the other hand, by the use of tuberculin I have saved many persons the expense and inconvenience of exile to the country, to which they had been sentenced by various

medical men. Further, when one uses tuberculin for treatment also, if perchance tuberculin has given a doubtful or false indication, the mistake is soon remedied. Thus, if the reaction be no greater than 99.5° to 100° F., and tuberculin is given for treatment, a constant absence of reactions with larger doses rapidly increased arouses suspicion. In my experience, with proper doses a temperature of 100° is positive. A rise of temperature to 99.5° to 100° is doubtful. *Tuberculin is quite harmless, if there is no tuberculosis.* Why, then, should we fear to use it in the cause of sanatorium or other methods of treatment, when it surely reveals the presence of tuberculous lesions? I have no hesitation in saying that tuberculin is an invaluable agent in the selection of suitable cases for sanatoriums, and also a ready means of gauging the success or failure of treatment. A more open question is the value of tuberculin as a curative agent. It is extremely difficult to measure the value of different methods of treatment in a disease that runs such a variable course. For any and every method of treatment successes will be claimed. The only test is the *relation of successes to failures.* If we investigate the statistics of sanatoriums, we find that the successes of to-day are the failures of to-morrow. Every medical man has had successes, but far more failures. Moreover, records are practically worthless, *unless they show that after an interval of time, say two years, the patient is the better for treatment.* It is the tradition of sanatoriums to publish results as soon as patients leave the institution. This pernicious practice must give rise to misconceptions and disappointments.

Dr. Sinclair, Superintendent of the Wentworth Falls Sanatorium, New South Wales, is an expert in sanatorium methods, and I fully recognize the humane and unostentatious labour of the last two years of his busy life. He knows too well the vagaries of the disease he has to deal with to raise hopes that may not be realized. He knows as well as I do that the immediate results of sanatorium methods, as of other methods, are satisfactory in every point but the most important—*they do not last.* The sequel to the chapter of improvements that stand recorded when the patient leaves the sanatorium must be stated with equal truth, and, sad to say, is a long wearisome chapter of relapses terminating in death after one or several years in the majority of cases—even though at the outset special care is exercised in selecting cases favourable for treatment.

Any one who has studied the analysis of 30,000 cases or thereabouts treated in German sanatoriums (Engelmann and Hameld, *Tuberculose-Arbeiten*) will hardly find occasion to boast of brilliant success. The fruit of the English sanatoriums and of our own sanatorium in New South Wales is not yet ripe for analysis—I said so in 1903, Ransome says the same in 1905. What is true in 1905 was doubly true in 1903, though I was laughed to scorn when I made the statement. Engelmann's statistics show that of the cases in Stage 1, 7.6 per cent. were disabled or dead in 1 to 1½ years, 19.7 per cent. in 2 to 2½ years, 33.3 per cent. in 3 to 3½ years, 55.6 were disabled or dead in 4 years. In all stages the records were infinitely worse. In 1 to 1½ years 2% per cent. were dead, in 2 to 2½ years 38.4 per cent., in 3 to 3½ years 55.0 per cent., in 4 years the deaths amounted to 66.7 per cent. Moreover, the failure of present methods is written large in the black letters of the statistics of every country.

The after history of 20,874 cases treated in 1897 showed the following permanent results:

In 1898	...	...	66 per cent. permanent results.
In 1899	...	...	48 " " "
In 1900	...	...	49 " " "
In 1901	...	...	39 " " "

In Weicker's statistics—2,469 cases:

In following year			55 per cent. permanent results.
In second year	...		50.7 " " "
In third year	...		41.1 " " "
In fourth year	...		36 " " "

Two years after treatment 25 per cent. are dead, four years after treatment 50 per cent., and six years after treatment 6⅔ per cent. are dead.

Even Dr. Sinclair has been premature with his records. When I published my results in 1902 my work extended back five years and more; Dr. Sinclair's extend back hardly more than two years and most of his successes have been reported within a year of treatment. The condition of time has not been fulfilled, and his records can at most form a starting point for further observations. Many of the apparent successes of to-day may prove the certain failures of to-morrow. Still the after-history of these recorded cases year by year will show the truth about the results of sanatorium treatment.

We learn already from Dr. Sinclair, as I insisted years ago, that a three months' residence in a sanatorium may be well enough from an insurance point of view, since it may restore the industrial competency of a workman for one or more years, but in three months one cannot expect to arrest the disease, and it is arrest of the disease which the workman is led to expect and desires. The workman wishes not only to be able to work but to recover his health. In most cases the work of sanatoriums is patchy and unfinished. Patients are discharged—improved no doubt—but with the disease still potential, if not active, and merely awaiting a favourable opportunity to reassert itself. My purpose at this congress is to bring forward reasons for advocating the use of tuberculin as a remedy so as to bring the work of the sanatorium to a higher level of efficiency and completeness, for the benefit of the unfortunate victim of pulmonary tuberculosis, and even of the whole community. The better the work of the sanatorium the better for the community, and at the present time the inmates of our sanatoriums are denied the advantages of tuberculin treatment that are enjoyed by patients in some of the best German sanatoriums. The ideal treatment is specific treatment combined with those general methods adopted in the sanatorium that are of undoubted value in increasing that tissue energy upon which the success of tuberculin treatment depends. Weicker lost hope after a careful experience of the ordinary and best sanatorium methods of Brehmer; he weighed sanatorium treatment in the scales and found it wanting. He tried tuberculin, and, combining both methods he has taken heart again. Another very great authority, Moeller, has become a convert to our side, but he states that he uses tuberculin especially when sanatorium methods absolutely fail (see *Zeitschrift*), and in such cases he has been astounded at the splendid effects of tuberculin. My simple criticism of this somewhat half-hearted advocacy is that surely if tuberculin has been proved by him to be of enormous value as a curative agent, when *sanatorium methods have failed*, there is no *a priori* reason why it should not be far more successful in those cases in which sanatorium methods do good.

Years ago, when I was making my early observations with tuberculin, I studiously avoided the introduction of factors that might vitiate my conclusions. Accordingly I instructed patients to live under the conditions to which they had been accustomed. Having thus proved that the uniform improvement could be only due to the new factor—the tuberculin—I lost no time in adopting all measures that might reasonably be supposed to help in the arrest of the disease and the cure of the patient.

Strange as it may seem, I am the only specialist in diseases of the lungs in Sydney who has gone to the trouble of providing sanatorium treatment for private patients, even though I consider the sanatorium methods of subordinate importance. Other medical men who openly proclaim that sanatorium treatment is of primary importance, have taken no steps to secure for their private patients that method of treatment which they tell the world is the best and indeed the only treatment. It is idle to pretend that the haphazard exile of patients to the country constitutes sanatorium treatment. I leave it to the over-zealous advocates of sanatorium treatment for the poor to explain why it should not be equally successful in their well-to-do and rich patients. Let those who wish to be enlightened upon the great virtues of sanatorium methods read Dr. Ransome's article in the BRITISH MEDICAL JOURNAL. He quotes Walther of Nordrach to this effect, that, if by cure we mean that all subjective and objective signs of disease have disappeared, no more than 11.20 per cent. can be so classed, although improvement occurs in 70-80 per cent. of the cases. Ransome writes himself, "I think it may fairly be said, as the result of a large mass of Continental statistics, that only about 30 per cent. of patients discharged from sanatoriums for the poor maintain the capacity for work more than four years." He also writes, "In England sanatoriums for the poor have existed too short a time (writing himself in 1905) to allow of statistics of much value being collected from them." I said the very same thing quite two years before—in 1903.

Later Ransome says, "Exactly half the patients discharged have maintained the improvement gained for over a year, while half have got worse or are dead."

Professor Moeller, of the Belzig Sanatorium near Berlin and a recognized authority on tuberculosis, six years ago an utter sceptic upon tuberculin treatment, is now one of its most earnest advocates. He tells us that in cases in which sanatorium methods have entirely failed, tuberculin has been proved to possess undoubted curative properties, and that while sanatorium treatment never cures in three months, permanent cures are often obtained with tuberculin.

In his first record Moeller showed that

Sanatorium methods alone cured	10.9 per cent.
Sanatorium methods and tuberculin cured	36.3 ,,

Arranged according to stages the results were:

Stage I.—Sanatorium methods alone cured	31.8 per cent.
Sanatorium methods and tuberculin cured	75.0 ,,
Stage II.—Sanatorium methods alone cured	1.9 ,,
Sanatorium methods and tuberculin cured	20.0 ,,

Stage III.—No cures possible except as curiosities.

According to Moeller's later experiences, sanatorium methods alone may cure 25.30 per cent. of the cases of pulmonary tuberculosis in the first stage (German Board of Health classification), while tuberculin in his hands has secured the same result in 84.6 per cent. of the cases. I venture to say that when Professor Moeller uses larger doses or repeats the course of treatment, he will find that tuberculin will cure 90 to 100 per cent. of these early cases. In fact, Professor Moeller will agree, as I do, with our great teacher, Professor Koch, that "*tuberculosis of the lungs in the first stage can be cured with certainty by tuberculin.*" In the second stage, which Moeller maintains is never cured by sanatorium treatment alone, tuberculin gives permanent results in 40 per cent. to 60 per cent. of the cases. Even in the third stage tuberculin sometimes yields remarkable results that cannot be approached by sanatorium methods. When these splendid results are claimed for tuberculin by those who have had an extensive and prolonged experience with it, are we going to be so foolish as to pay any heed to the carping, surreptitious criticism of those sterile authorities who have the hardihood to express adverse opinions on a matter concerning which they have no personal knowledge?

In medicine, as in surgery, pioneers have often had to bear much unfair criticism. Experience is our great teacher. I do not know any great authority who has used tuberculin with the conditions and limitations laid down by Koch and found tuberculin wanting. On the other hand, I have seen no carefully compiled records that prove tuberculin to be either harmful or useless. We do not condemn operations because novices and those who have not learned their art make mistakes and fail. There have been terrible tragedies arising from various operations in their early history, but the operations have survived. The failures and tragedies associated with tuberculin are not the fault of tuberculin, but the fault of those "fools who rush in where angels fear to tread."

Failures may be the stepping-stones to high success; and the failures of to-day are converted by increasing knowledge and experience into the successes of to-morrow.

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INTERNATIONAL BALNEOLOGICAL EXPOSITION.—An international balneological exposition will be held at Spa this year from July 20th to August 30th. Among the objects exhibited will not only be such as show the present condition of balneology in the strict sense, but any others that may seem to be of importance for the development of modern watering-places. Among these are especially objects relating to hygiene, architecture, the betterment of dwellings, the improvement of baths, and the provision of amusements. Communications relative to the exhibition should be sent not later than June 3rd to the General Secretary, 43, Avenue de Marteau, Spa, Belgium.

UNDER the will of the late Miss Margaret Harrison, of Bayswater, the London Hospital receives a bequest of £200.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF URTICARIA PIGMENTOSA TREATED BY X RAYS.

IN July, 1906, a male child, aged 13 months, was brought to me on account of a rash which proved to be a very typical example of urticaria pigmentosa. The child had fair hair and blue eyes. The rash first appeared on the abdomen, eight days after vaccination, at the age of 4 months. The distribution of the rash over the front of the body is well seen in the photograph; on the back



its distribution and extent was similar; it involved the neck. The face, hands, and feet were free. Upon the trunk the lesions ran in oblique lines in its girdle axis. The individual lesions were macules, and although a number could be felt with the eyes shut, I believe that this was due to temporary turgescence. In colour they were a deepish brown with a tint of yellow, in shape oval. Turgescence of the old lesions on irritation and factitious urticaria were very marked. Itching was slight. The child was in all other respects healthy, and gave a normal blood count.

For treatment the child had three exposures to the *x* rays at intervals of a week, the total dose being insufficient to produce any visible reaction. For six months from this date both factitious urticaria and turgescence of the old lesions on irritation ceased, and no new lesions appeared. At the end of this period the old symptoms returned, but were again removed by three doses of *x* rays, and remain absent after three months. The mother holds that the old macules are lighter in colour, but I am not convinced of this.

F. H. JACOB, M.D., M.R.C.P.,
Physician to the Nottingham General Hospital.

URTICARIA AND INFLUENZA.

A GIRL of about 8 years, with normal temperature, had an inflamed throat and consolidation of the base of the right lung. These gave no appreciable symptoms. I was asked to see large urticarial patches—boggy in nature of irregular outline. One in front of the neck was 5 in. long and 2 in. wide (vertically) and was surrounded by skin somewhat red and swollen. Another circular patch about 1½ in. in diameter was at the back of the neck, while a large patch 5 in. by 2 in. was placed over the left shoulder, extending down the limb; another

similar patch was placed in the upper third of the right thigh at its inner aspect. The tongue had been partially cleansed by opening medicine given by the mother. There was no surrounding red skin save at the front of the neck; this was probably due to scratching. On the following day no trace of the previous eruption was visible—two fresh spots of urticaria over the right abdomen and of almost ordinary size were alone visible. The consolidation had disappeared. The next or third day there was no rash; the throat was slightly red, but no symptoms were present. The treatment adopted was simple diet and magnesia. The mother said the girl had not been well since she had had diphtheria—treated by antitoxin—four years ago. I hear no rash appeared. Apart from some evidence of constitutional weakness (rheumatic ?) I found no other disease.

These localized eruptions are probably on a par with the ischaemic processes found in connexion with influenza, and especially with convulsive cases. The size of the wheals seem to me to make the case interesting.

London, E.C. J. Reid, M.D.

EGGS IN THE DIET OF INFANTS.

Although the question of the substitute feeding of infants has been voluminously argued for hundreds of years, it is by no means settled yet.

In the British Medical Journal of April 13th Dr. Haworth says he hopes men will be induced to try undiluted, sterilized, pure cow's milk. He does well to say "pure," but where can one obtain pure cow's milk? For many years undiluted, sterilized cow's milk has received a careful trial in thousands of cases in London and elsewhere. It has been proved beyond question that, although infants can digest it, they do not really thrive on it alone. The antiscorbutic and other vital principles are destroyed during the process of sterilization.

For many years I have wondered why eggs have been so persistently excluded from the dietary of infants. None of us hesitate to prescribe raw white of egg, even in desperate conditions, as a temporary measure, but few seem to know that eggs may be given indefinitely to the exclusion of milk.

After having despairingly tried fresh cow's milk, modified at one time and another by every known device, during many years, and witnessed untold suffering on the part of the infants and acute distress on the part of the mothers, I have come to the conclusion that it is one of the most difficult articles imaginable to handle successfully. I now rely largely on eggs. I recommend the following proportions for an infant weighing 6 lb. or more at birth:

During the first two days after birth beat up the raw white of a large new laid hen's egg, add to this water to make 8 oz., also 30 grains of pure cane sugar. Strain through butter muslin. Put 1 oz. of this into the feeding bottle, stand it in hot water at 110° until the food is raised to 98° F. Feed every hour and a half.

On the third or fourth day add 5 minims of the yolk of the egg and 5 minims of raw meat juice to each feed.

Increase the quantities gradually as the child grows older, and also add cod liver oil emulsion to each feed, say 5 minims of a 40 per cent. preparation.

I have yet to meet with an infant unable to digest these ingredients carefully adjusted to the needs of each case. The merits of this method of feeding are that one is giving quite fresh uncontaminated food containing all the elements of perfect nutrition. It is, moreover, easy to prepare.

The medical attendant should not shirk his duties, but should see the child, and give written instructions as to the quantity of food, intervals between feeds, etc., at least twice a week for the first six weeks of its life, then, say, once a week for the next six weeks, after that an occasional visit will usually suffice.

The child's mother and father should be encouraged to take an interest in its feeding, and keep a close watch on the nurse to see that the bottles are kept clean, the food given at the right temperature, etc. Even the best nurse requires watching.

One child in particular, now under my observation, and brought up upon the above lines, is one of the finest I have ever seen; she has no sign of rickets, is very muscular, and is bright mentally. Her teeth are coming through in good time, without difficulty, and when not quite 10 months old she grasped an apparatus weighing 11¼ lb. in both hands, and lifted it several inches. Her father, who is 43 years of age, has never been strong, and of late years has suffered from repeated attacks of influenza of a very debilitating type. The mother, also, has been in feeble health for many years, and has twice suffered from albuminuria of pregnancy.

Bournemouth. W. J. Midelton.

MANIACAL CHOREA.

Having read Dr. J. Magee Finny's paper in the Journal of April 27th, and seeing how rarely these cases recover, it has occurred to me that an account of one which occurred in my own practice may be of interest.

Condition on Examination.—In March, 1904, I was called to see an unmarried primipara, aged 19, and at about the seventh month of her pregnancy. She was suffering from a fairly severe attack of chorea, but the pulse was good, and there were no cardiac complications. I prescribed 10 minims of liq. arsenicalis three times a day for a week, and at the end of that time there was some improvement. Fearing, however, the development of neuritis (which I have seen develop when these large doses have been continued too long), I then changed her medicine. During the next few days the chorea increased in gravity, but her mind remained clear.

Treatment.—In the early morning of the twelfth day of my attendance I received an urgent call, as the patient had become decidedly worse. On arrival I found her in a wild state of maniacal excitement. She failed to recognize any of her friends, and seemed unconscious of her surroundings. She was tossing wildly in the bed, and throwing her arms and legs in every direction. The room being a low one, she almost kicked the ceiling in her frenzy. The bed coverings were lying in a heap in one corner of the bed. As I think resisted movements are more exhausting than free ones, I told the friends not to struggle with her, but, beyond keeping her on the bed, to let her "have her fling." The bed being next a wall, only one side had to be guarded. As she had improved on arsenic before, I determined to give it freely, and ordered liq. arsenicalis mj x every four hours. This was continued for seventy-two hours. I also gave chloral hydrate in 20-grain doses at intervals. She remained in much the condition described for three days, excepting that sometimes she would sleep an hour or two after a dose of chloral. There were no lucid intervals, but at times she was less violent than others. Fortunately her mother was able to get her to take a fair amount of nourishment. The question of procuring abortion occurred to me, but in her violent condition I decided against it.

Result.—On the fifteenth day of my attendance she recognized me for the first time for three days, and from this time she steadily began to mend. On the nineteenth day she gave birth to a premature child, which had evidently been dead a few days, and from this time her recovery was rapid.

Remarks. She has since married, and I have twice confined her with strong, healthy children. There was no recurrence of the chorea. The chief credit for her recovery is due to her mother, who never left her for three weeks, and showed great tact and patience in inducing her to take nourishment and medicine. What share the large amount of arsenic (liq. arsenicalis, 180 minims in seventy-two hours) had in her recovery it is difficult to say. As far as I could see there were no ill effects from it. There was no vomiting nor diarrhoea, nor was it followed by neuritis. Whether she had abdominal pain or muscular cramps, she was in no condition to tell us. She complained of none when she regained consciousness. Arsenic is usually regarded as the most reliable drug in chorea. Dr. W. Murray, in his *Rough Notes on Remedies*, contends, however, that it is usually given in inadequate doses, and it seems to me he is correct. Unfortunately, many choreic patients will not stand the large doses he advocates. In most of the published cases of maniacal chorea it is stated that arsenic was tried and found useless. The question is, Was it given in sufficiently large doses? The way this patient took these heroic doses (1½ grains in seventy-two hours) may encourage others to give it freely in this formidable and usually hopeless disease.

Spennymoor. W. Musselwhite.

Free Diphtheria Antitoxin. The State of Illinois has appropriated a sum of £6,000 to be expended during the next two years by the State Board on the purchase of diphtheria antitoxin, which will be distributed free wherever it may be needed outside Chicago. That city already furnishes antitoxin free to its citizens. The State Board of Health of Massachusetts has for a number of years produced its own antitoxin for free distribution. The State of New York follows the course now adopted by Illinois.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

DEVON COUNTY ASYLUM.

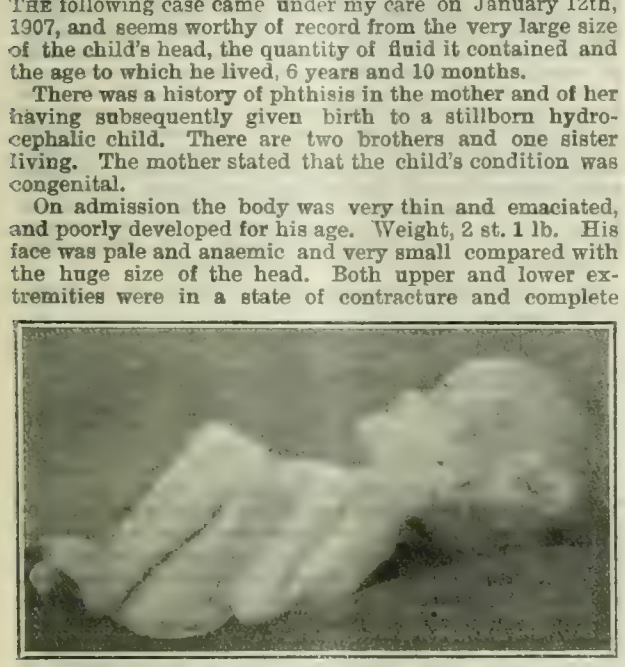
CASE OF EXTREME HYDROCEPHALUS.

(By RICHARD EAGER, M.B., Ch.B., Assistant Medical Officer.)

THE following case came under my care on January 12th, 1907, and seems worthy of record from the very large size of the child's head, the quantity of fluid it contained and the age to which he lived, 6 years and 10 months.

There was a history of phthisis in the mother and of her having subsequently given birth to a stillborn hydrocephalic child. There are two brothers and one sister living. The mother stated that the child's condition was congenital.

On admission the body was very thin and emaciated, and poorly developed for his age. Weight, 2 st. 1 lb. His face was pale and anaemic and very small compared with the huge size of the head. Both upper and lower extremities were in a state of contracture and complete



paralysis. The knees were drawn up on to the abdomen and the arms bent across the front of the chest, the thumbs being firmly bent into the palms and covered with the fingers. There was well-marked beading of the ribs on both sides. Over the position of the spinous processes there was a quantity of downy hair but no spina bifida.

His head was globular in form and fairly well covered with fine dry hair. The circumference was 26½ in. The fontanelles could be felt to be widened, but tense and partly ossified. The skin of the scalp was tightly stretched with large blue veins on the surface. The temporal and parietal bones bulged outwards, making the greatest transverse diameter on a line with the ears. The eyeballs were prominent and were continually rolled from side to side. A considerable amount of sclerotic was exposed above the iris, whereas the lower lid obscured a large part of the pupil from view.

The whole of his muscles were in an atrophic condition, and the heavy head rolled about owing to the weakness of the muscles of the neck. He was unable to raise his head from the pillow or move it voluntarily, and when made to sit up his head required support. The child was quite unable to talk, and his only voluntary movement was to open his mouth to be fed. He was constantly moaning and whining, and had incontinence both of urine and faeces. He frequently made a blowing, spluttering noise with his lips, and he cried whenever pressure was applied to his head.

On February 9th his head was again measured, and found to have increased to 26¾ in. On March 28th the circumference was 26⅞ in., and measurements taken with calipers were as follows:

Greatest transverse diameter	7½ in.
Greatest antero-posterior diameter ...	8¾ in.

He was spoon-fed with sops and took milk out of a bottle, but gradually became weaker, and died on April 2nd.

At the *post-mortem* examination the calvarium was found to be very soft, only ⅛ in. thick, and diaphanous. The quantity of fluid in the subarachnoid space was small. The convolutions were flattened and the sulci nearly obliterated, and the cortical grey matter and white matter together measured ¼ in. at the thickest part. Inside this was a huge cavity, which contained 90 oz. of fluid, stretching from the remains of the frontal lobes anteriorly to the occipital lobes behind. No trace of the remains of the fornix or corpus callosum could be found, so that there was no sign of a septum dividing the cavity into two. In fact, the brain consisted of a cavity on the floor of which the basal ganglia formed small projections, the roof and walls being formed by attenuated brain substance. The grey and subjacent white matter of the cortex could be clearly distinguished, each forming a layer ⅛ in. in thickness. The ependyma at the base of the cavity contained a few translucent bead-like projections. The aqueduct of Sylvius admitted the little finger, but the central canal of the spinal cord was not distended.

The fluid in the brain was acid in reaction, sp. gr. 1006, and contained chlorides but no albumen.

The cerebrum weighed 28¾ oz. and the cerebellum 4¼ oz.

MANCHESTER ROYAL INFIRMARY.

A BAYONET WOUND OF THE STOMACH.

(Reported by P. R. WRIGLEY, F.R.C.S.Eng., Resident Surgical Officer.)

PUNCTURED wounds of the abdomen are so rare in civil life that the following case, on which I operated for Mr. Southam at the Manchester Royal Infirmary, seems to me to be worth recording:

The patient, a male 25 years of age, was admitted to the infirmary about 1 a.m. on December 29th, 1906. On the previous night he drank two or three pints of beer, and, returning home somewhat intoxicated, had a hearty supper of beef-steak with more alcohol. He then retired to his bedroom, and, being a volunteer, commenced to give his brother a demonstration in bayonet drill, but slipped and fell on the point of the bayonet, which entered his abdomen.

STATE ON ADMISSION.

Two hours later he was still markedly under the influence of drink, and was much collapsed. His pulse rate was 116 and his temperature normal. On examination of the abdomen a piece of omentum about the size of a two-shilling piece was seen protruding through the abdominal wall just below and to the right of the umbilicus. The abdominal muscles were rigid and boardlike, and very tender in the region of the umbilicus. The liver dullness was completely absent, being replaced by a loud tympanitic note. It was obvious that he was suffering from a perforating wound of one of the hollow viscera, so immediate operation was decided on.

OPERATION.

He was anaesthetized, and the projecting omentum clamped with forceps to prevent it from retracting into the abdomen and infecting the peritoneum. The wound in the abdominal wall, which was found to be almost vertical and about an inch long, was enlarged upwards and downwards to the extent of ¼ in. On opening the peritoneum a large quantity of free gas escaped, and coils of small intestine came into view.

The projecting omentum was ligatured and removed, after which the small bowel was rapidly examined from end to end, but showed nothing abnormal and no sign of injury was found in the transverse colon. The stomach was then exposed, and on its anterior surface, about 1in. from the great curvature and 2 in. from the pylorus, a penetrating wound ¼ in. long was found. The mucous membrane was prolapsed, plugging the opening; there had been no large escape of stomach contents, the stomach wall in the immediate vicinity of the wound alone being stained with a dark brown fluid. This was sponged away and the wound in the stomach closed by a fine continuous silk suture taken through all the coats, supplemented by a continuous Lembert suture through the serc-muscular coat.

The colon and omentum were then thrown upwards to allow examination of the posterior wall of the stomach. A small extravasation of blood in the transverse mesocolon attracted attention, and on close examination it proved to be caused by a tear in that structure. On enlarging this, a wound was found in the posterior wall of the stomach, in extent about ¼ in. long, situated close to the cardiac end and ½ in. from the lesser curvature.

From this wound there had been no escape of stomach contents, so it was rapidly sutured in two layers, the tear in the mesocolon repaired, and the stomach replaced in the abdomen. The abdominal wall was then sutured with catgut in layers, a small superficial gauze drain being left in the site of the original wound.

From the variation in level of the wounds in the skin and the walls of the stomach it is clear that the bayonet must

have penetrated very obliquely from below upwards and from right to left. This obliquity, aided by the distension of the stomach at the time of the injury, probably accounts for the escape of the important structures on the posterior abdominal wall.

RESULT.

For the first forty-eight hours after the operation the patient was fed entirely by the rectum; after this he was allowed gradually-increasing quantities of liquid by the mouth. His recovery was only interrupted by the formation of a superficial abscess in the abdominal wall. He was sent to our Convalescent Hospital on January 23th, 1907, with the wound almost healed and taking normal diet. At the end of three weeks he went home, and when seen last, May 1st, the scar was quite sound and he was in perfect health.

In conclusion, I wish to thank Mr. Southam for his kindness in allowing me to publish the case.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. WARRINGTON HAWARD, F.R.C.S., President, in the Chair.

Tuesday, May 28th, 1907.

CERVICAL MYELOPATHIC TRICHOSIS.

SIR WILLIAM GOWERS read a paper on this affection, describing a case corresponding with the occasional occurrence, in spina bifida occulta, of a growth of hair across the lumbar region, but unusual in being unilateral and associated with unequivocal symptoms of cervical syringomyelia on the corresponding side. The patient was 41; the right arm and leg were a little weak and rigid. Sensation on the leg and arm was normal, and also on the trunk below the level of the shoulder. At this level there was a band of analgesia, but tactile sensibility was unimpaired. The growth of hair occupied a triangle, of which the inner side was along the middle line of the spine from the sixth cervical to the third dorsal; opposite the first dorsal it extended nearly 2 in. from the spine. The hair was about an inch long, and had existed all the patient's life. The case seemed unique from its position and association with evidence of syringomyelia and in being unilateral. The condition pointed to a disproportion between the inner and outer layers of the right neural ridge of the epiblast in the lower cervical region. Relative excess of developmental energy in the outer layer and defect in the inner layer might be the cause of the condition. A notable feature of the case was the fact that the growth of hair was of greatest vertical extent at the middle line, corresponding to the edge of the neural ridge of the epiblast. Had the other side been also affected the area of trichosis would have presented a lozenge shape, which was strikingly present in some of the recorded cases of lumbar trichosis in spina bifida occulta.

THE PRESIDENT said, in reference to a case alluded to in the paper as having been under his care, that the hair was 9 in. long; there was, he believed, no defect of the vertebrae, but the patient had loss of power and talipes, loss of sensation, and a great tendency to ulceration of the toes, even leading to exposure of the bone, requiring removal of the toes. The patient, now a young man, was still greatly troubled with ulceration and discomfort of the foot.

MR. GEORGE PERNET had not been able to discover in literature any case on all fours with that described in the paper. If not unique it must be nearly so. There were, however, cases of arterial hypertrichosis on record. A case was referred to in which hypertrichosis followed an injury to one of the nerves of one upper limb.

DR. T. GRAINGER STEWART had seen a similar case when under the care of Dr. Ormerod—a miner who had wasting and weakness of the right arm, with spasticity of that limb and of both lower limbs. He also had considerable scoliosis. The seventh cervical spine was conspicuously prominent, and it was found that as a baby he had had a growth of hair in the cervical region with some bag like formation. It was believed that the seventh cervical spine was bifid. The scar was in the middle line rather more to the right than the left, and was about 1½ in. broad.

SIR WILLIAM GOWERS, in reply, doubted whether a bag connected with the spinal canal could fail to prevent closure of the arches.

LIGATION OF THE RENAL VESSELS FOR THE CURE OF PERSISTENT URINARY RENAL FISTULA.

Major M. P. HOLT read this paper, in which he described a successful case:

For persistent urinary renal sinus, nephrectomy, by reason of extensive matting of the kidney to certain surrounding structures, might be impossible or extremely hazardous. Four years ago a case of this kind came under the author's care; six months previously there had been rupture of the kidney, and extensive far-reaching suppuration had occurred; during the next two years four separate attempts were made to perform nephrectomy, but on each occasion the operation had to be abandoned owing to furious haemorrhage. Then it occurred to the writer that supposing the secretion of urine into the abscess to be the sole hindrance to healing, if permanent cessation of urine secretion on that side could be effected by ligature of all renal vessels, then the abscess should rapidly and completely heal. Two years and nine months after the original injury, during which time the patient had been slowly but surely losing ground, the renal vessels on that side were ligatured through the transperitoneal route. The operation was a complete success; within five days urine ceased to be present in the discharge, and by the fifty-seventh day the sinus had completely healed. The patient had remained quite well since, now nearly two years.

The paper was discussed by the PRESIDENT and Mr. A. E. BARKER.

CLINICAL SOCIETY OF LONDON.

H. H. CLUTTON, M.A., M.C., F.R.C.S., President, in the Chair.

Friday, May 24th, 1907.

PROLONGED PYREXIA.

DR. DE HAVILLAND HALL read notes of two cases of prolonged pyrexia of hectic type; one was that of a man of 44 with pulmonary tuberculosis and enlarged glands; the other was that of a man of 21 with ulcerative endocarditis. After drawing attention to Dr. W. M. Ord's list of conditions giving rise to remitting or paroxysmal pyrexia, Dr. Hall pointed out that in practice cases of prolonged pyrexia were more commonly due to tuberculosis or malignant endocarditis than to any other conditions. In arriving at a diagnosis, family history might be of certain assistance, as the occurrence of several cases of tuberculosis among the immediate relations of the patient should awaken suspicion. On the other hand, a rheumatic family history should suggest the possibility of a rheumatic endocarditis. The past history of the patient would often yield valuable information; for instance, attacks of haemoptysis, though it not infrequently occurred in mitral stenosis, pleurisy, fistula *in ano*, enlarged glands, etc., might lead one to suspect tuberculosis. The history of pneumonia was of equivocal value. Pulmonary tuberculosis might supervene upon lobar pneumonia, especially of the apex; on the other hand, pneumonia was one of the most common antecedent conditions of ulcerative endocarditis. The history of acute rheumatism followed by cardiac trouble should incline the scale strongly in favour of ulcerative endocarditis. The comparative rarity of the association of valvular disease, and especially mitral stenosis, with pulmonary tuberculosis, was insisted on. Stress was laid upon the importance of several examinations of the sputum, one or two negative results not being sufficient to exclude tuberculosis.

DR. STANLEY PHILLIPS said that in diagnosing between ulcerative endocarditis and tuberculous disease of the lungs there was often some difficulty, and that the observation of the temperature alone gave but little aid in framing the diagnosis. Dr. Murchison had in 1879 prepared a list of diseased conditions accompanied by continuous pyrexia, and he (the speaker) had turned to it for guidance in a doubtful case. Syphilis was mentioned in that list; and the patient having had that disease, anti-syphilitic remedies were administered, and the temperature fell at once. Ulcerative arteritis without endocarditis and ulcerative colitis were also causes of prolonged pyrexia. He did not recognize the term "hectic pyrexia," as it implied no special form of temperature chart.

DR. J. W. CAIN considered it very difficult to diagnose ulcerative endocarditis if there was no evidence of valvular disease. In the case of a gentleman, aged 67, who had been

in Rome, and had rigors and high temperature, malaria was at first suspected. There was also a suspicion that the heart was enlarged, but there was no cardiac murmur. There being some amount of sepsis about the teeth they were extracted, but no lessening of the pyrexia followed. Suddenly he became insensible, and embolism was indicated, without apparently any source of the thrombus. He died after four days; at the necropsy there was found a large mass of vegetation on a flap of the mitral valve. But this had caused no murmur during life.

Dr. C. R. BOX cited as another cause of continuous pyrexia chronic posterior basic meningitis.

Dr. J. GREY GLOVER mentioned a lengthy case which eventually proved to be one of rheumatic pyrexia.

Dr. DE HAVILLAND HALL stated, in reply, that he used the term "hectic pyrexia" to include both intermittent and remittent pyrexia.

PARTIAL HEART-BLOCK.

Dr. GOSSAGE read a paper on heart-block, which was illustrated by sphygmographic tracings on the screen. After pointing out that conductivity might be affected separately from the other functions of cardiac muscle, he explained that depression of conductivity showed itself chiefly in the muscle fibres that connect auricles and ventricles. Depression of conductivity was illustrated by tracings showing a lengthening of the normal interval between the contractions of the auricles and the ventricles, and the dropping out of ventricular beats was shown when conductivity was further depressed, for example, by digitalis or action of the vagus. Tracings were exhibited where there were three auricular beats to every two ventricular, two auricular to one ventricular, and three auricular to one ventricular. In the last two cases the patients exhibited the Stokes-Adams syndrome. The nervous attacks of this syndrome were shown to be preceded and accompanied by a cessation of ventricular contractions over a considerable period. Wenckebach had suggested the possibility of a block occurring between the veins and the auricles, and a tracing was shown where two successive ventricular beats had apparently been dropped, a circumstance which could be explained by a block between auricle and ventricle for the first beat and between vein and auricle for the second.

FOREIGN BODIES IN THE BRONCHI.

Dr. F. W. PRICE presented a paper on this subject, which was taken as read, and ordered to be published in the Society's *Transactions*.

MEDICAL SOCIETY OF LONDON.

Sir JOHN TWEEDY, F.R.C.S., in the Chair.

Monday, May 27th, 1907.

THE CAUSE OF HEART BEAT.

Dr. G. A. GIBSON of Edinburgh delivered the annual oration and dealt with this subject. The cause of the heart beat, he said, did not trouble Harvey, and Albrecht von Haller was the first to speculate on the subject, but he only suggested that the cause lay in the heart itself. The discoveries of the nervous mechanism of the heart led to some more definite views, and Volkmann formulated the conception that the cause lay in the action of the ganglia of the heart. These ideas were subject to some tidal currents of opinion, and the ebb and flow of thought was seen in most of the standard works. Gaskell was the pioneer of the great army of workers who in the last quarter of a century had altered existing ideas. He showed that rhythmical pulsation decreased regularly from sinus to apex, and that the rhythmical power varied inversely as the distance from the sinus; that the power must lie in the muscle cells or nerve fibres, as some parts that could be made to beat had no ganglia; that the conduction of the contraction could only be seen when the "bridge" was intact; that the auriculo-ventricular ganglia of the frog could be removed without causing standstill; and that by nerve influence the rhythmicity, conductivity, excitability, contractility, and tonicity might be increased or lessened. In all this it was to be remembered that nervous tissues were present, and Gaskell frankly admitted as much. Carlson, in reviewing Gaskell's work, emphasized this fact, and the further fact that no one had proved a direct action of the vagi on muscle. Engelmann followed Gaskell, and in a long series of papers strove to prove myogenesis. He had advanced many analogies, but no proof of the myogenetic hypothesis. The peristalsis of the ureter, in which he had forgotten the existence of nerves; the contraction of parts of the heart which had no ganglia, in which, however, there was a wonderful mesh of nerve fibres, which Carlson had shown to have more vitality than muscle cells; the beating of the heart after the removal of nervous interference by curara, about which it might be said that not much was yet known in regard to its influence on special cardiac nerves, and the arguments from embryology—admittedly the most powerful at the disposal of the myogenesists—all these were fully stated by Engelmann. He further claimed the law of Bowditch and the refractory period of Marey as in favour of his views, ignoring the fact that they were as much in support of neurogenesis. It might be remarked that the explanations of Engelmann and other myogenesists were sometimes so contradictory as to cancel each other. In connexion with this matter, it might be said that the recent anatomical, physiological, and pathological studies of the sino-auricular and auriculo-ventricular connexions, along with their extensions by means of Purkinje fibres, by Tawara and Keith, by Hering and Erlanger, by Stengel and the present orator, had been claimed as proofs of myogenesis, in forgetfulness of the presence of nerve cells and nerve fibres in these connexions. The recent interesting work of Keith was fully discussed as bearing on this aspect of the matter. The orator expressed the view that a block at the sinus—proved by Hering, Wenckebach, Ritchie, and himself—was clear evidence of neurogenesis, and that juvenile arrhythmia and toxic cardiac disturbances were likewise powerful arguments in its favour. He showed how the evidence formerly advanced from the supposed myogenic peristalsis of the intestine had had to be given up, since both on experimental and embryological grounds the latter had been discovered to be neurogenetic in origin. The researches of Romanes, Schäfer, and Carlson on the Invertebrata were detailed, and it was shown that the conclusions to be drawn from them were all in favour of neurogenesis. It was freely admitted that as the heart of an invertebrate was not homologous with that of a vertebrate such facts could only be used in the way of analogy. The recent work of Yandell Henderson on the volume curve of the mammalian heart was described, from which that observer had been led to espouse neurogenesis. The conclusions meantime seemed to lie distinctly in favour of neurogenetic views. The embryological facts could not be claimed by either side, as neither muscle nor nerve was present when the heart began to beat; the anatomical facts did not prove either hypothesis, for nerve and muscle were closely interwoven in the part which served to initiate the pulsation; pathological evidence could likewise be claimed by both schools of thought; clinical observations, however, were distinctly in favour of the neurogenetic hypothesis. Beyond a doubt the curious structure recently described by Keith and Flack was that in which the pulsation took its origin, but the esoteric cause of the contraction was undoubtedly the rhythmic discharge of the nervous elements.

Sir EDGCUMBE VENNING moved a vote of thanks to the orator, which was seconded by Sir LAUDER BRUNTON and carried with acclamation.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—At a meeting on May 4th, Mr. A. E. CUMBERBATCH, President, in the chair, Mr. A. CHEATLE showed a series of 96 temporal bones exhibiting a condition which he called infantile. The outer antral wall was thick, the mastoid process diploëtic, the compact bone increased in thickness, and no mastoid cells existed. Surgically the condition was important because of the probability of disease spreading internally rather than externally, of the absence of external signs of suppuration, and the unusual forward position of the lateral sinus in these cases.—Mr. LAKE showed an electric stomasseur, giving up to 18,400 vibrations a minute. In the discussion which followed several speakers expressed the opinion that stomassage was only of slight value.—Mr. C. G. LEE reported: (1) A case of *Extradural abscess* in a patient of 35 who had had otorrhoea for twelve months. Symptoms of giddiness, vomiting, severe headache, and incoherency were present. Recovery followed the complete mastoid operation, during which it was found that the roof and posterior wall of the tympanum were absent.

(2) A case of *Chronic otorrhoea* in a child of 10. After being knocked down in a playground she complained of headache, vomiting, and pain in the right ear, followed in a few days by a rigor. At the operation there was extensive mastoid disease and suppuration round the lateral sinus, which was thrombosed. This was incised and the clot turned out, and complete recovery followed. (3) A case somewhat similar to the last, following a blow on the ear, which terminated fatally. Here the sinus was not opened at the first operation, but two days later, owing to further symptoms, Mr. Stockdale removed nearly the whole of the collapsed and cord-like jugular vein and much of the lateral sinus, the patient however, eventually dying of meningitis and pneumonia.—Dr. DONELAN read notes on the frequency of marked enlargement of the pharyngeal ends of the Eustachian tubes with remarks on 14 cases. Several speakers thought this was not such an unusual condition as had formerly been considered.—Dr. DONELAN also showed a portion of the temporal and occipital bones with the dura mater attached, showing an occluded lateral sinus, and read notes of the case.—Dr. MILLIGAN showed a temporal bone from a case of fracture of the skull. The fracture involved the middle ear and external auditory meatus, extending upwards and backwards into the occipital bone behind the lateral sinus, and then through the sinus back into the petrous. Considerable haemorrhage had occurred from the sinus. The discussion turned on the prognosis as to recovery of hearing in those cases which recovered from the fracture. Dr. MACBRIDE considered the subject full of difficulties, and that much would depend upon the amount of hearing present and the date of the examination. Dr. PRITCHARD believed that any improvement would occur within three months from the injury, and Mr. LAKE thought that no recovery of hearing would occur in fractures through the labyrinth.

REVIEWS.

PUBLIC HEALTH.

THE fact that the volume, *The Public Health Acts*,[1] by the Messrs. ELLIOTT, has passed into a second edition is evidence rather of the need for a handbook of this character than of the excellence of the work. Although the new edition has been amplified by a summary of the Public Health (London) Act, the want of grip of the practical difficulties in the work of a medical officer of health is still apparent. The definitions of drain and sewer are most incomplete; the principal clause of the water clauses (Section 62) is omitted, although it is subsequently referred to as if it had been put in; no details of procedure are given and even the misprints of the first edition remain uncorrected. The authors have put forward the book as all-sufficient for the candidate for the D.P.H. so far as sanitary law is concerned, but the unfortunate who was asked to explain the effect of Section 19 of the Public Health Acts Amendment Act, to explain how he would deal summarily with a nuisance, to state fully what his powers and duties were under the Midwives Act and its regulations, or even to set out the new powers conferred with regard to nuisances in the metropolis, would run a grave chance of not satisfying the examiners. It may also be noticed that although the summary of the London Act is quite new no mention is made of the municipalization of London, and thus the whole of the sections quoted on pages 16–5 are repealed and obsolete. The idea of the handbook is excellent, and the authors have to their hands a scheme which, it must be confessed with regret, has received scant justice.

Those who read German with ease will find Dr. KAMEN'S[2] book on the origin and prevention of infectious diseases a most interesting and instructive work of reference on the subject. It has been published in parts, of which the first four were reviewed in the BRITISH MEDICAL JOURNAL of December 30th, 1905; the last three have been issued recently. Considerable attention is devoted to the subject of typhoid fever. The theories of Pettenkofer and his disciples, especially Emmerich and Gemünd, are fully examined. The latter authors state that epidemics of cholera and typhoid are entirely due to soil infection, and cannot be spread by drinking water, as pathogenic bacteria are completely destroyed by protozoa (flagellata), which they call "the hygienic protecting troops of water." Dr. Kamen, while not denying the part which the soil takes in spreading disease, considers that these authors' researches do not negative the theory of direct contagion, of which the drinking-water theory is a part; in fact the occurrence of epidemics clearly associated with public water supplies can leave no doubt on this point. Dr. Kamen goes on to point out that the most recent researches prove the typhoid bacillus to be one of the most resistant of micro-organisms, living typhoid bacilli having been found in pieces of typhoid spleen kept in tap water at 37° C. after 542 days, and in sterile distilled water at 37° C. after 429 days. He gives very little attention to the part occasionally played by oysters in the dissemination of typhoid, the succulent bivalve being merely mentioned among the foodstuffs which may be contaminated by infected water. The book contains a very instructive chapter on trachoma, a historical survey of the ravages committed by various epidemics of this disease, and of the efforts to counteract them, being given. Special courses, it appears, are about to be instituted at Königsberg in Prussia for the instruction of all medical men holding official positions, and also for general practitioners, in the diagnosis and treatment of trachoma. Such courses were held some years ago in Hungary, and the plan might be worthy of imitation elsewhere.

THE TOXIN OF DYSENTERY.

DR. ROBERT DOERR, in a monograph on the toxin of dysentery,[3] draws a broad distinction between the two types of organisms associated with bacillary dysentery, the Shiga-Kruse type and the Flexner type. The former type secretes a genuine soluble toxin, whereas the latter does not. This toxin is found in high concentration in the germ-free filtrates of young broth cultures, the lethal dose being 0.01 c.cm. or less. A toxin may also be prepared from young agar cultures by extraction with salt solution and subsequent filtration. The intensity of the toxin production is dependent partly upon the individual characteristics of the strain of bacilli employed, and partly upon the degree of alkalinity of the culture medium. As the alkalinity of the medium is raised within certain limits, there is a corresponding increase in toxicity, the optimum result being obtained with broth which, after being made neutral to litmus, has received an addition of 3 grams of crystallized soda per litre. Under anaërobic conditions of growth or in albumen-free media no specific toxin is formed. Against heat the toxin is relatively resistant; it withstands a temperature of 70° C. for an hour, but is quickly destroyed by a temperature as high as 80° C. It resists the action of trypsin, bile, and enterokinase. Mineral acids neutralize the toxicity of broth culture filtrates, but though they combine with the toxin they do not destroy it, since the toxicity is again demonstrable when the medium is brought back to an alkaline reaction. The toxin of dysentery is pathogenic for rabbits, cats, dogs, and monkeys, but guinea-pigs, white mice, fowls, and pigeons are refractory. In susceptible animals which have been inoculated either intravenously, subcutaneously, or intraperitoneally, there is often produced an inflammatory condition of the intestinal mucosa, characterized by haemorrhagic necrosis. It is also found that the toxin regularly produces lesions of the nerve centres to which the animals succumb. The most useful animal for experimental purposes is the rabbit. In about a third of these animals a haemorrhagic, membranous typhlitis is produced, whilst the small intestine, as in man, remains unaffected. The excretion of the toxin takes place through the intestine, and also, though to a relatively small extent, through the kidneys, the liver, on the other hand, appears to take no part in the excretory process. Dr. Doerr's study of dysentery toxin is a careful piece of work and will be read with interest by both clinicians and bacteriologists.

[1] *The Public Health Acts and Other Acts, Orders, and Regulations relating to Public Health, Sanitary Matters, and Local Government.* By W. ELLIOTT and C. ELLIOTT, M.R.C.S., L.R.C.P., D.P.H., D.T.M. London: H. K. Lewis. 1907. (Crown, 8vo, pp. 195, 5s.)

[2] *Die Entstehung, Verhütung und Bekämpfung der Infectionskrankheiten.* Origin, Spread, Prevention, and Control of Infectious Diseases. By Ludwig Kamen. Parts 1 to 7. Vienna: Joseph Safář. 1905 (Dec.). 8vo, pages 143, 63 Illustrations and 5 charts. M. 5.

[3] *Das Dysenterie-Gift.* Von Dr. Robert Doerr. Jena: Gustav Fischer. 1907. (Super royal 8vo, pp. 76 with 2 charts in the text and 1 plate. M. 2.60.)

PATHOLOGICAL HANDBOOKS.

THE greater portion of the notebook by Dr. LEFAS on histological and bacteriological technique[4] is occupied with instructions for the preparation and staining of histological specimens. A very useful list of fixatives is given, and most of the formulae for the composition and application of special stains are excellent. Special attention is paid to the selection of the fixative which best meets the requirements of the special type of tissue to be investigated, and more careful instructions than are usually to be found in textbooks are provided for the microscopic examination of the retina, the internal ear, and bony tissues generally. For the staining of fibrin, Weigert's method, which the author admits to be uncertain, is the only one mentioned; it would have been an advantage if the more elaborate procedure adopted by Kochel had also been described as an alternative. Some account, too, might have been given of Pappenheim's valuable differential stain for plasma cells. The few pages devoted to the staining of bacteria are hardly enough to fulfil the average requirements of students. The staining of the diphtheria bacillus, in particular, and its differentiation from other bacteria which may resemble it, call for fuller treatment. A more lengthy account is given of the ways to stain the tubercle bacillus, but this would have been increased in value if it had been supplemented by a short statement of the relative powers of this and other acid-fast bacilli to resist decolorization by acid.

In his editorial preface to "The Medical Epitome Series," Dr. PEDERSEN of New York announces that the series as a whole is to embrace the entire realm of medicine, and the individual volumes are to deal "authoritatively" with their respective subjects "in all essentials." The volume on *Pathology*, by Drs. STENHOUSE and FERGUSON of Toronto,[5] can hardly be regarded as presenting to the medical student all that it is essential for him to know about this very wide subject. Without imputing any fault to the authors, who apparently have done their best to fulfil the requirements imposed on them by their publishers and editor, we feel compelled to say that it has been impossible for them, in the small space at their disposal, to treat their subject with the thoroughness which it requires. Even the less ambitious medical students who are preparing for one of the easier pass examinations will find it necessary to acquire a more extensive knowledge of pathology than they can obtain from this "epitome."

Dr. GUYER, Professor of Zoology in the University of Cincinnati, has prepared a useful book of technical instructions on *Animal Micrology*.[6] The more important methods of fixing, cutting, and staining specimens are very fully described, and special instructions are given for students pursuing a course in embryology. The volume concludes with some appendices which will prove serviceable to teachers engaged in class work on practical histology and zoology. A lengthy list of tissues and organs suitable for demonstration purposes has been drawn up in tabular form, with brief annotations of the method of preparation appropriate for each. Advice is also given on the collection and preparation of microscopic material for a general course in zoology.

The pocket-book of microscopical technique for the investigation of protozoa, by Dr. PROWAZEK,[7] whilst not confined to the organisms which occur as human parasites, is mainly intended for the assistance of clinical pathologists in dealing with the pathogenic protozoa. Special attention is paid to the amoebae found in dysentery, the *Treponema pallidum* of syphilis, and the parasites causative of malarial fever. The instructions for the microscopist are detailed, precise, and practical and the book may be specially recommended to those who desire information about the special stains and reagents employed in this class of work.

[4] *La Technique Histo-Bactériologique Moderne.* Par le Dr. E. Lefas, Paris: Baillière et Fils. 1906. (Cr. 8vo, pp. 96. Fr.1.50.)

[5] The Medical Epitome Series: *Pathology General and Special.* By John Stenhouse, M.A., B.Sc., M.B., and John Ferguson, M.A., M.D. Edited by Victor Cox Pedersen, A.M., M.D. London: Hodder and Stoughton. 1906. (Crown 8vo, pp. 285, with 16 engravings and 1 coloured plate. 4s.)

[6] *Animal Micrology: Practical Exercises in Microscopical Methods.* By Michael F. Guyer, Ph.D. London: T. Fisher Unwin. 1907. (Medium 8vo, pp 250. With illustrations. 9s.)

[7] *Taschenbuch der mikroskopischen Technik der Protistenuntersuchung.* Von Dr. S. von Prowazek. Leipzig: Johann Ambrosius Barth. 1907. (Fcap. 8vo, pp. 66. M.2.)

CHEMICAL PATHOLOGY.

DR. WELLS commences his textbook of *Chemical Pathology*[8] with introductory chapters on the more recent chemical conceptions of the proteid molecule, the composition of the animal cell, the application of physical principles to biological chemistry, and the properties and constitution of enzymes. He then discusses the chemistry of bacteria, immunity, haemolysis, and other allied subjects to which investigators of the problems of immunity have recently devoted special attention. Then follow chapters on inflammation, disorders of the blood and lymph, degenerative processes in the tissues, the chemistry of tumours, auto-intoxications, gout, and diabetes. This is a very wide range of subjects, and it is an ambitious task to collect into one volume of moderate dimensions all the important facts which ought to be recorded. The teaching of chemistry has been revolutionized during the last few years, and many of the medical men and pathologists who received their elementary instruction in this subject before "ions" came into their kingdom, will probably find in Dr. Wells's introductory chapter on the chemistry and physics of the cell much enlightenment on modern chemico-physical conceptions. The two chapters on enzymes may be particularly recommended; they contain a large amount of information which is not usually found in pathological textbooks, and the discussion of such subjects as autolysis is not only interesting from the chemical standpoint, but also of assistance in the comprehension of general pathological processes. The study of bacteriological and cytological toxins and antitoxins and the processes of immunization is certainly akin to chemical pathology, but it involves the consideration of an enormous mass of work specially devoted to these particular problems, and is dealt with in many excellent textbooks devoted to these subjects alone. It appears to us, for these reasons, that Dr. Wells has overburdened himself by including these matters in a general treatise on chemical pathology, and has not been able, in the space at his disposal, to treat them in a sufficiently comprehensive manner. The chapter on inflammation contains a carefully written exposition of the surface tension theory of phagocytosis and allied phenomena. This is interesting; it is quite refreshing to find inflammation treated in a less hackneyed manner than is usual in the average textbook of pathology. Many authors of works on general pathology, who find it difficult to say anything in their chapter on inflammation which has not been said a hundred times over, will now have the opportunity of incorporating from Dr. Wells's book useful considerations on this subject which are relatively novel to the average medical student. On the chemistry of the blood Dr. Wells is less interesting; this subject is better treated in some of the standard textbooks specially devoted to the blood. In the chapter on oedema there is an interesting discussion of the causes of oedema, and a useful review of the chemical analyses which have been made of oedematous fluid produced in different parts of the body and under different pathological conditions. The main facts which are known about the chemistry of tumours are carefully surveyed; these details are certainly of interest, but we must agree with Dr. Wells's candid admission that they do not throw any important light on the fundamental problems of tumour pathology.

INFLAMMATION.

PROFESSOR ADAMI'S book on *Inflammation*[9] is a reprint, revised and enlarged, of his article in the new edition of Allbutt and Rolleston's *System of Medicine*. There is not very much new matter. There is a little more about opsonins. The treatment of inflammation is briefly dealt with, and Professor Bier's method of induced hyperaemia is described. Mention is also made of Schridde's attempt to differentiate the various forms of

[8] *Chemical Pathology.* By H. Gideon Wells, Ph.D., M.D. Philadelphia and London: W. B. Saunders Co. 1907. (Medium 8vo, pp. 549. 15s.)

[9] *Inflammation: an Introduction to the Study of Pathology.* By J. George Adami, M.A., M.D., F.R.S. London: Macmillan and Co. 1907. (Post 8vo, pp. 256. 5s.)

leucocytes within the tissues. Professor Adami's article on inflammation is already well known and has been widely appreciated. Its publication as a separate volume will render it accessible to many who are unable to purchase the larger work. The gift of clear exposition makes Professor Adami an excellent teacher, and he is seen at his best when he handles in a way appreciable to the elementary student such complicated subjects as the relation of Metchnikoff's doctrine of phagocytosis to the theories of Ehrlich and his followers. Within the limits of the volume it has been impossible to enter fully into technical details, or to present a summary, adequate for the purposes of those actively engaged in research, of the many important contributions to the study of inflammation which have recently appeared. To do this would be a much larger undertaking, but it would be well worth doing, and no one is better fitted to accomplish the task than Professor Adami. The study of inflammation, as he truly says, is the foundation of pathology, but we are greatly in need of an advanced textbook, comparable, for example, to Schaefer's *Physiology*, which would contain a fairly complete record of all that is likely to be of permanent value in the literature of inflammation. An undertaking of this nature would do much to avert the danger, recognized by Professor Adami as imminent, that pathology may become "a scientific Babel."

THERAPEUTICS.

PRIESTLEY, the great chemist to whom we owe the discovery of oxygen, was also the first to recommend its medicinal use, especially in asphyxia. But since his time the therapeutic efficacy of oxygen has been much questioned, above all in Germany, where physiologists rejected it for theoretical reasons, and also on the ground of experiments made on normal, healthy individuals. A group of von Leyden's pupils and co-workers, chief among whom is MAX MICHAELIS, have done much to convince German practitioners that oxygen is a valuable therapeutic agent. Their experiences and results have been collected in a volume,[10] to which von Leyden has contributed the introduction. Among the subjects treated are: Oxygen therapeutics in obstetrics (Leo Zuntz); therapeutical indications for oxygen treatment, and the technique of oxygen treatment (Max Michaelis); the value of oxygen in surgery (H. Wohlgemuth); the physiological bases of oxygen therapeutics (A. Loewy and N. Zuntz); new forms of oxygen application (L. Spiegel). Each of the seventeen papers is of interest, and many are illustrated.

PARAFFIN IN SURGERY.

IN a volume with the title, *Paraffin in Surgery*,[11] Drs. LUCKETT and HORN, of New York, discuss the use of paraffin in surgical practice for both functional and cosmetic improvements. The results of the most reliable investigations on the action of paraffin when injected into living tissues, and the good or evil such injections are likely to effect, are dealt with in a very thorough and also practical manner, and the authors base their conclusions as to the value of the paraffin treatment on the outcome of both purely scientific and of clinical research. Full and lucid instruction is given on the chemistry of paraffin, the mutual reaction of this agent when injected and the surrounding tissues, the technique of the treatment, and finally its results in actual practice. The useful sections on unsatisfactory results and accidents indicate the necessity for study and care in the use of a method which, notwithstanding its many good results, has undoubtedly in some few instances caused serious lesions.

The same subject is the theme of a somewhat longer French volume from the pen of Dr. LAGARDE,[12] who in his introduction admits that the procedure has not so far attained an honourable place in modern surgery, chiefly on account of sundry accidents which have followed injections; these he believes are due to the employment of an unsuitable substance and the use of imperfect apparatus. The object of his volume naturally is to show how all these difficulties and dangers may be avoided. Sixteen pages are devoted to the history of the subject, and then follows a consideration of the uses of gelatine, vaseline, and paraffin. Gelatine is discussed in a few paragraphs, and we cannot ascertain that it has been of any surgical value, while the injection of vaseline appears to be distinctly dangerous, many of the patients having died of collapse and pulmonary embolism, while suppuration is not an infrequent result. Paraffin has been largely used for improving the appearance of depressed noses, and pages 53 to 108 are occupied by a full description of the method practised by Eckstein. Many of the serious results following the injection of vaseline can be obviated if solid paraffin at a melting point of 60° C. be used and driven into the tissues under pressure. Considerable space is given up, from page 150 onwards, to all the possibilities of the employment of paraffin in this way. The general impression conveyed is that the method is very much upon its trial, and most surgeons hesitate to employ it, except perhaps in situations where it can do little harm or be easily evacuated if it gives rise to suppuration or other untoward results.

[10] Handbook of Oxygen therapeutics. By Dr. Med. Max Michaelis, Universitäts Professor. Berlin: A. Hirschwald. 1907. (Demy 8vo, pp. 451. M. 12.)

[11] Paraffin in Surgery. A Critical and Clinical Study. By William Luckett, B.S., M.D., Attending Surgeon, Harlem Hospital, and Frank Horn, M.D., Assistant Surgeon, Manhattan Eye and Ear Hospital Dispensary, N.Y. New York: Surgical Publishing Company. 1907. (Post 8vo, pp. 208, illustrations. 7s. 6d.)

[12] Les Injections de Paraffine. Par le Docteur Lagarde. Paris: A. Maloine. (Demy 8vo, pp. 207.)

NOTES ON BOOKS.

WE have received from Messrs. Gallenkamp and Co., of Sun Street, Finsbury Square, E.C., a copy of the third edition of their catalogue of the apparatus required by workers in clinical and public health laboratories as well as by biochemical and other physiologic research students. Its size, when compared with a somewhat similar publication of an earlier date, constitutes an eloquent testimony to the important part which work of this sort nowadays plays, while its contents indicate the extent of the knowledge now involved and the very special nature of the technique with which those engaged in advanced laboratory work must be familiar.

MEDICAL AND SURGICAL APPLIANCES.

Knife for Enucleating Large Tonsils.

DR. ADOLPH BRONNER, M.D., Senior Surgeon, Bradford Eye and Ear Hospital, Laryngologist, Bradford Royal Infirmary, writes: Numerous recent investigations have proved that the tonsils, especially if inflamed, can serve as portals of infection for many diseases (tuberculosis, rheumatic fever, etc.). There can, therefore, be no doubt, that all diseased tonsils, large or small (the small are often the most dangerous), should be removed. The method of operation must necessarily vary with the age of the patient and the size of the tonsil. We should try and remove as much of the tonsil as we can, and in the shortest space of time, and in the least dangerous manner. In young children I still use the much-despised guillotine when the tonsils are large. When they are small I prefer the punch forceps. In adults enucleation of the tonsils is the best method. But this is generally very difficult and tedious and often impossible. In removing large tonsils I have lately used a bent knife with a long handle. The tonsil is pulled forward by vulsellum forceps and then quickly cut off by the knife. The bent part is pressed well back between the pillars of the fauces, and thus practically the whole of the tonsil can be removed, quite as completely as by enucleation by the finger, much more quickly, and with much less haemorrhage and danger to the patient. If not carefully done there is a possibility of wounding one or both of the pillars of the fauces, but with a little experience this can be avoided. In some cases the tonsils are very soft and the forceps cut through the tissue, which makes the operation much more difficult. If the pillars are attached to the tonsil, they should be loosened before the tonsil is excised. The knife is double-edged so that it can be used for either tonsil. It has been made for me by Messrs. Mayer and Meltzer, Great Portland Street. In removing small tonsils in adults I use the punch forceps or slit them open with a sharp strabismus hook.



EXPERIMENTS ON LIVING ANIMALS.

REPORT OF INSPECTORS UNDER THE ACT.

THE Report of the Inspectors of Experiments under the Act 39 and 40 Vict., chap. 77, for the year 1906, has just been issued as a Parliamentary Return.*

England and Scotland.

Professor G. D. Thane makes the return for England and Scotland. Tables are appended giving the names of all "registered places" and the names of all persons who held licences during 1906. The tables afford evidence: (1) That licences and certificates were granted and allowed only upon the recommendation of persons of high scientific standing; (2) that the licensees were persons who by their training and education were fitted to undertake experimental work and to profit by it; and (3) that all experimental work was conducted in suitable places. Another table shows the number and nature of the experiments returned by each licensee on the list, specifying whether these experiments were done under the licence alone or under any special certificates. This table is divided into two parts, A and B, for the purpose of separating experiments which were performed without anaesthetics from those in which anaesthetics were used.

Number of Licensees.

The total number of licensees during 1906 was 402; reports were furnished by, or, in a few exceptional cases, on behalf of, these licensees in the form required by the Secretary of State. The reports show that 123 licensees performed no experiments. The number given above includes thirty licensees whose licences expired on February 28th, 1906, and who returned no experiments in that year.

Number of Experiments.

The total number of experiments performed was 46,073, being 8,138 more than in 1905; the increase in the number of experiments in Table 4 (A) (experiments other than those of the nature of simple inoculations, hypodermic injections, or similar proceedings) was 280; that of those in Table 4 (B) (simple inoculations, hypodermic injections, or similar proceedings performed without anaesthetics) was 7,858.

Nature of Experiments.

Of the experiements in Table 4 (A), 1,429 were performed under licence alone; 159 under Certificate C; 917 under Certificate B; and 281 under Certificate B + EE.† Table 4 (B) includes 43,287 experiments, whereof 42,757 were performed under Certificate A; 467 under Certificate A + E; and 63 under Certificate A + F. All experiments involving a serious operation are placed in Table 4 (A). The larger part of the experiments included in Table 4 (A), namely, all performed under licence alone, and under Certificate C, 1,588 in number, come under the provision of the Act that the animal must be kept under an anaesthetic during the whole of the experiment, and must, if the pain is likely to continue after the effect of the anaesthetic has ceased, or if any serious injury has been inflicted on the animal, be killed before it recovers from the effect of the anaesthetic.

In the experiments performed under Certificate B, or B linked with EE, 1,198 in number, the initial operations are performed under anaesthetics, from the influence of which the animals are allowed to recover. The operations are required to be performed antiseptically, so that the healing of the wounds shall, as far as possible, take place without pain. If the antiseptic precautions fail and suppuration occurs the animal is required to be killed. It is generally essential for the success of these experiments that the wounds should heal cleanly and the surrounding parts remain in a healthy condition. After the healing of the wounds the animals are not necessarily or even generally in pain, since experiments involving the removal of important organs, including portions of the brain, may be performed without giving rise to pain after the recovery from the operation; and after the section of a part of the nervous system the resulting degenerative changes are painless.

In the event of a subsequent operation being necessary in an experiment performed under Certificate B, or B linked with EE or with F, a condition is attached to the licence requiring all operative procedures to be carried out under anaesthetics of sufficient power to prevent the animal feeling pain; and no observations or stimulations of a character to cause pain are allowed to be made without the animals being anaesthetized.

In no case has a cutting operation more severe than a superficial venesection been allowed to be performed without anaesthetics.

The experiments included in Table IV (B), 43,287 in number, are all performed without anaesthetics. They are mostly inoculations, but a few are feeding experiments, or the administration of various substances by the mouth, or the abstraction of a minute quantity of blood for examination. In no instance has a certificate dispensing with the use of anaesthetics been allowed for an experiment involving a serious operation. Inoculations into deep parts, involving a preliminary incision in order to expose the part into which the inoculation is to be made, are required to be performed under anaesthetics, and are therefore placed in Table IV (A).

The Question of Pain.

The operative procedures in experiments performed under Certificate A without anaesthetics are only such as are attended by no considerable, if appreciable, pain. The certificate is, in fact, not required to cover these proceedings, but to allow of the subsequent course of the experiment. The experiment lasts during the whole time from the administration of the drug or injection until the animal recovers from the effects, if any, or dies, or is killed, a period possibly extending over several days, or even weeks. The substance administered may give rise to poisoning, or set up a condition of disease, either of which may lead to a fatal termination. To administer to an animal such a poison as diphtheria toxin, for example, or to induce such a disease as tuberculosis, although it may not be accompanied by acute suffering, is held to be a proceeding "calculated to give pain," and therefore experiments of the kind referred to come within the scope of the Act 39 and 40 Vict., c. 77. The Act provides that, unless a special certificate be obtained, the animal must be kept under an anaesthetic during the whole of the experiment; and it is to allow the animal to be kept without an anaesthetic during the time required for the development of the results of the administration that Certificate A is given and allowed in these cases.

It is pointed out in the report that it must not be assumed that the animal is in pain during the whole of this time. In cases of prolonged action of an injected substance, even when ending fatally, the animal is generally apparently well, and takes its food as usual, until a short time before death. The state of illness may last only a very few hours, and in some cases it is not observed at all.

In a very large number of the experiments included in Table IV (B), the results are negative, and the animals suffer no inconvenience whatever from the inoculation. These experiments are therefore entirely painless.

In the event of pain ensuing as the result of an inoculation, a condition attached to the licence requires that the animal shall be killed under anaesthetics as soon as the main result of the experiment has been attained.

The Increase of Experiments.

The increase in the number of experiments in Table IV (B), 1906, when compared with that of 1905—namely, 7,858—is more than accounted for by the increase in the experiments contained in that table that were performed on behalf of the Imperial Cancer Research Fund—namely,

* London: Printed for His Majesty's Stationery Office by Eyre and Spottiswoode, Printers to the King's Most Excellent Majesty. And to be purchased, either directly or through any bookseller, from Wyman and Sons, Limited, Fetter Lane, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin.

† In experiments performed under licence alone, the animal must during the whole of the experiment be under the influence of some anaesthetic of sufficient power to prevent the animal feeling pain; and the animal must, if the pain is likely to continue after the effect of the anaesthetic has ceased, or if any serious injury has been inflicted on the animal, be killed before it recovers from the influence of the anaesthetic which has been administered. Certificate C allows experiments to be performed, under the foregoing provisions as to the use of anaesthetics, in illustration of lectures. Certificate B exempts the person performing the experiment from the obligation to cause the animal on which the experiment is performed to be killed before it recovers from the influence of the anaesthetic: and when the animal is a dog or a cat Certificate EE is also necessary. Certificate A allows experiments to be performed without anaesthetics; and when the animal on which the experiment is performed is a dog or a cat, Certificate E is also necessary. Certificate F is required in all cases of experiments on a horse, ass, or mule.

8,659. The total number of experiments performed for this fund during 1906 was 21,082, of which 20,795 were inoculations into mice.

A large number of experiments, almost wholly simple inoculations and similar proceedings contained in Table IV (B), were performed either on behalf of official bodies, with a view to the preservation of the public health or directly for the diagnosis and treatment of disease. Several county councils and municipal corporations have their own laboratories, in which bacteriological investigations are carried on, including the necessary tests on living animals, and many others have arrangements by which similar observations are made on their behalf in the laboratories of universities, colleges, and other institutions. A sewage farm is registered as a place in which experiments on living animals may be performed in order that the character of the effluent may be tested by its effects on the health of fish. The Board of Agriculture has two laboratories which are registered for the performance of experiments having for their object the detection and study of the diseases of animals. In other places experiments have been made on behalf of the Home Office, the War Office, the Local Government Board, the Board of Agriculture and Fisheries, and the Metropolitan Asylums Board. Fifty-two licensees return nearly 6,000 experiments which were performed for Government departments, county councils, municipal corporations, or other public health authorities; 2,144 experiments were performed by five licensees for the Royal Commission on Tuberculosis; eleven licensees performed 4,732 experiments for the preparation and testing of antitoxin serums and vaccines; and six licensees performed 1,079 experiments for the testing and standardizing of drugs.

The number of injections made during the year 1906 for the diagnosis of rabies in dogs was 26.

Inspections of Registered Places.

During the year the usual inspections of registered places were made by Professor Thane and Sir James Russell. They found the animals suitably lodged and well cared for, and the licensees attentive to the requirements of the Act, as well as to the conditions appended to their licences by the Secretary of State.

Irregularities.

The irregularities that occurred during the year were the result of inadvertence or misunderstanding. They were as follows:

A licensee holding Certificates B, EE, entitling him to perform certain experiments on dogs, cats, and other animals, performed a larger number of experiments on other animals than were specified in Certificate B, but none on dogs or cats; the total number of experiments performed did not exceed that to which the certificates were given.

A licensee who held Certificate A for feeding experiments on rats and rabbits reported that he had by oversight performed two more experiments than were authorized by his certificate.

A licensee who held Certificate A authorizing him to perform feeding experiments returned 8 experiments, for which he had used 101 mice. It has been laid down by the Secretary of State that the number of animals used must not be the basis of the number of experiments performed—that is, that every animal shall be counted as a separate experiment. In Table IV (B) these are therefore entered as 101 experiments.

A licensee who is a doctor of medicine of a foreign university and whose Certificate B, EE, expired at the end of 1905, made a return showing that he had performed 12 experiments under B and 12 (on cats) under B, EE during 1906. He has since explained that this arose from his thinking that when his licence was renewed his certificates were also revived.

By direction of the Secretary of State a suitable admonition was addressed to each of these licensees. In the last two cases renewal of the licence was not sought.

The attention of the Secretary of State was recently called to certain inoculations which had been performed by a licensee in 1904, at an unregistered place, their object being to obtain a vaccine for experimental purposes. Inoculations for the purpose of obtaining lymph or serum to be used for the prevention or treatment of disease are held not to be experiments, and therefore do not come under the Act 39 and 40 Vict., cap. 77; but inoculations for experimental purposes, including inoculations made for the purpose of testing the potency of serum or lymph, are subject to the provisions of that Act, and consequently may be performed only in places that have been authorized by the Secretary of State. The licensee in question, therefore, acted wrongly, although unwittingly, in regarding these inoculations as being outside the purview of the Act, and in making them at a place that had not been registered for the performance of experiments.

IRELAND.

Number of Licences and Certificates.

The Inspector for Ireland, Sir Thornley Stoker, states in his report that thirteen licences were in force during the year 1906; of these one expired, and three were new licences. The certificates in existence or allowed were:

A	to	5	licensees.
B	,,	10	,,
C	,,	3	,,
E	,,	2	,,
EE	,,	4	,,
F	,,	1	licensee.

Two expired during the year (B and E). Seven new ones were allowed (three of A and four of B).

Number of Experiments.

The experiments performed were 97 in number; 42 being under licence alone, and 55 under certificates. Ten licensees performed experiments. Twenty-five certificates were in force among thirteen licensees, of whom eight performed experiments, namely:

Under Certificate	A	25
,, ,,	B	14
,, ,,	C	12
,, ,,	B, EE	4

Animals Used.

The animals experimented on were:

Rabbits	48
Guinea-pigs	23
Dogs	12
Mice	6
Cattle	3
Cats	2
Goats	2
Sheep	1

Nature of Experiments.

The experiments were physiological and pathological, and with a few exceptions were done for the purpose of investigating the phenomena of disease and its causes and treatment in man and animals, or of conducting experiments leading in those directions. Study was made of the effects of the *x* rays on internal organs, the skin, and the vasomotor system of nerves. The virulence of microbic cultures, the detection of pathological germs in milk and in effusions, and of tuberculosis in animals, were also matters of investigation. The functions of various structures round the neck of the bladder in connexion with certain operations on the human subject received attention; as did the control of the salivary secretion, and the functions of certain nerves. The differentiation of the blood of various mammals was investigated, as was the movements of the stomach in connexion with their action on food substances. The action of the heart, blood vessels, and the respiratory mechanism was examined. The conditions of blood pressure in connexion with the effects of ether and chloroform were studied; and pathological germs were procured for the necessary purposes of teaching.

Irregularities.

This paragraph of Sir Thornley Stoker's Report is like the famous chapter on snakes quoted by Dr. Johnson from Horrebow's work on Iceland. No abuses of the Act were found in Ireland during the year, and the Inspector expresses the opinion that all the work done was sincere and well intentioned.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

THE twenty-fourth annual meeting of the Medical Sickness Annuity and Life Assurance Society was held in the rooms of the Medical Society, Chandos Street, W., on May 23rd, under the presidency of Dr. DE HAVILLAND HALL, Chairman of the Executive Committee.

Chairman's Address.

The CHAIRMAN congratulated the members on the work of the Society during the year, and said that the number of new proposals had been 156, which, after allowing for

members dying and lapsing, left a net gain of members of 59, which totalled on December 31st, 1906, to 2,438; this number fell short of the 5,000 members he had always hoped for. There had been an increase of £12,073 in the funds, and if they added the bonuses amounting to £561 which had been paid to members on reaching the age of 65, they would have the largest increase of any year since the foundation of the Society. The sickness pay, amounting to £11,493, was the largest on record, the sickness experience totalling up to within 107 weeks of the expectation. There was a steady increase during the last few years in the sickness experience, which showed the necessity of having a large reserve, and he was glad to be able to say that the Society was absolutely solvent, with ample reserve for any liability. Fifteen members were now drawing annuities, and he regretted more members did not avail themselves of the advantageous terms for annuities which they could obtain through the Society from the Rock Assurance Company. The Investment Fluctuation Fund showed an increase of nearly £2,000, and notwithstanding the bonuses paid to members reaching the age of 65, the Management Fund showed a small increase. The Committee attendance amounted to 113, as against 102 in the previous year. He expressed the gratitude of the Committee for the attendance of the trustees at the investigation of the securities of the Society, and also their appreciation of the most excellent work done by their small staff, consisting of their Secretary, Mr. Addiscott, and his assistant. He would also like to propose a cordial vote of thanks to the BRITISH MEDICAL JOURNAL and the *Medical Press and Circular* for the valuable assistance they had afforded in making the work of the Society known. The Chairman concluded his remarks by proposing that the report of the Committee and the audited accounts for the past twelve months be received and adopted.

Dr. W. G. DICKINSON wished that the Executive Committee would take into consideration the question of the large reserve, and see if they could not return some part of it to members in the form of a bonus.

Dr. W. K. SIBLEY and Dr. BRINDLEY JAMES spoke in support of the proposal.

On the suggestion of the CHAIRMAN, the matter was allowed to be postponed until after the next quinquennial valuation.

Alterations of Rules.

Certain alterations of rules proposed by the Committee were agreed upon.

Payment of Members of Executive Committee.

Dr. W. G. DICKINSON proposed the following resolution, which was carried *nem. con.*:

That it be a recommendation that a payment be made to the members of the Committee for attendance at each Committee meeting.

Appointment of Officers.

The list of officers proposed for election was adopted.

Vote of Thanks to Chairman.

A vote of thanks to the Chairman for presiding, proposed by Dr. BRINDLEY JAMES and seconded by Dr. F. J. ALLAN, brought the proceedings to a close.

COMPENSATION FOR INDUSTRIAL DISEASES.*

REPORT OF THE DEPARTMENTAL COMMITTEE.

To a Committee appointed by the Home Secretary and composed of Mr. Herbert Samuel, M.P., Professor Clifford Allbutt, Mr. Henry Hardinge Cunnynghame, and Dr. T. Morison Legge, was entrusted in August last the duty of inquiring into and reporting upon the diseases and injuries, other than injuries by accident, that are due to industrial occupations, are distinguishable as such, and can properly be added to the diseases enumerated in the Third Schedule of the Workmen's Compensation Bill, 1906. In the Report now made 42 occupations and forms of industrial poisoning are mentioned. The Committee held 41 sittings, most of them in London; it took evidence from 159 witnesses, 92 of whom were members of the medical profession. Several factories were visited. In the consideration of the various diseases or forms of injury, the Committee applied the three following tests in compliance with the provision and intention of the Workmen's Compensation Act.

1. Is it outside the category of accidents and diseases already covered by the Act?

2. Does it incapacitate from work for a period of more than one week, which is the minimum period for which compensation is payable under the Act?

3. Is it so specific to the employment that the causation of the disease or injury by the employment can be established in individual cases?

The Committee frequently experienced the difficulty of drawing a line of demarcation between accidents and disease. Is poisoning by gaseous fumes, for example, an accident? Clearly it is if it is sudden, but when it is the result of long exposure then it is unmistakably a disease. The recognition previously in courts of law of anthrax as the consequence of an accident simplified matters for the Committee, and made this part of the inquiry easier. It is important in scheduling an industrial disease or injury that it should be specific to the employment. The difficulty experienced by the Committee in dealing with such maladies as bronchitis and lung diseases is at once apparent. Of the several forms of industrial poisoning dealt with, the following are recommended to be included for compensation. Poisoning by dinitro-benzole and aniline, bisulphide of carbon, nitrous fumes, sodium cyanide and cyanogen, nickel carbonyl, African boxwood, pitch, and coal tar; also such conditions as miners' nystagmus, glanders, compressed-air illness, miners' beat hand, knee, and elbow.

The remarks of the Committee in regard to the inclusion or not of bronchitis and fibroid phthisis as industrial diseases for compensation form an extremely interesting part of the report. It is held that if a person with commencing lung trouble leaves the dusty trade and engages in agricultural work the disease may be practically arrested. How far this opinion is based upon the experience of the medical members of the Committee we are not informed, but there is much to recommend a trial of the treatment. It is interesting to learn that, frequent as fibroid phthisis is in steel grinders and potters, it is hardly ever met with in coal miners. When colliers develop phthisis it is generally due, not to dusty conditions in the mine, but to infection in the home. The Committee wisely, in our opinion, has not recommended the immediate addition of the disease to the schedule. This will be a source of gratification to the Staffordshire pottery manufacturers as well as to the medical men of that district, who have not been at all unanimous in favour of the inclusion. Mention is made in the report of the evidence upon this point given by Dr. Haldane of Oxford and Dr. Oliver of Newcastle-upon-Tyne, whose opinions upon the economic as well as upon the medical aspects of the question are expressed in the text of the report. Mr. Simeon Snell, ophthalmic surgeon, Sheffield, gave very important and helpful evidence in regard to miners' nystagmus. The subjects of dilatation of the heart, illness contracted in the removal of night soil, housemaid's knee, hernia, and boiler-makers' deafness are alluded to, but none of them is recommended for inclusion in the schedule.

* Wyman and Sons, Ltd., 109, Fetter Lane, Fleet Street. Price 3d.

MOTORS FOR MEDICAL MEN

DR. J. K. TULLOCH (Dundee) writes: There is a phase of the "Motors for Medical Men" question which has not been touched upon, and which is to my mind a somewhat important one. I refer to cases in which a motor might be used to *assist* a medical man in his work, although not definitely adopted as the sole and only way of getting the whole work done. I do not wonder that many hesitate to put down the hundreds necessary to change over from horses to motors in the present uncertainty as to the success of the experiment, but there is a way of utilizing the motor which, if not of universal application, is still of great service and costs but very little.

Three years ago, more as a toy than as a professional vehicle, I purchased a second-hand motor, "Ariel Quad." This little machine cost me £30, and it has not only saved its price two or three times over, but has been a source of great satisfaction and amusement to me since the day I got it. My practice is a city one, with a fair sprinkling of country work in the surrounding districts; and for my country visits the Quad is invaluable. The power is very moderate, but with a single rider its speed is quite up to

legal limit, and as it has a two-speed gear it climbs well. The comfortable front seat comes in handy at times, and my wife and I have had more than one long tour on this little machine. The carburettor is a surface one, but is absolutely reliable and most economical, as I run over a hundred miles to a gallon. I have a Wolseley two-seater for my ordinary city work, but am not so enthusiastic over the motor for street-to-street visitation. Now there must be many medical men situated as I am with part town, part country practice. To all such, if they can by hook or crook put up a small hut or other accommodation to house the motor, allow me to strongly recommend just another such little motor vehicle as I have in my "Ariel Quad." There are many things, of course, it will not do, but then there are so many things that it will do. I am sometimes asked if it is as comfortable as my car. No, it is not; and yet it has some advantages over the car, too. For instance, in case of puncture it is only the work of a few minutes to slip in a spare tube, the tyres being even more easily handled than plain bicycle tyres. I am asked, also, could I do my work in town on it? No, I would not care to do so; but again, because it is not as suitable as a brougham and horse in town, is it of no use in its own proper sphere?

When I first got this small motor I was promptly told (by those who had no knowledge of the matter) that the machine, having no clutch, would be a heart-break to start by pushing off. This turned out to be no difficulty whatever; as a matter of fact, it entails less exertion than starting my car by handle. There are tricars and tricars; but, judging from what I read in the trials, the modern tricar is far behind this old Ariel Quad in reliability.

Let those who fear to make the plunge into motoring begin in this small way, and a month or two, at very little expense, will tell them more than reams of printed matter on the subject.

I do not vouch for all small motors of the cycle order, but do so with confidence of the make and kind I myself possess.

M.D. DURHAM writes: The discussion going on in your columns, "Motor Cars for Medical Men," seems to have aroused so much interest that I enclose you my experiences and expenses (very carefully kept) of the first year.

Previously I kept two horses, but the disagreeable smell from the dung heap and the pest of flies in the summer, decided me on a change.

With this decision (my car is 10-h.p. Vulcan) I bought and read diligently several books on motors, and in my spare time went half a dozen times to the works whilst the car was being built, to pick up all the information I could.

I keep a lad to go out with me, wash the car when we come in from the round, and oil up before going out. I drive myself and in any case where the machinery is touched, I either do it myself or am present.

I have never been stopped on the road but once, due to dirt getting into the carburettor, and this will never happen again as I at once fitted on a filter (Staley's) on the petrol supply pipe. I have done 4,000 miles and the car is now going better that it ever did. The great expense is tyres, but then our roads are bad very bad. Here are the expenses.

	£	s.	d.
Motor car	250	0	0
Extra additions:			
Cape cart hood	13	0	0
Leather driving apron	4	15	0
Head lights	10	0	0
	277	15	0
Running expenses:			
Petrol	11	0	0
Oils and grease	3	5	0
Licences, registration, and insurances ...	17	16	3
Repairs, incidental expenses, and additions	10	15	1
Tyres, etc.	23	17	11
Boy at 12s. a week	31	4	0
	107	18	5

My accounts have been very carefully kept, but as I have paid "licences and insurances" twice in the twelve months and have two spare tyres, I expect the account will work out out much cheaper in the next twelve months.

In conclusion, I may say I never was mechanically inclined, but I now find infinite pleasure in looking after my car and making the necessary adjustments to keep her up to working pitch. I have had better health in the last twelve months, and I frequently get little runs out to see friends which previously was impossible.

I always advise my brother practitioners to stick to horses unless they are prepared to know and superintend their car themselves, and on no account to leave themselves in the hands of a chauffeur. I once had occasion to draw the attention of one of these gentlemen to his deflated tyre, and offered him friendly help. His reply was it was of no moment, and he drove on. To this day I regret I didn't take the number of the car and write his employer.

I shall be pleased to reply by letter to any one desiring information of my car.

A NEW VACCINATION ORDER.

THE Local Government Board has had under consideration an amendment of the Vaccination Order, 1898, as far as relates to public vaccination for districts other than workhouses. Complaints have from time to time been made as to the cost of vaccination under the system established by the Vaccination Act, 1898, and the Board appointed a Departmental Committee to investigate the subject. The Committee in its report found that, apart from the great increase in the number of operations performed since 1898, the principal factor in the increased cost of public vaccination had been the increase in the fees payable to the public vaccinators.

But, as the Committee pointed out, some increase in the remuneration of the public vaccinators was inevitable in view of the additional duties which were imposed upon them by the provisions of the Act and of the Vaccination Order, 1898. The Committee thought that, having regard to the work required, the remuneration for primary vaccination since the Act of 1898 came into operation had in many cases not been excessive, particularly in country districts. At the same time, it considered that under certain conditions the fees both for primary vaccinations and for revaccinations might be reduced. The Board having given very careful consideration to the matter, issued an Order amending the Order of 1898 in relation to public vaccinators. The amending Order will come into operation on October 1st next.

Payments to Public Vaccinators.

Article 1 deals with the provision to be made in any future contract for public vaccination, other than a contract with the medical officer of a workhouse for the vaccination of the persons resident in it, and substitutes a new Article on the subject for Article 3 of the Order of 1898. The new Article repeats the requirement in the Order of 1898 as to the provision to be made by the contract for the payment to the public vaccinator of a minimum fee of 1s. in respect of every child whose birth is registered in his district, or who is resident there and whose birth has been registered elsewhere or has not been registered at all, and substitutes fresh requirements for those in paragraphs (*b*) and (*c*) of Subdivision (1) of Article III of the Order of 1898 as to the provision to be made for the other payments to be made to him.

The Order of 1898 requires that the contract shall provide for the payment to the public vaccinator of a minimum fee of 2s. 6d. in respect of every successful primary vaccination of any person other than a child, or of any successful revaccination where in either case the operation has been performed by him at his surgery or elsewhere than at the home of the person vaccinated. The new Order extends this requirement so as to include any case of successful vaccination performed by the public vaccinator on a child whose age exceeds 12 months at his surgery or elsewhere than at the home of the child. The parent or person having the custody of the child must, however, have requested that the child may be vaccinated elsewhere than at the home of the child, and the public vaccinator must have satisfied himself that the child can be safely vaccinated having regard to subsection (4) of Section 1 of the Vaccination Act, 1898. That subsection provides that the public vaccinator shall not vaccinate a child if, in his opinion, the condition of the house in which it resides is such, or there is or has been such a

recent prevalence of infectious disease in the district that the child cannot be safely vaccinated. The Order of 1898 requires that the contract shall provide for the payment to the public vaccinator of a minimum fee of 5s. in respect of every successful vaccination or revaccination performed by him at the home of the person vaccinated. The new Order alters this requirement, and directs that the contract shall provide not less than the sums specified in the rules set out on page 3 of the Order.

The effect of these rules will be that where the district is situated wholly or partly in London, or in a borough, or other urban district with a population according to the returns of the last census for the time being of not less than 50,000, the amount of the payment must in every case be not less than 2s. 6d., and that where the district is not so situate the amount must in every case be not less than 3s. 6d.

It will be understood that the payments fixed by the Order are only minima, that the precise sum to be paid should be determined by agreement between the guardians and the public vaccinator, and that it will be fixed by the contract to be approved by the Board. Each case must be considered on its merits in determining the actual fee to be paid, and the Board states that as regards districts which are only partly situate in London, or in a borough or urban district with a population of not less than 50,000, it contemplates that a higher fee than the minimum will be fixed if the circumstances of the district in respect of area and population are such that a higher fee should properly be paid.

The new Order deals specially with cases where, during a period of twenty-four hours, successful vaccination or successful revaccination has been performed by the public vaccinator upon two or more persons at one and the same home, or on any premises (other than the surgery of the public vaccinator) on which these persons were together present at any time during the period.

In any such case the amount to be paid to the public vaccinator will be subject, in respect of the first person vaccinated or revaccinated, to the rules as to the minimum fees above referred to; but otherwise the amount to be paid in such cases must be mutually agreed upon by the guardians and the public vaccinator and approved by the Board, or in default of agreement determined by the Board.

The new Order repeats the provisions of the Order of 1898 as to the conditions of payment to the public vaccinator and the age for revaccination.

Existing Public Vaccinators.

As regards existing public vaccinators, it will not be requisite that fresh contracts should be entered upon with them in consequence of the new Order. The contracts which are in force on May 21st may be determined in the same way as heretofore; but until this is done, or new contracts are entered into, they will be continued in force by Article III of the Order. Any such contract, however, is from October 1st next to be deemed as regards the remuneration of the public vaccinator, in lieu of the payments mentioned in the contract, to provide for payments to him by the guardians after such rates as are before December 31st next set forth in an Instrument to be executed by the Board.

The guardians and the public vaccinators should agree as to the amounts to be fixed subject to the provisions of the Order, and should inform the Board of the result. The Board will issue forms for the purpose. If an agreement is not arrived at before October 1st, the amount will be fixed by the Board.

The Board does not suggest that as respects existing public vaccinators a reduction should be made in the payments to them without regard to the circumstances of the particular case; but where more than one person is vaccinated or revaccinated at the same time and place the Board thinks that a provision of the kind contemplated by the Order should be made where no such provision is already in force.

Visits of Public Vaccinators.

Article VII of the Order of 1898 requires that the visit of the public vaccinator to the home of a child, whether on request of the parent or other person having the custody of the child, or after notice from the vaccination officer, shall, in the absence of any sufficient reason for delay, be made within two weeks after the receipt of the request or notice as the case may be. This period is extended by Article IV of the new Order to four weeks, so as to give public vaccinators an opportunity of arranging their visits to the homes of children when they have other professional work in the neighbourhood of those homes. This is in accordance with one of the recommendations of the Departmental Committee.

Forms of Medical Certificates.

The Committee also approved a suggestion that some of the forms prescribed by the Order of 1898, such as those of the medical certificate of successful vaccination or of postponement of vaccination, should be altered so that the several particulars required as to name, place of birth, residence, etc., should be placed in lines one underneath the other. Effect is given to this proposal by Article VII (*b*).

Vaccination Officers.

Advantage has been taken of the opportunity afforded by the Order to make one or two amendments in the Order of 1898 as respects vaccination officers.

Article VI of the new Order makes an alteration in paragraph (*a*) of No. 6 of the Instructions to Vaccination Officers in the Fourth Schedule to the Order of 1898. The present paragraph directs that if, on the expiration of seven days after any child entered on the birth list has attained the age of three calendar months none of the certificates mentioned in paragraph 2 of the instructions have been received by the vaccination officer, and he has not in his possession a valid certificate of postponement, he shall proceed to make personal inquiries with a view to obtain the requisite certificate.

As altered by the new Order, the paragraph will require that in the circumstances above mentioned the vaccination officer shall proceed to give notice and make inquiry in the Form Q. This form will be found on p. 16 of the Order.

An alteration in Form H, which relates to the lists of children in respect of whom the necessary certificates have not been received by the vaccination officer, and which was prescribed by the Order of 1898, has been made by the new Order by the addition of a column showing the number in the birth register of each child mentioned in the form.

The new provisions as to Forms will not come into operation until October 1st next.

It is made the duty of the clerk by Article V of the new Order to furnish the vaccination officer with the copy of the resolution appointing him with which he is to be supplied under Article 12 of the Order of 1898.

The Order and circular will be placed on sale, so that copies may shortly be obtained from Messrs. Wyman and Soms, Limited, Fetter Lane, E.C., either directly or through any bookseller.

THE METROPOLITAN ASYLUMS BOARD.

THE report of the Metropolitan Asylums Board for the year 1906 consists of a preface and a sufficiently comprehensive account of the work of each of the ten Standing Committees among which the general work of the Board is subdivided. All of these bodies, with the possible exception of the Exmouth Training Ship and Finance Committees, deal with matters of direct medical interest, and to most of the reports on their work numerous appendices by the Executive medical officers concerned are attached. The volume includes, moreover, many and elaborate tables of statistics, which sooner or later will be of great utility to investigators in various branches of Public Health administration. In this place it is impossible to do more than draw attention to the points of general interest, referring those whose work is identical with that carried on under some of the Committees to the original documents.

THE HOSPITALS COMMITTEE.

The report of the Hospitals Committee, which has seventeen establishments for the treatment of infectious disease under its control, records the appointment of a medical investigator as a permanent official. His duty apparently will be to advise the Committee on all matters coming within its purview when such advice must be the outcome of a special inquiry on a special topic, and involves perhaps a decision between the conflicting views of many capable men of equal experience. The present occupant of the post is Dr. Cuff, formerly Superintendent

at the North-Eastern Hospital. The policy of transferring patients as soon as possible from "acute" to "convalescent" hospitals has been continued, and it is intended to extend it to the fullest extent practicable. It is also intended to apply the principle of isolation in cubicles to all the fever hospitals and to establish a new antitoxin manufactory and general bacteriological laboratory at Belmont. Tentatively this system has already been applied for some months at the North-Eastern Hospital, and the full account by Dr. A. T. G. Pugh of how it is worked there will be found interesting by medical officers of isolation hospitals elsewhere.

Asylums Committee.

The report of the Asylums Committee, besides covering the reports of the Commissioners in Lunacy on the five asylums for imbeciles under the Board's control, states that the new departure made at Leavesden of allowing the female members of the staff to sleep out has been found beneficial to the institution and to the officers themselves, and will be continued. Reports from the various medical superintendents are included in the medical supplement. It would appear that the report of Dr. Monckton Copeman, who investigated the outbreak of typhoid fever at Belmont, acquitted the Asylums Committee of any negligence in the matter, and was also entirely favourable to the executive officers concerned.

The Children's Committee.

In many respects the report of the Children's Committee is the most interesting in the volume. Its appendices include, amongst others, records of the work of the ophthalmia schools, of the ringworm schools, of the certified homes and homes for defective children.

Ophthalmia Schools.—Dr. Frederick Collins, who is in charge of the ophthalmia schools, concludes his report with the following words:

"Any diminution in the number of trachoma cases admitted to the ophthalmia schools would seem to indicate that the establishment, and the facilities which they afford for the early isolation of such cases, is tending to check the spread of that disease. In connexion with this matter, it is well to mention that during the last year several children have been admitted with advanced trachoma who had been residents in their parish schools for some years. Presumably on account of the eye affection from which they were suffering, and for a long time before, they had been excused attendance at school. This would appear highly probable that many unrecognised cases of trachoma might be discovered in the Poor-law schools if systematic examinations of the eyes of all the children were made periodically by skilled observers.

"So far the accommodation provided for ophthalmia patients has been greatly in excess of the demands, but the Committee claims that this does not show that the provision made was not desired.

Ringworm Schools.—In the report on ringworm schools of interesting point is the proportion of trichophyton to microsporon ringworm: this was 90 cases to 546 cases. Last year's report an opinion not altogether favourable to the use of x-rays in the disease was expressed, but it was thought that cases then in the hands of Dr. Sabouraud had been a complete success. Owing to the wearing out of the apparatus connected with the accumulators, recourse was had as a temporary measure to electricity drawn direct from the main, and this was found to be so successful that the use of an accumulator has been altogether abandoned. The x-ray method has now cured 500 cases, and is described by the Committee as expeditious, and therefore economical, safe and painless. One immediate result of its introduction has been that the Committee has been able to close one of the schools devoted to ringworm, thus saving £1,000 a year.

Certified Homes.—The appended remarks relative to seaside convalescence are drawn up respectively by Dr. C. S. Bowes of Upton Park, Mr. W. Cooper Dent of Margate and Mr. C. E. Lord of Kensington, and all bear testimony to the value of sea air, while it is a great pity that guardians in London do not make greater use of it. The special object is to cure of children whose health it is believed would be permanently benefited at the seaside.

Homes for Defectives.—The report on Homes for Defectives, which is chiefly dealt with by correspondence, and only occasionally by personal inspection of the schools for the purpose, emphasises the fact that age is of little importance in estimating cases, it is the precise degree of mental capacity of the individual. A somewhat defective boy of 13 may have more aptitude for learning a trade than a more distinctly feeble-minded adult; each case must be considered *per se*. She thinks it of importance, too, that physically the mentally defective boy should be worked as hard as possible. The best results, she believed, will only be obtained when feeble-minded children are placed under treatment at a very early age; preferably from two to three years old, and that moral depravity—one of the most serious difficulties in the way of progress—will best be eradicated or prevented by keeping these defectives, while young, under the supervision of women in homes sufficiently small for each child to be watched.

Statistical Committee.

An interesting point in the report of this Committee is the evidence afforded of increased popularity of the Board's hospitals for infectious diseases. Last year 84 per cent. of all cases of infectious disorders notified in the metropolis in persons legally admissible were received at one or other of the Board's hospitals. About two-thirds of the total number of patients who passed through the wards were suffering from scarlet fever, the total of such cases was nearly 18,000, being 88 per cent. of the total number notified. The death-rate was 2·9 per cent. Another point of interest is the number of patients who were found not to be suffering from the disease stated on the medical certificates which secured their admission. Altogether there were 2,151 instances of this nature, or 8.3 per cent. of the total admissions. The errors seemed to have arisen chiefly in connexion with enteric fever; the percentage of erroneous diagnoses of that disease being as high as 33.7 per cent. Fourteen out of the 235 patients supposed to be suffering from enteric fever proved to have influenza; 6 general tuberculosis, 62 pneumonia, and 7 had no obvious disease. It is suggested that these errors indicate a growing disposition on the part of practitioners to get cases away while they are still in a doubtful stage. If this is the case, and it becomes a recognized practice, some alteration of the views at present held as to the amount of isolation accommodation required in the hospitals may be necessitated. There are a large number of tables with regard to diphtheria, these being a record of the Board's experience since 1890, year by year, with regard to the mortality from (1) all forms of diphtheria, (2) laryngeal cases, (3) tracheotomy cases, and finally laryngeal and non-laryngeal cases of post-scarlatinal diphtheria, the latter, however, being carried back for ten years only. In all a distinction is made between cases treated by antitoxin and those not so treated, and it is a pity that in connexion with the first table the fact is not brought out that all cases admitted to the Board's hospitals receive antitoxin injections if deemed sufficiently serious to require it. As the table stands it might be read, innocently or otherwise, as a proof that antitoxin does harm, not good; for the mortality amongst the cases not treated with antitoxin is shown to be only 1.5 per cent., against 10.4 per cent. among those who received antitoxin.

Ambulance Committee.

The work of this Committee included the transport of 50,306 persons for an aggregate distance of 388,265 miles. The motor ambulance which the Committee purchased at the end of 1905 did such good work and proved so economical that others have now been purchased.

Medical Supplement.

The Medical Supplement contains a great many interesting tables relating to the complications and co-existence of infectious disorders, to laparotomies performed for perforation during enteric fever, and further statistics with regard to the diphtheria work of each hospital, and cases in which intubation was performed. It concludes with two good papers—one by Dr. J. G. Rolleston on rhinorrhœa in faucial diphtheria, and the other by Dr. F. J. Woollacott on return cases of scarlet fever.

Staff Illness.

A useful sidelight is thrown on the value of vaccination by the figures contained in the report with regard to illness among the staffs of the various infectious diseases hospitals. At the ordinary fever hospitals, where no prophylactic is in use, 3.5 per cent. of all members of the staff contracted fever or diphtheria from the patients; but at the small pox hospitals, thanks to vaccination, no member of the staff contracted the disease.

LITERARY NOTES.

DR. JEAN CHARCOT, son of the famous neurologist, has given to the Salpêtrière his father's library, said to be the largest collection of literature dealing with the nervous system and its diseases in the world. He has also given to that institution the furniture of Charcot's study. Under the direction of M. Mesureur, head of the Assistance Publique, and Dr. Jean Charcot, one of the wards in the institution which the fame of Charcot made a Mecca of medicine has been fitted up in the style of his study.

Many translations of the famous epigram beginning "*Tres facies habet medicus*" have been attempted. The following, which is taken from Timothie Kendall's *Flowers of Epigrams* (1577) is the oldest English version which we have come across:

> Three faces the Phisition hath.
> First as an Angell he,
> When he is sought; next when he helpes,
> A god he seems to be;
> And last of all, when he hath made
> The sicke, deseased well,
> And asks his guerdon, then he semes
> An oughly Fiend of Hell.

A cynic has said that the gratitude of the patient for the physician is well known. It is part of the disease. It comes on with the fever, it improves during convalescence, and is cured by return to health.

In "George Paston's" new book, *Lady Mary Wortley Montague and Her Times*, just issued, there is naturally a good deal about the inoculation of small-pox which Lady Mary was instrumental in introducing into Europe. It is in the spring of 1717 that she first mentions the subject. In a letter addressed to "Mrs. S. C.," probably Sarah Chiswell, she writes:

> A propos of distempers, I am going to tell you a thing that I am sure will make you wish yourself here. The small-pox, so fatal and so general among us, is here entirely harmless by the invention of ingrafting, which is the term they give it. There is a set of old women who make it their business to perform the operation every autumn in the month of September, when the great heat is abated. People send to one another to know if any of their party has a mind to have the small-pox; they make parties for this purpose, and when they are met (commonly fifteen or sixteen together), the old woman comes with a nutshellful of the matter of the best sort of small-pox, and asks what veins you please to have opened. She immediately rips open that you offer her with a large needle (which gives you no more pain than a common scratch), and puts into the vein as much venom as can lie upon the head of her needle, and after binds up the little wound with a hollow bit of shell .... The children or young patients play together all the rest of the day, and are in perfect health till the eighth. Then the fever begins to seize them, and they keep their beds two days, very seldom three. They have rarely above twenty or thirty in their face, which never mark, and in eight days' time they are as well as before their illness. Where they are wounded there remain running sores during the distemper, which I don't doubt is a great relief to it. Every year thousands undergo this operation, and the French Ambassador says pleasantly that they take the small-pox here by way of diversion, as they take the waters in other countries. There is no example of any one who has died in it; and you may believe that I am well satisfied of the safety of the experiment, since I intend to try it on my dear little son.
>
> I am patriot enough to take pains to bring this useful invention into fashion in England; and I should not fail to write to some of our doctors very particularly about it, if I knew any one of them that I thought had virtue enough to destroy such a considerable branch of their revenue for the good of mankind. But that distemper is too beneficial to them not to expose to all their resentment the hardy wight that should undertake to put an end to it. Perhaps if I live to return I may, however, have courage to war with them.

The innovation was not well received, and we are told that during the four or five years after her return to England she seldom passed a day without repenting of her patriotic undertaking; and she often declared that she would never have attempted to introduce the new treatment if she could have foreseen the vexation, the persecution, and the obloquy that it would bring upon her.

> The faculty rose in arms to a man, foretelling failure and the most disastrous consequence; the clergy descanted from their pulpits on the impiety of thus seeking to take events out of the hand of Providence; and the common people were taught to hoot at an unnatural mother who had risked the lives of her own children.

Lady Mary's son had been inoculated in Turkey, but it was not till after she returned to England that her little daughter underwent the operation. Four leading physicians were deputed by Government to watch the treatment, but they betrayed so much scepticism about its success that the mother never dared leave her child alone with any one of them. The Princess of Wales, who had her own children inoculated (after it had been successfully tried on six condemned criminals) proved a powerful ally; and as the practice gradually gained ground, Lady Mary's numerous friends and acquaintances came one after the other to beg for her advice and guidance while the operation was in progress. Thus in a letter to Lady Mar, written in 1723, she says:

> Lady Byng [the wife of Admiral Byng] has inoculated both her children; the operation is not over, but I believe they will do very well. Since that experiment has not yet had any ill effect, the whole town are doing the same thing, and I am so much pulled about, and solicited to visit people, that I am forced to run into the country to hide myself.

Horace Walpole, we learn from himself, was inoculated in 1724; therefore he owed something to the woman for whom he never had a good word. In another letter of the same year Lady Mary announces the death of a little nephew (son of Lady Gower) from small-pox, and adds:

> I think she has a great deal of reason to regret it, in consideration of the offer I made her two years together, of taking the child to my house, where I would have inoculated him with the same care and safety I did my own. I know nobody that has hitherto repented the operation; though it has been very troublesome to some fools, who had rather be sick by the doctor's prescription, than in health in rebellion to the college!

By the year 1724 the efficacy of the practice seems to have been pretty well established. In July of that year *The Plaindealer*, a paper at one time edited by Sir Richard Steele, gave a most laudatory notice of the new treatment, and of the lady who had introduced it to her countrymen. The writer, who was almost certainly Mary Astell, begins by denying the commonly-accepted belief that the English are fond of novelty. She says:

> I have wondered a thousand times how this notion became established. For that nothing is more false in fact may be proved by our old Histories, and is every day remarkable in our modern and familiar practice. . . . Innovations were ever odius to us, and we chose rather to neglect advantages than to try an unbidden path for 'em. What lost England the first possession of that gold and silver world in the Spanish West Indies but her disposition to discredit *Novelty?* Our very laws depend on *Precedent.* And the defence even of rights in Parliament is supported by *What has been,* and seems unconcerned in *Why it was.* Those scandalous oppositions which are so obstinately given to the clearest Bills for publick benefit, such as *Making our rivers navigable, Putting our Lands under a Register, Promoting untried Trades,* and establishing *National Fisheries,* are all convincing instances that no nation under Heaven have so fixed an aversion to the encouragement of *Novelty,* which yet everybody is imputing to us as the Reigning Humour of our Country.

After pointing to the opposition to the process of inoculation as one more proof of our conservatism, the writer refers to a pamphlet lately published by a member of the Royal Society, who, resolving to establish or expose this practice, had informed himself of its success in all parts of the kingdom. She goes on:

> It is demonstrated in the above-mentioned Treatise, from a forty years' examination of the Bills of Mortality, that the small-pox carries off at least one in every nine of all whom it seizes in the natural way; whereas not one in fifty (scarce one in many hundred) of those who receive it by inoculation, have been found to die of it.

After describing the intense malignancy of the opposition, she continues:

> It is the voice of some Historian—but I forget where I met with it—*That England has owed to Women the greatest blessings she has been distinguished by.* In the case we are now upon this reflection will stand justified. We are indebted to the reason and the courage of a Lady for the introduction of this art, which gains such strength in its progress that the memory of its Illustrious Foundress will be rendered sacred by it to Future Ages. This ornament of her Sex and Country, who enobles her own Nobility by her Learning, Wit, and Vertues, accompanying her consort into Turkey, observed the Benefit of this Practice, with its frequency, even among these obstinate Predestinarians, and brought it over for the service and the safety of her native England, where she consecrated its first effects on the persons of her own fine children!

UNDER the will of the late Miss Sarah Maria Stokes, of Edgbaston, each of the following institutions receives £1,000—the Birmingham General Hospital, the Queen's Hospital, Birmingham, and the Birmingham Ear and Throat Hospital. In addition the will directs the division of a sum of £6,000 between various Birmingham hospitals in equal proportions.

LINGFIELD EPILEPTIC COLONY.

The Epileptic Colony at Lingfield had its origin seven or eight years ago. A few philanthropic persons who had previously started a colony for men who were out of work conceived the idea of providing a suitable training school for epileptic children of the poorer classes, for whom no provision is made except the senile wards of workhouses or the very unsuitable surroundings and training of their own cottage homes. The work was begun with about half a dozen children on the farm at Lingfield, which consists of from 250 to 300 acres.

It was found that the applications for admission were very soon in excess of the accommodation, and it became necessary to apply to people interested in the work to provide funds for building.

These calls have from time to time been very generously responded to by three or four donors, and as a result there is now accommodation for about 126 children, that is to say, there are 60 boys under 16, 42 girls under 16, 11 boys over 16, 13 girls over 16.

For the following account we are indebted to Dr. Basden of Crowborough, the medical director of the colony:

There are separate houses for the boys and girls; in addition to these a large schoolhouse, a laundry, in which the elder girls are taught, and a cottage in another part of the farm, where the elder boys live, most of whom are learning gardening.

The staff consists of a matron who is a trained nurse of long experience, a resident lady doctor and a sufficient number of nurses, an excellent headmaster and his wife, assisted by one master and three mistresses.

There is the necessary number of domestic servants, the elder children being utilized to do as much of the housework as their school training and games give them time for.

A large number of children come from boards of guardians and education committees, a few are sent privately. For the pauper children a charge of 14s. 6d. weekly is made; parents or guardians in better circumstances are expected to pay rather more, but all the children are treated alike, and any surplus funds are expended for the benefit of the colony.

The school is certified by the Board of Education.

Only children capable of receiving instruction—that is, who are not imbeciles are admitted. Most of the children present more or less mental defect. Careful investigation is made into each case before admission, the medical attendant of the child being asked to fill up a question form. A complete examination of the child is made on admission, and the details of the condition at that time recorded, the child's photograph also being taken. A daily record of fits is kept, together with notes on general health and progress physically, morally, and in school.

Treatment.

Regular and constant employment, with as much fresh air as possible.

The interest and discipline of school. Organized games.

Amusements, such as concerts and theatricals, in which the children are the performers.

A careful diet, chiefly vegetarian.

Abundance of sleep.

Medicinal.

Careful attention to digestion, with administration of simple aperients as often as necessary.

Potassium Bromide.

After watching new children for from one to six months this drug is given in selected cases, and, where necessary, is energetically pushed to large doses. The results given by bromide in these cases have been very good, and in almost every instance the child's mental capacity and school work has improved.

Fits.

The weekly payments cover the cost of maintenance, but there is no balance to meet capital outlay.

The children admitted six or seven years ago are now over 16, and consequently have to be separately housed. For this new buildings are urgently required. In order to provide accommodation for the many who apply for admission, we are already seriously in debt on our building account. Better work could be done more cheaply if house room were available for more children.

The present great difficulty is to provide houses for "young adults" just leaving our school, and whom it is hoped to teach gardening and carpentering, and the girls, for the most part, laundry-work. If funds cannot be raised for the purpose of carrying out this building then these young people must be turned out, and the work of the last few years is wasted.

The following is the week-day programme of the colony:

Rise 6 30 a m. Bath.
Breakfast 7 30. Porridge and milk.
Medicine 8.30.
School 9.30.
Recess 10.30. 15 minutes for lunch. Bread-and-butter or jam.
School over 12.
Games 12–1 p.m.
Dinner 1 p.m. Soups, vegetables, fish, puddings, meat (once a week).
School 2.
Recess 3.10. 15 minutes.
School over 4.
Games 4–5.30.
Tea 5.30. Bread-and-butter, jam or marmalade. Milk.
Medicine 6.30.
Bed 7. Little ones.
Bed 8. Elder ones.
A few are deputed for domestic duties.

Sunday Programme.

Rise 7 a.m.
Breakfast 8. Bread-and-butter, jam and cocoa.
Medicine 9.
Singing 9.30–10.30.
Children's service 11–12.
Walk 12–1 p.m.
Dinner 1 p.m. As week days.
Sunday school 2 30.
Tea 5. Bread-and-butter, cake, and tea.
Medicine 5.45.
Singing 6–7.
Bed 7.
A few are deputed for domestic duties.

Dr. G. H. Savage, who recently visited the colony as the representative of the British Medical Journal, writes: I spent an afternoon at the colony, and had ample opportunity of seeing the children at work, at drill, and at play. I was very much struck with the excellent method of education which combined the development of the senses and powers of observation with regularity of habit and kindly discipline.

The matron (or lady superintendent) with the resident lady doctor showed me all the inner working of the school, so that I was able to visit the infirmary, where there were but few invalids, and the laundry where the girls were at work.

The schoolmaster and his wife were enthusiastic in their work, demonstrating the good results of the educational system which was being followed.

The diet, which is almost free from meat, was satisfying and the health of the children was undoubtedly good. That such a school exists under such excellent management, and that the educably-epileptic children can be trained at such moderate rates as 14s. 6d. to £1 per week is surprising.

I feel it right to add, however, that though excellent work is being done there is great scope for development, for at present, though free from debt as I understand, they are simply living from hand to mouth, and it is all-important that larger sums should be contributed by the charitable public to extend this most useful and efficient work.

The Nile Reservoir. The report of Dr. J. Ferguson Lees, of Isna, Upper Egypt, supplies further evidence of the importance which large employers of labour at home and abroad in increasing numbers are now attaching to the work done by the medical profession. The report in question relates to the medical arrangements in connexion with the reservoir works in progress on the Nile at Isna, which seem to be of a not less elaborate character than those which the same contractors, Messrs. John Aird and Co., authorized to be made in connexion with their earlier work at Assouan. In general terms, they resemble those of a large standing military camp in a tropical country, the needs of European and native employees being alike anticipated. Dr. Lees and his staff seem also to do a good deal of medical and surgical work for the general population in the locality.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ended April 27th and May 4th the deaths from plague in India numbered 76,771 and 77,776; the seizures during the same periods amounted to 87,394 and 89,747 respectively. The deaths in the chief centres of plague during the weeks in question were: Bombay Presidency, 1,853 and 1,577; Bengal, 3,526 and 3,512; United Provinces, 15,464 and 19,982; Punjab, 54,204 and 51,305; North-West Frontier Province, 12 and 55; Central Provinces, 923 and 662; Burmah, 196 and 151.

Plague seems to be spreading towards the Afghan frontier at Jalalabad, Jamrud, Ghari Mauladad, Charsadda, and Peshawar. On the frontier cases of plague are reported; and as at this time of the year (April, May) many Afghans are leaving India for Afghanistan to escape the hot weather, there is danger of the disease being carried along the caravan route between Kabul and Peshawar.

AUSTRALIA.

Queensland.

Brisbane.—During the weeks ended April 13th and 20th the fresh cases of plague numbered 3 and 0 and the deaths from the disease 1 and 1 respectively. On April 20th 2 cases of plague remained under treatment.

Port Douglas.—During the weeks ended April 13th and 20th the fresh cases of plague numbered 2 and 0.

MAURITIUS.

No fresh cases of plague reported since April 25th.

HONG KONG.

During the week ended May 18th the fresh cases of plague numbered 18, and the deaths from the disease 7.

SOUTH AFRICA.

Cape Colony.

King Williamstown.—During the weeks ended April 27th, May 4th and 11th the fresh cases of plague numbered 2, 0, and 1, and the deaths from the disease 2, 0, and 0. Evidence of plague in rodents has been found recently.

SPAIN.

The report of plague in Carthagena, Spain, notified by a Reuter's telegram recently, is now ascertained to be unfounded.

MEDICAL NEWS.

THE first French Congress of Stomatology will be held in Paris this year from August 1st to 5th.

THE President of the Pathological Society of London, Dr. Pye-Smith, will deliver his valedictory address at a meeting of the Society on Tuesday next.

THE Rev. Frederick Borradaile of Lincoln, whose will has now been proved, bequeathed £500 to Lincoln County Hospital and £100 to Lincoln Dispensary.

A SPECIAL meeting of the Clinical Society will be held on June 14th to make arrangements preliminary to its amalgamation with the Royal Society of Medicine.

DR. LOUIS VINTRAS, Physician to the French Hospital, has been appointed Director of the French Convalescent Home at Brighton and of the Annexe for the Preventive Treatment of Tuberculosis.

THE Irish Medical Schools and Graduates' Association will give a smoking concert at the Café Monico, on June 6th, at 9 p.m. Members can obtain tickets on application to the Honorary Secretary, 77, Harley Street, W.

THE Neurological Society of the United Kingdom is to discuss the relation of posterior basic meningitis with epidemic cerebro-spinal fever at its meeting on Thursday next, the proceedings being opened by Dr. F. E. Batten.

THE Dermatological Society of Great Britain and Ireland held its annual meeting and conference on the afternoon of May 22nd, the principal event being an oration by Professor Lassar of Berlin, on the relationship between dermatology and other branches of medical science. A dinner in honour of the distinguished guest was given by the Society the same evening.

A BANQUET was held at the Mansion House on May 28th to inaugurate a special appeal for £10,000 with which to free from debt the North-Eastern Hospital for Children, Bethnal Green; it resulted in a collection of £2,500 in the room. The Lord Mayor mentioned that the hospital served a poverty-stricken district with a dense population of 470,000 inhabitants. In Bethnal Green the infant mortality last year equalled 280 per 1,000. During the year 1,712 children had been treated in the wards and about 30,000 in the out-patient department.

THE festival dinner in aid of the British Home and Hospital for Incurables at Streatham, held at the Princes' Restaurant on May 23th, resulted in a collection of £2,348. Lord Cheylesmore, the Chairman, mentioned that since 1861 330 persons had passed through the home, and 968 others had received allowances of £20 a year in order to enable them to reside with friends.

TRAINING OF MIDWIVES.—The Essex Education Committee, at a meeting on May 27th, decided to give a number of scholarships of the value of £10 each for the training of midwives. The recipients are to undergo a six months' course at the Leytonstone Home of the Essex County Cottage Nursing Association. Every candidate must undertake to work in the district of the local committee which nominates her for a scholarship.

MR. AND MRS. SAMUEL STRETTON, now of Droitwich but formerly of Kidderminster, celebrated their golden wedding on April 28th, and were the recipients of addresses from several public bodies, including the Corporations of Kidderminster and Droitwich, and of a large number of valuable presents. The latter included a golden rose bowl, offered by the supporters of the Kidderminster Infirmary and Children's Hospital, and a gold matchstand from the Kidderminster Saturday Collections Committee. Mr. Stretton, who became M.R.C.S. in 1854 and L.S.A. in 1856, was medical officer of Kidderminster Workhouse for forty years, and for a great many years one of the most active members of the staff of Kidderminster Infirmary and Children's Hospital; this he still serves as Senior Consulting Surgeon. All their children, twelve in number, are still alive, one of them, Mr. Lionel Stretton, being Senior Surgeon of the hospital mentioned. The parents of Mr. and Mrs. Samuel Stretton celebrated a similar event some thirty years ago in Leicester.

METROPOLITAN ASYLUMS BOARD.—The first meeting of the new Board was held at the office on the Embankment on May 25th. Mr. J. T. Helby was elected Chairman. A letter was read from the Secretary of the Committee appointed to inquire into the ambulance provision for dealing with cases of accident and illness in the streets and places of the metropolis, asking the Board to appoint a representative to attend and give evidence before the Committee. Mr. T. Duncombe Mann, the clerk, was appointed. The various standing committees of the Board were afterwards appointed. The returns of infectious cases showed that during the fortnight ended Thursday last 995 patients had been admitted to the Board's fever hospitals; 51 had died in those institutions, and 836 had been discharged recovered, the total number remaining under treatment being 3,705, as compared with 3,597 a fortnight previously—an increase of 108. Of that number, 2,725 were sufferers from scarlet fever, 925 from diphtheria, 52 from enteric, and 3 from other diseases. There were no small-pox patients under treatment. In the Board's imbecile asylums there were 6,645 patients, as compared with 6,619 at the date of the last return; on the training ship *Exmouth* there were 548 boys, and in the children's schools and homes 1,335 inmates.

KING'S COLLEGE, LONDON.—The forty-seventh annual dinner of King's College, London, was held on May 27th, the Bishop of St. Albans in the chair. The Chairman, in proposing "Prosperity to King's College," pointed out that it included faculties of theology, medicine, engineering, law, and science, and that it had a total of 3,145 students. They stood now on the borders of greater things. If King's College was to advance still further, much larger funds would be needed. They were on the brink of a thorough incorporation with the University of London, and he rejoiced most heartily at the prospect. It was because the college had shown a capacity for still further development that it was taking a share in the work of the university. The principal, Dr. Headlam, in responding, referred to the loss which the college had suffered by the death of Dr. MacFadyen, and suggested that there should be a public recognition of one who died as a martyr in the cause of science and for the sake of amelioration of disease and the benefit of the human race. Alluding to the incorporation of the college with the university and to the appeal for funds which had been made in connexion therewith, he mentioned that the Goldsmiths' and Clothworkers' Companies had each contributed £5,000, and that there had been other promises and donations, raising the amount subscribed up to the present time to £15,000. Sir William Ramsay proposed "The Professors and Lecturers," who, he said, had included Maurice, Daniell, Miller, and Lord Lister, men who had impressed their personality, not merely on King's College, but on the whole world. Professor Seeley responded.

British Medical Journal.

SATURDAY, JUNE 1st, 1907.

THE DEBATE ON THE VACCINATION BILL.

It was a wise, if not an astute, move on the part of Mr. Burns to bring on the second reading of his Vaccination Bill on the first Friday after the Whitsuntide recess. He was thus pretty certain to secure a small House, and indeed there were less than twenty of the regular Opposition present when the Bill came on, while the supporters of the Bill mustered in good force. Nevertheless the opponents of the measure made a fair show of resistance; and if they had been more numerous they might easily have succeeded in talking the Bill out, and so putting off the second reading to a later day. In the present House the Bill has always been certain of a favourable majority, as the antivaccinists favour the measure as an instalment of what they want, although they would gladly see compulsion abolished altogether. They very likely will make an attempt to modify the Bill in this direction in Committee, but we trust the Government will not be so ill-advised as to yield to any such demand. There was a curious incident when the Bill was called, as Mr. Burns was absent from the Chamber, and so the second reading was formally moved by a subordinate member of another department of the Government. Sir John Batty Tuke then made his motion for the rejection of the Bill in a very moderate and sensible speech, a report of which appears elsewhere. He condemned the Bill as a feeble compromise, which would please neither side in the controversy and would afford increased opportunities for evading the law. He based his opposition on a regard for the public health, and gave his reasons for thinking that an increase of agitation would follow the enactment of the measure. As in 1898, the argument was that recognition of the conscientious objector would lead to a diminution of vaccination, and then some day in face of a great outbreak there would not be the means of protecting the people. He described how even now a queue of applicants might be seen waiting to be vaccinated when an epidemic prevailed, and an aggravation of this kind of thing would become a great danger in face of an outbreak in an unprotected community. He held up Germany as the example to be followed, and suggested that as it was time to revise the existing Act, a small representative Committee should be appointed to devise a *modus vivendi* on which could be based a Bill acceptable to both sides. A good many members smiled at the idea, as it would be a herculean task to reconcile antivaccinists like the member for Sleaford and certain medical members of the House of Commons. Mr. Cave, the member for the Kingston Division of Surrey, made a very useful speech in seconding the motion for rejecting the Bill. He argued that vaccination was a real protection against small pox, and that the last epidemic in London had proved this. The Bill as framed would settle nothing, and if, as he admitted, some magistrates had exceeded their powers in refusing exemption certificates, let there be a right of appeal for the applicant to the Local Government Board or some other authority. Altogether, the speech was a valuable contribution to the debate, and the more so as it came from a non-medical member. Mr. Burns next came forward to defend his Bill. He first of all recalled the five promises he had made about vaccination in April last, and said this Bill was the fulfilment of one of those pledges. The Bill was a simplification of the procedure for obtaining an exemption certificate. The Government which had put in the word "satisfies" in Section 2 of the Act of 1898 was responsible for the necessity of amending the Act now. The difficulties which had arisen in administering the Act were all foreseen by those who persuaded the House in 1898 to recognize the conscientious objector. They had hoped that if the process were made easy the agitation against vaccination would be greatly lessened, and would in time die out, but, by requiring the applicant to satisfy the Bench of the reality of his conscientious conviction—that is, to satisfy others of the state of his own conscience—an impossible task—the administration of the Act was injured and a new set of martyrs made to uphold the banner of antivaccination. The state of things, Mr. Burns said, had become intolerable, and the Bill substituted a simple statutory declaration before a commissioner of oaths or a justice of the peace. There were some 12,000 commissioners and some 18,000 magistrates, and so there would be some 30,000 persons before whom the declarations could be made. He refused to add the registrar of births, and gave strong reasons for this decision. He believed the Bill would remove a grievance, and appealed to the sympathy of the House for his measure. After this the debate was mostly on the side of the objectors. The supporters of the Bill, with the exception of Mr. Pickersgill, who asked for amendments, resolutely kept silence in order to obtain a division before the close of the sitting at 5 o'clock. Sir Henry Craik, as the representative of the medical graduates of Glasgow and Aberdeen, denounced the Bill because it was a concession to ignorance and prejudice, and because it left no discretion to the justices or the commissioners of oaths. Sir F. Banbury followed, and most skilfully tried to draw Mr. Lupton (who sat in unwonted silence with a huge bundle of notes) and others into the wordy fray, but all to no purpose. The question was put soon after half-past 4, when the debate closed from want of speakers, and by 20 minutes to 5 the Bill passed its second reading by a majority of 108. It will now be considered in Grand Committee, and then no doubt many amendments will be moved. The antivaccinists are too anxious for the Bill to pass to run any risk of losing it by endeavouring to amend it in the direction of abolishing compulsion, while the supporters of vaccination are not strong enough in this House to make the Bill any more stringent. We do not think the Bill will really make much difference in the number of exemption certificates. During the last few years the numbers have remained practically stationary, as was shown in the debate, and unless some organized system of procuring certificates under the easier methods proposed is attempted, we do not think there will be any large increase. If the careless and indifferent are recruited for the antivaccination army, it will be a deplorable and dangerous result. The earnestness and the energy of vaccination officers will probably be sufficient to prevent this, and then we have some hope that the absence of all serious grievance on the part of those who do not believe in vaccination will steadily lessen, and finally kill, the mischievous agitation of the past few years.

FASHION AND PHYSIC.

THE fashionable physician is not always held in honour by his own profession, and he is a favourite butt for the satire of novelists and playwrights. And it must be confessed that the airs and graces which he cultivates as a part of his professional equipment too often furnish matter for ridicule. He is apt to have "fads" about food, or drink, or raiment, or mode of life, which he imposes upon his patients as if they were laws of the Medes and Persians. The patients of one are known because they refuse soup, and of another because they reject condiments with horror. Fashionable physicians have special formulae in prescribing, sometimes more remarkable for elegance than for efficacy; and they have a carefully-selected list of shrines of healing to which their clients resort with the faith with which an ancient Greek went to Epidaurus. In all this there is nothing very remarkable, except the almost religious strictness in obedience to the most trivial detail upon which they insist. The patients believe that the dietary, with the savoury forbidden meats separated from the comparatively uninteresting things that are allowed, has been adapted after serious consideration to their individual needs, and are as particular in conforming to the exact letter of the law as a high caste Brahmin is about the "purity" of his food. This, of course, has a good side, for half the difficulties of medical practice arise from the disobedience of patients, many of whom seem to think it a mark of an independent spirit to disregard the injunctions of the doctor. They will boast of not taking the advice and medicine they have paid for, as if they were having a joke at the practitioner's expense instead of their own. The fashionable physician may not know more than his brethren; it may be, indeed, that his knowledge is the reverse of profound. Indeed, one is sometimes tempted to think that too much science rather handicaps a physician. The truth is that a man of the rigorously scientific type of mind often cannot bring himself down to the level of the details, which, small in themselves, are of great importance in a sick-room, either as adding to the comfort of the patient or as helping to inspire that faith in the physician which often has a greater healing influence than medicine. This attention to detail and the habitual display of "a good bedside manner" have given rise among people who profess to be strong-minded to a certain degree of prejudice against the fashionable physician. It is well, therefore, that it should be understood that the term "fashionable physician" does not by any means necessarily connote either insincerity or ignorance. Some of the men who have done most for the welfare of their fellow-beings, and who have most contributed to raise their profession in public esteem, have been fashionable physicians. We propose to give two examples—one from the best days of ancient Rome, the other from the most brilliant period of the eighteenth century—who will serve as types of the fashionable physician at his best. One was Asclepiades, the friend of Cicero; the other was Theodore Tronchin, the physician and friend of all the leaders in French society and letters in the age of Voltaire.

Of the Greek physicians who found a sphere for the exercise of their art in Rome, the most famous was Asclepiades of Prusa in Bithynia, a pupil of the Alexandrian School. He was no believer in heroic medication, but used gentle remedies, and relied largely on hygiene, temperance, exercise, open air, and bathing. To his teaching was largely due the general use of warm baths which under the Empire became a passion, and finally an abuse. Like the late Sir James Paget, Asclepiades had great faith in good wine; he had made a careful study of the conditions in which its administration was beneficial. He gave it in accurately adjusted doses in fevers, in depression, in heart disease, in delirium, and in convalescence. He prescribed it for women, to whom in the sterner days of the Republic it was absolutely forbidden. By this relaxation of the ancient law he won great popularity among the fair sex. Asclepiades was a man of wide culture, the friend of Cicero and other leading men of the time. Like certain fashionable physicians of a later day he was denounced by some as a quack, but he had an immense reputation with the public, which credited him with power to raise the dead to life. More fortunate than many other doctors in all ages, he lived to a great age without illness, a circumstance which he attributed to the efficacy of his own hygienic precepts.

In the Middle Ages men drifted far from the sweet reasonableness of Asclepiades. In the seventeenth century the time was ripe for reform. The impulse was given by Molière, who was doubtless inspired by some disappointed member of the Faculty. It is probable that the more revolting parts of the older medication were beginning to die out in his day, otherwise he could scarcely have failed to make it the object of his satire. According to him, the medical treatment of the time might be summed up in the famous formula, *Seignare, ensuita purgare.* To what an excess bleeding was carried may be gathered from that spiteful old gossip, Gui Patin, who was Molière's contemporary. He says: "This remedy, boldly and "happily repeated at the outset of diseases, is one "of the principal mysteries of our art." He bled his own wife a dozen times for inflammation of the lungs, and his son a score of times in a continued fever. He bled a child of 7 thirteen times within a fortnight; he bled an infant 2 months, and another 8 days, old. He did not spare himself, for he had himself bled seven times for a common cold. He cites with approval the practice of one colleague who bled a patient suffering from fever thirty-two times; that of another who bled sixty-four times for rheumatism; and that of a third who bled a man of 80 eleven times in six days. Of a physician who died without allowing himself to be bled, he says that "the devil will bleed "him in the other world, as a scoundrel, an atheist, "deserves." Most of the physicians of that day were as "sanguinary pedants" as Patin, and the bloodshed continued far into the last century.

One of the strongest opponents of this and other drastic methods of treatment was Tronchin, the most famous physician of the eighteenth century. His life has recently been written by a member of his family,[1] and the book is interesting not only from a medical point of view, but as a picture of life in Paris before the Revolution. Born at Geneva in 1709 of a family of good position, Tronchin, after studying for a time at Cambridge under Richard Bentley, spent some time in London, where he made the acquaintance of Mead. He asked that great man the secret of his vast reputation. Mead modestly answered: "I have done "little good, but I have always been careful not to do "harm." Tronchin never forgot these words, and the principle which they expressed was the guiding principle of his life. In 1728 he went to Leyden, where he worked under Boerhaave, whose favourite pupil he was. There he graduated, and for some years he practised

[1] *Un Médecin du XVIIIme Siècle: Théodore Tronchin.* Par Henry Tronchin. Paris: Plon-Nourrit et Cie. Genève: Librairie Hundig. 1907.

in Holland. In 1754 he returned to Geneva, where, except for one or two visits to Paris, he remained till 1766, when he finally took up his abode at the French Court. Here we are concerned with his career only in respect of the principles of practice by which he won the confidence of nearly all the leading personages in Europe, and at the same time incurred the enmity of a great many members of his own profession. It must be admitted that he handled the doctors rather roughly. He said that, blinded by their little arguments, they loved rather to give laws to Nature than to seek them from her. He was never tired of insisting that the only right method in medicine was the laborious study of Nature. The wise physician is he who contents himself with removing obstacles. It is Nature alone that heals. He belonged to no sect and followed no system, holding that systems spoil everything and that the best of all sects had done more harm to medicine than medicine had done good to the human race.

Tronchin earnestly condemned what he called the disastrous activity of his brethren. It is often, he said, the height of wisdom to do nothing. The first quality required in a physician is that he shall be an honest man; science comes after. The evil which a doctor does not do should be counted unto him for righteousness. If sometimes a man may be reproached for sins of omission, these are lost in the mass of sins of commission of which many of them are guilty. Among these sins of commission he counted the use of violent purgatives, bleeding, and emetics. Of bleeding, in particular, he spoke as a positive malefaction. He states that he was asked by a patient whether he should be bled, as his doctor advised, for the eight hundred and thirty-third time. The doctor held this to be necessary, but there was no blood in the patient's body. The operation was therefore to be deferred for a week, till a fresh supply was manufactured!

In the management of his aristocratic patients Tronchin had recourse to certain subtleties of art. Knowing that it would be useless to tell a courtier that he must get up early and be moderate in food, he put his advice into the form of a formula, as follows: Every day three pills, the first to be taken at seven in the morning on getting up; the second at five, after a light meal; the third at nine, just before going to bed. It is no wonder that his pills, which were made of bread, administered in this way wrought cures that seemed to be miraculous. He was a great enemy of drugging, and laid the greater stress on diet, pure air, exercise, and living in the country. Like Sydenham, he thought that the outside of a horse was the best thing for the inside of a man. Owing to his influence, the fashionable ladies of Paris, thirty years before the Revolution, got into the habit of taking walking exercise in the morning, and for this purpose he made them wear short skirts and flat soled shoes. He insisted that babies should not be tightly swathed in swaddling clothes, and should not be drugged for every trifling ailment. It was from him that Rousseau learned the sounder part of the hygienic teaching which he long afterwards embodied in his *Emile*. He would not allow his patients to sleep more than seven hours, and raised his voice against overheated rooms and lounge chairs. He was an advocate of the open window, and even succeeded in getting the windows of the Palace of Versailles, which used to be hermetically sealed from All Saints Day till Easter, thrown open; and he impressed on Louis XV the dangers arising from the stagnant water of the Canal. He enjoined men of letters to work, like Victor Hugo, standing at a desk, in order to avoid the evils that wait on a sedentary life. Sometimes he insisted on a vegetarian diet, sometimes on milk, sometimes on farinaceous food. He allowed, like St. Paul to Timothy, a little wine for the stomach's sake, but used to say that history taught that the strongest men and the strongest peoples had been water drinkers. Other subjects of denunciation were wigs, tea, coffee, and hot baths, which he said caused the decay of Rome. He preached against the barbarous iron appliances then in use for disease of the spine, and treated his cases by suspension. Tronchin well knew the influence of the mind on the body, and used it with great skill on the ladies with vapours who flocked to him. As Voltaire said of him, he knew the soul and was therefore a great physician. He taught them the evil effect of unrestrained passions on the body, and he urged his female devotees instead of giving up most of their time to society, to do needlework, to read, and to quiet their minds with music.

Tronchin was a man of fine presence, who spoke well on all kinds of subjects, and mingled on equal terms with the most cultivated society in Europe. Voltaire, who believed as little in medicine as in anything else, believed in Tronchin. When he was at Geneva all the fine ladies of Paris and many from England flocked to Switzerland and put up with uncomfortable accommodation to be under his care. His advice was sought by Frederick the Great, the King of Sweden, the King of Denmark, and Pope Clement XIV. In Paris his consulting rooms were crowded and the street in which he lived was blocked with carriages. He had among his patients Mme. de Pompadour, Buffon, d'Alembert, and Diderot, besides innumerable lords and ladies, commoners, writers, financiers, actresses, and all sorts and conditions of men and women. Yet he was never a rich man, for he gave to the poor a large part of what he got from the rich, and when he died in 1781 he was followed to the grave not only by the Duke of Orleans, who mourned him as a brother, but by a crowd of poor people to whom he had not only given advice, but money to buy the medicines that he ordered. There probably was never a physician who was more trusted by patients, and it might be said of him, as Johnson said of Mead, that he lived in the broad sunshine of life more than almost any man.

Tronchin's ideas, which were scoffed at by many of his brethren, are now universally accepted, and the methods of barbarism against which he waged war are abandoned. He used to say that it is not enough to know the evil or even the remedy; the doctor must know how to induce the patient to use it. This art he had in perfection. This is the true secret of the fashionable physician.

THE TREATMENT OF POOR CONSUMPTIVES.

We give with all reserve a report which appeared in the *Daily Graphic* that the Local Government Board has for some time past been conducting through its medical staff a full inquiry into the condition of the whole of the sanatoriums for the treatment of consumptives throughout the country and the methods of the various organizations which control them. The result of these investigations will, it is stated, be contained in a Blue Book which will shortly be ready for publication. Particular attention is said to have been directed to the inadequacy of the Poor Law in its relation to the treatment of tuberculous patients, and it is anticipated that the issue of the report will be followed by the appointment of a Royal Commission which will deal with the whole question of the treatment of poor con-

sumptives. We have been unable to obtain any official confirmation of the report, which is described as "not authorized." We may remind our readers, however, that in the House of Commons Mr. John Burns stated, in reply to Sir Francis Channing, that Dr. Bulstrode, one of the Medical Inspectors of the Local Government Board, has been engaged for some time past on an inquiry as to phthisical sanatoriums in England and Wales, and incidentally had acquired much information as to the working of both voluntary and compulsory notification of pulmonary phthisis. It was added that this information had been embodied in a report now in the press.

COMPENSATION FOR INDUSTRIAL DISEASES.

FOR the last few years there has been a growing feeling in the country that workpeople suffering from some of the well-known industrial diseases should be regarded as proper subjects for compensation at the hands of their employers. In Great Britain legislation is so very much a matter of experiment and expediency, as well as of experience, that the progress of industrial legislation is particularly slow. An effort has lately been made in the House of Commons to quicken the pace. Provision was made a few years ago for workmen to receive compensation for injuries received irrespective of the manner in which the accident happened. It was therefore not unexpected that the present Parliament, which contains so many Labour members and social reformers should have at an early stage of its existence proceeded to amend the Workmen's Compensation Act and extend its application so as to bring within its influence a larger number of persons variously occupied. When, therefore, the Workmen's Compensation Bill was passed last year it was felt that certain industrial diseases should be scheduled as coming within the Act. Until then persons suffering from industrial diseases received no compensation because they were not suffering from an accident, but an exception was made in the law courts in cases of anthrax, a disease which, owing to its sudden development and distinct relation to particular work on a particular day could not fail to be regarded, although a disease, as an accident. This circumstance has paved the way for the inclusion of other diseases. On another page of the JOURNAL we give a brief review of the main points in the report of the Committee appointed by the Home Secretary to inquire into the subject. With the findings of the Committee there cannot be anything but general agreement. The Committee has brought to bear calm and deliberate judgement upon the solution of the several problems submitted to it. It has been known for some time, for example, that bottle-makers were liable in a greater degree to cataract than men engaged in other occupations. According to the statement of the Secretary of the Glass Bottle-makers of the Yorkshire United Trade Protection Society, 30 per cent. of their superannuated members had suffered from cataract. This is a much higher percentage of cases than the numbers given by the medical witnesses. Dr. William Robinson stated that in one year there had been admitted into the County of Durham and Sunderland Eye Infirmary 18 men, out of a body of 122 bottle-finishers, suffering from cataract. This is a large number. The disease commences, too, at a comparatively early age. Among German glass-workers cataract is present to the extent of 12 per cent. It was decided by the Committee that cataract in bottle-makers should be scheduled. The question as to whether bronchitis, pneumonia, and fibroid phthisis should be regarded as industrial diseases was perhaps one of the most difficult questions set the Committee for solution. These diseases are so frequently due to causes other than dust that to have scheduled them would at least have been premature. Even admitting fibroid phthisis to be a trade disease, it is not always a sufficiently distinguishable trade disease; and besides, it is often due to other causes. In a word, it is not specific to the employment. Medical evidence on this point is stated to have been given, among others, by Drs. Robert Owen, Arthur Hall, Robertshaw, J. Haldane, and T. Oliver, but there is an economic side to the problem which is of as much, if not more, importance than the purely medical. What the effect of the extended Workmen's Compensation Act will be upon the industries of this country and upon the workpeople themselves time alone can tell. All over the country there are expressions of dissent. It is maintained that older workmen will have a difficulty in finding employment. Already in certain towns it is said that workmen who are fairly well on but not far advanced in years are dyeing their hair to make themselves look young. Whether the insurance companies will require medical examination of all the workpeople employed in factories remains to be seen. Whilst it is only reasonable that persons who have lost their health through lead poisoning caught in following their employment should receive compensation, there will doubtless be many frauds attempted. The extension of the Act will give plenty of work to the lawyers and probably also to medical men in courts of law.

THE ACTION OF WINE ON THE TYPHOID BACILLUS.

IF a drinking-water is suspected of containing typhoid bacilli, is it a useful precaution to dilute it with wine before imbibing it? According to MM. Sabrazès and Marcandier the answer to this question must be unhesitatingly in the affirmative.[1] They find that ordinary wines exercise a distinctly bactericidal effect upon the typhoid bacillus. If two drops of a typhoid culture are added to wine in a test tube the bacilli are rapidly killed, and the same action takes place, though less quickly, when the bacilli are added to a mixture of wine and water. Incidentally, the corollary from these considerations would appear to be that those who are anxious to avoid contracting typhoid fever would be in the position of greatest security if they abstained from water altogether, and drank nothing but pure wine; but the authors do not press this point. They have investigated a variety of wines and find that these differ somewhat in their efficacy, the general rule being that white wines are more potent than red. Champagne appears to be the most valuable of them all, as it destroys the bacilli in less than ten minutes; then come other white wines Sadirac and Cérons, which take some five or ten minutes longer. Of the red wines Beaune is one of the most effective, taking something under thirty minutes to complete its bactericidal effect, whereas with some of the others from two to three hours are necessary. These experiments were made with wine unmixed with water. As examples of the delayed action produced by the addition of water, it is stated that when red *vin ordinaire* receives an addition of water up to dilutions of 1 in 2 or 2 in 3, the time requisite for the complete bactericidal action is extended from two to four hours; and with champagne containing equal parts of water the time is increased from ten minutes to one and a half hours. In actual practice, in order to feel quite secure that a suspected water has been freed from danger, the authors recommend that an equal quantity of wine be added several hours before consumption, six hours when white wine is used and twelve when red is employed. All this, so far as it goes, seems good news for the bibulous fraternity. But the expectant alcoholist has a disappointment in store for him. MM. Sabrazès and

[1] *Ann. de l'Inst. Pasteur*, April 25th, 1907.

Marcandier state that the proportion of alcohol, which in their tests varied from 8 to 15 per cent., has scarcely any influence upon bactericidal action. The acidity of the wine is the property to which the destruction of the typhoid bacillus is mainly due. Thus, a white Sadirac which killed the bacilli in less than fifteen minutes, was found, after neutralization, to be capable of retaining living organisms for more than six and a half hours; and when equal parts of water were added the bacilli remained alive for several days. The hyperacidity of the white wines as compared with the red appears, in the cases investigated, to account for their superior bactericidal action. In addition to the numerous organic acids usually present in wine, white wines contain a variable amount of free sulphuric acid, and it is considered that their inimical action upon bacteria is especially favoured by the presence of this substance. These observations suggest a ready, if not very palatable, method whereby the staunch teetotaler can disinfect his drinking water without doing violence to his principles.

"A HOPELESS CAUSE."

THE Philistines are upon us. The article in which last week we ventured to give our impressions of the debate between Miss Lind-af-Hageby and Professor Halliburton, has brought upon us a small avalanche of letters from supporters of the Swedish lady who shows so fine an altruistic spirit by coming to this country to lighten our darkness in the matter of vivisection. There is a curious family likeness about these letters. We do not suggest that they have a common source of inspiration, but we may say of them—

> Facies non omnibus una
> Nec diversa tamen, qualem decet esse sororum.

They all denounce with equal bitterness the disgraceful conduct and rowdiness of the medical students, and, with one exception, imply that the antivivisectionists bore the insults of their opponents like lambs without even bleating in response. Having ourselves been present on the occasion, we have no hesitation in saying that this is a misrepresentation of the case. We have already expressed our regret that the students did not better control their feelings of not unnatural indignation, but the fact remains that of the two speakers we heard more of Miss Lind-af-Hageby's speech than of Professor Halliburton's. If the antivivisectionists made less noise, that is explained by the fact that most of them were women. The students, whose conduct we do not seek to extenuate, had at least the excuse of youth; that plea could scarcely be put forward on behalf of the ladies who shrieked "Puppies" by way of reply to the opposition who cried that Lord Lister was a brute, and who greeted with sympathetic laughter the heresaw sentiment expressed by Miss Lind-af-Hageby, when she declared that "she spoke "for a considerable section of antivivisectionists when "she said that they did not consciously accept a friend "of vivisection, nor were they terrified into moral "cowardice when they were ill and *when their children* "*were ill.*" This fine display of altruism was in significant accord with an expression which we could not help overhearing from a man who seemed to be discharging the functions of a steward. When Professor Halliburton was describing the sufferings of patients from diphtheria before antitoxin came into use, this philanthropic person who it may charitably be hoped has never seen a case of the disease, snorted "Drivel!" We should not mention this were it not that the frame of mind is typical of the philozoist. The person we have quoted would doubtless find an "elective affinity" in a lady who at a more recent debate on vivisection stated that she loved a monkey which she kept as a pet, and would rather vivisect Mr. ——— (a clergyman who had dared to say something in defence of experimental research) than her monkey. Suggestions that vivisectors should use themselves as subjects of experiment were freely made in the Portman Rooms, and the evidence given by antivivisectionists before the Royal Commission shows that there are at any rate some among them who would prefer that a man should be "tortured" rather than a dog. And yet these are the people who speak of the demoralizing effects of science! Two correspondents have written to point out that Miss Lind-af-Hageby is not a "professional champion "of obscurantism." We were under the impression that the lady's services to the cause she so ably represents brought her fees as well as fame—and we are sure the labourer would be well worthy of her hire—but if we are mistaken in this supposition we have great pleasure in substituting the word "amateur" for "professional." Her performance certainly suggests an amateur rather than a professional hand.

UNEXPECTED DEATH AND THE STATUS LYMPHATICUS.

Two recent cases have called public attention to the condition known as "status lymphaticus," but there is no ground whatever for trying to make a sensation of it, as certain newspapers have done, as if it were something altogether new to the medical profession. For many years it has been known that in children sudden death occurred from trifling and apparently quite inadequate causes. Those who have made many medico-legal *post-mortem* examinations, or have been pathologists to large children's hospitals, have learned to recognize a group of fatal cases in which it has not been possible to determine the precise cause of death. In some instances slight dyspnoea had preceded the fatal event, and as enlargement of the thymus has been found, to this the death has been attributed—the so-called thymus death. But in 1889 Paltauf, from an unusually rich experience, gave a new explanation of these cases. He determined that in addition to enlargement of the thymus there was a general hyperplasia of the lymphatic glands and the adenoid tissue generally, particularly the tonsils and the lymphatic follicles of the intestines and of the spleen, and hypoplasia of the arterial system has also been present. To this combination he gave the name "status lymphaticus." Clinically the subjects are usually well nourished, but pale and of a flabby lax habit, with the superficial glands enlarged, hypertrophy of the tonsils, a palpable spleen and a percussion flatness over the sternum, indicating an enlarged thymus. The children are often rickety or the subjects of eczema or prurigo. Spasm of the larynx has been a common feature. The sudden death has taken place under a variety of circumstances. One of the most common has been during anaesthesia for some slight operation, as circumcision, or for adenoids, or during convalescence from a mild fever. The explanation is by no means easy. In a few cases in which dyspnoea has been a symptom the compression of the enlarged thymus may have been the cause, but in a majority no satisfactory reason has been found, and writers have been forced to conclude that there is a special vulnerability of the system associated with the general hyperplasia of the lymphatic tissues. Others have thought that it may mean an overproduction of the internal secretion of these structures or lymphotoxaemia. But whatever the explanation, we must recognize the existence of the group of cases, and in children who present the signs of this lymphatism, as it is called, we should not advise operation, and we should be particularly watchful in what appear to be slight ailments.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

WE are informed by the Secretary of the Royal College of Surgeons of England that a meeting of Fellows will be held on July 4th, at 3 p.m., for the election of four Fellows into the Council of the College, in the vacancies occasioned by the retirement in rotation of Sir John Tweedy, Mr. Page, Mr. C. W. Mansell Moullin, and Mr. Eve. Sir John Tweedy was substitute member for Mr. Davies-Colley until 1904, but retained his seat for several years, being President according to Charter. Mr. Moullin retires as substitute member for Sir William MacCormac, and Mr. Eve as substitute for Mr. Jessop. There are no death vacancies. Blank forms of the requisite notice from a candidate of his nomination may be obtained on application to the Secretary, and the same may be received by him, duly filled up, not later than Monday, June 10th. A voting paper will be sent by post to each Fellow whose address in the United Kingdom is registered at the College on Friday, June 21st, and Fellows will not be required to apply for voting papers. The Secretary requests that Fellows be careful to furnish him with their correct addresses. Our usual analysis of the composition of the Council will be found at p. 1341. It is important for Fellows to bear in mind that on this occasion the Poll will be open from 3 p.m. to 5 p.m., thus beginning one hour later than according to recent custom. We are informed that Sir John Tweedy will not seek re-election, whilst Mr. H. W. Page, Mr. Moullin, and Mr. Eve will stand again for election.

EVELINA HOSPITAL FOR CHILDREN.

THE new out-patient department at the Evelina Hospital for Children was declared open by the Lord Mayor on May 23rd. He was accompanied by the Lady Mayoress and the Sheriffs, and was received by Mr. Charles Wightman, the Chairman of the institution, Sir John Murray Scott, Bart., the Treasurer, and Mr. Leopold de Rothschild and Mr. D. Malcolm Scott, the Trustees. After a thorough inspection of all the alterations and improvements effected, the visitors assembled in the new waiting hall, where Sir William Treloar formally declared the new portion open and dedicated to the sick children of the poor. Various votes of thanks brought the proceedings to an end, that to the Sheriffs and their ladies being proposed by Dr. Frederick Taylor and seconded by Mr. Tubby, and the party then adjourned for tea to the general dining hall of the hospital. This event marks the completion of the transformation undergone during the past few years by this institution, which with one exception is the only hospital for children in South London, and very much bigger than its single colleague. It now has cots for 76 children, and of late years its in-patients have averaged 1,000 and its out-patients 30,000 annually. The old out-patient department, with its inadequate waiting hall and five small rooms which many will remember, has practically disappeared. The hall itself has been enlarged by removing the casualty room and the dressing-room, while the dispensary has given place to a bath-room for out-patients, a new casualty department being formed out of the old consulting-room and two other small rooms. The out-patient department proper is now in an entirely new wing, the ground floor of which is well arranged for medical work and dentistry. At the bottom of the stairs leading to the upper floor is a room communicating with the dispensary for patients waiting to receive their medicines. On the first floor the ample provision for surgical work includes an out-patient operating room with an anaesthetizing chamber adjoining, and a special room for ophthalmic work. The second and third floors are given up to improved accommodation in the way of lecture, sitting, and bed-rooms for the nursing staff, together with a ward for sick nurses. In the basement in addition to a drug store and dark room is an *x*-ray department; an electrically-driven lift has also been provided. The floors of the out-patient rooms and corridors are of vitreous mosaic paving, the rooms, staircases, and corridors having a dado of vitreous tiles. For the walls and ceiling of the operation room and its annexes, as also for the lavatories, Luxilite glass tiles have been used. Other improvements effected are the provision of emergency staircases and screens to cut off staircases from the corridors, as suggested by the London County Council by way of precaution against fire. The total cost of these latest improvements is estimated to be £14,000, of which about one-half still remains to be collected. The Lord Mayor in his speech remarked that the hospital was situated in one of the poorest districts in London, and doing splendid work, and laid special stress upon the wisdom of having made good provision for the sisters and nurses; in the absence of attention to their health and well-being they could not be expected to carry out their duties to their little patients with real efficiency, however willing.

THE REGISTRATION OF NURSES.

THE Medical Society of London lent its rooms on Friday last for the fifth annual meeting of the Society for the State Registration of Nurses. It was well attended, and its note, as set by the Chairman, Miss Mollett of the South Hants and Southampton Infirmary, in her opening address, was one of patient confidence in eventual success, coupled with a clear recognition of the many difficulties yet to be overcome. Some of the grounds for this attitude were indicated in the executive committee's report. Summarizing its gist on this point in general terms, it was shown, in the first place, that the nature of the opposition had entirely changed. Some years ago it was a scornful refusal even to consider the matter seriously; now it was admitted that the desire of nurses for some kind of official recognition was legitimate, and the only question was the form which it should take. Secondly, there had been an actual victory, one of permanent importance; the Select Committee of the House of Commons had reported in favour of registration. Finally, the Society could now boast that its wishes were those also of the medical profession inasmuch as the British Medical Association had formally expressed an opinion that the registration of nurses was desirable in the public interest. The report also contained a review of the position of nurses in regard to registration in the colonies and foreign countries. In Germany and in thirteen of the United States of America official registration of nurses after a prescribed period of study is already in being. In Denmark and Holland a proposal to the same effect has been made and favourably received. In Ontario, Canada, a Bill was introduced some time ago but withdrawn by the promoters just before the third reading because in its final form it did not seem to offer a satisfactory guarantee that the standard of knowledge demanded from nurses would be sufficiently high. In Australia a Bill has been introduced in the New South Wales House of Legislature and referred to the Select Committee for consideration of the report. In New Zealand registration has been in force for the last five years, the results being deemed by the Inspector-General of Hospitals and Charitable Institutions highly satisfactory.

A UNIQUE HONOUR.

THE degree of Doctor of Medicine was conferred upon Dr. Wilfred T. Grenfell, C.M.G., by the University of Oxford, *causa honoris*, at a Convocation on May 28th, in recognition of the work he has done in improving the social condition of the Labrador fisherfolk. This is the

first instance of an honorary M.D. degree conferred by Oxford. Dr. Grenfell was educated at Marlborough and Queen's College, obtaining his "blue" for Rugby Union football. Afterwards he studied medicine at the London Hospital, where he was house-surgeon to Sir Frederick Treves. On completing his studies he joined the Royal National Mission to Deep-Sea Fishermen in 1889, and worked amongst the fishermen in the North Sea till 1892, when he initiated work of a similar character amongst the toilers of the sea in Labrador and North Newfoundland. He commanded his own vessel, being a master mariner. During the fifteen years he laboured in those regions he was instrumental in establishing four hospitals and several co-operative stores, besides promoting many other schemes of a practical character with the object of helping the settlers to free themselves from the chains of the truck system, by which they had been bound for so many generations. Dr. Grenfell also assisted the administration of justice, and helped to fight the liquor traffic.

Dr. Bier, the Sultan's special physician, has been decorated with the Iftihar Order in brilliants. This is the highest decoration that is conferred in Turkey.

The annual dinner of the Indian Medical Service will be held in the Adams Room at the New Gaiety Restaurant, Strand, on Thursday, June 13th, at 7.45 p.m., when Surgeon-General Sir Benjamin Franklin, K.C.I.E., will preside. Officers intending to be present are requested to communicate as early as possible with the Honorary Secretary, Lieutenant-Colonel P. J. Freyer 27, Harley Street, Cavendish Square, W.

The Cavendish Lecture of the West London Medico-Chirurgical Society will be delivered by Mr. C. B. Keetley on Friday, June 21st, in the Town Hall, Kensington. The subject will be The Question of Preserving or Sacrificing Parts and Their Functions. There will be a reception by the President at 8 p.m., and the lecture will be delivered at 8.15.

A Medicina Contemporanea of Lisbon states that an epidemic of small-pox is prevalent in Funchal. The Governor-General has sent a circular to the consuls on the island, pointing out that there is no cause for alarm, but calling on them to take the precautions dictated by science. We gather, however, from our Portuguese contemporary that the carrying out of vaccination has had to be suspended owing to the lack of vaccine. In the meantime, the sufferers are being isolated, but they have to wait their turn for admission.

THE SPECIAL REPRESENTATIVE MEETING.

The Special Representative Meeting convened by the Council to consider the alterations in the Charter as drafted by the Organization Committee began its deliberations at the Examination Hall, Victoria Embankment, London, W.C., at 9.30 a.m. on Wednesday, May 29th, Dr. J. A. Macdonald being in the chair.

The Chairman announced that since its session at Caxton Hall, the Representative Body had suffered a sad loss in the death of Dr. Comyns Leach, the Representative for West Dorset Division, and that he regretted further to have to announce the deaths of Dr. Markham Skerritt, the ex-Treasurer of the Association, and of Dr. Groves, of the Isle of Wight, a highly valued member.

The Agenda included an alteration of the present By-law 20 by which the election of the chairman of the Representative Meeting and the determination of the order of business is no longer required to be taken as the first business at such meetings. This alteration was agreed to without discussion.

The early business, dealing with the Charter, was disposed of with little or no discussion. The Dublin Division having given notice of an amendment to the effect that while it heartily approved of the objects for which a Charter is being sought, the consideration of the draft should be postponed in order to give the Divisions time to consider the form of Charter best adapted for the Association, Dr. Martley pointed out that the objects for applying for a Charter were especially applicable to Ireland, and evidenced the question of benevolence in this connexion. The points of contention were the composition of the Central Council and the mode of election of the members of that body. He attacked the schemes which had been brought forward from the point of view of inconsistency. In quoting from the Journal, he stated that the Divisions had been urged to make up their minds, "as the decisions arrived at "when the matter is discussed will be binding," and objected to this suggestion. He especially appealed to members who had received no specific instructions from their constituencies. Dr. Straton (Salisbury) approved of postponement, chiefly on the ground of financial embarrassment. The Association had entered upon a phase in which it was not justified in undertaking a heavy additional expenditure, partly on account of the general diminution of the yearly surplus and partly on account of the additional expenditure involved through the rebuilding and the consequent leasing of temporary premises. The Chairman of the Organization Committee pointed out that the opposition appeared to fail to appreciate that the matter was not one of parochial or local policy, but had become one of Imperial policy, and that postponement might mean the estrangement of the Colonial Branches from the mother Association. Dr. Robertson (Glasgow) stated that his Division did not fully realize the exact reasons why it was desired to apply for a Charter at all. Dr. Bradshaw asked for a financial statement referring to the probable cost of an unopposed Charter, of an opposed Charter, and of the winding-up of the present Association. He considered that the Divisions had not had two years to consider the Charter, as had been stated, but had only had some six weeks since the present draft had been sent down to them—a time which was too short for a proper discussion of all the many points contained. He stated that he had reason to believe that, if proceeded with, a petition of organized opposition to the Charter by members of the northern Branches of the Association would be laid before the Privy Council.

The effect of postponement on the Divisions and also on the Colonial Branches having been fully discussed, the amendment was put to the vote, a vote by card being claimed. Thirty-four Divisions, representing 3,784 members, voted in favour of the amendment; and 81 Divisions, representing 8,502 members, voted against it, thus negativing it by 47 Divisions, representing 4,718 members.

Following this, a motion by the Wandsworth Division, ably proposed by Dr. Fothergill, to the effect that the Association be called the "British Imperial Medical Association," was lost.

An attempt was made to leave out of the Draft Charter, under Clause 2, Section (2), all the subsections describing the objects and powers of the Association, but this proved futile. Special arguments were employed against the suggestion that the Association

should have power to promote the candidature of any member of the Association for Parliament, on the ground that politics should be left untouched, but this raised much opposition, and the example of the National Union of Teachers was freely quoted in support of the line which it was desired that the Association should take up. Dr. Bradshaw believed that the introduction of party politics would lead to a wholesale resignation of members. The endeavour to exclude the Association from taking up medical defence met with a similar fate. Lastly, the idea of limiting benevolence to the members of the Association did not receive sufficient support to justify its adoption. A somewhat lively discussion took place on an amendment by the Stockport Division to Clause 6, to the effect that the governing powers of the Representative Meeting be handed over to the Council and that the Divisions be only retained as bodies to deal with local matters. On being put to the vote, however, the amendment was lost by a very large majority. The greater part of the rest of the draft Charter was then agreed to without discussion.

With regard to the Ordinances, debates took place on several amendments, the majority of which, however, were lost by considerable majorities. Wandsworth proposed that a list of qualifications accepted by the Association for eligibility for election should be prepared by the Council. This was to accommodate certain Colonial Branches, but difficulties in the way of the smooth working of such a plan were mentioned, and the suggestion was lost. Another point, which was eventually lost, referred to the exemption of political offenders from automatic expulsion. The Organization Committee recommended certain alterations of the Ordinances to allow of the Colonial Branches defining certain rules which affected their local conditions exclusively. This alteration partly affects the ordinances and partly the by-laws; in both cases the recommendations were adopted. The opinions of the Colonial representatives were heard on this and on several other points. We understand that several gentlemen have come especially from distant Colonies (such as Cape of Good Hope, Dr. Guillemard; Natal, Dr. Strapp; New South Wales, Dr. Twynam and Dr. Worrall, and Colonel Joubert de la Ferté, representing the Indian Medical Service). Lastly, the recommendation for the enforcement of the carrying out of the referendum when the Council had determined upon it within a period of five months, which was brought forward by the Organization Committee, was preferred to the other suggestions moved by certain Divisions.

Only a few minor alterations in the proposed By-laws were adopted, the greater number of the suggestions being negatived by very decisive majorities. The meeting was discussing the question of the applications for grants by Divisions, when a motion to adjourn the meeting was carried.

At the Special Representative Meeting, the Chairman, Dr. J. A. Macdonald, made a special appeal to the Representatives, and indirectly to the Divisions, on behalf of the Central Emergency Fund. He pointed out that the struggle in South Wales has been very generously supported locally in the past, but as the strain had been a severe one he thought that the Association as a whole should be asked to support the members in difficulties in the Ebbw Vale district. He instanced a most striking example of unity in the Association, in which a Colonial Branch had, unasked, sent a donation for the purpose.

A full report of the proceedings will be published in a subsequent issue, and the continuation of this summarized account will appear next week.

General Medical Council.

[*The full report of the Proceedings of the Council will be published in the* SUPPLEMENT *of June 8th.*]

NOTES.

THE 84th session of the General Council of Medical Education and Registration opened on Tuesday, May 28th.

President's Address. — The President's introductory speech foreshadowed an unusually short session of the Council. The penal business is light, and will probably consume but little time, all of the cases being those of persons convicted in ordinary law courts, so that the Council will have nothing more to determine than the question whether their offences have been such as to properly involve their removal from the *Register*. The finances of the Council are in a satisfactory position, and there is little before it of a controversial nature. Perhaps the most weighty issue being brought up by the contemplated action of the British Medical Association in taking up the position of complainants, which may probably involve the withdrawal of all members of the Council from membership of the Association.

Reciprocity with Nova Scotia.—The General Medical Council having considered the conditions under which medical qualifications are granted in the province, have instructed the Registrar to accept certain qualifications for registration. It may be remembered that at an earlier stage a little difficulty was felt in that only a four-year curriculum was required in the province, and it is gratifying to learn that already the provincial authorities have undertaken to speedily extend their curriculum to five years, although this was not exactly made a condition for the acceptance of their qualifications. The degrees of the province thus now become acceptable for appointments in our Army Medical Service and for other British appointments.

The Apothecaries' Hall of Dublin.—At the last session of the Council a motion made by Sir John Moore asking for returns which should show the total number of persons who for the last ten years have obtained the qualifications of this body, and for certain other returns, was actually carried by a small majority. The validity of the vote, however, was challenged on the ground that, owing to a large number of those present not having voted at all, the majority did not constitute a majority of those present, as is required by the Act, and it was declared not to have been carried. On this occasion a somewhat similar result was attained, in so far as the abstention from voting of a material number of members of the Council went, though this time an actual majority of the votes recorded were against the motion. Sir John Moore's contention was that the total numbers were so insignificant that the body could not be regarded as really wanted; that an analysis of the returns so far as they were available, seemed to indicate two things—the one that those earlier examinations which were not inspected were of less severity than those which were inspected (namely, the final examinations), and the other that the large number of exemptions on account of other examinations having been accepted in lieu of those of the Hall, rendered it of even less importance as an examining body than a mere return of qualifications granted might seem at first sight to indicate. Moreover, he pointed out that its original function of qualifying dispensers had fallen into abeyance—that whereas not so many years ago it qualified a very large number, it now had become superseded in this direction by the Irish Pharmaceutical Society—and he desired that it might return to its old functions, which, he held, were far more useful than its present functions. It seemed a pity that the representative of the Hall should have opposed the giving of the information, as by so doing colour was lent to the supposition that the Hall would make a bad show on the returns. Other members of the Council raised the objection that the motion was a flank attack upon the Hall, and that the functions of the Council began and ended with the determination of the sufficiency or otherwise of the qualifying examinations, and that the other question, whether the Hall should be retained as a qualifying body for medicine and surgery, had been fought out before and decided by the action of Parliament and of the

Privy Council. The issues having been thus clearly placed before the Council, it was a pity that the voting should have been rendered unconvincing by so many votes being unrecorded. Subsequently, on the motion of Dr. Adye Curran, two Irish surgeons were appointed Assistant Examiners. Hitherto Scotch or English examiners have been appointed, their functions being quite as much those of inspectors as of examiners, and a hope was expressed that this aspect of their appointment might not fall into abeyance by the employment of local instead of extern examiners.

Clinical Teaching in Medicine and Surgery.—Dr. Lindsay Steven moved a somewhat discursive resolution on this subject, and advocated it in an equally discursive speech. The main point had relation to the complaint sometimes made that the practitioner as turned out had theoretical but not practical knowledge, and that he had to acquire the latter in the subsequent pursuit of private practice. There is no doubt that this is to some extent true, and the issue is one which well falls within the province of the Council to investigate. But it is perhaps to be regretted that the motion was mixed up with such questions as the influence of the practical facilities upon the size of the teacher's class, and the influence of his being also an examiner, upon the attractiveness of his teaching, for, to say the least of it, these can only be matters of opinion, and hardly admit of the close investigation which might be applied to the actual teaching material available for the individual student.

Medical Notes in Parliament.

The Vaccination Bill.*—The Commons did not come back in any great numbers last week after the Whitsuntide recess. There were a few over 100 members only present on the Thursday, and on the Friday the division on the second reading of the Vaccination Bill showed only 136 members in the House. Sir John Batty Tuke moved the rejection of Mr. Burns's Bill. He objected to the Bill because, he said, it was neither one thing nor the other. It would meet the views neither of the vaccinators nor of the antivaccinators, and would afford increased opportunities for evading the law, thus constituting a danger to the public health. While not wishing to discuss the methods by which the controversy as it affected the conscientious objector had been conducted, he might be permitted to say that, if it had been conducted on the high level adopted by the hon. member for West St. Pancras, the whole position would have been much better than it was to-day. He contended that the Bill, if passed, would have the effect of increasing the agitation and the number of the extremists. It would not affect the honest objector to vaccination, for he was at present willing to sacrifice himself and to take some trouble to vindicate the courage of his opinions. But unluckily even the honest conscientious objector dragged in his train a large number of persons who had no settled convictions on the subject, such as ignorant parents and guardians; and this was the class that was really dangerous. Soon it would be declared that the Vaccination Acts were dead, and literature of all sorts would be scattered over the country. Societies opposed to vaccination would arrange the places where declarations might be made against the liability to incur vaccination, and they might possibly arrange even for domiciliary visits. It was true to say that at the present time small-pox was in abeyance, but as surely as the sun would rise to-morrow small-pox would reappear in our midst to work its deadly power among what would have become an unprotected community. A large section of the community would be unvaccinated, and when an epidemic arose there would be a rush of persons to be vaccinated, and then it would be found that the local authorities were not able to meet the demand. Within the last few years, in areas in which small-pox had broken out, people had been seen standing at the doors of vaccination establishments much in the same way as people were accustomed to take up positions outside the doors of a theatre. He often wondered whether the anti-vaccinationists had ever seen an epidemic of small-pox among an unprotected community. If they had gone through this experience, as he had on more than one occasion, he thought that they could not fail to realize the horrible condition of things that ensued from the outbreak of small-pox. It was also urged against the practice of vaccination that sanitation was a more effective preventive against the disease of small-pox. No one was more willing than he was to grant local authorities greater powers in the enforcement of sanitary precautions, but at the same time hon. members should look at the experience of other countries. Of all European countries Germany presented the most valuable series of object-lessons. Sanitation there was still very inferior to our own system and practice. In certain large cities in Prussia there had been, no doubt, a great improvement in this respect, but in the small towns the state of affairs was bad indeed. In Germany small-pox could not be said to exist, for the death-rate was represented by a small decimal. At the same time, occasional cases did arise. These were almost invariably on the eastern frontier, where people from unvaccinated countries came in. But when the disease did cross the frontier it did not spread. The cases were only sporadic. There was now an epidemic at Metz; but the conditions were not yet known, and could not be cited on either side. But he was told that around Metz there were thousands of labourers from Italy, Roumania, and Russia; and, if he were a betting man, he would readily wager that the people whom this epidemic had touched belonged to this unprotected class. With few exceptions, all civilized countries adopted vaccination with great advantage; and in these circumstances were the Government justified in bringing forward this Bill, which sapped the very foundations of the Vaccination Acts? At the instance of a small section of the community, the President of the Local Government Board was throwing the responsibility on to the shoulders of the illiterate; but in the long run the responsibility must be his. But it must be admitted that the time had come for a revision of the working of the Act; and he would suggest that the Bill should be abandoned and a small representative committee appointed. Such a committee might arrive at a *modus vivendi* which would be the foundation of a Bill acceptable to all sides. But if this Bill were passed, all consideration of the subject would be in abeyance for many years. Mr. Cave seconded the motion for rejection. The President of the Local Government Board (Mr. John Burns) replied, and reminded the House of what he promised, on behalf of the Government, in regard to this subject on April 25th. The first thing was a reduction in the cost of vaccination, which, it was generally agreed, had in recent years been unduly inflated. Only the day before yesterday he had issued a Vaccination Order that carried out, he believed, to the full the pledge he had given. He next promised some form of statutory declaration in lieu of the existing exemption certificate, and the Bill gave effect to that promise. Then he promised that they would do their best to secure uniformity of action by the magistrates pending the adoption of the other matters promised, and the Home Secretary had issued a circular advising magistrates not only to be more discreet, but more reasonable and uniform in the practice of administering the Act. He further undertook that they would do their best to consider the possibility of transferring the whole administration of vaccination from the Boards of Guardians, who ought, in his judgement, never to have had this duty, to the public health authorities. But every one now recognized that the Poor Law was in the melting pot, and, until the Royal Commission which was considering the subject had reported, he could not carry out, as he should like to do, the transfer. And, finally, he promised that they would consider the question of suspending vaccination in early infancy till a later period of life, but until the two sets of opinions represented by the hon. member for Sleaford, and the hon. member for Edinburgh and St. Andrews Universities reconciled themselves more amicably on other phases of vaccination, he could not see his way to redeeming this promise. It must be a subject of congratulation to everybody that the terrible scourge of small-pox was diminishing, and it was cheering to know that in the year 1906 there were in England and Wales but 21 deaths from this disease, and that in London, with a population of 5,000,000, there were, whatever might be the cause, only 27 admissions into the hospitals and not a single death from the disease. The object of the Bill was

* The Bill was printed in full on page 1 of the Supplement issued to the British Medical Journal of May 25th.

to bring about an alteration in the manner of obtaining exemption from penalties for omitting to have a child vaccinated, by substituting a statutory declaration for the certificate of conscientious objection required by Section 2 of the Act of 1898. Those who inserted the word "satisfies" in that section were, perhaps, to some extent responsible for the necessity of amending the Act. The difficulty of administering the section was foreseen at the time by certain members, whose predictions had been justified by the event. The present condition of things was one not respectful to the law, and it constituted a nuisance that needed to be abated as soon as possible. Even the hon. member for one of the Surrey Divisions admitted that some of the magistrates exceeded their powers. In his judgement the conduct of many of them went beyond that description. In April, 1906, the Chairman of the Bench at the Dorchester Police Court declared that he had seen the benefits of vaccination all over the world, and would never grant a certificate of exemption. The state of things had become so intolerable that the Home Office had issued circulars asking magistrates to do their duty in a way that would not give offence to applicants for exemption. Another matter of complaint under the present law was that, in order to obtain a certificate of exemption, parents were compelled to attend the court under a *quasi* criminal aspect. This Bill substituted for the present process a simple statutory declaration before a commissioner for oaths or a justice of the peace. The parent who made such a declaration would be exempted from the stamp duty, which the Chancellor of the Exchequer had generously consented to waive. He would, however, have to pay a small fee required by the Statutory Declarations Act, 1885, which varied from 1s. to 1s. 6d. It might be urged that this Bill would make the way of the conscientious objector too easy. Similar predictions were made in 1898, but, as a matter of fact, the conscientious objections since that date had remained practically stationary. The Royal Commission contemplated a statutory declaration of some kind. They wished to call the parent before the local authority. But from the point of view of the parent that procedure would be more inconvenient and irritating than appearing before a magistrate or commissioner for oaths. He did not think the local authorities would be easier to satisfy, and at times they would be more inaccessible. He was satisfied that the persons to be entitled to receive the statutory declaration should be everywhere the commissioners for oaths; in big towns also it might be the stipendiary magistrates, and in the country certainly the justices of the peace. He saw no reason for adopting the suggestion that recourse should be had to the registrar in preference to the commissioner for oaths and the magistrate. The registrar was in no sense connected with vaccination, and he thought it was undesirable to create any more vested interests with regard to vaccination. There were 2,000 registrars in England and Wales, but there were from 10,000 to 12,000 solicitors who were commissioners for oaths, and he thought hon. members who were in favour of this Bill, or, perhaps, of something which went beyond it, would agree that it was infinitely better to have from 10,000 to 12,000 commissioners for oaths for this purpose than only 2,000 registrars. He, at any rate, preferred the commissioners for oaths, and to them he added the 17,000 to 18,000 magistrates. This would provide some 30,000 centres for application instead of 2,000. Therefore, he ruled out the registrars. It was suggested that it would be better for the registrar to be charged with this duty, because he now registered the child for another purpose. That was his strongest objection to his coming in. He registered the birth of a child within six weeks, and if he was allowed to register it for another purpose—namely, vaccination—he would be anxious to register the child for both purposes within six weeks, and antivaccinators, as well as other people, agreed that it would be better that the child should be vaccinated near the expiration of the four months than within the six weeks. Another point which weighed with him was this: in the administration of this Act they ought not to have any officer for this purpose who might be supposed to be increasing his professional business by the taking of these declarations; and it was exceedingly important to satisfy all sections that the commissioners for oaths, the magistrates, and the justices of the peace could be regarded as neutral persons and received their fees for the declaration and for no other purpose. He believed that the nuisance which had grown up under the Bill of 1898 was intolerable and could not be allowed to continue. He also believed that this useful little Bill would go a long way to remove the grievance of the conscientious objector, and he trusted it would receive the hearty sympathy of the House and be read a second time. Mr. Pickersgill supported the Bill, but regretted that it did not go further. Sir H. Craik and Sir F. Banbury opposed the Bill, and on a division the second reading was carried by 122 to 14. The antivaccination party supported the Bill with a view to its amendment in Committee, and they refrained from speaking on the second reading in order to prevent any chance of the Bill being talked out. As it was, the second reading was carried a quarter of an hour before the time for rising.

The Cost of Municipal Milk Depots.—In answer to a question put by Mr. Ridsdale, Mr. John Burns gave some interesting figures last week which showed that the cost of installation of the milk dépôt in Battersea was £659, and that there had been an annual excess of expenditure over receipts ranging from £588 to £570. In Lambeth the installation cost £881, and there had been a loss on the two years since the opening. In Woolwich the dépôt cost £663, and had so far shown a loss. In Bradford £444 were spent on the dépôt, and there was an estimated profit for this year, but a small loss on the three preceding years. In Burnley the figures told the same tale of loss, and in Liverpool from 1901 to 1906 inclusive there was a large excess of expenditure in each year. In St. Helens the dépôt cost £391, and for each year there had been an excess on the expenditure side. The figures showed similar results for Ashton-under-Lyne and Dukinfield, where the dépôt was closed after two years' trial.

Pensions and Anaesthetics.—Mr. Wedgwood Benn asked an interesting question last week respecting a soldier named Craig, who had been required by the War Office to undergo an examination under an anaesthetic before the continuation of his pension. Mr. Haldane stated, in reply, that an anaesthetic would not be administered unless it was considered safe by the medical authorities. The latter would be glad to receive any evidence that Craig was unfit to receive a general anaesthetic, but the ultimate decision as to whether he was or was not fit must rest with them. In the event of death under an anaesthetic the man's dependents would have no claim to compensation.

The Hartley Wintney Schools.—Sir Albert Spicer inquired last week why these schools were being enlarged in spite of repeated outbreaks of infectious disease and the condemnation by the Departmental Committee of Barrack Schools. Mr. John Burns replied that the accommodation at the school was not sufficient to provide for the children of the unions comprised in it. The Local Government Board's inspector for the district discussed the matter with the managers in February last. He pointed out various ways in which the difficulty might be met, and expressed his personal opinion that an enlargement of the school would probably be found the best and, in the long run, the most economical course. Even if the accommodation was extended as suggested the institution would not be a large one, and would not appear to come within the category of a barrack school to which exception had been taken. The school was in an open and healthy situation, and His Majesty's inspector of schools had reported last year that the instruction had improved since his last visit, and that it promised well.

The Notification of Births Bill, which was introduced by Lord Robert Cecil and which passed the second reading stage late at night on May 8th, has been referred to the Standing Committee A. Mr. Burns, who has exhibited a benevolent attitude to the Bill, has put down a number of amendments which have for their objects the modification of the Bill by altering it from a compulsory measure to an Act to be adopted with the sanction of the Local Government Board in areas anxious to test its usefulness. Dr. Cooper has also put down several amendments, and the Bill is certain to be greatly altered in Committee.

Ireland.

Post Graduate Classes.

An elaborate course of post graduate instruction has been arranged in connexion with the Royal College of Surgeons, Ireland, lasting from June 10th to July 2nd; and a second course will begin on September 23rd and continue to October 15th. All the general hospitals will be available, as will be the special hospitals. The subjects of instruction will be surgery, medicine, skin, eye, and ear, throat and nose, gynaecology, *x*-ray and light therapeutics, pathology and bacteriology, children's diseases, lunacy, anaesthetics, operative surgery (cadaver), anatomy and sanitary science. The Secretary is Professor Fraser, Royal College of Surgeons.

Royal College of Surgeons in Ireland.

The election of President, Vice-President, Council and Secretary of the Royal College of Surgeons will take place on June 3rd between 1 and 3 o'clock. Mr. H. R. Swanzy and Mr. John Lentaigne will be elected for a second year as President and Vice-President respectively. Sir Charles Cameron will be again elected Secretary. The Council consists of nineteen members, and there are twenty-eight candidates. Of last year's members Dr. E. H. Bennett will not be a candidate, the cause being, we regret to say, serious illness; and Mr. Jameson Johnston has been appointed a member of the Court of Examiners. The new candidates are: Lieut.-Colonel Edgar Flinn, Mr. Louis A. Byrne, Mr. F. T. Porter Newell, Mr. R. Lane Joynt, Mr. Thomas E. Gordon, Mr. Louis Werner, Mr. H. W. Oulton, Mr. Robert J. Harvey, Mr. Thomas O'Connell Redmond, Mr. George P. Meldon, and Mr. Andrew Charles.

Richmond Hospital, Dublin.

On Tuesday, May 14th, at the Richmond Hospital, Sir Thomas Myles placed a ligature on the innominate artery and also divided the common carotid of the right side between two ligatures for a large subclavian aneurysm. The incision was made along the inner edge of the sterno-mastoid which was left intact. The sterno-hyoid and thyroid were divided and the common carotid traced down from the inner side till the bifurcation and innominate came into view. Silk ligature (Van Horn's No. 6) was used, and though the operation was a long one, no serious difficulty was encountered in its performance. The patient, so far, has done very well and the wound has now healed. A large number of medical men from Dublin and the provinces were present at the operation. Sir Thomas Myles intends to publish a detailed account of the case later.

Health Commission, Belfast.

On May 16th Councillor Dr. Henry O'Neill was examined; he gave instances where canvassing was carried on, and committees pressed to act against the advice of their own officers, both in narrowing streets, building on made ground, and abandoning prosecutions for the sale of impure milk. In some of these cases the witness admitted the action taken was according to the by-laws. He also advocated certain regulations which he had found adopted in Paris; he did not see why they should not work in Belfast.

Mr. P. J. Kelly, Inspector of National Schools, examined on May 17th, said he had charge of a district of 194 schools; he gave details as to their management. The schools were too few and too small, but the schoolrooms were too large; often two to six teachers were found teaching in the same room under conditions which, to him personally, were wellnigh intolerable; in one school he found a class stuffed into a cloak-room for instruction; it was not uncommon to find them on the stairs; these schools had often been built for quite a different purpose; only 23 out of 193 were heated by hot water; the teachers had often to bear part of the expense of the fuel, consequently the windows were kept closed to retain the heat. 40 per cent. of the schools had no playgrounds, and 20 per cent. had only moderate playgrounds; in one case he found a large heap of horse manure a few feet from the premises; slates were still in use, and the hand was employed for cleaning them, which was a most objectionable habit. He would remove the existing schools by degrees, and replace them by much better buildings. Cleanliness was a matter that should be insisted upon as preventive of disease. He had seen twenty-one children washing their hands in one basin, and drying them with one towel.

Dr. McCaw, Senior Physician to the Belfast Hospital for Sick Children, was examined on May 18th. The birth-rate had fallen from 34.7 in 1895 to 31.6 in 1904; in the face of this falling birth-rate the importance of lowering the infant mortality was paramount. In Belfast for 1906 it was 144 per 1,000; he calculated that in Belfast they were losing at the rate of 650 children per year whom they ought not to lose. There had been no material reduction of infant mortality in the last fifty years; 50 per cent. of these deaths were due to diarrhoea and rickets. In the Queen Street Hospital he had found in the out-patient department 30 per cent. of illness was due to diarrhoea. It was a common habit for children to be given to an old woman to take care of for a few shillings a week, while the mother worked; the sum was so low that it could not be properly done, and the child probably got skimmed milk or any rubbish. Cow's milk as supplied to Belfast was the cause of much of the trouble, both from the state of the dairies, the way it was sold in little shops, and from being kept in dirty sculleries. The delicacy of the mothers was due to bad feeding during pregnancy and unskilled attention at labour. There was a considerable amount of intemperance amongst women in Belfast, and this caused much mischief. It was quite common for children not to be insured till they became ill and the parents were satisfied they (the children) were not going to live long. He thought that the mother, when it was proved that she was drunk, in cases of death of an infant from overlying, should be prosecuted. There were also a number of deaths from burns and scalds which were preventable. Milk dépôts were urgently needed in Belfast. There should be more lady health inspectors.

The Commission then adjourned till July 15th.

The Royal Medical Benevolent Fund Society of Ireland: Belfast Branch.

The annual meeting of this Branch was held in the Medical Institute on May 17th, Professor Lindsay presided. Dr. Richard Purdon, Honorary Secretary, read the annual report, which showed that there were 131 contributors in Belfast, with a subscription of £96, and 46 from the country, with a subscription of £34; other sums were: From lay friends £11, from Ulster Medical Society £5, from Ulster Branch £5, and from medical students £5. Total net subscription remitted to the central Treasurer in Dublin was £147 2s. The sum of £150 was received from the parent Society in answer to their claims for local relief. Many speakers referred to the fact that it was a disgrace that a comparatively rich Branch like their own should receive more back from the rest of Ireland than it sent to head quarters. All expressed the greatest regret at the retirement from the local Honorary Secretaryship and Treasurership of Dr. Purdon, who had for ten years been most assiduous and devoted in the discharge of the duties of a rather thankless office. Dr. Fielden was elected in his place. The following letter was read from Mr. Benson, Secretary of the Fund in Ireland: "That the Central Committee of the Royal Medical Benevolent Fund of Ireland desires to express to Dr. Richard Purdon, of Belfast, their high appreciation of the valuable services he has rendered to the Society in the capacity of Honorary Secretary and Treasurer of the Belfast Branch for ten years, and have learnt with regret of his resignation of this post."

Prevention of Consumption.

A most important conference took place on May 23rd in the City Hall, between members of the Public Health Committee of the Cork Corporation and of the Cork Branch of the Association for the Prevention of Consumption, the object of which was to discuss what steps should be taken to prevent the spread of consumption. It was thought that by the combined efforts of these two bodies, representing public men in the city as well as members of the medical profession, much work of a preventive character might be accomplished with greater effect. The Association for the Prevention of Consumption had devoted considerable time to the dissemination of knowledge as to the nature of consumption, its infectious character, and the precautions that should be adopted by the healthy to lessen their

chances of contracting it, and many thousands of pamphlets, leaflets, posters, etc., had been distributed by the Cork branch to the hospitals, dispensaries, schools, and other places where consumptive patients or their friends were likely to congregate. The establishment of a sanatorium for early cases of consumption was a measure that was being dealt with by another body in which representatives from the Corporation were included. The conference was more anxious to press home the necessity there was for the proper inspection of dairies and slaughter-houses, both in the city and in the rural districts, in order that a pure milk and meat supply might be assured. Accordingly the following resolution was carried:

> That in the opinion of this Conference of the Public Health Committee and of the Cork Branch of the Society for the Prevention of Consumption the powers possessed by the county borough council as a sanitary authority were entirely inadequate to enable them to secure the purity of the milk supply of the city. Most of it comes from outside the city boundary, and the same applies to the meat supply; and the Conference believes that, in the interest of the public health, it would be desirable that extended powers should be conferred on the borough council, by which they would be enabled to inspect all dairies and slaughter-houses outside the borough boundary as well as inside, and to examine all meat intended for sale in the city, and that a copy be sent to the Chief Secretary.

Dr. Brown, Local Government Board Inspector, supported the resolution, and said he was glad the meeting had come to a decision on this question, because he had no doubt that the powers the Corporation had to inspect meat and milk outside the city area were almost *nil*. He had inspected a good many places in the rural district of Cork from which the milk supply and a good deal of the cattle came, and he did not find the condition of the dairies satisfactory. In one particular instance he visited a slaughter-house in which a cow was being slaughtered; this house was outside the city boundary, and he could assure those present that the animal was one mass of tubercle, and if he had not dropped in that meat would have been exposed for sale in the city. What he would suggest would be that an abattoir should be erected and the animals could be inspected and proper steps taken to prevent them being exposed for sale. The question of the thorough disinfection of houses occupied by consumptives was gone into, and the necessity for a bacteriologist to examine sputum resulted in the following resolution being adopted unanimously:

> That with a view to preventing the spread of consumption in Cork, this Conference recommends the County Borough Council to appoint Dr. Moore as public bacteriologist at a salary of £20 per annum and a fee of 2s. 6d. for each sample of sputum examined.

Dr. Donovan, M.O.H., urged that the bacteriologist should be appointed to examine samples of milk, meat, water, etc,, as well as sputum, and it was decided to communicate with Dr. Moore as to his terms for the examination of samples of milk, water, and meat.

It was agreed that monthly meetings of the conference should be held in future, and it is earnestly hoped that much good may be derived from the combined efforts of these two important public bodies.

Scotland.

EDINBURGH HARVEIAN FESTIVAL.

THE one hundred and twenty-fifth Harveian Festival was held in the Hall of the Royal College of Physicians, Queen Street, on Friday, May 17th. At 6.30 the President, Dr. William B. Dow, Dunfermline, gave the Harveian Oration on "Evolution of Diseases." At 7.30 the annual dinner took place. After dinner the loyal toasts were given from the Chair; Dr. Clouston (the Vice-President) gave the toast of "The Army and Navy," and Dr. Claude B. Ker replied; Dr. Finlay gave the toast of "The Guests," and Professor Yule Mackay replied; Dr. John Playfair gave the toast of "The President." The new President is Dr. Clouston.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

One case was notified as suspicious cerebro-spinal meningitis to the Edinburgh medical officer of health in the week ending midday, Saturday, May 25th. One death has occurred during the week, and 14 cases remain under observation. The Registrar-General for Scotland reports that in the week ending Saturday, May 25th, 28 deaths from cerebro-spinal meningitis occurred in eight principal towns of Scotland, or 11 fewer than in the preceding week. The 28 deaths were distributed thus: Glasgow 19, Leith 5, Dundee 2, Edinburgh 1, and Greenock 1. Obviously, then, the disease is diminishing very considerably in Scotland.

EDINBURGH ROYAL INFIRMARY WATER SUPPLY.

For lack of pressure there has been great difficulty in getting enough water for the ordinary and daily use of the Edinburgh Royal Infirmary. Lately, when a fire occurred in one of the lower and detached buildings, the fire brigade found great difficulty in dealing with the fire, because there was barely enough water to keep one fire engine working. Now a new 9-inch pipe has been led into the infirmary grounds, and two large underground tanks, into which the water of this pipe may be discharged at full pressure, have been made. This will give an ample supply of water in case of fire. The efficiency of the new system was demonstrated on Monday last, when an alarm of fire was given, and in the course of a few minutes three steam fire engines were at work. They found that the supply of water from one of the tanks was not only sufficient to supply the three steam fire engines, but could have fed three others. The infirmary is thus placed in a safer position in relation to fire.

QUEEN MARGARET COLLEGE, GLASGOW.

At a largely-attended meeting of past and present students of Queen Margaret College and Eilmorehill, held at Queen Margaret College on May 22nd, it was decided to institute a Founders' Day, to be held annually in May. In submitting the resolution, Miss Galloway pointed out that those who had taken the leading part in founding Queen Margaret College had all passed away. During the past year Mrs. Campbell of Tullichewan, the foundress of the Glasgow Association for the Higher Education of Women, and the first President of Queen Margaret College, had died. The college owed a deep debt of gratitude to Mrs. Campbell, as it was largely through her exertions that the funds for its endowment were collected. To perpetuate the remembrance of the great services rendered by Mrs. Campbell, by Mrs. Elder, the donor of the college buildings, and by Professor John Young, the founder of the medical school, it was proposed to institute an annual meeting in May of past and present students of Queen Margaret College and Eilmorehill, to be called Founders' Day. This meeting would not only keep fresh the memory of these pioneers of the movement for the higher education of women, but would also prove a useful means of uniting past and present students. Miss Galloway stated that as long as she remained Honorary Secretary of Queen Margaret College she was willing to give an "at home" on Founders' Day, and she hoped that in after-years the function would be undertaken by the Students' Union and the Graduates' Association. This proposal was cordially accepted by the meeting, and it was agreed to institute a Founders' Day on these lines.

OUTDOOR DISPENSARY FOR MENTAL CASES.

During the summer session an additional department has been added to the outdoor dispensary by the appointment of a specialist in mental cases to look after cases of this nature. It is intended that doubtful cases on the borderline shall be transferred from the cliniques of the Medical Dispensary to this department for special advice and treatment. For this purpose Dr. L. R. Oswald, the Medical Superintendent of Gartnavel Asylum, attends the dispensary on Tuesdays at 3 p.m.

CHANGES AT THE WESTERN INFIRMARY.

Dr. John Alexander has resigned his position of assistant physician, which he has held for a number of years. Dr. Hinshelwood has ceased to act as clinical assistant to the Regius Professor of Medicine, and in his place Dr. Wm. MacLennan, one of the assistant physicians, has been appointed. Dr. MacLennan is this summer conducting the clinical course, as Sir Thomas McCall Anderson has been granted leave of absence for six months from his university and infirmary duties.

Lancashire.

Sir Rubert Boyce.

The many friends of Sir Rubert Boyce and his colleagues and pupils are glad to see him back again and at work after his long illness.

Liverpool Port Sanitary Authority.

Report.

The annual report of the medical officer of health to the port sanitary authority for the year 1906 has just been issued. It contains a new feature in the form of an interesting history of quarantine and port sanitary administration in England, more especially as it affects Liverpool. It appears that it was customary to adopt preventive measures in various towns in the south of Europe from about 1346 onwards in order to protect them against plague, but it was not till 1580, when plague first visited England, that attempts were made to follow these methods in this country. In this year measures were adopted to prevent persons arriving from Lisbon from lodging in London and the suburbs, and the discharge of goods from ships until they had some time for airing. In 1629 similar precautions were taken against arrivals from Holland and France. In 1663 for the first time quarantine properly so called was instituted, it being advised that, "after the custom of other countries, vessels coming from infected ports should not be permitted to come nearer than Gravesend, or such like distance, where repositories or lazarettos were appointed into which ships might discharge cargoes to be aired for forty days." His Majesty also issued a manifesto to his allies, informing them that "no ship or vessel would be allowed to enter port unless they brought with them a certificate from the port authority whence they came." This appears to have been the origin of the modern bills of health. In those early days quarantine was not enforced during the winter. Apparently these laws remained in force until 1825, when a modification was introduced tending towards the introduction of the modern system of inspection in place of quarantine. In 1831 cholera was present in Europe, and the Privy Council made it subject to the precautionary rules under the Quarantine Act of 1825, but in spite of this cholera appeared in England, and gave much trouble from time to time in Liverpool. In the same year a general Board of Health was established for the purpose of preventing the introduction and spread of cholera. Later the Government issued two orders under the Quarantine Act, one requiring local Boards of Health to be established in all such places as the Privy Council might name, and requiring medical practitioners to send to the Local Board a daily report of all cholera cases attended by them. Another order required the Poor-law authorities to abate and remove existing public nuisances, injuring or likely to be injurious to the public health.

From 1848 onwards there was gradual but steady evolution of the powers and duties of local authorities over ships, not only as regards disease but also for the removal of nuisances. In the Sanitary Act of 1866 we find the first provision for the removal to hospital of persons brought within the district by any ship or boat, and who are infected with a dangerous or infective disorder.

It was in the year 1872 that the Liverpool Port Sanitary Authority was established, and in June, 1874, the jurisdiction was extended to the whole of the port. The order was amended on various occasions. The expenses are now borne by the various riparian authorities included in the district, 77½ per cent. being borne by Liverpool. The first port hospital for Liverpool was erected in 1877, and was considerably enlarged in 1902.

It was during 1894 that a new impetus was given to medical inspection. Previous to this year inspection was only undertaken at the request of the Customs officers, when sickness was present on board or when the officers suspected infection. This year two additional medical officers were temporarily appointed to undertake the examination of all ships coming from infected ports, and to certify "That it was desirable, with a view to checking the introduction and spread of cholera, that the persons on board the ships should not be allowed to land unless they satisfied the medical officer of health as to their names, destinations, and addresses."

Among the chief points in which modern quarantine regulations differ from the old is this: That the liability of the ship to detention and disinfection is judged more by the state of health of the crew at the time of arrival and during the voyage than by the presence of infectious disease in the port of departure.

During 1906 the number of persons medically examined on arriving from plague-infected ports alone totalled 9,090. In addition a large number were examined on vessels on which other infectious diseases had occurred. Seven cases suspected of plague were landed, some with fever and buboes, but they proved to be of a non-infectious nature; 2,979 rats were caught on board vessels; most of them were examined for plague infection, but almost with a negative result. With regard to anthrax, it appears that during the last three years there have been 21 cases of this disease, with 14 deaths, mostly among dock labourers. Dr. Hope urges that the disease should be made compulsorily notifiable. During the year 3,492 vessels have been inspected in dock with regard to their water supply and sanitation generally. The whole report shows that the sanitary department of the port is in a highly efficient state and it forms very interesting reading. One result is that the Health Committee have placed on the agenda for the city council for June 5th a motion that anthrax shall be made a notifiable disease experimentally for three years.

West Yorkshire.

New Dignity for a Bradford Hospital.

We are very pleased to hear that the Bradford Eye and Ear Hospital has received the King's sanction to use the prefix "Royal" before its title in future. Some weeks ago the Committee of the hospital, through one of the members of Parliament for Bradford, approached the Master of Elibank (Comptroller of the Household) in connexion with the matter. On the King's return from the Continent it was placed before him, and a telegram received in Bradford on May 24th from the Master of Elibank stated that the King "had been graciously pleased to extend to the hospital the sought-for privilege, and to command that the institution be henceforth known as 'the Royal Eye and Ear Hospital.'"

The institution has this year entered on its Jubilee, having been founded in 1857, and it well deserves the newly-added dignity. It has done excellent work during the whole period, and has a very high reputation over the whole of the north of England. The work done has enormously increased since the early days of the hospital. In its first year some 500 attendances of patients and some 66 operations took place. During the past year 7,270 new patients were treated, and 1,091 in-patients and 1,084 (including 160 extractions of senile cataract) operations were recorded. Since the foundation of the hospital no less than 158,848 cases have been treated and 20,791 major operations performed.

The present hospital is too small for the number of in- and out-patients, and the Committee is considering the question of building a large separate out-patient department.

The Halifax Workhouse Hospital.

The Halifax Board of Guardians, at its meeting held on May 22nd, received a report of a special committee which had been appointed to consider the medical "staffing" of the workhouse and hospital. There are at present a medical officer for the workhouse, appointed as far back as March 17th, 1869 and at the hospital a medical officer, an assistant visiting medical officer, and a resident assistant medical officer (a lady). "It was felt by the Committee that it would tend to greater efficiency if the same medical man were responsible for both institutions, as by this means greater knowledge would be gained of the requirements of the inmates of both places, which would tend to cause those suffering from slight ailments to be treated in the workhouse and others retained in the hospital until more suitable for admission to the workhouse." The medical officer (Dr. Dolan) for the workhouse offered to resign on certain conditions to facilitate the arrangements, but the Committee appeared to think that

it would not be possible to obtain the sanction of the Local Government Board to the whole of their requirements. It therefore suggested that the question should remain in abeyance until the time arrives when Dr. Dolan can be superannuated.

KEIGHLEY GUARDIANS AND THEIR PUBLIC VACCINATORS.

In our issue for April 13th attention was drawn to the action of this Board of Guardians in connexion with its public vaccinators. At the last meeting of the old Board the antivaccinators got a resolution adopted to give twenty-eight days' notice to the public vaccinators to terminate their engagements. It was intended to offer the appointments on re-engagement at lower fees. Since that time a new Board has been elected and wiser counsels have prevailed. A resolution was adopted that the appointments of the public vaccinators should be continued until the expected new order of the Local Government Board should be received.

DIVISIONAL POLICE SURGEONS IN BRADFORD.

In the JOURNAL for May 18th we gave an outline of a scheme recommended by the Watch Committee of the Bradford City Council for Divisional Police Surgeons in Bradford. The appointments have now been advertised and the duties defined, and the remuneration offered appears quite inadequate for the large amount of work entailed.

Amongst the duties allotted to the three divisional surgeons are the following: To attend members of the police force and police matrons when sick or injured; to give a written certificate once in every forty-eight hours to each sick constable; to provide all necessary medicines and appliances; to attend day or night at any police station, public institution, or other premises in his division to give medical attention to any person at the request of an officer in charge; to give reports in writing on these persons; to attend day or night at the request of any officer at the public mortuary or any other premises to examine the body of any person and give a report; to keep records of all duties performed as divisional surgeon to be submitted to the Watch Committee each month, and various other minor details. In a fit of unparalleled generosity the Committee state that where fees are paid by the magistrates or City Coroner, or by the sessions or assizes, they may be retained. And all this for £50 per annum.

When one considers that each of the districts involved extends for some two or three miles, and that policemen and stations are scattered about in all parts of them, it is easy to have some idea of the magnitude of the work thrown on the divisional surgeon. It is to be hoped that the medical profession of Bradford will reject the scheme until more adequate remuneration is offered.

The Committee is evidently anxious to obtain infinitely more attention to the most exacting duties than has been paid in the past, but at the same rate of payment. This is unreasonable, and it ought not to be possible to do it if the medical profession combines for its own protection.

South Wales.

CARDIFF INFIRMARY.

THE Board of Management of the Cardiff Infirmary has had in use for some time a form of tender for milk supplied to it, particulars of which are briefly as follows:

1. *With regard to the cows*:
(*a*) The cows to be examined and reported upon by a veterinary surgeon selected by the infirmary, and who is not employed by the dealer who tenders.
(*b*) The dealer has to undertake that cows certified by the veterinary surgeon referred to shall be the only animals whose milk shall be sent to the infirmary. If for proper reasons the animals must be changed, this can only be done after such animals have been certified as provided for.
(*c*) The dealer must undertake to wash the cows' udders with soap and water just before milking, the milker's hands to be washed immediately before milking; also that the cows be milked in a place free from manure and dust.

2. *With regard to the storage and transport of the milk:*
(*a*) The milk supplied by the dealer to be stored in churns belonging to the infirmary.
(*b*) The milk shall be carefully strained and cooled to at least 50° F., immediately after milking, by means of a Lawrence or other approved cooler, and shall be delivered at the infirmary at a temperature not higher than 52° F.
(*c*) As soon as the cows are milked and the milk has been dealt with as in (*b*), it shall be placed in churns, which must be at once locked and the milk taken to the infirmary without delay.
(*d*) Empty milk churns to be cleansed in a manner approved of by the sanitary adviser of the infirmary, to be then locked and given to the dealer who only opens them when he is about to fill them.

3. *With regard to the quality of the milk:*
(*a*) The milk supplied must not contain any "preservative" or colouring matter.
(*b*) The milk must contain at least 3 per cent. butter-fat and 8.5 per cent. solids not fat.

4. The dealer shall allow any person or persons duly authorized by the Cardiff Infirmary, and whose names shall be made known to the dealer, to visit his farm without warning and inspect the conditions under which the contract is being fulfilled.

5. No tender shall be accepted until the sanitary adviser of the infirmary is satisfied that the sanitary conditions under which it is proposed to fulfil the contract are adequate, and has informed the secretary and general superintendent of the infirmary to that effect in writing.

6. The milk shall be obtained from cows kept within a radius of fifteen miles of the infirmary.

7. The foregoing conditions are in no way to relieve the dealer from compliance with the Dairies, Cowsheds, and Milkshops Orders and Regulations.

Should the tender be accepted, the person who tenders undertakes to deliver the milk contracted for, at his own expense, in such quantities and at such time as directed by the secretary, and of such quality as shall be to his entire satisfaction, or the person appointed by him to inspect or test the same. If at any time the milk be found inferior, or not to the entire satisfaction of the secretary or of the person directed by him to inspect or to test the same, or if he fails to deliver it from time to time as ordered, the secretary shall be at liberty to give notice to terminate the contract. And, further, the secretary shall at all times, for any other reason which shall be satisfactory to him alone, have the power, without the actual test of the milk, to terminate the contract by notice in writing whenever to him it may appear desirable in the interest of the infirmary to do so.

MERTHYR HOUSING.

On May 22nd a Local Government Board inquiry was held at the Merthyr Town Hall into the application of the town council for powers to borrow £8,100 for the erection of 50 houses for the working classes at Twynyrodyn.

The town clerk said that during the last twelve months closing orders had been obtained in respect of 100 houses. The inspector asked whether anything was being done in the way of clearing insanitary areas. It was stated in reply that the town council did not see their way at present to deal with areas. The inspector said he thought his Board would be pleased to see some advance in that respect. The town clerk said he would note the observation, and the council would consider it. The medical officer of health said that while they did not, under Part I of the Act, deal with areas, they dealt with so many individual houses that areas were cleared. On behalf of the Merthyr Ratepayers' Association objection was made to 15 of the houses being built larger than the 35 other houses, because they would only have the effect of competing with private enterprise, and could only be carried on at a loss, having regard to the rental proposed to be charged. The town clerk said that the houses would be self-supporting. They were building some larger than others because there was a demand for houses by men earning good wages and having large families. A member of the Independent Labour Party, in supporting the application, said that private enterprise had entirely failed to solve the slum question in Merthyr. They were

quite prepared to see the houses built at a little loss to the ratepayers if they gained in the general health of the community what they lost on the houses.

SPECIAL CORRESPONDENCE.

PARIS.

Académie de Médecine: Professor Lannelongue on Urinary Toxicity in Appendicitis, its Prognostic Value.—Société de Chirurgie: the Value of Preventive Injections of Antitetanus Serum.—Visit of University of London to University of Paris. Annual Luncheon of Continental Anglo-American Medical Society.

AT a recent meeting of the Académie de Médecine Professor Lannelongue made a communication on appendicitis. In a number of acute cases it is extremely difficult for the clinician to solve the problem of the degree and intensity of the infection, and consequently of the advisability or otherwise of operative interference. He thought that by estimating the urotoxy—that is, the degree of toxicity of the urine in the patient—it would be possible to form a prognosis. With the aid of Dr. Gaillard, Professor Lannelongue has carried out a research on those lines. The "urotoxy" is the quantity of urine which must be injected into the veins of a rabbit, per kilogram of its weight, to cause its death. The "urotoxic coefficient" is the number of urotoxies fabricated per unit of weight. The normal urotoxy in the adult, and especially in young people, who are more frequently attacked by appendicitis, had first to be determined. In adults it varies between 40 and 80 c.cm.; between 5 and 7 years it is 110 c.cm.; between 8 and 10 years, 84 c.cm.; 11 to 14 years, 89 c.cm., the urotoxic coefficient at these ages being 0.44, 0.52, 0.535. In cases of appendicitis which were acute and febrile, with marked local reaction, and circumscribed adherent or purulent peritonitis, the urotoxies fell to 27 c.cm. in children of 5 to 7 years; to 27·39 c.cm. in children of 8 to 10 years; to 27·21 c.cm. in children of 11 to 14 years. The urotoxic coefficient of all the cases together was 1.53 instead of 0.533, the normal mean in adolescents. On considering these results with the clinical facts of each case it is found that the urotoxic coefficient or the number of urotoxies express fairly exactly the degree of gravity of the appendicitis. The higher the coefficient the greater is the infection, or the intoxication, and the nearer the patient is to death. These results decrease in proportion till the normal is attained. If the urinary toxicity falls to 25 urotoxies—that is, to an injection of 25 c.cm. per kilo of weight of rabbit—and more so if below this figure, Professor Lannelongue considers this a pressing indication to operate immediately. The urinary toxicity allows one also to appreciate the degree of infection of the organism in prolonged or chronic cases of appendicitis; it becomes a contraindication for operation, demanding a further delay, when the patient is still appreciably infected. The technique of the experiment is simple. The rabbit is first weighed and fixed on a board. A rubber tube 3 metres long and 2 cm. wide is fitted with a glass funnel, and at the other extremity a small tap, and this tube is attached to the wall. A fine trocar is fitted to the tap, and the tube being filled with the urine to be tested, the ear is sterilized, and the injection made in one of the dorsal veins of the rabbit's ear. The urine is first passed through a fine piece of linen to stop any deposit or salts in suspension. The urine is allowed to pass slowly, and the experiment lasts from half to one hour. When the animal is mortally intoxicated, there are a few convulsions and then death.

At several of the recent meetings of the Société de Chirurgie an interesting discussion has been held on the question of tetanus and antitetanic serumtherapy. M. Quenu said that during many years of practice, in fact till 1905, he had never used preventive injections of tetanus serum, and during all this period he had never seen a case of tetanus. Since 1905, injections of antitetanus serum have been given preventively in his wards at the Cochin Hospital in all cases of street accidents. Recently a patient developed tetanus and died; the wound had been caused by a firearm, and through negligence the patient had not received the usual preventive injection. This case, with an analogous one communicated to M. Quenu by M. Kümmer of Geneva, and including those previously mentioned in the discussion, brought to nine the number of cases of tetanus occurring in hospital, which had, through omission, not been given the usual preventive injection of serum which is the rule in these wards. These were not, as M. Regnier states, negative facts, but most positively in favour of the efficiency of preventive injections. M. Legueu added a tenth case. A woman was admitted to his wards suffering from a burn of the hand, and to whom, seeing the nature of the injury, no preventive injection of antitetanic serum had been given. The patient died of tetanus, in spite of injections of the serum being given as a curative treatment. M. Delbet said it was certain that antitetanus serum gave better results in the hands of veterinary surgeons. If the serum acted more surely and energetically in the horse than in man, was it not because it was the serum of the horse which was used, and would it not be possible to increase its strength? Perhaps another animal would give a more active serum. With the unanimous assent of the Society, the suggestion of M. Delbet will be submitted to the Pasteur Institute, which prepares the serum. M. Tuffier said that during the last six years that he had used preventive injections of serum he had not seen a single case of tetanus in his wards. M. Guinard added an eleventh similar case, and, from the lengthy discussion, summed up with the following conclusion: That, in the actual state of science, it is wise to use the serum as much as possible as a preventive, to use it also as soon as a patient is recognized as having tetanus, but not to neglect at the same time the well-known treatment of large doses of chloral and bromide and isolation in the dark and freedom from noise.

During last week the University of Paris extended its hospitality to the University of London, and a series of fêtes were given on Tuesday, Wednesday and Thursday. The party from London numbered over 100, and included Sir Edward Busk, Vice-Chancellor of the University; Sir Arthur Rücker, F.R.S., Principal; Sir Henry Roscoe, Dr. P. H. Pye-Smith, Sir Thomas and Lady Barlow, Dr. Rose Bradford, Sir Wm. Collins, Sir Frederick Bridge, Mr. C. W. Kimmins, Professor Capper, and Mr. H. J. Mackinker, members of the Senatus. The fêtes were opened by a solemn reception in the large amphitheatre of the Sorbonne under the presidency of M. Briand, the Minister of Public Instruction, who opened the proceedings and was followed by M. Liard, Vice-Rector of the Académie de Paris, who recalled the fact that during the 13th and 14th centuries the University of Paris was much frequented by English students, who have left their name in the "Rue des Anglais," and who were called the "Nation Anglaise": they contributed thirteen vice-rectors to the University of Paris during this period. Sir Edward Busk replied to these two speeches. The deans of the Faculty of Arts in Paris and London each made a speech which was much applauded. The fêtes on Tuesday consisted of a luncheon at the Hôtel de Ville, and a large reception at the British Embassy in the evening. On Thursday the delegates were received in the afternoon by the President of the Republic and Madame Fallières. In the evening there was a dinner in the Sorbonne followed by a *soirée*. The members of the University of London had an opportunity of visiting the various centres of education in Paris, including the Sorbonne, the University, Technical Schools, the Pasteur Institute, etc.

The annual luncheon of the Continental Anglo-American Medical Society will be held during the meeting of the British Medical Association at Exeter on Thursday, August 1st, at 12.45, at the New London Inn. Members wishing to be present should communicate with Dr. D. W. Samways, Knowle, Topsham, Devon.

BERLIN.

The Leaving Examination. An Open-Air Forest School.

AT this year's meeting of the German Society for School Hygiene in Carlsruhe, a whole day was devoted to the question of the matriculation examination (*Abiturientenexamen*) and its possible abolition. Everyone knows that the German Matriculation is an extremely difficult examination, making the highest demands on both intelligence and acquired knowledge. And there is no doubt that a

large number of boys who go through their school classes with fair success are overweighted by the closing matriculation examination. Dr. Dornblüth (Frankfurt-on-the-Main) spoke very seriously to the meeting on the medical aspect of this difficulty. In the upper classes of German *gymnasien*, he said, the demands made on the pupils' time and brains have been carried to the utmost permissible limit. Six hours of school and three of home work daily is the average in the highest class (*Prima*). But besides this nine hours working day, there is the "cram" for the *abiturium*—wearying work done in hours when the brain should have rest. Bad effects on health are inevitable; considerable loss of weight is a symptom frequently observed; often there is a condition of nervous apprehension and fear of a more or less pathological nature. In isolated cases the final result is suicide. A short debate, following on Dornblüth's address, showed that the meeting was almost unanimous in condemning the *Abiturienten-examen*. One speaker reminded the meeting that it had been established in order to keep the universities free from insufficiently prepared students, but that this object might be effected by less strenuous means. Finally, a resolution condemning the *Abiturienten-examen* and demanding its abolition, was unanimously adopted by the meeting.

The open-air forest school (*Waldschule*), established three years ago by the municipality of Charlottenburg (a Berlin suburb) for delicate children of needy parents, shows most encouraging results. The number of applicants was so great in 1906 that a second school pavilion and a second reclining shelter had to be erected, the bathing pavilion enlarged, etc. The schools were kept open till late in December of each year. Careful statistics have, of course, been collected. Of 199 children, 62 were anaemic, 81 scrofulous, 31 had lung disease, 21 suffered from heart affections. Two of the little patients grew worse, 17 remained stationary, 96 improved decidedly, and 84 were registered as cured. The best results obtained were the general thorax enlargement and the equally general increase in weight. There has not been a single case of infectious disease, and hardly a case of cold or cough, even in chilly and unfavourable weather. Unfortunately the three winter months spent in the old unhygienic conditions at home undo much of the good gained in the open-air life of the *Waldschule*, and it is earnestly to be hoped that the Charlottenburg municipality, which has shown itself a pioneer in so many social-hygienic problems, may see its way to erecting solid buildings in the forest where the delicate children of the poor can be kept, not only all day but all night too, and not only in certain months but the whole year round.

CORRESPONDENCE.

UNIVERSITY OF LONDON.

SIR,—There is one aspect of the question of the cause that has led to the diminution in the number of medical students in the University of London that Dr. William Hunter has not touched upon—the economic one. The demand for the doctor's "help" is not so great as it was, even a decade ago. The reasons are apparent. Hygiene, temperance, hospitals of all sorts, sanatoriums for consumptives, quack medicines, midwives (certified), surgery, local anaesthesia, improvements in treatment, which much shorten attendances and fees, are all limiting the demand for the general practitioner. There is less to do—less to be earned. The correspondence in the press last year on "Ruined Doctors" tells the same tale. Economically, it is certain that parents will invest as little money as possible to obtain a degree for their sons, as the anticipated reward is small. Wealthy men will put their sons into some business offering better prospects. Observation shows that it is not knowledge that makes the successful general practitioner, but a pleasing manner, push, and who shall say what? The public understand M.D. and no other degree, as a writer in the *Daily Telegraph* this week confesses; but one M.D. is as good as another to it. Why, then, should the man whose ambition is to be a general practitioner lengthen his curriculum and increase the labour and expense by taking such an exalted degree as that of London when no adequate reward is to be expected? Exceptionally gifted men—perhaps 3 per cent. of the whole, with high ambitions, must have London degrees in order to get on hospital staffs.

The provincial schools supply an education adequate to the ends in view, and in many cases the coveted M.D., for less effort and less expense than London University does. Until it is demonstrated to the average parent's satisfaction that a London degree *ipso facto* will increase markedly the earning capacity of his son, men will be sent to the schools which are cheaper—cheaper because more accessible to numbers of men, and because the attaining of a qualification to practise in a given time is far more certain. Much as this sordidly commercial way of regarding our profession is to be deprecated, I feel sure that the economic position is the main factor in the diminution of the numbers of "London" men.—I am, etc.,

VAUGHAN PENDRED, M.D.Durh., F.R.C.S.Eng.

Coventry, May 23rd.

DR. WILLIAM HUNTER'S STATISTICS.

SIR,—I read Dr. Hunter's letter with great pleasure. On the whole, in spite of his recent research, I think he is more at home in the rôle of humorist than in that of statistician. His intentional pleasantries are capital, but only biometricians will appreciate the rich vein of unconscious humour running through his remarks on statistical methods.

One of Dr. Hunter's witticisms is perhaps a little forced. I had suggested that the development of provincial universities, etc., must diminish *relatively* the percentage of students educated in London. Dr. Hunter inserts "naturally," omits "relatively," and attributes his own version of the sentence to me. I am willing to suppose that this misquotation is a jest. When in a less jocular frame of mind, Dr. Hunter will probably realize that if the percentage of A's in a population remains constant, while that of B's diminishes, then the A's have increased relatively to the B's.

If it were merely a question of replying to Dr. Hunter, I could safely leave the matter as it stands; but a principle of some importance being involved, I should like to examine the problem a little more closely.

If we are to draw *any* conclusions as to the merits of rival systems from Dr. Hunter's figures, we must first be sure that the returns for different years are comparable. If, owing to the rise of new professions, for instance, the class from which medical students are recruited has changed in character, or if it is more difficult or easier to register as a student now than thirty or forty years ago, the material is not homogeneous, and direct comparison of different years is illegitimate. What statistical test of homogeneity has Dr. Hunter applied? None whatever.

If the *whole* number of registered students for the period of forty-two years were grouped in fourteen equal periods, the ordinary process of curve fitting could be employed. If the material were found to be capable of representation by some regular frequency curve (for example, Pearson's Type I), and the "fit" were reasonably good, it would be tolerably strong evidence in favour of a belief that the material is approximately homogeneous, and therefore comparable from year to year. I do not say this is the only or even the best criterion of homogeneity; the important point is that the problem can only be solved statistically; *a priori* reasoning and jokes are merely irrelevant.

Even were the material homogeneous, Dr. Hunter's treatment of it would be inadmissible. He continually speaks of such and such a school as having "encroached on" London. His reasoning appears to be of this type: If London students diminish, say, 10 per cent., and Edinburgh students increase 10 per cent., then the whole London loss has been transferred to Edinburgh. This is the way in which Mr. Sherlock Holmes and other heroes of romance argue. A given circumstance can be explained in n ways; Sherlock selects one and the author plans the story in such a fashion that Sherlock is always right. In actual practice one has to consider the other n-1 possibilities, and that is why we are not all Sherlocks. Dr. Hunter could readily have tested his conclusion. If it is correct, the correlation between London graduates in medicine (educated in London) and Edinburgh graduates must be significantly negative. This is one test; others could easily be given. Dr. Hunter has employed none. To judge from his

remarks on Chart II. Dr. Hunter thinks that a percentage determined on a basis of 1,513 can be compared with one calculated from 1,140 without troubling about "probable errors."

If n be the number of individuals in a first sample, and p and q the numbers educated in and out of London, then in a second sample m we should expect: $100\frac{p}{n} \pm 67.449\sqrt{\frac{pq}{n^2}\left(\frac{1}{m}+\frac{1}{n}\right)}$ per cent. in the London schools and unless the observed value differs from $100\times\frac{p}{n}$ by more than three times $67.449\sqrt{\frac{pq}{n^2}\left(\frac{1}{m}+\frac{1}{n}\right)}$ we cannot say that the difference is significant. As a matter of fact, if the material is homogeneous, some of the figures, tested in this way, are certainly significant; but this does not justify Dr. Hunter, who has not calculated the "probable error" of a single constant, and does not seem to know what a "probable error" is.

It appears to me that Dr. Hunter has tackled a peculiarly complex problem in statistics, a problem requiring specially cautious treatment. Without even a semblance of analysis, he has published deductions intended to serve as a basis for immediate action and likely to be accepted without question by the many who have no leisure to examine the data.—I am, etc.,

Loughton, May 27th. M. Greenwood, Jun.
("Statistician").

Sir,—While there is no doubt that the total number of medical students in the London schools has notably diminished, it is equally certain that in some of the schools the numbers have not fallen off, and that one of these, at least, is on the crest of a wave of prosperity. The material dealt with by Dr. Hunter is not in this respect homogeneous. The reasonable course for the University of London to pursue is not to attempt the destruction or damage of these successful schools by the building of a new centre for the medical sciences at South Kensington, but to inquire into the causes and conditions of their success, and to further and help it.—I am, etc.,

Loughton, May 29th. Leonard Hill.

CONVALESCENT HOME OF ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

Sir,—May we ask you for space to appeal to Cambridge graduates and their friends for help in providing Addenbrooke's Hospital with a seaside branch for convalescents, such as we now find it to be a necessary equipment for every great hospital?

These seaside branches are quite distinct from the ordinary convalescent home, to which admission may be obtained through subscribers' letters for people needing merely rest and change of air. They are intended precisely for those whom such homes must of necessity exclude, namely, those who still need surgical care and treatment, including men, women and children from three years old. The patients are nominated by the Hospital staff, and have all been under treatment at the Hospital. There are thus no trivial cases. The removal of these to the sea at the earliest possible moment after operations or of severe illness gives much needed relief to the congested wards, while the bright seaside and open-air life completes the work of restoration as nothing else could.

In response to an appeal made eight years ago by the medical and surgical staff of Addenbrooke's Hospital for such a branch the work was begun in a hired house by the sea-side. The generosity of a few friends provided funds enough to try the experiment for some years, and its success has been even beyond their hopes. But those funds are now exhausted, the lease of the temporary home at Deyncourt has come to an end, the Committee have decided to build one house not planned for this purpose but being really suitable and have secured an admirable site at Hunstanton. All that is now needed is £5,000, towards which £3,000 have already been given or promised.

Donations will be gratefully received at Barclay's Bank, Cambridge.—We are, etc.,

Cambridge, May 18th. L. de Burgos,
Honorary Treasurer of the Home.
Donald MacAlister,
Chairman of Physicians to Addenbrooke's Hospital.

THE MILK SUPPLY.

Sir,—I take a little exception to your comments to my note upon this subject, which appeared in the Journal of May 25th, p. 1258. I said that medical officers of health were much more deeply impressed with the dangers attaching to the consumption of raw milk than with those pertaining to the consumption of sterilized milk, and I alluded particularly to those medical officers of health who have the exceptional experience gained in the public supply of infant food, as well as that gained in connexion with milk production and milk supply. If the men with this combined experience are not the best authorities upon this subject, I venture to ask who are? If, in their all-round experience, they find more evidence of harm from the use of raw milk than from the use of sterilized milk, they are right in assuming a less favourable attitude towards the provision of raw, than towards the provision of sterilized, milk. The British Medical Journal a few years ago collected and published details of a large number of epidemics caused by milk, and since then many other epidemics have been recorded; in fact, such epidemics are of continual occurrence, and never a year passes that does not see several in one part of England and another. The danger to individuals from raw milk consumption, apart from epidemics, whether from the germs of tuberculosis, or those of other diseases, is not so easily estimated, but no one doubts that it is very great. On the other hand, what is the evidence of damage done by the consumption of sterilized milk? It appears to be extremely vague, and one may say positively that up to this moment no evidence has been published to prove that anything like the risk attaches to the consumption of sterilized milk as to the consumption of raw milk. If the physicians of the children's hospitals are possessed of positive evidence to prove anything to the contrary, surely it is their duty to enlighten us all upon the subject by publishing the details. I have it from competent authorities that the liability to the development of scurvy in infants from feeding upon sterilized food has been greatly exaggerated, and indeed it must be so, judging from the numbers of children one knows in well-to do private families who are thriving upon sterilized milk, or upon sterilized patent food, for the proprietary foods in commonest use are also given in a sterile condition.

I acknowledge that the medical officer of health cannot do more than give a very broad supervision to the distribution of infant food by the municipal authority, but I think it must be evident to most of those engaged in municipal work that the more intimate supervision cannot be done in the way you suggest, namely, by "a practitioner, or staff of practitioners, who can give sufficient time to the individual management of the cases." I say that such a proposition if insisted upon would put an end to the municipal provision of infant food, but, as you remark, the hospitals "in many instances but not in all" can take up the work, to the happy release of the medical officers of health. There is still plenty of scope for all the hospitals in London, if they be of such mind, for up to the present I believe that only 5 of the 29 metropolitan boroughs are supplying food, and these only in a tentative and partial way. These "systems of milk depôts" are hardly worth mentioning in comparison to what might be done, and whilst the managing boards and staffs of the hospitals are elaborating their systems of milk supply, surely these few municipal institutions might be left alone. In the end there is a possibility of their turning out to be the more appropriate and better managed of the two sorts, or perhaps they may be the only sort ever established. There is not much likelihood of the metropolitan municipalities calling upon the boards and staffs of the children's hospitals to advise them upon infant feeding; such a practice is not feasible, but there is nothing in the way of these latter before instituting a system of infant feeding entirely in accord with their own ideas. The field is open if the will and initiative be present. The municipal mode is to employ women inspectors to attend to individual cases rather than medical practitioners, and there is a good deal to be said for it both as regards cost and otherwise, but in their own depôts the hospitals could employ practitioners if they chose to do so.

As to the provision of pure raw milk, no legal powers at present exist to compel cowkeepers to take all the precautions which, at great expense, might be taken in the

production of milk and the provision of the by-laws that have been allowed to be made, even if carried out in their entirety, would not result in pure milk, or anything near it, whilst only those who are trying to put the by-laws, weak as they are, into execution can appreciate the difficulties that are encountered in this connexion.—I am, etc.,

May 28th. M.O.H.

THE CLIMATIC TREATMENT OF TUBERCULOSIS.

SIR,—If Dr. Bampton had waited for the full report of the discussion of the meeting of the Balneological Society on the above subject, which he will in due course receive, I do not think he would have written the letter which appears in your issue of May 25th. The discussion did not evoke "a conflict of opinion as to the respective merits of moorland and seaside resorts," and it is not the case that "bias was shown according to whether the speaker practised at a marine station or an inland watering place." The conflict was about a very different matter, and the bias, if indeed such was shown, was displayed in quite other directions.

Dr. Bampton closes his letter with "some very elementary observations on choice of climate which," he tells us, "are often lost sight of in discussion." It seems to me that in matters climatic there is a point which is still more often lost sight of (it is, for example, conspicuously absent from these observations), namely, the necessity for treating the patient rather than the disease. Dr. Bampton's comparisons between moorland and seaside, between east coast and west coast, are so "elementary" that they leave altogether out of account the type of patient with whom he is concerned.

"Tuberculous patients do well browsing among the heather."

"For choice I would send a tuberculous patient to the moors in the spring . . ."

"My own experience is that patients gain ground on the moors . . ."

Whether the patient be young or old, lymphatic or excitable; whether in his case the disease be incipient or advanced, limited or widespread, would seem to be negligible quantities. For the moorland climatologist there is evidently nothing like heather.—I am, etc.,

London, May 25th. LEONARD WILLIAMS.

THE NEW VACCINATION ORDER.

SIR,—I have been favoured by the Clerk to the Guardians for this Union with a copy of the new Vaccination Order,[1] and the circular letter to Boards of Guardians accompanying it, and I venture to say that a more extraordinary production never emanated from that Board, which never meets, and which therefore must be saddled upon the man who represents it, namely, the Right Hon. John Burns. Extraordinary both as regards the injustice it inflicts upon public vaccinators, who are placed absolutely at the mercy of Boards of Guardians, strongly antivaccinists in a great many cases, and still more extraordinary in showing up the want of knowledge of the work of the public vaccinator which exists at head quarters. The logic, too, is very fine. The Order says that for vaccination and revaccination at the surgery or some place other than the home of the person vaccinated, a minimum fee of 2s. 6d. is to be paid, and further says that children over 12 months old may be vaccinated at the surgery for that fee, but this must be at the request of the parent or person having the custody of the child; but (and it is rather a big one) before he (the public vaccinator) proceeds to vaccinate, "he must satisfy himself that the child can be safely vaccinated, having regard to Subsection 4, Section 1 of the Vaccination Act, 1898," which provides that—

> The public vaccinator shall not vaccinate a child if, in his opinion, the condition of the house in which it resides is such, or there is or has been such a recent prevalence of infectious disease in the district that the child cannot be safely vaccinated.

So that for a fee of 2s. 6d. and the *privilege* of vaccinating a child at his surgery, the public vaccinator is to make an inspection of the home of the child and inquiries in the neighbourhood as to the prevalence of disease, in fact is to act as a medical officer of health and is, if the conditions are such as to render the vaccination unsafe, to make a report to the medical officer of health. All this for what? Nothing at all if the vaccination is not done, and if done, 2s. 6d. Truly the generosity of the Local Government Board is overwhelming.

It is also set forth in the Order that in districts not wholly rural the fee payable shall be not less than 2s. 6d. for vaccination at the home of the child and even where the district is partly urban and partly rural this fee is also set down as a minimum, but with the proviso that it shall be approved of by the Local Government Board. And in this it will be seen that Boards of Guardians will, wherever possible, fix the minimum fees as adequate remuneration for work which was not overpaid at double the figure. True the amount of fee must be agreed upon between the guardians and the public vaccinator, and if they fail to agree will be settled by the Local Government Board.

But here again a new provision is made which I venture to say is absolutely unworkable. The question of vaccinating two or more persons in the same house at the same time is thus set forth:

> Nothing in the foregoing paragraphs of the Order shall apply in any case in which during a period of twenty-four consecutive hours successful vaccination or successful revaccination has been performed by the public vaccinator upon two or more persons at one and the same home or on any premises (other than the surgery of the public vaccinator) whereon those persons were together present at any time during the aforesaid period.
>
> In every case the amount to be paid to the public vaccinator shall in respect to the first person vaccinated or revaccinated, be the sum which being not less than the sum specified in such one of the Rules hereinbefore set forth as is applicable to the case of that person, is fixed in the Contract approved by Us . . . . and in respect of every other person vaccinated or revaccinated the amount to be paid to the Public Vaccinator shall be such sum as is fixed in the Contract approved by Us.

So that the public vaccinator may vaccinate or revaccinate as many as he likes at his own surgery for 2s. 6d. each, but if he takes the trouble to go to the home of a person to vaccinate or revaccinate, and a second person wishes to be vaccinated, he is to receive 2s. 6d. (minimum) for the first, and such sum for the second as "may be approved by Us."

Moreover, if he, having vaccinated one person in a house, receives a request to return and vaccinate another person in that house within twenty-four consecutive hours, he is to have all the trouble of a second visit, etc., and still only to receive the sum "approved by Us." And as the Order is made with the distinct intention of reducing the fees, what that sum will be is problematical.

Now, sir, here we find the work of the public vaccinator is increased, and in no case, excepting the arrangement of the form of certificate, is it at all decreased; for I do not consider the extension of the time in which the visit is to be made after receipt of the H. list to a month is any privilege at all, as I for one find it impossible to mix up my private work with the vaccination part, and I have to set apart at least three afternoons a week for the latter purpose.

Moreover, a new method of procedure by the vaccination officer is to come into being in that it will become his duty so soon as any child attains the age of 3 months and 7 days and none of the certificates, etc., shall have been received, he shall proceed to give notice and make inquiry in Form Q, which reminds the parent that the child will be 4 months old on a certain date, and that unless a certificate be received, dealing with the vaccination of the child, within seven days of that date he will place the child's name on the list H for the public vaccinator, who will visit in due course, and concludes:

> If, however, you should propose some other arrangement for vaccination of the child I shall be glad to be informed of the same.

What this is intended for I do not know, unless it be as a reminder that the period for obtaining exemption is almost up.

If that be so it is simply an attempt to lessen the number of children vaccinated.

Have the medical profession any idea of the work entailed in connexion with public vaccination? (I am almost tempted to ask the same question with regard to the Local Government Board, for in neither case do I think there is even an elementary idea.) May I, therefore, trespass on your space to inform at least our professional brethren what we are required to do, before I appeal to

[1] See page 1312 of the present issue of the BRITISH MEDICAL JOURNAL.

them for support in a struggle which I am convinced will be a strenuous one?

I will put as shortly as I can the absolute requirements. On receiving from the vaccination officer a list of children who have reached the age of 4 months (list H), it is first necessary to sort them out into districts and determine when the visit should be made. Then the "notice to visit' form has to be filled up and posted ("at least twenty-four hours' clear notice being given of the intention to visit"). The visits are then made, and the results of such visits are to be entered on Form H and also, where vaccination has been performed, in the Vaccinator's Register.

Form H, I may say, contains four columns to be filled in by the public vaccinator—namely, date of sending notice, date of visit, result of visit, and "remarks."

The Register contains no less than nineteen columns to be filled in—namely, number of case, date of vaccination, name of person vaccinated, whether primary or revaccination, age of person vaccinated, residence of person vaccinated, place where person vaccinated, source of lymph, number of insertions made, initials of person performing the vaccination, date of inspection, place where inspection made, number of successful separate vesicles produced, ditto unsuccessful, initials of person inspecting, date of sending certificate to vaccination offices, the money column in respect of fee payable in each case, and a column for remarks.

He must fill up and post all certificates of successful vaccination and postponement of vaccination within seven days, and must inform the Medical Officer of Health of any insanitary condition in the home of the child or of the prevalence of infectious disease.

Vaccination must be done in accordance with the regulations of the Local Government Board—namely, the arm and instruments must be thoroughly cleansed; and, after applying the lymph, the arm must be protected by suitable dressings. Should anything happen to the child or person during the next fortnight, and if through negligence the arm becomes septic, he must take charge of the case, and provide at his own expense any treatment that may be necessary; and here be it noted, that all the ills that flesh is heir to coming on during that period are put to the (dis)credit of vaccination. He must, for the convenience of the Local Government Board, fill up a schedule, giving the date of using, age of person on whom used, number of insertions and number of separate vesicles obtained, and state whether used for a primary or revaccination, for each supply of lymph.

In addition, he must keep a postponement register, and must on the expiry of the period for which any vaccination was postponed, again visit the house of the child and report the result, either by again postponing or vaccinating if person is fit.

Should the person be "out" when he calls (and it very frequently happens), he is to call again and again till he sees the person in custody of the child. The visits may in some cases amount to six or seven, and I have cases where I have visited nine times without being able to arrive at a result.

Such, then, are roughly the duties we are asked to carry out, and close inspection of our work renders it absolutely necessary that they should be scrupulously carried out, and I ask and I ask it with some degree of faith in obtaining my request that the support of the profession, and at least that of the British Medical Association, should be given to the public vaccinators in the coming struggle.

Talk about contract practice and provident dispensaries sweating us! The attempt now made, to my mind, is far worse than that and is far more dangerous, in that it has the official sanction of the Government. It is a sop to a certain noisy crowd of agitators, whose methods are neither honest nor honourable, and who care not for the general welfare so long as their own opinions are allowed full play.

One word of advice to public vaccinators generally I would give, and that is—Do not be in a hurry to agree with your guardians. Let the public vaccinators of every union meet and determine the line of action they are to take, and when that is fixed on, if there be any necessity, let them ask the assistance and co-operation of their medical brethren.

Certain negotiations with your guardians must take place, and if you fail to agree then the Local Government Board will step in and decide, and then, I take it, the struggle will commence, and nothing but united action and the whole-hearted co-operation of the profession can save the situation.—I am, etc.,

Burnley, May 27th. J. M. Ferguson.

Sir,—The Local Government Board has just issued a General Order about Vaccination, to "Boards of Guardians, Public Vaccinators, and all others whom it may concern," which, when working in conjunction with Mr. Burns's new Vaccination Bill, which passed the second reading in the House of Commons on Friday last, May 24th, virtually means the repeal of the Vaccination Acts. What will be the effect of this new Order and this new Bill? Let us take the new Bill first, which when it becomes law will allow the so-called conscientious objector to simply make a statutory declaration before a Commissioner for Oaths or Justice, and pay 1s. or 1s. 6d., and thus be exempt from the Act. But this is not all, for when a baby is 3 months old, the vaccination officer, according to the new Order, must notify the parent of the date when the child will be 4 months old, and tell him that if he does not receive a legal exemption or a certificate within seven days from that date, the public vaccinator will be instructed to call and offer to vaccinate. This means that the vaccination officer is to write and warn the people, that they have only another month in which to obtain their exemption, and so they had better bestir themselves. In other words, the vaccination officer is to stultify himself by warning the people not to do what he was placed there originally to enforce. Now the conscientious objector is really a very small minority, although perhaps somewhat a noisy one, but he does not give any real trouble, and in spite of him, the people are to-day better vaccinated than ever they have been. There are, however, a great number of people, less earnest than the conscientious objector, who "do not believe in it," and who "think it a shame to cut the poor little mite about," and a very great number who think it "nonsense" and a "lot of trouble." These people take it as a matter of course and submit, but when shown how easy it is to become exempted, they will willingly make the declaration, and so save themselves trouble, and thus become a danger to the community. A great many of the public believe that small-pox has been, and can be, kept away by sanitation, etc. Now, if this were the case, scarlet fever, which is a very similar disease as regards its infectious properties, would be as rare a disease as true small-pox. This is, however, very far from being the case, and epidemics of scarlet fever are about as common now as ever they used to be.

In sending out the new Order, the Local Government Board enclose a circular, in which they in a way apologize for introducing the Order. They excuse themselves chiefly on the ground of economy, and yet in the same breath they say that the remuneration was not excessive. The letter reads: "The Committee found that apart from the great increase in the number of operations performed since 1898, the principal factor in the increased cost of public vaccination has been the increase in the fees payable to the public vaccinators. But as the Committee pointed out, some increase in the remuneration of the public vaccinators was inevitable, in view of the additional duties which were imposed upon them by the provisions of the Act and of the Vaccination Order, 1898, the Committee thought that, having regard to the work required, the remuneration for primary vaccination since the Act of 1898 came into operation had, in many cases, not been excessive." Yet, in spite of all this, they have decided to reduce the fees for primary vaccination by one-half. This, however, is only a minor point when viewed from the standpoint of public health. It does not appear to me that it will matter greatly to the public vaccinator whether his fees are big or little, as there will be precious few to collect under this régime.

There can only be one result if this Order is long in force, or the Bill becomes law, and that is, that within the next decade the country will be put to the expense of a real small pox epidemic. But still we must submit, as it is one of the many mandates with which the present Government seems to be over burdened.—I am, etc.,

Chiswick, May 28th. Arthur D. Ducat, M.B.

OBITUARY.

JOSEPH GROVES, B.A., M.B.LOND., M.R.C.S.,

L.R.C.P.LOND., M.D.BOLOGNA, F.G.S., F.S.S., F.MET.S.,

JUSTICE OF THE PEACE; MEDICAL OFFICER OF HEALTH, ISLE OF WIGHT RURAL DISTRICT COUNCIL, ETC.

ON May 21st Dr. Joseph Groves died at his residence at Carisbrooke in the Isle of Wight. For the three weeks preceding his death his friends and the inhabitants of the Isle of Wight had been aware that he lay very seriously ill, but to many of his very numerous and widely-scattered personal friends, and to those also who have known him in the Council and Committee meetings of the various associations and societies with which he has been so long and so honourably connected, the intimation of the end of his manifold activities and untiring efforts in the cause of suffering humanity must come with a sudden sense of irreparable loss. With his death there passes from the Isle of Wight one of its most prominent, useful, and universally-respected citizens, and the British Medical Association has to mourn a loss which will be felt for many years to come. A distinguished physician, a sanitary reformer of the first rank, an antiquarian, and a geologist, his interests and sympathies were so many-sided that they defy brief description, and we can only here mention the most salient features and events of a life spent in well-doing.



JOSEPH GROVES, B.A., M.B.LOND., M.R.C.S.

He was born in the year 1839, being the eldest son of Mr. Joseph Groves of Newport, and was descended by the maternal line from one of the oldest island families. His mother belonged to the Roach family, who for several hundreds of years have farmed the lands of Arreton and Great and Little Standen, and doubtless it was his close connexion with many families of historic importance in the island which was at the root at once of his great love for the beautiful homes of his forefathers and of the antiquarian zeal which never deserted him, making him at the time of his death one of the most reliable and well-informed authorities on island antiquities.

His parents belonged to the Methodist Connexion, and he was sent at the age of 12 to Taunton College, a well-known school for the sons of Methodists. Even in his school days he must have been recognized as the possessor of those sterling qualities which afterwards won for him the respect of all who knew him, for it is related that whilst still a lower-form boy the Head—Mr. Thomas Sibley—having to repress a certain amount of illicit correspondence carried on by the boys, and being unwilling to intervene personally, requested the boys to elect for themselves a "postman," through whose hands all letters had to pass. Young Groves, much to his surprise, was elected to this post of trust. Leaving school in 1856, at the age of 17, and having passed the London Matriculation, his future career appears for a time to have been undecided, and for about a year he was employed at a business house in London. He then for some time studied law, but finally decided to enter the medical profession. Even during his brief commercial life, however, he read steadily and took the B.A. degree of London at the age of 19. After taking his arts degree he entered King's College as a medical student, we believe in 1861. Whilst only a second-year student the pecuniary advisability of his taking a qualification to practise was urged upon him by some of his college friends, and after considerable difficulty he was allowed to enter for the Licence of the Society of Apothecaries, being granted this in 1863. Taking the M.R.C.S.Eng. in 1864, he was appointed Medical Registrar at King's College Hospital, having previously held temporarily one or two dispensary appointments. About 1866 he settled in practice in Highbury, still keeping in touch with his hospital, acting as anaesthetist to Fergusson and Priestley, with both of whom he was on terms of great friendliness. It was in the year 1866 that an apparently accidental occurrence — the outbreak of Asiatic cholera — decided very largely the future trend of his life-work. As a result of a hastily-summoned Privy Council meeting, various medical men, selected by medical bodies, were put in charge of preventive measures in the several districts. Dr. Groves, acting in co-operation with Dr. Evans, the Medical Officer of Health, was put in charge of the Charing Cross district until the epidemic was stamped out. His fearless discharge of duty and lofty disdain of personal attack were well illustrated at that time by his closing of the old Holy Well from which Holywell Street was named, in the face of considerable popular indignation. On the day following this act he was mobbed and stoned, and had to take refuge in Charing Cross Hospital. This temporary appointment marks, we believe, the beginning of his life-long labours in the public service, labours which have resulted in incalculable benefits to the people of the Isle of Wight, often wrung with unusual courage and tenacity of purpose from the most strenuous local opposition. Not long after this time and to the great concern of his friends, signs of pulmonary consumption appeared and in 1868 his chief, Sir William Fergusson, secured for him a transatlantic travelling appointment. Unfortunately on his second voyage to New York a severe haemorrhage occurred and we may incidentally mention it as most characteristic of the man that a fellow-traveller incurring a fracture of the thigh and no medical man being available at the time, Dr. Groves, though himself in a most precarious condition, caused himself to be carried to the side of the patient and directed the setting of the limb. Returning to Carisbrooke, as his friends thought to die, he treated himself on what are now everywhere recognized as the most approved methods of treatment of pulmonary consumption —abundant food and perpetual open air—and made a most satisfactory recovery. In this relation we may say that we have before us as we write the original manuscript of an article entitled "The Health of Rome," by

Dr Groves, penned nearly forty years ago, in which are indicated those principles afterwards put into practice in his treatment of consumption and insanity and which are to-day universally recognized. "In no respects perhaps," he said, "is the advance in medical knowledge and treatment more marked than in the confidence with which the modern physician regards many cases of phthisis and of mental derangement which come before him. He knows that if, instead of further impairing the digestive functions of a consumptive with sedatives and other drugs, he judiciously administers cod-liver oil, iron, and other foods; that, if instead of depriving him of all occupation, he encourages him to follow pursuits which do not hurry the circulation, and which can be carried on in a pure atmosphere; and that if, instead of shutting him up in a suite of rooms heated to one temperature, his patient can reside in climates which admit of his living out-of-doors all the year round, life will be at least prolonged in most cases. He knows that if, instead of confining a person with mental delusions in a mad-house and using such disciplinary measures as were formerly in vogue, he is bold enough to send him travelling under sunny skies and with surroundings of the beautiful in nature and art, which will provide for him constant change of scene and material for change of thought, he will in many cases more or less speedily restore him to his work in life, and save his family one of the intensest griefs which families know."

After a year spent in convalescence in his island home he spent some years in foreign travel in medical charge of invalid noblemen and others, wintering in Italy, Switzerland, or Egypt, and visiting Scotland in the summer. He also spent at this time on two occasions several months of fruitful study in Paris, living in the Latin Quarter with other students. He was living in Paris at the time of the Communist barricades, and witnessed the death of a close friend who was shot down by the soldiery on the top of a barricade whilst attempting to disperse his riotous student friends. This incident was afterwards introduced into a novel, the hero of which was Dr. Groves's friend, by "Ouida," whose acquaintance Dr. Groves made at this time. In these years of foreign travel Dr. Groves made lifelong friendships with many people of note, he laid up a store of ever-fruitful knowledge and pleasant memories, and he developed his unerring taste in works of art. Returning to the Isle of Wight, at first in charge of a simple patient who suffered from mental derangement, he sought, on the recovery of his patient, to practice, but for a year or two attended only his friends at their urgent request.

In 1875 however, he was appointed Medical Officer of Health to the Isle of Wight Rural Sanitary Authority, which position being automatically exchanged to the Rural District Council. From that date, twenty-four years ago, until severe and repeated anginal attacks and the onset of dangerous symptoms four weeks ago compelled him to take to his bed, he has discharged his numerous duties—for the past year with increasing difficulty, but with indomitable courage and never a thought for himself—as Medical Officer of Health and as a highly-esteemed medical practitioner, winning the confidence and admiration of all. As a physician his practice has been entirely confined to medicine, and for many years he has been largely called in consultation by his *confrères* in the island and the adjacent mainland. As a Medical Officer of Health he was known and respected all over Great and Greater Britain. In the words of an Isle of Wight newspaper, he fought battalions almost single handed and carried reform after reform at the bayonet point. His annual reports were models of what such reports should be, and in the closing words of his last report, one may dimly discern his dawning knowledge that he was handing in his last report, his final *apologia pro vitâ suâ*, at once a farewell and his most fitting epitaph: "As the person who knows, perhaps, your sanitary district and its requirements better than any other, I have, rightly or wrongly, endeavoured to do my duty by speaking plainly, but not, I trust, discourteously. My only object has been the good of the people for whose welfare I have striven for so many years."

He joined the British Medical Association in 1875. In 1897 he came on the Central Council as a Representative of the Southern Branch; he was at one time Chairman of the Public Health Committee, and was a member of the Journal and Finance Committee at the time of his death. He had been a member of other Committees in other years, including the Parliamentary Bills Committee, the former Ethical Committee, and was a very active member of the Colonial Committee from the time of its formation up to last year. He was a Vice-President of the State Medicine Sections in 1899 and again in 1906. In his capacity of Vice-President of the State Medicine Sections he attended the Annual Meeting of the Association at Toronto last year, and there is some reason for fearing that, after the meetings of the Association were over, the exertion of travel to Vancouver and his hurried visits to many cities in the United States did him harm. Three years ago an honour which he greatly appreciated was conferred upon him by his election to the presidentship of the Incorporated Society of Medical Officers of Health. He was a member of the British Balneological and Climatological Society, and at the time of his death was the President elect for the ensuing year. He was also a member of the Conjoint Committee for the teaching of Hygiene and Temperance in the universities and schools of the British Empire, and a Fellow of the Geological, Statistical, and Meteorological Societies. He was for many years a Justice of the Peace, and as an islander took the keenest interest in local societies, being a vice-president of the Isle of Wight Horticultural, the Isle of Wight Agricultural, and the

Newport Literary Societies, and was a member of the Newport Benevolent and many other societies and athletic clubs. As an ardent archaeologist he was a member of the Hampshire Field Club and Archaeological Society, and devoted much time and care to the study of the records of the past and to the preservation of the ancient monuments and landmarks of his native and beloved island.

We have summed up here, very inadequately, the main facts, from the point of view of professional service, of a life devoted to the public good. As a writer in the Isle of Wight paper has said, he lived for the island, he worked for it, and it may truly be said that he died for the island. Certainly his devotion to his public work hastened his end. The urgent remonstrances of his friends were disregarded, and he died, as he often said he wished to die, still in harness. For these reasons his most enduring monument will be his public service to the community, no small part of which has been his faithful education of the people of the Isle of Wight, in season and out of season, in the laws of health. The public official, however, may be replaced, but the man never. Whilst his public work is a long record of duties nobly fulfilled, notwithstanding obstacles from without and increasing bodily illness, he will be remembered not as the sanitary reformer, wise in council-chamber, bold in action—for he was a born fighter, though ever and only in a good cause, intolerant of wrong, disdainful of convention, contemptuous of shams, and singularly independent and outspoken in his commerce with all manner of men—but as one who all his life long has been to great numbers of the poor and suffering at once physician, banker, counsellor, and truest friend.

He was laid to rest in the family burying ground at Newport on Friday, May 24th. The estimation in which he was held was well shown by the presence at the funeral, in addition to the civic bodies and the representatives of all the medical associations with which he was connected, of a concourse of mourners from all parts such as has been seldom witnessed in the island.

And so, after a distressing illness borne with uncomplaining fortitude, grieving only that he should trouble others, there passed into the great silence one whom the world can ill spare. Of good presence and distinguished courtesy, noble of mind and great of heart, thoughtful of all but himself, he lived entirely in the service of humanity, loving his neighbours as himself, and leaves behind him an ever-inspiring memory of lofty ideals nobly attained.

Mr. WARD COUSINS writes: All my friends in the South of England deeply regret the loss the profession has sustained by the death of our old friend Dr. Joseph Groves. He long enjoyed a high professional reputation as a wise and skilful physician, and also as a very able practitioner in every department of sanitary science. Dr. Groves was a man of strong convictions and marked independence of character, and while well able to defend at all times his high ideals of duty in every relation in life, he possessed at the same time a very kind and generous heart. His mental energy never flagged, and for many years he very successfully discharged the duties of medical officer of health over the rural districts of the Isle of Wight, and under his persistent and able direction the sanitary condition of the island greatly improved. He devoted much time, too, to philanthropic labour among the poorer classes, and his generous and unostentatious work among them will be a lasting record of his useful and earnest life. Personally I have been intimately associated with Dr. Joseph Groves for many years, not only as an active member of the Southern Branch, but also as a most agreeable and invaluable colleague in the Central Council of the Association. In many other professional matters I have had great opportunities of appreciating his worth, and our long friendship will always be surrounded in my memory with the kindest recollections.

Dr. J. F. BRISCOE (Alton, Hants) writes: The Southern Branch has lost one of its best "pillars" in the death of Dr. Joseph Groves, of Carisbrooke, Isle of Wight. It is impossible for me to fully place on record the history of his life, for I am not in possession of it; but as a servant of the Southern Branch I know his worth. He was a leading star of ethics, and I feel sure he had few equals. At our meetings, executive or otherwise, he was always in the front rank with wisdom and knowledge, and I know of no one in the Southern Branch who fought so strenuously to bring the ethics of medicine to the highest pitch of perfection. He has encouraged and lessened the task of many who bend themselves in that direction. As you know, sir, medicine is falling into a distinctly new groove contrary to the past, and it is only by the individual efforts of example that the Association can gather sheep into the fold. Myself, very much interested in ethics, I have over and over again consulted the late Dr. Groves on knotty points, and it has only been by his skilful advice that I have tracked a right course. Often I have listened to his remarks. "He ought to know better," meaning that a man in the profession occupying a front stall should set the example by eschewing those indifferent habits rising up amongst us by personal advertisement in any shape or form. "How can the youth of the British Medical Association be expected to steer a right course when leaders of medicine track the perilous road of careless ethics?" he would say. These and other points which help to make up the fabric of the British Medical Association were so deeply rooted in our lost brother, Dr. Groves, that not only the Southern Branch loses an ornament, but the British Medical Association all over the world.

THE LATE SIR JOSEPH FAYRER.

SIR WILLIAM HOOPER, Honorary Surgeon to His Majesty the King, late President, Medical Board, India Office, writes: Having enjoyed for many years an intimate friendship with the late Sir Joseph Fayrer, I can testify that he lost no opportunity of furthering the cause of science and medical education and of promoting the interests of the public medical services of which he was such a grand representative. Fayrer consistently upheld the honour and dignity of his profession and strongly advocated the rights of the medical services. It may not be generally known that he was twice invited to represent in Parliament, in the Conservative interest, the Scottish Universities. His duties at the India Office debarred his acceding to the first invitation, and his failing health made him decline the second. The Scottish Universities, the profession, and the medical services were thus deprived of having a parliamentary advocate of great ability and oratorical power with the courage of his convictions. Fayrer was at heart the kindest of men—ever ready and anxious to help and advise a friend. One of the most touching traits in his noble generous character was his love of children; the village children of Kyleakin, Skye, where he visited every autumn for many years, were, with the sick and helpless, objects of his special care. Each evening numbers would await the return of his fishing-boat for their share of the day's catch. Fayrer's ardent love of sport was enhanced by his extensive acquaintance with natural history. He made an excellent collection of British sea and game birds. Even when partially crippled by gout he would get over miles on the moor and kill his birds. All who knew Fayrer must feel that a man of very marked individuality, exceptional gifts, high courage, strong will, and a noble and lovable nature, has passed from amongst us.

Sir LAUDER BRUNTON writes: The points about Sir Joseph Fayrer which impressed one most were, I think, the perfect uprightness of his character, his absolute fearlessness, the wide range of his activity and interests, the wisdom of his judgement, the promptness and energy of his action, and, last but not least, his kindness and tenderness of heart. As illustrating the difficulties under which his scientific work was done, he said to me that in Calcutta he had sometimes to break off an experiment upon the action of snake venom in order to go to the hospital and do his work, and while there performing an amputation he would sometimes be disturbed in his mind by anxiety regarding the progress of labour in one of his best patients. His rapid decision and energetic action are well illustrated by a story which he told me of the siege of Rangoon. A boat was landing from Fayrer's ship in order to take part in the siege, but the fire was so hot that the boatmen who were pulling wished to turn back. Fayrer said that he felt extremely frightened, but the only outward and visible sign of his fright was

that he unshipped the tiller with which he was steering and threatened to dash out the brains of any man who attempted to turn. The boatmen saw they might possibly escape from the bullets which were falling thickly around, but there was no chance of escape from Fayrer, and they wisely continued in their course. While studying in Edinburgh he attended the botany class, where the discipline was very lax. The students were accustomed to throw plants and flowers about during the lectures, and one day they took the opportunity of pelting Fayrer. Fayrer stood this for a short time, then jumped up, seized the chief offender by the collar, marched him up to the platform where the professor was lecturing, and threatened to thrash him with a stick which he held in his hand within an inch of his life if he did not then and there kneel down and beg pardon both of the professor and himself. This course the student wisely pursued. The plainness with which he put his views went a good way towards getting them accepted. In my own case, when I was broken down by repeated attacks of malarial fever, I asked Fayrer for advice. He said: "There are two courses open to you; you can go away for four months, or go into your coffin. It is not for me to decide; you must take your choice." I need hardly say that I went away, although at the time leaving practice seemed to be little less than complete ruin. Few men have had the same power of inspiring universal confidence and admiration, and of securing the warm affection of all who knew him at all well, and the love of those who were privileged to know him intimately.

Colonel Kenneth Macleod, Indian Medical Service (retired) writes: Having known the late Sir Joseph Fayrer for very nearly forty-nine years, held the same appointment as he had occupied with such distinction in Calcutta, having been associated with him on the Medical Board at the India Office, and having had the honour of his personal friendship, and enjoyed many opportunities of studying his character and career, I venture to place on record a few observations illustrative of his disposition and capacity drawn from my own knowledge.

My earliest recollection of him goes back to the year 1858, when I was a second-year medical student in the University of Edinburgh. Fayrer had returned from India in April of that year in bad health, bent but far from broken by the arduous and anxious labours of the siege of Lucknow, in which he had borne so conspicuous, so gallant, and so useful a part, crowned with the laurels won on that memorable occasion, and by his previous intrepid service in the Burmese war of 1852. With characteristic energy he took classes in the university with a view to qualifying for the degree of M.D., which he obtained by special examination in March, 1859, just before he proceeded to join the appointment of Professor of Surgery in the Calcutta Medical College. I well remember his sturdy figure and strong features, and the regularity and diligence with which he prosecuted his studies. On one occasion there was a disturbance in Professor Goodsir's large class. Goodsir was a striking and pathetic figure gaunt, pale, and paralysed, and Fayrer rose in his place and indignantly addressed the class, with the result of a speedy restoration to order. This was characteristic of the man—fearless reproof of unruliness, and generous sympathy with physical failing in a truly distinguished man.

My next encounter with Fayrer was in January, 1866. After my arrival in Calcutta I found my way to the Calcutta Medical College Hospital, and was warmly received and invited to attend his clinic. He was then in high repute as a surgeon and teacher, and held a leading position in Calcutta practice. He was worshipped by his assistants and students, highly esteemed by his colleagues, loved and trusted by his patients, and known throughout the Presidency as a man of rare ability and skill. I experienced his hospitality, which was always profuse and generous. Among other kindnesses, he drove me to a meeting of the Bengal Branch of the British Medical Association, in the proceedings of which he took a warm interest and active part. Unfortunately a few years later homœopathy caused dissensions and led to a disruption of the society, which has never been revived. On my return to Calcutta in 1870 as Secretary in the medical department and Editor of the *Indian Medical Gazette*, I had opportunities in both capacities of becoming further acquainted with Fayrer's enthusiasm in his profession and in the promotion of science. His well-known researches regarding the poisonous snakes of India were then in progress, and the details of his experiments were contributed, in the first instance, to the *Indian Medical Gazette*, and subsequently embodied in the magnificent work entitled *The Thanatophidia of India*, published in 1871. This undertaking is a good example of his scientific methods, original, strenuous, persevering, and straight to the point. His surgical work in the hospital was very disappointing on account of the disasters caused by "hospitalism." These he and his colleagues—Chevers, Partridge, and Ewart—a noble quartette, were inclined to attribute to faults of site and construction. This was before the era of Lister, and it is interesting to relate that without any alteration in the hospital, when strict antiseptic methods were introduced by me in 1879 after learning them from Lister in Edinburgh, hospitalism disappeared, and the mortality after surgical operations was strikingly reduced. It was a repetition of the experience of Glasgow. It is characteristic of Fayrer's perfect honesty that in his published works he recorded with faithful accuracy the unfavourable results of his hospital practice. Compelled to leave India by ill health in March, 1872, he resigned the service which he had so long adorned in December, 1874, on being appointed to succeed Sir James Ranald Martin as President of the Medical Board at the India Office, on which he had previously served as member. In July, 1893, I was appointed through his recommendation a member of this Board in succession to Deputy Surgeon-General S. B. Partridge, whose eyesight had failed. For nearly two years I worked with Fayrer, who had in London brilliantly enhanced the reputation for talent and capacity which he had earned by his Indian work. Kindly straightforward good sense characterized his dealings with officers brought before the Board, and pleasant urbanity with his colleagues. During his tenure of this appointment, he was a member of the Army Medical School at Netley, in which he took a keen interest. Indeed, for many years after his retirement from office he made a point of attending the prize-givings and offering a few words of congratulation and advice to the young officers on the threshold of their career. Convinced of the importance of Indian medical service men attending this school he on two occasions, by directly addressing Her Majesty the Queen, thwarted a proposal to discontinue sending them to Netley. When Fayrer retired from the Medical Board I was a candidate for the succession and was nominated in conjunction with the officer who obtained the post. Fayrer when finally asked to make a choice gave weight to the stronger claims of my senior, but in such a tactful, kindly way as to obviate disappointment and disarm resentment. He was a loyal friend, and his loyalty was fully and heartily bestowed on his profession and service. He was a many-sided man, a linguist, a lover of art, a sportsman, a yachtsman, a scientist; but the largest share of his mind and heart was devoted to his profession, in which he was also many-sided—a surgeon, physician, and sanitarian. He held strong views on many subjects, some of them perhaps not quite in consonance with the beliefs of the day; but he was far from being intolerant, and it was a point of honour with him to encourage the expression of opinion however adverse to his own. In a word he was a great and good man, and I look upon it as one of the most fortunate circumstances of my life that I enjoyed his friendship.

One who knew him for more than twenty-seven years, and was associated with him in his daily life, writes: To know Sir Joseph Fayrer was to love him, and he was a living contradiction of the saying that no man is a hero to his *valet de chambre*, for those who were brought most closely in contact with him loved him best.

As a man of science, Sir Joseph's chief characteristics were his open-mindedness and his readiness to weigh and patiently consider all evidence before forming an opinion. He thought that many of the investigators of the present day jumped too hastily to conclusions and generalized on insufficient data. The reasonableness of his view has been borne out by the short life and gradual disappearance of many forms of treatment and views of causation of disease, and their replacement by others which will probably disappear in their turn. Sir Joseph was ever a humble and reverent seeker of truth in all branches of

knowledge, religious as well as scientific; and though never demonstrative in religious matters, he had the simple piety and trust in God to be found in all really great characters. His sympathies were wide, and he had close friends among clergy of many denominations—Roman Catholic, Church of England, and Presbyterian, while he listened with interest to the Hibbert lectures delivered by the Rev. James Drummond.

Physically never a very strong man, and latterly much debilitated by severe illnesses, he had great powers of endurance, and in his youth did not know what it meant to be tired. When at the zenith of his powers, working hard professionally in Calcutta, investigating the causes of pyaemia, writing for the medical journals, and carrying on the experiments embodied in the *Thanatophidia*, he always considered he was doing nothing, and that perhaps some day he might begin to do real work.

His energy, both physical and mental, was remarkable. He was a keen sportsman and his experience was varied, beginning with tiger shooting in the Oude Terai in 1855, and ending with the shooting of rare birds and sea fishing in the early part of 1907 from his boat, the *Seamew*, in Falmouth Harbour and Bay. After his return to England in 1872 he visited Scotland every autumn for deer stalking, shooting, and fishing, and he was to the last interested in these forms of sport.

As a man, Sir Joseph's chief characteristics were steadfastness of purpose, from which nothing could turn him, and a lofty sense of duty. He always said exactly what he thought on every subject, but if the expression of his views gave pain to any individual, he tempered it with words of kindness and encouragement. In short he always distinguished the sin from the sinner. He had a great tenderness and love for children, and was ever ready with encouragement and material help, when possible, for young people trying to make their own way in life or for any who needed help. He was incapable of a small or mean action or thought, and what was more unusual, he never attributed unworthy motives to others. His unfailing cheerfulness, even when suffering, his strong sense of humour and his genial smile will long be remembered by those who were privileged to know him even slightly.

Sir Joseph was a man of many interests, but his chief amusement at home was reading, and latterly being read to, as his sight failed somewhat, and his area of general reading was wide, comprising poetry, history, biography, and theology. He was very familiar with the *Divina Commedia* in the original, and with the greater English and French poets. He appreciated a good novel, but theology was his favourite reading. He read all kinds, but was especially interested in the works of Scottish divines, and in those of the Broad Church party, of which the pioneers were Kingsley and Maurice.

To his family and friends the loss is irreparable, for he was a tender loving husband and father, a staunch and firm friend, a kind and considerate master. When he gave his confidence he gave it completely, and to gain his friendship was indeed a privilege. Once a friend, always a friend. He was a man to love and revere, and his character is best summed up in the words he applied to his friend, Sir James Outram, "He was indeed '*Chevalier sans peur et sans reproche.*'"

The funeral of Sir Joseph Fayrer took place at Falmouth Cemetery on May 24th. The Rev. R. A. Edgell, son-in-law of the deceased physician, was one of the officiating clergy. On the coffin was a beautiful wreath from Edward VII, bearing the inscription "For Auld Lang Syne." It may be mentioned here that Lady Fayrer had previously received a letter from Sir Dighton Probyn, conveying to her the expression of His Majesty's sympathy in her bereavement. The mourners were Lieutenant-Colonel Joseph Fayrer, R.A.M.C. (who succeeds to the title); Lieutenant-Colonel J. O. S. Fayrer, Indian Army (retired); and Captain F. D. S. Fayrer, I.M.S. (sons); Mrs. R. A. Edgell (daughter), Mr. A. Young Herries, Major W. D. Herries, Mr. J. Scobell Armstrong, Mrs. R. Scott, and Mr. Graham Keith. Sir W. R. Hooper represented the Indian Medical Service and the Secretary of State for India; Sir Lauder Brunton, the Medical Society and the Royal Society; Mr. S. Forster, Wellington College; Mr. E. Owen, the Royal College of Surgeons; Sir Dyce Duckworth, the Royal College of Physicians and Edinburgh University; and Mr. Alexander Dashwood, the survivors of the Lucknow Garrison. The Mayor and Town Council of Falmouth and many local residents also attended.

A memorial service was held at St. Peter's Church, Vere Street, which was largely attended. Canon Page Roberts, D.D., officiated. The King was represented by Major-General Sir Arthur Ellis. Among the congregation were Lord Strathcona, Sir Edgcombe Venning (representing the Medical Society of London), Sir Shirley Murphy, Sir Richard and Lady Douglas Powell, Surgeon-Major-General Sir John Reade, Sir James Reid, Sir William Church (representing the Royal Medical and Chirurgical Society), Mr. Henry Morris (President of the Royal College of Surgeons of England), Sir Frederick Treves, the Rev. W. A. Thomas, Mr. J. A. Newsom, and Mr. Bernard Lamb, Secretary (representing the staff at Epsom College), Surgeon-Lieutenant-Colonel Kialimark, Dr. John Anderson and Mrs. Anderson, Surgeon-General L. D. Spencer, Colonel J. Lane Notter (representing Wellington College), the Rev. G. H. Anderson (representing the Duke of York's School, Chelsea), Dr. P. Chalmers Mitchell (Secretary of the Zoological Society of London), Mr. F. Jeffrey Bell (Natural History Museum), Dr. Watt Black (representing Charing Cross Hospital), Dr. W. H. Hamer (representing the Epidemiological Society), Colonel David Bruce (representing the Royal Society), Mr. R. J. B. Howard (representing the McGill University, Montreal), Major-General R. Blundell, Mr. Henry Williams (representing Guy's Hospital), Mr. Stanley Boyd, Dr. Harold, Mr. Pearce Gould, and General Abadie.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

MR. SHIPLEY, of Christ's College, has been reappointed the representative of the University on the Council of the Marine Biological Association.

DEGREES.

The following degrees were conferred on May 23rd:

M.B., B.C.—H. F. G. Noyes, Gonv. and Cai.

M.B.—C. R. Crowther, Joh.; J. R. C. Greenlees, Joh.; G. F. S. Bailey, Gonv. and Cai.

B.C.—A. I. Cooke, Gonv. and Cai.; R. F. Young, Christ's.

A DIPLOMA IN ANTHROPOLOGY.

The Board of Anthropological Studies recommend in a report to the Senate: (1) That a diploma in anthropology be established; (2) that an advanced student who has studied some branch of anthropology under the direction of the Board and has presented a thesis, which thesis has been approved for a certificate of research, shall, on the payment of such fees as the Senate may from time to time determine, be entitled to a diploma testifying to his competent knowledge of anthropology; (3) that any member of the University having graduated before the date of the establishment of the diploma, who has presented a thesis on some branch of anthropology, which thesis has been approved by the Board, shall, on the payment of such fees as the Senate may from time to time determine, be entitled to a diploma testifying to his competent knowledge of anthropology.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE COMING COUNCIL ELECTION.

THE Council is at present constituted as follows:

President.

Mr. H. Morris; C, (1) 1893 (substitute), (2) 1898, (3) 1906.

Vice-Presidents.

Mr. Edmund Owen; C, (1) 1897, (2) 1905.
Mr. Rickman J. Godlee; C, (1) 1897, (2) 1905.

Other Members of Council.

Sir J. Tweedy; C, (1) 1892, (2) 1900 (substitute for Mr. Davies-Colley till 1904, but retained seat, being President).
Mr. Marsh; C, (1) 1892 (substitute), (2) 1894, (3) 1902.
Mr. Butlin; C, (1) 1895, (2) 1903.
Mr. Mayo Robson; C, (1) 1893, (2) 1901.
Mr. W. Watson Cheyne, C.B.; C, (1) 1897 (substitute), (2) 1901.
Mr. F. R. Cross; C, (1) 1898, (2) 1906.
Mr. H. W. Page; C, 1899.
Mr. A. Pearce Gould; C, 1900.
Mr. J. Ward Cousins; C, (1) 1895 (substitute), (2) 1897 (substitute), (3) 1900.
Mr. R. Clement Lucas; C, 1901.
Mr. J. H. Morgan, C.V.O.; C, 1902.
Mr. H. H. Clutton; C, 1902.
Mr. C. W. Mansell Moullin; C, 1902 (substitute for Sir W. MacCormac until 1907).

Mr. C. T. Dent; C, 1903.
Mr G. H. Makins, C.B.: C, 1903.
Mr F. S. Eve: C, 1904 (substitute for Mr. Jessop till 1907).
Mr. A. A. Bowlby, C.M.G.; C, 1904.
Mr. G. Barling; C, 1904.
Mr. C. H. Golding-Bird; C, 1905.
Mr. W. Harrison Cripps, C, 1905 (substitute for Sir Alfred Cooper until 1908).
Mr. G. A. Wright: C, 1906.

The following list shows the proportional representation of metropolitan medical schools and of the provinces:

St. Bartholomew's	3
Charing Cross	1
Guy's	2
King's College	1
London	2
Middlesex	2
St. George's	1
St. Mary's	2
St. Thomas's	2
University College	2
Total number attached to London schools	18
London member unattached to any hospital	1
Provincial members (Birmingham, Bristol Cambridge, Manchester, Southsea)	5
Total	24

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following candidates have been approved at the examinations indicated:

PRIMARY FELLOWSHIP.—W. F. O'Connor, Miss E. R. Benjamin, B. Charles, F. J. Colgan, E. A. Gregg, P. M. J. Power, R. S. White.

FINAL FELLOWSHIP.—F. J. Cahill, R. H. Dickson, Major T. W. A. Fullerton, I.M.S., P. E. Hayden, H. Stokes, P. D. Sullivan.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved in the subjects indicated (May, 1907):

SURGERY.—*R. Beesley, †H. S. Barnett-Jones, S. A. Mahmood, *E. Moar, *C. C. Morrell, *R. Spears, †S. H. Watton.

MEDICINE.—*E. V. Connellan, J. Cree, *F. M. Cunningham, *R. Spears, *E. E. C. Violet.

FORENSIC MEDICINE.—C. L. Driscoll, H. E. Middlebrooke, E. H. Paterson.

MIDWIFERY.—H. W. Phillips, W. P. Pinder, E. W. Squire, G. L. Walker.

The diploma of the Society has been granted to Messrs. H. S. Barnett-Jones, S. A. Mahmood, E. Moar, C. C. Morrell, R. Spears, and E. W. Squire.

* Section I. † Section II.

GUY'S HOSPITAL.

SIR ARTHUR RUCKER, M.A., D.Sc., LL.D., F.R.S., Principal of the University of London, will distribute the prizes to the successful students at Guy's Hospital on Thursday, July 4th. The usual garden party will be given in the grounds.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

FEES FOR ANÆSTHETICS.

H. MURRAY.—Fees for anæsthetics vary greatly in different parts of the country, but in England half a guinea is a common fee to pay a medical practitioner who administers gas for a dentist, whatever the social position of the patient. On the other hand, a guinea is also often paid for the same service and by the same class of patients. We should advise our correspondent to ascertain the fees that are usually accepted by practitioners of his own standing in his division of the United Kingdom.

MEDICAL REPORTS TO EMPLOYERS.

[illegible] says he was asked by a hotel proprietor to express an opinion as to whether a barmaid was or was not under the influence of drink, and he asks whether it was or was not right for him to "look" at the barmaid on the landlord's behalf, and certify as to her condition.

*** Nothing in the nature of a medical examination should be made on behalf of an employer without the express consent of the servant, and the latter should understand fully the [illegible] of giving consent. It is doubtful whether an intoxicated person could give a valid consent. Provided that our correspondent did not obtain access to the barmaid in his professional character, and was asked merely to "look" at her as an impartial witness whose medical knowledge would give greater value to his opinion should legal proceedings result, we are not prepared to say that he was precluded from doing what any other person might do.

Medico-Legal.

MOTOR CARS AND WATER RATE.

MOTORIST writes that he has recently bought a motor car, and the local authorities have increased his water rate by 25 per cent., making a special charge for the motor car. He wishes to know if this is legal.

*** We know of no right possessed by the local authorities to charge a special water rate for motor cars, but it is customary to assess a householder specially for stables. It may be that the charge complained of by our correspondent is for stables.

INSTRUMENTS AND DRUGS IN PURCHASE OF PARTNERSHIP.

A. takes B. into partnership for one year's purchase. Is it customary for the instruments and drugs to be included in the one year's purchase, or should they be valued apart?

*** In the absence of a special agreement to the contrary, B. should pay for his share of the instruments, drugs, etc., belonging to the firm, in addition to the sum he pays for his share in the practice.

PARTNERS AND HOLIDAYS.

A. AND B. are practising in partnership, and the partnership deed allows each partner to take a four-weeks' holiday. B. takes his holiday by changing with another practitioner in the country, who gives him free board and lodging in return for doing his work, but no money remuneration. Should B. pay into the partnership a sum equal to the value of the board and lodgings?

*** Certainly not. Provided B. makes no pecuniary profit by doing professional work during his holidays, his partner has no claim on him.

PRINCIPAL AND ASSISTANT.

A. AND B. are principal and assistant. B. has made no promise of any description to A. B. is paid on the 2nd of each month. B. obtains an appointment on the 10th day of the month, and gives A. a written notice to leave in a month's time on the following day the 11th. A. refuses to receive notice from B. until the 2nd of the following month. Can B. legally leave on the 11th of the following month and demand payment to that date?

*** An assistant, in the absence of a special agreement to the contrary, who is paid monthly, is only bound to give a month's notice, and can give this notice at any time he thinks fit.

THE CORONER AND MEDICAL FEES.

ERGOT writes: A coroner in my district is a bankrupt. Some time ago I gave evidence at an inquest, and have not yet received my fee of £1 1s. How can I recover same?

*** By the Coroners Act, 1887, Sec. 26, it is enacted: "A coroner holding an inquest shall immediately after the termination of the proceedings pay the fees of every medical witness not exceeding the fees fixed by this Act, and all expenses reasonably incurred in and about the holding thereof, not exceeding the sums set forth in the schedule of fees for the time being in force under this Act, and the sums so paid shall be repaid to the coroner in manner provided by this Act." Our correspondent should write to the coroner first and request it; then, if no satisfactory reply is received, a county court summons should follow. At the County Council Office it might be ascertained when the fee for "Ergot" was paid to him, as fees payable in his court cannot be reclaimed for bankruptcy purposes.

CIGARETTE SMOKING BY WOMEN.—Mr. D. W. Williams, the United States Consul at Cardiff, in a report to the Bureau of Manufactures at Washington, says that the United Kingdom is the best market in the world for tobacco. The consumption of tobacco in this country has increased 30 per cent. in the past fifteen years. The Consul says the cigarette seems to be the special favourite of all classes, and dealers report that there is a growing demand for cigarettes among women.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES

DISTRICT MEDICAL OFFICER AND TRAMP.

WOLFSTONE, a district medical officer, writes that he was called to a man in the condition of an ordinary tramp who was seriously ill with pleuropneumonia in a small public-house, the landlord of which was a very poor man who could not provide a nurse or any other necessaries for the patient. The latter possessed one shilling. No nurse was provided by the relieving officer after necessity for one had been indicated to him, but some milk was supplied by him. Our correspondent was subsequently informed that the Board of Guardians repudiated any further responsibility in reference to the case, and he further asks what would happen if the patient were to die without further relief.

*** As the Board of Guardians decided to give no further relief we apprehend that it would be useless to make any further application to either relieving officer or overseer. We therefore recommend our correspondent or the landlord in consequence of the patient's poverty to apply to a magistrate to *direct* the relieving officer or the overseer to give *proper immediate relief* to the patient. The question. *Proper relief* in our opinion means any form of relief which the urgency of the case appears to demand, and it rests with either of the above mentioned officials to decide what it should be. Should they decline to give the proper relief they are liable to a penalty for having omitted to do so. Should death occur without further relief having been given an inquest should be held.

HOSPITAL AND DISPENSARY MANAGEMENT.

GUY'S HOSPITAL.

THE Treasurer's report for 1906 just issued is of a more jubilant character than most of the reports issued by him during the preceding eleven or twelve years. It records that in 1895, when the ordinary revenue had already been depleted by £20,000 per annum, the Governors, nothing deterred, resolved to restore that revenue and raise special funds in order to improve the buildings and equipment and make them equal to the latest and best ideals of humanity and science, which, however, depriving the sick poor of a single benefit previously at their command. This report notes that these high purposes are now in a fair way of realization, though still short of actual fulfilment. The in-patients for last year were 8,447 the out-patients increased from 137,792 the previous year 147,521 in 1906, an increase which, with one trifling exception was spread over every class of case. The medical in-patients were 2,624, amongst whom the rate of mortality was 20.3 per cent.; the surgical in-patients numbered 5,823, with a rate of mortality equalling 4 5 per cent. The out-patient visitor's list states that of 41,118 new out-patients interviewed by her in 1906, and from whom particulars of their circumstances in life were obtained, only 124 persons were found ineligible to receive the benefits of the charity. Towards the Renovation and Building Fund, for which an appeal for £100,000 was issued in 1905, the sum of £60,292 had been received on December 31st last; for the balance of the sum needed an urgent appeal is now made. The Re-endowment Fund now amounts to £266,374s. 10d., leaving a balance of £233,627 1s. 2d. still to be subscribed. The total income, ordinary and extraordinary, for 1906, amounted to £75,670 17s. 10d., which provided for ordinary expenditure £57,375 14s. 6d., building improvements £7,304 5s. 4 repayment of loan £8,500 (enabling the Governors to reduce their indebtedness from £36,000 to £27,500) and left a balance of £2,490 18s. carried to capital account. An enlargement of the out-patient department is to be put in hand at as early a date as the funds of the hospital will permit. A grant of £8,000 was made from King Edward's Hospital Fund for London to Guy's Hospital in 1906, and it is stated that before the grant was made the Treasurer of the hospital had to certify that no payment would be made during 1906 to or on account of the Medical School out of General Funds subscribed for the relief of the sick poor.

INGHAM INFIRMARY.

FROM the annual report of the Ingham Infirmary and South Shields and Westoe Dispensary, it would appear that the number of persons who received the benefit of this institution last year alone equalled 10 per cent. of the whole population of South Shields. The Nurses' Home and new operating theatre have both come into use during the past year, and the new dispensary building is nearly ready. All three have been built out of invested capital; nevertheless, the income for the year just balanced ordinary expenditure.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—
EDITOR, 2831, Gerrard. GENERAL SECRETARY AND MANAGER, 2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

INCOME TAX.

SURGEON writes: Last year I purchased a practice, and am now taxed on my book debts as well as on net cash receipts. Is not this an unusual proceeding, and can I get any redress by appealing to the Commissioners?

*** The method of assessment adopted is correct. The credit side of our correspondent's account should show his gross bookings, and from this amount may be deducted (1) his professional expenses and (2) any bad debts actually written off. If this course is consistently followed the ultimate result will be exactly the same as if the assessments were based year by year on cash receipts. Some Commissioners will accept a cash account as the basis of the assessment, but this is a concession on their part, and cannot legally be insisted on.

ANSWERS.

J. A. S.—Application should be made to Mr. A. H. Williams, Secretary, Midland Counties Asylum (for Feeble-Minded, etc.), Knowle, near Birmingham.

T. G. M.—Miss Kirby, Secretary, National Association for Feeble-Minded, Denison House, Vauxhall Bridge Road, S.W., would probably be able to recommend a suitable home in connexion with the association for the case referred to.

DRS. G. M. A THOMAS AND DOUGLAS MACDONOUGH. — The work referred to by our correspondents, though interesting to medical antiquarians, is not rare, and has no great commercial value.

CARLISLE.—There is the Cripples' Nursery, 29, Park Road, Clarence Gate, Regent's Park, N.W. The payment is £14 per annum; the Secretary, Mrs. Kirk. There is also the Countess of Warwick's Home for Crippled Children, Avon House, Emscote, Warwick.

DR. WILFRID A. ALDRED.—We know of no institution other than a hospital for incurables likely to receive such a case. Information as to mode of admission, terms, etc., may be obtained from Secretary, Royal Hospital for Incurables, 106, Queen Victoria Street, E.C.

ANNUITIES AND DAMAGED LIVES.

DR. W. B. RANSOM (Nottingham) writes, in reply to "J. D. L." in the BRITISH MEDICAL JOURNAL of May 25th, that the Royal Exchange Assurance, London, E.C., advertises special terms to annuitants whose health is impaired.

"STRUMOUS" GLANDS.

INQUIRER.—Surgeons act rightly in removing "strumous" glands, because these generally contain tubercle bacilli, and might, if left *in situ*, give rise to disseminated tuberculosis. It is true that there are many people in excellent health who had enlarged cervical glands when children, but it has not been satisfactorily proved that their general health and their freedom from any subsequent manifestations of

tuberculosis are attributable to this circumstance. At the same time it is possible, as has been shown by experiment, that a healed tuberculous focus may confer a certain amount of active immunity. There is therefore nothing unreasonable in the theory that a healed tuberculous adenitis may be credited with some protective influence. According to this view the glands would not merely act "mechanically" or locally as a trap for the arrest and destruction of tubercle bacilli, but would increase the general capacity of the organism for resisting infection.

THE HISTORY OF MEDICINE.

DR. GEORGE J. DUDLEY.—There is an admirable summary of the history of medicine by Dr. J. F. Payne in the *Encyclopaedia Britannica*; it is largely founded on Haeser's great work. The first volume of the new edition of Clifford Allbutt's *System of Medicine* contains a sketch of medical history by Professor Clifford Allbutt and Dr Payne. Freind's *History of Physick from the time of Galen to the beginning of the Sixteenth Century* (London, 1750) is thought by some to be the best work on the subject in the English language. Edward Meryon's *History of Medicine*, "comprising a narrative of its progress from the earliest ages to the present time, and of the delusions incidental to its advance from empiricism to the dignity of a science" (Longman, Green, Longman, and Roberts, London. 1861) is very good, but unfortunately only the first volume was published. The large works by Sprengel (1792-99) in German and De Renzi in Italian, and Daremberg's *Histoire des Sciences Médicales* are all necessary for a thorough study of the subject.

THE ACTION OF METALS UPON BACTERIA.

A CORRESPONDENT asks for references dealing with the action of various metals upon bacteria. Gotschlich, on p. 206 of vol. iv, Part I, of Kolle and Wassermann's *Handbuch der pathogenen Mikroorganismen* (Jena: Gustav Fischer, 1904), discusses the action of gold, silver, and other metals upon bacteria, and gives the following references:—Miller, *Verhandl. d. Deutsch Odontolog. Gesellsch.*, 1889; Behring, *Ztschr. f. Hyg.*, Bd. 9, S. 432; Ders, *Bekampfung. d. Infektionskrank.*, Leipzig, 1894; Credé, *Berl klin. Woch.*, 1901, No. 37; Ficker, *Ztschr. f. Hyg.*, Bd. 29, 1899; Thiele and Wolf, *Arch. f. Hyg.*, Bd. 34, S. 43, 1899; Brochniowsky, *Diss. Petersburg*, 1901, ref. *Centralbl. f. Bakt.*, I Abt., Bd. 32, S. 136, 1903.

COLOUR BLINDNESS.

MITHRA.—By far the best work which has been done on colour blindness and colour vision is that by Edridge-Green, who wrote a book some years ago on the subject, which was published in the International Science Series. A considerable amount of work has been done since, all of which confirms the work of Edridge-Green, who has published several papers in the *Transactions of the Ophthalmological Society* and other scientific publications. Work has also been done on the subject by Sir William Abney. A good summary of the present position of things is given in the last edition of Swanzy's *Handbook of Diseases of the Eye*. We do not know of any recent publication which deals with the whole matter fully.

SEA-SICKNESS.

IN answer to "Cornish," a correspondent writes that validol has been used with success for several years past on the steamers of the German Lloyd Company. It is a compound of menthol and valerianic acid, and is given in doses of from ten to fifteen drops every three hours until relief is effected. It may be administered either on sugar, in water, or in wine. When the chief evidence of sea-sickness is severe headache, it is found useful to rub a small quantity on the forehead. Probably, in the case of a short voyage—for example, crossing the Channel—it would be most useful if taken half an hour before starting.

TREATMENT OF SCIATICA.

LIEUTENANT COLONEL J. DUKE, I.M.S. (retired) writes in reply to J. D.: In hospital treatment of natives in India I have used the following. Inject subcutaneously over the sciatic nerve, at the point where the nerve-stretching incision is usually made, ℥x to ℥xx of pure chloroform. In some cases this treatment is wonderfully, often marvellously, efficacious. In some it fails. Some pain is caused at first, but it soon passes off. I have never seen any injurious effects follow. Of ordinary treatment, 20 grains of salicylate of soda with one grain of opium, three times a day, has proved very beneficial.

LETTERS, NOTES, Etc.

CARBOLIC GANGRENE.

DR. JOHN ALLAN of Walsall has supplied us with another instance of carbolic acid gangrene similar to those recorded by Mr. Wallace at page 1110 in the issue for May 11th. The patient, an adult, received a superficial cut on the finger about a quarter of an inch in length from a penknife, and to this a dressing dipped in a 5 per cent. solution of carbolic acid was applied by a companion. When seen by Dr. Allan next morning the finger was blanched, and was beginning to be discoloured. A boracic dressing was applied, and the patient was seen daily, but gangrene slowly progressed, and finally, some three weeks later, the finger had to be amputated. Dr. Allan states that these cases prove that carbolic acid cannot always be used with impunity, and that even weak solutions may cause untoward results. In children especially the greatest caution in its use should be exercised.

THE USE OF STRYCHNINE.

IN a letter commenting on Dr. James Barr's strictures on the use of strychnine in pneumonia (BRITISH MEDICAL JOURNAL, March 23rd, page 717), R. Dalal, of Mazagon, Bombay, says that no one can doubt the life-saving qualities of this drug who has witnessed its effects on the failing hearts of plague and cholera patients. In plague, in particular, the myocardium degenerates early and rapidly that there is some risk in using digitalis and adrenalin, but no such objection applies to strychnine, the use of which should be commenced at the earliest possible moment. By pushing its use until slight spasmodic contraction of the muscles of the limbs have been produced, he has averted a fatal end even in cases in which the pulse was 140 or more and the heart sound feeble and embarrassed cardiac in type. The existence of delirium is no contraindication to its use and it is equally valuable, in his experience, with the failing hearts of cholera, pneumonia, and influenza.

IS CONSERVATIVE TREATMENT OF THE OVARIES OVERDONE?

KENT writes: Under the heading, "Is Conservative Treatment of the Ovaries Overdone?" (BRITISH MEDICAL JOURNAL, May 11th, 1907, p. 1110) Professor Bovée of Washington is quoted as saying that "5 per cent. of malignancy exists in the cases of uterine fibroids submitted to operation." Does this mean that 5 per cent. of the uterine fibroids removed by operation have been found to have undergone cancerous degeneration, or does it mean that cancer happened to be coincident with the fibroids? If the former, surely the statement is quite at variance with the experience of specialists in this country. A woman writes: "I know not that the presence of fibroids in a uterus in the least increases its liability to cancer, nor know I of cancer beginning in a fibroid."

*** Professor Bovée's words are: "In the first place, through the careful and prodigious (*sic*) work of C. P. Noble and many others, the fact is demonstrated that 5 per cent. of the consecutive cases of fibroids of the uterus that come to operation and studied (*sic*) microscopically, *malignant disease of the corporeal mucosa of the tumour or of the cervix* was present at the time of operation or developed later in the stump." Hence Bovée's third conclusion respecting conservative treatment of the appendages: "3. That 5 per cent. of malignancy exists in the cases of uterine fibroids brought to operation, and in 30 per cent. marked complications of the appendages are present, leaving in (*sic*) the ovaries when the uterus or its body is removed, for such condition is hazardous to the future well-being of the patient." Thus Professor Bovée was alluding to three forms of malignancy." He did not employ the word "cancer" "carcinoma."

HOSPITAL REFORM.

OBSERVER writes: Now that the profession is awakening to the crying need for some reform in hospital management so as to counteract the flagrant abuse of "attendance, medicine, and advice gratis," it would be interesting to know the percentage of medical men on the various hospital boards whose fees might at least be raised on behalf of their less fortunate brethren in the profession. The well paid domestic servant who can afford to dress better than her mistress, and the artisan, who makes no attempt to save but squanders his wages in the public-house and music hall, knowing that when he has injured his health by excess he has only to apply for treatment and obtain it gratis at the hospital, are largely in evidence in the out-patient department now. The lower classes are educated for nothing, doctored for nothing and bed for nothing, all at the expense of the charitable (so-called) or the unfortunate ratepayer.

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Clinical Lecture
ON
ACUTE PNEUMONIA IN CHILDREN.

BY H. MONTAGUE MURRAY, M.D., F.R.C.P.,

LECTURER ON MEDICINE AT CHARING CROSS HOSPITAL MEDICAL SCHOOL, AND SENIOR PHYSICIAN TO CHARING CROSS HOSPITAL AND TO THE VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.

GENTLEMEN,—In dealing with this subject on the present occasion I propose to arrange my remarks in three groups. The first will deal with the value of a continuous record of the respiration-rate, with illustrative cases. In the second I shall show grounds for my disbelief in the utility of the current classifications of the disease, and, indeed, of any known classification, so far as prognosis and treatment are concerned. The third group will contain a statement of my own experience concerning the complications, diagnosis, prognosis, and treatment of the disease.

I. RESPIRATION-RATE.

The frequency of respiration does not, in my judgement, receive the amount of consideration it deserves. In the case of young children suffering from acute disease of the lungs it is, I believe, of more importance to keep an accurate record of the respiration-rate than of the frequency of the pulse.

The normal respiration-rate varies with age. In healthy infants of 6 months of age, while sleeping or lying quietly in bed, it varies from 30 to 25, and in children of 3 years of age from 25 to 20.

When respiration is disturbed by disease, the influence of age is more easily noticed, both as regards the rapidity of breathing and the constancy of the rate. Thus, a respiration-rate of 60 in a child of 3 years of age is of less favourable omen than a rate of 80 in a child of 6 months. In every case a knowledge of the course of the respiration-rate is of more importance than a knowledge of the actual frequency at any one time.

An increase in the respiration-rate depends upon many factors besides that of age. To some extent it generally increases in proportion to the nature and intensity of the febrile process. The varying influence of this factor renders it probable that it is the action of the toxines rather than the height or duration of the fever which is primarily responsible. It also depends on the extent of lung involved, and on the rapidity with which this is thrown out of work. Furthermore, it is affected by any lack of rigidity in the ribs, by any failure in the vigour of the respiratory muscles, by any obstruction to the entry of air, or by any pain in the pleura or wall of the chest causing the patient to diminish the range of movements. These factors may act singly or in various combinations. Indeed, some of them may be still further resolved. Thus, the vigour of the respiratory muscles may be impaired by febrile states, by diphtheritic or other paralyses, or by the fatigue consequent on long-continued overaction.

If the value of the respiration-rate is to be fully utilized, the influence of every one of these factors must be taken into consideration, and the part it plays estimated. The more suddenly any of these factors are brought into action the more marked will be the respiratory disturbance resulting. For example, in severe cases of rickets the respiration-rate is normally high—high, that is, without the presence of any pulmonary complication. In mild cases of rickets the respiration-rate may be absolutely normal, since the slight softening of the ribs does not hinder the efficient expansion of the lung so long as the air passages are free, the lungs normal, and no special demand is made on the breathing capacity. But when frequent spasm of the larynx, bronchitis, or adenoids and enlarged tonsils hinder the free admission of air, the difference between the air pressure outside and that inside the chest during inspiration persists longer, and the soft parts sink in under the weight of the greater pressure. Thus the frequency of the respiration in a rickety child suffering from acute pneumonia is greater than can be explained by the extent of the disease, and when this has disappeared the respiration-rate may remain abnormally high owing to the persistent anatomical defect. But a knowledge that the increased respiration-rate may be as much an indication of the degree to which the softened thoracic walls affect the efficiency of respiration as of the extent and gravity of the pneumonia, does not render an observation of its course valueless. It is a measure of the defective aëration of the blood, and serves to remind us that a prolonged and considerable rise in the respiration-rate may be followed by a rapidly culminating exhaustion—matters of no small importance in prognosis and treatment.

In the early stages of acute pneumonia, apart from age and from rickets, the extent and duration of the disease are in children the chief factors in accelerating the rate of breathing. It may be as quick in cases of scattered pneumonia as in those of massive consolidation, especially if the case of scattered pneumonia has been unduly prolonged. The high and rising rate in fatal cases is due largely to muscular exhaustion, but if death be due to some complication unconnected with the lungs, such as vomiting and diarrhoea, the rate may be comparatively low.

In most febrile states, as I have already said, the rapidity of breathing increases as the temperature rises; and when the latter falls by rapid crisis the respiration also falls, but only partially. In cases of acute pneumonia the respiration-rate falls in two or three recognizable stages. The first is that accompanying the drop in temperature, and is the measure of the extent to which it was due to the same cause as the fever. A second and less marked fall sometimes occurs two, three, or four days after the first; while the last fall, or return to normal, does not occur until a week or ten days after the temperature has fallen—not until the inflammatory products are removed, the damaged portion of the lung becomes capable of its normal functions, and the muscular power is restored. The return of the respiration-rate to normal is a practical sign that the risks of extension of the disease, of sudden cardiac failure and of general exhaustion, are over. In cases of relapse—or, more accurately, of secondary extension of the disease—the respiration-rate does not usually fall below the first stage, remaining at that level until it rises again with the return of the febrile state.

Other practical uses of a knowledge of the respiration-rate may be mentioned. In cases with a very gradual onset it may afford the earliest indication of a pneumonia complicating bronchitis. In late stages, when the fever is remittent, it may be the first sign of an extension of the disease. A secondary rise in the temperature without an accompanying rise in the rapidity of breathing is reliable evidence that the rise in temperature is not due to an extension of the disease, and will likely enough disappear on the administration of an aperient. In general terms, a rise in the respiration-rate accompanying a rise in the temperature suggests the spread of the disease, while a rise in the respiration-rate without a rise, or with a fall, in the temperature suggests muscular exhaustion and cardiac failure, and is, therefore, an extremely grave sign.

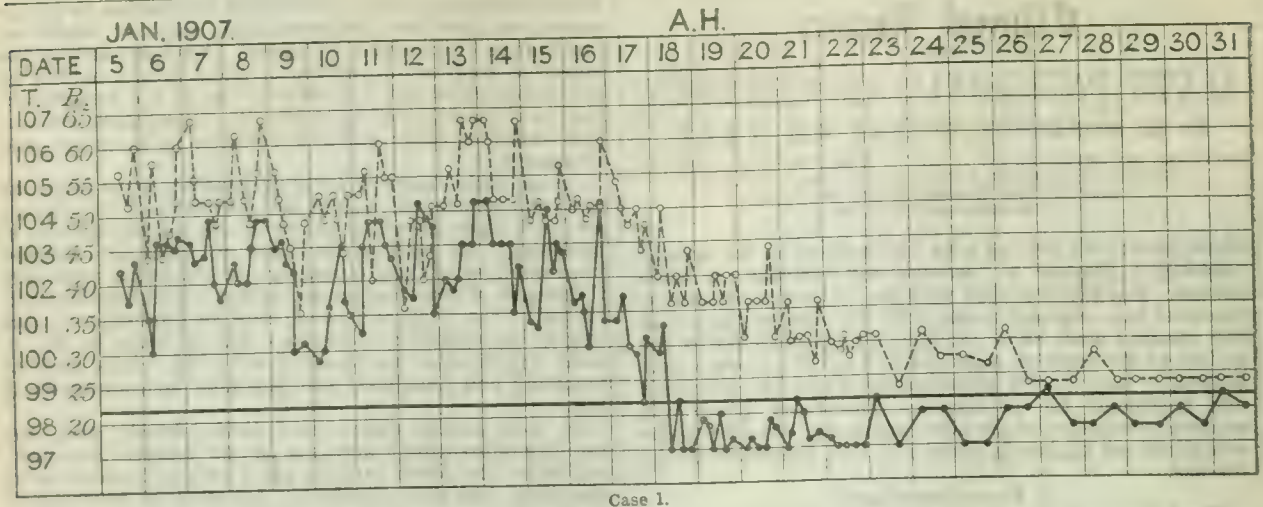
I now wish to direct your attention to four illustrative cases, represented by the charts I have had prepared. The black line indicates the temperature record, the broken line that of the respiration-rate.

CASE I.—A. H. was a well-nourished girl, aged 2¼ years, admitted under my care on January 5th, 1907. About a week previously she had vomited, begun to cough, and complained of pain in her abdomen. During the next few days she was feverish, drowsy, constipated, and tender on handling. We learned that she had had bronchitis for several weeks, and that she had never had any acute specific fever. When first seen her face was flushed and her breathing rapid. There was a slight cough, and the alae nasi were acting vigorously, but there was no expiratory grunt. At the right base, below a horizontal line 1 in. above the angle of the scapula, there was impaired resonance and distant bronchial breathing. Mucous râles were audible at both bases, and a few scattered rhonchi could be heard over the right upper lobe.

During the next four days the physical signs of consolidation at the base became more marked, and extended over a rather larger area, and rhonchi became audible over both lungs. During the next week, that is, from the eleventh to the eighteenth day of the illness, the following changes occurred: redux crepitations developed over the dull area; the right upper lobe lost its resonance, and the breathing over it became bronchial; and, last of all, the upper part of the lower lobe and the middle lobe became similarly involved. By the twenty-first day redux crepitations could be heard in both these places. At the end of another week a few scattered bronchitic rhonchi were the only abnormal sign.

From these notes I think we may draw three conclusions:

1. That the consolidation of the lung was preceded by



Case 1.

bronchitis which persisted after the consolidation had disappeared.

2 That the disease began near the root of the lung, and thence spread by radiating paths to the surface. These paths would probably be the bronchial tubes. This conclusion is based on the facts that the consolidation developed slowly, and that the different parts of the lung were attacked in a very remarkable order: (1) Lower part of lower lobe, (2) upper lobe, and (3) lastly, the intermediate portion of the lung. If this conclusion be correct, then we have a case of pneumonia which is a broncho-pneumonia on its anatomical and a lobar pneumonia on its clinical side. To this point I shall refer in my second section.

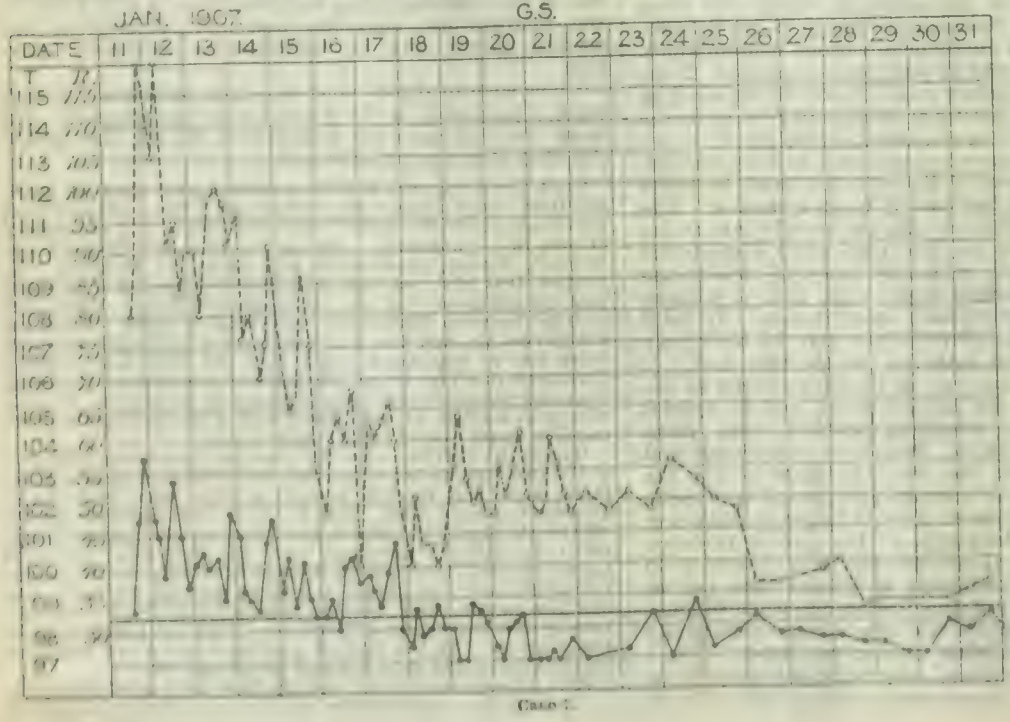
3 That the resolution followed the consolidation more quickly and proceeded more rapidly in the parts last affected, suggesting a diminishing virulence on the part of the organisms, or a more effective resistance on the part of the tissues.

The case also illustrates what I have already said about the delay in the fall of the respiration-rate.

CASE II.—G. S. The next chart represents the course of the temperature and of the respiration-rate in a child 9 months old, admitted for pneumonia. It was her first illness, and began about a week before admission (January 11th, 1907) with cough and vomiting. When seen the child was fairly nourished. The face was dusky, the dyspnoea extreme, and the expiratory grunt constant. The upper half of the chest moved freely, but there was so much inspiratory recession round the diaphragmatic arch that but little air actually entered the chest. Bronchitic râles and rhonchi were audible all over, and at the bases there were impaired resonance, faint bronchial breathing, and loud, consonating râles. It was clear that there was considerable collapse in addition to the pneumonia. The dyspnoea was so great that for thirty-six hours it seemed impossible that the child could live. Ammonia, brandy, oxygen, and plenty of fresh air were the remedies employed, and on the night of the 12th some improvement in the breathing was noted. Next morning the recession was less and the air-entry better, but the dullness at the left base gradually extended in area and degree. By the 23rd, however, nothing abnormal but a few bronchitic sounds remained, and by February 1st all the pulmonary signs were normal. The value of the respiration-rate during the first week was very marked. During the first two days it was the best measure of the severity of the case, and during the next three it furnished the grounds for a hopeful prognosis. Again, as in the last case, the respiration-rate did not fall to normal until about eleven days after the fall of the temperature, and this final fall corresponded with the complete disappearance of all abnormal physical signs.

CASE III.—E. M. This case was recently under the care of my colleague, Dr. Mott, to whom I am indebted for the notes. It illustrates two of my statements concerning the significance of the respiration-rate. (1) On the fourth day after admission the temperature had fallen to normal. The respiration-rate, however, remained at a high level, showing that convalescence was not established. Soon after, the rising temperature and rising respiration-rate indicated an extension of the pneumonia. (2) A few days later, after the temperature had again fallen, a third rise occurred, but this time without any serious interference with the declining respiration-rate, showing, as the sequel proved, that the rise in temperature was not due to any further extension of the disease.

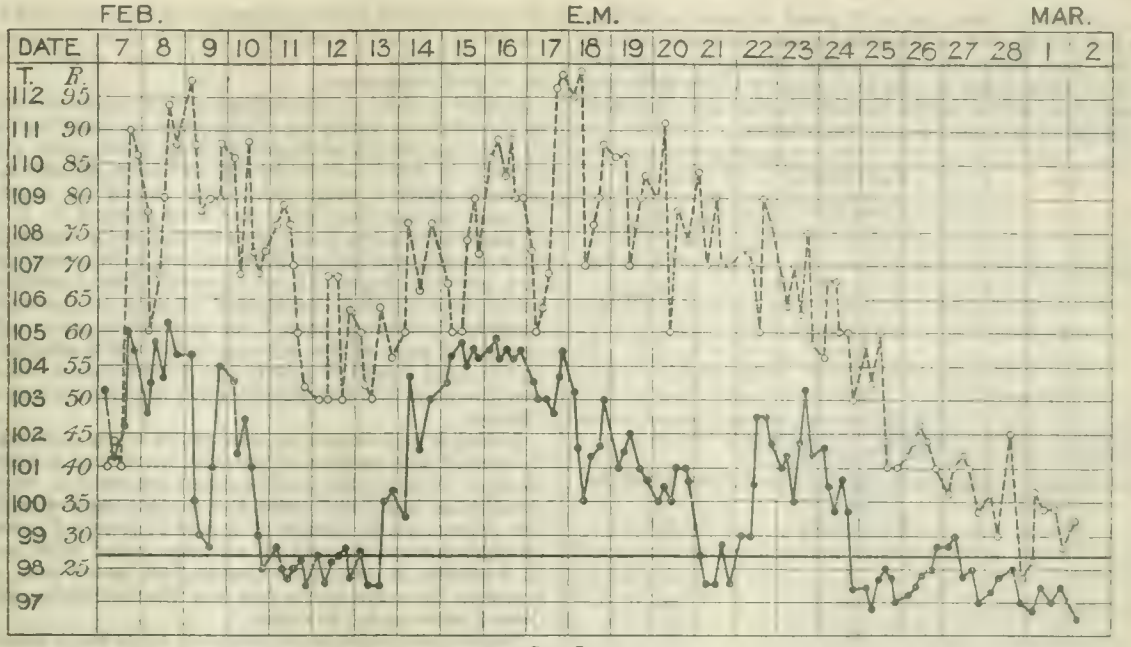
CASE IV.—E. R. The fourth chart is that of an infant, aged 1 year and 10 months, who had suffered from bronchitis and vomiting for three weeks before admission. The child was much wasted and both lungs were involved. I want to draw your attention to the rise in the respiration-rate and the fall in the temperature which marked the onset of the exhaustion of the respiratory muscles and the failure of the right side of the heart, furnishing the grounds for a fatal prognosis.



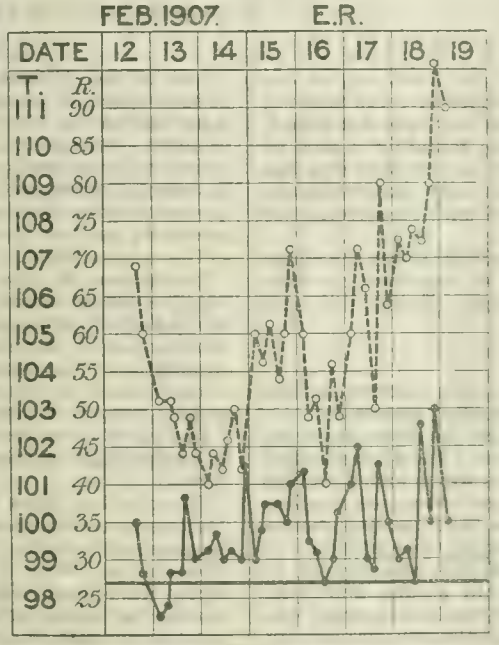
Case 2.

II. MODERN CLASSIFICATIONS OF ACUTE PNEUMONIA IN CHILDREN.

A few years ago all acute pneumonias were placed in one of two definite groups. The first of these varieties of pneumonia was a disease of adolescence or of adult life, with a mortality varying at different ages from 12 per cent. to 5 per cent. It was characterized by a sudden onset, and by continuous and considerable fever terminating by crisis. The physical signs were those produced by



Case 3.



Case 4.

the complete consolidation of the whole or of a large portion of one or more lobes. This was known as lobar or croupous pneumonia.

The second variety of pneumonia was a disease of childhood and of old age. It was preceded by bronchitis or by one of the acute specific fevers, and had a much higher mortality than the lobar variety. The onset was sudden or gradual, the temperature remittent, and the fall by lysis. The disease was bilateral and the consolidation scattered. As a consequence of these peculiarities, any extensive area of dullness was unusual, though there were often present patches of impaired resonance; but the most constant and important physical sign was the existence of loud consonating râles on both sides, especially at the bases. This was known as catarrhal or broncho-pneumonia. It was stated that (1) lobar pneumonia was rare in infants and very young children; and (2) that the clinical signs of lobar pneumonia were liable to but little variation. In effect, all cases that did not conform to the characteristic case of lobar pneumonia as it is met with in the adult were placed in the second, or broncho-pneumonic, group.

There is now but little doubt that this old classification is too rigid and not really in accord with clinical observations. Writers on pneumonia have accordingly shown an increasing tendency to subdivide the broncho-pneumonic group into two or more varieties, one or more of which closely resemble the lobar form. Thus Holt divides acute pneumonia as it occurs in childhood into:

1. Broncho-pneumonia { Primary / Secondary
2. Lobar
3. Pleuro-pneumonia

and calls attention to the similarity of the clinical signs in primary broncho-pneumonia, lobar pneumonia, and pleuro-pneumonia. West divides broncho-pneumonia into three varieties, of which two correspond to Holt's varieties, while the remaining or intermediate variety serves as a refuge for those cases which cannot fairly be placed in either of the other groups.

My own observations have led me in an opposite direction. The more closely I follow the clinical phenomena the greater difficulty do I find in devising any classification of clinical utility. The symptoms and signs are so variable and are met with in such different combinations that the cases do not lend themselves to classification. Ultimately, no doubt, a satisfactory pathological classification will be found, but at present this is impossible. Young children do not expectorate, and swabbings from the throat cannot furnish sufficiently reliable evidence of the causal parasites at work in the lungs. We have more to hope from a careful comparison of the opsonic indices to the various suspected organisms; but this subject is still in its infancy, and we must perforce wait awhile before we can safely erect any elaborate superstructure on this foundation. To me at present "broncho-pneumonia" simply means a pneumonia that in spreading seems to follow the distribution of the bronchial tubes, and "lobar pneumonia" pneumonia that spreads by a fairly even advancing line: in this sense, and in this sense only, is broncho pneumonia a far commoner disease of childhood than lobar pneumonia; but my contention is that we should endeavour to estimate the individual value of each sign and symptom on the prognosis and treatment rather than, by means of them, to place the case in some hypothetical group and deal with the prognosis and treatment of that group as a whole.

I propose now to place before you some of the evidence on which I base this opinion. I have taken 54 consecutive cases that were under my care at the Victoria Hospital for Children. Fifty-four cases are, of course, too few to prove anything; I merely wish to use them as illustrations of a larger experience.

I have prepared a table which shows the ages of the 54 patients, as well as the number, ages, and condition of nutrition of the fatal cases. Of the cases that recovered, two were rickety and one was wasted.

I may remark incidentally that these figures illustrate the frequency of pneumonia under 3 years of age; and that they cast doubt on the statement that the heavy

mortality in children under 2 years of age is mainly dependent on age. The figures suggest, I believe rightly, that the high mortality is largely confined to wasted infants—infants, that is, who are not only likely to be less resistant than well-nourished children, but also less able to assimilate nutriment during the illness.

Age.	No. of Cases.	No. Fatal.
Under 1 year	10	4 (wasted 3)
Between 1 and 2 years ..	13	6 (wasted 4)
.. 2 and 3 years ..	15	1 (wasted 1)
.. 3 and 4 years ..	4 (wasted 1)	0
.. 4 and 5 years ..	5	0
.. 5 and 11 years ...	7	0

Mortality in wasted infants (under 2 years of age), 7 out of 7.
Mortality in well-nourished infants, 3 out of 16.

If the wasted children are omitted the figures would be:

Age.	No. of Cases.	No. Fatal.
Under 1 year	7	1
Between 1 and 2 years ...	9	2
.. 2 and 3 years ...	14	0
.. 3 and 4 years ...	3	0
.. 4 and 5 years ...	5	0
.. 5 and 11 years ...	7	0

There is a rule limiting the number of cases under 2 years of age that are admissible to any one ward, and, while room would nearly always be found for a case of pneumonia, the rule tends to lessen the number of cases admitted under 2 years of age, and may partly explain the rise in the third year; it also leads to a selection of the worst cases.

The features of the disease on which I base my statement concerning the uselessness of classification are: (1) The onset, (2) the physical signs, (3) the site, and (4) the course of the fever.

1. Onset.

Under this heading I include rapidity of onset, initial vomiting, convulsions, pain and preceding bronchitis.

1. *Rapidity of Onset.*—The onset of the disease may be said to have been sudden in 35 out of the 43 cases that recovered and in 6 out of the 11 cases which ended fatally. The more definitely localized the pneumonia, or, in other words, the more nearly it approaches the lobar pneumonia of the adult, the more likely is the onset to be sudden. It is, however, impossible, with any degree of accuracy, to divide the 54 cases into the two old groups, and it is, therefore, impossible to express this result in figures. My impression is that a sudden onset is almost invariable in the localized cases, and that it occurs in rather more than half of the scattered cases.

2. *Vomiting.*—Vomiting is unquestionably the most constant of the early symptoms. Out of the 41 cases of sudden onset it was present in 28—that is, in about 70 per cent. In only 2 cases is it definitely stated that the child was not sick; so that, allowing for the forgotten instances, it is probably correct to say that in 4 out of every 5 cases of pneumonia with sudden onset vomiting is an initial symptom. On the other hand, vomiting at the beginning of any febrile disorder, or as a result of dietetic indiscretions, is so common that this symptom is of little diagnostic significance.

3. *Convulsions.*—Convulsions, on the contrary, are a rare initial symptom even in those cases in which the onset is extremely sudden. Only 2 of my 54 cases began with convulsions. The first was a boy aged 2½ years, in whom the attack began with vomiting, convulsions, and delirium. There was never any clearly defined dullness, but scattered consonating râles were heard over both lower lobes. A crisis occurred on the eleventh day, and convalescence was rapid. The second case was that of a well-nourished boy, aged 5 months. His attack began with vomiting, dyspnœa, and convulsions. The right base was solid by the third day, and on the evening of the same day crepitations were heard at the left base. The patient died on the fourth day. These facts favour the view that the occurrence of convulsions is no evidence of any special type or variety of pneumonia.

4. *Pain.*—Pain, an important and prominent symptom in the adult, is rarely of significance in early childhood. It will be readily understood that local pain, even if present, is not likely to be an available symptom in a patient under 3 years old. But out of 12 cases over 4 years of age local pain was only present in 2. Both of these were boys; their ages were 6 and 9 respectively; only one of them had initial vomiting, both were delirious, and both recovered. Four other children complained of pain. One, aged 6, complained of pain in the neck and shoulders; another, aged 5, of abdominal pain; a third, aged 2½, of pain in the side opposite to that affected; the fourth, aged 4, also of pain in the opposite side, but in his case the pain did not appear until the fourth day of the disease.

5. *Cough and Bronchitis.*—In nearly every case, whether the onset was sudden or gradual, there was a history of cough. When this had existed for several weeks or months, as it did in 9 cases, the disease generally (6) ran the characteristic course of a case of so-called secondary broncho-pneumonia, and in no case ended with a crisis. In 2 others, in which the cough had lasted from ten to fourteen days, the course was less characteristic, and 1 of these 2 cases ended in crisis.

Those cases which were preceded by definite bronchitis were generally slow in convalescence, the signs in some instances persisting for a month or six weeks.

2. Physical Signs.

Out of the 54 cases, 24 presented easily and clearly defined areas of complete consolidation, with physical signs similar to those met with in the adult—increased fremitus (whenever ascertainable), dullness, tubular breathing, bronchophony, and later on redux crepitations. In many of these, secondary patches of similar consolidation occurred on the same side or in the opposite lung, the secondary patches, in some cases, resolving almost as soon as the original areas.

In another 24 cases there were signs of consolidation, but the limits of the consolidated areas were less certainly defined, and consonating râles were heard throughout so much of the course of the disease as came under observation. The consonating râles were as a rule limited to the vicinity of the consolidation, but were occasionally audible over other parts.

In 7 cases there were no definite areas of consolidation, but only slightly impaired resonance with consonating râles.

The physical signs in these cases cannot be said to justify any arrangement into defined groups; nor did the temperature charts suggest any definite correlation between the course of the temperature and the physical signs. In almost every case, the oscillations of temperature during the fastigium were sufficiently marked to have justified the use of the term "remittent"; moreover, a definite crisis occurred in as large a proportion of the 7 cases of the third group as in the 24 cases of the first.

3. Site.

A few words on the site of the lesions will suffice, since it bears but little on my present contention. In those cases in which the consolidation was most clearly defined the

Right upper lobe was affected	In 11 cases,	of which 1 was fatal.					
Left	..	..	6	..	..	0	..
Right lower lobe ..	..	..	14	..	..	5	..
Left	..	..	6	..	..	1	..

These figures really count for very little; since in a few cases a definitely localized lesion was followed by scattered bilateral signs. They support the usually accepted statement that the right side is more frequently affected and that apical pneumonia in children is proportionately commoner than in adults, and that it has a better prognosis. Furthermore, they illustrate the statement that the less definite the area of consolidation the worse the prognosis. The 4 fatal cases in which there was consolidation of lobar type were aged 5 months, 6 months, 15 months, and 15 months respectively; the second and third of these were much wasted, and the fourth was complicated with uncontrollable diarrhœa. On the other hand, out of 17

cases in which the scattered signs predominated there were 7 deaths.

4. FEVER.

The feature which is most difficult of all to classify is the fever. It is altogether impossible to group the cases into those of "continuous fever" and "remittent fever" Of course instances of each of these can be found; but the range and character of each case is so different that no classification which is not absurdly artificial is possible.

For example, out of the 43 cases that recovered, there were in 4 a gradual onset, a remittent fastigium, and a fall by lysis; in 4 a sudden onset, a remittent fastigium, and a fall by lysis; in 7 a sudden onset, a remittent fastigium, and a fall by crisis; in 8 a sudden onset, a fairly continuous fastigium, and a fall by crisis. These four groups contain 23 of the 43 cases. There remain 20 cases which defy any sort of classification—that is, nearly 50 per cent.

The fatal cases were still more difficult to classify, since in some of them the patients were moribund on admission, while most of the others died within forty-eight hours. In my experience the type of fever is of extremely little importance either in diagnosis or prognosis.

In 23 out of the 43 cases the fever may be said to have terminated by crisis. The day of the disease on which this usually occurs is not so easy to ascertain as in the case of adults, since the day of onset is not so definitely known; but, apart from this error, there seems to be in young children a greater average range. In 9 out of the 23 cases the crisis occurred within a week. In 1 case the crisis did not occur until the twentieth day. In 14 out of the 23 it took place between the sixth and tenth day, the average working out at the ninth day. The actual duration of the crisis was generally less than twelve hours, and in 1 case as short as two. Pseudo-crises are not common; many instances are met with in which it is impossible to say whether the term "crisis" or "lysis" more fittingly describes the character of the fall of the temperature.

III. COMPLICATIONS.

Concerning the complications, diagnosis, prognosis, and treatment of the disease, I have but little to add to what you will find in the ordinary textbooks, and therefore shall not detain you long.

Empyema and pericarditis have the reputation of being somewhat common complications. In no one of my tabulated cases did either occur. This, I think, is an exceptional experience.

Vomiting and diarrhoea in very young children are such fatal complications that every effort should be made to avoid and to check them.

Relapses are, in my experience, always due to direct extension either from the original focus or from some other patch of consolidation.

Delayed resolution is a phenomenon of frequent occurrence. It often happens that after an attack of acute pneumonia defective resonance and moist crepitations persist at one apex or base, the temperature oscillating between 100° F. and normal. If the condition is confined to one apex the possibility of tuberculosis at once suggests itself. Sputum for examination is rarely available, and a serious prognosis, based on the physical signs, is often given. In the majority of such cases this turns out to be incorrect. The temperature gradually falls, the appetite returns, strength and weight are recovered, and, last of all, the physical signs gradually disappear, though sometimes not till two or three months or more after the original disease began. In the absence of sputum containing tubercle bacilli, it is hardly ever wise to diagnose tuberculosis unless the signs have persisted for more than three months or are accompanied by fever and wasting. Local fibrosis with bronchiectasis can sometimes be traced to a case of pneumonia followed by delayed resolution.

IV. DIAGNOSIS.

Two distinct problems confront us: (1) The recognition of the pneumonia, and (2) the classification of the special instance of the disease.

1. The difficulties in the recognition of the pneumonia vary with the stage of the disease. At the outset it has to be distinguished from an acute specific disorder or even from meningitis, especially if headache and delirium are marked symptoms. In a few cases the existence of abdominal pain may raise a suspicion, even in a child, of some acute abdominal lesion. The most reliable positive signs of pneumonia at this stage are undue acceleration of the respiration-rate, and the discovery in some part of the lung of a few fine crepitations. In a case of pneumonia the signs of meningeal or of abdominal disease will soon diminish, and the characteristic rashes of the acute specific fevers will fail to appear.

When the pneumonic condition of the lung is fully developed, the principal difficulty lies in the interpretation of the physical signs. In scattered pneumonic infection the consolidated areas may be of small size. The defective resonance which they produce may be easily missed, and loud consonating râles may be the only trustworthy sign of their existence.

When a large area is involved, the condition has to be distinguished from infarction, collapse, and pleural effusion respectively. Infarction in children, apart from mitral stenosis, is very rare. Moreover, the evidence of the heart disease, the haemoptysis, and the rapid development of the signs of consolidation soon clear up all difficulties. Collapse, like pneumonia, may occur in the course of bronchitis in a weakly child, but the dyspnoea and cyanosis at the outset are more urgent, and, like the physical signs, may come on with absolute suddenness, and disappear with almost equal rapidity. In these cases, too, retraction of the chest is generally very noticeable. The difficulty in distinguishing pleural effusion from consolidation is sometimes very great. The most important distinctions are that in fluid the dullness is absolute, and the percussion note wooden in character; that the heart's apex is displaced, and that no râles or other adventitious sounds are present. Moreover, the physical signs remain unaltered for several days. The age of the patient often prevents vocal fremitus from being an available sign. Nor is the character of the breath sounds always of much value. Bronchial breathing in its most characteristic tone is often heard over the site of a pleural effusion, and a large area of bronchial breathing at a base, without any adventitious sounds, is more suggestive of effusion than of consolidation. In only exceptional cases is there any sputum available for purposes of diagnosis. The cough in pleural effusion is slight, dry, and frequent.

The second problem in diagnosis is to classify the various instances of the disease. I think I have shown that the various manifestations of pneumonia are so curiously intermingled, that there are great difficulties in the way of those who seek to frame a useful classification of pneumonia in children. It is certain that pneumonia resembling clinically the acute pneumonia of the adult is far commoner in children than was generally believed a few years back. But there seems to be little use even in insisting on this. Three children in one family were simultaneously attacked by measles, and all three subsequently suffered from acute pneumonia. In one it seemed to be of true lobar form, in another of the scattered sort, while in the third it began as a typical instance of the localized kind, and subsequently spread into what ten or twenty years ago would without any hesitation have been labelled broncho-pneumonia.

If we ascertain the character, extent, and spread of the consolidation, and the various other symptoms and signs of the disease, we shall have sufficient information to forecast the future and to determine the treatment better than by using this information to put the case into some hypothetical group, the exact nature and tendencies of which we are ignorant. This, as I said at the outset, is the conclusion to which I have myself arrived.

V. PROGNOSIS.

The extent to which the various clinical signs affect the prognosis has already been referred to. It may be laid down as a general rule that the two most important factors in forming a prognosis are *age* and *nutrition*. Out of the 54 cases I have tabulated only 4 were under 9 months of age, and all of these died; whereas no case of localized pneumonia in which the patient was more than 15 months old proved fatal. Rickets is a serious factor, especially in the prolonged cases. If a child is less than a year old, ill-nourished, and rickety, the prognosis is bad. The more sudden the onset and the more localized the consolidation, the better are the patient's chances.

Complications are infrequent, but when present greatly increase the gravity of the case.

VI. TREATMENT.

The importance of wasting and of continued vomiting in the prognosis suggests that special attention should be paid to the diet. To maintain an adequate state of nutrition and to conserve the patient's strength, feeding must be carried out with the utmost regularity, and will need the most untiring patience and tact. A careful record of the food that has really been taken should always be kept, especially when the mother is the nurse. Nasal or rectal feeding is rarely necessary. The food should be diluted too much rather than too little.

There is so much doubt concerning the value of external applications in pneumonia, and so many obvious disadvantages connected with the use of some of them, that no measure calculated to disturb or fatigue a patient should be adopted without serious consideration. Poultices are, in my judgement, an unmixed evil. A child has enough to do to raise its ribs sixty times a minute without being obliged to raise a heavy linseed meal poultice sixty times a minute as well. It has been said that this objection is removed if the poultice is only applied to the back. This is true, provided that the patient simply lies in the poultice, which is not fixed to it in any way. There cannot be many to whom this procedure will commend itself.

The use of ice-bags and the abstraction of blood are measures which also have their advocates. Whatever may be their value in the case of adults, I never employ them in children who have sound cardiac muscle and whose chief danger lies in respiratory, not cardiac, muscle-exhaustion, and who, as Sir James Barr remarks, may die from failure of the respiratory muscles to secure adequate entrance of air into the chest.

A free supply of fresh air is of prime importance. I believe that one reason why a larger proportion of cases recover in a hospital than in the homes of the lower and lower middle classes is that there is always a free current of air in the ward, and too often a stuffy, used-up atmosphere in the home. Inhalation of oxygen may be a substitute for this, but it is a poor one. Oxygen is probably of most use in those cases in which respiration is very feeble, and the possibility of introducing enough fresh air on the one hand, or too much oxygen on the other, is therefore small. In a few cases it appears to be of service; more often it fails. When employed it should be warmed and diluted. Three yards of tubing and a reservoir bag should be used. Part of the tubing should lie in a basin of warm water, and the nozzle should not be held close to the mouth. Steam-kettles are worse than useless. The room should not be lighted by gas, since its products aggravate the cough.

Drugs have little influence over the course of pneumonia in childhood, except so far as they act as stimulants to the circulation or the respiration. These are needed at the first suspicion of respiratory or circulatory failure, as shown by the occurrence of cyanosis or an increase in the rapidity of breathing. They are especially needed in prolonged cases of the scattered pneumonic type. They comprise strychnine, ammonium carbonate, spirits of ether, sparteine, and alcohol. Expectorants are only of use when the accompanying bronchitis is an important feature of the case; otherwise they should be avoided.

Save your patient every possible source of alarm and fatigue. Caution the friends against exciting and exhausting the patient by new toys, and all the other attentions which, in their ill informed devotion, they love to bestow. So large a proportion of cases recover that recourse should never be had to measures of doubtful utility. Be always on the look-out for the earliest sign of any complication. The desire to avoid worrying a patient is often a temptation to be slovenly in one's examination of an affected organ. I learned from Sir William Jenner an aphorism I never lose an opportunity of repeating: "More mistakes are due to want of examination than to want of knowledge."

By Ministerial decree, an inquiry has been ordered into the prevalence of measles and whooping-cough at German health resorts and watering places, with the object of formulating a system of preventive measures that will prevent outbreaks of these diseases during the bathing season.

Remarks

ON

COMPLETE VOCAL REST DURING THE SANATORIUM TREATMENT OF LARYNGEAL TUBERCULOSIS.

BY

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and

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In a recent issue of the BRITISH MEDICAL JOURNAL,[1] Sir Felix Semon drew attention to the great value of absolute rest of the voice in the treatment of laryngeal tuberculosis. Since the date of the opening of the King Edward VII Sanatorium (July, 1906), all patients admitted suffering from laryngeal tuberculosis have been treated on the lines suggested by Sir Felix Semon, and, in view of the considerable proportion of consumptives who have laryngeal complications* and the measure of success which has resulted from our trial of complete vocal rest in their treatment, we think that the following report may be of interest.

The six patients whose progress under treatment we now record, had all well-marked tuberculous disease in the lungs, in addition to tuberculous disease in the larynx. They were all treated, generally, on the usual sanatorium principles; the laryngeal disease was especially treated by complete vocal rest, and in three cases periodic local applications of lactic acid were made.

Re the possibility of carrying out the complete vocal rest treatment in sanatoriums. Considerable doubts have been expressed by many as to the possibility of persuading patients faithfully to carry out such an irksome treatment as complete silence for a period of several months continuously. The treatment, certainly, is very irksome to many, but in practice we have found that patients carry this out much better than might be expected. Several observers have stated that it is best to keep laryngeal cases, treated in this way, apart from other patients under treatment in a sanatorium. They have advised that a room be set apart where laryngeal cases can have meals together, and have recommended that these patients should always be sent out for their walks, either alone, or in company of each other, so that they should be less exposed to the temptation to talk. These measures, though necessary in some instances, are not in our experience indicated for the majority of patients with laryngeal disease. A tendency to introspection, depression and analysing of symptoms, which is apt to arise when consumptives are aggregated together in any number, is much lessened if patients are kept occupied and cheerful, and it is in practice found inadvisable to cut off certain patients from the general social life and amusements of the sanatorium if it can possibly be avoided. We allow most of our patients on the silence treatment to take their walks with patients who have no laryngeal disease, and also to have their meals at the general tables. Considerable care must, however, be exercised in this. The companions of the laryngeal cases on their walks, and their neighbours at meals, must be carefully chosen, for on them, almost as much as upon the laryngeal patients themselves, depends the efficient carrying out of the treatment. Companions of sound common sense are, indeed, a valuable asset to the patient on vocal rest, and to secure success the sanatorium physician must pay some particular attention to these patients' friends as well as to the patients themselves.

The silence treatment, carried out on these principles, is, we find, much less irksome than when the laryngeal patients are isolated, for these patients can, by signs and gestures, and with the aid of scribbling books or slates and

* Of the 60 admissions to the King Edward VII Sanatorium 24 patients or 40 per cent. had some abnormal condition of the larynx. Of these 24 patients 14—that is, 14 per cent. of the first 100 admissions—had definite tuberculous disease of the larynx. The remaining 10 patients were suffering from general catarrh of the larynx, thickenings of vocal cords, or some other abnormal condition not due to tuberculosis; for example one patient had complete paralysis of the left vocal cord, probably due to pressure of a gland on the recurrent laryngeal nerve. The proportion of patients suffering from definite laryngeal tuberculosis in the sanatorium at any one time has fluctuated between 10 per cent. and 20 per cent., the average number working out at 14 per cent.

pencils, to a considerable extent take part in the conversation and amusements around them. It goes without saying that the *rationale* of the silence cure must be thoroughly explained to patients to whom it is prescribed, for the clearer the understanding the patient has on this point the greater is the chance of the treatment being carried out conscientiously.

In a large community, such as a sanatorium, the thoroughness with which this treatment is carried out also depends a good deal upon the general discipline of the institution, and the personal interest of those responsible for its management. If at the outset the laryngeal patients are carefully watched, and constantly urged to persevere in their treatment, silence soon becomes to be a recognized part of the sanatorium routine, and one in which both laryngeal patients and the other patients take an intelligent and personal interest. Again, on the principle that "nothing succeeds like success," the obvious fact of laryngeal patients rapidly improving upon complete vocal rest, soon becomes a valuable ally to a physician in charge of the cases thus treated. Patients will put up with some inconvenience when convinced on the evidence of their own senses that it is in their own interest to do so; as Sir Felix Semon, at Berlin, replied to a critic who said that this treatment would never be carried out, "Grey, my dear friend, is all your theory, and green the golden tree of life" (Goethe).

RESULTS OF THE TREATMENT.

In the following table we give the conditions of the six patients on admission to the Sanatorium and on discharge, or at the present time if still under treatment. It will be noted that all six patients had well-marked disease of the larynx, four of them having definite ulceration, in addition to congestion of the vocal cords. In the remaining two cases there was swelling and congestion of the cords and of the mucous membrane of the arytenoids or the interarytenoid region. All the patients had pronounced hoarseness, and two of them had some degree of dysphagia. As a result of treatment extending on an average over five months, the laryngeal disease in all these cases has immensely improved. In the four cases in which there was definite ulceration on admission, the ulcers have completely cicatrized, and the congestion and swelling have very much diminished, or entirely cleared up. In five cases the normal voice has been restored, and in the sixth case the hoarseness is much less. It will be noticed also that in every case the improvement in the larynx has been associated with great improvement in the lungs and general health. This is, unfortunately, not always the case. We have under our care at the present time a patient whose lung disease has been well arrested, and whose general health has been perfectly restored, but whose laryngeal disease has at the same time definitely progressed. We might add, too, that this particular patient had, throughout his stay in the sanatorium, carried out the complete vocal rest treatment most thoroughly.* Sir Felix Semon, in his paper, states that "complete vocal rest is neither absolutely certain nor indicated in all cases of laryngeal tuberculosis, nor is its exclusive use sufficient in many instances in which it may be advantageously employed. I rather look upon it as a very valuable helpmate which, although it might in some cases render local treatment superfluous, is not at all intended to altogether do away with the latter. On the contrary, in more severe cases a combination of the two methods will often produce excellent results."

Our experience, up to the present time, is thoroughly in accord with the opinion thus expressed by Sir Felix Semon.

Reports of Cases.

CASE I.

Mr. P. N., aged 27, clerk in motor works. Admitted July 11th, 1906. He gave a history of cough since February, 1906, and loss of voice and hoarseness since April, 1906. On admission he was found to have infiltration in all three lobes of his right lung and at the apex of the lower lobe of the left lung. His laryngeal symptoms were an irritable cough and very marked hoarseness; there was no dysphagia. In the larynx there was an ulcer at the posterior end of the left vocal cord, and a small erosion in the corresponding position on the right cord. He was prescribed the usual sanatorium régime and complete vocal rest for the larynx. In November, 1906, the following report was made on his larynx: "On the posterior end of the left vocal cord there is still some irregular thickening but no actual ulceration; the rest of the larynx is normal, and the voice very much improved."

He was now using his voice again. Associated with this laryngeal improvement there was marked improvement in his lung disease. This progress towards recovery was steadily maintained, and at the date of his discharge, on January 12th, 1907, his general health was completely restored, and the signs of disease in the lungs were limited to a few moist sounds of cough at the apex of the right lower lobe only. In the larynx there was a scar in the situation of the former ulcers, but otherwise the larynx was practically normal. The voice was very much improved—in fact, it was practically normal—a slight alteration in quality, rather than huskiness, only remaining. It is perhaps worth recording that this patient took a part in two of the plays performed by the patients at the New Year entertainments. He was perfectly well heard

*For the past fortnight this patient has been treated with lactic acid application, twice weekly, in addition to vocal rest, and has distinctly improved.

Table of Results.

	Condition on Admission.				Length of Treatment	Condition on Discharge.			
	Type of Disease.	Duration of Disease.	Laryngeal Disease.			Lung Disease.	Laryngeal Disease.		Remarks.
			Objective.	Subjective.			Objective.	Subjective.	
Case I ...	Infiltration of 4 lobes	11 months	Ulcer on left cord	Cough, hoarseness	6 months	Incomplete arrest (A)	Scar only	Nil	Returned to work.
Case II ...	Infiltration of 2 lobes	3 months	Ulcer on epiglottis and on right ventricular band.	Hoarseness, dysphagia	4 months	Complete arrest	Scar only	Nil	Returned to work.
Case III.	Infiltration of 2 lobes	18 months	Congestion and erosion of left cord	Slight hoarseness	3 months	Incomplete arrest (A)	Much improved	Nil	Still in sanatorium.
Case IV ...	Extensive disease of 5 lobes	7 months	Interarytenoid swelling and congestion	Hoarseness	6 months	Incomplete arrest (A)	Some interarytenoid thickening	Hoarseness	Returned to work.
Case V ...	Chronic disease of 5 lobes	6 years	Swelling and congestion of cords, etc.	Hoarseness, dysphagia	6 months	Incomplete arrest (B)	Much improved	Nil	Still in sanatorium.
Case VI...	Infiltration of 2 lobes	6 months	Ulcers on both cords	Hoarseness	4 months	Complete arrest	Scars	Nil	Still in sanatorium.

Definition of Terms.

Complete Arrest = General health completely restored in every respect, and lung disease completely arrested (apparent cure), there being no physical signs present or only such as are compatible with a completely healed lesion.

Incomplete Arrest (A) = General health completely restored, but physical signs of lung disease, though much improved, not entirely cleared up—for example, perhaps limited to a few moist sounds on cough.

Incomplete Arrest (B) = General health only imperfectly restored, and physical signs of the disease—for example, moist sounds, etc.—still well marked.

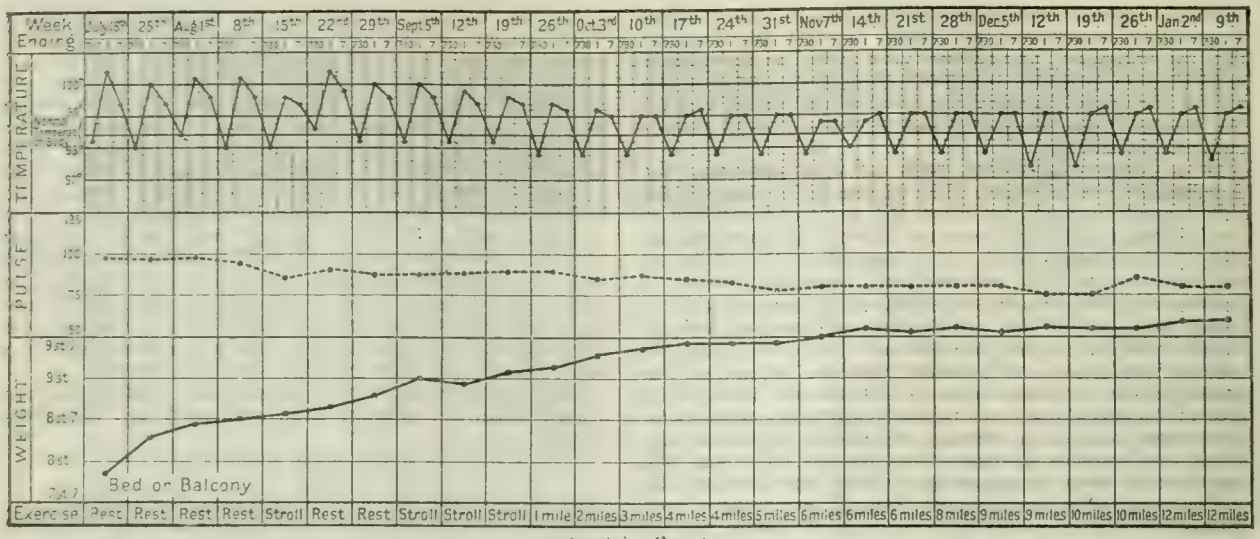


Chart for Case IV.

by the audience, and his larynx did not suffer in the least by this additional use of his voice.

On discharge from the sanatorium this patient returned to work.

CASE II.

Mr. C. G., aged 40, lecturer, admitted September 10th, 1906. This patient gave a history of pain in the larynx and dysphagia three years previously. Eight months before admission he had practically lost his voice, and the pain in the larynx and the difficulty in swallowing had since then become much worse. He had been under treatment in London for his larynx for a month before admission, and the advisability of having the larynx curetted had been considered, but it was decided to see what sanatorium treatment would do for him before taking operative measures. On admission his general health was very poor; he was obviously ill, and was a stone below his normal weight. On examination he was found to have early disease at the apices of both lungs. In the larynx there was active ulceration of the right free border of the epiglottis as well as on the inner aspect of the right aryteno-epiglottidean fold. Both the vocal cords were congested, and the mucous membrane over the arytenoids was considerably swollen. Subjectively he had marked hoarseness and a good deal of dysphagia. This patient was prescribed complete vocal rest, and, in addition, the ulcerated surfaces of the larynx were, twice a week, treated with Lake's mixture, and later with pure lactic acid. After two months' treatment the patient was immensely improved in every respect. He had gained 10 lb. in weight, he had lost his fever, and was walking eight miles a day without the least fatigue. In the larynx there was still active ulceration in the same situations as on admission, but he had completely lost his dysphagia, and his voice was very much improved.

On discharge on January 19th, 1907, his lung disease was completely arrested, and his general health and capacity for work restored. At this date Sir Felix Semon made an examination of the larynx and made the following report: "The condition of the larynx is a good deal better than when I last saw him. The ulcer on the edge of the epiglottis now seems quite cicatrized; of the ulceration on the right ventricular band only a little yellow spot is seen; on the vocal process of the right vocal cord a clear loss of substance which also seems to be already cicatrized is visible, and his voice is practically normal."

March. This patient returned to work soon after leaving the sanatorium and is now in good health.

CASE III.

Aged 24, captain in the Indian army, admitted November 17th, 1906. This patient gave a history of cough and gradual loss of weight for eighteen months, and hoarseness for the month previous to admission. On examination he was found to have somewhat extensive early disease of the upper and lower lobes of the right lung. In the larynx there was considerable congestion of both cords and of the interarytenoid space, and an erosion of the posterior end of the left vocal cord. He had no laryngeal symptoms except the hoarseness. He had slight fever, but his general condition was very fair. This patient was prescribed vocal rest, which he carried out very thoroughly. After two months' treatment his condition was greatly improved. He had gained a stone in weight, his temperature was normal, he was walking about eight miles daily, and the physical signs of the lung disease were much less marked. Examination of his larynx at this date showed that there was still a small erosion on the left vocal cord though the congestion was markedly less, and his voice was practically normal. This patient is still in the sanatorium, and continuing to make good progress under the same treatment.

CASE IV.

Mr. W. L., aged 19, clerk in insurance office, admitted July 11th, 1906. The history in this case was "a succession of colds in January, 1906, followed by gradual loss of strength and appetite." He first noticed some hoarseness in February—four months before admission—and gave up his work in the following month. On admission, he had extensive infiltration, with some breaking down in both lobes of his left lung and recent infiltration of the upper and lower lobes of the right lung. In the larynx there was considerable swelling of the interarytenoid fold and also distinct swelling of the mucous membrane over the arytenoids; both vocal cords were very congested, but there was no actual ulceration. His only laryngeal symptom was extreme hoarseness. For the first month after admission he was kept in bed owing to his having fever, and he was advised to keep his voice at rest. This patient made steady and uninterrupted progress, and after three months' treatment his temperature was normal and the condition of his lungs and his general health were much improved. In the larynx there was much less congestion of the vocal cords, but swelling of the interarytenoid region still remained and prevented the vocal cords meeting on phonation; his voice in consequence was still very husky.

On discharge in January, 1907, after six months' treatment, this patient had made remarkably good progress. The rate of his improvement is well shown by the weekly average chart of his temperature, weight, etc., which we give. His general health was excellent, and he was walking from ten to fourteen miles daily with perfect ease. He had gained 25 lb. in weight, and his working capacity was sufficiently restored to allow of his return to duty as an insurance agent in the country.

The signs of disease in the lungs were much less, though they had not completely cleared up. The general condition of the larynx was greatly improved, and the cords were healthy. The swelling over the arytenoids was much less marked, but some thickening in the interarytenoid region still remained and prevented the complete approximation of the cords on phonation. There was still, in consequence of this, some hoarseness, though very much less than on admission. This patient had been on complete vocal rest until discharge from the sanatorium; and on leaving he was advised to use his voice as sparingly as possible on his return to work.

CASE V.

Miss M. M., aged 32, teacher, admitted December 3rd, 1906, gave the following history: Eleven years before admission she had congestion of the lungs, three years later bronchial catarrh, and two years later pulmonary tuberculosis was diagnosed. She then had a month's treatment and returned to work, at which she continued until February, 1906. Two years before admission her voice first became husky, and since that date it had never been quite right; since May, 1906, she had had intercurrent dysphagia. On admission her general health was very poor. Examination of her chest showed extensive chronic disease of both lungs with excavation of both lobes of the left lung.

In the larynx both cords were very congested, and the mucous membrane over the arytenoids and interarytenoid space was considerably swollen. Subjectively she had marked hoarseness and some dysphagia. She was prescribed complete vocal rest and a spray of zinc sulphate. After two and a half months' treatment she had considerably improved in every respect. She had lost her fever, was walking six miles daily, and was up to her normal weight, having gained 11 lb. since admission. In the larynx there was still some congestion of the cords and swelling of the mucous membrane, though much less marked. At the present time, after six months' treatment, she has made still further progress. The

larynx has a very much more healthy appearance; the vocal cords are practically white, the swelling of the mucous membrane is very much diminished, and her voice is normal.

CASE VI.

Miss M. F., aged 32, school teacher, admitted October 1st, 1906. On admission this patient gave a history of two years' general failure in health, with loss of weight and strength; cough and huskiness came on first in February, 1906, but she remained at her work until six weeks before admission, when she was compelled to give it up, largely on account of her loss of voice. Examination on admission showed that she had infiltration of the upper and lower lobes of the right lung. In her larynx there was an ulcer on the interarytenoid fold, and also on the posterior end of the right vocal cord, there was also a longitudinal cleft at the posterior end of the left cord, and both cords were in addition considerably congested. She had marked hoarseness but no dysphagia. Her general health was poor, she was obviously below proper weight, and had slight fever. For her laryngeal condition she was prescribed complete vocal rest and a spray of zinc sulphate. She has persevered very thoroughly in the treatment prescribed for her, with very satisfactory results. At the present time—she is still a patient in the Sanatorium—her lung disease is arrested, and her general health wonderfully improved. She has gained 16½ lb. in weight, and is walking eight miles daily, her temperature being absolutely normal. The larynx has greatly improved, the cleft in the left vocal cord has quite disappeared, and there is now only a scar in the interarytenoid fold; the general anaemia of the larynx has quite disappeared, the congestion of the vocal cords is much diminished, and the voice is clear.

REFERENCE.

[1] Therapeutic Value of Complete Vocal Rest during the Sanatorium Treatment of Laryngeal Tuberculosis. BRITISH MEDICAL JOURNAL, December 8th, 1905.

An Address

ON

THE VALUE OF OPHTHALMIC SYMPTOMS IN GENERAL DIAGNOSIS AND PROGNOSIS.

DELIVERED BEFORE THE RICHMOND DIVISION OF THE BRITISH MEDICAL ASSOCIATION.

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MR. PRESIDENT AND GENTLEMEN,—Cases presenting all degrees of complexity are met with in general medical practice, and you have frequently to deal with obscure symptoms in different organs of the body entailing difficult clinical analysis. I propose speaking to you about the aid that you may obtain in your work by paying due attention to ocular affections.

One important plea in favour of my theme is that such ophthalmic symptoms as I shall mention are easily observed, and do not need any very special training; one of the greatest charms of ophthalmic work, indeed, consists in the ease with which, generally speaking, our observations are made.

Much more attention is paid to-day by the medical practitioner to disorders of the eyes *per se* than obtained twenty years ago, and the early treatment of such affections as iritis, glaucoma, and ocular headaches has proved highly beneficial to the community. But I hold that there is still much to be desired in the recognition of ophthalmic signs as indicative of general disease. Accordingly, I desire to describe very shortly some readily-recognized symptoms which often present valuable evidence of past disease; which in some instances afford the earliest indications of a threatened serious general ailment; or, again, which are often of value in differential diagnosis when the true nature of a general affection is otherwise doubtful. Some of these ophthalmic signs are entirely subjective; others are first, or most readily, detected by subjective symptoms; while yet others are objective only.

Subjective Signs.

A patient, most often a woman between 20 and 30 years of age, comes with an account of rapid, recent failure of vision in one eye. Outwardly the eye looks normal, and the ophthalmoscope shows no fundus change. There may be deep-seated pain experienced on pressing the globe backwards into the orbit, and even on moving the eye in different directions. The amount of failure of sight varies, but may be almost complete; in slighter forms the eye fails to distinguish small pieces of red and green at or near the fixation point. The pupil may contract fairly well to light for a moment, but then dilates again under continued exposure, behaving quite differently from that of its normal fellow.

We should here be justified in diagnosing *some affection of the corresponding optic nerve in its course between the optic disc and the chiasma.* Locally, the prognosis is favourable, as sight is usually gradually recovered in the course of two or three weeks. But the chief importance of the diagnosis lies in this, that a very large proportion (quite one-half) of these cases have already developed, or will within the next few years exhibit, other signs of disseminated sclerosis; and that we have to regard the retro-ocular nerve affection as a local "island" of this disease. We are thus prepared to guard our general prognosis, and may be enabled early to put the patient on a judicious system of life treatment. Cases of this kind are very liable to be confused with a one-eyed hysterical amblyopia, particularly as the same patient not uncommonly has other symptoms that are undoubtedly functional in character. Attention to the behaviour of the pupil which I have described is, however, sufficient to prevent such a mistake from being made. Further, although commonly enough there is no ophthalmic change at first, some days later we often find evidence of neuritis, and this is succeeded after some weeks by a decided pallor of this optic disc.

Occasionally, a patient who similarly complains of loss of sight in one eye is found, when we examine the nature of the failure, to have in reality lost half of each field of vision. Thus he may state that his right eye is blind, while, in fact, the right half of the visual field is blind in each eye, while the left half of each is still retained. This condition, *homonymous hemianopia*, is an evidence of intracranial disease, the site of the lesion being one optic tract, the visual centre in one occipital lobe, or, finally, the fibres connecting the tract and sight centre. There are indications in the nature of the pupillary reaction in such cases which serve to localize the lesion more precisely, whether it be in the tract or posterior to it, but into this question of finer localization I need not enter at present. In elderly people homonymous hemianopia is generally due to vascular disease, and may be a valuable indication of a more general arterio-sclerosis.

In a third important subjective group, the outer or temporal half of each visual field is lost (bitemporal hemianopia). This is a symptom of localizing value as showing the presence of some disease involving, usually by pressure, the part of the optic chiasma where the optic nerve fibres cross. It is found in cases of tumours or hypertrophy of the pituitary body, among other causes, and sometimes constitutes an early symptom in acromegaly.

Ophthalmic Signs connected with the Position of the Eyeballs in the Orbits, and Muscular Anomalies affecting the Eyes and Upper Eyelids.

Prominence of the eyeballs, when accompanied by retraction of the eyelids, gives rise to a remarkable staring facial expression familiar as a common symptom of Graves's disease or exophthalmic goitre. This appearance is often what leads us to look for clinical evidences of this disease. In early stages the proptosis may not be well marked, and where our suspicions are aroused we ask the patient to look slowly downwards, and note whether the upper lid drops gradually as in health, or whether it lags behind, remaining for some time in its initial retracted position. This latter is a valuable sign of Graves's disease, even in its slighter forms and earliest stages, and if accompanied by decided tachycardia and muscular tremors the diagnosis may, I believe, be considered complete.

Nystagmus is occasionally of more than local significance. By nystagmus I mean a fairly rapid to-and-fro movement of the eyes, often constant, and always very evident when one attempts to examine the fundus with the ophthalmoscope. It is common in those whose sight has always been defective. But when met with in association with normal eyes, and when of comparatively recent development, this symptom is of value as indicating the

probable presence of disseminated sclerosis; in these cases the nystagmus is generally much exaggerated on directing the eyes well away from the middle line. Slight, quick, jerking movements in one direction, with slow return, present only on extreme conjugate movement of the eyes to the right or left, must not be mistaken for true nystagmus.

As regards paralysis of the external ocular muscles, I would say only a very few words to you. A slight impairment of movement may be difficult of recognition apart from a study of the subjective symptom of diplopia so produced, but there is generally little difficulty in recognizing paresis of the third or of the sixth nerves. As regards the nature of the affection, apart from cases manifestly due to injury or to orbital disease, it is important to consider the question whether the lesion affects the nerve trunks or the nerve nuclei. It would be foreign to my present purpose simply to enumerate the different more common causes of ocular paralysis, but there are one or two points that I would have you bear in mind. In cases in which you have found evidence of intracranial tumour, the presence of sixth-nerve paralysis is in itself of no real localizing value: one or both sixth nerves may be affected from a tumour in any position, seemingly as a result of the rise of intracranial tension only. Secondly, we must recollect that paralysis of ocular nerves, usually temporary, is not uncommon in early stages of locomotor ataxy, and may be valuable in directing our examination to other more definite features of this disease. Lastly, in young people, an unexplained sixth-nerve paralysis should make us consider the possibility of a recent attack of diphtheria. In one severe epidemic of this disease I met with a considerable number of cases in which, always along with other nerve lesions, this somewhat exceptional sequela was present. I need not impress upon you how important the proof of this sequence may sometimes be; when present, therefore, in a suspected case, other evidences of post-diphtherial nerve poisoning must be looked for.

Occasionally we may meet with decided drooping of both upper eyelids, of comparatively recent onset, in young or middle-aged adults. The condition I mean is distinguished from a limited paralysis of the third nerve by the facts that both upper lids are affected, though not always equally; and that the lids can be voluntarily raised momentarily, only to drop back into their former position; and that a repetition of this voluntary elevation of the lid rapidly exhausts it, so that it then remains drooped notwithstanding all voluntary efforts until a considerable time has been allowed for its recovery. Where these lid conditions are present, the action of other muscles should be investigated, as they constitute a prominent early symptom in myasthenia gravis.

Pupil and Accommodation.

As to the clinical value of observations on the pupil, there is much more to be said than time admits of now. You are familiar with the Argyll-Robertson phenomenon, where the pupils contract well with convergence but are inactive to light, a condition diagnostic of late or post-tertiary syphilis, and an early—sometimes the earliest—evidence of the onset of locomotor ataxy. If, along with this phenomenon, there is marked inequality in the size of the two pupils, you should suspect the probability of the occurrence of general paralysis.

When we examine the reaction of the normal pupil to light, we find that, after its first contraction, though still exposed to light, it dilates a little once or twice, but soon comes to rest. In some conditions these oscillations are continuous, and this oscillatory pupil is very marked in ordinary epilepties.

Marked inequality in the size of the pupils is often due to implication of one cervical sympathetic, such as may be produced by the pressure of a deep enlarged gland, a tumour of the œsophagus, or a carotid aneurysm. I need hardly remind you that when the sympathetic is merely irritated the corresponding pupil is wide; but if there be an actual loss of action in these sympathetic fibres the pupil is smaller than normal, and cannot be dilated by cocaine.

Cycloplegia, or paralysis of accommodation, is not an uncommon sequela of diphtheria. It may follow attacks where the throat affection has been slight, and may then prove most valuable in showing the true nature of a series of throat cases. On several occasions, by the presence of this symptom, I have determined the diphtherial nature of what had been considered an ordinary follicular tonsillitis in children. Complaint is made of inability to read ordinary type; both eyes are affected similarly; the pupils are very rarely dilated and act well to light; the condition usually occurs some weeks after the sore throat, though I once found it present while the tonsils were still covered with diphtherial membrane. (I need hardly say that in this case also the nature of the throat affection had not previously been recognized, from the mother not having sought advice for it.) The cycloplegia only lasts some three weeks or so, and is therefore of no great consequence in itself, but its recognition must always give rise to some anxiety as indicating severe poisoning of the nervous system, and it is frequently accompanied by other signs of this, such as paralysis of the soft palate, loss of knee-jerk, and sometimes by grave symptoms of cardiac failure.

Cornea and Conjunctiva.

Apart from subjective symptoms and such functional disturbances as we have been considering, actual *disease* of ocular tissues is not infrequently of great general diagnostic value. Such affections of the anterior parts of the eye may be dismissed in a few words.

The clinical picture of interstitial keratitis and the associated teeth as drawn by Hutchinson has proved of inestimable value in enabling us to ascertain with certainty the presence of inherited syphilis.

The formation of greyish-pink nodules of exudate near the pupillary edge of the iris is sometimes useful in discriminating syphilitic from other forms of iritis.

Very delicate children within the first two years of life may develop a peculiar form of corneal affection, in which its surface becomes dry and semi-opaque, without photophobia; in such cases the entire cornea frequently sloughs, exposing the front of the iris and lens capsule. Such cases generally soon die, but the local affection is not in itself of great value in the prognosis, the general condition of malnutrition showing itself conspicuously in other ways.

Phlyctenular ophthalmia in adults, and repeated attacks in children, I regard as affording a strong suspicion of a proneness to tubercle, and this ought to be remembered in the general treatment of such patients.

The Fundus.

The mention of tubercle induces me to mention another class of cases sometimes met with in medical practice, and then usually in young adults. The patient has a morning and evening variation in temperature and abdominal symptoms suggestive of enteric fever. The diagnosis seems to lie between this and acute general tuberculosis, and the ophthalmoscopic discovery of one or more tubercles in the choroid has afforded important evidence as to the true nature of disease.

Now, Gentlemen, there can be no doubt whatever that every medical practitioner should know how to use the ophthalmoscope, and should have had opportunities of seeing and learning to recognize the appearances of the normal fundus and the more common fundus diseases. If in his student days he had given less than a tithe of the attention to the ophthalmoscope that he was rightly obliged to give to the microscope and the stethoscope, he would be able to see all that is clinically most important with this easily-used instrument. It is possible that I am speaking to men who are all well able to make ophthalmoscopic observations, but if there be any who desire to acquire or improve such knowledge, it must be a source of gratification to them that they can now turn to my friend Mr. Blair in your well-appointed ophthalmic department of the Richmond Hospital.

The changes in the intraocular end of the optic nerve constituting optic neuritis or papillitis are easily recognised, except when in their very early stages. This condition is found, sooner or later, in the great majority of cases of intracranial tumour, and not infrequently the diagnosis practically rests on this observation. The other symptoms must of course receive due attention, however, for optic neuritis occurs in other conditions, and it is only when it is present along with other characteristic symptoms that we are really justified in diagnosing intracranial tumour. Furthermore, we must not expect too much from the ophthalmoscopic examination in this disease; the

intensity of the neuritis forms no accurate guide to a knowledge of the nature or the size of the new growth, and its usefulness in localization is comparatively small.

The condition known as albuminuric retinitis is of more value in prognosis than from a diagnostic point of view, and this on account of two things: (1) The same clinical picture is sometimes present without the kidneys being affected, and (2) when it is present in renal disease there are usually other evidences of this affection.

As regards life-prognosis, however, the detection of albuminuric retinitis is most important. Amongst the poorer classes this retinal complication means that the end of life is drawing very near, and comparatively few survive more than a year. Among the well to do, where every care in diet, clothing, and attention to general hygiene can be exercised, the prognosis is not so bad, but even among these the probability of life does not exceed eighteen months to two years. The only exceptions to this unfavourable prognosis are when the retinitis accompanies acute nephritis, such as the post-scarlatinal, or when it occurs in connexion with the albuminuria of pregnancy.

There is one other ophthalmoscopic change which I must mention, and its significance must be recognized more and more as the importance of the early detection and proper treatment of general arterio-sclerosis is accepted by our profession. In the retina we have the unique privilege of being able to observe with care and accuracy these minute arteries which are so often the first to tell the tale of vascular degeneration, and the successive alterations in retinal vessels have now been followed and described with sufficient detail to enable us, in any given case, to give a shrewd guess concerning the stage at which the degeneration has arrived. That by this means we can predicate with an approach to certainty the condition of small arteries in other more vitally important tissues is no longer in dispute, and it is by this observation that we are often first able to diagnose granular kidney disease, and, at one late stage of the retinal arterial change, to anticipate with more than mere probability the imminence of grave evidences of cerebral vascular disease.

I have purposely given no verbal description of these ophthalmoscopic changes, for I feel strongly that such details by themselves are apt to be misleading, and at best fall far short of the actual pictures presented by the diseases in question. It is to instances of the affections mentioned that I would refer you, and I can assure you they are not uncommon.

It may be, Gentlemen, that I have appeared to you in these remarks to have unduly magnified the importance of one special branch of your work. I know that you have many points to think of and many facts to bear constantly in mind. My aim has been, not to add to these, but to present for your consideration a few clinical lessons gleaned from ophthalmology which may be of some service to you, and, if you think well of them, to induce you to take advantage of the opportunities this ophthalmic department will undoubtedly afford.

FOREIGN STUDENTS IN GERMAN UNIVERSITIES.—The number of matriculated foreign students on the books of the universities of Germany during the last winter semester was 4,151, being 9.2 per cent. of the total number of students. These foreign students were distributed among the several universities as follows: Heidelberg, 1,189 (16.1 per cent.); Leipzig, 662 (14.8 per cent.); Jena, 186 (14.6 per cent.); Berlin, 1,189 (14 5 per cent.); Konigsberg, 134 (11.8 per cent.); Halle, 254 (11.3 per cent.); Freiburg, 164 (9.4 per cent.); Gottingen, 160 (9.2 per cent.); Munich, 486 (8.9 per cent.); Giessen, 84 (7.7 per cent.); Strassburg, 96 (5.8 per cent.); Greifswald, 43 (5.2 per cent.); Würzburg, 67 (4.7 per cent.); Marburg, 60 (3.9 per cent.); Tübingen, 59 (3.9 per cent.); Breslau, 77 (3 9 per cent.); Bonn, 88 (2 9 per cent.); Erlangen, 28 (2.6 per cent.); Rostock, 13 (2 per cent.); Kiel, 11 (1.4 per cent.); Munster, 11 (0.7 per cent.). Of the foreigners, 1 890 were from Russia, 681 from Austria-Hungary, 341 from Switzerland, 144 from Great Britain, 139 from Bulgaria, 83 from Roumania, 61 from Servia, 58 from France, 57 from Holland, 53 from Luxemburg, 47 from Greece, 40 from Turkey, 33 from Italy, 32 from Sweden and Norway, 23 from Spain, 19 from Belgium, 9 from Portugal, 5 from Denmark, 1 from Montenegro. In addition to these America sent 302 students, Asia 113, Africa 13, and Australia 11.

ACUTE COLITIS AND ULCERATIVE COLITIS.*

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THERE are few diseases so grave as acute colitis of which our knowledge is so deficient, and I think, therefore, the records of the following cases will be of interest:

CASE I.

A. W., a youth of 19, who had enjoyed good health except for rheumatic attacks, commenced on July 14th, 1894, to have diarrhoea, soon becoming severe; the motions were liquid and slimy, and there was pain after defaecation, but no tenesmus. The diarrhoea increased, the bowels being open eight times a day, and on August 13th he gave up work, melaena coming on, which increased till half a pint "like treacle," he says, passed with each motion, and on August 20th even more. He came into St. Mary's Hospital on August 23rd; he had vomited twice before admission. The tongue was quite clean. There was tenderness over the whole abdomen; the transverse colon was distended, and the abdominal muscles were kept tense. There was pain in the left iliac fossa before and after defaecation. The stools were loose, dark, and foul-smelling, with much mucus and no blood. He was ordered bismuth carbonate and opium, but continued passing seven stools a day, and soon experienced much pain over the sigmoid flexure and right iliac fossa. Occasional slight melaena till the 26th, when a clot passed the size of a crown piece.

On the 27th he complained of sudden severe pain in the splenic region; the spleen was not enlarged, and probably the pain arose in the splenic flexure of the colon. On the 28th there was much more blood in the stools and some pus. Up to the 29th he had only vomited twice, but he now commenced to return everything that was swallowed, and even enemata were not retained; his general condition was much worse, with prostration. On the 31st there was great pain and tenderness, especially over the left lumbar and iliac regions; bowels open, but merely mucus passed.

On September 1st, the abdomen, previously distended, became retracted; vomiting persisted, and on the 3rd hiccough came on; his pulse, previously only 84, ran up to 128 per minute on the 6th, and he died of syncope on the 8th, the hiccough having persisted from the 3rd until death; the temperature had been subnormal throughout. All along there had been some bladder strangury. *Post mortem*, on the outer surface of the colon numerous dusky patches of congestion; on opening it, it was seen to be intensely congested throughout, but especially the sigmoid flexure, and numerous ulcers were found in the caecum, ascending, transverse, and descending colon; in the sigmoid flexure the greater part of the surface was denuded of mucous membrane, the ulcers being only separated by narrow bridges of mucosa, which was quite shreddy. The upper half of the rectum showed ulcers, but the lower none; nor were there any in the small intestine or in the stomach; no peritonitis.

CASE II.

C. J., aged 48, a plumber, on December 7th, 1905, began to suffer, from vomiting with abdominal pain and tenderness especially marked over the caecum and descending colon and most severe at night; there was much flatulent distension and slight melaena. After lying at home for three weeks under medical treatment, during the whole of which time he had hiccough and pyrexia, he came into St. Mary's Hospital on January 1st, 1906. He said that he had been perfectly well up to the date of his illness, which he at first attributed to some beefsteak pudding he had eaten; his doctor had thought it was lead colic.

On admission he lay on his back, with sunken eyes, groaning loudly, and incessantly coughing; he retched and vomited up most of the liquids given him; the colon was somewhat but not greatly distended; there was some tenderness over the sigmoid region and also at a point over the position of the hepatic flexure. His breath smelt almost gangrenous and his pulse could hardly be felt nor his heart sounds heard; he was clear in mind; the urine contained bile but no albumen; his temperature was 100° on admission, but fell to 96° on the next day, when he died of collapse.

The necropsy showed the whole of the descending colon to be in a state of sloughy ulceration exposing the muscular fibres; there was no perforation and no peritonitis.

CASE III.

L. M., a ladysmaid, was attacked on July 17th, 1888, with severe lumbar pain, feeling of severe illness and diarrhoea. She had been previously in excellent health, had eaten nothing unusual, but had got wet in a thunderstorm the day before; there was nausea but no vomiting. She took to bed at once under medical treatment, but the diarrhoea increased, with occasional griping in the left hypochondriac region; there was no headache or epistaxis. She came into St. Mary's Hospital

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on August 11th with flushed face and hectic look, slight moist fur on the tongue; motions relaxed, offensive, light-coloured, semi-liquid; abdomen everywhere resonant, left side more full and distended than the right; pulse 120, soft. Her temperature during the next week ranged from 98° to 102·6° daily; the colon became markedly distended; there was general but not extreme tenderness over the abdomen, most marked over the position of the ileo-cæcal valve. Rectal examination revealed nothing abnormal, but the passage of a rectal tube gave such pain as not to be repeated. The abdomen, though always distended, was soft and doughy; diarrhœa was very intractable, the motions being most offensive, but there was never any melæna. Pyrexia persisted, about 101° to 102° each day. She took liquid food well, but she sweated freely and gradually emaciated.

On August 24th—that is, the twenty-seventh day of illness—the abdominal pain and distension increased and her downward progress became more rapid. On the 26th she vomited once, purpuric spots appeared and oidium albicans in the mouth. The mind remained perfectly clear throughout, but she died of exhaustion on August 28th, after an illness of forty-one days.

The necropsy showed morbid conditions entirely confined to the colon, which in its whole length was thinned to an extraordinary degree; it was very pale and absolutely dried up; this desiccation was most striking; it was honeycombed by perforations, and where the wall was not perforated it was nearly destroyed. The perforations had thin, shreddy, or sharp-cut edges, but no thickening or attempt at repair—in fact, were irregular circular holes about the size of a threepenny piece. There was no trace of lymph or peritonitis or adhesion, but in the peritoneal cavity was a good deal of pulpy-like, pale gluey, decolorized faecal matter which had slowly exuded through the perforations, and had evidently been in the peritoneal cavity some, if not many, days. There was most of this about the descending colon. There was no lymph exudation and no peritonitis and no effusion of blood.

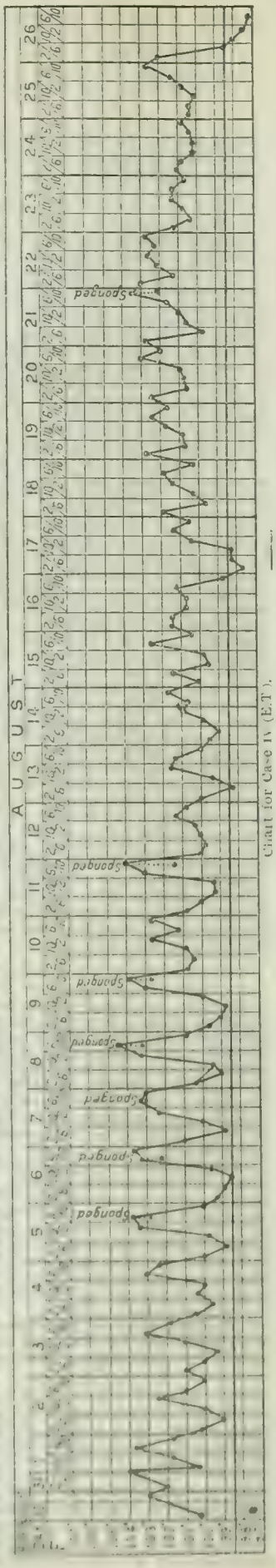


Chart for Case IV (E.T.).

CASE IV.

E. T., a servant girl, aged 18, always had good health till July 15th, 1906, when pains came on in the abdomen, soon increased about half an hour after taking food; diarrhœa followed on the 18th and next day sickness; there was severe frontal headache and occasional vomiting. On the 19th she took to bed, and on July 23rd came into St. Mary's Hospital, a well-nourished girl, cheerful, joking, and very anxious for solid food, though the temperature was 104° and she vomited three times on the day of admission. There was severe diarrhœa of offensive liquid dark motions containing much bile and very unlike typhoid motions: there was little abdominal distension, but some tenderness at a spot on the left side corresponding to McBurney's point on the right; the pulse was 90, of good tone. Below the inferior angle of the left scapula there was a considerable area of almost complete percussion dullness with absence of vocal fremitus, vocal resonance and breath sounds, but an exploring needle showed absence of any pleural effusion. The day after admission she passed a small blood clot; during the next few days the pyrexia was of a marked intermittent type, rising each evening to 104° or more and falling each morning to 99°, as shown in the annexed chart; the case resembled typhoid fever in some respects and tubercle of abdomen and lung in others. The character of the stools, the very early melæna and the intermittent pyrexia, however, excluded typhoid, and the stationary nature of the lung condition taken with the high fever made tubercle improbable. The blood showed marked leucocytosis at each examination—47,000 white corpuscles per c.mm.—and on August 2nd slight melæna recurred and colitis was diagnosed; the intermittent pyrexia persisted, and the patient, though not feeling ill but being in good spirits and continually asking for solid food, gradually lost flesh; diarrhœa was most intractable. On August 28th she got sudden pain in the left leg and tenderness over the middle of the tibia with puffiness of the foot. Slight diarrhœa and melæna continued, and death took place on August 26th. At the necropsy the whole length of the large intestine when slit open showed a continuous granulating surface with in several places superficial ulceration. The wall of the colon, sigmoid flexure, and rectum were greatly thinned and atrophied, but there was no perforation; there was no peritonitis and no adhesions. The left posterior tibial and popliteal arteries contained a continuous column of *ante-mortem* clot. There were two infarcts in the base of the left lung which had caused the area of percussion dullness and the other signs which had been observed during life in the left chest.

CASE V.

A medical man, aged 45, was attacked by symptoms of colitis: diarrhœa with mucus and blood in the motions, pyrexia and pain over the sigmoid region. He came into a nursing home in London, where he gradually improved, and in some weeks returned to his country practice very incompletely recovered. About two months later he was attacked by severe dyspnœa, shivers, and pyrexia. I saw him in the country and found extensive percussion dullness and weakened air entry at the base of the right lung; this and his repeated shivering attacks suggested empyema, and a few days later Mr. Pepper saw him with me. On the morning of our visit he had been attacked with pain in the loin and passed urine containing albumen and a considerable quantity of blood; an exploring needle negatived fluid in the chest, and it appeared certain he had embolisms in the lung and kidney. After a long illness he recovered, but remained intensely anæmic and of waxy appearance during many months of convalescence at the seaside.

Two years later the diagnosis of embolism was verified, for he began to pass blood in the urine, and Mr. Pepper exposed the left kidney, and on incising it found broken-down infarcts with discoloured blood. He recovered after this, but some two years later died of nephritis.

CASE VI.

A. B., my clinical clerk, while in perfect health was attacked in June, 1892, by lumbar pains and by diarrhœa so severe that he was thought to have "English cholera"; this continued, and two or three days later he came into St. Mary's Hospital under my care; temperature was 101°; pain about the sigmoid region with diarrhœa of offensive stools containing much mucus. There was distension of the colon and it was evident that he had acute colitis; I could find no cause to account for it, but he had, shortly before the illness began, drunk freely of cold water while playing cricket on a very hot day. Sir William Broadbent attended him with me throughout a very severe illness. Blood had appeared in the motions three days after his admission to hospital and the motions were horribly offensive. There was rather acute pain over the sigmoid region and pyrexia of moderate degree, 101° to 102°. The pain over the left side of the abdomen gradually lessened, but for some weeks there succeeded attacks of acute pain over other parts of the colon, each time with other evidences of fresh colitis. He became greatly emaciated and very weak, but clear in mind except for some little nocturnal wandering. At the end of five weeks the symptoms began to subside and he eventually perfectly recovered from an illness which brought him to the point of death, and he is now, seventeen years afterwards, occupying a distinguished position in the profession. He was treated throughout his illness by small doses of calomel and opium internally and by antiseptic and astringent enemata.

CASE VII.

F. H., a youth of 17, after getting wet through on May 25th, 1906, did not feel very well, and on the 30th got acute pain in the abdomen and in the cæcal region; he kept his bed, vomit-

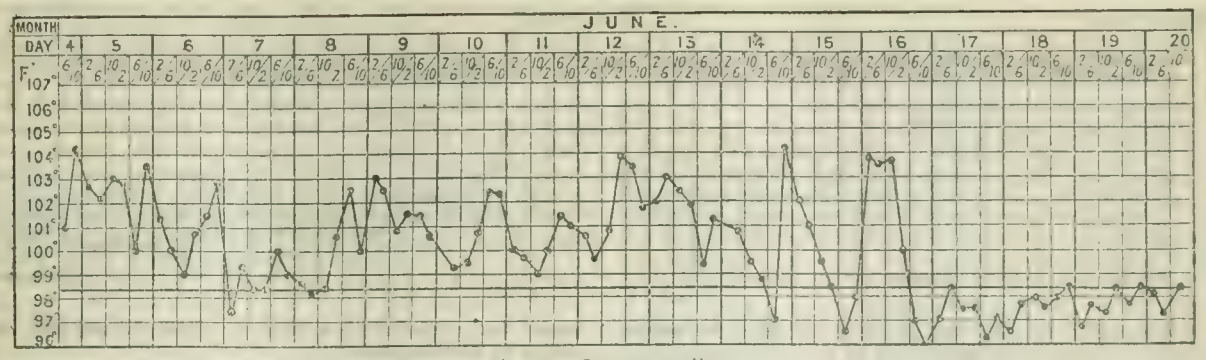


Chart for Case VII (T. H.)

ing up everything except a little milk and tea. He was admitted into St. Mary's Hospital on June 4th. There was considerable abdominal pain and marked tenderness over the descending colon; the bowels were relaxed and the motions very offensive, containing much mucus but no blood; there was little tympanites; pulse, 98 per minute; frontal headache of some days' duration; mind quite clear; temperature 104.4°. During the next twelve days—that is, till June 16th, the temperature was 99° or 100° each morning, rising every evening to 103°, and on the 14th and 15th to 104°. He took food fairly well without vomiting; constipation alternated with diarrhoea, and disinfectant enemata were given on every second day. After the 16th the temperature gradually fell, as seen by the chart, the diarrhoea lessened, and the patient gradually got well.

CASE VIII.

E. K., a retired naval officer, was quite well till December 16th, 1893, when after dinner he felt a little sick; next morning he vomited again twice, and felt so ill he had to lie down. After this he remained in bed, with slight pyrexia, and with hiccough, which never left him night or day; he vomited all food given him, and there was retention of urine. On December 26th I saw him with Dr. Payne of Storrington; I could find nothing objective, except some distension and tenderness over the descending colon. I thought the attack was due to bacterial poisoning, as he had taken some scalloped fish just before his attack. He gradually got well, but on May 21st, 1899, he got an exactly similar attack, vomiting, and hiccough, with melaena, diarrhoea, and great pain and tenderness over the descending colon, and pyrexia; his symptoms continued till June 11th, and he gradually recovered. I think there is little doubt this was a case of colitis and not of bacterial poisoning.

CASE IX.

E. W., a girl of 13, after suffering for a fortnight with severe abdominal pains, diarrhoea and pyrexia, came into St. Mary's Hospital on October 15th, 1903. The temperature during the ten days following remained at 102° to 103°. There was slight tympanites and mucous diarrhoea. She gradually got well, and the case was regarded as one of possibly typhoid fever, though the severe abdominal pain rendered this very doubtful.

On February 8th, 1905, she came again into the hospital with similar symptoms—abdominal pains, diarrhoea, and continued pyrexia. The abdominal pain was severe, there was tenderness over the descending colon, and mucus with the dejecta. Her blood count showed marked leucocytosis, 18,950 white corpuscles per c.mm.

The symptoms persisted for some twenty-one days, with fairly clean tongue, no vomiting, but persistent pyrexia, the maximum temperature being 103° and the minimum 102° on the 9th and 10th; then 100° to 103° till the 16th, then fell to 102° on the 18th and 19th; and fell to 99° on the 19th, almost by crisis.

The clean tongue, absence of splenic enlargement or of spots, the history of the previous attack, the leucocytosis, and the acute pain, excluded typhoid fever, and I think there is little doubt that the two illnesses were attacks of colitis.

CASE X.

Nurse L. was quite well till the night of October 18th, when she vomited three times while on night duty, and had pains in the abdomen but no diarrhoea. She took to her bed on the morning of October 19th, when I saw her with Dr. Bird, the Resident Medical Superintendent of St. Mary's Hospital; she had vomited twice; there was headache and diarrhoea; temperature 101°. There was tenderness and distension over the colon, and much mucus and a very large quantity of blood in the motions, which were offensive and frequent. She was ordered calomel and opium three times a day, and sanitas enemata.

On the night of the 21st there was a good deal of abdominal pain and diarrhoea, but less blood. There was marked tenderness over the hepatic flexure. Dr. Spilsbury's blood examination showed white blood corpuscles 14,000 per c.mm.; polynuclear leucocytes 68 per cent; large mononuclear 12 per cent.; small polynuclear corpuscles 20 per cent.

She gradually improved, the temperature falling, and in about three weeks was well, though very anaemic and weak.

CASE XI.

I may add notes of a case still under my observation, in which a gentleman of 51 years of age, after suffering pains in the abdomen for over a year, suddenly developed, in March, 1906, a very acute attack of colitis with severe diarrhoea and melaena; from this he soon recovered. But in September, 1906, a similar attack occurred with pyrexia, but slight melaena, diarrhoea, and severe abdominal pain, with phantom tumour in the sigmoid region; hiccough soon succeeded and a severe rigor, threatening fatal collapse. An exploratory operation showed nothing abnormal except pallor and dryness of the colon. Terrible and exhausting hiccough for ten days threatened the patient's life, after which recovery slowly ensued; but early in January the colitis recurred in a very acute form with return of hiccough, symptoms of intestinal obstruction suddenly came on, and death was averted only by opening the caecum.

Addendum.—For the five months since this paper was read acute colitis has persisted with pyrexia, occasional rigors, and signs of pulmonary embolism; and it is only now, after seven months of acute illness, that gradually diminishing symptoms of colitis allow some slight hopes to be entertained of recovery.

CASE XII.

In another case, seen in consultation with Dr. Wiggin early this year, a lady was attacked with severe acute colitis, accompanied by melaena, which resisted all medicinal treatment and became so severe that, as a last resort, the caecum was opened; the melaena gradually ceased, and, after many weeks of colitis and intermittent pyrexia, recovery ensued, but three or four weeks later a relapse occurred with evidences of embolism in the lungs. Ultimately the patient got quite well.

REMARKS.

Records of other cases which have come under my observation might be added, but these sufficiently illustrate the main features of the disease to which I wish to draw attention; no attempt will be made here to give a complete account of the disease.

First as to the *Onset*: (1) Very acute cases may commence by severe pains in the back and limbs, like variola or influenza or lumbago; this back pain may precede other symptoms by two or three days; there may be accompanying fever and chills. (2) More commonly the first symptoms indicate some abdominal disorder—acute abdominal pain or diarrhoea or melaena—either of which may be profuse; vomiting, too, is common, and headache, and there may be pain on defaecation. (3) The onset may be gradual, with headache, diarrhoea, and pyrexia simulating typhoid fever. The distinguishing points between the two will be discussed later.

The *tongue* is usually, in the early stages, thickly coated with white fur, which soon clears off, and throughout the course even of very severe cases the tongue may remain small, moist, and clean; the dried up, brown tongue of typhoid is seldom seen, and the clean, moist tongue is quite a characteristic of the disease.

The *gums* may become sore, ulcerated, or spongy, and in bad cases acute pharyngitis may occur. In one case a membrane of oïdium albicans formed on the palate.

There is often a horribly offensive *odour of the breath*, a heavy musk-like sickening odour, which may permeate the whole sick room, and is very different from the characteristic odour of typhoid fever.

The appetite and gastric digestion are preserved in a remarkable degree. The patient may enjoy and digest food well throughout a serious, even a fatal, attack of colitis. In one case the patient asked for solid food up to almost the day of her death. *Vomiting* is rarely present except at the very onset of the disease, when it may be repeated, and severe.

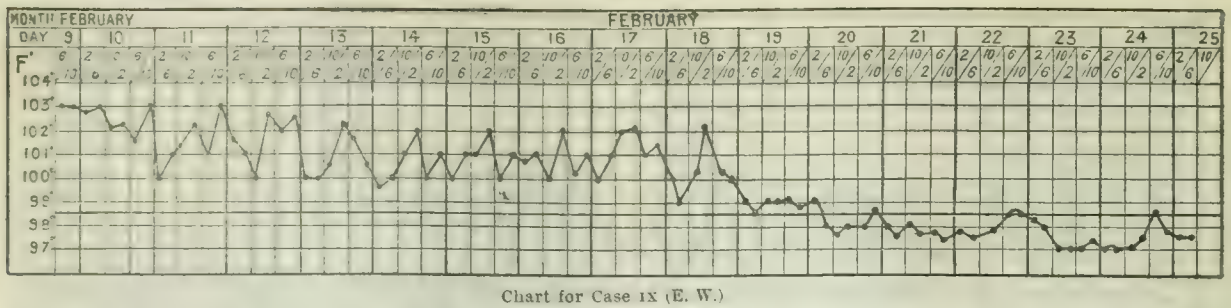


Chart for Case IX (E. W.)

Abdominal Pain.—At the onset there may be severe colicky, or cramp-like pains, and in all acute cases there is a feeling of soreness or "gnawing inside," and frequently in addition paroxysms of cramp-like pain in the situation of parts of the colon which seem to be in a condition of spasm, or in which active peristaltic contraction is traceable through the abdominal wall. These paroxysms may be very severe, and persist with intensity dependent on the severity of the colitis. The position of the pain in colitis may change from time to time quite suddenly, sometimes from involvement of fresh tracts of colon by inflammation, sometimes from spasm of alternating parts of the colon. When the rectum is affected there may be pain on defaecation.

Still, on the whole, colitis is not a very painful disease, and *very intense, even fatal, ulcerative colitis may be unaccompanied by pain from first to last.*

Tenderness is usually present over the part of the colon affected, most often the descending or sigmoid colon, and often a more widespread hyperaesthesia of the abdominal wall.

Abdominal Distension.—The distended outline of the part of the colon affected—most usually the descending colon—is often discernible; the distension is not usually extreme, nor is there usually any general tympanites, and the abdomen, so far as I have seen, remains soft and yielding, and never becomes tense and drumlike, as it may do in typhoid fever; one part of the intestine may be distended and compressible, while another part may be tense and spasmodically contracted, with severe cramp-like pain. Moreover, these conditions may suddenly change, a portion of intestine that is spasmodically contracted and tense becoming quite soft an hour later; Dr. Langenhagen[1] observes that "this spasm is not in contradistinction to atony, the two conditions succeeding one another with great facility"; the abdominal muscles may become tensely contracted over spasmodically-contracted lengths of colon, producing a prominent swelling liable to be taken for abscess or solid tumour; in fact, a "phantom tumour"; such tumours produced by spasmodic contraction of "lengths" of intestine have been described by Laënnec under other conditions, such as dynamic pulsation of the abdominal aorta.

Diarrhoea is usually an early symptom, the motions being frequent, liquid, containing mucus, and maybe blood, and being horribly offensive; they are usually dark in colour and contain much bile, very unlike typhoid motions; the mucus is passed in shreds or membranes, or filaments or pellets, and is often blood-stained; melaena may appear at the very commencement of the disease, and certainly may do so before any ulceration has occurred; it may be very profuse and bright red in colour; more often it is passed as red stained fluid with the motion. The melaena may intermit and recur with other evidences of recurrent colitis. Considerable sized thick sloughs may be passed with the stools. Although there is in colitis usually passage of loose frequent stools, there is a tendency to retention of faecal matter in the intestine, probably from atony of the bowels, especially in the more chronic cases.

The *circulatory and respiratory* organs are singularly little affected in the course of colitis; the pulse does not greatly quicken and it keeps its tone and strength, except of course when a fatal end is approaching; there appears much less tendency to congestion of lungs, etc., in colitis than in other long continued febrile maladies. There is, however, a great tendency to severe anaemia in protracted cases, partly no doubt from melaena. The anaemia after recovery may be most intense and long lasting. And *leucocytosis was observed so frequently in my cases that I cannot but regard it as a feature of the disease*, and one useful in the diagnosis.

Nervous System.—There is not the tendency to gradual prostration with dulling of the mental faculties, hebetude, or stupor, as seen in typhoid; on the contrary, the alertness and clearness of mind, and the freedom from delirium are most marked, and the *patient's mental condition is no criterion of the seriousness of his illness*—he may be cheerful and hopeful in the most serious and fatal cases; one patient joked and made inquiries as to how long it would be before she was well almost to the day of death. Sleeplessness is often troublesome, and headache may be present at the onset of the disease.

Hiccough in the course of acute intra-abdominal disease is usually significant of gangrene, and may be so in ulcerative colitis. But in this disease it frequently occurs without gangrene, as shown by the ultimate recovery of the patient, or, if he die, by *post-mortem* examination. Such gangrene is probably a reflex symptom or a result of toxaemia. But, whatever its cause, *hiccough occurs in the course of ulcerative colitis so frequently that it is almost to be regarded as a symptom of the disease.* And its severity, frequency, and persistency for many days or weeks constitute it in itself a very dangerous symptom, tending to exhaust the patient by want of food and sleep to the point of death, or to death itself.

Urinary Symptoms.—There is occasionally some strangury or difficulty in micturition, but the urine is usually of good quantity and normal in composition, though often containing bile pigment.

General Symptoms.—The temperature in acute colitis is usually raised, though not to a very high range—101° or 102° as a rule; it may rise higher in some cases, not necessarily the most severe. As a rule, the pyrexia is of the continued type, with but slight variations, but it may take on a remittent or intermittent type, as exemplified by Case V, where the temperature, normal each morning, rose every evening to 104°; many other cases have shown that the *temperature in colitis may be of this intermittent character*, which is worthy of note, as in Murchison's well-known enumeration of the causes of intermittent pyrexia ulcerative colitis is not included.

One remarkable point was noticeable in two of my cases of colitis that, while the skin was cool to the feel and the temperature normal or but slightly raised in the axilla, it was raised 1½° or 2° higher in the mouth; this difference in axillary and mouth temperature may be marked all through the course of colitis.

Rigors may occur in colitis, sometimes severe, and without any subsequent indications of local complication; they appear due to toxic absorption. Similar rigors occur during the course of typhoid fever.

Emaciation and Debility are less rapid than might be expected in so grave a pyrexial disease; probably this is owing to food being well taken, and to the digestive functions of the stomach and small intestine being unimpaired; the skin may be dry, or there may be profuse sweats; in long lasting cases there is a tendency to bedsores.

Complications and Sequelae.

Perforation may occur, though, considering the severity of the ulceration it is remarkably infrequent, partly, no doubt, because the wall of the colon is much thicker than that of the small intestine; there may be multiple perforations, and even considerable sloughing of the wall of the colon. Evidently, if multiple perforations are found *post mortem*, perforation is not rapidly fatal, and in Case III there was a large accumulation of dried, putty-like faecal matter in the abdominal cavity, which must

have gradually found its way through perforations formed long before death occurred.

It is noteworthy that peritonitis does not necessarily result from perforation from colitis, and that *perforation may occur without any symptom whatever to denote it*, and may be survived a considerable time. Other writers have noted this; thus, in Lazarus Barlow's case,[2] there were many perforations, but "nothing to lead to a suspicion of the existence of the lesions during life," and in Sharkey's case[3] "there had been no indications during life of perforations" which were found *post mortem* in the caecum and sigmoid colon. Possibly the bell sound heard widely over the abdomen might indicate it.

Embolism.—In E. T.'s case there were signs of consolidation in the base of the right lung, the nature of which was difficult of diagnosis; the autopsy showed it to be due to embolic infarctions in the lung, and in this case there was also embolic blocking of the anterior tibial artery; in Case v there were symptoms during life of embolism in the lung, liver, and kidney, and two years after the infarcts in the latter were shown by operation; in two other cases there have been evidence of sudden embolisms in the lungs during convalescence followed by physical signs of local pneumonia, pleurisy, or collapse of lung. Hale White, too, mentions a case fatal with all the signs of pulmonary embolism.

There *appears to be, therefore, in colitis a marked tendency to embolism in distant organs*, usually after the acute stage of colitis has subsided.

Relapses.—The whole course of the disease tends to consist in a series of repeated attacks of inflammation of the colon. But apart from this there is a tendency to relapse after apparent convalescence and even recovery; one patient after a month's continuous improvement, and when he seemed practically well, got a second attack worse than the first. And I have several times met with patients in whom acute colitis recurred after much longer intervals.

Anaemia of very intense and lasting nature is apt to follow on colitis; the leucocytosis of colitis has been already alluded to.

Local After-Effects of Colitis.—In the condition in which large ulcers small in number occur in the colon contraction may occur on healing with serious after-results, in one case a subdiaphragmatic abscess. But when recovery ensues after acute ulcerative colitis there need be no necessary contraction or after-symptoms; in one case the patient has been quite free from any intestinal trouble for seventeen years since the attack of very severe ulcerative colitis.

Causation.

No doubt there are many varieties of colitis, and the cause may not be the same in all cases. In some cases it has been clearly due to drinking of impure water, and in some cases has been set up by poisonous food. Possibly preserved and tinned foods may set it up, or even the substances used as preservatives to foods. Sir Almroth Wright was good enough to investigate the blood and faeces in one case of mine, but *B. coli* and streptococcus were alone detectable, and the specific organism of colitis, if such there be, is as yet undiscovered.

Morbid Anatomy.

Innumerable varieties of acute colitis have been described, but this subdivision affords little assistance in the study of the disease. The condition in which one or two or three large ulcers may be found in the colon, comparable to the perforating ulcers of stomach or duodenum, is a condition quite distinct from acute ulcerative colitis of which this paper treats.

In acute colitis the mucous membrane becomes intensely hyperaemic and gorged with blood; no doubt the congestion affects also the deeper coats of the intestine, and its whole wall may be much thickened, with turgidity of the mucous membrane and ready effusion of blood without any ulceration. The turgidity of the mucous membrane subsides considerably after death, but is sometimes observable during life in cases in which the colon has been opened by operation. It can also be seen through the sigmoidoscope (which must be used sparingly in colitis); the condition seems to be what in old works is called "phlegmonous inflammation." Usually only part of the colon is attacked, most commonly the descending or sigmoid colon, but any part, and sometimes the whole length of the colon, may be attacked at once, or may get gradually involved by continuous extension, or by successive attacks of independent parts. This is shown *post mortem* sometimes, tracts of ulceration being seen in the colon with intervening lengths of healthy mucous membrane.

Ulceration is not a necessary part of acute colitis: it may be very intense, even fatal, without any ulceration; in other cases the ulcers may be very minute, as in Wilks and Moxon's case, in which "the whole internal surface of the colon presented a bright vascular soft red surface, with but a few minute points of ulceration." And as a rule the individual ulcers are not of large size, mostly only about the size of a sixpenny-piece, but they may be innumerable and coalescent, so that little of the mucous membrane remains except shreds or bridges between ulcerated parts of the bowel. The ulcers may be deep, destroying the coats of the intestine except the peritoneum and the colon, or lengths of it may be so thinned that they can be seen through, and the colon cannot be removed from the body without tearing it. Sometimes there is considerable thickening of the colonic wall. The ulcers have sharp-cut irregular edges, and tend to the circular form. The edges may be shreddy, and show often no attempt at repair.

There seems no definite dividing line between acute colitis with and without ulceration, and there is certainly a stage of acute colitis before ulceration occurs.

The colon is often quite fragile and rotten; the condition of the wall has been likened to that of sodden paper; in Case III the noticeable feature was the dryness of the colon; it was desiccated and fragile rather than sodden; in another case in which operation exposed the colon during life, its dry, pale condition afforded a great contrast to that of the glistening, moist small intestines.

Perforation is not common, but may produce irregular openings with ragged, shreddy edges, no thickening or adhesions and no signs of repair—indeed, mere holes in the gut; they may be multiple—in Case III there were six—and this fact and the presence of dried-up, putty-like faecal matter extruded from them into the abdominal cavity shows that perforation may be long survived. But the colon wall may be much more extensively destroyed than by such perforations; *there may be widespread sloughing of the colonic wall*, and there is no limit to the ravages of the disease; in Ormerod's case[4] "the front wall of the transverse colon was so completely destroyed that the inner surface lay open and exposed; the caecum was perforated in several places; the only parts of the bowel that were not laid widely open were the ascending colon, splenic flexure, lower part of the sigmoid flexure, and the rectum."

Peritonitis or local abscess may occur, but in most *post-mortem* examinations there is a singular absence of signs of peritoneal inflammation.

The process of repair cannot be looked for in *post-mortem* evidence, but patients who recover after even very severe attacks, with all the evidences of deep ulceration, may be afterwards free from symptoms, from which it may be inferred cicatrization may occur without much contraction of intestine.

Course and Duration of the Disease.

No doubt many varieties of acute colitis exist, but it is not possible to give any clinical classification of them at present.

Some cases appear to run a definite course of about three weeks, after which the symptoms subside and recovery ensues, though relapse may occur. Other cases run a very rapid course, being soon fatal from exhaustion. And many run on indefinitely, with evidences of recurring attacks of inflammation of the colon, and end fatally after many months from asthenia or complications. In a case of Dr. Gee's, death occurred after eighteen months' illness.

Prognosis.

It is a grave and dangerous disease. Data as to its fatality are wanting, and in an individual case the prognosis must be based on the severity of the symptoms. Very severe cases may be recovered from.

Diagnosis.

The diagnosis of acute colitis usually presents little difficulty if it be borne in mind that such a disease as colitis exists.

When commencing with severe lumbar pain it may simulate influenza, variola, Bright's disease, or lumbago; when it begins with abdominal pain it has been taken for lead, biliary, or renal colic. When it comes on with diarrhoea it has been diagnosed as English cholera, and is

often set down as gastro-enteritis or English dysentery, sometimes as typhoid or paratyphoid; in all these cases the characteristic signs of colitis soon develop.

When it commences with profuse melaena there is usually also mucus in the stools, pointing to acute colitis.

Greater difficulty in diagnosis arises when the disease comes on gradually with headache, diarrhoea, and pyrexia simulating typhoid fever; but in colitis the headache is less severe and persistent than in typhoid; the pyrexia does not increase in the same step-like manner, the tongue does not become dry, the abdominal detension is limited to the colonic area, the stools are different in character, the spleen is not enlarged, there is no cutaneous eruptions, and the breath has a characteristic odour. Melaena may occur in both diseases, but in colitis melaena may occur much earlier than the tenth day, but not in typhoid. Widal's test may also assist the diagnosis.

Of all the distinguishing points, there is none, I think, so important as that in colitis there is often acute abdominal pain, which is unknown in typhoid, and there is leucocytosis.

Tuberculous abdominal disease, like colitis, leads to pyrexia, diarrhoea, and melaena, and if there chance to be the physical signs of consolidation of lung, as arose from an infarction in Case IV, the resemblance may be increased. But tuberculosis so acute as to simulate acute colitis will not fail to yield some more distinctive evidences of itself than those common to it and acute colitis.

Typhlitis and Appendicitis.—Typhlitis is colitis limited to the caecum, and it and appendicitis are distinguishable from acute colitis by the persistent limitation of the local manifestations to the right iliac region. Appendicitis is sometimes met with in association with colitis.

Treatment.

Treatment should be directed to lessening the amount of toxic substances in the colon, which may be readily absorbed by its ulcerated mucous membrane. Innumerable substances have been employed as intestinal antiseptics; probably but a small proportion of any of them, when given by the mouth, can exercise any *direct* effect so far down the intestine as the colon, but they may, nevertheless, be beneficial by their antiseptic effect on the contents of the small intestine before they pass into the colon. Of all the antiseptics none is so useful in acute colitis as mercury in some form—as blue pill, or grey powder, or calomel, combined, if it produce diarrhoea, with opium. Where the colon has been opened by operation the antiseptic powers of the mercury are very readily observable. It is surprising for how long—weeks or months mercury may be taken in small doses in colitis without producing "mercurialism." Possibly mercury has a beneficial effect in colitis in other ways than by its antiseptic power, and certainly appears to control the disease to some extent. Intestinal antisepsis may be assisted by antiseptic enemata, peroxide of hydrogen, or chlorinated liquors, or sanitas, added to the enema. But on no account must an enema be introduced with any force, or if it produce much pain. Weak solutions of nitrate of silver are useful in some cases.

Diarrhoea may be checked by enemata with or without opium, or by bismuth salicylate, etc., given by mouth. As a rule, even though several liquid motions are passed daily, there is a tendency to retention of faeces in the bowel probably owing to an atonic condition of the colon; and this requires occasional enemata. Purgatives, even simple ones such as castor oil or salines, may greatly aggravate the symptoms. But, after the acute stage, gentle laxatives, such as part of a sulphur lozenge, which is also a good antiseptic, are allowable.

Melaena may become so severe as to be a grave danger; enemata of nitrate will control this best, but in one case an opening of the caecum was made, and stopped the melaena after all other measures failed.

Hæmoptysis.—Of the numerous drugs and modes of treatment tried, opium is the only one which has any effect at all, enabling the patient to get some sleep, but even it has little effect on the hæmoptysis.

The Nutrition of the patient must be carefully attended to, as the illness tends to be long and exhausting. Liquid foods seem best, and a mixed diet is advisable. The tendency to anaemia must be anticipated, and a little fruit or lime juice is useful. Alcohol, ether, rumbul, and other diffusible stimulants may be required. In one case in which the inflammation was intense and phlegmonous I gave large doses of perchloride of iron with seeming benefit.

Future investigations may provide effective treatment by "vaccines," but cases of colitis recorded in which this has been tried are not yet sufficiently numerous to give definite conclusions.

Operative Measures.

Colotomy or caecostomy have been performed, sometimes for the purpose of promoting recovery by diverting the passage of faeces from the part affected, sometimes in order to lessen dangerous haemorrhage, and in one case under my own observation it had to be done to avert the dangers of acute obstruction. Colotomy has been thought to cut short the disease, and very possibly it may do so sometimes, but this cannot be assured, and in one case acute colitis continued for months after performance of caecostomy; in another a bad relapse occurred while there was still an opening in the caecum. When ordinary measures fail in arresting melaena, opening the colon may be efficacious. In one case the patient's life was in extreme danger from haemorrhage, which greatly lessened after opening the caecum.

REFERENCES.

[1] *Mucous Membranous Enteritis—Colitis*, p. 31. [2] *Path. Soc. Trans.*, 1892, p. 72. [3] *Ibid.*, vol. xlvii, p. 103. [4] *Ibid.*, 1899, p. 109.

CASE OF TUBERCULOUS MENINGITIS IN BOY TREATED WITH TUBERCULIN: RECOVERY: RECURRENCE AND DEATH.

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I MERELY record the following case as I am not aware that any similar case has been published, and in such a hopeless disease as this one is glad of any line of treatment offering any improvement in the prognosis.

I have put down the notes of this case as they were entered in my notebook during my visits. They are not very complete, as I did not feel very confident that any benefit would result from tuberculin treatment.

J. M., aged 8½ years. No tuberculosis in family. Suffered at Christmas from sore throat, which was probably diphtherial, as a younger sister was at the same time suffering from diphtheria. The throat symptoms cleared up after an injection of 2,000 units of antitoxin. A week after the injection he began to complain, and was feeling so ill that during the first week of the present year he voluntarily took to bed, complaining of feeling tired. The pulse was then about 120, and occasionally missed a beat, and I attributed his feeble condition to his late throat trouble. No cardiac lesion could be made out and there was no temperature. He did not at first complain of headache, and even when he first vomited I thought he had just upset his stomach as the Christmas and New Year festivities were delayed by the diphtheria in the family. Head symptoms, however, gradually developed; persistent vomiting; fever up to 101 at night, headache, fast pulse, and aversion to light: the abdomen was retracted. He gradually got worse, though the temperature and pulse seemed to improve, and by January 20th the headaches were confined to the frontal and temporal regions mostly frontal. There was occasionally paresis of left side, including face and leg, but more especially of arm, which at times became completely paralysed. The pulse-rate was now 13, weak and irregular; temperature in the mouth 97·9°. The headache was paroxysmal in character had yesterday, January 19th, less severe to-day. Appetite good.

January 21st. Left side still paretic, but arm now completely paralysed, sensation in arm apparently unaffected, but tested only by touch. Later in the day I saw him, in consultation with a colleague specially skilled in children's diseases, and he agreed that the disease was probably tuberculous meningitis, and gave the parents a bad prognosis. With his concurrence, I resolved to try tuberculin, and gave $\frac{1}{1000}$ mg. of Messrs. Meister and Lucius's T.R. The pulse was now 60, irregular, and temperature in the mouth 96°.

January 22nd. Very bad headache during the night. Pulse 52, temperature 97°. Leg still moved voluntarily; complained of pain in left side over the lower ribs.

January 23rd. Slightly less headache; pulse 68, regular. Gave for headache a powder containing sod. salicyl. gr. iij, phenacetin and caffein ā gr. j.

January 24th. Had taken two of the powders, and headache was a little better. Had slept for three hours.

January 25th. Has improved during the last four days.

Pulse 63, regular. Less headache, and is doing without the powders. Leg, arm, and side in same condition, but left leg very painful. Ordered syrup of senna as an aperient, the bowels not having acted since 22nd inst.

February 1st. Improvement continues. Still slight frontal headache. Is very hungry, and takes light nourishment greedily. Pulse 84, regular; temperature normal.

February 2nd. Has had a bad night; pulse 60, regular, intermittent. "His eye aches," he says, and he is constantly whining with pain. Has had two of the headache powders. Temperature not raised. Has been very sick and vomiting during the night.

February 3rd. Headache still very severe, and complains of want of breath at times. Pulse very irregular.

February 4th. Asleep and much quieter. Some numbness in right hand—"can't feel things properly," he says, and has dropped things unconsciously.

February 5th. Pulse 85, regular; temperature 98.8°. Feels better, but still has headache, more acute on left than right side. Injected $\frac{1}{1000}$ mg. T.R.

February 6th. Pulse 70; temperature 98.8°. Has had a fair night, but is restless, and complains of his head at times.

February 7th. Not so well; more headache. Pulse 65; temperature, 98.2°.

February 8th. Pulse 50, regular; temperature 98°. Has had a very bad night. Headache severe, and constant vomiting. Has taken no food by mouth.

February 9th. Pulse 60, regular; temperature normal. Very wakeful; no vomiting, but no appetite. Pain in right ear and in back; headache much less severe.

February 10th. Pain all along the back from neck to sacrum; no retraction.

February 11th. Pulse 58; temperature subnormal; has had a good night. In early morning became very excited, and could not talk properly. Is at times to-day quite delirious, but there is no retraction of the head.

February 13th. Improved considerably yesterday and to-day. Pulse 84; temperature normal. There is difficulty in passing urine, especially at the start. Has had a good night.

February 15th. Still improving. Pulse 72, regular. No complaint of any kind except left arm paralysis, which is still complete; sensation to touch still perfect.

February 18th. Pulse 70, regular; temperature normal; not quite so well as before; was very restless during the night, and perspired profusely.

February 20th. A little frontal headache at roots of hair; can flex elbow jerkily and raise his shoulder. Pulse 90, regular; temperature normal; appetite not so good as yesterday.

February 22nd. Improvement still gradual, but perceptible.

February 27th. Left arm is flexed more readily and raised at the shoulder; cannot be extended; leg also improving; face seems quite better; examination of leg for reflexes painful, but knee-jerk is present on both sides, though exaggerated on left side. Patella reflex also exaggerated, and there is well-marked and painful left ankle clonus. Cremasteric reflex absent on left side. No headache now, nor other complaint; is playing with toys, and anxious to get up.

A small dose was given on both occasions, but still I think the dose was too large, as the patient's state was distinctly worse during the three days following each injection, and this was so marked on the first occasion that it made the parents very unwilling to consent to the second one.

Probably the disease may break out again, but I should now have less hesitation and more hope in proposing injections of tuberculin in tuberculous meningitis in this or any other future case. I am aware that an error in diagnosis is quite possible and that the paralysis may be called post-diphtheritic, though I have never seen so extensive a paralysis following diphtheria.

There is a history, too, of his head having been bumped against a wall some weeks previously, but though he says this pained him at the time there was no continuous pain up to the beginning of the present illness, and he has recalled the bumping incident only since his recovery.

Flexion of fingers is now slight, but there is at times a little indication of the paralysis on the left side of the face, for example, when he smiles. At the time of writing, March 4th, there is no complaint of pain anywhere except when the reflexes are being tested.

This improvement continued for the next ten days, and he was sitting up and improving in every way. He was quite free from pain on March 14th, but on March 15th I was again called, and here my notes are continued.

March 15th. During the night he complained of headache on top of head and then over the occiput which finally came to the front. He cried very much, "blubbered," his mother says, and is still hysterical. He began to vomit at 6 o'clock and this continued till 9.30. It seemed spontaneous at first, not as if he were sick. He had the old feeling of "punching" in his stomach and it came away at once. This is his birthday, and he was very excited over his presents. There is no error of diet that I can find out, except that he had a great thirst for cocoa. I ordered milk diet. Temperature, 98°. Pulse, 100, regular. I tested the reflexes a few days ago, the ankle-clonus was less marked and less painful. Left patella clonus present; other reflexes as before. This was a decided improvement in left arm though only the flexors respond voluntarily as yet. Slept a little this morning from 9 o'clock to about 11.

March 16th. Had a good night, slept a few hours, still complains of slight frontal headache. Had a rigor this morning when mother was washing him. Pulse to-day 89 regular. Temperature normal. No vomiting nor sickness; tongue dirty.

March 19th. Has been complaining much more of his head these last three days, and to-day it is particularly bad. He had a fairly good night, did not awake, but says his head has ached—more in front than at back since afternoon. Pulse 90 regular, good volume. Temperature, 98 8°. Has been perhaps too free with playing and reading. He asked for a T.R. injection which I gave—having brought it with me for that purpose.

March 20th. Pulse 88, slightly irregular, not missing but slowing over some of the beats. Slept well all night. Not much headache and appetite much better. Temperature, 97.9°.

March 22nd. Pulse 83 per minute; temperature normal. He had headaches occasionally, and pain in eye but not steady. Complained of pain in right wrist. No more squint nor interference with sensation or movement.

March 23rd. Pulse 108-84, fairly regular. Still complaining of headache (intermittent); was groaning at night while asleep. Temperature normal.

March 30th. Still improving. Has had a little headache, and pain in back opposite lower dorsal; also difficulty in breathing, and heart at times, his mother says, was irregular. In the morning he recovered and is to-day much better and lively. He had senna and is taking his food well.

April 2nd. Gave another $\frac{1}{1000}$ mg. T.R. solution. He has to-day no temperature, and other symptoms are much the same. Headache is fairly constant. There seems to be a sort of firm contraction of biceps and flexors of the fingers, as if there were some cerebral irritation, and hand and arm can be extended with difficulty and tend to close soon but gradually.

April 3rd. I saw him late in afternoon. Has had intense headache since midnight and is very depressed. Pulse 90°. Temperature normal. About every half minute there is a clonic spasm in the left leg lasting about three seconds. It is twitched up at knee and gradually subsides again on to the bed.

About 8 p.m. his father telephoned me to say that patient was much worse—still quite unconscious, but very low, with heart intermittent and sometimes almost inaudible. I advised half a teaspoonful of brandy in warm milk and water.

April 4th. Is very low to-day, pulse irregular in rate, but not missing—about 80 to 100 beats per minute; temperature normal. The clonic spasm of the left leg is not so bad, but the right leg is affected. He cannot pull it up, and when it is put up he cannot push it down. It inclines to clonic movement too. The whole of the symptoms seem to point to intracranial fluid tension, and the question of lumbar puncture has been considered and put off, as probably there would be only temporary benefit.

April 5th. Is feeling much better to-day and taking a little milk. Pulse regular—87 per minute; temperature normal; still a little headache. Right leg has improved, and so has right arm. Left side is still inclined to extreme flexion, but can be straightened without pain if done slowly.

April 6th. Is quite free of headache and extremely lively to-day. Abdominal and cremasteric reflexes are almost absent on right sides and quite gone on the left—clonus, patellar, and ankle, well marked on left. Patellar clonus elicited for short time once on right, but no ankle clonus. Patella reflex exaggerated on left—normal on right. Not so acute flexion of arm to-day; legs lie quite straight; is very constipated. This last injection has produced by a long way the most acute symptoms of cerebral tension, but there has been no loss of intelligence unless on 5th, when he was unwilling to be roused. The effects of the tension were well shown in the affection extending to the right leg. During the last fortnight he has wasted considerably, and I am a little anxious about his present condition. There is evidently a lull in the activity of the disease, but I am not so sanguine now that he will recover the use of his left arm and leg. As I have not taken the opsonic index it may be that this last injection was given before the positive phase was quite established, and I have found this a drawback to the T.R. treatment in other tuberculous lesions.

April 9th. Temperature and pulse normal. He is lying quiet on his side with legs and arms extended. Patellar clonus is well developed on the right side now, and there are occasionally very severe cramp-like spasms. He cannot raise his head or turn himself, but he complains of no pain, unless he is moved or touched. Right arm is now flexed at elbow, but he can move the fingers; faeces and urine pass unconsciously; complains a little of headache, but not much, nor so much cramp in limbs to-day as yesterday and the day before when he complained much of these pains. There is patellar clonus on right side well marked and freely elicited, but not so long as on the left side. Pulse 105, regular, but his mother says it is irregular at times, and that he is short of breath. He eats and sleeps well and feels quite happy and comfortable.

April 10th. Feels fairly easy to-day, and moves his hands and legs, but not voluntarily. He draws up both legs together, not one at a time, and the same with his arms. He is taking his food very well, but still passing everything into bed. Is quite sensible and intelligent.

April 19th. There has not been much to report since my last note of the 10th. The disease has progressed in its usual way. Consciousness was completely lost two days ago. Previous to that there was complete paralysis of both legs and arms. Last night he was particularly bad, and although he had a little morphine he moaned for hours on end. Cheyne-Stokes breathing was noticed in the morning and he died quietly in the afternoon.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

AORTIC PRESSURE IN *POST-PARTUM* HAEMORRHAGE.

THE patient in the following case after her first confinement had a sharp haemorrhage. Her second labour took place on March 15th early in the morning. The pains were very weak and short.

When the head had been an hour on the perineum without making any progress, I gave chloroform, applied forceps, and delivered easily. The body followed shortly after. There was very little haemorrhage before the third stage was completed, but the uterus remained flabby and did not contract for about twenty minutes after the second stage. I held it firmly all the time.

An enormous gush of blood came away with the placenta, and was followed by a very copious flow. The handy woman who was assisting, and who is accustomed to attend labour cases among the working classes, fainted when she saw such an amount of blood, and I was left to my own resources, as there was no one else in the house.

I turned the patient on her back and pressed on the abdominal aorta, which at once controlled the haemorrhage. In about half an hour the uterus began to contract, and in one hour it was firm and hard. I gave her two or three grain tabloids of ergot when the placenta, which came away entire, was born.

REMARKS. I recognize the efficiency in *post-partum* haemorrhage of this method, for which I am indebted to the recent articles in the BRITISH MEDICAL JOURNAL. There is no mention of it in Galabin (1893) or in Williams 1903). I do not think I could have saved the woman by any other means under the circumstances. Her puerperium was satisfactory, and she is now well but somewhat anaemic.

Retford. M. HENRY, M.B., B.Ch., B.H.O.

MUSCULAR SPASM UNDER ANAESTHESIA.

I HAVE read with much interest Dr. Campbell Stark's case of spasm under chloroform.

On April 26th I gave ether to a man, aged 50, suffering from epithelioma of the scrotum, and, after a violent struggling stage, the corneal reflex disappeared. But he was still rigid, and when an attempt was made to put him in the lithotomy position his legs resisted bending, and remained fully extended, but were thrown into violent jactatory convulsive movements, so violent that it was feared he might tear down the rods by which he was suspended. As he showed no signs of relaxation the lithotomy position was abandoned, and he was operated on in the supine position. He had still some sensation left, and reacted to it by clonic movements when stimulated, but they soon disappeared when he was fully under.

Apart from the difficulties mentioned, he was not an easy case to anaesthetize properly, as one eye had been removed and an iridectomy had been done in the remaining eye. The operation lasted two hours, and towards the close as his breathing did not seem very good, I gave him a short rest from the anaesthetic, but he soon showed that he was beginning to come round by the return of the jactatory movements in the legs. When he was coming round after the completion of the operation he again had the jactatory movements.

I have seen the same kind of clonic movements, in a patient who was being sick up in the lithotomy position for operation on anus, ulcer, during the administration of ether.

I have also given ether to a patient who began to have clonic movements of the arms and legs and the body generally before the corneal reflex had disappeared.

In several cases after an anaesthetic I have elicited ankle clonus.

The cases in which I have noted these jactatory movements have been alcoholics who have had a good deal of struggling in the initial stages, and in whom the inhibitory powers of the upper motor neurones, weakened by the alcoholic habit, have been cut off, while the lower motor neurones still retain their irritability, the spastic and clonic condition being analogous to that seen in disseminated sclerosis.

JOHN M. MACPHAIL, M.B., Ch.B.Edin.,
House Physician, Cardiff Infirmary.

ASTHMA CAUSED BY IMPACTED TOOTH.

THE following facts cannot, I think, fail to be of interest:

The maid of one of my patients went, in January, 1906, to have some teeth extracted. She informed me that she took the gas very badly, choked a good deal, and was advised never to take it again.

Directly after this visit she began to "wheeze," and, in short, to suffer from the canonical symptoms of asthma, which were undoubtedly relieved by a mixture of potassium iodide and tincture of belladonna.

The general conditions, however, persisted in a greater or less degree until a few days ago, when, after a fit of coughing, the maid expectorated a fairly large portion of a tooth, and with it the asthma, for she has been quite well since.

One is sorry to have to add one more to the already too long list of the causes of asthma.

London, W. A. J. RICE OXLEY, M.D.

DESQUAMATION AFTER SCARLET FEVER.

I HAD a girl aged 5 brought to me a fortnight ago, with a temperature of 99.4° F., no rash, throat inflamed, and a typical "strawberry" tongue. I advised perfect isolation, and the patient was taken home, put in a hot bath, and to bed, on ordinary light milk diet; the room was stripped and every precaution taken. The patient has gone on favourably, no discharges, no rash, and up to now, eighteen days after the commencement, there is no sign of desquamation. I am convinced the case has been one of scarlet fever of an abortive character, but owing to the absence of hyperaemia of the skin there will be no peeling of the epidermis. I look upon the peeling as being caused by congestion between the epidermis and the cutis vera raising the former until nutrition is cut off and the epidermis is thrown off as dead tissue, thus prolonging the convalescent stage. I have not seen the question discussed as to why the skin peels off after an exanthematous disease, and the above appears to me the explanation. We know the blood vessels do not pass through the layers of the epidermis, therefore its attachment will not be considerable.

In the absence of peeling, and more particularly of any discharges at the end of a fortnight, there does not appear to me any reason why further isolation should be kept up. This is a matter of very great economic importance, a whole month of convalescent separation being spared. I often hear of cases of scarlet fever being kept indoors for a week or two, then discharged as free from infection, and up to now I have not known the reason. After twenty years' practice, this is the first case of undoubted scarlet fever I have seen of such short duration and not followed by desquamation. It would be interesting to know the real cause of the skin peeling, and why it is considered so infectious as to necessitate prolonged isolation.

F. G. HAWORTH, M.B., C.M., D.P.H.,
Darwen. M.O.H. Darwen.

THE NORMAL ERUPTION OF THE FIRST MILK TOOTH.

HAVING been impressed by the remarkable variations that normally occur in the date of eruption of this tooth, and thinking that an analysis of the same may prove of interest from the medical and anatomical standpoints, I have been making inquiries as to the exact date of eruption of this tooth through the gum in the case of 200 healthy breast fed Manchester infants—100 boys and 100 girls—born of healthy parents of the working class, whose dentition may be said to be normal, inasmuch as the teething in these cases has not been accompanied by any

symptoms of distress beyond the slight irritation that is usually incident to the process. Special pains were taken to exclude all babies where there was any suspicion of inherited syphilis, rickets, or tuberculosis, the three diseases which are the most prone to modify the normal evolution of the teeth.

The textbooks agree that the central incisors are normally cut first, and most of them state that the lower ones appear before the upper. They make no comparison, however, between the initial eruption of boys and girls, which I find in some degree to show a divergence, as will be seen from a study of the accompaning table:

Summary of 200 Cases of Normal Dentition.

First Tooth or Teeth to Appear Through the Gum.	100 Boys and 100 Girls Taken Together.		100 Boys Alone.		100 Girls Alone.	
	Number of Instances of this Eruption.	Frequency of this Eruption.	Number of Instances of this Eruption.	Frequency of this Eruption.	Number of Instances of this Eruption.	Frequency of this Eruption.
		%		%		%
Right lower median incisor .	71	35·5	39	39	32	32
Left lower median incisor ..	71	35·5	32	32	39	39
Both lower median incisors together	29	14·5	14	14	15	15
Right upper median incisor ...	12	6	10	10	2	2
Both upper median incisors together	11	5·5	5	5	6	6
Left upper median incisor ..	6	3	0	0	6	6
	Average age in days when first tooth erupts = 237		Average age in days when first tooth erupts = 252		Average age in days when first tooth erupts = 221	

These figures show that girls begin to teeth earlier than boys, there being an average difference of thirty-one days between the sexes in this respect.

Haverhill, Suffolk. A. T. SPANTON, M.A.Cantab., L.R.C.S.Edin., L.S.A.

A CASE OF OVARIOTOMY AT THE AGE OF 10.

SIXTY operations for ovarian cysts have been performed in the Victoria Hospital, Bangalore, since the opening of the hospital at the beginning of the year 1901. The ages of these subjects of operation varied from 20 to 60 years. On October 13th, 1906, a girl aged 10 years was admitted as an in-patient for an abdominal tumour, which on examination was found to be partly cystic and partly solid. The abdomen was opened on October 15th, and the tumour was found to be a multilocular cyst, partly solid and partly cystic, of the left ovary. The patient made a good recovery and was discharged from the hospital on November 17th, 1906.

It may be of interest to note that this is the youngest subject of an ovariotomy in this hospital.

J. V. ARUMGAM, M.B., C.M., Medical Officer in Charge, Victoria Hospital, Bangalore, South India.

NOTE ON AN UNSUCCESSFUL ATTEMPT TO CONVEY KALA-AZAR TO ANIMALS.

IN a man under the care of Major Meyer, I.M.S., at the Jamsetjee Jhejheebhoy Hospital, Bombay, the clinical course of the disease was typical, and the Leishman-Donovan parasite was independently demonstrated during life by splenic puncture by Major Meyer and by the writer. The patient died on August 1st, 1906. The *post-mortem* examination was made nine hours later, and the animal injections made ten hours after death. The *post-mortem* appearances were characteristic: The spleen weighed about 2½ lb., and smears made from its cut surface showed very large numbers of the parasites, which stained sharply and, with few exceptions, showed no sign of breaking up or of degeneration. The weather was warm, but there was no sign of *post-mortem* change about the cadaver. Aseptic removal of the spleen was not practicable, to which circumstance the accidents related below are attributable.

A portion of the spleen was taken to the Parel Laboratory, and was minced and pounded in a mortar with sterile saline solution. The emulsion obtained was filtered through coarse filter paper, and the rich bloody filtrate used for animal injection. It was examined and found to be loaded with Leishman-Donovan parasites. Healthy animals were inoculated as under (August 1st, 12 noon):

Monkey (*M. sinicus*) 1—2 c.cm. injected under the skin.
" " 2—2 c.cm. into the peritoneal cavity.
" " 3—2 c.cm. into the spleen substance.
" " 4—2 c.cm. into the liver.
" " 5—2 c.cm. into a vein (partially intracellular).
" " 6—10 c.cm. by soft oesophageal tube into the stomach.
" " 7—20 c.cm. by soft oesophageal tube into the rectum.
Goat ... ... 1—4 c.cm. injected subcutaneously.
Rabbit ... ... 1—2 c.cm. injected subcutaneously.
" ... ... 2—2 c.cm. injected subcutaneously.
Rat (*M. ratius*) ... 1—2 c.cm. injected subcutaneously.
" " ... 2—2 c.cm. injected subcutaneously.
Guinea-pig ... ... 1—2 c.cm. injected intraperitoneally.
" ... ... 2—2 c.cm. injected intraperitoneally.
Pigeon ... ... 1—2 c.cm. injected subcutaneously.
" ... ... 2—2 c.cm. injected subcutaneously.

Progress.

Guinea-pig 2 died on August 2nd, 1906. Septic peritonitis.
Guinea-pig 1 died on August 3rd, 1906. Septic peritonitis.
Rabbit 1 developed an abscess at inoculation site on August 15th, 1906.
Monkey 4 developed hepatic abscess, and died on September 1st, 1906.
Rabbit 2 developed an abscess in inoculation site on September 14th, 1906.
Rat 2 died on September 24th, 1906 (cause not ascertained).

In all these cases careful *post-mortem* and bacteriological examinations were made, and particular attention directed to the presence or otherwise of the Leishman-Donovan parasites. In no case were they found. Daily records were taken of the temperature and body weight of all the monkeys and of the body weight of all the other animals. This was continued for about five weeks, and the animals were kept under observation for a further six months. The blood was examined at intervals, and the clinical signs of the disease looked for. The results in all cases were entirely negative.

The writer has never seen any reference made to animal experiments or to any attempts at transmission by hypodermic injection or by bites of insects. These experiments point to the immunity of the ordinary laboratory animals. Their value, however, depends entirely upon the length of time the parasite lives after the death of the host and how far its healthy microscopic appearances may be taken to indicate actual vitality.

F. PERCIVAL MACKIE, F.R.C.S., Capt. I.M.S., Assistant to the Director, Bombay Bacteriological Laboratory.

TREATMENT OF BIRTH ASPHYXIA.

AT a recently difficult labour case, in which the child was delivered in a state of white asphyxia, I adopted the ordinary methods of Sylvester and Schultze without satisfactory results, and then tried mouth-to-mouth inflation. The child was pale and limp; there was no attempt at respiration, and apparently the heart was not beating, but a little dark blood oozed from the child's untied cord. The baby being wrapped in a warm blanket, I breathed into the mouth and inflated the lungs, and at the same time attempted to compress the heart externally by placing the right thumb parallel to and below the left costal arch with the fingers extended over the precordia; simultaneously the left hand was applied to the right side of the chest in order to express the air from the lungs. No air appeared to pass into the stomach, but perhaps my hand prevented it.

After a few minutes the child's skin flushed and the untied cord had to be secured owing to the commencement of the hemorrhage. Natural respiration started after about a quarter of an hour.

The modification of using heart compression described may be fanciful, but, though one cannot dogmatize from one case, it seems worth trying.

Schultze's method has never helped me in stillbirth, and in the above case Sylvester's was valueless.

Harrogate. J. W. MALIM.

A CASE OF COLOCYNTH POISONING.

As poisoning by colocynth is rare in this country, the following may be interesting:

B. C., aged 18, recently married, and under the impression that pregnancy was established, took at 10 p.m. on May 12th two teaspoonfuls of powdered colocynth (bought under the pretext of removing moth from furs).

Half an hour afterwards there was a burning sensation over the abdomen, but the patient was able to go to sleep and slept comfortably until 5 a.m. the following morning, when violent vomiting and purging set in; this lasted until 9 a.m. Breakfast at 9.30 a.m. consisted of bread and milk, which was retained—in fact, the patient was able to go about the whole day, spending most of the time in her husband's motor car, with no vomiting and only one action of the bowels at about 4 p.m. There was, however, burning pain over the whole of the abdomen and a feeling of nausea.

At 7 p.m. the acute symptoms returned, with severe vomiting and purging. This continuing, the patient confessed to her husband at 11 p.m., and I was sent for immediately. On arrival I found the patient in agony, with a hard, rigid abdominal wall, but very little constitutional disturbance. Temperature 98.2°; pulse 84; heart sounds quiet; respirations normal. As little or no food had been taken during the day a basin of Benger's food was given; this was retained thirty minutes. As vomiting and purging continued with severe abdominal pain, a hypodermic injection of morphine ½ grain was given; this relieved the pain, and vomiting and purging ceased, and at 1 a.m. the patient was left sleeping comfortably. Next day patient was comfortable, with no further vomiting or purging, and recovery gradually took place, a mixture of bismuth and hyoscyamus now being given.

REMARKS.—There is no doubt the patient's statement was correct when she admitted taking two teaspoonfuls of this drug. It is curious that there was no collapse, and that the heart sounds and pulse were so regular. The vomit was the colour of the drug—that is, yellow, and contained much mucus but no blood, and there was no blood in the stools which were watery, light yellow in colour, and not offensive.

London, S.W. CHARLES N. BARTON.

SUDDEN DEATH FROM CEREBRAL HAEMORRHAGE IN A GIRL AGED 26.

G. T., aged 26, dressmaker, apparently in good health, had been out for a walk, and ran for about 100 yards downhill just before returning home. When she got into the house she sat down to wait for a meal. She then remarked that she had a curious pain in her left eye, and immediately fell off the chair, after which she only breathed once or twice although her pulse was perceptible for about five minutes. On my arrival, a few minutes later, there were no signs of life. There was no history of any illness except one or two slight fainting turns, and headache, from which she had suffered intermittently since childhood. She had never been medically attended.

Necropsy.

Brain.—Extravasated haemorrhage at base, and over both cerebral hemispheres. Right lateral, third and fourth ventricles full of clotted blood; a little haemorrhage into substance of right hemisphere. (I could not find the point from which the haemorrhage had arisen.)

Heart.—Rather small, fatty, except for the left ventricle, which felt like a cystic solid mass. Its cavity was very small and the walls very thick. The heart was absolutely empty and the valves quite healthy; coronary arteries normal.

Aorta.—Several small yellowish white patches on inner surface.

Kidneys.—Small, firm, dark coloured; the right kidney had some pale patches on it; on section cortex thin, pyramids small and dark coloured, arteries thickened.

Other organs normal.

Her father was a painter and died of chronic lead poisoning. The case seems to be remarkable for the age of the girl, the extreme suddenness of death, the absence of any definite signs of the disease, and the good health she had enjoyed.

Cheadle. H. W. BERMAN, M.R.C.S., L.R.C.P.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GLASGOW HOSPITAL FOR DISEASES OF THE EAR, NOSE, AND THROAT.

CASE OF POSTERIOR ETHMOIDAL DISEASE CAUSED BY A FOREIGN BODY.

(By J. STODDART BARR, M.B., Ch.B., Assistant Surgeon to the Hospital.)

THE patient in this case, a man aged 49, presented himself at the dispensary on February 9th, 1907, complaining of severe and persistent headache for many years, chiefly over the vertex and occiput, and more recently in the left ear, for which he came for advice. There was no complaint of discharge from the nose, but on close questioning he admitted that from time to time he spat up small white masses, coming apparently from the back of the nose. He also mentioned that he had a curious sensation as if something were "rattling about inside his head." The patient also remembered in a hazy manner that when very young he had been taken to a doctor to have something removed from his nose, which he understood had been successfully done.

State on Admission.—There was nothing found in the ear to account for pain. Anterior rhinoscopy revealed little—only a little white speck, pus like, on the left side far back on a level with the middle turbinal. By posterior rhinoscopy, however, the left choana was found to be entirely blocked by a white mass of what appeared to be purulent débris. From the symptoms, subjective and objective, I came to the conclusion that there was sphenoidal or posterior ethmoidal disease, or both.

Treatment.—A nasal douche was at first prescribed, which was continued for over a fortnight, with some relief to the symptoms. I then proceeded to operate, and on March 2nd removed the entire left middle turbinal, partially curetting the posterior ethmoidal cells, with the result of removing a considerable quantity of granulation tissue, pus, and softened bone, the bony framework being in a condition of carionecrosis.

Result.—A week later, when the resulting swelling had subsided, there was seen by anterior rhinoscopy a large whitish mass, hard to the touch of the probe, upon the anterior wall of the sphenoidal sinus. This was easily removed with forceps, when it was found to consist of a piece of indiarubber, much changed in appearance, about 1 in. square, and slightly curled upon itself. It was coated over with pus, and there was a deposit of gritty material, probably of a calcareous nature; it yielded a very offensive odour. This had probably originally been a cake of indiarubber as used by school children for erasing pencilling. After its removal the headaches entirely disappeared, and the nasal passages appear now (April 23rd) to be quite healthy.

REMARKS.—This case is one of the rare instances of posterior ethmoidal disease being due to a foreign body. While empyema of the antrum of Highmore owes its origin in not a few cases to the presence of a tooth, bullet, or other foreign substance, I cannot find mention in the works of Hajek, Moritz Schmidt, and other authorities, of any definite case of posterior ethmoidal or sphenoidal empyema directly due to the presence of a foreign body. In the present case the piece of indiarubber had evidently its habitat in the olfactory fissure, and it would indeed have been surprising if, during its 40 years' sojourn, it had not excited purulent inflammation of one or both of the accessory sinuses opening into that region. It is quite possible that the headache, which was the claimant symptom, was due, not so much to the presence of the foreign body, as to the purulent mischief excited by it.

ROYAL NAVAL HOSPITAL, PLYMOUTH.

A CASE OF PURPURA HAEMORRHAGICA.*

(Reported by D. H. PORT, Staff Surgeon, R.N.)

THE patient in this case, a boy aged 16 years, belonging to H.M.S. *Impregnable*, was admitted on February 19th with purpura haemorrhagica.

History.—He had been a healthy lad until a few days previously, when he spat up a little blood and continued

* Forwarded by the Director General, Medical Department, Royal Navy.

to do so. The spots commenced the day before he came to the hospital (February 18th). He thought he "had caught cold whilst learning to swim" (water of swimming bath was lukewarm). He had never been to sea, and he had never suffered from rheumatism.

State on Examination.—Temperature on admission was 101° F. There were haemorrhagic spots on the body, extremities, lips, and tongue; a large subcutaneous haemorrhage existed in the left dorsal region. The gums were not spongy. Rhonchi were heard over both lungs, and he was spitting up frothy, blood-stained sputum. The spleen could be felt. The bowels had not been open for twenty-four hours. No cause could be found to account for his condition.

Progress.—He was placed in bed, and ordered as diet milk, eggs, beef-tea, and custard, and as medicine ol. terebinthinae ♏ x t.d.s. The next day his temperature was 99.8° F. The purpuric spots had increased, and fresh subcutaneous haemorrhages had appeared on the thighs and soles of the feet. He had coughed up about a pint of frothy, bright red expectoration. The urine contained blood. The bowels were not open, but appetite was good. A blood examination showed coagulation much delayed and imperfect: Haemoglobin, 50 per cent.; index colour, 1.1; red cells, 2,150,000; white cells, 21,250; differential count (500 cells): polymorphonuclear, 63.4 per cent.; lymphocytes (large and small), 34.2 per cent.; eosinophile, 2.0 per cent.; basophile, 0.2 per cent. Next day, February 21st, the same symptoms continued. He had haemoptysis, haematuria, one or two fresh ecchymoses; had become very anaemic. Pulse 110. Rhonchi heard over both lungs. Appetite good. Bowels constipated. Temperature, 101° F.

Change of Treatment.—On the third day calcium chloride gr. xv was prescribed for him every four hours, instead of the oil of turpentine, minced chicken added to his diet of milk, eggs, beef tea, and custard

Result.—In about twenty-four hours his symptoms began to subside, and his general condition improved. The temperature came down to 99°; sputa lessened; the urine contained less blood, and the spots faded; pulse 86. Bowels opened once, showing melaena. In a week he was quite convalescent; spots and haemorrhages had nearly disappeared, leaving some discoloration. He still had some cough and blood-stained expectoration, which contained no tubercle bacilli. Temperature was normal in the morning and 99° F. at night. The cough and expectoration soon cleared up, and he was discharged to two weeks' sick leave on April 11th, preparatory to his returning to duty.

REMARKS.—The case seems interesting (1) because purpura haemorrhagica is comparatively a rare disease when it occurs spontaneously; (2) because it usually attacks weakly children and not robust lads such as this boy, who only recently joined H.M. Navy; (3) because improvement and recovery rapidly occurred when the administration of calcium chloride was begun.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

NORTH OF ENGLAND BRANCH.—At a meeting of the North of England Branch held on May 14th, Dr. BEATTIE, President, in the chair, Mr. CLAY read a paper on the *Uses and Methods of Ureter Catheterization*, and showed *x*-ray photographs of the shadowgraph bougie in position in the male and in the female ureter. He pointed out that the method was of value in obtaining a sample of urine from the kidney, when for some reason, such as irregularity in the wall of the bladder, Luys's segregator was unable to effect a complete separation of the urines; that in cases in which nephrectomy was proposed the ureter of the diseased kidney only should be catheterized, the urine of the other kidney being collected by a catheter passed into the bladder. In this way the danger of infecting the only working kidney was avoided. He referred to other uses of the method, more especially to the use of the shadowgraph bougie introduced by Mr. Hurry Fenwick. He thought the methods in which the bladder was distended by a fluid were better than those in which air was used for that purpose, as in the former an antiseptic could be used, which gave additional security against infection. Nitze's catheterizing cystoscope had proved most useful, and the bougies shown in the *x*-ray photographs were passed by its aid on the male and on the female. Dr. PHILIPS referred to a case in which nephrectomy had been performed successfully for tuberculosis, but on pregnancy supervening, the patient died from general tuberculosis. Dr. ROBSON referred to a case of his in which the ureters were catheterized and tuberculous disease of the kidneys fortunately diagnosed while operative procedures were still under consideration. Dr. DUPUIS (Middlesbrough) had found the method of catheterizing the ureters of value. He did not place much reliance on antiseptics in bladder work. Dr. CROMIE and the PRESIDENT spoke on the question of operative treatment of tuberculous disease of the urinary tract.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Dr. P. H. PYE-SMITH, F.R.S., President, in the Chair.

Tuesday, June 4th, 1907.

HAEMOGREGARINES IN THE BLOOD OF SNAKES.

DRS. L. SAMBON AND C. G. SELIGMANN exhibited specimens of ten new species of haemogregarines found in the red corpuscles of different snakes in the Gardens of the Zoological Society. In all cases it was necessary for the parasite to be transferred to the intestine of a blood-sucking host for the completion of its life-history. In each of the species the organism was capsulated; certain lines in the capsule indicated lines of future cleavage by means of which the parasite escaped. Free forms were encountered in the blood, and the authors had been able to trace the penetration of red corpuscles by the micro-organism. In some cases the leucocytes as well as the red cells harboured the parasite.

Dr. D. NABARRO remarked that leucocytozoa at times occurred in the blood of the rat. In some of the cells two parasites were to be found, the micro-organisms being presumably of different sexes.

THE HISTOGENESIS OF GOITRE.

Dr. P. G. E. BAYON read a communication upon the experimental production of goitre in its diffuse and adenomatous forms. He did not regard the theory of embryonic residue as at all borne out. The ordinary parenchymatous goitre commenced in hypersecretion and epithelial proliferation. The accumulation of epithelium acted as a further irritant; the "casts" (as they would be in the kidney) were not got rid of. Such changes the author had induced in animals by the injection of toxins into the thyroid artery. Ligation of the artery led to localized necrosis and the formation of nodular adenomata. Any agency leading to damage of the epithelium might incite an enlargement of the gland. Graves's disease had been observed to develop after infective conditions. Acute bacterial infection might ultimately produce atrophy of the thyroid. In some cases of myxoedema and cretinism there was a history of an antecedent acute infection.

OSTEO-LIPOMA OF BASE OF BRAIN.

Dr. F. P. WEBER exhibited the above, which was a tumour about the size of a haricot bean, situated between the optic tracts. The small focus of bone contained well-developed red marrow. The actual site corresponded with the infundibulum. Dr. Bristowe had recorded a very similar case in one of the earlier volumes of the Pathological Society.

At the close of the meeting the Society passed a resolution declaring itself dissolved. It becomes now the Pathological Section of the Royal Society of Medicine.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

PRIESTLEY SMITH, F.R.C.S., President, in the Chair.

Saturday, May 25th, 1907.

RUPTURE OF DESCEMET'S MEMBRANE.

MR. GEORGE COATS gave a lantern demonstration on the pathology of ruptures of Descemet's membrane, first observed microscopically by Becker in 1875. The speaker had found them in 12 out of 13 cases of buphthalmos, and in 2 out of 8 cases of glioma with increased tension. They were absent in 4 cases of high myopia. The ruptured ends were sometimes found to be flat and sometimes curled up, but the rupture itself was almost always covered with endothelium. At times extensive detachment of the membrane was found. Experimentally, he found that the

globe would give way before the membrane would rupture, but if the membrane was first scratched many fractures of it could be produced.

Colour Vision.

Dr. Edridge-Green gave an account of his observations with Lord Rayleigh's colour-mixing apparatus, and showed a table which brought out the fact that there were extraordinary differences in the way in which people were able to match the colours. This was not due to any physical condition present, but could be readily explained physiologically in accordance with the author's theory of colour vision.

Syphilitic Affection of the Eye.

Mr. Sydney Stephenson described the present position of the *Spirochæta pallida* in relation to syphilitic affections of the eye. After briefly reviewing the evidence in favour of the *Spirochæta pallida* being the specific element of syphilis, he described the special researches which had been made on the eyes of man and the lower animals. In congenital syphilis the organism had been found by Stock, Peters, Römer, Bab, and himself. He detailed the experiments of other observers who had produced interstitial keratitis in the eyes of monkeys and rabbits with syphilitic material from man, and had found spirochaetes in the lesions thereby produced. As regards clinical syphilis of the eye, the organism had been found by himself and other observers, and he expressed his belief that the presence of Schaudinn's organism was the strongest possible proof of the syphilitic nature of any given disease of the eye or of any of its appendages.

The Eyes of Invertebrates.

Dr. Leslie Buchanan showed a series of lantern slides of preparations of eyes of invertebrates, with the object of indicating that from the anatomical structure a certain amount of information could be obtained as to the degree of functional activity of which the organ is capable. The preparations included sections of the eye of the octopus, the clam, the spider, the caterpillar, the house fly, the bee, and the snail. Sections of the eye of the Australian mole and of the leech were shown to illustrate the fact that loss of functional activity leads to anatomical degeneration.

The Pectinate Ligament.

Dr. Buchanan also demonstrated a case of rupture of the pectinate ligament.

A man was struck on the left eye by a broom handle in the end of June, 1906. Amongst other injuries to the eye, there was what appeared to be a large coloboma of the iris in a downward and inward direction, accompanied by high tension and loss of vision. The case was considered to be one of rupture of the pectinate ligament, with displacement of the iris and ciliary body backwards along the sclera.

As the eye continued to be painful, it was excised in January, 1907, when, after histological examination, the diagnosis was proved to be correct.

Opaque Capsule.

Dr. Angus McGillivray read a paper on the after-treatment of cataract. To obviate the dragging on the ciliary body and the risk of cyclitis, he divided the capsule diagonally from above downwards and inwards by very short and steady sawing movements by means of a specially designed cutting needle. Since adopting this sawing method of dividing opaque capsule after cataract extraction, little or no trouble had been experienced, so little, in fact, that he no longer hesitated to divide an opaque capsule when the vision was, from this cause, below ⅓.

Parinaud's Conjunctivitis.

Drs. A. Sinclair and T. Shennan described a case of Parinaud's conjunctivitis in a man, aged 61, who was a painter's labourer.

The left eye became affected during the third week in July, 1906. About three weeks later, the surrounding lymphatic glands became enlarged. The patient was under observation for four months, and had not completely recovered when he ceased his attendance, and could not be further traced.

Dr. Shennan described the histological and bacteriological condition. Two varieties of staphylococci were the organisms found.

Retinal Telangiectasis.

Dr. Inglis Pollock described a case of telangiectasis of the retinal capillaries and venous radicles. The condition followed on fracture of the left side of the skull, due to a heavy weight falling upon the head. He showed an ophthalmoscopic drawing of the fundus.

Exhibits and Demonstrations.

Among the numerous exhibits and demonstrations was one by Dr. Bramwell of a brain showing occipital abscess from a case in which epileptic fits had been preceded by visual aurae and in which hemiachromatopsia developed.—Dr. A. Bruce gave a lantern demonstration of the third nerve nucleus and the surrounding parts.

The Society for the Study of Disease in Children.—At a meeting on May 17th Dr. Frederick Taylor delivered the Wightman Lecture, dealing with Pneumonia in Children. Discussing the relative frequency of lobar pneumonia and bronchopneumonia in children, he mentioned that till the test of inflation was systematically employed collapse was confused with bronchopneumonia; this confusion being discovered led to the belief that the error had resulted in an under-estimation of the importance of lobar pneumonia in children. Hence many papers on the subject had been written. Clive Riviere stated that the greatest incidence of lobar pneumonia was in the second year of life, and after that in the third year; Vere Pearson found croupous pneumonia more common in infancy than in any other age of childhood; Bertram Abrahams regarded it as a common affection from the age of 2 upwards; Ashby considered it more common after the first two years; in Guy's Hospital Dr. Taylor found during one year 35 cases of bronchopneumonia and 24 of the lobar variety. Of the latter only 1 was in a child as young as 2 years of age. In the *post-mortem* records of lobar pneumonia during 1905, out of 50 cases only 7 were in children; 1 in the first year, 2 in the second, and 1 in the third year. Similar discrepancies existed with regard to the mortality from lobar pneumonia; this was considered by most writers to amount to not more than 1 to 5 per cent., while others put it as high as 25 per cent. or even more in the first two years of life. Very different estimates had been given of the relative frequency of the two forms of pneumonia, but lobar pneumonia had been generally admitted to be less frequent by those who had seen the largest number of cases. The discrepancies were due to many causes, such as varying condition of the patients on admission to hospitals, the influence of epidemics, and errors of diagnosis, etc. Some relied upon a crisis as a sign of lobar pneumonia, but in the first two years about half the cases recovered without this sign. Similarly, extensive consolidation might be produced by bronchopneumonia, and lobar pneumonia and bronchopneumonia might coexist. Bacteriology was of little help. The conclusions seemed to be that great differences in frequency might occur in different places and at different times. Bronchopneumonia was uncommon after 3 years of age, and lobar pneumonia was more frequent in infants than was formerly believed; possibly it varied more with epidemic prevalence than did bronchopneumonia. Nobecourt and Voisin found that when nervous symptoms appeared the cerebro-spinal fluid was unusually abundant; in 2 cases it was turbid and contained polymorphonuclear cells and pneumococci. As for treatment, a bacteriological method, when such could be discovered, would probably prove of value.

Welsh Medical Dinner. The fourth annual dinner of Welsh members of the medical profession was held in London on May 31st, under the presidency of Sir Isambard Owen. There was a very large gathering. The Chairman, who proposed the toast of "The Medical Profession," referred to the advances that had been made in Wales in general and medical education. Through its University Wales would have the power of giving its own degree in medicine and surgery. When this new movement was fully developed he believed that the position of the Welsh medical student would be second to none in the land. Sir R. Douglas Powell responded to the toast. The toast of "The Guests" was proposed by Dr. Latimer, of Swansea, and acknowledged by Mr. Henry Morris, President of the Royal College of Surgeons. "The Health of the Chairman" was proposed in eulogistic terms by Dr. Lloyd Roberts, of Manchester, and Sir Isambard Owen briefly responded.

Successful Vaccination. Dr. Watson Burdwood, public vaccinator, of Bourne, has again been recommended for a payment to be made to him for successful vaccination in his district.

REVIEWS.

ANAESTHETICS.

WE welcome the third edition of Dr. HEWITT'S admirable work on *Anaesthetics and their Administration*,[1] which is enlarged by a hundred pages, and contains much new and interesting material. While the character of the book, which may be described as a complete exposition of the subject founded upon the careful observations made by Dr. Hewitt during his large experience, is maintained, the author has incorporated into the present edition all the available new material that has seemed to him worthy.

There is much of importance to students of the subject in this book, as we pointed out when reviewing the second edition, but the present notice must deal principally with the additional new matter. Among this is an excellent chapter on ethyl chloride, in which the present knowledge of this drug from the clinical standpoint is concisely summarized. With regard to this, we think that the comparative danger of this drug, which in these days of anaesthetic teaching has already caused some thirty reported fatalities, might perhaps have been even more forcibly brought before the student. The chapter on chloroform is considerably enlarged and brought up to date, and the vexed question of the best method of administration is fully discussed. While we gather that, on the whole, some method by which the percentage of chloroform vapour is regulated is to be recommended for the use of house officers in hospital work, yet the author generally favours the open method, particularly when it follows some safer method of inducing anaesthesia. Several disadvantages of the Vernon Harcourt inhaler are mentioned, and two cases that are recorded in which it was employed are particularly deserving of attention. One was a narrow escape from death, a case of most serious danger; and the other resulted in the death of a previously healthy patient. In these cases Dr. Hewitt considers that the apparatus was responsible for the occurrence of the dangerous symptoms.

The subject of shock during anaesthesia is much amplified since the last edition, and both the account given and the cases by which it is illustrated are deserving of great praise. Dr. Hewitt applies the term "respiratory shock" to conditions in which "serious respiratory embarrassment" is produced reflexly by some surgical procedure. This expression is open to much criticism, and also seems to be unnecessary. Slight reflex modifications of the act of respiration are amongst the commonest phenomena encountered by the anaesthetist; and because in certain infrequent instances a greater reflex disturbance of this function may result in the production of grave danger, this fact does not appear to warrant the use in this connexion of the word "shock," which has hitherto been reserved for conditions directly associated with symptoms of circulatory impairment. One of the reported cases of "respiratory shock" is held to exhibit the occurrence of paralytic respiratory failure due to reflex inhibition of the centre, although it is but fair to say that this diagnosis is qualified by a "(?)." Sudden cessation of breathing causing duskiness, and requiring chest compression, occurred at the moment of incision in a man deeply narcotized by ether. The abdomen was relaxed and there was no corneal reflex, while the respiration, which had been deep and stertorous, became less full before it suddenly ceased. The colour was good, which would seem to be Dr. Hewitt's reason for regarding the symptom as of reflex origin, but we think that most anaesthetists would not agree with Dr. Hewitt's view of this interesting case.

One of the most striking features of the book, to which we have previously drawn attention, is its richness in interesting illustrative cases, of which the one epitomized above is an instance. These number seventy-two in the present edition. They are reported with great care and clearness of diction, and carefully selected to illustrate the author's teaching. On this ground alone the book will prove of the greatest value to all real students.

A few more of the additions in this edition demand notice. Dr. Hewitt has invented yet another inhaler, designed for the administration of a mixture of two parts chloroform with three parts ether. From the descriptions it would seem to be well adapted for the purpose, and to be a distinct advance upon other methods of giving that or similar mixtures. It may be used with a preliminary administration of nitrous oxide. The mixture alluded to is the A.C.E. mixture without the alcohol, and Dr. Hewitt believes, after several years' extensive use, that he obtains better results with it than with the ordinary A.C.E. mixture. As the A.C.E. mixture is so extensively employed this opinion demands careful consideration, and the question might well be investigated by other clinical observers. In the chapter on the after-condition of the patient is to be found an interesting summary of recent publications upon the interesting condition known as "acid intoxication."

We cannot omit to notice the preface to this edition, which is worthy of the serious attention of the profession. In it the author enters a strongly-worded plea for the clear recognition of the responsibility of the anaesthetist as distinct from that of the operator. He holds that legislation should prevent the administration of anaesthetics by unqualified persons, and points out that "it not infrequently happens in the surgery of to-day that the rôle played by the anaesthetist is of even greater importance than that played by the operator." To quote another sentence: "Another reform needed is the appointment within our hospitals of an adequate number of officers for the special administration of anaesthetics, the senior of such officers being a member of the staff, and possessing academic or professional qualifications similar in every respect to those required for other staff appointments at his particular hospital."

In once more recommending this book, we consider that alike in its accuracy, its completeness, and its unique characteristics, it deserves to rank as one of the medical classics.

[1] *Anaesthetics and their Administration: A Textbook for Medical and Dental Practitioners and Students.* By Frederick W. Hewitt, M.V.O., M.A., M.D. Third Edition. London: Macmillan and Co. 1907. (Demy 8vo, pp. 627; 72 illustrations. 18s.)

GALL-STONE SURGERY.

MR. BLAND-SUTTON has published a series of lectures, delivered at the Middlesex Hospital, under the title, *Gall Stones and Diseases of the Bile Ducts*.[2] He has happily taken them out of the lecture form and published them as a systematic treatise. The book is not a large one, considering the extent of the subject; but it is so well arranged that the reader is not sensible of compression anywhere, and at the same time none of the rarer conditions appear to have escaped adequate consideration. The pathology and pathological anatomy of the various morbid conditions are described with care and lucidity, and it is this part of the work which deserves most commendation. Less space is devoted to clinical illustration and the discussion of operative technique. This no doubt is the proper proportion in a textbook chiefly intended for students, but surgeons will also find much of interest in Mr. Bland-Sutton's opinions on various matters of practice which are keenly debated at the present time. The anatomy of the bile ducts and the chemistry and physiology of the bile are described in the first chapter, and in the second—one of the best in the book—the infections of the bile ducts and gall bladder. In the third chapter the view is expressed that congenital obliteration of the ducts should be considered along with congenital obliteration of other ducts and passages, and that all are closely connected with extraordinary growth activity at certain situations during fetal life. Following this chapter are four devoted to the pathology of gall-stone affections, the last being on gall-stone ileus; in this condition operation is considered wise as soon as the diagnosis is made. The view of the significance of the "islands of Langerhans" expressed on p. 134 is not that in favour with physiologists since the researches of Dale. In the chapter on cancer, Mr. Bland-Sutton says: "Now that gall stones are recognized as a predisposing cause of cancer, it behoves surgeons when removing gall stones to excise the gall bladder, especially when this organ is thickened and disorganized." Later (p. 201) more definite indications are given for this excision, and it is evident that the author does not practise it quite to the extent which the above quotation suggests. In regard to the operation itself, the description of technique is

[2] *Gall Stones and Diseases of the Bile Ducts.* By J. Bland-Sutton, F.R.C.S. London: James Nisbet and Co. 1907. (Pp. 223, 67 illustrations. 3s. 6d. net.)

somewhat wanting in clearness. It is not stated definitely for example, in what cases drainage of the ducts is indicated or contraindicated, and how it is best provided. There is at present considerable diversity of practice in these matters, and Mr. Bland-Sutton's views would be of interest. On the whole the student will find no more admirable outline of the clinical aspects of gall-stone disease than is presented in the final eight chapters. Mr. Bland-Sutton has solved the problem of writing a monograph not too elaborate for the student and sufficiently comprehensive for the practitioner, and we cordially recommend the book to the notice of both.

Dr. A. von Bardeleben has written a monograph on gall-stone surgery,[3] the chief interest of which lies in its record of 166 cases of cholecystectomy. The total number of gall-stone operations which he has performed since 1893 is 286, representing about half the patients who have been under his care for gall-stone affections during this period. He recommends operation on the following grounds:

1. When there is pain in the region of the bile passages, either persistent or recurrent at short intervals, with or without enlargement of the gall bladder or liver, with loss of appetite and impaired nutrition, especially if the patient is becoming accustomed to morphine.
2. When jaundice has been present for more than two months, and is due to some form of common duct obstruction.
3. When the patient suffers from afternoon shivers and a gall-bladder tumour is to be felt, giving rise to suspicion of empyema, or of stone impacted in the cystic duct.

Dr. von Bardeleben makes a practice of removing the gall bladder if it is in any way altered, and if it contains gall stones, believing that every gall bladder which contains stones is diseased, although it may not appear so to the naked eye. He further argues that a diseased gall bladder must be considered prone to the re-formation of calculi, and he considers it inconceivable that a gall-stone diathesis should show itself only once in life; in other words, he holds that a patient in whom concretions have once formed should be considered liable to relapse, and that therefore the gall bladder in which stones form should be removed. This problem is not to be settled on theoretical grounds: clinical experience can alone decide whether cholecystotomy is to be replaced entirely by cholecystectomy under the conditions here described. At present the results obtained by many surgeons who perform cholecystotomy with drainage, and who follow out their cases, show that these theoretic arguments for the regular practice of cholecystectomy are of little importance. One of the matters of chief interest in Dr. von Bardeleben's practice is that he employed drainage of the hepatic duct in only two of his 166 cases. He looks upon this as a superfluous procedure in the great majority of cases, and an unnecessary interference with the course of healing. He recommends closure of the stump of the cystic duct by suture, and his large experience and successful results give weight to his recommendation. The chapter on Cholecystenterostomy discusses the indications for this procedure in a lucid manner. Appended to the text is an exhaustive analysis of the literature since 1890, which greatly increases the value of the publication.

THE HEART AND ITS DISEASES.

The addition of a new *Textbook on Diseases of the Heart* to current medical literature, by Dr. Graham Steell,[4] might seem at first sight to be "giving its sum of more to that which had too much," but perusal of the book will show that it differs from a textbook in many essential particulars. It might, perhaps, be more fitly described as a clinical manual for the senior student, the teacher, or the practitioner, to whom the ordinary facts of heart disease are already well known. Arranged in a series of short chapters, each dealing with a special point or group of allied points, the teaching is essentially that of the clinical physician speaking of what he has himself observed and not by any means inclined to quote the work of other writers unless verified by his own judgement. Such a work is welcome, and more especially so when presented in the compact and well-printed form in which the publications of the University of Manchester are issued. Modern views with regard to the pathology of heart disease have undergone no small change from those of thirty years ago, when valvular affections and the murmurs to which they gave rise occupied too large a share of the attention of students and teachers alike. The experienced clinical physician learns, sooner or later, that a very large proportion of cases pass out of his hands into those of the pathologist, without adequate explanation, if looked at from the standpoint of the valve condition only. The part played by the muscular walls of the heart and the nervous influences exciting them has for a long time past been engaging more and more attention, and the author obviously has this thought constantly in mind in discussing the phenomena of disease, and still more so when dealing with the question of treatment. The work done by Wenckebach to prove experimentally the sequence of the cardiac movements is fully quoted, but cannot be said to give much aid to the elucidation of cardiac irregularity in disease, unless it be as a stepping stone to further discovery. The teachings of the cardiograph and the sphygmograph are profusely illustrated by tracings which will be found useful as types for comparison. The value of Dr. Henry Head's work on the association of superficial tenderness with visceral lesions is fully recognised in relation to the referred pain observed in aneurysm and pericarditis, and reproductions of his diagrams are given. The tone of the whole work is practical, and the author expresses himself without reserve when dealing with certain time-honoured fallacies that have passed from one textbook to another. To borrow the language of the evening poster, some sections of the work might well be dubbed "The Truth about Heart Disease." We can cordially recommend it as a most useful and interesting manual and as a trustworthy guide to the clinical study of the subject.

The thirty stereoscopic Roentgen photographs[5] of the coronary arteries of normal and pathological human hearts collected by Dr. Janin and Dr. H. Merkel constitute a valuable addition to our knowledge of the anatomy of the blood vessels of the heart, and it can only be regretted that the authors have not provided their beautiful photographs with a more extended text. Numerous previous attempts to demonstrate the distribution of the coronary arteries of the heart have been made both by metal injections and digestion and by more ordinary injections and dissections, but none of them have demonstrated in so clear a manner as the photographs of Drs. Janin and Merkel the finer branches and the numerous anastomoses. A particularly striking feature shown by the photographs is, as the authors point out, the great size and the large number of the vessels distributed to the interventricular septum. Another point of great importance which the photographs demonstrate clearly is the number and the completeness of the anastomoses between the branches of the two coronary arteries, more especially in the interventricular septum, the anterior wall of the right ventricle, and in the walls of the auricles. The photographs, of the usual stereoscopic size, and the text, which is printed on paper of the same size as the photographic cards and bound in a paper cover, are enclosed together in a neat and compact cloth-covered case.

THE GERMAN SYSTEM OF WORKMEN'S ASSURANCE.

Dr. J. Grober's *Einführung in die Versicherungsmedizin* (introduction to medical assurance practice)[6] consists of eleven lectures, in which the whole German system of universal assurance of the working classes is discussed from every medical point of view. The fourth lecture, for instance, explains the position of the "Kassenarzt," or

[3] [illegible] Gallenstein-Krankheit. [illegible] Cholecystectomy and Cholecystenterostomia. Gall-stone Laparotomies. Von Dr. A. von Bardeleben. Jena: Gustav Fischer. 1906. (Roy 8vo, pp. [illegible])

[4] A Textbook on Diseases of the Heart. By Graham Steell, M.D., F.R.C.P., Senior Physician to the Manchester Royal Infirmary; with an Appendix on The Examination of Recruits as to Heart Disease, by J. Lorrain Smith, M.A., M.D., Professor of Pathology, Manchester University. Manchester: Sherratt and Hughes. London: Simpkin, Marshall, Hamilton, Kent and Co., Ltd. 1906. (Cr. 8vo, pp. 570. 7s. 6d.)

[5] Die Kranzarterien des menschlichen Herzens unter normalen und pathologischen Verhältnissen. Dargestellt in stereoskopischen Röntgenbildern. Von Dr. P. Janin und Dr. H. Merkel. Jena: Gustav Fischer. 1907. (M. 10.)

[6] Einführung in die Versicherungsmedizin. Von Dr. J. Grober. Jena: G. Fischer. 1907. (Roy. 8vo, pp. 136. M. 3.60.)

German club doctor, towards the subscribers to the "Kasse" and towards its managing directors; it likewise points out the advantages and disadvantages of the various systems of payment by the Kasse for medical services. The next two lectures deal with assurance against infirmity, and the following three with assurance against accidents. The effects of traumata in regard to the production and progress of many diseases have of late years served as subjects for discussion at various medical societies, and for numerous articles in medical journals, especially in Germany and on the Continent. Such questions, which in this book are of necessity rather briefly dealt with, are notoriously both of great scientific interest and, from the assurance point of view, of immense practical importance. We need only refer to the possible influence of trauma in regard to diseases of the heart and circulatory system, the respiratory system (traumatic pneumonia, tuberculosis), hernia, some organic diseases of the nervous system (for example, haematomyelia), and the various forms of "traumatic neurosis" and cases of "traumatic neurasthenia" and "traumatic hysteria." The tenth and eleventh lectures are devoted to the subject of life assurance, in the history of the development of which England doubtless takes an important place. Examination methods for the detection of diabetes, renal diseases, cardiac and circulatory diseases, pulmonary tuberculosis, etc., are alluded to, and, finally, the expectation of life for the doctor himself is discussed. According to the statistics published by the Gothaer Lebensversicherungsbank the general mortality-percentage for the age 26–30 is 0.58, but for medical men 0.86; for the age 36-40 for all occupations it is 0.82, but for medical men 1.10. The mortality amongst medical practitioners from tuberculosis and enteric fever, and from apoplexy and "heart-stroke" is referred to. The book can be specially recommended to those who wish to study the practical medical aspects—that is, the aspects from the practitioner's point of view—of the complicated system of universal assurance which has gradually been elaborated in Germany, and which perhaps, sooner or later, will be more or less imitated in other countries.

THE MEDICAL SERVICE OF THE JAPANESE NAVY.

IN an address on sanitation in the Japanese navy and army delivered before the Medical Department of the University of Pennsylvania, and published in the *University of Pennsylvania Medical Bulletin* for December, 1906, Baron Takaki, Director-General of the Medical Bureau of the Japanese navy, gives an account of the evolution of the service.

The Naval Medical Bureau of the Japanese Empire was established in 1872. At that time medical as well as executive officers thought that the duties of medical service began and ended with the treatment of disease and wounds. Hence from 1872 to 1877 the medical records consisted only in statements of the results of treatment, the names of diseases, and the names of patients admitted to hospital. Between 1878 and 1883 the reports gradually began to make mention of sanitary work. From 1884 the records became more and more complete, giving various tables illustrating hygienic conditions. When the Medical Bureau was established Dr. Wheeler, attached to the British Legation, was invited to give lectures, theoretical and practical, in the Naval Hospital. In 1872 Mr. William Anderson was specially invited from England to teach medical officers and students. In 1877 sixteen men were qualified and passed out of the school. These were the first graduates. Chief among them were the present Surgeon-Generals Yamamoto, Totsuka, Suzuki, and Kimura. The first three were, like Baron Takaki himself, educated at St. Thomas's Hospital, London. Surgeon-General Yamamoto served during the recent war with Russia as the Chief Surgeon of Yokosuka Naval Station; Surgeon-General Totsuka as the Chief Surgeon of Sasebo Naval Station, where the majority of the wounded from the naval fights were treated; and Surgeon-General Suzuki as the Chief Medical Officer of Togo's fleets. At a later period, during Baron Takaki's absence in England, the levying of medical students was stopped, and Mr. Anderson's office was abolished. It was found, however, that as the newly-admitted medical officers could not understand a foreign language they could not learn anything about naval and military hygiene in foreign lands, nor follow the progress of medical service in general. Besides, they could not associate with foreign medical officers, and when they visited foreign ports or lands they could not discover the sanitary conditions, especially in regard to the endemic and epidemic diseases, of those ports. Baron Takaki, therefore, insisted that the naval medical school should be re-established, and in 1881 he enlisted some students. Besides the full medical course, the English language was taught, and by 1894 eighty students had passed out of the College as officers. In 1893 Baron Takaki was placed on the reserve list, and became a Member of the House of Peers, and after 1894 fresh students were not again enlisted, and the service was recruited from those men who had studied in the Imperial University and specially licensed medical schools. Medical officers were also sent abroad to pursue further study in medical science, chiefly in England and Germany.

An idea of the work of the service may be formed from the following facts mentioned by Baron Takaki: The average number of general diseases during 1878, 1879, 1880, was 4,327 per 1,000; in other words, each sailor was sick 4.32 times every year. The death-rate averaged 16.34 per 1,000, and the invaliding rate 8.75. The number of patients suffering from beri-beri was 349.33 per 1,000. Those who died from it averaged 7.96, and those invalided 2.45 per 1,000. Therefore, the number of sailors lost through death and made invalids owing to general diseases was 24.09 per 1,000, and those lost through death and invaliding from beri-beri 10.43 per 1,000. Hence it was clear that if beri-beri could be wholly exterminated, the number of losses from illness would decrease to 13.66. From 1881 to 1883 the number of cases of illness slightly decreased. In 1884 the general health of the navy suddenly changed for the better, and the number of general diseases as well as cases of beri-beri markedly decreased. The number of general diseases was 1,776.27 per 1,000; that is, each person was sick 1.77 times a year. Deaths per 1,000 decreased to 7.98 and invalids to 7.80. The number of cases of beri-beri averaged 127.35 per 1,000. Deaths from it decreased to 1.42. Therefore the average of deaths and invalids from general diseases decreased to 15.78, and that of beri-beri to 1.60 per 1,000. Similarly, in 1885, the number of general diseases decreased to 992.48 per 1,000, and deaths to 7.08 per 1,000. Beri-beri decreased to 5.93 per 1,000 without a death. So the number of deaths and invalids decreased to 12.14. In 1886 general diseases averaged 577.46 per 1,000, deaths 7.43, and beri-beri 0.35 without death or invaliding. In 1887 general diseases were 434.22, deaths 6.04, and invalids 6.15 per 1,000. In 1888, general diseases averaged 400.59, deaths 7.08, and invalids 9.15 per 1,000. In short, the number of losses through deaths and invalids in 1884 was 15.78; in 1885, 12.14; in 1886, 12.57; in 1887, 12.19; in 1888, 16.33 per 1,000. If these five years were compared with the three years of 1878 to 1880, there would be found a marked decrease of general diseases and disappearance of beri-beri, with a corresponding decrease in the loss of sailors year by year. In 1890 Baron Takaki was able to inform the Emperor that beri-beri had been completely suppressed in the navy. This result, as is well known, is due to the untiring efforts of Baron Takaki himself, who reformed the diet of the men by the substitution of barley and rice for bread and biscuit.

ORAL INSTRUCTION OF DEAF AND DUMB.—In its report for the year 1906 the Committee of the Association for the Oral Instruction of the Deaf and Dumb states that the Practising School has been attended during the year by 22 girls and 23 boys, and that there are now vacancies for additional pupils and also for students. The Association is continuing to urge upon Government the propriety of recognizing as schools for the deaf and dumb only those institutions which have on their staff fully qualified teachers of the deaf. The London County Council from this year onwards will annually award scholarships to enable students to take a third year's training at the Association's college. This it is hoped will increase the number of candidates at the examinations for certificates as teachers of the deaf. Financially the chief need of the Association seems to be an increase in the number of annual subscribers, as distinct from those who figure in the donation list. The body has its habitation at 11, Fitzroy Square, London, W.

ROYAL COMMISSION ON VIVISECTION.

(*Continued from p. 1199.*)

An appendix to the second report of the Royal Commission on Vivisection, dated April 13th, has been issued.* It contains minutes of the evidence taken during February and March.

ANTIVIVISECTIONIST TESTIMONY.

Evidence of Miss Arabella Kenealy, L.R.C.P.Dubl.

In reply to the Chairman, Miss Kenealy stated that she had practised in London and Watford for about eight or nine years. She ceased to practise about seven or eight years ago; since then she had been wholly engaged in literature. She had taken great interest in the question of experiments on animals for the last two or three years only. The witness went on to say that it was her privilege to appear before what she believed to be one of the two very highest tribunals ever constituted. Mrs. Cook had given a few examples of the published cruelties which took place in vivisections. Dr. Herbert Snow had shown the futilities and profitlessness of these investigations as regards cancer. She begged leave to continue this chapter of the scientific worthlessness of vivisection. She had not the facile talents of Professor Starling. Although she was a writer of fiction, she could not hope to persuade the Commissioners of things so rosily improbable as that a surgical ward was a place in which persons were hilariously free from pain, that dogs came up cheerfully wagging their tails for the privilege of being vivisected, that to be starved was a pleasing succession of lotus-eating sensations, and that the laboratory boy was so brilliant an anæsthetist that, although he erred always on the side of giving too much anæsthetic, he might yet be trusted over long periods of hours never to give the too much which would put a sudden stop to that which his master might regard as a unique and valuable experiment. As to Professor Starling's other optimistic pictures, his glowing accounts of the marvellous discoveries in physiology and medicine which had been achieved by vivisection, it would be her grateful task to show that, apart from the truths which anatomy, histology, and pathology had taught, they were still in states of profoundest ignorance and confusion as to all but elementary facts.

The witness proceeded to criticize, mainly by quotations from *Kirke's Physiology*, statements made by Professor Starling as to diabetes and the ductless glands, till the Chairman pointed out that she was following a course quite different from that which had been followed by all witnesses who were heard by a Royal Commission. She was rather addressing herself to giving them an exposition of her views generally on physiology. The Commission was not inquiring whether physiology was a useful science or whether the method of inquiry into it by experiments on animals was one that led to no results, but whether experiments on living animals were carried out with unnecessary cruelty and inhumanity. The witness replied that her intention was to prove that it was experimental physiology which had led to all the errors and all the ignorance, and that if they were to employ the subjective method and were to examine patients and learn physiology in that way, they would know very much more about it. The Chairman invited the witness to come to the first paragraph of a *précis* she had sent the Commission in which she spoke of those experiments as being an absolute failure. The witness replied that she would go on to the brain. As she was not an experimental physiologist, and had no results of her own to offer with which to further confound the confusions of cerebral science, she proposed to offer a few of the results and confusions of experimental physiologists themselves, taken from their own works. Those who had no knowledge of vivisection, in practice or in theory, might suppose it to be the simplest thing in the world to open a living body, to watch the living organs at work, and to describe straightway the functions and the working of these living organs as they saw them. The trouble was that they could no more see function by looking at a living organ than one could see the passage of an electric current by looking at a telegraph wire. If physiologists demanded living tissues for their work, they need only to make use of the fact that all tissues, muscles, glands, even the brain, retained their living properties for some time after death. Moreover, they could be revivified. "All we have to do after their removal from the body, however," Professor von Poehl said in his *Rational Organo-Therapy*, "is to establish an artificial circulation of the blood, and the liver will again secrete gall, and produce urea, while the kidneys, too, will secrete. This may go on for hours. Besides, the kidneys continue their synthetical activity by producing hippuric acid out of glycocoll and benzoic acid." He cited the case of the heart of a child which twenty hours after death was so revivified, and which two days after death gave muscular contractions. As was well known, the heart of a frog would continue to beat for four hours after removal from the body, and if revivified would do so for days. Asked if she would take any case, as other witnesses speaking from the same point of view had done, in which experiments had been made which in her opinion had proved failures, she replied that she had not dealt with any particular experiments.

On a hint from the Chairman that the Commission would really like to come to some precise facts, Miss Kenealy quoted a number of passages from various authors in order to show the uncertainty of physiological teaching. It was pointed out to her that this was not so much her evidence as a collection which she had made from different authors of what those different authors thought. Witnesses were called to point out, from their own knowledge and experience of a subject, facts and deductions to be made from those facts. In her *précis* she said that she was prepared to offer a criticism of certain experiments on animals described in the *Journal of Physiology* for August, 1906. That was a definite matter upon which they could hear her own criticisms, and they could refer to the book and ascertain whether there was anything to be said on the other side about it.

In reply, the witness reminded the Commission that science was the study of natural law as revealed by its normal and abnormal phenomena. But artificial phenomena, manufactured in the laboratory, were not deviations from a natural law. They were, for the most part, purely arbitrary and artificial manifestations, which had little or no relation to the normal working of natural laws. She admitted that the experiments of modern physiologists simulated scientific experiments by the precise and painstaking methods attending them. But they must not allow themselves to be deceived by these methods. They must judge them by their aim, by the intelligent and productive, or by the unintelligent and unproductive, ideas inspiring them. So judged, she thought they would find that the vast majority of them were of the nature of that pseudo-science of the sixpenny magazines, which told that in the course of a lifetime a man ate as many sheep as would fill a barn of given dimensions, or as many currant buns as, laid edge to edge, would pave Trafalgar Square. She would take, as an example, The *Post-mortem* Flow of Lymph, a paper by F. A. Bainbridge, from the Gordon Laboratory, Guy's Hospital, on p. 275 of the *Journal of Physiology* for August, 1906. Asked if that was an experiment on a living animal, she said there was an experiment on a living animal first; they injected something into the blood and then they killed the animal. Asked if the injection was under anæsthesia, and if the animal was killed whilst in a state of anæsthesia, she said she had not gone into that. She was not dealing with the cruelty question now, but with the futility of these experiments. Here were a number of experiments to decide the source of a flow of lymph which had been seen to take place from the thoracic duct in animals which had been killed a few minutes after the injection into their veins of a concentrated solution of dextrose. Asher believed that this lymph could not be formed by filtration through the capillary walls, but was due to the secretion of glands. Mendel and Hooker, who had obtained the same *post-mortem* flow of lymph, after injecting an extract of strawberries, believed, too, that this *post mortem* lymph was derived from the tissues. But neither Asher, nor Mendel, nor Hooker, made any observations on the venous pres-

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sures. Bainbridge considered, therefore, that Asher's explanation of his results were unproven. Accordingly he performed a number of experiments to clear up the mystery, a mystery which could not have the slightest scientific value or practical bearing upon medical treatment. After a series of elaborate experiments he came to the following conclusions: that "the *post-mortem* lymph flow after the injection of peptone is due either to filtration through abnormally permeable capillaries or to increased metabolism in the liver, the former view being the more probable." So that, after all his elaborate operations, he was unable to settle the question of the source of the lymph flow after death. In reply to questions, Miss Kenealy said Bainbridge's results were not so much useless as that he got no results. Had he absolutely proved by his experiments some hypothesis absolutely different from earlier observers, he would yet not have proved it. She proceeded to refer to another experiment recorded in the *Journal of Physiology* for August, 1906, p. 282, The Influence of Organ Extracts of Cold-blooded Animals on the Blood Pressure of Dogs, by Dr. Orville Harry Brown and Don R. Joseph, from the Department of Physiology, St. Louis University. They removed the organs of various marine creatures as aseptically as was possible. They put them into a clean vessel, and minced them finely. Finally, they made of them what they termed "warm extracts," "boiled extracts," and "sediment extracts," according to the temperature and other conditions under which they were prepared. At last they had them ready, "boiled," "warm," and "sediment" extracts of shark liver, of shark kidney, and other organs, of squeteague liver, of dogfish liver, and of starfish ovary. Then they took living dogs, and, making minutely accurate records of respiration, blood pressure, and time of injection, injected these "extracts" into their blood. Asked by Colonel Lockwood if this was done under anaesthesia, she said she supposed so. She was not then dealing with the question of cruelty. Asked if the operator stated what the object of the experiments was, she replied that he said his curiosity was aroused to see what would happen. On Dr. Gaskell pointing out that if she read the first page she would see that he said, "Knowing that organ extracts of warm-blooded animals had such decided effects upon the blood pressure," the witness replied, "Yes, I said that." The Chairman said he thought these gentlemen must have said something more than that they wanted to satisfy their curiosity, because on the first page they said, "Knowing that organ extracts of warm-blooded animals had such decided effects upon the blood pressure, the curiosity of one of the authors of this paper was aroused regarding the effects of organ extracts of cold-blooded animals upon the blood pressure of warm-blooded animals." The witness replied that the conclusions were so conflicting that there was no value in the whole thing. The whole thing was moonshine. Dr. Gaskell said he did not see where the "conflicting" was. Miss Kenealy went on to say that during the recent meeting of the British Medical Association Dr. Percy Dawson, discussing blood pressure in relation to disease, observed:

> There is, perhaps, no one factor which has done more to throw into confusion the literature on the subject now before us than the use of the term "blood pressure" without specification as to the sort of blood pressure under consideration. The necessity for accuracy of expression can be realized only when it is borne in mind that the systolic may exceed the diastolic pressure by as much as 100 per cent. of the latter, and that these two pressures may vary quite independently of each other.

According, therefore, to Dr. Percy Dawson, these experiments of Dr. Brown and Don Joseph, because they did not distinguish between systolic and diastolic blood pressures, were absolutely worthless, even from the laboratory point of view. Asked by Mr. Ram if the remark about the uselessness was her deduction from the evidence, or made by Dr. Dawson, she replied that Dr. Dawson was not alluding to these experiments; he was speaking generally of blood pressures. Proceeding, she said that in the August number of the *Journal of Physiology*, page 332, there was a paper on The Cortex and Medulla in the Suprarenal Glands, by T. R. Elliott and Ivor Tuckett, from the Physiological Laboratory, Cambridge. A number of experiments were made on guinea-pigs, rabbits, cats, and rats. The aim was "to analyse both in bulk and in cellular detail some of the changes of the suprarenal glands under various conditions," and to determine the relation between the medulla and the cortex. The only certain conclusion arrived at was that when the suprarenal gland of one guinea-pig was transplanted beneath the skin of another guinea-pig, it caused "intense irritation of the surrounding tissues." But the same graft planted beneath the skin of a rabbit, a cat, and a rat had but little effect. It was calmly absorbed. So, also, when a rabbit's suprarenal gland was planted in another rabbit, and a rat's in a rat, nothing happened. What value under the sun it had, goodness only knew! Then, added the witness, it was suspected that adrenalin (which is an extractive of the gland) might be the cause of the irritation and oedema. She went on to cite details of experiments on this point till the Chairman said that kind of observation did not help them in their inquiry. The witness was treating them to what sounded rather like a partisan description. To this the witness replied: But if an experiment would not bear the tests of common sense and humour, what was to be said for it? On Miss Kenealy asking if she could read something about the thyroid gland, she was asked if she could not tell them shortly what the object of the experiment was, and then tell them without unnecessary comment that it failed entirely in its object. The Chairman found it quite impossible in following her to understand how far what she was stating was something taken from a book or was part of her own criticism upon it. Could she not tell them what the object of the experiment was and what the result of it was, and point out that it was, in her opinion, useless, without reading from a paper in which she repeated over and over again on each experiment the arguments about the uselessness generally of physiological experiments? The witness replied that for years they had been experimenting on the thyroid glands. "If you get varying results in the same species of animal, how much more likely are you to get varying results when you try to apply them to human beings?" In reply to Colonel Lockwood, who suggested that they might take it for granted that she thought that these experiments had led to no definite results, that they might take that as her opinion, Miss Kenealy protested, "No, not as my opinion. I take their own results at one time and pit them against their own results at another." In reply to the Chairman, who said he certainly thought they were taking her opinion as a physiologist upon it, she said No; a person skilled in medicine. In reply to Sir John McFadyean, she said she was trying to show the futility of the experiments on animals. Asked why it was the same train of reasoning did not discredit clinical observation and *post-mortem* observation, she said she thought they had neglected *post-mortem* observation and clinical observation. Asked if she could give evidence to show that these were being neglected, she said: "Yes, I can give you evidence. May I not read my statement on the thyroid gland?" The Chairman said he thought it was unnecessary if she was endeavouring to show that many experiments had been unsuccessful, and that many experimenters had arrived at different results from others at different times. The witness said she thought the conflicting results arose because it was impossible to deduce any true conclusions from the conditions of an animal in a state, in the first place of anaesthetization, and in the second place of mutilation. The Chairman asked if that was her opinion as a person of some medical knowledge. She said, Yes, it was her opinion, gathered from reading the experiments of these men, who got entirely conflicting results. In reply to the Chairman, the witness agreed that she objected to the principle of obtaining immunity from microbic infection by inoculation, and considered that it was unscientific as well as futile. She thought it unscientific because Nature evolved us from the lower animal into man; therefore the plan of Nature must be beneficent. Disease was a natural operation of Nature, and when they attempted to thwart the operations of Nature they were putting back evolution. Attempts to inoculate to prevent disease were wrong: not only because it was against Nature, but also because they were putting into human blood the blood of one of the lower creatures. There was evidence to show that when they put the blood of one of the lower creatures into the human being they conferred not only the immunities of that lower creature, but the susceptibilities of

that lower creature. Asked if she meant that Nature intended children to have the various diseases referred to in her *précis*, she said, Yes; there was no other way to get out of it. She did not see how else the unvarying occurrence of these diseases could be explained. No other preventive means should be used except isolation; no preventive means such as vaccination or injecting serums, for example. Asked if supposing a doctor had a serum that would save life it was his duty to use it, she said she did not believe in a serum that would save life. What she said was that for that which might be a slight disease or slight illness they might entail upon the patient serious and lasting results. For example, Dr. Paton had shown in his *New Serum Therapy* that when he was giving by the mouth, to human patients, the plasmata of various animals and antidiphtheric serum, he conferred upon the patient the susceptibilities of the animal—the susceptibility, for example, of horses and sheep to influenza and catarrh. The Chairman pointed out that what she was saying was a little different from what she said in her *précis*. She said there:

> The microbe, making, as it does, for the survival of the fittest, is a factor as indispensable to the health and evolution of the race as are air and light. For example, the child having been already tested by the severe ordeal of dentition, is further tested for his fitness for survival by the zymotic diseases; the nervous system and respiratory organs by whooping-cough: the skin, throat (pharyngeal), respiratory organs, and mucous membranes by measles; the skin, throat (laryngeal), serous membranes, and kidneys by scarlet fever, and so forth. By these means the efficiency (or otherwise) of the constitution is early tested, and the candidate for life turned back, if inefficient, at the outset.

Asked if that were correct, she said she believed it to be so. She thought only the abnormal preventive methods, such as by injection of serum, were in themselves unscientific and bad. It was pointed out to her that she did not use the word "abnormal" or anything of the kind; she said that these diseases were sent by Providence or by Nature for the purpose of testing children; and that it was unscientific to interfere with their operations. She replied, "No, but that it is unscientific to inject children with serum with that object—I think distinctly so—because if you make them immune to the microbe you make them insensitive to the deleterious conditions which breed the microbe." As these diseases were sent to test children, it was unnatural to try to prevent them by the inoculation of a serum. Asked why it was more unnatural to prevent them by the inoculation of a serum than by any other remedy which would cure them or prevent the disease, she replied, "Because by the inoculation of a serum you merely conferred a tolerance to the circulation in their blood of disease germs which the healthy body should rebel against." Her objection was the same as her objection would be to vaccination. She went on to say that the use of creatures in such a way as to treat sentient living creatures as mere material for experimental purposes was a demoralizing attitude of mind. Asked if, supposing those experiments were things which gave pleasure to the animals, she would see any objection to them, she said that was a difficult question. She thought the objection was to the mental attitude of exploiting these poor creatures which were dependent upon them. It was not only a question of cruelty, it was a question of the attitude of mind which looked at these poor creatures as subjects for experiment, apart entirely from the question of cruelty. They had no moral right to use animals in that way. They had a moral right to kill them for food, but she thought when the moral sense was well developed, as it was evolving now, they would not kill them for food. Proceeding, the witness said that if, for example, in disease of the pancreas they noted a patient during life, and found the symptoms which occurred from disease of the pancreas, and noted the extent of the disease when the patient was on the *post-mortem* table, then they got a rational idea of the value of the function of the pancreas. But if they produced artificially a disease of the pancreas in a rabbit they lost the psychological symptoms—they lacked really the most valuable observation of the absolute function of the pancreas. Nowadays they had come to depend so much upon experiments on animals that clinical and pathological research were neglected. And those, she thought, were the only really valuable means to advance in medicine, and in physiology also. The witness asked the Chairman if he remembered Cicero's fine words: "Whatsoever that be which thinks, which understands, which acts, it is something celestial and divine, and on that account must necessarily be eternal"? Colonel Lockwood said, with all respect to Cicero, it was evidence they were asking for, not what the gentleman said originally or now. The witness went on to say that if one read the British Medical Journal on the subject of epidemic cerebro-spinal meningitis, one might look carefully to find something about treatment, but would find little or nothing. It described the bacterium; how it could be cultivated, whether it grew on certain broths or gelatine. The Chairman pointed out that this was not a thing that could be dealt with by an amendment of the law relating to experiments on animals; it was getting a very long way from that. It was discussing generally the failure of the human race in humanity and other things. The witness said she thought they were neglecting treatment because they were expecting to find some serum that would cure everything. In reply to Colonel Lockwood, who asked if she knew what the terms of reference to this Royal Commission were, and if she had ever looked to see what they were sitting there to inquire into, she said: "Yes; I am not quite sure what they are." Colonel Lockwood then read the terms of reference to her. In reply to further questions she said she thought it had been proved to be quite impossible to thoroughly anaesthetize animals. Asked if she knew the law as relating to licences issued to men who practised experiments, she said perhaps she did not know it very exactly. She had not taken up the administration of the law. Asked if she did not know anything about the various safeguards that hedged round the operations, she said she did not regard any of them as sufficient safeguards. She thought the only way to alter the law was absolutely to abolish experiments on animals. She would not abolish clinical observations. Asked where she drew the line between observation and experiment, she said: "We observed a patient in hospital, but we were supposed not to experiment on that patient." By observation she meant every-day observation of animals in sickness or in health. Asked if she had ever known any scientific question as to which great men had not differed until a law was discovered, she said these were not questions of opinion, they were questions of fact. If they removed the thyroid or parathyroid glands from an animal and they observed certain results, myxoedema or tetanus, that was a question of fact. And if another person removed the thyroid or parathyroid glands and found that no symptoms followed, there again was a question of fact, and these two questions of fact put one against another neutralized one another. In reply to Sir William Church, the witness disclaimed absolutely the title of an expert. Referring to the open letter quoted by Mrs. Cook, the witness was asked the grounds for her statement that "the present great object of medical science is to discover in the blood of one or another of the lower animals 'cures' for all ills, or semi-miraculous substances which, injected into the blood, shall render us 'immune' to diseases we have incurred by neglecting natural laws." She said she thought that medical science was devoting itself to-day to seeking serums to cure all forms of disease, that is, "semi-miraculous substances." She had not worked in a physiological or pathological laboratory to any great extent. She was, however, prepared to answer the question why it was thought that some of the zymotic diseases came to an end in the body. She had studied the subject, and knew a good deal about it, she believed. She did not think they ought not to try to find out, but they did not sufficiently study types of people. They might gain a great deal of knowledge by studying the types of persons who got certain diseases. She thought the ordinary medical scientist nowadays had no faith in anything but serums. Modern medicine was more or less a study of the microbe and the habits of the microbe. She thought it had not been proved that any micro-organism was the cause of a specific disease. They knew that it was associated with it, but that might be merely incidental. Asked if she had any doubt that in these diseases the way in which natural cure took place was by the gradual presence in the blood of something which acted in a contrary way to the toxin produced by the organism, she said she thought this had not been proved. She knew a number of authorities who did not believe in the antitoxins at all; they held that disease was cured by oxidation and by the action of the living cell. As for

her own opinion, she said she dared not advance her opinion before this Commission. She did not claim to be an expert, but she gave the opinion of experts who supported her view. Asked as to another passage in the open letter: "Men used to working in sewers become 'immune' to noxious gases and microbes," if that was the case, she said she thought that was well proved. She thought it was an established fact that at first persons who were exposed to sewer gas suffered from sickness and diarrhoea. Asked where she got that information from, she said she could not give the authority, but believed it was an accredited fact. Asked what she meant by men becoming immune to noxious gases, she said that when a man who had been used to fresh air with plenty of oxygen went into bad air he got symptoms of a certain description, but if he remained for a long while in that bad air he became to a certain extent immune to it, the system did not rebel against it. Asked on what grounds the following sentence was founded: "Can we suppose that those noxious gases and microbes have ceased to gravely and steadily deteriorate their tissues?" she said, "Can we believe that it is as healthy to breathe bad air as it is to breathe good air? If it is as healthy to breathe bad air as it is to breathe good air, why do we take all the trouble we do about ventilation?" She knew that there had been investigations at different times into the health of sewer men, but had not looked up those authorities before writing the paragraph, because she did not know anybody who was a sufficient authority to be able to say what was health and what was not health. Asked in regard to her statement in her letter about one observer having vivisected 2,000 creatures to substantiate one theory, and another having vivisected an equal number to prove the opposite, and her explanation that she was referring to Magendie and Flourens, she said that was given as the number they experimented on for one purpose. The story was told, it was a classical story, on the evidence of Blatin. The theory was the function of the posterior spinal nerve roots. Sir Charles Bell discovered it, and Magendie performed his first 2,000 experiments to show that it was true, and his second 2,000 experiments to show that it was false, and Flourens some further thousands of experiments to show again that it was true. Asked what was her ground for the statement about Magendie, she said it was a well-known story, and had never been contested. She had no authority except the authority of Blatin. Asked if she really thought it right on a serious matter like this to put forward all these general statements for which she had no authority at all, she said it was given on Monsieur Blatin's authority. He told that story. It was not on her authority; it had been stated over and over again, and it had never been contested. The statement occurred in "Ayez Pitié: Quelques mots sur l'Urgence d'abolir totalement la Vivisection," by Jules Charles Scholl (vol. i. Lausanne: Imer et Payet. 1881). Asked what she meant by the following passage in her letter to Lord Selby, "I was compelled to cite experiments of the last generation as modern experimenters are reticent upon this particular," she said that if they took any of these magazines, the *Journal of Physiology*, for example, they did not start by saying how many animals were sacrificed to certain experiments. On its being put to her that the numbers are published every year by the Home Office, she said one did not know how many were sacrified to one particular experiment, therefore she said that they were reticent. Asked if she was not aware that they had to get a fresh animal for each experiment if they had a licence, she said it had been admitted before this Commission that the number of experiments did not necessarily set forth the number of animals experimented upon. Asked if she knew the form in which a person had to apply for a licence, she said she would not speak of the journals in which these experiments were recorded. Asked if she was aware that the Home Office required that the number of animals used should be specified, she said she wished she had the reference; she was sure that in the report the number of the experiments was stated, but not the number of animals used, and that they did not necessarily correspond—that in any experiment a man might use two or a dozen animals. He might require a separate certificate for each. She did not know much about the administration of the law; she had not a mind for that sort of thing, and had not studied it. Asked for the reference to the carefully-collected statistics compiled by the authorities of cancer hospitals and cancer wards to which she referred in the open letter as to the question of the heredity of cancer, which she said they had disapproved, she said they would be found in Dr. Herbert Snow's book on *Cancer*. She made a mistake with regard to what the Cancer Research Fund had stated of which she was thoroughly ashamed. She had not seen any of the mice to which cancer had been communicated, nor had she inquired from anybody who was in the habit of seeing them, but she took it as a matter of fact from her clinical experience that if those tumours produced in mice were cancer, then a certain number of them at all events would be extremely painful; and if they were not painful, then she thought it was an argument that the mouse tumour was not cancer. Asked if she had ever had an opportunity of watching a number of cases of diphtheria, and seeing those serious cases before the use of the antitoxin and then subsequently, she said she thought that antitoxin treatment was an abortive treatment, like, for example, the abortive treatment of gout by cold applications; or, as when a person was suffering from catarrh, the use of medicated snuff. It stopped the catarrhal process in the nasal mucous membrane, and drove it on the stomach and liver; it violently changed the normal course of disease. Asked as to cases in which tracheotomy was required to keep the patients alive, whether she thought that the antitoxin treatment had had no benefit in those cases, she said it might have had an apparent benefit. Asked if she was aware of there being any difference in the result of those tracheotomy cases since the antitoxin treatment had been used, she said from her experience of diphtheria that it was such a delusive thing. At one moment a child might appear to be on the point of death, and in an hour later it might appear to be well. Asked if she meant to tell the Commission that when a child's throat had to be opened to keep it alive for another quarter of an hour or twenty minutes, there was any doubt about its condition, and that it was all right in half an hour, she said she had seen it so, and this with the presence of a false membrane. She had seen it clear up, because the presence of the false membrane caused a certain amount of spasm, and it was always difficult to say what was due to the false membrane and what was due to the spasm. The membrane cleared away by some resistance of the system. Asked if she had any explanation to give of the fact that the mortality in these tracheotomy cases had fallen by more than 20 per cent., she said that she thought that statistics were so deceptive that one could not trust to them. Even supposing she admitted that there was such a reduction of mortality, she would not consider that it was a sufficient argument for injecting a number of children who might only have a mild attack of diphtheria, with a substance which caused an increased number of cases of paralysis, inflammations of joints, convulsions, albuminuria, and sudden death, all of which were admitted to be results of antitoxin. She was perfectly aware how the antitoxin was produced and how it was standardized. It was put to her that if it had no effect upon toxin in an animal, how was it that the animals by which it was standardized which received a dose of the toxin and the antitoxin did not die, while those which did not receive a dose of the antitoxin did die. She said the results in the lower animals were so absolutely worthless that they were not evidence, and that they must go by clinical results.

MOTOR CARS FOR MEDICAL MEN.

STEAM *v.* PETROL.

DR. F. L. NICHOLLS (Cambridge) writes: I am tempted to write a few lines on a point one never sees touched upon, and it is that of a suitable car for those who are not robust. Unfortunately there are amongst doctors, as amongst other people, a fair number who suffer from physical weakness of one kind or another, and to such the thought of the starting handle of the petrol car must be a veritable nightmare, for, however well an engine may fire in a general way, there will be times from one cause or another when a considerable amount of grinding will be called for, and unless a man is strong or can afford to always have a servant with him, it is enough to make him forego the benefit and pleasure of a car. To such I would

advise the serious consideration of the Stanley steam car. From the very fact of its being lightly built, it is easily kept in order, and for this purpose entails no laborious work. It is quiet and sweet in running, and from the absence of vibration little or no wear appears to take place, and rarely are adjustments necessary to the car proper. What is necessary is to keep the steam joints and glands in proper order, and this entails no difficulty. I speak after running one of these cars a little under 1,000 miles (not a great distance to be sure, but enough to test a car's virtues). There are advantages on both sides, whether petrol or steam, and for the man who wants a car to dash about with, and requiring little attention while doing so, he had better get a petrol car; but for the man who is satisfied with a fair pace, and can appreciate the charm of a car he can glide quietly up to a friend or patient, stop and talk, without the least noise, and glide quietly off again, without moving from his seat; he might do worse than become possessed of a Stanley steam car. Let no man think he is going to have no trouble; no matter what car he buys he will have this, especially at first, but the more he gets to know his car and the more care he bestows upon it, the less will he suffer in this way. I have driven a 6-h.p. petrol car for nearly two years and a half, and for the past eighteen months have hardly averaged one involuntary stop in four months, and then only for minor troubles easily put right; and for the past twelve months have not had a single stop for a tyre trouble, and have only had four punctures since I commenced the use of a motor. But, notwithstanding how well my little petrol car has served me, I much prefer the steamer, and never use the petrol car unless I have some one to go with me to tackle the starting handle. It nearly always starts on second pull, but there are occasions when some grinding is required. You have at times published letters as to the cost of motoring that are enough to frighten off a would-be motorist, and again one sees letters at the other extreme. To the uninitiated this may be very puzzling, but it is easily explained. There are two classes of motorists—the mechanical and the reverse. To the former a small car is an untold benefit, a great pleasure, and an economical machine—or rather, I should call it a friend—for to the man who will bestow a little trouble upon it, and who gets to understand all its ways and peculiarities, it is anything but a mere machine. Such a man runs his car at a trifling expense. The other man knows little about his car, leaves it to servants or agents to look after, looks upon it as merely a means to get him from one place to another as quickly as possible, and consequently has to pay, and pay well, for it. If a man has plenty of means and can afford a costly luxury, all well and good; but it is not good for the motor industry that the possession of a car should be looked upon as an extravagant luxury. My petrol car has cost me £5 in repairs since I bought it in January, 1905, and is going better now than when I first had it. It will run 40 miles to the gallon of petrol (roads and weather being favourable), and has averaged some 33 miles all the year round since I have had it, and will run 130 miles on 6 oz. of cylinder oil.

One question I should like to ask the experienced motorists: Is not the fan much over-rated, and is it necessary? I experimented with mine last October, much to the advantage of my engine power, and now never use it, though since the warm weather came in I have put it back in its place and carry the strap on the car to be ready if required. Possibly in traffic and on first speed it might be useful.

THE TREATMENT OF INEBRIETY.

THE HOMES FOR INEBRIATES ASSOCIATION.

In the twenty-third annual report of Dalrymple House, Rickmansworth, 1906-7, Dr. Hogg tells us that of the patients discharged since 1893 6 per cent. of those who can be traced and about whom he has information are doing well. The death-rate among discharged patients (5 per cent.) is a large one, but inebriate persons readily succumb to conditions which would not prove fatal to those of sound undamaged constitution. About 15 per cent. of the cases treated were young—between the ages of 20 and 30—and about half the total number were between 30 and 40. Many of them had commenced to take alcohol regularly between 17 and 20.

Dr. Hogg considers that the critical period of puberty should be a time for special precautions in the case of nervous individuals or those who have a bad heredity in alcohol addiction.

He also mentions as a point of interest that when a family drink-history is obtainable it is much more frequently to be found on the mother's than on the father's side of the family.

It appears as if the diathesis which is connected with a tendency to indulge in alcohol is more frequently transmitted through the mother. The mother's failing is sometimes shielded out of a feeling of chivalry, but the alcohol addiction of the mother's relatives is freely referred to.

In addition to the insane and mentally weak, Dr. Hogg describes a large number of patients as being "borderland" cases—persons of eccentric habit, neurotic, emotional, hysterical, impulsive, subject to alternating conditions of exaltation and depression, all badly balanced mentally, a few dull-brained, while many are above the average, and some brilliant.

THE LANCASHIRE INEBRIATES REFORMATORY.

The report of Dr. Gill, Director of the Lancashire Inebriates Reformatory, shows that the average daily number of inmates during the year 1906 was 130. Dr. Gill points out that insufficient use is made of the powers enabling persons who have attempted suicide through drink to be committed to reformatories under Section I of the Inebriates Act. He maintains that no good whatever is effected in these cases by short prison sentences, and recalls one known to him in which a weakminded woman was undergoing six weeks' imprisonment for her sixth attempt at suicide. This is worthy of consideration, for, as Dr. Braithwaite has pointed out, many of these cases ultimately succeed in their attempt. All that Dr. Gill says in his report regarding the failure to deal with many kinds of criminals under Section I of the Act deserves serious consideration of the responsible authorities. In urging the earlier committal of possibly reformable cases, Dr. Gill says:

> Now it is reasonable to suppose that the Court, in committing a woman with 106 prison convictions, did so not so much for her own good as for the benefit to be conferred on the community, in plain language, to get rid of her, and there is no doubt that the object of the Court, in this respect, has been attained. It so happens that this particular person, in spite of her 106 convictions, is one of the seven who are as yet doing well. . . . She herself has benefited and learned to be at least a non-objectionable and I hope a useful member of society. . . .

The proportion of mentally-defective inmates to the total committals to the reformatory is 60·1. Dr. Gill lays stress upon certain characteristics of habitual drunkards, the observations, of course, being conducted upon these persons when sober and under long periods of detention. Among these characteristics are an absolute disregard for the truth, the lying being without any conceivable object, whereas non-inebriate criminals of the same class will own up to the truth when nothing is to be obtained by lying. Another characteristic is that few of the inmates will admit the justice or legality of their sentence. There are very frequently delusions of conspiracy or persecution, which Dr. Gill regards as unfavourable symptoms, and which, moreover, render the subjects quarrelsome, passionate, and difficult to control, and unfit to be at large, though not certifiably insane. Another symptom is a "sense of rectitude." The general lack of all self-control and ready yielding to all impulses is emphasized by Dr. Gill, who also records the same facts regarding the tendency of the inmates to pilfer and accumulate all kinds of rubbish as have been reported from other institutions. Dr. Gill speaks strongly as to the futility of "drug cures" in reformatory cases.

The German Neurological Society is to hold its first annual meeting this year at Dresden on September 14th and 15th. Among the subjects to be discussed are the surgical treatment of brain diseases, excluding tumours; brain puncture; the surgical treatment of tumours of the spinal cord; and the treatment of diseases of the cauda equina.

LITERARY NOTES.

DR. PAUL TRIAIRE of Tours, well known by many interesting contributions to medical biography, has for a long time past been preparing an edition of Gui Patin's letters which is intended to be definitive. Several letters with a critical commentary by the editor have appeared from time to time in the *Gazette Médicale du Centre* (Tours). We are glad to learn that the first volume of the work is to be published by M. Honoré Champion about June 10th. It will be completed in four volumes. Patin's letters give a vivid picture of the whole social life of Paris during the long period, 1630-72, which they cover. He is a spiteful gossip, and to the last degree cross-grained and prejudiced, but this to us, whose withers are unwrung by his satire, makes him all the more amusing. He was a contemporary of Molière, who may have had him in his mind in his gibes at the sanguinary propensities of the physicians of his time. Dr. Triaire reproduces the letters from the MS., reconstitutes the text altered or abridged in the 1718 and 1846 editions, and adds many unpublished letters and more than 1,600 notes.

We have received the first number of the *Journal of Clinical Research*, which is the official organ of the Clinical Research Association. It will be issued at intervals of about three months, and for the present it is proposed to send a copy of each issue, without charge, to every member of the Association. The prospectus states that it is just over twelve years since the Clinical Research Association started upon its successful career. The result of this twelve years' work has amply justified the founders of the Association in believing that there existed a distinct need of such an institution. Its work has steadily increased year by year, not only in the number, but in the complexity of the investigations carried on in the laboratories. Nearly 200,000 separate laboratory reports have been issued by the Association. The great majority of these have been prepared on behalf of the patients of private practitioners. By the periodical publication of the *Journal of Clinical Research*, the Association has decided to provide a still greater measure of assistance to the private practitioner. The object, in short, which it hopes to fulfil is that of providing for the solitary worker in private practice a substitute for the companionship of colleagues and students, which keeps the hospital physician and surgeon abreast of all advances in laboratory aids to diagnosis or treatment.

The first number of the *United States Naval Medical Bulletin* appeared in April. It is issued for the information of the Medical Department of the service, and its contents are "limited to professional matters as observed by medical officers at stations and on board ship in every part of the world and pertaining to the physical welfare of the naval *personnel*."

Dr. Robert Reyburn of Washington, who is now 73 years old, has given an account of his professional life under the title of *Fifty Years on the Practice of Medicine and Surgery, 1856 to 1906*. Dr. Reyburn was professionally connected with the cases of the two murdered Presidents—Lincoln and Garfield. In that of Garfield he took a prominent part. Dr. D. W. Bliss, who was the chief of the surgeons who strove to save Garfield's life, was fiercely criticized in the press. Dr. Reyburn nobly defends him in the following passage, which we take from the *New York Medical Journal*:

> The ground taken by Dr. Bliss was that in the President's case it was vitally necessary to keep from him every unfavourable symptom, for by so doing we gave him his only desperate chance of recovery. It must be remembered that during almost all of his illness he was able to have the newspapers read to him, and he always asked for them every morning. If the slightest unfavourable symptom was mentioned in one of the bulletins it was instantly telegraphed all over the country, and appeared in every newspaper the next morning. In fact, during the early part of the case he very often read the newspapers himself. We were placed in a very embarrassing position; on the one hand, we did not wish to dishearten our patient by circulating discouraging reports of his condition, and, on the other hand, we wished to do our duty to ourselves and to the people of the whole country, who watched with such intense eagerness every word of intelligence that came from us.

With regard to the whole management of the case, Dr. Reyburn bears the following testimony:

> The writer knows that he speaks only the truth when he says that no wounded man ever received more tender, loving, and devoted service, not only from his surgeons, but also from the faithful friends who nursed him through his long and weary illness. We gave him this cheerfully and would have sacrificed even our lives for him, if by so doing we could have saved his. We would have done this not only because he was President, but because we loved the man. Poor, patient, uncomplaining, suffering President! How our hearts ached for him! Member of Congress, Senator, President, stricken down at the time when he had received in rapid succession the highest honours his country could bestow, he passed through days, weeks, and months of suffering, through the valley of the shadow of death, to that heavenly country where there is neither sorrow nor suffering nor pain. We cannot understand why such things should be. We can only bow in humble submission to the will of Him who ruleth all things both in heaven and earth, and who doeth all things well.

In the *Annales Medici*, MS. No. 340, of the Library of the Paris Faculty of Medicine, is preserved the original protocol of the *post-mortem* examination of the body of Louis XIV. The document begins with a letter of invitation signed "Desgranges," and dated Versailles, September 1st, 1715, addressed "A Messieurs, Messieurs les doïen et docteurs-régens de la Faculté de médecine de Paris aux écoles de Médecine rue de Bucherie." It is to the following effect:

> When the King dies, it is customary to summon the dean and a senior member of the Faculty of Medicine to be present at the opening of his body. It is for that reason that I have the honour to ask you, gentlemen, to come here to-morrow, the second of the month, at eight o'clock in the morning. M. le Marquis de Beringhen, first equerry of the King, will place at your disposal a carriage which to-morrow at six o'clock in the morning will be at the gates of the School of Medicine, whither two sworn surgeons of Paris will proceed in order that they may come with you.

The document goes on:

> Adfuit decanus M. Doie cum socio M. Guérin et duobus chirurgis Versalias, et Ludovici 14, Galliarum Regis, corpus adapertum fuit, cujus haec est relativ ex nostr. comm.

The protocol follows in French. It states:

> To-day, 2nd September, 1715, we assembled at nine o'clock in the morning in the castle of Versailles, in order to open the body of the King, in which we found the following conditions:
>
> Externally, the whole of the left side appeared to us to be gangrenous from the extremity of the foot to the top of the head, and generally over the whole body on both sides. The right side was gangrenous in several places, but much less than the left, and the belly seemed extremely distended.
>
> On opening the abdomen, the intestines were found changed, with certain signs of inflammation, principally those situated on the left side. The large intestine was prodigiously dilated. The kidneys were in a fairly normal state; we only found in the left one a small stone of the same size as those which he passed in his water several times during life without feeling any pain. The liver, the spleen, the stomach, and the bladder were absolutely healthy and in a normal state within as well as without. On opening the chest we found the lungs healthy, and also the heart; the terminations of the vessels and some valves were becoming osseous. All the muscles of the throat, however, were gangrenous. On opening the head, the whole of the dura mater was found adherent to the skull, and the pia mater showed two or three purulent stains along the falx. For the rest, the brain was in the normal state without as well as within. The left thigh was gangrenous in the inside, as well as all the muscles of the abdomen, and this gangrene extended upwards to the throat. The blood and lymph were universally in a state of extreme dissolution in the vessels.

There exists a *Journal de la Santé du Roi*, which we believe has never been published in full, in which the successive physicians of the King carefully chronicle the variations of his health, and all the bleedings and purgings which he underwent. One gets the impression that Louis XIV must have had a constitution of iron. He suffered from not a few serious illnesses, but the wonder is that he reigned for more than sixty years without dying of his physicians.

IT is announced that a great university on modern lines is to be established at Peking. It is to be organized on European models, and will have eight faculties—theology, law, history and literature, medicine, natural science, industry, agriculture, and commercial science. In the higher colleges connected with the university system English is to be compulsory, while to those who study in the departments of chemistry, electro-technique, metallurgy, or forestry the study of German is recommended.

DR. WILLIAM MILLAR of Brough, East Yorks, has been awarded, for the third time in succession, the Government grant for successful vaccination.

BRITISH MEDICAL BENEVOLENT FUND.

At the last monthly meeting of the Committee thirteen applications for assistance were received, and sums amounting to £104 were voted in relief to eleven of the cases. Two vacant annuities of £20 were filled by the election of candidates from the selected list. An abstract of the cases to which help was given is appended.

1. M.D. (Aberdeen), aged 54. Used to practise in London, but was obliged to give up a few years ago, and is now making a fresh start in the country. Is promised some help by a friend. Two children, the youngest at school. Voted £10.
2. Widow, aged 46, of M.D. (Glas.). Only income a few shillings a week. Two children, aged 5 and 3. Voted £10.
3. Widow, aged 56, of L.R.C.P. (Edin.). Income £10 a year; slight help from sons; is endeavouring to obtain a post as housekeeper or companion, but finds great difficulty. Voted £5.
4. Widow, aged 52, of M.D. (Aberdeen). No income: health very feeble. Two children, but unable to help. Voted £10.
5. Widow, aged 47, of M.R.C.S. No income; endeavours to support herself by letting lodgings. A son, unable to work owing to ill-health. Voted £12.
6. Daughter, aged 59, of late M.R.C.S. Dependent on a Government pension of £14 a year and an annual gift from Lloyd's Patriotic Fund. Health indifferent. Relieved ten times, £60. Voted £5.
7. Daughter, aged 60, of late M.R.C.S. No income, and mentally deficient. Relieved once, £12. Voted £12
8. Daughter, aged 67, of late M.R.C.S. Only provision a small annuity. Relieved once, £9. Voted £5.
9. Daughter, aged 51, of late M.R.C.S. Has supported herself as a teacher, but finds she can no longer obtain employment. Relieved once, £10. Voted £10.
10. Widow, aged 66, of late M.D.Edin. No income; children unable to help. Relieved three times, £27. Voted £15.
11. Daughter, aged 62, of late M.R.C.S. Has a pension of £20 a year; unable to earn on account of indifferent health and failing sight. Relieved twelve times, £99. Voted £10.

MEDICAL NEWS.

The Society for the Study of Disease in Children intends to hold a provincial meeting at Bedford County Hospital on June 15th, when a discussion on Acute Rheumatism will be opened by Dr. C. O. Hawthorne.

On May 31st the Earl of Crewe, Lord President of the Council, received a deputation of Members of the Royal College of Surgeons of England, which waited upon him to urge the rights of Members to a share in the government of the College.

The annual general meeting of the Medical Officers of Schools Association will be held at 11, Chandos Street, W., at 3.45 p.m., on Thursday, June 13th. A paper will be read by Mr. C. Edward Wallis, Assistant Dental Surgeon to King's College Hospital, on the care of the teeth in public elementary schools.

The Bowman Lecture in connexion with the Ophthalmological Society of the United Kingdom is to be delivered at 4 p.m., on Friday, June 14th, at 11, Chandos Street, W. The lecturer for the year, Professor Sattler of Cincinatti, has chosen for his subject the pathology and treatment of myopia.

The members and friends of the Glasgow University Club dined together under the chairmanship of Principal Donald MacAlister, at the Trocadero Restaurant, London, on May 31st. The function was very successful, and reflected great credit on the organizing capacity of Dr. C. O. Hawthorne. The chairman, in proposing the toast of "The University and the Club" appealed for funds for the Union building, which was the home of the corporate student life of the university. It was the sole material expression of the university's solicitude for its students' lives outside the class-room, and it was very far from adequate. Some immediate extension was urgently required, if only as a temporary measure. The students were doing their best to raise the £3,500 which was necessary, but their resources were limited. Lord Kelvin, who responded, urged that boys should be taught Latin, Greek, and Logic before commencing the study of science. Sir William Ramsay proposed the toast of "The Guests," which was responded to by Sir Lauder Brunton and Dr. George Ogilvie. The evening concluded by Dr. G. A. Heron submitting the health of "The Chairman" which was drunk with enthusiasm, and duly acknowledged.

The Medical Golfing Society held a tournament on May 30th at Ranelagh Bicycle Golf Club. The challenge cup presented by Mr. Henry Morris for the best score against Bogey under handicap was won by Dr. F. J. Smith, who was "all square" with Bogey. Dr. Smith also secured the gold medal presented by the Medical Golfing Society to the winner of the cup, and he further carried off the first prize in Class II for players with handicaps over 12, the second prize being gained by Dr. Seymour Taylor with a score of 1 down to Bogey. The prize offered for the best last 9 holes *v.* Bogey in Class II was awarded to Dr. Lambert Lack with a score of 1 up. Class I, for players with handicaps of 12 and under, attracted a numerous entry, and resulted in three men (Dr. Probyn-Williams, Dr. F. Buzzard, and Mr. C. M. Anderson) handing in scores of 1 down to Bogey. The best score *v.* Bogey of the last nine holes in Class I was by Dr. Harold Kidd, who was 1 up. The foursome sweepstake was won by Messrs. T. H. P. Kolesar and W. Rushton with 2 up on Bogey, the second place being tied for with "all square" by Messrs. G. C. Bell and T. M. Young, H. M. Rigby and F. B. Cooper, and C. M. Anderson and J. R. Walker.

Guy's Hospital Ladies' Association.—The annual meeting of this association was held on May 30th in the Court Room of the Hospital. Princess Christian presided, and was supported by Lady Valentia, Lady Waldegrave, Lady Bective, Lady Goschen, Lady Selkirk, Lady Henry Bentinck, Lady Perry, Mrs. Cosmo Bonsor, Mrs. Merry, Mrs. Benyon, Mrs. Pye-Smith, Mrs. Frederick Taylor, Mrs. Hale White, and Mrs. Lauriston Shaw. The Committee's report stated that the present membership was 1,217, an increase of 60 during the year. The local branches had not only provided a large number of garments for the patients but had also contributed £220 for the support of beds in the maternity ward. The association had gained immense advantage from the kindly interest of Princess Christian, during whose presidency the membership had been nearly doubled, with the result that the services which the association had been able to render to the hospital had been extended in every direction. Lady Bective moved the adoption of the financial statement, and said that the surplus of £346 had enabled the Association to maintain 5 beds, instead of 4, in the Victoria maternity ward. They anticipated that all the 8 beds in that ward would eventually be maintained by their funds. The claims of the hospital increased continually, and the Committee asked for increased support. Mrs. Benyon moved the adoption of the report, and referred to the local branches as the mainstay of the association. She emphasized the fact that Guy's Hospital was not a purely local institution, as its patients were drawn from all parts of the Empire; and she appealed to members and other ladies interested in the work to initiate branches in new districts. In reply to a vote of thanks, moved by Lady Selkirk and seconded by Mrs. Cosmo Bonsor, Princess Christian said she was glad to be of use to such an excellent institution as Guy's Hospital.

The Medico-Legal Society.—The first banquet of the Medico-Legal Society was held at the Holborn Restaurant, London, on June 4th, 1907, with the president of the society, Mr. Justice Walton, in the chair. Sir W. J. Collins, M.P., in proposing "The Bench and Bar," pointed out the advisability of the University of London founding a medico-legal school in the metropolis, where there was a wealth of material for such study. Lord Justice Kennedy, in responding, said lawyers and doctors sought to better the communities in which they lived, and to promote the attainment of true scientific knowledge. This toast was also responded to by Mr. W. English Harrison, K.C. Sir Edward Clarke, K.C., then proposed the toast of "The Medical Profession," and referred to the services rendered to the State by medical men. Sir R. Douglas Powell, in replying, dealt with the questions of life assurance and lunacy, and showed how closely the professions of law and medicine were united. Mr. Henry Morris, who also replied, said that the methods of modern medicine were those of experimental research. He concluded with a historical account of the growth of medical jurisprudence in this country. He also urged that not only the title but also practice of medical men should be protected by law. Sir Edward R. Henry, in submitting the toast of "The Medico-Legal Society," expressed his surprise that there was not an endowed chair for medical jurisprudence in London. He detailed fully the uses of the study of finger-prints. The Chairman, in acknowledging the toast, said the distinguished gathering at the banquet proved the vitality and importance of the society. As regards the legal protection of the title and practice of medical men, he said that it required watching and consideration. The toast of "The Guests" was proposed by Dr. F. J. Smith, and replied to by Judge Rentoul. Mr. W. Blake Odgers, K.C., gave the toast of "The Chairman," which received a suitable response. The toast of "The Honorary Secretary" (Mr. R. Henslowe Wellington) which was enthusiastically honoured concluded the evening.

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THE DRAFT CHARTER.

THE Association has advanced a distinct step toward the goal which it has had in view for nearly three years—the adaptation of its constitution to its present needs. The Special Representative Meeting, a full report of whose proceedings appears in the SUPPLEMENT, discussed the second draft of a Royal Charter which had previously been submitted to the Divisions, and, after sitting for two days, agreed that the draft Charter, Ordinances, and By-laws, as amended, subject to any alterations which may be required as the result of a Referendum, are to be finally revised by counsel, and then placed before a statutory meeting for final confirmation before being laid before the Privy Council.

The Organization Committee has to redraft a By-law dealing with the grouping of Branches for the purpose of the election of the members of the Central Council, and when this work is completed the altered By-law will be placed before the Divisions. But it may be said that the Divisions are now in possession of the details, and they can determine on the line of policy which they desire to follow from these details. They will have to consider once more, first, whether they desire a Royal Charter; secondly, whether they are satisfied with the draft Charter which the Organization Committee has drawn up, if they desire one; and thirdly, whether they are prepared to attempt to obtain this Charter without further delay.

The debate at the Representative Meeting was conducted in a very temperate tone, and all views found clear and free expression. The Representative Meeting has proved itself to be a consistent body. In 1905, 9½ thousand votes were registered in favour of a Charter and 2½ thousand against; in 1906, practically the same numbers were repeated; and in 1907, 8½ thousand votes were given in favour and 3½ thousand against. The meeting determined in the majority of cases on the same policy this year as it determined on last year, and furthermore, the vast majority of the votes recorded at the Examination Hall were practically unanimous. Under the able chairmanship of Dr. J. A. Macdonald, and with the assistance of the lucid explanations given both by the Chairman of the Organization Committee (Mr. Verrall) and the Solicitor (Mr. Hempson), the whole discussion was efficiently got through within a really short space of time. The members also received material help from the way in which the Medical Secretary and his staff performed their task.

From a practical point of view, the points of especial interest are the following: (1) The proposal of the Dublin Branch to postpone the application for further discussion by the Divisions; (2) the discussion on the Referendum; (3) the matters affecting the Colonial Branches and members; and (4) the method of election and composition of the Central Council.

Dr. Martley (representing Dublin) and his supporters advanced arguments in favour of postponement, the most important of which are that while the Charter in itself is desirable, it contains certain things which some Divisions do not want, and does not include other things which they do want; that at the present time the Association is involved in heavy additional expenses, and as the surplus shown on the balance-sheet of last year is smaller than that shown in previous years, the present time is inopportune for incurring extra expenditure and for enlarging the scope of the work; and, lastly, that it would be safer to progress more slowly and allow the Divisions a longer time to consider the details. Against these arguments it was urged that the Colonies were looking to the Mother Association to move forwards, and that disappointment of the Colonial members might mean the loss of a large number; that the mere obtaining of a Charter would not necessarily mean increasing the yearly expenditure and that there was more danger in slow progress than in precipitation. That the majority of the Divisions believe that they have had sufficient time to consider the Charter and wish to go on with it is shown by the result of the vote.

In dealing with the power of Referendum, proposals were made to extend the power to the members of the Association, provided that at least 100 signed the petition. This was compared with the present method of limiting the power to the Council. The arguments which moved the meeting to refuse this extension were that the number proposed was much too small to safeguard abuse, and that the control of the Council in the government should be its prerogative. Greater difference of opinion was expressed on the subject of whether the matter should be referred to the Divisions or to the individual members of the Association. But here again a large majority was in favour of applying to the Divisions, on the ground that it is only at Divisional meetings that a subject could be properly discussed and considered. The most important decision lay in the acceptance by the meeting of a regulation by which any resolution which is passed by the Representative Meeting can be prevented from becoming effective only if the Council decide on a Referendum and carry it out within a period of eight weeks.

Mr. Verrall announced that the negotiations which were going on between the Organization Committee and the Colonial Branches promised well, and that he did not anticipate any serious difficulty in arriving at a satisfactory understanding on the points which had been raised. The Colonies desired to retain the power of Home Rule in certain matters, but he thought that it would be necessary to insist on having a schedule drawn up specifying exactly on what matters they wished to make their own laws. The members from the Colonies who had come to England especially for the meeting expressed themselves satisfied with what they were being offered, and gave their views freely on many matters, views which were always listened to with attention and respect.

Lastly, the question of the Central Council threatened to cause some dissension. The difficulties were largely overcome by the method adopted by the Chairman for dealing with the problem. First, the Representatives had to decide whether the Council was to be elected by them, provided that the Association was divided up in groups to secure topographical representation and over-representation for distant parts, or not. The meeting was not prepared to go so far as that, and the next question put was whether the present system of complete election by the members in Branches should be adhered to. To this, too, the meeting declined to agree. Thus there remained only the proposition which was

passed last year at Caxton Hall, that the election should be partly by the one method and partly by the other. After a very thorough discussion of the subject, the meeting determined on a Council of 52 members, of whom 24 are to be elected by the Branches grouped to secure topographical distribution, 12 by the Representative Meeting, 7 Colonial members, 6 *ex-officio* members, and 3 Service members. The power of co-option, it was agreed, was to be taken away from the Council. It may safely be said that every side of the question was well ventilated, and that the meeting decided deliberately on the settled opinions of the Divisions.

The Divisions, as has already been pointed out, will be able to discuss the Charter further if they wish to do so. For a final decision two-third majorities of the Representative Meeting will be required. When that stage is reached, therefore, it will be necessary that such unanimity shall be secured as will leave no room for doubt as to the wishes of the Association.

PROBLEMS OF MEDICAL EDUCATION.

THE report furnished to the General Medical Council by its Education Committee is one which deserves careful study by all who are interested in the advancement of medical education, although it is but an interim report which it is proposed to extend by obtaining further details as to the periods at which students arrive at various stages in their career as marked by their presenting themselves for intermediate examinations. The report deals with the careers of 1,111 students, and gives their ages at the commencement of medical study, and on obtaining of their qualifications, and the period of time consumed in obtaining their qualifications. Dr. Mackay, the Chairman of the Committee, points out that although the general averages taken from the whole number are, of course, of value, a truer picture is presented if we take the central and larger numbers in each group and eliminate the extremes. Thus, though a dull student may have taken fifteen years to qualify, we do not learn anything from the fact except that he was dull or idle or both, and his inclusion goes to vitiate the truth of the average. Hence, the extremes are excluded in striking the averages under each heading; for example, those who commenced their studies after the age of 21 are left out, although in the full tables they are all to be found. After the application of this eliminating process it is found that the average age at entrance is 18 years and 10 months, at qualification 25 years and 6 months, and that the average time consumed in fulfilling the curriculum and passing the examinations is 6 years and 1 month. Some further methods of grouping the figures are dealt with in the course of the report, with which we need not concern ourselves at the moment. The statistics relating to the age at entrance are particularly important. It will be recollected that a few years ago the Medical Council debated at great length the desirability, indeed, it may almost be said, the possibility of raising the standard of entrance examinations, and, under the advice of educational experts, came to a conclusion that it would be practicable to effect only a slight and very gradual raising of the standard.

Some of its own members and a good many of its outside critics, amongst them the British Medical Association as represented by a Committee, thought that the Council had not moved fast enough, and urged greater stringency. But it may fairly be assumed that the standard of the preliminary examinations accepted is a very large factor in determining the age at which, at all events in the case of the younger group of entrants, medical study is commenced. It is true that under perfectly satisfactory conditions of general secondary education in the country it does not seem much to expect that the level of senior examinations should be attained by the age of 17. Nevertheless, although only the junior standard is now required, only 25 per cent. of students do enter by the age of 18; and it may be inferred that any raising of the standard would result in postponing to a still later age the commencement of medical studies. Indeed, a division of the figures into groups of those in the earlier and in the later years covered by the statistics brings out quite clearly that the effect of such raising of the standards as was actually accomplished was to increase the entrance age; at least there is no other obvious cause in operation to account for the cutting off in a marked degree the entrances below the age of 18 years, and Dr. Mackay considers that the figures indicate about six months' difference. Hence he draws the conclusion that for the present nothing more is possible in the direction of raising standards than the pursuit of the present policy of exerting steady pressure in this direction without taking any more radical step.

If we now pass on to the consideration of the period spent in obtaining a qualification, we find that differences obtain in England, Scotland, and Ireland. In England the corrected average gives a period of six years and six months, in Scotland five years and eight months, and Ireland five years and eleven months. What further inferences may be indicated it is for the present impossible to say, though the proposed investigation into the division of the students' time within this period may throw some light upon it; at all events, we see that under present conditions the minimum of five years is materially exceeded everywhere, and notably in England.

Out of the 1,111 students, only 153 qualified at the earliest possible period. It is pointed out, however, that in England the figures are dominated by those of the Conjoint Board, which requires a period of two years to be spent after the passing of the intermediate before admission to the final examination, no such regulation existing in the Scottish universities, and it is very possible that here may lie the clue to the materially longer time taken by the English student in obtaining his qualification. The further statistics which it is proposed to obtain can hardly fail to throw light upon this as well as upon other points, such as the time spent upon the acquirement of the preliminary subjects of chemistry, physics, and biology. Hence until this promised material is available it seems premature to discuss such questions as the removal of these subjects to a period antecedent to the entry upon medical education proper, a course towards which we have always felt favourably inclined. But we cannot conclude without congratulating Dr. Mackay and his Committee upon having furnished a report which can never be neglected in any discussion of this moot question of the suitability of our present medical curriculum and of the directions in which it admits of improvement.

THE TEACHING OF MIDWIFERY.

On Thursday, May 30th, the General Medical Council considered the report of its Committee on the teaching of midwifery, and adopted it with one slight, though by no means unimportant, modification. In our issues of June 9th and December 15th, 1906, we commented on that report, and we pointed out that although its recom-

mendations were theoretically excellent, and if carried out would result in better teaching of midwifery, and therefore improvement in midwifery practice, yet that in London, at least, hospitals and infirmaries being regulated as they are, they were impracticable. We expressed the opinion that if these requirements were hastily pressed, one effect would be to deter medical students from entering the London medical schools, and to make them go where the kind of midwifery teaching required could be had. We stated the obvious fact that London, the largest city in the world, is the richest in the clinical material for the study of medicine. Any change which prevents that clinical material from being utilized for the purposes of teaching and research is an injury to medical science taken as a whole. It may fairly be questioned whether a possible improvement in the teaching of one department is a benefit so great that it is worth purchasing at the cost of frightening men away from the best opportunities of learning medicine and surgery that exist.

Discussion from this point of view is now out of date The General Medical Council has decided. It has adopted the report. Trifling amendments as to the courses of lectures to be attended before the student goes to practical midwifery were proposed and rejected. Sir Charles Ball and Dr. McVail urged more important amendments, the object of which was not to alter the *kind* of teaching demanded, but to lessen the *amount;* but the Council stuck to its position. Dr. Saundby moved an amendment, which was seconded by Mr. Henry Morris, and which, we venture to think, was a very wise one, to the effect that the proposed changes in the method of instruction should be made "where the "necessary hospital facilities exist." If this amendment had been carried it would have given the London schools more time for reorganizing their teaching. It might, it is true, have allowed them to postpone improvement indefinitely, although we do not believe that this effect would have followed, for the pressure of opinion is stronger than is often at the moment realized.

The amendment, which we said was slight but by no means unimportant, was moved by Dr. Langley Browne, Chairman of the Council of the British Medical Association, and accepted by Sir John Williams. Its substance was to put Poor-law infirmaries among the places in which students may obtain instruction in midwifery. Unfortunately, its effect at present can only be slight. There are two reasons for this: First, there are thirty Poor-law infirmaries in London. We are not sure that all of these have lying-in wards. But those that have only receive lying-in women from their own parish or district. There is no Poor-law infirmary in London, so far as we know, in which a sufficient number of labour cases occur to make it a place of choice in which to learn midwifery. Secondly, if the student is to learn midwifery properly he must have a competent teacher. The medical officers of Poor-law infirmaries are appointed by boards of guardians, who are not able to judge of their professional knowledge. When appointed, these medical officers soon find out that professional knowledge is the least important thing required of them. Orderly and economical administration, reasonable courtesy and kindness to the pauper inmates, and abstention from quarrelling will counterbalance any amount of errors in diagnosis and neglect in treatment. Hence it is a fact which is to be regretted, but cannot be denied, that the medical officers of Poor-law infirmaries are not invariably competent to train in midwifery the rising generation of doctors.

There are two measures by which this state of things might be improved, and these the adoption of Dr. Langley Browne's important and valuable suggestion will help to make possible and acceptable. One is to concentrate the accommodation for lying-in women. If all the lying-in women who are obliged to seek Poor-law relief during childbirth were brought together under one roof there would then be the means of giving valuable instruction in clinical midwifery. The second measure is to take the appointment of the superintendents of Poor-law institutions out of the hands of any popularly elected body, and let them be nominated by some person or persons competent to judge of their fitness. We doubt if there is to be found in this world a body of men more capable, honourable, and tactful than the medical inspectors of the Local Government Board. And why? Because they are appointed by the Principal Medical Officer of the Board, who is a man able to judge of a medical man's qualities. If he or some other competent authority could nominate the medical officers to the London Poor-law infirmaries, these might become centres of scientific work of inestimable value.

The broad fact that the application to midwifery practice in lying-in hospitals of Lord Lister's teaching has resulted in the abolition in them of puerperal fever, while no change of the same importance has yet affected lying-in women outside hospitals, shows the need for improvement in the practice of midwifery, and, for efficient teaching there must be an efficient teacher.

It is not yet announced when the General Medical Council intends the changed method of teaching midwifery to become compulsory. We presume that the change will not be retrospective, that those students who have already begun their medical studies will be allowed to finish them under the system at work when they began them. If so, this will give at least five years for the medical schools to reform their midwifery teaching. Whether this is to be done by the provision of lying-in wards in our general hospitals; by the fuller utilization of the existing lying-in hospitals; by the establishment of new lying-in hospitals; or the concentration of Poor-law lying-in accommodation under the supervision of a competent obstetrical officer, must depend upon local financial and personal conditions so various that we cannot at present forecast or discuss them.

LORD LISTER AND THE CITY OF LONDON.

AT a meeting of the Corporation of the City of London held on May 30th, the Lord Mayor presiding, Mr. Alderman Alliston (we learn from the *Times*), in moving that the honorary freedom of the City be presented to Lord Lister in a gold box, in recognition of his eminence as a surgeon and the invaluable services he had rendered to humanity by the discovery of the antiseptic system, said the resolution, if carried, would do honour not only to a great man, but a noble profession. Over 100 years had elapsed since the Court bestowed the freedom of the City on a member of the medical or surgical profession. The last was that given to Edward Jenner, the discoverer of vaccination, in 1803. Since then the Corporation had welcomed Royal personages, great warriors, eminent statesmen, and others, but the still small voice of the personal ills that flesh was heir to—their amelioration and remedy—had, he feared, somewhat escaped the City's notice. That deficiency he hoped the Court would make good that day by the gift of the freedom of the City to Lord Lister. To his research and patient

discoveries they owed the cure of disease, the prolongation of life, and the lessening of suffering, and Lord Lister's beneficent discovery of the antiseptic treatment in surgery was now fully acknowledged and practised all the world over. The resolution was carried with acclamation, and the City Lands Committee were empowered to make the necessary arrangements for the presentation of the freedom to Lord Lister at an early date.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

At a meeting of medical men, biologists, and others interested in tropical diseases, which was held in London on May 10th, a Society of Tropical Medicine and Hygiene was duly constituted. Laws for the government and administration of the Society were at the same time considered and passed, and the first Council was elected. The following are the members of the Council of the new Society: President, Sir Patrick Manson, K.C.M.G., F.R.S, F.R.C.P. Vice-President, Professor R. Ross, C.B., F.R.S., F.R.C.S. Treasurer, W. Hartigan, M.D., 5, Bond Court, Walbrook, E.C. Secretaries, F. M. Sandwith, M.D., F.R.C.P., 31, Cavendish Square, W.; W. Carnegie Brown, M.D., M.R.C.P., 32, Harley Street, W. Councillors, Ernest E. Austen, F.Z.S.; Fleet Surgeon Bassett-Smith, R.N.; James Cantlie, M.B., F.R.C.S.; C. W. Daniels, M.B.; Lieutenant-Colonel G. M. Giles, M.B., F.R.C.S., I.M.S.; W. M. Haffkine, C.I.E.; C. F. Harford, M.D., C.M.S.; T. S. Kerr, M.B.; G. C. Low, M.B.; Professor E. A. Minchin, F.Z.S.; Lieutenant-Colonel C. H. Melville, R.A.M.C.; Professor G. H. F. Nuttall, M.D., F.R.S.; L. W. Sambon, M.D.; Arthur E. Shipley, M.A.; J. W. W. Stephens, M.D.; Fred. V. Theobald, M.A. The need of such a Society has long been felt, but various difficulties have hitherto prevented the realization of the idea. The successful foundation of the Society has in a great measure been due to the approval and co-operation of the Schools of Tropical Medicine in London and Liverpool, the universities and other teaching bodies, the naval and military medical services, and the large and rapidly-increasing number of physicians who are engaged in mission work and in the practice of medicine and hygiene in tropical countries. Among the active supporters of the movement have been many eminent biologists. All registered medical men and others who are interested in sciences related to tropical medicine are eligible for election as Fellows; and the Council is empowered, for a period of six months, to elect without ballot, on application being made, and on their being satisfied as to the eligibility of the candidates, a limited number of original Fellows. The annual subscription is one guinea; at present there is no entrance fee. The head quarters of the Society have been established at 20 Hanover Square, where ordinary meetings will be held at 8.30 p.m. on the second Wednesday of every month except August and September. The first meeting of the Society is fixed to take place on Wednesday, June 26th, at 8.30, when it is expected that the President, Sir Patrick Manson, will deliver an inaugural address and objects of interest in tropical medicine will be exhibited.

A SUPREME NATIONAL HEALTH AUTHORITY.

For long many persons have felt that the arrangements at present in existence do not meet all the necessities of public health requirements. At a recent conference in Newcastle-upon-Tyne of representatives of the various sanitary authorities of the district the following resolution was carried:

> That a permanent union of the sanitary authorities of England and Wales be established as a supreme national health authority, with the object of safeguarding and promoting the public health interests of the people at large against tuberculosis and other dangers to the public health.

A Committee was appointed to give the resolution practical effect, Dr. H. E. Armstrong, medical officer of health for Newcastle, being appointed Honorary Secretary. The meeting was presided over by Alderman Dr. Henry W. Newton, a gentleman whose long service as Chairman of the Sanitary Authority enables him to speak as an expert from his intimate knowledge of the subject. There are many questions relating to public health which are not being dealt with at present by any special body, Governmental or scientific. It is with the view of bringing together the various sanitary authorities and of seeking to unite them into one body so as to obtain uniformity of action, that the movement has been inaugurated. It is a step in the right direction and one that commends itself. The housing of the poorer working classes, the milk supplies to large towns, tuberculosis and infectious diseases generally are subjects towards the elucidation of which a public health parliament composed of representatives of sanitary authorities could bring to bear intimate knowledge and practical experience.

"KILL DYING CONSUMPTIVES."

Under this sensational title the *Daily Telegraph* of May 9th informed its readers that Dr. Knopf, of New York, had virtually advised the members of the National Tuberculosis Congress, recently held at Washington, to "kill their dying consumptives quickly "and painlessly by heavy doses of morphine." Our contemporary went on to say: "The statement, "which created a sensation, and was liberally "applauded, was made at the close of the session "of the clinical and climatological section, of "which Dr. George Dock, formerly of Philadelphia and "now Dean of the Medical Department of the Univer-"sity of Michigan, was chairman. 'It is my practice, "'and it is your sacred duty,' said Dr. Knopf" (we are still quoting the *Daily Telegraph*), "'when you see a "'dying consumptive before you, to give the sufferer "'morphine in plenty, that the end may come quickly "'and painlessly.'" Other papers not unnaturally commented upon this amazing statement, but it does not seem to have occurred to them to follow the famous advice of the dying scholar and verify their references. We are even told with the utmost gravity by the *St. James's Gazette* that the reception given to Dr. Knopf's alleged statement "illustrates the attitude of "doctors and scientists, and, indeed, of a great body of "the general public, on one of the most awkward ques-"tions with which mankind is faced." Our contemporary is good enough to add that "in the present state "of the public mind it is perhaps as well that "doctors should realize, as they do realize, that "their duty is to keep patients alive. There are "exceptions, for which every doctor who is so unhappy "as to meet them must take individual responsibility. "But the doctor's rule is clear." The "doctor's rule" is clear enough, but we cannot say the same of the remarks of the *St. James's Gazette*. What are the exceptions for which the doctor must take the responsibility? The only rule recognized and acted upon by the profession is that followed by Desgenettes, who refused to poison the plague-stricken Frenchmen in Egypt at the bidding of Napoleon. Every honourable practitioner of medicine would say, like Sir Henry Holland when he was asked by Mehemet Ali for some subtle poison that would kill and leave no trace, that his business is to prolong life, not to destroy it. We were sure, therefore, that Dr. Knopf's remarks had been misunderstood or misreported, and we are glad to be able to quote the following authoritative statement

on the subject which Dr. George Dock, writing from Ann Arbor, Michigan, under date May 17th, has addressed to the American journals:

"Mr. Editor,—I take this method of trying to correct "the outrageously false impression given by many of the "newspapers of the country to the statement of Dr. "Knopf before the Clinical and Climatological Section "of the National Association for the Study and Preven- "tion of Tuberculosis, at its recent meeting in Wash- "ington. I was present as chairman of the section "when Dr. Knopf made his remarks. He was "within a few steps of where I sat, and I "was paying close attention to his remarks. I "understood him, and all others with whom I have "spoken on the matter since the meeting understood "him to state plainly the need of using morphine to "relieve painful symptoms in the last stage of the "disease. Any physician who heard the remarks must "have known that the morphine was used, not for "shortening life, but solely for making it easier, "and every physician also knows that life is "generally prolonged by that sort of treatment. "As I have expressed myself before this re- "garding the shortening of lives of seriously sick "people, I need hardly say that had Dr. Knopf advo- "cated anything like the administration of large or "dangerous doses of morphine, I would have vigorously "protested. I hope that physicians who are asked "about the matter will contradict the newspaper state- "ments, and seize the opportunity of explaining the "real object of the treatment."

It is greatly to be wished that newspapers showed a greater sense of responsibility in regard to their medical news than most of them display. Any nonsense said to emanate from a "doctor" seems to be accepted without question.

THE LORD MAYOR'S CRIPPLE FUND.

THE Lord Mayor of London is not a man who lets the grass grow under his feet, and in nothing is he more active than in his attempts to improve the lot of cripples. To this end Sir William Treloar has devoted much money and energy for years past, and his latest idea, the foundation of a Cripples' Home and College, is being pushed on rapidly. To raise the £60,000 estimated to be necessary many efforts are on foot, but possibly the most important contribution will be a gift by the nation, if made, of the site and buildings of the disused Military Hospital at Alton, which was erected by the Absent-minded Beggars' Fund some years ago, mainly out of the proceeds of the publication of Mr. Rudyard Kipling's poem. This gift must be authorized by Parliament, and a private Bill enabling the War Office to make the transfer has already been lodged in the Upper House. It is to be feared, however, that it is not likely to pass unchallenged, unless in the meantime Sir Willlam Treloar crystallizes out of his general desire to benefit cripples a definite plan proving beyond dispute that the gift will be used to the best advantage and in the wisest way. Unfortunately, at present there is no evidence to this effect; and it may even be said that the indications from what has at present been disclosed are that Sir William Treloar has not considered several very important facts. These are that there are cripples and cripples; cripples by disease and cripples by accident; cripples who, given plenty of fresh air and a certain amount of surgical treatment are eminently curable, and those for whom nothing to remove their deformity can be done, but who nevertheless can be taught to play a useful part in life and to support themselves, some partly, some entirely, by their own efforts. If it is his intention to convert the building at Alton into a place for the open-air treatment of what are known as cases of surgical tuberculosis, of children with open or impending wounds, which untreated must end in permanent physical defect, the support he will obtain will probably be unanimous. The institution will be on all-fours with that maintained by Baron James de Rothschild's widow at Berck-sur-Mer, of which an account was given in a series of articles on Tuberculosis in Childhood, published in this JOURNAL in 1904 and reprinted as a pamphlet in the same year, and will be greatly welcomed by all who take an interest in the suffering children of the poor. On the other hand, if—as the title of the institution seems to suggest—it is proposed to carry on at the same place work the object of which is mainly educational, there should be, and probably will be, serious opposition to the passage of the Bill. Crippled children for whom everything in the way of treatment, whether open air or otherwise, that can be done has been done, should not be kept in a colony with those still under treatment. It is indeed cruel to segregate them in any way whatever; on the contrary the freest intercourse possible with healthy children should be secured for them; for only thus do they obtain real education and lose those sensitively morbid feelings which often handicap them in life by preventing their recognition of the fact that though less able than their fellows in some ways, they are at least as able, if not more able, in others. It is to be hoped, therefore, that before long Sir William Treloar will make a perfectly clear and satisfactory statement of what he proposes to do, for at present there are not wanting those who regard the great movement in which he is urging the public blindly to take part with considerable misgiving.

POST-GRADUATE OPHTHALMOLOGY AT OXFORD.

MR. R. W. DOYNE, as is well known, has instituted annual courses on ophthalmology for graduates and practitioners at Oxford, which have proved very successful. This year the fourth of these courses will be given, and will extend from July 15th to 27th. The main idea of the course is to demonstrate—on actual patients as far as possible—the whole range of ophthalmology, in order to make the reading of a textbook more profitable than can be the case when relying merely on pictures. The first part will be mainly devoted to demonstrating the practical examination of eye patients, the use of the ophthalmoscope, and the work of refraction. In the second part the work will be more specialized. Altogether some 500 cases will be present for demonstration. The Syllabus includes, in addition to lectures and demonstrations by Mr. Doyne, who is the University Reader on Ophthalmology, practical instruction by the hospital staff, clinical lectures by Professor Osler and Dr. Risien Russell, and lectures by Messrs. P. Adams, Cargill, Sydney Stephenson, Richardson Cross, W. Lang, and Priestley Smith. Between eighty and ninety surgeons accepted the invitation given last year to see some of the more interesting cases collected for the post-graduate course and other demonstrations. Another gathering of the same sort will be held this year on July 26th and 27th. In order that it may not clash with the meeting of the British Medical Association held in the following week a series of demonstrations, rather than papers and discussions, has been arranged. Mr. Nettleship, who is to preside, will give an address, and the following demonstrations have been arranged:—Mr. P. H. Adams: Experiment on Coagulation of the Blood; Dr. G. Burch, F.R.S.: Experiments on Colour Vision; Mr. G. Coats: Lantern Demonstration on the Reaction of the Eye to Foreign Bodies Remaining with the Globe; Mr. R. W.

Doyne: Demonstration of a Method of Dressing after Cataract Operation; Professor Gotch, F.R.S.: Demonstration of Photo-Electric Changes Produced in the Frog's Eye by Light of Different Quality; Colonel Herbert: New Operation for Chronic Glaucoma: Mr. A. C. Inman: Demonstration of the Opsonic Index; Dr. Lagrange, of Bordeaux: New Operation for Chronic Glaucoma; Dr. Victor Morax, of Paris: Demonstration of Trypanosomiasis of the Eye; Dr. Maitland Ramsay: Demonstration of Ocular Tuberculosis by Means of Opaque Projector; Professor Rollet, of Lyons: Operation for Excision of Lacrymal Sac; Mr. S. Stephenson: Demonstration of *Treponema pallidum* in Syphilitic Diseases of the Eye. Practitioners who desire to attend will be accommodated with board and residence in Keble College at the rate of 7s. 6d. per day. They will meet at dinner on Thursday, July 25th, and the meeting will close after breakfast on Monday, July 29th. There will be morning service in Keble College Chapel at 8 on Sunday, and after breakfast a launch will leave Folly Bridge at 10 to go down the river to Reading. As it will hold only a limited number, those wishing to take part in the trip must take tickets (price 7s. 6d.) beforehand. These will be apportioned strictly in the order of application.

THE BRITISH MUSEUM READING ROOM.

The cry in a letter which appears elsewhere in this issue is likely to evoke a sympathetic echo in the breasts of most of those whose lot it has ever been to work in the Reading Room of the British Museum. Within its walls many an abstruse problem has doubtless received solution, but the comparatively simple question of how to keep an enclosed atmosphere reasonably fresh is certainly not one of them. What the conditions will be when the alterations in progress are completed remains to be seen; but that the atmosphere in the old room was not what it should have been is incontestable. It suggested that it had never occurred to the authorities that even a student accustomed to the burning of midnight oil may require fresh air. Possibly it was considered that "the bright countenance of truth" was more likely to be discerned by literary researchers if "the quiet and still air of study" which Milton deemed so delightful were ensured by carefully preventing all atmospheric movement whatever. There may have been some who deemed it as physically pleasant as it was mentally imposing, and there were certainly those who found it soothing, for often a nodding head was to be noted by any one whose devotion to the Humanities had not led to entire abandonment of that other study which Pope deemed specially proper to mankind. The atmosphere was also redolent of other things than learning, and that there should have been a tendency in this direction is not remarkable. The most profound lover of "countless tomes of wars and kingcraft's leaden history" must admit that, however attractive their contents and artistic their bindings, vast collections of leather enclosed volumes in one chamber do not tend to make its atmosphere reminiscent of the spices of Araby. Again, too, though it has been said that cleanliness is next to godliness, it must be remembered that the precise relation of learning to either has not been settled. It is what the modern biometrician, we believe, would call a constant variable, and a problem with which we do not propose to deal beyond indicating that in any statistical calculation the probable error would be found so great as to render any deduction from the result valueless. It is permissible, however, to suggest that the proximity of learning to cleanliness would commonly be found to vary inversely as the combined squares of the individual's learning and age + the influence of nationality, early training, and existing domestic influence. Great variation in these respects exists amongst the occupants of the room, who include at times persons of every nationality, primary instincts, personal idiosyncrasies, and depth of learning. It is not peculiar, therefore, that there are sometimes present those who nasally if not visually suggest that however well acquainted they may be with the historical facts concerning soap, their knowledge of its practical value is purely abstract. It is to be hoped, therefore, on all grounds that in the refurbished Reading Room full attention will be found to have been paid to the question of ventilation. In such a room with its special architectural proportions and shape it should not be difficult to provide an atmosphere neither negatively devitalizing from lack of oxygen nor positively nauseous owing to accumulated organic products.

DROITWICH BATHS.

Some important additions to the principal bathing establishments at Droitwich, projected by the late Dr. Thomas Corbett, and recently completed by the trustees of the Corbett estate, were formally declared open on Saturday, June 1st. The ceremony was performed by the Earl of Coventry, Lord-Lieutenant of Worcestershire, and followed by a luncheon, at which a very large number of medical men were present as the guests of the Mayor and Corporation; hospitality in the way of sleeping accommodation having also been offered to many of them by the proprietors of the Worcester, Park, Royal, and other hotels and establishments which in this town provide for the comfort of the increasing number of persons who seek it in search of health. The allusions made in the various speeches to the essential points and distinguishing characteristics of the baths were the more intelligible to the visitors, owing to the fact that many of them had made a prolonged examination of the baths in the morning, and tested their immediate subjective effect by a personal trial, especially of the swimming bath. Moreover, as the events appealed with particular force to practitioners in other health resorts and to members of the Balneological and Climatological Society, a considerable portion of those present were already well versed in matters hydrotherapeutic. Among the speakers were Dr. de Havilland Hall, Dr. Hamilton Cumming of Torquay, and Dr. Shirley Jones of Droitwich.

THE PATHOLOGICAL SOCIETY.

The closing meeting of the Pathological Society, which has now ceased to exist as an independent organism and become a part of the new Royal Society of Medicine, was held on June 4th. Dr. Pye Smith, the President, in his valedictory address, gave a short review of the history of the Society, which was founded in 1846. The first President was Dr. C. J. B. Williams, who was followed, after two years, by a surgeon, Mr. Aston Key. This alternate choice between the two branches of the profession was preserved until very recently. Mr. Aston Key, who was prematurely cut off by the epidemic cholera of 1850, was succeeded by Dr. Peter Mere Latham. The second surgical President, Mr. Caesar Hawkins, of St. George's Hospital, died before he had completed his term (1855), and was followed by Dr. Guy Babington, a remarkably accomplished man, who as a boy went to sea as a midshipman, and was present at the battle of Copenhagen. He was afterwards Professor of Tamil, in India, and graduated at Cambridge. He was a learned physician, now best remembered as the inventor of the "glottiscope" more than twenty five years before Garcia gave the profession the laryngoscope. Babington was succeeded in 1855 by Moncrieff Arnott; and in 1857 Sir Thomas Watson became President. He was followed by Sir William Ferguson in 1859, and he in turn gave place to Dr. Copland, the author of a once popular cyclopaedia of

medicine. The next President was Sir Prescott Hewett, who was succeeded in 1865 by Dr. Peacock, whom Dr. Pye-Smith described as one of the best Presidents the Society has had. Peacock was followed by Sir John Simon in 1867. Sir Richard Quain was the next President. He was the chief motive power in making the useful and necessary change from the original house in Berners Street to the present spacious rooms, and he would have been delighted to see the union of societies now an accomplished fact. John Hilton succeeded him in 1871. Then came in succession Sir William Jenner, Mr. George Pollock, Dr. Murchison, Mr. Hulke, Dr. Bristowe, Sir James Paget, Sir George Humphry, and Sir John Burdon-Sanderson, who became President in 1902. "Such," said Dr. Pye-Smith, "is the list of our past Presidents who have joined the "majority. But we thankfully and proudly point to "no less distinguished men who are still with us: Sir "Samuel Wilks, Mr. Hutchinson, Dr. Dickinson, Dr. "Pavy, Mr. Butlin, Dr. Payne, and Mr. Watson "Cheyne." When the Society was founded, pathology was still the handmaid of medicine and surgery. Dr. Pye-Smith went on to say: "The science has now a far "more independent position, and is the foundation "or *institute* on which all scientific prevention and "treatment of diseases must rest. The study of morbid "anatomy was the beginning of rational pathology. "Then followed experiments on living animals, like "those of Harvey himself, of Mayow, of Stephen Hales, "of Hunter, and of Sir Charles Bell. Since 1846 we have "seen the rise and vast progress of bacteriology as the "third and most important chapter in the causation of "disease. The fourth division of pathology is chemical, "at present in its infancy, but probable destined to open "many fresh paths to investigation. Especially fruitful "will probably be the borderland between animal and "vegetable pathology. The recent investigations by "Professors Halliburton and Mott into degeneration of "nerve fibres deal with the conditions, not only histo-"logical, but also chemical. Moreover, by an unex-"pected series of observations it appears to be "demonstrated that a parallel series of changes—after "Wallerian degeneration of nerve fibres, but in the "reverse order—may lead to a restoration of the axis "cylinder and ultimately of the whole injured nerve "fibre. At present the future of experimental pathology "lies on the knees of the Royal Commission on Vivi-"section. Let us hope that the result will be to "give greater freedom for experimental methods. "The minute anatomy of disease is not yet complete. "The chemical aspect of pathology is not more than "begun, and our contributions in this department are "comparatively few, though in value they have been great. "Nowhere," concluded Dr. Pye-Smith, "is the ground "more promising than on the confines of physics and "physiology, between botany and zoology, between "chemistry and physics. The investigations embodied "in Professor Farmer's admirable lecture before the "Royal Society show how complicated may be the "structure of a single cell. But complicated or simple, "it still baffles all attempts to explain its functions and "their mechanism. To apply the words of an anony-"mous poet of the seventeenth century: In the ovum "or the germ-cell

> The thread of life untwisted is
> Into its first consistencies;
> Infant nature cradled here
> In its principles appear.

"And, so untwisted, its principles are as great a puzzle "as ever."

COMPULSORY RETIREMENT OF POSTAL MEDICAL OFFICERS.

WE are informed that the Postmaster-General has intimated to the Association of British Postal Medical Officers that he recognizes "that on the first introduc-"tion of a new practice as regards medical officers "over 70, some inconvenience may have been "caused in particular cases, and if there are instances "in which hardship could be shown and at the same "time the officer is fully efficient, Mr. Buxton would be "prepared to consider whether the date of retirement "might be postponed for a time." Any postal medical officer desirous of availing himself of this offer would do well to communicate immediately with Dr. Giddins, 206, Mansfield Road, Nottingham, the Honorary General Secretary of the Association of British Postal Medical Officers.

AN AMERICAN MINISTRY OF PUBLIC HEALTH.

IT has already been stated in the BRITISH MEDICAL JOURNAL that at the annual meeting of the American Association for the Advancement of Science held in June, 1906, a Committee of one hundred was appointed to take steps for the creation of a Government Department of Public Health. On April 28th about twenty of the members of that Committee met in New York, and, after a full discussion of the subject, elected a special committee of seven to carry on the work of the movement. Professor Fisher, the Chairman of the general committee, and the following Vice-Chairmen: President Eliot of Harvard, Professor W. H. Welch of Johns Hopkins University, President Angell of the University of Michigan, Archbishop Ireland, Mr. John D. Long, Ex-Secretary of the United States Navy, Dr. Lyman Abbott, and Professor Felix Adler of New York, and Judge Lindsay of the Juvenile Court of Denver were added to the Special Committee.

WE understand that Mr. W. Bruce Clarke and Mr. Charters Symonds will be candidates for election to the Council of the Royal College of Surgeons of England next month.

ON June 4th Dr. Clifford Allbutt, Regius Professor of Physic, and the resident medical graduates of Cambridge, gave a dinner at St. John's College to Dr. Donald MacAlister in complimentary recognition of his appointment to the office of Principal of Glasgow University.

THE annual Bolingbroke Lecture of the South-West London Medical Society will be delivered on Wednesday, June 12th, at 9 p.m., at the Head Quarters of the 4th Volunteer Battalion, East Surrey Regiment (opposite Clapham Junction Station), by Dr. G. H. Savage. The subject is "The Factors of Insanity." Medical men, whether resident in the district or not, are cordially invited to be present.

WE understand that an endeavour is being made to arrange an annual dinner of past and present members of the West African Medical Staff, and it is hoped to hold the first one in the first week in July. Any members who are at present on leave, and who have not yet received any communication on the subject, are requested to communicate as early as possible with Dr. W. T. Prout, C.M.G. (Late Principal Medical Officer, Sierra Leone), 17, Canning Street, Liverpool.

SIR JOSEPH DALTON HOOKER, G.C.S.I., C.B., the first of living botanists, will enter on his 90th year on June 30th. We are proud to claim him as a member of the medical profession. He took his M.D. degree at the

University of Glasgow in 1839, and in the same year became a Licentiate of the Royal College of Surgeons of Edinburgh. Like Huxley he entered the navy, and he sailed with Sir James Ross in his Antarctic Expedition, consisting of the ships *Erebus* and *Terror*, the names of which are commemorated in the two great volcanoes which were revisited quite recently by Captain Scott. He was one of the most strenuous supporters of Darwin, who said, "If Lyell, Hooker and Huxley are convinced. "that is enough." Hooker was the earliest confidant of Darwin's great conception, and was his closest and earliest friend.

As has already been stated in the JOURNAL, the first International "First Aid" and Life-Saving Congress will be held at Frankfort-on-the-Main in Whitsun week, 1908, under the Presidency of Count von Posadowsky, Minister of the Interior. The work will be divided into ten sections, as follows: (1) Qualified "First Aid" in accidents; (2) the teaching of "First Aid"; (3) "First "Aid" in towns; (4) in the country and in manufactories, etc.; (5) on railways, automobiles, etc.; (6) at sea and on the coast; (7) in mines and the best way of carrying it out; (8) in fires; (9) on mountains; (10) in sport. Mr. S. Osborn, F.R.C.S., Constitutional Club, Charing Cross, is Acting Secretary for Great Britain, and to him all inquiries may be addressed.

AT a special meeting of the Council of the British Medical Association held in the Board Room of the Metropolitan Asylums Board, Victoria Embankment, on June 5th, Dr. Langley Browne, Chairman of Council, presiding, the minutes of the Special Representative Meeting held at the Examination Hall on May 29th and 30th to discuss the Draft Charter were considered, and it was decided to take a Referendum on certain points. The shortness of the time now available before the Association meets at Exeter, and the fact that under the Referendum the Colonial as well as the Home Divisions must be consulted, make it impossible that the question of the Charter should be discussed by the Annual Representative Meeting this year.

SPECIAL REPRESENTATIVE MEETING.

THE Representative Meeting continued its deliberations on the draft Charter on Thursday, May 30th.

At the opening of the day's meeting Dr. Maclean (Cardiff) asked whether the funds which the Branches carried over from the time before the new Constitution could be employed as donations to the Central Emergency Fund. The Chairman stated that the funds could be applied in such a way. Several members stated that either their Branches intended to make such a subscription or that the member would endeavour to arrange with the Council of the Branch to make the subscription. Dr. W. Smith (St. Pancras) suggested that a subscription list be handed round at the meeting, and members were asked not only to put down their names for small or large amounts, but also to induce their colleagues in their Divisions to follow suit.

Dr. Milner Moore reported on a Provident Dispensary dispute which was going on in Coventry, and stated that three members of the profession had, against the wishes and in spite of the warnings of the Division, accepted the posts which had become vacant in consequence of the dispute. The names of these individuals were John Inman Langley, A. P. Blanchard Ellis, and A. St. Lawrance Burke.

A discussion took place in connexion with the consideration of the by-law dealing with the formation of constituencies for the Representative Meeting. The draft by-law provides that a Division having not less than fifty members may form one constituency. The Stratford Division moved that the number be increased to 100; but it was pointed out that in many instances the smaller Divisions might require as much consideration as the larger ones, and that even if this by-law should have the effect of increasing the number of Representatives, it would be unwise to drive economy at the expense of efficiency. Dr. Robertson could not see see how this by-law could hold good if the total number of constituencies are not to exceed 300. It was pointed out from the platform that it would not be given to every small Division to possess a Representative, but that the Council would use its discretion in exercising this rule. The number of Representatives had never exceeded 150 hitherto. The by-law was retained in its draft form. The meeting expressed its opinion very definitely that the election of Representatives is best carried out by voting at Divisional meetings, and that while it agreed with an alternative in the form of voting by means of voting papers, it was of opinion that it would be a mistake to make this compulsory. A further discussion took place on the advisability of limiting the term of office of the Representatives to six years, and then requiring one year to elapse before the same member would be re-eligible. Dr. Fothergill believed that it would be advisable to provide for the introduction of new blood, and thought that the member should not serve for more than three years in any one official capacity. Dr. Milner Moore was of opinion that a man was only just beginning to feel his feet during his second and third year of office, and disapproved of any restriction. It was pointed out that each Division could form its own opinion as to the term during which one man should serve as Representative, and that it would be unwise to form a rule which would be binding. The motion for the restriction was lost. It was also resolved that a Representative, or his deputy, need not be a resident in the Division which sends him to the Representative Meeting. This was especially required for the Colonies.

THE composition and mode of election of the Central Council was then discussed. In order to arrive at a definite opinion with as little loss of time as possible the Chairman accepted a motion of the Norwich Division to the effect that the whole of the Council, with the exception of the *ex-officio*, Service, and Colonial members be elected at the Representative Meeting. Dr. Ballance, in proposing this, accepted a suggestion from Dr. Fothergill to include the Service members. In a very clear and able speech, he wished to deal with the method of election without discussing the schemes proposed for the present. He did not agree with the compromise which the Representative Meeting of last year had adopted, to provide for the election partly by the Branches and partly by the Representatives. The constitution of the Association should be founded on a logical basis, and this could be defined as follows: The Association is divided up into areas called Divisions, which are of convenient size to form units. Each Division, or in the case of smaller Divisions, each convenient group of Divisions, have the power of electing one Representative who shall carry out the wishes of the individual members of his constituency in the government of the Association at the Representative Meeting. The Representative Meeting should then have the power of electing a Central Council, having due regard to topographical distribu-

sion, and the Council should have the function of carrying out the instructions of the Association, as determined on at the Representative Meeting and of performing its other functions as prescribed in the laws of the Association. He wished to reduce the size of the Council, but was opposed to omit from the Council any of the present members. Dr. Laffan (Waterford), speaking for Ireland, considered that the Council works well under the present arrangements, and pleaded for adequate representation for Ireland. Dr. Martley (Dublin) considered that Irish members of Council should be elected in Ireland. Dr. Ewart (Westminster) opposed Dr. Ballance's proposal, as he thought that the Representative Meeting should not be the master of the situation. Mr. Wolstenholme (Manchester) directly disagreed with the last remark. In giving the views of the Portsmouth Division, Dr. Ward Cousins disagreed with the idea expressed that strife between the Council and the Representative Meeting was unhealthy, and suggested that too much affection is not desirable in business transactions. The difficulty with regard to the question of Referendum was discussed and it was further pointed out that under the present condition the majority of the members of the Association did not know who the member was who represented their Branch on the Central Council, but every man knew who the Division Representative was. After a prolonged but temperate discussion, the question was decided by a vote by card. Dr. Ballance's proposal was negatived by 2,024 votes, 35 constituencies including 3,683 votes being in favour and 52 constituencies including 5,707 votes against. Hampstead Division wished to retain the present mode of election. In speaking in support of this, Mr. Armit pointed out that by relegating the power of election to the Representatives, the individual members of the Association lost the personal element of election. It would practically mean election by an electoral college, a system which had long since been proved to be obsolete and inefficient. The supporters of Dr. Ballance's scheme felt inclined to support Hampstead rather than to revert to a mixed electorate for logical reasons, and it was pointed out that as the matter was to be determined in a by-law, it would be wiser to leave it as at present, so that at some future time the whole question might again receive full discussion. Several members spoke both for and against the proposal, and on being put to the vote the amendment was lost by 31 votes for to 57 votes against. The Organization Committee thereupon proposed that the election should be partly by the Branches and partly by the Representative Body. In determining what ratio should be adopted, that of 2 to 1 was suggested in accordance with the resolution passed at Caxton Hall. This was eventually carried. Dr. Ballance then proposed that the Branches should elect 20 members, the Representative Body 10, and the Colonies 10, while the whole Council would consist of 49 members. The Colonial members having expressed themselves satisfied with less than 10 members, Dr. Ballance accepted the number of 7 for the Colonial members. Dr. Fothergill proposed that the Colonial members be nominated by local councils or federations. This was agreed to. An attempt to increase the size of the Council to 64 proved futile, and it was eventually agreed that the Council should consist of 24 members to be elected by the Branches, 12 by the Representative Meeting, 7 members from the Colonies, 6 *ex-officio* members, and 3 Service members. Only 5 votes were recorded against this proposal. The question of topographical distribution was discussed, and it was agreed that the Organization Committee would do its best to embody in a draft clause adequate representation, over-representation for distant parts being desired. The Service members are to be elected by the Council. The power of co-option was next dealt with. Dr. Ewart proposed that the Council retain the power of co-option. Dr. Straton (Salisbury) supported this. Dr. Fothergill regarded that co-option should be limited to Committees and refused to the Council. The meeting determined against co-option for the Central Council. It was further urged that Wales should be regarded as a separate entity, and therefore be accorded a separate member. The details of the geographical distribution was, however, left to the Organization Committee. At the instigation of the Wandsworth Division, it was agreed that the election of members by the Branches should be conducted by the head office out of central funds, as this would be a more businesslike method. Dr. Cox urged that since several Branches would be grouped together in each Constituency, it would be difficult to arrange for a local control of the election.

On a motion by Dr. Greer (Monmouthshire), it was agreed that each Representative should be an *ex-officio* member of his Branch Council. The first-class railway travelling expenses will be allowed to members of the Council and of Central Committees and to the Representatives. This was carried in the face of a proposition that reasonable daily and travelling expenses be allowed.

Finally, the constitution of the Standing Committees was discussed and arranged. In spite of an opinion given by the Treasurer, the motion to keep the Journal and the Finance Committees separate was carried. Dr. McKenzie Johnston (North-West Edinburgh) proposed that they should form one Committee, as at present. Dr. Macdonald (Taunton) could not see why the Journal Committee should have more claim on the Finance Committee than any other Committee. The voting for a separation was 68 for and 5 against. Mr. Armit (Hampstead) considered it unwise to impose a narrow limit on the Science Committee, and proposed that the numbers be increased to 14, exclusive of *ex-officio* members. He pointed out that while money was being freely spent on medico-political and ethical matters it was opposed to the constitution of the Association to hamper the work on science. Mr. Wolstenholme (Salford) opposed on the ground that the present Committee was not representative of pure science. The amendment was lost. Dr. Langdon-Down (Richmond) proposed that the Ethical Committee consist of 6 members elected from the Representative Meeting and 6 by the Council, beside *ex-officio* members. This was approved of. On the point of co-option being raised, Dr. Cox (Gateshead) wished that all Committees should have the power of co-option. Dr. Kirby (Birmingham) seconded the proposal. Mr. Armit pointed out that it was the Subcommittees which required co-option for the discharge of efficient work, and that co-option for Standing Committees was unnecessary. It was agreed to limit the power of co-option to the Subcommittees.

The final motion of the Organization Committee, that the draft Charter, Ordinances, and By-laws as amended, subject to any alterations which might be required as the result of a Referendum, be referred to counsel for final revision and placed before a Representative Meeting for final confirmation at the earliest possible date, was approved, and hearty votes of thanks to Dr. Macdonald for presiding and to Mr. Verrall (Chairman of the Organization Committee) for assisting in directing the meeting were duly recorded.

After we had gone to press last week the following cablegram was received: "Adelaide Branch approves Charter and details."

General Medical Council.

[A full report of the Proceedings of the General Medical Council is published in the SUPPLEMENT *for this week.]*

NOTES.

Membership of the British Medical Association and of the General Medical Council.—This question, alluded to in the President's address, was shelved for the time being, it having been pointed out that the communication on the subject did not come from the Association but only from one of its Committees, and that the decision that the Association should take up penal cases as complainants was by no means final. The communication was therefore referred back to the Association and no doubt the question will arise again at the November session of the Council.

Teaching and Examination in Midwifery and Gynaecology.—More than a year ago Sir John Williams called attention to some inadequacy in the teaching of midwifery, and the Midwifery Committee has been for some time discussing the matter, and has conferred with a number of the licensing and teaching bodies as to its improvement. In the discussion of the recommendations of the Committee, which were now presented for adoption, it was evident that the need for some improvement in the practical teaching was pretty generally recognized, and the only differences of opinion had relation rather to what was practicable than to what was desirable. The first recommendation of the Committee will have the effect of postponing to a somewhat later period than is now usual the attendance of students upon their practical midwifery, for it is laid down that they shall have first held the offices of clinical clerk and of dresser. A good deal of discussion took place as to the retention or rejection of a requirement that a course of lectures on surgery should also have been attended, and whether a course on medicine should not also be required as an antecedent condition. This was rather a waste of time, for unless the spirit of the requirement were to be evaded by giving clinical appointments at an unnaturally early period, it is quite certain that the lectures would have been attended in the usual course of events before students were qualified for the attendance of practical midwifery. The further recommendation of the Committee as to attendance at a lying-in hospital presented some difficulty, inasmuch as in some places where medical schools exist there are no lying-in hospitals. It was suggested and accepted that Poor-law infirmaries should be included, which would in some cases remove this difficulty, though it does not follow that in all cases the authorities will lend themselves to the use of these institutions for teaching purposes. Sir John Williams, however, was not willing to yield the point further than this, perhaps considering that if the recommendation went forth, some means of meeting it would be devised, and that the object of improving midwifery teaching, which presents obvious difficulties, would not be attained if every recommendation which presented any inconveniences were waived. Some question as to whether a smaller number of labours than twenty would not be adequate was also raised, but finally the recommendations of the Committee, which had devoted much time and care to their preparation, were adopted. Similar objections on the score of impracticability were raised to the recommendations of the Committee that the practical element should be introduced into the examinations on midwifery and gynaecology, but on this point also the recommendations of the Committee were finally carried. The recommendation after all, is merely that the attention of the licensing bodies should be called to the necessity of introducing some form of practical examination.

New Ordinances of the University of Edinburgh. With the view of saving time these have been referred to the Education Committee and to the Examination Committee to report to give a reply to the Privy Council's inquiry as to how these new regulations came into accord with the General Medical Council's requirements, and the session of the Council had to be prolonged for a day because the Report of the Examination Committee was not in print. The result was a fiasco of a curious sort. The Committee had reported in effect that the new regulations, while perpetuating the system of allowing students to pass their subjects one by one, had not adopted the recommendation of the Council that, when this was allowed, a higher percentage of marks should be required for a pass than where all the subjects were taken up together. It was, however, pointed out by the President that the recommendation of the Council on this subject, taken in connexion with its context and with the circumstances under which it was passed, really had relation only to the subjects of the Final Examination, whereas, as quoted and used by the Examination Committee, it was extended to all subjects. Hence the recommendation travelled beyond the reference, which was only on the point whether the Ordinances conformed with the Council's existing rules, and was in effect making a new rule *ad rem*, so that it was out of order. A motion by the Chairman of the Examination Committee, that the Council is of opinion that when subjects which are usually taken together are entered for singly the pass standard should be at least 60 per cent., was lost. It is probable that it was lost simply because it came up in this particular connexion, so that the anomaly was created of the Council recording a vote in general terms which, on the face of it and without its attendant circumstances being understood, is the opposite of its real opinion. Finally it was resolved that the Council find nothing in the proposed ordinances contrary to the Council's resolutions on professional education and examination—a somewhat lame conclusion, seeing that, in fact, the Ordinances, whilst they do not negative, yet do not adopt, the Council's resolution on this matter, which they might easily have done; but this conclusion seemed to be the only one possible without blocking the Ordinances altogether.

Education Committee.—A most valuable report was presented by the Chairman of the Education Committee, upon the preparation of which much time and care had been spent. It dealt with the curriculum of 1,111 students who qualified in 1906 under three sections—namely, age at entrance, age at qualification, and age length of actual curriculum. As we propose to deal at greater length with some of the conclusions to be drawn from the report, it will suffice to note here that the general averages arrived at were an age of 18 years and 10 months at entrance, an age of 25 years and 6 months at qualification, and a length of curriculum of six years and one month.

The Pharmacopoeia. The Committee appends to its report a copy of the international agreement respecting the unification of the formulas for potent drugs, signed by the representatives of eighteen Governments at Brussels in November last. It will be noticed that in some instances a formula for the preparation of the drug is given, in others a formula for preparation in addition to a fixed ultimate strength, and in others the fixed ultimate strength alone. Potent drugs are not to be employed in the form of medicinal wines, and the "drop" is defined as 20 drops per gramme of distilled water at 15 centigrade. It will be necessary to ascertain what changes must be made in the *Pharmacopoeia* in order to bring it into accord with the terms of the agreement.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Course of Business. The Prime Minister's statement last Monday settled the question of an autumn session. The House will probably rise in the middle of August, and the following are the principal Bills to be passed through the Commons: The Army Bill, the Finance Bill, the Patents Bill, the two Small Holdings Bills for England and Scotland, the Evicted Tenants Bill for Ireland, the Criminal Appeal Bill, and the Women on Local Authorities Bill. The Valuation Bill for Scotland will be passed if possible, and a Housing Bill will be introduced but it is not very likely to pass this session. The Irish Council Bill, the Irish University Bill, the Passive Resistance Bill, and the Licensing Bill are all dropped.

King Edward's Hospital Fund for London Bill.—This is a private Bill to incorporate the President and Council of the Fund and to provide for its management. It was the subject of some conversation among members of the House last week, and when it came before the Select Committee on Unopposed Bills it was discussed at considerable length. The Bill had passed the Lords, but the Commons' Committee thought it was drawn on too narrow lines. The Fund was of over a million, and all the powers connected with its distribution, it was urged, might not always be in such good hands as the present President's (H.R.H. the Prince of Wales), and provision should be made to meet such a possible contingency. The discussion ended in the matter being adjourned to another meeting of the Committee.

Health Questions in Scotland.—When the Scottish Estimates were under discussion last week several topics of medical interest were raised. Sir F. Banbury called attention to the increase of 35 per cent. in the cost of administering the Inebriates Act in Scotland, and asked how it could happen in a country that enjoyed Sunday and Early Closing Acts. The Secretary for Scotland said the increased expenditure was due to the desire to extend and develop the curative treatment of inebriates. Mr. Weir complained of the inadequacy of medical inspectors in Scotland. There was but one inspector for the whole of the country, and it was a physical impossibility for one man to do the work. He asked for more inspectors, and pointed out the growing insanitary condition of the cottages in the Island of Lewis. The importance of inspection of meats was also raised. Mr. Gulland commended the steps taken by the local authorities to prevent the spread of consumption, and urged the increase of female sanitary inspectors with the object of lessening infantile mortality. Mr. Sinclair replied sympathetically on all these points, and promised that the condition of things in the Island of Lewis should have the special attention of the Government.

The Notification of Births Bill came before the Grand Committee on Monday, and was greatly modified in the course of its consideration. The Local Government Board found the Bill in its original shape difficult to work, so a large number of amendments were introduced by Mr. John Burns. The first and the most important alteration was to make the Bill an adoptive instead of a compulsory Act. This was carried, after a good deal of opposition, by 19 to 15. Dr. Cooper raised several points with reference to the position of medical men as regards the notification, for which no fee is provided, and also as regards the invasion of the lying-in chamber by the medical officer of health or his representatives. The feeling of the Committee was that on the whole the Bill would be useful in lessening excessive infant mortality, in accordance with the experience in Huddersfield. The notification of stillbirths was included, but, in spite of protests, no definition of a stillbirth was put in the Bill. This may lead to confusion and difficulty in administration. On the Report stage the defects may be remedied if the Government gives the Bill facilities for passing.

Parish Midwives.—Mr. Remnant asked the President of the Local Government Board if he could state the number of midwives who were employed during the last or any recent period of twelve months as parish midwives; whether midwives so employed were regarded as Poor-law officers; and whether any Order of the Board had been issued with regard to their appointment. Mr. John Burns replied that he was not in a position to give the information desired. The midwives referred to would not usually be regarded as Poor-law officers. There was no Order of the Local Government Board with regard to their appointment.

The Inebriates Acts.—Mr. Gladstone, in reply, to Mr. E. H. Pickersgill, said that he was aware that a good many women in Holloway Prison had qualified for committal to an inebriate reformatory. It was, of course, for the court to decide what was the best way of dealing with each case; but he had specially drawn the attention of magistrates to the working of the reformatory system, and had recently taken steps to ensure metropolitan courts being made acquainted with a prisoner's previous convictions for drunkenness. He did not see that he could with advantage take any further action at present, but he thought it would be well if more use were made of the powers given by the Inebriates Act.

The Drainage at Kingston Barracks.—Mr. Hicks Beach again called attention to the sanitary conditions at these barracks, and Mr. Secretary Haldane said that the drainage was still under construction and had not yet been completed. In the meantime the temporary arrangements for the use of urinal tubs at night must be continued.

Inquests in London Workhouses.—Mr. Claude Hay asked the President of the Local Government Board whether he could state the number of inquests held on persons who died in London workhouses and infirmaries during the latest year for which the figures were available; the proportion of inquests held to the total number of deaths in such institutions, and the number of inquests held on persons over 60 years of age, and the proportion to the total number of deaths over that age; whether he could say what was the general practice in regard to the holding of inquests; and what were the fees paid to medical officers and coroners in connexion therewith. Mr. John Burns answered that he had made inquiry, but he did not find that any official returns gave the particulars desired. The subject of coroners and inquests was not within his province, but he might state that the London coroners were paid fixed salaries, and that a medical man who attended an inquest on a summons from the coroner was entitled under the Coroners Act, 1887, to a fee of one guinea for attending to give evidence at an inquest at which he had made no *post-mortem* examination, and of two guineas for making a *post-mortem* examination and attending to give evidence thereon.

Tuberculosis in Cows.—In answer to Mr. Watt, the Secretary for Scotland stated that the figures compiled from the returns of the Local Government Board from 1900 to 1906 were as follows: 1900. Cows examined, 20,076; of these 54 were affected with tuberculosis of the udder; in 1901, the figures were 22,604 and 46; in 1902, 26,382 and 40; in 1903, 29,870 and 40; in 1904, 29,305 and 37; in 1905, 38,309 and 43. The figures were, however, only approximate and did not represent the exact number of cows certified as affected with tuberculosis of the udder, which he was unable to obtain. He had no information as to how the cows certified were disposed of.

Medical and Dental Practice by Companies.—The Select Committee of the House of Lords appointed to inquire into the Bill for the prohibition of medical and dental practice by companies opened their work by hearing evidence on Monday last. Dr. Donald MacAlister and Mr. Tomes gave evidence on behalf of the General Medical Council, and some witnesses were heard on behalf of the British Dental Association. The Committee adjourned till Thursday.

The London County Council and Inebriates.—Mr. Pickersgill called the attention of the Home Secretary to the decision of the London County Council to terminate the arrangement of 1904 with the National Institution for Inebriates, and asked whether the effect of this decision would not be to deprive the London magistrates of the opportunity of committing inebriates to reformatories except as regards a small number of selected cases eligible for Farmfield, and what steps would be taken to continue the committal of inebriates to reformatories in suitable cases. Mr. Secretary Gladstone replied that his attention had been drawn to the decision of the London County Council to discontinue their present provision for the reception of all classes of female inebriates, and to restrict their work to a few selected cases eligible for Farmfield, and there was no doubt that if this policy was maintained, the London magistrates would be deprived of the opportunity to commit female inebriates to reformatories save as regards a few isolated cases. He was about to communicate with the Council upon this important matter.

Scotland.

The Edinburgh and Glasgow Medical Club.

On Friday, May 31st, the annual dinner of this club took place in the Hall of the Royal College of Physicians, Edinburgh, Dr. Playfair, Vice-President of the College, being in the chair. The occasion was in every sense a great success, and Edinburgh men were delighted to welcome a large contingent from Glasgow. From their proximity the sister cities are eminently fitted to support and supplement the general medical projects and endeavours of each other, and there is no healthier sign of the mutual good feeling and sense of *camaraderie* existing between them than is to be found at this annual function. Next year the meeting takes place in Glasgow, and a large increase in the number of Edinburgh medical men taking part is expected.

Research Work in Edinburgh.

Since Dr. Ritchie has taken over control of the laboratory of the Royal Colleges a great incentive to research work has been added to the assets of medical Edinburgh.

Recognition of the intimate relationship between research work, pathological work, and general clinical work is everywhere rapidly breaking down the barriers between kindred institutions and smoothing the path to a fuller and a freer elucidation of the many complex problems demanding investigation.

Hospitals and laboratories alike have one common ultimate aim and object; they must work hand in hand and render what assistance they can the one to the other.

In Edinburgh the relationship has always been of the most friendly and intimate nature, and it is hoped that in the near future still greater opportunities will be offered laboratory workers of obtaining information of cases of disease in hospital connected with their work, and of obtaining access to such valuable, and in many cases essential, links in the chain of their investigations.

The Dr. Finlayson Memorial.

Those still intending to subscribe to the Dr. Finlayson Memorial might do so at their early convenience, either to Dr. R. Gourlay, 124, St. Vincent Street, or to W. D. Macfarlane, jun., M.B., 17, Woodside Crescent, Glasgow.

Poor-Law Commission.

The Royal Commission on the Poor Laws and Relief of Distress commenced the hearing of evidence in Scotland in the Caledonian Station Hotel, Edinburgh, on June 3rd. Evidence was given on behalf of the Poor-Law Subcommittee of the Scottish Committee of the British Medical Association by Dr. W. Core, Medical Superintendent, Stobhill Poorhouse Hospital, Glasgow; Dr. W. L. Muir, Secretary, Scottish Poor-Law Medical Officers' Association; and Dr. J. E. Moorhouse, Secretary, Scottish Committee of the British Medical Association. The proceedings of the Commission are private and we are not in a position to publish a report of the evidence. The witnesses were examined on the following statement, drawn up by the Poor-Law Subcommittee of the Scottish Committee of the British Medical Association, which had previously been submitted to the Royal Commission:

A.—OUTDOOR MEDICAL SERVICE.

The Committee has received returns from 420 Outdoor Medical Officers, the total number of districts dealt with being somewhat larger.

The condition of the Medical Service varies greatly, that in the populous towns being quite different from that in the Highland and Island districts.

Recommendations.

1. *Highlands and Islands.*

In many districts it is impossible to supplement the Medical Officer's salary by private practice.

In many districts there is no suitable house for the Medical Officer, and the rates cannot be used for building one.

The Committee would suggest that in these districts there is need for a national service, such as has been recommended for Ireland by the Viceregal Commission.

2. *Payment of Medical Officers.*

In the towns the Medical Officer is paid at a very low rate per attendance, and his salary is more like a retaining fee than a payment for work done.

The salary should be fixed in consideration of medical attendance only. Drugs and other materials should be provided under a separate contract.

There is no fixed method of remuneration for—

(1) Vaccinations;
(2) Lunacy Certificates; and
(3) Confinements;

and fees are not paid at all for—

(4) The Treatment of Fractures and Dislocations; and
(5) Operations.

Special fees should be paid for these services.

3. *Consultations and Administration of Anaesthetics.*

Provision should be made for consultations and the administration of anaesthetics.

4. *Tenure of Office.*

The want of such security of tenure of office as would be conferred by requiring the sanction of the Local Government Board to the dismissal of a Medical Officer is keenly felt.

5. *Holidays of Medical Officers.*

Medical Officers should be allowed a definite holiday every year, during which the Parish Council should defray the expense of a substitute.

6. *Superannuation.*

Some scheme of superannuation is desirable.

B.—INDOOR MEDICAL SERVICE.

The Committee has received returns from 60 Poorhouse Medical Officers.

Recommendations.

1. *Management of Poorhouses.*

In drafting rules for the management of poorhouses, a distinction should be made between the larger and smaller poorhouses. Special rules should be drafted for poorhouses having a resident medical staff.

2. *Poorhouse Hospitals.*

Whatever medical or surgical treatment is attempted in poorhouse hospitals should be assimilated to that in general hospitals, especially as to the standard of nursing, food, and drugs. In smaller poorhouses arrangements should be made for the transference of cases requiring operations to other institutions.

3. *Payment of Medical Officers.*

The salary of the Poorhouse Medical Officer should be fixed in consideration of medical attendance only. Drugs and other materials should be provided under a separate contract.

In addition to the salary, special fees should be paid for—

(1) Vaccinations;
(2) Lunacy Certificates;
(3) Confinements;
(4) The Treatment of Fractures and Dislocations; and
(5) Operations.

4. *Consultations and Administration of Anaesthetics.*

Provision should be made for consultations and the administration of anaesthetics in smaller poorhouses.

5. *Tenure of Office.*

From the Poor-Law Act of 1845 it is assumed that Poorhouse Medical Officers can only be dismissed by the Local Government Board. This point has never been tested, but the matter should be put beyond question.

6. *Holidays of Medical Officers.*

Medical Officers should be allowed a definite holiday every year, during which the Poorhouse Committee should defray the expense of a substitute.

7. *Superannuation.*

Some scheme of superannuation is desirable.

C. PUBLIC ASPECTS OF POOR-LAW MEDICAL SERVICE.

The Committee has received returns from 352 Medical Officers.

Recommendations.

1. *Pauper Children.*

The replies show a large preponderance of opinion in favour of the system of boarding-out, both in its physical and moral effects.

2. *Chronic Inoffensive Lunatics.*

The replies show a large preponderance of opinion in favour of boarding out with relatives or with strangers, in preference to treatment in lunacy wards.

3. *Aged Persons.*

One-half of the replies are in favour of outdoor relief, one-sixth of special almshouses, one-third of special poorhouse wards, giving a preponderance of 2 to 1 in favour of relief outside poorhouses.

The Committee is of opinion that aged persons who require nursing are best relieved in the poorhouse.

4. *Deserted Wives.*

The replies show a preponderance of 2 to 1 in favour of outdoor relief. In all cases it is desirable that the Parish Council should give a direct reference to some agency, such as the Legal Agent for the Poor, to assist the wife in securing aliment from the husband.

5 *Able bodied Unemployed.*

Upon consideration of the information collected, the Committee is of opinion that in all cases of application for relief the Parish Council should give a direct reference to some agency for relief of the unemployed, and that Poor-law relief should only be granted to the sick dependants of able bodied unemployed persons.

6. *Compulsory Powers.*

The replies show a large preponderance of opinion in favour of compulsory powers being granted for:

(*a*) The removal of sick paupers to poorhouse hospitals;
(*b*) The detention of sick paupers in poorhouse hospitals;
(*c*) The detention of "ins and outs" in poorhouses;
(*d*) The separation of children from vagrant or vicious parents.

7. *Outdoor Nursing.*

The replies show a preponderance of 4 to 1 in favour of Parish Councils subscribing to district nursing associations for the poor, in preference to the institution of special Poor law district nurses.

EDINBURGH ROYAL INFIRMARY.

At the weekly meeting of the managers on Monday, June 3rd, in view of the retirement in the autumn of Dr. Alexander James, senior ordinary physician, and Dr. C. W. MacGillivray, senior ordinary surgeon, the following promotions were made from the assistant staff:—William Russell, M.D., F.R.C.P.E., to be ordinary physician; and James W. B. Hodsdon, F.R.C.S.E., to be ordinary surgeon, both for five years, from September 1st next.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

In the week ending midday Saturday, June 1st, there were reported to the medical officer of health for Edinburgh (Sir Henry Littlejohn) 4 cases of suspicious cerebro-spinal meningitis; 1 death occurred, and 14 cases remained under observation.

The Registrar-General for Scotland reports that in the week ending Saturday, June 1st, in eight principal towns of Scotland there were 19 deaths from cerebro-spinal meningitis, or 9 fewer than in the previous week. Of these, 17 were in Glasgow, 1 in Edinburgh, and 1 in Leith.

Dr. Chalmers, Medical Officer of Health for Glasgow, has recently submitted to his authority a memorandum of much interest, in which the conclusions which may be drawn from the prolonged outbreak of cerebro-spinal fever in that city are discussed in detail. What he has observed inclines him to believe (1) that under average conditions the disease is possessed of a limited range of infectivity; (2) that it spreads in the majority of instances through the agency of an intermediary, analogous to the "carrier case" in diphtheria; but (3) the malady, under conditions which tend to produce air impurity in confined spaces, is capable of assuming the characteristics of a true airborne disease, such as typhus fever or measles, and then to attack a considerable proportion of the persons who breathe that air. Each of these conclusions is supported by detailed descriptions of the facts on which they are founded, tables being supplied to show that both this year and last year an undue percentage of cases have occurred in houses possessing two apartments only; while in all houses of similar size the proportion of those invaded has been highest amongst those inhabited by comparatively the largest number of persons. The majority of attacks occurred in children and young people under 15, the suggestion being made that a contributing factor is the exalted activity of adenoid tissue in the young. A good many cases occurred in which infection seemed clearly due to infection from "contacts." The meningococcus was discovered only three times in the nares of actual patients, but was found in four contacts, and these were inmates of houses in which four and five cases respectively had occurred. As regards school association, in 38 schools only single cases occurred; in 17 others there were two cases each; in 6, three; and in 4, four. In only five instances altogether, however, were two children in the same class attacked. The total death-rate up to March 31st, 1907, was 73 per cent. This is regarded as so abnormally high as to suggest that a good many cases of minor severity must pass unrecognized. There has been no instance of infection among the staffs of the hospitals, but one of Dr. Chalmers's assistants, Dr. Archibald, was attacked six days after visiting a house in which the disease was present, and in which there was a smell so foul as to nauseate him.

Ireland.

UNIVERSITY EDUCATION IN IRELAND.

WHAT every one expected—except, apparently the Government—has happened, and the Premier has found it necessary to drop the University Bill for this session. Mr. Birrell, whose name has become associated with failure in legislation, will devote his vacation to a fresh examination of the problem, and will perhaps introduce a Bill next year quite different from Mr. Bryce's proposals. He may actually propose a Catholic University in Ireland, if he has courage enough to face the denunciation of his party. There is a good deal to be said for such a solution, which would have the approval of the friends of Trinity College in opposition to the present scheme. At present it looks impossible, but more unlikely things have happened in the political market-place. Then there is the proposal to establish a new university in Dublin, with a college similar to Trinity, and to convert Belfast and Cork Queen's Colleges into universities. These things are possible; they certainly demand serious consideration. But they also present serious difficulties in the case of Ireland. Mr. Birrell will have a large demand upon his patience and good temper before he arrives at even a proposal which will have some chance of consideration.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

At the annual meeting of the Royal College of Surgeons, Ireland, held on June 1st, the report showed that the gross receipts amounted to £5,095 1s. 1d., and the expenditure to £4,584 16s. 4d., leaving £510 14s. 6d. in the bank. The mortgage and investment account showed a sum of £9,347 3s. 1d. to credit of the College. The portrait of the late Mr. Edward Hutton, President 1852, was presented to the College by his widow, who also sent a donation of £250 to the funds of the College on behalf of her late husband.

At a meeting of the College, held on Monday, June 3rd, the following were elected President, Vice-President, and Council: President, Henry R. Swanzy; Vice-President, John Lentaigne; Hon. Secretary, Sir Charles A. Cameron; Council—William Stoker, Sir Charles A. Cameron, John B. Story, Sir Charles B. Ball, Sir Thomas Myles, Sir Arthur Chance, Richard D. Purefoy, Sir Lambert H. Ormsby, Henry G. Sherlock, R. Bolton M'Causland, John S. M'Ardle, Robert H. Woods, R. Lane-Joynt, Thomas Donnelly, William Taylor, Edward H. Taylor, R. Charles B. Maunsell, Wm. Ireland Wheeler, and D. Edgar Flinn. The two new members are Mr. R. Lane-Joynt (Surgeon, Meath Hospital) and Mr. D. Edgar Flinn (Medical Inspector, Local Government Board).

ROYAL MEDICAL BENEVOLENT FUND, IRELAND.

Dr. Redmond, President of the Royal College of Physicians, occupied the chair at the annual meeting of the Royal Medical Benevolent Fund Society of Ireland held recently. The report submitted by Dr. J. Magee Finny stated:

The total amount of the grants recommended since last distribution is £1,114. The total number of applicants considered during the year was 84. Of these, 75 were from widows of medical men; 5 from, or on behalf of, their orphans; and 4 from medical men themselves. The number of applicants this year has been even larger than usual, and the amount given in grants has strained the resources of the Society to the utmost, though the aid given to many of the recipients has fallen far short of their claims and of their urgent necessities. The following hospitals have, this year, forwarded a list of subscriptions from the students attending them—namely: The Royal City of Dublin Hospital, £1 15s. (per Dr. J. H. Morton); the Adelaide Hospital, £3 2s. 6d. (per Dr. Harvey and Dr. Thacker); Sir Patrick Dun's Hospital, £1 10s. (per Mr. B. Solomons). The Belfast Medical Students sent £5 6s. (per Dr. Purdon) for 1906. The Central Committee again most heartily congratulate the Co. Antrim Branch upon the very satisfactory report which its energetic secretary, Dr. Richard Purdon, has, previous to his resignation, sent in. The Committee desire again to thank the General Secretary of the British Medical Association for kindly receiving, through the BRITISH MEDICAL JOURNAL, subscriptions for this Fund. The amount which passed through his hands this year was £26 16s. 6d. At the annual meeting last year of the Irish Medical Association, held in Dublin, a collection was made after the dinner. This collection resulted in adding £96 to the funds of the Society. For this valued help the Committee beg to thank the Irish Medical Association.

The Treasurer's report, submitted by Surgeon-General Joynt, stated:

During the year 1906-7 the grants awarded by the Central Committee amounted to £1,097 10s., or £24 less than in the preceding year. The grants awarded for the last eight years averaged £1,182. Dividends on stock realized £690 3s. 2d., including a refund of £33 15s. 5d. income tax. This shows an increase of £11 2s. 3d. No dividends have been received during the last two years from the Dublin and South-Eastern Railway Company (formerly the Dublin, Wicklow, and Wexford Railway), of which the Society holds £2,150 5 per cent. Preference Stock. The amount paid through the Central Treasurer was £221 19s., as compared with £196 6s. in the preceding year. Miscellaneous receipts realized £15 14s. 6d. The subscriptions forwarded by the Branch Treasurers amounted to £343 0s. 6d., as compared with £323 4s. 8d. the preceding year. The Belfast and County Antrim Branch contributed £149 14s. (including £7 18s. received late for audit the preceding year), an advance on any former year. The Society is much indebted to the President and Secretary of the Belfast Branch for the great personal interest they take in the Society's work, and for the admirable manner in which their branch is managed. The County Armagh Branch contributed £22 16s. 6d., the next largest contribution from any of the County Branches. Of the £343 received from County Branches, £154 should have appeared in last year's account, but was only received after that account was audited.

Mr. H. R. Swanzy (President, Royal College of Surgeons), Dr. A. Horne, Dr. Edward Taylor, Dr. Travers Smith, Dr. Purser, Dr. Donnelly, Sir J. W. Moore, Dr. Craig, and Mr. A. H. Benson addressed the meeting in support of the various resolutions advocating the cause of the Society.

Queen's College, Cork.

The retirement of Professor Charles, M.D., M.A., D.Sc., F.R.S.E., F.R.U.I., from the Chair of Anatomy and Physiology in Queen's College, Cork, which he has filled with marked distinction for the past thirty-two years, has caused deep regret, not only amongst the students, past and present, but the entire staff of the institution. On May 29th, in the Anatomy Theatre of the College, Professor Charles gave his farewell address, and received in turn from his students an expression of appreciation, regard, and gratitude of which any one might feel proud. The President, B. C. Windle, M.A., D.Sc., M.D., F.R.S., occupied the chair, and he was supported by the professors and students, past and present, to the number of about 100. Professor Charles referred to the great advances that anatomy and physiology had made since he began to teach. The twin sisters, as they are sometimes called, overlap he said to such a degree that in practice there is a debatable ground between them which is often claimed by both. It was in 1874 that Burdon-Sanderson was appointed Professor of Human Physiology in University College, London, and about 1878 the Council of the English College of Surgeons elected separate examiners in anatomy and physiology. This separation, however, had not taken place—at any rate, in any of the English and Scottish medical schools—when the professors in the three Queen's Colleges were appointed in 1849. The three professors of anatomy and physiology of Belfast, Cork, and Galway met twice a year at the Queen's University in Dublin. They created and maintained such a high standard in these subjects, that the medical degree of the Queen's University came to be recognized as a sufficient guarantee that the holder possessed, amongst other attainments, a thorough knowledge of practical anatomy and theoretical physiology. In 1875, when Professor Charles was appointed to the Chair of Anatomy and Physiology, the medical buildings were about half the present size, and much too small for dissections and physiological work. However, Dr. Sullivan, the then President of the College, took a deep interest in its welfare, and, having obtained the requisite funds from Government, in a short space of time he effected remarkable changes in the medical buildings, in fact, he practically made the building as it now stands. When the Royal University was established separate examiners were appointed in Anatomy and Physiology, and a few years afterwards the Chair of Anatomy and Physiology was divided. Of late years Professor Charles confesses to having found the practical teaching necessary to keep abreast of the times very arduous, with the result that the mental and bodily strain, which should diminish as years advance, had been gradually increasing. For this reason he had resolved after mature deliberation to retire, and thus allow younger hands to take the reins which he had held so long. Referring to the future of the College, Professor Charles was convinced that the best solution of the University problem, as far as the South of Ireland was concerned, would be to found eventually a university as well, which might possibly include Galway as well as Cork College. Dr. Windle, as President of the College, had done so much in the general organization in the College departments since coming to Cork that the goal of a Cork university might be reached this time. Professor Charles passed in review the pleasant colleagues he had been associated with in the past, now no more. Professor Maxwell Simpson, F.R.S., for many years Professor of Chemistry, shed lustre on the College by his discoveries and attainments. Professor Stephen O'Sullivan was a staunch and reliable friend, fearless in the expression of his views, and a good surgeon. Professor MacNaughton Jones was one of the most enthusiastic teachers the College had ever had. His knowledge of each branch of his profession was so well up to date, that he truly deserved the appellation of "Universal Specialist" given him by some of his Cork brethren. The names of Professor Lewis and Professor Savage Armstrong recalled two splendid types of distinguished men of letters. Having referred briefly to the many distinguished members of the present staff of the College, as well as past distinguished pupils of his own who were Professors of Anatomy or Physiology in various parts of the world, particularly in the Indian Medical Service, he bade farewell in a touching manner to those present.

Health of Belfast; Cerebro-spinal Fever.

It has been noted with satisfaction that the reports of the Medical Superintendent Officer of Health and of the Medical Officer to the Fever Hospital show that both the numbers and the severity of the cases of cerebro-spinal fever are declining. Dr. Robb says the recent cases admitted to the hospital are of a much milder type; 22 cases were notified in the week ending May 25th, which shows a slow but steady fall. The total has now reached 485, and the total number of deaths 336.

Fête at Queen's College, Belfast.

Last year Sir Donald Currie promised a quarter of the sum required to buy and furnish athletic grounds for the College if the students undertook to raise the remainder. The challenge was accepted, and a large number of the friends of the institution, as well as the students, have been busied during the last year with the ways and means of raising about £8,900. The chief item in the work is a large *fête* and bazaar which was held on May 29th, 30th, 31st, and June 1st and 3rd. It was opened each day under the patronage of distinguished names, and the various members of the professorial staff have given much-appreciated help in presiding, and proposing and seconding resolutions, at the openings, and all through the year working in committees. The students were most energetic, and contributed much to the success. Most unfortunately the weather utterly failed after the first day, and had it not been for the determined and unceasing activity of every one, success would have been distant. It is understood that about £3,700 have been raised. If the weather had been at all propitious there is no doubt that the full sum required would have been exceeded.

Liverpool.

Country Hospital for Chronic Diseases of Children.

Mr. Holbrook Gaskell has given the sum of £5,000 to complete the building, so far as at present arranged, of the Country Hospital for Children at Haswell. He has also expressed the wish that in some conspicuous and appropriate manner it should be recorded in the hospital that it is in commemoration of the labours of Miss Sedgwick and Dr. Charles J. Macalister in commencing and bringing to success the great work which has been, as it was expected to be, the pioneer of similar institutions. Mr. Gaskell has already presented to the hospital a memorial of the services of Mr. Robert Jones in the shape of an operating theatre. The provision of sufficient funds to

complete the building will naturally prove of great assistance to the institution, but it appears that the sum of £10,000 is still needed to complete the furnishing and equipment of the hospital. It is just ten years since the need for a hospital of this kind came to be realized in Liverpool, and the formal opening of the institution, housed in temporary premises, took place about two years later, namely, in November, 1899. This was the first attempt in this country to make provision for the treatment of crippled children in a hospital in which there was practically no time limit. The movement, thus started, has been warmly taken up and liberally supported, and the hospital now in course of construction will, when completed, have accommodation for 200 children. The idea of providing a hospital of this type was first carried out in France. Since it was tried in Liverpool, the United States have adopted it, and the Lord Mayor of London has just initiated a scheme for the provision of an institution devoted to the care of crippled children.

QUEEN ALEXANDRA SANATORIUM.

On June 10th a meeting will be held in the Town Hall in connexion with the proposed Queen Alexandra Sanatorium at Davos. The Lord Mayor will preside, and Lord Balfour of Burleigh will be present to explain the scheme

South Wales.

NEWPORT MUNICIPAL MILK DÉPÔT PROPOSAL.

THE Newport Sanitary Committee on May 28th considered the special report of Dr. Howard Jones, medical officer of health, on the high infantile mortality-rate of the town. One of the recommendations of the medical officer was that the corporation should consider the advisability of providing a municipal milk dépôt. Mr. Peter Wright strongly supported the suggestion, arguing that everything that was socially needed should be supplied by the municipality. Dr. Howard Jones said the milk supply was mainly responsible for the high death-rate amongst children. He submitted figures showing that where municipal milk had been supplied to infants the death-rate had been decreased by 35 per cent. After considerable discussion it was resolved that a subcommittee consider the report, but that they should not consider the question of a municipal milk supply.

SWANSEA MIDWIFERY LECTURES.

The Swansea supervising authority (the town council) of midwifery training, in connexion with the Central Midwives Board, has just commenced its course of lectures, the first course of lectures which have been given at the Swansea Hospital. Dr. Knight, instructor and lecturer, in presenting a report at a meeting held at the hospital on May 24th, said that the attention given was excellent, and the average attendance, 96 per cent., was especially good, considering that some of the pupils came from a great distance away, and had to attend other duties and occupations. Two pupils were going up for examination at the Central Board in June; several others would do so but for the difficulty of getting signed up for the twenty cases, but they hoped to overcome successfully that difficulty in future. Prizes for examination papers were distributed by Dr. Ebenezer Davies, executive officer of the local supervising authority, who said he was pleased to see such a good class at the first course of lectures, a scheme embracing which he had years ago hoped to see started in Swansea. One of the greatest deficiencies of the social life in our great towns was a supply of educated and thoroughly equipped midwives. Healthy-born children within a fortnight had, through pure ignorance, been blighted for life. Now, however, they were seeking to dispel ignorance, and the teaching imparted at these lessons was second to none, thanks to the efficiency of Dr. Knight. Of 90 midwives in Swansea, he did not think there were more than 8 or 10 who were qualified by examination.

SANITARY INSPECTORS' ASSOCIATION.

On May 25th a meeting of the South Wales Branch of the Sanitary Inspectors' Association of Great Britain was held at the Town Hall, Llanelly. Owing to the absence of the President, Dr. W. Williams, County Medical Officer of Health, Glamorgan County Council, Mr. D. R. Thomas, Chairman of the Council of the South Wales Branch, occupied the chair. After the ordinary business of the Branch was transacted, Mr. J. C. Hill, M.R.C.V.S., Veterinary Inspector to the Llanelly Urban District Council and the Carmarthenshire County Council, read a paper on The Inspection of Slaughter-houses and Cowsheds, in which he stated that inspection of meat was primarily done to protect the public from the dangers of diseased, unsound, and unwholesome food. To accomplish this it was, of course, necessary to inspect the animal prior to slaughter. It was, he thought, desirable that the Acts relating to meat inspection should be consolidated, and that every local authority should have the power to close all private slaughter-houses, to inspect and stamp all meat, and to have a clearing-house in urban districts and towns to which all meat which had been slaughtered outside those areas should be brought for inspection and stamping. Emergency slaughter should not be permitted until a veterinary inspector had given his report that the animal was fit for human food. This law should be made compulsory, not permissive. Failing the abolition of private slaughter-houses, they ought to be licensed annually, and only on their satisfying the local authority's requirements in every detail. Local authorities should not build large, unwieldy slaughter-houses, but rather medium-sized places at the most convenient centres. The attendants at dairies should be in good health. No one with the least suspicion of being a carrier of disease ought to go into the cowshed on any pretence whatever. The milker ought to wear a clean overall while milking, this to be used only when so engaged, and the hands should be swilled before beginning to milk each and every cow. The milker ought not to smoke or chew tobacco when milking. As regards diseases, the cow was in no way responsible for typhoid or scarlet fever; these diseases had to be put down to insanitary cowsheds, impure water supply, or infection of milk by the attendants. The appalling infantile mortality throughout the country called for increased control of milk. There was need of regular, frequent, and systematic inspection of all dairy cows. Many tuberculous cases were due to milk infection. About 3 per cent. of the milch cows in this country were tuberculous to some degree, and 2 per cent. of them had tubercle of the udder. A hearty vote of thanks was accorded Mr. Hill for his most interesting paper.

CORRESPONDENCE.

UNION OF MEDICAL SOCIETIES.

SIR,—The following societies have decided to amalgamate—namely:

Established—

1805. The Royal Medical and Chirurgical Society.
1846. The Pathological Society.
1850. The Epidemiological Society.
1856. The Odontological Society of Great Britain.
1858. The Obstetrical Society of London.
1867. The Clinical Society of London.
1882. The Dermatological Society of London.
1884. The British Gynaecological Society.
1886. The Neurological Society.
1888. The British Laryngological, Rhinological, and Otological Association.
1893. The Laryngological Society of London.
1894. The Dermatological Society of Great Britain and Ireland.
1901. The British Electro-Therapeutic Society.
1902. The Therapeutical Society.

The Otological Society of Great Britain and Ireland (1899) will give its decision on June 10th. His Majesty the King has graciously granted the petition of the above societies that the amalgamation shall be known as the Royal Society of Medicine. The new society will be housed at 20, Hanover Square. The balance of assets over liabilities is more than £37,000. The estimated balance of income over expenditure is about £1,000. This estimate is based on subscriptions actually promised. As answers have yet to be received from 700 persons entitled to join the new society, and as many members of the profession who are not members of the amalgamating societies

and therefore are not entitled to be proposed for election until the Society has been constituted, have expressed their desire to join, the balance of income over expenditure will be increased. The first meeting of the Fellows of the Royal Society of Medicine will be held at 20, Hanover Square, on Friday, June 14th, at 5.30 p.m., for the purpose of adopting By-laws and electing the Council and Honorary Officers.—We are, etc.,

ARTHUR LATHAM,
HERBERT S. PENDLEBURY,
Honorary Secretaries of the Committee of Representatives of the Societies.

London, W., June 3rd.

ARTERIO-SCLEROSIS.

SIR,—In the EPITOME of the BRITISH MEDICAL JOURNAL of May 25th, page 83, M. Huchard is reported as saying of certain observers that "In 1883 Sir William Broadbent attributed the lesions of arterio-sclerosis to a heightened blood pressure; Clifford Allbutt said the same in 1895" (the paper apparently referred to was published in 1894), and so on. I fear I trouble my brethren too often with my opinions, but one naturally desires to be quoted correctly. My position—one in which I still seem to be alone—is that arterio-sclerosis is not, clinically speaking, a disease, but a term of many diseases; that the process which I have named "hyperpiesis" is one of them, but not by any means the only one; and that in those other diseases the general arterial pressures may be, and continuously may have been, normal or subnormal. For instance, within two hours of writing this letter I have seen a young man, aged 20, with a definite and apparently widespread, but probably toxic and transitory, arterial thickening, whose full systolic pressure was under 120 and had been thereabouts to my knowledge for twelve months. Such cases are common enough.—I am, etc.,

Cambridge, May 29th. T. CLIFFORD ALLBUTT.

DR. WILLIAM HUNTER'S STATISTICS.

SIR,—The majority of the teachers in London have, I venture to think, read Dr. Hunter's statistics without much interest. They show—what nobody doubts—that London graduates have diminished; they do not show (*pace* the distinguished collector) much else. But if Dr. Hunter would carry his researches a little further he might perhaps furnish a more useful contribution, particularly as there is a more or less popular panacea (in the form of a red-brick building) recommended for these woes. We would all like to know, seeing that 'centres" have been established, with much fanfaronade, directly under the University:

(*a*) What proportion of students go to these "centres" in comparison with "other places."

(*b*) How these "centres" compare in equipment, endowment, and general efficiency with the supposed muddle elsewhere. Dr. Hunter can, if he likes, contrast, for example, King's College and the London Hospital.

(*c*) How two hospitals find their experiments answer in sending their students to these centres for instruction, and how much their numbers have increased as a result of their policy which, be it remembered, is what we are all exhorted to follow.

(*d*) What becomes of the students afterwards. This is a point no one seems to regard. If a man wishes to settle near a provincial town, he can now get a good local training and connexion—he therefore will not take a London degree; and if the richer arms at London itself he must face the ever growing competition, ever-lessening fees, and the increasing field of the specialist.

It seems hardly necessary to search for elaborate reasons for a diminution of students when so poor a reward is offered to them in return for so much learning and capital expenditure.—I am, etc.,

N. H. ALCOCK.

[illegible] June 3rd.

ANOTHER FORM OF HOSPITAL ABUSE.

SIR,—I hope you can spare me space in the JOURNAL to relate an episode which occurred a few weeks ago, and which shows that there are other directions besides that of the general practitioner to which the General Medical Council might turn its attention, with a view to the prevention of touting for patients by medical men. A lady who is in financial difficulties was advised to take her little boy to a hospital for diseases of the throat, nose, and ear in London, with a view to having tonsils and adenoids removed, as she is quite unable to pay for the operation. Greatly to her distress at having to seek charity, she took him there, and he was examined by a member of the visiting staff, who said he could not advise her as to operation till her next visit, which was to be in a fortnight. A few days later she received a typewritten letter, signed by this gentleman, and dated from his consulting rooms in the vicinity of Cavendish Square. In this letter the surgeon referred to her son, whom he had recently seen at the hospital, and invited her to bring the boy to see him "at above address," giving her a choice of two days, and asking her to "bring this letter with you." She acceded to this request, and was told by this gentleman that he had noticed that she and her son were above the ordinary class of hospital patients. He then pointed out to her that the operation would have to be very carefully performed, and that the boy was too delicate to be taken home after it; also, that haemorrhage might occur after they got home, and there would be no one present to attend to it. His suggestion was that she should take the boy to a nursing home for a few days (he knew of two or three in the neighbourhood), where the tonsils and adenoids could be removed carefully, and where the surgeon could be immediately summoned if haemorrhage commenced. The lady asked the probable cost of the proposed plan, and was informed that usually the fee was twelve guineas, but that it could be done for a reduced fee if necessary. She explained to him that she was quite unable to pay any fee owing to her embarrassed circumstances, which was her reason for seeking assistance at the hospital. He then suggested that she should wait awhile till her financial position improved sufficiently to have the operation done as he proposed. As I know this lady's position and the troubles which she has gone through, I have sent her to see the throat surgeon at a general hospital who is going to do the operation to-morrow, carefully I trust, although in a hospital. I have thus rescued her from the dilemma in which she found herself. She could not afford twelve guineas, nor even the reduced fee suggested by the West End throat specialist, neither did she feel disposed to have her boy operated upon at an institution where, on the admission of a member of the operating staff, the operation could not be done carefully, and from whence it would be dangerous to take him home afterwards.

I do not know whether this is the usual method adopted by members of the staffs of the special hospitals to increase their private practice; but if it is so, that may be the explanation of the fact that not only are the necessitous poor (who, by the way, are always asked to pay something) treated at these institutions, but nobody who will pay whatever he or she is disposed to is refused admission. I have heard people in comfortable circumstances boast that they need not pay doctors, as all they had to do was to go to a hospital and give a couple of shillings, and thus have the advantage of consulting West End specialists.

I feel that this is a subject which needs investigation, and that if a consultant uses his position on the staff of a hospital as a vantage point from which to tout for private patients, he should be brought to book, just as much as the general practitioner who touts by means of a friendly society.—I am, etc.,

London, E.C. W. FRANCIS ROE.

ARE PERICARDIAL ADHESIONS OF GREAT IMPORTANCE?

SIR,—Dr. Alexander Morison, commenting upon my letter, says that he would answer this question in the affirmative, and bases his conclusion mainly on the fact that some cases of enlargement of the heart associated with adherent pericardium have been considered to derive benefit from section of the overlying chest-wall.

It is sincerely to be hoped that cases of adherent pericardium may be alleviated by surgical procedures, but the success of a palliative measure cannot be said to prove that the idea in which it originated has been based upon sound pathology.

Dr. Morison does not dispute the statement that enlargement of the heart associated with general adhesion of the pericardium is virtually limited to cases in which adhesions are of rheumatic origin, but considers the different results which follow the presence of rheumatic and non-rheumatic adhesions to be due to the fact that in one instance "all the cardiac structures are affected in the general infective process," while in the other "the inflammatory process spreads from neighbouring organs." Although all varieties of pericardial inflammation can scarcely be definitely divided into two groups—on the one hand those in which the heart wall becomes diseased and on the other those in which it remains healthy—if it were possible thus to divide them, it seems to me that the division would remove any ground for belief in the serious nature of pericardial adhesions. If, where adhesions are present, the heart only suffers when "all the cardiac structures are affected in the general infective process," obviously the adhesions are not mainly responsible for enlargement of the heart or other evidences of cardiac failure.

While, however, the extreme importance of adhesions seems to me to be doubtful, it is not clear that inflammation of the cardiac muscle is the cause of cardiac failure in cases of adherent pericardium. In septicaemia pericarditis is secondary to foci of suppuration within the cardiac muscle, yet, if recovery from the acute illness should occur, enlargement of the heart does not follow. To repeat the remark made in a former letter, it appears probable that the deleterious sequences of rheumatic pericarditis occurring in a child are due to some influence on the nutrition of the growing heart.—I am, etc.,

April 16th. THEODORE FISHER.

P.S.—Sir James Barr has forcibly criticized the importance attached by Dr. Wenckebach to pericardial adhesions in the production of the pulsus paradoxus. Experience varies, but it seems to me to be open to question whether the pulsus paradoxus is especially commonly met with in association with adherent pericardium. An intermission of the pulse, occurring at the commencement of inspiration, is not uncommonly present in children recovering from almost any variety of febrile disease. Such a pulse possibly attracts attention more often in cardiac disease than in other affections, because in disease of the heart the pulse is more frequently observed. I have not had the pleasure of reading the paper by Sir James Barr on reduplication of the first sound of the heart, but the dull diastolic sound which has not inaptly been called "the third cardiac sound," when audible in children, is not infrequently heard only at the time of the heart-beat which occurs immediately after the commencement of inspiration. There can be no doubt that respiration very frequently affects the pulse and the action of the heart in children where there is not the least reason to suspect the presence of pericardial adhesions.

SIR,—This question, recently put in some letters in the JOURNAL, has been answered in different ways by some of your correspondents. It seems to me, however, that no direct answer to such a question can be given in the form of Yes or No. The importance of pericardial adhesions depends upon circumstances. No doubt a completely adherent pericardium may be found *post mortem* which has never given any symptom of its presence during life, and where nothing in the history of the patient is found to account for it.

The fibrous meshwork of the heart in which the muscle bundles lie is continuous with the membranous expansion which forms the endocardium on the one side and the visceral layer of the pericardium on the other. Inflammation of the pericardium is not limited to the surface, but spreads some distance along the fibrous septa of the myocardium. The effect of this varies according to its extent or amount. If extreme, it will produce a marked degree of interstitial myocarditis which might be called cirrhosis, and has the same effect upon the soft muscle fibres as in the liver it has upon the liver cells. In some cases the apparent hypertrophy, or, as it would be better described, the myocardial thickening, proves to be due not to muscle, but to fibrous tissue, exactly as in hepatic cirrhosis. In this case pericardial adhesion is one of the most serious affections the heart can suffer from. Fortunately such extreme conditions are rare; ordinarily the myocardium is not much affected, and where this is so what will then be the effect of the pericardial adhesion? This depends upon the degree to which it has interfered with the muscular contraction of the ventricle. The parietal layer of the pericardium is continuous anteriorly with the fibrous tissue of the mediastinum, but the attachment is loose, indeed in some animals—as in the dog—its tissue forms what looks very like a mesentery. So long, then, as this tissue continues loose and loculated, as it normally is, even if the two layers of the pericardium be adherent, the movements of the heart are not much interfered with, for a sort of pseudo-pericardium is formed outside the true pericardium. The little difference there may be is easily compensated for by a little muscular hypertrophy, and no cardiac symptoms whatever may arise. If, however, the fibrous tissue of the mediastinum be involved with the pericardial, then the heart becomes fixed to the sternum in front, and the movements are greatly hampered. Under these circumstances hypertrophy fails to effect compensation, and grave symptoms must follow.

The importance of pericardial adhesion depends therefore, as Dr. Morison says, upon mechanical conditions, but I fail to see how any surgical operation can do anything for them, except it may be to make them worse.—I am, etc.,

London, W. SAMUEL WEST.

AN ABNORMAL RISE IN THE AVERAGE LEVEL OF THE DIAPHRAGM.

SIR,—In his interesting paper on the above subject (published in the BRITISH MEDICAL JOURNAL of April 27th) Dr. Stacey Wilson infers that his cases of high diaphragm were due to a "diminution in the bulk of the intrathoracic contents" owing to "the relative emptiness of the thoracic blood vessels, especially those of the lungs." Dr. Wilson would appear to assume that a high position of the diaphragm necessarily implies a diminution in thoracic capacity, but this is by no means the case; it is, for example, possible, by elevating the ribs, to effect considerable thoracic expansion, while the diaphragm remains completely relaxed—that is, in a condition of diaphragmatic expiration. Without taking account of the girth of the thorax one is, therefore, not justified in postulating a diminution in thoracic volume from a high position of the diaphragm.

Is it possible, I would ask, that in some of Dr. Wilson's cases (for example, pericarditis, gastric ulcer, typhoid fever) the high position of the diaphragm was due to a passive relaxation of this muscle in order to afford as much rest as possible to the neighbouring parts?

Doubtless in some of the cases of high diaphragm quoted by Dr. Wilson there was an actual diminution in the mean size of the chest, and in reference to these I would suggest that the explanation offered is not the only available one. We may broadly say that fluctuations in the mean size of the chest are determined by the respiratory needs of the organism. The greater the latter the more are the inspiratory muscles (including the diaphragm) excited to activity, and the greater is the mean size of the chest; and vice versa. In complete quiescence of the body, as during profound sleep, the chest shrinks, whereas in breathlessness it expands. Now, in starvation the respiratory needs of the organism fall considerably, because there is so much the less food to be burnt off. I should, therefore, expect the lungs to shrink in a starved person, especially if kept warm and quiet in bed; but I should attribute this shrinkage not to a primary diminution in the quality of intrathoracic blood, but to a comparative inactivity of the inspiratory muscles, including the diaphragm.

I am not denying that there may be a relation between the quantity of intrathoracic blood and the height of the diaphragm. There are several reasons, for example, why a great increment in the former should cause the mean level of the diaphragm to be low. On the other hand, I am inclined to believe, for reasons I need not now state, that a considerable diminution in the quantity of intrapulmonary blood (for example, by a sudden diminution in the calibre of the pulmonary artery causing decided, though not excessive, dyspnoea) would lead, not as Dr. Wilson

implies, to a shrinkage, but to an actual expansion of the lungs from over-action of the inspiratory muscles.—I am, etc.,

London, W. HARRY CAMPBELL.

MORPHINOMANIA TREATED SUCCESSFULLY WITH ATROPINE AND STRYCHNINE.

SIR,—The paper, published in your issue of May 18th, on Morphinomania Treated Successfully with Atropine and Strychnine, by Dr. Mary S. P. Strangman, I have read with great interest, as I have devoted the last five years exclusively to the treatment of morphinomania and inebriety. In the first place, however, I would like to point out that the title of the paper is misleading, for the treatment seems to have been successful in dealing with only the after-effects of morphinomania with atropine and strychnine, Dr. Strangman stating that the patient had been without his drug for about a fortnight before she saw him. My experience of treatment by the administration of atropine and strychnine during the period the patient is being demorphinized, and immediately after, leads me to believe firmly that neither of those drugs is in any way useful. I have tried these drugs in over thirty cases, and have never yet found satisfactory results. After a patient is free from the drug, say for a fortnight, however, the struggle is practically over, and then undoubtedly atropine and strychnine, and especially the latter, are of value. Tonics, fresh air, massage, gentle exercise, and nutritious diet will, as a rule, restore a patient; but while the patient is still getting morphine, even in minute doses, and immediately after this is stopped, atropine and strychnine are of no avail. I therefore think that the case cited by Dr. Strangman is by no means conclusive that these drugs are specifics in the treatment of morphinomania, but are simply of use to assist the after-effects. The drugs I have found by far the most useful, and which have assisted me in getting patients through the crisis, which takes place when the morphine is reduced to minute doses, and eventually stopped altogether, are acetanilide with citrate of caffeine in an alkaline medium. In every case this combination has proved most useful. My experience has proved to me that reducing the dose of morphine slowly, keeping the patient in a restful state, maintaining the strength, with the administration at the crisis of the combination I have mentioned, is the only safe method of curing morphinomania.

Another point I should like to touch on is that Dr Strangman mentions the patient suffered from diarrhœa. This symptom, in the cases I have dealt with, has been rare. The intestine usually seems to have lost tone, and the peristaltic movement seems to be almost lost, the result being constipation. Here the drugs Dr. Strangman mentions are certainly of great value. Again, she refers to the loss of craving for morphine which her patient experienced as the result of the administration of atropine and strychnine. Now the great majority of morphinomaniacs, once they are free from their drug and their bodily strength has been regained, have no such craving. It is only when, by either overwork, worry, or some similar cause, their mental and bodily strength gets below par that they relapse into the habit, and therefore it is wrong to assume it was either the atropine or strychnine which caused this aversion.

I would like to point out in concluding that the so-called craving for alcohol in dipsomaniacs is now widely spoken of as being cured by atropine and strychnine. To say mind this is absurd, as dipsomania is purely a mental condition over which drugs have no control. I have never yet, in the hundreds of cases I have treated, found a direct craving for alcohol after the patients have been abstainers for a week or two. What they suffer from is a mental state of unrest, and this generally takes place at a most inopportune time when either atropine or strychnine could not be given, and which if it were, in my experience, would absolutely fail to correct this mental state of unrest.

To return for a moment to Dr. Strangman's morphine case, it would be of value to know by what method the patient stopped the use of his laudanum before he commenced her. Did he drop it gradually? Was it done under treatment or of his own freewill? In fact, a full history of his case would be of value. I am, etc.,

James G. Dreaper, L.R.C.P., L.R.C.S.Edin.

Cons. surgn. Fife, S.B. May 20th.

THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

SIR,—"Antiseptic" (April 27th) seems to be rather like his own "Man in the Street," who "laughs at our absurd medical etiquette, and does not bother his head to find out what it all means." He appears to regard the matter as one of mere etiquette, whereas it is really one of ethics, which is a much more serious question. Perhaps, along with many other members of the profession, he regards etiquette and ethics as equivalent or synonymous terms, which they certainly are not. All our ethical rules are framed primarily in the interests of the public, not of the profession, and the hitherto accepted rules as regards consultations are no exception. Rules of etiquette hardly affect the public at all, except in so far as they tend to keep members of our profession on good terms with each other and prevent misunderstandings.

In all matters the individual must occasionally suffer a little hardship for the general good, and in this matter of consultation the patient or either of the doctors may find our ethical rules in conflict with his personal desires or what he conceives to be his interests. The patient suffers for the good of the public and the doctor for that of public and profession alike. The patient may grumble and rail against our "etiquette," but the doctor ought to be able to take a wide view of the question, and not allow his own immediate interests or desires to interfere with the general good.

In the case "Antiseptic" mentions—a very typical one—Mr. Jones called in the wrong doctor to begin with; on finding out his mistake, he had not the courage to dismiss him, but called in the popular Dr. B. in consultation, and might do so again if necessary; he need not suffer very much for want of Dr. B., and might easily get some one else to take Dr. A.'s place if he chooses until the embargo is removed by lapse of time. Dr. B. has no valid grievance, he got a fee and a (perfectly legitimate) advertisement, and has no right to anything more, especially as Mr. Jones's happy recovery may have been quite as much due to A. as to B, whatever Mr. J. may think about it.

Are consultations desirable in the interests of the public? If they are, our rules ought to make them easy and to the advantage of all concerned. Noble as we all are, we are but human, and if a consultation is to be markedly to our disadvantage, we may somehow fail to regard it as necessary or even advisable, unless it is forced upon us as the less of two evils, consultation or dismissal. Such would be the attitude of all but the noblest of us, if we had no better rules than the one "Antiseptic" suggests, and consultations would be rarities. Where would the public interest come in? I fail to see how such a rule would benefit patient, doctor, or medical practice in the slightest degree, so I presume I should sign myself, yours, etc.,

COMMONSENSELESS.

THE ADMINISTRATION OF THE MIDWIVES ACT.

SIR,—I have every respect for the opinions of Sir Dyce Duckworth and Dr. Cullingworth as eminent specialists in their own subjects, but I am very much afraid that Poor Law and Poor-law hospitals are not included amongst them.

I see that several of the speakers talked about two standards of training. Now, as neither the Local Government Board or the guardians, either by the Central Poor-law Committee or the Poor-law Association, have ever suggested such a thing as two standards of examination, the two standards must be in the training. May I point out in passing that at the London Conference of Poor law Guardians of England and Wales the resolution expressly stated that there should be "one standard of examination," and at least one member of the deputation knew that the resolution was declared carried *nem. con.*, so we may treat the two standard story of examination with the contempt it deserves, and come to the training.

If the speakers really knew what is going on they would be aware that at the present time there are at least two standards of training. At some of the voluntary institutions the midwives are trained in the hospital, in others they are sent out with a midwife to attend the cases at the homes of the patients. The speakers at the interview appeared to labour under the mistake that all union hospitals are either as they were forty years ago or like some of the small workhouses in the rural part of England.

As one who takes his full share in the administration of union hospitals and asylums, I have no hesitation in saying that during the quarter of a century that I have been connected with the Poor Law there has been a revolution, and that to-day the administration in our large union hospitals is as good and the construction better than it is in some of the largest voluntary hospitals. I say that the proportion of union hospitals "approved" to the voluntary hospitals "approved" is absurd, and I also say that it is preposterous that the only union hospital approved in all Yorkshire, with its three and a half million people, is the Sheffield Union Hospital. If the present regulations stand, the supply of midwives in Yorkshire cannot possibly meet the demand.

If proof of the incompetence of the Midwives Board to deal with the questions that come before them in a statesmanlike manner is asked for, I may quote the case of the Whitechapel Workhouse, which has only just been approved, after long delay.

Dr. Cullingworth, who was the most competent member the Central Board ever had, states that "the certificate of that Board was accepted as evidence that a midwife had been satisfactorily trained, but under the plan of the Local Government Board that would not be the case." May I ask, Why not? I know that some of the large voluntary maternity hospitals have been very glad to get nurses from union hospitals. If the training was good enough to qualify them for those important positions, why is it not good enough since the Midwives Board came into existence?

Members of a deputation should always be careful to make themselves acquainted with both sides of a question, and also see that they are not being made a cat's paw of. Mr. John Burns and I do not always see eye to eye, but I am thankful to think that we have a strong man at the Local Government Board, who will appreciate the views expressed at their true value.—I am, etc.,

Didsbury. JNO. MILSON RHODES.

AN HONOUR FROM THE KING.

SIR,—Sir Alfred Scott Gatty states that three of the instances I sent you of "royal augmentations" are incorrectly so described. These are certain bearings in the arms of Sir James Clark, Sir Thomas Barlow, and Sir John Williams.

It would be as indecorous as it is impossible to doubt the ruling of Garter King of Arms, but perhaps you will allow me to give my reasons for including the bearings in question. Unless my researches are hopelessly inaccurate, I believe it would be found on investigation: (1) That no "lion passant" existed in the North Scottish family to which Sir James Clark belonged before the baronetcy conferred upon him for his services to Queen Victoria. (2) That no red rose existed in any Barlow arms until Sir Thomas Barlow received the baronetcy for his attendance upon our present Sovereign. (3) That no white rose existed in the Williams arms before Sir John Williams received his baronetcy after the accouchement of the Princess of Wales, at that time Duchess of York. I know enough of heraldry, though an amateur, to know that these distinctions are not "royal augmentations" in the strict heraldic sense, for an "augmentation" naturally means something added to an existing coat, and the three coats in question were new grants to their respective bearers. At the same time, in each of these three cases the shield contained charges which had already been borne by persons of the same name, and presumably of the same family. The crescents in the arms of Sir James Clark, the eagle in the arms of Sir Thomas Barlow, and the stag in the arms of Sir John Williams all existed previously in arms borne by families bearing these three names respectively. If, therefore, to a coat containing old charges something indicative of services to royalty is added, if such addition is not a "royal augmentation," what is it? We have all heard of the proverbial "distinction without a difference." In this matter, the difference is that one distinction is added by the King to a coat already in existence, the other is included by the heralds in the original grant. The heralds, however, are supposed to act under the direction of the King in both cases.—I am, etc.,

May 21st. ARMA VIRUMQUE.

THE MODIFICATION OF THE RADICAL MASTOID OPERATION.

SIR,—There is one point, at any rate, on which I am in thorough agreement with Mr. C. J. Heath, and that is, his advocacy of early treatment in suppurative otitis. But if we could always get these cases in the early stages I do not think there would be any need for a radical operation at all. Antiseptic irrigation and antiseptic soaking through a large or enlarged perforation will assuredly cure most of these cases, if commenced soon enough, and if it is properly carried out.

On some other points I am at issue with Mr. Heath. I think his teaching with regard to the importance of the antrum is wrong. It must be admitted that the original focus of disease is usually in the middle ear, and in my experience the most common complication in long-standing cases is caries of the walls of the middle ear. Mr. Heath suggests that if you cleanse the antrum and provide posterior drainage the cavity of the middle ear may be left to itself, and he does not think there is much danger of extension of mischief through the attic roof. This does, however, take place sometimes, and probably far oftener than Mr. Heath believes.

It is not surprising that the suppurative condition has continued in some of Mr. Heath's cases; but what is very surprising is that he does not appear to consider this fact a matter of much moment.[1] For my part, I cannot consider any case satisfactory in which a suppurative condition of the middle ear continues. Out of 74 cases of brain disease, 27 were shown to be due to ear mischief (Reynolds). For myself, I have found that in the great majority of cases the disease may be cured by treatment through the meatus, with or without an otectomy, and in a very small percentage of cases have I had to perforate the bone. Of course I do not refer to those cases that come to me with coarse lesions of the bone. With regard to such I follow Professor Politzer's advice—to remove diseased bone wherever you can find it, but leave the healthy bone alone as far as possible.

With the provision of good drainage through the meatus, with antiseptic irrigation and swabbing, hundreds of cases have got well, the antrum becoming disinfected *pari passu* with the middle ear. This little accessory cavity of the middle ear has been most unnecessarily abused by otologists. It is difficult to believe that disease ever originates in the antrum. In its normal condition it does not contain structures that interfere with drainage as does the middle ear. I do not think its condition often prevents the favourable progress of a case of middle-ear disease.

With regard to Mr. Heath's views on ossiculectomy, I have certainly seen a few cases in which this operation had been performed, years ago, without apparent benefit; but these cases got perfectly well after further treatment, and I am forced to conclude that the after-treatment had not been well managed at the time. But as the removal of an ossicle is not an essential step in an intrameatal operation for the cure of otorrhoea, I prefer to use the term "otectomy," which signifies a cutting out from the ear; and as every case should be treated on its merits, in one case all that may be required is a curetting of a carious patch, in another perhaps the removal of the outer attic wall.

Mr. Heath appears to think that the hearing cannot be good after removal of the membrane. I do not care to use the word "perfect," as Mr. Heath does, in connexion with the hearing; but I have several cases, still under occasional observation, in which I have removed the remains of *both* membranes, and whose hearing is very satisfactory indeed.

I beg to lay stress on the fact that my arguments are founded upon positive evidence, which is worth a great deal of negative assumptions. The frequent loss of hearing after the radical operation, which is now at last admitted, is, I believe, due to an effect upon the auditory nervous apparatus from shock due to the violent interference of the operation. It should not be thought to be due to removal of the remains of the membrane. Improvement in hearing has occurred after otectomy in some hundreds of cases. There is at the present moment a girl in the Coventry Hospital who has had both membranes completely removed. She has no difficulty in answering

[1] *Lancet*, August 11th, 1906, p. 357.

questions asked in a low voice by myself, standing some distance from the end of the bed. The same might be said of a boy, also under treatment. I have always been ready to admit that it may be legitimate to risk the loss of some hearing, if danger to life can be removed by a radical operation and by that alone, but to advocate an operation, the effect of which on the suppurative condition is admittedly uncertain, must be considered a somewhat retrograde proceeding.—I am, etc.,

Coventry, May 16th. F. Faulder White.

REGENERATION OF NERVES.

Sir,—I have read with much interest Professor Halliburton's Oliver-Sharpey Lectures on New Facts in Relation to the Processes of Nervous Degeneration and Regeneration, and should like to make some remarks regarding his second lecture, namely, that on Regeneration. There are practically two views as to the mode by which regeneration takes place, and it appears to me that Professor Halliburton has allowed himself to judge favourably or unfavourably as to the trustworthiness of the observations of others bearing upon this subject just accordingly as these observations favour or oppose the view which he himself supports.

The view which he upholds—namely, that the young axis cylinders, after section of a nerve, are produced by growth from the central segment of the divided nerve, and that these grow downwards till they reach the peripheral end-organs—is very seriously opposed by clinically-observed facts after secondary suture of divided nerves. Thus, after such repair of a divided nerve, the insensitive area within a few days after the operation recovers its sensation. This, Professor Halliburton admits, "would be valuable evidence in favour of the 'peripheral theory,'" as it certainly is; but then he sweeps it aside by saying, "if it were entirely trustworthy." It seems to me that this is a case of setting out to prove a theory, and when an unfavourable piece of evidence crops up which cannot be explained, it is swept aside as being untrustworthy. If facts are found which do not fit a theory, surely the theory requires to be altered, and not the facts to be denied. We are asked to believe that these clinical observations of early return of sensation are untrustworthy because of the observation of Mr. A. Edmunds, who "had recently the opportunity of observing carefully one of these cases. . . . A short time after the operation the patient stated he was able to feel, but these sensations rapidly subsided, and sensation did not really return until months later. The preliminary sensations were doubtless subjective; the irritation of the nerve fibres in the scar lasted some hours, and the sensations so produced were referred by the patient's mind to the original terminals of the fibres."

Now, there is no difficulty in understanding a case of this kind. It was of course a secondary suture, and apparently no early return of sensation was developed at all. Every surgeon must have met such cases. The feelings which the patient experienced were due undoubtedly to irritation at the seat of suture, the sensation being referred to the terminations, and the irritation was very likely the reason why early union failed and no early sensation appeared. Now in such a case the area of cutaneous distribution would probably still be found insensitive although the patient had feelings of pain in it—that is, referred pain. A needle prick in the cutaneous area would probably not be felt by the patient. This case was therefore not a return of sensation at all. Professor Halliburton seems to imply that cases of early return of sensation published by myself and others have been cases exactly like this, and if he imagines this then there is no wonder that he characterizes such observations as untrustworthy. I do not think, however, that he is justified in making any such assumption, for in the recorded cases of early return of sensation the facts have been stated quite clearly and definitely, and such patients experience return of sensation only in the ordinary way—namely, on stimuli being applied to the skin, and do not experience subjective feelings such as were experienced by the patient observed by Mr. Edmunds. No one, therefore, could justly attach such an interpretation to them.

Professor Halliburton, then, referring specially to some of my cases, reports them as "because no care appears to have been taken to distinguish real cutaneous from deep sensibility. Head and Sherren . . . showed by very careful work that the deep sensibility of the subjacent parts, such as would be excited by the pressure even of the finger, is entirely independent of cutaneous sensation. The fibres subserving this form of sensation run with the motor nerves, and are not destroyed by division of all the nerves to the skin."

Now all this in no way affects the conclusions to be drawn from my published cases. For example, take my first case, a full account of which is to be found in the *Phil. Trans.* (1897). In that case two nerves had been divided in the middle of the forearm six and a half months previously—namely, median and ulnar. Before the operation of suture there was neither sense of touch nor of pain over the little or ring fingers; slight tactile sensation, but no sense of pain over the middle finger and palmar aspects of the thumb and index fingers; loss of sense of touch and pain over palm and ulnar side of the dorsum of the hand. Sense of pain was tested by pricking the skin with a pin.

The two nerves were sutured, and three days after the operation, on pinching the tip of the little finger (formerly quite insensitive) the patient cried out with pain. On the fourth day he recognized the little finger when touched, and felt pain when it was firmly grasped or pricked with a pin. This return of sensation did not disappear but gradually continued to improve, and when the bandages were removed on the nineteenth day and the cutaneous sensation could be better examined, he was found to have recovered ability to localize touch in all parts of the affected fingers. All these parts were insensitive before the operation, and I should like to know why such an observation as this can be called untrustworthy, and how this return of sensation can be accounted for other than by supposing restoration of conductivity in the median and ulnar. I have published many cases of the same kind since, but quote this one as being the first of my series, the majority of which have given the same result.

The distinction between deep sensibility and cutaneous sensation of Head and Sherren clearly does not affect these observations, because we are dealing with a comparison between the sensibility of an area of skin just before and just after an operation, *the skin being at both periods tested by the same methods*, and showing before operation absence of sensation, and after operation presence of sensation. Therefore I should like to know how such an observation can be justifiably called untrustworthy.—I am, etc.,

Glasgow, May 28th. Robert Kennedy.

THE BRITISH MUSEUM READING ROOM.

Sir,—May I venture to bring to your notice a question respecting the British Museum Reading Room, now closed for repairs?

A large sum of money is to be spent on the painting and gilding of the interior of the dome, which we cannot suppose will greatly affect readers intent upon their books. Is it not desirable that in this age of advanced hygienic knowledge some money should be spent upon the better ventilation of the room?

As the windows of the dome command all the winds of heaven, it would surely be an easy matter to make ventilators in these in such a manner as to produce a thorough draught and to clear out the stagnant air when the *readers are absent*. This would not cause any chill to a sensitive constitution, and would remove the danger for officials and readers of breathing an impure atmosphere.—I am, etc.,

May 29th. A Student of the Reading Room.

CONGENITAL MALARIA.

Sir,—In reply to Dr. R. U. Moffat's inquiry, I venture to suggest that a case recorded by Sir Thomas Browne is a very striking example of congenital malarial infection. Writing from Norwich to his son Edward, about the year 1679, Sir Thomas says: "There have been and are still many quartane agues." Later on in the letter, there occurs the following passage, which I transcribe (from Browne's *Works*, Wilkin's edition, vol. i, p. 228):

"Mr. John Larke's wife, Sir Ralph Hare's sister, fell into a great ague fever, when she was yong with child, which held her long, and when she came to her time she was delivered of a daughter in the fitt, and the child was so ill that none thought she would live; butt it grewe better; butt, on the

third day, about the hower of its birth, fell into a fitt of an ague, and so agayne the third day after, and that quartane settled and lasted for divers moneths, till she was emaciated to skinne and bone, and was so lowe that shee was fayne to use bathing for a good while; butt she is now of the age of 18 yeares, and a very full yong woeman, I calld to mind this account, because shee dined with mee lately; her father was your loving friend.

—I am, etc.,

Glasgow, May 4th. T. K. MONRO.

INFANT MORTALITY.

SIR,—In the issue of the BRITISH MEDICAL JOURNAL of February 16th you note and remark on the surprising figures given in Sir Shirley Murphy's report in regard to the infant mortality during the first month of life in the crowded centres of London. The figures certainly are not what might be expected, nor is his conclusion that they do not afford much ground for the widely-held belief that antenatal causes are responsible for an alarming proportion of infant deaths.

A glance at a list of London districts and their infant death-rates as given in footnote, p. 32, of Dr. Newman's *Infant Mortality*, seems to suggest a probable explanation of the figures, and to lend very strong support to the old-established belief in regard to antenatal causes. Thus, take Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, Bermondsey, Lambeth. These are all credited with high rates of infant deaths. They are also, I believe, what may be called crowded areas.

The race composition of the population, however, is peculiar, quite half, I understand, being Jews. The Jewess is an excellent mother, and as a rule rears a large and healthy family; further, this race is, I believe, marvellously free from the causes chiefly responsible for producing antenatal conditions which result in infants unfit for life.

The conclusion would be that half the infants come of an exceedingly healthy stock, and may reduce the apparent death-rate for the first month of life nearly 50 per cent.; but while this hides the death-rate from antenatal causes, it can hardly be said to reduce it. The increase given in the successive three monthly periods seems to be what might be expected. The effects of insanitary surroundings, overcrowding, etc., acting on all, although the healthy section still no doubt improves the rate, it, on the other hand, emphasizes the probability of antenatal causes telling their tale throughout the course of infancy.

Should these speculations be well founded, the figures in regard thereto do not seem to give much ground for cheery optimism on the subject of infant mortality from antenatal causes.—I am, etc.,

May 5th. B. G. B.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

APPOINTMENTS.

MR. F. A. POTTS, B.A., Trinity Hall, has been appointed Assistant to the Superintendent of the Museum of Zoology.

Mr. K. Lucas, M.A., Trinity College, has been appointed an Additional Demonstrator in Physiology.

The following have been appointed Examiners in the Third M.B., Part II:

MEDICINE.—Professor Bradbury, Dr. Pitt, Professor Osler, and Dr. Rose Bradford.

MIDWIFERY.—Dr. Rivers Pollock and Dr. Spencer.

SURGERY.—Mr. Kellock, Professor Barling, Mr. Stanley Boyd, and Mr. L. A. Dunn.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on May 15th.

Advanced Lectures in Physiology.

Mr. M. Greenwood's course of eight lectures on Visual Sensation of Light, at the London Hospital Medical College, and Messrs. Beddard and Pembrey's course of eight lectures on Internal Secretion, at Guy's Hospital, were recognized as courses which an honours candidate may name for his practical examination for honours in physiology.

The following courses of advanced lectures in physiology were approved as falling within the general scheme of advanced physiological teaching:

London Hospital.—On the History of Anatomical and Physiological Discovery, by Dr. Charles Creighton.

Guy's Hospital.—On the General Physiology of Nutrition, by Dr. J. S. Haldane; on the Physiological Significance of Variations in the Constituents of Urine, by Dr. F. G. Hopkins.

Mr. M. Greenwood and Dr. H. M. Vernon were added to the panel of Lecturers in Physiology.

Physiological Laboratory.

Dr. Waller was re-elected Director of the Physiological Laboratory for the year 1907.

Sir Lauder Brunton's lectures on the Therapeutics of Circulation were directed to be published in accordance with the scheme in the Senate Minutes of December 17th, 1902.

Board of Examiners in Physiology for the Final B.Sc. Examination for Internal Students in 1907.

The following were appointed as Examiners for Internal Students for the B.Sc. (Pass and Honours) Examinations in Physiology for the year 1907; J. S. Edkins (Bedford College and St. Bartholomew's Hospital Medical School), M. S. Pembrey (Guy's Hospital Medical School), Professor E. H. Starling (University College), together with the External Examiners (Mr. Hill being chairman).

Resignation of Examiner.

It was reported that Mr. C. A. Ballance, owing to ill-health, had been unable to act for the M.B. B.S. examination in May, and that the Vice-Chancellor had appointed Mr. H. J. Waring as his substitute.

Appointment of Members of the Senate.

Among the appointments reported were Sir Thomas Barlow to represent the Faculty of Medicine; Dr. F. Taylor, the Royal College of Physicians of London; and Dr. S. Russell Wells, as one of the representatives of the Faculty of Science.

PASS LIST.

The following candidates have been approved at the examination indicated:

M.B. B.S. (Group I only).—L. C. Blackstone, Emily S. Cooke, R. L. E. Downer, T. S. Dudding, E. H. Hugo, Mary O'Brien, Evelyn H. B. Oram, E. N. Ramsbottom, H. G. Webb.

(Group II only).—L. Ball, W. R. Bristow, T. E. A. Carr, H. S. Chate, B.Sc., D. M. Davies, C. C. A. De Villiers, H. Houwink, D. W. Hume, A. J. Lee, G. W. Lloyd, C. Lovell, J. C. Mead, Emily M. S. Mecredy, E. L. R. Norton, J. Paulley, J. G. Phillips, E. S. Phipson, R. J. Reynolds, Marie Simpson, F. Standish, R. Y. Stones, R. S. Townsend.

COMPLETE EXAMINATION (*Pass*).—G. F. E. Allison, C. J. Armstrong-Dash, J. S. Avery, A. Ball, A. Barber, T. Bates, Ella Beales, Sylvia R. M. Blackstone, Mary A. Blair, J. F. Broughton, S. W. R. Colyer, E. J. C. Dicke, K. H. Digby, A. B. Fearnley, J. Ferguson, K. M. Gibbins, E. T. Glenny, S. L. Graham, A. D. Griffith, Leopoldine W. D. Griffiths, S. W. Grimwade, G. Hamilton, H. B. Hill, F. N. S. Hitchcock, F. P. Hughes, G. G. James, S. H. J. Kilroe, H. S. Knight, Janet E. Lane-Claypon, D.Sc., A. Manuel, Marian Mayfield, Emily H. Morris, F. M. Neild, G. E. Oates, Catherine Payne, A. F. Perl, A. J. S. Pinchin, J. M. Plews, D. Rauken, F. D. Roberts, C. F. Robertson, F. W. Schofield, H. J. Smith, R. E. Todd, J. A. Torrens, S. W. J. Twigg, J. Unsworth, T. W. Wade, N. H. Walker, T. E. Walker, R. J. Waugh, D. Wilson, A. W. G. Woodforde, C. E. Zundel.

M.B., B.S. (*Honours*).—H. G. Bennett (*a*), G. T. Burke (*c*), B. W. Cherrett (*e*), J. H. Farbstein (*d*), J. A. B. Hicks (*b*), W. H. Miller (*d*), H. J. Nightingale (*a, b, c, d, University Medal*), A. C. F. Turner (*b*), C. W. Vining (*a*).

(*a*) Distinguished in Medicine.
(*b*) Distinguished in Pathology.
(*c*) Distinguished in Forensic Medicine and Hygiene.
(*d*) Distinguished in Surgery.
(*e*) Distinguished in Midwifery and Diseases of Women.

B.S. EXAMINATION (*Pass*).—(*For Students who graduated in Medicine in or before May, 1907*). J. Acomb, Dora E. L. Bunting, E. C. B. Ibotson, R. Phillips, F. Tratman, M.D., Hilda K. Whittingham.

LONDON HOSPITAL MEDICAL COLLEGE

A course of three lectures will be delivered by Dr. Frederic W. Hewitt, M.V.O., Emeritus Lecturer on Anaesthetics to the Hospital, on Certain Interesting Clinical Points in the Administration of General Anaesthetics, on Fridays, June 14th, 21st, and 28th, at 1 o'clock, in the Clinical Theatre at the Hospital. The lectures are free to all students of the University, and to medical graduates.

THE CRY OF THE CHILDREN.—A discussion on "The Cry of the Children" was held at the Women's Institute, Victoria Street, Westminster, on May 29th. The chair was taken by Mrs. Hylton-Dale. Mr. Charlton gave a short history of the growth of the movement, and, discussing the question of legislation, said that he felt confident that, even if it was found impossible to make an active move this session, an earnest endeavour would be made to carry the reform early next session. Miss Mary Gordon, L.R.C.P. and S., dealt with the physical and moral effect of alcohol upon women as witnessed by her in female reformatories. Many of the women in such institutions, she said, sprang from three generations of inebriates. They confessed that they could not remember a time when they had not been intimately acquainted with drink and the public-house. The crux of this question was that the nation wanted men. It did not wish to see the next generation physically and morally ruined during the plastic years of childhood. A general discussion followed.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

THE TITLE OF "DR." AND MULTIPLE DOORPLATES.

RUSTICUS.—(1) The question of the right of a registered medical practitioner to call himself "Dr." on his doorplate and visiting card has been discussed *ad nauseam* in the medical press; but when a resolution sanctioning this custom was proposed at the Annual Representative Meeting of the Association at Oxford it was lost. (2) We have frequently condemned the practice of multiplying doorplates upon houses at which there is no bona-fide tenancy. It can be justified only in scattered country districts.

THE OBLIGATION OF A LOCUM TENENS.

FAIR PLAY.—We think the obligations of a *locum tenens* are limited to the party for whom he acted as substitute, and that it is unreasonable to regard him as precluded from accepting as his patients those whom he formerly attended for his friend.

CO-OPERATION WITH AN UNQUALIFIED PERSON.

T. ARCHER GILT.—We cannot think our correspondent is well advised in continuing in attendance upon a patient who is also under the care of an unqualified person, as by so doing he is actually facilitating the proceedings of the unqualified person, and accepting a certain measure of responsibility for the result. We should advise him to withdraw from the case unless the attendance of the unqualified practitioner is stopped.

PROFESSIONAL MISCONDUCT.

ST. MUNGO.—It is often desirable that in mental cases the doctor should have an interview alone with the patient, and so far as this goes there is nothing unusual about the conduct of the practitioner. The other charge made by our correspondent, however, is so grave that it would be considered infamous conduct in a professional respect if established to the satisfaction of the General Medical Council, the court for hearing charges of professional misconduct. We should advise our correspondent to consult a solicitor, who will advise as to whether there is evidence to substantiate the charge.

Medico-Legal.

UNQUALIFIED PRACTICE.

In the *Tottenham, Edmonton, and Wood Green Weekly Herald* of May 18th is reported a death from phthisis which was made the subject of a coroner's inquest at which Mr. Tasker Keys, of 437, High Road, Tottenham, gave evidence, and is reported to have said that he had several medical degrees, although he conducted the business of Tasker, Keys, and Co. Neither name appears either in the *Medical Register* or the *Calendar* of the Pharmaceutical Society for 1907.

VALUATION OF A PRACTICE.

A CORRESPONDENT asks for a suggestion as to the lines to be taken in valuing a practice, which was to be sold as a death vacancy, where a *locum tenens* was kept in charge for a year, and the valuation deferred, owing to the late practitioner having been very irregular in sending in his accounts. The *locum tenens* is the proposed purchaser, and he has succeeded to an appointment of £50 per annum.

*** A death vacancy is seldom worth more than one year's purchase and this must be arrived at by calculating the probable annual income that should have been derived from it during the last three years after the accounts have been realized as far as possible: the income derived from it during the year the *locum tenens* was in charge, might properly be counted as one of these three years.

NOTIFICATION FEES.

NOTIFICATION FEE writes that he has applied to his local board for two notification fees. He received thereon a form to sign, as usual, on which he duly telephoned. But he has not heard from the board again, although he has written about the matter. He asks us what remedy he has.

*** Our correspondent should sue the local board in the county court for the fees, and if the circumstances are as stated he should have no difficulty in recovering them.

ACCOUNT-BOOKS IN SALE OF PRACTICE.

A CORRESPONDENT asks for information on the following points: (1) What is the usual custom, in the selling of a practice, as to the disposal of the account-books? (2) What is the usual restriction as regards length of time "not to start in practice" in a large town?

*** (1) If the book debts are bought by the purchaser they become the property of the latter. If not, they belong to the vendor in the absence of a special agreement. (2) It is usual to restrict the vendor for life from practising within a radius of from 3 to 5 miles of the house where the practice is carried on.

THE WORKMEN'S COMPENSATION ACT.

W. H. B. writes: Is a medical man liable under the Employers Liability Act for accidents to his collector while engaged in collecting accounts? He goes on to say that "collectors so employed spend only a few hours a week of their spare time, and are paid by commission on their takings. They are in no sense employed on or about the premises."

*** A medical man is clearly *not* liable under the Employers Liability Act, but he may be liable after July, 1907, under the Workmen's Compensation Act, 1907. A man employed to collect accounts is clearly employed "for the purposes of his employer's trade or business" within the Act. Unless it can be said that the employment is "casual," it does not appear that the doctor can escape liability; and in our view the fact that a man is employed only a few hours a week, and that he is paid by commission has no bearing on this question.

PUBLIC CONVENIENCE AND PRIVATE HOUSE.

A CORRESPONDENT writes that his local board has passed plans for a public convenience to be built very near the end of his house. It will also be overlooked by houses immediately across the road. Can he prevent the erection of the building so near his house, or could the owner of the houses opposite object?

*** Our correspondent, and the owner of the other houses and their tenants should make strong representations to the local board to induce it to modify its plans; and use might also be made of the local press. Failing this, it is to be feared there is no other remedy likely to be successful.

MOTOR CARS AND WATER RATE.

J. 837 writes: If "Motorist" (BRITISH MEDICAL JOURNAL, June 1st, page 1342) is a member of the Motor Union he may obtain information on the above point from the secretary. A test case was, I believe, tried recently, the Motor Union supporting a medical man at Harrogate in resisting such a charge, and, as far as my memory serves, the charge was declared illegal.

EDWARD H. EZARD, M.D., D.Sc. (Lewisham), writes: This question, which was dealt with in the BRITISH MEDICAL JOURNAL, June 1st, p. 1342, has been already the subject of legal proceedings, as will be seen by reference to a case reported in the *Royal Automobile Club Journal* for April 11th, 1907, page 470 (Harrogate Corporation *v.* Mackay). In that case a corporation sued a doctor to recover water rent charged for water supplied "for other than domestic purposes—namely, cleansing a motor car," which the doctor refused to pay. The petty sessions court decided against the corporation, and stated a special case for the opinion of the High Court. I would suggest that your correspondent, "Motorist" should become a member of the Motor Union (1, Albemarle Street, W.), from which body he will receive advice and assistance should he be involved in litigation with his local authorities on the particular question, as well as many other benefits and privileges in relation to motoring generally.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ADMISSION TO THE ROYAL ARMY MEDICAL CORPS.

"Regulations for Admission to the Royal Army Medical Corps" have been recently issued, and may be obtained by those specially interested.

VOLUNTEER MEDICAL ASSOCIATION.

The annual shield competition of the Volunteer Medical Association will take place on Saturday, June 29th, at Wellington Barracks, London, S.W. Teams must be entered not later than June 15th. The entrance fee is one guinea each team. All particulars may be obtained from the Honorary Secretary, Captain F. C. Montgomery Smith, 59, Abbey Road, London, N.W.

REWARDS FOR DISTINGUISHED SERVICE.

AN Army Order just issued contains a Royal Warrant directing that "a sum of £14,200 a year shall be distributed as rewards for distinguished or meritorious service among officers of our regular army, in annuities not exceeding £100 each." Among those eligible for selection are medical officers on the retired list, except such as may have received a substantial grant of public money for services of an exceptional nature.

INDIAN MEDICAL SERVICE.

CHOICE OF AREA IN CIVIL EMPLOYMENT.

THE Governor-General, under instructions from the Secretary of State for India, notifies that in future officers admitted to the Indian Medical Service will not be permitted to exercise choice of area for the purpose of civil employment, but will be posted on a consideration of all the circumstances, including, so far as possible, their own wishes, to one of the following civil areas: To Madras, including Madras and Burmah; to Bombay, including Bombay and Aden; to the Upper Provinces, including the United Provinces, Central Provinces, and the Punjab; to the Lower Provinces, including Bengal and Eastern Bengal and Assam. Though ordinarily employed within one of the above areas, they will remain liable to employment elsewhere.

I.M.S. WRITES: As I am under the impression that the profession at home are very badly informed at present as to the state of affairs in the Indian Medical Service, I hope you will publish this letter, giving a few facts about the service and comparing it with other Indian services. I will first deal with the question of pay.

On first joining the service the pay is Rs. 420 a month. This compares very favourably with the commencing pay in the other Indian services—namely: I.C.S., Rs. 400; I.A., Rs. 350, Forest, Rs 380; Police, Rs. 300 On joining, our services are thus estimated to be more valuable than those of the officers joining any of the other services.

What a difference is apparent later on. At four years the following is the average pay in the various services: I.M.S., Rs. 550; I.C.S., Rs. 700; I.A., Rs. 350; Forest, Rs. 500; Police, Rs. 500.

At eight years the difference becomes more marked in some of the services: I.M.S., Rs. 650; I.C.S., Rs. 900; I.A., Rs. 500; Forest, Rs. 660; Police, Rs. 700. It will be noticed that now the Police and the Forest Officer draw more than we do.

At twelve years the pay averages: I.M.S., Rs. 700; I.C.S., Rs. 1,500; I.A., Rs. 550; Forest Rs. 850; Police, Rs. 700. At this stage our services are only half the value of the services of the I.C.S. Officer, less than those of a Forest Officer, and equal to those of a Police Officer.

At sixteen years: I.M.S., Rs. 900; I.C.S., Rs. 2,250; I.A., Rs. 600; Forest, Rs. 1,050; Police, Rs. 900.

At twenty: I.M.S., Rs. 1,250; I.C.S., Rs. 2,500; I.A., Rs. 1,000; Forest, Rs. 1,300; Police, Rs. 1,000.

We are now more valuable to Government than the police, though we were at four years' service much less valuable. At 26 years: I.M.S., Rs. 1,350; I.C.S., Rs. 3,000; I.A., Rs. 1,500; Forest, Rs. 1,600; Police, Rs. 1,200.

Now we with the Police are thought least of. It has always been an axiom that the medical officer should draw more pay than a combatant officer, as he enters the service much older and spends more on his education for his profession. It will be seen that he does so until late in his service. The Police Officer comes in very young, about 18 or 19 years of age, and immediately begins to earn pay. The Medical Officer at this period is only at the beginning of his medical course and spending money instead of earning it. Thus the Police Officer of 24 is earning more than the Medical Officer of 32 as a rule. The Forest Officer enters earlier than we do, and is all through better paid. The I.C.S. Officer enters about the same age, and is very soon drawing huge pay. Another question we must consider is the aggregate pay drawn in the services in twenty-five years, as the increases in pay are very different and occur at very different periods. The Forest service, for example, get annual increments; we only get six increments in twenty-five years. The following are the aggregates: I.M.S., Rs. 240,840; I.C.S., Rs. 496,800; I.A., Rs. 169,400; Forest, Rs. 274,300; Police, Rs. 229,200. These figures are very instructive.

The last table I will give is an estimate of the expenses of the candidate for the various services from the time he leaves school to the time he begins to earn pay:

I.M.S.	age of entry,	25,	expenses,	£1,000
I.C.S.	,,	24,	,,	£800.
I.A.	,,	19,	,,	£600.
Forest	,,	23,	,,	£500.
Police	,,	19,	,,	£100.

The Police officer commences earning a salary when about 19 years of age, while the average age of an I.M.S. officer at entrance is 25, and he has spent a great deal of money to acquire his scientific training necessary for the examination.

I think you will agree with me that the pay of an I.M.S. officer for twenty years compares very unfavourably with that of the other services, except the Indian army, which is notoriously underpaid. The increase of the pay of the officers of the Indian army in the junior ranks is at present under consideration, but I have not heard that any increase is proposed for the I.M.S.

The I.M.S. should undoubtedly receive a substantial increase very soon, or the support of the profession should be withdrawn. The civilians say that we more than double our pay by private practice. This is a fallacy; a few very senior civil surgeons in the large cities do still add largely to their incomes in this way, but 95 per cent. of the service make nothing but their pay. Officers still go into the civil medical service because they get more professional work in the civil hospitals than in a regiment, and because living is much cheaper than with a regiment.

Most civil surgeons would prefer to have a fixed substantive increase of salary, and to have a rule that all fees made outside their Government work would be credited to Government. This would be a fair and equitable arrangement, and would enable us to receive a substantial increase all round.

The cost of the necessaries of life and of servants and house rent have increased so much that it is impossible for a married man to live in the country without getting seriously into debt until he is drawing Rs.700 a month. As a junior he is shifted about from one station to another about four times a year, and each move costs him at least Rs.400, all that Government allow him is two first-class fares.

In addition to all this, he has to try to save money to go home on leave, as he has to pay his own fare home and back. The average man cannot keep fit unless he gets his leave regularly, and this he does not do as he cannot afford it.

The leave question is the next that I wish to deal with. In the circular setting forth the conditions of service in the I.M.S. it is stated that an officer is entitled to one year's furlough after four years' service, but it does not state that he very seldom gets it; there are cases in which officers have done five, six, seven, up to ten and eleven years' service and have had no furlough. This is the result of the service being always short-handed. An officer is also supposed to get two months' privilege leave in the year; this he also seldom gets, as there is no one to do his work. I know one officer who has only had three months' privilege leave in fourteen years' service, and then it was combined with four months' sick leave.

The result of all this is that an officer seldom gets home until he has to go owing to having completely broken down in health. The proportion on the cadre allowed no furlough is one-fifth, so it would appear that officers should get their leave up to time. There is no allowance made for the number on sick leave, so the officer that is well cannot get leave. The obvious and extremely necessary remedy is to increase the cadre. Lately new leave rules have been introduced for the Indian army by which an officer can go on combined leave up to a total of eight months, that means two months' privilege and six months' furlough, etc.: five officers out of the fourteen in a regiment are thus allowed to go. The I.M.S. are also allowed to take this combined leave, but they do not get leave in the proportion of five to fourteen; they get leave in the old way—only one-fifth of the cadre on leave at a time—so if they take it they get four months' leave less than under the old rule.

You will see from the foregoing remarks that we are at present between two stools in the question of leave and pay. We do not get as much leave as we are entitled to, and if we did get it our pay is not sufficient to allow us to take it. These two grievances must be redressed at the same time or the service will become so unpopular that no one will enter. The sooner the Government's hand is forced in this matter the better for the service and for the profession.

THE MEDICAL SERVICE OF THE UNITED STATES NAVY.

WE learn from *Science* that the medical corps of the United States navy has not been able to get enough surgeons to meet the needs of the service. Admiral Rixey, the Surgeon-General, has undertaken to give temporary appointments as "acting assistant surgeons" to the young men who will pass a satisfactory preliminary examination and come to Washington for instruction. They will receive six months' special training at the Naval Medical School and Hospital, or at the Mare Island Naval Hospital. At the end of that course they will receive appointments as assistant surgeons, with an annual salary of 1,760 dollars, supplemented by allowances of 432 dollars and mileage. The shortage of medical officers in the navy has become really serious. There are 64 vacancies in a corps that at its maximum should number only 350.

ITALIAN RED CROSS SOCIETY.—The annual general meeting of the Italian Red Cross Society was held at Rome on May 20th. According to a report in the official gazette of Italy, the President, Count Taverna, made special reference to the Society's exceptional work caused by accidents in Calabria and in the districts around Vesuvius, and in their efforts to deal with malaria in the Pontine marshes and in the Agro Romano. The latter work is under the direction of Professor Postempski, to whom the meeting passed a special vote of thanks.

OBITUARY.

WILLIAM SEYMOUR BURROWS,

B.A.CANTAB., M.R.C.S.ENG., J.P.,

BRIGHTON.

THE death took place in Hove, on May 8th, of Mr. Seymour Burrows, a medical man who, like his father before him, had long been identified with the public life of Brighton. The only son of the late Sir John Cordy Burrows, whose work for Brighton—of which he was thrice Mayor—is commemorated by a statue in the Pavilion Gardens, William Seymour Burrows went to Cambridge in the Sixties, becoming B.A. in 1870, and M.R.C.S., as a student of St. George's Hospital, some five years later. After receiving his diploma he joined his father in practice, and until a year or two ago continued to occupy the family house overlooking the Pavilion grounds. Of late years, however, he had found this quarter too noisy for him, and about a year ago moved to Hove, and there in Exton House, Second Avenue, he died somewhat suddenly from heart failure. Though he had not been in good health for some little time past, it was only about a fortnight before his death that his condition was regarded as in any degree serious. He was a long-standing member of the British Medical Association, a Vice-President of the Brighton Natural History and Philosophic Society, medical referee to several insurance societies, and in public affairs followed in his father's footsteps, though in less conspicuous fashion. An excellent friend to the poor, and a generous supporter of all Masonic institutions, he was identified more particularly with volunteering and with the management of the Brighton Racecourse property. The 1st Sussex Artillery Volunteers he joined on leaving Cambridge, having already had some experience of the work as a member of the University Corps, and he maintained an active connexion with it for nearly thirty years. As First Lieutenant of a battery known at that time as the "Forty Thieves," in consequence of its success in winning prizes, he afterwards became Medical Officer to the corps, and showed such capacity for the work that in the old days of the big Brighton reviews he was on three occasions appointed by the War Office Principal Medical Officer. Eventually he retired in 1898 with the rank of Surgeon-Lieutenant-Colonel and the volunteer decoration. In his work as trustee of the Brighton Race Stand Property he was very active, and when the property eventually was handed over to the town he took steps to ensure that the future profits from the races should not be appropriated to what he considered undesirable municipal fads. It is to the old trustees, of which Mr. Burrows was one of the two survivors, that Brighton owes several valuable gifts, including Tenantry Downs and Queen's Park. He was also a magistrate for the borough, and frequently took a seat upon the bench, where his advice in certain cases was often of special value. He is survived by his wife, but leaves no children.

SAMUEL LODGE, M.R.C.S.ENG., L.R.C.P.EDIN.,

SURGEON, BRADFORD AND WEST RIDING POLICE.

THE late Mr. Samuel Lodge of Bradford, to whose death passing reference was made in our issue for May 18th, turned his thoughts to the medical profession at a very early age, made his way into it in spite of the many difficulties, and proved the wisdom of his early desires by making a decided mark in his chosen career. The eldest of a large family, he was born at Whitney, near Oxford, in 1824, and received his early education at the Bluecoat School in that town. He was a hard-working boy and did excellently at school, but he had his own way to make in the world, and for long it seemed impossible that he would be able to realize his ambition of becoming a medical man.

At the age of 25 he was still obliged to engage in other occupations, but in the following year secured a position as a schoolmaster in Huddersfield, and then began to study medicine privately. His first real start, however, he made a year or two later as an apprentice to the late Dr. Field of Dudley Hill, and it was not until 1859 that he was able to obtain a qualification, then becoming L.R.C.P.Edin. and M.R.C.S.Eng. In the same year he married a daughter of Mr. J. Lee of Durham, and began to work at Dudley Hill. Some ten years later, however, found him established in the centre of Bradford, on his appointment as Medical Officer of the third district of the Bradford Poor-law Union, a post which he retained until 1903. After this his success was continuous, in spite of several mishaps which might have ruined the career of a less resolute and less able man. When quite a young man an accident with a pistol had cost him the sight of one eye, and a few years later a fall from a horse resulted in a broken thigh and permanent lameness.

In the latter part of his career he was best known professionally as Surgeon of the Bradford Police, a post which he held for long and with great distinction, and in which, in spite of his great age, he had scarcely seemed to need any assistance until within quite recent years, when he appointed a deputy. He was a particularly good witness, extremely lucid and precise in his statements, and always ready to bring out any points which might tell in favour of the accused.

In the conduct of medico-legal examinations and the performance of *post-mortem* examinations his marked powers of observation served him in good stead. The first evidence of his ability in this connexion was contained in a report which, while still in his pupilage, he published under the title of *Post-Mortem Examination on a Man who Died from So-called Woolworker's Disease.* It was not, however, in professional relations alone that Mr. Lodge made his mark and became well-known in the West Riding of Yorkshire and the Midlands.

Well able to use a pencil himself he was an excellent judge of paintings and a student of art, both ancient and modern, who was capable of putting his knowledge into excellent literary form. His powers in this direction are well instanced by a paper on *Art and Artists*, which he read before the Bradford Scientific Association in 1875, and which has since been reproduced as a pamphlet. His literary ability, as well as his other powers, he retained to a very advanced age. This is interestingly proved by a short poem which he composed some five years ago on his seventy-eighth birthday, at a time when he was still carrying on practically unassisted his ordinary professional work. A copy of it may be valued by many of his old friends, as also by those acquainted with the locality near Oxford which he describes:

> The sighing wind brought music from the sea,
> The setting sunbeams gilded every tree,
> The darkening clouds bedimmed the tender light,
> And evening's glimmer faded into night.
> Ah! doleful now the recollection seems
> Of early years and boyhood's sanguine dreams,
> Of days when I by fragrant Windrush strayed,
> Or traced with blythsome steps St. Margaret's glade,
> Where grey and flinty stand the crumbling walls
> Of Minster's Tower and Lovell's lordly halls,
> And gazed enraptured through the moonlight hours
> On fancy woodland scenes in Wychwood's bowers,
> When Puck and Oberon and Fairy Queen
> Flew instant to my feet from Arden Green,
> With thronging imps and elves, a sprite array,
> That danced to sylvan sounds the night away.
> Anon my thoughts would turn the L'Angle land,
> Its Mercian kings and lords, "its councils grand,"
> Bards, priests, and spearmen, warriors grim and bold,
> Who there assembled, made the laws of old.
> The English heart springs light in L'Angle's groves,
> Blest home of literature and law and love!
> Now do the youthful days give place to age,
> And earnest life becomes a blotted page;
> Swift shadows of the past are dimly seen,
> And grave reflection tells what might have been.

His remains were interred at Bowling Green Cemetery on May 14th, the ceremony acquiring the character of a public funeral owing to the presence of many officials and of a strong detachment of the city police; members of the latter body bore the coffin from the house to the hearse, and the police band also attended, playing alternately Beethoven's funeral march and the Dead March in *Saul* until the church was reached. Mr. Lodge left a daughter and three sons, two of whom are medical men.

EDWARD USSHER CROKER, L.R.C.P.LOND., M.R.C.S.ENG.

THE medical profession in Fiji has suffered a severe blow in the loss of one of its comparatively junior but able and much esteemed members, Mr. Edward Ussher Croker. His death, which occurred on Easter Monday after only a few days' illness, was the consequence of septic absorption from the body of a native upon whom he was con-

luding a *post-mortem* examination, and has deprived the Colonial Service of an upright and promising officer in the very prime of life.

Mr. Croker was born at Dublin in 1875, and was the son of an army medical officer. He gained honours in the Cambridge Local Examination, and entered upon his medical studies at St. Thomas's Hospital in 1891, obtaining in due course the conjoint diplomas of the Royal Colleges. In 1897 he was given charge of the pathological department of the Sussex County Hospital, where he acted temporarily as one of the resident staff and gave great satisfaction. In the next and following years he was Assistant Resident Medical Officer at the Royal Berkshire Hospital, and from thence he went to the Victoria Hospital for Children at Chelsea, where he was House-Physician in 1899-1900. On the breaking out of the war in South Africa, Mr. Croker received an appointment as Civil Surgeon, and served on the surgical side successively in the General Hospitals at Newcastle, Howick, and Pretoria, where he did excellent work. He also had sole charge of the medical division of the Military Hospital at Krugersdorp for more than half a year, and served with the R.A.M.C. in the South-Eastern Home District until the autumn of 1904.

Subsequently he studied for some months at the London County Asylum at Banstead, but foreign service had given him a taste for travel, and in May, 1905, Mr. Croker was selected by the Secretary of State for the Colonies from the list of applicants for a vacancy in the Government Medical Department of Fiji, whither he proceeded in October of that year, after taking the usual course at the London School of Tropical Medicine. In Fiji his abilities and striking personal advantages were early recognized, and after a few months in a provincial out-station to gain necessary experience in the habits and language of the natives, he was recalled to fill the responsible post of Resident Medical Officer at the Colonial Hospital at Suva, where he constantly gave the most conscientious attention to his patients, coloured as well as white, and endeared himself in a short twelve months to his colleagues and all those associated with him in his work. At the time his last illness came upon him he was temporarily engaged in examining newly-arrived Indian coolies at the Quarantine Dépôt, and was not himself aware of his real condition. He worked steadily on for five days, with malaise and a rising temperature, and only yielded when it reached 104°—never reporting himself ill to the authorities. On his illness being made known in Suva medical assistance was immediately sent, and on Good Friday one of his colleagues—who, as it happened, had been a fellow-student with Mr. Croker at St. Thomas's—brought him away from the quarantine island in a fast motor launch to Suva. He was at once received into a private ward in the hospital in which, less than a week before, he had been doing his ordinary duty as resident medical officer; but septicaemia had already gained the mastery, and the skill of his colleagues availed no more than the assiduous care of his nurses. On the next evening but two he passed away—in a distant land, but on the very scene of his own good work, and in the presence of his sorrowing brother officers and staff. Lieutenant T. J. Croker, R.N., and a sister, who are understood to be the only surviving near relatives, have our true sympathy.

DONALD JAMES MACDONALD, M.B., C.M.ABERD.,
STORNOWAY.

WE regret to have to record the death of Dr. Donald James Macdonald of Stornoway, which took place on May 3rd after a short illness. The deceased, who was born at Garrabost, Stornoway, 53 years ago, received his literary education at the Aberdeen Grammar School, where he greatly distinguished himself. He afterwards studied medicine at the university of that city, where his ability and devotion to work brought him under the favourable notice of his teachers. He was for some time professionally associated with the late Dr. Robert John Garden, Senior Surgeon to the Aberdeen Royal Infirmary, to whose children he had been tutor for two years. He graduated M.B., C.M. in 1889, and in the same year qualified as D.P.H. He subsequently entered into partnership with Dr. C. M. Macrae, the Nestor of the medical profession in the North. Dr. Macdonald held several public appointments, including those of Medical Officer to the Post Office, Inland Revenue and Customs, and Certifying Factory Surgeon, and on the resignation last year of Dr. Macrae was elected to succeed him in the office of Medical Officer of part of the parish of Stornoway. He was also a Justice of the Peace for the counties of Ross and Cromarty. Eight years ago he married Dr. A. M. Weir, a daughter of Mr. J. G. Weir, M.P. for Ross and Cromarty; the union proved a singularly happy one. With his wife and his father-in-law he made a trip round the world some years ago.

Dr. Macdonald possessed mental abilities of an exceptional order, and such as enabled him, without much apparent effort, to master any subject he took up. He was widely and deeply read in medicine and the allied sciences, and his extraordinary memory enabled him to use his knowledge with effect. Of botany he made a speciality for his moments of relaxation from harder pursuits, and a visit to his garden and hothouses was a rare treat. His bent was more towards medicine than surgery, but he was a skilled pathologist and bacteriologist. He knew general literature well, but never had the leisure to cultivate it as he would. His powers of observation were exceptional.

The funeral, which took place on May 7th, was of a public character, as many as 500 persons being present, including representatives of the Fortrose Lodge of Freemasons, of which Dr. Macdonald was a member, and of the Loyal Lewis Lodge of Oddfellows, of which he was Medical Officer.

JOHN SIBLEY HICKS, F.R.C.S.EDIN., L.R.C.P.LOND.,
LIVERPOOL.

WE regret to record the death of Mr. John Sibley Hicks, which took place at his residence, 11, Bertram Road, Sefton Park, Liverpool, on June 1st. Mr. Hicks was a native of the Scottish Highlands; he studied in the Medical School of the University of Glasgow, and qualified as Licentiate of the Faculty of Physicians and Surgeons, and as Licentiate in Midwifery in 1860. For some years he served as medical officer on one of the liners plying between Liverpool and America, and he also had professional experience in the hostilities between the Northern and Confederate States. A keen observer of all that went on around him, he had some interesting facts to narrate regarding the war. As a practitioner of some forty years' standing in Liverpool his name was long a household word in the neighbourhood of Erskine Street, where he used to reside, and among the profession he was held in high and deserved esteem. He became F.R.C.S.Edin. in 1871, and L.R.C.P.Lond. in the same year. He was a Fellow of the Linnean Society, ex-President of the Liverpool Microscopical Society, Vice-President of the Liverpool Naturalists' Field Club, and Vice-President of the Liverpool Literary and Philosophical Society.

THE death occurred in Ealing on May 30th of Dr. MAXWELL TYLDEN MASTERS, F.R.S., at the age of 74. Dr. Masters, who studied medicine at King's College Hospital, became L.S.A. in 1854, M.R.C.S. in 1856, M.D. St. Andrews in 1862, and for a few years engaged in ordinary practice. On his appointment, however, as Lecturer on Botany at St. George's Hospital, he gave himself up to that study, and in connexion with it acquired great distinction. His talent in this direction was inherited from his father, a nurseryman of Canterbury, who effected some notable hybridizations of aloes and other plants. Dr. Masters, the son, a man of wide culture, became editor of the *Gardeners' Chronicle* in 1865, and conducted it with great success up to the time of his death. His publications, which included a volume of Vegetable Teratology, were numerous, and his attainments widely recognized both at home and abroad. In addition to being elected a Fellow of the Royal Society, he was appointed a corresponding member of the Institute of France in 1888, and an Officer of the Order of Leopold a few years later. He also for some years acted as Examiner in Botany for the University of London.

LIEUTENANT COLONEL WILLIAM PERCY BRIDGES, retired Army Medical Staff, died in London on March 24th. He joined the department as Assistant Surgeon, September 30th, 1871; became Surgeon, March 1st, 1873; Surgeon-Major, September 30th, 1883; and Surgeon Lieutenant-Colonel, September 30th, 1891. He retired from the service, October 21st, 1896.

Lieutenant-Colonel William Edwin Griffiths, Indian Medical Service (retired), died recently at Florence, Italy, at the age of 58. He joined the Bengal Medical Department as Assistant Surgeon, October 1st, 1872; was made Surgeon-Lieutenant-Colonel, October 1st, 1892; and retired from the service in 1903. He was in the Afghan war of 1878-80, including the engagements at Matun and at Shuturgardan on October 2nd, 18th, and 19th (medal). He also took part in the Mahsood Wuzeeree expedition in 1881, and in the Waziristan expedition in 1894-5, including the action at Wana (medal with clasp).

The death of Surgeon-Lieutenant-Colonel John Alexander Howell, formerly of the Indian Medical Service, is announced as having occurred at Bognor on March 16th. He entered the service as Assistant Surgeon, April 1st, 1869; becoming Surgeon-Lieutenant-Colonel, April 1st, 1889; and retiring in 1895. He was in the Afghan war in 1880, receiving the medal granted for that campaign.

Surgeon-Major Lancelot Armstrong, late of the 13th Light Dragoons, died at Weston-super-Mare on May 11th, aged 77. He entered the service as an Assistant-Surgeon, April 7th, 1854; was promoted to be Surgeon, October 11th, 1864, and retired with the rank of Surgeon-Major, October 8th, 1876. He served throughout the Eastern campaign of 1854-5, including the reconnaissance on the Danube under Lord Cardigan, the affair of Bulganac, the battles of Alma, Balaklava, Inkerman, and Tchernaza, and the siege of Sebastopol; he was also present with the Light Cavalry Brigade at Eupatoria, and had received a medal with four clasps and the Turkish medal.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Johann Nosiloff, sometime Professor of Surgery in the Military Medical Academy of St. Petersburg, author of a manual of operative surgery and of a monograph on diphtheritic gangrene, aged 64; Dr. Hugo Beckmann, of Berlin, a well-known otologist and laryngologist, aged 46; Dr. José Peon y Contreras, formerly Professor in the National Faculty of Medicine of the Mexican Republic, and for many years a member of the Mexican Senate, a poet as well as a physician, aged 64; and Dr. Van Stappen of Termonde, formerly Secretary of the Belgian Medical Committee.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A Council meeting was held at 9, Copthall Avenue, E.C., on Thursday, May 30th. Surgeon-General Evatt, the President, was present, and Dr. Balding, J.P., Chairman of Council, presided.

Among matters of interest to the Poor-law service the following were considered: A member complained of an increase of population in his district beyond the 15,000 laid down in the Poor-law Orders as the limit of a medical relief district, and wished to know if a redistribution of the medical districts could be demanded. It was thought by the Council that there was great laxity with regard to this General Order, which was little regarded throughout the country. The Local Government Board seldom, if ever, interfered in such cases, and the guardians could not be compelled to make a redistribution, although such an increase of population might be a good ground for claiming an increase of salary.

The new Vaccination Order also came under consideration, and was unanimously condemned. Attention was drawn to an ambiguity in Rule 1 and 2 of Art. 3 (d).

Where the district is one which is wholly situate in the County of London, or is a County or Urban District, with a population according to the last Census for the time being of 50,000 or more,

It was disputed whether the last clause was a qualification to the *Vaccination District*, or to the *Borough or Urban District* in which the said Vaccination District was situate. That reading would be in accordance with the wording, and the opinion of the Council was divided as to the meaning. Important practical results depended on which was the true reading. According to the public vaccinators in London and large towns could very generally claim 3s. 6d. as the minimum fee per case. If (2) were correct, then 2s. 6d. would be the minimum fee.

THE TRAINING OF MIDWIVES.

The executive of the Poor-Law Union Association is circulating a letter among Poor-law infirmary committees throughout the kingdom urging each of them to apply at once to the Central Midwives Board for recognition of their lying-in wards as training schools for midwives. It has also addressed a letter to the Local Government Board reminding that body that only twenty Poor-law institutions have so far been recognized by the Midwives Board, and suggesting that it should take steps to obtain power for itself to confer the status of a training school on any Poor-law establishment which in its opinion is worthy of that position. In favour of such action it is urged that the present policy of the Central Midwives Board is such as must lead both to a deterioration of the nursing in Poor-law infirmaries and to shortage in the supply of qualified midwives.

HOSPITAL AND DISPENSARY MANAGEMENT.

NORTH WIMBLEDON COTTAGE HOSPITAL.

The thirty-seventh annual report of the North Wimbledon Cottage Hospital, recently issued, opens with an appreciative reference to the late Mr. Collyns, to whose memory it is proposed to erect a suitable memorial, and for which purpose a sum of £850 has been raised. The report states that the number of patients treated in the hospital during the year was 182, being 33 more than in 1905, and the number of hospital days was larger by 311 than those in the preceding year. The results of the treatment were that 143 recovered, 21 were relieved, 2 were not relieved, 2 were discharged, 6 died, and 8 were still in hospital at the end of the year. Of the patients, 84 were males and 98 females. The total number of hospital days in the year was 3,822, giving an average residence of 21 days to each patient. The average cost per patient was £3 19s.; the average cost per patient per week was £1 6s. 3d.; the average cost per patient per day was 3s. 9d. The total number of patients admitted to the hospital since its foundation was 3,500. Thirty-five persons received treatment as out-patients in the course of the year. The receipts, including a balance of £98 16s. 0½d., amounted to £849 16s. 3½d. The expenditure included: Provisions, £258 16s. 5d.; surgery and dispensary, £49 4s. 2d.; domestic, £152 14s. 5½d.; establishment charges, £38 19s. 3d; rent, £6; salaries, wages, etc., £165 11s. 5d.; miscellaneous, £23 0s. 4d.; administration, £23 15s. 8½d., leaving a balance of £131 14s. 6½d.

HOSPITAL FOR CONSUMPTION, BROMPTON.

An urgent appeal for further support of the Brompton Consumption Hospital, recently circulated, states that the connected open-air sanatorium at Frimley has more than fulfilled the expectations of the medical staff, and has fully justified the expense which the hospital has incurred by its erection. Although this addition to the resources of the hospital has raised the total number of beds from 318 to 428, the list of patients awaiting admission has not diminished, and now contains 400 names. It is also observed that, in addition to the diminution of capital consequent on the building of the sanatorium annexe, the income of the hospital has very materially decreased since the foundation of King Edward's Hospital Fund for London.

METROPOLITAN CONVALESCENT INSTITUTION.

At the annual meeting of the Governors of the Metropolitan Convalescent Institution on March 19th, figures were submitted which showed that the number of patients received in the Institution's homes during 1906 exceeded the record of any previous year by nearly 500. It was reported also that the arrangements made at Walton for the reception of a limited number of patients in an early stage of pulmonary disease had worked well, and that the usefulness of the institution had been extended by providing at the Bexhill Homes special wards for surgical cases still needing active treatment. About £7,000 is required to complete the Men's Home at Little Common, Bexhill, which was opened with 71 beds in 1905.

DORSET COUNTY ASYLUM.

From the annual report of Dr. F. W. MacDonald, the Medical Superintendent of this asylum, we see that on January 1st, 1906 there were 1,210 patients in residence, of whom 140 were private and 1,070 pauper patients. Of the pauper patients 59 were out-county cases. At the end of the year there remained 917 patients, of whom 154 were private patients, 625 county and 10 out-county pauper patients. The returns for this year, therefore, show a satisfactory increase in the relative proportion of private to pauper cases, and an actual decline in the patients chargeable to the county. The total number of cases under care during the year was 938, and the average number daily resident 813. During the year 178 were admitted, of whom 157 were first admissions. The admissions from the natives in the county were 165, as compared with 171 of the previous year. Of the total admissions 81 were the subjects of

first attacks within three, and 11 more within twelve months of admission; in 41 the attacks were not first attacks within twelve months of admission, and the remainder were either of more than twelve months' duration (37), or congenital cases (4), or of unknown duration (4) on admission. They were classified as to the forms of mental disorder into—mania of all kinds, 103; melancholia of recent (within twelve months) occurrence, 43; dementia of all kinds, 17; general paralysis, 3; acquired epilepsy, 5; and congenital or infantile defect, 7. Many of the admissions, Dr. MacDonald says, were cases of adolescent insanity with a strong hereditary predisposition, and so of a most hopeless nature. Last year Dr. MacDonald had to utter a protest against the union authorities sending juvenile cases as fitting subjects for asylum treatment, but during 1905 no such case had to be admitted.

As to the probable causes of the insanities in the admissions, alcoholic intemperance was assigned in only 12 cases, or 6.7 per cent., puberty or adolescence in 19, the menopause in 9, old age in 25, various bodily diseases in 30, previous attacks in 37, venereal disease in none, and "moral" causes in 32.

Hereditary influences were ascertained in 47, or 26.4 per cent., and congenital defect existed in a further 8. During the year 59 were discharged as recovered, giving a recovery-rate on admissions of 33.4 per cent., and 36 as not improved. There were 76 deaths, giving a death-rate on the average numbers resident of 9 29 per cent. The deaths were due in 27 cases to cerebro-spinal diseases, including 11 from general paralysis; in 19 cases to chest diseases, with only 5 deaths from phthisis pulmonalis; in 17 cases to general diseases, and in 13 to old age. The general health of the year was good, and there was an entire freedom from zymotic disease.

GLASGOW DISTRICT ASYLUM, WOODILEE.

AT this asylum there is a large amount of vacant accommodation, due to three causes—first, the fact that owing to the large numbers which are boarded out in country districts there has been no increase, but instead a decrease of 3, in the asylum population in the year covered by the report; secondly, that increased accommodation has been provided at East and West Muckcroft farms by alterations sanctioned the previous year; and, thirdly, that the erection of a nurses' home has opened for patients accommodation formerly occupied by the nursing staff.

The annual report of the Medical Superintendent, Dr. Hamilton C. Marr, shows that on May 15th, 1905, there were 943 patients in residence; that the total number of cases under care during the year was 1,204, and that there remained on May 15th, 1906, 940 patients. During the year 261 cases were admitted, of whom 185 were first and 76 not-first admissions. In 154 the attacks were first attacks within three, and in 17 more within twelve months of admission; in 64 the attacks were not-first attacks within twelve months of admission, and the remainder were either of more than twelve months' duration (18) or congenital cases (8) on admission.

The number of senile and infirm patients admitted shows, Dr. Marr says, practically no diminution. No less than 47, almost all of whom were incurable cases, of 60 years of age or over, were admitted. Dr. Marr shows that during the last twenty years the proportion of this class of cases has more than doubled.

The total admissions were classified as to the forms of mental disorder into: Mania of all kinds, 73; melancholia of all kinds, 81; dementia of all kinds, 64; general paralysis, 15; acquired epilepsy, 16; and cases of congenital or infantile defect, 12. As to the various etiological factors, alcoholic intemperance was assigned in 75, or 28.7 per cent. From this Dr. Marr concludes "that the diminished number of admissions and the so-called wave of temperance that was passing over the community are only the concomitants of bad trade and diminished prosperity, and afford no indication that a higher plane of sobriety and reason has been reached. During the year there has been a slight spurt in trade. The increased number of admissions in which alcoholic excess played the causal part reveals, almost as sensitively as a barometer reflects atmospheric conditions, the increase of intemperance that accompanies prosperity in a large civilized community." Turning to other usually-cited causal factors, old age was assigned in 23, syphilis in 13, previous attacks in 25, and "moral" causes in 21. Hereditary influences, direct or collateral, were ascertained in 49, and congenital defect existed in a further 15.

During the year 99 were discharged as recovered, giving a recovery-rate on the admissions of 37.9 per cent.; 71 as not recovered, of whom 45 were transferred to private dwellings, and 94 died. These deaths, giving a death-rate on the average numbers resident of 9.9 per cent., were due in 35 cases to cerebro-spinal diseases, including 13 from general paralysis; in 38 to chest diseases, including 9 deaths from phthisis pulmonalis, and 22 from heart disease; in 8 to abdominal diseases; in 12 to senile decay, and in 1 to marasmus. There were no deaths from accident, the general health was good throughout the year, and no serious casualties had to be recorded.

The asylum was visited on separate occasions by Commissioners Fraser and Macpherson, who left very favourable reports of the general management and condition of this institution.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

QUERIES.

ETHEL M. N. WILLIAMS, M.D Lond., D.P.H.Cantab. (Newcastle-on-Tyne) would be glad if any correspondent could give her any information about vacuum cleaners of a size to be used for the daily cleaning of an ordinary dwelling-house. She would like to know the experience of different makes as to efficacy, and also the consumption of electric power where the machine is run in that way.

H. H. writes: I have a patient, a girl of 19, in good circumstances, who has been suffering for seventeen weeks from "subacute rheumatism." Such cases are well known to be "perhaps among the most tedious in hospital wards," and to be much less amenable to treatment than ordinary forms; but in my case, in addition, there are frequent "startings" of the legs of a most distressing character. Without warning, both legs are most violently jerked high up above the bed and then drop down again. Can any one who has had a similar case kindly give me help as regards treatment, especially of the "startings"? The patient is absolutely bedridden; the knee-joints are extremely tender. There are no signs of other infections.

DR. P. W. MOORE (Melbourne, near Derby) writes: I should be much obliged if any of your correspondents could give me any information as to a good, warm winter climate, not too far from England, suitable for a chronic phthisical patient. The patient has spent the last five winters at Davos Platz, but has been advised that the climate is too severe for his present condition, and that he should seek a warmer one. The climate must be mild and equable, yet not relaxing, from October to April, and there must be good accommodation and cooking for a semi-invalid. No place where there are mosquitos will suit, as the patient cannot sleep in mosquito curtains. Information concerning Helouan, the Guimar Sanatorium, Teneriffe, or any other suggested place would be thankfully received.

FINGER-NAILS EXFOLIATION.

W. W. writes: I should be glad if any of your readers could suggest treatment for the above complaint in a strong young woman. The trouble commences by loosening of the nail at the free distal border; some on both hands have extended almost to the semilunar part at root of nail, others are just commencing. There is no pain, but the condition is unsightly.

MEAT, FRESH AND FROZEN.

ENQUIRER asks (1) Is there any difference in the nutritive and digestive qualities of: (*a*) Ordinary butcher's meat; (*b*) chilled meat; (*c*) frozen meat; the last two as applying to imported meat. (2) If there is any difference, what is it? And does it apply equally to mutton and beef? (3) Is fresh or frozen (or chilled) meat mostly used in the Poor-law institutions of England, both workhouse and infirmary?

*** (1 and 2) The nutritive value and digestibility of these are the same. (3) On this point we have no information that would justify us in giving a definite answer for each. The whole subject is discussed in an article by Gautier (Frozen Meat as an Article of Diet), an abstract of which will be found in the *Edinburgh Medical Journal*, August, 1897.

ANSWERS.

ALPHA.—We are informed that Messrs. Allen and Hanburys, Wigmore Street, W., will supply an Edgar's obstetric bag.

R.G.—Most standard works on dietetics contain analyses of vegetable foods which should be sufficient for our correspondent's purpose. Among them may be mentioned Davis's *Diet and Therapy* (Cohen's *System of Physiologic Therapeutics*, vol. vi), Rebman, Limited, 1901; and Hutchison's *Food and Dietetics*, second edition, Arnold, 1906.

TREATMENT OF SCIATICA.

IN reply to "J. D." (BRITISH MEDICAL JOURNAL, May 25th), Dr. H. J. Thorp (Ipswich) suggests the following: Aspirin, gr. vj; phenacetin, gr. v; quininae salicyl, gr. ij; codeina, gr. ½. Every four or six hours.

SEA-SICKNESS.

IN answer to "Cornish," Dr. H. Karr, of Cricklewood, writes to say that the husband of a lady, a bad sailor, for whom he prescribed five or six drops of validol on sugar just before commencing a sea passage, and a similar dose half an hour later, reported that benefit had been derived from it by her.

LETTERS, NOTES, Etc.

THE steamship *Ophir*, of the Orient Steam Navigation Company, will commence on June 12th a series of thirteen-day cruises to the fjords of Southern Norway. An illustrated booklet entitled *Bound for Norway* can be obtained on application to the company.

The Exeter Meeting.

The route from England to Ireland viâ Fishguard, which has recently been opened by the Great Western Railway, is now in active work, and should add to the number of Irish medical men attending the annual meeting at Exeter. The steamers which make the passage have been specially built for the purpose, and being worked by turbine engines are free from vibration, and travel so fast that the sea passage lasts considerably less than three hours. The route, moreover, affords a direct connexion with Exeter from Dublin, Galway, Athlone, Kildare, Killaloe, Kilkenny, Limerick, Tipperary, Clonmel, Cork, and Killarney. For residents in London and other great centres the journey to Exeter is, of course, very easy, as the Great Western now has expresses which complete the journey from London in three hours, and from North and South Wales, Liverpool, Manchester, Birmingham, and the Midlands in general with corresponding rapidity.

"Hospital Abuse."

Mr Stewart Johnson (Secretary, Hospital for Sick Children, Great Ormond Street) writes: My attention has been drawn to a letter in your issue of May 25th headed "Hospital Abuse," in which the name of this hospital is mentioned.

From details mentioned by your correspondent, it is not difficult to identify the case he refers to. Here are the facts:

The child was first brought to the hospital on April 8th as an out-patient. The father's wages at that date were 26s. a week, but up to the previous February they had been only 24s. Since March 7th, a week before her confinement, the mother had been earning nothing. It is true that she works when she is able, but her earnings amount on an average not to 12s. a week, as your correspondent states, but to 6s. The figures of the wages of both father and mother, I may remark, are confirmed by their respective employers. The couple have two other children in addition to the baby who died in the hospital.

On April 8th the family were paying 7s. 6d. rent for two rooms in a house on the southern bank of the Regent's Canal, but between that date and April 25th, the date when the baby was admitted as an in-patient, they moved into a block of County Council buildings, where their rent was 8s. 6d. a week, the smallest amount which the regulations against overcrowding permitted them to pay; 2s. 2½d. a week, moreover, is paid out of the family income for the man's club and for the insurance of the members of the family and the woman's mother.

Such being the financial circumstances of the family, it is difficult to see how there could be any objection to the child's receiving hospital treatment even as an out-patient. But the child was in need of more than out-patient treatment. Even when first seen, the child was seriously ill, and only the great demand for beds for children under the age of 2 prevented her from being admitted earlier than she actually was.

It is quite true that the child was buried at the expense of the hospital, but it is not true, as your correspondent states, that the proposition to bury came from the hospital. The hospital only buried the child at the request of the mother, on her asserting that she was unable to pay for the funeral, and undertaking to repay the cost by instalments. Of the 6s. she received from the insurance company on the death of her child 1s. was paid for the death certificate, 1s. for the faces of the mother and grandmother to the cemetery and back, the father was unable to attend the funeral), and 2s. 6d. as the first instalment due to the hospital.

As regards the inquiries into the circumstances of out-patients in general at this hospital, I might explain that in the case of all out patients seen by the honorary medical staff the parents are obliged to give the following information about themselves, which is recorded and card indexed:

The address of parents,
Occupation of father,
Name of father's employer,
Total family earnings,
Number of family dependent,
Rent,
Number of rooms occupied.

In the case of patients seen by the casualty officer, who are only allowed to attend for a very limited period, the following information is elicited and recorded in a book:

Address,
Father's occupation,
Total family earnings.

The questions, I might add, are only the minimum of what is asked, if thought necessary. The inquiry officer follows them up with what questions he considers most appropriate, and if any of the statements appear doubtful the patients are visited in their homes with a view to check their accuracy. More than that, a certain number of cases are selected every day to be visited that are not even doubtful, because it is considered a good thing to let the patients know that the statements they make are liable to be verified.

It is difficult to see how more can be done in the way of inquiry without unduly increasing the precautions so as to keep away from the hospital many of those rightfully entitled to attend.

The Doctrine of Pre-existence.

J. S. B. writes: Dr. Stoddart, in his excellent lecture on Early Symptoms of Mental Disorder, in speaking of illusions of recognition, says: "Such a person enters a village where he cannot possibly have been before, and at once experiences a feeling of recognition—feels that he has been there before. This phenomenon has given rise to *the absurd idea of pre-existence*" (the italics are mine). This particular phenomenon may not rank high as evidence in favour of the doctrine of pre-existence and reincarnation, but does it follow that the doctrine itself is "*absurd*"? The arguments in its favour are many and weighty. It is a cardinal doctrine of many of the great religions of the world. Millions of the human race believe it with unquestioning faith. Great philosophers and poets have either believed the doctrine, or at least have not treated it as absurd. Wordsworth—the most Christian of poets—affirms it in those well-known lines beginning "Our birth is but a sleep and a forgetting . . ." It was taught in the early Christian Church, especially by the saintly Origen. It has really never died out, and is accepted and is being taught by many Christian thinkers and teachers. It was asserted, or at least strongly hinted at, by Christ Himself. One who is a great teacher and one of the world's great spiritual forces, speaking of this doctrine, said: "I know what it has of hope, of strength, of encouragement in the face of difficulties in the world. I know what it means for the heart-broken, who fall in despair before the puzzle of life, to have the light thrown upon it which makes life intelligible, for the misery of intellectual unrest is one of the worst miseries that we face in the modern world." If I lived and worked amidst the human wreckage in Bethlem, I should hesitate ere I described a doctrine like this as "*absurd*," seeing that it is sacred and an inspiration and hope to thousands of human souls to-day.

First Aid to the Wounded and Sick in the Public Streets.

Dr. Thomas Dutton (London, W.) writes: The profession appear to try and help the public in a very strange manner. A number of medical men are now advocating street ambulances in a very energetic manner. With the want of these I entirely agree, but by far more important is the question of rendering first aid to people who are suddenly taken ill or meet with some accident in the public streets. These are at present at the mercy of policemen and well-meaning but extremely dangerous lay helpers. I have explained before in a letter to the British Medical Journal, that long before any ambulance could arrive the poor victim may have been killed or seriously injured by ignorant first-aiders, who know nothing about the *rationale* of the treatment they recommend. I gave a good illustration of a young lady who fell in an epileptic fit in Hyde Park. One wanted to give her brandy, another to make her drink cold water, a policeman ("blood to the head," said he) to stand her upright; while a nurse wanted to violently flex and extend her arms. I had to fight all these (not being in a physician's uniform they would not have me to be a doctor), and tell them to leave her alone, after undoing her dress. I should think it should be patent to any one that long before taking steps to provide ambulances a few clear, simple, definite rules should be drawn up by the London County Council, and strictly enforced, so that when any unfortunate person is suddenly prostrated by illness, or meets with an accident in the public streets, he or she will know that they will not be further injured by the mistaken kindness of their fellow citizens. I have seen a number of victims injured, and I believe two killed, by the chaos that at present reigns when any one is laid prostrate in the streets of this civilized Capital of the Empire. I call the attention of members of the profession once more to a subject that must interest them, because when they are called to a street accident under the present confused conditions, it is impossible for their skill to be of any avail, for the public crowd round and prevent them from exercising it.

A Correction.

The offices of the Royal Hospital for Incurables are situated at 4, St. Paul's Churchyard, E.C., and not as printed last week in the reply to Dr. W. A. Aldred's inquiry.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

Remarks
ON
SOME AFFECTIONS OF SPEECH.

BY SIR WM. H. BROADBENT, BART., K.C.V.O., M.D., D.Sc., F.R.S.
PHYSICIAN IN ORDINARY TO THE KING.

DR. THOMAS, Assistant Medical Officer (Education) of the London County Council, relates a number of interesting examples of speech defects met with in children.

In one series it is chiefly in reading that the difficulty occurs. An intelligent boy of 7 years old cannot remember how to make l, p, y, g, that is, cannot reproduce the written or printed characters representing the articulate sounds, and reads "It has three birds in it" as 'To see best in to," that is, he cannot reproduce the articulate sounds represented by the printed words. On the one hand, he cannot translate auditory impressions or perceptions into visual representative characters, and, on the other, cannot translate visual symbols into the appropriate articulate sounds. He recognized words if they were spelt to him; he did difficult sums in mental arithmetic, and when 11,308 was written in numerals gave the number in words.

Another boy could not read the smallest words. Said "chair" spelt "sister"; made serious mistakes in writing from dictation; did not copy correctly. He, also, calculated correctly, and was said to "know all his letters," that is, I suppose, could name them, or perhaps could say the alphabet.

A third boy, of 11, good at arithmetic, smart, ready, and trustworthy, spells out "girl" as "vice"; cannot read "mouse," though he recognizes each letter; writes from dictation "a pen and ink" as "a gen and inck." It may be accidental that the two words which he bungles are nouns, while "and," which has the same number of letters, he writes correctly.

These, with a case which has come under my notice, afford an opportunity of discussing the terms "word-blindness" and "letter blindness," and appear to me to be worthy of consideration as bearing upon the mechanism of speech and thought.

My case is as follows:

I was informed that a boy of 14, of superior intelligence, was kept in a lower class at school because he could not read aloud, and that his prospects in life were likely to be injured by his not reaching the proper standard.

I found him to be remarkably alert intellectually, fond of reading, particularly adventures and travels, full of information, ready and apt in conversation, and altogether a very interesting boy. He could not explain his difficulty in reading aloud. I gave him two long and rather complicated paragraphs from the *Times* to read, and asked him to tell me what they were about. This he did readily and clearly. I then asked him to read them aloud. His face at once took on an expression of anxious effort. He did not read even short words fluently, but uttered two or three with the slight hesitancy and uncertainty of a beginner, and was then brought to a standstill for a moment by some longer word, not because it was difficult or unfamiliar, but apparently as if he had to grasp its meaning and pass it through his mind for utterance. Sometimes it seemed as if he were on the point of substituting another word (Dr. Thomas's boy No. 1, when shown the word "buds," read it "branch," which looks like an intellectual substitution).

There was here clearly no word-blindness in the true sense of the term, since that is a purely sensory defect, and this was a motor failure, not a sensory defect. Words printed or written reached his mind with normal readiness, and were perfectly understood. There was no fault in the mechanism of speech or intellectual expression, to employ the excellent term introduced by Hughlings Jackson. The afferent and efferent paths, and the sensory and motor centres concerned in language as an intellectual process, were intact. It was utterance in one particular respect which was interfered with—the translation of visual characters into the articulate sounds which they represented.

This boy ultimately gained the faculty of reading aloud fairly well, but with great effort, and when he read aloud the attention was so concentrated on the task that he did not understand what he read.

Now this is not an intellectual operation properly speaking. We can read aloud quite easily an unknown language—it is a mere matter of putting into corresponding spoken words certain combinations of letters. No ideas reach the mind. So, again, we can read aloud, often with appropriate inflection of the voice and emphasis, while thinking something else all the time, and not at all realizing mentally the meaning of what we are reading. The same convolutions are not engaged in translating printed words into articulate sounds as are concerned in the intellectual recognition of the meaning of the word and its employment in the mental operation which ultimately find expression in speech.

A case closely parallel to this came under my observation in 1878, and was related in *Brain*, vol. i, 1878 9. The patient read his newspaper with great interest, and related the substance of paragraphs to the Sister of the ward and to the class, but when asked to read aloud, the result was a jargon which had no recognizable relation whatever to the words he was reading.

The printed words reached his mind and conveyed their meaning, but the cell and fibre mechanism by which the association between visual word symbols and the articulatory motor centre is effected was damaged.

In another case an old woman in reading aloud a familiar verse, which she understood perfectly well, always read it wrong, but differently every time; there was, however, some correspondence in length and sound between the words as she read them and the words of the verse.

Another case seen in 1871, and related in a communication to the Royal Medical and Chirurgical Society on the Mechanism of Speech and Thought,[1] corresponded more closely with Dr. Thomas's cases, supposing, that is, that boy No. 1, while still failing to name letters and to read aloud, did not learn the meaning of the words.

The patient, a very intelligent man, could not read either printed or written characters, except his own name. He could write letters to his wife, or from dictation, and took elaborate notes of my instructions, but could not read even what he had himself written.

The conception which I entertain of the mechanism of speech and thought is based on the functional and structural arrangements of the spinal cord.

Throughout the nervous system there is an afferent or sensory and an efferent or motor side. The sensory is everywhere and always the dominant side. All movements are in orderly response to sensory impressions; the sensory impression guides and governs the movement which it calls into action. The structural representation of this physiological fact is that sensory cell-groups arrange and combine the motor cell-groups which put into execution the dictates of the sensory impressions. Such motor cell-groups may be said to represent the words. In the cord the sensory and motor cell-groups execute reflex actions which may be extensive and elaborately co-ordinated.

At the next higher level the sensory impressions and movements are re-represented, to employ Hughlings Jackson's useful term, and undergo an intellectual elaboration. Impressions are translated into sensations, and the sensations, tactile and other, derived from the skin, muscles, and viscera, are co-ordinated with visual sensations in such manner that visual and tactile form and size correspond. The tactual centre may be said to educate the visual centre. The movements of the limbs and of the body generally are at this level brought, in some degree, under the guidance of visual sensations.

The spinal motor centres have been educated by the corresponding spinal sensory centres, and large and complex cell-groups have been formed representing extensive co-ordinated purposive movements. These groups are placed at the service of the visual sense-centre which can call into action and combine for a given purpose, under the guidance of vision, movements of the entire body and limbs. It may almost be said that the spinal motor centres concern themselves with muscles, while the visual centre directs movements. The second level in which the primary intellectual elaboration—the translation of impressions into crude sensations, and the organization of movements under the guidance of vision—takes place is, in my judgement, constituted by the great central ganglia,

the thalamus (sensory) and corpus striatum (motor). It is interesting to see that these two great masses of grey substance, which have long been almost ignored by neurologists, are being reinstated in their important position.

Another step in intellectual elaboration is perception, the recognition in consciousness of the external object to which the sensory impression is due. This is done separately for each sensation, and we have a corresponding number of perceptive centres, tactual, visual, auditory, gustatory, olfactory—all of them in marginal convolutions which are reached by radiating fibres ascending from the central ganglia, bulb and cord—each of which directs and controls motor centres, also situate in marginal convolutions and in relation with radiating fibres, which, however, are efferent. The movements of the body and limbs are under the joint control of the tactual and visual centres, the tactual perceptive centre being concerned in what may be called individual movements, the visual with general combined movements.

The auditory perceptive centre while in relation with the motor system generally and automatically for protective purposes, as when we start at a noise, or turn aside, or assume certain attitudes, has a special educational relation with the muscles concerned in speech. Words, as articulate sounds, are acquired by imitation; they can, to a certain extent, be so acquired by a parrot or raven. Articulatory motor cell-groups are organized in the left third frontal convolution under the guidance of sensory cell-groups in the auditory perceptive centre, the superior temporal convolution. Words are thus primarily automatic—percipio-motor processes only, parrot-like reproductions of articulate sounds. Words of an unknown tongue listened to and uttered are nothing more. Their employment as intellectual symbols, as having a meaning, as vehicles and instruments of thought, although taking place as the child is learning to talk, is another matter altogether.

In learning to read, the process is at first, while relating only to letters, almost more distinctly concerned with perceptions, as distinguished from ideas, and is more independent of intellectual operations, properly speaking, than that of learning to talk. In learning to speak, a double process is going on, for while the utterance of a name is gradually accomplished by the organization of a communication between auditory and articulatory cell-groups, the person or thing designated is before the child's eyes, and is associated in the child's mind with the name. The name comes to represent a mental image, and is not merely an articulate sound. The letters that a child painfully learns to associate with the appropriate sound do not raise any idea whatever in the mind. The process is simply the association of an arbitrary visual character with a given auditory perception. There is no natural connexion between the two, but an association is established by an effort of attention. The letter has to be repeated aloud again and again. The association between the printed character and the sound which it represents—between the visual impression and its auditory equivalent—is reinforced by the articulatory rendering of the sound which brings into action the imitative motor process. There is no such thing as a separate centre for letters as such; a letter is learnt when such an association is formed between the visual and auditory centres that the character seen at once suggests the particular articulate sound. This connexion may be established with difficulty and imperfectly, or it may be deranged by some lesion, so that the individual cannot name the letters shown to him. This has been called "letter-blindness"; but it is not a sensory defect at all—it is the result of an imperfect sensori-motor mechanism. A word made up of these very letters may convey an idea to the mind.

The sensory centre for printed or written words is the same as that for individual letters, and the translation of words into the appropriate articulate sounds in reading an unknown language is exactly the same process as learning the individual letters. It is the establishment of an association between visual characters and an already organized articulatory motor centre. It is on a level with part at least like speech. But before the child is taught to read, spoken words have become intellectual counters. The name of an object calls up a mental image formed by the convergence on a higher cortical centre of all the perceptions to which the object gives rise—a centre in which the name becomes the symbol of the combined perceptions, or complete image or idea of the object. This, which is sensory in character, and constitutes the cortical summit of the afferent side of the nervous system, has a corresponding cortical motor centre for intellectual expression which it educates and employs, and this in turn makes use of the word groups ready organized by the auditory perceptive centre in the left third frontal convolution, the downward starting point for words, for articulate speech. These two centres I have called the naming centre and the propositionizing centre respectively. The word groups, then, are called into action by impulses along two different routes, a low level route from the auditory or visual perceptive centre, and a high level convolutional route, which, starting in the auditory or visual marginal perceptive centre, ascends to the centre for names or ideas, and is transmitted forwards to the centre for intellectual expression, which employs the word groups for utterance.

An interesting question here arises. When a printed or written letter or word is read aloud, does the visual perceptive centre reach the motor word group in the third frontal, organized by the auditory centre, by fibres passing directly to them, or does the word as seen call up the word as heard—that is, the corresponding sensory word group in the auditory perceptive centre, and make use of it to pass on the impulse which gives rise to the uttered word to the motor-word groups? The latter is the order of events which probably makes the difficulty in reading aloud to be due to imperfect association between the visual and auditory perceptive centres. It is not likely that fibres pass from the calcarine or occipital region to the third frontal, whereas the calcarine and angular convolutions are adjacent to each other. It is true, however, that a deep-seated mass of commissural fibres takes origin in the occipital lobe, and proceeds towards the frontal convolutions.

Sufficient has been said to explain the idea which I entertain of the particular imperfection in the mechanism of speech of which the cases related are examples.

The question of numbers in relation to aphasia of various kinds is one of very great interest. It was very early found that some patients whose vocabulary was limited to "yes" and "no" and a few interjectional exclamations could state distinctly the number of objects given them to count. Sometimes the numeral would drag the name of the object with it, as, for example, a man who could not say "shillings," when asked to repeat it, or when shown the coins, said "five shillings" after counting this number when the amount was placed before him. A patient who could not say any part of the alphabet could count up to 20, and, while unable to write a single letter, would make figures on the palm of his hand with his finger to show the number of spokes in a wheel.

These are instances of motor differences between words or letters, and figures. Even more remarkable is the sensory difference between letters and numerals. Dr. Thomas's boy, who could scarcely recognize letters, at once put into words "11,308." From such examples as this it has been inferred that there is a different cortical centre for letters and figures. But, suppose this had been a Roman boy, would he have failed to recognise "X" as signifying "decem"? He would have been unable to say "x," to translate a visual character into an articulate sound, but he would at once have interpreted it as signifying "ten," and said "decem." It is not that there is a separate centre for letters and numerals, but that they represent different cerebral processes. A number is not like a name or noun; it does not call up the image or idea of any particular object; it has nothing to do with the properties of objects, and it is not a motor part of speech. It represents, in a sense, an abstract conception, but not of a very high order. Dogs can probably count sheep, birds can count the eggs in their nests, and other instances of the faculty of enumeration by animals might be cited. A calculating boy need not be otherwise very clever. The auditory and visual perceptive centres receive and register spoken and written numerals, and the word cell-groups for the utterance of numbers must be organized in the articulatory centres; but addition and subtraction and other arithmetical operations are totally different processes from the intellectual apprehension and description of the properties of an object. It is as a result of this fundamental distinction, and not because there are separate centres

for letters and figures, that the remarkable difference is observed.

I have shown elsewhere that words as motor processes, which they are from one point of view, parrot-like reproductions of articulate sounds, must be organized bilaterally in the bulb and central ganglia, all the muscles concerned in speech being bilaterally associated, the word cell-groups being ready for employment by the higher centres, and, in my opinion, this bilateral organization extends as high as the third frontal convolutions. Word cell-groups exist in the right third frontal as well as in the left, and are habitually employed in speaking in association with the left third frontal, the two being connected by commissural fibres of the corpus callosum. It is through these word groups on the right side that aphasia is obviated in some cases of right hemiplegia with marked paralysis of the face and tongue, the lesion having taken place in the white fibres of the internal capsule sufficiently low down to leave intact the commissural fibres of the corpus callosum between the frontal convolutions of the two hemispheres.

In support of this view may be cited the remarkable phenomenon of mirror writing. Some people can write currently with the left hand, but the writing is not only backwards from right to left, but reversed, so that a mirror is required in order to interpret it, when it is found to resemble the ordinary handwriting. Here the graphic centres must be bilaterally associated, and the left must have educated the right.

I may be permitted here to recall the fact that before the identification of the sensory and mortor cortical areas by Hilzig and Ferrier I had inferred that they would be found in the Sylvian, Rolandic, calcarine, and occipital convolutions, since radiating fibres from the bulb and central ganglia were distributed only to those convolutions, the intermediate superadded convolutions constituting much the largest area of cortex receiving no radiating fibres. This structural arrangement, made out by tracing the fibres, has been confirmed by Flechsig on developmental grounds. I have some right, therefore, to assume that other conclusions at which I arrived are valid. The most important of these was that the fibres of the corpus callosum and anterior commissure were distributed to exactly the same convolutions as the radiating fibres, and constituted a commissure between corresponding gyri in the two hemispheres. I found also a large longitudinal commissural system.

REFERENCE.

* *Transactions of the Royal Medical and Chirurgical Society*, vol lv, 137.

Clinical Remarks

ON

A CASE OF CEREBRO-SPINAL MENINGITIS OR SPOTTED FEVER TREATED BY LUMBAR PUNCTURE AND VACCINE INJECTIONS: WITH RECOVERY.

BY HECTOR MACKENZIE, M.D., F.R.C.P.,

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THE following case of cerebro-spinal fever has several points of interest. It was the first case to be notified in London during the recent visitation of the disease in this country. Although it was a very severe type of the disease, at first suggesting the malignant form, it happily ended in recovery. No conclusions of any value can be drawn as to the effects of treatment in one case. With regard to lumbar puncture, which was repeatedly performed, I should like to say that, after an extended use of this method of treatment during a number of years, I consider it of great value in all forms of meningitis. It should be performed as soon as one diagnoses the nature of the case, and should be repeated at short intervals, especially where there are signs of intracranial pressure. The immediate improvement in the patient's condition after lumbar puncture is usually most striking, and I believe that several lives in my own practice have been saved by its means. I have always used the needle of an ordinary antitoxin syringe for this purpose. The fluid should be allowed to come away gradually drop by drop, as it usually does, and should be collected in a test tube. As a rule no suction should be employed.

In this case in nine punctures nearly 9 oz. of fluid were removed. In two punctures no fluid was obtained. The fluid obtained was at first very turbid, then was clear, again was very turbid on the fourth puncture, while afterwards it was either opalescent or clear. The cells contained in the fluid were throughout chiefly polymorphonuclears. The micro-organisms were intracellular, Gram-negative diplococci, and on one occasion the *Staphylococcus albus*. After the end of the fifth week the fluid was sterile.

The vaccine used was prepared and administered by Mr. Leonard Dudgeon, Superintendent of the Clinical Laboratory at St. Thomas's, to whom I am much indebted for the care and attention given to this case. It is obvious, however, that the value of such a vaccine as has been here used can only be determined by experience in a sufficient number of cases. It is impossible to say how far the recovery was due to the lumbar punctures and the vaccine injections respectively. I am convinced of the benefit to be derived from lumbar puncture. Of the effects of the vaccine we can speak with no certainty at present. For the following notes of the case I am indebted to Mr. W. O. Sankey, house-physician, and Mr. W. N. Child, clinical clerk.

Florence H., aged 6 years, was admitted to St. Thomas's Hospital under the care of Dr. Hector Mackenzie.

The only previous illness she had had was measles when 2 years old; otherwise she had been quite healthy.

On Thursday, January 24th, 1907, the child seemed perfectly well, but next morning, before breakfast, she shivered, and complained of pain in her left shoulder.

She took her usual breakfast, however, and went to school, but at eleven o'clock she said she felt ill, complained of headache, and was allowed to walk home.

The headache, which was frontal, continued, but the pain in the left shoulder was not mentioned again.

She vomited twice during the afternoon. Between 7 and 8 p.m. she became unconscious, her fingers were constantly twitching, and she kept looking round in a frightened manner. During the night she spoke incoherently of the pain in her head.

Next morning, Saturday, January 26th, at 10.30, the child, who was still unconscious, was brought up to St. Thomas's Hospital and admitted. She lay on her side with her legs drawn up and was in a comatose condition. The face was cyanosed and the respiration shallow. The radial pulse could only just be felt. Strychnine and ether were at once given hypodermically.

On inspection in the ward the child still lay on her side with the legs, thighs and trunk flexed; from time to time she straightened out her limbs and screamed loudly.

The head was retracted and the muscles of the neck were stiff. The knee-jerks were brisk on both sides; the plantar reflex was extensor and Kernig's sign was obtained. The skin had a bluish mottled appearance, and on the front of the chest, back and legs there was a scanty dark blue petechial rash; in one or two places the haemorrhages were as large as a threepenny-piece. The pupils reacted to light, and there seemed to be marked photophobia.

Nothing abnormal was detected in the chest.

The abdomen was flat and retracted, and nothing definite could be felt of the organs.

The tongue was dry and furred.

The temperature was 101.4°; pulse, 144 per minute; respirations, 32 per minute.

Lumbar puncture was performed two hours after admission, and about 5 drachms of very turbid fluid ran out through the needle; this contained a number of cells, in which a diplococcus be could seen. A subsequent examination revealed the presence of "a large number of cells, chiefly finely granular polymorphonuclear cells, and many intracellular Gram-negative diplococci."

The child was noisy and restless during the afternoon, but slept well after being given chloral, 5 grains.

The temperature rose to 102.8° during the night.

On the following day, Sunday, January 27th, some fresh spots were seen; the child was quieter, and recognised her mother; she took milk well. After admission there was no more vomiting. Lumbar puncture was performed again, but no fluid could be obtained, even by aspiration.

The temperature went down to 101.2° during the day.

Until Monday, January 28th, the condition steadily improved.

The child was able to talk intelligently and answer questions; she said she had no pain at all, and her eyes did not ache. There was still some retraction of the head and stiffness in the neck, and the tongue was still furred. The haemorrhagic spots were now brownish-yellow, and no fresh spots had appeared; some labial herpes was present.

The pulse was steady and regular at 136 per minute, and the temperature was 102.8°.

Some films were made from swabs taken from the nose, and in these diplococci were seen.

On the next day, Tuesday, January 29th, the mouth was dry, and in a foul condition. The temperature had fallen to 99·2°.

Urine acid, deposit of urates. No reduction of Fehling, and no trace of albumen.

Lumbar puncture was performed, and 4 drachms of clear fluid were obtained in which a meningococcus was seen; the cells were almost entirely finely granular polynuclear; a few intracellular diplococci were seen.

On the same date 120,000,000 meningococcous vaccine was injected; on this and on subsequent occasions of injection considerable oedema and hyperaemia of the tissues round the site of injection were caused. The number here given in connexion with the vaccine is that of the microbes contained in the dose administered.

During the next eleven days, from Wednesday, January 30th, to Saturday, February 9th, the temperature remained in the same condition—that is, varying from 100° to 103° or 104°; whenever the latter figure was reached (for example, on the nights of February 2nd, 3rd, and 4th) the child was carefully sponged, after which the temperature always fell again.

She was usually restless at night during this period and irritable at all times.

An ice-bag for the head was begun on February 5th. Chloral was given on three nights; calomel was given twice, and mist. hyd. c cret. on several occasions.

Lumbar puncture was performed on January 31st, February 5th, and February 8th; the amount of fluid obtained on each occasion and the results of examination will be found in the table given below.

Meningococcus vaccine (20,000,000) was injected on February 7th.

After February 9th the temperature fell by lysis, until on February 16th and 17th it varied from 97° to 98·6°. The child was still irritable and restless at night; the knee-jerks were brisk, but not easily obtained. On the latter two or three days of the fall of temperature the child was much better and slept a good deal during the day as well as the night; she had no headache and sat up and played with her toys.

During this period lumbar puncture was performed twice and on February 14th vaccine (143,000,000) was injected.

The optic discs were examined twice (January 30th and February 16th) up to this time, and beyond slight hyperaemia of the left disc and a suspicion of haemorrhage (not verified at second examination) of the right no abnormalities were found.

From February 17th onwards, until March 6th, there was a period of sudden changes of temperature; three times lumbar puncture was performed when the temperature rose to between 102° and 103° on February 18th, March 1st and 5th, and each time fluid was obtained, as shown in the accompanying table. Vaccine was injected (71,000 000) on February 26th. On February 21st, soon after the first relapse, a sudden rise of temperature was checked by sponging and followed by a rapid fall.

Lumbar Puncture and Results.

No.	Date.	Temperature Before.	Temperature After.	Characters of Fluid
1	Jan. 29th	101·2°	100·0°	Very turbid. Large number of cells, chiefly polymorphonuclear. Many intracellular. Gram negative diplococci present.
2	Jan. 30th	101·4°	100·0°	No fluid obtained.
3	Jan. 31st	103·2°	100·0°	Clear. Cells entirely polymorphonuclear. A few intracellular Gram negative diplococci seen.
4	Jan. 31st	103·6°	98·2°	Very turbid. Meningococci and *Staphylococcus albus* present.
5	Feb. 5th	104·2°	98·4°	Opalescent. Sterile. Many cells present.
6	Feb. 8th	103·8°	100·2°	Almost clear. Pure culture of meningococcus. Pus cells abundant, but very few intracellular diplococci.
7	Feb. 14th	101·4°	98·6°	Opalescent. Polymorphonuclear cells and a few intracellular diplococci. Pure culture of meningococci obtained.
8	Feb. 17th	98·4°	98·0°	No fluid obtained.
9	Feb. 18th	103·2°	98·4°	Clear fluid.
10	March 1st	102·6°	98·4°	Clear. Sterile.
11	March 5th	102·2°	98·4°	Opalescent. Sterile. Polymorphonuclear cells.

After this period the knee-jerks were still brisk, plantar reflex was flexor and ankle clonus not obtained.

Aspirin, 15 grains, were given on March 2nd.

On March 8th vaccine was injected (32,000,000), and from that date the temperature was subnormal.

On March 15th the child was moved into another ward with other children, and since then the temperature has been irregular but about normal.

On March 23rd vaccine (64,000,000) was injected and aspirin, 5 grains given.

Patient got up first on March 29th, and left the hospital quite well towards the end of April. Knee-jerks brisk; nothing abnormal in chest or abdomen; optic discs normal; mental condition unimpaired.

Summary of Chief Features of the Case.—Temperature continually above normal for the first eighteen days, mainly between 101° and 104°. The removal of fluid by lumbar puncture always relieved symptoms. The child usually slept for eight or ten hours after each puncture. There were two well-marked relapses. There was no diarrhoea, purgatives being necessary on several occasions. No important treatment was given beyond vaccine and lumbar puncture; the vaccine was prepared from organisms cultivated from the fluid withdrawn by lumbar puncture. The diplococcus was present in seven out of the nine specimens of fluid withdrawn. Injection of the vaccine caused oedema and hyperaemia of tissues around injection site.

A Lecture
ON
CIRCUMCISION AS A RITE AND AS A SURGICAL OPERATION.

Delivered at the Middlesex Hospital,

By J. BLAND-SUTTON, F.R.C.S.,
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Circumcision may be described as the most ancient as well as the simplest operation in surgery, but it differs from all other recognized surgical procedures in possessing among many races and tribes of men a ceremonial value. In this lecture it will be considered from the religious, the ethnic, and clinical standpoints.

I do not think an apology is needed for devoting a lecture to this simple and common operation, especially when such great masters as Botticelli and Fra Bartolommeo considered it worthy their high art to represent the performance of circumcision.

Among the magnificent frescoes on the wall of the Sistine Chapel there is one representing Zipporah, the wife of Moses, circumcising her son with a sharp stone, according to the description contained in Exodus iv. 25.

The earliest mention of the rite of circumcision occurs in Genesis xvii, when Abram's name was changed to Abraham, and God made a covenant with him that he should be fruitful and multiply. The sign of this covenant was circumcision, and the instructions in regard to it are very explicit: "Every man child among you shall be circumcised," and that there should be no mistake in the meaning of the term the following verse runs: "And ye shall be circumcised in the flesh of your foreskin," and the age at which the rite should be performed is deliberately fixed for the eighth day after birth. Abraham, it should be remembered, was 99 when he submitted himself to the operation.

There has been much quibbling in regard to circumcision as to whether it should be regarded as an ordinance for cleanliness or a purely religious rite; the text, however, is very clear; it was to ensure fruitful coitus in order that the seed of Abraham should multiply according to the covenant. A long foreskin is a recognized hindrance to convenient coitus. Apart from any consideration as to the rite of circumcision being instituted for the mere purpose of cleanliness, the Jews must have regarded it as a sacrament, for in many of the Old Testament narratives "uncircumcised" is used as a term of contempt, and nowhere with more force than by Ezekiel xxxii. 17-32, from which it would be inferred that the place for the wicked is among the uncircumcised in the nether pit (hell).

One of the most dramatic events connected with circumcision in the Old Testament is the massacre of the Hivites by Simeon and Levi three days after they had been circumcised in order to make Shechem an eligible husband for

Dinah the daughter of Jacob (Genesis xxxiv). I have often regarded this as the most cunning plot ever played by the crafty Israelites, outdoing in this respect Saul when he desired a hundred but received from David two hundred Philistine foreskins as a dowry for his daughter Michal (1 Sam. xviii. 25–27).

Notwithstanding the determined manner in which this quasi-religious rite appears to have been enforced in the early history of the Jews, it fell into abeyance whilst this band of emancipated slaves wandered in the desert, for it was revived by Joshua (v. 3–7). Burton, in a footnote in the *Arabian Nights*, has calculated the weight of prepuces removed on that occasion. Although the Jews treated their uncircumcised neighbours with contempt, there was one period in their history when some of them were ashamed of their circumcision, and there is a curious passage in the first Maccabean Book, Chapter i. 15, which runs: "And made themselves uncircumcised and forsook the holy covenant and joined themselves to the heathen." This passage has puzzled many writers, and it is a curious problem to surgeons, for it is difficult to understand how such a condition could be brought about.

It is strange also that even the rite of circumcision should lead to persecution, for in this same chapter (verses 60 and 61) we read that at the time when Antiochus set up the fashions of the Gentiles in Jerusalem and spoiled the temple, two women were put to death who had caused to be (or had) circumcised their children. The mode of their execution was particularly brutal—"And they hanged the infants about their necks, and rifled their houses, and slew them that had circumcised them." In the Second Book of Maccabees the matter runs thus:—"For there were two women brought who had circumcised their children, whom they had openly led round about the city, the babes hanging at their breasts, they cast them down headlong from the wall" (vi. 10).

Among the Jews to-day circumcision is performed on the eighth day after birth and is regarded as a sort of domestic feast-day; but only men are allowed to witness the actual performance of the rite.

Among Mohammedans, circumcision is performed as a rite about the thirteenth year; there is no recommendation or commandment regarding it in the Koran, but on inquiry I find that the Arabs practised circumcision before the advent of Mohammed. The Mohammedan Arabs profess to trace their origin to Ishmael, the son of Abram by his Egyptian concubine Hagar, and the choice of time accords with the age at which he was circumcised, namely, the thirteenth year (Genesis xvii. 25); but there is no exact practice in this matter, for in Egypt circumcision is performed on boys of seven or eight years and later. The ceremony is attended with great show, the boy being conducted through the streets in gaudy attire, attended by a procession, musicians, and the barber who carries out the rite. Wallace, in his interesting account of Java (*Malay Archipelago*), describes a circumcision festival at Modjo-agong which lasted five days. The two boys circumcised were about fourteen years of age, and the operation was performed by two priests on a bench in front of the house in the open air, before the assembled crowd.

Circumcision among Jews and Mohammedans is clearly a quasi-religious rite and had the same origin. The diffusion of the Jews throughout the civilised world after the destruction of Jerusalem, and the spread of Mohammedans in the East has made civilised man familiar with the rite. Circumcision, however, has an ethnic as well as a religious aspect, and this needs consideration in regard to the practice of this rite among savage and uncivilised tribes in Australia, the South Sea Islands and the East Coast of Africa. Howitt (*The Native Tribes of South-East Australia*) has made careful observations of the tribal customs in this region, and shows that it is an initiation ceremony and is performed often with a complicated ritual when the lads are near the period of puberty. It belongs to the same kind of custom which includes the knocking out of an incisor tooth, which is a sign that the boy has now become a man. The ritual accompanying the performance of circumcision varies widely among the different tribes, and in one of the tribes "the medicine-man who operates swallows the prepuce with some water." In most instances the foreskin is cut off with a piece of sharpened quartz.

Circumcision is practised in British East Africa, and Fleet Surgeon Bradnell states (BRITISH MEDICAL JOURNAL, 1905, i, 964) that "circumcision and clitoridectomy among the Masai and Kavirondos are great ceremonial events extending over a period of many months, and occurring but once every six or seven years." He gives a detailed account of the operation, and states that "the foreskin is carefully preserved, as it is believed that any one stealing it can cause the boy's death." This appears to indicate that the custom has a totemic significance. Among the Jews the amputated foreskin is usually ceremoniously burnt. The same writer states that he was informed "by an officer who accompanied the Brass River expedition on the West Coast of Africa that he saw outside one of the native villages a tree from which were suspended numerous recently-amputated foreskins." This would suggest that the part after removal is regarded as a totem, or at any rate as a propitiatory offering to an imaginary deity. In regard to this, it may be mentioned that some writers, in reference to certain passages in Jeremiah (chap. iv, ver. 4, and ix, ver. 25-26), would regard circumcision among the Jews as in the nature of a representative sacrifice. This is not probable, for the Jews are especially enjoined in Leviticus xix. 27-28, to avoid rounding their beards, cutting their flesh, or printing marks on their skin (tattooing, etc.).

Spencer and Gillen, in their interesting book on *The Northern Tribes of Central Australia* (1904), in describing initiation ceremonies through which "youths must pass before they are admitted to the ranks of men and allowed to see, or take part in, any of the performances which are regarded as sacred," state that the two most important ceremonies are circumcision and subincision. These anthropologists, after the most painstaking inquiries, came to the conclusion that the native has no idea what these ceremonies mean; no one is allowed to have a wife until he has passed through these rites, and the women look with contempt upon those who have not done so. Spencer and Gillen state that these ceremonies have no relation to procreation, for the simple reason that the natives one and all in these tribes believe that the child is the direct result of the entrance into the mother of an ancestral spirit-individual. They have no idea of procreation as being directly associated with sexual intercourse, and firmly believe that children can be born without this taking place. They believe the spirit to be very minute, about the size of a grain of sand, and that it enters the woman through the navel and grows within her into the child.

That these natives should perform circumcision and other initiation ceremonies as a more or less sacred rite without understanding its meaning is by no means inconceivable. I have been assured that many Hindus who worship Shiva under the form of the lingam, which is merely a vertical stone column with a conical end representing in a rude fashion the penis, but symbolical of the procreative power in animal nature, do not really understand the meaning of the lingam itself.

A study of anthropological writings makes it certain that circumcision is very widely practised by civilized and by uncivilized races and tribes of men throughout the world. In many it certainly has a religious aspect, as in Jews and Mohammedans; a quasi-religious but undetermined meaning among many savage races in regions as wide apart as Australia and the West and East Coasts of the African continent. It is said to be practised in Central America, but the principles on which it is based are unknown to me. In some of the Solomon Islands and in the Fiji, as will be described later, slitting of the prepuce and circumcision are necessities on account of hereditary phimosis.

CIRCUMCISION FROM THE SURGICAL POINT OF VIEW.

The skin covering the anterior two-thirds of the penis differs from that of the adjacent part of the trunk in being glabrous, thin, and free from fat, but it is in the white races of men more pigmented than skin elsewhere; moreover it is movable and distensile. At the end of the penis it doubles upon itself and forms a loose fold, known as the prepuce, investing the glans penis. The inner layer of this fold becomes directly attached to the constricted portion of the penis known as the neck or cervix; immediately in front of this attachment is the rounded projecting border of the glans known as the corona glandis, and the epithelial covering of the prepuce is continued from the cervix over the corona, and after

investing the glans penis is continuous with that of the urethra at the slightly projecting vertical folds which guard its terminal orifice.

At the free margin of the prepuce the skin changes its appearance, becoming thin and moist, resembling mucous membrane. At the groove or cervix and along the posterior border of the corona there are numerous modified sebaceous glands (glands of Tyson; glandulae odoriferae). The lubricating matter which facilitates the gliding of the prepuce over the glans is furnished by the desquamating epithelium of the glans and the corresponding surface of the prepuce mixed with the secretion furnished by Tyson's glands. From the corona to the urethra the preputial skin is again modified, for it contains no glands, but is beset with large vascular and nervous papillae, and it adheres intimately and immovably to the tissue of that portion of the corpus spongiosum which forms the glans.

The median fold of the prepuce which connects the glans below the urethral orifice with the under border of the penis is known as the fraenum of the prepuce.

Thus in normal conditions the terminal portion (glans) of the penis has a complete investment of loose hairless skin, with an orifice allowing the free escape of urine.

The function of the prepuce is to serve as a sheath for the protection of the delicate nerve-endings (or end-organs) in the skin covering the glans penis which are concerned in sexual sensations. The natural elasticity of the preputial skin causes it to contract as the glans penis retracts within it after erection.

The prepuce is liable to a variety of malformations and morbid conditions, but in this lecture our attention will be mainly centred on those conditions which are concerned with circumcision.

In the ordinary way the prepuce is long enough to invest the glans penis completely, but variations from this normal condition may occur in the direction of deficiency and excess. The rarer variation is deficiency, and occasionally boys are born with a prepuce insufficient to cover the glans, and in some instances it is so short that the glans is as completely uncovered as if circumcision had been performed. There is a curious defect of the prepuce associated with the milder degrees of hypospadias in which the cutaneous hood completely covers the dorsal aspect of the glans, but remains, as it were, unfastened below, and the fraenum is absent.

Phimosis.

The common abnormality of the prepuce is redundancy, and the tubular process of skin may stretch for an inch or more like a miniature proboscis in front of the penis; but mere abnormal elongation of the prepuce does not in itself constitute a nuisance so long as this skin-fold can be easily and painlessly retracted to allow the parts to be freed from the retained smegma and kept clean. In many long foreskins, and in many short ones also, the terminal orifice is too small to allow of its retraction, and the gland is practically muzzled by its prepuce—a condition exactly expressed by the term *phimosis*. It is to remedy this condition that surgeons recommend and perform the operation of circumcision, which means removal of the foreskin, and it is advised for a variety of reasons, some of which we will consider.



Phimosis is of two kinds—congenital and acquired. Congenital phimosis is very common, and it may be due to an excessively long foreskin with a narrow orifice, or to adhesions of the adjacent surfaces between the foreskin and the epithelium of the glans penis, which is normal in utero at birth, but which usually spontaneously disappears. This temporary union is accounted for by the mode in which the prepuce originates. Mr. J. Strickland Goodall has devoted some attention to this matter, and describes the development of the prepuce in the following manner: When first formed, the penis has no prepuce, and the anterior end of the penis is imperforate. The prepuce is subsequently differentiated by an ingrowth of the surface epithelium, which extends into the substance of the organ and appears in section as an imperfect ring or horseshoe-shaped epithelial structure (Fig. 1). This ring is incomplete ventrally, the gap representing the fraenum, the tissue external to the epithelial ingrowth becoming the prepuce, while the part internal to it represents the glans. As development proceeds, the central cells of this ingrown epithelium degenerate so that the preputial tissue becomes separated off from the glans, the outer layer forming the epithelial lining of the prepuce, the inner layers the covering epithelium of the glans penis. It must be noted that the epithelium does not grow back into the substance of the penis uniformly, but grows back fastest at the sides (Fig. 2). The desquamation leading to delamination and the subsequent differentiation of the prepuce usually appears to begin latero-posteriorly. Many (if not all) of the sensory end-organs of the prepuce (and possibly some of the glans itself) are developed from this ingrown surface epithelium. The glands of the prepuce and penis are relatively late formations, and are not functionally active till long after the prepuce is differentiated; the glands in the skin covering of the penis appear first towards its root, and are developed before the prepuce is separated or the smegma glands formed.

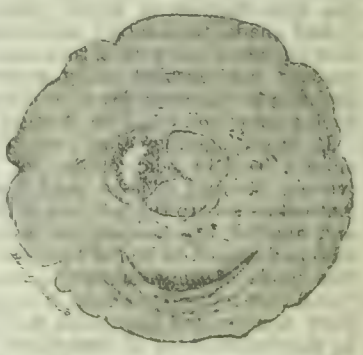


Fig. 2.—Section through the anterior end of the fetal penis, showing that the epithelial plug grows backwards faster at the sides.]

The so-called adherent prepuce of the infant is due to an organic connexion between the glans penis and the non-differentiated preputial tissues, and results from the ingrowing epithelium above described not desquamating at the usual time, and is really in the nature of an arrested development.

Berry Hart, in an excellent "Contribution to the Morphology of the Human Urinogenital Tract,"[1] has also described this mode of origin of the prepuce of the penis and clitoris. He further points out that this epithelial-plug formation with subsequent central breaking down is seen in the development, not only of the prepuce, but also in the formation of the anus, the lower third of the vagina, and in sweat glands.[2] The disadvantages of a narrow preputial orifice, especially when the foreskin is abnormally long, are many. Chief among them is the difficulty the child experiences in voiding urine; this leads to retention and straining efforts, and if the inguinal canals are weak, this straining will produce an inguinal hernia, or lead to prolapse of the rectum. It is a fact that a hernia in a child will occasionally disappear after circumcision.



Fig. 3.—Section showing central desquamation beginning in the posterior part of the epithelial outgrowth and leading to delamination with the formation of the movable prepuce. (6, objective.

Apart from these matters, the dribbling of urine through a narrow preputial orifice will cause much irritation of the marginal skin which makes the infant peevish and fretful, and may lead to reflex disturbances which retard its healthy development.

In many instances a prepuce is sufficiently loose to allow of retraction, but if it becomes inflamed or swollen from any cause, such as irritation, or in sexual employment, it will swell to such an extent that the man is unable to reduce it over the glans penis and it remains retracted; this condition is known as *paraphimosis*, and the swollen prepuce forms a red ring or collar immediately behind the corona, strangulating the penis. In severe forms of paraphimosis the condition is serious, for, if unrelieved, it ends either by ulceration of the constricting preputial ring, or by gangrene of the glans penis. These consequences are rare, for with patience and perseverance, the surgeon usually effects reduction by means of his thumbs and fingers—a very effectual and simple, though painful method of relief.

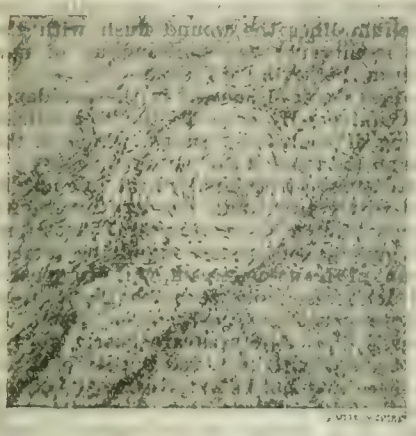


Fig. 4.—Section showing organic (cellular) nature of adhesion between prepuce and glans penis in the fetus.

It is wise to recommend a patient, young or old, who has had paraphimosis, to be circumcised, in order to prevent the recurrence of such a painful and unpleasant condition.

In rarer cases the preputial orifice may be so narrow that the urine after escaping from the urethra will distend the prepuce like a balloon, and then issue as a fine jet through it. This sort of thing often causes mirth to the boy's companions, but will exercise a baneful influence by leading to sacculation of the bladder, dilatation of the ureters, and hydronephrosis.

The Museum of Charing Cross Hospital contains a prepuce removed from a man 35 years of age with an orifice so narrow that when the urine escaped from the urethra it ballooned the prepuce to the size of an orange, and it was then expelled by squeezing. Micturition required fifteen minutes. The patient had a congenital phimosis, and at the age of 33 years contracted soft sores at the margin of the prepuce, and these gradually caused the narrowing. Mr. Waterhouse relieved the condition by circumcision.

When the urine is retained between the prepuce and the glans penis it sets up much irritation and occasionally inflammation of the prepuce (balanitis), and in rare examples concretions or calculi will form in this situation.



Fig. 5.—Preputial calculi: from natives of the Solomon Islands. (Museum St. Thomas's Hospital).

It is not uncommon in circumcising children to find on peeling the prepuce from the glans in the neighbourhood of the corona small, rounded, pearly bodies composed of smegma and epithelium; it is easy to understand that if urine had free access to and was retained by a prepuce with an unusually narrow orifice, such bodies would form the nuclei of urinary calculi. This actually happens, but in this country, at any rate, preputial calculi appear to be very rare. It is, however, certain that severe degrees of congenital phimosis do lead to the formation of preputial calculi, and cases have been described in which a calculus as large as a sparrow's egg was removed from the preputial sac of a child (Foster, 1880). There are facts which support the opinion that phimosis may be hereditary, and the following notes are interesting in this direction:

Mr. B. Corney, who was an emigration medical officer in Fiji, states that nearly all the natives of the Solomon Islands have congenital phimosis, and in about one and a half per cent. the preputial orifice is no larger than a pin's head; a few of the tribes remedy this by slitting up the prepuce, usually with a sharp shell.

In the Island of Malakula all the tribes except one at the north-east corner slit up the prepuce, and in this tribe as a result of congenital phimosis, balanitis (non-specific), caused by want of cleanliness and consequent irritation is very common. The Fijians, a much superior race, all circumcise or slit.



Fig. 6.—A large preputial calculus: from a native of the Solomon Islands.

As a consequence of congenital phimosis in the natives of the Solomon Islands, if they remain uncircumcised or are not slit, calculi form under the prepuce, and Corney sent to Mr. Crofts, at that time (1884) Surgeon to St. Thomas's Hospital, some preputial calculi which he had removed from two natives, aged 17 and 18 years respectively. The stone from one of the men weighed 1 oz. 110 grains, and in the other case twenty-two calculi were extracted (Figs. 5 and 6). These calculi are preserved in the Museum of St. Thomas's Hospital.[3]

Acquired Phimosis.

Many men with a slight degree of phimosis or with a long but retractile prepuce remain uncircumcised, and so long as they are taught to keep the parts clean and carry out the precepts the condition, though inconvenient, may not give rise to serious trouble throughout a long life. There is no question that such a condition is often a hindrance to coitus and leads often to paraphimosis and balanitis, besides rendering the individual more prone to abrasions and slight fissures which may be infected with syphilis; moreover, a long foreskin is certainly a trap for the gonorrhoeal virus. A frequent cause of acquired phimosis is cicatrization of a chancre at the margin of the preputial orifice.

Apart from these evils, the margins of the preputial orifice are apt to be excoriated and fissured in old men whose urine dribbles away from prostatic trouble, or when it is overacid, foul, or diabetic; under these conditions the chronic inflamed prepuce thickens, its under-surface as well as the epithelial covering of the glans thickens, and the surfaces assume the peculiar white appearance characteristic of leucoplakia, which is common on the lingual, buccal, and vulval mucous membrane. Moreover, the thickening of the prepuce leads to narrowing of the preputial orifice, which prevents the proper exposure of the glans; smegma accumulates, the patient is made uncomfortable and often miserable from an irritating and annoying balanitis. Cases are known in which an acquired phimosis of this character has been neglected, and the glans has, in consequence of sloughing of the skin, forced its way through the dorsal portion of the prepuce. All the discomforts of acquired phimosis may be remedied by circumcision even in octogenarians. The preputial irritation sometimes seen in diabetics is better treated by merely slitting up the foreskin under local anaesthesia.

Not the least interesting feature of acquired phimosis in men is the formation of preputial calculi. The concretion, vary greatly in number and in size. One may be present, and as many as 200 have been counted (Vincent); the concretions in this instance are preserved in the Museum of the Royal College of Surgeons. Thirty or forty is not an uncommon number. For example Mr. Annandale removed thirty-six calculi from under the prepuce of a salmon fisher 58 years of age, and Demarquay[4] has collected several interesting cases, including one under Brodie's care containing sixty concretions. Zuckerkandl has reported a curious and rare example of acquired phimosis with unusual consequences. A Slavonian

peasant 50 years of age stepped into a wasp's nest and the insects flew up the wide leg of his trousers and stung his penis and scrotum; as a consequence he had a diffuse cellulitis. Twenty years later he came under the observation of Vujic with an apple-size swelling at the end of his penis, but the preputial opening was so narrowed in consequence of cicatricial contraction that it only admitted a probe. The prepuce was slit up and the space between it and the glans penis found occupied by three stones the size of a dove's egg; their apposed surfaces were faceted and the pressure they had exerted on the glans had caused it to atrophy.[5]

Preputial calculi arise probably in the following way:—Some are minute concretions which find their way from the kidney or bladder along the urethra and are retained under the prepuce, its orifice being too small to allow them to escape. Others, and probably the majority, consist of urates or triple phosphates deposited on a nucleus of smegma; and some are masses of smegma impregnated with phosphates.

It is beyond any doubt that many inconveniences are associated with a non-retractile foreskin in children, in adults, and in elders; it is also, in some circumstances, a menace to health. Mothers often strongly object to have their baby boys circumcised, not only from dislike to subjecting them to a surgical operation, however trivial, but also from a feeling of revulsion in subjecting them to a process which is regarded as a rite in other religious communities. My own experience in this matter has been that when the advantages of circumcision are explained to them, they yield.

Congenital phimosis is common in London, as in a measure may be inferred from the frequency with which circumcision is performed in a large hospital. Mr. Morson ascertained for me that in this hospital (Middlesex), during 1906 fifty-four children were circumcised and twelve adults, three of the men were over fifty years of age. Circumcision of infants is very common in hospitals concerned with children, and I have been informed that at the Hospital for Sick Children, Great Ormond Street, during 1906 this operation was performed on 874 patients.

Occasionally one hears of certain supposed disadvantages of circumcision; it has been urged that the scar left by the operation may ultimately be attacked by cancer. Carefully-observed cases have been reported in which squamous-celled cancer has been found on a circumcision scar, and this may happen to any scar, but the liability is excessively small; an adult with a long, non-retractile, chronically-inflamed prepuce is far more liable to cancer of the penis than one with no prepuce. Cutaneous horns have been seen growing from a scar left by circumcision; but they may grow from any part of the penis, even from the epithelium covering the glans.

In rare cases syphilis and tuberculosis have been communicated to Jewish children as a result of a certain formula in the rite. Infants have died from bleeding and sepsis when the operation has been performed by medical men as well as by the mohel. These things only serve to show that an element of risk pervades all human actions.

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ON THE RADICAL CURE OF URETHRAL STRICTURE BY INTERNAL URETHROTOMY.

By JAMES MACMUNN,
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Excepting excision certain plastic procedures necessarily rare, and a few cases of external urethrotomy, and there has scarcely been any solid advance in the radical cure of urethral stricture for half a century. Yet internal urethrotomy dates back to Heliodorus (1st century). Exceedingly few irrefutable examples of the cure of deep fully organized annular stricture—the common "stricture" can be adduced. Partly organized, penile, and segmental strictures are cured every day by the most diverse means.

It is my object to attempt to show that failure was and is due chiefly to the overlooking of "little things." Is not the secret before our eyes in the healing of the wound in the simple operation of meatotomy and in other places where epithelium gets fair play in the covering of raw surfaces? Cut a meatal stricture as freely as you like and merely pass round sounds; recontraction to an undesired extent is the rule. A "splice" forms. Pass a flat body—even a loop of wire—with like frequency; contraction does not recur. Epithelium lines the wound flush with the plane of mucous membrane; the building up of new tissue does not outrun the paving of the old.

I claim that the first secret of success is the avoidance of that which is universally courted—the "cicatricial splice," an offspring of contractile tissue, which in the future will possess all the vices of the parent.

Most urethral strictures will generally heal like meatal if cut properly and wisely treated in the way mentioned or by a process like scabbing. The periurethral deposit, no longer called on to support the tissues round the lumen, which bear the brunt of the urine stream, will disappear.

The anatomy of strictures varies so much that to treat them scientifically we must examine them so. Owing to want of this I assert that strictures are nearly always undercut, overcut, or badly cut. If A. and B. have obstructions 5½ in. down these may not be at the same site owing to the varying length of the penile urethra. That of A. may be prebulbar, that of B. bulbar or post-bulbar. Such difference makes a great difference in regard to treatment and results. Another urethra where incision at the bulb is required measures normally 40 or 45 mm., but the stricture deposit has extended into the corpus spongiosum even beyond this extent, whilst the meatus, or mid-spongy part, measures 24 mm. only. Now we are told if we "cut at all to cut all," and almost universally that cure depends on the severance of every stricture fibre. There is no instrument, used in England at least, capable of doing such a thing, and no sound was ever passed capable of determining if it were done. A gutter is made and even this is allowed to fill up.

Find out (1) the site of the stricture, (2) its length, (3) the aspect of the urethra it engages, (4) whether it be urethral only or periurethral, (5) inflammatory (hypertrophic) or sclero-cicatricial.

The instruments I find most helpful are a full set of flat demi-boule sounds, and some of a rhomboid shape for deep examination which will not hitch so much on the layers of the triangular ligament. Both are metal, the former are straight. Straight instruments are usually as easily passed through deep stricture as curved. The sinus of the bulb is filled up, and the surgical path, the roof, is fairly free.

I pass as large a demi-boule as possible down to the stricture and mark the site over its shoulder. Then, if possible, a small one through the stricture, and make it hitch on the posterior aspect of the latter. A finger in the anal canal can pull the tissues over the instrument, can feel where it hitches, and can straighten the curved urethra. Thus site and length are known.

Whoever performs internal urethrotomy should decide (1) how to cut, (2) where to cut, (3) how much to cut, (4) what to do besides, (5) what to do afterwards.

1. *Instruments.*

Of some sixty urethrotomies not one is perfect. Indeed, otherwise there would not be so many. Some men decry new devices. Urethral surgery stands alone in this, that the patient is at the mercy of the instrument. Not one of the senses comes directly into play. Instruments, therefore, must supplant the senses; they may be simple, but they must be ingenious. Endoscopic section of stricture is a failure.

Urethrotomes are divided into those which cut from before and those which cut from behind. Again, into those which, acting in one of those ways, stretch whilst they cut. Lastly, some cut the roof only, some the floor only, and a few can cut both.

As the anatomy of stricture varies so greatly, it follows that an instrument incapable of adjustment to all needs is defective. An ideal one should be capable of:

1. Stretching the tissues.
2. Cutting roof or floor.
3. Cutting to any depth.
4. Cutting the widest as well as the narrowest coarctation.
5. Localizing the lesion it divides.
6. Cutting from before or from behind.

The indications are:

1. To restore the normal axis, thus getting rid of friction in urination.

2. To cut as much of the obstruction as possible, commensurate with safety.
3. To avoid unnecessary section of healthy tissue and blood vessels.

No instrument in use fulfils these wants. Take the chief types. Teevan's cuts the roof only, and only to the extent of its shield. Its prototype—that of Maisonneuve—is even more objectionable; the knob of the blade pushes some of the morbid tissues aside and tears, not cuts, its way through the periphery of the stricture. Civiale's, etc., cannot well cut beyond the extent of the protrusion of the blade. As to the Otis plan, stress is laid on the smallness of his blade, 2 mm., but a cut made into stretched, therefore attenuated, tissue by this small blade is really deeper than that made by a much larger blade without the stretching. It is a depth which cannot be gauged, and if the operation be carried out as originated, it is a combination really of cutting and bursting, a proceeding not ideal in results.

I do not deny that all these instruments now and then fulfil an admirable function, but that is not enough. Watson's urethrotome is admirable in some cases, but that is a limited use. Reybard's as modified by me possesses the advantages of that of Otis, and two in addition. It can cut roof or floor. The blade is capable of adjustment.

The urethrotome I prefer is that shown (Fig. 1). It is a modification of the simple one I described long ago, now made to cut in any direction. I am much indebted to Messrs. Arnold and Sons for the pains they took to carry out my ideas. It fulfils all the forementioned wants. A is a blade usually blunt on its upper aspect, which allows it to slide on the healthy mucous membrane, but very sharp before and behind. These sharp edges are bi-bevelled like a hatchet edge, to run up to the superior blunt margin. Thus the stricture is always cut at least flush with the plane of mucous membrane, which latter is stretched by the expansion of the instrument. The blade is protected by a shield, and is drawn back by a spring. A metal guide is shown. I usually prefer a copper end, which can be bent any way. Since, however, tortuosity, not mere narrowness, creates impassability, guides are often needed. Space forbids the description of mode of use. I shall only add one great point is this—the blade is adjustable in millimetres.

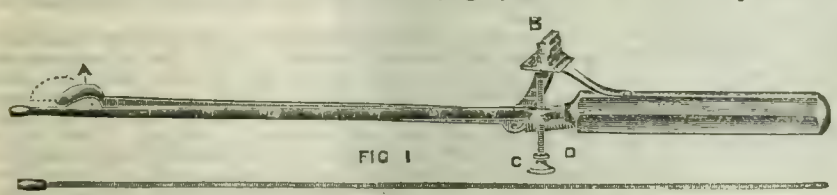


FIG 1

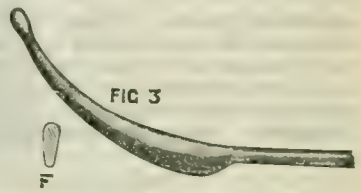


FIG 3

2. *Where to Cut.*

Certainly where the stricture mass is greatest, where bleeding will be least, where drainage is best secured. Although the greatest mass is usually on the floor, the contraction renders a corresponding point in the roof salient, hence a coarctation, though not actually circumferential, is practically so. Yet where the roof is healthy it is a mistake to cut it. New cicatricial tissue is added and increased calibre attained at the expense of true axis; the zigzag passage is exaggerated. Segmental stricture should be cut where it presents. Concisely, ante-bulbar obstruction should be divided on the roof, where deep incisions are safe; bulbar and post-bulbar on the floor—a rule with exceptions. Severe bleeding may arise from the roof of the membranous part, but deep wounds may be made in the bulbous and bulbo-membranous floor if exactly in the middle line (septum of Kobelt).

3. *How much to Cut.*

I said strictures were rarely completely cut. I find a vagueness even in theory on this matter, and also that "that grand old surgeon, Guthrie," was really the only man who stated an exact rule based on anatomy. He advised cutting through the corpus spongiosum as far as its outer muscular layer. No matter if the target be hard to hit, the aim is there! Haemorrhage, according to many, will be severe if we go this far; but haemorrhage does not so much ensue from stricture tissue, whose vessels are mere fissures, but from deep wounding of healthy tissue before and behind.

I find the best rule is to cut a little over the normal surgical capacity of the individual urethra immediately anterior to the stricture, usually 1 mm. more. This capacity varies greatly, and is scientifically expressed as the degree of expansion under a known dilating force. This can be determined by my automatic urethrometer. In the absence of a urethrometer, cut 2 mm. above the size of the largest bulb which will pass down to the stricture (meatus being normal). Physiological capacity should mean that required for the exit of the urine stream; the latter is 15 mm. (Sappey).

Radical cure does not so much depend on the depth of the wound as on its after-treatment. Even if we "cut all," like produces its kind, and cicatricial tissue will fill the gap if we are content with ordinary treatment.

Authorities, whom I respect, state that when a stricture is divided the wound gapes owing to the contraction of the remainder of the ring. That is hardly possible, because (*a*) the muscular elements in confirmed stricture are atrophied; (*b*) there is no yellow elastic tissue—or "vital contractility"—in stricture; (*c*) the undivided part of the corpus spongiosum, "that eminently contractile tissue" (Kolliker)—that tissue, indeed, which accounts for the "resiliency" of stricture—keeps the wound walls in contact.

It is often safer to cut too much than too little. Septic absorption, even extravasation, will be more likely to occur where there still exists an impediment to the stream, that is, where its volume and centrifugal tension behind is but little diminished, whilst an avenue for its escape into the tissues is afforded by the wound.

4. *What to do besides Cutting.*

A large flat demi-boule is the best test for the proper division of stricture. I am usually satisfied with the passage of short wedge-shaped sounds as illustrated, used as large as possible, and with pressure so as to get them well into the incision. When these pass easily, all that is needful has been done; they cannot injure healthy tissue, but if used properly they can complete the severance of any partially-divided bands possibly existing. Fig. 5 is used for the roof, and its shape allows it to exert an expansion wider than the meatus through which it passes; Fig. 3 for floor; Fig. 4 for either, or both.

These sounds do not divulse; they open the tissues to the extent used. Ordinary divulsion, whether by a divulsor or a sound, leaves a tear rugged and unlimited, and yet divulsion practically always attends internal urethrotomy. What is the result of using sounds in an ascending scale? If cylindrical sounds cannot be a test of the completeness of the operation, can they be a remedy for its incompleteness? Urethral sounds should have a curve half the usual size. They should pass through the stricture only, not into the bladder. Chill and shock will then be rare.


FIG 4



FIG 5

5. *What to do Afterwards.*

(1) Cause the wound to heal so that a permanent gap is left; (2) guard the wound against urine contact for a time; (3) prevent and treat complications.

(1) I continue the use of such sounds which enter the depth of the wound and keep its sides apart, combined with the previous injection of drugs which hasten repair and annul sensibility. Orthoform and xeroform, in the form of ointments and mucilages, are my chief friends. Iodoform stimulates granulation tissue too much. The

sounds are scarcely complained of, and press these things into the wound. The drugs are used twice daily; the sounds with a frequency dependent on tolerance and individual need till repair is complete. Thus the wound is healed, mucous membrane at one end sending its epithelium to meet that from the other end, and over the sides as well. The desirable medicaments block dead spaces, and guard from infection.

(2) Guarding from urine contact is largely fulfilled by these, but I usually empty the bladder as often as necessary for the first two days. The best catheter I find to be a small rubber one stiffened somewhat by a slender whalebone stylet, having a coudée bend.

(3) As to complications, space forbids. Haemorrhage from before the triangular ligament is met by perineal pressure. A soda-water bottle filled with iced water fulfils a double function: it restrains priapism (often very injurious) and inflammation as well. It contracts the compressor bulbi urethrae muscle. Haemorrhage from behind demands pressure on the membranous urethra and a contracted bladder.

The difficulty of passing guides is met by the small device shown in Fig. 2. We can push but we cannot direct

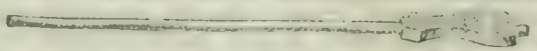


FIG 2

or sustain guides. If introduced into the little cannula, they can be both directed and sustained. One secret is to fill the urethra with oil, then rotate and push.

I have operated very many times on the foregoing principles with results which justify me in bringing them to notice. I regret the illustrations are not quite so true as I would wish.

CONGENITAL HYPOTONIA (CONGENITAL AMYOPLASIA).

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The main object of this paper is to describe a form of *myopathy*, exemplified by a patient under my care, which has apparently escaped observation in this country, at all events, although a condition similar in nearly every respect has been noted in Germany and America, and named "congenital hypotonia" or "myatonia congenita" by Oppenheim, the earliest and fullest writer on the subject. The patient was shown and her case discussed at a meeting of the Bristol Division of the British Medical Association and many of the apposite suggestions and comments made there have been embodied in this paper.

L. G., a girl of 10, was brought to the out-patient department of the Children's Hospital, Bristol, on account of muscular weakness and general wasting. Her parents are healthy, and in addition to give their child good food and hygienic surroundings. They have lost three children since the birth of this one, the first from measles, one from cancrum oris, and a third at two months old from some unknown cause. Her birth was uneventful and without instruments, at full term, and no relative, near or distant, has ever suffered from anything like this girl's malady. Within half an hour of her birth one hand was noticed to be peculiarly flabby and weak, but no other sign of weakness was apparent until she began to get about and to learn to walk. Then it was found that her legs gave way under her, letting her down upon the front aspect of her legs in very much the same position as that which will be described later on, this prevented her from walking by herself till she was over 2 years of age. Her mother often found it very difficult to put the child's clothes on and off, because the legs were so weak and flabby. When she was only 18 years the fact that her calves were very small was remarked upon; this feature has become more pronounced as she became taller and more defiant of outline. Till she was 7 or 8 her ankles turned over so readily as to cause a serious disability, as she often fell down, and her attendance at school suffered many interruptions as a consequence. This trouble, however, has been greatly lessened by the use of boots with very long "uppers." Her hands and their possibilities have always been a source of entertainment to her friends; at school this has developed to such an embarrassing degree that her parents have been obliged to forbid her "showing-off" to her schoolfellows. In spite of the muscular laxity, no dislocations have ever occurred. There has never been any defect of vision, and no squint has been noticed. Her voice does not disappear after prolonged use, and there has been no difficulty about mastication; it has, however, been noticed that she cannot cough powerfully. Her appetite is good, and she has never had any grave illness or serious injury. Her mental powers are quite normal. Her mother brought her to the hospital on account of the weakness of her hands, which was so great that she could not dress herself. She can hold up light objects, such as a cup of tea, but can do nothing with heavier weights—for instance, a bucket of water. Two miles is as far as she can walk at a stretch without being immoderately tired.

In appearance she is of average height; her face is not remarkably thin, and though the orbiculares palpebrarum seem slack and toneless, it is not possible to demonstrate weakness in any of the muscles supplied by cranial nerves. The muscles of mastication, together with those of the tongue and lips, are not appreciably atonic. It is when the upper limbs are examined that the most striking departures from the normal are found. There is a universal defectiveness of power, accompanied by, and apparently proportionate to, a poor development of the muscles—that is to say, the muscles of the hand and those controlling movement at the wrist are smaller and at the same time weaker than those of the upper arm. Unlike the muscular changes of acute and chronic anterior poliomyelitis and of most of the muscular dystrophies, no particular muscles or groups of muscles are selected by the process; the weakness and ill development are evenly distributed except for the fact already mentioned, that the distal parts of the limb have suffered more than the proximal.

Hence there is an entire absence of the contractures usually associated with muscular atrophy. This is also to be accounted for by the fact that, though the muscles are weak and ill-nourished, they are only relatively so; the grip, though very feeble, does exist, and similarly the muscles, though small and hypoplastic, are not completely wanting. Picked up in the fingers, they can be felt quite distinctly, though they are small, soft, and doughy; the impression given is different from that derived from fingering atrophied muscles. These remarks, while applying specially to the musculature of the upper limbs, are true also of the general state of the muscles of the lower limbs and trunk, particularly of the former. The most striking feature of this enfeeblement is, however, neither the loss of bulk nor the loss of power, but the remarkable hypotonicity of the muscles; resulting from this is an abnormal freedom of passive movement about the various joints, which is well illustrated by the accompanying photographs. It is at the finger joints and the wrists that the greatest mobility is found; each finger can be turned backwards till the tip touches the back of the hand just above the metacarpophalangeal knuckle, and similarly the hand can be extended on the forearm till the knuckles touch the back of the wrist. Flexion at the wrist is equally free; the palm of the hand can be pressed against the front of the wrist. The fingers can be spread out from each other widely; the hand can be rolled up into a cylinder with palm inwards and dorsum outwards, the tip of the little finger projecting beyond the ulnar border. The thumb, also, can be distorted into all sorts of fantastic shapes. At the elbow, recurvation is of course prevented by the olecranon process; but lateral movement is abnormally free, so that the forearm can be abducted till it forms quite a considerable angle with the line of the upper arm. The forearm can also be hyperpronated. At the shoulder there is nothing worthy of note.

The lower limbs are hypotonic, but not to the same degree as the arms; the gastrocnemii, like the extensors and flexors of the forearm, are small and soft. The toes can be doubled back at the dorsum of the foot; they can be drawn apart, and the foot can be crumpled up in much the same way as the hand. Movements at the ankle, also, are abnormally free; the patient, for example, are lax, and readily allow of the displacement of the foot into an exaggerated equino-varus position. The knee affords a good instance of the fact that in this patient the mobility of a joint is limited, not by muscular tonus, but by the actual anatomy of the joint itself; recurvation is possible, but not beyond the point permitted by the ligaments of the knee joint, wherein it seems to differ in degree from the recurvation sometimes seen in dorsal tabes, and called by Erb (cited) "hypotonia musculaire." The patella can be laterally displaced to an abnormal degree. At the hip a very high degree of mobility is possible, abduction and adduction being allowed through a large sector of a circle; the freedom of internal rotability is attested by the remarkable squatting position assumed naturally and habitually by the patient. Instead of sitting on the floor with her feet in front of her, she rests her body, not only on the glutei but also on the postero-internal surfaces of the thighs, and on the inner surfaces of the knees, legs and feet, the knees being flexed; that is to say, the lower limb can be rotated inwards at the hip through an angle of 90°. Such a posture would be impossible if the outward rotators of the hip were possessed of a normal degree of tonus.

The muscles of the trunk have erred less widely from the path of natural development; yet there are very distinct indications of hypotonicity here also. The most notable of these

perhaps, is the exaggeration of the antero-posterior curves of the spine in the erect posture; in the lumbar region the spinal column bends forward so as to have quite a deep hollow above the sacro-iliac joints. This lordosis is similar in nature to that seen in cases of pseudo-hypertrophic muscular atrophy, and is, as in this latter disease, due to atony of the glutei, the erectors of the spine, and the muscles of the anterior abdominal wall. These latter are soft, even when the patient is doing her utmost to harden the abdominal wall; and, further, they bear a good deal more stretching than is possible in a normal subject, for she can bend backwards till her dorsal spine is at right angles to her thighs. That the erectors of the spinal column are feeble is proved by the forward stoop of the trunk when she sits on a chair. The spinati are small on both sides, leaving the scapular spines unduly prominent. The scapulae are winged, but not to the extreme degree often met with in the several forms of acquired dystrophy. The respiratory muscles seem to act naturally, and there is no disturbance of the functions of the sphincters.



Fig. 1.

Co-ordination is as good as might be expected, the gait showing no definite departure from the normal. I have observed no fibrillary tremor, neither is there any sort of coarser tremor to be seen. The knee-jerk is present on both sides, and brisk; there is a tendo Achillis jerk, but no ankle-clonus, and the plantar response is normal on both sides. I have not been able to elicit any of the usual tendon reflexes in the upper limbs.

The electrical reactions, which Dr. George Parker kindly investigated for me in the Electrical Department of the Bristol General Hospital, showed a definite decrease of muscular excitability equally to both currents, roughly proportionate to the diminution in volume and power of the muscles. The stimulability and conductivity of the nerve trunks were unaltered.

There is no diminution nor other perversion of sensation, special or cutaneous; and, apart from the condition of the muscles, there is nothing of the nature of trophic change.

With regard to the patient's progress, there is no doubt that any change that is taking place is for the better; massage seems to have produced a definite increase in the muscular strength of the legs, though the hands do not respond to treatment. According to her mother's description, the muscles have not grown flabbier since the early age at which it was first discovered that anything was wrong. It seems likely, therefore, that she may grow a little stronger in the next few years, but that she will ever have anything like a normal measure of muscular power is not possible.



Fig. 2.

What is the exact nature of this disorder? It has been present since birth, yet it can be ascribed to no inherited cause; no other case has occurred in any branch of the family, in which lies an important contrast to many of the other muscular dystrophies. That the loss of power is primarily muscular and not secondary to any central or peripheral nervous disease is shown by (*a*) the fact that the muscles are weak in proportion as they are small and short; (*b*) the absence of sensory or trophic changes, fibrillary tremor, and reaction of degeneration. The small size of the muscles is apparently due, not to atrophy but to a failure of development which has been in operation through the child's life, and probably through the greater part, if not the whole, of the intra-uterine period of development; at any rate, it had begun within half an hour of birth, and is at a standstill now. (*c*) A further point of difference from the type of muscular weakness associated with and dependent on changes in the nervous system is the diffuse distribution of the muscular affection; unlike focal and systemic diseases of the brain, cord, and nerves, the muscles affected are not separable into groups, but all the muscles of the body—except, perhaps, those of the face and eyes—are implicated in the morbid process. This also is a point of difference from most of the other myopathies.

If, then, the nervous system is not at fault, is the disease entirely a muscular one? As was pointed out at the meeting where my patient's case was discussed, joints of normal configuration could hardly permit of such remarkably free passive movement; even in the presence of absolutely toneless muscles the wrist, for instance, could hardly be hyper-extended and hyper-flexed to the remarkable degree which is actually possible. The skiagraph which is reproduced seems to indicate a certain rounding-off of the articular surfaces, a deviation from the normal which would undoubtedly allow of passive movement through an excessively large arc of a circle. Not only the joint-surfaces, but also the other structures surrounding the joints—nerves, blood vessels, connective tissue and skin—must differ slightly from the normal in their anatomy, or pain and ischaemia would be produced by such a position as is for instance illustrated in Fig. 2. All these changes, or rather modifications of development, are, however, not primary; they would not have occurred if the muscles had been endowed with enough tone to prevent abnormally free passive movement. As it is, the muscular flabbiness has left the limbs more or less flail-like, and to this circumstance all the other structures have been compelled to adapt themselves. The fault, then, lies primarily and almost entirely in the muscles themselves; the nervous system cannot be accused of complicity for the reasons detailed above. The case must be set alongside of the various forms of muscular dystrophy; from these, also, it presents certain definite diversities. To begin with, it is congenital and yet not familial in origin; moreover, the affection is spread diffusely over the whole body, and has not selected any particular muscles or groups of muscles; there has never been any pseudo-hypertrophic stage, and the process is at a standstill. Having, therefore, ruled out of court not only the ordinary myopathies, but also central nervous disease, we yet have to see whether the case comes under the head of any disease hitherto described. At first I was inclined to suppose that it belonged to no recognized group, but further examination of medical literature shows that in nearly all details the case corresponds to those described first by Oppenheim under the name of "congenital hypotonia" or "myatonia (*not* myotonia) congenita" in two separate papers,[1] as well as in his textbook of nervous diseases.[2] The only other writer on the subject is Spiller, whose record of a case includes the only description

of an autopsy hitherto performed upon a subject of this malady. Briefly, Oppenheim brings forward as a definite clinical entity a general flaccidity of the skeletal muscles, excepting those supplied by cranial nerves, noticed at or soon after birth. It varies in degree; in extreme cases the limbs are mere useless appendages. The distribution of the muscular affection also varies. In one case all the limbs are affected, in another the legs alone, in another the muscles of the head and trunk suffer, but not those of the limbs. The muscles are not atrophic in the usual sense of the word, but soft and atonic; they react feebly or not at all to mechanical and electrical stimuli. Afferent paths are unaffected, the mind appears normal, and the sphincters act well. Oppenheim is inclined to give a hopeful prognosis based upon the course of the four or five cases he has seen. As he points out, the congenital nature of the complaint, the absence of the familial factor, the generalized distribution of the muscular change, and the tendency of the patients to get better rather than worse, separate it from acute and chronic anterior poliomyelitis, multiple neuritis, the various myopathies, and the pseudo-paralysis accompanying syphilitic, scorbutic and other diseases of the epiphyses. In his opinion, the fact that no history of injury at birth was forthcoming in any of his cases suffices to annihilate any theory of haemorrhage into the medulla or cord. He had met with no cases except in infancy. The only other description is Spiller's,[3] whose patient was also an infant; death was apparently due to tuberculosis. Clinically the case coincided exactly with Oppenheim's account. *Post mortem*, the affected muscles were found to be small, pale, and "hyaloid"; the subcutaneous fat constituted an unduly large proportion of the bulk of the limbs. The intramuscular connective tissue was excessive in bulk and in the amount of fat it contained; the muscle fibres were small, in the limbs especially, and to a less extent in the trunk, and had undergone a patchy hyaline degeneration. There was absolutely no demonstrable change, macroscopic or microscopic, in brain, cord, or nerves. Certain changes were noted in the thymus[4] a point of interest when conjoined with the fact that a persistence of the thymus is sometimes associated with myasthenia gravis. There was general fibrosis of the gland, with increase in the number and size of Hassall's corpuscles: in both thymus and spleen there was evidence of proliferative change in the intima and adventitia of the arterioles. Other points noticed were the presence of lymph nodes within the lungs, and proliferation of the lymphoid tissue of the mesenteric glands. Whether these changes bear any real relation to the nature of the disease is very doubtful, since the functions of the thymus are so little understood: fibrosis of the organ has been shown by my colleague, Dr. J. M. Fortescue-Brickdale,[5] and others,[6] to be commonly associated with idiopathic infantile atrophy.



Fig. 3.

My patient shows certain differences from the above descriptions; neither of the writers mentioned has seen a case of more than 2 years of age, but probably some of Oppenheim's patients, if they live to be as old as mine, will show a precisely similar condition of the musculature. The limbs in his cases were not small, while in my case they are very thin; this difference is to be accounted for by the relative excess of subcutaneous fat in infancy over the amount present in later years. In Oppenheim's cases, and in Spiller's, the tendon reflexes were absent; but, in view of the difficulty of obtaining reliable evidence with regard to these phenomena in a child, this discrepancy is of little importance. In all other points the similarity is complete, and there can be no doubt that my patient exhibits the same condition, persisting till the age of 10, which has so far only been recorded as existing in babyhood. Since this patient was shown at the meeting alluded to above several people have recollected similar accomplishments among their friends and relatives, but on a less ambitious scale; and it is possible that many of the "double-jointed" children who are always in great request among their school fellows, and the "boneless boys" of travelling circuses, are "formes frustes" of this curious muscular disease.

The term "amyoplasia" has been suggested as a substitute for "hypotonia" because the latter only expresses that feature of the disease which most struck Oppenheim; it is desirable to find a name which embodies that fuller information with regard to the nature of the malady which has been furnished by Spiller's autopsy, and the case recorded here in a patient of an age at which it is easier to appreciate the nature of a muscular disease than it is during infancy.

In conclusion, I must acknowledge my indebtedness and express my thanks to Dr. Newman Neild, Assistant Physician to the Bristol General Hospital, and to Mr. Ellington Jones, Skiagraphist to the same institution, for the excellent photographs and radiographs which they were good enough to take for me.

POSTSCRIPT. — To the foregoing summary of this interesting disease must be added a brief allusion to several cases published recently by Italian physicians. Unfortunately the descriptions available are meagre. Sorgente[7] contributes an account of two cases, both of them infants under a month old, with a general flaccidity like that which Oppenheim described; the thoracic muscles were affected as well as the limbs, which probably accounts for the death of both from bronchitis. In both the electrical reactions were doubtful and the knee-jerks brisk. Sorgente alludes to two other contributions to the subject without giving precise references; Murgia of Turin described a case in 1903, and Berti of Bologna in 1904 published an account of two more. In none of these was there any autopsy. Another paper by Jovane of Naples describes a case in a child of 3 months, who died of bronchopneumonia, a calamity favoured by the fact that the thoracic muscles did not escape the flaccidity which was distributed throughout the limbs and trunk. In all essential points the case was like the others summarized here; the tendon reflexes were absent, unlike those in Sorgente's cases and my own. There was no *post mortem* examination, nor any fact in the history that could throw light on the etiology. From these Italian cases the immediate prognosis would appear to depend on the state of the thoracic muscles; if these are involved, the infant is likely to die of bronchitis.

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A Clinical Lecture

ON

OPSONINS IN RELATION TO THE SPECIFIC TREATMENT OF TUBERCULOSIS.

DELIVERED AT THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

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THE essential potentialities of living matter have been defined by the physiologist from a study of life in its simplest forms. The complex activities of the more specialized tissues of the higher animals are but developments of the simple processes carried out in the protoplasm of an amoeba. Composed of protoplasm, the cell elements of the tissues and the wandering cells of the body have the power of assimilating material and converting it into protoplasm, thus nourishing themselves and growing. In the process of producing protoplasm and as an aid to this, other substances (by-products, as it were) are formed, and either stored up or excreted. The cell is, however, dependent for its nourishment upon supplies from outside, which, in the case of the body cells, must be brought to it by the blood stream. Its activity, moreover, is largely excited and the nature of this determined by external stimuli, which also may reach the cells by way of the blood. Thus, though we look to the cell as the active agent, we must also study the constituents of the blood under different circumstances if we would investigate the causes of the various modifications of cell activity. In the higher animals the metabolic power of the cell is developed and specialized in the component cells of the various organs—thus the brain cell and the liver cell, for example, perform different metabolic functions. How far any individual cell may, by suitable pabulum and stimulus, have its normal metabolic activities further developed or altered it is impossible to say; the metabolic potentiality of all cells is presumably essentially equal, but in the ordinary course specialization only results from the slow development of generations.

The special metabolic activity of the body cells is determined, first, by the nature of the cell, and then by the special stimuli present in the blood and lymph, these stimuli varying under different conditions. Thus the blood from the duodenum during digestion contains certain substances (hormones) which act as stimuli on the cells of the pancreas and call forth the secretion of pancreatic juice.[1] So also hormones in the blood of the pregnant woman—probably produced by the development of the fetus *in utero*—stimulate the cells of the mammary glands to the secretion of milk. It appears also that the same cell—for example, a leucocyte—may vary the direction of its metabolic activity and secrete different products under the influence of different stimuli.

In disease we may have innumerable modifications of cell activity, leading to structural abnormalities and abnormal metabolic products which are (or cause) the manifestations of disease. These perverted activities, like the functions performed in health, must remain within the limits defined by the potentialities of living matter as determined by the physiologist.

Pathology is, after all, as I have indicated, only physiology gone wrong; and in examining the somewhat intricate nature of the defensive processes which take place in the body when attacked by disease we must constantly bear in mind the investigations of the physiologist.

The physiologist has shown that the cell is what may be termed the "vital unit" of the body: the cell elements of the tissues are the active parts and alone able to perform vital functions.

Starting from the physiologist's recognition of the cell as the vital unit, the cellular pathology of Virchow is the natural evolution. The perverted activities of the cells in disease, leading to tissue changes in the organs, become intelligible when we realize the power of the cell to respond to stimuli of various kinds; and the examination of the blood in disease is a necessary investigation, not only in respect of the different varieties of leucocytes, but with regard to the constituents of the plasma, which may act as stimuli to the cells.*

As the hormones stimulate secretion, so in somewhat similar manner does the presence in the blood of morbific bacteria or their products stimulate the leucocytes or other body cells to specific activity of a defensive nature. The study of immunity is largely concerned with these stimuli and the consequent reactions in the body cells. Bacteria produce their ill-effects in the body by the secretion of substances poisonous to their host, either excreted by the micro-organisms (exotoxines) or retained in the body of the bacterium (endotoxines), and only set free on its death and disintegration. The natural inference is, therefore, that bacterial diseases may possibly be combated in two ways:

1. By the destruction of the bacteria which produce the toxines.

2. By the destruction or neutralization of the toxines which are formed.

The treatment of tuberculosis by antiseptics—creosote, guaiacol, izal, etc.—is an attempt to carry out the first of these plans of defence. Treatment by antitoxines—such as antidiphtheritic serum—is an example of the second method.

Let us briefly examine these two methods of defence in the light of modern experience and research.

One great drawback to the first defensive method is the difficulty in finding an antiseptic which is poisonous to the invading bacteria without being harmful to the body cells.

Though some bactericidal property has been attributed to the normal (healthy) blood serum, this is obviously insufficient to destroy many bacteria, otherwise infection would not occur. More particular attention was directed to the body cells, and especially the leucocytes, as agents in the destruction of the invading micro-organisms. The multiplication of leucocytes in the immediate neighbourhood of the disease-causing bacteria suggested that this leucocytosis was a protective effort—a massing of the defensive forces at the point of invasion. Landerer's treatment of tuberculosis by cinnamic acid was an attempt to increase leucocytosis; it is undoubtedly useful, and appears to favour fibroid tissue formation and localization of the disease centres. A further step of great importance was the observation of Metchnikoff, that certain cells may be seen to engulf and absorb bacteria—phagocytosis. This suggested that the cells might of themselves be able to protect the body from the effects of bacterial infection so long as their vitality was unimpaired, and that treatment should aim at strengthening the resisting power of the body. The hygienic or sanatorium treatment of consumption illustrates this plan of campaign.

So far, however, the effect of the serum in stimulating and determining the activity of the cells had not been sufficiently taken into account. The clinical history of infectious diseases shows that after recovery from an attack of one of these complaints the individual is, for a time at least, less susceptible to infection from the particular disease from which he has suffered. There is an acquired immunity which presumably results from the disease, or is produced in the body by the disease processes. The exact nature of this protective condition within the body, the nature of immunity, has in recent years been the subject of much research. Briefly, the facts already observed may be summarized as follows:

The bacteria, having gained entrance into the body and having found conditions suitable for their development, multiply and become sufficiently numerous to poison the blood with their toxines. After a time the further production of the poison may cease and the illness is over.

The simplest explanation seemed to be that the micro-organisms produced and excreted a poison which not only caused illness of the host but which was poisonous to themselves. Thus, when by reason of the multitude of the bacteria the poison production became great, the bacteria themselves were destroyed by the products of their own activity. Since, after the attack is over, the individual is insusceptible to infection from the specific bacterium which causes the illness, it would seem that the poison, whatever its nature, remained in the body for some considerable time; not in sufficient quantity to

* Since this was written I have read the excellent articles by Dr. Harry Campbell in the *Lancet* on the Rôle of the Blood Plasma in Disease.

affect the host, but enough to prevent the development of any small number of these particular micro-organisms which might enter the body. It was evident that the poison was specific, for one disease does not protect against one of another kind.

The search for this substance which is the cause of the specific immunity has engaged the attention of many of the most accomplished scientists, and the results already obtained, though incomplete, are interesting and valuable.

The matter is by no means so simple as it at first appeared. The bacteria certainly produce some substances which are injurious to the host. These toxines may, as before mentioned, be excreted (exotoxines), or may remain in the bodies of the bacteria to be set free only on their disintegration (endotoxines). In any case the effect of the toxine is to stimulate the tissues and leucocytes of the host to defensive reaction, resulting on the one hand in tissue changes, and on the other, in the production of antitoxines (which neutralize the toxines) and in substances which destroy the bacteria. The leucocytes are stimulated by the toxine to a protective metabolism by means of which the toxine is anchored and held fast, and the metabolic by-product or side-chain (Ehrlich) of the cell, which fixes the toxine, is as it were thrown out of action. This results in over-production of this particular by-product (receptor) by the cell; some of this material may be thrown off, and, floating in the plasmas, will anchor and fix any toxine present in the blood. The serum thus comes to contain "antitoxine."

In the case, however, of bacteria (like the tubercle bacilli) which produce endotoxines, no toxine or very little will be present in the blood until the bacteria die and are disintegrated. The reaction processes of the cells will, in such case, be mainly directed towards the destruction of the bacteria. Various by-products will be produced by the cell metabolism. Some of these (agglutins) clump the bacteria and render them less active though they are not killed. Others (lysins) dissolve the bacteria, thus destroying them. These, however, cannot act by themselves; they require the assistance of a substance (complement or alexin) normally present in the serum. Over-production of the cell products mentioned above results in these being thrown off by the cells into the plasma, forming immune bodies which, in the presence of the bacteria, will combine with the complement of the serum and cause the destruction of the bacteria. Thus, the special metabolic products of the cells require the assistance of some constituent of the plasma in order to destroy the bacteria and their products.

The antitoxines, agglutins, lysins, and immune bodies are specific for each kind of bacterium; the complement in the serum is, however, general. When bacteria are introduced into the circulation some are at once destroyed by the by-products of the cell metabolism (side-chains of Ehrlich) acting with the complement in the serum, and as soon as intermediate bodies (immune bodies, etc.) are formed and thrown off into the blood stream still more can be destroyed. But the complement is soon used up, and it is necessary to wait for a fresh supply. The agglutins keep the bacteria inert until this fresh supply is formed.[4] It seems probable that the leucocytes (phagocytes) are unable to assimilate and destroy the bacteria until these have first been killed by the action of the intermediate bodies and the serum complements.

Wright[1] found that the phagocytic power of the leucocytes with regard to special bacteria differed considerably between animals immunized against the special micro-organism and those not so protected. He found also that the proportionate number of tubercle bacilli which each leucocyte of a healthy individual could enclose and disintegrate was greater than that which the leucocytes of a tuberculous individual could so dispose of. If, then, it is possible to estimate the relative phagocytic power of the leucocytes we have a means of estimating the resisting power of the individual. In the case of the tubercle bacillus we have the low resisting power shown in the tuberculous individual, a higher degree of resistance in the healthy individual, and a still higher resistance in the specially immunized animal.

By some careful observations Wright proved that in the absence of serum leucocytes did not absorb any bacteria, and that the phagocytic capacity of the leucocytes depends upon the serum in which they are living, and not upon any differences in the cells themselves. The phagocytic capacity towards tubercle bacilli of leucocytes from the blood of different individuals, healthy or tuberculous, is practically equal for all when the same serum is used for all the observations. On the other hand, the leucocytes from the same individual vary in their phagocytic capacity according to the serum (healthy or tuberculous) in which they are tested. It is evident, therefore, that something in the serum either stimulates the phagocytes to action or so acts upon the bacilli as to make them more readily absorbed by the cells. This something is apparently produced in or added to the serum as a result of irritation by the special bacterium. As a sequence of infection by a special bacterium some protective substance is produced (specific for each kind of bacterium) which renders the bacteria susceptible to the phagocytic power of the cells, and, as it were, prepares them for eating.

This something Wright calls an opsonin (ὀψωνεῖν—to prepare a feast). We may for the present take it that the production of opsonins is on the same lines as the production of other antibodies, from side-chains of the leucocytes formed in response to the specific stimulus of some bacterium or its toxine. It may be that the opsonin and the immune body are one and the same substance. Against this theory we have Wright's statement that the opsonin is destroyed by heat (60° C.), whilst the immune body is undoubtedly thermostabile. Some recent observations[4] have, however, thrown a doubt upon the non-resistance to heat of the opsonins. On the other hand, evidence[5] has been brought forward tending to show that opsonins are in the nature of complement; if so we shall have to modify our views as to the non-specific nature of complement. With such different suggestions as to the identity of the opsonin, we may be permitted to confess our present ignorance of its exact nature.

The great value of Wright's observations is in the application as a means of measuring the resisting power of blood to any special bacterium, such as the tubercle bacillus.

If a definite proportion of the blood serum of the individual to be tested, together with some washed leucocytes, be added to a definite quantity of a standardized emulsion of bacteria, and incubated at the body temperature for a certain time (for example, fifteen minutes), and is then microscopically examined, a number of bacteria will be found within the leucocytes. A certain number of leucocytes are examined, and the total number of the contained bacteria are counted; from this the average number of bacteria absorbed per leucocyte is obtained. This average number compared with the average similarly obtained with a serum of known resisting power to the particular bacterium in question will give the relative resisting power of the individual under observation. The point now to be considered is how to obtain a serum of known resisting power as a standard of comparison.

Wright's observations, confirmed and extended by Bulloch and others, showed that the resisting power (or phagocytic power) against any particular bacterium varies little in different healthy individuals, and is practically constant.

The serum of any healthy person can therefore be used as the standard; the phagocytic capacity of leucocytes incubated with the serum to be tested as compared with that of leucocytes similarly treated with the serum of a healthy individual gives the "opsonic index" of the serum under observation. This opsonic index represents the resisting power of the individual to the particular bacterium used in the test as compared with that of a healthy person. Thus if the average number of tubercle bacilli taken up per leucocyte in the healthy serum is 10, and the number per leucocyte in the serum of the individual to be tested is only 5, this person's opsonic index is said to be 0·5. Wright found further that the opsonic index in regard to a particular bacterium may be influenced by the injection into the body of its specific toxine. If a large dose of toxine is introduced the opsonin is used up and the opsonic index falls: with smaller quantities of toxin, a temporary fall (negative phase) is followed by a considerable rise in the opsonic index (positive phase). The body cells may thus be stimulated to produce excess of opsonin or protective substances so long as the dose of toxine is not too great. The positive phase is not permanent, in fact only lasts a comparatively short time in the case of tuberculous inoculation: the opsonic index gradually falls, though it may not fall as

low as before the stimulation. The effect of inoculations —at least in the case of tuberculosis—is not cumulative, but when the positive phase has passed off a further inoculation will cause a repetition of the phenomena described.

By a series of inoculations properly timed, the opsonic index may be gradually raised until it remains permanently higher than it was at first. Inoculations during the negative phase—the duration of which depends largely upon the dose of toxine injected—produce a further fall in the opsonic index, and no positive phase may follow; the resisting power of the individual has then been weakened or destroyed.

Acting on these observations, Wright has employed Koch's tuberculin to stimulate the production of protective substances in cases of tuberculosis, in the belief that by this means a sufficient reaction may be promoted in the body to result in the cure of the disease.

The dosage and frequency of the injections of the tuberculin are carefully regulated by estimations of the opsonic index from time to time. Wright has in this way shown that the dosage of tuberculin as employed on its first introduction was dangerously high, and has furnished an explanation of the failure of the tuberculin treatment under the old conditions.

It will be noted that Wright's work in regard to opsonins in tuberculosis consists of two distinct practical considerations:

1. The determination of the opsonic index.
2. The treatment of tuberculosis by tuberculin injections regulated according to the condition of the opsonic index.

These are distinct, and must be considered separately. The application of the determination of the opsonic index to the regulation of treatment in cases of tuberculosis has impressed the public fancy, and people talk of "Wright's opsonin treatment." We may, however, thoroughly appreciate the value of the scientific observations without necessarily agreeing with the tuberculin treatment, even when its effects are checked by observing the opsonic index.

Let us, then, examine these two questions separately with regard chiefly to, first, the practical value of a determination of the opsonic index for tuberculosis, and, secondly, the specific treatment of this disease.

1. The Determination of the Opsonic Index.

There seems every reason to expect that with more exact methods the determination of the specific opsonic index may become a most valuable aid to diagnosis, a definite index of the progress of a bacterial disease, and a useful means of regulating treatment.

As a means of diagnosis it is as yet unreliable, though often useful. It has been already pointed out that the opsonic index varies little in healthy persons, and when this index is found in any individual to be outside the limits of health, it is a fair inference that the individual is suffering from infection from the specific bacterium.

Certainly, if the index is very low, the person is specially vulnerable—his resisting power is small. This, however, may be a "constitutional" or inherited weakness—a predisposition only; or, on the other hand, it may be the result of infection, the opsonins and other protective substances having been partly used up in combating the invading bacteria. There is thus an element of doubt as to the significance of the low opsonic index.

Again, the opsonic index of healthy persons, though nearly constant, yet varies within certain limits, and thus we have a varying standard with which to compare the serum to be tested. In comparison with the serum of one healthy person which is taken as unity the opsonic indexes of a number of other healthy persons will be found to range from 1.2 to 0.8.

Now, if a serum to be tested is compared with that of a healthy person at one end of this limit (1.2) and the opsonic index by this standard is 0.9, the test subject would be considered free from tuberculosis; whereas if the standard serum were that of a healthy person at the other extremity of the scale, the index would work out at 0.5, and a diagnosis of tuberculosis would be justified.

It is evident, therefore, that we require a standardized serum with which to compare serum to be examined for diagnostic purposes.

The above difficulty is in part overcome if repeated observations are made, for in many cases the opsonic index of a tuberculous subject varies from time to time, whilst that of a healthy person remains almost constant. It must be borne in mind that in a large number of undoubted cases of tuberculosis, especially in the subacute cases, the opsonic index remains within the limits of health. A patient whom I see at intervals, who in addition to extensive tuberculosis of the lungs has deposits of tubercle in other organs (testicle and probably liver and kidney), is found to have an opsonic index varying between 1.2 and 0.8, exactly within the limits found in healthy persons. This condition of the opsonic index in tuberculous patients is observed in sanatorium records.[6]

An opsonic index which is above the higher limit compatible with health is taken to indicate an excessive production of protective substances, which is presumably due to the presence of the specific irritant. It therefore denotes the specific infection with, at the same time, active defensive reaction—a condition favourable to cure.

We can as yet only say that the determination of the opsonic index in a doubtful case of tuberculosis may possibly furnish indications which might assist diagnosis; it should therefore not be neglected in doubtful cases.

Attempts have been made to utilize the opsonic index as a guide to prognosis in cases of tuberculosis.[6] The result as yet has not been particularly satisfactory. As a measure of the progress of the disease and of the effects of treatment, repeated determinations of the opsonic index, using always the same blood as the standard of comparison, should be of the greatest advantage. The effect of treatment of whatever nature, not only of tuberculin injections, may be watched, and to some extent controlled, by an occasional estimation of the opsonic index of the patient.

We have, then, in the determination of the opsonic index, a valuable clinical aid in diagnosis, prognosis, and treatment. It cannot be said to give definite information, but new methods require practical experience of their working before their full value is developed. At present the process is too lengthy in operation for the busy practitioner to employ himself, though he can easily send up a small quantity of his patient's blood serum to be tested at one of the clinical and pathological laboratories. The drawbacks to the more general and useful employment of the opsonic index in clinical work will no doubt soon be removed.

2. The Specific Treatment of Tuberculosis.

We may at once grant that if injecting tuberculin in any of its forms is a useful method of treatment for tuberculosis, Wright's improved method of employing this remedy renders this treatment very much safer and more satisfactory. I do not wish here to affirm or deny the advantages of tuberculin treatment; I merely wish to discuss the specific treatment of tuberculosis without prejudice. The determination of the opsonic index is a useful accessory to all treatment, but not an essential part of any one method. We know that bacterial infection stimulates reaction processes by which the body tends to protect or defend itself against the harmful effect of the bacteria and their products.

The morbific bacteria may be divided into two classes:

1. Those which produce exotoxines, of which the diphtheria bacterium may be taken as an example.
2. Those which produce endotoxines; the more numerous class in which the tubercle bacillus is included.

If bacteria of the first group or their toxines are introduced in suitable quantity into the body of an animal, the body cells (leucocytes) respond by producing an antitoxine; this defensive reaction can be encouraged until the blood contains sufficient antitoxine to render the animal invulnerable to a dose of toxine which previously would have proved fatal. This is "direct immunization."

The immune serum withdrawn from such an animal may be injected into another animal, which is then rendered to a large extent invulnerable to the particular toxine. This is "indirect immunization," and may be employed as a preventive or as a means of cure for that particular infection.

The successful employment of antidiphtheritic serum and

of antitetanic serum exemplifies the possibilities of specific treatment in those diseases which are caused by bacteria of the first group.

With bacteria of the second group, however, direct immunization calls forth, as we have seen, a different train of defensive reaction, and the serum of an immunized animal does not contain sufficient antitoxine to allow of successful protection of another animal by "indirect immunization." An antituberculous serum analogous to the antidiphtheritic serum is, therefore, not to be looked for, so far as our knowledge of immunity at present goes. We are, then, at present thrown back on direct immunization for the specific treatment.

Koch's tuberculin and others of like nature contain the toxine of the tubercle bacillus, and when injected into the body stimulate protective reaction. To be successful either as preventive or as curative agents it is essential that the reaction results—antibodies—should be produced in excess of the toxine introduced. Here we begin to see difficulties.

In the healthy person, even the large doses which were used when Koch first introduced his old tuberculin rarely exceeded the capabilities of the body cells to produce sufficient antibodies to protect the individual from the results of the infection. When, however, from the presence within the body of active tubercle bacilli, the defensive reactions were already severely taxed, there was serious risk of the added toxines being in excess of the defensive capabilities of the cells.

Even with the much smaller doses ($\frac{1}{1000}$ mg.) now employed by Wright there is a certain risk when a person is already infected with tuberculosis. As it seems to me, we are confronted with the following alternatives: Either the bacilli and their products already in the body act as stimuli to the cells to produce antibodies—in which case, the stimulus being present, it would seem unnecessary to introduce it by injection. Or the bacilli, being localized, do not affect the general circulation, so that the general production of antibodies is not promoted because of the absence of stimulus. In this case the introduction of the stimulus into the circulation will call forth protective reaction, but this will not affect the disease focus. If the bacterial toxines cannot escape from the disease centre into the circulation, the antitoxines can hardly get from the blood stream to the seat of mischief.

It may be urged that it is desirable to have antibodies ready prepared in the blood in case bacilli escape from the centre of disease into the circulation. But if the cells (leucocytes) respond satisfactorily to toxines injected into the body they are presumably capable of similar satisfactory reaction to bacilli or toxines thrown into the circulation from the tuberculous focus.

As a general proposition it appears to be a faulty procedure to add to the toxine already in the body in order to call forth additional protective activity in the body cells. Presumably there is already excess of toxine—the evidence of disease in the individual in itself indicates this. If the defensive response in the leucocytes is insufficient it suggests either that these cells do not come under the influence of the stimulus—that is, that the disease is localized, and the toxines produced in the diseased area do not get into the blood stream—or that the cells are incapable of responding to the stimulus. In either case there seems little reason in adding toxine in the blood. If the leucocytes are already stimulated without being able to respond effectively, more toxine can only do harm. If the cells are potentially active, but the production of antitoxines (or antibodies) is small or *nil*, it is probable that the stimulus is wanting—in other words, that there is little or no toxine in the general circulation—nothing requiring protective metabolism in the body as a whole. To stimulate the production of antibodies under these latter circumstances is in the nature of a prophylactive measure—an active immunization of the body in view of possible general infection. This is undoubtedly a wise and useful provision against auto-infection, but it is not treating the active disease processes, and can have little effect towards curing the local tuberculosis. Wright has apparently realized this, and suggests counter-irritation and other means to increase the flow of blood through the disease area or to flood it with lymph derived from the immunized blood stream. If the leucocytes in the body generally are able to produce antibodies in response to stimulation one would expect them to rise to the occasion if toxines should escape from the disease focus into the circulation. No doubt, however, it is a wise precaution to have these antibodies previously prepared for such an emergency.

The position appears, therefore, to be somewhat as follows: In some localities within the body bacilli are established and are producing toxines: the cells in the immediate neighbourhood are overtaxed and unable to produce sufficient protective substances to deal with the attack. The rest of the body is not infected, so that the blood does not contain the stimulus to protective metabolism by the leucocytes, and the general opsonic index remains comparatively low. We may raise the general protective power of the blood, but this hardly, if at all, affects the conditions in the disease area. Injection of tuberculin to raise the general opsonic index will not cure the disease, though it may and probably does protect the body against general infection, and may limit the spread of the disease locally. So far it is extremely valuable, especially if the individual's opsonic index was naturally low, but only as an adjunct to other treatment—such, for example, as removal by surgical means of the disease focus. I would suggest that scraping operations in surgical tuberculosis should never be undertaken without ensuring that the opsonic index of the patient is sufficiently high to guard against general infection.

There appears to be some possibility of over-stimulating the reaction powers of the cells by introducing toxines into the circulation, especially when the toxine is already present from disease. It is a physiological rule that over-stimulation paralyses functional activity. That such an event may occur in regard to the protective reaction of the leucocytes is indicated by the fact that, in the case of horses used for the production of antidiphtheritic serum, if too large a dose of toxine or too frequent or long-continued injections are given, the cells cease to respond in the formation of antitoxine, and cannot resume their specific activity until after a long rest.[7] The negative phase which occurs after tuberculin injections is probably something in the nature of a result of temporary over-stimulation.

Taking it altogether it would appear, with the knowledge at present available, that in those diseases (such as tuberculosis) in which the bacteria produce endotoxines and which are, for a time at least, localized, injections of toxines may be useful in prophylaxis—either in guarding against possible infection from without or against auto-infection from the disease area—but are of little use in the actual cure of the disease. For cure we want excess of antibodies within the area of the disease.

Whilst, therefore, I am profoundly sensible of the valuable work performed by Sir A. E. Wright in the discovery of opsonins and in the application of the opsonic index to the measurement of the resisting power of the individual to tuberculosis and other bacterial diseases, I am still unconvinced of the wisdom of attempting to cure pulmonary tuberculosis by the introduction into the body of a further supply of tuberculous toxine. The procedure is in my opinion too risky with our present incomplete knowledge of the details connected with the formation of antibodies, and the conditions which regulate the specific protective reaction of the leucocytes. Much remains to be done in the investigation of these processes, and this field of research promises most valuable results.

I am ready to admit that tuberculin may be a valuable adjunct to other treatment in surgical tuberculosis, and possibly in tuberculosis of internal organs other than the lungs, but it is inapplicable to the treatment of pulmonary tuberculosis. I have had, quite recently, three cases, in which, with all precautions which Wright has elaborated, tuberculin injections appeared to light up quiescent mischief in the lungs. It may be that tuberculin may be useful in those cases where, after progress has been made towards recovery, there is a check, and the patient remains in the same condition without making any further progress. In such case one or two small injections of tuberculin might result in restarting the curative process.

I have purposely limited my criticism to the case of tuberculosis, and particularly to pulmonary tuberculosis. The widespread prevalence of consumption makes every one look anxiously for the announcement of the cure which the public confidently expects. I am afraid we have not the cure for consumption in tuberculin, even

when regulated by watching the opsonic index. The value of direct immunization in certain other diseases has already been abundantly proved, and the value of the determination of the opsonic index as a guide to dosage and as a measure of progress in treatment has been clearly demonstrated. It seems possible that we are almost within measurable distance of a satisfactory specific treatment for tuberculosis, and the work of Wright has undoubtedly brought us a good step nearer the goal. Whether the specific treatment, when found, will be generally applicable to the cure of pulmonary tuberculosis, as well as to tuberculosis of other organs, is a matter of conjecture.

Whilst we are on the look-out for curative serums it might be worth while to see if we cannot obtain from the chief manufactories of antibodies—namely, the lymphatic glands of an infected animal—some extract containing the protective substances. Dr. Paterson of Glasgow has made some clinical observations in this direction in the case of tuberculosis.[8]

Though I am not sanguine as to the probability of curing pulmonary tuberculosis by either direct or indirect immunization, I think it quite possible that prophylactic immunization might be accomplished. Seeing the tremendous incidence and mortality of tuberculous diseases it would seem that "vaccination" against tuberculosis would be quite as justifiable and quite as useful as vaccination against small-pox.

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A CONTRIBUTION TO THE VALUE OF COMPLETE VOCAL REST AS AN AID TO RECOVERY FROM LARYNGEAL TUBERCULOSIS AND ALLIED CONDITIONS DURING SANATORIUM TREATMENT.

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FROM the experience gained by Dr. R. Mander Smyth and myself, at Linford, I should like to add my testimony to the value of complete rest as a powerful aid to recovery from laryngeal tuberculosis during sanatorium treatment.

It has struck me as suggestive that people who have used their voice a great deal, as in singing for instance, are, when they do get pulmonary tuberculosis, more prone to develop laryngeal tuberculosis than others. Vocal rest is but a common-sense application of Hilton's principle,—rest for a diseased or injured part. A tuberculous joint is given absolute rest for many months by fixing not only itself but also the joints above and below it, and, aided by general hygienic measures, recovery takes place in many cases. The principle is true for the tuberculous larynx also, but unfortunately we cannot give it the same measure of rest as a joint. Still, much may be done, and I find the simile just used useful in explaining the great importance of complete vocal rest to patients. The rest must be complete, even whispering should not be indulged in. All unnecessary coughing must be suppressed. The laryngeal movements associated with "clearing the throat," a constant habit with some patients, must as far as possible be done away with. The nearer the disease approaches the cords, arytenoids, or arytenoid fold, the greater is the importance of laryngeal rest. It has been said that no fool will ever get cured of pulmonary tuberculosis. This statement is even truer of laryngeal tubercle. I have never yet known a patient refuse to carry out this treatment when once the simple principle underlying it had been grasped. A hint to other patients will make them helpful, and not an additional difficulty to the sufferer. Nasal breathing should be encouraged as a habit, because it is a further safeguard against useless coughing. In febrile cases the isolation in bed in their own room almost ensures silence. When the patient finds, as is generally the case, that improvement is taking place, this acts in itself as a powerful incentive to perseverance. Most of our patients have used either a small notebook and pencil or a small slate for communicating with others; some few have learnt to talk on their fingers with their special friends. I have seen many cases of slight and moderate laryngeal catarrh associated with pulmonary tuberculosis clear up after a short period of a few weeks' more or less complete vocal rest; but these cases are common and not worth recording. One case of failure may here be mentioned, that of a lady who developed a severe tuberculous laryngitis under observation, involving great swelling and ulceration of both ventricular bands, and in which complete silence could not be enforced, though the necessity was strongly impressed upon her from the very commencement of the disease, and in which a continuous harrassing, and uncontrollable cough frustrated all efforts of obtaining even approximately laryngeal rest. She did badly, but the ulceration improved under vigorous lactic acid treatment.

Of the following illustrations, Group I comprises the histories up to date of 4 cases recorded in Sir Felix Semon's paper in the BRITISH MEDICAL JOURNAL of December 8th, 1906, and which have been under the care of Dr. R. Mander Smyth and myself.

Group II consists of 3 cases of undoubted laryngeal tubercle and of 4 of severe and obstinate catarrh associated with pulmonary tuberculosis.

Case I (Mrs. N.) is, with the exception of Mrs. C. (Group I), the severest case of laryngeal disease associated with advanced chest disease in which I have seen great improvement without any local treatment. In Case II (Mrs. M.) a considerable ulcer healed rapidly and completely in a way it would not, I think, have done with lactic acid only.

GROUP I.

Mrs. C. returned to Linford on November 6th, 1906, her larynx being in the condition described in Sir Felix Semon's paper. In spite of the attack of pleurisy and haemoptysis there was no material alteration in the state of the lungs. Her temperature was normal. She was treated with tuberculin. Strict silence was again maintained, and the only local laryngeal treatment consisted of an insufflation of a menthol and boracic powder three times a day. She complained a good deal of an uncomfortable "swollen" feeling in the larynx. On January 9th, 1907, there was distinctly less swelling over the arytenoids, but their inner aspect was still reddened. The cords and the rest of the larynx appeared normal. On February 27th the left arytenoid was very little swollen or reddened. The swelling on the arytenoid fold was smaller, and the right arytenoid was still swollen though less reddened. She left on March 18th, 1907, having gained 5 lb. in weight. The uncomfortable sensation in the larynx was very slight and only occasional, and the swellings of the arytenoids and over the arytenoid fold had almost completely subsided. The sputum was very scanty and contained no tubercle bacilli.

Miss S. returned to Linford for the winter on October 5th, 1906, in good general health and state of nutrition. The laryngeal scars were quite sound and the voice normal. About once in ten days she brought up a small piece of sputum the size of a small pea, which still contained tubercle bacilli. There were a few post-tussic crepitations over the left upper lobe. The temperature was normal and remained so. She used her voice very freely. She left on May 4th, 1907, in good general health. The sputum and physical signs in the lungs continued as above described. The scars in the larynx became quite inconspicuous. This was confirmed shortly after her departure by Sir Felix Semon, who even allowed her to cautiously begin singing again.

Miss W. returned to Linford on October 29th, 1906. The larynx was in the condition last described in Sir Felix Semon's paper. She was allowed to use her voice fairly freely. She left again on February 13th, 1907, the larynx remaining absolutely quiescent though the state of her lungs did not materially improve and was not so satisfactory.

Mr. W. I had an opportunity of seeing this patient three weeks ago. He was in bed after a sharp attack of haemoptysis. He had not been in good health for some time and had lost about a stone in weight. He complained of some laryngeal pain, but the only abnormality discoverable in the larynx was a moderate degree of general congestion.

GROUP II.

Mrs. N., aged 31. She arrived at Linford on March 4th, 1903. She had a small haemoptysis at the age of 18, but otherwise remained well until December, 1899, after the birth of a child. Since then she had suffered with cough, expectoration, night-sweats, and wasting. In the spring of 1901 she had an attack of left-sided dry pleurisy, which kept her in bed for three weeks. On her arrival she was found to have extensive tuberculous disease of both the left upper and lower lobes and slighter disease of the right apex and apex of the right lower lobe. There was a history of hoarseness, dysphagia, dis-

comfort and pain in the larynx dating back for some months. The larynx showed considerable swelling of both arytenoids and arytenoid fold, which was further the seat of ulceration, partially granulating and chronic in appearance, and extending outwards on to the left arytenoid. The left cord was fleshy-looking in its posterior half, and moved badly. Strict silence was ordered and rigidly persevered in. On account of the great irritability of the larynx and the extent of the lung disease no local treatment was applied. On May 12th, 1903, there was still some arytenoid swelling, the left cord moved better, but was still fleshy, and the ulceration appeared almost to have healed. There was now no dysphagia or laryngeal pain. On June 20th, the swelling of the arytenoids had greatly decreased, the fleshiness of the left cord was very slight, but there was a small ulcer below the centre of the arytenoid fold of comparatively recent origin. On August 14th the larynx appeared practically normal except for the small superficial ulcers above mentioned, which had, however, not increased in size. The patient returned home on August 21st, having gained 27 lb. in weight and very greatly improved in every respect. After she left the ulcer was for a time treated with lactic acid, but silence was not persisted in. She returned to Linford for a few weeks on July 10th, 1904. She had lost 8 lb. in weight, and was not in such good general health as she had been when she left the previous year, and had recently again had a little haemoptysis and some left-sided dry pleurisy. The larynx appeared normal, except for a small ulcer below the centre of the left arytenoid fold. This received several applications of 50 per cent. lactic acid, and silence was again persevered in. She left again on August 4th, 1904, when the ulcer was beginning to granulate. This patient died at home on April 27th, 1905, but, so far as could be ascertained, without any recrudescence of laryngeal symptoms.

Mrs. M., aged 33, arrived at Linford on June 24th, 1903. Her lung disease dated from an attack of left pleural effusion in August, 1901, occurring a month after the birth of a child, but she got much worse after a second attack of left-sided dry pleurisy in July, 1902, which was immediately followed by night-sweats, loss of flesh, cough, and expectoration. The laryngeal symptoms dated from February, 1903. She had on arrival disease scattered through both left upper and lower lobes. Tubercle bacilli were numerous in the sputum. There was a fairly large ulcer affecting the arytenoid fold and spreading on to the base of the left cord, and congestion of both cords, with laryngeal pain, dysphagia, and alteration of the voice. Strict silence was ordered, and fairly rigorously carried out. Lactic acid was applied about once a week: first 50 per cent. and then pure. On July 27th the laryngeal pain and dysphagia were less, and the voice was clearer. On August 20th there was some patchy reddening of both cords, but only a trace of the arytenoid ulcer was left. The lactic acid treatment was discontinued. This patient left on September 19th, when the only abnormality to be seen in the larynx was some epithelial thickening over the site of the previous ulcer. She gained 15 lb. in weight, was in good general health, had lost all dyspnoea, and her cough and expectoration were much less. Tubercle bacilli were, however, numerous in the sputum. I heard from this patient a year ago, when she reported herself in fair general health, and free from any laryngeal symptoms.

Mr. E., aged 42, arrived at Linford July 7th, 1906. He gave a short history, dating only a month back. The onset was sudden and fairly severe, with bad night-sweats, cough, mucopurulent expectoration, and great langnor. At the same time his voice became increasingly husky. Tubercle bacilli were present in moderate numbers. There was scattered infiltration of the right upper lobe to the third rib, and of the apex of the lower lobe. The temperature was at first raised in the evening to 101° or 101.4° F. The left vocal cord was irregularly swollen and reddened and granular in its posterior half; otherwise the larynx was normal. He was kept in bed and strict silence advised and practised. In two months' time the temperature slowly fell to normal, and remained so. By October 25th, 1906 the swelling of the left cord had subsided, but it still showed a pink granular appearance in its posterior half. At the end of November, 1906, the larynx was normal except for a slight streaky reddening of both cords. Some use of the voice was now allowed. He left at the beginning of January, 1907. The larynx then appeared normal, and his voice was natural. He gained a stone in weight, but still had a little sputum containing tubercle bacilli in small quantity.

Mrs. G., aged 29, arrived at Linford on December 24th, 1906. She had suffered from recurrent hoarseness, loss of voice, with pain often shooting upwards towards both ears, and laryngeal cough for five years, dating from an attack of influenza. For eighteen months she had lost weight. There was very early implication of the left apex. She had no sputum. A considerable variety of applications had been made to the larynx with little benefit. The pharynx was much reddened. The skin showed marked general congestion and slight swelling in the ventricular bands. No local treatment was applied to the larynx, except silence was advised, and most rigidly carried out. To facilitate silence and on account of the low state of her health she was kept entirely in bed, although her temperature was normal. She only remained at the sanatorium for a month. At the end of her stay both laryngeal and pharyngeal congestion had decidedly decreased, and the larynx felt much more comfortable. This observation was corroborated independently on her return to town.

Miss W., aged 37, came to Linford on January 10th, 1907. She has a very bad family history of phthisis. She has suffered from winter cough for years. During August, 1906, she began to fail in health, lost weight, and developed a cough with expectoration. Six weeks before her arrival she had an attack of influenza with high fever for two or three days, and exacerbation of all her symptoms since. She has had hoarseness and occasional loss of voice since Christmas, 1906. On her arrival tubercle bacilli were fairly numerous in the sputum, and she was found to have tuberculosis of the left upper lobe to about the third rib and of the apex of the left lower lobe. There were doubtful signs at the right apex. She complained of discomfort but no pain in the larynx and was very hoarse. The larynx showed marked general congestion, including the cords, and slight swelling over the arytenoid fold. Silence was enforced and fairly strictly adhered to. No local treatment was adopted beyond a spray of glycothymoline. She has been kept in bed a good deal, because, for two or three weeks at a time, her temperature in the evenings goes up to 100° or 100.6° F. On February 14th the larynx still showed marked general congestion, but the swelling of the arytenoid fold had subsided. On March 5th, 1907, the laryngeal congestion was less, but the arytenoid fold again appeared somewhat swollen. At the end of March the laryngeal congestion had further decreased and she complained of no discomfort now. On May 30th, 1907, the larynx was only very slightly reddened. There was no swelling of the arytenoid fold. The voice was more normal, but at the base of the left cord there was a small red elevation. She is still undergoing treatment and her lung condition has remained stationary in spite of the laryngeal improvement.

Mr. D. C., aged 30, arrived at Linford on February 23rd 1907. He developed a cough at the end of 1900. In March, 1902, he was found to have slight pulmonary tuberculosis and was treated for three months at the Nordrach in Wales Sanatorium, Llanbedr. He left there free from symptoms and in excellent general health. In September, 1902, he complained of "sore throat" and hoarseness, and was found by Sir Felix Semon to have some swelling of the ventricular bands, congestion of the vocal cords, and erosion of the left vocal process. He was sent to Bournemouth. Off and on slight ulceration of the larynx occurred, and yielded to treatment with lactic acid. In July, 1903, before going to South Africa, his larynx still showed congestion of the vocal cords and some swelling of the ventricular bands. He worked hard as a mine-owner, spending many hours daily underground in a hot, moist, and dusty atmosphere at Salisbury (Rhodesia). He had dysentery in November, 1906, which pulled him down a good deal, and led to a return of cough and expectoration. He also had malaria. In January, 1907, tubercle bacilli were found to be numerous in the sputum. He then returned to England for a long holiday. He was seen by Sir Felix Semon at the beginning of February, 1907, who again found swelling of the ventricular bands, and congestion of the vocal cords. The patient complained of discomfort and slight pain in the larynx. He has been a heavy smoker, but has not smoked for a year. Tubercle bacilli were numerous in his sputum on arrival at the sanatorium, and he was found to have disease scattered through the left upper lobe and upper half of the left lower lobe. There were also a few moist sounds over the upper part of the right lower lobe. He was directed to maintain absolute silence and not to smoke, and these instructions he has most rigidly carried out. In addition to the open-air treatment, he has received tuberculin injections with observations of the opsonic index. The only local treatment to the larynx has consisted of a menthol and carbolic spray. The laryngeal condition has steadily improved. The swelling of the ventricular bands has subsided. The congestion of the left cord has almost disappeared and the only remaining abnormality now is patchy injection of the right cord. He has lost all pain and discomfort in the larynx, and his voice is nearly normal. He has further gained 17 lb. in weight, has almost lost all expectoration, and at the last examination tubercle bacilli were only present in very small numbers; he is still undergoing treatment.

Mr. A., aged 19, arrived at Linford March 11th, 1907. He gave only six weeks' history of illness, beginning with right-sided dry pleurisy which kept him in bed three weeks. At the same time a cough developed, with thick yellowish green expectoration. He also suffered with loss of appetite, wasting, night-sweats, and asthenia. His voice became weak and husky, and he complained of pain localized in the posterior part of the larynx. On his arrival tubercle bacilli were found to be very numerous in the sputum, and his temperature ranged from 99° F. in the morning to about 10.. F. at night, and there was evidence of active disease in both upper lobes. The sputum was profuse and purulent. His voice was weak; besides the pain he complained of slight dysphagia. The larynx was intensely reddened, and the cords especially were deep red and velvety in appearance. He was kept entirely in bed and cautioned to maintain silence, which was pretty well secured by isolation in his own room and on the sanatorium terrace. The larynx was sprayed four or five times a day with a menthol and carbolic solution. His temperature came down slowly and irregularly, and was normal by April 5th. The sputum decreased in amount, and is now very little. He has

gained 10 lb. in weight. He is up all day and beginning to take exercise. On April 5th there was less laryngeal pain. The general laryngeal congestion was less marked, and the cords were paler and less velvety. By May 15th the larynx appeared practically normal; the voice was normal, and there was no abnormal laryngeal sensation whatever. He has since that date been allowed to talk a good deal. He is still undergoing treatment.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

MYXOEDEMA AND EXOPHTHALMIC GOITRE.

ALTHOUGH it has been recognized for some years that myxoedema may intervene in the later stages of exophthalmic goitre, the cases are sufficiently unusual to be worth recording. The patient reported below first sought advice three years ago, and gave the following history:

History.—A. B., a woman aged 52, married, had always enjoyed good health until the strain of eleven pregnancies in quick succession undermined her constitution. At 31 years of age she sought advice, as she was in a very weak and nervous condition. She had for some time noticed that her throat was swollen, that her eyes were becoming large and prominent, and that her hands trembled so that she could not execute fine movements, such as threading a needle. She got out of breath on the slightest exertion, and suffered with very distressing palpitation. She was treated with medicine and electricity from time to time for years, at the end of which her condition improved. Three years ago she again sought advice: for some time she had been getting too stout, was unable to walk far, and dyspnoea was brought on by trivial exertion.

State on Examination.—She presented the typical appearance of a case of myxoedema, there was a large increase in the bodily bulk, the weight being 12 st. The skin was dry and coarse, and there was considerable swelling of the subcutaneous tissues throughout the body, which did not pit on pressure. The supraclavicular pads of fat were well marked, the face looked coarse and swollen, with a flush over both malar bones, and there had been a considerable loss of hair, that remaining being dry and coarse. The gait was slow and clumsy, and the patient seemed incapable of mental exertion. There was no sign of a tumour in the thyroid region, and no exophthalmos. The temperature was subnormal, being 97.2°. The cardiac dullness was slightly increased to the left, and a systolic murmur was audible at the apex. The pulse was regular, 62 to the minute; moderate volume and tension; the vessel wall was thickened.

Treatment.—The patient was placed on thyroid extract and improved in a wonderful way, losing 9 lb. in weight during the first fortnight. If the treatment is discontinued she rapidly begins to relapse to her former state.

REMARKS.—In the *Transactions* of the Clinical Society, 1900, Pasteur published a case in which some of the symptoms of Graves's disease persisted, while those of myxoedema supervened. In this case no benefit resulted from thyroid extract. Faure also recorded a case of this kind (*Presse Méd.*, Paris, 1899), but in looking up the recent literature I can find no case where the two diseases occurring in the same individual were so separate and distinct.

Chigwell. SIMONDS GOODING, M.A., M.B.Cantab.

PHLEBOLITHS AND THE ROENTGEN RAYS.

RECENTLY two very interesting cases came under my notice which appear to be worth recording.

1. A male, aged 32 complained of dull aching pain deep down in the pelvis on the right side. It had been present for the past two years, and was more or less of a constant character, very little affected by rest or exercise. The urine contained a slight excess of phosphates, otherwise it was normal. Eighteen months previously his appendix had been removed by an eminent London surgeon, who afterwards told the patient that there was very little to account for his symptoms so far as this structure was concerned. Very slight benefit resulted from the operation. It was thought by several medical men who examined him here that he might possibly have a ureteral calculus on the right side. He was accordingly sent to me, and two excellent Roentgenograms presented the same appearance—what seemed to be two small ureteric calculi on the right side, one near the termination of the ureter and the other an inch higher up; they were the size of small shot. Feeling confident that I had discovered two ureteric calculi I made my diagnosis accordingly. The patient was then sent into a private hospital, and a suprapubic operation was performed. The surgeon palpated the right ureter but felt nothing. The ureter was then catheterized, with negative result. He then passed one finger into the rectum, and with the other hand in the bladder could distinctly feel two shotty bodies as indicated by the Roentgenograms. Their position was just a little outside the line of the ureter and on a deeper plane. Nothing further was done. Afterwards the patient was carefully questioned as to whether he had ever been accidentally shot, and he could positively answer this question in the negative. Convalescence was uneventful, and I have not seen the patient since.

2. A man, aged 38, had been complaining of pains in the right testicle and the region of the ureter on that side on and off for ten years. The pain was never severe. The urine was normal. A Roentgenogram revealed a small, shot-like body on the right side on a level with the lower end of the ureter, but an inch outside. On this occasion my diagnosis was a phlebolith. No operation was performed. I am quite confident, too, that on the first occasion the shadows were those of phleboliths.

Quite recently I mentioned these cases to Professor Watson of Adelaide, and he quite agrees with my interpretation. He mentions that it is not at all uncommon to find phleboliths in these positions during the course of *post-mortem* examinations, and expressed the opinion that they occur more frequently during life than is generally supposed.

Referring to phleboliths, Quain in his *Dictionary of Medicine* says:

> Phleboliths, or venous calculi, tend to form in veins in which circulation is slow, as in the veins of the prostate and bladder, and in varicose veins anywhere. They commence, no doubt, as precipitated fibrin, which becomes infiltrated with the less soluble salts of the blood, chiefly phosphate of calcium, and in less quantity sulphate of calcium and sulphate of potassium.

In conclusion, I would only say that the Roentgenogram must be very carefully taken, so that differentiation in the tissues may be clearly evident.

L. HERSCHEL HARRIS, M.B., Ch.M. (Sydney, N.S.W.),
Honorary Assistant Surgeon and Senior Honorary Skiagrapher, Sydney Hospital.

PLUGGING THE POSTERIOR NARES.

THE ordinary method is both rough and horribly uncomfortable to the patient. The method which I have devised is as follows: Pass the usual double thread (preferably of silk) through either nostril, using for the purpose an eyed probe, if the surgeon possesses one of sufficient length. Such an implement is a nearer approach to a Eustachian catheter in calibre than a Bellocq's sound or any urethral catheter; as all aurists soon learn, even a small Eustachian catheter sometimes fails to pass. Repeat the process through the other nostril with a fresh thread. The loose ends hanging from the mouth are now tied to each other and round a plug of gauze or of lint, and are cut short.

By pulling on the ends hanging from the nostrils, and aided by a finger in the mouth, the plug is dragged up behind the soft palate, and more or less to one posterior nostril as may be necessary. Next (if required) plug one or both anterior nares, thread the silk ends through a piece of rubber tubing, and tie either in front of the nose or across the cheeks and behind the neck. Keep these ends long, so as to control the plug when, next day, it is pushed back into the mouth for removal.

By this plan the discomfort to the patient is reduced to a minimum.

London, E.C. A. OGIER WARD, M.D.

UNDER the will of the late Mr. George Francis Moth, of Brixton, who died on May 7th, the National Hospital for Paralysis, and the Royal London Ophthalmic Hospital each receive a sum of £100.

THE PROTOZOAL THEORY OF CANCER AND SYPHILIS.—Professor Max Schüffer of Berlin is still a vigorous upholder of the theory that both malignant disease and syphilis are caused by parasites which he describes as protozoa. He has reiterated his views in articles which have recently appeared in German scientific journals (*Berl. klin. Woch.*, No. 9, 1907, and *Centralbl. f. Bakt.*, Abt. I., Orig., Bd. 43, 1907) and supports his statements by reproductions from photographs of the appearances in carcinoma, sarcoma, and syphilis which he regards as protozoan parasites.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LEIGH INFIRMARY.

A CASE OF COMPLETE SEPARATION OF RECTUM FROM ANUS.

(Reported by J. SACKVILLE MARTIN, M.D., M.R.C.S., Honorary Surgeon.)

THE patient in this case, a miner, aged 30, whilst working in the pit, on February 14th, jumped in front of a moving wagon, which knocked him down and pushed him before it. He lost consciousness, and so could not give a clear account of his accident, but he seems to have been pushed some four or five yards before the wagon stopped.

State on Admission.—There was a considerable bruise on the right hip, which was apparently the place where the wagon struck him. There was an extensive rupture of the perineum running right through the anus. The wound was ragged, and had the appearance of having been produced by a force acting from before backwards. The sacrum was exposed both front and back. On the front surface a mass of fat was lying. On the posterior surface the nerves were visible. The rectum was completely separated from the anus, and was pulled up into the top of the wound. The external sphincter was torn, as were also the levatores ani; but the separation of the rectum took place at the very margin of the anus, and the internal sphincter was intact.

Treatment. I pulled down the rectum and stitched it with silk stitches to the margin of the anus. The wound was sewn up and an opening left into the large pocket at the back of the rectum which was plugged with iodoform gauze.

Result.—The patient made a good recovery. There was some suppuration, owing to the bruising sustained by the parts, and some of the stitches gave way. Those on the right side held, however, and proved sufficient to keep the rectum in its place. The bowels were not moved until February 18th, when an enema had a slight result. On February 25th he had for the first time two good motions, and subsequently the bowels moved freely. He had at first no control, but this gradually came back to him, and on March 12th he had full control. Towards the end of March he had a sudden attack of swelling in his right leg which passed away in two or three days, and was succeeded by a similar swelling in the left leg. He was discharged at the end of April, feeling quite well.

REMARKS. This case seems worth recording, as I know of no other in which complete separation of the rectum from the anus has occurred. I was surprised to find that he obtained such full control as he did, and attribute it to the undamaged condition of the internal sphincter. The swelling of the legs I am inclined to attribute to inflammatory conditions of the common iliac veins. To my colleague, Dr. J. Jones, I have to express my thanks for assistance rendered at the operation.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. WARRINGTON HAWARD, F.R.C.S., President, in the Chair.

Tuesday, June 11th, 1907.

THE CAUSES OF COLITIS.

MR P. LOCKHART MUMMERY read a paper on this subject, which was based on 50 cases. The study of colitis, aided by examination with the sigmoidoscope, had proved that colitis, far from being merely a neurosis, resulted from definite demonstrable lesions in or around the bowel. These were usually of a chronic inflammatory nature, as in 25 out of the 50 cases. Ulceration was present in 7 of the cases. The ulcers were shallow, irregular in outline, and involved only the surface layers of the mucosa, a type to be distinguished from that of ulcerative colitis and dysentery. In 6 of the cases a new growth within the bowel was the cause. These cases differed in no respect as regards the symptoms from the former. A rare cause was multiple adenomata of the colon. Pericolitis and abscess might be causes of a chronic colitis. Chronic appendicitis was a not uncommon cause. Adhesions binding down and constricting the colon might be associated with chronic colitis, and the separation of the adhesions was followed, in many cases, by its cure. Abdominal aneurysm was occasionally a cause of chronic colitis. In only 6 of the cases was no lesion discovered to account for the colitis, and it was to be believed that there was always a local cause for the symptoms which must be searched for and discovered.

Dr. HALE WHITE said that the cases treated of in the paper were those of only a small group—that of mucomembranous colitis. Membranous colitis was a definite disease, and was often associated with all sorts of neurotic phenomena—displacements of viscera, especially the kidney, various pelvic ailments, even membranous dysmenorrhœa, and the passage of intestinal sand. Membranous colitis might sometimes, however, be associated with the local lesions mentioned in the paper, hence the importance of looking for local causes. But there were cases, especially seen in women, where there was no demonstrable local lesion. In them often the whole length of the colon was affected. The value of the use of the sigmoidoscope could not be overemphasized.

Sir DYCE DUCKWORTH said the cases of membranous colitis associated with nerve disorder were distinct; they probably represented a phase of catarrh. Many of them got well under appropriate treatment as at Plombières. It was to be remembered that there were all degrees of intensity of the colitis. In rebellious cases surgical aid might be required.

Dr. PARKES WEBER drew attention to minor forms of colitis—of catarrh of the colon. Many were amenable to exercise and massage, being probably due to disorders of the circulation in the colic wall. Such disorders would favour the abnormal as well as the normal flora, and it was probable that many of the cases of chronic biliousness were of this type. This view was supported by the beneficial effect of calomel. In some cases purgation produced a bad effect at first, this being possibly due to an early increase in the absorption of intestinal toxins. In other cases dietetic errors might not only produce a bilious state, but even febrile attacks like influenza; it was not unlikely that under these circumstances there was an entry of micro-organisms from the intestine into the blood stream.

Dr. P. J. CAMMIDGE had found blood present in the stools of all five cases of colon cancer he had examined. The constant presence of blood was strongly suggestive of malignant disease. In some 40 cases of colitis he had found a constantly alkaline reaction of the stools, and an excess of inorganic ash even as much as 44 per cent. The proportion between the saponified fat and unsaponified fat was disturbed; instead of being equal in amount the saponified fat was much in excess.

Dr. S. PHILLIPS thought there was not much justification for attributing the colon ulcers to constipation. This was often an effect rather than a cause. Some were doubtless due to syphilis.

Dr. H. A. COLEY also thought that some of the alleged causes were probably consequences—for example, the hypertrophic condition of the mucous membrane. Adhesions were probably the effect of colitis and a subsequent pericolitis. The balance of evidence seemed in favour of the view that appendicitis was more often the sequel than the antecedent of colitis.

Mr. MUMMERY replied.

THE THYROID GLANDS AND GOUT.

Dr. D. FORSYTH read a paper, in which he described the results of keeping four fowls on an exclusively meat diet for periods varying from eleven months to two years, but in every other respect, including a sufficient supply of lime, their health having been carefully tended. *Post mortem* no gross lesion was present in any of the fowls: the thyroids were not enlarged, the long bones were healthy, and there was no sign of gout in the joints. In the pituitary of each bird there was an exceptionally large amount of colloid. It was concluded that the bone

changes that had been previously observed under excessive proteid feeding were not due to that, but to an insufficiency of lime salts. In regard to the thyroid it was pointed out that the absolute weight of the gland was no index to its hypertrophy; the criterion was the amount of thyroid gland per kilogram body-weight, and the weight of one lobe alone was misleading, as the two lobes were often of unequal size. Birds, including domestic fowls, suffered sometimes from sporadic goitre.

The paper was discussed by Dr. E. I. SPRIGGS and Dr. PARKES WEBER.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—At a meeting on May 10th, Dr. R. WOODS (Dublin), the President, in the chair, the PRESIDENT showed a case of *Accidental cut throat* which had healed in such a way that a cicatricial diaphragm had formed from the vertebrae to the epiglottis at the level of the hyoid bone, cutting off all communication between the nose, mouth and pharynx above, and the larynx and oesophagus below. Respiration and feeding had been carried on through an opening in the thyro-hyoid membrane. When first brought to Dr. Woods the patient had not spoken nor breathed through her mouth for fifteen months. The pharynx above the stricture held a pool of saliva which could only be emptied by the patient holding her head forward and allowing the fluid to run out. The three difficulties—that of breathing, that of swallowing, and that of the saliva—were solved by dilating a pinhole opening found in the diaphragm, and so providing an air-way. Feeding was still carried out by a tube inserted into the gullet through the opening in the front of the neck. Finally the accumulation of saliva was got rid of by a specially-constructed cannula which provided a breath-way and at the same time, by means of a small "by pass" connected with an air pump attached to the patient's belt, supplied a means of getting rid of the annoyance experienced from the continual collection of saliva in the upper cul-de-sac. —Mr. STUART-LOW showed a case of *Frontal sinusitis* in a girl a sufferer from epilepsy, in whom no fit had occurred since the operation of opening the sinus had been performed three months ago. At the operation the sinus had been found to be packed with mucous polypi. Both sinuses had been cleared out through one opening, by breaking down the intersinusal septum. Several members expressed an opinion that it was too early yet to look upon the case as one of epilepsy due to nasal suppuration and cured by operation.—Mr. CHICHELE NOURSE read notes of a fatal case of *Otitic cerebral abscess and meningitis* in a healthy man of 60, who had suffered from ear-discharge for twelve months. Frequent and transient attacks of earache in the right ear preceded the onset of the fatal illness, which was marked by a rigor. Some days later, headache, drowsiness, and delirium appeared. On admission to hospital the patient was semi-comatose. Examining with Siegle's speculum, a large piece of cholesteatoma was aspirated from the attic. There was no optic neuritis. Two operations were performed for the relief of the patient's symptoms. At the first, a large temporo sphenoidal abscess was drained through a fistulous opening in the roof of the mastoid antrum. At the second, the lateral sinus was exposed and examined, and the temporo-sphenoidal lobe and the cerebellum opened into through trephine openings, without, however, altering the course of the illness, which terminated fatally eleven days after the first rigor. The autopsy showed that death had been caused by purulent meningitis.—This being the last meeting of the Association as an independent entity, Dr. DUNDAS GRANT read a paper giving an interesting review of the history of the Society since its inception.

INTERNATIONAL CONGRESS OF HYGIENE.—In connexion with the fourteenth International Congress of Hygiene and Demography, which is to be held at Berlin next September, a Ladies' Committee has been formed to organize a series of social functions and to arrange for the comfort and entertainment of the foreign ladies who will be in Berlin at the time of the Congress. Dr. Eilsberger, President of the Local Congress Committee, will act as business manager for the Ladies' Committee. The Committee is under the honorary presidency of Princess von Bülow, Countess von Posadowsky-Wehner, Frau von Studt, and Frau Oberbürgermeister (Lady Mayoress) Kirschner.

REVIEWS.

VON WINCKEL'S TEXTBOOK OF OBSTETRICS.

THE *Handbuch der Geburtshülfe*, edited by Professor F. VON WINCKEL, of Munich, is from some points of view a magnificent work. The first part of the third volume[1] contains an account of obstetrical operations. The reader will at once perceive that 900 pages give ample space for description of these manipulations. There is much more than a description. A copious bibliography is prefixed to the account of each operation. How full may be judged by the fact that the list of cases, papers, etc., relating to Porro's operation occupies 30 pages, and that referring to the conservative Caesarean section 45 pages. This shows an admirable industry. For the obstetrical historian these bibliographies, compiled respectively by Dr. F. Schenck, of Prague, and Dr. F. Kleinhans, also of Prague, will be invaluable; and also for the teacher of midwifery who likes to know about the gradual discovery of knowledge and improvement of practice. The description of each operation begins with a sketch of its development. These things are interesting; but there must come a limit to their introduction into treatises on practical subjects. After the history there follows a discussion of the indications for each operation; and then directions for the performance of the operation itself. These are elaborated more fully than in any preceding work with which we are acquainted. For these things this "handbook" in four huge volumes, written by thirty-six different authors, under the inspiration and guidance of Professor von Winckel, is entitled to a foremost place in obstetrical literature.

But the use of all this labour is in its application to practice. In matters of practice the test is experience. However learned a German professor may be, however conversant with the arguments for and against everything that has been proposed and with every modification of familiar instruments that persons anxious for notoriety have pressed into surgical instrument makers' catalogues, his judgement must finally be formed by his own experience. It is not possible for one man personally to try everything; and a sensible beginner prefers to practise with the instruments and methods that a trusted teacher has taught him. Thus is perpetuated a tradition which sometimes prevents the best methods from getting known. It is a tradition of this kind which makes Dr. Kroenig, of Freiburg, say that Braun's "schlüsselhaken" (literally "keyhook"), the operation of which he compares to the old-fashioned key formerly used by dentists to wrench out teeth, is "the oldest, best known, and to-day most usual instrument" for decapitating the fetus. We do not think it is in England the most commonly used or the best known decapitator. We have used Ramsbotham's sharp hook, and we have seen Braun's decollator used upon the dead fetus in a skeleton pelvis, and we do not hesitate to say that Ramsbotham's hook is as much superior to Braun's for the purpose of decapitation as the modern dental forceps is to the old dental key for the purpose of extracting a tooth. The sharp hook is known in Germany, and we have seen it called in an American book "Schultze's sharp hook"; but Ramsbotham had invented and described it before Schultze was born.

Symphysiotomy is, of course, described, and so is ischiopubiotomy or hebotomy. We cannot imagine that the latter operation will ever take a place among the resources of the general practitioner. Nor will symphysiotomy, until the subcutaneous method of performing that operation becomes generally known. Dr. Kroenig, the writer of the article on these operations, is unacquainted with the subcutaneous method, although a paper on the subject is included in the bibliography, occupying fourteen pages, which is prefixed to the article. The author's final conclusion is that it is as yet undecided whether symphysiotomy or Caesarean section is to be preferred; that it will not be possible to answer the question until the technique of symphysiotomy has become so uniform that large numbers of cases are available for comparison. He estimates the mortality at present from either operation as about the same, from 10 to 14 per cent. This is by no means a necessary, unavoidable mortality; the fact that

[1] *Handbuch der Geburtshülfe* (Handbook of Midwifery). In drei Bänden; herausgegeben von F. von Winckel. Dritten Band. 1 Teil. Wiesbaden: J. F. Bergmann, and Glasgow: F. Bauermeister. 1906. (Roy. 8vo, pp. 901; 22s. 9d.)

it has occurred shows how much allowance must be made for human imperfection, and should prevent surgeons from talking about abdominal operations as if they were free from risk.

Dr. Dührssen is allowed more than 100 pages in which to advocate his operation of vaginal Caesarean section. He successfully, we think, vindicates his own claim to priority. He adduces records of 248 cases, performed by different operators, with a mortality of 13.3 per cent. He says that the prognosis in eclampsia is better both for mother and child if the mother is at once delivered by this operation; but he does not support this statement by any evidence. The classical Caesarean section has been performed in a fair number of cases of eclampsia, but without improving the mortality. This question is very fully discussed in the excellent article on Caesarean section by Kleinhans. It appears to us at present that all that can be said in favour of vaginal Caesarean section applies also to the classical Caesarean section; and we cannot go the length of saying that it will replace forceps delivery and version. The old Caesarean section left the patient with a scar in the abdominal wall. In the vaginal Caesarean section we should like to be sure that the pelvic floor is safe from injury.

The second part of the third volume extends to 1,025 pages, and is devoted to the pathology of the lying in period. The first 87 pages contain a sketch of the history of midwifery in the nineteenth century by von Winckel. There is a general sketch of the way in which practice has improved, followed by short biographies of obstetricians who in their day were of note. We are glad to see the reader informed that the lying-in hospitals in the British Islands have from of old been characterized, as compared with those of every other European country, by their greater cleanliness, and the greater humanity to the patients. We cannot think how the author has tripped into saying that the Obstetrical Society of London was founded in 1825 (S. 21). The correct date is 1859.

After the historical sketch we have an article by v. Braun-Fernwald of Vienna on the genital wounds of lying-in women. He also treats of inversion of the uterus and *post-partum* haemorrhage.

Each subject is discussed at length, and a copious bibliography is prefixed. It is not too much to say that each section presents a faithful reflection of German opinion. The anxiety of the author for completeness sometimes makes him lose sight of the relative importance of things. Thus, every conceivable cause of inversion of the uterus is mentioned; but what is probably the commonest cause of all—namely, the pulling on the placenta during natural delivery of a cord made relatively short by being coiled round the body of the child—is not put in the prominent place it deserves. It is important that this should be recognized, for it is a cause of inversion for which the accoucheur is not, and cannot be held to be, responsible. In describing the reduction of an inverted uterus the author quotes to the effect that the operator should fix the uterus by putting his fingers into the ring formed by the cervix uteri, and stretching it open; but after this advice he puts Spiegelberg's name in brackets, as if the advice were a private crotchet of Spiegelberg's of doubtful value, whereas, really it is the essential condition of success. Chronic inversion of the uterus is mentioned, although it might seem outside the purview of a work on midwifery; but the author seems not to have heard of Aveling's repositor, although he discusses other less effective modes of treatment.

The bulk of this large volume is devoted to the great subject of puerperal fever. The bibliography extends over no less than 75 pages. The person chiefly responsible for this part of the work is von Herff of Basel. The bacteriology of the disease is expounded by Walthard of Berne, with the exception that the characteristics and behaviour of the pus-cocci are described by Dr. H. Wildholz of Berne. All this is done with thoroughness. But as only a small minority of medical men are bacteriologists, we refrain from criticizing it, and go on to the clinical section which, dealing as it does with a large part of the general practitioner's work, is of the highest importance to most of our readers. The author has collected numerous statistical tables which lead to the following broad conclusion: "Since the introduction of antiseptics or asepsis the mortality from puerperal fever has almost everywhere appreciably diminished. But this diminution has for some years come to a standstill. Hardly anywhere have good results been attained approaching those of well-managed lying-in hospitals, in spite of the great advantages that, in theory, private houses have over hospitals." The best results in Europe appear to be those of Basle, a city provided with a large lying-in hospital. In some places, for instance in Schleswig and in Ireland, there seems to have been lately a slight increase of puerperal fever. The author goes on to say: "Lamentable as it is, yet it must be asserted that at the present day the woman is most surely protected against puerperal fever who trusts herself to a well managed lying-in hospital—in sharpest contrast to former times."

With this broad fact in our mind, we go on to learn what our author has to teach as to the practical details in the prevention of puerperal fever. "The means," he says, "of reaching an extensive improvement of the puerperal fever mortality, are extraordinarily simple, transparently clear, and inexpensive, namely, the most painfully careful disinfection of the doctor, the nurse, and everything that comes into contact with the patient. And less frequency in operating on the part of the doctor." He thinks that many doctors who as students had abundant opportunities of learning methods of disinfection, degenerate after they get into practice, and cease to properly employ them. The chief point in which the methods recommended by von Herff differ from those which have been taught in England for years, is in the importance which he attaches to washing with alcohol. He says, "every practitioner who uses no alcohol in cleansing his hands, without doubt insufficiently cleanses them, and runs risk of infecting his lying-in patients, if he does not wear gloves." (India-rubber gloves are of course meant.)

His orders for disinfection, we condense as follows: Coat to be taken off, and replaced by sterilized overall. Sleeves to be turned up. Hands, arms, and nails to be washed for five minutes by the clock with soap, nailbrush, and hot water, the nails being specially attended to. The hand is to be scrubbed for five minutes with a piece of flannel repeatedly soaked in pure alcohol. Before examination the patient's genitals are to be carefully cleansed with hot water and sublimate. Kresol soap is recommended as a lubricant. Before an operation the vulva is to be shaved and disinfected with alcohol. "The doctor may have thoroughly cleansed his hands, and doubly and triply protected the patient by wearing sterilized india-rubber gloves; and yet neglect to cleanse the vulva may very easily avenge itself by a severe attack of puerperal fever."

The extraordinary success attained in the midwifery clinic which Dr. von Herff directs at Basle has made us think his methods worth quoting. His views deserve the consideration of every accoucheur. We hope we shall not appear pessimistic if we say that there are conditions of English private practice which will every now and then lead to infection however carefully the doctor disinfects his own hands. In the present state of public information, we are afraid that a doctor who before he applied forceps or turned should insist on shaving the vulva and scrubbing it with alcohol, would probably considerably limit his sphere of usefulness. There are probably many women in England about to be parturient who do not realize the possibilities of infection from the nurse. They do not understand that the nurse ought to be as meticulously careful in cleanliness as the doctor; that it is vital to the patient that she should be; and they choose her rather because she is a pleasant companion, who understands how to keep the baby quiet, and to do the work of a lady's maid. It is this want of intelligent comprehension of the methods of antisepsis and asepsis by the public that we think is the explanation of the fact that the diminution of puerperal fever seems to be at a standstill.

In the clinical description of puerperal fever the author recognizes as clearly as possible the difference between septicaemia and sapraemia, but he adopts new names for these, namely, "bacteraemia" and "toxaemia." These names may be correct, but they are not pretty.

The part of the book which our readers will probably think is of the most practical importance to them is that which describes and gives judgement on the most modern proposals as to the treatment of puerperal fever. Irrigation of the uterus is only beneficial when lochia are retained. It should be abstained from when any inflammation is present, and in the second week of the

puerperium it only does harm. Warm or cold bathing, sponging, etc., may be used, according to the feelings of the patient—a very sensible precept. Antistreptococcic serum is of use in pure bacteriaemia and in no other cases. A surely effective serum has not yet been prepared, but it is probable that it soon will be. Collargol will kill microbes in broth, but it is very doubtful whether it will do so in the living body. It will, however, produce leucocytosis, and it is probable that this is a help in the body's struggle against the microbes. The best way of giving it is to inject into a vein with a sterilized syringe from 3 to 9 c.cm. of a 5 per cent. solution. Antipyrin, 15 to 30 grains daily, improves temperature, pulse, and breathing, and does no harm. Washing out with large quantities of saline solution, introduced into the rectum or cellular tissue, strengthens the heart and relieves thirst, but otherwise is of little value. The less alcohol is given the better. Curetting is to be strenuously avoided. Brushing out the uterus, practised in France, and there called "écouvillonage," is much less dangerous than curetting; but it is possible that in many cases which recovered after being brushed out it was unnecessary. Abscesses should be opened. A suppurated ovarian cyst should be removed. But hysterectomy on account of suppuration of tubes or ovary is in no way to be recommended. One of the latest therapeutic proposals—namely, the excision of veins in puerperal pyaemia—is fully discussed. His conclusion is that clear and satisfactory indications for the ligature of veins do not exist. The only cases in which von Herff thinks it may be considered are cases in which there are repeated rigors, no localized collection of pus can be perceived, and the pulse is good. If it is intended only to tie the veins, they can be best exposed by a median abdominal incision. But tying the veins means leaving behind infected clot, which may set up local inflammation. To remove the veins, an incision should be made as for ligature of the common iliac artery, and the peritoneum lifted off the veins. But it is difficult, and may be impossible, to say on which side lie the veins that are the source of infection. And with recurrent rigors and fever there is always a possibility that the most recent rigor may be the last. Von Herff relates a case in which an operation was done in a case of the kind, and which illustrates the difficulty and uncertainty of such operations. The large veins were found perfectly healthy, but there was a small abscess in the broad ligament. This was opened and drained, but rigors continued, and the patient died. Careful dissection after death revealed a small suppurated vein running from the abscess cavity into a larger vein, which showed no sign of disease. Hysterectomy in puerperal infection is only called for in cases of inflamed and sloughing fibroids, in cases in which retained secundines cannot be removed, and in cases of inflammation limited to the uterus; and in these cases, if it is to do good, it must be done early.

The work is a great monument of industry. It will be indispensable for the specialist and the teacher, but it is too big for the practitioner or the student. Like most German books, it is sent out unbound, and the copy sent to us was so badly stitched that cutting the leaves made the sheets fly asunder.

EPILEPSY.

ALTHOUGH the explicit aim of Dr. ALDREN TURNER'S book on *Epilepsy*[2] is to present a clinical picture of idiopathic epilepsy, avoiding all reference to the mechanism of convulsions, it ranges itself at once amongst the foremost treatises on this subject, both by reason of the author's own careful studies and the excellent and comprehensive summary it contains of the voluminous literature which has gathered round this protean and still mysterious disease.

In the earlier chapters, after showing that idiopathic epilepsy exists in a proportion of about 2 per 1,000 of population and is somewhat more common among males than females, Dr. Turner proceeds to an examination of its etiology. In common with every other well-known authority he finds its great predisposing cause in an inherited neuropathic constitution evidenced by various psychical, pathological, and structural peculiarities. In his own cases a neuropathic family history was obtained in 50 per cent., and outside these many others without any such history showed well-marked "stigmata of degeneration." These latter are accepted by the author as in themselves constituting proof of a neuropathic heredity, a conclusion which is probably correct, but it is certain that the tables given would have had more value had they been accompanied by others showing the relative frequency of these same structural abnormalities in non-epileptic people. In this relation we may draw attention to one of Dr. Turner's tables (XV) in which it is shown that in no less than 130 out of 200 epileptics no neuropathic heredity could be ascertained, and that amongst these bodily stigmata were present in 42 per cent., whereas in the remaining 70 cases with ascertained neuropathic heredity the stigmata were present in only 24 per cent.

Leaving this point, the author passes on to an able clinical study of epileptic fits. As to the much-discussed and extremely important question of what constitutes the essential feature of a fit, Dr. Turner decides that this is "the sudden temporary loss or impairment of consciousness," although he admits that there are epileptic phenomena which occur without loss of consciousness. Although the last word has not been and cannot for long be said on this point, this criterion is probably as useful as any yet put forward. Classifying epileptic attacks into minor epilepsy, major epilepsy, and psychical epilepsy, excellent descriptions, illustrated by charts representing typical cases, are given of the several varieties and clinical types. In these chapters Dr. Turner brings out several points of importance, two of which may be mentioned. The first concerns the remarkable tendency to a great diminution in the mortality during and after the *status epilepticus*, due doubtless to the greater care patients now receive in special institutions. The author's own mortality-rate from this cause is given as only 10·7 per cent. The second point is the description given by Dr. Turner of a definite clinical form of epilepsy characterized by the occurrence of only a few fits. The fact that a person may have in his whole lifetime only one fit is of great medico-legal significance, and has, further, an important bearing on heredity, as a patient who has had only one epileptic seizure may beget epileptic offspring. In a most valuable chapter on the mental states found in epilepsy the question of "epileptic equivalents" is *inter alia* treated, and the author gives it as his opinion that these so-called equivalents are "the mental phenomena of the pre- and post-convulsive states, when they occur without convulsion or spasm." This definition, therefore, excludes many morbid phenomena described by various Continental authorities as true epileptic equivalents.

A very interesting chapter on the neuro-pathological anatomy of epileptics is contributed by Dr. John Turner of the Essex County Asylum, who bases his opinions largely on changes met with in the brains of congenitally defective individuals. As the result of a long series of investigations, Dr. John Turner finds, in support of the opinion expressed by Hughlings Jackson in 1864, that the immediate cause of fits is cortical stasis resulting from obstruction to the blood supply by intravascular clots occurring—and this was not suggested by Dr. Hughlings Jackson, though believed by Dr. Turner to be an essential part of the process—in persons having congenital structural defect of the nerve cells. The chemical pathology of epilepsy is treated succinctly by Dr. Aldren Turner, and the concluding chapter relates to diagnosis, prognosis, and treatment.

The chapter on treatment is one of the most valuable in an exceedingly valuable book, and the author's remark that "there is no single specific remedy or system in the treatment of idiopathic epilepsy" cannot receive too much stress in these days of indiscriminate bromidism. For these and many other important matters we warmly commend this book to readers as an exceedingly lucid, comprehensive, and thorough study of idiopathic epilepsy.

[2] *Epilepsy. A Study of the Idiopathic Disease.* By William Aldren Turner, M.D., F.R.C.P., Physician to Out-patients, National Hospital for the Paralysed and Epileptic, and King's College Hospital, London; Visiting Physician, Colony for Epileptics, Chalfont-St-Peter etc. London: Macmillan and Company. 1907. (Med. 8vo, pp. 286. 10s.)

INTUSSUSCEPTION.

IT does not fall to the lot of many surgeons to acquire an extensive experience of intussusception, and that of

Mr. CHARLES CLUBBE of Sydney,[2] embracing 144 cases since 1893, is quite exceptional, and therefore valuable. In an introductory chapter to his book on the *Diagnosis and Treatment of Intussusception* he traces the history of the operation of laparotomy for the condition, giving to Mr. A. E Barker the credit of first showing the importance and value of early operation. The second chapter deals with the etiology and pathology and the varieties of intussusception. It is interesting to find that the most frequent starting point in the author's cases was the caput caeci. He advocates the adoption of a fresh classification at the risk of a somewhat complicated nomenclature, and that which he and other recent writers recommend certainly has this feature. It may well be asked whether it is necessary to load the textbooks and the memory with the terms "colic-ileo-caecal," "caeco ileo-caecal," "enteric ileo-caecal." Surely all that is necessary is to indicate what portion of the bowel forms the head of the primary intussusception and into what segment it is invaginated. Should not an example in which the head of the intussusception is the caput caeci be named caeco-colic, and not either colic-ileo-caecal (Corner) or caeco-ileo caecal (Clubbe)? Such nomenclature leads logically to such terms as ileo-caeco-caeco-colic, and even worse than this. The two chapters on the clinical course and the diagnosis of the affection are most valuable. The history of onset as told by the mother, and the subsequent vomiting, straining, and crying are held to be clear enough in most cases to raise a strong suspicion if sufficient attention is paid to them, and the almost invariable passage of blood makes the diagnosis, as the author says, morally certain. Passage of blood by the bowel was recorded in all but 6 of Mr. Clubbe's 144 cases.

The most interesting chapter of all is that in which the results of treatment are recorded. The author used injection in all his cases before operation, but never unless prepared to go on with the operation forthwith. Out of 133 cases he only sent 16 back to the ward without opening the abdomen. He does not expect reduction by injection in more than a small proportion of cases, but he considers the method of much value in diminishing the extent of the intussusception, and in this way a valuable adjunct to operation. It is impossible to notice here all the important points of which the author treats; his record of 124 laparotomies with 84 recoveries is enough to show how well fitted he is to speak authoritatively on the subject, and his monograph will, no doubt, attract much attention.

HEART FAILURE.

PROFESSOR ASCHOFF and Dr. TAWARA[1] have summarized the present day teaching on the subject of heart failure from the point of view of anatomical and pathological investigations by themselves and others. Both authors have already made valuable contributions to the study of the paths of conductivity in the mammalian heart, and in their present work they attack somewhat severely the views of Albrecht and others who have expressed the opinion that the cause of heart failure must be looked for more especially in muscular changes. The attention of all students of cardiac pathology has of late years been directed to the problems of heart failure. The older pathologists and physicians were too often content to regard the valvular lesion as the primary disorder and to pay less attention to those cases, which would appear to have become more frequent of late years, where failure could not be attributed to any such cause. The demonstration of a direct muscular continuity between auricle and ventricle, and the results of severing such continuity, proved that conductivity of the stimulus arising in the auricle must play an important part in the maintenance of normal action. One object of the present work has been to demonstrate the greater importance of this conductivity and to combat many of the observations and opinions put forward by Albrecht, who regards cardiac muscle as essentially cellular in nature and to be looked upon as entirely different in its pathological processes from other muscular tissue in the body. Not only the opinions but also the microscopic findings of Dr. Albrecht are met by direct contradiction, and this is particularly the case in regard to nuclear changes, of which the authors offer a different explanation from other observers. The general development of the fibrillar substance and the changes undergone by the sarcolemma are discussed, but here the evidence adduced by the authors themselves becomes somewhat equivocal and by no means convincing. The latter part of the work is devoted to a record of cases, with details of the microscopic conditions illustrating the points of difference in discussion. The whole work is deserving of the attention of other investigators in the same field, but it cannot be said to establish, as yet, any of the points on which competent observers are at present at issue.

[1] [illegible] By Charles P. B. [illegible] Crown [illegible]

[illegible] Pathologie et Anatomie [illegible] Heart [illegible] Marburg [illegible] Oxford [illegible]

NOTES ON BOOKS.

THE lectures which Professor ARRHENIUS delivered before the University of California were well worth preserving in the more permanent form in which they now appear as *Theories of Chemistry*.[3] The author's object has been to show how the less exact theories of the past are being expanded and rendered ever more complete in the light of our fuller knowledge. He deals with chemical fundamentals, such as affinity, the theory of valency, electrons, the dimensions of the atom and the molecule, osmotic pressure, electrolytic dissociation, and the like. While giving a very careful account of the bearing on chemical theory of the latest researches on radium, the author agrees with Lord Kelvin in refusing to look on the evidence as affording proof that one element can be transmuted into another. The only passage which has any direct bearing on medical science deals with the physiological effects of certain drugs as the logical outcome of the theory of electrolytic dissociation. The intrinsic interest of the book, however, is so great, and it affords such an admirable and brief statement of the results of the latest activity in scientific work, that it should prove of considerable value alike to those few who are able to keep abreast with modern developments and to the many who appreciate a short statement of those principles which summarize the trend of modern thought in the realm of chemistry.

In the preface of the latest edition of this standard textbook of *Surgical Pathology and Morbid Anatomy*[4] Mr. BOWLBY again acknowledges the able co-operation of Dr. F. W. ANDREWES, who has not only helped in the revision of the whole work, but has also done special service in the preparation of the chapters on surgical bacteriology and on sepsis. The extended range of surgical therapeutics, and the increasing number of internal lesions that require surgical attention, have rendered it necessary to enlarge the volume, but not to any undue extent, and Mr. Bowlby has, we think, done wisely in preserving the character of his book, and in maintaining its well-merited popularity as a convenient and also a most efficient manual for the surgical student.

[3] [illegible] By S. Arrhenius. Edited by T. S. Price D.Sc., Ph.D., F.I.C. [illegible] being lectures delivered at the University of California [illegible] Berkeley. London: Longmans, Green, and Co. 1907. [illegible] pp. [illegible]

[4] [illegible] By Anthony A. Bowlby, C.M.G., F.R.C.S., [illegible] to St. Bartholomew's Hospital and to the Home [illegible] to the King. Fifth edition, revised with the assistance of Dr. F. W. Andrewes. London: J. and A. Churchill. 1907. Crown [illegible] pp. 672, 179 Illustrations. 10s. 6d.)

MEDICAL AND SURGICAL APPLIANCES.

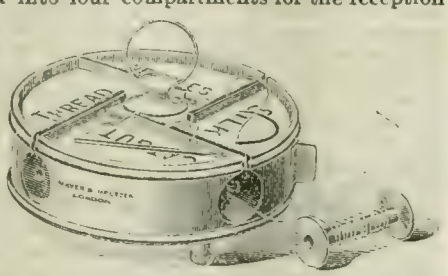
The Mono-Service Milk Pail.

THAT a large portion of the milk supply of London and other large cities is deplorably defective in many respects is not to be denied. Any device, then, promising improvement, even in a single direction, should be favourably received by both the profession and the public. Much of the defective condition of the milk is due to the multiple sources of contamination it is exposed to in its course from the farm to the consumer, and to the fact that neglect in any one particular may vitiate all the care and attention bestowed upon it in the rest. The milk may be contaminated from the outset owing to a dirty condition of the cow's udders or the milker's hands, or from the state of the vessels into which it is

received. Should it pass satisfactorily through this stage and be then properly strained and refrigerated, it is next exposed to pollution by dust and other impurities from the inefficient sealing of the cans during its transit from the farm to the dairy dépôt, and it is an open secret that the cans are not infrequently opened on railway journeys. After reaching the dépôt the milk is further exposed to contamination during the round of distribution from the frequent exposure of the measuring vessels and the milk itself to dust and dirt, and from the receptacles it is placed in on reaching the households. A common practice, too, that of entrusting the carriers with a quantity of milk in bulk and merely requiring from them, on their return to the dépôts, a sum of money proportional to the amount of milk disposed of, is one that obviously lends itself to abuses in the way both of dilution and pollution. It may well be, then, that no inconsiderable proportion of the deterioration of the milk occurs after it has left the dépôts. A plan has lately been devised by which it is claimed the deterioration of the milk at this stage can be largely or entirely prevented. This is to be accomplished by the use of what is called the "Mono-service Milk Pail," manufactured by the Mono-service Vessel Company, Limited, 104-107, Fetter Lane, London, E.C. This "pail" is a small conical vessel formed out of paper or wood pulp, which, after having been coated with a special paraffin wax, is exposed to a temperature of 500° C. In this way the interior of the vessel becomes coated with a sterile varnish, which is unacted upon by either acids or alkalies. The pails are to be supplied to the dairy companies in three sizes, half-pints, pints, and quarts. After being filled with milk at the dépôt a lid of the same material is stamped down, and the vessel becomes hermetically sealed, and the milk cannot be exposed in any way without the partial destruction of the "pail." The householder receives the vessel intact, but can easily release the milk by tearing down a particular portion of the rim, and by doing this a sort of lip is formed by which the milk can be poured out without spilling. Once the rim is torn the "pail" cannot be used again, and is of no further service after the milk is extracted. It is claimed that the "pails" can be supplied at so cheap a rate that the dairy companies would find them more economical to use than the customary glass bottles. More than one of the large dairy companies, we understand, is shortly to give the system a trial. If it better in any way the present milk supply, we wish the system success. Even in the case of complete success, it is evident that the proposed system in its present form deals only with one source of the milk contamination, and much of the milk is undoubtedly in an unsatisfactory condition on reaching the dépôts. We gather, however, that in the event of success in its present limited form, an extension of the system could be devised to deal with the milk from its source at the farms.

A Suture Sterilizer.

The annexed illustration shows an ingeniously-contrived apparatus designed by Mr. SIMPSON NEWLAND, Assistant Surgeon of the Children's Hospital, Adelaide, South Australia, for the purpose of sterilizing sutures, needles, and ligatures in such fashion that they can be at once used by the surgeon without being handled by other people. It consists of an external and internal case, of which the inner is divided into four compartments for the reception of reels; these are inserted through the openings in the side, and the compartments are then closed by rotating the external case. The latter has also an opening on the under surface, through which three small knobs attached to the inner case pass and serve as feet. The compartments of the inner case have slots in their upper wall, and through these the loose ends of the reels of ligatures and sutures are passed, being threaded to a needle and drawn out and cut off as required. On the top of each compartment is a loose opal glass plate marked with the name of the contents. The apparatus is nickel plated throughout and easily kept clean. Its use, Mr. Newman finds, saves much time, and by dispensing with one pair of hands lessens the possible sources of infection. It can be made in any size and with as many compartments as desired. It can be obtained from Messrs. Mayer and Meltzer, Great Portland Street, W.



ROYAL COMMISSION ON VIVISECTION.

(Continued from p. 1373.)

AN appendix to the second report of the Royal Commission on Vivisection, dated April 13th, has been issued.* It contains minutes of the evidence taken during February and March.

ANTIVIVISECTIONIST TESTIMONY.

Further Evidence of Miss Arabella Kenealy, L.R.C.P.Dubl.

The following is an abstract of evidence given by Miss Kenealy at a later date than that summarized in the BRITISH MEDICAL JOURNAL of June 8th. She was recalled before the Commission after some other witnesses had been examined, but it has been thought convenient to place the abstract of her further evidence here, so that the whole of her testimony may be kept together. In reply to Colonel Lockwood, Miss Kenealy said medical science and the evolution of the race had been the passion of her life. One was right in supposing that any number of animals might be, and were, used to demonstrate or to refute a single theory, but it was customary to describe each animal as an experiment: hence the confusion. For example, in Swale Vincent's and W. A. Jolly's experiments on the functions of the thyroid and parathyroid glands twenty-seven animals were used—six monkeys, six cats, nine dogs, two prairie wolves, two badgers, and two rats. All these animals were sacrificed in order to show one thing—namely, the function of the thyroid and of the parathyroid glands, and to prove that the numerous previous experiments had resulted in mistaken views as to the importance of these glands. Sir Victor Horsley was quoted in the *Hospital* for November 26th, 1904, as having said that the only satisfactory result of all these innumerable experiments upon the thyroid and parathyroid glands had been the treatment of myxoedema by means of thyroid extract. But surely all these mutilations of miserable creatures were an absurdly roundabout and impracticable way of showing that in disease of a particular organ benefit might be derived from administering to the patient an extract of that organ. It had been done for years with pepsin. She was right, too, in stating that in the descriptions of experiments the number of animals used might be or might not be given. Then she had not been able to give the figures showing the decline of interest in treatment, which she spoke about. In a presidential address to the Clinical Society of London, Dr. F. Taylor classified the contributions to it for the preceding ten years. Of the surgical papers—which outnumbered the medical (this was significant, a surgical operation frequently meaning a failure in medical skill to arrest disease in its earlier stages)—three-fourths of the surgical papers, he said, dealt mainly with treatment, while of the medical papers only one-fourth made treatment their main consideration. In the report of the Lister Institute there was the following passage:

> The increased number of cases of paralysis following the use of antitoxin has by certain individuals been attributed to the use of antitoxin.

But how was one to account for the increased number of cases for paralysis which had followed its use? She thought it was not always the severe cases that were followed by paralysis; in a great many mild cases paralysis followed. Asked how she showed that paralysis was not caused by the disease, she said that in all diseases nature selected the organ that should throw out the poison. In typhoid fever it was the glands of the small intestine; in scarlet fever it was the skin and throat; and so forth. In diphtheria Nature had selected the tonsils as the best route for eliminating the poison. By giving antitoxin one might relieve the tonsils, but one threw the poison back into the blood, so that it caused paralysis; it caused albuminuria, it caused convulsions and sudden death, rashes, and inflammation of joints. She would make the use of the serum treatment a legal offence. Asked how she had arrived at that conclusion, as she did not seem to have had any practical experience whatever of serum treatment, she said she followed the results of it in the BRITISH MEDICAL

* London: Printed for His Majesty's Stationery Office by Wyman and Sons, Limited, 109, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 109, Fetter Lane, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. (1907.)

JOURNAL and other medical journals. Asked if she could give the evidence of any one who had had experience of the treatment of diphtheria, both before and after the introduction of the serum treatment, who supported her view, she said she required no evidence except the report of the Lister Institute itself upon the subject of the action of antitoxin if it increased the number of cases of paralysis. On the question being pressed, she said she knew very few doctors who would do anything in that way. In reply to Colonel Lockwood, who asked if she had or had not known such medical men, she said she knew few such cases. She had been out of practice for some years, but she thought the onlooker saw more sanely. Asked if she preferred the views of the onlooker, she said she did not. But as an onlooker who looked at the results of practical men, and from her own reasoning, she deduced that these serum treatments were most dangerous. Asked by Sir William Church if she would extend her objection to the use of serums on animals, she replied she had had no experience of the treatment of animals by serums as a preventive of disease. She had no experience at all of the treatment of animals. Asked if she thought her opinion, gained from apparently very wide reading, was to be placed against the opinion of those who were in daily observation of these diseases in animals, she said:

If you look through the records of cures you will find that they are most delusive. The Christian Scientists have marvellous cures; the homœopathists have marvellous cures. One cannot depend upon these records.

Asked if it would have been possible for physiology or medicine to have made any very great advances before knowledge was gained of circulation and the nature of respiration, she said she thought not; but she thought those truths were to be found by observation of human beings, by making *post mortem* examinations, and by pathological findings. Asked by Sir William Church if she had any objection to feeding experiments, she said, Certainly not if they involved no cruelty. Asked if she had ever herself watched a case of myxœdema, or the cretinoid condition of children being treated by feeding with thyroid extract, she said she had never seen a case fed, but was quite willing to admit it. But vivisection was not necessary to prove that the administration of a gland might be valuable in disease of that gland. On its being put to her that before any opinion could be formed as to the way in which a substance acted it was necessary to experiment in some way with it, she replied in the affirmative, but thought those experiments should be upon human beings. Asked if she deemed that any increase of knowledge with regard to myxœdema and thyroid feeding had been arrived at by experiments on animals she said she did not say thyroid feeding. But in these operations on the thyroid and parathyroid glands, all the observers got different results. Some produced tetanus and myxœdema, others did not. Asked if she could point to any discovery in science that had been made at once by a single experiment and not controverted she said, No; but she thought they had only to look round upon all the degeneration and disease, and their absolute helplessness to do anything for it, to see that medical science must have been adopting wrong and misleading methods. Asked if she had ever used adrenalin or seen it used she said, No; but she would find it quite unnecessary. They had quite enough beautiful healing medicinal substances from the mineral and vegetable world without going to the bodies of the lower creatures. She thought there was a great deal of danger in it. Asked if she would carry that so far as to include cod liver oil, she said that was a food. It was not given subcutaneously, it was given via the stomach, and the stomach was a very intelligent organ and discriminated between things which were good and things which were bad to be passed into the system. Asked if she would have any objection to give extracts of suprarenal capsules by the mouth, and there was not the same objection to that that there was to injecting subcutaneously. But she did not think it was necessary. Asked if she was aware that the cause of pulsation in the heart was demonstrated by actual experimentation, she said she thought all these facts were discovered by pathology, by listening to the heart in health and in disease and comparing the two. Asked if she thought the experiments of Dr. Hope and Dr. Williams had no effect in demonstrating the truth of various theories, she said she thought that by listening to the heart in health and in disease they could get all the indications they needed. In reply to further questions, she said she thought that when hypodermic injections were given it was quite impossible to calculate the result; that there was no doubt of the hypnotic influence of the touch of the doctor; and although it was not generally recognized, she believed that there were healing forces in certain people, and that very often these produced effects which they attributed to drugs which had been given hypodermically. Asked if she approved of experimentation for diagnostic purposes, she said that she disapproved altogether of using sentient living creatures as subjects for experiments. Asked if she would prefer that her patient should run the risks of uncertainty to experimenting upon an animal, she said: No, she thought she could judge by the clinical aspects of the case whether it was tuberculous or not. Asked if, for the purpose of guarding the public health, she thought it was justifiable to use animal experimentations to keep plague out of the country, she said she thought there were other methods. That was her opinion, formed from the reports of those who had had experience. In reply to further questions, she did not say that medical science was absolutely unintelligent. But she thought it might be very much more intelligent than it was if it gave up all these observations on guinea-pigs and rabbits. Asked if she thought it was for the advantage of children that they should have whooping-cough, measles, and scarlet fever, she said she was not sure. But as they always occurred she could not help thinking they might have some developmental effect, or that they were merely tests to roughly weed out those who were not among the fittest for survival. Asked by Mr. Ram if her objection to all experiments on animals was that they involved some amount of suffering, she said that was not the only objection. There was the other objection, that it was an immoral attitude to look upon sentient living creatures linked to us by evolution in some way we did not understand as mere material for experiment. Asked if she thought that, however great the advantage might be to a child, it would be wrong to sacrifice an animal under any circumstances, she said she could see no benefit that could come to the child through it. Asked to imagine such a case of great advantage to children, she said she thought that if it came to a question of right and wrong, it would be distinctly wrong to torture an animal in order to obtain a benefit for one of our own race. Even supposing it could be obtained by an experiment on an animal which was not torturing the animal, she would still think it was wrong. Asked if she had ever seen an experiment on any living animal, she said, Never. Asked if she would object to putting a dog under an anæsthetic from which it could not recover, and then examining its brain when it was wholly unconscious, she said she thought there was something revolting to the sense of right in the mutilation of living creatures, not for their own good, but as a mere scientific experiment. In reply to further questions, she said experiments on the lower creatures could not teach the use of drugs on human beings. Besides, digitalis acted differently in health and in disease. Asked if she thought it wrong when a new drug was discovered to test it upon animals, she said she thought it not only wrong but unscientific, because, after all the experiments made on animals one had to come eventually to experimenting on man, and one might find then an absolute difference in the effects. On its being put to her that then that might be arrived at by the process of killing two or three people, she said, No, one began by the subjective method. The proper method was for students and doctors to test in small quantities upon themselves the actions of drugs, beginning with small quantities, and so gradually finding out their power. Asked if the Society with which she was connected had taken any action with regard to the cruel operations which took place daily on young animals—colts, lambs, and so forth—she said it took no action of that sort. The Society existed to influence Parliament to introduce a Bill for the total abolition of vivisection. They did not meddle with castration. Asked if, in the view of the Society, those things should be stopped or not, she said they had not considered them. Really, they had not undertaken that aspect of the case. Asked if she was taking action with the object of purifying science, or of protecting animals, she said personally her feeling was almost stronger about science even than

it was about the animals. There were only two doctors in the Society, Dr. Helen Bourchier and herself. Asked by Sir William Collins if it was not a rather strong measure to suggest to Parliament to abolish entirely the utilization of animals for scientific purposes while they were still utilized, even painfully, for food and for commercial purposes, possibly even for fashion, she said she thought not at all. She thought medical science should be in advance of every other code of ethics. Asked if she thought that kind of moral evolution was more likely to be facilitated by a penal Act of Parliament than by leaving matters alone, she could not say that she was really serious about punishment for injecting serums. What she meant was that this injection of morbific principles, extracted from the blood of the lower animals, into human blood had become so serious that she thought some very stringent measures should be taken to put a stop to it. Asked how she was going to achieve the abolition of vivisection by Parliamentary action except by putting it under some penalty, she supposed that was true. She was quite prepared that it should be made a penal offence to vivisect an animal. Asked by Sir John McFadyean if the reasons she had given for objecting to vivisection in order to extend knowledge with regard to human diseases applied also to the same method of seeking for information on animal diseases, she said with regard to animals there was an element of reason in it, because it was less irrational to suppose that one might by experiments on animals learn something about the diseases of animals, than to suppose that by experiments on animals one could learn about the diseases of man. She objected to the whole principle of experimentation on living creatures. Asked whether she would have them believe that she was so well acquainted with the whole of scientific literature that they might safely accept her opinion that no useful item of knowledge had been contributed by experiments on animals, she said, Yes; she thought so very little was known that they need not grudge attributing the little that they knew to pathology and to clinical observation. Asked if she thought she had any right to come before the Commission and make the statement that experimentation on animals had contributed absolutely nothing useful to man's power of curing and preventing animal diseases, she said:

> No, I qualify that also. I say that if it has, it has; it might have been obtained infinitely better by clinical methods. In experimenting on animals we may discover some truths which might have been better discovered by clinical observation.

In reply to further questions, she admitted that she knew nothing about animals. Asked what was morbific material in ox serum injected into an ox, and what she meant by "morbific," she said she thought that science did not know what it meant by morbific. Pressed for an explanation, she replied:

> Suppose we say, then, the products of the micro-organisms, not the micro organisms themselves nor their toxins, but the products of the micro-organisms.

Asked to quote authority for a statement that there were disease producing powers in the antirinderpest serum, she said she would be extremely sorry to eat part of an ox which had been injected with such serum, and she thought there was very great danger in injecting cattle used for food with these serums. Asked if she could bring anybody to furnish an atom of evidence to the Commission that such serum was injurious, she said she did not say that she could; but she did not consider that these things had been used long enough for them to be able to test their far-reaching results. Asked if she had any knowledge of the extent to which antirinderpest serum had been used, and for how long, she said, No; but she thought if one of these serums was injurious it was rational to suppose that another was, and that if the principle of serum-therapy was wrong it was wrong in every instance. It must be wrong to inject the diseased blood of one animal into another healthy animal, and nothing could make it right. Asked if she thought that farmers and cattle-owners had been absolutely deluded when they considered that this method of treatment had saved millions of money in some countries, she said she thought the bubble would explode, as all the other bubbles had exploded, when sufficient statistics had been collected. Asked if she denied that when an animal had recovered from rinderpest it was scarcely possible to kill it with rinderpest afterwards, she said that, of course, was probable. Asked if she denied that the protective properties which it possessed could be transferred to another animal by transfusing the blood from one animal into another, she said she thought it was absurd to suppose that that could be true. Asked if she thought that all those who held that that was true, and who had had endless opportunities of observing whether it was true or not, were mistaken, she said, No, she did not think that. She thought it produced what they called immunity, which was simply that it accustomed the creature—produced a vicious tolerance—to the poison of rinderpest. She would restrain farmers from using these remedies, which they believed to be of great economic value. Nature knew best whether these creatures were fit to live or whether they were unfit to live. In reply to further questions, the witness said Dr. Montgomerie Paton's book *New Serum Therapy* was considered a very important contribution to the science of serum-therapy. He said that he had conferred on human beings the susceptibility to catarrh and influenza of sheep and horses. Asked if she wished the Commission to believe that sheep were very susceptible to catarrh, she said she did not know. She gave it on the authority of Dr. Montgomerie Paton, who was considered an authority. Asked if it surprised her to be told that sheep were extraordinarily insusceptible to catarrhal complaints of the air passages, that it was almost unknown amongst them, she said the observation was not her own. It was quoted from a man who was an authority. Asked who was her authority for suggesting that calves were more susceptible to tuberculosis than human beings, she said she could not give her authority for that. Asked if she could find any authority for it, she said, No. On its being pointed out that she had implied that it was a fact, she said surely it was proved by the susceptibility of calves to tuberculosis which had been shown by the recent Tuberculosis Commission. They found that the calves readily took tuberculosis by feeding with tuberculous milk and with the sputum of tuberculous patients. Surely that showed that they were very susceptible to tuberculosis. Asked if she professed to have great knowledge of the Report of the Royal Commission on Tuberculosis, she said she did not profess to have great knowledge, but she had a very fair knowledge. Asked if she wished the Commission to believe that any calves were killed by tuberculosis by feeding with sputum, she said she did not say "killed." Tuberculosis was transferred. Asked what accounted for the susceptibility of calves when they were not vaccinated with anything, she said it might be entirely natural to them. From her experience of the way in which cows and calves were kept by farmers, she did not think it was any wonder at all that they were most susceptible to tuberculosis. She did not wish to modify the opinion implied in her previous evidence, that calves were more susceptible to tuberculosis than human beings, but she could not bring before them any direct evidence showing that. Asked if she could cite any experiment performed within the limits of these islands during the last ten years that could fairly be described, without exaggeration, as torture of the animal, she said, Certainly. These experiments could be described only as torture. She meant by torture an extreme amount of pain. Asked if she could say that they would all be correctly described as torture, she said she did not say that they would all be correctly described as torture, because she thought in some cases the anaesthesia was complete; but she thought that in a great number of prolonged cases of operation the anaesthesia was not complete. Asked to cite one or two specific instances which she thought could, without exaggeration, be described as torture, she said she had not taken up the question of pain; that was so accepted. She did not wish to mention any specific case. She had not prepared any specific case, but she thought the Chairman of their Society produced specific cases; a great number of other witnesses would also produce specific cases of pain. Asked if she admitted a distinction between pain and torture, she said, Certainly. No pain was equal to the torture of vivisection. No pain could be equal to the torture of a knife among the living tissues. On its being pointed out to her that surely the pain caused by similar lesions and alteration of tissues without anaesthetics must be much greater than the pain experienced under

anaesthetics, she said she thought not. The whole thing—the fright and terror, the horror of the creature finding itself at the mercy of a merciless person with a knife—was appalling. Asked if she thought that the administration of anaesthetics aggravated the pain really, she said, No. If the creature were absolutely anaesthetized, of course there would be no pain; but the question was that these creatures were not fully anaesthetized. Asked as to a statement that it had been proved to be quite impossible to anaesthetize thoroughly, whether she were speaking of animals, she said she meant for such long periods of time. She had not fully gone into the question of anaesthetics. There was much evidence to show that dogs, for example, were most susceptible to chloroform. For that reason it was certainly impossible to keep dogs absolutely under anaesthesia during these long experiments. Asked if she could cite any other authority than Sir Thornley Stoker, she said there was her own experience in operations. On its being put to her that this was with regard to dogs, she said the same must be true of human beings. Asked if what was true of human beings must be true of dogs, she said, Not necessarily so. On its being pointed out that she had said it was, she said she thought it very likely it applied to anaesthetics. In reply to further questions, she said what she meant was, not the impossibility of anaesthetizing them, but the impossibility of keeping them for hours under anaesthetization, seeing that dogs were peculiarly sensitive to the effect of chloroform. Asked in what proportion of cases during the last five years curare had been administered, she said she was not prepared to say in what proportion; but certainly it was given. She believed it was common. Asked if she could bring any evidence before the Commission to show that curare was habitually or customarily employed, she said she was not prepared to say, because she had not prepared statistics of the number of cases in which curare was given; but curare was given, and was given to a very great extent, she thought. Further pressed for evidence, she said she would look the matter up.

Miss Kenealy subsequently wrote:

In the two *Journals of Physiology* from which I have been quoting I find in the number for December, 1904, that curare was given in 1 out of 6 vivisection experiments, and in the number for August, 1906, curare was given in 1 out of 7 vivisection experiments described there.

In regard to an experiment of Professor Cushny, in which she said curare had been given, it was pointed out to the witness that there was no mention of curare; it was morphine that was given. Asked whether man had the right to interfere with what might be called Nature in respect to animal freedom, she said it was a right he had assumed. The justification for it was the belief that human beings could not live without animal food, or could not live to the utmost of their power without animal food. Asked if that would justify the cutting off the tails of some three or four million lambs annually in this country, she said she did not approve of that. Asked if she would suggest that it ought to be prohibited by law, she said she did not know anything about it. Asked if, supposing it to be a fact that all over this country sheep were, as a rule, painfully killed—had their throats cut in full consciousness—she would not admit that the pain inflicted on animals in that way was a hundredfold greater than all the pain inflicted by so-called vivisection, she said, No, she would not admit that. Asked if her feelings when she ate a piece of mutton were at all wrung, she said they were. On its being put to her that she had told them on the previous day that sheep were painlessly killed, she said it was absolutely against her principles. It was only under compulsion that she ate meat. She tried vegetarianism for eighteen months, and found that she could not do her work without meat. Asked if she would desire that legislation should be introduced to compel butchers to administer an anaesthetic to all the sheep in killing them, she said she would have them killed painlessly. She thought all people of ordinary humane sense were of that opinion. Asked if she professed to be well acquainted with Koch's postulates, she said she thought that one case in which a disease had been transmitted when it had been proved that there was no bacillus was sufficient to prove that a bacillus was not necessary. Asked for the reference, she said she would leave it to Dr. Granville Bantock, who knew that aspect of the case better than she did. In reply to further questions, she said the cause of the disease might be a product of the bacillus, not the bacillus itself. It might be something clinging to the bacillus; it might be some potency of the bacillus we did not understand. There was something that caused disease; whether it was a bacillus or a product of the bacillus, or something clinging to the bacillus, was a mere detail.

In reply to Sir Mackenzie Chalmers, she said she had practised medicine for eight or nine years as a general practitioner. She was in practice in Watford, and had a consulting practice in Henrietta Street, Cavendish Square. She abandoned medical practice about six or seven years ago. She had a very bad attack of diphtheria, which incapacitated her for a while. She did not interest herself in experiments on animals until after she abandoned actual practice. She took it for granted that there were no cruelties practised. About two or three years ago she was led to look into the subject, and found the appalling lengths to which vivisection had gone, and the appalling way it was increasing, and that cruelties were practised. She admitted that the opinion of the leaders of the profession was strongly opposed to her view. Asked if it was not extraordinary that men of high ability and high scientific knowledge should become a prey to a fetish, she said it was astonishing. But everybody knew that this fetish—belief in the miraculous properties of blood, for example—had characterized all nations; it was one of the most difficult creeds to die. Every race was misled by this fetish, belief in the miraculous properties of blood. It was the same in religion—the mystical properties of blood to save. In reply to further questions, she said the truth was that the experiment must always come in the end to be applied to a human being. And why not begin with that? She admitted that there was a conflict of consciences. Asked what the standard was, she said the human, instead of the technical, standard. Asked what was the human standard, as one branch of humanity held vivisection to be right while the other held it wrong, she said the reason vivisection was upheld by the members of the medical profession was simply due to class prejudice. Asked where she drew the distinction between right and wrong, she said it seemed to her that they had only to take the internal evidence. Pressed on the point, she said it was difficult to say what they were to take as the standard. She would say the feeling of large-hearted, intelligent, progressive persons, rather than of persons governed by the traditions of a class and by the fetishes of a class. In reply to further questions, she said she did not think it was a question of sentiment; she thought it abhorrent to the humane sense to take a living frog and pin it out on a board and cut into it. Asked if it was worse than taking a living fish and playing it on a hook, she said that creature thought, at all events, it might escape; sport was not so cruel; nothing was so cruel as vivisection. In reply to further questions, she said she had been told by an expert hypnotizer that it was possible to hypnotize animals. Suppose a man was experimenting upon the brain of one of the lower animals, how could he tell now far his influence affected the results he got upon that animal? Dr. Esdaile had written a book on the subject. He performed a number of hypnotic experiments by which he anaesthetized his patients by hypnotizing them; but then his intention was to keep them free from pain. But the intention of experimenters would have no relation to pain, but would be to tell whether they would get certain movements from stimulation of certain areas of the brain. She thought that if an animal was hypnotized, in stimulating a certain area of the brain the operator might unconsciously suggest to the animal, to the subconsciousness of the animal, that certain muscles should move in response to the stimulation of a certain area. In the case of a surgeon operating on his patient, he was not dealing with the consciousness of the patient at all; the anaesthetist would be influencing the patient in that direction, if there were any influence. Asked in regard to her statement, "Disease is a natural operation of Nature, and when we attempt to thwart the operations of Nature I think we are trying to put back evolution," if that argument did not carry one to this extent, that we ought simply to leave disease alone, she said she did not think so at all. Nature had given us not only intelligence for the treating of disease, but had given us drugs and other

medicaments for treating disease. Her answer simply applied to artificial prevention of disease by attempting to immunize patients by means of serums and vaccinations. In reply to further questions, she said that in China small-pox was very common, but in the parts of China where there was no small-pox there was leprosy. How did we know that small-pox was not a substitution on the part of Nature for leprosy? Leprosy was common in England in the sixteenth and seventeenth centuries. She admitted that, while diminishing small-pox in England, we had happily, not increased leprosy, but we could not say that we had not dangerously interfered with the plan of Nature in some way that we did not understand. For example, we might have increased the tendency to cancer. Asked in regard to drugs, she said there was no danger in experimenting on man in small quantities and noting the symptoms. Any young student who was worth his salt would be glad to make little experiments of that kind, and it would give him an interest in his work.

Asked by Dr. Gaskell if she thought there was any difference between small doses and large, she said she did not object to his taking a large dose, but it would be safer for him to begin with a small dose and gradually to work up, and so find the physiological dose. Asked if she did not know that frogs were always pithed if they were not given anaesthetics, she said she thought that there was no sufficient evidence that the power of sensibility had been lifted in frogs to the brain, because frogs were capable of intelligence, and were evidently sensitive to pain after their brains had been removed. Asked if she meant that the spinal cord was sensitive to pain, she said she did not know about the spinal cord. She knew they performed acts of intelligence. A frog without its brain could swim and catch flies and perform other acts of intelligence. Asked if frogs could swim and catch flies when their medulla was spiked, she said perhaps not, but they might be able to feel. Asked in regard to her statement that no knowledge of the functions of the ductless gland had been gained by experimental physiology, she said she believed in the knowledge which we gained from pathological observation and clinical observation, and subjective observation. Asked as to the following passage in her evidence:

> In *Kirke's Physiology* are mentioned rhythmical contractions and dilatations of the spleen as obtained by the oncometer (an appliance for inclosing the organ of a living creature). But as Starling does not even allude to these, I take it that they have since been discredited,

she said she had looked carefully to find it in Starling. Dr. Gaskell quoted the following passage from Starling:

> If the spleen be enclosed in a plethysmograph, or splenic oncometer, and its volume be recorded by connecting this with the oncograph, it will be seen that it is subject to a series of large, slow variations, each contraction and expansion lasting about a minute and recurring with great regularity.

The witness said she was very sorry that she missed it. It was purely a mistake. She had not made many such mistakes she was sure. Asked about the suprarenal glands, whether since Schäfer's work in 1894 there had not been a large amount of work done, she said she did not know that it was very productive work. Asked if she had ever heard of Kohn's work, she said, Yes. Asked what she thought Kohn meant by the paraganglion, she said she did not know. Asked what was the difference between the medulla and the cortex of the suprarenals, she said it was a histological difference. She could have told them when she was a student, but she could not say that she had kept up to all the latest physiological details, largely because she did not consider them of very much consequence, as they were chiefly obtained from dogs and rabbits. Dr. Gaskell proceeded to ask the witness questions with regard to the suprarenal glands and the brain, which she said she had specially studied, and the witness said she was ignorant of the results of recent research on the subject. Asked if she knew that there was absolutely no doubt now with respect to the different parts of the cortex concerning the movements of different parts of the body, she said that wherever it had been proved it had been proved by clinical observation. The results of experiments on localization of the cortex in the Rolandic area were still disputed. Asked by whom, she said by Claude Bernard and Goltz. Asked if she knew that tumours had been diagnosed and cut out by surgeons in consequence of this knowledge with perfect accuracy, she said there was a brain expert coming who would tell them that that was not so—that the brain in various persons differed with regard to the bones of the skull and the position of the sutures. Dr. Gaskell went on to ask some questions in connexion with Mrs. Cook's evidence, because Mrs. Cook told them that she was ignorant of these matters, and that the witness was the person to whom all her evidence had been given beforehand. To this Miss Kenealy replied, Oh no, she had not read it before she gave it—at least, she read it an evening or two before, but she had nothing to do with its preparation. On its being put to her that Mrs. Cook had said she could not answer any expert questions, but was understood to say that Miss Kenealy would do that for her, the witness said, Oh no; she said to Mrs. Cook before she gave her evidence: "I should very much like to read your evidence," and she sent it to her a day or two days before, but with no idea of her making any alterations in it. To Sir William Church, who said Mrs. Cook certainly led him to think that Miss Kenealy had furnished her with the information, especially with reference to experiments, which she placed in her *précis*, the witness said, Not at all. The only thing she quoted her for was with regard to the open letter. In reply to Dr. Gaskell, who asked whether the witness agreed with Mrs. Cook's statement that in one case a ligature round the optic nerve was tied as tightly as possible, and the animal was kept alive, adding, "This must have been a peculiarly agonizing experiment," the witness said:

> Please do not ask me about it: I should prefer not. You must not ask me to express an opinion upon the witness's statement.

Asked whether in point of fact she believed the optic nerve did not carry pain fibres in it, she replied that it was generally supposed not to be sensitive; but Mrs. Cook was not dealing with the surface of the brain so much as with the operation to get at the surface of the brain. Dr. Gaskell reminded the witness that Mrs. Cook spoke again and again of the agonizing excitation caused by the stimulation of a cut into the sciatic nerve, and asked if in her opinion that was an agonizing excitation. Miss Kenealy replied that it was very difficult to say. She might say that it was only the central end that would convey pain. There might be synapses and arborizations with other nerves which might conduct pain. Asked if she knew of any evidence of any such communications, she said we had no evidence that there was not, had we? Dr. Gaskell replied, Absolutely. In reply to Dr. Wilson the witness said Mrs. Cook prepared her own *précis* without her assistance. So far as she knew no other member of the committee had anything to do with it. Asked what she thought would be the effect upon medicine if all experimentation upon animals were prohibited, she said she thought that it would give the finest possible impulse to medical science; that we were surrounded by all these problems of disease and degeneration and suffering in human kind, and that if we were to devote our attention to man, and to all the valuable human material surrounding us instead of wasting valuable time and talent upon dogs and guinea-pigs, we should make rapid and immense advance in the relief of human suffering.

Miss ARABELLA KENEALY writes to call attention to an error in the abstract of her evidence before the Royal Commission which was published in the BRITISH MEDICAL JOURNAL of June 8th (p. 1370, left-hand column, line 35), where she was made to say that "it would be her grateful task to show," etc. "Grateful" should be "ungrateful." The omission of the negative prefix was purely a copyist's error; but we regret that it should have occurred, especially as Miss Kenealy says that she is "far too deeply interested in medical science to feel any grateful sense in pointing out its limitations." The workers in the field of medical science will probably feel duly grateful that its limitations should be pointed out by Miss Kenealy.

THE Duchess of Bedford has been nominated by the Queen to the post of President of her Committee at the Queen Victoria Jubilee Institute for Nurses. This body now has under its control 1,450 fully trained nurses, who together with the Queen's probationers, village nurses, and midwives, bring the total number on the roll to 2,190. By way of raising additional funds the possible membership of Queen Alexandra's Committee has been increased to 200 ladies, each of whom is responsible for a collection of £10 a year.

LITERARY NOTES.

A monograph entitled *Surgical Instruments in Greek and Roman Times*, by Dr. J. S. Milne, will shortly be issued from the Oxford University Press. The author points out that many interesting operations described in detail by ancient authors are rendered obscure or unintelligible owing to lack of knowledge of the instruments employed. This department of archaeology has hitherto received scant attention. The volume is illustrated.

At a meeting of the French Académie des Inscriptions et Belles Lettres on May 25th, M. Edmond Pottier presented a short communication on a small vase on which are painted red figures. The vase, which is in the Peypel collection, is in fact a very beautiful product of Greek art of the fifth century. It represents the clinic of a Greek surgeon. The surgeon is shown among a number of wounded patients with surgical dressings. M. Pottier gave an account of the ancient works of art dealing with the same subject, which are very rare.

In his presidential address to the Glasgow Obstetrical and Gynaecological Society, which is published in the June number of the *Glasgow Medical Journal*, Dr. Lawrence Oliphant gave an interesting account of the state of medicine in Scotland before and at the time of the Union, the bicentenary of which is celebrated this year. He began by describing the general social atmosphere in which medicine was being emancipated from mediaeval superstition, and especially from the thraldom of religious bigotry. In their first charter of 1505 the Royal College of Surgeons of Edinburgh were bound "to uphald ane altar in the college Kirk of Sant Geill in the honour of God and Sanct Mongow our patrone"; while after the Reformation members were to "except idolatrie," and were sworn to "continue in the profession of Christ's blessed evangel as the same is publicly preached within the realm." In 1638 the Surgeons of Edinburgh signed the Covenant and "ordained their haill prenteisses and servands to subscryve the same as themselfis, and that there sall be in no tyme cumming any freeman admitit either chirurgeon or barbour, nor any bulke prentisses or servands, but sic as shall subscryve the Covenant." The bishops, too, under Charles I, obtained an enactment "that no man should be permitted to practise or profess any physic unless he had first satisfied the bishop of the diocese touching his religion." In fact, the idea of toleration in the matter of religious belief was absolutely foreign to the human mind in those days. From an earlier date there had been doctors in Scotland. Dunbar, addressing King James IV, says:

> Sir, ye have mony servitours,
> And officers of divers cures;
> Knychtis, courtmen, and craftsmen fine,
> Doctors in Jure and Medicine.

The king himself, like Henry the Eighth, dabbled in the mysteries of physic. He is described as "weill learned in the art of medicine," and is said to have been "ane singular and cleyr chirurgiane." The royal leech took no fees, but naturally paid his patients, as appears from an entry in the account books, "Item to ane fallow, because the king gaiff furth his twthy, xviiis." Was this by way of compensation? Dr. Oliphant has found no record of women who practised the art of healing in Scotland, as they did elsewhere, in the Middle Ages. The great sometimes employed doctors of repute from foreign countries. Queen Mary had a French physician. Before their time, in the regency of Arran, John Hamilton, Archbishop of St. Andrews and a man allied by blood to the royal house of Scotland, employed the services of a young Frenchman, Quentyne Tod, who was in 1547 and five years later, on the advice of Cassio, who had failed to cure him, the Archbishop brought from Italy the famous Jerome Cardan, who found the remedy for his asthma. James VI's physician was Scotch and the Thirty Years' War in Germany was a great school not only for soldiers but for surgeons, to which countrymen became prehicent. It was in this period of much enterprise that such men as Pennecuik and Sibbald were educated. John Monro, the father of the surgeons, had been surgeon to King William's army in Ireland, and settled in Edinburgh in 1706. For the bulk of the profession the only training then was through apprenticeship to a practitioner. The apprentices were lodged in their masters' houses. It was the custom in most Scottish corporations that the sons and sons-in-law of members were admissible by mere examination, without apprenticeship, and at a low rate of entry money. It seems that students who were anxious to enter the corporations through the gate of matrimony sometimes paid more attention to the master's daughter than to the study of their craft, and this sometimes led to undesirable results. So we may gather from the fact that at a meeting convened for the purpose in 1591, it was enacted that in future the sons-in-law of members should have no privileges above other entrants to the College of Surgeons, in right of their wives, in the case of the latter having been guilty of levity prior to marriage. In 1612 the surgeons' apprentices had become insufferably turbulent and unmanageable. Thus, under minute of May 7th, 1612, we find the following entry:

> Whilk day the Decone and brethrene under subscryvand beand convenit in the Decone's house, and respecting and considering the insolencie of thair servands and prenteisses, how thay ar sa gevin to licentiousness that thay will not be correctit, so that not only in evil speeches but als be way of deid that will misserve thair maisteris and wilfullie gainstand their will and correction, therefore it is statut and ordanit that nane of their prenteisses or servands, prnt. or to cum, sall use or weit ony dager, quhinzard, or knyff except ane knyff to cut thair meit, wanting the point, under the paine of tinsell of thair freedom and liberties of the said craft, and all utheris privleges and liberties they may enjoy throw thair maisters. And that nane of the said prenteisses or servand miscall nor invaid thair maisteris or mastresses in tyme cuming under the paine forsaid.

The medical professors or mediciners in the universities did not teach. As for the giving of degrees, it was almost entirely a personal affair. If the candidate were desirable and willing to pay the fees, the mediciner had the right to grant him a diploma; in some cases even the fee was dispensed with. It stands in the entry in the records of the University and King's College, Aberdeen, under the date of September 8th, 1701, that "George Cheyne" was made a doctor of medicine because, like Cassio, he was a great arithmetician, or as the entry states with some little exaggeration, "one of the ablest mathematicians in Europe." Cheyne, however, fully justified the action of the University, for he was one of the most distinguished physicians of the eighteenth century. He was a pupil of the famous Archibald Pitcairn, who had been Professor of Medicine at Leyden, where he had Boerhaave among his pupils. Dr. Oliphant quotes the following account of Pitcairn from Woodrow's *Analecta*, under date October, 1713:

> This month, at the close of it I think, Archibald Pitcairn dyed at Edinburgh. He was the most celebrated physitian in Scotland this age, and certainly a man of great skill, and now of long experience. I am told he still spent three or four hours every morning in reading and writing, and some people talk that every day he did read a portion of the Scripture, though it seems he made an ill use of it. He was a professed Deist, and by many alleged to be an atheist, though he has frequently professed a belief of a God, and said he could not deny a Providence. However, he was a great mocker of religion and ridiculer of it. He keeped noe publick society for worship, and on the Sabbath had his sett meetings ridiculing of the Scriptures and sermons. He was a good humanist, and very curious in his choice of books and library. He got a vast income, but spent it upon drinking, and was twice drunk every day. He was a sort of a poet. There goes a story of ane apparition he had frequently, which he owned. He dyed not very rich; and for some years he was much declined in his business and health. Some say he had remorse at his death, but other that he continued to mock at religion and all that is serious. He was a Jacobite violent, and was consulted anent the Pretender's health. He was a man of great learning, and was sometime professor at Leyden and, till of late, keeped a great correspondence with learned men abroad.

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The Third International Congress on the Care of the Insane is to be held at Vienna next year from October 7th to the 11th. The President of the Organizing Committee is Professor Obersteiner.

The secretaries of the National Committee of the Fourteenth International Congress of Hygiene and Demography, to be held at Berlin from September 23rd to 29th, request those who propose attending the Congress to send in their names to the Secretary (including the titles of their papers, if any, and who they will attend the Congress as delegates or ordinary members). Further information regarding the Congress can be obtained from Professor G. H. F. Nuttall, F.R.S., Honorary Secretary, 3 Cranmer Road, Cambridge.



Photograph by] Tor Abbey Sands, Torquay. *J. G. Dunham, Torquay.*

THE SEVENTY-FIFTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION,

EXETER

JULY 27TH TO AUGUST 2ND, 1907.



On the Border of the Moor.
Photograph by J. S. Amery, Esq., Ashburton.

EVERY member who accepts the invitation of the South-Western Branch to attend the meeting at Exeter may be sure of two things—the first is a hearty West Country welcome, and the second is the unique opportunity of seeing one of the most beautiful parts of England to the best advantage. In the first place, Exeter is easily reached from all parts of England; it is only just over three hours from London, either by the London and South-Western Railway or by the Great Western Railway. The railway companies generally will afford the usual facilities for reaching Exeter at reduced rates. The Executive Committee are doing all in their power to make the meeting a success, and it is hoped that, both in the work of the various Sections and in the excursions and entertainments arranged for members and their families, the meeting at Exeter will be at least equal to those which have preceded it.

The head quarters of the meeting will be at the Royal Albert Memorial, where the secretarial offices, post-office, ticket office, reading and smoking rooms, and some of the Sections will be accommodated, and here, also, on the evening of Friday, August 2nd, the civic authorities will hold a reception. This fine block of buildings is central in position, within two minutes' walk of the London and South-Western Railway station and the Victoria Hall, where the Annual Exhibition will be held. The remaining Sections will be grouped in buildings within easy reach. The Pathological Museum will also be centrally situated at the Barnfield Hall, in which there is ample accommodation for a very fine collection of specimens. The Representatives will meet in the Royal Public Rooms, situated in the High Street and close to the theatre, where the President's Address, the Addresses in Surgery and Medicine, and probably the Ladies' Entertainment will be given. At the Royal Public Rooms, also, will be held the Annual Dinner. The full programme of the meeting will, of course, be published later, but some of the arrangements may be mentioned.

On Tuesday, July 30th, a service will be held in the cathedral at 12 noon, and in the evening the President will deliver his address in the theatre. It is hoped that robes or uniforms will be worn by all those who attend either. In the afternoon the Mayor of Exeter will give a garden party on Northernhay, a pleasant, shady park above which tower the old city walls and the castle. On Wednesday afternoon, July 31st, a garden party (limited to 200) will be given by Dr. Deas, President of the South-Western Branch, at Wonford House, and on Thursday afternoon, August 1st, another will be given by the Bishop of Exeter in the Palace Grounds. Other garden parties have been arranged. Arrangements will be made to conduct parties over the cathedral and to other places of interest in the city. The Exeter, Budleigh Salterton, and Warren Golf Clubs will admit members of the Association on payment of the usual charges to visitors. The Victoria Park Lawn Tennis Club will hold a tournament during the week of the meeting, and will be glad to receive entries from members or their families. On August 1st there will be a cricket match on the county ground at Exeter. It may be mentioned that there is plenty of good accommodation for visitors both in Exeter and in the neighbouring seaside towns of Exmouth and Dawlish: details and tariffs will be published later.

In the BRITISH MEDICAL JOURNAL of December 8th last appeared an account of Exeter, its history, cathedral, and principal buildings. A list of drives from Exeter will be found below. It is rather with the places of interest in the counties of Devon and Cornwall, most of which are within easy reach of Exeter, that the present article will deal. Numerous invitations from towns in both counties have been received, details of which will appear in a later issue.

The Sights of Devon.

It is said that visitors who are "doing" England in a hurry see two things in the West: the Cathedral at Exeter and Clovelly. Beautiful as these two are, there are many other places which will repay a visit, both on account of the beauty of their surroundings and also for their interesting historical or antiquarian associations. From Exeter lines radiate in every direction, and most of the better known places in either county are easily reached by a short railway journey. The roads are good, though hilly, so that members who bring motor cars with them will have no difficulty in getting to the various places of interest in the district. Devonshire is essentially a county of rivers, and it is to their winding courses and richly-wooded banks that much of its charm is due. On the south coast the river mouths are often land-locked—as at Dartmouth, Salcombe, Falmouth—thus giving additional shelter to the towns situated there. The cliffs here are of red sandstone till they change to the white chalk of Dorset further to the east. On the north coast the cliffs are more rugged and rocky, and the vivid colours of the sea are a noteworthy feature. The following short account of towns in the two counties is necessarily brief and incomplete, but it is hoped that it may give intending visitors some idea of what there is to see, and help them to choose amongst the many places which they might wish to visit, were greater time at their disposal.

Drives from Exeter.

1. *Pennsylvania and the Dunyard Estate*, about four miles. A good view of the valley of the Exe, the city of Exeter, and the river as far as the estuary at Exmouth.

2. *Haldon and the Belvedere Tower*, a round of about thirteen miles, with fine views of Dartmoor, Exmoor, and the estuary of the Exe.

3. *Topsham and Woodbury Common* to Exmouth, about ten miles.

4. *Killerton*, where Sir Thomas and Lady Acland will give a garden party on Thursday, August 1st, is situated in a beautifully wooded park, and is about five and a half miles by road from Exeter.

5. *Chudleigh*, ten miles from Exeter on the Plymouth road, is famous for its Rock, a lofty limestone crag covered with trees and creepers. Beneath it are several caves, the longest about 130 ft. in length. Ugbrooke, the seat of Lord Clifford, stands in a beautiful park, of which "Dryden's Grove," a favourite walk of the poet, is a conspicuous feature.

Boating may be had on the canal from Exeter to Turf (five miles).

Places of Interest in Devonshire.

Exmouth is ten miles by rail from Exeter, and there is a good service of trains. This growing seaside town has a capital beach and a fine sea walk. Golf, tennis, cricket, and good bathing may be had; there are pleasant cliff walks. In the Manor Gardens evening concerts are frequently given in the summer. Steamers leave Exmouth for Starcross (ferry), Budleigh Salterton, Seaton, Sidmouth, Lyme Regis, Torquay, and Dartmouth.

Budleigh Salterton, five miles from Exmouth, is on a branch line which connects Exmouth with Sidmouth and the main line (L. and S.W.R.) at Sidmouth Junction. There is a pebble beach and good tennis and golf clubs. Close by is Hayes Barton, the birthplace of Sir Walter Raleigh.



Photograph. Sidmouth from Peak Hill [G. T. Harris, Sidmouth.

The town lies to the west of the mouth of the Otter, and from the cliffs which bound it on either side there are good views of the coast towards Lyme Regis in one direction and Torquay in the other.

Sidmouth lies a little further along the coast, and is about an hour by rail from Exeter. This popular watering place is peculiarly sheltered from the wind, and its sunny charms make it yearly an increasing favourite with those who visit it. There are several first-class hotels here, and it is particularly well equipped in the matter of baths. Every form of amusement is to be obtained, and its association with the late Queen, who lived at the Glen as a child, makes it additionally interesting. The beach is noted for its variegated pebbles. Steamers call here daily from Exmouth.

Seaton, a little further along the coast, is reached by rail (L. and S.W.R.) from Exeter. It is a pretty seaside town, sheltered and sunny—perhaps the most bracing place on the Devon south coast—and, like its neighbours Sidmouth and Budleigh Salterton, has pleasant cliff walks. Tennis, cricket, boating, and bathing form its principal attractions. There are also excellent golf links.

Lyme Regis, though in Dorset, is contained within the



Photograph by] Exmouth from the Plantation. *[R. G. Murdoch, Exmouth.*

boundaries of the South-Western Branch. It is about thirty miles by rail from Exeter, and lies in a steep and narrow valley at the head of a large bay. There is a fine marine parade with shaded seats, and above it rise bright-coloured cliffs. Between Lyme Regis and Seaton is the famous Dowlands Landslip. This remarkable landslip occurred in 1839, forming an undercliff, and carrying with it a strip of coast nearly a mile long. The cottages and orchards on the surface were very little injured. The scenery of the landslip is wild and rugged.

Ottery St. Mary lies inland from Sidmouth, and is reached in about three-quarters of an hour by rail from Exeter. This town was the birthplace of Samuel Taylor Coleridge, and is the "Clavering" of Thackeray's *Pendennis*. Ottery contains one of the finest parish churches in England. In form it resembles Exeter Cathedral, and the two transeptal towers date from about 1260. There is some good fan-tracery, and the carving and stained glass is also very fine. Altogether, the church is well worth a visit.

Bideford is in the centre of the Kingsley country, and will be familiar to all readers of *Westward Ho*. Of Bideford Kingsley says: "Above the town the hills close in, cushioned with deep oak woods, through which juts here and there a crag of fern-fringed slate; below they lower, and open more and more in softly-rounded knolls and fertile squares of red and green, till they sink into the wide expanse of hazy flats, rich salt marshes, and rolling sand-hills, where Torridge joins her sister Taw, and both together flow quietly towards the broad surges of the bar and the everlasting thunder of the long Atlantic swell." The pride of Bideford is its ancient bridge of twenty-four arches. Bideford is about two hours by rail from Exeter. Not far from Bideford is *Westward Ho*, famous for its Pebble Ridge and golf links. Westward Ho College, which has lately been removed, was the school of Kipling, and is described in his book, *Stalky and Co.*

Ilfracombe is the most popular of North Devon watering places, and deservedly so. It is reached in about two hours and a quarter by rail from Exeter (L. and S.W.R.). Steamers run between Ilfracombe, Bristol, Cardiff, Newport, and Swansea. The town is magnificently situated on a rocky coast. It is bracing but equable in climate. The grandeur of the coast scenery and its winding cliff walks are the features of the place. Within easy reach of Ilfracombe is the pretty little hamlet of Lee, and Woolacombe, with its sandy beach, a perfect paradise for children. There is excellent bathing at both these places.

Lynton and *Lynmouth*, though difficult to reach, well repay a visit. The beauty of the East Lyn valley and wild coast scenery, beloved by Southey and Shelley, and well described by Blackmore, fully justify the praise bestowed upon them. This is seen at its best in the Valley of Rocks about a mile from Lynton. A cliff railway connects Lynton with the mouth of the Lyn 500 feet below. A light railway connects Lynton with Barnstaple.

Barnstaple, about one and a quarter hours by rail from Exeter, is the largest town in North Devon. It was the settling place of numerous Huguenot refugees in the sixteenth century, and traces of this French invasion may be seen in the names of some of the streets. There is a fine thirteenth century bridge, 700 feet in length, some pleasant gardens and promenades by the river—notably Queen Anne's Walk—and a picturesque old Grammar School, originally the chapel of the Huguenots.



Photograph by] The River Dart from below Holne. *W. R. Gray, South Brent.*

Clovelly, eleven miles from Bideford by road, defies description. It is a little village consisting of one steep street leading down to a tiny quay. The charm of its setting in the cliffs can only be appreciated by those who have seen it. There is only one Clovelly in the world.

Along the south coast of Devon runs the Great Western Railway from Exeter to Plymouth, and on it are situated the numerous seaside towns which have made this coast so famous as a health resort.

Dawlish, half an hour by rail from Exeter, has a good beach, excellent bathing, and pleasant gardens, through which a little stream runs down to the sea. Close by is the Warren, a sandy peninsula running out into the estuary of the Exe, with good golf links. Tennis and cricket flourish here in the summer.

Teignmouth is the next station to Dawlish, and is a larger and more pretentious seaside place. What was once a sandy dune is now the Den—a fine promenade with gardens and a pier. Tennis, cricket, and boating abound here, and there are pleasant excursions to Labrador

and Coombe Cellars, famous for its cockles. The town is sheltered and sunny, and the sea fishing is particularly good. Keats lived here for a time, and it was in view of Teignmouth's

Untumultuous fringe of silver foam
Along the flat brown sand

that *Endymion* was finished; the house in which the poet lived is in the Strand. Across the Teign is a wooden bridge, built in 1827, and one of the longest of its kind in England.

Torquay is about an hour by rail from Exeter. It has been well named the Queen of English watering places. Torbay, over which it looks, is four miles broad, and is sheltered on all sides except the south. It is a magnificent place for boating, and is a favourite anchorage for yachts, besides being often visited by the fleet. The hills which encircle Torquay shelter it from every wind, and its rocky walks are particularly suited to invalids. The town is a modern one with plenty of excellent accommodation and amusements of every kind. The most interesting things to be seen in Torquay are Torre Abbey, an ancient Norbertine abbey, now the home of the Carys, and Kent's Cavern in which were discovered in 1858 a wonderful collection of flints and the bones of many extinct animals. The remains found here point to human habitation at a very remote date. Babbacombe and Anstey's Cove are two charming little bays which have formed the subject of numerous pictures.



Photograph by] Clovelly from the Hobby Drive. [Twiss, Ilfracombe.

Paignton, also situated on Torbay, has a fine beach and is a growing seaside town with golf links close by. There is some exquisite carving in the church.

Dartmouth can be reached by rail from Exeter (one and a half to two hours) or by steamer from Exmouth. The town lies at the beautiful landlocked mouth of the Dart. From Dartmouth may be taken one of the most delightful excursions in the district, steamers go up the river from Dartmouth to Totnes, and the trip up this most beautiful of Devonshire rivers with its richly wooded banks and winding course is one that can never be forgotten. Dartmouth itself is a quaint old town with narrow streets and overhanging wooden houses.

Salcombe is just such another land-locked harbour rather further south. It was Salcombe Bar which suggested to Tennyson the poem "Crossing the Bar."

The Three Towns, which includes Plymouth, Devonport, and Stonehouse, is reached by Great Western Railway or London and South-Western Railway in about an hour and a half from Exeter. It has a population of nearly 200,000, and is the second largest arsenal in the kingdom. The principal sights of Plymouth are the Hoe, with its memorials of Drake and the Armada; the Keyham steamyard, the largest in the world; the docks, which have cost about 10 millions; the Marine Biological Museum and the Guildhall, which has some fine stained glass windows. A favourite excursion from Plymouth is to Mount Edgcumbe, whose beautiful gardens and wooded slopes are well known. Steamers ply to the Breakwater, and up the Hamoaze and Tamar river. There are always some modern battleships to be seen at Plymouth besides numerous obsolete ones. At Saltram is a wonderful collection of pictures, including fourteen portraits by Reynolds, who was born at Plympton, the mother town of Plymouth. The following excursion has been arranged for Saturday, August 3rd, by the members of the Branch in the three towns. The Mayor will entertain 125 guests to luncheon. During the morning the Principal Medical Officer will arrange for visits to be paid to the Station Hospital, Devonport, and the Military Families' Hospital. The Inspector-General, R.N., will be pleased to see members at the Royal Naval Hospital, Plymouth. At 3 p.m. a steamer will leave West Hoe Pier for a trip round Plymouth Sound, the Hamoaze and River Tamar. At 4.30 tea will be kindly provided at Mount Edgcumbe by the Earl of Mount Edgcumbe. To this, and also to the steamer trip, ladies are invited. The steamer will return to West Hoe Pier about 6 p.m. In addition, for those who prefer it, the Inspector-General, R.N., has arranged with the Commander-in-Chief for visits to H.M.S. *Cambridge* (gunnery ship), H.M.S. *Defiance* (torpedo ship), and H.M.S. *Indus* (training ship for artificers, etc.).



The Land's End [illegible]

Eddystone Lighthouse is fourteen miles from Plymouth; steamers frequently make the trip.

Newton Abbot, about three-quarters of an hour by rail

(G.W.R.) from Exeter, is a good centre for exploring Dartmoor. Bovey Tracey is on a branch line, and is reached in about twenty minutes from Newton. William the Third read his first proclamation in Newton after landing at Brixham in Torbay; the stone from which the proclamation was read stands in the centre of the town. Close to Newton is Forde House, which twice gave shelter to Charles I, and later was the stopping place of William of Orange. Bradley Manor House and Ogwell Mill are both worth a visit, and are close to Newton. There are golf links at Stover three miles away.

Totnes, one hour and a quarter by rail (G.W.R.) from Exeter, is a quaint old town in which two of the gates still remain. The old piazza-form of street building still exists in Totnes, and the town is only surpassed by Chester in this respect. Three miles away is Berry Pomeroy Castle, the most perfect ruin in the county; it dates from the thirteenth century. Totnes is situated on the Dart, and steamers ply between Dartmouth and Totnes daily.

A visit to Devonshire would be incomplete without seeing something of Dartmoor. This "great upheaval of granite" lies about 1,400 ft. above sea level, and is the source of most of the Devonshire rivers; it is about 125 square miles in area. The tors, some 170 in number, form the principal natural feature of the district, and are sometimes fine, sometimes grotesque, but always rugged and weatherbeaten. High Willhays and Yes Tor, both over 2,000 ft., are the highest points in the South-West. Though much of the Moor is bare and desolate, there are many parts of it—especially on its borders—which have a peculiar beauty and grandeur of their own. Gorse and heather combine to clothe its slopes with masses of colour. Herons, kingfishers and every kind of bird abound here. There is probably no other district in England so rich in remains of antiquarian interest as Dartmoor. These mostly date from the late neolithic age. Hut circles, the remains of low stone huts roofed in by reeds and heather and occupied by shepherds probably some few centuries before the Christian era, abound everywhere, but at Grimspound near Widecombe-in-the-Moor is a walled enclosure containing several huts which have been partly restored. *Kistvaens* the stone chests in which these early Silurians were buried, are also frequently to be seen. There are also several fairly complete stone avenues, numerous menhirs or Longstones, and some excellent examples of the rude stone "clapper" bridges. The principal collections of antiquities are at Merivale, between Princetown and Tavistock, at Gidleigh and Fernworthy near Chagford, and at Grimspound and in the district round Widecombe. The moor is best approached from *Chagford*, which is reached by motor omnibus from Exeter; from *Tavistock* (one hour and a quarter by rail from Exeter), or from *Buckfastleigh* and *Bovey Tracey*. *Okehampton*, which lies on the northern extremity of Dartmoor, is also an excellent centre from which to explore the Moor, but unfortunately the establishment of a large artillery camp and the consequent daily practice has very much restricted the limits of expeditions to the Moor from this place. Near Tavistock is *Endsleigh*, the beautiful gardens belonging to the Duke of Devonshire. *Princetown* is eight miles by road from Tavistock, and is the highest place of any size in the kingdom, being 1,370 feet above the sea. The Convict Prison, originally built for prisoners of war in 1809, contains some 900 convicts. A limited number of visitors will be enabled to go over the prison.

Buckfastleigh (one mile and a half by rail from Exeter) is situated on one of the most beautiful reaches of the Dart. The Abbey was founded about A.D. 760, and, after various vicissitudes, passed into the hands of Benedictine monks, who are at present restoring it on the old lines. Near Buckfastleigh is Holne, the birthplace of Charles Kingsley and Dean Prior, where Herrick lived and wrote the greater part of his delightful *Hesperides*. This little town forms a centre for some of the most delightful excursions in the county.

Bovey Tracey (one hour and a quarter by rail from Exeter) is the starting point for numerous drives across Dartmoor, to Hey Tor (1,491 ft.), Widecombe, Dartmeet, etc.

SOME PLACES OF INTEREST IN CORNWALL.

Newquay, reached in about three hours from Exeter (G.W.R.). From a simple fishing village Newquay has grown into the most popular of Cornish watering places. Invigorating breezes from the Atlantic make it wonderfully healthy, and the huge Atlantic rollers breaking on the shore are a magnificent sight. There is an excellent beach and fine headlands. The hotels here are about the best in Cornwall, and there are good golf links. On the Headland is the "Huer's House," from which the "huer" used to watch for shoals of pilchards. Special week-end terms (21s.) are being offered by the hotels to a limited number of visitors after the meeting.

Falmouth (about four hours by rail from Exeter) has one of the most beautiful harbours on the south coast. It was for many years (1688 to 1850) the station for the departure of mail packets. The river is guarded on either side by Pendennis Castle and St. Mawes. The road to Pendennis Point is one of the most beautiful in the kingdom. The climate of Falmouth is particularly sunny. The harbour is a favourite anchorage with yachtsmen, and pleasant steamer trips are run during the summer to Truro. The church, built in 1663, is dedicated to King Charles the Martyr. Besides Pendennis Castle and St. Mawes the Polytechnic Hall, Art Gallery, Observatory, and Kimberley Park are all worth seeing.

Fowey can be reached in about three and a half hours from Exeter. This is another charming little seaport situated at the mouth of the Fowey River. A large trade in china clay is done here, and the harbour is a fine one. It is supposed to have been Tennyson's "haven under a hill," and is the "Troy Town" of Quiller Couch. There is excellent sea fishing to be had here, and many pleasant boating excursions may be made to Looe, Mevagissey, etc. Steamers frequently run to Fowey from Plymouth.

Penzance is the second largest town in Cornwall, and is reached in about four and a half hours from Exeter. Every sort of amusement is to be had here in plenty. There are some admirable natural history, geological, and antiquarian museums, and a very fine library at Morrab House. The Morrab Gardens contain a remarkable number of exotic plants. There are some quaint buildings in the older part of the town.

Newlyn, one mile west of Penzance, is noted for its artists and fish. Of the former Stanhope Forbes and Frank Bramley may be mentioned specially amongst those who have painted Newlyn and its fishing folk.

The Land's End is only about ten and a half miles from Penzance by road. This weatherbeaten mass of columnar granite with its natural arch, in which "seas meet and clash," is well worth seeing, and leaves a lasting impression of its wild, forlorn scenery.

The Scilly Isles may be reached by steamer from Penzance. Five of the islands are inhabited, and the whole population is occupied in the gathering and packing of flowers, of which as much as 38 tons are sometimes conveyed to Penzance daily to be forwarded to Covent Garden. This "flower garden of England" well repays the visitor for his long journey.

A PAPER on plague prevention in Nagpur city and district published recently by Major Buchanan, I.M.S., contains the results of an experiment made during four months to stamp out plague by the extermination of rats. The results were distinctly satisfactory, and no one after the recent Indian work on the flea as the transmitting agent will be found to object to this method. Major Buchanan believes that most of the methods of prevention hitherto followed have failed because they were based on the supposition that bubonic plague is an infectious disease, and he quotes Dr. Ashburton Thompson of Sydney as saying that "plague owes nothing of its epidemic form to communication with the sick." On the whole perhaps this statement is a little too sweeping if we class all varieties of plague together, because the pneumonic form is highly infectious, and may, of course, be the starting point of an epidemic, as in the Vienna outbreak, in the Japanese epidemic when many doctors treating pneumonic cases got the disease themselves and died of it, and in the outbreak in South Africa. With this reservation, however, the doctrine that rat destruction is the surest and most efficacious method for limiting the spread of the disease in man may be accepted, and Major Buchanan's paper shows how a little ordinary common sense will soon overcome the obstacles in its way as regards India.

THE late Mr. John Weston Taylor, of Sheffield, who died on March 13th, left £100 each to the Sheffield General Infirmary, the Sheffield Royal Hospital, and the Jessop Hospital for Women, Sheffield.



The Entrance Hall, St. Andrew's Baths.

NOTES ON HEALTH RESORTS.

Droitwich.

In the Journal of June 8th brief reference was made to the additions recently made to the bathing resources of Droitwich, a place which has a long corporate existence behind it. Under the title of Salinae, it was a well known place in the time of the Roman occupation, and it returned two members to Parliament as far back as the reign of Edward I; but its medical history is comparatively brief. The therapeutic possibilities of the waters were, so far as is known, not suspected until the third decade of last century, and even then but for the prescience of a man to whom the British Medical Association likewise owes its existence, Sir Charles Hastings, matters might have remained as they were. The circumstances, however, upon which the suspicion of therapeutic value was founded were brought to his notice, with the result that a year or two later steps were taken to facilitate the employment of the waters in cases of disease. To the bathing arrangements then brought into existence sundry additions were afterwards made at various epochs, but it is only of late years that even Droitwich itself has fully awakened to the value of its geological conditions, apart from the facilities they offer for the manufacture of salt; and it is still more recently that any active steps have been taken to attract visitors to the place, or to bring home to medical men in general the assistance which the place may give them in the treatment of certain classes of disease.

The town lies about seven miles from Worcester, on the ground which fills in a deep dip in a strata of permian rock running between Lickey and Malvern Hills. The surface consists of about 20 ft. of peaty soil, under which is a layer of gravel; then come about 30 or 40 ft. of red marl; then 140 of gypsum, marl, and rocksalt combined, and finally a thin layer (18 in.) of dense gypsum, covering in an unknown quantity of rocksalt. This lower strata, some 200 ft. below the surface of the ground, appears to have in its interstices an unlimited supply of water which, as brought to the surface, is impregnated with sodium chloride, magnesium chloride, and the sulphates of calcium, aluminium, and sodium. The specific gravity is 1195, and the proportion of sodium chloride so high that the water for all practical purposes may be regarded as a saturated solution some ten or twelve times stronger than the sea. This is the principal therapeutic asset of the place, but possibly some value may be ascribed to the vapours which arise from the salt distilleries in the town, and which, though they do not attract the attention of visitors, the townspeople regard as greatly adding to the healthfulness of the air. The neighbourhood is of the same well-wooded, pleasantly undulating character as the rest of Worcestershire, but in the town itself there is nothing specially attractive. As for the baths, to those accustomed to the palatial structures with which some balneological resorts have provided themselves, the bathing establishments at Droitwich may not be impressive, but on examination they will be found, though unimposing, well thought out and thoroughly comfortable. There are two bath houses, the Royal and St. Andrew's, the former and older being in the centre of the town; and the latter quite modern and recently greatly improved, in an open part close to the large hotels. This is the bath chiefly used by visitors, and its entrance hall is shown in the engraving. One side is for male and the other for female patients, either sex being provided with a good waiting hall, a series of well arranged bath and dressing rooms, and an excellent swimming bath. In addition there are arrangements for needle and vapour baths and spinal douches. The ordinary baths are of brown teak, as nothing else fails to become unsightly after a short time, owing to the action of the strong brine. The usual practice is to raise the water by steam to a temperature of between 98° F. and 101° F., and for the patients to remain immersed for about half an hour. Commonly pure brine is used, but this depends upon the advice of the medical man in charge of the case. After hot immersion treatment the patient either merely rests in the dressing room, is given a needle bath, or takes a short turn in the swimming bath, which is kept tepid. There are also arrangements for using the brine as vapour, and for massage and remedial exercises, but the commoner practice is for these operations to be conducted in the private rooms of the patients at the hotels, which are so close as practically to form part of the bathing establishment. The brine is so buoyant that, in order to keep the patients immersed, there are wooden bars across the baths, and the same circumstance applies to the swimming baths, which provides a curious experience. The bather for the first time in his life finds himself in a medium which is heavier than himself. He can lie on the water, sit in the water, stand in the water; but to get below its surface is a matter of some difficulty. Nor is it advisable so far as the face and head are concerned, but with the body it is different; the strong brine flushes the whole skin with blood, and promotes rapid and effective metabolism. A final point in which the Droitwich baths excel is the laundry, a matter in which slackness is often shown elsewhere. At Droitwich every towel and sheet after use is not only washed, but practically, though not intentionally, sterilized.

As a place for bath treatment, Droitwich stands practically by itself in these islands. Indeed, with the exception of Rheinfelden in Switzerland, there is no other muriated spring in Europe which can quite be compared with it, for its waters are naturally of the strength which is often aimed at by the authorities of other muriated springs, such as Kreuznach, by the addition of salts or *mutterlauge*. Hitherto Droitwich has been modest both in its claims and aspirations, and has contented itself mainly with the treatment of chronic, especially muscular, rheumatism, and of sciatica. That the baths are extremely efficacious in a very large proportion

of sufferers from these complaints is incontestable; and it is presumable that by dilution the use of the water might be greatly extended, for other health resorts with far weaker waters of the same character claim that they treat successfully a great number of other conditions. Garrod, an impartial authority, in his article in the report of the Medico-Chirurgical Society on the watering places of Great Britain, speaks of the place with strong approval in connexion with complaints of a rheumatic nature, and Weber mentions their use as a tonic after acute illness. That the tepid swimming baths, with their invigorating action on the skin, would be especially useful in this latter respect seems highly probable. It may be assumed, too, that the claim made by Robin of Paris for the waters of Rheinfelden—that they are valuable in chlorosis accompanied by incomplete oxidation—would apply equally to Droitwich, for the two waters differ but slightly, if at all, in brine strength or other important contents. In point of accommodation visitors are well off, there being several excellent hotels which specially cater for the infirm, having bedrooms on the ground floor communicating directly with the principal bathing house. There are also plenty of good apartment houses. Access to the town is likewise easy, as its station, lying on the Great Western main line from Paddington to Wolverhampton, is also served by the Bristol and Birmingham branch of the Midland Railway. Finally, it should be mentioned that comparative lack of means is not an absolute bar to obtaining treatment at Droitwich. For many years past there has been in existence a charitable and well kept institution known as St. John's Hospital, which receives persons from all parts of the kingdom who are unable to pay for themselves, boards and lodges them free, and superintends their progress while undergoing treatment at the older establishment—the Royal Baths.

TEACHING OF HYGIENE AND TEMPERANCE IN PUBLIC ELEMENTARY SCHOOLS.

AN influential deputation waited upon the Right Hon. Reginald McKenna, M.P., President of the Board of Education, on June 6th, to urge the desirability of the introduction into the curriculum of the Education Code of the teaching of hygiene and temperance and the medical inspection of children in public elementary schools.

Lord STRATHCONA, in introducing the deputation, said that in April last he had been asked by distinguished members of the medical profession to preside at a conference then held on the subject. It was now thirty-seven years ago since he had introduced what was known as the Prohibition Act in the territory of the North-West of America. That Act had a very good effect, and he was glad to say that Canada might be looked upon as one of the most temperate nations of the world at the present moment. In the other Colonies great attention had also been given to the matter, and he was sure that the local authorities in the Mother Country would be glad to find that some measures were being taken by the Education Department and the Government which would give such education in the schools and to the children as would enable them to think seriously of the evil of intemperance.

Sir THOMAS BARLOW said that three deputations had been received by the Education Department within a comparatively short time in respect to the subject of the teaching of hygiene and temperance in elementary schools. A large deputation had been received by Lord Londonderry in the most courteous manner, but no reply could be given to the prayer of that deputation because it was decided that the department should wait until after the report of the Departmental Committee on Physical Deterioration had been submitted. That report was issued very shortly afterwards, and he believed that it supported up to the very hilt all the contentions put forward. The second deputation was recently received by Mr. Birrell, who advised them to be practical, and he ventured to submit that they had been very practical. They had received a memorandum from the Education Department which specifically requested that hints should be given as to the practical working of the teaching of hygiene and temperance. This was most carefully considered by a London Committee of members of the medical profession, and by a special Board composed of both medical men and educationalists, and he submitted that the reply they sent in to the Board of Education contained suggestions in the highest degree practical. Since the time the deputation had been received by Mr. Birrell the subject had ripened. There had been an important conference held at the time of the visit of the Colonial Premiers, in which experts from various parts of the world, more especially from the Colonies, gave most valuable information, and the Conference had supported the contention which the deputation had submitted. The petition had been based on reports of several Committees who had considered the question from the point of view of the training of teachers to give instruction. They now wished to submit that the subject was ripe for some definite action, and they urged upon the Board of Education:

(*a*) That instruction in hygiene and temperance should be specifically introduced into the curriculum of the code, which, for that purpose, should be recast;
(*b*) That facilities for special training in these subjects should be provided for all teachers;
(*c*) That these subjects should be reported upon by H.M. Inspectors of Schools.

Mr. PEARCE GOULD said he wished to draw attention to the fact that to the deputation which waited upon Lord Londonderry a negative was not given to the request; they were asked to wait until the Physical Deterioration Committee had reported; last year when they waited upon Mr. Birrell again, there was no direct negative given; they were asked to wait a little longer. It was inconceivable that any education authority would give a direct negative to the request of the deputation. What they had rather to fight against was the tendency to postpone the matter, and they were there to urge the Board very earnestly at once to name a day for the introduction of this important teaching. Whenever the matter was introduced into the code, they all admitted that there might be a little difficulty in at once finding teachers everywhere over the country suitable to administer it; and he ventured to submit that, pressing as the whole matter of teaching was, the teaching of teachers was more pressing, and if the Board did not see its way to introduce the teaching in schools into the code at once, they trusted it would see its way to introduce the matter into the training colleges for the instruction of teachers, and that such instruction should be of a practical nature in properly equipped laboratories by really scientific instructors. Those who were ultimately to give this teaching must themselves be scientifically taught. Something was said last year about there being facilities in training colleges for giving such instruction. It was not for them to say one word against training colleges; they no doubt did the work which was hitherto expected from them, but this was a new departure, and they knew from experience that the colleges were not now equipped with proper laboratories for the work.

After some remarks by Professor SIMS WOODHEAD,

Sir VICTOR HORSLEY said he was there to represent the British Medical Association, and he was extremely sorry that Dr. Macdonald, the Chairman of Representatives, who was really the head of the Association, had been called back to the country. The Association did not profess to be a body of educational experts, but it shared the general feeling in the country that the state of children as they left the schools in the way of education was not what it might be. He wanted to know on behalf of the Association what was the present position of affairs in the House of Commons. It was characteristic of a general political statement on national health that the Prime Minister, in referring to the Education Bill, left out all reference to Mr. McKenna's Administrative Provisions Bill, and he would like to know if that Bill was still before the House. They all felt that the Bill was a most important measure, and they considered the religious difficulty trifling as compared with the health of the nation. The Association transmitted to the Board of Education last year a request that it should establish in the Education Department a medical bureau, believing that if the Board had a medical officer holding a position somewhat less, but still analogous to that of the medical officer to the Local Government Board, he would assist the subject of correlating the work done by the local authorities. The duties

of such an officer would be (1) to collate and report upon facts obtained by an anthropometric survey of school children; (2) to collate and consider reports received from local authorities; (3) to collate and consider facts regarding hygiene obtained at home and from abroad; (4) to advise the Board of Education on medical subjects. The medical profession felt that for the purposes of economy one mechanism would carry out the whole of these official duties and consequently the nation would gain if these were correlated in the manner suggested. The British Medical Association believed that the medical officer of health would be the middle person to report to the Education Department, and to report upon reports which he again received from the officers actually inspecting the schools and examining the children. In several large cities educational medical officers had been appointed, and the work was going on extremely well and in perfect harmony with the health authorities, but medical officers of health were anxious that the department should secure co-ordination of the health authorities with the officers actually examining the schools. It was hardly necessary to argue such a point in full detail.

Mr. MCKENNA: I should have thought not.

Sir VICTOR HORSLEY, continuing, said that at the same time they had never had a direct answer from the department, and he was sent there to ask whether Mr. McKenna would establish the medical bureau, and whether he would endeavour to secure the co-ordination or not. The British Medical Association wanted to know whether the Board would provide for the proper teaching of hygiene and temperance by altering the code, and by reorganizing the science teaching in the elementary schools. It also wanted to know whether the Board would provide that every teacher should be taught science not by a slight degree of hygiene teaching as at present established, but a full teaching of science on an adequate scale. The Association also desired to know whether the Board would provide that the inspectors were fully qualified to appreciate the value of the teaching of science, while also giving the teachers credit for the teaching that they were giving successfully in hygiene and temperance.

After some remarks from Sir LAUDER BRUNTON,

Mr. MCKENNA said he could assure them that he was fully in agreement in the desire to carry out the objects of the deputation. But he had got to find the means of carrying them out, and there he found himself confronted with a very difficult problem. Had the Board the means of carrying out the three objects at the present moment? Mr. Gould had laid his finger upon two weak spots: the chief one was the difficulty of getting teachers to teach the teachers, and the second was to get teachers to teach the children. The second difficulty would disappear years hence, when the teachers had been taught; but to give effect to the views of the deputation they must have teachers to teach the children in the 21,000 schools. A second trouble was to know precisely what it was that the children were to be taught. Nature study, science teaching, hygiene and temperance were very easy words to use, but when they came to draw up their practical syllabus they would find that so far as temperance was concerned the syllabus offered very serious difficulties. The Board had the problems of the teaching of hygiene and temperance before them, and meant to the best of their abilities to solve them. Those who had spoken to him privately he had asked to have a little patience, and he had fixed two months hence as the limit of their patience. In the early part of August a great international conference upon the very subject was to be held in London. He had urged that it was not very much to ask that he should be allowed time to have the advantage of hearing what was said at the conference, on the subject before giving his reply. Sir Victor Horsley had put questions to him in a very peremptory manner, and he was aware from what had been brought to his notice in the public press that Sir Victor Horsley had such very strong views as to his opinions upon the subject that he understood he proposed to contest his seat in North Monmouthshire. On these grounds he was more confidentially informed as to his views than he should venture to declare himself. Sir Victor Horsley now asked him to declare that no further delay would occur in the establishing of a medical bureau at the Board of Education, a bureau which would have to carry out certain distinct functions.

Sir VICTOR HORSLEY said he must with all respect protest against being addressed personally; he had explained that he was merely the mouthpiece of the British Medical Association.

Mr. MCKENNA said he apologized if he had said anything of a personal nature; Sir Victor Horsley only addressed him as President of the Board of Education.

Mr. MCKENNA, continuing, said that the Bill for the medical inspection of schools had not yet been passed through the House of Commons. It was going to be pressed, and if the Government got the support of the House of Commons the Bill would become law; but until the Bill was passed, and until he knew what form it was going to take in the House of Commons and in what way it might be amended in Committee, it would be impossible and improper for him to declare in advance what the stated policy of the Board was as to the carrying out of the proposals of the Bill. He could say generally that the policy of the Board would be to have expert medical advice upon the various topics, but he could not lay down any definite lines for the establishment of a medical bureau, which could only be of use at all if the Bill which was now before Parliament was passed. When the Bill passed, he would be perfectly willing to give a definite reply. On the general question he was heartily in sympathy, as the whole of the Government were, with the objects which had been laid before him.

In reply to an inquiry, Mr. MCKENNA said that the Administrative Provisions Bill was a departmental measure and was still before Parliament, and would be carried; it was an agreed Bill between the two parties.

The proceedings were brought to a close by Lord STRATHCONA thanking Mr. McKenna for receiving the deputation.

PREVENTION OF PULMONARY TUBERCULOSIS.

A CONFERENCE of representatives of twenty-eight out of the twenty-nine city and metropolitan borough councils was held on June 6th at the Paddington Town Hall to consider the question of taking measures to limit the spread of pulmonary tuberculosis. The chair was taken by Alderman H. LIDIARD, J.P., the Mayor of Paddington.

Compulsory Notification of Pulmonary Tuberculosis.

Councillor Dr. W. J. NOLAN (Paddington) moved the following:

> That it is desirable that the notification of pulmonary tuberculosis should be compulsory.

He said that compulsory notification was necessary to supply the groundwork for legislation. He did not agree with the suggestion that consumptives should be isolated, and pointed out that the requisite measures could be "nicely and gently worked without interfering with the liberty of the subject."

Councillor LYELL (Hampstead), in seconding, declared that voluntary notification in Hampstead had proved defective.

Councillor Dr. F. H. ALDERSON (Kensington) moved the following amendment:

> That it is desirable that voluntary notification of pulmonary tuberculosis should be general throughout Great Britain and Ireland.

He discussed the difference from the point of view of notification between tuberculosis and small pox or diphtheria and then showed that as public hygiene increased in efficiency so consumption decreased. Compulsory notification would make a social leper of the unfortunate patient. Anyone with a cough would shun his doctor for fear of notification, so that such a compulsory measure would be a danger to the community. The provision of sanatoriums would be ruination to the ratepayer.

Dr. A. J. ECKARD OXLEY (Kensington) seconded the amendment, which was opposed by Councillor J. E. WOOD (Lambeth) and Alderman M. ROBINSON (Wandsworth).

Councillor W. KINGS (Battersea), speaking as an expert on the tailoring industry, declared that while compulsory notification might be hard on the individual, still the danger to the public must be considered, and if these phthisical people were "lepers" it was the duty of the nation to deal with the matter, and if sanatoriums were necessary then the country must supply them.

The CHAIRMAN then put the amendment to the vote, and announced that it was lost by 36 against and 12 for.

The motion for compulsory notification of pulmonary tuberculosis was then put and carried, 47 voting in favour.

Resolutions.

The conference then passed the following resolutions:

That application be made to the Local Government Board for an Order to be made: (1) To include pulmonary tuberculosis (consumption) among the diseases to be notified under Section 55 of the Public Health (London) Act, 1891; and (2) to extend the provisions of the following Sections of the above Act to pulmonary tuberculosis (consumption). Section 60—Cleansing and disinfecting of premises, etc. Section 61—Disinfection of bedding, etc. Section 62—Infectious rubbish thrown into ash-pits, etc., to be disinfected. Section 63—Penalty on letting houses in which infected persons have been lodging. Section 64—Penalty on persons letting houses making false statements as to infectious diseases. Section 65—Penalty on ceasing to occupy house without disinfection or notice to owner, or making false answer.

That in the opinion of this conference it is desirable in order to limit the spread of tuberculosis that provision should be made for public inspection and control at its several sources of the milk supply of England and to ask the Local Government Board to make the Dairies, Cowsheds and Milkshops Order of 1885 and its amendments compulsory on local authorities.

That application be made to the Local Government Board for an Order to be made to extend the provisions of Section 69 of the Public Health (London) Act to pulmonary tuberculosis, in so far as it relates to the milking of cows and to the sale and distribution of milk.

That the provision conferred by Section 7 (1) of the Factory and Workshop Act, 1901, namely, that in every room in any factory or workshop sufficient means of ventilation shall be provided and sufficient ventilation maintained, be rigidly enforced, and a similar provision extended to all places where people are assembled together for any lengthened period, with a view to restricting the spread of pulmonary tuberculosis.

That a sanatorium is needed for the open-air treatment of poor persons suffering from pulmonary consumption in the early stages of the disease, and should be provided by a central authority acting for the metropolis as a whole; that the managers of the Metropolitan Asylums Board by reason of their practical experience in the management of hospitals for infectious disease being eminently qualified for the position of such authority, the Local Government Board be requested to confer on, or if necessary to obtain for, the said managers power to act in that capacity; that the managers of the Metropolitan Asylums Board should also be empowered to use, for sanatorium purposes, the "Southern Hospital," recently erected by them at Carshalton, in the county of Surrey.

"A HOPELESS CAUSE."

WE have received the following communication from Miss Lind-af-Hageby:

My attention has been drawn to a leading article in your JOURNAL of June 1st, entitled "A Hopeless Cause," in which you quote a sentence taken from your report of my speech at my debate with Professor Halliburton on May 16th. That report contains several inaccuracies, and one generally imputes no bad motive to such inaccuracies, for they are common in all newspaper reports. In your issue of June 1st you have, however, proceeded to criticize my "fine display of altruism" on the basis of the following sentence: "She spoke for a considerable section of antivivisectionists when she said that they did not consciously accept a friend of vivisection, nor were they terrified into moral cowardice when they were ill and when their children were ill." I did not use the expression "a friend of vivisection," but "the *fruits* of vivisection," and I hope you will agree with me that it is generally a good rule to be sure of the correctness of a quotation before it is made a stimulus to one's sarcastic faculties. I am glad to notice that you do not seek to extenuate the conduct of the students, and I therefore venture to hope that you would not consider the deliberate breaking of a window, in which the students indulged upon leaving the hall, as a useful argument in favour of vivisection. I can find no evidence in the verbatim report of the debate to the effect that anybody called out "brute" when Lord Lister's name was mentioned. If any antivivisectionist be guilty of having used such an expression, it compares favourably with some of the interjections and epithets used by the provivisectionistic party, which are decidedly not fit to be printed.

We willingly accept Miss Lind-af-Hageby's correction, although it is not borne out by our shorthand writer's note. The fact, however, that after a fortnight's minute textual study this absolutely unimportant error is the only one which she points out, may be taken as conclusive testimony to the substantial accuracy of the report. The point of our criticism of her 'fine display of altruism" is in no degree blunted by the correction. Miss Lind af-Hageby apparently still glories in the fact that antivivisectionists are "not terrified into moral cowardice when they are ill and when their children are ill." As regards themselves there are many cases which show that, when the need arises, some of them at least are ready, and even eager, to accept the "fruits" of vivisection. It is in the case of children that the "altruism" comes in. In this matter, of course, Miss Hageby is in the position of him of whom it was said:

He jests at scars who never felt a wound.

But there are other antivivisectionists who do not, like her, walk in maiden meditation fancy free; and we know of some of whom, from what we know of them in their domestic relations, we have no difficulty in believing that they are quite free from "cowardice," moral or otherwise, when their children are ill. The "verbatim report" which Miss Hageby cites is clearly imperfect if it contains no mention of the cry "He's a brute," which greeted the mention of Lord Lister's name. For this we have the evidence of our own ears, and this is confirmed by others who were present. The fact that the cry came from one who appeared to have some kind of official character made the utterance of this noble sentiment all the more notable.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ended May 11th and 18th the mortality from plague in India numbered 82,400 and 67,681. The fresh cases of the disease reported amounted during the weeks in question to 91,273 and 89,747 respectively. The mortality in the different provinces was: Bombay Presidency, 1,161 and 820; Bengal, 2,415 and 1,740; United Provinces, 17,057 and 10,381; Punjab, 60,486 and 53,478; Rajputana, 245 and 247; Kashmir, 151 and 191; North-West Frontier Province, 82 and 84; Central Provinces, 500 and 338; Central India, 129 and 30; Mysore, 12 and 94; Hyderabad, 6 and 4; Madras Presidency, 6 and 8.

It is satisfactory to note that the total number of fresh cases and of deaths from plague has fallen considerably during the second of the two weeks in question; and that in the Punjab the mortality during the same week has fallen some 7,000. In the Punjab during the six weeks ended May 18th, 286,777 deaths were caused by plague; and in the whole of India 451,892.

PERSIAN GULF.

In the island of Bahrein in the Persian Gulf there occurred 169 deaths from plague during the weeks ended May 2nd and 9th.

QUEENSLAND, AUSTRALIA.

Brisbane.—During the weeks ending April 27th and May 4th no further cases of plague were reported, and the plague hospital is now empty. The last infected rat was found on April 22nd, 1907

No further bulletins will be issued unless a case of plague should occur.

Port Douglas.—No further cases of plague reported.

HONG KONG.

During the week ended May 25th the fresh cases of plague in Hong Kong numbered 10, and the deaths from the disease amounted also to 10.

TRINIDAD, WEST INDIES.

St. Thomas.—A telegram dated St. Thomas, June 8th, 1907, states: "It is officially announced that 2 fatal cases of bubonic plague have occurred at Trinidad."

DURHAM UNIVERSITY MEDICAL GRADUATES' ASSOCIATION.—The annual meeting and dinner of the Durham University Graduates' Association took place on Friday, May 31st. The meeting was held at the rooms of the Medical Society of London, at 4 p.m., when the new scheme for the reconstitution of the University, as announced in the draft Act, was discussed at considerable length. A strong resolution was unanimously carried in favour of the measure, subject to certain modifications in details, on the lines suggested by the Northern and Southern Councils of the Association. The annual dinner, held at the Imperial Restaurant, took place on the same evening at 7.30. The newly-elected President, Charles W. Chapman, M.D., M.R.C.P., occupied the chair, supported by sixty-three members and guests. Excellent music was provided under the direction of Miss Jessica Leeson, which contributed in no small degree to the success of a delightful evening.

MEDICAL NEWS.

Owing to the occurrence of some cases of small-pox at Naples, an order for the vaccination of all school children has been issued.

Last Sunday was Hospital Sunday in the metropolis, and collections were made in various public places other than churches and chapels with the usual activity. Up to date the sum received is about £12,000.

Mr. Joseph Scott, M.B., has received the Royal permission to accept the Second Class of the Order of the Lion and the Sun, conferred upon him by His Imperial Majesty the Shah of Persia, in recognition of valuable services rendered by him.

The Medical Advisory Board of the Wesleyan Methodist Missionary Society gave a kind of reception on June 5th at Caxton Hall, at which the work of the Society in connexion with medical missionaries was discussed by a number of medical men, including Dr. Mary Scharlieb, Mr. Pearce Gould, and Sir Thomas Barlow, who presided at the function. Dr. J. B. Hellier, who gave an account of what has hitherto been done, stated that the Society now maintained sixteen hospitals and dispensaries, seven of the former being in India, three in Ceylon, and six in China. It was greatly desired, he said, to increase the number of these institutions and to strengthen their staffs.

There was a large gathering in the Connaught Hall, Newcastle, on June 6th, on the occasion of a presentation to Dr. Charles William Newton of an illuminated address from the trades and friendly societies in the city, who also presented Mrs. Newton with a valuable dressing case. Dr. Newton for some forty years past has been a member of the Corporation, and throughout his career has been conspicuous for his efforts on behalf of the industrial classes. He has been twice Mayor of the City, and as Chairman of the Sanitary Committee is at present engaged in a vigorous crusade to induce the City Council to contribute towards the maintenance of the new sanatorium for consumptives at Barrasford.

Dr. Thomas Henry Stocker Pullin of Sidmouth was the recipient on June 1st of a silver salver and illuminated address, presented by past and present members of the Honiton Board of Guardians, which at the date of his resignation last month he had served for a period of over fifty years. Dr. Pullin, who became M.R.C.S., L.S.A., in 1850, and M.D. St. Andrews and F.R.C.S.Edin. in 1862 and 1882 respectively, received his first public appointment in connexion with the cholera scare in the South of England in 1849. In the following year he returned to Devonshire, his native county, as Medical Officer of the Exeter St. Thomas Union, and altogether has had over fifty-seven years' experience of public work.

A meeting in aid of the funds of the After-Care Committee for Blind, Deaf, and Cripple Children was held on June 5th at 11, St James's Square. The purpose of the Association is to provide assistance of various sorts for young people who, at the end of institutional life, have to endeavour to earn their own living. In the twenty-two special schools in London for children there are now some 2,000 children who are cripples, apart from those who are blind or deaf, and the Committee anticipates that before long they will be passing out of these schools annually some 500 children who, in default of assistance either in the way of training or apprenticeship, will not have a really fair start in life.

The Lord President of Council received on the last Friday in May, a deputation from the Council of the Royal College of Surgeons, inadvertently referred to in our issue of June 8th as one of the Members of the same College. The Council was represented by Mr. Henry Morris (the President), Mr. Edmund Owen and Mr. R. J. Godlee (Vice-Presidents), and Mr. Howard Marsh, Mr. Henry T. Butlin, and Mr. A. Pearce Gould (ordinary members of Council). The object was to make a reminder to the views urged last March upon the Privy Council, through Lord Crewe, by a deputation from the Society of Members of the Royal College of Surgeons of England. A report of the proceedings and of the arguments used will be made to the Council at its next meeting.

The British Dental Association announce the foundation of the "Smith Turner scholarship in Dental Mechanics." The scholarship, which is of the annual value of £30, is founded to honour the memory of James Smith Turner, to help those students who, in the opinion of the Fund Committee, have financial difficulty in completing the dental curriculum, and is open to any registered dental student who has not completed the curriculum required for a dental qualification. It will be awarded after examination, and be tenable for one or two years, at the discretion of the Committee. The scholarship money will be paid to any approved dental school in Great Britain and Ireland in discharge of fees. The examination in dental mechanics will be both practical and viva voce, and, as far as may be convenient, will be held in rotation in the dental schools of the United Kingdom. The first examination will be held in London at the Royal Dental Hospital, Leicester Square, on April 8th, 1908. Applications must be received on or before March 1st, 1908, addressed to the Honorary Secretary, British Dental Association, 19, Hanover Square, London, W.

Society of Women Journalists.—On the evening of June 19th, the President, Mrs. Burnett Smith ("Annie S. Swan"), and the members of the Society of Women Journalists, will be "At Home" at 2, Orme Court, Kensington Gardens, W., kindly lent for the occasion by Mrs. Herbert Cohen, a member of the Society. The following artistes have consented to appear: Signor Oscar Cafetto, Miss Alma Stenzil, Mr. Jean Schwiller, Mdlle. Rosetti, and Miss Ellen Borwick, recitations.

Poor-law Medical Officers Association of England and Wales.—The annual general meeting of this Association will be held at the Trocadero, Piccadilly Circus, on Thursday, June 27th, 1907, at 6.30 p.m. At 7.30 the members and their friends will dine together, and as the dinner this year is to be of an informal nature evening dress is not necessary. There will be a musical entertainment, and the Honorary Secretary will be glad to hear from any member willing to assist, either with vocal or instrumental music. The price of the dinner will be 7s. 6d., exclusive of wine. Members may introduce any friends they desire, and all Poor-law medical officers are cordially invited. Those desiring to be present are requested to communicate with the Honorary Secretary, Dr. M. Greenwood, at 144, Stoke Newington Road, London, N.

Complimentary Dinner to Principal Donald MacAlister.—On Tuesday, June 4th, a complimentary dinner was given to Dr. Donald MacAlister in the Combination Room of St. John's College, Cambridge, by the Resident Medical Graduates of the University. The Regius Professor of Physic occupied the chair, and among those present were: Sir Hector Cameron, Dr. David Murray, and Professor MacVail from Glasgow; the President of Queens', Sir Robert Ball, Professors Langley, Bradbury, J. J. Thomson, Marsh, Woodhead, Nuttall, Brodie; Drs. Gaskell, Adam Sedgwick, Shipley, Hopkins, Humphry, and others. Professor Allbutt, in proposing "The Guest of the Evening," pointed out that the University was losing a great pioneer, whom it could ill spare. After dwelling on the personal friendship between the new Principal and those present, he spoke of the celerity of business, the financial success, and the general efficiency of the General Medical Council since Professor MacAlister had become their Chairman. They were glad to think that the Principal of Glasgow University would still continue to represent Cambridge on that Council. The great advantage which Glasgow would derive from a man endowed with such a legal, mathematical, and cultured mind it was impossible to overestimate. In conclusion, Professor Allbutt prophesied that the new Principal would help to light lamps of truth in the hearts of the young men with whom he came in contact. Principal MacAlister spoke of the twenty-six years he had spent in Cambridge. In 1877, when he joined Cambridge as a medical student, there were only 40 medicals in the year, and only 100 students of medicine in the whole university. Last October 122 medical undergraduates matriculated, and the total was 420. The number had increased on account of the modern equipment, the high standard required, and the enthusiasm and stimulation of the teachers. He spoke lightly of his work on the General Medical Council, and as Chairman of the Special Board for Medicine in Cambridge. His only difficulty when he had twenty-four hours in which to decide whether or not he should accept the position of Principal of Glasgow University was the resignation of the chair of the General Medical Council which he thought that would entail. His colleagues suggested that he should hold both, and so solved that difficulty for him. Professor Marsh, in a witty speech, proposed the Visitors. Sir Hector Cameron, in responding for Glasgow, pointed out how glad they all were to have Dr. MacAlister as their Principal, and said this was an experiment, as previous Principals had all been Divines. Sir Robert Ball replied for the Cambridge visitors, and spoke of the well known facility Dr. MacAlister possessed for the assimilation of foreign languages. Professor Bradbury, Professor Woodhead, and Dr. Shore also spoke briefly.

British Medical Journal.

SATURDAY, JUNE 15TH, 1907.

THE GENERAL MEDICAL COUNCIL AND THE ASSOCIATION.

THE Annual Representative Meeting last year decided that the British Medical Association should in future act as complainant in cases which in the judgement of the Association were such as called for the exercise of the disciplinary and penal powers of the General Medical Council. It was, of course, understood at the time that this decision would raise questions as to the position of members of the General Medical Council who were also members of the British Medical Association. It will be remembered that a similar point arose some years ago when the decision of the General Medical Council in a penal case was challenged on the ground that certain members of the Council who had taken part in hearing the case were members of the Medical Defence Union, the body which had acted as complainant. The case was taken to the Court of Appeal, and though the two judges who formed the majority took the view that there was no sufficient proof of bias to justify them in setting aside the judgement of the Council, they arrived at this conclusion with some hesitation, and Lord Justice Fry, who was in the minority, expressed the opinion that a member of the society in question was virtually a prosecutor, and could not be said to be free from the suspicion of bias or prejudice in cases in which the society to which he subscribed acted as complainant.

The Annual Representative Meeting, when it decided that the British Medical Association should act as complainant before the General Medical Council, would appear to have intended that the Central Ethical Committee should act for the Association in deciding whether a case should be reported to the Council, and in preparing the evidence to be laid before it. This Committee was of course aware of the circumstances above mentioned, of the opinion expressed by Sir Edward Fry, and knew that no member of the General Medical Council who had acted, for example, as the member of the council of a medical defence union or protection society could take part in the hearing by the General Medical Council of a case presented by the council of which he was a member. It was also recognized that it was at least doubtful whether an ordinary member of such a union or protection society could properly sit as a member of the General Medical Council when it was engaged in the investigation of a complaint made by the organization in question. It was felt, however, that the position of the British Medical Association, which has so wide a range of objects and so large a membership throughout the British Empire, differed materially from that of societies formed for the special purpose of medical defence and protection. Consequently the Central Ethical Committee, having duly reported the position of the matter to the Central Council of the Association, and having had a definite case brought before it by a Division of the Association, instructed its Chairman to address a letter to the President of the General Medical Council pointing out that the responsibility of an individual member of the British Medical Association, not a member of the Central Ethical Committee, would, in respect of the formulation of a complaint for submission to the General Medical Council, be merely nominal, and that such a member could not reasonably be held to have prejudged a case of which he had no previous knowledge. On receipt of this letter the President of the General Medical Council consulted the solicitor to the Council, and acting on his opinion, the Executive Committee, at its meeting on May 27th, being advised that no member of the British Medical Association should act as a member of the Penal Cases Committee or take part in adjudicating as a member of the Council in cases in which the British Medical Association or any Branch of it acted as complainant, adopted a resolution expressing a unanimous opinion that it was under the circumstances undesirable that a member of the Council should during his tenure of office be a member of the British Medical Association or of any other body which might submit complaints to the Council for inquiry.

In his address at the opening meeting of the General Medical Council, the President referred to the subject at some length, and stated that in his own case matters had been precipitated by the fact that at the beginning of May a formal complainst against a practitioner had been lodged with the Registrar of the Council by one of the Branches of the British Medical Association, and that in accordance with the standing orders the documents were then awaiting his consideration. Dr. Donald MacAlister, holding that he could not take even this first step towards a judicial inquiry while a member of the British Medical Association, immediately tendered his resignation from the Association, and resolved not to inspect the documents in the case until that resignation had taken effect. He added, moreover, that he would not feel justified in bringing the complaint before the Penal Cases Committee until its other members had ceased to be members of the British Medical Association, and it seems obvious that the principle must apply to all members of the General Medical Council, since the final decision rests with the whole Council. Dr. Langley Browne, one of the Direct Representatives elected last year, has already acted on this view, and his resignation of membership of the British Medical Association will vacate the Chairmanship of the Central Council, which he has held for the last two years. Every one will regret the loss of a member who has taken so active an interest in the Association for a great number of years, and has done good work for it in many capacities, and as the remarks made by the President in his address referred especially to the members of the Penal Cases Committee, it may seem to some that Dr. Langley Browne's action has been somewhat hasty. On the other hand, it must be remembered that Dr. MacAlister went on to say that if the decision of the Representative Meeting became operative as regards either the central body or its branches, members of the General Medical Council who took any part in judicial inquiries would, in his opinion, have no choice but to sever connexion with the Association. However slight this connexion might be, circumstances might at any moment arise in relation to an inquiry wherein the Association was interested which might be held to affect the impartiality of their judgement, and so to invalidate the Council's decision. We understand that other members of the General Medical Council have resigned membership of the British Medical Association, or are about to do so, and their loss will be acutely felt, not only as individual members, but because there

is a strong and widespread desire that the Association should take an active share in the selection of candidates at the election of Direct Representatives.

ANOTHER CANCER "BOOM."

IT is now some months ago since it was announced, with a lightness of heart recalling that with which the Government of Napoleon the Third entered on the disastrous war with Prussia, that the "conquest of "cancer" had been achieved—or would be before the proofs of the article proclaiming the joyous tidings could be seen by the writer. But still that "formidable shape" walks up and down the world seeking whom it may devour, unconquered, and, as far as the signs in the sky of science can be read, unconquerable, by any weapons at present at our command. For some time after our exposure of the hollowness of the claims so confidently put forward for certain methods of treatment, the virtues of which were being cried aloud in the streets, the voice of advertisement was hushed. Recently, however, there has been a fresh "boom," and the newspapers are once more full of the "conquest of cancer." It would be amusing, if the matter were not so serious, to find the newspaper scribe—of whom, in regard to medical matters, it may be said that he is like the Bourbons, who learnt nothing and forgot nothing—once more trying to hold the public with his glittering eye and teach him his too familiar tale of the cure of cancer.

Of course he must begin with the worn-out *cliché* about the Gallio-like attitude of the doctors. Thus we are solemnly assured by the *Observer* that "the time "must be approaching when public opinion will force "the members of the medical profession to throw aside "their indifference to Dr. Beard's important discovery "and study seriously the remarkable results which are "being obtained in cases in which it has been tried "by competent hands, with the proper preparations, "following strictly the directions." But how on earth is the medical profession to study seriously cases that are not reported? Have we not waited in anxious expectancy, like Mariana at the Moated Grange, for the man who should send us a full account of cases of cure that will bear critical examination? But, alas! he cometh not; and we are aweary of the old familiar faces that follow one another in unsubstantial vision like a stage army of ghosts. A doctor has stated to a representative of the *Sheffield Daily Telegraph* that the treatment has made far more "progress in America, Italy, and Germany than in "England." He admitted, however, in a burst of confidence, that "too much was expected from it. If this be so, it is the fault not of the medical profession but of those who offered it to the public as a gem of discovery beyond all price, with the suggested further attraction that the medical profession had played the part of the swine to which the pearls were thrown. In the *Daily Chronicle* "A Student" complains that "both the theory "and the treatment have been rejected without either "consideration or inquiry by nearly every one in this "country." If he has really studied the matter, he must know that this statement is inaccurate. He also says that "the attitude of the heads of the surgical "professions and of the principal medical papers "towards Dr. Beard has created the utmost "indignation amongst those who are acquainted "with the facts." This, however, he adds "is a "small matter." It must be small indeed for no whisper of the indignation referred to has reached us except from one or two of those who swing the censer within the little sanctuary of self-adoration in which the prophet dwells. There is one statement of "A Student" which must be dealt with more seriously. He says: "One of the most important medical journals not very "long ago stated that not a single cure had been obtained "by this method, though in point of fact a large number "of such cures had already been authoritatively reported." We presume that reference is here made to the BRITISH MEDICAL JOURNAL, which has impartially published reports of all the cases that have come within its ken. We have further carefully analysed the clinical evidence appealed to by the supporters of the new method. We have not, however, been so fortunate as to find a single case of cure even in the limited sense in which that word is used by surgeons. We should be glad, therefore, to be referred to the authoritative reports in question.

The writer of a series of articles which has recently appeared in the *Daily Mail*, who calls himself "An "External Student of the Subject," though he displays a very remarkable inside knowledge of the details of the Beard system of treatment, cites as examples of cure cases that have been publicly shown to be nothing of the kind. Professor Morton's cases are again trotted out, and it is said that he had already obtained "two absolute cures when he wrote, while in every "case without exception the patient was benefited." This is simply untrue, as will be seen on reference to the BRITISH MEDICAL JOURNAL of January 19th, where details of all the cases are given, and the results analysed. To that article no reply has yet been made. Professor Morton has since published a series of cases of cancer treated by another method, and this at least suggests that his faith in the pancreatic treatment is perhaps a little shaken.

The *Daily Mail* writer confesses that he cannot give references to any reports of cures obtained in this country. "On the other hand," he says, "there are no "references to give to any cases here on which the "treatment has been employed and failure reported." We are sorry to have to deprive him of this delusion in which he seeks to find a grain of comfort. Dr. Lazarus-Barlow has been good enough to send us advance sheets of a paper entitled The Trypsin Treatment for Cancer, by Walter Ball and E. Fairfield Thomas, which is to appear in the forthcoming ninth volume of the *Archives of the Middlesex Hospital* (6th Cancer Report). As is well known, every method of treatment of cancer that offers a reasonable prospect of success is given a fair trial in the wards of that hospital. The trypsin and amylopsin treatment was carried out in strict accordance with the instructions given by Dr. Beard himself, and the preparations were obtained from Messrs. B. T. Fairchild of New York, through their London agents. Every effort, indeed, was made to give the method as full and fair a trial as possible. Two cases were treated by trypsin alone, and of these no account is taken here, as that method is now a stone rejected by the builders. Of the remaining nine which were subjected to the trypsin and amylopsin treatment, three are set aside by the authors because the treatment was continued only for a period of little more than three weeks. There remain, therefore, six cases in which a course of treatment lasting from 66 to 115 days was carried out. Two of the patients died, one was sinking fast at the time of the last note, and three were still living. Of the latter, two had lost weight. The only encouraging features noted are diminution of pain in one case, disappearance of stenosis of the rectum in another, and a stationary condition of the disease in a third. To these may be added the

calcification of the cell nests in one case and the vacuolation of the cells in another. But, as the authors point out, each of these characters may be, and not infrequently is, observed in cancer cases that have undergone no special treatment. On the other hand, the treatment did not prevent the patients from showing a progressive loss of weight. From their observations the authors conclude that "the course "of cancer, considered both as a disease and as a "morbid process, is unaltered by the administration "of trypsin and amylopsin." It should be stated that Mr. Pearce Gould, who was surgically in charge of the patients, and Dr. Lazarus-Barlow, Director of the Cancer Research Laboratory, are in entire agreement with the conclusions thus expressed.

With Dr. Beard's theories we are not here concerned: it is the practical result that interests us. What that has been so far we leave our readers to judge. To suggest, as is freely done by the supporters of the pancreatic treatment, that we are prejudiced against it, is simply absurd; and to say, as they do, that surgeons are opposed to it, because it "may prove to be "the most serious matter financially to the profession," is equally foolish. The profession can only gain by any increase of its resources against disease. We are only anxious to guard both the profession and the public against the danger of being led astray by loud promises which so far at least have not found fulfilment. We say once more, as we have said over and over again before, that the medical profession will hail with enthusiasm a genuine cure for cancer wherever it may come from. Unhappily, we see no sign that it has yet come.

THE LEGAL INTERPRETATION OF PROFESSIONAL MISCONDUCT.

THE cases of Hill *v.* Clifford, Clifford *v.* Timms, and Clifford *v.* Phillips, which raised questions of considerable interest in relation to the effect of a finding by the General Medical Council, were decided last week by the Court of Appeal. The main question was whether, assuming that articles of partnership provide for dissolution in case either partner is guilty of professional misconduct, the fact that the General Medical Council has found one partner to be guilty of conduct which is "infamous or disgraceful in a professional respect" is sufficient to justify the Court in granting relief to the remaining partner. In Hill *v.* Clifford, Mr. Justice Warrington held that neither the order of the Council nor their report was admissible in evidence, and refused to grant relief. His judgement was reversed by the Court of Appeal on June 12th, all three members of the Court declaring that the plaintiff was entitled to judgement. The other two cases were decided in a similar way. We hope to deal more fully with these cases next week.

THE RED CROSS CONFERENCE.

THE International Conference of Red Cross Societies began its proceedings at the Examination Hall, Victoria Embankment, on June 11th. The first of these conferences took place in the year 1870; they have been continued at intervals of five years ever since, and that now in progress is the eighth of the series. The opening scene was one of considerable brilliancy, as a number of ladies were present and the majority of the delegates wore uniforms and decorations. Every civilized Government is represented, and altogether there are some 157 delegates on the roll, the majority being officers in the army or navy of their respective countries. Those who directly represent the British Government are Director-General H. M. Ellis, and Deputy-Inspector-General A. W. May, on the part of the Admiralty; Director-General Sir A. Keogh, and Lieutenant-Colonels M. W. Russell, W. G. Macpherson and J. E. Edmonds on behalf of the War Office, and Surgeon-General Branfoot, Lieut.-Colonel Sir A. Havelock Charles, and Majors Strickland and Foster on the part of the India Office. Others who are taking an official part in the proceedings as members of Committee or as representatives of the Central Council of the British Red Cross Society are Sir Frederick Treves, Mr. Anthony Bowlby, Lieutenant-Colonel G. T. Beatson, Surgeon-General G. Sterling-Ryerson, Miss Ethel McCaul, and Mr. Danvers Power, the general chairman. The conference was opened by Lord Roberts, who read messages from the Queen, from the Empress Marie Feodorovna of Russia, and from Miss Florence Nightingale, which in due course were redelivered in French, the official language of the Conference, by Dr. Emil Reich. Queen Alexandra, of course, is specially interested, as she is President of the British Red Cross Society, while to the Empress Marie of Russia is in large degree due the success of the exhibitions usually held in connexion with these conferences. Some years ago she set aside a sum of 100,000 roubles, the interest on which is distributed as money prizes to the exhibitors of the best invention connected with the care of the wounded during war. As the interest on the capital sum accumulates for five years, these prizes are of considerable value, and doubtless materially help to stimulate the development of contrivances really of practical value in the relief of suffering on the battlefield and in connexion with active service. Lord Roberts in the course of his address mentioned that the British Red Cross Society, which is the host on this occasion, has since its foundation, in 1870, expended over half a million of money in providing comforts for the sailors and soldiers in hospitals; about a quarter of this sum was spent during the South African war. The Marquis de Vogüé, one of the French delegates, who followed Lord Roberts, claimed that the Conference could place to its credit since its first meeting certain distinct achievements. In early days the work, position, and intent of Red Cross Societies was somewhat vague, but now they were all stamped as national societies, doing work fully consistent with the highest patriotism, and united by the bond of common humanity through the International Conference. Secondly, the Conference had been successful in obtaining an extension of the Convention of Geneva so as to cover not only land but sea operations, and finally it had contrived to get that Convention entirely revised, with the result that the Red Cross Societies and their work were now recognized in a formal agreement between all nations. The deliberations of the Conference, including a number of discussions, have continued during the week, and Her Majesty the Queen, accompanied by the Queen of Denmark, visited the exhibition of Red Cross appliances shown in connexion with the Conference on Tuesday morning. It remains open only for a week or ten days, and there is much in it that is of interest in ordinary connexions.

THE TEACHING OF MIDWIFERY.

WE regret to find that some sentences in an article on the teaching of midwifery published last week have been taken by some readers to convey what they did not state, and what they were not intended to imply. In that article it was expressly stated that on one point —the number of institutions possibly available for midwifery teaching—our information was imperfect. We neither made nor intended to imply any reflection upon the obstetric practice of the Poor-law infirmaries. We have no doubt that Lord Lister's teaching has been applied in them as well as in other lying-in hospitals. So far as we know the results obtained in the Poor-law lying-in wards are excellent; and we made no statement whatever about them. What we said to the effect that

administrative efficiency and tact were more thought of by the managers of Poor-law infirmaries than professional knowledge, if a reflection on any one, is a reflection on the Boards of Guardians not on the medical men. One important statement that "the application "to midwifery practice in lying-in hospitals of Lord "Lister's teaching has resulted in the abolition in them "of puerperal fever, whilst no change of the same im- "portance has yet affected lying-in women outside "hospitals," is one which it would give us the greatest possible pleasure to withdraw and apologize for; but it is unfortunately true, and it applies not only to England, but to Europe. The medical superintendents of the Poor-law infirmaries we believe administer them very well in spite of great difficulties, but the point under consideration is the teaching of midwifery to medical students, and we are not acquainted with any published facts which show that any organization exists for this purpose in the Poor-law infirmaries, or that the number of cases available would be adequate to meet the demand which may probably arise. It would be interesting and useful to obtain such information, and if we can count on the co-operation of the medical superintendents we shall be glad to undertake to collect it. Hitherto the infirmaries have not been made generally available for clinical instruction, and proposals in this direction have met with opposition from the guardians and also, in some instances, at least, from medical superintendents. Owing to this the field of clinical experience open to medical students in London is unduly contracted as compared with Paris, Berlin, or Vienna, where hospitals under State or municipal control are, with few, if any, exceptions, utilized for this purpose.

THE PREVALENCE OF PLAGUE.

The hold the plague has taken on India was brought prominently to public notice by Mr. Morley in his speech on the Indian Budget. The figures are justly described as appalling, for no fewer than five and a quarter millions of human beings have died of the disease since its first appearance in India in 1896. It is difficult for the mind to grasp the fact that the total number of inhabitants in India is 300,000,000; but even so the mortality from plague has been enormous, and the figures show no signs of any abatement of the disease, since during the first four months of this year it is greater than in the same period for any past year. It is only natural to ask whether something cannot be done to check the disease, for at the present day we are hardly likely to accept the doctrine that the disease must be looked upon as Nature's method of checking an undue increase of population. In most civilised countries where plague occurs it is undoubtedly possible to do much to prevent its extension, but in India the difficulties are much greater and the outlook correspondingly less hopeful. Our knowledge of the epidemiology of plague has increased considerably of late years, and there is now no doubt that the rat must be looked upon as the agent that keeps the disease going, and that its fleas are the chief transmitters of the virus to man. The acceptance of these facts would lead in theory to the conclusion that it ought to be comparatively easy to check the disease by killing the rats, and undoubtedly this must be attempted, but it must be remembered that rats and insanitary conditions are inseparable, and that in dealing with one we are dealing also with the other. If plague is to be mitigated in India, this is the line which will have to be followed. Isolation of cases, segregation camps, and other means of combating the disease when once established are necessary and useful measures, but they do not strike at the root. The destruction of rats has already met with considerable success in various parts of India where it has been carried out thoroughly and efficiently, and the knowledge of this success ought to act as a spur to other less fortunate areas. The enormous difficulties that have to be faced, due to the nature of the work to be done and the prejudices of the natives, must not be forgotten, but it is for the Government to devise some scheme by which the native will be induced to see that the sanitary measures which must be carried out are designed for his own benefit. The scientific investigations of the last ten years have shown how the disease may be prevented, and the difficulties of the task must not prevent the Government of India from boldly facing the present position.

MALE NURSES

The Navy and Army Nursing Association, to which allusion was made in the Journal of May 25th, is now in being, the proposal for its formation having been unanimously approved at a meeting held on June 3rd. The general objects in view were explained by Sir Frederick Treves, who, after showing that the value of male nurses had hitherto been much more commonly recognized in America than in England, said that it was a common experience of his own for a patient to ask if he could not have a male rather than a female nurse. The organization in view would meet this need, and at the same time provide a permanent career for the large number of men who now received an excellent training in naval and military hospitals. As things had been hitherto, these men, once their service was complete, had nothing to look forward to in civil life; but if the Association came into existence, the whole position would be changed. It would enrol all men who had nursed in the navy and all those who had obtained the rank of first-class orderly in a military hospital, and act as middleman between patients who desired to be nursed by male nurses and men who wished to pursue a career for which they had already shown their fitness and in which they were already experienced. The Association would be worked on a co-operative basis, the nurses receiving the whole of the fees paid, minus only a certain percentage for administration expenses. Her Majesty the Queen had expressed her readiness to become a patroness of the Association. The resolution in favour of forming the Association was moved by Inspector-General Ellis, Director-General of the Medical Department of the Royal Navy, and seconded by Surgeon-General Sir A. Keogh, Director-General of the Army Medical Department, and supported, in the course of subsequent speeches, by Sir William Church, Sir R. Douglas Powell (President of the Royal College of Physicians) and Mr. Henry Morris (President of the Royal College of Surgeons). Sir Alfred Keogh mentioned that since the South African war great strides had been made in army nursing; in his department there were now engaged in nursing 800 men of the highest possible character and training. He welcomed the Association more particularly because its existence would open up a permanent career, and thus afford great encouragement to young men of respectable class to join the nursing section of the Army Medical Corps. In the course of the proceedings letters were read from the First Lord of the Admiralty and from the Secretary of State for War, both highly approving of the projected scheme.

SLEEPING SICKNESS IN CENTRAL AFRICA.

Dr. A. E. R. Woolaston, a member of the expedition sent out last year by the British Museum to explore the Ruwenzori region, has recently returned to England. After concluding a year's work on Ruwenzori, the British Museum Expedition, which had been conducting scientific research on that range, broke up, some of the members returning to England by the East Coast

others by way of the Congo. From Ruwenzori, Dr. Wollaston with one companion, Mr. Carruthers, in September, 1906, proceeded to Entebbe and to Lake Albert Edward. From the south of Lake Albert Edward the expedition proceeded through the Mfumbiro volcanic region, a wild mountainous and difficult country, with waterless stretches. Some years ago Mr. Grogan passed through the eastern side of this region, but Dr. Wollaston went through the heart of the volcanic region, where no Englishman had ever been before. For the most part, the volcanoes were extinct. There were nine of them altogether, the highest being about 14 000 ft. Near the top they are covered with dense bamboo, which is supposed to be inhabited by a race of pigmies, who live by raiding the villages on the lower slopes. Although the expedition spent five weeks among the volcanoes, they were not able to visit the pigmies, of whom nothing is known. As they are far removed from the Congo Forest pigmies they are probably a new race. From the volcanic region Dr. Wollaston proceeded down a steep descent to Lake Kivu, whence the expedition travelled to Tanganyika through the unknown valley of the Russisi, a mountainous region. Tanganyika was reached at the north end at a place called Uvira, a large Belgian post, where the expedition spent Christmas. There Dr. Wollaston came upon the sleeping sickness country, and from this point, through the Manyuema country, traversed a region devastated by that scourge. He describes the sights as being fearful, with people dead and dying on the roadside. Almost every village presented a revolting spectacle, as it is the custom of these natives to turn out stricken people to die. The population is dying by thousands, without any medical attention.

ASYLUM WORKERS' ASSOCIATION.

THE annual general meeting of this Association, which has for its object the aid and improvement of the status of "mental nurses" (including asylum attendants), was held on May 29th at 11, Chandos Street, W. There was a large attendance, including many past and present medical and other officers of asylums, with the Bishop of Croydon, Sir William Collins, M.D., M.P., Sir John McDougall, L.C.C., A. O. Goodrich, Esq., L.C.C., Miss Inderwick, M.A.B., and others interested in asylum work. On the motion of Dr. Theo. B. Hyslop, seconded by Dr. Robert Jones, Sir William Collins was unanimously elected President of the Association in succession to Sir John Batty Tuke, M.D., M.P. The report for 1906 (presented by Dr. G. E. Shuttleworth, Honorary Secretary) showed an increase of members from 3,227 to 3,390 during the year, with an increased credit balance amounting to £98. With the kind aid of the British Medical Association, a large number of pledges of support to any adequate scheme of assured pensions for workers in public asylums had been secured from Parliamentary candidates at the general election; and it was hoped that when Government found time to take up lunacy legislation this subject might be favourably considered. The claims of mental nurses to State registration were being looked after by the Parliamentary Subcommittee. Representations had been made to the authorities with reference to improved housing accommodation for married attendants at certain asylums. In 16 cases grants had been made from the Home of Rest Fund to attendants or nurses suffering from strain or recovering from illness. Sir William Collins, in moving the adoption of the report, said that he could conceive no calling in which active sympathy was more needful or more helpful, and at the same time, perhaps, more difficult to maintain, and to retain, and to cultivate, than that of the asylum worker. "It is hard enough for the surgeon, "it is far more difficult for the medical officer of "the asylum, and again, perhaps, harder still for the "attendant and nurse. The boredom of routine, the "dull pressure of the daily round and common task, "the degradation and irresponsibility of those you "treat, the disappointment of relapse, the vexation, the "ingratitude, and at times even the peril incurred, all "tend to quench the finer feelings and weaken our "fidelity to the ideals with which we have set "our." Dr. Collins went on to show how essential active sympathy, combined with knowledge, and skill, and patience, and accuracy, and wise firmness, was to the success of asylum workers, and to insist on the importance of self-discipline, as well as training, in fitting them for their work. The Bishop of Croydon, who seconded the adoption of the report, spoke of the importance both to patients and nurses that the latter should come to their work themselves fortified by refreshment and rest, rather than with nerves strained by months of unrelieved toil. It seemed to him that the insane often suffered from morbid sensitiveness, and it was important that they should have nurses who were at their very best, both ethically and physically fitted to minister to them. The report was unanimously adopted. The officers and Executive Committee were elected, and two gold and two silver medals were presented by the President on behalf of the Association to two nurses and two attendants for long and meritorious asylum service, extending from twenty-seven to forty-five years. Cordial votes of thanks to Sir William Collins and the Bishop of Croydon brought a very interesting meeting to a close.

THE LORD MAYOR'S CRIPPLE FUND.

LAST week attention was drawn in the BRITISH MEDICAL JOURNAL to the great effort which Sir William Treloar is now making on behalf of the cripple children of London. His aspirations on their behalf are so admirable that all must desire to co-operate with him, in spite of the fact that, as we pointed out, there is an undesirable vagueness in his statements as to the exact nature of the project which he has in view. That he is anxious to collect a sum of £60,000 for the benefit of cripples, and wishes to induce Parliament to present him with the disused hospital at Alton for the same purpose, is well known; but as to the precise fashion in which he proposes to use these gifts he has, so far, been curiously silent. The net result is that many persons who are intensely interested in cripples, and who have shown that interest by large gifts in the past, are holding aloof. Very naturally, they do not care to take part in a scheme with the details of which they are not acquainted, and perhaps many of them feel some misgivings as to whether Sir William Treloar's Alton plan, when fully disclosed, will not be found to be one of those *omnium gatherum* schemes which students of the question have long since recognized not to be the best possible way of contributing to the mental and physical well-being of cripple children. If this prove to be the case, considerable opposition to the private Bill, already laid on the table of the House of Lords, may be expected. Meanwhile, the suspicions aroused that the Lord Mayor, admirable as are his general intentions, has amid his multifarious duties not found time to give so complex a problem all the attention it deserves, are not likely to be laid to rest by a publication now being sold in aid of his fund, under the title of *Crutches to Help Cripple Children*. It is a volume of short stories by more or less well-known writers, illustrated by admirable pictures in colour, but the whole effect is marred by some of the advertisements which it includes. In the acceptance of these—a matter always regarded as of importance in connexion with any book—either gross carelessness has been displayed by those

responsible, or they have thrown aside all scruples of good taste, and even considerations of those higher motives which should characterize every step of the effort. The inclusion of advertisements of the kind to which we refer goes far to confirm the suspicion held by some that Sir William Treloar, large as is his heart, cannot implicitly be trusted to carry out the details of a great scheme for the benefit of a special class with entire wisdom. There is ground even for belief that the "experts" to whom he referred in one of his speeches may be persons not dissimilar from those who, as some of our readers may recollect, nearly succeeded in ruining by their connexion with it an equally meritorious scheme some years ago.

THE DANGERS OF MALARIA.

In a lecture delivered at the Royal Institution on May 28th, Professor G. H. E. Nuttall, F.R.S., Quick Professor of Biology in the University of Cambridge, said that in Italy there were almost two million cases of malaria a year, including over 16,000 deaths. In Greece one-half of the population suffered from malaria, and 6,000 deaths occurred annually. In India malaria caused six times as many deaths as cholera, and about 40 per cent. of the deaths among whites. In Africa there were places in the Gambia and Congo, where 80 to 100 per cent. of the children, and 60 to 70 per cent. of the adult indigenous population suffered from malaria. Fifty years ago malaria was extremely prevalent in the Fens, but since then it had disappeared almost, if not entirely. The prevention of malaria by quinine as a cure and preventive, by drainage, by personal protection, and mosquito-proof houses was then discussed. He cited the following as striking instances of preventive measures: In Italy 16 young men volunteered to sleep in a mosquito-infested hut in a highly malarious locality. Ten of the men wore mosquito clothing and veils, whilst 6 remained unprotected. The 10 protected men escaped infection, whilst of the 6 unprotected persons 5 contracted malaria. Owing to screened houses, quinine prophylaxis, etc., singly or combined, the incidence of malaria in troops belonging to the Roman garrison had been reduced by 50 per cent. in places; in Corsica and Algiers the cases had been reduced by 80 to 95 per cent. The similar experiences at Ismailia and Selangor were demonstrated graphically. Professor Nuttall then described the malaria-like diseases of animals due to protozoal parasites, the *Piroplasmata*, and their fatal effects on cattle, sheep, and dogs in many parts of the world. In the United States alone the losses due to "red-water" or "Texas fever" in cattle had been estimated at eight millions sterling a year. These diseases were a source of great loss in South Africa, Asia, and Australia. He described some observations recently made in Cambridge which threw new light upon the life-history of piroplasms. The difficulty of estimating these fatal diseases amongst domesticated animals appeared to be very considerable, and up to now nothing definite in that direction has been arrived at.

INTERNATIONAL NURSING CONFERENCE.

The International Conference of Nurses will be held in Paris on June 18th, 19th, and 20th. Many nurses from Great Britain and Ireland and the Colonies from Germany, Holland, Denmark, Finland, and the United States of America have signified their intention of being present, and French men and women well known in the medical and nursing worlds are interesting themselves in the organization of the meeting. M. Mesureur Director of the Assistance Publique, which controls 20,000 nurses in the Paris hospitals, will, as President open the first session of the Conference with an address on The Work of the Assistance Publique for Nursing Education. He will be supported by Dr. Bourneville, Mme. Alphen Salvador, who has established a training school for nurses in Paris on modern lines; Dr. Lande, Administrator of civil hospitals in Bordeaux; and Dr. Anna Hamilton. The Members of the Conference will be received by the Municipal Council of Paris at the Hôtel de Ville, by M. Mesureur at the Nursing College at the Salpêtrière Hospital, and at Chantilly by the Baroness James de Rothschild. Other invitations to visit hospitals and kindred institutions have been received.

LOCAL AUTHORITIES AND THE WORKMEN'S COMPENSATION ACT, 1906.

The Local Government Board has recently issued two circulars, one addressed to Boards of Guardians and the other to local authorities generally, dealing with the Workmen's Compensation Act, 1906. Having set out the definitions of "employer" and "workman" which are to be found in the Act, the Board say that it appears to it that Boards of Guardians and local authorities generally will be employers within the meaning of the Act, and that to the extent to which in that capacity they will become subject to liability which may be met by insurance, the guardians may properly incur reasonable expenditure in effecting an insurance against their liability under the Act. Then follows an extraordinarily cautious announcement to the effect that the Board is not in a position to indicate the range of the possible liabilities of guardians or local authorities under the Act. It only suggests that the Council or the Board should carefully consider in relation to each person in their employment the effect of the definition of "workman," and of the provisions of the first schedule to the Act which determine what should be regarded as the remuneration of a workman for the purposes of the Act. Were the Local Government Board an advisory as well as an administrative body, there are a number of questions of considerable interest to the medical profession which it might have discussed. The position of medical officers of health and of Poor-law medical officers is not made at all clear by the Act. Medical men, in common with many other "employers" and "employed" throughout the Act must wait patiently until the problems which arise under the Act are solved by the courts.

SANATORIUMS FOR WORKERS SUFFERING FROM TUBERCULOSIS.

Information has been received from many members of the Association in widely distant parts of the country which show that the National Association for the Establishment and Maintenance of Sanatoriums for Workers Suffering from Tuberculosis is seeking to enlist the gratuitous services of leading practitioners throughout the country in the capacity of "medical referees." The matter has already been discussed in the British Medical Journal of January 26th, 1907, page 221, and a letter from the Honorary Secretary of the National Association was published on February 2nd, 1907, page 288. From the statements made in that letter it would still appear that this is another case in which friendly societies are attempting to make the best of both worlds, claiming, on the one hand, that they pay market prices for all the medical services that they receive, and, on the other hand, endeavouring to secure the services of practitioners for less than the market price, or even gratuitously, on the ground of the laudable character of their work. The subject is, we understand, receiving the careful consideration of the Medico-Political and Hospitals Committees of the British Medical Association, and in the meantime

medical men who receive applications of the kind above referred to will perhaps do well to refrain, at all events, from definitely accepting such positions until the Committees have reported.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

AT an extra afternoon meeting of the Royal Medical and Chirurgical Society to be held at 20, Hanover Square, on Wednesday next, at 5.30 p.m., probably the last which will be held by the Society as such, since it is expected that the new Charter of the Royal Society of Medicine will be accepted at a meeting on June 14th, Mr. D'Arcy Power, F.R.C.S., F.S.A., will read a paper on Dr. Walter Bayley and his works, 1529-92. Mr. Power has given much study to the subject, following up every clue, and being rewarded by the discovery of Bayley's will, an extremely interesting document of which he will give a transcript. At this afternoon meeting Fellows and others will exhibit various objects of antiquarian interest. Mr. Power will show a letter of Archbishop Strafford, Abbot of Westminster, dated April 19th, 1445, directed to all barber-surgeons in the City of London, enjoining them to cease from opening their shops on Sunday on pain of excommunication.

A TRAGEDY OF TUBERCULOSIS.

DR. JOHN MACDONALD, County Medical Officer of Health for Inverness-shire, in his annual report gives an account of the remarkable havoc wrought by consumption among the members of a single family, which has been virtually extinguished by the disease. A crofter at Tarbert, Morar, had acted as a beater or ghillie in the summer season, and had lived in the same house for twenty-one years. Until the spring of 1906 the whole family, consisting of himself, his wife, five daughters, and seven sons, the oldest being 21 years and the youngest 2, had always been healthy. In April, 1906, the eldest girl, aged 21, who had been in service, came home suffering from a suppurating finger. Symptoms of phthisis manifested themselves, and she died of tuberculous meningitis on May 26th. In the following November another daughter, aged 14, was found to be suffering from well-marked phthisis in both lungs. Death took place on January 8th, 1907. During the time that she was ill the father began to suffer from a cough, and the mother complained of pain in the abdomen and the left ankle. Two daughters, aged respectively 20 and 10, also complained of cough, and the baby, aged 2, was anaemic and emaciated, also had a cough. Examination showed that the father was suffering from tuberculous disease of the ankle and there seemed to be reason to suspect the existence of similar disease in the abdomen; while the two daughters and the baby showed distinct signs of pulmonary phthisis. The baby died on January 3rd, and the daughter, aged 10, about January 10th, after an illness of about three weeks. The mother was removed to the Western Infirmary, Glasgow. The father who up to this point was the only one of the male side of the house to be attacked, did not improve. In March, however, it was found that a boy, aged 15, was suffering from phthisis. Meanwhile the father got worse and died soon afterwards. Attention is drawn to the following points of interest in connexion with the outbreak: (*a*) The entire absence of a family history, or predisposition on either side; (*b*) the fact that for twenty-one years the family had occupied the same croft healthily; (*c*) the fact that the disease attacked the female side of the house first; (*d*) the acute onset of the disease in the majority of the cases; (*e*) the rapid destruction of lung tissue, very high temperatures in some, and the fact that there was very little expectoration in any of the cases; (*f*) within three months, father, mother, four sisters, and a brother have all been attacked, with 4 deaths out of 7 cases. The house was of the ordinary type of crofter's dwelling, consisting of two apartments, with stone walls, thatched roof, clay floors, and very damp. The people were particularly clean and tidy, and kept their house in an excellent condition. According to recent information, the mother has died of tuberculous peritonitis in Glasgow. The ravages of the disease have not ended there, and the family is in danger of utter extermination. Its doom recalls the fatefulness of a Greek tragedy.

HOME OFFICE REGULATIONS FOR USE OF HORSEHAIR.

THE large number of cases of anthrax which keep cropping up in industrial establishments in this country is a sufficient reason for the draft regulations which have been issued by the Home Secretary in regard to the incidence of anthrax in the manipulation of horsehair and bristles. It is proposed that all horsehair (with the exception of white and light-grey hair, which might suffer damage in the process) should be disinfected before undergoing any process other than those of opening or sorting. Arrangements will be made whereby a large proportion of the material can be disinfected by or on behalf of the importers before distribution to the manufacturers. This is a most important procedure and a step in the right direction. As very few cases of anthrax have been traced to bristles, the Home Secretary has decided to exclude bristles from the Regulations; but although excluded, the hope is expressed that when the disinfecting apparatus is installed, manufacturers will adopt the practice of having undressed bristles disinfected. It appears that between January 1st, 1906, and March 31st, 1907, there have been 17 cases of anthrax including 6 deaths in connexion with horsehair and bristles. As only Draft Regulations have been issued, employers, owners, occupiers, and workpeople can lodge objections within forty days from the date of issue. The objections must be in writing, and the particular part in the Regulations objected to stated. The Regulations commend themselves. They entail attention to minute details as regards the removal of dust by mechanical means, weekly cleaning of the extracting shaft and the space beneath the opening and the sorting screen, daily cleansing of the floor of every opening and sorting room, and the burning of the collected dust. The Regulations make for personal cleanliness on the part of the workpeople, improved ventilation of the workrooms, and the provision of ample lavatory accommodation. Operatives with sores or scratches on their skin must absent themselves from work.

WE regret to announce the death of Mr. Walter Arnold Densham, M.R.C.S., L.R.C.P., who was recently killed by a buffalo in Uganda. Mr. Densham had been in the Medical Department of the East African and Uganda Protectorate since March, 1905. No further details have yet been received by the Colonial Office.

AMONG the distinguished persons on whom honorary degrees were conferred by the University of Cambridge on June 12th, was Sir Thomas Fraser, Professor of Materia Medica and Clinical Medicine in the University of Edinburgh, who received the degree of D.Sc. The same degree, it is announced, will be conferred by the University of Oxford on Sir Richard Douglas Powell and Professor Watson Cheyne at the forthcoming Encoenia.

The Croonian Lectures before the Royal College of Physicians of London will be given by Dr. W. J. R. Simpson on June 18th, 20th, 25th, and 27th, at 5 o'clock, the subject selected being Plague.

The Council of the British Association for the Advancement of Science has nominated Mr. Francis Darwin, F.R.S., Foreign Secretary to the Royal Society, and author of the *Life and Letters of Charles Darwin*, to be President of the meeting next year, when, for the fourth time in its history, the Association will assemble in Dublin. Mr. Darwin is a member of the medical profession, holding the degree of M.B.Cambridge, but does not practise.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Plague in India.—When the Indian Budget was discussed on Thursday in last week, Mr. Secretary Morley, in the course of his great speech, referred to the plague as follows: The Budget is a prosperity Budget. We have, however, to admit that a black shadow falls across the prospect, for the plague figures are appalling. But do not let us get unreasonably excited even about these appalling figures. If we had reviewed the plague figures last September, we might have hoped that this horrible scourge was on the wane. From 92 000 deaths in the year 1900, the figures went up to 1,100 000 in 1904, and they exceeded 1,000,000 in 1905. In 1906 a gleam of hope arose, and the mortality sank to something under 500,000. The combined efforts of the Government and of the people produced that reduction; but, alas, since January, 1907, the plague has again flared up in districts that had been filled with its terror for a decade. For the first four months of this year the deaths were 642,000, and exceeded the record for the same period in any past year. You must remember that we have to cover a very vast area, and I do not know if these figures would appal us if we took the area of the whole of Europe. It was in 1896 that the plague first appeared in India, and up to April, 1907, the total figure of those human beings who have died is 5,250 000. But, dealing with a population of 300 millions, this great mortality, although enormous, is not at all comparable with the black death and other scourges which spread over Europe in earlier times in proportion to the population. The plague mortality, which was higher this year than in 1904 only represents a death-rate of about 3 per 1,000. It is local, and particularly centres in the Punjab, the United Provinces, and Bombay. No one—I do not care to what school of Indian thought he belongs—can deny that measures for the extermination and mitigation of this disease have occupied the most serious, constant, unflagging, zealous, and energetic attention of the Government of India. But the difficulties we encounter are enormous. It is possible that men may arise this afternoon and say that we are not enforcing with sufficient zeal proper sanitary rules, but I am certain other hon. members will get up to show that the great difficulty in the way of sanitary rules being observed arises from the reluctance of the population to practise them. They are naturally suspicious, and when all these new rules are forced upon them they naturally resent them and resist them. I will not detain the House with the details of all the proceedings we are taking. We have instituted long scientific inquiries with the aid of the Royal Society. Then we have very intelligent officers, who have done all they could to trace the roots of this disease and to discover, if they could, any means to prevent it. It is a curious thing that, while there appears to be no immunity from this frightful scourge for the natives, there is an almost entire immunity by Europeans. It is difficult to understand this immunity. Later in the debate Dr. Rutherford said that the plague was one of the chief causes of the unrest in India. It was a preventable disease. It had been brought under control in most countries, and only in India had it such awful effects. The Government had not taken sufficient measures to cope with this terrible scourge. They had been advised by the highest medical authorities, with a knowledge of India, that they should engage a sanitary army, composed entirely of Indians, so that there might be no degradation of Indian homes by the entrance of foreigners, to see that the sanitary requirements were carried out. The Government of India could not better spend the surplus at their disposal than in the provision of this sanitary army. Mr. Hobhouse, the Under Secretary for India, in his reply, took a somewhat mediaeval position by declaring that the plague "was not the hand of man; it was the hand of God." He was rebuked by an interruption, and afterwards said that the success of all their measures depended upon the co-operation of the people themselves. It was freely admitted that in some ways the executive which dealt with the plague wanted strengthening. They were prepared to supply native doctors acquainted with the habits and customs of the people, and sufficiently trained in sanitary science to cope with this great evil, and also to supply native servants well acquainted with the measures to be taken for the relief of plague. One point greatly excited the interest of the people of India. They asked how it was that, while natives died in millions, Europeans died by single individuals. It was easy to understand how, in the minds of an ignorant and easily excited population, suspicion might be aroused by the disparity in the numbers that died. Scientific investigation had proved that plague was largely disseminated by the agency of rats, and of fleas which infested the rats, and it was a fact that rats were mostly found in native houses. A further cause of contamination was germs in the soil, and the natives, who walked barefooted, took up those germs from the earth as they walked, while Europeans were protected by their shoes. Laboratories were being widely established to meet all the demands for inquiry, and all possible means which human ingenuity could suggest and science could devise were being taken by the Government of India to cope with the evil.

Plague Deaths in India.—Dr. Rutherford asked the Secretary of State for India on Tuesday whether he would give the House the weekly returns of death from plague during May for each province in India. Mr. Secretary Morley said, in reply, that the deaths returned for the weeks ending the 4th, 11th, and 18th of May respectively were for all parts of India 77,772, 82 400, and 65,512. Later figures had not yet been received. He should be very willing to communicate the provincial returns for those weeks to the hon. member, or to place them in the Library. Sir Walter Foster asked that the weekly returns of plague deaths should be published in the press as received. Mr. Morley promised to see if this could be done.

The Vaccination Bill had a somewhat troublous time in Committee on Wednesday. The Chairman first ruled out all amendments which sought to extend the scope of the measure, and then the question of the permanency of the Act was raised by Sir William Collins. Mr. Burns said the Government thought that it would be wise to continue the Act as renewable from year to year. An amendment to allow the conscientious objector to make his declaration before the Registrar of Births was discussed for some time, and finally defeated by one vote. Mr. Pickersgill afterwards carried against the Government an amendment to give either parent the right to make the statutory declaration. The Committee then adjourned.

Prosecutions under the Vaccination Acts.—Sir William Collins asked the President of the Local Government Board whether he was aware that, by general orders of October 31st, 1874, the Local Government Board prescribed it as the duty of the guardians of the poor to give directions to their vaccination officers to take proceedings in cases in which the proceedings of the Vaccination Act of 1867 had not been complied with, and that in July, 1875, the Local Government Board obtained a mandamus to compel the guardians of the Keighley Union to give

irections to their vaccination officer; and that in consequence of their default the guardians of that union suffered imprisonment; whether, seeing that Lord Herschell's ommission on Vaccination reported in 1896 that it was ie duty of the guardians to put the law in regard to vaccination in operation, he would say whether the powers nd duties of guardians in regard to such prosecutions nder Sections 29 and 31 of the Act of 1867 had since een altered by statute: and, if not, whether the powers f the guardians in directing their officers in instituting roceedings under the Vaccination Acts were the same ow as they were held to be in 1875 and in 1896. Ir. John Burns answered that he was aware of the facts eferred to. Some limitations were placed by Sections 2, , and 4 of the Vaccination Act, 1898, on the cases in which rosecutions could be instituted under Sections 29 and 31 f the Vaccination Act, 1867, but, subject to this, there had een no statutory provision since 1898 which would affect ie powers and duties of guardians in regard to prosecuons under those sections. Since that date, however, the ourts of Law had decided that it was the duty of the accination officer to institute these prosecutions without ny directions from the guardians. When in 1898 the rder of 1874 mentioned was rescinded, the provision hich it contained as to directions by the guardians in ases of this kind was not inserted in the Order which ook its place. That Order provided, however, that the uardians should from time to time ascertain whether the accination officer was performing the duties imposed on im by the Vaccination Acts of enforcing the provisions f those Acts and the duties imposed on him by the Order, nd should require the due performance by him of such uties.

The Public Health Bill.—This Bill, which is a large easure to enable local authorities to adopt by a simple rocedure clauses enacted in private Bills, was the subject f a question by Mr. Brigg last week, who asked for facilies to be given for its enactment. The Prime Minister eplied that no undertaking could be given at present bout the Bill, but that the Government was quite alive to ts importance.

The Royal Commission on Sewage Disposal.—Mr. homasson asked the President of the Local Government oard whether the Royal Commission on Sewage Disposal, ppointed on May 7th, 1898, was still sitting; if so, whether he could inform the House when it would issue its eport on the bacterial or artificial methods of sewage reatment as distinguished from the natural method or and treatment; and when the final report would be ssued. Mr. John Burns replied that the Royal Commission was still sitting, and that he understood that in ts fifth report, which it hoped to issue before the nd of the year, the methods of sewage treatment referred o in the question would be dealt with. He further nderstood that the investigation of the disposal of trade ffluents when not mixed with sewage, which would form he subject of the final report, had been commenced.

Colwyn Bay and its Drainage.—In answer to a question ut by Mr. Weir, Mr. John Burns stated on Monday that ie had made inquiry on that subject, and was informed hat the whole of the drainage of Colwyn Bay had been inked up with the new drainage system, and that the old ewer outfalls had been done away with.

Sewage of Southend-on-Sea.—Mr. Samuel Roberts asked he President of the Local Government Board whether he was aware that although an expenditure of many thousands of pounds had been incurred by the Town Council of Southend-on-Sea in defending their action of discharging crude sewage into the estuary of the Thames in defiance of all constituted authorities, and moreover of violating the principle laid down so emphatically by the Commissioners on Sewage Disposal, the Town Council had been served with another writ by the owner of the Hadleigh Bay oyster beds; and whether, seeing that in the recent action in the High Courts judgement was given against the corporation, involving some £8,000 damages and costs, he would bring in a Bill, in accordance with the recommendations of the Commissioners on Sewage Disposal, to prevent the pollution of rivers and estuaries by all local authorities. Mr. John Burns replied that he had not received any information as to the further writ referred to. He was afraid that he could not hold out any expectation that he could introduce a Bill during the present Session on the subject mentioned in the last part of the question.

Medical Officers at Embassies and Consulates.—Sir William Collins asked the Secretary of State for Foreign Affairs if he would state to how many of His Majesty's embassies and consulates medical officers or advisers were attached; what were the medical and surgical qualifications required of candidates for such posts; and what were the salaries and conditions of service attached to each of them. Secretary Sir Edward Grey replied that the salaries and allowances provided for medical officers were given in the estimate for diplomatic and consular services under the names of the various posts. The officers were duly qualified practitioners, and those who received allowances were usually selected on the spot. The following were the principal medical posts: Constantinople, £700; Peking, £650 to £700; Alexandria, £500; Tokio, £350; Tehran, £600; Bangkok, £250; Zanzibar, £400. Quarters were provided at Peking and Tehran. Officers who took private practice were not pensionable.

Sanitary Inspectors.—Mr. Cooper asked the President of the Local Government Board whether he could state how many women had passed during the last ten years the examination required to qualify for a sanitary inspector, and how many sanitary authorities had appointed a female sanitary inspector on their staff. Mr. John Burns replied that it was only in London that a sanitary inspector was required by law to be the holder of a certificate granted by a body approved by the Local Government Board to the effect that he had by examination shown himself competent for such office. He understood that the number of women who had passed the qualifying examination during the ten years ended December 31st last was about 216, and that the number of metropolitan borough councils who had appointed one or more female sanitary inspectors was 22.

Tinned Meat.—Captain Faber asked the President of the Board of Trade whether he had any official information showing that a report had been published by the State Commissioner of Health at Albany to the effect that the reforms to be made in American tinned meat were still incomplete, and that the chemical analyses of 154 samples of canned meats showed the presence of boron preservative and other bad matter; and, if so, whether he would take steps to prevent these canned meats from being landed in England. Mr. Burns said that his right hon. friend had asked him to reply to this question. He had seen some account in a newspaper of the report referred to in the question, and he had asked for a copy of it. It did not appear to him that, in the present state of the law, he was empowered to take action of the kind suggested, but, as he was no doubt aware, he had before the House a Bill which would empower him to make regulations authorizing measures to be taken for the prevention of danger to the public health arising from the importation of articles of food. In reply to Mr. Alden, who asked about the Bill, Mr. Burns said the Bill was on the order paper, and, if members would remove their blocking motions, he saw no reason why it should not go through to day or to-morrow.

Disease from Tramway Tickets.—Mr. Summerbell asked the Secretary of State for the Home Department if his attention had been called to an analysis of tramway tickets carried out by Dr. Busquet of Bordeaux, and the statement made in relation thereto that four out of five tramway tickets taken at random in Paris might transmit dangerous diseases; and, if so, would he state whether he was prepared to have an analysis of tramway tickets in London. Mr. Secretary Gladstone said that his attention had not been called to this matter, and, as at present advised, he did not think there was any need to take such steps as suggested.

Ireland.

Irish Medical Association.

The annual meeting of the Irish Medical Association was held at the Railway Hotel, Portrush, on June 5th, under the presidency of Mr. J. S. McArdle of Dublin, who delivered an address. The election of officers for the ensuing year was proceeded with, and Mr. McArdle was appointed President for a second year. In the evening there was a banquet. Next day was devoted to excursions, and although the weather was broken, the visitors enjoyed their brief holiday, its attractions being largely increased by the hospitality of the profession in the north-west.

The Salaries of Dispensary Doctors.

During the Irish land war of the last two decades of the nineteenth century the late Mr. Gladstone used an expression which has passed into a sort of proverb: "Remember Mitchelstown," and we are inclined to think that in future the expression "Remember Castlerea" will be found to mark a turning point in the long warfare the Irish Poor-law doctors have waged for a recognition of their rights.

In the British Medical Journal of March 9th some particulars were given of the peculiar hardships of the medical service in that part of Ireland comprised within the Poor-law Union of Castlerea. This, we may inform our readers, is named after a small town situated in the County of Roscommon and Province of Connaught, a province which, if we may judge from certain proverbial sayings, is not held in high estimation by the inhabitants of the other three Provinces.

Readers of the daily press will be familiar with the efforts of the Roscommon farmers to establish what they regard as their rights to the possession of grazing farms, rights which the occupants of these farms do not always admit, and this brings into stronger contrast the action of these same people in refusing to their medical officers that remuneration for their services which their representatives, the guardians, have admitted they are entitled to.

The medical officers of Castlerea have now taken what we believe is a step in the right direction. All other efforts to obtain justice at the hands of their oppressors having failed, they have issued a pamphlet addressed to the ratepayers of the union, reiterating their demands and informing them that until these demands are acceded to they will charge double fees for their services to private patients.

We are aware this plan has been adopted elsewhere in Ireland with success, but has not hitherto been placarded so publicly as in this instance. We shall await the results with interest, for the medical officers have the whip hand.

In these remote Irish unions there are no private practitioners. No man could live on the meagre amount to be obtained from private practice alone, therefore the Poor-law medical officers have the public at their mercy. Not that there is the least fear of the Irish Poor-law doctor abusing his powers. None see so much of, or feel more for, the sufferings of the real poor; but if they can touch the "village ruffians, those men who terrorize the honest peasantry, in that part of their economy in which they can alone be made to feel that is, their pockets, we wish them God-speed, and hope "Remember Castlerea" may become a war-cry through the land.

Testimonial to Professor Charles, of Cork.

The medical students of Queen's College, Cork, presented Professor Charles with an address and a handsomely illuminated album on the occasion of his resignation of the Chair of Anatomy and Physiology at the college. The following is the text of the address:

To J. J. Charles, Esq., M.D., M.A., D.Sc., F.R.S.E., L.R.C.P.I., Professor of Anatomy and Physiology, Q.C.C.

Dear Sir,

We, the students of Queen's College, Cork, feel that we cannot allow you to leave us without expressing our appreciation of your life work amongst the medical students of the South of Ireland, and our high opinion of your personal character, which has enabled you to fill so capably the important chair with which your name is associated.

For nearly a third of a century you have maintained the high level of scholarship which has enabled Cork medical students to more than hold their own against the rival colleges, and carry off the most coveted prizes of the university.

We owe you a deep debt of gratitude for the interest you have taken in our careers, and many of our past students, scattered, as they are, in so many countries, are united in their testimony of regard and affection for their old Professor. You have told us that the name of Queen's College, Cork, will be found engraved on your heart. We can assure you your name will be no less cherished amongst your students. We trust that you will still look with interest on the intellectual progress of your old pupils, and that you will sometimes revisit the scenes of your labours.

That the autumn of your life be a sunny and happy one is the unanimous wish of the students of the Queen's College, Cork.

Professor Charles on rising to reply was cordially greeted. Emotion and excitement, he said, had, to use a physiological term, exercised such an inhibitory influence on the action of his brain that he could not adequately thank them for the kind address and handsome album which they had just presented. He hoped, therefore, that they would be good enough to excuse him giving a formal reply to the too flattering references they had made to his work amongst them. He would only say that he appreciated the address very highly as an expression of their opinion, and that he felt sincerely grateful. He would treasure the album not only as a work of art, but because it contained the autographs of warm-hearted Cork students, whose names he wished never to forget.

Health of Belfast.

At the monthly meeting of the City Council on June 3rd the Medical Superintendent Officer of Health said that the death-rate for the month was 23.7; the rate from zymotic diseases was 0.6 as compared with 2.8 for last year, and this fall was all the more remarkable as the cerebro-spinal epidemic had not yet died out, although during the last ten days there had been a great improvement. There was also considerable discussion on the question of tuberculosis in pigs, which arose out of a lawsuit against the Council with regard to the destruction of the carcasses of pigs in which the neck glands alone were affected. The Council's present order is that the glands be removed and the body then considered as wholesome; the Chairman of the Health Committee said the order really was that the whole head should be cut off. It would be interesting to know how many of these councillors would allow such pork to be eaten in their own homes.

Scotland.

Complimentary Dinner to Professor Beattie.

To the long list of eminent pathologists that Edinburgh University has sent out to hold important posts throughout the world, Professor Beattie, of Sheffield, is the latest addition. The large number of men who attended the complimentary dinner given to him on June 7th, was a testimony to the high estimation in which he is held by his Alma Mater, to the respect he has won throughout the country by his medical abilities, and to the very sincere sense of loss that is felt by his Edinburgh medical brethren on his appointment to his present post. Dr. P. A. Young, President of the Edinburgh Australasian Club, was in the chair, and had the pleasure of congratulating yet another Colonial on his appointment to an important post, and Professor Greenfield, in proposing the health of Professor Beattie, spoke most affectionately and appreciatively of his late assistant.

Duties of School Board Medical Officers.

The Govan School Board decided some time ago to appoint medical officers, and are now advertising for six medical men to undertake the duties. The salary attached to the post is £150 per annum, but the duties are numerous and varied. The medical officer must advise the Board as to the ventilation, heating, lighting, and cleanliness of the schools, and periodically inspect the sanitary arrangements. In the event of an outbreak of infectious disease in a school, he must investigate the outbreak, take such action as may be immediately necessary, and report to the Board and to the medical officer of health, with whom he

is to co-operate in any measures proposed for the prevention of infection. In addition to advising the Board as regards periodic disinfection and cleansing of the schools with a view to the prevention of disease, he must undertake certain more purely medical duties. He is to examine and grant certificates as to the mental and physical condition of children seeking admission to special classes or schools, and must medically superintend such special schools and classes as may be allotted to him, and report twice a year on the mental and physical progress of the children attending them. To the extent and in the form prescribed from time to time by the Board he must medically examine the pupils attending the schools and keep records of the examination of each child. At present he is required to examine all the scholars in attendance at the infant departments and in Standards I and II; in the other standards he must examine the children on admission and twice thereafter during their school life. For this purpose he must visit the schools at least once a fortnight. He must also organize and superintend systematic measurements of height and weight, make observations on improvement or deterioration of physique, and inspect the physical exercises in use and report any practices he considers injurious to individual pupils. He must also examine candidates and junior students, and report upon cases of employees absent through illness. He is required also, by lecture, demonstration, or otherwise, to instruct teachers in the methods of recognizing the common ailments and defects of school children, in the practice of first aid for school accidents, in the general hygiene of the school and class room, and in the physiological principles which underlie physical training. He must also keep records and books, make annual reports and special reports if required, and perform any other medical duties that may be required from time to time by the Board, but medical and surgical treatment is no part of his duty.

THE GOVAN COTTAGE NURSES' TRAINING HOME.

The following letter, written on behalf of the Govan Medical Association, illustrates the nature of the abuses which may grow up in connexion with cottage nursing homes unless those who are responsible for their conduct realize the necessity for enacting and enforcing strict rules for the guidance of the matron and nurses and for the training of the nurses. The letter opens up several important questions which call for careful consideration. The Holt-Ockley system properly conducted can do useful work by filling a gap in country districts where population is scanty and available pecuniary resources small. It is not applicable to towns or popular suburbs where district nursing ought to be done by fully-trained nurses who have learnt to understand their duties not only towards patients but also to the medical men practising in the district. If the Govan Cottage Nurses' Training Home is turning out women after six months' teaching of the kind described, and allowing them to be looked upon as trained nurses, the Committee of Management is accepting a very serious responsibility, and we trust that the matter will be reconsidered after consultation with the medical profession through its recognized organizations. It would also be well that the Committee should ascertain by an inquiry into the system followed at other nursing homes and training institutions what experience has shown to be the true lines on which a trained home for nurses should be conducted.

Sir,—Permit me to direct the attention of your readers to a few facts concerning a nursing institution called the Govan Cottage Nurses' Training Home. This home has now been established in Govan for over four years. Its aims, as stated in the printed annual report, are to provide nursing in their own homes for the working classes and poor in the district of Govan and elsewhere, and to train women as cottage nurses and certificated midwives for work in rural and other districts. The training is said to be done under what is known as the Holt-Ockley system. No nursing is done inside the home, but lectures are delivered to the pupil nurses by medical men and instructions given in nursing by the matron. The practical experience is acquired by the pupil nurses going out to nurse patients in their own homes, sometimes with a doctor, but very often without a doctor. Often, too, the veriest tyros in nursing are sent to take charge of the most serious cases, and are left pretty much to their own resources in doing so. Of course, the matron is supposed to supervise the work; but, considering the wide area over which the work is scattered, the supervision must be very perfunctory indeed. In some cases, if the people can afford to pay for it, the nurse resides in the patient's house, but most of the nursing is done by visits to the patient once or twice daily. Another peculiarity of the system is that in order that the nurses may see as many cases as possible in their short period of training there is very frequent, sometimes daily, changing of the nurse at a case. The midwifery part of the training was at first supposed to be received in the Glasgow Maternity Hospital. However, last year only two nurses from the Govan Home were resident there, and that merely for the purpose of bringing down their learning to Govan to convey it to the other nurses in the home by acting as clinical teachers. But even this has now been stopped, and none of the nurses are sent to the Maternity Hospital. All now receive their midwifery training by lectures in the home from a medical man, and by practising on the inhabitants of the surrounding districts under the clinical supervision of the midwife of the home. The period of training extends to only six months. In some instances the nurses are retained for a few months longer to act as tutors to the beginners. A portion of this time (two or three months) is now spent by some of the nurses in the Elder Cottage Hospital, which contains fifteen beds, but of course this cannot count for much in the way of hospital experience. In this short period of time they are supposed to acquire a knowledge of general nursing and midwifery sufficient to enable them to be sent to country districts as "cottage" nurses and "rural" midwives; eighty such nurses, we are told, have already been sent to districts. By the word "cottage" is meant that they undertake, as well as nursing, other domestic duties in the homes of the patients, such as cooking, washing, care of children, etc., the training in which is also supposed to be acquired during the six months' residence in the home. For the pupil nurses' services a fee is charged wherever it can be got, and instead of the nurses' services being restricted to the working classes and the poor, their services are as freely given to people above that class—for example, to the inhabitants of the high-class residential districts of Ibrox and Bellahouston. For the services of the midwife and her pupils a minimum fee of 7s. 6d., partly payable in advance, is charged by the home. In this case also, until recently, the services were not restricted to any class. Now the midwifery work is supposed to be restricted to people where the householder's average weekly wage does not exceed 30s. No account is taken of other probable sources of income to the family besides the householder's wage. Govan, however, being almost entirely a working-class community, this limit will still allow the home a large proportion, if not the majority, of the population in which to compete with the doctor. This class in the past have been able to pay doctors' fees; these are not so exorbitant. Besides, if they can pay a fee to the home, why not to the doctor? When the home was started, none of the medical men of the district were consulted. Nevertheless, many of them looked upon it with favour, thinking that the nurses, although only in training, would be an improvement on the handy women who very often attend the wives of the working class, and encouraged their employment. However, after a time the true nature of the home became evident, and it was seen to be a fee-charging concern in active competition with the doctors in their rightful work. In many cases doctors had actually recommended the employment of the nurses to nurse their midwifery patients, to be cut out by the midwife of the home and her pupils at the subsequent confinement. But besides midwifery cases other kinds of cases, surgical and medical, were also attended and treated by the pupil nurses without a doctor being in attendance. The true aim of the home also soon became apparent, and instead of concern for the interests of the poor inhabitants of Govan, this was seen to be the turning out into country districts, in the shortest possible time, of women with a smattering of training picked up in a scrappy manner, certificated as nurses and midwives.

The matter was then taken up by the medical men of the town and representations made through the local Medical Union, the Govan Medical Association, to the Executive Committee of the home. After a lengthy correspondence and a conference, the Executive Committee drafted a code of rules for the matron's guidance. Previous to this there were no such rules, the sole working and directing of the home being left entirely in her hands, assisted by a midwife. In these rules two or three supposed concessions were made to the demands of the medical men—for example, as already mentioned, the services of the midwife and her pupils were to be limited to people earning less than 30s. per week; where the nurses had been introduced by a doctor to nurse a maternity case the midwife was not to be sent back to a subsequent confinement *unless the matron upon investigation found that the circumstances warranted it*; the pupil nurses were not to be sent to medical or surgical cases without a doctor, *unless in first aid and emergency cases*. These and a few other rules referring to minor points, however, only served to accentuate the objectionable character of the home. The members of the Govan Medical Association thereupon by resolution decided to give no further countenance or support to the home and to bring the matter before the profession in the JOURNAL. The two most objectionable features of the institution are (1) the competition with medical men, and (2) the inadequacy of training of the nurses and their competition

with highly-trained nurses. With regard to competition with doctors, this affects not only the practitioners of Govan, but also the medical men of the districts to which the nurses are sent. Just as the nurses in Govan are taught to look upon themselves as rivals and competitors with the medical men and to undertake work which properly belongs to the doctor, so they will act and are encouraged to do when they go to their districts. In one country district supplied with these cottage nurses there is a nursing association with rules and a tariff of subscriptions payable by the members entitling them to the nurses' services. In these rules the people are encouraged to call in the nurse before sending for the doctor, and it is stated that she is to use her discretion, and advise as to the necessity for calling the doctor or not. Here is first aid and emergency work with a vengeance. The tariff of subscriptions is also graduated to meet the resources of all classes, from the labourer to the professional gentleman, showing that there is no intention in the country districts, whatever the supposed intention of the Govan Training Home authorities may be, to restrict the services of these cottage nurses to the working classes and the poor. With regard to training, while other institutions for the training of nurses are doing their utmost to raise the standard and to bring the profession as near perfection as possible, we have here a deliberate attempt by the Govan Home Executive Committee to lower that standard and to institute an inferior grade of nurses. This they themselves admit. The medical men of Govan, however, desire to dissociate themselves from this action of the Executive Committee in foisting upon the country as certificated nurses to the exclusion of properly trained nurses, large numbers of women with the meagre and happy-go-lucky training received in the Govan home. Connected with the home as members of the Executive Committee and as the holders of honorary posts are a number of well-known medical men in the city of Glasgow. Besides these there are on the Committee a number of other influential ladies and gentlemen. The medical men connected with the institution are, however, the parties really responsible for the state of affairs. In matters pertaining to the nurses' training and sphere of work, the other members of the Committee will naturally look to their medical colleagues for guidance, and will no doubt look upon whatever meets with their approval as right.—I am, etc.,

FORBES BROWN.

Govan Medical Association, June 10th, 1907.

Cerebro-Spinal Meningitis in Scotland.

In the week ending mid day Saturday, June 8th, nine cases were notified to the Medical Officer of Health of the City of Edinburgh as suspicious cerebro-spinal meningitis, all of which were removed to the City Hospital at Colinton Mains. Five deaths occurred during the week, and 17 cases remain under observation. The Registrar-General for Scotland reports that in the same week in eight principal towns of Scotland 24 deaths were registered as due to cerebro-spinal meningitis, of which 15 were in Glasgow, 5 in Edinburgh, 3 in Leith, and 1 in Paisley.

Edinburgh Royal Infirmary.

At the close of the Board meeting on Monday, June 10th, Miss F. L. Spencer, the Lady Superintendent, was presented by the managers with a silver tea service and tray, the latter bearing the following inscription: "Presented with a silver tea service by the members of the Board of Management of the Royal Infirmary, Edinburgh, to Miss F. L. Spencer, as a token of their high appreciation of her most efficient, valuable, and devoted services to the institution during thirty years, first as Assistant Lady Superintendent, and then for the past twenty years as Lady Superintendent of Nurses.—June, 1907." The Lord Provost made the presentation, and assured Miss Spencer that the Board's good wishes went with her in her retirement. Miss Spencer, in a few words, expressed her thanks to the managers.

Plural Appointments in Edinburgh Hospitals.

A correspondent writes: Appointments on the staff of a hospital in a great teaching centre such as Edinburgh must of necessity go to specialists. The process of the subdivision of medicine and surgery into a variety of specialities is a progressive necessity in the natural course of events owing to our ever extending knowledge; several daughter specialties have already reached such maturity as to claim special hospitals and undivided attention. For the junior posts in large teaching hospitals, competition is always keen, the best man presumably always obtains the fulfilment of his aspirations, and what hospital practice and experience does he gain thereby? Practice and experience of the most valuable and the most essential nature undoubtedly, but also limited in extent, very limited in extent in hospitals with an overflowing staff. And yet large practice and wide experience are absolutely a *sine qua non* for the development of the finished specialist. For the patients, for the honour of the hospital, and for the school it is obviously a truism to say that, other things being equal, the man with the soundest fundamental knowledge and the greatest opportunities of practice and observation is the most valuable addition to the staff. As junior physician or as junior surgeon, his opportunities are necessarily comparatively small, and the satisfactory and full discharge of his duties demands, as a rule, no inordinate amount of time from one in the position of a specialist. For such a man, appointments of the same nature on two hospitals are of more than double value—in hospitals, that is to say, where the hours of duty do not cause difficulty. It is of equal importance for the reputation of the hospital and for the success of the youthful specialist that his opportunities of practice should be in no way curtailed. Granted that the efficient discharge of his duties in both cases is fully and readily capable of accomplishment, the man is of double value to both institutions. Superfluity of hospital appointments is undoubtedly an evil, entailing, as it necessarily does, a submaximum amount of success and result from each separate appointment; but to lay down the rule—one man, one hospital appointment—is to take a retrograde step in the course of development of medical, and more particularly, of surgical talent.

In the course of the next few weeks the managers of the Royal Infirmary of Edinburgh have to appoint a junior assistant physician and a junior assistant surgeon to the institution. In each case the successful candidate will look to become a specialist in his particular subject, and in no case, it may be expected, will a candidate depart from what he knows to be just and for the best interests of his school, his hospital, and himself.

West Yorkshire.

Police Surgeons in Bradford.

In the British Medical Journal for June 1st we drew attention to a new scheme formulated by the Watch Committee of the Bradford City Council for Police Surgeons. The portion of the scheme to which we particularly alluded was that in connexion with the appointment of three divisional surgeons. In our comments on this subject we are glad to feel that in writing as we did we correctly interpreted the feelings of the medical profession of Bradford in the matter, and we make no apology for again reverting to it, as the question is one of the greatest possible importance to our profession. The whole scheme appears to have been drawn up without consultation with any of the leaders of the profession, the Division, or any other local medical body. It is evidently on a par with a general endeavour to obtain the services of medical men at the lowest possible rate of remuneration. The Bradford Division called a general meeting of the profession together on Friday, May 31st, to consider the question. Nearly sixty members of the profession were present, and there was a general unanimity of opinion which was most inspiriting. The general practitioners were particularly glad to see that most of the consultants in the city were present. The whole scheme of the Watch Committee was considered, and the clauses as to the duties allotted to each post were discussed seriatim. Up to the present there has been one police surgeon for the whole of Bradford. At the time of his decease, a few weeks ago, the Watch Committee formulated the present scheme. The late police surgeon was paid a salary and received all the fees for attendance on accidents, for certificates, attendances at *post mortem* examinations, and various other duties. It is a little difficult to know what remuneration he received altogether; but it is probably not far from the mark if we put the amount at between £400 and £500 per annum. The new scheme provides for a "Chief Police Surgeon," three Divisional Police Surgeons and four Subdivisional Surgeons. The salary for the Chief Police Surgeon is to be £120 per annum, for the Divisional Surgeons £80 per annum, and the four Subdivisional Surgeons a capitation grant of 10s per man. There are to be absolutely no fees allowed, but where fees are paid by the magistrates or city coroner, or

by the Sessions or Assizes, they may be retained. On the whole scheme there has been an apparent desire to save something between £100 and £200 a year, to demand infinitely more exacting duties, and to do it all at the expense of the medical profession. We are glad that the Division has taken up the matter so energetically, and has been so well supported by the rank and file of the profession. The general conclusion arrived at was that a retaining fee was necessary for the Police Surgeonship; but that all fees for street accidents, certificates and all other duties, except the attendance on constables, should be paid for as extras. It was felt that on several points more knowledge was required of the duties involved; that "appliances" should not be provided by the surgeons with "medicines," and that the Watch Committee, not the Chief Constable, should approve a *locum tenens* to do the work when the surgeon was away from home, and also that the diary with the record of duties performed should be submitted direct to the Committee and not through the Chief Constable. Some minor suggestions were also adopted. The meeting was pleased to hear that the Chairman of the Watch Committee was willing to receive a deputation from the profession in connexion with the matter. The deputation was appointed, and we have no doubt will be able to convince the Watch Committee of the reasonableness of the attitude adopted by the medical profession in the matter.

North Staffordshire.

MOND GAS AND POTTERS' OVENS.

THE success of certain experiments in the application of Mond gas to firing potters' ovens, which have been undertaken by Mr. T. W. Twyford, promises to do a great deal for the health of the towns of North Staffordshire. The general use of this fuel would largely decrease the smoke element which is at present a necessary accompaniment of good trade in the Potteries. The experiments have now overcome the difficulties of increasing the normal calorific value of the gas so that a temperature of 1,350° C. is procurable in the ovens, of diffusing the temperature properly, and of placing the gas under full control. The cost of this method of firing is less than that of coal firing and the cost of installation and adaptation of existing ovens is small, while the saving in wear and tear, and the avoidance of loss by reason of greater regularity of firing will be enormous. The system therefore is both cleanly and economical.

Bristol.

LUNATIC ASYLUM.

THE report of the Visiting Committee of the Council of the Lunatic Asylum for the City and County of Bristol shows that on December 31st there were 923 patients in the institution. This number is slightly smaller than that of a year before, and was made up of 422 males and 501 females. Not all of these are chargeable to the city, for there were 17 private patients, 20 from Cardiff, 3 from out-county unions, and 3 criminals. The Committee reports that it has experienced great difficulty in satisfying the Commissioner on the extension plans, though these have been passed not for 45 beds as intended but for 90, which will relieve the overcrowding on the male side. The report of the medical officer follows, giving details of the admissions, but perhaps the most interesting figures are those showing the percentage of recoveries. During the past year it was 41.85, a slightly higher figure than last year, though not quite the highest recorded. The report of the Visiting Commissioners in Lunacy calls attention to the overcrowding on the male side by 11 patients, with vacancies on the female side of 52 beds. The condition of the patients is favourably commented on, and while facilities were given to all inmates of speaking to the visitors, no complaints worth mentioning were made. The meals were inspected and approved of—the report does not say they were practically tested. The asylum is reported to be well maintained throughout, and the suggestions of previous visitors on the ventilation stated to have been carried out. The chaplain reports on the spiritual welfare of the inmates, stating their attendance to be good and behaviour exemplary, but deplores the destructive propensities of the patients as regards books, and particularly the bound magazines from the library.

South Wales.

M.O.H. AND J.P.

AT the Aberavon County Police Court on June 3rd a rather curious point was raised in the course of a case against a butcher summoned by the Margam District Council for selling a quantity of liver unfit for human food. The liver was taken to the police, and the medical officer who condemned it ordered it to be destroyed. Proof was given of the adoption of the Public Health Acts (Amendment) Act, 1890, by the Council. For the defence it was submitted that there was no case to answer, as the proceedings were improper and not in accordance with the Act. In this case Dr. Davies had acted as medical officer and justice of the peace, which, it was submitted, was highly improper, as the Act definitely referred to two separate persons. The meat had been taken to Dr. Davies as medical officer of health to decide whether it was fit for human food or not, and, in addition, he had ordered it to be destroyed. It was argued that after Dr. Davies had once acted as medical officer he had no right to act as a justice of the peace. It was shown on behalf of the Council that personal knowledge of the offence was unnecessary, and that there was no law to prohibit a medical officer and justice of the peace acting in the two capacities. The magistrates, after a retirement, ruled against the points submitted, and found defendant guilty of the charge. A fine of £3 and £7 costs was imposed.

WELSH MUSEUM.

The Merionethshire County Council, on June 5th, appointed Dr. William Williams (Penarth), Medical Officer of Health to the Glamorgan County Council, a native of Merioneth, as Representative of that county on the Court of Governors of the National Museum of Wales at Cardiff.

MIDWIVES IN GLAMORGAN.

The Executive Officer has reported to the Midwives Act Executive Subcommittee of the Glamorgan County Council that the number of midwives who had notified him their intention to practise in the county during 1907 was 634; of these, 595 had been certified by the Central Midwives Board on account of having been in bona-fide practice since July, 1901; the remaining 39 held certificates of training in midwifery. The work of inspection had been continued by Nurse M. Evans, L.O.S., 266 visits having been made during the quarter. Nine cases of puerperal fever were voluntarily notified by the medical practitioners in the county, and these were investigated. No midwives were suspended except for disinfecting purposes. Reference was made to the new rules issued by the Central Midwives Board, which came into operation on May 1st. A letter was sent to each of the midwives practising within the county calling their attention to the new rules and advising them to obtain a copy without delay.

MEDICAL AID AND SELF-HELP.

For nearly a quarter of a century the Cardiff Provident Dispensary has carried on its excellent work in Guildford Street. The work has gone on quietly, and hence is little known except to the beneficiary subscribers and the few others who have the institution's affairs at heart and take part in the management. The Chairman of the Committee of Management has issued an appeal for subscribers, who on payment of an annual subscription of not less than 5s. become Governors. The appeal sets forth that the provident dispensary is the only institution in the city which provides medical aid for the thrifty poor on the basis of self-help. Some 5,000 people are every year enabled, by small weekly payments, to secure efficient medical attendance in sickness, together with proper medicines. By this means the stigma of pauperism is avoided on the one hand, while on the other there is a considerable saving to the overburdened ratepayers, and the infirmary is relieved of much work which would otherwise fall upon it. About 85 per cent. of the expense of the institution is defrayed out of the contributions of the

beneficiary members. The accounts of the institution show a deficit on the general fund of £207 16s. 6d., which is the accumulation of some years, and the object of the present appeal is to secure at least 100 new subscribers in sums of 5s. and upwards.

JOINT ASYLUM, CARMARTHEN.

At a special meeting of the Committee of Visitors to the Joint Counties Asylum, Carmarthen, on June 8th, the final election was made from the four selected applicants for the post of medical superintendent, the salary offered being £450 a year, with house, vegetables, gas, and coal. The previous medical superintendent, Dr. Goodall, is now medical superintendent of Cardiff City Asylum; his salary before he left Carmarthen was £700 a year. The applicants were Mr. J. Richards, M.B., C.M., F.R.C.S. (Edin.), the deputy medical superintendent and senior medical officer of Leicestershire and Rutland Asylum; Mr. W. Stanley Hughes, M.B., B.S. (Lond.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), senior assistant on the male side of the London County Asylum, Claybury, Woodford Bridge, Essex; Mr. F. Grice Jones, M.D., C.M. (Aberd.), who has been for six years at the North Wales Asylum, Denbigh; and Mr. J. M. Rutherford, M.B., C.M. (Edin.), who has been at the Royal Edinburgh Asylum for the past eleven years. The first three are Welsh-speaking Welshmen. At the final voting Dr. John Richards received nine votes and Dr. Grice Jones eight.

SPECIAL CORRESPONDENCE.

PARIS.

Professor Hallopeau on the Treatment of Syphilis by Atoxyl.—M. Roux on the Early Diagnosis of Tuberculosis.—Change of Chairs in the University of Paris.

At the last meeting of the Académie de Médecine, Professor Hallopeau made an important communication on the treatment of syphilis by atoxyl, according to the method of M. Paul Salmon, indicated by him at meetings of the Société de Biologie in March and April. The results of this drug in the treatment of sleeping sickness and the analogies in structure between the organism of that disease and that found in syphilis led many pathologists, among whom Professor Lassar must be cited, to try it in the treatment of syphilis. M. Paul Salmon, who works in M. Metchnikoff's laboratory at the Pasteur Institute, taking into consideration the quantities of the drug, supported by sleeping sickness cases, administered it to syphilitics on similar lines, but he soon found that the *Treponema pallidum* is more resistant than the trypanosoma. Having a large number of cases in his wards at the St. Louis Hospital, Professor Hallopeau has been able in five weeks to observe seventy-two cases under this treatment, which with the cases of M. Salmon, Professor Lassar, and M. Balzer, of the St. Louis Hospital, bring up the number of observations on this method to over 150. The following are Professor Hallopeau's conclusions:

1. Atoxyl has a powerful action on the infectious agent of syphilis.
2. We now possess, against syphilis, a third specific agent equal, if not superior, to its predecessors.
3. Secondary and so-called infectious such as those which give rise to vegetating condylomata and certain suppurations, appear to be refractory to the treatment.
4. The same is true of syphilitic dentopathies, leucoplasias of the tongue, and in hemiplegia; but the drug will probably be found to have no influence on tabes and general paralysis.
5. It would very probably be possible to cure syphilis by injections of atoxyl if it were possible to repeat them for a long enough period at short intervals.
6. Unfortunately this is not possible, and the injections have to be stopped after a varying number have been given owing to symptoms indicating intolerance.
7. These symptoms consist of gastro-intestinal pains, nausea, vomiting, general trouble, painful sensation in the limbs, painful micturition; generally these symptoms are mild and transient, but they may in exceptional cases take on an alarming character.
8. They can be avoided by limiting the injections to a small number, by only using large doses for the two first injections, by leaving an interval between each successive injection, and by stopping the moment any abnormal symptoms appear.
9. Old people, patients who are of small stature, and those who have a predisposition are predisposed to these untoward effects, and should be given smaller doses.
10. Doses given in succession accumulate in the organism, and consequently it is possible to keep the patient under the influence of the drug with smaller doses than the initial injection.
11. It is highly probable that atoxyl introduced into the organism breaks up after a certain time into toxic products; it is impossible to explain otherwise the sudden onset of symptoms, frequently without any premonitory phenomenon. The rapidity and varying activity of this dissociation would explain differences in tolerance, and it will be wise, therefore, to look for more stable compounds.
12. The drug is eliminated fairly rapidly; at the end of fifteen days no further trace is found in the urine; and, according to M. Salmon, a fresh course can be begun without danger. Further research will show in what measure the series of injections can be repeated without giving rise to chronic arsenical poisoning, and if they will produce an immunity like that found in arsenic eaters.
13. The question arises whether it is possible to determine what part is played by the aniline and what by the arsenic in the genesis of these accidents? The latter certainly preponderates.
14. The earliest research had to be undertaken to show the microbicide activity of the drug, independently of all other local or general medications; in future there will be grounds for administering at the same time mercury and potassium iodide according to the prescribed rules.
15. The direct local action of atoxyl has not yet been established, but injections should be given in the neighbourhood of a hard chancre, or of gummata, exostoses, and tertiary ulcerating syphilides.
16. Experiments on monkeys by Metchnikoff and Salmon appear to indicate that atoxyl administered after an exposure to infection is capable of aborting disease. M. Metchnikoff thus describes the experiment that shows this: "Seven monkeys (macacus) were inoculated with the same syphilitic virus; during the incubation period of syphilis two of these animals were given by injection a certain dose of atoxyl. While the chancre appeared in the five monkeys not subjected to the arsenical treatment, the two monkeys treated did not show any visible sign of syphilis. It is, then, possible by the use of arsenic to prevent the development of the syphilis inoculated and to cause it to abort. Besides its *curative* properties on established lesions of syphilis, arsenic shows *preventive* properties."

In treating his patients Professor Hallopeau always uses a 10 per cent. solution, and the injections are made into the buttock. He has been able, without causing any morbid signs of intolerance, to give eight injections of 75 cg. followed by two injections of 50 cg., but this was an exceptional case; generally signs of intolerance arose after from five to eight injections. Professor Hallopeau advises that the treatment should be carried out as follows: A patient with an average constitution is given first, at two days' interval, two injections of 75 cg., and then four further injections of 50 cg. each, with three days' interval between each. There are grounds for thinking that these doses will be sufficient, on account of their cumulative effect, to maintain the drug in sufficiently active proportion in the body. Should any warning symptoms of intolerance arise during the series of injections, such as gastric or abdominal pains, general malaise, or weight in the limbs, the treatment must be immediately stopped and only recommenced after their disappearance.

At a recent meeting of the Académie des Sciences, M. Roux made a communication on the early diagnosis of tuberculosis. A little while ago von Pinquet of Vienna described the method, which consists in making a scarification on the skin and then rubbing it with a tampon of wool moistened with a few drops of tuberculin. If the patient is free from tubercle, the incision cicatrizes without any accident; if he is tuberculous, a minute pustule develops on the small incision rubbed with tuberculin. M. Vallée (Alfort) has shown that this particular reaction occurs also in animals. In healthy cattle the incision of the skin, followed by rubbing with tuberculin, produced no reaction. On the other hand, in tuberculous cows, under the same treatment, an inflammatory dermatitis occurred, which lasted for five days and then slowly disappeared.

Professor Hutinel, Professor of Medical Pathology in the University of Paris, has been appointed, at his request, Clinical Professor of Children's Diseases. In the same way Professor Segond, Professor of Operations and Apparatus, has been appointed Professor of Clinical Surgery.

Mr. Henry Phipps, the American millionaire, has given £200,000 for the building of a hospital in Philadelphia for persons suffering from tuberculosis.

CORRESPONDENCE.

HE DEPUTATION TO THE PRESIDENT OF THE BOARD OF EDUCATION.

SIR,—Mr. McKenna's reply to the deputation on ne 6th needs correction in one or two particulars.

In the first place, when speaking on the point which is such importance to the profession as well as the nation namely, the co-ordination of the school medical work th that of the public health officers—his interjection was abrupt that I naturally concluded he did not wish to ar any further argument.

I therefore concluded with four questions which the ommittee that drew up the memorial to the President cided should be put in a direct manner.

It is quite unnecessary to characterize a question as remptory, or to plead the necessity of further delay, hen the Minister and his Department have been given ree years to make up their minds on the main question d one year on the administrative point.

The suggestion that the medical profession should be patient" for three years when such an issue as the pre-ention of physical deterioration is at stake appears to me be as unreasonable as the further suggestion that the ongress on School Hygiene next August will in any way odify the principles we ask to be established.

Mr. McKenna's sensitiveness against me personally is pparently due to his believing an absurd story that I ropose giving up my profession and contesting his seat Parliament. It is easy to understand that a Minister ho is satisfied to treat a great national question from ich a basis of personality and misstatement would also ake such assertions as that it is difficult to get teachers teach hygiene and temperance when many are already oing it, and that it is difficult to compose syllabuses for ich teaching when Mr. Birrell and he had actually had ir drafts before them for a year.

Finally, whatever difficulties exist, real or imaginary, it id not appear to be realized by Mr. McKenna and his epartment that they are appointed by the nation to meet ich difficulties and not to make them.—I am, etc.,

London, W., June 12th. VICTOR HORSLEY.

TEACHING OF MIDWIFERY.

SIR,—Although you have kindly afforded me space in our columns on two or three occasions when I endeavoured combat what I believe to be an erroneous conclusion—amely, that the unsatisfactory results of non-hospital aternity cases is due to carelessness by medical tendants—yet I would crave your indulgence once more.

In your leader of June 8th you say: "The broad fact at the application to midwifery practice in lying-in ospitals of Lord Lister's teaching has resulted in the osition in them of puerperal fever, while no change of ne same importance has yet affected lying-in women out-de hospitals, shows the need for improvement in the ractice of midwifery."

Granted; but whose practice—the doctor's, who attends small percentage of cases, or the midwife-nurse, or handy oman? Dr. Ebenezer Davies, Executive Officer of the cal supervising authority for Swansea, states in his ldress, reported in your issue of June 8th: "Of 90 mid-ives in Swansea he did not think that there were more an 8 or 10 who were qualified by examination."

What we want, Sir, in the General Medical Council, in ne Obstetrical Society, and, I fear, in your own columns, the rational handling of vital statistics, and then we ill be spared a charge of criminal carelessness which is, believe, absolutely untrue, and for the proof of which I ave asked in the JOURNAL in the past and do so now gain.—I am etc.,

Southampton, June 11th. JAMES C. HOYLE, M.B.

ACUTE COLITIS.

SIR,—Dr. Sidney Phillips's interesting paper on acute olitis and ulcerative colitis again raises the question hether, in well-marked cases of this grave and dangerous sease, any treatment short of thorough and efficient ainage of the large bowel through one or more temporary penings is likely to prove successful.

The medical treatment of this complaint is admittedly most unsatisfactory and must be so, while treatment by vaccines is still *in futuro*.

The destruction and utter rottenness of the colon wall so often found *post mortem* surely tends to show that drainage should be resorted to early, and not postponed until inflammation and ulceration have caused grave structural changes in the colon wall, or severe haemorrhage has made it imperative.

Thorough drainage of the large bowel carried out through an opening in the caecum and descending colon combined with gentle irrigation of the intervening portion with bland and unirritating antiseptics would seem to offer the best chance of dealing effectively with this severe and too often fatal condition.—I am, etc.,

Caterham, June 10th. GEORGE A. CLARKSON.

AN ABNORMAL RISE IN THE AVERAGE LEVEL OF THE DIAPHRAGM.

SIR,—In his elaborate paper published in the BRITISH MEDICAL JOURNAL for April 20th, Dr. Stacey Wilson argues with much ingenuity that, when the volume of the intrathoracic viscera is so much reduced as materially to draw up the diaphragm, an estimate of the total amount of blood in active circulation, and to a certain extent of its quality, may be based upon the alteration observed in the average level assumed by the diaphragm. So large an inference could not have been advanced without a solid foundation of evidence. This, Dr. Wilson has endeavoured to supply; and his arguments tend to justify in a great measure his main conclusion, however startling this seems at first reading. It is interesting to note that the "mutual influences between the abdomen and the circulation" have in like manner recently been studied by Stadler and Hirsch[1] experimentally, and clinically by Schmidt,[2] who concludes that in heart disease the raised level sometimes attained by the apex beat of the heart owing to gastro-intestinal inflation might almost be utilized as a measure for the degree of venous congestion of the abdominal organs.

It is not, however, my purpose to attempt a discussion of the main proposition presented to us, but to refer to points of technique which need not affect the general conclusions. The question is whether in any given case we can express with sufficient precision the level of the diaphragm in terms of the ribs, of the costal interspaces, and of the nipple line. There is in reality only one strictly reliable anatomical standard of measurement for its variations, and that is the vertebral column. As this is not easily available for clinical reference, the next best skeletal landmark is the sternum; only, owing to the mobility of its lower end, to which the central tendon is connected, we cannot regard the sternum as a perfect standard. Let it be stated too, incidentally, that its displacements forwards and backwards would influence the degree of tension of the membrane antero-posteriorly, and its apparent level. Nevertheless, in normal subjects the anterior level of the diaphragm may generally be identified by percussion as occupying a definite anatomical situation—namely, the top of the infrasternal notch. This is also the exact normal level of the "hepatic line" of absolute liver dullness, whilst the "suprahepatic line" of partial dullness is, as stated by Dr. Wilson, apt to vary in its distance above the latter. As, putting aside rare pathological exceptions, the liver and the diaphragm always rise and fall bodily together, our most reliable method of localizing the diaphragm would be to determine the extent of any shifting of the "hepatic line" up and down the infrasternal space.

Greater attention has of late been bestowed upon the art of percussion in Germany, and it has at last been recognized that there is no difficulty in determining that line even on the left side where an entirely distinct dullness, that of the heart, lies above it; and still less difficulty in identifying the same line below the sternum and at the right base. This is also true when the extraordinary condition occurs which I described in connexion with the spleen as "boxy," and which I have subsequently met with in the liver. It does not appear that any other skeletal landmarks can be used with accuracy for a determination of the absolute rise or fall of the diaphragm, particularly if they be so shifty as are the ribs in the

[1] *Mitth. a. d. Grenzgeb.* Bd. 15. H. 3 and 4.
[2] *Berl. klin. Woch.* No. 14. 1906.

nipple line, even though the relative or apparent rise or fall be considerable. As a fact, when the thorax collapses upon reduced abdominal and thoracic viscera the lower ribs and interspaces are greatly depressed, whilst the absolute diaphragmatic level may have varied but little. Careful measurements taken in two adult female cases of the kind Dr. Wilson has described have enabled me to demonstrate that it is possible for the infrasternal level of the diaphragm to drop to half an inch below the angle, and at the same time for the level taken at the left nipple line to be apparently raised as high as the fifth rib, although the line drawn through these two levels remains horizontal.

As the thoracic contents are much more largely made up of air than of blood, a depressed respiratory function from lowered vitality, from loss of exercise, or from insufficient diet, might account for a good deal of the thoracic collapse associated with an apparent rise of the diaphragm. In both the patients referred to, the effect of a quarter of an hour's respiratory exercise in bed was to raise the "hepatic line" in the infrasternal fossa almost to the normal, and to cause so material a rise of the lower ribs that the upper level of the resonance of the stomach corresponded with the sixth instead of the fifth interspace. It is well known that if the thoracic diameters be measured in the tight laced, and in the unlaced condition a considerable difference will be found; and this shows that the diaphragm can assume very different attitudes between its position of tension as a pumping membrane, and its position of relaxation analogous to the flaccidity of an imperfectly-inflated balloon.

Although it may perhaps be questioned whether the rise in the level of the diaphragm described by Dr. Wilson may not in some of his cases have been of the relative kind rather than an absolute rise, his suggestive paper opens up important considerations; and we shall probably all agree with his practical conclusions that a determination of the upper level of the gastric resonance is of value in diagnosis and in prognosis, and affords indications for treatment.—I am, etc.,

London W. WILLIAM EWART.

REGENERATION OF NERVES.

SIR,—Dr. Robert Kennedy, in the letter published in the JOURNAL of June 8th, p. 1369, takes exception to my use of the word "untrustworthy." This adjective was not applied, or not meant to be applied, to the clinical observers who have recorded cases of early recovery of sensation after secondary suture of cut nerves, but rather to the evidence adduced by patients themselves.

I am quite willing to admit that the four cases recorded by Dr. Kennedy in his paper in the *Philosophical Transactions* are striking, and that due care appears to have been taken to exclude any bias of the patients' own mind. On the other hand, Dr. Kennedy admits that *every* surgeon has met with cases where no early return of sensation occurs, and from the much more numerous cases recorded by Head and Sherren, he will no doubt also admit that cases of early recovery are the exception and not the rule. From his own point of view auto-regeneration would appear to be an unusual phenomenon.

Granting that the early recovery was genuine in Dr. Kennedy's cases, it seems to me that there is a much more probable explanation than that advanced by Dr. Kennedy. They are doubtless instances where extremely rapid growth of new axis cylinders from the central into the peripheral stump of the nerve took place. As a general rule the growth takes place more slowly, because the new axis cylinders have the impediment of either cicatricial tissue or the presence of degenerating nerve fibres to contend against. Dr. Kennedy's cases are happy examples of the date of the secondary suture being such that these impediments were minimal. The preparatory work of the neurilemmal cells in the distal segment of the nerve had apparently reached that stage when they were most fitted to receive the new axis cylinders, and by their metabolic activity favour the onward growth of the fibrils at a rapid rate. Marinesco has adopted the word *apotrophic* to indicate this nutritive action of the neurilemmal framework, and he thus gives his adhesion to the views of its function advanced by Mott, Edmunds, and myself.

The examination of Dr. Kennedy's own records supports the same view. In 5 of the 4 cases sensation returned first in the parts nearest the suture, and later in more distant parts, such as the finger tips. This surely prove that regeneration was proceeding in a peripheral direction The record of the fourth case—No. 1 in Dr. Kennedy' list—gives no details of the order of recovery.

The only difficulty remaining is the unusual rapidity of the reparative process. I say "unusual" becaus most of our ideas of the rate at which axis cylinder grow are derived from cases in which grave impediment to growth are present. I have, however, been struck i some of our experiments with the rapidity with whic the central unites with the peripheral end even when a inch or more of nerve has been excised; in some case there was a well-defined strand of union after a fe days. This is specially the case when young an vigorous animals are employed. In 2 of Dr. Kennedy' cases the patients were in the prime of life—aged 29 an 37 respectively; the other 2 were children—aged 6 and 1 respectively.

The introduction of the new methods of Cajal has no furnished us with a method of tracking the growing axi cylinders with a certainty that was previously lacking and Marinesco, in one of his recently-published papers, availing himself of these methods, has demonstrate that the lengthening of the regenerating fibres is demon strable twenty-four hours after a nerve has been cut.— I am, etc.,

London, June 8th. W. D. HALLIBURTON.

PHYSICIANS AND PRIVATE HOME COMPANIES.

SIR,—I notice that a company has been formed to pr mote a private hospital or nursing home, and that man of the shareholders and most of the directors are Fellow of the Royal College of Physicians. For the gentlemen i question I have the greatest possible esteem and shoul not wish to mention their names, but I submit that a medical practitioner, and certainly no Fellow of a Colle of Physicians, is justified either in promoting such private hospital or in acting as director of such for limited company. The rule obtains that Fellows of College shall not engage in trade or supply their patien with drugs, and this presumably because they shou have no financial interest in the amount of medici which a patient takes or in the articles which they m recommend him to use. Surely it is of graver mome that a physician may not be a director of a private hospit or nursing home to which he sends a patient. I am, etc.,

J. C. MCWALTER, M.A., D.P.H., M.D.Brux.,
Dublin, June 10th. Barrister-at Law.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Appointments of Examiners.

THE following have been appointed Public Examiners in t branches of Natural Science indicated: W. N. Stocker, M. Fellow of Brasenose College, in Physics; N. V. Sidgwick, M. Fellow of Lincoln College, in Chemistry; W. Ramsden, D. Fellow of Pembroke College, in Physiology; A. Dendy, D.S London, in Zoology.

Department of Ophthalmology.

The Margaret Ogilvie Reader in Ophthalmology announ his fourth annual Summer Course on Ophthalmology to held from July 15th to 27th. The course (fee £5 5s.), whic not confined to members of the University, will consist lectures and practical instruction and demonstrations by Reader, assisted by a number of distinguished English a foreign ophthalmologists and others.

Professorship of Pathology

The electors give notice that they intend, if possible proceed to the election of a professor early in the month July.

Candidates are requested to send their applications to Registrar of the University on or before July 1st. No te must also are to be submitted but candidates should send with their names, ten copies of a statement of their qualif tions, accompanied by references or any other evidence t may desire to offer.

The Professor of Pathology is bound by statute to lecture give instruction in pathology. He also has charge of Pathological Laboratory and of the pathological collecti belonging to the University.

He is not allowed to engage in private medical or surg practice.

[1] Marinesco and Minea, Procesele de Phenomenes de Reg [illegible] Nerfs [illegible] Section, *Compt. Rend. Soc. Biol.*, lx p. 193.

The University guarantees an income of £700 per annum from the University chest. This may or may not be augmented hereafter by a Fellowship in a college.

UNIVERSITY OF CAMBRIDGE

THE Professorship of Zoology and Comparative Anatomy is vacant owing to the death of Professor Newton.

Research Studentship in Medical Entomology.

The Vice-Chancellor announces that Professor Nuttall has received a letter from the Under-Secretary of State, Colonial Office, stating that the Advisory Committee for the Tropical Diseases Research Fund have advised that a grant of £100 for two years should be made to assist in establishing a studentship in medical entomology in Cambridge. Candidates are requested to send in applications to Professor Nuttall before Monday, June 17th, 1907.

The Balfour studentship will be vacant at Michaelmas next. Applications should be made to the Registry of the University, Cambridge, before October 1st, 1907.

Professor Woodhead, Professor Nuttall, and Dr. Graham Smith have been appointed to represent the University at the International Congress of Hygiene and Demography to be held in Berlin in September, 1907.

Dr. Humphry has been appointed Assessor to the Regius Professor of Physic for 1908

The following degrees were conferred on June 6th:

M.D.—W. E. M. Ede, King's; G. R. Rickett, King's; J. Wharton, Joh.; E. H. Harrison, Cla.; B. Hudson, Cla.; C. R. Howard, Pemb.; S. L. O. Young, Christ's

M.B., B.C.—H. J. Clarke, Trin.; G. G. Packe, Trin.; L. Nicholls, Down.

M.B.—W. H. R. Sutton, Down.

B.C.—A. T. Densham, Joh.; G. F. Greenwood, Sid. Suss.

UNIVERSITY OF LONDON.

The Concentration Scheme.

THE following letter has been addressed by the Treasurer of Guy's Hospital to the Principal of the University of London:

"Dear Sir,—As Treasurer of Guy's Hospital I have to bring to your notice the following resolution passed at a School meeting on the 7th inst. and approved by me:

That, in view of the resolution of June, 1905, that the Medical School of Guy's Hospital is not committed to any particular line of action with regard to the concentration of preliminary and intermediate studies, the School now desires the Treasurer to inform the Senate of the University of London that it is of the opinion that the proposed scheme of three centres for the teaching of such subjects at University College, King's College, and South Kensington, and the institution of internal examinations at these centres, would not be to the advantage of medical education in London, and that it does not propose to abandon the teaching of the preliminary and intermediate subjects under these circumstances.

"I desire to add that this decision must not be construed as adverse to the principle of the concentration of the preliminary and intermediate medical studies in the University, but solely as directed against the particular proposals for concentration indicated in the resolution.

"I am, dear Sir,

"Yours faithfully,

"H. COSMO O BONSOR, Treasurer.

"Guy's Hospital, S.E., May 10th, 1907."

UNIVERSITY OF GLASGOW.

Final Examination for Medical Degrees.

THE University Court has come to an important decision regarding the final examination in medicine. At a meeting recently held, a resolution from the Senate was accepted and passed to the effect that a second final examination be held in December. Hitherto there has only been one regular examination for the final medical subjects. It was held in July, but, in order to enable those candidates to come up again for examination who had been referred in one subject for three months' further study, it was the custom to hold a second examination in October. Students, however, who were referred for six months had no opportunity of submitting themselves for examination before the following July. The new examination will be held first in December, 1908.

UNIVERSITY OF BIRMINGHAM.

Post-Graduate Course.

THE post-graduate lecture on the Value of Preventive Methods against Infections, by Dr. John Robertson, arranged for Thursday last, has been postponed till June 20th, at 4 p.m.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MONDAY last, June 10th, was the latest day on which applications from candidates for the Council elections on July 4th could be received. As already announced, Sir John Tweedy will not seek re-election, whilst the remaining three members who retire—Mr. Page, Mr. Mansell Moullin, and Mr. Eve—will all come forward once more as candidates. The new candidates are four in number, namely, Mr. Higgens, Mr. Bruce Clarke, Mr. Charters Symonds, and Mr Dunnett Spanton of Hanley, in order of their date of Fellowship, but Mr. Spanton is the oldest member (1862) among the four, and was elected Fellow in 1898 as a Member of twenty years' standing.

Mr. Higgens (F.R.C.S. 1871, M.R.C.S. 1868) would replace, if elected, another eminent ophthalmic surgeon, the late President, who retires. Mr. Higgens's work is too well known to need further mention, and Guy's men will doubtless support him as an honour to their school.

Mr. Bruce Clarke (F.R.C.S. 1879, M.R.C.S. 1877), Surgeon and Lecturer on Surgery at St. Bartholomew's Hospital, is one of the pioneers of modern renal surgery in this country. His name is intimately associated with Knowsley Thornton, Morris, Newman, and others who in the Eighties established nephrectomy and nephrolithotomy as operations which should be undertaken by every surgeon of average ability. Mr. Bruce Clarke's reputation in that field was established by his Jacksonian Prize Essay in 1886.

Mr. Charters Symonds (F.R.C.S., 1881; M.R.C.S., 1875), is Surgeon and Lecturer on Surgery at Guy's Hospital, and is the author of several interesting monographs on important surgical subjects, especially diseases of the larynx and adjacent parts amenable for operative treatment.

Mr. W. Dunnett Spanton (F.R.C.S., 1893; M.R.C.S., 1862), J.P., is coming forward as a representative more especially of provincial Fellows, and also of Fellows unattached to teaching schools. The staffs of the majority of the general hospitals in the country do an immense amount of work, and are brought into contact with a large number of newly-qualified young practitioners. Yet, in the opinion of many Fellows of the College, provincial hospital surgeons are not adequately represented on the Council. Mr. Spanton has for long been connected with the Association, and is a past president of the Staffordshire Branch.

ANDERSON'S MEDICAL COLLEGE, GLASGOW.

Dr. R. BARCLAY NESS has resigned the position of Professor of Medicine at Anderson's Medical College, and in his place the directors have appointed Dr. J. M. Cowan, who has for some years conducted a successful class in medicine at the Western Medical School, and was recently appointed one of the physicians to the Royal Infirmary.

APOTHECARIES HALL OF IRELAND.

AT a general meeting of the members of the Apothecaries Company, held at 40, Mary Street, Dublin, on June 7th, Dr. Seymour Stritch, J.P., in the chair, it was proposed by Dr. Montgomery, seconded by Dr. Finucane, and passed unanimously:

That the best thanks of the Company are hereby tendered to Colonel Adye-Curran, M.D., F.R.C.S., for his untiring and successful efforts on behalf of this Hall in the General Medical Council.

OBITUARY.

HENRY COULING, M.R.C.S.ENG., F.R.C.S.EDIN., HOVE.

WE regret to announce that Mr. Henry Couling of Hove died on May 31st, 1907, aged 70.

Henry Couling will be sadly missed by a large circle of friends and patients, for though he had not actively practised for the last few years, he lived in the hearts of many people. He was essentially a most lovable man, of large heart, unbounded sympathy and fine temper, magnanimous in his dealings at all times and quick to resent injustice to others. He spoke no slander nor listened to any.

After an industrious and hardworking student's career at Guy's, where he was held in high esteem by the staff and was greatly liked and respected by his fellow students, many of whom being his juniors he materially assisted in their practical work, he settled more than thirty-five years ago in Brighton and became Assistant Surgeon to the Sussex County Hospital there in 1871. As a hospital surgeon he was a pattern: sound in judgement, shrewd and conscientious in his work, kind beyond words to his patients and unsparing in the trouble he would take on their behalf; nor did he forget them when they left the hospital and had returned to their homes. He soon became well known in private practice, and made many friends before a severe illness compelled him for a time to give up work and seek health in a warmer climate. On his return to Brighton his earlier friends soon rallied round him, and he rapidly came to the front, enjoyed the full confidence of many leading members of the profession, and for years carried on one of the largest provincial private practices in this country; yet he retained throughout a character most diffident and modest, though always ready to help his friends with advice and sympathy whatever might be their difficulties;

it may truly be said of him that patient and friend were synonymous.

For several years past Mr. Couling had become so crippled by gout and by heart trouble that he was able to do little, and that little intermittently, but he was cheered to the last by the visits and attentions of many grateful patients. He was buried in Hove Churchyard on Tuesday, June 4th.

The news of the death of Dr. George Henry Biden of Wallington, Surrey, which occurred on May 28th, will be heard with regret by his many friends, and especially by those with whom he was associated in the more active portion of his career in Wales and Cumberland. He was the youngest son of W. M. Biden, an officer in the Royal Navy, and, pursuing his medical education at Charing Cross Hospital, became L.R.C.P. in the year 1890. For about a year after leaving his hospital he practised in the suburbs, but on his marriage purchased a practice in Newtown, Montgomeryshire, where he obtained appointment on the staff of the Montgomeryshire Infirmary and the surgeoncy of the Oddfellows, the Druids, and other friendly societies. Some three years later, however, he made a further move to Penrith, in Cumberland—a place with which his wife's family was connected; there he remained for upwards of ten years, but finally came south, as his health had failed to some extent, and Wallington, in Surrey, was believed likely to suit him better. During his residence in Penrith, Dr. Biden's life was one of activity, both in professional and local public affairs—a medical officer of the Jubilee Cottage Hospital, honorary surgeon and lecturer to the local branch of the St. John Ambulance Association, and surgeon of the Fire Brigade; he also played a useful part in public affairs as a member of the Penrith School Board, having strong views on the value of education. He was a member of the Urban Council, and assisted in the recreations of the locality as a hard-working honorary secretary of the Penrith Golf Club and the Penrith Cricket Club. The former he took in hand at a time when its fortunes were at a low ebb, and with a success which was acknowledged by the presentation to him of a piece of plate as a memento. The deceased, who had three brothers in the medical profession—one a Fleet surgeon in the Royal Navy, a second in practice at Dieppe in France, and a third in Suffolk—leaves a widow and three children, with whom much sympathy will be felt at the loss they have sustained by his death at the early age of 41.

Although it is now some three months since the death of Dr. Heath Strange, one who had known him as a colleague and a brother practitioner for some twenty-six years would like to put on record the esteem in which he was held, and the keen regret which all who knew him felt at the news of his death. This occurred somewhat suddenly and unexpectedly on the evening of February 28th, as he was retiring for the night. He was 69 years of age. Dr. Strange was one of the oldest practitioners in Hampstead, having commenced practice there over forty years ago. He received his medical training at St. Thomas's Hospital and Aberdeen University, graduating there M.D. and C.M. in 1866. He contributed [illegible] on Diseases of the Rectum and Anus, a subject of which he made a special study. The Dispensary in Long Acre, which afterwards developed into the "London Medical Mission," was started by him, and he was a member of its Council until his death. He was a founder of the Hampstead Medical Society, and was President for many years. He was also Chairman a [illegible] of the Hampstead Division of the Metropolitan Counties Branch of the British Medical Association. For many years he was on the staff of the Hampstead [illegible] Dispensary, and while in office there he [illegible] for the treatment of [illegible] patients. He therefore took in hand the [illegible] Hospital, which at first consisted [illegible] Hampstead Home [illegible] and was carried on [illegible] Hospital. This was in the [illegible] Hospital gradually increased in [illegible] until now, when the [illegible] one of the principal local public institutions and as a monument to the zeal and energy of the founder. Dr. Strange was a careful and skilful practitioner, a man who was devoted to the welfare of his patients, and to his profession with absolutely no thought of himself; "a man without guile" (as a common friend described him), unselfish almost to a fault—in fact, a "good" man in the best sense of the word. He will long remain in the affectionate remembrance of both friends and patients, rich and poor alike.

G. D. P.

The death occurred in the last week of May of Dr. Edwin Price, of Dudley Port House, Tipton, after an operation for appendicitis. Dr. Price, who was born in the year 1848, received his early education at Dudley; having decided to enter the medical profession, he was apprenticed to a firm of practitioners in the same locality, and later entered Queen's College, Birmingham, serving during his career in that institution as Prosector of Anatomy. In 1872 he became M.R.C.S.Eng., and some years afterwards L.R.C.P.Edin. In Dudley Port and its neighbourhood Dr. Price had for long been a well-known and highly-esteemed personality. Settling down there some thirty years ago, he filled the office of medical officer to the Tipton Post-office, and carried on a large practice; he was also vice-president of the Midland Medical Benevolent Society, a member both of the Birmingham Medical Society and of the British Medical Association, and a zealous Freemason. A man of specially fine physique, he was an excellent colleague and a large-hearted friend; he was fond of his profession, and scrupulously regardful of the needs and interests of his patients. The position he had held in the locality was sufficiently evidenced by the concourse at his funeral, which included representatives of various public bodies and of the medical profession, and many in humbler walks of life who had had reason to regard him with gratitude. Dr. Price was married and leaves a widow and four sons, three of whom are members of the medical profession.

Major David Macbeth Moir, M.D., Indian Medical Service (Bengal), Professor of Anatomy at the Medical College, Calcutta, died at Calcutta on June 5th, having nearly completed his 47th year. He was the eldest son of the late Dr. Moir, St. Andrews, and entered the Bengal Medical Department as Surgeon Captain, March 31st, 1888, and becoming Major, March 31st, 1900. He took part with the Chin-Lushai Expedition in 1889-90, receiving a medal with clasp.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

ADVERTISING BY DENTISTS.

G. Savage. The consensus of opinion in the dental profession condemns advertising for patients, and most of the licensing bodies forbid their licentiates in dental surgery to seek practice by this means, but the person complained of appears to owe his position upon the *Dental Register* merely to the fact that he was in practice before 1878. The General Medical Council has warned dentists against "objectionable" advertising, and it is not quite certain what may be included in this term. Our correspondent should consult with his colleagues, and, if they are agreed, one of them might be deputed to submit their opinion to their dental colleague and request him to discontinue his advertising; if he declines to do so the case may be brought before the General Medical Council.

PROVIDENT MEDICAL ASSOCIATION.

X. Y. Z. Our correspondent should insist on getting the information he has asked for before he applies for the appointment, as there would be an ethical objection to joining any association that advertised or canvassed for patients.

A PROTEST.

Dr. W. A. Potts (Edgbaston, Birmingham) writes: It has just come to my notice that copies of an article I wrote recently have been circulated with a trade advertisement. This was

done without my knowledge or consent, and I have already insisted on its discontinuance. I should be much obliged if you would publish this in the next number of the BRITISH MEDICAL JOURNAL.

Medico-Legal.

COMPENSATION FOR ACCIDENT TO MATERNITY NURSE

L. inquires whether a maternity nurse can claim compensation for the result of an accident which occurred to her during the time she was employed at a maternity case.

*** If the accident were due to any negligence on the part of her employers an action would lie for damages, but not otherwise. After July 1st, however, compensation could probably be claimed in a similar case under the Workmen's Compensation Act.

VALUATION ON SALE OF PRACTICE.

NUX VOMICA, who is selling his share of a practice to his partner, writes that when he purchased the same, he had to pay in addition for his share of the stock, drugs, etc., belonging to the firm. Is he not entitled to claim to be repaid this by his partner, who is taking the whole practice? The latter contends that it is not usual.

*** Our correspondent is entitled to have a valuation made of the property of the firm, and claim his share, unless it is agreed that the purchase money paid to him for his share of the practice is inclusive of this.

THE STATUS OF A LABORATORY OF PATHOLOGY AND PUBLIC HEALTH.

THE case of Lord Howard de Walden *v.* Eastes, which was heard by Mr. Justice Swinfen Eady, on June 9th and 10th, raised a question of some interest to the medical profession as to a covenant in a lease. The action was brought for an injunction to restrain Mr. George Leslie Eastes, M.B.Lond., from carrying on a pathological laboratory at 62, Queen Anne Street.

Mr. Micklem, K.C., and Mr. Wace appeared for the plaintiff; Mr. Eve, K.C., and Mr. Harman for the defendant.

It appeared that by a lease which was granted during the minority of the plaintiff in 1893, it was provided that the lessees would not, without the consent of the lessors, permit or suffer to be used or exercised in or upon the premises any trade or business whatsoever, but should and would use and occupy the same as and for a private dwelling-house only, except that the same might be used for residential or professional chambers or for offices; and should not, without consent, make any alteration of or upon the premises, or do or suffer anything which should be or tend to the annoyance, nuisance, or damage of the person or persons entitled to the reversion, or his tenants. In 1901 the then tenants desired to grant a licence to the defendant to carry on a pathological laboratory, but the trustees of the estate would not at first allow it. In September, 1901, on the intervention of Sir Alfred Fripp, they obtained a limited licence to allow the defendant to carry on microscopical tests of fluids of the human body. No animals were to be kept for experiments, nor was any inoculation to be performed on the premises. In February, 1906, the premises were assigned to the defendant for the residue of the term. He thereupon made alterations to enable the ground floor to be used as a laboratory, and affixed a plate to the door bearing the inscription, "Laboratories of Pathology and Public Health." In November, 1906, the plaintiff gave notice to terminate the licence. The defendant, by his pleadings, admitted the licence, but said it was unnecessary. He denied that he had made alterations in breach of the covenant, and contended that he was only carrying on a branch of the medical profession.

A large number of witnesses were called on either side.

Mr. Justice Swinfen Eady, after stating the facts, said it was clearly established by the evidence that the defendant's work was highly scientific and useful, meriting and obtaining the approbation of the medical profession. By his skill, the appliances at his command, and the assistance of qualified medical practitioners, he was able to make microscopic examination of certain fluids to the great advantage of medical men who had not time or apparatus to do it for themselves. There was no suggestion that he had improperly advertised his establishment; indeed leading members of the profession said there was nothing unusual or contrary to medical etiquette in what he had done. The question was a legal one. It was clear that on the termination of the licence the premises should immediately cease to be used for the purposes therein authorized. His Lordship could not draw any distinction between different branches of the defendant's work. He was doing what the licence authorized, but what by agreement he was precluded from doing on the termination of the licence.

In the event, his Lordship granted a perpetual injunction suspended over September 29th to give defendant time to make arrangements.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ARMY REORGANIZATION IN INDIA.

UNDER date May 14th, an Indian Army Order publishes Lord Kitchener's new scheme of army re-organization. It does not, however, contain matter of special interest to medical officers. It is indeed expressly stated that the officers and establishments in the medical among other services in the commands affected will remain as at present.

WOMEN NURSES IN THE UNITED STATES NAVY.

SURGEON-GENERAL RINEY, of the United States Navy, has, we learn from the *Boston Medical and Surgical Journal*, recently drawn attention to the somewhat extraordinary fact that the American Navy is without a single trained nurse. In time of illness a hospital steward and an apprentice are available; but this, it is maintained, is insufficient to meet the demands oftentimes, and patients are necessarily deprived of proper nursing. A plan has been developed by means of which a corps of trained nurses may be organized for the Navy, such as now exists in the Army. Men will naturally be employed on board ship, but women will take charge of the nursing in the Navy hospitals on shore. The Surgeon-General is said to be seeking support for the furtherance of this plan.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

THE annual inspection of the London companies R.A.M.C. Volunteers as well as of the bearer companies of 1st, 2nd, 3rd, and 4th London Infantry Volunteer Brigades, by Colonel A. T. Sloggett, C.M.G., will take place at Hyde Park (Guards' Ground) on Saturday, June 15th, at 5.30 p.m. The proceedings are expected to have additional interest from the pitching of a field ambulance and demonstration of carrying patients in cacolets, on horseback, etc.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

GUARDIANS AND MEDICAL FEES.

IN consequence of the attitude of the Banbury Board of Guardians in deciding to allow only a maximum fee of one guinea for medical consultations, the local medical practitioners (says the *Birmingham Post*) have written a reply to the effect that the uniform fee must be one guinea for in-town consultation and two guineas for the country, or they could not meet any of the Board's medical officers in consultation. A discussion followed, and a proposition on the agenda for the reappointment of Dr. A. Tisdall Johns as medical officer for the Cropredy Division was deferred.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

BATTERSEA.

THE Medical Officer of Health for Battersea (Dr. G. Quin Lennane) devotes several pages of his annual report to a very interesting account of the Infants' Milk Depôt which was established in Battersea by the Borough Council in 1902. During 1906 the number of children fed at the depôt was 620. The weekly charges for a full supply of milk are 1s. 6d. for children under six months' old, 2s. up to one year, and 2s. 6d. over one year. The cost of the undertaking to the rates is equal to one-eighth of a penny in the pound upon the rateable value. The amount in pounds sterling is not stated, which is a pity, for the information would have been useful for comparison with the cost of similar undertakings elsewhere. Dr. Lennane gives some very striking figures relating to the fall in the rate of infantile mortality during the past five years. In 1901, before the depôt was started, this rate was 165 per 1,000, and there appears to have been a steady decline each year since until 1906, when the rate was 128 per 1,000. It is not quite clear from the report whether the 1906 rate was lower or higher than that of 1905. On two pages the 1905 rate is stated to have been 131 per 1,000, and in the Local Government Board table it is given as 114 per 1,000. The advantages of the milk depôt, as Dr. Lennane very properly says, are not confined to the mere distribution of the milk; it has an educational value, and the visits to the homes of the children by the lady health visitors are factors of no small importance. The report contains a clear and concise account of the work of the sanitary department of the Battersea Borough Council, and it is evident from a perusal of its pages that the traditions of the public health administration in the borough, which were established by Dr. McCleary, will be continued by the present medical officer of health.

M. COMMERCY, a wealthy man who has recently died, has left a capital sum of £160,000 to the University of Paris, the interest of which is to be applied to the scientific development of the University, particularly by the foundation of scholarships for the encouragement of original research.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

TYMPANUM would be obliged for information as to the effect of thiosinamin on cicatricial thickening of the tympanum, and the strength of the drops to be used.

RUSTICUS would be grateful for suggestions for a stimulating substitute for alcohol in a man who cannot afford to take alcohol, but who in his worrying work occasionally feels he must have a "pick-me-up" and would gladly take something which would not produce any craving for alcohol.

COTTAGE HOSPITAL PATIENTS AND FEES.

COTTAGE HOSPITAL STAFF writes: I would be glad to have your advice in the following circumstances: We have here a cottage hospital with two classes of patients: (1) Charitable patients admitted with a subscriber's letter, and paying a minimum of 3s. 6d. a week; (2) private patients paying 15s. a week or over. According to the foundation rules, which were agreed to by the staff, the former are attended gratuitously. Certain members of the staff wish to compel the Hospital Committee to make a new rule permitting them to charge fees to any of the first class they consider capable of paying them. The staff would be glad to know if this course is advisable, and if it is the custom in other cottage hospitals. The private patients now pay whatever fees are agreed upon by them and their medical attendants.

*** We have referred this question to a practitioner who has had a large experience in regard to cottage hospitals. He writes: As surgeon to the —— and —— Cottage Hospital, where patients are charged from 2s. 6d. to 10s. 6d. per week, and sometimes more, I can give you our practice, and may say that I have shown the letter to two other medical officers of the institution who agree in what I now state. Our patients are all admitted by subscriber's letter, and pay according to means, but the doctors in attendance do not receive any fee for any attendance on any class of patient admitted to the hospital. It is not considered advisable for medical men to receive fees from any patient, however well off, if attended in an institution of that nature, which is supported by voluntary contributions. Would the Hospital Sunday Fund under these conditions give a grant to the cottage hospital? I should be inclined to doubt it.

ANSWERS.

DR. A. M. LAURIE.—The work referred to by our correspondent is not rare enough to have much commercial value.

MEDICAL INQUIRER will find information on the subject in any of the text-books on diseases of women. We know of no book specially dealing with this limited question.

L. J. C.—We cannot say what customs may prevail among the lower class of Russian and Polish Jews. But the practice of swallowing oil to loosen the pelvic joints is not known among the better class of English Jews.

LETTERS, NOTES, ETC.

CALCIUM IODIDE IN THE TREATMENT OF ULCERS.

DR. A. G. PERRETT (London School of Tropical Medicine) writes: Might I suggest that "A. D. S." unfortunate experience with calcium iodide recorded in your issue of May 25th, p. 1294, was due to the fact that calcium iodide—a very deliquescent crystalline salt—on exposure to bright light or air readily gives off free iodine, the probable cause of the gastritis. Certainly during a seven months' administration of it to a daily minimum of twenty per cent., and at times many more, gastritis was neither complained of nor observed among those I treated with it. Such I would explain by the facts that our dispenser, knowing from Dr. Stephen's original paper of this peculiarity of the drug, ordered it in small quantities and did not compound it to stand in the dispensary shelves in accordance with the Infirmary regulations all medicines being locked up in the ward medicine chests were not being given, there was probably throughout a minimum of decomposition. Of course if this is the explanation of "A. D. S." experience the difficulty can be got over by dispensing in suitably coloured bottles. A similar observation is observed if calcium guaze is exposed to a period of light. I did not receive from Dr. Stephen's paper that he had been troubled with this gastritis [illegible] of the drug in the cases reported by him.

MOTOR CYCLES.

DR. G. W. EVANS (Plumbridge, co. Tyrone), writes: In answer to "Columba" my experience of a motor cycle might be of service to him. I purchased a 3-h.p. Quadrant two years ago, and used it in my practice in a very hilly district, and found it a great pleasure when the roads were quite dry, but when any rain came on and moistened the roads it became a positive death-trap. I persisted in its use for about six months, and at the end of that time received a nasty side-slip, resulting in a compound fracture of the tibia and fibula. When I fully recovered I tried the cycle again, but when I experienced another side-slip I gave it up totally, and am now using a small car (8-h.p. Rover), which is a treat, and could not be compared with a motor cycle, which I certainly, for one, would not venture my life on any more. I may add that my tyres were Dunlop non-skid. Any cyclist is liable to falls, but if a motor cycle falls with you you cannot get out of its way like an ordinary cycle, it being so heavy; consequently if one falls with a motor the result is usually serious.

HYPNOTISM AND ITS APPLICATION TO MEDICINE.

DR. H. E. WINGFIELD (Queen Anne Street, W.) writes: Fourteen years ago a Committee appointed by the British Medical Association to inquire into the phenomena of hypnotism and its applicability to medicine presented its report. This report, which consisted in part of the results of experiments made by Professor Langley and myself, was, I believe, eventually accepted. Since that time hypnotism has gained for itself a recognized place as a legitimate mode of treatment, owing mainly to the courage and tenacity of purpose of one man, Dr. Milne Bramwell. There is, however, still a large amount of prejudice against its use, both among the laity and also among members of the medical profession. In almost all cases this appears to be due to a quite excusable ignorance, both of the power and still more of the limitations of hypnotic treatment. Is it not time that this ignorance should be made no longer possible for the rising generation of medical men, and that they should have a chance of learning what the treatment is and what it is not while they are still students? Until it is taught in theory at least in our medical schools, hypnotism as a mode of treatment will never be judged on its merits or demerits by medical men, but almost necessarily by prejudice for or against it. Even one lecture a year would be far better than none, and would be enough to prevent the continuance of the distorted ideas at present so common on the subject. Is it too much to hope that our medical schools may in the future ensure that their students be not sent out when qualified in complete ignorance of what treatment by hypnotism means?

"HOSPITAL ABUSE."

MR. STEWART JOHNSON (Secretary, Hospital for Sick Children, Great Ormond Street, W.C.) writes: Will you allow me to correct a small error—whether of your printer's or my own I am not sure—in my letter to you of June 8th, which makes the sentence I wrote somewhat misleading. The letter runs as follows: "The questions, I might add, are only the minimum of what is asked, if thought necessary. The inquiry officer follows them up with what questions he considers most appropriate." A full stop has been transferred, and the letter should read: "The questions, I might add, are only the minimum of what is asked. If thought necessary, the inquiry officer follows them up with what questions he considers most appropriate."

A CORRECTION.

MR. GEORGE PERNET (London, W.) writes: I am sorry to trouble you with reference to report of some of my remarks page 1304, column 1, of your issue of June 1st. I am made to say, "There were, however, cases of *artificial* hypertrichosis on record," whereas I stated that there were cases of "*acquired spinal*" hypertrichosis—a very different thing. As they stand, my remarks will be a conundrum to many and read like nonsense to some readers.

TRUE GRATITUDE.

GRATEFUL PATIENT: "Doctor, how can I ever repay you your kindness to me?"

Doctor: "Doesn't matter, old man. Cheque, money order or cash."

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

Eight lines and under	...	...	...	£0 4 0
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N.B.—It is against the rules of the Post Office to receive lette *Poste Restante* addressed either in initials or numbers.

Clinical Observations
ON
TROPICAL AILMENTS AS THEY ARE MET WITH IN BRITAIN.

BY JAMES CANTLIE, M.B., F.R.C.S.,
SURGEON TO THE SEAMEN'S HOSPITAL; LECTURER ON SURGERY AT THE LONDON SCHOOL OF TROPICAL MEDICINE.

So widespread is our empire, so intimately connected are we with countries of different, and for the most part warmer, climates than our own, that there is scarcely a family in these islands that has not some relative who occasionally returns to his native place from abroad. In many instances the tropical resident is sent home on sick leave or to recoup after a long spell in a trying climate. He may be suffering from actual illness on landing, but it is not uncommon for a tropical resident whilst at home to develop some latent illness, such as malaria, blackwater fever, liver ailments, or dysentery. It comes about, therefore, that medical men—in what some Londoners call the "very depths of the country," in the most remote Highland glen, or in the wilds of Galway—may find themselves called upon to treat unfamiliar tropical ailments with the very names of which they may be unacquainted. A short summary of some of the more common tropical ailments may therefore be useful to medical men in practice in Britain.

MALARIA.

Curiously enough in regard to the diagnosis of malarial affections, the danger is not so much that they may go unrecognized, but that any and every ailment attended by an increase of temperature, occurring in tropical residents sojourning at home, is apt to be attributed to malaria. It is only within the last few years that medical men engaged in practice in the tropics have themselves come to weed out several diseases from the malarial group, for with them in the past, as with medical men at home at present, a febrile state was almost invariably considered due to malaria, or had malaria in some measure tacked on to it.

Malaria infection is determined by the presence of the malaria parasite in the blood, by periodicity of the fever, and by the effect of quinine upon the illness.

It is not given to every medical man to possess the knowledge of the technique necessary to the recognition of the malaria parasite in the blood; but the periodicity of the fever and the effect of quinine are conditions which every medical man is capable of recognizing, if he takes but ordinary time and care to thoroughly observe. At times the patient misleads his doctor, for all old tropical residents consider themselves authorities on "fever," and the medical man at home is regarded by them as ignorant of how to recognize or treat *their* "fever." They frequently deny having had malaria, but state they have previously had "touches" of *ordinary* "West Indian fever," "West Coast fever," "West African fever," "Mauritius, Indian, or Hong Kong fever," and so forth. These delusive beliefs on the part of the patient that it is not malaria, but some specially local infection, that is the cause of the febrile state, must be disregarded by the medical man—not argued about, but silently disregarded—in the knowledge that most of these so-called "touches of fever" with local names are malarial. Again, the patients' statements that they never had malaria or fever whilst abroad, even if it were true—which it generally is not—must not negative the possibility that it is malaria they are now suffering from at home, it may be for the first time; for the first severe attack of malaria may develop whilst the patient is on the way home or after he has been at home some time. The doctor must trust to his thermometer, to the effects of quinine, and to a blood examination where and when that is possible.

That a man (even a medical man) may be suffering from malaria whilst resident in the tropics, and yet be unaware of the fact, is borne out by the following occurrence. Whilst attending a patient suffering from malaria, and in whose blood I had just recognized malarial parasites, I wished to demonstrate to others the different appearance presented by healthy blood and blood infected by malaria. I thereupon pricked my own finger, and placed a smear below the microscope. To my astonishment I found my own blood contained many parasites, and, on taking my temperature, found that it was 102° F., and I had to extend my investigations on others present before finding a malaria-free specimen. I did not know I had fever, and had I been asked would have denied that I ever suffered from malaria. This observation (made in 1892) confirmed my belief for all time as to the diagnosis of malaria by the microscope, and emphasized the fact that, all unknown to oneself, one may be suffering from malaria.

Chronic malaria is, however, the form in which the medical practitioner at home meets with cases of malaria for the most part. In such cases the condition of the spleen is usually a manifest guide in diagnosis. Given an enlarged spleen, with occasional attacks of increased temperature, however slight, in a person returned from a tropical country, malaria has to be thought of. After more than a usual amount of exercise or fatigue from any cause, after exposure to wet or cold, or when any intercurrent affection such as an attack of ordinary cold or of influenza supervenes, the malaria-infected patient is apt to develop febrile attacks of a continued or intermittent character. These febrile attacks might be naturally expected, but what one does not look for are attacks of fever during the *hot* weather—that is, during the months of July and August in England. Let me illustrate this point by again giving a personal experience. On reaching Britain in March, 1896, I had an enlarged spleen, anaemia, slight fever, the usual shortness of breath, and the chronic "tiredness" characteristic of chronic malaria. During the colder months, March to June, the fever disappeared and the spleen lessened. After exposure to a blazing sun at Henley Regatta from 11 a.m. to 5 p.m., fever developed, and for two months the temperature ranged from 100° F. to 102° F. When the colder weather returned the temperature fell to the normal; but in July and August, 1897, the temperature again returned at from 99·5° F. to 102° F. With the colder weather a normal temperature again obtained, but in July and August, 1898—for the third year in succession—the temperature again ranged from 99° F. to 101° F. During the fourth year, 1899, the return of the hot weather did not cause fever, but I suffered from a severe and persistent neuralgia with loss of power in the left arm, forearm and hand, which lasted throughout July and August—a malarial neuritis, a condition often denied but in this instance undoubted.

The account just given shows that it is not the cold but the hot weather in Britain, especially in the south of England, that has to be dreaded by the old tropical resident who is the subject of chronic malaria. The appreciation of this fact gives the cue to treatment, namely, to get away to a colder climate (not a warmer) when malarial fever shows itself.

The régime to follow in regard to treatment in the case of a patient the subject of malaria, returned from a tropical climate, should be: When a febrile attack is recognized—it is not always ushered in by a rigor—the patient should be sent to bed between blankets, placed upon a mild diet with plenty of warm drinks, but no alcohol. Quinine in powder or in solution should be given in adequate doses. It is best to begin—if the attack is intermittent—to give the drugs between the attacks of fever, or when the temperature is just beginning to rise; if the fever is continued or remittent, the drug should be given when the temperature is lowest. The first dose of quinine may be from 10 to 15 grains, and repeated in 7-grain doses every six hours for forty-eight or seventy-two hours.

The salt of quinine may be either the sulphate or bisulphate or the hydrochloride. If hyperpyrexia obtains, it is best to inject the hydrochloride in 5 to 10 grain doses intramuscularly. When hypodermically administered, local abscesses and ulceration of a persistent character are not unknown. If, after three days, active treatment by quinine fails, the cause of the temperature must be sought for elsewhere, and hepatic inflammation, hepatic abscess, or typhoid be thought of.

When the patient recovers from the attack, the future treatment consists either in the administration of quinine prophylactically, 7 grains every fifth and sixth days during the hot weather, or a change of residence. Concerning the question where to send patients suffering from chronic malaria, the writer has come to very definite opinions. First, to avoid the seaside and low-

lying country, and get to the hills. The best part of the British Isles during the hot weather in England for the patient the subject of malaria to sojourn in is in the north of Scotland—in the counties of Nairn, Moray, Banff, and the western part of Aberdeenshire. Morayshire and Nairn are preferable, as in these counties the rainfall is lowest and the dampness less than in any other part of the British Isles.

In the winter, say the months of December to March, send the patient to the hills in Switzerland at a height not lower than 4,000 ft. For the past few years, I find that patients with enlarged spleen due to malaria do better in Switzerland at one of the high health resorts than anywhere else. A month of outdoor life at these high levels is well-nigh a specific for an enlarged malarial spleen. No harm has ever been known in my experience to result from this treatment, and the effects have been invariably beneficial.

It is still the custom with some to send a woman home when pregnant, so that she may avoid the dangers attributed to parturition in a tropical climate. It is usually during the sixth month of pregnancy that this doubtfully beneficial step is taken. It is unnecessary to point out the dangers of a long sea voyage for a woman under these conditions. On arriving at home the woman is attended by her own doctor, and after parturition it is not infrequent that on the third day after delivery a rigor followed by high temperature causes anxiety. If such a case is followed it may be that even when the temperature is distinctly intermittent, recurring, say, every third day, the condition is not recognized, and the patient is submitted to the usual treatment for puerperal fever. The various falls in temperature are attributed to the active régime pursued, and the woman has to suffer the tormenting treatment usually followed for puerperal fever. It is well for the practitioner to remember the possibility of such attacks, and his anxiety will be at once allayed when he finds full doses of quinine bring back the lochia and control the febrile attacks. When a woman is known to be subject to malaria it is well to give quinine as a prophylactic immediately before or immediately after the child is born, and to continue the drug in small doses for eight or nine days.

Haemoglobinuria.

It happens that residents in West Africa may on reaching Britain develop haemoglobinuria; it may even happen that the first attack of blackwater fever occurs *at* home. The recognition of this disease is puzzling unless the urine is seen, for the patient may be first examined whilst in a state of semi-consciousness and unable to direct attention to the urine. Under such circumstances the diagnosis is difficult in the extreme. Given, however, a patient returned from West Africa with a high and continued temperature, with enlarged spleen, and not seldom a swollen liver, vomiting, a jaundiced tinge of the skin, pain in the loins, occasional delirium, blood-stained urine, feeble and irregular pulse, and all the symptoms of profound illness, the diagnosis ought to be possible. The blood examination in haemoglobinuria is usually negative as regards malarial parasites, but shows the condition associated with pronounced anaemia. The treatment of blackwater fever is unsatisfactory, as it is not yet decided whether quinine should be administered or not. If it is to be tried, it should be injected intramuscularly into either hip or loin in a full dose, 7 to 15 grains of the hydrochloride of quinine. Whether administered or not all remedies calculated to promote action of the skin and kidneys must be employed. Vomiting allayed by ice and mustard to epigastrium and the general condition of the patient maintained. I found 10 minims of oil of turpentine repeated every two hours until five doses were given effective in diminishing the haemoglobinuria whilst quinine was withheld. It must be remembered that in some cases quinine causes a return of the haemoglobinuria every time it is administered.

Dysentery and Sprue.

Liver complaints are the most common form of illness one is called upon to treat in this country in patients returning from warm climates and the most troublesome to deal with. Happily the diagnosis of dysentery presents no difficulty as a general rule. The acute form presents the typical blood-stained shreds of mucus in the stools with or without the presence of faeces. The temperature rises two or three or more degrees, and the frequency of the motions, tenesmus, and general enfeebled state serve to stamp the nature of the complaint. The chronic form of the disease—loose motions, with some mucus, occurring frequently but mostly in the early morning hours and in the forenoon—is more commonly seen in Britain. In the chronic form the temperature may or may not be raised, but the liver is abnormal in size, being either diminished or markedly increased, and in the latter state tender on percussion or palpation.

Sprue is characterised by an intestinal flux, sore tongue, general wasting and anaemia. The stools are bulky, frothy or fermenting, and occur most frequently in the early morning and forenoon. In severe cases the patient is also disturbed once or twice during the night.

In almost all cases of chronic dysentery there will be found pain in the left iliac region, and a tender spot can be made out on deep pressure in the left iliac region corresponding to MacBurney's spot on the right side in disease of the appendix. The tender spot is situated over the lower end of the sigmoid flexure where it joins the rectum, and in 90 per cent. of the cases a congestive or a commencing organic stricture will be found in this part of the bowel when a high examination is made per rectum with the sigmoidoscope.

Mistakes in diagnosis in chronic dysentery and chronic or intermittent flux in patients returning from the tropics are common. Because the patient has resided in the tropics one is apt to forget that there are other causes of loose motions and of mucus in the faeces with or without blood. Of these the more common are intestinal parasites, of which the more frequently met with are round worms (*Ascaris lumbricoides*), *Bilharzia haematobia* and *Ankylostomum duodenale*. The presence of round worms (it may be in scores) is a common feature of tropical life, especially in the Far East. It is well to recognize this condition, and to remember to administer santonin, more especially in cases in which loose stools alternate with normal motions. Bilharzia seldom gives rise to dysenteric-like stools until after the urinary tract is involved, when, with the signs and symptoms of haematuria, blood and mucus may appear in the stools. The presence of the spined ova of the parasite is readily recognizable on microscopic examination of the stools. Ankylostome worms in the intestine do not necessarily imply that the patient has acquired the parasite in the tropics, for it is now met with in many European countries, and quite lately they have been found in miners in Britain. Constipation is the rule, but occasionally there are attacks of diarrhoea, with blood in the motions. If the ankylostomiasis is pronounced there will be marked anaemia with gastric disturbance, but it is only by microscopic examination of the stools that the diagnosis will be cleared up by finding the ova in the stools. The ova are oval in shape, possessing a clear transparent shell through which the yolk segments, two or four in number, can be readily made out.

Intestinal parasites are so frequently met with in the faeces in tropical residents, that medical men in Britain would do well to submit the stools to an expert of all cases of patients coming under their care who present symptoms of intestinal flux, be its character what it may.

In women the pelvic organs ought to be examined in all cases of intestinal flux. I have "cured" instantaneously several cases of so-called chronic dysentery and sprue, and the passing of intestinal mucous casts by replacing a retroverted or retroflected uterus and inserting a ring support. In other cases left pelvic adhesions of the uterus and left ovarian trouble—from the fact that they involve the rectum or sigmoid flexure—set up intestinal troubles, which when the cause is removed the so-called dysentery or chronic diarrhoea disappears.

What is called chronic dysentery, but in reality is simply diarrhoea, is a common feature of hepatic disease in patients returned from the tropics. All too frequently the simple morning diarrhoea of the tropics is due to hepatic derangements set up by alcohol—a fact that is apt to be overlooked because the patient is home from the tropics and the ailment is looked upon as "climatic" when the cause is frequently whisky. In long-standing cases of this nature the condition of the liver will help in the diagnosis, and if, in addition to morning diarrhoea and hepatic atrophy or hyperplasia, there is albumen in the urine, associated with hepatic tenderness on palpation,

the part played by alcohol should not be difficult to arrive at.

Tropical dysentery as met with in Britain is best treated by ipecacuanha. The Epsom salt treatment in this country fails as a rule, and it must be noted that treatment by ipecacuanha is more likely to ensure a permanent cure than that by Epsom salts. After having had the stools examined microscopically for ova, or if that is impossible, after the administration of three 4-grain doses of santonin, a dose of castor oil is given. When the bowels are well cleared, and suppose the ipecacuanha is to be administered at, say, 10 a.m., proceed as follows: At 9.40 give 20 minims of tincture of opium by the mouth; at 9.50 place a mustard plaster on the epigastrium (these precautions are given to allay the tendency to vomiting); at 10 o'clock give 30 grains of freshly-powdered ipecacuanha root in cachets; keep the patient lying down with the head low, with directions to move about as little as possible. Should vomiting occur within a few minutes the dose must be repeated. For three hours it is well to give nothing by the mouth, but if thirst distresses, small pieces of ice may be placed in the mouth occasionally. After three or four hours weak tea or beef-tea may be given, and the regular "feeds" afterwards gone on with. On the following day give 25 grains of ipecacuanha with the same precautions. The dose of ipecacuanha is repeated on successive days in doses of 20, 15 and 10 grains respectively. The smaller doses are to be given even should the first dose bring down a healthy stool. No food should be given for three hours before giving the ipecacuanha nor for three hours after. The tendency to vomit is so slight after the second day that the opium may be withheld and the times of fasting lessened.

Sprue was usually treated by milk, and milk alone, no farinaceous or proteids of any kind being allowed. Milk will bring down, usually after a few days, a "solid" motion, and as long as the milk is given these apparently solid motions obtain. Milk stools are not faecal; they consist merely of the milk curd and do not resemble faeces in appearance or smell. The patient is nourished and kept alive by the whey formed when the milk curdles, the whey is absorbed and the curd passed in the motions. When, however, more solid food is combined with the milk diet the hoped-for cure is not maintained. I have long ago discarded the milk treatment of sprue and instead employed a purely meat diet, commencing in very bad cases with beef-tea, beef essence and beef jellies administered hourly, and if the condition improves giving pounded, finely-minced or shredded beef thrice daily, with calves' foot or beef jellies between the meat meals. Weak China tea, without sugar, or with saccharin if preferred, is given half an hour after each meal. It is well to observe fast days from meat, and on these days milk may be given as pure milk, as curds (junket without flavouring), and two or three times in the day as butter-milk. On no account is the milk and meat diet to be combined or given on the same day. After a time the meat need no longer be pounded, but is given finely minced or as a cut from the joint. Of vegetables, after a time may be given stewed celery, or sea-kale, or spinach. Wet packs (cold or warm) to the abdomen help; but as a rule no medicine is given, except perhaps cyllin in 3-minim doses, as recommended by Dr. W. Hartigan. The strawberry cure of sprue is in some cases effective when nothing else succeeds; the patient may be fed on fresh strawberries only, 6 to 8 lb. daily; after a few days the sprue symptoms in some cases have disappeared by this treatment.

"Tropical Liver."

The "tropical liver" of fiction was due to brandy, and the cases of "liver" met with to-day in tropical residents are due to alcohol far more often than to climate. When first a European takes up residence in a warm country the action of the liver is excessive. The stools are copious, loose, deeply bile-stained, and rather frequent, and the new immigrant is possessed by a feeling of fitness. In a few months—four to eight months—the state of physiological excess fades, and is succeeded by a condition of hepatic failure with its attendant digestive troubles. The liver will be found diminished in size and in a state of atony and perhaps some atrophy. This is the normal liver of Europeans dwelling in the tropics after the first twelve months, who remain temperate in eating and drinking. From some intercurrent disease brought on by chill or dysentery or from conditions set up by continued over-indulgence in alcohol or food, combined with insufficient exercise, the liver may become swollen, tender and congested, attended by slight increase of temperature, gastro-intestinal troubles, morning retching, morning diarrhoea, and a feeling of depression and disinclination to work. This man is at the turning point of his existence. If left to himself he will in all certainty develop a craving for alcoholic stimulant to overcome the feeling of depression, so that he may continue his work; if he has the fortune to fall into the hands of a capable medical man whilst yet in the early stages of the trouble, he may be cured of "liver" and saved from becoming hopelessly alcoholic.

The medical man in Britain must, therefore, expect to find the liver of tropical patients as frequently diminished in size as enlarged, and he must not assume the liver is sound—that is, performing its normal physiological purposes—because it cannot be felt below the rib cartilages. In sprue, in the person who is not alcoholic or gluttonous, in cases of long-standing diarrhoea the liver will as a rule be found below the normal size, and neither painful nor tender to palpation. As a rule, with small livers the temperature does not exceed the normal.

In other cases the liver may be enlarged, when the explanation must be sought for to be due to excess at table or to chronic inflammation or hepatic abscess, set up as a rule by dysentery. In such cases the temperature is usually above the normal.

The treatment in the case of small livers when no fever is present is to give the organ work to do. Milk will not accomplish this, so meat should be administered instead, even when intestinal flux due to sprue is present. When the liver is enlarged and tender, and there is increased temperature, milk answers well, being given with the idea of reducing the hepatic functions to a minimum; it is only when the temperature approaches the normal and the liver area diminishes and the tenderness lessens that a fuller diet is allowable. Rest in bed is necessary when the temperature is above the normal, as well as in bad cases of sprue and chronic dysentery. Drugs in the form of chloride of ammonium, rhubarb and soda, some one of the purgative waters daily with occasional doses of calomel, or full doses of ipecacuanha, are helpful in enlargement of the liver associated with fever; in the small liver when there is no fever drugs are not indicated.

Spas may be beneficial in cases of enlarged liver with fever, but are not indicated for patients with small livers in whom there is no febrile state. Of the British spas—Harrogate in summer, Strathpeffer in autumn, and Bath in winter are the most suitable.

Hepatic Abscess.

A fair number of cases of tropical liver abscess reach British shores every year; of these, some are diagnosed, some are buried with the pus in their bodies, whilst in yet a third group the pus finds its exit without surgical aid.

As a rule, a tropical liver abscess occurs in persons who have had dysentery, but that liver abscesses may occur in persons who have never had dysentery is now a well-established fact. I classify liver abscesses into suprahepatic, intrahepatic, and subhepatic, according to the situation of the pus. Of these, the first named is, as a rule, independent of dysentery; the last named has nothing to do with dysentery, and it is only in the group named intrahepatic that dysentery is in almost a constant relationship. There is more, therefore, in this classification than merely an intimation of the situation of the pus, for, in addition to being perhaps independent of dysentery, the pus in the suprahepatic abscess is sterile. When first I announced that I found suprahepatic pus was, as a rule, sterile, I was very naturally disbelieved; now it is accepted as a fact. The abscess following dysentery is, on the other hand, intrahepatic, and the pus is infected by organisms.

The classical signs and symptoms of a liver abscess are: Pain or fullness in the right hypochondrium (the abscess is usually in the right half of the liver), cough on taking a deep breath, gastric disturbance, uncertainty of appetite, increase of temperature, night sweats, and occasional rigors. A patient presenting symptoms of this character, on reaching Britain not infrequently has his ailment put down to tropical liver and malaria, owing to the fact that he has fever, and is treated accordingly. After dosing with quinine and having "liver" remedies,

he is all too often sent to a spa, where he is "liver-packed," massaged, douched, dieted, and dosed. Meantime the liver abscess increases and may burst into a neighbouring organ, unless the bulging of the abscess on the abdominal wall determines that a surgical operation is called for. The pain in such cases varies with the situation of the pus. When suprahepatic, the pain is usually acute, there is usually neuralgic pain in the right shoulder, congestion of the base of the right lung, and a short and hacking cough. When the pus is in the liver substance (intrahepatic) there need be no pain nor lung congestion, shoulder-ache, nor cough. Subhepatic abscesses are so rare that they need not be considered here.

When pus in the liver is suspected, it must be sought for at once. The patient must be anaesthetized (chloroform), and the needle of an aspirating syringe not longer than 3½ in. thrust into the liver in several places if necessary. When pus is found, the operation must be proceeded with at once. For the physician to put a needle into the liver, and, having found pus, leave the patient with instructions that the surgeon is to be called on the following day, amounts to malpraxis. The liver must not be searched for pus unless and until all is ready for immediate operation. The operations in vogue are two in number. One is cutting down upon the liver either by way of the thorax or by the abdominal wall, according to the indicated presence of the pus; the other is by trocar and cannula—the introduction of a stretched drainage tube through the cannula and syphonage. When operation is deferred until the pus causes bulging of the abdominal or thoracic wall, incision is satisfactory, but when the abscess is deep-seated, cutting operations are over-heroic and unnecessary.

Liver abscesses occur in tropical countries in out-of-the-way parts as well as near large centres; when the medical man is single-handed or with only untrained native help, the transthoracic operation is wholly unjustifiable. I have operated in just over 100 liver abscesses, with 17 deaths, and have employed the trocar and cannula, except in one or two instances, in every case.

There is no single sign or symptom that is conclusively indicative of pus in the liver; the rule is, when pus is suspected search for it immediately.

Skin Affections.

Perhaps the most common tropical skin affection the medical man is called upon to treat in Britain is what is termed Dhobhie itch (washerman's itch). It affects chiefly the perineum, scrotum and groins, but may extend to the umbilicus and the armpits. The pathology of this "itch" is complex, and the washerman may not have, and likely seldom has, anything to do with it. It is a form of intertrigo caused by at least two or three of the more common fungi which produce ringworm.

The treatment in most instances is simple. The lotio calcis sulphurati, mentioned in Martindale and Westcott's *Extra Pharmacopœia* as a substitute for Vleminckx's solution, is usually effective after a morning and evening application for three days.

The condition I have termed "foot tetter," for want of a better name, as the exact pathology of this disease is not yet made out, is a troublesome affection of the soles of the feet, characterized by areas of raised epidermis, which become scaly and hard; cracks and fissures appear about the toes, causing at times lameness, and attended by intense itching. The disease is very persistent, and may last for years—ten or even more after the patient has left the tropics, recurring during hot summer weather in this country, although never wholly dying out during the winter.

The treatment is to completely cover the affected parts with some paste or plaster which will wholly exclude the air for several weeks; as this treatment is troublesome and inconvenient few will be found to carry it out.

Of the many skin affections, most are common to both temperate and tropical countries, although a few are part and parcel of some general condition of tropical origin. Perhaps the most interesting of these and the most difficult to rightly interpret are the skin lesions found in sleeping sickness. Strange as it may seem, cases of this disease do occur in white men coming to Britain, and the peculiar wandering, irregular, eczematous-looking patches presented by the skin would be impossible, in the present state of our knowledge, to explain aright, had we not other symptoms and signs to guide us.

Plague and Climatic Bubo.

Plague has occurred in several British ports of late years, and in most instances the disease has been readily recognised by the medical men of our ports, who are at the present time on the *qui vive* for this disease.

A more puzzling disease is the climatic bubo met with in the men of the Royal Navy, in the merchant service, and in soldiers and civil tropical residents. Especially is this disease prevalent in men returning from plague-stricken districts. The resemblance to true plague is very marked, and it is only by the absence of the true plague bacillus from the glands and perivascular regions that the diagnosis is possible. Climactic bubo, or, as I term it, pestis minor, is not a fatal malady; a groin gland enlarges, suppurates, and breaks by two or three or more openings, leaving a necrosed gland or glands at the bottom of the cavity. The patient has usually a period of three weeks' fever and illness. The treatment is early excision of the gland or glands affected.

Beri-Beri.

Beri-beri is seldom, if ever, seen in Europeans returning from the tropics, but it must not be forgotten that in 1896 and 1897 beri-beri prevailed in the lunatic wards of the Dublin Infirmary, and it is possible the disease may come up for recognition in other quarters of these islands.

Malta Fever.

Malta fever is not an uncommon disease for medical men in Britain to have to treat. The disease is usually diagnosed before the patient reaches these shores, although it is possible that a man from the Mediterranean in whom the disease is incubating may develop the disease after landing.

Malta, Mediterranean, or undulant fever is characterized by repeated attacks of fever with spells of apyrexia of various lengths—weeks to months. Many signs and symptoms may arise during the illness—enlarged spleen and (sometimes) liver, effusion into the joints, agonizing pains at times in the back, head, or limbs, anaemia, and marked loss of weight; sciatica, intercostal neuralgia, profuse perspiration, and orchitis are not uncommon, and gastro-intestinal derangements frequent.

Of all fevers to treat, this is perhaps the most troublesome. It is impossible to say when it has finished, for the *Micrococcus melitensis* may be met with in the blood for years after all febrile symptoms have subsided. There is no specific known, and the legend of "treat symptoms as they arise" is perhaps truer of all that can be done for Malta fever than any other ailment. Change of air or of country is useless as a specific measure, although advantageous to the general health.

Filariasis.

In regard to filaria and filariasis, I have on several occasions been asked to see cases of chyluria in this country. The patients came from the West Indies and from China, and the nature of the ailment consisted of backache, occasional retention of urine, followed by the passage of "milky" urine. When this urine is allowed to stand the whole mass at first coagulates, but later the coagulum contracts and a clot separates, floating in a milky fluid.

The history of the case and the appearance of the urine suggests filarial infection. This diagnosis will be clenched if the embryo filarial worms are seen in the urine or if they are demonstrable in the blood. In the urine they are usually demonstrable at all times of the day and night, but in the blood the worm can be found, in the most common of the filarial infections, between the hours of 10 p.m. and 6 a.m. only hence the name *Filaria nocturna* given to this species of worm.

In another case the contents of a hydrocele may be of a milky appearance and show filaria embryos microscopically. In yet another instance the patient may suffer from enlarged (lymph) scrotum or elephantiasis. The meaning and import of varicose groin glands, in which the scrotum may or may not be involved, are very naturally a puzzle to the medical man in Britain. In addition to these conditions elephantiasis may be met with usually of the scrotum or of one or both lower extremities.

The meaning of these signs and symptoms is at once explained if the medical man has the knowledge that they may be, and generally are, evidences of the blocking of the lymphatics, usually of the trunk, by the ova of the filaria worm.

There is no specific treatment, but residence in Britain or any non-filarial country tends to lessen the fertility of the parent worm, and so lead to the diminution and final disappearance of the embryos from the blood. In two of the cases of chyluria I have seen in this country there were neither embryos to be found in the urine nor in the blood, but the history of filarial fever attacks, and the condition of the urine left no doubt that the cause of the condition was due to blocked lymphatics in the prevertebral lumbar region.

It may happen that a person returned from a filarial-infected country may develop the first attack of fever in this country or that the lymph scrotum may develop on the journey homewards.

These bald observations on a few of the more common tropical ailments met with in patients returned from the tropics may serve the purpose of familiarizing medical men at home with diseases outside the routine of practice, and perhaps help them to recognize chance tropical ailments which occasionally come their way. I am aware of the many omissions from the list of tropical diseases I might have enumerated and also of the curtailed and wholly imperfect description of the diseases mentioned.

A Clinical Lecture

ON

REFERRED PAIN AND ITS DIAGNOSTIC VALUE.

DELIVERED AT THE NORTH-EAST LONDON POST-GRADUATE COLLEGE.

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AFTER some introductory observations, Dr. Forsyth said: Regarded from the broadest standpoint, pain is a necessary, desirable, and advantageous factor in the evolution of the species as well as in the development and survival of the individual. The statement is too obvious to need amplification, but it implies a corollary that must be borne in mind. Pain is not always pathological. It may be purely physiological, and between the two are many grades. To give just one example. How shall we place intestinal colic? In some cases it must undoubtedly be pathological, but in others it is just as surely physiological, and where are we to draw the dividing line?

Attempts to classify pain have not always been particularly happy, but we may make the following distinctions. There are the pains of inflammation, of pressure, and of stretching—the two latter probably the same. Then there is neuralgic pain—pain with no organic lesion—and subjective pain, where the mind itself is at fault. Lastly, and this is the variety I wish to speak of to-day, there is referred or sympathetic pain. Such vaguely-defined sensations as hunger and thirst can hardly claim admission to our classification.

By referred or sympathetic pain I mean that variety of pain which is located to one healthy part of the body as a result of disease in another. It may be the only pain produced by the disease, or it may co-exist with a greater or less degree of local pain set up in the affected viscus. Here, however, we must recognize that referred pain can arise without remote disease. From time to time cases are recorded in which pain, even of the intensest, has been produced in one part by gentle stimulation of another. There is the case of the woman who suffered such pain and soreness over the angle of the scapula after suckling her infant that the pressure of clothing became intolerable. There is the example recorded by Witmer, where a pinch to the neck on the right side set up pain in the left dorsal region. With this patient a pimple on the back of the neck was notably irksome because of the referred pain it entailed. Other examples may be found here and there in the medical periodicals, but I have time to mention only a couple more. One of the best known is Monro's patient who experienced sharp pain in the right side when a certain area on the right forearm was rubbed, and an unusually curious case is that recorded by Mitchell, where stimulation of a mole on the leg produced pain in the chin. But these are unique examples of what I may call physiological referred pain, and for an everyday illustration we need seek no further than our own selves. Most of us after eating an ice-cream feel pain in the forehead just above the eye. Here we have a natural—or should I say unnatural?—stimulus applied to the stomach, and a pain referred to the trigeminus.

Before we can recognize the diagnostic import of referred pain we must first understand its causation. Many observers have noted the connexion between a lesion in one situation and pain in another, and Head showed that the limits of this pain tallied with those of herpetic eruptions. Further, he discovered that herpes zoster appeared over an extent of skin innervated by some one posterior nerve root. It was clear, then, that each area of referred pain corresponded to the same nervous distribution, and that the pain was referred along a posterior nerve root. So far so good, but how establish the relationship between a viscus or group of viscera and a remote strip of skin? The answer is not difficult. The spinal cord consists of segments each of which receives one pair of posterior nerve roots. Each root brings fibres, some cutaneous, some visceral, and the impulses arriving from both enter the cord by a common path, and reach the brain by the same routes. This transmission along one highway of impulses from two localities must inevitably lead to confusion, and a message arriving from one will be liable to reference to the other.

Now, a moment's reflection will show that all day long our consciousness is being interrupted by stimuli coming from the skin, and rarely by any from viscera—indeed, the man who knows he has viscera is a poor creature—and therefore we fall into the slack practice of ascribing to the skin *all* the sensations that reach us. The habit is natural and harmless so long as we are in health, but it leads to error when a deep-lying viscus grows uneasy. Such an organ sends up its message of complaint demanding rest and decreased work, and we, undone by our lax attention, are unable to locate the mischief, and lightly conclude that the impulses come whence they usually start—from the skin. We say the skin of such and such a part is sore, and we cannot tolerate our clothes upon it. We loosen a belt or a band and indulgently shield our perfectly healthy dermis by a soft swathing of wool, while the slighted viscus continues to go crying in the wilderness. Sooner or later, however, its messages grow so imperious that we are compelled to heed them, and then we recognize something in their nature which differs from any cutaneous sensation we are familiar with. Thus we light on the correct source of the pain, and realise that the trouble lies elsewhere than in the skin.

Not only is pain referred to spinal segments of the trunk, but areas on the head and face supplied by cranial nerves may betray a similar sympathy with visceral disease. For example, soreness of the vertex of the scalp will be associated with disease of the stomach and occipital tenderness will go with ovarian disorder. These connexions, though difficult to explain, must not be forgotten.

Recently Head published a further series of observations of importance which throw light on our subject. His experiments and conclusions are too detailed to be discussed here, and for my present purpose it will be enough to give his broad conclusion. He believes that the whole body, within and without, skin and viscera, is innervated by a system subservient to the more lowly sensations of pain and of the extremes of heat and cold. This system he calls the protopathic system. In addition there is another system—the epicritic—distributed only to the skin and concerned in cutaneous localization, discrimination of distances between stimulated points, and the finer grades of temperature called warm and cool. Now it is interesting to note that with referred pain the skin is in a condition of hyperalgesia but never of hyperaesthesia proper—that is to say, a disturbance of the visceral protopathic sense leads to a disturbed somatic protopathic sense but never to a disturbed epicritic sense.

These considerations of the nature and causation of referred pain will have paved our way to a right understanding of its diagnostic value. Let me now illustrate the importance of such pain to show how much we can be helped in forming an opinion of certain cases by an intelligent and searching investigation of its circumstances.

I shall say no more on the subject of physiological referred pain, but the condition, though uncommon, is worth bearing in mind. Pain, pathological in origin, we must recognize for diagnostic purposes as being of three kinds. There is local pain, situated at the site of the lesion, and due to afferent impulses streaming up to the cord. There is the pain due to pressure on a nerve or nerve plexus; it depends directly on some lesion in the course of the nerve, but is located to a more peripheral region. Lastly there is referred pain proper produced in the manner we have discussed. Commonly, one or other of these is present; not infrequently two co-exist; and in many cases all three may be noted. The example of this last that comes first to my mind is an aortic aneurysm, where there may be pain in the aneurysm itself, pain from pressure by the aneurysm on a nerve, and referred pain in some cutaneous spinal segment.

Local pain need not detain us; it is easy to identify, to interpret simple. The general train of symptoms will suggest the delinquent organ, the pain will lie at the site of this viscus, and will be aggravated by pressure or functional activity. Pain from pressure on a nerve, however, demands more careful investigation for its solution. It necessitates, first, familiarity with the course, relation, and distribution of the nerve; and, secondly, a knowledge of the morbid conditions which might press on that nerve. There is a most instructive case exemplifying this form of pain given by Hilton in his classic *Rest and Pain*. A lady consulted him for persistent pain in her little finger—a trivial enough complaint, and one some might have deemed hardly worthy of serious attention. Hilton, however, having excluded all the more probable causes, proceeded to trace the nerve from the little finger—the ulnar—back to its origin. It was not until he came as high as the clavicle that he found anything suspicious, but there bulged a small pulsatile swelling. Though at first inclined to look on it as an aneurysm of the subclavian artery, he realized on closer examination that it was a normal artery pushed forward by a growth arising from the first rib and compressing the ulnar nerve. The practical difficulty in diagnosing this variety of pain lies, I think, not so much in any uncertainty of anatomical minutiae, but merely in remembering that any given pain may be due to this cause, for unless this possibility occurs to you at the moment, how can the correct diagnosis be reached? It is helpful to remember in this connexion that long-continued pressure on a nerve leads not only to pain, but also to anaesthesia, muscular atrophy, or trophic changes.

Let us suppose you are examining a patient and have found no reason to regard his pain as local or to ascribe it to pressure on a nerve. Can it be referred pain that he is complaining of? What steps must you take to answer this question?

Referred pain is, in a way, an error of judgement. A man feels he has pain up the side of his head or between his shoulder blades, and not unnaturally thinks his trouble is similarly located. Therein he falls in error, but you, better informed, will hardly expect to find any physical symptoms of disease in those situations. Often, as I shall tell you in a moment, you will find something abnormal, but in many instances the phenomenon is wholly subjective, and we have to depend on our patient's story. Such cases, however, are frequently so characteristic that his description alone suggests the diagnosis. There is, for example, the sharp, intense pain that shoots down the arm in angina pectoris, the cutting pain that darts between hypochondrium and shoulder in biliary colic, and the agonizing pain stabbing into groin and testicle in renal colic.

In other cases the referred pain is calculated deliberately to mislead, a well known example being pain in the knee as an early symptom of hip disease. Here the connexion is established by the obturator nerve, which assists in the supply of both joints. Another instance sometimes arises in glaucoma, where aching of the teeth in the upper jaw may be a prominent symptom. Severe earache, too, is not infrequently the complaint made by a patient with cancer of the tongue.

In a large group of cases, however, there is a sensory disturbance which can be elicited by physical examination, and our next concern must be to discuss its investigation. Ask your patient to lay bare the part that hurts, and to point out the limits of his pain. Pick up a fold of skin in that region and gently roll it between finger and thumb. He will probably tell you it feels sore; often the remark is that the skin feels bruised or well beaten. Next take a pin and lightly draw its head up and down over the skin. You will find that where the massage felt sore, the smooth end of the pin gives the sensation of a sharp prick; the protopathic sense of pain, you remember, is over-acute. Lastly, test the superficial reflexes corresponding to the affected skin; you will find them exaggerated. These three points, then, must be investigated, and if a positive result is obtained it remains to decide what spinal segment supplies the affected region. As far as the trunk is concerned the segments are not difficult to remember, for they are arranged in orderly sequence from neck to groin, the first dorsal supplying the chest just below the clavicles, the seventh the level of the costal angle, and the tenth that of the umbilicus. Finally, the viscera supplied by the same segment have to be identified, and thus your attention will be led to the prime source of the pain. The following table is modified from Head, and will show the grouping of the viscera.

Viscus.	Spinal Segments.	Spinal Segments and Corresponding Viscera.			
Aorta	D 1-3	Heart and Aorta	D 1		
Bladder:			2		
Muscle wall	D 11-L 1		3	Lungs	
Mucous membrane	S 3-4	Breast	4		
Breast	D 4-5		5		
Epididymis	D 11-12		6		
Gall bladder	D 8	Stomach	7		
Heart	D 1-3		8	Gall bladder	Liver
Intestines	D 9-12		9		
Kidney	D 10-12	Intestines	10	Testis, Ovary	
Liver	D 7-10	Ureter	11	Epididymis	Kidney
Lung	D 1-5	Bladder (muscle wall)	12		
Ovary	D 10		L 1		
Rectum	S 2-4		2		
Stomach	D 6-9		3		
Testis	D 10		4		
Ureter	D 11-L 1		5		
			S 1		
		Rectum	2		
			3	Bladder (mucous membrane)	
			4		
			5		

Sometimes your powers of deduction may be taxed even further than I have described, for the referred pain itself may be the starting point of a fresh train of symptoms. I may illustrate this by the following case which I quote as one where the prime trouble was of everyday occurrence. A patient sought advice touching an enlarged gland below the ear. There was fairly severe pain in the auditory meatus and some slight excoriation and discharge in the canal, not sufficient, however, to account for the pain. Examination of the mouth revealed a badly decayed tooth and on extracting this the pain ceased, the excoriation healed and the gland disappeared. Here the patient noted only the last link of a chain of symptoms. The carious tooth set up earache, which led to frequent rubbing of the canal, the skin was broken, the sore discharged, and inflammation in a neighbouring gland resulted.

Other occasions when referred pain will almost inevitably mislead arise when disease of one viscus is referred not to the skin, but to another viscus; it was an instance of this that I met with some years ago that first drew my special attention to the subject.

I was asked to see a man suffering from sudden acute pain shooting from his right loin into the testicle on the same side. He had only recently arrived in this country from Australia and during his voyage had suffered a number of similar but less severe attacks, accompanied as a rule by vomiting. I found the right kidney tender and the right testis exquisitely so, and although a specimen of urine examined at the time contained no blood I felt very little doubt I was dealing with a case of renal colic. He was kept under observation, and in the course of a week or more, the case resolved itself into one of undoubted appendicitis.

The explanation of these anomalous symptoms is full of

interest, for it depends on the production of referred pain. The appendix is supplied by nerves corresponding to the tenth dorsal segment. The same level controls the kidney, and since testis and kidney develop together their spinal segmentations are identical. The pain, therefore, in the appendix was referred to two other viscera of similar innervation, and shot from one to the other, making both tender.

In this connexion let me warn you of the manner in which the pain of an early penumonia will sometimes simulate appendicitis. In these cases the earliest and most prominent symptom is sudden severe pain—referred pain—in the right iliac fossa; the abdomen is often rigid, and the diagnosis of appendicitis seems probable, yet if the patient be watched the abdominal symptoms mollify, and the signs of pneumonia develop at the right base.

Still more difficult diagnoses are those where the patient complains of pain which is undoubtedly referred and yet corresponds to no spinal segmentation. Such cases show the pain transgressing the limits of the spinal areas with perplexing freedom, and are illustrations of what has been called the "generalization" of referred pain. By this is meant the tendency that exists in some patients, especially those in indifferent health, for the pain gradually to spread to more and more remote areas until the original referred pain forms but a fraction of the whole. This spread is seen—I select common examples—from so simple a primary lesion as dental caries. The referred pain probably takes at first the form of a neuralgia limited to one branch of the trigeminal. This continues for a time, and then the greater part of the same side of the head is affected, and later the neuralgia attacks the opposite side. As a result the patient grows exhausted and run down, and pains begin to show themselves all over the body, especially in such places as have at previous times been painful—the joints feel rheumatic, dyspepsia accompanies digestion, or dysmenorrhoea becomes accentuated. If a patient has reached this stage when first seen, you can readily understand the difficulty of tracking the trouble to its lair. Yet the pursuit is worth undertaking, for to discover the prime cause is to convert your patient from a state of misery and dejection to one of relief and happiness.

As the most frequent causes of this generalization you should remember, in addition to hunger and fatigue, anaemia in its various forms, and hypermetropia—both fertile provocations—while in women menstruation and pregnancy fan the spread. Remember, too, that in women the spinal areas which are earliest to fall before the attack are the sixth and tenth dorsal—in other words, pain and tenderness in the breast and in the ovary.

No lecture on referred pain would be complete without reference to that interesting condition known as allocheiria. With this uncommon symptom the patient refers stimuli applied to one part of his body to a corresponding position on the opposite side. It occurs in certain nervous diseases, and has been described in connexion with diphtheritic paralysis. Gowers has recorded a case where a stimulus was referred to both sides at once.

A last condition that bears on our subject is true neuralgia. This depends on no nerve lesion, neither is it referred from any remote condition. It is a distinct entity as a disease, and as such must be carefully distinguished from referred pain. The diagnosis may be difficult, and the points on which you must rely are the area of distribution and the presence or absence of superficial tenderness. As we saw earlier, referred pain is associated with hyperalgesia; with neuralgia this is unusual. Referred pain (and its superficial tenderness) is limited by boundaries set in the central nervous system; the distribution in neuralgia corresponds to some peripheral nerve. These distinctions, however, will sometimes fail to settle the question, and a definite diagnosis may have to be withheld until the effects of treatment have been watched.

HOLIDAY COURSES IN BERLIN.—The next "cyclus" of the Berlin Dozenten-Verein for medical holiday courses will begin on September 30th and continue till October 26th. A list of the courses, etc., will be sent free, and any information required will be supplied on application to Herr Melzer, Ziegelstrasse, 10-11, Berlin.

THE TREATMENT OF LOCOMOTOR ATAXY BY FIBROLYSIN.

BY F. M. POPE, M.D.,
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IN the following case of locomotor ataxy treatment by fibrolysin was followed by much improvement and by return of the knee-jerks.

J. B., aged 32, was admitted to Leicester Infirmary on December 20th, 1906 complaining of shooting pains in the legs and numbness of feet. He had noticed the symptoms for the past two years; had had great difficulty in walking in the dark; for the previous four weeks he had been confined to bed unable to walk at all.

Past History.

He had an "abscess on the chest" fourteen years ago, urethral discharge ten years ago; no clear history of syphilis.

Condition on Admission.

His nutrition is fair, general health fair, sleeps poorly; complains of legs feeling cold. Ill-marked areas of paraesthesia in both legs; tactile sense impaired; thermal sensation impaired but not lost; no complete analgesia; tactile conduction retarded. He is very ataxic. Romberg's symptom marked. Inco-ordination of both upper and lower extremities marked. Is quite unable either to stand or walk.

Argyll-Robertson pupil phenomena marked; no nystagmus. Left pupil smaller than right. Knee-jerks absent. Plantar reflex flexor. Has slight difficulty in micturition, none in defaecation. Facial muscles of right side slightly atrophied. Right side of tongue slightly atrophied. No morbid changes to be detected in other organs.

Treatment.

He was kept under observation for nearly a fortnight without treatment, and his condition underwent no change.

On January 2nd, 1907, treatment by intramuscular injections of fibrolysin was commenced. He received 2.3 c.cm. every alternate day.

February 12th. He has had nineteen injections. He can stand better, and walk a little with assistance. Says legs are warmer. Still much inco-ordination.

February 20th. Has had twenty-one injections. Knee-jerks are present on both sides.

March 6th. Had in all twenty-four injections. No injurious local effects. Immediate effects of each injection were a feeling of warmth and diaphoresis. He goes out to-day walking with assistance.

May 1st. He walked up to the hospital to-day. He can walk with two sticks. The knee-jerks are still present. He has no shooting pains. Pupil reaction unchanged. Achilles reflex faint but perceptible.

I have little to add to the above facts. A second case treated at the same time shows little or no improvement, but this does not, in my opinion, outweigh the positive results obtained in the first case. Ormerod, in *Allchin's System of Medicine*, says: "We think that when ataxia has developed steadily and become thoroughly established it is likely to be permanent"; and most people will agree with him. In this case advanced ataxia has retrogressed so that the patient can get about and the knee-jerks have returned.

I regard this communication as merely a preliminary note, hoping that it may lead to a further trial of this remedy.

ON THE CAUSES AND SIGNIFICANCE OF CERTAIN AMBIGUOUS REACTIONS OBTAINED IN TESTING URINE FOR SUGAR.

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(From the Physiological Laboratory.)

Fehling's Test.

FOR the detection of sugar in the urine, the test most in vogue in this country is Fehling's alkaline cupric tartrate solution. This test depends on the fact that dextrose in hot alkaline solution is capable of reducing cupric salts (which are soluble in Fehling's solution) to the cuprous form in which they are insoluble, and so separate out as a red or yellow precipitate. When the amount of sugar present is not too small this test answers admirably, and a distinct reaction with Fehling's solution indicates in almost every case that sugar is present in excess. With regard to the detection of small amounts of sugar in urine,

Fehling's test is, unfortunately, not so definite. If a normal urine, giving no reaction with this test, be taken and a small percentage of sugar added, it will generally be found on subsequent testing with Fehling's solution that no evidence of the presence of the added sugar can be obtained. It might be argued that Fehling's solution, though a good general test for sugar, is lacking in delicacy, and is therefore incapable of detecting very small quantities of this substance. This solution, however, is really one of the most delicate indicators of sugar we possess, and if some sugar be dissolved in distilled water, such minute traces as 1 in 120,000 can be distinctly demonstrated. The following table shows the relative delicacy of the more common tests for sugar.[1]

	Sugar in Aqueous Solution.
Fehling's test	0 0003 per cent.
Trommer's test ...	0 0025 ,,
Nylander's test ...	0.025 ,,
Fermentation test ...	0.1—0 5 per cent.
Phenyl-hydrazine test ...	0.025—0.05 ,,
Polarimetric test ...	0.025—0.05 ,,

Normal urine, to which many times 0.0008 per cent. of sugar has been added, gives no result with Fehling's test, and this at once leads to the conclusion that urine contains something which prevents the sugar, when present in small amounts, giving a reaction with Fehling's solution. Pavy[2] explained this on the assumption that the action of the alkaline part of Fehling's solution on the nitrogenous constituents of the urine might generate free ammonia in quantity sufficient to hold the reduced suboxide in solution and so form no precipitate. The writer finds, however, that this explanation is not by any means adequate, as the amount of ammonia given off when a urine is heated with an alkali of the strength usually present in Fehling's solution is not nearly sufficient to exert any influence in inhibiting the reaction.[3] In short, this effect is dependent on the fact that the kreatinin normally present in urine is capable of holding the reduced suboxide in solution, so that no apparent result is obtained. The sugar added to normal urine reduces its equivalent amount of copper, just as it does in aqueous solution; but since the kreatinin normally present is capable of holding this reduced suboxide in solution, we have no indication that any change has taken place. Thus, it is obvious that urine may contain some sugar and yet not give any indication of its presence when tested by Fehling's solution.

Kreatinin is generally mentioned in the textbooks as a substance interfering with Fehling's test. Other so-called "interfering" substances are uric acid, hippuric acid, glycuronic acid, homogentisinic acid (alkaptonuria), lactose, pentoses, and certain drug products. It is generally stated that kreatinin, like many of the other substances mentioned, interferes with the reaction in virtue of its direct reducing action, thus apparently producing a positive result when sugar is not really present. This general statement needs revision, and gives no explanation of many ambiguous reactions which from time to time make it exceedingly difficult to say whether or not a particular urine should be held to contain sugar in slight excess, or merely gives a doubtful reaction as the result of the presence of some other substance. To clear up some of these obscure points, it will be most appropriate to consider these "interfering" substances individually, in order to ascertain how and to what extent they really do interfere with the reaction. In this way it will be possible to explain many points which are at present either unexplained altogether, or, if any explanation is forthcoming, it is unsatisfactory and insufficient.

Kreatinin.

In February, 1906, I published the results of an investigation undertaken to determine the effect of kreatinin in modifying Fehling's test for sugar.[4] In the following October an article by Kellas and Wethered[5] appeared, in which much of this work had been repeated and the general conclusions advanced in my paper confirmed. That kreatinin constitutes the most important interfering substance constantly present in urine is undoubtedly true, but the manner in which it acts is very different from that generally described in the text-books. Here it is considered in view of its direct reducing power on Fehling's solution, the general impression conveyed being that kreatinin, if present in excess in urine, may cause a precipitation of the reduced cuprous oxide, and so in this way simulate sugar. That this is quite erroneous is at once obvious from a consideration of the results obtained on heating solutions of pure kreatinin with Fehling's solution. Kreatinin is capable of directly reducing Fehling's solution, but this action occurs very slowly, so that an artificial solution of kreatinin equivalent in strength to what may be regarded as the maximum amount normally present in urine requires to be boiled for three to six minutes or more before it gives any appreciable precipitation. Strong solutions of kreatinin do decolorize Fehling's solution after moderate boiling, but it is almost certain that the maximum amount of kreatinin ever present in urine is of itself quite insufficient to cause any very appreciable reaction in this direction. In an adult the quantity of kreatinin passed per day is variously estimated at from 0.6 gram to somewhat over 2 grams. Neubauer found 0.6 to 1.3 grams, while Johnson gave a daily average of from 1.7 to 2.1 grams.[6] Generally it may be taken that the average normal quantity of kreatinin daily excreted by an adult on ordinary mixed diet is, roughly, between 1 and 2 grams. Taking the daily output of urine as 1,500 c.cm., this gives an amount of kreatinin equivalent to about 0.7 mg. to 1.33 mg. per c.cm. Voit states that it may sometimes reach as high as 3 mg., or somewhat more, per c.cm. (4.9 grams per diem), but this would seem to be quite exceptional, and probably represents the maximum value. In highly concentrated urine the amount per c.cm. would, of course, be somewhat increased, but it is doubtful whether in any but very exceptional cases it is ever present in greater amount than 3 to 4 mg. per c.cm., and it is certain that this strength is only reached very rarely indeed. A small quantity of kreatinin such as might be present in normal urine gives no apparent reaction with Fehling's solution even if boiling is fairly prolonged, while such an amount as 15 mg. per c.cm., though it gives a yellow solution, gives no precipitate whatever on moderate boiling. The following table indicates the results obtained on boiling solutions of kreatinin with an equal volume of Fehling's solution for a moderate time.[7]

1 mg. kreatinin in 1 c.cm. H_2O...	No change even on fairly prolonged boiling; no change on cooling.
2 mg. ,, ,,	No apparent change.
3 mg. ,, ,,	No change on boiling; blue colour seemed to be very slightly less intense after cooling, but hardly apparent.
5 mg. ,, ,,	Somewhat decolorized on boiling; on cooling, reduction in intensity of colour but still fairly blue.
9 mg. ,, ,,	Decolorized on boiling; on cooling gave clear solution.
15 mg. ,, ,,	Decolorized on boiling; gave yellow colour; no precipitate, even after long standing.

This direct reducing power possessed by kreatinin is therefore of little importance in regard to its interference with Fehling's test; it is possible that in exceptional cases it might be present in amount sufficient to cause some change in the blue colour of the solution, but as it never seems to give a precipitate unless boiling is continued for a comparatively long time, this direct reducing power is unimportant, and should never give any trouble. This aspect of kreatinin may therefore be entirely neglected in urine-testing with Fehling's solution.

Kreatinin, however, exerts a very important influence in other ways. Not only, as above stated, does it prevent a small amount of sugar giving any apparent reaction with Fehling's solution, but, what is much more important from the clinical point of view, it constitutes the chief factor in the genesis of many of those ambiguous reactions which are so puzzling to the clinician. This interfering action may be considered from—

1. Its power of preventing any reaction with Fehling's solution in the presence of a small amount of sugar.
2. Its power of modifying and masking many sugar reactions when the latter is present in somewhat larger amount.

With regard to its effect in preventing a reaction with Fehling's solution, experiment shows that sugar may be

present in urine to the extent of about 0.1 per cent. or somewhat beyond this without giving any indication of its presence, the kreatinin being able to inhiblt the formation of the ordinary precipitate. It is probably to this action of kreatinin that the statement to the effect that normal urine contained no sugar owed its origin. It is now held as a proved fact that all urines contain a certain amount of sugar, and in view of the above statements it is at once obvious that Fehling's test for sugar in urine is but a relative reaction, depending within certain limits on the amount of kreatinin present in relation to the amount of sugar or reducing substance. Thus, a urine very poor in kreatinin might give a fairly distinct reaction with Fehling's test, while another specimen containing more sugar, but at the same time an increased amount of kreatinin, might give no reaction. As the result of the examination of a very large number of specimens giving results more or less definite with Fehling's solution, it was generally found that a reaction really indicated slight excess of reducing substances, though, on the other hand, it sometimes happened that a urine which contained but the normal amount of reducing constituents gave a somewhat ambiguous reaction. This I interpreted as indicating a rather low percentage of kreatinin, and this seems the only satisfactory explanation; in a few cases colorimetric experiments were carried out in order to determine the amount of kreatinin actually present; this view seemed to be corroborated by the results.

More important still is the power of kreatinin in modifying certain sugar reactions with Fehling's solution. If the amount of sugar in urine is just too large to be prevented from reacting in the ordinary way, the reaction which results is much modified. After boiling for some time with Fehling's solution no result is obtained, or perhaps the mixture may be somewhat changed in colour, presenting a somewhat greenish or greenish-blue appearance; the test tube is put aside, and, after standing for some time, it is noticed that there is now a distinct greenish-yellow opalescent fluid containing a finely-divided precipitate. If the amount of sugar present is rather greater, the gradual formation of a precipitate may be evident after boiling for a fairly long time; it does not, however, form quickly, the first indication of a change being a greenish tint in the solution, which gradually becomes intensified, and passes on to give a definite dirty, milky, greenish, opalescent liquid. In some of these cases it is difficult to detect a distinct precipitate with the eye, but the centrifuge indicates that the opalescence is due to the suspension of many fine particles. In other cases where the sugar is present in fair amount (say 0.3 per cent. to 0.4 per cent. or more), no precipitate may be obtained on boiling for the usual time, but on removal from the flame or shortly afterwards, a fairly dense precipitate separates out.

On the Manner in which Kreatinin gives rise to these Ambiguous Reactions.

If a liquid containing a small amount of sugar and kreatinin be boiled with Fehling's solution, the sugar present almost immediately acts on the copper and reduces it to the suboxide. The kreatinin, however, is capable of preventing any indication of this reaction in virtue of its power of preventing the reduced copper suboxide from separating out as a precipitate. Therefore, after boiling for a few seconds we have a liquid containing kreatinin and some cuprous oxide, which is held in solution. The power of holding this lower oxide in solution is directly dependent on the amount of kreatinin present at any given moment, so that if by any process the amount of kreatinin be lessened, there is an increased tendency on the part of the suboxide to separate out as a precipitate. Now, kreatinin itself is gradually changed when acted on by Fehling's solution, part of it being probably changed into kreatin and part destroyed; if the amount of kreatinin present is just sufficient to prevent the sugar giving a precipitate, it follows that boiling for a comparatively short time will disturb the balance sufficiently to enable a small amount of the suboxide to separate out as a precipitate. This takes place gradually, and is naturally more liable to happen after the solution has cooled, the presumption being that a hot solution of kreatinin has a greater solvent power on cuprous oxide than a cold one. The suboxide at first separates out in the form of exceedingly minute particles which are held in suspension in the blue liquid, constituting the dirty-greenish opalescent fluids so often encountered in testing certain urines with Fehling's solution. If this liquid be centrifuged for an hour or two a blue solution remains, and a greenish precipitate is found at the bottom of the tube, indicating that the opalescence was really due to a suspension of fine particles; of course there may be many modifications of this reaction depending on the amount of sugar actually present; in the presence of a fair amount the resulting precipitate may be quite easily detected as such by the naked eye. From the above it is obvious that the time for which a urine must be boiled in order to give a precipitate depends essentially (within certain limits) on the relative proportions of reducing substances and kreatinin present; the more of the latter there is in relation to reducing substances, such as sugar, the more boiling will be necessary in order to obtain a precipitate. In all normal urines, as described later, a very distinct turbid precipitate can always be obtained with Fehling's solution if boiling be continued long enough.

These ambiguous reactions are often mentioned in clinical textbooks, but there seems to be no explanation of their cause or significance. Simon,[8] in his book on clinical diagnosis, states that not infrequently when applying Fehling's test it will be observed that upon standing, when no precipitate has occurred previously, the blue colour of the mixture changes to emerald green, while the solution at the same time becomes turbid, but that such a phenomenon should not be referred to sugar, as it is in all probability due to the action of other reducing substances. Allen,[9] on the other hand, while admitting that a urine giving a reaction similar to that described above may contain sugar, explains the phenomenon on the assumption that some of the reducing substances of urine, such as uric acid, hippuric acid, hypoxanthine, glycuronic acid, or kreatinin, may be preventing the normal reactions of sugar. The substance, however, which causes this is really kreatinin, this effect having no relation to its reducing action. To give this modified result with moderate boiling two substances are necessary:

(*a*) Kreatinin.
(*b*) Substances reducing cupric oxide directly and capable of giving a precipitate in the ordinary way with Fehling's solution.

All the so-called interfering substances in urine, except kreatinin, act in virtue of their direct reducing power, and so, if present in excess, may simulate sugar. Kreatin, however, is an exception, as it acts in much the same way as kreatinin, only it is very much less powerful. Since, according to Folin,[10] kreatin may occasionally appear in the urine in large quantities, especially after meat diet, it is likely that in certain urines kreatin may enhance to a certain extent the effects of kreatinin. In the majority of urines the amount of kreatin appears to be small and its direct effect of minor importance. Other substances also may sometimes be present which may act to a limited extent in the same manner as kreatinin, but their influence in this direction seems to be of little consequence. Thus, it is obvious that kreatinin is the substance in urine which really constitutes the greatest interfering factor in the application of Fehling's test for the detection of small amounts of sugar; it acts by its power of apparently inhibiting the reaction with relatively small percentages of sugar, as well as by the influence it exerts in giving rise to ambiguous reactions when larger amounts are present.

On the Modifications of Colour obtained on Testing Saccharine Urines with Fehling's Solution.

Every one must have observed that certain saccharine urines give with Fehling's solution a distinctly yellow precipitate, while in others it is of a pronounced red colour. Urines containing a comparatively low percentage of sugar (say, 1 per cent. to 2 per cent.) give as a rule a yellow precipitate, while others containing three or four times this amount give a distinct red. It is generally admitted that kreatinin is the substance which is responsible for this difference in colour, but how this is brought about has, so far as I know, not been explained. That kreatinin is capable of bringing about the change is obvious from a very simple experiment. If a weak solution of sugar in distilled water be treated with Fehling's solution in the ordinary way a distinct red precipitate is

obtained; if to another portion of the same solution a little kreatinin be added, and the mixture treated as before with Fehling's solution, a yellow precipitate now results. A similar result can be seen by adding, say, ½ per cent. or more of sugar to normal urine, when on testing the precipitate is distinctly yellow. If, again, just enough sugar be added in the latter case to give a reaction after fairly prolonged boiling, the resulting precipitate is greenish, and all gradations of colour from dirty green through greenish-yellow and yellow to red may be obtained by carefully graduating the amount of sugar added to the urine. In some of my earliest experiments on this subject I found that it was always exceedingly difficult to filter off many of these yellowish precipitates, while in cases giving a greenish substance the only result obtained was a green stain on the filter paper, the filtrate being practically unchanged in appearance; the more nearly the colour of the precipitate approached to red, the easier filtration became, the latter precipitate separating with ease. In experiments with the centrifuge the results of filtration ran parallel to those of sedimentation, the green and greenish-yellow fluids taking a very long time to yield a distinct precipitate, while red ones were very quickly separated. These and other considerations led to the conclusion that the difference in colour of the precipitate really depended on the fineness of the particles, and there can be little doubt that this is the true explanation, for it can be confirmed by microscopical examination. In the presence of kreatinin even in small amount, the precipitate with Fehling's solution is modified in that it consists of finer particles; the more kreatinin present relative to the sugar, the finer the particles are; if the amount of sugar is very large (say 5 to 6 per cent. or so), the kreatinin normally present is usually insufficient to exert any appreciable influence, and the ordinary red precipitate is obtained. As above stated, when testing a slightly saccharine urine with Fehling's solution, a point arrives at which the amount of kreatinin and its derivatives present in the mixture is just insufficient to hold the reduced suboxide in solution. Naturally this suboxide is thrown out as an exceedingly fine precipitate. If heating be continued, the kreatinin becomes less and less capable of preventing a precipitate, and a yellowish-coloured turbidity is obtained; ultimately a point is reached at which the kreatinin practically exerts no influence in inhibiting the formation of a precipitate, and the tendency now is for the suboxide to separate out as a red-coloured compound. These facts are well illustrated by an experiment in which I boiled a weak solution of sugar and kreatinin until the characteristic greenish-coloured opalescent liquid was obtained; on filtering this no change was apparent in the filtrate, the filter paper being merely stained green. After centrifuging this for two hours, a greenish precipitate was obtained, the fluid part being now distinctly blue and quite clear. This blue solution was again heated, and this time the result was a distinct greenish yellow precipitate. This was separated by means of the centrifuge and the liquid again heated; this time a yellow precipitate was obtained, which was capable of being separated by filtration. A repetition of the process eventually resulted in the filter paper showing a distinct red precipitate. These differently coloured precipitates are therefore dependent on the degree of fineness of the particles composing them, this in turn being directly dependent on and caused by, the kreatinin normally present in the urine according to the above explanations. In the ordinary textbooks we are generally told that the yellow precipitate is the cuprous hydroxide (Cu_2OH_2O), while the red is characteristic of the cuprous oxide (Cu_2O). A consideration of the chemical properties of the lower hydrate of copper at once suggests a doubt with regard to this statement; if it were true that the yellow precipitate is really the lower hydroxide, this would be an easy method of obtaining a body which is one of the most unstable of chemical compounds. If, however, the yellow is really the hydrate and the red the cuprous oxide, what explanation is to be ascribed to the great number of intermediate coloured precipitates obtained between green and yellow and yellow and red? There is every reason to believe that the precipitate is in every case the comparatively stable cuprous oxide, the difference in colour being no indication of a chemical difference, but merely depending on the physical state of the precipitate with regard to subdivision of the particles. That the yellow precipitate is really the lower oxide in modified form was suggested by Dr. Angus Fraser of Aberdeen many years ago.

If a very strong solution of sugar be made up in urine the resulting precipitate may be somewhat modified and appear as a dark brown mass. This probably depends on the fact that part of the excess of sugar present is charred, while at the same time the alkali of Fehling's solution gives, with the sugar, a dark brown liquid (Moore's test). The mixture of reduced oxide, charred sugar, and dark brown liquid naturally gives a modified result, but this is essentially distinct from that obtained with moderate quantities of sugar. If a very weak solution of sugar in distilled water be examined by Fehling's test a yellow or greenish-yellow liquid is at once obtained, but here the precipitate is really red, as can be at once proved by the centrifuge; also separation by filtration is easy, and leaves a red deposit on the filter paper.

Uric Acid.

Uric acid, present in the form of urates, is another substance credited with the power of markedly interfering with the results of Fehling's test. In all textbooks this substance when present in excess is held to be a prominent factor in simulating small amounts of sugar in urine. Uric acid reduces Fehling's solution very readily, and any interfering action it may possess is due to this property. In making some experiments on this subject I found that normal urine contained more than sufficient uric acid to give a distinct reaction with Fehling's solution; the addition of a very little kreatinin, however, was quite sufficient to prevent this reaction, and showed that a considerable amount of uric acid could be prevented from giving any reaction by a comparatively small amount of kreatinin. It was obvious that the uric acid normally present in the urine was prevented from reacting with Fehling's test by the inhibitory power of the kreatinin. Experiments were conducted with a view to saturating a urine with uric acid (or urates) in an endeavour to obtain a uric acid reaction with Fehling's test. In every case this failed, and it would seem that the maximum amount of uric acid capable of being held in solution in ordinary urine is prevented from giving any reaction with Fehling's test by means of the kreatinin present. Similar experiments, in which the actual urates obtained from concentrated urine were utilized, gave negative results. These results all point to the general conclusion that urates do not generally constitute an important interfering factor in Fehling's test for sugar when this is performed in the ordinary way. After prolonged boiling they would no doubt exert a certain influence, but when boiling is fairly restricted, as is generally the case in testing by Fehling's solution, it is doubtful whether they really often cause a reaction that would likely be mistaken for sugar. There can be no doubt of the fact that many of the urines giving an ambiguous reaction are rich in urates, or at any rate show copious deposits of this substance in the urine glass. The natural inference would, of course, be that an ambiguous reaction obtained from such a urine was due to urates; it is very questionable, however, if there is sufficient ground for such a view. In urines of the above described type, great numbers of which I have examined during the last few years, I almost invariably found that other substances, mainly of a carbohydrate nature, were present in quantity sufficient to account for the reaction.

A few in which the kreatinin was rather low were explained by this fact, as described above, the kreatinin being insufficient in amount to prevent the reducing action of the normal carbohydrate material present. That uric acid, with the help of other substances, tends to decolorize Fehling's solution to some extent is undoubtedly true, but that it is often present in urine in amount sufficient *per se* to simulate a sugar reaction in the presence of the normal kreatinin is inconsistent with the results of many observations and experiments.

How, then, it may be asked, can the fact that many urines giving an ambiguous Fehling's reaction show a copious deposit of urates on standing be accounted for? The answer seems undoubtedly to be that these urines are really concentrated and contain an excess of normal carbohydrate reducing material, which is really mainly responsible for the action. The deposit of urates is a

natural result of concentration, but really seems to be of secondary importance in the sense of interfering with Fehling's test as generally performed. It would thus seem that the usual statement to the effect that urates often interfere with the test requires modification. The maximum amount of uric acid capable of being held in solution by urine containing the normal amount of kreatinin would not exert any appreciable influence on Fehling's solution in the sense of producing a precipitate of cuprous oxide. As will be described below, a urine rich in urates and giving a reaction with Fehling's test under normal conditions is practically always found to contain sugar in slight excess of the normal amount. In such a case no doubt the urates contribute to the effect in virtue of their reducing power, but the fact that sugar is present in excess shows that the part played by the urates is not a marked one. The statement that a urine containing the normal amount of sugar and kreatinin will not usually give an ordinary Fehling's reaction though saturated with urates may be accepted as a general fact. With a little care in performing Fehling's test in urine, any influence exerted by urates may be, in a general sense, neglected; on the other hand, if boiling is prolonged they may undoubtedly assist in causing a precipitation, but it is doubtful whether boiling should ever be prolonged in performing the test. The reason for this will be discussed below.

Phosphates.

It is not often that phosphates are mentioned as interfering with Fehling's test, but that they occasionally do constitute a source of difficulty is certain. This is due to the fact that in a urine rich in certain phosphates the addition of an alkali causes a precipitation, which, as a rule, becomes much more marked on heating. In such a urine the addition of Fehling's solution may give rise to no change in the cold, but immediately on heating a greenish-yellow fine precipitate of phosphates forms, giving the fluid quite an opalescent appearance. This reaction, however, differs from that caused by a definite reduction of Fehling's solution in the fact that the phosphatic precipitate soon becomes flocculent, and separates out more or less in distinct masses. If a precipitate of this kind is obtained, it will be found that rendering the urine alkaline with some such salt as sodium carbonate, and heating, will give a precipitate of phosphates which can be easily removed by filtration. On testing the filtrate with Fehling's solution no reaction is now obtained. This interference by means of phosphates, though not perhaps very common, is a very real one when it is encountered, and exceedingly liable to cause a mistake. The accompanying table gives an indication of what is often obtained in urines of high specific gravity, giving a certain reaction with Fehling's test. It will be seen that the amount of carbohydrate present is sufficient to give an ambiguous reaction, except in one case in which the reaction was due to phosphates.

Glycuronic Acid.

This substance undoubtedly exercises a powerful reducing action on Fehling's solution, and if present in urine in sufficient quantity would simulate sugar very closely. In urine it always appears as the paired acid (the glycuronate), and seems to be present as such to a very slight extent in normal urine; in such minute quantity it is of course of no importance, and the question to be considered is whether this substance is often present in urine in sufficient amount to simulate sugar. In a few isolated cases it has been found in abundance in the urine of apparently healthy persons, but such cases seem to be rare. As a general fact it may be stated that, in the absence of drug treatment, the presence of glycuronic acid in urine in appreciable amount is an exceedingly rare condition. On the other hand, there can be no doubt but that in certain cases, as the result of drug treatment, it really does appear in fair amount in urine, and so tends to give a more or less well-defined reaction with Fehling's test. After such drugs as chloral, morphine, naphthol, camphor, turpentine, etc., this condition may be met with. Even in these cases, however, I find that along with this substance there is sometimes an increase in the amount of fermentable sugar as well, and in cases in which a very distinct reaction was obtained sugar was generally found to be present in excess along with an appreciable amount of glycuronic acid. On the whole, this substance really seems to be of rare occurrence in urine in amount sufficient to give a Fehling's reaction, though undoubtedly it is perhaps the most important direct interfering substance likely to be encountered in quantity sufficient to closely simulate sugar. Many methods of distinguishing between sugar and glycuronic acid have been advocated, and they are so well known as to make it superfluous to describe them here. The chief of these are the phenylhydrazine reaction and the fermentation test. Both operations are tedious, and the first often requires special manipulation and experience in order to obtain a reliable result. The simplest way to distinguish between sugar and glycuronic acid seems to be to add to the urine a little tribasic lead acetate (1 to 2 grams to 50 c.cm. urine) and boil for a little time; then cool thoroughly, allow to stand, and filter. The glycuronic acid will have been almost entirely precipitated by the lead salt, while any

No.	Specific Gravity.	Results with Fehling's Solution. Before Fermentation.	After Fermentation.	After Treatment with Basic Lead Acetate	After Allen's Modification for Precipitation of Uric Acid, etc.	Total Carbohydrate Present. Before Fermentation.	After Fermentation.	Notes.
						Per Cent	Per Cent	
1	1025	Fairly distinct yellowish-green precipitate on cooling after boiling for ten to twenty seconds	Faint reaction after cooling; greenish opalescence	Reaction after cooling	Reaction after cooling, but somewhat less distinct than original urine	0.25	0.24	Sample gave marked deposit of urates on standing.
2	1022	Greenish opalescent precipitate after boiling for a few seconds, became more distinct on cooling	Much fainter reaction; no distinct precipitate to naked eye; greenish yellow opalescence	Distinct reaction after cooling	Fairly distinct reaction, more marked after cooling	0.2[illegible]	0.13	Deposit of urates.
3	1018	After heating for a few seconds became fairly opalescent; on cooling, flocculent precipitate	Flocculent precipitate as before	—	—	0.11	0.08	Sample contained excess of phosphates which gave ambiguous reaction
4	1024	Opalescence on heating; slight greenish precipitate on standing	Very faint reaction	Opalescent solution after cooling	Opalescent solution after cooling	0.1[illegible]	0.1[illegible]	Deposit of urates.
5	1015	Green colour on heating; distinct greenish-yellow precipitate on standing	No reaction	Fairly distinct reaction	Fairly distinct reaction	0.23	0.2[illegible]	No deposit
6	1030	Gave slight opalescence after few seconds' heating; fairly distinct precipitate on standing	Gave slight precipitate after cooling, though much less marked than unfermented urine	Gave opalescent fluid with precipitate on cooling	Distinct reaction after cooling	0.2[illegible]	0.1[illegible]	Deposit of urates.

sugar present will be still in solution in the filtrate. It is important to notice that the urine be of acid reaction; of course, an ammoniacal urine would be quite unsuitable, for in this case the sugar would also be precipitated. As a rule the filtrate can be quite well tested by Fehling's solution without separating off the lead; if a distinct result is now obtained the reaction is in all probability due to sugar. I have found this method very reliable as well as quick; it can be performed in a few minutes without any special apparatus. At present I am investigating the subject of glycuronic acid, and hope at a later date to publish further results both in regard to this and other substances, such as homogentisinic acid, pentoses, lactose, etc. These are, however, of comparatively rare occurrence, and only occasionally give any trouble. Lactose is only in evidence under circumstances that would probably suggest its presence in the urine of lactating women.

The Reducing Power of Normal Urine on Fehling's Solution.

Every urine will give a distinct precipitate with Fehling's solution if boiled long enough.[11] The time required varies from an average of two to five minutes, or more, depending on the quantity of reducing substances normally present. Pathological urines rich in dextrose give a marked reaction even before the boiling point is reached, while the presence of a minute amount may necessitate boiling for some time in order to obtain any indication of the presence of sugar. These modifications are caused by the kreatinin present, as will be obvious from the facts already stated. If no kreatinin were present, all normal urines would at once give a fairly distinct reaction with Fehling's solution, even the normal quantity of uric acid being much greater in amount than is necessary to cause this. Besides uric acid, normal urine always contains a certain amount of reducing carbohydrate material (of which part, at any rate, is dextrose) as well as minute traces of other substances, such as glycuronic acid compounds. All these tend to cause almost immediate reduction after the boiling point is reached, and in the percentage in which they occur in urine reduce their equivalent amount of Fehling's solution in a few seconds; in the process of reduction they undergo destruction.

Kreatinin, on the other hand, while holding in solution the reduction products of the above substances, gradually exerts a reducing action of its own. This occurs slowly, however, as is proved by the fact that a solution of kreatinin containing approximately the percentage of this substance found in normal urine requires to be boiled with Fehling's solution for many minutes before any precipitate is obtained.

If, therefore, we boil a mixture of Fehling's solution and normal urine for a short time, we have a fluid containing a certain amount of cuprous oxide which is held in solution by the kreatinin; on continued boiling the kreatinin itself continues gradually to add to the amount of the lower oxide present, in virtue of its own reducing power, while, at the same time, it becomes gradually less in amount. Ultimately a point is reached at which the suboxide reduced by the uric acid, sugar, etc., of the urine, added to that reduced by the kreatinin itself, is no longer capable of being held in solution by the amount of kreatinin and its derivatives actually present in the urine at that moment; at this point a precipitation occurs.

Thus it will be seen that the reaction obtained from normal urine is essentially the same in kind, and only differs in degree, from that obtained in a urine containing more than the normal amount of sugar, the chief difference being that the more sugar present the quicker the reaction occurs.

On the General Significance of these Ambiguous Reactions.

The question of the significance of many of these modified reactions in urine probably presents itself most forcibly in the examination of cases for life insurance. In examining the urine of a candidate, it fairly often happens that a reaction is obtained with Fehling's solution which, though not a typical sugar reaction, leaves the examiner in great doubt as to whether he is justified in saying that the urine is free from sugar. As life insurance companies generally hold that the presence of a trace of sugar in the urine is sufficient to disqualify the applicant, the question is rendered still more difficult, strictly speaking, every urine contains a certain amount of sugar, which, as explained above, is prevented from giving a reaction with Fehling's test by means of the kreatinin present. The kreatinin, however, is not capable of inhibiting the effect of considerable amounts of sugar, even when it is itself present in increased amount, and if the percentage of normal carbohydrates be increased from any cause, then a modified result will be obtained with Fehling's test. Now, ordinary urine contains on an average carbohydrate matter to the extent of from 0.05 per cent. to 0.1 per cent., part of this being dextrose. Such a urine would normally give no reaction, for the reasons already given. If such a urine of specific gravity 1015 be evaporated to about half its bulk, its specific gravity would then be from 1028 to 1030. Such a concentrated urine would contain from 0.1 per cent. to 0.2 per cent. carbohydrate material, and the latter amount would usually be quite sufficient to give an ambiguous Fehling's reaction, though the urine was otherwise quite normal.

In testing a urine the first consideration to be taken into account is the specific gravity. It is often the case that these doubtful urines are of high specific gravity, and consequently contain more normal carbohydrate than usual. In the days when the presence of sugar in urine was denied, this concentration was of course held to have no effect, and the ambiguous reaction obtained from such a urine was either ascribed to urates or some other reducing substance, or if sugar was suspected, the urine was held to be abnormal. Many quite normal concentrated urines, however, give an ambiguous result with Fehling's test, and the following observations may help in a doubtful case.

If the specific gravity of the urine is high, it ought to be reduced by the addition of water to about 1015. In the case of a urine of from 1028 to 1030 specific gravity an equal volume of water would be required to effect this. If now it gives a distinct reaction when boiled with an equal volume of Fehling's solution for about ten seconds either immediately or on standing for a minute or two, it may generally be assumed that sugar is present in quantity above the average for normal urine. Unless at least a distinct opalescent fluid with a greenish or yellowish precipitate is obtained, the test should be held as negative for practical purposes, since the amount of sugar necessary to cause decolorization and yet not give a precipitate is likely to be of no clinical importance. In the absence of drug treatment an ambiguous reaction with Fehling's test generally indicates, in a urine of average specific gravity (1015), a slight excess of sugar. In connexion with specific gravity, it should be remembered that a urine giving an indication of 1020 when passed, will, on cooling to the temperature of the room, show a specific gravity of 1025 to 1026. In insurance cases the urine is generally tested immediately after it is passed, and this fact in regard to specific gravity is often lost sight of, and consequently leads to error.

If all urines, after cooling to room temperature, were diluted to about 1015, many mistakes might be avoided; a reaction in such a dilute urine would always be obtained with less than 0.15 per cent. dextrose. In urines containing a slightly higher percentage of sugar than normal the important point, of course, is to determine how much urine is passed per diem, and so obtain a clue as to the total sugar passed. An ambiguous reaction with Fehling's test in the urine of an individual passing less than 1,000 c.cm. per day would obviously have a different significance to that of a urine giving a somewhat similar reaction but of which the daily average amount was nearly 2,000 c.cm., or even over this. In a case giving a modified reaction with Fehling's test after dilution it is always advisable to postpone a report until a future examination can be made, for it seems certain that the presence of small amounts of sugar in urine in quantities above the normal is often caused by factors which have very little direct bearing on the probability of life. The amount of exercise taken, the quantity of carbohydrate eaten, working or sitting in badly-ventilated rooms or offices, temporary feverish or mentally-disturbed conditions, alcohol, etc., all tend to cause a slight increase in the amount of sugar excreted in the urine of many apparently healthy individuals.

Again, observation proves that sugar may be occasionally present in the urine of healthy people without any apparent cause, and that the power of assimilation of carbo-

hydrate may vary within fairly wide limits, not only in different individuals, but in the same individual. The important point to consider is whether, with ordinary diet, the urine always contains a small excess of sugar. If it does so, the case is suspicious, and the ultimate prognosis very doubtful—probably bad. If the sugar is of but temporary occurrence, it can be said that in the majority of cases its presence is of no importance. This temporary increase of sugar is often observed in cases of mental disturbance. The teaching that urines containing sugar are of high specific gravity, while generally true, is not always so. In connexion with this, it is interesting to note that a sample kindly sent me by Dr. A. W. Macintosh, of the Aberdeen Royal Infirmary, contained about 1 per cent. sugar, and yet the specific gravity was, on passing, only 1005, and after cooling, 1010. On the other hand, urines of high specific gravity, such as 1030, suggest at once a suspicion as to the probable presence of sugar. This, of course, is the ordinary textbook statement, but, unfortunately, is often misleading. If, on testing such a urine with Fehling's solution, a modified reaction is obtained, this is often held as confirmatory. As a matter of fact, almost all urines of such high specific gravity as 1030 give some reaction with Fehling's test, but a little consideration would at once show that if the high density were really due to sugar, then the amount necessary to cause this would give a very decided reaction indeed. If glycuronic acid is suspected it can be separated by basic lead acetate. In doubtful cases other tests must be made use of, and in a future publication I intend to give an account of my experience of some of these tests and their results, as well as some methods by which the exact amount of sugar present can be determined. The above will serve to show the nature of Fehling's reaction, and to render intelligible certain reactions of which I have not hitherto seen an explanation. The fact that every urine contains a certain amount of sugar; that the amount normally present varies with different individuals and probably for the same individual, and that the test is at best but a relative one, indicates that the occurrence of an ambiguous reaction in a concentrated urine is generally of no clinical importance, and though largely due to carbohydrates does not usually indicate an abnormal condition. In urines of low specific gravity these ambiguous reactions do generally indicate a slight excess of sugar, but its probable bearing and importance can only be ascertained by watching the case, and by repeated examination of the urine at short intervals. In many cases it will be found to disappear, and give no further trouble; in a few it may show the starting point of a true diabetes mellitus, and in such cases early detection of the true condition is exceedingly important.

In conclusion, I would express my thanks to the various medical men who were kind enough to supply me with samples of urine from time to time during the last few years, and would particularly mention Drs. Souter, Copeland, and Chalmers, residents at the Aberdeen Royal Infirmary.

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LIGATURE OF COMMON CAROTID FOR ARTERIAL DILATATION AND EPILEPSY.*

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THE following case of arterial dilatation of the left side of the head, attended by epilepsy and right hemiparesis, relieved by ligature of the left common carotid, is of interest from several points of view:

An unmarried woman, aged 32, was admitted into the Liverpool Royal Infirmary in November, 1905, suffering from a dilated and strongly pulsating condition of the arteries of the left side of the head for fifteen years, epilepsy for ten years, some frontal headache, and a dull expression, with slow mental processes. It was presumed that similar vascular derangement existed inside the skull, affecting portions of the brain, and probably accounting for the epilepsy. She was put into a medical ward, under the care of Dr. Abram, for observation and report previous to operation.

It was there ascertained that the dilated vessels were first noticed on the left forehead at the age of 17, and had since spread over that side of the head, with increasing pulsation and headache. The fits began at the age of 22, and had latterly been as many as thirteen in a week. There was no aura, but complete loss of consciousness. She had bitten her tongue, but had not passed urine or faeces during a fit. There was a certain amount of right hemiparesis, but sensation was normal; Babinski's sign and ankle clonus were present in the right foot and triceps-jerk in the right arm. The pupils varied and the fundus oculi was normal. Besides the great general dilatation of blood vessels on the left side of the head, confined to the arteries, and specially affecting the main trunk, there was a thrill felt and a murmur heard. The vessels elsewhere were normal. Four days after admission she had six fits, which appeared to start in the right leg.

In the matter of treatment by operation, as the vascular changes outside the skull involved branches of the external carotid, and as those inside might possibly have concerned the middle meningeal—itself also a branch of the external carotid—it was suggested by Dr. Abram that ligature of this division of the main trunk might wisely be attempted.

With that view on November 27th, 1905, seventeen days after admission, the left common carotid was exposed and its bifurcation sought in the usual place, but no sign of it found there. The wound had been freely made in the line of the vessel, and was now extended at right angles. It was eventually found that there was an unusually high division of the carotid at the level of the jaw. The external carotid was barely within reach of the finger and could hardly, if at all, have been accessible for ligature. Moreover, pressure on it did not control the strong pulsations outside the head. They were only allayed by compression of the common carotid, which was then tied with prepared catgut. The vessel was much widened, as surmised before operation.

The wound healed simply and quickly by first intention; the patient was immediately relieved of her headache and all other inconvenience, and remained without fits for a time. On April 5th, 1907, she came to hospital, and was then examined by Dr. Abram and Mr. Parker. Her sister said that the fits returned about three months after operation, but much more mildly and seldom. Although during the period after their return she had sometimes been free for as much as three weeks at a time, they had latterly become more frequent, and now numbered about one a week. Her memory, also, and power of speech were failing; but in other respects she was healthy and cheerful, in great contrast with her condition before operation. Examination of the fundus oculi showed again no abnormality, and Babinski's sign was no longer present in the right great toe.

The total disappearance of outside arterial dilatation, the cessation of wild pulsation, mitigation of the right-sided hemiparesis, together with the improvement in her appearance and comfort, are quite conspicuous; but the ten years' epilepsy before operation has permanently affected her mental powers, the further deterioration of which was notably arrested during the three months' total freedom from fits. The vascular changes are not likely to have been confined to those perceived outside the left side of the head; the accompaniment of right hemiparesis, epilepsy and headache having been probably due to some such internal derangement.

* Read at a joint meeting of the Lancashire and Cheshire and North Wales Branches of the British Medical Association at Chester, April 10th, 1907.

ON THE

CULTIVATION OF THE MENINGOCOCCUS IN THE PRESENT EPIDEMIC OF CEREBRO-SPINAL MENINGITIS IN BELFAST.

BY

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DURING the present epidemic of cerebro-spinal meningitis in Belfast we have made bacteriological examinations of the fluid obtained by lumbar puncture during life (that is, during the first week of illness) from 31 cases, from 27 of which we obtained the *Diplococcus meningitidis* of Weichselbaum by culture on appropriate media. (See below.) One of the negative cases showed intracellular, Gram-negative cocci in the pus cells; and another negative

case was clinically acutely maniacal and probably not a case of the prevalent disease.

Moreover, we have culturally examined the fluid obtained by lumbar puncture after death (necropsy being refused) from 37 cases, with positive result in 22; the remaining 15 cases did not furnish us with the meningococcus, but occasionally with Gram-positive cocci. And thirdly, from the spinal fluid or pus, taken at *post-mortem* examination, we recovered the meningococcus in five out of six cases examined. Thus out of a total of 75 cases examined we were able to cultivate the specific coccus in 52 instances from the cerebro-spinal fluid.

As regards the identification of the coccus, we rely upon the following characteristics:

1. The colonies on suitable agar (see below) are smooth circular discs, with smooth regular contour; they have a peculiar translucent grey colour, closely suggesting the appearance of colonies of *Coli communis*, are only slightly raised above the surface of the medium, and according to the propinquity of the colonies to each other they vary in size from a mere pin-point to discs measuring 5 mm. in diameter after forty-eight hours' growth, but even after eighteen to twenty-four hours' growth the more isolated colonies are 1 to 2 mm. in diameter. These colonies, when first recovered from the cerebro spinal fluid, are always discrete, never confluent.

2. The colonies, microscopically, are composed of cocci which are indistinguishable in shape and size from the gonococcus—that is, diplococci whose apposed surfaces are flattened or slightly concave. Moreover, there are numerous isolated cocci, smaller than the gonococcoid forms, that are spherical in shape, like staphylococci. The older the culture the more numerous are these isolated cocci, the younger the culture the more abundant are the gonococcoid forms: but even after four or five days' growth there are always present the typical diplococcal forms with their flattened apposed surfaces.

3. The organism is Gram-negative. The larger gonococcoid forms retain the dye somewhat more resistantly than do the smaller isolated cocci, so that thorough washing with absolute alcohol must be practised in order to remove the stain from the former, but even with repeated washing in alcohol it is found that the larger forms cling, in certain cases, to the dye, but if a contrast stain is used, for example, weak aqueous solution of fuchsin, even the resistant cocci part with the last vestige of the original stain, and are coloured an intense pink. We use Czaplewsky's modification of Gram's method, namely, two minutes in carbol gentian violet, one minute in Lugol's solution, wash thoroughly in absolute alcohol. After which the film is thoroughly dried, and aqueous fuchsin is applied for a second or two to one-half the area of the dried film, wash quickly in water, dry and mount. Thus one half the preparation is pink, the other half colourless; if the organism is really Gram-negative the microscopic examination is much facilitated by the stained half of the film.

4. The organism does not grow at 20° to 22° C.

5. Dextrose and maltose containing media are fermented to the extent of acid formation, whereas galactose and saccharose remain unchanged.

This failure of Weichselbaum's coccus to form acid in media containing galactose has been insisted upon by v. Lingelsheim,[1] who finds that acid is produced in maltose and in dextrose containing media, but that no other sugar used by him undergoes this change, for example lævulose, galactose, mannite, dulcit, cane sugar, lactose, and inulin. Kutscher[2] confirms this statement, stating that he has repeatedly been able to verify its correctness.

We repeat that in Belfast we have not found that any one of our strains ferments galactose; acid was never formed in any instance in media containing this sugar, although abundant growth occurs in both solid and fluid media provided a little raw ascitic fluid is added thereto. The galactose used by us was obtained from Messrs. Baird and Tatlock, who write that the sample was prepared by Merck of Darmstadt; we have also used galactose made by Kahlbaum. In common with other observers, we have found that gas is not produced from sugars by the meningococcus.

The above five criteria, when taken in conjunction, are, we think, sufficient to identify a coccus obtained from the cerebro-spinal fluid (or blood) of patients suffering from meningitis—in other words to stamp the organism as being Weichselbaum's *Diplococcus intracellularis meningitidis.*

Media used to Cultivate the Meningococcus.

We find that the most satisfactory solid culture medium is the following:

Raw ascitic fluid	... 1 part.
3 per cent. agar	... 2 parts.

The agar is made in the usual way, but we find that Chapoteaut's peptone is the best to use.[3] Witte's peptone is good, but not so much so as the French preparation. A convenient laboratory name for these media is "chapasgar" (or "wittasgar," as the case may be)—obviously a mnemonic word comparable to "nasgar." In making the medium, allow the agar to cool to 55° C., and then add the ascitic fluid, which has been warmed to about the same degree; place in tubes, allow to solidify in the slanting position, and rest for several hours; then incubate for twenty-four hours, so as to insure sterility.

On such slopes the meningococcus lives for a week (sometimes two weeks), and subcultures can easily be propagated, provided the öse is well laden with the growth from the lowermost part of the tube—that is, by taking the moist growth near the condensation water. We have abundant growths on this medium, some in the fiftieth to sixtieth generation and above. It is well in the earliest generations to transplant every day, but after three or four transplantations every fourth or fifth day will be found to be amply sufficient.

The organism lives much longer in certain fluid media—for example, from bouillon to which three parts of raw ascitic fluid have been added the coccus is in many instances easily recoverable after thirty days' incubation. Our experiments on this point are still in progress, as the tubes are not yet devoid of living cocci; an agar slope stroked with a single loopful from a three weeks old culture in ascitic bouillon will be covered by an abundant growth within twenty-four hours at 37° C. The same vitality is shown in bouillon to which glucose or maltose with a little raw ascitic fluid are added, although the meningococcus *more suo* is apt to give unpleasant surprises in this particular; still we have, in two instances, recovered the organism after sixty-three days (fifty days at room temperature) and in one instance after seventy-five days.

When a culture has been once established on chapasgar, it will grow well on ordinary agar if transplanted every day or every other day. For opsonic work, where a growth of well-nourished cocci is needed, it can be procured by growing the organism on chapasgar, making daily transplantations and for the actual emulsion transplant from a chapasgar culture to ordinary agar and incubate for six hours at 37° C. Here the cocci are mostly the gonococcal forms, staining beautifully and intensely, besides forming a perfect emulsion.[4]

The coccus grows abundantly in gelatine to which raw ascitic fluid is added if kept at 37° C. Such tubes, when cooled, resolidify, no gelatine peptonizing ferment having been at work. From certain of these cultures the organism was recovered after thirty days' incubation.

Indol is produced in ascitic bouillon; eight strains were tested for this point, the cultures being examined after thirteen days at 37° C., pure H_2SO_4 being run in, and on addition of a drop of 0.1 per cent. sodium nitrite, the characteristic pink colour appearing.

Recovery of the Meningococcus.

In examining the cerebro-spinal fluid culturally we proceed as follows: If pus is present, a little of it is lifted up on a platinum loop and stroked over the surface of chapasgar in a Petri dish; at the same time an öse full of the supernatant fluid, clear or turbid, is spread over a slant tube of chapasgar. When the fluid obtained by lumbar puncture is limpid, 1 c.cm. is poured over the Petri dish, and also a single loopful is spread over a chapasgar slope.

The plates and tubes are incubated for eighteen to twenty-four hours at 37° C., and the colonies, if any, are then subcultured. The following examples may be of interest.

About 10 c.cm. of a perfectly limpid puncture fluid were obtained. One single loopful on the agar slope furnished about 200 colonies, whereas 1 c.cm. on the Petri dish furnished 30 only.

Again a turbid fluid was examined microscopically, and it was only after long searching that a few cocci were found within certain of the cells, and yet a loopful of this fluid furnished by culture 1,000 colonies.

Again a thick purulent exudate on the lumbar cord showed

many cocci in a great number of the pus cells, and yet the cultures obtained showed a marked paucity of colonies—under twenty on a Petri dish.

The meningococcus was also recovered from the blood in 3 out of 15 cases.

The blood was taken from the bend of the elbow; the skin having been washed was treated with mercuric iodide, being prepared as for operation, then a sterile needle was introduced into the vein and about 10 c.cm. of blood allowed to run directly into 300 c.cm. of peptone water. This was incubated for twenty-four to forty-eight hours at 37°, and loopfuls were then smeared over chapasgar. The first successful case was that of a boy whose blood was taken on the eleventh day of his illness. He died sixty-three days afterwards. The second case was a girl of 15 years, whose blood was examined on the second day of illness; she died twenty-four hours afterwards. The meningococcus was still living in the flask of peptone water nineteen days after the blood was added.

In the third case the blood was taken on the fourth day of disease; this patient died ten days later.

SUMMARY.

The meningococcus in the present Belfast epidemic has so far been isolated from cerebro-spinal fluid in 52 cases out of 75 examined, and from the blood of living patients in 3 out of 15 cases.

The organism is Gram-negative, does not peptonize gelatine, produces indol, forms acid from glucose and maltose, but not from galactose, gas is never produced, grows well in media containing raw ascitic fluid, lives for at least a week on "chapasgar," lives from two weeks to a month on ascitic bouillon, lives for two weeks to two months in fluid sugar media.

We are very greatly indebted to Drs. Ernest H. M. Milligan, W. J. Leighton, and Wm. Patton, house-physicians at the fever hospitals of Belfast, for supplying us with most of the lumbar-puncture fluids, and especially for the promptitude with which the samples were sent to the laboratory. To Dr. Gardner Robb, chief physician of the fever hospitals, we wish to extend our sincere thanks for many favours.

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[1] *Klin. Jahrbuch*, 1906, Band 15, H. 2. [2] Kutscher, Kolle and Wassermann's *Handbuch d. path. Mikroorganismen*, Ergauzungsband zweites Heft, p. 494, 1907. [3] See Kolle and Hetsch, "Die experimentelle Bakteriologie" (*Lehrbuch*, 1906, p. 210. [4] Houston and Rankin, *Lancet*, May 4th, 1907, p. 1215.

THE RÔLE OF THE VARIOUS ELEMENTS IN THE DEVELOPMENT AND REGENERATION OF BONE.

BY SIR WILLIAM MACEWEN, F.R.S.,
REGIUS PROFESSOR OF SURGERY IN THE UNIVERSITY OF GLASGOW.

[Abstract of a Paper communicated to the Royal Society.]

THE present inquiry has been undertaken with the view of obtaining data, chiefly by direct experiment, as to the rôle which the various elements play in the development and reproduction of bone. This communication deals with a part of the subject under two heads: A, the potentiality of the periosteum as a factor in the production of bone; and B, the regeneration of bone from proliferation of osseous tissue. The following is a brief summary of the paper:

A.—POTENTIALITY OF PERIOSTEUM AS A FACTOR IN REPRODUCTION OF BONE.

(1) To test this, a complete cylinder, constituting a portion of the shaft of a long bone, was removed while the periosteum was preserved intact. This showed, ten weeks afterwards, an osseous defect, constituting a gap in the continuity of the shaft.

(2) Periosteum free from osseous plaques was removed and transplanted. This was not followed by reproduction of bone, but by absorption of the periosteum.

(3) Duhamel's silver ring experiments are discussed, and the correctness of the deductions drawn therefrom are questioned.

In order to test whether the bone cells or the periosteum produces the bone which covers the silver rings, three experiments, each differing from the other, were performed, in which silver rings were placed on bone deprived of its periosteum, with the result that in each case the rings became covered with bone.

B.—THE REGENERATION OF BONE, FROM PROLIFERATION OF OSSEOUS TISSUE.

The periosteum is shown to be a limiting membrane controlling the osteoblasts, as illustrated in fractures, when the periosteum is intact and when it is torn. The production of callus is not inherently greater in the lower animals than in man—the amount of callus in both depends on the limitation of the periosteum and the amount of movement. (4) Direct experiment, showing that a long bone deprived of its periosteum continues to grow; (5) so also do the flat bones of the skull. (6) Bone may be made to grow in the midst of lacerated muscles by the mechanical distribution of osteoblasts. Observation. Rider's Bone. Suggestion as to the production of myositis ossificans.

(7) Can shavings of nude bone grow on being placed between muscles in a gap in the continuity of the shaft? Experiment and result seven weeks after show that not only do they grow but that they also proliferate to a very marked extent.

Is there any direct evidence to show that transplanted living bone actually grows and proliferates instead of forming, like blood clot, a passive framework for the granulation tissue to penetrate, which framework will then become absorbed? There is, as may be illustrated (8) in an instance of bone grown in sponge filled with granulation tissue.

(9) To test the osteogenic power of bone cells constituting the shaft of a long bone, they were grown inside of a glass tube. Result.

(10) Intrahuman transplantation of bone. Result 28 years after. Data are obtained from this experiment as to the growth of the humerus from the proximal and distal epiphyseal cartilages respectively. Also as to interstitial osseous increase—evidence of the increase in length of the diaphysis from the epiphyseal cartilage toward which the nutrient vessel runs.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

DYSTOCIA FROM ENCEPHALOCELE.

BEING summoned to Mrs. X., 38, 8-para, I found her in the second stage of labour, with inefficient pains. The child was in the fourth face position, and the waters that had come away were meconium stained; no sign of fetal life was made out. Rotation by hand and subsequently by forceps—under chloroform—failing, podalic version was done with much difficulty, being obstructed by a curious fluctuating tumour near the head. While preparations were being made to exercise traction on the after-coming head, a sudden sharp uterine pain shot it out, accompanied by a gush of sanious fluid and the disappearance of the "tumour" from the uterus. The swelling was then seen to be due to a large encephalocele. The child was dead. The mother subsequently did well.

Necropsy.—Full-time female child, normal size; very thick neck and small chin. Fronto-parietal part of skull normal in size; occiput smaller than usual. From occiput there sprang mesially a large encephalocele, which when empty and pendent reached to the sacrum, and without undue expanding held some 30 cc. of water. The sac walls were formed of skin, brain membranes, and thinned-out and expanded brain-cortex. The sac cavity was in free communication with the cerebral ventricles, by an opening roughly circular in shape and 1½ in. in diameter. The cerebral tissue entering into the sac formation appeared to consist of occipital lobes only; the remainder of the cerebral hemispheres was of normal size. The tentorium was absent. The cerebellum was represented by a peculiar tongue-shaped prolongation (perhaps the vermis only) extending 2 in. downwards on the dorsal aspect of the cord. Sections taken from this process, when cut and stained, showed a modified cerebellar tissue. All the organs of the body were examined, but no other abnormality was found.

REMARKS.—The mother informs me that three and a half years ago she had, what must have been from her description, a similar pregnancy, being a male child with a frontal meningocele, the size of a large orange. Her description of the child indicated also a spina bifida in the dorso-lumbar region, a small apple in size. This child lived seven weeks. Between these two abnormal pregnancies a healthy (girl) child was born, and is now 2 years old. No

history of shock or other influence possibly causative could be elicited. Two such pregnancies occurring within less than two years make the case, I think, worth recording. Playfair, quoting from Hecker (*Midwifery*, Part III, chap. vi.), specifies the dolichocephalic cranium—"prominent posteriorly, with the occiput projecting, which has the effect of increasing the length of the posterior cranial lever-arm and facilitating extension"—as an etiological factor in face presentations, and Herman (*Difficult Labour*, chap. iii) also makes allusion to it. This case might be regarded mechanically as an extreme example of such a condition.

Histon. L. G. Davies, M.D.Cantab.

UTERINE HAEMORRHAGE AND OVARIAN DISEASE.

The occurrence of periodic uterine haemorrhage long after the menopause, and in association with the development of cystic ovarian disease, seems to be sufficiently rare to make the following case of interest:

History. The patient, a married woman aged 57, with four children, consulted me in November, 1905, on account of a haemorrhage per vaginam which she attributed to a fall ten days previously. She said she had been a very healthy woman, and had ceased to menstruate thirteen years previously. The onset of the menopause was reached by a gradual cessation of the flow, and accompanied by none of the usual symptoms.

State on Examination. Vaginally nothing abnormal was found. Palpation was difficult, owing to adipose deposit, and at first nothing was discovered.

Progress.—After the lapse of some months, however, it was possible to make out a sense of fulness and resistance in the left iliac region, which gradually became more and more evident. Meanwhile the uterine haemorrhage recurred at regular intervals of three weeks, was never excessive in amount, and followed the usual course of a menstrual flux; the quantity gradually increased for the first two or three days, and then diminished daily until its cessation at the end of a week. The patient declined any operative interference, on the ground that she felt so well that she could not think that there was "anything the matter with her," and I lost sight of her for about six months. On her again consulting me in November, 1906, there was a large semi-elastic swelling to be felt filling up the left iliac region, reaching well above the umbilicus, and also extending across the middle line to the right. She told me that the "discharge" had continued to exhibit its previous periodic characteristic.

Operation and Result.—As the patient was by this time beginning to suffer from pressure symptoms she consented to operation, and this was performed almost exactly a year after I first saw her. A large multilocular cyst of the left ovary was removed, the right ovary being also taken away, as it showed commencing cystic disease. The uterus was examined and appeared quite healthy. The patient made an uninterrupted recovery.

Remarks. The points of interest seem to be (1) that a uterine haemorrhage so closely resembling an ordinary menstrual flux occurred so long after the menopause; (2) that its onset was apparently simultaneous with the commencement of the cystic disease of the (left) ovary; and (3) that it continued to appear at regular intervals during the whole period of the growth of the ovarian disease. Both Lewers and Pozzi make some reference to post-climacteric haemorrhage in cases of ovarian tumour, but I have been unable to find any reference to a case exactly corresponding to the one I have described.

W. H. Maling, M.R.C.S., L.S.A.,
Surgeon to the Sunderland and Durham County Eye Infirmary.
Sunderland.

RUMINATION IN MAN.

In connexion with Dr. Brockbank's very interesting article on merycism, which appeared in the British Medical Journal of February 23rd, 1907, I have pleasure in quoting the following case, which has lately come under my notice:

A clergyman, aged 40 years, resident in Scotland until 1904; robust, active, and in perfect health; first remembers to have observed return of food to the mouth some twenty years ago. He was then attending the University of Glasgow, and noticed that after hurrying breakfast and rapidly walking a mile to 8 o'clock lecture, food was frequently regurgitated half an hour to an hour and a half after eating. No sour taste was observed; in fact, the function seemed quite natural and rather pleasant. He thought it was a form of indigestion, but there was no discomfort of any kind, and finally he came to view it as a corrective process and even to depend upon the return of hastily-chewed food. For the most part, fairly large pieces of meat only were returned. He noticed that pork of all kinds, and mutton chops especially, provoked regurgitation, and that steak, grilled or fried, frequently returned. He still experiences the same thing, but only very occasionally. Fluid at times returns to the mouth, especially after a very full meal when much liquid has been taken; it is never sour or unpleasant. So far as he has observed, the action in regurgitation is a simple reversal of the process of swallowing. There is no eructation or spasmodic feeling, and to some extent the process is under control, though mostly quite involuntary. When a portion of partially chewed beef makes its presence felt in the stomach he can, by a slight contraction of the abdominal muscles, force it into the oesophagus, which automatically completes the process. He has lately observed roast pork return after two hours, still quite sweet. The only stomach trouble he remembers is some slight "heartburn" in early youth.

His mother and father were both quite normal. His father died at the age of 76, and his mother is still alive, aged 76. None of his brothers or sisters has any peculiarity of the kind. A male cousin had, however, voluntary control of the stomach and could at will ejaculate its contents.

A. C. L. La Frenais,
New Amsterdam, British Guiana. Government Medical Officer.

INFECTION OF MEASLES TRANSMITTED BY LETTER.

A few weeks ago a patient entered my consulting-room complaining of being "run down and in desperate need of a tonic." As a matter of fact he had measles and the rash was fully out. I promptly referred him to bed. Visiting him the following day, the diagnosis was amply verified, but his symptoms of illness were so slight that, unknown to me, he sat up in bed and wrote a letter to a brother residing at an isolated farmhouse, "six miles from everywhere," in Devonshire.

My patient's course ran smoothly and he was soon about. But his brother was attacked by measles, having been in contact with no one previously who had had the complaint. Dr. Wigham of South Molton, having attended him, has been good enough to verify facts, and he, moreover, is quite of the impression that the letter carried the contagion, it having been written whilst all the symptoms of coryza were evident and during the height of the rash.

I deem this case of sufficient interest to publish. It has a moral and a warning: Correspondence by letter should not be carried on by a patient suffering from measles.

Woodford Green, Essex. Hughes R. Davies.

HYPEREMESIS.

The following cases of persistent vomiting were treated successfully with acetyl salicylic acid:

Case I.—The patient, a primipara two months pregnant, complained of constant nausea and vomiting and inability to retain even milk. She had suffered from constipation for about a month. On examination there was tenderness over the colon, and the uterus was found retroverted; this was replaced and a suitable Hodge pessary inserted; large enemata (soap and water and lysol) by siphon were given every second day and a bismuth mixture prescribed, the patient being kept in bed and fed in the horizontal position with small quantities of easily assimilable food. The nausea and vomiting, however, continued. Salol p. c. ratae aromatica in capsules, tr. nucis vom., cetrarin (Merck), magnesium carbonate, were tried in succession with no effect. The patient was getting more and more emaciated, and the advisability of inducing abortion began to be considered. As a last resort acetyl salicylic acid, 5 grains in solution with food, was prescribed with immediate result. The patient did not vomit for a fortnight and was able to take more solid food; the vomiting then returned somewhat, but soon after cleared up and the patient made a good recovery.

Case II. This was also in a primipara, six weeks pregnant; she could not keep any food down, and she suffered from constipation. She was getting thin and unable to do her household duties. Profiting by my experience with Case I, she was given 5-grain doses of acetyl salicylic acid with her meals. Vomiting was relieved by the first dose, and the patient is now feeling quite well and getting strong. Her constipation was treated with cascara.

Case III.—The patient had a tuberculous history, and complained of constant nausea and vomiting after food, and pain

in the lower part of the abdomen. The uterus was pushed forward by a mass in Douglas's pouch, probably owing to localized tuberculous peritonitis, cut off by adhesions from general peritoneal cavity. The vomiting was treated with acetyl salicylic acid with the best results. She is now putting on flesh and taking her food well.

REMARKS.—Other milder cases of morning sickness have been treated with the drug with uniform success. I think the above cases indicate that it may prove of use in this troublesome and dangerous condition.

Sutton Bridge. W. M. CROFTON, M.B., R.U.I.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

VICTORIA HOSPITAL, BANGALORE, INDIA.

EXTRAPERITONEAL TRANSPLANTATION OF URETERS INTO THE RECTUM, ACCORDING TO THE DESCRIPTION OF PETERS OF TORONTO IN A CASE OF EXTROVERSION OF BLADDER.

(Reported by T. V. ARMUGAM, M.B. and C.M., Medical Officer in Charge.)

ON August 11th, 1906, R., a male, aged 18 years, was admitted for complete extroversion of the bladder.

State on Examination.

He was smelling heavily of ammoniacal urine, and the posterior wall of the bladder was found to open on the surface between the normal situation of the umbilicus (which was absent) and the symphysis pubis, which was also absent, the rami of the pubes being 3½ in. apart. The mucous membrane of the wall of the bladder was thickened and inclined to bleed in parts. There was a ring of ulceration and induration all round the exposed surface of the bladder. The ureters were found opening at the lower part of the exposed mucous membrane on either side of the median line, each on the summit of a papilla, and urine was observed to dribble from the summits of the papillae at intervals of fifteen to twenty seconds, but not simultaneously from both.

Operation.

On August 20th, 1906, the patient, having been prepared the previous day, was anaesthetized with chloroform, the external sphincter of the rectum was dilated with the fingers, and a medium-sized sterilized sponge with 2 feet of sterilized tape attached to it was introduced into the rectum as high as possible to prevent the escape of faecal matter. A sterilized Jacques catheter, No. 5, with its eye cut out, was introduced into the right ureter to a distance of 2 in. and fixed to the papilla with a silk suture. With a pair of blunt-pointed scissors the mucous membrane all round the papilla was released and the ureter was then released to a distance of 2 in. The left ureter was similarly dealt with, taking care not to open the peritoneal cavity. The reflection of the peritoneum was found to be unusually low. The mucous membrane of the bladder was cautiously dissected out. The rectum having been raised by an assistant with his fingers introduced into it, a pair of long dressing forceps was introduced high into the rectum and made to press on the point where it was decided to open the rectum from above; a small opening sufficient to admit No. 5 Jacques catheter was made in the rectum on its right side, and a similar opening was made on its left side. Through the openings the Jacques catheters were gently drawn into the rectum, until they brought through the ureters into which they were sutured; and then the ureters and the catheters were drawn out of the rectum and the papillae made to project a little (¼ in.) beyond the sphincter. The surface of the bladder from which the mucous membrane was dissected out was packed with antiseptic gauze, and the sponge in the rectum was removed and the patient put to bed.

Result.

The catheter from the right ureter was passed out on the fifth day, and the one from the left on the seventh day. Up to the thirty-fourth day after operation the patient was having one faecal motion and passing urine per anum on an average five times in twenty-four hours, with a little dribbling of urine from his rectum during sleeping hours. From the thirty-fifth day up to the date of discharge from hospital—that is, the fifty-eighth day after operation—the patient was having one faecal motion during the day, and passing urine per anum on an average four times between 6 a.m. and 9 p.m., the waking hours. The dribbling of urine from the rectum during sleep stopped on the thirty-fourth day after operation, and from that day up to the day of discharge from the hospital—that is, the fifty-eighth day after operation—patient was able to retain urine in the rectum from 9 p.m. until about 5 30 a.m. or 6 a.m., and was passing urine per rectum about four times between 6 a.m. and 9 p.m.

The patient left the hospital very much improved in general health, and has promised to come back for an operation for epispadias. In selecting sites for the openings in the rectum the precaution mentioned by Peters of Toronto was observed—namely, to select a point as high as possible, so as not to exert any traction on the ureters.

REPORTS OF SOCIETIES.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

J. O. AFFLECK, M.D., President, in the Chair.

Wednesday, June 5th, 1907.

ANAESTHESIA IN DENTAL OPERATIONS.

MR. W. GUY described his method of producing anaesthesia in cases in which the period need not last more than ninety seconds. After an exhaustive trial of various anaesthetics he found that gas and ethyl chloride yielded the most satisfactory results. He used an apparatus into the bag of which ethyl chloride could be directly introduced, and strongly disapproved of the use of cotton-wool or lint as recipients. In the case of adults he filled the bag with 1 gallon of gas, and caused the patient to breathe this for five respirations (all air being excluded); 3 c.cm. of ethyl chloride were then poured into the bag, and the patient respired the mixture for twenty-five seconds. His experience with this method was satisfactory from all points of view.

Dr. GIBBS did not consider that administration of the mixture as described for a period of twenty-five seconds would be sufficient to induce anaesthesia for ninety seconds in all adult or alcoholic patients.

MASSAGE AND MOVEMENT IN FRACTURES.

Mr. C. W. CATHCART in a paper on the treatment of fractures expressed the following conclusions:

(1) Absolute immobility of the broken ends of bone is not essential to bony union. The slight amount of movement necessarily involved in the daily massage of a fractured limb and in the daily active and passive movement of the adjacent joints seems to hasten cure. (2) Massage, combined with active and passive movement, not only aid the actual union of the bones, but help in the absorption of effused blood and serum, thus preventing the formation of adhesions and maintain the nutrition of the muscles. They, therefore, hasten union and at the same time prepare the limb to return to functional use almost as soon as the bones are united. (3) Splints and other retentive apparatus, including extension, are required more to prevent mal-union than non-union, and hence are called for specially where the weight of the limb or muscular action are likely to lead to a bad position during healing. During the acute stages massage diminishes swelling, allays muscular spasm, and diminishes pain. Later on it stimulates the circulation in the part, disperses accumulations of blood and serum, and maintains nutrition of the muscles.

In performing massage and movements the cardinal rule should be to cause no pain.

Mr. WALLACE pointed out that in Edinburgh for many years past the methods advocated had been carried out.

Mr. MILES did not consider that a masseur was necessary in carrying out such treatment. He had found that with comparatively little training nurses were able to perform all the necessary manipulations. He was still of opinion that long splints were necessary in the treatment of fractures of the shaft of the femur. For such cases Hodgkin's splint was probably the best.

NASO-PHARYNGEAL INFECTION.

Drs. J. S. FRASER and J. D. COMRIE, in a paper on the naso-pharynx as an infection-carrier in epidemic cerebro-spinal meningitis, pointed out that epidemics of this disease were frequent in seaport and colliery towns. Their investigations were chiefly concerned with the occurrence of the disease in Leith, where up to May 28th, 1907, 83 cases have occurred. Most of the cases were found in the densely crowded and poorer parts of the town near the docks. Eighty per cent. of the cases were under 16 years of age, at the period of life when adenoids and naso-pharyngeal catarrh were common. The *Micrococcus*

intracellularis meningitidis was found in 2 out of 13 cases of epidemic cerebro-spinal meningitis examined. This small proportion was due to the fact that isolation of one bacterium was very difficult in the case of patients who were extremely ill and whose nasal cavities swarmed with germs of different kinds. The micrococcus was present in 10 out of 69 contacts; and of those 10, 5 were fathers of cases; and of the 69, 14 were fathers of cases. The organism was present in only 9 per cent. of the mothers, brothers, sisters, and other relatives, but in 33 per cent. of the fathers of the patients. Five of the 14 fathers worked on a particular ship, and on exposing Petri dishes containing ascitic agar in various parts of this ship the micrococcus was found to be present in the air of the engine room. Twenty-three controls who had no evident connexion with the disease were examined, and in none was the micrococcus found to be present in the naso-pharynx. The authors thought the usual methods employed in stopping epidemics were useless when applied to outbreaks of acute cerebro-spinal meningitis. Their investigations and those of Ichle pointed to the spread of the disease by the fathers of the patients, causing infection of the naso-pharynx by kissing or by expectoration; therefore, all contacts should be isolated and a bacteriological examination of their nose and naso-pharynx should be obtained. Those cavities should subsequently be disinfected by very dilute solutions of formalin or other antiseptic.

Dr. ALEXANDER BRUCE was of opinion that the incident of the presence of the *Micrococcus intracellularis meningitidis* in the engine room of the ship at Leith Docks, and the fact that the disease had occurred in 5 cases the fathers of whom had worked in this ship, was very important and might provide a clue to the discovery of the channel by which this mysterious disease was spread.

OBSTETRICAL SOCIETY OF LONDON.

HERBERT R. SPENCER, M.D., President, in the Chair.

Wednesday, June 5th, 1907.

CORNUAL PREGNANCY.

DR. H. RUSSELL ANDREWS related 2 cases of pregnancy in a rudimentary uterine horn. In the first case pregnancy had occurred in a right rudimentary horn, and had gone on to about eight months when the fetus died. Laparotomy was performed five months later, when suppuration had occurred. The specimen removed showed a small uterine cavity on the left side and the large right horn. The patient recovered. The second case was one of ruptured pregnancy through a rudimentary uterine horn at about the eighth month. The pregnant horn ruptured, causing severe intraperitoneal haemorrhage. Laparotomy was performed and the pregnant horn removed, but the patient died about an hour after the operation. The fetus did not appear to be of much more than six months' development.

MISS GARRETT ANDERSON mentioned a case of cornual pregnancy on which she had operated recently. The gestation sac lay in the undeveloped right horn of the double uterus, and corresponded to about two months' pregnancy. The right ovary contained a recent corpus luteum. There was no communication between the right horn and the exterior.

CHORION EPITHELIOMA.

Mr. H. T. HICKS read a paper founded on a case of primary chorion epithelioma occurring in the vagina of a woman aged 26.

A hydatid mole was passed, and the growth accidentally discovered about a month later. There was no evidence of primary uterine growth. Sections showed that the growth was the structure of a chorion epithelioma, but no villi could be found. Fourteen other cases he said, could be found in the literature of the subject. The patient remained free from recurrence for seven months after removal of the first growth. The second growth was excised without delay, but two new ones appeared quickly. These were removed, but two months after the anterior vaginal wall became rapidly infiltrated with cancerous growth, and it was decided that further operation could be hopeless. The patient, who up to this time had been comparatively well, now went downhill with great rapidity. Metastases commenced to form into the vagina in many cases causing haemorrhage. The temperature rose, and signs of pulmonary trouble became evident. The patient died on the [illegible] eleven months after the passage of the mole.

Drs. W. S. A. GRIFFITH and H. WILLIAMSON recorded the case of a lady 42 years of age, who was delivered of a mole, probably hydatidiform, on December 30th, 1905.

The patient had borne four children, the last eight years previously: her fifth pregnancy commenced in the early part of June, 1905. From August to December she suffered from numerous small vaginal haemorrhages: from November 17th until December 29th she was under close observation, and, as no increase in the size of the uterus occurred during this period, a diagnosis of molar pregnancy was made, and abortion was induced. A mole was expelled which in its general characters resembled a carneous mole, but upon the surface were seen a few vesicles. Three weeks later (January, 1906) the patient suffered from persistent haemorrhage and the passage of clots; the uterus was explored and a quantity of blood clot and débris removed. From this time the haemorrhage ceased, excepting for the loss of a very small quantity of dark blood on February 16th, but the uterus again became enlarged, and pain was felt in the pelvis. On March 3rd the uterus and ovaries were removed by the abdominal route. In November, 1906, the patient died with signs of new growth in the lungs. The uterine cavity was greatly distended with fluid and clotted blood, the cervix being completely occluded by blood clot. A growth, of the nature of a chorion epithelioma, was found on the anterior wall near the fundus; numerous lutein cysts were present in both ovaries.

Mr. TARGETT thought that all cases of double lutein cystic tumours of the ovary should be carefully recorded. At an operation for ovarian cyst with pregnancy at the fourth month he found the tumour consisted of thin-walled lutein cysts, which partly ruptured on removal. The opposite ovary was in a similar condition. Both tumours were removed. A fortnight later the patient aborted. The fetus was macerated, and the placenta was partly composed of vesicular mole. So far the patient had shown no sign of development of chorion epithelioma.

SPECIMENS.

The following specimens were shown:

Dr. LONGRIDGE: (1) Rupture of the heart in a stillborn baby; (2) specimen and drawings of dilated uterers in stillborn infants. Dr. AMAND ROUTH: Pelvic organs from a case considered to have inoperable ovarian papilloma seven years previously. The PRESIDENT: Myomatous uterus, weighing 7 lb., in a patient aged 22. Dr. BRIGGS: (1) Fibroid induration around a needle removed from the left labium majus; (2) early tubal pregnancy; (3) ovarian pregnancy.

EDINBURGH OBSTETRICAL SOCIETY.

J. W. BALLANTYNE, M.D., President, in the Chair.

Wednesday, June 12th, 1907.

VAGINAL CAESAREAN SECTION.

DR. BREWIS read notes of 6 cases in which he had performed vaginal Caesarean section. The indications for operation were (1) hyperemesis gravidarum associated with a rigid cervix. (2) Eclampsia occurring between the seventh and eighth month of pregnancy; both mother and child lived. (3) Stenosis of the os uteri following amputation of the cervix. (4) Mitral stenosis in a patient 5½ months pregnant, in whom dyspnoea was very severe. (5) Haemorrhage from a lateral placenta praevia. All the patients made satisfactory recoveries, the operations presenting practically no difficulties.

Dr. LACKIE considered that one of the many advantages of vaginal Caesarean section was the rapidity with which it could be performed. As a rule the uterus could be evacuated in a few minutes.

Dr. HAIG FERGUSON preferred vaginal Caesarean section in cases calling for rapid delivery to the use of instruments designed for rapid dilatation of the os uteri. He did not, however, approve of the operation in cases in which induction of abortion was called for. Ordinary methods at the disposal of the obstetrician could cope with such cases. In heart cases medicinal treatment gave satisfactory results. Performance of the operation required a good deal of skilled assistance.

SYPHILITIC ABORTION.

Dr. E. P. WATSON read notes of a case in which the patient had a definite history of syphilitic infection, followed by five abortions. In the following pregnancy the patient was given 30 grains of potassium iodide daily, and gave birth to a full time living child. During her next pregnancy the drug was also administered, but was discontinued for a fortnight at the eighth month; the child died *in utero*, and was born slightly macerated a

ortnight later. In her last pregnancy potassium iodide had been given throughout, and she gave birth to a full-time living child which had a well-marked goitre; this gradually diminished in size till the child's death from an intercurrent malady at the age of 3½ months. Histological examination showed the goitre to be of the parenchymatous variety. The possible etiology of the tumour was discussed, and similar growths which followed the administration of potassium chlorate by J. Y. Simpson, A. Simpson, Drs. Angus McDonald, W. E. Fothergill, and Hewetson were mentioned. The potassium element and not the iodine was probably the factor in such growths.

Dr. NICOLSON stated that the iodine element in the colloid matter of the thyroid gland was increased by the administration of potassium iodide.

Dr. KEPPIE PATERSON thought that in the treatment of such syphilitic cases the best results were obtained by the administration of small doses of mercury perchoride. The drug should be given early in the pregnancy, and continued through its course. Great improvement in the nutrition of the mother followed such treatment.

Dr. HAIG FERGUSON took the same view, but preferred the red iodide of mercury.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

PRIESTLEY SMITH, F.R.C.S., President, in the Chair.

Thursday, June 13th, 1907.

CONGENITAL NIGHT BLINDNESS.

MR. NETTLESHIP communicated a genealogy in which congenital, stationary night blindness without ophthalmoscopic changes occurred in 9 consecutive generations during about 250 years. This disease, often hereditary, was, he said, less known than retinitis pigmentosa and its so-called unpigmented variety, and, unlike them, did not progress. A great part of the present case was published by Cunier nearly seventy years ago, and had been mentioned by many writers. But the nature of the disease was unknown until a year ago, when, at Mr. Nettleship's request, Professor Truc of Montpelier examined several living night-blind descendants, established the diagnosis, and instituted a fresh inquiry, resulting in an extension of Cunier's tables from upwards of 600 persons in seven generations, to nearly 1,800 in ten generations. Only certain branches of this large tree, containing about 260 persons, bore the disease, and of this number just one-half (129), contained in 60 childships, were affected. In half the affected childships (29) the proportion of diseased to healthy agreed with the Mendelian theory; others showed a near approach to agreement, and others, again, would conform if the dominance were supposed to have been reversed. About a quarter of the cases seemed inconsistent with Mendelism, but incompleteness of record doubtless accounted for some of these. The disease always passed from parent to child without a break, was rather commoner in females than males, did not lead to blindness, and was not accompanied by any other defects or peculiarities. It was not due to consanguinity; there were two first-cousin and seven second-cousin marriages, and only one of these nine produced night-blind children.

A SUBRETINAL CYSTICERCUS.

Mr. L. WERNER (Dublin) showed a coloured ophthalmoscopic drawing, lantern slides, and microscopic sections of a subretinal cysticercus.

The patient, a man, aged 19, had noticed a failure of sight in the right eye for four months. The eye was normal in outward appearance, and the tension was also normal; but in the fundus, close to the optic disc, was a large spherical projection, covered by the retina, and resembling an intraocular tumour. It presented a transparent bluish-white appearance, with a very delicate margin in some parts. The surface was smooth, and marked with white connective tissue-like areas, and a small portion was pigmented. A remarkable feature was the presence of a deep pit in the tumour, and also an enormously dilated retinal vessel, which disappeared abruptly in the growth. The diagnosis was doubtful, and the eye was removed.

On examination it was found that the growth was an intraretinal cyst, in which a cysticercus had been encapsuled. The animal was dead, and portions of it were found in various states of preservation, external to the capsule, chiefly in the angles between it and the retina. One well-preserved sucker was discovered, but no hooklets. The parasite evidently succeeded in escaping from the capsule, but became imprisoned in the anterior layers of the retina, and died. The pit seen in the growth with the ophthalmoscope was found to be due to a mass of granulation tissue, which divided the cyst into two cavities in the sections. It extended from the posterior to the anterior wall, and by its retraction of the latter produced a depression in it. The blood supply of the granulation tissue was derived from the dilated vessel alluded to before. He stated that intraretinal cysticerci were very rare, for of 29 cases anatomically examined only 3 were in the retina. It was a curious coincidence that this was the third time that the author had met with bladder-worm cysts in connexion with the eye, and that those were the only examples of eye affections of this nature which had ever been observed in Ireland.

METASTATIC TUMOUR OF THE CHOROID.

Mr. WHITEHEAD read notes of (*a*) a case of metastatic tumour of the choroid. A mammary tumour, which had been present two years, was removed seven years ago. Recurrence took place in the scar, and many metastatic tumours appeared in various parts of the body. Vision failed in the right eye, and after four weeks the eye became blind and glaucoma set in. The eyeball was excised and a flat growth found to be present in the choroid. Microscopically, the growth was found to consist of closely-packed spindle-shaped cells with an excess of fibrous tissue between irregular groups of tumour cells. (*b*) A case of multiple cysts of the retina, associated with glaucoma. Vision had been defective in the affected eye from birth, for three months there had been complete blindness, and for two months glaucomatous symptoms were present. Examination of the eyeball after removal showed no intraocular growth, but numerous translucent cysts in the retina, which was not detached. These appeared to be lymphatic cysts developed within the retina, and separating its layers. The causative association between the cysts and the glaucoma was not clear.

BRITISH GYNAECOLOGICAL SOCIETY.—At a meeting on June 13th, Mr. W. D. SPANTON, President, in the chair, Mr. MAYO ROBSON read an address on the modern treatment of *General peritonitis*. He regarded early operation as advisable, holding that if undertaken within twelve hours of the onset of the condition, the patient's life ought always to be saved—a probability in this direction attached to operation performed at any period within the first twenty-four hours, but after the lapse of that period the chances of success gravely diminished. The operation should be completed as rapidly as possible. If the cause were discovered, it should, of course, be removed, but damage to any viscera was to be avoided. Nor was much sponging desirable, though the cavity should be freed as far as possible from pus. After injecting saline solution, either by the rectum or transfusion, the patient should be propped up in a sitting posture in order that septic fluids might gravitate to the lowest part of the abdomen and so be drained away the more readily. Sir W. J. SINCLAIR recommended morphine and large doses of alcohol combined with flushing of the abdomen with saline solution; if puerperal patients were watched and treated well they would not get peritonitis. Mr. CHARLES RYALL believed the best form of drainage was provided by absorption; the latter was best promoted by free action of the bowels. Dr. HEYWOOD SMITH said that in the prevention of peritonitis large doses of calomel gave excellent results. Mr. ALBAN DORAN said there was a great deal more to be learned about peritonitis, and the best principle to act on was to avoid it. Treatment by opium was of questionable utility. Dr. BEDFORD FENWICK found the sitting posture useful when there was a difficulty in getting the bowels to act, and urged the avoidance of drainage and flushing. Dr. MACNAUGHTON-JONES advised the application of ice to the abdomen on the first appearance of symptoms. He preferred small doses of calomel to large ones. The most important question was whether the abdomen ought to be opened early or the symptoms alone treated. He preferred subclavicular or

submammary infusion to rectal injections. Dr. DAUBER considered the real hope for the future treatment of peritonitis lay in the antitoxin treatment. The evening's proceedings included a vote expressive of the deep regret of the Society at the death of its President, the late Dr. Robert Barnes.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting on June 7th, Dr. LEONARD MARK in the chair, Dr. ADDINSELL read a paper, illustrated by lantern slides, on *Metritis*, especially the form due to chronic infection from gonorrhoea. In the intractable cases marked by severe and exhausting haemorrhage, he advocated hysterectomy. Dr. ROBINSON thought good results were obtained by curettage, especially when followed by an application of pure nitric acid.—Dr. ARTHUR in a paper on *x*-ray work, especially in connexion with thoracic disease, said that in early phthisis, when apical deposit could not be demonstrated, a difference in the diaphragmatic excursions on the two sides was a point of diagnostic importance; orthodiascopic tracings were also of great value in localizing intrathoracic tumours or abscesses.

REVIEWS.

PHYSICAL SIGNS OF MENTAL DISEASE.

DURING the last two years a great number of important textbooks and clinical studies in psychiatry by well-known authorities have been published, and in submitting their various classifications of morbid types the authors have one and all deplored the necessity of forming provisional categories, due to present ignorance of the distinctive underlying pathological changes on which, by common agreement, any scientifically exact classification must ultimately rest. They have, therefore, even though differing markedly among themselves in their nomenclature of morbid types, founded their classifications mainly on symptomatological and to a less extent on etiological data. Here and there references have been made in these works to the bodily signs and symptoms accompanying the various types, or to often valuable and suggestive original investigations into the physical accompaniments of the insanities, but until the appearance of the *Studies in Clinical Psychiatry* by Dr. LEWIS C. BRUCE,[1] the Physician-Superintendent of the Perth District Asylum at Murthly, we know of no work based entirely on physical signs and symptoms. The book, by its avoidance of psychology or of the pathology of nervous tissues, and its sole regard for the results of investigations along the channels open to general medicine—demonstrable disorders of the alimentary, haemopoietic, circulatory, respiratory, and urinary systems and so on: and its classifications founded entirely thereon, breaks new ground, and for that, if for no other reason, would be welcome. It contains, however, the results of most valuable investigations which have been carried on for some years with indefatigable zeal by Dr. Bruce and his assistants, and should do much to stimulate research in a field which promises to yield important practical results.

As is already known from his numerous contributions to the medical press, Dr. Bruce is an exponent of the toxic origin of most forms of insanity, and the present work is throughout an exposition of the physical changes observed from this point of view. He does not, of course, undervalue the importance of hereditary predisposition as an etiological factor; but so far as the usually assigned exciting causes given in official statistics are concerned, he maintains that not more than three—lactation, alcohol, and syphilis—are possible exciting causes. In harmony with this contention, he classifies the insanities into two categories—(1) Insanities of non-toxic, and (2) of toxic, origin. The first class contains "exhaustive" insanity—insanities the result of gross brain lesion or traumatism, or of brain anaemia, or resulting from deprivation of the special senses, or from mental or physical shock. This class is therefore very limited and occupies only a few pages of the book. The whole number of acute insanities are included within the second category, which is subdivided into three main groups (A) Those the result of toxins of metabolic origin; (B) those in which there is evidence of bacterial toxins in the blood, with hyperleucocytosis and the frequent presence of bacterial agglutinins; and (C) insanities the result of alcohol and drug toxins. Two further classes are given—namely, nervous diseases complicated by mental disease (epilepsy, general paralysis, and dipsomania), and states of mental enfeeblement (idiocy, imbecility, secondary and organic dementia). In these also the toxic factor is kept in view.

The chief interest naturally centres in the author's treatment of Class 2—the insanities of toxic origin. Group A (insanities, the result of toxins of metabolic origin) includes acute melancholia, insanity associated with thyroid gland disorder, a variety of puerperal insanity, delusional insanity (paranoia) and chronic metabolic toxaemia (chronic brain atrophy). Acute melancholia the author takes as typical of this group. It is, he maintains, "a definite physical disease with definite physical symptoms, and is a disease of adult life and the decline of life," characterized on the physical side in the short acute stage by a rapid pulse, high arterial tension, deficient excretion of urea, an absence of hyperleucocytosis and loss of digestive power of the stomach juices, as shown by the examination of test breakfasts, all symptoms pointing to deficient elimination. The remaining insanities of this group are discussed somewhat briefly, and are stated to give the same symptoms of metabolic toxaemia without hyperleucocytosis, evidencing nutritional failure, the author inclining to the belief that in paranoia, characterized in its delusional stage by an increased excretion of urea, chlorides, and purin nitrogen, there is a frequently overlooked transient acute stage, generally of the nature of acute melancholia, with diminished excretion and the other symptoms given above.

The insanities of bacterial origin include "excited melancholia," maniacal excitement with confusion (acute mania), manic-depressive insanity (*folie circulaire*), katatonia and hebephrenia. The invariable symptom common to the whole group is, Dr. Bruce says, the presence of a hyperleucocytosis with, in the early stages, a high percentage of polymorphonuclear leucocytes, the most characteristic form of mental derangement associated with this physical symptom being excitement with confusion. It should be stated at this point that Dr. Bruce says in his opening chapter that for the past two years he has examined the blood of every case of acute insanity coming under his care. The number of these cases is not given but he says that in only two was an organism isolated from the blood, in both instances small streptococci. One of these was from a case of mania, and the other from a case of katatonia. Notwithstanding these scanty positive results, he obtained definite agglutination of the organism from the case of mania by the serum of 19 out of 23 other cases of mania tested, and the streptococcus from the case of katatonia gave a similar clumping in 12 out of 18 cases of that disease, whilst no agglutination reaction was ever obtained from the control serums used in every case. These results, he contends, warrant the assumption of a bacterial invasion, outside the tissues—that is, on the surfaces of the alimentary, respiratory, or genito-urinary tracts. Dr. Bruce appears to have demonstrated (page 9) that it is not necessary for an organism to effect a lodgement in the tissues to produce agglutinins in the blood serum.

For the distinguishing clinical somatic features of the several insanities covered by this group and for the results of the treatment carried out by the author in harmony with his views of the causation of these insanities, we must refer readers to the book itself which will well repay careful perusal and which should do much to stimulate research in a comparatively unworked field. Although the book, with its most careful and minute clinical records, evidences a very great amount of valuable work, the views advanced by the author rest on results which are admittedly incomplete, and which therefore call for a suspended judgement. Nevertheless, the publication of the results Dr. Bruce has so far obtained will be of the greatest assistance to other workers, and will be read with interest by many, even if, like ourselves, they encounter opinions expressed as facts, and statements, such as "that the serum of a case of general paralysis in a state of remission when injected into an early progressive case arrests the disease," which demand quoted and

[1] [illegible] By Lewis C. Bruce, M.D., B.C.P.E. London: Macmillan and Co., Ltd. 1906. Demy 8vo, pp. 215. 14s. net.

uthoritative corroboration when put so explicitly. The ook contains no bibliography, and it may be suggested nat in future editions—we have little doubt that further ditions will be called for—a complete list of references ould enhance the value of the work.

AN AMERICAN PRACTICE OF SURGERY.

DR. JOSEPH D. BRYANT and Dr. ALBERT H. BUCK, of New ork City, are the editors of a new surgical textbook ntitled the *American Practice of Surgery*.[2] The first two olumes are issued and six more are in preparation. The ontributors to the work are all surgeons in the United tates and in Canada. To these the editors have entrusted rticles on the subjects in which they have severally ained eminence, and in doing so appear to have permitted each to treat his subject unhampered by restrictions. A certain amount of repetition and some differnces of opinion necessarily result from such a plan, ut these are not disadvantages, rather the contrary. Differences in practice are obscured in the smaller logmatic treatise; in a work of this scope we look for heir expression, and benefit from their discussion. An ntroduction is written by Dr. Stephen Smith, who lescribes the evolution of surgical practice in America hrough three periods which he entitles the primitive, he formative, and the practical. The history of the first wo periods he traces in the work of the surgeons who figured most prominently in each, and for the history of the third he refers his readers to the present work. To Dr. John Jones, of New York, is accorded the title of "Father of American Surgery"; in describing his eminent qualities, Dr. Stephen Smith says, "he performed the first operation for lithotomy," obviously a slip of the pen, which should have been qualified in some manner.

Part I is devoted to general surgical pathology, and commences with a lucid and scholarly exposition of the subject of inflammation by Dr. A. S. Worthin. Dr. A. G. Nicholls, of Montreal, writes the sections on disturbances of nutrition and on tumours and tumour formation; and Dr. E. H. Nichols that on processes of repair. The last article contains some fine original illustrations, as does also that on tumours, the reproduction of photomicrographs being very successful in both. Following the chapter on tumours come two special articles on the etiology of new growths. There is no note in any of the three on the important work which has been contributed in this country by Farmer, Moore, and Walker to the elucidation of the cancer problem—a surprising oversight, considering that the most significant portion of their work was published some three years ago. Part II, on complications and sequelae, deals in its first chapter with a small group of wound infections, and in its second with surgical shock. Dr. J. C. Bloodgood is the author of the latter, and he presents both the physiological and the clinical aspects of the condition in a masterly manner.

In Part III is a striking chapter on the technique of radiographic work and the interpretation of radiographs. The authors (Mr. Walter Dodd and Dr. Robert Osgood) have aimed, as they state, at the description of apparatus and methods which will enable a practitioner to instal and work an *x*-ray plant with satisfaction and accuracy. In the later part of the article they fail to discuss the interpretation of plates taken for the demonstration of renal calculi and of thoracic conditions, omissions which will presumably be made good in later articles.

General surgical treatment and general surgical prognosis complete Volume I. In the former chapter Dr. James Moore gives an outline of general surgical technique, the greater part being, of course, concerned with the methods of sterilization. A more precise statement than that given on the subject of hand sterilization would have been justified by the later researches. Generally speaking, the chapter gives details of all the best methods of dealing with surgical materials, and of the treatment of the different varieties of wounds.

Volume II continues the discussion of general surgery. It opens with the description of certain general infective diseases—leprosy, plague, glanders, anthrax, actinomycosis and mycetoma, and also scurvy, and what is termed rhinopharyngitis mutilans. The last is a designation given to an affection of unknown etiology which is particularly prevalent in Fiji. The other conditions are adequately illustrated, and the utility of surgical methods of treatment is discussed in relation to each. The variations in the type of external anthrax and the advisability of avoiding a routine practice in all types is well shown in the author's review of the results obtained by different methods. Is rabies intentionally omitted from this chapter?

Tuberculosis and syphilis occupy Part VII. Both articles are of high merit. The author of the second, Dr. Edward Keyes, jun., has treated his subject the more fully. He has not, however, illustrated it as freely as might have been expected; a photograph of Hutchinson's teeth and another of a leg showing some tertiary ulcers form the sum total of the illustrations given, and there is no picture of a primary chancre, genital or extragenital. In Part VIII are grouped a series of articles under the heading, "Surgical diseases of various widely distributed structures of the body." The first three are on abscess, ulcer, and gangrene, and then come sections on diseases of the skin, diseases and wounds of muscles, nerves, and so on; obviously some rearrangement is wanted here. The first three articles belong to Part I, and should follow that on inflammation; the later chapters naturally group themselves under the heading of wounds and diseases of special tissues. Where in the work are we to meet with the chapters on the bones, the blood vessels, and other special tissues which are not to be found here? It would, of course, be pedantic to demand a strict adherence to a certain order, but the arrangement here is inconsequent. All the articles in this part deserve high praise. Dr. Alfred Wood's contribution on gangrene is especially noteworthy, and next to this that on the lymphatics by Dr. Charles N. Dowd. In the article on diseases and wounds of nerves Dr. Willard covers a wide field, including the subjects of infantile paralysis, cerebro-spastic palsy, and some other forms of paralysis—some amenable to surgical treatment and some not. The subject of root anastomosis in cases of Erb's and other forms of brachial palsy does not receive due consideration, and in the treatment of paralysis generally the principle of relaxation of affected muscle groups as an aid to recovery is not clearly enunciated.

There are two chapters in the final part of the second volume. The first is by Captain Darnall on wounds of soft parts by cutting and piercing instruments, the second by Major Borden. This last chapter is the most complete and the best conceived in the volume, and will be highly appreciated not only by army surgeons but by others.

The editors and publishers of this work have set themselves a task of herculean proportions. In such a publication articles are necessarily of varying excellence. We have indicated those which seem to stand out from the rest in these two volumes, and it remains only to remark that the remainder, without exception, reach a high level. American surgeons are justly proud of their contributions to the science and art of surgery, and this great undertaking promises to rank with the most notable contributions to its literature.

[2] *American Practice of Surgery.* A Complete System of the Science and Art of Surgery by Representative Surgeons of the United States and Canada. Edited by Joseph D. Bryant, M.D., and Albert H. Buck, M.D. Volumes I and II. New York: William Wood and Co. 1906-7. (Royal 8vo; profusely illustrated. Vol. I, pp. 818; Vol. II, pp. 782. 7 dols. per volume.)

VENEREAL DISEASE.

IN his recent work on syphilis and venereal diseases,[3] Dr. C. F. MARSHALL has focussed our present knowledge in an able manner. He reviews the subject of syphilis in a systematic way, dealing first with the circulatory apparatus, after introductory general remarks. There are also some useful chapters on syphilis in relation to life assurance and marriage. Gonorrhœa and soft sore are also dealt with clearly. Altogether, the book should prove valuable for reference, provided as it is with an up-to-date and well-selected bibliography at the end of each chapter, in addition to a good index of subjects and of names. In an appendix methods of staining and useful formulae are given. The importance of bearing in mind the possibility of syphilis as a cause of obscure symptoms cannot be too often insisted on, and

[3] *Syphilology and Venereal Disease.* By C. F. Marshall, M.D., M.Sc., F.R.C.S. London: Baillière, Tindall and Cox. 1906. (Crown 8vo, pp. 509, five plates. 12s. 6d.)

the author very rightly emphasizes the point in his preface by a quotation from Ricord: "I have been reproached with seeing syphilis everywhere, but my only regret is that I have not recognized it often enough." On the other hand, there has been a tendency to expand unduly the list of morbid or abnormal conditions included under parasyphilis. Again, the author repeatedly refers to syphilis as being *par excellence* the hereditary disease, when, as a matter of fact, our actual knowledge of what is known as heredity is very limited indeed. The experimental demonstration of the infectivity of syphilitic semen is far from having clinched the matter. The evidence certainly points to the maternal origin of syphilis. Colles's law bears this out, the so-called exceptions not being able to stand critical examination, including the instance adduced by Colles himself in his admirable contributions to our knowledge of syphilis (*The Works of Abraham Colles*. New Sydenham Society, 1887, pp. 271-272), showing the need for circumspection in investigating these matters. As to syphilis of the third generation, that again needs to be dealt with in a cautious way, for it is no doubt the result of human experience which has crystallized in the saying that it is a wise child that knows its own father. Further, all experience shows that in many instances a woman may to all appearance be healthy and yet have had syphilis. With regard to the cases recorded by Pernet in Sir William Gowers's paper (the BRITISH MEDICAL JOURNAL, The Nature of Tabes, July, 1905), they referred to males, as did the figures of Gowers, for the very reason that history is so fallacious in women. This has not been brought out by Dr. Marshall in his book (page 234), yet it is an important point. In conclusion, the author is to be congratulated on the way in which he has alluded to, and dealt with, debatable questions.

In his preface to the second edition of *Genito-urinary Diseases and Syphilis*,[3] Dr. MORTON states that he has been materially assisted by Drs. Frank, Wossidlo, Roescher, Casper, and others in Berlin, so one is prepared to find German views and methods receiving full consideration. The book is not so large as some of its American contemporaries on the same subject, and consequently various matters are dealt with more briefly. Syphilis is imperfectly treated, the reader being referred for a fuller account of some of its effects to the textbooks on surgery and internal medicine. Dr. Morton also thinks that syphilitic affections of the nervous system and of the eye and ear are best studied in the special textbooks devoted to these subjects. With regard to the treatment of syphilis, Dr. Morton says that it is now generally held by the "best authorities" that it is not good practice to begin the administration of mercury until the eruption appears on the skin. Perhaps this may be generally true as regards the United States, but not, we think, of other countries. Respecting the syphilitic virus, we are told on one page that the physiological secretions in exceptional cases do contain it, and a little further on that they do not contain it. Again, in one place the "chancroid" is said to have no period of incubation, and in another the incubation is given as two to three days. The statement that the secretion of a syphilitic primary sore is not autoinoculable requires qualification. The chapter on diseases of the kidney contains a useful summary of what has been done with respect to renal decapsulation in Bright's disease since the publication of Mr. Reginald Harrison's paper in 1896. When prostatectomy is required for prostatic enlargement, Dr. Morton considers that the best form of operation for the majority of cases is perineal prostatectomy as performed by the late Dr. Bryson of St. Louis. Bottini's operation seems to Dr. Morton to be peculiarly suitable for the small hard fibrous prostates where there is a decided bar at the neck of the bladder. The book is quite worth reading, and, though there are some points on which we are unable to agree with him, on the whole it may be said that Dr. Morton has succeeded in his endeavour "to present the subjects considered as they are understood at the present time."

This work on diseases of the genito-urinary organs in men and women, by Drs. LE FUR and STUCKEY, forms Fasciculus xxii of the *Nouveau Traité de Médecine et de Thérapeutique*[5] edited by Professor BROUARDEL and Professor GILBERT. The first and larger portion of this volume is by Dr. Le Fur, and it includes the different forms of urethritis (in both sexes), prostatitis, prostatic hypertrophy (which Dr. Le Fur considers to be a form of chronic prostatitis), cystitis, vesical disorders of nervous origin, incontinence of urine, urinary infection, epididymitis and orchitis. Thus it will be seen that the present work includes by no means all the diseases of the genito-urinary system. Those of the kidney, for example, are to be dealt with in a separate volume. On the other hand, there is a certain amount of overlapping between this volume and that on venereal diseases by Dr. Balzer (which was reviewed in the BRITISH MEDICAL JOURNAL some few months ago), in that gonorrhoea is treated in both. With regard to the treatment of this disease, Dr. Le Fur's views differ from those generally accepted. In the acute stage, while gonococci are still present, he advises urethral irrigations, with or without massage of the prostate according to circumstances; and, later on, instillations and dilatation by means of the Kollmann-Franck dilators, combined with massage of the prostate. If epididymitis comes on, the urethral irrigations are continued, however severe this may be. There is no such thing, according to Dr. Le Fur, in the immense majority of cases, as a spontaneous cure of gonorrhoea or even a cure by medical means alone. For full particulars of Dr. Le Fur's vigorous methods the book itself may be consulted, as well as for an account of the other diseases mentioned above, which are all carefully dealt with at considerable length.

VOICE TRAINING.

WITHIN the compass of 155 pages Dr. HERMANN GUTZMANN, in his work entitled *Stimmbildung und Stimmpflege*,[6] conveys a remarkable amount of information on the subject of the formation, cultivation, and preservation of the voice. It is intended for the comprehension of the laiety, and its aim is mainly to point out the very great necessity that exists for reform in the teaching of singing in the elementary schools. It is certain that much harm is done by the irrational teaching of *ensemble* singing without regard to the peculiarities of the individual voices of the children as regards such qualities as range and power. The description of the larynx and accessory parts is not simply extracted from an ordinary work on anatomy, but is given so that any educated person may readily follow it and understand the physiology of voice without being worried with too much technical terminology. The medical reader will be more interested in the discussion of such questions as the range of the voice at different ages from birth to old age, the effect of puberty, the time at which the teaching of singing should be commenced, and many other points which are fully dealt with in this work. The last of the ten lectures is perhaps the most important of all, as it deals with the measures to be adopted for the prevention of injury to the voice in schools. The importance of insisting on distinctness rather than loudness of utterance is strongly enforced, as also of frequent intervals of rest for the voice. It is to be hoped that some one in this country will take up the subject, which is one of national importance. Whoever does so will find in Dr. Gutzmann's lectures an admirable groundwork and model.

Dr. PERRETIÈRE, in his treatise on the diseases of the singing voice, covers a good deal of the same ground as Dr. Gutzmann in the work above described, though in a somewhat different manner. The French treatise is obviously intended for the physician, whose requirements it will be found to meet in many respects. Some space is given to a description of the various diseases of the upper air passages, such as may be found in greater detail in most of the works on laryngology; but much more is

[3] [illegible] By H. Henry G. Morton, M.D. [illegible] Philadelphia: F. A. Davis Co. 1907. (Demy 8vo, pp. [illegible] Price [illegible])

[5] [illegible] Publié sous la direction de MM. les Professeurs Brouardel et Gilbert. Fascicule xxii. [illegible] Par le Dr. Le Fur. Paris: J. B. Baillière et Fils. 1907. (Demy 8vo, pp. [illegible] Illustrations. Price [illegible])

[6] [illegible] Formation and Care of the Voice. Popular lectures delivered by Dr. Hermann Gutzmann, Privatdocent in the University of Berlin. Authorized translation by Frances Gunter Webster; Wiesbaden: J. F. Bergmann. 1906. (Demy 8vo, pp. 155. 2s. 6d.)

[7] [illegible] Traité des Maladies de la Voix Chantée. Treatise on the Diseases of the Singing Voice. By Dr. Antonin Perretière, former House Surgeon of the Hôpital Laennec. Paris: A. Poinat. 1907. (Demy 8vo. Price [illegible])

devoted to such peculiarly "vocal" symptoms as *le trac* (vocal fatigue), *grelottement*, *cracs*, *couacs*, *graillons*, *chats*, and *la bobèche*, the last being a noise similar to that produced by the glass saucer round a piano candle when set in vibration by a corresponding tone (pp. 102-3). The arrangement of the book is, *more Gallico*, most logical and methodical, and possibly this may account for a tendency to devote as much attention to minor as to major points, as well as for a certain amount of repetition when the same subject recurs under a different heading in the scheme. The work begins with a description of the causes of disease of the singing voice as inherent in the individual and in his surrounding conditions, the former being subdivided into physiological and pathological, the latter into external and professional. Among the physiological we have, naturally, age, sex, and heredity. Among the pathological remarks, reference is made to the localization by Marinesco, on clinical and anatomical grounds, of a centre for singing in the lower half of Broca's convolution (p. 27). Two registers are recognized (p. 68), a moderate use of the *coup de glotte* is advocated (p. 65), especially when there is a tendency to waste of breath (*coulage*). A study of this work will help the physician in dealing with the maladies of the voice in singers, which, it may be stated, is not always a mere matter of laryngoscopy. Many references are made to living authorities, and among others to Castex and Moure, whose cognate works are well known. Among the deceased authors frequently quoted are Morell Mackenzie, Lennox Browne, and Emil Behnke.

THE INTERNATIONAL CANCER CONFERENCE, 1906

THE Transactions of the International Conference on Cancer Research,[8] held at Heidelberg and Frankfort in September, 1906, contain articles by many of the leading authorities on cancer research. In a carefully-constructed paper on the relations of the vascular system to malignant new growths, Dr. GOLDMANN shows that not only in sarcoma but also in carcinoma, and even in its early stages, specific changes occur in the walls of the blood vessels. He discusses the dissemination of malignant cells by the blood stream, and also describes his investigation of the formation of new blood vessels at the periphery of cancerous growths. The mouse, as we are now accustomed to expect, in the present phase of cancer research, holds the place of pre-eminence amongst the topics of interest. Papers on the inoculable cancer peculiar to this animal are contributed by Professor Ehrlich, Dr. Gustav Spiess, Dr. Henke, and various other authorities. Still further experiments on mouse carcinomata are in progress, and it can hardly be said that the goal of the investigators is within sight. It is to be hoped that ultimately the results ascertained will be of some tangible assistance to our knowledge and treatment of the human disease. Amongst other articles in the volume we note a plea for the parasitic theory, by Dr. Borrel; a discussion of the clinical causes of cancer of the breast, by Mr. Leaf; and a statistical study of cancer mortality by Dr. Prinzing. On the whole, it cannot be said that the volume contains much which is new, and it may be pointed out that many of the authors do not seem to have realized that their contributions would have been increased in value if they had taken the trouble to summarize their main results.

NOTES ON BOOKS.

CAPTAIN WALTER, I.M.S., of the *X*-Ray Institute of India, has contributed to the Practitioner's Handbook Series a little volume on *X Rays in General Practice*.[9] The choice of similar works now open to the general practitioner is so wide that it seems almost a pity not to have asked a general practitioner to write the work specially intended for the particular needs of that branch of the profession. In so small a book it is ridiculous to include a description of apparatus specially devised for mountain travelling and transport, however ingenious and interesting. On page 147 we find this paragraph: "*X*-ray treatment had occupied rather less than five months, and had resulted in cure in a patient who had been attending hospitals for epithelioma *for the last twenty years*" (the italics are ours). The description of apparatus and general technique is fairly clear, although it would be difficult to undertake "localizations" without other aid than that which the author gives. He provides a table for "exposures" and "distances" in skiagraphy of different parts of the body, but falls into the common error of omitting exact instructions for the "dosage" in therapeutic applications. There is no mention in the index of Sabouraud's pastilles, nor of Holtzknecht's chromo-radiometer. On page 125 we find the statement concerning tinea tonsurans and favus that "the treatment for either of these diseases . . . is somewhat slow"! If there be one respect in which *x*-ray treatment excels it is in the remarkable reduction of the duration of treatment, as witnessed conclusively by the average length of stay of children at the County Council Ringworm Schools.

The posterior forms of appendicitis[10] are discussed in a pamphlet containing two articles, one by M. VIGNARD on the intraperitoneal, the other by M. CAVAILLON and M. CHABANON on the extraperitoneal suppurations of appendicular origin, developed behind the caecum and ascending colon. The pathology and clinical characters of both these forms of retro-colic infection are fully dealt with, and much practical instruction is afforded on these obscure and not infrequent results of appendicitis. The authors of the second paper consider at length the varied and uncertain symptons of retroperitoneal suppuration, and insist on the importance in all suspected cases of early surgical intervention, as this lesion, although it does not extend to the peritoneal cavity, is very serious, and often results in hepatic and subphrenic abscesses.

In spite of the small size of their manual for Italian officers of health,[11] Drs. Tonzig and Ruata, by the use of small but clear type, have managed to convey in it a large amount of useful information. The work is really an amplification of a smaller textbook previously published by them for the use of their pupils. Having been engaged for some years in the actual teaching and practice of public hygiene, the authors have given this manual an essentially practical character. The first two chapters (on bacteriology and microscopy) take up more than half the book; other chapters follow dealing with chemistry, physics, food inspection, disinfection, and statistics as related to public health. There is an appendix on the microscopic diagnosis of rabies and an index.

IN the preface to the *Descriptive Catalogue of the Pathological Museum of the Hospital for Sick Children, Great Ormond Street*,[12] the Honorary Curator, Dr. G. F. STILL, accords to Dr. Charles West the credit of having founded the collection at his own cost, in 1853, and compiled the first catalogue. The present issue, however, is the first ever put in print. We may congratulate Dr. Still and Dr. F. Langmead on supplying medical literature with a great want, and for affording invaluable aid to all who desire to study children's diseases at the famous special institution at Ormond Street. The collection is divided into series of specimens of all forms of disease except stone, and also parasites, numbered from beginning to end, not in separate classes—into "urinary calculi," "plaster casts and wax models," and "drawings, paintings, photographs, and skiagrams." We may turn attention to several subseries of special interest in association with diseases of children—namely, the specimens of syphilitic bone disease presented by M. Parrot and others, those of achondroplasia, the 35 samples of congenital heart disease, and the kidney series, including 5 examples of the horseshoe type. There are also 5 specimens of disease of the suprarenal glands, 2 showing haemorrhages and 3 sarcoma.

SINCE the first Seaside Camps for London Working Boys were pitched in 1889, some 30,000 lads have passed through them, and aid is now being sought to continue the work this summer. Those benefited are boys between 14 and 17 years of age who belong to the Church Lads' Brigade, or are recommended as worthy of assistance by employers and others. Contributions can be sent to the Secretary, Mr. F. A. Bloxam, 23, Northumberland Avenue, W.C.

[8] *Zeitschrift für Krebsforschung*, Bd. V, H. i. u. ii. *Verhandlungen der Internationalen Konferenz für Krebsforschung, vom 25–27 September, 1906*. Berlin: August Hirschwald. 1907. (Medium 8vo, pp. 288; 2 plates and 4 figures in the text. M.8.)

[9] *X Rays in General Practice*. By A. E. Walter, Captain I.M.S., Superintendent of the *X*-Ray Institute of India. London: John Lane. 1906. (Crown 8vo, pp. 175; illustrations 47. 5s.)

[10] *Les Formes Postérieures de l'Appendicite*. Par MM. P. Vignard, P. Cavaillon, et A. Chabanon. Bibliothèque de "La Province Médicale." Paris: A. Poinat. 1907. (Cr. 8vo, 1 p. 145. Fr. 1.)

[11] *Manuale Pratico dell' Igienista*. Par Dott. C. Tonzig and G. R. Ruata. [Practical Textbook for Medical Officers of Health.] Milan: U. Hoepli. 1907. (Med. 16mo, pp. 386; 243 illustrations. L. 5.)

[12] *A Descriptive Catalogue of the Pathological Museum of the Hospital for Sick Children, Great Ormond Street*. London: Bradbury, Agnew and Co., Limited. 1907. (Roy. 8vo, pp. 181. 5s.)

SECRET REMEDIES AND PROPRIETARY PREPARATIONS.

DR. F. ZERNIK publishes the seventh part of his work on secret remedies, proprietary preparations, and new drugs, in the *Deut. med. Woch.* of May 2nd.

Amrita is the name given to a Berlin preparation which is widely advertised in newspapers and by circular. It is stated to be an aphrodisiac. The preparation, which is in powder form, is indifferently put up, and consists of twenty so called "white" powders (wrapped up in white paper capsules), and twenty "red" powders (wrapped up in red paper). The "white" powder contains 45 per cent. of carbonate of iron, 40 per cent. of rye flour, and 15 per cent. of calcium phosphate, and a trace of some apparently inert bitter. The average weight of the "white" powders is 2.2 grams. The "red" powders contain the same ingredients, with some liquorice added. The average weight of these is 1.4 grams. One "white" powder is to be taken in the morning and one "red" powder at night. The forty powders cost 5s.

Geisha Menstruation Powder is claimed to be a remedy for obstructions and disturbances of the circulation in women. One small coffee-spoonful is to be taken three or four times a day in water. The box contains 30 grams, and costs 3s. The powder consists of powdered Roman camomile. Warnings have been issued by the Darmstadt and Berlin police against the powder, and it is pointed out by the former that the cost of the same powder at the chemist's is about 3d.

Following the lead given by Roux and Metchnikoff, a Muehlhausen chemist, Gabriel Levy, has introduced a preparation called *Grandira, a protective cream against syphilis.* It is a pink-coloured soft ointment put up in tubes, and is said to contain 30 per cent. of calomel. The sample examined only contained 9 per cent. of calomel, but the chemist explains this by stating that unfortunately a certain quantity was put up containing only 10 per cent.

Broyella Nostra is another ointment, which is offered for sale at 1s. per 30 grams. In the accompanying advertisement it is said to cure all wounds, including sore feet, carbuncles, malignant and scrofulous ulcers, cracked nipples, and burns. It is also said to relieve the pain in rheumatism and gout, and to render the joints elastic. It appears on examination to be a simple resinous ointment, something like the officinal unguentum basilicum of the German *Pharmacopoeia.*

Augenwol, the new remedy, is a fluid preparation which is supposed to work wonders for the eye. It is said to be obtained from various plants derived from various countries. The bottle costs 3s., while a large bottle costs 5s. On testing, it was found to contain 3 per cent. of sodium chloride, about 6 per cent. of glycerine, and some extractive substances in water; the whole is perfumed with rose oil and coloured with a yellow aniline dye.

Ophthalmol is advertised in a booklet as a natural remedy for all kinds of eye diseases. It is said to be harmless, nontoxic, and very stable. It is supposed to be prepared by extracting the glandular substance of a fish—*Cobitis fossili*—distilling the extracted liquid and then sterilizing. A sample was tested, and was found to have the characters of a rancid olive oil with about 6 to 7 per cent. of some mineral fat, similar to fluid paraffin.

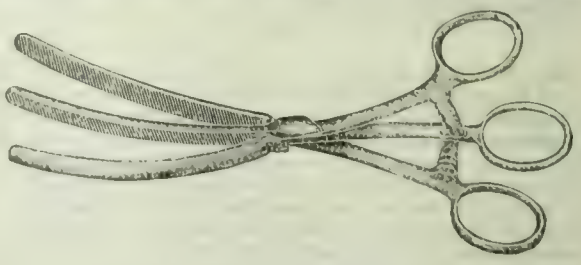
Winter's *Naehrsalz* (nutrient salts) is very widely advertised as a "true hygienic nerve salt," and is supposed to be composed of neutral sodium and ammonium phosphates. The packet contains 85 grams of a whitish powder, and costs 2s. 6d. It proved to be a simple mixture of sodium phosphate and ammonium phosphate. "True nutrient salt I" is said to purify the blood. It costs 1s. 3d. per packet of 95 grams. It consists of sulphates (57·4 per cent. SO_3), phosphates (41·3 per cent. PO_4), carbonates 3·1 per cent., and chlorine 6 per cent., while there is a trace of tartrate. The bases are chiefly sodium (29·2 per cent.) and potassium (0·9 per cent.), while only a small quantity of ammonium was found (0·12 per cent.). No. II nutrient salt is recommended for good production of blood. The packet contains 76 grams of a pale red powder, and costs 1s. 3d. It is nearly the same as the first salt, but contains besides minimal quantities of silicates, calcium, magnesium, very small traces of iron albuminate and of manganese. Nutrient salt No. III is recommended for infants and young children. The powder in each packet weighs 76 grams, and costs 1s. 3d. It has the same ingredients as No. II, beside 21 per cent. of milk sugar. The Carlsruhe sanitary authority has issued a warning against the use of the Winter's Naehrsalz preparations.

MEDICAL AND SURGICAL APPLIANCES.

Forceps for Entero-anastomosis.

THE forceps shown in the woodcut is essentially copied from the approved stomach forceps of Doyen, but, as distinguished therefrom, is comprised of three arms. Thus, against the middle blade a right as well as left outer blade presses. In front of the loops of the outer blades are rachets which engage in a suitable notch in front of the loop of the middle blade. In this way the instrument can be used alike with its right and its left half as an ordinary Doyen forceps.

The parts to be united in the entero-anastomosis operation are placed by the operator in the desired position, the middle blade of the open forceps pushed between the intestines, and then the intestines pressed against the middle blade by the outer arms. The same procedure takes place on the opposite side of the intestinal parts to be closed. It is advisable not to place the forceps vertically, but somewhat obliquely to the axis of the intestines. The handles of the two instruments, the designer adds, then lie wide on the abdominal wall, and ensure a permanent and convenient fixing of the squeezed-off pieces of intestines during the stitching.



The arrangement of the forceps in the case of gastro-enterostomy is effected in the same manner. It is only necessary to see that the points of the two forceps come in contact together in order to ensure a complete shutting off of the field of operation against emerging contents of the stomach. A change of the forceps during the stitching is not necessary, as the arms being 5 in. long leave so much room between them that, after the back stitching has been finished, the front stitching can be conveniently effected without tension of the abdominal wall.

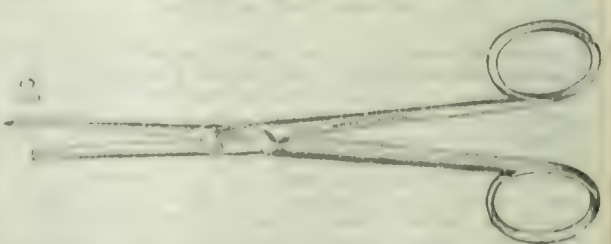
The advantages of the forceps appear to be that it renders possible:

1. Exactness and quickness of the stitching.
2. Dispensing with an assistant.
3. That it can be used as an ordinary stomach and intestine forceps.

They were designed by Dr. Linnertz, and can be obtained from Messrs. Arnold and Sons, West Smithfield, London, E.C.

Deep Abscess Forceps.

DR. ARTHUR TODD-WHITE (Senior Clinical Assistant, Throat Hospital, Golden Square) writes: Messrs. Down Bros. have made for me a pair of forceps for opening peritonsillar abscesses. The advantages of these forceps are that the abscess can be lanced and thoroughly opened with one instrument, which is less painful to the patient; a further



advantage is that the point and two cutting edges are in one piece, so that a much sharper instrument is obtained than if the division extended to the end. A projecting shoulder prevents insertion too far, and the serrations at the side prevent it slipping out or dilating before dilatation is complete.

INAUGURATION OF THE ROYAL SOCIETY OF MEDICINE.

A SPECIAL GENERAL MEETING of the Royal Medical and Chirurgical Society of London was held at the Society's House, 20, Hanover Square, on the afternoon of June 14th, Mr. J. WARRINGTON HAWARD (President) in the chair, at which the resolution that the supplemental Charter graciously granted to the Society by His Majesty the King be and the same is hereby dutifully accepted, was unanimously adopted. Immediately afterwards there was held the first general meeting of the Fellows of the Royal Society of Medicine. Mr. WARRINGTON HAWARD was elected chairman, as president of the parent society, and congratulated the meeting that the union of the main medical societies of London, first mooted in 1808, revived in 1860, and again in 1870, was at last achieved.

Sir RICHARD DOUGLAS POWELL, Bart., K.C.V.O., President of the Royal College of Physicians, then moved, Mr. HENRY MORRIS, President of the Royal College of Surgeons, seconded, and it was unanimously carried:

That at this meeting of Fellows and Members of the following Societies—Royal Medical and Chirurgical Society, Pathological Society of London, Epidemiological Society, Odontological Society of Great Britain, Obstetrical Society of London, Clinical Society of London, Dermatological Society of London, British Gynaecological Society, Neurological Society, British Laryngological, Rhinological, and Otological Association, Laryngological Society of London, Dermatological Society of Great Britain and Ireland, Otological Society of Great Britain and Ireland, British Electrotherapeutic Society, Therapeutical Society—which have agreed to unite and form a Society under the name of the Royal Society of Medicine, we who are present do hereby constitute ourselves the first meeting of the said Society, and do now proceed to do such things and acts as are necessary for formally constituting the said Society, and for the carrying on of its work.

Sir R. DOUGLAS POWELL, in moving this resolution, said that a main object of this union was the closer co-ordination of the many ramifications into which the medical profession had necessarily been split up.

Sir WILLIAM CHURCH next moved, and Mr. PEARCE GOULD seconded, that the supplementary Charter graciously granted by His Majesty the King be and the same is hereby dutifully accepted and adopted. This was unanimously approved. Sir William Church said that the aim of the union was the advancement of British medicine; and Mr. Pearce Gould, in seconding the resolution, said he hoped that its spirit would be carried out by every Fellow of the new Society in heartily working for its triumphant success.

Sir WILLIAM CHURCH moved, and Mr. MAKINS, C.B., seconded:

That the By-laws which have been prepared by the Committee of Representatives of Societies, and are now submitted to the meeting, be and the same are hereby adopted and confirmed as the By-laws of the Royal Society of Medicine.

Mr. MAKINS, in seconding this resolution, said that the by-laws had been very carefully considered by the Committee of Representatives, and legal opinion had been taken as to their soundness; they were, however, only meant as provisional rules, which might be amended or abrogated at any general meeting of the new Society held for the purpose. This resolution, too, was unanimously carried.

It was next proposed by Sir THOMAS SMITH, Bart., K.C.V.O., and seconded by Professor OSLER:

That Sir William Selby Church, Bart., K.C.B., be elected President of the Royal Society of Medicine.

This was carried unanimously by acclamation, and the first President received the master-key of the house from Mr. Haward.

Dr. OSLER, in seconding the resolution, said that the great need of the new Society was money, and that no profession had better friends than the medical; he also said that they who asked much received much.

Dr. PYE-SMITH, F.R.S., moved, and Mr. CLINTON DENT seconded:

That the nominations of the Committee of Representatives of Societies for the following posts be adopted and confirmed:

Honorary Treasurers, Dr. F. H. Champneys and Mr. Pearce Gould.

Honorary Librarians, Mr. Rickman Godlee, Dr. Head, and Dr. Norman Moore.

Honorary Secretaries, Dr. Arthur Latham and Mr. H. S. Pendlebury.

Members of Council, Sir R. Douglas Powell, Mr. Henry Morris, Mr. Warrington Haward, Mr. G. H. Makins, Sir Shirley Murphy, Mr. T. L. Read, Sir Felix Semon, Dr. Frederick Taylor, and Dr. T. J. Walker; together with the Presidents of Sections and other *ex officio* members of Council.

This was unanimously carried.

After official auditors had been appointed for the new Society, a vote of thanks to the Committees and Sub-committees which had conducted the negotiations from April, 1905, to the present time for the formation of this Society was proposed by Sir THOMAS BARLOW, seconded by Dr. L. H. HABERSHON, and carried.

Sir WILLIAM CHURCH pointed out that much work of organization in detail had yet to be accomplished, and the new Society would not therefore be in full working order until the autumn.

The meeting, which was both large and enthusiastic, then ended.

CLINICAL SOCIETY OF LONDON.

The final meeting of the Clinical Society of London was held on Friday, June 14th. Mr. H. H. CLUTTON, President, took the chair, and after the minutes of the last general meeting and of the last Council meeting had been read and confirmed, Sir DYCE DUCKWORTH proposed:

That in pursuance of the decision of the Society on November 23rd, 1906, to unite with other societies in forming the Royal Society of Medicine, which has now received a Royal Charter, all the property, of every kind whatsoever, of this Society be and is hereby transferred to the Royal Society of Medicine, and the Treasurer and Trustees are hereby directed forthwith to transfer to the Royal Society of Medicine all sums of money and all invested funds in their possession standing in their names, or at the credit of the Society at its bank.

He said that he had a peculiar pleasure in making this proposal, as he was an original member of the Society, and was present when in 1868 Sir Thomas Watson had inaugurated it. The Society had fully justified its existence, and now, as part of a larger body, he was sure it would still be a worthy exponent of British medicine.

Dr. W. PASTEUR seconded the proposition, which was carried unanimously.

The CHAIRMAN proposed the two following resolutions, which were also carried unanimously:

Resolved that the Clinical Society of London, in handing over its archives to the Royal Society of Medicine, expresses a wish that these archives may be entrusted to the keeping of the Clinical Section of the Royal Society of Medicine.

Resolved that the Clinical Society of London be discontinued, and is hereby dissolved.

The archives of the Society included copies of the forty annual *Transactions* of the Society, the obligation-book containing autographs of all the members of the Society from its foundation onwards, and the volumes of the minutes.

Mr. Clutton then left the chair, and the meeting resolved itself into the first meeting of the Clinical Section of the Royal Society of Medicine, for the election of officers and members of Council for the year 1907–8.

Mr. W. G. SPENCER, Senior Secretary of the late Clinical Society, proposed that Mr. Clutton should again take the chair, for the meeting to organize the Clinical Section of the new Society. This was carried unanimously.

Sir D. DUCKWORTH proposed that Sir T. Barlow, Bart., K.C.V.O., be the first president.

Mr. CHARTERS SYMONDS seconded the proposal, which was carried unanimously.

The CHAIRMAN proposed the following officers, who were unanimously elected:

Vice-Presidents.—A. A. Bowlby, C.M.G.; G. H. Makins, C.B.; W. Pasteur, M.D.; Sir Felix Semon, K.C.V.O., M.D.; C. J. Symonds, M.S.; W. Hale White, M.D.

Council.—C. R. Box, M.D.; W. H. B. Brook, M.D.; A. Carless, M.S.; C. H. Fagge, M.S.; H. Morley Fletcher, M.D.; L. G. Guthrie, M.D.; J. Ernest Lane; V. Warren Low, B.S.; T. H. Openshaw, C.M.G., M.S.; F. J. Smith, M.D.; W. G. Spencer, M.S.; F. J. Steward, M.S.; G. A. Sutherland, M.D.; H. Campbell Thomson, M.D.; H. H. Tooth, C.M.G., M.D.; A. H. Tubby, M.S.; H. G. Turney, M.D.; H. F. Waterhouse, C.M.; Claude Wilson, M.D.; F. Parkes Weber, M.D.

Honorary Secretaries.—A. E. Garrod, M.D.; Raymond Johnson, B.S.

This resolution was also carried unanimously, and the meeting ended.

ROYAL COMMISSION ON VIVISECTION.

(*Continued from p. 1433.*)

An appendix to the second report of the Royal Commission on Vivisection, dated April 13th, has been issued.* It contains minutes of the evidence taken during February and March.

ANTIVIVISECTIONIST TESTIMONY.

Evidence of Mr. John W. Graham, M.A.

Mr. GRAHAM, Principal of Dalton Hall, Victoria University, Manchester, said he appeared as a witness on behalf of the Parliamentary Association for the Abolition of Vivisection and also on behalf of the Manchester Antivivisection Society and the Manchester Friends' Antivivisection Society. He had already supplied to the Commission a *précis* of his evidence under the following heads:

(1) That the natural horror of ordinary people on hearing of such suffering represents an outraged moral sense which is the inheritance of long ages of evolution, and should not be violated or ignored in any scientific judgement of the situation. (2) That, though "Nature is cruel" and often appears indifferent to pain, it must not be forgotten that over against the apparent recklessness to suffering which runs through the physical world, the moral sense of man, his sympathy, his instinct for righteousness, is also part of the kosmos, and the part by which men, as human beings, ought to be guided, to the over-ruling of every other consideration. (3) That the central track of human improvement has in general been along the line of increasing sympathy and tenderness; to sympathy is due what makes life worth living now, and upon it centred the hope of the future. Vivisection, therefore, in pursuing a collateral interest, mainly intellectual, is running counter to the most vital current in human progress. (4) That it will be, therefore, clear that everything depended on the relative value given to material and to spiritual considerations. I shall ask the Commission to believe that spiritual things are as real—one may say as concretely and significantly existent—as material things, and that suffering, violated trust, ruined life, conscious tyranny are facts as actually disastrous as earthquake or frost or loss of property. (5) That we ought to extend the ordinary conceptions of love, kindness, and justice to animals, some of which possess intellectual and moral qualities which themselves give them a claim in any harmonious universe to an adequate response. All this is much helped by the fact of our common ancestry with them. (6) That an expert in physiology is not necessarily gifted with more than the average moral insight to begin with, and the constant exercise of torture inevitably produces in any of us corresponding callousness. A special professional morality in any calling is a moral danger. A temper of mind is produced in physiologists which easily passes from using animals to demanding human material by which common fallacies may be avoided. The moral authorities of the world are against the torture of animals. (7) The needlessness of repeating well-known experiments for practice and for teaching purposes. (8) The relation of vivisection to Christianity. (9) The difficulties of the subject: Border-line cases: vaccination; sport; farmers' practices; difference between death and torture; our inherited habit of meat-eating; admitted difficulty of "drawing the line"; common comparisons between human and animal life. (10) That we cannot omit from the argument either past series or Continental series of experiments. Scientific attention may at any time be turned to subjects requiring equally painful treatment with those of the past. (11) Legislative proposals.

By way of a concrete basis for his argument, he gave a summary of a few cases of acute suffering caused by experimentation on living animals. The first case he took was that of Dr. Rose Bradford, who cut into the ears of dogs, destroyed the tympanic plexus, scraped out the middle ear, and poured in pure carbolic. The experiment was reported in a paper on the physiology of the gland nerves, which appeared in the *Journal of Physiology* for November, 1892, page 429. The operation was done under chloroform, but the dogs lived for weeks afterwards, in what must have been a condition of great suffering. As another instance, he quoted Sir Lauder Brunton, who slowly heated—"or shall we say baked" rabbits to death, and along with Dr. Theodore Cash, did the same to cats, the operation lasting from three to five hours. The authority for that was the *Practitioner*, volume xxxiii, page 273 *et seq.*, 1884. The object of the research was the action of digitalis with reference to the pulse. The temperature of the rabbits was raised to 111° F. and 113° F. in one series of cases, and something a little less in another. Asked if he called that being baked to death, he said, "It is just whatever phrase you like to use. They were heated, at any rate, until they died." His next instance was an experiment of Dr. Cecil Shaw, who cut into rabbits' eyes and put in jequirity seeds, and afterwards small shot, in order to produce prolonged irritation, purposely using dirty instruments; he kept this up for periods varying up to six months, in order to see whether the other eye would be sympathetically affected. That was to be found in the BRITISH MEDICAL JOURNAL of June, 18th, 1898, page 158. That case came up before the public because Dr. Cecil Shaw did not happen to have a licence at the time, so that it happened to become rather a public affair. Dr. Shaw's defence was that his colleague, who had a licence, had really done the work. Asked who the colleague was, he said he forgot his name at that moment. He had no note of the laboratory in which the experiment was done. He thought very likely it was in Belfast. The witness went on to say that he had some details of the effects of snake poisoning which were to be found in the *Edinburgh Medical Journal* for 1870-71, at page 791. It was stated that there were 280 experiments performed by Sir Joseph Fayrer. He only mentioned that because he wished to go back to an even earlier fact—namely, a book which was published in England, translated into English, in 1787, by Fontana, on the *Bite of the Viper*. Asked by Colonel Lockwood what his object in going back to 1787 was, he said it was to show that research on snakebite had been going on on a very extensive scale for 120 years. The author stated in that book that he had carried out more than 6,000 experiments, and he says:

> I have had more than 4,000 animals bitten, and I have employed upwards of 3,000 vipers, and I may have been deceived; my experiments may have been too few in number.

When they were balancing things he thought it well to mention a case like that. His next case was that of Dr. B. A. Watson, who wrote a book an American book—and he had not the original, but the BRITISH MEDICAL JOURNAL, speaking of it, said:

> We trust that no one in our profession, or out of it, will be tempted by the fancy that these or such-like experiments are scientific or justifiable.

The experiments were the dropping of 141 dogs from a height of 24 ft. The date of those experiments was 1890. He knew nothing more about Dr. Watson. In the twenty-first volume of the *Journal of Physiology*, at page 325, there was an account of prolonged observations on dogs who had their throats cut, and cannulae inserted, and the viscera exposed, by Leonard Hill and H. Barnard, on the effect of gravity on the circulation; and this was what was said:

> It is absolutely essential that chloroform should not be administered during the periods of observation.

The actual experiment was done under anaesthetics. He had not a memorandum of the period of observation, but it was quite prolonged. Asked if the animals had not some other anaesthetic, the witness said he thought that was the one which had morphine. It was not universally admitted that morphine was an anaesthetic. On its being put to him that they were killed before they got rid of the morphine, he said that was not his point at all. If he had wished to say that they were not killed, he would have mentioned it. They were under morphine, but not chloroform. On December 29th, 1906, in a paper before the American Association for the Advancement of Science in New York, Dr. John B. Watson, of the University of Chicago, told how he had tried to discover whether rats had a sixth sense unknown to man—namely a sense of direction. To this end he put a rat in a box, from which the only outlet was by a maze, and he kept it there until it was thoroughly familiar with the intricacies of the exit. Then he removed its eyes, but it managed to get out. Next he extirpated the olfactory nerve, but the rat still threaded the maze. As the escape might have been due to a sense of touch, he froze the rat's feet. Finally he covered its head completely with collodion. Asked by Sir John McFadyean for the source of his information, he said it had been mentioned in various papers. He got it from an antivivisection paper in

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Manchester, called the *Quarterly Reminder*. It did not quote its authority, but only this statement. Mr. Graham went on to quote an opinion of Dr. F. Borel, who had been the head of a hospital for a long time, on the subject of anaesthetics, which was to be found in a letter he wrote to the *Pall Mall Gazette*. He did not know if he was an English doctor; very likely he was a Frenchman. Dr. Borel wrote in the *Pall Mall Gazette* of August, 1889, as follows:

Will you permit a vivisector, past, present and future—if it were necessary for the good of science and mankind—to tell those good people who believe seriously that the animals experimented on by M. Pasteur do not suffer, that they are deceiving themselves? My personal experience of fifteen years' practice gives me the right formally to deny the truth of that. I have vivisected birds, horses, frogs, rabbits, monkeys, and, above all, dogs; and I can affirm three things: (1) That it is nearly completely impossible to employ anaesthetics upon them so as to render them insensible. (2) That the sufferings of the animals after the experiments are so great that they are almost stupefied, showing the apathy and indifference of the martyr. And (3) that the employment of curare, far from diminishing sensibility, augments it exceedingly, moreover that the use of it necessitates tracheotomy beforehand, to make them respire artificially, because the curare totally paralyses all voluntary movement, and thus they would otherwise suffocate. Any one who is accustomed to a laboratory, to physiology, or to pathological experimentation, knows that animals suffer when vivisected, and greatly, until they die. No, it is necessary for M. Pasteur to have living animals to support his thesis; this letter is not the place to inquire whether he is right or wrong; but I maintain—I, pathologist, and lately chief of a hospital—that he has imposed on brave men whose confidence he has won, when he pretends that these animals do not suffer. To listen to him, one would say they come voluntarily to submit themselves to his experiments to procure pleasures hitherto unknown.

Asked if he would say whether this gentleman was a pathologist, the witness said he did not know. Asked if he could give any reference to any work done by him, he said he had made no inquiry as to Dr. Borel; he knew nothing about his researches. The witness proceeded to deal with the heads of his *précis*. In regard to the first head, his point was that there was a tendency among those whose profession lay wholly with the physical tissues to ignore, and even to despise, considerations derived from the purely mental horror and shock which men experienced on reading of cruelty. He referred to the admission of Dr. Starling that pain vitiated physiological experiments, saying that was what they had always said, and he could desire no more severe condemnation of the great body of "classical experiments" performed before anaesthetics had come into general use than that. He claimed that sympathy took a central place in human evolution, and that if physiology led to callousness it was attacking that upon which the stability of human intercourse was built. Passing to his second head, he said the mystery of pain was a thing which had always puzzled philosophers; but the one thing which to him was clear was that over against the apparent indifference of Nature to pain there had been set the heart of man, which was also part of the kosmos, and that if they ignored human sympathy for suffering they destroyed the balance of Nature, and were undoing the last and highest work of creation. As regards his third point, he claimed that sympathy was almost in the central track of human development. The development of sympathy had increased as men had found that more good could be done by trade and helpful co-operation than by slaughter and contention. At the present time that sympathy could only be safely carried up to a certain point. "Herbert Spencer," said the witness, "has pointed out that if you sympathize more than is possible under the circumstances of a given time, you weaken yourselves, you suffer; and sympathy cannot be developed, therefore, beyond the point at which it becomes damaging." But every act of sympathy produced a certain amelioration in the surrounding circumstances They might look forward to the time when the highest pleasure of mankind would be found in altruistic acts. In the midst of that blessed sequence the production of artificial cruelty and suffering came in. It closed up the pores of sympathy amongst those who were connected with it, and, to a less degree, in society, which was conscious of it and sanctioned it, and it discouraged the possibility of the exercise of sympathy by the most sympathetic. He had no doubt that many persons had had their life and strength considerably shortened by their work in the cause of antivivisection. It was by accustoming the motor tracks in the brain to kindly acts that they became habitual to us. A medical man saw much suffering, but he devoted himself to alleviating it. A physiologist was engaged in producing suffering, to which he was bound by human nature to become in time insensible. The tragedy of this controversy was that two good things were in conflict—namely, truth and kindness—and that whilst the kindness might degenerate into mere foolish sentiment, the pursuit of truth also had its limits on the moral side. Passing to his fourth head, the strength of his plea depended upon the validity of one's faith in or perception of spiritual facts. He believed that every act of cruelty was recorded on the fabric of the universe as truly as a rain shower recorded its channel in the sand. A deadened sensibility of soul was as real a lameness as an atrophied limb, and the breaking up of the friendly compact between a man and his dog was a catastrophe as real as an earthquake. It was a crime which detonated through the spiritual environment like a thunderclap. His fifth argument was a very practical one. Every one said we must be sympathetic to men, but why include animals? And it had been said before that Commission, If we began to include animals, why stop at the dog or the horse and not go on to the rabbit, the frog, and the mosquito? Our reply would be, that if we believed in a harmonious universe, then every faculty had its proper organ and its proper response. A dog and a horse were beings of wonderful and delightful intelligence; they were sensitive, sensible and amiable; they knew the meaning of obedience and loyalty and shame; they wore themselves out in our service and they risked their lives in our defence. These very qualities in themselves were an all-sufficient reason why their trust and veneration should be met, otherwise the harmony of Nature was broken, there was a sort of volcanic eruption from another world, with horror and degradation.

Turning to his sixth point, he came to the question of hospitals. In 1892, even a man so humane as Lord Lister said it was "a serious thing to experiment on the lives of our fellow men, but I believe the time has now come when it may be tried." He did not wish to criticize Lord Lister for saying it, because he had not got the context, and he might have said something which made it all right; but he mentioned it to show how in a man less humane than Lord Lister the practice of experimentation on animals was bound to lead in the end to a desire to carry the experiments to a complete solution with human beings. Asked if he knew when Lord Lister said that, the witness said it was in a lecture in 1892. He ought to try to find it; it was in the BRITISH MEDICAL JOURNAL of that year; but he repeated that he did not wish to make much of it. He admitted that the context might be important, but he hoped they would not try to make a point against him on that account, because he was anxious not to say anything unfair about Lord Lister or any one else; but if one once got into the habit of mind which regarded a living creature as the *corpus vile* whose principal use was to give up its physiological secrets, it was only too easy to follow on to dealing with human beings, if they were criminals, or lunatics, or paupers, or dying, or distant natives at a remote station. They knew that the Continent had gone in very much for that; they knew that there were frightful instances in which cancer, syphilis, and small-pox had been given to women and foundling children, and that the medical profession had rightly raised a disturbance about it. But they must remember that vivisection originally came from the Continent, and unless they checked the exaggerated claim on behalf of knowledge they might some time have to meet the demands of a dominant profession saying—just as they were now beginning to be told that painful experiments were useless—that experiments on animals were always liable to the fallacy of arguing from animals to men (which was quite true), and that the safety of their dearest lives depended upon the sacrifice of a few of the weakest or worst of humanity. Dr. Sydney Ringer, in his well-known *Handbook on Therapeutics*, described the painful consequences of his own administration of overdoses of salicin, nitrate of sodium, and gelseminum to various hospital patients. The witness claimed, then, that the appeal on this issue really lay away from the experimenters to men of acknowledged

inspiration, to men of far-seeing moral insight, to men who saw the light dawn first on a new duty. Carlyle was on their side. Browning said that no supporter of vivisection could be among the number of his friends. Tennyson wrote *The Children's Hospital* for the sake of the cause. Oxford lost the services of Ruskin when she built her vivisection laboratory. In regard to his seventh point, no doubt a certain vividness would be imparted to teaching by those experiments, but they could very well be dispensed with. A professor of geology managed to get on without being able to produce an earthquake; a professor of physics was limited in his handling of thunderstorms. The introduction of the torture of living animals to multitudes of young students scattered seeds of callousness much more widely than it did in the select laboratory where a professor gained fame, and ultimately money, by research. They could not afford to dehumanize young students of the medical profession, even at the risk of their missing a certain facility in remembering their physiology, most of which it was their usual happy habit shortly to forget. In regard to his eighth point, he thought he might just say that the precepts of Christ would hardly do for mottoes or footnotes for a manual of practical physiology. Every great religion meant the sacrifice of self for others, and this experimentation meant the sacrifice of others for self. In regard to his ninth point, he fully admitted the difficulty of drawing the line between the reckless disregard for pain of living creatures and the very slight cases, such as occurred in public health laboratories. He condemned vivisection, but he condemned also many things which occurred in sport and many things which occurred on farms. At the same time, he believed it was right for some of them, at any rate, to concentrate their work on scientific cruelty for one particular reason—namely, that many of these other forms of cruelty were traditional and had come down from our more barbarous ancestry; but this was a new incursion of reaction into human life. Sometimes the question was asked: Would you sacrifice 100 rabbits for the sake of one child? He would like to meet a question like that by actual facts, not by hypotheses. Take, for instance, the great research which occupied the vivisectional world a generation ago on the localization of the functions of the brain. Hundreds of thousands of dogs all through Europe in the course of that inquiry suffered, yet they knew that at the present time about one-third of the cases operated upon recovered, and in those that did recover there was nearly always local paralysis. It was because of cases of that kind that he hoped the Commission would not confine its attention to the immediate bacteriological work of the moment, but would consider what might be in the future the favourite object of research, being sure that, should it become desirable to experiment upon the nerves in a way which required the persistence of sensation, the spirit of scientific inquiry would not hesitate to inflict whatever suffering was necessary, if allowed to do so by law or by public opinion. Passing to his eleventh point, with regard to legislation, the societies which he represented were all advocates of the total abolition of vivisection, and they took up that attitude because they doubted inspection of a thorough kind being practicable. They considered the use of anæsthetics unreliable, and they considered that regulation would be too weak to restrain a profession consisting of such able and distinguished men, and he felt personally so much difficulty in suggesting one course more than another, that he felt it was rather for the Commission than himself to make any suggestion on other lines. In reply to questions, he said he was against the special exclusion of dogs. Asked if he could quote any case in which curare had been administered alone without anæsthetic, he said he quoted that from Dr. Borel. Asked if any other case had been brought to his personal knowledge, he said he was not a medical witness. On the question being pressed, he said he did not remember any at that moment. In reply to further questions, he said he had given cases which showed that some experts in physiology had been constantly in the exercise of torture. He did not say that every man was doing so every day, or that all experts in physiology were constantly in the exercise of torture. Asked whence he derived all this knowledge of the torture that vivisectors inflicted, he said he had been reading the subject for twenty years, and therefore he had a large number of sources for that information, and he had consulted the actual journals for the evidence which he had brought before them. Asked whether if he had a severe attack of diphtheria, he would think it was wrong to receive an injection of antitoxin, he said he thought the difficulties of the subject as it existed were so great that hypothetical cases were not of value. He would be willing that we should all do without the benefits, real or supposed, that had come from it. Asked if with his present knowledge he thought it was right to let a person die of hydrophobia rather than make use of a serum which most doctors honestly believed gave him a very good chance of life, he said, of course, one would differ from their premisses. He thought that research would have been on wiser lines if it had been otherwise directed. In reply to Sir William Collins, he said he was a teacher of mathematics and political economy, and he was a University Extension Lecturer in History. His view was that experiment for scientific purposes on living animals was immoral. Asked if such experiment were conducted under anæsthetics, it would still, in his opinion, be immoral, he replied that if it could be guaranteed that there was complete anæsthesia and not pain, he would have no objection to the experiments; but, of course, the difficulty was to guarantee that. His objection was to the cruelty. If cruelty could be certainly avoided and surely avoided, he was satisfied; then he would rejoice in the experiments. Asked if, as representing the Parliamentary Association for the Abolition of Vivisection, he advocated the introduction of a Bill to abolish by law the practice of vivisection, the witness said that was the view of that Society. Asked if he did not speak on its behalf, he said he did broadly. Asked if it was the intention of the Society to lead up to Parliamentary action, he said he believed that was so. Asked if its object and his would be the introduction of a Bill to abolish by law the practice of vivisection, he said, Yes. Asked if he thought that if such a law were passed it would reduce the number of animals utilized for vivisection, he said he thought it would, inasmuch as it would not then be possible legally and truthfully to describe experiments in the medical journals, and that would take away the foundation of experimentation—the source and motive of it. Asked if he did not think it might have the effect of driving vivisectors to other countries where such a law would not be in force, he replied he thought it would have that effect, but, of course, in diminished numbers from those which obtained now in England. Asked if it might not also lead to the practice of vivisection surreptitiously, without regulation, he said he thought it would. Asked if his Association, which advocated Parliamentary action with a view to the introduction of a Bill completely to forbid the practice of vivisection, had contemplated the kind of penalty which should be applied to the infraction of such a law, he said he was not a member of the Committee of that Association, and he had no part in its action. On its being put to him that he was speaking as a witness on its behalf, he said he was. He could not tell whether they had gone into that or not. On its being further put to him that neither he nor the Association on behalf of which he spoke had thought out the question of the penalty that should be imposed for the breach of such a law as they had in their contemplation, he said he personally had not. He did not know whether they had or not. In reply to Sir John McFadyean, he said he had no opinion of any value on the point whether it was impossible to anæsthetize dogs completely, but he quoted the opinion of Dr. Borel. Asked if he had any personal information whether Dr. Borel had a large experience in attempting to anæsthetize dogs, he replied that he said: "I have for fifteen years vivisected birds, horses, frogs, rabbits, monkeys, and, above all, dogs." Asked whether Dr Borel said he himself administered an anæsthetic to a dog, the witness replied, "You would hardly expect him to vivisect them for fifteen years without." On its being put to him that they did not know anything about Dr. Borel at all, he said, "I do not know whether you do or do not." Asked on what ground he called him "Dr." Borel, he said that was what it was headed "Dr. F. Borel." He was the head of a hospital, and had

been for fifteen years a vivisector. Asked whether if veterinary surgeons who had for operations on dogs in veterinary practice chloroformed a thousand were to give evidence to the Commission to the effect that in their opinion dogs could be anaesthetized, just like human beings, they ought, in his opinion, to allow that evidence to neutralize Dr. Borel's, he replied that he would go by the weight of testimony. Asked if his objections to vivisection extended to cases in which a very trifling amount of pain was inflicted, he said he had confessed that it was very difficult to draw the line. In reply to a question whether the infliction of a trifling amount of pain on an animal would be justifiable if thereby we acquired useful knowledge with regard to the prevention or cure of disease, he said the ambiguity of the words made it best for him not to answer the question. Asked what particular word was ambiguous, he said the word "trifling." He would speak much more freely if they were talking together as individuals, but he had behind him a certain amount of opinion, and on these borderland cases one man might think one thing and another another, and he would rather not lay down anything definite about it. Asked to assume that useful knowledge could be obtained by experiments which involved no more pain than the insertion of a needle into his own skin, and not followed by any pain at all, he replied that he would be extremely willing to prick a cat or any other animal as he would prick his own finger. Asked further, if, assuming that there were valuable methods of treatment and prevention that had been discovered by vivisection, he thought it morally right to take advantage of them, he said he thought that, strictly speaking, it was not morally right. Asked if his horror of vivisection extended to all cases in which man inflicted pain on animals, he replied, For scientific research. Other cases did not come before this Commission. He was against all forms of cruelty. Asked if he would deny that the actual amount of pain inflicted in field sports was far in excess of what was caused in this country by physiological and pathological experiments on animals, he said he was unable to estimate the relative amount of pain, but he was against them both. Asked if he would advise that there should be legislation to put down field sports, he said that was a very complicated question, and many things came in there which did not come in here. It was so complicated that he had never contemplated the question. Asked to contemplate it, he said they could not expect him to answer upon a political issue, which touched English life at many points, on the spur of the moment. Every Act of legislation was an extremely responsible thing, and he did not form an opinion upon a new issue upon the spur of the moment. Asked if he was aware that a great deal of pain was inflicted on animals in killing them for human food, he said he would do what he could to minimize it. Asked, further, if it would be absolutely impossible to insist that the animals should be anaesthetized before they were killed, he said he did not know. He would be very glad if it could be done. Assuming it to be possible, he would advise that there should be legislation to secure it. Asked if he was a vegetarian, he said, "No, not entirely." Asked if he thought it quite consistent to eat animal food which was secured to him after the infliction of so much avoidable pain, he said he doubted if it was quite consistent. On its being pointed out to him that the anaesthetization of animals for castration and spaying would involve the anaesthetizing of some millions of animals annually in this country, he said he should not have thought that the numbers were so large. Asked if he knew that about 99 per cent. of male sheep were castrated, he said he did not. On its being put to him that in the months of spring and early summer in this country farm places simply seethed with vivisection; that male and female animals had these sensitive organs cut out of their bodies in full consciousness, and that this was done on millions of animals annually, he said, in reply to a question if he had ever made any effort to reduce this animal suffering, that one could only do a few things in life, and he was not a missionary for agriculture at all. Asked if, assuming that one million animals were thus castrated in a year, the amount of animal suffering thus caused was not greatly in excess of that caused by physiological and pathological observers, he said the torturing was often short; one had to take all that into account. Asked if he really meant to say that if an animal had its testicles cut out the pain was very short, he said he was not very well qualified to give an opinion. Asked, in regard to a statement in his *précis*, if he put it forward seriously that 200,000 dogs were experimented upon in Europe, he said he did not say 200,000, of course. On its being pointed out to him that he said "hundreds of thousands," he said he put it down at a very large number; he did not know the number. In reply to Sir Mackenzie Chalmers, he said he would specially prohibit scientific experiments. The general law of cruelty might be difficult to enforce under the difficulties of private laboratories and the difficulty of obtaining testimony. He was aware that there must be a certain amount of experimentation throughout medicine, obviously, in trying things, and it was always a delicate and careful question with a medical man, no doubt, as to how far he ought to go. Asked if he thought it justifiable to try a new drug which was thought likely to be useful in medicine on an animal before it was tried on a human being, or if he thought it ought to be tried on a human being first, he said it all depended upon the case. Taking the case of a new soporific, he would have no objection to trying it on an animal first. He did not know that all his friends would agree with him in that. Asked where the line was to be drawn, he said the business of drawing the line should be, and naturally would be, left to the judiciary. He admitted that they must have some direction. They would have to interpret a carefully-worded Act. Asked what would be the lines on which they would interpret that Act, he said he knew quite well that that was the weak point in his case; but, in dealing with a question like this, one ought to deal with the large issues, and not with the borderland cases. He would go so far as to say that if nothing had ever been done in the way of scientific experimentation worse than the ordinary trying of drugs, there never would have been an antivivisection movement; it would not have been worth powder and shot. The movement arose out of far more serious matters than that. Asked about operations, he agreed that if an operation was performed under anaesthetics, and if there was no serious pain afterwards, assuming that the animal was allowed to recover, he saw no ethical objection to it. Asked if that condition was not now realized in the vast majority of cases, he said that was such a loose expression that one hardly liked to reply to it. In reply to Dr. Gaskell, he said his impression was that many of the cases of cruelty were so because the anaesthetic was not sufficient. Asked whether, while agreeing with other witnesses that there was very great difficulty in keeping animals completely under anaesthesia, he considered that in hospitals men could not be kept under anaesthesia, he said: "Oh, yes; men can be kept under." Asked how it was that he was able to speak confidently in the one case and not in the other, he said because they knew that those operated upon in hospitals did not as a rule suffer pain. They never had complaints that they did. Asked if he had any doubt as to veterinary surgeons being able to operate in the veterinary hospitals without causing pain, he said he had read the testimony of veterinary surgeons before the Commission, who said various things on that point which he accepted, and from which he had learnt more than he knew before. Asked why he did not try to learn before he came there whether his suggestion that physiologists did not insure complete anaesthesia was correct or not, he said he did. On his being asked why he did not go to the veterinary people and so find out that anaesthesia was possible in animals just as much as it was in man, he said he thought no one said it was impossible. A great many people thought that it was uncertain, and that sufficient attention might not be paid to it. On his being asked whether the statement that anaesthesia was so difficult to secure in animals was true or not, he said he should not think that an answer which he might get from a neighbouring veterinary surgeon would be of so much value as the answer one got from the published statements of more important people. On its being put to him that he had not asked anybody who was acquainted with the subject, he said he should not admit that. He could not recall every one to whom he had spoken for fifteen years on the point. In reply to further questions, he said he had been to laboratories, but he had not seen experiments going on

while he was there. He did not know that he would be admitted to such a laboratory whilst work was going on. Besides, the private research laboratory of the professor was where one would have to go, and he had not intruded into such a laboratory. Asked if he was personally acquainted with vivisectors, he said, Yes. Asked if he found them an immoral set of men, he said he thought their work had a bad effect upon their characters in that particular direction. In reply to a further question, he said it was his opinion that physiologists were less humane than other men. Asked by Mr. Tomkinson as to the "baking" experiments which were stated to have been done by Sir Lauder Brunton on rabbits and cats, he said the animals were put into a kind of stove in order to investigate the effect upon their pulse. They were heated until they died; that was the form of words used. Asked if he knew what the normal temperature of a rabbit was, he said he did not. It was pointed out by Mr. Tomkinson that the mere fact of a temperature of 113° would not be cruelty or torture in a heated place. People went into a Turkish bath and sat in a temperature up to 200° and 220°. He had sat in 220° himself. Asked if he wished them to understand that these poor creatures were slowly baked to death, the witness said they were slowly done to death by heat. Asked if he thought it would be in the interests of the public and for the quieting of the public mind if permission were given to properly authorized laymen, members of Parliament, or others, to see these operations and to satisfy themselves as to the efficacy of the insensibility or otherwise, he said he thought it would be very useful.

(To be Continued.)

ANTITYPHOID VACCINATION IN THE ARMY.

THREE articles on this subject are contributed to the May issue of the *Journal of the Royal Army Medical Corps*, by Lieutenant-Colonel Leishman, Major Harrison, and Lieutenant Luxmoore.

PREPARATION OF THE VACCINE.

Colonel Leishman states that at the Royal Army Medical College antityphoid vaccine is prepared by a method which in its essentials is that of Sir A. E. Wright, but has been modified in a few particulars in the light of the research work on which the College has been continuously engaged during the last two years. A non-virulent strain of typhoid bacilli is used, and good results have been obtained with it, but the relative value of virulent and non-virulent cultures has not yet been definitely settled. The bacilli are grown in broth at a temperature of 37° C. for a period of from twenty-four to forty-eight hours. It is considered important that they should not be incubated for a longer period. They are then sterilized by heat in a water-bath at a temperature of 53° C. This is much lower than the temperature formerly employed (60° to 65°), and has been adopted as a result of experiments showing that a temperature of 53° maintained for one hour is sufficient to ensure sterility, and that the employment of unnecessarily high temperatures seriously impairs the efficacy of the vaccine. After the sterilizing process is over, samples are taken for the purpose of proving the fact of sterility by aerobic and anaerobic cultures; 0.25 per cent. of lysol is then added in order to prevent the danger of subsequent contamination of the vaccine during the process of opening and closing the phials in which it is placed. This percentage of disinfectant has been shown by experiment to be sufficient to sterilize a vaccine artificially contaminated with microbes of many kinds, including anaerobes and spore-bearing organisms, within five days. The vaccine is standardized by estimating numerically the number of bacilli contained in a given volume. This estimation is performed in a manner which is in principle the same as Wright's blood counting method, but it has been found advantageous to use an ivory ball in place of blood. The vaccine is to be administered in two doses, with an interval of ten days between them, the first dose consisting of 500 million bacteria and the second of 1,000 million. These amounts are, as a rule, contained in 1 and 2 c.cm. respectively of the vaccine, but some bottles of vaccine may be rather more or less concentrated than others. The precise volumetric strength of the vaccine is always marked on the bottle.

LABORATORY EXPERIMENTS.

Numerous experiments in connexion with antityphoid vaccine have been made by Major Harrison. Various methods of killing the cultures have been tested. By passing through the liquid culture or emulsion of bacilli a stream of air saturated with chloroform, it was found that the bacilli were killed, in every experiment, in one hour. Special attention was paid to sterilization by heat, and it was ascertained that 53° C. was the minimum temperature which could be relied upon to kill a culture of *B. typhosus* in a time not exceeding one hour. Toluol was shown to be completely bactericidal within three days. Undiluted glycerine produced sterility in twenty-four hours, 40 per cent. glycerine required two days to produce this result, and 20 per cent. required four days, whilst 10 per cent. failed to produce sterility in eight days. A few experiments on the serum of inoculated persons were made with the object of throwing some light on the duration of immunity. From these observations Major Harrison concludes that

> evidence of a bactericidal activity higher than normal and of the presence of agglutinins can be obtained from the serum of men who have been inoculated as long as six years previously, but whether the protection that remains would still suffice to ward off an attack of typhoid fever is not yet known.

Experiments are also recorded on the antitropic substances produced by vaccines prepared in various ways, and some comparisons have been made of the protective action afforded by different vaccines against multiple lethal doses of a virulent typhoid culture. These last experiments, in which three different vaccines were employed, failed to bring out any clear differences in protective power, but they showed that the dead cultures in a dose of $\frac{1}{10}$ c.cm. per 100 grams would protect a guinea-pig against twice a lethal dose of *B. typhosus*, and that, by repeating the doses of vaccine, a guinea-pig could be protected against at least ten times a lethal dose.

CLINICAL OBSERVATIONS.

During the end of August and the beginning of September, 1905, Lieutenant Luxmoore inoculated 150 persons belonging to the 17th Lancers. With the exception of 23 who refused to accept a second dose, all of these persons received two inoculations. After the first dose, the local symptoms consisted of redness at the site of inoculation, swelling, from varying degrees of serous exudation, pain, and tenderness. There was some lymphangitis in a few cases, and sometimes enlarged glands were found in the groin or axilla. The constitutional symptoms consisted of malaise of varying degrees, nausea, fever varying between 99° and 101°, headache, and loss of appetite. With one exception the constitutional symptoms did not last longer than thirty-six hours. The exceptional case was that of an officer who remained in bed for forty-eight hours with a rather severe type of the symptoms just described. He got up, however, at the end of forty-eight hours, and the following morning was feeling quite well again. With regard to the second dose, Lieutenant Luxmoore says:

> Nearly every person who received the second dose complained of some local pain and tenderness at site of inoculation, which the majority said was not to be compared to that following the first dose, the local symptoms being so mild, and the constitutional symptoms hardly noticeable. There were a few who said that they were worse in every way than they were after the first dose, and there were some who said they felt absolutely nothing of it at all.

The regiment reached India on September 28th. About the end of October enteric fever broke out, and during the few following months 65 cases were recorded. With two exceptions all of these occurred amongst the uninoculated portion of the regiment, and both of these two exceptions were men who had refused to have the second inoculation. Commenting on this result, Colonel Leishman points out that since the uninoculated portion served, unintentionally, as "controls," the evidence in favour of the protective effect of the inoculations is very striking. It is also of interest to note that the vaccine used for inoculation had been prepared and standardized in accordance with the modifications suggested by recent experiments at the Royal Army Medical College.

THE POLICY OF THE UNIVERSITY OF LONDON IN RELATION TO LONDON MEDICAL EDUCATION AND MEDICAL SCIENCE.

By WILLIAM HUNTER, M.D.Edin.,

Fellow of the Royal College of Physicians of London: Teacher in Pathology in the University of London: Recent Examiner in Medicine in the University of Glasgow: and formerly Research Student of the University of Cambridge.

(Concluded from May 18th, p. 1194.)

THE object of the articles concluded in the present one has been to consider:

1. How far the alarm about the state of university medical education in London is justified.

2. If justified, what factors have been at work to produce it.

3. How far it is possible by removal of these factors to remedy the defective conditions existing.

I. With regard to the first point. I was unwilling to accept mere general statements as to the decline in the medical schools without testing them in any way in my power. For as I pointed out by way of prelude to any considerations and conclusions which might follow, at no time in the long history of medical education in London have the equipment or teaching facilities of its medical schools even approached those at present supplied by these schools. The accuracy of this conclusion is known to all, and has been testified to in recent letters by two of the most distinguished scientific teachers whom any university could possess—Professor Starling and Professor Leonard Hill. The former points out (April 20th) that while in 1892 his course for physiology amounted in all to 180 hours, in 1900 the same students had to attend 260 hours, and at the present time the course occupies 350 hours.

And Dr. Leonard Hill has recently testified from his own experience as a teacher and examiner that the teaching in London has never been better, and is nowhere excelled.

If under these circumstances university medical education in London is in difficulties—if the number of students in the London schools are falling off as was asserted—the causes for this had to be sought for in other directions than the equipment of the schools or the efficiency of the teachers. I endeavoured to ascertain by the only official data uniform for all university centres and medical schools—namely, the registration data as to "the date and place of commencement of medical study as certified by the student himself, and the official of the school where he began his medical studies"—what movements had taken place during the past forty years between London and other university centres of medical education. These data had been brought together by me about eighteen months ago not with a view to advocate any particular policy, but solely for my own information as to the present position of the London schools.

I hoped to find that the diminished entry into the London schools was shared proportionally by other schools, and was solely the result of the diminished entry of students into the medical profession which set in about 1894. The results show that this is not the case. London has been affected relatively more than other university centres; the number of students registering in its schools for their whole course has been falling more or less steadily for the last thirty or more years. Whereas these used to constitute over 40 per cent. of the total students registering in England and Scotland they now constitute some 20 to 25 per cent. There was ground, therefore, for concern about the actual and relative prosperity and popularity of London medical education; prosperity of the medical education had not been associated with the university policy in their great centre (London) as it had to a notable degree been associated with the university policies pursued in other great centres—especially Cambridge and Edinburgh.

II. With regard to the possible *factors* responsible for this. I considered to what degree the decline could be ascribed to—

1. The diminished entry into the medical profession.
2. The competition of other university centres.
3. The difficulty of the task assigned to the London medical schools in carrying on at their own expense, without endowment, and *without the slightest pecuniary support* from the university whose students they educate their great task of English medical education (for London still educates one-fourth to one-third of all the students of England and Scotland).
4. The handicap placed on them by the peculiar *examinational policy* of the University—namely,
   (*a*) A matriculation policy which repels numbers of excellent students who would otherwise enter its faculty and its schools, not by its standard but by *its character*; and which has reduced the percentage of its matriculated students who enter the Faculty of Medicine from 20 per cent. in 1880 to a little over 5 per cent. in 1905.
   (*b*) An examinational policy with regard to the Professional Examinations, which aims at a high percentage of rejections (irrespective of the quality) as the chief criterion of the standard of the University, and rejects anything from 35 to 48 per cent. of those examined.

CONSTRUCTIVE REFORM IN UNIVERSITY AND INTER-HOSPITAL POLICY.

Necessity for a Combined and Liberal Policy.

At the close of my last article I began to consider what remedies seemed to be suggested by the various facts and considerations to which attention had been drawn.

The object of the articles has been to invite attention to the problem of medical education in London, not in relation to the individual schools in London, but in relation to other university centres. How urgent is the necessity for viewing it in this wider aspect some of the recent letters and criticisms contributed to your correspondence columns amply testify.

The statistical figures supplied in my recent articles have taken up an undue proportion of your space for the last three or four weeks. One would almost gather from the character of the comments that I had invented the figures which I have been at pains to bring together, for any information either to myself or others that they may be capable of affording. For the benefit of the many who have not time to read articles on medical education I may be allowed to point out that the "statistics" referred to are really the official registration figures supplied by the General Medical Council as to "place and date of commencement of medical studies as certified by the student himself and the official of the institution where he registers."

In the articles referred to these data are used by me in one definite relation, namely, to ascertain "through what centres or schools of medical education do parents elect to enter their boys as medical students—in the belief that they may get the education and the qualifications and degrees which will ensure them every reasonable prospect of success in their profession."

The conclusion to which the figures point is the one known to every one acquainted with London medical education, namely, that students are more and more being attracted to other university centres than London. And if, as my severe critics admit, "nobody doubts this," I am at a loss to understand why I should be gravely called on to test the accuracy of the registration figures by "biometric tests," and by head-splitting mathematical formulae, the mere reading of which makes one giddy. Now that I have supplied the figures, it is open to any one to apply any test—biometric or mathematical—which he may think fit, or put any interpretation upon them that they appear to him to justify.

The correspondence, however, brings out the point, namely, that my critics appear to be even more concerned about the conclusions which *they suppose* I intend to draw from these data than with the data themselves. It is feared that "my deductions are intended to serve as a basis for immediate action, and likely to be accepted without question by the many who have no leisure to examine the data." The words "concentration" and "centre" which I used and shall continue to use in their ordinary English sense—not in the local and parochial sense attached to them of "South Kensington Institute of Medical Science"—appears to have equally frightened others. Had they kindly waited till they had learnt the

conclusions I intended to draw from the various facts and considerations I had adduced, they would have learnt that the "concentration" which appears to me necessary is not the narrow local one (so strongly advocated by some, so strongly reprobated by others) of one particular centre for all the students of London. The *Concentration* which appears to me called for is one of *University Policy and Inter-Hospital Policy*, with the following objects:

(*a*) To liberalize and *raise the character* of the Matriculation Examination governing entrance into the Faculty of Medicine.

(*b*) To offer more *Educational* inducements to their students to come to London for the whole of their course, and thereby secure for them a more uniform education than that which they now receive.

(*c*) To utilize and contribute to the support of (*pro rata* according to the number of university students), the many excellent laboratories already provided adjacent to the great hospitals of London; and

(*d*) To widen and raise the character of London University education (*a*) by allowing all university students (and for that matter all other students as well), if they so desire to supplement the education they receive in the particular school of which they are members by additional courses that may be offered them in other schools. Every student *in* London would in this way have the opportunity, at present denied him, of becoming a real *student of London*, with all the unique educational facilities and clinical material which London can place at his disposal throughout the whole of his career.

The adoption of such a combined policy on the part of the University and medical schools would give an enormous stimulus to university medical education in London, would tend by honourable competition among its students and teachers to raise the standard of education, and would give a corporate character to university medical education, and place a responsibility upon its many excellent scientific and clinical teachers such as could do nothing but enhance the credit of the University, and prove a great incentive to its teachers.

I believe the policy here briefly outlined—the details are matters for the Faculty of Medicine and not for general discussion—to be practicable, and the only one which will effectively meet the needs of university medical education in London at the present time. For the problem presented is not the narrow one of whether one London school is prosperous at the expense of some other London school, but the much wider one of how London as a whole—as *one University Centre*—stands in relation to other university centres of medical education. To endeavour, with whatever success possible, to place the problem on its higher plane and remove it away from local controversies, has been the sole purpose of the articles and data I recently supplied.

The interesting circumstance that the facts I have supplied have been decried by those who (wrongly) feared that they were intended to lead to other conclusions, is perhaps the best testimony as to the degree of impartiality with which I have presented them.

Conclusion.

As I have shown, the so-called "crisis" which is stated to have "arisen" in the London medical education is not a crisis at all, but a chronic condition which has existed for the past twenty to thirty years, and has only been masked by the increase in the number of students entering the medical profession between the years 1880 and 1895. It does not depend upon the absence of any one individual centre in London where London University students could get all their scientific education. As a matter of fact, at least half a dozen or more of the London schools could each quite comfortably accommodate all the university students who come yearly to London. It cannot, therefore, be remedied by the provision of such a centre, however well equipped and endowed. Considerations of area and distances in London would alone render such a scheme unworkable. It depends upon more general and widespread causes connected with (1) university policy and (2) isolated hospital policy.

As I have stated at the outset, the University has shown by inviting to its councils and affiliating as its schools all the medical schools of London that medical education is one of the subjects which more than any other it has endeavoured in its recent reconstitution to place on a broader and firmer basis.

Every one must recognize and sympathize with the peculiar difficulties of its task in face of the historical origins, independent constitutions, and isolated policies of the schools thus affiliated. Each school views every proposal from the point of view of what it conceives to be its own individual interests. And in the absence of any clear defined policy on the part of the University, this is the only course they can rightly pursue. For each school is the inheritor of honourable traditions of work and success, whose continuity they have no right to imperil by any hasty or ill-judged action on their part in handing themselves over to the care of those who have no particular interest in their future, some of whom even assert that the sooner they are crushed out the better.

My own sympathies are with both—with the University which is called on to drive a team pulling in many directions—but no less with the schools which are thus driven, and are left at the end of the day's work to provide and pay for their own accommodation and support and resume the same task the following morning.

If the University desires—as it undoubtedly does—to influence and control university medical education in the schools, *it must do what every other university does*—namely, assume financial liability (partial in the first instance) for the education of its students and the upkeep of the laboratories in which they are educated.

On the other side, it is no less necessary for the schools to sacrifice some portion of their independent policy and give University students the run of all their hospitals. This combined policy is one of "give and take," and the result would be all to the advantage of the *University Student of London* and of the University, and without any disadvantage to any one.

SLEEPING SICKNESS.

At the invitation of the Colonial Office a conference of the various powers and colonies concerned was opened at the Foreign Office in London on June 17th, to consider what international measures can be taken to check the spread of sleeping sickness. The disease, as is well known to readers of the British Medical Journal, has prevailed to a most serious extent in the Congo Free State and in Uganda. It has appeared in the French Congo, in the Portuguese possessions and in the Sudan, while German East Africa and Rhodesia and British Central Africa are undoubtedly threatened. The countries represented are Great Britain, Germany, France, Portugal, the Sudan, and the Congo Free State. The delegates are:

Germany.—Herr von Jacobs, of the Imperial Colonial Office, Dr. Ehrlich, and Dr. Fulleborn.

Congo Free State.—Colonel Lantonnais, Vice-Governor-General Commandant Tonneau, M. Rutten, and Dr. van Campenhout.

France.—Dr. Kermorgant, Dr. Paul Gouzion, Professor Blanchard, and Dr. Laveran.

Great Britain.—Lord Fitzmaurice, Sir W. Foster, Mr. A. W. Clarke (Foreign Office), Mr. H. J. Read (Colonial Office), and Sir Patrick Manson.

Portugal.—Dr. Correa Pinto.

Sudan.—Colonel Hunter and Dr. Balfour, of the Gordon College, Khartoum.

Lord Fitzmaurice, Parliamentary Under-Secretary to the Foreign Office, has been chosen President of the Conference, and in his opening address said that the object of the British Government in proposing the Conference was the hope that the several countries responsible for the good government and prosperity of tropical Africa would be willing to co-operate in the struggle against sleeping sickness; he submitted the following as the chief points for consideration: (1) An annual or biennial conference of delegates from the several countries interested in sleeping sickness; (2) a central bureau to extract and circulate all new literature on the subject; and (3) the assignment of definite points for investigation to particular countries or individuals. Under the latter head he mentioned the questions whether the trypanosome undergoes developmental changes in *Glossina palpalis*, whether other species can convey the trypanosome, the geographical distribution of the infecting species, the part played by the vertebrate fauna, the best methods of exterminating *Glossina palpalis*, for preventing the introduction of the infection, and for controlling its spread, and finally, the experimental and therapeutical study of drugs believed to destroy the trypanosome.

AMERICAN MEDICAL ASSOCIATION.

THE fifty-eighth annual session of the American Medical Association was held in Atlantic City, New Jersey, on June 4th, 5th, 6th, and 7th, under the presidency of Dr. Joseph D. Bryant, of New York.

President's Address.

Dr. Bryant took for the subject of his presidential address, "The American Medical Association, its Aims and Interests."* After some introductory remarks he said that in looking about for a topic on which to base his remarks on this occasion, he was, perhaps, unduly impressed with the idea that impersonal open-hearted introspection might not be amiss at this period of the Association. In this connexion he referred more especially (1) to the organizing of the medical profession of the country and its potential perplexities; (2) to the elevating of the standard of medical education and its possible afflictions; and (3) to the urgent demand for trustworthy medicinal means and of sincerer efforts on the part of every physician in securing a betterment of therapeutic methods.

The Object of the Association.

It was of great moment that the Association had (as set forth in its constitution) but one significant object in view—namely, "the promotion of the science and art of medicine"; and it was purposed, in attaining this end, "to unite into one compact organization the medical profession of the United States," in order to foster "the growth and diffusion of medical knowledge"; to promote "friendly intercourse among American physicians"; to safeguard "the material interests of the medical profession"; to elevate "the standard of medical education"; to secure "the enactment and enforcement of just medical laws"; to enlighten and direct "public opinion" regarding the "broad problems of hygiene"; and to present "to the world the practical accomplishments of scientific medicine." It followed, therefore, that the promotion of the science and art of medicine as provided by the constitution of the Association was, in effect, the promotion of the methods and the development of the means and the opportunities for relieving human suffering and thereby the adding of years and comfort to human existence. A transcendent service like this should be sheltered by the zeal of healthful personal and professional devotion and in no way depleted by the wiles of business ambitions. Those who regarded the practice of medicine as a business enterprise should class themselves as brokers in a market of human affliction. To those who would infect the sound spirit of professional devotion and fellowship with the virus of sordid gain little heed need be given at the counsels of thoughtful men in the ranks of a beneficent profession. The uniting of the medical profession of the United States into "one compact organization," making to the wise purposes already stated, was progressing in a decided manner. Already the constituent members of the organization numbered nearly 65,000, of which the fully constituted members were about 27,000, showing a substantial increase of the former class during the present year of about 10 plus per cent. and of the latter about 12 5 per cent. And when it was recalled that the regular medical profession of the United States numbered about 112,000, it was not difficult to understand that in the near future the medical profession of these States might easily be united into one compact organization. But how compact it might be and how enduring it might become would depend on the degree of wisdom exercised by its builders and on the measure of justice dispensed by those in control of its affairs. It was well for them to keep in mind that a failure on the part of the responsible many to plan and co-ordinate wisely the official acts of the few often rendered effeminate and inoperative the subsequent inhibitory efforts of those in established control. Every physician could contribute a definite share to the healthy growth and wise diffusion of medical knowledge and to its bounties. Those who strove in the workshops of medicine, the laboratories, and the hospitals, more especially the former, had already bestowed a bountiful portion toward the attainment of this end. Scientific laboratory deductions, however, could not be regarded as final; they yet required the leavening proof from out the complex laboratory of the human body, as demonstrated by practical applications in the treatment of disease, to establish their worth. To the general and to the hospital practitioners of medicine belonged the duty of dispensing the fruits of laboratory research, and thus far so well had concurrent effort accomplished its purpose, that life's expectancy during the first forty years of existence had been advanced quite 30 per cent. But following this period only a little advance in this regard had yet been made, principally because of the differences in the nature of the diseases which afflicted those of the earlier and of the later periods of life. The physical sufferings of this period were largely the outcome of its peculiar diseases, many of which might be prevented and perhaps cured by means of progressive investigation and therapy related to a full term of years, and thus life's span became yet longer extended. After speaking of the needs of medical education and the *Journal* of the Association, the President said he was deeply impressed with the belief that at this time the greatest danger to continued harmonious unity in the Association lay ill-hidden in the constituted expression, "to safeguard the material interests of the medical profession." It required no special discriminating sense to foresee the devious interpretations which eager desire might willingly give to the phraseology of that declaration. Fortunately, no rendering of the language of this expression could be properly entertained which conflicted with that of the antecedent one, "the promotion of friendly intercourse among American physicians." However that might be, the following suggestive lines of Froude should not be overlooked: "Where all are selfish the sage is no better than the fool, and only rather more dangerous."

The War Against Disease.

Proceeding, Dr. Bryant said the genuine products of completed organization of the medical profession were of infinite importance to the well-being of the country. The broader the field of opportunity in this regard, and the greater the activity of the contest, the more bounteous would be the return and the greater a final victory. When, for instance, it was recalled that for unknown reasons the death rate from cancer was slowly advancing, in spite of intelligent, earnest opposition; that acquired tuberculosis yet added 13 per cent. to the total death rate; that unrestrained ophthalmia caused over 25 per cent. of the blindness from disease; that over 30 per cent. of the school children of New York, and perhaps of other large cities, suffered from defective vision, and that in 75 per cent. their mentality was impaired by causes yielding to curative measures of a simple and permanent nature, then, indeed, was the necessity for united action relating to control of human infliction emphatically demonstrated.

A National Board of Health.

Speaking of the prevention of communicable disease, the President said it would seem wise that inter-State sanitary regulations should be established, thus affording even-handed opportunity of protecting inter-State enterprise from the effects of concurrent disease. A national board of health having in charge such things as properly fell under its consideration and action would be a national blessing of ever-increasing importance. But in this relation he found little encouragement for those of our profession who at the outset would demand a seat in the executive council at the head of the nation as an acknowledgement of professional capacity, or as a retainer for prospective service. Not a little had been said in the near past regarding the possibility of securing national incorporation of the American Medical Association, with power to hold property and transact business anywhere in the United States. The gaining of such incorporation was no longer speculative, for within the last year several charters of similar scope to that framed by Judge Ray for them had been secured for other organizations. He was inclined, however, to hesitate in recommending a renewal of endeavour in this respect until assurance could be had of earnest, genuine effort on the part of all, looking to the securing of incorporation and also co-operation in the adjustment of the business matters essential to a completed consummation of the act. A policy which would contemplate the locating of the business affairs of the Association at Washington in the event of incorporation

* For advance proofs of the President's Address and of the Orations on Medicine and on State Medicine we are indebted to the courtesy of the Editor of the *Journal of the American Medical Association*.

he regarded as hostile to the best interests of the profession and contributive to the impairment of fraternal peace.

Medical Education.

Speaking of medical education, the President asked if they kept in mind that the increase in educational requirements above a certain point had not resulted, at least in New York State, in a corresponding increase in medicine of those of the highest qualifications, but instead their comparative numerical status (21 per cent.) in this and in other common respects had remained practically unchanged for the last ten years. Was it not possible, therefore, he asked, that many worthy and able young men who were less favoured than their fellows had side-stepped because of the comparative hardships imposed by educational requirements, and the uncertain and delayed rewards that attended earnest endeavour in the medical profession? Whether or not the standard of medical education should soon be raised in that country to equal that of the Old World was a matter concerning which honest differences of opinion were earnestly pronounced. While no one could consistently contend that knowledge was not power, yet the adjustment of more than a requisite amount of knowledge in the practice of medicine, to the sparse occupancy of many broad areas of the country, was a matter which for some time to come might concern the stern power of economics more than the needs of ideal culture. The analytic work being done by the Council on Medical Education was mercilessly disclosing the comparative status of the medical schools in the country, to the discredit of many heretofore differently regarded. Apropos of the importance that the faculties of medical schools should lead the way to higher station in professional ethical conduct, both by precept and example, he was prompted to say that there appeared to be no doubt that uncanny business instincts were encroaching, in the reciprocal vulgar ways characteristic of lay methods, not a little on the sacred domain of professional propriety. The remedy for the cure of that unprofessional propensity rested largely in the hands of the faculties of medical schools. They should inculcate a high sense of professional honour in those who come under their tutelage. Ample instruction of medical students in the tenets of moral philosophy, as applied to the practice of medicine, and substantial disapprobation of offending practitioners by their colleagues would, in his judgement, hasten the reduction of this evil to a minimum. In the United States there were about 84,000,000 people, the great majority of whom were capable of satisfactorily judging of the practical things of life relating to themselves as they came into thought. Also in the United States there were about 112 000 physicians eligible to membership in the American Medical Association, but of whom as yet little more than one-half were affiliated in any capacity with the organization. It logically followed that a judicious estimate should be made of how the great majority of the 84,000 000 of people plus nearly half of their own calling would regard their intentions before venturing at all, rather than prematurely to court defeat and corresponding loss of station. The question was not altogether what they thought themselves and their causes, but how they themselves and their causes might be regarded by the people concerned and by their friends, to say nothing of the balance of their own profession. It should be kept in mind that it was not likely that general mutual accord would prevail in all matters of common interest which arose in organized bodies of men. It was within the easy recollection of most of them that sturdy efforts were made by the united medical profession of a State in what was regarded to be a justifiable cause. Yet, as it appeared, decided defeat was the outcome, because the majority of the interested people were not in harmony with the contention. That suggestive lesson should not pass unheeded, if experience and good judgement were to become available assets in the conduct of the affairs of medical organization.

The Need of Honest Drugs.

It was written that Oliver Cromwell, while fording a river with his army to attack the enemy, exclaimed, "Put your trust in God, but mind to keep your powder dry!" No less determined than Cromwell was did many physicians now feel on account of the fact that their figurative powder (drugs) was apt to be worse than wet, being alarmingly defective in quality and fickle in strength. As an illustration of these facts, no evidence more convincing could be presented than that of the Health Department of New York City. It appeared from the reports of the Board of Health of New York City, on the analytical findings incident to the examination of crude drugs, tinctures, fluid extracts, etc., as compared with corresponding standards adopted in the *United States Pharmacopoeia*, that reputable pharmacists had, because of commercial indifference or studied intention, not infrequently contributed to therapeutic misfortune through the quality and strength of their drugs. Thus, five of thirteen samples of aconite analysed were of the tincture and fluid extract of the root. Of the three specimens of the tincture, one had 9 per cent. more, and of the remaining two 6 and 20 per cent. respectively less, of aconitin than the standard required. The two samples of extract of the root had 13½ and 25½, respectively, more aconite than was required. The remaining six samples were of the powdered root, which in no instance was sufficiently abnormal to call for admonition. The samples of belladonna showed, respectively, from 35 to 45 per cent. less of mydriatic alkaloids in the powdered extract of the leaves, 11½ per cent. less in the fluid extract of the root, 17 per cent. more in the tincture of the leaves, and 47½ per cent. in the fluid extract of the leaves than was required by the *United States Pharmacopoeia*. Powdered nux vomica was found to be comparatively worthless, but in the tincture and fluid extract was revealed an excess of strychnine above the required standard of 19 and 17 per cent. respectively. In the tincture of opium was found of morphine 7 to 13 per cent. more than the accepted standard of composition.

In $\frac{1}{100}$ grain tablet triturate of nitroglycerine was discovered only $\frac{1}{1000}$ grain of the drug. It was not difficult to foresee how the failure to secure proper response from the use of these or other tablets of uncertain strength that the substitution therefor of a fresh solution of the drug might result unfortunately, especially if the dose of the fresh preparation were of the same amount as was that of the tablet last given. He had in mind an instance of this kind in which the use of a fresh solution of strychnine caused a fatal result.

It further appeared that of the first sixty-one samples of drugs examined by the Health Department, all "articles of exceptional importance, most of them potent poisons, and all represented by definite chemical standards in the *Pharmacopoeia*," only about 28 per cent. was considered good, and 16 per cent. was so bad as to justify legal action. It was proper to say that the majority of the manufacturers, recognizing the awkward position in which they were placed, with a spirit of yielding opposition, complied with the reformatory demands of the Health Department. This list of producers was small in numbers compared with those engaged in similar business in the United States, and, no doubt, presented as favourable picture of this class of the drug evil as could be drawn. Moreover, the idealized savoury products of pharmacy with which the market was cloyed were often quite as fickle in their nature and virtues as was a certain ancient queen of the Nile. Discreditable business thrift supplemented by co-operative professional contentment and convenient indifference, patronized by confiding and credulous people, yielded princely returns for the diminutive cash and equivocal integrity invested in it. Very many of those engaged in the pharmaceutical trade were as sincere and trustworthy in their business affairs as the best of those in other undertakings. Therefore, the old and revered principle of common justice, while emphasizing the fact that every person should be regarded as being honest until the contrary was proven, should be kept in mind and action. In this recital he could not overcome the belief that they themselves contributed a major share to the inception and success of many medicinal ventures by their indifference or ignorance relating to savoury prescribing, and also by their thoughtless employment of proprietary medicines. Here was a chance for medical teachers to instil proper notions regarding consistent ethical and therapeutic refinements. The President went on to urge the careful scientific consideration of the therapeutic value of the

abundant springs of America. A scientific co-operation with those who were in charge of certain baths possessed of traditional specific value might readily guide the way to improved conditions of significant importance for all those who sought relief.

(*To be continued.*)

LITERARY NOTES.

THE Oxford University Press is making a heavy bid for a foremost place among medical publishers, but its most important announcement is that of Osler's *System of Medicine* in seven volumes. The prospectus states that the work is written by "eminent authorities in Great Britain, the United States, and the Continent"; but in justice it should be said that the lion's share of the work has been undertaken by the country which holds the second place in the list, for out of 116 contributors whose names are given only 16 are from Great Britain, 11 from other countries, and 89 from the United States of America! As the prospectus is headed "The Oxford Medical Publications," it is right to make it clear that the work in question is mainly American, as several Canadian writers are included in the 11 from "other countries."

Dr. Weir Mitchell, who has won considerable fame as a novelist, is said to be engaged in writing a story of life in Philadelphia, to be entitled *The Red City*.

The forthcoming issue of the *Journal of Tuberculosis* will be a special number dealing with the tuberculosis problem as it concerns child life. It will contain articles by representative British, American, and German experts.

Apropos of a paragraph entitled "Wigs and Skulls," which appeared in the BRITISH MEDICAL JOURNAL of April 13th, Dr. Charles J. Egan, of King Williamstown, South Africa, has kindly sent us the following extract from Herodotus. The translation, which is by Henry Cary, M.A., is included in Lord Avebury's list of the hundred best books. The passage occurs in Book III (Thalia):

> Here I saw a very surprizing fact, which the people of the country informed me of. For as the bones of those who were killed in the battle lie scattered about separately (for the bones of the Persians lay apart in one place, as they did at first, and those of the Egyptians in another) the skulls of the Persians were so weak that if you should hit them only with a single pebble, you would break a hole in them; whereas those of the Egyptians are so hard that you could scarcely fracture them by striking them with a stone. The cause of this, they told me, is as follows, and I readily assented, that the Egyptians begin from childhood, and shave their heads, and the bone is thickened by exposure to the sun; from the same cause also they are less subject to baldness, for one sees fewer persons bald in Egypt than in any other countries. This then is the cause of their having such strong skulls; and the reason why the Persians have weak skulls is this: they shade them from the first, wearing tiaras for hats. Now I myself saw that such was the case; and I also observed the same thing at Papremis with respect to those who were slain with Archaemenes, son of Darius, by Inarus the Libyan.

If at the present day little attention is given to saints' days, it can scarcely be said that other anniversaries are allowed to pass unhonoured, or at least unsung. Almost every day we are reminded of the centenary, bicentenary, tercentenary, or what not, of the birth or death of some famous man. The other day the University of Upsala was celebrating with memorial rites the 200th anniversary of the birth of the famous botanist Linnaeus. It may not be unfitting, therefore, to recall that June 3rd was the 250th anniversary of the death of William Harvey. He died at Roehampton under the roof of his brother Eliab. Aubrey says (we quote from Mr. D'Arcy Power's life of him, which is one of the "Masters of Medicine Series") that on the morning of his death, about 10 o'clock, he went to speak and found that he had the dead palsy in his tongue; then he saw what was to become of him. He knew there were then no hopes of his recovery, so presently he sends for his young nephews to come up to him, to whom he gives one the minute watch with which he had made his experiments, to another his signet ring, and to another some other remembrance. He then made signs (for being seized with the dead palsy in his tongue he could not speak) to Sambroke, his apothecary in Blackfriars, to let him blood in the tongue, which did him little or no good, and so ended his days, dying in the evening of the day on which he was stricken, the palsy giving him an easy passport. It would appear from this account that Harvey died of a cerebral haemorrhage from vessels long injured by gout and situated rather at the base or internal parts of the brain than in the frontal lobes. Most probably the left Sylvian artery gave way, leading at first to a slight extravasation of blood, which rapidly increased in quantity until it overwhelmed his brain. The copy of the death mask in the church at Hempstead shows the left eye more widely open than the right, whilst the furrows on the right side of the face are much more marked than those on the left side. Harvey's immortal small quarto entitled *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus* was issued from the press by William Fitzer, of Frankfurt, in 1621. According to Mr. D'Arcy Power, the place of publication was chosen by Harvey because the annual book fair held in Frankfort enabled a knowledge of his work to be more rapidly spread than if it had been issued in England. The book contains the matured expression of the doctrine taught by Harvey in the Lumleian visceral lecture delivered in 1616.

One of the most famous—or, rather, infamous—quacks whose names are preserved in literature was James Graham, who in the eighteenth century attracted the "smart set" of the time to his Temple of Health, where he delivered lectures on love, the character of which may be imagined; these were illustrated by a display of "living statuary" in the person of Emma Lyon, afterwards Lady Hamilton, whose name is so unhappily linked with the glorious memory of Nelson. Graham treated the victims whom he lured to his net with "balsamic" and "aetherial" medicines, made them sit on a "magnetic throne," plunged them into "electric" baths and mud baths, and offered the barren and the impotent the use of a "celestial bed" for a fee of £50. He was a quack of the most shameless kind, but there was an element of madness in him which in his later days assumed a religious character. Among his patients was Walter Scott, whose parents placed him under Graham's care in the hope that his lameness might be cured. Lockhart, in his life of Scott, quotes a Mr. Irving, who remembered having often assisted in applying the electrical apparatus. There is an allusion to these experiments in Scott's autobiographical fragment, but Lockhart quotes a fuller notice which he found on the margin of Scott's copy of the *Guide to Health, Beauty, Riches, and Longevity*, as Captain Grose called an amusing collection of quack advertisements. It is worth quoting:

> The celebrated Dr. Graham was an empiric of some genius and great assurance. In fact, he had a dash of madness in his composition. He had a fine electrical apparatus, and used it with skill. I myself, amongst others, was subjected to a course of electricity under his charge. I remember seeing the old Earl of Hopetoun seated in a large armchair and hung round with a collar and belt of magnets, like an Indian chief. After this, growing quite wild, Graham set up his *Temple of Health* and lectured on *the Celestial Bed*. He attempted a course of these lectures at Edinburgh, and as the magistrates refused to let him do so he libelled them in a series of advertisements, the flights of which were infinitely more absurd and exalted than those which Grose has collected. In one tirade (long in my possession) he declared that "he looked down upon them" (the magistrates) "as the sun in his meridian glory looks down on the poor, feeble, stinking glimmer of an expiring farthing candle, or as G— himself, in the plenitude of his omnipotence, may regard the insolent bouncings of a few refractory maggots in a rotten cheese." Graham was a good-looking man; he used to come to the Greyfriars' Church in a suit of white and silver, with a chapeaubras, and his hair marvellously dressed in a sort of double toupee, which divided upon his head like the two tops of Parnassus. Mrs. Macaulay, the historianess, married his brother. Lady Hamilton is said to have first enacted his Goddess of Health, being at time a *fille de joie* of great celebrity. The Temple of Health dwindled into a sort of obscene *hell*, or gambling house. In a quarrel which took place there, a poor young man was run into the bowels with a red-hot poker, of which injury he died. The mob vented their fury on the house, and the magistrates, somewhat of the latest, shut up the exhibition. A quantity of glass and crystal trumpery, the remains of the splendid apparatus, was sold on the South Bridge for next to nothing. Graham's next receipt was the *earth bath*, with which he wrought some cures, but that also failing, he was, I believe, literally starved to death.

Graham's earth bath was also tried upon Scott, but without success.

EHRLICH'S AMBOCEPTOR THEORY.

PROFESSOR PAUL EHRLICH, who delivered the first of the Harben Lectures of the Royal Institute of Public Health on June 5th, dealt with experimental researches on specific therapeutics, and described his amboceptor theory in the following terms:

As a matter of fact, from all sides proofs of the existence of the direct relationship of the amboceptor and the complement have been advanced, and I think that the great majority of my colleagues to-day accept my point of view, which is known as that of the amboceptor theory. It is true, as I have insisted from the beginning, that the distributive relation of the complement in the presence of the amboceptor is not that of maximum chemical affinity; on the contrary, there is as a rule an exceedingly loose relationship, which perhaps corresponds to a reversible reaction. To show that this relation is purposeful we need only the following proof: Amboceptors are already present in large quantity and of various kinds in the blood serum of normal animals. What, then, would happen if the entire mass of normal amboceptors reacted in an active manner with the complement? Obviously the entire mass of complement would be anchored by the complementophile groups of the amboceptors, and there would be no free complement present in the living body. The grave results of such a state of affairs must be evident; as soon as the necessity for the action of complements with a special kind of amboceptor arose, there would be no complement available, all having already been used up for the action of indifferent amboceptors. It is thus owing to the fact that the complement is free or only loosely united to the amboceptors in the circulation, that at a given moment it is ready for use. The maximum stimulus to action is rendered possible by the anchoring of the amboceptor to the erythrocyte, the avidity of the latter towards the complement being thus increased. This increase of avidity is due to the chemical affinity of the complementophile group for the complement being carried to its maximum, and represents the gist of our knowledge of the action of the amboceptor. The amboceptor, therefore, exercises the important function of bringing about a specific modification of those conditions existing in the organism which determine the distribution of complements, and which otherwise are not very evident. It causes the complements to become monotropic by its union with the given substance. The complements are thus localized by amboceptors which have previously become united to the substance, cell or otherwise. At the same time, this action represents a purposive saving; if the complement were already a constituent part of the amboceptor, then, as the complement is easily destroyed, there would often be no action. The purposive saving is evident from two facts; first, that only in case of need does the amboceptor become capable of combining with the complement; and, secondly, that complementoids which, by reason of having lost the xymotoxic group, become incapable of action, have at the same time lost some of their avidity for the amboceptor. By this change in the distributive quality of the complement associated with the formation of complementoid, the sphere of action of the amboceptor is considerably extended.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

INDIAN MEDICAL SERVICE.

THE annual dinner of the Indian Medical Service was held at the New Gaiety Restaurant on June 13th, when the chair was taken by Surgeon-General Sir Benjamin Franklin, K.C.I.E., and the guests were Sir Thomas Barlow and the Editors of the BRITISH MEDICAL JOURNAL and the *Lancet*. There were no speeches, but after the health of the King had been drunk the officers present resolved, on the suggestion of the Chairman, to send a telegram of condolence to Lady Fayrer on the death of her husband, Sir Joseph Fayrer, K.C.S.I. The officers present were:

Surgeon-Generals.—A. M. Branfoot, C.I.E., W. B. Beatson, C. W. R. Hay, L. D. Spencer.

Colonels.—C. W. Carr-Calthrop, W. E. Cates, W. H. Henderson, D. E. Hughes, C. H. Joubert de la Ferté, W. A. S. Wynne.

Lieutenant-Colonels.—A. Alcock, E. Bovill, S. H. Dantra, P. J. Freyer, W. Gray, E. R. Johnson, G. F. A. Harris, H. Herbert, Sir R. Havelock Charles, K.C.V.O., D. P. Macdonald, T. H. Pope, C. L. Swaine, W. H. Thornhill, J. F. Tuohy, H. R. Woolbert.

Majors.—G. T. Birdwood, W. H. Caldwell, J. Davidson, A. L. Duke, T. W. A. Fullerton, T. A. Granger, P. B. Haig, S. Hassan, J. B. Jameson, C. A. Johnston, H. G. Melville, W. Molesworth, A. H. Nott, P. W. O'Gorman, L. Rogers, P. C. H. Strickland, R. G. Turner.

Captains.—H. Ainsworth, A. Fenton, J. K. S. Fleming, G. Harkness, J. H. Horton, R. W. Knox, J. C. G. Kunhardt, Hayward Pinch, F. C. Rogers, R. Steen, E. O. Thurston, J. N. Walker, E. L. Ward, J. W. Watson, W. S. Willmore.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

INSPECTION IN HYDE PARK.

THE annual inspection of the London Companies of the Royal Army Medical Corps (Volunteers), and of the 1st, 2nd, 3rd, and 4th London Volunteer Infantry Brigade Bearer Companies, took place on the Guards' Ground in Hyde Park on June 15th; additional importance was lent to the proceedings by the fact that Mr. Haldane, Minister of War, who was accompanied by Lieutenant-Colonel W. G. MacPherson, C.M.G., R.A.M.C., Deputy-Assistant-Director-General, was present throughout. The inspecting officer was Colonel A. T. Sloggett, C.M.G., Principal Medical Officer of the London District, who was attended by Majors Wade Brown and H. S. Thurston, R.A.M.C. There was also present, Colonel J. Cantlie, Honorary Colonel of the corps, and its founder. The men, drawn up in line, and their equipment having been duly inspected, a demonstration of their abilities at work followed; the idea underlying the operations being that a section of a field ambulance consisting of a bearer division and a tent division, with three ambulance wagons, three general service wagons, and a water cart, had just reached the neighbourhood of a battlefield. In actual warfare, the tents, of course, would have been pitched in the rear of the fighting line at a distance depending on the nature of the ground, and the bearers would necessarily have had to labour over a corresponding length of country, but on this occasion the wounded were distributed at a distance of some 200 yards. The word being given, the tent division with its general service wagon made for the site chosen for the field ambulance, and at once began to get things into order. The ground was marked, tents pitched, fires lighted, the Red Cross flag flown, the hospital office opened, stores served out, beds (in this form of hospital consisting of blankets and waterproof ground sheets) laid, the dispensary equipped, the operation tent prepared, and instruments sterilized; the operating surgeons and their assistants finally getting into white overalls and standing ready for the first case. The whole of this work, sufficient to provide for the reception of 50 cases, was done very smartly, the camp being laid out and the tents firmly erected in their proper positions within fifteen minutes of the arrival of the men on the ground, while the rest of the preparations were quite complete by the time, some ten minutes later, that the wounded, who had been collected and dressed by means of the "First Field Dressing" by the bearer division, began to reach the tents. The work of bringing in the wounded was made all the more interesting by the fact that all known ways of transporting men on hand stretchers, in cacolets, in ambulances, on cycle-borne stretchers, carried by individuals and supported on horses—were employed, and examination of the men thus brought in showed that the first-aid dressings for the supposed injuries had as a rule been skilfully applied. On the conclusion of the proceedings the men were played past the saluting point by the band of the corps. In spite of the vagaries of the weather a large concourse of people attended to witness the operations; these were throughout of interest, and reflected great credit upon Colonel Valentine Matthews, V.D., his adjutant, Captain Langford Lloyd, D.S.O., R.A.M.C., and the other officers concerned, of whom the following were present on parade: Major J. Harper, Second in Command London Companies R.A.M.C. (Vols.), Captains J. R. Whait, W. E. Miles, W. S. Sharpe, E. B. Waggett, E. W. Harrington, E. A. Snape, Lieutenants H. C. Phillips and H. A. T. Fairbank, Captain and Quartermaster J. W. Bennett, V.D., Lieutenants and Quartermasters H. E. L. Purcell and H. C. Jones. The Bearer Company officers present were Brigade-Surgeon Lieutenant-Colonel J. N. Brown, Senior Medical Officer, 1st London Volunteer Infantry Brigade, Captain E. C. Montgomery-Smith, Major E. Lloyd Williams, Surgeon-Colonel W. R. Smith, V.D., Senior Medical Officer 3rd London Volunteer Infantry Brigade, Captain N. C. Trustall, Lieutenant J. Forbes, and Captain W. G. MacLee. With a very few exceptions all these officers are medical men in practice within the Metropolitan area. Of the non-commissioned officers and men, a large number are medical students. Major Richardson, the trainer of war dogs who is attached to the London Companies R.A.M.C. (Vols.), was also present with two ambulance dogs to assist the bearer division in the search for casualties.

THE estate left by the late Sir Joseph Fayrer is valued at £16,732 gross.

MEDICAL NEWS.

MR. MCADAM ECCLES, M.S., F.R.C.S., will deliver the next Lees and Raper Memorial Lecture.

THE new buildings of the City of London Lying-in Hospital will be opened by Princess Christian on Monday, July 1st, at 3 p.m.

DR. D. LIVINGSTONE DAVIES, of Criccieth, has, on the recommendation of the Lord Lieutenant, been appointed to the Commission of the Peace for Carnarvonshire.

DR. FRANK BILLINGS, Dean of the Rush Medical College, University of Chicago, has been elected President of the National Association for the Study and Prevention of Tuberculosis.

THE Lord Lieutenant of Ireland, on the recommendation of His Grace the Duke of Devonshire, has been pleased to appoint D. F. Walker, M.D., of Springfield, Portlaw, to be a magistrate for the county of Waterford.

MRS. MARY SCHARLIEB, M.D., M.S., will open a discussion on "Alcohol and the Children of the Nation" at the meeting of the Society for the Study of Inebriety, on July 9th, at 4 p.m., in the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, W.

THE papers moved for by Sir William Collins in the House of Commons on April 12th containing "the results of an inquiry into the origin of certain deaths from tetanus in the Punjab, consequent on the employment of Dr. Haffkine's prophylactic against plague," have been issued as a Blue Book, price 1s.

THE first meeting of the Society of Tropical Medicine and Hygiene will be held at 20, Hanover Square, W., on Wednesday next, at 8.30 p.m. The President, Sir Patrick Manson, will deliver an address, and Dr. Daniels will give a lantern demonstration. Medical men interested in tropical medicine are invited to be present.

THE Committee of University College Hospital, in making an appeal to meet the deficit in the annual income, states that during 1906 the average number of occupied beds was 279, as compared with 212.5 in 1905; at the same time the cost of an occupied bed had been reduced from £99 14s. 8½d. in 1905 to £87 0s. 7¾d. in 1906.

THE objects of the Income Tax Reduction League, formed on June 11th, are the organization of income-tax payers, the reduction of the rate, and the taxation of trading concerns upon the distributed profit only. Lord Avebury is the President and the Hon. Herbert Gibbs Vice-President. Among the members of the Society is Mr. W. Bruce Clarke, M.B., F.R.C.S.; Mr. T. Hallett Fry, 2, Cloisters, Temple, E.C., is acting as Honorary Treasurer.

AN Association for the Advancement of Science on the lines of those of England, France, and America, has recently been founded in Italy. It will hold its first meeting at Parma in September. The Association is in reality a revival of the Society of Italian Men of Science which held its first meeting at Pisa in 1839 and its last in 1870. The old society, however, had come to be used more as a means of political propaganda than for the furtherance of science; hence the discontinuance of its meetings when the unification of Italy was achieved.

THE Government of Queensland and certain other of the States of the Commonwealth of Australia have recommenced the practice of providing assisted or entirely free passages to the Colonies to applicants of good physique, character, and health, and guaranteeing them work at ordinary colonial rates on arrival. A large number of emigrants left England at the beginning of June on these terms, travelling by the *Omrah*, a vessel belonging to the Orient Royal Mail Line, who are the official contractors in connexion with the emigration service.

ON June 11th, at Grosvenor House, the Earl of Derby presided at a meeting of the National Health Society, at which Princess Christian distributed prizes and certificates won by ladies who attended the courses of lectures and examinations held by the Society. Of the old students, five have in the course of the past year been appointed sanitary inspectors, six health visitors, one an inspector of midwives, another an inspector under the Infants' Life Protection Act, and two others respectively a female relieving officer and a lady almoner at one of the great London hospitals. The offices of the Society are at 53, Berners Street, Oxford Street, W.

THE Livingstone College for Missionaries held its annual festival, known as Commemoration Day, on June 5th. In giving an account of the position of the college, Dr. C. F. Harford, the Principal, claimed that ethically it deserved support, because it was right that missionaries despatched to dangerous and isolated stations should be given such medical instruction as would enable them to care for their own health and in somewise relieve suffering among the natives around them. Educationally, the scientific training given broadened the mental outlook of the missionaries, and enabled them to give the people amongst whom they worked simple instruction in the laws of health, based on real knowledge. The Year Book of the college, which has just been published, contains extracts from large numbers of letters from missionaries who are old students of the college. Many of these throw an interesting light on matters of a medical character in uncivilized lands, and prove beyond doubt that calls are made upon missionaries for assistance in suffering to which they can scarcely decline to respond.

THE annual meeting of the Colonial Nursing Association held on June 14th brought together a large gathering, which included both Lord Ampthill and Mr. Austen Chamberlain. The Association, which owes its foundation largely to the influence of Mr. Joseph Chamberlain, when Secretary of State for the Colonies, has now been some twelve years in existence, but still only has on its roll 167 nurses, and of these 121 are employed by some one or other Government. Enjoying a species of semi-official recognition, it might be expected to play a much larger part, and doubtless it would if more of the many persons to whom the well-being of workers in the smaller colonies is a matter of direct interest came to its assistance. In the majority of the small scattered colonies in tropical and semi-tropical countries it is, as Mr. Austen Chamberlain remarked, scarcely possible for the white residents to keep up a supply of nurses without external assistance, while, as he also added, it is undoubtedly true that if medical men require skilled assistance at home in the treatment of their patients they require it still more in distant lands where all difficulties connected with the effective treatment of disease are gravely increased. Sir G. Taubman-Goldie, who also addressed the meeting, laid much stress upon the latter consideration, adding that during the time that he was in Nigeria half the deaths among the men under him were due, he believed, to lack of proper nursing assistance, and that a vast saving of life could be effected were it provided. He regarded the matter as of imperial importance, because a heavy death-rate inevitably increased the difficulty of keeping up a supply in the Crown Colonies of suitable officials with adequate local experience. The same considerations apply to those at home who are interested in the success of commercial enterprises in the less healthy colonies.

CHELSEA CLINICAL SOCIETY.—The annual dinner of the Chelsea Clinical Society was held at the Criterion Restaurant, Piccadilly Circus, London, on June 6th, with the President of the Society, Dr. J. D. E. Mortimer, in the chair. The great success of the dinner must be ascribed to the admirable brevity of the toast list and speeches, to the crayon drawings executed with marvellous quickness by Surgeon Henry Hunt, R.N., to the singing of Mr. Julien Henry, and the excellent arrangements made for the comfort of all concerned by Dr. Austin Cooper on behalf of the Dinner Committee. After the usual loyal toasts the Chairman proposed "The Chelsea Clinical Society," pointing out its advantages to medical practitioners, and showing how it promoted good fellowship. After Dr. J. Barry Ball had responded to this toast, Dr. Vincent Dickinson gave "The Visitors and Kindred Societies," which was replied to by Dr. L. Mark. The proceedings terminated with Dr. Herbert Owen proposing "The President and Officers of the Society," which was acknowledged by Dr. Mortimer and Dr. Cooper.

PELLAGRA IN ROUMANIA.—The staple crop of Roumania, or at least the staple food of her peasantry, is maize, and last year's harvest is stated in the British Consular report to have been the best yet recorded, reaching a total of 126,000,000 bushels. Whether the grain was harvested in good condition does not appear, but it seems that pellagra, always more or less prevalent in this country, has lately considerably increased. In 1901 the number of cases was recorded as being 33,645, but in 1905 this had risen to 54,689, and now it is reported in the papers, though not officially, that last year the cases exceeded 100,000 in number. No statistics on this head are given in the report, and the fact that in the tables of mortality for Bucharest only 3 deaths are ascribed to this disease proves nothing, as the malady is one especially affecting the poorer country districts. Indirectly it may account for the very high infant mortality, for nearly 22 per cent. of the children born die before they are a year old, and in some districts in Northern Moldavia half the deaths registered are those of children under 5; indeed, it is estimated that 60,000 children under this age die every year in the rural communes.

British Medical Journal.

SATURDAY, JUNE 22ND, 1907.

HEALING SILENCE.

ONE of the worst complications of pulmonary phthisis is laryngeal tuberculosis. How frequent it is may be estimated from the fact recorded in the paper by Drs. Bardswell and Adams, published in the BRITISH MEDICAL JOURNAL of June 8th, that of the first 150 admissions to the King Edward VII Sanatorium 33 patients, or 22 per cent. of the whole, had some abnormal condition of the larynx. On the other hand, laryngeal tuberculosis, as an isolated condition, is extremely rare. In cases where there is any reason to suspect a tendency to phthisis, however, it is important that the larynx should be examined, as not infrequently handwriting on the wall can be seen there which, if rightly interpreted, may give timely warning of impending danger. It is now matter of common knowledge that localized pallor of the larynx, or congestion of a single cord without obvious cause, may be premonitory appearances of consumption. Yet it is not so many years ago since a warning given to a patient or his friends of the possible ominous significance of such appearances, was denounced, even by pathologists of renown, as "specialist quackery."

Laryngeal tuberculosis in its more advanced manifestation is one of the most painful of diseases, and the patient's condition in former days was all the more desperate since he was unable to take the nourishment which is an essential factor in the cure. Such cases used to be among the most painful with which the practitioner had to deal. The physician would, of course, on general principles recommend a generous diet, but he was apt to overlook the merely "local" point that the unhappy patient could not follow the advice because of pain and difficulty in swallowing. The introduction of cocaine brought about a great improvement in the situation. Now the difficulty has virtually been overcome by the use of local anaesthetics, of which the effect is at once more lasting and less likely to be attended by secondary ill effects. Moreover, the resources of medical art in dealing with laryngeal tuberculosis have been greatly increased. Local treatment by scraping the diseased parts, followed by the application of lactic acid and dusting the raw surface with orthoform or anaesthesin, generally relieves and sometimes cures the condition.

A most important addition to these measures is the application of the principle of surgical rest to the treatment of the disease. The principle, of course, is that laid down by Hilton in his famous book, and vigorously enforced by Lewis Sayre, who used to say, when demonstrating his method of fixing a diseased spine, that the whole secret of the treatment was "R. L. S. T. Rest." As Dr. Felkin pointed out in a paper which appeared in the JOURNAL of June 15th the principle is as applicable to a tuberculous larynx as to a tuberculous joint. The value of complete vocal rest in the treatment of laryngeal tuberculosis was convincingly shown and strikingly illustrated by Sir Felix Semon in a paper which appeared in the BRITISH MEDICAL JOURNAL of December 8th, 1906. The whole subject was discussed in the broad scientific spirit which characterizes the writings of the distinguished author. He did not contend that mere vocal rest is an infallible remedy in laryngeal tuberculosis, and he frankly admitted both the limitations of the method and the difficulties of carrying it fully into effect. So great, indeed, were those difficulties under the ordinary conditions of life, that he said he did not remember that in former years he had ever seen a really convincing proof of the usefulness of complete and lasting silence in laryngeal tuberculosis; and though his belief in the method remained unshaken, he had, in despair of securing full obedience to his injunction of absolute silence, confined himself to recommending patients to spare their vocal organs as much as possible.

The advent of the sanatorium has brought an immense change in this as in other points of the treatment of tuberculosis. Not only are patients becoming more and more alive to the fact that they themselves can give powerful help in the cure of the disease, but the sanatorium provides conditions under which the teachings of medical science can be effectively applied. For the enforcement of vocal rest, of course, not only the co-operation of the patient himself, but that of his fellow patients and of all around him must be secured. The proof that this is possible may be found in the papers of Sir Felix Semon, Drs. Bardswell and Adams, and Dr. Felkin. Considerable strength of will is needed on the part of the patient to whom the purpose of the treatment must be explained, and great tact and firmness are necessary on the part of the physician. Drs. Bardswell and Adams rightly point out that it is not well to keep laryngeal cases under the silent system apart from the social life and amusements of the sanatorium. The companions of their walks, and especially their neighbours at table, must be judiciously chosen. The patient must refrain from speech with more than the strictness of a Trappist monk. Even whispering must be strictly forbidden; and this will have the further advantage that it will go far to make impossible the flirtation which is one of the dangers of the sanatorium. Intelligent patients will readily submit to communicate with those about them by writing or by signs.

How remarkable is the healing action of silence in laryngeal tuberculosis is shown by the results reported in the papers to which reference has been made. Sir Felix Semon's note of warning against exaggerated expectations should not, however, go unheeded. His ripe experience gives a special force to his conclusion that the method is neither absolutely certain nor indicated in all cases of laryngeal tuberculosis, nor is its exclusive use sufficient in many cases in which it may be advantageously employed. Drs. Bardswell and Adams record the case of a patient whose lung disease has been well arrested, and whose general health has been perfectly restored, but whose laryngeal disease has at the same time definitely progressed, notwithstanding the most rigid observation of the rule of silence. In cases of any severity, vocal rest cannot supersede local treatment, but it is always a most valuable adjunct. The average time during which what is called in monasteries the *silentium magnum* must be maintained is five months.

The results of the treatment of laryngeal tuberculosis must be placed wholly to the credit of the sanatoriums

We congratulate the authors whose papers we have cited on the fruits of their work, and the profession on the addition to its therapeutic arsenal of a method of treating a troublesome disease which promises to be of the highest value. In a special sense we desire to offer our respectful congratulations to His Majesty the King on the good work that is being done by the sanatorium which bears his name. The institution is already, we understand, full to the limits of its capacity, a fact which proves that the advantages which it offers are appreciated by the class for whom it is intended, and which at the same time affords ground for the hope that from it will come in the fullness of time a great increase of our knowledge of tuberculosis and the means of dealing with that terrible scourge.

SMALL HOLDINGS AND NATIONAL PHYSIQUE.

MR. HARCOURT, in introducing the Small Holdings Bill on May 27th, made certain observations on the effect he hoped its provisions would have on the physical development and health of the people, which it might have been supposed would have met with general acceptance. This was, at any rate, his expectation, for he said that the provision of small holdings and allotments had been for many years an aspiration common to both parties in the State, and he assumed that all would agree that the depopulation of rural districts had been bad for the country, and overpopulation bad for the towns. The physical degeneration which accompanied and was caused by the urban poverty was, he truly said, sadly patent, not only in Blue Books, but in every experience of daily life; and while he did not believe that an Act of Parliament would turn back to the villages any great proportion of those who had acquired the taste for the excitement of towns, if legislation would help to fix upon the land those now living on it or near it, and could provide a career for those about to be born on the land, then the experiment was well worth trying.

During the debate on the second reading Sir Walter Foster referred more at length to this aspect of the question, observing that the depopulation of the rural districts was certainly followed by physical deterioration of the race due to crowding of people into the towns, and the lessened reinforcements of town population by an influx of healthy and vigorous country-born men and women. Mr. Balfour, who spoke a little later, made a strangely vehement attack upon this line of argument, mainly, as it seemed, on the ground that its acceptance was equivalent to saying that the task of having a healthy urban population must be abandoned because town life was an inevitable cause of hereditary disease. Mr. Balfour's speech was perhaps slightly ironical, because he went on to say that if this doctrine were true it would be the duty of the Legislature to check the growth of big towns and artificially to stimulate the population of the country by laws deliberately intended to be protective and deliberately intended to keep the population there at whatever cost to the community at large. While repudiating this suggestion, he criticized rather strongly the attitude of those who made an appeal of this nature with regard to the physique of the race, on the ground that it could not be proved that urban life was inconsistent with the maintenance of good physique. Mr. Balfour contended that the size of existing holdings depended not on the caprice of the landlord but on economic conditions, and passed very lightly over the obvious objection that a change in economic conditions rendering desirable a change in the size of holdings may have taken place.

Nobody knows better than Mr. Balfour that all questions in sociology have their biological side. When the physical development of a people is in question the biological side of the problem is of first-rate importance. The point is not so much whether under ideal conditions, in a garden city where there was no poverty, urban life might not be compatible with normal physical development of children there born and there dwelling, but whether under conditions now existing and likely long to persist in large towns the children of the country labourer attracted from farm to street are not placed under circumstances inimical to healthy growth. Mr. Balfour probably spoke on the spur of the moment, and the tone of his remarks gave the impression that he had not fully considered the matter in all its aspects. When he asked whether it was to be assumed that urban life was inconsistent with the maintenance of good national physique, he apparently forgot that urban dwellers are not all of the same class and do not live under the same conditions. There is evidence that in the case of some of them, who have adopted the principle in respect of their children that the town is a very good place to live out of for nine or ten months in the year, urban life is not inconsistent with good physical development; but if we look to the results on the physique of children of the conditions existing in the poorer quarters of towns the evidence is all the other way, whether we have regard to the death-rate or to anthropometrical statistics. The report of the Committee on Physical Deterioration contains many striking facts and opinions, but we need only refer to some recent reports analysed this year in our columns. For example, Dr. A. S. Arkle, from a comparison of children attending different classes of schools in Liverpool, arrived at the conclusion that the difference of physique between the children in the secondary school and in the poorer Council schools had reached alarming proportions, and appeared to increase as the children grew older. The elaborate inquiry made by the Edinburgh Charity Organization Society showed that children living under the worst housing conditions compared in respect of height and weight unfavourably with those living under even slightly better conditions. The statistics gathered in London under Dr. Kerr's direction for the Education Committee point in the same direction.

As has again and again been pointed out in these columns, in the report of the Committee on Physical Deterioration, and indeed by all those who have studied the subject seriously, the main issue is not whether inferior physique is inherited by town children, but whether it is produced by urban conditions of overcrowding and squalor. The use of the term "hereditary disease" in this connexion is an error; it is not a question of the inheritance of disease, but of imperfect physical development of children born perhaps quite healthy but subjected from their earliest days to deleterious influences in crowded towns.

If the Legislature, by continuing and extending a line of policy approved in the past by both political parties, can encourage a more intensive cultivation of the soil, and thereby provide greater opportunities for the country born to earn a living in the country, it is surely under an obligation to act. Those who have given special attention to the matter believe that small holdings if intelligently cultivated, with due regard to peculiarities of climate and soil and market conditions, can be made profitable under existing

fiscal conditions if combined with a good system of co-operative distribution. It seems a pity, therefore, to trot out the bogey of protection.

THE KING EDWARD'S HOSPITAL FUND FOR LONDON.

DR. RUTHERFORD, in giving notice to amend the Bill for the incorporation of the King Edward's Hospital Fund for London in order to introduce the representative principle into the constitution of its council, will have the support of the whole medical profession. Soon after the Bill was introduced the British Medical Association made representations in this direction, but the Bill was allowed to pass through the House of Lords with slight amendment, and has come under criticism in the House of Commons only at the last moment. The text was printed in the SUPPLEMENT to the first number of the BRITISH MEDICAL JOURNAL for this year, and at the same time articles were published explaining fully the scope and effect of the Bill, and pointing out the objections which might legitimately be taken to its terms. By Clause 5 of the Bill "the direction, control, and "management of the affairs and property of the "corporation and the application of all moneys, "property, and income of the corporation" are to be vested in the president, who is to act on the advice of a general council appointed by himself. The president mentioned in the Bill was the Prince of Wales, who was to hold office during the pleasure of the Sovereign, future presidents being appointed by, and holding office during the pleasure of, the Sovereign. The Bill during its passage through the House of Lords was amended in this respect, it being provided that future presidents should be appointed on the recommendation of the Lord Chancellor, the Prime Minister, and the Governor of the Bank of England, and should hold office during the pleasure of the Sovereign.

The Council of the British Medical Association at its meeting on January 23rd adopted a resolution expressing disapproval of the Bill on account of the form of management proposed, attention being specially directed to the absence of any provisions for the representation of the medical profession or of subscribers on the council. It was resolved to communicate these opinions to the Prince of Wales, and accordingly at the end of February a letter signed by the chairmen of Representative Meetings, of the Council, and of the Hospitals Committee was addressed to the private secretary of His Royal Highness. In this letter it was submitted that the majority of the members of the council of the Fund ought to be persons elected to represent bodies interested in the well being of hospitals, and it was urged on behalf of the medical profession that there should be on the council medical members elected by bodies representative of their fellow practitioners. The important question of the abuse of hospitals, it was added, illustrated the need for including in the councils of such bodies practitioners who, even if not directly engaged in hospital administration, were able from their experience to throw light upon the external effects of such administration upon the general community. The reply received was to the effect that the Prince felt that to make the council largely elective and to place the administration of the Fund in the hands of the president and council, would be to deprive it of the character given to it by His Majesty the founder, and would not be in consonance with the feelings of some of the principal benefactors of the Fund. It was added that the Fund was a trust originally undertaken by His Majesty on behalf of those members of the public who responded to the appeal made in 1897 for funds to found a memorial of the late Queen's Diamond Jubilee for the benefit of the London hospitals.

When the Bill reached the House of Commons it came before the Select Committee on Unopposed Bills, and one of the members of that Committee, Mr. Caldwell, objected to the management of a fund of this character being left to one man. The chairman and other members of the Committee, while stating that they had no objection to these exceptional powers being enjoyed by the Prince of Wales as present president, expressed doubts as to the wisdom of the same powers being conferred on future presidents. The Committee postponed further consideration of the Bill, and at an adjourned meeting on June 13th it was stated that by a new clause it had been provided that in the event of the office of president becoming vacant, a brother, son or grandson who, in the opinion of the Lord Chancellor, the Prime Minister, and the Governor of the Bank of England, was duly qualified to fill the office, should be recommended to the Sovereign for appointment. Mr. Caldwell again expressed his opinion that the management of such a Fund should be in the hands of a constitutional body, pointing out that wherever there were powers of management there must be responsibility, and that responsibility should rest with persons who could be freely criticized. Mr. Caldwell did not press his view, and, the preamble having been formally approved, the Bill was ordered to be reported for third reading. On Tuesday last, at the eleventh hour, when the order for the consideration of the Bill came before the whole House, objection was taken to its terms, and the Bill was deferred. Dr. Rutherford gave notice that he would move that the Bill should be recommitted to the former Committee, and that it should be an instruction to that Committee to insert clauses to provide that the control and management of the Fund shall be vested in the president and council, and that the council should be constituted on representative lines.

Dr. Rutherford's motion, which is down for June 27th, is, as has been shown, in consonance with the opinion expressed by the British Medical Association, and while recognizing the Prince's scruples and his regard for the wishes of the principal benefactors of the Fund, and while associating ourselves with the opinion expressed by the Chairman and other members of the House of Commons Committee that the interests of all parties are safe in the hands of the present president, we cannot believe that it is wise to stereotype an improvised constitution. The Fund has grown in magnitude and influence beyond all expectation, and it already exercises a powerful influence upon the policy of the hospitals in London. We recognize that hitherto its influence has been mainly, if not wholly, for good; nevertheless we believe that both the efficiency of the Fund and the confidence of the public would be increased if, as Dr. Rutherford's amendment suggests, the principle that the council should be constituted on representative lines were adopted.

THE LEGAL AUTHORITY OF THE GENERAL MEDICAL COUNCIL.

THE case of Hill *v.* Clifford, and two other cases of a similar nature, reported in another column, involved the discussion of an important question as to the legal effect of decisions of the General Medical Council. As the case is under appeal to the House of

Lords, we do not wish to do more than draw attention to the legal principle involved, and to the judgement of the Court of Appeal, consisting of the Master of the Rolls, the President of the Probate Division, and Lord Justice Kennedy.

The material facts may be very briefly stated: Articles of partnership between two dentists contained a clause providing that either might give notice of dissolution if the other was guilty of professional misconduct. At the meeting of the General Medical Council on May 24th, 1906, the Council adjudged one partner to "have been guilty of conduct which is infamous or dis-"graceful in a professional respect," and directed the Registrar to erase his name from the *Dentists' Register*. The other partner, who objected to remaining a partner with one whose name had been erased from the *Register*, gave notice of dissolution. The Court of King's Bench was asked to say whether the notice was valid, and Mr. Justice Warrington, before whom the case was heard, held that the decision of the General Medical Council was not binding on him, inasmuch as it was "*res inter alios acta*." He also held that it was for him to say, upon the evidence before him whether there had been "professional misconduct" within the meaning of the articles. Finding that there was none, he refused to decree dissolution.

The Court of Appeal has taken a different view. The Master of the Rolls said: "I think the order (of the "General Medical Council) is admissible as evidence of "the existence of conduct which was 'infamous or "'disgraceful in a professional respect.' . . . Unless "and until evidence to the contrary is given, the order "suffices to prove that the Cliffords were guilty of "statutory misconduct. No evidence was given by "them to rebut this prima facie evidence. I may add "that I doubt whether it is competent to any court to "review a declaration by the General Medical Council "that an act of a particular kind is 'disgraceful con-"'conduct in a professional respect,' even though it "may be competent to review the decision that a cer-"tain individual has committed an act of that "particular kind. . . . I think it is idle for a man "who, in the language of Section 13 of the Act "of 1878, has been guilty of 'disgraceful conduct "in a professional respect,' to contend that he "has not been guilty of professional misconduct." In the event, his lordship, whose judgement was concurred in by the remainder of the Court, declared that there should be a dissolution of partnership. The effect of this is that the Court of Appeal has declared, in effect, that the decision of the General Medical Council as to what amounts to professional misconduct shall be final; although it may be that where a particular person has been found guilty of such conduct he may endeavour to show in another court that there was not sufficient evidence against him. The legal question before the Court of Appeal, and upon which the final decision of the House of Lords is to be sought, is whether the decision of the General Medical Council amounted to a judgement *in rem*, that is, an adjudication pronounced upon the status of a particular subject matter by a tribunal having competent authority for that purpose, and therefore binding upon other persons. An inquisition in lunacy may be mentioned as a judgement *in rem* which may be referred to in subsequent proceedings between third parties, but the effect of which may be rebutted by evidence. The Court of Appeal would place a decision of the General Medical Council on a disciplinary question on the same footing as the decision of a jury as to whether a man is insane or not.

THE REFERENDUM.

THE report published in the SUPPLEMENT this week of the proceedings of the special meeting of the Central Council of the British Medical Association on June 5th, contains a statement of the matters upon which the Council resolved to take a Referendum under Articles XXII and XXXV of the existing constitution. Under these articles the Council, when it has determined on a Referendum with regard to any resolution of a Representative meeting, must, within four months, refer it, accompanied by such observations as the Council may think desirable, to the consideration of special meetings of all the Divisions convened at the instance of the Council. A resolution thus referred is not valid and binding as a decision of the Association unless and until it is approved by a majority of the aggregate votes given thereon throughout the Association in the said special meetings of the Divisions, and the Divisions are respectively bound to hold meetings accordingly, and to certify to the Council the result of the voting thereat upon the resolution. As will be seen, the points upon which the Council has determined upon a Referendum are practically two, the constitution and mode of election of the Central Council, and the appointment of separate Finance and Journal Standing Committees. With regard to the former point, the principle adopted by the Representative Meeting was that the Council should be elected partly by the Branches and partly by the Representative Meeting, and that the ratio should be Branches 2, Representative Meeting 1. Subsequently the Representative Meeting resolved that the Central Council should not exceed 46 members, 24 elected by the Branches in the United Kingdom grouped for this purpose, not more than 7 elected by the (grouped) Branches not within the United Kingdom, 12 by the Representative Body, and 3 officers, on the active list or retired within the previous five years, nominated by the Central Council to represent the Royal Navy Medical Service, the Army Medical Service, and the Indian Medical Service respectively. As already announced, the shortness of the time now available before the Association meets at Exeter, and the fact that under the Referendum the Colonial as well as the Home Divisions must be consulted, make it impossible that the question of the Charter should be discussed by the Annual Representative Meeting this year.

THE SCIENCE COMMITTEE.

AT the suggestion of the Chairman, Dr. Norman Walker, the last meeting of the Science Committee, which took place on June 15th, was held at Harrogate. This is, we believe, the first occasion on which a Committee of the Association has met elsewhere than in London, such meetings being commonly held at the central offices of the Association. The innovation appears to have been popular, and the attendance of members was good. The Committee had before it the reports of the scholars and recipients of grants last year, which were considered and approved for publication. Subsequently the Committee considered applications for the scholarships and for new and renewed grants, and made a series of recommendations which will be brought before the Council at its next meeting. In the evening an informal dinner took place, at which the members of the Committee had the opportunity of meeting many members of the Harrogate Division of the British Medical Association. The Chairman of the Division, Dr. Mouillot, presided, and after he had given the usual loyal toasts, that of "The Science Committee of the British Medical Association" was proposed by Dr. Gordon Black of Harrogate, who said that it gave the Harrogate members much pleasure to meet the members of the Committee. He gave some account of

the great improvements in the bathing arrangements which had been made in Harrogate within recent years, and went on to say that he thought there was an opportunity for a young man of scientific attainments, who would be prepared to give assistance in laboratory work, which was now in many instances so essential a part in diagnosis and treatment. The toast was acknowledged by Dr. Norman Walker, who expressed his regret that that must be the last occasion on which he would preside over the Science Committee. Sir James Barr, who proposed the toast of "The Harrogate Division of the British Medical Association," referred to Dr. Gordon Black's remarks, and observed that if the assistance of specially trained pathologists was required by general physicians and surgeons they must take care that this assistance was properly remunerated. He also praised the excellence of the arrangements at Harrogate, saying that his habit was to say to a patient, "If you really want a holiday, go "abroad; but if you are ill and want to be treated, go to "Harrogate or some other English spa." The toast was acknowledged by the Chairman, who subsequently proposed the health of the Editor of the British Medical Journal, a compliment which was briefly acknowledged.

THE BRADFORD POLICE SURGEONCIES.

In several articles published recently, the new scheme evolved by the Watch Committee of the Bradford Corporation for police surgeonships in that city has been described. The late police surgeon had held office for over a quarter of a century, a period of great expansion in the population and area of Bradford. Prior to the year 1899 the area was 10,773 acres, but since that time it has been more than doubled, the area of the present city being 22,780 acres, while the population during the period of office of the late police surgeon increased by more than 100,000. It was therefore to be expected that any revised scheme under new conditions would entail some increase in the expenditure of the city in providing for the due discharge of the duties of police surgeons. The Watch Committee, however, acting apparently largely on the advice of the Chief Constable, has produced an elaborate scheme, involving much more work, at a scale of remuneration probably quite £200 a year less than was paid to the late police surgeon. With the general outline of the scheme itself we have no quarrel. Where a city is rapidly extending in area and increasing in population some devolution of duties must be effected. But it is not reasonable to suppose that more work shall be efficiently done for diminished remuneration, and we must record a most emphatic protest against a proposal which seeks to carry out a public improvement at the expense of the medical profession. The Royal Infirmary recently set an example which the Corporation of Bradford might well have followed. The Board of Management being anxious to produce a scheme for the efficient working of its dispensary department, laid the matter before the Bradford Division and asked for its assistance. The financial position of the infirmary was such that it could not pay its district medical officers adequately for the services required of them, but they agreed to accept the sum of £50 per annum each, on the understanding that the payment was only to be considered an honorarium, and that the extra work involved was to be looked on as an additional contribution by the profession to the charitable work done for the poor of the city. The scheme of the Watch Committee promulgated without consultation with the medical profession in Bradford or its representative organizations, proposes that there shall be one chief police surgeon, three divisional surgeons, and four subdivisional surgeons. It would be the duty of the chief police surgeon to examine all recruits for admission to the police force, to attend all street accidents within a radius of a mile of the Town Hall, and discharge other minor duties of a similar character. In addition he would be required to act as the chief forensic expert for the Corporation in medico-legal cases. For all this work — much of it requiring special expert knowledge—the chief police surgeon of this rich and populous city is to be paid the munificent salary of £120 a year. It seems almost an insult to the medical profession to offer this paltry sum for such important and onerous duties. We are sure that the Watch Committee had no such intention, but it ought to have been better informed before it came before the public with so ill-considered a proposal. The failure of the Committee to understand its own scheme is shown by its expecting an authority on medico-legal subjects to devote his Saturday evenings and Sunday mornings to attending to cut heads and other similar casualties at the Town Hall. This is not the way such work is usually arranged to be done in well-regulated cities, where the Corporation provides for the attendance of a junior surgeon for such emergencies, the services of the chief surgeon being available for consultation in serious cases. The scheme provides that the divisional and subdivisional surgeons should be the medical attendants to the police force. For these services the first-named are to be paid £50 a year and the latter 10s. a man per annum. The payment works out at about 8s. a man for the divisional surgeons. Both classes are to give their services for street accidents, casualties, etc., without extra payment. In these cases again the remuneration offered is utterly inadequate. The medical profession in Bradford has endeavoured to convince the Corporation of the unreasonableness of its scheme, but the Watch Committee has remained obdurate, even going so far as to make the insidious suggestion that the scheme should be tried for one year, and then revised if found unsuitable. This again shows that the Committee was not adequately informed before it launched its scheme. Bradford is not the first city that has had to organize such a service. The nature and extent of the duties police surgeons are called upon to perform are quite well known from experience, and it is absurd to treat the matter as though it were a novel and daring experiment. Having failed to convince the Corporation of the error of its way, the medical profession in Bradford has unanimously resolved not to accept appointments on the terms offered, and some fifty applications which had been made for the post were simultaneously withdrawn.

ROYAL SOCIETY *CONVERSAZIONE*.

The chief feature of medical interest at the Royal Society's *Conversazione* this week was the exhibition of a large number of stereoscopic *x*-ray photographs by Mr. J. Mackenzie Davidson. Mr. Davidson's method, which was described some years ago in a special article contributed to the British Medical Journal, is admirably simple, involving merely the application of ordinary stereoscopic procedure to *x* ray photography. Among the photographs shown were a bad case of congenital hip disease, of a fractured and wired patella, and of a broken needle lodged in the knee joint. Especial interest attached, however, to an injection of one of the branches of the portal vein, made at the suggestion of Mr. Canthe. The *x*-ray photograph showed that the injection affected only one half of the liver, and affords conclusive evidence that there is no communication between the two branches of the portal vein. A case also was exhibited in which the *x* rays had located a steel splinter which had lodged in the eye. It is a

matter of regret that the rays are not more widely used in the diagnosis of injuries to the eye. The case in question had been seen by five medical practitioners, not one of whom had suggested the application of the *x* rays. Among other interesting exhibits must be mentioned a further stage of Mr. Bottomley's work on the artificial inoculation of the leguminous and other plants. Those plants treated by Mr. Bottomley's method have already fruited, while those which have not been so treated have either not yet fruited, or the fruits which have developed are far inferior in size and in quality. Mr. Phillips exhibited a variety of glass which should prove of value in conducting quantitative electro-statical experiments. It is composed of sodium silicate, borax, and Powell's flint glass, and has an electric conductivity about 500 times as great as that of any other glass. A fibre of this glass acts more delicately than the finest gold leaf in an electroscope, and has the great additional advantage that the sharp edge presented by the fibre can be read with very great accuracy. The instrument should prove useful for research on radio-activity. Dr. Ernst Hartert exhibited specimens to demonstrate that there are some twenty British birds which show constant and in many cases easily recognized differences from their Continental allies. The result of Dr. Hartert's investigations are the more interesting as in 1892 Wallace accepted only three birds as peculiar to the British isles. The varieties peculiar to this country are distinguished by being for the most part darker in colouring and smaller than the species to which they are related. Dr. Flinders Petrie exhibited some Egyptian pottery soul houses dating back to 3,000 B.C., Professor Stewart showed a number of examples of alternation of generation both in plant and in animal life. The remains of a South African Saurian were exhibited in far greater completeness than last May by Professor Seeley, while a number of the specimens were the same as at the recent *conversazione*. During the course of the evening Professor Miers gave a demonstration on the growth of crystals, Professor Flinders Petrie described the houses of ancient Egypt, while Mr. Louis Brennan repeated his account of the gyroscopic mono-railway.

"DRINK-PROOF."

IN a recent number of the German temperance journal *Die Alkoholfrage*, Dr. Eric Meinert has taken occasion to demonstrate the harmfulness, from a medical point of view, of a prejudice which he says exists widely among officers of the German military forces, and even more strongly among the members of those students (*Couleurkorps*) in the universities whose Gargantuan drinking bouts are notorious. This prejudice is that it is distinctly advantageous, if not essential, for a man of the world to make himself as soon as possible immune to the intoxicating effects of alcohol (*Trinkfest*) by learning to drink comparatively large quantities; this immunity is believed to be a safeguard against the social and professional danger young men run of being overcome by drink consumed through want of caution, or where etiquette or custom render it more or less necessary. Dr. Meinert quotes the opinions of gentlemen occupying high positions, in which the necessity is emphatically affirmed. "An officer must "be able to drink a bottle of wine," says a lieutenant-general. Good fellowship is not supposed to be possible among students without drinking, and a gallon of beer at a sitting is an average quantity. Such folly condemns itself to all but prejudiced minds, but none should know better than ourselves how hard it is for customs which have absolutely nothing in their favour but their having been handed down from previous generations to disappear as all impartial observers would desire. It is almost impossible for any one to get out of the environment in which he has been born and brought up so as to consider that which is sanctified by innumerable pious associations with the cool detachment of an onlooker, and we by no means desire to express any pharisaical superiority in this respect if we congratulate ourselves on not being the slaves of the tyranny of the particular demon which hides itself under this *Trinkfest* prejudice. Such a habit of mind cannot be corrected by calling it ridiculous or foolish or wicked, for those who accept it believe that, even if harmful, it is a preventive of worse evils, and they pay little heed to the opinions of those who do not admit the need or good sense or advantage of taking alcohol at all. But Dr. Meinert attacks them by traversing their main argument; he proves that those who make themselves temporarily immune to alcohol acquire with that purely relative advantage a terrible permanent liability to disease, the effect of which is to injure their health and greatly to reduce the average duration of their lives. He is enabled to show from official figures that the average age at death of officers of the army and navy is only 48—an extraordinarily low figure for a class of selected lives; moreover, there is an exceptionally high mortality from cancer, diabetes, and suicide, which Dr. Meinert, with some show of reason, regards as depending upon the alcoholic habit. The rate of suicides is enormous—9.25 per cent. of all deaths! No wonder the Kaiser interests himself to check gambling, duelling, and drinking in the services when he has such striking evidence of the existence of serious moral evils. Dr. Meinert complains that, in spite of Imperial favour, the efforts of his Society meet with no support from the officer class, who do not even read the fly-sheets distributed to instruct them and the men under their command concerning the evil effects of alcohol in impairing the military efficiency of those who make use of it habitually. The pamphlet ends with the recital of an incident, which, not being without humour, may be briefly related. In the course of an address to a Ladies' Association for Social Work, Dr. Meinert alluded to the "*Trinkfest*" habit, and spoke of the officers of the army and navy as being generally "*Alkoholisten*," that is to say, users of alcohol. This harmless remark reached the ears of a naval lieutenant commander, in the offensive form that "all "naval officers were drinkers and soakers," with the consequence that Dr. Meinert received a summons to withdraw this insulting expression respecting the navy in the presence of the Polizei-Präsident of Dresden and a Commissioner appointed by the naval Commander-in-Chief! To this Dr. Meinert naturally demurred, and explained that he had used the expression "*Alkoholisten*" in a purely scientific sense. This explanation brought a conciliatory reply from Prince Henry, who suggested that the matter should be discussed with a Herr Marineoberkriegsgerichtrat (Councillor of the Court of Admiralty) whom he proposed to send to Dresden if Dr. Meinert would receive him. We are glad to know that the interview was followed by results satisfactory to both parties, the Herr Marineoberkriegsgerichtrat eaving Dresden without an apology but with his pockets stuffed full of temperance pamphlets!

THE RED CROSS CONFERENCE.

THE business of the International Red Cross Conference came to an end last Saturday. The meetings were well attended. On the first day after the formal opening of the Conference there was a discussion as to the purpose to which the annual interest on the Augusta Fund should be devoted; finally it was arranged to appoint a small Committee to consider the advisability of setting it aside in order eventually to dispatch on a visit of inspection of Red Cross

institutions in various countries some four or five delegates charged with the duty of preparing a report for the Conference in 1912. It was also determined that in future the duties of Red Cross societies should include assistance to prisoners of war. Another resolution adopted was one urging all Governments to take steps to protect the sign of the Red Cross from abuse, whether in time of peace or of war. On the following day an announcement was made and received with cheers that Japan had offered its hospitality to the Conference at its ninth session five years hence. A number of papers and reports were then read; in one of these General Priou, a French delegate, advocated increased utilization of the services of women in connexion with all Red Cross work. In another, Sir Frederick Treves gave an account of how the British Red Cross Society had been formed out of its predecessors, the National Society for Aid to the Sick and Wounded and the British Red Cross Council. In a third, Mr. Makins discussed the position and duties of Red Cross societies in relation to maritime warfare. Over this paper a good deal of discussion arose; the chief point at issue being the position of hospital ships as regards immunity from being raided for stores. The final paper of the day was one in which an account was given by a Japanese delegate of the work of the Japanese Red Cross Society during the late war. It was shown that although the amount of work performed had been enormous the total expenditure was only about half a million. This economy was possible because everything had been carefully mapped out beforehand. The Society was a purely private organization, maintained by the subscriptions of its 3,100,000 members, but worked upon the principle that in every detail it must acknowledge the authority of the army and navy, and never attempt to do independent work. It had carried out this principle so thoroughly that it was almost impossible to say how many of the sick and wounded in the late war had been treated by the Red Cross Society, and how many by regular officers of the army and navy. Finally the Conference passed a resolution urging all Red Cross societies to set to work to discover the best ways of rapidly constructing stretchers out of the materials commonly to hand in the various countries concerned, and of practising these methods sedulously. Another resolution adopted at the meeting on Friday was to the effect that Red Cross societies might properly take part in the campaign against tuberculosis. This day ended by papers on surgical dressings, and on war nursing, by French and Hungarian delegates respectively. In the one a detailed tribute was paid to Lord Lister and in the other to Miss Florence Nightingale. At the final meeting on Saturday the Turkish delegate unsuccessfully urged that in his country a red crescent should be substituted for the red cross, the Mohammedans regarding the cross not as a sign of a humanitarian institution but as a religious symbol; hence, though they respected the red cross when flown by the enemy, they could not enjoy its protection themselves. The Conference throughout the week was entertained by various notable personages, and on Saturday was received at Buckingham Palace by the King.

WEST LONDON HOSPITAL AND POST GRADUATE COLLEGE.

The annual dinner of the past and present members of the West London Hospital and Post Graduate College and of the resident staff of the hospital, took place at the Trocadero on June 12th, when Mr. H. Lloyd Williams, Dental Surgeon to the Hospital, presided over an assemblage of about one hundred persons. The usual loyal toasts having been duly honoured, Dr. J. Barry Ball proposed "The Imperial Forces," a toast acknowledged by Surgeon-General W. J. Charlton. The Chairman then proposed "The West London Hospital," and in describing its work gave a history of its origin from a dispensary, of its subsequent progress, and of that of its offspring the Post-Graduate College. Dividing the entries at the latter into triennial periods from the first session, he showed that in the first period the number who had joined had been very small, only 50 altogether; in the later periods the growth had been steady and continuous, the entries in the latest period of all, that ending December, 1906, numbering nearly six hundred. Great progress had been made in all directions, and a new pathological department worthy of the College and of the Hospital was already in sight. Mr. G. F. Marshall, Chairman of the Hospital Committee, expressed the interest felt by it in the College. The two institutions, he said, were indissolubly united, and there was no doubt as to the happy future of either of them. Mr. Keetley having replied for the staff, and Dr. Niall for the past residents, the toast of the "Post-Graduate College" was given by Lieutenant-Colonel Alcock, I.M.S., who said that the opportunities afforded to officers belonging to the services were of the highest excellence. In his reply, the Dean, Mr. L. A. Bidwell, stated that among its students the College had numbered 177 officers of the Royal Navy, so that one in three of all naval medical officers had been students of the College. There had also been 125 officers belonging to the Army Medical Corps, 75 to the Indian Medical Service, and 183 Colonial medical officers and other practitioners in India and the Colonies. There was plenty of room for all the post-graduate institutions which had hitherto been established, and there was no occasion for any jealousy between them. So far as the West London Post-Graduate College was concerned, the birth of its rivals had seemed merely to stimulate post-graduates to join the older establishment. The toast of "The Visitors," proposed by Dr. Donald Hood, having been acknowledged by Sir R. Douglas Powell, the formal events of the evening were brought to a close by a toast to the Chairman, Mr. Lloyd-Williams, proposed in a happily-worded speech by Mr. Stephen Paget.

SMOKE NUISANCE.

The report of the Public Control Committee of the London County Council on the smoke nuisance is interesting from many points of view. The Committee has conducted a careful and exhaustive inquiry into this important subject, and has made several practical and useful suggestions. Experience has shown that the principal enactments dealing with smoke are inadequate, and that important amendments are needed to furnish means for dealing effectively with the nuisance. While all sources of smoke nuisance in London, with the exception of locomotives and domestic chimneys, are subject to the Public Health (London) Act, 1891, the operative sections are so crippled by qualifying words that it is difficult to obtain convictions under them. The administration of the law is in the hands of the metropolitan boroughs, and the Committee recommends that this duty should be entrusted to a central body—for example, the County Council—and that fines and penalties should be increased. The report also draws attention to the fact that considerable and serious nuisance is caused by the smoke from private houses. It is estimated that one half of London smoke may be attributed to this source; and when it is remembered that under the present law the consumption of fuel in private houses is subject to no restrictions, it is clear that manufacturers are not wholly to blame. The Committee, however, does not recommend any very drastic interference with the private consumer. Many people,

the report states, "advocated the abolition of the open "fire in favour of the closed stove system in use on the "Continent; but while undoubtedly the general adoption "of such a system of heating would result in a purer "external atmosphere, this would be secured at the "sacrifice of much of the fresh air inside living rooms "for which open fires, by providing a good deal of "ventilation, were largely responsible."

SUCCESSFUL ANTITYPHOID VACCINATION.

WE publish in another column (p. 1494) an account of antityphoid vaccination in the army. Our readers will be especially interested in the experience of the 17th Lancers. When this regiment was about to depart for India, 150 persons belonging to it were inoculated against typhoid fever. India was reached on September 28th, 1905. Less than two months afterwards the regiment suffered from an outbreak of typhoid fever, during which 63 cases were recorded. Only two of these occurred amongst the men who had been inoculated, and these two were men who had refused the second dose of vaccine, which is considered necessary in order to confer the full measure of protection.

THE FEEBLE-MINDED IN NEW SOUTH WALES.

WE learn from the *Australasian Medical Gazette* that for some years the State Children's Relief Board has been advocating the establishment in New South Wales of homes for the accommodation and treatment of feeble-minded children, and the matter has been discussed at length in the annual reports. A home for those under the control of the Board is now about to be established through the sympathetic interest of the Rev. Dr. and Mrs. Jefferis of Adelaide, who have given for the purpose the proceeds of a sale of a house originally used as a cottage home for children. The building is to be erected at once on Crown land at Parramatta, adjoining the cottage home for invalid children there, according to plans prepared with the approval of the Government architect.

ACADEMIC COSTUME AT THE ANNUAL MEETING.

WE are asked to state that the Executive Committee of the Annual Meeting of the British Medical Association at Exeter this year has decided to ask all those entitled to do so to attend the Cathedral service and the President's address in academic costume. On both these occasions seats will be reserved for those so robed who have previously sent in their names, and Messrs. Ede, the robe makers, will attend with robes for those who have bespoken them.

DR. CHARLES THEODORE WILLIAMS has been elected an Honorary Fellow of Pembroke College, Oxford. There are, we understand, several candidates for the scholarship recently founded by Dr. Williams at this College.

MEDICAL practitioners who may contemplate accepting appointments under the British South Africa Company will do well to apply to the Medical Secretary of the Association for information bearing upon the subject.

THE first general meeting of the Medical and Surgical Sections of the newly-constituted Royal Society of Medicine will be held at 20, Hanover Square on Monday next at 5.30 p.m. for the election of officers and council, and the transaction of other necessary business.

THE Local Government Board has established new premises for the preparation and distribution of glycerinated calf lymph for the use of public vaccinators, and have notified that all applications for calf lymph should now be addressed to the Government Lymph Establishment, Colindale Avenue, The Hyde, N.W.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Physical Deterioration and Town Life.—In the course of the debate on the second reading of the Small Holdings Bill last week, Sir Walter Foster urged the importance of creating small holdings as a remedy for physical deterioration. The depopulation of the rural districts was not the sole evil, there was the consequential evil of physical degeneracy certain to ensue from the crowding of the people in the towns and the lessened reinforcement of town populations by an influx of healthy and vigorous country men. Mr. Balfour replied to this argument at some length. He said: The right hon. member for Ilkeston says that we must keep the population in the country, not because that would diminish the migration, but because it is absolutely necessary to have a great country population if we mean to maintain the physique of our race. Is it really true that we depend for the maintenance of our race upon that population? If it be a fact that the whole future physique of our race depends upon the agricultural labourer, who, we are told, is working under degrading conditions, it is lamentable. If we are going to acquiesce in giving up the problem of having an urban population, if we cannot deal with the health of our great towns so as to prevent them from being, as we are told, sources of hereditary diseases, then, indeed, the resources of British civilization are bankrupt, and it would be the first duty of this House to check the growth of big towns and artificially to stimulate the population of the country by laws deliberately intended to be protective, and deliberately intended to keep the population there at whatever cost to the community at large. But I cannot admit this bankruptcy. I do not think it wise for hon. or right hon. gentlemen to make these appeals to us about the physique of the race unless they are prepared to prove that urban life is inconsistent with the maintenance of that physique; and if they come to that conclusion, then let them take their courage in their hands and say that our forefathers were wrong when they took the view that England henceforth in the main must be a manufacturing country, and that we must preserve our most valuable heritage, even at a great and almost overwhelming cost. I do not admit the conclusion of the right hon. gentleman. In the course of the debate Mr. Balfour's contention did not find favour; and, in summing up the discussion before the second reading of the Bill was carried without a division, the Solicitor-General said that after all, the real, paramount, and urgent necessity for the proposal which the Government had made was to be found in the fact which nobody denied—namely, the rural depopulation. The figures which had been quoted showing the extent of the depopulation were few, simple, and appalling. He had no doubt whatever that economic reasons were the principal cause of the agricultural depression, and it had caused great economic loss to the country. But there was another consideration than the economic one which ought to be paramount in the mind of the House, and that was the health and virility of the race. He should think himself there could be no doubt at all as to the enormous physical advantages of those who lived in the country as compared with those who lived in the towns. They had generation after generation growing up under conditions which made for the physical decadence of the race. In industry and in war they must rely on the physical efficiency of the people; and, depend upon it, those who would be most responsible for the evil results of physical decadence would be those who obstinately adhered to a landed system under which the cultivators of the soil could neither make a subsistence nor a decent career.

The Medical Inspection of School Children.—Friday in last week was the last day for private members' Bills, and one was passed and a second practically accepted. The

Bill which succeeded in getting a third reading was Mr. Hart-Davies's measure for regulating advertisements and preventing the disfigurement of landscapes and public parks. The second Bill was Mr. Walter Rea's measure to amend the Education Acts by providing for vacation schools and the medical inspection and treatment of school children. The single operative clause of the Bill was taken from the Education Bill of last year, after amendment by the Lords and acceptance by the Commons. It was therefore practically non-contentious, and provided for medical inspection of children immediately before, or as soon as possible after, admission to a public elementary school, and on other such occasions as the Board of Education might direct. Powers were also provided for attending to the health and physical condition of the children. There was considerable discussion lasting over two and a half hours, some verbal amendments were made, and the Bill was reported just before 5 o'clock. The third reading, it was understood, will not be opposed. Unless the Government Bill which contains the same provisions is pushed forward this session, Mr. Walter Rea's Bill will be passed and medical inspection of school children made the law of the land.

The Teaching of Hygiene and Temperance in Elementary Schools.—In answer to a question put by Mr. Harmood Banner last week Mr. McKenna replied that he had received numerous representations urging the necessity of extending the teaching of hygiene in elementary schools. The code at present laid down that physical training should be included in the curriculum for scholars other than infants, and should be accompanied by instruction in the elementary rules of personal health in respect of food, drink, cleanliness, and fresh air, and the volume of *Suggestions for the Consideration of Teachers*, which was issued by the Board a few years ago, included an outline scheme for the teaching of hygiene and temperance. He was considering how the numerous difficulties connected with the teaching of this subject could be surmounted, and he hoped to derive considerable assistance in this from the International Congress upon School Hygiene which was to meet in London in August.

King Edward's Hospital Fund for London Bill came on for consideration on Tuesday afternoon at the time for private business, but was blocked by more than one member and so postponed for the present. Dr. Rutherford handed in afterwards a notice of motion to recommit the Bill and that it be an instruction to the Committee on King Edward's Hospital Fund for London Bill to insert clauses to provide that the control and management shall be vested in the President and Council, and that the Council be constituted on representative lines.

The Vaccination Bill passed through Grand Committee on Tuesday last, and was ordered to be reported to the House. The passage through Committee gave rise to a good deal of discussion. Mr. Ashton first of all proposed to enable the conscientious objector to make his declaration before the chairman of a parish council. This was opposed by Mr. Burns, and eventually withdrawn. Sir W. J. Collins afterwards moved an amendment to omit the statement of a belief in the prejudicial effect of vaccination on the health of the child from the declaration, and to let it take the form of a simple objection. Sir John Tuke opposed the proposal as an attempt to broaden the basis of the Bill, and Mr. Burns said that if the floodgates of medical controversy were opened they might have to sit even longer than the Royal Commission. He said that personally he was and always had been an antivaccinator, but he urged those who thought with him not to jeopardize the prospects of the Bill, which had been brought in to remove an admitted grievance. It was absurd to say that the Bill was the last word in the vaccination controversy, but if the amendment was accepted it would be the last word for this particular Bill for this session. He asked for the amendment to be withdrawn, and this was done after some further discussion. It was agreed that the statutory declaration to be delivered to the vaccination officer within seven days might be an alternative to be sent by post. Mr. Lupton then moved to make the Bill retrospective, but it was defeated by 21 votes to 11, and the Bill reported.

The Public Health Bill, which has been referred to a Grand Committee, has had its consideration postponed *sine die* in consequence of the illness of Mr. J. W. Wilson, who is in charge of the Bill.

Vaccination Officers and the Vaccination Bill.—In reply to a question put by Captain Faber respecting the extra duties thrown on the vaccination officers in connexion with the receipts of exemption certificates, Mr. Burns replied that he had had occasion to consider this matter, but he did not see his way to propose the insertion in the Bill of a clause to pay for the registration of exemption certificates.

The Grant for Health and Sanitary Officers.—Sir William Bull asked the Chancellor of the Exchequer whether, seeing that the discontinued grants towards the salaries of medical officers of health and sanitary inspectors were made under the Public Health Act of 1875, which did not apply to London, and whether consequently London had received no share in these grants; that, notwithstanding this fact, the grant was included in the basis adopted for the distribution of a large part of the grants from the Local Taxation (England and Wales) Account under the Local Government Act, 1888; and that from 1888 to the present time the London County Council had in effect received no grant in respect of sanitary officers, but had been required by Parliament to pay to the Metropolitan borough councils one-half the salaries of the medical officers of health and sanitary inspectors employed by them with the approval of the Local Government Board, he could state the additional amount which London would have received from the local taxation account if the sanitary officers grant had been excluded from the basis of distribution fixed in 1888. Mr. Burns, in replying for the Chancellor of the Exchequer said that he was aware of the facts. The grant in respect of the salaries of provincial medical officers of health and inspectors of nuisances was one of the discontinued grants on the basis of which county and county borough councils outside London had shared in some of the moneys payable out of the Local Taxation Account. Had the grant been excluded from the basis, and no other variation in the scheme been made, the county and borough councils outside London would have received less and London would have received more. Calculations had been made showing that on the altered basis about £295,000 would have changed hands, as between the provinces and London, during the period from 1889 to 1907.

The Lunacy Commissioners.—Sir John Batty Tuke asked the Secretary of State for the Home Department on Tuesday whether, pending the production of the report of the Royal Commission on the Care and Control of the Feebl Minded, and pending legislation founded on the said report, he would take any steps to supplement the Lunacy Commission so as to relieve the existing congestion in the department and to procure adequate inspection of asylums. Mr. Secretary Gladstone said in reply that the number of Lunacy Commissioners was fixed by statute, and while he was fully alive to the fact that the great increase in the duties which they had to carry out had caused a considerable congestion of business, to meet which an addition to the staff might be required, he could not initiate legislation pending the presentation of the report of the Royal Commission.

Poor-law Inmates and Lunatics in Ireland.—In answer to a question put by Mr. Boland last week, Mr. Birrell said that it was not possible to state the total number of inmates of workhouses for a year, as admissions only were recorded, and the same person might be admitted several times during the year. The daily average numbers of persons relieved during the financial year 1905-6 were as follows. In workhouses, 42,906; in extern hospitals, institutions, and district schools, 1,479. For the same year the total expenditure of Boards of Guardians was £873,583, which £19,190 was for cost of medicines and medical appliances in workhouses. The total cost to the county of providing for the inmates of district asylums during the financial year 1905-6 was £520,027 9s. 3d. The daily average number of inmates was 18,967.

Liverpool.

THE PREVENTION OF HOSPITAL ABUSE.

ALL the principal hospitals, with, it is understood, one exception, have agreed to a proposal made some time ago by Sir Richard Hampson, Chairman of the Stanley Hospital, to hold a conference with a view to limiting or preventing the abuse of hospitals by persons able to pay for medical advice and adequate treatment. The question is no doubt beset with difficulties, but it is one of great interest, not only to the supporters and managers of the hospitals, but also to the members of the medical profession. One of the first duties of the conference, which will probably take many months to complete its labours, will be to ascertain to what extent, if any, abuse at present exists. Before any effectual means can be taken to put a stop to abuse, it is clear that all the hospitals in the district must agree upon a similar line of action, and it is earnestly to be hoped that they will all, without exception, agree to confer together. There is reason to believe that the mere fact that it is known that patients making application to certain hospitals are liable to be subjected to inquiry as to their means, deters some who ought not to apply from attending at those institutions. It is clear, therefore, that unless all the hospitals adopt the same course, the statistics of attendance at the hospitals which make inquiries will fall off, and the public may then be asked to conclude that they have declined in reputation and are less worthy of financial support, a result not likely to be contemplated with equanimity by those responsible for their maintenance.

THE MAGHULL EPILEPTIC HOME.

The annual meeting in connexion with the epileptic home at Maghull took place at the home on June 15th, and was presided over by the Lord Mayor of Liverpool. The annual report showed that 19 males and 17 females were admitted during the year, the total number in the house on December 31st, 1906, being 209. Of these, 5 were "first" class patients, 52 "second" class, 4 "intermediate" class, and 148 "third" class. The usual kinds of work had been followed; men have been employed in the fields and gardens whenever their physical condition allowed, while those physically unequal to hard work and exposure to the weather were engaged under cover at joinery, etc., or acted as porters and messengers. The women, when possible, were engaged in gardening, but mostly in the domestic work of the institution. Hardly any of the patients had any knowledge of agricultural work before coming to the home, but after a course of training and under effective supervision they proved capable of doing satisfactory work. The farm account unfortunately showed a loss this year. The plan of making a small weekly allowance to those workers who had acquired some skill and did their work steadily proved advantageous, and gave a much-needed stimulus to the patients, who were without the motives urging to steady and continuous work which act as incentives in ordinary life. In the day school the children were given an elementary education, and taught simple manual work such as carving. The Committee felt compelled to make further provision for children, and had decided to erect a home for 30 boys and 30 girls. It already possessed the necessary land, and was about to build at a cost of £8,000.

After the report had been adopted, on the motion of the Lord Mayor, Sir James Crichton-Browne moved:

> That this meeting cordially approves of the Committee's proposal to provide a home where epileptic children may be cared for and trained, and strongly recommends it to the liberality of the public.

He said that the Maghull Home was the first institution established for epileptics in this country, and he was present to show his appreciation of the admirable methods pursued in it. Epilepsy was a heavy national burden, and also a burden to medical science. It was crippling and killing multitudes of children, and no sure or effectual means of arresting it had been discovered. His impression was that it was increasing. Modern modes of life were more and more conducive to instability of the brain, out of which epilepsy sprang. There was an increased stringency and agitation which demanded increased brain power and made for increased brain jeopardy. Injuries to the head were a cause especially in early life, a factor of importance in these athletic days. Any wise system of education which fortified character and improved and strengthened the will power would serve to maintain the mental and nervous equilibrium. He asked, Was it extravagant to hope that remedies would yet be discovered which would restore those afflicted with epilepsy to their normal level of action? He particularly rejoiced to find in that home a medical staff who were animated by the true scientific spirit, and took no despairing view of the evil with which they had to cope. Dr. Alexander was satisfied by clinical and pathological observations that epilepsy was a curable disease, and he quite agreed with him. It seemed to him that Dr. Alexander was on the right track, and, should he succeed, then the Maghull Home would have conferred inestimable benefits on suffering humanity.

QUEEN ALEXANDRA SANATORIUM.

A meeting in support of the Queen Alexandra Sanatorium at Davos took place in the Town Hall on June 11th, the Lord Mayor presiding. Lord Balfour of Burleigh, who was the chief speaker, explained the scheme, and said that though the British were the first to start an institution at Davos, they were now represented by a small home put up twenty-five years ago, and now hopelessly out of date. The proposed home was for middle-class patients, who would pay a guinea and a half a week.

Sir James Barr supported the proposal, but did not wish it to be supposed that nothing had been done in England in regard to the treatment of consumption and its prevention. England stood that day one of the most favourable countries in Europe so far as the death-rate from consumption was concerned. So far as prevention was concerned, great improvement had taken place in England. That had been largely due to medical officers of health and to sanatoriums generally. It was agreed to open a fund in support of the scheme.

THE SAMARITAN HOSPITAL.

A special appeal has been made by Lord Stanley for the sum of £1,600 to enable the Committee of the Samaritan Hospital for Women to provide additional accommodation and to deal with other matters of pressing urgency. Considerable sums have already been received or promised, including one of £400 from Mr. W. P. Hartley.

Manchester.

INCREASED HOSPITAL ACCOMMODATION.

AT the present moment an extraordinary development in hospital accommodation is taking place in Manchester. The new Royal Infirmary, situated on an area of about 12 acres facing Oxford Road, is now well advanced, and will, it is hoped, be ready for opening about a year hence. Its huge series of buildings, in serried blocks, impress the onlooker partly by the alternate white stone and red brick used in their construction and partly by their number and relative position. With the number of beds raised to nearly 600, a very large sum, in addition to the annual income at present available, will be required. Next door, and in line with the Royal Infirmary frontage, the Eye Hospital authorities are erecting a large addition, and they, too, have made an earnest appeal for more funds. On the other, or southern, side, and also in line with the Royal Infirmary frontage, the St. Mary's Hospital —that is, that part devoted to diseases of women and children—is rapidly growing apace. Special arrangements have been made for the residence of those students who wish to attend obstetrical cases during the winter and summer sessions. While money has been given for the construction of the new hospital, many additional subscriptions will be required to help in its maintenance.

In Oxford Road also, and within a stone's throw of the University, the Victoria Dental Hospital has acquired a capital front site, and is busy with a new hospital, for which funds are urgently needed. All these new hospitals or additions are in the immediate neighbourhood of the University, so that within a very short time Oxford Road, in part, will be a boulevard of hospitals, grouped in close relation to the University and the Medical School.

Salford also wants more hospital accommodation. The Salford Royal Hospital has issued an appeal for £70,000.

The number of beds has risen from 10 in 1845 to 135 in 1905. It is the only general hospital in Salford, which has a population of 236,000; the number of beds is considered inadequate, and the Board of Managers proposes to increase it to 200 and to make suitable provision for the nursing staff. About £23,000 has been promised. The Skin Hospital, on the confines of Manchester and Salford, has just completed a great extension.

West Yorkshire.

POLICE SURGEONS IN BRADFORD.

SINCE the note on this subject in last week's issue of this JOURNAL was written, the deputation appointed by the profession to interview the Chairman of the Watch Committee has had a discussion with him on the subject. Some of the minor wishes of the medical men were agreed to, but the proposals that the rate and method of remuneration should be altered was rejected. The medical profession then held another meeting and appointed the deputation as a committee to take any other action necessary to carry out the wishes of the profession in the matter. The Watch Committee remained obdurate, and as a consequence all the candidates for the posts were asked to withdraw their applications. This was loyally done, and over fifty applications were withdrawn, so that at the meeting of the Watch Committee on June 14th no candidates remained to whom the posts could be given. The Committee adjourned the matter for a month, "in the hope that wiser counsels may prevail." We trust the Watch Committee intends to apply the last sentence to its own action. The determination to force rules, regulations, and rates of pay on medical men without any previous consultation with them is intolerable.

BRADFORD ROYAL INFIRMARY.

The Mayor of Bradford has issued a statement to the effect that he has already been able to obtain promises of financial help to the extent of over £8,000, to be spread over a period of five years, towards the Sustentation Fund. The whole sum required for this period is £15,000, and there can be little doubt that with such a rapid and generous response to his appeal the Mayor will soon be able to announce that he has promises for all that is necessary to carry on the work of the Bradford Royal Infirmary efficiently for the next five years. When the first appeal was made the Board of the Infirmary hoped that the Bradford Hospital Fund would help considerably to make up the annual deficiency. But although this fund has shown a satisfactory increase, it has not yet had time to raise enough to meet all the requirements of the hospital.

Durham.

ELECTION OF CORONER.

WE record with regret the death of Mr. Crofton Maynard, the late Coroner for the Easington Ward of the County of Durham; he had held office since 1865, and was a son of the last of the coroners elected by the Bishops of Durham. It may be interesting to note that in the county of Durham, as a County Palatine, the coroners were appointed by the Bishops, and from time immemorial the county seems to have been divided into wards for coroners and other purposes. The privileges of the Bishops of Durham as Counts Palatine were much abridged by the Resumption Act of 27 Henry VIII, cap. 24, and finally transferred to the Crown by the Act 6 and 7 Will. IV, cap. 19. By the Act 1 Vic. cap. 61, it was enacted that the coroners were in future to be elected by the freeholders as in other counties. By the Coroners Act, 1887, "for the purpose of the provisions of any Act with respect to the coroners' districts, a ward in the county of Durham shall be deemed to be a coroner's district in that county." Under a still more recent Act coroners are now elected by the County Council and the body recently met to fill the vacancy. It had already decided that the salary should be £400 per annum for the present. There were twenty-nine applicants for the post, of whom fifteen were solicitors, nine doctors, and five laymen. A final vote was taken between Mr. C. E. Cadle, solicitor, and Dr. Rutter, when the former received 43 votes and the latter 39. Mr. Cadle was therefore duly elected coroner.

Throughout England and Wales there are at present about 350 coroners, 50 of whom are medical men, showing that however much some may esteem the doctor the better man to hold the inquiries into the cause of death, there still remains a large preponderance of the legal profession who retain office. In London and some other cities the medical coroner prevails, but in the country districts it is hardly worth while for the medical man to accept the appointment, as the salary is too small, and often insufficient to compensate him for the time he devotes to the office, interfering as it may with the urgent demands of his patients; while on the other hand the lawyer can more easily travel about the country, and postpone any other duties he may have till a more convenient time, without pecuniary loss. Until recently the expenses of an election were very heavy, and bribery and corruption were not unknown in some districts; the scenes at the polling booths, which were erected in the streets, resembled the ancient hustings as depicted by Charles Dickens in *Pickwick*: the "freeholders," of whom there was no list, voted "many a time and oft" as they felt the "spirit" move them and the silvery coin slip into their pockets. In the present day there is no expense to the candidate beyond the printing of a few testimonials for distribution among the members of the County Council. Every vacancy should be contested by a medical man as it is a position for which he is by education and training especially qualified.

South Wales.

CARDIFF INFIRMARY.

AT a meeting of the Board of Management of the Cardiff Infirmary held on June 12th Mr. Edmund Fairfield Thomas, M.R.C.S.Eng., L.R.C.P.Lond., of the Middlesex Hospital, was appointed House-Physician, in the place of Dr. Macphail, resigned. The report of the Finance Committee showed that the bank overdraft was £13,431 15s. 4d. it had during the past year increased by £3,586. The Chairman expressed the hope of the Committee that the income would increase, and moved the adoption of the report. Mr. T. H. Stephens, who seconded, said that new wards and new wings would only tend to the increase of that large overdraft, which would have to be met some time. Ultimately the report was unanimously adopted.

A letter was read from Dr. Tatham Thompson stating that he had completed a period of 20 years as ophthalmic surgeon, and consequently his office as an acting member of the staff terminated. The Chairman moved, and Dr. Wallace seconded, that Dr. Tatham Thompson be appointed consulting ophthalmic surgeon, and the Committee took the opportunity of recording its very great appreciation of the services Dr. Thompson had rendered to the Infirmary. Dr. Thompson is still retained on the staff of the Infirmary, and the resignation of his former position does not imply that he is giving up practice in Cardiff, or abating his practical sympathy with the Infirmary. In proposing a vote of hearty thanks to the generous donors of the fund for the new wing, Colonel Bruce Vaughan said that three more gentlemen had forwarded subscriptions, bringing the fund up to £9 57. The new subscribers were Mr. S. Campbell Cory, J.P., D.L., £250; Mr. Isaac Samuel, J.P., £27 10s.; and Mr. Merrils, £25. Dr. T. Wallace seconded, and the motion was unanimously carried.

DEAFNESS OF CHILDREN.

Dr. Rhys Davies reported to the Swansea Education Committee on June 10th that he had examined 1,20 children in the schools in order to ascertain the acuteness of their senses. Six simple and familiar words—school, table, board, tree, shot, fire—that neither tested the spelling capabilities nor the vocabulary of the children, were dictated once to them in a low voice. The result presented showed that 15 did not hear one word correctly and 54 only one, 88 only two. Thus, 134 children—

in every 9 of the 1,200 examined—failed to hear half the words. The mistakes that were committed were endless and often incomprehensible. Taking the boys and girls together, of the 1,200 examined 547 had five or six words correct, 520 had three or four, and 133 had fewer than three. Taking these three groups as "good," "fair," and "bad," 45 per cent. were "good," 43 "fair," and 11 "bad."

Ireland.

THE ROYAL SANITARY INSTITUTE.

THE Royal Sanitary Institute will hold a conference at Dublin next week, beginning on Tuesday, June 25th, when an inaugural meeting will be held in Trinity College at 3 p.m., under the chairmanship of the President, the Earl of Rosse. On Wednesday there will be a meeting of the section of sanitary science and preventive medicine under the chairmanship of Sir Charles Cameron, when the subjects for discussion will be Poor-law and sanitary administration in Ireland, and the rôle of sanatoriums as a factor in checking tuberculosis. On Thursday the section of engineering and architecture will meet to discuss the economic housing of the working classes in town and country, and the existing requirements as to sewage disposal. On Friday the section of physics, chemistry, biology, and meteorology will be opened by an address by Sir John William Moore on the climatology of Ireland in relation to public health. The subject of disinfection will also be discussed, the first paper being read by Dr. S. Rideal.

MATER INFIRMORUM HOSPITAL, BELFAST.

The twenty-third annual report of this institution states that during the past year 1,861 intern patients were received into the wards, 23,785 cases were treated in the dispensary, and 597 surgical operations were performed. The total number of patients was 2,130 in excess of the previous year. The expenditure for the year has been £4,842, and there is a deficit of £219. The Sisters of Mercy point out "that the benefits conferred by the hospital on the working classes have received as yet little recognition from public firms, and the hope is expressed that employers of labour will give their workmen an opportunity of helping the hospital to cope with the increasing expenditure."

BELFAST BOARD OF GUARDIANS.

Mr. Oswald, on his election to the chairmanship of this Board for the fifth year in succession, enumerated a large number of improvements carried to a successful issue during the year. The Abbey Sanatorium for Consumptives would be ready for the full complement of patients in a week or so; an examination room in the infirmary, additional fire exits, a sewage scheme for the children's and lunatic departments, additional laundry machinery, and other works, costing in all £25,812, were now completed; numerous other works, to be carried out in the immediate future, were in contemplation. As regards finance, the position was satisfactory; the year began with a deficit of £1,900; at the end there was a credit balance of £415; the Poor-law rate was only 1s. in the £. Mr. Oswald also gave high praise to the various officers of the Board, and quoted from a very favourable report of the Local Government Board on the most satisfactory manner in which the various records and accounts of the clerk's and master's were kept; he also mentioned the untiring work of the matron.

SANATORIUM FOR CONSUMPTION, CORK.

The sanatorium is likely to be a reality in the near future, despite the difficulties that have arisen from time to time as to the site. The Local Government Board has written to the Joint Hospital Board approving of the site offered by Mr. Brazier Creagh at Stream Hill, Doneraile, saying that it is prepared to consider an application from the Joint Hospital Board for its sanction to a loan for the erection of a sanatorium on this site, also enclosing a form on which such application should be made, to include plans, specification, and estimates of whatever building or accessory works might be contemplated. The solicitor for the Hospital Board has been instructed to draw up the necessary deed accepting Mr. Creagh's kind offer of a site. Mr. Creagh urged on the Board that the average sum to be spent per bed should be about £65, which would bring the cost of a sanatorium for seventy patients up to £4,550—very close to their limit of £5,430. Mr. Creagh also stated that he intended the site for the county of Cork, and for no other county. The Board has decided to advertise for plans for a building to contain seventy beds and capable of extension, the plans to be submitted within two months.

Scotland.

CEREBRO-SPINAL MENINGITIS IN SCOTLAND.

THE Registrar-General for Scotland reports that in the week ending Saturday, June 15th, in eight principal towns of Scotland, 23 deaths were due to cerebro-spinal meningitis. Of these, 14 were registered in Glasgow, 7 in Edinburgh, and 2 in Leith. Sir Henry Littlejohn reports that in the same period 6 cases had been notified as suspicious cerebro-spinal meningitis in the city of Edinburgh. Five of these were removed to the City Hospital at Colinton Mains. Seven deaths occurred during the week, and 16 cases remained under observation.

SIR HENRY LITTLEJOHN'S ANNUAL REPORT.

Population, etc.—The annual report of the Medical Officer of Health of the City of Edinburgh gives the area of the city as 11,416 acres, and the estimated population for the year 1906 as 341,240, or an increase since the middle of 1905 of 4,663 persons. The increase in the number of occupied houses was 390, as compared with an increase of 384 in 1905, and 586 in 1904.

Unoccupied Houses.—The number of habitable unoccupied dwelling-houses at Whit-Sunday, 1906, was 4,179 compared with 3,820 and 3,199 in the preceding years.

Births.—The number of births registered in 1906 was 7,649, equal to a birth-rate of 22.41 per 1,000 of the population, In 1890 the birth-rate began to fall below the average—namely, 28.6 per 1,000, and ever since then the decline has been rapidly progressing. Comparison of this rate with other large towns of Scotland shows Greenock with 32.2, Glasgow 29.4, Leith 28.2, Aberdeen 27.6, Dundee 27.4, Paisley 26.2, Edinburgh 22.4, and Perth 22.3; and with some of the large towns of England—Liverpool 32.6, Sheffield 29.9, Birmingham 29 2, Manchester 29.0, London 26 6, Leeds, 26.1, Bristol 25.8, and Bradford 20.6. The percentage of the illegitimate to the total number of births was 8.0.

Deaths—The number of deaths was 5,463, giving a death-rate of 16:0 per 1,000 of the population. Deducting "country deaths"—that is, related to persons who were merely temporary residents in Edinburgh, or who had come to the city for treatment in one of its many medical institutions—the death-rate was only 14.26 per 1,000, or practically the same as in 1905. The following death-rates of the last five quinquennia—18 12, 18.62, 17.20, 17.99, and 14.91—show that this low rate was in keeping with the continuous reduction which has taken place during the last twenty years. Comparison with the death-rates in the large towns of Scotland gives Dundee 19.6, Greenock 17.9, Glasgow 17.5, Paisley 15.5, Perth 15.5, Leith 15.4, Aberdeen 15 0, and Edinburgh 14.2; and in large towns of England—Liverpool 20.3, Manchester 19 0, Birmingham 16.7, Sheffield 16 7, Bradford 16.1, Leeds 15.8, London 15.7, and Bristol 14.3.

Infantile Death rate.—The infantile death-rate, that is, the proportion of deaths of infants under 1 year of age to 1,000 births during the year, was 112 in 1906, compared with 124 in 1905, 125 in 1904, and 117 in 1903.

Causes of Death.—No deaths occurred from either smallpox or typhus fever. Measles caused a death-rate of 0.37 per 1,000, scarlet fever 0.09, diphtheria and membranous croup 0.14, whooping-cough 0.10, enteric fever 0 03, puerperal fever 0.02, influenza 0.11, diarrhoea 0.19, cancer 0.96, scrofula and other forms of tuberculosis 0.31, tabes mesenterica 0.04, phthisis 1.09, tuberculous meningitis 0.27, diseases of the nervous system 0.83, of the circulatory system 2.52, of the respiratory system 2.28, of the digestive system 0 95, of the urinary and generative system 0.60. Childbirth gave 0 06, suicide 0.10, other violence 0.35, "other causes" 2.74. The zymotic death-rate (excluding diarrhoea) was 0.75

per 1,000 of the population, which is considerably below the average rate for the preceding five years—namely, 1.25. Alcoholism was stated as the direct cause of death in 35 persons—17 men and 18 women. Under developmental diseases, 159 infants were said to have died as a result of premature birth (100 males and 59 females). Injury at birth caused 7 deaths, and 40 succumbed as a result of congenital defects or malformations; 11 deaths were attributed to atelectasis, while 5 infants were stated to have died as a result of teething.

The deaths from suicide were 35 (30 males and 5 females). The methods employed were firearms, 1 case; cut throat 3, drowning 7, hanging 9, poison 9, other methods 6. The poisons taken were laudanum 5 cases, oxalic acid, carbolic acid, prussic acid, and bichromate of potassium each 1 case.

Ill defined and non-specified causes accounted for 435 deaths, of which those due to "atrophy, debility, or inanition" amounted to 146, while 281 were certified to be the result of "old age," and amongst these, 155 persons had exceeded the age of 80 years, 19 being over 90 years of age.

Out of 607 illegitimate children born last year, 110 died, or a proportion of 181 per 1,000, as compared with a proportion of 106 deaths of legitimate children per 1,000 legitimate births.

Notification of Infectious Diseases.—The notifications of infectious diseases received during 1906 were 2,147 in number, compared with 2,021 in 1905 and 2,559 in 1904. The cases of scarlet fever were 155 more than in 1905, and there was also an increase in the erysipelas notifications.

Bacteriology.—At the John Usher Institute of Public Health 548 specimens were examined for tubercle with 166 positive results, 216 for enteric fever with 64 positive results, 918 for diphtheria with 253 positive results.

City Hospital. 3,529 patients were treated in the hospital, as compared with 2,955 in the previous year. The total deaths in the hospital numbered 220, equal to a death-rate of 6.6 per cent. of the cases treated: 104 cases of phthisis (49 males and 55 females) were admitted to the hospital between April 20th and December 31st, of which 48, or 46.15 per cent., died. Of these, 14 arrived in a practically dying condition. All the others might be said to have thoroughly justified their removal and the expense entailed by their treatment. The total cost of occupied bed per annum was £66 9s. 11d. in 1906, as against £43 10s. 4d. in 1897. Antidiphtheritic serum cost £286 19s. 5d.

Other Reports. Reports on workshops, bakehouses, and inspection of dairy cows follow. As usual, the whole report is interesting and instructive reading.

SIR THOMAS FRASER.

It was announced in the BRITISH MEDICAL JOURNAL of June 15th that Sir Thomas Richard Fraser, Professor of Materia Medica and Clinical Medicine in the University of Edinburgh, was among the recipients of the Honorary Degree of D.Sc. at the University of Cambridge on June 12th. In presenting Sir Thomas Fraser to the Chancellor, the Public Orator said: This gentleman has been Professor of Materia Medica in the University of Edinburgh for thirty years now and for a long time previously had been engaged in investigating the action and use of remedies. More than forty years ago he wrote on that magic bean, the *Physostigma venenosum*, and for his researches on that subject he received a prize from the Institute of France. What shall I say of that plague which has for some time been prevalent in India, and which was fearlessly investigated by him for a period of three years? What of the snake poison also boldly investigated by him? What of atropia and strophanthus? It was not indeed, unknown to the ancients that in medicine even poisons were sometimes useful. It is by the help of such men that this branch of learning which at one time, in the words of Seneca, was only the knowledge of a few herbs, has grown into a manifold a variety as we now see. I introduce to you the illustrious Edinburgh Professor, Sir Thomas Richard Fraser.

DUNOON SEASIDE HOME.

A new wing of the West of Scotland Convalescent Seaside Homes at Dunoon was opened on June 8th by the Duke of Argyll. In the new portion of the building there are bedrooms, directors' and doctors' rooms, and apartments for the matron and superintendent. With this additional bedroom accommodation the homes will be able to receive 308 patients. It is interesting to learn that the extension has been opened free of debt. The number of patients accommodated last year was about 5,000, and the income exceeded £9 000, while for the past three years the average expenditure has been £6,500. These homes are very largely made use of by working men and their dependents, and this class of the community shows that it appreciate the advantage of the homes by subscribing increasing amounts to their support. In the first year the workers and employees of factories, etc., subscribed £274, while in the past year this sum has grown to £3,766.

SPECIAL CORRESPONDENCE.

PARIS.

Visit of Association of Water Engineers to Paris.—Professor Chantemesse on the Prophylaxis and Treatment of Peritoneal Infection by Nucleinate of Soda.—Professor Hallopeau on A Correction re Atoxyl Treatment of Syphilis.—Professorships and Hospital Appointments.

DURING last week the Association of Water Engineers paid a visit to Paris, and under the guidance of engineers in charge were able to inspect practically all the works for supplying the city and suburbs of Paris with water. On Monday, after luncheon at a restaurant in the Bois de Boulogne, the party drove to the Suresnes pumping station, and inspected the plant of 1,000 h.p. which pumps 7,700,000 gallons of Seine water daily, and thence to the reservoirs and Puech sand filters on Mont Valerian. On Tuesday morning a visit was paid to the sewers. In the afternoon the party went by train to Choisy-le-Roi, and inspected the filtering and pumping stations of the Compagnie Générale des Eaux: here "Anderson" Revolving Purifiers deal with 20 million gallons a day, the pumping plant being of 1,800-h.p. It is one of the works together supplying 131 communes round Paris, containing a population of 900,000 inhabitants, with 40 million gallons of river water daily. On Wednesday morning the party drove to Versailles and visited the palace and park. After luncheon the drive was continued to the aqueduct of Marly, and a visit paid to Marly La Machine, where the ancient pumping plant erected in 1685 under Louis XIV to supply water to the fountains at his château at Versailles still exists. The primitive machine erected on the plans of the Dutchman Rauneken, cost more than 3½ million pounds, but since 1859 has been replaced by a dyke in masonry and six iron wheels, the pumps sending the water in a single jet to the aqueduct 154 metres above the level of the river, and more than ¾ mile in length, leading to a reservoir above the town of Versailles. The modern plant supplies 5½ million gallons of river water daily. On Thursday morning a visit was paid to the Montsouris reservoir, which is in two stories, and has a capacity of 45 million gallons. From thence the party went to the ancient aqueducts called the Arcades of Arcueil, on which is superposed the modern aqueduct of the Vanne. On Friday morning the party drove to Montmartre and visited the Montmartre reservoir, constructed in three stories and containing spring and river water in different compartments, and then past the Basin de la Villette, conveying 30 million gallons of unfiltered water daily to low-lying districts, to the Ourcq pumping station. After luncheon at a restaurant in the Bois de Vincennes, a visit was paid to the municipal works at St. Maur. Here are pumping stations and filter works supplying 25 million gallons daily of unfiltered water and 5 million gallons daily of filtered water from the River Marne; there are water wheels and turbine pumps of 880-h.p., and steam pumping plant of 930 h.p., also filter plants employing various purifying agents. The party, which numbered nearly sixty, including ladies, had many opportunities of visiting the monuments and sights in Paris. They were received at the Hotel de Ville and a reception was given in their honour by the President and Council of the Société des Ingenieurs Civils at their head quarters in the rue Blanche. The visitors arrived on Sunday, and left again

on Saturday, having spent a well filled and enjoyable week in Paris.

At a recent meeting of the Académie de Médecine Professor Chantemesse read a short paper in collaboration with M. Kahn on the prophylaxis and treatment of peritoneal infection with the assistance of the hyperleucocytosis provoked by nucleinate of soda. During the last ten years Professor Chantemesse has seen many cases with perforation of the intestine, and he is convinced that the symptoms classically described really belong to the consecutive peritonitis. They may exist in typhoid peritoneal inflammation by propagation without perforation, and at the onset of a small perforation they may be entirely absent. Surgeons are agreed that later than eight to ten hours after a perforation the chances of the operation being successful are gone, and the patient dies from peritonitis. Is there no medical means of moderating this peritoneal inflammation, of making its progress slower, so that the patient defends himself better and the surgeon on opening the abdomen finds the peritoneum in a state of powerful defensive reaction? Professor Chantemesse uses nucleine in subcutaneous injections in the form of nucleinate of soda 1 per 100 in physiological solution. In two cases of fairly large intestinal perforation, proved *post mortem*, the patients, who were not operated on, lived for twelve days after the beginning of the perforation, thanks to two or three injections of nucleinate of soda which had been given late, that is, fifteen to eighteen hours after the perforation, when the classical signs were already fully developed. Twenty-four hours after the injection the symptoms had remarkably improved, the pulse was slower, the facies was better, the abdomen less tense and painful. The situation had so much improved that an operation might have been attempted with success. The patients refused the operation, and died twelve days later from slow peritonitis. The *post mortem* examination showed the development of the defence of the organism; the perforations in spite of their size were quite well obliterated by the epiploon and organized connective tissue. This energetic resistance of the peritoneum is explained by the modifications in the condition of the blood and in the reaction of the leucopoietic system after the injection of nucleinate of soda. In man, as in animals, six to eight hours after the injection there occurs in the blood a hyperleucocytosis, principally of the mononuclear type, which increases during forty-eight hours and persists for four or five days, slowly diminishing. It is considerable, and in a few hours the number of leucocytes in the blood may double. In man an injection of 40 cg. of nucleinate of soda dissolved in 40 c.cm. of physiological solution is given at one or two places, preferably the flanks or outer side of the thigh; in a few hours there is a rise of temperature and a little local pain, which is relieved by a poultice with laudanum. After twenty-four hours there is occasionally some swelling and redness at the seat of injection. Two or three days later a second and a third injection may be given in smaller doses, thus maintaining the hyperleucocytosis. In a typhoid patient with perforation Professor Chantemesse found that the opsonic index had increased twenty-four hours after the injection from 1.60 to 2.5. The drawback of this method is that, in addition to the local pain, there is some fever and malaise, which are not well supported if the patient is very old. In a strong patient on whom laparotomy is to be performed, an injection of 40 cg. of nucleinate of soda on the previous day would prepare the peritoneum for the risks of the operation. In a feeble patient, however, the simultaneous performance of laparotomy and the injection of nucleinate would produce a double shock prejudicial to the patient. The hyperleucocytosis provoked by the injection is a general defensive act on the part of the organism, and Professor Chantemesse has seen it produce favourable effects in erysipelas and pneumonia. If it does not cure an acute peritonitis, it certainly increases the chances of the success of a surgical operation.

At the last meeting of the Académie de Médecine Professor Hallopeau referred to his previous communication on the treatment of syphilis by atoxyl, analysed in the BRITISH MEDICAL JOURNAL for June 15th. He then said that the treatment by mercury and atoxyl might be carried on simultaneously; he has since found that he was wrong, for corrosive sublimate dissociates the atoxyl, and might give rise to accidents. Before beginning mercurial treatment, it will be well to wait for fifteen days till the atoxyl is eliminated from the system. The German preparation, being stronger, should be used in smaller doses than the French.

The Council of the Faculty in Paris has decided that in future the functions of physician, surgeon, and accoucheur to the hospitals are incompatible with those of professor of anatomy, histology, physics, chemistry, and pharmacology. The professors of special chairs must give an undertaking to devote themselves exclusively to their teaching.

CORRESPONDENCE.

BOLD ADVERTISEMENT.

SIR,—Certain imperfectly-reported observations of mine, made at the opening of the Isolation Hospital for Infectious Diseases at Preston, have been so distorted in certain journals, and have been so further misrepresented in a most objectionable advertisement just issued, that I should be glad if you would allow me to refute the ridiculous assertions with which I am credited. I am made to say that "patients should leave off taking medicine when they are sick." I need not say that I made no such preposterous observation. What I did say was this—that in dealing with such maladies as typhoid fever, smallpox, scarlet fever and tuberculosis, the public would be better advised to adopt preventive measures against those disorders than take medicines when they were sick with them.

From this observation I imagine no medical man would dissent. I further quoted the following passage from Frankland's *Pasteur* (p. 129): "A day will come when in Berlin, in London, in Paris, man will not die of diphtheria, of typhoid, of scarlet fever, of cholera, of tuberculosis, any more than he dies in these cities to-day from the venom of snakes or the tooth of wolves."

My solicitors have been assured by the authors of the advertisement that it will be at once discontinued.—I am, etc.,

London, W., June 18th. FREDERICK TREVES.

THE PROPOSED INSTITUTE OF MEDICAL SCIENCES AT SOUTH KENSINGTON.

SIR,—At the date of the recent election by the Faculty of Medicine of their Representatives on the Senate of the University of London an impression obtained that St. Thomas's Hospital was no longer whole-hearted in support of an Institute of Medical Sciences at South Kensington. This impression is entirely erroneous, and in view of the meeting of the Faculty summoned for next week it seems desirable that it should be corrected.

St. Thomas's has throughout been consistent in its opinions on this question, and still desires to afford its support to the Senate in the steps which the University has taken on the recommendation of the Faculty to establish an Institute at South Kensington.

The Treasurer of St. Thomas's is a member of the Committee appointed by the Senate to obtain financial help for this scheme; the staff and lecturers continue to give their unanimous support to the proposal; they believe it to be one of the most important steps which can be taken, and which are so urgently needed, to strengthen the position of the metropolis as the chief centre of medical education in the United Kingdom.—I am, etc.,

J. HERBERT FISHER,
Dean of the Medical School, St. Thomas's Hospital.

London, W., June 17th.

THE GENERAL MEDICAL COUNCIL AND THE BRITISH MEDICAL ASSOCIATION.

SIR,—Your leading article dealing with this question treats it as if it were settled that the Association will prosecute cases before the General Medical Council, but it has always been supposed that this is at present *ultra vires*, and at the last meeting of the Council of the Association the Chairman said that he had obtained the opinion of Mr. Dill, the counsel who has been advising in the matter of the Charter, to the effect that neither the Association nor any of its committees or Branches possesses at the present time the power to prosecute cases

before the General Medical Council. It has been decided to ask for such power under the new Charter, but this has not yet been granted, and it seems to me premature to take any steps until the constitution of the Association is resettled. For this reason I have so far refrained from resigning my position in the Association.—I am, etc.,

Birmingham, June 17th. ROBERT SAUNDBY.

SIR,—I have been expecting to find in the BRITISH MEDICAL JOURNAL some protest against the way in which useful and eminent members of the Association who have been honoured by being sent to sit on the General Medical Council are now threatened with the loss of their membership of the Association. The fact appears to be that if a member of the Association gives such evidence of administrative ability as to gain the confidence of the profession, he is liable to be driven from the Association simply because he deems it incumbent upon him to accept nomination and election to the General Medical Council! If he then gives satisfaction, he may be re-elected and remain out of the Association; if not, he may return to it.

It seems to me this is a great argument against the Association acting as prosecutors.

Taking another aspect of the case, what a fine may be imposed on any member of the General Medical Council if during his tenure of office he must not insure against the expense of legal proceedings he may have to take to defend his honour.

Surely under these circumstances it will be difficult to find suitable candidates for election to the General Medical Council.

One would have thought that membership of the profession was as great (if not greater) source of bias as mere membership of some society the executive of which takes action.

I hope this matter will be taken up seriously by the Divisions and the Representatives.—I am, etc.,

Mumbles, June 15th. F. DE. COVERLY VEALE, M.D.

ANOTHER FORM OF HOSPITAL ABUSE.

SIR,—With reference to the letter entitled "Another Form of Hospital Abuse," published in your issue of June 8th, 1907 (p. 1392), I have been asked by the surgical staff of the Metropolitan Ear, Nose, and Throat Hospital to disclaim the episode related by your correspondent as occurring at a hospital for diseases of the throat, nose, and ear. In justice to this, one of the first, if not the oldest special hospital for the treatment of diseases of the ear, nose, and throat, I shall be obliged by your giving to this disclaimer the same publicity which you have given to your correspondent's letter. It is unnecessary for me to add that the method described by your correspondent would meet with the strongest disapproval of the members of the staff of this hospital.—I am, etc.,

JOHN MACKINNA,
Secretary to the Metropolitan Ear, Nose, and Throat Hospital.

June 17th.

SIR,—I have been waiting to see if any notice would be taken of Mr. Francis Roe's letter on the above subject, which appeared in your issue of June 8th, but as nothing has so far appeared in your columns, will you allow me to make a few remarks?

In the first place, the conduct attributed to the specialist is both indefensible and unpardonable, but as far as I can gather, Mr. Roe's *facts* are based entirely on the statements of the patient's mother, and the specialist has not been given an opportunity of explaining the matter. From some considerable experience in investigating the complaints of patients I am convinced that it is dangerous from the point of view of justice to accept the statements of even fairly well-educated people without hearing the other side of the question.

In the next place, assuming that all Mr. Roe's statements are facts, is his letter a fair one? There are four hospitals for diseases of the throat, nose, and ear in London, all of which are necessarily under the cloud of his accusations. There are, too, some twenty-six visiting surgeons to these hospitals working "in the vicinity of Cavendish Square," all of whom are more or less tarred with his accusing brush.

It seems to me that if Mr. Roe has made sufficiently sure of his facts to warrant his giving publicity to them, he could well afford to run the risk of an action for libel, and that he should therefore give the name of the hospital concerned and that of the specialist he is accusing. If, on the other hand, he is not in a position to verify every detail of his statement, he should have withheld his hand from paper.

Surely, in any case it would have been better and fairer if Mr. Roe had reported the information he has received to the Medical Board and to the Committee of Management of the hospital concerned, with a request for investigation. Should these bodies decline to investigate, which seems to me most improbable, he could then carry the matter to the Ethical Committee of the British Medical Association or of its Metropolitan Counties Branch, and finally, if necessary, to the General Medical Council. Such action would be a more efficacious method of checking the abuse, and would be much fairer to Mr. Roe's professional brothers and their hospitals.

I think I can honestly say that the practices of which Mr. Roe complains are *not* "the usual methods adopted by the members of the staffs of the special hospitals to increase their private practice," and that we shall all be delighted if he has the pluck to aid and abet us in an investigation on the lines I have suggested.

Such letters as Mr. Roe's can do no good, but must necessarily do some harm to useful institutions, and I think, Sir, they should not be published unless their authors are prepared to "face the music" and give chapter and verse.—I am, etc.,

CHARLES A. PARKER.

Throat Hospital, Golden Square, W., June 18th.

ACUTE PNEUMONIA IN CHILDREN.

SIR,—In a suggestive article published on June 8th under the above title, Dr. Montague Murray refers to what he describes as "Dr. West's classification of broncho-pneumonia into primary, secondary, and intermediate." This does not look convincing, and does not represent my views. I did not intend it as a classification at all, but only as a statement of the clinical forms under which bronchopneumonia presents itself. As the views I have long advocated seem to be gradually meeting with general acceptance, I desire that they should not be misapprehended, and I may therefore be permitted to state them again concisely.

Acute inflammation of the lung, or pneumonia, is generally divided into two forms, according as it produces massive consolidation or disseminated patches of consolidation, the first being called lobar or croupous pneumonia, the latter lobular or broncho pneumonia, the former being characterized by its acute onset, short duration, and abrupt termination.

The cases of disseminated, patchy pneumonia in children, or bronchopneumonia, fall into three clinical groups:

1. That in which the disease is of gradual onset, the temperature hectic in character, the course prolonged and interrupted by relapses, and the termination by lysis. As it is preceded by some affection of the air tubes it may be called secondary.

2. That in which the history and symptoms are similar, but the disease is of sudden rather than gradual onset.

3. That in which there is no antecedent affection of the air tubes: so that the affection may be called primary. The attack is of sudden onset and short duration; the temperature persistently high; there is not any tendency to relapse, and the termination is by crisis.

From the 1st group lobar pneumonia differs only in the extent of the consolidation—that is to say, in little more than physical signs.

What I maintain, therefore, is this: That under the term "bronchopneumonia of children," or disseminated patchy pneumonia, two different conditions are confused. Though it is true that I divide bronchopneumonia into two forms, the primary and secondary, I do so only to draw attention to them and to separate them from one another as different diseases with different clinical and pathogenic histories.

There has been much difference of opinion among authorities as to the frequency of croupous or lobar pneumonia in the child. The difference depends upon whether

the cases be classified according to their clinical characters or according to the physical signs and gross morbid anatomy. Massive consolidation is certainly much less frequent in the child than in the adult. At the same time the primary form of bronchopneumonia of the child does not differ in any way clinically from the acute massive pneumonia of the adult. The anatomical classification of bronchopneumonia must therefore give way to the clinical classification, and we are forced to the conclusion that the primary form of bronchopneumonia is really the same disease as the massive pneumonia of the adult.

Bacteriological observations, so far as they go at present, confirm this conclusion, and show that the primary form is associated with the pneumococcus, the secondary with other organisms. Pneumococcal inflammation of the lung thus appears to occur with almost equal frequency in the child and in the adult. In each it may produce either a single massive consolidation or several disseminated patches; but while in the adult the massive form is common and the patchy rare, in the child the contrary is the rule; it is the patchy form that is usual, and the massive form rare.

I do not desire to retain the primary form among the bronchopneumonias at all, but to take it away from them altogether, and put it into the category of ordinary or pneumococcal pneumonia, to which it really belongs. It is therefore pneumococcal pneumonia rather than bronchopneumonia which I would classify in order to emphasize the fact that pneumococcal pneumonia occurs not only in a massive but also in a patchy form, the patchy being the common form in the child and the massive in the adult.

If this view of bronchopneumonia renders it possible, as it indeed does, to foretell the course of any given case with greater precision and confidence, it is clear that there is much to recommend it.—I am, etc.,

London, W., June 12th. SAMUEL WEST.

MEDICAL REFEREES UNDER THE NEW COMPENSATION ACT.

SIR,—The Home Secretary has just issued a circular to medical referees under the Workmen's Compensation Act, 1897, inviting them to apply for similar appointments under the new Compensation Act.

The remuneration is stated to be similar to that under the old Act (a remuneration which has, I believe, amounted, on an average, to less than two guineas a year to each medical referee, since their services have been so seldom called for), but with the addition that a fee of three guineas will be payable when the medical referee is called upon to sit as assessor with the county court judge.

Surely such a fee is utterly inadequate for the time, inconvenience, and responsibility involved. Whether the home consultation hours are thus interfered with, or the visiting, or the operating hours, the call must seriously interrupt the surgeon's work; whilst the fees are much below such as he would readily command for giving evidence in court.

Such considerations are emphasized by the grave responsibility of the post of assessor, and by the fact that the Home Secretary expects the holders of such posts to be:

> Those who hold, or have held, hospital appointments, or have in other ways acquired wide experience of accidents and their consequences, as it is essential that they should have such experience of the kind of questions arising as to enable them to decide, authoritatively, points on which there may be a divergence of medical evidence. It is no less essential that referees should be men of independent position and high standing in their profession, so that they may command the confidence of all parties in disputes under the Act, and bring to such disputes, not only the fact, but the reputation of strict impartiality.

The circular is dated June 17th, and applications are to be sent in by the 25th, so that there is no time for consultation or combination among the present medical referees.

It is to be hoped that the Home Secretary may see his way to amend the fee for sitting as assessor, and that meanwhile the county court judges will consult the convenience of the medical referees in fixing the times for hearing cases with them.—I am, etc.,

June 19th. A MEDICAL REFEREE SINCE 1897.

BEES' STINGS AND RHEUMATISM.

SIR,—In the course of an inquiry into the relation, which I have been led to suppose may exist, between certain manifestations of rheumatism and an abnormal production of formic acid in the tissues, my attention has been called from time to time to a curious belief which appears to be prevalent in various parts of the country. This very interesting piece of folk-lore is to the effect that frequent exposure to the sting of bees (as among bee-keepers) is both protective and curative for rheumatism.

My correspondence leads me to conclude that this belief is widely disseminated, and is probably familiar to many of your readers. May I, therefore, be allowed the privilege of making the following inquiries of any of your readers who are sufficiently interested in the question to send me such information as has come within their own knowledge:

1. Have you met with the belief that bees' stings cure or prevent rheumatism?

2. Do you know any case in which a rheumatic subject claims to have benefited in this way as the result of working among bees?

2. Are you acquainted with any reliable evidence which supports or explains the origin of this belief?

4. What were the characters of the "rheumatism" in question?—I am, etc., E. W. AINLEY WALKER.

University College, Oxford, June 16th.

UNION HOSPITALS AND THE TRAINING OF MIDWIVES.

SIR,—I respectfully protest against your disparaging remarks on the subject of the qualifications and fitness of the medical officers of union hospitals to train midwives. We receive the same training and pass the same examinations as the gentlemen connected with the alms-supported institutions. What special virtue have alms for educing capacity that rates do not possess? Then, again, the staffs of the alms-supported institutions are selected in precisely the same way as we are, namely, by influence and votes, and not by concursus or tests of any description. At p. 1402 of the JOURNAL of June 8th there is a paragraph announcing that the English Poor-law Union Association are circulating a letter among Poor-law Union authorities urging them to apply at once to the Central Midwives Board for recognition of their lying-in wards as training schools for midwives. I then wrote to them asking them for a copy of their circular, that I might lay it before my authority, whereupon I received the singular reply from the Secretary that he could not do so, as all correspondence was strictly confidential. This is certainly a new way to advance a public question.—I am, etc.,

Cashel, June 15th. THOMAS LAFFAN.

THE SOCIETY OF APOTHECARIES OF LONDON BILL, 1907.

SIR,—This Bill, having been passed by both Houses of Parliament, now only awaits the Royal assent to become law. It changes the title of L.S.A. to the more appropriate one of Licentiate in Medicine and Surgery, and gives authority to the Society to confer the latter title, by diploma, on all of its licentiates who have qualified since June 30th, 1887. Authority is also given to the General Medical Council to enter the new description on the *Medical Register*. Power is given to the Society to restore (with the consent of the Medical Council) the name of any licentiate who may have been removed from the roll. Heretofore the Society had only the power to remove a name.

The cost of obtaining this Act has been considerable, and the Council of the Association of Physicians and Surgeons of the Society of Apothecaries undertook to raise £250 towards it. Of this sum, £222 5s. 6d. has been subscribed by the licentiates, £25 was voted by the Association from its funds, leaving a deficit of £2 14s. 6d. The expenses of collection amount to £13 1s. 9d., bringing the total deficit to £15 16s. 3d.

May I ask those licentiates who have omitted to send a donation, to send their contributions to me without delay? It is scarcely fair that the members of the Council of the Association, who have had all the hard work, and who have already borne more than their share of the expenses, should also be saddled with this deficit.—I am, etc.,

Oxford, June 17th. A. RIVERS-WILLSON.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

THE LATE PROFESSOR NEWTON.

THE Vice-Chancellor announces that the late Professor Newton has bequeathed to the University his Natural History Collections and Library and the sum of £1,000 for maintenance.

PHYSIOLOGY AND PSYCHOLOGY.

The General Board of Studies, in consequence of a letter received from Dr. Rivers, recommend that in place of the present lectureship there shall be two University lectureships as from Michaelmas 1907—a lectureship in the Physiology of the Senses at an annual stipend of £100, and a lectureship in Experimental Psychology at an annual stipend of £50.

DEGREES.

The following degrees were conferred last week:

M D—T G M Hime, King's; J Mellanby, Emm.; G. I. Western, Penh.; L. B. Leech, Christ's.
M B, B C—F. Gayner, King's; C. Cassidy, Sid Suss.; H. P. Crampton, Cla.; H. P. Grob, Sid Suss.; H. W. Wiltshire, Cla.; H. Dimock, Sid Suss.
M B—C. E. Droop, Trin.; J. W. Linnell, Joh.; H. C. Cameron, Joh.; A. R. Jordan, Cla.; E. Lloyd, Emm.
B C—L. H. L. Mackenzie, Trin.

The following degrees were conferred on June 15th:

M D—E. B. Leech, Christ's.
M B., B C—H. Dimock, Sid. Suss.
M B—E. Lloyd, Emm.

THESES.

The Raymond Horton-Smith Prize for 1907 is awarded to John Mellanby, M A., Emmanuel College, for his M.D. thesis on The Properties of Diphtheria Antitoxin and Its Relation to the Proteids of Normal Serum.

Proxime Accessit: H. Morriston Davies, M A., B C., Trinity College, M D. thesis on The Functions of the Trigeminal Nerve.

EXAMINATIONS.

The following have been approved at the examinations indicated

FIRST M.B. (*Chemistry and Physics*).—W. B. Alcock, G. Arnfield, L. W. Barlow, W. F. Benstead-Smith, A. H. Birks, J. Brewer, D. F. Burton, E. Calvert, C. G. H. Campbell, M. H. Cane, J. W. H. Chun, J. D. Clarke, L. B. Clarke, A. C. Clifford, G. B. Code, E. R. C. Coole, J. H. Cumming, G. C. Fairchild, A. N. Garrod, B. Graves, J. L. Green, E. F. W. Grellier, A. F. Hall, J. D. Jones, A. Kennedy, C. H. Locke, J. D. Legge Currie, G. R. D. McGeagh, W. C. D. Maile, A. S. L. Malcolm, R. K. Merson, G. C. Metcalfe, E. J. Nangle, W. S. Newton-Clare, A. B. Paul, N. P. Pritchard, L. C. Rivett, R. S. Scott, H. J. S. Shields, J. W. Stretton, C. R. Taylor, H. F. W. Warden, C. Warner, H. A. Watermeyer, E. H. C. Wilson.

FIRST M.B. (*Zoology, Botany*).—W. B. Alcock, L. A. P. Anderson, G. Arnfield, L. W. Barlow, W. F. Benstead-Smith, A. V. Boyall, J. Brewer, D. F. Burton, E. Calvert, J. W. H. Chun, J. D. Clarke, A. C. Clifford, E. K. T. Collins, A. G. W. Compton, B.A., S. S. Crowe, J. Dougherty, E. L. Dobson, E. Donaldson, G. C. Fairchild, A. N. Garrod, J. E. Gethin, B.A., B. Graves, J. L. Green, E. F. W. Grellier, R. H. Groves, A. F. Hall, S. M. Hattersley, D. W. John, I. W. Jones, G. R. D. McGeagh, J. M. D. Mackenzie, C. Madge, W. C. D. Maile, A. S. L. Malcolm, E. G. Martin, B.A., R. K. Merson, G. C. Metcalfe, E. J. Nangle, W. S. Newton-Clare, N. E. Norman, T. Owen, A. B. Paul, J. H. Pondered, D. V. Pickering, C. P. Pugh, L. C. Rivett, T. T. Rutherford, R. S. Scott, B. Sharpe, B.A., L. W. Shelley, H. J. S. Shields, F. E. Smith, C. A. Smythe, L. C. Somervell, J. W. Stretton, A. L. Sutcliffe, C. R. Taylor, C. P. Taylor, G. S. R. Thomas, J. W. Tonks, G. A. Wade, J. E. Waddy, H. F. W. Warden, C. Warner, W. G. Watson, S. M. Wilcox.

THIRD M.B. (*Pharmacology and Experimental Psychology*).—C. W. Archer, B.A., A. E. Bonny, E. S. Carey, B.A., L. Coleridge, B.A., C. A. Doubleday, B.A., E. A. Dyson, B.A., A. Fearing, B.A., P. K. Gilroy, B.A., A. H. Hassall, B.A., A. R. Harrison, B.A., S. L. Harker, B.A., W. Harrison, B.A., E. G. V. Hodge, B.A., H. E. Humphreys, B.A., R. R. Hutchinson, B.A., P. C. V. Jones, B.A., G. C. Kidd, B.A., F. J. Lewis, B.A., P. A. Lloyd-Jones, B.A., C. K. McKerrow, B.A., J. Mackie, B.A., A. F. Morrison, B.A., L. E. Percy, B.A., H. Rashdall, B.A., E. M. R. H. Thornhill, B.A., H. H. Tresidder, B.A., C. Tyler, B.A., R. M. Vick, B.A., B. Wanby, T. S. Wood, B.A., A. L. Wyatt, B.A., C. E. Wright, B.A.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary Council was held on June 13th; Mr. Henry Morris, President, in the chair.

Deputation to the Lord President of the Privy Council.

A report was received and entered on the minutes from the above deputation, which consisted of the President, Vice-Presidents, Mr. Howard Marsh, Mr. Bailey, and Mr. Pearce Gould, who waited upon the Lord President of the Council concerning the relative position of the Licentiates and Members before the Lord President.

The Licence in Dental Surgery.

Diplomas were issued to twenty-six candidates found qualified.

Fee for Examination in Dental Surgery.

The following resolution, passed by the Board of Examiners in Dental Surgery, was adopted:

"That candidates for dental diplomas who have completed a course of not less than three years' study relating to medical dentistry and who have been registered in British Colonies under conditions which do not require the passing of a recognized preliminary examination be admitted to the Examinations for the Licence in Dental Surgery provided they pass the required preliminary examination in general education and complete the course of study required by the regulations at a recognized medical school and hospital and at a recognized dental school and hospital.

2. That a candidate who possesses a registrable dental qualification be admissible to re-examination without producing certificates of additional study.

The following regulation was also adopted, this regulation having been previously adopted by the Royal Colleges in regard to conjoint candidates:

A candidate must present himself for examination in chemistry and physics together (unless he claims exemption from one of them) until he has reached the required standard to pass in both, or in one of those parts, but he will not be allowed to pass in one part unless he obtains at the same time half the number of marks required to pass in the other part.

Closing of the Library.

The library will be closed during September and October next for repainting.

Appointment of Examiners.

The following appointments were made for the ensuing year:

Elementary Biology.—T. G. Stevens, H. W. M. Tims.
Anatomy.—W. H. C. Greene, A. Robinson, W. Wright.
Physiology.—B. L. Abrahams, J. B. Leathes.

For the Primary Fellowship.

Anatomy.—C. Addison, W. McA. Eccles, A. Keith, A. H. Young.
Physiology.—T. G. Brodie, G. A. Buckmaster, C. F. Myers-Ward, W. H. Thompson.
Medicine.—A. H. N. Lewers, H. J. M. Playfair, W. R. Pollock, W. W. H. Tate.
Public Health.—Part I: H. R. D. Spitta. Part II: H. T. Bulstrode.

Election of Members of Council.

A meeting of Fellows will be held at the College on Thursday, July 4th next, for the election of four Fellows into the Council in the vacancies occasioned by the retirement in rotation of Sir John Tweedy, Mr. Herbert William Page, Mr. Charles William Mansell Moullin, and Mr. Frederic Samuel Eve, of whom Sir John Tweedy did not offer himself for re-election.

A vote of thanks was passed to Sir John Tweedy for the long and zealous services rendered by him to the College.

Fellowship.

At the same meeting the following candidates were admitted to the Fellowship:

R. G. Turner, S. E. Denyer, R. H. Paramore, J. V. Arkle, F. A. Hepworth, W. L. Cripps, F. W. Goyder, F. A. G. Jeans, W. G. Ball, H. W. Perkins, A. J. Walton, I. G. Back, J. C. Mead, W. I. Cumberlidge, E. R. Faulkner, P. L. Giuseppi, M. Birks, R. D. Forbes, F. E. McKenty, D. T. Barry, R. B. Etherington-Smith, A. C. Goodwin, R. E. Harcourt, J. Swift-Joly, F. S. Mackenzie, H. H. Rayner.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE ABUSE OF MEDICAL CHARITIES.

THE recent Conference of Charity Organization Societies at Norwich resulted, amongst other things, in a useful discussion on the abuse of medical charity and charities. It was founded on a paper dealing with provident medical associations, read by Lieutenant-Colonel Montefiore on behalf of Dr. Gray of the Medical Subcommittee of the London Charity Organization Society. In this paper the system was strongly commended of appointing almoners to examine the financial fitness for free treatment of persons attending hospital, and of choosing for the work individuals well trained in charitable work among the poor. The chief point made, however, was that the true solution of hospital abuse and allied questions lay in the promotion of provident dispensaries, and in these institutions working hand in hand with the hospitals. Some of the suggestions arising from the paper were subsequently well driven home by Dr. Beverley of Norwich, who was for two years Chairman of the Hospitals Committee of the British Medical Association. Provident dispensaries, he considered, encouraged thrift and a spirit of self-respect and independence, which was often lacking in the *habitués* of hospital out-patient departments. The latter, he indicated, should bear the [illegible] to the working classes as do Hurley Street and its neighbourhood to those who can afford to pay ordinary fees. The general theme was further exemplified by Mr. H. A. Ballance, who described in detail the working of the Norwich Public Medical Service, a society instituted to provide the working classes with medical attendance in times of sickness, and to benefit those persons who financially are just below the class which is able to afford the minimum fee of ordinary private practitioners. He also explained in general terms some of the undesirable features of friendly society medical contract work, and more particularly the unfairness of allowing members of friendly societies to benefit by those contracts long after they have ceased financially to be on a par with ordinary members of the society. The discussion terminated in some speeches, ruled to be out of order, intended to show that the provision of medical assistance for all classes should be the duty of the State and not of individuals.

OBITUARY.

JULIUS DRESCHFELD, M.D., F.R.C.P., B.Sc.,

PROFESSOR OF MEDICINE IN THE UNIVERSITY OF MANCHESTER; CONSULTING PHYSICIAN TO THE ROYAL INFIRMARY, MANCHESTER.

WE announce with profound regret the death of Dr. Julius Dreschfeld, Professor of Medicine in the University of Manchester, which occurred unexpectedly from heart failure at his residence in Withington on the evening of Thursday, June 13th.

Shortly after Whit week, on his return from London, he had what he considered to be an attack of influenza, but he kept hard at work until he was compelled to take to bed (on June 10th). He passed away quietly, but suddenly and unexpectedly, whilst talking to a friend who had gone to call for him in the evening.



Photograph by] JULIUS DRESCHFELD, M.D., F.R.C.P., B.Sc. *[Lafayette, Manchester.*

Dr. Dreschfeld was born at Niederwerm in Bavaria in 1845, and received his early education at Bamberg. He had a relative resident in Manchester, and went to that city in 1861, with scant knowledge of English and little to back him save natural ability and determination of purpose. Owens College was then situated in the town in Quay Street, and young Dreschfeld pursued his general and scientific studies there. His success, especially in the study of English, mathematics, and chemistry, already indicated the measure of his powers of application. He came under the influence of Roscoe, and his excellent knowledge of chemistry—for he gained the Dalton Chemical Prize in 1863, and also the Dalton Junior Mathematical Scholarship in 1864—proved of the greatest value to him in his subsequent studies on diabetic coma and allied diseases. He studied medicine at the Royal School of Medicine in Pine Street, for in those days the Manchester Medical School as it now is had not been founded. In 1864 he went to Würzburg, then as now a renowned school of medicine, with the late A. von Kölliker as Professor of Anatomy and Histology, and von Bezold in the Chair of Physiology. Dreschfeld assisted von Bezold, and one of his earliest publications—*Reflex Action of the Vagus on Blood Pressure*—was the outcome of work under this distinguished master.

He took the degree of M.D. in Würzburg in 1867. In the short, sharp campaign of the Austro-Prussian war which terminated at Sadowa, Dreschfeld acted as an Assistant-Surgeon in the Bavarian army. Three years later he returned to England, and passed the examination for the L.R.C.P. and then began practice in the Broughton district of Manchester. He devoted himself with remarkable assiduity to his profession, so that within three years—in 1872—he was appointed Honorary Assistant-Physician to the Hulme Dispensary, and in the following year was elected one of the Assistant-Physicians to the Manchester Royal Infirmary. This gave him an unlimited field for the development of his keen powers of observation and of his remarkable aptitude for accuracy of diagnosis. He had, indeed, all the instincts of a great physician. Step by step with ever-increasing reputation he kept a steady upward and successful course, until in 1883 he become full Physician on the retirement of Sir William Roberts. He became Senior Physician to the Infirmary in 1899, when the late Professor Leech retired from the active staff. According to the rule as to the age limit requiring retirement at the age of 60, he resigned in October, 1905; but so highly were his services, abilities, and professional attainments valued, that he was permitted to retain some beds and continue his active career as a physician of the Infirmary. This concession enabled him to illustrate in the hospital his teaching as given at the University, for he still continued to hold with great acceptance his position as Professor of Medicine at the University. In 1875 he took the M.R.C.P., and in 1883 was elected a Fellow of the Royal College of Physicians. He also acted as one of the Examiners in Medicine for the College for three years. The College set its *imprimatur* on his scientific work by asking him in 1888 to deliver the Bradshaw Lecture. The subject of this lecture, which was published in the BRITISH MEDICAL JOURNAL for that year, was "Diabetic Coma."

Dreschfeld was not only a great clinician, he was also an ardent investigator in the domain of pathology, and an able, painstaking, and most successful teacher. His medical training was founded on the basis of pathology and clinical work and experience. His knowledge of pathology was so extensive and accurate that in 1876 he was appointed Lecturer on Pathology in Owens College. His success as a teacher was immediate, for he had at first hand a masterly grasp both of details and principles. He organized a department of pathology, which perhaps at that time was second to none in the United Kingdom. Former pupils who had the advantage of his prelections

on pathology often spoke of his lectures as masterly in regard to their practical utility, their conciseness, and the almost encyclopaedic character of their scope, while his demonstrations and the accompanying histological course were fit complements calculated to illustrate and drive home the lessons of the lecture. In 1891, on the resignation of Professor Morgan, he was elected Professor of Medicine, and for a time he had as a colleague the late Professor James Ross. In medicine, as in pathology, he proved himself a successful and beloved teacher, both at the University and Infirmary. He had that broad training, wide knowledge, sympathetic insight, kindly manner, critical ability, and sharp, keen penetration which are the requisites of a successful teacher, as well in the lecture room of the University as at the bedside.

He was always an active member of the Manchester Medical Society, and was the second President of the Pathological Society in 1886–7, an office which he held for several years. Amongst other local offices filled by him were those of Consulting Physician to the Skin Hospital, Christie Cancer Hospital, and to the Society for Distressed Foreigners. He acted as an Examiner for the University of Cambridge. The calls upon his services as a consulting physician, however, were so frequent and continuous that he had little time to spare for such work. In 1902 he was President of the Section of Medicine when the British Medical Association met in Manchester. At the time of his death he was busy preparing his lectures for next year as Lumleian Lecturer of the Royal College of Physicians.

Dr. Dreschfeld's publications are very numerous. They begin with his paper already referred to whilst assistant to von Bezold. He early pointed out the changes that take place in the nerve cells of the spinal cord after amputation of a limb.[1] In fact, in some respects he anticipated the more recent results on what is now known as chromatolysis. The pathology and clinical phenomena of nervous affections attracted his attention, and he published numerous papers in the *Journal of Anatomy and Physiology*, *Brain*, British Medical Journal, *Medical Chronicle*, etc., on such subjects as locomotor ataxy, cerebellar tumours, lateral sclerosis, optic nerve and tract, muscular atrophy, sclerosis of the cord, myelitis, etc. But Dreschfeld was more than a distinguished neurologist; he was a most accomplished all-round physician, and as evidence we may point to his masterly paper on Enteric Fever, and to his contributions on Endocarditis and Ulcer of the Stomach and Duodenum in *Allbutt's System of Medicine*. His intimate knowledge of German and French were of the greatest use to him, for he was a diligent student of medical periodicals. Little escaped his keen quest, so that he was always abreast of the newest information on all matters, medical, pathological, and therapeutical.

Dr. Dreschfeld was twice married; he leaves a widow and four children—two sons and two daughters.

Dr. Dreschfeld's position in Manchester was unique. Coming as a stranger, he climbed to the highest rung of the ladder in the medical world in the city of his adoption. His fame was not merely local; it was European, and, in fact, cosmopolitan. As a consultant he was in constant request. To what extent this almost incessant work by night often as well as by day played its part in contributing to his untimely end at the age of 61, it is difficult to say. His life was one with few gaps for peaceful repose and recuperation. Every minute seemed to be utilized, and often late into the evening Dreschfeld was journeying to and fro at the call of those who eagerly sought to have the advantage of his counsel, ripe experience, and wise advice. To his colleagues his loss is irreparable, and a wide circle of friends and pupils will keep green his memory.

It will be difficult to fill his place, for, as we have said, his position as physician, consultant, and teacher was unique and commanding. Dreschfeld lived an arduous and strenuous life of persistent professional activity. He had no relieving hobby or beguiling pastime. He sometimes pictured to his colleagues and friends the time when he would relinquish the daily calls of the consultant in order to devote himself again to laboratory work and the pursuit of scientific medicine. It was not to be. *Die Arbeit war vollbracht.*

The funeral of Dr. Dreschfeld took place at Southport on June 18th, and was attended by a very large and representative gathering of his colleagues and professional brethren in and around Manchester, and by many public men and a large body of medical students. Amongst the public bodies represented at the funeral were the Council and Senate of the University, the Lancashire and Cheshire Branch of the British Medical Association, the North Manchester Medical Association, the Manchester Royal Infirmary, the Christie Hospital, Ancoats Hospital, the Oldham Medical Society, Manchester Eye and Ear Hospital, Lancashire and Yorkshire Railway Company, and the Southport Medical Society.

[1] *Journal of Anatomy and Physiology*, 1879.

Brigade-Surgeon BENJAMIN LANE.

Brigade-Surgeon Benjamin Lane, who for some years lived in retirement at Cheltenham, died on June 12th at his residence in that town.

He was the eldest son of Dr. W. Lane, of Limavady, co. Derry, and was born on June 4th, 1827; he entered the army in 1852 as Assistant Surgeon; he was promoted Surgeon in 1860, Surgeon-Major in 1872, and Honorary Brigade-Surgeon on his retirement in 1882.

He received for his services in the Burmese war of 1852-3 with the 80th Regiment the medal with clasp; he was present at the attack on Tomboo, and gained distinction in the various operations in its vicinity. On one occasion, when the whole detachment at Tomboo was prostrate with fever, he devoted himself so wholeheartedly to the care of the sick that his assiduous attention to those under his care was singled out for particular commendation in General Orders by the Commander-in-Chief. In the storm and stress of the Indian Mutiny his sterling worth and inherent capacity to deal with the most untoward emergencies gained for him the well-earned reputation of an able and energetic officer. On March 5th, 1858, his zeal and experience were utilized at the action on the banks of the Jumma, for which he received the medal. For fourteen years his duties kept him in close touch with the 4th King's Own Royal Regiment at home and abroad. He leaves three daughters and one son who is well known in the medical profession, Mr. W. Arbuthnot Lane, Surgeon to Guy's Hospital and to the Hospital for Sick Children, Great Ormond Street, London.

Brigade-Surgeon Lane was buried in Cheltenham Cemetery on June 15th, and the ceremony was attended by the immediate relatives and by a great gathering of his old military and other friends, amongst these being General Winson, General Prendergast, Deputy Surgeon-General Watson, Colonel Croker King, Commander Dillon, R.N., Lieutenant-Colonel Harvest, Colonel Farwell, Colonel Abbott, Colonel Burlton-Bennett, Colonel Mortimer, and Brigade-Surgeon Owen.

DAVID GRANT, M.B., C.M.Glasg.,

INVERNESS.

We regret to have to record the death of Dr. David Grant, Inverness, which occurred rather unexpectedly on June 3rd at Cannabad, Bonar Bridge, Sutherlandshire. He had been in rather indifferent health for some time past and went to his native parish, hoping that the rest and quiet there would restore his strength.

Dr. Grant, who was born 56 years ago, studied at the University of Glasgow, and in the Arts Classes there he distinguished himself in several subjects, especially in mathematics and natural philosophy. Sir William Thomson now Lord Kelvin—took an interest in him while a student in his class, and through him he was offered a professorship in a South African college: he did not see his way to accept this appointment, having made up his mind at an early date to go abroad as a medical missionary. Entering the Medical School, he graduated M.B., C.M. in 1880. He acted as house surgeon to the late Sir George Macleod, and on finishing his studies at the Medical School with distinction he applied to the Presbyterian Church of England to be sent as a medical missionary to China; he was accepted, and established a medical mission and hospital at Chin-chu, about fifty miles north of Amoy. There for fifteen years, during which he paid only a short visit home, he laboured with marvellous success. At first he was single-handed, but by and by he passed several Chinese young men through a full course of medical and surgical study, translating for their use medical books into excellent Chinese. These

men helped him in the hospital; latterly something like 10,000 cases were dealt with annually. Dr. Grant won the confidence and affection of the people in a remarkable degree, and the keenest regret was felt when the state of his health obliged him to relinquish the work. His heart was throughout in China, and until a year ago, if even then, he never gave up the hope of returning there. When his health broke down he returned to this country, and, on the recommendation of Professor Gairdner and Sir Patrick Manson, he settled down in Inverness. This was in 1895, and for five years he practised as an eye specialist with great success, winning the respect and esteem of his fellow-practitioners and the general public. His health again breaking down, he was recommended to go to California, and settled in Los Angelos, going into partnership with a fellow-missionary, Dr. McLeish. He returned to Inverness about a year ago. Again he took up his work as an eye specialist, and soon got a good practice. A few months ago, his health showing signs of breaking down, he resolved to abandon all work for some time, trusting that his native air would have an invigorating effect on his enfeebled constitution. He never rallied, however, and died, as already stated, on June 3rd.

Dr. Grant was a most likeable man, and a conscientious, skilful, and successful practitioner, of a high Christian character; he was a generous friend to the poor, never refusing the exercise of his great knowledge and skill in innumerable cases where he could not look for any fee or reward.

Brigade-Surgeon JAMES BALFOUR COCKBURN, M.D., Army Medical Service (retired), died at Elm House, Guernsey, on June 1st. He entered the service as Assistant Surgeon, March 3rd, 1854; became Surgeon, January 8th, 1864; Surgeon-Major, March 1st, 1873; and Honorary Brigade-Surgeon on retirement, April 5th, 1882. He served in the Crimean campaign in 1854-6, and took part in the expedition to Kertch and Yenikali, and in the siege of Sebastopol, for which he had received a medal with clasp and the Turkish medal.

LIEUTENANT-COLONEL ALEXANDER BANNERMAN STRAHAN, Indian Medical Service (retired), died at Glenesk, Forfarshire, suddenly, on June 8th, in his 65th year. He joined the Bengal Medical Department as Assistant Surgeon, October 1st, 1869, becoming Surgeon Lieutenant-Colonel October 1st, 1889, and retired from the service in 1895. He served in the Afghan war in 1879-80, and took part in the operations around Kabul in December, 1879, including the investment of Sherpore (medal with clasp). He also received a medal with two clasps for his services with the Burmese expedition in 1886-9.

BRIGADE-SURGEON WILLIAM JAY, retired, Army Medical Department, died in London on April 18th. He entered the service as an Assistant Surgeon, January 22nd, 1858, became Surgeon-Major, April 1st, 1873, and retired with the honorary rank of Brigade-Surgeon, July 21st, 1880. He was in the Afghan war in 1878–80, and had received a medal for that campaign.

THE death is announced of Surgeon-Major ROBERT REID, late of the Bengal Medical Department, which he entered as Assistant Surgeon, March 31st, 1865, becoming Surgeon-Major, November 16th, 1880, and retiring from the service in 1887. His death occurred at Lisburn, co. Down, on March 26th last.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

A NAÏVE PROPOSITION.

WE have received a communication from a chemist and druggist asking our assistance to procure him a "Doctor willing to do a cheap practice . . . Advice and medicine, 6d. Powders, etc., extra." He goes on to say: "There are plenty of likely patients around here; and as I could easily arrange for a doctor to sit here at stated times, it could be managed with practically no expense for the doctor. I am anxious to meet with a doctor who is looking for a start, as I feel sure it is a good chance for a young man. Could you assist me?" It is a doubtful compliment to the medical profession that our correspondent should imagine the offer he makes likely to be accepted, nor do we find it flattering to ourselves that he imagines we should be willing to act as the agent to forward his scheme. He does not say how the money, "Medicine 6d., powders, etc, extra" is to be shared, although "powders, extra" we take to mean that the additional labour and skill required to dispense these articles involves an extra charge.

FRIENDLY SOCIETIES AND BONESETTERS

IT is satisfactory to learn that at the Folkestone Conference of the Manchester Unity of Oddfellows a proposal to accept certificates from a "practical bonesetter" in lieu of a registered medical practitioner was lost, the same fate attending an amendment to refer the matter to the directors for consideration. The speeches showed much common sense, the difficulty being especially emphasized that there is no means of defining the status of a person professing to be a practical bonesetter, so that the conference very wisely decided to leave the rule as it stands.

HOSPITAL STAFFS AND CLAIMS FOR COMPENSATION BY WORKMEN.

DISSONUS informs us that the following resolution was recently sent to the directors of a hospital with which he is connected: "To consider the advisability if possible of precluding any of the honorary medical staff of the hospital giving evidence against workmen in county court on compensation claims, when such workman has been medically attended at the hospital, also when the workmen pay to the institution for its benefits; other questions may arise out of the above." The Federation, we are further informed, makes an annual subscription to the hospital in question, a fact which throws light on the concluding words of the resolution. Our correspondent also sends us the following resolution passed by the directors of the hospital: "That it is desirable before any certificates are given by the member of the staff under whose care the patient was that the consent of the said patient be obtained, and that a copy of the said resolution be sent to the Federation." The resolution of the directors of the hospital is consonant with the principles which guide medical men in respect of professional secrecy. The implied threat in the resolution of the Federation is idle. It is always open to the employer to obtain the evidence of a member of the medical staff of a hospital under subpoena. A medical witness is bound to answer any question at the direction of the judge, and cannot in this country plead medical privilege.

Medico-Legal.

HILL *v.* CLIFFORD

IN this case, in which judgement was delivered by the Court of Appeal on June 12th, a question of considerable interest as to the meaning of "professional misconduct" was raised. The facts are shortly as follows: The plaintiff was in partnership with one of the defendants, R. E. Clifford, as dentists. The partnership deed provided that if R. E. Clifford died his brother Isidore, the other defendant, might take his place. Clause 20 provided that if either of the partners should at any time during the continuance of the partnership be guilty of professional misconduct or any act calculated to bring discredit on or to injure the business, the other partner might by notice in writing determine the said indenture, and in such case the provisions of the said indenture were to apply in the same manner as if the offending partner had died on the day of such notice. In June, 1906, Hill gave notice to determine the partnership, and the action was brought for a declaration that the notice was good, and for an injunction to restrain the defendant, R. E. Clifford, from representing or asserting that he was a partner. The plaintiff alleged that the defendant had been guilty of "professional misconduct" within the meaning of the articles, and sought to prove that his name had been erased from the *Dentists' Register* by the General Medical Council under Section 13 of the Dentists Act, 1878, on the ground that he had been guilty of conduct which was "infamous or disgraceful in a professional respect."

The report of the Dental Committee of the Council was also tendered in evidence. The question as to the admissibility and effect of both these documents was the main question in the action.

It appeared that in 1887 a company was incorporated under the name of the American Dental Institute (Limited). The Cliffords were shareholders and directors of this company, which carried on a dental practice in London and elsewhere. It was alleged that the company, to the knowledge of R. E. and Isidore Clifford, employed unregistered persons to attend patients and perform dental operations. Some of these were shown to have used the title "doctor." It was also shown that the company had advertised by certain pamphlets which puffed American methods in comparison with those of other

practitioners. Mr. Justice Warrington held that there was no evidence of professional misconduct and dismissed the action. He also decided the cases of Clifford *v.* Timms and Clifford *v.* Phillips, which raised similar issues, in favour of the Cliffords. Against these decisions appeals were lodged.

Mr. Buckmaster, K.C., and Mr. Ward Coldridge appeared for Hill; Mr. Buckmaster, K.C., and Mr. Buckley for Timms; Mr. Upjohn, K.C., and Mr. E. Ford for Phillips; while Mr. Terrell, K.C., and Mr. Houston appeared for the Cliffords in all three cases.

In giving judgement the Master of the Rolls said: Although it will be necessary to deal separately with each of these three cases, there is one important point common to them all which I think it desirable in the first instance to consider. Messrs. Isidore and Ruby Clifford, being registered dentists, entered into three separate partnerships with Hill, Phillips, and Timms for carrying on the profession or business of dentists, and the actions relate to the right of these three persons to determine the several partnerships on the ground that the Cliffords have, under the provisions of the Dentists Act, 1878, been found guilty of conduct which was "infamous or disgraceful in a professional respect," and have thereupon been removed from the register of dentists. The question arises whether the order of the General Medical Council, acting under the powers conferred by the Medical Act, 1858, and the Dentists Act, 1878, is to any and what extent evidence of professional misconduct on the part of the Cliffords. Now the Medical Council is the body to which, and to which alone, is confided the power, and with the power the duty, of altering the status of a dentist by removing his name from the *Register*. The language of Section 13 of the Act of 1878 is clear. By Section 15 the facts are to be ascertained by a committee of the Council, and the report of the committee is made conclusive as to the facts for the purpose of the exercise of the power by the Council of erasing a name from the *Register*. The consequences of removal of a name are set forth in Sections 3 and 5 of the Act. The person whose name is so removed cannot use the name or title of "Dentist" or "Dental Practitioner," nor can he recover any fee or charge for the performance of any dental operation or for dental attendance or advice. It is contended on behalf of the Cliffords that the order of the General Medical Council is *res inter alios acta* and not admissible in evidence to prove that they were guilty of professional misconduct. Mr. Justice Warrington has adopted this contention; but, with all respect to the learned Judge, I cannot agree with this view. I think the order is admissible as evidence of the existence of conduct which was "infamous or disgraceful in a professional respect," the proof of which fact was essential to the validity of the order of the General Medical Council (see Harvey *v.* The King, 1901 A.C. 601, 611). [His Lordship here proceeded to discuss the legal bearings of the case, and pointed out that while an inquisition in lunacy is evidence of lunacy, it is not conclusive, but may be traversed. He then continued:] In my opinion the order of the General Medical Council should be treated on the same footing as an inquisition. Unless and until evidence to the contrary is given, the order suffices to prove that the Cliffords were guilty of statutory misconduct. No evidence was given by them to rebut this prima facie evidence. I may add that I doubt whether it is competent to any Court to review a declaration by the General Medical Council that an act of a particular kind is "disgraceful conduct in a professional respect," even though it may be competent to review the decision that a certain individual has committed an act of that particular kind. I prefer to base my judgement on this general principle, although in the present case it might be sufficient to say that the Cliffords, by their counsel, admitted in the most formal way "that they have been guilty, as has been found by the Committee, of offences of professional misconduct," and promised not to repeat these offences. In Hill's case the partnership was created by a deed on October 18th, 1905. [His Lordship here referred to the Penal Clause 20 *supra*] and continued:] Hill, shortly after the decision of the Council on May 21th, 1906, gave notice in writing to determine the partnership, and brought an action for a declaration that the notice was valid, and that the partnership was determined, and for consequential relief. In my opinion the notice was valid. I think the Cliffords were guilty of "professional misconduct" within the meaning of Article 20, and that it is idle for a man who, in the language of Section 15 of the Act of 1878, has been guilty of "disgraceful conduct in a professional respect" to contend that he has not been guilty of "professional misconduct." I think, further, that by reason of the removal of their names from the *Register* the Cliffords have become incapable of taking part in the management of the business. His lordship then pointed out that in Phillips's case, in which the language of the penal covenant was somewhat different, Phillips had a right to dissolve the partnership by notice by reason of injury done to the business through the public or private misconduct of Isidore Clifford. He then said: "I think it is clear that it was competent to Phillips to give the notice of dissolution which he did give on June 20th, 1906, dissolving the partnership. In my view all the considerations as to professional misconduct which arose in Hill's case apply to this case. But there is a further peculiarity which ought not to be passed over. Phillips is not a registered dentist, and I infer from a statement made by his counsel in the Court below that he is not qualified to be put on the *Register*. Under these circumstances it seems to me impossible to allow the tw Cliffords, who are not on the *Register* or qualified to be pu on the *Register*, to maintain an action against Phillips, who also not on the *Register*, for the purpose of securing the co tinuation of the professional business of dentists upon th terms of the partnership articles. The whole foundation of th partnership is gone." His Lordship then dealt with Timms case, which closely resembled Hill's case, and said that Timm was entitled to have a dissolution. In the event he directe that the judgement of the Court below in all three case should be revised, and that the Cliffords should pay all th costs.

Sir Gorell Barnes and Lord Justice Kennedy concurred.

SCARLET FEVER AND MILK.

In an action brought against the proprietor of the Stoney La Hydro, Ilkley, at the Otley County Court, for damages to th amount of £52 1s. 11d. by a gentleman whose child was allege to have contracted scarlet fever whilst residing at th defendant's establishment, it was stated that the defenda had allowed a boy suffering from the disease to milk cows th supplied his establishment with milk, and that the child ha been infected from this source. The defence was a denial negligence, as the defendant was unaware, as also were th doctors, in the early stage of the boy's indisposition, of th real nature of his condition. As soon as he learned that the was scarlet fever in the lad's home he was stopped from goi to work. His Honour asked the jury to consider three que tions:—(1) Was the boy suffering from scarlet fever at th period when the child was in residence at the hydro? (2) D his milking the beasts affect the milk? (3) If so, was th infected milk the cause of the plaintiff's child's illness?

The jury returned a verdict for the defendant.

THE WORKMEN'S COMPENSATION ACT AND THE MEDICAL PROFESSION.

KAPPA writes: (1) Can a non-resident medical officer to workhouse and district claim compensation from t guardians under the new Act if they do not choose to insu him, which they have decided not to do? (2) Is an Od fellows' Club supposed to insure the medical officer unc the new Act, as he is under a contract? Also (3) are ott clubs to be treated in the same way? and (4) Does it cover accidents as well as illness contracted from the patients?

*** As to (1), it is clear that if the salary of t resident medical officer did not exceed £250, he would entitled to compensation; but it should be remembered th the resident medical officer may have income from oth sources, and it is a moot point under the Act whether th other income may not have to be taken into consideration order to swell the total to over £250.

(2) The club would be wise to insure.

(3) Yes.

(4) The Act refers to "accidents." The question, Wha an accident? is one of mixed fact and law. Infection wh anthrax has been held, in certain circumstances, to be accident arising out of and in the course of a man's empl ment. The Courts might well say that a practitioner w became infected through attending a patient or who suffe from blood poisoning as the result of an operation was victim of an accident.

THE INSURANCE OF LOCUM TENENTS.

TENACULUM writes: Do you consider it advisable to ensu locum tenent at £4 4s. per week against employer's liabil or would board and lodging be considered as amountin more than £250 per annum?

*** It seems that in determining whether a locum ten came within the £250 a year provision the court would t into consideration not merely the rate of pay per week, b his total earnings for the year. It might very easily happ therefore, that a locum tenent who earned four guine a week would not earn £250 a year, for he might only h employment for twenty or thirty weeks in the year. Th Act provides—Schedule I (2) (*a*)—that "average we earnings shall be computed in such manner as is calculated to give the rate per week at which the person being remunerated. Provided that where by reason o shortness of the time during which the workman has be in the employment or the casual nature of the employment it is impracticable to compute the rate of remunerati regard may be had to the average weekly amount w during the twelve months previous to the accident was bei earned by a person in the same grade employed at the work by the same employer. . . ." The point is doubtful it would be safer to insure. This can be done through the Medical Insurance Committee at the rate of five shillings year.

HOSPITAL EXPENSES.

H. C. writes: In cases where the insured is taken to a hospital for medical treatment, will not the hospital be entitled to claim the amount the insurance company will have contracted to pay for such medical treatment?

*** It is clear that there would not, in an ordinary case, be any contractual relationship between a hospital and the insurance company, and in the absence of contract there is nothing in the Act which would enable the hospital to recover these expenses.

ABSTRACTS OF MEDICAL PAPERS IN THE LAY PRESS.

DR. MARY S. P. STRANGMAN complains of an abstract of a paper which appeared in the BRITISH MEDICAL JOURNAL having been published in the *News of the World*, and in the Sunday edition of the *Independent*, by which a far wider publicity has been given to the facts, to the considerable annoyance of the patient, and she asks whether there are no means of preventing such republication.

*** Some years ago, in order to prevent the republication of matter which has appeared in the JOURNAL, it was registered as copyright at Stationers' Hall. We have referred the matter to the General Secretary, that he may see whether the copyright has been infringed.

INQUEST FEES AT POOR-LAW INFIRMARIES.

D. asks particulars of a case tried at Croydon where the Medical Superintendent of the infirmary summoned the coroner for fees as medical witness at inquest.

*** The case to which our correspondent refers appears to be Don Bavaud *v.* Morrison, heard on March 31st, 1885. Mr. Fraser, solicitor, of 2, Soho Square, appeared for the plaintiff, Mr. Don Bavaud, the Medical Officer of the Croydon Infirmary, and Mr. Braxton Hicks was counsel for the defendant coroner. The plaintiff appears to have been required by the coroner to make a *post-mortem* examination, and to attend and give evidence at the inquest on a destitute pauper, who was sent to the infirmary on November 5th, 1884, and who died there November 6th. The inquest was held November 11th. The plaintiff claimed a fee of £1 1s. for his attendance and £2 2s. for the *post-mortem* examination, under 6 and 7 Will. IV, cap. 89, secs. 3 and 5, and 1 Vict., cap. 98, sec. 2. The point raised was whether the workhouse infirmary was a public infirmary. The plaintiff contended that it was not, but that it was only provided for the reception of paupers, and that no one was admitted except destitute persons within the union. It was also pointed out that the infirmary was not supported by "endowments or by voluntary subscriptions" (see Coroners Act 1887, sec. 22, c. 2). The Circular of the Poor-law Board of April 1st, 1846, appears to have been referred to. It was also pointed out that although county lunatic asylums are mentioned as institutions supported out of the rates where the medical officers are not paid, workhouses are *not* mentioned. The learned judge gave judgement for the defendant with leave to appeal. It is believed that no appeal was made.

NOTIFICATION FEES.

KEEP FREE writes: In the BRITISH MEDICAL JOURNAL of June 8th, p. 1398, you publish a letter from a correspondent, in which he asks what remedy he possesses in order to recover from a sanitary authority the fees for the notification of two cases of infectious disease. In reply thereto, you say; "Our correspondent should sue the Local Board in the county court for the fees. . . ." May I take the liberty of pointing out that in my humble opinion few things would tend more to lower the dignity of the profession than such a course, bringing the practitioner on a level with a class of tradesmen who resort as a matter of course to the county court for the recovery of debts, often contracted in not a conspicuously fair manner? I would advise your correspondent to forego his fees rather than take the step you recommend, as he will get nothing in return for his pains, in all probability, but loss of dignity and wounded feelings, if not actual insult and insolence. Some thirty years ago I attempted to recover some small outstanding accounts in this manner, but the experience I gained has prevented me ever taking the same course again; indeed I made a vow at the time, which I have religiously kept, that nothing should induce me to take a like step again. I have seen practitioners of mature years and experience, and of undoubted integrity and uprightness, subjected in a local county court to the greatest indignity and contumely, which must have lowered them very much in their own estimation, if not in that of others; indeed, I have heard many prisoners tried at assizes for revolting crimes, but they have been treated almost invariably with more kindness and consideration than was meted out to these respected practitioners of whom I speak. Therefore I would strongly recommend your correspondent to lose his fees, even ten times over, rather than subject himself to the rude and overbearing treatment which others have experienced, and which will probably be his portion.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE INSPECTION OF CATTLE.

THE conditions under which the milk supply in many parts of this country is produced have long been known to be unsatisfactory in the extreme. As regards cleanliness alone, very few dairy farmers have made any effort to ensure suitable surroundings either for the cows or for the dairies in which the milk is kept, in spite of statutory enactments and special regulations. However stringently these last are enforced, they cannot after all be so effectual as public opinion, and any means should be welcomed which will direct popular sentiment in the right direction. The urgent need for systematic inspection is shown in a very striking manner in a report recently made to the Health Committee of the Portsmouth Corporation by Dr. A. Mearns Fraser, the medical officer of health for the borough. It appears that for some time past one of the Portsmouth sanitary inspectors has been in the habit of attending cattle markets outside the town for the purpose of ascertaining the destination of cattle sold at absurdly low prices, and presumably unfit for human consumption. Dr. Fraser gives a list of the prices at which sixty-seven animals were sold during the past twelve months. The lowest price was 5s. and the highest £4. Sixteen were sold for £1 or under and thirty for over £1 and under £2. Several animals followed to Portsmouth slaughterhouses were found to be tuberculous, but the greater number went to London and elsewhere, and could not be traced. As Dr. Fraser very properly points out, the difficulty of dealing with the circumstances detailed is that the producers of meat and milk live in the country, "where the administration of sanitary measures rests with the rural and small urban councils, which are largely composed of farmers and those pecuniarily interested in the meat and milk trade." Dr. Fraser suggests that the duty of cattle inspection might be placed upon the Board of Agriculture, similar machinery to what is needed being already organized in connexion with the Board's swine fever Orders.

VACANT POOR-LAW MEDICAL APPOINTMENTS.

L.R.C.P. writes as follows: A. has sold his practice to B. and has resigned the Poor-law and Public Vaccination appointments. It has been understood between A. and B. that these appointments are not saleable, and this has been recognized in their agreement. C. has just commenced practice in the district, which is a country one. Would it be a breach of professional etiquette for C. to apply for these appointments?

*** If the appointments in question have been advertised as vacant we are not inclined to regard it as a breach of professional etiquette for an outsider to apply for them, but should there be no public announcement of the vacancies it may be taken as an indication that the guardians do not wish for applications from strangers, and under such circumstances we think it would be bad taste for any such person to apply for the vacant appointments.

THE ASSOCIATION OF PUBLIC VACCINATORS OF ENGLAND AND WALES.

A MEETING of delegates appointed by the thirty-seven representative councils of the Association of Public Vaccinators of England and Wales was held in London on June 18th.

The delegates represented over 3,000 members of the medical profession who are public vaccinators, and the following was one of the resolutions passed at the meeting:

That this representative meeting of the public vaccinators of England and Wales emphatically protests against the provisions of the new Vaccination Order, which suggests the reduction of the existing minimum fees to public vaccinators, and points out that although the Departmental Committee reported that, if the public vaccinator were made an officer only removable with the consent of the Local Government Board and eligible for superannuation, it might be fair to make a reduction of fees, the new Order not only refuses to the public vaccinator the position which is his just right, and leaves him still under contract without right of appeal, but also reduces the minimum fees for domiciliary vaccination even lower than the Committee suggested.

That in the opinion of this meeting it is impossible for the work to be remunerative at the minimum fees in any district in England and Wales under existing circumstances, and that the proposed reduction would be an instance of sweating of medical men such as could scarcely be exampled in any other branch of the public medical service.

That this meeting looks with the gravest apprehension upon the effect of such drastic reduction of fees as are suggested, feeling that public vaccination in England and Wales cannot be maintained at its present level of efficiency if such fees

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

INDIA, who has encountered some difficulty in getting milk properly peptonized in India, asks for a test, chemical or other, by which it can be ascertained whether milk is completely peptonized before it is administered.

ABDOMINAL ACTINOMYCOSIS.

F. W. J. asks to be recommended a paper on actinomycosis, having reference especially to abdominal cases.

*** Our correspondent will find a complete summary, up to its date, in a paper by Vandeveer and Elting on actinomycosis in general, including the abdominal type and recording a case of the latter, in the *Philadelphia Medical Journal*, December 28th, 1901. He might also consult the paper by Dr. Archibald Cuff in the BRITISH MEDICAL JOURNAL of July 21st, 1906, p. 137, and the note by Mr. T. H. Kellock on actinomycosis of the vermiform appendix, briefly reported in the JOURNAL of October 13th, 1906, p. 954.

ANSWERS.

M.D.—No analysis of Condy's fluid appears to have been published. It has been stated by the proprietors in advertisements that it does not consist of potassium permanganate, and it is generally regarded as containing sodium permanganate, with potassium or calcium permanganate, or both. In a legal case a good many years ago, it was stated in evidence by an analyst to contain potassium permanganate and sodium chloride, but the composition may, of course, have been changed.

CLIMATE OF NAIROBI.

M.O.H.—The climate of Nairobi, in British East Africa, is suitable for Europeans, and many of the Government officials have their wives and families with them there. It is situated several thousand feet above sea level, and, though so near the equator, has a wonderfully equable temperature. It is also, when compared with other tropical towns, distinctly healthy, there being practically no malaria in the town itself.

FINGER-NAILS EXFOLIATION.

MR. JONATHAN HUTCHINSON, F.R.S. (London), writes: Your correspondent, "W. W.," describes (see p. 1403) a condition of psoriasis of the nail-bed sometimes met with in association with common psoriasis of the limbs and trunk. I would suggest a long course of arsenic. It would be of interest to know whether common psoriasis has occurred in the patient or any of her relatives. Although the note is headed "Finger-nail exfoliation," it is not stated that any of the nails have actually fallen.

LETTERS, NOTES, Etc.

HYPNOTISM AND ITS APPLICATION TO MEDICINE.

SIR LAUDER BRUNTON (London, W.) writes: From his letter in the BRITISH MEDICAL JOURNAL of June 15th, Dr. H. E. Wingfield seems to be unaware that the theory of hypnotism has been explained and its effects demonstrated to students at St. Bartholomew's Hospital for several years. He will find this in the verbatim report of my lectures published, under the title of *The Action of Medicines*, by Messrs. Macmillan and Co.

INTERNAL URETHROTOMY.

DR. C. J. MCFARLANE (Stoke Newington) writes: Feeling interested in Mr. Mac Moon's article on "The Radical Cure of Stricture by Internal Urethrotomy," I would like to ask the writer two questions: (1) In what way can it be determined that the surgical capacity of the urethra means the degree of expansion under a known distending force? (2) In regard to the treatment of haemorrhage by pressure, what is the virtue of a "soda water bottle" over any other bottle? Does he not recommend the retention of a large catheter?

POST-OPERATIVE DESQUAMATION.

In a note on page 1403 of the BRITISH MEDICAL JOURNAL for June 8 a case was related in which a febrile temperature, an inflamed throat and a "strawberry" tongue led to a diagnosis of scarlet fever. Up to the eighteenth day of the attack no desquamation had followed. Dr. Howarth, the reporter of the case, raised a question as to why it should ever occur and as to why the discarded epidermis of a scarlatinal patient should be regarded as infectious. This, being a point of great importance in connexion with the period of isolation necessary, has brought a good deal of correspondence.

Dr. S. J. Ross, of Bedford, narrates a case in all respects identical with that mentioned, except that it was ushered in by vomiting, and suggests that a patient with nasal or aural discharge, or with tonsils still in an abnormal condition, is far more dangerous to others than one in whom desquamation is not yet complete.

Dr. T. S. Smith, of Farningham, on the other hand, relates a case in which free desquamation on the hands, in the armpits, and in the groins, followed a fortnight after a febrile exanthematous attack, finally deemed not to have been one of scarlet fever. On the first day there was malaise and cough; on the second day an erythematous rash on the chest and arms, a furred tongue, a temperature of 101°, and bronchial catarrh in the right lung, but a perfectly normal throat.

Dr. A. Hamilton Wood, of the City Hospital, Little Bromwich, Birmingham, suggests that a strawberry tongue is not as pathognomonic of scarlet fever as textbooks indicate. A case in his experience admitted to hospital as one of scarlet fever, on the strength of a typical tongue of this character turned out to be an example of rötheln. Delay in the commencement of desquamation is not, he thinks, very uncommon in mild cases; he has seen it commence on the eighteenth day in a doubtful case, only isolated as a measure of caution. Hence a fortnight is not, in his opinion, a long enough period of quarantine, even in a mild case. In the absence, however, of rash and proof of infectivity all mild cases are, he thinks, open to doubt as to their real nature.

DRUNKENNESS.

DR. J. REID (London, E.C.) writes: A recent decision recalls a case brought under my notice a few years ago. The man was examined in the police cell, on the request of his employer, who told me he had drunk only two glasses of whisky. I stated that he was suffering from acute bronchitis in both lungs, that he evidently took the stimulant to avert the weakness due to disease, and that the alcohol had more than the usual effect on this individual from his disease state. He had partially recovered from drunkenness when seen by me. The magistrates fined him. It would be interesting to know whether the effects of disease and alcohol, disease and drugs and alcohol, are grounds for dismissal of charge. A man was found by the police, vomiting freely foodstuffs strongly smelling of alcohol, and quite comatose. As he was suffering from double pneumonia he was not charged but sent to hospital for treatment. It was difficult to say how much alcohol he had drunk, but in all probability he was justly described as intoxicated.

AMBULANCE DOGS.

MAJOR RICHARDSON, of Carnoustie, Scotland, who recently took three ambulance dogs by order of the Sultan to Constantinople, has been created a Commander of the Order of the Medjidieh of the rank of Major-General. The Sultan witnessed the work of the dogs in his private park at Yildiz Kiosk with his Albanian guards, and expressed high delight. The dogs were submitted to the most exhaustive tests by the Turkish general staff, and stood all the trials excellently. Major Richardson's system has been adopted for the Turkish army.

VENTRIFIXATION OF UTERUS.

DR. H. V. DREW (Timaru, New Zealand) writes: The following case is somewhat unusual, so I venture to report it: A single woman, aged 22, in domestic service, consulted me for complete prolapse of uterus. She had not been pregnant, and owing to her trouble, was completely incapacitated from work. I tried several pessaries, but all were expelled on the slightest effort, so I did ventral fixation, and she has been quite free from discomfort and able to do work ever since, namely, about nine months.

A SCIENTIFIC "NIGHTCAP."

A CORRESPONDENT of the *Spectator* relates that Herbert Spencer, when staying at a country house, asked to be supplied with some whisky and water on turning in at night "to re-establish the periodicity of my somniferous functions." His host said afterwards that he had never heard a longer name for a "nightcap." The phrase is one that Samuel Johnson might have envied.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters *Poste Restante* addressed either in initials or numbers.

A Lecture

ON

THE PATHOLOGY AND TREATMENT OF TUMOURS OF THE JAWS.

DELIVERED AT THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, DECEMBER 4TH, 1906.

BY FREDERIC EVE, F.R.C.S.,

SURGEON TO THE LONDON HOSPITAL.

TUMOURS of the jaws present many points of interest, because of their variety and complexity. The upper jaw contains the teeth, has attached to it the hard and soft palates and gums, and is closely related to the cavities of the nose and naso-pharynx. It is not only made up of many tissues and structures from which may originate primary growths, but it may be invaded by tumours originating in neighbouring cavities.

Further, the jaws furnish some of the best examples of the truth of Cohnheim's theory of the origin of some tumours from "rests" or remnants of embryonic tissues. The review which I purpose to take of tumours of the jaws has been materially assisted by a collection of all the cases occurring at the London Hospital during the last five years, and which were submitted to microscopic examination. Mr. Russell Howard, lately Surgical Registrar, has most kindly put together and abstracted the notes; and we have gone over together the microscopic specimens. Without this collection of cases, parts of this paper could not have been written, for some of the neoplasms are so complex and variable that it is only by comparing a number of specimens that their true nature can be made out. Further, a series of consecutive cases coming from a single institution may be of some value as showing the frequency of different growths in the maxillae.

EPULIS.

This is a convenient clinical term to apply to a tumour originating from the alveolar margin of the jaws near to or surrounding one or more of the teeth. The tumour springs from the periosteum of the jaw or from the periodontal membrane of the alveolar socket. It more frequently occurs in young adolescents and adults, and affects by preference the incisor or bicuspid regions.

Thirty-eight cases of epulis were admitted to the London Hospital in five years up to 1905. Of these 17 were submitted to microscopic examination. The latter may be classified as follows:—

Epulides composed of granulation tissue springing up around the fangs of carious teeth	7 cases
Fibro-sarcomata	2 ,,
Mixed and fibro-sarcomata containing myeloid cells:	
Upper jaw	3 ,,
Lower jaw...	5 ,,

There was no example of endothelioma.

I have long been of opinion that most of the so-called fibrous epulides were fibro-sarcomata. This collection of cases brings this point out strongly, for there is not a single example of pure fibrous epulis. The myeloid variety was by far the commonest. The exact pathological position of this tumour has long been doubtful. Most authors group it with central myeloid sarcoma or myeloma both of the lower jaw and of the long bones. I have taught for some years that this view is likely to give an erroneous idea of the nature and tendencies of the myeloid epulis.

The central myeloid tumours of long bones are growths from the cancellous tissue. They are composed of multinucleated giant cells lying in a tissue composed of round, or mixed round and spindle, cells with an intervening homogeneous or faintly-fibrillated intercellular substance. In addition to the giant cells, which may be considered the homologues of osteoclasts, they contain characteristic marrow cells (myelocytes). The malignancy of these tumours is so slight and local in character that they present a sharp contrast to the ordinary sarcomata of bone. All this applies equally to the somewhat rare central myelomata of the lower jaw. The myeloid epulis, on the other hand, is essentially a periosteal tumour, springing either from the alveolar periosteum or the periodontal membrane. The giant cells lie in tissue composed of oval and round nuclei embedded in a distinctly fibrillar matrix. Most of them may be described as giant cell and mixed fibro-sarcomata. There is a distinct tendency to fibrillation of the stroma, and in this fibrillation the giant cells themselves take a very distinct part (see Fig. 1). Unless completely removed these tumours are prone to recur. Among 30 cases at the London Hospital, and including the epulides composed of granulation tissue, 18.2 per cent. recurred. I have only met with one example of epithelioma which might clinically be called an epulis. This is a specimen in the Royal College of Surgeons Museum (2193a) which I described as an epulis from the lower jaw surrounding the second molar tooth. In its microscopic structure this specimen had the characters of an epithelioma but it contained no cell-rests. It was from a woman, aged 52, who observed a swelling in the gum five months before the operation.

In excising an epulis it cannot be too strongly insisted that the teeth in its immediate neighbourhood should be removed, together with the portion of the alveolus involved; and the section should be carried right to the bottom of the alveolus.

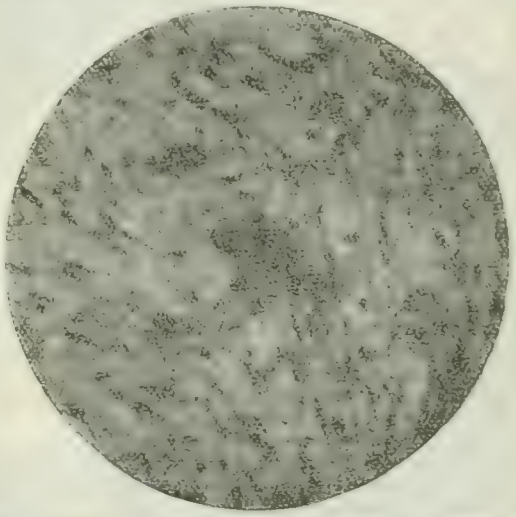


FIG. 1.—Myeloid epulis undergoing fibrillation, in which giant cells take part.

TUMOURS OF THE JAWS.

The following is a summary of the tumours of the jaws admitted to the London Hospital and submitted to microscopic examination during the period named:

Cancellous osteoma	1
Myxo-fibroma of antrum (polypoid)	1
Sarcoma and fibro-sarcoma, upper jaw	5
,, ,, lower jaw	8
Squamous-celled carcinoma, upper jaw	7
,, ,, lower jaw	4
Malignant tumours, probably originating from embryonic dental structures	7
Endothelioma	1

This summary will give some idea of the number of different forms of tumour found in the jaws. Among the sarcomata of the superior maxilla were two examples of round-celled and three of mixed-celled sarcoma. Those of the mandible comprised one round-celled, one mixed, and six fibro-sarcomata. It is not, however, my object to deal with them in detail, but I shall select for consideration one or two interesting groups.

It is well recognized that certain tumours in the jaws originate in aberrant dental structures or in "rests" or remains of portions of the embryonic structures set aside for the development of the teeth, especially in those remains of the enamel organ found in the alveoli, and first observed by Malassez. The paradental epithelium of Malassez is evidently identical with the sheath of Hertung, which is a growth of the epithelium of the dental germ extending in the form of a fold towards the apex of each fang (see Fig. 2). In the gum itself are also remains of the dental lamina and of the neck of epithelium connecting this with

the tooth germ (see Fig. 2, Z.L and V.B, from *Quain's Anatomy*, vol. iii, part iv, Fig. 64). "Rests" of the tooth papilla may give rise to central sarcomatous tumours of the jaws.* This will be proved by reference to certain sarcomatous tumours containing strands of epithelium evidently derived from the enamel organ.

The importance of these tumours does not reside in the growths themselves, but in the light they throw on the etiology of morbid growths generally. On account of the specialized character of certain structures in the jaws we are able to trace the origin of the tumour, whereas such a clue fails, for example, in the sarcomata of the long bones. We can show definite grounds for stating that a large group of tumours clinically presenting the characters of sarcomata and carcinomata are derived from "rests" of embryonic dental structures.

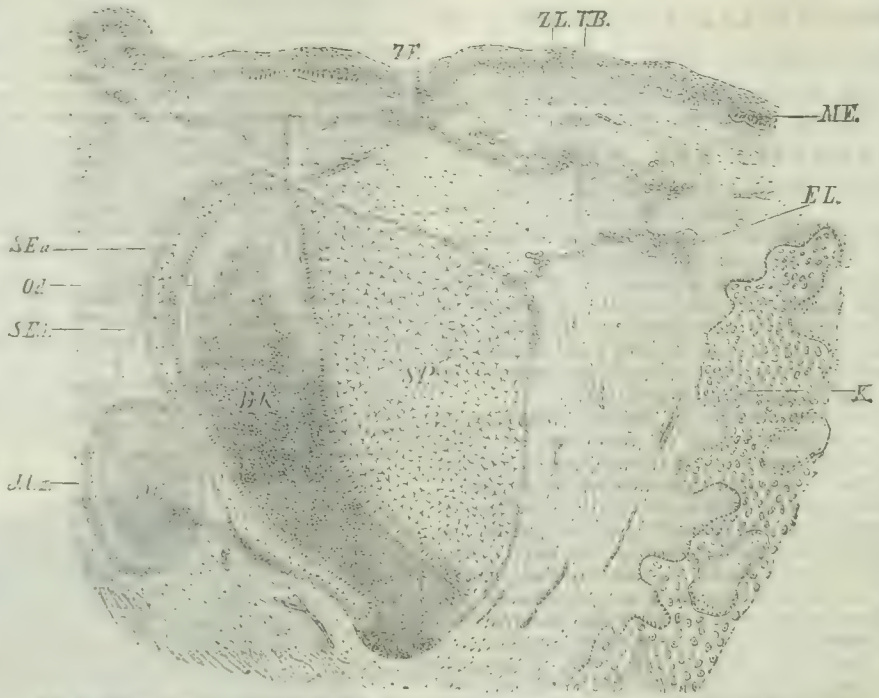


Fig. 2. After Quain).—Section of the first milk incisor of a human embryo (Rose). D.K., papilla; Od., odontoblasts; K., bone of alveolar process; S.E.a., S.E.i., outer and inner layers of enamel organ; S.P., enamel pulp, or reticulum produced by degeneration of the central cells of enamel organ; Z.F., dental furrow; M.E., mouth epithelium; Z.L., remains of dental lamina; V.B., cell bridge connecting this with tooth germ; E.L., reserve germ for permanent tooth; J.I.H., germ of second milk incisor.

We therefore recognize two great groups of tumours—one originating from embryonic "rests," the other, mainly carcinomata, arising as the result of chronic irritation and inflammation, and possibly from the irritation produced by micro-organisms. Following Cohnheim, we must remember, however, that any irritation producing hyperæmia may cause a latent "rest" to grow and become active.

Returning now to tumours arising from "rests" of dental structures, I shall exclude the calcified odontomes and confine myself to what may be termed "tooth tumours" or embryoplastic odontomes. I recognize so far two varieties:

1. Composite odontome, containing all the elements of a tooth follicle.
   - (*a*) A composite or mixed embryoplastic odontome (innocent).
   - (*b*) A composite or mixed embryoplastic odontome (sarcomatous).
2. Epithelial odontome derived from enamel organ cells.
   - (*a*) Epithelial odontome (cystic variety or cystic epithelial tumour).
   - (*b*) Epithelial odontome (carcinomatous, usually described as spheroidal or columnar cell carcinoma).

Of this group (2 *a*), the epithelial odontomes or cystic epithelial tumours are quite familiar. They are composed usually of collections of cysts and usually involve the lower jaw. Microscopically they consist of anastomosing and branching epithelial columns (Fig. 3), which are made up of a peripheral layer of columnar cells, while the central cells undergo a peculiar form of degeneration, resulting in the formation of a reticulum. Elsewhere I have shown that this degeneration is due to a colloid metamorphosis of the protoplasm of the cell, and not to compression and flattening of the cells by effusion of fluid between them.[1] These changes are in exact imitation of those which take place in the formation of the enamel cap. The tumours are usually only locally malignant, but I have cited cases in which metastasis took place.[2]



Fig. 3 (low power).—Multilocular cystic tumour of lower jaw (enamel-cystoma odontome). St. Bartholomew's Hospital Museum, No. 42 described by Mr. Eve's Erasmus Wilson Lectures, BRITISH MEDICAL JOURNAL, 1883, vol. i, p. 1).

1. (*a*) *Composite Embryoplastic Odontome* (*Innocent*).

In 1886 I published[3] an account of a tooth tumour of this description which was evidently non-malignant, as shown both by its microscopic characters and clinical history. The patient was a man aged 24, with a swelling of the left side of the lower jaw which had been growing four years. It was surrounded by a capsule of bone, and was shelled out after removing only the outer wall of the cavity. Two years later there was no return of the disease. Microscopically, the tumour was composed of anastomosing bands of enamel epithelium lying in fibrillar connective tissue (see Fig. 4). In places were elongated bands of columnar enamel cells (Fig. 4*a*).

1. (*b*) *Composite Embryoplastic Odontome* (*Sarcoma*).

This group is the counterpart of the preceding, the stroma, however, being malignant. In the same paper I described as embryoplastic odontomes two sarcomatous tooth tumours, which contained bands and columns of enamel epithelium. Both were in the Royal College of Surgeons Museum. One was presented by the late Mr. Christopher Heath. It is a very large central tumour involving the left half of the lower jaw, and was removed from a man aged 32. It had existed for eleven years. The mass of the tumour was a fibro-sarcoma, and embedded in it were irregularly-shaped masses and columns of enamel epithelium (Figs. 5, 6, 7) (Specimen 2254 Royal College of Surgeons Museum). In the second specimen, also a lower jaw, the bulk of the tumour was composed of round cells. The patient was 67 years of age. In 1896

Sir W. Fergusson removed from the right side of the lower jaw a "fibroid" tumour, containing a cyst, of many years' duration. In July, 1877, a cystic tumour, which had developed in the left half of the lower jaw, was operated upon by opening the cysts and scooping out their contents. In November, 1877, and again a year later, the operation was repeated for recurrences of the cystic disease. In November, 1879, the patient reappeared with a large solid tumour which had grown on the left side of the jaw in the site of the cystic tumour. This recurrent growth was removed. The patient died three months afterwards with recurrence of the tumour in the skin of the cheek, with a round-cell sarcoma beneath the right biceps muscle, and a tumour of a similar nature in the pelvis. This case fully proves the malignancy of these tumours.

In the London Hospital series of cases are two examples of sarcomatous mixed odontome, one being from a case of my own. This patient, a woman 33 years of age, had observed a swelling on the outer side of the left half of the mandible for two years. The tumour was surrounded

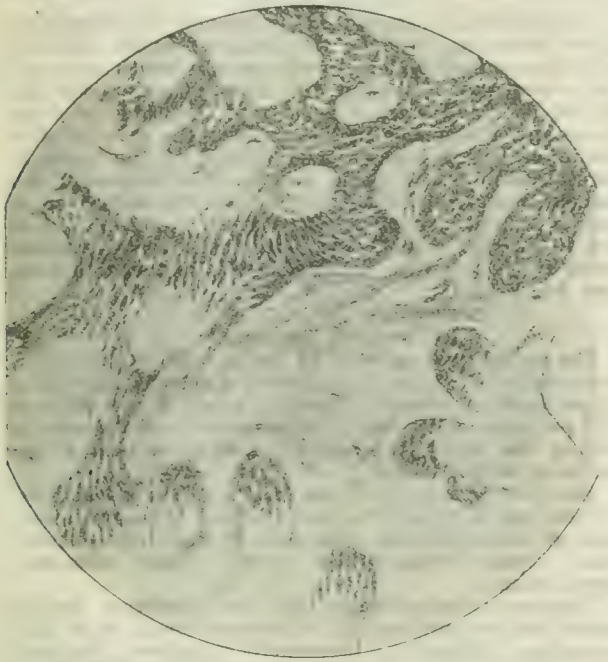


Fig. 4.—Composite embryoplastic odontome composed of anastomosing bands of epithelium in fibrillar connective tissue.

by a complete bony capsule, and on section looked like a sarcoma. A portion of the whole thickness of the jaw was excised. The microscope showed that the growth was a fibro-sarcoma containing branching strands of enamelogenous epithelium (Figs. 8 and 9). Another case was a woman, aged 53, who had observed a swelling of the alveolar margin of the right upper jaw for four

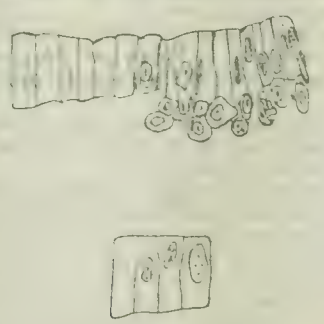


Fig. 4a.—Columnar enamel cells from the same tumour as Fig. 4.

months. A fungating mass projected from the alveolar margin (this point should be noted). The strands of epithelium (Fig. 10) were wider in this case and showed typical reticular degeneration (Fig. 11). They were distributed in an abundant stroma of sarcoma tissue.

In these composite tooth tumours I surmise that the epithelial element is derived from the enamel organ and the sarcomatous stroma from the tooth papilla.

The dental character of these tumours cannot be doubted, owing to the characteristic appearance and arrangement of the epithelium. In Figs. 7 and 9 the peripheral layer of columnar cells is very well shown. At places in the columns are rounded or flask-shaped enlargements due to microscopic cysts, or to small, rounded areas of stroma which appear to penetrate the epithelial columns just as the tooth papilla invaginates the enamel organ (see *b* in Fig. 7).

The degeneration of the central cells of the columns, leading to the formation of a reticulum, was present in all the specimens, and is shown at *a* in Figs. 7, in 9 and 11. A wavy or crenated outline of the margins of the epithelial strands is a feature of some of these growths. (See Figs. 5 and 8 and compare with Fig. 3, cystic odontome.) The tumours were sarcomata, as shown by their appearance and progress. In Mr. Heath's specimen the duration was unusually long—namely, eleven years. The patients were 21, 33, 53, and 55 years respectively when the tumours commenced. The tumour in the upper jaw was evidently the most malignant, for it had existed only four months.



Fig. 7 (high power).—Composite embryoplastic odontome with basis of sarcomatous tissue. The figure shows a rounded strand of enamel epithelium, lined externally with columnar cells. The intermediate layer exhibits a reticulum (*a*). At its centre the strand is penetrated by a rounded area of stroma (*b*).

I am not aware that this interesting group of tumours has been fully described before.

2. (*b*) *Epithelial Odontome (Carcinoma).*

The study of the composite sarcomatous odontomes leads up to this important group, and, in fact, gives the clue to their nature—epithelial odontome (carcinoma), usually described as spheroidal or columnar-celled carcinoma.

Among the tumours of the upper jaw is a large group exhibiting many general characteristics. They are usually described as springing from the epithelium and mucous glands of the lining of the antrum. They consist of rounded masses or of columns of epithelium, often tortuous, branched, and anastomosing. The epithelium is mainly of the spheroidal type, with sometimes columnar or elongated cells at the periphery of the columns; in one specimen the cells were entirely columnar. The central cells of the epithelial columns undergo vacuolation by mucoid or colloid degeneration, with the result that in typical examples a reticulum is produced; and the margins of the columns are often crenated. The ground substance or connective tissue is, as a rule, very abundant and proliferative; in fact, it may have all the appearance of sarcoma tissue, and the growth might be described as a carcinoma sarcomatodes. The connective tissue may be composed of fibrillar tissue containing large numbers of small round nuclei, or of elongated or spindle shaped nuclei; or, again, of fibrous tissue. The following examples of these tumours indicate their chief features:

A man, aged 61, was admitted with a fungating mass springing from the alveolus at the position of both bicuspids and the first molar of the upper jaw. It had existed for six weeks. The upper jaw was removed. The microscopic characters of the growth are shown in Figs. 12, 13, and 14. Fig. 12 shows under a lower power the epithelial columns with crenated edges; and Figs. 13 and 14 (under higher powers) show elongated cells at the margins of the columns, and a well-marked reticular structure. The stroma penetrates the columns in places, as in Fig. 7. This tumour appeared to spring from the alveolus, yet it is clearly not a squamous-celled carcinoma.

A young man, aged 20, was admitted under my care with a firm tumour situated on the outer side of the maxilla over and below the malar eminence; it had been growing five months. I removed the maxilla. Figs. 15 and 16 show the microscopic characters of the tumour under a low and high power. The reticulum in Fig. 16 is well shown. The stroma is very abundant, and the tumour closely resembles that shown in Figs. 10 and 11, and classed among the mixed sarcomatous tooth tumours.

In the case of a boy, aged 11, a tumour of seven weeks' growth sprang from the alveolus between the upper central incisors, and separated them. I have the specimen before me; the growth is entirely confined to the alveolus, does not extend as far as either the inferior meatus or the antra. Its microscopic characters are most interesting, and are shown in Figs. 17 and 18. Fig. 17, from the centre of the tumour, shows columnar cells arranged in rounded masses or in tubular columns with a central space formed by degeneration of the central cells. Fig. 18, taken vertically through the gum, shows the columnar-celled growth beneath but entirely distinct from the epithelium of the gum. Here there is distinct cystic degeneration similar to that found in cystic epithelial tumours.

I consider this tumour to have been derived from "rests" of the columnar cells of the enamel organ. If there had been any trace of continuity between it and the nasal or antral cavities I should have been in doubt as to its nature.

The last example I shall quote should, I think, be included in this group.

The patient, a woman aged 58, had a tumour stated to have begun in the left side of the hard palate at the age of 19 years. From the appearance of the specimen it seems probable, however, that the growth commenced in the posterior part of the left alveolar process and spread to the hard palate. I saw her in 1899 when a growth projected from the whole surface of the hard palate and involved the alveolus only at the point stated, although it had spread up to it in front and to the left. The tumour had extended into both antra, expanding their walls and absorbing rather than infiltrating. I removed both superior maxillæ after tying the external carotid on the left side, which was chiefly affected. The patient did not recover consciousness and died on the third day. Fig. 19 shows the growth under a low power. The columns are composed of spheroidal epithelium and their arrangement is very similar to Fig. 12. In places there was extensive cystic degeneration. Apart from the matter under consideration, the case may merit recording owing to the long duration —thirty-nine years—and the peculiar nature of the tumour.

In regard to its duration and progress this case presents a close parallel with some examples of mixed sarcomatous odontome.

In this series of cases I have placed five in the group under consideration. The tumour occupied the maxilla in four cases and the mandible in one. The majority were rapidly growing; recurrence took place in two, two patients were lost sight of and one died of shock.

Upon the evidence given above, I therefore submit that some of the carcinomatous tumours of the antrum arise from "rests" of the germinal epithelium of the teeth, which make their way in the direction of the least resistance, namely, into the antral cavity. This opinion is based on the arrangement of the epithelial columns, the presence in most instances of the peculiar degeneration of the cells characteristic of enamelogenous tumours, and in some of a peripheral layer of columnar cells. Further, in some instances there was definite evidence that the tumour originated in the alveolar process.

It is not my intention to suggest that the lining of the antrum does not produce tumours, but I think they are usually of the columnar-celled type, as might be anticipated from the nature of the epithelium. Columnar-celled carcinomata also originate from the lining membrane and mucous glands of the nose, and may secondarily involve the antrum.

The nature of the myxomatous growths springing from the lining of the antrum may be gauged by the accompanying photographs (Figs. 20 and 21) of papillomata associated with chronic suppuration of the antrum. These, with other similar specimens, I described in the *Clinical Society's Transactions*, vol. xxxii, p. 200.

Not unlike them in some respects is the photograph (Fig. 22) of a malignant antral growth from a gentleman aged 62, whose maxilla I excised. He had suffered with nasal polypi for fifteen years. Mr. Hovell, who transferred the case to me, states that for three or four years polypi were seen protruding into the nose from the antrum, but the patient would not consent to the antrum being explored. The bulk of the tumour consisted of fibrillar connective tissue, and intersecting it were numerous well-defined tubules (each possessing a lumen filled with mucus) lined with long columnar cells (Fig. 22). Some goblet cells were observed. Many years ago I examined for Mr. Heath a localized papillary outgrowth springing from the lining of the antral cavity. I described it thus: The mucous membrane of the antrum was observed to be exceedingly thickened by an overgrowth of epithelium with cells for the most part of an elongated form (R.C.S. Museum, No. 2246).

Endothelioma.

The following case probably falls under this classification: A woman, aged 52, was admitted under my care with a tumour of the left superior maxilla which expanded the outer wall, depressed the hard palate, raised the orbital floor, and blocked the nostril. It had existed for three and a half months. I removed the maxilla after preliminary laryngotomy and ligature of the external carotid, with a favourable result. Microscopically the tumour was composed of large rounded masses or of narrow rods of spheroidal cells with large nuclei. These lay in sharply defined spaces in the connective tissue lined in places with flattened cells like endothelium (see *a* in Fig. 23).

Operative Treatment.

The mortality of excision of the maxilla is still high, some of the latest statistics showing a percentage of 20 to 30 per cent. of deaths. Kronlein found a mortality of 21.5 per cent. in 158 cases of total resection of the maxilla during the antiseptic period. Koenig estimated the mortality at 30 per cent.

The chief causes of death are from septic lung affections, or from loss of blood directly at the time of the operation, or more indirectly, at a subsequent period, from exhaustion. Some deaths also occur from secondary haemorrhage.

Pulmonary complications due to inhalation during anaesthesia account for half the cases of death after this operation. Kronlein, therefore, abandoned general anaesthesia, and operated after a morphine injection and under suggestive anaesthesia. The relatively high mortality of resection of the upper jaw, even with modern aseptic precautions, from the above causes must have been noted by every observant surgeon. Being impressed with the great value of ligature of the external carotid and laryngotomy as a preliminary measure in the removal of malignant tumours of the tonsils and soft palate, I have adopted it for some time in all cases of fairly extensive malignant disease of the maxilla. I first performed ligature of the external carotid in 1899, in the case, already quoted, of removal of both upper jaws for a tumour in the left superior maxilla which had spread over to the right side.

In cases of disease of limited extent, it is sufficient if the patient is kept well in the lateral position so that the blood can flow from the mouth.

In my opinion the operations of preliminary ligature of the carotid and laryngotomy do not prolong the operation, and tend to decrease the amount of the shock. The average period required for both these operations is under fifteen minutes, when no glands require removal. Very few vessels need ligature; in some cases none, except one or two in the cheek flap. Thus much time is saved in securing vessels, sponging, etc., and what is much more important, the operator can see exactly what he is doing, and remove the disease more thoroughly. I also regard the incision in the neck for ligature of the external carotid as a distinct advantage, in that it permits the surgeon to ascertain the condition of the glands behind the angle of the jaw and around the upper part of the internal jugular vein. My own cases lead me to believe that the tendency to implication of glands in both

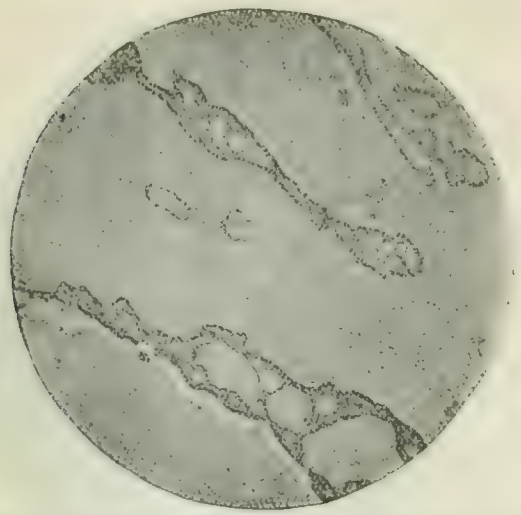


Fig. 5 (low power).—Composite embryoplastic odontome showing strands of enamel-epithelium lying in a sarcomatous ground substance. The strands enclose small cysts, and areas of stroma.

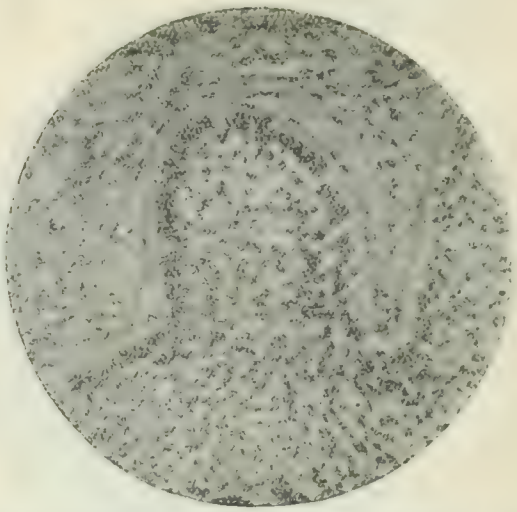


Fig. 9 (high power).—From the same tumour as Fig. 8, under a higher objective. The peripheral cells of epithelial strand are columnar, and the intermediate cells form a reticulum.

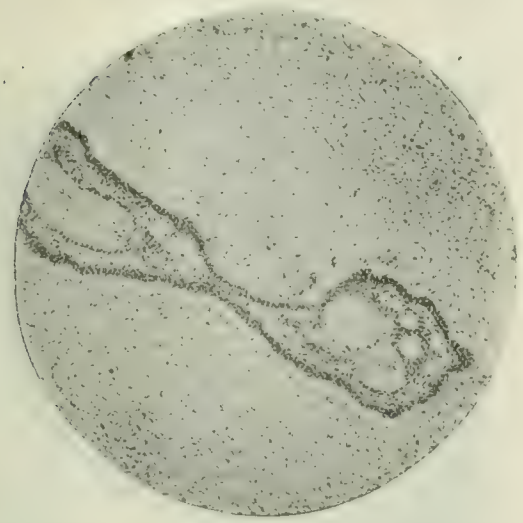


Fig. 6 (low power).—The same as Fig. 5, but under a higher objective. See also Fig. 7, under still higher objective.

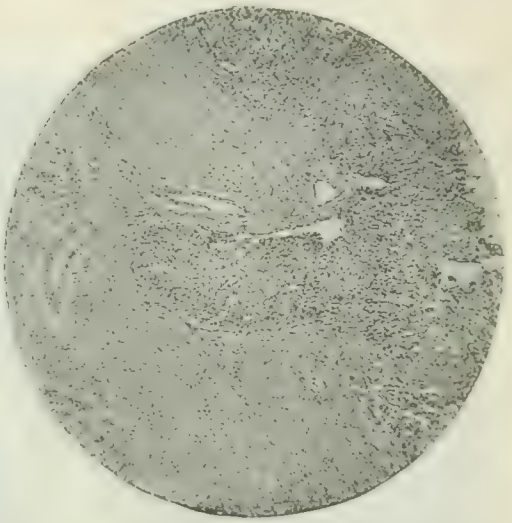


Fig. 10 (low power).—A similar tumour from the upper jaw, showing masses of rounded epithelium in a sarcomatous ground substance.



Fig. 8 (low power).—A similar tumour to the above, Figs. 5 and 6. The columnar cells lining the strands of enamel-epithelium are well shown.

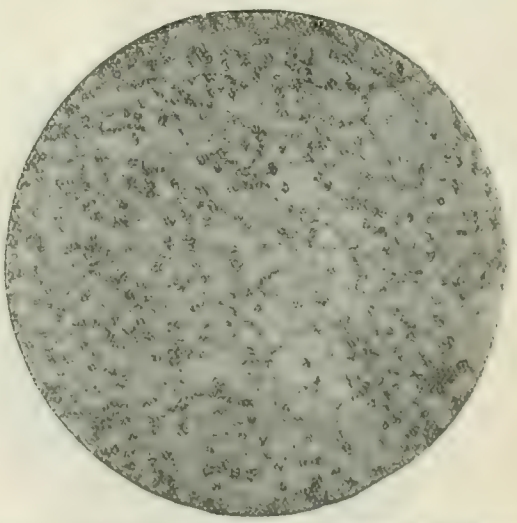


Fig. 11 (high power).—From the same tumour as Fig. 10, showing a reticulum formed by the cells of the epithelium.

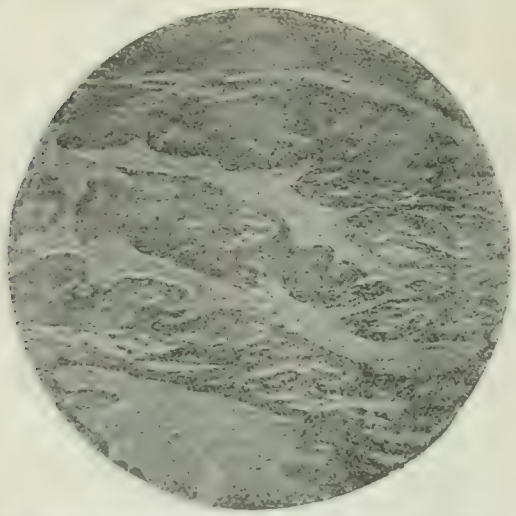


Fig. 12 (low power).—Epithelial odontome (carcinomatous). The tumour is composed of strands of epithelium with crenated edges, lying in a fibrous stroma. The epithelial element greatly predominates over the stroma.

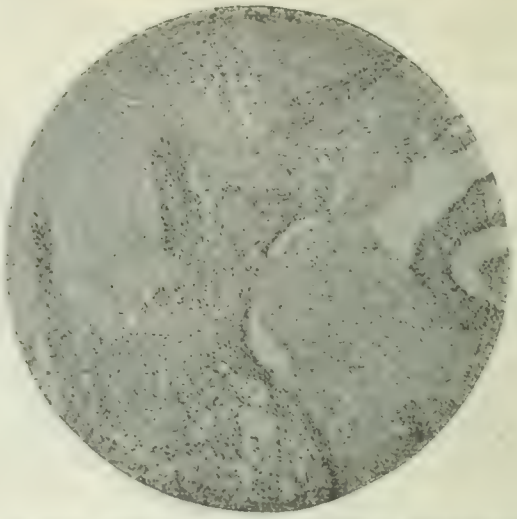


Fig. 15 (low power). — Epithelial odontome (carcinomatous), showing strands of epithelium in a fibrillar stroma.

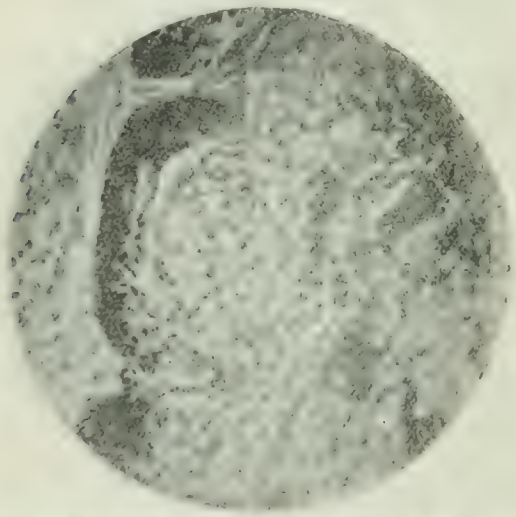


Fig. 13 (high power). — From the same tumour as Fig. 12 under [illegible] showing a reticulum formed by the epithelial [illegible].

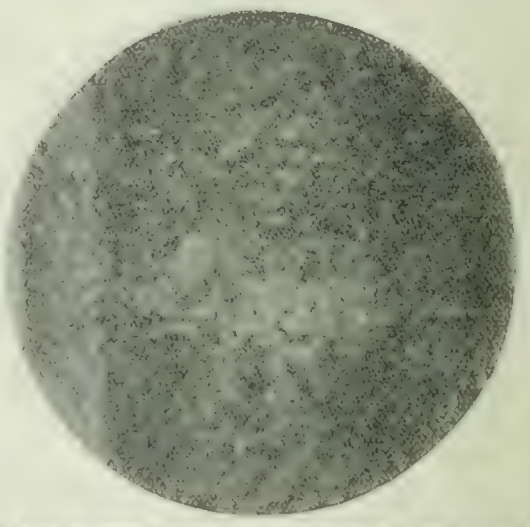


Fig. 16 (high power). – From the same tumour as Fig. 15, showing the reticulum in the epithelial strands.

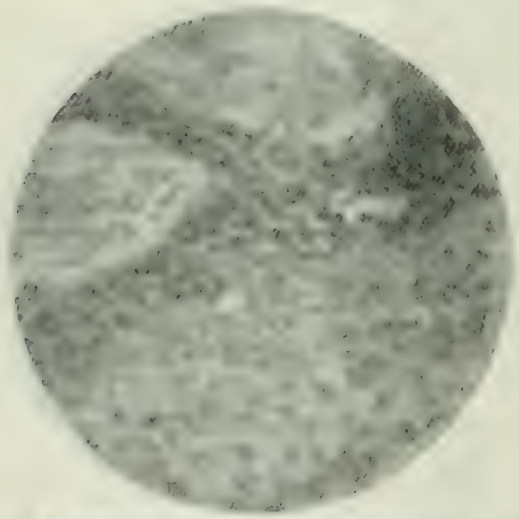


Fig. 14 (high power). – The [illegible] Fig. 11 under a [illegible] of the margin of [illegible].



Fig. 17 (low power). Growth from alveolus of upper jaw, composed of rounded and elongated spaces lined with columnar epithelium.

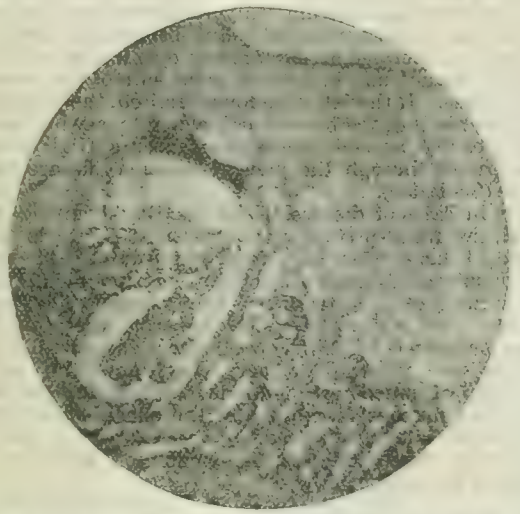


Fig. 18 (high power).—From the same tumour as Fig. 17. The section is taken vertically through the gum; beneath this, and distinct from it, is the columnar-celled growth undergoing cystic degeneration.

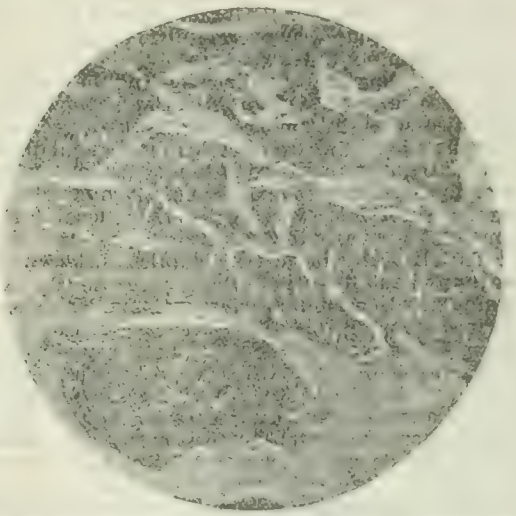


Fig. 19 (low power).—Tumour of upper jaw of thirty-nine years' duration.

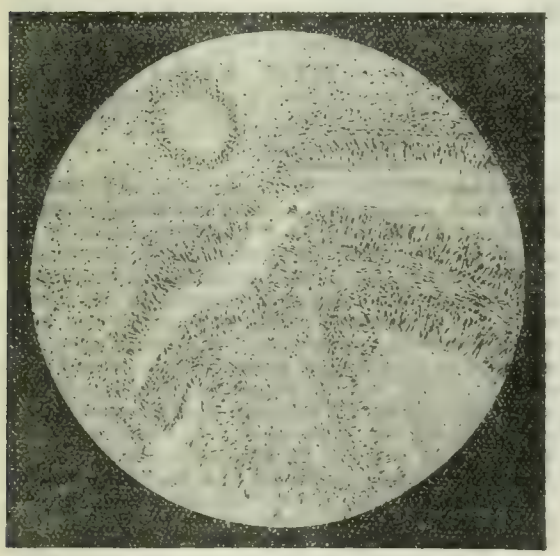


Fig. 20.—Papilloma of antrum associated with chronic suppuration.

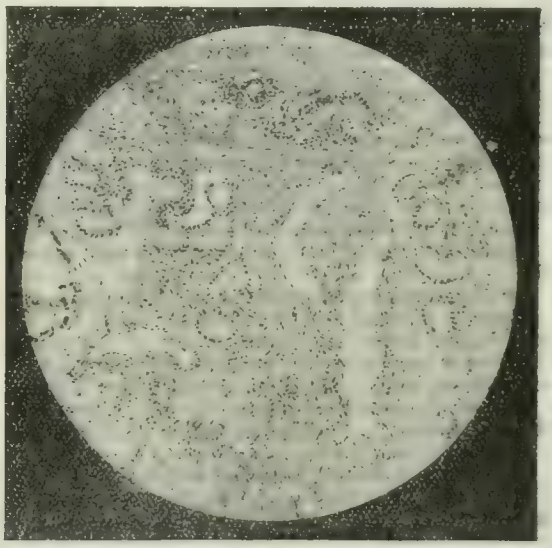


Fig. 21.—Growth in antrum, mainly papillomatous, associated with chronic suppuration.

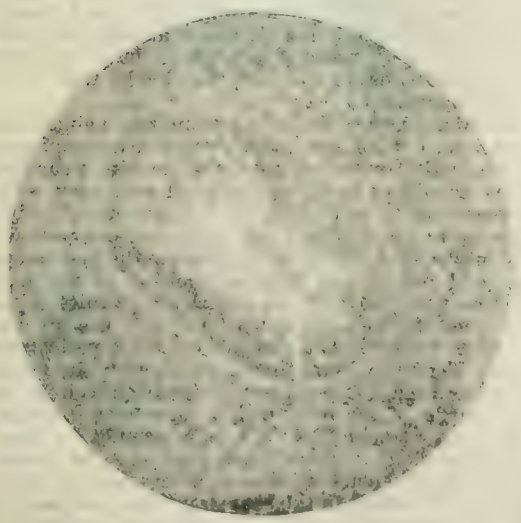


Fig 22.—Columnar-celled carcinoma of antrum.

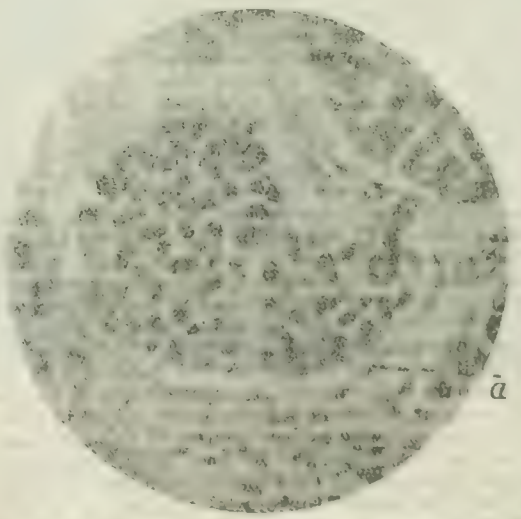


Fig. 23.—Endothelioma of antrum. Rounded mass of spheroidal cells lying in a space lined with flattened cells. *a*, Endothelial cells lining the lymphatic spaces.

carcinoma and sarcoma of the maxilla has been much under-estimated. In the majority of them I found the external carotid obscured by overlapping enlarged glands. Preliminary ligature of the external carotid, therefore, gives the surgeon the opportunity of investigating the condition of, and, if necessary, of dissecting out and following up secondary disease in the glands of the neck—a procedure now generally adopted where feasible in malignant disease elsewhere. To ascertain the condition of the glands, and in view of the fact that the position of the bifurcation of the common carotid is often higher than usual, I have always made it a practice to thoroughly expose the bifurcation. The ligature is usually applied between the superior thyroid and lingual arteries.

Returning now to preliminary laryngotomy. This should be performed after the ligature of the external carotid, as in opening the air passage the hands must necessarily be soiled. Laryngotomy, in addition to greatly diminishing the chance of inhalation pneumonia, also diminishes shock. The anaesthetist's task is easier, and therefore likely to be more efficient. Cyanosis is entirely avoided, and with it the danger of overstraining of heart muscle from distension of the right side of the heart. I much prefer laryngotomy to tracheotomy: the former can be very rapidly performed, there is little haemorrhage, and little disturbance of soft parts. After the insertion of the tube the air passages are protected by a large marine sponge thrust into the pharynx. The disadvantages associated with Trendelenburg's or Hahn's tubes are thus avoided. The tube is taken out immediately after the operation, or the next morning.

During the last two years I have in five consecutive cases performed removal of the upper jaw with preliminary ligature of the external carotid and laryngotomy without a death. One patient died of gangrene of lung in whom the external carotid was tied *without laryngotomy*. Taking all my hospital cases during the last six years and adding my private cases, I have removed the maxilla twelve times with two deaths—a mortality of 16.6 per cent. None of my cases have had secondary haemorrhage either from the cavity in the mouth or the external carotid.

In the operation of excision of the upper jaw the median or Fergusson's incision is now invariably used; the horizontal incision across the facial aspect of the maxilla should be only just above the level of the lower edge of the malar bone, and should not extend further outwards than the spheno maxillary fissure or the fibres of the facial nerve passing to the inferior half of the orbicularis oculi will be divided.

In severing the bones I have for some time used a Gigli's saw. It effects its purpose much more cleanly and quickly than an ordinary saw and bone forceps. After reflecting the cheek flap and raising the soft parts from the floor of the orbit, a strong silk thread is passed from above downwards through the spheno maxillary fissure by means of a large narrow aneurysm needle. The Gigli's saw is drawn through the fissure by the silk, and the section then completed. The section of the hard palate is carried out in a similar manner by making a puncture in the middle line at the junction of the hard and soft palate. The aneurysm needle loaded with silk is passed through the nose and through the puncture into the mouth, where the silk is seized, and by it the saw is drawn through the nose into the mouth. The section of the hard palate is then completed. Although this method is not, I think, commonly employed, I find that no better has preceded me in publishing it.

When the position of the growth admits of the orbital floor being preserved I have found it inadvisable to completely sever the malar bone at the level of the spheno maxillary fissure. A better plan is to chisel or saw through the lower two-thirds of the malar; and from this osseous incision I divide the anterior wall of the maxilla in a direction horizontally inwards parallel with the orbital margin until the cavity of the nose is reached. By this means not only is the floor of the orbit preserved, but also its bony margin. There is, therefore, less falling in of soft parts and less tendency to tear the floor of the orbit away with the bone than when the incision is carried through the whole thickness of the malar bone and along the orbital plate just within the orbital margin, as is often recommended.

When an epitheliomatous growth has commenced in the alveolus or hard palate and does not appear to have extensively involved the antrum, only the lower half of the maxilla may require removal. But before this limited operation is performed an exploratory opening should be made into the antrum, in order to make sure of the extent of the disease. If the latter be found limited, the removal of the lower half of the bone is completed by sawing from the nasal cavity horizontally outwards; or a Gigli's saw may be passed through the pterygo-maxillary fissure into the nose (Schlatter).

When, in cases of disease of the maxilla requiring its removal, the muco-periosteum of the hard palate is not involved, I have with considerable advantage in two cases preserved it by carrying an incision along the inner surface of the teeth on the affected side and reflecting the muco-periosteum towards the middle line, as suggested by Watson Cheyne; the maxilla is then removed in the ordinary way, and the edge of the flap of muco-periosteum is stitched to the cut edge of the mucous membrane of the cheek. The roof of the mouth is thus restored.

I have to thank Messrs. Longman for their kind permission to use Fig. 2.

REFERENCES.

1 *Odontological Society's Transactions*, vol. xviii, New Series, p. 44. 2 BRITISH MEDICAL JOURNAL, vol. i, 1883, p. 3. 3 *Odontological Society's Transactions*, vol. xviii, New Series, p. 52.

A NEW METHOD OF DEALING WITH CLEFT PALATE.*

BY F. N. G. STARR, M.B.TOR.,

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THOSE of us who have had much experience with cases of cleft palate have all met with more or less disappointment in our results. It has more than likely happened in the practice of all who have undertaken these cases that certain ones, though they looked promising at the time of operation, have broken down at some point in the line of closure, if not throughout. This experience has been mine upon more than one occasion. In looking about for causes, the following points presented themselves: (1) Tension along the line of suture; (2) sucking of the stitches by the patient; (3) infection from the mouth.

When searching for some means to overcome these difficulties I read a paper by Charles H. Peck, of New York,[1] in which he made reference to a plan suggested by C. H. Mayo—namely, the introduction of a tape through the lateral incisions, completely surrounding the flaps, and thus preventing tension. I tried this at the first opportunity; but, though it took off the tension, I am satisfied that in the three cases upon which it was used the risk of infection was increased, for after forty-eight hours it became most offensive, and by the end of a week the patients almost hated themselves. It therefore became necessary to find something better, and, finally, as a substitute for the tape I chose aluminium, sufficiently beaten out to make it pliable. I have no doubt that silver would answer the purpose equally well, but it is more expensive.

My technique varies somewhat from the Langenbeck operation, and, I think, saves time, which is an important point. The child is placed upon a table with a sandbag under the shoulders to throw the head well back, while the surgeon stands to the left of the patient. Hewitt's gag is placed in position and the tongue drawn well forward by means of a silk suture. I make the first lateral incision well out to the alveolar margin of the hard palate, carrying it beyond the anterior extremity of the cleft, if the cleft does not extend through the alveolar margin. With the periosteal elevator the muco periosteum is quickly denuded from this side, then with Lane's curved scissors the palate aponeurosis is snipped from the posterior margin of the hard palate, thus freeing the flap from its bony attachment. The flap should be freed anterior to the cleft. This incision may then be packed with a piece of sea sponge while one proceeds to the opposite side to deal with it in the same way. The first packing may now be removed, when one finds that all haemorrhage

* Read at a meeting of the Toronto Medical Society, May 2nd.

has ceased. The edges of the flap are then removed with a small tenotomy or cataract knife, making certain to cut as thin a slice as possible, at the same time taking the whole thickness of the flap margin. By the time denudation has been carried to the anterior angle on one side the sponge packing from the other may be removed, and denudation proceeded with on the other flap. While the raw edges are still oozing, and before there is time for mucus to glaze them over, I begin suturing, commencing at the anterior angle and proceeding backward. Horsehair is used, and each suture is passed about ⅛ in. from the margin and from ¼ to ¼ in. apart. These are left long until all have been passed, when they may be quickly tied. Lane's needles and needle-holder are used, and greatly facilitate the work. I then take a piece of aluminium, gauge 36 in thickness (Fig. 1), bend it at an angle where I want it to fold over the outer side of the flap, and pass it through one lateral incision; then by passing a pair of forceps into the opposite lateral incision, I grasp the free end and pull it down into the mouth cavity again, carry it across to the point at which it entered, and there cut off any excess. With a heavy needle one may then easily penetrate the metal, at one or two points as required, and pass a horsehair suture through and tie it to prevent the free end scraping and irritating the tongue, or the free end may be turned up into the lateral incision again and pinched with a pair of forceps (Fig. 2). The operation takes from twenty-five to fifty minutes. The aluminium may be left in for eight or nine days, when it is removed by cutting it across close to the lateral incision, and the stitches are taken out. The lateral incisions then rapidly heal, and the patient may leave the hospital in from ten days to two weeks.

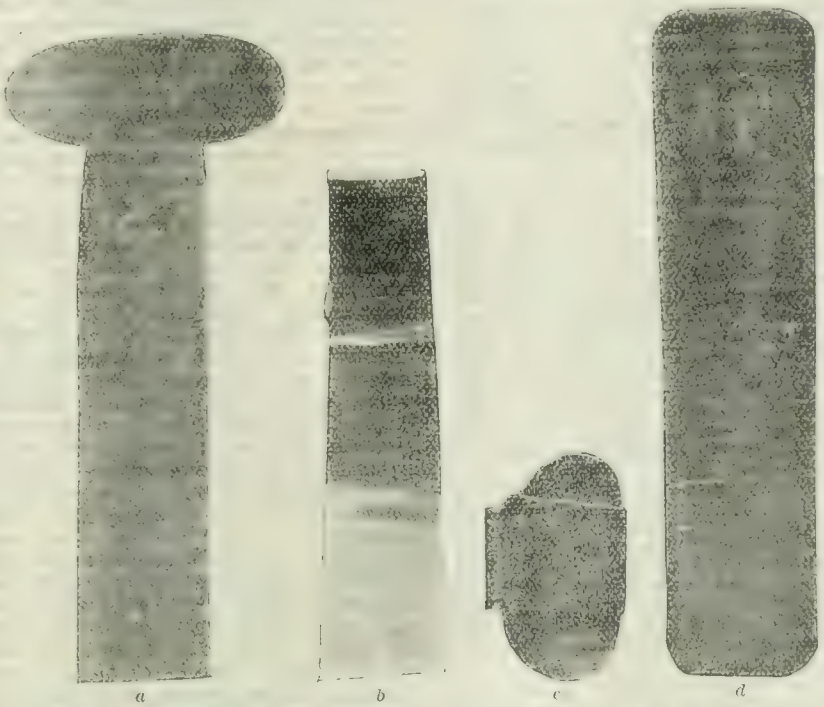


Fig 1.—*a*, Aluminium prepared with flange to cover line of suture. *b*, The same, bent at an angle, preparatory to passing the small end through the lateral incision. *c*, Appearance of splint when made secure. *d*, Piece of aluminium that may be used in small clefts.



Fig. 2.

The case, aged 2 years and 4 months, that I show to-night was operated upon April 19th last. The cleft was of the soft palate and about one-third of the hard. The aluminium splint and the stitches were removed on the 28th; you therefore see the case thirteen days after operation, and may judge for yourselves as to the efficiency of the method. This is the third case upon which the aluminium splint has been employed. The first one was in a child, aged 14, that had a very wide cleft which had been pronounced incurable, and it was advised that she should wear an obturator. The cast of the mouth (Fig. 3) was sent me a few days ago by Dr. Bennett, a dentist of St. Thomas's. It will be observed that union has taken place, except at one pin-point spot at about the junction of the hard and soft palate. This, of course, can readily be repaired. The second case was a child of 2 years with a complete cleft, in which union occurred throughout.

The advantages of the aluminium splint that occur to me are these: That it prevents tension, and prevents—till union of the edges has occurred — adhesion taking place between the muco-periosteum and the bone of the hard palate. I am satisfied that some cases have gone bad because of this, in that while there may be no tension at the completion of operation, yet, when such union begins, tension upon the edges of the flap may be sufficient to separate them by tearing out the stitches. Then, too, it prevents the child sucking the stitches. To avoid infection, the mouth is sprayed with a solution of boric acid and 10 per cent. rectified spirit, which may easily find its way under the splint and remain in contact with the wound for some time. For this purpose, however, I shall in future have the opsonic index taken; and if it be low to the germs within the mouth, an injection of vaccine will be administered a day or two before the operation, when there will be little or no possibility of infection. Thus one has overcome all the causes that tend to prevent union.

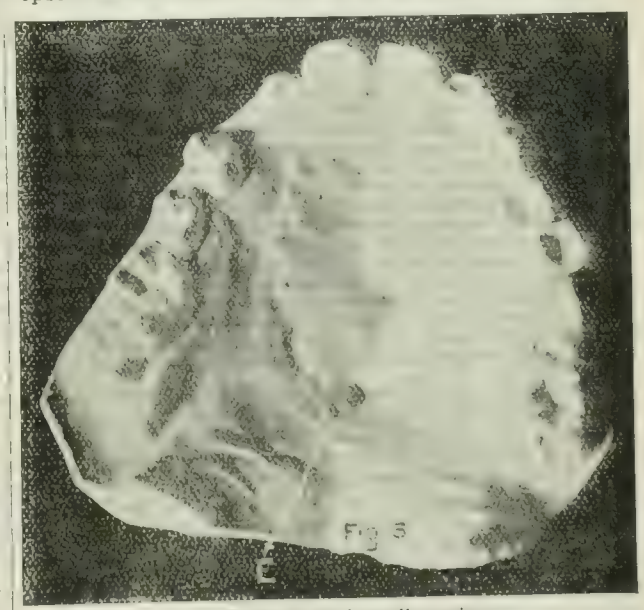


Fig 3.—E, Pin through small opening.

REFERENCE.
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SEVERE HAEMOPTYSIS TREATED BY MEANS OF THE ICEBAG.

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THE following case seems to be of interest as an illustration of a method of treatment which has largely gone out of use:

The patient, W. B., labourer, age 28, was admitted to Bellefield Sanatorium on March 12th, 1907. There was a history of a considerable haemorrhage eight years ago, but details were wanting. Since then he seems to have enjoyed good health up to August, 1906, when he had a fresh haemorrhage, which continued for some days; from that time to the present he has been in failing health, suffering from cough and weakness, has been unable to do any work, and has been in poor circumstances in consequence. He has lost about a stone in weight.

On examination he was found, in spite of the old history, to be suffering from phthisis in a comparatively early stage. The cough and expectoration were slight, temperature normal, pulse 70. On the right side there was some flattening below the clavicle, with limitation of movement; slight dullness extended to the level of the third rib in front and correspondingly behind; vocal resonance was slightly increased over this area, the breath sounds were bronchial, and a few deep-seated crepitations were heard about the level of the third rib in the mammary line. The base was clear. The left lung was practically normal with the exception of slight dullness at the base, with faint breathing, probably indicative of former pleurisy. The heart sounds were normal, except for accentuation of the second sound in the pulmonary area; the arterial walls were slightly thickened, and the pulse tension was somewhat increased. The urine was normal.

He was kept in bed, and given a full diet, including a liberal allowance of meat and four pints of milk a day. On March 16th (four days after admission) the sputum was increased in quantity and tinged with blood, and the same was observable on the following day. On March 19th definite haemorrhage set in. This continued at fairly regular intervals of a few hours for a period of nine days, the quantity of blood lost at a single haemorrhage varying from 1½ to 15 oz., the total amount being almost 5 pints. The daily quantities were as follows:

March 19th	...	...	...	...	2 oz.
,, 20th	...	...	...	...	20 ,,
,, 21st	...	...	...	...	31 ,,
,, 22nd	...	...	...	...	23 ,,
,, 23rd	...	...	...	...	18½ ,,
,, 24th	...	...	...	...	7 ,,
,, 25th	...	...	...	...	16 ,,
,, 26th	...	...	...	...	11 ,,
,, 27th	...	...	...	...	20 ,,
Total	...	...	...	...	153½ oz.

The temperature ranged from 99° to 101° F. The patient throughout was remarkably philosophic. The only alteration in the physical signs was an increase in the number of crepitations over the area already noted and the development of a consonant area at a corresponding point behind. No evidence of definite vomica was at any time obtainable.

The treatment included absolute rest with the shoulders gently raised, a diet of milk and eggs, and mild saline aperients. Hypodermic injections of morphine (¼ grain) were given at first but were discontinued as ineffectual. Amyl nitrite was administered in 5 minim capsules at frequent intervals, but appeared to have no effect. On the evening of March 29th an icebag was applied over the front of the right upper lobe and kept continuously in position night and day, the ice being frequently changed. Not a single drop of blood was expectorated from the time it was first applied. All drugs were stopped and the bag kept in place for six days. At the end of that period the chest was examined, and no crepitations could be discovered. The patient is now twelve weeks after the occurrence of the attack, rapidly improving in health, has gained 15 lb. in weight, and has no cough or expectoration.

The treatment of haemoptysis by means of the icebag is of course far from being a novelty, but of recent years it has largely been discontinued. I have frequently made use of the outward application of ice in such cases, but without very convincing results. It is seldom that the bleeding point can be localized with sufficient accuracy for the ice to be applied directly over the seat of the haemorrhage and thus to produce reflex contraction of the pulmonary vessels in the affected lobule. If opened in the wrong place, it probably does harm by raising the blood pressure in the region of the haemorrhage. In the case under consideration there is little doubt that the blood was coming from a minute cavity situated deeply in the lower portion of the right upper lobe, since there was no sign of breaking down of lung tissue in any other situation. In such cases the local application of the icebag would seem to be a method of treatment worthy of more general adoption.

GOITRE OPERATIONS UNDER LOCAL ANAESTHESIA.

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I do not advocate local anaesthesia as a routine practice in goitre operations. Most patients who undergo operations for enlarged thyroid glands take general anaesthetics satisfactorily (though it is not always possible to say beforehand which patients will not do so), so there is no need to submit the majority of these patients to the discomfort and anxiety of an operation under local anaesthesia. But for those patients whose condition makes general anaesthesia risky, or for those surgeons who shrink from giving general anaesthetics to patients of this class, I am sure that much good can be done with local anaesthesia.

During the last two years I have had opportunities of using a local anaesthetic for a number of severe goitre operations, and the results have been satisfactory. I do not claim any originality in this method, I have merely tried to follow the advice given by Professor Barker in the BRITISH MEDICAL JOURNAL of December 24th, 1904. The needles I have used have been his and the solution that which he recommends—sodium chloride 12 grains, beta eucaine 3 grains, water 3½ oz.; this is boiled, and then 10 minims of commercial adrenalin solution are added. The solution is ready for injection as soon as cool enough. The injection is made in two parts, superficial and deep. The superficial injection is made about the middle of the line of the proposed operation wound with a long, sharp needle; by passing the needle through the subcutaneous tissue and injecting at different points, the whole site of the incision can be dealt with through a single puncture. It is well to inject high up and to the outer side of the incision line, so that the nerves may be dulled on the proximal side of the wound. Half of the 3½ oz of fluid are injected superficially. For the success of the deep injection I think it important to introduce the fluid behind the transverse layer of the cervical fascia, so that it may reach the nerves which compose the cervical plexus. To this end I have been accustomed to make a deep stab puncture with a sharp tenotomy knife—if possible, through skin already anaesthetized, behind the posterior border of the sterno-mastoid muscle at the junction of its upper with the second fourth. The puncture is made here to be above the point at which the spinal accessory nerve emerges from the muscle. One of Professor Barker's flexible blunt-pointed steel needles is then passed along the track of the tenotome deeply into the neck, and the remaining half of the fluid injected here. This is done with the special syringe made to fit these thin flexible needles. If need be, the process may be carried out on both sides of the neck at once, 3½ oz. of the fluid being injected on each side.

The injection, apart from the punctures, does not seem painful, though some patients complain of fullness in the throat during the deep injections. All this injecting can be done with the patient in bed, and after a brief delay she may be moved to the operating room, where the operation should begin not sooner than half an hour from the commencement of the injection. The anaesthesia will last for at least an hour after the commencement of the operation.

The oedema produced in the tissues is often considerable, but is seldom troublesome to the surgeon, for the bloodlessness of the tissues due to the adrenalin compensates for the inconvenience so caused. The operations done have been excisions of half the thyroid gland or isthmus of both superior thyroid arteries. The arteries were found without difficulty.

During the operation the patient's face, unless she prefer not, should be covered with a piece of lint, so as to hide the operator from view. She may drink tea, brandy and water, or other fluid during the operation and this may divert her mind from what is going on. The moral control of these patients has been remarkable; in no instance of a goitre operation have I seen trouble given by the patient.

The results of the anaesthesia have been surprisingly good. The patients experience little inconvenience, except

when the trachea is dragged; then they complain of choking. One boy of 16, who otherwise showed no sign of discomfort, attempted to vomit when the gland was dragged away from the trachea. One woman whose superior thyroid arteries were tied for exophthalmic goitre, and whose condition with small, frequent pulse put general anaesthesia out of the question for her, bore the operation well, and said afterwards that the only painful steps in the procedure were the punctures for the deep injections. With all operations under local anaesthesia the patient's condition on her return to bed is much better than after general anaesthesia; all the post-anaesthetic distress is avoided. I have seen one goitre patient vomit during the day of operation, but no other has shown ill effects which could be attributed to the drugs injected. Another had a high temperature with frequent pulse-rate for a day, but I do not put this down to the eucaine or adrenalin. Healing is not hindered by the injection.

I thank the surgeons to whose patients I have referred, both for their permission to publish these few notes and for their help in carrying out the process of anaesthesia at the times of their operations.

THE ECLECTIC TREATMENT OF LUPUS VULGARIS.*

By J. GOODWIN TOMKINSON, M.D.,
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DR. MACKINTOSH has very kindly asked me to show some of the patients suffering from cutaneous diseases who have been treated in the electrical department of the Western Infirmary.

With your permission, I would like to make a few remarks bearing upon the treatment of lupus vulgaris, and, for purposes of illustration, I would draw attention particularly to three of the patients who have been under treatment for that clinical form of cutaneous tuberculosis.

CASE I.

R. C., a farm servant, aged 23, entered the electrical department on March 29th, 1906, suffering from lupus vulgaris exedens of the nose. His family history was good. He himself had enjoyed good health until about four years ago, when he began to suffer from a sensation of obstructed respiration in the right nostril. Examination on admission revealed a lesion occupying in the main the right ala nasi, the tip, and the lower half of the middle third of right half of the nose. There was more or less redness and swelling of the greater part of the organ, with a few vesico pustular points here and there and considerable desquamation. The sebaceous glands, where visible, were widely dilated and plugged with comedones. There was slight loss of tissue at the middle of the margin of the right ala nasi with some ulceration. The mucous membrane of the right nostril was involved. There was right epiphora. Pressure with a microscope slide revealed "apple jelly" or "*sucre d'orge*" areas. Prior to admission he had been under treatment for lupus vulgaris. With a lesion in such a situation the treatment obviously indicated was—first, that which would most likely ensure the best cosmetic results, namely, the least possible loss of tissue and the development of smooth and flexible cicatrices; secondly, rapidity of cure or of improvement.

There is no doubt as to the excellent quality of the cicatrix resulting from the Finsen treatment, but the length of time involved in its application is calculated to exhaust the patience of an individual immediately dependent upon his daily exertions for his living.

For three weeks, however, the patient was submitted to that treatment (Lortet and Genoud lamp) in so far as the non-ulcerated parts were concerned. In three weeks' time the x rays were called into use with resulting rapid record of improvement. The light treatment, however, was not entirely abandoned, and until July 28th, when the patient was dismissed (with instructions to return in three months' time, or earlier, if necessary) he was under both forms of treatment. In addition, the nasal mucous membrane was painted daily, or less frequently, according to tolerance, with pure lactic acid, and a weak salicylic acid ointment was continuously applied to the whole lesion. The general health was assisted by the internal administration of syrup of the iodide of iron and an occasional saline cathartic. In the middle of July he spent a whole week at sea. In all he was under active treatment for about four months. Three months after dismissal he returned for inspection. All swelling and virtually all redness had disappeared, the epiphora had greatly diminished, and the ulcerated area was replaced by a smooth and very regular cicatrix. Some further treatment is still necessary, but the result at present is very satisfactory.

CASE II.

I. M., a married woman, aged 23, was admitted to the electrical department on March 5th, 1906. One of her brothers had suffered from hip joint disease. The disease—lupus vulgaris of vegetating ulcerative type—for which she sought relief commenced about eleven years ago as a circumscribed swelling in the left malar region. In spite of treatment, it had been steadily progressive. On admission, the affected area was found to occupy the greater part of both cheeks, virtually the whole of the nose—of which there was considerable loss of tissue—and the upper lip. The centre of the right cheek exhibited an area of about the size of a florin covered with vegetations, purulent discharge, and some crusting. The surrounding parts were markedly injected and somewhat swollen. At the junction of the nose and lip the tissues were broken down, while the lip itself was much swollen, more or less cicatrized, and showed tuberculous nodules. Somewhat hard cicatricial tissue occupied the greater part of left cheek, with consequent ectropion of slight degree. There was some crusting at the lower limit of this area. The same eclectic methods were adopted in this as in the other two cases. The non-ulcerated areas were exposed to the Finsen light, while the vegetating and ulcerated parts were treated by the x rays. The vegetating area at the onset of treatment gave considerable trouble, the associated inflammatory action, due doubtless to secondary infection, sometimes being very intense. Wet boracic dressings frequently applied were found to be of considerable alleviative value, and in a relatively short time the vegetations flattened down, and by the end of June the patient had so much improved that she went home for five weeks. On her return the area which at the onset of treatment was covered with vegetations showed a smooth cicatrix of very flexible quality, and the ulceration in the naso-labial region had practically disappeared. The mixed treatment was recommenced, but since October 2nd the Finsen light has been discontinued.

With a view to the reducing of the widespread hyperaemia, which was a marked feature at the onset of treatment, a lotion containing zinc oxide and calamine with a little ichthyol was used; also, it should be added, salicylic acid in the form of plaster, rarely, and as a weak ointment more frequently, have been employed. The local treatment has been supplemented from time to time by the internal administration of haematinics and cod-liver oil, and saline aperients when indicated. Since March 5th, 1906, the patient has had about seven and a half months of active treatment. Although some further treatment is necessary, the result so far is eminently satisfactory, especially when considering the revolting aspect presented by the patient at the time she arrived for treatment.

Obviously the x rays have been in the main responsible for the relative rapidity of improvement in both of these cases—a rapidity which was strikingly apparent in the first case described.

CASE III.

J. D., a domestic servant, aged 27, who has suffered from lupus vulgaris of the right maxillary and submaxillary region for many years, and who has a distinctly tuberculous family history, commenced treatment in the electrical department on January 3rd, 1902. She has had virtually all forms of light treatment—the Finsen, the iron electrode lamp, and the x rays. The upper limit of the affected area has continued, however, more or less rebellious to treatment. Latterly this has been largely overcome by the alternation of x-ray treatment with a mildly caustic method which, briefly described, consists in removing as much of the diseased tissue as possible by the use of a strong salicylic acid plaster, the subsequent application of ichthyol in ointment and lotion, till the irritation more or less subsides, and thereafter repeated cauterization by 80 per cent. phenol in absolute alcohol, the strength advocated by Dr. Billet, of the good results of whose treatment for lupus vulgaris I had visible evidence some time after hearing his paper at the Paris Congress on Tuberculosis, held last year.

In conclusion, judging from patients who have been under my own personal treatment and from the experience of others, the x rays are a very valuable addition to the dermatologist's armamentarium for the treatment of lupus vulgaris. Unfortunately, some cases appear to be at present altogether irresponsive to their curative action, but, on the other hand, there are cases which respond with relative rapidity and with the production of a cicatrix of high aesthetic value, as the first two cases demonstrate. Almost all are agreed as to the benefits resulting from the Finsen treatment in cases of limited extent, but the length of time demanded in the treatment of extensive areas considerably restricts its practical value in such cases. The older methods undoubtedly still play an important rôle in the therapeutics of cutaneous tuberculosis, and, along with the newer ones, should be recognized and employed as mutual adjuvants.

* Read before the Western Division of the Glasgow and West of Scotland Branch.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

SURGICAL TUBERCULOSIS AND THE OPSONIC INDEX.

Regarding Dr. Squire's paper on opsonins and treatment of tuberculosis, I was much interested to find that he mentioned a point which I have been much interested in of late—namely, the infection of the blood system in surgical cases of tuberculosis. I have lately had two cases under my care.

In the first case a child (male), aged 2 years, had an attack of acute ascites, which I put down as tuberculous in origin, although there were no enlarged glands to be found. The child made a good recovery, but about a year afterwards it came again under my care suffering from tuberculous periostitis of a rib with abscess. I advised surgical interference. The rib was scraped and a tuberculous necrosis removed. The wound healed nicely, but the child developed tuberculous meningitis, and died about five weeks later.

The second case was a tuberculous knee. Excision of the joint was performed, and the child recovered from the operation but showed symptoms of meningitis four weeks later, and died of that condition about one year later.

These two cases tend to prove that there is a great danger of general infection by interfering with localized tuberculosis, and also that tuberculous meningitis, bone lesions, and peritonitis are caused by the same bacillus—namely, the *lupus bovinus*. That children are more susceptible to bovine tuberculosis is shown by the preponderance of bone, meningeal, and abdominal lesions in children as compared with adults.

Blantyre. Joseph Stark, L.R.C.S.Edin.

ACUTE COLITIS.

T. M., a civil engineer, aged 45, was seized one evening, after a long cycle ride in the wet, with violent diarrhœa. This continued throughout the night, and all the following day; but it was not until the second morning that a doctor was called. The patient gave a history of abdominal trouble extending over ten years. Whilst serving in China, at the age of 35, he had suffered from a severe attack of colitis, presumably brought on by the ingestion of tainted food or water. He had recovered fairly rapidly, and at once returned to England; but a chronic irritability of the large bowel had remained, showing itself in a liability to acute attacks of diarrhœa at intervals of weeks or months. These attacks were as a rule directly traceable to fatigue, cold, or indigestible food.

The patient was kept in bed, placed on a milk diet, and given bismuth and soda. No improvement resulted. Various diets were tried, to no purpose. Five or six blood-stained, evil-smelling motions were passed daily, and were accompanied by much pain and tenesmus. At the end of a fortnight a consultation was requested. A distinguished physician of European reputation was called in; he advised removal to a nursing home. This was done; but no special change was made in the treatment, except to ring the changes on various so-called "astringent" drugs. Opium was as yet withheld.

Another two weeks passed; the intestinal flux was still unchecked, and the patient, now greatly emaciated and in a pitiable state of pain and unrest, began himself to dread a fatal issue. To make his condition still worse, persistent hiccough developed, which was but imperfectly controlled by morphine. At length the patient's relatives, one of whom was a medical man, requested that a surgeon should see the case. An operation was eventually performed. The large bowel was found to be thickened and intensely congested. An opening was made in the caecum, and an artificial anus established in the right iliac region. Much to the surprise of everybody, the patient rallied from the operation. The immediate result was a stoppage of the diarrhœa, so that the sufferer's state became one of comparative comfort. But his recuperative power had been reduced too low to permit of ultimate recovery, and a week later he died comatose.

I saw the above case about a week after he first took to his bed: he was then cheerful, anxious for solid food, and did not look particularly ill. A month passed before I again saw him, and he was then evidently a dying man. Early operation would in all human probability have saved his life. It is doubtless true, as Dr. Sidney Phillips states, that the disease may sometimes persist, and even grow worse, in spite of colotomy. But surely this is no excuse for non-interference. A severely ulcerated colon is to all intents and purposes a closed cavity containing a mass of toxins, and its lining membrane is specially adapted for systemic absorption. To drain, to flush, and to keep on flushing until the formation of toxic products ceases—surely no other treatment is rationally conceivable.

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RELAPSES IN ENTERIC FEVER.

The patient in the following case, a girl aged 16, was admitted on May 4th, 1907, suffering from a moderately severe attack of enteric fever. The history given by the parents was that she had been ill for nine days before admission, but her condition indicated that the fever had lasted for about three weeks, a supposition which was subsequently borne out by the temperature chart.

Progress.—For five days after the case came under notice, it pursued an uneventful course, two slight haemorrhages from the bowel occurring, but not in sufficient quantity to be of importance. There was no diarrhœa nor abdominal distension. By May 9th her temperature had fallen to normal, and she was apparently on the way to convalescence. On May 10th, however, her temperature began to rise, and reached a maximum of 102·6° F. six days later. After this it oscillated between 102° F. and 99° F. till just before the end. On May 20th there was a sudden drop of three degrees, unaccompanied, however, by any other immediate symptoms or physical signs.

Result.—She died on May 23rd. A *post-mortem* examination of the abdomen was made. It revealed peritonitis, non-purulent, and not characterized by much matting together of the abdominal contents; in the small intestine numerous ulcerated patches at various stages, and a perforation about $\frac{1}{8}$ in. in diameter situated 6 in. above the ileo-caecal valve. Projecting through this perforation was a small piece of hard faecal material.

Remarks. The case is an interesting one, inasmuch as it departs from the rule that typhoid relapses do not usually result seriously, and confirms the rule that when in such circumstances a fatal result does take place it is nearly always due to a complication such as the above, partial immunization having almost certainly exempted the patient from the effects of a toxaemia sufficiently severe to cause death. The protection afforded by the primary attack is shown in this case by the comparatively mild nature of the relapse—early appearance of fresh crops of the eruption, short duration of febrile symptoms, etc. It also exemplifies the difficulties which are sometimes present in the diagnosis of a perforating typhoid ulcer, even in the absence of abdominal distension and when the patient is quite conscious. There was no sudden acute pain, no marked collapse, no great and immediate alteration in the pulse. In fact, there was practically no evidence which would justify the physician in saying at once, "That case has a perforation."

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SUDDEN DEATH IN INFANTS.

The following case of sudden death in an infant seems worth recording, owing to its possible etiology and the sidelight it may throw on some cases of overlaying which reach the coroners' courts. The child was a healthy boy, 7 weeks old, whose mother had died shortly after its birth, from anaemia. It was fed on milk and water and had appeared to thrive. When put to bed (in a separate cot) on April 29th it appeared quite well; it slept well and at 6 a.m. was said to be "playing and cooing" like a healthy child. At 7 a.m. the father thought the child looked "queer," and came over for me; when I arrived about half an hour later I found the child dead. The child had taken its bottle naturally between 6 and 7, no choking and no convulsion had been noticed. Its lips were bluish and hands clenched, with some blueness of the nails. At the *post-mortem* examination the thymus was obviously somewhat large; it weighed a little over an ounce, and measured 3½ by 2 in.; it was dotted with punctiform haemorrhages; there was no pressure on the trachea. Some yellowish fluid similar to what was found in the stomach was seen

in the trachea, and very slightly in the right bronchus. The lungs were healthy save for a few punctiform haemorrhagic-looking spots at the base. Similar spots were seen on the right and left ventricle. The superficial veins over the brain were a little congested. The stomach and bladder were full, the former containing about 2 oz. of bilious-looking fluid. No other disease could be detected. No choking had been noticed during life, no croup and no convulsion, and there was no suspicion of overlaying. Although the thymus was not very large, and certainly caused no pressure, it is possible, in the light of previously recorded cases, it may have been the proximate cause of the child's death, the immediate cause being asphyxia.

London, N. W. J. ANDERSON SMITH, M.D.Lond.

CASE OF BRONCHIAL DIPHTHERIA.

THE following case of diphtheria seems worth recording, owing to the region primarily affected being unusual. The patient, a boy aged 8, after a few days of general malaise, developed a nasal catarrh with slight cough and sore throat, but continued to go to school for five days; he was then noticed to be gradually losing his voice, his nose bled occasionally, and he was unable to breathe through it. On the tenth day he was medically examined.

The skin was very hot and flushed, the pulse 102, the temperature 101.4°; sero-sanguineous discharge from both nostrils, nasal breathing being obstructed owing to turgescence of the mucous membrane over the turbinals. The pharynx generally was red and congested, the enlarged tonsils showing a few whitish-yellow follicles; the soft palate and uvula were only reddened. Owing to extreme reflex irritability the larynx could not be examined. Except harsh, prolonged expiration, the lung sounds were normal. The urine was albuminous.

Progress.—The same evening the soft, toneless cough became very troublesome, and finally the patient coughed up two separate white fibrinous casts, apparently of the two main bronchi, which act caused immediate relief of the dyspnoea and cough. Each cast was about 3 in. long, ¼ in. diameter, hollow, and thin-walled, but of firm texture and slightly streaked with blood, and thirty-six hours later he coughed up a third cast about 4 in. long and of exactly similar appearance to the first two.

Treatment and Result.—Serum treatment was at once started, 4,000 units being injected every twenty-four hours for five days; after this all symptoms gradually abated and the patient made an uninterrupted recovery, though the voice was not completely restored for many weeks, and for three weeks the heart-beat was rather irregular and the first sound at the apex somewhat muffled. The only sequela was a bilateral paralysis of the ciliary muscle of the eye, which, treated with eserine, cleared up in a month.

Cultures made from the casts and from a throat swab developed colonies of Klebs-Loeffler bacilli. It seems clear that the casts did not result from an extension of membrane from the larynx, but were of primary formation, for throughout the illness there was, beyond the aphonia, no symptom of involvement of the larynx. It is also interesting that the formation of membrane caused no secondary bronchitis or bronchopneumonia, which so generally results from extension of laryngeal diphtheria downwards.

G. E. BELLAMY, M.R.C.S.Eng., L.R.C.P.Lond.

Kew Gardens.

COLOCYNTH POISONING.

IN connexion with the case of colocynth poisoning published in the BRITISH MEDICAL JOURNAL of June 8th, p. 1364, a similar case of my own may be of interest. It is the first case I have encountered, but inquiries show that colocynth is very frequently taken in Essex as an ecbolic under the synonym of "bitter apple." The condition is less uncommon probably than Dr. Barton thinks.

My experience coincides with his in that, though very drastic in their effects at the time, the patients seem to recover very well after large doses. It would, however, be interesting to know if there is any lasting after-effect in the small intestine or colon.

The patient, a married woman (aged 26, four children, no miscarriages, at present time pregnant three months), at 8.45 on Sunday morning took the half of a 2d. packet of "bitter apple" (about four teaspoons). About one and a half hours after taking the powder she began to vomit. Again, one and a half hours later, or three hours after taking the powder, she had great pain in the abdomen and purging commenced. The vomiting, pain, and purging continued incessantly all that day and night. At 6 a.m. on Monday she called in a neighbour, who administered an emetic of mustard, salt, and water. I was called in at 7.30 a.m., and found the patient very haggard-looking and in great pain. Temperature, 98.4°; pulse, 80. I saw the vomit, which was a thin yellow fluid. I administered morphine sulphate, grain ⅓, hypodermically; and, on calling again at 11 a.m., found the pain, vomiting, and purging had all ceased. A mixture of chalk and opium was prescribed. The next morning the patient felt quite well; she had had no more pain or vomiting, and one small, loose stool. The pulse and temperature were normal, and the drug had had no effect whatever on the uterus.

The printed label on the packet was as follows:

Powdered
BITTER APPLE.
This drug being a powerful medicine, should not be used internally except under medical advice.

What constitutes medical advice in the eyes of druggists? The one who sold this packet evidently did not hesitate about supplying this powerful drug without a written prescription from a medical man.

Colchester. T. LANGTON BUTLER.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

CITY OF BELFAST FEVER HOSPITAL, PURDYSBURN.

CASES OF FULMINATING CEREBRO SPINAL FEVER.

(Reported by ERNEST H. M. MILLIGAN, M.B., R.U.I., House-Physician.)

IN an epidemic of cerebro-spinal fever various types of the disease are to be met with, and in hospital I have observed cases which might be classified under the following heads: Ordinary, mild, abortive, chronic, intermittent, typhoid, relapsing, fulminating, and purpuric.

CASE I.

A female, aged 6 years, was admitted at 4 p.m. on April 24th 1907. She had been taken ill at 6 o'clock on the morning of admission, with vomiting and great restlessness, becoming rapidly unconscious. She was brought to the Royal Victoria Hospital, where the extern surgeon, Dr. Watson, found Kernig's sign slight in one leg and no rigidity of neck, and transferred the case at once for isolation.

State on Admission.—The child was unconscious, very dirty, and covered with a general petechial rash with a few purpuric spots about the groins. Temperature 101.4° F., pulse 140. There was blepharitis marginalis of the eyes and congestion of the palpebral conjunctiva, with slight purulent discharge. The pupils were equal and dilated, and reacted slightly to light. The posterior cervical, axillary, and inguinal glands were numerous and shotty. The neck was not retracted, and but very slightly rigid. Kernig's sign was very slightly present in both legs. The face was pale, the extremities cyanosed. Bubbling râles audible all over both lungs. No crepitations, tubular breathing, or dulness present. The heart sounds not heard owing to the râles.

Progress.—At 6 p.m., twitching of muscles of face and limbs occurred and lasted a few minutes; four similar attacks were noted in the next half-hour. The right arm and leg then worked convulsively, and the eyes rolled upwards to the right and twitched frequently. A little later breathing became laboured and Cheyne-Stokes in type; cyanosis increased, and the child died at 8.10 p.m. The urine contained no albumen. Duration of illness about fourteen hours.

Post-mortem Examination.—The following observations were made by Dr. Leighton and myself: Lividity well marked; on groins and thighs several purpuric spots about the diameter of split peas. Brain: Veins on surface of temporal, frontal, and occipital regions greatly distended; meninges fairly adherent to each other; pons, on anterior surface, slight purulent exudation; interpeduncular space, slight purulent exudation along blood vessels; medulla oblongata, purulent fluid oozing up from under it. Spinal canal: Clear opalescent fluid in large quantity, otherwise nothing unusual. Lungs congested; apices slightly emphysematous. Pericardial sac contained clear fluid. Heart: Haemorrhagic spots spread generally over its surface. Thymus: Rather enlarged. Kidneys: Slightly congested, venae rectae engorged, vessels in pelvis engorged. Spleen: Malpighian bodies prominent. Stomach: Mucous membrane congested; purpuric spots on the serous surface. Intestines: Purpuric spots on serous surface of entire jejunum and ileum; mucous membrane, solitary follicles greatly enlarged, especially in ileum. Mesenteric glands: Greatly enlarged and somewhat congested. Bladder: Purpuric spots

on peritoneal surface. Peritoneum: Numerous purpuric spots all over.

The *Diplococcus intracellularis meningitidis* was isolated from the ventricular fluid by Dr. W. J. Wilson, Queen's College Laboratory, Belfast, and also by Professor Symmers from fluid withdrawn by lumbar puncture before death.

CASE II.

This was a boy aged 7 years, admitted at 6 p.m. on May 11th, 1907. At 6 a.m. the same day he appeared to be in his usual health, but at breakfast time was found lying limp and unconscious. Between midday and 6 p.m. several convulsions occurred, some being observed by a nurse who went to bring it to hospital. She reported that both legs worked convulsively, the arms were thrown about, and there was twitching of the mouth, which was drawn to the right side.

State on Admission.—The temperature was 102·8° F., and pulse 164. The child was very dirty, its face pallid, and extremities cyanosed. It was unconscious, restless, and tossing its arms about in a purposeless manner. Kernig's sign was absent: the neck not stiff or retracted. The glands in posterior cervical, axillary, and inguinal regions were numerous and slightly. The palpebral conjunctiva was congested; the pupils were equal and not dilated, and reacted sluggishly to light. Numerous purpuric spots about a pin's head in diameter were visible on trunk and arms, such as might have been due to *Pulex irritans*. The heart sounds were normal. In the lungs bubbling rales were heard, generally over both lungs. The respiration was of the Cheyne-Stokes type. The child became gradually quieter, and its colour and breathing worse. At 9.20 p.m. another convulsion of several minutes' duration, similar to the ones described above. After this it remained quiet, and died at 10.20 p.m. Duration, fourteen to fifteen hours.

Post-mortem Appearances.—An examination was made by Professor St. Clair Symmers, who supplied the following notes. The body was well nourished; lividity of face, ears, back, and shoulders marked. Hundreds of small red spots over arms, chest, neck, back, flanks; none on legs. The thymus gland: Enlarged slightly, reddened; small petechial ecchymosis on it. The heart: A dozen petechiae, especially on posterior aspect, and one small haemorrhagic spot 3 mm. × 5 mm. in area. The lungs: No petechiae. The stomach: Marked injection and distension of the vessels of the mucous membrane, especially near cardiac end. The intestines: Small intestine, duodenum, jejunum, and upper part of ileum normal, as one approached the caecum the solitary follicles became progressively more numerous, more enlarged, and more visible, without reddening, until in lower three feet of the ileum the mucous membrane was positively mammillated with swollen solitary follicles; the lower most Peyer's patches showed considerable tumefaction of lymphoid tissue. Large intestine: An enormous number of swollen solitary follicles, especially in sigmoid flexure. The liver: Marked yellowish mottling. The spleen and kidneys: Slightly hyperaemic. Urinary bladder: Congestion of capillaries. The mesenteric glands: Enlarged. The brain: The whole organ was greatly congested; the pia and arachnoid mater saturated with purulent fluid, which accumulated in small bullae over the cerebellum; no pus was visible to the naked eye; the ventricular fluid was turbid and stained pink. Lumbar puncture was done *post mortem* and clear fluid obtained, from which the *Diplococcus intracellularis meningitidis* was isolated by Professor Symmers.

CASE III.

This might be classified as one of purpuric type. The patient was a male child, aged 4 months, admitted at 1.15 p.m. on February 4th, 1907. It had been ill since 5 o'clock in the early morning. At that time it became restless and cried continually. In the afternoon purpuric spots appeared on the forehead, then on its face, and spots and blotches appeared rapidly in succession over the trunk and limbs.

State on Admission.—The arms, legs, and trunk showed numerous purpuric spots and patches of subcutaneous haemorrhage, the face, neck, and scalp were also affected. Taken as a whole the area of the skin showing the purpuric condition covered the clear area. The neck was very slightly retracted and stiff. Kernig's sign was absent, the heart sound indistinguishable, the lungs normal, the eyes, slight ecchymosis of the conjunctivae.

Result.—The child died quietly two hours after admission. Lumbar puncture was performed after death and the *Diplococcus intracellularis meningitidis* isolated from the haemorrhagic fluid withdrawn by Dr. W. J. Wilson. Duration of illness twenty-two hours.

Remarks.—From the above notes it will be seen that cases of cerebro-spinal fever may be almost indistinguishable clinically from other acute toxaemic conditions, such as pernicious vomiting, uraemia, or malignant purpura. The pathological condition is also such as might be met with in an acute toxaemia, as the whole system is more or less involved. Where meningeal symptoms are slight, as may be the case in fulminating cases of cerebro spinal fever, diagnosis may be very uncertain except lumbar puncture be performed. The agglutination test and the raising of the opsonic index, as worked out by Drs. Houston and Rankin, which is a valuable aid in more advanced cases, in these fulminating cases could not be relied on. With regard to the mode of infection, the condition of the intestines and stomach might point to them as a possible source, but no definite opinion could be given, there are so many factors to account for. I must thank Dr. Gardner Robb, Medical Superintendent, City of Belfast Infectious Diseases Hospital, for permission to publish these cases, as also Professor St. Clair Symmers and Dr. W. J. Wilson, Queen's College, Belfast, Patnological Laboratory, for *post-mortem* examinations and bacteriological notes.

REPORTS OF SOCIETIES.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—At the annual provincial meeting held on June 15th, at Bedford, Dr. R. H. COOMBS in the chair, Dr. C. O. HAWTHORNE opened a discussion on *Acute rheumatism* in childhood. He observed that a considerable change had taken place in the views held as to the age-incidence of the disease. One of the characters specially distinguishing the disease in childhood was the frequency of cardiac complications. Possibly these were in part due to the child's activities being unrestrained by implication of the joints. The parents of rheumatic families should always have impressed upon them the risks involved even by apparently trivial illnesses of their children. There was too great a tendency to apply the term "rheumatism" to isolated events the nature and origin of which were obscure. Dr. Ewart, as an explanation of the frequency of endocarditis in children, suggested that this condition of the glands at that period did not favour retardation in the joints. It thus found a seat elsewhere. Calomel and antiphlogistic remedies were useful in the treatment of the endocarditis. Dr. MORRISON, speaking of erythema nodosum, said it was not limited to rheumatic subjects; it was generally preceded by tonsillitis at an interval of ten to fourteen days; this he looked upon as its incubation period. Dr. HARTLEY said that in Bedford, on the banks of a river, with a damp climate, it would be expected that rheumatism would be very common, but in his experience it was not so. Dr. SUTHERLAND thought that after active endocarditis had passed away it was a mistake to prolong rest in bed; this was frequently done owing to the reappearance of a murmur. In cases of recurring subacute rheumatism in which salicylates failed, he thought there must be some source of undiscovered infection. Mr. TUBBY, in a paper on *Contracted tendo Achillis*, described it as a cause of pains in the calves, shambling gait, sprained ankle, everted feet, and turning in of the toes. The contraction of the calf muscles produced lessening of the angle of dorsiflexion of the foot, and shortening of the stride in walking. It was usually due to infantile paralysis, and could be remedied by lengthening the tendon. Mr. SKELTON narrated a case of *Bilharzia* in a boy aged 11, who came from Rhodesia. The symptoms were great drowsiness and haematuria; ova were found in the urine. Dr. H. GOLDSMITH described a condition occurring in children characterized by photophobia and injection of the ocular conjunctiva; on the latter were small grey nodules which never broke down. It was rapidly cured by the yellow oxide of mercury ointment.

EXHUMATION OF BODIES IN NEW SOUTH WALES.—At the beginning of 1901 the duty of supervising the exhumation of dead bodies in New South Wales was transferred from the Department of Lands to the Board of Health. A return has been presented to the Board showing the number of exhumations during the past year. The total number was 126, the majority being the bones of Chinese for return to China; the remainder were for re-interment either in some other grave in the same cemetery, or for transfer from one cemetery to some other at a distance.

ANNUAL DONATIONS.—GEORGE GRANVILLE RANDOLPH, of Hove, who died on May 16th, left £1,500 to the Sussex County Hospital, and £500 each to Hove Dispensary, the Alexandra Children's Hospital, the Eye Hospital, and the Throat and Ear Hospital, all in Brighton.

REVIEWS.

THE PATHOLOGY OF INSANITY.

THE third volume of the *Archives of Neurology*[1] was issued a few weeks ago. Dr. MOTT'S work in the special field of research which he has taken for his province is now too well known to require either introduction or commendation at our hands. Neurologists throughout the world have learned to look to the publication of these *Archives* with well-founded confidence as being sure to contain important additions to the sum of knowledge on the vital problems of nerve pathology with which they deal. The present volume does not belie the promise of its predecessors. Leaving out of account for a moment the scientific value of its contents, the appearance of the volume, and in particular the number and beauty of the illustrations, are highly creditable to all concerned in its production. It is only just to say that medical science is deeply indebted to the enlightened liberality of the London County Council, under whose auspices the *Archives* are published.

The new volume is a further proof of the great value of the work done in the Pathological Laboratory at Claybury. There Dr. Mott has at his disposal material drawn from all the London County Council asylums, and this rich field of investigation has been cultivated by him, his assistants, and pupils with a zeal directed by wide knowledge and ripe experience, which has already yielded an abundant harvest. If the growth of insanity, as to which alarming statements are made from time to time, is to be checked, it can only be by an intelligent study of the physical basis of the disease. Thanks to Dr. Mott, a glimmer of light is now beginning to shine in what not long ago was one of the darkest places of pathology. What gives special value to his work, from the sociological not less than from the purely scientific point of view, is the fact that his researches are directed largely to the practical object of the discovery of means of preventing insanity. In the previous volumes of the *Archives* he has shown that this is no mere dream of transcendental hygiene. He has established, for instance, that syphilis is accountable to a very large extent, if not wholly, for general paralysis. This form of mental disorder constitutes a considerable proportion of the whole mass of insanity which has to be dealt with. The conclusion is therefore sufficiently obvious to be grasped by the mind of a vestryman of the old school, if any such still survive, that if syphilis is prevented or notably mitigated, the heavy cost now entailed by the provision for the care of lunatics will be materially lightened. The problem is how syphilis is to be prevented. The solution is far from easy in any case, but it is made infinitely more difficult by the moral considerations which are allowed, rightly or wrongly, to influence legislation, and even research. In his recently published *Essais Optimistes*, Metchnikoff complains that Professors of the Paris Faculty of Medicine have opposed his efforts in this direction, on the ground that it is immoral to allow people to believe that they can go to Cythera without danger, and that it is not right to give the public the means of wallowing in debauchery. Yet it is undeniable that neither the pulpit nor the teaching of hygiene has so far done much to check the spread of a disease which scourges the innocent as often and as severely as the guilty. It may be remembered that at the annual meeting of the British Medical Association held at Manchester in 1902 the Psychological Section passed a resolution urging on the Legislature and public bodies the necessity of greater efforts being made to stamp out syphilis; but, as in the case of many other resolutions, this has been but the voice of one crying in the wilderness.

In the two previous volumes of the *Archives*, syphilis as the direct cause of general paralysis of the insane, and as a direct and indirect cause of organic brain disease, was the main subject dealt with. These volumes were reviewed in the BRITISH MEDICAL JOURNAL of November 25th, 1899, p. 1483, and March 7th, 1903, p. 554. In the present volume are embodied the results of researches showing the close relationship of certain trypanosome infections, such as sleeping sickness and dourine, with syphilis, as manifested by the changes in the nervous system. This matter, as Dr. Mott points out in his preface, is of great pathological interest, because syphilis is now regarded as a protozoal disease caused by the *Treponema pallidum*, an organism closely allied to a trypanosome. He shows that in sleeping sickness there is a slow progressive extension of inflammatory reaction to irritation, manifested by lymphatic endothelial and conjunctival tissue proliferation, leading to a perivascular and meningeal infiltration with lymphocytes and plasma cells. The endothelium of the blood vessels is scarcely at all affected, so that, although there is a tendency to stasis and a progressive anaemia of the nervous substance, this is seldom so complete as to lead to a coarse and obvious local necrosis as in syphilis, or to a local or generalized necrobiosis as in general paralysis. In sleeping sickness, he says, the neurons suffer from functional depression as a result of interference with their gaseous and nutritive exchanges. This interference is caused by circulatory disturbances in the flow of blood and lymph brought about by the lymphangitis and the increase of intracranial pressure. There is no obvious wasting of the central nervous system as in general paralysis. On the other hand, in multiple gummata or generalized syphilitic brain disease in which there is stupor, the symptoms may be partly due to intracranial pressure and transitory circulatory disturbances, but sooner or later vascular occlusions occur which terminate in areas of necrosis. General paralysis, again, is a slow insidious progressive disease, in which there is not only an interstitial perivascular and meningeal infiltration and neuroglia proliferation like that of sleeping sickness, but in addition a marked progressive parenchymatous necrobiosis of the neurons. The constant and most important feature of the disease is the progressive dementia, which is proportional to the abiotrophy and destructive of the cortical neurons. A paper (in German) on the neuroglia in sleeping sickness is contributed by Dr. George Eisath, of the Claybury Laboratory.

In an elaborate paper on alcohol and insanity, the effects of alcohol on the body and mind, as shown by asylum and hospital experience in the wards and *post-mortem* rooms, are set forth by Dr. Mott with a wealth of facts gathered by accurate observation, which entitle it to rank as one of the most valuable monographs yet written on this important subject. An abstract of this paper was published in the *Journal of Mental Science* for October, 1906, and was reviewed in the BRITISH MEDICAL JOURNAL of March 30th, 1907, p. 762. It need only be said here that while recognizing the fact that if the effects of alcoholism and syphilis could be eliminated, the total number of admissions to lunatic asylums might be reduced by 25 to 30 per cent., and allowing that a certain number of patients may lose their reason on account of other toxaemic conditions or from mental shock, grief, or other emotional and moral causes, Dr. Mott expresses the conviction that the most important cause of insanity is an inborn mental deficiency or instability, "what we term the cause may be a coefficient and often merely serves as the spark which falls into the explosive matter." Dr. W. L. Ascherson's well-written paper entitled, Some Aspects of the Mental State in Alcoholism, with Special Reference to Korsakow's Disease, is another valuable contribution to the same subject.

In a strictly scientific sense, perhaps the most important paper in the volume is Dr. Mott's Bowman Lecture on the Progressive Evolution of the Structure and Functions of the Visual Cortex in Mammalia, which was delivered on November 4th, 1904; an abstract of it appeared in the BRITISH MEDICAL JOURNAL of November 12th, 1904. He says there that the distinctive feature of the human cerebral hemispheres is a general cortical expansion, especially of the neopallium, not restricted to any particular localized areas, although in some regions expansion is much greater than in others. This increase of the cortex generally, and of certain regions in particular, may be associated with the fact that associative memory is a vastly greater potentiality for the storage and comparison of sensory impressions in man than that of any other animal. The largest ape brain is approximately only half the size of the smallest normal human brain, and the average gorilla's brain is only about one-third the weight of the average human brain. The superficial area of the cortex cerebri in man is more

[1] *Archives of Neurology from the Pathological Laboratory of the London County Asylums, Claybury, Essex.* Edited by Frederick Walter Mott, F.R.S., M.D., F.R.C.P., Director of the Laboratory, and Pathologist to the London County Asylums; Physician to Charing Cross Hospital. Vol. iii. London: Published for the Asylums Committee of the London County Council by Macmillan and Co., Limited. New York: The Macmillan Company. 1907. (Pp. 530.)

than three times that of the gorilla, and this is due to the increase in the number and complexity of the sulci and convolutions, and especially to the development of the superficial and deep annectant gyri. This great increase is not so much around the primary fissures—Sylvian, central calcarine (the sensory spheres)—as in the frontal, temporal, and parietal lobes. The object of the research was to show what part vision, as a directive faculty, played in this great increase of the neopallium in mammals from the lowest types up to man. With the assistance of Dr. Watson, Dr. Mott was enabled to examine, compare, and have accurate drawings made from photomicrographs according to scale of the visual cortex, stained by the Nissl method, of insectivores, rodents, marsupials, ungulates, carnivores, lemuridae, and primates. Contrasting the microscopic structure of the visual cortex of the primates with that of the lower mammals, it was found that the main differences are the existence of an occipital lobe, the cortex of which consists of two structurally-different regions: (1) Visuo-sensory, which attains its maximum extent and complexity of cell and fibre structure in the ape, characterized by an increase of the width of the line of Gennari, a double layer of granules, and above the outer a deep layer of small and medium-sized pyramids; (2) visuo-psychic or associational, either not definite or as a very narrow zone in animals below the apes, and characterized by an increased depth of the pyramidal layer, owing to the presence of a third layer of large associational pyramids. This associational zone increases in area with the progressive evolution of the primates, and occupies a large part of the superficies of the occipital lobes in the highest types of human beings. Mott's observations on the visual cortex of mammals thus tend to show a parallelism between the progressive development of binocular vision.

It has long been considered that a large frontal development indicates a high order of intelligence, and that this is one of the striking features of difference between the anthropoid brain and the human. Dr. Mott points out, however, that there is a much greater development in the parietal lobe. Rudinger, who studied the brains of a number of distinguished men, including Bischoff, Döllinger, Tiedemann, and Liebig, asserted that the higher the mental endowment of an individual the greater is the relative extent of the upper part of the parietal lobe. Other observers, however, have fixed upon the lower part of the parietal lobe as that in which there is a correlation between a high order of intelligence and a relative increase of surface. According to Retzius, this was the case in the brains of the astronomer, Hugo Gylden, and the mathematician, Sophie Kovalesky. Hansemann described a similar condition in the brain of Helmholtz. Moreover, the wide parietal development of the cranium in the skulls of Beethoven, Sebastian Bach, and Kant indicates that an increased size of the parietal lobe is especially related to a high order of intellect, and it may be assumed, to genius and constructive imagination. The difference between the anthropoid brain and the human is not so much in the occipital as in the parietal lobe; it is in the parietal region, the region in which Flechsig locates the concept centres, that the great development of the posterior part of the brain has occurred. The progressive evolution of vision as a directive faculty is simultaneous with a motor adaptation, especially related to the mode of feeding and defence rather than to a particular species.

We can do little more than mention the other papers which make up the volume. Dr. George A. Watson, a former assistant of Dr. Mott at Claybury, contributes a valuable paper on the Mammalian Cerebral Cortex, with special reference to its comparative histology. It embodies the results and conclusions of an investigation dealing with the histological structure of the cortex cerebri in various mammals which has extended over a period of some years. Dr. Mott and Professor Halliburton deal with the suprarenal glands in nervous and other diseases. The general conclusions are that atrophy and degenerative changes in the suprarenal glands are frequent in the cases of nervous diseases (asylum cases) which they specially investigated; these changes, however, do not appear to be related in any special way to the kind of disease for which the patients were admitted to the asylum. They appear rather to be the consequence of the secondary diseases which ultimately caused death. The suprarenal glands, like other secreting glands, are adversely affected by any disease which impairs the general nutrition of the body. The diseases which appear to be specially efficacious in producing this result are those of a chronic and wasting nature, but acute disease, if sufficiently intense, will often produce the same result.

Dr. Arthur E. Bodington gives the results of a painstaking investigation of the condition of the blood in general paralysis of the insane, with special reference to the condition of the white cells. Among other things, he finds that there is an evening rise in the total number of white cells in all cases, amounting to from 2,000 to 3,000 per cubic millimetre. In convulsive seizures of general paralysis there is a very marked and sudden increase in the total number of white cells in the blood, which may in a few hours be multiplied four or six fold. The extent of leucocytosis appears to be proportionate to the severity and number of the convulsions. The blood pressure in general paralysis is low in conditions of mental excitement and during the last stage of the disease, and high in conditions of mental depression. It is higher in the morning than in the evening, thus corresponding with a change in the mental condition from depression to exaltation. The specific gravity of the blood is lower than in health.

Dr. Robert Jones reports a case of severe injury of the frontal region of the brain, followed by mental changes in the form of loss of the higher control; Drs. J. W. H. Eyre and J. Froude Flashman describe diphtheroid organisms found in the throats of insane persons; Dr. Waldemar Koch records some chemical observations in the nervous system in certain forms of insanity. Dr. Mott records a number of cases, all of which throw some light on points in the pathology of insanity. Among these are a case of Friedreich's disease, with autopsy and a systematic microscopical examination of the nervous system; two cases of amaurotic dementia (idiocy) and a correlation of the microscopic changes in the central nervous system, with the results of a chemical analysis of the brain; a case of paramyoclonus multiplex with epilepsy, affecting four members of a family, with the microscopic examination of the nervous system in a fatal case; one of frontal tumour simulating general paralysis; one of cerebral tumour, illustrating the difficulty of localization; one of bilateral lesion of the auditory cortical area giving rise to complete deafness and aphasia. Dr. Mott further contributes papers on carbon monoxide and nickel carbonyl poisoning; a preliminary note on the microscopic examination of the brain in cases of dementia praecox, and on cerebral anaemia in relation to the lesions in psychoses of toxic origin. Dr. Joseph Evans reports a case of acute Addison's disease without pigmentation, paroxysms of vomiting being the main clinical symptom; the illness terminated three days after admission in sudden death. There was tuberculous disease of both suprarenal capsules, and obsolescent tubercle in the lung with calcareous bronchial glands. He also records two cases of Raynaud's disease. All these cases were under the care of Dr. Mott.

Dr. J. P. Candler is the author of a critical essay on dysentery in the London County Asylums. He concludes that the disease is infectious and preventable; that it is caused by the action of an organism (or group of organisms) generally known as the *Bacillus dysenteriae;* that it is communicable mainly by contact with the excreta of infected persons and articles contaminated therewith, in this way closely resembling the manner in which enteric fever is spread; that it may attack the sane as well as the insane, and may occur sporadically outside the sphere of asylums, but that it is especially likely to occur when a large number of people of lowered powers of resistance and uncleanly habits are brought into close association, as occurs in the case of lunatics congregated together in large and overcrowded asylums. Further, he is of opinion that owing to the lack of adequate accommodation for the reception of cases of dysentery in many of the asylums, the methods of isolation of infected and suspicious cases cannot be carried out in the manner recommended in Dr. Mott's well known report, and there is little chance of the disease being eliminated from the asylums unless isolation and its attendant difficulties are combined with systematic bacteriological research. The scattered distribution of the London County Asylums, and the consequent difficulties of organization,

render this combined work a matter of impossibility, but Dr. Candler believes it would be practicable if it could be reduced to more workable limits. This, he thinks, could be effected if it were decided to commence an organized investigation extending over a definite period; to limit the investigation of cases to one particular asylum; to provide adequate accommodation for prolonged isolation of definite and suspicious cases, including those of diarrhoea, which would be removed immediately upon detection to the isolation block from the main building. From these would be derived the material for bacteriological research. This research would be directed to the elucidation of several matters which are at present the subject of controversy, and to laying the basis for the most thorough and rational treatment of cases of dysentery which can be evolved. It would include the investigation of every case of dysentery and diarrhoea in the asylum; the search for the causative organism, the earliest date at which it can be detected in the course of the disease, the method whereby the disease is spread, and the length of time a patient may remain infectious after recovery from the attack; the investigation as to the agglutinative properties of the serum of affected patients; and research into the possible value of serumtherapy. As the result of some such systematic and thorough investigation of the disease, confined in the first instance to cases arising in one particular asylum, Dr. Candler believes that a rational system of treatment would be discovered which would be of benefit both to the individual and to the general community, and which, if successful, could be adopted by the rest of the asylums of the London County Council. Failing this, he is convinced that the incidence of the disease can be diminished to a very great extent by stringent and prolonged isolation in wards set apart for the purpose of all cases denoting any signs of bowel disturbance. The present system of allowing patients who have only just recovered from an attack of dysentery to return at once to a general ward is, he says, simply courting disaster.

Mr. P. Harper, a student of St. Thomas's Hospital, contributes an interesting note on the weight and convolutional pattern in seven Chinese brains. The results of the examination go to show that in Chinamen the cerebral part of the brain is slightly larger in proportion to the cerebellar than it is amongst Europeans. The larger size of the cerebrum is due to a very large frontal lobe. Huxley said that when John Chinaman came to a knowledge of himself and felt his own power he would become the dominant race. In view of the "yellow peril" of which we used to hear so much, we find some comfort in the reflection that Mr. Harper's observations were made on a very small number of cases. Nevertheless, they are suggestive.

Dr. Mott states that he is at present engaged in organizing a systematic research concerning the relation of certain types of insanity to hereditary predisposition. He points out that another fruitful field of study in psychiatry would be those early cases of uncertifiable mental affection which are termed neurasthenia, psychasthenia, obsession, mild impulsive mania, melancholia, hysteria, and hypochondria, which in many instances are really the prodromal stages of a pronounced and permanent mental disorder. As he says, the poorer patients suffering from these conditions first come into the hands of the practitioner, the dispensary or infirmary doctor, and the out-patient physician at the general or special hospitals. The better-class patients are sent by the practitioner to the neurologist; the generality of the poorer patients, and often the better class patients, are regarded as of little medical interest by the medical man, who finds it a wearisome task to listen to their stories, to ascertain their inborn tendencies, and to find out the truth of what has happened to account for the strange conduct, which indicates that they do not feel, think, or act in accordance with the general usages of their social surroundings. Yet these patients may not be so antisocial as to be certifiable. Such cases are often in the hopeful and curable stage, and these, if studied carefully by trained medico-psychologists, could not fail to yield valuable results in regard to our knowledge of the causation, prevention, and cure of insanity. Moreover, when the cases are followed up systematically, they would throw much light on prognosis in similar cases. The majority of cases which are admitted to the asylum have long passed this hopeful stage; still there are a certain number of early curable cases, and these, Dr. Mott maintains, would sometimes be much better if they had not been certified or sent to associate with chronic lunatics.

We cannot conclude this inadequate notice of the *Archives of Neurology* without once more congratulating the County Council on the excellent results of the step which it took when it founded its pathological laboratory, and Dr. Mott on the success of his labours as illustrated in his own work and that of the assistants and pupils whom he has trained. The quality of the work cannot be more convincingly proved than by the fact that a large number of papers based on work done at Claybury has been published in the *Philosophical Transactions* and the *Proceedings of the Royal Society*. If such are the fruits of labours carried out by workers in a laboratory difficult of access, what a harvest might not be looked for if, as we have more than once urged, it were transferred to a more convenient position!

TEXTBOOKS OF MEDICINE.

IN the present day of many books on most ordinary scientific subjects and the multiplicity of subjects the student of medical science is liable to be examined upon, there seems to be a clear space for books containing concise and what may be termed essential or fundamental teaching. Among such Dr. R. A. FLEMING's *Short Practice of Medicine*[2] takes a place. On first opening the book the impression obtained was that it was, in a way, "a small Osler," but on examination it became clear that the impression depended merely on the reproduction, by Professor Osler's permission, of several temperature charts and diagrams from his well-known textbook. The sphere that Dr. Fleming suggests for his book is that it might be used to prepare the way for and economize time in attending a course of lectures on the practice of medicine by giving an outline of each disease and leaving only special points, clinical cases in illustration, and hints on treatment to be written down by the student. The book also professes to be a guide to the student as to what is and what is not of importance from the examination point of view. Subjects held by the author to appertain properly to clinical medicine, as the higher analysis of urine and the chemical examination of the gastric contents, have been omitted.

Perhaps the most outstanding feature of Dr. H. A. HARE'S *Textbook of the Practice of Medicine*,[3] the second edition of which is before us, is the practical, detailed, and ample discussion of the treatment of the individual medical diseases. A valuable feature of the work is the great attention given to the important subject of the specific infective diseases. More than a third of the thousand pages and over of text are devoted to this group of maladies. The section includes an account of such little known conditions as nasha fever, Japanese river fever, verruga, and kubisagari. All the chapters are good, but those on nervous diseases probably the least so. Many, for example, would be prepared to dispute the statement that the Argyll-Robertson pupil (really an index of previous syphilitic infection) is a sign of disseminated sclerosis, and although a transient and early diplopia is a so common sign of commencing disseminated sclerosis as to be almost characteristic, yet few would hold that actual ocular palsy leading to strabismus is common, as it undoubtedly is in tabes dorsalis. In spite, however, of such considerations there can be no hesitation in recommending Dr. Hare's work, now in its second edition, as an excellent textbook.

[2] *A Short Practice of Medicine*. By Robert A. Fleming, M.A., M.D., etc. London: J. and A. Churchill. 1906. Demy 8vo, pp. 748. 10s. 6d.)
[3] *A Textbook of the Practice of Medicine*. By Hobart Amory Hare, M.D., B.Sc. Second edition. London: Henry Kimpton. 1907. (Royal 8vo, pp. 1148. 21s.)

THE EXTERMINATION OF MOSQUITOS IN BRAZIL. Between 1872 and 1902 the total mortality from yellow fever at Rio was seldom less than 800, and was often over 2,000, and even 4,000. The extermination of the mosquito undertaken by "brigades," under the command of Senhor de Oliveira Borges, in 1903-4 reduced the mortality to 48, and in 1906 it was only 42. Yellow fever has now, it is stated, ceased to be endemic or epidemic. Equally satisfactory results were obtained in ships in the port.

NOTES ON BOOKS.

In Lucas's *Book of Receipts*[1] is presented a rewritten edition of Beasley's *Druggist's Receipt Book*, which has for many years been a useful occupant of the pharmacist's bookshelves. The present volume comprises a section on veterinary materia medica, chapters of formulae for domestic articles, photographic preparations, various forms of medicines, such as capsules, suppositories, etc., and toilet articles, with short directions for the analysis of urine, water, and milk, and a large collection of tables of very varied nature. The formulae for medicines supplied by druggists without a prescription will no doubt sometimes throw useful light on what a patient may be taking; the only other section likely to be much used by the medical practitioner is the last, in which appear lists of synonyms, incompatibles, volumetric equivalents, solubilities, chemical formulae, etc. Very few mistakes are to be noticed.

The first volume of the seventeenth series of *International Clinics* for 1907 is an unusually interesting and valuable number. The volume is more than worth possessing on account of the first article alone: On the psychic treatment of some of the functional neuroses, by Professor L. F. Barker, Dr. William Osler's successor in the Johns Hopkins University and Hospital, Baltimore. The neuroses in question are those real diseases known as hysteria, neurasthenia, traumatic neurosis, hypochondria, and psychasthenia, and among the psycho-therapeutic measures recommended in their treatment are explanation (of the patient's condition to himself), avowal (of the patient's mental state and habits to the physician), persuasion, medical obedience (as a temporary measure in the vast majority of cases), psychical stimulation and education (of the emotions, the attention, the will), and lastly suggestion, which, however, Professor Barker would prefer to replace for methods of persuasion. This article, in which the important part of the present-day physician as "confessor" and "moral director" is emphasized, contains, among other things, a valuable amplification of the grain of truth contained in the modern faith-healing craze. Other valuable articles are those by Dr. F. P. Gay on recent advances in the prevention and cure of tuberculosis, by Dr. J. J. Walsh on the treatment of functional heart disease, by Dr. A. S. Warthin on the clinical diagnosis of enlargement of the thymus, and by Professor Th. Tuffier on the opening of the pleural cavity without pneumothorax. Besides the original articles, there are 100 pages devoted to the progress of medicine during 1906 in treatment, medicine proper, and surgery.

Professor Aitken's *Manual of Clinical Chemistry*[2] was written primarily as a class book for second-year students, but is just of a size to appeal to many practitioners, who, whilst anxious to keep abreast of modern advances in physiological chemistry, are appalled by the immensity and complexity of most textbooks. Here they will find a simple but substantially accurate account of the chemistry of the organs and organic processes. The illustrations are not all equally good, but they serve their purpose, and there is a satisfactory index. The schemes for differentiation of fats, albumens, blood pigments, etc., are useful. There is room for the inclusion of one or two more on the same line.

A book of pocket size, such as Dr. H. Drinkwater's *Sick Nursing*[3] allows no margin of space for the irrelevant or non-essential. The author tells us in his preface that the book is intended for the use of students in connexion with the St. John Ambulance Association, and the evening continuation classes; but few such students require to be told that infants differ from adults among other things in their much smaller size, or that the nurse's duties "imply competence, personality and observance." The prevalence of this kind of platitude involves undue compression in important sections, but otherwise this little volume should form a reliable guide for junior students. We can heartily endorse Dr. Drinkwater's condemnation of the "binder" for infants as unnecessary and often injurious.

The appearance of a fifth edition of Dr. CUFF's *Lectures on Medicine to Nurses*[5] is sufficient evidence that the book has, as on the whole it deserves, found favour with its public. The preface contains a defence of the author's method of giving more medical and pathological information to nurses than is usually to be found in nursing manuals, and, inasmuch as it may keep nurses from the perusal of more advanced textbooks which they have not the training to understand, the method is justified. On the whole, the author shows considerable tact in observing the dividing line between the information fitted for a nurse and that required by the medical student, but it is difficult to see what good purpose is served by mentioning the names of the drugs usually prescribed in certain cases. On the other hand, there is a little dissertation on hysteria which is eminently wise and valuable. The book is illustrated by diagrams which, though primitive, are usually clear, but that illustrating the anatomy of the kidney is incorrect and misleading, as the vessels in Bowman's capsule are shown piercing the wall of the tubule instead of invaginating it.

[1] *Lucas's Book of Receipts.* Revised by E. W. Lucas, F.I.C., F.C.S. Illustrated edition. London: J. and A. Churchill. 1907. (Cr. 8vo, pp. 256. 6s.)

[2] *Manual of Clinical Chemistry.* A Laboratory Text-book. Edited by W. T. Longcope, M.D. Illustrated. Philadelphia and London: W. B. Saunders Co. 1907. (Med. 8vo, pp. 252. 7s. 6d. net.)

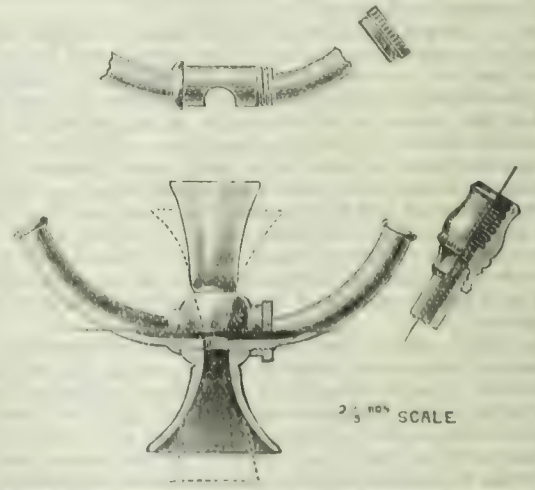
[3] *Sick Nursing.* By H. A. E. Archer, A.B., M.D. Professor of Medicine, Tufts College, Boston. London: W. C. Bryce, Co. 1907. (Cr. 8vo, pp. 288. 2s. 6d.)

[5] *A Course of Lectures on Medicine to Nurses.* By Herbert E. Cuff, M.D., F.R.C.S. Fifth Edition. London: J. and A. Churchill. 1907. (Cr. 8vo, pp. 274. 3s. 6d.)

MEDICAL AND SURGICAL APPLIANCES.

Chestpiece for Binaural Stethoscope.

DR. DAVID ROSS (London, N.E.) writes: For several months I have been using a form of chestpiece which I consider an improvement. As will be seen from the illustration, the body is made so that it revolves, the larger end being used for general chest examination, while the smaller is suitable for the intercostal and supra-clavicular region. The instrument is in three parts—the actual chestpiece, the curved arms to which the tubes are attached, and a metal screw cap, which serves either to allow the whole to be taken apart for sterilization, or to

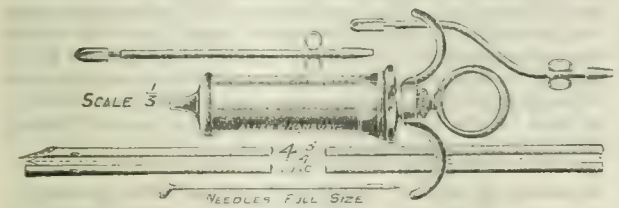


make the chestpiece quite rigid. The revolving part is in one piece of metal or ebony and while in most binaural stethoscopes the ebony part has to be unscrewed for intercostal examination, this simple device obviates that necessity. Stethoscopes now in use need not be discarded, for although the illustration is intended for india-rubber tubes, either silk or mohair tubes can easily be fitted by means of the special mount depicted separately, which is screwed on to both ends of the arms. The article can be obtained from any dealer in surgeons' instruments.

A Syringe for Enemas.

Major F. J. W. Porter, D.S.O., R.A.M.C., writes: This syringe, as depicted in the accompanying woodcut, is a modified pattern of the original instrument invented by Mr. A. L. J. Barker, F.R.C.S., and has been made by Messrs. Allen and Hanburys, Limited, of 48 Wigmore Street, London, W., at my suggestion. The syringe is of 30 c.cm. capacity, and is constructed throughout of hard metal; consequently there are no parts which can get out of order during the process of sterilization. The metal piston is so accurately ground to fit the barrel that a little sterilized oil is required to lubricate it before use. It is graduated and fitted with a revolving stop. There is no possibility of fluid getting behind the piston when inject-

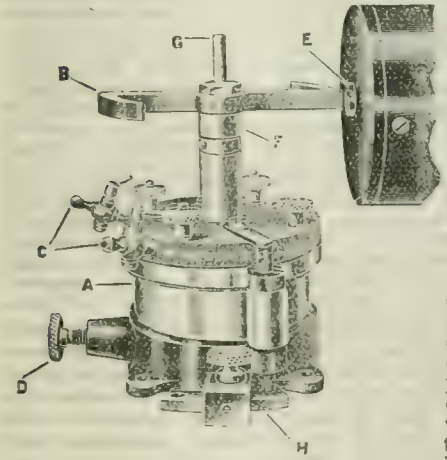
ing into dense tissues, an advantage which users of the old syringe will at once appreciate. The connexions of the needle-carrier to the barrel are such as to prevent leakage at this point. The finger grips are large. The Schimmel's needles used with this syringe are of larger gauge than were formerly employed, and the long cannulae as shown in the woodcut are also of correspondingly larger calibre. The needles do not corrode so quickly as the smaller ones, and can therefore be used many times. The needles and



cannulae are contained in two metal tubes. The syringe and fittings are all nickel plated, and are fitted into an aseptic case. The whole of the apparatus can be sterilized whenever necessary. The instrument has been tested very exhaustively in several large military hospitals during a period extending over six months, and has given complete satisfaction. The cost of the syringe complete in case is 45s.

Radiography.

Messrs. W. Watson and Sons have demonstrated to our representative two instruments designed to improve and simplify the technique of radiography. The Intensified Induction Coil has as its special feature a very large primary of heavy copper wire, the layers of which are separately wound and brought to terminals in such a manner that their arrangement in "series" or "parallel" can be altered at will, and the self-induction thus controlled. The nominal 8-in. spark coil can be arranged to give a continuous flame discharge of 12 in., and the nominal 12 in. size one of 16 to 13 in. Working with an electrolytic interrupter, currents of 15 to 25 milliampères, the makers state, can be passed through an *x*-ray tube, and under these conditions an exposure of five seconds suffices to produce excellent negatives of the parts of the body requiring greatest penetration. Of course few tubes will stand this treatment for long, but the advantage of being able to command such conditions is obvious. The Motomagnetic Interrupter, illustrated in the drawing, is a distinct advance upon existing instruments of the type. In the first place the di-electric used is ordinary coal gas from the household supply, or, where available, hydrogen. With the former gas there is, after some months' use, a slight deposit of carbon, with hydrogen none, and the advantage of not having to clean the mercury will appeal to every practical worker. The instrument is operated in the primary circuit, and its speed can be altered by a simple arrangement for increasing or diminishing the distance of the star-shaped magnet from the cord. The magnet is mounted on the shaft of a cylindrical metal block, which revolves carrying the jet, produced by a spiral channel, and impinging upon stationary but interchangeable teeth. The speed and noiseless working of the motor are noticeable, the simplicity of adjustment is a boon, and the weight of the complete appliance is but 5½ lb.



An Achromatic Illuminator.

Mr. PERCY DUNN, F.R.C.S., London, writes: The achromatic lens is often indispensable for examining the cornea, corneal surface, and iris, but the difficulty is that both hands are required to be employed in so doing, one in holding the lens and the other in supporting a focussing lens for condensing the light from a lamp. With the assistance of Mr. Davidson, the optician, 29, Great Portland Street, W., I have overcome this difficulty by the introduction of an electric light attachment to the achromatic lens, by which one hand is left free to carry out the necessary manipulations of the lids while the examination is being conducted. The apparatus consists of an achromatic lens of about half an inch focus, fixed in a metal clip, attached to which is the lamp holder. The current is controlled by means of a spring, by the pressure of which the light comes into use. The object of this arrangement is to prevent the waste of current when the lamp is not required. The lamp is of four volts, and is screwed into the folder. It can therefore be easily replaced when broken or fused. A dry battery is supplied, which will probably last with intermittent use upwards of six months. The appliances can also be fitted with 8 and 12 volt lamps for use with various accumulators, and even with the ordinary house current, by means of special adaptors which Mr. Davidson has designed. The whole appliance is enclosed in a small leather-covered box at a moderate cost.

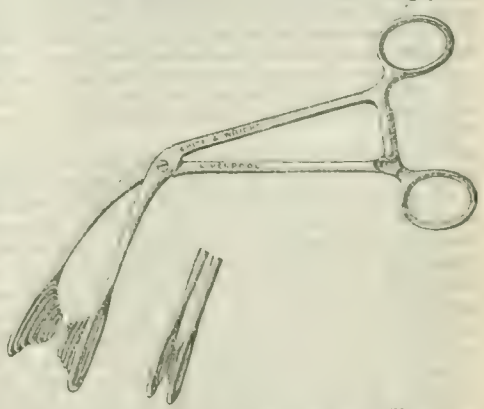


Forceps for Entero-anastomosis.

Mr. J. LYNN THOMAS, F.R.C.S. (Cardiff), writes: The three-bladed forceps described on p. 1488 of the BRITISH MEDICAL JOURNAL of June 22nd are similar to those designed by Dr. Roosevelt, and which I have used in short-circuiting operations since I had the privilege of first seeing them employed by Dr. William Mayo in Rochester, Minn., U.S.A., last September. I have tried these forceps over twenty times in cases of gastro enterostomy, ileo-colostomy, and cholecysto-colostomy, and I consider that they mark progress in the evolution of intestinal clamps. I very rarely used clamps before I obtained Roosevelt's unless working with a well-trained assistant, as I found that manipulation of two clamps in the hands of the untrained impeded rather than facilitated work. The lateral blades in Roosevelt's clamps are fenestrated, and are sufficiently rigid to prevent their overriding the median strong bar when the forceps are tilted sidewards to observe that the viscera are properly gripped in their respective places. The advantages claimed for the forceps devised by Dr. Linnertz exist in those I refer to, and I desire to record my impression of their value because I have been in the habit of looking upon the use of forceps in short-circuiting operations as a requirement to satisfy man's imitative faculties rather than a necessity to accomplish success in this branch of work.

"Finger-Grip" Forceps.

Mr. W. BLAIR BELL, Assistant Gynaecological Surgeon, Royal Infirmary, Liverpool, writes: The forceps here illustrated are intended to take the place of the finger and thumb in grasping any organ, such as the uterus, without damaging it. The blades terminate in oval rings, into which are fixed cone-shaped springs. The apposition of these resembles the action of the "pads" of the finger and thumb in grasping and holding a soft organ. The blades may with advantage be covered with an old rubber glove finger. The great superiority they possess over the ordinary finger-grip of an assistant is security of grasp and the small amount of space occupied; that is say, the hand of the assistant is not in the way. They have been made for me by Messrs. White and Wright, 93, Renshaw Street, Liverpool, and may be obtained in two sizes.



ROYAL COMMISSION ON VIVISECTION.

(*Continued from p. 1477.*)

An appendix to the second report of the Royal Commission on Vivisection, dated April 13th, has been issued.* It contains minutes of the evidence taken during February and March.

Evidence of Lord Rayleigh, President of the Royal Society.

Lord Rayleigh presented a statement drawn up by the Council of the Royal Society.

The document set forth that there could be no doubt that the main cause of the remarkable development of science in modern times had been the adoption of the experimental method of investigating Nature. In no branches of investigation had the theoretical and practical successes of experimental work been more conspicuous in recent years than in physiology and its practical applications in medicine and surgery. In medicine, the careful and patient testing of the effect of drugs on the lower animals had not only led to an accurate knowledge, not otherwise attainable, of these effects as produced on the human body, but had greatly increased the number of substances now available to the physician in the treatment of disease. Without this method of investigation the progress of pharmacology, in recent years so astonishing and beneficent, would be arrested, and diseases, which might in time be successfully combated, would continue their ravages unchecked. In modern surgery the application of similar experimental work had been attended with brilliant success. Most delicate and fundamental operations on the human body had been made possible by the knowledge obtained from the treatment of animals. The President and Council of the Royal Society claimed that since the continued advancement of science in every department depended so largely upon the use of the experimental method, the utmost caution should be observed in any proposals for legislation whereby the prosecution of the method might be unduly limited. So much had already been gained from the application of experiments on animals, both for the progress of physiology and the alleviation of human suffering, and so much more might be confidently expected in the future, that the President and Council trusted that nothing would be done that would hamper the legitimate employment of the method. While precautions should undoubtedly be taken against improper use of experiment on living animals, it was not the province of the Society to suggest what safeguards should be adopted. It was, however, the bounden duty of the President and Council to urge that those safeguards should be so framed as not unnecessarily to interfere with that advancement of knowledge to promote which the Society exists. Such restrictions would not only cripple or arrest the growth in this country of an important branch of biological science, but in so doing would reduce the efficiency of both physician and surgeon to mitigate or cure disease. It might then become no longer possible to maintain the high position which this country had gained in researches necessary for the advancement of knowledge, and for the guidance of medical practice; and the investigators, to whose devotion and skill the progress of medical science owed so much, might be compelled to seek in foreign universities and scientific organizations the opportunities for research which they could no longer find at home. This statement was not founded on general knowledge alone. The co-operation of the Royal Society had often been sought by the Government in taking measures to arrest the spread of deadly disease, and to improve the conditions of health in distant parts of the British Empire. Without the ungrudging services of physiologists and pathologists, many of whom the Society was proud to count among its Fellows, the services thus solicited could not have been given. The President and Council gladly availed themselves of this opportunity of testifying to the laborious and unselfish devotion, often in most dangerous conditions, with which the necessary experimental researches had been carried on, and to the value of these researches, not only in enlarging our biological conceptions, but in alleviating the sufferings of mankind.

Asked by Colonel Lockwood, who was in the chair in the absence of Lord Selby owing to illness, if he had ever, in the course of his personal knowledge, known medical men practise experiments on themselves sooner than go through the formalities necessary to obtain leave to carry them out on living animals, Lord Rayleigh said he had heard talk of that nature, but he could not speak to it as of his own knowledge. In reply to Sir William Collins, he said he had not, as President of the Royal Society, anything to do with applications for licences or certificates. In reply to Sir Mackenzie Chalmers, Lord Rayleigh said it would be rather difficult for the Royal Society, considering the mixed composition of its Council, to undertake the duties of the Association for the Advancement of Science by Research in regard to applications for licences and certificates. In reply to Dr. Gaskell, he said the Royal Society had been very well satisfied with the work done by the expedition in connexion with sleeping sickness. Asked by Dr. Wilson if the Fellowship of the Royal Society was more easily won by young men who took up experimental research on animals than by those in other departments of science, the witness replied that he could hardly say that. The nominations to Fellowships were very carefully discussed by the Council, and the object was to represent all branches. Asked if he did not think that errors were more likely to creep in in experiments on living animals than in experiments on inanimate nature, he said it was a question of the experimenter taking sufficient care to avoid being misled.

Evidence of Sir R. Douglas Powell and Dr. Frederick Taylor.

Sir R. Douglas Powell said Dr. Taylor and he had handed in a memorandum of the general views that they wished to place before the Commission. He would only remark that since the last Royal Commission was held the science of bacteriology had been almost entirely developed, and that it had, directly and indirectly, been of infinite service in the prevention and treatment of disease and in the mitigation of suffering, and that that had been brought about almost entirely by means of experiments on living animals.

In their memorandum they alluded very briefly to the well-known observations of Lord Lister and Pasteur, and to the infinite results which had been obtained from those observations in lessening human and animal suffering. Then they alluded to the important influence which bacteriological observations and discoveries had exercised on the public health and in the prevention of disease. Then they referred to some particular instances in which the results of bacteriological investigations had led to the treatment of certain diseases, and more particularly they mentioned diphtheria as an example; and they alluded to the important means of standardizing certain valuable remedies, such as the antitoxin or diphtheria, which could only be done by means of experiments on animals. They also referred to other specific instances, such as anthrax and swine fever, particularly amongst the diseases of animals, which had been greatly mitigated by these discoveries; and the nature and treatment of cretinism and myxoedema amongst the human diseases, which had been solely, it might be said, established through experiments on animals by Kocher and Horsley, Schäfer and Oliver, and others. Finally, they drew attention to the important recent observations of Lannander, showing how very little sensitive were the internal organs to surgical and other manipulations; that sensitiveness was almost entirely on the surface, and that the consequent lesions to internal organs were in the human being or in the animal attended with far less suffering than the public had been led to believe.

Dr. Taylor, on being asked if he had anything to add, said that, representing, as he supposed he did, the views of the Fellows of the College of Physicians and of practising physicians, he might say that those who were constantly thinking how disease was to be recognized and treated believed that it was absolutely necessary that constant research and constant experimentation and observation should be made in order to get at the problems of disease. Much could be learnt by observation, but it must be helped by experimentation. If new drugs were introduced, they must be tested on animals or on man. Diphtheria, tetanus, tubercle, typhoid, Malta fever, snake poison, yellow fever, the infections of pneumococcus, streptococcus, staphylococcus, had all been influenced materially by bacteriology, and there were many hopes that they would continue to be influenced by bacteriology and its necessary attendant, vivisection of some kind, on either a human being or animal. The witness went on to refer to the considerable decrease in mortality from diphtheria since the use of antitoxin. He had a number of figures taken from the Metropolitan Asylums Board's report.

In 1890 the mortality was 35 per cent. There were 942 patients admitted, of whom 346 died, giving a mortality of 36·5 per cent.; in the next year the mortality was 30·26 per cent.; the next year 29; the next year, 1895, it was 30 per cent. In the latter end of that year, 1895, the antitoxin treatment was introduced, and in the next year the mortality was 28 per cent., the next year 1896 it was 23 per cent. (He was not giving the decimal points.) In 1896 it was 21 per cent.; and then the succeeding figures are 17·4, 15·1, 13·6, 12·5, 11·14,

* London: Printed for His Majesty's Stationery Office by Wyman and Sons, Limited. 29, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 29, Fetter Lane, E.C., and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. (1907.)

11 33, 10; 10 per cent.—that is in the year 1904, and in 1905, 13.3 per cent.

In reply to Sir William Collins, he said the total numbers admitted in the later years were:

4,148 in 1905; in 1904, 4,687; the year before that, 5,072; the year before that, 6,520; over 7,000 in each of the two years before that; 8,673 in 1899; 6,000 in 1898; and, going back, 5,000, 4,000, and so on.

In the first year, 1890, there were 942 cases, and then the numbers rose rather rapidly until the maximum admissions were 8,673 in 1899; and then the admissions gradually diminished to 4,000 again. He attributed the improvement in the percentage of mortality to antitoxin. The admissions to hospital were dependent upon entirely different conditions; but the improvement was between 30 per cent. and 8 per cent., and he thought it was the feeling of all of them who had to do with these cases that the improvement in the treatment of diphtheria was very great indeed. In the laryngeal cases, in which obstruction and death from asphyxia were liable to take place, more patients recovered without the necessity of having the operation of tracheotomy, and those who had tracheotomy recovered in a greater number than they used to do. Before that time the fatality in those cases was so great that there were some physicians and surgeons who felt it was almost useless to operate by tracheotomy because the certainty of death seemed so great at that time. Proceeding, the witness said Koch's tuberculin treatment was taken up in a most sanguine way by the public and by the profession, and one might say that a vast vivisectional experiment was made on the whole civilized world. But it proved to be a vast failure as far as the treatment was concerned. As a means of testing the presence of tubercle it was successful; and, since that time, either by means of that tuberculin or some similar production obtain in a similar way, tubercle had been tested numbers of times with very fair success in numerous cases both in man and animals. A similar process had been employed with regard to glanders, in which a similar production, mallein, had been used, he believed, with complete success, in horses and cattle. Had Koch's statements been tested all over the civilized world by other experimenters, upon animals, it was extremely probable that how much good and how much bad was in it would have been found out before the sick ones in the human race submitted themselves to that very large experiment. In reply to questions, Sir Douglas Powell said he had seen some operations on living animals, but not recently. He had recently made some observations in an endeavour to find an antitoxin for pneumonia; but those observations were carried out by Mr. Foulerton, the bacteriologist. He had never seen any actual cruelty during the carrying out of those experiments, and he would say emphatically that no cruelty, as they should understand it, was practised. In reply to further questions, he said he did not think the law as administered at the present time had interfered with the advance of science. He was quite satisfied that it would be impossible to get the results which Professor Starling had obtained without the use of an animal like the dog. It was clear to him that some demonstrations of that kind were necessary, but he thought the restrictions laid down by the previous Royal Commission must be scrupulously adhered to as regards the sparing of animals any superfluous suffering, and as regards the status of those who had to do the experiments. Asked if he was of opinion that clinical observation and study had suffered by the use of experiments, he said he should say quite the contrary; it rather stimulated the student's powers of observation upon the human being. In reply to Sir W. Church, he said that as President of the Royal College of Physicians, he signed a large number of applications for licences. He always scrutinized them carefully, and saw that the person who asked for a certificate, if he was not known personally to him, had credentials from one of the professors of his own department. He also investigated the reason for the proposed experiments, and he not infrequently referred the application back to him to render those reasons more clear before he signed. In reply to Sir W. Collins, he said that in the last two years he had signed possibly a hundred or rather more. (Sir R. Douglas Powell subsequently wrote: "117 applications for various certificates, including 29 applications for licence. Several of these certificates are held by the same person or by two workers jointly.") He did not think he had actually declined in any case. He was, *ex officio*, a member of the Association for the Advancement of Medicine by Research, and he was in frequent communication with the Secretary of that association. Sometimes he had referred an application to him to ascertain some further data about it. He did not think that anybody could be in practice without noticing the vast difference in the treatment of diphtheria which had been produced by the use of the antitoxin. He would practically attribute the whole of the fall in the case mortality to the introduction of the antitoxin. In reply to Colonel Lockwood, Dr. Taylor said he did not know of any other cause. Sanitary conditions might have improved to a certain extent in the time, but he did not think that could account for such an enormous fall as there had been. He remembered perfectly well that the first two cases treated with antitoxin at Guy's Hospital, which happened to be under his care, recovered at once; they were just as bad, apparently, as numbers of others that they had had before. He did not attach too much importance to single cases; but the same impression, which was the result practically of unorganized experience—unorganized statistics, if they liked—was what all, he believed, who had had to do with antitoxin in diphtheria cases had derived from observation—namely, that the cases were not so fatal, that many more recovered now, and that cases of laryngeal complications, if they were injected at once, oftener got well without tracheotomy, and that if they had tracheotomy they did not have the rapid extension of the disease to the lungs, which was almost always fatal from the bronchopneumonia which used to be the result. The "unorganized statistics" were confirmed by the organized statistics. These were not only what had been published by the Metropolitan Asylums Board, but also those which had been published by similar bodies in other countries, such as Germany and France. Asked by Sir William Collins if it was not a fact that as many people were at the present time dying annually from diphtheria in England and Wales as were dying twenty years ago, he replied that he believed that it was not a fact. Asked if, assuming the fact of the case mortality having fallen from 20 per cent. to 8 per cent., he offered any suggestion as to the reason for the fact, according to the Registrar-General, that the number of persons dying from diphtheria per million in England and Wales from 1901 to 1905 did not appear to be less than it was from 1881 to 1885, Sir Douglas Powell said it would require a great deal of research to answer that question. He would like to know how many were treated with the remedy. Asked how the case mortality, having "by assumption, or by proof if you like," been so greatly reduced, he explained the fact of the larger number of people still dying from diphtheria from 1901 to 1905, Dr. Taylor said the disease spread from the conditions and the susceptibility and the multiplication of the toxin, bacillus, or whatever it might be—perhaps insanitary conditions, and so forth—and passed from one person to another, and broke out in the different persons to whom it passed. The treatment was a different thing from that, and had no bearing upon it whatever. All one could submit was that there was no doubt a hope that in some future time diphtheria might be prevented as typhoid fever had been to a great extent prevented. Asked to explain the fact that according to the Registrar-General's return for 1901 to 1905 the death-rate from diphtheria was more than it was twenty years ago, Sir Douglas Powell said the cases must obviously be more numerous generally. He believed it to be a true statement of the case that the case mortality had been reduced from something between 29 and 30 per cent. down to something between 8 and 10 per cent. In reply to further question, the witness said the deaths from actual suffocation from the spread of lymph down the trachea, which used to be so terribly frequent, had almost been abolished. He thought there had been a considerable improvement or alteration in the mode of diagnosing diphtheria in recent years. The bacillary test was fairly absolute, and they had been enabled by that means to diagnose as diphtheria cases which otherwise would have escaped diagnosis, and that in considerable numbers. Asked by Sir William Collins whether, prior to Kocher and Horsley, Sir William Gull and Dr. Ord had, from clinical observation, suggested the pathology of myxoedema, Sir Douglas Powell said they had suggested but had not proved it. The proof had been

established by experiments on animals, inasmuch as Horsley, for instance, produced cretinism in monkeys by the removal of the thyroid; and he thought it was Horsley who cured cretinism by leaving a portion of the thyroid behind or by introducing a portion of the thyroid into the body; and he thought it was Murray, of Newcastle, who first obtained the essence of the thyroid gland and used it for administration either subcutaneously or in doses by the mouth in the treatment of myxoedema. Now the use of the thyroid extract was a well-established curative treatment of that disease. In reply to Sir John McFadyean, Sir Douglas Powell agreed that it was a fact that the effect of the diphtheria poison on animals could be averted by the use of what was called the antidiphtheritic serum. Asked if there was any one to his knowledge who seriously contested that, provided there was a proper relationship between the dose of the serum and the size of the patient and it was administered early enough, the witness said he did not think that any well-informed person could deny that. He had not the slightest doubt as to the great value of the antidiphtheritic serum in the treatment of cases of diphtheria in human beings. Asked if he thought it possible that half the cases of diphtheria in Great Britain and Ireland were still not treated with the antitoxin, he said he should think that was quite possible. In reply to Sir Mackenzie Chalmers, Sir Douglas Powell said that, as far as he knew, the opinions which Dr. Taylor and he had expressed that day were the opinions of the leading members of the profession. Asked if he could give the name of any leading member of the College of Physicians who thought that animal experimentation either was wrong or led to erroneous results, he said he did not know of any one. In reply to further questions, he said the carrying out of the profession of a physician was largely based upon the results of experiments on animals, and he thought it unquestionable that the practice of medicine would be injured if experiments on animals were stopped. In reply to a question as to the increase in the actual number of diphtheria cases, he said he thought the diagnosis was more accurate now than it used to be. Perhaps one would be fair in saying that many cases now were recognized as diphtheria which would have been looked upon as sore throat. He thought it was hindered also in house cases by the use of the serum as a preventive for those exposed to infection. That might diminish the cases on the other hand, but he should think probably the facilities of communication and the crowding of the population would increase the number of cases. It was sometimes used as a prophylactic for nurses. The vast difference in the severity of cases in different epidemics was one of the fallacies one had always to bear in mind in the treatment of all epidemics. Asked by Dr. Gaskell as to the use of the active principles of various ductless and other glands being a most important addition to the resources of the physician in the treatment of patients, Sir Douglas Powell said he had mentioned the use of the essence of the thyroid gland in the treatment of myxoedema; cases of myxoedema which were formerly incurable were now completely held in abeyance for long periods of time by the use of the thyroid extract and completely cured at least for a time. Sometimes if the patients discontinued the remedy they would relapse, but with the continuance of the remedy they might be regarded as cured. As another instance, the use of the suprarenal extract had been found very valuable in certain cases of Addison's disease. These were very recent additions, and were due to laboratory experiments. Asked if he would recognize that the amount of pain and suffering had enormously diminished in recent years, he said it had certainly diminished in recent years with the antiseptic method of surgery which had been introduced through the researches of Lister twenty-seven years ago. He had seen a great number of very severe abdominal surgical operations and he thought he could say that when a patient emerged from the anaesthetic he suffered very little pain afterwards; the internal wounds healed up with great rapidity and the suffering was practically nil. In reply to further questions, he said he decidedly thought that in some cases of operations it would be very desirable to rehearse these operations on animals before doing them upon the patient. He was distinctly with Professor Starling in regard to that. He considered that a surgeon who had thought out an operation which he believed an improved method of treating patients should be able to try it first on an animal. He thought that under certain definite restrictions it might be very desirable that a student should perform some of these operations before he was let loose on the public. Of course, such operations would be done with the same anaesthetic, and in the same careful manner, as they would be done on the human subject; and he thought that at Johns Hopkins Hospital, Baltimore, such operations had been done. Dr. Taylor said he quite agreed with Sir Douglas Powell. He thought it would be desirable to relax the law in that direction. In reply to Mr. Tomkinson, Sir Douglas Powell said he did not think there was any special difficulty in keeping a dog under perfect anaesthesia for a long time. Dogs were rather susceptible to anaesthetics, and a skilled physiologist recognizing that could keep a dog under anaesthesia for any length of time, just as a human being could be kept under. In reply to Dr. Wilson, the witness said tuberculosis could only be acquired by the introduction of the tubercle bacillus; it was a specific disease. There was no question as to the influence of predisposing causes. He thought it was propagated by generally-distributed infection more than from case to case. The fact that in hospitals for consumption there was no special incidence of the disease amongst the nurses or the staff generally before precautions were taken in dealing with it had always, among many other considerations, led him to attach much less importance in regard to case infection of consumption than was attached by many members of the profession. His belief was that the virulence of contagion of consumption was due largely to the association of dirt with that contagion. In insanitary surroundings the tubercle bacillus was associated with other micro-organisms. Just as in the case of the tetanus bacillus, when mixed with other infections, it was far more virulent, so he believed the tubercle bacillus, when mixed with streptococcal and other organisms, was definitely more contagious, and, therefore, in clean places like consumption hospitals and sanatoriums, consumption was practically not infectious at all. He believed it had been shown that the infection with regard to husbands and wives and wives and husbands was not more than that of the general population. Heredity in his belief exercised a decided influence in diminishing the resistance to tuberculous infection. In reply to further questions, he said tuberculin was sometimes used as an aid to diagnosis in human beings. He should be very indisposed to use it himself. As a remedy the use of tuberculin, guided by the ascertainment of the opsonic index, had been helped by experiments on animals. The Marmorek serum was still under trial. He feared it was not going to prove very successful. In reply to Sir William Church, both the witnesses said they had never met anybody who had been in the habit of constantly treating diphtheria who did not believe in the value of antitoxin. In reply to Mr. Ram, Sir Douglas Powell said there were a good many sanatoriums in England now where the tuberculin treatment was practised. Returns were being obtained from those places. About three years ago, at the Royal Medical and Chirurgical Society, the use of tuberculin was fully discussed, and a certain measure of advantage seemed to have accrued from it in bladder cases, in skin cases, and in lung cases; and since that time it had been and was being used in sanatoriums, and he hoped that in the course of a little time they would be getting more definite reports. Dr. Taylor, asked by Colonel Lockwood if there was anything else he wished to say, referred to the last paragraph in their memorandum:

> We would, in conclusion, say, on the part of the whole medical profession, that we have no less regard and sympathy for suffering animals than others, nor any less urgent desire to spare them so far as is compatible with the larger claims of humanity.

He said he did not know that the public always recognized what they, as medical men, knew and felt with regard to human sufferings. They saw patients day after day, and going on month after month, suffering from diseases which they were trying to alleviate or to prevent a fatal termination. That seemed to him to involve a very large element of sympathy, that they had a right to feel for humanity as others felt for dogs and horses; and he thought that from that point of view the subject

had not always been sufficiently put before the public when this matter had been discussed. Much had been made, for instance, of the subject of hydrophobia. He had seen two cases some years ago, and anything more horrible one could scarcely conceive than to see a child of 10 years of age, as he did, dying as it was for two or three days of that disease. Any one, he thought, who had any sort of feeling whatever would feel that a good many animals might have been sacrificed to save that child's life and preventing the distress to her parents and all others connected with her. So he felt with regard to the whole matter. It was said that there were hundreds of dogs experimented upon, but in the whole country—the whole world—there were thousands of people suffering. They saw it every day of their lives, and those who had had a large experience of that kind of suffering, he thought, had a right to desire to improve their means of alleviating those sufferings; and, if that could only be done by means of vivisection, then it was a fair question for consideration whether the practice should not still be maintained.

AMERICAN MEDICAL ASSOCIATION.

(Continued from page 1493.)

THE fifty-eighth annual session of the American Medical Association was held in Atlantic City, New Jersey, on June 4th, 5th, 6th, and 7th, under the presidency of Dr. Joseph D. Bryant, of New York.*

The Oration on Medicine.

The Oration on Medicine was delivered by Dr. James B. Herrick, of Chicago, who took as the subject of his discourse the relation of the clinical laboratory to the practitioner of medicine. After referring to the change that had been brought about in our conception of disease and in the manner of its detection through the discovery and invention of instruments and methods of precision and the application of improved laboratory technic, the orator went on to say that the practitioner, not clearly understanding all the workings of the laboratory, and dazzled by the brilliancy of the splendid results that had come from it, had hailed the laboratory as his deliverer from the thralls of empiricism, irrationalism, and mere experience, and had looked up to it as the embodiment of science, as a never-failing aid in solving the mysteries of disease. The laboratory method had therefore in the minds of many acquired a transcendent importance; anamnesis and physical examination seemed old-fashioned and unreliable. Now, while the aid of the laboratory was indispensable, it had its own proper place. The earlier tendency to overvalue its work and to undervalue that done at the bedside was having the natural result in a swing back of the pendulum, and they were now hearing voices on either side of the Atlantic cautioning against the undue magnification of the laboratory at the expense of other aids to diagnosis. It should be understood at the outset that he was not referring to laboratories devoted exclusively to research, such as the Pasteur Institute, Koch's or Ehrlich's laboratories, the Lister Institute of Great Britain, the Rockefeller Institute, or the Memorial Institute for Infectious Diseases. He referred particularly to what was commonly called the clinical laboratory, the laboratory that was run as a utility, as an instrument of precision in the armamentarium of the physician, the place to which he took to examine himself or to have examined by others his specimens of blood, sputum, stomach contents, cultures from the throat, or fragment of tumour, hoping for aid in diagnosis and hints as to prognosis and therapy. It seemed to him that certain mistaken notions obtained regarding these laboratories, which led at times to strained relations and misunderstandings between the practitioner and the laboratory expert. These were due to faults that lay partly in the laboratory worker, partly in the practitioner. First as to the faults of the laboratory. In the first place there was often a failure on the part of the laboratory to acknowledge frankly its inherent limitations. The truly great men in this line of work were ever the most conservative in the expression of opinion. These were the men who were always on the look out for artefacts, who refused to state positively, from microscopic examination alone, that a smear from the throat did or did not contain diphtheria bacilli, who hesitated to declare that a cellular form was the *Amœba coli*, who might decline to pronounce whether a given section was from a sarcoma or an inflammatory swelling. Were there a franker willingness on the part of the laboratory expert to admit these limitations of knowledge, just as the clinician must at times acknowledge his inability to interpret physical signs, there would be in the end a distinct gain in confidence in the laboratory rather than a loss when the practitioner found from subsequent history of the disease, as he sometimes did, that the opinion of the laboratory so positively expressed was wrong. In the second place, there was at times a failure on the part of the laboratory to realize the gravity of the duty imposed on it by the physician. On the findings of the laboratory expert depended, perhaps, the loss of the uterus in a young wife for supposed carcinoma, the sacrifice of a limb for what seemed to be sarcoma but might be really gumma, the giving up of life's plans and hopes because of supposed tuberculosis of the lung or kidney, the diagnosis being based on some doubtful tubercle bacilli in the sputum or urine. The laboratory worker was often so remote from his patient that he failed to feel that personal responsibility of which the family physician was all too conscious, and so, scarcely realizing the importance which attaches to his decision, he might make it on insufficient grounds. Thirdly, there was a tendency for some laboratory workers to step beyond their province and make diagnoses unwarranted by the facts and even to advance a prognosis and advice as to treatment. Strictly speaking, the laboratory's function stopped when it announced its findings. The interpretation of the findings rested with the practitioner. Nothing had done more to bring the laboratory into disrepute than this irrational, almost meddlesome, method of venturing a diagnosis on wholly insufficient grounds. It was hardly an excuse that the laboratory was often asked for a diagnosis by the physician who was unable to interpret the findings. On the part of the practitioner there was often a failure to recognize the limitations of the laboratory. The physician too often had the notion that the laboratory methods were supreme, and that it rendered unnecessary and obsolete the old-time careful bedside observation. The possibility of error on the part of the patient or of the physician who provided the specimen for examination, particularly a specimen for bacteriological examination, the personal element of carelessness, haste, hurried conclusions in the laboratory operator, faulty instruments or reagents, the entrusting of important details to immature assistants, these were some of the ways in which error might creep in and ways concerning which the practitioner untrained in the laboratory was ignorant. Misinterpretation of laboratory findings by the practitioner was common and was grave. This was due to no fault on the part of the laboratory, but rather to the shortcomings of the methods themselves and the failure on the part of the practitioner to take cognizance of the fact. How many physicians to day are treating cases for something else than typhoid because a single serum test, made perhaps early in the disease, had failed to show the specific reaction, overlooking the fact that this reaction was very capricious as to the time of making its appearance, and overlooking, what a few years ago would have enabled them to make a diagnosis, the course of pulse and temperature, the spleen, rose spots, tympany, facies, etc.? Or how many times had the failure to find free hydrochloric acid been regarded as conclusive evidence of carcinoma of the stomach? And who among them had not had his hard fall from placing too great reliance on the presence or absence of leucocytosis? They should remember that many of the tests were not yet clearly understood, that in a sense they were still on probation and still to be regarded as only approximately correct. Too often the difference between a positive and a negative finding was not clearly kept in mind. Because no plasmodia were found in the blood on a single, even though careful, search, malaria was not necessarily excluded, though the finding of even a few proved malaria. Most diseases had yet to be recognized, not by some one symptom or sign that was pathognomonic, but by a complexus of symptoms and signs. Nearly all the laboratory findings

* For advance proofs of the President's Address and of the Orations on Medicine and on State Medicine we are indebted to the courtesy of the Editor of the *Journal of the American Medical Association*.

should be viewed in the same light as important symptoms, greater or less weight being attached to them, as one learned from experience or knew from their inherent character that they approached the pathognomonic. To illustrate: The finding of typhoid bacilli in the blood was of greater diagnostic value than the Widal test; the latter outweighed in importance the diazo reaction of Ehrlich, and this in turn was of more diagnostic value than the finding of a concentrated urine with perhaps a trace of albumen. The physician must have some reasonably clear conception of the relative importance of these and analogous procedures, or his interpretation was liable to be misleading. The laboratory finding must be fitted into the symptom-complex as a cardinal symptom perhaps, but must not be permitted to usurp the position of prime importance unless its inherent nature entitled it to such a position. The faults he had specified were remediable. The solution lay in two directions—first, in a better practical training of the undergraduate in laboratory technique and methods, so that he realized the difficulties, limitations, and possibilities of the laboratory; secondly, in the closer relation between the laboratory expert and the clinician, and when possible their union in the one individual. To these ends there should be laboratories in medical colleges for the training of undergraduates, and these should be as closely connected with the wards of the hospital and the clinic as possible. No modern hospital should be regarded as well-equipped that did not make provision for a laboratory. Departmental laboratories were desirable, and, on the same principle of keeping the laboratory and the attending staff in close touch and removing the dangers coming from divided responsibility, there should be, when possible, ward laboratories, or laboratories for the individual attending man. And the time would soon come, if it were not already here, when the laboratory of the clinic or the ward must have its subdivisions into chemical, bacteriological, anatomical, etc. In private practice how was it? Ideally each practitioner should have his private laboratory. He attempted it now with his few begrimed test-tubes, his bottle of nitric acid and his Fehling's solution and the binocular microscope under that large glass globe on the marble-topped table in front of the window in the parlour. But there were many men, and their number was rapidly increasing, who had a microscope that they used, who were equipped to do in their own offices good work in the examination of urine, blood, sputum, faeces, stomach contents, pieces of pathologic tissue, etc. And as they grew too busy to do these things themselves, they employed the young man fresh from the college laboratory, and, guiding and directing him, instructing him in the practice of medicine, instructed by him in the later improved methods just taught him in college, they worked together, mutually benefiting, keeping up with the times, and exemplifying the union of the laboratory and the clinical side of medicine. But not every man was able to do this or felt that he could afford it. Could not groups of men combine to employ some young man to do much of this laboratory work? These group laboratories, or what amounted to such, he had seen in small towns where a recent graduate, perhaps not on any salary, was yet the man to whom the other physicians by common consent submitted their specimens for laboratory examination, and because all did it there was no feeling of lowered dignity or of acknowledged inferiority, but perfect harmony, good feeling, and mutual profit.

Similarly, the country medical society might have its clinical laboratory under the charge of some young man paid a salary or fees for separate examinations who conducted a laboratory to which any member might feel free to go for the help that for various reasons he could not get in his own office. Laboratories for counties had already been established, and, if not too much entangled in politics, ought to be successful, especially in the way of guarding the health of the community and in aiding in the diagnosis of charity cases. In the same way municipal laboratories had become a recognized feature of the modern city.

What he would contend for was not less laboratory work but more, more for the undergraduate and more for the practitioner. And he would plead for the closer relation between the laboratory and the patient. Not only should there be a training of the physician in laboratory technic, but a training of the laboratory worker in observation of disease. The more familiar he was with illness the more acutely did he feel the responsibility resting on him and the more helpful did he become as the co-worker of the practitioner. In exceptional cases exceptional laboratory knowledge or skill might be necessary and could be obtained of some one who had made a special study of some particular branch of pathology, bacteriology, physiology, chemistry, etc., in just the same way that the practitioner in exceptional cases called for the help of the expert oculist, neurologist, laryngologist, or other specialist.

Dr. Herrick went on to urge that the value of close observation of the patient should not be underestimated. The stored-up and collated observations of keen-eyed and keen-brained students of disease from the time of Hippocrates down to the present were not to be lightly thrown aside. Because bacteriology, the microscope, and the *x* ray often enabled them to make an early diagnosis, they should not rely on these agencies to the exclusion of the older methods. Rather should they be led to greater care in examination because of the possibility of earlier recognition of disease and more accurate interpretation of slight deviations from the normal, for the laboratory had sharpened their insight into the meaning of signs and symptoms otherwise obscure. It was only by the correlation of the results of the examination by all methods that the conclusion was reached as to the nature of an illness. A caution along another line ought also to be given. The use of instruments of precision and of laboratory methods in diagnosis had tended, at least in some quarters, toward a slighting of the study of pathological anatomy. Changes in the size, shape, consistency, and other physical properties of organs with resulting alteration in function, had been, and of necessity must be, the basis for many of their diagnoses. No bacterlological or blood findings could detract from the detection and identification by physical examination of a large spleen, though the interpretation of such enlargement might be impossible without the study of the blood. There should be as careful comparison of clinical findings with those of the autopsy as in the days of Skoda and Rokitansky. And encouragement should be given any method of diagnosis that tended to emphasize a study of function as altered by disease. Pathological physiology, he believed, would play a far more important rôle in the diagnosis of the future than at present. In conclusion, they should not look on the laboratory as a short cut to a diagnosis. Sometimes it was, but often its workings were slow and cumbersome, and because of their complexity the results were not easily expressed in practical, everyday usable terms, and were, therefore, inconclusive or confusing. Anamnesis, physical and laboratory findings were to be studied and compared and a result reached that not only gave a name to the disease but gave them a conception of the disease as it existed in the particular individual, with all that such a comprehensive diagnosis implied in the way of prognosis and hints as to therapy.

THE MIDWIVES ACT.

The Payment of Medical Men Summoned to Assist Midwives.

The Council of the County Borough of St. Helens, Lancashire, has adopted the following scheme for the payment of medical practitioners summoned in cases of emergency to assist midwives; it has been framed to meet the difficulty now well known to exist in the working of the Midwives Act; the power for making the payments is obtained from Section 133 of the Public Health Act:

Scheme for the Payment of Medical Practitioners called out in Cases of Emergency to Assist Midwives.

The Council of the County Borough of St. Helens is prepared to make certain payments to medical practitioners called in under Section E 18 and E 19 of the rules framed by the Central Midwives Board, under Section 3 1 of the Midwives Act, 1903. (2 Edw. VII, c 17.)

These payments will be made only on the written application of the Medical Practitioner after consideration and investigation by the Health Committee of the Council. In determining which cases shall come under this scheme the Health Committee will take into consideration:

1. Nature of case.
2. Inability of medical man to recover his fee.

1. *Nature of the Case.* The expenses of medical attendance will be paid only when there is great urgency, and under Section E the cases of urgency will include:

19 (1) The whole subsection.
19 (2)*b* When there is loss of blood.
19 (3) The whole subsection.
19 (4) Secondary *post-partum* haemorrhage.
19 (5) Dangerous feebleness of the child.

but all other cases when there is undoubted urgency and danger to either mother or child shall be included whether mentioned in the foregoing list or not.

2. *Inability of Medical Man to Recover His Fee.*—The medical man is required to take reasonable means to secure his fee before applying to the Health Committee. The fee will be paid only on the written declaration of the medical attendant that he has been unable to obtain the whole or any part of it from the patient, and shall be wholly or partly repayable by the medical attendant to the Council, if subsequently whole or part payment be made by or on behalf of the patient. The medical attendant shall also be required to give a description of the case, and the treatment adopted, on a prescribed form. (Copy attached.)

The fee for attendance in all cases of urgency and danger to either the mother or the child, shall be on the scale of 5s. for a visit, or £1 1s. when operative interference is required and has been carried out. The fees are not cumulative and the fee in any one case shall not exceed 5s. when operative interference is not required, and £1 1s. when an operation has been required and carried out. Any claim for an additional fee must be made in writing, and will be considered by the Health Committee on its merits.

Nothing in this scheme shall be held to bind the Health Committee or the Council to pay the fees of any medical attendant in cases which they, after investigation, shall for any reason whatsoever deem unsuitable. The Health Committee reserve to themselves the right of withdrawing or amending the scheme.

Form of Application for Fee.

THE MIDWIVES ACT, 1902.

To the Health Committee of the County Borough of St. Helens.

I hereby certify that on..... at.....{p m. / a m.} I was called in at the instance of a midwife ..... to attend.....at.....

The reason given on the paper furnished by the midwife for calling me in was.....

The case was one of urgency, and I found the following conditions requiring medical assistance: .....

.....

The treatment which I adopted was briefly as follows:

.....

.....

I hereby declare that I have failed to obtain my fee in whole or part for this attendance, and that I have taken reasonable means to secure it. I further undertake to refund to the Council any payment made to me with respect to this attendance, should whole or part payment be made to me by or on behalf of the patient.

.....

Address.....

Date.....

This Form duly filled up and signed by the medical practitioner must be sent to the Medical Officer of Health, Town Hall, St. Helens, within six months of the date of the attendance.

FIRST REPORT OF THE ROYAL COMMISSION ON MINES.

BREATHING APPLIANCES FOR RESCUE WORK.

THE preliminary report of the Royal Commission on Mines appointed June 7th, 1906, with Lord Monkswell as its Chairman, and enlarged by the addition of other members on May 18th, 1907, has been issued.[1] A large number of questions relating to the health and safety of miners was submitted to the Commission, including the watering of roads to allay dust, standards of ventilation, rescue work after accidents and explosions, and means to be adopted to prevent ankylostomiasis. The Commission decided to proceed with only two of the questions—the compulsory watering of roads in dry and dusty mines, and the provision and use of breathing appliances in connexion with rescue work in the event of accidents. This preliminary report deals only with the use of breathing appliances designed to enable persons to remain in a poisonous or irrespirable atmosphere such as is found in a coal mine after an explosion or in a fire.

It was in 1881 that Fleuss introduced his breathing appliance. The apparatus was first tried at Seaham Colliery, co. Durham. The question of rescue appliances was shortly afterwards submitted to a Royal Commission on Accidents in Mines which was sitting at the time. This Commission advised that it was desirable to establish centres in mining districts where men could be trained. This recommendation apparently received little or no attention from the Home Office, for nothing was done officially. It was left, therefore, for voluntary enterprise to take up what was clearly a Government duty.

In 1900 Mr. Garforth, of Messrs. Pope and Pearson's Altofts Collieries, built an artificial gallery, in which are reproduced most of the structural difficulties likely to be met with in a coal mine after an explosion. The Commission has tested the various rescue appliances that are in the market, eight of which at least were handed over to Dr. A. C. Boycott for experiment at the Lister Institute. The results of those experiments, along with a comparative estimate of the qualities of the various rescue appliances, are embodied in an appendix to the report. These results are not meant to be exhaustive, nor does the Commission feel that the time has come to make the provision of rescue appliances compulsory, as is the case in Austria. Experience alone can show whether the use of rescue appliances in a coal mine after an explosion will be attended by the saving of human life. There are many difficulties to be overcome. Many mine managers are not in favour of rescue apparatus, but that is no reason why the appliances should not be tried and their defects remedied. It is conceded that their use might be attended with danger, but this would, to a great extent, be overcome by having men trained to wear them. This is important. If rescue work is to be of real service, men must be trained, and this involves considerable sacrifice on the part of men, for the exercises are hard. This part of the problem has been solved at Altofts Colliery, where Mr. Garforth's men are always eager to repeat the experiments. In this matter *esprit de corps* counts for much. Now that the question of rescue work has been taken up and dealt with by a Commission, it is to be hoped that something will be achieved, and that the recommendations of the Commission will not share the fate of those of the Commission of 1886.

[1] Published by Wyman and Sons, Limited, 109, Fetter Lane, Fleet Street, E.C. 1s. 6d.

NOTES ON HEALTH RESORTS.

POINT OF AYRE, ISLE OF MAN.

DR. C. DISNEY ROE, of Ramsey, Isle of Man, writes to call in question a statement in the article on Droitwich, published in the BRITISH MEDICAL JOURNAL of June 15th, to the effect that Droitwich in respect of the strength of its brine waters, stands practically by itself in these islands, and can be compared only with Rheinfelden in Switzerland. Dr. Roe states that the brine at Point of Ayre in the Isle of Man is stronger than that at Droitwich, and supplies the following comparative analysis:

Analyses of Brines.

Locality.	Cheshire.		Worcestershire.		Isle of Man (Point of Ayre).	
	Marston.	Wenlock.	Droitwich.	Stoke Prior.	Sample in 1895.	Sample in 1899.
Constituents:	%	%	%	%	%	%
Sodium chloride (salt)	25.232	25.333	22.452	25.492	25.50	26.30
Magnesium chloride..	—	0.171	—	—	—	—
Calcium chloride ..	—	—	—	—	0.03	0.10
Bromide and iodide of sodium	0.011	0.020	Traces	Traces	0.29	Traces
Sodium sulphate ..	0.146	—	0.360	0.594	0.09	0.25
Potassium sulphate ..	Traces	Traces	Traces	Traces	—	—
Calcium sulphate ..	0.391	0.418	0.387	0.231	—	—
Sodium carbonate ...	0.036	—	0.115	0.016	—	—
Calcium carbonate ...	—	0.052	—	—	—	—
Water	—	—	—	—	74.18	73.35
					100.00	100.00

Dr. Roe adds: "The brine is conveyed by pipes to two well-fitted modern hydropathic establishments in Ramsey—the Ramsey and the Dalmeny—where teak

baths are fitted for brine medication. At the Dalmeny establishment the baths embrace the following variety: Brine, vapour, Russian, hot steam douche, shower, and needle spray; massage is carried out by experienced hands. One great advantage Ramsey has over all other home health resorts for the carrying out of the brine treatment is its extremely equable climate, having a low annual variation of 17.1, while the duration of sunshine exceeds the annual mean of the United Kingdom by 166 hours, being only equalled by the South-West of England and the Channel Islands. This renders it a most suitable spot for 'all-the-year-round' treatment of rheumatism and its allied complaints. I can personally vouch for the above facts, and am sure many of your readers will be pleased to have the presence of such a place so near home brought to their notice."

BRITISH MEDICAL BENEVOLENT FUND.

At the last monthly meeting of the Committee fifteen applications for assistance were considered and grants amounting to £155 voted in relief. Appended is an abstract of the cases which were helped.

1. Daughter, aged 51, of late M R C.S. No income; endeavours to support herself by needlework, but is in very indifferent health and has injured her right arm. Relieved fifteen times, £116. Voted £12.

2. Widow, aged 35, of M.B., C.M Edin. Quite unprovided for at recent death of husband after an illness of many months' duration which exhausted his savings. Two children, aged 16 and 11. Voted £12.

3. Widow, aged 60, of L.R.C.P., L.R.C.S.Edin. No income; has endeavoured to support herself by taking boarders, but now, owing to failing health, is dependent on a daughter who is an elementary teacher. Voted £10.

4. Daughter, aged 45, of late M R C S. No income, and health so bad that regular occupation is impossible. Voted £12.

5. Daughter, aged 39, of late L R C.S. No income; unable to make any attempt to earn a living on account of permanent ill-health. Dependent on mother, whose income is so small that necessary nourishment cannot be provided. Relieved six times. £50. Voted £12.

6. Daughter, aged 55, of late L R C P., L.S.A. Mental condition prevents employment; has been supported hitherto by a sister, who has to earn her own living, and whose health is now broken down. Relieved twice, £20. Voted £12.

7. Widow, aged 54, of L R C P. L M.Edin. No income; endeavours to maintain herself by letting lodgings. Children unable to help. Relieved nine times, £102. Voted £10.

8. Widow, aged 41, of L R C P., L R C S.Edin. No income; slight help from children; has just opened a small school. Relieved three times, £36. Voted £12.

9. Widow, aged 46, of L R C.P., L.R.C.S.Edin. Only income £20 a year. Six children, four being partially dependent and the others unable to help. Relieved four times, £40. Voted £10.

10. Daughter, aged 47, of late M R C S., L.S.A. No income. Suffers from a severe form of epilepsy and consequently unable to follow any employment. Relieved four times, £48. Voted £12.

11. Widow, aged 58, of M.B., C.M. No income; earns a little by needlework and is assisted by only son earning less than £1 a week. Health indifferent. Relieved four times, £48. Voted £12.

12. Widow, aged 55, of L R C.P., L R C.S Irel. Since husband's death has partially supported herself by maternity nursing, but is now nearly blind and has no means whatever. Relieved thirteen times, £114. Voted £12.

13. Daughter, aged 56, of late M R C S. Only income a pension of £30 from the Royal Hospital for Incurables, endeavours to supplement this by letting lodgings, but has had her rooms empty for some time, and is consequently in arrears with her rent. Relieved eight times, £74. Voted £8.

14. Widow, aged 53, of M D Edin. No income, lets lodgings, but has been very unsuccessful lately. Children unable to help. Relieved three times, £56. Voted £12.

SECRET REMEDIES AND PROPRIETARY PREPARATIONS.

In the eighth article of the series dealing with secret remedies and proprietary preparations (*Deut. med. Woch.*, June 6th, 1907), Dr. F. Zernik states that, in spite of the excessive number of nutrient preparations on the market, new ones are constantly being introduced. He deals with three of these.

Cacaol is described as a first-class dietetic nutrient preparation. It costs 1s. per half-pound. It is a brownish powder containing numerous white particles, and smells strongly of cocoa. On analysis it was found to contain cocoa, with 2.5 per cent. of common salt, 15 to 17 per cent. of sugar, and 20 to 25 per cent. of oatmeal.

Eggore is also highly praised by the makers (Lauser, of Regensburg). One half-box costs 60 pfennig, while the whole box costs 1 mark 20 pfennig. It consists of a mixture of oatmeal, a trace of wheaten flour, sugar, and cocoa. Besides these ingredients, minute traces of lecithin, or a substance containing lecithin, were detected.

Visvit is advertised as "the most perfect nutrient preparation of the present day" by a Berlin firm. It is said to contain lecithin containing proteids, eggs, milk, haemoglobin, and cereals. The analysis revealed that it consisted, when regarded as water-free substance, of 78 per cent. of nitrogen-containing substances, the chief of which was wheat gluten. About 12.3 per cent. was starch, which was only imperfectly dextrinized. The total content of lecithin was found to be 0.42 per cent. This would correspond to about 0.83 per cent. of yolk of egg; but as the manufacturers claim that some of the lecithin is derived from other substances, it must be assumed that less than this percentage of egg is present. Only 0.46 per cent. of the total 11.52 per cent. of nitrogen is derived from haemoglobin. Visvit costs 3s. per 100 grams.

August Schrader's Plaster is a widely-used secret remedy. Three varieties are put up in packets, each packet costing 3s. 7d. No. 1 is supposed to be a remedy for caries of bone and other bone diseases. No. 2 is advised for gout and rheumatic complaints, and also for herpes; while No. 3 is prepared for the cure of "salt flux" and wounds of all descriptions. The plasters are 17 cm. long and 2 cm. broad. They contain 30 per cent. of fat, beside chalk, zinc oxide, litharge, calcium sulphate, iron oxide, and charcoal.

Rheuma-Tabakolin is quite a new preparation, introduced by Gustav Laarmann of Berlin, and is sold at 5s. per box, containing about 100 grams weight of material. The quantity for neglected and obstinate cases costs 15s. It is supposed to be a newly-discovered remedy obtained from tobacco for rheumatism and gout. The contents of the box is to be extracted with about 24 oz. of a 50 per cent. alcohol. This extract is to be used as a local application for the painful areas. The analysis showed that the substance consists of waste and powdered tobacco, perfumed with lemon oil. The price is quite out of proportion to the cost of waste broken tobacco, which can be bought at from 5d. to 6d. lb. Zernik adds that toxicologists believe that tobacco should not be applied externally.

Kapitol smells strongly of menthol. It is a white ointment and consists of 63 per cent. water free cotton fat, 14.5 per cent. of water, and 22.5 per cent. of menthol; 12 grams cost 1s. The ordinary menthol stick has the same action, and is considerably cheaper.

The *Paracelsus Sleeping Bandage* is supposed to remove sleeplessness. It consists of a thin silk bandage, to which are applied two silk strings, ending in knots at each end. One of these knots or tassels is to be inserted into each external meatus, and fastened with the other string, while the bandage lies across the eyes, neck, or throat. It is impregnated with small quantities of indifferent perfumes, such as ol. pini pumilionis and kumarin, but no trace of any narcotic substance could be detected. Zernik cannot imagine how the bandage is to act, unless it be by deadening sound.

A number of remedies for gall stones are next mentioned. These are *Gallin*, *Gall stone remedy of Koehne* (against which the health department of Carlsruhe has issued warnings), and Dr. Franke's *Gall stone remedy*. These and similar gall stone remedies consist of a purgative and a large quantity of some form of oil. The oil, together with the purgative, produce more or less copious evacuations, having a soft, nodular consistence and being bile coloured. The manufacturers state that the motions contain softened gall stones!

Another class of remedies of this nature are those which are supposed to cure jaundice and gall stones. They contain alkaline saline purgatives and vegetable laxatives. Among other preparations of this class examined he mentions Dr. Ziegler's "*Specific*" *against Gall stones and jaundice* and *Lithosan*.

HANDEL COSSHAM MEMORIAL HOSPITAL.

THE district of Kingswood, in which stands the new Handel Cossham Memorial Hospital, is a centre of a populous suburban district lying on the confines of the Bristol civic boundaries. The district is a poor one, and has not hitherto been sufficiently well furnished with public institutions, the Bristol General Hospital and Royal Infirmary being several miles away. The neighbourhood has long been noted for its collieries, coal having been worked at Kingswood Hill since the reign of James I. The late Mr. Handel Cossham, the donor of the new hospital, was at the time of his death the owner of the local collieries. His estate was left in the hands of three trustees, and later came under the control of the Court of Chancery, which appointed as additional trustees Mr. W. H. Butler (the present chairman of the Board of Management), the late Mr. George Fussell, and the late Dr. E. Crossman, under whose auspices the estate was sold and realized a total of about £120 000, of which about £30,000 was apportioned for building and furnishing and the rest funded as an endowment for the maintenance of fifty beds.



Fig. 1.—Handel Cossham Memorial Hospital. General View.

The site chosen by the trustees for the erection of the hospital is situated on Lodge Hill, which is close to Kingswood, but in the parish of Stapleton and within the Bristol City boundaries. The ground formed part of the late Mr. Cossham's estate; it is the highest point for many miles around, being about 350 feet above sea level. The building scheme was initiated some years ago. Mr. F. Bligh Bond, of Bristol, was instructed to prepare the plans, and these were finally approved by the Court of Chancery and a contract obtained in the spring of 1905, when the work was started.

THE BUILDING.

The building possesses a distinctive architectural character, the style chosen being a type of later Renaissance, having features largely adapted from English work of the time of the first Georges with a certain admixture of French feeling in the detail. The sense of monotony is here obviated by the varied proportions and detail of the work. The building is roughly T-shaped, the centre or administrative block forming the leg of the T, whilst the arms are the wards. The high roof of the central block dominates the building and is covered with a silver grey Cumberland slate. From this block diverge the wings containing the wards, and these have flat roofs of vulcanite protected by ornamental copings. At the extremity of these wards stand the rectangular towers containing the sanitary appliances, and these are finished with pyramidal slate roofs capped by turrets with cupolas giving a picturesque outline. The walls of the building are of local pennant stone selected to give a warm purplish colour for the facing. All the architectural features of the building are in box ground freestone, the entrance pavilion being entirely of this material and having a massive dentilated pediment resting on carved consoles, and bearing on its face carved shields exhibiting the arms of the donor with a riband on which the name of the building and the date of its erection appears. Above all the roofs and visible from all points arises the hospital tower, octagonal in shape, carrying the high level water tanks and terminating in a belfry and clock chamber having a decided architectural character, the exterior being of massive freestone; that is capped by a dome of copper above which again rises a smaller cupola bearing a gilt vane with the shield of Handel Cossham. There is a fine clock with four 6 ft. dials and a set of full-toned Westminster chimes by Messrs. Kemp Bros. of Bristol.



Fig. 2.—Handel Cossham Memorial Hospital. Main Entrance.

INTERIOR ARRANGEMENTS.

On the ground floor the corridors diverge right and left, the right hand section giving access to receiving room and matron's room, and terminating with an isolation block which is self-contained. On the left are approaches on the one side to the board room and house-surgeon's sitting room, and on the other side the dispensary, surgery, laboratory, and surgeon's bedroom. Continuing along the corridor we come to the main staircase, in the well of which is a large bed lift. At this point the corridor again branches right and left, giving access to the Butler Ward on the south and the Burgess Ward on the north side; between these lie at the termination of the corridor the patients' dayroom and bathroom, and further on at the extreme end the operating theatre, with its adjunct, projects out on the west front. The kitchen wing lies off on the north side opposite the main entrance, and here are a complete arrangement of kitchen offices readily accessible but sufficiently secluded from the rest of the hospital. On the first floor are two wards, to be known as the Fussell Ward and the Henshaw Ward, lying over the other two on the north and south respectively, whilst again there is a large patients' dayroom with a piazza lying between that and the patients' bathroom. The ward kitchens, both on the ground and first floors, will be seen to open immediately by the entrance to the wards. Proceeding down the corridor on the first floor we find a series of nurses' bedrooms, with a large and well-lighted sitting room over the main entrance to the hospital. There is another isolation block at the end of this corridor, and a secondary staircase leading to ground floor immediately opposite the main entrance. Over the kitchen is a flat roof laid with vulcanite and surrounded by a freestone parapet This is accessible directly from the first floor, and will no doubt form a convenient airing ground for nurses' use.

The wards are well lit on both sides and at the ends, both walls and ceilings are finished with a hard enamel having a peculiar perfect surface of impervious nature. All the corridors, sanitary towers and other offices, the isolation wards, etc., are finished with the same material. The floors of the wards are laid with teak blocks, wax

polished. The floors of the corridors and offices, and the main entrances, are laid with a high-class Venetian mosaic on concrete by Diespeker, Ltd., of London. The operating theatre has a special floor of "britopal," a tough glass laid in square blocks, the face being carefully ground. The walls and ceiling of the operating theatre are lined with glass tiles of a quiet green colour. Iron safety staircases are provided to each of the wards, and these are also furnished with central double-faced Musgrave stoves.

Heating.

At a little distance from the main building, near the northern boundary of the site, is a detached block containing the laundry, boiler house, stables, and mortuary. The heating system for the whole hospital is on the low-pressure steam system, and the steam is generated by a pair of large Cornish boilers situated in this block. These supply pipes and radiators over the whole hospital, also colorifiers for the domestic hot water supply, baths, lavatories, etc., steam for the kitchen utensils, also for the laundry fittings, which are very perfect and complete.

The grounds in which the hospital stands are fairly extensive, giving the building perfect freedom on all sides, and allowing of a considerable amount of pleasure ground for patients. The hospital ground proper is fenced in for the greater part of its girth by a low wall with freestone coping and ornamental iron railing.

The main entrance is from Lodge Hill on the east side, and here there is a picturesque entrance lodge with handsome iron entrance gates to the approach set in massive freestone piers. The site is bounded on the south and west sides by private roads. In each case there is a strip of ground on the further side belonging to the Hospital, which will be planted in order to improve still further the surroundings of the institution and to maintain privacy. The Committee have paid particular attention to the laying out of the grounds around the building. Lawns have been levelled and some judicious planting has been done which will enhance the general appearance of the building.

The Opening.

The opening ceremony took place on June 1st with complete satisfaction to all concerned. A large tent was erected in the grounds capable of giving seating accommodation to most of the 700 persons invited to attend, and the weather, though dull, was on the whole satisfactory.

Soon after the prescribed hour of 3 p.m. the Chairman of the Committee (Mr. W. H. Butler, J.P.) took the chair, and, having called on the Rev. Dr. Glover to offer a prayer, gave a short account of how he and his colleagues came into possession of so large a sum of money to carry out the wishes of the late Mr. Handel Cossham. From this, and from the programme presented to each visitor, we gather that Handel Cossham was born in 1824 at Thornbury, in Gloucestershire, of humble parents. At the age of 21 he became connected with a colliery, and made himself thoroughly acquainted with mining and geology. In 1848 he began to work the Parkfield Colliery at Pucklechurch, and in 1864 the Kingswood Colliery, thus commencing his connexion with Bristol and Kingswood in particular. How the money came to reach such a large sum was due to the capabilities of his trustees, who were able to sell the property under their charge when collieries were at the top of a boom. The hospital had been now erected, and it was hoped that it would be the success it promised. The Chairman, at the conclusion of his address, called on Mr. Augustine Birrell, who said that among the pleasant recollections he had on entering Parliament was that he was able to make the acquaintance and appreciate the character of the great benefactor whose noble foundation they were to declare open that day. Mr. Handel Cossham was a man of large composition, strenuous in life, active, and eager. He probably made many mistakes, but throughout it all he laboured unceasingly, without ever losing his faith in humanity or his zest in life, for the good of the world. He was always interested in politics, in trade, in views of coal, in rates of wages in temperance, in religion, and—in a word—in humanity itself. He never lost interest in life, was never weary or bored. The dominant note of his character was sympathy. Sorrow and suffering, whether of the kind medicals called deserved, or whether of the kind that was the lot of human nature, always excited in him genuine interest and sympathy. He had never heard Mr. Cossham address great crowds, but the tradition still survived that he was one of our greatest speakers. He had heard that on his day few, if any, could speak with greater effect on their audiences than Handel Cossham. He was quite sure that this oratorical gift was the full and free outlet of a generous, sympathetic, and large-hearted nature. Mr. Handel Cossham's wish was that he might be remembered by the sick and suffering as a friend who in death as in life felt it his duty to try to lessen human suffering and increase human happiness. Mrs. C. E. Hobhouse, in place of her husband, who was detained by his parliamentary duties, said she was personally aware of the needs of a hospital in the district of Kingswood. This hospital started free of debt and amply endowed, and was bound to prove of immense benefit to the residents. The Hon. Cyril Ward also addressed the meeting. Mr. J. E. Henshaw proposed a vote of thanks to the medical staff, and said that he believed the equipment of the hospital was the best that could be provided, and that the staff was equal to all the demands that might be made upon it. This was seconded by Mr. Howell Davies, M.P., and replied to by Dr. R. Shingleton Smith and Dr. James Swain. Votes of thanks to Mr. Birrell and the Chairman concluded the meeting. The company then went to the main entrance, where Mr. Birrell was handed the key by Mr. F. Bligh Bond, the architect. On Mr. Birrell opening the door a flourish of trumpets from a band stationed in the garden announced that the hospital was formally opened. The company present then entered and inspected the hospital, tea being provided in what will be the surgical wards. At 5 p.m. the public were admitted, and many thousands availed themselves of the opportunity of seeing the building.

In addition to the details given above of the building, the following will be of interest: The turret clock shows the time on four 6 ft. illuminated dials. The escapement is Lord Grimthorpe's double three-leg gravity, and the time-keeping is guaranteed to two seconds a week. The clock has three trains, chimes the quarters on four silver-tone bells, and the hours on a tenor. An automatic arrangement for illumination at sunset is provided, and the clocks in the hospital are electrically controlled from the main clock.

The following is the staff:

Consulting Physicians.—Dr. R. Shingleton Smith, Dr. J. O. Symes.

Consulting Surgeons. Dr. James Swain, Mr. C. Morton.

Physicians. Dr. Bertram M. H. Rogers, Dr. J. Nixon.

Surgeons. Mr. Hey Groves, Dr. Stack.

Anæsthetist.—Dr. A. L. Fleming.

Skiagraphist.—Dr. Ellington Jones.

House-Surgeon.—Dr. Mort.

Matron. Miss Maur.

The hospital took in its first patients on Monday, June 3rd.

Instruction of the Deaf. The annual general meeting of the Society for Training Teachers of the Deaf and for the Diffusion of the Pure Oral System was held at Stafford House, St. James, S.W., recently, under the chairmanship of Mr. B. St. John Ackers. The report stated that the Society had sent forth about 150 teachers to posts in private homes, schools, and institutions in all parts of the United Kingdom, while some had gone abroad. It also referred to the irreparable loss of the late Chairman of the Society, Dr. E. Symes Thompson. It recorded the fact that the London County Council had decided to give scholarships for third year students in the Council's training colleges to take up their course at the Training College for Teachers of the Deaf at Ealing. These scholarships, of which two would be available in 1907 and four in 1908, were also tenable at Fitzroy Square. The adoption of the report was proposed by Major Skinner, I.C.C., and carried. The Chairman, in his remarks, referred to the great loss which the Society had sustained in the death of Dr. Symes Thompson and expressed its heartfelt thanks for the work he had done and its deep sense of sympathy with Mrs. Symes Thompson and the other members of the family on their great loss. He also appealed for funds to further the great work of the Society. Among the letters of regret for non-attendance was one from the Right Hon. H. Chaplin, enclosing a Bank of England note for £50 towards the funds of the Society.

LITERARY NOTES.

THE French *Codex Medicamentarius* now in use dates from 1884. A supplement was added in 1895, but there are still many omissions. For a long time past it has been clear that a complete revision was required. At the meeting of the General Association of the Pharmacists of France held at Bordeaux on June 18th, M. C. Crinon, in a report on the work of the Association, announced that a new edition of the *Codex* would shortly be issued. In deference to the representations of the Association, the Special Committee to which the preparation of the new edition was entrusted has agreed to append a table of the maximum doses in which exceptionally powerful drugs can be given.

The Medical Society of Athens, in the endeavour to assist in the formation of a system of classical Greek medical nomenclature for the guidance of men of science who chiefly use the Greek language for scientific terms, has, we learn from the New York *Medical Record*, appointed a Committee, of which Professor S. Mangina is Chairman. This Committee is charged with the collection of classical Greek definitions to be proposed as substitutes for irregular terms newly introduced into medical literature, and in use both in Greece and in foreign lands. Dr. Achilles Rose of New York, well known by his advocacy of the use of modern Greek as the international language of science, has been unanimously elected a member of this Committee.

We learn from the *Australasian Medical Gazette* that after the lapse of eighteen months since the Australasian Medical Congress met in Adelaide, the *Transactions* have been published and forwarded to members. Our contemporary says that the volume is a credit to the Editorial Committee and to the South Australian Government printer, adding, however, that the long delay in its issue detracts from its value as a record of Australasian work in the various departments of medical and surgical science and as a medium for the publication of original work. Two chief causes are assigned for the delay: first, press of work in the Government printing office; and secondly, delay on the part of contributors of papers in furnishing the manuscripts and revises of proofs. But these causes, says the *Gazette*, must not be allowed to operate in the publication of future volumes of this kind. We understand that this matter is now engaging the attention of the Committee of the next Congress, to be held in Melbourne in October, 1908, and it has been suggested that, instead of the printing being done in the Government Printing Office, the Government should give a grant of money towards defraying the cost, and that the work should be entrusted to a private printing firm. If such an arrangement can be made it will obviate the first cause of delay in the issue of the *Transactions*. To obviate the second cause, we understand that very stringent regulations will be imposed, and that no paper will be published in the *Transactions* unless the manuscripts, ready for the printer, are in the hands of the Editorial Committee at the close of the Congress. It is only fair, says the *Australasian Medical Gazette*, to those who take the trouble to bring the results of original work before the Congress that no time should be lost in the publication of their work, and it expresses the hope that the issue of the *Transactions* of the next Congress will not be so long delayed after the close of the session. We are in entire agreement with our contemporary. But a long and painful experience compels us to state that the fault lies more often with the authors than with secretaries of sections or editors.

In the recently published *Recollections and Impressions* of Mrs. Sellar, widow of the well-known sometime Professor of Humanity in the University of Edinburgh, she has a good deal to say of Dr. John Brown, the beloved physician, dear to all lovers of good literature as the author of *Rab and his Friends*. Mrs. Sellar says that although he never wrote anything so perfect as *Rab*, his writing had always a unique flavour.

> Whatever he wrote, whatever he said, one might add whatever he looked, had the same exquisite personal quality—what he himself used to call "the juice of the whole man."

This essential excellence, she says, he sought, with a fine fastidiousness, in music, in literature, in art; this he found, with an even surer touch, in the men, women, and children, and dogs whom he met and loved and understood in his daily life.

> No one I have known had such delight in such a variety of human qualities as he, provided only that they were genuine. The rugged humour of a carter, the grace of a delicate high-bred woman, the wit of a man of the world, the innocence of a child—all were "dear to this man who was dear to God."

Mrs. Sellar adds that for nothing in her life is she more thankful than for the years in which Dr. Brown came in and out of her house after she and her husband settled in Edinburgh, with the doctor's privilege of knowing and comforting all their sorrows and anxieties, and his special gift of sharing all joys and interests. She goes on:

> To me, who was always profoundly *un*interested in "symptoms," his respect for the healing power of Nature made him particularly sympathetic as a doctor. More than once, when I have been prostrate in the dark with a headache, I have sent the message, "Mrs. Sellar's love, and she is too ill to see a doctor." I am glad to think that I wasted little of his visits on professional talk. We were far more interested in discussing some new book or poem, some new aspect of thought, some fresh experience.

Of Dr. Brown's humour Mrs. Sellar says it interpenetrated all his speech, and played, with a soft, lambent light, over his saddest thought. At times, too, like Charles Lamb's, it had an elfin freakishness. Her message to the doctor when she had a headache recalls a story of considerably older date, of a *grande dame de par le monde* in London, of whom it is related that she would sometimes send down word to her physician, one of the most fashionable of his day, that her ladyship was too ill to see the doctor to-day!

Lord Young, the venerable Scottish judge who died recently, was one of the last links of the present generation with Robert Burns, through Dr. Maxwell, whom he had known intimately in his youth. Of Maxwell, some account is given by Dr. William Findlay ("George Umber") in his interesting book entitled *Robert Burns and the Medical Profession*, which was published in 1898. William Maxwell was a son of Kirkconnell Maxwell, who was "out" with Prince Charlie in the '45, and became the historian of the expedition. Dr. Maxwell is said, while a student in Paris during the Revolution, to have acted as one of the National Guard who stood round the scaffold of Louis XVI. There is a legend, which was often brought up against him in after-years, that he dipped his handkerchief in the King's blood. This was denied by his friends. As Dr. Findlay suggests, however, if it were true, it would be no proof of republican savagery, but might be interpreted in quite an opposite sense as inspired by the motives that led some to

> . . . . go and kiss dead Caesar's wounds,
> And dip their napkins in his sacred blood.

It is certain, however, that Maxwell caught something of the revolutionary fever in his early days, and that he was one of the leaders of the Liberal party at Dumfries, and was even singled out by no less a person than Edmund Burke for special denunciation in the House of Commons. His revolutionary leanings, however, in no way lessened his patriotism, for both he and Burns joined the volunteer company formed in Dumfries when invasion was threatened by "haughty Gaul." One of the few compliments paid by Burns to the medical profession is an epigram addressed to Maxwell on the recovery of Miss Jessie Staig, daughter of the Provost of Dumfries, from a fever:

> Maxwell, if merit here you crave
> That merit I deny:
> *You* save fair Jessie from the grave!
> An angel could not die.

Maxwell attended Burns in his last illness. The poet said of him:

> What business has a physician to waste his time on me? I am a poor pigeon not worth plucking. Alas! I have not feathers enough to carry me to my grave.

On his death-bed Burns gave Maxwell a pair of pistols, which were afterwards presented to Dr. James Gillis, one of the Roman Catholic Bishops of Scotland, and by him in turn to the Scottish Society of Antiquaries in 1859. The poet's youngest child, Maxwell, who was born on the day of his father's funeral (July 25th, 1796), and died on April 25th, 1799, was called after his physician and friend. After Burns's death, Maxwell took an active part in various projects for benefiting the poet's family, and negotiated for the publication of his letters.

MEDICAL NEWS.

The Princess Louise, Duchess of Argyll, has become a patron of the London Temperance Hospital.

The judicial authorities at Versailles have found that the sensational charge brought some time ago against D. P. Z. Hebert of London is unfounded.

It is stated in the *Berliner klinische Wochenschrift* that Professor von Leyden proposes to resign the position of Director of the First Medical Clinic in the Berlin Charité at the end of the current semester.

We are requested to state that Dr. Alexander Morison and Dr. C. O. Hawthorne have resigned their position as members of the Council of the Scottish Medical Diplomates Association.

The late Sir Benjamin Baker, the well-known civil engineer, who died on May 19th, left £2,000 to Westminster Hospital, £1,000 to King Edward's Hospital Fund, and £500 to the Royal Berkshire Hospital.

Sir Charles Cameron and Professor E. J. McWeeney, of Dublin; Dr. Henry Handford, of Nottingham; Lieutenant-Colonel C. H. Melville, R.A.M.C.; and Dr. H. Scurfield, of Sheffield, have been elected Fellows of the Royal Sanitary Institute.

Mr. George Allardice Macdonald, M.B., C.M., has been granted the Royal permission to accept the Order of the Third Class of the Brilliant Star of Zanzibar, conferred upon him by the Sultan of Zanzibar in recognition of valuable services rendered by him.

By a recent Act of the Legislature the Boston School Committee has been enabled to appropriate £2,000 towards the establishment of a system of nurses in the public schools. As a beginning twenty-two nurses will, we learn from the *Boston Medical and Surgical Journal*, be employed: they will enter upon their work on September 1st. These nurses are to be employed in vacation schools, as well as in the regular schools.

A series of post-graduate lectures will be given at the Royal Dental Hospital and London School of Dental Surgery, Leicester Square, during the months of October, November, and December. The first lecture will be given by Mr. J. H. Mummery on October 21st, on recent views of immunity in relation to dental disease. The fee for the course is two guineas; past and present students of the hospital and internal students of the University of London will be admitted free. Further particulars can be obtained on application to the Dean of the School.

The Association of Physicians and Surgeons of the Society of Apothecaries will hold a dinner on Thursday, July 4th, at the Restaurant Frascati, Oxford Street, London, W., to celebrate the passing of the Act of Parliament authorizing the Society of Apothecaries to confer the title of Licentiate in Medicine and Surgery on those who have obtained its licence since June 30th, 1887. On this occasion the Master and Wardens of the Society will be the guests of the Association. Further particulars can be obtained from Dr. Gerald Dalton, Cranbourne Mansions, Cranbourne Street, London, W.C., or from Dr. Rivers-Wilson, 42, Wellington Square, Oxford.

The Cavendish Lecture of the West London Medico-Chirurgical Society was delivered by Mr. C. B. Keetley, F.R.C.S., on June 21st, in Kensington Town Hall, the subject being the question of preserving or sacrificing parts and their functions. Before the lecture the President of the Society, Dr. Leonard Mark, welcomed the guests at the entrance of the hall, and with him were Mr. L. Cox, Mr. Purdon, and the two Honorary Secretaries, Mr. L. Percy Paton and Dr. L. G. Crookshank. Amongst those present were Professor Howard Marsh and Mr. Battle. After the lecture there was a *conversazione* and a medical and surgical exhibition together with music and two demonstrations, one of disinfection of rooms, the other of the application of hot air in treatment.

Anything which can increase the efficiency of secondary schools is of interest to the medical profession, as one of the obstacles to raising the educational standard for admission to the profession is the unsatisfactory character of the teaching in too many of these schools. We may, therefore, note that at the general meeting of the Teachers' Guild of Great Britain and Ireland on June 15th resolutions were adopted instructing the Council of the Guild and its members to take steps to ameliorate the tenure of teachers in endowed schools under schemes of the Charity Commissioners and Board of Education, and especially to provide for both head and assistant masters a right of appeal in cases of dismissal. The Council was also instructed to co-operate with other associations in improving the anomalous system of salaries prevailing in the majority of secondary endowed schools.

The annual post-graduate medical tour, known by the name of "E.M.I.," is to start this year on August 7th, the point of departure being Nancy. On the following day Stuttgart will be visited, and thence in succession Munich, Nuremberg, Marienbad, Carlsbad, Prague, Vienna, Buda-Pesth, Semmering, Gastein, and Innsbruck. On the completion of the visit to the latter place the party will cross the Arlberg Pass, travel straight through Switzerland, and separate at Belfort on August 23rd. At each place the visitors will be received by representatives of the local medical profession and afforded a thorough opportunity of examining the work carried on. Information as to the tour can be obtained either on personal application or on writing to the Administrateur-Scientifique l'oeuvre d'enseignement médical complémentaire, 8, Rue François-Millet, Paris.

Hampstead General Hospital.—In view of important developments which have arisen since the meeting of the local profession on this subject held on May 24th, the committee of the local profession appointed on that date has decided to call a special meeting to consider the following resolution: "That this meeting considers that the Hampstead Hospital should always have a visiting staff of local practitioners, and in consideration of this opinion calls upon the members of the medical profession to refuse to accept any office on the staff on terms which are not considered satisfactory by the local profession." The meeting will be held under the auspices of the Hampstead Division on Wednesday, July 3rd, at 4.30 p.m., in the Lecture Room of the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. G. D. Pidcock in the chair. It is hoped that the medical practitioners of the district will attend in large numbers in order that a definite line of action be decided upon.

The Excretion of Creatinin.—We have received a copy of a paper on the "Excretion of Creatinin in a Case of Pseudohypertrophic Muscular Dystrophy," by Dr. E. I. Spriggs (*Bio-Chemical Journal*, ii, No. 4, 1907), which is the outcome of the first piece of original work done in the new Research Laboratory of St. George's Hospital. Dr. Spriggs's patient, a man of 29, when placed on a diet free from meat and meat extracts, passed in his water only half as much creatinin per diem as would have been normal for a man of his weight. The proportion of N excreted as creatinin was below the normal also. The author points out that these results are in agreement with the prevailing view that creatinin is derived from the muscular tissues to a greater degree than it is from other proteid tissues. On a diet of adequate caloric value but containing hardly any proteid, the N-excretion sank in four days to 2 grams a day, and under these circumstances the proportion of N excreted as creatinin approached that found in normal individuals on such a diet.

A Demonstration in the Paris Radium Laboratories.—One of the concluding events of the visit paid by representatives of London University to Paris in the last week of May was a practical demonstration of the resources and work of the Laboratoire Biologique du Radium. This is an institution which was established about a year ago in the Rue d'Artois with the object of testing to the full the therapeutic possibilities of radium, its organization including chemical, physiological, and clinical research laboratories, as well as those devoted specially to radium. Invitations to be present were extended to a number of foreign medical men resident in, or known to be visiting, Paris, as well as to the medical visitors specially representative of the University of London, and were generally accepted. The visitors were received by Dr. Louis Wickham, who is attached to the St. Lazare Hospital, and also Chef de Clinique of the Skin Department of the Hôpital St. Louis. He delivered a short lecture on the work done. In the course of this he showed and explained all the apparatus employed, and demonstrated a large number of cases which had been treated. Among these were persons who had been successfully treated for epithelioma of the skin, and a number of children and others subjected to radium treatment by way of minimizing the disfigurement of strawberry marks and of removing naevi. Stress was laid upon the special value of radium in the treatment of young children in these connexions, it being pointed out that, while radium was at least as effective as electrolysis, the former treatment had the added advantage of being entirely free from pain. Some successful cases of skin tubercle and lupus erythematosus were also shown. On the conclusion of the demonstration an examination was made of the connected laboratories. The visit, as a whole, was of considerable interest because up to the present the value of radium has received much more study in France than elsewhere, and the institution in some respects stands entirely alone.

British Medical Journal.

SATURDAY, JUNE 29TH, 1907.

MEDICAL MEN AND THE WORKMEN'S COMPENSATION ACT.

THE Workmen's Compensation Act, 1906, comes into force on Monday next, July 1st. It enacts that "if in "any employment personal injury by accident arising "out of and in the course of the employment is caused "to a workman, his employer shall be liable to pay "compensation." There are certain exceptions; the employer is not liable in respect of an injury which does not disable the workman for a period of at least one week from earning full wages at the work at which he is employed; further, if the injury is proved to be attributable to the serious and wilful misconduct of the workman, the compensation claimed in respect of that injury shall be disallowed, unless the injury results in death or serious and permanent disablement. It will be observed that this last proviso does not relieve the employer from the more serious part of his liability.

We have on several occasions drawn attention as prominently as possible to the risks to medical men arising under this Act, and, as was announced some months ago, a Medical Assurance Committee has been formed, and has arranged with the Guardian Assurance Company, Limited, specially favourable terms to meet the particular risks of medical men as well as those which they incur in common with all householders. The liabilities of medical men under the Act may, in fact, be divided into two classes: the ordinary risk which every householder who employs indoor domestic servants, gardeners, or coachmen, runs under the definition of "workmen" in Section 13, and the special risks associated with practice. With regard to the first class it should be understood that the definition of "workmen" in the Act includes any person who has entered into or works under a contract of service or apprenticeship with an employer, whether by way of manual labour, clerical work or otherwise, and whether the contract is expressed or implied, is oral or in writing. The exceptions are a "person em- "ployed otherwise than by way of manual labour whose "remuneration exceeds £250 a year, or a person whose "employment is of a casual nature and who is employed "otherwise than for the purposes of the employer's "trade or business"; members of the employer's family dwelling in his house are also excepted. The special risks of medical men arise in connexion with the assistance which they may require in their practice. A medical assistant whose remuneration does not exceed £250 a year will have a claim against his principal, and in estimating the annual remuneration a sum of 10s. a week may be allowed for board and lodging, when these are provided. A dispenser, a medicine boy, a messenger, or a trained nurse, employed for the purposes of the principal's profession, will also have a claim. Further, as we have frequently pointed out, there seems little doubt that a locum tenent will also have a claim, unless it can be shown that his annual remuneration exceeds £250 a year. Some lawyers believe that in calculating the remuneration of a locum tenent the rate per week may be taken, and that if this is over £250 a year the locum tenent will have no claim. Others, however, believe that the courts will hold that the actual remuneration received during the course of the year by a locum tenent must be taken as the basis of a decision, so that a locum tenent paid at the rate of five guineas a week, who can show that he only had employment for, say, thirty weeks in the year, would have a claim against the principal in whose employment the accident occurred. Until the point has been tried and decided the only advice which can be given is that medical men who may have occasion to employ a locum tenent should insure against this risk. The Medical Assurance Committee has arranged with the Guardian Assurance Company to cover the risk for a minimum payment of 5s., provided that the period during which the locum tenent is employed does not exceed a period of, say, ten weeks. The rate is governed by the general principle that the premium for covering the risk with regard to medical assistance of all sorts which the principal may employ shall be at the rate of 10s. per cent. on the total sum expended in this way. The premium for a collector employed to collect accounts would be at the same rate, but for a book-keeper the premium would be 3s. per cent., the rate charged for a clerk in an office.

It is probable that difficulties will arise with regard to the interpretation of the provisions of the Act with regard to casual labour. A charwoman employed at irregular intervals would probably not come within the provisions of the Act, but a charwoman regularly employed, say once or twice a week, would. A sick nurse or a monthly nurse employed by a medical man for attendance on members of his family would probably have a claim, and would be insured under the rate for occasional or casual domestic labour—namely, 25 per cent. on the total premium for his permanent domestic staff, with a minimum of 2s. 6d. a year. On the whole, although it cannot be said to be absolutely necessary, we think that the prudent course is, in taking out a policy for indoor domestic servants, to include the small additional premium to cover occasional or casual labour, as it is not easy to foresee the circumstances under which such labour may be required, and the cost of resisting any improper claims for casual work will be paid by the Insurance Company.

The time within which insurances can be effected is now short, but applications made to the Medical Assurance Committee, care of British Medical Association, 6, Catherine Street, Strand, London, W.C., will receive immediate attention, and members who promptly fill up the form which will again be found in our advertisement pages this week* will be held covered by the Guardian Assurance Company as from July 1st, provided that distinct instructions to insure are given on the form.

THE VITAL STATISTICS OF TEN YEARS.

THE report prepared in the office of the Registrar-General for England and Wales on the vital statistics of periods of ten years, commonly known as the decennial supplement, is always looked forward to with much interest. The first part of that for the ten years 1891-1900 has just made its appearance; it has been prepared by Dr. Tatham, the superintendent of statistics, and is prefaced by a short letter from the Registrar-General submitting the report to the President of the Local Government Board. This first part forms a bulky

* Page 52.

octavo volume of nearly a thousand pages, and the Registrar-General states that the second part, containing particulars of the mortality of occupations, is in an advanced state of preparation. The introduction, in the form of a letter to the Registrar-General, has been prepared in the careful and comprehensive manner which has always characterized these decennial supplements, but never more admirably than during the tenure of office of Dr. Tatham himself.

As this volume is the fifth of a series, it affords an opportunity for making a retrospect in some directions of a period of half a century. On an early page, in referring to the decline in the death-rate, Dr. Tatham utters a word of warning against the possible tendency to attribute to the results of sanitary administration alone the whole of the life-saving represented by the steadily-falling death-rate. He shows that a considerable share of the fall in the general death-rate depends on changes in the age-constitution of the population. As is well known, there has been a serious fall in the England birth-rate; in the year 1876 it was 36.3 per 1,000 of the population, but from that year onwards there has been almost an uninterrupted decline, the birth-rate for the whole country in 1900 being only 28.7 per 1,000. This change in the rate of birth, continuing for between twenty and thirty years, has materially modified the age-constitution of the population, and as mortality varies considerably at the different stages of life, it has had a considerable effect on the general death-rate. Until the decennium 1871-80 the proportion of children under 10 years of age in the population increased, but thereafter it declined, and in the decennium under review the proportion was considerably less than in 1851-60. The increase in the proportion of persons living at the age of 10 to 15 years continued until 1881-90, but thereafter the proportion diminished. Corresponding to these changes at the earlier ages there was at first a decrease and afterwards an increase in the proportion of persons living at the earlier adult ages, inasmuch as the mortality of children of tender age is very high, whilst that of young adults is very low. It is obvious that the effect of these changes in the age-constitution of the living will be to alter the general rate of mortality at all ages, irrespective of any reduction caused by sanitary improvement.

The general mortality in England and Wales in the ten years 1881-90 was equal to a rate of 18.73 per 1,000 living, and in 1891-1900 was 18.19 per 1,000. This has been compared with the death-rate in the decennium 1841-51, when the mortality at all ages was in the proportion of 22.28 per 1,000 living. Bearing in mind the extreme variations of mortality with age, Dr. Tatham estimates that if the numbers of the living at the several age groups had been in the same proportion in that decennium as they were in 1891-1900, the death-rate at all ages in the earlier period would have been 21.74 per 1,000. The comparison is, therefore, between that figure for the earlier decennium and 18.19 in the last. The difference is of course very considerable, but not quite so large as the crude figures suggest.

In the course of the last four decennia the death-rate at all ages has fallen by 15 per cent. (from 21.5 to 18.2), and the death-rate at ages 1 to 5 years by not less than 34 per cent. (36.5 to 24.5), yet at ages under 1 year the death-rate in 1891-1900 was 181.2, exactly the same as in 1851-70, and higher than in any decennial period since. For the purpose of comparing urban with rural mortality a selection has been made from among the counties of England and Wales, placing in one group those which at the census of 1901 were mainly urban, containing the chief centres of industry, and in the other group counties which, although they contain some considerable urban communities, were nevertheless mainly rural in character. The corrected death-rate for the urban counties was 20.34, and for the rural counties 14.88. A similar comparison applied to deaths under the age of 1 year brings out very clearly the deleterious effect on child life of residence in towns. The infant mortality—that is to say, mortality under 1 year of age—per 1,000 births in England and Wales was 153.33; but when this is analysed it is found that the rate was 167.00 in the urban counties and only 126.27 in the rural counties. In the next year of life the difference is again very great—48.99 in the urban counties, as compared with 28.15 in the rural counties. In the third year of life the contrast is still marked—18.56 in the urban counties and 10.54 in the rural counties; so also in the fourth year, the rates being 11.54 in the urban and 7.16 in the rural counties, and in the fifth year 8.04 in the urban and 5.45 in the rural counties.

We have been able to indicate here some of the more general conclusions to be drawn from this most instructive volume; other sections, dealing with various diseases and classes of disease, await notice on some future occasion.

THE SLEEPING SICKNESS CONFERENCE.

The International Conference on Sleeping Sickness, which, as was announced last week, was opened at the Foreign Office by its President, Lord Fitzmaurice, on June 17th, concluded its work on June 21st, a formal sitting being held on June 24th for the signature of the minutes. The countries represented were Germany, the Congo Free State, France, Great Britain, Portugal, the Sudan, and Italy. After listening to the address of its President, in which were set out the subjects which would arise for consideration,[1] the conference, at the instance of Dr. Laveran, one of the French delegates, resolved itself into two committees, medical and administrative respectively. Both of these committees reported to the conference, the former after one and the latter after two meetings.

The most important decisions of the conference arose out of the report of the administrative committee. It was resolved that a permanent central bureau should be established in London, and that each country represented should institute a national bureau. The duty of the central bureau will be to collect documents relating to sleeping sickness, to take the initiative with regard to all international questions arising in connexion with the disease, to maintain communications with the different national bureaux, and to fix the date and the place of future international conferences. It was also decided to invite all the Governments concerned to notify any occurrence of the disease in a new country, in order that immediate steps may be taken by the authorities of the countries thus threatened. The conference also adopted certain other recommendations of the administrative committee; the first was that a map should be prepared showing the distribution of sleeping sickness, and of the different species of flies in the different countries; this map is to be revised at short intervals of not less than six months. The second recommendation was that the administration of each country and colony should make every possible effort to prevent the movement of natives of infected districts into other districts, and that the administrative and medical authorities on the

[1] British Medical Journal, June 22nd, p. 1496.

frontiers should freely communicate all information calculated to prevent the spread of the disease, more especially the occurrence of new cases, as is already done by the Congo State and Rhodesia. Another recommendation was to the effect that the administration of every country concerned, while maintaining its liberty of action, should communicate as early as possible to the central bureau the results of measures taken to prevent the spread of the disease, so that all countries might benefit from the experience of each.

Some discussion took place with regard to a proposition recommending that missionaries of every denomination going to Central Africa should attend a course at a school of tropical medicine, where they should be made acquainted with the means taken for combating sleeping sickness; eventually the recommendation was adopted. Another recommendation was to the effect that the results of the Red Cross Conference on the construction of lazarets for sleeping sickness should be communicated to the conference or to the respective Governments, and when this came up for discussion Dr. Laveran urged that the term "lazaret" was too vague; Dr. Gouzien, one of the representatives of France, thereupon suggested the use of the word "hypnosies," with a view of showing that the lazarets referred to were the special hospitals for the isolation of persons attacked by the sleeping sickness. The conference, however, refused to take the responsibility of introducing this new word, the term "lazarets for "sleeping sickness" being maintained, and the recommendation adopted.

The recommendations of the medical committee were not so fortunate; it had proposed a programme of researches to be entrusted to certain countries and individuals, with the object of promoting inquiries into a number of special points in relation to sleeping sickness. Professor Blanchard of Paris had undertaken to be responsible for the zoological and biological study of the *Glossinas* and other insects and animals capable of transmitting the disease; Professor Ehrlich, Director of the Institute of Experimental Medicine at Frankfort, had promised to supervise the work in respect of experimental therapeutics, and Dr. Ayres, Portugal, that on applied therapeutics, while Professor Laveran promised to undertake to report to the next conference on the biology of the trypanosome and its existence in men and animals. Further, the Committee recommended that the study of the epidemiology of the disease and of the distribution of biting flies in Senegambia, in the Egyptian and in the French Sudan, in the German and Portuguese colonies, and in the Congo State, should be entrusted to special missions or local commissions, appointed by the different Governments. When these propositions came before the full conference they were opposed by the chief representative of Germany, who had all along insisted that the members of the conference were simply delegates, and had no diplomatic authority. The proposition of the Medical Committee was supported by Dr. Laveran and Sir Patrick Manson, but on being put to the vote was not carried unanimously, and accordingly, under the rules which govern international conferences, was declared to have been rejected. What the German Government can conceive it has gained by this attitude of obstruction it is difficult to see. Its spokesman professed to believe that the recommendation would interfere with the liberty of science, but as Dr. Laveran pointed out, this was far from being the case. The object of the recommendation was to appoint reporters for the next conference, and not in any way to give certain persons or certain countries the monopoly of certain researches.

At the conclusion of the conference Dr. Rose Bradford, one of the British representatives, suggested that every European going to tropical Africa should be provided with a pamphlet giving information with regard to the diagnosis of sleeping sickness and instructions for its treatment; and, after some discussion, the conference expressed the hope that one of the first tasks undertaken by the central bureau would be the publication of such a pamphlet. The conference also approved a proposal made by Professor Blanchard, of Paris, that a scientific pamphlet should be published by the central bureau for the information of medical men and biologists interested in the disease.

In view of the fact that most of the members of the conference were not invested with full powers to sign a convention, and that the representatives of some of the countries interested considered it necessary to obtain further information both on the scientific and on the administrative side, it was resolved to refer the resolutions adopted to the Governments represented, and to adjourn until November 1st next, when it is hoped that the delegates will meet again, armed with the necessary full powers to sign a convention. The conference, therefore, has accomplished some useful work, though not as much as had been hoped. It will have served the very important purpose of crystallizing into a diplomatic document, which must come under the official notice of all the Governments concerned, the facts with regard to the nature and mode of dissemination of sleeping sickness brought to light by the researches of the last few years. It has assured that Europeans going into the infected areas shall be forearmed with an official pamphlet giving "a concise but complete account, arranged under "different heads, of the present state of our knowledge "of this question"; and it has, it may be hoped, paved the way for the systematic investigation of the many scientific and administrative questions which remain open.

THE ANNUAL MEETING AT EXETER.

In accordance with the usual custom, the railway companies of the United Kingdom have agreed to grant to members attending the annual meeting at Exeter return tickets on payment at the time of booking of a single fare and a quarter. The reduced rates will be available from July 25th to August 6th, both dates inclusive. To secure this concession each passenger must produce a special railway voucher, which can be obtained on application to the General Secretary at the office of the Association, 6, Catherine Street, Strand, London, W.C. In order to facilitate the work of the local organizers of the meeting, it is earnestly requested that those who intend to be present will notify the fact as early as possible on the form published in the SUPPLEMENT for this week. On the same form will be found a list of hotels and lodging houses, with a scale of charges. It will be observed that in this list particulars are given of accommodation to be obtained at Exmouth, Lympstone, Dawlish, and Teignmouth, all within thirty or thirty-five minutes by train of Exeter, as well as of houses in what may be called the suburbs of Exeter.

PROPOSED WEST COAST OF AFRICA BRANCH.

DR. J. P. FAGAN, Deputy Principal Medical Officer, Northern Nigeria, invites officers of the West African Medical Staff to write to him, care of Sir Charles R. M'Grigor and Co., 25, Charles Street, St. James's, London, S.W., stating their views with regard to the

proposal to establish a Branch of the British Medical Association for the West Coast of Africa. Dr. Fagan adds that if he receives a sufficient number of supporters he will proceed to take the steps necessary with a view to the formation of such a Branch.

THE EYESIGHT OF SCHOOL CHILDREN.

THE recent awakening of educational authorities to the fact that many children attending schools cannot benefit by the instruction given owing to defective eyesight, while in itself an unmixed good, has caused a good deal of inconvenience to the hospital authorities because of the large number of school children who have been referred to them for treatment, especially for the estimation of errors of refraction. Dr. Kerr, in his last report to the Education Committee of the London County Council, estimated that an average of 10 per cent. of the children in the standards have vision which is bad (V. $\frac{6}{9}$ or less) when tested under ordinary conditions of light. He added that when an attempt was made to follow up this 10 per cent. it was found that only a minority received any further treatment, but pointed out that, unless carefully distributed through the year, even this minority gave great trouble at the hospitals. The Day Schools Subcommittee has now made a special report to the Education Committee on the subject of vision testing and medical treatment of school children. From this report it appears that the Victoria Hospital for Children, Chelsea, has given notice that patients attending must bring a subscriber's letter of recommendation; that a notice of the number attending from each school must be sent to the hospital at least three days before attendance, and that not more than twenty new cases can be treated. A communication has also been received from St. George's Hospital stating that the governors were prepared to sanction the testing of the eyes of school children, but they would be treated as ordinary patients, and only fifteen new cases could be seen on each day the ophthalmic surgeon attended. The governors further required that the prescriptions for glasses should be taken to the hospital opticians, and the expense of purchasing glasses defrayed by the patients. Dr. Kerr has reported to the Subcommittee that the regulation with regard to glasses has the advantage that the hospital authorities can be assured that the work is well done, and that if a reasonable price is charged no fault can be found with the arrangement save that in cases in which the parents are too poor to pay the children will derive little benefit from their attendance at the hospital. The Subcommittee expresses the opinion that the question of vision testing and correction is only part of the larger question of the treatment of school children by the public charities, which requires reviewing both in the interests of the children and the charities. As regards vision testing, the difficulties appear to be due to the fact that the work that ought to be done is very much greater than the hospitals can possibly perform. Moreover, the work itself is considered uninteresting and is said to bring no reward, either from practice or experience, to the medical officers, and no additional subscriptions to the hospitals. Further, the Subcommittee found that provision for this kind of work is very inadequate that hindrances arise from various by-laws and regulations, the chief being the requirement of a subscriber's letter and the restriction of patients to a wholly inadequate number on a day on which the ophthalmic surgeon attends and the frequent necessity of paying a high price for needlessly accurate and highly finished glasses. After careful consideration the Subcommittee came to the conclusion that a full inquiry into the whole question of the medical treatment of children attending public elementary schools was desirable, and accordingly recommended the Education Committee to appoint, under Section A (6) of the first schedule of the Education Act, 1902, a special subcommittee consisting of members of the Council and representatives of hospitals, charitable institutions, aid societies, etc., for the purpose of making full inquiry into the whole question of the medical treatment of children attending public elementary schools with a view to drawing up a report to form the basis of future action.

STREET ACCIDENTS IN LONDON.

THE annual report for 1906, just issued, of the Central Executive Committee of the St. John Ambulance Association insists upon the necessity for the extension of the street ambulance service in London. It states that the great increase in motor traffic of all kinds involves a corresponding increase in dangers to which pedestrians are liable; and although, mainly through the education work of the St. John Ambulance Association, effective first aid is frequently rendered on the spot, it is admitted by the most competent judges—the physicians and surgeons of the London hospitals—that there is great room for improvement in the mode of conveying the injured. In support of the statement that the risks to pedestrians are increasing, it is pointed out that whereas the number of accidents reported by the metropolitan police in 1891 numbered only 4,766, in 1901 they reached 7,995, an increase of 42 per cent. in ten years; while in 1903 they amounted to 10,363, an increase of over 25 per cent. in two years. Of the accidents in 1903, no fewer than 154 were fatal. According to official figures furnished to the House of Commons recently by the Home Secretary there were in London during two months recently (October, November) 1,859 accidents in the streets caused as follows: by motor omnibuses 199, by motor cars and cycles 211, by mechanically-propelled tramcars 256, by horsed tramcars 38, by horsed omnibuses 87, and by other vehicles 1,068. The Departmental Committee appointed by the Home Secretary to inquire into the existing facilities for dealing with cases of accidents and sudden illness in the streets has, we understand, heard the evidence of Mr. Reginald Harrison, the President of the Metropolitan Street Ambulance Association, and of Captain J. W. Nott Bower, the Commissioner for the City Police of London. Both these gentlemen are specially competent to give valuable information, as both have had experience of the successful working of the ambulance service established in Liverpool, and both are well acquainted with the needs of the metropolis.

EXTRA CORPOREAL STAGES OF HERPETOMONAS AND THE LEISHMAN-DONOVAN BODY.

The Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India (new series), No. 27, contains a preliminary report by Captain Patton, I.M.S., on the development of the Leishman-Donovan body in the bed bug, a very important and interesting piece of work and one which may considerably affect the prophylaxis of kala-azar. The rarity of Leishman-Donovan bodies in the peripheral blood was supposed to preclude the chance of insects being intermediary hosts, but Captain Patton shows that in certain cases those parasites occur quite commonly in the polymorphonuclear leucocytes circulating in the peripheral blood. By feeding different insects on such cases he has found that the bodies cannot be recovered from *Pediculus corporis*, *Culex fatigans*

[1] Calcutta: Office of the Superintendent of Government Printing. 1907. 9d.

Anopheles stephensi, *Stegomyia fasciata*, or the tick *Ornithodoros savignyi*, but all the intermediate stages of development and numerous fully developed flagellates, similar to those seen in cultures of splenic blood, may be readily obtained from the mid-gut of the bug. This is a very decided advance in our knowledge of the extra-corporeal stage of the Leishman Donovan body, and supports very strongly the original view of Rogers that the bug might act as the intermediary in the spread of the disease. It still remains to be shown whether the flagellate undergoes any further development, and also how it gets back to man when the bug bites again; but those points we have no doubt Captain Patton is now following up, and we wish him every success in the speedy solution of this interesting problem. We may add that we have received from Captain Patton a preliminary note on the life-cycle of a species of *Herpetomonas* found in *Culex pipiens*, which will be published shortly. The interest of the subject lies in the fact that there is a similarity between the developmental forms of the Leishman-Donovan bodies in the bed bug and those *Herpetomonas* found in mosquitos. In the hind gut of larvae of *Culex pipiens*, round and oval parasites with a macronucleus and a micronucleus can be demonstrated, and it is found that they eventually divide longitudinally, and develop flagella. In the nymphs or pupae, by compound division, rosettes may form, and in older nymphs the individuals flagellate and the rosettes begin to break up. In the adult mosquitos the parasites are seen as elongated spindles, from the anterior end of which a long wavy flagellum protrudes. Captain Patton has also been able to follow some stages in the life-cycle of a species of *Crithidia* in a water bug. Though some gaps in the cycle still remain to be filled in, enough has been accomplished to show that these two parasites pass their complete cycle in their insect hosts, and are quite distinct from the trypanosomata and other blood parasites.

ANOTHER IMPOST ON THE PROFESSION.

THE Bill to provide for the early notification of births, introduced into the House of Commons under the ten minutes rule by Lord Robert Cecil on April 23rd, was read a second time on May 8th, and referred to Standing Committee A. As already stated in the BRITISH MEDICAL JOURNAL, the President of the Local Government Board, while showing a benevolent interest in the Bill, gave notice of a number of amendments, and the Bill was accordingly amended in some material respects in the Standing Committee; its text as it left that Committee is printed in the SUPPLEMENT to the JOURNAL for this week (p. 434). The amendments, however, proposed by Dr. Cooper, who had been in communication with the Medico Political Committee of the British Medical Association, were not carried. As it stands, the Bill imposes upon the father of the child, if he is residing in the house at the time of the birth, and upon any person in attendance upon the mother at the time of or within thirty-six hours after the birth, the duty of giving notice in writing of the birth to the medical officer of health of the district. The penalty for failing to give this notice is a fine not exceeding 20s. Although the duty of making the notification is imposed upon the father as well as upon any person in attendance upon the mother, yet the experience of the working of the Infectious Diseases (Notification) Act tends to show that in practice the duty will fall upon the medical man or midwife; and it is clear that the profession should make the strongest possible protest against the imposition by the State of this fresh duty without any corresponding remuneration. The principle is thoroughly bad; and, so far as we are aware, has never been applied to any other profession or calling. A letter was addressed, on behalf of the British Medical Association, to the President of the Local Government Board, asking him to take steps to secure either that the provisions of the Bill imposing the duty in question upon medical practitioners and midwives be deleted, or, in the alternative, that provision for suitable remuneration in respect of such duties be inserted. So far Mr. Burns has taken no action to adopt either alternative; but, as will be seen by reference to a paragraph in our Parliamentary Notes, the Bill is at present blocked by amendments put down by Dr. Cooper and other members. Reference is there made to another defect in the Bill, which proposes that the provisions as to notification should apply to stillborn children as well as children born alive. There is no definition of stillbirth in the Bill, nor is any definition known in English law. Dr. Cooper has an amendment proposing that the line shown be drawn at the twenty-eighth week of pregnancy. The absence of any definition from the Bill, even after passing through the Standing Committee, illustrates the dangers of hasty legislation, however good the motives of its promoters may be. It would appear that the Bill has little chance of passing unless the Government gives it special facilities. We trust that Mr. Burns will see the propriety of giving its provisions further consideration before attempting to force it through Parliament.

QUEEN ELIZABETH'S PHYSICIAN.

AT a posthumous meeting of the Royal Medical and Chirurgical Society held on June 19th Mr. D'Arcy Power, F.S.A., read a paper embodying his researches on the life, works, and associates of Dr. Walter Bayley, Physician to Queen Elizabeth. His attention, he said, had been directed to the study of Dr. Bayley's life and works by acquiring a copy of his *Briefe Treatise touching the Preservation of the Eiesight, consisting partly in Good Order of Diet and partly in Use of Medicines*, dated 1586, bearing no author's or printer's name on the title-page, but inscribed, "To the righte worshipfull my very good "frynde, Mr. John Popham, Her Majesty's Attorney-"Generall," the preface being signed, "Your very "lovinge frynde, Walter Bayley." Dr. Bayley was born at Portisham, near Dorchester, in 1529, and was educated at Winchester College; thence he passed to New College, Oxford, in 1548, of which he was elected a Fellow in 1550. He was admitted B.A. on October 24th, two years later, and licensed to proceed M.A., July 6th, 1556. He was granted the degree of Bachelor of Physic and leave to practise medicine "ad practicandum in re "medicâ per totam Angliam" on February 21st, 1558 9. In 1561 he became Queen's Professor of Medicine in the University. He graduated M.D. on July 26th, 1563. A search at the Record Office showed that Dr. Walter Bayley was appointed "medicus ordinarius ad vitam" to Queen Elizabeth on December 1st, 1581. In the same year he was elected a Fellow of the Royal College of Physicians of London, and was named Elect on June 10th, 1584, and Consiliarius in 1588. He died March 3rd, 1592, and was buried in the inner chapel of New College, Oxford. Besides the *Briefe Treatise* he published *A Brief Discourse on the Baths at Neuheim Regis* in 1587 and *A Short Discourse on the Three Kinds of Pepper* in 1588. Each book was printed privately and issued without any name. They were given away by Dr. Bayley as New Year greetings. Each copy was tastefully bound, and the offering made personal by a short autograph inscription at the beginning of the introduction and by the donor's signature at the end of the preface. Dr. Walter Bayley's will recorded that he lived in Salisbury Court, Fleet Street, and continued, "Firste I doe bequeathe my soule to allmightie god and "my bodie to be honestelie buried without anie greate "pompe in christiaun buriall at or in the church of St. "Marie Colleage in Oxford, called commonlie Newe

"Colleage." The will also contained a bequest of a cup to the College and of a sum of money for its library and the support of its high table.

TUMOURS IN WILD ANIMALS

Dr. Harlow Brooks, who holds the appointment of Pathologist to the New York Zoological Park, and is also Assistant Professor of Pathology to a medical college, has written a brief but important article on neoplasms in wild animals.[1] He distrusts reports made by the general zoologist on the one hand, and by the pathologist of strictly laboratory experience on the other. Most of the "growths" or "tumours" described by zoologists and naturalists are found on microscopical examination to be inflammatory. Domestic animals, as well as all wild beasts, big or little, which have lived for some time in captivity, are excluded as not coming within the scope of Dr. Brooks's subject. The authorities of the Zoological Park will not admit a single addition to their collection without a thorough veterinary inspection. This regulation has been in force for five years, during which time not a single animal has been excluded for a new growth formation. In 2,647 mammals under Dr. Brooks's inspection, only 1 case of true neoplasm has been noted; 744 of these animals underwent a complete necropsy without a single new growth being found, excepting in that one case. The exception occurred in a female racoon-dog, *Nyclerentes albus*, from Japan. It had lived, let us remember, for two years in captivity, and, moreover, zoologists have suggested that *N. albus* is an albinoid, and so far not absolutely normal, variety of *N. procyonides*, the "racoon-like dog" of which specimens are sometimes to be seen in our own zoological collections, a true dog closely allied to *Canis*, and only resembling the racoon, which does not belong to the family *Canidae*, in external appearance. Still the specimen in question was a pure wild animal. The tumour which caused its death was a myxosarcoma of the left ovary, forming a large retroperitoneal mass; there was partial intestinal obstruction. Those who are even more sceptical than Dr. Brooks may suggest that during the two years' captivity the animal did not live under normal sexual conditions. In conclusion, Brooks declares that the rarity of true tumours in wild animals of pure species supports those theories which attribute neoplastic formations to perversions of cell growth—a tendency well recognized as more frequent in animals or people of imperfect development or of mixed race, or in such as live under more or less artificial environment. That true tumours are relatively rare in wild animals, particularly in the gregarious North American ruminants, the wapiti, caribou, prong-buck, etc., which Dr. Brooks has been able to examine in considerable numbers, seems, in his opinion, to disprove the theory of the infectious origin of new growths, or their complete dependence upon such extraneous causes as parasitic infection, or peculiarities in food, drink, or habitat.

SPIROCHAETES IN RELAPSING FEVER.

Professor Uhlenhuth and Dr. Hansel have made an endeavour[2] to differentiate the spirochaetes found respectively in African, American, and European relapsing fever. Their strains of the American and African spirochaetes were in the bodies of inoculated mice when the investigators received them, and had already been propagated in this species of animal for a considerable time; there was therefore no difficulty in passing them on from generation to generation in rats and mice. But the European strain, received from Moscow whilst an epidemic was in progress there, was more difficult to keep alive. The first attempt was a failure. Three mice inoculated with the blood of patients had been received from Moscow, together with a sealed capsule containing human blood. The blood and tissues of these animals and also the human blood were injected into mice and rats, but in every instance the virus died out. A second supply of inoculated mice and human blood was then obtained. As the material derived from these animals also proved non-infective for mice and rats, the human blood was injected into the muscular tissue of a monkey (*Cercopithecus fuliginosus*). The day after inoculation the monkey became ill; the temperature rose to 39·2° C., there were severe rigors and marked prostration. On the thirteenth day after infection spirochaetes were demonstrable in the blood of this animal, and from this source transmission of the spirochaetes to rats and mice was found possible, though with some difficulty in the earlier passages. In the light of this experience the authors consider that there is a better chance of continuously propagating the organisms in small laboratory animals if the original human material is first passed into a monkey. When the European strain had become readily transmissible in rats and mice the investigators proceeded to compare it with the African and American varieties. Microscopic comparisons were made of the living spirochaetes removed from rats and mice twenty-four hours after infection. The African form was more vigorous than the other two, and its convolutions were wider apart and less sharply indented. The American spirochaete showed the narrowest and most regular spirals, whilst the European organism was intermediate between the other two. Still clearer and more decisive differences between the three strains were brought out by means of serum reaction tests. Mice and rats which have been successfully inoculated with a given strain are usually found to be immune against reinfection with the same strain, even when it is introduced in larger doses. If the serum of an animal immunized in this way is brought into contact with blood containing spirochaetes from an animal infected with the same strain a marked agglutination takes place; the spirochaetes lose their motility in from a quarter of an hour to half an hour, and undergo granular disintegration. This reaction was found to be specific for each of the three strains investigated. A differentiation was also brought out by means of the Pfeiffer phenomenon. When guinea-pigs were inoculated with 0·1 c.cm. of a specific rat or rabbit serum and then received 0·5 c.cm. of rat's blood containing spirochaetes, if the spirochaetes were of the same strain as that used to produce the specific serum, they disappeared from the peritoneal cavity in from ten to thirty minutes; whereas, if they belonged to a different strain, they retained well-marked motility for several hours. The authors have applied the agglutination and Pfeiffer tests to the serum of five patients suffering from relapsing fever, with results which showed decisively that they were dealing with the American variety of spirochaete. These observations, they point out, are not merely of theoretical interest, but have also a practical bearing on the serumtherapy of this disease, and they are continuing investigations in this direction.

SANITATION OF PANAMA

Dr. W. C. Gorgas has published in the *Medical Record* an interesting account of the sanitary work that has been done on the Isthmus of Panama during the last three years. When the United States took possession of the canal zone three years ago, there were all the conditions necessary to the breeding of *Stegomyia* and *Anopheles* mosquitos, and malaria,

[1] Concerning Certain Phases of Neoplasia in Wild Mammals, with Report of a Case of Sarcoma of the Ovary in *Nyctereutes albus*. *Amer. Journ. Med. Sci.* May, 1907, p. 684.

[2] *Arb. aus dem Kaiserl. Gesundheitsamte*. Bd. xxvi, H. 1, 1907.

dysentery, and small-pox were prevailing among the people, while yellow fever was present at Panama and Colon. The sanitary measures that have been carried out have caused the disappearance of yellow fever, and malaria has been held in check with a very large force employed on the works. For 15 miles the canal belt is low and swampy, and in the other portions rain-water barrels and cisterns are plentiful, so that every condition for the breeding of mosquitos is at the best in a climate that is never cold. The presence of yellow fever, apart from the presence of *Stegomyia*, is due to the coming of non-immune whites in large numbers, who catch and propagate yellow fever. The health authorities have furnished pure water, sewage systems, and methods for proper disposal for nightsoil, and sufficient hospitals for the care of the sick. They keep up an inspection of non-immunes, isolate yellow fever cases in screened houses, and kill infected mosquitos by fumigation. By ditching, draining, and oiling stagnant waters they have lessened the *Anopheles* and the consequent malarial troubles. An efficient quarantine against infected localities is maintained at the ports of entry to keep out yellow fever, and for fifteen months there has not been a case of it in the canal belt. This is not a coincidence, but a result of the sanitary measures taken. Dysentery has been controlled by a good water supply.

A DOCTOR'S WATER-RATE.

IT would seem that when a water company or a local authority having authority to supply water desire to augment their revenues, they not infrequently try to do so at the expense of medical practitioners. We recently dealt with a case in which an attempt was made to charge a doctor extra for the water used by him in his dispensary. Fortunately the attempt was unsuccessful. In a case which was heard in the High Court last week, this mild form of attack upon the profession was renewed. It appears that the Harrogate Corporation sought to make a special charge against Dr. Ian Donald Mackay in respect of water used in washing his motor car. Speaking generally, a water authority must supply water for domestic purposes at ordinary rates. The statute does not define domestic purposes, but says what is *not* included in that term. Thus "a supply of "water for domestic purposes shall not include a "supply of water for cattle or for horses, or for washing "carriages where such horses or carriages are kept for "sale or hire or by a common carrier, or a supply for "any trade, manufacture, or business, or for watering "gardens, or for fountains or for any ornamental pur-"pose." It was argued that inasmuch as the doctor used his motor for seeing his patients he used it in his business. But this view did not prevail. "If," said Mr. Justice Darling, "it had been intended to include in "this section a doctor's carriage, the Act would have "said so plainly." Thus Dr. Mackay established his case, and is excused from liability to pay an extra 10s. a year for this water rate. We should mention, perhaps, that it was decided some years ago that the washing of an ordinary carriage was a domestic purpose within the meaning of the Act.

THE RED CROSS EXHIBITION.

AT the last meeting of the International Red Cross Conference the awards of the jury in connexion with the Red Cross Exhibition were announced. On this occasion three prizes, each approximately of the value of £500, had to be distributed, and these, in accordance with a preliminary notification, were awarded for the quickest and least painful methods (1) of discovering and lifting persons wounded whether in land or sea fights, (2) of transporting them to dressing stations, and (3) of finally removing them by such means as ambulances, trains, and hospital ships. Practically all Red Cross Societies were represented by exhibits as well as a number of private firms and others, the majority of appliances coming under the former category. No less than sixteen German States sent more or less numerous exhibits, America, Austria, Denmark, Holland, France, Japan, Great Britain, Mexico, Italy, Switzerland, and Russia being also well to the fore, and the total exhibits numbering 189. As a class, perhaps the most striking objects were the models of ambulance trains, and an examination of the differences shown in elaboration of detail and the ingenuity displayed in arriving by different means at the same end was interesting. Correspondingly impressive were the various models exhibited to show the way in which comfortable ambulances, large and small, can be devised out of the carts, wagons, boats, and the like, commonly used in the countries exhibiting. In this connexion, the Japanese improvised stretchers, and "handy nets" were particularly attractive for their combination of simplicity and ready utility. In the English section there were altogether thirty appliances shown, the St. John Ambulance Association having on view an excellent military ambulance wagon and some litters, and Messrs. J. A. Carter and Co., of New Cavendish Street, specimens of such of the appliances they manufacture for invalids as are more particularly intended for carrying injured persons. Among these were their new "Rastilon" suspension springs, which automatically adjust themselves to the weight of the body to be carried. They were shown, of course, applied to one of Messrs. Carter's own litters, but can be fitted to any existing ambulance, and are undoubtedly of value in abolishing shaking and jolting. Of other firms, Leslie's, Limited, displayed a number of readily-applied dressings, and Messrs. Evans and Wormull the aluminium splinting suggested by Sir Frederick Treves. It is intended for military service but would be useful in any practice. Among the exhibits of private personages was the ingenious device of Mr. R. H. Luce, Senior Surgeon of Derbyshire Royal Infirmary, consisting of a Mark V Regulation ambulance stretcher, carried on a pneumatic-tyred bicycle wheel. When in actual use at the recent annual inspection of the London Companies of the Royal Army Medical Corps Volunteers, it was obvious that, balanced at the corners by the hands of the usual four bearers, it could be taken anywhere where men could walk, but with greatly less exertion than usual on the part of the bearers. The portable operation table devised by Mr. J. Lynn Thomas, C.B., was also shown, as well as the umbrella stretcher devised by Colonel Valentine Matthews, R.A.M.C.(Vols.). Finally, Colonel Hathaway, R.A.M.C., was represented by two of his ambulance carts and some stretchers, and with one of the former enabled England to divide the prize in the first division with Russia; the Russian winning exhibit was a Finnish two-wheeled cart, fitted for the transport of invalids. In the other divisions the prizes were also divided: France and Germany in the former, and Germany and Holland in the latter, being the winners.

DOCTORS AND THE SUPPRESSION OF THE DUEL.

THE duel, which in this country has come to be regarded as a mediaeval "method of barbarism," is still in many countries which call themselves civilized a recognized way of healing wounded honour. We believe that among us it died not so much of superior enlightenment as of ridicule. A duel between two tailors brought the absurdity of the thing home to "Society," and there was an end of it. Duels in Italy are by no means so bloodless as they mostly are in France, and any effort to suppress them is to be welcomed. It will be strange if

the medical profession succeeds in accomplishing what the Church has for centuries striven to do in vain. Yet it is not impossible that this consummation may be witnessed by the present generation. Not long ago the Medical Society of Palermo discussed the question, and after full deliberation decided that "the mission of the "physician and the surgeon is to prevent diseases and "wounds, not to help in making wounds that they may "treat them afterwards; that by lending their help in duels, "doctors make themselves accomplices, and that they "should, therefore, refuse to assist at hostile meetings of any kind." Our brethren of Palermo—a quarter from which such pacific sentiments would scarcely have been expected *a priori*—think that by setting their faces against the duel in this way, they will put down the practice. Where, they ask, are the seconds who would take upon themselves the responsibility of bringing their men on the ground, if there is no medical aid at hand? The resolution of the Palermo Society is to be sent round to all the medical associations of Italy in order that an effective league against duelling may be formed. We wish the movement the success which it undoubtedly deserves, and we hope that the action of the Italian doctors may be followed in countries where this particularly foolish method of blood-letting still prevails.

SUDDEN DEATH FROM HAEMORRHAGE: DIFFUSED CHORION-EPITHELIOMA.

It is instructive to note how frequently we hear about a disease which thirty years ago was unknown to us. The highly-malignant malady named deciduoma malignum, or chorion-epithelioma, is now a familiar subject. A remarkable instance of this disease has recently been reported by Risel.[1] A woman, aged 20, had an unaccountable attack of fever early in February, and complained of a painful swelling in the region of the liver. On the 12th an attack of profuse haemorrhage occurred, over a pint and a half of blood escaping from the vagina. The patient died within a few hours. On August 3rd, last year, the same patient had been delivered manually of a hydatidiform mole. Septic symptoms occurred, and intravenous injection was followed by traumatic paralysis of the right median nerve. The complications disappeared after appropriate treatment, and the patient enjoyed good health from September to February, when the fever and fatal bleeding occurred. The uterus, ovaries, and Fallopian tubes were free from any new growth. The haemorrhage was traced to a broken down point on the surface of a soft tumour of the size of a small apple which grew in the anterior vaginal wall, a smaller tumour occupied the upper part of the posterior wall. The space between them was distended with recent clot. The liver was full of new growths, and a few were found in both lungs. The tumours vaginal, hepatic, and pulmonary all alike showed the characters of chorion epithelioma. Two rather curious features are to be remembered in respect to this remarkable case. Clots, evidently not recent, adhered to the serous surface in Douglas's pouch, yet no trace of new growth could be detected there, nor on any other part of the peritoneum. Lastly, although the patient had been in very good general health until the final week of her life, the vena cava inferior and both common, external, and internal iliacs and femorals (etc.) were for the most part obliterated, and collateral circulation through the veins in the abdominal parietes was already established. The malignancy of the type of tumour in this case is universally recognized by authorities, but the clinical history, especially the sudden fatal haemorrhage, is unusual.

[1] [illegible] Chorionepithelioma des [illegible] Deutsche [illegible] Beobachtungen über [illegible] Uterus [illegible], No. 2, 1907, p. 63, with drawing.

KING EDWARD'S HOSPITAL FUND BILL.

Dr. Rutherford's motion that this Bill should be recommitted to the former Committee, and that it should be an instruction to that Committee to insert clauses to provide that the control and the management of the Fund shall be vested in the President and the Council, and that the Council should be constituted on representative lines, which was to have been discussed on Thursday, June 27th, has been postponed.

Among the recipients of the honorary degree of Doctor of Science at the Encoenia at Oxford on Wednesday, June 26th, were Sir Richard Douglas Powell and Professor Watson Cheyne.

The annual meeting of the General Committee of the Cancer Research Fund will be held at Marlborough House under the presidency of His Royal Highness the Prince of Wales, on Monday, July 1st, at noon.

Dr. Jaroslav Hlava, Professor of Pathological Anatomy in, and sometime Rector of, the Czech University of Prague, has been made a life member of the Austrian House of Lords. The Austrian Chamber of Deputies includes eight members of the medical profession.

The inaugural meeting of the Society of Tropical Medicine and Hygiene was held in the house of the Royal Society of Medicine on Wednesday evening. Sir Patrick Manson delivered the presidential address, in which he compared the knowledge of tropical diseases possessed ten or twelve years ago with that of the present day. Subsequently Dr. Daniels, of the London School of Tropical Medicine, gave a very interesting lantern demonstration dealing particularly with parasites.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Notification of Births Bill, which was altered a good deal in Grand Committee, and made an adoptive instead of a compulsory measure is put down daily for its report stage. Its further progress, however, is blocked by a series of amendments put down by Dr. Cooper and others. These amendments seek to widen the responsibility of giving notice of the birth, and not make it the duty of the medical practitioner or midwife. The Bill requires the notification of stillbirths under a penalty, but contains no definition of a stillbirth. As there is no definition known in English law, it was considered in Committee difficult to exact a punishment for the non-notification of a birth which was nowhere accurately defined. To remedy this remarkable omission, Dr. Cooper proposes to leave out in Clause 2 the words "stillborn children as well as children born alive," and insert "a child which has issued from its mother after the expiration of the twenty eighth week of pregnancy as dead or apparently dead, and not called back to life." Another amendment proposes to make the London County Council as the chief sanitary authority, the body to adopt the Act when passed, for the whole of the London area. Altogether there are some twenty amendments on the paper, and unless special facilities are given to the Bill by the Government, the prospects of the measure in the crowded state of the order paper are not promising.

Schools of Tropical Medicine.—Colonel Lockwood asked the Under Secretary of State for the Colonies what amount was contributed by the Imperial Government towards the maintenance of the Tropical School of Medicine at Liverpool; what was the total cost of maintenance of that hospital, and what amount was contributed by the Government of the Congo: and what sum, if any, was contributed by the Government to similar hospitals in London. Mr. Churchill replied that a sum of £500 a year was contributed by the Imperial Government to the Tropical Diseases Research Fund, administered by the Secretary of State for the Colonies, and an annual grant was made from this fund to the Tropical School of Medicine at Liverpool. The amount of the grant for the present financial year was £500. The school was not a Government institution, and he was unable to say what was the total cost of its maintenance and what amount was contributed by the Government of the Congo. An annual grant was also made from the fund to the School of Tropical Medicine in London. The amount of the grant to that school for the present financial year was £1,000, with an additional grant of £1,000 to be spread over three years, for the purpose of creating the appointment of a Pathological Entomologist at the school.

Cancer in India.—Mr. Weir asked the Secretary of State for India, in regard to the fact that the Command Paper entitled Statement exhibiting the Moral and Material Progress and Condition of India, 1905-6, declared that very valuable results had been obtained by the Plague Investigation Committee, if he would consider the expediency of appointing a committee to inquire into the prevalence of cancer in India and the measures to be taken to combat that disease. Mr. Secretary Morley replied that the investigations desired were already being prosecuted in India by the Imperial Cancer Research Fund in co-operation with the Government of India. Arrangements had been made for the systematic collection of data as to the prevalence of the disease in India and for the transmission of the same by medical officers to the Cancer Research Fund for examination and record. The research work which the fund was carrying on would guide the Indian medical authorities in the adoption of measures for combating the disease, which relatively to plague had a very slight effect on the health of the general population of India.

The Compulsory Notification of Phthisis.—In answer to two questions put by Sir Francis Channing, Mr Burns said that he was not aware that the Scottish Local Government Board had made any report on the working of the compulsory notification of phthisis in certain towns in Scotland. The question whether any such report should be made and laid before Parliament was hardly a matter for him. It appeared to be one for the Secretary for Scotland. As regards Dr. Bulstrode's report, that gentleman was engaged in revising the proofs of his report, but there was a considerable amount of work to be done upon it. He could not undertake that it would be issued before the vote for the Local Government Board was taken.

Insanitary Barracks.—At the end of last week, in the discussion on supply, there was a lively debate on the vote for barrack construction. Viscount Turner began by complaining that the Piershill Barracks at Edinburgh were not in a fit state to hold troops. Owing to the insanitary condition, the soldiers had suffered much from diphtheria and other diseases. It was stated last July that the matter was under consideration but nothing had been done. The Preston Barracks at Brighton also had not been put into a sanitary state. Mr. Buchanan, the Financial Secretary of the War Office, said that the Medical Committee sent down to inquire into the condition of Piershill Barracks reported that it could not be condemned as insanitary; still it was an inferior barracks, and it was the intention of the Government as soon as the "Greys" were moved out to have a further medical investigation, and everything necessary done. The barracks had been complained of for ten years yet the last Government did nothing. Mr. Balfour said that the present Government had laid down the principle that all works must be done out of revenue, and they were face to face with the difficulty that they must either expand their estimates, which they were unwilling to do, or allow troops to live in barracks which were admittedly unhealthy if not insanitary. That was a very lamentable conclusion in the interest of the health and efficiency of His Majesty's forces. Mr. Price and Mr. Gulland also spoke, and Mr. Austen Chamberlain pointed out that the Government proposed to spend six millions on telegraph works, which he contended was less necessary than provision for the health of the troops. Mr. Arnold-Forster urged that a large sum was necessary to put barracks into a proper state. Mr. Mond, in asking what the War Office intended to do about cavalry barracks at Chester, said it would be better to build new barracks at Chester than attempt to restore old and insanitary barracks in Scotland. After a brief reply from Mr. Buchanan the vote was passed by 184 to 40.

Women Guardians.—Mr. Arnold Herbert asked the President of the Local Government Board how many members of boards of guardians were women, and in how many cases the election of such women members was in a contested election. Mr. John Burns answered that according to the latest figures in his possession the number of lady guardians was 1,093, of whom 1,050 were elected and 43 were co-opted. Some of the returns, however, for the present year had not at present been received, and in these cases the numbers had been taken from last year's returns. He was not able to say in how many cases the election of the women serving as guardians was contested.

Colwyn Bay and its Sewage.—Mr. Weir asked the President of the Local Government Board whether he was aware that the promenade at Colwyn Bay was constructed for upwards of two miles over the top of the main sewer which carried the sewage into the sea at Rhos on-Sea; and, seeing that the sewer was ventilated by means of ventilating shafts on the parade, would he ascertain whether any less offensive means of ventilating the sewer could be adopted; and, in view of the sewage stench at Rhos-on-Sea, would he suggest to the local authorities the expediency of carrying the sewage further out to sea. Mr. Burns replied that he understood that the promenade at Colwyn Bay was not constructed over the outfall sewer, but over the main intercepting sewer. The latter sewer was ventilated by ventilating shafts, some of which were on the promenade, but they were of considerable height, and he was informed that they were no nuisance and that there had been no complaints with respect to them. He understood that there was no outfall sewer at Rhos-on-Sea, that outfall having been disconnected, and the whole of the sewage connected with the new sewerage scheme which discharged some 1,530 ft. below low-water mark, at a point near the Little Orme.

Sewage at Dumbarton.—Mr. Robert Duncan asked the Secretary for Scotland if he was aware that the sewer pipes of the burgh of Dumbarton were being extended towards the centre of the river Leven; whether this action had the concurrence and sanction of the Local Government Board; and, if not, whether steps would be taken by the Board to compel the burgh to adopt a satisfactory system of sewage purification. Mr. Sinclair said that he had no fresh information. The sanction of the Local Government Board to the extension of the sewer outlets was not required, nor had they power to compel the local authority to adopt a system of sewage purification unless it could be shown that such was essential in order to remove a public health nuisance. Arrangements had, however, been made for a joint inquiry by the Inspector under the Rivers Pollution Act and the medical inspector of the Board.

The Consolidation of the Public Health Acts.—In answer to Sir Francis Channing, Mr. Burns said on Monday that it would not be practicable to introduce a Bill to consolidate the Public Health Acts during the present Session. He did not think that at the present time he could give any pledge as to legislation for the purpose next year.

Medical Referees under the Workmen's Compensation Act.—In reply to a question by Mr. Peters, Mr Gladstone informed the House on Monday that the question of appointing women medical referees for the purposes of the new Workmen's Compensation Act was under consideration.

Liverpool.

PHTHISIS AND SUMMER DIARRHOEA.

At a meeting of the Health Committee of the Corporation on June 20th an important proposal was brought forward to provide accommodation for the treatment of phthisis and summer diarrhoea in the City hospitals. It was stated that some of the hospitals were only half full, and the Hospitals Committee had decided to accede to the request of the deputation from the Health Committee to provide twenty beds for infantile diarrhoea and twenty-four for phthisis. It was ultimately agreed to refer the question of infantile diarrhoea to the Infant Life Preservation Subcommittee, and the question of phthisis to Dr. Hope, for the arrangement of details.

HEALTH OF BOOTLE.

Mr. W. Naylor Barlow, M.O.H. Bootle, in his report for 1906 just issued estimated the population for the year as 68,000. The birth-rate was 31.9 per 1,000, which is 1.0 per 1,000 less than the previous year, but 4.9 in excess of England and Wales as a whole. The report refers to the disadvantages arising from the long time between the birth and the obligation to register; 312 children died under one year of age, that is, 14 per cent. of the births; 1.6 per cent. of the births were illegitimate. The total deaths were 1,177, giving a death-rate of 17.3. This is the lowest on record, and considering the character of the inhabitants and the density of the population, must be regarded as decidedly low. Mr. Barlow is strongly opposed to the present system of death registration, pointing out that any system which admits the possibility of the registration of the death of a living person, and, in addition, allows laymen to ascribe the cause of death on the information of third parties in cases which number thousands in the year throughout the country, is in need of reform. The defects of the present system, he remarks, render it comparatively easy to put an end to the existence of children not wanted; the illegitimate births numbered 35, and 19 of the deaths were of illegitimate children. In discussing the question of infantile mortality, Mr. Barlow states his opinion that one factor which has a material influence on its rate is the lack of that professional advice which many children ought to receive when ill.

This is especially noticeable in such diseases as whooping-cough. Medical advice is supposed to be within reach of every one. When people cannot afford to pay for a doctor, it is commonly supposed to be an easy matter for them to obtain medical attention free. In actual practice it is not always so, and my experience is that in the majority of cases of measles, whooping-cough, itch, skin diseases, ophthalmia, and other so-called minor diseases the children do not receive medical attention at all, and the only advice many of them receive is that given by the lady sanitary inspectors, which is, after all, not medical advice.

The notifications of infectious disease numbered 514, 336 being cases of scarlet fever and 40 of enteric fever. No cases of small-pox or typhus were notified. There were 83 deaths from diarrhoea. The type of scarlet fever was mild, the mortality being only 4 per cent. With the best intentions on the part of all concerned, isolation was only partially successful, owing partly to many mild cases passing unrecognized, and partly to ignorance of the danger of healthy children associating with infected children. There was a noticeable connexion between the periods of school attendance and the periods when notifications were numerous. Forty-four deaths were due to measles; on the recommendation of Mr. Barlow, the practice with regard to measles has been relaxed at the elementary schools to this extent, that children above 7 who have had measles are not excluded from elementary schools because of the existence of the disease in their homes. This practice has not led to any evil results. The number of deaths due to whooping-cough was 30. There is a strong case made out for the medical inspection of school children, which, besides preventing much illness, would materially ease the pockets of the rate payers.

There are twenty midwives practising in the borough. Three of these were placed on the roll on the ground that they had been in bona fide practice for a year before the Act came into force. Two of these can neither read nor write. The report has been prepared with great care, and shows that the condition of the borough is highly creditable to the authorities concerned.

NOTIFICATION OF ANTHRAX.

The City Council has ordered that anthrax shall be a compulsorily notifiable disease for three years commencing June 18th.

Manchester.

HOSPITAL ABUSE IN MANCHESTER.

In last week's issue of the BRITISH MEDICAL JOURNAL there appeared a paragraph showing the extraordinary development of hospital accommodation in both Manchester and Salford. The feeling among practitioners is fairly general, that if the hospitals were only used by those who are deserving of charity, some, at any rate, of the extensions would not be necessary. The plan of making small charges for each out-patient attendance, or for medicines supplied, is becoming more and more general. At some hospitals out-patients pay sums varying from threepence to half a crown a time. Theoretically they pay what they can afford; practically considerable pressure is brought to bear on them to pay more than is generally offered. Thus the hospitals have become most formidable competitors with the general practitioner, and the services of consultants are actually being sold to the public by the hospitals at lower rates than those charged by general practitioners. Again, the system of inquiry into the fitness of patients to receive charity is often a mere farce. Almost every hospital advertises the number of its patients, and the greater the number the greater is its claim on public sympathy supposed to be, and also the greater the revenue from the patients themselves. Thus it is to the interest of the hospital to encourage patients to attend. Moreover, it is quite certain that in the interests of the patients themselves some radical reform is needed. A short time ago a hospital surgeon said that in a single morning of about three hours he had seen 150 patients at the hospital. Of these about 30 were new cases, which occupied about an hour; the other 120 occupied about two hours. Of course, such wholesale treatment must be a delusion. But the hospital is in want of money, and two out of every three patients pay a small sum, so that great numbers of patients are a necessity. Thus the whole system is one that tends to encourage abuse. Complaints against individual members of the hospital staffs are only few—fewer, indeed, than seems to be the case in other large towns—but the staffs seem to be helpless to prevent abuses, the extent of which they are probably hardly aware of. Many of the hospitals are in a state of chronic impecuniosity, and the fault lies with the lay boards. The Divisions are roused to the importance of the subject; it has already been discussed by several of them, and it is expected to come up for discussion at an early meeting of the joint Divisions. It has been discussed also by the Medical Guild. There is an idea that a conference between the staffs of the various hospitals and the medical societies might be of some use in lessening what is rapidly becoming a public scandal.

DR. BAGLEY'S CASE.

The importance of the Bagley case to the medical profession in Manchester has been fully recognized by all the Divisions of Manchester and Salford and by the Medical Guild, though it would seem that the Watch Committee of the Corporation has determined that Dr. Bagley shall pay for his victory. It will be remembered that Dr. Bagley was charged in the police court with obstructing and assaulting the police in the execution of their duty, the assault being merely technical. It was proved in court that Dr. Bagley was attending an old man of feeble intellect who had attempted to commit suicide by cutting his throat. The police appeared on the scene at the man's residence, and in spite of Dr. Bagley's statement to them that the patient was not fit for removal, and could be well tended and guarded at home, they insisted on taking him to the Ancoats Hospital. Dr. Bagley resisted the police, and a slight struggle took place in which Dr. Bagley had his coat torn, and it was alleged that he struck one of the police officers. It was, of course, perfectly evident that he was simply acting in defence of his patient, whose removal at the time he considered to be

dangerous. The magistrates ruled that the police had no right to remove the patient without a warrant, and were not at the time engaged in the execution of their duty, and on these grounds the charge fell through. Not only so, but a few days later the Chief Constable issued instructions to the police that in future "if a person is under medical attendance, it is the part of the police to simply act in accordance with the instructions of the doctor."

So far, good; but now comes the sequel. In defending himself against the charge, Dr. Bagley had had to spend about £30 in legal expenses. Now, whatever may be the custom in such cases where a defendant has been acquitted, in this case not only was Dr. Bagley acquitted, but the magistrate's ruling meant that the police themselves had acted illegally. Their failure to appeal against the verdict, and the subsequent instructions of the Chief Constable, show that they recognized their position; in fact, the charge ought never to have been made at all. It was therefore not without reason that Dr. Bagley applied to the Watch Committee for his costs. He was met by refusal to allow anything. The Council of the Lancashire and Cheshire Branch of the British Medical Association thereupon instructed the Secretary to write to the Watch Committee again, asking that the costs should be allowed. Again the Committee gave a definite refusal to make any allowance. Thus, though the police were proved in the wrong, for their mistake Dr. Bagley has been practically mulcted to the extent of £30. The feeling is very strong that this is a gross miscarriage of justice, and attempts will be made to bring the matter before the House of Commons. It is intolerable that any one should be put to great expense in defending himself in court when the verdict shows that the prosecuting police were acting beyond their rights. The fact that the general relations between the Manchester police and the medical profession have been so amicable in the past makes the decision of the Watch Committee all the more regrettable.

Leeds.

PORTRAITS OF PROFESSOR CLIFFORD ALLBUTT AND MR. T. PRIDGIN TEALE.

SOME months ago a movement was initiated among the many professional and personal friends of Dr. Allbutt and Mr. Teale to ensure that the eminent services these two distinguished members of the profession have rendered to the school of medicine and to the public at large should be recognized. The movement was cordially taken up, and arrangements have been made that a portrait of Dr. Allbutt should be painted by Mr. A. S. Cope, A.R.A., and one of Mr. Teale by Mr. W. W. Ouless, R.A. Though Dr. Allbutt left Leeds a good many years ago, he remains a member of the consulting staff of the General Infirmary, and on those rare occasions when he visits the scene of his former labours, it is always a peculiar satisfaction to any member of the staff to uncover his notice board at the front entrance, and to see that the hall porter, who may not know him, enters his name, with the precise hour of entry and departure, in the book which is provided for registering the attendance of members of the honorary staff. Dr. Allbutt's colleagues on the staff of the infirmary are not unmindful of the fact that the great part of his fruitful clinical work was carried on when he was on full duty as honorary physician to the infirmary and Professor of Medicine to what was then the Yorkshire College. Mr. Teale, though he has retired from the active practice of his profession, has never lost his interest in the infirmary or the medical school, nor in the many spheres of public work in connexion with which his name is so well known.

POST-GRADUATE COURSE AT THE LEEDS PUBLIC DISPENSARY.

The second post-graduate course at the Leeds Public Dispensary, the details of which were given in this column on April 13th, will be brought to a close by a demonstration on the use of the *x* rays by Dr. Rowden. The demonstrations have been well attended, and the Committee is confirmed in the wisdom of limiting the numbers attending the course to twenty. Should it appear that there is a demand, of which there seems to be some indication, for a course during the late autumn, it is understood that a series of demonstrations will be arranged for October and November.

West Yorkshire.

WORKHOUSE ADMINISTRATION IN DEWSBURY.

Two inspectors of the Local Government Board opened an inquiry on April 16th into several alleged irregularities in the administration of the Dewsbury Workhouse. One of the chief causes of complaint appears to have arisen out of an incident which occurred early in the present year in which a male mental case in the infirmary, becoming suddenly violent, rushed out of the building armed with a knife. The man was put into a strait-jacket by the superintendent nurse, with the authorization of the workhouse medical officer, and kept in this way for two days until he was removed to the asylum. The guardians appear to have considered the application of the strait-jacket a reprehensible proceeding. There were also charges against the matron.

At a meeting of the guardians, held on June 21st, the report of the Local Government Board was read. It stated that the Board considered that the master had shown great laxity in his administration, had failed to discharge his duties with proper energy and efficiency, and should be requested to resign. The allegations made against the matron had not been substantiated. The Board did not consider that blame attached to the officers of the workhouse in the particular incident which gave rise to the inquiry, but thought it unfortunate that fuller particulars with regard to the insane man were not given at the time of his admission. There should be a male officer of experience in the wards, and in view of the proposed extension of the infirmary it was desirable that a resident assistant medical officer should be appointed.

INFANT MORTALITY IN HALIFAX.

The Medical Officer of Health for Halifax (Dr. Neech) in his annual report, referring to the question of infantile mortality, suggests that parents should be compelled to register their children within forty-eight hours of their birth. Nearly 40 per cent. of deaths occur amongst infants under one month old. He approves of municipal incubators for children born prematurely. He deprecates the suggestion for the municipalization of the milk supply, but thinks farmers might be better educated in keeping their cowsheds well ventilated and carrying out greater cleanliness in collecting milk. More clean towels are required in day schools, to prevent the spread of infectious disease. The Halifax birth-rate of 19.1 is 8 per 1,000 below the average for England and Wales, and the lowest yet recorded.

BRADFORD INSANITARY AREAS.

The Bradford Health Committee recently proposed to build, on some insanitary areas in the Longlands district, five blocks of dwelling houses, each three stories high, subdivided into three, two, and one room tenements. At the back of the buildings there was to be an open asphalted space, enclosed at either end by a wall and a gate, as a drying ground and a playground for children. The plans, however, have been rejected by the Local Government Board on the ground that they do not comply with the regulations of the building committee of the city.

HALIFAX BOARD OF GUARDIANS.

At the fortnightly meeting of this Board of Guardians applications were considered for the post of resident medical officer to the workhouse infirmary. This appointment is the subject of a warning notice in the JOURNAL. It is satisfactory to note that no male applicants applied, but very regrettable that three ladies offered themselves for the post. One of these—Miss McLean of Chorlton-on-Medlock—was appointed.

Birmingham.

HALLS OF RESIDENCE FOR THE UNIVERSITY STUDENTS.

THE Queen's College has gone through many changes since its foundation in 1828. It was the home of the medical school in Birmingham until the school was transferred to Mason's College, which is now the University.

Since losing its medical students the Queen's College has been used for the education of theological students. The college has now been closed temporarily for theological instruction, and a considerable portion of the buildings has been acquired by the University on a lease for five years. It is proposed that the residential part of the Queen's College should be a hostel for male students of the University, and for this scheme the approval of the Board of Education has already been obtained. The Council of the University has power to provide, maintain, and supervise halls of residence for students, but up to the present there has only been the University House in Hagley Road in which live a few lady students. The Queen's College will provide accommodation for about forty students. The hall will be opened at the beginning of October, and in the meanwhile it will be thoroughly overhauled and renovated. Professor Kirkaldy has been appointed warden. Another scheme is to erect a new hall for lady students near the site of the University buildings at Bournebrook.

Hospital Saturday Fund.

Saturday, June 15th, was Hospital Saturday, and on that day and during last week over £18,000 was collected. This is a little more than was collected in the corresponding time last year, and it is hoped that the collection may reach the large sum of £20,000.

Scotland.

Epidemic Cerebro-Spinal Meningitis in Scotland.

The Registrar General for Scotland reports that in the week ending June 22nd, 1907, 12 deaths were due to cerebro-spinal meningitis in eight principal towns of Scotland, or 11 fewer than in the preceding week. The deaths are fewer than those recorded in any week since the week ending January 5th. For some weeks past the death returns have indicated that the epidemic of cerebro-spinal meningitis is diminishing. The Medical Officer of Health for the City of Edinburgh reports that in the same week 6 cases had been notified as suspicious cerebro-spinal meningitis, of which 5 were removed to the City Hospital at Colinton Mains. Six deaths occurred during the week, and 15 cases remained under observation.

Edinburgh Royal Infirmary.

In view of the impending changes on the staff, the managers, meeting in private on June 24th, elected D. Chalmers Watson, M.D., F.R.C.P.E., assistant physician, and William James Stuart, M.B., Ch.B., F.R.C.S.E., assistant surgeon. Both appointments were for five years from July 1st next. There were six candidates for the first-named post and seven for the latter.

St. Andrew's Ambulance Association (Aberdeen Centre).

At the annual meeting of the local Committee of the above Association it was reported that during the year just closed 15 classes had been held and 249 pupils had passed the examinations. Colonel Douglas Duncan was reappointed Chairman; Professor D. W. Finlay, Vice-Chairman, and Mr. William Smith, Advocate, Secretary, and Treasurer for the ensuing year. The following were appointed Examiners for the coming year: Drs W. E. Croll, T. Fraser P. Howie, J. Inner, F. Kelly, W. R. Pirie, A. Ogston jun., J. Smart and J. A. Watt (all in Aberdeen), Donald Campbell (Elgin), P. Clason Garson (Huntly), Duncan D. Mackintosh (Aboyne).

Ireland.

The University Question.

The Wesleyan Conference, which has been sitting in Dublin this week, had its attention called to the Irish University question by the following motion, introduced by the Rev. Dr. Nicholas:

> That inasmuch as we no European country of the first or of the second rank has seen fit to commit the entire control of higher education to the charge of a single university, inasmuch as experience has shown that in the foundation of universities local feelings and local requirements may advantageously be allowed weight; inasmuch as specialization by universities, namely, the special cultivation of certain studies and lines of research, and the development of an individual character, has been in many cases fruitful of beneficial results to education and the world—Resolved: That we do not approve of the proposal to concentrate all university education in the hands of a single university; that we are opposed to the establishment of a Federated University, which is specially unsuited to the condition of Ireland. At the same time we would be in favour of any scheme that would meet the desire of our Roman Catholic fellow-countrymen for higher education, so long as it does not involve the establishment and endowment out of public funds of a sectarian university or college.

It was pointed out that if carried the resolution would bring the Wesleyans into opposition with their Presbyterian brethren, who recently, at their general assembly, had approved of a United University by a large majority. After some discussion, the Rev. Dr. Evans urged that there was great danger in passing abstract resolutions on concrete things. He moved that they proceed to the order of the day, and this motion was carried on a division.

Accommodation for Consumptives in Belfast.

A special meeting of the City Council in Committee was held on June 18th to consider a proposed arrangement made by the Public Health Committee with the authorities of the Forster Green Hospital. The hospital is to reserve 25 beds for patients nominated by the Public Health Committee; the Corporation is to pay 35s. per week, and to have two Representatives on the Board of the Hospital, the Lord Mayor and Chairman of the Public Health Committee or their deputies. An amendment to the effect that it would be better for the Corporation to erect a hospital of its own was moved, but rejected; finally the original motion to ask the Council to adopt the arrangement was passed by 20 to 6.

South Wales.

West Wales Sanatorium.

Dr. Reid, of Tenby, honorary secretary for Pembrokeshire of the West Wales Sanatorium at Alltymynydd, presided over a meeting of those interested at Haverfordwest on June 22nd. Among those present were the Dowager Lady Kensington and Sir Owen Scourfield. Dr. Reid explained that about £800 was yet needed before the sanatorium could be opened free of debt, and the Committee had decided that until the debt was cleared off the building should remain closed. He complained that the County Councils, having held out promises of support, on the strength of which in a great measure the scheme was proceeded with, had now withdrawn. In this matter it was the poor people who had been the most generous, for, with the exception of a gift of £300 from Mr. David Davies, M.P., Cardigan, no sum of over £100 had been contributed. Since last October he had collected £324 4s. 10d., mainly in the southern portions of Pembrokeshire. Up to the present there had been no good response from the northern part. Those present decided to form themselves into a committee to further the interests of the sanatorium in Mid and North Pembrokeshire.

Health of Cardiff.

Dr. E. Walford, the Medical Officer of Health for the City of Cardiff, has just issued his annual report for 1906. All the best features of previous reports are retained, and there is, in addition, a great mass of matter that is of value and interest. The estimated population for mid-year 1906 was 176,850, with 976 houses uninhabited, the density of the population being 28·3 persons per acre. From August, 1905, to August, 1906, plans were passed for 291 new houses, the smallest number, with three exceptions, since 1894. Although there are no large insanitary areas in the city which could be dealt with under Part I of the Housing of the Working Classes Act, 1890, a considerable number of houses have been closed as unfit for human habitation, under the provisions of Part II of the Act. As a result of systematic meat inspection by the officers of the Health Department, 68,909 lb. of meat were destroyed as unfit for food during the year, this being the largest quantity so dealt with during the previous ten years. As there are no private slaughter-houses in the city, the condition of the meat is usually discovered by the meat inspectors at the

municipal abattoirs immediately after slaughter. On the other hand, Dr. Walford points out that there is not sufficient protection against the introduction of diseased meat from without the urban district; he recognizes that the difficulties of inspecting meat in rural districts in which there is a large number of slaughterhouses are considerable, but he fears that no great efforts are made to overcome these difficulties. In some Continental cities meat stations have been established for the examination of all carcasses slaughtered outside the urban district. To introduce this method into this district it would be necessary to obtain powers in a local Act of Parliament, and this step is now under the consideration of the Health Committee. It is interesting to note that the Shop Hours Act, which came into operation in 1904, has been made applicable to 416 shops in Cardiff, employing 854 persons, the trades affected being barbers, bootmakers and boot sellers. There are now 117 midwives in Cardiff who have been certified under the Midwives Act. No schools were closed on account of the prevalence of infectious diseases, but a considerable number of scholars suffering from such diseases and others from infected houses were excluded. The birth-rate in Cardiff, which was 35 9 per 1,000 persons in 1898, has been ever since gradually decreasing, so that in 1906 the rate was 27 9. A similar decline is noticeable throughout the country. Happily the death-rate shows a gratifying decline in Cardiff, the 14.2 per 1,000 in 1906 being the lowest but one during the last ten years, and the lowest but one in the 33 large towns. The infant mortality in Cardiff was 134 per 1,000, as against an average of 133 throughout England and Wales, 148 in the 76 great towns, and 132 in the 149 smaller towns.

India.

NEW PASTEUR INSTITUTE.

THE new Pasteur Institute for South India was opened by Sir A. Lawley, Governor of Madras, on Thursday, April 25th. The Governor explained that the scheme had originated with his predecessor, Lord Ampthill, but that its consummation was made possible by the generosity of Mr. Henry Phipps, an American, who gave a lakh of rupees to the Government for the purpose. The extra cost and the annual charges for working expenses will be borne by Government, but as the Institute is expected to benefit the neighbouring States some share of the expenses will probably be borne by them. The Institute is situate at Conoor, a small hill station near Ootacamund, and easily accessible to residents in most places in Southern India. The first director is to be Captain Cornwall, I.M.S., who has made a special study of everything connected with the Pasteur treatment. It is to be hoped that the Institute is only the beginning of a research laboratory for South India corresponding to Kasauli, though there is much to be said for the establishment of institutions for pathological research in the large centres, where there is ample material, rather than in hill stations where, after all, only a proportion of the real tropical diseases can be found. The usefulness of the Pasteur Institutes of India would be vastly increased if Government were to call upon the local authorities to make some arrangement for sending the poor patients for treatment; at present only a small fraction of the cases are treated, and many are prevented by lack of the means to pay for the railway ticket to the place of treatment. In European countries no one would suggest that Government should undertake to send the patients to the institute, but in India the people expect to have everything done for them, and recognizing this fact the Government does many things that would be left to private initiative in Europe.

GRANT MEDICAL COLLEGE, BOMBAY.

The students of Grant Medical College are considerably disturbed as to the residential quarters which Government has at length determined to erect for them. The site which is believed to have been chosen is situated at Agripada; and this is a considerable distance—nearly a mile and a half—from the College building and the Jamsetjeebhoy Hospital, where they do their clinical work. Hence a petition has been addressed to the Governor, praying that the building may be placed on some vacant land in the vicinity of the College rather than at a distance. The arguments used are that such proximity would not only be convenient to the students, but also greatly facilitate the work of the hospital in which the students assist; it often necessitates their visiting the hospital at odd hours of the night and day, and this would be difficult if the residential quarters were at a distance.

DEATH OF MAJOR MOIR, I.M.S.

Recently we had to announce the sad death of a young R.A.M.C. officer who contracted plague in the course of his duties; now with equal regret we have to record the death of Major D. M. Moir, I.M.S., Professor of Anatomy of the Medical College of Bengal and Surgeon to the Medical College Hospital of Calcutta.

Major Moir operated on a septic case at the Medical College Hospital, and within a few hours noticed signs of irritation in the neighbourhood of a slight abrasion of the index finger of his left hand. Soon he began to suffer from slight fever, but it was not till six days later that the illness assumed a really serious aspect, grave constitutional symptoms setting in and the axillary glands becoming enlarged and painful. The glands were removed, at the earnest request of the patient, by Major Bird, I.M.S., the Professor of Surgery at the College. The operation was entirely successful as far as it went, but unfortunately the infection appears to have been general from the beginning, the local symptoms being trivial in comparison with the constitutional. Three and a half days after the operation, in spite of a hard struggle by a healthy and vigorous constitution, the patient succumbed on June 6th.

Colonel Drury, I.M.S., the Principal of the Medical College, and Major Bird were unremitting in their attendance, and, aided by the local medical staff, did all that could be done to help their colleague in his last struggle. Few men ever earned in so full a degree the confidence and respect of those with whom they came in contact as did Major Moir. In spite of the fact that he was accustomed to say what he thought without hesitation and without fear of the consequences, he was universally liked; for to an intolerance of humbug and of the conventional frauds of society, he added a kindness of heart and friendliness of disposition which promptly disarmed all suspicion of malice. His transparent honesty and his exceptional professional ability were fully realized by the public of Calcutta, and he had built up a very extensive practice during the short time that he was stationed there.

In the earlier days of his service he contributed many articles of value on medical subjects, but for some years his attention was devoted almost entirely to the practice of his profession. Not quite 47 years of age, he had been in the Indian Medical Service since 1888, being first man of his batch in the competitive examination. He was an M.A. and M.D. of Edinburgh University, and had seen a good deal of active service before entering civil employment. He leaves a young widow, for whom deep sympathy is felt.

This sad case brings into prominence the question of the use of gloves in operating, as there is no reasonable doubt that Major Moir would be still with us had he worn gloves when operating. In spite of the special risks of septic infection in India very few surgeons have adopted the practice of wearing operating gloves, but whether this is due to conservatism or to the opinion that gloves on the whole interfere with the successful performance of their operations, a calamity like the present is an exceedingly strong practical argument for their general adoption.

Canada.

THE ONTARIO MEDICAL ASSOCIATION.

THE twenty-seventh annual meeting of the Ontario Medical Association was held in the Medical Building of the University of Toronto on May 28th, 29th, and 30th, under the presidency of Dr. George A. Bingham. There was a large attendance at the meetings, which were held in two sections—Medicine and Surgery. The President's address was a second report on goitre and its treatment. The address in surgery was delivered by Dr. George W. Crile of Cleveland, on clinical and experimental observations on the direct transfusion of blood. The address in medicine—methods of infection in pulmonary tuberculosis, by Dr. Mazyck P. Ravenal of Philadelphia—was a

well-reasoned argument from extensive experiments and observations to support his original conclusion, that tuberculosis was chiefly infectious through the digestive route, and that the rarity of primary intestinal tuberculosis was no disproof thereof, as it could be shown that the bacilli passed directly through the wall of the intestine without causing disease there. A dinner and smoking concert were held in connexion with the meeting, and were well-attended and enjoyable events.

Natal.

THE NEW VACCINATION ACT.

WE have received the following memorandum from a member of the British Medical Association resident in Natal:

The Vaccination Act of 1906 in Natal came into force this year, and has given rise to a good deal of adverse criticism. Under this Act lay vaccinators can be appointed to do the work formerly carried out by medical men, and already the Health Officer for the Colony has appointed one lay vaccinator in the Ixopo district, but this action has been negatived by the Minister of Health, who in this matter has shown a very wise discretion, for it can easily be understood how such an appointment would bring discredit upon the profession, and play into the hands of those who are all too easily prejudiced against vaccination.

The Act, which has evidently been drafted in an economical spirit, allows district vaccinators payment at the rate of 1s. a head; and a further provision ordains that free Indians (farmers and those of the independent class) can, on payment of 1s., obtain a pass from the magistrate which allows them to claim vaccination at this low and unprofessional rate. This class of well-to-do Indian used formerly to be vaccinated by their medical attendants at a minimum charge of 2s. 6d., but now they naturally seek vaccination at the lower rate. The Government of Natal are thus entering into competition with the profession, and are guilty of a most unfair attempt to undersell medical men.

The reduction of the rate to the lowest possible figure is certainly not calculated to increase the dignity of the profession, and the reason assigned for removing the vaccination of Indians from the hands of the Indian medical officers, who for years have been the recognized vaccinators of these people, is not at all calculated to raise the Government very high in the opinion either of the district surgeons or the Indian medical officers. There is certainly abundant cause at present in this Colony for the issue of a warning such as that conveyed in the telegram of the Secretary of the Natal Branch of the British Medical Association to the BRITISH MEDICAL JOURNAL of May 3rd, and medical men will do well to give Natal a wide berth till matters medical receive more generous attention at the hands of the Government. Indeed, one must wonder what possessed the Natal Medical Council and the Board of Health to allow a measure so destructive to the good of the profession to pass into law.

It has, however, received wholesale condemnation at the hands of the British Medical Association in Natal, and the Governor has been petitioned to repeal the Act.

Ceylon.

VITAL STATISTICS.

DR. ALBERT J. CHALMERS, F.R.C.S., D.P.H., has dealt with this subject instructively in a presidential address recently delivered at a meeting of the Ceylon Branch of the British Medical Association. The figures on which this address is founded relate to the years 1898-1904. They are by no means faultless, but they suggest important practical measures for the amelioration of the public health. The population of the island is growing. There has been in recent years a considerable excess of immigration over emigration, and the birth-rate of the period (36.5) is in excess of the death rate (27.4). Cingalese constitute about two-thirds of the population, and their birth-rate (32.6) is 16.3 in excess of their death-rate. Infantile mortality, while comparing favourably with Indian rates, and, on the whole, not greatly in excess of European rates, presents in some races and localities a lamentable height. It is shown that nearly one half of the deaths which occur during the first year of life take place within a week of birth, and that in Colombo, convulsions and diarrhœa account for 55.6 per cent. of deaths, prematurity and debility for 23.2, tetanus for 20.4, and bronchitis and pneumonia for 11.1; puerperal mortality is also very serious. These facts indicate the claimant need of improved general sanitation and better care for the health of both mothers and infants. While the general death-rate must be considered high, the average is exceeded among Tamils, Moors, and Malays, and in some provinces and districts very high rates prevail, reaching from 40 to 44. The registration of death causes is very imperfect, but fevers and bowel complaints are by far the chief entries in the returns, and in regard to these great differences exist in different races and places. Enteric fever is held to be a substantial cause of mortality, but the extent of its incidence is unknown. Ankylostomiasis is said to account for much sickness and fatality, and more careful inquiry would probably reveal more. Phthisis is on the increase, especially in Colorado and among the burghers; preventive measures are imperatively indicated. Malarious disease is rife in many parts of the island, causing much sickness and disability, but not directly fatal. The address, which has been reprinted in the form of a pamphlet, is well worthy of thoughtful study.

SPECIAL CORRESPONDENCE.

VIENNA.

Vaccination in Austria.—Proposed New Hospital for 1,000 Beds.—Attacking the Hypophysis through the Nose.

IN Austria the antivaccination movement is just now beginning to make itself known by several pamphlets and meetings, which concern themselves not only with vaccination but also with vivisection. Here and elsewhere the leaders and the bulk of the followers are more or less hysterical women and effeminate men, while the Society for the Prevention of Cruelty to Animals also takes a certain part in the proceedings. But the publication of the official report of the vaccinators, together with the health statistics for the whole empire, show in a striking manner the beneficial results obtained by the present practice, which is virtually identical with compulsory vaccination. The disease may be regarded as eradicated within the boundaries of Austria; only now and then a few cases are reported, all of them imported from Italy, Russia, or other countries, especially from the Turkish parts of Southern Europe. The regulations now in force as to vaccination are briefly as follows: Every child ought to be vaccinated. For admission to the army, to civil service, to official posts, in fact to nearly every situation, the production of proof that the candidate has been vaccinated is insisted on. Admission to public schools may be refused if the child has not been vaccinated, or if the parents refuse to allow it to be done. These rules work so well that the majority of young doctors have never seen a case of small-pox, whilst of the older physicians many confess that for the past twenty-five years or so the disease formerly so much dreaded, has hardly ever come into mind. When this is compared with the conditions prevailing about forty years ago, when 2 per cent. of all deaths were due to small-pox, and when blindness was caused chiefly by small-pox and infantile blenorrhœa, the crusade of the antivaccinators is difficult to understand.

For the celebration of the sixtieth jubilee of the Emperor's reign, the municipality of the City of Vienna decided to devote a sum of £400,000 for the erection of a large hospital. The sum will be sufficient to cover the cost of erecting a hospital with 1,000 beds, and for its maintenance a capital of the same amount is necessary. This will be found by the State, so that the plan is now approved by the competent authorities. The medical staff of this hospital will have a different status from that of the staff of other hospitals in that the doctors will not have to resign their posts after four years, as has hitherto been the rule; their appointment will be for life, with regular promotion carrying higher remuneration.

Basing his method on a few recent operations, and on the experience of Schloffer of Innsbruck, Dr. Moszkowicz has worked out a method of attacking the hypophysis of the brain through the nose, thus performing the operation extradurally. He turns the nose to the side by dividing it in the nasobuccal fold of the left side, and thus turning it out of the way. The septum and the turbinated bones are next removed, whilst the orbits and the inner wall of the antrum of Highmore are spared. The ethmoidal cells must all be removed, and the lower and front walls of the

frontal sinus are chiselled away, leaving a wide entrance to the sphenoidal sinus. In order to prevent meningitic complications, the operation may be done in two sittings; after the sphenoidal bone has been laid open, a flap from the forehead is turned into the sinus, so as to cover the meninges. The second stage of the operation consists in freeing the hypophysis, removing it or the tumour which has taken its place, and pressing the end of the skin flap into the sella turcica. The relations of the sphenoidal cavity to the hypophysis are very variable; very often the cavity consists of several small sinuses, divided from each other by horizontal or vertical sagittal septa. The manipulation in this part must be specially gentle, because careless movement may cause pressure on the base of the brain. The enlarged hypophysis is more easily got at and removed than a normal one. Hitherto very few successful operations of this kind have been recorded, so that the functional disturbances caused by removal of the hypophysis—a radical removal is hardly possible—are not yet well known. Now that a comparatively easy and not dangerous procedure has been devised, indication for operation will be more readily admitted.

CORRESPONDENCE.

TEACHING OF HYGIENE AND TEMPERANCE IN PUBLIC ELEMENTARY SCHOOLS.

SIR,—The object of this letter is to protest against the inclusion of the subject of temperance (so-called) by any deputation under the auspices of the British Medical Association.

We are all agreed that hygiene is an admirable subject to be taught in public elementary schools, but we are not by any means agreed that a certain sect should be allowed to inculcate their doctrine under the Association's wing, and at the expense of the ratepayer.

I am convinced that a vast majority of the British Medical Association are in agreement with the manifesto recently issued by eminent medical men, pleading for moderation, and I protest that the great subject of hygiene (which, of course, includes temperance—that is, true temperance) is being rendered subservient to the aims of the total abstinence societies, and opposition is being created which would not otherwise occur.

If the British Medical Association is going to take up total abstinence as one of its objects, it will certainly alienate the sympathies of the majority of its members. No one wants to see hygiene included in the curriculum of the schools, and no one wants to see true temperance in all things as one of the national assets more than I do.

But I am sure of this, that the Minister of Education will receive a deputation which has hygiene, unhampered, as its motive in a much more favourable manner than when it has the controversial objects of a faction tacked on to it, as in the clumsy title at the head of this letter.—I am, etc.,

Crouch End, N., June 14th. J. R. FULLER.

*** We have referred this letter to Sir Victor Horsley, who writes:

I think Dr. Fuller is under some misapprehension respecting the position of the Association in regard to its action in promoting the teaching of hygiene and temperance in the public elementary schools. The recent deputation to Mr. McKenna was simply a continuance of the course begun in 1904, and was only arranged because nothing was being done in the matter in spite of the deputations of 1904 and 1906. The action of the Association in 1904 was on the recommendation of the Public Health Committee defined by the Council in the following resolution (Minute 524, 1904):

> It is of urgent importance that elementary scientific instruction in health subjects, including temperance, should be provided in all the primary schools by the educational authorities in order that the conditions which lead to deterioration of the national physique may be understood, and as far as possible prevented.

The position of the Association as regards the teaching of children thus appears to be clearly expressed. Even in a certain non-medical manifesto, signed by some medical men and recently addressed to the public, the special use of the word "adult" plainly suggests that, as regards the habitual use of alcohol by children, for "moderation" it would be better to read "total abstinence." On this point probably there is no controversy among those who are interested in the future of the nation, and it must not be forgotten that in this matter the action of the Association has reference only to the children in elementary schools.

BILL FOR THE EARLY NOTIFICATION OF BIRTHS.

SIR,—An endeavour is being made to run a Bill through the House of Commons which will throw a further obligation on medical practitioners of a most unjustifiable character.

It has been referred to in the BRITISH MEDICAL JOURNAL on pages 1077, 1327, and 1387, but little notice seems to have been taken by the profession generally, although one of its provisions is to compel medical practitioners to notify to the M.O.H. of the district, within thirty-six hours, every birth they are in attendance on, under a penalty of 20s. It is true, the duty of notifying is thrown on others, as well as the medical man, but practically, he would be the only person worth taking action against in many cases.

There is to be no payment for the notification, and the Bill ought to meet with uncompromising opposition on the part of the Association. From a public point of view, in my opinion, it is utterly worthless, and another example of meddlesome legislation; but if an unpleasant duty of this kind is to be forced upon medical practitioners, at least the public ought to pay the expenses.

The same obligation is to be laid upon midwives, and it is as unjust to them as to us, and any association that looks after their interests should also take prompt steps to oppose the Bill.

According to its latest shape, the Bill only proposes to be an optional enactment—that is, it must be adopted by some local authority before it will have binding effect. This makes it only the more unjust. If every medical practitioner had this burden put upon him, the injustice, at least, would be general; but to give a small local authority the power of compelling one section of its constituents to work for nothing is worse.

As stillbirths as well as live births are included, and there is no definition of the former, it is a moot point whether miscarriages will not have to be notified under a penalty. All the good the Bill can do is already at the public service within six weeks of the birth, and all ought to resent this tyrannical interference with their domestic privacy, and shrink from forcing their doctors in the name of law to violate professional confidences they are the first to complain of when broken under other circumstances. In those sad cases which occur from time to time in family practice, what parent would like his daughter's shame published to the local authority, and to have emissaries from the Town Hall calling at his house to advise as to the treatment of the baby? In such cases the onus of publishing his patient's disgrace must necessarily be thrown on the unfortunate doctor.—I am, etc., MAJOR GREENWOOD, M.D., D.P.H.,

London, N.E., June 24th. Barrister-at-Law.

THE PROPER WAY TO ADMINISTER CHLOROFORM.

SIR,—I observe that in your review of Dr. Hewitt's third edition you quote some of his remarks on the Vernon Harcourt apparatus, without any comment upon the obvious fallacies in the cases he mentions.

Let us review the case in which death occurred from "mucus inundation."

An anaesthetist (name not given) begins with ethyl chloride; he then goes on with ether by means of *Bellamy Gardner's* apparatus, and "about" a quarter of an hour later, as the patient had "*bubbling of mucus*," this unnamed anaesthetist decided to continue with chloroform by the Vernon Harcourt. It is admitted that this last method, which one regrets was not adopted in the first place, diminished the secretion of mucus, gave a quiet narcosis, and left the patient in a satisfactory condition. However, half an hour later the dire effects of ethyl choride and ether manifested themselves, and the patient eventually died in twelve hours.

Can any one's judgement allow them to apportion one tittle of blame to the Vernon Harcourt apparatus in this case? During three years' constant use of this apparatus at University College Hospital, where as a Resident Officer I had ample opportunity of observing its use, no such case occurred, but the apparatus proved itself to be ideal in all respects, as also at the Sussex County Hospital, where I exclusively employ it for chloroform cases.

On the other hand, ethyl chloride and ether are well known for their hyperstimulation of the respiratory tract, and, instead of using this case as an argument against the Vernon Harcourt, I propose to employ it to confute Dr. Hewitt's statement that, "by avoiding chloroform as an agent for inducing anaesthesia, and by employing it only for maintaining anaesthesia, its risks are so greatly reduced that there is *little or no point in using a percentage inhaler*." I would ask Dr. Hewitt what means he proposes that we should employ for induction in a case where chloroform is strongly indicated, and respiratory teasers like ether and ethyl chloride contraindicated? Such sequences have other dangers beside.

Further, can Dr. Hewitt or any one else administer for a space of two hours a continuous definite percentage of 0·4, which is all that is necessary for ideal narcosis in many cases, by pouring drops of chloroform on a piece of lint? If he cannot do so, then the patient is inhaling more chloroform than is necessary for narcosis, and the anaesthesia is not perfectly even and regular, although it may appear to be so to even the most experienced observer.

Some cases require as little as 0.2 per cent. I can hardly imagine an even, continuous 0.2 per cent. being given from a handkerchief! The "open method" is therefore essentially "irregular"—that is, the patient is not receiving a definite minimum percentage throughout the operation, and since it is possible to maintain narcosis with so low a percentage as 0·2 per cent. only when the administration is perfectly regular and continuous, it follows that in the methods of irregular administration unnecessary saturation with chloroform results if the patient is kept still during the operation.

These fundamental facts are quite apart from the other important considerations—namely, that reflex troubles are far more likely to occur with an irregular than with a regular narcosis, and these and fatal overdosage are by no means infrequent, especially at certain hospitals, where percentage methods are not employed. *A propos* of this, I would refer your readers to Dr. F. J. Waldo's remarks in the City Coroner's Court on June 17th, as published in the daily paper.

All of Dr. Hewitt's objections to the Vernon Harcourt apparatus can be disposed of in a word or two such objections as its being "irksome," etc. but it would be a waste of your valuable space. However, there is one so-called disadvantage which he speaks of repeatedly and takes as the groundwork of his arguments—namely, a mysterious thing called "suction." I say "mysterious" because, after reading Dr. Hewitt's book, I am still unacquainted with any physiological effect on the respiratory apparatus due to drawing air through a clean tube of the same diameter or larger than the human trachea. The valves are so delicately adjusted that they may be left out of the argument altogether if the apparatus is properly looked after. What, then, is this fetish of suction, upon the altar of which so many advantages over antique methods are to be sacrificed?

With regard to Dr. Hewitt's other case which you quote (again the anaesthetist's name is not given) all I have to say is that a man who asphyxiates a patient by smothering his face with a towel is worse than puerile to shelve the blame on to an apparatus that he obviously did not understand.

The anaesthetists at University College Hospital do not envelope the Vernon Harcourt with a towel, neither do I do so. It is absolutely unnecessary, even with the edentulous. I am, etc.,

[illegible] CECIL E. REYNOLDS.

[illegible] to the Essex County Hospital

OXYGEN POISONING.

SIR,—In my report as research scholar published in last week's SUPPLEMENT, it is suggested that mice exhibit a special sensitivity to high tension oxygen. In view of several other experiments, I think this is incorrect. The fact that mice often show signs of distress before rats or large animals seems to be due rather to their liability to rapid cooling on account of a relatively greater surface exposure. If plenty of cotton-wool is placed in the pressure chamber and the air kept dry by continuous ventilation there is no constant difference between the resisting powers of rats and mice. I am, etc.,

[illegible] M. GREENWOOD jun.

CLINICAL TEACHING AND EXAMINATIONS.

SIR,—In the BRITISH MEDICAL JOURNAL of June 1st, among the notes on the General Medical Council, there is one on clinical teaching in medicine and surgery, in which reference is made to a complaint frequently made that practitioners are turned out theoretical and not practical. The reason, I believe, is easy to fathom, and to my mind is partly to be found in the questions set at an examination. For instance, I have just read the following question set in Materia Medica for a final examination in medicine:

Give the composition of the oxide of antimony, tartarated, and sulphurated antimony, the preparations into which they enter, their uses, and dose.

In the name of common sense, of what use to the general practitioner is the knowledge embodied in the first part of the question? It is certainly more in the province of the chemist than physician. Men are turned out crammed with the latest operations which the majority never perform, and talk about bacteriology they never do. They take an assistantship and call measles erythema. It seems learned to talk about hysterectomy, and I presume the operation and details are given minutely to the examiner; but how many general practitioners perform it? A noted man once made the remark that "students are taught surgery which they never practise, and practise midwifery which they were never taught"; and this is the kernel of the matter. For those who intend practising in the higher walks of the profession, and intend taking the higher qualifications, this knowledge may or may not be of some use; but the General Medical Council and examining bodies could certainly turn out better men if they would confine themselves to drilling knowledge into students likely to be of use in after-life, and setting questions at the ordinary pass examinations which embody this practical knowledge, rather than questions the substance of which is of doubtful utility, inasmuch as it is rarely required in the majority of the cases coming under notice in general practice.—I am, etc.,

June 18th. GENERAL PRACTITIONER.

METROPOLITAN STREET AMBULANCE ASSOCIATION.

SIR,—As the inquiry relative to ambulances now proceeding before the Home Secretary's Committee presents an exceptional opportunity to the medical profession of London to put forward its views on the subject referred to, the above Association desires to point out and emphasize the great importance of the inquiry and the responsibility it carries with it. The scope of the inquiry is thus officially described:

To inquire as to the provision for dealing with cases of accident and sudden illness in the streets and public places within the metropolis, and to report whether any, and if so what, improvements in ambulance provisions are necessary or desirable, and how they could be best effected with due regard to efficiency and economy.

The nature of this inquiry relative to public safety is such as to bring it specially within the scope of the medical profession as being the authority most competent to judge as to the efficiency or otherwise of present methods, or any other that may be proposed as a substitute. It should be remembered that many years may elapse before opportunity is again offered for promoting action or legislation in reference to this most important subject.

The Metropolitan Street Ambulance Association, as largely representing the medical profession practising in the metropolis, which number might be added to indefinitely, and also including the Metropolitan Branch of the British Medical Association, desires to ask the cordial co-operation of the profession generally to matters directly affecting the safety and protection of all persons who use the streets of London. The Association, therefore, desires to point out in the interests of all concerned

1. That the present provision for dealing with such accidents and casualties is admitted to be inadequate and obsolete, and that an unnecessary amount of mortality and physical suffering is thereby permitted to continue.

2. That though the better organization of existing ambulance provision may to some extent improve matters,

more extended system of first aid by the police or others who may undertake this duty, as well as improvements in signalling and in appliances and forms of ambulance, are absolutely and urgently needed.

3. That no service for London can be regarded as efficient that does not include a proportion of rapid-transit ambulances, motor or horse, capable of communicating immediately with accidents when authoritatively requisitioned by telephone or otherwise, and containing, if required, necessaries for first aid attendance; in fact, under special circumstances and urgency, reversing the order of things and bringing the hospital, so to speak, to the patient in the street.

Further information relative to the action which is being taken by the Metropolitan Street Ambulance Association to promote a more efficient service for the many thousand accidents occurring annually to men, women, and children in the streets of London, may be obtained from the Honorary Secretary of the Association, Mr. Arthur James, 69, Gloucester Terrace, Hyde Park, W.

I am, etc.,

REGINALD HARRISON,
President, Metropolitan Street Ambulance Association.

London, W., June 24th.

PRACTICE IN SOUTH AFRICA.

SIR,—Earlier in the month I cabled to you to the following effect: "Regarding Darley-Hartley's letter [BRITISH MEDICAL JOURNAL, April 6th, p. 839], no opening for practitioners in Natal, letter following."

Dr. Darley-Hartley's letter appeared in the JOURNAL of April 6th last and in the opinion of the Natal Branch of the British Medical Association it conveys an erroneous impression regarding the openings for and prospects of newcomers to South Africa in general and to Natal in particular.

In these days of acute depression in every branch of industry in this subcontinent it is questionable whether "the prospects of making an immediate living are far better in South Africa than in England." Such a statement was, generally speaking, true up to quite recent times. The Boer war was, however, responsible for a large influx of practitioners who came out as civil surgeons with, in many instances, the ulterior intention of remaining as private practitioners. A number carried out this intention and a large proportion of such have lived to regret their venture. Thus the profession became overcrowded.

Regarding "assistants"—they can hardly be said to exist in Natal.

It is quite true that there is at certain periods a demand for "locums," but the majority of practitioners prefer to obtain their substitute direct from home rather than engage a man locally.

Dr. Darley-Hartley is correct when he says that there is now no room for "squatting" as the country is thoroughly well occupied. We hold, however, that he underestimates the difficulties which will beset the newcomer whether he be provided with capital or not, that he minimizes the financial outlay necessary and that he overstates the ease with which money may be saved and practices bought. His letter is written in an unwarrantably optimistic strain, and if acted upon will in most cases only lead to disappointment.

The demand in Natal for assistants, "locums," partners and successors is strictly limited. With respect to the Government district appointments—a newcomer must first take an outlying division where the private practice is all but *nil* and await his chance of promotion to a better locality later on.

In our opinion any man who is desirous of coming to South Africa at the present time should have the prospect of something certain to come to before he leaves England —I am, etc.,

D. CAMPBELL WATT, M.D.,
Honorary Secretary, Natal Branch, B.M.A.

Pietermaritzburg, Natal, May 27th.

THE HOSPITAL FUNDS AND THE EXCLUSION OF SCOTTISH DIPLOMATES FROM THE MAJORITY OF LONDON HOSPITALS.

SIR,—On behalf of the Council of the Association of Scottish Medical Diplomates, I beg to draw your attention to what we consider a grave injustice to those holding the diploma of the Scottish colleges. We refer to the clause in the laws of many medical charities of the metropolis making the possession of a London qualification an essential condition of election to a post on the honorary medical and surgical staffs. The effect is to make those posts a monopoly in the hands of certain London corporations. We submit that this practice inflicts a gratuitous injury upon the diplomates of the Scottish colleges, who have obtained their legal qualifications after stringent examination. We submit that the exclusion of which we complain is contrary to the elementary grounds of justice, and that its result, if not its intentions, is to swell the ranks and to increase the revenues of certain London corporations at the expense of rival colleges, of Scottish diplomates, and, as we think, of the community in general. This arbitrary practice is in our opinion a relic of class privilege absolutely out of touch with the trend of modern thoughts and ideas, and one calculated to close the door to many a fine career, and in the long run to inflict injury upon the public by narrowing the field of competition. If the London qualification be of such supreme excellence, why should their holders fear competition in the open market? Why resort to such a weapon as disqualification of all Scottish and Irish competitors?

This exclusion of Scottish diplomates from the majority of London and provincial hospital appointments has been going on for many years. Our present object, however, is to draw attention to its revival in an insidious form and its imposition by a side issue upon two institutions that previously welcomed Scottish diplomates to its honorary staffs. We wish to show how the Hospital Sunday and King Edward's Funds have helped, doubtless unwittingly, to bring about that injustice.

There were lately three London orthopaedic hospitals, the Royal, the City, and the National. The above-mentioned funds have for some years pressed the policy of amalgamation upon these hospitals by every means in their power. Of these three hospitals the Royal and the City admitted Scottish diplomates to their staffs, while the National excluded them. All three institutions are now amalgamated. It seems incredible that the funds should have permitted the new charter of the consolidated hospitals to exclude Scottish diplomates. Such, however, has been the case. In other words, the National Orthopaedic Hospital has been enabled to force its exclusiveness upon the other two partners in the new institution. One holder of a Scottish qualification has been allowed to join the new staff, apparently in defiance of the charter. Another member of the City Orthopaedic has been denied any staff appointment in the new institution on the ground of not possessing a higher English qualification.

That gentleman naturally protested against his exclusion. To investigate the facts of the case Sir Edmund Hay Currie was appointed arbitrator. His report stated that:

1. The charter could be amended.
2. That an exception should be made in favour of the gentleman concerned.
3. And that the conditions as to qualification would doubtless be retained in the new charter.

We submit, sir, that this charter in its present form is unjust, inasmuch as it excludes Scottish diplomates. We submit, further, that its amendment should be made to cover not only the specific hard case of a single Scottish diplomate, but to throw open all staff appointments to all registered medical practitioners.

His Majesty King Edward and the Prince of Wales are deeply interested in the two Funds which have been mainly concerned in bringing about this amalgamation scheme. We hereby appeal to them earnestly and solemnly to assist in removing an intolerable injustice from the shoulders of the Scottish diplomates. The King Edward's Fund has recently applied to Parliament for incorporation; but we venture to say the assent of the Commons is not likely to be unanimously secured if it be known that a body not amenable to public control sanctions, and in one instance has actually encouraged, the exclusion of Scottish diplomates from London hospital appointments.

We trust, sir, that your columns will be thrown open to the discussion of a subject that directly or indirectly, affects interests of thousands of Scottish diplomates in various parts of the United Kingdom —I am, etc.,

CLAUDE ST. AUBYN FARRER,
President.

London, W., May 31st.

THE ABUSE OF MEDICAL CHARITIES.

SIR,—Your short summary of the proceedings at the Conference of Charity Organization Societies at Norwich was most interesting. I rejoice to think that some people are beginning to get a glimpse of the real inwardness of the vexed questions for example, the battle of the clubs, the abuse of medical charities, the chronic insolvency of our public hospitals, consultants and general practitioners, the staffs of public hospitals and the general practitioners outside them. All these questions are mixed up in the same problem; and I believe the truth lies in your last paragraph—that "the provision of medical assistance for all classes should be the duty of the State, and not of individuals."

Under our individualistic régime it has become necessary to organize the medical profession as a trade union under the aegis of the British Medical Association. All the worries and unhappiness of a medical man's life are caused by the competitive commercialism which now dominates the medical profession. Under present conditions it cannot remain a "noble profession," because "we must all live." It is incompatible with "the struggle for existence" system. We get just that amount of consideration from the public which is due to "competitive tradesmen." Medicine as a science suffers. Humbug and quackery are rampant because they pay. As an organization in the interests of the public it is a failure, because the hospital doctors and the men outside are in two different camps. The men outside the hospitals have not a fair chance of making that advancement in their professional knowledge which in the public interest should be theirs. The middle-class folks have not as good a chance of obtaining the best hospital treatment as the working classes. The voluntary system of hospitals is as great a failure as was the voluntary system of elementary schools.

I maintain that the only cure for all our ills lies in the truth that "the provision of medical assistance for all classes should be the duty of the State, and not of individuals."—I am, etc.,

Aman, June 24th. FERDINAND REES, M.D.

SIR,—In respect of the letter which, acting upon the information I received, I wrote you on June 8th, headed "Another Form of Hospital Abuse," I have now to ask you to allow me to state that I find that the facts were not as alleged, and therefore that my inferences were incorrect. I have since seen the member of the staff of the hospital referred to, and after hearing his clear statement as to what really occurred, I have no hesitation in publicly withdrawing the letter which I wrote, and in asking him to accept my *amende honorable* for having written it. I am, etc.,

[illegible] W. FRANCIS ROE.

MORPHINOMANIA TREATED SUCCESSFULLY WITH ATROPINE AND STRYCHNINE

SIR,—Dr. John Q. Donald, in his letter in the BRITISH MEDICAL JOURNAL for June 8th, p. 1394, asks why and how my patient had stopped taking opium before coming to me. He did so from necessity, his means and the patience of his friends being exhausted. I have described his convalescent state of misery and desperation, and neither he nor I saw the slightest reason to hope that he would gradually get all right by merely keeping him from his drug. As a matter of fact, ever since he realized that he had acquired the habit he had from time to time been making efforts to free himself, the strongest inducements and easier circumstances all alike failing. I see no reason, therefore, to think that "the struggle was practically over and I only assisted the after effects."

I have already explained that the circumstances under which he was treated were about as unfavourable as they could well be. "Tonics, fresh air, massage, gentle exercise, nutritious diet, rest for mind and body," such as Dr. Donald relies on, were conspicuously the reverse. Instead, worry, constant effort of mind and body, scanty and ill-cooked food, unhygienic surroundings, insufficient clothing, and all the other ills of extreme poverty had to be contended with. In fact, my reason for hoping that the case would prove interesting, and perhaps instructive, was the entire absence of any other factor in the treatment to which his present condition could be ascribed. Even suggestion, which is helpful in some cases, was absent in this.

My experience of dipsomania does not lead me to agree with Dr. Donald that "the so-called craving is a mental condition over which drugs have no control." The restlessness, both mental and physical, which so often heralds the onset of an attack is only one of the many symptoms which patients may complain of. We know that alcohol has a toxic effect on the nervous system and that repeated and excessive doses give rise to definite pathological conditions; also that in every case of craving for alcohol there is to be found a history of alcoholism either before or after birth. I fail, therefore, to understand why the ailment should be considered purely mental.

As to the fuller history of the case Dr. Donald asks for, perhaps the following particulars will suffice: The patient was aged about 65 at the date of treatment and began smoking opium when 28. He had been much above the average in physique, intelligence, and education, but was now unable to make any prolonged muscular or mental effort, his memory lapsing when writing, totting up figures, etc. His family history was bad as regards alcoholism. Treatment was begun April 20th, 1906, with atrop. sulph. $\frac{1}{100}$ grain, strych. nit. $\frac{1}{30}$ grain, thrice daily; increased by April 30th to atrop. $\frac{1}{50}$ grain, strych. $\frac{1}{20}$ grain; reduced on May 3rd to atrop. $\frac{1}{60}$, the dryness of mouth, etc., lasting from one dose till next was due, and preventing his swallowing food. I began reducing atropine further on June 1st, and stopped it on June 20th; the full doses of strychnine were maintained till middle of July and then gradually reduced to nil. It will be noticed that I kept him on large doses for a considerably longer period than Dr. M'Bride recommended. I did so because one of my alcoholic cases broke down badly after a fortnight's treatment, but after a later course prolonged for eight weeks has kept perfectly well to date (just fifteen months).

During the past couple of months he has been undergoing a severe enough test of the stability of his condition in a troublesome affection which not only causes him considerable pain but also interferes greatly with his efforts to earn a livelihood, thereby causing him further mental worry and unrest.

In Hare's *Therapeutics* and other works nausea, vomiting, and diarrhoea are mentioned as usual symptoms, especially when the withdrawal is at all sudden.

Waterford, June 11th. MARY S. P. STRANGMAN.

THE CLIMATIC TREATMENT OF DISEASE.

SIR,—I would assure Dr. L. Williams that I have the patient in my mind when I recommend change of air. In the limited space of a short letter something has to be left to the imagination. And even in elementary observations on climate some things have to be taken as understood. In this case it is the patient.

At the same time, as we gain experience we recognize that classical types of disease are rarely met with except in textbook descriptions, and that types are mostly mixed and merge one into the other. Where lamb ends and sheep begins who can tell? Haemorrhage and cough are not unknown in mild and sedative climates. The main consideration in choice of climate is to raise the opsonic index of the patient, or, in older phraseology, to increase his powers of resistance by improving his general health. That moorland air will do this in the summer months in early cases is undoubted, and not only in tuberculous patients. Hear what Professor Huxley said:

> I took a three hours' walk over the Ilkley Moors this morning with nothing but grouse and pee-wits for company, and it was perfectly delicious. I am beginning to forget I have a liver. I feel better than I have for months. I eat, drink, and sleep well. I am sure the lovely air here would set you up. The country is lovely.

Moreover, there are three climates in Ilkley, all good, but all different, as Dr. Fletcher Little has pointed out. There is one in the town, in Wharfedale, which is mild, yet bracing; another higher up the hill, still more bracing; and a third on the table land of the moor, which is unsurpassed in England.

In the summer there is no way I know of by which many patients get well so quickly as by letting them lie on the heather, bathed in the sunlight and fanned by the ozonic breeze.

These are independent witnesses. I do not affect to be unbiassed. "Ad ogni uccello, suo nido è bello."—I am, etc.,

Ilkley, June 9th. AUGUSTUS H. BAMPTON.

EGGS IN THE DIET OF INFANTS.

SIR,—I have frequently used eggs as a diet for young infants as recommended by Dr. Midelton in the BRITISH MEDICAL JOURNAL of June 1st, 1907, when suffering from digestive troubles, but in rather different proportions, and I should like to add my testimony to Dr. Midelton's as to their value.

I would, however, suggest that Dr. Midelton's mixture is too weak in fats and carbohydrates for a young infant to commence with.

The percentage of proteids, fats, and carbohydrates as given in each feed—that is:

White of egg	1 drachm (about)
Cane sugar	5 grains
Raw meat juice ...	5 minims
Cod-liver oil emulsion ...	5 minims

Water added to make 1 oz.

are approximately as follows:

Proteid	1.3 per cent.
Carbohydrates	1 ,,
Fats	0.8 ,,

If 30 grains of sugar-of-milk take the place of 5 grains of cane sugar and 15 minims yolk of egg be given instead of 5 minims we get the following percentage:

Proteids	1.6 per cent.
Carbohydrates	6 ,,
Fat	2.4 ,,

And a food very nearly approximating the correct proportions of nutriment and a valuable substitute for milk.—I am, etc.,

T. CLIFFORD LAST, M.D.Brux., M.R.C.S.Eng.

New Milton, June 3rd.

HEALING SILENCE.

SIR,—Your leader on "Healing Silence" in your issue of June 22nd directs attention to the very favourable results obtained by Drs. Bardswell and Adams in the treatment of laryngeal tuberculosis by enforcing absolute silence. The fullest credit for these good results and for the employment of this method is rightly accorded to those whose names are mentioned in your article, but I venture to point out that we owe it to Dr. StClair Thomson more than any one else that the value of this enforced silence has become recognized. In the Laryngological Section at the Cheltenham meeting of the Association in 1901 I and others emphasized the importance of "silence," but it was Dr. StClair Thomson who first proved that silence, in association with suitable surroundings, alone suffices to cure many cases of laryngeal tuberculosis.—I am, etc.,

Bristol, June 25th. P. WATSON WILLIAMS, M.D.

THE REFERENDUM WITH REGARD TO THE PROPOSED ROYAL CHARTER.

SIR,—Members will see by consulting the SUPPLEMENT for June 22nd that the Central Council at a small meeting and by small majorities has determined on a Referendum with regard to several clauses in the Royal Charter.

The expense of this use of the power given in the Articles is at any time very great. Every Division throughout the empire is asked to hold a meeting to consider the questions referred, and has to report the numbers of votes given thereat for and against. The cost, if thoroughly carried out, could not be under £200. It will probably directly and indirectly come to £100 in this case. Will the Central Council pay it, or are the Divisions out of their small grants to meet the expense?

The necessity for the decision in view of the present state of the finances of the Association must have been overwhelming.

The Charter itself and the Ordinances, if at a future date any alteration should be contemplated, would have to be submitted to the Privy Council for approval. It is, therefore, most desirable to get a definite opinion now in favour of these, so as to save future expense and delay.

The only Referendum the Central Council has determined on with regard to these two sections of the Charter appears to refer to the Ordinance giving the power of Referendum.

The By-laws, on the other hand, do not require to be submitted to the Privy Council after the Charter has been granted, and can come up for revision annually, without practically any expense to the Association. Then for what purpose is the Association about to spend this £100? for, having determined on a Referendum, it would seem that the Central Council has brought itself within the Articles of Association and Standing Order 51, and must proceed within four months, in spite of Dr. McKenzie Johnston's resolution suggesting the contrary. The primary reasons for this Referendum seem to be contained in contemplated changes in the By-laws. How, then, did the Representative Meeting vote on these By-laws which the Central Council is referring for further consideration?

Two By-laws were "carried"—that is, by cries of of "Agreed"; two were carried *nem. con.*; two were carried by 68 constituencies voting for to 5 voting against; two were carried with only 5 dissentient constituencies; two were carried with only one dissentient constituency.

And yet a small majority in a small meeting of the Central Council has decided that these decisions do not properly represent the wishes of the Association. What are the feelings of the "Representatives" when they read that?

It is to be hoped that the memorandum accompanying the reference will give weighty reasons for the conclusion thus arrived at, which on the face of it seems extraordinary; and many would be glad if those members of the Council who will decline to sign this memorandum will feel it due to themselves and the Association to circulate to the Divisions their opinion on the various points to be considered. Thus the members will have both views before them when they discuss the *pros* and *cons* at the several meetings that have to be called.

Very little change will probably take place in the ratio of votes as given at a Representative Meeting and on a Referendum. Only the same members of a Division will attend a Referendum meeting as attended a meeting held to instruct their Representative how to vote at the May meeting.

It should not be concluded by the Colonials or others from the way the members of the Central Council returned from the Metropolitan Branch voted at the last Council meeting on this subject that they represent the opinion of the 2,700 odd members in London. It is an additional reason for congratulating that Branch Council that they have now decided to ask for annual reports from these members, as in this way only can we hope to arrive at true representation on the Central Council. Under the present constitution the members of the Central Council, with few exceptions, never consult nor receive instructions from their electors; they never report to them, nor see them; and they therefore represent only themselves when speaking on the policy of the Association.

This trial of the Referendum will be helpful to the Representatives in making up their minds as to how to vote at a later date when a suggested amendment to Ordinance 17 is placed before them, whereby a full Council meeting, with either a two-thirds majority of those present, or on a card vote, shall be assured before a Referendum becomes possible; especially when the decision of the Representative Body has been so clearly given. Under the Charter, as drafted at present, a majority of one in a meeting of fifteen of the Central Council can involve the Association in what might prove to be a needless expenditure of anything up to £200.

The criticism of the details of the Referendum can well be deferred until the promised memorandum has been circulated.—I am, etc.,

Southfields, S.W., June 22nd. E. ROWLAND FOTHERGILL.

EXAMINATION OF SEAMEN UNDER THE NEW COMPENSATION ACT.

SIR,—A movement is on foot to extract a sum of money from the medical officer before he is appointed under the Shipping Department. The amount is to go to swell the Sailors' Reserve Fund. The demand varies from £25 upwards according to the importance of the port or ports. The cheque must be paid, and a contract signed for seven years—no guarantee whatever as to the amount of remuneration, which is only to be the bare legal fees on all cases examined, and court fees. This is only an attempt at sweating the medical profession. Many, I fear, will be taken in.—I am, etc.,

June 26th. ONE WHO REFUSED A CHEQUE FOR £50.

THE COUNCIL ELECTION AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SIR,—I have had several inquiries from Fellows of the College as to which of the candidates at this election are in favour of some reform in the direction of giving the Members reasonable representation. I have not been in communication with any of these gentlemen, and do not know their views, with the exception of one—Mr. Bruce Clarke—who has frequently spoken and written in favour of this reform. I have therefore advised my correspondents to vote for him, and would urge all other liberal-minded Fellows to do the same.—I am, etc.,

W. G. DICKINSON,
Hon. Sec. Society of Members R.C.S.Eng.

June 24th.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

INDIAN ARMY REORGANIZATION SCHEME.

FROM Simla, under date May 31st, it is announced that the Secretary of State, having sanctioned the introduction of temporary and provisional arrangements in the Administrative Service in consequence of the abolition of commands, temporary changes are made with effect from June 1st, 1907. Permanent arrangements for the conduct of duties and for remuneration of officers, including those immediately affected by the abolition of commands, will be notified hereafter, when the details have received the approval of the Secretary of State. The section relating to the Medical Department is as follows:

a Appointments of the Principal Medical Officer, the Personal Assistant of the Principal Medical Officer, Sanitary Officer, and Staff Officer, Army Bearer Corps, in each command and of the Sanitary Officer and Staff Officer, Army Bearer Corps, in the Secunderabad Division and Burmah, will be abolished.

b The Principal Medical Officers of three of the divisions will be Surgeon Generals, their pay being fixed at 2,260 rupees per mensem, consolidated.

c Two temporary administrative posts will be created, each to be held by a Colonel—namely, one for Allahabad and Bombad Brigades, and the second for the Secunderabad Brigade (Infantry and Cavalry).

d A Colonel will be appointed deputy to the Principal Medical Officer of His Majesty's Forces in India, his pay being fixed at Rs. 1,800 a month, consolidated.

e A Sanitary Officer will be appointed in each office of the divisions and Burmah, staff pay being fixed at Rs. 350 per mensem.

f A Staff Officer for the Medical Mobilization Stores will be appointed in each of the nine divisions (excluding Burmah), his staff pay being fixed at Rs. 350 per mensem.

g Owing to the above changes the establishments of medical services in India will be reduced by the number of officers corresponding with the number of extra appointments abolished.

h Existing Lady Superintendents will, under the orders of the Principal Medical Officer of His Majesty's Forces in India, be distributed to the charge of four circles as follows: 1st circle, comprising Peshawar, Rawal Pindi, and Lahore Divisions; 2nd circle, comprising Meerut and Lucknow Divisions; 3rd circle, comprising Poona, Mhow and Poona Divisions; 4th circle, comprising Secunderabad Division and Burmah.

Orders regarding the disposal of clerks and establishments of [illegible] and headquarters will be issued by the Principal Medical Officer of His Majesty's Forces in India.

MANCHESTER COMPANIES, R.A.M.C. (VOLUNTEERS).

THE annual inspection of the Manchester Companies of the Royal Army Medical Corps (Volunteers) took place on May 26, when the corps was undergoing its annual Whitsuntide training on Salisbury Plain. The inspecting officer was Colonel Allan May, who has now held the inspection for three years in succession. The evolutions to which he submitted the corps included the arrangement of a camp, the pitching of tents, and preparations for the reception of wounded; a number of patients were also dressed before him. A surprise visit was also paid to the camp by Field Marshal Lord Roberts on Whit Monday. The officers present during the training included Major J. Bently Mann, upon whom, in the absence of Colonel Coates and Major Fairclough, the command devolved, Captains W. B. Pritchard, F. D. Woodley, W. R. Matthews, H. G. Parker, W. R. N. Smithard, G. Ashton, C. Roberts, W. E. Dickenson, Lieutenants S. F. Thompson, G. W. Fitzgerald, G. R. Wattleworth, C. C. Stoddard, S. Pritchard, H. Thompson; and the Rev. T. G. Kent, M.A., the Acting Chaplain.

THE NATIVE REBELLION IN NATAL.

The London Gazette of June 25th contains a despatch from the Government of Natal relating to the recent Zulu outbreak in Natal. After describing the measures taken for the suppression of the rising the Governor adds a long list of officers who, he considers, deserve special mention for their services. Of the medical officers who accompanied the force he says:

Lieutenant-Colonel J. Bishop, D.S.O., V.D., Principal Medical Officer, Natal Militia, was the head of the Medical Department. The organization of this was carefully planned and successfully carried out, resulting in the very unusual low death-rate of four men from sickness, these only dying from disease [illegible] of over a thousand men in the field. Major R. A. Bourtine, Natal Medical Corps, Senior Medical Officer during the operations in Zululand and later in the Mapumulo-Stanger District, did excellent service. . . . . Captain M. G. Pearson, Natal Medical Corps, did excellent work in the field throughout the campaign, and rendered good service in assisting in the organization of medical arrangements, especially in sanitary matters."

Medico-Legal.

THE PECULIAR PEOPLE.

AT the Chelmsford Assizes on June 18th the father of a child which had died from diphtheria was charged first with manslaughter and secondly with neglect under the Act of 1904 for the prevention of cruelty to children. The prisoner was one of the sect known as the Peculiar People, and had therefore refused to summon medical aid. Evidence was given to the effect that had such assistance been obtained the life of the child would probably have been saved, or suffering relieved, by antitoxin or local or other treatment. The jury having found the prisoner guilty of neglect under the Act mentioned, and having added a recommendation to mercy, Mr. Justice Phillimore said that at the previous assizes a sentence of one month's imprisonment had been passed for a similar offence. As this had not acted as a sufficient deterrent, it was the duty of judges to increase from time to time the sentences passed in such cases, until persons such as the prisoner learned to comply with the law. The sentence, therefore, would be one of two months' imprisonment in the second division.

MEDICAL FEES AT INQUESTS.

G. Y. P., who is non-resident medical officer of a workhouse where there is no house surgeon or resident medical officer, gave evidence at an inquest, and was refused a fee by the coroner. He asks whether he is entitled to a fee.

*** Our correspondent is, we are advised, entitled to receive the usual fees from the coroner if he gave evidence at an inquest.

S. F.—If our correspondent's partner has no connexion with the hospital, but saw the deceased outside at the time of the accident and gave evidence at the inquest, he is entitled to receive the usual fee from the coroner.

VALUATION OF PRACTICE.

F.R.C.S. asks whether, on the sale of a medical practice at two years' purchase, it is usual to make the calculation on the gross receipts of the practice, or on the nett, deducting expenses.

*** It is customary only to take the gross receipts into consideration when estimating the value of a practice.

ILLNESS OF ASSISTANT.

ROSACEAE writes that an outdoor assistant developed pneumonia, and later, pleurisy and empyema while in the service of his principal. He has been disabled several months, and his principal has given him no wages, and declines to assist him in any way. No notice has been given by the principal up to the present time terminating the original agreement. Is the principal acting legally or equitably?

*** A principal is legally bound to pay an assistant his full salary up to the termination of his engagement. Such an engagement may be terminated summarily only by misconduct on the part of the assistant. In all other cases, including sickness, a proper notice must be given, the length of which is usually settled in the agreement.

FEES OF MEDICAL WITNESSES.

LEX writes that he was asked by the defendant's solicitor to see a woman who was bringing an action for assault as to the nature of her alleged injuries, but that, on his calling on her, she refused to allow him to examine her. He was present in court to give evidence from 1.20 to 3.30; but, as the plaintiff admitted that she received no injury, or practically none, his evidence was not required. He asks what fee he is entitled to?

*** One guinea for visiting the plaintiff, and one guinea for attending court to give evidence. It would have been better, perhaps, if "Lex" had himself fixed the fee with the solicitor when first asked to attend to the case.

The report of the Nightingale Fund for 1906 records the opening during the year of the new nurses' home at St. Thomas's Hospital, and shows that between the St. Thomas's school and that at St. Marylebone Infirmary some 94 new probationers were accepted for training. It also contains an expression of gratitude to members of the medical and surgical staff for lectures delivered and other services rendered. The year ended with a cash balance of £1 6s.

Under the will of the late Mr. John Leckie, of Torquay, who died on April 26th, the General Hospital and the Eye Hospital, Birmingham, each receive a sum of £100.

OBITUARY.

EDWARD HALLARAN BENNETT, M.D., F.R.C.S.I.,

LATE PROFESSOR OF SURGERY, TRINITY COLLEGE, DUBLIN.

EDWARD HALLARAN BENNETT, until lately Professor of Surgery in Trinity College, Dublin, died at his residence in that city on Friday, June 21st. The announcement will be received with much regret not only by all his numerous pupils but by the profession at large, for he had established his claim to be regarded as a distinguished authority and leader in surgery, to which he had devoted his life. His illness began last year, when he showed symptoms of anaemia, which could never be successfully combated, and he passed away quietly on the morning of June 21st.

Edward Bennett was born in Cork on April 9th, 1837, the fifth son of Robert Bennett, who held the high position of Recorder of Cork. His mother was the daughter of William Hallaran, a distinguished physician in that city; and Bennett was also connected with that J. R. Bennett who, educated at the College of Surgeons and Richmond Hospital, proceeded to Paris in 1822 and established his famous private classes in anatomy at La Pitié Hospital. As a boy Bennett was first at Hamblin's School in Cork; then he proceeded to Dublin, where he went to that great nursery of famous men, Dr. Flynn's Academy in Harcourt Street. He entered Trinity College and showed special interest in the study of natural science. Then, turning to medicine, he pursued his studies in the Trinity School, in the Meath Hospital, Sir P. Dun's, and the Richmond. In this last, and at the school, he became the intimate friend of Robert W. Smith, who was visiting surgeon at the Richmond, as well as Professor of Surgery at Trinity, and who was then engaged in those studies of injuries to bones, with which his name will always be associated. This friendship influenced Bennett's after-career, for he devoted himself specially to the same line of investigation, and in after-years he was justly recognized as Smith's legitimate successor as an authority in bone lesions of all kinds. He took the M.B. in 1859, and continued in connexion with the school as demonstrator of anatomy. In 1864 he succeeded the late John Kellock Barton as University Anatomist, and thenceforward he became a very prominent influence in the School of Trinity, devoting himself to its development in days when a non-professional Board showed only too often that it failed to realize the growing importance of medical science and the need for its liberal encouragement.

Robert Smith died in 1873. As already indicated, he had in his quiet, forceful way excited Bennett's enthusiasm, and carried it with him into those investigations which had fascinated himself, and it seemed as if he had specially selected his pupil to take up his work. At all events, this Bennett did, and he was as keen as his master to see all strange fractures or dislocations, to read their signs and note them. As University Anatomist he had excellent opportunities for seeing such things *post mortem*, and upon his own researches and the specimens which Smith had already added to the Trinity and Richmond museums he wrote many of the papers which have added so much to our knowledge in this branch of surgery. One of his most important papers was upon Colles's fracture of the radius, read at the Cork meeting of the British Medical Association in 1879. He also described a fracture of the metacarpal bone of the thumb, and showed many examples.

He was at this time Secretary of the Pathological Society, of which he was the moving spirit, and he was one of the early workers in developing this study in the Dublin Medical School. His labours were recognized by his brethren, who in 1880 made him President of the Society.

He became Fellow of the Royal College of Surgeons in 1863. He was soon elected to the Council, and in 1884 he was made President. Here he did admirable work with the thoroughness which always characterized him.

He was one of the promoters of the union of medical societies in Dublin which resulted in the formation of the Royal Academy of Medicine, under the presidency of his friend, Sir John Banks, K.C.B. Later on, in 1897, he was himself elected to this high honour, and he held the position for the usual period of three years. When the Earl of Dudley became Viceroy, Bennett was invited to join his staff as Surgeon. His University chose him to represent it on the General Medical Council as successor to the Rev. Samuel Haughton, M.D., and it was only last year, when his fatal illness was already casting its shadow, that he asked to be relieved of the onerous duties of that position.



Photograph by] EDWARD HALLARAN BENNETT, M.D., F.R.C.S.I. [*Elliott & Fry.*

Edward Bennett's name will live in the history of Trinity College and of the Dublin School. His labour in general surgery was somewhat hidden by that in the department to which he seemed to devote his best energies, but he was, nevertheless, a worker at all branches, bringing to bear upon the consideration of his cases a singularly well-equipped mind and a judgement which was well balanced and wise. He had a facility for awakening the interest of students, and of attaching them to him as loyal and believing followers. And he was a worthy leader for young men. If he sometimes appeared brusque in manner or in tone, his students knew what he was at heart generous, encouraging, a just and tolerant judge, a man devoted to their interests, and always helpful in those things that led to their success.

They regarded him with true affection, and the playful name by which he was known in their own circles was a proof of how he had awakened their kindliest feelings towards him.

To his fellow practitioners he was always a man who might stand as a model of honour and uprightness. No one ever heard it said that Bennett did a crooked thing. He was blunt, sometimes very emphatically so; but he always said what he believed to be the truth, although that might not be pleasant to hear. Irish surgery has lost one of its ablest professors, and in the profession, not only in Ireland but the world over, there will be deep regret that the band of true workers in science is to-day smaller by the calamity that has fallen upon it.

Dr. Bennett was married to Miss Frances Conolly Norman, of Fahan, county Donegal, who survives him, as does one daughter.

Dr. J. Magee Finny, President, Royal Academy of Medicine in Ireland, has sent us the following: In writing a few words of loving remembrance and appreciation of the late Dr. Edward Hallaran Bennett, whose removal from us we all deplore, and whose loss to the profession is incalculable, it is not my intention to dilate upon his distinguished career, his skill, and world-wide reputation as a surgeon others more competent than I have doubtless done so—but I would simply place before my fellow-members of the British Medical Association my impressions of his life and personality, and portray some little features which may serve to recall his memory to many of his former pupils and present friends, scattered throughout the world.

It was my good fortune to have known him and to have been more or less closely associated with him for over forty years—first, when he demonstrated anatomy to me in the School of Physic, Trinity College, Dublin; then when he co opted me to teach medicine while he taught anatomy and surgery in a tutorial class, where we worked together for some years until he became University Anatomist; and for the last twenty five years I was intimate with him as co Professor in the School of Physic and colleague in Sir Patrick Dun's Hospital. During all those years we have been close friends, and for the last year I have been with him practically every day during his long and trying illness.

Although Dr. Bennett was a reticent man, he was ever ready to enter sympathetically and heartily into any matter upon which he was consulted; and, if he gave advice, it was sound and seasoned with the wisdom of matured experience, and marked with a sense of justice. He was a man of strong personality, and in his criticism of other men's work he was very outspoken, but never captious or unfair. I have never heard him say an unkind word of any one. He was thoroughly straightforward in all his ways, and he detested anything underhand or crooked. The result was, as might be expected, that no man had fewer enemies or more friends.

At the meetings of the Royal Academy of Medicine, in which he was an indefatigable worker and contributor and of which he was President for three years, he was always courteous to the junior members of the profession and markedly lenient to their crude and not infrequently inaccurate comments and judgements.

He loved teaching the students in the hospital wards, were they the most junior or the most advanced, and nothing did he enjoy more than discussing with them some difficult case or propounding some points of diagnostic interest. His liveliest interest lay in the diagnosis and the pathology of rare fractures and dislocations. It was almost a revelation to see him proceed to the examination of some injury, and the impression it made on the onlooker and the patient alike was never to be forgotten. A short but pertinent inquiry as to the way in which the injury occurred, an *apparently* superficial inspection of the part affected, a few passes of his hand over it, and the diagnosis was forthwith announced unhesitatingly but modestly.

His manner towards the poor patients in hospital was gentle to a degree, while his fondness for children was proverbial, so that he was a great favourite with them, and his name and praises were being constantly sung by the little ones of the children's ward. He was a man of retiring habits, and his figure was rarely seen on public platforms or at great social gatherings; but he was possessed of a high sense of duty, being methodical and punctual in his habits, and he was never absent, without some real cause, from his place at any of the weekly meetings of the college or hospital committees.

These latter qualities and habits, combined with the true instincts of a gentleman, explained the remarkable fact that, whenever Dr. Bennett was elected a member of any board or society or council, he was invariably re-elected year after year until his term of office expired.

Much more might be written as side lights of his character and personality, but I will content myself with one more fact which will show how popular he was with his class of students. When a year ago Dr. Bennett retired from the onerous duties of the Professorship in Surgery, no fewer than two hundred of his past pupils—men who had gone out into the world with the degrees of the University of Dublin—heartily joined to present him with a testimonial expressive of their respect and affection. At his own request it went to found a bronze medal and a money prize to encourage the students in advanced surgery.

ese prizes, called "The Bennett Medal" and "The nnett Money Prize," will be awarded next year to the o best answerers at the examination for the Travelling ze; alas! that he had not lived to see his good inten- ns fulfilled—but they remain to remind the rising nerations of brilliant men of one who had worked as y worked, and who by that work, and by a consistent l honourable life, had reached the highest position in profession of surgery, and upon whose brow was ced the laurel crown of victory—the esteem and regard all who knew him.

An old friend of Professor Bennett writes: As University atomist in the Trinity College Medical School, a post ich he held for nine years, he showed himself a roughly competent anatomist, and his demonstrations, quently accompanied by good-humoured chaff, were ays well attended; he made his subject interesting by nting out how essential a practical knowledge of tomy was as a training for surgery, and encouraged his dents to work for themselves.

n 1866 Sir Patrick Dun's Hospital was opened for sur- al cases, and Bennett was appointed one of the first geons, his colleagues being Butcher, R. W. Smith, and cDowell, and he continued a member of the acting staff forty years. He was in active hospital work at the wn of Lister's great discoveries, and at once recognizing ir vast importance, threw himself with characteristic rgy into the subject of wound infection, and became bably the principal pioneer of antiseptic surgery in land. On the death of R. W. Smith, in 1873, Bennett s appointed Professor of Surgery in Trinity College, and rator of the important pathological museum that Smith l accumulated. He constantly added to this collection, re especially specimens illustrating fractures and dis- es of bone; he made the care of this museum his bby, and he has left it probably the most complete of kind in the world. His name is more particularly ociated with two fractures, oblique fracture of the base he first metacarpal bone and fracture of the neck of the ula following strain of the ankle-joint. The discovery *x* rays threw a flood of light upon his favourite subject, l he rapidly became an adept at interpreting a agram of a complicated case of fracture. Failing alth necessitated his withdrawal from the more ive duties of his Professorship three years ago, and E. H. Taylor was appointed to lecture for him, l last year's increasing weakness compelled him to ign, when Dr. Taylor was appointed Professor of gery and Curator of the Pathological Museum. His irement from active practice was felt by Professor nnett's numerous old pupils to be a fitting occasion to rk their sense of affection for and gratitude to their old cher, and it was thought the most appropriate form for testimonial to take was the foundation of a money gical prize and commemorative medal in Trinity llege and the fixing of bronze portrait medallions in Patrick Dun's Hospital, and in the Surgical Lecture eatre of Trinity College. The medal and bronzes were signed by Mr. Oliver Sheppard, A.R.A. On the obverse a most excellent likeness of Bennett's well-known tures, and on the reverse a model of "Bennett's cture of the thumb." His old pupils will be glad to ow that, although he was too ill to permit of a public sentation of the first proof of the medal in gold, he was atly pleased to receive it, and expressed most critical proval of the modelling of the fracture. Bennett eived professional and public recognition of his inence in many ways. He was Consulting Surgeon to evens's, the National Eye and Ear and Dental Hospitals, Past-President of the Royal College of Surgeons in land, of the Royal Academy of Medicine in Ireland, of Irish Branch of the British Medical Association, and of Pathological Society, Honorary Fellow Royal College Surgeons, England, and Honorary Surgeon to the Lord utenant during Lord Dudley's Viceroyalty.

A former student sends the following tribute: Though loss cannot fail to affect at large the members of the ofession on which he reflected so much credit, in Dublin rticularly, where medicine has its own tradition and is st respected, the death of Professor Bennett will be st regretted. He was the colleague of men who seem have directly inherited and brought to their profession in a later day the manners of eighteenth-century Dublin —a culture that went hand in hand with a kind and robust humanity. If I thus associate Professor Bennett with a school older than the one with which he was contemporary, it is because he maintained, whilst availing himself of modern scientific resources, the attitude towards life of a generation who were never forgetful of the high import and dignity of their profession, and who never allowed science to defeat its object or leave them too well equipped but too little capable. He was dignified without pedantry, and cultured without arrogance. He found in his profession an honourable philosophy. The greater knowledge his position afforded him, and his own reflection, made him, as it has made all men with a like and equal gaiety, cheerful, social, and indulgent. He was a kind and amiable gentleman. When he lectured as University professor he came to treat of surgery having at his command the resources of literature and a great and nice knowledge of the classics. His lectures were learned and academical, far removed from mere recitals of facts that under the name of science become impersonal and inorganic because they lack the teacher who can assimilate and subordinate them to their proper ends in humanity. One could see with what reverence he esteemed his calling, if only from the respect and enthusiasm with which he always spoke of the work of his colleagues or his predecessors. He would dwell on names well known in medicine with admiration, and revive them with his own personality until we on the benches shared his enthusiasm. He had a wider experience than the generality of men, and a wider humanity. He knew life well, and the more he learned of it the more he adorned it. His insight did not sour him, for his was a great sanity. He was kind and forbearing—intolerant only of pretence. His character taught us as well as his precept. I would borrow a thought of Metchnikoff in speaking of this great surgeon who died full of days and read in "days" achievements: for of these his life was full. Now he is gone, but not his memory, nor that noble tradition of medicine for which he stood.

A colleague and former pupil writes: Edward Hallaran Bennett was a man possessed of an attractive personality. With students of medicine he was immensely popular, and generations of undergraduates who attended his lectures and surgical demonstrations were wont to allude to him as "the Boss." They listened to his stories with keen delight, and wondered at his intimate knowledge of surgical lore and his familiarity with the works of the great surgical masters of the past. As a hospital teacher Bennett was eagerly listened to by his students. His diagnoses were often brilliant, and before the *x*-ray era his wonderful diagnostic skill in obscure cases of fractures and dislocations was wisely recognized. The character of the man was most clearly revealed in his hospital work, and many of those who in bygone years accompanied him on his rounds through the wards will remember the considerate regard which he evinced for his patients. For all he had a pleasant word, a genial smile, and a full-hearted sympathy. By his juvenile patients especially he was beloved, and he loved them; indeed, it was remarkable how quickly he succeeded in gaining their confidence and setting their fears at rest.

As a surgeon Professor Bennett may justly be said to have been a representative of the older school, although he was quick to realize the value of modern methods and carry them into execution. It is generally admitted that he was the first to introduce Listerism into Dublin. As a young man he came into close association with Professor Robert William Smith, and it was through the influence of this great surgeon that Bennett acquired such a deep interest in all matters appertaining to injuries and diseases of bones and joints. He made this branch of surgery his hobby, and he has left behind him in the surgical museum of Trinity College a priceless collection of specimens. Whenever he made a communication on any subject bearing on osseous pathology he showed himself a master of his subject, and made it replete with interest for his hearers. He made many and valuable contributions to surgical literature, the principal of which dealt with the subject of fractures. He was the first to recognize a form of fracture implicating the base of the meta-

carpal bone of the thumb, and in modern works on surgery it is alluded to as Bennett's fracture.

When Professor Bennett ceased active work in the University, it was decided to perpetuate his memory by means of a suitable memorial. A large sum of money was subscribed by his former pupils. A portion of this was set aside to found a money prize for the candidate obtaining the surgical travelling prize. With the remainder, two medallions representing Professor Bennett's profile were made. One has been placed in the surgical theatre of the medical school in which he lectured, the other forms a conspicuous object in the hall of Sir Patrick Dun's Hospital. In addition to these medallions, dies were struck for a Bennett medal. The medal is of bronze. On one side Professor Bennett's profile is represented, and the following inscription: "In Honorem Eduardi Hallaran Bennett, Prof. Chir., 1906." On the other side is represented the metacarpal bone of the thumb, showing the fracture associated with his name, and the inscription, "Viri in fractis ossibus collocandis sollertissimi."

As a friend Bennett endeared himself to all who knew him. Beneath a somewhat blunt exterior there lay a kindly disposition and a depth of geniality which those who knew him well could fully appreciate. He was a loyal colleague and one with whom it was not merely a pleasure but also an honour to be associated. He will long be remembered as a warm friend, a delightful companion, and an ornament to the surgical profession.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

THE following candidates have been approved at the examination indicated:

SECOND M.B. (*Human Anatomy and Physiology*).—W. A. Anderson, B.A., E. W. Atkinson, B.A., H. J. Baldwin, M.A., A. W. Bourne, J. S. Bury, B.A., F. G. Chandler, N. L. Clarke, K. J. A. Davis, B.A., M. E. Dellcroft, R. Franklin, B.A., L. St. G. S. Goodwin, A. H. Gosse, B.A., H. G. Greaves, B.A., S. J. Higgins, B.A., J. M. Jarvis, B.A., J. S. Johnson, B.A., A. C. Johnston, G. G. Johnstone, T. H. Just, K. T. Khong, G. Moore, T. E. Osmond, B.A., W. M. Penny, B.A., B. A. Plagne, G. H. Pooley, J. B. Pulling, A. H. Richardson, J. B. Ronaldson, B.A., S. H. Roupuette, A. C. Roxburgh, H. B. G. Russell, F. D. Sauer, L. W. K. Seargill, M.A., F. H. Smith, B.A., A. W. Scott, I. Van Schalkwijk, B.A., H. F. Wilson, M. M. Woods.

UNIVERSITY OF LEEDS.

MEETING OF THE COURT.

At a recent meeting of the Court of the University of Leeds the Pro-Chancellor (Mr. A. G. Lupton) took occasion to say that the authorities were still appealing for £15,000, which was necessary to complete the endowment fund of £100,000, or the amount mentioned as desired to be raised at the time the University received its charter. All who are interested in the medical school are keenly alive to the necessity of completing the buildings for the accommodation of the Pathological Department, and when the present buildings were opened in 1894 it was felt that adequate provision had not been made for the double purpose of research and instruction. No one could however, suggest that the support the University had had been meagre. On the site and buildings of the Medical School the sum of £50,000 has been expended, and when the new mining and electrical departments are completed as they will be very shortly, a sum of upwards of £30,000 will have been expended on the buildings of the other parts of the University. Much remains, however, yet to be done, and it is hoped that Yorkshire will not be backward in supporting the University of Leeds, which draws its students from all parts of the county.

APPOINTMENTS.

It will be remembered that in consequence of the resignation of the position of honorary surgeon by Mr. W. H. Brown and the vacancy caused by the consequent promotions, Mr. J. F. Dobson was appointed Assistant Surgeon. At a recent meeting of the Council of the University Mr. Dobson was elected a member of the Faculty of Medicine and one of the Lecturers on Clinical Surgery. Mr. J. A. Coupland, who was recently appointed Surgical Registrar to the General Infirmary, was elected Honorary Demonstrator of Surgery. Mr. J. Lewin Payne, Assistant Dental Surgeon and Lecturer on Dental Medicine at Guy's Hospital, was appointed an External Examiner in Dental Surgery and Mr. Rupon and Mr. Lowson were appointed Internal Examiners in Dental Mechanics and Dental Metallurgy respectively.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

ADDITIONAL EXAMINERS.

MESSRS. J. DUNLOP AND L. G. GUINN have been appointed additional Examiners in Surgery.

CARMICHAEL PRIZE ESSAY.

The next award for the Carmichael Prize Essay will be made in November, 1908. The subjects with which the essay must deal are the state of the medical profession in its different departments of physic, surgery, and pharmacy, in Great Britain and Ireland; the state of the hospitals and schools of medicine, surgery, and pharmacy; and the state and mode of examination or of testing the qualifications of candidates of the different licensing colleges or corporations of medicine, surgery, and pharmacy. Authors are invited to make suggestions respecting the improvement of the profession, including the preliminary and moral education of medical and surgical students, as well as the mode of conducting their professional studies. The essays are to be lodged at the College on or before July 1st, 1908. Full particulars can be obtained from Mr. John Barton, F.R.C.S., Secretary of the Council, at the College.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved in the subjects indicated:

SURGERY.—†M. L. Ford, *S. F. Fouracre, †O. C. H. L. Moll.
FORENSIC MEDICINE.—P. D. Pickles, G. L. Walker.
MIDWIFERY.—J. M. Murray, A. Shepperd.

The diploma of the Society has been granted to Messrs. S. F. Fouracre, A. Shepperd, and G. L. Walker.

† Section I. * Section II.

TRINITY COLLEGE, DUBLIN.

THE following candidates have been approved at the examination indicated:

FINAL M.B. (PART II. *Medicine*).—*W. Pearson, R. G. S. Gregg, R. E. Wright, W. A. R. Spong, H. de C. Dillon, J. G. M. Molony, W. E. M. Armstrong, W. J. Dunn, T. P. S. Eves, H. P. Hart, F. Stephenson, F. O'B. Kennedy, J. D. K. Roche, O. St. J. Gogarty, J. C. C. Hogan, C. H. O'Rorke, E. T. Jameson, J. C. A. Ridgway, L. H. Sheehan, J. R. Yourell, A. L. Robinson, W. D. Mitchell.

* Passed on high marks.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES

REMUNERATION FOR ATTENDANCE IN ANOTHER DISTRICT.

M. O. (Scotland) writes: I am a parochial medical officer. A neighbouring parish has at present no medical officer, and the inspector of poor for that parish asked me to attend on a pauper who, though resident in his parish, was a dependent of a parish further south. I understood that for this I should receive payment both for visiting the pauper and for providing medicine, etc. I have been refused payment for the visits. Would you let me know if I could sue for it?

*** There was no statutory duty devolving upon our correspondent to attend the patient in question. He has therefore a clear title to sue the inspector of poor who requested him to attend the patient, both for medical attendance and the supply of medicines. The inspector of poor will recover the cost from the parish to which the patient is chargeable.

PUBLIC HEALTH IN ATHENS.

JUDGING from the recently published British consular report on the Piraeus and district it seems that the health condition both in Athens and its port are by no means satisfactory. The population of the former city is now estimated at about 170,000 and that of the Piraeus, which has of late enormously increased owing to its having become the distributing centre for a large part of Greece, is at least 70,000. In both, bad drainage and lack of an efficient water supply doubtless play some part in the unsatisfactory statistics. Last year an epidemic of measles attacked both those cities, and also Laurium, but the mortality is not stated. Small-pox was also very prevalent and was the cause of a large number of deaths, 286 persons dying from the disease in the Piraeus and 203 in Athens, while there were 166 fatal cases of typhoid in the two cities.

THE fourth Italian Congress of Orthopaedic Surgery will be held at Bologna on October 15th, under the presidency of Professor Alessandro Codivilla, Director of the Rizzoli Orthopaedic Institute in that city. The principal subject on the programme is the treatment of tuberculous spondylitis. The discussion will be introduced by Professor Riccardo Galeazzi, of Milan, and Raffaele Bastianelli, of Rome.

THE late Sir Charles Bowman Logan, of Edinburgh, who died on March 2nd, left £1,000 to the Edinburgh Royal Infirmary and £500 to the Edinburgh Hospital for Sick Children.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 6, Catherine Street, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 6, Catherine Street, Strand, London, W.C.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 6, Catherine Street, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—

EDITOR,	GENERAL SECRETARY AND MANAGER,
2831, Gerrard.	2630, Gerrard.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

PREMATURE FALLING OF THE HAIR.

M. has a son of 17 years, and the hair is rapidly receding from his temples. The boy is perfectly healthy, tall, muscular, and athletic. His hair is black, and at present he has a splendid crop of it. Can any one suggest a remedy? He has been studying hard for the past year or so.

A TRAGEDY OF TUBERCULOSIS.

DR. TUCKER WISE (Norton Park, near Dartmouth) writes: I read with much interest an annotation on page 1451 in the BRITISH MEDICAL JOURNAL of June 15th, in which was quoted the account given by the Medical Officer of Health for Inverness-shire, in his annual report, of the havoc made in a family at Tarbert, Morar, by tubercle, where the whole family were practically extinguished by the disease. I myself have had from time to time cases in which several members of a household have contracted the disease one after the other, and in these instances unhealthy birds—linnets, canaries, parrots, or such like—had been kept in the kitchens and habitable rooms of the houses. Whether avian tuberculosis can be transmitted in this way is a matter for observation, and I should like to ask Dr. John MacDonald if, in the exceptional case he mentions, any birds or diseased domestic pets inhabited the crofter's dwelling, or whether we may attribute the transmission of tubercle to so many members of the family through direct infection occurring in an overcrowded, cold dwelling, imperfectly ventilated for so comparatively large a number of inhabitants.

INCOME TAX.

A. G. W. writes: I am a country practitioner taking resident patients. The latter are left under my wife's care, as a trained nurse. Am I right in assuming that I need not include profits from resident patients in my income-tax return, as the money is obviously earned by the personal labour of a married woman?

*** The question is one for the Income Tax Commissioners to decide, but on the facts stated our correspondent will probably have some difficulty in establishing his contention. The Finance Act, 1897, provides for the separate treatment of the wife's income from occupation, subject to the following conditions: (*a*) That the total joint income of husband and wife does not exceed £500; (*b*) that the income includes profits of the wife from any business carried on by means of her own personal labour, and profits of the husband from any business carried on by means of his own personal labour; and (*c*) that the business of the husband is unconnected with the business of the wife. To establish his claim our correspondent must not only fulfil conditions (*a*) and (*b*), but also satisfy the Commissioners that the business of taking resident patients has no connexion with his profession. Can he say that the patients would come to his wife if he were, say, a solicitor instead of a medical practitioner?

ANSWERS.

CORNUBIENSIS, who asks for an inexpensive book on the septic tank system, might consult *The Sewage Problem: A review of the evidence collected by the Royal Commission on Sewage Disposal*, by A. J. Martin, A.M.I.C.E., M.R.S.I. London: The Sanitary Publishing Company (Demy 8vo, pp. 380, 8s. 6d.), a review of which was published in the BRITISH MEDICAL JOURNAL of March 25th, 1905, p. 659.

CALCIUM IODIDE IN THE TREATMENT OF ULCERS.

DR. ARTHUR WATSON (Sandown, I.W.) writes: In reply to "J. D." (BRITISH MEDICAL JOURNAL, May 25th), I confidently recommend, *solely*, ferri carb. sach., gr. vj to vij, t.d.s.

SUBACUTE RHEUMATISM.

DR. ARTHUR WATSON (Sandown, I.W.) writes: If "H. H." (BRITISH MEDICAL JOURNAL, June 8th, p. 1403) would—say, for five days only—give acetate of potash in 20 grain doses, simply in water (*soft*), I think the results will agreeably surprise him.

BEES' STINGS AND RHEUMATISM.

DR. BERTRAM ABRAHAMS (London, W.) writes in reply to Dr. Ainley Walker's inquiries: I am sure that anyone with much experience of treating joint affections will have met with many patients who have tried the bee sting as a means of cure. Belief in its efficacy is widely diffused, especially, it would appear, in the Midlands and the Fen country. As far as I can ascertain, it is used chiefly in cases of acute articular rheumatism; I have known it to be applied also in the acute exacerbations of arthritis deformans, but I have, so far, not met with an instance of its use in gout. There is a paper on the subject by Terc (*Med. Press*, June 3rd, 1903), to which I referred in my article on acute rheumatism in the *Medical Annual* for 1904.

LETTERS, NOTES, ETC.

WEST AFRICAN MEDICAL SERVICE.

REFORM writes: Some letters have recently appeared in your columns which only slightly indicate the widespread discontent which prevails in the West African Medical Service.

In service in a country where the conditions of life are so unnatural that a man is never in a sufficiently fit state of health to enjoy life, where, in spite of the fact that most men take the precautions of an invalid, three to six attacks of fever each year is the usual rule, the period of service (eighteen years) entitling to a pension is too long, and should be altered to fifteen years as matters stand at present; for each man who survives eighteen years in West Africa at least ten die, and of those who chance to survive all do so with permanently damaged constitutions and a considerably shortened expectation of life. I do not want to accuse the Government of any deliberate intention to mislead applicants for appointments in West Africa, but statements as to the salubrity of the climate are most favourably received and widely circulated, whilst reports to the contrary are disbelieved or shelved.

Secondly, the gratuity given on retirement is too small, and the number of years entitling to it too great. A man ought to be entitled to retire at any time after completing five years' service on a gratuity calculated on three months' salary multiplied by the number of years served. This arrangement has at least the merit of consistency. A man retiring after nine years, whose salary is £500, would receive £1,250, and after twelve years £1,500; at present the figures are £1,000 after nine years and £1,250 after twelve, so that, proportionately, the man who serves twelve years receives nearly £100 less on his extra three years' service (£1,250 instead of £1,333 6s. 8d.), a fact which speaks badly for the care bestowed in drawing up the West African Medical Rules, and for the interest taken by the Colonial Office in the department.

Thirdly, promotion is extremely slow, a medical officer must have on an average nine years' service or upwards before he attains the rank of senior medical officer, which is more than half a lifetime in West Africa. Men should be promoted to the rank of senior medical officer after five years' service with a substantial increase in pay.

Fourthly, medical officers when in charge of districts should receive a duty allowance in some if not all of the West African Colonies. Civilian officers in charge of departments or districts draw such allowance, whilst medical officers are always debarred.

Fifthly, the rule which states that promotion will take place according to seniority in the service, which seniority will date from first appointment, is too often disregarded at the whim of Governors or of the Colonial Office, and whilst most of us would wish that promotion should depend on merit or on services, we think that in most cases where men have been passed over there has been more than a suspicion of favouritism on the part of the authorities.

Lastly, I think that members of the West African Medical Staff have a right to ask that the Colonial authorities should take more interest in their department, and that the management should not be continued in the hands of a comparatively junior official who is not even a medical

man, and who, never having been in West Africa—for which, no doubt, he thanks his lucky stars—is to be presumed to know nothing of West Africa or its medical service, except at second-hand, from hearsay, and, consequently, cannot be expected to take a deep interest in the subject. The West African Medical Service, I should think, is the only department in any country run on similar slack and unbusinesslike lines.

The Colonial Office ought also to be asked to publish full statistics of the deaths which occur not only on the coast, but on the way home and shortly after arrival in England, in order to clear themselves of the suspicion which unfortunately exists that they desire to mislead applicants for appointments in the matter of the salubrity of the climate; they should also be asked to point out to applicants that they may at any time be called on to proceed on expedition, and it should be insisted on that medical officers killed or wounded on service should be put on the same footing as combatant officers on the same pay.

I think that it is the duty of the members of the West African Medical Service to lay their grievances before the Colonial Secretary either collectively or through your columns, and to respectfully ask that the official head of the department should be a member of the West African Medical Service, and that he should be assisted by other members of the service to whom the conditions in West Africa are not merely theoretical problems.

I should like to add a word of caution about accepting in their roseate colours the reports of members of Medical Commissions, most of them brilliant and all young and enthusiastic, about the salubrity of the climate; these gentlemen are naturally embued with a deep faith in the theories for the regeneration of West Africa evolved in laboratories at home—which are all excellent as theories—and are prone to ignore the insuperable difficulties in the way of expenditure which prevent most of them being put into practice.

Again, members of Medical Commissions come out to West Africa for two weeks or two months in the healthiest and driest periods of the year, orders are given that they are to be made as comfortable as possible, they seldom travel beyond head quarters or the few principal towns, they are not pointed out the many grave insanitary conditions which health officers have struggled in vain with the authorities to have removed, and they have not in most cases the remotest idea of the intense discomfort and danger of the conditions under which men exist in out-stations.

CENTRAL MIDWIVES BOARD.

DR. JNO. MILSON RHODES (Didsbury) writes: In the JOURNAL of June 1st I see that examinations for midwives are to be held at the Examination Hall, London; Lying-in Hospital, Newcastle-on-Tyne; University College, Bristol; and Victoria University, Manchester. The midwives of the present day have, to use a slang term, "quite enough side on," without the Central Board doing their best to increase it as their present arrangements must tend to. To the Examination Hall and the Lying-in Hospital I have no objection; but I have, and I think the general practitioners also will have, very strong objection to the University College and Victoria University being used, because the midwife will be able to say, "I passed all my examinations at the Victoria University, where Dr. Blank passed his." The working man in very many instances does not know enough to discriminate between a lady graduate and a certificated midwife, and I feel certain the result will be an increase in the amount of quackery largely due to being able to obtain a qualification as a midwife after a few months' training by passing an examination at a university or university college. I do not suppose the Central Midwives Board were alive to this danger, but there can be no doubt that it would be better to select a lying-in hospital than a university.

SUDDEN DEATH FROM CEREBRAL HAEMORRHAGE IN A GIRL.

MR. T. E. HILTON SMITH, F.R.C.S. (Farningham), writes: Dr. Berman's case, published in the BRITISH MEDICAL JOURNAL of June 8th, p. 1264, recalls to mind the following one which occurred some time during the latter half of the year 1880 at the Hospital for Consumption, Brompton. A woman, aged about 20, died from cerebral haemorrhage. The necropsy revealed an aneurysm about the size of a large pea of one of the cerebral arteries which had ruptured. Dr. Berman's patient most probably suffered from chronic nephritis.

INTERNAL URETHROTOMY.

MR. JAMES MACMUNN (London) writes: In answer to Dr. Mc Farlane I beg to state:

1. That the surgical capacity of the urethra is determined by my automatic urethrometer, described in the *Lancet*, October 19th 1901. That such capacity should mean the degree of expansion under a known distending force is most important. Surgeons differ not only in regard to the size of instruments they should use, but in the force thought justifiable in use. If new what one man considers a stric- ture, another does not. This has a direct bearing on the differentiation of normal from abnormal narrowing in the presence of gleet. It is thought that the nature, for instance, of narrowings of 2·7 mm. cannot be determined if the urethroscope fail, which it usually does. Cutting operations are often, therefore, needlessly done. I find the solution of the enigma easy. The automatic registration of the above instrument shows not only a difference of resistance in the two cases, but invariably a *post-stenosal* inflammatory dilatation or atony in the case of the abnormal narrowing, causing gleet. Cystitis depending on atony has its representative in urethral atony, causing gleet.

2. A soda-water bottle for haemorrhage is best, because of shape and strength. I fix it by elastic braces. I do not advise a large catheter, because it is irrational. It widens out the cut, and yet cannot press out its depths. If intra-urethral pressure be needed, I prefer a stall of india rubber tied over a small catheter and distended with mucilage, etc. This is better and less irritating. It fits into irregularities and spaces.

BAD NAUHEIM.

BAD NAUHEIM has lately been brought prominently under the notice of the British public by the announcement that the Duke of Devonshire, whose attack of illness will be regretted by all Englishmen without distinction of sect or party, has been ordered thither for treatment. A number of English mayors and British Members of Parliament recently paid a semi-official visit to Nauheim for the purpose or inspecting the arrangements in the "Bad." They were received and entertained by several well-known personages, including Dr. Fuchs and Herr Schmick, who represented the Ministry. The chief points of interest were the electric plant house and central heating establishment, the laundry, the bath-houses, and the three "sprudel" (thermal wells). The latter attracted the attention of the English visitors especially. Before leaving Bad Nauheim a luncheon was given to the party, at which diplomatic speeches were made both by the hosts and by the guests. The directors of the baths claim that in spite of very unpropitious weather, the numbers of persons taking the baths at Nauheim this spring has exceeded that of the spring of last year.

ACADEMIC COSTUME AT THE ANNUAL MEETING.

WITH reference to the announcement in the JOURNAL of last week that Messrs. Ede would be in attendance at Exeter to supply robes to those who have bespoken them for use at the Cathedral Service and the President's Address, we may state that the address of Messrs. Ede, Son, and Ravenscroft is 93 and 94, Chancery Lane, London, W.C., and that robes are lent at a fixed charge.

DESQUAMATION AFTER SCARLET FEVER.

DR. JOHN BROOM (Kirriemuir, Forfarshire) writes: In reference to the theory regarding desquamation in Dr. Haworth's memorandum published in the BRITISH MEDICAL JOURNAL of June 8th, p. 1362, allow me to point out the fact of desquamation occurring after cases of influenza when there had been no rash.

MEMORIAL TO CHARLES DICKENS.

MR. ALGERNON ASHTON (London, N.W.) writes: It is a well-known fact that Charles Dickens, one of the greatest glories in English literature, whose imperishable writings will ever remain among the world's most precious possessions, strictly desired that no statue should ever be erected to his memory. The wish of such a man, however unreasonable it may appear to be, is bound to be respected for all time, but the borough of Portsmouth, where Charles Dickens first saw the light, has at last resolved to raise a permanent memorial to its illustrious townsman in the shape of a cot in the hospital situated in the parish in which he was born. Failing a statue, no happier object could be conceived than this. To accomplish so noble an aim, however, it will, I hear, be necessary to raise the sum of £500. The first £100, and a little over, is already assured, among the subscribers being some of the most distinguished names in the country. There surely ought to be no great difficulty in raising the remainder of the sum required, and I deem it a special privilege and honour to be permitted by the chief promoter of this memorial to make, through the medium of your influential journal, an earnest appeal to every Dickens lover in the land to further this noble object by sending a subscription, large or small, to Mr. C. Louis de Wolff, the indefatigable Honorary Secretary of "The Dickens Birthplace Fellowship," 73, Laburnum Grove, Portsmouth.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

Eight lines and under	£0 4 0
Each additional line	0 0 6
A whole column	2 13 4
A page	8 0 0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 6, Catherine Street, Strand, London, not later than first post on Wednesday morning preceding publication, and if not paid for at the time, should be accompanied by a reference.

N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

THE

British Medical Journal.

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

SUPPLEMENT

CONTAINING

PROCEEDINGS OF COUNCIL

REPORTS OF STANDING COMMITTEES

MEETINGS OF BRANCHES AND DIVISIONS

PROGRAMME OF ANNUAL MEETING

MEDICAL BILLS IN PARLIAMENT

PROCEEDINGS OF THE GENERAL MEDICAL COUNCIL

ETC.

VOLUME I 1907.

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TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 5TH, 1907.

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SPECIAL NOTICE.

Members, especially members of the Metropolitan Counties Branch, are requested to preserve this "Supplement," which contains the text of the King Edward's Hospital Fund for London Bill, 1907.

BILL FOR THE INCORPORATION OF KING EDWARD'S HOSPITAL FUND FOR LONDON.

7 Edward VII.—Session 1907.

ARRANGEMENT OF SECTIONS.

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A BILL

To Incorporate the President and Council of King Edward's Hospital Fund for London; to provide for the Management of the Fund; and for other purposes.

Preamble.—WHEREAS His Majesty then Prince of Wales did in the year 1897 invite public subscriptions (annual and otherwise) to a Fund now known as "King Edward's Hospital Fund for London" (hereinafter referred to as "the Fund") with the object of securing more efficient aid and support for Hospitals of London and of thus commemorating the sixtieth anniversary of the reign of Her late Majesty Queen Victoria.

AND WHEREAS the Fund was established and the same has been generously supported by public subscriptions donations and by legacies and otherwise.

AND WHEREAS His Royal Highness George Prince of Wales is now President of the Fund.

AND WHEREAS His Royal Highness has from time to time appointed certain persons to act as an Advisory Council and as Committees and in various other capacities and has with the advice and assistance of such Council and Committees administered the Fund.

AND WHEREAS it is expedient that for the proper establishment and administration of the Fund upon a permanent basis the President and Advisory Council should be incorporated and that provision should be made for the regulation and management of the Fund and with respect to present and future investments.

AND WHEREAS the purposes of this Act cannot be attained without the Authority of Parliament.

MAY IT THEREFORE PLEASE YOUR MAJESTY that it may be enacted and be it enacted by the King's Most Excellent Majesty by and with the advice and consent of the Lords Spiritual and Temporal and Commons in this present Parliament assembled and by the authority of the same as follows:—

1. *Short Title*.—THIS Act may be cited as King Edward's Hospital Fund for London Act 1907.

2. *Incorporation*.—FROM and after the passing of this Act His Royal Highness George Prince of Wales now President of the Fund and the present members of the said Advisory Council and the persons who hereafter shall be the President and the General Council respectively under this Act are hereby incorporated by the name of "King Edward's Hospital Fund for London" (in this Act referred to as "the Corporation") and by that name shall be a body corporate with perpetual succession and a common seal and with power without any further licence

in mortmain to take purchase and hold lands and hereditaments and to sue and be sued and with all other rights powers and privileges of a body corporate.

3. *Objects.*—THE objects of the Corporation are to secure from public beneficence by means of annual or other subscriptions of donations and bequests or otherwise funds and property which and all real and personal property now belonging to or held by any person or persons in trust for the Fund shall constitute a general fund of which either the capital and income thereof or any part of such capital or income as the President of the Corporation in his uncontrolled discretion may from time to time think fit shall be applied (*a*) in or towards the support or benefit of all or such one or more to the exclusion of the others of the Hospitals of London as the said President in his like discretion shall think fit and whether such application shall be for the general or any special purposes of any particular one or more of such hospitals of London (*b*) in giving aid or assistance generally to all or any one or more of such Hospitals of London as the said President in his like discretion shall think fit and (*c*) generally in doing all such other things as are incidental or may be thought conducive to the attainment of the best interests of the Hospitals of London or any one or more of them or of the persons or any of them for whose benefit such Hospitals exist which the said President in his like discretion shall determine.

IN this Act the expression "the Sovereign" means His Majesty his heirs and successors Kings and Queens of the United Kingdom of Great Britain and Ireland and the expression "Hospitals of London" means and includes the following Institutions namely any present or future Hospital Convalescent Home Nursing Home or Nursing Institution Lying-in Institution Dispensary Medical Mission Society for the provision of Surgical or Medical Aid or Appliances and any Institution for the Rest Relief or Cure of Sick Persons as shall be situate within the County of the City of London or the Metropolitan Police District as existing at the passing of this Act or as the same may be hereafter extended or any Institution which being situate beyond such County or District shall afford Medical or Surgical treatment or Rest Relief or Cure to Patients all or some of whom are persons usually resident or carrying on their vocation in life within such County or District.

4. *President.*—HIS Royal Highness George Prince of Wales shall during the pleasure of the Sovereign be the President of the Corporation and every succeeding President shall be appointed by and hold office during the pleasure of the Sovereign.

5. *Management.*—THE direction control and management of the affairs and property of the Corporation and the application of all moneys property and income of the Corporation shall be vested in the President whose powers shall include the following that is to say (*a*) power to appoint and at pleasure remove the members of the General Council and of any other Councils and Committees hereinafter mentioned and Trustees Treasurers Secretaries Auditors and other officers and to award them or any of them salaries or remuneration (*b*) power to appoint and dissolve Councils and Committees other than the General Council and from time to time to delegate to any Council or Committee all or any of his powers of direction control or management as he may think fit (*c*) power to make vary and rescind bye-laws rules and regulations for the management and administration of the affairs and property of the Corporation and the procedure relating thereto including the use of the corporate seal and the keeping of regular books and accounts (*d*) power to direct the mode of collection of moneys for the Corporation and the investment and application of such moneys and of all property and income of the Corporation to or for the benefit of all or such one or more to the exclusion of the others of the Hospitals of London as he in his uncontrolled discretion shall think fit and generally to determine the manner in which such moneys property and income shall be dealt with and applied for the purposes of this Act and in furtherance of the objects of the Corporation (*e*) power to determine whether any transaction proposed to be benefited in or is not within the limits of the objects of the Corporation as defined by this Act and (*f*) power generally to do or direct to be done all acts and things which in his discretion he may deem conducive to promoting and effecting the objects of the Corporation.

6. *General Council and its duties.*—THE General Council shall consist of such and so many persons as the President shall from time to time appoint. The duties of the General Council shall be to render to the President at his request such advice and assistance with respect to the affairs and property of the Corporation and the exercise of his powers in relation thereto as he shall from time to time require.

7. *Transfer of existing Property and as to Property generally and Trustees.*—ALL real and personal property now belonging to or held by any person or persons in trust for the Fund shall forthwith after the passing of this Act be assured transferred delivered and paid by such person or persons to or otherwise vested in or placed under the control of the Corporation or (if the President shall think fit) of the Trustees or Trustee to be appointed under this Act for the purposes of this Act but as to property given to the Fund upon any special trust or condition now affecting the same subject to such trust or condition.

ALL gifts by will or otherwise which if this Act had not been passed would have taken effect in favour of the Fund shall enure for the benefit of the Corporation.

ALL property of the Corporation for the time being not applied for the purposes thereof shall be and remain vested in the Corporation provided that any part or parts thereof may if the President shall think fit be from time to time vested in Trustees to be appointed and removable by him and the Governor of the Bank of England may be appointed Sole Trustee for the purposes of this Act during the President's pleasure.

SUCH Trustees or Trustee shall dispose and deal with the property vested in them or him as the Corporation shall direct.

8. *Investments.*—ALL moneys and funds the property of the Corporation may (but as to gifts heretofore accepted on behalf of the Fund or which may hereafter be accepted by the Corporation with any special restriction as to investment subject to such restriction) be invested in the purchase or on the security of land of any tenure or in or upon such investments (whether authorised by law for the investment of trust funds or not) as the President may think fit and any investments may in like manner be varied from time to time or realised and the proceeds applied for the purposes of this Act. Land belonging to the Corporation may subject only to the consent of the President be sold leased or otherwise dealt with by the Corporation with the powers of an absolute owner. Any investments forming part of the Fund at the passing of this Act may be continued and the same and any investments heretofore made shall be deemed to have been made under the authority of this Act.

THE provisions of section 5 of the Mortmain Act 1891 as to the sale of land assured by Will to or for the benefit of a charitable use shall not apply to gifts by Will to the Corporation.

9. *Gifts subject to conditions.*—THE Corporation may accept gifts and endowments of real and personal estate either for special purposes of the Corporation or in aid of the general purposes thereof and upon such terms and conditions (not inconsistent with the objects of the Corporation) as may be agreed upon between the Corporation and the person bestowing such gifts and endowments.

10. *Indemnity.*—ALL persons hitherto acting in the management and application of the Fund shall be indemnified by virtue of this Act in respect of all acts and things done by them or any of them in the execution or intended execution in good faith of the trusts of the Fund as heretofore constituted.

11. *Costs of Act.*—THE costs charges and expenses preliminary and of and incidental to preparing and obtaining this Act shall be paid by the Corporation.

British Medical Association.

ADJOURNED EXTRAORDINARY GENERAL MEETING.

AN extraordinary general meeting of the British Medical Association was held at the offices, 429, Strand, on Friday, December 28th, 1906, when the chair was taken by Dr. LANGLEY BROWNE, Chairman of Council.

The minutes of the meetings held on November 28th and December 5th having been published in the BRITISH MEDICAL JOURNAL and circulated, were taken as read and signed as correct.

The CHAIRMAN stated that at the meeting summoned for December 21st to confirm the special resolutions passed at the extraordinary general meeting of the Association on December 5th a quorum was not present, and that the meeting therefore stood adjourned until December 28th. Those present at the meeting that day constituted a quorum. He then moved the following nine resolutions seriatim; and each having been duly seconded, was carried unanimously:

1. That the 5th Article of Association be altered by the insertion of the words "Divisions or" immediately before the word "Branches" where that word secondly occurs.

2. That the 27th Article be altered by the insertion immediately after the words "constituency having not less than fifty members" of the words "provided that the Council shall have a discretionary power to permit a Division having less than fifty members to form one constituency in any case in which it shall appear to the Council that the holding of joint meetings of members of that Division and of neighbouring Divisions would be attended by special difficulties."

3. That the said 27th Article be altered by the substitution of the words "nine months" for the words "three months."

4. That the 36th Article be altered by the insertion of the word "and" immediately before the words "a Treasurer" and by the omission of the words "an Editor of the JOURNAL and a General Secretary" and of the words "the Editor of the JOURNAL and the General Secretary."

5. That the following Article be substituted for the 37th Article, namely:

XXXVII.—OFFICERS *(continued)*.

The Chairman of Council shall be elected by the Council from its own number and shall hold office for such period and discharge such duties as shall be determined by the Council. During this period and for one year thereafter he shall *ex officio* be a member of the Council and any Branch of which at the time of his election he was a Representative shall be entitled to elect another in his stead.

6. That the 38th Article be altered by the substitution of the words "Chairman of Council and (during the year succeeding his period of office) the *Past Chairman* of Council" for the words "(if any)."

7. That the 41st Article be altered by the substitution of the words "the Chairman of Representative Meetings, the Chairman of Council, and the Treasurer" for the words "and the Chairman of Council."

8. That the following clause be substituted for Clause (*e*) of the 44th Article, namely:

(*e*) No member in regard to whom a representation as aforesaid has been made or whose conduct is under investigation or is the subject of inquiry by the Council or by a Branch or Division shall be capable of effectively resigning his membership of the Association until the result of such investigation or inquiry has been officially and finally declared.

9. That the following Article be substituted for the 45th Article, namely:

XLV.—TRAVELLING EXPENSES.

The first-class travelling expenses within the United Kingdom of Members of Council and Representatives of Divisions attending the Annual or any Special Representative Meeting shall be defrayed out of the general funds of the Association. Attendance of Representatives of Divisions for this purpose at the Annual Representative Meeting shall be construed to mean attendance at each daily Session of that Meeting and also at each daily Session of the Annual General Meeting at which business described under the head (A) in Article XVIII is to be transacted unless the Council shall be satisfied that good cause existed for absence from any particular Session or Sessions. The first-class travelling expenses within the United Kingdom of all Members attending any meeting of Council or of a Committee and of all Officers of any Division or Branch attending any conference held under conditions approved by the Council, shall be defrayed in like manner. Save as in this clause expressly provided the Council shall determine what shall be considered an attendance for any purpose of this Clause.

The CHAIRMAN having thanked those present for attending, the meeting terminated.

THE 75TH ANNUAL MEETING AT EXETER.

GENERAL ARRANGEMENTS.

THE seventy-fifth annual meeting of the British Medical Association will be held at Exeter on Tuesday, Wednesday, Thursday, and Friday, July 30th and 31st and August 1st and 2nd, 1907.

President: RICHARD ANDREWS REEVE, B.A., M.D., LL.D., Dean of the Faculty of Medicine, University of Toronto.

President-elect: HENRY DAVY, M.D., F.R.C.P., Physician, Royal Devon and Exeter Hospital.

Past-President: GEORGE COOPER FRANKLIN, LL.D., F.R.C.S.Eng., L.R.C.P.Lond., Surgeon, Leicester Infirmary, Leicester.

Chairman of Representative Meetings: JAMES ALEXANDER MACDONALD, M.D., Physician, Taunton and Somerset Hospital.

Chairman of Council: HENRY WM. LANGLEY BROWNE, M.D., LL.D., F.R.C.S.E., Consulting Surgeon, West Bromwich District Hospital.

Treasurer: HENRY RADCLIFFE CROCKER, M.D., F.R.C.P., Physician, Skin Department, University College Hospital, London.

The Address in Medicine will be delivered by WILLIAM HALE WHITE, M.D., F.R.C.P.Lond.

The Address in Surgery will be delivered by HENRY TRENTHAM BUTLIN, D.C.L., F.R.C.S.Eng.

The Popular Lecture will be delivered by Sir JOHN WILLIAM MOORE, M.D., D.Sc., F.R.C.P.Irel.

THE SECTIONS.

The scientific business of the meeting will be conducted in thirteen Sections, which will meet on Wednesday, July 31st, Thursday, August 1st, and Friday, August 2nd.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes. Papers read are the property of the British

Medical Association, and cannot be published elsewhere than in the British Medical Journal without special permission.

The following is a list of the Sections, with the names of the officers so far as at present settled. The subjects selected for discussion in the various Sections will be published as soon as the arrangements of the Committees of Reference are completed.

Pathology.

President: Robert Muir, M.D., F.R.C.P.Ed., Professor of Pathology, Glasgow.

Vice-Presidents: Henry George Plimmer, M.R.C.S., F.L.S., London; William Hunter, M.D., F.R.C.P., London: Walter Ley Pethybridge, M.D., B.Sc., Plymouth.

Honorary Secretaries: Reginald Vaughan Solly, M.D., F.R.C.S., 40, West Southernhay, Exeter; Professor William St. Clair Symmers, M.B., C.M.Aberd., Queen's College, Belfast.

Medicine.

President: William Gordon, M.D., F.R.C.P., Exeter.

Vice Presidents: William Powell, M.B., F.R.C.S., Torquay; William Joseph Tyson, M.D., F.R.C.P., F.R.C.S., Folkestone; George Newton Pitt, M.D., F.R.C.P., London; Edward Lawrence Fox, M.D., M.R.C.P., Plymouth.

Honorary Secretaries: Frederick John Poynton, M.D., F.R.C.P., 1, Harley Place, London, W.; Edwin Bramwell, M.B., F.R.C.P.Edin., M.R.C.P., 23, Drumsheugh Gardens, Edinburgh; Alfred Bertram Soltau, M.D., F.R.C.S., 31, Athenaeum Street, Plymouth.

Diseases of Children.

President: Alfred Herbert Tubby, M.S., London.

Vice Presidents: Lewis Mackenzie, F.R.C.S., Tiverton; Frank Hichens, M.D., Redruth; Reginald Horace Lucy, F.R.C.S., Plymouth; Edmund Cautley, M.D., London.

Honorary Secretaries: John Harley Gough, M.D., Glenallon, Old Torwood Road, Torquay; Edred Moss Corner, F.R.C.S., 37, Harley Street, London, W.

Psychological Medicine.

President: Thomas Claye Shaw, M.D., London.

Vice Presidents: Arthur Nathaniel Davis, L.R.C.P., Exminster; Robert Leonard Rutherford, M.D., Exeter; George M. Robertson, M.B., Larbert.

Honorary Secretaries: Samuel Hollingsworth Agar, M.R.C.S., Hurst House, Henley-in-Arden; William Francis Menzies, Staffs County Asylum, Cheddleton, Leek.

Electrical Section.

President: H. Lewis Jones, M.D., London.

Vice-Presidents: John Delpratt Harris, M.D., Exeter; Cecil R. Chaworth Lyster, M.R.C.S., London; William Cheyne Wilson, M.D., Plymouth.

Honorary Secretaries: Ellis Pearson, F.R.C.S.E., Strand House, Bideford; Edward Warren Hine Shenton, M.R.C.S., 126, Harley Street, London, W.

Tropical Diseases.

President: James Cantlie, F.R.C.S., London.

Vice Presidents: Guthrie Rankin, M.D., London; Sir Richard Havelock Charles, K.C.V.O., M.D., I.M.S. (ret.), London; Lieutenant-Colonel Robert Caldwell, F.R.C.S., Plymouth.

Honorary Secretaries: Henry Edward Annett, M.D., 41, Upper Parliament Street, Liverpool; William Carnegie Brown, M.D., 32, Harley Street, London, W.; Lieutenant-Colonel G. M. J. Giles, M.B., F.R.C.S., I.M.S. (ret.), 3, Lilac Terrace, The Hoe, Plymouth.

Surgery.

President: George A. Wright, Professor of Surgery, Manchester.

Vice-President: Edward James Domville, M.R.C.S., Exeter; Charles Edward Wallace Bell, M.R.C.S., Exeter; David Newman, M.D., Glasgow; William Frederic Haslam, F.R.C.S., 55, Newhall Street, Birmingham.

Honorary Secretaries: Bernard Scott, M.R.C.S., Ingleswood, Poole Road, Bournemouth; Brennan Dysart, F.R.C.S., 71, Queen Street, Exeter; William Sampson Handley, M.S., 51, Devonshire Street, London, W.

Ophthalmology.

President: Louis Hy. Tosswill, M.B., Exeter.

Vice Presidents: John R. Rolston, M.R.C.S., Plymouth; Alexander Hill Griffith, M.D., Manchester; Arthur Charles Roper, F.R.C.S.E., Exeter.

Honorary Secretaries: Ransom Pickard, M.S., F.R.C.S., 31, East Southernhay, Exeter; Elmore Wright Brewerton, F.R.C.S., 84, Wimpole Street, London, W.

Laryngology, Otology, and Rhinology.

President: Robert McKenzie Johnston, M.D., Edinburgh.

Vice-Presidents: George Jackson, F.R.C.S., Plymouth; James Barry Ball, M.D., London; Patrick William Maxwell, M.D., Dublin.

Honorary Secretaries: Charles Edward Bean, F.R.C.S.E., 19, Lockyer Street, Plymouth; Arthur Longley Whitehead, M.B., 31, Park Square, Leeds.

Dental Surgery.

President: John McKno Ackland, M.R.C.S., L.D.S., Exeter.

Vice-Presidents: Peter Sidney Spokes, M.R.C.S., L.D.S., London; Thomas Arthur Goard, M.R.C.S., L.R.C.P., L.D.S., 28, Southernhay, Exeter; Kenneth Weldon Goadby, M.R.C.S., L.R.C.P., L.D.S., London.

Honorary Secretaries: Joseph Lewin Payne, M.R.C.S., L.D.S., 44, Devonshire Street, Portland Place, W.; George Arthur Peake, M.R.C.S., L.D.S., Alma House, Cheltenham.

Obstetrics and Gynaecology.

President: Ernest Hastings Tweedy, F.R.C.P.Ire., Dublin.

Vice-Presidents: William Fookes Thompson, M.D., Launceston; J. Macpherson Lawrie, M.D., Weymouth; Walter Ley Woollcombe, F.R.C.S.E., Plymouth; William Walter Hunt Tate, M.D., London.

Honorary Secretaries: George Herbert Johnson, M.R.C.S., 7, Den Crescent, Teignmouth; Hy. Russell Andrews, M.D., 7, Wimpole Street, London, W.; Edwin Josiah Toye, M.D., Bridgeland Street, Bideford.

State Medicine.

President: Arthur Newsholme, M.D., M.O.H., Brighton.

Vice-Presidents: Edward Alexander Brash, M.R.C.S., Exeter; Frederick Mann Williams, M.R.C.S., Plymouth; Professor Henry Richard Kenwood, M.B., London.

Honorary Secretaries: Sack Noy Scott, M.R.C.S., Plymstock, Devon; Francis Charles Martley, M.D., 71, Lower Baggot Street, Dublin.

Naval and Military.

President: Inspector-General James Porter, C.B., M.D., R.N., Newport, Mon.

Vice-Presidents: Colonel George Deane Bourke, R.A.M.C., Devonport; Brigade-Surgeon-Lieutenant-Colonel J. Raglan Thomas, M.D., V.D., Exeter; Surgeon-Lieutenant-Colonel Decimus Currie, M.R.C.S., Blandford.

Honorary Secretaries: Fleet-Surgeon Horatio S. R. Sparrow, L.R.C.P., R.N., Royal Naval Barracks, Plymouth; Surgeon-Captain John Robinson Harper, M.R.C.S., Bear Street, Barnstaple; Surgeon-Captain John Shirley Steele Perkins, M.B., V.M.S., 47, Southernhay West, Exeter.

The Honorary Local Secretaries are:

Russell Coombe, M.D. (Cantab.), F.R.C.S.Eng., 5, Barnfield Crescent, Exeter.

G. T. Clark, M.B. (Cantab.), 14, West Southernhay, Exeter.

Leonard R. Tosswill, M.R.C.S., L.R.C.P., 54, West Southernhay, Exeter.

The Honorary Secretary of the Pathological Museum Committee is:

R. V. Solly, M.D., 40, West Southernhay, Exeter.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

CAPE OF GOOD HOPE (EASTERN PROVINCE) BRANCH.

East London Division.

A SPECIAL meeting was held on November 28th, 1906, to discuss contract rates.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, J. P. Tannock, M.B., M.S., D.P.H.; *Honorary Secretary and Treasurer*, Dr. Hill Aitken; *Branch Council and Executive Committee*, Drs. Alexander, Batchelor, Chute, Egan, MacGregor, and Robertson. The Vice-Chairman will be elected at the next meeting.

Contract Medical Practice.—Dr. ROULSTON said contract rates were at the present time occupying the attention of the profession at home and in the Colonies. Insidiously the different societies had extended their scope and at the same time made themselves so powerful, that it was impossible for a few medical men to cope with the injury and injustice done to the isolated members of the profession. Happily the profession as a whole was rising to a sense of its duty and was putting forth every effort by advice and combination to put a stop to this long-standing evil. In the BRITISH MEDICAL JOURNAL SUPPLEMENT dealing with contract practice it was set forth that one object should be to bring the rates up to a proper standard, and that each member of a friendly society should have the right to choose his own medical attendant. On that point he was happy to say Drs. Worsely and Rubidge were strongly in favour, and Dr. Paley said at the yearly meeting of the Division he would resign his clubs if the members wished. He specially mentioned these gentlemen's names to show their willingness to fall into line with the others. There were a few points he wished to lay particular stress on: (1) It was derogatory to the honour and dignity of the profession to give its services at an insufficient remuneration, and by doing so they made little of themselves. (2) The different societies had never, as far as he knew, taken the trouble to prevent members who were socially and financially in a position to pay ordinary fees from making use of the society's doctor. He felt sure it never was the original intention of any society to do so; nevertheless, they did it. Why should they allow this unhappy state of affairs to continue? They had the remedy in their own hands; let them organize, be loyal to each other, and the evil must vanish. (3) Undercutting had been the cause of the fees being reduced to the present miserable pittance. It was, in his opinion, the duty of every honourable medical man to do all in his power to bring them up to a proper standard. (4) The scale of fees he was about to propose had been submitted to all members of the Division residing out of East London. Replies had been received from Cambridge, King Williamstown, Queenstown, and Tarkastad strongly supporting it, and none against. This scale of fees was fair and reasonable, would benefit them all, and injure no one. The white population of East London was about 14,500, and from that were deducted the railway employés, their wives and families, 2,250; Harbour Board, 1,000; and clubs, 280; the population left for the purely private practitioners was less than 10,970. The following resolution, proposed by Dr. ROULSTON and seconded by Dr. GREY, was carried:

> That the fees payable by Friendly Societies be 3s. 6d. for each visit or consultation by day—that is, from 7 a.m. to 9 p.m. Night visits and consultations to be double day visits. Medicines to be 1s. 6d. per bottle of ordinary medicines. Members to be permitted to call in any medical man they like to select. These fees not to include anaesthetics, operations, confinements, nor consultations with other medical men. No one with an income over £250 per annum to receive such reduced medical terms.

Dr. PALEY spoke vigorously against it, but did not move an amendment nor vote. Drs. Lownds and Nangle alone voted against the proposition. The CHAIRMAN said he hoped the members would loyally support one another in the matter, the importance of which to East London Dr. Roulston had pointed out. He was surprised that there should be found medical men in East London willing to vote against so necessary a proposition—one in line with what was being done in the Transvaal and at home.

Vote of Thanks.—A vote of thanks to the members in the country who had shown their interest in the discussion was passed.

DORSET AND WEST HANTS BRANCH:

Western Division.

A MEETING of the Division was held on Wednesday, December 12th, 1906, at 4.15 p.m., at the County Hospital, Dorchester, Dr. P. W. MACDONALD in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Annual Representative Meeting.—The REPRESENTATIVE, Dr. Comyns Leach, read his report of the Representative Meeting held in London.

May Meeting.—It was decided that the May meeting should be held in Dorchester.

Cases.—The following cases were shown by the honorary staff of the hospital, and discussed by the members present: Dr. MORRICE: (1) Aortic aneurysm; (2) splenic leucocythaemia (introduced by Mr. Taylor, house-surgeon).—Mr. GOOD: (1) Gall stone removed from the common bile duct; (2) ovarian cyst of rapid growth.—Dr. MORRICE and Mr GOOD: Case of tuberculous peritonitis treated by laparotomy.—Mr. COSENS: (1) Case of otitis media and its sequelae; (2) cases of ectopia vesicae and their surgical treatment; (3) surgical treatment of caecum in gangrenous appendix, with cases.

Dinner.—Twelve of the members present dined together at the King's Arms Hotel afterwards.

YORKSHIRE BRANCH:

Barnsley Division.

A MEETING of the Division was held in the Beckett Hospital, Barnsley, on Friday, November 23rd, 1906. Dr. CASTLE was unanimously elected chairman of the meeting and Dr. MACPHAIL consented to act as secretary, *pro. tem.*

Model Rules.—Correspondence with the Yorkshire Branch and the Head Office having been read, the meeting proceeded to adopt the model rules for the Division as suggested by the Association, marked by the Medical Secretary A, B, C and Z. Regarding the points in these to be decided by the Division the following were decided: (1) That meetings be held quarterly, three days' notice being given. (2) That special meetings be held when required with three days' notice. (3) That the Committee shall consist of four members in addition to officials—three to form a quorum—and that for the present, both executive and ethical functions shall be exercised by the same Committee. (4) That the term during which the Chairman shall be debarred from again taking that office shall be three years. Regarding the appointment of officers it was resolved that, in view of the rule that the regular date of their election is at the annual meeting in May and June, merely provisional appointments be made at present.

Provisional Election of Officers.—The following were thereupon unanimously elected:—*Chairman*, Dr. Castle (Darfield, near Barnsley); *Vice-Chairman*, Dr. Knowles (Barnsley); *Secretary and Treasurer*, Dr. J. H. Fryer (2, Eastgate, Barnsley); *Representatives to Branch Council*, Dr. Burman (Wath-on-Dearne), and Dr. Macphail (Barnsley); *Ordinary Members of Committee*, Dr. Allott (Hoyland), Drs. Rowley and Sadler (Barnsley), and Dr. Pearce (Darton).

Vote of Thanks.—A very hearty vote of thanks was accorded to Mr. Benjamin Marshall, solicitor, for his valuable services in connexion with the formation of the Division.

Bradford Division.

A CONJOINT meeting of the Division and the Bradford Medico-Chirurgical Society was held at the Bradford Royal Infirmary on Tuesday, December 18th, 1906, at 8 p.m. The evening was devoted exclusively to the exhibition of clinical cases and pathological specimens. Mr. SHACKLETON presided. The following gentlemen exhibited cases or specimens:—Drs. and Messrs. ALTHORP, BRONNER, LITTLE, MITCHELL, WARD-SMITH, WOOD, EURICH, and BASIL HALL.

GLASGOW AND WEST OF SCOTLAND BRANCH.

At the requisition of the Glasgow Central Division of the Association, a special meeting of the Glasgow and West of Scotland Branch was held in the Faculty Hall, 242, St. Vincent Street, Glasgow, on the afternoon of Thursday, December 20th, 1906, for the purpose of considering the proposed Anderston and District Health Association, with special reference to the medical dispensary in connexion therewith. There was a very large attendance of the members of the Branch. Dr. Lindsay (Lesmahagow), President of the Branch, occupied the chair.

Minute of Previous Meeting.—After the Honorary Secretary (Dr. James Hamilton) had read the requisition calling the meeting, the Chairman called upon Dr. Macfarlane, the Secretary of the Central Division, to read the minute of the meeting at which the resolution was arrived at to request the Branch Secretary to convene the meeting. Dr. Macfarlane complied by reading the minute of the meeting of the Division held on December 10th, 1906.

Apologies for Non-attendance.—The Chairman intimated apologies for absence from Dr. Alexander Robertson and Dr. Nicol, both of whom regretted their inability to be present.

Introductory Remarks by the Chairman.—The Chairman further stated that while he was President of the West of Scotland Branch he never could very well tell from what title or distinction he derived that honour. The only thing that he could fix upon was that he was a general practitioner, and had been so for very nearly fifty years, and he might also add a fairly honourable practitioner. Having been so long a general practitioner, he knew the wants, the discouragements, and the difficulties that general practitioners underwent in their practice. In the first place, their wants were considerable; they wanted patients and something to live on. He believed the discouragements that general practitioners met with were very frequent; but if a practitioner did his work fairly and honourably and acted fairly to the members of the profession, he would always be in request and would be the best guide as a family doctor. There was a great inclination in these days to make people poor. Bodies such as county councils, town councils, and parish councils were inclined to make people poor, and in his own case he knew people who had told him that they had applied to the parochial board for help who a few years ago would never have thought of it. They were inclined to make their application early now and without stint, and they got help often without much judgement. They saw the same thing rampant in their hospitals and in their dispensaries. Those crowded dispensaries were a disgrace to the people who kept them up and to the profession which stood it, and they should be taken hold of in some way or other. About fifteen years ago he had gone to the post graduate classes in Edinburgh and had often gone to the eye dispensary, and he had seen crowds of people who were able to help to pay doctors, and they were so well dressed and evidently in such a comfortable position that they had certainly no right to be there. They were having the best advice and operations performed by Dr. Argyll Robertson, and all free, gratis, and for nothing, with plenty of money in their pockets, or plenty of it at home, at any rate. He thought that the profession was itself considerably to blame for the state of matters. A great many cases that used to be treated at home were now packed off to the hospital, and he did not think that that should be, because with the education that young practitioners now had they ought to be able to undertake almost any case. There would always be room for great operations that should be done and for some great operations that should never be done. He believed the teaching was now a great deal to blame. He supposed that those gorgeous hospitals and extraordinary places which the young fellows had to look at dazzled them, and knocked them off their centre of gravity. Were all these things necessary? They all knew what Sir Douglas Powell had said about them. He thought the right thing for practitioners to do was to combine amongst themselves and do a great deal of that work at home. They could do it perfectly well, and according to the best authorities it did not need all the wonderful operations or the wonderful amount of help that we got in these theatres. Some great change was needed on all hands. Hospitals were getting deeper in debt and expense, and the dispensaries fed up very much to the expense, and were certainly to a very large extent entirely unnecessary. The close combination of the general practitioners to assist one another and do a great many of those things would help to do away with the abuse to a large extent. He did not suppose that any doctor would grudge to go and see two or three poor people in a day, but what they grudged to do was to attend those who would not pay—at least that was his experience. He asked some of the members to lead off in the discussion.

Proposed Anderston and District Health Association.—Dr. Grant proposed that the Secretary should give the meeting a little information as to what had passed, so that the discussion could be conducted with good results. Dr. Macfarlane said that he had received the following letter, dated November 21st, 1906, from Dr. Paterson, Secretary of the Committee of Medical Men in the Anderston District:

Dear Sir,—Proposed dispensary for Anderston. As the individual responsible for, and having charge of, the memorial of the Anderston practitioners against the above proposed dispensary, and being also a member of the Central Division of the British Medical Association, I have been advised to, and do hereby request that you will call a meeting of your Division for the purpose of ascertaining the opinion of the members regarding the above dispensary and our memorial against it, and, if possible, to enlist their assistance on our behalf. I shall be pleased to lay before the meeting any information that may be required—Yours faithfully (Signed) John Paterson, M.D.

He communicated with Dr. Stockman, who had advised him to call a meeting, which he had done on November 26th. There was a general discussion held at that meeting, and it was unanimously agreed that a dispensary in the Anderston district was quite unnecessary. The outcome of the meeting was summed up in a resolution, which was proposed by Dr. A. N. M'Gregor, seconded by Dr. Alexander Robertson, and carried unanimously, as follows:

That the Secretary be instructed to write to the Secretary of the Committee for the promotion of the new Anderston Dispensary, stating that, in view of the opposition of some of its members, the Central Division of the West of Scotland Branch of the British Medical Association would be glad to have information on the following points:

1. What departments of general or special medical and surgical assistance have been instituted, and what additional professional assistance is contemplated?
2. What medical, surgical, and special appointments have been made, and what further appointments are proposed?
3. As to whether the Christian social work and the professional assistance are intended to run conjointly and interdependently, or whether an open dispensary will be maintained for all comers?
4. As to whether there is any further information the Committee may desire to offer for the consideration of the Division?

That was what he sent to the Secretary, and on November 30th, 1906, he had received the following letter:

The Anderston and District Health Association.

Dear Sir, With reference to your letter of the 26th inst., I have now had an opportunity of submitting it to my Committee for their instructions. My Committee regrets to note that there is any opposition on the part of some of your members, but they are, of course, unable to deal with that opposition without any information as to what it is directed against. As communications, however, have been received from several medical societies, it may, in reply, be generally stated that the movement, which is the outcome of a proposal which originally came from social workers and others familiar with the needs of the Anderston district, is intended to provide the means of giving practical effect to some of the views expressed at the Home Relief Congress held in Edinburgh two years ago, and for which, so far as we are aware, there is at present no existing provision in Glasgow. It is believed that the Anderston district would form a most suitable centre in which to carry those views into effect. To do this it is essential that the Social Work and Medical Assistance should run conjointly, and it is the intention of my Committee not only to act in connection with the social and religious agencies presently interested and at work in the district, but also to organize a special body of district health visitors, who by visiting the homes, will thus be able to report any circumstances which they may consider may make the patient such fit for assistance from such an association. I am, yours faithfully (signed), Frederick V. Ferguson, Honorary Secretary.

Dr. Wyllie said that possibly this was now the time for any gentleman to state his reason for going into this matter of the dispensary, and that would bring the thing possibly to a head. If any gentleman was in favour of

this dispensary he might give his reasons and let the meeting know how they stood.

Dr. A. K. CHALMERS said that unfortunately Dr. Carswell was not present, as he had been at the very beginning of the movement. However, he himself was prepared to explain as much as he knew, but he could not go back to the very start. He took advantage of this opportunity of meeting face to face with some who probably held different views from those he held himself, and probably different views from the Committee or what was called the Anderston Health Association. He did not know about the movement from the beginning, but he had become associated with it when the resolution was come to that a dispensary was necessary. As they knew, the profession had got its eyes opened to the infant mortality in Glasgow, and nursing dispensaries had not been tried in this country hitherto; not only in Anderston but also in Cowcaddens he felt convinced that they would be the better of places of the kind where mothers could bring their children very much after the corresponding system in France. He believed that the one in Anderston would not overlap any existing charity. In the second place, he referred to the fact that, rightly or wrongly, doctors were getting round to the view that they must do something more definitely with consumption, and they had not far to go for an excellent illustration of the thing that proved itself capable of rendering excellent help—he meant a dispensary in the form that the French people had adopted and that Dr. Phillips in Edinburgh was so eager to suggest; not a dispensary where simply the patient ill with phthisis went to get told how well or ill he was, but a place where one was taught sanitation and social relief. He was not clear that they should go beyond that, but he knew that a movement already on foot was begun to supply a medical dispensary on a very limited basis. He was thinking of the need discovered by the Seamen's Orphans' Society. They were in possession of facts which proved conclusively that from that point of view Anderston was not supplied with medical relief. One often was asked where it was possible to find a place between an association and an organization existing for medical relief. The most frequent illustration was the family of the able-bodied man who was a drinker and who was not at work. If he was ill, then the family were entitled to parochial relief, but, if he was not ill, the wife and children might be as ill as possible and yet at present there was no organization ready to take it up. Was he right or wrong? [Cries of "Wrong."] Then, further, taking this question generally, they had in Glasgow and in the centres of Scotland for the last twenty or thirty years an enormous improvement in general hygiene, but they had here illustrations of bits that had been absolutely left—he meant that literally as applying to Anderston and Cowcaddens. At the census of 1901 these places had the same death-rate as away back in 1870, and these were the only two that still remained with that abnormal death-rate, and for that reason he said that they were left. They had come to believe that there was something more than the badly-arranged streets, and that they must tackle the individual and teach families cleanliness, and a few more things. The question now was, Would a dispensary further that work or not? If it did further it then it was a thing to be considered whether they should have it, but if it did not help it then the argument was gone. He did not know whether he had made the matter as clear to the meeting as it appeared to himself, but he hoped that they would come forward and help the movement. They were not overlapping on the twenty-four places where medical relief could be obtained. He held that it was time they were organizing. Dr. Carswell knew about the movement a little further back than he did, but he thought it was necessary to combine and organize the minor charities on the one hand, and they should certainly send representatives to the Board of this dispensary to see that no mischief would accrue.

Dr. LINDSAY STEVEN asked what Dr. Chalmers meant by minor charity, and if he would say that this new dispensary was to be a minor or a major charity.

Dr. CHALMERS said that a general hospital was a major charity, and he used that distinction because he thought they were aware that what was known as Hospital Sunday dealt with major charities, and there were twenty-four others, such as the Sick Children's Hospital, the Hospital for Diseases of Women, the Samaritan Hospital, and others.

Dr. HAMILTON said that if Dr. Chalmers had a copy of the letter that he had sent to the Lord Provost in the early part of the movement it would facilitate business, and it would do a very great justice to Dr. Chalmers himself if he would read it.

Dr. CHALMERS said that he had not the letter with him.

Dr. RUSSELL said that Dr. Chalmers asked them to believe that this was the only dispensary that would undertake to deal with the treatment of children, and his experience of dispensaries was that they had a large proportion of babies under a year, and that the mothers were thoroughly taught how to treat their children.

Dr. CHALMERS said it was quite easy to tell the difference. In France the babies were brought week after week, and there they were dealt with because they were well and not because they were ill, and the French dispensaries wanted to keep the children well.

Dr. LINDSAY STEVEN said it seemed to him that unless they got to the point they might go on all the evening, and he did not think they could continue a discussion of that kind much longer without something definite being put before the meeting. He thought that the Chairman should ask for a motion in favour of the dispensary to be put definitely before the meeting, and then they would be in a position to discuss it. Dr. Chalmers had kindly said that he would be glad to answer any questions that were put to him, and he thought it was only by asking a few questions that they would get at what was wanted. Dr. Chalmers had suggested that, as medical men, they should crowd the Boards of Directors of the different hospitals, and advise what was the proper thing to do. He would like to know who were invited to the original meeting and to the meeting in the Municipal Buildings. He knew that there were several men in the medical profession who were very anxious to go to that meeting and to express their views, but he understood from the little note in the newspapers that it was an invitation meeting by the Lord Provost, and therefore the general body of the practitioners were not there. The medical profession was the body upon whom these people were entirely dependent, and, if they took a stand, no dispensary could go on without their permission.

Dr. CHALMERS said he would answer the question by saying that he was not at the first meeting and was not asked to it.

Dr. A. W. RUSSELL said he could supplement the information. He had been asked to be present at the first meeting. It was a private meeting, the result of a conference between the Lord Provost and one or two other members of the council who were intimately associated with the district referred to. They had had several conversations on the matter, and he himself was only getting light gradually in connexion with it. No medical man was consulted at that time at all. The Lord Provost was so convinced of the desirability of the scheme that he asked a number of friends likely to support the movement from a social point of view and asked representatives of the workers connected with the various organizations in the Anderston district to be present. He himself was not present at that meeting, but he had understood that Dr. Chalmers and Dr. Carswell were asked to draw up a memorandum as the result of that meeting, which had now been in the hands of several of the secretaries. He himself was at the second meeting, and associated himself, at their request, with the movement. He had not been expecting to speak at this meeting, because Dr. Carswell had intended to be present; but he thought it was only fair at this stage of the meeting that he should tell them what the origin of the Health Association was. It did not include all the schemes that were in the minds of those who promoted the association. The dispensary was certainly in their minds, and was an essential part of the scheme. It was not by any means an open dispensary in the sense that they meant; it was to be a dispensary open only to those who were in the Anderston and associated district, strictly limited. It was to be a dispensary that was to be limited in this respect—that the circumstances of the people who applied for medical assistance

were understood to be those of the necessitous poor, and visitors were to certify that. They could take their own view of the matter, but he would not have associated himself with any scheme such as a rival scheme which was likely to take place. The regular medical mission was to be carried on under the old management, and Dr. Chalmers and Dr. Carswell would certainly never have agreed to act on such a committee for such a scheme as that.

Dr. Edmiston asked what was meant by the word "nursing." If they were looking after the infant mortality in the city it would not be by nursing. The foods were to blame, and if the Health Committee would turn its attention to that fact and expose those rancid foods in the market which had been retained in places for years before being given to an infant—[cries of "Question"]. He held that he was entitled to travel over the whole ground, and he asked the question as it seemed to him that, if nursing was the only thing to be done, it must be the food nursing, and that was the most important item to look at.

Dr. Grainger asked if the meeting was to understand that the Anderston Health Association was to be confined to those two departments that Dr. Chalmers had given them to understand had led him to join the Committee.

Dr. John Wright said he was glad to have the disclaimer both of Dr. Russell and Dr. Chalmers as to the idea of a general dispensary, but it was common talk amongst the profession that certain men had been appointed who were specialists in their own way. He had had a talk with one or two of them, and they had nothing to do with nursing or the treatment of either healthy or sick children or tuberculosis. He might tell them that the mind of one of the gentlemen, at any rate, was quite alive to the fact that it was to be an open dispensary that he was associating himself with. He wanted to know from Dr. Russell and Dr. Chalmers what were the appointments that had been made, and how far they were associated with the sick children's place.

Dr. Chalmers said he did not think that was a question that should be put. He was not there to stand a cross-examination on behalf of the Anderston Dispensary. One might talk for an hour, but a dispensary was a matter that existed entirely apart from the organization.

Dr. Grainger said he would preface a question by thanking Dr Chalmers for the information given and for the remarks that he had made, and the lines on which his mind was going were the lines on which he could support them; but he would like to know whether the Anderston Health Association Dispensary was to be confined to those departments that Dr. Chalmers spoke of, and if he could tell them that they were not going to trench on anything but a nursing association and tuberculosis and cases of destitution to mean, then he thought they would not be long in coming to a conclusion. Might he ask whether it was to be confined to that department?

Dr. Carswell said he was very eager that they should see eye to eye. Months ago there were quite a number of people interested in their movement, and they included specialists, or men who were taking up certain specialisms, but some left time they had retired. That was an indication that the Health Association were not eager to do anything against the interests of any individual or against the Society, and he thought it was also an indication that they wished to tell them where they stood.

Dr. J. Wishart Kerr said that he was a humble general practitioner, and he quite agreed with Dr. Grainger in what he had said. Dr Chalmers's answer was most unsatisfactory. Instead of this dispensary being confined to the objects that Dr Chalmers had mentioned, it was to be a general dispensary, and the general practitioners were once more to be shoved to the wall by the multiplication of medical charities. He begged to move:

That this meeting of practitioners here assembled [illegible] of opinion that the proposed Anderston District Health Association is unnecessary and that no medical practitioner should [illegible] with all the benefits.

Dr. J. Paterson seconded the motion and said that he had been at the very beginning of the opposition and more especially for this reason that they were simply being fleeced right, left. Not one of them had been called into consultation in the matter, and when they memorialized against it they got a very unsatisfactory answer.

Dr. Kerr said he was very sorry that Dr. Carswell was not present, because he would have liked to hear what he had to say. He (Dr. Kerr) had been in the Government service abroad at the time that Dr. Carswell's unfortunate action was brought against him, and he could assure him that afternoon that he had no idea of the sympathy that had been expressed for him abroad, and he was very glad to hear that the money for the defence fund had rolled in from Capetown to John O'Groats. He was sorry to hear that a gentleman like Dr. Carswell was at the bottom of a scheme like this. He (Dr. Kerr) had been invalided with an attack of blackwater fever, but he had recovered, and he had bought a practice in Glasgow, but found that he put his money in the wrong place. When the ladies were getting in lots of subscriptions they were coming down to his district and defeating him in his strenuous pursuit of the elusive florin. He wished to say with all due deference that he was sorry that Dr. Carswell was not present to hear his statement, that he thought Dr. Carswell was making a poor return for the generosity shown to him in his hour of trial. He had seen the circular that had been sent out. He did not know whose was the ingenious brain that had originally conceived what he might call this puff, but he had a great admiration for the capable minds that had gone on with the incubation of it. It was a most ambitious scheme, and if it went on, as he hoped it would not, the humble medical practitioners would only have themselves to blame; their expenses would be increased and their earnings lessened and their position would be rendered much worse in the future than at present.

Dr. Stockman said that before the meeting voted on this motion he should explain that the meeting had hardly a right to express its opinion regarding the social and Christian work which was being undertaken by this Health Association. They had nothing to do with that, and if they did that they were certain to be snubbed in reply, and they must confine themselves to an expression of opinion about the medical work which was proposed to be carried on. Perhaps Dr. Kerr might modify his motion in that respect.

Dr. Kerr said he had nothing to do with the social and Christian work, and he hoped he had not insulted anybody, but so far as he had gone amongst the people he had come to the conclusion that the proposed scheme was absolutely unnecessary.

Dr. Lindsay Steven said the only part of the motion that he had a little doubt about was the boycotting part at the end of it. Boycotting was all right, and he personally had no objection to it, but could they carry it out?

Dr. Kerr: Yes.

Dr. Lindsay Steven said he was not so sure of that. Dr. Kerr had been in South Africa for a good while. He was entirely in sympathy with Dr Kerr in opposing this movement so far as it proposed to open a dispensary in Anderston. He had no hesitation upon that point whatever. There should be no dispensary either for nursing or for tuberculosis, or for anything else opened in Anderston at the present moment, and he was quite in sympathy with Dr. Stockman in saying that they had nothing to do with the social and Christian work; but with regard to the establishment of another dispensary in the Anderston district they had a great deal to say, and he agreed with those speakers who had already said that without the medical practitioners that dispensary could not be opened. He thought they were right in coming forward unanimously and stating that the dispensary would not be opened, at least he hoped that would be the result of the meeting. It seemed to him absurd for Dr. Chalmers to come to a meeting like that at that time of day and say that because of nursing and consumption he was in favour of opening this dispensary. That was not what they wanted to do when they proposed to open it. He had admitted that men had resigned from the dispensary.

Dr. Chalmers said that he had not come there to answer questions; he had come for information.

Dr. Lindsay Steven said that Dr. Chalmers had given information that specialists had resigned from the dispensary. According to the information that he had it was to the effect that the original scheme was that they should not have the dispensary confined to nursing and tubercu-

losis and the other things that Dr. Chalmers had laid before the meeting, but a dispensary which was going to have on its staff specialists of one kind and another. That would not be a limited dispensary, and if there had not been opposition in the profession the scheme would have gone on on that wider basis; he hoped that by continuous opposition it would be wiped out altogether. It was absurd to say that they required another dispensary in the heart of Anderston within a halfpenny car ride of the Western Infirmary. Was there anything that an Anderston dispensary could do that the Western Infirmary could not do for the inhabitants of Anderston, even with regard to advising them about their sick babies? Did Dr. Chalmers come forward and say that they wanted a dispensary for those who were well?

Dr. CHALMERS: I spoke of the Continent.

Dr. LINDSAY STEVEN said he was not talking about the Continent; he was talking of Scotland. He was satisfied that a great deal could be said against these places in France that Dr. Chalmers spoke about. They did not want that Continental system of foundling hospitals, and therefore he said that he had heard no argument advanced and no information given by the gentlemen who had spoken in favour of this movement for the opening of a dispensary in Anderston. If Dr. Kerr could see his way to adopt an amendment of the motion, he would move:

> That this meeting of the medical profession in Glasgow and the West of Scotland and the Glasgow and West of Scotland Branch of the British Medical Association is of opinion that the establishment of an open dispensary in the Anderston district is unnecessary, and respectfully expresses the hope that the directors of the Anderston Health Association will reconsider their decision.

The meeting had nothing to do with the social and religious work of the Association, but had a great deal to do with this dispensary, and he hoped that they would pass this motion unanimously in one of the largest meetings that he had seen, showing the unanimity of the practitioners on the matter.

Dr. KERR said that, with the consent of his seconder, he would adopt the motion, but he objected to the word "respectfully" in it.

Dr. CHARLES ROBERTSON seconded the motion. Rightly or wrongly, medical men were coming to the opinion that there were far too many free dispensaries in the town. He did not think there was any profession that was so willing to do free and charitable work as their own. However, they would like to know in the first place that it was charitable work. Throughout the whole of the city in all the dispensaries and in all the hospitals there was absolutely no provision made to guarantee that the recipients of the medical bounty were proper recipients of that benevolence. He had endeavoured in his position in connexion with the Victoria Infirmary to get some method by which they could guarantee that those people who attended the dispensaries and hospitals were really worthy of receiving that medical benefit. There were two reasons why they could not get proper attention in that matter. The first reason was because the directors of the different large hospitals required an increased number of cases from year to year to send out in their annual report in order to gain increased subscriptions. It was an absolute necessity on the part of those directors to endeavour to show that they were having an enormous number of cases, and they would not adopt any method by which they could guarantee that it was the poor that they were treating. The feeling was rather that the poor should hardly be associated with the infirmaries, and that they were not charitable institutions. Working men who were paying their modicum weekly to the infirmaries were beginning to think that they were not getting a charity, but that they were paying for it, and that they could demand to be admitted; they demanded it as a right and as having already paid for it. That was the feeling that was getting abroad over the whole of the city, and it was being encouraged, because when they brought down their foot to demand entrance on that ground the directors were unable to refuse them, because it happened that they were able to write a letter and say, "If you don't allow these things we will withdraw our subscriptions." He maintained that the position was quite wrong, that they were charitable institutions, and that the medical profession attended these institutions in a charitable way. There was another point that the medical men had themselves to blame for largely, because of the tremendous desire on the part of medical men to get into positions in these infirmaries. The laymen were perfectly right to know their position. They said, "We can do what we like with medical men." They could introduce as many dispensaries as they thought proper, and they could fill them up with medical men; and whenever there was a vacancy in any one of these infirmaries there were forty or fifty medical men pushing and canvassing among the directors for the position, and these directors thought that they could do with the medical men as they wished. He suggested that a certain position should be defined by the medical men—what he meant was that all those positions should be so arranged by medical men that no one would feel aggrieved at any other man getting the job.

Dr. STOCKMAN: Is this a discussion on general matters?

Dr. CHARLES ROBERTSON said that he was supporting the motion. Dr. Chalmers had said that although this dispensary was under the Anderston Health Association, it was distinctly stated by him that the intention would be to extend it to Gorbals and Bridgeton and somewhere else afterwards, and therefore he had a right to some voice in this question of the Anderston Health Association, because they did not want any more of these free dispensaries unless they could guarantee that all that was done was for charity and for the poor. If they did that he did not think any one would object to do it, but if there was to be no effort whereby he could distinguish who were the poor and who were not, and if the directors were going to refuse absolutely to appoint some almoner whose duty it would be to see that these people were worthy of their benefit, he thought it was high time that the profession laid down the law and said, "Thus far shalt thou go and no further."

The CHAIRMAN asked if there was any amendment to the motion.

Dr. CHALMERS said that what he would suggest was not a direct amendment, but that the discussion be meanwhile adjourned and that the meeting now appoint a certain number of its own members to confer with the Committee which directed the Anderston Health Association.

Dr. WRIGHT: No, it is past that; they should have asked us at the very beginning.

On the motion being put to the meeting by a show of hands, the CHAIRMAN announced that it had been carried unanimously, or nearly so.

The following Committee was then appointed to form a deputation to approach the directors of the Anderston Health Association and acquaint them of the resolution that had been come to: The Chairman and the Secretaries (Drs. James Hamilton and Grant Andrew), Dr. Lindsay Steven, Dr. W. D. Macfarlane, Dr. Paterson, Dr. Grainger, Dr. Stockman and Dr. Kerr.

Vote of Thanks to Chairman.—On the motion of Dr. PATERSON a hearty vote of thanks was given to the President for his conduct in the chair.

ST. JOHN, NEW BRUNSWICK, BRANCH.

THIS Branch held a meeting for organization and the election of officers on December 14th, 1906.

Election of Officers.—The following officers were elected: *President*, M. MacLaren; *President elect*, Thomas Walker; *Vice-President*, James Christie; *Treasurer*, J. R. McIntosh; *Financial Secretary*, W. Warwick; *Recording Secretary*, J. Henry Scammell; *Representative*, W. C. Crocker (Fredericton); *Members of Council*: T. F. Sprague (Woodstocke, N.B.), B. Travers (St. John, N.B.), S. Skinner (St. John, N.B.), G. A. Baddy (St. John, N.B.), L. A. McAlpine (St. John, N.B.), G. T. Smith (Moncton, N.B.), F. H. Wetmore (Hampton, N.B.).

Meetings—The meetings are to be held quarterly on the first Thursday in February, May, August, and November. The annual meeting will be held in May.

LANCASHIRE AND CHESHIRE BRANCH.

COMBINED MEETING OF MANCHESTER AND SALFORD DIVISIONS.

ON Wednesday, November 28th, 1906, the members of the five Divisions of Manchester and Salford were invited to

attend a meeting at the Midland Hotel, Manchester. The invitation was issued by the Executive Committee of the Manchester (West) Division, in the hope that the meeting might be the commencement of a movement to secure closer union, and more definite co-operation in Association work, of the members of the local Divisions. A large and representative gathering was the result, and an animated and interesting discussion took place.

Combined Divisional Meetings.

The proposal brought forward by the West Division for consideration was embodied in the following resolution:

> That this meeting of the Manchester and Salford Divisions considers that the interests of the Association, and of the profession, will be best served by the discussion, in combined meetings, of all matters at present dealt with in ordinary Divisional meetings; and, further, is of opinion, that decisions arrived at by all such meetings should be referred to the Branch Council, and by them transmitted to the central authorities of the Association.

On the motion of Dr. Redmond (Chairman of the Manchester West Division), seconded by Dr. Milson Rhodes (South Division), Dr. Collins (South Division) was voted into the chair.

The Chairman, in thanking the meeting for electing him, said he hoped that the courteous action of Dr. Redmond in resigning his right, as Chairman of the Division which had called the meeting, of presiding over them, would impress all present with the fact that the meeting had been arranged in the interests of all Divisions, and not in that of the West Division alone. The British Medical Association had been a disappointment to him and to many others, inasmuch as it had not succeeded in getting the best out of its members. There were upwards of 19 000 members, and he did not think that those 19 000 men and women had ever let the public know, or even realized to themselves, what their weight is. In the Lancashire and Cheshire Branch 1,600 or 1,700 members were scattered over a wide area and loosely united by means of the Branch, but this union scarcely met all their requirements. Was the Branch efficient, as a portion of the Association, for collecting the ideas of the various Divisions within its area? Most of them wanted to unite the Divisions more closely without destroying their identity. Roughly, there were in Manchester and Salford about 700 medical men, and 362 of these (that was about half) were members of the Association. They wanted to get the other half, and become then a united body. After sketching in outline the constitution of the Association, the Chairman said that it seemed to him there existed three central authorities which were to some extent independent of, and, might be, antagonistic to one another; namely, the Association in general meeting, the Representative Meeting, and the Central Council. This arrangement appeared to him very adverse to the interests of members. In concluding, he thought that, as the resolution before the meeting contained two distinct proposals, it would facilitate discussion if it were divided into two parts, the first embodying the idea of grouping the Divisions, and the second dealing with the suggestion that the opinion of the Divisions should be discussed by the Branch Council. He asked speakers to remember that all members of the profession were "general practitioners." He would rule it out of order for any one to make use of the terms "hospital men," "consultants," or "specialists." He had much pleasure in calling on Dr. Redmond to move the first resolution.

Dr. Redmond (West Manchester) said that the Executive Committee of his Division felt that the work of the Divisional Committees was not appreciated or supported by the general body of members in the way that it should be. They had given the matter very careful consideration, and had come to the conclusion that some definite step further was needed to bring about some measure of reform which would tend to create a feeling of comradeship in fighting for that amelioration of the position of the profession which was the object of their efforts. The present condition of affairs appeared inadequate, and some change was required to insure a more intimate connection between the various Divisions, and to restore the *entente cordiale* which ought to prevail among them and which would prevent much of that undesirable action which now so frequently took place. His committee thought that one of the best means to such an end would be the institution of combined meetings, at which fuller discussion and freer intercourse would be possible: that the Association ought to be democratic rather than oligarchic, as at present. They viewed with dismay the financial extravagance which bid fair to convert a substantial credit balance into an adverse debit one, and felt very strongly that the men who paid the piper should have the privilege of calling the tune. He had much pleasure in moving:

> This this meeting of the Manchester and Salford Divisions considers that the interests of the Association and of the profession, will be best served by the discussion in combined meetings of all matters at present dealt with in ordinary Divisional meetings.

In seconding the resolution, Dr. Vipont Brown (South Manchester) said that he would not do so if he thought that the proposal could in any way lead to the loss of identity of the Divisions. His emphatic opinion was that the adoption of such a measure would not interfere with the autonomy or individuality of the Division.

Dr. G. H. Broadbent objected to the passing of any resolution by that meeting, a meeting which had no authority to legislate for the Divisions. It was ignoring the existence of the Divisions.

The Chairman explained that the meeting had been called by the West Division with the co-operation of the South Division, for the purpose of full and friendly discussion of a proposal which it was hoped would unite the Divisions to some extent in their work, and thus lead to better results than had obtained hitherto. The meeting was, of course, unofficial, and resolutions passed could not in the nature of things be binding on the Divisions, but would be submited to all local units for separate consideration. By friendly discussion in large meetings greater interest might be thrown into the working of the various Divisions jointly and individually. There was no desire to capture any particular Branch, or Division, or to interfere in any way with the autonomy of any section of the Association. There was the wish on the part of the two Divisions responsible for the meeting, that there should be greater co-operation and greater fellow feeling between the members, and for the great advantages which would accrue from closer union.

Dr. Sawers Scott proposed that a rider be added to the motion to the effect—

> That a Committee, composed of the chairmen and secretaries of Divisions, be formed to carry out the scheme.

Dr. Taylor (Salford) agreed with the feeling that joint meetings ought to be held, but thought that the words "all matters" would have to be deleted from the resolution. It would be impossible to discuss in combined meetings all the matters with which the Divisions had to deal—local finances and the election of officers, for instance. He moved that "matters of general interest" be substituted for "all matters" in the motion.

Dr. David Owen (Salford) agreed with Dr. Taylor, and was willing to second the amendment.

Dr. Brassey Brierley pointed out the need for precision. "Matters of general interest" was a very indefinite expression. Who was to decide what such matters were? He suggested the addition of the words, "to be determined on by a combined Committee."

Dr. Broadbent (North Manchester) moved an amendment:

> That this meeting approves of the formation of a Joint Committee of the Divisions of Manchester and Salford, and of joint meetings of those Divisions when required, providing that neither imperils the autonomy of the Divisions.

Dr. McGowan (North Manchester) seconded; and after some further discussion, which circled round the danger of interfering with the existence of the Divisions, and during the course of which Dr. David Owen (Salford) stated that, in his opinion, it might be, in the future, a wise step to unite the comparatively small divisional elements of Manchester and Salford into one large Division, which would be a more efficient force in the Association, but that, at present, the autonomy of the Divisions should be jealously guarded,

Dr. Redmond desired to say, before any resolution was put to the meeting, that there was no intention, express or

implied, on the part of the Executive Committee of the Manchester West Division, to do anything to imperil in the slightest degree the autonomy of the Divisions.

Dr. Broadbent's resolution was then put to the meeting and carried by a majority of 1, and thus became the substantive resolution.

Dr. TAYLOR proposed as an amendment:

That this meeting of the Manchester and Salford Divisions considers that the interests of the Association and of the profession will be best served by the discussion in combined meetings of matters of general interest to be decided upon by a combined Committee.

The amendment was carried by a large majority.

The meeting proceeded to discuss the constitution of a committee, to further the scheme of combination. Much difference of opinion was expressed, many thinking that a small committee of officials was all that would be needed, whilst others were strongly in favour of a larger body, which should include members other than those belonging to the divisional executives. Officialism, it was said, was already too rife in the Association. Eventually it was decided:

That a Committee, composed of the Chairmen and Secretaries of the various Divisions be formed to carry out this scheme.

It was proposed by the CHAIRMAN, seconded by Dr. REDMOND, and carried unanimously:

That it be an instruction to the Acting Secretary that he inform the various Divisions of Manchester and Salford, in the kindliest expressions he can, of the decisions come to by this meeting, and emphasize the fact that we do not in any way wish to interfere with the authority or individuality of any Division; and that we hope that this scheme will be the means of securing greater sympathy and good feeling between the various Divisions, and the general practitioners of the district.

Dr. MILSON RHODES proposed:

That all decisions arrived at by combined meetings of the Divisions should be referred to the Branch Council, and by them transmitted to the central authorities of the Association.

He thought all were agreed that at the present time the position of the medical profession was a dangerous one. Schemes of legislation were afoot which would powerfully affect the medical community, and it was a matter of common knowledge that they had little or no political power. Why had we not the same power as the Bar or the Church? Because combination was wanting, and *that* they must have if the profession was to take its proper position in the councils of the State. The value of a resolution sent up from a small area was comparatively little; but let that resolution be sent from a combined meeting of Divisions and reinforced by the approval of the Branch Council (the members of which were the picked representatives of the Divisions), and its worth and power were immensely increased. It could not then be ignored.

Dr. J. SKARDON PROWSE (West Manchester) seconded the resolution, and said the intention was that subjects of importance should be first discussed in separate Divisions, then receive fuller ventilation in combined meetings and in the Branch Council, whence they would issue with increased likelihood of proper attention being paid them in the discussions of the central authorities. Each Division would still have the power of forwarding their suggestions direct to head quarters.

Dr. MCGOWAN (North Manchester) thought that the resolutions of combined meetings would have no force until they had been referred to the Divisions again.

Dr. WOLSTENHOLME (Salford) considered that it would be an excellent plan if the Branch Councils, of their own initiative, were to discuss these matters first, in the presence of the Divisional representatives; but he would certainly at present oppose the sending of resolutions directly or indirectly to Branch Councils.

Dr. BRIERLEY (West Manchester) pointed out that Dr. Collins was the originator of the idea expressed in the resolution, and said that the intention of Dr. Collins and of himself and others who supported the motion, was that the work of the Divisions should be concentrated and made more useful than, as it was universally agreed, it could be under present conditions. Hopeless confusion reigned at present, and it was hard to know where to send work done, for consideration and for the purpose of putting it into effect.

Dr. TAYLOR said it was a definite rule of the Association that the Division submit their work, not to the Branch, but to the central authority.

Some further discussion took place, and then the motion was withdrawn, on the understanding that it would be brought before an early meeting of the combined Divisions.

Vote of Thanks to the Chairman.—The meeting broke up after passing a hearty vote of thanks to Dr. Collins for his conduct of the Chair.

METROPOLITAN COUNTIES BRANCH:

HAMPSTEAD DIVISION.

A MEETING of this Division was held on Friday, December 14th, 1906, at 5 p.m., at St. Peter's Hall, Belsize Square, N.W.

Confirmation of Minutes.—The minutes of the meeting of November 9th, 1906, were read and confirmed.

Apology for Non-attendance.—A letter was received from Dr. Heath Strange regretting inability to be present.

Election of Central Council.—The HONORARY SECRETARY read a resolution from the Dublin Division objecting to the proposed election of the Council by the Representative Meeting, on the ground that London would be over-represented.—Mr. ARMIT proposed and Dr. YELD seconded a resolution carried in Committee on November 30th, 1906:

That this Division approves of the present system of election of the Central Council, but repudiates the suggestion that the London area is over-represented on the Council.

—Mr. HUMPHREYS objected to the first part of the resolution as too binding, and proposed postponement of consideration of the Dublin resolution till the next meeting. This was not seconded—Mr. ARMIT's proposal was then put to the vote and carried.

General Meeting of the Association.—Mr. ARMIT referred to the difficulty in getting a quorum, and consequent waste of time and money. He appealed to members present to attend the meeting in the Strand on Friday, December 21st, 1906, at 3 p.m. If each Secretary of a Division in this Branch would guarantee to get together ten members, a quorum would be secured easily.

Annual Dinner.—The HONORARY SECRETARY read the report of the dinner given in the SUPPLEMENT of December 15th, 1906.

Premises Fund.—Dr. ANDERSON said that the idea was to create a reserve fund to provide a permanent room for meetings when held in Hampstead.—Mr. ARMIT thought that the Branch might subscribe to such an object.—Mr. HUMPHREYS thought it would be necessary to send out a special circular early next year on the subject.—Consideration was postponed till next meeting.

Finance of the Division.—The HONORARY SECRETARY stated that he estimated the total expenses for 1906 at £45. A full financial report would be submitted later on. He had appeared before the Finance Committee of the Branch on account of the extraordinary expenditure of the Division; the usual allowance to Divisions being £20 only. In future, when any matter requiring additional expenditure was to be dealt with, it would be necessary to send an estimate of some kind to the Branch Finance Committee.

Medical Men and Chemists.—The discussion that was to have taken place on the relation between the medical man and the chemist was postponed in order to allow time to deal with certain matters in connexion with the Poor Law submitted to Divisions in the SUPPLEMENT of December 8th, p. 307.

Poor Law.—Dr. CLAUDE TAYLOR, Medical Officer of the Hampstead Workhouse, said that the Poor-law Service in Hampstead differs from that elsewhere, as Hampstead was the only metropolitan district which has so few paupers that they can all be looked after in one institution, the medical work of which can be carried on by one non-resident practitioner. Personally he entirely agreed with Proposition B 1, "that the general principles of Poor-law infirmaries should be brought into conformity with those prevailing in well-conducted general hospitals."—Dr. FORD ANDERSON asked if the infirmary could

not be made more public, and if use might not be made of the clinical material. At present any inquiry in connexion with Poor law infirmaries seemed to be resented. To what extent were patients admitted to the infirmary who could afford to pay? Do the Poor law authorities pay hospitals for taking out-patients for them?—Dr. TAYLOR, in reply to Dr Anderson said that the guardians now did not permit the use of the infirmary by medical societies for clinical purposes. They had done so, but not recently. The Poor Law subscribes to certain hospitals. Personally he rarely had occasion to send patients to hospitals.—Dr. ANDERSON: Why not pay when a patient is sent? Mr. HUMPHREYS objected to the want of publicity in connexion with the Poor Law. Abuse certainly went on, and the general management of infirmaries was in some cases abominable. The nursing in some institutions was appalling. It was ridiculous that these institutions should be simply private hospitals belonging to the guardians. He hoped that emphasis would be laid on the necessity for proper medical management of infirmary cases.—Dr. TAYLOR thought that the treatment of the sick should be dissociated from the care of the healthy or able-bodied paupers.—Dr. SHARMAN deplored the waste of clinical material. Might not consultants be called in occasionally for exceptional cases, and arrangements be made for clinical lectures?

The following resolutions were eventually passed:

1. That, in the opinion of this Division, it should be possible to utilize the clinical material in infirmaries for educational purposes.
2. That the management of the institution for the sick should be to a much greater extent independent of that of the workhouse.

In order to allow time for further discussion of this subject, and also of an expected memorandum on provident dispensaries from the Medical Charities Committee of the Branch, the meeting was adjourned till Monday, January 7th, at 3.30 p.m., at 41, Belsize Park, by kind invitation of Dr. Ford Anderson.

TOTTENHAM DIVISION.

A MEETING of this Division was held at Tottenham Hospital on December 12th, 1906 at 4.30 p.m., Dr. LEONARD GRANT in the chair.

General Meeting.—Read letter from Mr. Armit requesting ten members from each Division to attend the General Meeting. Eight members promised to attend if possible.

Election of Central Council.—Read letter from Dublin Division regarding election of the Council. Resolved that it would be invidious for this Division, being a London Division to offer any opinion on the subject.

Postal Medical Officer for Tottenham.—The Executive Committee brought the affair of the postal medical officer for Tottenham before the meeting. This gentleman was called upon to resign after twenty-four years' service by the postal authorities for no other reason than that of his age, although no such stipulation had been made at the time of his appointment. It was resolved that a circular be sent to every practitioner in Tottenham and Edmonton earnestly requesting them not to apply for nor accept the appointment.

Membership of the Association.—Dr. TWEEDIAN opened a discussion on the best methods for increasing the membership of the Association and inducing outside medical practitioners to join. He commenced by reciting the returns which a member received for his annual subscription of £1 1s., and the advantages derived from being a member of the Association. The privilege of attending the annual meetings, and of having everything arranged for his comfort; the use of the library and committee rooms at the office in the Strand; the receipt weekly of the Journal, containing information on all important medical matters, connected with the Association or not; the use of the Journal as a medium for correspondence, inquiry, and advertisement were all readily enjoyed. Next the great advantages to be derived from the present system of Divisions and Branches, which were tending here to be scientific meetings and more devoted to the discussion and reading on matters which interested them in general practice. Perhaps the greatest gain to all who attended the meetings was meeting friends and neighbours socially and getting to know them personally, which more than anything else helped to diminish jealousy and bickering and to make men loyal to each other and to the ethics of the profession. The Divisional meetings provided ample opportunities for discussion on all subjects interesting the members locally, and were used largely for bringing forward any circumstances affecting the interests of an individual member which he might wish to have discussed and to gain the opinion and co-operation of his friends and neighbours. Parliamentary Bills affecting the interests of the profession were also discussed at such meetings, and voted on, and the Representative of the Branch or Division attended the annual meeting of the Association, and recorded his vote on these matters in accordance with the votes of the majority of his Division. Private matters affecting the interests of an individual could be ventilated at a meeting, and thus also be brought before the Ethical Committee of the Association. Here, again, the advice and assistance of the Medical Secretary could always be obtained. At present the British Medical Association was a quite distinct body from the General Medical Council, and exercises no direct influence on it, and had no adequate representation on the Council. But no doubt with the reform which would ensue if the Medical Acts Amendment Bill became law, such a condition would not be allowed to continue, and the bulk of the members who formed the Association would be given a definite and proper position on the Council which made laws for them, and governed their conduct. In this connexion a comparison was made with the Incorporated Law Society, the Executive Council of which consisted entirely of general practitioners and noted counsel or barristers. That society helped its members by suppressing illegal practice, and had also a regulated tariff of fees which could always be recovered in court for work done. As to methods for inducing fresh members to join, it was deplored that in this Division, as elsewhere, only about one in three of men in actual practice were members of the Association. Until all practitioners were members the Divisions would never acquire the strength and unity and exert the influence which it was quite possible for them to obtain for the good of all members. It was suggested that these outside practitioners should be approached by circulars repeatedly, and the advantages of membership of a Division should be put in large print constantly in the BRITISH MEDICAL JOURNAL and other publications. Personal persuasion and invitation to such of their friends as they knew were not yet members was sometimes successful. It ought to be made obligatory for all newly qualified young men to join the Association, and perhaps a means which might tend to bring this about would be to endeavour to get the teaching and examining bodies of the various schools, universities, and colleges to induce their students to join on qualification, and to post notices in the club rooms and in the vestibules of the schools and hospitals, and also in the prospectuses. In the reader's opinion the strongest point in advocacy of the question of medical protection and defence being taken up by the Association and not left to outside societies, would be the fact that every young qualified man would then be compelled to join the Association so as to secure protection and defence. All such young men now joined either one of these two protection societies immediately on entering work and practice, and would, if such defence and protection could only be obtained through the Association, have no alternative but to become members.

It was resolved that the Medical Secretary be requested to ascertain whether it would not be possible for the councils of teaching bodies to carry out the proposals of Dr. Tweedian, namely, to induce their students to join on qualification, and to put notices in the club rooms and vestibules of schools and hospitals, and also in the prospectuses.

LANCASHIRE AND CHESHIRE BRANCH: MANCHESTER (SOUTH) DIVISION.

A CORRECTION

In a letter from the Honorary Secretary of the Manchester (South) Division to the Honorary Secretary of the Manchester South Division which was published in the SUPPLEMENT of December 29th, 1906 p. 551 the word "Division" in the first line of the last resolution should be "Division." We regret the misprint, but we consider it would not have been one as having any particular importance were it not that some sinister meaning seems to be attached to it in certain quarters. We beg leave, there

fore, to assure all whom it may concern that "Division" was correctly written "Divisions" in the report sent to us for publication, and that the responsibility for the accidental transformation of a noun plural into a noun singular lies on our shoulders. That it is a misprint and nothing more might have been gathered from the fact that the word is correctly printed at the beginning of the letter.

☛ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, January 23rd, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,
January 3rd, 1907. *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m., except on Saturdays, when they close at 2 p.m. Members can have their letters addressed to them at the office.

BRANCH AND DIVISION MEETINGS TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH.—A scientific meeting of this Branch will be held at 4 p.m. on Wednesday, January 23rd, at the Medical Institution, Liverpool. Dinner at Adelphi Hotel at 7 p.m.—F. CHARLES LARKIN, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next meeting of the Lambeth Division will be held at the Lambeth Infirmary, Brook Street, Kennington Road, S.E., on Friday, January 25th, at 4 p.m. A meeting of the committee will be held at 3.30 p.m. sharp, prior to the general meeting. Agenda: (1) Minutes of the last meeting. (2) George J. Jenkins, F.R.C.S. (Surgeon to the German Hospital), will read a paper on abscesses in the peritoneal cavity. (3) Dr. M. H. Quarry (Medical Superintendent of the Lambeth Infirmary) will show cases of interest in the wards of the Infirmary.—W. ALEXANDER ATKINSON, M.D., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: MARYLEBONE DIVISION.—A special meeting of this Division will be held at the rooms of the Medical Society, Chandos Street, W., on Thursday, January 24th, at 8.30 precisely. The second of a series of discussions on economic problems in the practice of medicine will take place. The resolution submitted will be: "That the development of properly-organized systems of mutual assurance for the costs of illness offers the most readily-available method of reducing the admitted evils of excessive medical charity and the misuse of hospitals." The debate will be opened by Dr. R. C. Buist, Mr. H. W. Armit, Mrs. Scharlieb, Dr. L. S. McManus, and Dr. J. H. Keay. Special invitations will be sent to all practitioners resident in the Marylebone Division whether they are members of the Association or not. Any member of the profession will be admitted on presentation of his card. The Honorary Secretary will be glad to receive the names of those willing to take part in the debate.—COMYNS BERKELEY, M.B., B.C.Cantab, M.R.C.P., Honorary Secretary and Treasurer, 53, Wimpole Street, W.

METROPOLITAN COUNTIES BRANCH: TOTTENHAM DIVISION.—A meeting of the Tottenham Division (with the St. Pancras and Islington Division) will be held at the rooms of the Hornsey Conservative Association, opposite Finsbury Park Station, on Wednesday, January 9th, at 9.15 p.m. Dr. Calvert will read a paper on some new remedies.

ULSTER BRANCH.—The winter meeting of this Branch will be held in Belfast, on Wednesday, January 30th. Members having cases to show or communications to make to the meeting are requested to send me particulars of the same before January 20th.—CECIL SHAW, M.D., Honorary Secretary, 18, College Square East, Belfast.

YORKSHIRE BRANCH: BRADFORD DIVISION.—A general meeting of this Division will be held at the Eye and Ear Hospital, Bradford, on Tuesday, January 8th, at 8.30 p.m.—JAMES METCALFE ANDREW LITTLE, Honorary Secretaries.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,707 births and 5,780 deaths were registered during the week ending Saturday, December 22nd 19·6. The annual rate of mortality in these towns, which had been 15·8, 15·8 and 17·4 per 1,000 in the three preceding weeks, further rose to 19·1 per 1,000 in the week under notice. The rates in the several towns ranged from 5·7 in Kings Norton, 6·7 in Northampton, 7·8 in Hornsey, 9·6 in Tynemouth, 10·0 in Devonport, 11·3 in Wallasey, and 12·0 in Willesden, to 25·1 in Stockport, 25·3 in South Shields, 25·6 in Warrington and in Rotherham, 25·7 in Stockton on Tees, 25·9 in Oldham, 27·0 in Newport (Mon.), 28·3 in Smethwick, and 30·5 in Rochdale. In London the rate of mortality was 20·8 per 1,000, while it averaged 18·3 in the seventy-five other large towns. The death-rate from the principal infectious diseases in these towns averaged 1·4 per 1,000; in London this death-rate was equal to 1·1 per 1,000, while among the seventy-five large provincial towns the rates ranged upwards to 4·0 in Hull, 4·3 in Leicester, 4·6 in Reading, 4·8 in Smethwick and in Rochdale, 5·3 in Warrington, 6·0 in Wigan, 7·0 in South Shields, and 9·4 in Rotherham. Measles caused a death-rate of 2·7 in Plymouth, 2·8 in Hull and in South Shields, 2·9 in Leicester, 3·2 in Smethwick, 3·3 in Oldham, 3·8 in Warrington, 4·3 in Rotherham, and 4·9 in Wigan and in Rochdale; scarlet fever of 1·6 in Handsworth (Staffs.), and 1·7 in Rotherham; diphtheria of 1·1 in Walsall, 1·5 in Grimsby and in Warrington, 1·6 in Smethwick, and 4·6 in Reading; whooping-cough of 1·1 in Huddersfield, 1·5 in Preston, 1·6 in Middlesbrough, 2·3 in South Shields, and 2·6 in Rotherham; "fever" of 1·2 in Wigan; and diarrhœa of 1·5 in West Bromwich. No fatal case of small-pox was registered during the week in any of the seventy-six towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients under treatment in these hospitals and in the London Fever Hospital, which had been 4,053, 4,062, and 3,996 at the end of the three preceding weeks, had further declined to 3,807 on Saturday, December 22nd; 334 new cases were admitted during the week, against 401, 419, and 359 in the three preceding weeks.

During the week ending Saturday last, December 29th, 1906, 5,721 births and 5,988 deaths were registered in seventy-six of the largest English towns. The annual rate of mortality in these towns, which had been 15·8, 17·4 and 19·1 per 1,000 in the three preceding weeks, further rose to 19·7 per 1,000 last week. The rates in the several towns ranged from 9·8 in Handsworth (Staffs.), 10·6 in Devonport, 11·3 in Grimsby, 11·6 in Willesden, 11·8 in Burton-on-Trent, and 12·0 in St. Helens, to 25·1 in Hanley, 26·0 in Middlesbrough, 27·4 in Oldham and in Sunderland, 28·1 in South Shields, 28·3 in Norwich, 28·8 in Newport (Mon.), 29·0 in Rotherham, 29·9 in Merthyr Tydfil and 31·7 in Rochdale. In London the rate of mortality was 20·4 per 1,000, while it averaged 19·4 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·4 per 1,000 in these towns; in London this death-rate was equal to 1·3 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 2·8 in East Ham and in South Shields, 3·3 in Rhondda, 3·5 in Merthyr Tydfil, 3·6 in Wigan, 4·0 in Norwich, 4·1 in Oldham, and 6·0 in Hull. Measles caused a death-rate of 1·2 in Sheffield, 1·3 in Norwich, in Leicester, and in Birkenhead, 1·6 in Huddersfield, 1·7 in Rotherham, 1·8 in Plymouth, 1·9 in South Shields, 2·4 in Wigan and in Rochdale, 2·6 in Oldham, and 4·4 in Hull; diphtheria of 1·2 in Blackburn and in Rhondda and 1·3 in Walthamstow; whooping-cough of 1·2 in East Ham, 1·3 in Norwich, and 1·5 in Willesden; "fever" of 1·2 in Rhondda; and diarrhœa of 2·8 in Merthyr Tydfil. The mortality from scarlet fever showed no marked excess in any of the large towns. One fatal case of small-pox was registered in Hull, but none in any other of the seventy-six towns. No small-pox patients were under treatment during the week in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 4,062, 3,986, and 3,807 at the end of the three preceding weeks, had risen again to 3,846 at the end of last week; 237 new cases were admitted during the week, against 419, 359, and 334 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, December 22nd, 1906, 921 births and 681 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18·4 and 18·1 per 1,000 in the two preceding weeks, rose again to 19·9 per 1,000, and was 0·8 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 12·0 in Leith and 17·9 in Edinburgh to 21·1 in Perth and 25·3 in Dundee. The death-rate from the principal infectious diseases averaged 2·0 per 1,000 in these towns, the highest rates being recorded in Dundee and Perth. The 330 deaths registered in Glasgow included 2 from scarlet fever, 5 from diphtheria, 14 from whooping-cough, 2 from "fever," 9 from diarrhœa, and 5 from cerebro-spinal meningitis. Four fatal cases of diarrhœa, 3 of diphtheria, and 2 of scarlet fever were recorded in Dundee; 3 of measles, 2 of whooping-cough, and 2 of diarrhœa in Aberdeen; and 3 of diarrhœa in Edinburgh.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: THOMAS H. VICKERS, Surgeon, to the *Sphinx*, additional, January 8th, and on recommissioning, undated; ROBERT H. ATKINS, M.B., Surgeon, to the *Lapwing*, additional, January 8th, and on recommissioning, undated; EVELYN R. TOWNSEND, Surgeon, to the *Imogene*, additional, and on recommissioning; FREDERICK C. ROBINSON, Surgeon, to the *Sapphire*, to be lent to the *Tune*, January 9th; HERBERT STONE, M.B., Surgeon, to the *Woodlark*, January 8th; GERALD C. CROSS, Surgeon, to the *Wildfire*, additional, for the *Endymion*, January 8th; GEORGE D. BATEMAN, Surgeon, to the *Grange*

and for the *Caroline*, January 2th: GERALD NUNN, Surgeon, to the *Britannia*, on recommissioning, undated: JAMES M. A. HOLMES, Surgeon, to the *Sutlej*, on recommissioning, undated: EDWARD COOPER, Staff Surgeon, to the *Sutlej*, January 3rd: GEORGE S. DUNCAN, Surgeon, to the *Vivid*, December 22nd, 1906: EDWARD S. WILKINSON, M.B., Surgeon, to the *Victory*, December 22nd, 1906: WILLIAM G. K. BARNES, Fleet Surgeon, to the Royal Marine Depot, Deal, January 1st.

ARMY MEDICAL STAFF.

SURGEON-GENERAL I. A. CLERY, C.B., M.B., from temporary half pay, is placed on retired pay December 21st, 1906. He entered the service as Assistant Surgeon, April 1st, 1871, became Surgeon, March 1st 1873; Surgeon-Major, April 1st, 1883, Brigade-Surgeon, March 10th, 1890; Colonel, March 13th, 1899; and Surgeon-General, May 23rd 1902. He was placed on temporary half pay on account of ill-health, December 29th, 1905. He has been Principal Medical Officer at Woolwich, of a general hospital in South Africa, on the lines of communication in South Africa, in the Transvaal and Orange River Colony, of the Second Army Corps, and of the Southern Command. His war record is as follows: The Soudan Expedition in 1884-5 in charge of Abu Dom Field Hospital (medal with clasp, and Khedive's brouze star); the Nile Expedition in 1898 (mentioned in dispatches, British and Egyptian medals); the South African war, 1899-1902, as a Principal Medical Officer on the Lines of Communication, being present at the relief of Ladysmith, in operations in the Transvaal and Orange River Colony, and on the Zululand Frontier of Natal. He was several times mentioned in dispatches, made a C.B., and received the Queen's medal with six clasps and the King's medal with two clasps.

ROYAL ARMY MEDICAL CORPS.

THE following Lieutenants are confirmed in that rank: PERCY FARRANT, AUGUSTUS S. WILLIAMS, TIMOTHY W. O. SEXTON.

INDIAN MEDICAL SERVICE.

Colonel P. H. BENSON, M.B., Madras, Principal Medical Officer, Bangalore and Southern Brigades, is transferred in the same capacity to the 5th (Poona) Division.

Colonel O. TODD, M.B., R.A.M.C., Principal Medical Officer, 6th (Poona) Division, is transferred in the same capacity to the Bangalore and Southern Brigades.

Lieutenant T. J. WRIGHT, R.A.M.C., Colaba, transferred to Belgaum, is appointed a specialist in the prevention of disease from September 11th.

Major G. W. JENNEY, M.B., Mhow, is appointed specialist in the prevention of disease, from November 26th, 1906.

Major B. G. SEATON, Bengal, is placed on special duty under the Director-General, Indian Medical Service.

Lieutenant-Colonel F. W. THOMSON, M.B., Bengal, is placed on special duty at the Central Research Institute, Kasauli.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-MAJOR J. W. H. DIXON, M.D., 1st Devonshire Regiment, is granted the honorary rank of Surgeon-Lieutenant-Colonel, November 10th, 1906; he resigns his commission from November 11th, 1906, retaining his rank and uniform.

Surgeon-Major M. MACKENZIE, the Highland Regiment, to be Surgeon-Lieutenant-Colonel, October 23rd, 1906.

Surgeon-Lieutenant-Colonel S. A. S. DALY, 7th Lancashire (the Manchester Artillery), is granted the honorary rank of Surgeon-Colonel, November 27th, 1906; he resigns his commission, retaining his rank and uniform, November 28th, 1906.

ROYAL ENGINEERS (VOLUNTEERS).

SURGEON-CAPTAIN H. HALTON, M.B., 1st Lancashire, resigns his commission, November 15th, 1906.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

FREDERICK WHALLEY, M.B., to be Lieutenant in the Leeds Companies, Northern Command, November 7th, 1906.

Lieutenant J. WALKER, M.B., Glasgow Companies, Scottish [illegible] to be Captain, December 14, 1906.

Lieutenant R. A. GRAHAM, South Wales Border Bearer Company, [illegible] November 14th, 1906.

Lieutenant-Colonel V. MATTHEWS, London Companies, London [illegible] granted the honorary rank of Colonel, November 27th, 1906.

Lieutenant E. J. E. EVANS, M.B., Welsh Bearer Company, to be Captain, September 7th, 1906.

VOLUNTEER RIFLES.

[illegible] Lieutenant-Colonel J. A. GRAY, 5th Volunteer Battalion the Royal [illegible] Lothian Regiment, is granted the honorary rank of [illegible] November 7th, 1906; he resigns his commission, [illegible] November 7th, 1906.

Honorary Major M. [illegible], M.B., to be Surgeon-Lieutenant in the [illegible] Battalion the Northumberland Fusiliers, November [illegible], 1906.

[illegible] J. F. PORTER, M.D., 2nd Volunteer Battalion Alexandra, Princess of Wales's Own (Yorkshire Regiment), is granted the honorary rank of [illegible] Volunteer Regulations, [illegible].

[illegible] 3rd Volunteer Battalion the [illegible] to be Surgeon-Captain, November 13th, 1906.

[illegible] Major and Honorary Surgeon-Colonel (Staff, [illegible] Lothian Regiment, December 11th, 1906.

[illegible], M.B., 1st Volunteer Battalion (Derbyshire) [illegible], resigns his commission, November [illegible], 1906.

[illegible] and Honorary Surgeon-Colonel (Staff, [illegible] Lothian Regiment, to be Surgeon-Colonel, November 24th, 1906; he retains his rank and uniform.

Surgeon-Lieutenant T. D. H. HOLMES, M.D., 3rd Volunteer Battalion the Bedfordshire Regiment, resigns his commission, November 17th, 1906.

Surgeon-Major and Honorary Surgeon-Lieutenant-Colonel W. POOLEY, 2nd Volunteer Battalion the Lancashire Fusiliers, resigns his commission, retaining his rank and uniform, November 14th, 1906.

Surgeon-Lieutenant R. W. MEIKLE, 1st Roxburgh and Selkirk (the Border) Volunteer Rifle Corps, to be Surgeon-Captain, July 7th, 1906.

Surgeon-Lieutenant-Colonel J. MACLACHLAN, M.B., 3rd (Dumfries) Volunteer Battalion the King's Own Scottish Borderers, is granted the honorary rank of Surgeon-Colonel, November 1st, 1906; he is retired under Para. 103 Volunteer Regulations, retaining his rank and uniform, November 2nd, 1906.

Surgeon-Lieutenant N. MACNAIR, M.D., 4th Volunteer Battalion the Cameronians (Scottish Rifles), to be Surgeon-Captain, November 6th, 1906.

Surgeon-Major D. HEPBURN, 2nd Volunteer Battalion the Welsh Regiment, to be Surgeon-Lieutenant-Colonel, October 14th, 1906.

ARTHUR W. SHEA (late Captain), to be Surgeon-Lieutenant in the 2nd Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), November 9th, 1906.

Surgeon-Captain E. M. CALLENDER, the Prince of Wales's Own, 12th Middlesex (Civil Service) Volunteer Rifle Corps, to be Surgeon-Major, November 23rd, 1906.

Surgeon-Lieutenant C. A. C. SMELT, M.B., 21st Middlesex (the Finsbury) Volunteer Rifle Corps, to be Surgeon-Captain, November 27th, 1906.

HAROLD F. HORNE, M.B., to be Surgeon-Lieutenant in the 2nd Volunteer Battalion the York and Lancaster Regiment, November 6th, 1906.

Supernumerary Surgeon-Lieutenant-Colonel T. PHILIP, M.B., 1st (Renfrewshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders) (Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Clyde Volunteer Infantry Brigade), is granted the honorary rank of Surgeon-Colonel, November 30th, 1906.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BANBURY: HORTON INFIRMARY.—House-Surgeon. Salary, £20 per annum.

BATH: ROYAL UNITED HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

BIRMINGHAM: QUEEN'S HOSPITAL.—House Physician. Salary, at the rate of £50 per annum.

BOURNEMOUTH ROYAL NATIONAL SANATORIUM.—Resident Medical Officer. Salary, £10 per month.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary, £80 per annum, rising to £100 on re-election for the second year.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £50 per annum, eligible for election as House Surgeon after six months at £65 per annum.

CARMARTHEN: CARMARTHEN, CARDIGAN, AND PEMBROKE JOINT COUNTIES LUNATIC ASYLUM.—Junior Assistant Medical Officer. Salary, £150 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician (male). Salary, at the rate of £50 per annum.

DOWNPATRICK: DOWN DISTRICT ASYLUM.—Junior Assistant Medical Officer (male). Salary, £130, rising to £150 per annum.

EDINBURGH SCHOOL BOARD.—Medical Officer. Salary, £400 per annum.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—Assistant House-Surgeon. Honorarium, £20 for six months.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians. Honorarium, £25 for six months each.

LIVERPOOL STANLEY HOSPITAL.—House-Surgeon. Salary, £60 per annum.

LONDON LOCK HOSPITAL.—House Surgeon to the Male Hospital, Soho. Salary, £80 per annum.

MANCHESTER: ST. MARY'S HOSPITAL.—District Obstetric Officers.

MIDDLESEX KING EDWARD VII SANATORIUM.—(1) Pathologist; (2) Two House Physicians. Salaries for (1) £200 per annum; and for (2) at the rate of £40 per annum.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Male Assistant House Surgeon. Honorarium £20 for six months.

PADDINGTON GREEN CHILDREN'S HOSPITAL.—(1) Physician to Out-Patients. (2) Surgeon to Throat and Ear Department.

PADDINGTON UNION.—First Assistant to the Medical Superintendent of the Infirmary and Assistant Medical Officer of Workhouse. Salary £70 rising to £90 per annum.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL. House Surgeon. Salary, £100 per annum.

ROYAL DENTAL HOSPITAL AND SCHOOL OF DENTAL SURGERY, Leicester Square, W.C.—Demonstrator of Practical Dental Surgery. Stipend £50.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.—Clinical Assistants.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.—(1) Medical Registrar, (2) Dental Surgeon, (3) Medical Officer in charge of electrical department.

SHEFFIELD UNIVERSITY.—Professor of Pathology.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House Physician. Salary, £100 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon. Honorarium, £50 for six months.

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—(1) Senior Resident Officer. (2) Two Assistant Resident Medical Officers. Salaries, for (1) £200 and for (2) £80 per annum

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—(1) Surgeon to Out-patients, (2) Senior Resident Medical Officer. Salary, £105 per annum

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY. House-Surgeon. Salary, £70 per annum.

WORCESTER GENERAL INFIRMARY.—House Physician. Salary, £80 per annum.

WREXHAM INFIRMARY.—Resident House-Surgeon. Salary, £80 per annum

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies for Certifying Factory Surgeons at Midsomer Norton (Somerset), Elstree (Hertford), Bedford (Bedford), and Wantage (Berks).

APPOINTMENTS.

ATTERIDGE, J. J., M.D., M.Ch.R.U.I., District Medical Officer of the Parish of Kensington

BECK, E. A. A., M.B., R.C.Cantab., District Medical Officer of the Bromyard Union.

BUTLER, T. Harrison, M.A., M.D., B.Ch.Oxon., M.R.C.S., L.R.C.P., Honorary Ophthalmic Surgeon to the Coventry and Warwickshire Hospital

FORTY, A. Alan, L.D.S.Eng., Honorary Assistant Dental Surgeon to the Leeds Public Dispensary.

GRACH, R. N., M.R.C.S., L.R.C.P., District Medical Officer of the Chipping Norton Union.

GREEN, Lieutenant-Colonel, I.M.S., Clinical Assistant to the Chelsea Hospital for Women

HOBSON, H. Okerton, M.D.Edin., Examiner in Materia Medica, Government School of Medicine, Cairo.

KIRKBY, R. C., M.R.C.S., L.R.C.P., Assistant Medical Officer of the Wandsworth Union Workhouse

KYNOCH, I. A. C., M.B., F.R.C.P., F.R.C.S.Ed., Extern Examiner in Midwifery, University of Durham

LAWRENCE, A. G., M.D.St. And., Medical Officer of Health, Chepstow Urban District.

M'KINNON, M., M.B., Ch.B.Edin., House Surgeon to the Cardiff Infirmary.

OSMOND, C. H., L.F.P.S.Glas., L.S.A., District Medical Officer of the Parish of Bristol.

PHIPPS, H. H., M.R.C.S., L.R.C.P., Medical Officer of the Swinton Schools of the Township of Manchester.

REES, F. J., M.R.C.S., L.R.C.P., Resident Assistant Medical Officer to the Workhouse and Schools of the West Ham Union.

SHEPPARD, Amy, M.B.Lond., D.P.H.Cantab., Ophthalmic Surgeon to the Canning Town Hospital.

SQUIRE, F. H., M.R.C.S., L.R.C.P., Medical Officer of Health of the Borough of Pudsey.

THOMPSON, George H., M.R.C.S., L.R.C.P., Honorary Medical Officer to the Devonshire Hospital, Buxton.

THOMPSON, Theodore, M.D.Cantab., M.R.C.P., F.R.C.S.Eng., Physician to the Poplar Hospital for Accidents.

TURNBULL, Miss J. H., M.D., B.S.Lond., Surgical Registrar to the Royal Free Hospital.

TURNER, R. G., Major, I.M.S., Clinical Assistant to the Chelsea Hospital for Women.

WATKINS, W. R. Spencer, M.B., Ch.B.Edin., Resident Medical Officer of the Cardiff Infirmary

WATSON, George W., M.D., M.R.C.P.Lond., M.R.C.S.Eng., Honorary Pathologist to the Leeds Public Dispensary.

WEBSTER, Harold G., M.R.C.S.Eng., L.R.C.P.Lond., District Medical Officer and Public Vaccinator to the Foleshill District and Lowe and Stoke Districts of the Foleshill Union, Warwickshire.

DIARY FOR THE WEEK.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 p.m.—Drs. G. Newton Pitt, M. S. Pembrey, and R. W. Allen: Observations upon Cheyne-Stokes Respiration. Drs. Frederick Taylor, M. S. Pembrey, A. P. Beddard, and Herbert French: On Observations upon Two Cases of Cheyne Stokes Respiration. Special demonstrations (epidiascope and microscopes): Mr. Alexander MacLennan: On the Various Phases of the Spirochaetes of Syphilis and Yaws. Mr. J. Jackson Clarke: On the Bodies described by him in 1895 as Protozoa in Syphilitic Lesions; with subsequent observations.

SOCIETY FOR THE STUDY OF INEBRIETY, 11, Chandos Street, W., 8 p.m.—Discussion on the Education of the Public respecting Alcohol in its Relation to Physical Deterioration, to be opened by Mr. W. McAdam Eccles (with lantern demonstrations).

WEDNESDAY.

DERMATOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, 5.15 p.m. precisely. Cases and specimens.

HUNTERIAN SOCIETY, 4 p.m.—Clinical afternoon at St. Bartholomew's Hospital.

THURSDAY.

BRITISH GYNAECOLOGICAL SOCIETY, 20, Hanover Square, W., 8 p.m.—The annual general meeting. The President's valedictory address.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 p.m.—The following papers will be read: Dr. Francis H. Hawkins: A Case of Acute Pneumonia, with Abscess of the Lung, and Acute Endocarditis. Dr. Forsyth: A Fatal Case of Myxoedema with Changes in the Parathyroid. Dr. Langmead: Introduced by Dr. Garrod: The Association of Tetany with Dilatation of the Large Intestine.

POST-GRADUATE COURSES AND LECTURES.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear. Lectures at 5.15 p.m. each day will be given as follows: Monday, Pleural Effusion; Tuesday, Blood Pressure and the Influence of Drugs upon it; Wednesday, The Rôle of Blood Pressure in Disease; Thursday, General Diseases in Relation to the Ear.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Myelitis. Friday, 3.30 p.m.: Cerebral Tumours.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—Tuesday, 4.30 p.m.: Lecture on Peritonitis, its Pathology, Diagnosis, and Treatment. Wednesday, 2.30: Dermatological, Ophthalmological, and Medical Out-patient Clinique. Thursday, 2.30 p.m.: Gynaecological Operations, Medical and Surgical Out-patient Cliniques. 4.30 p.m.: Lecture: Peritonitis, its Pathology, Diagnosis and Treatment. Friday, 9.30 a.m.: Surgical Out-Patient Clinique. 2.30 p.m.: Medical Out-patient Clinique; Surgical Operations; Ophthalmological Clinique. 3 p.m.: Medical In-patient Clinique.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, Hammersmith, W.—The following arrangements have been made for next week: Daily: 2 p.m., Medical and Surgical Clinics; 2.30 p.m., x rays; operations. Monday and Thursday: Diseases of the Eye. Tuesday and Friday: 10 a.m., Gynaecological Operations. Tuesday and Friday, 2 p.m., and Wednesday and Saturday 10 a.m.: Diseases of Throat, Nose, and Ear. Tuesday and Friday: 2.30 p.m., Diseases of the Skin. Wednesday: 10 a.m., Diseases of Children.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BALLANCE.—On December 27th, 1906, at 4, Royal Terrace, Weston-super-Mare, the wife of H. Stanley Ballance, M.D., B.S.Lond., of a son.

MURRELL.—On December 20th, 1906, at Blenheim Lodge, London Road, Reading, the wife of G. F. Murrell, M.B., of a son.

NEWSOME.—On December 25th, 1906, at Pill, near Bristol, to Dr. and Mrs. H. Newsome, a son.

MARRIAGE.

CLAY—SMITH.—On December 22nd, 1906 at Stoke Abbott, Dorset, by the Rev. W. D. Sargeaunt, Ernest Langsford Clay, M.B., M.R.C.S., L.R.C.P., only son of Dr. Langsford Clay, Birmingham, to Elizabeth Lilian, eldest daughter of the late Henry John Smith, Esq., Stoke Abbott, Dorset.

DEATHS.

D'ARCY.—On November 18th, 1906, at Willowmore, Cape Colony, aged 43 years, Richard John D'Arcy, J.P., L.R.C.P., L.R.C.S.Ire., District Surgeon and Medical Officer, Cape Government Railways.

GRIFFIN.—On December 1st, 1906, at 12, Royal Terrace, Weymouth, Frederic Charles Griffith Griffin, M.A., M.B.Oxon., M.R.C.S.Eng., aged 68.

JONES.—At 15, Bank Street, Alexandria, Scotland, on December 5th, 1906, Edward James Jones, M.R.C.S.Eng., L.R.C.P.Lond., aged 29 years.

MERRICK.—On December 19th, 1906, at his residence, 81, University Street, Belfast, Alexander Stewart Merrick, M.D., aged 60. Formerly Resident Medical Superintendent, Belfast District Asylum. Funeral December 22nd

PALEY.—On December 1st, 1906, at East London, South Africa, James Hewitt Paley, M.R.C.S., L.S.A., L.R.C.P., third son of the late Dr. James Paley of York, aged 54.

TOLLER.—On December 20th, 1906, at his residence, The Zephyrs, Scarborough, Ebenezer Toller, M.R.C.S., L.S.A., late Medical Superintendent, Gloucester County Asylum, formerly Resident Medical Superintendent, St. Luke's Hospital, London, in his 77th year.

BOOKS, ETC., RECEIVED.

Fables. By R. Ross, Liverpool. University Press. 1906. 2s. 6d.

Berlin: A. Hirschwald:

Verotfentlichungen aus dem Gebiete des Militär-Sanitätswesens. Herausgegeben von der Medizinal-Abtheilung des Königlich Preussischen Kriegsministeriums. Heft 35: Beiträge zur Chirurgie und Kriegschirurgie. Festschrift zum siebzigsten Geburtstage des Dr. E. von Bergmann. 1906. M.16.

Studien auf dem Gebiete des Kriegs-Sanitätswesens im Russisch-Japanischen Kriege 1904-5. Von Dr. W. von Oettingen. 1907. M.6.

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*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JANUARY.	
6 Sunday ...	
7 MONDAY ...	LONDON: Premises Committee, 2.30 p.m.
8 TUESDAY ...	LONDON: Organization Committee, 11 a.m. LONDON: Public Health Committee, 3.15 p.m. LONDON: Medical Charities Committee of the Metropolitan Counties Branch, 3.30 p.m. LONDON: Science Committee, 5 p.m. BRADFORD DIVISION, *Yorkshire Branch*, Eye and Ear Hospital, Bradford, 8.30 p.m.
9 WEDNESDAY	LONDON: Medico-Political Committee, 2.30 p.m. LONDON: Medical Witnesses Sub-committee, 1.45 p.m. TOTTENHAM DIVISION, *Metropolitan Counties Branch* (with St. Pancras and Islington Division), Rooms of the Hornsey Conservative Association, opposite Finsbury Park Station, 9.15 p.m.
10 THURSDAY...	LONDON: Hospitals Committee, 2.30 p.m.
11 FRIDAY ...	LONDON: Central Ethical Committee, 2 p.m. HAMPSTEAD DIVISION, *Metropolitan Counties Branch*.
12 SATURDAY...	LONDON: Science Committee, 11 a.m.
13 Sunday	
14 MONDAY ...	
15 TUESDAY	LONDON: Poor-Law Committee (English Members), 1.30 p.m. Full Committee, 3.30 p.m. CITY DIVISION, *Metropolitan Counties Branch*, Great Eastern Hotel, E.C., 4 p.m.
16 WEDNESDAY	LONDON: Journal and Finance Committee, 3 p.m.
17 THURSDAY...	LONDON: Metropolitan Counties Branch Council, 5 p.m. LEIGH DIVISION, *Lancashire and Cheshire Branch*.
18 FRIDAY ...	
19 SATURDAY ...	
20 Sunday ...	
21 MONDAY ...	
22 TUESDAY ...	
23 WEDNESDAY	CENTRAL COUNCIL at Metropolitan Asylums Board at 2 p.m.
24 THURSDAY...	MARYLEBONE DIVISION, *Metropolitan Counties Branch*, Special Meeting, Rooms of the Medical Society of London, 11, Chandos Street, W., 8.30 p.m. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Wandsworth Town Hall, 8.45 p.m.
25 FRIDAY ...	LAMBETH DIVISION, *Metropolitan Counties Branch*, Lambeth Infirmary, Brook Street, Kennington Road, S.E., 4 p.m.; Committee, 3.30 p.m.
26 SATURDAY...	
27 Sunday ...	
28 MONDAY ...	
29 TUESDAY ...	
30 WEDNESDAY	BATH AND BRISTOL BRANCH, Bristol. ULSTER BRANCH, Belfast.
31 THURSDAY...	
FEBRUARY.	
1 FRIDAY ...	
2 SATURDAY ...	
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	
6 WEDNESDAY	
7 THURSDAY...	WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
8 FRIDAY ...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch*.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by and in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and shall by his agreement, if elected, to abide by the Regulations and By-laws of the Association and the Rules of such Division and Branch to which he may at any time belong and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 12TH, 1907.

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THE WORKMEN'S COMPENSATION ACT, 1906.

By W. VALENTINE BALL,

Barrister-at-Law.

I.

OF the many Acts placed on the Statute Book during 1906 the most important from the point of view of employers and employed is that which consolidates and amends the law relating to the compensation of workmen for injuries sustained by them in the course of their employment.

It is not too much to say that this measure affects nearly every member of the community; for who does not belong to one of the two great classes—employers and employed?

The Workmen's Compensation Act, 1897, mainly affected those engaged in industrial pursuits. True, its provisions were extended in 1900 to persons employed in agriculture, and in so far as gardeners and labourers were enabled to claim compensation for injuries arising out of and in the course of their employment, the scope of the Act was widened. But the new Act, which is to come into force on July 1st, 1907, imposes liability to pay compensation upon practically every employer in the Kingdom.

It is proposed to discuss the general provisions of the Act which affect, or which seem likely to affect, the interests of the medical profession. It contains certain special provisions relating to medical practitioners—such, for instance, as those which specify the duties of medical referees. These provisions will be discussed at a later date. It is as "employers,"—and even, apparently, as "employer"—that members of the medical profession are most nearly and generally affected by the Act.

GENERAL OBJECT OF THE MEASURE.

The object of the Act is the same as that of the Act of 1897—namely, to provide compensation for accidental injuries. It is provided by Section 1 (i) that if in any employment personal injury by accident arising out of and in the course of the employment is caused to a workman, his employer shall, subject to the provisions of the Act, be liable to pay compensation. Limitations to this liability are contained in Subsection (2) of Section 1. Of these, the two more important are the provisos that (*a*) the employer shall not be liable under the Act in respect of any injury which does not disable the workman for a period of at least one week from earning full wages at the work at which he was employed; and (*b*) that if the injury is attributable to the serious and wilful misconduct of the workman, any compensation claimed in respect of that injury shall, unless the injury results in death or serious and permanent disablement, be disallowed. Under the Act of 1897 the period of *one week* above referred to was *two weeks*, and serious and wilful misconduct debarred the workman from any remedy, whatever the nature of the injury. In these two respects, then, the new Act is more favourable to the workman than the older measure.

The meaning of the expression "accident arising out of and in the course of the employment," which also occurs in the Act of 1897, has frequently been discussed in the courts. One or two cases will suffice to show that it has been construed in favour of the workman. Thus a bricklayer who was struck by lightning, a night watchman who was injured by the fall of a shanty when cooking his dinner, and a stevedore who fell into the hold of a vessel owing to an attack of epilepsy have each been held to be victims of an "accident" within the meaning of the Act of 1897.

There are certain other provisions relating to alternative claims, the right to contract out of the Act and the liability of subcontractors, with which it is not necessary to deal at present. Suffice it that a serious liability is imposed upon employers and the right to prefer a claim for injury is conferred upon employés.

AMOUNT OF COMPENSATION.

(*a*) *Where Death Results.*

If death results from the accident and the workman leaves dependants (which term includes illegitimate children) wholly dependent on his earnings, the dependants are entitled to a sum equal to his earnings during the three years preceding the injury, or to £150, whichever be the larger, but the compensation is never to exceed £300. Where he leaves persons partially dependent upon his earnings they are to receive such sum (not exceeding the amounts above mentioned) which is to be reasonable and proportionate to the injury sustained by them. If he leaves no dependants the employer need only pay the reasonable expenses of his medical attendance and burial not exceeding £10.

(*b*) *Where Total or Partial Incapacity Results.*

Where total or partial incapacity for work results from the injury, the workman becomes entitled to a weekly payment during the incapacity not exceeding 50 per cent. of his average weekly earnings during the previous twelve months, if he has been so long employed, but if not, then for any less period during which he has been in the employment of the same employer, such weekly payment not to exceed £1. To this general provision there are two

provisos, namely, (*a*) if the incapacity lasts less than two weeks no compensation is payable in respect of the first week; and (*b*) in the case of a workman under 21 whose average weekly earnings are less than 20s. he shall be entitled, during total incapacity, to 100 per cent. of his average weekly earnings, but the weekly payment shall in no case exceed 10s.

Computation of "Earnings" and "Average Weekly Earnings."

When the workman is in regular work at a fixed weekly wage his "average weekly earnings" are not difficult to compute. Where he is only employed casually, or for a short period, regard may be had to the average amount which during the twelve months was being earned by a person in the same grade, employed at the same work by the same employer. Where an employer pays his workman a sum to cover any special expenses entailed on him by the nature of his employment the sum so paid is not to be reckoned as part of the earnings.

Another part of this schedule shows that the Act clearly contemplates that a workman may be in the service of two employers. Thus it is provided that where a workman had entered into concurrent contracts of service with two or more employers, under which he worked at one time for one such employer and at another time for another such employer, his average weekly earnings shall be computed as if his earnings under all such contracts were earnings in the employment of the employer for whom he was working at the time of the accident. This definition (which has effect to reverse a decision of the Court of Appeal under the old Act) may have a special significance in relation to the medical profession with which we shall presently deal.

A point which has an important bearing on the amount of compensation payable to employés who reside in the employer's house is not specifically stated in the Act, but was decided under the Act of 1897.[1] It is that when the person employed receives board and lodging from his employer that is to be taken into account as earnings.

It is not necessary to go further into the question of weekly payments, except to point out that where such a payment has been continued for not less than six months the employer may redeem his liability by paying the workman such a sum as, where the incapacity is permanent, would, if invested in a post office annuity, produce an annual sum equal to 75 per cent. of the yearly compensation.

PERSONS AFFECTED BY THE ACT.

Having outlined the objects of the Act and the method by which those objects are carried into effect it is necessary to consider the persons or classes of persons who are affected. The phrases used in the Act are "employer" and "workman."

Definition of Employer.

By Section 13 "employer" includes any body of persons corporate or unincorporate and the legal representatives of a deceased employer; and where the services of a workman are temporarily lent or let on hire to another person by the person with whom the workman has entered into a contract of service or apprenticeship, the latter shall for the purposes of the Act be deemed to continue to be the employer of the workman whilst he is working for that other person. Save that it does not apply to the army or navy the Act applies to workmen employed by or under the Crown.

With reference to the definition of "employer," it is obvious that every one who employs a domestic servant is an "employer" within the Act. Note, too, that a body corporate or unincorporate may be an employer. Thus the trustees or governing body of a hospital would be the "employers" of the salaried medical staff and nurses of the hospital. Again the committee of a sick club, or even the members of the club collectively, would seem to be the "employers" of the club doctor within the meaning of the Act. Again, if the head of a household employs a practitioner to attend his family and servants for so much a year, the householder would seem to be the "employer" of the practitioner within the meaning of the Act; but the question whether the practitioner so employed is a "workman" within the Act is discussed below. A patient employing his medical attendant from time to time would not be an "employer" within the meaning of the Act, as the employment would be of a "casual" nature. That mere casual employment is excepted appears from the definition of the term "workman" (see *infra*).

Definition of Workman.

By Section 13 the term "workman" does *not* include:

(*a*) *Any person employed otherwise than by way of manual labour whose remuneration exceeds £250 a year;* or

(*b*) A person whose employment is of a casual nature and who is employed otherwise than for the purpose of the employer's trade or *business;* or (*c*) a member of a police force; or (*d*) an outworker; or (*e*) a member of the employer's family dwelling in his house; but, save these as aforesaid, it *means* any person who has entered into or works under a contract of service or apprenticeship with an employer, whether by way of manual labour, clerical work, or otherwise, and whether the contract is expressed or implied, is oral, or in writing.

Certain important words and phrases contained in this definition have been printed in italics. With regard to the term *business* in Paragraph (*b*), this means, in the case of a local or other public authority, the exercise and performance of their powers and duties.

Can a Medical Practitioner be a Workman?

Looking at the section from the point of view of a medical man, who is sometimes an "employed" person, the interesting question arises, Is a registered medical practitioner acting in his professional capacity a "workman" within the meaning of the Act? It is clear, of course, that if his income from one source exceeds £250 a year he is, so far as that employment is concerned, outside the Act. Thus, a medical officer of health with a salary of £260 per annum could not prefer a claim for compensation under this Act. But take the case of a medical officer of health, or a member of the salaried staff of a hospital receiving only £200 a year. Is he under a "contract of service by way of manual labour, clerical work, or otherwise"? Taking the Act of 1906 by itself, one would be tempted to say offhand that the contract entered into by a medical officer of health, or the house-surgeon or house-physician to a hospital was a contract of service, and that, inasmuch as the words "or otherwise" appear in the Act, he is a workman. But in discussing this question regard must be had to the definition of "workman" in the Act of 1897 and the decisions thereunder. By Section 7 (2) of the Act of 1897 "workman" *includes* every person engaged in an employment to which this Act applies, whether by way of manual labour or otherwise, and whether his agreement is one of service or apprenticeship or otherwise, and is expressed or implied, is oral, or in writing." Two decisions of the Court of Appeal—one of them being of very recent date—go to show that a man receiving a salary as distinct from wages, and who works with his head rather than with his hands, is not a "workman" within the above definition. In the first of these it was held that the certificated manager of a coal mine who was paid a salary of £400 a year, payable monthly, and who was provided with a house rent free, and who did no manual labour, was not a workman within the meaning of the Act.

In this case considerable stress was laid upon the facts that the Act of 1897 is described in the preamble as a Workmen's Compensation Act, that the manager was paid a salary, and that compensation is based upon wages or weekly earnings. The Master of the Rolls said:

> Can the Act apply to a person whose salary might be over £1,000? It is clear some limit must be put; the question is, Where is it to be put?

One of the other judges on that occasion said:

> The words "by way of manual labour or otherwise" meant by way of manual labour or labour other than manual.

Another said:

> To say that the term workman includes every person who has an employer is to extend it to a class of persons whom I do not believe Parliament intended to include.

The principle of this case was applied by the Court of Appeal in the later case of *Raynall v. Levinstein* (December 13th, 1906). In that case a man who had been educated

[1] [illegible] reported 21 L. R. [illegible]

at a university in England and had taken the degree of Master of Science entered the employment of a firm of chemical manufacturers for five years at a yearly salary. He was to place the entire results of his work at the disposal of the firm, and though for part of his time he worked with his hands his main duty was to bring his scientific knowledge to bear upon the business of his employers. He was held by the Court of Appeal (Lord Justice Farwell dissenting) not to be a workman. The Master of the Rolls said:

> If he was employed for the benefit of his attainments with a view to his discovering improvements in scientific processes, the mere fact that his work involved some manual labour does not make his employment that of a workman. In such a case a man is employed as a scientific expert, not as a workman.

From these cases it is reasonably clear that a medical practitioner could not claim to be a workman within the meaning of the Act of 1897. Take the case of a house-surgeon or house-physician employed at an annual salary. Were he to make a claim, all the objections taken in the above cases could be raised by the hospital authorities. It is clear, however, that the Act of 1906 fills many of the lacunae which were left in the definition of "workman" as contained in the Act of 1897. The Act of 1906 applies to all employments; it modifies the definition of employment by the use of the words "manual labour, clerical work, or otherwise"; and last, but not least, it expressly states that persons whose remuneration (not *wages*) in any employment other than manual labour exceeds £250 are not within the Act; thus raising the necessary implication that persons earning less than that sum are entitled to benefit. In other words, it prescribes a limit, for which the Master of the Rolls searched in vain in the Act of 1897.

It is submitted that the extension of the principle of compensation to all employments has effect to modify and expand the definition of workman so as almost to make it mean "every person who is employed," subject, of course, to the specific exceptions enumerated in the Act. If the view adumbrated above is correct—and it is pretty certain that the Act will not be long in force before an opportunity of testing the point will arise—the medical practitioner may be admitted to benefit in respect of any appointment in which he receives a salary not exceeding £250 a year. Nor does it matter, apparently, that he hold more than one appointment, although, if his income from all "appointments" exceeds £250, it is a question of some nicety whether he will not be excluded from the Act. As has been shown, the schedule to the Act prescribes a method by which the earnings of a man in more than one employment may be computed, thus contemplating that he may have more than one employment. If the contract which is entered into by the medical officer of a hospital or a sick club is not a "contract of service," it is impossible to define it. In the one case his time and labour are at the service of the governors of the hospital; in the other, he is at the service of the members of the club. Take the case of a medical practitioner who receives a salary of £100 a year from a hospital. He is employed by the hospital "by way of manual labour . . . or otherwise." His employment is not "casual," as it might be if he were employed by a patient every now and then; and there is nothing elsewhere in the Act to show that he would not be entitled to compensation if injured in an accident arising out of and in the course of his employment. Suppose that he was injured in the hospital lift, or that he suffered from blood poisoning after performing an operation, it would seem that if he thought fit to pursue his remedy, he would recover compensation.

In each and every case, provided his remuneration does not exceed £250 per annum, he will be entitled to compensation if injured, and his dependants will receive compensation if his death is caused by accident. Suppose, for instance, that the medical officer of a sick club, summoned to see a member is thrown from his trap; who shall say that this is not an accident "arising out of and in the course of his employment"? The writer is conscious that the inclusion of professional men may not have been within the contemplation of Parliament; and, further, the Court of Appeal, looking at the Act as a whole, might well arrive at a contrary conclusion.

Appointments to which the Act will apply.

Before dealing specifically with various classes of appointments held by medical men, it will be well to point out that the Act appears to apply whether the appointment is "whole time" or not. Further, if a medical man holding an appointment takes private practice, the fact that he earns money from that source will not diminish the liability of the employer.

Indeed, if a man works for two employers and sustains injury by accident while working for one of them the Act provides that his compensation shall be based upon his earnings from each employer. So if a practitioner were medical officer of health at a salary of £52 (that is, £1 a week) and held another appointment of the value of 10s. a week; and he met with an accident while performing his duties as medical officer of health which totally incapacitated him from further work of any kind, it is clear from Schedule I, Section (2) (*b*) of the new Act that the average weekly earnings upon which compensation would be payable would be 30s. He would, therefore, be entitled to 15s. a week. It may be stated here that in the writer's view the income from private practice could not be brought in to swell the total, inasmuch as each employment of a practitioner by a patient is "casual" and not necessarily connected with the employer's trade or business.

(*a*) A medical officer of health may have a whole-time appointment with an annual salary; but there are a very large number of appointments as medical officer of health held by general practitioners at small salaries, from £20 to £70 a year. It is submitted that the Act will apply in either case, provided, of course, that "remuneration" does not exceed £250 a year.

(*b*) As to practitioners who hold appointments at hospitals, lunatic asylums, sanatoriums, and convalescent homes, etc., so long as there is "remuneration" upon the basis of which compensation can be assessed, they appear to be entitled to benefit. An honorary physician or surgeon would not be so entitled. Even if a man holding an honorary post were paid his out-of-pocket expenses, it is conceived that this would not bring him within the Act, having regard to the fact that "special expenses" entailed by the nature of the employment are not to be reckoned as part of the "earnings." (See Sch. I (2) (*d*)) In the case of a house-surgeon or house-physician it must be remembered that in estimating the "remuneration," which is not to exceed £250, board and lodging are to be taken into account.

(*c*) Sundry nice points may arise as to the position of a general practitioner who is medical officer to a sick club, and the writer would not like to commit himself to any definite opinion of a general character. It is submitted, however, that if an officer is duly appointed by the club, and is paid a salary for the whole of his time, and that salary does not exceed £250, he will be entitled to benefit. Even in cases where he is paid by capitation fee the Act would seem to apply, for it was stated by the House of Lords in a case which arose under the old Act that even if there was no specified mode by which the *quantum* of compensation could be fixed, there was nothing which repealed the right to compensation, which is to be ascertained by arbitration or some other means.

The Act applies so long as the relationship of employer and employed exists. That is a question for the Court to determine. It cannot be described as "casual employment," so far as the officer is concerned, if any member of the club has the right to call upon him at any time.

(*f*) Where a local practitioner is engaged by a railway company to attend the company's servants at a local station or terminus, he would be "employed" within the meaning of the Act.

(*g*) With regard to practitioners employed by the Post Office, very few of such appointments are "whole time." Nevertheless, inasmuch as the Act applies to persons employed by the Crown (except soldiers and sailors), there seems to be no reason why a practitioner who receives an annual retaining fee, or is otherwise remunerated by the Post Office for attendance upon postal employés, should not be entitled to benefit.

(*h*) Inasmuch as the Act applies to Ireland, it is apprehended that dispensary doctors will be entitled to benefit. Although (as was recently pointed out in the columns of this Journal) the salary of a medical officer is paid partly by the State and partly by the local authority, it seems that the power of appointment is with the latter body. Upon the true construction of the first schedule to the Act it seems that the liability to pay compensation would therefore fall upon the local authority.

(*i*) With regard to medical men who hold appointments as lecturers or demonstrators, it is difficult to assign any reason why they should be excluded from the benefits of the Act. Assuming the construction which has been put upon the Act to be correct, if a person who is employed to exercise skill and to give advice is employed "by way of manual labour, clerical work, or otherwise," a teacher or demonstrator should be placed in the same category.

LIABILITIES OF THE PRACTITIONER UNDER THE ACT.

In dealing with the liabilities as distinguished from the privileges of medical men under the Act, one treads upon more certain ground, for it is clear from the definition of "workman" above set out the Act imposes a somewhat serious liability upon the practitioner. The following persons, all or some of whom may be employed, clearly come within the definition of "workman," namely, assistants, dispensers, trained nurses employed in or about practitioner's house, and domestic servants. Coachman, gardener, and chauffeur must also be included. The question whether a *locum tenens* is included is one of some difficulty. Of course, if the rate of his remuneration exceeds £250 a year, he will be excluded; and it must be remembered that, in estimating this figure, the fact—if it is the fact—that he is receiving board and lodging is to be taken into account. Assuming that no question arises about the salary, it is submitted that upon the true construction of the definition clause a *locum tenens* is within the Act. It may be objected that his employment "is of a casual nature" within the exception (*b*) above mentioned, but that exception clearly does not apply where the person casually employed *is* employed for the purpose of the employer's business.

CONCLUSIONS.

Having regard to the serious liability which the new Act imposes upon all employers, it will be absolutely necessary for every medical man in independent practice to insure. It is probable that the companies will issue floating policies, that is to say, policies which will protect an entire staff of employés within a certain number, whether there be changes in the *personnel* from time to time or not.

If the interpretation which has been put upon the words "contract of service" is correct, it is clear that hospital authorities must take every precaution with regard to insurance. Seeing that the Act does not come into operation until July, 1907, all persons likely to be affected will have ample time to consider their position.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

GLASGOW AND WEST OF SCOTLAND BRANCH:

NORTH-WESTERN DIVISION.

AN ordinary meeting of this Division was held in the Western Infirmary Dispensary, at 8.30 p.m., on Tuesday, December 18th, 1906, Dr. DONALD MACKINTOSH in the chair.

Confirmation of Minutes.—The minutes of last meeting and of the Executive meeting were read and approved.

Carswell and Gilchrist Case.—The SECRETARY then read the report of the Glasgow and West of Scotland Branch with reference to the Carswell and Gilchrist case. It was agreed to enter the report in the minutes.

Annual Representative Meeting.—Dr. CASKIE read a carefully prepared statement of his duties as Representative to the meeting in London in July last.

Election of Central Council.—The communication of the Dublin Division against the proposal "That the Central Council should be elected at the Representative Meeting" was discussed. Dr. G. B. BUCHANAN moved the approval of the Dublin resolution, which became the finding of the meeting.

Notification of Births.—At the request of the CHAIRMAN, Dr. A. T. CAMPBELL gave an account of the deputation organized by the Eastern Medical Society to oppose the inclusion of medical practitioners in the clause of their Bill dealing with the notification of births. Dr. Campbell said that all would be glad to learn that as a result of the deputation the paragraph relating to medical practitioners was excluded from the scope of this Bill.

Poor-law Commission.—It was agreed to postpone consideration of the "collection of evidence to the Royal Commission on the Poor Law" till Wednesday, December 26th, 1906.

Paper.—The meeting then heard a short paper by Dr. JOSEPH GOODWIN TOMKINSON on the eclectic treatment of lupus vulgaris.

Visit to Electrical Department.—The members afterwards adjourned to the electrical department to inspect cases treated, and also to view the apparatus.

LANCASHIRE AND CHESHIRE BRANCH:

NORTH MANCHESTER DIVISION.

A MEETING of the Division was held on Wednesday, January 2nd, at the Palatine Hotel, Dr. HARGREAVES in the chair.

Poor-Law Commission.—The question of evidence to be submitted to the Royal Commission on the Poor Law was considered, and the following replies given to the points raised: A. (1) Salaries and fees of Poor-law medical officers not so publicly known as to have any such effect. (2) No. (3) No; there should be no appointments at all; every medical man willing to act as public vaccinator or Poor-law medical officer, or both, should be empowered and adequately paid to do so. (4) Not so far as this Division is aware; but a lot of work that should be paid for under the Poor Law is now done charitably by the medical profession outside the Poor Law. (5) No; where special treatment is required it should be properly paid for; Boards of guardians have no right to receive aid from charitable contributions. B. (1) Yes. (2) Yes; but inadvisable. (3) Outside workhouses where possible. (4) (*a*) Yes; (*b*) (i) give none; (ii) present arrangements satisfactory. (5) An unimportant matter of administration. (6) Most unnecessary and inadvisable. (7) This Division is prepared to accept the views of the majority on this question. The above replies practically agree with the recommendations of Dr. Milson Rhodes as published in the SUPPLEMENT of December 29th, 1906, page 356.

Organization of Local Divisions.—The organization of local Divisions was discussed, and in order to allow ampler consideration for a topic of such importance the matter was adjourned to the next meeting.

METROPOLITAN COUNTIES BRANCH:

STRATFORD DIVISION.

A MEETING of this Division was held on Thursday, December 13th, 1906, at 9 p.m., Dr. HASTINGS in the chair.

Confirmation of Minutes.—The minutes of the preceding meeting were confirmed.

Discussion.—Dr. W. J. HADLEY (London Hospital) read a paper on some conditions of the bronchi. Thereafter a general discussion ensued, many questions being asked by various members.

Vote of Thanks.—Dr. Hadley, on replying to these, received a very cordial vote of thanks for his extremely instructive lecture.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH:

LANCASTER DIVISION.

A MEETING of all medical practitioners in the area of the Lancaster Division of the British Medical Association was held, on the invitation of the Division, in the County Hotel, Lancaster, on December 5th, 1906, to discuss the relations of the profession to the National Deposit Friendly Society.

After discussion, the following resolution was unanimously passed, and ordered to be forwarded to all the medical men in the area:

"That this meeting of medical practitioners in Lancaster and district decides that they will not examine nor pass into the Society any fresh members, nor attend any of its members as such on the scale of fees set forth, so long as the Society is conducted on the present lines.

NORTH WALES BRANCH:
SOUTH CARNARVON AND MERIONETH DIVISION.

A MEETING of this Division was held at the Queen's Hotel, Blaenau Festiniog, on September 21st, 1906, Dr. HUGH JONES (Dolgelly) in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Apologies for Non-attendance.—Apologies were received from Drs. Wynn Griffith (chairman), Walter Williams, Howel White, and Dr. Aikin.

Letters of Condolence.—Votes of condolence were passed, all the members standing, with the families of the late Dr. Jones (Corris) and Dr. Thomas (Nevin).

Executive Committee.—Dr. Wilbraham Griffith (Pwllheli) was unanimously elected to the Executive Committee vacancy occasioned by the death of Dr. Thomas (Nevin).

Papers.—Dr. GLYNN (Liverpool) read a paper entitled Notes on the diagnosis of hysteria, Dr. HUGH JONES, Dr. RICHARD JONES, and Dr. WILLIAMS (Bala) taking part in the discussion. Dr. GLYNN replied. A hearty vote of thanks was accorded Dr. Glynn for his valuable paper, which the members hope he will publish. Dr. RICHARD JONES (Blaenau Festiniog) read a paper, with a practical demonstration, on the writing materials used in elementary schools—their dangers. Dr. T. J. CAREY EVANS (Blaenau Festiniog) read notes on a case of spina bifida with myelocele of the cord, and with a large diaphragmatic hernia in a fetus, with specimen, and showed a case of lupus vulgaris of the face. Dr. Jones and Dr. Evans were warmly thanked for their valuable papers.

Inspection of Sewage Works.—After the meeting all the members sat down to an excellent tea, and afterwards drove off to inspect the sewage disposal works bacteria beds, Dr. WILLIAM JONES and Dr. ALLTWEN WILLIAMS acting as guides. This terminated the meeting, which was well attended.

SOUTH-EASTERN BRANCH:
CANTERBURY AND FAVERSHAM DIVISION.

A MEETING of this Division was held on December 13th, 1906, at Faversham Cottage Hospital, Dr. EVERS presiding.

Confirmation of Minutes.—The minutes of the previous meeting were confirmed.

Next Meeting.—It was decided that the next meeting should be held in March, 1907, at Sittingbourne; Dr. Grayling to be invited to preside.

Motor Car Legislation.—The question of motor car legislation was brought up by the CHAIRMAN, and discussed by several members; eventually a resolution was passed:

> That increased taxation on motor cars will press heavily and unfairly on the large and increasing number of medical men who use motors for their professional work, and earnestly hope that members of Parliament will assist them in obtaining exemption from any such additional burden.

Resolution from Dublin Division.—A resolution passed by, and forwarded on from, the Dublin Division was considered, and it was decided to let it lie on the table.

Cases.—Dr. F. W. GANGE showed a case of injury to leg followed by tetanus, treated successfully by intracerebral injection of antitoxin.—Dr. GOWLLAND showed a case of appendicitis operated on successfully in a child with a ¾ in. incision, which he considers quite large enough in ordinary cases, and with no danger of an ultimate hernia.

Hospital Reform.—Dr. REID remarked on the progress made in hospital reform since the last meeting, when this matter was discussed. He stated that an East Kent Hospitals Conference Board had been formed in connexion with Canterbury, Folkestone, and Dover, three representatives from each—one layman from each Hospital Board, one member of staff, and one medical man to represent the general practitioners' side on hospital staffs for each town, Dr. Ian Howden, of Dover, being the Honorary Secretary. Dr. Rigden was elected as the representative for Canterbury, and in the event of his not being able to serve, Dr. Henchley.

Votes of Thanks.—Votes of thanks were passed to Dr. Evers for his hospitality and for presiding; to Mr. Arnold, of the Gun-cotton Works, for kindly showing members round works; to Drs. Gange and Gowlland for showing cases; and to the hospital authorities for use of hospital rooms for meeting.

Excursion.—An excursion to the Faversham Gun-cotton Works was made during the afternoon, where the whole process of making gun-cotton, tonnite, cordite, and other explosives was shown.

Luncheon.—Dr. Evers very kindly entertained the members at luncheon at his house prior to the meeting, and tea was supplied afterwards at the hospital.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, January 23rd, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,
January 3rd, 1907. *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m., except on Saturdays, when they close at 2 p.m. Members can have their letters addressed to them at the office.

BRANCH AND DIVISION MEETINGS TO BE HELD.

EDINBURGH BRANCH.—It is proposed to hold the annual clinical meeting of the Edinburgh Branch in the Royal Infirmary, Edinburgh, on the second or third Friday in February.—A. LOGAN TURNER, FRANCIS W. BOYD, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—A scientific meeting of this Branch will be held at 4 p.m. on Wednesday, January 23rd, at the Medical Institution, Liverpool. Dinner at Adelphi Hotel at 7 p.m.—F. CHARLES LARKIN, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—On Thursday, January 17th, the usual monthly meeting of this Division will be held in the Co-operative Offices, Ellesmere Street, Leigh. Agenda: 1. Minutes. 2 Consider appointment of Medical Representatives on the Infirmary Board. 3. Decide on course to adopt *re* Formation of Medical Board. 4. A discussion to be opened by Dr. Beckett on Mastoid Operations and some cases shown. 5. Any other business.—MICHAEL J. HALTON, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—A general meeting of this Division will be held on Tuesday, January 15th, at 4 p.m., at the Great Eastern Hotel, Liverpool Street, E.C. (Lincolnshire Room, entrance in Bishopsgate Street). Agenda: 1. Minutes. 2. Letters (i) from Dublin Division, with resolution from Executive Committee. 3. Questions. 4. Report from Executive Committee. 5. Report from Mr. P. Wallace on last Annual Representative Meeting. 6. Matters referred to Division: (i) Evidence for Poor-law Commission: (ii) Ethical Aspects of Medical Consultation: (iii) Arrangements for the Medical Inspection of School Children. 7. Resolution *re* St. John Ambulance Association: Dr. Withers Green. 8. Any other business. Smoking is allowed.—E. W. GOODALL, M.D., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next meeting of the Lambeth Division will be held at the Lambeth Infirmary, Brook Street, Kennington Road, S.E., on Friday, January 25th, at 4 p.m. A meeting of the committee will be held at 3.30 p.m. sharp, prior to the general meeting. Agenda: (1) Minutes of the last meeting. (2) George J. Jenkins, F.R.C.S. (Surgeon to the German Hospital), will read a paper on abscesses in the peritoneal cavity. (3) Dr. M. H. Quarry (Medical Superintendent of the Lambeth Infirmary) will show cases of interest in the wards of the Infirmary.—W. ALEXANDER ATKINSON, M.D., Honorary Secretary.

Metropolitan Counties Branch: Marylebone Division.—A special meeting of this Division will be held at the rooms of the Medical Society, Chandos Street, W., on Thursday, January 24th, at 8.30 precisely. The second of a series of discussions on economic problems in the practice of medicine will take place. The resolution submitted will be: "That the development of properly-organized systems of mutual assurance for the costs of illness offers the most readily-available method of reducing the admitted evils of excessive medical charity and the misuse of hospitals." The debate will be opened by Dr. R. C. Buist, Mr. H. W. Armit, Mrs. Scharlieb, Dr. L. S. McManus, and Dr. J. H. Keay. Special invitations will be sent to all practitioners resident in the Marylebone Division whether they are members of the Association or not. Any member of the profession will be admitted on presentation of his card. The Honorary Secretary will be glad to receive the names of those willing to take part in the debate.—Comyns Berkeley, M.B., B.C.Cantab, M.R.C.P., Honorary Secretary and Treasurer, 53, Wimpole Street, W.

Ulster Branch.—The winter meeting of this Branch will be held in Belfast, on Wednesday, January 30th. Members having cases to show or communications to make to the meeting are requested to send me particulars of the same before January 20th.—Cecil Shaw, M.D., Honorary Secretary, 18, College Square East, Belfast.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 9,714 births and 6,879 deaths were registered during the week ending Saturday last, January 5th. The annual rate of mortality in these towns, which had been 17·4, 19·1, and 19·7 per 1,000 in the three preceding weeks, further rose last week to 22·4 per 1,000. Among these large towns the death-rates ranged from 6·4 in Hornsey, 12·2 in East Ham, 13·1 in West Hartlepool, 13·5 in Barrow-in-Furness, 13·7 in Northampton, 14·2 in Handsworth (Staffs.) and in Bury, and 15·0 in Aston Manor to 26·2 in Stockport and in Swansea, 26·9 in Salford, 27·3 in Burton-on-Trent, and in Newcastle-on-Tyne, 27·6 in Preston, 28·0 in Oldham, 32·4 in Sunderland, and 36·4 in Middlesbrough. In London the rate of mortality was 21·5 per 1,000; while it averaged 21·5 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases in these towns averaged 1·6 per 1,000: in London this death-rate was equal to 1·5 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 2·6 in Oldham, 2·7 in Sheffield, 2·9 in Wigan, 3·0 in Rochdale, 3·1 in Salford and in Hull, and 6·7 in Warrington and in Rotherham. Measles caused a death-rate of 1·3 in Sheffield, 1·5 in Leicester, 1·7 in Plymouth, 2·0 in Hull, 2·2 in Oldham, 2·4 in Rochdale, 2·9 in Wigan, 5·0 in Rotherham, and 6·7 in Warrington; scarlet fever of 1·0 in Sheffield; diphtheria of 1·7 in Rotherham, 1·9 in Reading, and 2·1 in Derby, and whooping-cough of 1·0 in Nottingham, 1·2 in Blackburn, 1·3 in Tottenham and in Leyton, and 1·5 in Hastings and in Middlesbrough. The mortality from "fever" and from diarrhoea showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. There were 3,707 scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital at the end of last week, against 3,986, 3,801, and 3,846 at the end of the three preceding weeks; 309 new cases were admitted during the week, against 359, 334, and 237 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, December 29th, 1906, 905 births and 6[illegible] deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18·1 and 19·0 per 1,000 in the two preceding weeks, fell again to 19·0 per 1,000, and was 0·7 per 1,000 below the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 14·5 in Greenock and 14·4 in Paisley to 20·9 in Dundee and 23·2 in Aberdeen. The death-rate from the principal infectious diseases in these towns averaged 1·6 per 1,000, the highest rates being recorded in Paisley and Aberdeen. The 318 deaths in Glasgow included 3 from scarlet fever, 16 from whooping-cough, [illegible] fever, 5 from diarrhoea, and 4 from cerebro-spinal meningitis. Five fatal cases of diarrhoea were recorded in Edinburgh, 6 of measles and 2 of diphtheria in Aberdeen, and 3 of diarrhoea in Paisley.

During the week ending Saturday last, January 5th, there were 915 births and 7[illegible] deaths registered in these towns: the annual rate of mortality was 2[illegible] per 1,000, or 1·5 per 1,000 above the mean rate last week in the seventy-six large English towns. The rates in the eight Scotch towns ranged from 14·9 in Perth and 20·3 in Glasgow, to 29·0 in Dundee and 31·4 in Paisley. The death-rate from the principal infectious diseases averaged 2·0 per 1,000, the highest rates being recorded in Aberdeen and Paisley. The 130 deaths registered in Glasgow included 2 which were referred to measles, 2 to scarlet fever, 4 to diarrhoea, 11 to whooping-cough, 6 to "fever," 3 to [illegible] and 6 to cerebro-spinal meningitis. Two fatal cases of diphtheria and 5 of diarrhoea were recorded in Edinburgh, 2 of whooping-cough and 5 of diarrhoea in Dundee, 6 of measles and two of whooping-cough in Aberdeen, and 3 of diarrhoea in Paisley.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, December 22nd, 1906, 422 births and [illegible] deaths were registered in six of the principal Irish towns, as against 422 births and 416 deaths in the preceding period. The annual death-rate in these towns, which had been 20·3, 20·8, and 21·5 per 1,000 in the three preceding weeks, fell to 17·6 per 1,000 in the week under notice, this figure being 2·1 per 1,000 lower than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 5·5 in Londonderry and 18·4 in Belfast to 21·4 in Waterford and 22·8 in Dublin. The zymotic death-rate in the same six Irish towns averaged 0·7 per 1,000, or 0·6 per 1,000 lower than during the preceding period, the highest figure—1·7—being recorded in Dublin, while Londonderry and Waterford registered no deaths under this heading at all.

During the week ending Saturday, December 29th, 1906, 431 births and 353 deaths were registered in six of the principal Irish towns, as against 422 births and 416 deaths in the preceding period. The annual death-rate in these towns, which had been 20·3, 20·8, and 21·5 per 1,000 in the three preceding weeks, fell to 17·6 per 1,000 in the week under notice, this figure being 2·1 per 1,000 lower than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 5·5 in Londonderry and 18·4 in Belfast to 21·4 in Waterford and 22·8 in Dublin. The zymotic death-rate in the same six Irish towns averaged 0·7 per 1,000, or 0·6 per 1,000 lower than during the preceding period, the highest figure—1·7—being recorded in Dublin, while Londonderry and Waterford registered no deaths under this heading at all.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon A. E. Weightman has been placed on the retired list, at his own request, December 1st, 1906. He was appointed Surgeon, August 20th, 1886, and became Fleet Surgeon, August 20th, 1902.

Fleet Surgeon J. W. Slaughter, M.B., has been placed on the retired list of his rank at his own request. He was appointed Surgeon August 20th, 1886, and Fleet Surgeon August 20th, 1902.

The following appointments have been made at the Admiralty: Richard C Munday, Fleet Surgeon, to the *Aboukir*, undated; Warren G. Westcott, Staff Surgeon, to the *Esser*, undated; Gerald M. Eastment, Surgeon, to the *Magnificent*, January 21st; Herbert L. Geoghegan, M.D., Surgeon, to the *Victorious*, January 30th; Robert B. Scribner, Surgeon, to the *Majestic*, January 4th; Walter P. Yetts, Surgeon, to the *Leviathan*, January 4th; George E. Macleod, Surgeon, to the *Glory*, January 4th; John R. Muir, M.B., Surgeon, to the *Albion*, January 4th; Arthur R. Thomas, Surgeon, to the *Terrible*, January 21st; Reginald C. P. M'Donagh, Surgeon, to the *Cressy*, January 4th; Godfrey Taylor, M.B., Surgeon, to the *Ariadne*, undated; Edgar S. Wilkinson, M.B., Surgeon, to the *Andromeda*, January 4th; Robert Kennedy, M.B., Surgeon, to the *Spartiate*, January 4th; Nelson J. Roche, Surgeon, to the *Hannibal*, January 18th; Sydney Croneen, Surgeon, to the *Cornwall*, January 4th; William J. Martin, Surgeon, to the *Cumberland*, January 4th; Herbert A. Browning, Surgeon, to the *Donegal*, January 4th; Thomas W. Jeffery, Surgeon, to the *Aboukir*, January 4th; George C. C. Ross, M.B., Surgeon, to the *Niobe*, January 4th; Percy F. Minett, Surgeon, to the *Europa*, January 4th; George E. Duncan, Surgeon, to Plymouth Hospital, January 18th; Arthur H. S. Richardson, to the *Cambridge*, January 4th; William M. Craig, M.B., Fleet Surgeon, to the *President*, additional, for three months' course at West London Hospital, January 7th; Hilary C. Arathoon, Staff Surgeon, to the *Diamond*, on recommissioning, January 29th.

Thomas R. Wiglesworth, civil practitioner, to be Surgeon and Agent at Scrapsgate, Eastchurch, Leysdown, Sheerness, Queenborough, and Shellness, January 5th.

Percy C. Burgess, civil practitioner, to be Surgeon and Agent at Margate and Birchington, January 5th.

ARMY MEDICAL RESERVE.

The undermentioned Surgeon-Captains are promoted to be Surgeon-Majors from the dates specified: A. B. Lyon, M.B., February 10th, 1906; J. P. S. Ward, November 21st, 1906; R. T. Ferguson, M.B., December 5th, 1906.

Surgeon-Lieutenant H. Stallard to be Surgeon-Captain, December 27th, 1906.

INDIAN MEDICAL SERVICE.

Captain G. H. L. Whale, M.B., is permitted to resign the service, from November 30th, 1906. He joined the department as Lieutenant, September 1st, 1902, and was promoted to be Captain, September 1st, 1905.

Lieutenant J. Campbell, M.B., R.A.M.C., who is serving in India, is appointed specialist in the prevention of disease, Lucknow.

The following postings have been ordered: Lieutenant-Colonel H. N. V. Harington, Madras, to be Residency Surgeon, Western States of Rajpootana; Captain L. J. M. Deas, I.M.S., to be Agency Surgeon in Alwar; Major W. E. Scott-Moncrieff, M.B., Bengal, to be Residency Surgeon in Mewar; Major J. Fisher, D.S.O., M.B., Bengal, to be Agency Surgeon in the Eastern States of Rajpootana; Lieutenant-Colonel W. H. B. Robinson, Bengal, to be Agency Surgeon, Bikanir; Lieutenant-Colonel P. D. Pank, Bengal, to be Residency Surgeon in Jaipore; Major P. J. Lumsden, Bengal, to be Residency Surgeon in Gwalior; Major T. W. Irvine, M.B., Bombay, to be Residency Surgeon in Mysore.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BANBURY HORTON INFIRMARY. House Surgeon. Salary, £80 per annum.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—Assistant Physician.

BIRMINGHAM GENERAL HOSPITAL.—(1) House Surgeon. (2) Two Assistant House Surgeons. Salary for (1) at the rate of £120 per annum, and for (2) at the rate of £40 per annum.

BIRMINGHAM QUEEN'S HOSPITAL. House Physician. Salary at the rate of £100 per annum.

BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL.—(1) Honorary Surgeon. (2) Honorary Assistant Surgeon.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN. (1) House Surgeon. Salary, £120 per annum, rising to £150 on re-election for the second year. (2) Assistant House Surgeon. Salary £20 per annum.

CARMARTHEN, CARDIGAN, AND PEMBROKE JOINT COUNTIES LUNATIC ASYLUM. Junior Assistant Medical Officer. Salary, £130 per annum.

EDINBURGH SCHOOL BOARD.—Medical Officer. Salary, £400 per annum.

GLOUCESTER GENERAL INFIRMARY, ETC.—Assistant House-Surgeon. Remuneration at the rate of £30 per annum.

HOSPITAL FOR WOMEN, Soho Square, W.—Clinical Assistants to the Gynaecologists in the Out-patient Department.

HULL ROYAL INFIRMARY.—Casualty House-Surgeon. Salary, £50 per annum.

LEITH HOSPITAL.—Surgeon in the Out-patient Department. Salary at the rate of £80 per annum.

LIVERPOOL DISPENSARIES.—(1) Head Surgeon. (2) Assistant Surgeon. Salary, £200 and £100 per annum respectively.

LONDON TEMPERANCE HOSPITAL.—Assistant House-Surgeon non-resident. Honorarium at the rate of £75 per annum.

MANCHESTER EAR HOSPITAL.—Assistant Surgeon.

MANCHESTER EYE AND EAR HOSPITAL.—(1) Honorary Aural Surgeon. (2) Honorary Ophthalmic Surgeon. (3) Anaesthetist, salary, £60 per annum.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill,—Junior House-Surgeon. Salary, £50 per annum.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Male Assistant House-Surgeon. Honorarium, £20 for six months.

ROCHDALE INFIRMARY. — House-Surgeon. Salary, £100 per annum

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Two members of the Court of Examiners.

SHEFFIELD CHILDREN'S HOSPITAL. — House-Surgeon for the East-End Branch. Salary, £70 per annum.

STROUD GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

TRURO: ROYAL CORNWALL INFIRMARY. — House-Surgeon. Salary, £100 per annum.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—(1) Senior Resident Officer, (2) Two Assistant Resident Medical Officers. Salaries, for (1) £200 and for (2) £80 per annum each.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—(1) Surgeon to Out-patients, (2) Senior Resident Medical Officer. Salary, £105 per annum.

WEST HARTLEPOOL: CAMERON HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY. House-Surgeon. Salary, £70 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies for Certifying Factory Surgeons at Burford (Oxford), Richmond (Surrey), and Gomersal (York).

APPOINTMENTS.

AITKEN, Charles J. Hill, M.D., an Examiner for the Cape Colonial Medical Council's Examination of Midwives and Trained Nurses at East London, Cape Colony.

BROWN, W., M.B., Ch.B.Edin., Certifying Factory Surgeon for the Braemar District, co. Aberdeen.

COGHLAN, E. F., M.R.C.S., L.R.C.P., Clinical Assistant, Chelsea Hospital for Women.

DRAPES, T. L., M.R.C.S., L.R.C.P., District and Workhouse Medical Officer of the Chepstow Union.

FELDMAN, M., M.R.C.S., L.R.C.P., Lecturer on Health Subjects to the London County Council.

FLEETWOOD, Wm. Hardy, M.R.C.S., L.R.C.P., Resident Assistant Medical Officer to Mill Road Infirmary, Liverpool.

GILL, E. S. H., M.B., Ch.B.Liverpool, Resident Assistant Medical Officer, Brownlow Hill Workhouse of the Liverpool Parish.

ILIFFE, C. W., L.R.C.P. and S.Edin., Medical Officer of the Workhouse of the Derby Union.

INGRAM, P. C. P., M.R.C.S., L.R.C.P.Lond., Second Resident Assistant Medical Officer, St. George's Union Infirmary.

LATHAM, Arthur, M.D.Oxon., F.R.C.P., Advisory Physician to the Hospital for Diseases of the Throat, Golden Square.

MACDIARMID, P., M.B., B.S Edin., Resident Assistant Medical Officer of the Walton Workhouse of the West Derby Union.

MOXON, Frank H., M.B Dunelm., Ophthalmic House-Surgeon at the Sheffield Royal Hospital.

PATRICK, J. King, M.B., B.Ch.Glasg., Anaesthetist to the Glasgow Royal Infirmary.

PETTEY, T., M.D.Edin., F.R.C.S.Eng., District Medical Officer of the Eastbourne Union.

ROMER, R. L., M.R.C.S., L.R.C.P., Medical Officer of Health, Hendon Rural District and District Medical Officer of the Hendon Union.

SANDFORD, G. C., M.D.Edin., District Medical Officer of the Parish of Devonport.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, W., 8.30 p.m.—Dr. Sidney Phillips will read a paper on Some Affections of the Pancreas.

TUESDAY.

MEDICO-LEGAL SOCIETY, 22, Albemarle Street, W., 8.30 p.m.—(1) Exhibition of medico-legal specimens. Discussion on Suicide and Sanity, to be opened by Dr. Claye Shaw.

PATHOLOGICAL SOCIETY, 20, Hanover Square, W., 8.30 p.m.—Communications. (1) F. W. Andrewes: Observations on MacConkey's Bile Salt Neutral-red Medium. (2) T. J. Horder: Note on a case of Typhoid Fever diagnosed by Blood Culture in the absence of Agglutination Reaction. A third case of Influenzal Endocarditis diagnosed by Blood Culture. A case of Gonococcal Endocarditis. (3) F. W. Twort The Incidence of Spontaneous Cancer in Mice.

FRIDAY.

EPIDEMIOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, W., 8.30 p.m.—Dr. E. F. Bashford (General Superintendent of the Imperial Cancer Research Fund)—Paper: Real and Apparent Differences in the Incidence of Cancer. Microscopic demonstration — Dr. J. B. Murray: Sporadic and Experimental Cancer in Mice.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN, 11, Chandos Street, W., 5 p.m.—Cases will be shown by Dr. F. J. Poynton, Mr. H. S. Clogg, Dr. E. Cautley, Mr. P. L. Mummery, Dr. C. O. Hawthorne, Dr. T. R. Whipham, Dr. G. Carpenter, and others.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Wednesday, 5 p.m.: Larynx.

CHARING CROSS HOSPITAL, W.C.—Tuesday, 4 p.m.: Medical. Thursday. 4 p.m.: Surgical.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—Clinics: Tuesday, Medicine. 2.30 p.m.; Surgery. 3.15 p.m.; Diseases of the Skin, 4 p.m. Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30. Out-patient Demonstrations: Medical and Surgical, 10 a.m. daily; Ears and Throats, noon, Monday and Thursday; Eyes, 11 a.m., Wednesday and Saturday; Skin, noon, Tuesday and Friday.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, throat. Lectures at 5.15 p.m. each day will be given as follows: Monday, The Administration and Uses of Ethyl Chloride; Tuesday, The Surgical Anatomy of the Temporal Bone: its Bearings on Suppuration (with lantern slides); Wednesday, Asthma in Infancy and Childhood; Thursday, On the Treatment of Some Paralytic Deformities.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Cerebral Arterial Supply (demonstration of injected hemispheres). Friday, 3.30 p.m.: Hemiplegia.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the arrangements for next week: Monday, 9.30 a.m.: Surgical Out-patient Clinique. 2.30 p.m.: Medical Out-patient, Throat, Nose, and Ear Cliniques; x-ray Demonstration. 3 p.m.: Medical In-patient Clinique. Tuesday, 10.30 a.m.: Medical Out-patient Clinique. 2.30 p.m.: Surgical Operations; Gynaecological Out-patient Cliniques. 3 p.m.: Medical In-patient Clinique. 4.30 p.m.: Lecture on the Working Value of the Diseased Heart. Wednesday, 2.30 p.m.: Dermatological, Ophthalmological, and Medical Out-patient Cliniques. Thursday, 2.30 p.m.: Gynaecological Operations; Medical and Surgical Out-patient Cliniques. 4.30 p.m.: Lecture on Diseases of the Thyroid Gland. Friday, 9.30 a.m.: Surgical Out-patient Clinique. 2.30 p.m.: Medical Out-patient Clinique; Surgical Operations; Ophthalmological Clinique. 3 p.m.: Medical In-patient Clinique.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, Hammersmith, W.—The following arrangements have been made for next week: Daily: 2 p.m., Medical and Surgical Clinics; 2.30 p.m., X Rays; operations. Monday and Thursday: Diseases of the Eye. Tuesday and Friday. 10 a.m.: Gynaecological Operations. Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Tuesday and Friday, 2.30 p.m.: Diseases of the Skin. Wednesday, 10 a.m.: Diseases of Children. Lectures—Monday, 12: Pathological Demonstrations. Monday, 5 p.m.: Practical Surgery. Tuesday: Tropical Medicine: Wednesday: Practical Medicine. Thursday: Clinical Lecture. Friday: Clinical Lecture.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BOTHAM.—At Staindrop, on January 3rd, the wife of R. H. Botham, M.R.C.S., L.S.A., of a daughter.

GILFORD.—On January 2nd, 1907, at 136, Oxford Road, Reading, the wife of Sidney Gilford, M.B., Ch.B., of a daughter.

HARTLEY.—At No. 4, De Parys Avenue, Bedford, on January 7th, the wife of Arthur Conning Hartley, M.D., F.R.C.S.Edin., of a daughter.

JOHNSON.—At Ashley Lodge, Aberdeen, December 28th, 1906, the wife of John J. Johnson, M.B., Ch.B., of Meadow House, Crook, co. Durham, of a son.

DEATHS.

AUSTIN ROBINSON.—On January 3rd, 1907, at Hastings, England, of acute meningitis, Gwenllian Rogers (Gwenyth), aged 4 years, only daughter of the late Frederic Austin Robinson, M.R.C.S.Eng., L.R.C.P.Lond., who gave his life in service to the Colony of Natal as Volunteer Medical Officer during the recent Native Rebellion.

LOFTHOUSE.—January 7th, 1907, at Harrogate, Surgeon-General Richard Chapman Lofthouse, formerly of Knaresborough, aged 74. Will be interred at Knaresborough Cemetery on Thursday, the 10th inst., at 2.30.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JANUARY.	
11 FRIDAY ...	LONDON: Central Ethical Committee, 2 p.m. HAMPSTEAD DIVISION, *Metropolitan Counties Branch.*
12 SATURDAY ...	
13 Sunday ...	
14 MONDAY ...	
15 TUESDAY ...	LONDON: Poor-Law Committee (English Members), 1.30 p.m. Full Committee, 3.30 p.m. CITY DIVISION, *Metropolitan Counties Branch*, Great Eastern Hotel, E.C., Lincolnshire Room, entrance in Bishopsgate Street), 4 p.m.
16 WEDNESDAY	LONDON: Journal and Finance Committee, 3 p.m.
17 THURSDAY...	LONDON: Metropolitan Counties Branch Council, 5 p.m. LEIGH DIVISION, *Lancashire and Cheshire Branch*, Co-operative Offices, Ellesmere Street, Leigh, 8.30 p.m.
18 FRIDAY ...	
19 SATURDAY ...	
20 Sunday ...	
21 MONDAY ...	
22 TUESDAY ...	
23 WEDNESDAY	CENTRAL COUNCIL at Metropolitan Asylums Board at 2 p.m. LANCASHIRE AND CHESHIRE BRANCH, Medical Institution, Liverpool, 4 p.m.: Dinner, Adelphi Hotel, 7 p.m.
24 THURSDAY...	MARYLEBONE DIVISION, *Metropolitan Counties Branch*, Special Meeting, Rooms of the Medical Society of London, 11, Chandos Street, W., 8.30 p.m. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Wandsworth Town Hall, 8.45 p.m.

Date.	Meetings to be Held.
JANUARY *(Continued).*	
25 FRIDAY ...	LAMBETH DIVISION, *Metropolitan Counties Branch*, Lambeth Infirmary, Brook Street, Kennington Road, S.E., 4 p.m.; Committee, 3.30 p.m.
26 SATURDAY ...	
27 Sunday ...	
28 MONDAY ...	
29 TUESDAY ...	
30 WEDNESDAY	LONDON: Special Finance Inquiry Committee, 2.30 p.m. BATH AND BRISTOL BRANCH, Bristol. ULSTER BRANCH, Belfast.
31 THURSDAY...	
FEBRUARY.	
1 FRIDAY ...	
2 SATURDAY ...	
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	
6 WEDNESDAY	
7 THURSDAY...	WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
8 FRIDAY ...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch.*
9 SATURDAY ...	
10 Sunday ...	
11 MONDAY ...	LONDON: Ethical Subcommittee, 2 p.m.
12 TUESDAY ...	LONDON: Organization Committee, 11 a.m.
13 WEDNESDAY	
14 THURSDAY...	
15 FRIDAY ...	
16 SATURDAY...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts or any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom who is duly registered or possesses such medical qualifications as shall, subject to the Regulations be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership from time to time to be determined by or in accordance with the By-laws. Every Member who was one of the Ordinary Members or a subsequently elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing addressed to the Association, and stating his qualifications. He shall, be made by the Regulations and By-laws of the Association and the Rules of such Division and Branch to which he may at any time belong and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 12s. 0d. for abroad.

Published by the British Medical Association at their Offices, No. 429 Strand in the Parish of St. Martin-in-the-Fields, in the County of Middlesex.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 19TH, 1907.

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THE WORKMEN'S COMPENSATION ACT, 1906.

By W. VALENTINE BALL,
Barrister-at-Law.

II.

INTRODUCTORY.

IN a former article[1] some account was given of those provisions of the Workmen's Compensation Act, 1906, which are of interest to members of the medical profession as "employers" or "employed." It is now proposed to deal with certain parts of the new measure which are of special interest to medical men as practitioners.

The Act of 1897 provided for the employment of medical men as medical referees, and in certain important particulars those provisions have been modified. Further, it is obvious that any statute which imposes liability upon employers to pay compensation to workmen who are injured must involve the employment of medical practitioners.

The terms and conditions of such employment were to some extent provided for in the Act of 1897; but the new Act contains further provisions on the subject. Finally, it will be necessary to consider the nature of certain duties which are to be imposed upon Certifying Surgeons under the Factory Acts.

The subject may therefore be conveniently discussed under the following heads:

(1) Employment of practitioners generally; (2) employment, duties, etc., of Medical Referees; (3) employment, duties, etc., of Certifying Surgeons under the Factory Act, 1901.

EMPLOYMENT OF PRACTITIONERS GENERALLY.

The fact that the liabilities of employers are enormously increased by the Act must necessarily involve a more careful inquiry into the health and physique of persons about to be engaged. Thus the extension of the Act to seamen has already led the Shipping Federation to announce that arrangements are being made whereby voluntary medical examination prior to the engagement of sailors will be facilitated.

The new Act provides, by Schedule I, Section 4, that where a workman has given notice of an accident, he shall, if so required by the employer, submit himself for examination by a duly qualified medical practitioner provided and paid by the employer; if he refuses to submit himself to such examination, or in any way obstructs the same, his right to compensation, and *to take or prosecute* any proceeding under the Act in relation to compensation shall be suspended until such examination has taken place. Save that the words in italics are new, and that the words "has taken place" replace the words "takes place," this provision, the object of which is to give the employer an opportunity of detecting malingering, is identical with that which is contained in the Act of 1897. No cases have been decided with reference to it which are of particular interest to the medical profession. In view of the fact that after July 1st, 1907, employers will be liable for all injuries which disable a workman for a week or more, instead of a fortnight or more as heretofore, it is probable that practitioners who have been engaged by employers to examine injured persons will find their work increased.

It is noteworthy, however, that by Schedule I, Section 15, a workman shall not be obliged to submit himself to examination under this provision otherwise than in accordance with regulations made by the Home Secretary. Such regulations have not yet been published, but they will no doubt appear before the Act comes into force. The Act further provides, by Schedule I, Section 14, that where a workman is in receipt of weekly payments under the Act he must, if so required by the employer, from time to time submit himself to examination by a medical practitioner chosen by the employer. If he refuses to submit, his right to weekly payments is suspended until the examination takes place.

The Act of 1897 contained a provision similar to this, but in that Act "any person by whom the employer is entitled to be indemnified"—for example, an insurance company—had the right to call upon a workman to submit to examination. This right may no longer be exercised.

It will apparently be necessary for the practitioner who is asked to make an examination under either of the above sections to make a written report as to the workman's condition or fitness for employment. At any rate, it will be wise for him to do so, inasmuch as the employer may require to serve a copy of it upon the workman, with a view to coming to some agreement. As will presently be shown, failure to come to an agreement may involve the employment of a medical referee.

Subject to the provisions of Section 8 (5), which enables the Secretary of State to confer upon any medical practitioner the powers and duties of a certifying surgeon (see *sub tit.*, Certifying Surgeons, *infra*), this concludes our survey of the act so far as the private practitioner is concerned.

EMPLOYMENT, ETC., OF MEDICAL REFEREES.

Those provisions of the Act which relate to medical referees, their powers, duties, and liabilities, are of

[1] See the SUPPLEMENT to the BRITISH MEDICAL JOURNAL for January 12th, 1907.

considerable importance to the medical profession. The medical referee was created by the Act of 1897. Three hundred referees were duly appointed in accordance with that measure; and their position cannot, to say the least, be said to be satisfactory. It is proposed to consider how the Act alters their condition, and in order to appreciate the changes which have been made it is necessary to refer to the Act of 1897.

Provisions of the Act of 1897 as to Medical Referees.

By Schedule II, Section 13, of that Act, the Secretary of State was empowered to appoint legally qualified medical practitioners for the purpose of the Act. Any judge or arbitrator was authorized, by the same section, to appoint a medical referee to report on any matter which seemed material to any question arising in the arbitration. The expense of the referee was to be paid by the State. Regulations providing for the appointment and payment of referees were made on May 2nd, 1898. It was provided by those regulations that before any reference the judge must be satisfied, after hearing the medical evidence tendered by either side, that such evidence was either conflicting or insufficient on some matter which seemed material to a question arising in the arbitration.

By a further regulation the judge was empowered, in a case of special difficulty, to require the attendance of the medical referee at any proceedings at a date and hour to be arranged. Payment was made by fees at the rate of 2 guineas for a first reference (including examination of the injured workman and a written report); 1 guinea for a further statement (under Reg. 18); 1 guinea for any second or subsequent reference; and 3 guineas for attendance at a county court at the request of the judge. A mileage rate was also allowed; but there was no provision for anything in the nature of a retaining fee.

There is some doubt as to what value is to be attached to the report of the medical referee. In a Scotch case[2] the Court of Session held that it was conclusive evidence of the condition of the workman at the date of the report. The report is not, however, evidence at all in the strict sense of the word. It is only for the private guidance of the judge or arbitrator, and the parties have no right to test it by cross-examination.

Certain other duties devolve upon the medical referee under the Act of 1897. It is provided (by Schedule I (11) of that Act) that a workman who is receiving weekly payments may be called upon by his employer to submit himself for examination by a duly-qualified practitioner appointed and paid by the employer. If the workman objects to an examination by that medical practitioner, or is dissatisfied with his certificate, he *may* submit himself to a medical referee. The Section goes on to provide that the certificate given by the medical referees as to the condition of the workman shall be conclusive evidence of his condition, and that if the workman refuses to submit himself to *such examination*, or in any way obstructs the same, his right to such weekly payments shall be suspended until such examination has taken place. It has recently been decided that the words "such examination" in this section refer only to examination by the employer's medical practitioner, and that a workman cannot be required to submit himself for examination of a medical referee.[3]

Working of the Act of 1897.

Statistics show that in so far as it relates to medical referees the Act of 1897 is practically a dead letter. In 1903 a memorial was prepared to be submitted to the Home Secretary on behalf of the British Medical Association concerning the working of the Act.[4] It was there pointed out that the Association had received from 230 referees replies to inquiries as to the working of the Act; 161 said they had never acted; of the remainder, the vast majority said they had only been consulted in a few cases, 25 having given "certificates," 51 having furnished reports under Schedule II, S. 13, and 7 having served as assessors with the judge. Three reasons were assigned in the memorial why medical referees were not more frequently employed to consider the condition of a workman receiving weekly payments:

1. That the workman, if he calls in the referee, has to pay his fee.

2. That the employer has no power to call in the referee under this clause; and

3. That the workman cannot call in the referee at a sufficiently early stage, only being able to do so when he objects to being examined by the employer's medical adviser, or appeals from the opinion of such medical adviser.

We shall see whether and how far these grievances have been removed by the Act of 1906.

Duties of Medical Referees under Act of 1906 in Relation to the Grant of Certificate.

It has been pointed out, when discussing (see above) the employment of practitioners generally, that by Section 14 of Schedule I a workman must, if so required, submit himself for examination by a medical practitioner. The second paragraph of Section 15 of the same schedule provides as follows:

> Where a workman has so submitted himself for examination by a medical practitioner, or has been examined by a medical practitioner selected by himself, and the employer or the workman, as the case may be, has within six days after such examination furnished the other with a copy of the report of that practitioner as to the workman's condition, then, in the event of no agreement being come to between the employer and the workman as to the workman's condition or fitness for employment, the registrar of a county court, on application being made to the court by both parties, may, on payment by the applicants of such fee not exceeding one pound as may be prescribed, refer the matter to a medical referee.

Comparing this with the corresponding provision of the Act of 1897, it will be seen that the question whether he shall or shall not be examined by a referee still rests with the workman. The application for the reference to a medical referee must be made by both parties—that is, the employer and the workman—and there is nothing to compel the workman to join in making an application. It is true, however, that the fee payable on the application is to be paid by both the employer and the workman. The section goes on:

> The medical referee to whom the matter is so referred shall, in accordance with regulations made by the Secretary of State, give a certificate as to the condition of the workman and his fitness for employment, specifying, when necessary, the kind of employment for which he is fit, and that certificate shall be conclusive evidence as to the matters so certified. Where no agreement can be come to between the employer and the workman as to whether or to what extent the incapacity of the workman is due to the accident, the provisions of this paragraph shall, subject to any regulations made by the Secretary of State, apply as if the question were a question as to the condition of the workman.

It is made clear by these two paragraphs that the medical referees may have to judge as to (*a*) the workman's condition and fitness for employment; (*b*) whether and to what extent the incapacity was due to the accident. In this respect the section goes far beyond the corresponding provision of the Act of 1897, under which the referee was merely empowered to certify as to the "condition" of the workman at the time of the examination. The fact that the referee's duties are to be carried out in accordance with regulations made by the Secretary of State would seem to point to his examination being conducted in some sort as a reference or arbitration. The regulations, for instance, might well prescribe that the parties should be represented before him. No regulations have as yet been published.

The section proceeds:

> If a workman, on being required so to do, refuses to submit himself for examination by a medical referee to whom the matter has been so referred as aforesaid, or in any way obstructs the same, his right to compensation and to take or prosecute any proceeding under this Act in relation to compensation, or in the case of a workman in receipt of a weekly payment, his right to that weekly payment shall be suspended until such examination has taken place.
>
> Rules of court may be made for prescribing the manner in which documents are to be furnished or served and applications made under this paragraph, and the forms to be used for those purposes and, subject to the consent of the Treasury, as to the fee to be paid under this paragraph.

The first of the two paragraphs above set out has effect to reverse the decision in *Nragle v. Nixon's Navigation Company* (*supra*), and to make it possible for the employer to compel the workman to submit himself to examination by the referee. It is not to be forgotten, however, that the question whether the referee shall or shall not be

[2] [illegible] 4 F. [illegible] 711.
[3] [illegible] Co. 2 I. R. 160.
[4] [illegible] Journal, July 14th, 1903, Supplement, p. cxxii.

called in in the first instance depends in part upon the workman himself.

Having regard to the above provisions, it will be seen that the new Act does not remove all the causes which in the past have militated against the employment of medical referees. It is true that the fee on application for the appointment of a referee is (presumably) to be shared by employer and workman; but the employer cannot insist on the referee being consulted unless the workman consents. It is clear, however, that under the new Act the workman may, with the consent of his employer, call in the referee if the employer fail to accept the decision of the workman's medical practitioner. This may have effect to increase the employment of medical referees.

Other Duties of Medical Referees.

In addition to the duties above mentioned a medical referee may be asked to review the decision of a certifying factory surgeon upon certain questions relating to industrial diseases (see Section 8 (1) (*f*) and *sub tit.* "Certifying Surgeons," *infra*). Putting the matter quite shortly, the certifying surgeon has power to certify that a workman is suffering from an industrial disease, and that he is thereby disabled from work, and an employer or a workman may appeal from his decision on these points. If the medical referee grants a certificate of disablement, he has power to fix the date upon which that disablement shall be said to commence (Section 8 (4) (*a*)).

A medical referee may also be called upon to decide whether the incapacity resulting from an injury is or is not likely to be of a permanent nature, in order to enable the Court to decide as to the amount of compensation to be paid to an injured workman residing abroad (Schedule I (18)).

A judge of a county court may, if he thinks fit, summon a medical referee to sit with him as assessor (Schedule II (5)); and any committee, arbitrator, or judge may, subject to regulations made by the Secretary of State and the Treasury, submit to a medical referee for report any matter which seems material to any question arising in the arbitration (*ib.* (15)). As to the appointment of assessors, a county court judge has a general power to appoint an assessor under Section 103 of the County Courts Act, 1888; but the provision above mentioned enables him to appoint a medical referee to act in this capacity. With regard to the power of a judge to call upon a medical referee to report, Schedule II (15) of the new Act is in the same form as a part of Schedule II (13) of the Act of 1897. The report under this provision must not be confused with the certificates which are to be given under Section (15) of Schedule I.

Remuneration of Medical Referees.

It has been shown that under the Act of 1897 and the regulations made pursuant thereto, medical referees are paid by fees and by fees alone. There is nothing in the nature of a retainer. Owing to the fact that a referee occupies a quasi-judicial position, the Home Secretary has insisted that a referee shall retain no appointment which would be likely to interfere with his duties or bias his judgement, and many referees have resigned good appointments. The statistics already referred to show that in some cases this rule must have been the cause of great hardship.

These considerations were brought to the notice of the Home Secretary in the memorial above referred to; and although there is nothing in the new Act which expressly authorizes the payment of a retaining fee, it is possible that in framing new regulations, the Treasury would take the matter into consideration.

Section 10 (1) of the Act provides that:

> The Secretary of State may appoint such legally qualified medical practitioners to be medical referees for the purposes of this Act as he may, with the sanction of the Treasury, determine, and the remuneration of, and other expenses incurred by, medical referees under this Act shall, subject to regulations made by the Treasury, be paid out of moneys provided by Parliament.
>
> Where a medical referee has been employed as a medical practitioner in connexion with any case by or on behalf of either party or by any insurers interested, he shall not act as medical referee in that case.

This section replaces, with certain modifications, Schedule II, Para. 13, of the Act of 1897. Under that provision the Treasury were empowered to make regulations as to the expense of medical referees. Now, "the remuneration of and other expenses incurred by" medical referees are to be the subject of Treasury regulations. It may be that this change is made for the express purpose of enabling the Treasury to pay salaries in addition to or in substitution for fees.

The last paragraph of the section is new. It declares, in effect, that no medical referee must act in any case where he is likely to be biassed in favour of one side or the other. It is difficult to imagine that any medical practitioner holding the office of referee would ever act in such a case, and the paragraph would therefore appear to be unnecessary. But it has a value of its own; it draws attention to the disadvantages under which a medical referee may labour. Consider the position of a general practitioner in a manufacturing town. Assume that he is medical officer to an accident insurance company, and to a large sick club, and that he is paid a retaining fee by the owners of a factory employing many thousand hands to advise in any case where a claim for compensation is made by a workman. Were he to become a medical referee, he would be compelled to refuse to act in most of the cases submitted to him. If a man in this position were required to act as medical referee, and to be always ready and willing to act whenever called upon, he would probably be compelled to give up all his appointments.

CERTIFYING FACTORY SURGEONS AND THEIR DUTIES.

The fact that a workman who acquires an industrial disease is now to be regarded as the victim of an accident has rendered it necessary for the Legislature to provide for the employment of medical practitioners to decide:

(*a*) Whether a man is so suffering; and

(*b*) Whether he is disabled by the disease.

The term "industrial disease" includes anthrax, lead, mercury, arsenic, and phosphorus poisoning and their sequelae, and ankylostomiasis. The Secretary of State has power to extend the definition so as to include other diseases. (Section 8 (6).)

A certifying surgeon may be called upon to certify that a workman is suffering from an industrial disease and is thereby disabled from earning full wages at the work at which he is employed. (Section 8 (1) (*i*).) If an employer or workman is aggrieved by the action of a certifying surgeon in giving or refusing a certificate, he may (as we have seen) appeal to a medical referee. (Section 8 (1) (*f*).)

The Secretary of State may make rules regulating the duties and fees of certifying and other surgeons (including dentists) (Section 8 (3)); and in such cases and subject to such conditions as the Secretary of State may direct, a medical practitioner appointed by the Secretary of State for the purpose shall have the powers and duties of a certifying surgeon under this section.

Certifying surgeons are at present appointed by inspectors of factories, in accordance with regulations made by the Secretary of State (Factory Act, 1901, Section 122). If there is no certifying surgeon for a factory, the Poor-law medical officer acts as such (ibid., Section 123). The fees payable to certifying surgeons in respect of their duties under the Factory Act are prescribed in Schedule V of that Act.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, January 23rd, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,

January 3rd, 1907. *General Secretary.*

ANNUAL MEETING, EXETER, 1907.

PATHOLOGICAL MUSEUM.

The following are the members of the Committee:—

President: J. D. Harris, M.D.
Honorary Secretaries: R. V. Solly, M.D.; G. P. Hawker, M.B.

Members of Committee:

A. E. Carver, M.D.	R. Pickard, F.R.C.S.
B. Dyball, F.R.C.S.	A. C. Roper, F.R.C.S.Edin.
R. Hingston	P. H. Stirk
H. C. Jonas, M.D.	H. Sharp, M.B.
R. H. Lucy, F.R.C.S.	G. L. Thornton, M.R.C.P.
H. Montgomerie, M.D.	H. W. Webber.
W. L. Pethybridge, M.D.	

Ex-Officio Members:
The President-elect: H. Davy, M.D., F.R.C.P.
The Local Honorary Treasurers: J. Somer; L. H. Tosswill, M.B.
The Local Honorary Secretaries: R. Coombe, F.R.C.S.; G. T. Clapp, M.B.; Leonard Tosswill.

The following circular has been sent out by the Sub-committee of the Pathological Museum to over 600 men interested in pathology, and likely to help in the organization of a museum:

The Committee appointed to organize the Pathological Museum in connexion with the Annual Meeting in Exeter, 1906, propose to arrange the material under the following heads:

I. Exhibits bearing on discussions and papers in the various Sections.
II. Specimens and illustrations relating to any recent research work.
III. Instruments relating to clinical diagnosis and pathological investigation.
IV. Individual specimens of special interest, or a series illustrating some special subject.

It is also proposed to make a special effort to gather together a series of exhibits relating to:

(*a*) Tumours and chronic inflammatory conditions of breast.
(*b*) Diseases of liver, gall bladder, and pancreas.
(*c*) Intracranial tumours and abscesses.
(*d*) Dislocations and fractures near joints, illustrated by dissections and *x*-ray photographs.

The Committee wish it to be understood that the above are only suggestions, and if there is any subject in which you are specially interested, and can supply interesting specimens, we shall be glad to hear from you.

The Museum will occupy a central position and will be easy of access.

The Committee desire to enlist your hearty co-operation, and we shall be glad to hear from you, if you are able to make an exhibit. Every care will be taken of specimens, and the contents of the Museum will be insured.

It is hoped that it will be possible for arrangements to be made whereby exhibitors may have an opportunity of demonstrating their specimens.

Yours faithfully,
R. V. Solly.
G. P. Hawker,
Honorary Secretaries.

West Somerset House, Exeter, January, 1907.

METROPOLITAN COUNTIES BRANCH: MARYLEBONE DIVISION.

The second of a series of discussions on economic problems in the practice of medicine will be held at the Medical Society's Rooms, 11 Chandos Street, Cavendish Square, W., at 8.30 p.m. on Thursday January 24th. The following resolution will be submitted:

That the development of properly organized systems of medical assurance for the costs of illness offers the most feasible available method of reducing the admitted evils of excessive medical charity and the misuse of hospitals.

The debate will be opened by Dr. R. C. Buist, Mr. H. W. Armit, Miss Schartieb, Dr. L. S. McManus, and Dr. J. H. Keay. The following is a synopsis of the remarks to be made by Dr. Buist and Mr. Armit:

Dr. R. C. Buist.

Insurance.

Risk may be anticipated by simple thrift, or by insurance, or met by debt, or by charity.

Where the margin for thrift is narrow insurance is the only efficient mode of preparation for a risk such as that of sickness, which for the individual may be indefinitely large.

Insurance compulsory or voluntary.

Voluntary systems of provision for illness may be complete, including sick pay, medical attendance and medicine, or partial, the balance being provided by thrift or by charitable assistance.

The existing organizations.

Main defects of present arrangements: (1) Lack of choice of medical attendant; (2) inadequate premiums; (3) abuse.

The essential condition of safe development is agreement of the medical profession as to the conditions on which it will perform the various classes of work.

Evidence that the public will not suffer by such agreement.

Is such agreement possible?

Mr. H. W. Armit.

1. Social economy of insurance against the cost of sickness and accident.
   (*a*) Significance to the State.
   (*b*) Significance to the individual.
2. Mutual assurance.
   (*a*) The part to be played by the individual.
   (*b*) The part to be played by the medical practitioner.
3. Classes to be involved.
   (*a*) Those with low wages.
   (*b*) Those with moderate incomes.
   (*c*) Special circumstances.
4. Employers' liabilities and medical charities.
5. Effect of general insurance on the excess of medical charity, and on the misuse of hospitals.
6. Limitations.
7. Possibility of inducing the low wage-earner to subscribe voluntarily.
8. Machinery at our disposal for effectively introducing reforms.
9. Administration and control.
10. The parties to the contract.
    (*a*) The State.
    (*b*) The low wage-earner.
    (*c*) The medical practitioners.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m., except on Saturdays, when they close at 2 p.m. Members can have their letters addressed to them at the office.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Birmingham Branch: Coventry Division.—A special meeting of this Division will be held at the Coventry and Warwickshire Hospital on Monday, January 21st, at 9 p.m. Agenda: (1) Dr. Webster will show a case of Transposition of the Viscera, and also a specimen of a Bronchial Cast. (2) The Committee will recommend the adoption of the Model Rule "Z" (see Supplement to the British Medical Journal of July 28rd, 1901, p. 78). (3) The Chairman will move that the Division resolve itself into a Committee to discuss the dispensary question.—E. H. Snell, Honorary Secretary.

Border Counties Branch.—A general meeting will be held in Carlisle on February 15th, when the Medical Secretary of the Association will deliver an address on Contract Practice. All medical practitioners are invited to attend.—Francis R. Hill, Secretary, Carlisle.

Edinburgh Branch.—It is proposed to hold the annual clinical meeting of the Edinburgh Branch in the Royal Infirmary, Edinburgh, on the second or third Friday in February.—A. Logan Turner, Francis W. Boyd, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—A scientific meeting of this Branch will be held at 4 p.m. on Wednesday, January 23rd, at the Medical Institution, Liverpool. Dinner at Adelphi Hotel at 7 p.m.—F. CHARLES LARKIN, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next meeting of the Lambeth Division will be held at the Lambeth Infirmary, Brook Street, Kennington Road, S.E., on Friday, January 25th, at 4 p.m. A meeting of the committee will be held at 3.30 p.m. sharp, prior to the general meeting. Agenda: (1) Minutes of the last meeting. (2) George J. Jenkins, F.R.C.S. (Surgeon to the German Hospital), will read a paper on abscesses in the peritoneal cavity. (3) Dr. M. P. Quarry (Medical Superintendent of the Lambeth Infirmary) will show cases of interest in the wards of the Infirmary.—W. ALEXANDER ATKINSON M.D., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: MARYLEBONE DIVISION.—A special meeting of this Division will be held at the rooms of the Medical Society, Chandos Street, W., on Thursday, January 24th, at 8.30 precisely. The second of a series of discussions on economic problems in the practice of medicine will take place. The resolution submitted will be: "That the development of properly-organized systems of mutual assurance for the costs of illness offers the most readily-available method of reducing the admitted evils of excessive medical charity and the misuse of hospitals." The debate will be opened by Dr. R. C. Buist, Mr H. W. Armit, Mrs Scharlieb, Dr. L. S. McManus, and Dr. J. H. Keay. Special invitations will be sent to all practitioners resident in the Marylebone Division whether they are members of the Association or not. Any member of the profession will be admitted on presentation of his card. The Honorary Secretary will be glad to receive the names of those willing to take part in the debate.—COMYNS BERKELEY, M.B., B.C.Cantab. M.R.C.P., Honorary Secretary and Treasurer, 53, Wimpole Street, W.

ULSTER BRANCH.—The winter meeting of this Branch will be held in Belfast, on Wednesday, January 30th. Members having cases to show or communications to make to the meeting are requested to send me particulars of the same before January 20th.—CECIL SHAW, M.D., Honorary Secretary, 18, College Square East, Belfast.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

STAFF SURGEON A. BOBART, M.D., has been allowed to withdraw from the service with a gratuity. His first commission bears date November 14th, 1894: that of Staff Surgeon, November 14th, 1902.

The following appointments have been made at the Admiralty: JOHN J. DENNIS, M.D., Fleet Surgeon, and JOHN MARTIN, Staff Surgeon, to the *President*, additional, for three months' course at West London Hospital, January 14th; PERCY JACKSON, Fleet Surgeon, to the *Sapphire*, on recommissioning, January 27th; PERCY MAITLAND, Fleet Surgeon, to the *Majestic*, January 29th; FREDERICK ROBINSON, Surgeon, to the *Sapphire*, on recommissioning, to be lent to the *Tyne*, January 29th.

INDIAN MEDICAL SERVICE

MAJOR B. G. SETON, Bengal, is appointed to officiate as Secretary to the Director-General, Indian Medical Service, vice Major A. E. Roberts, M.B., Bengal, who has been granted furlough out of India for fifteen and a half months.

The following officers, R.A.M.C., on arrival from England, are posted as follows: Lieutenant-Colonel H. S. McGILL and Captain H. G. MARTIN, to the 6th (Poona) Division; Lieutenant-Colonel R. L. R. MACLEOD, M.B., to the 4th (Quetta) Division; Lieutenant-Colonel H. P. G. ELKINGTON, Lieutenant-Colonel J. J. O'DONNELL, M.B., and Major F. W. BEGBIE, to the 5th (Mhow) Division.

The following transfers, Royal Army Medical Corps, are ordered: Lieutenant-Colonel G. E. HALE, D.S.O., from the 6th (Poona) Division, to the 4th (Quetta) Division; Captain J. G. BERNE, from the 5th (Mhow) Division, to the 6th (Poona) Division; Captain L. L. G. THORPE, from the Aden Brigade to the 5th (Mhow) Division.

COLONIAL MEDICAL SERVICE.

THE following appointments have been made to the West African Medical Staff:

NAME.	COLONY.	DATE.
H. Catling, M.R.C.S., L.R.C.P.	S. Nigeria	December 15th, 1906.
F. H. Storey, M.B., Ch.B.	Gold Coast	January 12th, 1907.
H. W. Gush, M.B., Ch.B.	Gold Coast	January 12th, 1907.
F. J. M. Jupe, L.S.A.	Gold Coast	January 12th, 1907.
T. H. Dugon, M.R.C.S., L.R.C.P.	Gold Coast	January 19th, 1907.
A. B. S. Powell, L.R.C.S.Edin., L.C.P. and S.Glasg.	S. Nigeria	January 12th, 1907.
A. H. Wilson, M.B., Ch.B.	S. Nigeria	January 12th, 1907.
C. C. Robinson, M.B., L.R.C.P., M.R.C.S.	S. Nigeria	January 12th, 1907.
H. M. Newport, M.R.C.S., L.R.C.P.	S. Nigeria	January 12th, 1907.

RESIGNATIONS.

Dr. W. R. Henderson, C.M.G., Principal Medical Officer of the Gold Coast, retires on pension.

Dr. G. F. Darker, Medical Officer in Southern Nigeria, resigns.

Dr. D. Cowin, Medical Officer in the Gold Coast, resigns.

Dr. H. Kramer, Medical Officer in the Gold Coast, is invalided from the service.

PROMOTIONS

Dr. W. H. G. H. Best, Medical Officer in Southern Nigeria, is promoted to be Senior Medical Officer, vice G. T. Rutherford, transferred.

Dr. E. H. Read, Medical Officer in Southern Nigeria, is promoted to be Senior Medical Officer, vice F. G. Hopkins, promoted.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,413 births and 6,348 deaths were registered during the week ending Saturday last, January 12th. The annual rate of mortality in these towns, which had been 19.1, 19.7, and 22.4 per 1,000 in the three preceding weeks, declined again to 20.7 per 1,000 last week. The rates in the several towns ranged from 8.7 in Hornsey, 10.3 in King's Norton, 10.7 in Wolverhampton, 14.3 in Willesden, 14.4 in Aston Manor, in Barrow-in-Furness, and in Rhondda, 14.9 in East Ham, and 15.0 in Ipswich, to 27.7 in York, 28.5 in Preston, 28.6 in Stockton-on-Tees, 28.9 in Warrington, 30.2 in West Bromwich, 31.5 in Brighton, 31.8 in Hanley, and 32.8 in Middlesbrough. In London the rate of mortality was equal to 21.3 per 1,000, while it averaged 20.4 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.4 per 1,000 in these towns; in London this death-rate was equal to 1.2 per 1,000, while among the seventy-five large provincial towns the rates ranged upwards to 4.2 in Rotherham, 4.3 in Leyton, 4.7 in Smethwick, in Bootle and in Hull, and 8.2 in Warrington. Measles caused a death-rate of 2.0 in West Ham and in Leicester, 2.3 in Bootle, 2.5 in Rotherham, 3.1 in Hull and 8.2 in Warrington; scarlet fever of 1.6 in Hanley and 2.3 in Smethwick; diphtheria of 1.0 in Newcastle-on-Tyne, 1.6 in Smethwick, and 1.7 in Leyton; whooping-cough of 1.3 in Leyton, 1.7 in Rotherham, and 2.1 in Walthamstow; "fever" of 1.1 in Swansea; and diarrhoea of 1.1 in Oldham and 1.5 in West Bromwich. No fatal case of small pox was registered last week in any of the seventy-six towns, and no cases of this disease were under treatment during the week in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3,807, 3,846, and 3,707 at the end of the three preceding weeks, had further fallen to 3,521 at the end of last week: 285 new cases were admitted during the week, against 334, 237, and 309 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 12th, 955 births and 721 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.9, 19.0, and 22.9 per 1,000 in the three preceding weeks, declined again to 20.8 per 1,000 last week, but was 0.1 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scotch towns the death-rates ranged from 18.2 in Paisley and 19.2 in Edinburgh to 24.0 in Perth and 25.6 in Greenock. The death-rate from the principal infectious diseases averaged 1.9 per 1,000 in these towns, the highest rates being recorded in Glasgow, Aberdeen, and Greenock. The 539 deaths registered in Glasgow included 2 which were referred to scarlet fever, 3 to measles, 13 to diphtheria, 3 to "fever," 4 to diarrhoea, and 11 to cerebro-spinal meningitis. Two fatal cases of measles, 4 of diarrhoea, and 3 of cerebro-spinal meningitis were recorded in Edinburgh; 5 of measles in Aberdeen; and 4 of whooping-cough in Greenock.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, January 5th, 581 births and 490 deaths were registered in six of the principal Irish towns, as against 431 births and 353 deaths in the preceding period. The annual death-rate in these towns, which had been 20.8, 21.5, and 17.6 per 1,000 in the three preceding weeks, rose to 24.0 per 1,000 in the week under notice, this figure being 1.6 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 12.3 in Londonderry and 13.7 in Limerick to 31.5 in Cork and 31.9 in Dublin. The zymotic death-rate in the same six Irish towns averaged 1.3 per 1,000, or 0.6 per 1,000 higher than during the preceding period, the highest figure—2.5—being recorded in Dublin, while Waterford registered no death under this heading at all. Altogether in the twenty-one urban districts of Ireland whooping-cough caused 14 deaths.

VITAL STATISTICS OF LONDON DURING THE FOURTH QUARTER OF 1906

IN the accompanying table will be found summarized the vital statistics of the metropolitan boroughs and of the City of London, based upon the Registrar-General's returns for the fourth, or autumn, quarter of 1905. The mortality figures in the table relate to the deaths of persons actually belonging to the various boroughs, and are the result of a complete system of distribution of the deaths among the several boroughs in which the deceased persons had previously resided.

The 29,989 births registered in London during the three months ending December last were equal to an annual rate of 25.5 per 1,000 of the population, estimated at 4,721,217 persons in the middle of last year; in the corresponding periods of the three preceding years the rates had been 27.4, 27.2, and 26.1 per 1,000 respectively, the average rate in the fourth quarters of the ten years 1896-1905 being 28.2 per 1,000. The birth-rates last quarter ranged from 13.1 in the City of London, 15.4 in the City of Westminster, 15.6 in Hampstead, 16.9 in Chelsea, and 17.0 in Kensington, to 31.1 in Bermondsey, 31.6 in Bethnal Green, 31.9 in Shoreditch, 34.0 in Stepney, and 35.2 in Finsbury.

The 18,120 deaths of persons belonging to London registered during the quarter under notice were equal to an annual rate of 15.4 per 1,000, against 15.1, 16.4, and 16.2 per 1,000 in the fourth quarters of the three preceding years, the mean rate in the corresponding periods of the ten years 1896-1905 was 17.5 per 1,000. The death-rates last quarter in the various boroughs ranged from 8.9 in Hampstead, 10.5 in Stoke Newington, 12.0 in Lewisham, 12.4 in Wandsworth, 12.9 in the City of Westminster, and 13.0 in Chelsea, to 18.8 in Holborn and in Poplar, 18.9 in Stepney, 19.3 in Bethnal Green, 20.6 in Bermondsey, and 21.9 in Finsbury.

During last quarter 1,428 deaths were referred to the principal infectious diseases: of these 212 resulted from measles, 152 from

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during the Fourth Quarter of 1906.

Boroughs.	Estimated Population middle of 1906.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Ill-defined Pyrexia.	Diarrhœa.	Phthisis.	Deaths of Children Under 1 Year of Age to 1,000 Births.
COUNTY OF LONDON	4,721,217	29,989	18,120	25.5	15.4	1.22	1,428	—	212	152	219	176	—	101	1	576	1,871	122
Paddington	148,913	731	504	19.7	13.6	0.87	32	—	—	7	6	1	—	1	—	17	49	115
Kensington	180,952	765	636	17.0	14.1	0.72	33	—	1	1	6	6	—	1	—	18	69	124
Hammersmith ...	120,679	763	419	25.4	13.9	1.06	32	—	—	4	10	3	—	6	—	9	39	90
Fulham	161,965	1,152	621	28.5	15.4	2.06	83	—	6	5	16	8	—	4	—	44	50	137
Chelsea	74,672	314	242	16.9	13.0	0.71	13	—	—	2	2	2	—	—	—	7	23	143
City of Westminster	173,906	667	559	15.4	12.9	0.56	24	—	1	5	5	4	—	2	—	7	67	103
St Marylebone ...	128,280	961	482	30.0	15.0	0.87	28	—	2	7	4	—	—	1	—	14	56	68
Hampstead	89,633	318	200	15.6	8.9	0.30	7	—	—	—	2	1	—	1	—	3	15	60
St. Pancras	236,486	1,358	969	23.0	16.4	0.93	54	—	—	8	8	9	—	7	1	21	110	122
Islington	344,987	1,996	1,349	23.2	15.7	0.87	76	—	9	8	6	19	—	8	—	26	111	134
Stoke Newington ...	53,217	287	137	21.6	10.3	0.53	7	—	—	—	2	1	—	—	—	4	10	77
Hackney	230,721	1,443	772	25.1	13.4	1.24	71	—	10	8	5	4	—	8	—	36	85	100
Holborn	56,895	413	262	29.7	18.8	1.00	14	—	—	—	2	1	—	—	—	11	38	97
Finsbury	97,496	856	531	35.2	21.9	2.51	61	—	2	6	5	13	—	7	—	28	64	134
City of London ...	21,367	70	97	13.1	18.2	0.57	3	—	—	1	—	1	—	1	—	—	10	100
Shoreditch	116,108	924	538	31.9	18.6	1.55	45	—	1	8	4	8	—	1	—	23	56	145
Bethnal Green ...	130,609	1,029	627	31.6	19.3	2.02	66	—	20	7	4	9	—	6	—	20	81	166
Stepney	307,176	2,603	1,450	34.0	18.9	2.46	188	—	78	7	16	12	—	11	—	64	154	134
Poplar	170,873	1,282	799	30.1	18.8	1.77	75	—	22	3	6	2	—	3	—	39	77	164
Southwark	209,143	1,468	921	28.2	17.7	1.25	65	—	1	9	10	14	—	4	—	27	120	134
Bermondsey	125,029	937	662	31.1	20.6	1.90	61	—	19	9	11	7	—	1	—	14	71	154
Lambeth	317,774	2,186	1,194	26.5	14.2	0.73	58	—	1	5	10	8	—	5	—	29	117	116
Battersea	179,622	1,087	611	24.3	13.6	1.01	45	—	1	13	4	8	—	3	—	16	65	121
Wandsworth	273,381	1,704	846	25.0	12.4	1.01	69	—	10	6	22	9	—	6	—	16	75	102
Camberwell	274,132	1,625	962	23.8	14.1	1.01	71	—	2	10	14	17	—	3	—	25	102	111
Deptford	115,495	749	438	26.0	15.2	0.86	25	—	1	2	7	2	—	1	—	12	44	140
Greenwich	105,340	619	383	23.6	14.6	1.07	28	—	2	6	7	—	—	4	—	9	32	111
Lewisham	148,463	816	444	22.1	12.0	1.01	37	—	1	4	7	6	—	1	—	18	37	89
Woolwich	127,345	876	465	27.6	14.6	1.79	57	—	22	1	9	1	—	5	—	19	44	111

scarlet fever, 219 from diphtheria, 176 from whooping-cough, 101 from enteric fever, 1 from ill-defined pyrexia, and 576 from diarrhœa. These 1,428 deaths were equal to an annual rate of 1·22 per 1,000, against an average rate of 1·89 per 1,000 in the corresponding periods of the ten preceding years. The lowest death rates from these infectious diseases last quarter were 0·30 in Hampstead, 0·53 in Stoke Newington, 0·56 in the City of Westminster, 0·57 in the City of London, 0·71 in Chelsea, 0·72 in Kensington, and 0·73 in Lambeth; and the highest rates 1·79 in Woolwich, 1·90 in Bermondsey, 2·02 in Bethnal Green, 2·06 in Fulham, 2·46 in Stepney, and 2·51 in Finsbury. Measles showed the highest proportional mortality in Bethnal Green, Stepney, Poplar, Bermondsey, and Woolwich; scarlet fever in St Marylebone, Finsbury, Shoreditch, Bethnal Green, Bermondsey, Battersea, and Greenwich; diphtheria in Hammersmith, Fulham, Bermondsey, Wandsworth, Greenwich, and Woolwich; whooping-cough in Finsbury, Shoreditch, Bethnal Green, Southwark, and Camberwell; "fever" in Hammersmith, Fulham, the City of London, Bethnal Green, Greenwich and Woolwich; and diarrhœa in Fulham, Hackney, Holborn, Finsbury, Shoreditch, Stepney, and Poplar.

During the three months under notice 1,871 deaths from phthisis were registered, equal to an annual rate of 1·59 per 1,000 the rates in the corresponding periods of the three preceding years being 1·64, 1·73, and 1·72 per 1,000. Among the various boroughs the lowest death rates from phthisis last quarter were recorded in Hampstead, Stoke Newington, Wandsworth, Lewisham, and Greenwich; and the highest rates in Holborn, Finsbury, Bethnal Green, Stepney, Southwark, and Bermondsey.

The mortality, as measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 122 per 1,000 last quarter, against 132, 132, and 130 in the corresponding periods of the three preceding years; the mean rate in the fourth quarters of the ten years 1896-1905 was 145 per 1,000. The lowest rates of infant mortality last quarter were recorded in Hammersmith, St Marylebone, Hampstead, Stoke Newington, Holborn, and Lewisham; and the highest rates in Chelsea, Shoreditch, Bethnal Green, Poplar, Bermondsey, and Deptford.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £80 rising to £120 per annum.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—Assistant Physician.

BIRMINGHAM QUEEN'S HOSPITAL. House Physician. Salary at the rate of £80 per annum.

BRIGHTON, ROYAL ALEXANDRA AND ALBERT DISPENSARY.—House Surgeon. Salary £100 per annum.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Assistant House Surgeon. Salary, £70 per annum.

BRISTOL ROYAL INFIRMARY.—(1) Resident Obstetric Officer. (2) Resident House Surgeon. (3) Resident Casualty Officer. Salaries (1) £75 per annum, and for (2) and (3) at the rate of £70 per annum.

CARMARTHEN: CARMARTHEN, CARDIGAN, AND PEMBROKE JOINT COUNTIES LUNATIC ASYLUM.—Junior Assistant Medical Officer. Salary, £150 per annum.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Registrar for In-patients. Honorarium, 20 guineas per annum.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Registrar. Honorarium, £40 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Resident Medical Officer. Salary, £100 per annum.

FARRINGDON GENERAL DISPENSARY, Bartlett's Buildings, E.C.—Honorary Physician.

GLOUCESTER GENERAL INFIRMARY, Etc.—Assistant House-Surgeon. Remuneration at the rate of £30 per annum.

GREAT INDIAN PENINSULA RAILWAY COMPANY.—District Surgeon (European). Salary, Rs.450 per mensem, increasing to Rs. 800.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Honorarium, £25 for six months.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House Physician. (2) Assistant Casualty Medical Officer. Salaries, 25 guineas for eight months, and £3 10s. washing allowance.

HUDDERSFIELD COUNTY BOROUGH.—Two Lady Assistant Medical Officers of Health. Salary, 100 guineas per annum each.

HULL ROYAL INFIRMARY.—Casualty House-Surgeon. Salary, £50 per annum.

LANARK DISTRICT ASYLUM, Hartwood.—Senior Assistant Medical Officer. Salary, £200 per annum.

MENSTON: WEST RIDING ASYLUM.—Fourth Assistant Medical Officer. Salary to commence at £150, increasing to £180 per annum.

METROPOLITAN EAR, NOSE, AND THROAT HOSITAL, Grafton Street, Fitzroy Square, W.—Two Clinical Assistants.

MIDDLESEX COUNTY ASYLUM, Upper Tooting.—Assistant Medical Officer.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—Junior House Surgeon. Salary, £50 per annum.

NORTH WEST LONDON HOSPITAL, Kentish Town Road, N.W.—(1) Physician for Diseases of Women. (2) Dental Surgeon.

OXFORD RADCLIFFE INFIRMARY AND COUNTY HOSPITAL.—Junior House Surgeon. Salary at the rate of £40 per annum.

PLYMOUTH SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House Surgeon. Salary at the rate of £50 per annum.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant House-Surgeon. Salary at the rate of £80 per annum.

ROCHDALE INFIRMARY.—House-Surgeon. Salary, £100 per annum.

ROYAL PIMLICO DISPENSARY, Buckingham Palace Road, S.W.—Visiting Medical Officer.

ST MARY'S HOSPITAL, Paddington, W.—Casualty Physician. Salary, £75 per annum.

ST PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Honorary Physician.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.—Clinical Assistants.

SHEFFIELD CHILDREN'S HOSPITAL.—House-Surgeon for the East-End Branch. Salary, £70 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Honorarium, £31 for six months.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WAKEFIELD: WEST RIDING ASYLUM.—Junior Assistant Medical Officer.

WEST HARTLEPOOL: CAMERON HOSPITAL.—House-Surgeon. Salary, £100 per annum.

CERTIFYING FACTORY SURGEON.—The Chief Inspector of Factories announces a vacancy in the office of Certifying Factory Surgeon at Sturminster Newton, co. Dorset.

APPOINTMENTS.

ALLEN, Samuel H., M.D.Balt., Clinical Assistant to the Chelsea Hospital for Women.

KING, T. A., M.R.C.S., L.R.C.P.Lond., Medical Officer of Health, Stratton and Bude Urban District.

LEONARD, Crossley, M.D.Edin., Medical Superintendent of Sanatorium at Benenden Branch of National Association for the Establishment and Maintenance of Sanatoriums for Workers Suffering from Tuberculosis.

MIDDLETON, G. W., M.D.Balt., Clinical Assistant to the Chelsea Hospital for Women.

ORME, W. Bryce, M.R.C.S., L.R.C.P.Lond., District Surgeon at Kuala Kangsar, Federated Malay States.

PHILLIPS, Miles H., M.B., B.S.Lond., F.R.C.S.Eng., Honorary Assistant Medical Officer to the Jessop Hospital for Women, Sheffield

PRINGLE, A. M. N., M.B., C.M.Edin., D.P.H.Cantab., Certifying Factory Surgeon for the Ipswich District, Suffolk.

SHORNEY, Herbert P., M.D., B.S.Melb., Resident Medical Officer to the Hospital for Diseases of the Throat, Golden Square, W.

SINGTON, Harold S., M.R.C.S., L.R.C.P., Clinical Assistant to the Chelsea Hospital for Women.

SPEIRS, Henry, M.B., Ch.B., House-Surgeon to the Chelsea Hospital for Women.

TAYLOR, E. J. Davis, B.A., M.B., B.C.Cantab., Physician to Out-patients at the Royal Portsmouth, Portsea, and Gosport Hospital.

THOMPSON, W. G., M.D., Honorary Surgeon, Monkwearmouth and Southwick Hospital, Sunderland, vice P. A. Pearsey, M.B., C.M., appointed Honorary Consulting Surgeon.

TRAVERS-SMITH, V. E., M.D.Dub., District Medical Officer of the Eastbourne Union.

WATKINS, Arthur C., M.R.C.S., L.R.C.P.Lond., House-Surgeon of the Aberystwith Infirmary.

WESTERMAN, Arthur, M.D.Aberd., Clinical Assistant to the Throat and Ear Department at the Brompton Hospital.

WHITMORE, J., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Oldham Union.

YOUNG, G. P., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Stony Stanton District, co. Leicester, and District Medical Officer of the Hinckley Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

COLQUHOUN.—At Palmitefontein House, Dannhauser, Natal, South Africa, on January 7th, the wife of Dr. James S. Colquhoun, of a son (both doing well). By cablegram.

RING.—On January 8th, at Montague House, Hatherleigh, North Devon, the wife of C. A. Eamonson Ring, L.R.C.S. and P.E., L.F.P. and S.G., L.M., of a son.

DEATH.

O'DWYER.—At Heidelberg, Germany, on her birthday, January 11th, following a surgical operation, Henrietta Matilda (Dettie), the beloved wife of Surgeon-General T. F. O'Dwyer, late Army Medical Staff.

DIARY FOR THE WEEK.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 p.m.—Dr. H. Charlton Bastian, F.R.S.: On the *de novo* Origin of Bacteria, Bacilli, Vibriones, Micrococci, Torulae, and Moulds in Certain Previously Superheated Saline Solutions Contained within Hermetically-sealed Tubes. Drs. Samuel West and Thomas Wood Clarke: Idiopathic Cyanosis due to Sulph-haemoglobinaemia. (Epidiascope demonstrations.)

THERAPEUTICAL SOCIETY, Apothecaries' Hall, Blackfriars, E.C., 4.30 p.m.—Papers:—Dr. R. B. Wild: The Proper Scope of the Teaching of Materia Medica, Pharmacology, and Therapeutics in the Medical Curriculum. Dr. Bonnefin: On a New Method of Rendering Creosote and Cannabis Indica Soluble, and short notes on certain useful but little known drugs.

WEDNESDAY.

HUNTERIAN SOCIETY, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Second Hunterian Lecture by Mr. Mayo Robson on Points in the Diagnosis and Treatment of Duodenal Ulcer.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8 p.m.—Clinical Evening for the Exhibition of Cases, followed by discussion. Patients will be in attendance from 8 p.m. to 9 p.m.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Wednesday, 5 p.m.: Nose and Accessory Sinuses.

CHARING CROSS HOSPITAL, W.C.—Tuesday, 4 p.m.: Dermatological. Thursday, 4 p.m.: Gynaecological.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—Clinics: Monday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Throat, Nose, and Ear, 4 p.m. Tuesday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Skin, 4 p.m. Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30. Out-patient Demonstrations: Medical and Surgical, 10 a.m. daily; Ears and Throats, noon, Monday and Thursday; Eyes, 11 a.m., Wednesday and Saturday; Skin, noon, Tuesday and Friday

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, Some Points in Connexion with Dysmenorrhoea; Tuesday, The Insane Temperament; Wednesday, Developments and Disasters of Extrauterine Gestation; Thursday, The Special Features of Appendicitis in Children.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Surgery of the Brachial Plexus. Friday, 3.30 p.m.: Surgery of the Nervous System.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the arrangements for next week: Monday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Clinics: Medical Out-patient, Throat, Nose, and Ear; *x*-rays. Tuesday, 10.30 a.m.: Medical Out-patient Clinic. 2.30 p.m.: Surgical Operations; Clinics: Gynaecological, Surgical Out-patient. 4.30 p.m.: Lecture on Empyema in Children. Wednesday, 2.30 p.m.: Clinics: Dermatological, Ophthalmological, Medical Out-patient. Thursday, 2.30 p.m.: Gynaecological Operations; Clinics: Medical and Surgical Out-patient. 3 p.m.: Clinic: Medical In-patient. 4.30 p.m.: Lecture: Demonstration of Selected Skin Cases. Friday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Surgical Operations; Clinic: Medical Out-patient. Ophthalmological. 3 p.m.: Clinic: Medical In-patient. Saturday, 10.30: Clinic: Dental Out-patients.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, Hammersmith, W.—The following arrangements have been made for next week: Daily: 2 p.m., Medical and Surgical Clinics; 2.30 p.m., operations; *X* Rays. Monday and Thursday, 2.30 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Dr. Moullin, Gynaecological Operations. Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Tuesday and Friday, 2.30 p.m.: Diseases of the Skin. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday, 2.30 p.m., Diseases of Women. Lectures—Monday, 12: Pathological Demonstrations. Monday, 5 p.m.: Practical Surgery. Tuesday: Clinical; Wednesday: Practical Medicine. Thursday: Clinical. Friday: Anaesthetics.

BOOKS, ETC., RECEIVED.

Calcutta: Office of Superintendent of Government Printing, 1906: Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India (New Series), No. 25. On the Importance of Larval Characters in the Classification of Mosquitos. 8 annas = 9d. No. 26. Leucocytozoon Canis. 12 annas = 1s. 2d. By Captain S. R. Christophers, M.B., I.M.S.

Year Book of Pharmacy, with the Transactions of the British Pharmaceutical Conference at the 43rd Annual Meeting in Birmingham, July, 1906. Edited by J. O. Braithwaite, E. Saville Peck, M.A., and E. White, B.Sc., F.I.C. London: J. and A. Churchill. 1906.

The Birds of the British Islands. By C. Stonham, C.M.G., F.R.C.S., F.Z.S. Part IV. London: E. Grant Richards. December, 1906. 7s. 6d.

The Practical Medicine Series, ten volumes on the Year's Progress in Medicine and Surgery. Edited by G. P. Head, M.D. Vol. VIII. Materia Medica and Therapeutics, Preventive Medicine, Climatology, Forensic Medicine. Edited by G. F. Butler, Ph.G., M.D.; H. B. Favill, A.B., M.D.; N. Bridge, A.M., M.D.; D. R. Brower, A.M., M.D., LL.D.; and H. N. Moyer, M.D. Series 1906. Chicago: The Year Book Publishers; and Glasgow: G. Gillies and Co. 5s.

Lessons on Elementary Hygiene and Sanitation, with special reference to the Tropics. By W. T. Prout, C.M.G., M.B., C.M. London: Waterlow and Sons, Limited. 1905.

Transactions of the Southern Surgical and Gynecological Association. Vol. xviii. Eighteenth Session at Louisville, Kentucky, December 12th, 13th, and 14th, 1905. Edited by W. D. Haggard, M.D. Published by the Association. 1906.

A Health Reader. By C. E. Shelly, M.A., M.D., M.R.C.P., and E. Stenhouse, B.Sc. Book I. London: Macmillan and Co. 1906. 1s.

Tumours: Innocent and Malignant. By J. Bland-Sutton, F.R.C.S. Fourth edition. London: Cassell and Co. 1906. 21s.

The Edinburgh Medical Journal. Edited by A. Thomson, M.D., F.R.C.S.Edin., and H. Littlejohn, M.B., F.R.C.S.Edin. New series. Vol. xx. Edinburgh and London: Young J. Pentland. 1906.

The Children of the Nation: how their Health and Vigour should be promoted by the State. By the Right Hon. Sir J. E. Gorst. London: Methuen and Co. 7s. 6d.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JANUARY.	
20 Sunday ...	
21 MONDAY ...	Coventry Division, *Birmingham Branch*, Coventry and Warwickshire Hospital, 9 p.m.
22 TUESDAY ...	
23 WEDNESDAY	Central Council at Metropolitan Asylums Board at 2 p.m. Lancashire and Cheshire Branch, Medical Institution, Liverpool, 4 p.m.; Dinner, Adelphi Hotel, 7 p.m.
24 THURSDAY...	Marylebone Division, *Metropolitan Counties Branch*, Special Meeting, Rooms of the Medical Society of London, 11, Chandos Street, W., 8.30 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Wandsworth Town Hall, 8.45 p.m.
25 FRIDAY ...	Lambeth Division, *Metropolitan Counties Branch*, Lambeth Infirmary, Brook Street, Kennington Road, S.E., 4 p.m.; Committee, 5.30 p.m.
26 SATURDAY...	
27 Sunday ...	
28 MONDAY ...	
29 TUESDAY ...	
30 WEDNESDAY	London: Special Finance Inquiry Committee, 2.30 p.m. Bath and Bristol Branch, Bristol. Ulster Branch, Belfast.
31 THURSDAY...	
FEBRUARY.	
1 FRIDAY ...	
2 SATURDAY...	
3 Sunday ...	
4 MONDAY ...	

Date.	Meetings to be Held.
FEBRUARY *(Continued).*	
5 TUESDAY ...	
6 WEDNESDAY	
7 THURSDAY...	Wandsworth Division, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
8 FRIDAY ...	Hampstead Division, *Metropolitan Counties Branch.*
9 SATURDAY...	
10 Sunday ...	
11 MONDAY ...	London: Ethical Subcommittee, 2 p.m.
12 TUESDAY ...	London: Organization Committee, 11 a.m.
13 WEDNESDAY	
14 THURSDAY...	
15 FRIDAY ...	Border Counties Branch, Carlisle.
16 SATURDAY...	
17 Sunday ...	
18 MONDAY ...	
19 TUESDAY ...	City Division, *Metropolitan Counties Branch*, Great Eastern Hotel, E.C., 4 p.m.
20 WEDNESDAY	
21 THURSDAY...	
22 FRIDAY ...	
23 SATURDAY...	
24 Sunday ...	
25 MONDAY ...	
26 TUESDAY ...	
27 WEDNESDAY	Bath and Bristol Branch, Bath.
28 THURSDAY...	Wandsworth Division, *Metropolitan Counties Branch*, Balham (Hotel), 8.45 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election, in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom, and £1 12s. 8d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 26TH, 1907.

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Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

GLASGOW AND WEST OF SCOTLAND BRANCH: AYRSHIRE DIVISION.

THE Executive Committee of the Ayrshire Division has requested the publication of the following memorandum drawn up by that Committee for the consideration of the Division. The scheme propounded may also be of interest to other members of the Association.

SCHEME FOR CONSTITUTION OF COUNCIL OF BRITISH MEDICAL ASSOCIATION.

1. The Council shall consist of thirty members nominated by the Representatives of Divisions.
2. For purposes of nomination, the United Kingdom shall be divided into sections composed of Divisions of Branches which are in geographical relation.
3. The Representatives of Divisions from each section alone shall nominate the Councillor to be returned by that section.
4. The sections shall be as follows:
   (*a*) An Irish section consisting of the Divisions of the Irish Branches.
   (*b*) A Scottish Section, consisting of the Divisions of the Scottish Branches.
   (*c*) A North England Section, consisting of the Divisions of the North of England, North Lancashire and South Westmorland, Yorkshire, East Yorkshire and North Lincolnshire, Midland and Staffordshire Branches—41 Divisions in all.
   (*d*) A West of England Section, consisting of the Divisions of the Lancashire and Cheshire, and North Wales and Shropshire Branches, and the South Wales and Monmouthshire Branch —40 Divisions in all.
   (*e*) A Central England Section, consisting of Divisions of East Anglian, Cambridge and Huntingdon, South Midland, Oxford and Reading, Metropolitan Counties, Birmingham and Worcestershire, and Hereford Branches—41 Divisions in all.
   (*f*) A South of England Section, consisting of Divisions of South-West, West Somerset, Bath and Bristol, Gloucestershire, Dorset and West Hants, Southern, and South-Eastern Branches—41 Divisions in all.
5. The Representatives of—

Irish Section	shall nominate	4	Councillors.
Scotch Section	,, ,,	4	,,
North England Section	,, ,,	5	,,
West England Section	,, ,,	5	,,
Central England Section	,, ,,	5	,,
South England Section	,, ,,	5	,,
	Total	28	

6. The remaining two Councillors shall be nominated by the Representative Meeting as a whole, and they shall be regarded as representing especially the Divisions of Branches outwith the United Kingdom.

Notes.

1. The ideal Council should be elected by the Representatives of Divisions, for thereby the Executive of the Association will be evolved by direct progression from the individual members composing the Association. This will ensure that the Association's policy is in line with the needs and wants of its members.

2. That the Council should be *so* constituted was largely appreciated by the Representatives at the Representative Meeting held in July last, and it was consequently decided that 20 members should be elected by the Branches as at present, but that the other 10 should be elected by the Representatives.

3. It was felt that in the constitution of the Council due regard should be had for "geographical representation." The fear that it would be impossible to obtain this "geographical representation" with a Council wholly elected by the Representatives probably determined the Representatives to the actual decision arrived at.

4. The present scheme has been constructed to ensure that a Council, while wholly elected by the Representatives, must yet be constituted with due regard to "geographical representation."

5. It may be taken for granted that a Council, however constituted, will be anxious to work for the benefit of the whole Association, and not for part at the expense of the rest.

6. It is therefore more to be desired that the Council, as a whole, should be in touch with all the problems and needs presented to the profession all over the country, than that each individual Councillor should represent a numerically-equal constituency.

7. It is size of area rather than number of Associates in an area that determines the variety of conditions and problems presented to the profession in that area. Thus in Lancashire there are more members than in all Ireland, yet the conditions of practice obtaining all over Lancashire will be very similar, whereas the conditions of practice obtaining throughout Ireland will be extremely diverse.

8. In this scheme, therefore, it will be seen that certain

wide districts have more Representatives on the Council than they would be entitled to on a system strictly based on proportionate numbers.

9. The number of Associates are as follows:

In England	12,034 or 89.96	per cent.
In Scotland	1,834 or 12.74	,,
In Ireland	937 or 6.30	,,

By a strictly numerical system of Council representation this would entitle—

England to	24.27	Councillors
Scotland to	3.82	,,
Ireland to	1.90	,,

10. Bearing in mind the considerations stated previously (Sections 6 and 7) it is proposed to give Ireland four Councillors, Scotland four, and England 20=twenty-eight Councillors.

11. In order to carry out the idea of "geographical representation" in England, it is proposed to divide England into four areas, each composed of an equal number of Divisions; each of these areas to nominate five Councillors. The actual number of Associates in each of these areas is not markedly unequal, being

2,311	in the Northern Section
2,385	in the Western Section
4,445	in the Central Section
2,893	in the Southern Section
12,034	

The greater numbers of the Central Section is due to the numerical predominance of London Associates.

12. It is provided by the Scheme that the twenty-eight Councillors representing the United Kingdom shall be nominated by the Representatives of each Section respectively. It does not necessarily follow that the Section will nominate as Councillors only those who are Representatives at the time of election; the actual nominations depend entirely on the choice of the Representatives of each Section.

13. The remaining two Councillors, it is proposed, shall be nominated by the whole Representative Meeting, and they shall be considered as especially representing on the Council all Branches outwith the United Kingdom, and to them Colonial Branches could address themselves when they have any matter they wish to bring before the Council or Association. It will probably be convenient that one, if not both, of these Councillors should be resident in London, and this will tend to balance any under representation existing under the scheme in the Central Section on a consideration of the number in that Section.

14. The division of England into the proposed Sections will probably remain adequate for some considerable time, for, if the Association expands equally in each Section, the proportionate numbers composing each Section will remain similar, seeing that the proportion of Associates to non-Associates in each Section is practically similar, being as 1 to 2.03, 1.89, 2.15, 1.93 in the North, West, Central, and South Sections respectively.

15. An objection has been raised that, owing to their mode of election, a Representative does not truly represent the Division that is supposed to elect him. It is obvious that, if thought desirable, this anomaly, if it is an anomaly, can be rectified by electing the Representative by ballot paper.

16. Under this proposed scheme the Branch Council would be of value, so that questions affecting the Association generally or a wide district might be discussed by the Representative of Division in that district, and so where necessary all Representatives for that district could act in common. It would probably be wise to ordain that a Representative of a Division at the Representative Meeting should also *ex officio* be a member of the Council of the Branch in which his Division lies.

17. It would probably also be desirable to elect Councillors of the Association Council for more than one year, say three, so many retiring by rotation each year. In this way not more than one or two Councillors would require to be elected by a section at any one time.

N.B.—The numbers on which the scheme is based are taken from the last *Year Book* published by the Association.

[Copy.]

Names of Branches.	No. of Divisions.	No. of Members.	No. of Practitioners in Area.
Northern Section:			
North of England	17	532	1,034
North Lancashire and South Westmorland ...	3	141	208
Yorkshire	10	771	1,773
East Yorkshire and North Lincolnshire ...	2	145	275
Midland	6	515	1,065
Staffordshire	3	207	339
	41	2,311	4,694
Western Section:			
Lancashire and Cheshire	31	1,616	3,613
North Wales and Shropshire	4	322	543
South Wales and Monmouthshire	5	447	825
	40	2,385	4,531
Central Section:			
East Anglian	10	430	1,034
Cambridge and Huntingdon	1	166	303
South Midland	3	244	441
Oxford and Reading	3	268	416
Metropolitan Counties	15	2,736	6,590
Birmingham	7	487	928
Worcestershire and Herefordshire	2	114	205
	41	4,445	9,620
Southern Section:			
South-West	6	436	762
West Somerset	1	82	138
Bath and Bristol	3	400	661
Gloucestershire	1	127	204
Dorset and West Hants	2	200	407
Southern	7	401	724
South-Eastern	21	1,247	2,687
	41	2,893	5,583

BIRMINGHAM BRANCH:

West Bromwich Division.

A meeting of the West Bromwich Division was held in the Board Room of the District Hospital on Wednesday, January 16th, under the chairmanship of Dr. T. Sansome, J.P.

Apologies for Non-attendance.—Apologies were received from Drs. Stephen, H. Manley, Langley Browne, Urquhart, and Darley Weston.

Vote of Sympathy.—A vote of sympathy was passed to Dr. Stephen and Dr. Urquhart.

General Medical Council Election.—A vote of congratulation was passed to Dr. H. Langley Browne on the result of the election to General Medical Council.

Report of Division to Branch.—The Honorary Secretary read the report of the Division to the Branch; this was approved and adopted.

Poor-law Commission.—The questions in the Supplement of December 8th, 1906, *re* Royal Commission on the Poor Law were then considered and answers adopted.

LEINSTER BRANCH:

Dublin Division.

A quarterly general meeting of the Division was held at the Royal College of Physicians on January 11th, Dr. Ouless in the chair.

Confirmation of Minutes.—The minutes of the last general meeting were read and signed.

Election of Central Council.—The HONORARY SECRETARY reported the action taken by the Committee, the following letter had been sent to every Division in Great Britain:

Dublin, November 14th, 1906.

DEAR SIR,

Many members of the Dublin Division have felt that the proposal, which was carried by the Annual Representative Meeting last July, that the new Charter, which is under consideration, should provide that a substantial portion of the Council should be elected by the General Representative Meeting, would be disastrous to the provincial and more remote portions of the Association, by throwing an undue amount of power into the hands of the London district. That such is no idle fancy has been unmistakably shown by the composition of the Special Finance Committee of Inquiry. No representative of any Irish, Scotch, or Welsh Division was appointed, and out of twenty candidates representing English Divisions three were elected, while out of seven from London four were appointed, the London members alone forming a majority of those elected.

It was attempted to get over the difficulty by saying that geographical representation should be safeguarded, but no method of doing this was put forward.

These matters were discussed at a meeting of the Dublin Division held on October 30th, 1906, and the following resolution passed unanimously:

That the Dublin Division should resist in every way in their power the proposal that the Council should be elected at the Representative Meeting, as they believe if not safeguarded, amongst those elected the London area will be largely over-represented, and in any case no Representative Meeting would be able to elect a member for an Irish constituency better than those living in Ireland. Furthermore, that the constitution of the Council should be determined by ordinance, and not by by-law.

We should be glad if you would lay this letter before your Division, and let us know, as soon as possible, whether you are in substantial agreement with it.

If so, we are anxious to arrange a common line of action with other Divisions to be taken at the Special Representative Meeting next January.

O'C. J. DELAHOYDE, Vice-Chairman.
L. G. GUNN, Honorary Secretary,
43, Fitzwilliam Square,
Dublin.

Replies had been received promising assistance from practically the whole of Ireland and from numerous Divisions in Scotland and England. The general meeting expressed their hearty approval of the means the Committee was using to bring this grievance before the members of the Association.

Irish Poor-law Commission.—Dr. DELAHOYDE proposed, and Dr. MCWALTER seconded:

That the Dublin Division of the British Medical Association records its general approval of the report of the Viceregal Commission into the Irish Poor Law, but protests against any segregation of the Poor-law Medical Service into any distinct classes, and claims that the conditions of the service shall be equal for all entrants.

Dr. CRAIG proposed, and Sir JOHN MOORE seconded, the following amendment:

That the Dublin Division of the Leinster Branch of the British Medical Association offers its congratulations to the members of the Viceregal Commission on the Irish Poor-law system on the ability and care displayed in the drafting of this report, the suggestions of which are made in a broad and statesmanlike manner, and that the Dublin Division heartily approves the formation of properly remunerated State Medical Service of the entire Poor-law Medical Service, as it is certain to be a distinct advantage to the treatment of the sick poor in Ireland.

Dr. Craig's amendment was carried, and afterwards passed as a resolution by 19 votes to 2.

Irish Local Government Board and Vaccination Instruction.—Dr. MCWALTER proposed and Dr. STRAHAN seconded:

That in the opinion of the Dublin Division of the British Medical Association, the new Vaccination Instruction Regulations of the Local Government Board of Ireland are unnecessary, and are an interference with the rights of registered medical practitioners.

Carried by 13 votes to 1.

TOPOGRAPHICAL REPRESENTATION ON THE COUNCIL.

SIR,—The letter from the Dublin Division with regard to topographical representation on the Council, which has been circulated to the Divisions, and is, I understand, about to be published in the BRITISH MEDICAL JOURNAL, contains certain misconceptions which, I believe, are prevalent, and which it may be well that I should correct officially, in order to secure a clear understanding of the important subject involved.

In the first place, it appears to be understood that there will be a Special Representative Meeting in January. No date, however, was fixed for a meeting, and as it is probable that the revised Charter will not be ready for consideration by the Divisions before February or March, such meeting of the Representative Body can scarcely be held till May.

In the second place, as regards the subject of topographical representation, on which stress is laid by the Dublin Division, special instruction was given to the Organization Committee by the Annual Representative Meeting of 1906, to make due provision in the revised Charter to secure this, and the Organization Committee is giving effect to this instruction.

It will be well, therefore, for the Divisions to defer their consideration, or at any rate to defer expressing a definite opinion on this matter till the revised draft of the Charter is in their hands, when there will be ample time for deliberation before coming to a decision.—I am, etc.

Taunton, Jan. 20th. J. A. MACDONALD.
Chairman of Representative Meetings.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—The third ordinary meeting of the session will be held at the Medical Library of University College, Bristol, on Wednesday evening, January 30th, at 8 o'clock, Dr. D. S. Davies, President, in the chair. Clinical meeting:—Dr. P. Watson Williams will demonstrate stereoscopic skiagrams of frontal sinuses and maxillary antra. He will also show a case of sphenoidal sinus suppuration. Patients will also be shown by Mr. Hey Groves: Two cases of Volkmann's contracture occurring in haemophilia. Dr. J. O. Symes: Two cases of rheumatoid arthritis in children. Dr. Michell Clarke: Cases of (1) tabetic arthropathy of right knee and right foot; (2) adherent pericardium; (3) cyanosis in a youth—a case for diagnosis. Mr. Munro Smith: Laminectomy. Mr. Paul Bush: Case of filariasis. Dr. Walker Hall will demonstrate the living worms in Mr. Bush's case by means of the projectoscope, if possible. A Council meeting will be held at 7.55.—NEWMAN NEILD, W. M. BEAUMONT, Honorary Secretaries.

BORDER COUNTIES BRANCH.—A general meeting will be held in Carlisle on February 15th, when the Medical Secretary of the Association will deliver an address on Contract Practice. All medical practitioners are invited to attend.—FRANCIS R. HILL, Secretary, Carlisle.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—A meeting will be held on Friday, February 1st, at 4.45 p.m., at the Marylebone Infirmary, St. Charles's Square, Notting Hill, W. Cases will be shown by Mr. J. R. Lunn and others.—CHARLES BUTTAR, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next meeting of the Lambeth Division will be held at the Lambeth Infirmary, Brook Street, Kennington Road, S.E., on Friday, January 25th, at 4 p.m. A meeting of the committee will be held at 3.30 p.m. sharp, prior to the general meeting. Agenda: (1) Minutes of the last meeting. (2) George J. Jenkins, F.R.C.S. (Surgeon to the German Hospital), will read a paper on abscesses in the peritoneal cavity. (3) Dr. M. F. Quarry (Medical Superintendent of the Lambeth Infirmary) will show cases of interest in the wards of the Infirmary.—W. ALEXANDER ATKINSON, M.D., Honorary Secretary.

PERTHSHIRE BRANCH.—A meeting will be held in the Royal Infirmary, Perth, on Friday, February 1st, at 3.20 p.m. Business: Consideration of Draft Branch Rules.—WILLIAM A. TAYLOR, ALEXANDER TROTTER, Joint Honorary Secretaries.

SOUTH-EASTERN BRANCH: BRIGHTON DIVISION.—There will be a meeting of the Division at the Dispensary, 113, Queen's Road, Brighton, on Wednesday, January 30th, at 4.30 p.m. All members are invited to show cases and specimens at the meeting. Mr. Mayo Robson will give an address on the Surgical Treatment of Gastric and Duodenal Ulcer.—RYDING MARSH, Honorary Secretary.

SOUTH-WESTERN BRANCH.—An intermediate meeting of the Branch will be held at the Athenaeum, Plymouth, on Wednesday, January 30th, at 3 p.m. Luncheon (1s. 6d. per head) will be prepared at Risdon's Restaurant, opposite the Athenaeum, between 1 and 2.30 o'clock. Tea will be provided at the same place after the meeting. Agenda:—(*a*) Read and confirm minutes of annual general meeting and of the adjourned annual general meeting. (*b*) Consider communications (if any). (*c*) Exhibition of clinical cases. Mr. C. Hamilton Whiteford: Two cases illustrating the results of Halsted's breast operation with notes on technique. Mr. Russel Rendle: A case of wired olecranon: a case of skin transplantation. Mr. Donbavand: A case of oesophagotomy for foreign body, and the specimen removed. Mr. George Jackson: A case of thyro-lingual cyst cured after repeated operations; a case of chronic otitis media with mastoid sclerosis and Stacke's operation on both sides. (*d*) Papers. Mr. Griffith C. Wilkin: Notes on a case—diagnosis? Mr. Gilbert T. Arnold: Notes on infiltration anaesthesia in major and minor surgery. Mr. H. G. Shore: Notes on physical exercise at home with the use of apparatus (*e*) Exhibition of pathological specimens, etc. Dr. H. W. Webber: Specimens from cases of heart disease. Dr. Cheyne Wilson: Radiographs of renal and vesical calculi and other subjects.—RUSSELL COOMBE, Honorary Secretary.

ULSTER BRANCH.—The winter meeting of this Branch will be held in Belfast, on Wednesday, January 30th.—CECIL SHAW, M.D., Honorary Secretary, 18, College Square East, Belfast.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: JOSEPH C. WOOD, Staff Surgeon, to the *President*, additional, for three months' course at West London Hospital, January 17th; CHARLES STRICKLAND, Fleet Surgeon, to the *Cochrane*, on commissioning, undated; ROBERT HICKSON, Fleet Surgeon, to the *Bulwark*, on recommissioning, February 12th; EDWARD SUTTON, Staff Surgeon, to the *Implacable*, on recommissioning, undated; FREDERICK A. CAPPS, Staff Surgeon, to the *President*, additional, for three months' study at West London Hospital, January 30th; ROBERT R. FASSON, M.B., Surgeon, to the *Bedford*, on completing, February 5th; HENRY HUNT, Surgeon, to the *Leander*, February 5th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT H. C. SIDGWICK, M.B., is among the sufferers from the disastrous earthquake at Kingston, Jamaica. He sustained a compound fracture of the leg, but is reported to be progressing favourably.

Colonel D. BRUCE, C.B., F.R.S., M.B., has been granted an extension of two years in his appointment to the Army Medical Advisory Board as Expert in Tropical Diseases.

Lieutenant-Colonel J. R. YOURELL, M.B., has been appointed Senior Medical Officer, Jersey, vice Lieutenant-Colonel F. B. Maclean, R.A.M.C.

Lieutenants E. J. PORTEOUS, M.B., J. C. L. HINGSTON, and H. JACQUES have resigned their commissions, January 19th. They were appointed on probation, January 30th, 1906.

CHANGES OF STATIONS.

THE following changes of stations amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during December 1906:

		FROM	TO
Lieut.-Col.	D. O'Sullivan	Nathia Gali	Rawal Pindi.
	F. J. Mansfield	—	Bloemfontein.
	S. C. B. Robertson	W. Com., India	Ahmednagar.
	T. P. Woodcock	Ambala	Lahore.
	B. Porter, M.B.	Bloemfontein	Belfast
	J. R. Yourell, M.B.	Secunderabad	Jersey
	F. H. Treherne	Murree	Rawal Pindi.
	H. A. Hearn, M.D.	Dagshai	Ambala.
	C. F. Marshall, M.D.	Fermoy	Cork
	R. W. [illegible]	St. Helena	Woolwich
	D. [illegible], M.D.	Allahabad	W. Com., India
	E. H. S. [illegible]	Murree	Rawal Pindi
	C. A. Y. [illegible]	Bellary	Aldborne
	J. Gerrard	London Dist.	W. Artlea
	A. L. Bernadelle, M.B.	Ripon	Chester
	C. S. McLaughlin, D.S.O., M.B.	Colchester	Woolwich.
	H. N. Ross, M.B.	Wynberg	India
	C. P. [illegible], M.B.	Bareilly	Glasgow.
	F. M. [illegible], M.B.	Londonderry	Cork.
	F. P. Bennett	Belgaum	Ahmednagar
	C. [illegible], M.B.	N. Com., India	Lahore
	W. [illegible]	Colchester	Weedon
	F. H. [illegible], M.B.	Ahmednagar	Mount Abu
	[illegible]	[illegible]	Brighton
	C. [illegible], M.B.	[illegible]	Woolwich
	F. [illegible]	Peshawar Div.	Gibraltar
	C. H. [illegible]	Fermoy	Belgaum
	F. [illegible], M.B.	Murree	London Dist.
	F. [illegible]	Lucknow	Fermoy
	F. [illegible]	Lucknow	Rawal Pindi
	[illegible]	Edinburgh	Portsmouth
	[illegible]	[illegible]	Portsmouth
	[illegible]	Yorkshire	Colchester
	[illegible]	Sherkhel	Delhi
	[illegible]	Westbourne	Pembroke Dk.
	[illegible]	Allahabad	West Africa
	[illegible]	Jullundur	Poona
	[illegible], M.B.	[illegible]	Portsmouth
	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible] India	Lucknow
	[illegible], M.B.	[illegible]	Khondalla
	[illegible], M.B.	Lucknow	Eastern Comd
Captain	J. Dorgan, M.B.	Poona	Dublin.
,,	R. T. Brown, M.D.	E. Command	London.
,,	P. H. Henderson, M.B.	Colchester	Weedon.
,,	C. R. L. Ronayne, M.B.	Streusall	Lichfield.
,,	R. F. Ellery	Bulford	Devouport.
,,	J. T. Johnson, M.D.	N. Command	Newcastle-on-Tyne.
,,	W. R. P. Goodwin	Murree	Rawal Pindi.
,,	R. N. Hunt, M.B.	Dublin	Belfast.
,,	W. Riach, M.D.	York	Sheffield.
,,	J. C. Kennedy, M.B.	E. Command	Colchester.
,,	W. M. B. Sparkes	S. Command	Portsmouth.
,,	R. V. Cowey	E. Command	Colchester
,,	J. H. Barbour, M.B.	Belfast	Londonderry.
,,	F. W. Lambelle, M.B.	Leith Fort	Edinburgh.
,,	M. C. Beatty, M.B.	Mhow	Colaba.
,,	T. J. Potter	Aldershot	Deepcut.
,,	A. J. Williamson, M.B.	Hyderabad	Aden.
,,	A. H. Hayes	Subathu	Ambala.
,,	J. W. S. Seccombe	Bulford	India.
,,	J. E. H. Gatt, M.D.	Middelburg, Transvaal	Pretoria.
,,	C. W. Holden	Devizes	Bulford.
Lieutenant	F. M. M. Ommanney	Shorncliffe	Punjab.
,,	E. M. Glanvill, M.B.	Barberton	Harrismith.
,,	T. J. Wright	Colaba	Belgaum.
,,	J. A. Turnbull	Murree	Rawal Pindi.
,,	E. H. M. Moore	Middelburg, Cape Colony	Wynberg, Cape Colony.
,,	S. C. Bowie	Sangor	Poona.
,,	P. Dwyer, M.B.	Kirkee	Mhow.
,,	R. H. L. Cordner	Murree	Rawal Pindi.
,,	R. J. C. Thompson	London Dist.	South Africa.
,,	C. D. M. Holbrooke	Poona	Belgaum.
,,	H. G. Sherren	W. Com., India	,,
,,	R. P. Lewis	Ft. Tregantle	Devonport.
,,	A. M. Rose, M.B.	Bustard Camp	Portsmouth.
,,	V. H. Symons	Devonport	Fort Tregantle
,,	R. A. Bryden	Tidworth	Bulford.
,,	T. B. Moriarty	Curragh	India.
,,	M. B. H. Ritchie, M.B.	Bulford	,,
,,	P. Farrant	Colchester	Ipswich.
,,	E. T. Potts, M.D.	—	Pretoria.
,,	W. M'Conaghy, M.B.	—	,,
,,	T. S. Blackwell	Maryborough Heath Camp	Queenstown.
,,	A. D. O'Carroll, M.B.	Aldershot	R.A.M. Coll.
,,	H. Stewart, M.B.	Cork	Queenstown.
,,	W. R. Galwey, M.B.	Queenstown	Ballincollig.
,,	F. A. M'Cammon, M.B.	Curragh	Belfast.
,,	C. R. M. Morris, M.B.	Kilworth	Cork
,,	M. G. Dill, M.B.	Ayr	Edinburgh.

Lieutenant-Colonel U. A. JENINGS, M.D., retired pay, has relinquished the medical charge at Cork Detention Barracks, and been succeeded there by Lieutenant-Colonel W. S. DOWMAN, retired pay.

Lieutenant-Colonel J. E. FISHBOURNE, M.D., retired pay, has relinquished the medical charge at Woking Detention Barracks, and been succeeded by Lieutenant-Colonel A. DE C. SCANLAN, retired pay.

Lieutenant-Colonel J. M. NICOLLS, retired pay, has been placed in medical charge of troops at Birr.

Vital Statistics.

ENGLISH URBAN MORTALITY IN THE FOURTH QUARTER OF 1906.

THE vital statistics of the seventy-six large towns dealt with in the Registrar-General's weekly returns are summarized in the accompanying table. During the three months ending December last, 104,689 births were registered in these towns, equal to an annual rate of 26·5 per 1,000 of the population, estimated at 15,818,300 persons in the middle of last year; in the corresponding periods of the three preceding years the rates were 28·6, 28·1, and 26·6 per 1,000 respectively. In London the birth rate last quarter was 25·5 per 1,000, while it averaged 27·0 per 1,000 in the seventy-five other large towns, among which the rates ranged from 15·7 in Hastings, 16·9 in Bournemouth, 18·0 in Halifax, 18·4 in Hornsey, 18·8 in Bradford, 20·5 in Burton-on-Trent, and 20·6 in Northampton, to 33·1 in Middlesbrough, 33·2 in Rhondda, 33·8 in Merthyr Tydfil, 34·1 in St. Helens, 34·6 in Rhondda, and 35·0 in Tynemouth.

During the quarter under notice 63,897 deaths were registered in these towns, equal to an annual rate of 16·2 per 1,000; in the corresponding quarters of the three preceding years the rates were 17·5, 17·4, and 15·8 per 1,000. In London the rate of mortality last quarter was 16·0 per 1,000, while it averaged 16·3 per 1,000 in the seventy-five large provincial towns, and ranged from 7·3 in Hornsey, 8·5 in King's Norton, 10·2 in Northampton, 10·9 in East Ham, 11·0 in Willesden, 11·5 in Handsworth (Staffs.), and 11·4 in Leyton, to 20·2 in Wigan, 20·3 in Sunderland, 20·4 in Preston, 20·5 in Burnley, 21·0 in Rochdale, 21·2 in Middlesbrough, 21·8 in South Shields, and 22·1 in Oldham.

The 63,897 deaths from all causes in the seventy-six towns last quarter included 6,781 which were referred to the principal infectious diseases of these 1,041 resulted from small pox, 1,337 from measles, 511 from scarlet fever, 935 from diphtheria, 597 from whooping-cough, 1,452 from "fever," and 2,308 from diarrhœa. The death rate from these principal infectious diseases was 1·72 per 1,000 last quarter, having been 1·66, 1·67, and 1·27 per 1,000 in the fourth quarters of the three preceding years. In London the rate was 1·25 per 1,000, while among the seventy-five other towns it averaged 1·92, and ranged from 0·00 in Hastings, 0·34 in Hornsey, 0·82 in Northampton, 0·99 in Bournemouth, 0·47 in Hastings, 0·54 in Hornsey, 0·82 in Northampton, 0·99 in Bournemouth, 0·61 in Burton-on-Trent, 0·68 in Handsworth (Staffs.), and 0·75 in King's Norton, to 3·30 in Hull, 3·31 in Preston, 3·67 in Norwich, 3·85 in Warrington, 3·94 in Bootle, 4·23 in Oldham, 5·06 in Rotherham, and 5·43 in South Shields. The 1,337 deaths from measles were equal to an annual rate of 0·34 per 1,000 in London the death rate from this disease was 0·18 per 1,000, while it averaged 0·41 in the seventy-five other towns and was highest in Norwich, Bootle, Warrington, Rochdale, Oldham, Rotherham, and South Shields. The 511 fatal cases of scarlet fever corresponded to an annual rate of 0·13 per 1,000 in London also the rate of mortality from this disease was 0·13 per 1,000, while in the seventy-five other large provincial towns the disease was proportionally most fatal in Hanley, Wolverhampton, Leicester, Birkenhead, Manchester,

Analysis of the Vital Statistics of Seventy-six of the Largest English Towns during the Fourth Quarter of 1906.

Towns.	Estimated Population middle of 1906.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhoea.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
76 Towns	15,818,360	104,689	63,897	26.5	16.2	1.72	6,788	9	1,337	511	938	597	588	2,808	138	1.0
75 Provincial Towns	11,097,143	74,700	45,061	27.0	16.3	1.92	5,329	9	1,124	389	725	417	479	2,216	143	1.3
London	4,721,217	29,989	18,836	25.5	16.0	1.23	1,459	—	213	152	213	180	109	592	125	0.2
Croydon	151,011	883	482	23.6	12.8	1.18	44	—	—	1	14	7	1	21	108	—
Willesden	143,622	940	393	26.3	11.0	0.88	31	—	2	1	2	11	3	12	116	1.0
Hornsey	86,935	398	159	18.4	7.3	0.51	11	—	1	—	2	—	3	5	70	—
Tottenham	119,503	806	391	27.1	13.1	1.33	40	—	—	1	6	[illegible]	4	21	117	—
West Ham	301,617	2,239	1,188	29.8	15.8	2.17	164	—	43	15	21	7	13	65	142	—
East Ham	129,886	854	353	26.4	10.9	1.81	59	—	14	4	5	13	4	19	114	—
Leyton	118,287	804	337	27.3	11.4	1.35	40	—	2	3	18	5	1	11	103	—
Walthamstow	121,334	833	410	27.6	13.6	1.91	58	—	3	7	20	8	4	16	132	—
Hastings	67,144	263	195	15.7	11.6	0.42	7	—	1	2	1	—	1	2	87	—
Brighton	128,095	666	457	20.9	14.3	0.94	30	—	10	—	4	4	2	10	93	—
Portsmouth	205,118	1,438	784	28.1	15.3	1.25	64	—	1	1	26	13	3	20	138	1.0
Bournemouth	67,702	285	230	16.9	13.6	0.60	10	—	5	—	—	—	1	4	91	—
Southampton	117,312	659	351	22.5	12.0	0.82	24	—	—	—	14	3	—	7	86	—
Reading	78,987	486	231	24.7	11.7	1.75	34	—	—	—	20	1	2	11	66	2.2
Northampton	93,749	482	238	20.6	10.2	0.52	12	—	—	—	2	1	2	7	89	1.7
Ipswich	71,809	447	255	25.0	14.2	1.18	21	—	—	—	6	—	1	14	123	1.6
Great Yarmouth	52,613	409	240	31.2	18.3	1.38	18	—	—	2	3	1	1	11	115	—
Norwich	117,958	713	572	24.2	19.4	3.67	108	—	57	6	15	12	5	13	153	0.5
Plymouth	118,014	683	487	23.2	16.6	1.80	53	—	37	1	4	1	1	9	135	—
Devonport	78,405	522	258	26.7	13.2	1.64	32	1	16	—	4	1	1	9	105	—
Bristol	363,223	2,210	1,331	24.4	14.7	1.02	92	—	2	6	23	6	9	46	110	0.4
Hanley	66,360	521	330	31.5	19.9	2.89	48	—	—	6	9	5	3	25	161	0.6
Burton-on-Trent	52,922	271	163	20.5	12.4	0.61	8	—	—	—	—	—	1	7	118	1.2
Wolverhampton	100,729	664	359	26.4	14.3	2.00	50	—	—	6	11	3	3	27	126	0.6
Walsall	94,577	635	335	26.9	14.2	1.52	36	—	—	—	10	5	7	14	118	0.6
Handsworth	63,819	358	180	22.5	11.3	0.68	11	—	1	3	1	—	1	5	92	0.6
West Bromwich	68,469	544	243	31.9	14.2	1.23	21	—	3	1	1	—	5	11	118	0.8
Birmingham	548,022	3,676	2,152	26.9	15.8	1.57	215	—	59	14	25	13	20	84	146	3.5
King's Norton	72,608	416	153	23.0	8.5	0.72	13	—	—	3	—	4	—	6	79	3.9
Smethwick	64,531	493	220	30.6	13.7	1.68	27	—	15	3	5	—	1	3	110	1.4
Aston Manor	82,288	509	275	24.8	13.4	1.52	31	—	12	1	5	—	1	12	136	1.1
Coventry	76,374	585	294	30.7	15.4	1.45	27	—	—	2	3	3	2	17	118	3.1
Leicester	232,111	1,393	782	24.1	13.5	2.12	122	—	56	16	9	1	7	33	128	0.9
Grimsby	69,359	491	249	28.4	14.4	1.50	26	—	3	—	7	—	2	14	165	2.4
Nottingham	254,563	1,573	980	24.8	15.4	1.26	79	—	1	8	12	3	17	38	156	0.8
Derby	123,981	759	496	24.6	16.0	1.32	41	—	1	—	19	4	5	12	124	—
Stockport	99,646	632	480	25.4	19.3	2.86	71	—	33	1	1	5	7	24	166	0.4
Birkenhead	117,292	854	497	29.2	17.0	2.08	61	—	[illegible]	7	10	7	10	19	144	0.4
Wallasey	64,578	376	243	23.4	15.1	2.11	34	—	3	2	3	1	1	24	149	0.4
Liverpool	739,180	5,749	3,625	31.2	19.7	2.59	477	—	93	32	47	31	48	226	161	3.0
Bootle	65,989	546	318	33.2	19.3	3.94	65	—	36	1	6	2	3	17	139	3.8
St. Helen's	91,153	774	369	34.1	16.2	1.80	41	—	8	1	6	2	10	14	154	4.9
Wigan	87,588	688	441	31.5	20.2	3.25	71	—	28	3	1	2	12	25	145	0.2
Warrington	69,280	490	322	28.4	18.6	3.88	67	—	29	2	3	1	4	28	157	3.7
Bolton	180,502	1,087	716	24.2	15.9	1.83	82	—	—	7	7	2	21	45	153	0.4
Bury	58,744	317	248	21.6	16.9	1.31	19	—	1	—	1	2	2	13	170	1.6
Manchester	637,126	4,545	3,112	28.6	19.6	1.99	316	—	32	47	50	17	35	135	158	0.8
Salford	234,077	1,705	1,098	29.2	18.8	2.77	162	—	42	8	28	9	17	58	164	0.1
Oldham	140,969	954	778	27.1	22.1	4.24	149	—	86	7	4	8	2	42	166	0.5
Rochdale	87,189	485	457	22.3	21.0	2.71	59	—	43	—	5	1	—	9	157	2.6
Burnley	102,808	650	526	25.4	20.5	3.01	77	—	10	5	2	1	3	56	226	1.0
Blackburn	134,015	821	544	24.6	16.3	2.43	81	—	1	4	7	5	8	56	163	2.2
Preston	116,399	756	591	26.1	20.4	3.31	96	—	12	4	5	8	4	63	237	2.9
Barrow-in-Furness	60,967	436	214	28.7	14.1	1.06	16	—	—	1	3	1	—	11	131	5.1
Huddersfield	94,851	554	418	23.4	17.7	1.78	42	—	10	3	3	6	3	17	125	1.7
Halifax	109,272	491	423	18.0	15.5	1.02	28	—	2	—	12	—	3	11	132	1.2
Bradford	288,544	1,356	1,085	18.8	15.1	1.25	90	—	4	3	15	14	22	32	131	0.8
Leeds	463,495	2,883	1,677	24.9	14.5	1.01	118	—	2	10	26	20	18	41	129	—
Sheffield	447,951	3,314	1,887	29.7	16.9	2.32	258	—	45	52	21	14	22	104	159	1.9
Rotherham	61,098	458	298	30.1	19.6	5.38	82	—	43	5	2	9	2	21	162	4.4
York	83,467	507	285	24.4	13.7	1.01	21	—	—	—	1	4	7	9	97	—
Hull	262,426	1,854	1,126	28.3	17.2	3.30	216	3	61	6	35	15	25	66	127	0.4
Middlesbrough	100,069	825	530	33.1	21.2	3.04	76	—	1	2	8	13	8	44	178	1.3
Stockton-on-Tees	52,664	421	224	32.1	17.1	1.36	18	—	—	—	2	2	2	12	157	1.3
West Hartlepool	73,387	508	269	27.8	14.7	2.06	38	—	1	1	9	3	1	23	161	0.4
Sunderland	154,385	1,252	782	32.8	20.3	1.74	67	—	2	2	12	6	10	35	159	4.1
South Shields	111,402	872	606	31.4	21.8	5.43	151	—	87	3	8	15	4	34	177	3.0
Gateshead	123,191	930	544	30.9	17.7	2.68	82	—	14	3	15	2	4	44	181	5.5
Newcastle-on-Tyne	268,721	1,978	1,155	29.5	17.2	2.02	136	—	21	9	21	11	5	66	147	0.1
Tynemouth	54,138	473	255	35.0	18.9	1.33	18	—	1	2	2	1	3	9	161	1.6
Newport (Mon.)	74,227	565	349	30.0	19.4	2.15	40	—	13	1	1	3	2	20	184	0.8
Cardiff	183,823	1,184	683	25.8	14.9	0.94	43	—	1	2	3	9	2	26	159	0.1
Rhondda	127,684	1,101	478	34.6	15.0	1.73	55	—	5	1	4	3	7	35	139	0.6
Merthyr Tydfil	74,961	632	364	33.8	19.5	2.46	46	—	—	6	3	2	3	32	177	0.5
Swansea	96,848	749	481	31.0	19.9	2.18	53	—		3	3	17	1	29	162	0.2

Sheffield, Rotherham, and Merthyr Tydfil. The 93 deaths from diphtheria were equal to an annual rate of 0.24 per 1,000: in London the diphtheria death-rate was 0.18 per 1,000; it averaged 0.26 per 1,000 in the seventy-five other large towns, and was highest in Leyton, Walthamstow, Portsmouth, Reading, Norwich, Hauley, Derby, and Hull. The 57 deaths of whooping-cough were equal to a rate of 0.15 per 1,000. In London the mortality from this disease was 0.15 per 1,000: among the seventy-five other large towns the rates were highest in Willesden, East Ham, Norwich, Rotherham, Middlesbrough, South Shields, and Swansea. The 588 deaths referred to different forms of "fever" corresponded to an annual rate of 0.15 per 1,000: in London the "fever" death-rate was only 0.09 per 1,000, or about one-half the average rate in the seventy-five other large towns; the greatest proportional mortality from "fever" in these towns occurred in Birkenhead, Wigan, St. Helens, Bolton, Bradford, York, Hull, and Middlesbrough. The 2,89[illegible] cases of diarrhœa corresponded to an annual rate of 0.71 per 1,000; in London the death-rate from this disease was 0.50 per 1,000; while among the seventy-five other large towns the rate averaged 0.89 per 1,000, and was highest in Warrington, Burnley, Blackburn, Preston, Middlesbrough, and Merthyr Tydfil. Of the 9 fatal cases of small-pox, 8 belonged to Hull and 1 to Devonport.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 138 per 1,000 last quarter, against 167, 147, and 134 in the corresponding periods of the three preceding years; in London the rate last quarter was 125 per 1,000, while it averaged 138 in the seventy-five other large towns, and ranged from 98 in Reading, 70 in Hornsey, 78 in Kings Norton, 85 in Southampton, 89 in Northampton, 87 in Hastings, and 91 in Bournemouth, to 177 in South Shields and in Merthyr Tydfil, 178 in Middlesbrough, 181 in Gateshead, 184 in Newport (Mon.), 223 in Barrow, and 247 in Preston.

The causes of 625, or 1.0 per cent., of the deaths registered in the seventy-six towns last quarter were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, Hornsey, Tottenham, West Ham, East Ham, Leyton, Walthamstow, Hastings, Brighton, Bournemouth, Southampton, Great Yarmouth, Plymouth, Devonport, Derby, Leeds, and York; the highest proportions of uncertified deaths were 3.8 in Bootle, 3.9 in King's Norton, 4.1 in Sunderland, 4.4 in Rotherham, 4.9 in St. Helens, 5.1 in Barrow-in-Furness, and 5.5 in Gateshead.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,747 births and 5,549 deaths were registered during the week ending Saturday last, January 19th. The annual rate of mortality in these towns, which had been 12.6 and 12.7 per 1,000 in the two preceding weeks, further declined last week to 18.1 per 1,000. The rates in the several towns ranged from 8.7 in Handsworth (Staffs.), 9.0 in King's Norton, 9.1 in Reading and in West Bromwich, 9.3 in Hornsey, 10.2 in Willesden, 10.3 in Bournemouth, and 11.8 in East Ham, to 22.5 in Huddersfield, 23.5 in Oldham, 24.8 in South Shields, 25.2 in Warrington, 27.8 in York, 27.9 in Hull, 31.4 in Rotherham, and 36.3 in Middlesbrough. In London the rate of mortality was 18.1 per 1,000, while it averaged 17.9 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.2 per 1,000 in these towns; in London this death-rate was equal to 1.1 per 1,000, while it exceeded [illegible] in the other large towns to 3.1 in Barrow, 3.2 in Middlesbrough, 3.7 in Grimsby, 4.3 in Hull, 5.1 in St. Helens, 5.6 in Warrington, and 7.0 in Rotherham. Measles caused a death-rate of 1.3 in Birkenhead, 1.5 in West Ham and in Sunderland, 2.2 in Gateshead, 2.5 in West Bromwich, 3.1 in Hull, 4.0 in St. Helens, 4.1 in Warrington, and 6.7 in Rotherham; scarlet fever of 1.4 in South Shields, diphtheria of 1.5 in Aston Manor; whooping-cough of 1.1 in Walsall, 1.2 in York, 1.5 in Leyton, 1.6 in Hull, 1.7 in Willesden, and fever of 1.1 in Huddersfield. The [illegible] deaths registered showed no marked excess in any of the large towns. No fatal case of small-pox was registered last week either in London or in the large provincial towns, and no [illegible] were under treatment during the week in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients [illegible] the London Fever Hospital, which had been [illegible] three preceding weeks, [illegible] new cases were [illegible] 359, and 425 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the [illegible] large Scotch towns, [illegible] births and 713 deaths were registered during the week ending Saturday last, January 19th. The principal Scotch towns, which had been 240 and 229, and 242 per 1,000 in the three preceding weeks, further declined last week to 227 per 1,000. Among these Scotch towns the [illegible] ranged from 16.0 in Dundee to 22.7 in Paisley and 23.1 in Aberdeen. The principal [illegible] were [illegible] in Dundee, the highest [illegible] corresponded. The 362 [illegible] were referred to [illegible] to the [illegible] Three fatal cases of [illegible] were registered in Glasgow, and [illegible] in Edinburgh, Dundee, and Aberdeen. [illegible] whooping-cough in [illegible]

HEALTH OF IRISH TOWNS.

[illegible] 17 births and [illegible] were registered during the week ending Saturday last, January 19th. [illegible] which had been 27.0 and 26.1 per 1,000 in the two preceding weeks, further declined last week to 25.1 per 1,000. The annual death-rate [illegible] in the [illegible] towns ranged from 19.2 in Londonderry to 28.1 in Belfast. The [illegible] were [illegible] to [illegible] to the [illegible] Three fatal cases of [illegible] were registered in Belfast, and [illegible] in Dublin. [illegible] whooping-cough in [illegible] Belfast, and twenty-one

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ALNWICK INFIRMARY.—House-Surgeon. Salary, £120 per annum.

BARROW-IN-FURNESS: LONSDALE HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BRADFORD POOR-LAW UNION.—Resident Medical Officer for Hospital and Workhouse. Salary, £100 per annum.

BRISTOL DISPENSARY.—Medical Officer.

BRISTOL ROYAL INFIRMARY.—(1) Resident Obstetric Officer. (2) Resident Junior House-Surgeon. (3) Resident Casualty Officer. Salaries for (1) £75 per annum; and for (2) and (3) at the rate of £50 per annum.

CARDIFF INFIRMARY.—House-Surgeon. Salary at the rate o £60 per annum.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Registrar. Honorarium, £40 per annum.

CITY OF LONDON LYING-IN HOSPITAL, City Road, E.C.—District Surgeon.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Resident Medical Officer. Salary, £100 per annum.

HAMPSTEAD GENERAL HOSPITAL.—Resident Medical Officer. Salary at the rate of £80 per annum.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—Assistant House-Surgeon. Honorarium, £20 for six months.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Honorarium, £25 for six months.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Physician. (2) Assistant Casualty Medical Officer. Salaries, 25 guineas for eight months, and £3 10s. washing allowance.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum, increasing £10 if re-appointed.

LIVERPOOL: STANLEY HOSPITAL.—(1) Honorary Physician. (2) House-Surgeon. Salary, £60 per annum.

MANCHESTER: ANCOATS HOSPITAL.—Resident House-Physician. Salary, £80 per annum.

MENSTON: WEST RIDING ASYLUM.—(1) Second Assistant Medical Officer. (2) Fourth Assistant Medical Officer. Salary to commence at £200 and £150 per annum respectively.

MIDHURST: KING EDWARD VII SANATORIUM.—Junior Assistant Medical Officer. Salary, £100 per annum.

NEWCASTLE-UPON-TYNE AND NORTHUMBERLAND SANATORIUM FOR CONSUMPTION, Barrasford-on-Tyne.—Resident Medical Officer, male. Salary £180, rising to £200 per annum.

PADDINGTON INFIRMARY.—Second Assistant to the Medical Superintendent. Salary at the rate of £72 per annum.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL. Assistant House-Surgeon. Salary at the rate of £50 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Resident Medical Officer. Salary at the rate of £120 per annum.

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL Great Portland Street, W.—Honorary Assistant Anaesthetist.

ROYAL PIMLICO DISPENSARY, 104, Buckingham Palace Road, S.W.—Visiting Medical Officer.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN.—House-Surgeon. Salary, £60 per annum.

SHEFFIELD UNIVERSITY.—Chair of Pathology.

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST. Two Assistant Resident Medical Officers. Salary, £80 per annum each.

WEST HAM UNION. Two District Medical Officers. Salary, £130, rising to £150 per annum each.

APPOINTMENTS.

BUCKE, H. F. S., M.R.C.S., L.R.C.P.Lond., Medical Officer of Health for the Borough of Shaftesbury.

CLAPHAM, S. C., M.B., B.S.Durh., District Medical Officer of the Bradford Union.

COLEMAN, J. G. B., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Headington Union.

CROSS, L. W., M.R.C.S., L.R.C.P.Lond., Medical Officer of the Leyton-stone Schools of the Parish of Bethnal Green.

DOBSON, Henry, M.B., Ch.B., Public Vaccinator and Poor-law Medical Officer for the No. 2 Kirkoswald Division of the Penrith Union.

DOLBY, Edward H., M.A., M.D., M.C.Camb., F.R.C.S., M.R.C.P., M.D.Paris, M.D.Lausanne, Surgeon to the Queen Victoria Memorial Hospital, Nice.

HARRIS-JONES, P. J., M.B., Ch.B.Vict., Resident Medical Officer to the Bournemouth Royal National Sanatorium.

HAY, John, M.D., M.R.C.P., Assistant Physician to the Royal Infirmary, Liverpool.

LAVAL, F., M.B., M.S.Edin., Resident Medical Officer at the Epileptic Colony, Lingfield, of the Chorlton and Manchester Joint Asylum Committee.

MCVEAGH, J. G., M.D., M.R.C.P.Edin., Honorary Physician, Ancoats Hospital, Manchester.

MOSSOP, C. H., M.R.C.S., L.R.C.P.Lond., District and Workhouse Medical Officer of the Romney Marsh Union.

O'DONOVAN, T. J., L.R.C.P. and S.Edin., Medical Officer of the Coolmoreglare Dispensary District of the Dunmanway Union.

ROE, F. W., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Droxford Union.

SHAW, W. F., M.D., reappointed Resident Surgical Officer to the St. Mary's Hospitals, Manchester.

STEVENS, W. Mitchell, M.D.Lond., M.R.C.P., Honorary Consulting Physician to the Royal Hamadryad Seamen's Hospital, Cardiff.

THOMAS, E., L.R.C.P.Edin., L.F.P.S.Glasg., District Medical Officer of the Pwllheli Union.

WEBSTER, H. G., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Foleshill Union.

YOUNG, J. Stirling, M.B., Ch.B., Fourth House-Surgeon to the St. Mary's Hospitals, Manchester.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

HODGSON.—On January 18th, at Leyburn, 6, Mitcham Lane, Streatham, S.W., the wife of Charles Hodgson, L.R.C.P., M.R.C.S.Eng., of a son.

RYALL.—On January 19th, at 77, Harley Street, W., to Mr. and Mrs. Canny Ryall, a son.

MARRIAGES.

HAMILTON—HALSEY. On January 17th, at Streatham Congregational Church, by the father of the bride, Richard Hamilton, M.D., of Saltley, Birmingham, son of the late Andrew Hamilton, Manchester, to Evangeline, eldest daughter of the Rev. Joseph Halsey, late of Anerley.

SIMSON—CLARKE.—On January 17th, at St. George's, Hanover Square, by the Rev. Canon Bristow, M.A., of Southwark Cathedral, assisted by the Rev. Daven Jones, B.A., Vicar of Kidwelly, and the Rev. David Anderson, M.A., Rector, Captain Harold Simson, R.A.M.C., third son of Thomas Simson, of Blackheath, to Kate Litton, eldest daughter of Ernest Clarke, M.D., F.R.C.S., of Chandos Street, Cavendish Square.

THOMPSON—CLARKE.—January 15th, at St. Peter's Church, Morley, by the Rev. H. T. Robinson, B.A., assisted by the Rev. F. Sykes, M.A., John Andrew Douglas, M.B., Ch.B.Edin., fourth son of Alexander Thompson, Esq., Barmeal, Wigtownshire, N.B., to Amy Winifred, second daughter of J. C. Clarke, M.R.C.S. and L.S.A., of Bank House, Morley, Yorks.—At home, Comberton House, Halesowen, February 17th and 18th.

DEATH.

PEDDIE.—At 15, Rutland Street, Edinburgh, on January 19th, of pneumonia, Alexander Peddie, M.D., F.R.C.P.Edin., etc., in his 97th year.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Discussion: Some Points in the Diagnosis and Treatment of Laryngeal Cancer; to be introduced by Sir Felix Semon, C.V.O., M.D.

WEDNESDAY.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY, 20, Hanover Square, W., Ordinary Meeting, 5.30 p.m. Discussion: The Influence of Climate upon Gout, Rheumatism, and Rheumatoid Arthritis; to be introduced by Dr. Charles W. Buckley (Buxton). Dr. Joseph Groves (Isle of Wight), Dr. Hamilton Cumming (Torquay), and Dr. Percy Lewis (Folkestone) will take part in the discussion.

THURSDAY.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W.—Ordinary Meeting. Card Specimens, 8 p.m.; Papers at 8.30. Mr. Simeon Snell: (1) A Case of Tubercle of the Eyeball in which the Opsonic Index was regularly taken: (2) a Family Tree of Nyctalopia. Mr. Arnold Lawson: Two Cases of Streptococcic Infection of the Conjunctiva. Mr. G. Brooksbank James: Some Notes on Stereoscopic Vision.

FRIDAY.

SOCIETY OF ANAESTHETISTS, 20, Hanover Square, W., 8.30 p.m.—Paper by Dr. L. Guthrie: Poisonous After-effects of Chloroform and of Ether.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8 p.m.—Pathological Meeting.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Wednesday, 5 p.m.: Middle Ear and Labyrinth.

CHARING CROSS HOSPITAL, W.C.—Tuesday, 4 p.m.: Medical. Thursday, 4 p.m.: Surgical.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m.: Hip Disease.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—Clinics: Monday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Throat, Nose, and Ear, 4 p.m. Tuesday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Skin, 4 p.m. Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30. Out-patient Demonstrations: Medical and Surgical, 10 a.m. daily; Ears and Throats, noon, Monday and Thursday; Eyes, 11 a.m., Wednesday and Saturday; Skin, noon, Tuesday and Friday. Special Lectures: Monday, Nasal Suppuration; Wednesday, Iritis; Thursday, Angina Pectoris.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, Traumatic Neurosis. Tuesday, The Surgical Anatomy of the Temporal Bone: its Bearings on Suppuration (with Lantern Slides). Wednesday, Cervical Ribs, and Muscular Atrophy of the Hands (with Lantern Slides). Thursday, Rectal Haemorrhage; its Causation and Treatment.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Cerebral Palsies of Infancy. Friday, 3.30 p.m.: Cases from the Wards.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the arrangements for next week: Monday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out-patient, Throat, Nose, and Ear Clinics; *x*-ray Demonstration. Tuesday, 10.30 a.m.: Medical Out-patient Clinic. 2.30 p.m.: Surgical Operations; Surgical and Gynaecological Out-patient Clinics. 4.30 p.m.: Lecture Demonstration on Electro-Diagnosis. Wednesday, 2.30 p.m.: Dermatological, Ophthalmological, and Medical Out-patient Clinics. Thursday, 2.30 p.m.: Gynaecological Operations; Medical and Surgical Out-patient Clinics. 3 p.m.: Medical In-patient Clinic. 4.30 p.m.: Lecture on the Pathology of the Pneumonias. Friday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out-patient Clinic; Surgical Operations; Ophthalmological Clinic. 3 p.m.: Medical In-patient Clinic.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, Hammersmith Road, W.—The following are the arrangements for next week: Daily: 2 p.m., Medical and Surgical Clinics; 2.30 p.m., *X* Rays; Operations. Monday and Thursday, 2.30 p.m.: Eye Diseases. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2.30 p.m.: Diseases of the Skin. Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday, 2.30 p.m.: Diseases of Women. Lectures—Monday, 12 noon: Pathological Demonstration. Monday, 5 p.m.: Clinical Lecture. Tuesday: Ankylostomiasis. Wednesday: The Treatment of Stricture of the Urethra. Thursday: Practical Surgery. Friday: *X* Rays: Diagnosis and Treatment.

BOOKS, ETC., RECEIVED.

Lehmann's Medizinische Atlanten. IV Band. München: J. F. Lehmann. 1907:

Grundriss der deskriptiven Anatomie des Menschen. Von Dr. med. J. Sobotta. III Abteilung. Die Gefässlehre, die Nervenlehre, und die Lehre von den Sinnesorganen des Menschen. M.6.

Atlas der deskriptiven Anatomie des Menschen. Von Dr. J. Sobotta. III Abteilung. 2 Lieferung: Die Sinnesorgane des Menschen nebst einem Anhang: Das Lymphgefässsystem des Menschen. M.6.

International Clinics. A Quarterly. Edited by A. O. J. Kelly, A.M., M.D. Vols. ii and iii. Sixteenth series. 1906. Philadelphia and London: J. B. Lippincott Co.

Our Heritage in the Land. By H. E. Moore, F.S.I., F.S.S. Second edition. London: P. S. King and Son. 1906. 1s.

London: A. and C. Black. 1907:

The Englishwoman's Year Book and Directory. 1907-8. Edited by E. Janes. Twenty-seventh year. 2s. 6d.

The Writers' and Artists' Year Book. 1907. 1s.

A Practical Treatise on Materia Medica and Therapeutics, with especial reference to the Clinical Application of Drugs. By J. V. Shoemaker, M.D., LL.D. Sixth edition. Philadelphia: F. A. Davis Co. 1906. $5.00.

Paris: Vigot Freres:

Manuel Pratique de Massage et de Gymnastique Médicale Suédoise. Par J. E. Marfort. Troisième edition. 1907. Fr.5.

Notions élémentaires de Prophylaxie des Maladies Tropicales. Par R. Wurtz. 1906. Fr. 1.

La Sterilité chez la Femme. Par le Dr. E. Hugon. 1907. Fr. 2.

Traite des Urines. Par le Dr. E. Gerard. Deuxieme edition. 1907. Fr. 8.

Manuel de Gynécologie Pratique. Par J. Barozzi. 1907. Fr. 10.

Poisons: their Effects and Detection. By A. W. Blyth, M.R.C.S., F.I.C., F.C.S., etc., and M. W. Blyth, B.A., B.Sc., F.I.C., F.C.S., etc. Fourth edition. London: C. Griffin and Co. Ltd. 1906. 21s.

Climatotherapy and Balneotherapy: Health Resorts of Europe and North Africa. Third edition of the Mineral Waters and Health Resorts of Europe. By Sir H. Weber, M.D., F.R.C.P., and F. P. Weber, M.D., F.R.C.P. Edited by F. P. Weber. London: Smith, Elder and Co. 1907. 15s.

Sanitary Engineering with respect to Water Supply and Sewage Disposal. By L. F. Vernon-Harcourt, M.A., M.Inst.C.E. London: Longmans, Green and Co. 1907. 14s.

Wurzburger Abhandlungen aus dem Gesamtgebiet der praktischen Medizin. Herausgegeben von Professor Dr. J. Muller and Professor O. Seifert. 1 Supplement-Band. Die Diagnose und Therapie der Anämien, von Dr. J. Arneth. Wurzburg: A. Stuber. 1907. M.9.

La Technique Histo-Bactériologique Moderne. Par le Dr. E. Lefas. Paris: J. B. Baillière and Fils. 1906. F.1.50.

Une Nouvelle Méthode de Diagnostic de la Tuberculose Pulmonaire par la Tuberculine de Koch. Par M. M. A. Moeller, E. Loewenstein, et E. Ostrovsk. Troisième edition. Paris: A. Poinat. 1907. Fr.1.50.

***** In forwarding books the publishers are requested to state the selling price.**

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JANUARY.	
25 FRIDAY	Lambeth Division, *Metropolitan Counties Branch*, Lambeth Infirmary, Brook Street, Kennington Road, S.E., 4 p.m.; Committee, 3.30 p.m.
26 SATURDAY	
27 Sunday	
28 MONDAY	
29 TUESDAY	
30 WEDNESDAY	Bath and Bristol Branch, Medical Library of University College, Bristol, 8 p.m.; Council, 7.55 p.m. Brighton Division, *South-Eastern Branch*, Dispensary, 113, Queen's Road, Brighton, 4.30 p.m. South-Western Branch, Athenaeum, Plymouth, 3 p.m. Ulster Branch, Belfast.
31 THURSDAY	
FEBRUARY.	
1 FRIDAY	Kensington Division, *Metropolitan Counties Branch*, Marylebone Infirmary, St. Charles Square, Notting Hill, W., 4.45 p.m. Perthshire Branch, Royal Infirmary, Perth, 3.20 p.m.
2 SATURDAY	
3 Sunday	
4 MONDAY	
5 TUESDAY	
6 WEDNESDAY	
7 THURSDAY	Wandsworth Division, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
8 FRIDAY	Hampstead Division, *Metropolitan Counties Branch.*
9 SATURDAY	

Date.	Meetings to be Held.
FEBRUARY *(Continued).*	
10 Sunday	
11 MONDAY	London: Ethical Subcommittee, 2 p.m.
12 TUESDAY	London: Organization Committee, 11 a.m.
13 WEDNESDAY	
14 THURSDAY	
15 FRIDAY	Border Counties Branch, Carlisle.
16 SATURDAY	
17 Sunday	
18 MONDAY	London: Premises Committee, 2.30 p.m.
19 TUESDAY	City Division, *Metropolitan Counties Branch*, Great Eastern Hotel, E.C., 4 p.m.
20 WEDNESDAY	
21 THURSDAY	
22 FRIDAY	
23 SATURDAY	
24 Sunday	
25 MONDAY	
26 TUESDAY	
27 WEDNESDAY	Bath and Bristol Branch, Bath.
28 THURSDAY	Wandsworth Division, *Metropolitan Counties Branch*, Balham (Hotel), 8.45 p.m.
MARCH.	
1 FRIDAY	
2 SATURDAY	
3 Sunday	
4 MONDAY	
5 TUESDAY	
6 WEDNESDAY	London: South-Eastern Branch Council, 3.15 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom, and £1 12s. 6d. for abroad.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 2ND, 1907.

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ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF COUNCIL.

AT a meeting of the Council held (by kind permission of the Metropolitan Asylums Board, London, in their Board Room) on Wednesday, January 23rd, 1907, at 2 o'clock in the afternoon.

Present:

Dr. H. W. LANGLEY BROWNE, LL.D., Chairman of Council, in the Chair.

Dr. HENRY DAVY, President-elect.

Mr. G. C. FRANKLIN, LL.D., Past-President.

Dr. J. A. MACDONALD, Chairman of Representative Meetings.

Dr. H. RADCLIFFE CROCKER, Treasurer.

Dr. JOHN FORD ANDERSON, London.
Mr. H. A. BALLANCE, M.S., Norwich.
Dr. EDGAR G. BARNES, Eye.
Fleet Surgeon E. J. BIDEN, R.N., Southsea (Representative of the Royal Navy Medical Service).
Dr. T. R. BRADSHAW, Liverpool.
Dr. R. COCHRANE BUIST, Dundee.
Dr. W. A. CARLINE, Lincoln.
Mr. ANDREW CLARK, D.Sc., London
Dr. WM. COLLIER, Oxford
Dr. JAMES CRAIG, Dublin.
Mr. C. F. CUTHBERT, Gloucester.
Mr. E. J. DOMVILLE, Exeter.
Mr. GEORGE EASTES, M.B., London.
Dr. E. LAWRENCE FOX, Plymouth.
Dr. JOHN H. GALTON, Upper Norwood.
Dr. JOSEPH GIUSANI, Cork.
Dr. BRUCE GOFF, Bothwell.
Dr. DAVID GOYDER, Bradford.
Dr. J. GROVES, Carisbrooke.
Dr. JAMES HAMILTON, Glasgow.
Dr. G. E. HASLIP, London.
Sir VICTOR HORSLEY, LL.D., F.R.S., London.
Dr. J. H. HUNTER, South Shields.
Dr. R. McKENZIE JOHNSTON, Edinburgh
Colonel C. H. JOUBERT DE LA FERTE, I.M.S., Weybridge (Representative of the Indian Medical Service).
Mr. R. H. KINSEY, Bedford.
Dr. C. G. DRUMMOND MORIER, London (South Australian and West Australian Branches).
Professor J. T. J. MORRISON, M.B., Birmingham.
Dr. T. G. NASMYTH, Cupar, Fife.
Mr. EDMUND OWEN, LL.D., London.
Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. P. H. PARSONS, London (Victorian Branch).
Dr. FRANK M. POPE, Leicester.
Dr. EDWIN RAYNER, Stockport.
Mr. H. JONES ROBERTS, Penygroes.
Professor ROBERT SAUNDBY, M.D., LL.D., Birmingham.
Dr. ST. CLAIR B. SHADWELL, Walthamstow.
Dr. CECIL E. SHAW, Belfast.
Dr. E. MARKHAM SKERRITT, Clifton, Bristol.
Mr. W. D. SPANTON, Hanley.
Mr. C. R. STRATON, Salisbury.
Mr. J. LYNN THOMAS, C.B., Cardiff.
Dr. G. E. TWYNAM, London (Sydney and New South Wales Branch).
Mr. T. JENNER VERRALL, Brighton.
Dr. NORMAN WALKER, Edinburgh.
Dr. ARTHUR T. WEAR, Newcastle-on-Tyne.
Mr. F. E. A. WEBB, Cambridge.
Dr. SINCLAIR WHITE, Sheffield.
Lieutenant-Colonel E. M. WILSON, C.B., C.M.G., S. Farnborough (Representative of the Army Medical Service).

Minutes.

The minutes of the last meeting (October 24th, 1906) having been printed and circulated were taken as read and signed as correct.

Apologies.

Read letters of apology for non-attendance from Dr. J. Brassey Brierley, Lieutenant-Colonel Drake-Brockman, Professor D. W. Finlay, Dr. C. W. Marriott, Dr. J. Murray, Dr. J. Maxwell Ross, Dr. W. J. Tyson, Dr. Denis Walshe, and Mr. D. J. Williams.

Deaths.

The CHAIRMAN OF COUNCIL reported the deaths of Dr. George Bagot Ferguson, of Cheltenham; Mr. R. S. Fowler, of Bath; Dr. Alfred Sheen, of Cardiff; Mr. Thomas Henry Cheatle, of Burford, Oxford; former members of the Council, and the following resolutions of condolence were ordered to be transmitted to the families respectively.

Resolved: That the sincere sympathy of the Council be forwarded to Mrs. Ferguson and her son on the tragic death of George Bagot Ferguson, M.D., M.Ch., F.R.C.S. The Council desires to place on record its deep appreciation of the valuable work done by him on behalf of the Association. Dr. Ferguson filled with distinction the position of President of the Association in 1901, when it met at Cheltenham, and he delivered an address of great ability. He showed the keenest interest in the work of the Association, and his intervention in the discussions in the Council was always welcome on account of his shrewdness and sound common sense. Dr. Ferguson's charming personality will long be remembered by all those who had the privilege and pleasure of working with him.

Resolved: That this Council regrets to learn of the death of Mr. R. S. Fowler of Bath. He was elected to the General Council by the Bath and Bristol Branch as far back as 1859. Mr. Fowler was also Honorary Secretary to the Branch for twenty-three years as well as its first President, and he continued to represent the Branch on the Central Council until 1899.

Resolved: That this Council regrets to learn of the death of Dr. Alfred Sheen of Cardiff, who was elected a member of the General Council in 1875, and continued a Branch representative until 1900. Dr. Sheen acted as Honorary Secretary of the South Wales and Monmouthshire Branch from 1879 to 1900, from which date to 1904 he acted as Honorary Treasurer. When the Association met at Cardiff in 1885 Dr. Sheen acted as Honorary Local Secretary. Dr. Sheen was also a Vice-President of the Surgical Section at the Swansea meeting.

Resolved: That this Council regrets to learn of the death of Mr. Thomas Henry Cheatle of Burford, Oxford, who represented the Oxford Branch on the Central Council from 1900 till 1904.

Sir John Byers.

Moved by the Chairman of Council and

Resolved: That the hearty congratulations of the members of Council be extended to Sir John William Byers, M.D., on the honour of Knighthood which he has received at the hands of His Majesty the King.

Special Representative Meeting.

In reference to the following resolution of the Representative Meeting:

> That the Charter be referred to the Organization Committee in order that the instructions adopted by this Representative Meeting, after consideration of the amendments before it, may be embodied in the Charter, together with such amendments desired by the Colonial Branches as are consistent therewith, and that the Charter, as revised by the Organization Committee, be published in the Supplement, and referred to a Special Representative Meeting,

it was moved by the Chairman of Representative Meetings, seconded by Mr. Verrall, and

Resolved: That the announcement be made that a Special Representative Meeting will be held in May, but that the date of same be left to the discretion of the Chairman of Representative Meetings.

Exeter Programme.

Considered the question of the times of meeting in reference to the following minute of the last meeting:

> The Provisional Programme containing the times of meeting for the Exeter meeting was then considered, and upon the motion of Sir Victor Horsley, seconded by the Chairman of Representative Meetings, was postponed until the January meeting of Council.

Moved by the Chairman of Representative Meetings, and

Resolved: That the Annual General Meeting be fixed to commence on Friday, July 26th, at 2 p.m., to be followed by the Annual Representative Meeting.

The Chairman reported that he had received several requests from officers of Sections asking that the Sections might be allowed to meet on the Tuesday morning.

Whereupon it was moved by the President-elect, seconded by Dr. Fox,

That the Sections be allowed to meet a day earlier than usual—that is, on the Tuesday morning.

The motion having been put from the Chair was declared to be lost.

Moved by the President-elect, seconded by Dr. Collier, and

Resolved: That the settlement of the programme be left to the President-elect, the Chairman of the Representative Meetings, and the Chairman of Council.

Journal and Finance Committee Minutes.

Resolved: That the minutes of the Journal and Finance Committee of January 16th, 1907, be received.

Moved by the Treasurer, seconded by the Chairman of Council, and

Resolved: That the accounts for the quarter ending December 31st last amounting to £11 351 18s. 4d., be received and approved, and the Treasurer be empowered to pay those remaining unpaid, amounting to £1 852 14s. 10d.

Moved by the Treasurer, seconded by the Chairman of Representative Meetings, and

Resolved: That the extra expenditure incurred by the Special Poor-Law Committee be sanctioned.

Resolved: That the recommendation of the Special Poor-law Committee as to the payment of a fee of 30 guineas to Dr. Stewart be approved.

Resolved: That the Medico-Political Committee be authorized to expend a sum not exceeding £70 in pursuance of the objects set out in its minutes regarding the Truck Act.

Resolved: That additional expenditure not exceeding £40 be authorized to the Hospitals Committee in reference to the recommendation as to analysing the Hospital replies.

Resolved: That the Treasurer be authorized to expend a sum not exceeding £10 for the purpose of the Medical Secretary presenting certain preliminary inquiries in connection with the opposition of the Association to King Edward's Hospital Fund Bill.

The Council had before it a memorandum from the General Secretary outlining the probable results of the twelve months' working of the Journal in its improved form, also particulars as to the revenue derived from advertisements under the new scale of charges.

Moved by Dr. Collier, seconded by Dr. Craig, and

Resolved: That this Council tenders its congratulations to the Editor and Manager on the success attending the changes in the "make up" of the Journal and the increased charges for advertisements.

Premises Committee Minutes.

Resolved: That the minutes of the Premises Committee of December 3rd, 1906, and January 7th, 1907, be received.

Mr. Andrew Clark, the Chairman, presented the following report from the Premises Committee:

In connexion with the Premises Committee I do not think it necessary to make any remarks on the minutes, but I should like to say something as to the progress made in regard to the rebuilding on the Strand-Agar Street properties, and why there is still some delay in beginning the work of rebuilding. Ever since the Association acquired 2 and 3, Harvey's Buildings, it has always been our ambition to make these buildings—if possible by the purchase of No. 1—contiguous to the Strand-Agar Street properties. This, however, has not been possible till the eleventh hour, when we succeeded in exchanging No. 3, Harvey's Buildings, for No. 1 with the Civil Service Supply Association.

The latter give up No. 1 on the condition that we allow them a passage-way of 6 ft. 6 in. wide at the back of 1 and 2, Harvey's Buildings, for which they pay the Association a consideration of £700. In the opinion of the Premises Committee, and on the advice of the Architect, the exchange is highly favourable to us, as not only does it make Harvey's Buildings almost Strand property, but the Civil Service Supply Association give an undertaking that they will raise no objection to the Association in regard to any interference the Association may make to the light and air which at present the Civil Service Supply Association enjoy.

The acquirement of 1 and 2 Harvey's Buildings gave the Committee an opportunity which they have long desired of dealing with the property of the Association as a whole. Consequently amended plans have been got out, and these affect the basement, ground, first, and second floors. On the ground and basement by the extension through to Harvey's Buildings it is believed that the conditions of letting will be materially improved, while on the first and second floor the Association will be able to arrange the Library, Committee, and other rooms in a more satisfactory manner for the efficient working of the Association and convenience of members.

In the original undertaking it was considered it might be necessary to expend some £35,000 to £40,000 on the new premises of the Strand-Agar Street site, but the introduction of the Harvey's Buildings into the scheme, though involving additional outlay, will not it is believed exceed that sum.

The plans are well advanced, and it is hoped that actual operations will be commenced in February. Temporary premises have been engaged in Catherine Street, and every endeavour will be made to minimize the inconvenience to members caused by the necessity of living during the rebuilding—in temporary premises.

Andrew Clark, *Chairman.*

Resolved: That the report be received, approved, and entered on the minutes.

Organization Committee Minutes.

Resolved: That the minutes of the Organization Committee of November 6th and December 11th, 1906, and January 8th, 1907, be received.

Resolved: That the Rules submitted by the Sydney and New South Wales Branch be approved.

Moved by Mr. Verrall, seconded by Professor Morrison, and

Resolved: That the Council bring before the next Annual Representative Meeting the following alteration of the By-laws, namely:

That the existing By-law 24 be amended to read as follows:

> The elective Members of Council shall be elected by voting papers sent to each elector by post. Candidates may be nominated by any Division of a Branch or by such number of Members as the Rules of the Branch may prescribe. Nominations shall be sent, in writing, to the Secretary of the Branch on or before an appointed day, of which notice shall have been given by him in the British Medical Journal. The names of all candidates so nominated shall be placed in a list, which it shall be the duty of the Secretary to circulate to every Member of the Branch.
>
> In any case in which Branches are grouped for representation on the Council, the above provisions shall be carried

out as though the Branches so grouped formed one Branch, and it shall be the duty of the Secretary of the Branch having the largest membership to carry out the requirements of the By-law.

Moved by Mr. Ferrall, seconded by Sir Victor Horsley, and

Resolved: That the Council approve and in due course take steps to secure the adoption of the following amendment of Article VIII, namely:

Insert in the last line but three, between the words "given" and "previous," the words "one calendar month's," and delete the words "on or before the 1st December in the current year."

Resolved: That the Council approve of the following Divisions of the New Zealand Branch, having such boundaries as may be prescribed by the Branch Council:

Auckland Division.	Nelson Division.
Canterbury Division.	Otago Division.
Hawkes Bay Division.	Wellington Division.

Resolved: That the Council approve the adoption of the model Organization Rules by the Barnsley Division.

Resolved: That the Council approve the following Rule submitted by the Hong Kong and China Branch:

No Member of this Branch shall be eligible to represent this Branch, alone or in conjunction with any Branch with which it may for the time being be grouped for representation on the Council of the Association, until he has been a Resident Member of the Branch for a period of not less than three years, and no Representative so qualified shall continue to represent the Branch or groups of Branches on the Council after he has been absent from the Branch for a period of three years.

Resolved: That the Council approve the modification of the form of application for membership recommended by the Organization Committee.

Resolved: That the Council group the Colonial Branches for representation on the Council for the year 1907-8 in the same manner as for the year 1906-7.

Resolved: That the rules submitted by the St. John, New Brunswick Branch, be approved.

As regards the references to the Charter, and the amendments to the Standing Orders of Council set out in the minutes of the Organization Committee, the Chairman of Council ruled that these references would be received only but not approved.

Hospitals Committee Minutes.

Resolved: That the minutes of the Hospitals Committee of November 15th, 1906, and January 10th, 1907, be received.

Resolved: That Mr. Garrett Horder be appointed a member of the Hospitals Committee to fill the vacancy created by the resignation of Dr. Beverley.

Resolved: That the expenditure necessary for making a complete analysis of the replies received from hospitals to the proposals circulated in August, 1906, be authorized.

The Council considered the recommendation of the Hospitals Committee with regard to the King Edward's Hospital Fund Bill, expressed its disapproval of certain features of the Bill, and directed the Chairman of the Representative Meetings, the Chairman of Council, and the Chairman of the Hospitals Committee to make suitable representations upon the subject.

Naval and Military Committee Minutes.

Resolved: That the minutes of the Naval and Military Committee of November 26th, 1906, be received.

Colonial Committee Minutes.

Resolved: That the minutes of the Colonial Committee of December 28th, 1906, be received.

Irish Committee Minutes.

Resolved: That the minutes of the Irish Committee of January 5th, 1907, be received.

Moved by Dr. Craig, seconded by Dr. Cecil Shaw, and

Resolved: That the Council approve the Report of the Viceregal Commission on the Irish Poor Law as an able solution of the whole question on broad lines, and the Council approve the establishment of a State Medical Service as being likely to be of incalculable benefit to the sick poor. The Council hope that legislation on these lines may be promoted by the Government with as little delay as possible.

Resolved: That a copy of the foregoing resolution be forwarded to the Prime Minister, the Chief Secretary for Ireland, the Under Secretary for Ireland, the Local Government Board, Ireland, Mr. John Redmond, M.P., and the Right Hon. Walter Long, M.P.

Public Health Committee Minutes.

Resolved: That the minutes of the Public Health Committee of January 8th, 1907, be received.

Science Committee Minutes.

Resolved: That the minutes of the Science Committee of January 8th, 1907, be received.

Moved by Dr. Norman Walker, seconded by Mr. Andrew Clark, and

Resolved: That Mr. T. Shirley Hele be elected to the unexpired portion of the vacant Research Scholarship.

Medico-Political Committee Minutes.

Resolved: That the minutes of the Medico-Political Committee of January 9th, 1907, be received.

Resolved: That representations be made to the Government with respect to the abatement of medical practitioners from taxation of motor cars used for purposes of practice.

Resolved: That the Council approves of the instructions of the Medico-Political Committee to the Medical Secretary in regard to the Ebbw Vale dispute in South Wales.

Resolved: That the Council instruct the Medico-Political Committee on behalf of the Association, to support the Certifying Factory Surgeons' Association in urging such amendment to the Factory Acts as may be necessary for the abolition of examinations on workmen, as to fitness for employment elsewhere than at the factory or at the workshop, and for the increase of the fees paid to Factory Surgeons for examinations at the factories, and that in the meantime the support of the Association be accorded to the factory surgeons in demanding an immediate increase of the fees for examinations at their surgeries.

Resolved: That the support of the Association be given to the Public Slaughter-houses Bill.

Resolved: That the action of the Medico-Political Committee be approved in submitting to the Royal Commission on the Feeble-minded evidence on behalf of the Association as to the future composition and powers of the Lunacy Commission, and the statement of evidence submitted.

Resolved: That the support of the Association be given to the Bill prepared by the National Society for the Prevention of Cruelty to Children as to the Overlying of Infants Bill, which the Public Health Committee has found to conform to the principles approved by the Council at its last meeting.

Resolved: That the Council approve the collection and submission of evidence on behalf of the Association to the Departmental Committee on the Truck Acts, with respect to the provision under those Acts for medical attendance upon workmen, those Divisions and Branches of the Association which are specially concerned being requested to assist in the collection of such evidence.

Ethical Committee Minutes.

Resolved: That the minutes of the Ethical Committee of January 11th, 1907, be received.

Resolved: That the Council approve the adoption of Rule "Z," with slight modifications, by the Birmingham (Central) Division.

Resolved: That the Council approve the adoption of the Model Rules of Ethical Procedure, the Bradford Rules, and Rule "Z," by the Barnsley Division.

Resolved: That the Council approve the following addition to the Model Rule "Z," namely, that the following paragraph, to be designated (*b*), be added to the Rule, the present Rule becoming paragraph (*a*) thereof.

(*b*) In any case in which the Division shall at the time of, or subsequently to, the adoption of a resolution of the nature contemplated by paragraph (*a*) of this Rule, have also resolved that, in the opinion of the Division, it is desirable that such resolution shall be brought officially to the notice of any specified Division or Branch of the Association, it shall be the duty of the Executive Committee of the Division to

submit to the Central Ethical Committee a statement of this fact and of the reasons for which such notification is desired, and, subject to the approval of the said Ethical Committee, to cause a copy of the said resolution to be transmitted by the Honorary Secretary of the Division to the Honorary Secretary of the Division or Branch so specified.

Resolved: That the Council approve of the adoption of Rule "Z" by the Coventry Division.

The Council then considered and dealt with the case of a member of the Association recommended for expulsion.

Poor-law Committee Minutes.

Resolved: That the minutes of the Poor-law Committee of January 15th, 1907, be received.

Resolved: That the recommendations of the Committee be approved as the basis of evidence respecting the administration of the Poor Law in England and Wales, to be given on behalf of the Association before the Royal Commission on the Poor Law on January 29th, 1907.

Resolved: That the Chairman of Representative Meetings, the Chairman of Council, Dr. Ford Anderson, and the Medical Secretary be appointed witnesses to give evidence on behalf of the Association.

Resolved: That the expenditure incurred in the collection and preparation of evidence be approved, including a fee of 30 guineas to Dr. James Stewart for his services in the preparation of the analysis of evidence.

Election of Candidates.

The election of candidates was then considered, and the fourteen candidates whose names appeared on the circular convening the meeting were declared elected members of the British Medical Association.

Division Returns.

In October, 1906, Mr. Parkinson asked how many Divisions replied giving the numbers present, absent, and voting at the elections of Representatives. Further, why these replies were not published according to the Oxford resolution, when the Chairman of Council replied as follows:

That at the Representative Meeting held at Oxford in 1904, the following minute was passed:

That in recording the votes of members of Divisions on matters to be referred to Representative Meetings the following plan should be adopted, namely, the number of voting affirmative present; the number of voting negative present; the number absent.

This minute was embodied in a circular letter forwarded to the Divisions on December 1st, 1904.

On February 15th, 1905, the Medico-Political Committee passed the following recommendation for the consideration of the Council:

That it be recommended that the names and numbers of members attending the meetings of Divisions be not recorded in the reports of Division meetings published in the Journal.

This resolution was confirmed by the Council, and in consequence no details as to the numbers present at a Divisional meeting are published in the Journal.

At the end of the Council meeting Mr. Parkinson gave notice that he would reopen the matter at the January 1907 Council meeting.

Moved by Mr. Parkinson, seconded by Mr. George Thompson:

That the attention of the Divisions be again drawn to the resolution of the Annual Representative Meeting of July 1906, and they be requested to furnish the information desired therein in forwarding all resolutions or motions referred to and from Representatives.

Local Meetings.

Moved by Mr. Macalister, seconding the proposal for the consideration of cases at Exeter, to move:

That the General Secretary be instructed to write to Mr. Morrison that as the Council are very much pressed for time they are precluded from placing the consideration of Mr. Allen's case on the Agenda of the Annual Meeting in 1907, but that at the same time the Council has no wish to limit the medical profession of Hereford will see that a way to repeat the invitation of July last for the consideration of the Annual Meeting at Exeter.

Royal Sanitary Institute Congress.

Resolved: That the Chairman of the Representative Meetings and the Chairman of the Public Health Committee be appointed delegates to the Conference of the Royal Sanitary Institute to be held in Dublin in June.

Lancashire and Cheshire Branch and Payment of Representatives.

A communication from the Honorary Secretary of the Lancashire and Cheshire Branch regarding the payment of Representatives was referred to the Organization Committee.

Mode of Election of the Council.

A resolution forwarded by the Hon. Secretary of the Cambridge and Huntingdon Branch pointing out that any alteration in the present mode of electing members to the Council of the Association would be seriously detrimental to the interests of all those Branches consisting in the main of smaller towns and rural areas, was referred to the Organization Committee.

Motor Car Taxation.

On considering a resolution from the Yorkshire Branch on the question of motor car taxation, the Chairman of Council reported that the subject of this resolution had been dealt with under the minutes of the Medico-Political Committee.

School Hygiene Congress.

A communication from the Second International Congress on School Hygiene, asking for a grant of money in aid of the expenses of the Congress to be held in London in 1907 was referred to the Journal and Finance Committee.

Reports of Standing Committees.

ORGANIZATION COMMITTEE.

At the meeting of the Council on January 23rd the Organization Committee reported its proceedings at meetings held on November 6th and December 11th, 1906, and January 8th, 1907.

Meeting, November 6th, 1906.

At the meeting of the Committee on November 6th there were present Mr. T. Jenner Verrall, in the chair; Dr. J. A. Macdonald (Chairman of Representative Meetings), Mr. H. A. Ballance, Mr. Andrew Clark, Dr. Alfred Cox, Dr. E. D. Kirby, Professor J. T. J. Morrison, Mr. E. E. A. Webb, Professor A. H. White; Mr. Hempson, Solicitor to the Association, also attended to advise the Committee.

Intimations of apologies for absence were received from the President, the Chairman of Council, the Treasurer, Sir Victor Horsley, and Dr. E. Rayner (illness).

Issue of "Journal" to Colonies.

In reply to a communication from the Cape of Good Hope (Western Province) Branch, proposing that the Journal should be sent to the South African Branches in bulk, and any saving of expense thereby effected credited to them, the Committee stated that while previous inquiries on this subject did not indicate the probability of any saving, the suggestions of the Branch would be more carefully investigated.

Territorial System in Council Election.

In reply to a communication from the Dublin Division to the Chairman of Council, referred by him to the Committee, forwarding the resolution of that Division respecting the proposed election of a portion of the Council by the Representative Meeting, the Division was informed that the Committee already had the matter under consideration, both as affecting the revision of the Charter and as affecting the necessity of provision for topographical representation in all cases of election by the Representative Meeting, for which they were preparing a scheme as instructed by the meeting.

Visits to Divisions.

The Medical Secretary's report of visits to the Chelsea and Kensington Divisions was approved.

Rules.

Victoria Branch.

Rules submitted by the Victoria and New South Wales Branches were considered, and the latter provisionally approved, subject to the contemplated alterations of Articles being carried out.

Boundaries.

Barnsley.

The Committee, pursuant to standing orders, approved the formation of the new Barnsley Division (Yorkshire Branch), as to which it had evidence of complete local agreement.

New Brunswick.

The formation of a St. John, New Brunswick, Branch was also approved.

New Zealand.

In accordance with representations from the New Zealand Branch, the Committee recommended the Council to approve of the following Divisions of that Branch, each to have such boundaries as the Branch Council should define: Auckland Division, Canterbury Division, Hawkes Bay Division, Nelson Division, Otago Division, and Wellington Division.

Cases Undecided.

After consideration of the proposed formation of new Divisions at Kidderminster and Stourport, and of alterations of boundaries of the Auckland and Wellington Divisions of the New Zealand Branch (as regards the Gisborne district), and of alteration of boundaries of the Mid and South Staffordshire Divisions (Staffordshire Branch) and Birmingham Central Division (Birmingham Branch), these questions were adjourned pending receipt of further information.

Articles and By-laws.

Election of Members: Residence.

In connexion with a recent case of difficulty as to election of a new member, the Committee considered whether it would be possible to define more precisely the term "residence" as used in By-law 2, and, in view of a report from the Solicitor, decided that it would be impracticable.

Renewed Applications for Membership.

To overcome the difficulty indicated, the possibility was considered of modifying the application form for membership in order that information should be given as to whether a candidate had previously applied, and the Medical Secretary was instructed to prepare a suitable draft.

Resignation of Members.

It was also decided, upon consideration of a communication from the Central Ethical Committee, to recommend that in due course Article VIII should be amended in order to provide an interval after the resignation of a member is tendered before it shall take effect.

An inquiry having been made as to whether the resignation of a member had been valid under the regulations, the matter was considered and postponed pending the receipt of a report from the Solicitor upon the subject.

Election of Chairman of Representative Meetings.

On consideration of the instruction of the Representative Meeting to make provision for the election of the Chairman at the end instead of at the commencement of the Annual Representative Meeting, and pending the decision by Counsel as to whether this would necessitate an alteration of the Articles, the Medical Secretary and Solicitor were instructed to draft a suitable By-law.

Election of Branch Representatives on Council.

Upon consideration of a communication from the Honorary Secretary of the Metropolitan Counties Branch as to the ambiguity of the present By-law 24, relating to the procedure in election of Branch Representatives on the Council, the Committee decided to recommend the Council to propose such an alteration of the By-law as would remove the ambiguity, at the same time improving the drafting in other respects.

Election of Committees.

The Committee also resumed consideration of the instruction from the Annual Representative Meeting to report as to some method for securing topographical representation in the election by the Annual Representative Meeting of members of Committee, and approved the following memorandum upon the subject:

APPLICATION OF THE TOPOGRAPHICAL PRINCIPLE IN THE APPOINTMENT OF COMMITTEES BY THE ANNUAL REPRESENTATIVE MEETING.

Memorandum.

The Annual Representative Meeting, after resolving (Minute 332) that at least half the Members of each Standing Committee should be elected by the Representative Meeting, resolved (Minute 333):

> That it be an instruction to the Organization Committee to make provision whereby means may be afforded for ensuring topographical representation.

Minute 332 was included by the Council under the Referendum, and is for the present inoperative.

Minute 333 was not so included, and therefore stands as an instruction to the Organization Committee.

The two existing Committees to which the principle of topographical representation could be applied in the election of Members by the Representative Meeting are the Medico-Political and the Ethical Committees, of which the Meeting elects six of the former and five of the latter. If, as is contemplated by the resolutions of the Representative Meeting, with respect to the composition of the Council under the Charter, a considerable proportion of the Council should be elected by the Representative Meeting, the application of the principle of topographical representation to that election would doubtless also require consideration.

To ensure topographical representation provisions would be required that not less than a certain fixed proportion of those elected must be Members of Divisions included in certain specified areas, and the first question would be as to the extent to which the subdivision should be carried in specifying those areas. In the United Kingdom it will doubtless be desired that provision should be made, in some cases at least, to ensure the election of Members representative of Scotland and Ireland. It is doubtful whether it would be desired to divide England and Wales into provincial districts, and assign a certain representation to each district. In the case of such small numbers as those for the Medico-Political Committee and Ethical Committee such a subdivision might interfere unduly with the selection of the most suitable individuals.

Assuming for the present that division into three groups, namely, England and Wales, Scotland, and Ireland, would be sufficient, and, taking the Medico-Political Committee as an example, topographical representation might be ensured by a provision that of those elected to serve on the Medico-Political Committee at least one should be a member of a Scottish Division, at least one should be a member of an Irish Division, and at least three members of Divisions in England and Wales. This would allow a certain freedom of election. If it were desired to fix the numbers exactly, the provision would be that there should be four members for England and Wales, one for Scotland, and one for Ireland.

The machinery for ensuring the carrying out of such a principle would be secured by the form of the voting papers, by the directions to voters, and by the directions to those counting the votes. The most convenient course would appear to be by adopting a voting paper somewhat in the appended form, and containing the directions to voters suggested in that form.

In counting the votes, the procedure would differ according to whether fixed representation was assigned to a certain country or a certain elasticity permitted. If there were fixed proportional representation it would simply be necessary to count the required number for each country separately. If it were desired to give a certain freedom of choice to the voter, the most convenient procedure would appear to be to count the votes for each country separately, and take those who receive the highest number of votes until the minimum number for each country had been elected, namely, three for England and Wales, one for Scotland, and one for Ireland, and, as regards the sixth place, to take the remaining can-

didate who had received the greatest number of votes, irrespective of the country to which he belonged.

In considering this matter the Committee may perhaps think it well to take into consideration the question whether some arrangement could be come to in order that the selection of Members of these Committees by the Council should be taken into account in fixing the proportions to be elected by the Representative Meeting.

On the occasion of the first election by the Representative Meeting the appointments made by the Council were known, and in view of the fact that the Council had elected a Scottish Member, the Representative Meeting elected an Irish Member. There have always been one Scottish and one Irish representative on the Medico-Political Committee. The present Scottish representative was elected by the Representative Meeting, and the Irish representative by the Council. Thus, even under the present system, topographical represention has to this extent been obtained in this Committee.

PROPOSED FORM OF VOTING PAPER.

Election of Six Members to serve on the Medico-Political Committee for the Year 1907-8.

The following candidates have been duly nominated and are grouped under the countries to which the Divisions of which they are Members belong. Each voter is entitled to vote by placing a X against the names of not more than six candidates in all, of whom at least three, and not more than four, must be selected from the English and Welsh list, not more than two from the Scottish list, and not more than two from the Irish list. If more than six candidates are voted for in all, or more than the prescribed number in any one list, the vote will be spoiled :

England and Wales.	*Scotland.*	*Ireland.*
Dr. A.	Dr. L.	Dr. R.
Dr. B.	Dr. M.	Dr. S.
etc.	etc.	etc.

Reports of Committees to Council.

Upon consideration of an instruction from the Central Council, the Committee approved a preliminary report recommending that in future each Committee should present a report to the quarterly meetings of Council, instead of presenting its minutes as at present; and it was decided to circulate the report to each Committee in order that the recommendation of the several Committees could be included in the report on the matter to the Council.

Charter.

Revision of By-laws.

Further progress was made in the revision of the draft By-laws under the proposed Charter pursuant to instructions of the Annual Representative Meeting.

Annual Reports of Divisions to Branches.

The forms of annual reports of Divisions to Branches were approved, and in reply to the statement of an honorary secretary that the present time for sending in these reports is inconvenient, it was pointed out that the dates are governed by By-law 9, and are so adjusted as to allow six weeks between the reception by a Branch of the reports of their Divisions and the report of the Branch to the Central Council, and six weeks also between the reception by the Central Office of the reports of Branches and the issue of the annual report of the Council. It was also pointed out that these reports are not to be confused with reports of executive committees of Divisions to the Divisions or of Branch Councils to their Branches, the reports last mentioned being those of executive bodies to their constituencies, whereas the reports under By-law 9 are those of the local units of the Association to the general body. The Committee directed that a statement to the same effect be included in the covering letter sent to all Honorary secretaries with the forms.

Meeting December 11th, 1906.

At the meeting on December 11th there were present : Mr. T. Jenner Verrall, in the chair; Dr. J. A. Macdonald (Chairman of Representative Meetings), Mr. H. A. Ballance, Dr. Alfred Cox, Dr. E. D. Kirby, Professor J. T. J. Morrison, Dr. E. Rayner, Mr. E. F. A. Webb, Professor A. H. White, Mr. Hempson, Solicitor to the Association, also attended to advise the Committee.

Intimations of apologies for absence were received from the President, the Chairman of Council, the Treasurer, Sir Victor Horsley, and Mr. Andrew Clark (illness).

Voting in Representative Meetings.

In reply to a communication from a member of the Association, referred by the Chairman of Council to the Committee, suggesting that Representatives of grouped Divisions are not entitled under the articles to vote in the Annual Representative Meeting, the Committee expressed the opinion that the term "Representative of Divisions" in the first sentence of By-law 20, to which reference was made, clearly included Representatives of grouped Divisions as well as Representatives of single Divisions.

Visits to Divisions.

The Committee approved the Medical Secretary's report of a visit to a meeting of the Ilford Medical Society, at which questions of contract practice and also of the formation of an Ilford Division of the Association were under consideration.

Charter.

Consideration of the draft By-laws under the proposed Charter was resumed and completed save as to certain points specially reserved.

Resignation of a Member.

The report of the Solicitor was received upon the matter considered by the Committee at its previous meeting as to the validity of the resignation of a member, and it was decided to report that in the opinion of the Committee the resignation of the practitioner in question had been accepted, and he had ceased to be a member of the Association.

Election of Officers of a certain Branch.

The Committee considered the question raised by an Honorary Secretary of a Division as to the validity of certain proceedings in connexion with the election of officers at the annual general meeting of a Branch, and decided that the inquirer be informed of the opinion of the Solicitor to the effect that the said proceedings were irregular, that the election of the officers in question was therefore invalid, and that circumstances were conceivable in which the official action of such officers might render proceedings of the Branch inoperative and illegal.

Meeting on January 8th, 1907.

At the meeting of the Committee on January 8th there were present Mr. T. Jenner Verrall, in the chair; Dr. H. Langley Browne (Chairman of Council), Mr. H. A. Ballance, Mr. Andrew Clark, Dr. Alfred Cox, Dr. E. D. Kirby, Professor J. T. J. Morrison, Dr. E. Rayner, Professor A. H. White. Mr. Hempson, Solicitor to the Association, also attended to advise the Committee.

Intimations of apologies for absence were received from the President, the Chairman of Representative Meetings, the Treasurer, Sir Victor Horsley, and Mr. F. E. Apthorpe Webb.

Correspondence.

The consideration of communications from the Honorary Secretaries of the Staffordshire and Shropshire Branches as to grouping for representation on the Central Council, and from the Cape of Good Hope, Western Province Branch, in further reference to the proposal that the Journal should be sent to South Africa in bulk, was deferred.

Relation of Divisions to Branches and Association Respectively.

The Committee approved of the correspondence with a member of which the following is an abstract, and ordered that the abstract be filed for the information of future inquirers upon the same matter.

Relation of Divisions to Branches and to the Association respectively.

A member of the Association having asked Whether Divisions were to be recorded as Divisions of the Branch to which they belonged, or Divisions of the Association, and therefore whether resolutions of Divisions on Association business should be transmitted in all cases through the Branch Secretary or direct to the Central Office — a reply was sent to the following effect : That Articles IV and V and By-laws 7, 9, 11, and 12 were those which bore chiefly upon the question raised; that having regard to Article IV it appeared clear that a Division was a Division

of the Association, that it was, in the language of the Report of the Constitution Committee, the primary unit of the Association, the Branches being aggregates of Divisions and not the Divisions fractions of Branches.

Under the Regulations certain powers are specifically conferred on Branch Councils, which by By-law 9 are federal bodies chiefly composed of representatives of Divisions. These powers are:

(*a*) The election of Members rests with the Branch Council and not with the Divisions.
(*b*) The Branch Council has complete financial control because it receives the subscriptions from the Treasurer of the Association and pays to the Divisions such sums as it deems proper.
(*c*) It rests with the Branch Council to make Reports to the Central Council in any case in which it is thought that a Member should be expelled. The Division cannot go direct to the Central Council with such a Report.
(*d*) The Ethical Committee has laid down a principle, which has been approved by the Representative Meeting, that if an Ethical case has been investigated and decided by a Division either of the Members concerned has a right of appeal to the Branch, just as in any case of dissatisfaction with the decisions of the Branch either of them would have a right of appeal to the Central Ethical Committee and Central Council.
(*e*) If there is any proposal for altering the boundaries of a Division the Branch Council must have one month's notice in order to enable it to express its opinion on the matter before the change is carried out.
(*f*) Each Division must report once a year to the Branch Council on its membership, proceedings, and financial position.

To all matters other than those specifically provided, as above stated, the language of By-law 11, paragraph (*a*), would appear to apply, namely, that subject to the regulations each Division shall be free to govern itself as it think fit.

VISITS TO DIVISIONS.

The Committee approved the Medical Secretary's reports of visits to the Coventry, Cardiff and the Monmouthshire Divisions; also his proposed attendance at a General Meeting of the Border Counties Branch.

RULES.

Victoria Branch.

Rules submitted by the Victoria Branch were further considered together with the Solicitor's report thereon, and it was decided to inform the Branch that the Rules as submitted presented certain difficulties upon which the Committee desired to confer with the representative of the Branch on the Central Council and any other members who might be in London.

New South Wales Branch: Hong Kong Branch: Barnsley Division.

The Council was recommended to approve Rules of the New South Wales Branch (provisionally approved at the November meeting of the Committee), Rules of the Barnsley Division (Yorkshire Branch), and a Rule submitted by the Hong Kong and China Branch.

Auckland Division.

It was decided to point out to the Auckland Division of the New Zealand Branch that certain of the Rules submitted were in conflict with the regulations of the Association.

CHARTER.

The Committee completed its revision of the draft By-laws under the Charter, and gave instructions that they be referred to Counsel for consideration.

ELECTION OF COUNCIL.

Upon consideration of the question of the mode of election of the Central Council, it was decided to include in the report of the Committee By-laws drafted strictly in accordance with the resolution of the Annual Representative Meeting at Westminster, but to consider at the next meeting alternative suggestions to be submitted for the consideration of the Special Representative Meeting.

SUGGESTED ALTERATIONS OF ARTICLES AND BY-LAWS.

Reference from Annual Representative Meeting.

The Committee considered and prepared its report to the next Annual Representative Meeting upon the following motions from the agenda of the Annual Representative Meeting at Westminster referred to the Committee for consideration and report:

That it be an instruction to the Central Council to alter all Articles and By-laws, so that "the Chairman of a Division" be called "the President of the Division," and the "Executive Committee of a Division" be called "the Division Council." (Wandsworth Division.)

That at least one Registered Dental Surgeon should be added to the Central Council of the Association, either by election or by co-option. (Hampstead Division.)

On the following motion, similarly referred, being considered, it was ordered that a draft report be prepared for consideration at the next meeting:

That in order to accelerate the consideration of, and dealing with, matters of local interest that do not affect the principles or policy of the Association, and so relieve the routine work of the Central Office, it is desirable that there be gradually introduced the principle of District Organizing Medical Secretaries. That it be an instruction to the Central Council to consider the matter, and to report with a scheme to the Divisions by March 31st, 1907.

Alteration of Forms of Application for Membership.

Upon further consideration of the proposed alteration in the Forms of Application for Membership, considered at the November meeting, the Committee recommended the Council to approve a modified form of application making provision for a statement as to whether the candidate had previously applied for membership.

Election of Chairman of Representative Meetings.

The Committee also resumed consideration of the draft By-law as to election of the Chairman of Representative Meetings, and decided to take Counsel's opinion concerning the necessity of specifying the period of the Annual Representative Meeting at which the election of the Chairman should take place.

ORGANIZATION OF CANADIAN BRANCHES.

The Committee received the following report of a conference at Toronto on the organization of the Canadian Branches:

REPORT OF CONFERENCE AT TORONTO ON THE ORGANIZATION OF THE CANADIAN BRANCHES.

A meeting was held at Toronto of members of the Organization Committee and other Representatives of Central Committees in Canada, with Honorary Secretaries of Colonial Branches and other members in Canada specially interested in Colonial organization. The Nova Scotia and Halifax, and Toronto Branches were all represented as well as Winnipeg. There were also present the President of the Canadian Medical Association and the President of the Ontario Medical Association. The chair was taken by the President of the Association—Dr. Reeve. The Medical Secretary explained the origin of the Conference, namely, a resolution of the Council adopted on the recommendation of the Organization Committee, that at the time of the Annual Meeting at Toronto, a conference should be held to consider the organization of the Canadian Branches.

Dr. Rayner, on behalf of the Organization Committee. Sir Victor Horsley, Dr. McPhedran, President of the Canadian Association, Dr. Cameron, President of the Ontario Association, Dr. Hughes of Winnipeg, and others took part in the discussion, which turned particularly to the question of the form of organization most suitable to the requirements of the Canadian profession, and of the relationship of the British Medical Association to the Canadian Medical Association and the various provincial Associations and local medical societies, and of these to one another.

The amalgamation of various local medical societies, either with the Branches of the British Medical Association on the one hand, or with the Canadian Medical Association on the other, appeared to be regarded generally as feasible, and discussion chiefly turned on the question whether the reorganization of the Canadian Medical Association, apart from the British Medical Association, should first be carried through on lines resembling those of the reorganization of the British Medical Association, and some form of affiliation with the British Medical Association could afterwards be

effected, or whether the Branches of the British Medical Association should be maintained throughout as links in the chain of Canadian medical organization.

No resolutions were arrived at; those present as representing the Canadian Branches and other medical societies undertook to bring the matter before their respective societies, and Dr. McPhedran, the President of the Canadian Medical Association, undertook, on behalf of that body, that the suggestion made as to organization of the Canadian Medical Association, and its affiliation with the British Medical Association, should receive careful consideration.

In a subsequent interview of the Medical Secretary with Dr. McPhedran, the following points of procedure and detail were raised:

(1) That under the Charter probably much greater elasticity would be afforded to Colonial Branches in various matters, such as election of Members, alteration of Rules, and levying of local subscriptions.

(2) That in response to an application from the Cape of Good Hope, Western Province, Branch, the Organization Committee had already expressed approval of the general principle of a standing Committee of South African Branches.

(3) The difficulties which occurred to Dr. McPhedran as standing in the way of maintaining the organization of the British Medical Association in Canada throughout the contemplated reorganization of the Canadian Medical Association appeared to have reference largely to the possibility of establishing a Canadian Medical Journal as the property of the Canadian Medical Association or of the Federated Branches of the British Medical Association, as the case might be.

(4) The question of representation of the Canadian Branches in the Central Council and Representative Meetings of the Association was also considered, and the suggestion made that if, as seemed possible, an Annual Representative Meeting of Canadian Branches were organized, this body might elect Representatives for the Central Council on behalf of all the Canadian Branches, and might delegate also Representatives to attend the Annual Representative Meeting of the Association.

The Medical Secretary undertook to report these suggestions to the Organization Committee.

Charter as Affecting Colonial Branches.

In connexion with the foregoing report and communications received from other Colonial Branches, it was decided to issue a circular letter to Colonial Branches stating that the following points appeared to be those in respect of which it was desirable that special provision should be made in the Charter to give greater freedom to Colonial Branches than they at present enjoyed—

1. The desire for greater freedom in the procedure of election of members.
2. The method of alteration of rules.
3. The levying of compulsory local subscriptions.
4. The provision of some recognized Council or Committee, representative of the Branches in wider areas, as, for example, a Canadian Committee or Council, a South African Committee or Council, and an Australian Committee or Council.
5. Power to apply funds to such objects than those of the Association, as, for example, the desire of the Cape of Good Hope Branch to be enabled to take up medical defence locally, the statement of objects of the Victorian Branch, which is wider than the definition of objects of the Association;

that the Branches should be asked to consider these points and the provisions which had been considered for meeting them, and that the Colonial Branches be requested to report as to these and any other matters which they considered required attention in the preparation of the Charter at the earliest possible moment in order that their views might receive consideration from the Special Representative Meeting.

Grouping of Colonial Branches for Representation on the Council.

The Council was recommended to group the Colonial Branches for 1907-8 in the same manner as for the year 1906-7.

Irish Committee.

The Committee considered a communication from the Belfast Division, referred by the Chairman of Council to the Committee, respecting the proposed modification of the By-law relative to the Irish Committee in order to give that Committee power to co-opt members from parts of Ireland which at present are not represented thereon, and directions were given that a draft By-law should be prepared for the consideration of the Committee at its next meeting.

SCIENCE COMMITTEE.

A meeting of the Science Committee was held at the office of the Association, 429, Strand, W.C., on January 8th, when there were present: Dr. Norman Walker (Chairman) in the chair, Dr. H. Radcliffe Crocker (Treasurer), Colonel David Bruce, C.B., F.R.S., Dr. R. C. Buist, Mr. Andrew Clark, Dr. T. Arthur Helme, Dr. C. J. Martin, F.R.S., Dr. F. M. Pope, Mr. H. Betham Robinson, M.S., Dr. Cecil E. Shaw, Dr. Sinclair White.

Letters of apology for non-attendance from the Chairman of Council, Sir James Barr, M.D., and Professor J. T. J. Morrison were read.

Election of Chairman.

Dr. Norman Walker was re-elected Chairman for the ensuing year.

Library.

The Librarian reported that there had been 1,662 attendances during October, November, and December, 1906, as compared with 1,614 in the corresponding period of 1905. He also presented a list of recent additions to the Library, which included 157 *Thèses de Lyon* for 1905-6 and 68 *Thèses de Paris* for the current session. The Librarian was instructed during the rebuilding of the premises to equip the temporary reading room with these theses, the latest textbooks on various subjects, and the periodicals for the current year.

The Chairman of the Committee, the Treasurer, and Mr. Andrew Clark were appointed a subcommittee to deal with any emergency that might arise in connexion with the Library.

Royal Commission on Vivisection.

The Chairman reported that Sir Victor Horsley, F.R.S., and Dr. James Mackenzie of Burnley had consented to appear as witnesses on behalf of the Association before the Royal Commission on Vivisection.

Research Scholarship.

The Chairman reported that Dr. Herbert E. Roaf had resigned the research scholarship recently held by him in consequence of his appointment to be Assistant Lecturer and Senior Demonstrator of Physiology in the University of Liverpool.

Having considered the applications for the vacancy thus created for the research scholarship, the Committee resolved to recommend the election of Mr. T. Shirley Hele, B.A., B.Sc., M.R.C.S., L.R.C.P., who proposes to carry out researches in chemical pathology.

Inspection of the Work of Scholars and Grantees.

The Chairman reported that in accordance with the instructions of the Committee he had asked the following members to report on the work of the research scholars and recipients of grants: Professor Starling, F.R.S., for London; Sir James Barr, M.D., for Liverpool; Dr. T. Arthur Helme, for Manchester; Dr. F. R. Hill, for North of England; Professor Sims Woodhead, for Cambridge; and Dr. James Hamilton, for Scotland.

Reports were received from these gentlemen, and the thanks of the Committee were accorded to them.

IRISH COMMITTEE.

A meeting of the Irish Committee was held in the Royal College of Physicians, Kildare Street, Dublin, on January 5th, when there were present: Dr. James Craig, in the chair; Dr. R. B. Carey (Borris), Dr. J. G. Cooke (Londonderry), Dr. J. S. Darling (Lurgan), Dr. Joseph Kenny (Granard), Dr. P. G. Lee (Cork), Dr. D. J. O'Connor (Cork), Dr. J. Quirke (Piltown), Dr. Cecil Shaw (Belfast) and Professor White (Dublin), Honorary Secretary.

Letters of apology for non-attendance were read from the Chairman of Council, Sir John Byers, and Drs. Grimshaw and Walshe.

Sir John Byers.

A resolution offering the heartiest congratulations of the Committee to Sir John Byers on the distinction recently conferred upon him by the King, a distinction which the Committee recognized was richly deserved, was adopted.

Midwives (Ireland) Bill.

The Committee expressed the opinion that the county council should be the local supervising authority under the proposed Midwives (Ireland) Bill.

Public Health.

The Chairman and Dr. Darling were asked to draw up before the next meeting the various points which it would be desirable to embody in a Public Health Bill for Ireland.

Medical Inspection of School Children.

The following resolution was unanimously adopted:

That this Committee, recognizing the urgent need for the periodic inspection of school children in Ireland, request the Local Government Board to arrange for the appointment of inspectors in various districts, and specially in the larger cities, to carry out such inspection.

Poor Law.

The following resolution was unanimously adopted:

That the Irish Committee approve the report of the Vice-regal Commission on the Irish Poor Law as an able solution of the whole question on broad lines, and the Committee approve the establishment of a State medical service as being likely to be of incalculable benefit to the sick poor. The Committee hope that legislation on these lines may be promoted by the Government with as little delay as possible.

The Committee expressed the opinion that a full meeting of the Poor-law Subcommittee should be held at an early date.

Next Meeting.

It was decided to hold the next meeting in Galway on May 4th.

NAVAL AND MILITARY COMMITTEE.

The Naval and Military Committee reported their proceedings at a meeting on November 26th, 1906, when there were present: Dr. H. Langley Browne, Chairman of Council (afterwards Lieutenant-Colonel E. M. Wilson, C.B., C.M.G.) in the chair, Fleet-Surgeon E. J. Biden, R.N., Colonel David Bruce, C.B., F.R.S., Surgeon-Lieutenant-Colonel Decimus Curme, Surgeon-Colonel G. S. Elliston, V.D., Surgeon-General G. J. H. Evatt, C.B., Colonel C. H. Joubert de la Ferté, I.M.S. (retired).

Appointment of Chairman.

Lieutenant-Colonel E. M. Wilson, C.B., C.M.G., was appointed Chairman for the ensuing year.

Intimations of apology for absence were received from the President, the Chairman of Representative Meetings, and the Treasurer.

The Committee considered the replies of various Government Departments to communications addressed to them pursuant to the resolutions of the Council on July 4th, 1906,[1] and it was decided to take further action with respect to certain of these matters, the result of which will be reported in due course.

The Committee considered the question referred to them by the Council as to the eligibility for membership of certain medical practitioners in India who are not registered in the United Kingdom, and do not hold any qualification prescribed by the rules of any Indian Branch.

The Committee came to the conclusion that the practitioners in question were not eligible for election under the existing regulations of the Association, and that the attention of the Branches in India should be drawn to the subject.

[1] See Supplement to the British Medical Journal, July 14th, 1906, p. 27.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

EDINBURGH BRANCH:

Southern Division.

First Annual Dinner.—The first annual dinner of the Southern Division of the Edinburgh Branch was held on Saturday evening, January 19th, at the Carlton Hotel. There were present Dr. A. A. Matheson (Chairman), Councillor Dr. Cullen (Croupier), Drs. Norman Walker (Representative for Scotland on the General Medical Council), James, Wallace, C.M.G., Brigade Surgeon Lieutenant-Colonel A. D. Webster, Kennedy, E. Price, Dawson Turner, J. V. Paterson, Scott, Aitchison Robertson, A. Walker, Simla Paterson, G. Price, Lyon Wilson, Johnston, Morrison Milne, Burton, Salt, Cumming, Porter, Flett, Dickson, Messrs. Kris Allsopp, John Allsopp, Daish, Scott, Taylor, and Dr. Dewar (Honorary Secretary). Apologies for absence were received from Sir Robert Cranston, K.C.V.O., Sir William Gairdner, LL.D., Bailie Stevenson, Mr. Frank Cooper, K.C., Surgeon-Major Black, and Drs. Church, Craig, Lundie, Proudfoot, Darling, Boyd Jamieson, and D. G. Davidson. The loyal toasts were given by the Chair, "The Imperial Forces" being replied to by Lieutenant-Colonel Webster. The toast of "The Magistrates and Town Council of Edinburgh" was proposed in a happy speech by Dr. Dawson Turner. Councillor Cullen, Convener of the Public Health Committee, in reply, referred to the recent adoption of compulsory notification of phthisis, and said that in the administration of this particular notification the Town Council, as the local authority, would never apply the clauses of the 1897 Act to cases of this disease if the public did not wish it. The Town Council would always welcome the expressed opinion of the medical profession in these matters. "The General Medical Council" was toasted by the Secretary, and in his reply Dr. Norman Walker alluded to the important functions of that body, and animadverted strongly on the lack of interest evinced by the great body of practitioners in taking their proper share in the work of the Divisions. He thought that social functions of this kind should be held by the various Divisions from time to time, in order to stimulate a livelier interest among the members in their own affairs. The Chairman, in proposing "The Prosperity of the British Medical Association," made reference to the recent great improvement in the organization of that body, and pointed out the great power which was possessed in virtue of the representative character of the Branches and Divisions. Dr. Simla Paterson proposed the toast of "The Edinburgh Medical School," coupled with the name of Dr. Alexander James, who replied in his usual humorous manner. "Kindred Associations" was placed in the hands of Dr. Aitchison Robertson, and Mr. Wallace, in his reply, congratulated the Southern Division in organizing such a happy social function, expressing his great pleasure at being present as a guest, and that as he had enjoyed himself so much he would be only too glad to return on a future occasion. The healths of "The Chairman" and "Croupier" were proposed by Dr. G. Price and Dr. Porter respectively. The last toast of the evening—that of "The Secretary"—was proposed by Dr. Norman Walker, who referred in a very kindly way to the services rendered by that official since the Division was constituted. Dr. Dewar in a word thanked the members for the hearty way in which they had responded to the toast. Altogether a most pleasant evening was spent, the musical part of the programme being contributed by Drs. Kennedy, James, and E. Price and Messrs. Allsopp, Daish, and Scott.

METROPOLITAN COUNTIES BRANCH:

Hampstead Division.

An adjourned meeting of this Division took place on Monday, January 7th, at 41, Belsize Park, Hampstead, N.W. (by kind permission of Dr. Ford Anderson).

Confirmation of Minutes.—The minutes of the last

meeting were read and confirmed, with a correction as regards the memorandum on Provident Dispensaries, Dr. ANDERSON pointing out that this was not expected to be ready for this meeting.

Mr. ARMIT remarked on the good attendance of Hampstead men at the last special general meeting of the Association on December 21st.

Adjourned Discussion on the Poor Law.

The questions referred to Divisions in the SUPPLEMENT of December 8th, 1906, p. 307, were dealt with seriatim.

A (1). *Salaries of Poor-law Medical Officers.*

Dr. CLAUDE TAYLOR, Medical Officer of the Workhouse in Hampstead, kindly furnished exact details of the salary and extra emoluments received by him.

It was then resolved, on the proposal of Mr. ARMIT, seconded by Dr. OPPENHEIMER:

That in the Hampstead Division there is no reason to consider that the salaries of Poor-law medical officers are so inadequate as to depreciate the standard of remuneration of medical practitioners generally.

A (2). *Poor-law Medical Officers and Drugs, etc.*

Dr. CLAUDE TAYLOR said he thought the guardians ought to pay cost price to a dispenser for drugs, etc. He believed that Dr. Barter, Poor-law Medical Officer for West Hampstead, supplied his own medicines.

It was then resolved:

That the present system of requiring Poor-law medical officers to pay out of their salaries for drugs, including serums, and for surgical appliances, is unsatisfactory.

A (3). *Association of Posts of Poor-law Medical Officer and Public Vaccinator.*

Dr. FORD ANDERSON proposed and Dr. BAKEWELL seconded:

That the post of Poor-law medical officer and public vaccinator should not be systematically associated; but, if associated, the salary should not be reduced in consequence.

Dr. JAMES STEWART opposed, as he thought the two posts should be associated, and should be in the hands of the Local Government Board. Mr. ARMIT then proposed, and Mr. STEWART seconded, an amendment to Dr. Anderson's resolution as follows:

That while it appears that in the Hampstead Division such an association of offices would be inexpedient, yet this meeting realizes that it might be advantageous in other areas, and where such an association does exist there should be no reduction in salary.

The amendment was carried after full discussion, and having become the substantive resolution, the following rider was added to it as a memorandum on the motion of Mr. CUNNINGTON seconded by Dr. GLOVER:

That the office of public vaccinator should be withdrawn from the Poor Law and transferred to the public health authority.

This was carried.

A (4). *Abuse of the Poor Law.*

Mr. CUNNINGTON said that in his experience the work was thoroughly done, and there was very little abuse. Fraud occurred, but was rare.

Mr. ARMIT then proposed, and Dr. OPPENHEIMER seconded, the following resolution, which was carried:

That in the Hampstead Division there is no evidence that medical relief under the Poor Law is being granted to persons able and willing to pay for medical attendance.

A (5). *Boards of Guardians and Hospitals.*

Dr. CLAUDE TAYLOR said that in his opinion Poor-law patients should have as much freedom of entry into hospitals as other patients. The guardians in Hampstead had sent sick patients to hospitals without the knowledge of the medical officer.

Mr. ARMIT proposed and Dr. JAMES STEWART seconded:

That in the opinion of the Hampstead Division it should be proposed that some arrangement be made between the Boards of Guardians and certain hospitals for the weekly payment for cases admitted into the wards of the latter from the workhouse.

Dr. OPPENHEIMER opposed on principle. The poorest had the greatest right to gratuitous treatment.

Dr. ANDERSON moved as an amendment to Mr. Armit's resolution:

That the words "suitable payment" be substituted for "weekly payment."

This was seconded by Dr. SHARMAN. Finally, on Dr. Sharman's proposal, the amendment was made to read as follows:

(*a*) That Boards of Guardians should be encouraged to send clinically suitable Poor-law cases of illness to general hospitals.

(*b*) But that adequate payment should be made to the hospital funds for such cases.

On the motion of Dr. OPPENHEIMER, seconded by Mr. PARSONS, it was agreed to take the amendment as the substantive resolution, and deal with it in two parts.

The first part (*a*) was then put to the vote and carried *nem. con.*, while the second part (*b*) was carried, after a lively discussion, by 9 votes to 5.

During the discussion on this subject, Dr. ANDERSON said that there were 16,000 beds in the London infirmaries as against 10,000 hospital beds. There should be some arrangement whereby infirmaries could be opened to students. As things stood at present, the newly-qualified man went into practice without having seen the terminations of certain cases—for example, disseminated sclerosis, cancer, etc. Poor-law medical officers performed nearly 3,000 operations annually, and in many cases consultations were desirable but could not be secured owing to the guardians objecting to the expense.

B (1). *Administration of Infirmaries to be brought into Line with General Hospitals.*

On the proposal of Mr. HUMPHREYS, seconded by Dr. CLAUDE TAYLOR, the following resolution was put and carried:

That the sick poor in the workhouse sick wards should receive nursing treatment not less efficient than that which is now offered in well-conducted general hospitals.

A motion of Mr. PARSONS was then read relating to B (1), but discussion of it was postponed.

B (2). Discussion postponed.

B (3). Discussion postponed.

B (4) (*a*). *Feeble-minded Mothers.*

Mr. HUMPHREYS proposed, and Dr. OPPENHEIMER seconded:

That feeble-minded unmarried mothers should be detained in some suitable institution.

Carried.

B (4) (*b*) 1 and 2. Postponed.

B (5). This was discussed, but no resolution could be passed owing to the late hour.

B (6). Postponed.

B (7). Postponed.

Vote of Thanks.—The proceedings terminated with a vote of thanks to Dr. Ford Anderson for his hospitality.

STRATFORD DIVISION.

A MEETING of the Stratford Division was held in the Alexandra Hotel, High Street, Stratford, on Thursday, January 17th, at 9 p.m. Dr. E. B. HASTINGS in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Election of Central Council.—The meeting then considered a communication from the Dublin Division in reference to the election of the Council as proposed by the new Charter. After some discussion the following resolution, proposed by Dr. HAY and seconded by Dr. ROSE, was carried:

That this Division supports the resolution passed at the last Representative Meeting in reference to the election of the Council under the proposed Royal Charter.

Diagnosis of Intestinal Obstruction.—A very instructive address was given by Mr. HAROLD L. BARNARD, F.R.C.S., of the London Hospital, on the diagnosis of intestinal obstruction. He referred to numerous interesting cases which had come under his own observation. The members highly appreciated Mr. Barnard's address, and he was accorded a very hearty vote of thanks.

Bacteriological Examination of Cases of Diphtheria in School Children.—Dr. CONRAD BASAN then opened a discussion on a circular letter issued by the Poplar Medical Officer of Health to medical practitioners in his district in reference to the bacteriological examination of cases of diphtheria in school children. After several members had expressed their views of the subject the following

resolution, proposed by Dr. Rose and seconded by Dr. Cursham Corner, was carried:

That where private practitioners are asked to undertake work of preventive medicine they should receive remuneration from the public funds.

QUEENSLAND BRANCH.

The annual meeting of this Branch was held in Brisbane on December 7th, 1906. Dr. Turner, President, occupied the chair, and there was a good attendance of members.

Report of Council.—The Council's report stated that there was a membership of 147, and a credit balance in the bank of £135; and the Treasurer announced that a record had been established, every subscription due to the Branch having been received.

Presidential Address.—Dr. Turner read an inspiring address upon the Ideals of the Medical Profession.

Election of Officers.—The officers for 1907 were then announced as follows: *President*, Dr. Wilton Love; *Vice-Presidents*, Dr. L. Gibson, Dr. Turner; *Curator*, Dr. Penny; *Treasurer*, Dr. Carvosso; *Auditors*, Dr. Page, Dr. Eleanor Bourne; *Council*, Dr. Byrne, Dr. Espie Dods, Dr. McLean, Dr. Robertson; *Honorary Secretary*, Dr. Brockway.

YORKSHIRE BRANCH:
Huddersfield Division.

A meeting of this Division was held on Thursday, January 10th, at the Huddersfield Infirmary, Dr. Hall in the chair.

Confirmation of Minutes.—The minutes of the preceding meeting were confirmed.

Specimens, etc.—Mr. Porritt showed (1) an appendix found in the sac of a strangulated hernia; (2) a stomach from a case of perforating gastric ulcer; (3) a new wool specially prepared for medical use.—Mr. Rowell showed a case of fractured patella treated by wiring.

Papers.—The following papers were read:—Dr. Walker: An anomalous case of cancer of the stomach. Dr. Edwards: Notes on two cases of Caesarean section.

Taxation of Motor Cars.—Dr. Clampett brought forward the following resolution, which was passed unanimously:

The members of the Huddersfield Division of the British Medical Association feel strongly that any increased taxation on motor cars will press heavily and unfairly on the large and increasing number of medical men who use motors for their professional work, and earnestly hope that members of Parliament will assist them in obtaining exception from any such additional burden. They would desire especially to draw attention to the following points:

1. To meet the exacting requirements of medical practice cars must be substantially built, and of suitable horse-power to carry a body affording protection from the weather. To be reliable and capable of withstanding hard work over any roads in all weathers, the material and workmanship must be of the best. Thus the tax, whether based on weight, horse-power or price, will fall heavily on the medical man.
2. The use of motors by medical men is of great advantage to the public, not only especially in all cases of urgency or in times of epidemics, but under routine conditions, as the rounds are shortened, and visits can be paid at more suitable times.
3. Although the use of motors presents so many advantages that medical men are feeling more and more obliged to adopt them in preference to horses, yet no economy is effected; but, as a rule, a considerable increase in yearly expenditure results from the change. And it is already increasingly difficult for the general medical practitioner to make a living, owing, among other causes, to the greatly increased cost of medical education, the fees obtainable showing no corresponding augmentation, while the burden of taxation in general now falls heavily enough on the professional man of moderate means.
4. Medical men do not belong to the class who tend to damage the roads, and to make motoring offensive to the community. Their work is carried on in an area where they are well known, they have their reputation constantly to consider, and they cannot afford to run risks in any sense.

That copies of this resolution be sent to each member of Parliament for the district, to the Chairman of the Royal Commission, to the Joint Committee of the Automobile Club and the Motor Union, and to the local papers.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m., except on Saturdays, when they close at 2 p.m. Members can have their letters addressed to them at the office.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Border Counties Branch.—A general meeting will be held in Carlisle on February 15th, when the Medical Secretary of the Association will deliver an address on Contract Practice. All medical practitioners are invited to attend.—Francis R. Hill, Secretary, Carlisle.

Border Counties Branch: West Cumberland Division.—An ordinary meeting of the above Division will be held at Whitehaven on Thursday, February 28th, at 4 p.m. Members wishing to read papers or show cases will oblige by giving notice to the Honorary Secretary before February 21st. An agenda will be sent in due course.—John Penny, Honorary Secretary, Cockermouth.

Edinburgh Branch.—The winter meeting of the Edinburgh Branch will be held in the Royal Infirmary on Friday, February 22nd. The other Scottish Branches are invited to join in the meeting. Special clinics and demonstrations will take place during the forenoon. The clinical meeting will be held at 4 o'clock. Dinner will be served at 6 30 o'clock in the North British Station Hotel (morning dress).—A. Logan Turner, 27, Walker Street; Francis D. Boyd, 22, Manor Place, Honorary Secretaries.

Leinster Branch.—The annual meeting of the Leinster Branch will be held in the Royal College of Physicians, Dublin, on Saturday, February 23rd, at 4.30 p.m.—Arthur H. White, Honorary Secretary.

Metropolitan Counties Branch: Kensington Division.—A meeting will be held on Friday, February 1st, at 4.45 p.m., at the Marylebone Infirmary, St. Charles's Square, Notting Hill, W. Cases will be shown by Mr. J. R. Lunn and others.—Charles Buttar, Honorary Secretary.

North Wales Branch: Denbigh and Flint Division.—A meeting of this Division will be held in Wrexham, on Friday, February 15th, at 3.45 p.m.—E. D. Evans, Honorary Secretary, Bodeirian, Wrexham.

ROYAL COMMISSION ON THE POOR LAWS.

At the meeting on January 29th of the Royal Commission on the Poor Laws and Relief of Distress with reference to Poor-law Questions, Dr. J. A. Macdonald (Chairman of Representative Meetings), Dr. Langley Browne (Chairman of Council), Dr. Ford Anderson and Mr. J. Smith Whitaker (Medical Secretary) attended as witnesses on behalf of the British Medical Association; they handed in the following statement, together with copies of the Contract Practice Report, and subsequently gave evidence:

1. The British Medical Association, which includes 20,000 medical practitioners, has endeavoured in submitting its evidence to the Royal Commission to give expression to those opinions which the Association believes to be generally accepted in the medical profession.

2. The Association has circulated inquiries to all the Poor-law medical officers in England and Wales, over 3,500 in number, and a careful analysis has been made of the replies received. The evidence now submitted has been prepared after careful consideration of the information thus obtained and is to be taken as representing the conclusions of the Association based thereon, except those statements which are specified as those of the medical officers themselves.

A.—CONDITIONS OF EMPLOYMENT OF POOR-LAW MEDICAL OFFICERS.

Salaries.

3. The information obtained by the Association from Poor-law medical officers does not indicate the existence of any general grievance as regards inadequacy of ordinary remuneration, but in some districts the salaries paid to Poor-law medical officers are entirely inadequate and attention must be drawn to the absence of any uniform principle in fixing such salaries.

4. In fixing salaries more regard should be had than some local authorities give at present, to considerations affecting the amount of work to be done, such as the total population, the population per acre, or the size and shape of the district.

Special Fees for Operations and Midwifery.

5. It is desirable that local authorities and medical officers should not be allowed in any case to contract out of the Poor Law Order 177 as regards operations, or Orders 182 and 183 as regards midwifery.

6. With regard to Orders 182 and 183, the Association has evidence of a tendency to throw upon the parish doctor, either without extra payment or at the expense of the rates, duties of attendance upon patients previously under the care of midwives, for which such patients could, and should, be required themselves to pay.

Supply of Drugs and other Materials.

7. The salary of Poor-law medical officers should be made entirely independent of the supply of drugs, serums, surgical appliances, and other materials, and should be fixed in consideration of medical attendance and medical services only.

8. Drugs and other materials should be provided under separate contracts, which may be made, as circumstances may render advisable in different districts, either with the doctor himself, with chemists, or otherwise.

9. In the interests of public health it is particularly desirable that provision be made at the public expense for the supply of substances, such as antidiphtheritic serum, which are necessary for checking infectious disease.

Consultations and Special Assistance.

10. The Association considers that attention should be drawn to the fact that, in a large number of cases, medical practitioners are called in in consultation, and are not paid for such services.

11. This tends to prevent those who receive medical relief under the Poor Law from having the benefit of such special attention in exceptional cases as their condition may require.

12. It is, therefore, recommended that, in the public interest, the Poor-law authorities should in all cases pay fees for consultations and special assistance, including the administration of anæsthetics.

Recovery of Fees by Medical Officers.

13. As a matter of justice to medical officers, it is submitted that in cases in which the guardians are able to recover from the estate of persons who have received relief under the Poor Law repayment of the cost of such relief, recovery should also be made of fees to be paid to the medical officer for the attendance given by him to such persons while they were supposed to be entitled to his services under the Poor Law.

Clerical Work of Medical Officers.

14. Workhouse medical officers should not be required to do book keeping and other clerical work of kinds that could equally well be done by other persons, but such work should be carried out as far as possible by the master or his clerical staff, and the medical officer merely required to consider and initial when approved, those records which are deemed to need his supervision.

Holidays of Medical Officers.

15. The Association considers that the principle already acted upon in a few Unions should be applied generally, namely, that each Poor-law medical officer should be allowed a definite holiday every year, during which the expenses of employing a substitute should be defrayed by the Poor-law Authority, provision of a substitute during any leave of absence granted beyond such annual holiday being at the expense of the medical officer himself.

Association of the office of Public Vaccinator with that of Poor-law Medical Officer.

16. The Association considers that the appointments of Poor-law Medical Officer and Public Vaccinator should not be necessarily combined, though in many cases they may conveniently be held by the same persons; in all cases the remuneration for the two offices should be fixed independently.

Superannuation.

17. The area of the Poor-law Union is too small to afford a satisfactory unit for superannuation; the contributions to the superannuation fund throughout the country should be pooled, and the payments made from the common fund, in order that proper regard may be had to continuous service in successive districts.

18. Attention is particularly called to the hardship affecting non-resident medical officers, namely, that their appointments being made for limited periods only, although they have paid towards the superannuation fund for many years, the guardians in many cases deliberately refrain from reappointing them when near the age for superannuation in order to escape payment.

System of Appointment of Poor-law Medical Officers.

19. The Association has had under its consideration three systems of appointment of Poor-law medical officers, namely:—

(*a*) The creation of a State Medical Service consisting of whole-time officers to whom perhaps other duties in addition to that of Poor-law Medical Officer would be assigned.

(*b*) The appointment of special officers devoting as a rule only a part of their time to Poor-law work (the present system).

(*c*) Appointment of no special officers, provision being made whereby any patient receiving medical relief under the Poor Law may be attended by any local medical practitioner who has previously intimated to the guardians his willingness to undertake such work in accordance with the regulations of the service for the time being.

20. In the opinion of the Association there is no general dissatisfaction in the medical profession with the present system of appointment, but there are some members of the profession who have paid special attention to the subject who would prefer the system (*a*), and others who would prefer the system (*c*).

Non-resident District Medical Officers.

21. The present system of control by the Local Government Board of cases in which it is proposed to appoint non-resident medical officers is satisfactory in principle, but in the opinion of the Association the powers of the Local Government Board should be more frequently and more strictly exercised than at present.

B. QUESTIONS OF MEDICAL RELIEF NOT SPECIALLY AFFECTING CONDITIONS OF EMPLOYMENT OF MEDICAL OFFICERS.

Relation of Poor Law Administration to Hospitals.

22. Inquiries which have been made as to the extent to which patients are being treated at Out-patient Departments of Hospitals, who ought to receive medical relief under the Poor Law, and as to the extent to which patients are being relieved under the Poor Law, who ought to be treated as Out-patients of Hospitals, do not indicate any general prevalence of such arrangements.

23. The attendance at Out-patient Departments of General Hospitals of persons who are in receipt of relief from the Poor Law ought to be discouraged.

Assimilation of Poor-law Infirmaries to General Hospitals.

24. The provisions for the care of the sick in Poor-law Infirmaries should be assimilated to that of hospitals supported by voluntary contributions, in the following respects:—

(*a*) As to the standard of nursing, food and drugs.

(*b*) As to the provision for the performance of important operations in the institutions where possible.

(*c*) As to the use of the institutions for purposes of clinical medical instruction.

(*d*) As to the keeping of clinical records of cases.

(*e*) As to the institutions being open to reasonable public inspection.

25. Provision should be made for obtaining special medical or surgical assistance in Poor-law Infirmaries where necessary.

Amalgamation of Groups of Infirmaries.

26. It is desirable that Poor-law Infirmaries in country districts should in many cases be co-ordinated or amalgamated in order to render possible, without undue expense, the reforms suggested in recommendation 24.

27. In particular combined Infirmaries might be established for incurable cases, relieving the congestion of the Workhouses.

Provision for Cases of Infectious Disease.

28. The responsibility for dealing with cases of infectious disease should in all cases be placed upon the Sanitary Authority.

Venereal Disease.

29. Better provision than at present should be made for the care of cases of venereal disease, and all persons suffering from such diseases who obtain relief under the Poor Law should be detained until no longer infectious.

Placing Poor-law Infirmaries and General Hospitals under Common Management.

30. The Association has considered the question of bringing Poor-law Infirmaries and General Hospitals under common management. Only one method has, so far as the Association is aware, been proposed up to the present for this purpose, namely, by the municipal maintenance and control of the Hospitals which are now supported by charitable contributions. Opinion in the medical profession is at present adverse to this proposal.

Attendance in Emergencies.

31. Provision should be made to facilitate attendance by a medical officer in cases of emergency, without waiting for an order from the relieving officer.

32. It is also recommended that it should be made possible for the medical officer to obtain special assistance in cases of emergency at the expense of the Poor-law Authorities without waiting for an order from the relieving officer.

District Nurses.

33. Poor-law Authorities should subscribe to, or maintain district nurses for the poor, but all district nurses should be placed under stricter supervision than at present and should act under medical control.

C.—Questions of Poor-law Administration not Relating Specially to Medical Relief, but Considered from the Public Health Standpoint.

Constitution of the Local Poor-law Authority.

34. The replies received from Poor-law medical officers show a preponderatingly adverse opinion to the present system of administration by Boards of Guardians, as showing a lack of sufficient uniformity in administration, and a want of appreciation of those conditions which are necessary for the efficient medical service of the poor.

35. In the opinion of the Association the units of local Poor-law administration should be larger than the present Unions, although the County Council areas would not necessarily be suitable.

Relation of Local Poor-law and Sanitary Administrative Areas.

36. The preponderating opinion of Poor-law medical officers and the general opinion of the medical profession is in favour of making local Poor-law areas and areas of local Sanitary Administration coterminous.

Classification.

37. Classification of workhouse inmates in respect of personal character should be carried out wherever practicable; classes should also be made for the aged and infirm, for able-bodied males, able-bodied females, and children; and the British Medical Association has already, in giving evidence before the Royal Commission on the Feeble-minded, recommended that all cases of mental infirmity should be placed under the supervision of the Lunacy Commissioners.

Provision for Indigent Aged.

38. The opinion of Poor-law medical officers is generally in favour of provision in workhouses as best for maintaining the indigent aged under healthy conditions, and that, to facilitate such provision, married couples should not be compulsorily separated.

Provision for Children.

39. The replies both of workhouse and district Poor-law medical officers show a large preponderance of opinion in favour of the system of boarding out as the best method of making provision for children under the care of Poor-law authorities.

40. Some medical officers submit evidence of suffering and injury caused to children of vicious parents by the alleged want of power under the law at present to remove children from such care, and the Association considers that the Prevention of Cruelty to Children Acts should, if necessary, be so extended as to afford power to a magistrate, by summary process, to remove from the care of vicious parents children who are proved to be receiving injury therefrom.

Provision for Deserted Wives.

41. The Poor-law Authority should be empowered to make provision for deserted wives by out-door relief, where this appears to them most suitable.

Provision for Feeble-minded Unmarried Mothers.

42. Feeble-minded unmarried mothers should be detained in public institutions, and statutory provision should be made for such detention.

Out-door Relief.

43. Grants of Out-door Relief are, in some cases, inadequate for the maintenance in health of the person so relieved. The scale of Out-door Relief given to persons deemed suitable for such relief should be adequate, while on the other hand a more strict supervision should be exercised by the Poor-law Authority in the selection of recipients of such relief.

Methods of Dealing with the Able-bodied.

44. Upon consideration of the information which it has collected, the Association recommends that the grant of relief under the Poor Law to able-bodied persons should be discouraged by increasing the amount of work to be done, and reducing the diet.

Methods of Dealing with Incorrigibles.

45. Labour colonies should be provided for incorrigibles, statutory power being conferred on magistrates of commitment thereto.

Provision for Industrious Persons travelling in Search of Work.

46. Suitable provision should be made whereby genuine workers travelling in search of work may be relieved without being required to consort with habitual vagrants.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 7,874 births and 5,564 deaths were registered during the week ending Saturday last, January 26th. The annual rate of mortality in these towns, which had been 22·4, 20·7, and 18·1 per 1,000 in the three preceding weeks, rose last week to 18·2 per 1,000. The rates in the several towns ranged from 8·1 in Hornsey, 10·3 in Grimsby, 11·4 in Tynemouth, 11·7 in Burton on Trent, 11·9 in Handsworth (Staffs.), and 12·0 in Bournemouth to 22·2 in York, 22·4 in Oldham, 23·6 in Preston, 24·1 in Wigan, 24·3 in South Shields, 25·6 in Hull, and in Middlesbrough, 31·5 in Stockport, and 34·4 in Newport (Mon.). In London the rate of mortality was 18·0 per 1,000, while it averaged 18·2 per 1,000 in the seventy-six other large towns. The death-rate from the principal zymotic diseases in the seventy-six towns was 1·4 per 1,000, in London this death-rate was equal to 1·1 per 1,000, while among the seventy-six other large towns the rates ranged from 0·0 to 3·1 in Norwich and in Stockport, 3·2 in South Shields, 3·4 in Newport (Mon.), 3·5 in West Ham, in Walthamstow, 5·1 in Hull, and 6·1 in Middlesbrough. Measles caused a death-rate of 1·1 in Oldham, 1·3 in Gateshead, and in Aston Manor, 1·4 in West Ham, in Newport, 2·4, in Wigan, and in South Shields, and 3·0 in Hull; scarlet fever of 1·4 in Newport (Mon.); diphtheria of 1·2 in Derby, 1·3 in Norwich, 1·4 in Croydon, and 1·5 in Middlesbrough; whooping-cough of 1·3 in Norwich, 1·7 in Wednesbury, 2·0 in Middlesbrough, and 3·1 in Stockport, and 3·3 in Walthamstow; "fever" of 1·5 in Middlesbrough; and diarrhœa of 1·1 in Oldham and in Swansea. One fatal case of small-pox was registered in Hull and one in Cardiff, but none in any other of the seventy-six large towns. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,707, 3,523, and 3,405 at the end of the three preceding weeks, had further declined to 3,291 at the end of last week: 307 new cases were admitted during the week, against 309, 285, and 325 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, January 26th, 945 births and [illegible] deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 22.9, 20.8, and 20.5 per 1,000 in the three preceding weeks, further declined to 19.1 per 1,000 last week, but was 0.9 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 15.6 in Leith and 15.8 in Aberdeen to 22.0 in Edinburgh and 26.9 in Perth. The death-rate from the principal infectious diseases averaged 2.0 per 1,000 in these Scottish towns, the highest rates being recorded in Glasgow, Aberdeen, and Leith. The 307 deaths registered in Glasgow included 3 which were referred to scarlet fever, 11 to whooping-cough, 10 to diarrhoea, and [illegible] to cerebro-spinal meningitis. Two fatal cases of measles, 3 of scarlet fever, 1 of diarrhoea, and 2 of cerebro-spinal meningitis were recorded in Edinburgh; 2 of diphtheria in Dundee, 4 of whooping-cough in Aberdeen, and 2 of diarrhoea in Leith.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, January 19th, 556 births and 442 deaths were registered in six of the principal Irish towns, as against 581 births and 490 deaths in the preceding period. The annual death-rate in these towns, which had been 17.6, 24.0, and 24.6 per 1,000 in the three preceding weeks, declined to 20.5 per 1,000 in the week under notice, this figure being 2.4 per 1,000 higher than the mean annual rate for the seventy-six large English towns for the corresponding period. The figures ranged from 13.5 in Londonderry and 16.4 in Limerick to 24.7 in Cork and 27.5 in Dublin. The zymotic death-rate in the same six Irish towns averaged 0.9 per 1,000, or 0.5 per 1,000 less than during the preceding period, the highest figure—1.9—being recorded in Waterford, while in Londonderry and Limerick no deaths were registered under this heading.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—FRANCIS H. A. CLAYTON, M.D., Staff Surgeon, and HERBERT L. [illegible] M.D., Surgeon, to the *Hyacinth*, on completing, respectively, WILLIAM H. DAW, Staff Surgeon, to the *Vindictive*, on [illegible] PERCY H. BOYDEN, M.D., and HARRY SOUTER, Staff Surgeons, to the *President*, additional, for three months' course at West London Hospital, January 21st; JOHN VERDON, Surgeon, to the *Victorious*, February 7th; ALFRED H. JEREMY, Staff Surgeon, to the *Fox*, temporary, on recommissioning, January 24th.

ROYAL ARMY MEDICAL CORPS.

THE following were the successful candidates for commissions in the Royal Army Medical Corps at the recent examination in London, for which seventy-eight candidates entered.

Name	Medical School	Qualifications.	Marks.
Beaman, W. K.	Charing Cross Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	612
[illegible] C.	St. George's Hospital	B.A.Cantab., M.R.C.S.Eng., L.R.C.P.Lond.	580
Fraser, A. D.	Marischal College, Aberdeen	M.B., B.Ch.Aberd.	575
[illegible] M. F.	University of Dublin	B.A., M.B., B.Ch.Dub.	565
Turner, F. T.	King's College Hospital	M.R.C.S.Eng., L.R.C.P.Loud.	[illegible]
Fortescue, A. I.	University of Aberdeen	M.B., B.C.E. Aberd.	[illegible]
[illegible] H. G.	Guy's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	[illegible]
[illegible] L.	St. Thomas's Hospital	B.A.Cantab., M.R.C.S. Eng., L.R.C.P.Lond.	[illegible]
Field, S. ...	[illegible] Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	[illegible]
O'Connor, R. D. ...	St. Bartholomew's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	[illegible]
Mackenzie, D. F. ...	[illegible]	M.B., B.Ch.Edin., D.T.M., Liverpool	[illegible]
Boyd, J. E. M. ...	[illegible] Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	[illegible]
[illegible]	Guy's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	[illegible]
Middleton, E. M.	St. Thomas's Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	516
McEwen, O. R. ...	[illegible] Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	510
Gurley, J. H.	[illegible] Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	[illegible]
Chapman, F. H. M.	[illegible]	M.R.C.S.Eng., L.R.C.P.Lond.	[illegible]
Elliott, A. C.	[illegible]	B.A., M.B., B.Ch.Dub.	[illegible]
Longridge, J. du P.	[illegible]	M.B., B.Ch.Dub., M.R.C.S.Eng., L.R.C.P.Lond.	[illegible]
[illegible] R. F.	[illegible]	M.B., B.Ch., B.A.O. Dub., L.R.C.P. and S.Irel.	[illegible]
Perry, H. M. J. ...	[illegible] Cork	L.R.C.P. and S.Irel.	[illegible]
[illegible]	[illegible] Cork	M.B., B.Ch., B.A.O.	[illegible]
Wilson, M. O. ...	[illegible]	M.B., B.Ch., R.U.I.	493
[illegible] T. H.	University of [illegible]	M.B., B.Ch. Edin.	[illegible]
[illegible] E. A.	[illegible]	L.R.C.P. and S.Irel.	[illegible]
Rudkin, G. F. ...	[illegible]	M.R.C.S.Eng., L.R.C.P.Lond.	[illegible]
Carruthers, V. T.	[illegible]	M.B., B.Ch. Edin.	[illegible]
[illegible]	[illegible] Hospital	M.R.C.S.Eng., L.R.C.P.Lond.	[illegible]
[illegible]	[illegible]	B.A., M.B., B.Ch.Dub.	479

INDIAN MEDICAL SERVICE.

LIEUTENANTS to be Captains, dated August 31st, 1906: R. KELSALL, M.B., J. H. BURGESS, M.B., F.R.C.S., C. H. BRODRIBB, M.B., J. McC. A. MACMILLAN, M.B., C. A. GILL, W. E. J. TUOHY, T. F. OWENS, R. F. STEEL, M.B., G. F. I. HARKNESS, A. C. INGRAM, M.B., G. W. MACHONACHIE, M.B., E. W. C. BRADFIELD, M.B., A. W. M. HARVEY, M. B., C. I. BRIERLEY, J. B. D. HUNTER, M.B., and E. T. HARRIS. This is in substitution for the notification regarding the promotion of these officers in the *London Gazette* of November 15th, 1906.

Major H. E. DRAKE-BROCKMAN, Bengal, is appointed to officiate as Senior Surgeon and *ex officio* Sanitary Commissioner with the Government of Mysore from November 25th, 1906.

Lieutenant-Colonel G. J. H. BELL, M.B., Bengal, is appointed to officiate as Inspector-General of Prisons, Burmah, vice Lieutenant-Colonel E. P. FRENCHMAN, Madras, who has been granted leave for eighteen months.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT-COLONELS G. ENGLAND and J. W. HODGSON, M.D., having resigned their commissions in the Volunteers, cease to belong to the Army Medical Reserve.

IMPERIAL YEOMANRY.

SURGEON-LIEUTENANT H. A. AHRENS, Hampshire (Carabiniers), to be Surgeon-Captain, November 28th, 1906.

Surgeon-Lieutenant H. CONNOP, Montgomeryshire Regiment, resigns his commission, December 1st, 1906.

VOLUNTEER RIFLES.

THE announcement of the resignation of his commission by Captain E. M. GRIFFITH, 3rd Volunteer Battalion the South Wales Borderers, and of his appointment to a Surgeon Lieutenancy, which appeared in the *London Gazette* of November 13th, 1906, is cancelled.

Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel W. GANDY, 2nd Volunteer Battalion the East Surrey Regiment, is borne as supernumerary whilst holding the appointment of Brigade Surgeon Lieutenant-Colonel, Senior Medical Officer East Surrey Volunteer Infantry Brigade, June 1st, 1906.

Surgeon-Lieutenant J. SEARSON, 3rd Volunteer Battalion the Royal Fusiliers (City of London Regiment), resigns his commission, January 1st.

WILLIAM J. CAIE to be Surgeon-Lieutenant in the 2nd Volunteer Battalion the Suffolk Regiment, December 15th, 1906.

Surgeon Lieutenant R. V. PRYCE, 1st Volunteer Battalion the Royal Sussex Regiment, resigns his commission, January 1st.

Surgeon-Lieutenant-Colonel A. MACPHEE, M.D., 5th (Glasgow Highland) Volunteer Battalion the Highland Light Infantry, is granted the honorary rank of Surgeon-Colonel, December 28th, 1906: He resigns his commission, retaining his rank and uniform, December 29th, 1906.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON CAPTAIN K. B. PUGAYES, M.B., 1st Edinburgh (City), resigns his commission, December 21st, 1906.

Surgeon-Lieutenant-Colonel C. ARROL, M.D., 1st Kent, is granted the honorary rank of Surgeon-Colonel, January 1st.

ROYAL ENGINEERS (VOLUNTEERS).

SURGEON LIEUTENANT L. A. COOK, 2nd Lanarkshire, resigns his commission, December 13th, 1906.

Surgeon-Captain C. [illegible] WILLEY, M.D., 1st Sheffield, York, hire (West Riding), [illegible] the honorary rank of Surgeon-Lieutenant-Colonel, December 29th, 1906. He resigns his commission, retaining his rank and uniform, December 31st, 1906.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

SURGEON-MAJOR W. SIDEBOTHAM, D.S.O., the 5th Volunteer Battalion the Cheshire Regiment, to be Major, Cheshire Bearer Company, December 1st, 1906.

[illegible] A. [illegible] to be Lieutenant in the East Surrey Bearer Company, December 15th, 1906.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ARGYLL DISTRICT ASYLUM, Lochgilphead. Assistant Medical Officer. Salary at the rate of £160 per annum.

BANBURY HORTON INFIRMARY. House Surgeon. Salary, £80 per annum.

BATH ROYAL UNITED HOSPITAL. Resident Medical Officer. Salary, £100 per annum.

BIRMINGHAM QUEEN'S HOSPITAL. Honorary Physician.

BRISTOL EYE HOSPITAL. House Surgeon. Salary, £80 per annum.

CHELSEA, BROMPTON, AND BELGRAVE PROVIDENT DISPENSARY. Manor Street, Chelsea. Visiting Medical Officer.

DUNDEE MATERNITY HOSPITAL. Non-Resident Obstetric Assistant. Salary, £30 per annum.

GLASGOW DISTRICT ASYLUM, Gartloch. Resident Assistant Medical Officer. Salary, £150 per annum.

GLOUCESTER GENERAL INFIRMARY AND EYE INSTITUTION. [illegible]

HAMPSTEAD GENERAL HOSPITAL. Resident Medical Officer. Salary at the rate of £80 per annum.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL. Assistant House Surgeon. Honorarium, £30 for six months.

LONDON LOCK HOSPITAL. Surgeon to out-patients.

MANCHESTER CORPORATION. Fourth Medical Assistant at the Monsall Fever Hospital. Salary, £130 per annum.

MANCHESTER ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN. House Surgeon to the Clifford Street Branch. Honorarium, £50 for six months.

MIDDLESEX, KING EDWARD VII SANATORIUM. Junior Assistant Medical Officer. Salary, £100 per annum.

NEWCASTLE-UPON-TYNE AND NORTHUMBERLAND SANATORIUM FOR CONSUMPTION, Barrasford-on-Tyne.—Resident Medical Officer, male. Salary £180, rising to £200 per annum.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—Honorary Anaesthetist.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £50 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Resident Medical Officer. Salary at the rate of £120 per annum.

ST. BARTHOLOMEW'S HOSPITAL, E.C.—Surgeon and Assistant Surgeon to the Throat Department.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Honorarium, £31 for six months.

STROUD GENERAL HOSPITAL. House-Surgeon. Salary, £100 per annum.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Resident Medical Officer. Salary, £100 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Surgeon.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies in the office of Certifying Factory Surgeons at Malton, co. York, and East Linton, co. Haddington.

APPOINTMENTS.

ANDERSON, Miss C. E., M.B., Ch.B.Aberd., Resident Assistant Medical Officer of the Sheffield Union Hospital.

BIET, A. C., M.R.C.S.Eng., L.R.C.P.Lond., Certifying Factory Surgeon for the Wantage District, co. Berks.

COPLANS, Myer, M.D.Lond. (State Medicine), D.P.H.Camb., Demonstrator of Bacteriology, Faculty of Medicine, University of Leeds.

ELDER, Douglas, M.B., Ch.B Liverpool, Pathologist to the King Edward VII Sanatorium, Midhurst, Sussex.

HOSFORD, J. Stroud, F.R.C.S.Edin., Honorary Assistant Surgeon to the Royal Eye Hospital, Southwark, S.E.

M'KENZIE, Dan, M.D.Glasg., C.M., Assistant Surgeon to the Central London Throat and Ear Hospital.

LAWSON, W. W. J., M.B., Ch.B.Aberd., District Medical Officer of the Worksop Union.

PENNY, John, D.Sc. (Public Health), M.B., F.R.S.E., Medical Officer of Health to the Cockermouth Urban and Rural District Councils, vice John Robertson, M.D.Edin., resigned.

POLLARD, G. S., L.R.C.P.Edin., M.R.C.S., Certifying Factory Surgeon for the Midsomer Norton District, co. Somerset.

ROBINSON, H. Betham, M.S.Lond., F.R.C.S., Surgeon to St. Thomas's Hospital.

ROSS, S. J., M.D., M.Ch.Vict., Certifying Factory Surgeon for the Bedford District, co. Bedford.

SANDFORD, G. C., M.D.Edin., Medical Officer of the Devonport Parish Workhouse.

STUART, Hackworth, M.D.Lond., D.P.H.Cantab., F.R.C.S.E., Medical Officer to the Staffordshire County Industrial School, Warrington, Stoke-on-Trent.

WOOD, W. T., L.R.C.P. and S.Edin., L.F.P.S.Glas., District Medical Officer of the Worksop Union.

LEEDS GENERAL INFIRMARY.—The following appointments were made on January 25th:

House-Physician to Dr. Griffith: Mr. J. B. F. Wilson, M.R.C.S., L.R.C.P.

House-Surgeon to Mr. Ward: Mr. M. G. L. Walker, M.B., Ch.B.Leeds.

House-Surgeon to Mr. Kaye: Mr. F. G. Dobson, M.B., Ch.B.Leeds.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

ELLIS.—On January 23rd, 1907, at 208, London Road, Leicester, the wife of L. Erasmus Ellis, M.D., of a son.

HOAR.—On January 7th, at Bolarum, Deccan, India, the wife of Lieutenant J. E. Hoar, R.A.M.C., of a daughter.

MARRIAGE.

HEDLEY—HALLIDAY.—On January 12th, at St. Mary's, Harrow, by the Rev. F. Wayland Joyce, assisted by the Rev. R. Howel Brown, Vicar of Enfield, Dr. John Prescott Hedley, son of Dr. and Mrs. Hedley, Middlesbrough, to Miss Kathleen Halliday, daughter of Mr. and Mrs. James Halliday, Fishers, Harrow. At home, 11, John Street, Mayfair, W., March 12th to 17th, 1907.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 9 p.m.—First Lettsomian Lecture for 1907, by Dr. Charles E. Beevor, on the Diagnosis and Localization of Cerebral Tumours.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Erasmus Wilson Lecture by Mr. W. Evans, F.R.C.S.: Leucoderma and Analogous Pigmentary Changes in the Skin.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON, Lister Institute, Chelsea, 5 p.m., Meeting.

WEDNESDAY.

OBSTETRICAL SOCIETY OF LONDON, 20 Hanover Square, W., 8 p.m.—Annual Meeting. The following specimens will be shown:—Mr. J. Bland-Sutton: Cancer of the Body of the Uterus removed by Vaginal Hysterectomy from a patient aged 34 years. Mrs. Boyd: (1) Pregnancy in Fibroid Uterus—one horn. (2) Adeno-carcinoma of the Ovary. Mr. Doran (for the late Dr. G. Bagot Ferguson): Chorion-endothelioma of Uterus; Intraperitoneal Haemorrhage. Hysterectomy. Death. Dr. Tate: (1) Case of Extrauterine and Intrauterine Pregnancy: (2) Suppuration in Fibroid Tumour of Uterus following Labour. The President (Dr. Dakin): Annual Address.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Erasmus Wilson Lecture by Mr. R. C. Elmslie, F.R.C.S.: Injury and Deformity of the Epiphysis of the Head of the Femur, Coxa Vara.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Tottenham Hospital, N., 4 p.m. Discussion: The Sequelae of Influenza, to be opened by Dr. Murray Leslie.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 p.m.—The following papers will be read:—Dr. Francis Hawkins: A Case of Typhoid Fever, with Acute Pneumonia, Pericarditis, and Haemorrhagic Pleural Effusion. Mr. J. R. Lunn and Dr. Gordon Holmes: Clinical and *Post-mortem* Notes of a Case of General Paralysis of the Insane, in a Boy. Dr. Morley Fletcher and Mr. Betham Robinson: Further Report on a Case of Idiopathic Dilatation of the Colon.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Erasmus Wilson Lecture by Mr. K. W. Goadby: The Etiology and Pathology of Pyorrhoea Alveolaris: Riggs' Disease.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Wednesday, 5 p.m.: Pharynx.

CHARING CROSS HOSPITAL, W.C.—Tuesday, 4 p.m.: Electrical. Thursday, 4 p.m.: Medical.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m.: Cerebellar Tumours.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—Clinics: Monday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Throat, Nose, and Ear, 4 p.m. Tuesday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Skin, 4 p.m. Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30. Out-patient Demonstrations: Medical and Surgical, 10 a.m. daily; Ears and Throats, noon, Monday and Thursday; Eyes, 11 a.m., Wednesday and Saturday; Skin, noon, Tuesday and Friday. Special Lectures: Tuesday, 3.15 p.m., Some Injuries about the Elbow; Friday, 2.15 p.m., Thoracic Aneurysm.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures at 5.15 p.m. each day will be given as follows: Monday, Neurasthenia—a further criticism. Tuesday, Physiological Appearances of the Fundus Oculi. Wednesday, Constipation in Infancy and Childhood. Thursday, Some New Ideas on the Old Subject of Indigestion.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Epilepsy. Friday, 3.30 p.m.: Optic Nerve Changes in Nervous Diseases.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the arrangements for next week: Monday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out-patient, Throat, Nose, and Ear Clinics; *x*-ray Demonstration. Tuesday, 10.30 a.m.: Medical Out-patient Clinic. 2.30 p.m.: Surgical Operations; Surgical and Gynaecological Out-patient Clinics. Wednesday, 2.30 p.m.: Dermatological, Ophthalmological, and Medical Out-patient Clinics. 4.30 p.m.: Lecture, Ocular Headaches. Thursday, 2.30 p.m.: Gynaecological Operations; Medical and Surgical Out-patient Clinics. 3 p.m.: Medical In-patient Clinic. Friday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out-patient Clinic; Surgical Operations; Ophthalmological Clinic. 3 p.m.: Medical In-patient Clinic.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, Hammersmith Road, W.—The following are the arrangements for next week: Daily: 2 p.m., Medical and Surgical Clinics; 2.30 p.m., Operations and *X* Rays. Monday and Thursday, 2.30 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological. 2.30 p.m.: Diseases of the Skin. Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Wednesday, 10 a.m.: Diseases of Children. Lectures—Monday, 12 noon: Pathological Demonstration. Monday, 5 p.m.: Clinical. Tuesday: Clinical. Wednesday: Practical Medicine. Thursday: Practical Surgery. Friday: Cases of Skin Disease.

BOOKS, ETC., RECEIVED.

Abhandlungen zur Geschichte der Medizin. Herausgegeben von Geh. Medizinalrat Professor Dr. H. Magnus. Heft xviii. Geschichte der Pestepidemien in Russland von Dr. med. F. Dörbeck. Breslau: J. U. Kern. 1906. M.6.

Surgery: its Principles and Practice. By various authors. Edited by W. W. Keen, M.D., LL.D. Vol. I. Philadelphia and London: W. B. Saunders and Co. 1906. 30s.

L'Arthritisme par Suralimentation. Par le Dr. L. Pascault. Paris: A. Maloine. 1907. F. 4.

The Chemist's Annual. 1907. Edited by J. Humphrey. London: The "Pharmaceutical Journal" Office. 1907. 7s. 6d.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
FEBRUARY.	
1 FRIDAY ...	KENSINGTON DIVISION, *Metropolitan Counties Branch*, Marylebone Infirmary, St. Charles Square, Notting Hill, W., 4.45 p.m.
2 SATURDAY ...	
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	
6 WEDNESDAY	LONDON: Naval and Military Committee, 4.30 p.m.
7 THURSDAY...	WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
8 FRIDAY ...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch*.
9 SATURDAY ...	
10 Sunday ...	
11 MONDAY ...	LONDON: Ethical Subcommittee, 2 p.m.
12 TUESDAY ...	LONDON: Organization Committee, 11 a.m.
13 WEDNESDAY	
14 THURSDAY...	
15 FRIDAY ...	BORDER COUNTIES BRANCH, Carlisle. DENBIGH AND FLINT DIVISION, *North Wales Branch*, Wrexham, 3.45 p.m.
16 SATURDAY ...	
17 Sunday ...	
18 MONDAY ...	LONDON: Premises Committee, 2.30 p.m.
19 TUESDAY ...	CITY DIVISION, *Metropolitan Counties Branch*, Great Eastern Hotel, E.C., 4 p.m.
20 WEDNESDAY	
21 THURSDAY...	
22 FRIDAY ...	EDINBURGH BRANCH, Royal Infirmary, Clinics and Demonstrations during the forenoon; Clinical Meeting, 4 p.m.; Dinner, North British Station Hotel, 6.30 p.m.
23 SATURDAY...	LEINSTER BRANCH, Annual Meeting, Royal College of Physicians, Dublin, 4.30 p.m.
24 Sunday ...	
25 MONDAY ...	
26 TUESDAY ...	
27 WEDNESDAY	BATH AND BRISTOL BRANCH, Bath.
28 THURSDAY...	WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Balham (Hotel), 8.45 p.m. WEST CUMBERLAND DIVISION, *Border Counties Branch*, Whitehaven, 4 p.m.
MARCH.	
1 FRIDAY ...	
2 SATURDAY ...	
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	
6 WEDNESDAY	LONDON: South Eastern Branch Council, 3.15 p.m.
7 THURSDAY...	
8 FRIDAY ...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch*.
9 SATURDAY ...	
10 Sunday ...	
11 MONDAY ...	
12 TUESDAY ...	
13 WEDNESDAY	
14 THURSDAY...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who has registered or possesses such medical qualifications as shall, subject to any dispensation as prescribed by the Rules of the said Branch, entitle him to be a Member of the Association. The proposal and election of Members shall from time to time be determined by the Rules in accordance with the By-Laws. Every Member who is not one of the original Members or a subsequently elected Member shall between a Member and shall be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing addressed to the Association, and shall by such application declare that he will abide by the Regulations and Bye-laws of the Association and the Rules of such Division and Branch as he may at any time belong and to pay his subscriptions for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Forms of such proposal papers shall be sent by the Branch Secretary or the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, or £1 12s. 0d. for abroad.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 9TH, 1907.

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Reports of Standing Committees.

CENTRAL ETHICAL COMMITTEE.

AT the meeting of the Council on January 23rd the Central Ethical Committee reported its proceedings at a meeting held on January 11th, 1907, when there were present: Mr. R. H. KINSEY in the chair; Dr. J. Ford Anderson, Mr. H. W. Armit, Dr. A. G. Bateman, Mr. G. H. Broadbent, Dr. Bruce Goff, Dr. R. L. Langdon-Down, Dr. E. J. Maclean, Mr. M. A. Messiter, Mr. W. E. Hempson, Solicitor to the Association, also attended, to advise the Committee. Apologies for absence were intimated from the President, the Chairman of Representative Meetings, the Chairman of Council, and Mr. W. D. Spanton.

VISIT OF MEDICAL SECRETARY.

The Committee approved the Chairman's authorization of the Medical Secretary's attendance at a Joint Committee meeting of the Chelsea, Richmond, and Wandsworth Divisions to consider questions of ethical procedure arising in connexion with a hospital dispute.

RULES.

The Committee recommended the Council to approve ethical rules submitted by the Birmingham Central Division and the Barnsley Division. The consideration of rules submitted by the Auckland Division of the New Zealand Branch and the Victoria Branch was postponed to the next meeting, with the view of a report by the Subcommittee thereon.

REPORTS OF ETHICAL SUBCOMMITTEE.

The Committee received the reports of meetings of the Ethical Subcommittee held on November 12th and December 17th, 1906, dealing with the following matters:

Proposed Modification of Rule "Z."

The Subcommittee reported upon their consideration by instruction of the desirability of so modifying Rule "Z" as to permit of the issue of notices, of the kind contemplated by the rule, to officers of other Divisions or Branches.

The Subcommittee considered it desirable that provision should be made for the issue of such notices subject to the sanction of the Central Ethical Committee being obtained in each instance of such issue.

Having consulted the Solicitor as to the form which the necessary modification of the rule should take, the Subcommittee submitted the following draft for the consideration of the Committee:

That the following paragraph, to be called (*b*), be added to the Rule, the present Rule becoming part (*a*):

(*b*) "In any case in which the Division shall, at the time of, or subsequently to, the adoption of a resolution of the nature contemplated by paragraph (*a*) of this Rule, have also resolved that in the opinion of the Division it is desirable that such resolution shall be brought officially to the notice of any specified Division or Branch of the Association, it shall be the duty of the Executive Committee of the Division to submit to the Central Ethical Committee a statement of this fact and of the reasons for which such notification is desired, and subject to the approval of the said Ethical Committee to cause a copy of the said resolution to be transmitted by the Honorary Secretary of the Division to the Honorary Secretary of the Division or Branch so specified."

The Subcommittee further reported that they had considered the difficulty that the new paragraph (*b*), as submitted, could be applied not only to cases in which it should be desired by a Division or Branch to circulate to other Divisions or Branches information concerning a practitioner who was at the time resident in the area of the Division or Branch circulating the notice, but also to cases in which the practitioner concerned was not being so resident.

The Subcommittee considered that circulation in the second instance should only be permitted in exceptional cases, if at all, but did not think it desirable to attempt to make this distinction by the wording of the rule itself but by standing Order of the Committee.

The Subcommittee, therefore, recommended the adoption of the following Standing Order of the Committee:

That the Secretary be authorized, after conference with the Solicitor, to sanction the issue by Divisions and Branches of notices under Rule "Z" in cases in which he and the Solicitor are satisfied that the procedure has been regular and that this authority extend but to cases of issue (1) under paragraph (*a*) of Rule "Z," (2) to cases under paragraph (*b*) in which the practitioner concerned is, at the time of issue of such notice, resident in the area of the Division issuing the same.

That in all cases in which a Division or Branch desires to issue a notice under the Rule to any other Division and Branch concerning a practitioner who is not resident in the area of the Division or Branch issuing the notice, the matter shall be reserved for the consideration of the full Committee.

The Subcommittee also recommended that the attention of

Honorary Secretaries of Divisions should be drawn to the importance of issuing notices under Rule "Z" in sealed envelopes.

The Committee, adopting the report of the Subcommittee, recommended the Council to approve the proposed amendment of the Model Rule "Z," and adopted the modified Standing Order also proposed.

Penal Cases.

With respect to the authority given to bring before the General Medical Council cases of conduct alleged to be infamous in a professional respect, the Subcommittee reported that no case had required such action.

A request to the Committee to assist in bringing before the General Medical Council the objections to the restoration to the *Register* of a medical practitioner whose name was recently removed therefrom on the ground of canvassing had been considered. Inasmuch as the Association was not in a position to appear as complainant at the time when the name was struck off, the Subcommittee deemed it inadvisable for action now to be taken by the Association, although the recent decision of the Representative Meeting made such action possible.

Index of Ethical Cases.

The Committee received the report of the Subcommittee as to progress made in the preparation of the Index of Ethical Cases ordered by the Representative Meeting, and continued the instruction.

Signed Medical Articles and Lay Periodicals.

The Committee approved the recommendation of the Subcommittee that a collection of illustrative cases should be made preparatory to a pronouncement on the general question of publication of signed articles by medical practitioners dealing with medical subjects in lay periodicals.

Establishment of a So-called Hospital.

The Subcommittee reported investigation of a complaint as to advertisement of a so called "Hospital," primarily referred to a Division for inquiry.

The Division concerned having failed to obtain a reply, the Subcommittee applied for and received a full statement of the history and constitution of the "Hospital," and after full consideration found that the management of the institution and the principles on which it was conducted were highly undesirable, and decided that it should be closed without delay.

The Subcommittee also considered that the description of himself by the respondent and the notice of the institution in the list of hospitals in the *Medical Directory* were professionally improper.

The Committee confirmed these findings of the Subcommittee, and, in reply to the respondent's subsequent question as to the propriety of his continuing to hold the premises for the purpose of private practice, declared that it only expressed opinions on matters of fact of which evidence had actually been brought before it.

The Subcommittee further reported that the difficulty in the case had arisen partly from the ambiguity of the term "Hospital," and recommended that a special report be made to the Representative Meeting on the subject, proposing a definition of the term suitable for adoption by the Association. The Committee adopted the recommendation and gave directions for a report to be prepared for consideration at the next meeting.

Election to a Hospital Staff.

In a case of complaint as to the alleged unfair action of a Hospital Selection Committee, the Committee confirmed the opinion of the Subcommittee that, inasmuch as the complaint referred to the action, not only of the medical, but also of the non-medical members of the Selection Committee, it could not be dealt with as a matter of professional ethics.

The Use of a Practitioner's Name in Advertisements.

The question was referred to the Medico-Political Committee of the possibility of action for the assistance of a medical practitioner whose name had been advertised by a tradesman without his authority in an objectionable manner, the tradesman persisting in continuing the advertisement, notwithstanding the strong objection of the medical man.

Medical Practitioners and Medical Aid Societies.

A complaint as to the association of a medical practitioner with a medical aid society was referred to the Contract Practice Subcommittee for investigation, as the point raised appeared to be primarily one of professional policy rather than of ethics.

Professional Misconduct and the Apothecaries' Society.

The Committee approved the action of the Subcommittee in requesting the New Zealand Branch of the Association to assist the Apothecaries' Society in the investigation of a complaint of professional misconduct which had been brought against a licentiate of that Society practising in New Zealand.

Sickness and Accident Insurance Medical Officership.

An inquirer for advice as to accepting the local medical officership of a sickness and accidents insurance company was informed that it would be his duty (*a*) to secure whenever possible the presence of the ordinary medical attendant at the examination of any patient whom it might be his duty to examine for the company, and (*b*) to make clear to the company that his reply to the following question contained in the official form—namely, "In your opinion, is the claimant receiving proper treatment to hasten recovery?"—would not include any expression of opinion as to the treatment which the ordinary medical attendant was pursuing. Subject to the observance of these conditions, there would appear no objection to the appointment.

Matters under Consideration.

The action of the Subcommittee was approved in a number of other cases reported, which were not ripe for decision.

Communications Ignored.

In view of cases in which members of the Association had ignored communications addressed to them on behalf of the Central Ethical Committee, it was decided to consider, at the next meeting of the Committee, the subject of procedure in such cases.

Friendly Society Dispute.

The Committee approved the advice given by the Chairman in a case, in which an immediate answer was desired, respecting a friendly society dispute, wherein an attempt at local medical union had broken down. The advice given by the Chairman was approved—namely, that the local practitioners concerned ought to have arrived at a definite agreement among themselves, confirmed by the Division, or should have referred the subject for decision by the Division, before any of them took any action as regards increase of rates of remuneration, which the support of all local practitioners would be necessary to make effective.

Expulsion of a Member.

The Committee held an inquiry under the Regulations in a case in which the Council of a Branch proposed the expulsion of a member on the grounds of certain charges brought by the Division of which he was a member, to the effect that he had accepted an appointment in defiance of resolutions of the Division which under the Rules were binding upon him. The member did not avail himself of the invitation of the Committee to be present, but sent a written statement. The Honorary Secretaries of the Division and Branch concerned attended and gave evidence. The Committee directed the preparation of a full report to the Council of the facts elicited by the inquiry and recommended that the member be expelled.

Poor-law Medical Officer Taking over Cases from other Practitioners.

A Poor-law medical officer inquired as to his duty in regard to cases in which he might receive orders to attend patients whom he found to be already under the care of other practitioners, and was advised that in such cases he ought to observe the ordinary ethical rule, by himself communicating with the practioner previously in attendance, and inquiring as to the circumstances in which the change had been made, and as to any information which the former attendant might think it desirable in the interest of the patient to communicate, but that, as a Poor-law medical officer he must give the patient such immediate attention as might be required.

Circulars Regarding Friendly Societies.

In a case of inquiry as to whether a medical practitioner accepting an appointment newly created in connexion with an existing friendly society, concerning which circulars were being issued to present members of the society, would incur any risk of condemnation by the General Medical Council, the reply given was that the Committee did not consider that the condemnation of canvassing by the General Medical Council would be held to apply to cases in which circulars were issued only to the present members of the society offering the appointment. If, however, the inquirer asked the question for his own guidance, it was pointed out that, apart from any question of condemnation by the General Medical Council, it was his duty as a member of the profession to communicate with the Division, and take steps to ascertain the opinion of local practitioners as to the desirability of the appointment, before he became a candidate.

Scale of Minimum Fees.

The Committee considered an intimation received from a Division that at meetings of all local practitioners convened in various parts of the Division area a scale of fees for private practice had been adopted, and that the fact was reported to the Central Ethical Committee in view of possible ethical questions which might arise in the future in connexion therewith. The Committee decided to inform the Division that no ethical proceedings could be taken with respect to a member for not conforming to a resolution of the kind unless a Rule of the Division had previously been passed and approved by the Central Council, whereby such resolutions were made binding upon the members.

Withdrawal of Chairman of Council from the Committee.

A communication was received and noted from the Chairman of Council to the effect that being now a member of the General Medical Council, he did not propose to take any part henceforth in the work of the Central Ethical Committee, as this might involve the consideration of cases which might later come before the General Medical Council.

PUBLIC HEALTH COMMITTEE.

The Public Health Committee reported to the Council on January 23rd its proceedings at a meeting held on Tuesday, January 8th, when there were present: Mr. C. H. Watts Parkinson in the chair; Dr. H. Langley Browne (Chairman of Council), Dr. Edgar Barnes, Dr. D. Goyder, Dr. J. Groves, Mr. Herbert Jones, Dr. F. C. Martley, Dr. T. G. Nasmyth. Apologies for absence were intimated from the Chairman of Representative Meetings and the Treasurer.

Poor-law and Public Health Appointments.

The Medical Secretary reported on action taken respecting Poor-law and public health appointments as follows:

(*a*) *Lutterworth.*

The Leicester Division, supported by the Association, took action with regard to the attempt of the guardians to take advantage of the resignation of the medical officer of one of the districts greatly to reduce the salary attached to the appointment. His successor in private practice—the only resident practitioner—having refused to accept the reduced salary, the guardians advertised for a non-resident practitioner to take the post. Representations were made on behalf of the Association to the Local Government Board, urging that the appointment should not be sanctioned, and pointing out that the house of a non-resident practitioner whose appointment had been suggested was ten miles from some parts of the district. The matter was still unsettled.

(*b*) *Market Harborough.*

The Market Harborough guardians having attempted to reduce the salary attached to a district appointment, the Leicester Division took action in the matter and applied to the Central Office for support by a warning notice in the Journal, which was inserted. There were no applicants for the vacancy at the reduced salary, and the medical officer was appointed at the old rate.

(*c*) *Halifax.*

The Halifax guardians advertised a vacancy for a female assistant medical officer at £100 a year to undertake duties previously discharged by a male assistant medical officer at a salary of £140. The Secretary of the London School of Medicine for Women having drawn the attention of the Association to the matter, the Halifax Division intervened, with the result that the candidates to the appointment withdrew their applications. In a communication addressed by the Medical Secretary to the Clerk of the Halifax Guardians it was stated that the British Medical Association could not concur in any differentiation of salaries resting on grounds merely of sex. The matter was still under consideration.

(*d*) *Coventry.*

The Committee received the report of the difficulties which had arisen, and action that had been taken, in connexion with the Coventry Provident Dispensary dispute as regards the position of the Honorary Secretary of the Division, who was Medical Officer of Health for Coventry.[1] Representations were made on behalf of the Association to the Local Government Board in support of the position of the Medical Officer of Health.

The Committee expressed its satisfaction at the result of the Market Harborough case, and directed that the action at Lutterworth and Halifax should be continued.

The Committee also expressed its appreciation of the action which Dr. Snell, Honorary Secretary of the Coventry Division and Medical Officer of Health, had taken to maintain the dignity and rights of the profession, and its regret that the Local Government Board had failed to uphold the private rights of the medical officers of public bodies.

Parliamentary Questions.

The Committee considered the action to be taken in the next session of Parliament in matters affecting public health. It was decided that the Public Health (Security of Tenure) Bill should be reintroduced and pressed forward as much as possible, and that the Public Slaughter-houses Bill and the draft Bill prepared by the National Society for the Prevention of Cruelty to Children, as to overlying of infants and cases of burning arising from insufficient precautions, should be supported.

Housing of the Working Classes Report.

The Committee considered the report of the Select Committee on the Housing of the Working Classes, and decided to consider the matter further at an earlier meeting, inquiries being made in the meantime from the Local Government Board as to the probability of legislative action. It was decided to report that the Committee, while agreeing that small rural areas were unsatisfactory as units of sanitary administration, considered small urban areas also unsatisfactory, and that, on the other hand, a county was not necessarily a suitable area for general adoption.

HOSPITALS COMMITTEE.

The Hospitals Committee reported to the Council on January 23rd its proceedings at meetings held on November 15th, 1906, and January 10th, 1907.

Meeting on November 15th, 1906.

At the meeting on November 15th the following were present: Dr. F. M. Pope in the chair; Dr. J. Ford Anderson, Dr. W. A. Carline, Dr. Wm. Collier, Dr. E. Lawrence Fox, Dr. James Hamilton, Dr. John R. Hamilton, Dr. E. B. Hastings, Mr. E. F. White. Apologies for absence were intimated from the Chairman of Representative Meetings, the Chairman of Council, the Treasurer, and Dr. M. Beverley.

The business of the meeting consisted of considering recommendations to be made to the Joint Hospitals Committee, meeting the same day, as to the arrangements for the proposed United Hospitals Conference of Great Britain and Ireland

[1] British Medical Journal, December 1st, 1906.

Joint Hospitals Committee.

At the Joint Hospitals Committee, in addition to the members of the Association above stated, the following non-medical representatives appointed by the Conference in March, 1905, were present: Mr. Charles Lupton in the chair, Sir Henry Burdett, K.C.B., Mr. W. G. Carnt, Mr. Howard Collins, Mr. A. W. Davis, Mr. Eustace Gurney, Colonel Montefiore.

It was decided that the United Hospitals Conference should be held on December 6th, 1906; that Lord Cheylesmore, who had been appointed representative of the Middlesex Hospital in the conference, should be invited to preside, and that if he should be unable to do so it be left to Dr. Pope to invite some other suitable person to take the office; that those invited to take part in the conference should be the delegates appointed by hospital boards, the Joint Hospitals Committee, and the Council of the British Medical Association, together with the members of the Lords Committee on Medical Charities of 1892, large donors to hospitals, and others specially interested in hospital administration. A programme was drawn up of resolutions to be submitted for the consideration of the conference (see proceedings of United Hospitals Conference, Supplement to the British Medical Journal, December 15th, 1906, p. 322).

Meeting on January 10th, 1907.

At the meeting of the Committee held on January 10th, the following were present: Dr. F. M. Pope in the chair; Dr. J. Ford Anderson, Dr. W. A Carline, Dr. Wm. Collier, Dr. E. Lawrence Fox, Dr. James Hamilton, Dr. John R. Hamilton, Dr. E. B. Hastings, Mr. E. F. White. Apologies for absence were intimated from the Chairman of Representative Meetings, the Chairman of Council, the Treasurer, Dr. M. Beverley, and Dr. J. J. Giusani.

Resignation.

The Committee received an intimation from Dr. Beverley of his resignation from the Committee, and directed that he be informed of the great regret with which the Committee learn that he was no longer able to serve and of their appreciation of the great services which he has rendered to the cause of hospital reform.

New Members of Committee.

The Council was recommended to appoint Dr. Garrett Horder to fill the vacancy created by the resignation of Dr. Beverley, and it was also decided, in exercise of the power of co-option conferred upon the Committee, to invite Mr Edmund Owen and Dr. Lauriston Shaw to resume their services in connexion therewith.

Action Consequent upon Hospitals Conference.

Upon consideration of the report of proceedings of the United Hospitals Conference it was decided to recommend the Council to sanction the expenditure necessary for making complete analyses of the replies received from hospitals and also to have prepared a general statement of the results received. It was decided to defer in the meantime the consideration of the representatives to be made to hospital boards [illegible] their replies and the general consideration of hospital reform and proposed [illegible] to request the Joint Hospitals Committee to discuss matters at a meeting to be held [illegible] as possible after the analyses were completed.

Action thereon Deferred.

The Committee deferred also to the next meeting the consideration of a special report to the Division [illegible] Medical Secretary that on [illegible] which the hospitals had responded to the [illegible] of the Committee, a [illegible] of the fact should be communicated to the Hospitals Committee of the Hospitals Conference, they being requested to give such information as might be in their power.

King Edward's Hospital Fund Bill.

The Committee considered the King Edward's Hospital Fund Bill and made a recommendation to the Council as to what should be the attitude of the Association in reference thereto at the same time requesting the Chairman of Council to approach the Prince of Wales as President of the Fund and to point out the objections of the medical profession to certain features of the Bill.

POOR-LAW COMMITTEE.

The Council on January 23rd received the report of the proceedings of the Special Poor-law Committee at a meeting held on Tuesday, January 15th, when there were present: Dr. J. A. Macdonald in the chair; Dr. J. Ford Anderson, Dr. R. C. Buist, Mr. Herbert Jones, Dr. Herbert Manley, Dr. J. E. Moorhouse, Mr. W. L. Muir, Mr. C. H. Watts Parkinson, and Mr. C. R. Straton. Intimations of apology for absence were received from the Chairman of Council, the Treasurer, Dr. Cecil Shaw, Dr. J. S. Darling, and Professor A. H. White.

The object of the meeting was to consider the evidence to be presented on behalf of the Association to the Royal Commission of the Poor Laws and the Relief of Distress, with respect to England and Wales.

Appointment of Chairman.

The former Chairman, Dr. Brassey Brierley, having resigned his membership of the Committee, Dr. J. A. Macdonald, Chairman of Representative Meetings and Chairman of the Medico-Political Committee, was appointed Chairman.

Royal Commission on the Poor Laws.

Reports were received of two meetings of the English members of the Committee, constituting the English Subcommittee, on July 11th and November 28th, 1906, respectively.

The Subcommittee reported that questions framed in accordance with the decisions of the Committee of November 16th, 1905, had been drawn up and circulated to all the Poor-law medical officers, both for workhouses and districts in England and Wales, 3,500 in number, and replies had been received from nearly 2,000. Certain of these replies expressed warm appreciation of the action of the British Medical Association in investigating the subject so thoroughly.

Analyses of the information contained in the replies had been prepared and considered by the English Subcommittee, who submitted recommendations as to the evidence to be given before the Royal Commission. The recommendations with certain modifications were approved for submission to the Council. The Committee approved also a special statement as to London which had been prepared by Dr. Ford Anderson and Dr. Walter Smith at the request of the English Subcommittee.

The Committee decided to recommend that the evidence on behalf of the Association should be given by the Chairman of Representative Meetings (Dr. Macdonald), the Chairman of Council (Dr. Langley Browne), Dr. J. Ford Anderson, and the Medical Secretary. It was also decided that the witnesses should form a Subcommittee, with authority to draw up a statement of evidence based upon the recommendations of the Committee so far as these might be approved by the Council.

The Committee received the report of the expenditure incurred in printing and circulating the replies and for the clerical assistance in this work and in the analyses, amounting to approximately £74, and recommended that this expenditure be approved by the Journal and Finance Committee and by the Council, and that a fee of 50 guineas be paid to Dr. James Stewart for his services in analysing the information collected.

COLONIAL COMMITTEE.

The Colonial Committee of the British Medical Association consists of the following six members appointed by the Council: The President, the Chairman of Representative Meetings, the Chairman of Council, and the Treasurer [illegible] Mr. Donald Armour and Mr. C. R. Straton, together with the following five members chosen by the representatives of the Colonial Branches on the Council at a meeting held at the office of the Association on October 23rd, 1906: Colonel Bruce, C.B., F.R.S., Dr. E. H. Colbeck, Dr. Martin, Professor W. R. Smith and Dr. G. E. Twyman. The Colonial Committee reported to the Council on January 23rd, 1907, that it had held a meeting on December 28th, 1906, when there were present: Dr. H. W. Langley Browne, Chairman of Council (and afterwards Dr. C. G. Dreschfeld) Mr. Morgan in the Chair, Mr. Donald Armour, Mr. C. R. Straton, Professor W. R. Smith, M.D., and Dr. G. E. Twyman.

Election of Chairman.

The Chairman of Council having announced that Mr

Edmund Owen had retired from the Committee, Dr. C. G. Drummond Morier was unanimously elected Chairman for the ensuing year.

MEDICAL REGISTRARS AND RECIPROCITY IN AUSTRALASIA.

The GENERAL SECRETARY reported that in accordance with instructions he had communicated with the Colonial Office and Colonial Branches on the question of medical registration and reciprocity, and submitted the following memorandum:

Memorandum on Medical Registration and Reciprocity of Practice in Australasia and on the Work of the Colonial Committee and its Subcommittee.

On June 26 in, 1905, a Subcommittee was appointed, consisting of Mr. Donald Armour, Dr. Morier, and Dr. Twynam, to consider (*a*) certain communications received from the Colonial Office relative to Medical Registration in Australia, and (*b*) to prepare certain questions concerning the compulsory Registration of Medical Practitioners in the Colonies. The communications from the Colonial Office were consequent upon the opinion of the Committee having been conveyed to it, to the effect that only those medical qualifications which are available for registration in Great Britain and Ireland should be registrable in Australia.

In regard to the former question (*a*), the Committee has been for some time in correspondence with the Colonial Office, which has so far assisted the aims and aspirations of the Committee by having transmitted, from time to time, its findings to all the officers administering the Governments of the States of Queensland and Tasmania.

The following are synopses of official dispatches received from the Colonial Office, but which have not been placed before the Committee, though they have been considered by the Subcommittee:

The Queensland Medical Board favoured the suggestion of the British Medical Association, but considered the proposal impracticable as the law now stands. The Board will, however, draft a Bill correcting the defects of the existing Act.

The Medical Board of South Australia agreed likewise, although unable to carry out the Association's suggestions, being prevented under the Act by which they are guided.

The Medical Section of the Royal Society of Tasmania is agreed with the recommendation of the Association.

The Subcommittee thereupon advised the Committee to restrict in future its investigations to the question of compulsory registration in the Colonies, and to secure reciprocity of medical practice as between Australasia and the Mother Country. Arising out of this decision, the General Secretary was instructed to communicate with the Colonial Office and to point out that the Association was much gratified with the opinions expressed from Queensland, Tasmania, and South Australia (previously quoted), and to ask when the replies on so important a subject may be expected from the Governments of New South Wales, Victoria, Western Australia, and New Zealand. To this request the Colonial Office replied:

> With reference to your letters of the 19th July, 1904, and 17th July, 1905, urging the desirability of ensuring that only those medical qualifications which are registrable in the United Kingdom should be registrable in Australia and New Zealand, I am directed by Mr Secretary Lyttelton to request you to inform the Council of the British Medical Association that the Governor of the State of Victoria has reported that a Bill is now before the State Legislature which amounts to virtual adoption of their recommendations.

In addition, the Colonial Office has forwarded the following further dispatches:

New South Wales:—

> I have the honour, at the instance of Ministers, to state, for the information of the Council of the British Medical Association, that steps are being taken to so amend this State's Medical Practitioners Act of 1898, and its amending Acts, as to prevent the registration of any foreigner whose Government does not grant strictly equivalent facilities for practice in its country to graduates of the Universities of Sydney and of other Universities within the Commonwealth of Australia, but that it is thought very improbable that the Legislature here would consent to give effect to the resolution of the Council of the British Medical Association, since, if it were to do so, the Medical Board of New South Wales (the registering authority) in accordance with the terms of the resolution, would practically be placed under the direction, variable from time to time, of the General Council of Medical Education and Registration of the United Kingdom.

Governor of Western Australia:—

> The Medical Board of this State is working under the Medical Act, 1894. It will be seen that this Act embodies the principle of the resolution of the Council of the British Medical Association, with which I understand the Board is entirely in accord.

In accordance with the instructions of the Committee, the Subcommittee met, and as a result of its consideration of the various dispatches from the Australasian Governments the General Secretary was instructed to communicate with the Colonial Office:

(*a*) To thank them for certain dispatches.

(*b*) To urge the importance of securing a uniform Act for Medical Registration throughout Australasia in order to secure reciprocity of medical practice.

(*c*) To urge the modification of the New South Wales Act whereby only those persons should be allowed to practise within the State who are possessed of Degrees or Diplomas from a country granting equal rights and advantages to the holder of any British registrable Degree.

(*d*) To make similar representations with regard to the Western Australia Act.

(For copies of the communications embodying the foregoing instructions, *see* Letters at end, Nos. 1, 2 and 3.)

In reply to "c" the Colonial Office forwarded a copy of "The Medical Act, 1894" of the Medical Board of Western Australia, showing that the objection to the Act previously urged by the Committee to Clause 13, Schedule II as to the construction of the words, "or Foreign School of Medicine," had been removed by repealing the Act in the direction indicated by the Committee.

With regard to New South Wales the Colonial Office replied that a copy of Letter No. 1 would be transmitted to the State Government with whom the decision in the matter rested.

In regard to New Zealand, the Colonial Office transmitted copy of a dispatch from the Governor, Lord Plunket, viz.:

> My Ministers beg to state that the New Zealand Medical Practitioners' Registration Act, 1905, shows how far the Legislature of this Colony has considered it judicious to proceed on the lines of the resolution of the British Medical Association.
>
> It will be observed from the Schedule of qualifications for registration (*see* last paragraph of Schedule to Act) that the Colony of New Zealand is not absolutely tied down to follow the rate of procedure which obtains in the United Kingdom as to admitting foreign diplomas in medicine and surgery to registration. It is considered that perfect compliance would not suit the circumstances of this Colony.

In addition to the efforts of the Colonial Committee to obtain registration in Australasia, it has witnessed the consummation of medical registration in the Straits Settlements, where the Malaya Branch in conference with the Colonial Committee assisted in getting passed into law an *Ordinance to provide for Registration of Medical Practitioners, etc.*

The following resolutions on the subject were passed by the Council:

> Resolved: That the Colonial Secretary be thanked for forwarding a copy of the dispatch from the Governor of the Straits Settlements, together with a copy of Ordinance No. IX of 1905, entitled, "An Ordinance to provide for the registration of Medical Practitioners in the Colony." Further, that the Colonial Secretary be informed that the British Medical Association is pleased to learn that His Majesty will be advised to grant His Royal Assent to this Ordinance, the British Medical Association believing that such an Ordinance will tend to guard the general public of the Straits Settlements against the danger of unqualified and unskilled practice.
>
> Resolved, That the Malaya Branch be congratulated on the success of their efforts in obtaining an Ordinance to provide for the Registration of Medical Practitioners in the Colony.

It should be noted that the Committee, in conjunction with the Colonial Office, has been instrumental in obtaining Colonial medical legislation in the direction of medical reciprocity and registration, the restriction and repression of unqualified practice, in the following parts of the Empire, which means that legislation is either *sub judice* or *ut fait accompli*:

Name of Colony.	Title of Legislation.
Bermuda	Medical Registration Act, 1905.
Ceylon	Ordinance to Provide for the Registration of Medical Practitioners in Ceylon.
New South Wales	Act No. 33, 1900, an Act for the Registration of Medical Practitioners, the restriction of unqualified persons from practising, etc.
New Zealand	"An Act to amend the law relating to the Registration of Medical Practitioners."
Nigeria, Southern	"An Ordinance to Provide for the Registration of Medical Practitioners and the Lists."
Queensland Medical Board ..	Have failed [illegible] to correct the defects of their existing Act in the direction suggested by the Association.
South Australia	The Board are in sympathy with the aspirations of the Committee, though they are powerless to take action in the manner indicated as the present Act is one by which they are guided. By an Ordinance No. 17, 1[illegible] they have a system of Registration by a Medical Board. Also by a [illegible]
Straits Settlements	"An Ordinance to provide for the registration of medical practitioners in the Colony."
Tasmania	Medical section of the Royal Society are in favour of only those medical [illegible]
Victoria, Australia	A Bill [illegible] according to the recommendation of the Committee is now before the State Legislature.
Western Australia	The Medical Board works under the Medical Act of 1894.

[*Letter No. 1.*]

BRITISH MEDICAL ASSOCIATION.
429, Strand,
London, W.C.,
March 14th, 1906.

My Lord,

In continuation of the representation made by the British Medical Association as to the great importance of establishing reciprocity of Medical Practice throughout the Commonwealth of Australia, and the marked encouragement this Association has received from your predecessors in office, I am instructed by the Colonial Committee of the British Medical Association to inform your Lordship that it has recently had under its consideration the "Medical Act of New South Wales, Nov 26th, 1898," together with a Draft Bill proposing to amend the same.

With reference to this amendment, whereby it is proposed to insert after the words "that country," in Section 3, Subsection (1), Subclause *b* the words

"if in the opinion of the Board, corresponding eligibility has "been established in such country for the issue to persons who "may be received after due examination from the University of "Sydney diplomas or degrees in Medicine, licences entitling "them to practise medicine in such country."

I am instructed to inform your Lordship that my Committee is gratified that the Legislative Council of New South Wales approves the principle of allowing only those persons to practise within the State who are possessed of degrees or qualifications from such countries which in turn recognize the degrees or diplomas granted by the University of Sydney.

At the same time the British Medical Association feels that while this is a step in the right direction, it is unfortunate to limit this to the University of Sydney, or of other Universities within the Commonwealth of Australia, as it is essential to effectively secure reciprocity of medical practice, that the Legislative Council of New South Wales be induced to go further, on the lines now adopted by the Colonial Medical Council, Cape Colony, and the Legislative Council of Ceylon, whereby equal rights and advantages are given in these respective Colonies to the holders of any British registrable degree.

I have the honour to be,
Your Lordship's most obedient servant,
GUY ELLISTON,
General Secretary.

The Right Honourable
The Earl of Elgin and Kincardineshire, K.G., G.C.S.I., etc.,
Secretary of State for the Colonies,
Colonial Office, S.W.

[*Letter No. 2.*]

BRITISH MEDICAL ASSOCIATION,
429, Strand,
London, W.C.,
March 14th, 1906.

Dear Sir,

I am directed by the Colonial Committee of the British Medical Association to approach the New South Wales Branch in regard to the following matter:

The Committee has had under its consideration a copy of "A Bill . . . to amend the Medical Practitioners Act, 1898," which seeks to amend *inter alia* Clause 3, Subsection (1), Subclause (*b*) by the insertion of certain words, namely

"if in the opinion of the Board corresponding eligibility has "been established in such country for the issue to persons who "may be received after due examination from the University of "Sydney diplomas or degrees in medicine licences entitling them "to practise medicine in such country."

In regard to this matter, I should inform you that for some years the Committee has been in communication with the Colonial Office urging the expediency of adopting a uniform system of medical registration throughout the Australian Commonwealth, and in this direction it also desires to see passed into law the principle of not only medical registration, but that of medical reciprocity.

My Committee desires that the Act should be so amended as to allow only those to practise within the State who are possessed of degrees or diplomas from a country which recognizes the degree or diploma granted by any duly authorized licensing body throughout the British Empire.

You will doubtless be aware that the Medical Council Cape Colony, and the Legislative Council of Ceylon have actually adopted Bills on these lines, and I am directed to ask for your co-operation to secure similar legislation in New South Wales.

I am,
Yours faithfully,
GUY ELLISTON.

G. T. Hankins, Esq.,
Hon. Secretary,
New South Wales Branch of the
British Medical Association.

[*Letter No. 3.*]

BRITISH MEDICAL ASSOCIATION,
429, Strand,
London, W.C.,
March 14th, 1906.

My Lord,

I am directed by the Colonial Committee of the British Medical Association to approach your Lordship in regard to the following matter:

The Committee has had under its consideration a copy of "A Bill . . . to amend the Medical Practitioners Act, 1898," which seeks to amend *inter alia* Clause 3, Subsection (1), Subclause (*b*) by the insertion of certain words, namely

"if in the opinion of the Board corresponding eligibility has "been established in such country for the issue to persons who "may be received after due examination from the University of "Sydney diplomas or degrees in medicine licences entitling them "to practise medicine in such country."

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My Committee desires that the Act should be so amended as to allow only those to practise within the State who are possessed of degrees or diplomas from a country which recognizes the degree or diploma granted by any duly authorized licensing body throughout the British Empire.

You will doubtless be aware that the Medical Council Cape Colony, and the Legislative Council of Ceylon have actually adopted Bills on these lines, and I am directed to ask for your co-operation to secure similar legislation in New South Wales.

I am,
Yours faithfully,
GUY ELLISTON.

G. T. Hankins, Esq.,
Hon. Secretary,
New South Wales Branch of the
British Medical Association.

[*Letter No. 4.*]

BRITISH MEDICAL ASSOCIATION,
429, Strand,
London, W.C.,
March 14th, 1906.

My Lord,

I am directed by the Colonial Committee of the British Medical Association to approach your Lordship in regard to the following matter:

The Committee has had under its consideration a copy of "A Bill . . . to amend the Medical Practitioners Act, 1898," which seeks to amend *inter alia* Clause 3, Subsection (1), Subclause (*b*) by the insertion of certain words, namely

"if in the opinion of the Board corresponding eligibility has "been established in such country for the issue to persons who "may be received after due examination from the University of "Sydney diplomas or degrees in Medicine, licences entitling "them to practise medicine in such country."

I am instructed to inform your Lordship that my Committee is gratified that the Legislative Council of New South Wales approves the principle of allowing only those persons to practise within the State who are possessed of degrees or qualifications from such countries which in turn recognize the degrees or diplomas granted by the University of Sydney.

At the same time the British Medical Association feels that while this is a step in the right direction, it is unfortunate to limit this to the University of Sydney, or of other Universities within the Commonwealth of Australia, as it is essential to effectively secure reciprocity of medical practice, that the Legislative Council of New South Wales be induced to go further, on the lines now adopted by the Colonial Medical Council, Cape Colony, and the Legislative Council of Ceylon, whereby equal rights and advantages are given in these respective Colonies to the holders of any British registrable degree.

I have the honour to be,
Your Lordship's most obedient servant,
GUY ELLISTON,
General Secretary.

The Right Honourable
The Earl of Elgin and Kincardineshire, K.G., G.C.S.I., etc.,
Secretary of State for the Colonies,
Colonial Office, S.W.

The action of the Subcommittee was approved, and the Committee adopted the following resolutions:

That the General Secretary be instructed to communicate again with the New South Wales Branch asking for a reply to his letter dated March 19th, 1906. Further, to inform the Branch that the Committee has been given to understand that the local legislature would be largely influenced by any recommendations as to medical legislation put forward by the Branch.

That this Committee learns with pleasure that the Act of Western Australia has been amended so as to secure reciprocity of medical practice.

BERMUDA.

The CHAIRMAN reported the receipt of a copy of "The Medical Registration Act (1905) of Bermuda," from the Hon. Secretary of the Bermuda Branch.

The GENERAL SECRETARY presented the following Memorandum:

Memorandum of Previous Action with Regard to the Bermuda Act.

At the end of 1904, the Colonial Committee approved of an "Ordinance to Provide for the Registration of Medical Practitioners in Ceylon." Correspondence ensued between the Hon. Secretary of the Bermuda Branch (Dr. Eldon Harvey) and the General Secretary as to framing a Bill for Bermuda on similar lines to that of Ceylon.

At the last meeting of the Committee, correspondence from Dr. Eldon Harvey was considered in regard to the Bill then in course of framing, and which has now been passed into law and known as "The Medical Registration Act, 1905, of Bermuda." Had that part of the Bill relating to Registration been framed on the lines of the Ceylon Ordinance (Clause 13), it would have met with the approval of the Colonial Committee, whereas at the last meeting of the Committee it was shown that the Bermuda Branch sought to amend Clause 13 by making registration *optional*, for the Bermuda Medical Board to admit persons to the Register who are registered in the *Medical Register* of Great Britain instead of adhering to the provision in the Ceylon Ordinance which enacted that a person under the Acts of the United Kingdom *shall be* registered upon producing certain evidence to the Colonial Secretary.

The following is the text of the resolution of the Committee, which, upon being transmitted to the Bermuda Branch, led up to the receipt of the present Act of 1905, above referred to on the Agenda:

Resolved: That the Colonial Committee, having considered Clause 13 as proposed to be introduced into the Medical Registration Act, 1905, for the Bermudas or Somers Islands, is of opinion that any medical practitioner duly registered within the United Kingdom ought to be able to enter any British Colony or Dependency, and be entitled to practise on producing evidence of his registration in the United Kingdom. The Colonial Committee would further point out that it has already urged His Majesty's Secretary of State for the Colonies as to the expediency of registering in any Colony or Dependency only those medical qualifications which are registrable in the United Kingdom.

In regard to the remarks of Dr. Eldon Harvey that "medical men who have obtained their diplomas in the United Kingdom should not be sent to the Board, but be registered by the Colonial Secretary at a small fee," in the new Act which he now transmits it enacts that the Governor in Council shall appoint three persons (registered medical practitioners) to act as a Medical Board for certain defined purposes of examination and registration. It shall be the duty of the Board, upon receiving from the Colonial Secretary any application for registration, to meet together and examine the document or documents evidencing qualification, "*and if they shall think fit also to examine the Candidate as to his competency and fitness to practise medicine and surgery etc.*" It will be seen that medical practitioners registered in the United Kingdom need not necessarily be *examined* except it be the desire of the Medical Board so to do, as it (the Medical Board) has power to accept their qualifications only. Further, each applicant upon registration, shall pay a fee of £6. By way of contrast the following is the parallel clause contained in the Ceylon Ordinance:

[illegible] may claim to be registered in the Islands of Ceylon upon [illegible] the Colonial Secretary proof of his [illegible] of notice in the *Medical Register* and [illegible] certified copy of the entry of his name in the

original register or any branch register of the General Medical Council in the United Kingdom.

Ceylon admits medical practitioners registered in the United Kingdom to full practice in the island, whereas the Bermuda Act leaves it open to the Board to require a medical practitioner duly registered in the United Kingdom to submit himself for re-examination; further, a medical man on being admitted to practice must pay the registration fee of £6.

A communication to the Honorary Secretary of the Bermuda Branch was read expressing the opinion that medical men who had obtained diplomas in the United Kingdom should not be subject to examination by the Medical Board, but be registered by the Colonial Secretary on payment of a small fee. The Committee, after deliberation, adopted the following resolution:

That the General Secretary be instructed to request the Colonial Secretary to represent to the Legislative Council and Assembly of the Bermudas or Somers Islands the desirability of admitting to registration any duly registered medical practitioner from any part of the British Empire, without re-examination, as has already been provided under the Ceylon Ordinance.

Southern Nigeria.

The General Secretary reported the receipt from the Colonial Office of a copy of "An Ordinance to provide for the Registration of Medical Practitioners and Dentists" in the Colony of Southern Nigeria.

Summary of the Ordinance.

Fees for registration are £1 for each under (*a*), and £5 for each under (*b*):—

(*a*) The following persons shall be entitled to registration: The holder of any British, British Indian, or British Colonial degree, diploma or licence entitling him to registration in Great Britain.

(*b*) The holder of a degree or licence in medicine and surgery of any Medical School in Europe, the United States of America, or the Empire of Japan, the degrees, diplomas and licences of which are recognized as entitling to registration by the General Council of Medical Education and Registration in the United Kingdom.

It will be seen, therefore, that the holder of a British diploma has preferential treatment over the holder of a foreign qualification as regards the fee for registration.

The Principal Medical Officer shall be the Registrar. The names of those registered shall be published in the *Gazette* annually. Registered persons shall be entitled to sue for fees in any court of law, but no fees can be recoverable by an unregistered person. No medical certificate shall be valid unless signed by a registered medical practitioner. The penalty of conviction to be met by disregistration. Penalty for false assumption of medical titles not to exceed £100 for each offence, and a further penalty of £10 a day during its continuance.

The General Secretary was instructed to represent to the Colonial Office the Committee's gratification that preferential treatment is given as regards the registration fee to the holders of British diplomas, and at the same time urge the desirability of restricting registration in Nigeria to those possessed of degrees or diplomas granted by a country which recognizes the degrees and diplomas granted by any duly authorized licensing body in any part of the British Empire.

MEDICO-POLITICAL COMMITTEE.

Owing to the pressure on space it has been necessary to postpone the publication of the minutes of the Medico-Political Committee till next week.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m., except on Saturdays, when they close at 2 p.m. Members can have their letters addressed to them at the office.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

METROPOLITAN COUNTIES BRANCH: MARYLEBONE DIVISION.

A well-attended meeting was held at the rooms of the Medical Society of London on January 24th, Dr. Lauriston Shaw, President of the Divison, in the chair.

Economic Problems in the Practice of Medicine.

The President said that the following resolution would be submitted to the meeting:

That the development of properly organized systems of mutual assurance for the costs of illness offers the most readily available method of reducing the admitted evils of excessive medical charity and the misuse of hospitals.

He reminded the members that they decided to their own satisfaction at the first of the series of meetings, held in Hanover Square, that there was something distinctly wrong with the administration of medical charity, there being only one dissentient voice. Probably, however, the present meeting would not be nearly so unanimous, because while it was easy to detect that a person was ill it was not always easy to say what method of treatment should be adopted.

Dr. R. C. Buist said the present meeting would consider the therapeutics of medical abuse. It would be necessary to consider which remedies tackled the disease and which were intended to relieve the symptoms. Many thought the time had come when the conditions of payment by fee were no longer practicable for medical relief for a certain section of the community. Illness was necessarily a serious financial loss, and could not be faced without considerable resources, though it was not so serious a matter in England as in the Highlands of Scotland, where a single visit might necessitate 25s. in travelling expenses. Most people were ill at some time, and everyone had to die, and no one wished to die unattended medically, and therefore the matter under discussion appealed to every member of the community. How should the individual deal with his sickness risk? Some friendly societies' experience might be quoted. In one, embracing 80 000 members from 7 to 10 years of age, the sickness rate amounted to three days a year. The requirement could be faced by provision, or by improvision. The former included thrift on the part of the individual, or in a co-operative manner, that is, by some system of insurance. To the improvident man there were two avenues: debt and charity. In some circles in the profession medical debt was preferred to contract practice. In Lancashire there were districts where the persons were allowed to run into debt for their fees, and a person was sent round periodically to collect contributions towards that debt. Nothing could be more demoralizing to any but the most broken and destitute. So many people flocked to the great medical charities because they thought they were getting special skill at the hospitals, and it remained for medical men to convince them that that skill was at their disposal by means other than by abuse of the charities. Thrift was an excellent moral stimulant, but carried to extremes it developed characteristics which would be better tempered with a little humanity. Moreover thrift was not always possible; for instance, in the man with a family and earning a very low wage. Thrift must be organized, so that the risk could be distributed, thus making it co-operative thrift. By it fellowship, *esprit de corps*, and mutual help were engendered. The voluntary development of the principle seemed more practicable than the compulsory, though personally he would be agreeable to it being compulsory. There was much compulsory insurance nowadays, as exemplified in the Workmen's Compensation Bill. The provision afforded by voluntary systems could be complete, including sick pay, medical attendance and medicine, or it might be directed to some one or other of them. The Society in the medical profession, the Medical Sickness Society, provided for

sick pay alone, and the amount which members had to pay was one-twenty-eighth of the weekly compensation received when on the funds. Insurance was nowadays very widespread, and it was difficult to escape it, as for instance on opening one's paper or magazine in the railway carriage. The premium necessary for provision against accident would be very small. The provision of medical attendance and medicines was the feature which concerned medical practitioners most. The essential conditions of satisfactory medical attendance were, the confidence of the patient in the doctor, and the confidence of the doctor in the patient. If the patient was to have complete confidence in the doctor, he must be able to choose him. The next requirement was that the remuneration should be adequate. If it were not so, the confidence of the patient was impaired, because he thought that the doctor was a cheap doctor, and the doctor himself had a suspicion that the patient was attempting to defraud him. It was necessary to consider the relation between the risk and the remuneration. In the useful pamphlet issued by the Committee of the British Medical Association, "An Investigation into the Economic Conditions of Contract Medical Practice in the United Kingdom" at page 14 there was a table showing the yield per attendance. Where the annual subscription for medical attendance ranged from 2s. to 3s. per member, the average fee per attendance amounted to 7.95d.; and from that to 5s. the average return per attendance rose to 13.36d. The fee was rendered more inadequate by the abuse of the system by well-to-do people, because they required more visits and longer visits. A certain class of the community could not afford to meet the risks of illness when it arose, and that was a cogent argument in favour of having some system whereby they would be able to deal with those risks. And the only practicable way seemed to be to make their thrift co-operative—that is, they must insure. Any such system must be based upon the agreement of the whole profession. There were certain general conditions of such work about which the profession throughout the country must be agreed, and there were certain local conditions upon which the members of the profession in the locality must be agreed. The general conditions were such as would secure to the patient freedom of choice of the medical attendant, and to the medical attendant freedom to accept or refuse any pay. There must be local agreement as to the rates of remuneration for which the work must be done. The work must be open to every member of the profession who wished to do it. The premium must be adjusted to the risk which the profession had to meet. He had no hesitation in saying that the one form which offered, both to the public and to the profession, the necessary security was what was called the public medical service, a local organization undertaken by the practitioners in the locality by a committee representing those practitioners, served by all who wished to take a part in the work. If evidence were demanded that the public was safeguarded, there was the fact that where the public medical service had been established the work was done as economically as it was done by outside organizations, and there was an absolute fulfilment of the condition that the patient had the freedom to change if there was dissatisfaction. He thought there was sufficient evidence that agreement in the profession on the matter was possible as shown by the unanimity with which men out of the profession and even in the locality voted at a distance superior than half against the case of a dispute. Occasionally it was necessary to deal with a limited number of the profession who had an appointment and a professional [illegible] to be [illegible] working classes such a [illegible] and a [illegible] had been used [illegible] number of the profession [illegible] had been used in practice, [illegible] of spirit. And if, as he [illegible] had been the condition for securing the public [illegible] the profession had established a perfectly safe way of [illegible] the risk which he had [illegible] to a large section of the [illegible] he hoped.

[illegible] medical charity and the [illegible] and therefore [illegible] and the [illegible] made more [illegible] a properly organized system of insurance against the cost of sickness and accident which would apply to the mass of the population must of necessity be an enormous undertaking, but if well-conducted should solve the problem. Provision for adequate treatment of disease and accident meant individual and general gain. When medical treatment had to be paid for by the poor, it was applied for at a later date than when provided by some system, and the chances of doing good were thus lessened; the wage-earning life was shortened, and the pauper proportion of life lengthened. It was therefore to the interest of the State to take an active part in establishing some such system as that hoped for. In Germany the illnesses treated yielded 90 per cent. of favourable results. There the individual had the right to claim treatment as soon as he was ill. It was of great moment to the working man that he should steer clear of pauperism as long as possible. The German system formed an excellent basis to work upon, even though it would not be wise to adopt it in its entirety in this country. No system would be workable without some concessions on both sides, and while the low wage earner must be required to sacrifice a small sum out of his earnings during health, the medical man from whom he derived his treatment during illness must be prepared to attend him at a low rate. But that need not be so low a rate as in Germany, and could be planned on a different scale. The whole army of medical men should be prepared to take their share of the work at a reasonable rate of remuneration, and in that way contribute to a work of national importance. All workmen earning less than £2 a week should be compelled to subscribe to the funds in the first case. The next class should be from £110 to £300, within which range the majority of medical men themselves came. For this class no form of compulsory insurance could hold good, yet it was often harder for such people to meet the heavy expense connected with prolonged illness than it was for the low wage earner to do so. At the lower end of the scale were those whose earnings were irregular and who when out of work would find real difficulty in subscribing to the insurance. Next there were those whose earnings were regular enough, but who could not afford to subscribe, because they spent their money in drink and other excesses. The first must come under the Poor Law, while the others could be dealt with in a penal way. He proposed that the larger insurance companies should be invited to issue policies to persons whose incomes ranged within the limits of £100 and £300, the policies covering the charges made by the medical attendants, provided that the fees for a single visit were moderate in correspondence with the usual fees charged in any given district in which the policy-holder lived, and provided also that consultations with specialists, etc., were resorted to only in cases of necessity. How was the system which he outlined to check the admitted evils of excessive charity and the misuse of hospitals? If each worker had a card there would be no occasion for a call on the charity of the medical practitioner; he would be called upon to treat his patient according to his contract, and he would receive the fees agreed upon from the body insuring. There would be no risk of bad debts, and no long waiting for payment. But the hospitals should admit cases only under certain conditions. First, every patient should have to produce his or her hospital card, which would have to be signed by the practitioner in charge of the case. In emergency cases the signature of the medical attendant would have to be obtained within a certain fixed period from admission or a fee would be recoverable from the hospital. No person whose income exceeded £160 per annum should be allowed to remain in the hospital except in those cases where it would be dangerous to remove the patient after first aid had been given. The consultative departments of the large hospitals which had medical schools attached should be utilized for teaching purposes, and he would propose that in addition to the voluntary subscriptions now exacted by hospitals annual sums should be paid them by bodies insuring the lower wage earners. In that way the financial basis of the hospitals would be improved and the staff would find their work all the better for having been freed from the ever-increasing number of uncertain patients. Specially selected medical men would have to be chosen to report upon cases of alleged malingering and to investigate excessive claims, and the State should impose a responsibility on those who failed to subscribe to the insurance. He thought that no voluntary insurance for the low wage

earner would ever meet with success; the system must be compulsory. The British Medical Association, which had done such brilliant work of late, possessed the machinery for advancing the scheme. He would like the meeting to ask the Medico-Political Committee of that Association to prepare a Bill for compulsory insurance against sickness and accident, and if sufficient support could be obtained for it that the Government be asked to take up a Bill for old age pension insurance, into which such Bill might merge. Last year the number of persons insured against accident in Germany was 19,900,000 and the receipts exceeded 6.8 millions sterling, an increase of 56.4 per cent. in the course of seven years. He estimated that 10,000,000 persons would come within the limits of low wage insurance in this country, and it was necessary to enlarge on the possibilities of the system if inefficiently carried out. He proposed that there should be three parties to the contract in the compulsory State insurance, each having well-defined duties. First, the State should enforce a small deduction from the salaries of every working man and woman whose wage did not exceed £100 per annum, and should be prepared to accept the responsibility when the subscriptions were not paid. Secondly, the wage earner should realize that he was subscribing to provide against an expense which he could never anticipate, and which might, if it came on him unawares, bring him into the pale of pauperism. Lastly, the medical practitioner should be prepared to accept a small fee for attendance on such patients whenever called upon, in the knowledge that he was doing a national service thereby and helping to overcome one of his most invidious enemies, hospital misuse.

Mrs. Scharlieb said the medical man had also a great interest in the matter, both from the point of view of patriotism and the love of one's fellow men. Also, it must be confessed, there was a financial interest, and the necessity of having things on a business footing in all respects. If there were to be insurance schemes for the small wage earners of the country, it was evident that they must not be brought into competition with the existing charities, but must co-operate to some extent. There must be no going round in a vicious circle feeling that they could not have insurance schemes because of the charities, or that the charities would strangle the insurance schemes. There was so much indiscriminate charity that many people would tell them that there was no need for insurance. Then, because medical men were hoping to have insurance schemes, they were told that charity would fail. It had been threatened for many years that the great hospitals would be starved because of the unsatisfactory and unbusinesslike way in which some of them were conducted, and because of the great abuse which existed in connexion with many charities. Mrs. Scharlieb proceeded to give a vivid example of the sort of abuse which was possible. If there were insurance schemes, very much of the generous but not just methods adopted towards patients would come to an end. There was no doubt that from motives of pure pity and kindliness medical men and medical women frequently gave their services to patients who, after all, were quite as well able to pay for them as the medical man or woman was to give it. And it was easy to be generous at somebody else's expense. Those who had done well in the profession were apt to say, "I will see this patient for nothing or at a very reduced fee," without thinking that thereby they were under-selling and undercutting their own brothers and sisters in the profession. If those who were poor could be induced to enter into insurance schemes, that indiscriminate and ill-judged charity on the part of the medical men and women would cease. Medical women must not be excluded from co-operation in any of those schemes, because if they were there was the likelihood that they would form schemes for themselves, and upon a Poor-law basis, to compete successfully with the men and so maintain their own position.

Dr. Keay said he felt in an awkward position with that resolution before him, with which he did not entirely agree. He did not know whether the stage had been arrived at when one could absolutely say that organized systems of mutual assurance were the most readily available method. There were so many different methods. He would have been more in sympathy if the resolution had stated it offered probably the best method of reducing the admitted evils of charity. That seemed a small matter to cavil at, because no doubt a resolution of the kind submitted was infinitely superior to anything they had at present. He did not know of any scheme which had ever been put forward which he could not heartily accept in preference to the conditions under which they were at present; in fact, he did not think any muddle-headed body of men could devise anything worse than now existed. At present half London, so far as medical attendance was concerned, was subsisting on charity, and after that forlorn hope, the Hon. Sydney Holland said that no medical man ought to charge a fee of less than 5s.; he supposed that nineteen-twentieths of London subsisted on medical charity. He considered that the funds which had been left in the past at the disposal of the hospitals had been so grossly misused that it was a matter for the Charity Commissioners to deal with and bring them into touch with some larger system. He felt disappointed with the position which Dr. Buist had taken up; he did not think a scheme of merely optional insurance would ever meet the case. He knew that organizations like the Foresters had large numbers insured, but they were a small number compared with the whole population. Practically none of the labouring classes of London were insured; consequently those who provided for themselves in a reasonable way by insuring in some society or otherwise had to pay for the others, and that was unjust. The time had gone by for relying upon anything but compulsory insurance. He had long had a friendly feeling towards carrying out the system on the same principle as adopted in regard to education. They had free education not only for the poor but for the child of the millionaire. He would not have the medical question carried to that length, but when the education system was brought before the country a number of years ago there was scarcely a dissentient voice, and it was in that direction events had been moving ever since. They already had isolation hospitals, medical officers of health, and schemes for the prevention of disease, and it was necessary to only go a step further. The education of the child's mind in the Board School cost about three shillings, whereas the amount received by the average club or dispensary doctor for the care of its body was a halfpenny. It was utterly preposterous. He did not think the mass of the people would be slow to contribute through the rates and taxes or through compulsory insurance to anything of that sort. The masses of the people would not pay for anything direct, but where it was mutual or anything else they would be quite willing to pay for it by instalments, and they would quietly bear any amount which was tacked on to their rent in the shape of rates. The general practitioner was not paid to do anything like reasonable work, and he did not do it. It was in the interest of the State that something should be done to remedy that state of matters. Some might think that compulsory insurance was a long way off, but he thought it was in the very near future. A Bill for the provision of old age pensions was coming on, and the practitioners should tell the people of the country that it was not satisfactory, that it would not empty the workhouses and infirmaries, and that what was wanted was compulsory insurance. If the British Medical Association should decide on anything at the present time scarcely any Government would feel strong enough to oppose it. He belonged to a small body of factory surgeons, and when an objectionable Bill was brought in by the late Government, that body had no difficulty in getting the Bill squashed. Now that there was more unity between the consultant and hospital staffs on the one hand and the general practitioner on the other, the time was ripe for something to be brought about to remedy the state of matters now existing; it would be a vast blessing to medical men themselves and to the suffering poor of London and elsewhere.

Mr. Green (Fellow of the Institute of Actuaries) said he gathered that the evil was largely due to the fact that many of the members of the working classes made use of the hospitals while contributing practically nothing to their upkeep, whereas they might under a properly-organized system do so. Reference had been made to the German law, which was known as the law to provide against invalidity and for old age pensions. English actuaries had been watching that scheme for some time, and they thought it was a very difficult one to bring forward in England, largely because of the difference between the English and the German temperaments.

Moreover, one had to take into account the very large friendly society organizations in England. The friendly societies were very jealous of anything which they regarded as trespassing upon their preserves, and it was with the greatest difficulty that any step forward could be taken in the matter. He believed the same would be found to be the case in regard to insurance against the cost of sickness. Actuaries found that gradually the whole of the people of the country were becoming insurers, and it was now considered foolish for a man not to insure his life. Humanity was always somewhat selfish, and there was the recommendation in regard to insurance against sickness that the person insuring benefited during his life, whereas in insurance against death his relatives benefited. Actuarially there could be no difficulty in deciding what premiums were necessary to provide for the different systems. The necessary data could be gathered as time went on. Whatever scheme was started, the actuary should be there on the spot to take notes which would enable him to find what arrangements were necessary to be made. That was the case in life insurance, and the result was that there were now most elaborate tables, by which almost any benefit could be provided for which could be mentioned. Most sick schemes provided for a definite sum for the first six months, and if the illness continued a smaller amount for the next six months, and a still smaller amount for the remainder of the illness. One of the great features of insurance was that it worked by means of averages, and for that reason any national system was bound to be more successful than only a partial one. Reference had been made to insurance companies, but for a scheme of such magnitude as that proposed he thought a scheme of mutual insurance was to be preferred, because insurance companies naturally worked for a profit for themselves. If efficiently run, a mutual system must prove the cheaper. Dr. Buist had mentioned the importance of thrift in making provision; but, however thrifty a man might be, if his illness came early he would have had no chance of deriving any benefit from his thrift, and it was there that insurance came in. Insurance enabled a man to obtain a large benefit for himself or those dependent upon him at once. As to whether the insurance should be made by a voluntary association, such as in the Mutual Life, or whether it should be compulsory, he would not express an opinion. In many departments of the national life the application of actuarial principles, which were practically synonymous with the application of the principles of insurance, would be greatly to the benefit of all, and actuaries would strive all they could to bring that about. And they would be prepared to consider favourably any means by which the cost of the sickness might be met by a judicious system of insurance and the stress on the hospitals thereby lessened, and thus leave those institutions freer not only to meet the cases for which they were suited to deal, but also to be able to undertake the investigation of the causes of disease and devising means of preventing it.

The HONORARY SECRETARY (Dr. Comyns Berkeley) read a communication from Sir Hugh Beevor—who was unable to take part in the meeting—in which he said that at first insurance seemed to be the ready solution of the problem of hospital abuse. He still thought so, but he was not over sanguine as to the readiness with which the problem could be solved. The modes of applying insurance were just as much matters of principle and of first-rate importance in dealing with that question as the principle of insurance itself. The recent hospital conference recommended the provision of nursing homes, but he suggested that it was much open to question whether the same economy and popularity could be joined to the efficiency of a nursing home as would be attached to a hospital. Supposing for argument it would not, then the question of the foundation of a new hospital required distinct consideration apart from insurance, even in London. He had seen a rough outline of a plan which had been drawn out by Mr. F. Walker, which carefully omitted any determination as to whether the institution would be a hospital which might have as many doctors as it had beds or patients, or whether the institution would be a hospital. Nevertheless, his scheme provided that the patient should pay when the medical attendant was paid, while its raison d'être was largely the prevention of hospital abuse. He asked whether both the public and the profession would be able to see such advantages in the fulfilment of payments that they could allow the question of hostel or hospital to be relegated to principles of economy? He did not think the British Medical Association could do better than consider the question by Branches. The solution for the metropolis should be held to require local consideration, and he would therefore greatly value the expression of opinion by members of the Metropolitan Branch as concerning London.

Dr. DAUBER said the resolution submitted appeared to be a counsel of perfection, and not one which the medical profession had any power to enforce. It was proposed that a far greater task than attending the disabled and the sick should be placed on their shoulders, and, he presumed, for no pay or reward. There was also to be a moral crusade. Such might be meritorious, but was it likely to be successful? No inducements could be offered by the profession. The thrifty as well as the thriftless were good cases for gratuitous medical relief. Sir Mitchell Banks said that, generous as the British public were, there were two things which they objected to pay for, their religion and their doctoring. He pointed to the thrifty propensities of the Swedish people which he had observed. The poor of that country were taught to be resourceful and self-reliant. In Japan it was recently enacted that even the blind should no longer receive free relief, and the result was that the blind in that country applied themselves to such pursuits as massage. He thought thrift should be enforced indirectly by withholding free miscellaneous medical attendance, except in the case of those who were absolutely without the means to pay for it. He instanced the case of a man who received £45 compensation from an insurance society, and went into a hospital and got cured without paying a penny. Many working people actually made a profit out of their illnesses, because they belonged to several clubs from which they received sick pay, and under the present law it was quite possible for a doctor to pay compensation to a servant and have to treat her gratuitously at a hospital while she pocketed the money. Salvation did not lie merely in preaching the benefits of insurance, but in the concentration of their forces on some critical point. The medical staffs on the London hospitals should combine and protest to their Boards of Management that the time had come to cease treating gratuitously at the hospital those who could afford to pay. There would be no lack of clinical material in the hospitals, as there was no dearth of such in the Continental hospitals, where the conditions were much more satisfactory in regard to patients. "Those who would be free, themselves must strike the blow!" and without loyalty nothing could be done.

Dr. HUMPHREYS asked whether the three days' sickness per year quoted by Dr. Buist included women and children.

Dr. BUIST replied that it did.

Dr. HUMPHREYS, continuing, said the blind people in Japan were now complaining bitterly that people with normal sight were taking from them the occupations they had taken up. He referred to an inspired article in the *Morning Post*, complaining that in the cases for which insurance companies were liable no payment was made to the hospitals by those societies. Surely that was an admission of the abuse which was prevalent at the hospitals.

Dr. ROBERT BOXALL said, if medical attendance were to be provided on the lines laid down, then, to be consistent, it would be necessary to provide nursing facilities, which were of equal importance. The Chinese had a system whereby they continued to pay their doctor while they were in health, but immediately they fell ill that payment ceased, and it would be well if some such plan were adopted in the compulsory insurance which was intended to be brought about. The whole effectiveness of sick insurance depended on its being properly organized, and that required very careful thinking out. He had been asked by several people what the agitation was about and who was keeping it going? Was it for the benefit of the medical profession? He could not deny that the agitation was started for that purpose. Was the question of thrift really at the bottom of it? If a compulsory form of insurance were brought about, would not doctors be bound in many ways as much as the working man himself. And would not it then be possible for the

doctor to say, when he had the whip hand, that he would have an eight-hour day? Working people did not often appreciate how long a physician or surgeon worked, and it would never do for a case of illness or accident to be kept waiting because the doctor was enjoying leisure.

Dr. BUIST, in reply, said the *raison d'être* for the series of discussions was the existence of a class unable to pay at their homes for adequate medical treatment and attendance primarily. The hospitals were staffed by highly-skilled men who were expert in their work, and if the general practitioner found he was not likely to be paid, and the patient could not get the necessaries at home, he sent him to the hospital, and thus helped to perpetuate the abuse, thus making the hospital and the specialized staff perform the functions of the general practitioner. If hospital abuse was primarily due to that class, it was necessary to reduce that class as much as possible. Dr. Keay had dissented from his (Dr. Buist's) view that the development of voluntary insurance systems was the most readily available method. He had no doubt the ultimate solution would be found in a national system.

The resolution having been put to the meeting and carried unanimously, the proceedings terminated.

HAMPSTEAD DIVISION.

A MEETING of this Division was held on Friday, January 11th, at 8 30 p m., at the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. MACEVOY in the chair.

Minutes.—The minutes of the meeting of January 7th were not ready.

Report of Division to Branch.—The HONORARY SECRETARY read the report of the Division for 1906 to the Branch, giving details of attendance and financial report. The membership was now 190. There had been four resignations during the year. The average attendance at meetings was 20.4. There were twelve Divisional meetings and sixteen Committee meetings. The expenses for 1906 were £45 11s. 11½d., and there was a deficit of £4 17s. 5½d. Application had been made to the Finance Committee of the Branch for £5 to meet this deficit. The Hampstead Hospital expenses were £14 0s. 6d.; the Contract Practice Subcommittee had spent £5 0s. 3d.; printing of resolutions of the Division intended for the Representative Meeting stationery and postage of the same, £2 5s. 6d.; extra SUPPLEMENTS and reminders on the out-patient question. £1 9s. 5d.; ordinary expenses for ten meetings of Divisions, etc. (excluding the two Hampstead Hospital meetings), were £22 16s. 3½d. Out of this £22 16s 3½d., about £3 was spent on miscellaneous postage (excluding postage for Divisional meetings). If the items of expenditure for 1906 were arranged under the headings required for reports of Divisions to Branches, they read: Hire of rooms, £8 9s. 0d.; printing, £12 11s. 3d.; stationery, £2 14s. 8d.; postage, £16 13s.; clerical aid, £2 19s. 9d.; miscellaneous expenses, £2 4s. 3½d. The receipts from the Branch had been £40, and there was a balance on January 1st, 1906, of 14s. 6d., leaving a deficit of £4 17s. 5½d., as previously mentioned. The report was then approved by the meeting. Mr. ARMIT asked if Dr. Yeld knew who the members were who had resigned, and what was the cause of their resignation. The HONORARY SECRETARY said he would make inquiries.

Opsonic Indices.—Dr. W. D'ESTE EMERY then gave a lecture on opsonic indices, which was followed by a good discussion.

Vote of Thanks.—The proceedings terminated with a hearty vote of thanks to the lecturer, who gave a very lucid explanation of his difficult subject.

LAMBETH DIVISION.

A MEETING of the Lambeth Division was held at the Lambeth Infirmary, Brook Street, Kennington Road, S.E., on Friday, January 25th, at 4 p m., Dr. ROBERT CAPES in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read by the SECRETARY and confirmed.

Paper.—Mr. G. J. JENKINS, F.R.C.S., Surgeon to the German Hospital, read a paper on abscesses in the peritoneal cavity, illustrating his paper by several diagrams. The paper was afterwards discussed by Drs. LEFTWICH, HERBERT TAYLOR, and CLATWORTHY. A vote of thanks to Mr. Jenkins for his paper was proposed by Dr. DENNING and seconded by Dr. M. DUKE. This was put to the meeting and carried unanimously.

Visit to the Lambeth Infirmary Wards.—Dr. QUARRY and members of the Medical Staff of the Infirmary then conducted the members round the wards and showed several cases of great interest and demonstrated upon the same.

Votes of Thanks.—The CHAIRMAN then proposed:

> That a hearty vote of thanks be accorded to the guardians of the Borough of Lambeth, for the use of the Board Room, and to Dr. Quarry and members of the medical staff for showing the cases of interest in the wards of this up-to-date infirmary.

This was put to the meeting and carried with acclamation.

EDINBURGH BRANCH:

NORTH-WEST DIVISION.

A MEETING of the Division was held on Tuesday, January 15th, in the Hall of the Royal College of Physicians, Dr. T. F. S. CAVERHILL in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and approved.

Congratulations to Dr. Norman Walker.—The CHAIRMAN, in the name of the Division, congratulated Dr. Norman Walker on his election to the General Medical Council.

Annual Representative Meeting.—Dr. CAVERHILL, the Representative of the Division to the Representative Meeting, made a verbal report, in the course of which he drew attention to the far reaching nature of the proposals considered, and referred more particularly to the investigation into the economic conditions of contract medical practice. After some discussion a hearty vote of thanks was returned by the Division to Dr. Caverhill.

Notices Remitted from Branch Council.—Notices remitted to the Division from the Edinburgh Branch Council were then considered, and the following motions were carried by the meeting:

1. The Division approves of the compulsory notification of tuberculous phthisis, and suggests that the Branch Council should draw up recommendations for its administration and submit them to the Branch.
2. The Division considers that measles ought to be replaced on the list of notifiable diseases, and suggests that the Branch Council arrange the financial conditions under which notification be made.

LANCASHIRE AND CHESHIRE BRANCH.

Scientific and Clinical Meeting.

OWING to the kindness of the Council of the Liverpool Medical Institution, their spacious rooms in Mount Pleasant were at the disposal of the Branch on the afternoon of Wednesday, January 23rd, and a very successful scientific and clinical meeting was held. Sir JAMES BARR presided, and 86 members of the Branch were present.

Specimens.—The following specimens were shown, chiefly in the upper library:—Dr. ALEXANDER (Liverpool): An umbrella handle removed from the transverse colon; it was passed accidentally into the rectum and worked its way back to the hepatic flexure, where it produced perforation and whence it was successfully removed. Dr. BUCHANAN (Liverpool): Sections and film preparations of marrow and abnormal blood states. Dr. HENRY ASHBY (Manchester): Five specimens illustrating congenital hypertrophic stenosis of the pylorus. Dr. GROSSMANN (Liverpool): A new refractometer. Mr. LARKIN (Liverpool): A breast removed from a lady of 65 and containing three different kinds of tumour—a scirrhus, a fibroma, and a calcified tumour. Dr. TAYLOR and Dr. ORAM: Numerous photographs and drawings of skin diseases, and an excellent series of skiagrams showing the stages of absorption of grey oil when injected intramuscularly.

Cases.—The following were demonstrated in the clinical rooms:—Dr. BARENDT (Liverpool): Various skin diseases, including prurigo ferox, psoriasis, and pustular eczema, commencing in a septic wound. Mr. BARK (Liverpool): Two cases of epithelioma of the vocal cords treated by thyrotomy (1) ten years, (2) eighteen months, after operation. Cases showing the results of the various modern operations for mastoid disease. Dr. GORDON GULLAN (Liverpool): Case (male) of aneurysm of the arch of the aorta, under treatment by intramuscular injections of gelatin. Case (male) of peripheral neuritis with ataxic symptoms. Dr. STOPFORD TAYLOR (Liverpool): Cases illustrating various diseases of the skin. Dr. A.

Nimmo Walker (Liverpool): A case of pulsating exophthalmos treated by ligature of the common carotid artery. Two cases of successful removal of foreign bodies from the eye.

Papers.—The following papers were read in the lecture theatre:—Dr. Henry Ashby (Manchester): On congenital hypertrophic stenosis of the pylorus (illustrated by specimens). Mr. Stanmore Bishop (Manchester): Some conditions of the gall bladder found during operations for biliary calculi (illustrated by specimens and drawings). Mr. R. Craig Dun (Liverpool): The treatment of hypospadias (illustrated by diagrams). Mr. Newbolt (Liverpool): On some cases of suppurative peritonitis due to perforative appendicitis. Dr. Buchanan (Liverpool): Case of acute haemorrhagic pericarditis, paracentesis pericardii, acute iodism, recovery (illustrated by lantern transparencies). The following papers were communicated, but in the unavoidable absence of the readers were taken as read:—Dr. Bradshaw (Liverpool): Spontaneous fracture of urinary calculi. Dr. Helme (Manchester): Acute intestinal obstruction associated with fibroma uteri and malignant stricture of the colon, for which total abdominal hysterectomy and resection of the colon, with end-to end anastomosis, were performed. Dr. Nathan Raw (Liverpool): On the treatment of chorea.

Radiographic Demonstration.—Mr. C. Thurstan Holland (Liverpool) showed with Mr. W. Thelwall Thomas (Liverpool) a series of renal calculi and radiographs and with Dr. Buchanan (Liverpool) radiographs illustrating several abnormal lung conditions.

Dinner.—At 7 p.m. the Liverpool University Clinical School dinner was held at the Adelphi Hotel, Sir James Barr in the chair. Members of the Branch were cordially invited to be present, and many attended.

ULSTER BRANCH.

The winter meeting of this Branch was held in the Medical Institute, Belfast, on Wednesday, January 30th, Dr. St. George Lisburn in the chair.

Confirmation of Minutes. The minutes of the previous meeting were read and confirmed.

Apologies for Non-attendance. The Honorary Secretary (Dr. Cecil Shaw) announced that apologies for non-attendance had been received from the President (Professor Symington), who had to conduct an examination in London on that day, and from Professor Anderson of Galway and Dr. Thos. Mclaughlin of Derry.

New Members.—The report of Council (read by the Honorary Secretary) stated that nine new members had been elected: Drs. Jones (Kilkeel), McDonald (Portadown), Rowland (Crossgar) McCloskey (Carrigart), Steel (Armagh), Flood (Bundoran), Robert Kennedy, R.N., R. R. Leathem, and F. C. Smyth (Belfast).

Medical Provident Fund.—Dr. R. M. Fraser read a short communication on a Medical Provident Fund. Several members suggested that the subject was too large and important to discuss at the moment, and that it should be the subject of a special motion of which due notice should be given.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

[illegible]

[illegible]

[illegible]

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Leinster Branch.—The annual meeting of the Leinster Branch will be held in the Royal College of Physicians, Dublin, on Saturday, February 23rd, at 4.30 p.m.—Arthur H. White, Honorary Secretary.

Metropolitan Counties Branch: City Division.—The next general meeting will be held on Tuesday, February 19th, at 4 p.m., at the Great Eastern Hotel, Liverpool Street, E.C. Agenda: (1) Minutes. (2) Letters. (3) Questions. (4) Report of Executive Committee on (i) action taken in the L.C.C. election, (ii) recommendations of the Ethical Committee of the Association on medical consultation. (5) Any other business.—E. W. Goodall, Honorary Secretary.

Metropolitan Counties Branch: Hampstead Division.—The meeting announced for this day, Friday, February 8th, will not take place.—R. Yeld, Honorary Secretary, 29, Platt's Lane, Hampstead, N.W.

Metropolitan Counties Branch: Lambeth Division.—The next meeting of this Division will be held in the Court Room of Guy's Hospital, London Bridge S.E., on Thursday, February 28th, at 4 p.m. Dr. Frederick Taylor (Senior Physician to Guy's Hospital, President elect of the Metropolitan Counties Branch) will read a paper on Some Unusual Forms of Pyrexia. It is hoped by the Committee that as many members as possible of the Lambeth Division (with their medical friends) will attend.—W. Alexander Atkinson, M.D., Honorary Secretary Lambeth Division, 216, Camberwell New Road, S.E.

Metropolitan Counties Branch: Westminster Division.—A meeting of the Division will be held at the St. James's Vestry Hall, 195, Piccadilly, on Wednesday, March 13th, at 8.30 p.m. Dr. W. Knowsley Sibley will open a discussion, and move the following resolution: "That in view of the mismanagement and abuse of hospitals, the Westminster Division considers the welfare of the public and the interests of the medical profession would be best obtained by the establishment of a Central Hospital Board for London."—F. J. McCann, M.D., Honorary Secretary.

North Wales Branch: Denbigh and Flint Division.—A meeting of this Division will be held in Wrexham, on Friday, February 15th, at 3.45 p.m.—E. D. Evans, Honorary Secretary, Bodeirian, Wrexham.

Northern Counties of Scotland Branch.—A clinical meeting of the Branch will be held in Inverness on Friday March 1st. Particulars as to meeting place and hour of meeting will be communicated to members by circular.—J. Munro Moir, M.D., Honorary Secretary, 4, Ardross Terrace Inverness.

Staffordshire Branch.—The second general meeting of the Session will be held at the North-Western Hotel, Stafford, on Thursday, February 28th. The President, Mr. Chas. Reid, will take the chair at 5.20 p.m. Business: (1) Minutes of the last general meeting. (2) Correspondence. (3) Dr. Ridley Bailey has given notice that he will move a resolution altering the time of meeting at Wolverhampton. (4) Exhibition of living cases. (5) Paper: Notes of a Case of Death due to Haemorrhage from Ulcer of the Duodenum, caused by Stone on the Kidneys—Percy R. Mander. (6) Paper: Notes on a Case of Pyloric Obstruction—Alfred H. Carter. (7) Angina Pectoris: Notes on a Case, with Comments—F. Geoghegan. (8) Exhibition of Pathological Specimens, etc. Dinner at 7.30 p.m. Charge 5s. 6d.—G. Petgrave Johnson, Honorary General Secretary, Stoke-on-Trent.

CENTRAL MIDWIVES BOARD.

A meeting of the Central Midwives Board was held on January 31st at Caxton House, Westminster, with Dr. E. B. Chamneys in the chair.

Examinations in Ireland.

A letter was read from the Assistant Under Secretary for Ireland inquiring on behalf of the Lord Lieutenant, whether there would be any objection on the part of the Board to steps being taken to amend the Midwives Act, 1902, so as to enable the Board to hold examinations in Ireland. The Board decided to reply that it realizes the difficulties of an extension of the Midwives Act, 1902, to Ireland, but would look with favour on a new Act for Ireland framed on the lines of the present Act.

The Roll of Midwives.

The Secretary was instructed by the Board to give notice to the local supervising authority of any application for the restoration of a name to the Roll.

The Board resolved to ask the Privy Council whether the Board has power under the Midwives Act to frame a rule providing for the removal from the Roll of the name of a woman wishing to retire.

Training Centre at Chesterfield.

A letter was read from Dr. Sidney Barwise, County Medical Officer for Derbyshire, submitting, for the approval of the Board, a scheme for the establishment of a training centre for midwives at Chesterfield. The Board decided that the scheme be approved in principle.

Certificate under Section 2.

A letter was read from a certified midwife as to the circumstances under which she obtained the certificate of the Board under Section 2 of the Midwives Act. The Board directed that the medical practitioner who certified that the applicant had been in bona fide practice as a midwife since January, 1901, should be asked for an explanation of the circumstances under which he signed the certificate.

A Midwife Censured.

The charge alleged against the midwife A. L. Bellis by the Local Supervising Authority for Southampton, was considered, and the Board decided that she be severely censured on her own admission of having made a false declaration of a stillbirth.

December Examination.

The Secretary of the Board reported that at the December examination there were 208 candidates, of whom 153 passed. There were 55 failures, the percentage being 26 4.

Vital Statistics.

EPIDEMIC MORTALITY IN LONDON.

THE accompanying diagram shows the prevalence of the principal epidemic diseases during the fourth, or autumn, quarter of the year. The fluctuations of each disease and its relative fatality compared with that in the corresponding periods of the four preceding years can thus be readily seen.

Small-pox.—No fatal case of small-pox was registered in London during last quarter, nor in any of the three preceding quarters. No small-pox patients were admitted into the Metropolitan Asylums Hospitals during the latter half of 1906; the numbers admitted during the first and second quarters of the year were 13 and 15 respectively.

Measles.—The deaths from measles, which had been 684, 765 and 256 in the three preceding quarters, further declined last quarter to 213, showing a decline of 219 from the corrected average number in the corresponding period of the four preceding years. Among the various metropolitan boroughs this disease was proportionately most fatal in Bethnal Green, Stepney, Poplar, Bermondsey, and Woolwich.

Scarlet Fever.—The fatal cases of scarlet fever, which had been 129, 144, and 103 in the three preceding quarters, rose again to 192 last quarter, and were 25 in excess of the corrected average number. Scarlet fever showed the highest proportional mortality last quarter in St. Marylebone Finsbury, Shoreditch, Bethnal Green, Bermondsey, Battersea, and Greenwich. The number of scarlet fever cases in the Metropolitan Asylums Hospitals, which had been 2,353, 2,765, and 3,140 at the end of the three preceding quarters, had further risen to 3,787 at the end of last quarter; 5,584 new cases were admitted during the quarter, against 3,01 , 4,146, and 3,113 in the three preceding quarters.

Diphtheria.—The deaths referred to diphtheria in London which had been 147, 180, and 183 in the three preceding quarters, further rose to 213 last quarter, and were almost equal to the corrected average number. Among the various metropolitan boroughs this disease was proportionately most fatal in Hammersmith, Fulham, Bermondsey, Wandsworth, Greenwich, and Woolwich. The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of last quarter was 865, against 924, 752, and 854 at the end of the three preceding quarters; 1,320 new cases were admitted during the quarter, against 1,015, 1,366, and 1,612 in the three preceding quarters.

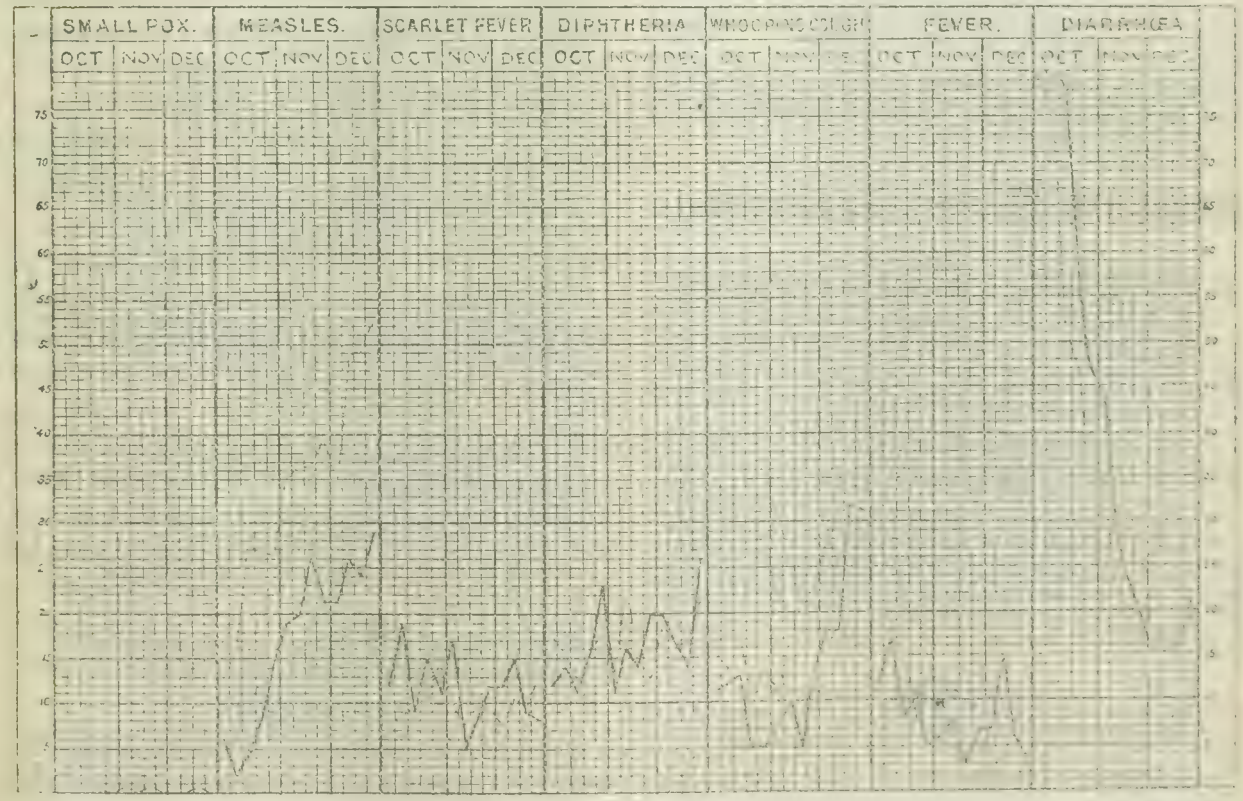
Whooping-Cough.—The fatal cases of this disease, which had been 458, 406, and 180 in the three preceding quarters, further declined last quarter to 180, and were 75 fewer than the corrected average number in the corresponding quarter of the four preceding years. The greatest proportional mortality from this disease occurred in Finsbury, Shoreditch, Bethnal Green, Southwark and Camberwell.

"*Fever.*" Under this heading are included deaths from typhus, from enteric fever, and from ill-defined pyrexia. The deaths referred to these different forms of "fever," which had been 45, 60, and 75 in the three preceding quarters, further rose last quarter to 109, but were 41 below the corrected average number. One from ill-defined pyrexia was registered during the quarter, but not any from typhus. Among the various metropolitan boroughs the greatest proportional mortality from enteric fever was recorded in Hammersmith, Finsbury, the City of London, Bethnal Green, Greenwich, and Woolwich. The Metropolitan Asylums Hospitals contained 134 enteric fever patients at the end of last quarter, against 65, 93, and 139 at the end of the three preceding quarters; 333 new cases were admitted during the quarter, against 166, 184, and 251 in the three preceding quarters.

Diarrhœa.—The 592 deaths from diarrhœa in London last quarter were 112 in excess of the corrected average number in the corresponding periods of the four preceding years. This disease was proportionally most fatal in Fulham, Hackney, Holborn, Finsbury, Shoreditch, Stepney, and Poplar.

In conclusion, it may be stated that the 1,459 deaths from these principal infectious diseases in London last quarter were more than 14 per cent below the corrected average for the corresponding periods of the four preceding years. The lowest death-rates from these diseases in the aggregate were recorded in Hampstead, Stoke Newington, the City of London the City of Westminster, Chelsea, Kensington, and Lambeth; and the highest rates in Woolwich, Bermondsey, Bethnal Green, Fulham, Stepney, and Finsbury.

DEATHS FROM EPIDEMIC DISEASES IN LONDON DURING THE FOURTH QUARTER OF 1906.



NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the four preceding years 1902-5.

* In the first and second weeks of the quarter the recorded deaths from diarrhœa were 135 and 93 respectively, and the average numbers were 94 and 87.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,550 births and 5,097 deaths were registered during the week ending Saturday last, February 2nd. The annual rate of mortality in these towns, which had been 20·7, 18·1, and 18·2 per 1,000 in the three preceding weeks, rose again last week to 19·8 per 1,000. The rates in the several towns ranged from 9·7 in King's Norton, 11·6 in Hornsey, 11·7 in West Ham, 11·9 in Leyton, 12·1 in Coventry, 12·6 in Northampton, 13·0 in Reading, and 13·1 in Hastings, to 25·1 in Rotherham, 25·2 in Warrington, 25·6 in Newport (Mon.), 25·8 in Preston, 28·6 in Tynemouth, 30·0 in Swansea, and 31·8 in Middlesbrough. In London the rate of mortality was 20·8 per 1,000, while it averaged 19·4 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·5 per 1,000 in the seventy-six large towns; in London this death-rate was equal to 1·4 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3·2 in Swansea, 3·3 in Rotherham, 3·7 in Hull, 3·9 in Stockton-on-Tees, 4·5 in St. Helens, 4·6 in Middlesbrough, 5·5 in Newport (Mon.), and 5·9 in Warrington. Measles caused a death-rate of 2·0 in Devonport, 2·2 in Hull, 3·4 in St. Helens and in Newport (Mon.), and 5·2 in Warrington; diphtheria of 1·3 in Aston Manor, 1·4 in Merthyr Tydfil, 1·5 in Middlesbrough, 1·7 in Derby, and 2·1 in Newport (Mon.); whooping-cough of 1·7 in Willesden, 2·1 in Walthamstow and in Swansea, and 2·2 in Preston; "fever" of 2·0 in Stockton-on-Tees; and diarrhœa of 1·2 in Rhondda and 2·6 in Middlesbrough. The mortality from scarlet fever showed no marked excess in any of the large towns. No fatal case of small-pox was registered last week in any of the seventy-six towns, and no small-pox patients were under treatment during the week in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3,523, 3,405 and 3,292 at the end of the three preceding weeks, had further declined to 3,176 at the end of last week; 319 new cases were admitted during the week, against 285, 325, and 307 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, February 2nd, 837 births and 712 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 20·8, 20·5, and 19·1 per 1,000 in the three preceding weeks, rose again to 20·5 per 1,000 last week, and was 0·7 per 1,000 above the mean rate last week in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 13·4 in Greenock and 15·6 in Leith to 23·0 in Glasgow and 24·7 in Paisley. The death-rate from the principal zymotic diseases in these towns averaged 2·5 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 374 deaths recorded in Glasgow included 3 which were referred to measles, 7 to diphtheria, 19 to whooping-cough, 4 to "fever," 9 to diarrhœa, and 16 to cerebro-spinal fever. Four fatal cases of diarrhœa and 3 of cerebro-spinal meningitis were recorded in Edinburgh; 2 of diarrhœa in Dundee; 5 of measles in Aberdeen; 2 of diphtheria and 2 of cerebro-spinal meningitis in Paisley; and 2 of diarrhœa and 1 of cerebro-spinal meningitis in Leith.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, January 26th, 476 births and 450 deaths were registered in six of the principal Irish towns, as against 503 births and 434 deaths in the preceding period. The annual death-rate in these towns, which had been 24·0, 24·6, and 20·5 per 1,000 in the three preceding weeks, rose to 21·7 per 1,000 in the week under notice, the figure being 3·6 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 13·6 in Waterford and 16·4 in Limerick to 22·8 in Belfast and 32·6 in Dublin. The zymotic death-rate in the six towns averaged 0·8 per 1,000 or 0·1 per 1,000 less than during the preceding period, the highest figure—1·4—being recorded in Belfast, while in Londonderry and Limerick again no deaths were registered under the heading. Whooping-cough was the cause of [illegible] in Belfast and 1 in Cork.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The undermentioned Surgeons are promoted to be Staff Surgeons, with seniority as stated: W. L. MARTIN, F.R.C.S., May 13th, 1904; first commission, dated May 14th, 1904. S. CROSBIE, May 13th, 1904; first commission, dated May 14th, 1904. A. C. BIAS, May 27th, 1905; first commission, dated May 28th, 1905. W. HEWITT, M.B., November 20th, 1905; first commission, dated November 21st, 1905. C. TAYLOR, M.B., November 20th, 1905; first commission, dated November 21st, 1905. W. H. POPE, November 20th, 1905; first commission, dated November 21st, 1905. G. E. DUNCAN, M.B., seniority from May 23rd, 1906; first commission, dated May 24th, 1906. W. W. KEIR, M.B., seniority from November 4th, 1906; first commission, dated November 5th, 1906.

Fleet Surgeon [illegible] has been appointed to the Admiralty [illegible] and Inspector for the Physical Training Establishments.

Surgeon [illegible] has been appointed to the Victory for disposal.

Surgeon [illegible] has been appointed to the Victory for disposal.

Surgeon [illegible] has been appointed to the Victory for disposal

HOLLICK, B. S., M.R.C.S., L.R.C.P.Lond., District and Workhouse Medical Officer of the Sturminster Union.

JOHNSTONE, Thomas, M.D., M.R.C.P., Honorary Consulting Physician to Coronation Hospital, Ilkley.

LOCKYER, Cuthbert, M.D., B.S., F.R.C.S., M.R.C.P., Obstetric Physician to Out-patients, Great Northern Central Hospital, and Physician to Out-patients, British Lying-in Hospital.

MCILROY, A. Louise, M.D., Gynaecologist to the Victoria Infirmary, Glasgow.

MCVAIL, J. R., M.B., Resident Assistant Medical Officer, Newcastle-upon-Tyne Union Workhouse.

MASON, E. R. F., L.R.C.P. and S.Edin., Medical Officer of Health, Gomersal Urban District.

SAWARD, A. H. M., M.R.C.S., L.R.C.P.Lond., Certifying Factory Surgeon for the Richmond District, co. Surrey.

SMITH, Walter Heaton, M.R.C.S. Eng., L.R.C.P. Lond., Senior House-Surgeon to the Derby Hospital and Infirmary.

TAYLOR, R. W., L.S.A., District Medical Officer of the Dewsbury Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 5s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

ADDISON.—On January 30th, at Pretty Corner, Northwood, the wife of Christopher Addison, M.D., F.R.C.S., of a daughter.

HAUGHTON.—At Tannachie, Falmouth, on Sunday, February 3rd, wife of J. Welby Haughton, L.R.C.P.I., of a son.

MARRIAGE.

CUFFE—HANCOCK.—On January 31st, at St. Langton's Church, Woodhall Spa, by the Rev. F. Bennell, Major R. Cuffe, V.D., of Woodhall Spa, to Grace Margaret Hancock, eldest daughter of Charles Robert Hancock, Esq., Solicitor, The Uplands, Walmley, nr. Bristol.

DEATHS.

FORBES.—On January 31st, at Sandiacre, Nottingham, Robert Thomson Forbes, M.B. and C.M., aged 57.

GORNALL.—On February 4th, at Grappenhall, Warrington, John Guest Gornall, M.A., M.B.Cantab., Medical Officer of Health for Warrington, Medical Superintendent of the Fever Hospital, aged 40.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Clinical evening. Cases will be exhibited by Drs. O. K. Williamson, T. D. Savill, James Collier, Cecil Wall, Graham Little, Leonard Guthrie, F. J. Poynton, Parkes Weber, and Messrs. L. B. Rawling, A. E. Barker, and Mr. C. A. R. Nitch. (Patients will be in attendance at 8 p.m.)

TUESDAY.

MEDICO-LEGAL SOCIETY, 22, Albemarle Street, W., 8.30 p.m.—Exhibition of Medico-Legal Specimens. Discussion on Suicide and Sanity, to be opened by Dr. Clave Shaw.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 p.m.—Mr. J. D. Malcolm: On the Condition of the Blood Vessels During Shock. Mr. Edred M. Corner: Fractures of the Odontoid Process of the Axis. Epidiascope Demonstration.

WEDNESDAY.

DERMATOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, 5.15 p.m.

HUNTERIAN SOCIETY, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Paper by Dr. Langdon Brown on Acetonuria, its Clinical Significance and Treatment.

THURSDAY.

BRITISH GYNAECOLOGICAL SOCIETY, Hanover Square, W., 8 p.m.—The President's (Mr. W. D. Spanton) Introductory Address. Paper: Dr. James Oliver, a Study of Suppuration of the Ovary with Illustrative Cases.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Tichborne Street, Edgware Road, W., 8.30 p.m.—Papers: (1) Mr. Raymond Johnson: A Case of Fatal Extravasation of Urine from the Ureters from Ulceration by a Minute Calculus. (2) Dr. T. B. Hyslop: Psychorrhythm and Recurrent Psychoses.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W., 8 p.m.—Clinical meeting. Mr. Ludford Cooper: Paralysis of the Vertical Movements of Both Eyes. Mr. A. S. Morton: Case of Siderosis of the Eyeball. Mr. M. L. Hepburn: A Case of Polycoria Associated with Chronic Glaucoma. Mr. Waren Tay: A Case of Tuberculosis Diagnosed from Ophthalmic Appearance of Fundus.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 4 p.m.—Hunterian Oration by Henry T. Butlin, D.C.L., F.R.C.S.

FRIDAY.

EPIDEMIOLOGICAL SOCIETY, 11, Chandos Street, W., 8.30 p.m.—Paper: Recent Researches into the Epidemiology of Malta Fever by Colonel D. Bruce, C.B., F.R.S.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN, 11, Chandos Street, Cavendish Square, W., 5 p.m.—Clinical evening for the Exhibition of Cases, followed by Discussion. Patients in attendance from 4.30 p.m.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Wednesday, 5 p.m.: External Ear.

CHARING CROSS HOSPITAL, W.C.—Thursday, 4 p.m.: Mental.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m.: Some Points of Importance in the Treatment of Dental Conditions in Children.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—Clinics: Monday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Throat, Nose, and Ear, 4 p.m. Tuesday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Skin, 4 p.m. Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30. Out-patient Demonstrations: Medical and Surgical, 10 a.m. daily; Ears and Throats, noon, Monday and Thursday; Eyes, 11 a.m., Wednesday and Saturday; Skin, noon, Tuesday and Friday. Special Lecture. Tuesday, 4 p.m., Eczema.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, Opsonins in Relation to the Specific Treatment of Tuberculosis. Tuesday, The Relation of Epilepsy to Insanity. Wednesday, Unsoundness of Mind not always Insanity. Thursday, The Treatment of Some Common Skin Affections.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Hysteria. Friday, 3.30 p.m.: Surgery of the Nervous System.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the arrangements for next week: Monday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out patient, Throat, Nose, and Ear Clinics; *x*-ray Demonstration. Tuesday, 10.30 a.m.: Medical Out-patient Clinic. 2.30 p.m.: Surgical Operations; Surgical and Gynaecological Out-patient Clinics. 4.30 p.m.: Lecture, Demonstration on the Administration of Anaesthetics. Wednesday, 2.30 p.m.: Dermatological, Ophthalmological, and Medical Out patient Clinics. Thursday, 2.30 p.m.: Gynaecological Operations; Medical and Surgical Out-patient Clinics. 3 p.m.: Medical In-patient Clinic. 4.30 p.m.: Lecture, Acroparaesthesia (with Cases). Friday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out-patient Clinic; Surgical Operations; Ophthalmological Clinic. 3 p.m.: Medical In-patient Clinic.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, Hammersmith Road, W.—The following are the arrangements for next week: Daily: 2 p.m., Medical and Surgical Clinics; 2.30 p.m., Operations and *X* Rays. Monday and Thursday, 2.30 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2.30 p.m.: Diseases of the Skin. Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday, 2.30 p.m.: Diseases of Women. Lectures—Monday, 12 noon: Pathological Demonstration. Monday, 5 p.m.: Clinical. Tuesday: Bilharzial Disease. Wednesday: Practical Medicine. Thursday: Malunited Fractures and Unreduced Dislocations of the Elbow. Friday: Anaesthetics.

BOOKS, ETC., RECEIVED.

New York: J. Wiley and Sons; and London: Chapman and Hall, Ltd.: Physical Chemistry in the Service of Medicine. Seven addresses by Dr. W. Pauli. Translated by Dr. M. H. Fischer. 1907. 5s. 6d.

The Toxins and Venoms and their Antibodies. By Em. Pozzi-Escot. Translated by A. I. Cohn, Phar.D. 1906. 4s. 6d.

The Practical Medicine Series. Edited by G. P. Head, M.D. Vol. IX. Anatomy, Physiology, Pathology, Dictionary. Edited by W. A. Evans, M.S., M.D., A. Gehrmann, M.D., and W. Healy, A.B., M.D. 1906. Chicago: The Year Book Publishers; and Glasgow: G. Gillies and Co. 5s.

The International Scientific Series. Edited by F. Legge. The Mind and the Brain. By A. Binet. Authorized translation of "L'Ame et le Corps." London: Kegan, Paul, Trench, Trübner, and Co., Limited. 1907. 5s.

Die Koronararterien des menschlichen Herzens unter normalen und pathologischen Verhältnissen. Dargestellt in stereoskopischen Röntgenbildern. Von Dr. F. Jamin and Dr. H. Merkel. Jena: G. Fischer. 1907. M 10.

French Law and Customs for the Anglo Saxon: A Guide for Everyday Use. By A. S. Browne. Second Edition. London: The Health Resorts Bureau. 1907. 2s. 6d.

The Essential Similarity of Innocent and Malignant Tumours: A Study of Tumour Growth. By C. W. Cathcart, M.A., M.B., C.M., F.R.C.S. Bristol: J. Wright and Co.; London: Simpkin, Marshall. 1907. 9s. 6d.

An Atlas of Illustrations of Clinical Medicine, Surgery, and Pathology. Compiled for the New Sydenham Society. Fasciculus XXV *bis*: Variola, Vaccinia, and Varicella. London: H. K. Lewis. 1906. £1 1s.

Human Personality and its Survival of Bodily Death. By F. W. H. Myers. Edited by L. H. Myers. London: Longmans, Green, and Co. 1907. 10s. 6d.

Anaesthetics and their Administration. By F. W. Hewitt, M.V.O., M.A., M.D. Third Edition. London: Macmillan and Co. 1907. 15s.

Mémoires présentés à l'Institut Egyptien et publiés sous les auspices de S. A. Abbas II. Khédive d'Egypte. Tome V. Fascicule I. A Contribution to the Study of Mummification in Egypt. By G. Elliott Smith. Le Caire. 1906.

Traité des Maladies Familiales et des Maladies Congénitales. Par le Dr. E. Apert. Paris: J. B. Baillière et Fils. 1907.

Traite de Maladies de la Voix Chantée. Par le Dr. A. Perretière. Paris: A. Poinat. 1907. Fr. 8.

The Treatment of Uterine Retrodeviation. By G. A. Casalis, M.B., C.M. Edin. Capetown: T. Maskew Miller. 1906.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
FEBRUARY.	
10 Sunday ...	
11 MONDAY ...	LONDON: Ethical Subcommittee, 2 p.m.
12 TUESDAY ...	LONDON: Organization Committee, 11 a.m. LONDON: Special Finance Committee, 3 p.m.
13 WEDNESDAY	ALTRINCHAM DIVISION, *Lancashire and Cheshire Branch*, Brooklands Hotel, near Sale, 5.50 p.m.
14 THURSDAY...	
15 FRIDAY ...	BORDER COUNTIES BRANCH, Carlisle. DENBIGH AND FLINT DIVISION, *North Wales Branch*, Wrexham, 3.45 p.m.
16 SATURDAY...	
17 Sunday ...	
18 MONDAY ...	LONDON: Premises Committee, 2.30 p.m.
19 TUESDAY ...	CITY DIVISION, *Metropolitan Counties Branch* Great Eastern Hotel, Liverpool Street, E.C., 4 p.m.
20 WEDNESDAY	
21 THURSDAY...	
22 FRIDAY ...	EDINBURGH BRANCH, Royal Infirmary, Clinics and Demonstrations during the forenoon; Clinical Meeting, 4 p.m.; Dinner, North British Station Hotel, 6.30 p.m.
23 SATURDAY...	LEINSTER BRANCH, Annual Meeting, Royal College of Physicians, Dublin, 4.30 p.m.
24 Sunday ...	
25 MONDAY ...	
26 TUESDAY ...	
27 WEDNESDAY	BATH AND BRISTOL BRANCH, Bath.

Date.	Meetings to be Held.
FEBRUARY *(Continued).*	
28 THURSDAY...	LAMBETH DIVISION, *Metropolitan Counties Branch*, Court Room, Guy's Hospital, London Bridge S.E., 4 p.m. STAFFORDSHIRE BRANCH, North-Western Hotel, Stafford, 5.20 p.m.; Dinner, 7.30 p.m. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Balham (Hotel), 8.45 p.m WEST CUMBERLAND DIVISION, *Border Counties Branch*, Whitehaven, 4 p.m.
MARCH.	
1 FRIDAY ...	NORTHERN COUNTIES OF SCOTLAND BRANCH, Clinical Meeting, Inverness.
2 SATURDAY...	
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	
6 WEDNESDAY	LONDON: South-Eastern Branch Council, 3.15 p.m.
7 THURSDAY...	
8 FRIDAY ...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch.*
9 SATURDAY...	
10 Sunday ...	
11 MONDAY ...	
12 TUESDAY ...	
13 WEDNESDAY	WESTMINSTER DIVISION, *Metropolitan Counties Branch* St. James's Vestry Hall, 195, Piccadilly, 8.30 p.m.
14 THURSDAY...	
15 FRIDAY ...	
16 SATURDAY...	
17 Sunday ...	
18 MONDAY ...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follows:

Art. [illegible] registered in the United Kingdom [illegible] recognized by the Association [illegible] in any part of the United Kingdom, who is approved by the Branch Council [illegible] Association. The Council [illegible] Branch Council [illegible] Every Member [illegible] Member in accordance with the provisions hereof.

By-law 2.—Every [illegible] membership of the Association shall [illegible] Association and [illegible] Association and [illegible] Association and

SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 16TH, 1907.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

CENTRAL EMERGENCY FUND.

UNDER the present constitution of the British Medical Association as a limited liability company, registered under the Companies Acts as formed not for profit, no part of its funds can be applied centrally or by any Branch or Division for the benefit of any individual member, except by way of remuneration for services rendered to the Association.

This has been found to prevent the Association, its Branches and Divisions, from giving the financial support which it is deemed desirable or even necessary in the interests of the profession to give to members of the profession engaged in contract practice and similar disputes. The Council of the Association, therefore, with the approval of the Annual Representative Meeting of 1906, has instituted a fund called the Central Emergency Fund, to be maintained by voluntary subscriptions, and to be under the management of the Medico-Political Committee for purposes of action in disputes of the kind referred to.

The following are the

REGULATIONS OF THE FUND.

1. The Fund is created by voluntary subscription, to assist members of the profession in various parts of the country in maintaining the interests of the profession against organized bodies of the community.

2. All members of the profession are invited to contribute. Any contribution may be earmarked for use in specified disputes, or for application to special methods of carrying out the objects of the Fund, and when not so earmarked shall be deemed to be given for disposal at the discretion of the Medico-Political Committee in carrying out the general objects defined in Clause 1. At the termination of any special dispute for which funds may have been earmarked, the balance (if any) shall be merged in the General Fund.

3. Subject to the conditions defined in this Scheme, the Fund shall be under the entire control of the Medico-Political Committee of the British Medical Association, and shall be vested in the names of the Chairman of the Committee and the Treasurer of the Association, as representing the Committee. Payments shall only be made on the authority of a resolution of the Medico-Political Committee, or of a Subcommittee of the Medico-Political Committee acting under powers specifically delegated by the Committee.

4. The Fund may be applied for the promotion of the general objects stated in Paragraph 1 in any of the following ways:

(*a*) By a grant or grants to any individual practitioner to assist him in maintaining any position in which the Association shall have decided to support him, or to compensate him for losses which he shall have incurred through taking action approved by the Association.

(*b*) By a grant or grants to any Division or Branch of the British Medical Association, for its assistance in defraying expenses incidental to the conduct of local disputes falling within the scope of the objects of the Fund.

(*c*) By expenditure under direct supervision of the Medico-Political Committee, or of a Subcommittee of that Committee, for the purpose of any action which the Medico-Political Committee may deem necessary or advisable for the promotion of the general objects of the Fund.

The Medico-Political Committee, through its Contract Practice Subcommittee, has had recently brought under

its notice disputes in several parts of the country in which it may be necessary to take, for the maintenance of the interests of the profession, action requiring such financial support as the Central Emergency Fund has been instituted to provide, and members of the Association and other members of the profession are strongly urged, so far as their circumstances permit, to assist the Committee in this important work.

Contributions—whether of periodical subscriptions at such periods, yearly, quarterly, or monthly, as may be convenient to the subscribers, or of special donations—are received on behalf of the Medico-Political Committee by the Medical Secretary, 429, Strand, London, W.C., to whom Cheques and Postal Orders should be made payable, crossed "London and Westminster Bank, Bloomsbury Branch."

Forms of banker's orders will be supplied on application for those regular subscribers who may prefer to pay in this way.

MATTERS REFERRED TO DIVISIONS.

I.—MEDICAL INSPECTION OF SCHOOL CHILDREN.

The Annual Representative Meeting, 1906, received and approved reports of action taken by the Medico Political Committee for the furthering of legislation making compulsory the medical inspection of school children throughout the country.

As stated in those reports, a deputation waited upon the President of the Board of Education to urge the importance of such legislation, and this action led to the acceptance by the Government of an amended Clause of the Education Bill, then before Parliament, which met to a great extent the views put forward by the British Medical Association.

The Clause in its final form was as follows:

> 32 The powers and duties of a local education authority under Part III of the Education Act, 1902, shall include—
>
> . . . . . .
>
> (b) The duty to provide for the medical inspection of children before or at the time of their admission to a public elementary school, and on such other occasions as the Board of Education direct, and the power to make such arrangements as may be sanctioned by the Board of Education for attending to the health and physical condition of the children educated in public elementary schools.

The Annual Representative Meeting instructed the Medico-Political Committee to bring the matter in due course before the Divisions for consideration and local action; and, with reference to this instruction, the Medico-Political Committee watched closely the subsequent history of the Clause in question during the consideration of the Bill by both Houses of Parliament, and had the satisfaction of noting the approval of the Clause by very large majorities in both Houses.

The failure of the Education Bill to pass has deferred for a time legislation upon the subject, though the emphatic approval accorded by Parliament to the principle gives reason to believe that in some form a statutory provision of this nature must be made before long.

In the meantime the Medico Political Committee places before the Divisions suggestions to facilitate their consideration of the general subject, and particularly of the method in which the medical inspection of school children could be most effectively carried out.

Various suggestions have been made with this object, such as that the work of inspection should be delegated to the medical officers of health, or that medical inspectors should be appointed, or that arrangements should be made whereby the work could be carried out by general practitioners without special appointment.

Attention is drawn to the American experience in Boston and other places, which has shown the possibility of organizing inspection of schools by the general practitioners of a district without the appointment of any special officers for the purpose. Such a system would require local organization, which might with advantage be initiated by the Divisions of the Association, who would place their views before the Local Education Authorities when the proper time for this arrived. The Committee suggests that this matter would afford an excellent opportunity for demonstrating both to the medical profession and to the public the capability of the Divisions of the Association for usefulness in organization of matters affecting the medical profession and public health.

SPECIFIC QUESTIONS REFERRED TO THE DIVISIONS.

1. Does the Division consider that the medical inspection of school children should be assigned—
   (*a*) to the medical officers of health? or
   (*b*) to medical officers specially appointed? or
   (*c*) be distributed among those general practitioners of the district who are prepared to undertake a proportion of the duty?
2. If the method (*c*) is preferred, how does the Division propose to carry this out locally?
3. Is there evidence of prevalence within the Division area of the practice of teachers sending school children, found to be ill, irrespective of their social status, to hospitals, instead of referring them to their family medical attendant?
4. If so, what steps, if any, has the Division taken, or is the Division taking, to prevent this abuse?

II.—THE ETHICAL ASPECTS OF MEDICAL CONSULTATION.

The Annual Representative Meeting of the Association at Leicester in July, 1905, adopted the following instruction to the Central Ethical Committee:

> "That the Ethical Committee be requested to consider the relative ethical position of consultants and the medical practitioner in attendance to each other, and to the patients, and report." (*Minute* 230).

The Central Ethical Committee, having very carefully considered this reference, reports thereon as follows:

Form of Report.

In order that the deliberations of the Association upon this subject may have a practical issue, the Committee has deemed it expedient to frame as Recommendations for adoption by the Representative Meeting, after a reference to the Divisions if thought necessary, a series of propositions which, being approved by the Association, would serve as a short code of rules for the guidance of members of the Association, and of the profession generally, when concerned in the circumstances to which these rules relate.

These Recommendations form the conclusion of the report and are preceded by a Memorandum in which the general principles underlying the subject are examined and considerations stated upon which the Recommendations are based.

MEMORANDUM.

Meaning of the term "Consultant."

The Committee has considered carefully the meaning to be attached to the term "consultant" as contained in the reference, particularly whether this term is to be understood as signifying a special class of medical practitioners. The context appears to the Committee to indicate that such a restriction of the inquiry was not intended by the Representative Meeting. It has, however, been represented to the Committee that the formal recognition of a distinctive class of practitioners who avowedly confine their practice to treating patients in co-operation with the ordinary medical attendant, would be advantageous to the profession and to the community, and the Committee has deemed it to be a part of its duty under the reference to devote a special section of the report to an examination of the advisability and practicability of such recognition.

Throughout the report except in this special section, the term "consultant" is used as the designation of any practitioner who in any given case is called in to advise thereon, but is not in general or continuous attendance.

Consultation in General.

Accepting the reference as applying to consultation in general, that is to say, to all cases in which medical practitioners are called upon in special circumstances to advise upon the condition and treatment of patients not under their care, the Committee has considered what are the obligations of the practitioners thus called in and of the ordinary attendants to one another and to the patients concerned.

"Ethics and Etiquette."

The questions arising for discussion in this report, particularly as affecting the relationship of the practitioners concerned to one another, fall naturally into two groups, which are conveniently distinguished as questions (*a*) of ethics and (*b*) of etiquette. It appears to the Committee important that in this, as in all questions of professional conduct, the distinction thus indicated should be recognized between those rules, the transgression of which would constitute an offence against ethical principles, and those which rest rather upon considerations of manners and good taste. For example, the ethical questions raised by the attempt of a practitioner to utilize his introduction as a consultant in order to supersede the regular attendant must be placed in an entirely different category from such a question as the etiquette of precedence in entering the sick room.

Circumstances Leading to Consultation.

Concerning the circumstances which lead to consultation, the Committee considers that prominence must be given to the obligation of the practitioner in attendance to his patient. It is impossible to define and classify all the circumstances in which it may become the duty of a practitioner in attendance to advise that a second opinion be taken. But it appears to the Committee that it will be helpful, particularly to the junior members of the profession, to enumerate concisely those conditions which would be generally recognized by the profession as imposing that duty upon him. Cases in which medical practitioners have shown undue reluctance to take a second opinion make it important to emphasize the duty to the patient, as well as the fact that this course does not necessarily involve any suggestion of professional incompetence or of want of confidence of the patient in his usual adviser.

The Duty of Consultation.

The Committee considers that a second opinion should be obtained whenever practicable in each of the following cases:

(*a*) When a question arises of the propriety of performing an operation or adopting some course of treatment which may be dangerous to life or permanently injure the condition of the patient, especially if the condition which it is sought to relieve by this treatment is not in itself dangerous to life.

(*b*) When a question arises of destruction of a fetus or unborn child in the interest of the mother.

(*c*) When the practitioner in attendance is definitely in doubt, either as to the diagnosis or as to the treatment to be followed, and when delay in arriving at a decision might be fraught with serious consequences to the patient.

(*d*) When there is evidence of serious doubt in the mind of the patient or his friends as to the correctness of a diagnosis, or of the treatment pursued.

(*e*) When there is any suspicion of—

(1) Performance of an illegal operation.

(2) Administration of poison.

(3) Commission of any other criminal offence.

The foregoing statement of circumstances in which it is the duty of a practitioner to obtain a second opinion is not to be understood as implying the exclusion of other possible circumstances in which this duty may also arise.

Choice of Consultant.

The professional knowledge of the practitioner in attendance makes it highly expedient, in the interest of the patient, that he should as a rule be asked to select the consultant; but if the patient or his friends insist upon making the choice this should not be resisted by the practitioner unless the difficulty for which the consultation is required is of a kind calling for special skill which the proposed consultant does not possess or the proposed consultant is one whom the practitioner is obliged to refuse to meet upon any of the ethical grounds mentioned in the next paragraph.

Objections to Proposed Consultants on Ethical Grounds.

No registered medical practitioner can meet in consultation an unregistered practitioner without risk of removal from the *Medical Register*. The interest of the patient must forbid a practitioner to meet in medical consultation, except as to diagnosis, any practitioner who pursues any peculiar system of treatment which renders consultation futile. The obligations of professional honour preclude a practitioner from meeting in consultation one whose conduct has been pronounced by some organized body representative of the profession to be detrimental to the honour and interest of the profession or calculated to bring the profession into disrepute.

Difficulties in Refusing to Meet in Consultation.

Two difficulties from time to time present themselves for the consideration of practitioners when requested to meet in consultation those whom they are precluded by ethical reasons from meeting—namely, as to the reasons to be assigned for refusing to consult, and as to the course to be taken when the condition of the patient makes further assistance urgent.

With respect to the first of these points, there need be no hesitation in stating explicitly the reasons for refusing to meet an unqualified practitioner, or one whose peculiar methods of treatment render consultation futile. In the case of refusal to meet a practitioner whose conduct has been held to be unethical, the practitioner should confine himself to a simple statement that for reasons personal to himself he cannot consent to meet the practitioner in question. No statement reflecting on the character or professional status of the proposed consultant must be made. The same rule should apply to the case of a practitioner who is asked to see as consultant a case under the care of an attendant whose conduct has been declared to be unethical.

Practitioners are at times placed in difficulty by being called in consultation to cases of urgency which are already under the care of those who, for any of the reasons above stated, cannot be met. In many such cases the interests of the patient do not make consultation necessary, and the difficulty may be overcome by consenting to attend on the withdrawal of the practitioner who cannot be met. In the rare cases in which the condition of the patient makes it indispensable that the practitioner previously in attendance should be met, the practitioner called in must be prepared to submit a report of his action to any professional body which may have authority to investigate his conduct.

Arrangements for Consultations.

The arrangements for consultation should be made by the ordinary medical attendant.

If a practitioner receives an application to him to act as consultant from other than the ordinary medical attendant of the patient, he ought not to see the patient except in the presence of the ordinary medical attendant, or with his consent.

Procedure in Consultations.

The experience of the profession has led to the general acceptance of certain rules of etiquette as to the procedure in consultations. These are set forth in a separate section of the Recommendations, and should be observed unless there is good reason for departure in an individual case from any particular rule.

The general rule of ethics affecting the procedure in consultations is that it is the duty of the consultant in every respect to recognize and safeguard the position of the medical attendant, and it is to be observed that this rule rests not only upon the duty of practitioners to one another, but also upon the interests of the patient, who can only be injured by having his confidence undermined. When the interests of the patient demand that a difference of opinion between the consultant and the ordinary medical attendant shall be revealed to him, this must be done in conformity with the rule laid down. It is further to be recognized that the interests of the patient demand that no discussion as to the diagnosis, prognosis, or treatment take place in his presence.

Arrangements for Subsequent Care of Patients.

The arrangements for subsequent care of the patient are based upon the principles that the practitioner in ordinary attendance is to be made responsible for carrying out those methods of treatment or procedures for elucidation of diagnosis which are agreed upon as the result of consultation, and that the consultant has no further concern in the matter, except by special arrangement to which the ordinary attendant is a consenting party. One important group of cases falling under the exception is that in which the result of the consultation is the performance of an operation by the consultant called in.

If it is thought desirable that the consultant should see the patient again, either definitely or in the event of certain specified contingencies occurring, this must be arranged during the conference between the practitioners, and the consultant must not make any suggestion of the kind in the presence of the patient.

Cases Seen at Consultant's House.

Cases in which the patient for whom a second opinion is desired calls upon the consultant require separate consideration. If this arrangement is made with the knowledge and consent of the ordinary attendant it is the duty of the latter to make the necessary appointment and to forward to the consultant such notes on the history of the case as will facilitate the formation of a sound opinion. If a patient seeks an opinion from a practitioner other than his ordinary attendant, and without any introduction, it is in general the duty of the practitioner consulted to ascertain the facts as to previous attendance, and if he finds that the patient is already under medical treatment he should refuse to see the case until he has communicated with the ordinary attendant, he should do so immediately afterwards, explaining the circumstances and stating the opinion which he has formed. It is a serious breach of professional etiquette, and may be a serious ethical offence, for the practitioner in attendance to fail to acknowledge courteously such a communication, but such neglect on the part of one practitioner cannot, as is sometimes suggested, excuse the consultant from the duty of following this procedure in other cases.

The Committee thinks it well to formulate the following general principle as a guide for the conduct of those called to see cases in consultation—namely: That the medical practitioner who accepts the responsibility of seeing in consultation, or giving a special opinion upon, a case under the care of another practitioner, thereby places himself in a position of trust which it is unethical for him to seek in any way to convert to his own advantage and to the detriment of the other practitioner concerned.

The Recognition of a Special Class Designated "Consultants."

It naturally arises that certain practitioners, on account of their exceptional skill or experience, are called in consultation by their colleagues more frequently than others, and from time to time some of these have definitely declined to treat patients.

Such a method of practice, in the first place, affords greater leisure for special study, and thus for acquiring exceptional qualification for advising in special cases; while, secondly, it removes what experience has shown to be important obstacles to consultation, namely, the consideration that a general practitioner who is called in consultation by another general practitioner acquires thereby a practice which may operate to the disadvantage of his colleagues, and the danger that the patient may at some time, as the result of the consultation, seek to employ the consultant as his ordinary attendant. Experience shows that on all these grounds, practitioners who have made it known that they did not attend as general practitioners, and have adhered steadfastly to this rule, have been more readily called in consultation by the general practitioners of the district.

It thus appears that there may be advantage both to the profession and the public in the formal recognition of a distinct class who might be specially designated "Consultants," the term being defined as meaning those practitioners who have adopted the rule of seeing those patients only who are referred to them by other practitioners already in attendance, and who do not themselves act as the regular attendants in any cases.

If such formal recognition of a special class should after due consideration be approved by the profession generally, their relation to other practitioners would be governed by such rules as are formulated in the recommendations contained in this report, as applying to consultants generally, and also by special rules arising from their peculiar position. These special rules would be readily formulated, as they would follow immediately from the definition of the class to which they are related.

RECOMMENDATIONS.

1. *Duty of Consultation.*

On grounds alike of public interest and of the interests of the medical profession, it is the duty of medical practitioners to welcome the opportunity of consultation, especially upon obscure and difficult cases, with colleagues especially qualified to advise.

2. *Cases in which Consultation is Specially Required.*

In the following cases it is specially the duty of the practitioner in attendance to endeavour if practicable to obtain the assistance of another opinion:

(*a*) When a question arises of the propriety of performing an operation or adopting some course of treatment which may be dangerous to life or permanently injure the condition of the patient, especially if the condition which it is sought to relieve by this treatment be not itself dangerous to life.

(*b*) When a question arises of destruction of a fetus or unborn child in the interest of the mother.

(*c*) When the practitioner in attendance is definitely in doubt either as to the diagnosis or as to the treatment to be followed, and when delay in arriving at a decision might be fraught with serious consequences to the patient.

(*d*) When there is evidence of serious doubt in the mind of the patient or his friends as to the correctness of a diagnosis or of the treatment pursued.

(*e*) When the attendant has reason to suspect:

(i) Performance of any illegal operation.

(ii) Adminstration of poison.

(iii) Commission of any other criminal offence.

3. *Choice of Consultant.*

The expediency, in the interests of the patient, of the choice of consultant being usually left to the practitioner in attendance, does not justify refusal to meet a consultant selected by the patient, or the patient's friends, unless the medical attendant is satisfied that the proposed consultant is not qualified by knowledge or experience to advise upon the special case, or is one whom he is debarred from meeting on the grounds stated in Recommendation 4.

4. *Refusal to Meet.*

It is the duty of practitioners to refuse to meet in consultation any of those included in the following classes:

(*a*) Unregistered persons, whom to meet professionally involves risk of removal of the name of the offending practitioner from the *Medical Register*.

(*b*) Practitioners who profess peculiar systems of treatment which make consultation futile.

(*c*) Practitioners whose conduct has, after due inquiry, been pronounced, by some organized body representative of the profession, to be detrimental to the honour and interests of the profession.

5. *Procedure in Arranging and Conducting Consultations.*

Rules of medical etiquette, generally recognized by the profession, with respect to arranging and conducting consultations, are formulated in Recommendation 6. These Rules should be observed, unless there is substantial reason in any particular case for departing therefrom. Such departure without sufficient reason may, in some circumstances, constitute a breach, not merely of etiquette, but of ethics.

6. *Etiquette of Consultation.*

(*a*) If the consultation is not held at the patient's house, it generally takes place at the house of the practitioner

consulted, who also fixes the hour of meeting unless otherwise amicably arranged.

(*b*) All parties to a consultation should be punctual. If the medical attendant does not keep the appointment, the other or others may, after a reasonable time, see the patient, and leave his, or their, conclusions in writing, in a closed envelope addressed to the attendant.

(*c*) Before seeing the patient, the medical attendant should, as a rule, give the consultant a brief history of the case.

(*d*) On entering the room of the patient, the medical attendant should precede the consultant, and should, if necessary, introduce him to the patient, and the medical attendant should be the last to leave the room. The diagnosis, prognosis, and treatment should be discussed in another room, privately.

(*e*) The opinion on a case, and the treatment, should be communicated by the medical man consulted to the patient or the patient's friends, with the consent and in the presence of the attending practitioner.

(*f*) If it is found necessary that the patient or his friends should be made aware of a difference of opinion among the practitioners taking part in a consultation, it is the duty of the consultant, jointly with the medical attendant, to communicate this information.

(*g*) The practitioner in attendance should ascertain previously, and inform the patient, or his friends, as to the amount of the fee, which should be paid to the consultant at the time.

(*h*) If for some reason a personal consultation should be impossible, the medical attendant should write a letter, introducing the case, and should courteously and punctually reply to any communication from the consultant throughout the duration of the case, and the latter should write and forward his opinion, along with any prescription he may advise, in a closed letter addressed to the medical attendant.

(*i*) Arrangements for a future consultation should, as a rule, be left to the initiative of the practitioner in attendance.

(*j*) The consultant, if he wishes to make any communication, or to obtain any information about the case after the consultation, should only do so through the medical attendant, and, on the other hand, if the patient's friends call upon him he should not, as a rule, discuss the case with them in the absence, or without the consent, of the medical attendant.

7. *Communications to Patients in the Course of Consultation.*

Great care should be exercised in making any observations in the presence of the patient on the nature of the malady, its probable issue, or treatment pursued, and all criticisms or reflections on the practitioner in attendance must be avoided. Differences of opinion, so long as there is final agreement among the parties to the consultation, are not to be revealed, but if agreement as to diagnosis and treatment should not be possible, and the consultant is convinced that the future well-being of the patient will otherwise be jeopardized, the patient must be informed in the manner prescribed in Recommendation 6 (*f*).

8. *After-care of Patients.*

It is the duty of the practitioner in attendance loyally to carry out the measures agreed upon at the consultation, and he should refrain from making any radical alteration except upon urgent grounds or after adequate trial.

9. *Consultant not to Injure Position of Attendant.*

In recognition of the position of trust in which he is placed towards the medical attendant, the consultant must not, by unduly ingratiating himself or otherwise, attempt to secure a patient, or the relatives of a patient, whom he has seen in consultation, and must exercise scrupulous care to avoid disturbing the confidence of the patient in his medical attendant.

10. *Consultant not to Supersede Attendant.*

A medical man who has obtained his introduction to a patient through a consultation should not supersede the attending practitioner during that illness, and, if he be asked to attend in any future illness, should only do so after explanation with the medical attendant, unless the circumstances are exceptional.

NOTICE OF THE FORMATION OF A NEW BRANCH OF THE ASSOCIATION.

Transvaal Branch.

The following change has been made in accordance with the regulations of the Association, and takes effect from the date of publication of this notice:

The members of the Association resident in the Transvaal are constituted a Branch of the Association designated the Transvaal Branch.

Reports of Standing Committees.

MEDICO-POLITICAL COMMITTEE.

At the meeting of the Council on January 23rd the Medico-Political Committee reported its proceedings at a meeting held on January 9th, when there were present: Dr. J. A. Macdonald in the chair; Dr. H. Radcliffe Crocker (Treasurer), Mr. H. W. Armit, Dr. G. E. Haslip, Dr. T. Arthur Helme, Dr. J. H. Hunter, Mr. George Jackson, Dr. H. A. Latimer, Mr. C. H. Watts Parkinson, Dr. C. E. Robertson, Dr. Cecil E. Shaw, Mr. C. R. Straton. Apologies for absence were intimated from the Chairman of Council and Dr. L. S. McManus.

Reports of Subcommittees.

The Committee received reports of the proceedings of the following Subcommittees:

Parliamentary Subcommittee of October 24th;
Parliamentary Subcommittee of December 12th;
Midwives Subcommittee of October 24th;
Contract Practice Subcommittee of November 7th;
Contract Practice Subcommittee of December 19th;
Medical Witnesses Subcommittee of November 28th and January 9th;
Lunacy Subcommittee of November 28th.

Matters arising out of Instructions of the Annual Representative Meeting referred by the Medico-Political Committee to the Parliamentary Subcommittee.

The Parliamentary Subcommittee reported as to its consideration of the following resolutions of the Annual Representative Meeting:

(1) That in all elections a series of questions for candidates analogous to that used at the General Election of January, 1906, should be prepared for the use of the Division Committees.
(2) That a statement of all the available information as to the past action of candidates on medical matters be supplied to the Committee of the Division concerned.
(3) That envelopes addressed to the medical practitioners should be supplied from the Central Office when desired by the Division Committees.
(4) That the Divisions should be ready to take prompt action in any election in their areas through Special Committees or the Divisional Committees.
(5) That it is not desirable that either the Association or the Divisions should make definite recommendations for the support of individual candidates.
(6) That it be an instruction to the Medico-Political Committee that in any future action taken in relation to Parliamentary elections candidates be invited to consult and co-operate with the Divisions of the British Medical Association in any matter that may come up in Parliament affecting the medical profession or public health.

The questions used in the General Election of January, 1906, were being revised to bring them into accordance with the present parliamentary position, but the work of revision was not complete, and it was recommended that in the meantime the old questions should be used. Steps were being taken to give effect to the other instructions as to action in parliamentary elections.

The Subcommittee noted as instructions the resolution of the Representative Meeting concerning nurses' registration, and ordered that they be communicated to Mr. Tennant, M.P., as Chairman of the Select Committee of the House of Commons on the subject, and also to Mr. Munro Ferguson, M.P., as the introducer of the Nurses' Registration Bill into Parliament in 1906.

On the questions of Amendment of the Death Registration Law and Amendment of the Coroners Act, the Subcommittee had considered the advisability of drafting a Death Registration Acts Amendment Bill, but recom-

mended that the Home Secretary and the President of the Local Government Board should first be approached on the subject. As regards the amendment of Coroners Law, it was decided to invite certain experts to co-operate with the Subcommittee of the Association in revising the draft Coroners Acts Amendment Bill.

The Subcommittee considered the resolution of the Representative Meeting as to the decision of the Lord Chancellor in the matter of the representations of the Association concerning the action of the Coroner for South-West London, which the Medico-Political Committee was instructed by the Representative Meeting to consider and report upon, and arranged for the preparation of a draft report, to be considered at a future meeting.

The Subcommittee considered also the instructions as to the position of the pathologists to the London County Council referred to them by the Medico-Political Committee for consideration, and decided to approach the medical boards of certain London teaching hospitals on the subject.

By direction of the Medico-Political Committee, the Subcommittee considered the following resolutions of the Representative Meeting:

(*a*) That for medicines which are supplied otherwise than upon medical, dental, or veterinarian prescriptions, no condition of sale, short of the publication on each packet of medicine of the name and quantity of each of its constituents should be permitted;

(*b*) That the label should be made to constitute a warranty, and that false description, whether on the label or in an advertisement, should be made an offence;

(*c*) That the provisions of the Foods and Drugs Acts should be applied to proprietary medicines.

and decided to ask the Divisions to assist in the collection of the following information:

(*a*) Reports of cases of fraud in connexion with the sale of proprietary articles.

(*b*) Cases of injury from the use of proprietary articles.

Arrangements were made for co-operation with the Subcommittee of the Journal and Finance Committee, which deals with analyses of patent and proprietary medicines, and it was decided to communicate with the Inland Revenue Department on certain aspects of the subject. The Subcommittee proposed to include a reference to this matter in the questions to be submitted to candidates for Parliament.

Upon the consideration of the instruction of the Representative Meeting to take further action in the matter of the reorganization of the Local Government Board, it was decided to request the President of the Local Government Board to receive a deputation with respect to the constitution of the Local Government Board as affecting the present position of the administration of public health.

Instructions were given on October 24th that the clauses of the Education Bill relating to medical inspection of school children and the clauses of the Workmen's Compensation Act Bill affecting the profession should be watched on behalf of the Association these being the only Government measures specially affecting the profession, and it being understood that the Autumn Session would be devoted purely to Government business.

It was decided to recommend the Medico-Political Committee to support the Public Slaughterhouses Bill, concerning which the following memorandum was submitted:

HUMANE SLAUGHTERING OF ANIMALS.

Public Slaughterhouses Bill.

The Bill which has been referred to in the proceedings of the Subcommittee as the "Humane Slaughtering Bill," is officially designated the "Public Slaughterhouses Bill."

The general effect of the Bill is to bring all slaughterhouses under municipal ownership.

By the first clause it is provided that if an urban authority desire to bring the Act into operation in their area they must satisfy the Local Government Board that they have provided adequate slaughter-houses within that area, and the Board may then make an order that after the expiration of two months from the publication of a notice to that effect, no other slaughterhouse shall be used as regards cattle, horses, sheep or pigs provided that existing licensed slaughterhouses must be allowed to work out the period of their licence, or be compensated in respect of the unexpired period. When the Act has been brought into operation in any district, slaughtering in any other than a municipal house is to involve a penalty not exceeding £5.

That Councils are given power to acquire slaughter-houses from present owners, or to make agreements with owners for the abolition of slaughtering in their houses.

The Act may also be applied to rural sanitary authorities on their application under Section 276 of the Public Health Act.

Special powers of appointing inspectors under the Act are also conferred.

The net effect of the Bill, if enacted, would be greatly to strengthen public control over the humanity of the methods of slaughtering animals and the sanitary precautions to be observed in slaughter-houses.

At the meeting on December 12th the Subcommittee recommended the Medico-Political Committee to approve the action which had been taken in an emergency by the Chairman in circularizing members of Parliament espepecially interested in public health in support of an amendment by Mr. H. J. Tennant, M.P., to the Workmen's Compensation Bill, the effect of which would be to extend the provisions of that measure to all cases of disease certified by a certifying factory surgeon as due to the nature of the employment instead of restricting it, as proposed in the Bill, to the diseases stated in the schedule thereto.

Upon the consideration of a communication from a member of the Association suggesting that action should be taken in opposition to the Plural Voting Bill, the Subcommittee recommended that no action should be taken by the Association on the matter.

The Subcommittee recommended the following programme as regards Parliamentary action by the Association in the Session of 1907:

(*a*) That steps be taken to secure a place in the ballot for the Public Health Bill.

(*b*) That the Public Health Bill and the Medical Acts Amendment Bill should receive the special attention of the Association.

(*c*) That the Divisions be circularized with respect to the Medical Acts Amendment Bill with the view to general action in support thereof.

(*d*) That, the Representative Meeting having now defined the policy of the Association as to payment of fees to medical practitioners called in to assist midwives, a memorial should be addressed to the Privy Council on the subject, efforts being first made to secure the support of certain bodies concerned.

(*e*) That support be given to the draft Bill prepared by the National Association for the Prevention of Cruelty to Children with respect to overlying of infants and with respect to cases of burning due to neglect.

The Subcommittee considered the position as to the differentiation of income tax. Several influential societies representative of various professions had agreed to co-operate with the Association in presenting evidence as to the hardships resulting from want of differentiation of the income tax to the Select Committee of the House of Commons appointed to consider that subject. The Select Committee replied, however, that they considered it unnecessary to receive evidence on the subject of hardship, their difficulty being chiefly as to the practicability of differentiation. The Select Committee having now reported to the general effect that differentiation was practicable, it was decided to approach the societies who had intimated their willingness to co-operate with the Association on the subject, inviting them to confer as to representations to be made to the Chancellor of the Exchequer as to hardship.

Representations from various Branches as to taxation of motor cars were also considered, and it was decided to recommend that the Association should approach the Government on the subject of taxation of motor cars belonging to medical men used for the purpose of practice.

THE MIDWIVES SUBCOMMITTEE.

The Midwives Subcommittee reported that, having taken into consideration the various resolutions of the Representative Meeting relative to amendment of the

Midwives Act, it had been enabled to complete the memorial to the Privy Council, which was originally drafted in 1905, and upon which action was suspended until the Representative Meeting could decide what proposals should be made by the Association as regards the remuneration of medical men called to assist midwives. It was recommended that before presenting the memorial to the Privy Council the General Medical Council and the Central Midwives Board should be communicated with with the view to obtaining their support; also that the Metropolitan Counties Branch be consulted as to possible representations to the London County Council on the subject. The Subcommittee also reported further consideration of the rules of the Central Midwives Board, and decided to make renewed representations to that Board, and to the General Medical Council as to the amendments which the Association considers desirable. The Committee approved the action and the recommendations of the Subcommittee.

Lunacy Subcommittee.

The Lunacy Subcommittee reported having taken into consideration the instructions of the Representative Meeting authorizing action to give effect to the recommendations contained in the report of the Medico-Political Committee as to the amendment of the Lunacy Acts and amendment of the Inebriates Acts.

The reference to the Royal Commission on the Feeble-minded having been recently extended to include questions affecting the constitution of the Lunacy Commission and the general administration of the lunacy laws, the Subcommittee decided to arrange for evidence to be given on behalf of the Association to the following effect:

That it be represented on behalf of the Association that the Lunacy Commission should be reorganized so as to include under its supervision every variety of feeble-mindedness and insanity, and that therefore the following subjects be specifically included within the scope of the Commission: The supervision of cases of habitual vagrancy, inebriety or drug habits, unconfirmed mental disease, feeble-minded and imbeciles, including feeble-minded children, boarded-out pauper lunatics, Chancery lunatics, criminal lunatics.

That the evidence to be given on behalf of the Association as to the composition of the Commission should be in accordance with the following principles, namely:

(*a*) Absorption of Chancery Commission.
(*b*) Increase of Medical Commissioners.
(*c*) Appointment of Assistant or Deputy Commissioners.

Suggestion: Provision for automatic increase in the future.

That it be suggested that the number of Commissioners be not fixed in the Bill, but that statutory provision be made so that the number may be increased by the Lord Chancellor on the advice of the Commissioners in Lunacy when need arises, without reference to Parliament.

Representatives of the Medico-Psychological Association attended to confer with the Subcommittee and reported that the Parliamentary Subcommittee of that Association had adopted the following resolution:

That this Association is strongly of opinion that visitation of asylums is a most serious part of the duties of the Lunacy Commission, and that none but the Commissioners themselves should carry out any ordinary visitations.

It was decided that this proposal should be supported in the evidence given on behalf of the British Medical Association.

Dr. Straton, the Chairman of the Subcommittee, Dr. Buist, Chairman of the Medico-Political Committee and of the Lunacy Subcommittee for the years 1905-6, and the Medical Secretary, were appointed witnesses to give evidence before the Royal Commission, and to draw up a preliminary statement of evidence. The Committee approved the action of the Subcommittee and the following preliminary statement of the evidence to be given before the Royal Commission:

STATEMENT OF THE EVIDENCE PROPOSED TO BE GIVEN ON BEHALF OF THE ASSOCIATION BEFORE THE ROYAL COMMISSION ON THE FEEBLE-MINDED WITH REFERENCE TO QUESTIONS AFFECTING THE COMPOSITION AND POWERS OF THE BOARD OF COMMISSIONERS IN LUNACY.

In the evidence given on behalf of the British Medical Association it is desired to make clear that, as a body representative of every section of the medical profession, the Association has given attention rather to those broader considerations upon which medical practitioners in general, and not only those who have special experience of the care and treatment of persons of unsound mind, are in a position to advise.

The inquiries upon which the conclusions of the Association are based have, nevertheless, been conducted by Committees which included experts, and the British Medical Association has been in constant correspondence and co-operation with the Medico-Psychological Association, with which body it is in general agreement on the subject.

The British Medical Association would make the following general recommendations:

1. *New Classes to be brought under the Supervision of the Commissioners.*

That the reference to the Board of Commissioners in Lunacy should be so extended as to bring within the official duties of that Board the central supervision of every variety of unsoundness of mind, whether designated "feeble-mindedness," "insanity," or under any other description, and that, pursuant to this principle, the following conditions of infirmity should be specifically placed under the supervision of the Commissioners:

(*a*) Habitual vagrancy.
(*b*) Habitual inebriety and drug habit.
(*c*) Unconfirmed mental disease.
(*d*) Feeble-mindedness and imbecility, including the special educational provisions for feeble-minded children.

The following classes of lunatics at present excluded should also be brought under the supervision of the Commissioners in Lunacy, namely—outdoor pauper lunatics, criminal lunatics, and Chancery lunatics.

2. *Composition of the Commission.*

Corresponding to the above change in the range of duties of the Lunacy Commission it would follow that the post of Chancery Visitor would be abolished.

The number of Commissioners should be increased by the appointment of additional medical Commissioners.

Assistant or Deputy Commissioners should also be appointed, who could, under the orders of the Board, discharge some, but not all, of the functions of Commissioners.

3. *Statutory Provision for Increase.*

The statutory provision for increase of the Commission should not specify the number of Commissioners, but should confer power upon the Lord Chancellor to increase the number of Commissioners as and when, on the recommendation of the Commission, he may deem this desirable.

In support of the foregoing recommendations, the British Medical Association would submit the following considerations:

(1) *As to the Extension of the Scope of the Commission.*—It appears to the Association generally desirable that there should be one central department charged with the supervision of matters which, from the medical standpoint, whatever differences there may be in degree, are in nature homogeneous.

The reference of this question to the Royal Commission on the Feeble-minded affords an opportunity for a systematic review of the whole matter, and on such an occasion no considerations of traditional arrangements or other than demonstrably grave practical difficulty should, the Association would submit, be allowed to stand in the way of the operation of the general reform which is advisable, namely, that the public provision for the care of persons suffering from unsoundness of mind, whatever its degrees or varieties, should be controlled by one central authority.

(2) Considering the application of this principle in detail to the classes enumerated in the general recommendation, the Association considers that unnecessary complexity is introduced into the care of persons found to be insane by the present distinction, as regards supervision, between two classes of persons whose care and treatment is carried on in establishments of the same kind, namely, lunatics so found by inquisition on the one hand, and lunatics certified under the Lunacy Acts on the other hand.

(3) The Association would emphasize (*a*) the frequency with which persons who have been enrolled in one class of the mentally enfeebled pass into another, and also (*b*) the necessity for continued surveillance of the conditions under which those who have once been recognized as mentally enfeebled continue to live, especially with regard to the responsibility for their safety and safe conduct.

The very numerous cases which appear now as habitual drunkards, now as criminals, now as certified lunatics, or again as habitual vagrants in and out of the workhouse and the prison, need only be referred to in illustration of the point (*a*).

Evidence of (*b*) is afforded by the frequency of instances of the sexual misuse of young adults who have been recognized in childhood as mentally enfeebled, by the readiness with which men or women who have once been inmates of a lunatic asylum are carried into a fresh outbreak by the contributory influence of the sublunatic character of their relatives to this result, and by the difficulty of safeguarding the habitual drunkard.

(4) The Association does not consider it necessary to dwell further upon the considerations in favour of bringing feeble-minded persons of all kinds under the supervision of the Lunacy Commissioners, as this matter has received such careful consideration from your Commission under the terms of their original reference.

(5) It is necessary to enter at greater length into the reasons for extending the duties of the Lunacy Commission to include the supervision of cases of unconfirmed mental disease, of persons suffering from habitual inebriety or drug abuse, and habitual vagrants.

(6) The Association, during the year 1905, made, through a Committee, a renewed special inquiry into the question of the care and treatment of cases of unconfirmed mental disease, a subject which some years ago received the attention of the Association in conjunction with the Medico-Psychological Association, and upon which both these bodies made representations to the Lord Chancellor.

Generally, the Association considers that provision for this purpose could best be made by extension to England and Wales of a provision similar to that of the saving clause contained in Section 13 of the Lunatics (Scotland) Act, 1866.

The general principle underlying the recommendations of the Association on this subject is that it is desirable that persons suspected to be suffering from mental disease should not, so long as the disease is unconfirmed, be placed under the same conditions of close supervision as those who can be definitely certified as of unsound mind, but, nevertheless, that it is desirable that provision should be made for a modified form of surveillance. Leaving aside questions of care and treatment, which are understood not to fall within the scope of the reference to the Commission, this would mean bringing within the cognizance and general control of the Lunacy Commission persons who were not definitely certified as being of unsound mind, and in whose interests it would not be desirable that the ordinary inspection requisite for certified lunatics should be carried out.

For the information of your Commission, in order to indicate exactly what duties it would be proposed to assign to the Commissioners in respect of such patients, the following clause is cited, which the Association proposes to bring to the notice of the Lord Chancellor with a view to its possible inclusion in any Lunacy Acts Amendment Bill which he may deem proper to bring before Parliament at an early date.

"*Temporary Care of Cases of Unconfirmed Mental Disease.*

"(1) If a medical practitioner certifies that a person is suffering from mental disease, but that the disease is not confirmed, and that it is expedient, with a view to his recovery, that he be placed under the care of a person whose name and address are stated in the certificate for a period therein stated, not exceeding *six months*, then during that period the provisions of Section three hundred and fifteen of the Lunacy Act, 1890, shall not apply.

"(2) The certificate must not be signed by the person under whose care the patient is to be placed.

"(3) Where a medical practitioner signs any such certificate he shall, within one clear day after signing it, send a copy of it to the Commissioners.

"(4) The person who receives a patient under any such certificate shall, within one clear day after receiving the patient, give notice to the Commissioners of his reception, and of the name and address of a medical practitioner who undertakes the treatment of the patient, who may be the person under whose care the patient is placed. If the patient dies, or the residence of the person receiving him is changed, within the period mentioned in the certificate, the person receiving the patient shall, within two clear days, give notice of the death or change of residence to the Commissioners.

"(5) He shall also, within two clear days after the expiration of the period mentioned in the certificate, or if he ceases to have the care of the patient at an earlier date, then within two clear days after that earlier date, send a report to the Commissioners stating whether the patient recovered, and, if not, in what manner he was dealt with when the person making the report ceased to have the care of him under the certificate.

"(6) If default is made in sending any notice or report required by this section, the person in default shall be guilty of a misdemeanour and be liable to a penalty not exceeding *twenty pounds*.

"(7) If before the expiration of the period mentioned in the said certificate it shall appear to the person in whose charge the patient is, if a medical practitioner or the ordinary medical attendant of the patient, that an extension of the said period as hereinafter provided is desirable in the interests of the patient, then such medical practitioner shall, not less than one week before the end of the period, send to the Commissioners in Lunacy a report on the mental and physical condition of the patient.

"Subject to the transmission to the Commissioners of such report as aforesaid, another certificate may, before the expiration of the period mentioned in the original certificate, be given for a further period not exceeding three months, provided that no patient shall in respect of the same attack of illness be detained under this form of certificate for more than nine months in all, and provided that after the expiry of these certificates no further certificates under this section shall be given in respect of the same patient within six months from the date of the expiration."

(7) With regard to the care of persons suffering from habitual inebriety and drug habits, the Association, as the result of a very careful consideration, has arrived definitely at the conclusion that the placing of such persons under care and control should not be made dependent, as at present, upon any previous criminal procedure, but that the whole procedure should be made analogous to that under the Lunacy Acts, with suitable modifications in recognition of the fact that the persons in question are not insane, though suffering from moral infirmity.

It is unnecessary in the present statement to enter into detail as to the provisions which the Association would suggest for care and treatment of such cases, it being sufficient to say that in the opinion of the Association the general supervision of such persons should be assigned among the duties of the Lunacy Commission.

(8) Concerning habitual vagrants, the experience of the many members of the Association who have acquaintance with Poor-law work demonstrates that the fundamental defect, in those who are in and out of the workhouse in brief alternating periods, is a mental one, and has convinced them of the need of special treatment, training, and discipline. From the frequent appearance of individual vagrants in other

classes of the mentally enfeebled, it seems clear that their control should be under the general supervision of the Lunacy Commission.

Alterations in Constitution of the Lunacy Commission.

(9) Even apart from the increased duties which it is now suggested should be assigned to the Commissioners in lunacy, the Association had previously come definitely to the conclusion, as the result of its inquiries, that at least two additional medical Commissioners should now be appointed, and it is understood that this proposal is generally approved by those conversant with the matter. The Association, however, deems it expedient in such a matter that the number should not be fixed rigidly by statute, as when further change is found desirable it may be unduly delayed by the mere practical difficulty of obtaining legislation in the permanently congested state of Parliamentary business. The Association considers that in a matter of this kind full power may well be delegated to the Lord Chancellor acting upon the advice of the Commissioners in Lunacy.

(10) With respect to the appointment of Assistant Commissioners, the Association recognizes that such appointments may be rendered necessary by the considerable increase in the duties of the Commissioners themselves which appears to be contemplated. The Association concurs, however, in the opinion which it is understood the Medico-Psychological Association will represent before the Royal Commission—namely, that while the visit of an Assistant Commissioner may count for legal purposes as the visit of a Commissioner, nevertheless the periodical statutory visitation of asylums by Commissioners should not be delegated to the Assistant Commissioners.

The British Medical Association would also represent that the persons who are appointed Assistant Commissioners should be possessed of considerable experience of such a kind as is now required in the case of those appointed as Commissioners, and that the salaries offered should be such as to attract medical practitioners possessed of such experience and of other necessary qualifications.

(11) The Association recommends that the present disqualification for becoming Commissioners in Lunacy, imposed by Sections 158 and 165 of the Lunacy Act, 1890, on certain medical practitioners for a limited time, should be removed.

Medical Witnesses Subcommittee.

The Medical Witnesses Subcommittee reported its proceedings at two meetings held on November 28th, 1906, and January 9th, 1907, respectively, at which the question of renewed representations to the Home Secretary as to the remuneration of medical witnesses giving evidence before the courts was considered. A collection of cases which had been made illustrating the hardships resulting from the operation of the present order of the Home Secretary on the subject, and a draft letter to the Home Secretary in reference thereto, were submitted for consideration of the Medico-Political Committee. The Committee approved the letter for communication to the Home Secretary at an early date.

Contract Practice Subcommittee.

The Committee received the report of the meeting of the Contract Practice Subcommittee of November 7th, and approved the action taken and recommendations made by the Subcommittee as follows:

Consideration, by direction of the Medico-Political Committee, of the resolutions of the Annual Representative Meeting, adopting with amendments the recommendations in the Medico-Political Committee's Contract Practice report, concerning (*a*) Contract Practice in general, (*b*) Public Medical Services, and (*c*) Provident dispensaries.

Consideration of the following Minute of the Annual Representative Meeting:

> That for the purpose of deciding upon the local conditions under which contract practice should be carried on, an organized body, such as a Division or Section of the British Medical Association, in conjunction with all the local profession, should be formed in each affected district,

concerning which the Subcommittee resolved to request the Organization Committee to consider the questions of Divisional organization involved.

Consideration of the draft model agreement between medical officers and friendly societies or similar organizations, which the subcommittee was instructed by the Medico-Political Committee to prepare and which was approved subject to settlement by Counsel.

Consideration of the report of disputes at Ebbw Vale, Coventry, Barrow-in-Furness, Upper and Lower Gornal, Worcester, Luton, and Ilford, and in certain Colonies, as to which the action of the Medical Secretary was approved, and he was instructed to attend a meeting if required.

Consideration of the position of Postal Medical Officers, and authorization of support to a Division in taking action if desired in support of a postal medical officer in the Division area.

Consideration of the present position of the Central Emergency Fund and recommendation that it is preferable that contributions in aid of practitioners in special disputes, as at Ebbw Vale, from members of other Branches, should go through the Central Emergency Fund as earmarked contributions, rather than direct; that the Editor be requested to draw attention in the Journal to the existence of the Central Emergency Fund, and that a statement of the work done by the Association be circulated to all members of the Association and other practitioners in the United Kingdom.

The Committee received also a report of the proceedings of the Contract Practice Subcommittee at its meeting on December 19th, and approved the action reported as regards questions of contract practice at Coventry, Luton, Helensburgh, Manchester, Salford, and Godalming.

In connexion with the Coventry dispute, the Committee considered the difficulty which had arisen as regards the position of the Honorary Secretary of the Coventry Division as Medical Officer of Health, and resolved that, in view of the important bearings of the matter as affecting the general interests of the profession, the Public Health Committee be requested to consider the possibility of further action.

The Subcommittee reported a conference with representatives of the Certifying Factory Surgeons' Association as to the possibility of support of the British Medical Association to that Association in certain proposed action concerning fees paid for medical examinations with a view to certification of fitness for employment, and reported provisional recommendations which had been forwarded for the consideration of the Council of the Certifying Factory Surgeons' Association. Representatives of the Certifying Factory Surgeons' Association attended to state the views of their Council upon the questions so submitted, and it was resolved to recommend the Council of the Association to authorize support by the British Medical Association to the Certifying Factory Surgeons' Association in the matter (See Minutes of Council, Supplement, February 2nd, 1907, page 43).

The Subcommittee also reported a conference with representatives of the Postal Medical Officers' Association with regard especially to the question of the new order of the Postmaster-General concerning an age limit for retirement of postal medical officers, and recommended immediate action to be taken in support of the Medical Officers' Association, and further action when there should have been an opportunity for careful consideration of the general conditions of the Postal Medical Service.

The Committee decided that in case any Division should desire to take action in support of a local medical officer, assistance should be given in such action from the central office, but that, pending the result of communications addressed to the Postal Medical Officers' Association, no further action be decided upon for the present.

The Committee received and entered upon its minutes the following report from the Contract Practice Subcommittee with respect to contributions to the Central Emergency Fund:

> The question raised by a Division and Branch of the Association as to their power to contribute out of their surplus funds, derived from the capitation grant, to the Central Emergency Fund, has been submitted to the Solicitor,

who has advised that under the Memorandum of the Association no funds of the Association could be applied for the personal benefit of its Members, that it was apparently one of the objects of the Central Emergency Fund to make, in suitable cases, payments of this kind, and that therefore, in the Solicitor's opinion, it would be *ultra vires* for the Association, either centrally, or through any Branch or Division, to make any payment out of funds the property of the Association to the Central Emergency Fund.

The Truck Acts.

Upon consideration of a communication from the Northumberland Secretary of the North of England Branch as to the advisability of the Association submitting evidence to the Departmental Committee on the Truck Acts with respect to the effect of the provision of these Acts for affording medical attendance to workmen under a system of deduction from wages, and report by the Medical Secretary of communications with the Secretary of the Departmental Committee on the subject, it was decided to recommend the Council to authorize the preparation of evidence on behalf of the Association, and that the Divisions and Branches specially interested be requested to assist in the collection of such evidence.

Medical Registration in Guernsey.

Upon consideration of a communication from the Guernsey Division, it was decided to recommend the Council to support the Division in certain action which was being taken for improving the system of medical registration in Guernsey.

King Edward's Hospital Fund Bill.

Upon consideration of a communication from the Wandsworth Division with regard to the King Edward's Hospital Fund Bill, which the Committee was informed was also being considered by the Hospitals Committee, it was decided to instruct the Parliamentary Subcommittee to take such action as might be necessary to give effect to any recommendations of the Hospitals Committee approved by the Council on the subject.

The Chairman and Secretary were instructed to write a letter to the press contradicting inaccurate statements which had been made as to the position of the British Medical Association in the matter.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

Lancashire and Cheshire Branch:

Manchester (North) Division.

A meeting of this Division was held at the Palatine Hotel, Manchester, on Monday, February 4th, Dr. Skinner in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Manchester and Salford Divisions.—With regard to the combined committee of the Manchester and Salford Divisions it was resolved that the committee be requested to submit a scheme of organization for the consideration of the Divisions as soon as possible.

Resignation of Chairman.—A letter was read from Dr. Boddy resigning his office as Chairman of the Division, and the following resolution was carried unanimously:

That Dr. Boddy be strongly urged to reconsider his resignation: that he has the full sympathy of the Division in his present position, and that any assistance possible will gladly be given him by the members of the Division.

The Police and Dr. Bagley.—The consideration of the case of a member of the Association summoned by the police was then proceeded with, and the following resolutions carried unanimously:

1. That this Division cordially sympathizes with Dr. Bagley; and considers it a most dangerous thing in the public interest for the police authorities to act contrary to medical advice in the removal of cases, and that where the medical attendant is willing to assume the responsibility, such cases should be left to his care, and not removed to hospital as a matter of routine.
2. That the Secretary be requested to open a fund, if necessary, for the purpose of helping to defray Dr. Bagley's expenses, by an appeal to the medical men in the Divisional area.
3. That these resolutions be forwarded to Dr. Bagley for the use of counsel engaged in the case; and also to the Central Council of the Association.

New Club in Bradford District of Manchester.—A question was raised by a member as to a new club in process of formation in the Bradford district of Manchester, for which medical men had been invited to tender both for attendance on men and their wives and children. It was unanimously resolved:

1. That this meeting of the North Manchester Division of the British Medical Association consider inadvisable and strongly condemn the inclusion of women and children in any such club.
2. That a copy of this resolution be sent to each medical man practising in the district named, with a suggestion that they should meet locally and discuss the question; and to the club authorities.

Manchester (South) Division.

An ordinary general meeting of this Division was held at Dr. Percy McDougall's, Barcombe, Fallowfield, at 3.30 p.m., on Tuesday, February 5th, Dr. Vipont Brown in the chair.

Apologies for Non-attendance.—Letters of regret at inability to be present were received from Dr. Willis; from Dr. Stennett Redmond, Chairman of the West Division; and Dr. Taylor, Secretary of the Salford Division. Dr. Owen, Chairman of the Salford Division, also expressed regret at inability to be present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Poor-law Royal Commission.—Arising out of the minutes, the matter of the Royal Commission on the Poor Law was discussed by Dr. Rhodes. He pointed out how few representatives of the general practitioners were giving evidence before the present Poor-law Commission. The meeting thereupon decided to recommend the names of the following medical men to the Secretary of the Poor-law Commission: Colonel Coats, Dr. Wolstenholme, and Dr. Dixon Mann; and the Secretary was instructed to write to the gentlemen named to ascertain whether they would be willing to give evidence.

Medical Benevolence.—A further question arising out of the minutes was put by Dr. Collins with regard to the matter of medical benevolence; and in reply Dr. Rhodes proposed and Dr. Ashton seconded, a resolution that the Committee be asked to recommend the subject to be brought up at a combined meeting of the Divisions.

Action of the Police with regard to Member's Patient.—Dr. Rhodes then opened a discussion on the action of the police with regard to a patient of Dr. Bagley's, and proposed a resolution, which was seconded by Dr. Featherstone, and carried unanimously after free discussion:

That this meeting of the Manchester (South) Division of the British Medical Association protests against the removal of any patient suffering from injury, even if suicidal or homicidal, without the consent of the medical man in attendance and responsible for the case.

On the proposal of Dr. Collins seconded by Dr. Featherstone, a unanimous resolution of sympathy was passed to the following effect:

That this meeting desires to express its sympathy with Dr. Bagley as the Division's Representative to the Lancashire and Cheshire Branch Council and to the Annual Meeting of Representatives, in connexion with the matter referred to in the above resolution.

It was further resolved that the funds of the Division should be used in the defence. The meeting further decided to telephone the first resolution to the meeting of the Medical Guild, which was being held in Manchester at the same hour, as invited by Dr. Owen, Chairman of the Guild. This was done during the sitting of the meeting.

Objectionable Pictorial Advertisement.—Dr. Rhodes brought to the notice of the meeting an indecent pictorial advertisement which was being circulated in Withington, and it was decided to communicate the matter to the Chief Constable of Manchester.

Manchester Eye and Ear Hospital.—The SECRETARY read a letter from the Medical Secretary of the British Medical Association requiring information with regard to an institution styling itself "The Manchester Eye and Ear Hospital," and on its being pointed out that this institution existed but was in the area of the Central Division, it was decided to advise the Medical Secretary to write to the Secretary of the Central Division.

METROPOLITAN COUNTIES BRANCH:
KENSINGTON DIVISION.

A MEETING of the Kensington Division was held at the St. Marylebone Infirmary, St. Charles's Square, Notting Hill, W., on Friday, February 1st, at 5 p.m., Dr. G. J. CRAWFORD THOMSON in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Cases.—Mr. J. R. LUNN (Medical Superintendent of the Infirmary) and his colleagues showed a large number of interesting cases, including the following: Two cases of facial diplegia; a case of melanosis; a man of 29 suffering from congenital heart disease; a case of ulcer of the cornea treated with dionine ointment; a man in whom the pulse could not be felt except very feebly in the carotids.

Vote of Thanks.—After the cases had been discussed, a vote of thanks to Mr. J. R. Lunn and his colleagues was proposed by Dr. CRAWFORD THOMSON and seconded by Dr. TURNBULL. This was carried by acclamation.

YORKSHIRE BRANCH:
BRADFORD DIVISION.

A MEETING of this Division, to which all medical practitioners in the city were invited, was held at the Eye and Ear Hospital, Bradford, on Tuesday, January 8th, at 8.30 p.m.; Mr. BASIL HALL, Chairman, presided.

Confirmation of Minutes.—The minutes of the last meetings of the Division were read and adopted.

Discussion.—The CHAIRMAN read a letter from Dr. Bedford Pierce in which he intimated his willingness to read a paper, to be followed by a discussion, at an early date before the Division. Mr. HORROCKS proposed and Dr. CAMPBELL seconded that Dr. Pierce's kind offer should be accepted, and that the time for holding the meeting should be left to the Chairman and Secretaries. Carried.

The Division and the Bradford Baths Committee.—Dr. METCALFE, Honorary Secretary, read a report written by Dr. Mitchell in connexion with the interview with the Baths Committee, asking that no further extension of electrical methods should be adopted by the Corporation at their Central Baths. The reply of the Committee was favourable to the wishes of the deputation. Dr. Mitchell was cordially thanked for his excellent report.

Bradford Infirmary Home Patient Department.—Mr. HORROCKS introduced the subject of the proposed change in the management of the Home Patient Department of the Bradford Royal Infirmary in an interesting and excellently written paper, which was much appreciated. The following are the recommendations of the Committee appointed by the Infirmary to draw up regulations for medical officers for home patients:

1. That the officers shall be designated "medical officers for home patients," their duty being to visit infirmary patients at their own homes.
2. That the medical officers for home patients shall be elected by a Committee of the Board of Management, nine in number, of whom five shall be lay members and four members of the honorary medical staff.
3. That the appointment shall be for one year, but the officers shall be eligible for re-election.
4. That the appointment may be determined by either side giving three months' notice in writing, or by the payment of £10.
5. That an honorarium of £50 per annum shall be given to each medical officer.
6. That the present area of the home-patient district shall be divided into five districts.
7. That a medical officer for home patients shall be appointed to each district, and shall reside in or near the district to which he is appointed.
8. That each home patient shall be visited by the medical officer as frequently as shall be necessary.
9. The medical officer shall visit the urgency cases promptly on receipt of the intimation.
10. That only patients who are physically unable to attend at the infirmary shall be treated as home patients.
11. That the medical officer shall transfer to the out-patient department all patients able to attend at the infirmary, subject to the approval of the physician or surgeon under whose care the patients would come.
12. That the medical officer shall recommend as in-patients suitable cases from the districts, such patients being admitted subject to the approval of the physician or surgeon under whose care the patients would be.
13. That all cases transferred to the Poor-law medical officers shall be notified to the House Committee each week.
14. That the list of visits shall be submitted to the House Committee each week.
15. That the medical officers for home patients shall attend the meetings of the House Committee when requested.

A long discussion followed, in which the following gentlemen took part: Drs. and Messrs. HALL, CAMPBELL, MITCHELL, MERCER, CARROLL, MANKNELL, BECKTON, VEAL, BEATTON, INVERARITY, MUNRO, CLOW, WOOD, R. CRAWFORD, OLIVER, EURICH and HIGGINS. The general feeling of the meeting appeared to be that the scheme was as good a one as the Committee could be expected to formulate under the conditions in which the Infirmary was placed. The remuneration was too low and could only be regarded as an honorarium, and the Infirmary should look on the extra work done by the medical officers as in the nature of charity. No extension of the home-patient district should ever be allowed. Names should be carefully examined and no outside pressure from employers' or workmen's Committees allowed to recommend unsuitable cases. Emergency calls should only be permitted to those actually on the books of the dispensary surgeon. All suitable cases should be drafted into the infirmary, and all cases able to attend should be made into out-patients. Appointments should only be given to medical men in practice in the city. Mr. HORROCKS, in replying on the discussion, thanked the gentlemen who had taken part in it for the good feeling shown and the consideration exhibited for the Committee in their endeavour to produce a workable scheme. If it was found that the scheme did not work well, it would probably be necessary to give the department up; but, if this was done, there was always the danger of a provident dispensary being formed in the town. Dr. METCALFE then proposed the following resolution:

> That this meeting approves of the general principles of the scheme outlined by the Committee appointed by the Infirmary to draw up regulations for medical officers for home patients, on the condition that if any radical changes are again made in the proposals they will first be referred to the Division for consideration.

Dr. MERCER seconded. On being put to the vote the resolution was carried *nem. con.* The meeting then terminated.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m., except on Saturdays, when they close at 2 p.m. Members can have their letters addressed to them at the office.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BIRMINGHAM BRANCH: COVENTRY DIVISION.—A meeting of this Division will be held at the Coventry and Warwickshire Hospital on Tuesday, February 19th, at 8.30 p.m. Agenda: (1) Mr Harrison Butler will give his Notes on the Case of Lymphatic Leukaemia shown at the last meeting. (2) Mr. Bennett will read a paper on The Treatment of Tuberculous Disease of Joints. (3) Mr. Faulder White will move the following resolutions: "That this Division of the British Medical Association is of the opinion that an almoner or inquiry officer should be appointed at the Coventry and Warwickshire

Hospital." "That this Division is of the opinion that it is not advisable to state the nature of the illness on certificates of inability to work." (4) The Chairman will move: "That the meeting resolve itself into a Committee to consider the dispensary question."—E. H. SNELL, Honorary Secretary, Warwick Avenue, Coventry.

BORDER COUNTIES BRANCH: WEST CUMBERLAND DIVISION.—An ordinary meeting of the above Division will be held at Whitehaven on Thursday, February 28th, at 4 p.m. Members wishing to read papers or show cases will oblige by giving notice to the Honorary Secretary before February 21st. An agenda will be sent in due course.—JOHN PENNY, Honorary Secretary, Cockermouth.

EDINBURGH BRANCH.—The winter meeting of the Edinburgh Branch will be held in the Royal Infirmary on Friday, February 22nd. The other Scottish Branches are invited to join in the meeting. Special clinics and demonstrations will take place during the forenoon. The clinical meeting will be held at 4 o'clock. Dinner will be served at 6 30 o'clock in the North British Station Hotel (morning dress).—A. LOGAN TURNER, 27, Walker Street; FRANCIS D. BOYD, 22, Manor Place, Honorary Secretaries.

GLOUCESTERSHIRE BRANCH.—A general meeting of the Branch will be held at the Infirmary, Gloucester, on Thursday, February 21st, at 7 p.m. Agenda: (1) Case of Bullet Wound of Intestine, by Dr. Weyland Ancrum. (2) Pathological Specimen: Aneurysm of Thoracic Aorta, by permission of Dr. Brown. (3) Paper: The Rheumatic Infection, with special reference to its Manifestations during Childhood (with microscopic slides), by Carey Coombs, M.D., Physician, Out-patient Hospital for Sick Children, Bristol. There will be a supper afterwards at the Wellington Hotel.—D. E. FINLAY, Assistant Honorary Secretary, Southville, Park Road, Gloucester.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—Alteration (temporary) of date of meeting. On Friday, February 22nd, the usual monthly meeting will be held in the Co-operative Offices, Ellesmere Street, Leigh, at 8 30 p.m., instead of Thursday, February 21st. Agenda: (1) Minutes. (2) Consider the attitude of the local profession towards club practice. (3) (*a*) Discussion on Case of Skin Disease (exhibited at last meeting) introduced by Dr. Thompson; (*b*) Specimen of Five Weeks Ovum, with peculiar history, exhibited by Dr. Wynne. (4) Report on finances of Division. (5) Any other business.—MICHAEL J. HALTON, Honorary Secretary, 95, Chapel Street, Leigh.

LEINSTER BRANCH.—The annual meeting of the Leinster Branch will be held in the Royal College of Physicians, Dublin, on Saturday, February 23rd, at 4.30 p.m.—ARTHUR H. WHITE, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—The next general meeting will be held on Tuesday, February 19th, at 4 p.m., at the Great Eastern Hotel, Liverpool Street, E.C. Agenda: (1) Minutes. (2) Letters. (3) Questions. (4) Report of Executive Committee on (*i*) action taken in the L.C.C. election, (*ii*) recommendations of the Ethical Committee of the Association on medical consultation. (5) Any other business.—E. W. GOODALL, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next meeting of this Division will be held in the Court Room of Guy's Hospital, London Bridge, S.E., on Thursday, February 28th, at 4 p.m. Dr. Frederick Taylor (Senior Physician to Guy's Hospital, President elect of the Metropolitan Counties Branch) will read a paper on Some Unusual Forms of Pyrexia. It is hoped by the Committee that as many members as possible of the Lambeth Division (with their medical friends) will attend.—W. ALEXANDER ATKINSON, M.D., Honorary Secretary Lambeth Division, 216, Camberwell New Road, S.E.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION.—An ordinary meeting will be held on Thursday, February 28th, at 9 p.m., at the Balham Hotel. E. W. Goodall, M.D., will read a paper entitled, The Prodromal Symptoms of Some of the Common Infectious Diseases, which will be followed by a discussion in which F. F. Caiger, M.D., will be followed by a discussion in which F. F. Caiger, M.D., and others have agreed to take part. There will also be shown some lantern slides of eruptions of infectious diseases and other conditions affecting them. All medical practitioners will be welcomed. Trains to Balham Broadway pass the hotel.—J. RICHARDS FOTHERGILL, Honorary Secretary, Longmay House, Smithfields, S.W.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION. A meeting of the Division will be held at the St. James's Vestry Hall, 99, Piccadilly, on Wednesday, March 13th, at 8.30 p.m. Dr. W. Langdon Brown will open a discussion, and it is the following resolution: "That in view of the inadequate management and advice of hospitals, the Westminster Division considers the welfare of the public and the interests of the medical profession would be best obtained by the establishment of a Central Hospital Board for London."—F. J. MCCANN, M.D., Honorary Secretary.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—A clinical meeting of the Branch will be held in Inverness on Friday, March 1st. Particulars as to meeting place and hour of meeting will be communicated to members by circular.—J. MUNRO MOIR, M.D., Honorary Secretary, 4, Ardross Terrace, Inverness.

STAFFORDSHIRE BRANCH.—The second general meeting of the Session will be held at the North-Western Hotel, Stafford, on Thursday, February 28th. The President, Mr. Chas. Reid, will take the chair at 5.20 p.m. Business: (1) Minutes of the last general meeting. (2) Correspondence. (3) Dr. Ridley Bailey has given notice that he will move a resolution altering the time of meeting at Wolverhampton. (4) Exhibition of living cases. (5) Paper: Notes of a Case of Death due to Haemorrhage from Ulcer of the Duodenum, caused by Stone on the Kidneys—Percy R. Mander. (6) Paper: Notes on a Case of Pyloric Obstruction—Alfred H. Carter. (7) Angina Pectoris; Notes on a Case, with Comments—F. Geoghegan. (8) Exhibition of Pathological Specimens, etc. Dinner at 7.30 p.m. Charge 5s.—G. PETGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

STAFF SURGEON BERNARD LEY has been allowed to withdraw from the service with a gratuity. He was appointed Surgeon, November 14th, 1894, and Staff Surgeon, November 14th, 1902.

Staff Surgeons T. C. MEIKLE, M.B., J. C. WOOD, H. B. MARRIOTT, N. L. RICHARDS, E. A. PENFOLD, M.B., E. J. FINCH, M.D., J. K. ROBINSON, M.B., and H. CLIFT are promoted to be Fleet Surgeons, from February 11th. Their previous commissions, which were simultaneous, are dated thus: Surgeon, February 11th, 1891; Staff Surgeon, February 11th, 1899. Fleet Surgeon Finch was Surgeon of the *Alecto* during the operations against Chief Nanna of Brohemie, and landed with naval and Niger Coast Protectorate forces at the destruction of Efferowhm and Liverpool, and also with the naval expedition for the punitive expedition against the Chief Nanna of Brohemie, on the Benin River, resulting in the capture of his stronghold, in 1894 (medal with clasp). Fleet Surgeon Clift, as Surgeon of the *Magpie*, served in the Naval Brigade at Bathurst, on the River Gambia, in February, 1894, for the punishment of Fodi Silah, a rebellious slave-trading chief (medal with clasp); landed for defence of Malindi, East Coast of Africa, against the rebel chief M'baruk, in June, 1895, and was present at storming and capture of M'baruk's stronghold. The other officers cited have no war record.

The following appointments have been made at the Admiralty:—CHARLES T. BAXTER, Surgeon, to the *Egmont*, additional, for the *Maine*, February 5th; AUGERNON C. BEAN, Staff Surgeon, to the *Pembroke*, additional, lent to Recruiting Head Quarters, February 5th; EDMUND CORCORAN, Fleet Surgeon, to the *Queen*, February 9th; JOHN H. STENHOUSE, M.B., Fleet Surgeon, to the *Africa*, February 9th; THOMAS W. JEFFERY, Surgeon, to the *Cressy*, February 9th; R. C. P. M'DONAGH, Surgeon, to the *Aboukir*, February 9th.

CHARLES MOSSOP, civil practitioner, has been appointed Surgeon and Agent at Dymchurch and Littlestone, February 5th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL E. A. ROCHE retires on retired pay, February 13th. He entered the service as Surgeon, February 4th, 1877; became Surgeon Major February 4th, 1889, was granted the rank of Lieutenant Colonel, February 4th, 1897, and elected for increased pay, March 13th, 1899. He was in the Afghan war of 1878-80, receiving a medal.

Major H. SIC. S. HORE is placed on retired pay, February 5th. His commissions are dated: Surgeon-Captain, February 7th, 1887; Major, February 5th, 1899. He has no war record in the Army Lists.

Major C. A. WADE, M.D., F.R.C.S.I., retires on retired pay, February 13th. His commissions were simultaneous with those of Major Hore. Major Wade served in the South African war in 1899-1902, being present in operations in Cape Colony, and has received the Queen's medal with two clasps and the King's medal with two clasps.

In future recommendations for the promotion of officers of the Royal Army Medical Corps into ranks with fixed establishments will be made to the Selection Board by a Board consisting of the Director General, Army Medical Service, and the Surgeon Generals serving at home.

INDIAN MEDICAL SERVICE.

CAPTAIN H. G. S. WEBB, R.A.M.C., who is serving at Lahore, is appointed Specialist in the Prevention of Disease, Lahore Cantonment.

VOLUNTEER RIFLES.

DAVID G. DAVIDSON, to be Surgeon Lieutenant in the 4th Volunteer Battalion the Royal Scots (Lothian Regiment), December 22nd, 1906.

EDWARD THOMAS, the date Captain, to be Surgeon Lieutenant in the 2nd Volunteer Battalion the Royal Fusiliers (City of London Regiment), January 4th.

Surgeon Lieutenant H. STALLARD, M.B., 4th (Nottinghamshire) Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), to be Surgeon Captain, December 27th, 1906.

Surgeon Captain J. HOLLOWAY, 2nd Middlesex (South Middlesex) Volunteer Rifle Corps, to cease to Command, January 4th.

Surgeon Lieutenant-Colonel Q. CHALMERS, 5th (Clydesdale Highland) Volunteer Battalion the Highland Light Infantry (Glasgow Highland Regiment), Senior Medical Officer, The Highland Brigade, to be Surgeon Colonel, January 4th.

Surgeon Lieutenant-Colonel W. ALLTON, 1st Volunteer Battalion the Royal Warwickshire Regiment, to cease to Command, January 4th.

Surgeon-Major N. E. ROBERTS, M.B., 2nd Volunteer Battalion the King's (Liverpool Regiment), is borne as supernumerary whilst holding the appointment of Brigade Surgeon Lieutenant-Colonel, Senior Medical Officer, Mersey Volunteer Infantry Brigade, January 1st.

Surgeon-Lieutenant H. M. BAYER, 5th (Irish) Volunteer Battalion the King's (Liverpool Regiment), resigns his commission, December 15th, 1906.

The undermentioned Surgeon-Lieutenant-Colonels and Honorary Colonels are borne as supernumerary whilst holding the appointments specified, dated June 1st, 1906: J. R. THOMAS, M.D., 4th Volunteer Battalion the Devonshire Regiment, the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Devon Volunteer Infantry Brigade; C. W. THORP, 2nd Volunteer Battalion the Lancashire Fusiliers, the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, North Lancashire Volunteer Infantry Brigade; P. E. HILL, 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers, the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, South Wales Border Volunteer Infantry Brigade; E. J. HUNTER, 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment, the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Hampshire Volunteer Infantry Brigade; R. DE LA P. BERESFORD, M.D., 2nd Volunteer Battalion the King's (Shropshire Light Infantry), the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, North Wales Border Volunteer Infantry Brigade: A. CLARK, 4th Middlesex (Kensington) Volunteer Rifle Corps, the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, 2nd London Volunteer Infantry Brigade.

Surgeon-Major W. NEITLE, 2nd Volunteer Battalion the Duke of Cornwall's Light Infantry, is granted the honorary rank of Surgeon-Lieutenant-Colonel, January 11th.

Surgeon-Major F. J. KNOWLES, 2nd Volunteer Battalion the Prince of Wales's Volunteers (South Lancashire Regiment), is borne as supernumerary whilst holding the appointment of Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, South Lancashire Volunteer Infantry Brigade, June 1st, 1906.

Surgeon-Lieutenant F. R. MILLER, 4th Middlesex (Kensington) Volunteer Rifle Corps, to be Surgeon-Captain, December 20th, 1906.

Supernumerary-Surgeon-Lieutenant-Colonel J. ADAM, M.D., 1st (Ross Highland) Volunteer Battalion the Seaforth Highlanders (Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Seaforth and Cameron Volunteer Infantry Brigade), is granted the honorary rank of Surgeon-Colonel, January 17th.

Surgeon-Captain J. G. TURNER, 7th Middlesex (London Scottish), to be Surgeon-Major, January 1st.

Captain E. P. A. MARIETTE, M.B., from the Devon Bearer Company, Royal Army Medical Corps (Volunteers), to be Surgeon-Captain, 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment, November 7th, 1906.

EDWARD M. GRIFFITH (late Captain) to be Surgeon-Lieutenant in the 3rd Volunteer Battalion the South Wales Borderers, November 2nd, 1906.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

J. SMART and J. W. MILNE, Lieutenants in the Aberdeen Companies, Scottish Command, to be Captains, December 27th, 1906.

J. D. NOBLE to be Lieutenant in the Aberdeen Companies, Scottish Command, December 28th, 1906.

Captain F. J. CHARTERIS, M.B., Glasgow Companies, Scottish Command, resigns his commission, January 31st.

ARCHIBALD JUBB, M.D., to be Lieutenant in the Glasgow Companies, February 1st.

Supernumerary Surgeon-Captain R. PICKARD, M.D., from the 1st (Exeter and South Devon) Volunteer Battalion the Devonshire Regiment, to be Captain, Devon Bearer Company, November 7th, 1906.

Vital Statistics.

THE ANNUAL REPORT OF THE REGISTRAR-GENERAL FOR ENGLAND AND WALES.

IN the sixty-eighth annual report of the Registrar-General, which has just been issued, will be found a detailed analysis of the vital statistics of England and Wales for the year 1905. On the subject of infant mortality a new series of tables has been introduced showing the mortality from several causes in each month of the first year of life and in each of the four following years in the country as a whole and in two groups of counties representing urban and rural areas respectively; these tables are on the same lines as the returns of infant mortality now required to be made to the Local Government Board by medical officers of health. The report shows also, for the purpose of comparison with England and Wales, the rates of marriages, births, and deaths in several of the principal colonies and foreign countries.

MARRIAGE-RATE.

The number of persons married in England and Wales in 1905 was 521,484, being equal to a rate of 15.3 per 1,000 of the estimated population, or 0.5 per 1,000 below the average for the preceding ten years. Compared with the mean rate in the three years 1870-72, the rate in 1905 showed a decline of 8.4 per cent., but if the rates in the two periods are calculated on a standard population excluding children and married persons, the decrease is found to amount to nearly 22 per cent.

BIRTH-RATE.

The births registered in England and Wales during the year under notice numbered 929,293, and were in the proportion of 27.2 per 1,000 of the total population. With trifling exceptions the fall in the birth-rate has been continuous since 1876, the rates in the eight years ending with 1905 having been successively the lowest on record. The ratio of births to the female population at ages between 15 and 45 years has declined to the extent of 21 per cent. since the period 1870-2; the legitimate birth-rate, calculated on the estimated number of wives at these ages, has fallen by 24 per cent., while the number of illegitimate births in proportion to the unmarried women of conceptive ages was, in 1905, less than one-half of what it was in 1870-2. The counties having the lowest legitimate birth-rates were Northamptonshire, Sussex, Cornwall, Devonshire, the West Riding of Yorkshire, and Bedfordshire; the highest rates were recorded in Northumberland, Durham, Glamorganshire, Monmouthshire, and Carmarthenshire. It is observed that the recent decline in fertility that has been general throughout civilized countries is greater in England and Wales than in all European countries except France and Belgium.

DEATH-RATE.

During 1905 the deaths of 520,031 persons were registered in England and Wales, being equal to 15.2 deaths per 1,000 of the population. This rate was 2.0 per 1,000 below the average for the ten years 1895-1904, and is the lowest rate recorded since the establishment of civil registration in 1837. Among the several counties, the lowest death-rates, after correction for differences of sex and age-constitution of their populations, were 11.5 per 1,000 in Buckinghamshire and in Bedfordshire, 11.6 in Sussex and in Hertfordshire, and 11.7 in Cambridgeshire; the highest rates were 17.2 in Northumberland, 17.3 in Durham, 18.0 in Monmouthshire and in Glamorganshire, and 18.6 in Lancashire. In the selected urban counties the corrected death-rate was 16.6 per 1,000, against 13.2 per 1,000 in the rural group, the ratio of urban to rural mortality being 1,254 to 1,000 in 1905, against 1,331 in the preceding five years. Comparison of the mortality at several groups of ages shows that at every age-group except 85 years and upwards the mortality was below the average; while among males under 5 years and from 20 to 45 years, and among females under 10 years and from 25 to 45 years the rates were the lowest on record. The proportion of deaths among children under 1 year of age to registered births was equal to 128 per 1,000, against an average of 150 in the ten preceding years.

CAUSES OF DEATH.

The various causes of deaths specified in the report are still grouped according to the arrangement first adopted in the report for 1901, this classification being in harmony with that of the Royal College of Physicians as recently published in the fourth edition of their *Nomenclature of Diseases*. The definite diseases are classed under two headings: (1) "General diseases" and (2) "Diseases of particular organs." The mortality in 1905 from nearly all the diseases in both of these categories was below the average, the most important exceptions being cancer and pneumonia. The death-rate from influenza was 204 per million, against an average rate of 296 per million in the sixteen years ending 1905. Pneumonia was fatal to 1,299 per million of the population, the rate in the urban counties being 63 per cent. higher than that in the rural. The mortality from phthisis was 1,347 per million among males and 947 per million among females, these rates being about 9 per cent. below the respective averages in the preceding quinquennium. There were in 1905, 30,221 deaths referred to cancer or malignant disease, being 2,209 more than the corrected average annual number in the preceding ten years; the death-rate from this cause in the year under notice was equal to 756 per million among males and 1,005 per million among females, the male rate being 13 per cent., and the female rate 5 per cent., in excess of the decennial average. With regard to alcoholism it is noted that the recorded mortality from this cause has declined in both sexes since the year 1900, the deaths in 1905 corresponding to a rate of 79 per million in men and 52 per million in women.

The causes of death in 49,026 cases were returned under such ill-defined headings as to prevent their proper classification. With respect to some of these indefinite cases, inquiries have been addressed to the certifying practitioners. In the course of the year, 3,848 replies to these inquiries

were received, and in many cases resulted in a more precise classification of the causes of death; for example, 534 deaths were transferred from indefinite causes to malignant disease, 501 to tuberculous diseases, 139 to puerperal septic diseases, 121 to appendicitis, 113 to gastric ulcer, 56 to intemperance, and 46 to venereal diseases.

HEALTH OF ENGLISH TOWNS

In seventy-six of the largest English towns, including London, 8,592 births and 6,437 deaths were registered during the week ending Saturday last, February 9th. The annual rate of mortality in these towns, which had been 16.6, 18.2, and 15.6 per 1,000 in the three preceding weeks, further rose to 20.0 per 1,000 last week. The rates in the several towns ranged from 8.5 in Handsworth (Staffs), 9.8 in Hornsey, 10.8 in Stockton-on-Tees, 11.4 in Tottenham, 13.0 in East Ham, 13.2 in West Hartlepool, 14.4 in Acton, Manor, and 14.7 in Hastings, to 27.3 in Rochdale, 27.4 in Plymouth and in Bury, 27.7 in Wigan, 29.2 in Rhondda, 29.5 in Merthyr Tydfil, 30.2 in Wolverhampton, 30.5 in Swansea, and 33.4 in Rotherham. In London the rate of mortality was 20.4 per 1,000, while it averaged 21.2 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.5 per 1,000: in London this rate was equal to 1.3 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 4.1 in Walthamstow and in Hull, 4.2 in Barrow-in-Furness, 4.4 in Grimsby, 5.1 in Middlesbrough, 5.3 in Bury, 6.7 in Rotherham, and 7.9 in St. Helens. Measles caused a death-rate of 2.0 in Hull, 2.2 in Grimsby, 3.0 in West Bromwich, 3.3 in Rotherham, and 6.8 in St. Helens; diphtheria of 1.6 in Handsworth (Staffs); whooping-cough of 2.1 in Walthamstow, 2.5 in Rotherham, 2.6 in Leyton and in Middlesbrough, 2.8 in Willesden and in Newport (Mon.), and 3.4 in Barrow-in-Furness; "fever" of 1.1 in Walsall and 1.2 in Wigan; and diarrhœa of 1.5 in Middlesbrough and 2.7 in Bury. The mortality from scarlet fever showed no marked excess in any of the large towns. One fatal case of small-pox was registered in Southampton, but none in any other of the large towns, and no cases of this disease were under treatment during the week in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3,105, 3,292, and 3,176 at the end of the three preceding weeks, had further declined to 3,099 at the end of last week: 311 new cases were admitted during the week, against 307, 319, and 311 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, February 9th, 875 births and 530 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 20.5, 19.1 and 20.5 per 1,000 in the three preceding weeks, further rose last week to 23.0 per 1,000, and was 2.1 per 1,000 above the mean-rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 18.2 in Aberdeen and 19.5 in Perth to 29.9 in Paisley and 28.1 in Leith. The death-rate from the principal infectious diseases averaged 3.0 per 1,000 in these towns, the highest rates being recorded in Aberdeen and Glasgow. The 396 deaths registered in Glasgow included 2 which were referred to measles, 4 to diphtheria, 24 to whooping-cough, 7 to diarrhœa, and 24 to cerebro-spinal meningitis. Three fatal cases of diphtheria, 3 of whooping-cough, 2 of diarrhœa, and 4 of cerebro-spinal meningitis were recorded in Edinburgh, 3 of diphtheria, 2 of diphtheria, and 1 of cerebro-spinal meningitis in Dundee, 3 of measles and 7 of whooping-cough in Aberdeen; and 1 of cerebro-spinal meningitis in Paisley and in Leith.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, February 2nd, 623 births and 341 deaths were registered in six of the principal Irish towns, as against 570 births and 370 deaths in the preceding period. The annual death-rate in these towns, which had been 24.6, 20.5, and 21.7 per 1,000 in the three preceding weeks, rose to 22.1 per 1,000 in the week under review: this figure being 2.3 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 17.2 in Londonderry and 19.4 in Limerick to 24.2 in Dublin and 25.5 in Cork. The zymotic death-rate in the same six towns averaged 2.7 per 1,000, being the same rate as in the preceding period. The highest rate, 4.7 per 1,000, was recorded in Limerick, while in Londonderry and Waterford no deaths were registered under this head.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES

ARGYLL DISTRICT ASYLUM, Lochgilphead.—Assistant Medical Officer. Salary at the rate of £100 per annum.

BANGOR (CARNARVONSHIRE) AND ANGLESEY INFIRMARY.—House-Surgeon. Salary £60 per annum, increasing to £100.

BIRMINGHAM GENERAL DISPENSARY AND COUNTY HOSPITAL.—(1) Assistant Pathologist, (2) Assistant Physician, (3) Assistant Surgeon.

BRISTOL ROYAL INFIRMARY.—(1) Resident Junior House-Surgeon, (2) Resident Obstetric Officer. Salary at the rate of £60 per annum each.

CAPE COLONY.—Several Assistant Medical Officers for Robben Island Leper Institution. Salary £300 per annum, rising to £450.

CARDIFF INFIRMARY.—House-Physician. Salary at the rate of £60 per annum.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road.—Assistant Surgeon to be appointed. Honorarium £25 a year.

CROSSHAVEN (CORK) SEAMEN'S HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) Medical Officer for Casualty Department: salary at the rate of £100 per annum. (2) House-Surgeon, honorarium, £25 for six months.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

EDINBURGH: CHALMERS HOSPITAL.—(1) Resident House-Physician, (2) Resident House-Surgeon.

EDINBURGH: ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.—Four Resident Medical Officers.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—House-Physician. Salary, £80 per annum.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Surgeon.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Assistant Resident Medical Officer. Salary, £1 0 per annum.

LEICESTER: LEICESTERSHIRE AND RUTLAND ASYLUM.—Second Assistant Medical Officer, male. Salary, £120, rising to £150 per annum.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—(1) Three House-Physicians, (2) Three House-Surgeons. Salary at the rate of £60 per annum each.

LONDON LOCK HOSPITAL.—House-Surgeon for Female Hospital. Salary, £100 per annum.

LONDON OPEN-AIR SANATORIUM, Pinewood, Wokingham.—Male Assistant Resident Medical Officer. Salary commencing at £100 per annum.

MEDICAL MISSION HOSPITAL, Canning Town.—Female Honorary Assistant Surgeon.

METROPOLITAN ASYLUMS BOARD.—Male Third Assistant Medical Officer. Salary, £150 per annum, rising to £170.

MIDDLESEX HOSPITAL, W.—Resident Medical Officer. Salary to commence at £200 per annum.

NEWPORT UNION, Monmouthshire.—Resident Workhouse Medical Officer. Salary, £250 per annum and vaccination fees.

ROCHDALE INFIRMARY.—House-Surgeon. Salary, £100 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Salary at the rate of £80 per annum.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House-Surgeon. Salary, £75 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Honorarium, £31 for six months.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W.—Out-patients' Physician.

WESTMINSTER GENERAL DISPENSARY, Gerrard Street, Soho.—Honorary Physician.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Physician. Honorarium, £80 per annum.

WORCESTER COUNTY AND CITY ASYLUM, Powick.—Third Assistant Medical Officer, male. Salary, £140, rising to £150 per annum.

YORK COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies in the office of Certifying Factory Surgeon at Buntingford, co. Hertford, and Maryport, co. Cumberland.

APPOINTMENTS.

BREMNER, D. C., M.B., Visiting Physician to the Peebles-shire Fever Hospital.

BROWN, W. H., M.Sc.Leeds, F.R.C.S.I., Consulting Surgeon to the Leeds General Infirmary.

BYHAM, Wm. L., L.R.C.P. and S.Edin., L.F.P.S.Glas., Medical Officer of Health, Sunbury-on-Thames Urban District.

COATES, C. J. A., L.R.C.P. and S.Edin., District Medical Officer of the Sheptou Mallet Union.

COLLINSON, Harold, F.R.C.S., Honorary Assistant Surgeon in charge of the patients at the Ida and Robert Arthington Semi-Convalescent Hospitals of the Leeds General Infirmary.

DOBSON, J. F., M.S., F.R.C.S., Honorary Assistant Surgeon to the Leeds General Infirmary.

FREER, A. E., L.S.A., District Medical Officer of the Ledbury Union.

HORSFORD, Cyril, M.D.Edin., F.R.C.S.Eng., Laryngologist and Aural Surgeon to the London College of Music, Great Marlborough Street, W.

HOWARD, A. F., L.R.C.P. and S.Edin., L.F.P.S.Glas., Honorary Anæsthetist on the staff of the General Hospital, Birmingham.

KNIGHT, Frederick, M.D.Lond., Lecturer to Midwives by the Supervising Authority of the Swansea County Council.

LORD, John R., M.B.Edin., Bexley, Medical Superintendent of the London County Asylum, Morton, Epsom.

MARTIN, H. C., M.B., Ch.B.Edin., Assistant Medical Officer at the Newport Borough Asylum, Caerleon, Mon.

MORTON, Edward J., M.B., F.R.C.S.E., Casualty Officer at the Belgrave Hospital for Children, London, S.W.

PEGLER, L. Hemington, M.D.Edin., Laryngologist and Aural Surgeon to the London College of Music, Great Marlborough Street, W.

SINCLAIR, H., M.D.Lond., District Medical Officer of the Uxbridge Union.

SMITH, Wm. M., M.D., M.R.C.P.Edin., Senior Assistant Medical Officer at Barnsley Hall Asylum, Bromsgrove.

VALLETT, J., M.R.C.S., L.R.C.P.Lond., Medical Officer in Charge of Troops at Hampton Court Barracks.

PADDINGTON GREEN CHILDREN'S HOSPITAL.—The following appointments have been made:

Physician for Out-patients: E. D. Macnamara, M.B., B.Ch.Camb., and Frederick Langmead, M.D., M.R.C.P.

Surgeon to Throat and Ear Department: L. A. Peters, F.R.C.S.

Honorary Anæsthetist: Cecil Hughes, M.B., B.S.Lond.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 5s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

CAMPBELL.—At Ruigh-Ard, Inverness, on February 5th, the wife of Robert Campbell, M.B., Medical Superintendent, Inverness District Asylum, of a son.

HARMER.—On February 8th, the wife of Douglas Harmer, M.C., F.R.C.S., of 45, Weymouth Street, W., a son.

RIPPON.—On February 5th, at 43, Agincourt Road, Hampstead, London, to Dr. and Mrs. Rippon, a son.

SWANZY.—At Cawnpore, India, on January 4th, to Captain H. H. Swanzy, R.A.M.C., and Mrs. Swanzy, a daughter.

MARRIAGE.

BOTT—ROBINSON.—On February 9th, at Christ Church, Cheltenham, by the Right Rev. Bishop Marsden, assisted by the Rev. A. P. Cox, Vicar, Percival George Albert Bott, M.B., F.R.C.S.E., younger son of the late John H. Bott and Mrs. Bott, formerly of Linden House, Cheltenham, to Stella Edith Robinson, younger daughter of Howard G. Robinson, J.P., of Glendronach, Cheltenham.

DEATH.

DICKSON.—On February 2nd, suddenly, at Wye House, Buxton, Francis Kennedy Dickson, F.R.C.P., F.R.C.S.Edin., J.P. of the County of Derbyshire, aged 64. Friends please accept this, the only, intimation.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W.—Dr. C. E. Beevor will deliver his second Lettsomian Lecture on The Diagnosis and Localization of Cerebral Tumours.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Arris and Gale lecture by Mr. J. F. Dobson, F.R.C.S.: The Lymphatic System of Certain Portions of the Alimentary Canal.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 p.m.—The Parathyroid Gland in Man, Dr. David Forsyth. A Histological Study of the Human Parathyroid Glands, Dr. W. L. Harnett. The Morbid Histology of the Suprarenal Glands, Dr. F. A. Bainbridge and Dr. P. R. Parkinson. A Rare Variety of Cardiac Degeneration, Dr. W. O. Meek.

THERAPEUTICAL SOCIETY, Apothecaries' Hall, Blackfriars, E.C., 4.30 p.m. Ladies' Day and Conversazione. There will be various exhibits, and Dr. Crichton will read a paper upon "The Metric System in Prescribing and Dispensing."

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m. Arris and Gale lecture by Mr. J. F. Dobson, F.R.C.S., The Lymphatic System of Certain Portions of the Alimentary Canal.

THURSDAY.

NEUROLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Annual General Meeting. Election of Officers. Presidential Address, by Dr. C. Beevor, on the Distribution of the Arteries Supplying the Human Brain.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Milroy Lecture by Dr. Leonard Rogers on Kala-Azar, its Differentiation and its Epidemiology.

FRIDAY.

BRITISH ELECTRO-THERAPEUTIC SOCIETY, 11, Chandos Street, W., 8 p.m. Council Meeting, 8.30 p.m. Minutes of Annual General Meeting. Paper: Some Physiological Effects of High-Frequency Currents in Disease, by Dr. Samuel Sloan.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., at 8.30 p.m.—Papers: (1) Mr. Raymond Johnson and Mr. C. E. Reynolds: Case of Spinal Meningocele in an Adult successfully treated by Operation after Spontaneous Rupture had Occurred. (2) Mr. C. H. Fagge. Resection of the Jejunum and Colon for Carcinoma of the Former. (3) Mr. T. H. Kellock: A new Method of Excising the Shoulder Joint.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Arris and Gale Lecture by Dr. B. L. Abrahams on Some Clinical Applications of Physiology.

POST-GRADUATE COURSES AND LECTURES.

CHARING CROSS HOSPITAL, W.C.—Thursday, 4 p.m.: Surgical.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m.: The Treatment of Thoracic Anaeurysm, with demonstration of selected cases.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m.:

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—Clinics: Monday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Throat, Nose, and Ear, 4 p.m. Tuesday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Skin, 4 p.m. Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30. Out-patient Demonstrations: Medical and Surgical, 10 a.m. daily; Ears and Throats, noon, Monday and Thursday; Eyes, 11 a.m., Wednesday and Saturday; Skin, noon, Tuesday and Friday. Special Lectures: Monday, 3.15 p.m., Abdominal Catastrophes. Wednesday, 2.30 p.m., Leukaemia.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures at 5.15 p.m. each day will be given as follows: Monday, Delayed Poisoning by Anaesthetics. Tuesday, Disorders of Sleep. Wednesday, The Uterine Curette and its Uses. Thursday, Associated Abdominal and Thoracic Diseases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Clinical Lecture. Friday, 3.30 p.m.: Disseminated Sclerosis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the arrangements for next week: Monday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out-patient, Throat, Nose, and Ear Clinics; *x*-ray Demonstration. Tuesday, 10.30 a.m.: Medical Out-patient Clinic. 2.30 p.m.: Surgical Operations; Surgical and Gynaecological Out-patient Clinics. 4.30 p.m.: Lecture, Some Difficulties in Gynaecological Diagnosis. Wednesday, 2.30 p.m.: Dermatological, Ophthalmological, and Medical Out-patient Clinics. Thursday, 2.30 p.m.: Gynaecological Operations; Medical and Surgical Out-patient Clinics. 3 p.m.: Medical In-patient Clinic. 4.30 p.m.: Lecture, Mental Disorders Associated with Pregnancy and Parturition. Friday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out-patient Clinic; Surgical Operations; Ophthalmological Clinic. 3 p.m.: Medical In-patient Clinic.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, Hammersmith Road, W.—The following are the arrangements for next week: Daily: 2 p.m., Medical and Surgical Clinics; 2.30 p.m., Operations and *X* Rays. Monday and Thursday, 2.30 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2.30 p.m.: Diseases of the Skin. Tuesday and Friday, 2 p.m., and Wednesday and Saturday 10 a.m.: Diseases of Throat, Nose, and Ear. Wednesday, 10 a.m.: Diseases of Children. Lectures—Monday, 12 noon: Pathological Demonstration. Monday, 5 p.m.: Practical Surgery. Tuesday: Ectopic Gestation and Pelvic Haemorrhage. Wednesday: Extractions. Thursday: The Diagnosis and Treatment of General Paralysis. Friday: Cases of Skin Disease.

BOOKS, ETC., RECEIVED.

The Control of a Scourge, or How Cancer is Curable. By C. P. Childe, B.A., F.R.C.S. London: Methuen and Co. 7s. 6d.

Sewage and the Bacterial Purification of Sewage. By S. Rideal, D.Sc. Third Edition. London: The Sanitary Publishing Co., Limited; New York: J. Wiley and Sons. 1906. 16s.

Tumours of the Cerebrum, their Focal Diagnosis and Surgical Treatment. By C. K. Mills, M.D., C. H. Frazier, M.D., W. G. Spiller, M.D., G. E. de Schweinitz, M.D., and T. H. Weisenburg, M.D. Philadelphia: E. Pennock. 1906.

Sanitary, Maritime, and Quarantine Council of Egypt: Scientific Reports by Members of the Medical Staff. Edited by M. A. Ruffer. Alexandria: Société de Publications Egyptiennes. 1906.

Pediatrics, the Hygienic and Medical Treatment of Children. By T. M. Rotch, M.D. Fifth edition. Philadelphia and London: J. B. Lippincott Co. 25s.

London: H. Kimpton, 1907:

Kimpton's Pocket Medical Dictionary. By T. Dutton, M.D. 3s. 6d.

A Manual of Otology. By G. Bacon, A.B., M.D. Fourth edition. 12s.

The Diseases of the Nose, Throat, and Ear. By C. P. Grayson, A.M., M.D. Second edition. 21s.

How to Become a Naval Officer. Revised edition. 1907. London: Gieve, Matthews, and Seagrove, Ltd., and J. and J. Paton.

Transactions of the American Dermatological Association at its Twenty-ninth Annual Meeting, New York, December 28th, 29th, and 30th, 1905. By C. J. White.

London: Baillière, Tindall and Cox, 1907:

Aids to Dental Surgery. By A. S. Underwood, M.R.C.S., L.D.S., and D. Gabell, M.R.C.S., L.R.C.P., L.D.S. Second edition. 2s. 6d.

War with Disease. By F. F. Maccabe, M.B. Second edition. 1s.

Surgery of the Rectum. By F. C. Wallis, B.A., M.D., B.C.Cantab., F.R.C.S. 2s. 6d.

Lessons on Massage. By M. D. Palmer. Third edition. 7s. 6d.

Erkältung und Erkältungskrankheiten. Von Mudr. K. Chodounsky. Wien: J. Safár. 1907.

Philadelphia and London: W. B. Saunders and Co.:

Abdominal Operations. By B. G. A. Moynihan, M.S., F.R.C.S. Second edition. 1906. 28s.

A Manual of Pathology. By G. McConnell, M.D. 1906. 12s.

The Elements of the Science of Nutrition. By G. Lusk, Ph.D., M.A., F.R.S. 1906. 12s.

The Immediate Care of the Injured. By A. S. Morrow, A.B., M.D. 1906. 12s.

Atlas and Textbook of Human Anatomy. By Dr. J. Sobotta. Edited by J. P. McMurrich, A.M., Ph.D. Vol. ii—The Viscera, including the Heart. 1906. 23s.

A Textbook of Diseases of Women. By C. B. Penrose, M.D., Ph.D. Fifth edition. 1905. 16s.

Employment Pictures from the Census. By M. G. Spencer and H. J. Falk, M.A. London: P. S. King and Son. 1906. 2s. 6d.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
FEBRUARY.	
17 Sunday ...	
18 MONDAY ...	London: Premises Committee, 2.30 p.m.
19 TUESDAY ...	City Division, *Metropolitan Counties Branch* Great Eastern Hotel, Liverpool Street, E.C., 4 p.m. Coventry Division, *Birmingham Branch*, Coventry and Warwickshire Hospital, 8.30 p.m.
20 WEDNESDAY	London: Chloroform Committee, 5.30 p.m.
21 THURSDAY...	London: Metropolitan Counties Branch Council, 5 p.m. Gloucestershire Branch, Infirmary, Gloucester, 7 p.m.: Supper, Wellington Hotel.
22 FRIDAY ...	Edinburgh Branch, Royal Infirmary, Clinics and Demonstrations during the forenoon; Clinical Meeting, 4 p.m.; Dinner, North British Station Hotel, 6.30 p.m. Leigh Division, *Lancashire and Cheshire Branch*, Alteration (temporary) of date of meeting, Co-operative Offices, Ellesmere Street, 8.30 p.m.
23 SATURDAY...	Leinster Branch, Annual Meeting, Royal College of Physicians, Dublin, 4.30 p.m.
24 Sunday ...	
25 MONDAY ...	
26 TUESDAY ...	
27 WEDNESDAY	Bath and Bristol Branch, Bath.
28 THURSDAY...	Lambeth Division, *Metropolitan Counties Branch*, Court Room, Guy's Hospital, London Bridge, S.E., 4 p.m. Staffordshire Branch, North-Western Hotel, Stafford, 5.20 p.m.; Dinner, 7.30 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Balham Hotel, 9 p.m. West Cumberland Division, *Border Counties Branch*, Whitehaven, 4 p.m.

Date.	Meetings to be Held.
MARCH.	
1 FRIDAY ...	Northern Counties of Scotland Branch, Clinical Meeting, Inverness.
2 SATURDAY...	
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	
6 WEDNESDAY	London: South-Eastern Branch Council, 3.15 p.m.
7 THURSDAY...	
8 FRIDAY ...	Hampstead Division, *Metropolitan Counties Branch*.
9 SATURDAY...	
10 Sunday ...	
11 MONDAY ...	
12 TUESDAY ...	
13 WEDNESDAY	Westminster Division, *Metropolitan Counties Branch*. St. James's Vestry Hall, 195, Piccadilly, 8.30 p.m.
14 THURSDAY...	
15 FRIDAY ...	
16 SATURDAY...	
17 Sunday ...	
18 MONDAY ...	
19 TUESDAY ...	London: Organization Committee, 11 a.m. London: Special Finance Inquiry Committee, 3 p.m.
20 WEDNESDAY	London: Naval and Military Committee, 3.30 p.m
21 THURSDAY...	City Division, *Metropolitan Counties Branch*, Hackney Town Hall, 4 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Battersea Town Hall, 8.45 p.m.
22 FRIDAY ...	
23 SATURDAY...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom, and £1 12s. 6d. for abroad.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

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CENTRAL EMERGENCY FUND.

UNDER the present constitution of the British Medical Association as a limited liability company, registered under the Companies Acts as formed not for profit, no part of its funds can be applied centrally or by any Branch or Division for the benefit of any individual member, except by way of remuneration for services rendered to the Association.

This has been found to prevent the Association, its Branches and Divisions, from giving the financial support which it is deemed desirable or even necessary in the interests of the profession to give to members of the profession engaged in contract practice and similar disputes. The Council of the Association, therefore, with the approval of the Annual Representative Meeting of 1906, has instituted a fund called the Central Emergency Fund, to be maintained by voluntary subscriptions, and to be under the management of the Medico-Political Committee for purposes of action in disputes of the kind referred to.

The following are the

REGULATIONS OF THE FUND.

1. The Fund is created by voluntary subscription, to assist members of the profession in various parts of the country in maintaining the interests of the profession against organized bodies of the community.

2. All members of the profession are invited to contribute. Any contribution may be earmarked for use in specified disputes, o for application to special methods of carrying out the objects of the Fund, and when not so earmarked shall be deemed to be given for disposal at the discretion of the Medico-Political Committee in carrying out the general objects defined in Clause 1. At the termination of any special dispute for which funds may have been earmarked, the balance (if any) shall be merged in the General Fund.

3. Subject to the conditions defined in this Scheme, the Fund shall be under the entire control of the Medico-Political Committee of the British Medical Association, and shall be vested in the names of the Chairman of the Committee and the Treasurer of the Association, as representing the Committee. Payments shall only be made on the authority of a resolution of the Medico-Political Committee, or of a Subcommittee of the Medico-Political Committee acting under powers specifically delegated by the Committee.

4. The Fund may be applied for the promotion of the general objects stated in Paragraph 1 in any of the following ways:

(*a*) By a grant or grants to any individual practitioner to assist him in maintaining any position in which the Association shall have decided to support him, or to compensate him for losses which he shall have incurred through taking action approved by the Association.

(*b*) By a grant or grants to any Division or Branch of the British Medical Association, for its assistance in defraying expenses incidental to the conduct of local disputes falling within the scope of the objects of the Fund.

(*c*) By expenditure under direct supervision of the Medico-Political Committee, or of a Subcommittee of that Committee, for the purpose of any action which the Medico-Political Committee may deem necessary or advisable for the promotion of the general objects of the Fund.

The Medico-Political Committee, through its Contract Practice Subcommittee, has had recently brought under its notice disputes in several parts of the country in which it may be necessary to take, for the maintenance of the interests of the profession, action requiring such financial support as the Central Emergency Fund has been instituted to provide, and members of the Association and other members of the profession are strongly urged, so far as their circumstances permit, to assist the Committee in this important work.

Contributions—whether of periodical subscriptions at such periods, yearly, quarterly, or monthly, as may be convenient to the subscribers, or of special donations are received on behalf of the Medico-Political Committee by the Medical Secretary, 429, Strand, London, W.C., to whom Cheques and Postal Orders should be made payable, crossed "London and Westminster Bank, Bloomsbury Branch."

Forms of banker's orders will be supplied on application for those regular subscribers who may prefer to pay in this way.

British Medical Association.

RECOMMENDATIONS

AS TO

CONTRACT MEDICAL PRACTICE.

"At the Annual Representative Meeting of the Association, in July, 1906, the Recommendations concerning (A) *Contract Practice in general:* (B) *Public Medical Services: and* (C) *Provident Dispensaries: contained in the Report on Contract Practice submitted by the Medico-Political Committee to the Leicester Representative Meeting, 1905, and referred by that Meeting to the Divisions for consideration, were approved in the following form,* (B) *and* (C) *as "ideals for recommendation to the Divisions."*

(A) GENERAL.

1. That the conditions upon which the medical practitioners in any district undertake contract practice should be prescribed by arrangement among themselves.

2. That the control of the profession over the conditions of contract practice can only be effectually exercised under the following conditions, namely:

(*a*) That the general control be in the hands of some organized local body representative of the profession, such as a Division of the British Medical Association.

(*b*) That it be open to every practitioner in the district to take part in the work, should he desire to do so, and conform to the regulations of the profession.

(*c*) That the details of administration be under the direct control of a purely medical committee representing both those who do and those who do not take part in contract work.

3. (*a*) That, with regard to the conditions upon which the profession will accept contract practice, the medical practitioners of each district should collectively and individually enter into an agreement, in which the following matters are specifically prescribed:

(i) Rates of remuneration.

(ii) Conditions of admission to attendance under contracts, including provisions with respect to the economic position, age, and health of candidates.

(iii) Definitions of the services to be rendered under the contract.

(iv) Where appointments are made by non-medical bodies: the forms of contract, tenure of office, and representation of the medical profession in the management of the medical service.

(*b*) That practitioners should cease to hold separate appointments or to carry on private clubs, and the principle of distribution of contract practice among all practitioners in the district who desire to participate should be carried into effect.

(*c*) That organized forms of contract practice at present under the control of non-medical committees should gradually be brought under direct medical control.

4. That agreements among local members of the profession with respect to contract practice should be effected through the agency of organized local bodies representative of the profession, the Rules of which should make the agreements binding upon the members.

5. That the professional organizations referred to should in each case be a Division of the British Medical Association.

6. That, to render professional co-operation as complete as possible, the Divisions should endeavour to secure the membership of every practitioner in their membership, and should make their decisions binding by adopting Rules such as have been suggested by the Central Ethical Committee.

7. That the Divisions be urged to establish a Public Medical Service in every area in which contract practice is believed by them to be necessary.

(B) PUBLIC MEDICAL SERVICES.

(A) Fundamental Principles Affecting the Relation of Public Medical Services to the Medical Profession.

(1) *Object of Public Medical Services.*

The recognized object of Public Medical Services is to enable certain sections of the community to make provision by a system of weekly or monthly payments for part or all of the cost of medical attendance upon themselves and their families by means of an organization under the sole control of the medical profession.

(2) *Benefits Included.*

The medical benefits of Public Medical Services may include medical attendance at any surgery provided for the Service or by the medical officer, attendance at the patients' homes when necessary, supply of medicines, and medical and surgical appliances, as defined by the local Rules.

(3) *Persons Suitable for Admission.*

The medical benefits of each Public Medical Service should be confined to those who are deemed suitable by the local profession for admission.

(4) *Staff.*

It should be a fundamental principle of the constitution that every medical practitioner in the district for which the Service provides, who wishes so to act, should be a medical officer of the Service, provided that he conforms to the Rules thereof, and provided that, if not introduced as the successor or partner of a practitioner in the district, he shall have been resident at least six months in the district.

Inasmuch as the constitution and management of Public Medical Services are a matter of concern not only to the active staffs of such institutions, but to the general body of the profession in the district, the Rules should be made subject to the approval of some organized local body representative of the profession, such as a Division of the British Medical Association.

(B) Scheme of Rules of Public Medical Services suggested for Adoption by Divisions of the Association, or by other Organized Local Bodies representative of the Medical Profession.

(1) *Admission to Benefits.—Ordinary.*

(*a*) That provision be made in the Rules, by wage limit or otherwise, for the admission to the benefits of the Service of such persons only as are suitable, in respect of means, for admission.

(*b*) That, if such provision be by wage limit, provision be made for suitable modification in respect of number in a family, and other special circumstances of individual cases.

(*c*) That members of Friendly Societies be admitted under the same Rules as other members.

(2) *Management.*

That the Committee of Management should include:

(*a*) Representatives elected annually by and from the Medical Staff.

(*b*) Representatives of the local medical profession, elected annually by some organized local body, such as a Division of the British Medical Association.

(*c*) Medical Representatives of local allied hospitals.

(3) *Medical Staff: Appointment.*

That all registered medical practitioners resident within the area of operation of the Service shall be eligible for appointment to the staff in accordance with Clause (4) of the Fundamental Principles.

(4) *Medical Staff: Distribution of Work.*

That it be open to each patient entitled to benefit to select the member of the staff by whom he or she desires to be attended, provided

(*a*) That change of medical attendant shall take place only at such fixed periods, or upon such conditions, as may be prescribed by Rules approved by the staff.

(*b*) That it shall be open to each medical officer to limit the number of patients of the Service whom he will consent to attend or to decline to attend any individual patient.

(5) *Duties of Medical Staff.*

That the duties of the staff in respect of medical attendance be defined in the Rules of the Service.

(6) *Payments of Patients.*

(*a*) That the payments of patients, including special payments, if any, for cards, medicines, fines, or other matters, be fixed by the Rules of the Service.
(*b*) That no lower rate be charged for children than for adults, subject to a special provision for families above a certain number.
(*c*) That patients admitted when over 50 years of age be subject to an extra charge.

(7) *Payments - Special Services.*

That such provisions as local circumstances render necessary be made with respect to payment for midwifery and other special services.

(8) *Payments—Distribution among Medical Officers.*

That the entire surplus of the payments of patients, after payment of necessary working expenses if the Service supplies medicines, shall be divided periodically among the medical staff, in proportion to the number of members on their respective lists.

(9) *Canvassing and Advertising.*

That the Rules should contain provisions against personal canvassing for members and against advertising of individual medical practitioners.

(10) *Relation of Public Medical Services to one another.*

That provision be made in the Rules for transference of patients from one Public Medical Service to another.

(11) *Approval of Rules by the Local Medical Profession.*

That the Rules affecting—
(*a*) The amount of payments of patients;
(*b*) The eligibility of medical practitioners for appointment to the staff;
(*c*) The conditions of dismissal of members of the staff;
(*d*) The definition of persons entitled to become patients; and
(*e*) The representation of the medical staff and local profession in the management—
be not altered except with the approval of some organized body locally representative of the profession, such as a Division of the British Medical Association.

(C) PROVIDENT DISPENSARIES.

(A) Fundamental Principles affecting the Relation of Provident Dispensaries to the Medical Profession.

(1) *Object of Provident Dispensaries.*

The recognized object of Provident Dispensaries is to enable certain sections of the community to make provision for part or all of the cost of medical attendance upon themselves and their families by a system of weekly or monthly payments.

(2) *Benefits Included.*

The medical benefits of Provident Dispensaries may include medical attendance at any surgery provided by the Dispensary or by the medical officer, attendance at the patients' homes when necessary, supply of medicines and medical and surgical appliances, as defined by the local Rules.

(3) *Persons Suitable for Admission.*

The medical benefits of Provident Dispensaries should be confined to those whose means are such that they are unable to pay the full cost of ordinary medical attendance.

(4) *Staff.*

Inasmuch as the system of Provident Dispensaries is a form of contract practice, it should be a fundamental principle of their constitution that every medical practitioner in the district for which the Dispensary provides, who wishes so to act, should be a medical officer of the Dispensary, provided that he conforms to the Rules thereof.

(5) *Local Medical Control.*

(A) The local practitioners should in all cases prescribe the conditions upon which they will render services through the Provident Dispensary, as regards:
(i) Representation of the profession in the management;
(ii) Definition by wage limit or otherwise of the class to be admitted;
(iii) The amount to be paid by each member to the medical officer attending him, as determined by—
(*a*) The contributions of members to the funds; and
(*b*) The proportion of such contributions paid to the medical staff;
(iv) The system of the distribution of the work among members of the profession;
(v) The duties of the medical staff.

(B) Inasmuch as the constitution and management of Provident Dispensaries are a matter of concern not only to the medical staffs of such institutions but to the general body of the profession in the district, the profession as a whole in each district has a right to be consulted, and this should be done through organized local bodies, such as the Divisions of the British Medical Association.

(B) Scheme of Rules of Provident Dispensaries Suggested for Adoption by Divisions of the Association, or by other Organized Local Bodies representative of the Medical Profession.

(1) *Admission of Provident Members—Ordinary.*

(*a*) That provision be made in the Rules, by wage limit or otherwise, for the admission to the benefits of the Dispensary of such persons only as are suitable, in respect of means, for admission.
(*b*) That if such provision be by wage limit, provision be made for suitable modification in respect of number in a family, and other special circumstances of individual cases.

(2) *Admission of Provident Members—Friendly Societies.*

That members of Friendly Societies be admitted under the same Rules as other members.

(3) *Subscriptions to the Funds from other than Beneficiaries.*

That, where local circumstances render it desirable, provision may be made for subscription to the funds by persons who do not share the benefits.

(4) *Committee of Management.*

That the Committee of Management, upon which the members of the medical profession should be a clear majority, should include:
(*a*) Representatives—
(i) Elected annually by and from the medical staff;
(ii) Of the local medical profession elected by some organized body, such as a Division of the British Medical Association; and
(iii) Of the managing body of any allied hospital.
(*b*) Representatives annually elected by and from the provident members.
(*c*) Representatives annually elected by subscribers who do not participate in the benefits.
(*d*) The honorary secretary, treasurer, and other officers elected in such manner as the Rules of the Dispensary may prescribe.

(5) *Medical Staff: Appointment.*

That all registered medical practitioners resident within the area of operation of a Provident Dispensary shall be eligible for appointment to the staff in accordance with Clause (4) of the Fundamental Principles.

(6) *Medical Staff: Distribution of Work.*

That it be open to each provident member to select the member of the staff by whom he or she desires to be attended, provided—
(*a*) That a change of medical attendant shall take place only at such fixed periods, or upon such conditions, as may be prescribed by Rules approved by the staff.

(*b*) That it shall be open to each medical officer to limit the number of members of the Dispensary whom he will consent to attend, or to decline to attend any individual member.

(7) *Duties of Medical Staff.*

That the duties of the medical staff in respect of attendance on the provident members be defined in the Rules of the Dispensary.

(8) *Payments of Provident Members.*

That the payments of provident members, including special payments, if any, for cards, medicines, fines, or other matters, be fixed by the Rules of the Dispensary.

(9) *Contributions—Special Services.*

(*a*) That obstetric services be paid for separately and in advance in all cases, in accordance with provisions defined in the Rules.

(*b*) That such provision as local circumstances render necessary be made with respect to other special services.

(10) *Division of Payments among Medical Officers.*

That the entire surplus of the payments of the provident members, after payment of necessary working expenses, including drugs and dispensing—if the dispensary supplies medicines—shall be divided periodically among the medical staff, in proportion to the number of members on their respective lists.

(11) *Capital Charges.*

That no payment be made from provident members' ordinary contributions in respect of buildings or other capital charges of a like nature.

(12) *Canvassing and Advertising.*

That the Rules should contain provisions against personal canvassing for members and against advertising of individual medical practitioners.

(13) *Collections of Payments.*

All payments of provident members shall be made at an office provided for the purpose, and visiting collectors shall not be employed.

(14) *Relation of Provident Dispensaries to One Another.*

(*a*) That the area in which each Provident Dispensary operates shall be defined.

(*b*) That provision be made for transference of members from one Provident Dispensary to another.

(15) *Approval of Rules of Dispensaries by Medical Staff.*—That the Rules defining the conditions of service of the medical staff be not altered, except with the approval of a two-thirds majority in a meeting of the medical staff, after fourteen days' notice of the proposed alteration shall have been given to every member thereof.

(16) *Approval of Rules by Local Medical Profession.*

That the Rules affecting

(*a*) The amount of payments of provident members (other than those if any for capital charges);

(*b*) The eligibility of medical practitioners for appointment to the staff;

(*c*) The conditions of dismissal of members of the staff;

(*d*) The definition of persons entitled to become provident members; and

(*e*) The representation of the medical staff and medical profession in the management

be not altered except with the approval of some organized body locally representative of the profession, such as a Division of the British Medical Association.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m., except on Saturdays, when they close at 2 p.m. Members can have their letters addressed to them at the office.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

GLASGOW AND WEST OF SCOTLAND BRANCH.

A special meeting of the Glasgow and West of Scotland Branch of the British Medical Association was held in the Faculty Hall, 242, St. Vincent Street, Glasgow, on Friday, February 1st, to receive the report of the deputation appointed to meet with the Anderston and District Health Association, and to consider further the formation of that association with special reference to the medical dispensary in connexion therewith. Dr. Lindsay (Lesmahagow), President of the Branch, occupied the chair.

Anderston and District Health Association.

The Honorary Secretary (Dr. James Hamilton), after reading the minutes of the last meeting, proceeded to report the proceedings relating to the matter under consideration undertaken since the members of the Branch last met. In accordance with the resolution passed on December 20th, Dr. Hamilton stated that he had opened up communication with the Secretary of the Anderston and District Health Association; but, as the Christmas and New Year holidays had intervened, some time was lost before an arrangement for a meeting could be made. Finally, however, a date was fixed—namely, January 18th—for the Branch's deputation to meet the directors of the association in the Municipal Chambers. A meeting of the deputation had been held a week previous to arrange as to the mode of action. Every member of the deputation turned up at the directors' meeting, of which there was a full complement, and after he (Dr. Hamilton) had had the honour of introducing the deputation to the Lord Provost, Dr. Lindsay Steven spoke at considerable length, conveying not only the resolution they had been sent with, but enforcing it with powerful arguments. The whole question was then fully discussed on both sides, and after sitting for close upon two hours the Lord Provost, on behalf of the Committee of the Association, suggested that two members should be appointed to act on the Committee for the purpose of giving them the benefit of their experience and advice in carrying out the aims of their new Association. This, the deputation said, they as a deputation had no power to agree to; but the matter was left there, with the understanding that they would submit the suggestion to the next Branch meeting. Since that date the deputation Committee had met twice to consider the position of affairs—the last time in conjunction with the three medical members of the Board, Drs. Carswell, Chalmers, and A. W. Russell—to try at least if they could not see eye to eye with each other, and at this last meeting they did receive some help from the gentlemen named. Since then he had received a letter from Mr. Ferguson, the Secretary of the Association, in the following terms, which clearly showed the position they now stood in:

Dear Sir,—With reference to the meeting which my Committee had with your deputation on 18th instant, when they submitted the resolution adopted at the meeting of your Branch on 20th ultimo, and having specially in view the subsequent meeting which the medical members of my Committee had with your deputation, I have been instructed to say that my Committee have taken the whole matter into further consideration; and, with the possibility of your Branch acceding to the suggestions made by the Lord Provost to appoint two members as representatives to the Committee of this Association, have decided to leave over all matters connected with the dispensary for further consideration at a meeting to be held on the 6th of February. I shall therefore be glad if so decided upon by your Branch, to receive the names of your representatives, that they may be invited to our meeting.—I am, yours faithfully, Frederick J. Ferguson, Honorary Secretary.

The Chairman intimated that Dr. Lindsay Steven had sent an apology for absence, also a lengthy letter pertaining to the business in hand. The letter referred to was then read to the meeting; the following is an extract:

Had I been present at the meeting to-day, and so in

position to speak to the report, I would have urged upon the Branch the propriety of adopting the following points:

1. That there is no evidence that the Anderston Health Association intend to depart from their resolve to found a dispensary.
2. That there is no good reason, so far as I can see, for the Branch modifying in any way its previous almost unanimous resolution on the subject.
3. That the statement that the consideration of the foundation of a dispensary is still open is no reason why the Branch should appoint two members to serve on the Board of the Association; and
4. That in view of the previous finding of the Branch, unless a clear and definite official undertaking in writing is given that the proposal to found a dispensary for the necessitous poor in the Anderston district is departed from, the Glasgow and West of Scotland Branch of the British Medical Association should not send two members to serve on the Board of the Anderston Health Association.

The matter being then open for discussion,

Dr. Kerr said that as one of the deputation he might be allowed to mention how well Dr. Lindsay Steven had put this matter before the Anderston Health Association. Dr. Lindsay Steven had been most uncompromising in his hostility to the scheme, and he (Dr. Kerr) quite admired him when he said, in spite of great pressure put upon him, that the Branch opposed this thing out and out. He himself did not say anything at that meeting, though he held a watching brief. What he found—and he thought the members would bear him out in saying so—was that they were face to face with a band of earnest and devoted philanthropists who addressed themselves to the subject of the human residuum, a problem as old as man and a problem that would always be with us. Instead of going about the consideration of the subject in a manner that he might suggest and that they might not agree to, the Anderston Association proceeded upon the old-time lines of a dispensary, and they had been quite surprised when they found that they had not been able to call into play the setting up of one doctor against another and the playing on each other of petty jealousies. So far as the aims of these philanthropists were really earnestly and truly devoted to doing something for what he might call the human residuum, the medical profession sincerely and earnestly wished them Godspeed, but when they, instead of putting their hands in their pockets and saying "Friend, you are sick, here is an elusive florin; go to the nearest doctor and get better," said "Say, doctor, will you be good enough to start this Association, and for the sake of altruism (about which we heard a lot at this meeting), you will have your reward in Heaven," it was a different matter. Why should doctors be perpetually exploited for the benefit of so-called philanthropists? Let them put down this fallacious and futile method of working. He did not think the medical advisers of this Association had taken any notice whatever of the attention hospital reform was receiving over the country, and if they had not, the members present would agree with him, that they were worse than blind leaders of the blind. At the meeting referred to he had heard that a poor woman had been found by one of the visitors without food in the house and with a bad cough. Dr. Granger had dealt effectively with that; he had reminded them of the fact that there was no food in the house. It was not medicine the old woman wanted, but bread. He agreed with Dr. Granger in saying so. It was time they dropped all sentiment in the matter. Speaking seriously, whatever tune they were playing there must be no dispensary. The Association was trying every way to get it, and were telling the profession all sorts of things. Who gave them the power to arrogate—to lay down the law to the profession in this matter? They were not paying a thousand a year, but were asking them to do it for nothing. They talked about this scheme and that scheme, and said, "What is your alternative scheme?" Who gave them the right to ask that? It was for them to bring forward schemes and for the profession to criticize them and say whether they would go on or not. The Association said they would carry on this dispensary. The General Medical Council said that no medical practitioner should have anything to do with a body that canvassed for patients. This Association was to get people by the scruff of the neck and drag them to the dispensary, and if that was not canvassing, what was? The Branch would not exactly boycott any professional brethren that took any of the so-called staff appointments, but he thought there were other methods of bringing pressure to bear upon any practitioner who had any anything to do with the dispensary. He, for his own part, would not care to incur any odium of his professional brethren in having anything to do with such a dispensary. The profession said that the needs of the necessitous poor were amply provided for by existing organizations. If another organization was set up, the organizations would not only be overlapping, but all the old bad ways would come in. One doctor was pitted against another, as he had said, and there would be a playing against each other of passions and petty jealousies. He hoped the day for that was past, and that they were going to bring in what he would call the medical new theology. He would like to conclude by saying that at the present moment, with a united front, the Branch was master of the situation.

Dr. Hamilton (Honorary Secretary) said he did not wish it to be understood that there was any real difference of opinion in the minds of the deputation, but he could not quite endorse all that Dr. Kerr had said just now. He wished to take that opportunity of making his own position perfectly clear in that matter. With the unanimous finding of the last meeting he was perfectly in accord—namely, that there was no necessity for the establishment of another open dispensary in Anderston District, or, for that matter, any other part of the city. By the term "dispensary" he understood, and he thought they all understood, an establishment where a staff of medical officers, supposed experts, or aspiring experts in various specialities, were sitting there so many days a week and so many hours a day giving advice and prescribing medicine to the necessitous poor. That was what he thought they all understood was the kind of establishment that was about to be formed in connexion with that Association. Now what grounds had they for supposing that? Some said they were too previous, because that was not whatever was intended and what no medical member of the Board ever thought of, whatever the lay members may have dreamt. If that was so, why, he asked, had they acquiesced (because they must take it for granted that they had acquiesced until they had an open avowel of protest) in the appointment of at least a physician, a surgeon, a gynaecologist, and an eye specialist—a fairly good beginning at least of a fully-equipped staff—appointments, too, that were made *in camera* without any advertisement ever having been made for them. No doubt that had then all been rescinded, and since that time the Association had changed its name from "Anderston and District Dispensary" to "Health Association." While, however, they dropped the term "Dispensary," it was quite clear to those who formed the deputation that the directors still meant (whatever they might mean now) to annex a dispensary, with a medical staff, to their Association. That they had learned from the various arguments that had been adduced by several of their Board in justification of their scheme, such as that the distance to the other institutions round about them of a like character was too great, that it cost the poor people a penny or twopence for car money, and perhaps the loss of half a day or day's wages to go to them—that some of them were so poor that they were not clad sufficiently decent to sit beside the better class that frequented the Western Infirmary, Bellahouston Dispensary, Eye Infirmary, etc. Hence the need for a less pretentious place at their very door. While he said all that, however, he felt that they had now reached a point when, having delivered themselves in no uncertain terms, they could say that the directors had seen fit to hold their hands at least, and that it appeared to him from all he could learn that whatever means they purposed adopting to get their aims carried out, it was not now to be in the direction of an open dispensary as he had described it. What they intended doing he was afraid he could not very well make out, but at least they ought to give them the credit for being honest with them; the directors were men of undoubted probity, and as they had asked them in further conference with them, they might do worse than accede to their invitation. They had not told them plainly, he admitted, that they had abandoned the idea in its entirety of a dispensary, and their letter to them kept the question of some form of a dispensary apparently still open, but for all that he had no hesitation in advising that they should send two of their number to their

Board to continue on lines similar to the lines they entrusted the deputation with, and if it should so happen that they found themselves beaten by voting power, all they had to do was to wash their hands of the whole matter, and throw the responsibility of a failure on the shoulders of the majority. But if, on the other hand, their representatives (if they sent any) could suggest something to these gentlemen, some via media that would both meet their ultimate aims and satisfy them, then, he thought, they would be amply rewarded for all their trouble. Let them, therefore, appoint two strong men whom they had confidence in to act as he suggested. That brought them to the further question—could they assist them at all in their aims? Yes, he thought they could. Several middle courses had been suggested. First and foremost, he thought, was the education of their lady visitors and missionaries to the organizations at present at work in and around their district for the amelioration of the suffering poor. Had they, he asked, exhausted all the resources of civilization in the district and found a single necessitous individual, old or young, dying for want of medical relief?—and by that he meant advice or medicine, in or outdoor. If so, he must say without a moment's hesitation he did not believe it, even including those who might properly be said to belong to the pauper class. He was appalled at the ignorance manifested by the Missionary Deputation and other members of the Committee they met, respecting the machinery that prevailed all over the city for the alleviation of the suffering poor. But they were told that the great aim of that Association was to *prevent* disease, and in so doing they wished to introduce a system of lecturing these poor people how to prevent disease. With that aim he had every sympathy, and he hoped they all had too, but whenever they began as an Association to treat and attempt to cure disease, then, he said, they were back to where they were; and if they really meant to do this latter as well, then let them apply to existing agencies, of which there were ample for that purpose. Other suggestions had been made. One he thought of himself was to ask the medical men in the district to guide them if they should happen to find unattended sick poor, and for that purpose the medical men might accept a modified fee. But whatever way there was out of it—and he was sure there was some way that would satisfy them—their duty was still further to see what could be done. If they demanded, as Dr. Steven suggested, a promise from the Association that the word "dispensary" must cease from their vocabulary in connexion with this scheme, before they again met to discuss matters, then he feared they would lose an opportunity for helping things to be placed on a proper footing which they might never have again.

The CHAIRMAN remarked that a good deal had been heard from one side, and that they might now hear something of the other side. Perhaps Dr. Carswell might have something to say.

Dr. CARSWELL said he preferred to wait until they had heard the feeling of the meeting.

Dr. ELLIS DUNCAN said he was fully in sympathy with the resolution passed at the last meeting, from which he was absent. He did not think there was any room for a new dispensary in the Anderston district, in view of the magnificent building, the Western Infirmary, which was so near it. Going over that building, one was astonished at the extent of it and the amount of money spent on it and on the attractions which had been provided for patients, who were of a far higher class than the class who represented the proper recipients of charity. It appeared to him, when he looked at that dispensary two or three years ago, that it was designed as if it were there for the purpose of directing the medical class of the community instead of the poor. There was every kind of appliance for accommodating people, as if it were for indoor patients, and he thought that the lavish expenditure on such institutions was to be deplored. He thought there was a great waste of charity in such institutions, and he did not wonder that the institution was crowded, that the dispensary physicians had to sit for hours prescribing for such numbers of patients, that the amount of advice the patient got was really advice which was of no value, because the unfortunate dispensary physicians had no time to investigate cases or to do their duty towards any individual patient. Regarding the present state of matters in the medical profession, he was perfectly convinced, from the large number who attended this meeting, that it was a burning question, and he did not wonder at that. When he began practice about twenty-nine years ago, he went to his friend Dr. Fergus and asked his advice. His friend took down the *Medical Directory*, and together they estimated the number of doctors in the city in relation to the population. At that time they found that it was one doctor for every 2,300 of the inhabitants, now it was one for every 1,500. And, in the meantime, the city authorities had taken away practically the whole of the infectious disease of the common classes, and to a large extent of the middle classes. In addition, there were agencies of every description scattered over the city for dealing with every necessitous condition which arose. Between the effects of the fever hospitals, and excellent and admirable effects of the sanitary administration of the city, and the effects of the numerous dispensaries which had been scattered all over, he thought the position was one simply to be deplored. Under the circumstances, he thought it was their duty to look after the interests of the younger men. It was a very serious thing for the younger practitioners that these agencies should be pushed beyond the limits of charity, and that patients of a higher class, who were quite able to pay, should be lured to such places as the dispensary of the Western Infirmary by the extravagances of their appointments. He knew most of the gentlemen connected with the Committee of the Anderston Health Association. He thought they were men of the highest character, men who would not do anything which was dishonourable in any way whatever. The medical men connected with the dispensary were men of note and position, who were appreciated as such, and he was quite sure that these gentlemen were perfectly willing to be guided in a matter of this kind by the general voice of the profession in Glasgow. He was sure they would do nothing which was against the interests of the profession if they could help it. He quite agreed with what had fallen from Dr. Hamilton; it would be a deplorable thing if they were to take up the position that they would do nothing in the way of helping this very admirable institution, founded to put the health and welfare of the very poor on a footing which would commend itself to every sensible man. He thought it was their duty, as a Branch of the British Medical Association, to guide and advise these men, and he would strongly urge that they send two representatives. If, after discussion with the members of this Committee, these representatives found that they were not able to continue to be members of this Association and still be loyal to this Branch, they could withdraw at once. But he was perfectly satisfied from what he knew of the gentlemen who were trying to establish the institution in Anderston that wise counsels would in the end prevail; and that if the Branch sent men who were able to speak to the others in a reasonable way, not to accuse the medical members of the directorate of having sordid motives and of being disloyal to the profession, but of having gone in a reasonable attitude as men endeavouring to instruct and expand the views of the profession as evidenced by this meeting, then there was a probability of success.

Dr. CARSWELL thought they owed something to Dr. Duncan for the perfectly frank manner in which he had dealt with the subject, and with all he had said, including his censure of the unnecessary extravagance of medical charities, he entirely agreed. He thought it was due to the members of the Branch—and it might be permissible from his own point of view—to make a short statement relative to the part he had played in this movement. When he was asked to a meeting of the committee which originated this movement, there was suggested the establishing of an open dispensary. That proposal he opposed, using the arguments that had been used by the profession in connexion with the same matter. He was entirely at one with any movement directed towards the existing abuse of charities or the prevention of further abuse. It might be wondered how he could explain how the Branch in its subsequent relations with the Committee seemed at least to give him the appearance of seeking to establish a local dispensary. To his own mind it was perfectly clear. Unfortunately, from a lack of precision not knowing that this matter was likely to come up for discussion he committed himself to a series of statements in a report, which

had been read by many of them, submitted to the Lord Provost and to the Committee, and which he thought would never be read by anybody but those who were able to read between the lines and who understood his position. Had he had the notion that he would have to explain it all to a meeting of his medical brethren, he would not have committed his ideas to writing. But, when the suggestion of an open dispensary was being discussed, he said if there was any room for anything at all in the Anderston district it was room for new work. There was room for getting at the neglect and the ignorance that prevailed, particularly in certain parts of the district, and for making the mission organization a means of reaching the poor with the gospel of health and with a knowledge at first hand, given by men who were familiar, each in his own speciality, with the aspects of preventive medicine. It was not with the intention of having a regular open dispensary for the purpose of treating patients. The suggestion of departmental men came up, but it was in order that each of these men might get into close touch with district visitors and make them familiar with the ideas that are prevailing as regards preventive medicine in each of the branches of the profession. The very fact that the premises taken were of a most limited character was in itself a sufficient proof of the fact that the Association had no thought of establishing a dispensary such as had been suggested. The whole suggestion must be taken together—a movement of a missionary character and a movement infused with medical feeling—and it was certainly thought that a centre, a bureau, a dispensary—call it what they liked—was necessary for the carrying on of that work. In that view the movement took shape until it was opposed by the profession. The Committee of the Branch came to the Committee of the Anderson Health Association, and there was a full and frank expression of opinion on both sides. Subsequently, he was invited along with Dr. Russell and Dr. Chalmers to a meeting of the Committee, and he and his colleagues made it perfectly clear that so far as they were concerned, and they believed so far as the Committee of the Anderston Association was concerned, there was really no difference of opinion between them, and that if a modus could be found whereby they could advise in the direction of prevention of disease, particularly the nursing work and the consultation work, they would be perfectly willing to advise their Committee to make such readjustment of the agency as would meet what he and his colleagues believed was the reasonable attitude of the profession. The result of the conference was conveyed to the Anderston Health Committee, and the result again was the letter before the meeting. As Dr. Duncan had said, the lay members of the Committee were all men of known integrity and business capacity, who perfectly appreciated the business point of view that might be represented at such a meeting as this, and he thought the meeting might agree to the suggestion of sending two members of the Branch to become members of the institution's Committee. The views of the representatives would meet with perfectly frank consideration, and he hoped they would remember that the other members of the Committee had something to say, too, and that the matter might be adjusted so as to make the best possible which it was believed would not clash with existing agencies, either medical or otherwise.

Dr. E. Duncan suggested that the meeting should also hear Dr. A. W. Russell.

Dr. A. W. Russell said Dr. Carswell had dealt with the matter so fully that he himself could only repeat Dr. Carswell's remarks in varying language. It was not fair to presume that he and the other medical men connected with this Association accepted some sort of stultified payment, and it was not fair to presume that there was to be no payment. He was perfectly certain, from what he had gathered from the lay members of the Committee, that they did not expect to get for nothing whatever form of medical work they felt they ought to have carried out in connexion with the poor of the neighbourhood. Of course, everything at present lay in abeyance, but if it should be decided to have medical assistance, payment of some kind would be made.

Dr. Edmiston said he was not yet a convert in this matter. Was this thing to be gone on with? He wanted to know what branches would be put out after the dispensary had been established. There was no need for any such thing in Glasgow. There were many associations in the city already in touch with the poor. In Brownfield, part of the Anderston district, they had the Students' Settlement of Queen Margaret College, and other things. What the proposers of this dispensary wanted to do was to take the bread out of the mouths of such as he. If there were poor cases in the district that required a doctor he was quite able to look after them. He remembered when notification of infectious disease was started in Glasgow, and since then every step that had been taken meant so much out of his pocket. This thing that had been begun was only the thin end of the wedge; it was not the tenth part of what was to follow. He urged those present not to be so easily converted.

Dr. Duncan moved:

That this meeting of the Glasgow and West of Scotland Branch of the British Medical Association, in agreeing to send two representatives, as requested, to join temporarily the Board of the Anderston and District Health Association, protests against the establishment of a dispensary in the Anderston District, and trusts that the Directors of the Anderston and District Health Association will accede to the unanimous finding of this Branch.

Dr. Duncan said he scarcely needed to make any further remarks. He sympathized very much with the members of the profession in Anderston district. He himself had a strong feeling that they ought not to countenance in any way the establishment of a new dispensary in that neighbourhood, but he thought they ought, as he had already explained, have their representatives on the Board to guide the members of the Association in other matters.

Dr. Granger, in seconding the resolution, said the speeches they had heard from Dr. Hamilton and Dr. Duncan had put the thing very clearly and fairly. The profession could not dissociate itself altogether from work in connexion with the poor, but members could give a very strong expression of opinion that a dispensary was not necessary in Anderston district, and that the objects and aims of this Association could be attained without such a thing. As Dr. Hamilton and Dr. Duncan had so ably pointed out, however, members of the profession might be able to show the Association a way in which good work could be done.

Dr. Edmiston moved, as an amendment, that the meeting do not send any representatives to the Board until the Branch knew exactly what the Association intended to do.

Dr. T. Russell, referring to Dr. A. W. Russell's expression of opinion that any medical work done in connexion with the Association would be paid for, asked if the Association intended employing doctors inside the district.

Dr. Charles G. Robertson rose to propose another amendment. It had been suggested that two representatives be sent to this Board. Why should the Association limit the number to two? His personal opinion was that the number of representatives on the Boards of these charities should be in the majority medical men. He thought that the least they could send to this Board was six representatives instead of two.

Dr. Hamilton pointed out that there were already three medical men on the Board.

Dr. Robertson said he advised sending six from this meeting. The members of the existing Board all seemed to be in favour of one thing.

Dr. Hamilton asked if Dr. Robertson's suggestions were in order, in respect that the Branch was not in a position to force itself on to any association. The Association had invited only two representatives, and the only question before the meeting was as to whether they would send two or none.

The Chairman said the amendment would be put to the meeting.

A Member pointed out that Dr. Edmiston's amendment had not been seconded.

Dr. Edmiston, being requested to put his amendment in writing, did so. It was:

That this meeting declines to send two representatives as such representation is inadequate.

Dr. Fergus seconded.

A Member asked to be allowed to put a question regarding Dr. Carswell's remarks. In the course of his statement Dr. Carswell had said that so far as he knew the other members of the Committee of the Anderston

District Health Association were at one with the Branch. It struck him (the speaker) as being a peculiar position for three medical men of standing that they should be on a Committee presumably for the purpose of helping in the deliberations and that they should allow themselves to be kept in the background. He would like to know if Dr. Carswell and the other medical members were taken into the full confidence of this Committee.

Dr. Carswell said he did not mean to convey any impression of the kind, but he did not know everybody's mind. He did not quite remember the connexion in which he had used the phrase, but it was a common colloquial phrase. All the members of the Committee were, however, animated by a desire to meet the reasonable views of the profession in this matter.

Dr. Grant Andrew asked if Dr. Edmiston, by his amendment, meant that if more representatives were sent to the Committee, that would meet the case.

Dr. Edmiston said the proposed representation was perfectly inadequate, but he would like to hear what they had to say on the other side. He might get wiser towards the end.

Dr. Grant Andrew said that, so far as he understood, he did not think the directors of the Anderston Health Association would object to two or more representatives being sent. He thought the number was just a suggestion of the Lord Provost. Perhaps Dr. Carswell or Dr. Russell might give the meeting an indication as to whether the directors would be willing to have more representatives. If they were, it might be possible to alter the motion so as to make it read "two or more representatives."

Dr. Service moved a direct negative.

Dr. Wright, who seconded, said that he had listened to all that had been said, and he was satisfied that the Anderston District required no association of any kind. He had been coming in touch with the very poor, and he would give the meeting an illustration of the kind of thing a medical man met with. About a fortnight ago he was asked by the sanitary inspector to go down to Piccadilly to see a case that was supposed to be infectious. When he called at the door of the patient's house a lady was just coming out. Of course, the woman of the house felt that she had to say something about that lady, and she informed him that she was a lady doctor. He replied that he did not know there was any doctor calling, and the woman said that the lady doctor had not come to see the child he had come to look at. He said there was no need for two, and the woman remarked that she did not like lady doctors. This doctor came from the Queen Margaret College Settlement it appeared, and the woman further informed him that a lady visitor from another mission had called and offered to send another doctor. They were going to start another association here in order that that woman might have a fourth doctor. The whole thing was absolutely unnecessary. There was not a case in Anderston that could not be attended to by existing institutions.

The Chairman said the amendment as proposed by Dr. Service and seconded by Dr. Wright was that the meeting do not send two representatives.

Dr. Hamilton asked that before a vote was taken he might be allowed to appeal once more to the meeting. Was it not possible to come to some unanimous finding? He did not see any substantial disagreement between the speakers.

A Member begged to propose, as another amendment, that there be no delegates.

Dr. R. Dickson pointed out that that had already been carried by the Branch, and that such an amendment was therefore out of order.

Dr. Carswell asked what harm it would do if the Branch sent two members to join the Board temporarily. He did not see that the position of the profession would be in any way prejudiced if that course was followed.

Dr. Charles H. Robertson said he had proposed an amendment which had been entirely overlooked. He thought two men were not sufficient to represent the Branch, and he would like to amendment that six be sent.

Dr. Chalmers said if Dr. Edmiston would agree to that.

Dr. Edmiston replied that he wished his amendment to go as it stood.

It was ultimately agreed to take a vote on the question whether or not any representatives be sent to the Anderston Health Association. On a show of hands there voted: Against the sending of representatives, 37; in favour, 17; majority against, 20. It was therefore declared that no representatives be sent.

This concluded the business.

LANCASHIRE AND CHESHIRE BRANCH:

Altrincham Division.

A meeting of this Division was held on February 13th, at the Brooklands Hotel, Dr. Cooper in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and signed as correct.

Annual Report.—The annual report of the Committee to the Branch Council, having been reported and circulated, was taken as read and approved. It was to the following effect: The number of members at the beginning of the year was 67, 6 new members have joined, 3 have come into the Division on change of residence, 7 have left the Division, and 2 have resigned (of whom 1 also died). At the close of the year, therefore, the number is still 67. There are believed to be not more than ten or twelve active medical practitioners within the extensive area of the Division who are not members of the Association. The Executive Committee has held fifteen meetings during the year, the strongest possible evidence of the continued vitality and activity of the Division. The average attendance was seven—an equally strong evidence of the zeal of the members, some of whom must necessarily (wherever the meetings are held) have long distances to travel. The Committee draws special attention to the fact that £13 19s. 6d. has been this year subscribed by the members of the Division; and that under the heading of "printing" only £1 5s. is strictly comparable with the figures of previous years, which shows a saving of £1 11s. 8d. (average), and therefore fully justifies the purchase of the duplicator. The steady rise in the item of postages testifies to the large increase in the work of the honorary secretary, and the Committee wishes to express its warmest appreciation of his services. The deficit is £6 5s. 11d. (of which the bookcase accounts for £3 12s 6d.), and this amount will be asked for from the Branch Council. The Division has assets valued at about £7. The average attendance at general meetings was 18, and no less than 50 members have now been present. The Committee is at a loss to know how to secure the attention and interest of the remaining 17, but notes with satisfaction that this number is steadily decreasing. Public meetings of the profession have been held at Winsford, Knutsford, Northwich, and Altrincham, at each of which the scale of minimum fees of the Manchester Medico-Ethical Association was adopted. A sum of 10 guineas was contributed to the British Medical Benevolent Fund. A library has been formed, a bookcase purchased and (by permission of the hospital Board) housed in the "surgeons' room" at the Altrincham Hospital. The four surgeons on the hospital staff, with the Chairman and the Honorary Secretary of the Division, have been appointed a Subcommittee to manage the library. Upwards of 60 volumes have been presented by members.

Relation of Divisions to Branches. The Honorary Secretary drew attention to the decision of the Central Ethical Committee in this matter, as published in the Supplement of February 2nd, pp. 46 and 47

Branch Annual Meeting. It was resolved that the Branch Council be invited to hold the Branch annual meeting in June at Brooklands.

Motor-car Taxation.—It was resolved to communicate at the present time with local M.P.'s, asking them to oppose increased taxation on motor cars used by medical men.

Central Council.—It was unanimously resolved that the Division should nominate Dr. Garstang as a candidate for election by the Lancashire and Cheshire Branch to the Central Council.

Dinner.—At the termination of the meeting a dinner took place.

NATAL BRANCH.

The following have been appointed office bearers for the new year: *President*, Dr. W. H. Addison (Durban); *Vice-President*, Dr. Watkins Pitchford (Maritzburg); *Honorary Secretary*, Dr. Campbell Watt (Maritzburg); *Honorary Treasurer* Dr. Pringle (Maritzburg); and to complete the Council, Drs. Buntine, Hyslop, Strapp, and Ward, all of Maritzburg.

MEMBERS ELECTED DURING THE DECEMBER QUARTER

UNDER BY-LAWS 2 AND 3.

BY THE COUNCIL.

Archibald, Robert George, M.B., Ch.B.Edin., Lieut. R.A.M.C.
Buckley, Hugh Clive, M.B., Ch.B.Edin., Lieut. I.M.S.
Collins, Dennis Joseph, M.B., D.P.H., Major R.A.M.C.
Dawe, Charles Henry, M.R.C.S.Eng., L.R.C.P.Lond., Surgeon R.N.
Dunkerton, Norman Edwin, M.R.C.S.Eng., L.R.C.P. Lond., Lieut. R.A.M.C.
Franklin, George Denne, B.A., M.B., B.C., M.R.C.S., L.R.C.P., Capt. I.M.S.
Hallowes, Richard Collis, M.B., B.Ch., B.A., T.C.D., Lieut. R.A.M.C.
Huston, Alexandrina Crawford, M.B., B.Ch., B.A.O., Borsad, Bombay Presidency
McCloy, Alexander, M.B.C.H., Surgeon R.N.
Newman, Richard Ernest Upton, M.B., Ch.B.Edin., Lieut. R.A.M.C.
Scarlett, William Watson, L.R.C.S. and P.I., Capt. R.A.M.C.
Scott, Alick Lauriston, M.R.C.S., L.R.C.P.Lond., Capt. R.A.M.C.
Sharpe, Frederick Ernest, L.R.C.P.Edin., L.R.C.S.Edin., L.F.P.andS.Glasg., Leh Ladak, Kashmir, India
Stirling, Alexander Wollaston, M.B., C.M., M.D., D.P.H., Atlanta, Georgia, U.S.A.

BY BRANCH COUNCILS.

Barbados Branch.

Bovill, D. De C., Esq., Bellevue, Barbados, Barbados

Bath and Bristol Branch.

Thomson, F. G., M.B., 20, Gay Street, Bath
Todd, D. B., Esq., Bratton, near Westbury

Birmingham Branch.

Anscow, Jas. A., M.B., Harley, Sandon Rd., Edgbaston
Barling, S. G., M.B., General Hospital, Birmingham
Bunting, E. L., M.B., 5, Reddicroft Park Road, Edgbaston
Davies, F. T. H., M.B., General Hospital, Birmingham
Crowe, H. N., M.B., Queen's Hospital, Birmingham
Francis, Lloyd, M.D., Dispensary, Stourbridge
Hird, R. B., D., Eye Hospital, Birmingham
McVeagh, D. I., Esq., Coventry
May, H. O'H., M.D., Birmingham
Phillips, G. R., Esq., General Hospital, Birmingham
Reilly, E. W., Lieut.-Col., I.M.S., 11, Hamilton Terrace, Leamington Spa
Robson, N. J. L., M.B., The Cottage, Little Heath, Coventry
Spencer, R. H., M.D., Arrow Road, Alcester
Thomson, W. T., Esq., 6, Guy's Clithe Terr., Milverton, Leamington
Walker, S. G., M.B., General Hospital, Birmingham
Wilson, A. H., Esq., Greswold House, Yardley

Border Counties Branch.

Caldwell, G. Y., M.B., Annan

Brisbane and Queensland Branch.

Chesson, Dr. H. S., Brisbane
Pain, F., Esq., Allora
Ross, T. G., Esq., Townsville
Stewart, Dr. Marie, Beenleigh

British Guiana Branch.

Rowland, E. D., M.B., Georgetown

Cambridge and Huntingdon Branch.

Gray, E., Esq., Lincoln Road, Peterborough
White, W. C. P., M.B., Caxton, near Cambridge

Cape of Good Hope, Eastern Province Branch.

Beyers, J. M., M.B., Somerset East, C.C.
Henderson, P. J., M.B., Jansenville, C.C.
Querney, F. M., Esq., Port St. John, Pondoland
Scott, William, Esq., Somerset East, C.C.
Shanks, Walter, M.B., Komgha, C.C.
Stirling, James, M.B., East London, C.C.
Thomas, A. E., M.B., Whittlesea, C.C.
Van Niekerk, S. V., M.B., Krugersdorp
Wall, C. P. B., M.D., Butterworth, C.C.

Colombo and Ceylon Branch.

Herat, A. E., Esq., Nuwera Eliya, Ceylon
Raffel, W. H. Allan, Esq., Colombo
Santiago, B., Esq., Karawanella, Ceylon

Dorset and West Hants Branch.

Broderick, F. W., Esq., 4, York Row, Wisbech

Dundee Branch.

Macdonald, P. H., M.B., 10, Tay Square, Dundee
MacGibbon, T. A., M.B., Royal Infirmary, Dundee
Robertson, J. W., M.B., Royal Infirmary, Dundee

Glasgow and West of Scotland Branch.

Adam, John, M.B., 2, New Smithills, Paisley
Allan, G. A., M.B., 12, Hayburn Crescent, Partick Hill, Glasgow
Bruce, Robert, M.B., 65, Cromwell Street, Glasgow
Cook, W. G., Esq., 6, Wilton Mansions, Kelvinside N., Glasgow
Duncan, J. P., M.B., Queen's Park House, Crosshill, Glasgow
Findlay, Leonard, M.D., 5, Ashton Terrace, Partick, Glasgow
Gilkie, J. S., M.B., 5, Barns Street, Ayr
Gordon, Helen M., M.D., Dunnicow, Bridge of Allan, Argyllshire
Hannington, Robert, M.B., 15, Cardwell Road, Gourock
Jones, A. E., M.B., Monkroddan, Prestwick, Ayrshire
Lundie, Alexander, M.B., Trafalgar Terrace, Dalmuir, Glasgow
Macarthur, W. P., M.B., 60, Prince's Street, Port Glasgow
MacDonald, D., M.B., 34, Huntley Gardens, Glasgow
McInnes, Angus, M.B., Mount Pleasant Place, Old Kilpatrick
McKenna, Fergus, M.B., 1, Randolph Terrace, Ayr
Maguire, Peter, M.B., 302, Bath Street, Glasgow
Milne, W. A., M.B., Oakfield West, Ratho Street, Greenock
Muir, Alan, M.B., 20, Barns Street, Ayr
Pollock, W. B. I., M.D., 376 Bath Street, Charing Cross, Glasgow
Service, D. S., M.B., Bellevue, Darvel, Ayrshire
Stewart, Charles, M.B., Dunsyre, Auchinleck
Walker, James, M.B., Bellahaven House, Port Glasgow
Wardlaw, Robert, Esq., 1, Shaw Place, Greenock

Edinburgh Branch.

Beesly, Lewis, Esq., 21, Torphichen Street, Edinburgh
Brook, Miss E. H., M.B., Edinburgh
Davidson, H. S., M.B., 4, Dundas Street, Edinburgh
Lowdon, A. W. B., M.D., The Manse, Reston
Low, R. C., M.B., 5, Castle Terrace, Edinburgh
McCreadie, W., M.B., 166, Ferry Road, Leith
Thatcher, C. H., F.R.C.S.E., 8, Melville Crescent, Edinburgh

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Douglas, Edgar, M.D., 252, Robie Street, Halifax
Mackenzie, K. A., M.D., 74, Gottingen Street, Halifax
Roach, E. B., M.D., G., Morris Street, Halifax
Smith, M. A. B., M.D., Bar mouth, N.S.
Woodbury, F. V., M.D., Halifax

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Lancashire and Cheshire Branch.

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Gosden, J. E., M.B., 422, Manchester Road, Droylsden
Henderson, R. G., M.B., 116, Egerton Street, Rhyl
Howe, J. Duncan, Esq., 10, East View, Deepdale Road, Preston
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Macdonald, A. G., M.B., Coppull, Chorley
Moffatt, C. W. P., M.B., North Dispensary, Liverpool
O'Neill, C. S., Esq., Egerton Road, Monton
Spittal, R. H., M.B., Whaley Bridge, near Stockport
Taylor, J. G., M.D., 35, Nicholas Street, Chester
Williams, A. H., Esq., Boughton House, Chester
Williams, S. W., Esq., Port St. Mary, Isle of Man

Leinster Branch.

Graham, Elizabeth S., L.R.C.P. and S.E., 18, Upper Merrion Street, Dublin
Hare, L. A., Esq., L.R.C.P.I., Rockbrook, co. Dublin
Irwin, J. W. A., Capt., R.A.M.C., c/o A.M.O., Dublin District
Jones, K. W., M.D., Glenmore, Orwell Park, Rathgar
O'Brien, K. J., L.R.C.P. and S.Ed., Oughterard, co. Galway

Metropolitan Counties Branch.

Acland, John H. D., Esq., West London Hospital, Hammersmith Road, W.
Barrett, H. E., Esq., 123, Holland Park Avenue, W.
Batticlo, H. O., Esq., 145, Merton Road, Wimbledon, S.W.
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Blount, A. B., Esq., 36, Alexander Road, Hornsey, N.
Bown, S. H., M.D., 18, Holland Street, Kensington, W.
Boyce, John R., M.D., 72, Stroud Green Road, N.
Buist, Captain James M., M.B., 91, Victoria Street, S.W.
Bunting, Dora E. L., M.B., 11, Lindsay in Gardens, N.W.
Cambridge, T. A., Esq., 124, Stroud Green, Road, N.
Chitty, A. G., Esq., The Buckstone, Shepherd's Hill, Highgate, N.
Coles, C. S., Esq., Lambeth, S.E.
De Prenderville, Arthur, Esq., 98, Weymouth Street, W.
Evans, S., Capt., I.M.S., Surbiton
Groves, H. E., Esq., 89, Park Avenue, N. Hornsey, N.
Harper, Peter, M.D., 94, Weston Park, Crouch End, N.
Hewlett, W. H., M.D., 107, West Green Road, South Tottenham, N.
Holt, Arthur, M.B., 356, Queen's Road, Upton Park, E.
Lambert, Florence B., M.B., 11, Endsleigh Street, W.C.
Lawrenson, H. F., M.D., 20, Muswell Rise, Muswell Hill, N.
Lewis, A. D., Esq., 189, High St., Stoke Newington, N.
Low, Vincent W., M.D., 146, Harley Street, W.
Macgeagh, James N., M.B., 2, 2, Balham High Road, S.W.
Mehta, S. B., F.R.C.S.Ed., 2, Bedford Place, W.C.
Ryan, E. W. St. V., Esq., Fermoy House, Bellingham Grove, Wandsworth Common, S.W.
Sainsbury, H., M.D., 32, Wimpole Street, W.
Shaw, F. Clare, M.D., 86, Harley Street, W.
Stepney, Miss Daisy A., 31, Goldsmith's Row, Hackney Road, N.E.
Stewart, Helen G., M.B., Brunswell Road, Cogwell
Sutherland, D. Sage, M.D., South-Western Hospital, Stockwell, S.W.
Swan, R. H. J., M.S., 75, Wimpole Street, W.
Tweedy, Sir John, F.R.C.S., 100, Harley Street, W.
Wadia, M., D., Esq., St. Peter's Hospital, Covent Garden, W.C.
Whitehead, F. H., Esq., 118, Lavender Hill, Battersea, S.W.
Williams, G. E. O., M.D., University College Hospital, Gower Street, W.C.

Northern Counties of Scotland Branch.

Durran, David, M.B., Thurso
MacDonald, J. M., M.B., Northern Infirmary, Inverness.
Weber, H. C., M.B., Golspie, Sutherland

New Zealand Branch.

Barclay, W. J., M.D., Auckland
Bathgate, Winfred I., M.B., Hastings
Begg, C. M., M.D., Wellington
Cook, S. J., Esq., Palmerston
Cowrie, J. A., M.B., Masterton
Crawshaw, J. H. M., Invercargill
Cummings, W. M. C., M.D., Devonport, Auckland
Harding, H. W. L., Esq., Picton
Murray, D. N. W., M.D., Auckland
Palmer, J. C., Esq., Christchurch
Ronald, A. E., M.B., Napier
Shrimski, C. H., M.B., Gisborne
Turnbull, L. S., M.B., Temuka
Wilson, H. M., Esq., Napier

Oxford and Reading Branch.

Hipwell, H., M.D., Shenington, near Banbury
Wilson, A. R., M.B., Bloxham, Oxon

St. John, New Brunswick.

Travers, J. R., M.D., Provincial Hospital, St. John, N.B.
Warwick, Wm., M.D., 110, Charlotte St., St. John, N.B.

Shropshire and Mid Wales Branch.

Bucke, W. F., M.R., Salop Infirmary, Shrewsbury
Skeen, D. T., M.B., Salop Infirmary, Shrewsbury
Woods, J. R. L., Esq., Worthen, Salop

South-Eastern Branch.

Blatherwick, Henry, Esq., Dulwich, S.E.
Carpenael, C. E., M.B., 17, Half Moon Lane, Herne Hill, S.E.
Hills, F. P., Esq., Sunnyvale, Belvedere, Kent
Kronig-Ryan, V. F., Esq., St. Moritz, Coniston
Sewell, Henry, Esq., The Old Rosery, Retford
Smith, W. C., M.B., Elm Lodge, Worcester Park

South-Eastern of Ireland Branch.

Maher, P., Esq., Myshall, Bagnalstown

South Indian and Madras Branch.

Jackson, A. I., Esq., Rose Cottage, Nungumbaukum, Madras
Pattabhisitaramaiah, B., M.B., Masulipatam
Potham, G. O., M.B., Parla Kimedi, Ganjam District

South Wales and Monmouthshire Branch.

Griffiths, Evan J., M.B., Pentrhwceiber
Hincks, T. S. B., M.D., Hay
Isaacs, Hyman, M.B., Pentrhwceiber
Ward, E. L., Esq., 32, Wyndham Street, Merthyr Tydfil
Williams, W. G., M.B., 20, The Parade, Cardiff

South-Western Branch.

Berry, C. H., Esq., Barbrook Sanatorium, Chagford
Causton, E. P. G., Surg., R.N., Royal Naval College, Dartmouth
Chamberlain, D. A., Esq., South Devon and East Cornwall Hospital, Plymouth
Donaldson, A. R., Esq., Paworthy Rectory, Holsworthy
Fortune, John, M.B., Devon County Asylum, Exminster
Gibbs, S. R., Esq., 17, Bear Street, Barnstaple
Lawson, T. C., Esq., Hartland, Bideford
Myles, Bertha M., M.B., Court Hall, Kenton, near Exeter
Ramsay, Mabel I., M.B., 10, Woodford Villas, Mannamead, Plymouth
Reid, M. B., Staff Surg., R.N., Royal Naval Hospital, Plymouth

Staffordshire Branch.

De Jersey, E. F. L., M.B., Burntwood Asylum, Lichfield

Sydney and New South Wales Branch.

Fiaschi, Carlo F., Esq., Macquarie Street, Sydney
Lockhead, W. K., Esq., Bathurst, N.S.W.
Robertson, J. M., M.B., Orange, N.S.W.
Waterer, F. A., M.B., Royal North Shore Hospital, Sydney

Toronto Branch.

Wheatley, D. G., M.D., Thornton, Ontario

Ulster Branch.

Fossett, R. F., Esq., Ravenscroft, Dromore
Innes, G. J., M.B., Kilkeel, co. Down
Kennedy, R., M.B., Surg., R.N., Belfast
Leathem, R. R., M.B., Ravenscroft, Belfast
McCracken, Jas. M., Carrigans, co. Donegal
Mehaffey, E., M.B., Portadown
O'Hara, John, M.B., 9, Hill Street, Newry
Ringland, W. P., M.B., Cressagh, co. Down
Smyth, F. C., M.B., 6, Toronto Terrace, Belfast
Steel, Jas. M.D., Creevin, co. Derry
Steen, P. J., M.B., Carrigart, co. Donegal

Worcestershire and Herefordshire Branch.

Addenbrooke, Bertram, M.D., Kidderminster

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Border Counties Branch: West Cumberland Division.—An ordinary meeting of the above Division will be held at Whitehaven on Thursday, February 28th, at 4 p.m. An agenda will be sent in due course.—John Penny, Honorary Secretary, Cockermouth.

Leinster Branch.—The annual meeting of the Leinster Branch will be held in the Royal College of Physicians, Dublin, on Saturday, February 23rd, at 4.30 p.m.—Arthur H. White, Honorary Secretary.

Metropolitan Counties Branch: Lambeth Division.—The next meeting of this Division will be held in the Court Room of Guy's Hospital, London Bridge, S.E., on Thursday, February 28th, at 4 p.m. Dr. Frederick Taylor (Senior Physician to Guy's Hospital, President elect of the Metropolitan Counties Branch) will read a paper on Some Unusual Forms of Pyrexia. It is hoped by the Committee that as many members as possible of the Lambeth Division (with their medical friends) will attend.—W. Alexander Atkinson, M.D., Honorary Secretary Lambeth Division, 216, Camberwell New Road, S.E.

Metropolitan Counties Branch: Marylebone Division.—A general meeting of the Division will be held at the rooms of the Medical Society of London, 11, Chandos Street, W., on Tuesday, February 26th, at 4.30 p.m. precisely. Agenda: (1) Minutes of the last meeting; (2) correspondence; (3) resolutions to be submitted by Dr. F. J. Smith—(*a*) That the Marylebone Division is of opinion that Article 27 of the Association should be altered in line 3 as follows: "Any Division having not less than fifty members may form one constituency" shall read, "Any Division having not less than one hundred members may form one constituency." (4) Consideration of the "Report on Provident Dispensaries." [This report will be found in this week's Supplement, p. 91.] (5) Communication from the Chairman *re* the Bill for the Incorporation of King Edward's Hospital Fund for London. (6) "That, considering the great increase in the work of the Division, it is desirable that in the Marylebone Division the offices of Treasurer and Secretary should be held by different persons and not combined in one person as at present."—Comyns Berkeley, M.B., B.C.Cantab., M.R.C.P.Lond., Honorary Secretary and Treasurer, 53, Wimpole Street, W.

Metropolitan Counties Branch: Wandsworth Division.—An ordinary meeting will be held on Thursday, February 28th, at 9 p.m., at the Balham Hotel. Tea and coffee at 6.30 p.m. Electric trams to and from Tooting Broadway pass close to the railway station and hotel, as also omnibuses from Clapham. Dr. E. W. Goodall (Medical Superintendent, Eastern Fever Hospital) will read a paper entitled, The Prodromal Symptoms of Some of the Common Infectious Diseases which will be followed by a discussion, in which F. Isambard Calver, M.D. (Medical Superintendent, South-Western Fever Hospital), Dr. Crookshank (Medical Officer of Health, Barnes), and Dr. J. D. Rolleston (Tooting Fever Hospital) will take part. There will also be shown some lantern slides of eruptions of infectious diseases and others simulating them, photographs of small-pox patients of last London epidemic, etc. All medical practitioners will be welcomed.—E. Rowland Eastwood, Honorary Secretary, Torquay House, Southfields, S.W.

Metropolitan Counties Branch: Westminster Division.—A meeting of the Division will be held at the St. James's Vestry Hall, 76, Piccadilly, on Wednesday, March 13th, at 4.30 p.m. Dr. W. Knowsley Sibley will open a discussion, and move the following resolution: "That in view of the increasing need and value of hospitals, the Westminster Division considers the welfare of the public and the interests of the medical profession would be best attained by the establishment of a Metropolitan Hospital Board for London."—F. J. McCann, M.D., Honorary Secretary.

Metropolitan Counties of Scotland Branch.—A clinical meeting of the Branch will be held in Inverness on Friday, March 1st; particulars as to meeting place and hour of meeting will be communicated to members by circular.—J. Milne Mann, M.D., Honorary Secretary, 4, Ardross Terrace, Inverness.

Metropolitan Branch: Central and Paddington Division.—[illegible] ordinary [illegible] meeting will be held at [illegible] Edwards, Sittingbourne, on Thursday, March 7th, at 3 p.m. Agenda: (1) To confirm minutes; (2) time, place, and chairman of next meeting; (3) to consider the question of school attendance certificates and a report from the Executive Committee; (4) a paper will be read by Dr. Grayling on Refuse Destruction in Kent; (5) any other business. Dr. Grayling invites members to luncheon at his house previous to the meeting—1.30 o'clock. Those who intend to accept are requested to write direct to him not later than Monday, March 4th.—A. R. Henchley, Honorary Secretary, Canterbury.

South-Eastern Branch of Ireland.—A meeting of this Branch will be held at Club House, Carlow, on March 6th, at 5.30 p.m. Agenda: (1) Minutes; (2) correspondence; (3) resolution by Dr. Laffan to reduce Branch meetings to two annually, to be held exclusively at Kilkenny, and to request Divisions to meet regularly at stated intervals and places.—J. Quirke, Honorary Secretary, Piltown.

Staffordshire Branch.—The second general meeting of the Session will be held at the North-Western Hotel, Stafford, on Thursday, February 28th. The President, Mr. Chas. Reid, will take the chair at 5.20 p.m. Business: (1) Minutes of the last general meeting. (2) Correspondence. (3) Dr. Ridley Bailey has given notice that he will move a resolution altering the time of meeting at Wolverhampton. (4) Exhibition of living cases. (5) Paper: Notes of a Case of Death due to Haemorrhage from Ulcer of the Duodenum, caused by Stone on the Kidneys—Percy R. Mander. (6) Paper: Notes on a Case of Pyloric Obstruction—Alfred H. Carter. (7) Angina Pectoris; Notes on a Case, with Comments—F. Geoghegan. (8) Exhibition of Pathological Specimens, etc. Dinner at 7.30 p.m. Charge 5s.—G. Petgrave Johnson, Honorary General Secretary, Stoke-on-Trent.

BRITISH MEDICAL ASSOCIATION LIBRARY.

List of Books, etc., Presented.

Presented by the Authors:

Ball, J. B. Handbook of Diseases of the Nose. 5th Ed. 1906.
Bannermann, Lieut.-Col. Report of the Plague Research Laboratory. Bombay. 1906.
Bruce, J. M. Principles of Treatment. 2nd Imp. 1901.
Dowse, T. S. Lectures on Massage and Electricity. 6th Ed. 1906.
Freyer, P. J. Clinical Lectures on Enlargement of the Prostate. 3rd Ed. 1906
French, H., and H. T. Hicks. Mitral Stenosis and Pregnancy. 1906.
Haffkine, W. M., Les Vaccinations Anticholériques aux Indes. 1906.
——— Les Inoculations Antipesteuses. 1906.
Marshall, C. F. Syphilology and Venereal Diseases. 1906.
Mummery, P. L. The Sigmoidoscope. 1906.
Paget, S. Experiments on Animals. 3rd Ed. 1906.
Reid, G. Practical Sanitation. 13th Ed. 1906.
Sullivan, W. C. Alcoholism. 1906.
Thresh and Porter. Preservatives in Food and Food Examination. 1906.

Presented by E. Bovell, Esq., M.B.Lond.:

La Semaine Médicale. 1884, 1885, 1889.

Presented by Thos. MacLaughlin, Esq., L.R.C.P. (Londonderry):

Braithwaite, Retrospect of the Medical Sciences. 1879-1901.
The Medical Annual. 1887-1896.

Presented by the Medical Officer to the Local Government Board:

Reports by:

Dr. Monckton Copeman. On Enteric Fever at Belmont Asylum, Sutton, Surrey. 1906.
Dr. Farrar. On the Sanitary Circumstances at Darlaston. 1906.
Dr. Fletcher. On the Sanitary Circumstances and Administration of Coggleshall, Essex. 1906.
Dr. Fletcher. On the Sanitary Circumstances and Administration at Southwick on Wear. 1906.
Dr. Low. On the Sanitary Circumstances of Batley. 1906.
Dr. Manby. On the Sanitary Circumstances and Administration of Windsor Rural District. 1906.
Dr. St. George Mivart. On Bourne Rural District and the Prevalence of Scarlatina and Diphtheria. 1906.
Dr. Sweeting. On Diphtheria at Princetown. 1906.

Presented by the Editor, British Medical Journal:

Arden, F. E. British Blood-sucking Flies. 1906.
Berger, Leroy. Troubles Oculaires chez la Femme. 1905.
Caulfeild, Jas. Physical Efficiency. 1906.
Gee, S. Auscultation and Percussion. 5th Edition. 1906.
Hall Walker. Purin Bodies of Food Stuffs. 2nd Edition. 1906.
Jacobson and De Schweinitz. The Ophthalmic Yearbook. 1906.
Mendeleeff, D. Principles of Chemistry. Vols. I.2. 3rd English Edition. 1905.
National Conference on Infant Mortality. 1906. (Proceedings.)

Oliver, T. Maladies Caused by the Air We Breathe, Inside and Outside Our Homes. 1906.
Saleeby, C. W. The Cycle of Life. 1904.
Saundby, R. The Treatment of Diseases of the Digestive Organs. 1906.
Schlesinger, H. Indications for Operation in Diseases of the Internal Organs. Translator, K. W. Monsarrat. 1906.
Schweinitz, G. E. De. Diseases of the Eye. 5th Edition. 1906.
Simon, W. Manual of Chemistry. 8th Ed. 1905.
Stöhr, P. Textbook of Histology. Translator. A. Schaper. 1904.
Tomes (the late Sir John). Tomes and Newell. System of Dental Surgery. 5th Ed. 1906.
Watson, Chalmers. Practical Handbook on Diseases of the Eye. 1903.
White, R. Prosser. Catarrhal Fevers. 1906.
Windsor, F. N. Indian Toxicology. 1906.
Wright, Sir A. E. Principles of Microscopy. 1906.

Calendars, Reports, and Transactions have been received from the following bodies:

American Laryngological Association. Transactions. Vol. 28. 1906.
American Otological Society. Transactions. Vol. 10. 1906.
Association of American Physicians. Transactions. Vol. 21. 1906.
Bellevue and Allied Hospitals. Vol. 4. Reports. 1905.
Birmingham University Calendar. 1906-7.
Bombay University Calendar. 1906-7.
British Pharmaceutical Conference Yearbook. 1906.
Chicago City. Biennial Health Report. 1904-5.
Childhood Society. Transactions. Vols. 1-3. 1904-5.
Clinical Society of London. Transactions. Vol. 39. 1906.
Edinburgh Obstetrical Society. Transactions. Vol. 31. 1906.
Galway. Queen's College Calendar. 1906-7.
Glasgow Medico-Chirurgical Society. Transactions. Vols. 3-4. 1900 and 1903.
Guy's Hospital Reports. Vol. 59. 1904.
King's College Calendar. 1906-7.
Laryngological Society of London. Proceedings. Vol. 13. 1906.
Life Assurance Medical Officers' Association. Transactions. Vol. 4. 1904-5.
London County Council. Seventeenth Annual Report of the Asylums Committee. 1906.
Medico Legal Society. Transactions. Vol. 3. 1905-6.
North London or University College. Registrar's Report. 1903.
Ophthalmological Society of the United Kingdom. Transactions. Vol. 26. 1906.
Presbyterian Hospital, New York. Medical and Surgical Report. Vol. 6. 1906.
Punjab University Calendar. 1906-7.
Reading Pathological Society. Proceedings. 1905-6.
Royal College of Surgeons. Calendar. 1906.
Society of Anaesthetists. Transactions. Vol. 7. 1905.
Society for Psychical Research. Proceedings. Vol. 20. 1906.
Society for the Study of Disease in Children. Transactions. Vol. 1. 1901.
Surgeon-General's Index Catalogue. 2nd Series. Vol. 10. 1906
University College Calendar. 1906-7.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—ROBLEY H. J. BROWNE, Fleet Surgeon, and EDWARD D. J. O'MALLEY, Staff Surgeon, to the *Majestic*, on recommissioning, February 26th; PERCY E. MAITLAND, Fleet Surgeon, and ROBERT R. SCRIBNER, Surgeon, to the *Albion*, on recommissioning, February 26th; HERBERT W. G. DOYNE, Fleet Surgeon, and ALGERNON C. BEAN, Staff Surgeon, to the *King Edward VII.* on recommissioning, March 5th; GEORGE HEWLETT, M.B., Fleet Surgeon and ALFRED J. HEWITT, Surgeon, to the *Prince George*, on recommissioning, March 5th; GODFREY TAYLOR, M.B., Staff Surgeon, to the *Terrible*, February 14th; HENRY B. HALL, Staff Surgeon, to the *President*, additional, for three months' course at West London Hospital, February 18th; FREDERICK D. LUMLEY, Staff Surgeon, to the *Mars*, on recommissioning, March 5th; HAROLD P. JONES, Staff Surgeon, to the *Alcantara*, on completing, March 5th; ROBERT S. BERNARD, Staff Surgeon, to the *Talbot*, on completing, March 5th; HUGH CLIFT, Staff Surgeon to the *Dido*, on recommissioning, March 5th; ARTHUR R. THOMAS, Surgeon, to the *Ariadne*, February 14th; JOHN R. MUIR, M.B., Surgeon, to the *Pembroke*, additional, for Chatham Dockyard, February 26th; GEORGE H. P. MILLN, M.B., Surgeon, to the *Fantome*, on commissioning, undated; PERCY F. MINETT, Surgeon, to the *Halcyon*, undated, and on recommissioning, March 2nd; AUGUSTUS J. LAURIE, Surgeon, to the *Mars*, on recommissioning, March 5th; DOUGLAS V. LOWNDES, Surgeon, to the Royal Marine Artillery Division, Portsmouth, March 5th; PERCY F. ALDERSON, Surgeon, to the *Surprise*, on recommissioning, March 5th; REGINALD L. JONES, Surgeon, to Plymouth Hospital, March 5th; JAMES C. BRINGAN, Surgeon, to the *Wildfire*, supplementary, February 16th.

Mr. J. L. OWENS, civil practitioner, has been appointed Surgeon and Agent at Holyhead, February 11th.

Mr. A. E. CARRUTHERS, civil practitioner, has been appointed Surgeon and Agent at Rhosneigr, February 11th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT H. E. GOLLEE, from the Seconded List, and who was appointed on probation, January 30th, 1906, to be Lieutenant, January 30th.

Lieutenants J. H. SPENCER, M.B., and B. JOHNSON, from the Seconded List, and who were appointed on probation, July 30th, 1906, to be Lieutenants, February 1st.

The undermentioned gentlemen to be Lieutenants, on probation, dated January 28th: WINFRID K. BEAMAN, COLIN CASSIDY, ALEXANDER D. FRASER, M.B., MICHAEL P. LEAHY, M.B., FREDERICK T. TURNER, ARCHER FORTESCUE, M.B., HOWARD G. GIBSON, JOHN L. WOOD, STEPHEN FIELD, RICHARD D. O'CONNOR, DONALD F. MACKENZIE, M.B., JOHN E. M. BOYD, GEOFFREY CARLISLE, EDWARD M. MIDDLETON, OWEN R. M'EWEN, JOHN H. GURTEY, FREDERICK H. M. CHAPMAN, ALFRED C. ELLIOTT, M.B., JOHN DE P. LANGRISHE, M.B., WILLIAM G. AVISS, WILLIAM B. PURDON, M.B., HENRY M. J. PERRY, JOHN C. HART, M.B., MALCOLM O. WATSON, M.B., THOMAS H. SCOTT, M.B., LEOPOLD A. A. ANDREWS, GERALD F. RUDKIN, VINCENT T. CARRUTHERS, M.B., HAROLD W. FAREBROTHER, FRANCIS CASEMENT, M.B.

Lieutenant C. CASSIDY is seconded under the provisions of Article 349, Royal Warrant, dated January 28th.

Lieutenant-Colonel C. H. BURTCHAELL, M.B., has been appointed Staff Officer to the Principal Medical Officer Irish Command, vice Lieutenant Colonel D. M. Saunders, M.D.

Lieutenant R. G. ANDERSON is seconded for service with the Egyptian Army, January 30th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL W. G. KING, M.B., C.I.E., Madras Establishment, is promoted to be Colonel, from April 29th, 1906. Appointed Assistant Surgeon, March 31st, 1874, he became Surgeon-Lieutenant-Colonel, March 31st, 1894, and was selected for increased pay, February 12th, 1900. He has no war record, but was appointed a Companion of the Order of the Indian Empire, June 3rd, 1899.

Captain D. HARVEY, M.D., R.A.M.C., who is serving in India, is placed on special duty at the Central Research Institute, under the orders of the Sanitary Commissioner with the Government of India.

Lieutenant-Colonel D. HENNESSY, R.A.M.C., on arrival from England, is posted to the 6th (Poona) Division.

The under-mentioned gentlemen are appointed Lieutenants, dated September 1st, 1906: JOHN TAYLOR, M.B., ALEXANDER D. STEWART, CLAUDE H. CROSS, ROBERT A. CHAMBERS, M.B., ROBERT H. BOTT, F.R.C.S., JOHN MORISON, M.B., SAMUEL G. S. HAUGHTON, M.B., FRANCIS W. CRAGG, M.B., NORMAN N. G. C. MCVEAN, NORMAN S. SIMPSON, SHUMSHERE SINGH, ROBERT F. HEBBERT, JOSEPH F. JAMES, M.B., JAMES SMALLEY, M.B., CHARLES M. ROBERTS, M.B., ANDREW S. LESLIE, M.B., WILLIAM M. THOMSON, M.B., ALEXANDER P. G. LORIMER, M.B., HERBERT B. SCOTT, GEORGE MCG. MILLAR, M.B., HUBERT A. KNIGHT, M.B., FRANCIS H. SALISBURY, M.B., FREDERICK C. FRASER, M.D., HAROLD H. THORBURN, M.B.

CHANGES OF STATIONS.

THE following changes of stations amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during January:

		FROM		TO
Colonel	H. J. W. Barrow	Dalhousie	...	Lahore.
,,	W. L. Chester, M.B.	Cherat	...	Peshawur.
,,	P. M. Ellis	—		Quetta.
,,	O. Todd, M.B.	Poona	...	Bangalore.
Lieut.-Col.	F. B. Maclean	Jersey	...	S. Africa.
,,	D. O'Sullivan	Rawal Pindi	...	Secunderabad.
,,	T. J. R. Lucas, M.B., C.B.	Secunderabad.		Bangalore.
,,	M. W. O'Keeffe, M.B.	Woolwich	...	W.Com., India.
,,	G. W. Brasier-Creagh, C.M.G.	Hounslow	...	Woolwich.
,,	W. A. Morris	Murree	...	Rawal Pindi.
,,	S. Westcott, C.M.G.	York	...	W.Com., India.
,,	H. S. M'Gill	Bombay	...	Poona
,,	G. E. Hale, D.S.O.	Poona	...	Kirkee.
,,	R. L. R. Macleod, M.B.	W. Com. India		Quetta.
,,	W. B. Day, M.B.	Crownhill	...	Devonport.
,,	R. G. Hanley, M.B.	Kuldana	...	Rawal Pindi.
,,	S. G. Allen	Kalabagh	...	Ambala.
,,	L. T. M. Nash	Golden Hill	...	India.
,,	H. Carr, M.D.	Mount Abu	...	Nasirabad.
,,	H. Cocks, M.B.	Madras	...	St Thomas' Mt.
,,	H. P. G. Elkington	Aldershot	...	Jubbulpore.
,,	D. M. O'Callaghan	—		Rawal Pindi.
,,	G. Scott, M.B.	Gharial	...	Multan.
,,	R. Holyoake	Solan	...	Lahore
,,	H. W. Austin	Quetta	...	Karachi.
Major	J. J. C. Watson, M.D., C.I.E.	Bermuda	...	Portsmouth.
,,	E. C. Freeman, M.D.	London	...	Jamaica
,,	J. Paterson, M.B.	Bermuda	...	Edinburgh.
,,	F. Smith, D.S.O.	Portsmouth	...	India.
,,	A. E. Smithson, M.B.	Chester	...	South Africa.
,,	T. W. Gibbard, M.B.	Murree	...	Rawal Pindi.
,,	C. J. Healy, M.B.	Ceylon	...	Dublin.
,,	I. A. O. MacCarthy	Kilkenny	...	Curragh
,,	H. P. Johnson	Benares	...	S. Command.
,,	C. C. Fleming, M.B., D.S.O.	Malta	...	Crete
,,	J. F. M. Kelly, M.B.	Cork	...	Fermoy
,,	J. G. M'Naught	Edinburgh	...	South Africa.
,,	A. E. Master, M.B.	Crete	...	Malta
,,	G. St. C. Thom, M.B.	Lahore	...	Ferozepore.
,,	S. W. Sweetnam	Weedon	...	Warley.
Captain	A. H. Waring	Dalhousie	...	Lahore.
,,	A. W. Hooper, D.S.O.	Kirkee	...	Quetta.
,,	W. A. Ward	R.A.M.College.		London Dist, Aldershot.
,,	G. E. F. Stammers	—		Edinburgh.
,,	C. P. Wauhill	Bermuda	...	Edinburgh.
,,	W. E. Hudleston	Kamptee	...	Mhow.
,,	H. L. W. Norrington	R.A.M.College		Chester.
,,	H. O. B. Browne-Mason	London Dist.		R.A.M.College.
,,	H. G. Martin	—		Colaba
,,	S. de C. O'Grady, M.B.	Fermoy	...	Kilkenny.
,,	E. A. Bourke	Londonderry		S. Africa
,,	C. J. O'Gorman, D.S.O.	Brighton	...	Shornclife.
,,	R. S. H. Fuhr, D.S.O.	Murree	...	Sialkot.

		FROM	TO
Captain	G. J. S. Archer, M.B. ...	R.A.M. College	Dublin.
..	S. O. Hall	St. Thomas's Mount	Secunderabad.
..	E. Brodribb	Gibraltar ...	Kilkenny.
..	H. B. G. Walton	R.A.M. College	York.
..	E. P. Hewitt	Netley	R.A.M. College
..	E. P. W. Barrow	Woolwich ...	..
..	A. L. Scott	R.A.M. College	S. Command.
..	H. S. Taylor	Aldershot ...	R.A.M. College
..	N. J. C. Rutherford, M.B. ...	R.A.M. College	E. Command.
..	A. O. B. Wroughton	Secunderabad.	Malapuram.
..	F. Aspe	R.A.M. College	E. Command.
..	G. G. Delap, D.S.O.	..	London Dist.
..	H. Stinson	Millbank ...	..
..	A. L. A. Webb	Norwich ...	R.A.M. College
..	P. H. Falkner	Warrington ...	Chester.
..	E. E. Lilley	R.A.M. College	S. Command.
..	A. A. Seed, M.D.	Middleburg, Cape Colony	Wynberg, Cape Colony.
..	J. H. R. Boyd	R.A.M. College	York.
..	H. M. Morton, M.B.	..	Aldershot.
..	F. G. Richards	..	Netley.
..	E. W. Sherry	..	Aldershot.
..	P. S. O'Reilly	Aldershot ...	R.A.M. College
..	C. C. Corkery, M.B.	Peshawur ...	Rawal Pindi
..	A. M. MacLaughlin, M.B. ...	London Dist...	Windsor.
..	T. A. Harrison, M.B.	Deepcat ...	R.A.M. College
..	F. M. Dowell, M.B.	R.A.M. College	Aldershot.
..	A. H. Sellers	Woolwich ...	R.A.M. College
	James M. Buist, M.B. ...	R.A.M. College	Aldershot.
..	C. E.	Aden	York.
..	F. W. C.	Chatham ...	R.A.M. College
..	I. M. P. ... M.B.	Jersey	..
..	B. R. D. ... M.B.	Portsmouth ...	..
..	W. L. P. ... le Cheek ...	R.A.M. College	S. Command.
..	R. L. Ar.	Lahore	Jullundur.
..	E. G. Ford, M.B.	R.A.M. College	York.
..	F. S. Warner	Murree	Ferozepore.
..	W. Bennett, M.B.	Fermoy ...	R.A.M. College
..	H. B. Fawcus, M.B.	Newcastle-on-Tyne ...	..
..	T. E. Fielding, M.B.	Portland ...	..
..	R. S. Bartlett	Fort Allahabad	E. Command.
..	G. Carroll	Clonmel ...	R.A.M. College
..	J. C.	Hounslow ...	..
..	A. D. Wa. ... M.B.	Belturbet ...	..
..	T. H. Stevenson, M.B. ...	E. Command...	Chatham.
..	F. M'Lennan, M.B.	Maryhill ...	R.A.M. College
..	A. F. Aveston	Colchester ...	Chatham.
..	J. Deegan, M.B.	Dublin ...	Fermoy.
..	L. Bennett	R.A.M. College	S. Command.
..	A. D. Jamieson	Woolwich ...	R.A.M. College
..	W. L. Bennett, M.B.	Edinburgh ...	..
..	C. R. L. Rouayne, M.B. ...	Lichfield ...	York.
..	P. J. Bodington, M.B. ...	R.A.M. College	London Dist.
..	J. F. Whelan, M.B.	Cherat	Peshawur.
..	F. A. Sc.	R.A.M. College	Edinburgh.
..	A. W. C.	Dinapore ...	E. Command.
..	R. S. Hunt, M.B.	Belfast	Belturbet
..	H. B. Bateman	Millbank ...	R. A. M. Coll.
..	A. R. C. P.	Tidworth ...	Bulford.
..	J. E. Corbett	Aldershot ...	R. A. M. Coll.
..	W. M. E.	Portsmouth ...	Sandown.
..	E. W. Powell	Queenstown ...	India.
..	E. E. Parkes, M.B.	Gibraltar ...	E. Command.
..	J. H. Barbour, M.B.	Londonderry .	R. A. M. Coll.
..	J. B. Clarke, M.B.	Ruckhet ...	York.
..	A. W.	..	West Africa.
..	H. W. Lo. ... M.B.	Murree	Jullundur.
..	E. M. H. C.	Dagshai ...	Ambala.
..	S. M. W. Meadows	Murree	Rawal Pindi.
..	H. G. S. Wood	Lahore	Multan
..	J. E. H. Gatt, M.D.	Pretoria ...	Standerton.
..	F. C. Lambert	.. ...	Potchefstroom
..	R. G. Parkin	Sanla	Ambala.
Lieutenant	W. Wiley, M.B. ...	Bangalore ...	Secunderabad.
..	M. O. Anwyl	Dalhousie ...	Ferozepore.
..	H. F. W.	Murree	Rawal Pindi.
..	A. W. C.	.. ...	Attock
..	J. A. Anderson, M.B. ..	Bulford ...	S. Africa.
..	R. C. L.	Devonport ...	..
..	S. ... M.B.	Millbank ...	India.
..	A. M. Rose, M.B.	Portsmouth ...	Bermuda.
..	T.	Dalhousie ...	India.
..	C. H.	Fort Tregantle	S. Africa.
..	R. A.	Bulford ...	..
..	A. E.	Dublin	..
..	P.	Ipswich ...	Jamaica.
..	F. C. ... ... M.B. ...	Devonport ...	S. Africa
..	T.	Mill Hill ...	Colchester
..	L. M.	Chatham ...	Tidworth.
..	A. H. ... M.B.	Aldershot ...	Bermuda.
..	F. H. O. ... M.B.	Netley ...	Bulford.
..	J.	.. ...	Portsmouth.
..	T. C. C. Leslie ...	Millbank ...	S. Africa

Vital Statistics.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his return relating to the births and deaths in the fourth quarter of last year, and to the marriages during the three months ending September last. The marriage-rate during that period was equal to 17.4 per 1,000, or 0.3 per 1,000 above the mean rate in the corresponding periods of the ten preceding years.

The births registered in England and Wales during the quarter ending December last numbered 225,124, and were equal to an annual rate of 25.9 per 1,000 of the population, estimated at 34,547,016 persons in the middle of 1906. In the fourth quarters of the ten preceding years the birth-rate averaged 27.8 per 1,000, the rate in the quarter under notice being, with one exception, the lowest recorded in the corresponding period of any year since civil registration was established. The birth rates in the several counties in the last quarter ranged from 19.5 in Sussex, 20.1 in Herefordshire, 20.7 in Cornwall, and 21.1 in Northamptonshire, in Somersetshire, and in Carnarvonshire to 29.1 in Staffordshire and in Carmarthenshire, 30.0 in Northumberland, 31.8 in Glamorganshire, 33.0 in Durham, and 33.4 in Monmouthshire. In seventy-six of the largest English towns, including London, the birth-rate averaged 26.5 per 1,000: in London the rate was 25.5 per 1,000, while it averaged 27.0 per 1,000 in the seventy-five other large towns, and ranged from 15.7 in Hastings, 16.9 in Bournemouth, 18.0 in Halifax, 18.4 in Hornsey, 18.8 in Bradford, 20.5 in Burton-on-Trent, and 20.8 in Northampton to 33.1 in Middlesbrough, 33.2 in Bootle, 33.8 in Merthyr Tydfil, 34.1 in St. Helens, 34.6 in Rhondda, and 35.0 in Tynemouth.

The excess of births over deaths registered in England and Wales during the three months under review amounted to 89,679: this represents the natural increase of the population during that period. From returns issued by the Board of Trade it appears that 111,639 passengers left the United Kingdom for places out of Europe: of these passengers, 43,798 were English, 9,143 were Scottish, and 8,818 Irish, while 49,880 others were of foreign or unspecified nationality. Compared with the numbers in the corresponding period of the preceding year, the English passengers showed an increase of 26.3 per cent., the Scottish of 31.9 per cent., and the Irish of 9.6 per cent.

During the fourth quarter of the year the deaths of 135,445 persons were registered, equal to an annual rate of 15.6 per 1,000: the average rate in the ten preceding fourth quarters having been 16.7 per 1,000. The lowest county death rates last quarter were 11.9 in Northamptonshire, 12.4 in Middlesex, 12.7 in Berkshire, 12.8 in Worcestershire, and 12.9 in Sussex, the highest rates were 16.9 in Glamorganshire, 17.5 in the North Riding of Yorkshire, 17.7 in Northumberland, 18.2 in Monmouthshire, 18.5 in Lancashire, and 18.6 in Durham. In seventy-six of the largest English towns, with an aggregate population of nearly sixteen millions, the mean rate of mortality was 16.2 per 1,000: in 142 smaller towns, containing a population of nearly five millions, the death rate was 14.7 per 1,000, while in the remaining and chiefly rural parts of England and Wales it was 15.1 per 1,000. The death-rate in London was 16.0 per 1,000, and among the seventy-five other large towns the rates ranged from 7.3 in Hornsey, 8.5 in Kings Norton, 10.2 in Northampton, 10.9 in East Ham, 11.0 in Willesden, and 11.3 in Handsworth (Staffs), to 20.4 in Preston, 20.6 in Burnley, 21.0 in Rochdale, 21.2 in Middlesbrough, 21.8 in South Shields, and 22.1 in Oldham.

The 135,445 deaths from all causes in England and Wales last quarter included 13,033 which were referred to the principal infectious diseases; of these, 12 resulted from small-pox, 2,471 from measles, 897 from scarlet fever, 1,986 from diphtheria, 1,233 from whooping-cough, 1,326 from "fever," and 5,108 from diarrhœa. The mortality from these diseases in the aggregate last quarter was at the annual rate of 1.49 per 1,000, against an average rate of 1.58 per 1,000 in the corresponding periods of the ten preceding years. The death-rate from each of these infectious diseases, except diarrhœa, was below the average.

The rate of infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 126 per 1,000, against an average rate of 144 in the corresponding quarters of the ten preceding years. Among the several counties the rates of infant mortality ranged from 74 in Herefordshire, 78 in Berkshire and in Somersetshire, 80 in Buckinghamshire, and 83 in Surrey, to 147 in Northumberland, 148 in Monmouthshire, 151 in Carnarvonshire, 152 in Glamorganshire, 159 in Lancashire, and 165 in Durham. In the seventy-six large towns the mean rate was 138 per 1,000, in London the proportion was equal to 125 per 1,000, while among the seventy-five other large towns it averaged 143 per 1,000, and ranged from 69 in Reading, 70 in Hornsey, 79 in King's Norton, 86 in Southampton, and 89 in Northampton, to 177 in South Shields and in Merthyr Tydfil, 179 in Middlesbrough, 181 in Gateshead, 184 in Newport (Mon.), 230 in Burnley, and 237 in Preston.

The mortality among persons aged between 1 and 60 years during the three months under notice was equal to an annual rate of 7.8 per 1,000 of their estimated population at this group of ages, and was 0.7 per 1,000 below the average rate. In the seventy-six large towns the death-rate at these ages was 8.6 per 1,000, in London the rate was 7.7 per 1,000, while among the seventy-five other large towns it ranged from 5.0 in Hornsey, 5.1 in King's Norton, 5.7 in Northampton and in Handsworth (Staffs), and 6.3 in Willesden to 11.8 in Wigan and in Rochdale, 12.3 in Rotherham and in Middlesbrough, 13.2 in Oldham, and 13.4 in South Shields.

Among persons aged 60 years and upward the death-rate last quarter was equal to 71.1 per 1,000, against an average rate of 67.9 per 1,000 in the fourth quarters of the ten preceding years. In the seventy-six towns the death-rate at this age-group averaged 75.6 per 1,000: in London the rate was 71.2 per 1,000, while among the other large provincial towns the rates ranged from 47.9 in Hastings, 57.4 in King's Norton, 61.5 in Leyton, 63.7 in Devonport, and 64.1 in Harrogate, to 90.8 in Newport (Mon.), 102.8 in Wigan, 103.4 in Rochdale, and 117.8 in Burnley.

The mean temperature of the air during last quarter was above the average in the east, but was slightly below it in the western districts. The mean amount registered in London amounted to 9.5 in., or 97 per cent. of the possible amount. The duration of bright sunshine during the quarter was 141 hours, or 20 hours in excess of the average for the corresponding quarter in the preceding twenty-five years.

VITAL STATISTICS OF METROPOLITAN BOROUGHS DURING 1906.

In the accompanying table will be found summarised the vital statistics of the City of London, and of each of the metropolitan boroughs, based upon the Registrar-General's quarterly returns for the year 1906. The mortality figures relate to the deaths of persons actually

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during 1906.

BOROUGHS.	Estimated Population middle of 1906.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Typhus.	Enteric Fever.	Ill-defined Pyrexia.	Diarrhœa.	Phthisis.	Deaths of Children Under 1 Year of Age to 1,000 Births.
COUNTY OF LONDON	4,721,217	125,652	71,155	26.7	15.1	1.93	9,047	—	1,909	533	691	1,226	—	260	4	4,424	6,775	130
Paddington	148,913	3,165	1,956	21.3	12.5	1.30	193	—	16	18	18	12	—	7	—	125	167	112
Kensington	180,902	3,323	2,499	18.4	13.8	1.56	280	—	81	11	19	20	—	8	—	144	237	137
Hammersmith ...	120,679	3,021	1,777	25.1	14.8	2.13	257	—	57	15	27	28	—	8	—	131	151	142
Fulham	161,965	4,767	2,214	29.5	13.7	2.40	388	—	53	18	32	31	—	13	—	241	182	136
Chelsea	74,672	1,506	1,168	20.2	15.7	2.03	151	—	8	9	15	17	—	—	—	82	117	141
City of Westminster	173,905	2,763	2,244	15.9	12.9	0.84	146	—	17	14	16	23	—	5	1	69	241	119
St. Marylebone ..	128,580	4,029	1,910	31.4	14.9	1.28	164	—	47	14	12	11	—	3	—	77	200	79
Hampstead	89,633	1,433	844	16.0	9.4	0.57	51	—	10	5	8	2	—	2	—	23	60	79
St. Pancras	236,455	5,742	3,743	24.4	15.9	1.65	392	—	96	32	23	76	—	15	1	105	426	131
Islington	344,987	8,484	5,071	24.7	14.7	1.62	565	—	193	37	30	74	—	20	—	201	422	128
Stoke Newington ...	53,217	1,082	612	20.4	11.5	1.10	58	—	11	1	4	17	—	—	—	5	55	104
Hackney	230,721	5,846	3,061	25.4	13.3	1.58	363	—	65	22	20	39	—	14	—	203	300	116
Holborn	55,805	1,644	1,001	29.5	18.0	1.44	80	—	25	3	6	10	—	1	—	35	132	91
Finsbury	97,466	3,461	2,011	35.6	20.7	3.59	349	—	123	15	23	54	—	14	—	140	212	136
City of London ...	21,367	341	369	16.0	17.3	1.08	23	—	3	7	2	4	—	1	—	6	37	135
Shoreditch	116,108	3,802	2,275	32.8	19.6	3.13	362	—	75	19	15	61	—	8	—	181	233	169
Bethnal Green ...	130,609	4,430	2,464	34.0	18.9	2.56	335	—	69	22	20	63	—	14	—	154	205	157
Stepney	307,176	10,957	5,431	35.8	17.7	2.74	840	—	175	37	61	104	—	26	—	457	526	133
Poplar	170,673	5,284	2,999	31.0	17.6	2.95	503	—	108	15	28	52	—	11	—	281	263	155
Southwark	209,143	6,079	3,768	29.1	18.1	2.23	462	—	95	45	31	54	—	12	—	225	429	147
Bermondsey	128,629	4,036	2,532	31.5	19.7	2.94	377	—	94	29	34	51	—	4	—	16	258	154
Lambeth	315,774	8,972	4,726	28.5	15.0	1.69	532	—	77	23	51	71	—	22	1	282	430	121
Battersea	179,622	4,597	2,392	25.7	13.4	1.82	327	—	41	24	18	78	—	8	—	158	230	129
Wandsworth	273,381	7,068	3,481	25.9	12.8	1.60	435	—	66	19	49	60	—	15	—	226	275	124
Camberwell	274,132	6,909	3,998	25.3	14.6	1.88	514	—	112	25	40	77	—	13	—	247	344	132
Deptford	115,495	3,260	1,949	28.3	16.1	2.69	310	—	69	15	20	62	—	6	—	135	148	145
Greenwich	100,380	2,667	1,415	25.4	13.5	1.87	196	—	31	17	29	42	—	3	—	72	125	119
Lewisham	148,463	3,445	1,777	23.3	12.0	1.46	215	—	21	14	21	27	—	1	1	130	122	113
Woolwich	127,345	3,539	1,668	27.9	13.1	1.52	192	—	30	5	22	21	—	9	—	105	169	110

belonging to the various boroughs, and are the result of a complete system of distribution of the deaths occurring in institutions among the various boroughs in which the deceased persons had previously resided.

The 125,652 births registered in London during 1906 were equal to an annual rate of 26.7 per 1,000 of the population, estimated at 4,721,217 persons in the middle of last year; this rate was lower than that recorded in any preceding year, and was 2.3 per 1,000 below the average rate in the ten years 1896-1905. The birth-rates last year ranged from 15.9 in the City of Westminster, 16.0 in the City of London and in Hampstead, 18.4 in Kensington, 20.2 in Chelsea, and 20.4 in Stoke Newington, to 31.0 in Poplar, 31.4 in St. Marylebone, 31.5 in Bermondsey, 32.8 in Shoreditch, 34.0 in Bethnal Green, 35.6 in Finsbury, and 35.8 in Stepney.

The deaths of persons belonging to London registered during the year numbered 71,155, and were in the proportion of 15.1 deaths annually per 1,000 persons living, against 15.2, 16.1, and 15.1 per 1,000 in the three preceding years: the average annual rate for the ten years 1896-1905 was 17.3 per 1,000. The lowest death-rates last year in the metropolitan boroughs were 9.4 in Hampstead, 11.5 in Stoke Newington, 12.0 in Lewisham, 12.5 in Paddington, and 12.8 in Wandsworth; the highest rates were 18.0 in Holborn, 18.1 in Southwark, 18.9 Bethnal Green, 19.6 in Shoreditch, 19.7 in Bermondsey, and 20.7 in Finsbury.

During the year under notice 9,047 deaths were referred to the principal infectious diseases; of these 1,909 resulted from measles, 533 from scarlet fever, 691 from diphtheria, 1,226 from whooping-cough, 260 from enteric fever, 4 from ill-defined pyrexia, and 4,424 from diarrhœa, but not any from small pox or from typhus. These 9,047 deaths were equal to an annual rate of 1.93 per 1,000, the rates in the three preceding years having been 1.75, 2.14, and 1.70 per 1,000 respectively: the mean rate in the ten years 1896-1905 was 2.32 per 1,000. Among the several boroughs the death-rates last year from the principal infectious diseases ranged from 0.57 in Hampstead, 0.84 in the City of Westminster, 1.08 in the City of London, 1.10 in Stoke Newington, 1.28 in St. Marylebone, and 1.30 in Paddington to 2.69 in Deptford, 2.74 in Stepney, 2.94 in Bermondsey, 2.95 in Poplar, 3.13 in Shoreditch, and 3.59 in Finsbury. Compared with the average mortality in the four preceding years scarlet fever and diarrhœa were rather more fatal, while the deaths from each of the other principal infectious diseases showed a decline. No death from small-pox was registered during the year, and no cases of this disease remained under treatment at the end of the year in the Metropolitan Asylums Hospitals; the number of small-pox patients admitted into these hospitals during the year was 28, against 414, 512, and 72 in the three preceding years. The greatest proportional mortality from measles was recorded in Chelsea, Finsbury, Shoreditch, Poplar, Bermondsey, and Deptford. Scarlet fever was proportionally most fatal in the City of London, Shoreditch, Bethnal Green, Southwark, Bermondsey, and Greenwich; 18,622 scarlet fever patients were admited into the Metropolitan Asylums Hospitals during the year, against 10,808, 11,629, and 17,592 in the three preceding years; 3,787 cases remained under treatment at the end of the year, against 1,606, 2,349, and 3,410 at the end of the three preceding years. The highest death-rates from diphtheria last year were recorded in Hammersmith, Fulham, Chelsea, Finsbury, Stepney, Bermondsey, and Greenwich; there were 6,478 diphtheria patients admitted into the Metropolitan Asylums Hospitals last year, against 6,158, 5,783, and 5,380 in the three preceding years: 995 cases remained under treatment at the end of the year, against 734, 801, and 701 at the end of the three preceding years. Whooping-cough was proportionally most fatal in Finsbury, Shoreditch, Bethnal Green, Bermondsey, Battersea, Deptford, and Greenwich. The greatest proportional mortality from "fever" occurred in Hammersmith, Fulham, Finsbury, Bethnal Green, Stepney, Lambeth, and Woolwich. The number of enteric fever patients admitted into the Metropolitan Asylums Hospitals, which had been 1,247, 1,008, and 831 in the three preceding years, rose again last year to 934: 134 cases remained under treatment at the end of last year, against 246, 150, and 78 at the end of the three preceding years. Diarrhœa showed the greatest proportional fatality in Fulham, Finsbury, Shoreditch, Stepney, Poplar, and Bermondsey.

The 6,775 deaths from phthisis registered during the year were equal to a rate of 1.44 per 1,000, the rates in the three preceding years having been 1.55, 1.62, and 1.42 per 1,000. Among the several metropolitan boroughs the phthisis death-rates last year ranged from 0.67 in Hampstead, 0.82 in Lewisham, 1.01 in Wandsworth, 1.04 in Stoke Newington, 1.12 in Paddington, and 1.13 in Fulham, to 2.01 in Shoreditch and in Bermondsey, 2.06 in Southwark, 2.18 in Finsbury, 2.25 in Bethnal Green, and 2.37 in Holborn. The central and eastern groups of boroughs continue to show excessive mortality from this disease, the rates in these two areas being 2.19 and 1.82 per 1,000 respectively, against 1.27 in the western, and 1.35 in the northern, and in the southern group of boroughs.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 130 per 1,000, or 20 per 1,000 less than the average. The lowest rates of infant mortality were 79 in St. Marylebone and in Hampstead, 91 in Holborn, 104 in Stoke Newington, 110 in Woolwich, 112 in Paddington, and 113 in Lewisham; the highest rates were 145 in Deptford, 147 in Southwark, 154 in Bermondsey, 155 in Poplar, 157 in Bethnal Green, and 169 in Shoreditch.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,470 births and 6,259 deaths were registered during the week ending Saturday last, February 16th. The annual rate of mortality in these towns, which had been 18.2, 19.8, and 20.9 per 1,000 in the three preceding weeks, declined again last week to 20.4 per 1,000. The rates in the several towns ranged from 7.6 in King's Norton, 10.3 in East Ham and in Levton, 11.0 in Hornsey, 11.1 in Handsworth (Staffs), and 12.0 in Gateshead, to 25.9 in Blackburn, 26.1 in Middlesbrough, 26.3 in Swansea, 26.4 in Sunderland, 27.3 in Portsmouth, 30.4 in Newport (Mon.), 31.6 in St. Helens, and 33.9 in Plymouth. In London the rate of mortality was 19.9 per 1,000, while it averaged 20.6 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.3 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.3 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3.0 in West Bromwich and in Stockton-on-Tees, 3.3 in Devonport, 3.9 in Great Yarmouth, 4.8 in Newport (Mon.), 5.2 in Grimsby, and 7.9 in St. Helens. Measles caused a death-rate of 1.1 in East Ham and in Leicester, 1.2 in Walthamstow and in Wigan, 1.3 in Devonport, in Aston Manor, and in Sheffield, 2.0 in Great Yarmouth, 2.3 in West Bromwich, 3.0 in Grimsby, 3.4 in Newport (Mon.), and 7.3 in St. Helens; diphtheria of 1.3 in Reading, 1.4 in South Shields, 1.5 in Grimsby, and 2.0 in Great Yarmouth; and whooping-cough of 1.1 in East Ham and in Swansea, 1.2 in Walthamstow, in Blackburn, in York, and in Hull, 1.5 in Middlesbrough, 1.7 in Tottenham, 1.8 in Preston, and 2.0 in Stockton-on-Tees. The mortality from scarlet fever, from enteric fever, and from diarrhœa showed no marked excess in any of the large towns. No fatal case of small-pox was registered in any of these towns, and no small-pox patients were under treatment during the week in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3,292, 3,176, and 3,059 at the end of the three

preceding weeks, had further declined to 3,055 at the end of last week; 364 new cases were admitted during the week, against 307, 319, and 311 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, February 16th, 803 births and 764 deaths were registered in each of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19.1, 20.5, and 23.2 per 1,000 in the three preceding weeks, declined again to 22.0 per 1,000 last week, but was 1.6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 19.0 in Greenock and 19.5 in Perth to 22.5 in Glasgow and 23.1 in Leith. The death-rate from the principal infectious diseases averaged 2.4 per 1,000, the highest rates being recorded in Glasgow, Aberdeen, and Paisley. The 366 deaths in Glasgow included 3 from diphtheria, 13 from whooping-cough, 3 from "fever," and 4 from diarrhoea. Four deaths from measles were recorded in Edinburgh, and 6 from whooping-cough and 2 from diarrhoea in Aberdeen. The deaths attributed to cerebro-spinal meningitis last week in these towns numbered 46, of which 36 occurred in Glasgow 3 in Edinburgh, 3 in Paisley, 3 in Leith, and 1 in Dundee.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, February 9th, 544 births and 474 deaths were registered in six of the principal Irish towns as against 623 births and 411 deaths in the preceding period. The annual death-rate in these towns, which had been 20.5, 21.7, and 22.1 per 1,000 in the three preceding weeks, rose to 22.7 per 1,000 in the week under notice, this figure being 1.8 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 13.5 in Londonderry and 19.2 in Cork to 28.6 in Dublin and 31.2 in Waterford. The zymotic death-rate in the same six Irish towns averaged 1.9 per 1,000, or 1.1 per 1,000 more than during the preceding period, the highest figure—6.8—being recorded in Cork, while in Limerick and Londonderry no deaths were registered under this head during the week terminating on February 9th. Whooping-cough was the cause of 9 deaths in Cork, 5 in Dublin, and 2 in Belfast.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BANGOR, CARNARVONSHIRE, AND ANGLESEY INFIRMARY.—House-Surgeon. Salary, £80 per annum, increasing to £100.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL. Male House Surgeon. Honorarium, £196 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) Assistant Pathologist. Salary, £50 per annum. (2) Third House-Surgeon; salary, £40 per annum.

BRISTOL GENERAL HOSPITAL.—Bacteriologist. Salary, £240 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary, £50 per annum.

CRONSTADT SEAMEN'S HOSPITAL.—Resident Medical Officer. Salary, £150 per annum.

DEVONPORT ROYAL ALBERT HOSPITAL. Assistant Resident Medical Officer. Salary at the rate of £50 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) Medical Officer for Casualty Department; salary at the rate of £40 per annum. (2) House-Surgeon; honorarium, £25 for six months.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

EDINBURGH CHALMERS HOSPITAL.—(1) Resident House-Physician. (2) Resident House-Surgeon.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Surgeon.

HOSPITAL FOR EPILEPSY AND OTHER DISEASES OF THE NERVOUS SYSTEM, Maida Vale, W.—Resident Medical Officer. Salary at the rate of £50 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Fourth Assistant Physician. Honorarium, 25 guineas for one year.

LEEDS GENERAL INFIRMARY.—Resident Surgical Officer. Salary, £100 per annum.

LEICESTER: LEICESTERSHIRE AND RUTLAND ASYLUM.—Second Assistant Medical Officer, male. Salary, £120, rising to £130 per annum.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon. Salary, £40 for six months.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—(1) Three House-Physicians. (2) Three House-Surgeons. Salary at the rate of £60 per annum each.

LONDON: CROYDON SANATORIUM, Plowwood, Woldingham.—Male Assistant Resident Medical Officer. Salary commencing at £100 per annum.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer. Salary at the rate of £80 per annum.

MANCHESTER ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Surgeon for the Oxford Street Branch.

MANCHESTER WORKHOUSE, Crumpsall.—Junior Resident Medical Officer. Salary £100 per annum.

MIDDLESEX HOSPITAL, W.—Resident Medical Officer. Salary to commence at £50 per annum.

NORTHAMPTON: ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES.—Third Assistant Medical Officer. Salary £150, rising to £200 per annum.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, E.—House-Surgeon. Salary at the rate of £60 per annum.

POLTON: NEW SAUGHTON HALL PRIVATE ASYLUM.—Resident Assistant Medical Officer. Salary, £120 per annum.

ROYAL EYE HOSPITAL, St. George's Circus, S.E.—(1) Refraction Assistant; honorarium, £40 per annum. (2) Clinical Assistants.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Salary at the rate of £80 per annum.

ST. PETER'S HOSPITAL FOR STONE, ETC., Henrietta Street, W.C.—Junior House-Surgeon. Salary at the rate of £50 per annum.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House-Surgeon. Salary £75 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Honorarium, £31 for six months.

WANDSWORTH UNION INFIRMARY, St. John's Hill.—Junior Assistant Medical Officer. Salary at the rate of £100 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Two House-Physicians; (2) Three House-Surgeons.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Physician. Honorarium, £80 per annum.

WORCESTER COUNTY AND CITY ASYLUM, Powick.—Third Assistant Medical Officer, male. Salary, £140, rising to £150 per annum.

YORK COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces a vacancy in the office of Certifying Factory Surgeon at Dorking, co. Surrey.

APPOINTMENTS.

BIRT, A. C., M.R.C.S., L.R.C.P., District and Workhouse Medical Officer of the Wantage Union.

BLACK, D. D., L.R.C.P. and S.Edin., Certifying Factory Surgeon for the Linton District, co. Haddington.

BRANDER, H. Stewart, M.A., M.D., Ch.B.Aberd., Honorary Surgeon to the Victoria Hospital, Keighley.

COLBY, J. G. E., M.B., B.Ch Oxon., Certifying Factory Surgeon for the Malton District, co. York.

FORSYTH, R., M.D.Glas., Certifying Factory Surgeon for the Birstal District, co. York.

GENT, W. C., L.R.C.P. and S.Edin., L.F.P.S.Glas., District Medical Officer of the Chesterton Union.

GIBSON, B. D., L.R.C.P. and S., District Medical Officer of the Basingstoke Union.

GOULD, H. U., M.B., B.C.Cantab., District Medical Officer of the Shaftesbury Union.

HANLY, T. F., L.R.C.P. and S.Edin., Medical Officer of Health, Shaftesbury Rural District.

KYNASTON, A. E. F., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer to the Bromley Asylum of the Poplar and Stepney Sick Asylum District.

LEACH, J. C., M.D.Durh., D.P.H.Camb., Certifying Factory Surgeon for the Sturminster Newton District, co. Dorset.

LOCKYER, Cuthbert, M.D., B.S., F.R.C.S., M.R.C.P., Consulting Gynecologist to St. Mary's Hospital for Women and Children.

MAIR, J., M.B., District and Workhouse Medical Officer of the Orsett Union.

MARTINEAU, A. J., F.R.C.S.Edin., Honorary Surgeon to the Throat and Ear Hospital, Brighton.

MORELAND, G., M.B., C.M.Glas., Medical Officer for the Cheetham District of the Prestwich Union, vice C. F. H. Kitchen, L.R.C.P.Lond., M.R.C.S., resigned.

OGG, Theodore A. W., L.R.C.S. and P.Edin., L.F.P.S.Glas., Parish Medical Officer and Public Vaccinator, Rothes.

SCATTIFF, Harold A. E., M.R.C.S., L.R.C.P., Honorary Assistant Surgeon to the Throat and Ear Hospital, Brighton.

SQUARE, W. Russell, M.R.C.S.Eng., L.R.C.P.Lond., House-Physician to the Essex and Colchester Hospital, Colchester.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 5s. net, which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BENTLEY.—On February 14th, at Gladwins, Lampsfield, Surrey, the wife of J. Reginald Bentley, M.B., B.C., etc., of a son.

MASINA.—On December 16th last, at Warden Road, Malabar Hill, Bombay, India, the wife of Dr. H. W. Masina, F.R.C.S., of a daughter.

DEATHS.

COCKEY.—At Frome, February 3rd, in his 90th year, Edmund Cockey, M.R.C.S., L.S.A.Lond.

DAVIDSON.—On February 10th, at 12, Struan Villas, East Finchley, N., from pneumonia, Ernest Gordon, elder son of Alex. Gordon Davidson, M.D. (late of Wartle, N.B., and Crouch End), aged 6½ years.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m. Papers: (1) Some Operations for Malignant Growths of the Naso-Pharynx and Pharynx, by Mr. F. S. Eve. (2) A Case of Haematuria due to *Bilharzia haematobia*, causing Papillomata of the Bladder: Suprapubic Cystotomy and Removal of Growth, by Mr. H. J. Curtis.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor W. Sampson Handley, on the Pathology of Melanotic Growths in Relation to their Surgical Treatment.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Second Milroy Lecture by Dr. Leonard Rogers on Kala-Azar, its Differentiation and its Epidemiology.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 p.m.—Dr. Nathan Raw: Human and Bovine Tuberculosis, with special reference to treatment with special kinds of tuberculin. (Microscopic and epidiascope demonstrations.)

WEDNESDAY.

HUNTERIAN SOCIETY, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Pathological meeting.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor W. Sampson Handley, on the Pathology of Melanotic Growths in Relation to their Surgical Treatment.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Third Milroy Lecture by Dr. Leonard Rogers on Kala-Azar, its Differentiation and its Epidemiology.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor J. W. Thomson Walker, on the Renal Function in its Relation to Surgery.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—Fifth meeting of the Fifty-first Session at Miller Hospital, Greenwich Road. Clinical evening.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Thursday, 5 p.m.: Case Taking.

CHARING CROSS HOSPITAL, W.C.—Thursday, 4 p.m.: Gynaecological.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m.: Cases from the wards.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m.: Some Diseases of the Naso-Pharynx.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—Clinics: Monday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Throat, Nose, and Ear, 4 p.m. Tuesday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Skin, 4 p.m. Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30. Out-patient Demonstrations: Medical and Surgical, 10 a.m. daily; Ears and Throats, noon, Monday and Thursday; Eyes, 11 a.m., Wednesday and Saturday; Skin, noon, Tuesday and Friday. Special Lectures:—Tuesday, 4 p.m., Mr. Malcolm Morris: Dry Scaly Affections. Wednesday, 3.30 p.m., Mr. Cargill: Glaucoma.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear. Lectures at 5.15 p.m. each day will be given as follows: Monday, The Vagaries of Blood Pressure; Tuesday, Medical Conditions of the Alimentary Tract: Gastric Ulcer; Wednesday, The More Recent Treatment of the Insane; Thursday, Some Common Types of Neurasthenia.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Cerebellar Disease. Friday, 3.30 p.m.: Myasthenia Gravis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the arrangements for next week: Monday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out-patient, Throat, Nose, and Ear Clinics; *x*-ray Demonstration. Tuesday, 10.30 a.m.: Medical Out-patient Clinic. 2.30 p.m.: Surgical Operations; Surgical and Gynaecological Out-patient Clinics. 4.30 p.m.: Lecture, Treatment of Certain Bronchial Affections. Wednesday, 2.30 p.m.: Dermatological, Ophthalmological, and Medical Out-patient Clinics. Thursday, 2.30 p.m.: Gynaecological Operations; Medical and Surgical Out-patient Clinics. 3 p.m.: Medical In-patient Clinic. 4.30 p.m.: Lecture, Demonstration in Relation to Tropical Disease. Friday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out-patient Clinic; Surgical Operations; Ophthalmological Clinic, 3 p.m.: Medical In-patient Clinic.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, Hammersmith Road, W.—The following are the arrangements for next week: Daily: 2 p.m., Medical and Surgical Clinics; 2.30 p.m., Operations and *X* Rays. Monday and Thursday, 2.30 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological. 2.30 p.m.: Diseases of the Skin. Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Wednesday, 10 a.m.: Diseases of Children. Lectures—Monday, 12 noon: Pathological Demonstration. Monday, 5 p.m.: Clinical. Tuesday: Treatment of Posterior Displacement and Prolapse. Wednesday: Practical Medicine. Thursday: Urinary Cases. Friday: Finsen, Ultra-Violet, and Other Methods of Phototherapy, illustrated by lantern slides.

BOOKS, ETC., RECEIVED.

The Journal of Obstetrics and Gynaecology of the British Empire. Editors: C. J. Cullingworth, M.D., and J. S. Fairbairn, M.B. Vol. x, July-December, 1906. London: Sherratt and Hughes. 12s. 6d.

The Health of our Children in the Colonies: a Book for Mothers. By Dr. L. A. Robinson. Second edition. London: Longmans, Green and Co. 1906. 2s. 6d.

Traité de Gynécologie Clinique et Opératoire. Par S. Pozzi. Quatrième édition, revue de F. Jayle. Tome ii. Paris: Masson et Cie. 1907. Two vols., Fr. 40; tome ii, Fr. 15.

Anaesthetics, their Uses and Administration. By D. W. Buxton, M.D., B.S. Fourth edition. London: H. K. Lewis. 1907. 7s. 6d.

Studies from the Bender Hygienic Laboratory, Albany, N.Y. Reprints. Vol. iii. 1906. Albany, N.Y.: Fort Orange Press.

Traité des Torticolis Spasmodiques. Par R. Cruchet. Paris: Masson et Cie. 1907. Fr. 15.

Polytechnic Cookery Book. By M. M. Mitchell, M.C.A. London: Longmans, Green and Co. 1907. 2s.

XV Congrès International de Médecine. Lisbonne, 19-26 Avril, 1906. Section IV—Thérapeutique et Pharmacologie, 2me Fascicule. Section VIII—Dermatologie et Syphiligraphie, 2me Fascicule. Lisbonne: Imprimerie A. de Mendouça. 1906.

The Sanitary Evolution of London. By H. Jephson, L.C.C. London: T. Fisher Unwin. 1907. 6s.

Paris: Bureaux du Progrès Médical; et F. Alcan:

Traitement Moral, Hygiène et Education des Idiots, et des autres Enfants arriérés. Par E. Séguin. 1906. Fr. 10.

Premiers Mémoires de Séguin sur l'Idiotie (1838-1843), Publiés par Bourneville. 1897. Fr. 3.

Recherches sur l'Epilepsie, l'Hystérie et l'Idiotie. Par Bourneville, avec la collaboration de Durand, Friedel, et Perrin. Vol. xxv. 1905.

Traitement Médico-Pédagogique des différentes Formes de l Idiotie. Par Bourneville. 1905.

Berlin and Wien: Urban and Schwarzenberg: 1907:

Die Therapie der Magen- und Darmkrankheiten. Von Dr. W. Zweig. M. 10.

Handbuch der Massage und Heilgymnastik. Von Dr. A. Bum. Vierte Auflage. M. 10.

The Essentials of Histology. By E. A. Schäfer, LL.D., Sc.D., F.R.S. Seventh edition. London: Longmans, Green and Co. 1907. 10s. 6d.

Philadelphia: F. A. Davis Co., 1906:

Syllabus of Lectures on Human Embryology. By W. P. Manton, M.D. Third edition. $1.25.

Conservative Gynaecology and Electro-therapeutics. By G. B. Massey, M.D. Fifth edition. $4.

The Refraction of the Eye. By G. Hartridge, F.R.C.S. Fourteenth edition. London: J. and A. Churchill. 1907. 5s.

Das Wesen des menschlichen Seelen und Geisteslebens als Grundriss einer Philosophie des Denkens. Von Professor Dr. B. Kern. Zweite Auflage. Berlin: A. Hirschwald. 1907. M. 7.

Einführung in die Versicherungsmedizin. Von Dr. J. Grober. Jena: G. Fischer. 1907. M.4.50.

20th Annual Report of the State Board of Health of the State of Ohio for the Year ending December 31st, 1905. Springfield, Ohio: The Springfield Publishing Co. 1906.

Plaster of Paris and How to Use It. By M. W. Ware, M.D. New York: Surgery Publishing Co. 1906. $1.

The Practical Medicine Series. Edited by G. P. Head, M.D. Vol. X. Skin and Venereal Diseases, Nervous and Mental Diseases. Edited by W. L. Baum, M.D., H. T. Patrick, M.D., W. Healy, A.B., M.D. Series 1906. Chicago: The Year Book Publishers; and Glasgow: G. Gillies and Co. 5s.

Hôpital de la Pitié, Conférences Pratiques sur les Maladies du Coeur et des Poumons. Par le Dr. L. Kénon. Paris: Masson et Cie. 1906. Fr. 5.

The Gardening Year Book and Garden Oracle, 1907. By G. Gordon, V.M.H. London: The Gardeners' Magazine Office. 1907. 1s.

International Clinics. A Quarterly. Edited by A. O. J. Kelly, A.M., M.D. Vol. iv. Sixteenth series, 1906. Philadelphia and London: J. B. Lippincott Co. 1906.

The Public Health Acts and other Sanitary Laws and Regulations specially prepared for the Diploma of Public Health. By M. Elliott and G. Elliott, M.R.C.S., L.R.C.P., D.P.H. Second edition. London: H. K. Lewis. 1907. 5s.

Société Belge d'Etudes Coloniales. Rapport sur les Travaux du Laboratoire Médical de Léopoldville de 1900 à 1905. Par le Dr. A. Broden. II. Bruxelles: Hayez. 1906.

A Second German Course for Science Students. By H. G. Fiedler and F. E. Sandbach. London: The de la More Press. 1906. 2s. 6d.

A Manual for Nurses on Abdominal Surgery. By H. Burrows, M.B., F.R.C.S. London: The Scientific Press, Ltd. 2s. 6d.

Archives of the Middlesex Hospital. Vol. ix. London: Macmillan and Co., Ltd. 1906.

The Manipulation and Fitting of Ophthalmic Frames. By H. L. Taylor. Birmingham: J. and H. Taylor. 1907. 4s.

The Public Schools Year Book. 1907. London: Swan Sonnenschein. 3s. 6d.

Uber die Psychologie der Dementia praecox. Ein Versuch von Dr. C. G. Jung. Halle a S.: C. Marhold. 1907. M.2.50.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
FEBRUARY.	
23 SATURDAY...	Leinster Branch, Annual Meeting, Royal College of Physicians, Dublin, 4.30 p.m.
24 Sunday ...	
25 MONDAY ...	
26 TUESDAY ...	Marylebone Division, *Metropolitan Counties Branch*. Rooms of the Medical Society of London, 11, Chandos Street, W., 4.30 p.m.
27 WEDNESDAY	London: Journal and Finance Committee, 3 p.m. Bath and Bristol Branch, Bath.
28 THURSDAY...	London: Hospitals Committee, 1.30 p.m. London: Joint Hospitals Committee, 3.30 p.m. Lambeth Division, *Metropolitan Counties Branch*, Court Room, Guy's Hospital, London Bridge, S.E., 4 p.m. Staffordshire Branch, North-Western Hotel, Stafford, 5.20 p.m.; Dinner, 7.30 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Balham Hotel, 9 p.m.; Tea and coffee, 8.30. West Cumberland Division, *Border Counties Branch*, Whitehaven, 4 p.m.
MARCH.	
1 FRIDAY ...	Northern Counties of Scotland Branch, Clinical Meeting, Inverness.
2 SATURDAY...	
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	
6 WEDNESDAY	London: South-Eastern Branch Council, 3.15 p.m. South-Eastern of Ireland Branch, Club House, Carlow, 5.30 p.m.

Date.	Meetings to be Held.
MARCH *(Continued).*	
7 THURSDAY...	Canterbury and Faversham Division, *South-Eastern Branch*, Meeting at Dr. Grayling's house, "Polveners," Sittingbourne, 3 p.m.; Luncheon, 1.30 p.m.
8 FRIDAY ...	Hampstead Division, *Metropolitan Counties Branch*.
9 SATURDAY...	
10 Sunday ...	
11 MONDAY ...	London: Standing Ethical Subcommittee, 2 p.m.
12 TUESDAY ...	
13 WEDNESDAY	Westminster Division, *Metropolitan Counties Branch*, St. James's Vestry Hall, 195, Piccadilly, 8.30 p.m.
14 THURSDAY...	
15 FRIDAY ...	
16 SATURDAY...	
17 Sunday ...	
18 MONDAY ...	
19 TUESDAY ...	London: Organization Committee, 11 a.m. London: Special Finance Inquiry Committee, 3 p.m.
20 WEDNESDAY	London: Naval and Military Committee, 3.30 p.m.
21 THURSDAY...	City Division, *Metropolitan Counties Branch*, Hackney Town Hall, 4 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Battersea Town Hall, 8.45 p.m.
22 FRIDAY ...	
23 SATURDAY...	
24 Sunday ...	
25 MONDAY ...	
26 TUESDAY ...	London: Public Health Committee, 3.15 p.m.
27 WEDNESDAY	London: Medico-Political Committee, 2.30 p.m. Bath and Bristol Branch, Bristol.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-Laws. Every Member, whether one of the original Members or a subsequently elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his Application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom, and £1 12s. 8d. for abroad.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 2ND, 1907.

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CENTRAL EMERGENCY FUND.

UNDER the present constitution of the British Medical Association as a limited liability company, registered under the Companies Acts as formed not for profit, no part of its funds can be applied centrally or by any Branch or Division for the benefit of any individual member, except by way of remuneration for services rendered to the Association.

This has been found to prevent the Association, its Branches and Divisions, from giving the financial support which it is deemed desirable or even necessary in the interests of the profession to give to members of the profession engaged in contract practice and similar disputes. The Council of the Association, therefore, with the approval of the Annual Representative Meeting of 1906, has instituted a fund called the Central Emergency Fund, to be maintained by voluntary subscriptions, and to be under the management of the Medico-Political Committee for purposes of action in disputes of the kind referred to.

The following are the

REGULATIONS OF THE FUND.

1. The Fund is created by voluntary subscription, to assist members of the profession in various parts of the country in maintaining the interests of the profession against organized bodies of the community.

2. All members of the profession are invited to contribute. Any contribution may be earmarked for use in specified disputes, o for application to special methods of carrying out the objects of the Fund, and when not so earmarked shall be deemed to be given for disposal at the discretion of the Medico-Political Committee in carrying out the general objects defined in Clause 1. At the termination of any special dispute for which funds may have been earmarked, the balance (if any) shall be merged in the General Fund.

3. Subject to the conditions defined in this Scheme, the Fund shall be under the entire control of the Medico-Political Committee of the British Medical Association, and shall be vested in the names of the Chairman of the Committee and the Treasurer of the Association, as representing the Committee. Payments shall only be made on the authority of a resolution of the Medico-Political Committee, or of a Subcommittee of the Medico-Political Committee acting under powers specifically delegated by the Committee.

4. The Fund may be applied for the promotion of the general objects stated in Paragraph 1 in any of the following ways:

(*a*) By a grant or grants to any individual practitioner to assist him in maintaining any position in which the Association shall have decided to support him, or to compensate him for losses which he shall have incurred through taking action approved by the Association.

(*b*) By a grant or grants to any Division or Branch of the British Medical Association, for its assistance in defraying expenses incidental to the conduct of local disputes falling within the scope of the objects of the Fund.

(*c*) By expenditure under direct supervision of the Medico-Political Committee, or of a Subcommittee of that Committee, for the purpose of any action which the Medico-Political Committee may deem necessary or advisable for the promotion of the general objects of the Fund.

The Medico-Political Committee, through its Contract Practice Subcommittee, has had recently brought under its notice disputes in several parts of the country in which it may be necessary to take, for the maintenance of the interests of the profession, action requiring such financial support as the Central Emergency Fund has been instituted to provide, and members of the Association and other members of the profession are strongly urged, so far as their circumstances permit, to assist the Committee in this important work.

Contributions—whether of periodical subscriptions at such periods, yearly, quarterly, or monthly, as may be convenient to the subscribers, or of special donations—are received on behalf of the Medico-Political Committee by the Medical Secretary, 429, Strand, London, W.C., to whom Cheques and Postal Orders should be made payable, crossed "London and Westminster Bank, Bloomsbury Branch."

Forms of banker's orders will be supplied on application for those regular subscribers who may prefer to pay in this way.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

CAPE OF GOOD HOPE (EASTERN PROVINCE) BRANCH.

The annual meeting was held at Steinman's Hotel, Grahamstown, on Wednesday, January 23rd, at 8 p.m., Dr. J. Bruce-Bays in the chair. It had been deferred from January 12th owing to a quorum not having been present on that occasion.

Confirmation of Minutes.—The minutes of May 11th, 1906, were read and confirmed.

Installation of New President.—Dr. Bruce-Bays then vacated the chair in favour of the incoming President, Dr. Jones-Phillipson, and was accorded a vote of thanks for his services.

Election of Officers.—The result of the ballot showed that Dr. Greenlees had been elected President-elect for 1907, Dr. Drury Secretary and Treasurer, and that Colonel David Bruce had been re-elected Member of Central Council in common with the Western Branch.

Reports of Secretary and Treasurer.—The report of the Secretary and of the Treasurer, with a financial statement for the year 1906, were read and adopted, and the Secretary was instructed to have the annual report of the Branch printed in a form similar to that of the two preceding years.

Adoption of Model Rules.—The recommendation of the Council on procedure in ethical matters was then discussed, and it was resolved:

That the draft model rules of a Branch to regulate the procedure thereof in ethical matters be adopted as the rules of procedure for the Eastern Province Branch.

It was resolved that the blank number of days in model rules 4 and 6 be filled by the insertion of the word "fourteen."

Proposed Amendment of Rule.—Pursuant to notice, Dr. Fitzgerald moved and Dr. Purvis seconded that Rule 6 be amended by adding the words:

Members of the Council who may be unable to attend a meeting of the Council shall have the right to record their votes by written proxy. The Council shall have the right to ascertain the opinion of the Branch on any important matter by means of a general referendum.

Carried.

President's Address.—Dr. Jones Phillipson then read the presidential address on External Appearances as a Guide to Diagnosis, for which he received a unanimous vote of thanks.

Motor.—Dr. Harris Fayle read an appendix to Dr. Fitzgerald's recent paper prophetically describing the first meeting of the Grahamstown Automobile Club, which was received with laughter.

GUERNSEY BRANCH.

A general meeting of the Branch was held at the Royal Hotel, Guernsey, on Tuesday, February 26th, the President, Dr. C. [illegible], in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Acute Retention of Urine.—Dr. Wayland Ascrum read notes on a case of [illegible] wound in groin discharged at a distance of 21 yards with perforation of intestine. At the [illegible] performed sixteen hours after the accident—having been delayed owing to absence of symptoms, except little pain—[illegible] was found to certainly as to whether the peritoneal cavity had been involved—the peritoneal cavity was found full of blood-tinged gas and faeces with general peritonitis. Two gaping holes were found in intestine and near the site of injury a hole [illegible]. After suturing the intestine the peritoneal cavity was flushed out with saline, and drainage tube inserted. The bullet was not found, but [illegible] a skiagraph taken afterwards, appeared to be imbedded in muscle at back of pelvis. The patient made a good recovery. The case was discussed by the President, Dr. Farquharson, Mr. Howell, Dr. Collenette, Mr. Ozanne, and Dr. Priaux, stress being laid on flushing and draining the peritoneal cavity in general peritonitis, and on increase of blood pressure on perforation into abdominal cavity.

Saccular Aneurysm of Aorta.—A pathological specimen was shown of saccular aneurysm of transverse arch of aorta, with notes on the case, in which paroxysms of dyspnoea were prominent symptoms. It was discussed by the President and Mr. Bower.

The Rheumatic Infection.—Dr. Carey Coombs (Bristol) read a paper on the rheumatic infection, with special reference to its manifestations during childhood. The paper began with a short description of the pathological effects of the infection on those organs which are usually selected for attack. The analogies between these lesions and those of tuberculosis were next pointed out, and the rest of the paper was occupied by an analysis of 67 cases of rheumatic infection occurring in children between 4 and 16 years of age. The relative frequency of the various manifestations was worked out and the importance of myocardial lesions emphasized, with particular reference to the value of rest in treatment. Among other points mentioned were the part played by the coronary arteries in carrying the infection to the heart wall and the fact that chorea is almost always a rheumatic infection. Two microscopic slides were shown, one of myocarditis and one of the diplococcus present in rheumatic infections. The paper was discussed by the President, Dr. Pruen, Dr. St. Johnston, Dr. Oscar Clark, Dr. Powell, and Dr. Mouat-Biggs.

Supper.—A supper was afterwards held at the Wellington Hotel.

LANCASHIRE AND CHESHIRE BRANCH:

Manchester (Central) Division.

A special meeting of this Division was held at Queen's Hotel, Manchester, on Monday, February 18th, to consider the case of a member of the Association summoned by the police. Dr. Donald was in the chair. The following resolutions were unanimously adopted:

1. That this Division wishes to record its sympathy with Dr. Bagley in the action brought against him by the police, and, by way of giving practical expression to this, direct that the Secretary be instructed to open a fund to help defray Dr. Bagley's expenses if necessary.
2. On consideration of the general question, the Division considers it against the public interest for the police authorities to remove a patient to hospital against the advice of the medical man in attendance.
3. That these resolutions be forwarded to Dr. Bagley and to the Central Council of the Association.
4. That the Secretary be instructed to send copies of the second resolution to the editors of the *Manchester Guardian*, *Manchester Courier*, *Manchester Evening News*, and *Manchester Evening Chronicle*.

Salford Division.

A general meeting of the Salford Division was held on February 6th, Dr. Owen in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and adopted.

The Midwives Bill.—The subject of the working of the Midwives Act in Salford was discussed, and it was resolved to send a deputation to the Health Committee to urge the adoption in Salford of a scheme similar to that already adopted in Manchester.

Ethical Rules.—It was also resolved that Drs. Wolstenholme and Taylor be asked to consider and report on the suitability of the Bradford ethical rules or other rules for enabling the Division to deal more effectively with contract practice questions.

A Medical Practitioner and the Police.—In connexion with the charge against Dr. Bagley of obstructing the police, which has been reported in the Journal, and which was decided in Dr. Bagley's favour by the magistrates, the following resolutions were passed:

1. That this meeting considers it is a dangerous procedure for the police to remove any patient in opposition to the opinion of the medical attendant in actual charge; further, that this resolution be sent to the Manchester newspapers, with an explanatory letter.
2. That a letter of sympathy and congratulation be sent to Dr. Bagley, and he be asked to consider the advisability of putting the question of Parliament called to the case.
3. That if there be need, the Branch Council be asked to contribute towards Dr. Bagley's expenses in this case, on the ground that it is a matter of general professional interest.

METROPOLITAN COUNTIES BRANCH:

City Division.

A meeting of this Division was held on February 19th at the Great Eastern Hotel, E.C. Dr. Major Greenwood (Chairman of the Division) presided.

Confirmation of Minutes.—The minutes of the meeting held on January 15th having been read and approved were signed by the Chairman.

City Ambulance Service.—A letter was read from the Town Clerk of the City of London in which he stated, in reply to a letter of inquiry addressed to him from the January meeting, that the question of medical attendance for the new ambulance service in the city had been considered by the authorities of the City and St. Bartholomew's Hospital, but that no decision had been arrived at. It was resolved to write to the Town Clerk to thank him for his letter, and to ask him to communicate the decision, when made, to the Division, and also to state that in the opinion of the Division arrangements should be made for the attendance of a medical practitioner before any patient is removed by the ambulance.

Proposed Conference on Election of Central Council.—A letter was read from Dr. Percy Rose of Stratford, asking whether the Division would join a conference of delegates of Metropolitan Divisions on the subject of the election of representatives of the Branch on the Central Council, such as was held last year. It was resolved that the Division should join the conference, and Mr. F. Wallace and the Honorary Secretary were appointed delegates.

Illness of Member.—It was mentioned that Mr. Herbert E. Powell, one of the representatives of the Division on the Branch Council, was seriously ill. It was resolved to send him a letter expressive of the sympathy of those present, and their earnest hope of his recovery.

Report of Executive Committee.—This stated that a meeting had been held on February 14th; that the Committee had taken steps to obtain answers from candidates for the L.C.C. to certain questions drawn up by the Branch Council; and presented a report on the ethical aspects of consultation. The action of the Committee was approved.

Ethical Aspects of Medical Consultation.—The recommendations of the Ethical Committee of the Association were taken seriatim, together with certain alterations suggested by the Executive Committee. The recommendations were all approved, with the following alterations and additions:

2. (*a*) Insert the word "major" before "operation" in the second line.

(*e*) (ii). This should read as follows: "The administration of poison with criminal intent."

3. A clause should be inserted stating that the practitioner in attendance should be allowed to retire from the case if the patient or his friends insist upon calling in a consultant of whom he does not approve.

6. Add another clause as follows:

(*k*) When a consultant is approached by the friends of a patient with a view to arranging a consultation, his first duty is to ask the name of the medical attendant and whether he has authorized them to arrange the consultation. If the medical attendant is unaware of the proposed consultation, the consultant must, under ordinary circumstances, require that the consultation be arranged with the consent of the medical attendant.

10. No rule should be laid down as regards attendance at a subsequent illness. All the words in this recommendation following the words "that illness" should be deleted.

Medical Inspection of School Children.—The specific questions submitted to the Division were considered seriatim:

1. It was resolved to make the following recommendation instead of (*a*), (*b*), (*c*):

That the inspection be carried out by medical men not engaged in general practice.

3. It was resolved to state that there was no evidence that the practice mentioned was prevalent within the area of the Division.

Vote of Thanks.—The meeting concluded with a vote of thanks to the Chairman.

Tottenham Division.

A general meeting of the Tottenham Division was held on February 13th, 4.30 p.m., at Tottenham Hospital, Dr. Hutt presiding.

Cases.—The members of the hospital staff showed a number of interesting cases, and were accorded a hearty vote of thanks.

The Appointment of Postal Medical Officer.—Dr. Fogarty was then voted to the chair in place of Dr. Hutt, who resigned. The question of the appointment of postal medical officer, North Tottenham, was then fully discussed, and finally settled by the resignation of the appointment by the present incumbent. It was resolved unanimously that all medical men practising in the district be requested not to apply for nor accept the appointment, and that warning notices be inserted in the British Medical Journal and the *Lancet*.

Wandsworth Division.

A meeting of the Division was held on Thursday, February 7th, at 4 p.m., at the Bolingbroke Hospital, Wandsworth Common. In the absence of Dr. Williams, Dr. M. G. Biggs presided.—Dr. H. Campbell Thomson showed and demonstrated a series of cases of nervous disease as follows: (*a*) Asthenic bulbar paralysis or myasthenia gravis; (*b*) general paralysis; (*c*) locomotor ataxia, with optic nerve atrophy; (*d*) Friedreich's disease; (*e*) tumour of brain (frontal lobe?); (*f*) paraplegia after childbirth. Several of these were of more than ordinary interest, and a good discussion followed.

Vote of Thanks.—On the motion of the Chairman, a very hearty vote of thanks was accorded to Dr. Campbell Thomson.

MIDLAND BRANCH.

A meeting of the Midland Branch was held at Grantham on February 7th, Dr. E. Mansel Sympson, President, in the chair.

Proposed Alteration of Divisional Areas.—Correspondence was read, and a discussion ensued, as to the alteration of the Divisional areas of the Branch, with special reference to the Stamford Division. The following resolutions were duly proposed, seconded, and carried:

1. That the county of Rutland be joined to that of Leicester to form the Leicester and Rutland Division.
2. That Grantham and the surrounding area, and practitioners in Woodhall Spa and in the town of Horncastle be joined to the Lincoln Division.
3. That the rest of the Stamford Division be joined to the Boston and Spalding Division.
4. That the Secretary of the Boston and Spalding Division, with the Branch Secretary, arrange details in connexion with the above, and report to the Organization Committee of the Association.

Poor-law Medical Officer for Market Harborough.—The Honorary Secretary of the Leicester Division (Dr. Gibbons) reported that as a result of the combined action of the practitioners in Market Harborough and of the warning notice in the Journal, the Poor-law authorities of that town had been unable to obtain a medical officer at the reduced salary advertised, and had been obliged to reinstate their former medical officer at the salary that had been heretofore given.

Paper.—The President read an interesting paper on two cases of partially reduced hernia.

Specimens.—Dr. Purvis showed several interesting pathological specimens, which were commented upon by various members present.

Cases.—Mr. M. Willis and Dr. G. H. C. Shipman showed cases.

ULSTER BRANCH:

Portadown and West Down Division.

The winter meeting was held at Portadown on January 9th, Dr. Fergus, J.P., chairman. Three members sent apologies for non-attendance.

Election to Central Council.—The resolution of the Dublin Division in opposition to the election of Irish members of Council by Representative Meeting as proposed was unanimously carried.

Irish Poor-law Commission.—The following resolutions were adopted:

1. That we hereby express our cordial approval of the chief suggestions made by the Viceregal Commissioners for the improvement of the workhouse and Poor-law systems of Ireland, especially as regards:
   (1) The separation of the hospital from the workhouse proper, and the establishment of district hospitals on the same basis as the present county infirmaries, with which they should be associated;

(2) The removal of the insane and epileptic into specially supervised institutions, where they would receive proper care and treatment under the county asylum authorities;

(3) The creation of sanatoria in each county for the treatment of consumptives; and

(4) The establishment in Ireland of a State service.

2. We further desire to express our opinion that the Local Government Board should lose no time in promoting legislation for the carrying out of the foregoing objects, and that in doing so the opportunity should be taken of giving the county councils the powers of a sanitary authority for the purpose of erecting hospitals and the appointment of county medical officers of health, who would act as medical superintendent officers of health in the different county districts and be debarred from private practice.

3. That we consider the conversion of the Poor-law and county infirmary medical officers into a State service would unquestionably tend to promote the interests of the profession, enable the doctors to keep pace with medical knowledge, and at the same time place at the disposal of the poor professional services which would be characterized by efficiency and up-to-date skill, whilst putting the medical officers of health in such a condition of independence as would secure for the public all the advantages that should follow from firm and impartial administration of the Public Health Acts, so necessary for the safety and well-being of both rich and poor.

4. That copies of the above resolutions be sent to the Local Government Board, each of the three Viceregal Commissioners, and to the local Parliamentary representatives.

Discussion on Typhoid Fever.—Dr. Francis opened a very instructive and practical discussion on typhoid fever, with an able summary of modern views of the disease, its diagnosis, complications and treatment. Dr. William Carnett followed with an interesting account of the results of treatment with essential oil of cinnamon in his own practice, together with a review of various important details as to diet and other matters. Dr. James Taylor gave a most interesting account of two extensive epidemics due to water contamination he had dealt with, and showed the manner in which the infection had been spread. Drs. S. F. Martin, Andrew, Shalet, Brownrigg, and Darling continued the discussion.

The Chairman generously provided tea, etc., for the members.

METROPOLITAN COUNTIES BRANCH.

The London County Council Election.

Sir,—In your issue of February 9th you gave a list of the questions sent to the candidates for the London County Council by the Metropolitan Counties Branch of the British Medical Association.

Favourable replies to the questions have been received from the following candidates:

Battersea (S.).

[illegible] (M.R.). [illegible], K.C., M.P. (P.).

Bethnal Green (N.E.).

[illegible] (M.R.). [illegible] (P.).

Bethnal Green (S.W.).

A. Shirley Benn (M.R.). W. Davies, J.P. (P.).

Bethnal Green and Clapham (Clapham).

Sir C. Kinloch-Cooke (M.R.). A. Clegg, J.P. (P.).

Camberwell (Peckham).

[illegible] (M.R.). [illegible] (P.).

Camberwell (Dulwich).

[illegible] (M.R.). [illegible] (P.).

Chelsea.

[illegible] (M.R.). J. Jeffery (P.).

Finsbury.

[illegible] (M.R.). W. Lloyd Taylor (P.).

Hackney (North).

[illegible] (M.R.). Theodore Chapman (P.).

Hammersmith.

W. [illegible] (M.R.).

Islington (E.).

[illegible] (M.R.). [illegible] (P.).

Islington (N.).

C. K. Murchison (M.R.). —

F. L. Dove (M.R.). —

Islington (S.).

— G. Dew (L.).

Kensington (S.).

R. A. Robinson, J.P. (M.R.). The Hon Walter James (P.).

Alderman E. B. Forman, J.P. (M.R.). V. R. Aronson (P.).

Lambeth (Kennington).

J. F. Badge (M.R.). Rev. E. Denny (P.).

Sir W. Porter (M.R.). —

Lambeth (N.).

J. Williams (M.R.). F. Briant (P.).

Marylebone (E.).

J. Boyton (M.R.). Dr. J. F. Little (P.).

Lord Duncannon (M.R.). —

Marylebone (W.).

Lord Henry Bentinck (M.R.). J. Lewis (P.).

Lord Kerry (M.R.). Dr. J. Searson (P.).

Paddington (N.).

— J. Fairbanks (P.).

— G. C. Maberley (P.).

Paddington (S.).

— A. Y. Meyell (P.).

St. Pancras (E.).

E. Barnes, J.P. (M.R.). A. W. Claremont (P.).

— Rev. F. Hastings (P.).

St. Pancras (N.).

E. J. King (M.R.). —

Lieut.-Col. Pakenham (M.R.). —

St. Pancras (W.).

F. Cassel, K.C. (M.R.). J. C. S. Hanham (P.).

P. Vesper (M.R.). —

Shoreditch (Haggerston).

Hon. G. Johnstone (M.R.). Lord Monkswell (P.).

Hon. Rupert Guinness (M.R.). Stephen Gee (P.).

Shoreditch (Hoxton).

E. Gray, ex-M.P. (M.R.). H. Ward (P.).

W. J. Davies, J.P. (M.R.). —

Tower Hamlets (Bow and Bromley).

H. V. Rowe (M.R.). —

W. S. M. Knight (M.R.). —

Tower Hamlets (Mile End).

F. H. Combe (M.R.).

Tower Hamlets (Whitechapel).

L. Hodsall (M.R.).

C. Weatherner (M.R.).

Wandsworth.

W. Hunt (M.R.). F. Kellaway (P.).

Several other candidates have expressed themselves as in general agreement with the Branch, but refuse to pledge themselves.

I beg cordially to thank the Honorary Secretaries of the various Divisions who have obtained these replies for me.—I am, etc.,

Atwood Thorne,

Honorary Secretary, Medico-Political Committee of the London Council, Metropolitan Counties Branch.

[illegible] W.

☛ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m., except on Saturdays, when they close at 2 p.m. Members can have their letters addressed to them at the office.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: TROWBRIDGE DIVISION.—A meeting of this Division will be held in the Council Chamber, Town Hall, Trowbridge, on Friday, March 15th, at 3 p.m., when the ordinary business of such meeting will be transacted, and an address will be delivered by James Berry, Esq., B.S., M.B.Lond., F.R.C.S.Eng., etc., Senior Surgeon and Lecturer on Clinical Surgery, Royal Free Hospital, Lecturer on Surgery, School of Medicine for Women, entitled, Peritonitis and its Treatment. Agenda: (1) Minutes of last meeting; (2) correspondence; (3) matters referred to the Division by the Central Council or adjourned from last meeting; (4) address by Mr. Berry; (5) other business (if any). Tea and refreshments will be provided in the Town Hall at the close of the meeting.—J. TUBB-THOMAS, Honorary Secretary.

CAMBRIDGE AND HUNTINGDON BRANCH.—A meeting of the Cambridge and Huntingdon Branch will be held at the University Arms Hotel, Cambridge, on Friday, March 8th, at 2.30 p.m. As important matters will be placed before the meeting, including the question of medical examination of school children and the requisite remuneration, it is especially desired that members make an effort to be present. Luncheon will be provided from 1.30 p.m. to 2.30 p.m., at 2s. 6d. per head. Members intending to be present at lunch should inform the Honorary Secretary.—F. E. APTHORPE WEBB, M.R.C.S. and R.C.P., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: TOTTENHAM DIVISION.—A general meeting of the Tottenham Division will be held at the rooms of the Hornsey Conservative Association on March 6th, at 9.15 p.m. Agenda: Paper by Dr. Corner on the Congestion Treatment of Inflammation. Other business.—H. F. STAUNTON, Honorary Secretary, Tottenham Division.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—A meeting of the Division will be held at the St. James's Vestry Hall, 195, Piccadilly, on Wednesday, March 13th, at 8.30 p.m. Dr. W. Knowsley Sibley will open a discussion, and move the following resolution: "That in view of the mismanagement and abuse of hospitals, the Westminster Division considers the welfare of the public and the interests of the medical profession would be best obtained by the establishment of a Central Hospital Board for London."—F. J. MCCANN, M.D., Honorary Secretary.

SOUTH-EASTERN BRANCH: CANTERBURY AND FAVERSHAM DIVISION.—The next ordinary divisional meeting will be held at Dr. Grayling's house, "Polveners," Sittingbourne, on Thursday, March 7th, at 3 p.m. Agenda: (1) To confirm minutes; (2) time, place, and chairman of next meeting; (3) to consider the question of school attendance certificates and a report from the Executive Committee; (4) a paper will be read by Dr. Grayling on Refuse Destruction in Kent; (5) any other business. Dr. Grayling invites members to luncheon at his house previous to the meeting—1.30 o'clock. Those who intend to accept are requested to write direct to him not later than Monday, March 4th.—A. R. HENCHLEY, Honorary Secretary, Canterbury.

SOUTH-EASTERN BRANCH: EASTBOURNE DIVISION.—A meeting of this Division will be held in the Mayor's Parlour, Town Hall, Eastbourne, on Tuesday, March 5th, at 8.30 p.m. Agenda: (1) Minutes; (2) consider matters referred to Divisions (SUPPLEMENT, February 16th, 1907, p. 74)—(*a*) Medical inspection of school children, (*b*) the ethical aspects of medical consultation; (3) other business.—WILLIAM MUIR SMITH, Honorary Secretary, Eastbourne.

SOUTH-EASTERN BRANCH OF IRELAND.—A meeting of this Branch will be held at Club House, Carlow, on March 6th, at 5.30 p.m. Agenda: (1) Minutes; (2) correspondence; (3) resolution by Dr. Laffan to reduce Branch meetings to two annually, to be held exclusively at Kilkenny, and to request Divisions to meet regularly at stated intervals and places.—J. QUIRKE, Honorary Secretary, Piltown.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

THE following is the text of the Education (Vacation Schools and Medical Inspection) Bill introduced by Mr. Walter Rea in the House of Commons on February 15th and put down for second reading on March 1st. It is backed by Mr. Shackleton, Mr. Frederick Edwin Smith, Mr. Tomkinson, Mr. Williamson, Mr. Guest, Mr. Masterman, and Mr. Tennant.

A BILL TO

Make provision for Vacation Schools, and for the Medical Inspection and Treatment of School Children.

BE it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same as follows:

1. *Provisions as to Vacation Schools and Health of School Children.* The powers and duties of a local education authority under Part III of the Education Act, 1902, shall include:

(*a*) Power to provide, for children attending a public elementary school, vacation schools, vacation classes, play centres, or means of recreation during the holidays or at such other times as the local authority may prescribe, in the schoolhouse or in some other suitable place in the vicinity, so far as the local education authority in the case of a schoolhouse or place not belonging to them can obtain for the purpose the use of the schoolhouse or place; and

(*b*) The duty to provide for the medical inspection of children before or at the time of their admission to a public elementary school, and on such other occasions as the Board of Education direct, and the power to make such arrangements as may be sanctioned by the Board of Education for attending to the health and physical condition of the children educated in public elementary schools.

2. *Short Title and Construction.*—This Act may be cited as the Education (Vacation Schools and Medical Inspection) Act, 1907, and shall be construed as one with the Education Acts, 1870 to 1903, and those Acts and this Act may be cited together as the Education Acts, 1870 to 1907.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

SURGEON LAWRENCE L. HUNT has been appointed to the *Jupiter*, February 19th.

JOHN V. LAVERICK, civil practitioner, has been appointed Surgeon and Agent at Skibbereen, February 20th.

ROYAL ARMY MEDICAL CORPS.

COLONEL E. H. FENN, C.I.E., is placed on retired pay, February 18th. He was appointed Surgeon, September 30th, 1875; Surgeon-Major, May 12th, 1886; Surgeon Lieutenant-Colonel, September 30th, 1893; and Colonel, August 26th, 1903. He was in the Afghan war in 1879–80, and took part in the march from Kabul to the relief of Kandahar and in the battle on September 1st; he was mentioned in despatches, and received a medal with clasp and a bronze decoration. He was attached to the Grenadier Guards during the Soudan expedition in 1885, and was present at the battle of Hashin; he received with clasp and Khedive's bronze star. He was made a Companion of the Order of the Indian Empire, January 1st, 1903.

Lieutenant-Colonel C. S. SPARKES has been appointed to the command of the Royal Army Medical Corps Depot at Aldershot, on arrival from Hong Kong.

Lieutenant-Colonel T. F. MACNEECE, from Cork, has been posted to Chatham as Administrative Medical Officer, vice Colonel E. H. FENN, C.I.E., who has retired from the service.

Lieutenant G. F. RUGG, from the Seconded List, to be Lieutenant, February 19th. He was placed on the Seconded List for service with the Egyptian army, February 10th, 1905.

ARMY MEDICAL SERVICE.

ARCHIBALD C. ADAMS, CECIL EWING, and WILLIAM M. BROWNE to be Lieutenants on probation, February 1st.

ALFRED S. MILLARD, M.B., to be Lieutenant, February 1st.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL G. J. H. BELL, M.B., Bengal, Superintendent, Rangoon Lunatic Asylum, is appointed Superintendent of the Central Gaol at Rangoon, and to officiate as Inspector-General of Prisons, Burma.

Lieutenant A. S. M. PEEBLES, Indian Medical Service, is appointed Specialist in Psychological Medicine, Eastern Command, India.

IMPERIAL YEOMANRY.

FREDERICK J. GREEN, M.D., to be Surgeon Lieutenant in the Duke of Lancaster's Own Regiment, January 23rd.

FRANCIS E. MARSTON, late Surgeon Captain, to be Surgeon-Captain in the Montgomeryshire Regiment, February 1st.

ROYAL ENGINEERS (VOLUNTEERS).

SURGEON LIEUTENANTS W. R. WILLIS, T. D. LAVIE, and J. LITHGOW, M.D., 2nd Lanarkshire, to be Surgeon-Captains, February 1st.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON LIEUTENANT A. Y. GREENWOOD, M.B., 3rd Lancashire, to be Surgeon-Captain, January 26th.

Surgeon Lieutenant-Colonel T. F. YOUNG, M.D., 4th Lancashire, is granted the honorary rank of Surgeon-Colonel, January 21st.

VOLUNTEER RIFLES.

WALTER CHAPMAN to be Surgeon Lieutenant in the 8th (the Hay Tor) Volunteer Battalion the Devonshire Regiment, January 12th.

GEORGE C. STEELE-PERKINS, M.D., formerly Surgeon, 1st Devonshire Royal Garrison Artillery, Volunteers, to be Surgeon Lieutenant in the 1st Middlesex (Victoria and St. George's) Volunteer Rifle Corps, January 17th.

Surg.-Lieut. and Lieut. E. G. P. BENSON, 4th Volunteer Battalion the Duke of Cornwall's (West Somerset) Regiment, resigns his commission, January 14th.

Lieut. and Capt. J. ROSE, to be Surgeon-Lieutenant in the 3rd Volunteer Battalion (Queen's Own) West Surrey Regiment, February 5th.

Surgeon-Lieut. D. THOMAS, M.D., 1st Brecknockshire Volunteer Battalion, the South Wales Borderers, resigns his commission, January 26th.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,250 births and 5,469 deaths were registered during the week ending Saturday last, February 23rd. The annual rate of mortality in these towns, which had been [illegible] and [illegible] per 1,000 in the three preceding weeks, further declined to 17.8 per 1,000 last week. The rates in the seventy-six towns ranged from [illegible] in Kingston-upon-Hull, 10.7 in Leyton, 11.6 in Derby, 11.8 in Smethwick, 12.0 in Walthamstow, and 12.2 in Hornsey, to [illegible] in Portsmouth, 25.7 in Salford, and 25.8 in Stockport, 25.5 in Brighton, 27.7 in Middlesbrough, and 27.9 in Hanley. In London the rate of mortality was 17.1 per 1,000, while it averaged 18.1 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.3 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.2 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3.0 in Rochdale, 3.1 in Smethwick, 3.3 in [illegible], 3.4 in [illegible], 3.5 in Middlesbrough, and 5.0 in St. Helens. Measles caused a death-rate of 1.5 in East Ham, in West Bromwich, in Leicester, in Warrington, and in Middlesbrough, 1.6 in Smethwick, 3.7 in Grimsby, and 5.1 in St. Helens; diphtheria of 1.2 in Derby and in Wigan; whooping-cough of 1.6 in Croydon and in Nottingham, 1.1 in Swansea, 1.2 in Rochdale, 1.7 in Rotherham, and 2.6 in Middlesbrough; and [illegible] in Aston Manor and diarrhœa of 1.3 in Norwich. The mortality from scarlet fever showed no marked excess in any of the large towns. One fatal case of small-pox was registered in Bristol, but not in any other of the large towns, and 10 cases of this disease were under treatment during the week in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3,176, 3,059, and 3,035 at the end of the three preceding weeks, had further declined to 2,938 at the end of last week; 322 new cases were admitted during the week, against 353, 412, and [illegible] in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, February 23rd, 941 births and 654 deaths were registered in eight of the principal Scottish towns. The [illegible] which had been 20·5, 23·0, and 22·0 per 1,000 in the three preceding weeks, further fell to 18·8 per 1,000 in the week, but was 1·0 per 1,000 above the mean rate during the same week in the seventy-six large English towns. Among these [illegible] the highest rates were 21·6 in Aberdeen and 18·[illegible] in Edinburgh. The death-rate [illegible] 13·0 per 1,000 in the three preceding weeks, further declined to 12·[illegible] in Glasgow and Greenock, but was 1·[illegible] per 1,000 above the mean rate in the seventy-six large English towns. Among these [illegible] were included 20 which were referred to [illegible] fever, 2 to diphtheria, 2 to [illegible], 2 to [illegible], 2 to [illegible],

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 9 p.m. Dr. Charles E. Beevor will deliver his third Lettsomian Lecture on the Diagnosis and Localization of Cerebral Tumours.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor J. W. Thomson Walker on the Renal Function in its Relation to Surgery.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, 8.30 p.m.—(1) Two Cases of Cystinuria, with Excretion of Diamines (Dr. F. H. Tinelli); (2) the Excretion of Creatinin in Pseudo-hypertrophic Muscular Dystrophy (Dr. E. I. Spriggs). (3) a Case of Sulphæmoglobinæmia (Dr. A. E. Russell); (4) an Apparatus for Estimating the Electric Conductivity of Small Quantities of Liquids (Dr. O. Grunbaum); (5) a New Case of Alcaptonuria (Dr. A. E. Garrod and Dr. T. Wood Clarke).

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Goulstonian Lecture by Dr. E. F. Buzzard on Certain Acute Infective or Toxic Conditions of the Nervous System.

WEDNESDAY.

OBSTETRICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8 p.m.—Short communication: Mr. Alban Doran—After-history of the Case of Fibroid of Broad Ligament associated with an Ovarian Cyst, reported in vol. xliii of the Society's *Transactions*. The following specimens will be shown: Dr. Amand Routh—Parovarian Cyst with a Long Twisted Pedicle. Dr. Blacker—(1) Suppurating Fibroid Tumour of Uterus; (2) a Case of Chorion-epithelioma. Dr. C. H. Roberts—Section of "Supposed Recurrence after Vaginal Hysterectomy." The President (Dr. H. R. Spencer) will deliver the Inaugural Address.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor J. Howell Evans on Cysts and Cystic Conditions of Embryonal Origin.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Discussion on the Diagnosis and Treatment of Fractures in the Neighbourhood of a Joint, to be opened by Mr. Watson Cheyne, followed by Professor Howard Marsh and Messrs. Edmund Owen, Pearce Gould, Arbuthnot Lane, Robert Jones, and Lynn Thomas.

NEUROLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, W., 8.30 p.m.—Drs. Hinds Howell and Lewis Jones: The Effects of Cervical Ribs.

NORTH-EAST LONDON CLINICAL SOCIETY, Tottenham Hospital, N., at 4 p.m.—Agenda: Clinical Cases.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Second Goulstonian Lecture by Dr. E. F. Buzzard on Certain Acute Infective or Toxic Conditions of the Nervous System.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 p.m.—The following papers will be read: (1) Dr. G. A. Sutherland, The Medical Treatment of Congenital Pyloric Stenosis; (2) Dr. A. F. Voelcker, Some Cases of Pyloric Stenosis in Infants; (3) Mr. F. F. Burghard, The Surgical Treatment of Congenital Pyloric Stenosis.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor J. Howell Evans on Cysts and Cystic Conditions of Embryonal Origin.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Wednesday, 5 p.m.: Clinical Pathology.

CHARING CROSS HOSPITAL, W.C.—Thursday, 4 p.m.: Surgical.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m.: Bronchiectasis.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m.: Chorea.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—Clinics: Monday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Throat, Nose, and Ear, 4 p.m. Tuesday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Skin, 4 p.m. Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30. Out-patient Demonstrations: Medical and Surgical, 10 a.m. daily; Ears and Throats, noon, Monday and Thursday; Eyes, 11 a.m., Wednesday and Saturday; Skin, noon, Tuesday and Friday. Special Lectures:—Monday, 2.30 p.m., Treatment of Pneumonia; Thursday, 3.15 p.m., Stiffness of the Spine.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, Lumbar Puncture: Its Value in Diagnosis and Treatment; Tuesday, Radium and its Medical Uses; Wednesday, Laryngeal Phthisis; Thursday, Lichen Planus.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Syringomyelia. Friday, 3.30 p.m.: Subacute Combined Degeneration of Spinal Cord.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the arrangements for next week:—Monday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out-patient, Throat, Nose, and Ear Clinics; *x*-ray Demonstration. Tuesday, 10.30 a.m.: Medical Out-patient Clinic. 2.30 p.m.: Surgical Operations; Surgical and Gynaecological Out-patient Clinics. 4.30 p.m.: Lecture, Nervous Children. Wednesday, 2.30 p.m.: Dermatological, Ophthalmological, and Medical Out-patient Clinics. Thursday, 2.30 p.m.: Gynaecological Operations; Medical and Surgical Out-patient Clinics. 3 p.m.: Medical In-patient Clinic. Friday, 9.30 a.m.: Surgical Out-patient Clinic. 2.30 p.m.: Medical Out-patient Clinic; Surgical Operations; Ophthalmological Clinic, 3 p.m.: Medical In-patient Clinic.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, Hammersmith Road, W.—The following arrangements have been made for next week:—Daily: 2 p.m., Medical and Surgical Clinics; 2.30 p.m., Operations, *X* Rays. Monday and Thursday, 2.30 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological. 2.30 p.m.: Diseases of the Skin. Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Wednesday, 10 a.m.: Diseases of Children. Lectures—Monday, 12 noon: Pathological Demonstration. Monday, 5 p.m.: Clinical. Tuesday: Plaster-of-Paris Splints. Wednesday: Fractures of the Jaw and their Treatment. Thursday: Appendicostomy. Friday: Treatment of Enteric Fever.

BOOKS, ETC., RECEIVED.

Jena: G. Fischer:

Stereoskopbilder zur Lehre von den Hernien. Von Prof. E. Enderlen und Prof. E. Gasser. 1906. M.2.

Trypanosomenkrankheiten (Schlafkrankheit) und Kala-azar. Von Prof. Martini. 1907. M.1.20.

London: Baillière, Tindall and Cox. 1907:

Cancer: Its Treatment by Modern Methods. The Bradshaw Lecture, 1906. By E. Owen, Hon. LL.D. Aberdeen. 1s.

Aids to the Diagnosis and Treatment of Diseases of Children. By J. McCaw, M.D., R.U.I., L.R.C.P. Third edition. 4s. 6d.

The Diagnosis and Treatment of Intussusception. By C. P. B. Clubbe. Edinburgh and London: Young J. Pentland. 1907.

The Past, Present and Future of the School for Advanced Medical Studies of University College, London. By R. J. Godlee. January, 1907. London: J. Bale Sons and Danielsson, Ltd. 2s. 6d.

Geschichte der Ohrenheilkunde. Von Dr. A. Politzer. Zwei Bande. I Band. Von den ersten anfängen Bis zur mitte des neunzehnten Jahrhunderts. Stuttgart: F. Enke. 1907. M. 20.

The Evolution of Life. By H. C. Bastian, M.A., M.D., F.R.S. London: Methuen and Co. 7s. 6d.

Atlas and Textbook of Dentistry, including Diseases of the Mouth. By G. Preiswerk, M.D., Ph.D. Translation from German, edited by G. W. Warren, A.M., D.D.S. Philadelphia and London: W. B. Saunders and Co. 1906. 15s.

Les Evolutions Pathologiques de la Digestion Stomacale. Par G. Hayem. Paris: Masson et Cie. 1907.

A Textbook of Ophthalmic Operations. By H. Grimsdale, M.B., F.R.C.S., and E. Bremerton, F.R.C.S. London: Kegan Paul, Trench, Trübner and Co., Ltd. 1907. 12s.

Notes on the Care of Babies and Young Children, for the Use of Teachers. By B. Tucker. London: Longmans, Green and Co. 1907. 1s.

Manuale dell' Igienista ad uso di Ufficiali Sanitari, Medici Provinciali, Ingegneri Chimici e Veterinari Igienisti, Uffici e Laboratori d'Igiene per cura del Prof. A. Celli. Opera in 2 volumi. Terza edizione. Vol. I. Parte Ia. Microscopia applicata all' Igiene, etc. Vol. II. Parte Ia. Demografia e Statistica sanitaria, etc. Torino: Unione Tipografico-editrice. 1906. 14.40.

London: The Scientific Press:—

The Care and Nursing of the Insane. By P. J. Baily, M.B., C.M.Edin. Part I. Anatomy and Physiology. 1s.

Skin Diseases; their Nursing and General Treatment. By G. N. Meachen, M.D., B.S., M.R.C.P., M.R.C.S. 2s. 6d.

The Drink Problem in its Medico-sociological Aspects. By Fourteen Medical Authorities. Edited by T. N. Kelynack, M.D., M.R.C.P. London: Methuen and Co. 7s. 6d.

Some Points in the Surgical Anatomy of the Temporal Bone from Birth to Adult Life. By A. H. Cheatle, F.R.C.S. London: J. and A. Churchill. 1907. 5s.

Clinique Thérapeutique du Praticien. Par H. Huchard and Ch. Fiessinger. Paris: A. Maloine. 1907.

Wiesbaden: J. F. Bergmann: and Glasgow: F. Bauermeister. 1906:—

Ueber Augenerkrankungen exzentrellen Ursprunges bei Frauen. Von Drs. E. Berger and R. Loewy. 4s.

Die Krankheiten des Magens und ihre Behandlung. Von Dr. L. Bourget. 4s. 9d.

Uber chronische, progressive, labyrinthäre Taubheit. Von P. Manasse. 3s. 9d.

Die Vorgeschichte der Menschheit im Lichte unserer entwicklungsgeschichtlichen Kenntnisse. Von Dr. L. Müller de la Fuente. 2s. 6d.

Die therapeutischen Leistungen des Jahres. 1905. Herausgegeben von med. und chir. Dr. A. Pollatschek. XVII Jahrgang. 8s. 9d.

Grundriss der medikamentösen Therapie der Magen- und Darmkrankheiten einschliesslich Grundzüge der Diagnostik. Zweite durch Einfügung der speziellen Diätetik der Magen- und Darmkrankheiten vermehrte Ausgabe. Bearbeitet von Dr. Med. P. Rodari. 4s. 10d.

***** In forwarding books the publishers are requested to state the selling price.**

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MARCH.	
3 Sunday ...	
4 MONDAY ...	
5 TUESDAY ...	Eastbourne Division, *South-Eastern Branch*, Mayor's Parlour, Town Hall, Eastbourne, 8.30 p.m.
6 WEDNESDAY	London: South-Eastern Branch Council, 3.15 p.m. South-Eastern of Ireland Branch, Club House, Carlow, 5.30 p.m. Tottenham Division, *Metropolitan Counties Branch*, Rooms of the Hornsey Conservative Association, 9.15 p.m.
7 THURSDAY...	London: Metropolitan Counties Branch Council, 5 p.m. Canterbury and Faversham Division, *South-Eastern Branch*, Meeting at Dr. Grayling's house, "Polveneers," Sittingbourne, 3 p.m.; Luncheon, 1.30 p.m.
8 FRIDAY ...	Cambridge and Huntingdon Branch, University Arms Hotel, Cambridge, 2.30 p.m.; Luncheon, 1.30 p.m. Hampstead Division, *Metropolitan Counties Branch*.
9 SATURDAY...	
10 Sunday ...	
11 MONDAY ...	London: Standing Ethical Subcommittee, 2 p.m.
12 TUESDAY ...	
13 WEDNESDAY	Westminster Division, *Metropolitan Counties Branch* St. James's Vestry Hall, 195, Piccadilly, 8.30 p.m.
14 THURSDAY...	
15 FRIDAY ...	Trowbridge Division, *Bath and Bristol Branch* Council Chamber, Town Hall, Trowbridge, 3 p.m.
16 SATURDAY...	
17 Sunday ...	
18 MONDAY ...	
19 TUESDAY ...	London: Organization Committee, 11 a.m. London: Special Finance Inquiry Committee, 3 p.m.
20 WEDNESDAY	London: Naval and Military Committee, 3.30 p.m.
21 THURSDAY...	City Division, *Metropolitan Counties Branch*, Hackney Town Hall, 4 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Battersea Town Hall, 8.45 p.m.
22 FRIDAY ...	
23 SATURDAY...	
24 Sunday ...	
25 MONDAY ...	
26 TUESDAY ...	London: Public Health Committee, 3.15 p.m.
27 WEDNESDAY	London: Medico-Political Committee, 2.30 p.m. Bath and Bristol Branch, Bristol.
28 THURSDAY...	
29 FRIDAY ...	*Good Friday.*
30 SATURDAY...	
31 Sunday ...	
APRIL.	
1 MONDAY ...	*Bank Holiday.*
2 TUESDAY ...	
3 WEDNESDAY	
4 THURSDAY...	
5 FRIDAY ...	London: Central Ethical Committee 2 p.m.
6 SATURDAY...	
7 Sunday ...	
8 MONDAY ...	
9 TUESDAY ...	
10 WEDNESDAY	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Duly Qualified Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner practising within the area of any Branch of the Association while in any part of the United Kingdom other than the United Kingdom, who is in possession of such medical qualifications as shall, subject to the By-laws, be approved by the Rules of the said Association, shall be eligible as a Member of the Association. The annual subscription of Members to the Association shall from time to time be determined by a resolution of the By-laws. Every Member who shall be in arrear of his subscription by the first day of March in any year shall be ceased to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election to the Secretary of the Branch within the area of which he resides, and shall, if elected, be admitted to membership by the Regulations and Bye-laws of the Association and the Rules of such Branch, and Branch to which he may at any time belong and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council of a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non members is £1 8s. 0d. for the United Kingdom, and £1 12s. 0d. for abroad.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 9TH, 1907.

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CENTRAL EMERGENCY FUND.

UNDER the present constitution of the British Medical Association as a limited liability company, registered under the Companies Acts as formed not for profit, no part of its funds can be applied centrally or by any Branch or Division for the benefit of any individual member, except by way of remuneration for services rendered to the Association.

This has been found to prevent the Association, its Branches and Divisions, from giving the financial support which it is deemed desirable or even necessary in the interests of the profession to give to members of the profession engaged in contract practice and similar disputes. The Council of the Association, therefore, with the approval of the Annual Representative Meeting of 1906, has instituted a fund called the Central Emergency Fund, to be maintained by voluntary subscriptions, and to be under the management of the Medico-Political Committee for purposes of action in disputes of the kind referred to.

The following are the

REGULATIONS OF THE FUND.

1. The Fund is created by voluntary subscription, to assist members of the profession in various parts of the country in maintaining the interests of the profession against organized bodies of the community.

2. All members of the profession are invited to contribute. Any contribution may be earmarked for use in specified disputes, or for application to special methods of carrying out the objects of the Fund, and when not so earmarked shall be deemed to be given for disposal at the discretion of the Medico-Political Committee in carrying out the general objects defined in Clause 1. At the termination of any special dispute for which funds may have been earmarked, the balance (if any) shall be merged in the General Fund.

3. Subject to the conditions defined in this Scheme, the Fund shall be under the entire control of the Medico-Political Committee of the British Medical Association, and shall be vested in the names of the Chairman of the Committee and the Treasurer of the Association, as representing the Committee. Payments shall only be made on the authority of a resolution of the Medico-Political Committee, or of a Subcommittee of the Medico-Political Committee acting under powers specifically delegated by the Committee.

4. The Fund may be applied for the promotion of the general objects stated in Paragraph 1 in any of the following ways:

(*a*) By a grant or grants to any individual practitioner to assist him in maintaining any position in which the Association shall have decided to support him, or to compensate him for losses which he shall have incurred through taking action approved by the Association.

(*b*) By a grant or grants to any Division or Branch of the British Medical Association, for its assistance in defraying expenses incidental to the conduct of local disputes falling within the scope of the objects of the Fund.

(*c*) By expenditure under direct supervision of the Medico-Political Committee, or of a Subcommittee of that Committee, for the purpose of any action which the Medico-Political Committee may deem necessary or advisable for the promotion of the general objects of the Fund.

The Medico-Political Committee, through its Contract Practice Subcommittee, has had recently brought under its notice disputes in several parts of the country in which it may be necessary to take, for the maintenance of the interests of the profession, action requiring such financial support as the Central Emergency Fund has been instituted to provide, and members of the Association and other members of the profession are strongly urged, so far as their circumstances permit, to assist the Committee in this important work.

Contributions—whether of periodical subscriptions at such periods, yearly, quarterly, or monthly, as may be convenient to the subscribers, or of special donations—are received on behalf of the Medico-Political Committee by the Medical Secretary, 429, Strand, London, W.C., to whom Cheques and Postal Orders should be made payable, crossed "London and Westminster Bank, Bloomsbury Branch."

Forms of banker's orders will be supplied on application for those regular subscribers who may prefer to pay in this way.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

LEINSTER BRANCH.

THE thirtieth annual general meeting of the Leinster Branch was held in the College of Physicians on Saturday, February 23rd. Dr. JAMES CRAIG occupied the chair.

Membership and Funds.—The membership appeared from the report to be 341, an increase of 1. The balance in hand amounted to £24.

Election of Officers.—The following officers were elected for the ensuing year: *President*, John Lentaigne, F.R.C.S.; *President-Elect*, J. Wallace Boyce, M.B.; *Vice Presidents*, F. W. Kidd, M.D., and Sir William Smyly, M.D.; *Representative on Irish Committee*, J. M. Kenny, M.B., Granard; *Honorary Secretary and Treasurer*, Professor White, Royal College of Surgeons, Dublin.

Report of Council.—The annual report of Council was, on the motion of Sir JOHN MOORE, seconded by Dr. HORNE, adopted unanimously.

Reconstitution of Central Council.—Dr. WALLACE BOYCE proposed and Dr. MARTLEY seconded a resolution:

> That the Leinster Branch of the British Medical Association desires to enter its strongest protest against the proposed great reduction in the number of the Central Council of the Association, whereby Ireland would be deprived of adequate representation on the Council, and much difficulty would arise in the choice of one, or at most two, members of that body.

The PRESIDENT said under the new scheme Ireland would probably have only one Representative, and to elect one only from the whole of Ireland would be rather a difficult matter. Some grievance would be felt in Cork and Belfast if a Dublin man was elected, and in Dublin if a Cork or Belfast man was appointed. The meaning of the whole thing was that certain people in the Association were most anxious to take away the control from the Branches and give it entirely to the Divisions. The Council, which formerly was the chief and most important body in connexion with the Association, was to be made merely a small Executive Council or Committee, with, of course, extremely little power. The resolution was carried unanimously.

Election of Officers.—The following were declared as officers of the Branch for the year 1907-8: *President*, John Lentaigne, Vice-President R.C.S.; *President-elect*, J. Wallace Boyce, M.B. (Blackrock, co. Dublin); *Vice-Presidents*, F. W. Kidd, M.D., Sir William Smyly, M.D.; *County Representative on Irish Committee* J. M. Kenny, M.B. (Granard); *Honorary Secretary and Treasurer*, Professor White, Royal College of Surgeons, Dublin.

Installation of New President.—Dr. Craig then vacated the chair, which was taken, amidst applause, by the new President, Mr. LENTAIGNE.

Vote of Thanks to Retiring President.—On the motion of Surgeon General EDGE, seconded by Dr. J. MASON, a hearty vote of thanks was accorded to Dr. Craig for the manner in which he had fulfilled the duties of President during the past year.

President's Address.—Mr. LENTAIGNE then delivered an address on Poor-law Reform in Ireland. What most directly concerned them, as medical men, in the report issued last October was the reorganization of the county and workhouse hospitals; the very valuable suggestions as to the treatment of the sick, and especially of tuberculosis; the proposed regulations for the accommodation of the insane, of epileptics, and of the aged and infirm, and the formation of what had been, rather unfortunately, called a State Medical service. He agreed with the suggestion that the designation "State Medical Service" was a bad one, and that the service should rather be called "National" or "Civil," or indeed anything but "State," as the latter word was so unpopular in Ireland. With regard to the reorganization of the hospitals, a great and admirable and much needed reform was proposed. All the county and workhouse hospitals were to be brought into a county hospital system, with the county infirmary as the central institution. At least a minimum standard of efficiency was to be secured by inspection and by power to transfer the responsible officer, if in fault, to a less desirable and less important position. In his opinion a minimum standard of efficiency, both as regards *personnel* and equipment, should be secured for all hospitals by a system of efficient inspection, combined with registration or licensing in some form, preferably by one central supreme authority, who would have adequate powers to correct gross deficiencies and to enforce the minimum standard by the simple process of refusing the licence when necessary. Under the present system, or want of system, there was little if any remedy except the force of public opinion. How different, said the President, it is in all other matters affecting the public safety. You could not keep a public-house without a licence; even a dairy must be registered. You could not keep two lunatics without a licence; but under the guise of charity, or for purposes of private gain, you might run a hospital, in which you might poison, maim, mutilate, starve, neglect, or otherwise maltreat the public with a minimum of risk of detection or exposure. Even merchants who sell explosives must be licensed, and were most carefully supervised and inspected. The same arguments applied with equal or greater force to private hospitals. Mr. Lentaigne went on to say that the principle of inspection of hospitals was actually already recognized in this city to some small extent, as was shown by the action of the Board of Superintendence of Dublin Hospitals, the Hospital Sunday Fund Committee, and the Hospitals Inspection Committee of the Corporation of the City of Dublin. Limited as it was, however, such inspection was of very great value indeed, as regarded the institutions supervised, and it helped one to form an idea of the enormous benefit that would accrue from universal inspection and licensing. The recommendations in the report for the accommodation and treatment of patients suffering from tuberculosis were most valuable, and would, he believed, when carried out soon effect a startling improvement in the health of the community at large. Of all the recommendations in the report, the best and most important from their point of view was that for a State or, as it should be called, a national medical service. On the whole he entirely agreed with the principle and with the details generally as laid down in the report, and he was strongly of opinion that the dispensary medical officers ought, as suggested, to be included in the scheme. Of course an ideal system would consist of the formation of a health department—a Minister of Health who would be responsible for all matters pertaining to public health and to mending medical education generally, and who would preside at this council and direct or assist its operations—but as they were not likely to obtain such they would be thankful for the next best thing. This scheme was, he believed, the keystone on which the entire fabric of reform depended. There was little use in reforming hospitals and making arrangements for the treatment of the sick unless they could find an efficient and reliable staff to work the hospitals and carry out the treatment. On the motion of Dr. NORMAN, seconded by Dr. KENNY of Granard, the following resolution was carried:

> That the Leinster Branch of the British Medical Association hereby offers its congratulations to the members of the Viceregal Poor law Commission on the excellent report which they have issued. The Branch takes this opportunity of expressing approval of the suggestion contained in the report that the entire Medical Poor-law Service in Ireland should be formed into a National Service. The Branch is further of opinion that the Imperial Treasury should provide the funds necessary for the payment of the members of the service, that the service should be entered by competitive examination, and that the members of the National Service should have a voice in selecting a due proportion of the members of the Central Board of Control.

A hearty vote of thanks was accorded to the President for his address.

METROPOLITAN COUNTIES BRANCH:

LAMBETH DIVISION.

A MEETING of the Lambeth Division was held in the Court Room (by kind permission of the Treasurer and Governors) of Guy's Hospital on Thursday, February 28th, at 4 p.m. Dr. ROBERT CAYES occupied the chair.

Confirmation of Minutes.—The SECRETARY read the minutes of the last meeting, which were then confirmed.

Proposed Conference on Election to Central Council.—A letter was read from Dr. Percy Rose, of 161, Barking Road, Canning Town, E., asking the Lambeth Division to appoint delegates to attend a conference of the Divisions of the Metropolitan Counties Branch to secure territorial representation in the election of members to the Central Council. It was proposed by Dr. HARVEY NORTON and seconded by Dr. ESLER that Dr. Herbert Taylor and Dr. Robert Capes be appointed to represent the Lambeth Division. This was put to the meeting and carried unanimously.

Paper.—Dr. FREDERICK TAYLOR (Senior Physician to Guy's Hospital) then read a paper on some unusual forms of pyrexia, mentioning a peculiar character of temperature which occurred in some cases of lymphadenoma and in malignant disease involving internal organs. A discussion followed in which Drs. M. DUKE, CAPES, ATKINSON, CLATWORTHY, DENNING, and FLORENCE PAYNE took part.

Votes of Thanks.—A vote of thanks to Dr. Frederick Taylor was proposed by Dr. HARVEY NORTON and seconded by Dr. SANGSTER and carried unanimously. A vote of thanks to the Treasurer and Governors of Guy's Hospital was proposed by Dr. BRAMLEY TAYLOR and seconded by Dr. ESLER. This was put to the meeting and carried with acclamation.

MARYLEBONE DIVISION.

A MEETING of this Division was held on February 27th, at 11, Chandos Street, Dr. LAURISTON SHAW in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and signed as correct.

Proposed Conference as to Election to Central Council.—A letter was read from Dr. ROSE, asking the Division to take part in a conference to be called to arrange a plan for the election of members to the Central Council. The following reply was sent:

The Marylebone Division does not feel itself able to take part in anything of the nature referred to in Dr. Rose's letter, unless it is brought to its notice by the Branch Council.

Letter from Dublin Division.—A letter from the Dublin Division was read. The following reply was sent:

The Marylebone Division agrees with the Dublin Division in suggesting that the Council should not be elected by the Representative Meeting.

London County Council Election.—A letter from Mr. Atwood Thorne *re* the L.C.C. election was read. In connexion with this Mr. Atwood Thorne informed the meeting that all the candidates (except one who had not replied) for the London County Council in the Marylebone Division had answered the questions propounded by the Medico-Political Committee of the Branch in a satisfactory manner.

Election of the Representatives of Divisions.—Dr. FRED J. SMITH then moved that Article XXVII, which runs as follows:

Representatives of Divisions shall be elected by constituencies formed as follows, each such constituency being entitled to elect one representative:—Any Division having not less than 50 [100] members may form one constituency, and every Division having less than 50 [100] shall be grouped by the Council with another Division or with other Divisions to form a constituency having not less than 50 [100] members,

should be amended in the new Charter in such manner that 100 should be substituted for 50, as shown by the square brackets. In proposing his resolution, Dr. Smith said that the effect would be felt in three directions. First, it would result in reducing materially the number of representatives in the Representative Meeting, which he thought would be a good thing, as it would facilitate business; and he did not think that any real injustice would be inflicted on any geographical area of the Association, for he believed that there were at present too many Representatives representing (if it could be termed representing) identical interests of a comparatively small area, and one in which the professional conditions were approximately identical. He illustrated agricultural, mining, and business areas by Norfolk, Durham, and London respectively, and suggested that similar areas might easily be represented by fewer members, for it was not to be supposed that the conditions of practice in a typical area would materially differ from those of a similar typical area situated elsewhere. Secondly, it would render representation more numerically equal throughout the country, illustrating the present inequality by comparing the metropolis with other centres, showing how inadequately in comparison (though he thought really sufficiently) the metropolis was at present represented. And, thirdly, Dr. Smith pointed out that his proposal would make a substantial saving in the expenses of the Representative Meeting—a consideration not to be despised in the present state of the finances of the Association. Dr. Smith's resolution was seconded by Dr. COMYNS BERKELEY, and was carried unanimously.

Offices of Secretary and Treasurer of Division.—Dr. F. J. SMITH proposed that the offices of Honorary Secretary and Treasurer to the Marylebone Division should be separated. In submitting his resolution, Dr. Smith stated that he did not want in any way to reflect upon the manner in which the duties of these offices had been carried out up to the present time, but he thought, considering the large amount of work the Honorary Secretaries were called upon to do nowadays, it was only fair that some one else should do the Treasurer's work. The proposition was seconded by the HONORARY SECRETARY, who pointed out that this meeting had no power to alter the rules of the Division, as this could only be done at the annual meeting or a meeting called specially for the purpose. It was accordingly unanimously resolved to present this resolution at the next annual meeting.

Provident Dispensaries.—The report on provident dispensaries was considered. After the CHAIRMAN had made a few remarks on the subject, the HONORARY SECRETARY reported the result of the special letter he had been directed to send to every practitioner resident in the Marylebone Division. This letter contained certain questions which the recipients were requested to answer. Letters were sent to 590 members and 340 non-members, 930 in all. Only 16 replies were returned to the letter, and this, as the Honorary Secretary pointed out, was most disappointing. It had been a very expensive matter sending these letters out, and yet, although they had been sent to a large number of gentlemen, among whom were many who complained of hospital abuse, only 16 had thought it worth while to answer the questions which had been framed with a view to eliciting opinions as to how hospital abuse could best be remedied. After several members had spoken, the following questions contained in the report on provident dispensaries were put to the meeting, and all three were answered in the affirmative: In order to secure uniformity of procedure in the Divisions our Council would venture to suggest that at a meeting of your Division, to which all practitioners resident in the district should be invited, a vote should be taken upon the following questions: (1) Should the Branch Council be requested to endeavour to secure the modification of provident dispensaries within the area of the Branch, in accordance with the principles put forward in the report of the Medico-Political Committee? (2) Should the Division approach those of its members who are on the staff of provident dispensaries, to gain their help in modifying their organization in accordance with the accepted principles? (3) Should the Division encourage practitioners, resident in its area, to join in the work of provident dispensaries which have been modified in accordance with the accepted principles?

King Edward's Hospital Fund for London.—Dr. LAURISTON SHAW brought to the notice of the meeting some important details connected with the Bill for the Incorporation of King Edward's Hospital Fund for London, more especially with regard to Clause 6, "Management."

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: TROWBRIDGE DIVISION.—A meeting of this Division will be held in the Council Chamber, Town Hall, Trowbridge, on Friday, March 15th, at 5 p.m., when the ordinary business of such meeting will be transacted, and an address will be delivered by James Berry, Esq., B.S., M.B.Lond., F.R.C.S.Eng., etc., Senior Surgeon and Lecturer on Clinical Surgery, Royal Free Hospital, Lecturer on Surgery, School of Medicine for Women, entitled, Peritonitis and its Treatment. Agenda: (1) Minutes of last meeting; (2) correspondence; (3) matters referred to the Division by the Central Council or adjourned from last meeting; (4) address by Mr. Berry; (5) other business (if any). Tea and refreshments will be provided in the Town Hall at the close of the meeting.—J. TUBB-THOMAS, Honorary Secretary.

Edinburgh Branch: South-Eastern Counties Division.—The spring meeting will be held in the King's Arms Hotel, Melrose, on Thursday, April 4th, at 5 o'clock, Dr. Young, Chairman, presiding. Business: (1) Medico-legal matters referred to Divisions by the Council; (2) Clinical papers by members. The Secretary will be glad if members intending to contribute will kindly notify him at their earliest convenience.—W. Hall Calvert, Honorary Secretary.

Metropolitan Counties Branch: Hampstead Division.—The next meeting of this Division will be held on Friday, March 8th, at 8.30 p.m., at the Hampstead Conservatoire room No. 11a, Swiss Cottage, N.W., Dr. Macevoy in the chair. Agenda: (1) Minutes; (2) letters; (3) questions; (4) paper on Acute Pneumonia in Children by H. Montague Murray, Esq., F.R.C.P.; (5) discussion on the Medical Inspection of School Children (see Supplement, February 16th, p. 74); (6) other business. N.B.—Members having resolutions intended for the Representative Meeting are requested to forward them to the Honorary Secretary as soon as possible.—R. A. Yeld, Honorary Secretary.

Metropolitan Counties Branch: Lambeth Division.—The Chairman will entertain the members of the Division at a special meeting which will be held at the Lambeth Carlton Club, Coldharbour Lane, S.W. (near Brixton Station), on Wednesday, March 27th, at 8.45 p.m. Agenda: (1) Minutes of the last meeting; (2) to consider the report of the Medico-Political Committee of the British Medical Association on Provident Dispensaries (see Supplement to British Medical Journal, February 23rd, page 91); (3) a paper will be read by H. Betham Robinson, M.S., F.R.C.S., Surgeon to St. Thomas's Hospital, on Acute Intestinal Obstruction. Tea and coffee at 8.45 p.m. The chair will be taken at 9 p.m.—W. Alexander Atkinson, M.D., Honorary Secretary, 216, Camberwell New Road, S.E.

Metropolitan Counties Branch: Wandsworth Division.—A meeting will be held on Thursday, March 21st, at the Town Hall, Battersea, at 8.15 p.m. Walter G. Spencer, F.R.C.S., will open a discussion on Fatal Haemorrhages from Mucous and Septic Surfaces. All registered medical practitioners will be welcomed. Suggestions for nominations of candidates by the Division as officers of the Branch and Representatives of the Branch on the Central Council for 1907-8 must be sent to the Honorary Secretary on or before April 1st.—E. Rowland Fothergill, Honorary Secretary, Torquay House, Southfields, S.W.

Metropolitan Counties Branch: Westminster Division.—A meeting of this Division will be held at St James's Vestry Hall, 195, Piccadilly, at 8.30 p.m., on Wednesday, March 13th. Dr. W. Knowsley Sibley will open a discussion and propose the following resolution: "That in view of the mismanagement and abuse of hospitals, the Westminster Division considers the welfare of the public and the interests of the medical profession would be best obtained by the establishment of a Central Hospital Board for London." Synopsis of Dr. Knowsley Sibley's Paper: (a) Mismanagement of Hospitals. (1) Competition between hospitals for funds, students, and patients; (2) large sums spent on advertising; (3) too many hospitals and badly situated; (4) extravagance in administration and multiplicity of paid officials; (5) supply of commissariat by numerous small tradesmen also drugs, surgical dressings, and instruments. (b) Abuse, by in-patients and out-patients. (c) Welfare of Public: (1) Subscribers; (2) patients. (d) Interests of the Profession. (1) Hospital [illegible] general practitioners. (e) Central Hospital Board: (1) Select Committee of House of Lords' scheme, 1891-2; (2) Charity Organization Society's scheme, 1896-97; (3) Central Hospital Council; (4) Prince of Wales's Hospital Fund, 1897. (f) Proposed amalgamation of (1) King Edward's Fund, (2) Hospital Sunday Fund, (3) Hospital Saturday Fund with the administration of the Charity Organization Society. The following will take part in the discussion: Colonel Montefiore, Dr. Dreschfeld, Dr. Hallé, Dr. A. C. E. Gray, Mr. Harvey Holland, Brigade Surgeon Lieutenant-Colonel Myers, others desirous of taking part in the discussion are invited to send their names to the Secretary.—F. J. McCann, M.D., Honorary Secretary.

[illegible] Division.—The next meeting of this Division will be held at the Royal Surrey County Hospital, Guildford, on Wednesday, March 20th, at 3.30 p.m. Dr. George Fisher Chairman of the Division will preside. Agenda: (1) Minutes; (2) Matters referred to Divisions by the Representative Meeting, February 16th; (3) Medical Inspection of School Children; (4) Clinical Aspects of Medical Cases; (5) Dr. Dundas Marshall will move the following resolution: "That a special meeting of the Division be held in May next to consider the conditions of contract practice in its area, with a view to the adoption of ethical rules for its regulation." (6) Dr. F. E. Weaver will read notes of a case of appendicitis, introducing a discussion on the early symptoms of the disease. (7) Dr. H. F. Parker will read notes of a case of tumour of the neck containing fatal remains. (8) Dr. F. E. Fearnsides will relate a case of purpura. (9) Dr. Archibald Maclaren will exhibit some photographs of unusual interest. (8) Any other business. Dinner at 6.30 p.m. at the Lion Hotel; charge, 6s.—E. J. Smyth, Honorary Secretary, Maythorne, Guildford.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE

The following appointments have been made at the Admiralty: Edmund Corcoran, Fleet Surgeon, and Bryan Pick, Surgeon, to the *Crocus*, on recommissioning, March 5th: William A. Whitelegge, M.D., Fleet Surgeon, to the *Isis*, March 2nd: Warren G. Westcott, Staff Surgeon, to the *Adventure*, March 2nd: Alfred H. Jeremy, M.B., Staff Surgeon, to the *Forward*, March 2nd: Ernest S. Tuck, Staff Surgeon, to the *Foresight*, March 2nd: William R. Trythall, Staff Surgeon, to the *Skerryhisher*, March 2nd: John St. J. Murphy, Surgeon, to the *Forward*, March 2nd.

ROYAL ARMY MEDICAL CORPS.

Lieutenant M. G. Dill, M.B., is seconded for service with the Egyptian army, February 8th.

Lieutenant-Colonel E. O. Wight retires on retired pay, March 6th. Appointed Surgeon, February 4th, 1882, he became Surgeon-Major, February 4th, 1894, and Lieutenant-Colonel, February 4th, 1902. He served in operations in the South Lushai Hills, Burmah, in 1892, receiving the Frontier medal with clasp. He has also received the bronze medal of the Royal Humane Society for saving a man from drowning in the Manipore River on May 7th, 1892.

Lieutenant-Colonel R. E. Molesworth also retires on retired pay, March 6th. He joined the department as Surgeon, May 30th, 1885; was made Surgeon-Major, May 30th, 1899; and Lieutenant-Colonel, May 30th, 1905. He was in the South African war in 1899-1900, for which he has the Queen's medal with two clasps.

The retirement on retired pay from March 6th is also announced of Major L. E. A. Salmon, who entered on Surgeon-Captain, February 5th, 1887, becoming Major, February 5th, 1899. He has no war record in the Army List.

Lieutenant C. G. Browne, appointed on probation July 31st, 1905, is confirmed in that rank.

Lieutenants G. de la Cour, V. G. Johnson, and J. W. L. Scott, appointed on probation, January 30th, 1906, are confirmed in that rank.

The undermentioned Lieutenants appointed on probation July 30th, 1906, are also confirmed in their rank: G. H. Stevenson, M.B., W. H. Forsyth, M.B., A. C. Amy, M.B., A. H. Heslop, M.B., W. Mitchell, M.B., J. A. B. Sim, M.B., E. J. Elliott, M.B., E. Gibbon, M.B., R. W. D. Leslie, E. B. Lathbury, C. Scale, M.D., D. M. Corbett, M.B., M. J. Lochrin, E. D. Caddell, M.B., J. R. Foster, W. W. Boyce, O. C. P. Cooke, D. Coutts, M.B., A. M. Bennett, G. P. A. Braken, F. L. Bradish, J. A. Bennett, M.B., W. J. E. Bell, M.B., C. W. Bowie, H. L. Howell, W. F. M. Loughnan, T. W. Browne, W. I. Thompson, M.B., C. Kelly, M.B., D. T. McCarthy, M.B., E. C. Phelan, M.B., J. J. O'Keeffe, M.B., R. C. Galgey, E. J. Kavanagh.

ARMY MEDICAL RESERVE

Surgeon-Major J. Mill, M.B., to be Surgeon-Lieutenant-Colonel, February 19th.

INDIAN MEDICAL SERVICE.

The undermentioned officers, appointed Lieutenants January 30th, 1904, are promoted to be Captains, from January 30th: H. B. Drake, G. C. Hodgson, W. S. McGillivray, M.B., W. Gillitt, M.B., W. F. Brayne, M.B., C. H. Barber, M.B., W. Tarr, M.B., H. Watts, M.B., I. D. Jones, M.B., W. T. Finlayson, S. W. Jones, W. I. McCowen, H. E. Stanger-Leathes, J. Anderson, M.B., E. A. Roberts, G. G. Hirst, M. J. Quirke, M.B., J. M. Holmes, M.B., M. F. White, M.B.

The undermentioned officers are placed on special duty under the Foreign Office from the dates specified: Major R. Bird, C.I.E., M.D., Bengal, Professor of Surgery, Calcutta Medical College, December 22nd, 1906: Major A. L. Duke, M.B., Bengal, Agency Surgeon, Second Class, December 10th, 1906.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Captain A. Macdonald, M.B., 1st Lothian Bearer Company, to be Major, January 27th.

Vital Statistics.

ENGLISH URBAN MORTALITY DURING 1906.

In the accompanying table will be found summarized the vital statistics of the seventy-six large towns dealt with in the Registrar-General's weekly returns. During the fifty-two weeks ending December 8th last 451,754 births were registered in these towns, equal to an annual rate of 27.9 per 1,000 of their aggregate population, estimated at 16,181,530 persons in the middle of last year, in the three preceding years the rates were 29.7, 29.1, and 28.2 per 1,000. In London the rate was 26.7 per 1,000, while it ranged from 14.1 per 1,000 in the seventy-five other large towns, and ranged from 16.0 in Hastings, 17.7 in Bournemouth, 18.4 in Hornsey, 18.4 in Halifax, 20.6 in Bradford, and 21.3 in Northampton to 34.0 in Merthyr Tydfil, 34.0 in Sunderland, 35.6 in Middlesbrough, 37.4 in Rhondda.

During the period under notice 290,747 deaths were registered in these large towns, the annual rate of mortality was 15.9 per 1,000, against 15.3, 17.2, and 15.1 per 1,000 in the three preceding years. In London the death rate was 15.1 per 1,000 while it averaged 16.2 in the seventy-five other large towns, and ranged from 8.8 in Hornsey, 9.5 in Bournemouth, 9.9 in Handsworth (Staffs.), 11.2 in Northampton, 11.3 in Leyton, 11.4 in Walthamstow, 11.5 in East Ham to 19.1 in Merthyr Tydfil, 19.1 in Wednesbury, 19.2 in Preston, 19.8 in Burnley, 20.3 in Middlesbrough, and 20.6 in Liverpool.

The 290,747 deaths from all causes in these towns last year included 27,267 which were referred to the principal infectious diseases, of these 17 resulted from small pox, 6,234 from measles, 1,118 from scarlet fever, 2,209 from diphtheria, 4,530 from whooping-cough, 1,447 from fever, principally enteric, and 13,312 from diarrhœa. The death-rate from these diseases was 2.24 per 1,000 against 1.80, 2.19, and 1.88 in the three preceding

Analysis of the Vital Statistics of Seventy-six of the Largest English Towns during 1906.

Towns.	Estimated Population middle of 1906.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough	Fever.	Diarrhœa.	Deaths of Child'n under one year, to 1,000 Births.	Ratio per cent. of Uncertified Deaths.
76 Towns	15,818,360	439,803	250,317	27.9	15.9	2 24	35,367	18	6,294	1,948	2,378	4,399	1443	18,329	145	1.0
75 Provincial Towns	11,097,143	314,151	179,162	28.4	16.2	2 39	26,320	16	4,345	1,415	2,295	3,173	1179	13,905	161	1 3
London	4,721,217	125,652	71,159	26.7	15.1	1 93	9,047	—	1,969	533	691	1,226	264	4,424	130	0.2
Croydon	151,011	3,866	2,015	25.7	13.4	1 76	266	—	39	8	41	28	5	145	127	—
Willesden	143,622	4,160	1,658	29.0	11.6	1.49	214	—	27	12	15	27	7	126	118	1.2
Hornsey	86,935	1 593	766	18 4	8.8	0.97	84	—	18	7	12	3	5	39	85	—
Tottenham	119,503	3,640	1,648	30.5	13.8	2 15	261	—	49	18	12	22	6	154	130	0.1
West Ham	301,617	9,212	4,721	30 6	15.7	3.17	949	—	128	39	53	78	13	565	150	0.2
East Ham	129,886	3,649	1,504	28 0	11.6	2 23	288	—	34	19	27	28	8	172	128	0.2
Leyton	118,287	3,318	1,410	28 1	12 0	2 20	259	—	53	16	35	37	6	132	118	0.3
Walthamstow	121,334	3,541	1,543	29.3	12.8	2 44	295	—	42	21	52	17	8	136	134	0.1
Hastings	67,144	1,091	904	16.3	13.5	0.66	45	—	7	6	3	1	2	26	126	0.8
Brighton	128,095	2,848	1,878	22.3	14.7	1.09	138	—	28	2	11	24	3	70	111	0.1
Portsmouth	209,118	5,870	3,049	28.7	14.9	1.84	377	—	8	3	60	63	17	226	130	1.2
Bournemouth	67,702	1,182	980	17.7	13.8	0.72	49	—	10	—	7	17	2	13	117	0.4
Southampton	117,312	2,913	1,630	24.9	13.1	1.37	160	—	—	—	24	35	6	94	113	—
Reading	78,987	1,877	1,104	23.8	12.7	1.82	143	—	—	—	39	24	2	68	115	2.8
Northampton	93,739	1,988	1,047	21.3	11.2	1.16	108	—	—	4	8	8	10	78	140	1.7
Ipswich	71,809	1,900	1,066	26.5	14.9	1.17	83	—	—	2	9	6	4	62	142	0.8
Great Yarmouth	52,613	1 469	925	28.0	17.6	2.46	129	—	33	4	8	3	7	76	159	—
Norwich	117,958	3,086	2,084	26.2	17.7	2.99	352	—	99	10	29	20	12	152	172	0.7
Plymouth	118,014	2,821	1,911	24.0	16.2	1 96	231	2	62	10	21	55	5	85	152	—
Devonport	78,405	2,135	1,026	27.3	13.1	1.38	108	3	21	4	8	17	8	47	111	—
Bristol	343,223	9,380	5,239	25.9	14.5	1.56	567	1	141	26	77	102	22	196	127	0.3
Hanley	66,360	2,250	1,239	34.0	18.7	3.12	206	—	1	25	21	8	10	141	162	1.3
Burton-on-Trent	52,922	1,270	636	24.1	12.6	1.04	54	—	2	2	4	13	4	29	117	3 3
Wolverhampton	100,729	2,761	1,487	27.5	14.8	2.28	229	—	26	17	23	21	9	133	140	0.6
Walsall	94,577	2,789	1,381	29.6	14.6	2.03	191	—	—	2	16	34	12	127	156	0.5
Handsworth	63,819	1,496	694	23.5	10.9	1.35	86	—	2	5	2	31	2	44	119	1.2
West Bromwich	68,469	2,160	1,061	31.9	15.5	2.06	141	—	7	9	5	45	12	67	156	1.6
Birmingham	548,022	16,046	9,176	29.4	16.8	2.78	1,520	—	218	54	97	218	40	863	168	2.8
King's Norton	72,608	1,853	691	25.6	9.5	0.85	62	—	8	7	5	17	1	26	103	2.6
Smethwick	64,531	2 027	902	31.5	14.0	2.09	134	—	16	4	11	30	7	66	129	1.8
Aston Manor	82,288	2,259	1,121	27.5	13.7	2.79	229	—	26	8	15	34	8	132	168	0.9
Coventry	76,374	2,404	1,223	31.6	16.1	2.71	206	—	1	5	13	37	5	146	138	2.4
Leicester	232,111	5,827	3,306	25.2	14.3	2.38	550	—	80	52	30	114	13	261	168	1.0
Grimsby	69,359	2,065	1,021	29.9	14.8	2.28	159	—	4	1	19	1	10	124	180	1.2
Nottingham	254,563	6,769	4 084	26.6	16.1	2.10	530	—	5	17	41	40	42	385	171	0.5
Derby	123,981	3,106	1,760	25.1	14.2	1.40	172	—	2	4	62	28	11	65	115	—
Stockport	99,646	2,677	1,883	26.9	18.9	2.89	288	—	68	3	6	35	9	167	186	0.2
Birkenhead	117,292	3,728	2,020	31.9	17.3	2.97	348	—	9	31	27	59	17	295	151	0.2
Wallasey	64,578	1,708	889	26.5	13.5	1.83	118	—	13	6	10	16	6	67	118	0.6
Liverpool	739,180	24,128	15,216	32.7	20 6	3.62	2,674	1	574	138	147	355	87	1,322	172	3.3
Bootle	65,989	2.172	1,200	33.0	18.2	3.38	222	—	47	12	15	30	7	111	160	2.6
St. Helens	91,153	3,031	1,566	34.0	17.2	2.02	184	—	10	4	24	5	19	123	158	4.7
Wigan	87,588	2,924	1,584	33.5	18.1	2.63	230	—	45	5	7	3	28	141	162	0.9
Warrington	69,260	2,248	1,264	32.5	18.3	2.93	203	—	29	3	8	31	5	124	157	3.6
Bolton	180,502	4,560	2.731	25.4	15.2	1.72	310	—	2	17	22	19	43	207	140	0.4
Bury	58,744	1,321	974	22.6	16.6	2.15	125	—	53	1	5	5	5	56	177	2 0
Manchester	637,126	18,629	12,179	29.3	19.2	3.09	1,961	—	476	114	120	194	85	573	167	0 8
Salford	234,077	7,059	4,231	30.2	18.3	3.23	750	—	186	44	90	53	41	336	159	0.3
Oldham	140,969	3,787	2,636	26.9	18.8	2.75	388	—	124	33	17	41	6	167	146	0.2
Rochdale	87,189	2,033	1,515	23.4	17.4	1.79	155	—	47	13	29	20	5	50	140	2.8
Burnley	102,808	2,847	2,001	27.8	19.5	3.82	391	—	118	12	14	29	12	206	212	1.1
Blackburn	134,015	3,334	2 143	25.3	16.0	2.23	299	—	68	35	25	14	14	143	196	2 9
Preston	116,399	3,323	2,226	28.7	19.2	3.58	416	—	125	13	16	12	20	227	188	3.1
Barrow-in-Furness	60,967	1,878	892	30.9	14.0	1.45	88	—	—	4	13	4	3	65	126	4.7
Huddersfield	94,851	2,301	1,638	24.3	17.3	2.21	209	—	61	7	13	55	10	95	135	1 0
Halifax	109,272	2,966	1,627	18.9	14.9	1.36	147	—	31	8	42	6	1	38	115	1 2
Bradford	288,544	5,936	4,638	20 6	16.1	2 03	584	—	127	41	69	38	31	267	142	0.8
Leeds	463,495	12,092	7,262	26.2	15.6	2.23	1,028	—	274	32	83	145	26	847	151	0 2
Sheffield	447,951	13,337	7,336	29.9	16.4	2.92	1,302	—	74	221	84	108	52	763	158	2 0
Rotherham	61,098	1,939	1,009	31.8	16.6	3.47	212	—	64	24	5	28	8	80	160	3.9
York	83,467	2,216	1,138	26.6	13.7	1.75	146	—	15	7	14	17	14	79	126	
Hull	262,426	7,807	4,431	29.8	16.9	2.93	762	10	62	12	135	73	49	421	160	0.7
Middlesbrough	100,069	3,549	2,030	35.6	20.3	3.09	309	—	24	12	31	45	16	183	169	1.3
Stockton-on-Tees	52,664	1,773	846	33.8	16 1	1.85	97	—	1	1	10	13	8	64	127	3.9
West Hartlepool	75,387	2,162	1,021	29.5	14.0	1.78	130	—	2	13	13	16	6	74	137	0.4
Sunderland	154,385	5,375	2,839	34.9	18.6	1.97	303	—	15	6	34	60	22	166	140	3.4
South Shields	111,402	3,531	1,952	31.8	17.6	2 60	290	1	107	6	29	38	11	99	148	4 2
Gateshead	123,191	3 919	2,005	31.9	16.3	2.78	340	—	20	7	34	40	10	169	161	5 8
Newcastle-on-Tyne	268,721	8,208	4,595	30 6	17.1	2.23	598	—	169	15	64	89	13	253	191	0 4
Tynemouth	54,138	1,741	1 017	32.2	18.8	2.03	110		19	6	9	4	6	66	148	2 0
Newport (Mon.)	74,227	2,408	1,203	32.5	16.3	1.66	123		13	4	18	20	4	69	145	0 4
Cardiff	183,823	5,000	2 869	27.3	14.0	1.31	239		2	5	13	64	13	144	138	0.2
Rhondda	127,684	4,751	2,014	37.3	16.1	2.46	312	—	24	9	25	27	20	207	174	0 4
Merthyr Tydfil	74,961	2 722	1 426	36 4	19.1	2.31	173	—	—	11	31	30	11	90	179	0 4
Swansea	96,848	3,192	1,767	33.0	18.3	1.90	184	—	29	9	7	50	10	79	177	0.2

years. In London the death-rate from the principal infectious diseases last year was 1·93 per 1,000, while it averaged 2·39 in the seventy-five other large towns, among which the lowest rates were 0·85 in Hastings, 0·72 in Bournemouth, 0·85 in King's Norton, 0·97 in Hornsey, 1·04 in Burton-on-Trent, and 1·09 in Brighton; and the highest rates 3·71 in West Ham, 3·23 in Salford, 3·35 in Bootle, 3·47 in Rochdale, 3·58 in Preston, 3·62 in Liverpool, and 3·82 in Burnley. Of the 18 fatal cases of small-pox registered in these towns last year, 10 belonged to Bristol, 3 to Devonport, 2 to Plymouth, and 1 each to Bristol, Liverpool, and South Shields. The 8,274 fatal cases of measles corresponded to an annual rate of 0·40 per 1,000 in London, the death-rate from this disease was 0·41 per 1,000 among the seventy-five other large towns the highest rates were recorded in Norwich, Bury, Oldham, Burnley, Preston, Rotherham, and South Shields. The 1,318 deaths from scarlet fever were equal to a rate of 0·12 per 1,000; in London the mortality from this disease was at the rate of 0·11 per 1,000, while among the seventy-five other large towns the greatest proportional mortality was recorded in Hanley, Birkenhead, Liverpool, Blackburn, Sheffield, and Rotherham. The 2,976 fatal cases of diphtheria corresponded to an annual rate of 0·19 per 1,000; in London the death-rate from this disease was 0·15 per 1,000; the highest rates among the seventy-five other towns were recorded in Walthamstow, Reading, Derby, Salford, Halifax, Hull, and Merthyr Tydfil. The 4,399 deaths from whooping-cough were equal to an annual rate of 0·28 per 1,000; in London whooping-cough caused a death-rate of 0·26 per 1,000, while among the seventy-five other large towns the rate averaged 0·29, and was highest in Handsworth (Staffs), West Bromwich, Coventry, Leicester, Birkenhead, Warrington, and Swansea. The 1,443 deaths referred to different forms of "fever" corresponded to an annual rate of 0·09 per 1,000; in London the "fever" death-rate was only 0·06 per 1,000; among the seventy-five other large towns the highest rates were recorded in West Ham, West Bromwich, St. Helens, Wigan, Bolton, Salford, Bradford, and Hull. The 18,329 fatal cases of diarrhœa were equal to an annual rate of 1·16 per 1,000; in London the mortality from this disease was equal to 0·94 per 1,000, while among the other large towns it was proportionally most fatal in West Ham, Hanley, Coventry, Burnley, Preston, and Middlesbrough.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births was equal to 145 per 1,000 last year, against 144, 160, and 140 in the three preceding years. In London the rate was 130 per 1,000, while it averaged 151 in the seventy-five other large towns, and ranged from 85 in Hornsey, 103 in King's Norton, 111 in Brighton and in Devonport, 113 in Southampton, and 115 in Reading, in Derby, and in Halifax, to 177 in Bury, 179 in Merthyr Tydfil, 180 in Grimsby, 186 in Stockport, 199 in Preston, and 212 in Burnley.

The causes of 2,560, or 1·0 per cent., of the deaths in these towns were not certified either by a registered medical practitioner or by a coroner. In London the proportion was 0·2 per cent., while it averaged 1·3 per cent. in the seventy-five other towns. All the causes of death were duly certified in Croydon, Hornsey, Southampton, Great Yarmouth, Plymouth, Devonport, Derby, and York; the highest proportions of uncertified deaths were 3·4 per cent. in Sunderland, 3·6 in Warrington, 3·9 in Rotherham, 4·2 in South Shields, 4·7 in St. Helens and in Barrow-on-Furness, and 5·8 in Gateshead.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,720 births and 5,652 deaths were registered during the week ending Saturday last, March 2nd. The annual rate of mortality in these towns, which had been 20·9, 20·4, and 17·8 per 1,000 in the three preceding weeks, rose again last week to 18·4 per 1,000. The rates in the several towns ranged from 5·8 in Hornsey, 8·3 in King's Norton, 9·1 in Gateshead, 11·1 in Leyton, and in Handsworth (Staffs), 11·6 in Hastings and 11·7 in Reading to 23·0 in Plymouth, 23·4 in West Bromwich, 23·7 in Rochdale, 24·8 in St. Helens, 25·0 in Oldham, 28·3 in Newport (Mon.), 28·8 in Grimsby, and 32·2 in Merthyr Tydfil. In London the rate of mortality was 17·4 per 1,000, which was also the average rate in the seventy-five other large towns. The death-rate from the principal infectious diseases in the seventy-six towns last week averaged 1·4 per 1,000; in London this death-rate was equal to 1·3 per 1,000, while among the seventy-five other large towns the rates ranged upwards, to 3·3 in Devonport, 3·4 in Merthyr Tydfil, 4·1 in Middlesbrough, 4·8 in Newport (Mon.), 6·0 in West Bromwich, 6·8 in St. Helens, and 8·9 in Grimsby. Measles caused a death-rate of 1·7 in West Ham, 1·8 in Wigan and in Sheffield, 1·9 in Aston Manor, 2·1 in Newport (Mon.), 2·6 in Devonport, 5·6 in St. Helens, 6·9 in West Bromwich, and 6·6 in Grimsby; scarlet fever of 1·2 in Walthamstow and 2·1 in Newport (Mon.), diphtheria of 1·0 in Hull, 1·3 in Sunderland, and 1·4 in Merthyr Tydfil; and whooping-cough of 1·2 in Walthamstow, 1·3 in Tottenham, 1·5 in Grimsby, 1·6 in Hanley and in Walsall, 1·7 in Rotherham, 1·9 in Blackburn, 2·9 in Middlesbrough, and 2·1 in Willesden. The mortality from fever and from diarrhœa showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 4,[illegible] and 4,[illegible] at the end of the three preceding weeks, had increased to 4,[illegible] at the end of last week. 536 new cases were admitted during the week, against 511, 368, and 322 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, March 2nd, 930 births and [illegible] deaths were registered in the principal Scottish towns. The annual rate of mortality, which had been [illegible] and 18·0 per 1,000 in the three preceding weeks, rose again to 19·3 last week, and was 1·9 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among the Scottish towns the highest rates were recorded in Greenock, 24·4; in Edinburgh, 23·[illegible]; in Dundee, 22·4; and 22·1 in Perth. The deaths referred to [illegible] diseases corresponded to 2·8 per 1,000, and were 0·[illegible] per 1,000 below the mean rate recorded in Glasgow and Paisley. The deaths registered in Glasgow include 1 [illegible] which was referred to [illegible] to whooping-cough, 4 to [illegible] and 2 to [illegible] Two fatal cases of measles, 2 of scarlet fever, 2 of diphtheria, 2 of [illegible] and 2 of [illegible] were recorded in Glasgow; 2 in [illegible] in Paisley, and 2 of [illegible] in Leith.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, February 23rd, 441 births and [illegible] deaths were registered in the principal Irish towns. The annual death-rate in these towns, which had been 27·1, 27·1, and 25·0 per 1,000 in the three preceding weeks, rose to 28·1 per 1,000 in the week under notice, this figure being 10·3 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 20·5 in Limerick and 20·6 in Belfast to 30·8 in Cork and 42·9 in Waterford. The zymotic death-rate in the same six Irish towns averaged 1·4 per 1,000, or 0·5 per 1,000 higher than during the preceding period, the highest figure, 2·7—being recorded in Cork, while Limerick registered no death under this heading at all.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held on February 28th at Caxton House, Westminster, with Dr. F. H. CHAMPNEYS in the chair.

Training Schools.

A letter was received from Dr. H. Larder, Medical Superintendent of the Whitechapel Union Infirmary, renewing the application of the guardians for the approval of the Infirmary as a training school. The Board resolved:

That the resolution of the Board of February 22nd, 1906, refusing the application of the Whitechapel Infirmary for approval as an institution for the training of midwives, on the ground that the Maternity Department was structurally unfit for the purposes of a training school, be rescinded, and that approval be now given.

Mr. PARKER YOUNG moved:

That the resolution of the Board of November 23rd, 1905, refusing the application of the Paddington Workhouse for approval as an institution for the training of midwives, on the ground that the Maternity Department was structurally unfit for the purposes of a training school, be rescinded, and that approval be now given.

This, however, was not seconded.

Amendment of the Midwives Act.

The Board discussed certain points upon which amendment of the Midwives Act, 1902, was important, and resolved:

That a Subcommittee be appointed to consider the matter, with a view to laying before the Privy Council a statement of necessary amendments of the Act, and a request that they may be embodied in a Government Bill to be introduced in Parliament during the coming session.

Workhouse Nurses and the Board's Certificate.

A letter was read from Dr. Wheatley, County Medical Officer for Salop, as to the necessity of workhouse nurses holding the Board's certificate; and a letter was also read from Dr. Niven, M.O.H. Manchester, as to notification of intention to practise by a midwife in the Chorlton Union Hospital. The Board directed that Dr. Wheatley and Dr. Niven be informed that the position of midwives in Poor-law institutions was at present under consideration with the Privy Council and the Local Government Board.

Premature Publication of a Leaflet.

The Board had under consideration a leaflet distributed to candidates at a recent examination advertising the appearance in a nursing paper of the correct answers to the questions set. The answers were found to be signed by a medical practitioner approved by the Board as a teacher. The Board directed that the medical practitioner be informed that the "correct answers" should not be published by an approved teacher until after the oral examination.

Rules of the Board.

Suggestions for amendments of the revised rules from the County Medical Officer for Lancashire, the Local Supervising Authority for Manchester, and the County Medical Officer for London were considered, and the Board decided:

1. That Rule E. 5 be amended by the omission in lines 10 and 11 of the words "and then exposed freely to the open air for several days."
2. That Rule E. 10 be amended by transposing the last paragraph so as to make it the second.
3. That Rule E. 11 (c) be amended by requiring the following particulars to be inserted in the notification of still-birth:

   Full term or premature (No. of months) .....
   Condition of child (whether macerated or not) .....
   Presentation .....

A letter was received from the Clerk of the Privy Council, transmitting an order in Council extending the period for which the present rules of the Board are in force to March 31st, 1907.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ABERDEEN UNIVERSITY.—The McRobert Fellowship for Cancer Research. Salary from £200 to £250.

ASHTON-UNDER-LYNE DISTRICT INFIRMARY AND CHILDREN'S HOSPITAL.—(1) House-Surgeon, salary £120 per annum and fees; (2) Junior House-Surgeon, salary a the rate of £50 per annum.

BIRKENHEAD UNION.—Resident Assistant Medical Officer for the Infirmary, Workhouse, and Sanatorium. Salary, £120 per annum.

BIRMINGHAM: QUEEN'S HOSPITAL.—Obstetric and Ophthalmic House-Surgeon. Salary at the rate of £60 per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Senior House-Surgeon. Salary to commence at £110 per annum.

BODMIN: CORNWALL COUNTY ASYLUM. Third Assistant Medical Officer. Salary, £140 per annum, rising to £160.

BRISTOL GENERAL HOSPITAL.—Pathologist. Salary, £240 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary, £80 per annum

CAPE TOWN: SOMERSET HOSPITAL.—Chief Medical Officer. Salary, £450 per annum.

CARLISLE: CUMBERLAND INFIRMARY — Resident Medical Officer, male, to act as House-Physician and House-Surgeon for six months each. Salary at the rate of £80 and £100 per annum respectively.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—Assistant Surgeon.

CHARING CROSS HOSPITAL.—Medical Registrar. Salary, £40 per annum

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

ECCLES AND PATRICROFT HOSPITAL.—House-Surgeon. Salary, £70 per annum.

EDINBURGH: ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.—Honorary Medical Electrician.

GROCERS' COMPANY.—Two Scholarships, each of £300 per annum.

LEAMINGTON: WARNEFORD HOSPITAL. — House-Surgeon. Salary, £100 per annum.

LEWES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

LIVERPOOL: DAVID LEWIS NORTHERN HOSPITAL.—(1) House-Surgeon, (2) House-Physician. Salary, £60 per annum each.

LIVERPOOL HOSPITAL FOR CONSUMPTION.—Assistant Honorary Physician.

MANCHESTER: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon for the Clifford Street Branch. Honorarium, £25 for six months.

MANCHESTER TOWNSHIP.—Assistant Medical Officer at the Workhouse at Crumpsall. Salary, £110 per annum.

NORTHAMPTON GENERAL HOSPITAL.—House-Surgeon (male). Salary, £90 per annum, increasing to £100.

NOTTINGHAM CHILDREN'S HOSPITAL.—Lady House-Surgeon. Salary at the rate of £80 per annum

ST. PANCRAS PARISH INFIRMARY.—Assistant Medical Superintendent. Salary, £120 per annum, rising to £135.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY. — Assistant House-Surgeon. Salary, £75 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £82 per annum

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—House-Surgeon. Honorarium, £30 for six months.

WARWICK COUNTY ASYLUM, Hatton.—Junior Medical Officer. Salary, £130 per annum, rising to £150 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies in the office of Certifying Factory Surgeon at Johnstown, co. Cork, Southwold, co. Suffolk, Tetbury, co. Gloucester, Cork, co. Cork.

APPOINTMENTS.

ST. THOMAS'S HOSPITAL.—The following gentlemen have been selected as House Officers:

Casualty Officers: (Senior) J. H. Drew, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; (Junior) A. B. Howitt, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.

Resident House-Physicians: E. V. Dunkley, M.B., B.S.Lond.; H. A. Philpot, B.A.Oxon., M.R.C.S., L.R.C.P.

House-Physicians to Out-patients: G. G. Butler, B.A.Cantab., M.R.C.S., L.R.C.P.; S. L. Walker, B.A.Cantab., M.R.C.S., L.R.C.P.

Resident House-Surgeons: C. M. Page, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; S. G. MacDonald, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.; H. B. Whitehouse, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; R. A. Gamlen, B.A.Cantab., M.R.C.S., L.R.C.P.

House Surgeons to Out-patients: H. J. Nightingale, M.R.C.S., L.R.C.P.; H. R. Unwin, M.B., B.C.Cantab., M.R.C.S., L.R.C.P.; G. M. Huggins, M.R.C.S., L.R.C.P.; F. M. Neild, M.R.C.S., L.R.C.P.

Obstetric House-Physicians: (Senior) A. C. H. Suhr, B.A.Cantab., M.R.C.S., L.R.C.P.; (Junior) A. C. D. Firth, M.A.Cantab., M.R.C.S., L.R.C.P.

Ophthalmic House-Surgeons: (Junior) A. S. Burgess, M.A.Cantab., M.R.C.S., L.R.C.P.

Special Departments: (Throat) J. Wallace, B.A.Oxon., M.R.C.S., L.R.C.P.; W. R. Bristow, M.R.C.S., L.R.C.P. (Skin) R. W. Stocks, M.R.C.S., L.R.C.P.; W. H. R. Sutton, B.A., B.C.Cantab., M.R.C.S., L.R.C.P. (Ear) R. W. Stocks, M.R.C.S., L.R.C.P.; W. H. R. Sutton, B.A., B.C. Cantab., M.R.C.S., L.R.C.P.

Children's Surgical: H. H. Carleton, B.A., M.B., B.Ch.Oxon.

Electrical Department (X-ray Department): A. J. H. Iles, M.R.C.S., L.R.C.P.

Several other gentlemen have received an extension of their appointments.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

RHODES.—On March 1st, 1907, at Baguley Sanatorium, Timperley, Cheshire, the wife of Dr. T. Basil Rhodes, of a son.

SHARP.—On February 25th, at Brant Broughton, Newark-on-Trent, the wife of Percy Sharp, L.R.C.P., M.R.C.S., L.S.A., of a son.

MARRIAGES.

MACDOUGALL—ROBERTSON.—At the Presbyterian Church, Singapore, on February 16th, William MacDougall, M.A., M.B., Ch.B., Christmas Island, Straits Settlements, son of Alexander MacDougall, Rothes, Morayshire, to Sara Maude Robertson, M.B., Ch.B., daughter of John Robertson, Collector of Inland Revenue, Glasgow.

ORFORD—LEASK.—On February 6th, at St. George's Cathedral, Cape Town, by the Rev. J. C. H. Brooke, M.A., Herbert John Orford, M.B., Ch.B., M.R.C.S., L.R.C.P., of Klerksdorp, Transvaal, to Grace, daughter of Thomas Leask, Esq., Ardrossan, Scotland.

DEATH.

WALKER.—On February 27th, 1907, at Conyers House, Newcastle-on-Tyne, Thomas Hatfield Walker, L.R.C.P., F.C.S., Public Analyst for the City of Carlisle, aged 56.

DIARY FOR THE WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor William Wright on The Prehistoric and Early Historic Inhabitants of England.

TUESDAY.

CHELSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor Street, Chelsea, 8.30 p.m.—First night of the annual clinical debate: Gall Stones—The Diagnosis and Indications for Operation. Speakers: Messrs. W. Hale White, A. W. Mayo Robson, and Seymour Taylor, M.D.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Third Goulstonian Lecture by Dr. E. F. Buzzard on Certain Acute Infective or Toxic Conditions of the Nervous System

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 p.m.—Dr Arthur F. Hertz: Observations on a Case of Chyluria occurring in England, with a Report of the *Post-mortem* Examination. Epidiascope Demonstration.

WEDNESDAY.

DERMATOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 5.15 p.m.—Cases and Specimens.

HUNTERIAN SOCIETY, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Short Discussions on Diseases of Children. Short papers will be read by Dr. George Carpenter on Nephritis; by Dr. David Lees on Administration of Salicylates; and by Dr. Harold Barnard on Intussusception.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor William Wright on The Prehistoric and Early Historic Inhabitants of England.

THURSDAY.

BRITISH GYNAECOLOGICAL SOCIETY, 20, Hanover Square, W., 8 p.m.—Specimens:—Mr. Spanton: Myoma of Uterus; Dr. Macnaughton-Jones: Carcinoma of Vagina; Mr. Jessett: (1) Carcinoma of Ovary, (2) Extrauterine Pregnancy, (3) Carcinoma of Uterus. Paper by Mr. Stanmore Bishop: Mobile Kidney.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W.—Card specimens at 8 p.m. Papers at 8.30. Dr. W. C. Rockliffe: (*a*) Acute Septic Meningitis with Thrombosis of the Cavernous Sinus, (*b*) Lymphatic Irritation occurring after eighteen, twenty-two, twenty-eight, and fifty years. Mr. A. R. Brailey: Cysts of the Ciliary Body.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Lumleian Lecture, by Dr. G. H. Savage, on Insanity, its Causes and Increase.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor William Wright on The Prehistoric and Early Historic Inhabitants of England

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN, 11, Chandos Street, Cavendish Square, W., 5 p.m.—Papers and Clinical evening, followed by discussion. Patients in attendance from 4.30 p.m.

SATURDAY.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY. The Town Hall meeting at Hastings, 5 p.m. A Discussion on The Present Position of the Treatment of Tuberculosis in Marine Climates, introduced by Dr. William Ewart.

POST-GRADUATE COURSES AND LECTURES.

CHARING CROSS HOSPITAL, W.C.—Thursday, 4 p.m.: Medical.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Wednesday, 5 p.m.: Larynx.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m.: Intestinal Stasis.

London School of Clinical Medicine, Dreadnought Hospital, Greenwich.—Clinics: Monday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Throat, Nose, and Ear, 4 p.m. Tuesday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Skin, 4 p.m. Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30. Out-patient Demonstrations: Medical and Surgical, 10 a.m. daily; Ears and Throats, noon, Monday and Thursday; Eyes, 11 a.m., Wednesday and Saturday; Skin, noon, Tuesday and Friday. Special Lectures:—Monday, 4 p.m.: Hoarseness. Tuesday, 3.15 p.m.: When to Operate on Appendicitis. Friday, 2.15 p.m.: Chronic Bright's Disease.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear. Lectures at 5.15 p.m. each day will be given as follows: Monday, The Failing Heart; Tuesday, The Treatment of Acute Peritonitis; Wednesday, Brachial Paralyses; Thursday, Suppuration in Bone—Non-Tuberculous.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m.: Treatment of Epilepsy. Friday, 3.30 p.m.: Surgery of the Nervous System.

North-East London Post-Graduate College, Tottenham Hospital, N.—The following are the clinics and demonstrations for next week:—Monday, 10 a.m., Surgical (Out-patient). 2.30 p.m.: Medical, Throat, Nose and Ear, *X* Rays. Tuesday, 10.30 a.m.: Medical (Out-patient). 2.30 p.m.: Operations; Surgical and Gynaecological (Out-patient). 4.30 p.m.: Demonstration: Affections of the Breast. Wednesday, 2.30 p.m., Medicine, Skin, Eye (Out-patient). Thursday, 2.30 p.m.: Gynaecological Operations; Medical, Surgical (Out-patient); *X* Rays; 3 p.m., Medical (In-patient). 4.30 p.m.: Lecture, Some Medical Aspects of Physical and Mental Development in the Child. Friday, 9.30 a.m.: Surgical (Out-patient); 2.30 p.m., Operations; Medical, Eye (Out-patient); 3 p.m., Medical (In-patient).

Post-Graduate College, West London Hospital, Hammersmith Road, W.—The following arrangements have been made for next week:—Daily, 2 p.m.: Medical and Surgical Clinics, *X* Rays, 2.30 p.m.: Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological. 2.30 p.m.: Diseases of the Skin. 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Wednesday, 10 a.m.: Diseases of Children. Lectures—Monday, 12 noon: Pathological Demonstration. At 5 p.m., Monday and Tuesday: Suppuration of the Maxillary Antrum. Wednesday: The Treatment of Chronic Urethritis. Thursday: Practical Surgery. Friday: Gout.

BOOKS, Etc., RECEIVED.

The Kennel Encyclopaedia. Edited by J. S. Turner, M.R.C.S., F.L.S., F.Z.S., and V. Nicolas. Vol. I. Part 1. Abd to Bad. Sheffield: The Encyclopaedic Press. 5s.

Einführung in die gerichtliche Medizin für praktische Kriminalisten. Vier Vorträge. Von Dr. H. Marx. Berlin: A. Hirschwald. 1907. M. 2.40.

Une Methode Simple pour l'Analyse de l'Eau. Par J. C. Thresh, M.D., D.Sc., D.P.H. Traduction sur la 5ième édition Anglaise (1904) par MM. les Drs. Magnier et G. Thiery. Londres: J. and A. Churchill. 1907. 2s 6d.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MARCH.	
8 FRIDAY ...	Hampstead Division, *Metropolitan Counties Branch*, Hampstead Conservatoire (Room 11), Swiss Cottage, N.W., 8.30 p.m.
9 SATURDAY ...	
10 Sunday ...	
11 MONDAY ...	London: Standing Ethical Subcommittee, 2 p.m.
12 TUESDAY ...	
13 WEDNESDAY	Westminster Division, *Metropolitan Counties Branch*, St. James's Vestry Hall, 195, Piccadilly, 8.30 p.m.
14 THURSDAY ...	
15 FRIDAY ...	Trowbridge Division, *Bath and Bristol Branch*, Council Chamber, Town Hall, Trowbridge, 3 p.m.
16 SATURDAY ...	
17 Sunday ...	
18 MONDAY ...	
19 TUESDAY ...	London: Organization Committee, 11 a.m. London: Special Finance Inquiry Committee, 3 p.m.
20 WEDNESDAY	London: Naval and Military Committee, 3.30 p.m. Guildford Division, *South-Eastern Branch*, Royal Surrey County Hospital, Guildford, 4.30 p.m.: Dinner, 6.30 p.m., Lion Hotel.
21 THURSDAY ...	City Division, *Metropolitan Counties Branch*, Hackney Town Hall, 4 p.m. Leigh Division, *Lancashire and Cheshire Branch*, Co-operative Offices, Lilfordmore Street, Leigh, 8.30 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Battersea Town Hall, 8.45 p.m.
22 FRIDAY ...	
23 SATURDAY ...	

Date.	Meetings to be Held.
MARCH *(Continued).*	
24 Sunday ...	
25 MONDAY ...	
26 TUESDAY ...	London: Public Health Committee, 3.15 p.m.
27 WEDNESDAY	London: Medico-Political Committee, 2.30 p.m. Bath and Bristol Branch, Bristol. Lambeth Division, *Metropolitan Counties Branch*, Lambeth Carlton Club, Coldharbour Lane, S.W. (near Brixton Station), 8.45 p.m.
28 THURSDAY ...	
29 FRIDAY ...	*Good Friday.*
30 SATURDAY ...	
31 Sunday ...	
APRIL.	
1 MONDAY ...	*Bank Holiday.*
2 TUESDAY ...	
3 WEDNESDAY	
4 THURSDAY ...	South-Eastern Counties Division, *Edinburgh Branch*, King's Arms Hotel, Melrose, 3 p.m.
5 FRIDAY ...	London: Central Ethical Committee, 2 p.m.
6 SATURDAY ...	
7 Sunday ...	
8 MONDAY ...	
9 TUESDAY ...	
10 WEDNESDAY	
11 THURSDAY ...	South Wales and Monmouthshire Branch, Swansea.
12 FRIDAY ...	Hampstead Division, *Metropolitan Counties Branch*. Wandsworth Division, *Metropolitan Counties Branch*, Conjoint Meeting with Wimbledon and District Medical Society, Worple Hall, Wimbledon, 9 p.m.
13 SATURDAY ...	

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 16TH, 1907.

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Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

EDINBURGH AND OTHER BRANCHES.

COMBINED MEETING.

A VERY successful clinical meeting of the Edinburgh with other Scottish Branches was held in the Edinburgh Royal Infirmary on February 22nd. The museum contained a number of very interesting exhibits, and was much appreciated by the members who were present. The dinner, which followed the meeting, was held in the North British Station Hotel, and was well attended, covers being laid for about eighty members and guests. Professor CHIENE, the President of the Edinburgh Branch, occupied the chair. The toast of the Association was proposed by Dr. BOWSER of Penrith, President of the Border Counties Branch, and replied to by Dr. JAMES CARMICHAEL. "The Guests" was proposed by Dr. JAMES RITCHIE, and replied to by Dr. HILL of Carlisle.

In the museum specimens were shown by Professor Annandale, Drs. N. T. Brewis, Alex. Bruce, Harvey Pirie, F. M. Caird, E. Scott Carmichael, H. Wade, C. W. Cathcart, George L. Chiene, John P. Comrie, J. M. Cotterill, J. W. Dowden, J. Haig Ferguson, R. A. Fleming, F. Gardiner, O. H. Garland, John Haddon, Cranston Low, and by Major D. G. Marshall, I.M.S. Microscopic demonstrations were given by Drs. Malcolm Campbell, F. Gardiner, and Chalmers Watson.

Mr. Alex. Miles showed pathological specimens; Mr. Richard Muir a permanent method of mounting bacterial cultures as museum specimens; Dr. Oliphant Nicholson various photographs and tracings; Dr. R. W. Philip specimens relating to cerebro-spinal meningitis and acute corrosive poisoning; and Drs. Th. Shennan and W. T. Ritchie a demonstration of the *Diplococcus intracellularis meningitidis*.

Drs. John Thomson, J. S. Fowler, Stuart McDonald, Logan Turner, and Messrs. W. J. Stuart, J. W. Struthers, and Henry Wade also showed specimens.

At the clinical meeting in the University Clinical Medicine Theatre patients were shown by Drs. Ford Robertson and Douglas McRae, J. V. Paterson, Alex. Bruce, Malcolm Farquharson, Edwin Bramwell, Mr. C. W. Cathcart, Dr. Norman Walker, Mr. Alex. Miles, Dr. T. S. Caverhill, Professor E. A. Schäfer, Mr. J. M. Cotterill, Dr. Alex. James, Dr. Haig Ferguson, Dr. F. Gardiner, Mr. H. J. Stiles, Dr. Byrom Bramwell, Mr. F. M. Caird, Dr. G. A. Gibson, Mr. Alexis Thomson, Dr. R. A. Fleming, and Mr. C. W. MacGillivray.

GLASGOW AND WEST OF SCOTLAND BRANCH: AYRSHIRE DIVISION.

A MEETING of the Division was held on February 20th at the Kilmarnock Infirmary, Dr. FREW (Kilmarnock), Chairman of the Division, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were confirmed.

Divisional Report.—The Divisional report for 1906 was presented.

Constitution of Central Council.—The consideration of the scheme for constitution of the Central Council of the Association, published in the JOURNAL of January 26th, was then dealt with. The following statement was read on behalf of the Executive of the Division: When it is proposed to make a change of any kind it is natural to consider why any change was thought necessary at all. In July last it was decided at the Representative Meeting, mainly on the score of expense, that the numbers of the Central Council of the Association should be cut down by one-half. It was considered that a Council of the resulting size (thirty), while being equally efficacious, would result in considerable economy. Besides this innovation the Representative Meeting determined that of these thirty councillors only twenty should be elected as at present, the remaining ten being elected by the Representative Meeting. It is obvious that if twenty councillors are to be elected where sixty were before elected, some considerable readjustment of constituencies will be necessary. It was consideration of this fact that led your Executive to look into the matter and finally determined them to bring the present scheme up for your discussion. At present the Council (excluding co-opted and *ex-officio* members) consists of Branch Representatives. A Branch having 200 members elects one councillor, a Branch having 400 members elects two councillors, and thereafter one additional councillor for each 600 members of the Branch above 400. Branches with less than 200 members are grouped together till their aggregate membership is 200 or more. These councillors are elected by ballot papers sent out to each member of the Branch, and in that each member has then an opportunity of voting for or against the candidates, it may be said that the councillor elected does truly represent his constituency. But neither before nor after election does

the councillor representing the Branch come in close contact with the members who have elected him. It is not easy, therefore, for any section either to impress its peculiar wants or general ideas on candidates, or to check, criticize, or encourage the councillor after election. As far as his Association value is concerned, he is an unknown quantity before election and remains one afterwards. As far as election of councillors is concerned, it is seen, therefore, that the Branch is the unit of the Association But there is another unit—namely, the Division. The Division is the administrative unit of the Association; it elects a Representative to attend the meeting of Representatives of Divisions. This Representative Meeting is an admirable debating society, and there is no other way by which the opinions of the Association as a whole can be so readily ascertained; but the meeting is impotent; it has no executive function, not even the right of veto. It passes resolutions, but the Council, after consideration, may take them or leave them as it pleases; in fact, its only practical connexion with the Executive is that its chairman is *ex officio* a member of the Council. It therefore seems to your Executive that at present the Representative Meeting is not worth the money and labour spent upon it. But, if the Representative Meeting elected the Council, then it is obvious it would at once exercise a most important influence on the Association, and Divisions would need take care they were capably represented thereon. It will be seen from the above that there are two units within the Association: the Executive unit—namely, the Branch; and the administrative unit—namely, the Division. This, in the opinion of your Executive, is bad. There should be only one unit, and that the Division, and from this unit should be developed the Executive, and it should be developed in such a way that at all stages of the development the electors of the next stage should be in intimate contact with those they elect. Under the present scheme this principle is assured. The Division elects one of themselves as its Representative; he is at all times accessible to the Division, and can be questioned, instructed, criticized, or supported according to the manner he represents his Division. This Representative, along with the fellow-representatives of his section, elects councillors, who can be subjected to the same process as he himself may be subjected to by his constituents. In this way the policy of the Association is bound to be in line with the policy of its members; further, the members are really responsible for their Executive. In this connexion, it may be as well to remark that any reflection as to the method by which the Representative of Division is presently elected is entirely alien to the discussion of the merits of the scheme. If the method of election is bad, there is no reason on earth why it should not be altered and made good. It is right that in any scheme for the constitution of the Executive provision should be made for what has been called "geographical representation," but this aspect of representation should be on a wide basis. It would be quite possible that a candidate not in one's own Branch might be more desirable than any candidate whose residence was more nearly situate. At the same time, it is not possible for any candidate, however able, living, say, in London, to adequately represent on the Council the requirements of, say, the North of England or Ireland. In order to give sufficient choice, therefore, the electoral districts for the actual election of the Council should be large, but at the same time only those whose interests are in that district should nominate the councillors for that district. A further advantage of having a large electoral district is that it neutralizes the sometimes antagonistic requirements of urban and country divisions; if the electoral district is small it probably means it will be dominated by any large urban centre occurring in that district, whereas if sufficiently large there are many urban Divisions and many country Divisions, and the resultant of these forces is an adequate representation for all. Whatever plan is ultimately chosen by the Association, your Executive is of opinion that this Division should insist that the Division should be the one and only unit of the Association. We do not yet know what the Council are going to recommend as regards Council representation; when the tardy draft Charter is published we shall know, but in any case your Executive thinks the present draft scheme worth submitting to your notice. It was moved by Dr. Easterbrook, seconded by Dr. Kyle, and carried:

That this meeting of the Ayrshire Division approves of the principle of the scheme for the constitution of the Central Council of the Association drawn up by the Executive.

Paper.—Dr. Inglis Pollok, Pathologist to Glasgow Eye Infirmary, read a paper on the bacteriology and treatment of conjunctivitis. Dr. Pollok showed how the prognosis and treatment of conjunctivitis depended on the nature of the infection. Microscopic preparations demonstrating the different organisms were shown. Subsequently some questions were asked, which were answered by Dr. Pollok.

North-Western Division.

An ordinary meeting of this Division was held in the Western Infirmary Dispensary on February 28th at 8.30 p.m.; fifteen members present, Dr. D. J. Mackintosh in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Medical Inspection of School Children.—After a division 1 (*b*) "medical officers specially appointed" was approved. The answer to 3 is in the negative.

Ethical Aspects of Medical Consultation.—The Division approves generally of the recommendations of the Ethical Committee.

Cases.—Before the above business interesting cases illustrative of mouth and throat examination and diseases were shown by Dr. Walker Downie. Dr. John Morton showed cases, and a patient on whom he operated for removal of a tumour in right side of neck. Microscopical examination showed it to be a thyroid adenoma with areas of carcinomatous tissue. Dr. A. G. Hay read an interesting and instructive paper on the treatment of sciatica by saline injections.

LANCASHIRE AND CHESHIRE BRANCH:

Manchester (West) Division.

A special meeting of the members of this Division was held at the Hulme Dispensary on February 6th.

Statement by Honorary Secretary.—The Honorary Secretary reported that on the date (October 9th, 1906) for which the last general meeting of the Division was called, a quorum not being formed within half an hour of the advertised time of meeting, no business was transacted. He stated that the difficulty which the Executive Committee had experienced in carrying on the work, in consequence of the poor attendances at Divisional meetings, had induced them to summon a general meeting of all members of Manchester and Salford Divisions, for the purpose of considering the best means of stimulating the interest of members in Association work. At that gathering a resolution had been passed in favour of holding frequent combined meetings of the local Divisions to promote social intercourse and to discuss matters of general interest to the profession. A Committee, composed of the Chairmen and Secretaries of the Manchester and Salford Divisions, had been appointed to superintend the arrangements for such meetings. Several members spoke and expressed approval of the action taken by the Executive Committee.

A Practitioner and the Police. The meeting proceeded to discuss the action of the Manchester police in removing a patient to hospital in opposition to the emphatically expressed opinion, as to the danger of such a proceeding, of the medical man in charge of the case. The Hon. Secretary gave an account of the facts of the affair as it was reported in the local papers. A full discussion followed, and the subjoined resolution was passed:

That this meeting of the Manchester (West) Division of the British Medical Association is of opinion that the action of the police in interfering with the medical attendant in the case of "The Police *v.* Bagley" was wholly unwarrantable, and is a practice which should be discontinued.

The Hon. Secretary was instructed to forward the resolution to the Chairman of the Watch Committee of the Manchester Corporation, and to the editors of the leading Manchester newspapers. A letter from Dr. Milson R. Rhodes, Hon. Secretary of the Manchester (South) Division, communicating the two following resolutions, was read:

1. That this meeting of the Manchester (South) Division protests against the removal of any patient suffering

from injury, even if suicidal or homicidal, without the consent of the medical man in attendance and responsible for the case.

2. That this meeting desires to express its sympathy with Dr. Bagley, as the Divisional Representative to the Lancashire and Cheshire Branch Council, and to the Annual Representative Meeting, in connexion with the matter referred to in the above resolution.

METROPOLITAN COUNTIES BRANCH:

Richmond Division.

A meeting of the Richmond Division was held in the Royal Hospital, Richmond, on Wednesday, February 20th, at 8.30 p.m., Dr. Crookshank in the chair.

Confirmation of Minutes.—The minutes of the last meeting were approved and signed.

Cases.—The following cases were shown:—(1) Extroversion of the bladder. (2) Supernumerary thumbs and great toes, with history of five other members of the family similarly affected.

Provident Dispensaries.—It was resolved that a special meeting of medical practitioners within the area of the Division be called for Wednesday, March 6th, at the Royal Hospital, Richmond, to consider the report issued by the Medico-Political Committee.

Diagnosis and Treatment of Renal Diseases.—Professor Rose Bradford delivered a most interesting and instructive address on the above subject, especially dwelling upon certain new and practical points not hitherto published.

Vote of Thanks.—A cordial vote of thanks to the lecturer was proposed by Dr. Wilson, seconded by Dr. Langdon-Down, and carried with acclamation.

Wandsworth Division.

An ordinary meeting was held on Thursday, February 28th, at the Balham Hotel, S.W., Dr. Llewellyn Williams, Chairman, in the chair. Previous to the meeting a small dinner was given to the readers of papers.

Confirmation of Minutes.—The minutes of the meetings of December 13th, 1906, and February 7th, 1907, were read and approved, and signed by the Chairman.

Paper.—Dr. E. W. Goodall (Medical Superintendent of the Eastern Fever Hospital) read a paper entitled, "The Prodromal Symptoms of some of the Common Infectious Diseases," and subsequently demonstrated by lantern various photographs of early infectious and non-infectious rashes. Dr. F. Foord Caiger (Medical Superintendent S.W. Fever Hospital) and Dr. J. D. Rolleston (Grove Hospital, Tooting) joined in the subsequent discussion. A hearty vote of thanks on behalf of a very large attendance of members was proposed by Dr. H. T. Barron, seconded by Dr. J. H. Gray, and carried with acclamation. A hope was expressed that Dr. E. W. Goodall's address would be printed in the British Medical Journal.

Proposed Conference on Election of Central Council.—A letter was read from Dr. Percy Rose of Stratford, acting as Honorary Secretary, asking whether the Division would join in a conference of delegates of Metropolitan Divisions on the subject of the election of Representatives of the Branch on the Central Council, such as was held last year. It was resolved that the Division should join the conference, and the Chairman and Honorary Secretary were appointed delegates.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:

Cardiff Division.

A special meeting of the Cardiff Division was held at the Cardiff Infirmary on December 20th, 1906, Dr. D. R. Paterson presiding.

Vote of Condolence.—The Chairman referred in feeling terms to the greatly lamented death of Dr. Alfred Sheen, and the following resolution was unanimously carried:

That this meeting of the Cardiff Division of the British Medical Association (at which a large number of members from other Divisions are present) desires to express its profound sympathy with the widow and family of the late Dr. Sheen, and takes this opportunity of recording its sense of the invaluable services rendered by him to the Association.

Address by Mr. Smith Whitaker.—Mr. Smith Whitaker, who was most cordially received, delivered a highly interesting and comprehensive address on the Ebbw Vale dispute.

Vote of Thanks.—At the conclusion, a hearty vote of thanks to Mr. Smith Whitaker was proposed by Dr. Paterson, seconded by Dr. H. A. Latimer, and unanimously carried.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 17th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,

March 14th, 1907. *General Secretary.*

BRANCH AND DIVISION MEETINGS TO BE HELD.

Border Counties Branch: Scottish Part Division.—A meeting of the above Division will be held in Dumfries on Friday, April 5th. The relations of medical practitioners to friendly societies, etc., in the Division area will be discussed. The attention of members is drawn to the various recent reports, etc., on contract practice; also to the unanimous resolution of the members of the Branch at the Carlisle meeting on February 15th.—George R. Livingston, Honorary Secretary, Dumfries.

East Anglian Branch.—The spring meeting of the East Anglian Branch will be held at the White Hart Hotel, Witham, on Tuesday, April 9th. Members wishing to read papers or show cases or specimens should communicate with me at once.—B. H. Nicholson, East Lodge, Colchester, Honorary Secretary.

Edinburgh Branch: South-Eastern Counties Division.—The spring meeting will be held in the King's Arms Hotel, Melrose, on Thursday, April 4th, at 3 o'clock, Dr. Young, Chairman, presiding. Business: (1) Medico-legal matters referred to Divisions by the Council; (2) Clinical papers by members. The Secretary will be glad if members intending to contribute will kindly notify him at their earliest convenience.—W. Hall Calvert, Honorary Secretary.

Lancashire and Cheshire Branch: Leigh Division.—The usual monthly meeting will be held in the Co-operative Offices, Ellesmere Street, at 8.30 p.m., on Thursday, March 21st. Agenda: (1) Minutes; (2) Medical Inspection of School Children (see Supplement for February 16th, 1907); (3) The Ethical Aspects of Medical Consultation (see Supplement for February 16th, 1907); (4) any other business. N.B.—Dr. Garstang (of the Altrincham Division), who is a candidate for the Council of the Association, will be present during the evening.—Michael J. Halton, Honorary Secretary.

Metropolitan Counties Branch: City Division.—On account of ill health, Dr. Rayner will unfortunately not be able to read his paper on March 21st, as announced. Consequently it has been necessary to make other arrangements. Through the kindness of Dr. J. O. Adams, a meeting will be held at Brooke House, Upper Clapton, N.E., on Thursday, March 21st, at 8 30 for 9 p m. Agenda: (1) Minutes; (2) Letters; (3) Report of Executive Committee; (4) The Medical Superintendent of the Eastern Fever Hospital will read a paper entitled, Observations on the Initial Symptoms of some of the Acute Infectious Diseases, and will also show a number of lantern slides and drawings illustrative of these diseases and others which simulate them. Visitors are cordially invited to be present Brooke House is close to Clapton Station on the Great Eastern Railway. Trains from Liverpool Street, 8 33, 8.36, 8.50 p.m. Motor buses and trams for Stamford Hill and the Lea Bridge Road pass the door.—E. W. Goodall, Honorary Secretary, Eastern Hospital, Homerton, N.E.

Metropolitan Counties Branch: Kensington Division.—A meeting of the Division will be held on Wednesday, March 20th, at 5 p.m., at the Kensington Town Hall, High

Street, Kensington, W. Agenda: Minutes of the last meeting. Paper and Demonstration by Dr. W. M. Bayliss on The Mutual Relation of the Digestive Processes. Nomination of Candidates for the Election of Officers for the Council of the Metropolitan Counties Branch. Report by the Medico-Political Committee of the Association on Provident Dispensaries. Amendments to the By-laws of the Association; proposed by Dr. G. C. Crichton. Any other business.—Charles Buttar, Honorary Secretary, Kensington Gardens Square, W.

Metropolitan Counties Branch: Lambeth Division.—The Chairman will entertain the members of the Division at a special meeting which will be held at the Lambeth Carlton Club, Coldharbour Lane, S.W. (near Brixton Station), on Wednesday, March 27th, at 8.45 p.m. Agenda: (1) Minutes of the last meeting; (2) to consider the report of the Medico-Political Committee of the British Medical Association on Provident Dispensaries (see Supplement to British Medical Journal, February 23rd, page 91); (3) a paper will be read by H. Betham Robinson, M.S., F.R.C.S., Surgeon to St. Thomas's Hospital, on Acute Intestinal Obstruction. Tea and coffee at 8.45 p.m. The chair will be taken at 9 p.m.—W. Alexander Atkinson, M.D., Honorary Secretary, 216, Camberwell New Road, S.E.

Metropolitan Counties Branch: Wandsworth Division.—A meeting will be held on Thursday, March 21st, at the Town Hall, Battersea, at 8.45 p.m. Walter G. Spencer, F.R.C.S., will open a discussion on Fatal Haemorrhages from Mucous and Septic Surfaces. All registered medical practitioners will be welcomed. Suggestions for nominations of candidates by the Division as officers of the Branch and Representatives of the Branch on the Central Council for 1907-8 must be sent to the Honorary Secretary on or before April 1st.—E. Rowland Fothergill, Honorary Secretary, Torquay House, Southfields, S.W.

Midland Branch: Boston and Spalding Division.—A meeting of this Division will be held on Tuesday, March 26th, at the Red Lion Hotel, Strait Bargate, at 3.30 o'clock. Agenda: (1) Paper by W. H. B. Brook, M.D., F.R.C.S., of Lincoln, entitled, The Diagnosis and Treatment of Appendicitis; (2) Alterations in the Division; (3) Future Meetings; (4) any other business.—A. E. Wilson, Honorary Secretary, Boston.

South-Eastern Branch: Croydon Division.—A meeting will be held at the Greyhound Hotel, Croydon, on Friday, March 22nd, at 4 p.m., Dr. C. Owen Fowler in the chair. Agenda: (1) Minutes of previous meeting; (2) to arrange where the next meeting shall be held, and to elect a Chairman; (3) other business. The following papers will be read:—Dr. Montagne Murray, Senior Physician Charing Cross Hospital: Acute Pneumonia in Children. Mr. Raymond Johnson, F.R.C.S. Surgeon University College Hospital: Some Injuries of the Upper Limb in Children. Dinner at 6 p.m.; charge 5s., exclusive of wine. Members intending to stay to dinner are requested to inform the Honorary Secretary, if possible, before the day of the meeting.—E. H. Willock, Honorary Secretary, Croydon.

South Eastern Branch: Guildford Division. The next meeting of this Division will be held at the Royal Surrey County Hospital, Guildford, on Wednesday, March 20th, at 4.30 p.m. Dr. George Fisher, Chairman of the Division, will preside. Agenda: (1) Minutes. (2) Matters referred to Divisions (see Supplement, February 16th): (*a*) Medical Inspection of School Children; (*b*) the Ethical Aspects of Medical Consultation. (3) Dr. Dundas Minchin will move the following resolution: "That a special meeting of the Division be held in May next to consider the conditions of contract practice in its area, with a view to the adoption of ethical rules for its regulation." (4) Dr. F. K. Weaver will read notes of some cases of appendicitis, introducing a discussion on the early symptoms of the disease. (5) Dr. H. F. Parker will read notes of a case of tumour of the neck containing fetal remains. (6) Dr. F. E. Pearse will relate a case of purpura. (7) Dr. Anderson Morshead will exhibit some photographs of unusual interest. (8) Any other business. Dinner at 6.30 p.m. at the Lion Hotel; charge, 6s. E. J. Smyth, Honorary Secretary, Maythorne, Guildford.

CENTRAL MIDWIVES BOARD.

A special meeting of the Central Midwives Board, under the provisions of Rule 4 of the Rules of Procedure was held on March 7th at Caxton House, Westminster, with Dr. F. H. Champneys in the chair.

Midwives Struck off the Roll.

The Board considered charges, as stated after their names, against the following midwives, whose names were ordered to be struck off the Roll:

Eliza Ashton, that being in attendance on patients suffering from infectious illnesses she neglected to disinfect herself, her clothing, or her instruments, as required by Rule E. 5. That being in attendance as a midwife at a confinement, the infant suffering from inflammation about the navel cord on the third day, she did not decline to attend alone, and neglected to advise that a registered medical practitioner should be sent for, as required by Rule E. 17.

Georgiana March, that being in attendance as a midwife at a confinement she was guilty of negligence in the following respects: The perineum being ruptured, she did not decline to attend alone and advise that a registered medical practitioner be sent for; she failed to attend to the cleanliness and comfort of the patient; and the child being ill on the seventh day with swollen breasts, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

Sarah London, that on August 3rd, 1906, she laid out the dead body of a stillborn infant in an advanced stage of putrefaction; that being in attendance as a midwife at a confinement on August 8th, 1906, and subsequent days, she neglected to notify the Local Supervising Authority of the fact of medical help having been sent for on account of patient suffering from puerperal fever; and that having ceased to attend the patient, then suffering from puerperal fever, on August 14th, she subsequently, before August 30th, attended eleven other women in childbirth, wearing the same dress, and without having disinfected the syringe she was using.

Eliza Gunter, that being in attendance as a midwife at a confinement on May 25th, 1906, and subsequent days, she was guilty of negligence in the following respects: The patient's temperature having risen above 100·4° with quickening of the pulse on May 26th and 27th, she did not decline to attend alone and advise that a registered medical practitioner be sent for; having continued in attendance on the patient until her death on June 4th of puerperal fever she neglected to disinfect herself, her clothing, or her appliances before going to another case. That being in attendance as a midwife at a confinement on June 5th, 1906, she was guilty of negligence in the following respects: She went to the confinement without having disinfected herself, her clothing, or her appliances, after having been in attendance on a fatal case of puerperal fever on June 4th.

Elizabeth Forrest, that being in attendance as a midwife at a confinement she was guilty of negligence in the following respects: She used a lubricant for her hands which she had been in the habit of using for children's sores; a medical practitioner having been sent for on account of the patient suffering from puerperal fever, she neglected to notify the fact to the Local Supervising Authority. That, being in attendance as a midwife at another confinement, she was guilty of negligence in the following respects: On the occurrence of a rigor she did not decline to attend alone, and neglected to advise that a registered medical practitioner should be sent for.

Hannah Hall, that she was not scrupulously clean in every way, and did not wear a dress of washable material, as required by Rule E 1; and that she suffered from a complaint in its nature liable to be a source of infection—namely, from ulcers on the legs.

The following charges alleged against Louisa Salmon, Maria Schofield, Mary Muffitt, Elizabeth Peat, Elizabeth Langston, Mary Ann Ashton, and Ellen Holmes were considered:

That they did not use or possess the appliances or antiseptics required by Rule E. 2, and that they persistently neglected to provide themselves with them; that they did not keep registers of cases, as required by Rule E. 19.

The names of these women were ordered to be struck off the Roll.

Midwives Cautioned.

The following charges alleged against Sarah Morris were considered:

That being in attendance as a midwife at a confinement, the patient being in protracted labour, suffering great pain and losing much blood, she did not decline to attend alone or advise that a registered medical practitioner be sent for, and that she habitually made excessively frequent internal examinations, thereby contravening Rule E. 8.

The Chairman cautioned Sarah Morris concerning her future conduct.

The following charges alleged against Mary Pitt were considered:

That being in attendance as a midwife at a confinement on April 4th, 1906, and following days, she was guilty of negligence in the following respects: The patient's temperature having risen above 100·4°, with quickening of the pulse on April 6th and so continuing on subsequent days, and, the patient suffering from haemorrhage and from foul smelling discharge during her attendance, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

The Chairman cautioned Mary Pitt concerning her future conduct.

GENERAL MEDICAL COUNCIL.

EXECUTIVE COMMITTEE.

A meeting of the Executive Committee of the General Medical Council was held on February 25th, when Dr. MacAlister, President, was in the chair, and the other members present were Sir Hugh Beevor, Dr. Pye-Smith, Mr. Young, Mr. Tomes, Dr. McVail, Sir John William Moore, and Sir Christopher Nixon.

Reappointment of Members.

Official notifications of the reappointment of the following members were received: Sir H. R. Beevor, M.D. (Apothecaries' Society of London), Sir Thomas Myles (Royal College of Surgeons in Ireland), Dr. D. W. Finlay (University of Aberdeen), Dr. J. Y. Mackay (St. Andrews University), and Dr. R. Caton (University of Liverpool).

Finance.

The Treasurers presented a statement of the receipts and expenditure of the General Council and of the English Branch Council. The Committee also had before it similar statements with regard to the Scottish and Irish Branch Councils and the Dental Registration Fund.

Receipts.

	Branch Councils. English.	Branch Councils. Scottish.	Branch Councils. Irish.	Dental Registration Fund.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Registration fees ...	3,455 17 6	2,331 15 0	918 2 6	807 10 0
Interest on investments	182 16 10	99 8 3	—	238 3 0
Interest on mortgage of General Council's Premises	705 15 6	—	—	—
Contribution by General Council	—	—	100 0 0	—
Deficit carried to Balance Sheet	—	—	10 1 1	—
Sale of publications	—	—		23 17 0
Total	4,344 9 10	2,431 3 3	1,078 3 7	1,069 10 0

Expenses.

	Branch Councils. English.	Branch Councils. Scottish.	Branch Councils. Irish.	Dental Registration Fund.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Printing and office expenses	673 9 0	343 9 3	223 12 3	613 11 2
Contribution to General Council	3,097 1 4	1,733 2 1	654 10 1	—
Attendance fees ...	—	40 19 0	12 3 0	365 10 0
Election expenses ..	507 4 11	180 0 10	182 18 3	—
Surplus	66 14 7	133 12 1	—	90 8 10
Total ...	4,344 9 10	2,431 3 3	1,076 3 7	1,069 10 0

Medical Registration in Colonies and Protectorates.

Ordinances relating to medical registration in British Central Africa, Central Africa Protectorates, Gambia, and Northern Nigeria were received from the Secretary of State for the Colonies, and the Committee adopted a resolution thanking the Secretary of State for transmitting the ordinances and expressing the satisfaction with which the Committee noted the provision therein contained for the prevention of professional practice by unqualified persons.

The Committee also had before it ordinances of 1890, 1895, 1897, and 1903, with reference to medical registration in St. Vincent. The Committee, while thanking the Secretary of State for transmitting these documents, called attention to the fact that they did not appear to contain any provision for the prevention of professional practice by unqualified persons.

Nova Scotia.

Further correspondence with the Provincial Medical Board of Nova Scotia with reference to the recognition of the degrees and diplomas granted in Nova Scotia, as entitling the holder to be registered in the Colonial List of the *Medical Register*, were considered, and the Executive Committee resolved to recommend the Council as follows:

That any person who holds—

1. The Diploma or Licence in Medicine, Surgery, and Midwifery granted after examination by the Provincial Medical Board of Nova Scotia, together with the Licence to practise in that province; or
2. The Degrees of Doctor of Medicine and Master of Surgery of the Dalhousie University, together with the aforesaid Licence to practise; or
3. The Degrees of Doctor of Medicine and Master of Surgery of the Halifax Medical College, together with the aforesaid License to practise,

shall be entitled to be registered in the Colonial List of the *Medical Register*, provided he satisfies the Registrar of the General Medical Council regarding the other particulars set forth in Part II of the Medical Act, 1886.

It also adopted the following resolution:

That the Registrar be instructed to express to the medical authorities of the Province of Nova Scotia the satisfaction with which the Executive Committee have learned that legislative steps are at once to be taken to make the requirement of a five years curriculum compulsory in the province, and their desire to be kept informed as to the progress and results of the proposed legislation.

Quebec.

The Committee received a letter from the Clerk to the Privy Council transmitting a dispatch from the Governor-General of Canada, containing a request made on behalf of the Government of the Province of Quebec for the application of Part II of the Medical Act, 1886, to that province as a separate possession of the Crown. The Committee expressed its great satisfaction that the request should have been made, and asked for further information on certain points.

Society of Apothecaries of London.

A letter from the Clerk of the Society of Apothecaries of London, submitting a copy of a Bill for the purpose of altering the title of the licence granted by this society to Licentiate in Medicine and Surgery of the Society of Apothecaries of London, was read. Various suggestions relating to clauses in the Bill having been made, Sir Hugh Beevor undertook to bring them under the notice of the Apothecaries' Society of London.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Arthur D. C. Cummins, Surgeon, to the *Eothrent*, March 7th; Thomas W. Philip, M.B., Staff Surgeon, to the *Topaze*, March 9th.

ROYAL HORSE GUARDS.

Captain P. J. Bodington, M.B., from the Royal Army Medical Corps, to be Surgeon-Captain, vice St. J. B. Killery, who exchanges, March 1st. Captain Bodington joined the R.A.M.C. as Lieutenant, November 14th, 1890, and was made Captain three years thereafter. He served in the South African war in 1900-02 as a Civil Surgeon, and was present in operations in the Transvaal and in Cape Colony both south and north of Orange River. He has the Queen's medal with two clasps, and the King's medal with two clasps.

ROYAL ARMY MEDICAL CORPS.

Surgeon-Captain St J. B. Killery, from the Royal Horse Guards, to be Captain, vice P. J. Bodington, M.B., who exchanges, March 1st. Captain Killery is promoted to be Major March 1st. He was appointed Surgeon-Lieutenant, Army Medical Department, July 29th, 1893; made Surgeon-Captain, July 29th, 1896, and transferred to the Royal Horse Guards, May 4th, 1904. He has no war record in the Army Lists.

ARMY MEDICAL RESERVE

Surgeon-Captain A. Macdonald, M.B., to be Surgeon-Major, February 27th.

INDIAN MEDICAL SERVICE.

Surgeon-General A. S. Reid, M.B., C.B., Bengal, is permitted to retire from the service, from March 25th. He joined the Bengal

Establishment as an Assistant Surgeon, March 30th, 1872, and, passing through the various intermediate ranks, became Surgeon-General, June 16th, 1902. He served in the Afghan war in 1879-80 (medal); with the Chin-Lushai Expedition in 1889-90 (medal with clasp); and in the campaign on the North West Frontier of India in 1897-8, being present at the defence and relief of Malakand at the relief of Chakdarra, and in the operations in Bajaur and the Mamund country (mentioned in dispatches, medal with two clasps). He was granted a Reward for Distinguished Service, December 2nd, 1901, and made C.B., June 26th, 1903.

The undermentioned Captains are promoted to be Majors, from January 29th:—C. J. ROBERTSON-MILNE, M.B.; A. F. STEVENS, C. H. BENNETT, F. H. WATLING, M.B.; S. EVANS, M.B.; E. J. MORGAN, M.B.; J. H. M'DONALD, M.B.; F. WALL, and C. M. MATHEW. Their previous commissions, which were simultaneous, were dated—Surgeon-Lieutenant, January 29th, 1895; Surgeon-Captain, January 29th, 1898. Major Watling was in the China war in 1900, receiving the medal, but the other officers cited have no war record in the Army Lists.

ROYAL ARMY MEDICAL CORPS (MILITIA).

CAPTAIN (Honorary Lieutenant in the Army) G. J. D. DAVIES resigns his commission, February 11th.

IMPERIAL YEOMANRY.

SURGEON-LIEUTENANT F. F. MACCABE, M.B., the South of Ireland Regiment, to be Surgeon-Captain, February 15th.

Surgeon-Major F. W. WELSHMAN, Staffordshire (Queen's Own Royal Regiment), resigns his commission, retaining his rank and uniform, February 11th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

HONORARY LIEUTENANT in the army W. M. TAYLOR, M.D., (formerly Surgeon-Captain) to be Surgeon-Captain 1st Midlothian, February 11th.

VOLUNTEER RIFLES.

RICHARD BLADWORTH, M.B., to be Surgeon-Lieutenant in the 2nd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment), January 14th.

JOHN A. NIXON to be Surgeon-Lieutenant in the 1st (City of Bristol) Volunteer Battalion the Gloucestershire Regiment, February 7th.

ALEXANDER T. MCILRAITH, F.R.C.S., to be Surgeon-Lieutenant in the 1st Nottinghamshire (Robin Hood) Volunteer Rifle Corps, December 15th, 1906.

Surgeon-Lieutenant T. D. BROWN, M.B., 5th (Glasgow Highland) Volunteer Battalion the Highland Light Infantry, to be Surgeon-Captain, February 5th.

Surgeon-Captains A. WAUGH, M.B., 3rd Volunteer Battalion the Duke of Wellington's (West Riding Regiment), and H. J. BRYAN, 4th Volunteer Battalion the Queen's Own (Royal West Kent Regiment), resign their commissions, February 4th.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,236 births and 5,469 deaths were registered during the week ending Saturday last, March 9th. The annual rate of mortality in these towns, which had been 20·4, 17·8, and 18·4 per 1,000 in the three preceding weeks, declined again last week to 18·2 per 1,000. The rates in the several towns ranged from 8·4 in Hornsey, 10·2 in Wallasey, 10·4 in Northampton, 10·7 in Ipswich, 11·1 in Great Yarmouth, 11·9 in Kingston, and 11·9 in Hartlepool, to 23·6 in Devonport, in Hastings, and in Stockport, 24·1 in Grimsby, and in Middlesbrough, 25·3 in Norwich, 27·4 in Huddersfield, 28·6 in Merthyr Tydfil, and 30·1 in Bury. In London the rate of mortality was 18·0 per 1,000, while it averaged 18·4 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·5 per 1,000 in the seventy-six towns, as in London, also the death-rate was equal to 1·5 per 1,000 in the seventy-five other large towns, the rates ranged upwards to 2·1 in Hanley and in Middlesbrough, 2·4 in Portsmouth, 3·1 in Birkenhead, 4·1 in Nottingham, 4·2 in Grimsby, 5·0 in West Bromwich, 5·4 in East Ham, and 6·2 in St. Helens. Measles caused a death-rate of 1·7 in Birmingham and in Stockport, 2·6 in Portsmouth, in Nottingham and in Bolton, 2·2 in Brighton, 3·2 in West Hartlepool, 3·5 in East Ham, 4·4 in Grimsby, 5·1 in St. Helens, and 5·5 in West Bromwich; scarlet fever of 1·4 in Liverpool, Manchester, and Sheffield, of 1·5 in Derby, whooping-cough of 1·1 in Wigan, and of 1·2 in Bradford, 1·3 in York, 1·4 in Nottingham and in South Shields, and 1·9 in East Ham; and diarrhœa of 1·3 in Rhondda and 1·5 in Bournemouth. The mortality from enteric fever showed no marked excess in any of the large towns. No fatal case of small-pox was registered in any of these towns last week, and no small-pox patients were under treatment in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,615, 2,492, and 2,518 at the end of the three preceding weeks, was again 2,512 at the end of last week; 558 new cases were admitted during the week, against 548, 522, and 429 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, March 9th, 917 births and 716 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 22·0, 20·6, and 21·5 per 1,000 in the three preceding weeks, rose again to 22·9 per 1,000 last week, and was 2·3 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in these towns last week ranged from 14·1 in Greenock and 16·6 in Perth to 24·9 in Aberdeen and 25·1 in Leith. The death-rate from the principal infectious diseases averaged 2·2 per 1,000 in the eight Scottish towns, being equal to that recorded in Glasgow and Leith. The 242 deaths registered in Glasgow included 5 from measles, 2 from scarlet fever, 2 from diphtheria, 3 from whooping-cough, 2 from "fever" (principally enteric), and 1 from diarrhœa. The 7 deaths of children under one year of age registered in Edinburgh included 1 from measles, 1 from whooping-cough, and 1 from "fever" (principally enteric). The 2 deaths recorded in Leith included 1 from whooping-cough. The 2 deaths registered in Dundee included 1 from measles and 1 from whooping-cough; and the 2 deaths registered in Aberdeen included 1 from scarlet fever and 1 from epidemic cerebro-spinal meningitis.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, March 2nd, 587 births and 498 deaths were registered in six of the principal Irish towns, as against 441 births and 453 deaths in the preceding period. The annual death-rate in these towns, which had been 22·7, 23·08, and 23·1 per 1,000 in the three preceding weeks, fell to 24·9 per 1,000 in the week under notice, this figure being 6·5 per 1,000 higher than the mean annual rate in the seventy-six English towns for the corresponding period. The figures ranged from 16·0 in Londonderry and 24·0 in Cork to 23·6 in Dublin and 28·7 in Belfast. The zymotic death-rate in the same six Irish towns averaged 0·8 per 1,000, or 0·6 per 1,000 lower than during the preceding period, the highest figure—2·1—being recorded in Cork, while Limerick and Waterford registered no death under this heading at all. In all urban districts together 10 deaths were ascribed to whooping-cough and 3 to measles. At Belfast 23 deaths were returned as due to cerebro-spinal meningitis.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRMINGHAM: QUEEN'S HOSPITAL.—Obstetric and Ophthalmic House-Surgeon. Salary at the rate of £50 per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—(1) Senior House-Surgeon; (2) Junior House-Surgeon. Salary £110 and £70 per annum respectively.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—Assistant Surgeon.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician (male). Salary at the rate of £50 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

DERBY BOROUGH ASYLUM.—Assistant Medical Officer. Salary, £120 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant to the Resident Medical Officer. Salary at the rate of £50 per annum.

DUNDEE ROYAL INFIRMARY.—(1) Resident Medical Assistant; (2) Non-Resident Obstetric Assistant. Salary at the rate of £20 and £40 per annum respectively.

EXETER: DEVON AND EXETER HOSPITAL.—Male Assistant House-Surgeon. Salary, £60 per annum.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway.—(1) Senior House Surgeon; (2) Senior House-Physician; (3) Two Junior House-Surgeons; (4) Junior House-Physician. Salaries at the rate of £60 per annum for Seniors, and £30 per annum for Juniors.

LEAMINGTON: WARNEFORD HOSPITAL.—House-Surgeon. Salary, £100 per annum.

LEEDS: GENERAL INFIRMARY.—Resident Casualty Officer. Salary, £120 per annum.

LEEDS PUBLIC DISPENSARY.—Two Junior Resident Medical Officers. Salary, £100 per annum.

MANCHESTER TOWNSHIP.—Assistant Medical Officer at the Workhouse at Crumpsall. Salary, £110 per annum.

NORTHAMPTON GENERAL HOSPITAL.—House-Surgeon (male). Salary, £90 per annum, increasing to £100.

NOTTINGHAM CHILDREN'S HOSPITAL.—Lady House-Surgeon. Salary at the rate of £80 per annum.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—Clinical Assistants.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—(1) House-Surgeon; (2) Junior House-Surgeon. Salary, £100 and £60 per annum respectively.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House-Surgeon. Salary, £70 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon. Salary, £80 per annum.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary, £80 per annum.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—House-Surgeon. Honorarium, £30 for six months.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—Resident House Surgeon. Salary, £120 per annum.

YORK: NORTH RIDING LUNATIC ASYLUM, Clifton.—Male Junior Assistant Medical Officer. Salary, £150 per annum, rising to £180.

APPOINTMENTS.

ATKIN, D. McCRAE, M.B., F.R.C.S.Edin., Medical Superintendent, Bolingbroke Hospital, S.W.

ARGUE, FRED E., M.R.C.S., L.R.C.P.Lond., Anæsthetist at the Hospital for Sick Children, Great Ormond Street.

CHALLAN, Burdett Charles, M.B. and B.S.Lond., L.S.A., District Medical Officer and Public Vaccinator of the Macclesfield Union.

CHEATLE, G. T., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Witney Union.

CLUTE, E. L., M.B., C.M.Edin., Certifying Factory Surgeon for the Maryport District of Cumberland.

COTTERILL, W. Frank, M.A., M.D.Cantab., D.P.H., Honorary Medical Officer to the Victoria Cottage Hospital, Sidmouth, Devon.

EASTES, Thomas, M.D.Lond., F.R.C.S.Eng., Honorary Consulting Surgeon to the Victoria Hospital, Folkestone.

FELL, R. W., M.B., C.M.Edin., Certifying Factory Surgeon for the Bunterford District of Hertford.

GARDEN, W. Sim, M.B., B.Ch.Aberd., Second Assistant Medical Officer, Menston Asylum, Leeds.

HARRISON, A. T., L.S.A., Medical Officer of Health, Durham Rural District.

HARTIGAN, T. J. P., F.R.C.S., appointed Dermatologist of the Alexandra Hospital, Queen Square, W.C.

HICKS, Charles E., M.R.C.S., L.R.C.P., Surgeon to the Huntingdon County Hospital.

HUGHES, Gerald S., M.B., B.S.Lond., F.R.C.S.Eng., Registrar and Pathologist, Bolingbroke Hospital, S.W.

HUSTLER, G. H., M.B., Ch.B.Leeds, Medical Officer to Hospital Ship (Royal National Mission to Deep Sea Fishermen).

LEADER, C. R., M.B., M.Ch.R.U.I., District Medical Officer of the Wem Union.

LINDSAY, D. Lauder, L.R.C.P. and S.Edin., L.M., Surgeon to the Police at Aldershot, Hants.

MAWSON, J. A., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the West Derby Union.

MEIKLE, J. Hally, M.A., B.Sc., M.D., D.P.H., Medical Officer to the Edinburgh School Board.

MORTIMER, W. G., M.D., District Medical Officer of the Sleaford Union.

OWEN, J. Lewis, M.R.C.S., L.R.C.P.Lond., Trinity Corporation's Surgeon and Admiralty Surgeon and Agent at Holyhead, vice Dr. Kendall, resigned.

POLLOCK, W. B. Inglis, M.D.Glasg., Consulting Ophthalmic Surgeon to the Ayr County Hospital.

PROUD, F., M.D.Durh., M.R.C.S.Eng., Medical Officer of Health, Maryport Urban District.

SANKEY, R. H., M.B., B.Ch.Oxon., Honorary Radiographer to the Radcliffe Infirmary and County Hospital, Oxford.

SHENNAN, Theodore, M.D., F.R.C.S.Edin., reappointed Pathologist to the Edinburgh Royal Infirmary.

SPEIRS, W. C., M.B., District and Workhouse Medical Officer of the Reeth Union.

STANLEY, Douglas, M.D.Edin., M.D.Birmingham, M.R.C.P.Lond., Honorary Physician to Queen's Hospital, Birmingham, vice Professor A. H. Carter, resigned.

WHITAKER, A. G., M.R.C.S., L.R.C.P., District Medical Officer of the Cern Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

DEATHS.

BATEMAN.—On the 11th inst., at Bridge House, Richmond, Surrey, William Adolphus Frederick Bateman, M.R.C.S., aged 72.

FARNCOMBE.—On the 6th inst., at Fairlea, Chudleigh, S. Devon, Edgar Leonard Farncombe, M.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P., in his 32nd year, of pneumonia.

FISHER.—On the 10th instant, at Shere, Guildford, Surrey, Charles Fisher, M.D., B.S.Durh., L.R.C.P. and M.R.C.S.E., D.P.H.Cantab., aged 30 years.

MACAULEY.—On March 7th, at 17, Nevern Road, South Kensington, William Robert Macauley, M.R.C.P.I., L.R.C.S., L.M., aged 64.

MEADOWS.—On March 9th, at 141, King Street, Great Yarmouth, Daniel Meadows, M.R.C.S.Eng., L.S.A., aged 79.

DIARY FOR THE WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor C. F. Beadles: (1) Anatomical variations in the larger arteries of the brain and their medical and surgical aspects; (2) Aneurysms of the larger cerebral arteries, with special reference to their possible diagnosis and treatment.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON, meeting at the Royal Army Medical College, Examination Hall, at 5.—Major H. W. Grattan: A Note on Blackwater Fever in Sierra Leone. Major W. S. Harrison: (1) A Pseudo-diphtheria Bacillus from a Case of Middle-ear Disease: (2) *B. typhosus* from a periosteal abscess one year after typhoid. Lieutenant-Colonel W. B. Leishman: (1) Typhoid inoculation in the Army; (2) Observations on the Spirochaetes of Relapsing Fever and Tick Fever (with demonstration).

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Second Lumleian Lecture by Dr. G. H. Savage, on Insanity, its causes and increase.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor C. F. Beadles (continued).

THURSDAY.

NEUROLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, W., 9 p.m.—Clinical meeting. Cases at 8 p.m.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Third Lumleian Lecture by Dr. G. H. Savage, on Insanity, its causes and increase.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8 p.m.—Clinical Evening. Exhibition of Clinical Cases, followed by discussion. Patients in attendance from 8 p.m. to 9 p.m.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Hunterian Lecture by Professor C. F. Beadles (continued).

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Wednesday, 5 p.m.: Nasal and Accessory Sinuses.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m.: Rickets, Achondroplasia, and allied conditions.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—Clinics: Monday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Throat, Nose, and Ear, 4 p.m. Tuesday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Skin, 4 p.m. Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30. Out-patient Demonstrations: Medical and Surgical, 10 a.m. daily; Ears and Throats, noon, Monday and Thursday; Eyes, 11 a.m., Wednesday and Saturday; Skin, noon, Tuesday and Friday. Special Lecture, Wednesday, 2.30 p.m.: Varieties of Spastic Paralysis.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures at 5.15 p.m. each day will be given as follows: Monday, Retrobulbar Neuritis; Tuesday, Traumatic Affections of the Spinal Cord: Wednesday, The Use and Abuse of Skiagraphy in Fractures and Dislocations; Thursday, Liver Abscesses, their Etiology, Symptoms and Treatment.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Muscular Atrophy in the Upper Extremity. Friday, 3.30 p.m.: Torticollis and the Tics.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the clinics and demonstrations for next week:—Monday, 10 a.m., Surgical (Out-patient). 2.30 p.m.: Medical, Throat, Nose and Ear, *X* Rays. Tuesday, 10.30 a.m.: Medical (Out-patient). 2.30 p.m.: Operations; Surgical and Gynaecological (Out-patient). Wednesday, 2.30 p.m., Medical, Skin, Eye (Out-patient). Thursday, 2.30 p.m.: Gynaecological Operations; Medical, Surgical (Out-patient); *X* Rays; 3 p.m., Medical (In-patient). 4.30 p.m.: Demonstration: Clinical Examination of the Urine. Friday, 9.30 a.m.: Surgical (Out-patient); 2.30 p.m., Operations; Medical, Eye (Out-patient); 3 p.m., Medical (In-patient).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following arrangements have been made for next week:—Daily, 2 p.m.: Medical and Surgical Clinics. 2.30 p.m.: Operations, *X* Rays. Monday and Thursday, 2.30 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2.30 p.m.: Diseases of the Skin. 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Wednesday, 10 a.m.: Diseases of Children. Lectures—Monday, 12 noon: Pathological Demonstration. At 5 p.m., Monday and Tuesday: Clinical. Wednesday: Practical Medicine. Thursday: Practical Surgery. Friday: Operative Treatment of Duodenal Ulcer.

BOOKS, ETC., RECEIVED.

Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1906:—

Allgemeine Diagnostik und Symptomatologie der Sehstörungen. Von Dr. H. Wilbrand and Dr. A. Saenger. Dritter Band, zweite Hälfte der "Neurologie des Auges." £1 2s. 6d.

Handbuch der Geburtshülfe. In drei Banden herausgegeben von F. von Winckel. Dritter Band, II Teil. £1 8s.

The Prevention of Cancer and its Relation to that of Some Other Diseases and Calamities. By C. B. Keetley, F.R.C.S. London: Baillière, Tindall, and Cox. 1907. 1s.

Food and Hygiene. By W. Tibbles, LL.D., L.R.C.P., M.R.C.S., L.S.A. London: Rebman, Ltd. 1907. 8s.

Arbeiten aus dem pathologischen Institute zu Leipzig. Herausgegeben von F. Marchand. Heft 4. Uber die entzündlichen Veränderungen der Glomeruli der menschlichen Nieren und ihre Bedeutung für die Nephritis. Von Dr. med. M. Löhlein. Leipzig: S. Hirzel. 1907. M. 4.

Annals of Tropical Medicine and Parasitology issued by the Liverpool School of Tropical Medicine. Edited by Professor R. Ross, Major, I.M.S. (Ret.), D.P.H., F.R.C.S., D.Sc., LL.D., F.R.S., C.B. Vol. I. February, 1907. No. I. Liverpool: The University Press; London: Williams and Norgate. 7s. 6d.

Animal Micrology. By M. F. Guyer, Ph.D. Chicago: The University of Chicago Press; and London: T. Fisher Unwin. 1907. 9s.

London: Macmillan and Co., Ltd., 1907:

Epilepsy: A Study of the Idiopathic Disease. By W. A. Turner, M.D.Edin. 10s.

Some Points in the Surgery of the Brain and its Membranes. By C. A. Ballance, M.V.O., M.S., F.R.C.S. 15s.

Burdett's Hospitals and Charities. 1907. By Sir H. Burdett, K.C.B. London: The Scientific Press, Ltd. 7s. 6d.

Nouveau Traité de Médecine et de Thérapeutique. Publié en Fascicules sous la direction de MM. P. Brouardel et A. Gilbert. XII. Maladies de la Nutrition: Goutte-Obesité-Diabète. Par H. Richardière et J.-A. Sicard. Paris: J. B. Baillière et Fils. 1907. Fr. 3.50.

Uber traumatische Entstehung innerer Krankheiten. Von Dr. R. Stern. Erstes Heft: Infections-Krankheiten, Krankheiten der Kreislaufsorgane. Zweite Auflage. Jena: G. Fischer. 1907. Mk. 3.50.

Matriculation Directory. No. XLV. January, 1907. Cambridge: Burlington House. 1s.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MARCH.	
16 SATURDAY...	ST. PANCRAS AND ISLINGTON DIVISION, *Metropolitan Counties Branch*, Board Room of the Royal Free Hospital, Grays Inn Road, 4 p.m.
17 Sunday ...	
18 MONDAY ...	
19 TUESDAY ...	LONDON: Organization Committee, 11 a.m. LONDON: Special Finance Inquiry Committee, 3 p.m. LONDON: Metropolitan Counties Branch, Medico-Political Committee, 4.30 p.m.
20 WEDNESDAY	LONDON: Naval and Military Committee, 3.30 p.m. GUILDFORD DIVISION, *South-Eastern Branch*, Royal Surrey County Hospital, Guildford, 4.30 p.m.; Dinner, 6.30 p.m., Lion Hotel. KENSINGTON DIVISION, *Metropolitan Counties Branch*, Kensington Town Hall, High Street, Kensington, W., 5 p.m.
21 THURSDAY...	CITY DIVISION, *Metropolitan Counties Branch*, Brooke House, Upper Clapton, N.E., 8.30 for 9 p.m. LEIGH DIVISION, *Lancashire and Cheshire Branch*, Co-operative Offices, Ellesmere Street, Leigh, 8 30 p.m. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Battersea Town Hall, 8.45 p.m.
22 FRIDAY ...	CROYDON DIVISION, *South-Eastern Branch*, Greyhound Hotel, Croydon, 4 p.m.; Dinner, 6 p.m.
23 SATURDAY...	
24 Sunday ...	
25 MONDAY ...	LONDON: Ethical Emergency Sub committee, 2 p.m.
26 TUESDAY ...	LONDON: Public Health Committee, 3.15 p.m. BOSTON AND SPALDING DIVISION, *Midland Branch*, Red Lion Hotel, Strait Bargate, 3.30 p.m.
27 WEDNESDAY	LONDON: Medico-Political Committee, 2.30 p.m. BATH AND BRISTOL BRANCH, Bristol. LAMBETH DIVISION, *Metropolitan Counties Branch*, Lambeth Carlton Club, Coldharbour Lane, S.W. (near Brixton Station), 8.45 p.m.
28 THURSDAY...	
29 FRIDAY ...	*Good Friday.*
30 SATURDAY ...	
31 Sunday ...	
APRIL.	
1 MONDAY ...	*Bank Holiday.*
2 TUESDAY ...	
3 WEDNESDAY	
4 THURSDAY...	SOUTH-EASTERN COUNTIES DIVISION, *Edinburgh Branch*, King's Arms Hotel, Melrose, 3 p.m.
5 FRIDAY ...	LONDON: Central Ethical Committee, 2 p.m. SCOTTISH PART DIVISION, *Border Counties Branch*, Dumfries.
6 SATURDAY...	
7 Sunday ...	
8 MONDAY ...	
9 TUESDAY ...	EAST ANGLIAN BRANCH, White Hart Hotel, Witham.
10 WEDNESDAY	LONDON: Journal and Finance Committee, 3 p.m.
11 THURSDAY...	SOUTH WALES AND MONMOUTHSHIRE BRANCH, Swansea.
12 FRIDAY ...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch.* WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Conjoint Meeting with Wimbledon and District Medical Society, Worple Hall, Wimbledon, 9 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations to be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member whether one of the existing members or a subsequently elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association and the Rules of such Division and Branch to which he may at any time belong and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non members is £1 8s. 0d. for the United Kingdom, and £1 12s. 0d. for abroad.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 23RD, 1907.

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Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.

A MEETING of the Division was held in the St. James's Vestry Hall at 8.30 on Wednesday, March 13th, Dr. G. E. HASLIP in the chair.

THE ABUSE OF HOSPITALS.

A discussion on the abuse of hospitals was opened by Dr. W. KNOWSLEY SIBLEY, who said:

At the last meeting of this Division, held on December 17th, 1906, Dr. Dauber opened a discussion and moved a resolution dealing with hospital management and abuse.

At the end of the meeting the following resolution was proposed:

> That the Westminster Division considers that the first step in obtaining any remedy for hospital abuse is the constitution of a central hospital authority, composed of an amalgamation of King Edward's Fund, Hospital Sunday Fund, Hospital Saturday Fund, and the Charity Organization Society, with an equal number of medical members.

This resolution was carried unanimously. It therefore appeared desirable to continue the discussion on the latter proposition, the wording of which has been slightly altered for the purpose of this evening's meeting.

It is proposed in the first place to take a rapid glance into a few of the more prominent points in our present uncontrolled hospital system, and then to see in what way these could be improved upon under an efficient central and guiding organization.

With the short time at our disposal, it is impossible to do much more than describe various headings, each one of which might in itself constitute a subject for future discussion.

It must be clearly understood it is not in any way intended to attack hospitals individually, but the systems under which they are to-day administered in this country. The defects pointed out are largely the result of comparing the methods on the Continent with those of Great Britain.

A. *Mismanagement.*

Each hospital is practically a private body of individuals, or small company, with unlimited liability to spend money; the committees, or Boards of Management, elect themselves from the governors, that is, ordinary subscribers of a guinea a year upwards.

These well-meaning persons become a Board of irresponsible directors, each Board believing its administrative powers to be vastly superior to any of its less fortunate neighbours, and naturally resists any attempt at outside inquiry or suggestions.

Usually it is only through the strenuous efforts of some enterprising journalist, who takes the trouble to attack and expose some charity time after time, that a hospital is forced to hold an inquiry into its own administration, and then one of our ever-recurring hospital scandals forms a topic for newspaper discussion.

Each institution has to compete with all others, especially in the way of advertisements, to attract public attention to its wants, the two chief recommendations being that the hospital is so mismanaged as to be many thousands of pounds in debt, and that being quite unable to afford to do so, it has treated many thousands of out-patients with drugs. Generally speaking, all those cases which could not have paid a private doctor required food and nourishment rather than medicine for the alleviation of their symptoms, and were cases for the Poor-law administration.

The deplorable ignorance of many hospital committees over business matters has of late been pointed out by capable city men, who after years of service on Boards have resigned in disgust at the hopelessness of the whole situation.

Competition is equally keen to attract students, there being twice as many hospitals with schools as there are students to go round. With this there is the unnecessary multiplication of teachers, occasionally dignified by the title of professors, which must be a mistake from an educational point, and could never be defended from an economical one. These have to be content with a miserable pittance by way of remuneration, often for teaching or lecturing on a subject they are not in sympathy with, as, for instance, a recently well-qualified man, waiting about for something to turn up, finds himself appointed lecturer in anatomy, because he happens to be a good physiologist.

So again with many small disconnected schools. Consider the narrowness of a London student's curriculum, when, owing to the confinement of his experience within the walls of one hospital, he is deluded into worshipping at the shrine of the small heroes of his own particular school, most of whom are probably never heard of outside of it, and he goes through life carrying these delusions with him to the grave, often to the detriment of his patients. In a profession called scientific, a man should rise to eminence as the result of his own brain power and exertions, and not because he has been placed on a pedestal by a group of third year students, who never have an opportunity of comparing him with a man of real eminence from another school.

The crowding of hospitals into wealthier districts, where they are not wanted, and their absence from the poorer parts, where they are sadly required, is another prominent

feature at present. Each hospital, however small, has its own complement of paid officials, secretaries, clerks, collectors, stewards, chaplains, etc., whereas one staff of these functionaries could very well administer several institutions. Again, each hospital buys its own commissariat, and other necessities, such as drugs, surgical dressings and instruments, from its own small tradesmen, whereas, if these were bought in bulk, considerable saving would be effected.

B. *Hospital Abuse.*

Until there is some central control it is pure waste of time speaking of hospital abuse—for with the present competition among hospitals, how could they exist without encouraging most flagrant abuse? If one hospital makes any attempt at inquiry into its patients by a properly educated almoner, those rejected at once go to the next hospital, where they are received with open arms. The former institution loses its subscriptions, because it can no longer appeal to a deluded public that it has relieved so many thousands of suffering humanity. What support the better conducted reformed institution loses, the more abused one gains.

The almost universal abuse, both by in-patients and out-patients, has become a matter of such common knowledge that even many members of the hospital staffs now readily admit such to be the case, although but comparatively few individual members have come forward and put aside their private interests for the sake of the public good, and have run the risk of giving offence to the powers that be.

C. *Welfare of the Public.*

Hospitals have ceased to be charitable institutions.

A charitable person is a being whose right hand knows not what his left hand does.

It would be impossible to apply this definition to the fashionable philanthropists of modern society, whose axiom appears to be to give a guinea to charity when they can be certain of obtaining two guineas' worth in return, either in the form of advertisement, social preferment, or in numerous other direct and indirect ways for their personal advancement.

Many of the annual subscriptions received by our hospitals are paid by business houses as a form of insurance, in order to provide for the unlimited free treatment of their employées in case of accident or illness; and so with some private individuals, who give their few guineas a year to the nearest hospital to ensure the free treatment of any of their servants, either as in-patients or out-patients. Where is the charity in these subscriptions? No, they are good business investments, and the medical profession has always been a willing tool to be exploited by a grasping public. This pursuit of business under the cloak of charity is daily becoming a more and more common feature of our age. What other profession will do anything, much less everything, for nothing? Whoever heard of solicitors, still less barristers, undertaking unlimited gratuitous work, in order that some public institution full of well-paid lay officials should flourish.

The origin of all this unpaid work is easily determined, having come down from the days when medical services were rendered by the religious orders, who did not look for their reward on this planet.

There are but few of their medical substitutes of to-day who are satisfied with such returns, and yet the majority of us continue to act as if we were, and, moreover, submit to be the servants instead of the masters of the lay officials.

With the new Employers' Liability Act just coming into operation the insurance companies will doubtless become subscribers to hospitals in order to obtain free treatment for the cases thrown on their hands; the hospitals, not the medical profession, will receive the benefit of this.

D. *Interests of the Profession.*

1. *The Hospital Staff.*—This is usually overworked through having to see an unlimited number of trivial cases, the majority of which could be as well attended to by the outside practitioners, and require no special skill either for their diagnosis or treatment.

2. *General Practitioners.*—These are turned out by medical students attached to hospitals by hundreds. What does the Alma Mater do for them in return for the fees received and for their gratuitous services and assistance freely given during the years of their studentship? It at once enters into the keenest and most unfair competition to snatch the bread from their mouths, and all for its own self-glorification and advertisement.

It often charges patients 6d., or even only 3d., for advice and medicine, whereas the outside practitioner finds it necessary to charge double these prices. How, in a business age, can he possibly compete against such underselling?

E. *Central Hospital Board.*

In the year 1892 a Select Committee of the House of Lords recommended the formation of a Central Board. It did not consider that such a Central Board should be given any statutory powers as regards the formal licensing of any hospital built or about to be built. It recommended that the proposed Central Board should be granted a charter to entitle it to receive endowments, legacies, bequests, and contributions for distribution to medical charities and to meet its own necessary expenses.

It suggested it should consist of 49 representatives, and that it should assist and work with the managers of the Hospital Saturday and Sunday Funds.

It also pointed out that with the establishment of Poor-law infirmaries and rate-supported asylums, under the Metropolitan Poor-law Act, 1867, the relations between the poor and the hospitals had been in a great measure completely changed, and so had everything else connected with medical charity; and the Committee could not shut its eyes to the possibility that, if some such organization as it had recommended was not adopted, a time would come when it would be necessary for hospitals to have recourse either to Government aid or municipal subvention.

In 1895 and 1896 Colonel Montefiore, of the Charity Organization Society, read papers at special meetings of the Council of that body on the need of a Central Hospital Board for London, the result of which was that in 1896 and 1897 the Charity Organization Society brought forward its scheme for the formation of a Central Hospital Board. A large General Committee was formed, largely composed of prominent medical men, and from this a smaller Executive Committee was elected.

Several meetings were held during this period, and a workable scheme was evolved, whose chief points were as follows:

It gave to each hospital definite representation on the General Board.

It suggested reliance, not on legal compulsion but on co-operation and publicity.

It proposed the formation of a fund for the large and liberal aid of hospitals for special purposes, rebuilding, etc.

It did not leave the settlement of details to a large and unwieldy representative body, but imposed on an Executive Committee the duty of carrying out the work which such a body could not possibly undertake with advantage. Nevertheless, by the representation of each hospital on the General Board, it allowed of ample discussion on all general questions, and placed the adoption of reports in the hands of the representative body on lines now generally accepted by Englishmen, and consistent with their ideas of effective local government.

The scheme was drawn in such a way as not to interfere with hospital and medical charities, but to promote co-operation on the following conditions:

1. The preservation of the voluntary system of medical relief.

2. The assistance of hospitals by means of a common fund, available for special purposes.

3. The regulation and improvement of the existing voluntary system.

The duties of the Board were to be as follows:

(*a*) To obtain annual reports, statements of accounts, and balance sheets of all hospitals, dispensaries, and other medical charities within the metropolitan area, together with returns of in patients, out-patients, and casualties.

(*b*) To require that the accounts of all such charities should be audited by competent chartered accountants.

(*c*) To arrange that all charities should be visited and reported upon.

(*d*) To report from time to time, as occasion required, on all proposals for the establishment, rebuilding, enlarge-

ment, or removal of hospitals, dispensaries, or other medical charities, and to make recommendations.

About this time, 1896, the Hospital Reform Association came into existence, and under the energetic honorary secretary, Dr. Garrett Horder, held several meetings in various parts of the country. It drew up some reports; one, the result of personal visits paid to all the special hospitals in London, was published in the BRITISH MEDICAL JOURNAL and *Lancet* in April the following year, 1897.

Referring to this report, the *Lancet* at the time wrote:

> Here are hospitals, in some cases officered by gentlemen of the highest reputation, entering into wholesale competition with private practitioners, and securing patients it would seem by the lowness of the fee demanded. The time will come when our consulting brethren will refuse to be made the tools of such a ruinous and demoralizing system. . . . Like ourselves, the Association looks with confidence to the staffs of the hospitals to help to avert the ruin alike of the thoroughly charitable institutions, and the profession at large, by the monstrous system of indiscriminate and inefficient relief which now prevails.

This was written ten years ago, the abuse has become more and more rampant ever since, and the remedy farther and farther from being applied.

The Hospital Sunday Fund was started in 1873, and has now done something towards improving hospital administration, for after twenty years' hard work it introduced a uniform system of accounts. The Fund has also done a good deal to improve the methods of publishing and auditing of accounts, has established economy in management in certain cases, and of course has assisted the financing of many institutions. The Distribution Committee in awarding its grants takes into consideration the amount of work done, and so encourages the hospitals to make as large a show as possible of the number of out-patients and casualties.

The Fund has also attempted to do good by encouraging the appointment of almoners for the out-patient department, but as no limit is usually placed on the number of patients seeking advice, the impracticability of to any extent checking abuse is at once obvious. So also the impossibility of inquiring into the better-class patients bringing subscribers' letters makes even this attempt in many cases useless.

The finances of this Fund of recent years have been temporarily increased by the considerable contributions of a well known donor now deceased.

The following year, 1874, notwithstanding the opposition of the medical press, the *Hospital Saturday Fund* was established. The BRITISH MEDICAL JOURNAL at the time wrote:

> The hospitals are intended for the benefit of the poor, the needy, the necessitous, and the really indigent, and in no sense can the artisan class be called poor and needy, indigent, or necessitous; moreover, the Committee of the Hospital Sunday Fund has pronounced against giving gratuitous medical advice to the artisan class, and has strongly urged the development of provident dispensaries.

This fund differs from the other two, in that it is a purely business corporation with no pretence at charity, and openly exacts its *quid pro quo* in the way of hospital letters, and thus deters the better members of the artisan class from joining provident dispensaries and medical clubs, by presenting them with hospital letters and encouraging them to seek advice at the hospital.

The fund is, however, to be congratulated on having done away with that very questionable method of street collections which it pursued for many years.

In February, 1897, the Prince of Wales announced his intention of opening a Hospital Fund for London in commemoration of the Queen's Jubilee.

The General Committee for the Promotion of a Central Hospital Board, as already described, addressed a petition signed by over 1,800 persons to His Royal Highness, in which they prayed that His Royal Highness would distribute his hospital fund through a Board or Council truly representative of the medical charities of the metropolis and of all the interests involved.

King Edward's Fund, although the last to be formed, has already outstripped the other two, not only in the matter of capital, but in its attempts to control the administration of hospitals by practical pressure, owing to its power of the purse.

It has instituted visitors who go personally to all the hospitals receiving grants at its hands, who, after inspection on the spot, draw up reports and recommendations. In some cases it has been remarked that its advice and recommendations are repeated year after year, but with no result.

It insists on a uniform system of accounts, has brought about the amalgamation of several hospitals and groups of hospitals, opened many beds which were closed for want of funds, vetoed the building of new hospitals where they were not wanted, assisted the migration of some to more necessary situations, and in many ways has made its voice heard for the better administration of numerous institutions.

Central Hospital Association or Council.—In May, 1897, the twelve general hospitals with medical schools, fearing that some central control might be instituted on which all the hospitals and general practitioners would be represented, formed among themselves what they called a Central Hospital Association, having first passed unanimous resolutions, deprecating the endeavours to connect the Prince of Wales's Fund with a Central Hospital Board, and deprecating the establishment of a Central Hospital Board having any control over the administration of the finances of the hospitals.

The General Committee for the Promotion of a Central Hospital Board invited this newly-formed body to receive a deputation and discuss the position. Its anxiety for the welfare of the hospitals in general was such that it declined the invitation.

The earlier part of the paper dealt with the unnecessary and extravagant expenditure of hospitals competing one against the other, and showed how, if they were to combine, an enormous saving would result. Much the same might be said of the three chief hospital funds—King Edward's, Hospital Saturday, and Hospital Sunday Funds. Each has to keep up its separate administration, and to all intents and purposes advertise for support in competition with the other Funds.

If these three large bodies were to amalgamate or in some way combine, there would be a large saving in expense, and united they would have a much greater power to control and supervise hospital expenditure.

The Charity Organization Society has, as has been shown, years ago elaborated a scheme for a Central Hospital Board; let them, therefore, in combination with the already existing funds, draw up a definite practical proposition.

Of recent years the British Medical Association has taken up the hospital question, and has done much useful solid work, through its Hospitals Committee.

This has now drafted a number of propositions and rules for the guidance of those hospitals whose Boards are obliging enough to adopt them, especially with regard to the out-patient department. Last year the Metropolitan Counties Branch formed its Medical Charities Subcommittee to deal with the same subject.

The Association, therefore, has now collected a large number of facts, and in combination with the Charity Organization Society should be in a position to be of great assistance in the proposed amalgamation scheme for the formation of a Central Hospital Board for London.

A great central body could at once stop the abuse and misuse into which our hospitals have allowed themselves to drift, and would restore them to the proper place they should hold in our social organization, and rescue them from their lamentable present position of pauperizing agents.

The so-called working classes in this city are naturally lazy, driftless, and absolutely impracticable, and require no assistance from public bodies to encourage them in their want of self-respect and self-reliance.

The encouragement of alcoholism by the unlimited free distribution of stomachics to crowds of out-patients has been pointed out on previous occasions.

As has already been said, King Edward's Fund has done much towards uniting the hospitals under one system of administration. It should now take the lead by uniting or, if necessary, by absorbing the other competing Funds, and so strengthening still further its financial position. It would then be a force whose recommendations no self-respecting institution could refuse to obey, and whose power for good would be increased enormously, and it

would then, indeed, have proved itself worthy of its founder.

Should it be found that there are practical difficulties which form an insuperable obstacle to the amalgamation of the bodies already existing, then a new association should be formed composed of representatives from each of the Funds; this would get over the possible objections, and would have the same result in the end.

The public and the profession are tired of the everlasting special appeal for funds, and our hospitals must now be rescued from the hands of competing groups of irresponsible individuals, and from the narrow cliques of many of the medical and lay committees, and placed under proper control of a central and responsible authority.

The first business of a central Metropolitan Board should be to draw up a "Hospitals or Charities Act" on somewhat parallel lines to the Public Companies Acts, which should define the legal position of members of charity committees and the responsibilities of all those holding fiduciary positions. The subscribing public has a right to know that the money given by it is not, through negligence and stupidity, wantonly squandered in a way that the law would not permit by any but a charitable institution.

In conclusion, I therefore beg to propose the following resolution:

> That, in view of the mismanagement and abuse of hospitals, the Westminster Division considers the welfare of the public and the interests of the medical profession would be best obtained by the establishment of a Central Hospital Board for London.

Dr. Dauber desired to second the resolution proposed by Dr. Sibley. They had listened, he said, to a most careful and exhaustive paper on the subject, and he felt they were greatly indebted to Dr. Sibley for the pains he had taken in getting together and presenting to them so many facts with regard to the exertions that had been made in the past to check hospital abuse and establish some Central Board for hospitals. It was disappointing to reflect how little had been accomplished in the past relative to the efforts put forth, and he would most strongly urge that the present resolution should not be consigned with the Supplement of the British Medical Journal to the waste-paper basket, but should be forwarded to the proper quarters and the purport of the resolution be emphasized as much as possible. As he had spoken at considerable length at the last meeting of the Branch he would be very brief on the present occasion. He was entirely in favour of a Central Board of Control to co-ordinate and regulate the forces and resources of the London hospitals. It had often seemed to him that the various medical charities of London might not unaptly be compared to a fleet of warships, but with this difference: that the hospitals, although the aim of each was similar—the combating of common foes, disease and death—yet were unlike a fleet in that they never acted in concert and were without any central directing influence like the Admiralty Board, and so their strength and fighting capacity were diminished just as that of a fleet would be if each ship acted independently and separately from its fellows. Co-ordinated concerted action was as essential in the one case as in the other if the maximum of result was to be obtained. He considered the fusion and amalgamation of the various funds named into a Central Board of control and distribution with ample representation upon it, to be a scheme deserving the strongest support of all medical men.

Brigade Surgeon Lieutenant-Colonel A. B. R. Myers said: If a question is worthy of discussion, it must have two sides, but I rather regret that I am called upon so early to address you, for I stand here as a distinct opponent to the scheme of a Central Hospital Board, not for the first time. However, I will ask you to listen patiently to me for a few minutes. When the Charity Organization Society brought forward this scheme ten years ago, it was shown that for proper representation of all interests a Board would have to consist of 500 members. This unworkable number would have to be reduced to general and executive committees. Now we all know the old saying that the smaller the committee the better the work done, but in this case there might be the danger of the consulting of enthusiastic philanthropists with more enthusiasm than sound judgement. For instance, the occurrence at the Animals' Hospital lately—a Christmas dinner of five courses, at which the cats had sardines for a fourth and cream for a fifth course. Representatives of hospitals could not afford the time to attend these committees, and they would practically pass into the complete control of non-medical men and women. Is St. Bartholomew's, with its eight centuries of splendid and ever-increasing work, to be dictated to by such a Board? As well expect Eton and Harrow, Winchester and Rugby to agree to the control of a Central Board! No doubt economy is effected by centralization, but King Edward's Fund and the Inter-Hospital Committees are doing excellent work in this respect without injuring the individuality of the hospitals. Economy may, however, be effected in an adverse way. Only to-day a friend told me that he now subscribed equal sums to four hospitals, but if a Central Board were formed he would only send one of the four to it. Now let me turn to another grave point. At the present time earnest men devote their time and money to various hospitals in which they take much personal interest, and if these hospitals were brought under a Central Board these individual interests would be lost and consequently large sums of money to these hospitals. For instance, at the Charity Organization Society meeting in 1897 a stranger said to me that he had left a large legacy to a hospital, but if a Central Board were formed he would cancel his legacy altogether. Such might easily be the views of others interested in individual hospitals, and I cannot help feeling that the Central Board scheme would only prove a stepping-stone to State aid, when the charitable public would divert their money to other channels.

Dr. Capes said: That mismanagement of hospitals exists has been pointed out even by one in such a high position as His Royal Highness the Prince of Wales. That abuse of hospitals is very prevalent no one can deny, and I quite agree that the welfare of the public would be better secured and the interests of the profession safeguarded by the establishment of a Central Hospital Board for London, but I am not quite convinced that the time has yet come when such a scheme enters into the field of practical politics. If the Central Hospital Board is to consist of representatives of existing medical and lay committees, I do not think any progress will be made. But if the Westminster Division can draw up a scheme which will practically abolish lay committees and be truly representative of all branches of the profession, they will earn the gratitude and praise of the whole Association. The abuse by in-patients is not nearly so great as that by out-patients, and could be met by requiring a certificate from a general practitioner stating that the patient is a suitable person for admission into a hospital. This has to be done in cases under the Metropolitan Asylums Board, in cases admitted to convalescent homes, in cases admitted to our Poor-law infirmaries—and if in those instances it is done to prevent mismanagement and abuse, why should it not be done in the case of charitable institutions? The abuse in the out-patient department can only be got over by the medical officers of hospitals refusing to treat trivial and chronic illnesses; if, after a careful examination, it is found there is little or nothing the matter or that the condition is a chronic one, the patient should be informed that his condition is not suitable for hospital treatment. As to the welfare of the public, I do not think we are much concerned with that; they certainly have little or no consideration for the general practitioner, but if we can educate them not to expect a *quid pro quo* in the shape of subscribers' letters for subscriptions, we shall get rid of another very flagrant cause of abuse. I consider the relation of hospital staff to general practitioner ought to be very different to what it is, and I would suggest that a weekly clinique at each large hospital, open for all practitioners to attend and to take patients to, would increase the scientific yearning of the general practitioner and diminish the haughty distrust of the general practitioner's opinion which is so often expressed, especially by residents of big hospitals. As general practitioners, I do not think we need look for much assistance from the various charitable funds and societies. At a meeting of the Charity Organization Society a year or so ago, to which I

was invited, nearly every speaker admitted that, in the interests of the medical profession, subscribers' letters ought to be abolished, and yet the Society would not agree to it. Also, in one of the large hospitals, the reason given for not abolishing subscribers' letters was that the Hospital Saturday Fund might not continue their donations if they did not receive subscribers' letters. In conclusion, I would say I heartily approve of a Central Hospital Board for London, but it must be established at the right time and on right principles to make it a success. I consider that the thanks of the whole profession are due to the Westminster Division for taking up this subject, and to Dr. Sibley for his excellent paper on it, and I trust your efforts may be better rewarded than in the Marylebone Division, where a canvass of the district on the management of dispensaries resulted in sixteen replies to 930 letters.

Colonel Montefiore, Dr. Hilliard, Dr. Haslip, Dr. Tanner, Dr. A. C. E. Gray, Dr. Forbes-Ross, and Dr. McCann joined in the discussion.

The resolution was put and carried unanimously. It was further resolved that a meeting of the Metropolitan Counties Branch should be called to consider the question of a Central Hospital Council for London.

EAST ANGLIAN BRANCH.

A meeting of the Council was held at the Crown and Anchor Hotel, Ipswich, on Thursday, March 7th, Dr. R. W. Brogden, President-elect, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

New Members.—The following gentlemen were elected members: T. W. Bartlett, L.R.C.P., L.R.C.S., Colnebrook, Steeple Bumpstead, Essex; B. F. Falkner, L.R.C.P., L.R.C.S., Monkwell, Coggeshall, Essex; P. G. Laver, M.R.C.S., L.R.C.P., Head Street, Colchester; W. A. Maybury, M.D., West Stockwell Street, Colchester; J. D. Moir, M.B., M.S., 18, Marine Parade, Great Yarmouth; S. E. Worts, M.R.C.S., L.R.C.P., Colchester; R. J. Fox, M.D., Norwich.

Reports of Divisions.—The reports of the Divisions were considered and capitation grants fixed.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 17th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,

March 14th, 1907. *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m., except on Saturdays, when they close at 2 p.m. Members can have their letters addressed to them at the office.

BRANCH AND DIVISION MEETINGS TO BE HELD

Border Counties Branch: Scottish Part Division.—A meeting of the above Division will be held in Dumfries on Friday, April 5th. The relations of medical practitioners to friendly societies, etc., in the Division area will be discussed. The attention of members is drawn to the various recent reports, etc., on contract practice; also to the unanimous resolution of the members of the Branch at the Carlisle meeting on February 15th.—George R. Livingston, Honorary Secretary, Dumfries.

East Anglian Branch.—The spring meeting of the East Anglian Branch will be held at the White Hart Hotel, Witham, on Tuesday, April 9th. Members wishing to read papers or show cases or specimens should communicate with me at once. B. H. Nicholson, East Lodge, Colchester, Honorary Secretary.

Edinburgh Branch: South Eastern Counties Division (*Alteration of Date*).—The spring meeting will be held in the King's Arms Hotel, Melrose, on Friday, April 5th, at 3 o'clock, Dr. Young, Chairman, presiding. Business: (1) Medico-legal matters referred to Divisions by the Council; (2) Clinical papers by members. The Secretary will be glad if members intending to contribute will kindly notify him at their earliest convenience.—W. Hall Calveri, Honorary Secretary.

Lancashire and Cheshire Branch: Altrincham Division.—The general (Division) meeting will be held on Wednesday, April 17th, at Greenbank, Northwich, at 5 p.m. The annual (Division) meeting will be held on Thursday, June 6th, at the Board Room of the Hospital, Altrincham, at 5 p.m. T. W. H. Garstang, Honorary Secretary.

Lancashire and Cheshire Branch: Liverpool (Northern) Division.—A meeting of the above Division will be held at the Medical Institution, 114, Mount Pleasant, on Wednesday, March 27th, at 3.30 p.m. Agenda: Proposed amalgamation of Local Division (see Supplement to the British Medical Journal, December 15th, 1906, p 338). Resolution by Liverpool (Western) Division. Matters referred to Divisions: Medical Inspection of School Children; the Ethical Aspects of Medical Consultation (see Supplement, February 16th, 1907). Central Emergency Fund. Recommendations as to Contract Practice (see Supplement, February 23rd, 1907). Unqualified Practice. Any other business.—A. W. German, Honorary Secretary to the Division.

Metropolitan Counties Branch: Lambeth Division.—The Chairman will entertain the members of the Division at a special meeting which will be held at the Lambeth Carlton Club, Coldharbour Lane, S.W. (near Brixton Station), on Wednesday, March 27th, at 8.45 p.m. Agenda: (1) Minutes of the last meeting; (2) to consider the report of the Medico-Political Committee of the British Medical Association on Provident Dispensaries (see Supplement to British Medical Journal, February 23rd, page 91); (3) a paper will be read by H. Betham Robinson, M.S., F.R.C.S., Surgeon to St. Thomas's Hospital, on Acute Intestinal Obstruction. Tea and coffee at 8.45 p.m. The chair will be taken at 9 p.m.—W. Alexander Atkinson, M.D., Honorary Secretary, 216, Camberwell New Road, S.E.

Midland Branch: Boston and Spalding Division.—A meeting of this Division will be held on Tuesday, March 26th, at the Red Lion Hotel, Strait Bargate, at 3.30 o'clock. Agenda: (1) Paper by W. H. B. Brook, M.D., F.R.C.S., of Lincoln, entitled, The Diagnosis and Treatment of Appendicitis; (2) Alterations in the Division; (3) Future Meetings; (4) any other business.—A. E. Wilson, Honorary Secretary, Boston.

North Wales Branch: Joint Meeting.—A joint meeting of the Lancashire and Cheshire and the North Wales Branches will be held at Chester on Wednesday, April 10th. Members having papers to read, cases to communicate, or specimens to show, will kindly notify the Honorary Secretary before March 30th. A programme of the arrangements will be issued later.—H. Jones Roberts, Llywenarth, Penygroes, Honorary Secretary.

South Eastern of Ireland Branch.—A meeting of this Branch will be held at the Adelphi Hotel, Waterford, on April 3rd, at 2 o'clock. Agenda: (1) Minutes. (2) Correspondence. (3) Nomination of Office-bearers for the year. (4) Paper on Morphomania. (5) Discussion on Pneumonia. (6) Any other business.—J. Quirke, Piltown, co. Kilkenny, Honorary Secretary.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

Deputy Inspector-General R. Bentham has been placed on the retired list, with the rank of Inspector-General, March 17th. His commissions were thus dated: Surgeon, March 31st, 1874; Staff Surgeon, March 31st, 1886; Fleet Surgeon, August 28th, 1891; and Deputy Inspector-General, September 2nd, 1901. In 1895, while Staff Surgeon of the *Curlew*, on the Australian Station, he received the expressions of their Lordships' satisfaction at receiving the very favourable report of his professional services on the occasion of the bursting [illegible] on board that vessel.

The following appointments have been made at the Admiralty: Lieutenant-Colonel J. Bruce Low, Surgeon, Indian Medical Service, additional, to be lent to Portland Hospital, March 16th. Thomas C. Merkle, Fleet Surgeon, and Frederick C. B. Collings, Staff Surgeon, to the *Naval*, on commissioning, undated. Gerald C. Cross, Surgeon, to the *Blake*, additional, for Sheerness Dockyard, undated. Archibald D. Spalding, Surgeon, to the *Victory*, additional, for the *Excellent*, undated. Charles E. C. Stanford, Surgeon, to the *Argonaut*, and on

recommissioning, March 14th; JOHN E. H. PHILLIPS, Staff Surgeon, to the *Victory*, additional, to be lent to Haslar Hospital, March 15th.

ARMY STAFF.

LIEUTENANT-COLONEL W. BABTIE, V.C., C.M.G., M.B., Royal Army Medical Corps, to be Inspector of Medical Services, March 12th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL W. DUGDALE retires on retired pay, March 16th. He was appointed Surgeon, July 31st, 1880 Surgeon-Major, July 31st, 1892; and Lieutenant-Colonel, July 31st, 1900. He served in the Boer war in 1881.

Lieutenant-Colonel G. SCOTT, M.B., retires on retired pay, March 20th He joined the department as Surgeon, July 28th, 1886, was made Major, July 28th, 1898, and Lieutenant-Colonel, July 28th, 1906. He served in the Burmese campaign in 1887-9, receiving the frontier medal with clasp.

Captain E. J. S. ARCHER, M.B., has been selected for appointment as Specialist in Operative Surgery at Belfast.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL D. W. SCOTLAND, M.B., Bengal, has been permitted to retire from the service from March 26th. He was appointed Assistant Surgeon, September 30th, 1886, and became Lieutenant-Colonel, September 30th, 1906

Lieutenant-Colonel E. P. YOUNGERMAN, Madras, has retired from the service, March 2nd. He was appointed Assistant Surgeon, October 1st, 1881, and became Lieutenant-Colonel, October 1st, 1901. He was with the Burmese expedition in 1885-6, receiving a medal with clasp.

The retirement from the service is also announced of Captain H. B. LEARD, M.B., of the Bengal Establishment, dated March 15th. He joined the department as Surgeon-Captain, March 31st, 1890, and went on half-pay, March 15th, 1901. His war record includes: The second Miranzai expedition, 1891 (medal with clasp); the Hunza Nagar expedition, 1891-2 (mentioned in dispatches, clasp); and with the Central Relief Force in 1895 as Principal Medical Officer, including the action of Nilab (mentioned in dispatches, medal with clasp).

CHANGES OF STATIONS.

The following changes of stations amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during February:

		FROM	TO
Lieut.-Col.	J. Battersby, M.B. ...	Chester ...	Secunderabad.
,,	H. L. Battersby	Ranikhet ...	Hounslow.
,,	R. Kirkpatrick, M.D., C.M.G.	Lichfield ...	Chester.
,,	M. O'D. Braddell, M.B. ...	Woolwich ...	Golden Hill.
,,	C. L. Josling	Hong Kong ...	London Dist.
,,	C. S. Sparkes ...	,, ...	Aldershot
,,	E. Eckersley, M.B. ...	Simla	London Dist.
Major	J. Ritchie, M.B.	Straits Settlements	E. Command.
,,	C. W. Reilly	Dublin	India.
,,	A. L. Bourdaille, M.B. ...	Chester ...	Ashton.
	E. McK. Williams ...	Shorncliffe	Straits Settlements.
	H. P. Johnston ...	S. Command ...	Devonport
,,	J. Hennessy, M.B.	Kildare ...	Secunderabad.
	C. F. Sammon	Jamaica ...	E. Command
,,	T. H. J. C. Goodwin, D.S.O. ...	R.M. Academy	India.
Captain	H. L. W. Norrington... ...	Chester ...	Manchester.
	S. de C. O'Grady, M.B. ...	Kilkenny ...	Dublin.
	N. H. Ross, M.B.	Colchester ...	W. Africa
	G. J. S. Archer, M.B. ...	Dublin	Belfast.
	J. S. Gallie	Bordon ...	India.
	A. R. O'Flaherty	Sangor	E. Command
,,	H. B. G. Walton	York	Pontefract
	A. L. Scott	S. Command...	Portland
	R. H. Lloyd	Peebshill ...	Edinburgh.
	N. J. C. Rutherford, M.B. ...	E. Command...	Dover.
	F. A. [illegible]	,,	Shorncliffe.
	V. J. Crawford	Glasgow ...	Edinburgh.
	E. E. Ellery	S. Command ...	Devonport
	J. H. R. Bond	York	Strensall
	E. W. Soberry	Aldershot ...	Bordon.
	C. E. Dean	York	Newcastle on Tyne.
	W. J. P. Adye Curran ...	S. Command ...	Tidworth.
	J. G. Foster, M.B. ...	Belfast ...	Londonderry
	J. C. [illegible], M.B. ...	York	Lichfield
	E. P. Sewell, M.B.	Millbank ...	London Dist.
	B. S. Bartlett	E. Command...	Colchester.
	J. M. [illegible], M.B. ...	Edinburgh ...	Maryhill
	J. Dunbar, M.B.	Fermoy ...	Tipperary
	F. Bennett	E. Command ...	Portsmouth
	A. E. [illegible]	Secunderabad ...	Aldershot
	P. C. [illegible]	Newcastle ...	S. Command
	R. L. Fegan, M.B.	Curragh ...	Dublin.
	W. J. Walker	Bermuda ...	Jersey
	T. E. [illegible], M.B. ...	Gosport ...	Dublin
	A. A. [illegible]	E. Command ...	Chatham
	J. L. [illegible], M.B. ...	[illegible] ...	Shorncliffe
	J. S. Rochford, M.B. ...	Egypt ...	S. Command
	F. W. [illegible], M.B. ...	Edinburgh ...	Portsmouth
	A. J. [illegible]	Dublin	Kildare
	A. M. [illegible]	[illegible] ...	Kinsale
	J. E. [illegible], M.B. ...	Aldershot ...	Royal Pavilion
[illegible]	and O. [illegible], M.B. ...	Wynberg, Cape Colony ...	Maritzburg, Cape Colony
	P. J. [illegible]	Victoria ...	Middelburg, Transvaal
	C. F. [illegible]	Egypt ...	Colchester
	R. C. [illegible]	Colchester ...	Egypt
	O. W. C. Hayes	Campbellpore ...	S. Command.
	F. C. T. [illegible], M.B. ...	[illegible] ...	Colchester
	J. H. [illegible], M.B. ...	[illegible] ...	Egypt
	M. [illegible]	[illegible] ...	Ireland
	F. S. [illegible]	[illegible] ...	Aldershot
	A. [illegible], M.B. ...	[illegible] ...	Netley
	W. R. Galwey, M.B. ...	Ballincollig ...	Queenstown.
	J. [illegible], M.B. ...	Belfast ...	Dundalk
	A. [illegible]	E. Command ...	Aldershot
	C. B. M. Sharpe, M.B. ...	Cork	Queenstown

		FROM	TO
Lieutenant	G. B. Edwards	Portsmouth ...	Gosport.
,,	T. W. O. Sexton	London Dist....	Millbank.
,,	R. W. D. Leslie	E. Command...	Dover.
,,	J. R. Foster	,,	Woolwich.
,,	A. M. Benett	S. Command ...	Portsmouth.
,,	G. P. A. Bracken	Dublin	Cork.
,,	F. L. Bradish	,,	,,
,,	H. L. Howell	E. Command...	Woolwich.
,,	E. C. Phelan, M.B. ...	,,	Shorncliffe.

Major G. A. Wade, retired pay, has been placed in medical charge of troops at Hornchurch.

Lieutenant-Colonel L. A. Irving, retired pay, has relinquished the medical charge of troops, London.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,507 births and 5,476 deaths were registered during the week ending Saturday last, March 16th. The annual rate of mortality in these towns, which had been 18·4 and 18·2 per 1,000 in the two preceding weeks, further declined to 17·8 per 1,000 last week. The rates in the several towns ranged from 6·4 in Hornsey, 8·8 in Burton-on-Trent, 10·7 in Coventry, 11·0 in Northampton, 11·1 in Handsworth (Staffs.), 11·5 in Leyton, 11·7 in Wallasey, and 11·8 in Croydon and in Barrow-in-Furness to 22·3 in Norwich, 22·8 in Manchester, 22·9 in Grimsby, 23·3 in Portsmouth, 23·4 in Sunderland, 23·8 in Birkenhead, 24·2 in Huddersfield, and 26·5 in Plymouth. In London the rate of mortality was 18·6 per 1,000, while it averaged 17·5 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·5 per 1,000 in the seventy-six large towns; in London, also, this death-rate was equal to 1·5 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3·6 in Middlesbrough, 3·8 in East Ham and in Leyton, 4·5 in West Bromwich, 5·3 in Portsmouth and in Birkenhead, 7·0 in Hanley and 8·5 in St. Helens. Measles caused a death-rate of 1·4 in West Ham, 1·5 in Middlesbrough, 2·1 in Leyton, 2·2 in Grimsby, 3·1 in Hanley, 3·4 in East Ham, 4·3 in Portsmouth, 4·4 in Birkenhead, 4·5 in West Bromwich, and 6·8 in St. Helens; scarlet fever of 1·3 in Hanley; diphtheria of 1·6 in Hanley and 1·7 in Barrow-in-Furness; whooping-cough of 1·2 in Nottingham and in Rhondda and 1·3 in Tottenham; and "fever" of 1·1 in Walsall and 1·3 in Norwich. No fatal case of small-pox was registered last week in any of these towns, and no small-pox patients were under treatment last week in the Metropolitan Asylums Hospitals. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2,878 at the end of each of the two preceding weeks, had declined to 2,826 at the end of last week; 527 new cases were admitted during the week, against 322, 326 and 306 in the three preceding weeks.

HEATH OF SCOTTISH TOWNS.

During the week ending Saturday last, March 16th, 901 births and 512 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18·8, 20·3, and 20·6 per 1,000 in the three preceding weeks, was 20·5 per 1,000 last week, and was 2·7 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 13·2 in Dundee and 17·9 in Aberdeen to 21·0 in Perth and 23·5 in Glasgow. The death-rate from the principal infectious diseases averaged 2·9 per 1,000 in these towns, the highest rates being recorded in Glasgow and Greenock. The 381 deaths registered in Glasgow included 3 which were referred to diphtheria, 22 to whooping-cough, 2 to "fever," 9 to diarrhœa, and 33 to cerebro-spinal meningitis. Four fatal cases of measles, 3 of whooping-cough, 2 of diarrhœa, and 2 of cerebro-spinal meningitis were recorded in Edinburgh; 4 of whooping-cough in Aberdeen; and 2 of cerebro-spinal meningitis in Leith, 2 in Greenock, and 1 in Paisley.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, March 9th, 551 births and 445 deaths were registered in six of the principal Irish towns as against 537 births and 486 deaths in the preceding period. The annual death-rate in these towns, which had been 28·08, 28·1, and 24·9 per 1,000 in the three preceding weeks, fell to 24·6 per 1,000 in the week under notice, this rate being 6·4 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 20·9 in Londonderry and 21·9 in Limerick to 26·7 in Londonderry and 28·2 in Waterford. The zymotic death-rate in the same six Irish towns averaged 0·9 per 1,000, or 0·1 per 1,000 higher than during the preceding period, the highest figure—1·9—being recorded in Waterford while Londonderry and Limerick registered no deaths under this heading at all.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRMINGHAM UNIVERSITY. Junior Demonstrator in Anatomy. Stipend, £75 per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY. (1) Senior House Surgeon. (2) Junior House Surgeon. Salary £110 and £70 per annum respectively.

BRISTOL EYE HOSPITAL. House Surgeon. Salary, £80 per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—Assistant Surgeon.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E. House Physician (male). Salary at the rate of £50 per annum.

CORNWALL COUNTY ASYLUM, Bodmin.—Third Assistant Medical Officer. Salary £140, rising to £160, per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

DERBY BOROUGH ASYLUM.—Assistant Medical Officer. Salary, £120 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant to the Resident Medical Officer. Salary at the rate of £80 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—Clinical Assistants in Out-patients' Department.

EXETER: ROYAL DEVON AND EXETER HOSPITAL (1) House-Surgeon. (2) Male Assistant House-Surgeon. Salary, £120 and £60 per annum respectively.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Resident House-Physicians. Honorarium, £25 each for six months.

LEEDS: GENERAL INFIRMARY.—Resident Casualty Officer. Salary, £125 per annum.

LEEDS PUBLIC DISPENSARY.—Two Junior Resident Medical Officers. Salary, £100 per annum.

LEICESTER: LEICESTERSHIRE AND RUTLAND ASYLUM.—Second Assistant Medical Officer. Salary £130, rising to £160, per annum.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Grafton Street, W.—Three Senior Clinical Assistants.

NOTTINGHAM CHILDREN'S HOSPITAL.—Lady House-Surgeon. Salary at the rate of £80 per annum.

ROYAL EAR HOSPITAL, Dean Street, W.—House-Surgeon. Honorarium at the rate of £40 per annum.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Refraction Assistant. Salary, £25 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

SHEFFIELD UNION HOSPITAL.—(1) Resident Medical Officer. (2) Resident Assistant Medical Officer. Salary, £100 and £80 per annum respectively.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—(1) House-Surgeon; (2) Junior House-Surgeon. Salary, £100 and £60 per annum respectively.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House-Surgeon. Salary, £75 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £82 per annum.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary, £80 per annum.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum.

TOTTENHAM HOSPITAL.—Honorary Medical and Surgical Registrars.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—Resident House-Surgeon. Salary, £120 per annum.

WREXHAM INFIRMARY.—Resident Medical Officer. Salary, £80 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Bourne, co. Lincoln; Inistigoe, co. Kilkenny; Stanmore, co. Middlesex.

APPOINTMENTS.

BRIDE, T. M., M.B., Ch.B.Vict., Junior Resident Medical Officer to the Manchester Children's Hospital, Pendlebury.

CAREY-EVANS, Thomas J., M.D.Brux., M.R.C.S., L.R.C.P.Lond., House-Surgeon, Royal Southern Hospital, Liverpool.

CHEYNEY, G. H., M.R.C.S., L.R.C.P., District Medical Officer of the Henley Union.

COLEMAN, F., M.R.C.S., L.R.C.P., L.D.S.Eng., Assistant Dental Surgeon, St. Bartholomew's Hospital.

COOKE, T. A. B., M.R.C.S., L.R.C.P., District Medical Officer of the Pembroke Union.

FARRAR, W. W., M.B., Ch.B.Glas., Medical Officer of Health, Misterton Rural District.

HEDGES, C. E., M.D.Camb., District Medical Officer of the Uckfield Union.

JOHNSON, J. B., M.D., C.M.Montreal, L.S.A., District Medical Officer of the Sturminster Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BEATH.—On the 8th March, at Barnard House, Bath, the wife of David Leslie Beath, M.R.C.S., L.R.C.P., a son.

WELSH.—March 15th, 1907, at Ramsgate Villa, Tarvin Road, Chester, the wife of John Welsh, M.R.C.S., L.R.C.P., F.C.S., etc., of a daughter.

MARRIAGE.

MITCHELL—THOMAS.—On March 9th, at the Parish Church, Weybridge, Annie Gladys, eldest daughter of J. Edwin Thomas, Esq., of Adelaide, South Australia, to Charles Martin Mitchell, M.R.C.S.Eng., L.R.C.P.Lond., of Oakfield, Sydney, Glos.

DEATHS.

GARTON.—March 13th, at Hurst Lodge, Wellington Road S., Hounslow, Middlesex, William Garton, M.D.Edin., F.R.C.S.Eng., of diabetes, aged 57 years. Formerly of St. Helens, Lancashire.

GREEN.—On the 20th of February, at Artel House, Keeth, Yorks, Eva, wife of Howard Green, Esq., M.R.C.S.

MCCONAGHEY.—On the 18th, at "Moorlands," Cyprus Road, Exmouth, in his 58th year, Colonel John McConaghey, late of I.M.S. Indian papers please copy.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Papers:—Mr. Lawrence Jones: The Operative Treatment of Ascites. Dr. W. Ironside Bruce: Relation between Sciatica and Hip-joint Disease.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 20, Hanover Square, W., 8 p.m.—Dr. J. W. Pare: A New Local Anaesthetic. Mr. J. G. Turner: Hereditary Hypoplasia of Enamel. Dr. Charles Stewart: Demonstration on some Dental Specimens from the Hunterian Museum.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., at 8.30 p.m.—Mr. J. Hutchinson, jun.: (1) Case of Recovery after Operation for Simultaneous (*a*) Acute Obstruction by Band formed of Vermiform Appendix and Omentum, with (*b*) General Septic Peritonitis: (2) Series of Drawings and Radiographs to illustrate certain Dislocations and Fractures of the Thumb and Great Toe; (3) On Volvulus of the Entire Small Intestine, Caecum, and Ascending Colon, Operation and Recovery; with an analysis of nine other cases of complete volvulus. (With Microscopic and Epidiascope Demonstration.)

THERAPEUTICAL SOCIETY, at the Apothecaries' Hall, Blackfriars, E.C., 4.30 p.m.—Papers:—Dr. W. E. Dixon: How Drugs Produce their Effects. Dr. Nestor Tirard: Opium in the Treatment of Pneumonia.

WEDNESDAY.

HUNTERIAN SOCIETY.—Clinical Meeting at Poplar Hospital, Blackwall, E., at 4 p.m.—Cases can be seen at 3.30 p.m.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Wednesday, 5 p.m.: Pharynx.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m.: Pulmonary Tuberculosis in Childhood and Infancy.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.—Clinics: Monday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Throat, Nose, and Ear, 4 p.m. Tuesday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Diseases of the Skin, 4 p.m. Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30. Out-patient Demonstrations: Medical and Surgical, 10 a.m. daily; Ears and Throats, noon, Monday and Thursday; Eyes, 11 a.m., Wednesday and Saturday; Skin, noon, Tuesday and Friday.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m.:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, College closes.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the clinics and demonstrations for next week:—Monday, 10 a.m., Surgical (Out-patient). 2.30 p.m.: Medical, Throat, Nose and Ear, *X* Rays. Tuesday, 10.30 a.m.: Medical (Out-patient). 2.30 p.m.: Operations; Surgical and Gynaecological (Out-patient) Wednesday, 2.30 p.m., Medical, Skin, Eye (Out-patient). Thursday, 2.30 p.m.: Gynaecological Operations; Medical, Surgical (Out-patient); *X* Rays; 3 p.m., Medical (In-patient). 4.30 p.m.: Demonstration: Clinical Examination of the Urine. Friday, 9.30 a.m.: Surgical (Out-patient); 2.30 p.m., Operations; Medical, Eye (Out-patient); 3 p.m., Medical (In-patient).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following arrangements have been made for next week:—Daily, 2 p.m.: Medical and Surgical Clinics, *X* Rays. 2.30 p.m.: Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear; 2.30 p.m.: Diseases of the Skin. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday, 2.30 p.m.: Diseases of Women.

BOOKS, ETC., RECEIVED.

Green's Encyclopaedia and Dictionary of Medicine and Surgery. Vol. III. Earth burial to Gummi indicum. Edinburgh and London: W. Green and Sons.

English Men of Science. Edited by J. R. Green, D.Sc. Thomas H. Huxley. By J. R. Ainsworth Davis, M.A. London: J. M. Dent and Co.: New York: E. P. Dutton and Co. 1907. 2s. 6d.

Opuscula selecta Neerlandicorum de Arte Medica Fasciculus Primus. Amsterdam: F. van Rossen. 1907.

The Higher Medicine. By J. S. Hooker, M.D., etc. London: The Celtic Press. 1907. 5s.

Insanity Cured by a New Treatment. By C. W. Suckling, M.D.Lond. Birmingham: Cornish Bros., Ltd. 1907. 2s.

London: Oxford University Press. The World's Classics:

CXVIII. Horae Subsecivae. By Dr. J. Brown. 1s.

CXXII. Mrs. Caudle's Curtain Lectures and other Stories and Essays. By D. Jerrold. 1s.

St. Bartholomew's Hospital Reports. Edited by A. E. Garrod, M.D., and W. McA. Eccles, M.S., F.R.C.S. Vol. xlii. London: Smith, Elder, and Co. 1907.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MARCH.	
24 Sunday ...	
25 MONDAY ...	LONDON: Ethical Emergency Sub-committee, 2 p.m.
26 TUESDAY ...	LONDON: Public Health Committee, 3.15 p.m. BOSTON AND SPALDING DIVISION, *Midland Branch*, Red Lion Hotel, Strait Bargate, 3.30 p.m.
27 WEDNESDAY	LONDON: Medico-Political Committee, 2.30 p.m. BATH AND BRISTOL BRANCH, Bristol. LAMBETH DIVISION, *Metropolitan Counties Branch*, Lambeth Carlton Club, Coldharbour Lane, S.W. (near Brixton Station), 8.45 p.m. LIVERPOOL (NORTHERN) DIVISION, *Lancashire and Cheshire Branch*, Medical Institution, 114, Mount Pleasant, 3.30 p.m.
28 THURSDAY...	
29 FRIDAY ...	*Good Friday.*
30 SATURDAY ...	
31 Sunday ...	
APRIL.	
1 MONDAY ...	*Bank Holiday.*
2 TUESDAY ...	
3 WEDNESDAY	SOUTH-EASTERN OF IRELAND BRANCH, Adelphi Hotel, Waterford, 2 p.m.
4 THURSDAY...	LONDON: Hospitals Committee, 2.30 p.m.
5 FRIDAY ...	LONDON: Central Ethical Committee, 2 p.m. SCOTTISH PART DIVISION, *Border Counties Branch*, Dumfries. SOUTH-EASTERN COUNTIES DIVISION, *Edinburgh Branch*, King's Arms Hotel, Melrose, 3 p.m.
6 SATURDAY...	
7 Sunday ...	
8 MONDAY ...	

Date.	Meetings to be Held.
APRIL *(Continued).*	
9 TUESDAY ...	LONDON: Organization Committee, 11 a.m. LONDON: Special Finance Inquiry Committee 3 p.m. EAST ANGLIAN BRANCH, White Hart Hotel, Witham.
10 WEDNESDAY	LONDON: Journal and Finance Committee, 3 p.m. NORTH WALES AND LANCASHIRE AND CHESHIRE BRANCHES, Joint Meeting, Chester.
11 THURSDAY...	SOUTH WALES AND MONMOUTHSHIRE BRANCH, Swansea.
12 FRIDAY ...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch.* WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Conjoint Meeting with Wimbledon and District Medical Society, Worple Hall, Wimbledon, 9 p.m.
13 SATURDAY...	
14 Sunday ...	
15 MONDAY ...	
16 TUESDAY ...	
17 WEDNESDAY	CENTRAL COUNCIL, Board Room of the Metropolitan Asylums Board, Victoria Embankment, 2 p.m. NORTHWICH DIVISION, *Lancashire and Cheshire Branch*, Greenbank, Northwich, 5 p.m.
18 THURSDAY...	CITY DIVISION, *Metropolitan Counties Branch*, Conjoint Meeting with Walthamstow Division, Brooke House, Upper Clapton, 8.30 p.m.
19 FRIDAY ...	
20 SATURDAY...	
21 Sunday ...	
22 MONDAY ...	
23 TUESDAY ...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is duly registered or possesses such medical qualifications as shall, subject to the Regulations, be approved by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member who has ceased to be a Member shall be deemed to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election by written addressed to the Association, and stating his agreement to conform to the Regulations and Bye-laws of the Association and the Rules of such Division and Branch to which he may at any time belong and to pay his Subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 12s. 0d. for abroad.

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SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 30TH, 1907.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

CAMBRIDGE AND HUNTINGDON BRANCH.

A MEETING of the Branch was held on Friday, March 8th, at the University Arms Hotel, Cambridge, Dr. KIRKWOOD in the chair.

Luncheon.—Previous to the meeting the members lunched together.

Medical Inspection of School Children.—The first subject considered was that of the medical inspection of school children. Seeing that there was no specific information as to the nature and scope of the proposed examination, it was decided, on the proposal of Dr. ROGERS, seconded by Dr. MALDEN, to consider the subject under two heads—namely, (*a*) on the lines that each child is to be separately and thoroughly examined; (*b*) with the idea that only obviously defective children are to be reported on. A general discussion then took place, in which many members took part. Dr. FORBES proposed that the work could best be undertaken by the medical officer of health. This was not seconded. Dr. DALTON proposed:

> That in all districts where the education authority and the public health authority are the same body the duty should be left to the medical officer of health with such assistance as may be provided by the authority.

This was seconded by Dr. FORDYCE, but was ultimately not carried. Dr. GRIFFITHS then proposed:

> That the duty of inspecting the physical condition of school children should be placed in the hands of men who are actually engaged in the practice of medicine and surgery.

This was seconded by Mr. APTHORPE WEBB and carried. It was further resolved that, in the case of large boroughs, the officer when appointed should devote his whole time to the special work, and should be properly remunerated. It was resolved that the same conditions should apply in the cases (*a*) and (*b*). With respect to country districts it was resolved that it was desirable that the work be distributed among those general practitioners of the district who are prepared to undertake a proportion of the duty, unless a whole-time officer was appointed for large districts.

The meeting was unanimously of opinion that the Branch should endeavour to secure a representation on the Council of the Association to represent the Branch solely.

LANCASHIRE AND CHESHIRE BRANCH:
MANCHESTER (SOUTH) DIVISION.

Manchester Eye and Ear Hospital.

WITH regard to a paragraph in the report of a meeting of this Division held on February 5th, we have received the following communication, the publication of which has been accidentally delayed:

The Manchester Eye and Ear Hospital was conducted by the late Dr. David McKeown, with a lay committee, at 25, St. John Street, for nearly twenty years. There is a body of trustees, who hold funds given specifically to this hospital for the treatment of persons suffering from diseases of the eye and ear. Dr. McKeown died recently, and as the funds must be utilized for the purpose for which they were given, the trustees decided that the hospital should be carried on in the same manner as the other public hospitals of Manchester. They advertised in the BRITISH MEDICAL JOURNAL and *Lancet* for an honorary medical staff, and have since elected two honorary aural surgeons and two honorary ophthalmic surgeons, who, before appointment, were assured by the trustees that certain specified conditions would be fulfilled. These conditions refer to the conduct of the hospital as a public charity, with properly audited accounts, and the publication of a balance sheet and report of the year's work at the annual general meeting of the hospital. This is also required annually by the Charity Commissioners. Under this agreement the following gentlemen have been appointed to the honorary medical staff: Griffith Apthomas, M.B., C.M.Edin., honorary ophthalmic surgeon; Mr. G. Aubrey Jelley, F.R.C.S.Edin., honorary ophthalmic surgeon; Mr. J. A Knowles Renshaw, M.A., M.D., B.C.Camb., honorary aura surgeon; and Mr. F. H. Westmacott, B.Sc.Vict., F.R.C.S.Eng.' honorary aural surgeon. In addition, a medical officer and anaesthetist will be appointed to assist the honorary staff. The work of the hospital amply justifies its existence; the record for 1906 shows that the 12 beds available for patients were almost continuously occupied throughout the year, while the out-patient department had an attendance of 20,613, which included 2,654 new cases. The accounts of the hospital are now being audited, and a provisional committee of prominent local gentlemen is being formed. As soon as this work is completed a public meeting will be held to announce the new constitution of the hospital. The date of this meeting will be notified in the public press. As it is intended to establish e system of post-graduate clinical instruction, medical men are invited to visit the hospital at any time during the hours of attendance of the staff. Special courses of instruction will be arranged.

J. D. SUTCLIFFE,
Honorary Treasurer and Chairman *pro tem.*,
FRED. H. WESTMACOTT,
Chairman Medical Board.

METROPOLITAN COUNTIES BRANCH:
HAMPSTEAD DIVISION.

A MEETING of this Division was held on Friday, March 8th, at 8.30 p.m., at the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. MACEVOY in the chair.

Minutes.—The minutes of the meetings of January 7th and 11th were taken as read.

Death of Drs. Strange and Macfadyen.—The CHAIRMAN reported with deep regret the death of Dr. Strange, who

was Chairman of the Division for the 1904–5 session, and had continued to take an active interest in the affairs of the Division up to a short time before his death. He was the founder of the Hampstead Hospital. The Chairman had sent, on behalf of the Division, a letter of condolence to Mrs. Strange, and Dr. Ford Anderson had provided a wreath on behalf of the Committee. Several members of the Committee attended the funeral. The Chairman also referred to the death of Dr. Allan Macfadyen and the meeting directed the Honorary Secretary to send a letter of condolence to his widow on behalf of the Division.

Hampstead Hospital.—The Chairman said that a short report was to have been presented on this subject at the meeting, but the Committee thought it desirable to postpone it. The meeting agreed to postponement for the present.

Branch Council Election.—Dr. Oppenheimer proposed that the Division should nominate Dr. Ford Anderson as President-elect for the 1907-8 session. Seconded by Mr. Humphreys. Carried unanimously.—Dr. Oppenheimer proposed that Mr. H. W. Armit should be nominated as one of the Vice-Chairmen. Seconded by Mr. Humphreys. Carried unanimously.—Dr. Ford Anderson thanked the meeting for their nomination.

Questions.—Mr. Humphreys asked why the Secretaries of the Branch should both be consultants. He thought it would be better to have one a general practitioner. The Chairman disallowed any resolution on this point, as it was not on the agenda.

Paper.—Dr. Montague Murray then read a paper on acute pneumonia in children, illustrated with diagrams and statistics of cases. He referred to the extreme importance of the respiration-rate in prognosis, and the great difficulty in classifying these cases clinically. In treatment he was strongly opposed to steam tents. He found alcohol of use in some cases, especially about the time of crisis. A discussion followed, in which Drs. Macevoy, Anderson, Sharman, and Humphreys took part.

Vote of Thanks.—The Chairman proposed a hearty vote of thanks to the lecturer, which was seconded and carried with acclamation.

Medical Inspection of School Children. With regard to the questions submitted to Divisions on this subject (see British Medical Journal, Supplement, February 16th, 1907), the Committee reported in favour of (1*c*) (that is, distribution of the work among general practitioners of the district. Dr. Oppenheimer proposed, Dr. Anderson seconded, the adoption of (1*c*) by the Division. Miss Dobbie opposed. She thought that special medical officers should be appointed, on the grounds that special anthropometric work might be necessary; that the work would be irregularly done by general practitioners; that interference with the family doctor might arise. With special officers cases might be referred to their own doctor for treatment. Practitioners accustomed to the work would do it more quickly. Eventually the resolution to adopt (1*c*) was put to the vote and carried. Question (2), adjourned. Question (3), decided that there is no evidence in this Division of the practice referred to. Question (4) became, in consequence, irrelevant.

Kensington Division.

A meeting of the Division was held at the Kensington Town Hall, on Wednesday, March 20th, at 5 p.m.

Paper.—A paper was read by Dr. W. M. Bayliss on the mutual relation of the digestive processes. The paper was illustrated by experiments in test tubes on the action of the various digestive juices.

Vote of Thanks.—Dr. Eastes proposed and Dr. Moorhead seconded, a hearty vote of thanks to Dr. Bayliss.

Branch Council Election.—The following were nominated by the Division as candidates for the offices on the Branch Council for the ensuing year: *President elect*, Mr. Edmund Owen; *Vice-President*, Dr. F. J. Smith; *Representative on the Central Council*, Mr. C. Eastes.

Provident Dispensaries. The report of the Medico-Political Committee on Provident Dispensaries was discussed by Mr. Atkinson, Mr. Spencer, and Dr. Bluett.

Proposed Amendment of By-laws.—Dr. Creighton introduced his proposed amendment to the by-laws, and the nine members then present assented to these amendments being laid before the Representative Meeting.

Stratford Division.

A meeting of the Stratford Division was held on Thursday, February 28th, at the Bow and Bromley Institute, Dr. E. B. Hastings presiding.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Bacteriological Examination of Diphtheria Cases.—The Honorary Secretary read a reply from the Medical Officer of Health for Poplar in reference to the bacteriological examination of cases of diphtheria in school children, and it was resolved to refer the matter to the Executive meeting for further consideration.

Address.—Dr. Peter Horrocks delivered an address on a criticism on certain routine practices in the conduct of normal labour. A free discussion ensued, and on the motion of Dr. Black, seconded by Dr. Beadles, a hearty vote of thanks was given to the lecturer.

A meeting of the Division was held at the Alexandra Hotel, High Street, on Thursday, March 7th. Dr. W. C. Taylor occupied the chair in the absence of Dr. E. B. Hastings on account of illness.

Confirmation of Minutes.—The minutes of the previous meeting were approved.

On the motion of Dr. Cursham Corner, it was resolved that the Honorary Secretary should convey the sympathy of the meeting to Dr. Hastings on his illness.

Address.—Dr. Leonard Guthrie gave a most interesting address on some nervous affections in childhood, in the course of which he gave some very valuable hints as to the management of neurotic children. He was accorded a very hearty vote of thanks for his instructive lecture.

SOUTH-EASTERN BRANCH:

Canterbury and Faversham Division.

An ordinary Divisional meeting was held at the house of Dr. Grayling, "Polveners," Sittingbourne, on Thursday, March 7th.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Annual Meeting.—It was decided to hold the annual meeting in June at Canterbury, and to invite those Divisions comprised in the East Kent district to join. Dr. Reid of Canterbury will preside.

School Attendance Certificates.—The Honorary Secretary brought up a report from the Executive Committee with reference to school-attendance certificates. It was decided to rescind the resolution passed at the meeting held at Faversham on December 13th, 1906, and in its place adopt the following:

> If medical man certifying is in attendance on child, the fee be 1s. If the patient is brought to the surgery and the medical practitioner is not attending, 2s. 6d.; 5s. if a visit in order to certify is required.

Paper.—Dr. Grayling read a paper on refuse destruction in Kent, which was fully discussed by most of the members present.

Vote of Thanks.—A vote of thanks was passed to Dr. Grayling for presiding and his kind hospitality.

Luncheon.—Members were entertained to luncheon prior to the meeting by the Chairman.

Eastbourne Division.

A meeting was held in the Mayor's Parlour, Town Hall, Eastbourne, on Tuesday, March 5th, at 8.30 p.m., Dr. J. Adams, Chairman, presiding.

Confirmation of Minutes. The minutes of the last meeting were read and confirmed.

Medical Inspection of School Children. It was proposed by the Honorary Secretary, seconded by Mr. J. H. Ewart:

> That the medical inspection of school children should be assigned to medical officers specially appointed.

An amendment was proposed by Dr. A. D. Williams, seconded by Dr. F. C. Goodwin, to the following effect:

> That the medical inspection of school children should be distributed amongst those general practitioners of the district who are prepared to undertake a proportion of the duty.

This was lost by 2 to 4 votes. The proposition was then put and carried by 4 to 3 votes. The answer to the question—Is there evidence of prevalence within the Division

area of the practice of teachers sending school children found to be ill, irrespective of their social status, to hospitals, instead of referring them to their family medical attendant?—was unanimously in the negative.

The Ethical Aspects of Medical Consultation.—After a general discussion, no exception was taken to the recommendations of the Central Ethical Committee.

Guildford Division.

A meeting of this Division was held at the Royal Surrey County Hospital on Wednesday, March 20th, at 4.30 p.m., Dr. A. A. Napper being in the chair.

Vote of Condolence.—Reference was made by the Chairman to the loss which had recently been sustained by the Chairman of the Division, Dr. George Fisher, through the death of his son Dr. Charles Fisher, and a hearty vote of sympathy with Dr. Fisher and his family was passed by the meeting.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Matters Referred to Divisions (see Supplement, February 16th).

(*a*) *Medical Inspection of School Children.*—After a discussion it was resolved:

> That in the opinion of the Division the medical officers of health are the most suitable persons to carry out the medical inspection of school children.

This was carried unanimously. In answer to Questions 3 and 4 no evidence of such practice was adduced.

(*b*) *The Ethical Aspects of Medical Consultation.*—A general approval of the recommendations of the Central Ethical Committee on this subject was expressed.

Contract Practice.—The following resolution was passed unanimously:

> That a special meeting of the Division be held in May next to consider the conditions of contract practice in the Division, with a view to the adoption of ethical rules as to its regulation.

Papers, etc.—Dr. F. K. Weaver read notes of some cases of appendicitis, showing the difficulty of early diagnosis, and of deciding as to the question of operative interference. A discussion followed, in which several members took part.—Dr. F. E. Pearse showed a case of purpura with unusual early symptoms, and gave a short history of the case.

Votes of Thanks.—The meeting closed with votes of thanks to the Chairman and to the Hospital Committee.

Dinner.—Several members afterwards dined together.

SOUTH-EASTERN OF IRELAND BRANCH.

The first meeting of the session was held at the Club House, Carlow, on March 6th, at 5.30 p.m. Dr. Mackesy was moved to the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Apologies for Non-attendance.—Three letters of apology were read.

Discussion at Next Meeting.—It was proposed by Dr. McDonald, and seconded by Dr. Carey, that pneumonia be the subject for discussion at the next meeting.

Tea was then served, and the meeting concluded.

SOUTH MIDLAND BRANCH:

Northamptonshire Division.

A meeting of the Northamptonshire Division was held in the Board Room of the General Hospital, Northampton, on March 19th, Mr. C. J. Evans in the chair. Mr. Cropley, Chairman, sent an apology for being unable to be present.

Confirmation of Minutes.—The minutes were read and confirmed.

Annual Report.—The annual report and statement of accounts was presented. The Division showed a membership of 107, against 94 last year.

Medical Inspection of School Children.—The question of the medical inspection of school children referred to the Division was then discussed. On the proposition of Dr. Larking (Bucks), seconded by Dr. Greenfield (Rushden), the following motion was carried:

> When the Bill becomes law the method of the examination of the school children shall be a matter of arrangement between the local education authority and the Divisions of the British Medical Association.

Six voted for the proposition; none against.

Consultations.—The consideration of the report of the Ethical Committee on Consultations was deferred.

Paper.—Mr. N. B. Odgers read a paper entitled, Some Points on Adenoids and their Treatment, which was discussed by Dr. Stone, Dr. Milligan, Dr. Larking, Dr. Greenfield, Mr. Percival, and Mr. Evans.

SOUTH-WESTERN BRANCH:

Plymouth Division.

A meeting was held at the rooms of the Plymouth Medical Society on March 5th, at 4.30 p.m., Dr. E. L. Fox in the chair.

Medical Inspection of School Children.—After consideration of this matter, the opinion expressed was that the duty should be distributed among those general practitioners of the district who are prepared to undertake a proportion. The meeting considered that there was no evidence of the prevalence within the Division area of the practice of teachers sending children found to be ill to hospital, irrespective of their social status, instead of to their family medical attendant.

Ethics of Medical Consultation.—The recommendations of the Ethical Committee were approved.

YORKSHIRE BRANCH:

Bradford Division.

A special general meeting of this Division was held at the Eye and Ear Hospital, Bradford, on Tuesday, March 12th, at 8.30 p.m. Mr. Basil Hall (Chairman) presided.

Confirmation of Minutes.—The minutes of the last meeting were read and adopted.

Emergency Cases among School Children.—Dr. Hime moved, and Dr. Berry seconded, the following resolution:

> That in the opinion of this Division of the British Medical Association it is the duty of the Education Authority to provide for the payment of medical men called in by their officials to visit emergency cases amongst children attending their schools, and that a deputation consisting of Drs. Hime, Goyder, Shives, the President, and Secretary be appointed to lay the matter before the Education Authority, the deputation to be convened not later than April 1st.

On being put to the vote the resolution was carried unanimously.

Medical Inspection of School Children.—The specific questions raised in connexion with the medical inspection of school children, as contained in the Supplement for February 16th, 1907, were considered. The matter was discussed by Drs. Crowley, Hime, Goyder, Hall, and Metcalfe. The general feeling appeared to be that it was almost impossible to answer the questions in the form given. It did not appear to be quite clear what the nature of medical inspection should be. The subject was considered a very important one, but it was felt that it should be fully gone into before the Division gave any opinion on the matter. Dr. Metcalfe proposed, and Dr. Hime seconded, that a committee, consisting of the following gentlemen, should be appointed to consider the whole question and report to the Division: Drs. and Messrs. Crowley, Hime, Evans, Willson, Foster (Shipley), Berry and Scatterty (Keighley), and Little. The Committee was also empowered to add to its numbers if thought desirable. This was carried *nem. con.*

A Local Herbal Company.—Dr. Bateson proposed, and Dr. Craig seconded, that the Divisional Ethical Committee be asked to consider the question of a local herbal company giving lectures on pessaries, etc., and see whether some means could not be devised to prevent the dissemination of the untruths with which it was associated. This was carried.

Medical Consultations.—Dr. Bronner proposed, and Dr. Beckton seconded, that the Ethical Committee be asked to consider whether it was allowable to meet certain gentlemen in professional consultation; and, if not, to take steps to make neighbouring Divisions cognizant of the fact. This was carried.

The question of the ethical aspects of medical consultation was postponed for discussion at a subsequent meeting.

The meeting then adjourned.

Association Notices.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IMPORTANT NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library will be closed as from Thursday, March 28th. During the rebuilding, the Temporary Offices of the Association are at Catherine Street, Strand (adjoining the Drury Lane Theatre). At these Offices a Reading and Writing Room will be provided, but will not be available for Members until Monday, April 8th. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

COUNCIL MEETING.

A meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 17th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,

March 14th, 1907. *General Secretary.*

BRANCH AND DIVISION MEETINGS TO BE HELD.

Border Counties Branch: North Cumberland Division.—The next general meeting of the Division will be held at the George Hotel, Penrith, on Friday, April 12th, at 3 p.m. The Secretary will be pleased to hear from any member who will read a paper, show cases or pathological specimens.—Norman MacLaren, Honorary Secretary, 23, Portland Square, Carlisle.

Border Counties Branch: Scottish Part Division.—A meeting of the above Division will be held at the Royal Restaurant, Dumfries, on Friday, April 5th. The relations of medical practitioners to friendly societies, etc., in the Division area will be discussed. The attention of members is drawn to the various recent reports, etc., on contract practice; also to the unanimous resolution of the members of the Branch at the Carlisle meeting on February 15th.—George R. Livingston, Honorary Secretary, Dumfries.

East Anglian Branch.—The spring meeting of the East Anglian Branch will be held at the White Hart Hotel, Witham, on Tuesday, April 9th. Members wishing to read papers or show cases or specimens should communicate with me at once.—B. H. Nicholson, East Lodge, Colchester, Honorary Secretary.

Edinburgh Branch: South-Eastern Counties Division. *(Alteration of Date).*—The spring meeting will be held in the King's Arms Hotel, Melrose, on Friday, April 5th, at 3 o'clock, Dr Young, Chairman, presiding. Business: (1) Medico-legal matters referred to Divisions by the Council; (2) Clinical papers by members. The Secretary will be glad if members intending to contribute will kindly notify him at their earliest convenience.—W. Hall Calvert, Honorary Secretary.

Lancashire and Cheshire Branch: Altrincham Division.—The general (Division) meeting will be held on Wednesday, April 17th, at Greenbank, Northwich, at 5 p.m. The annual (Division) meeting will be held on Thursday, June 6th, at the Board Room of the Hospital, Altrincham, at 5 p.m.—T. W. H. Garstang, Honorary Secretary.

North Wales Branch: Joint Meeting.—A joint meeting of the Lancashire and Cheshire and the North Wales Branches will be held at Chester on Wednesday, April 10th. Members having papers to read, cases to communicate, or specimens to show, will kindly notify the Honorary Secretary before March 30th. A programme of the arrangements will be issued later.—H. Jones Roberts, Llysemarth, Penrhosfeilw, Honorary Secretary.

South-Eastern Counties of Ireland Branch.—A meeting of this Branch will be held at the Adelphi Hotel, Waterford, on April 3rd at 3 o'clock. Agenda: (1) Minutes. (2) Correspondence. (3) Examination of Office-bearers for the year. (4) Paper on Morphinomania. (5) Discussion on Proprietaries. (6) Any other business.—J. Quirke, Pilltown, co. Kilkenny, Honorary Secretary.

Yorkshire Branch: Bradford Division.—A meeting of this Division will be held at the Midland Hotel, Bradford, on Tuesday, April 9th, at 8.30 p.m. An address will be given by Robt. J. Pierce, M.D., F.R.C.P. Lond., Medical Superintendent, The Retreat, York, on the Early Symptoms of Mental Disorder, with some remarks on Prognosis and Treatment, to be followed by a general discussion. At 9.45 the discussion will close, and the meeting will resolve itself into a social gathering, in which it is hoped all the members will take part.—James Metcalfe, Lynthorne Hey, Bradford, and Andrew Little, 114, Manningham Lane, Bradford, Honorary Secretaries.

HOSPITAL REFORM.*

By T. Garrett Horder, L.R.C.P.Edin., M.R.C.S.Eng.,
Cardiff.

The question of hospital reform, or hospital abuse as it is sometimes naturally termed, is a very old question indeed, and I do not think that any useful purpose will be served by recounting what steps have been taken in the past to remedy what is now pretty well generally admitted to be a grave disorder.

It must be apparent to every one who reads the papers that the hospital question is one of the highest importance, and one that has called forth the energies of the highest in the land. No one can possibly overrate the importance of the work done by His Majesty the King, or by His Royal Highness the Prince of Wales in connexion with the hospitals of the metropolis. It may enter into the minds of some of us that it was a pity that King Edward's Fund should have been limited to the hospitals in London. Many of the King's loyal subjects would be disposed to say that the hospitals in the provinces stand in quite as much need of assistance as those in the metropolitan area. And here I am bound to mention the fact that the League of Mercy, which may be rightly termed a very useful auxiliary to the King's Fund, has found it necessary to go considerably outside the metropolitan area for assistance. I know that the hospitals and infirmaries outside the metropolis have received some assistance from the League of Mercy, but I am not in a position to tell you what proportion of the funds raised by that League has been devoted to the extra-metropolitan hospitals.

It being generally admitted by all people who have gone into the subject that hospitals and infirmaries are abused, it now remains for us to discuss the best means of applying a proper remedy for that abuse. The British Medical Association has for some years past been endeavouring to formulate a series of recommendations for the consideration of hospital committees. That the Committee to whom was relegated the study of this question has not been premature or hasty in the conclusion it has arrived at is within my own personal knowledge. Moreover, they (the members of the Committee) have not thought it wise to make recommendations without due and deliberate consultation with laymen who were connected with hospitals in their management, and whose personal knowledge would therefore prove of infinite service to the medical members of the Committee.

The deliberations of the Hospitals Committee have not only dealt with ordinary hospitals, but with cottage hospitals, nursing homes, and provident dispensaries; but it is evident that the question of cottage hospitals and nursing homes is a subject that does not call for much attention. The provident dispensary system is one that is or ought to be intimately connected with the out-patient department of hospitals.

In point of fact, one can easily imagine that a properly-constituted provident dispensary or a public medical service, if thoroughly well equipped, would be the best solution of the difficulty that is found by many of the working classes of providing proper medical attendance for their families. It cannot be denied that there are in all large towns a considerable number of working men who cannot possibly afford to pay the ordinary fees of a medical man. For such persons the idea of paying small sums weekly during health in order to ensure proper medical attendance during sickness ought to commend itself; but somehow or other the provident dispensary system has not caught on. If we take the local instance we will find that whereas the number of out-patients at the Cardiff Infirmary has increased by leaps and bounds, the number of members of the Cardiff Provident Dispensary has remained practically stationary.

I may be wrong, but I cannot help thinking that a properly equipped provident dispensary should have on its staff specialists who would be willing to deal with special diseases in just the same way as they are dealt

* Read at a meeting of the Cardiff Division.

with at a hospital. The question of remuneration to the specialists should be dealt with by the Committee of the dispensary. There should be a special fund set apart for that purpose. I do not think it right that the patients should be called upon to pay an extra fee themselves. We have to recognize the fact that these people have been provident in paying money during their health, and it therefore seems to me that either the subscribers' fund or the ordinary doctor's fund should be called upon to pay for these special services. Of one thing you may be sure, that you will never make provident dispensaries compete with out-patient departments of infirmaries unless you offer the members the same facilities for treatment as exist in the infirmaries. You must recognize the efforts of those persons who are not disposed to accept charitable aid during sickness.

It is hardly incumbent on me to speak of the number of people who frequent hospitals, but I am bound to call your attention to the figures quoted by Sir Henry Burdett at a United Hospitals Conference held in London in December last, under the auspices of the British Medical Association.

The proportion of free out-patients to population in the twelve large towns in the United Kingdom in 1903 was as follows:

In Portsmouth	1 out of 14	people received free medical relief.
In Cardiff ...	1 out of 7.1	,, ,, ,, ,,
In Glasgow ...	1 out of 5.3	,, ,, ,, ,,
In Manchester	1 out of 3.5	,, ,, ,, ,,
In Liverpool ...	1 out of 3.4	,, ,, ,, ,,
In Birmingham	1 out of 3.2	,, ,, ,, ,,
In Brighton ...	1 out of 3.1	,, ,, ,, ,,
In Bristol ...	1 out of 2.9	,, ,, ,, ,,
In Edinburgh...	1 out of 2.8	,, ,, ,, ,,
In London ...	1 out of 2.2	,, ,, ,, ,,
In Newcastle ...	1 out of 1.9	,, ,, ,, ,,
In Dublin ...	1 out of 1.3	,, ,, ,, ,,

These figures are rather startling to any one who has not hitherto studied the question. It may be said, however, that in all large towns a very considerable number of patients who live outside the towns attend the hospitals. I fancy from investigations that I made some few years since it will be found that those towns that possess the greatest number of hospitals figure highest in the proportion of patients to population. That is to say, the more facilities afforded the people the more they avail themselves of them. This fact applies to such towns as London, Edinburgh, Dublin, Bristol, Manchester, Birmingham, and Liverpool, more especially.

But the great and pressing question is, How is this abuse to be remedied? and it is to this subject I must now address myself.

The Joint Committee of the British Medical Association and of the non-medical representatives of Boards of management of hospitals have drawn up a certain number of model principles of hospital management; and it must be admitted by every reasonably-minded person that they are moderate in nature and not difficult to carry into execution.

I do not propose to go into them seriatim, but only to bring before your notice those which seem to be essential to the proper working of institutions which are supported by charitable aid.

I will take the first nine recommendations, and I venture to say that if they could be carried into operation we should hear less of hospital abuse and less of the constant appeals for help from hospital authorities.

It is obvious that No. 5 is the most important of all:

That, except in emergencies sufficient evidence shall be obtained on two points:

(*a*) That the patient is not in a position to pay for adequate treatment.

(*b*) That the case is, from a hospital point of view, suitable for treatment.

It is well known that hospital abuse does not consist only of people obtaining aid who can afford to pay for it privately, but very largely of people who seek relief for trivial ailments—ailments that could easily, speedily, and cheaply be relieved elsewhere.

The universal testimony of hospital men proves that their time is wasted by the number of trivial cases they have to treat in the out-patient rooms. Such crowding of the out-patient department inflicts not only a hardship on the medical officers but on those patients whose cases require exceptional skill and time.

With reference to this overcrowding of out-patient departments, one can hardly absolve altogether from responsibility the medical officers themselves. On their appointment it is only natural that they should wish to make themselves popular with their patients, and to do so they sometimes continue to treat people who do not require continued treatment. At the same time, they (the medical officers) do not make such representation to the managers of the hospitals as would probably lead to some reforms being carried out. When the medical officers have become popular, and when their private practice has increased to such an extent as to make them feel that they cannot afford to spend so much time at the hospitals as they formerly did, you will find that the spirit of reform has entered their breasts, and that they will speak, and speak very openly, of the abuse that exists in their out-patient work.

Private practitioners are also not to be altogether found guiltless of abusing the out-patient department. It has been said, and not without some reason, that general practitioners only send their patients to an infirmary when they find that their (the patient's) means have been exhausted. This has been said so often, and by so many well-known and respected hospital men, that I cannot help feeling that there must be a certain amount of truth in the statement.

If the out patient department were made, as it should be, a consultative department for the medical officers and ordinary practitioners to meet and discuss the treatment of difficult and obscure cases of disease, there is no doubt that much abuse would cease to exist. Whether such a system is ever likely to come into operation I cannot say, but that is the goal which should be striven for, even though the chances of success are rather remote.

What I propose to you to-day is briefly this:

That in every hospital town the Division should meet and invite the hospital managers to join them to confer on the recommendations made by the Hospitals Committee. That as far as is practicable some member of the Hospitals Committee should be present at such conferences. If after such conferences are held it is found that the managers of hospitals are not willing to carry out the recommendations, then the Division should be empowered to call together all the subscribers of the hospitals, and point out to them the sweet reasonableness of the proposals, and ask them to withdraw their support from those hospitals that were not found willing to adopt the recommendations. Provided always that it is laid down in clear language which recommendations are considered essential to the reduction of the abuse.

Moreover, I would strongly urge the absolute necessity of invoking the aid of the lay press on this public question. Much good can be done by a temperate discussion in the columns of a newspaper. And it has been my experience that when a public question of this sort is brought within the arena of the lay press many points can be made by those medical men who are in full possession of the facts of the situation.

CENTRAL MIDWIVES BOARD.

A meeting of the Central Midwives Board was held on March 21st at Caxton House, Westminster, with Dr. F. H. Champneys in the chair.

Training of Midwives in Poor-law Institutions.

The Chairman, in answer to a question put by Mr. Parker Young, stated that on May 9th, 1906, the Board submitted their revised rules to the Privy Council for approval. The Privy Council replied on July 24th, 1906, transmitting certain amendments "deemed necessary" and alterations considered "expedient," transferring the supervision of the course of training in a Poor-law institution from the Central Midwives Board to the Local Government Board. After protracted negotiations and prolonged discussions on certain compromises, the Central Midwives Board on March 8th, 1907, passed a resolution declaring that they were unable to delegate the duties imposed upon them by the Act "to secure the better training of midwives," and regretting that they could not give the Lord President of the Privy Council their assurance of approval of "every Poor-law institution the arrangements of which are certified by the Local Government Board to be satisfactory."

The Removal of Names from the Midwives Roll.

The following letter to the Secretary of the Board was received from the Privy Council:

Referring to your letter inquiring whether the Central Midwives Board has power under the Midwives Act, 1902, to remove the name of a midwife from the Roll for reasons other than misconduct, I am directed by the Lords of the Council to state that the object of the Act being to provide women in childbirth with the attendance of properly-qualified persons, it is, in their Lordships' opinion, clearly part of the duty of the Central Midwives Board in respect of what "may be necessary for the due and proper carrying out of the provisions of the Act" to withdraw certificates from persons who are either too old or infirm, or for any other reason incapable of discharging their functions in the event of application being made to them to that effect.

Midwife Removed from the Roll.

An application was considered from a midwife, Susannah Davies, for the removal of her name from the Roll, on the ground of defective hearing and memory. The Board resolved to grant the application, and directed the Secretary to remove her name from the Roll of Midwives.

Title of Midwife.

A letter from Dr. Niven, Medical Officer of Health, Manchester, was received, reporting a conviction under Section 1 (1) of the Midwives Act, protecting the title of midwife.

Midwives Taking Cases into Their Own Homes.

A letter was considered from Dr. Sidney Barwise, County Medical Officer for Derbyshire, as to the licensing and inspection of certified midwives taking cases into their own homes. The Board resolved to refer the letter to the Act Amendment Committee when formed.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—ALEXANDER L. CHRISTIE, M.B., Fleet Surgeon, and JOHN W. CRAIG, M.B., Staff Surgeon, to the *Hibernia*, March 20th: EDWARD C. WARD, M.D., Fleet Surgeon, and FRANK E. BOLTON, Surgeon, to the *Barfleur*, March 21st: JOHN JENKINS, Fleet Surgeon, and HAROLD G. T. MAJOR, Surgeon, to the *Hood*, March 21st: JOSEPH C. WOOD, Fleet Surgeon, and ROBERT W. G. STEWART, Surgeon, to the *Andromeda*, undated: JOHN C. FERGUSON, M.B., Fleet Surgeon, to the *Ariadne*, March 21st: WILLIAM L. MARTIN, Staff Surgeon, to the *Ganges*, for Shotley Barracks, April 2nd: HUGH S. ELPHINSTON, M.B., Staff Surgeon, to the *Cumberland*, March 20th: ALFRED H. JEREMY, M.B., Staff Surgeon, to the *Cumberland*, March 20th: WILLIAM E. MARSHALL, Staff Surgeon, and EDGAR S. WILKINSON, M.B., Surgeons, to the *Achilles*, on commissioning, undated: ARTHUR W. B. LINDSAY, M.B., Staff Surgeon, to the *Bonaventure*, on commissioning, April 2nd: JOHN MARTIN, Staff Surgeon, to the Royal Marine Depot, Deal, April 27th: LLEWELLYN LINDSE, Surgeon, to the *President*, additional, for short course of study at West London Hospital, April 2nd: FREDERICK M. V. SMITH, Surgeon, to the *Cumberland*, April 2nd: HECTOR A. BROWNING, Surgeon, to the *Penelope*, additional, for the Tropical Diseases Course at March 25th: ARTHUR F. FRASER, M.B., Surgeon, to the *Dreadnought*, April 1st: PERCY E. MAITLAND, Fleet Surgeon, to the *Europa*, April 5th: THOMAS T. JEANS, M.B., Staff Surgeon, to the *Hibernia*, March 21st: HENRY W. GORDON GREEN, Staff Surgeon, to the *Europa*, March 22nd.

ROYAL ARMY MEDICAL CORPS.

THE undermentioned Lieutenants, appointed August 31st, 1906, are promoted Captain [illegible] dated December 29th, 1906: A. C. H. GRAY, M.B.: D. P. WATSON, M.B.: T. S. D. DUNG, I. E. POWELL, F.M.M. O'CONNOR, M.B.: E. H. MACNEAL, M.B.: H. H. J. FOSTER, M.B.: S. L. BARRETT: C. R. SYLVESTER BRADLEY, S. L. LEWIS, M.B.: A. [illegible], M.B.: J. T. McENTIRE, M.B.: N. E. DUNSTERVILLE, P. J. JENNINGS: D. [illegible]: M. E. M. CAMPBELL, M.B.: M. C. MACKENZIE, M.B.: H. C. BUTCHER, F.R.C.S.Edin.: W. MACD. MACKENZIE, R. F. [illegible]: T. F. WELBY, and A. C. OSBORN.

INDIAN MEDICAL SERVICE.

THE following orders have been issued: Captain H. B. LLOYD should be invited to [illegible] the notice of his retirement published [illegible]: Captain [illegible] received thanks of Government [illegible]: the Medical Field Forces and the Tirah expedition, 1897-98: Surgeon-Captain R. H. M. [illegible] has been appointed Special Plague Officer, Mandalay: Captain F. Selby, M.B., R.A.M.C. [illegible].

Captain H. E. M. [illegible], R.A.M.C., has been appointed Specialist in Ophthalmic Surgery and Ophthalmic Surgeon [illegible] Lucknow [illegible]: Captain D. Harvey, M.B., R.A.M.C.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

Surgeon-Lieutenant J. W. HARRISON, 1st Cinque Ports, resigns his commission, March 21st.

VOLUNTEER RIFLES.

The undermentioned Lieutenants [illegible] to be Captains in the 1st Volunteer Battalion the Durham Light Infantry, January 19th: [illegible] to be Second Lieutenants [illegible] Volunteer Battalion the Durham Light Infantry, January 19th.

Surgeon-Captain W. N. EVANS, 19th Middlesex (St. Giles's and St. George's, Bloomsbury) Volunteer Rifle Corps, resigns his commission, February 25th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

HAROLD A. T. FAIRBANK, F.R.C.S.Eng., to be Lieutenant in the London Companies, London District, March 1st.

Vital Statistics.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, March 16th, 493 births and 431 deaths were registered in six of the principal Irish towns, as against 531 births and 443 deaths in the preceding period. The annual death-rate in these towns, which had been 28·1, 24·9, and 24·6 per 1,000 in the three preceding weeks, fell to 23·7 per 1,000 in the week under notice, this figure being 5·9 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 21·4 in Waterford and 22·0 in Belfast to 25·0 in Dublin and 28·1 in Cork. The zymotic death-rate in the same six Irish towns averaged 1·2 per 1,000, or 0·3 per 1,000 higher than during the preceding period, the highest figure—2·7—being recorded in Cork, while Limerick and Waterford registered no death under this heading at all. The deaths at Belfast included 11 returned as cerebro-spinal fever and 9 as cerebro-spinal meningitis.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BEDFORD COUNTY HOSPITAL.—Honorary Assistant Physician.

BIRMINGHAM PARISH WORKHOUSE INFIRMARY.—Assistant Resident Surgical Officer. Salary, £104 per annum.

BIRMINGHAM UNIVERSITY.—Junior Demonstrator in Anatomy. Stipend, £105 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician (male). Salary at the rate of £50 per annum.

CORNWALL COUNTY ASYLUM, Bodmin.—Third Assistant Medical Officer. Salary £140, rising to £160, per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—(1) Assistant Surgeon. (2) Clinical Assistants in Out-patients' Department.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—House-Surgeon. Salary, £120 per annum.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary, £75 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Resident House-Physicians. Honorarium, £25 each for six months.

HOSPITAL FOR WOMEN, Soho Square, W.—Resident Medical Officer. Salary at the rate of £60 per annum.

LEICESTER: LEICESTERSHIRE AND RUTLAND ASYLUM.—Second Assistant Medical Officer. Salary £130, rising to £160, per annum.

LEWES DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary, £120 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon and Anæsthetist. Salary, £60 per annum.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Dental Surgeon.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary, £70 per annum.

PORT ELIZABETH: PROVINCIAL HOSPITAL.—Assistant House-Surgeon. Salary, £25, rising to £30 per annum.

ROYAL EAR HOSPITAL, Dean Street, W.—House Surgeon. Honorarium at the rate of £40 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Clinical Assistants.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon. Salary, £40 per annum.

SEAMEN'S HOSPITAL SOCIETY, Greenwich, S.E.—Two House Physicians and Two House-Surgeons at the Dreadnought. Salary, £40 per annum each Senior House-Surgeon, and House Surgeon at the Branch Hospital, Royal Albert Docks. Salary, £25 and £20 per annum respectively.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House-Surgeon. Salary, £70 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY. Assistant House-Surgeon. Salary, £52 per annum.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum.

THROAT HOSPITAL, Golden Square, W.—Assistant Surgeon.

WALSALL AND DISTRICT HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £90 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Senior House-Surgeon. Salary, £100 per annum.

APPOINTMENTS.

BRUCE, S. T., M.B., B.Ch., B.A.O.R.U.I., Medical Officer in charge of Troops and Recruiting at Burnley.

CAIE, Robert, M.R.C.S.Eng., L.R.C.P.Lond., Medical Officer to the Camberwell Provident Dispensary.

HARRISON, J. H. H., M.R.C.S.Eng., L.R.C.P.Lond., Colonial Surgeon of British Honduras, vice Dr. C. H. Eyles.

HEWKLEY, Frank, M.B., F.R.C.S.Eng., Honorary Surgeon with charge of Ophthalmic Department, St. Pancras and Northern Dispensary.

JEPHCOTT, Charles, M.B., B.C.Camb., Medical Officer to the Hoole Infirmary, Chester.

KINGSCOTE, Ernest, M.B., C.M.Edin., Honorary Physician, St. Pancras and Northern Dispensary.

MACKAY, Ernest C., B.S., M.D., M.R.C.S., L.R.C.P., Honorary Medical Officer to the Convalescent Home of the Chelsea Hospital for Women.

MILNE, R. A., M.B., C.M.Edin., District Medical Officer of the Auckland Union.

NORTHWOOD, G. R., L.S.A., District Medical Officer of the Basford Union.

O'DONOVAN, T. J., L.R.C.P.and S.Edin., Certifying Factory Surgeon for the Johnstown District, co. Cork.

POWELL, Hugh, M.D., M.R.C.S., L.R.C.P., Honorary Medical Officer to the Cheltenham General Hospital Branch Dispensary.

PRICE, B., L.R.C.P. and S.Edin., District Medical Officer of the West Derby Union.

PUGH, W. T. G., M.D.Lond., Medical Superintendent of the Gore Farm Hospital of the Metropolitan Asylums District.

RODGERS, J. W., M.B., Certifying Factory Surgeon for the Dorking District, co. Surrey.

RUSHTON, C. C., M.B., B.Sc.Lond., District Medical Officer of the Macclesfield Union.

ROPER, M. H., M.D., Medical Officer of Health, Shoeburyness Urban District.

SAYRES, A. W. Fortescue, M.D.Brux., M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Lond., Surgeon to the Exeter Dispensary.

SCOTT, H. M., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Enniscrone District, co. Sligo.

SMITH, S. Maynard, M.B., B.S., F.R.C.S., Assistant Surgeon to the Victoria Hospital for Children.

TAYLOR, Frank E., M.D., B.S.Lond., F.R.C.S.Eng., M.R.C.P.Lond., D.P.H.Camb., Physician for Diseases of Women to the North-West London Hospital and to the St. Marylebone General Dispensary.

WIGLESWORTH, T. R., M.D., Medical Officer of Health, Sheppey Rural District and District and Workhouse Medical Officer of the Sheppey Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

MURIEL.—On the 15th inst., at 109, Scotch Street, Whitehaven, the wife of G. Bertram Muriel, M.B., B.C., etc., of a daughter.

MARRIAGES.

GOMES—KIRKBY.—On the 16th inst., at St. Andrew's Church, Wells Street, W., by the Rev. H. A. Cumberlege, M.A.Oxon., Vicar, assisted by the Rev. E. H. Gomes, M.A.Oxon., Sidney Gerald Gomes, F.R.C.S.Edin., to Marian Elizabeth, eldest daughter of the Rev. Laurence Holwell Kirkby, Rector, Aurora, Ontario, Canada, and Mrs. Kirkby, and niece of the late Rev. E. E. W. Kirkby, M.A.Cantab., Vicar of Ware.

PRYTHERCH—THOMAS.—On March 20th, at Criccieth, John R. Prytherch, M.B., Ch.B., M.R.C.S., L.R.C.P., Llangefni, eldest son of Alderman William Prytherch, to Lowri Thomas, B.A., daughter of Alderman Robert Thomas, J.P., of Liverpool and Criccieth.

DIARY FOR THE WEEK.

WEDNESDAY.

OBSTETRICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8 p.m.—Special General Meeting to receive the report of the Council. The following specimens will be shown: Dr. H. Russell Andrews: Sarcoma of Cervix. Dr. Lewers: Two Specimens from Cases of Cancer of the Cervix, twenty and ten years without recurrence. Paper: Mr. J. D. Malcolm: On the Advisability of Removing the Cervix in Performing Hysterectomy. Mr. J. H. Dauber: Fibromyoma containing a Calcified Fibroid Lying Free in Uterine Cavity.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Tottenham Hospital, N., 4 p.m.—Clinical Cases.

FRIDAY.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8 p.m.—Clinical Evening.

LARYNGOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 5 p.m.—Exhibition of Cases and Specimens.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—Discussion on the Necessity for Organization in the Medical Profession, opened by Dr. F. S. Toogood.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Wednesday, 5 p.m.: Middle Ear and Labyrinth.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the clinics and demonstrations for next week:—Tuesday, 10.30 a.m.: Medical (Out-patient). 2.30 p.m.: Operations; Surgical and Gynaecological (Out-patient). Wednesday, 2.30 p.m., Medical, Skin, Eye (Out-patient). Thursday, 2.30 p.m.: Demonstration on Fevers (at the North Eastern Fever Hospital, St. Ann's Road, N.); Gynaecological Operations; Medical, Surgical (Out-patient); *X* Rays; 3 p.m., Medical (In-patient). Friday, 9.30 a.m.: Surgical (Out-patient); 2.30 p.m., Operations; Medical, Eye (Out-patient); 3 p.m., Medical (In-patient).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following arrangements have been made for next week:—Daily (except Monday), 2 p.m.: Medical and Surgical Clinics, *X* Rays. 2.30 p.m.: Operations. Tuesday and Friday, 10 a.m.: Gynaecological Operations 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday, 2.30 p.m.: Diseases of Women.

BOOKS, ETC., RECEIVED.

Berlin: S. Karger; and London: Williams and Norgate. 1907:

Beiträge zur Diagnostik und Therapie der Geschwülste im Bereich des zentralen Nervensystems. Von Professor Dr. H. Oppenheim. M. 8.

Nierenchirurgie. Von Professor Dr. C. Garré and Dr. O. Ehrhardt. M. 12.

Régimes Pathologiques et Régime Parfait. Par Dr. F. Cayla. Paris: Vigot Frères; and Bordeaux: G. Gounouilhon. 1907. Fr. 2.

A Suffragette's Love-letters. London: Chatto and Windus. 1907. 1s.

The School of Health. By A. B. Olsen, M.D., and M. E. Olsen, M.A. London: The International Tract Society, Ltd. 1906. 5s.

Etude expérimentale de la Pleurésie séro-fibrineuse tuberculeuse. Par M. le Dr. P. Cartier. Paris: G. Steinheil. 1906.

Dictionnaire de Médecine et de Thérapeutique médicale et chirurgicale. Par les Drs. E. Bouchut et A. Després. Septième édition. Revue par les Drs. G. Marion et F. Bouchut. Paris: F. Alcan. 1907. Fr. 25.

Practical Physiological Chemistry. By R. H. A. Plimmer. In two vols. Junior and Senior Course. London: University College.

Paris: F. Alcan. 1907:

Éléments de Philosophie biologique. Par F. le Dantec. Fr. 3.50.

La Morale Sexuelle. Par le Dr. A. Wylm. Fr. 5.

Das Wesen der bösartigen Geschwülste. Von Dr. E. F. v. Dungern und Dr. R. Werner. Leipzig: Akademische Verlagsgesellschaft m. b. H. 1907.

American Practice of Surgery. Edited by J. D. Bryant, M.D., and A. H. Buck, M.D. Eight volumes. Vol. ii. New York: W. Wood and Co. 1907. $7 per vol.

Traité du Paludisme. Par A. Laveran. Deuxième édition. Paris: Masson et Cie. 1907. Fr. 12.

Deutsches Bäderbuch. Bearbeitet unter mitwirkung des Kaiserlichen Gesundheitsamts. Leipzig: J. J. Weber. 1907. M. 15.

The Functions of Food in the Body. By A. Rabagliati, M.A., M.D. London: E. Stock; and Bradford: H. C. Derwent. 1907. 1s.

University College, London: Physiological Laboratory Collected Papers, Vol. XIV. Edited by E. H. Starling, M.D., F.R.S., F.R.C.P. 1905–1906. London: University College.

Le Délit Pénal de Contamination Intersexuelle. Par L. Fiaux. Paris: F. Alcan. 1907. F. 3.50.

Festschrift für Georg Eduard von Rindfleisch. Herausgegeben von Dr. M. Borst. Leipzig: W. Engelmann. 1907. M. 60.

Organic and Functional Nervous Diseases. By M. A. Starr, M.D., Ph.D. LL.D., Sc.D. Second edition. London: Baillière, Tindall and Cox. 25s.

London: H. Kimpton. 1907:—

Degeneration in Families. By Fr. Tonge, M.D. Translated from the Danish by C. C. Sonne. 3s. 6d.

A Treatise on Orthopaedic Surgery. By R. Whitman, M.D. Third edition. 28s.

The Practitioner's Library. The Practice of Obstetrics in Original Contributions. Edited by R. Peterson, A.B., M.D. 31s. 6d.

Appendix XX to the Second Edition of the Catalogue of the Pathological Specimens in the Museum of the Royal College of England. By S. G. Shattock. London: Taylor and Francis. 1906.

A System of Medicine by Many Writers. Edited by T. C. Allbutt, M.A., M.D., LL.D., D.Sc., F.R.C.P., F.R.S., etc., and H. D. Rolleston, M.A., M.D., F.R.C.P. Volume II. Part II. Tropical Diseases and Animal Parasites. London: Macmillan and Co., Limited. 1907. 25s.

Injuries of the Eyes of the Employed and the Workmen's Compensation Act: Problems in Prognosis. By W. M. Beaumont. London: H. K. Lewis. 1907. 5s.

The Medical Annual: A Year-book of Treatment and Practitioner's Index. 1907. 25th year. Bristol: J. Wright and Co. 7s. 6d.

Antiseptic Methods for Surgical Nurses and Dressers. By H. Upcott, F.R.C.S. London: Baillière, Tindall, and Cox. 1907. 2s. 6d.

Hynoptism and Spiritism. By Dr. J. Lapponi. Translated by Mrs. P. Gibbs. London: Chapman and Hall, Ltd. 1906. 5s.

The Infant, the Parent, and the State. By H. L. Heath, D.P.H.Cantab., etc. London: P. S. King and Son. 1907. 3s. 6d.

The Oxford Treasury of English Literature. Vol. II.: Growth of the Drama. By G. E. Hadow and W. H. Hadow. Oxford: Clarendon Press. 1907. 3s. 6d.

The Nursling: The Feeding and Hygiene of Premature and Full-term Infants. By P. Budin. Authorized translation by W. J. Maloney, M.B., Ch.B. London: The Caxton Publishing Company. 1907. 21s.

The Medical Epitome Series: Pathology, General and Special. By J. Stenhouse, M.A., B.Sc., M.B., and J. Ferguson, M.A., M.D. Series edited by V. C. Pederson, A.M., M.D. London: Hodder and Stoughton. 4s.

Milan: U. Hoepli, 1907:

La Tuberculosi. Pei M. Valtorta e G. Fanoli. L. 3.

Manuale Pratico dell' Igienista. Pei Dottori C. Tonzig e G. Q. Ruata. L. 5.

Leipzig: A. Barth, 1907:

Taschenbuch der mikroskopischen Technik der Protistenuntersuchung. Von Dr. S. von Prowazek. M. 2.

Die wirtschaftlich wichtegen Zecken mit besonderer Berüksichtigung Afrikas. Von Professor Dr. W. Dönitz. M. 5.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
APRIL.	
1 MONDAY ...	*Bank Holiday.*
2 TUESDAY ...	
3 WEDNESDAY	South-Eastern of Ireland Branch, Adelphi Hotel, Waterford, 2 p.m.
4 THURSDAY...	
5 FRIDAY ..	London: Central Ethical Committee, 2 p.m. Scottish Part Division, *Border Counties Branch*, Royal Restaurant, Dumfries. South-Eastern Counties Division, *Edinburgh Branch*, King's Arms Hotel, Melrose, 3 p.m.
6 SATURDAY...	
7 Sunday ...	
8 MONDAY ...	
9 TUESDAY ...	London: Organization Committee, 11 a.m. London: Special Finance Inquiry Committee, 3 p.m. Bradford Division, *Yorkshire Branch*, Midland Hotel, Bradford, 8.30 p.m.; Social Gathering, 9.45 p.m. East Anglian Branch, White Hart Hotel, Witham.
10 WEDNESDAY	London: Journal and Finance Committee, 3 p.m. North Wales and Lancashire and Cheshire Branches, Joint Meeting, Chester.
11 THURSDAY...	South Wales and Monmouthshire Branch, Swansea.
12 FRIDAY ...	Hampstead Division, *Metropolitan Counties Branch.* North Cumberland Division, *Border Counties Branch*, George Hotel, Penrith, 3 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Conjoint Meeting with Wimbledon and District Medical Society, Worple Hall, Wimbledon, 9 p.m.
13 SATURDAY...	
14 Sunday ...	
15 MONDAY ...	
16 TUESDAY ...	
17 WEDNESDAY	Central Council, Board Room of the Metropolitan Asylums Board, Victoria Embankment, 2 p.m. Altrincham Division, *Lancashire and Cheshire Branch*, Greenbank, Northwich, 5 p.m.
18 THURSDAY...	City Division, *Metropolitan Counties Branch*, Conjoint Meeting with Walthamstow Division, Brooke House, Upper Clapton, 8.30 p.m. Leigh Division, *Lancashire and Cheshire Branch*, Co-operative Offices, Ellesmere Street, Leigh, 8 30 p.m.
19 FRIDAY ...	
20 SATURDAY...	
21 Sunday ...	
22 MONDAY ...	
23 TUESDAY ...	
24 WEDNESDAY	Bath and Bristol Branch, Bath. Lancashire and Cheshire Branch, Branch Council Meeting, Liverpool Medical Institution.
25 THURSDAY...	
26 FRIDAY ...	
27 SATURDAY...	
28 Sunday ...	
29 MONDAY ...	
30 TUESDAY ...	
MAY.	
1 WEDNESDAY	
2 THURSDAY...	
3 FRIDAY ...	
4 SATURDAY...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 6TH, 1907.

British Medical Association.

REVISION OF THE DRAFT CHARTER.

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REPORT

OF

THE ORGANIZATION COMMITTEE

ON

REVISION OF THE DRAFT CHARTER, ORDINANCES, AND BY-LAWS.

1. Instructions of the Annual Representative Meeting, 1906.

The Organization Committee has revised the draft Charter in accordance with the following general instructions of the Annual Representative Meeting held at Caxton Hall, London, in July, 1906, and in accordance with the other resolutions of the Meeting relative to the matter, as stated in the first appendix to the present report (*See Appendix A, page* 177):

> That the Charter be referred to the Organization Committee in order that the instructions adopted by this Representative Meeting, after consideration of the amendments before it, may be embodied in the Charter, together with such amendments desired by the Colonial Branches as are consistent therewith, and that the Charter, as revised by the Organization Committee, be published in the Supplement and referred to a Special Representative Meeting.
>
> That the draft By-laws, with all amendments proposed thereto, be referred to the Organization Committee, with authority to redraft the same in such manner as the Committee may deem expedient.

2. Revision of Draft Charter and Ordinances.

In the draft Charter and draft Ordinances as now submitted for the consideration of the Divisions, all the detailed instructions of the Representative Meeting have been carried into effect, except in so far as the legal advisers of the Association have advised otherwise; certain other alterations have been made on the advice of Counsel.

3. Changes made or suggested in Draft Charter and Ordinances.

The following are the matters in respect of which the Committee has, under legal advice as stated, deviated from the specific instructions of the Meeting, or to which, upon other grounds, it is deemed proper to draw special attention:

(*a*) The provision desired by the Representative Meeting to empower the Association to provide a circulating medical library and a club house, which is met by Subclause 2 (2) (ii), has been made general in its scope, instead of being confined to London and other large centres as suggested.

(*b*) With regard to Subclause 2 (2) (ix), [formerly (viii)] Counsel advises that the language of the Clause, as previously drafted, would cover provision for the families of deceased members, and therefore no alteration in this respect is necessary.

(*c*) The language of Subclause 9 (2) has been modified on the advice of Counsel.

(*d*) The Committee has submitted to Counsel the question whether the provision of any limit, in Ordinance 5, would be necessary in order to satisfy the Privy Council, and, he advising that it is unnecessary, it has been omitted.

(*e*) The language of Ordinance 9, as to termination of membership, has been very carefully considered by the Committee and by Counsel, and the only change made has been the omission of the words "*ipso facto*" at the commencement of Subclause (*d*).

(*f*) With regard to the present Ordinance 14, and the former Ordinances 14, 15, and 16, Counsel has advised that in his opinion it is sufficient to make provision in the Ordinances as to the general constitution and powers of the Representative Body, and that questions of the machinery of election are better dealt with in the By-laws. The substance of the former Ordinances 15 and 16 has accordingly been transferred to the By-laws, and Ordinance 14 has been amended in language accordingly.

(*g*) In accordance with Counsel's advice, the former Ordinance 17, dealing with (*a*) resolutions of the Representative Body, (*b*) the proviso as to notice, and (*c*) the proviso as to Referendum, has been divided into three separate Ordinances.

(*h*) The Committee observes that the proviso as to the Referendum, as now worded, makes it possible for the operation of the resolutions of a Representative Meeting to be suspended by the Council holding a meeting, and not confirming such resolutions; but, nevertheless, not proceeding to carry out the machinery of the Referendum. If it were thought desirable to provide against such a contingency, it would probably be necessary to amend Ordinance 17 by making the resolutions of the Representative Meeting take effect if not referred by the Council within a specified time to the Divisions, instead of, as at present worded, if a meeting of Council be not held within a specified time. The Committee has not deemed it to be part of its duty to propose such a change, inasmuch as an alteration of the Ordinance as passed by the Representative Meeting would be involved, but considers that the attention of the Divisions and of the Representative Meeting should be called to the point.

(*i*) The Representative Meeting gave instructions that the Ordinances relating to the composition of the Council should be transferred to the By-laws. Counsel, in accordance with the same principle which actuated his advice referred to in paragraph (*f*) as to the Representative Meeting, namely, that questions of machinery of election are better transferred to the By-laws, has expressed his concurrence in the decision of the Representative Meeting as a matter of general expediency in drafting, but has advised also that it is more convenient that a general reference to the composition of the Council should appear in the Ordinances, while the details are prescribed by By-law. Ordinance 19 and By-laws 35 to 38 drafted by him will be seen to carry out, in substance, the instructions of the Representative Meeting.

(*j*) As regards Ordinance 20, the provision that certain officers should be *ex-officio* members of all Committees has likewise, by Counsel's advice, been transferred to the By-laws.

4. Revision of Draft By-laws: Changes Made.

The Committee, in accordance with the instruction of the Representative Meeting, has revised the draft By-laws, taking into consideration all amendments that were placed on the Agenda of the Annual Representative Meeting of 1906, and making such changes, either as proposed in such amendments or otherwise, as have seemed to the Committee expedient.

The changes of substance embodied in the By-laws, as now submitted, are as follows:

(*a*) With regard to By-law 11, an amendment was before the Representative Meeting that the discretionary power to raise subscriptions from 25s. to an amount not exceeding 30s. should be given to the Representative Body instead of to the Council. Upon consideration, it appeared to the Committee that, inasmuch as the Representative Body is the body which has power to change the By-laws, subject to a Referendum, the simplest procedure is to omit any reference to increase of subscriptions. Therefore the By-law as now submitted simply provides that the subscription shall be 25s. per annum.

(*b*) It follows from this change that former By-law 12 has been deleted.

(*c*) In By-law 13 (formerly 14), having regard to legal difficulties which have arisen as to the interpretation of the present By-law, it has been thought proper to provide that a member desiring to resign shall give "one month's notice" in writing, instead of, as formerly, that he should give notice "on or before December 1st in the current year."

(*d*) By-law 15 (formerly 16), has received special consideration from the Committee and from Counsel, having regard to communications received from Colonial members to the effect that the By-law, as formerly drafted, conferred upon Colonial Branches a dangerous power of increasing the subscription locally without affording any sufficient opportunity of protest to members who, on account of the great distances in some Branches, might be unable to attend general meetings. The provisions of the By-law have been elaborated in order to afford as much protection as possible to dissentient minorities.

(*e*) In By-law 18 (formerly 19), the Committee proposes a change as the result of its investigations of the subject of Branch and Division finance. At present considerable sums are accumulated in the hands of Branches, and the Committee considers that it is preferable that a discretionary power should be given to the Central Council to adapt the Capitation Grant to the actual requirements of Branches and Divisions. It is therefore submitted that, instead of a fixed annual grant of 4s. per head per annum, the Treasurer shall make such grant to each Branch, not exceeding 4s., as the Council may approve.

(*f*) In the By-laws dealing with the election o Representatives and business of the Annual Representative Meeting, the Committee has, as instructed by the Representative Meeting, provided that Representatives may be elected by voting papers instead of in meeting. The Committee has also, as instructed, considered the question of providing that when a Representative is elected by voting papers, some meeting of the constituency should be held in order to decide what instructions should be given to him concerning the business of the Representative Meeting. The legal advisers concur with the Committee in the opinion that the only method of making such a meeting obligatory is by providing that a Representative elected by voting paper shall not be capable of taking part in the Annual Representative Meeting unless a meeting of his constituency shall have been held. The By-law as now drafted provides that Divisions may elect Representatives either in their meetings or by voting papers as they prefer, but that, if the election is by voting paper, the subsequent meeting must be held as stated.

(*g*) The Representative Meeting instructed the Chairman of Representative Meetings to bring before the Council the question of providing that the Chairman of Representative Meetings should be elected at the end of each Annual Representative Meeting, instead of at the beginning. This matter having been referred to the Organization Committee, and Counsel's opinion having been obtained, the By-law is now so framed as to leave it entirely in the discretion of the Meeting to decide as to the period at which the Chairman shall be elected. The Chairman elected during one Annual Meeting will hold office from the close of that Meeting until the close of the next Annual Meeting.

(*h*) By-law 36, relating to the composition of the Council, has been redrafted in accordance with Minutes 215 to 220 of the Annual Representative Meeting of 1906. The Committee submits a statement, in Section 6 of this Report, of certain considerations affecting the mode of election of members of Council, and certain alternative proposals, but in the present Section the references to the election of the Council deal solely with the manner in which the Committee has drafted the By-laws with the object of carrying into effect the specific resolutions of the Representative Meeting on the subject.

(*i*) The Committee has experienced some doubt as to whether it was the intention of the Representative Meeting that the twenty members to be elected by the Branches should be elected by the United Kingdom Branches only, separate provision being made for Colonial Branches, but, having regard to the terms of the resolution of the Meeting, the Committee has considered that it must be understood to mean that twenty is to be the total number of members of Council elected by Branches throughout the Association.

(*j*) In accordance with the instruction of the Representative Meeting, the Committee has considered how a proper topographical distribution could be secured in the election of ten members by the Representative Meeting, and a scheme for this purpose forms an Appendix to this report (*Appendix B, page* 177).

It will be seen that the Committee has considered that the question of topographical election chiefly affects the Scottish and Irish Divisions and that such provision is unnecessary as regards the portions of England and Wales.

(*k*) The Committee has also considered how the Branches of the Association could be grouped to provide for the election of twenty members of Council, and a scheme is appended (*Appendix C, page* 178). It appears to the Committee that, having regard to all considerations, provision should be made, as at present, for a certain degree of over-representation in the more remote parts of the United Kingdom.

(*l*) The former numerical basis of grouping of Branches being entirely inconsistent with the reduction of Branch representation, it is proposed that detailed provisions as to any such grouping be not inserted in the By-laws but left to the discretion of the Council. These changes have entailed certain verbal changes in subsequent By-laws.

(*m*) With reference to By-law 35, the Committee has carefully considered the question of the time at which the newly-elected Council for each year should come into office, namely, whether at the commencement or at the close of the Annual Representative Meeting, and recommends that it should be at the close.

In arriving at this recommendation the Committee has had regard to the following considerations, namely: (i) That it is desirable that the members of Council who have acted as such during the previous year should be able to take part as members (though not voting) in the Representative Meeting, in order that the Meeting may have their assistance in reviewing the work of the year; (ii) that under the scheme prepared in accordance with resolutions of the Representative Meeting, and also under each of the alternative schemes which have been placed before the Committee, it is proposed that a proportion at least of the Council should be elected by the Representative Body, and therefore the Council could not be fully constituted until these elections have taken place.

(*n*) It appears to the Committee that it would also be desirable, however, that newly-elected members of Council, whose election has already taken place at the time of the Representative Meeting, should be enabled to take part in the work of the Meeting. To effect this a verbal amendment of Ordinance 14 would be necessary which the Committee has not felt authorized specifically to make, but submits the suggestion as a matter of principle for the consideration of the Representative Meeting.

(*o*) The attention of the Committee has been directed to the fact that provision has only been made in the By-laws for filling casual vacancies in the Council (By-law 44), there being no provision for filling casual vacancies among the officers of the Association. This omission was not observed by the Committee in time to effect suitable modification in the By-laws now submitted, but the matter is receiving the consideration of the legal advisers of the Association, and a draft By-law to meet the difficulty will be submitted to the Representative Meeting.

(*p*) At the suggestion of Counsel, the particulars of the composition of and reference to the Committees have been placed in a schedule to the By-laws, and stated in a tabular form, which is thought to be more convenient for reference.

5. The Charter as Affecting the Colonial Branches.

The Committee deems it advisable that advantage should be taken of the present consideration of the Regulations of the Association in connexion with the draft Charter, to make such changes as are necessary to meet the special requirements of the Colonial Branches. The Constitution Committee of 1901, in its report to the Association, pointed out that the adaptation of the new Constitution to the special requirements of the Colonial Branches would require consideration, and recommended that a Special Committee should be appointed to consider the matter. This recommendation has not been carried out, but communications from the Colonial Branches, drawing attention to special difficulties which affect them, have from time to time been referred to the Organization Committee. The Committee has issued a special circular to the Colonial Branches, asking them carefully to consider the Charter as submitted to the Representative Meeting in July last, together with the substantial modifications introduced pursuant to the resolutions of that Meeting, and to consider and to report as to the further modifications which may appear to them necessary. The Committee has also named the following matters as those which have already been brought under its notice—namely:

(*a*) That Colonial Branches should enjoy greater freedom as regards alteration of their local Rules in matters of detail without incurring the delays necessary for obtaining the approval of the Central Council.

(*b*) That Colonial Branches should have certain freedom as regards levying compulsory local subscriptions (provisions for this purpose are already incorporated in the draft By-laws).

(*c*) That Colonial Branches should have greater freedom than the existing By-laws provide as to the manner in which they elect new members.

(*d*) That provision should be made for the appointment of Councils or Committees representative of groups of Colonial Branches, as a Canadian Committee, or South African Committee, analogous to the present Scottish and Irish Committees.

The Colonial Branches have been requested to favour the Organization Committee with their opinion not later than May 1st, and, pending the receipt of their replies, the Committee is unable to make specific recommendations in the matters stated. It is hoped that a report upon this aspect of the matter may, however, be circulated to the Divisions with the agenda of the Special Representative Meeting called to consider the Charter.

6. Election of Members of Council.

6. Since the Annual Representative Meeting, 1906, the Organization Committee has had officially brought to its notice representations by Divisions objecting on various

grounds to the scheme of election of the Council, as contained in the two following resolutions of that Meeting:

> That the members of the Central Council other than *ex-officio* and service members shall be elected two-thirds by the Branches and one-third by the Representative Body at its annual meeting, due regard being had to geographical distribution of the members.
>
> That there be 30 members of the Council elected by the Branches and by the Representative Body, 20 by the Branches and 10 by the Representative Body.

It has appeared to the Committee to be beyond its province to make any recommendations differing from the specific resolutions of the Meeting, and therefore the By-laws relating to the election of the Council contained in the draft By-laws now submitted are framed in exact accordance with the resolutions of the Annual Representative Meeting.

The communications received by the Committee indicate, however, that considerable diversity of opinion may be expected on the subject of the election of the Council, and it has been thought that it may be of assistance to the Divisions to include in this report a note of certain alternative proposals which the Committee has had before it, and to draw attention to the different questions of principle involved.

It will be observed that the differences in such proposals relate to two groups of questions—namely, first, with respect to the total membership of the Council, and, secondly, with respect to the electorate.

As regards the electorate, it is alternatively proposed that this should be the individual members of the Association grouped in Branches as at present, or the Divisional Representatives of the members, appointed to represent them in Representative Meetings, who may vote either as a body or by districts, or through some combination of these arrangements.

It will be seen that the scheme submitted by the Committee (draft By-law 36 and *Appendix C, page* 178), based upon the resolutions of the Representative Meeting of 1906, is a combination of election of a majority of the Council by members grouped in Branches, with election of a certain number by the Representative Body voting as a whole. It involves a reduction of the membership of the Council to rather more than one-half its present size.

A member of the Committee has proposed a scheme (*Appendix F, page* 182) which differs from this only in not effecting so great a reduction in the number of members of Council elected by the members grouped in Branches.

A scheme proposed by the Ayrshire Division (*Appendix D, page* 179), which has been brought to the notice of the Committee, is based on election by the Representatives, voting in district groups, with two members elected by the Representative Body as a whole to act on behalf of the Colonial Branches.

A member of the Committee has drafted a scheme (*Appendix E, page* 180) which proposes that members of Council should be elected for the United Kingdom by Representatives of Divisions, voting in groups; for the Colonial Branches, by those Branches in such method (that is, by direct vote of their members or through some representative body) as they themselves may prefer; and that in addition a small number of members of Council should be elected by the Representative Body, voting as a whole.

The differences between the various schemes which have thus been brought under the notice of the Committee are conveniently exhibited in the accompanying table (p. 149), in which the present method of election of the Council is included for comparison.

The documents which have been officially submitted to the Committee contain statements of reasons for and against such proposals which may be briefly summarized as affecting the two principal questions involved, as above stated, namely (1) the reduction in the size of the Council, and (2) the constitution of the electorate.

The reasons urged in favour of a reduction in the size of the Council are that it is believed that its duties could be more efficiently carried out by a smaller body, and that expense of meetings would be diminished. The objections which have been brought under the notice of the Committee are that the reduced membership of the Council would not afford sufficient scope for adequate representation of areas peculiar in their conditions; for example, that the representation which the Irish members would receive on a strictly proportional system would not permit of the separate representation of districts differing widely in conditions of practice, such as Dublin, Belfast, and the southern and western provinces. This difficulty, however, has been recognized in all the schemes of topographical representation now submitted, in which special provision is made for the over-representation of remote districts having a scattered population.

The considerations urged in favour of election by the Representatives, whether voting in groups or acting as a body, are stated in the memorandum of the Ayrshire Division, namely, to the effect that in this way harmonious co-operation between the Representative Body and Central Council will be most effectively secured, it being deemed unsatisfactory to have in the Association two central bodies each elected directly by the members, one by the members voting through the Divisions (either by voting paper or in meetings as may be preferred), and the other by the members grouped in Branches, the second of these bodies being required constitutionally to act in subordination to the other, except upon appeal to a Referendum.

The objections to the election of the Council by the Representative Body, as stated in resolutions of Divisions which have been remitted for the consideration of the Committee, are: (i) That election by the Representative Body as a whole would not afford sufficient security for topographical representation, particularly of the more remote or rural districts—for example, that members of Council best qualified to represent in the Council the conditions of practice and wishes of the profession in various parts of Ireland could not be satisfactorily selected by the Representative Body as a whole; (ii) that the small attendance at meetings of many Divisions renders the election of Representatives themselves unsatisfactory.

With regard to the first of these objections, the Divisions will doubtless consider whether the mode of election by the Divisions voting in districts proposed in two of the schemes submitted herewith would overcome the difficulty; while, as regards the second objection, it appears to the Committee that the fact has been overlooked that the Representative Meeting decided in favour of allowing Representatives of Divisions to be elected by voting papers sent to all members, and the draft now submitted contains a provision to this effect (By-law 24).

QUESTIONS.

To facilitate the discussion of this important matter by the Divisions, and the instruction by them of their Representatives thereon, the Committee has drawn up the following questions upon which the Divisions may find it convenient to record their decisions:

1. Whatever the system of election, is it in the opinion of the Division desirable that the Central Council should be smaller than at present?

2. As regards members of Council elected by or on behalf of the members of the Association of the United Kingdom, is it preferable that these should be elected (*a*) by the members grouped in Branches; or (*b*) by the Representatives of Divisions in the Representative Meeting, grouped in districts; or (*c*) by the Representative Body as a whole; or (*d*) the majority under the system (*a*) and a certain number under the system (*c*); or (*e*) the majority under the system (*b*) and a certain number under the system (*c*)?

3. If it is considered that the system (*d*) or (*e*) should be adopted, what proportion is it considered that the members elected by the Representative Body should form to the total number of members of Council, other than *ex officio* and service members? (The proportions proposed under different schemes will be seen to vary from one-sixth to one-third.)

4. As regards election of Members of Council representing the Colonial Branches, (*a*) should it be required that these be elected by voting papers sent to the members of those Branches as at present; or (*b*) should it be left to these Branches themselves, grouped as the Central Council may determine, to decide as to the mode in which they will elect these members; or (*c*) should they be represented by members elected by the Representative Body, as suggested by the Ayrshire Division?

ELECTION OF CENTRAL COUNCIL: SUGGESTED SCHEMES.

Scheme.	A. Members of Council Elected by the Members of the Association in the United Kingdom Grouped in Branches.	B. Members Elected by the Members of the Association Not in the United Kingdom Grouped in Branches.	C. Members Elected by Representatives of Divisions Grouped in Districts (United Kingdom only).	D. Members Elected by the Representative Body as a Whole.	E. *Ex officio* Members of Council.	F. Members Elected by the Council to Represent the Naval and Military Services	G. Members Co-opted by the Council.	H. Total Membership.
No. of Members ...	Variable, at present 48	Variable, at present 11; possible 14	None	None	6	3	At present 5	73
I. Present mode of election	Elected by the members in constituencies formed as follows: A Branch of 200 to 400 members to elect 1 member (unless grouped). A Branch of 400 to 1,000 to elect 2 (if not grouped). Larger Branches to elect an additional member for each 600 members. Branches fewer than 200 to be grouped with neighbouring Branches at the discretion of the Council	Election of constituencies formed of Branches grouped at the discretion of the Central Council, it being provided that the proportional representation be not less than that of the Home Branches' present representation, 11 (17 constituencies not represented; 3 constituencies have not elected representatives)			President, President-elect, Past-President, Chairman of Representative Meetings, Chairman of Council, Treasurer	1 each for the R.N.M.S., A.M.S., I.M.S.	A number equal to not more than one-tenth of the elected members	
No. of Members ..	15	5	—	10	6	3	—	39
II. Scheme proposed in the By-laws now submitted pursuant to resolutions of the A.R.M., 1906	Elected by the Home Branches grouped in approximately equal electoral districts, but with over representation of Scotland and Ireland	Grouped according to geographical relations	None		As above	As above	None	
No. of Members ...	22	8	—	9	3	3	None	45
III. Scheme drafted by a member of the Organization Committee (*Appendix F*)	Grouped as in the Schedule proposed by the Organization Committee	Grouped at the discretion of the Council	None		President, President-elect, Treasurer			
No. of Members ..	None	None	28	2	6*	3*	—	39*
IV. Scheme prepared by the Ayrshire Division (*Appendix D*)				Specially selected to represent Colonial Branches				
No. of Members ..	None	10	24	6	6	3	None	49
V. Scheme prepared by another member of the Organization Committee (*Appendix E*)								

* In the Ayrshire proposals no reference is made to *ex officio* or service members. These numbers are inserted on the assumption that existing arrangements would be continued in these respects.

DRAFT CHARTER, ORDINANCES, AND BY-LAWS.

[*Submitted by the Organisation Committee, April*, 1907, *as revised pursuant to the instructions of the Annual Representative Meeting of* 1906.]

CHARTER.

British Medical Association.

EDWARD VII. by the Grace of God of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, King, Defender of the Faith—TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING.

WHEREAS

(a)

have presented to Us their humble Petition setting forth (amongst other things), to the effect following:—

(b)

AND WHEREAS We are minded to comply with the said prayer and to grant a charter containing the provisions hereinafter set forth.

NOW KNOW YE that We having taken the premises into Our Royal consideration of Our special Grace certain knowledge and mere motion, do will, ordain, constitute, declare, appoint, and grant as follows, that is to say:—

I. For the purposes hereinafter set forth and all other purposes of this Our Charter the above-named Petitioners and all other persons who shall pursuant to this Our Charter and the Ordinances made thereunder be members of the Corporation hereby constituted are hereby created and henceforth for ever shall be one body politic and corporate by the name of the "British Medical Association" (hereinafter called "the Association"), and by the name aforesaid shall have perpetual succession and a common seal with full power and authority to alter, vary, break, renew the same at their

(a) Here insert the names and descriptions of a few representative members of the existing Association as Petitioners.

It would be desirable to insert a statement of the substance of the Petition which is not yet drafted but will contain a short history of the Association and the reasons for desiring a Charter.—I. R. C. D.

discretion, and by the same name may sue and be sued, in every court of Us, Our heirs and successors, and We do hereby grant to the Association full licence, right, authority, power and capacity (notwithstanding the statutes of Mortmain), First to take and hold all such lands, tenements, hereditaments and property as are now vested in or held by the existing Association hereinbefore referred to, or any trustees or trustee for that Association, and, secondly, to take, acquire, purchase and hold in perpetuity or otherwise any lands, tenements, hereditaments and property whatsoever, situate within Our United Kingdom of Great Britain and Ireland or in any part of Our dominions; And (subject to such consent if any as may be required by law) to grant, demise, alien, mortgage, charge or otherwise dispose of all or any of the lands, tenements, hereditaments and property for the time being of the Association, and also to do all other matters incidental or appertaining to a body corporate.

2.—(1) We do hereby declare the objects of the Association to be the promotion of the medical and allied sciences, the maintenance of the honour and interests of the medical profession and of the members thereof collectively and individually, and the co-operation of the members of the Association for their mutual assistance and support in all matters affecting them in their professional capacity, including the encouragement, promotion or provision of means for protecting Members and their families against the exigencies of age, sickness, death or misfortune.

(2) Without prejudice to the generality of the foregoing objects and to the other powers conferred by these presents and so that the said objects and powers shall be in no wise restricted by the powers next hereinafter specified We do hereby expressly declare that for the attainment of the aforesaid objects the Association may adopt any or all of the following means, that is to say:—

(i) May hold meetings and conferences at any place in the United Kingdom or in any part of Our dominions or elsewhere for the discussion of the affairs, interests and duties of the medical profession and for promoting personal and friendly intercourse between Members of the Association and between members of the medical profession in general.

(ii) May provide, equip, manage, and carry on circulating and other libraries and rooms and buildings for social intercourse for the benefit of Members of the Association and of the medical profession in general.

(iii) May compile, revise, publish and distribute or sell lists and registers of medical practitioners, and records of events, transactions and proceedings of interest to the Members of the medical profession.

(iv) May publish periodically and sell the *British Medical Journal* or any other journal of a character specially adapted to the needs of the Medical Profession.

(v) May encourage research in the medical and allied sciences by grants from the funds of the Association, by the establishment of scholarships, prizes or rewards and in such other manner as the Association may determine upon.

(vi) May originate, support, promote, and oppose alterations in the law of the United Kingdom or any British Colony or Dependency affecting the Public Health or the Medical Profession and may promote the candidature of any member of the Association for Parliament or for any British Legislative Assembly.

(vii) May take or defend and assist persons in taking or defending any legal proceedings civil or criminal (including proceedings before the General Medical Council) in which in the opinion of the Association the honour or interests of the Medical Profession or of any Member of the Association in his professional capacity or any question of professional principle is or are involved, and may establish, contribute to, organise, and manage a fund or funds for the purposes aforesaid.

(viii) May provide facilities for sales or transfers of medical practices, for the arrangement of medical partnerships and for the engagement of qualified assistants and temporary substitutes for medical practitioners being Members of the Association.

(ix) May establish, endow, contribute to, organise and manage provident or benevolent funds for the benefit or assistance of Members of the Association or of the Medical Profession and their families or dependents, and of the staff employed by the Association.

(x) May undertake and carry out the execution of any trusts which the Association may deem to be directly or indirectly conducive to the interests of the Association or of the Medical Profession or any branch thereof.

(xi) May take such other means (whether of the same nature as the means hereinbefore stated or not) as may seem to the Association incidental or conducive to the promotion or carrying out of the foregoing objects or any of them.

3. The Association shall not carry on any trade or business (except so far as the same may be involved in the exercise of their powers with respect to any of the matters mentioned in paragraphs (ii), (iii), (iv) and (viii) of the last preceding clause) nor engage in any transaction with a view to the pecuniary profit or gain of the individual Members thereof, provided that this shall not preclude the Association from applying its funds in any manner within the contemplation and intention of the last preceding clause of these Presents, or in the remuneration of Members of the Association for services actually rendered.

4. The first Members of the Association shall be the persons named in the Register of the Members of the existing Association which has been certified by (the Secretary of the existing Association) as complete and correct and bears even date with the Order in Council for the preparation of the Warrant for passing this Our Charter under the Great Seal of the United Kingdom. Ordinary Members of the Association shall hereafter be elected in such manner as may be from time to time prescribed by the Ordinances and By laws of the Association.

5. (1) The Association shall have power to elect as Honorary Members such persons, and in such manner as the By-laws of the Association may provide, and to admit members so elected to such privileges other than that of voting as Members of the Association, as may from time to time be conferred on them by or under the By laws.

(2) Each Division or Branch hereinafter mentioned of the Association shall have power to admit to certain of the privileges of membership of such Division or Branch, other than that of voting, Members of the Association who are not entitled to be Ordinary Members of such Division or Branch and each Division or Branch of the Association not in the United Kingdom shall have power to admit to certain of the

privileges of membership of such Division or Branch, other than that of voting, Members of the Medical Profession, or persons distinguished in other sciences, who are not eligible for election as Ordinary Members of the Association. The By-laws of the Association may prescribe the designation under which persons shall be admitted to such privileges, the nature of the privileges to be conferred upon them, and the conditions of admission thereto.

6.—(1) For the better attainment of the objects of the Association the Members thereof shall be formed into separate local bodies styled Divisions and Branches.

(2) A Division shall comprise such body of Members as the Association shall in the manner prescribed by the Ordinances of the Association declare to be a Division, and a Branch shall be such Division, or such group of Divisions, as the Association shall in like manner declare to be a Branch.

(3) Each Division shall have a local area to be fixed from time to time by or in accordance with the provisions contained in the Ordinances.

(4) Every Member whose address as registered for the time being in the books of the Association is at a place situate within the area of any Division shall *ipso facto* be an Ordinary Member of that Division and of no other, and every Ordinary Member of a Division shall *ipso facto* be an Ordinary Member of the Branch which comprises that Division and of no other.

(5) In all other respects the Divisions and Branches shall be so constituted, managed, and governed, and shall have such powers, rights, and privileges and shall be under such obligations, as shall be prescribed by or under the Ordinances and By-laws for the time being, and the By-laws may provide for contributions, grants and subscriptions out of the general funds of the Association to Divisions or Branches, and may impose on the Members of any Division or Branch such obligations towards the Association, and the Division and Branch respectively, as may seem to the Association to be expedient, and may empower any Division or Branch to make (subject or not subject to the approval of the Association) any rules in relation to the affairs thereof and to vary and repeal any such rules.

7. The general control and direction of the policy and affairs of the Association shall be vested in a body of Representatives (hereinafter called the "Representative Body") elected by the Divisions in accordance with the provisions of the Ordinances and the By-laws. The Representative Body shall hold an annual meeting (hereinafter called the "Annual Representative Meeting") and may hold other meetings (hereinafter called "Special Representative Meetings").

8. There shall be a Central Council (hereinafter called "the Council") which shall, save as otherwise provided by the Ordinances, carry into execution resolutions passed by the Representative Body, and administer the affairs of the Association in accordance with this Our Charter and the Ordinances and the By-laws and shall exercise such powers and do such acts and things as may be exercised or done by the Association and are not by the Provisions of this Our Charter or the Ordinances or By-laws directed to be exercised or done by the Representative Body.

9.—(1) The Ordinances of the Association may (subject to the provisions of this Our Charter)

(*a*) Prescribe the qualifications for membership of the Association and the other terms of such membership and prescribe or limit the amount of the subscriptions to be paid by members.

(*b*) Provide for the resignation of membership and for the removal from or other modes of termination of membership of the Association.

(*c*) Provide for the formation of Divisions and Branches and other local bodies.

(*d*) Provide for and prescribe the constitution and powers of the Representative Body and the Council and the mode of election of the members thereof respectively.

(*e*) Provide for the holding of meetings of the Association and of the Representative Body and of the Council.

(*f*) Provide for the appointment of Officers of the Association.

(*g*) Provide for the payment of the personal expenses incurred by members in connection with their attendance at meetings of the Representative Body or of the Council or of any Committee of either of the said bodies or at any Conference authorised by the Representative Body or by the Council.

(*h*) Provide for the audit of the accounts of the Association.

(*i*) Empower the Representative Body (subject or not subject to the consent of the Council or other restrictions) to make and from time to time to add to, amend, alter or repeal By-laws for regulating (subject to this Our Charter and the Ordinances of the Association) the proceedings of the Representative Body and the Council and any committee thereof respectively and the conduct of the business and affairs of the Association and any other matters which require to be so regulated.

(*j*) Provide for the government of the Association in all respects not otherwise provided for by this Our Charter.

(2) The first Ordinances of the Association shall be those set forth in the 1st Schedule hereto and the same are hereby declared to be valid and effectual to all intents and purposes whatsoever. The Ordinances (including the first Ordinances) may be added to, amended, altered or repealed and new Ordinances made from time to time by the Representative Body subject to such restrictions (if any) as may be prescribed by the Ordinances. Provided that no such addition, amendment, alteration, repeal or new Ordinance shall have any force or effect until allowed by The Lords of Our Privy Council, of which allowance a certificate under the hand of the Clerk of Our Privy Council shall be conclusive evidence. Any addition, amendment, alteration, repeal or new Ordinance so allowed shall be conclusively deemed to have been in all respects duly made and to be valid and effectual for all purposes.

10. The first By-laws shall be those set forth in the 2nd Schedule hereto, and the same are hereby declared to be valid and effectual to all intents and purposes whatsoever until the same shall be amended, altered or repealed in pursuance of the powers conferred by the Ordinances.

11. The Representatives of Divisions of the existing Association, who shall be holding office as such at the date when this Our Charter comes into operation, shall be deemed to be the first Representatives of the Divisions of the Association, and shall continue to hold office as such until their successors are appointed in pursuance of this Our Charter and Members of the Council of the existing Association holding office at the date when this Our Charter comes into operation shall be deemed to be the Members of and to form the first Council of the

Association, and shall continue to act as such until the new Council is elected in pursuance of this Our Charter and the several Officers and Committees of the existing Association shall continue to hold their respective offices and discharge their respective duties and receive such emoluments, if any, as pertain to the offices which they fill until it shall be otherwise determined in pursuance of this Our Charter, and the Divisions and Branches of the existing Association, with their Officers, Councils and Committees existing and holding office respectively at the date of the grant of this Charter shall be deemed to be Divisions and Branches, Officers, Councils and Committees constituted or appointed in pursuance of this Our Charter, and shall continue until otherwise determined in pursuance of this Our Charter.

12. It shall be lawful for Us, Our Heirs and Successors by supplemental Charter to add to, amend or repeal the provisions of this Our Charter or any of them provided that a resolution to accept and approve such supplemental Charter shall have been passed by a majority of not less than two-thirds of the votes given thereon in the manner prescribed by the By-laws for the time being at a Representative Meeting specially summoned for the purpose. Any such resolution shall have effect subject to such approval or confirmation (if any) as may from time to time be required by the Ordinances with respect to the amendment of an Ordinance.

13. It shall be lawful for the Association by a resolution of the Representative Body passed at a representative meeting specially summoned for the purpose by such majority as mentioned in the last preceding clause hereof and subject to such approval or confirmation as therein mentioned to surrender this Our Charter and to wind up the affairs of the Association, but if on the winding up or dissolution of the Association there shall remain after the satisfaction of all its debts and liabilities any property whatsoever, the same shall not be paid to or distributed among the Members of the Association or any of them, but shall, subject to any special trusts affecting the same, be given and transferred to some other institution or institutions having objects similar to the objects of the Association to be determined by the Representative Body at or before the time of dissolution or in default thereof by a judge of the Chancery Division of Our High Court of Justice.

14. Lastly, We do hereby for Us, Our Heirs and Successors grant that these Our Letters Patent shall be in and by all things good, firm, valid, sufficient and effectual in law notwithstanding any omission, imperfection, defect, matter, cause, or thing whatsoever to the contrary thereof in these Our Letters Patent contained and shall be taken, construed and adjudged in the most favourable and beneficial sense and to the best advantage of and for the Association as well in Our Courts of Record as elsewhere notwithstanding any recital, mis-recital, uncertainty, or imperfection in these Our Letters Patent.

In Witness whereof We have caused these Our Letters to be made Patent.

Witness Ourselves at Our Palace of this day of in the year of Our Reign.

By warrant under the King's Sign Manual.

THE FIRST SCHEDULE.

ORDINANCES OF THE BRITISH MEDICAL ASSOCIATION.

SECTION I.

PRELIMINARY.

1.—(1) In these Ordinances (where not repugnant to the Context)

(*a*) "The Charter" means and includes the Royal Charter granted in the year 1907, and incorporating the British Medical Association and any amendment thereof, and any supplemental Charter for the time being held by that Association.

(*b*) "The Ordinances" means the Ordinances for the time being of the Association.

(*c*) "The By-laws" means the By-laws for the time being of the Association.

(*d*) "The Journal" means the *British Medical Journal* or other the professional journal for the time being published by the Association.

(2) Words occurring in these Ordinances and also occurring in the Charter shall bear the same respective meanings in these Ordinances as they bear in the Charter.

2. The Interpretation Act, 1889, shall apply for the purpose of the interpretation of these Ordinances as it applies for the interpretation of an Act of Parliament.

3. These Ordinances shall be construed so as not to conflict with the Charter.

SECTION II.

MEMBERSHIP.

Eligibility.

4. Any Medical Practitioner registered in the United Kingdom under the Medical Acts, and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualification as shall, subject to the By-laws, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. Subject as aforesaid the mode and conditions of election to membership shall from time to time be determined by or in accordance with the By-laws.

Subscription.

5. Every Member shall pay to the Association a subscription of such amount as may for the time being be prescribed by the By-laws. The said subscription shall be considered due in advance on the first of January of each year, or in the case of Members elected during the year at the time of election.

6. Each year's subscription shall entitle the Member to all privileges of membership of the Association, including that of receiving the *Journal* for the current year, and to the ordinary privileges of membership of that Division and of that Branch of which he is an ordinary Member.

Re-Eligibility.

7. No person who shall have been a Member of the Association and ceased to be such shall be eligible for re-election until he shall have paid all arrears of subscription (if any) due from him to the Association at the date when his former membership ceased, and no person whose former membership shall have been terminated by reason of his conviction or expulsion as hereinafter provided shall be eligible for re-election by any Branch Council without the sanction previously obtained of the Central Council.

Duration of Membership.

8. Every Member whether one of the first members or a subsequently elected Member shall remain a member until his membership is terminated in accordance with the provisions hereinafter contained.

Termination of Membership.

9. Membership of the Association may be terminated in any of the following ways, namely:—

(*a*) By resignation subject to such notice as may be provided for by the By-laws and subject to the provisions of the next succeeding Ordinance.

(*b*) *Ipso facto* by default in the payment of subscriptions to the Association for such period as may be prescribed by the By-laws.

(*c*) *Ipso facto* upon sentence (after conviction in a Court of Justice of any crime) to imprisonment with hard labour without the option of a fine or to any greater punishment, or upon erasure from the Medical Register under Section 29 of the Medical Act of 1858, or upon forfeiture through misconduct of the medical qualification by virtue of which the Member shall have been eligible for membership.

(*d*) By expulsion (after the enquiry and in the manner prescribed in the next succeeding Ordinance) on the ground that the conduct of the Member is detrimental to the honour and interests of the Medical Profession or Association or calculated to bring the Profession into disrepute, or on the ground that the member has wilfully and persistently refused to comply with the regulations of the Association or the rules of any Division or Branch of which he may be a member.

Expulsion.

10. (*a*) The Council shall have power on the representation of any Division or Branch and after due enquiry, of which not less than fourteen days' notice specifying a time and place at which he may be heard in his defence shall have been served on the Member in the manner prescribed by the By-laws, finally to expel from membership of the Association any Member of such Division or Branch whose conduct shall be held by the Council to be such as renders him liable to expulsion under paragraph (*d*) of the last preceding Ordinance.

(*b*) The Council of each Branch out of the United Kingdom having a membership of not less than thirty shall have power, on the representation of any two Members of such Branch and at a Special Meeting convened at not less than one month's notice, and after due enquiry of which not less than twenty-eight days' notice in writing specifying a time and place at which he may be heard in his defence shall have been

given to the Member, to expel from membership of the Association any Member of such Branch whose conduct shall be held by the Council of the Branch to be such as renders him liable to expulsion under paragraph (*d*) of the last preceding Ordinance.

(*c*) A majority of two-thirds of those present and voting at a meeting whether of the Council or of a Branch Council shall be required for the purpose of exercising the powers conferred by the last two preceding clauses.

(*d*) When a member is expelled he shall notwithstanding that he has ceased to be a member be liable to pay all sums due from him to the Association, or any Division or Branch thereof, at the time of his expulsion.

(*e*) No member in regard to whom a representation as aforesaid has been made or whose conduct is under investigation, or is the subject of enquiry by the Council, or by a Branch Council, or by any Council or Committee of a Division, or by any Committee authorised in that behalf by any such Council as aforesaid, shall be capable of effectively resigning his membership of the Association until the investigation or enquiry is completed and the decision thereunder is made known. An enquiry or investigation shall, for the purpose of this clause, be deemed to commence at the time when the matter of such investigation or enquiry is first brought officially under the notice of the body authorised by or in pursuance of this Ordinance to make such investigation or enquiry.

SECTION III.

Divisions and Branches.

Formation.

11. It shall rest with the Council from time to time to determine, recognise, and declare by resolution published in the Journal, what bodies of Members shall be Divisions, and what Divisions and groups of Divisions shall be Branches of the Association, and what shall be the local area of each Division, and accordingly the Council shall have full power from time to time to amalgamate, subdivide and modify Divisions and Branches and the local areas thereof. Nevertheless, not less than one calendar month's notice in all cases shall be given (in the manner prescribed by the By laws) to any existing Division or Branch in whose boundaries or area any change is proposed.

Boundaries.

12. In determining the boundaries or area of Divisions and Branches, the Council shall have regard to the expressed wishes of the existing local bodies concerned, and to the facilities of communication in each district by railway and otherwise, and the opportunities thus afforded to Members of local bodies for meeting to transact the business thereof, and to the expediency of making the boundaries of such bodies coincide with those of Parliamentary constituencies, counties, or other public administrative divisions of the country.

Autonomy.

13. (*a*) Subject to the Charter and the Ordinances and By laws each Division and each Branch shall be free to govern itself in such manner as it shall think fit, and for that purpose to make from time to time such Rules as it may think fit, and to repeal or alter the same as and when it shall consider it expedient.

(*b*) The Rules so made, and for the time being in force, shall be binding on the Members constituting the Division or Branch in reference to which they are made. Provided that such Rules shall be submitted for approval to the Council and shall not come into operation unless and until they are approved by the Council.

SECTION IV.

Representative Body.

Composition.

14. The Representative Body shall be composed of the Representatives elected by the Divisions in the manner prescribed by the By-laws and of the members of the Council in office for the time being. No Member of the Association who is not a Member of the Representative Body, shall be entitled to take part in any Representative Meeting.

Resolutions.

15. Subject as hereinafter provided a Resolution of the Representative Body which affects the funds of the Association, or relates to the Ordinances or By-laws or to the policy of the Association in matters affecting the honour or interests of the medical profession, and is carried by a majority of not less than two-thirds of the members present and voting thereon, or which relates to any other business within the powers of the Representative Body, and is carried by a simple majority, shall be deemed to be a decision of the Association.

Proviso as to Notice.

16. Provided that no resolution to make any addition to or any amendment, alteration or repeal of any Ordinances or By-laws, or to make any new Ordinance or By-law, shall have any operation unless a proposal to make the same shall have been previously approved and submitted to the Representative Body either by the Council, or by a Branch, or by a Division, and shall have been published in the Journal, not less than two months before the Annual Representative Meeting or one month before the Special Representative Meeting at which such resolution is passed.

Proviso as to Referendum.

17. Provided also that in respect of every resolution of the Representative Body the following provisions shall have effect:—

(*a*) Within three months after the date on which the resolution was passed the Council shall hold a meeting for the purpose of considering the resolution. Such meeting may be convened by a notice given either before or after or during the progress of the Representative Meeting at which the resolution was passed.

(*b*) The Council at their said meeting may either approve the resolution or determine on a Referendum and they shall determine on a Referendum if in their opinion the resolution does not truly represent the wishes of the Association.

(*c*) If the Council at their said meeting determine on a Referendum then the Secretary of the Association shall as soon as may be after the said meeting, but within eight weeks from the date thereof, send by post to the Secretary of each Division of the Association a requisition requiring him within four weeks to convene a meeting of the members

of his Division (hereinafter called "the Division Meeting") for the purpose of considering the resolution and shall with such requisition transmit such observations on the subject of the resolution as the Council may direct, and the Secretary of each Division shall immediately after the holding of the Division meeting (if any) certify in writing to the Council the number of the votes given at the Division meeting for and against the resolution.

(*d*) If the aggregate number of votes given for the resolution at all the Division meetings shall exceed the aggregate number of votes given against the resolution at all the Division meetings or if no vote shall be given at any Division meeting against the resolution the same shall be deemed to have been approved on a Referendum, provided that for the purpose of this provision no votes shall be reckoned unless the same shall be included in such certificate as aforesaid and such certificate shall have been received by the Secretary of the Association within four months after the date of the said meeting of the Council.

(*e*) If the said meeting of the Council shall not be held within the said period of three months then the resolution shall come into operation immediately upon the expiration of that period. But save as aforesaid the resolution shall have no operation unless and until it shall have been approved either by the Council or on a Referendum as hereinbefore provided and if and when so approved the same shall come into operation as a valid and effectual decision of the Association.

(*f*) The fact of the resolution having been so approved shall be forthwith published in the Journal.

SECTION V.

Annual Scientific Meetings.

18. The Council shall at least once a year arrange Meetings or Conferences, alone or in conjunction with other bodies, which it shall be open to every Member of the Association to attend, for the purpose of receiving addresses or other communications relating to the Medical or allied sciences, and discussing such subjects pertaining thereto as the Council may think proper, and the Council may arrange to hold such Meetings or Conferences in the United Kingdom or abroad. When held in the United Kingdom, one such Meeting shall be convened at the same place as the Annual Representative Meeting and in connection, but so as not to conflict, therewith. For the more convenient consideration of the matters to be discussed, the Council may provide that they shall be considered in Sectional Meetings, and the Council shall appoint a President and other Officers of such Sections as well as readers of any addresses that may be given.

SECTION VI.

Council.

19. The Council shall be composed of the President of the Association, the President Elect, the Past President, the Chairman of Representative Meetings, the Chairman of Council and Treasurer *ex officio* and of Members elected by the bodies and in the manner prescribed in that behalf by the By-laws.

SECTION VII.

Committees.

20. Committees may be appointed in such manner and having such powers as may be prescribed by the By-laws, or as the Representative Body or the Council, subject to the provisions of the By-laws, may think proper.

SECTION VIII.

Officers.

21. There shall be the following executive officers of the Association, namely, a President, a President Elect, a Past President, a Chairman of Representative Meetings, a Chairman of Council, and a Treasurer. The Officers aforesaid for the time being, other than the Chairman of Council, shall hold office for such term, and shall have and enjoy such duties, powers and privileges as shall be determined from time to time by the By-laws. The Chairman of Council shall be elected by the Council from its own number, and shall hold office for such term and discharge such duties as shall be determined by the Council. During his term of office and for one year thereafter he shall be an *ex officio* member of the Council, and for that period any Branch of which at the time of his election he was a Representative shall be entitled to elect another in his stead.

22. The Council may from time to time appoint and dismiss such salaried and other officers and servants as it may think fit.

SECTION IX.

Travelling Expenses.

23. The first-class travelling expenses within the United Kingdom of Members of Council and Representatives of Divisions attending any Representative Meeting shall be defrayed out of the general funds of the Association. Attendance of Representatives of Divisions for this purpose shall be construed to mean attendance at each Session of the Representative Meeting, unless the Council shall be satisfied that good cause existed for absence from any particular Session or Sessions. The first class travelling expenses within the United Kingdom of all Members attending Meetings of Council or of Committees and of all Members authorised by the Representative Body or by the Council to attend and attending any Conference shall be defrayed in like manner. The Council shall (subject as hereinbefore provided) determine what shall be considered an attendance for the purpose of this clause.

SECTION X.

Financial and other Reports and Audit.

24. The Council shall annually prepare a Balance Sheet and Financial Statement of the Association for the past year, an Estimate of the probable income and expenditure of the Association for the coming year, and a Report of the general state and proceedings of the Association for the past year to be presented to the Annual Representative Meeting. Such Balance Sheet and Statement shall be audited by a professional Accountant and a copy of the same as audited and also a copy of such Estimate and Report shall be sent to the Secretary of every Branch and Division, and published in the Journal not less than two months before the said Meeting.

25. In addition to the above-mentioned Report, the Council shall have power to present to any Representative Meeting such further report or reports as it may deem advisable, and the same shall be published in the Journal if time permits.

SECTION XI.

BY-LAWS.

26. Save so far as determined by the Charter, or by the Ordinances, the constitution and mode of government of the Association, the rights and obligations of every Member and separate body of Members thereof, the duties, powers, and privileges of all Officers, and of all Councils, Committees and governing and administrative bodies, both of the Association and of every Division and Branch, shall be such as may from time to time be prescribed and determined by or in accordance with the By-laws, and the By-laws (including the first By-laws) may from time to time be added to, amended, altered, or repealed by the Representative Body, subject to the provisions hereinbefore contained with respect to a resolution of that Body for the purposes aforesaid.

THE SECOND SCHEDULE.

BY-LAWS OF THE BRITISH MEDICAL ASSOCIATION.

SECTION I.

Preliminary.

1.—(1) In these By-laws (where not repugnant to the context) the expression "The Ordinances" means and includes the Ordinances of the British Medical Association contained in the First Schedule to the Royal Charter granted in the year 1907, and incorporating that Association and any amendment of those Ordinances.

(2) Words occurring in these By-laws and also occurring in the Ordinances shall bear the same respective meanings in these By-laws as they bear in the Ordinances.

2. The Interpretation Act, 1889, shall apply for the purpose of the interpretation of these By-laws, as it applies for the interpretation of an Act of Parliament.

3. These By-laws shall be construed so as not to conflict with the Charter or the Ordinances.

SECTION II.

Membership.

Application.

4. Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Ordinances and By-laws, and the Rules of the Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

Election by a Branch Council.

5. Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its rules prescribe) after the date of the said notice. A Branch may require that each candidate for election shall furnish a certificate signed by two Members (either of the Association, or of the Branch, as the Rules of the Branch may prescribe), stating that from personal knowledge they consider him a suitable person for election.

Election by the Council of the Association.

6. Every candidate who does not reside within the area of any Branch shall forward his application to the General Secretary of the Association, together with a certificate signed by three Members of the Association stating that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the

Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

Election of Officers of Services.

7. Notwithstanding anything contained in either of the two last preceding By-laws, officers of the Navy, Army, and Indian Medical Service on the Active List, are eligible for election through the Council or a Branch without any such certificate as therein mentioned.

Honorary Members.

8. The election of Honorary Members shall be by the Representative Body, on the recommendation of the Council. Honorary Members shall have none of the liabilities of Members as regards subscriptions, and shall not be entitled to any vote, but shall have such privileges as may be conferred upon them by resolution of the Representative Body. Every Honorary Member shall cease to be such Member upon a resolution of the Council to that effect passed by a majority of not less than two-thirds of those present and voting, and confirmed by the Representative Body.

Extraordinary Members—"Associate," "Complimentary."

9. Extraordinary Members shall be either Associate or Complimentary Members. Any Division or Branch may elect any Ordinary Member of any other Division or Branch as an Associate Member, and any Division or Branch not in the United Kingdom may elect as a Complimentary Member any qualified Medical Practitioner or person distinguished in Science resident within the area thereof, but not eligible for ordinary membership of the Association. Divisions or Branches may by their local Rules confer on Extraordinary Members such privileges other than that of voting, and impose such conditions of election as they may think desirable, subject to the sanction of the Council.

Annual List of Members.

10. In the month of May in each year a List of Members of the Association shall be prepared and published stating the names and addresses of the Ordinary Members of each Division and Branch as shown by the Register (to be kept by the Secretary of the Association) of Members of the Association on April 30th of that year, and those named in the said List as Members of any Division or Branch and no others shall be deemed to be the Ordinary Members of such Division and Branch at the date of the publication of such list for all the purposes of the Ordinances and the By-laws. Such list is hereinafter referred to as the "Annual List."

SECTION III.

SUBSCRIPTIONS.

Journal.

11. Except in the case of Members elected on or after the first of July in any year, the subscription to the Association shall be twenty-five shillings. A Member admitted on or after the first of July in any year shall pay half the current subscription for that year.

To whom Paid.

12. Subscriptions shall be paid by all Members to the General Secretary at the registered office of the Association, or in the case of Members residing out of the United Kingdom, to such persons (if any) as the General Secretary may authorise to receive subscriptions on his behalf, of which authorisation notice shall be given to all Members concerned.

Arrears of Subscription, Cessation of Membership.

13. Any Member whose subscription shall not have been paid on or before the 31st December of the current year shall, without prejudice to his liability to the Association, be suspended from all privileges of membership, and at the end of the succeeding year, if the arrears be still unpaid, he shall, *ipso facto*, cease to be a Member. No Member shall (except in case of his death or expulsion, or of his ceasing to be a Member under the provisions of Ordinance 9(*c*) or under the previous provision of this By-law) cease to be a Member without having given one month's previous notice, in writing, of his intention in that behalf to the Secretary of the Association, and having paid all arrears of subscription (if any) due from him.

Extra Subscription to Divisions and Branches.

14. It shall be competent for any Division or Branch offering special privileges to its Members to require a special subscription from those Members who desire to avail themselves of such special privileges, and it shall likewise be competent for any Division or Branch to charge such special subscription as it may think proper to its Extraordinary Members; but no Ordinary Member of any Division or Branch in the United Kingdom shall be called upon to pay any further subscription than that paid to the Association as a condition of enjoying any ordinary privilege of membership of such Division or Branch.

Special Subscriptions to Branches not in the United Kingdom.

15. (1) It shall also be competent for any Branch not in the United Kingdom by Rule (approved as hereinafter mentioned) to require each member of such Branch to pay (in addition to his Subscription to the Association and to any such special subscription) an annual subscription of such amount as may be deemed by such Branch to be necessary for defraying expenses occasioned by the special circumstances of such Branch, and not capable of being defrayed out of any grant from the funds of the Association made in pursuance of the By-laws.

(2) No such Rule shall have effect unless and until it shall have been approved by the Branch or by the Council in accordance with the following provisions.

(3) Approval by the Branch may be given either (*a*) by a majority of not less than three-fourths of the Members of the Branch, voting by means of voting papers sent to all such Members (in such manner as the Rules of the Branch may prescribe) not less than two months before the result of such voting is ascertained, or (*b*) by a majority of not less than three-fourths of the Members present and voting at a General Meeting of the Branch specially convened to consider the proposed Rule, of which Meeting not less than 21 days' notice shall have been given to all the Members of the Branch.

(4) In the event of such Rule being approved at a General Meeting of the Branch under paragraph (3) (*b*) hereof, a copy of such Rule, together with a copy of this By-law, shall be sent to every Member of

the Branch, and the Secretary or other responsible officer of the Branch shall certify to the Council that such copies have been so sent, and such Rule shall not be approved by the Council (*a*) until the expiration of six months from the date of such Certificate or (*b*) if the Council shall, within the said period of six months, have received a representation in writing purporting to be signed by not less than one-eighth of the total number of Members of the Branch (as appearing in the annual list for the time being in force), praying that the said Rule be not approved.

SECTION IV.

Divisions and Branches.

Local Management: Branches.

16. The management of the affairs of each Branch shall be vested in a Branch Council, of which the Members of the Council of the Association elected by the Branch shall be Members *ex officio*. In the case of a Branch comprising more than one Division, each Division shall be entitled to elect a Member or Members of the Branch Council and the number of Members to be elected by each Division shall be as nearly as possible proportional to the membership of such Division. In addition to the Members so elected, the Branch Council may have as *ex officio* Members thereof such Officers of the Branch as the Branch may think desirable.

Local Management: Divisions.

17. Any Executive Committee or Council appointed to manage the affairs of any Division shall include *ex officio* the Member who for the time being represents the Division on the Representative Body, and any Executive Committee or Council of any Division which is not in itself a Branch shall also include, as *ex officio* Members thereof, the Members of the Branch Council elected by such Division.

Grants to Branches: Ordinary.

18. (1) The Treasurer of the Association shall annually pay, or allow out of the funds of the Association, to the Treasurer of each Branch such sum, not exceeding four shillings, as the Council shall order to be paid, for each Member of the said Branch who has paid to the Association the full current annual subscription for that year, and such sum, not exceeding two shillings, as the Council shall order to be paid, for each Member elected after the 1st July, who has paid to the Association half the current annual subscription.

(2) The grants made under this clause shall be applied to the expenses of the bodies to which they are made at the discretion of those bodies and within the limits of the objects of the Association as defined in the Charter.

(3) For the purposes of this By-law, those named in the Annual List for the time being in force, as Members of any Branch, shall be deemed to be Members of the said Branch for the year in which such Annual List is published, and those elected by any Branch Council, whose membership dates from July 1st in any year and has been notified to the Council, shall be deemed to be Members of the said Branch for the ensuing half-year.

(4) Provided that it shall be competent for the Treasurer in any year to make grants on account to any Branch prior to the publication of the Annual List for the year.

Supplementary Grants.

19. In addition to the grants made in pursuance of the last preceding By-law, the Council, on the application of any Division or Branch, shall have power to make a supplementary grant of such amount as the Council may deem proper. Every application by a Division, not itself a Branch, shall be forwarded through the Branch Council, whose duty it shall be to transmit the same to the Central Council, with such comment (if any), as the Branch Council may deem expedient.

20. All applications for supplementary grants shall be referred by the Council to the Organisation Committee for report thereon, and, in considering the same, the said Committee and Council shall have regard to the evidence of work done by or through the agency of such Division or Branch for the Association or the medical profession, and also to the amount which may have been voluntarily subscribed locally for any purpose for which such a grant may be desired.

Application of Grants.

21. Out of the moneys received by way of grant from the Association as aforesaid each Branch shall (so far as possible) defray all its expenses, and shall also pay to each Division of the Branch such sum as the Branch Council may consider necessary to enable the Division to defray its expenses.

Annual Reports.

22. Every Division shall furnish annually to the Branch Council during the month of January, and every Branch shall furnish to the Council of the Association not later than March 15th in every year, a report of its proceedings during the previous year, a statement of its numbers and a financial statement in such form as the Council may from time to time prescribe.

SECTION V.

Formation of Constituencies.

23.—(1) Representatives of Divisions shall be elected by Constituencies formed as follows, each such Constituency being entitled to elect one Representative.

(2) Any Division having not less than fifty members may form one Constituency, and except as hereinafter provided every Division having less than fifty members shall be grouped by the Council with another Division, or with other Divisions, to form a Constituency having not less than fifty members.

(3) Provided that the Council shall have power to give separate representation to Divisions having fewer than fifty members in those cases in which it appears to the Council that special difficulties exist as to the holding of joint meetings with neighbouring Divisions.

(4) In no case shall the total number of Constituencies formed throughout the Association exceed 300.

(5) Subject as aforesaid the Constituencies shall be formed and may be from time to time altered by the Council, and the Council shall publish lists of the Constituencies as and when they may think expedient.

Election of Representatives.

24. (1) The Representative shall be elected by a General Meeting of the Members of the Constituency, held not more than nine months,

nor less than four weeks, before the Annual Representative Meeting at which he takes office, or by Voting Papers sent to each Member of the Constituency, as the said Constituency may decide.

(2) The said meeting shall be convened (or where the election is by voting papers, the voting papers shall be despatched) by the Secretary of the Division forming the constituency, or in the case of a constituency comprising more Divisions than one, by the Secretary of one of those Divisions to be chosen by the Secretaries of those Divisions, and if they cannot agree, by the Council.

(3) Where the election is by voting papers, a Meeting of the Members of the constituency (convened as aforesaid) shall be held after the election, and not less than 21 days before the date of the Annual Representative Meeting, for the purpose of considering the Agenda of that Representative Meeting, and if such Meeting of the Members of the constituency shall not be held, the Representative of the Constituency shall not be entitled to attend the Representative Meeting.

(4) The person acting under Clause 2 of this By-law shall, not less than fourteen days before the Annual Representative Meeting, inform the General Secretary of the name and address and mode of election of the Representative elected by the constituency, and if the election was by voting papers, shall satisfy him as to the holding of the subsequent Meeting of the Members of the constituency, and the General Secretary on being so informed and satisfied, shall issue to such Representative a ticket of admission to the Meeting.

Term of Office.

25. The Representative of a constituency shall come into office at the commencement of the Annual Representative Meeting next succeeding the date of his election, and shall continue in office until the commencement of the Annual Representative Meeting in the following year, and shall be re-eligible.

Substitutes for Representatives.

26. In the event of a Representative of any constituency being unable or unwilling to attend a Representative Meeting, the said constituency shall have power to select a Representative to act at the said Meeting in his stead, and such selection may be made by the constituency in General Meeting or by such Officer or Member of the Division or Divisions composing the constituency as may have been authorised by the Rules of the Division or Divisions or by a Resolution of the constituency to make such selection.

Convening of Annual Representative Meetings.

27. The Annual Representative Meeting shall be convened in every year by the Council, and shall be held at such time and place as shall have been prescribed by the Association in the previous Annual Representative Meeting, and if no time or place shall have been so prescribed, the same shall be determined by the Council.

Special Representative Meetings.

28. (1) Representative Meetings, other than the Annual Representative Meeting, shall be styled Special Representative Meetings, and shall be convened at any time by the Chairman of Representative Meetings on the requisition of the Council or on the requisition of not less than seven Constituencies.

(2) At least 14 days' notice of such Meeting shall be given in the

Journal, and such notice shall indicate the object for which such meeting is convened.

(3) No business shall be dealt with by a Special Representative Meeting other than that for which it is specifically convened.

Business of Annual Representative Meeting.

29. The business of the Annual Representative Meeting shall be to elect a Representative of a Division as the Chairman of Representative Meetings, and also a Representative of a Division as Deputy-Chairman; to elect a President of the Association; to elect ten Members of the Council, and such other Officers and such Members of Committees as by the Ordinances or By-laws be required to be so elected; to consider the election of Honorary Members when recommended by the Council; to appoint a place at which the next Annual Representative Meeting shall be held; to consider the Annual Financial Statement and Balance Sheet presented by the Council; to appoint an Auditor or Auditors (who shall be a professional Accountant or professional Accountants) and fix his or their remuneration; to consider Reports of the Council, Reports of Committees instructed to report to such Meeting and Reports of Branches and motions relating to the adoption of such reports in whole or in part; to make new Ordinances or By-laws and alter and repeal existing Ordinances or By-laws and to consider any resolution relating to the honour and interests of the Medical Profession or of the Association which shall have been adopted by any Division or Branch, provided that any such Resolution proposing material alteration of the Constitution or policy of the Association shall have been submitted through the Journal for the consideration of all the Divisions not less than three months previously.

Chairman.

30. At every Representative Meeting the Chairman of Representative Meetings, when present, and in his absence the Deputy Chairman of Representative Meetings, when present, shall preside. In the absence of both the said Officers the Meeting shall appoint a Chairman from its own number.

Voting.

31.—(1) In any Representative Meeting Representatives of Divisions only shall be entitled to vote.

(2) Voting shall be, as a rule, by show of hands, unless before such vote is taken twenty Representatives present request that the vote shall be taken by card, in which case every Representative shall record as many votes as there are Members in the constituency which he represents according to the annual list then in force.

(3) In voting upon any matter upon which a constituency has passed a Resolution within the three months immediately preceding such Meeting, the Representative of that constituency shall be under obligation to vote in accordance with such resolution.

(4) The Chairman shall in the case of an equality of votes have a second or casting vote.

Quorum.

32. No business shall be transacted at any Representative Meeting unless there be present at least one-half of the number of Representatives appointed to attend such Meeting.

Adjournment.

33. Any Representative Meeting may be adjourned from day to day until the completion of its business.

Minutes.

34. The Minutes of every Representative Meeting shall, after confirmation, be transmitted by the Chairman thereof to the Council for presentation to its next meeting.

SECTION VI.

Council.

Commencement of Office.

35. The Council shall come into office at the close of the Annual Representative Meeting of each year.

Composition.

36. The Council shall be composed of the *ex officio* Members mentioned in the ordinances, and of Members duly elected by the following bodies, namely (*a*) by the Branches of the Association, which shall be grouped for the purpose of electing twenty Members of the Council in the manner prescribed by By-law 37; (*b*) by the Representative Body, which shall elect annually ten members of the Council, and (*c*) by the Council itself, which shall have power to add to its numbers at any of its Meetings all or any one or more of the following, namely: One Medical Officer on the active or retired list of each of the following services:—The Royal Navy Medical Service, the Army Medical Service, and the Indian Medical Service, provided that in each case such Medical Officer shall not have retired from the active list more than three years previously.

Grouping of Branches.

37. The Branches shall be grouped for the purpose of the election of 20 Members of the Council in such manner as the Council may from time to time direct, but so that each group shall elect not less than one such Member and not more than four such Members.

Mode of Election by Groups.

38. The election of Members of Council by the groups of Branches shall be by means of voting papers sent by post to each member of every Branch comprised in the group. The said voting papers shall contain the names of those candidates who have been nominated, either (*a*) by a Division or Branch in writing, signed by not less than three Members of any such Branch, and sent to such Officer as the Council may appoint for the purpose on or before an appointed day of which not less than fourteen days' notice has been given in the Journal. The said voting papers shall contain such other particulars (if any) and shall be sent to the said officer within such time as the Council may [illegible] by some general notice given as aforesaid.

Term of Office by Members of Council elected by Branches.

39. (*a*) Each Member of Council elected by a group of Branches in the United Kingdom shall hold office for one year, and at the end of that time shall [illegible] for re-election, unless he have

served as the representative on the Council of one and the same Branch or group for six years successively, in which case he shall for one year be incapable of being elected as such representative.

(2) Each Member of Council elected by a Branch or group not in the United Kingdom, or elected by the Council to represent the Royal Naval Medical Service, the Army Medical Service, or the Indian Medical Service, shall hold office for such period, not exceeding three years, as the electing body may determine, and at the expiration of such period shall be eligible for re-election, provided that no such Member shall be re-elected so as to make his period of continuous service as the Representative on the Council of one and the same group exceed six years.

Term of Office of Members elected by the Representative Body.

40. Each Member of Council elected by the Representative Body shall hold office for one year, and at the end of that time shall be eligible for re-election, unless he have served as a Member of Council elected by the Representative Body for six years successively in which case he shall for one year be incapable of being so elected.

Qualification.

41. No person shall be eligible for election as a Member of Council by a group of Branches in the United Kingdom unless at the time of his election he shall be a Member of a Branch comprised in such group. The eligibility for election as a Member of Council by a group of Branches not in the United Kingdom, shall be such as may be agreed upon by the Branches forming the said group, and if no such agreement shall be made, the regulations as to eligibility shall be the same as for the groups in the United Kingdom.

Election Return.

42. The return of the election of each Member of Council elected by a group shall be communicated in writing to the Secretary of the Association by the President or Secretary of the Branch of which he is a Member, not less than twenty-eight days prior to the Annual Representative Meeting of the Association.

Powers of incomplete Council.

43. In default of and until election of a Member or Members by any body authorised to elect, or so far as such election shall not be complete, all the powers conferred on the Council shall belong to and be exercised by the *ex officio* Members thereof alone and such other Members (if any) of the Council as may have been duly elected by bodies authorised to elect.

Casual Vacancies.

44. Any casual vacancy occurring in the Council not less than four months before the Annual Representative Meeting may be filled up by any body the representation of which may have so become vacant, and the election to fill such vacancy shall be conducted in the same manner as the Annual Election. Any person so chosen shall retain his office so long only as the Member in whose office such casual vacancy shall have occurred would have retained the same if such vacancy had not occurred. The provisions of this clause shall apply as well to the members forming the first Council of the Association in pursuance of Clause 11 of the Charter as to members subsequently taking office.

Proceedings.

45. The Council shall meet not less than four times a year, and shall be presided over by the Chairman of the Council, or in his absence by a Chairman to be appointed by the Meeting from its own number.

46. Meetings of the Council shall be held at such time and place, and upon such notice as the Council shall appoint.

47. No business shall be transacted at any Meeting of the Council unless at least 15 Members be present.

48. The Chairman of Council may, if he think fit, and shall, upon receiving a requisition signed by not less than fifteen Members of the Council, and specifying the business for which a Special Meeting is required, call together a Special Meeting thereof. No business shall be transacted at a Special Meeting other than that for which such Meeting is called.

SECTION VII.

Journal.

49. The *Journal* shall be conducted by a paid Editor, who shall be responsible for all that appears therein except such matters as are inserted therein in accordance with the Ordinances or By-laws, or by the direction of the Council. The Editor shall be appointed by and shall be subject to the control of the Council.

SECTION VIII.

Officers.

50. The President of the Association shall be elected annually at the Annual Representative Meeting and shall enter upon the duties of his office at the next Annual Representative Meeting, and until then shall bear the title of President-Elect. At the expiration of his year of office as President he shall be designated Past President, and shall hold office as such for one year.

51. The Chairman of Representative Meetings shall be elected annually at the Annual Representative Meeting. He shall enter upon the duties of his office at the close of the Meeting.

52. The Treasurer shall be elected at an Annual Representative Meeting and shall hold office for three years. He shall receive all moneys payable to the Association, and discharge all accounts which have been ordered by the Council to be paid.

53. The Council shall have power to nominate for election at the Annual Representative Meeting those members who by their services to the Association are in the opinion of the Council worthy of election as Vice-Presidents. Such election shall be for life unless any appointment shall be subsequently cancelled by a vote of the Association in Representative Meeting assembled on a motion brought forward by the Council. No special privilege shall attach to the office of Vice-President.

54. All salaried officers shall be appointed and may be dismissed by the Council and shall hold office for such period and perform such duties and receive such remuneration as the Council may from time to time determine.

SECTION IX.

Committees.

55. The Representative Body and the Council shall respectively have power to appoint Committees, with such powers as may to them seem necessary or convenient, and to fix the quorum thereof, and lay down Rules for regulating the proceedings of such Committees.

56. The President of the Association, the Chairman of Representative Meetings, the Chairman of Council, and the Treasurer shall be *ex-officio* Members of all Committees.

57. Without prejudice to the foregoing By-laws, there shall be Standing Committees called by the names, composed in the manner, and having the powers and duties set forth in the Schedule to these By-laws.

Chairman.

58. Each Standing Committee shall appoint from its own number a Member of Council as Chairman.

SECTION X.

Seal.

59. The Council shall provide for the safe custody of the seal of the Association, and the seal shall not be used except in pursuance of a resolution of the Council and in the presence of at least one member of the Council and of the Secretary of the Association who shall sign every instrument to which the seal is affixed.

SECTION XI.

General.

Notices.

60.—(1) A notice may be served by the Association upon any member either personally or by sending it through the post, in a prepaid letter, addressed to such member at his last known address or by publication of such notice in the *Journal* and sending a copy of the *Journal* containing such notice to such member, prepaid and addressed as above mentioned.

(2) A notice may be served on any Division or Branch, by serving the same as aforesaid on the Secretary of such Division or Branch, and if there be none, then on any two members of such Division or Branch.

(3) Any notice, if served by post, shall be deemed to have been served on the day following that on which the letter, or a copy of the *Journal* containing the same is posted, and in proving such service it shall be sufficient to prove that the letter, or a copy of the *Journal* containing the notice, was properly addressed and put into the Post Office.

Validity of Proceedings.

61. The proceedings of the Representative Body or of the Council or of any Branch Council or Committee or other Body acting under the Charter or the Ordinances or the By-laws shall not be invalidated by any accidental omission to give any notice required by the By-laws or by any vacancy among their members or by any defect in the election or qualification of any of the members thereof.

SCHEDULE TO BY-LAWS.

STANDING COMMITTEES.

Name of Committee.	Additional *ex officio* Members.	Appointed Members. Appointed by the Representative Body.	Appointed by the Council.	Appointed by each Irish Branch.	Total.	Duties, Powers, &c.
Finance	The Chairman of each of the following Committees :— Organization, Journal, Science, Medico-Political, and Premises.	4	4	..	13	To certify the accounts prior to their presentation to the Council; to advise the Council on the administration of any funds held in trust by the Association, and of the Superannuation Fund. When necessary, the appointment of administrators for any such funds; to report to the Council on the financial bearings of any proposals involving special expenditure; to supervise and report to the Council on the general working and organization of the Central Office.
Organization ..	..	3	3	..	6 (with power to add to its number as mentioned in the last column of this Schedule.)	To consider and advise upon all questions affecting the interpretation or alteration of the Regulations of the Association and the Standing Orders of the Representative Meeting and Council; to deal with all questions of the boundaries or area of Divisions and Branches and combinations thereof, and the Rules thereof, other than those relating to ethical matters, and to advise the Council thereon, and to exercise such powers as may be conferred upon it by the Council in advising and assisting Divisions and Branches in the strengthening of their organization. This Committee shall have power to add to its number for special purposes a limited number of Members specially qualified to assist in its work.
Journal	..	3	3	..	6	To consider and report to the Council upon any matters connected with the Journal or other publications of the Association.
Premises	..	3	3	..	6	To consider and report to the Council upon the management of the property of the Association.
Science	..	3	5	..	10 (with power to add to its number as mentioned in the last column of this Schedule.)	To advise, and when so directed, act for the Council, in all matters not specially referred to other Committees which concern the work of the Association for the promotion of the Medical and allied Sciences, including the conditions of award of Scholarships, Grants or Medals given by the Association, or

STANDING COMMITTEES—*continued.*

Name of Committee.	Appointed Members. Additional *ex-officio* Members.	Appointed by the Representative Body.	Appointed by the Council.	Appointed by each Irish Branch.	Total.	Duties, Powers, &c.
Science—*contd.* ..	..	..	..	..	..	under Trusts undertaken by the Association, the assistance of the Officers of the Sections at the Annual Meeting, the arrangement of Committees for special Scientific work, the encouragement and assistance of the Scientific work of the Branches and Divisions, and all matters connected with the Library and its management. The Committee shall have power to co-opt for the consideration of the award of Scholarships, Grants and Medals, Members not exceeding four in number, specially qualified to assist in its work.
Ethical	..	4	4	..	8	To advise the Council on proposed Rules of Divisions and Branches relating to professional conduct, to investigate and report to the Council upon the case of Members whose conduct is to be considered by the Council, to adjudicate in cases of disputes on ethical questions referred to it by Members of the Association, and generally to advise and where so directed, act for the Council on all questions of professional conduct.
Medico-Political..	..	6	6	..	12	To deal with all matters involving the public relations of the Profession not specially referred to other Committees.
Public Health ..	..	3	3	..	6	To consider all questions relating to Public Health and the Poor Law Medical Service.
Hospitals.. ..	..	4	4	..	8	To consider and report to the Council upon all questions concerning Hospitals and other Medical Charities.
Naval and Military	The Representatives on the Council of the Royal Navy Medical Service, the Army Medical Service and the Indian Medical Service	2	2	..	..	To consider all matters relating to the Royal Naval Medical Service, the Army Medical Service, the Indian Medical Service, and the Medical Organization of the Auxiliary Forces.
Colonial	All the members of the Council who represent Colonial Branches.	2	2	..	..	To consider all questions specially relating to the Branches not in the United Kingdom.

STANDING COMMITTEES—*continued.*

Name of Committee.	Additional *ex-officio* Members.	Appointed Members. Appointed by the Representative Body.	Appointed by the Council.	Appointed by each Irish Branch.	Total.	Duties, Powers, &c.
Scottish	The Secretary of each Scottish Branch. All the members of the Council who represent Scottish Branches.	..	..	..	..	To consider all matters specially concerning Scotland. It shall have a Secretary, resident in Scotland, and shall meet at such place and time as the Committee may itself direct.
Irish	The Secretary of each Irish Branch. All the members of the Council who represent Irish Branches.	..	..	1 member or, if the Secretary of the Branch is a member of the Council, 2 members—any such member appointed by the Leinster Branch or by the Ulster Branch to be a practitioner not resident in Dublin or Belfast	..	To consider all matters specially concerning Ireland. It shall have a Secretary, resident in Ireland, and shall meet at such place and time as the Committee may itself direct. This Committee shall have power to add to its number not more than 3 Members to represent districts which are not otherwise represented thereon.

APPENDICES.

APPENDIX A.

RESOLUTIONS OF THE ANNUAL REPRESENTATIVE MEETING, 1906, AS TO THE REDRAFTING OF THE CHARTER.

(*Minutes of Annual Representative Meeting.*)

Minute 93 — That the Charter be referred to the Organization Committee in order that the instructions adopted by this Representative Meeting, after consideration of the amendments before it, may be embodied in the Charter, together with such amendments desired by the Colonial Branches as are consistent therewith, and that the Charter, as revised by the Organization Committee, be published in the Supplement and referred to a Special Representative Meeting.

Minute 98.—That in Clause 1, 19th line, after the word "Ireland," the words "or in any part of our Dominions" be inserted.

Minute 101.—That in Clause 2 (2) (i), second line, after the word "dominions" the words "or elsewhere" be inserted.

Minute 102.—That a clause be inserted in Clause 2 (2) allowing the Association to form a Circulating Medical Library and also a Club House in London in the first place, and in other large centres if occasion arise.

Minute 105.—That in Clause 2 (2) (vi), at the beginning of the first line, the words be inserted: "May establish, contribute to, organize, and manage Funds for assisting or defending, or."

Minute 108.—That with regard to Clause 2 (2) (viii), the Solicitor be instructed to extend its verbiage to include families of deceased Members of the Association and the Office Staff Superannuation Fund.

Minute 111 —That in Clause 2 (2) (ix), after the words "interests of the," the words "Association or of the," be inserted.

Minute 116.—That in Clause 5 (2), line 8, after the word "profession," the words "or other distinguished scientific men" be inserted.

Minute 129.—That in Clause 7, in the third line, the word "annually" be deleted.

Minute 139.—That in Clause 9 (1) (*c*), the word "the" before the word "Divisions" be deleted, and that, at the end of Subsection (*c*), the words "or other local bodies" be added.

Minute 149 —That in Clause 12, fifth line, for the words "the Members present and voting" there be substituted the words "the votes given thereon in the manner prescribed by the regulations."

Minute 159.—That, if a limit be required by the Privy Council, 100 shillings be the sum fixed.

Minute 173.—That the words "*ipso facto*" in Clause 9 (*c*) be deleted.

Minute 175.—That Ordinance 9 be referred back for redrafting.

Minute 176.—That in Ordinance 10 (*a*), second and sixth lines, after the word "Branch" the words "or Division" be inserted.

Minute 177.—That in Ordinance 10 (*b*), line 5, for "fourteen" be read "twenty-eight."

Minute 196 —That Ordinance 16 (6) be approved, as follows:

The Representative shall be elected by a General Meeting of the Members of the Constituency, held not more than nine months, nor less than four weeks, before the Annual Representative Meeting at which he takes office, or by Voting Papers sent to each Member of the Constituency, as the said Constituency may decide.

Minute 200.—That in Ordinance 17 (2), 6th line, after the word "Council" the words "by a Branch" be inserted.

Minute 201.—That in Ordinance 17 (2), 7th line, for "three," "two" be read.

Minute 202.—That in Ordinance 17 (3), (*a*) and (*e*), lines 1 and 2 respectively, for "twenty-eight days" "three calendar months" be read

Minute 204.—That in Ordinance 17 (3) (*c*), 3rd line, after the word "Meeting," the words "and not more than eight weeks after," and in 6th line, after the second bracket, the words "within four weeks" be inserted; and that in 11th line "(if any)" be deleted.

Minute 207.—That in Ordinance 18, 1st line, for "annually" "at least once a year" be substituted.

Minute 208 —That in Ordinance 18, 1st line, after "Meetings," the words "or Conferences alone, or in conjunction with other Bodies" be inserted.

Minute 210.—That in Ordinance 18, in 6th line, after "Meetings" "or Conferences" be inserted.

Minute 211.—That in Ordinance 18, 7th line, "one such Meeting" be substituted for "such Meetings."

Minute 223.—That in Ordinance 21, last line but two, after the word "and" the words "for that period" be inserted.

Proposed Application for a Charter.

Instructions of the Annual Representative Meeting, 1906, as to the Redrafting of the Draft By-laws.

(1) *Authority to the Organization Committee to Redraft.*

Minute 234.—That the draft By-laws, with all amendments proposed thereto, be referred to the Organization Committee, with authority to redraft the same in such manner as the Committee may deem expedient.

(2) *Election and Instruction of Representatives.*

Minute 197.—That the following proposal be considered in connexion with the By-laws:

> "That in the event of a Representative being elected by voting papers, a Meeting of the Constituency must be held to consider the instructions which are to be given to the said Representative."

(3) *Composition of Central Council.*

(a) *Minute* 215.—That the Members of the Central Council, other than *ex-officio* and Service Members, shall be elected two-thirds by the Branches and one-third by the Representative Body at its Annual Meeting, due regard being had to geographical distribution of the members.

(b) *Minute* 217.—That there be 30 Members of the Council elected by the Branches and by the Representative Body, 20 by the Branches, and 10 by the Representative Body.

(c) *Minute* 218.—Ordinance 19, that in the 11th line all the words after "numbers" and the whole of the 12th line up to and including the word "further," be deleted.

(d) *Minute* 219.—That in Ordinance 19, last line but one, after the words "Medical Officer," the words "shall be a Member of the Association and" be inserted.

(e) *Minute* 220.—That Ordinance 19 be approved as amended.

(f) *Minute* 220A.—That Ordinance 19 be a by-law.

(4) *Paid Officials.*

Minutes 225-7.—On consideration of the following motion by the Council—

> That a new Ordinance be inserted after Ordinance 21, and numbered Ordinance 22, to read as follows: "There shall be an Editor, a General Secretary and Manager, a Medical Secretary, and such other officers as the Council may from time to time appoint,"

It was proposed as an amendment and resolved—

> That the provision, if any, as to the principal paid officials be not in the Ordinances but in the By-laws, in order that it may be modified by the Representative Body when required, without reference to the Privy Council, and that no decision as to the designation of these officers in the Regulations be arrived at until the Committee of Inquiry has reported.

APPENDIX B.

SCHEME FOR TOPOGRAPHICAL SELECTION OF REPRESENTATIVES OF DIVISIONS ELECTED BY THE REPRESENTATIVE BODY TO THE CENTRAL COUNCIL.

The resolution of the Annual Representative Meeting, 1906, with respect to the election of the Council under the Charter provides that ten members of the Council should be elected by the Representative Body.

A question first arises as to the position of the Colonial Branches in the matter. It appears very doubtful whether the Representative Meeting could effectively elect members who could be considered representative of the

Colonies, and for the purpose of the present Memorandum it is assumed that the ten representatives elected by the Representative Meeting would be from the United Kingdom.

Assuming that the representation of the United Kingdom alone is to be considered, ten members are to be distributed among an aggregate constituency of approximately 15,000, giving an average of 1,500 members per representative.

The principle, however, has been generally recognized in these matters of assigning over-representation to the more distant and scattered medical populations, and Ireland, with 908 members, would doubtless be assigned at least one member, and Scotland, with approximately 1,900 members, two representatives.

This would leave seven representatives, and the question at once presents itself whether these should all be assigned to districts of England and Wales or a portion elected irrespective of districts.

If the principle be generally recognized that the functions of the Council are essentially administrative and executive, it may be considered that provision should be made for giving due weight to considerations of personal suitability as well as topographical representation. It might possibly be desired, therefore, to assign not more than 4 places definitely to representatives of England and Wales, thus leaving 3 places to be filled without regard to the part of the kingdom which such members might be deemed more particularly to represent.

Thus it would be necessary, as regards the topographical representation of England and Wales, to distribute 4 members among a population of 12,000. This would be effected by making 4 districts as follows:

North of England (north of Dee and Humber), population, 3,300.

East Anglia, Midlands and Wales, 3,000.

Metropolitan (including the metropolitan Divisions of the South-Eastern Branch), about 3,000.

South of England (Worcester, Oxford and Reading, and South-Eastern Branches, and Branches south and west of these), about 3,000.

It is impossible to construct precisely equal electoral districts without breaking up existing Branch grouping, and in the above suggestion equality of districts has been sacrificed to present Branch grouping, except as regards the metropolitan Divisions of the South-Eastern Branch.

The machinery for at the same time enabling the Representative Meeting to act as a body in the election, and insuring the desired degree of topographical representation among those elected, would be provided by the form of voting paper and the procedure in counting the votes. Assuming that it is desired that those specially representing England and Wales should be 4, those representing Scotland 2, those representing Ireland 1, and that there should be 3 elected without regard to the districts from which they came, the Voting Paper would contain 7 groups of names of candidates—4 English Groups, 2 Scottish Groups, and 1 Irish—and voters would be instructed to vote for not more than 2 in any one Group, and not more than 10 in all.

The instructions to the scrutineers would be to count the votes in each Group separately, and to take the candidate receiving the highest number of votes in each Group as elected.

For the remaining 3 seats, the 3 of the remaining candidates who received the greatest number of votes, irrespective of the Group in which their names appeared, would be elected.

APPENDIX C.

GROUPING OF BRANCHES FOR ELECTION OF TWENTY MEMBERS OF COUNCIL.

SCHEME OF GROUPING OF THE UNITED KINGDOM BRANCHES TO ELECT FIFTEEN MEMBERS.

If the Branches throughout the Association elected 25 Members of Council, the number to be elected by the Branches in the United Kingdom would be approximately 15, and on a system of proportional representation each Member of Council would be elected by a constituency of approximately 1,000 members. It would probably be deemed to make Ireland (membership 908), and Scotland (membership 1,885), separate groups, and Ireland would probably be assigned one representative at least, and Scotland 2, out of 15 Members of Council. Deducting the figures for these countries from the aggregates, there remain 12 members to be assigned to the Branches in England and Wales, having a total membership of about 12,000, and giving representation of one Member per 1,000.

Having regard to the widely differing and constantly fluctuating membership of the Branches, it is very difficult to form equal single Member constituencies corresponding to this representation without breaking up Branches. The larger the districts created the more nearly a system of strictly proportional representation can be carried out, and the solution which occurs as simplest is to take as a basis the creation of four districts of approximately equal size, each returning three Members.

For this purpose the grouping suggested in the scheme for election of representatives by the Representative Meeting on the topographical system would appear to correspond best to the requirements of the problem, which requirements may be taken to be (*a*) preservation of the integrity of Branches, (*b*) approximate equality of electoral districts, and (*c*) contiguity of the Branches which are to form one group.

Such grouping would be (1) Northern, (2) Midlands and Wales, (3) Metropolitan (including the metropolitan Divisions of the South-Eastern Branch), and (4) Southern and South-Western, as shown in the appended Schedule.

SCHEDULE.

SCHEDULE OF GROUPING OF BRANCHES IN THE UNITED KINGDOM FOR REPRESENTATION ON THE CENTRAL COUNCIL (*a*) ASSIGNING 15 MEMBERS TO SUCH BRANCHES AND (*b*) ASSIGNING 20 MEMBERS TO SUCH BRANCHES.

Grouping A. 15 in all. Number of Members to be Elected.	Branches.		Total.	Grouping B. 20 in all. Number of Members to be Elected.*
	NORTHERN.			
	North of England	669		
	N. Lancashire and S. Westmorland	133	802	1
	Yorkshire	..	792	1
	Lancashire and Cheshire... ...	..	1,627	2
			3,221	4
	MIDLAND			
	East Anglian	435		
	East York and N. Lincoln ...	136	716	1
	Cambridge and Huntingdon	147		
	Midland	541	765	1
	South Midland	222		
	Birmingham	439	727	1
	Staffordshire	202		
	N. Wales	211		
	S. Wales and Monmouthshire	484	838	1
	Shropshire and Mid Wales	132		
			3,011	4
	METROPOLITAN			
	Metropolitan Counties ...	2,661		
	Bromley Division 11		3,001	4
	Croydon ,, 153	404		
	Norwood ,, 252			
	SOUTHERN AND SOUTH WESTERN			
	Bristol and Bristol	382		
	Gloucestershire	139	715	1
	West Somerset	74		
	Worcester and Hereford ...	122		
	South Western	446	667	1
	Dorset and West Hants ...	217		
	Southern	498	717	1
	Oxford and Reading ...	219		
	South Eastern (excluding Bromley, Croydon, and Norwood) ...		881	1
			2,913	4

SCHEDULE—*continued.*

Grouping A, 15 in all. Number of Members to be Elected.	Branches.		Total.	Grouping B, 20 in all. Number of Members to be Elected.
	SCOTLAND.			
2	Aberdeen	183	1,885	3
	Border Counties	153		
	Dundee	108		
	Edinburgh	435		
	Fife	80		
	Glasgow and West of Scotland	687		
	Northern Counties of Scotland	117		
	Perth	56		
	Stirling	66		
	IRELAND.			
1	Connaught	42	908	1
	Leinster	338		
	Munster	104		
	South-Eastern Ireland	64		
	Ulster	360		

* On account of the doubt as to whether the Annual Representative Meeting intended that 20 Members should be elected by the Branches throughout the Association or by the Branches in the United Kingdom only, the alternative groupings shown in columns "A" and "B" respectively were drawn up. Though the Committee concluded, as stated in the Report, that the intention of the Meeting was that the 20 Members should represent the Branches throughout the Association, and therefore that only 15 Members should be assigned to the United Kingdom, the alternative grouping "B" would have had the advantage of making feasible an arrangement in many cases of single Member districts and therefore is retained for purposes of illustration.

The grouping "A" is that submitted by the Committee as deemed to carry out the intention of the Representative Meeting.

APPENDIX D.

SCHEME FOR ELECTION OF MEMBERS OF COUNCIL PROPOSED BY THE AYRSHIRE DIVISION.

1. The Council shall consist of thirty members nominated by the Representatives of Divisions.
2. For purposes of nomination, the United Kingdom shall be divided into Sections composed of Divisions of Branches which are in geographical relation.
3. The Representatives of Divisions from each Section alone shall nominate the Councillor to be returned by that Section.
4. The Sections shall be as follows:
   (*a*) An Irish section consisting of the Divisions of the Irish Branches.
   (*b*) A Scottish Section, consisting of the Divisions of the Scottish Branches.
   (*c*) A North England Section, consisting of the Divisions of the North of England, North Lancashire and South Westmorland, Yorkshire, East Yorkshire and North Lincolnshire, Midland and Staffordshire Branches—41 Divisions in all.
   (*d*) A West of England Section, consisting of the Divisions of the Lancashire and Cheshire, and North Wales and Shropshire Branches, and the South Wales and Monmouthshire Branch—40 Divisions in all.
   (*e*) A Central England Section, consisting of Divisions of East Anglian, Cambridge and Huntingdon, South Midland, Oxford and Reading, Metropolitan Counties, Birmingham, and Worcestershire and Herefordshire Branches—41 Divisions in all.
   (*f*) A South of England Section, consisting of Divisions of South-West, West Somerset, Bath and Bristol, Gloucestershire, Dorset and West Hants, Southern, and South-Eastern Branches—41 Divisions in all.
5. The Representatives of—

Irish Section	shall nominate	4	Councillors.
Scotch Section	,, ,,	4	,,
North England Section	,, ,,	5	,,
West England Section	,, ,,	5	,,
Central England Section	,, ,,	5	,,
South England Section	,, ,,	5	,,
	Total	28	

6. The remaining two Councillors shall be nominated by the Representative Meeting as a whole, and they shall be regarded as representing especially the Divisions of Branches outside the United Kingdom.

Notes.

1. The ideal Council should be elected by the Representatives of Divisions, for thereby the Executive of the Association will be evolved by direct progression from the individual members composing the Association. This will ensure that the Association's policy is in line with the needs and wants of its members.

2. That the Council should be *so* constituted was largely appreciated by the Representatives at the Representative Meeting held in July last, and it was consequently decided that 20 members should be elected by the Branches as at present, but that the other 10 should be elected by the Representatives.

3. It was felt that in the constitution of the Council due regard should be had for "geographical representation." The fear that it would be impossible to obtain this "geographical representation" with a Council wholly elected by the Representatives probably determined the Representatives to the actual decision arrived at.

4. The present scheme has been constructed to ensure that a Council, while wholly elected by the Representatives, must yet be constituted with due regard to "geographical representation."

5. It may be taken for granted that a Council, however constituted, will be anxious to work for the benefit of the whole Association, and not for part at the expense of the rest.

6. It is therefore more to be desired that the Council, as a whole, should be in touch with all the problems and needs presented to the profession all over the country, than that each individual Councillor should represent a numerically equal constituency.

7. It is size of area rather than number of Associates in an area that determines the variety of conditions and problems presented to the profession in that area. Thus in Lancashire there are more members than in all Ireland, yet the conditions of practice obtaining all over Lancashire will be very similar, whereas the conditions of practice obtaining throughout Ireland will be extremely diverse.

8. In this scheme, therefore, it will be seen that certain wide districts have more Representatives on the Council than they would be entitled to on a system strictly based on proportionate numbers.

9. The number of Associates is as follows:

In England	12,034 or 89.96	per cent.
In Scotland	1,894 or 12.74	,,
In Ireland	937 or 6 30	,,

By a strictly numerical system of Council representation this would entitle—

England to	24.27	Councillors
Scotland to	3.82	,,
Ireland to	1.90	,,

10. Bearing in mind the considerations stated previously (Sections 6 and 7) it is proposed to give Ireland four Councillors, Scotland four, and England 20=twenty-eight Councillors.

11. In order to carry out the idea of "geographical representation" in England, it is proposed to divide England into four areas, each composed of an equal number of Divisions; each of these areas to nominate five Councillors. The actual number of Associates in each of these areas is not markedly unequal, being

2,311 in the Northern Section
2,385 in the Western Section
4,345 in the Central Section
2,893 in the Southern Section

12,034

The greater numbers of the Central Section is due to the numerical predominance of London Associates.

12. It is provided by the Scheme that the twenty-eight Councillors representing the United Kingdom shall be nominated by the Representatives of each Section respectively. It does not necessarily follow that the Section will nominate as Councillors only those who are Representatives at the time of election; the actual nominations depend entirely on the choice of the Representatives of each Section.

13. The remaining two Councillors, it is proposed, shall be nominated by the whole Representative Meeting, and they shall be considered as especially representing on the Council all Branches outside the United Kingdom, and to them Colonial Branches could address themselves when they have any matter they wish to bring before the Council or Association. It will probably be convenient that one, if not both, of these Councillors should be resident in London, and this will tend to balance any under-representation existing under the scheme in the Central Section on a consideration of the number in that Section.

14. The division of England into the proposed Sections will probably remain adequate for some considerable time, for, if the Association expands equally in each Section, the proportionate numbers composing each Section will remain similar, seeing that the proportion of Associates to total practitioners in each Section is practically similar, being as 1 to 2.03, 1.89, 2.15, 1.93 in the North, West, Central, and South Sections respectively.

15. An objection has been raised that, owing to the mode of election, a Representative does not truly represents the Division that is supposed to elect him. It is obvious that, if thought desirable, this anomaly, if it is an anomaly, can be rectified by electing the Representative by ballot paper.

16. Under this proposed scheme the Branch Council would be of value, so that questions affecting the Association generally or a wide district might be discussed by the Representatives of Divisions in that district, and so where necessary all Representatives for that district could act in common. It would probably be wise to ordain that a Representative of a Division at the Representative Meeting should also *ex officio* be a member of the Council of the Branch in which his Division lies.

17. It would probably also be desirable to elect Councillors of the Association Council for more than one year —say three, so many retiring by rotation each year. In this way not more than one or two Councillors would require to be elected by a section at any one time.

N.B.—The numbers on which the scheme is based are taken from the last *Year Book* published by the Association.

Names of Branches.	No. of Divisions.	No. of Members.	No. of Practitioners in Area.
Northern Section:			
North of England	17	532	1,034
North Lancashire and South Westmorland ...	3	141	208
Yorkshire	10	771	1,773
East Yorkshire and North Lincolnshire ...	2	145	275
Midland	6	515	1,065
Stafford-hire	3	207	339
	41	2,311	4,694
Western Section:			
Lancashire and Cheshire ...	12	1,616	3,613
South Wales and Shropshire ...	4	322	943
South Wales and Monmouthshire ...	4	447	915
	20	2,385	5,471
Central Section:			
East Anglian ...	10	459	1,034
Cambridge and Hunts ...	1	109	303
South Midland	2	245	441
Oxford and Reading ...	3	268	416
Metropolitan	15	715	6,500
Berks	7	467	926
Worcestershire and Herefordshire ...	3	114	300
	41	2,377	9,920

Names of Branches.	No. of Divisions.	No. of Members.	No. of Practitioners in Area.
Southern Section:			
South-West	5	436	762
West Somerset	1	82	138
Bath and Bristol	3	400	661
Gloucestershire	1	127	204
Dorset and West Hants	2	200	407
Southern	7	401	724
South-Eastern	21	1,247	2,687
	41	2,893	5,583

APPENDIX E.

SCHEME FOR ELECTION OF MEMBERS OF COUNCIL PROPOSED BY A MEMBER OF THE ORGANIZATION COMMITTEE.

AT the Representative Meeting, 1906, in the discussion upon Ordinance 19 of the Royal Charter, it was resolved (Minute 217) that the Central Council should consist of 30 members, 20 of whom should be elected by the Branches and 10 by the Representative Meeting. The number 30 was intended to include all members of the Central Council other than the *ex-officio* and Service members; but at the time at which this resolution was considered no mention was made of the members of the Central Council appointed to represent the Colonies; and, in taking into account the varied character of the work of the Council and Committees, it has been felt that if the number 30 include the Colonial members the Council will be too small, especially as it has always been considered desirable to over-represent the Colonies by reason of the great distance of many of them from the Mother Country rendering attendance at Council meetings difficult, and of the large scattered areas of which most of them consist.

It is generally conceded that the logical outcome of the new Constitution involves the election of the Central Council by the Representatives of Divisions, and much of the opposition to this proposal at the last Representative Meeting is believed to have been due to the idea that the Council so elected would not adequately represent the various portions of the United Kingdom with due regard to their sectional interests; this scheme is based, therefore, on the principle that the Central Council should be elected by the Representatives, due regard being had to the further principle of topographical representation.

It is proposed in this scheme that 30 members of Council should be elected by the Representatives of Divisions of Great Britain and Ireland. The Members of the Association in the mother country are numerically to those in the Colonies as 3 to 1. This would give 10 members of Council to the Colonies as their proportionate share, and the Council as a whole would be formed as follows:

President President elect Past-President Chairman of Representative Meetings Chairman of Council Treasurer	*Ex officio*,	6
Royal Navy Medical Army Medical Indian Medical	Service,	3
Home Divisions		30
Colonial		10
Total ...		49

It is proposed to adopt as the basis of the topographical representation to be secured in the scheme the grouping of the districts in England submitted by the Organization Committee (*Appendix C*, page 178), while Scotland and Ireland would each be considered a district for the purpose of the election.

It is suggested that each district should elect four

members; that is to say, that in respect of any particular district, only those Representatives who represent constituencies in it would have the power to vote for the election of the four members to represent it on the Central Council.

Constituencies.	Divisions.	Districts Composed of Groups of Branches.		Members of Association.	Members of Council to be Elected.
		Northern.			
41	16	North of England	669	802	4
	3	North Lancashire and South Westmorland	133		
	10	Yorkshire		792	
	30	Lancashire and Cheshire		1,627	
	59			3,221	
		Midland.			
31	10	East Anglian	423	716	4
	2	East York and North Lincoln	146		
	1	Cambridge and Huntingdon	147		
	6	Midland	541	763	
	3	South Midland	222		
	7	Birmingham	525	727	
	3	Staffordshire	202		
	3	North Wales	211	838	
	5	South Wales and Monmouthshire	495		
	1	Shropshire and Mid-Wales	132		
	41			3,044	
		Metropolitan.			
17	15	Metropolitan Counties Branch	2,684	3,091	4
	1	*Bromley Division	41	407	
	1	*Croydon Division	134		
	1	*Norwood Division	232		
	18				
		Southern and South-Western.			
30	3	Bath and Bristol	382	713	4
	1	Gloucester	135		
	1	West Somerset	74		
	2	Worcester and Hereford	122		
	6	South Western	445	662	
	2	Dorset and West Hants	217		
	7	Southern	428	717	
	3	Oxford and Reading	289		
	17	South Eastern (excluding Bromley, Croydon, and Norwood)		851	
	42			2,943	
		Scotland.			
21	3	Aberdeen	183	1,885	4
	3	Border Counties	153		
	1	Dundee	108		
	5	Edinburgh	435		
	1	Fife	80		
	8	Glasgow and West of Scotland	687		
	1	Northern Counties of Scotland	117		
	1	Perth	56		
	1	Stirling	66		
	24				
		Ireland.			
10	3	Connaught	42	908	4
	6	Leinster	338		
	3	Munster	104		
	3	South-Eastern Ireland	64		
	7	Ulster	360		
	22				24

* These three Divisions of the South-Eastern Branch are grouped with the Metropolitan Counties Branch to equalize the numbers.

It will be seen that Scotland, and more especially Ireland, is over-represented as compared with England and Wales. The difficulty of attendance which the members of Council from these districts experience owing to the great distance from London is an adequate excuse for such over-representation.

In addition to the regard which must be paid to topographical representation, it must be recognized that personal suitability is a very important factor in considering the election of members to the Central Council. It is therefore proposed that the remaining six members of Council should be elected by the Representative Meeting as a whole, as it is possible that in an election arranged solely from the topographical point of view certain members of the Association of conspicuous ability, whom it would be highly desirable to see upon the Central Council, might fail to be elected. Even among these six members some topographical representation might be possible—for example, not less than three should come from England and Wales, and not less than one each from Scotland and Ireland.

It will probably be found convenient for the twenty-four members of the Council elected by districts to be elected not later than the second day of the Representative Meeting, nominations having been received on the first or early on the second day.

The six members of the Council elected by the Representative Meeting as a whole might be elected on the third day.

This voting by districts at the Representative Meeting should not be a difficult matter to arrange, and should be conducted by voting papers. Each Representative would be provided by the Secretary of the meeting with a list of candidates nominated by Representatives of his own district, and he would record his vote for not more than four of the candidates.

The proportionate representation of the Colonies on the Central Council being 10, the most equitable and convenient grouping would appear to be as indicated in the following table:

Branches.	Members.	Council.
Australia and New Zealand.		
Adelaide and South Australia	153	
Western Australia	65	
Sydney and New South Wales	530	2
Melbourne and Victoria	426	
Brisbane and Queensland	153	
	1,327	
New Zealand	325	1
Canada.		
Ottawa	15	
Quebec	16	
Montreal	89	
Halifax and Nova Scotia	109	
Bermuda	16	
St. John New Brunswick	53	2
Saskatchewan	41	
Toronto	912	
Manitoba	54	
British Columbia	34	
	1,339	
West Indies.		
Barbados	35	
Jamaica	52	
Trinidad	25	1
Leeward Islands	17	
British Guiana	34	
	163	
India.		
Bombay	71	
Punjab	20	
Bengal (no Branch)	—	
Burmah	40	
South India and Madras	133	1
Colombo and Ceylon	137	
The Far East.		
Malaya	82	
Kong Kong and China	103	
	586	
South Africa.		
Cape of Good Hope (Western)	159	
Cape of Good Hope (Eastern)	93	
Griqualand West (including Orange River Colony and Transvaal)	103	2
Natal	95	
	450	
Mediterranean and Continental.		
Egypt	37	
Malta	49	1
Gibraltar	33	
Members on Continent of Europe (no Branches)	about 80	
		10

If the greater part of the Council were thus elected directly by the Representatives there would no longer be the reasons which have existed heretofore for the appointment of a proportion of members of the Committees by the Representative Body, and it is suggested that the appointment of all Committees might with advantage be left in the hands of the Council.

APPENDIX F.

SCHEME FOR THE ELECTION OF MEMBERS OF COUNCIL PROPOSED BY ANOTHER MEMBER OF THE ORGANIZATION COMMITTEE.

CENTRAL COUNCIL: SUGGESTED SCHEME OF COMPOSITION.

As now constituted the Council contains over 70 members, distributed in the following groups: (*a*) *ex-officio* members; (*b*) Branch Representatives: (*c*) co-opted members: (*d*) service Representatives.

A two-fold change is deemed advisable—namely: (1) reduction in size, and (2) increased representation of the Representative Body.

The scheme of composition here suggested designs to effect this change, and at the same time to give just recognition to the Branches and their Representatives by whose scientific and administrative work in the past the Association has developed.

The scheme may be summarized in two propositions, as follows:

I. The Council shall consist of 45 members, composed of the following groups, namely:

A. *Ex-officio* members;

B. Branch Representatives:

(*a*) Home;

(*b*) Colonial, etc.;

C. Members elected by the Representative Body;

D. Service Representatives.

II. The number of members in the various groups shall be as follows:

A. Three (President of the Association, President-elect, and Treasurer);

B. Thirty (*a*) 22; (*b*) 8;

C. Nine (one of whom shall be the Chairman of the Representative Body);

D. Three (namely, one officer of the Royal Navy Medical Service, one officer of the Army Medical Service, and one officer of the Indian Medical Service).

Explanatory Notes.

1. The number of *ex-officio* members could be raised to six by including the Past-President, Chairman of Council, and Chairman of the Representative Body. The consequent increase in the size of the Council is not an insuperable objection, though it is regarded as unnecessary.

2. As in the past, the principle of geographical representation should be maintained. The appended tables suggest a practicable grouping. The schedule relating to Home Branches is identical with one already approved by the Organization Committee, except in the detail that four members are assigned to Scotland instead of three.

3. Of the eight members, exclusive of the Chairman, to be elected by the Representative Body, it is proposed that one shall be elected by the Representatives of Divisions comprised in each of the six groups shown in schedule I, and that two shall be elected by the Representatives of Divisions without the United Kingdom.

4. In addition, the Service Representatives shall be co-opted by the other members of Council.

SCHEDULE I.

DRAFT SCHEDULE OF GROUPING OF BRANCHES IN THE UNITED KINGDOM FOR REPRESENTATION ON THE CENTRAL COUNCIL, ASSIGNING 22 MEMBERS TO SUCH BRANCHES.

Branches.		Total.	Number of Members to be Elected.
Northern:			
North of England	669	802	1
North Lancashire and South Westmorland	133		
Yorkshire	792	792	1
Lancashire and Cheshire	1,627	1,627	2
		3,221	4
Midland:			
East Anglian	423	716	1
East York and North Lincoln	146		
Cambridge and Huntingdon	147		
Midland	541	763	1
South Midland	222		
Birmingham	525	727	1
Staffordshire	202		
North Wales	211	838	1
South Wales and Monmouthshire	495		
Shropshire and Mid Wales	132		
		3,044	4
Metropolitan:			
Metropolitan Counties	2,684	3,091	4
Bromley Division	41		
Croydon "	134	407	
Norwood "	232		
Southern and South-Western:			
Bath and Bristol	382	713	1
Gloucestershire	135		
West Somerset	74		
Worcester and Hereford	122		
South Western	445	662	1
Dorset and West Hants	217		
Southern	428	717	1
Oxford and Reading	289		
South-Eastern (excluding Bromley, Croydon, and Norwood)	891	891	1
		2,943	4
Scotland:			
Aberdeen	183	1,895	4
Border Counties	153		
Dundee	108		
Edinburgh	435		
Fife	80		
Glasgow and West of Scotland	687		
Northern Counties of Scotland	117		
Perth	56		
Stirling	66		
Ireland:			
Connaught	42	908	2
Leinster	338		
Munster	101		
South Eastern Ireland	64		
Ulster	360		

SCHEDULE II.

DRAFT SCHEDULE OF GROUPING OF BRANCHES WITHOUT THE UNITED KINGDOM FOR REPRESENTATION ON THE CENTRAL COUNCIL, ASSIGNING EIGHT MEMBERS TO SUCH BRANCHES.

Branches	Total Membership.	Number of Members to be Elected.
Australia	1,927	2
New Zealand	525	
	1,452	
Canada	1,430	2
India and Burmah	401	1
China and Straits	185	
	586	
South Africa	430	1
West Indies	129	1
British Guiana	34	
	163	
Mediterranean	119	1
Continental	about 50	about 100
		8

METROPOLITAN COUNTIES BRANCH:

HAMPSTEAD DIVISION.

PROVIDENT DISPENSARIES.

Second Interim Report of Contract Practice Subcommittee.

I. Reference:

That the Provident Dispensary question be referred to the Contract Practice Subcommittee to deal with, and that the Subcommittee shall have power to co-opt two members. (Resolution of Committee of November 30th, 1906.)

Before proceeding with the question your Committee have considered it advisable to adopt a definition of a provident dispensary, so that no misunderstanding might arise at a later date.

II. Definition:

In the following report the term "provident dispensary" is taken to mean such institution which contracts for medical attendance, which is managed by a Committee of elected members, and is not a club or friendly society.

III. Provident dispensaries in the Hampstead Division, or which derive a large proportion of the patients from the area of the Division:

1. Hampstead Provident Dispensary.
2. Kilburn Provident Medical Institute.
3. Haverstock Hill and Malden Road Provident Dispensary.
4. St. John's Wood and Portland Town Dispensary.
5. Finchley Dispensary.
6. Child's Hill and Cricklewood Provident Dispensary.

IV. Details of the dispensaries:

The following details have been extracted from the rules and annual reports of the six dispensaries mentioned, and care has been exercised to deal with each in the same way as the others, so that a fair comparison may be made. This is not always easy, as certain details are reported on in an obscure manner in some of the dispensaries, and it has not always been possible to gain full information on all the points.

1. HAMPSTEAD PROVIDENT DISPENSARY.

(*a*) Membership. There are honorary and benefit members.

(*b*) Conditions of admission. This is done by personal attendance.

The average wage must not exceed 50s. per week. For immediate attendance, payment of 10s. 6d.

(*c*) Contributions of benefited members. Deposit of 1s.

Single members (above 14)	5d. and 6d. per month.
Man and wife	8d. and 10d. „
Man, wife, and 1 child...	9d. and 1s. „
„ „ and 2 children	10d. and 1s. 2d. „
„ „ and family ...	11d. and 10d. „ plus 2d. per child.

Domestic servants for treatment when out of place 1s. annually, and 5d. per month during illness.

Confinement, 10s.

(*d*) Outside contributions.

Honorary members from 7s. per annum. Life members, £5 and upwards. Governors £1 1s. per annum, or £10 life subscription.

Fines from benefited members.

Donations and collections in one year amounted to £296 18s. 9d.

(*e*) Division of payment. £10 is put into the reserve fund annually. Each medical officer receives three-fourths of the contributions received from patients on his list, if funds allow.

Drugs and dispenser (item). £314 9s. 10d.
Medical officers' salaries, £481 3s. 1d.
(Midwifery, 10s. from patient, and 11s. from funds, £153 6s.)
Number of attendances, 11,518 cases, at 10d. per case.

(*f*) Collector.—A collector is employed.

(*g*) Management.—Annual general meeting, also special meetings.

Committee.—Ordinary:

1 president.
5 vice-presidents.
3 trustees.
1 treasurer.
1 auditor.
12 male honorary members.
20 male benefit members.

43 ordinary members, of whom 1 is a medical man.

Medical staff:

5 honorary staff.
7 acting staff.

12

(*h*) Medical staff:

(i) Appointment. By election in Committee. Applicants must be registered and resident in district. Remuneration is fixed by the Committee.

(ii) Distribution of work. Patients choose their doctor.

(iii) Duties. To attend at the institution or at the homes of patients when called upon and at certain fixed times.

(*k*) Canvassing and advertising.—There appears to be no canvassing, but the names of the medical staff are advertised in circulars and reports.

2. KILBURN PROVIDENT MEDICAL INSTITUTE.

(*a*) Membership. Honorary and free members.

(*b*) Conditions of admission. Average weekly wage must not exceed 25s. for single persons, and 50s. for families. For immediate attendance, payment of 10s. or 1 year's subscription, if entered with 2 healthy adults. Chronic invalids are removed from the books.

(*c*) Contributions of free members.

Single members (above 16)	6d. per month.
Man and wife	1s. „ „
Man, wife, and 1 child ...	——
„ „ „ family ...	2s. per month.

1d. charged for card.

(*d*) Outside contributions.

Donations and contributions in one year, £85 5s.

(*e*) Division of payment.

Drugs and dispenser ...	£190 18s. 11d.
Medical staff	£828 10s. 6d.

5,017 patients treated at institute, and 1,573 at their homes in one year. In all, 13,111 attendances at 1s. 3d. per attendance.

(*f*) Collector. No collector is employed.

(*g*) Management. Annual general meeting.

Committee. Ordinary members.

9 honorary members,
1 treasurer,
3 free members.

13

Medical members ... ... 14 doctors and 1 dentist.

(*h*) Medical staff:

(i) Appointment. By election in Committee. Applicants must be registered and resident in the district. Remuneration is fixed by the rules.

(ii) Distribution of work. Patients choose their doctor.

(iii) Duties. To attend at the institute or at the homes of patients when called upon and at fixed times.

(*k*) Canvassing and advertising. No canvassing is carried out. The advertisement of the names of the staff officers is now limited to the annual reports.

3. HAVERSTOCK HILL AND MALDEN ROAD PROVIDENT DISPENSARY.

(*a*) Membership. Benefit members.

(*b*) Condition of admission. Average weekly wage must not exceed 40s. for individuals or for families. Immediate attendance on payment of 5s.

(*c*) Contributions of benefit members:

Single members over 16 years ...	6d. per month.
Man and wife	9d. „
Man, wife, and 1 child	1s. „
„ „ 2 children ...	1s. 3d. „
„ „ family	1s. 6d. „

Confinements, 21s.

(*d*) Outside contributions:

Sums collected in one year amounted to £43 13s

Fines from members also swell the funds.

(*e*) Division of payments:

Drugs (not including dispenser's salary)	£54 13s. 6d.
Medical officers' fees	£237 10s. 0d.
Midwifery	£7 7s. 0d.

5,368 home visits and 8,451 consultations in one year, which works out at 4d. per attendance. The midwife attends cases for 8s. per confinement.

(*f*) Collector. There is a collector employed.

(*g*) Management. Annual general meeting.
Committee. Ordinary members.
2 auditors.
21 committee members (one medical).
1 treasurer.
1 honorary secretary.
—
25
5 medical staff.

(*h*) Medical staff (i), (ii), and (iii) as above.

(*k*) Canvassing and advertising. The circular distributed distinctly canvasses and advertises the medical staff. It contains unduly laudatory statements.

4. ST. JOHN'S WOOD AND PORTLAND TOWN DISPENSARY.

(*a*) Membership. Benefit members, provident and free.

(*b*) Conditions of admission for provident members:
Weekly wage must not exceed 40s. for families.
" " " " " 25s. " single persons.
Urgent cases are admitted. There is also a free dispensary with admission by letter from a governor.

(*c*) Contributions of provident members:

Single members (over 14) ...	8d.	per month.
Man and wife	1s.	" "
Man, wife, and one child ...	1s. 2d.	" "
Man, wife, and family ...	1s. 4d.	" "

(*d*) Outside contributions. Subscriptions and donations to the provident dispensary (apart from the free dispensary) amounted in one year to £380 4s. 11d.

(*e*) Division of payment:

Drugs, etc., excluding dispenser				£165	10 4
Medical officers' fees... ...	£165	0	0		
Midwifery (at £1 1s.) and vaccination	129	0	0		
				294	0 0

This works out at 6d. per case attended.

(*f*) Collector. There is one employed.

(*g*) Management. Annual general meetings.
Committee. Ordinary members.
1 president.
10 vice-presidents.
1 treasurer.
2 trustees.
1 honorary secretary.
14 governors. (16 may be elected).
—
29, of whom 5 are medical.
Medical staff ... 3 consulting officers.
4 acting officers.
7 Total 36.

(*h*) Medical staff.
(i) Residence in neighbourhood, registration, etc. Testimonials have to be laid before the Committee.
(ii) and (iii) as before.

(*k*) Canvassing and advertising. No canvassing known of.

5. FINCHLEY DISPENSARY.

(*a*) Membership. Benefit members.

(*b*) Conditions of admission:
Weekly wage must not exceed 35s. for single members or families.

(*c*) Contributions of benefit members:

Single members (above 14) ...	6d.	per month.
Man and wife...	9d.	"
Man, wife, and family ...	1s.	"

1d. is charged for card.

(*d*) Outside contributions. Donations amounted in one year to £ 5 1s. 5d.

(*e*) Division of payments. Medical officers dispense the medicines. There is a practically complete distribution of donations and subscriptions among the medical staff. The membership amounted to 5,567 cards and the amounts distributed to the medical officers to £1,071 9s. 9d. in 1905.

(*f*) Collector. None employed.

(*g*) Management. Annual general meeting.
Committee. Honorary members.
1 president.
15 members of Committee (mostly clergymen).
1 treasurer.
5 honorary secretaries.
—
22
Medical staff, 20 medical officers. Practically all the medical men in the neighbourhood are on the staff.

(*h*) Medical staff.
(i) Appointment: Qualifications, residence in neighbourhood and registration. Election by managers.
(ii) Distribution of work: Patients choose their doctor, but changes can only be made twice a year at fixed times.
(iii) Duties: To attend as stated above.

(*k*) Canvassing and advertising: None. The annual reports contain the names and qualifications of medical staff, without comment.

6. CHILD'S HILL AND CRICKLEWOOD PROVIDENT DISPENSARY.

(*a*) Membership. Honorary and benefit members.

(*b*) Conditions of admission. Entrance fee of 1s.
Weekly wage must not exceed 35s. for single members. Re-entry on payment of 2s. Urgency entry, 10s. 6d.

(*c*) Contributions of benefited members:

Single members (over 14 years) ...	9d. per month.
Man and wife	1s. per month.
Man, wife, and family	1s. 3d. and 1s. 6d. per month.

(*d*) Outside contributions. Subscriptions of honorary members last year amounted to £261 8s. 6d., ranging from 5s. to £3 3s. Donations from fund, etc., £20 3s. 9d.

(*e*) Division of payments:
Drugs, etc. ... ... £70 6s. 4d.
Medical officers' fees ... ... £214 10s. 1d.
7,737 patients were attended in the year, of whom 5,037 were seen at their own homes, and 2,700 at the institute, working out at about 6½d. per patient.

(*f*) Collector. There is a collector employed.

(*g*) Management. Annual general meeting.
Committee. Ordinary members.
1 chairman.
1 treasurer.
6 honorary members.
6 benefit members.
—
14
Medical staff: 1 consulting surgeon.
2 acting officers.
3
Total ... 17

(*h*) Medical staff. (i), (ii), and (iii), as above.

(*k*) Canvassing and Advertising. No canvassing or advertising in the ordinary sense is carried out.

V. Comparison of conditions of each dispensary to the others.

In the following a sort of summary of the foregoing tables is given. The material is used, as far as possible, to point out the way each is managed without comment.

(*a*) Membership. In the Hampstead Provident Dispensary and the Child's Hill Provident Dispensary there are honorary as well as benefit members. All the others have only benefit members.

(*b*) Conditions of admission. The weekly wage must not exceed 35s. for individuals in the St. John's Wood Provident Dispensary, 35s. in the Finchley and Child's Hill Dispensaries, 40s. in the Haverstock Hill Provident Dispensary, and 50s. in the Hampstead Provident Dispensary. In the St. John's Wood provision is made for families whose income does not exceed 40s. per week, and 50s. in the Kilburn Institute.

Entrance fees of 1s. apply at the Hampstead and Child's Hill Dispensaries, while 2s. is charged for re-entry in the latter. One penny is charged for cards at Kilburn and

Child's Hill. Immediate attendance can be obtained for the payment of 5s. at Haverstock Hill, 10s. at Kilburn, and 10s. 6d. at Hampstead and Child's Hill. Chronics are charged 10s. per quarter at Kilburn.

There does not appear to be any rule enforcing medical examination on admission in any of the dispensaries.

(*c*) Contributions. Provident members pay on a scale which agrees moderately closely in all. Single persons are charged from 5d. to 6d. per month, save at Child's Hill, where 9d. is charged. Man and wife and family pay from 11d. (Hampstead) to 2s. (Kilburn) per month.

(*d*) Outside subscriptions and donations.

Apart from the subscriptions of honorary and benefited members, donations and collections are encouraged by all the dispensaries. The amounts collected in this way form the following proportions of the total incomes.

St. John's Wood	1 : 2
Hampstead	1 : 4
Child's Hill	1 : 8
Haverstock Hill	1 : 12
Kilburn	1 : 15
Finchley	1 : 30

Donations from the Hospital Sunday Fund are received by Hampstead, Kilburn, St. John's Wood, and Child's Hill, while St. John's Wood receives contributions also from the Hospital Saturday Fund.

(*e*) Division of payments.

The following table shows the percentage of total expenditure for drugs, dispenser, etc., medical officers, and administration, domestic establishment, and clerical :

	Drugs, etc.	Medical Staff.	Administration.
Hampstead	27.8	56.0	16.2
Kilburn	14.0	60.9	25.1
Haverstock Hill	24.8	46.8	28.4
Finchley (medical men do own dispensing) ...	—	99.0	1.0
St. John's Wood	30.8	37.5	31.7
Child's Hill	20.2	61.8	18.0

The medical officers receive 4d. at Haverstock Hill, 6d. at Finchley and St. John's Wood, 6½d. at Child's Hill, 10d. at Hampstead, and 1s. 3d. at Kilburn, presumably for each attendance.

(*f*) Collector. All the dispensaries employ collectors save the Finchley and Kilburn dispensaries, but it seems that the collector only receives contributions from benefit members at the institutions, and also deals with subscriptions.

(*g*) Management. The dispensaries appear to be governed as companies under trust, and the committees consist in all cases of a number of subscribers, governors, or other persons subscribing, together with a certain number of benefit members in some cases and the medical staff, as *ex-officio* members.

The constitution of the committees is shown below:

	Total.	Ordinary Members.				Medical Members		
		Total.	Clergy.	Benefit Members.	Outside Medical.	Acting.	Honorary.	Total.
Hampstead	55	43	4	20	1	7	5	12
Kilburn	28	13	0	3	0	15	0	15
Haverstock Hill ...	26	21	7	0	1	5	0	5
St. John's Wood ...	36	29	8	0	5	4	3	7
Finchley	41	21	12	0	0	20	0	20
Child's Hill	17	14	1	6	0	2	1	3

The Hampstead Provident Dispensary also possesses a Council, composed of 21 lay members, 4 of whom are clergymen, but none medical men. Kilburn has a president and 15 vice-presidents, of whom 12 are clergymen.

(*h*) Medical staff.

(i) Appointment. This is invested in the committee of management, and depends in every case, save that of Finchley, in the selection of candidates residing in the neighbourhood. In one case—namely, that of the St. John's Wood Dispensary—the rules require candidates to submit testimonials. It seems, however, that this is practised in the other dispensaries. The staff of acting medical officers, including dentists, is limited in the five other dispensaries, as stated above.

(ii) Distribution of work. The patients choose their own medical attendant in all cases, but at Finchley the chosen doctor can only be changed by giving notice, and then only twice a year at certain dates.

(iii) Duties.—These merely appear to be to attend to the patients either at their homes or at the institutes as required. Each medical officer has to render his annual return to the Committee.

(*k*) Canvassing and advertising.—None of the dispensaries seem to practise regular canvassing, but the circular distributed by the Haverstock Hill Dispensary, obviously to attract persons to join, comes perilously near to canvassing. All the annual reports advertise the names of the medical staff. The Haverstock Hill Dispensary publishes unduly laudatory comments on the medical men of the staff.

VI. Comparison of dispensaries to ideal dispensaries.

In order to be better able to suggest action in this question, the Subcommittee have attempted to criticize the main points of the dispensaries, and offer the following remarks as a basis on which any reforms might be built up. As the local conditions require special adaptation, it has been deemed advisable not to lay down any hard and fast rules, especially with regard to the management, but to postpone this until the members directly interested have been consulted.

(*a*) Conditions of admission. The weekly wage given for the Kilburn and St. John's Wood Institutes appears to be high enough. This is 25s. per week for single individuals. It would be advisable that a sliding scale for persons with others depending on them could be fixed. Special conditions should be made with regard to chronic cases for individuals who have not been members for a certain number of years, and in this respect Kilburn seems to be the only satisfactory institute. No dispensary insists on medical examination before admission. This is absolutely essential for the proper working of a dispensary, and should be introduced. A fee should be charged.

(*b*) Contributions from benefit members. In all cases the contributions are too low. An ideal scale would be as follows :

For single persons ... from 2d. per week.
For man and wife ... „ 3d. „
For man, wife, and family, 1d. per week extra for each child under 16 years of age, with a maximum of 6d. per week.

(*c*) Outside contributions. Subscriptions should be directed solely to the payment of establishment charges.

(*d*) Division of payments. The best conditions undoubtedly are adopted at Finchley, but it is unnecessary to require medical men to dispense for provident dispensaries. The amount paid for dispensing at the other dispensaries is out of proportion to the amounts received by the medical officers. The charges for conducting some of the dispensaries are too high. At Kilburn the conditions may be considered to be satisfactory.

(*e*) Collector. No outdoor collector should be employed.

(*f*) Management. The larger committees are unnecessary and disadvantageous. In nearly all cases there are too many outside members. The large preponderance of the clergy in many cases is undesirable. This tends to keep the institutions up as charitable affairs. The interests of the outside profession should be considered. A fair Committee would be constituted as follows :

One half or more to be chosen from the members of medical staff by the full staff ;

About one quarter from the benefit members, and some representation should be given to the subscribers, where subscriptions are received, and, if desirable, to the outside profession. To this number one secretary and one treasurer might be added.

(*g*) Medical staff. All practitioners resident in the neighbourhood should belong to the staff if they desire it. Finchley is the best in this respect. The patients should choose their own doctor.

(*h*) Canvassing and advertising. This should be done away with altogether. Haverstock Hill sins in this respect more than the others.

VII. Recommendations.

In order to obtain a satisfactory working of all the dispensaries in the district, the Subcommittee considered that much care should be exercised before requiring changes in management, and the following have been deemed as the best steps to be taken in the first instance:

1. That a conference be arranged forthwith with the members of the staffs of all the dispensaries to discuss the situation.
2. That the time has now come to request the committees of management of each dispensary to reorganize the institutions and to fall into line with the desires of the medical profession.
3. Failing to obtain a satisfactory result from the existing dispensaries, unless the Metropolitan Counties Branch move independently, a mass meeting of the profession should be called to decide future action.

NOTICE OF CHANGES OF BOUNDARIES OF DIVISIONS AND BRANCHES.

THE following changes have been made in accordance with the regulations of the Association, and take effect from the date of publication of this notice:

That the present Stamford Division cease to exist, the county of Rutland being added to the Leicester Division, to form the Leicester and Rutland Division, Grantham and the surrounding area added to the Lincoln Division, and the remainder of the present Stamford Division added to the Boston and Spalding Division.

That Horncastle, Tetford, and Woodhall Spa be transferred from the Boston and Spalding Division to the Lincoln Division, and Swineshead and Heckington from the Lincoln Division to the Boston and Spalding Division.

Association Notices.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IMPORTANT NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library will be closed as from Thursday, March 28th. During the rebuilding, the Temporary Offices of the Association are at 6, Catherine Street, Strand (adjoining the Drury Lane Theatre). At these Offices a Reading and Writing Room will be provided, but will not be available for Members until Monday, April 8th. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 17th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,
General Secretary.

March 14th, 1907.

BRANCH AND DIVISION MEETINGS TO BE HELD.

[illegible] Counties Branch: North Cumberland Division.—A special and [illegible] meeting of the Division will be held on Wednesday, April 17th, at 7.30 p.m. at the Midland Institute. E. A. [illegible], Honorary Secretary.

Metropolitan Counties Branch: North Cumberland Division.—The next general meeting of the Division will be held at the George Hotel, Penrith, on Friday, April 12th, at 7 p.m. The Secretary will be pleased to hear from any member who will read a paper about cases of pathological specimens. Stewart Maclaren, Honorary Secretary, 27, Portland Square, Carlisle.

EAST ANGLIAN BRANCH.—The spring meeting of the East Anglian Branch will be held at the White Hart Hotel, Witham, on Tuesday, April 9th. Members wishing to read papers or show cases or specimens should communicate with me at once.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—Nomination of members of the Branch to serve on the *Council* of the Association. Nominations must be sent to Mr. Larkin, 54, Rodney Street, Liverpool, not later than May 1st, 1907.—T. ARTHUR HELME, F. CHARLES LARKIN, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—The general (Division) meeting will be held on Wednesday, April 17th, at Greenbank, Northwich, at 5 p.m. The annual (Division) meeting will be held on Thursday, June 6th, at the Board Room of the Hospital, Altrincham, at 5 p.m.—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LIVERPOOL (WESTERN) DIVISION.—A meeting of the Liverpool (Western) Division will be held on April 8th at the Liverpool Medical Institution. Agenda: (1) Nomination of member of Central Council; (2) letter from Dr. Garstang of Altrincham; (3) matters referred to Divisions *re* consultants.—K. GROSSMAN, Honorary Secretary, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH: ROCHDALE DIVISION.—The annual meeting of the Division will be held in the Wellington Hotel, Rochdale, on Thursday, April 11th, 1907, at 8.30 p.m.—J. MELVIN, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION.—The Wimbledon and District Medical Society have invited the members of this Division to attend their meeting at the Worple Hall, Wimbledon, on Friday, April 12th, 1907, at 9 p.m., when an address will be given by Herbert Tilley, F.R.C.S., on The Diagnosis and Treatment of Certain Nasal Diseases frequently met with in General Practice. The Committee of the Division hope there will be a large acceptance of this invitation.—E. ROWLAND FOTHERGILL, Honorary Secretary, Torquay House, Southfields, S.W.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION.—An additional ordinary meeting will be held at the Town Hall, Wandsworth, on Thursday, April 25th, 1907, at 3.30 p.m. Agenda: (1) Minutes; (2) correspondence; (3) questions; (4) nomination by the Division of candidates as officers of the Branch and Representatives of the Branch on the Central Council for 1907-8; (5) references *re* (*a*) medical inspection of school children, and (*b*) the ethical aspects of medical consultation (see SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 16th, 1907); (6) consideration of revised Charter (see SUPPLEMENT this week). On or before May 1st proposals for officers and members of the Executive Committee of the Division for 1907-8 must be sent in to E. ROWLAND FOTHERGILL, Honorary Secretary, Torquay House, Southfields, S.W.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—A meeting of this Division will be held at St. James's Vestry Hall, 195, Piccadilly, at 8.30 p.m., on Wednesday, April 17th, 1907. Agenda: (1) To consider the Medico-Political Committee's special report on Provident Dispensaries (the discussion will be opened by Dr. Hilliard; (2) to consider the Ethical Committee's memorandum on medical consultations, vide SUPPLEMENT to the BRITISH MEDICAL JOURNAL, February 16th, 1907 (Dr. Donald Baynes will introduce the discussion). It is hoped that every practitioner residing in the Westminster Division will make an effort to attend this meeting, whether a member of the Association or not.—F. J. McCANN, M.D., F.R.C.S., Curzon Street, Mayfair, W., Secretary.

SOUTH-EASTERN BRANCH: NORWOOD DIVISION.—The next meeting of the Division will be held at the Queen's Hotel, Upper Norwood, on Thursday, April 11th, 1907, at 4 p.m., Henry J. Prangley, M.R.C.S., etc., of Anerley, in the chair. Dinner at 6 p.m.; charge 7*s*., exclusive of wine. Agenda (1) Minutes of last meeting; (2) to decide when and where next meeting shall be held and to nominate a member of the Division to take the chair thereat. Papers:—Dr. Hale White: Gallstones and their Treatment. Mr. Laurie McGavin: The Use of Filigree of Silver Wire in the Radical Cure of Hernia usually considered Inoperable. Mr. F. J. Steward: Some Cases of Frontal Sinus Suppuration.—ARTHUR W. SOPER, Honorary Secretary.

NORTH WALES BRANCH: JOINT MEETING.—A joint meeting of the Lancashire and Cheshire and the North Wales Branches will be held at Chester on Wednesday, April 10th. Members having papers to read, cases to communicate or specimens to show, will kindly notify the Honorary Secretary before March 20th. A programme of the arrangements will be issued later.—H. JONES ROBERTS, Penygroes, Honorary Secretary.

WEST SOMERSET BRANCH.—The spring meeting of this Branch will be held at the Taunton and Somerset Hospital, on Friday, April 19th, at 5.30 p.m., when the chair will be taken by Dr. E. Liddon Meade King, the President. Agenda: No

Charter for Association—Dr. J. A. Macdonald, Representative of the Branch, asks members to make an effort to attend the meeting, as it is very important to have as strong as possible an expression of opinion on the Charter, especially on one point—the election of the Council. Medical Inspection of school children—Another matter will be discussed which is of importance to every general practioner, namely, the medical inspection of school children, for which a suggested scheme will be found in the British Medical Journal of April 6th. Discussion—Dr. H. S. Pope, of Bridgwater, has kindly consented to open a discussion on medical certificates, and will deal with all certificates required for public bodies, insurance reports, school, insurance, club and death certificates. Members wishing to bring any other matter before the Branch will kindly give me notice as soon as possible. Tea will be served after the meeting.—W. B. Winckworth, Honorary Secretary.

Yorkshire Branch: Bradford Division.—A meeting of this Division will be held at the Midland Hotel, Bradford, on Tuesday, April 9th, at 8.30 p.m. An address will be given by Bedford Pierce, M.D., F.R.C.P.Lond., Medical Superintendent, The Retreat, York, on the Early Symptoms of Mental Disorder, with some remarks on Prognosis and Treatment, to be followed by a general discussion. At 9.45 the discussion will close, and the meeting will resolve itself into a social gathering, in which it is hoped all the members will take part.—James Metcalfe, Lynthorne Hey, Bradford, and Andrew Little, 114, Manningham Lane, Bradford, Honorary Secretaries.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,544 births and 5,156 deaths were registered during the week ending Saturday, March 23rd. The annual rate of mortality in these towns, which had been 18 4, 18.2, and 17.8 per 1,000 in the three preceding weeks, further declined to 16.8 per 1,000. The rates in the several towns ranged from 9 1 in Willesden, 9 8 in Burton-on-Trent, 9 9 in Newcastle-on-Tyne, 10 2 in Wallasey, 10.3 in Handsworth (Staffs), 10.4 in Hornsey, in Northampton, and in Plymouth, 10.5 in Bournemouth, and 10.7 in Leyton, to 23 8 in Tynemouth, 24 4 in Grimsby, 25.5 in Hastings, 25.9 in St. Helens, 26.4 in Huddersfield, 27.7 in Middlesbrough, and 29.4 in West Bromwich. In London the rate of mortality was 16.3 per 1,000, while it averaged 17.0 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.5 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.1 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3 6 in Nottingham and in Middlesbrough, 3.7, in Bolton 3.9 in Smethwick, 4.4 in Birkenhead, 7.3 in East Ham and in St. Helens and 8 3 in West Bromwich. Measles caused a death-rate of 1 3 in Tottenham and in Devonport, 1.4 in West Hartlepool, 1.5 in Grimsby, 1.6 in Wallasey, 1 7 in Sheffield, 1.8 in Portsmouth, 2.0 in Middlesbrough, 2 4 in Nottingham, 2.9 in Bolton, 3.1 in Smethwick, 3.4 in East Ham, 3 5 in Birkenhead, and 6 8 in West Bromwich and in St. Helens; diphtheria of 1.2 in Walthamstow, 1.4 in Halifax, and 1 5 in West Bromwich; whooping-cough of 1.2 in Walthamstow, 1.4 in Ipswich and in West Hartlepool, 1.9 in Tynemouth, 2.1 in Willesden, and 3 1 in East Ham; and diarrhoea of 1.3 in Devonport. The mortality from scarlet fever and from enteric fever showed no marked excess in any of the large towns. No fatal case of small-pox was registered during the week, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,878 and 2,826 at the end of the two preceding weeks, had further declined to 2,734 at the end of last week: 312 new cases were admitted during the week, against 326, 306, and 327 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday, March 23rd, 962 births and 715 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 20.3, 20.6, and 20.5 per 1,000 in the three preceding weeks, rose again to 20.6 per 1,000, and was 3.8 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among the Scottish towns the death-rates ranged from 14.9 in Aberdeen and 16.8 in Leith to 20.1 in Dundee and 24.1 in Glasgow. The death-rate from the principal infectious diseases averaged 2.9 per 1.000 in these towns, the highest rates being recorded in Glasgow and Leith. The 391 deaths registered in Glasgow included 2 which were referred to measles, 4 to diphtheria, 30 to whooping-cough, 5 to "fever," 2 to diarrhoea, and 33 to cerebro-spinal meningitis. Two fatal cases of measles, 2 of whooping-cough, 3 of diarrhoea, and 4 of cerebro-spinal meningitis were recorded in Edinburgh; 2 of diarrhoea in Aberdeen; of cerebro-spinal meningitis in Paisley; and 3 of cerebro-spinal meningitis and 2 of diarrhoea in Leith.

Vacancies and Appointments.

VACANCIES.

BIRKENHEAD UNION.—Resident Assistant Medical Officer for the Infirmary and Sanatorium. Salary, £120 per annum.

BIRMINGHAM: QUEEN'S HOSPITAL.—Second Physician for Out-patients and Pathologist. Honorarium, £100 per annum.

BIRMINGHAM UNIVERSITY.—Junior Assistant in the Pathological Department. Honorarium, £50 per annum.

BODMIN: CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £140 per annum, rising to £160.

BOURNEMOUTH: ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House-Surgeon. Salary, £80 per annum.

BRISTOL ROYAL INFIRMARY.—Resident Medical Officer. Salary at the rate of £50 per annum.

CANTERBURY: CITY ASYLUM.—Assistant Medical Officer. Salary, £140 per annum.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Assistant Anaesthetist.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Salary, £60 per annum.

DUBLIN: ROYAL VICTORIA EYE AND EAR HOSPITAL.—House-Surgeon. Salary, £40 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—Assistant Surgeon.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—House-Surgeon. Salary, £120 per annum.

FIFE DISTRICT ASYLUM, Cupar.—Junior Assistant Medical Officer. Salary, £120 per annum.

GLOUCESTER: GENERAL INFIRMARY.—Assistant House-Surgeon. Remuneration at the rate of £30 per annum.

HOSPITAL FOR WOMEN, Soho Square, W.—Resident Medical Officer. Salary at the rate of £60 per annum.

HUDDERSFIELD INFIRMARY.—Senior Assistant and Junior Assistant House-Surgeon. Salary, £80 and £60 per annum respectively.

LEICESTER: LEICESTERSHIRE AND RUTLAND ASYLUM.—Second Assistant Medical Officer. Salary £130, rising to £160, per annum.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon and Anaesthetist. Salary, £60 per annum.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Dental Surgeon.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—(1) Medical Officer in charge of Electrical Department. Honorarium, £52 10s. per annum.

MIDDLESBROUGH: NORTH RIDING INFIRMARY.—Assistant House-Surgeon. Salary, £75 per annum.

NATIONAL DENTAL HOSPITAL, Great Portland Street, W.—Anaesthetist.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Assistant Ophthalmic Surgeon.

NEWCASTLE-UPON-TYNE: ROYAL VICTORIA INFIRMARY.—Director for the Bacteriological Department. Salary, £100 per annum.

NORTHAMPTON GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum.

OXFORD UNIVERSITY.—Philip Walker Studentship in Pathology. Annual value £200.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—(1) House-Physician; (2) House-Surgeon. Salary at the rate of 50 guineas per annum each.

PORTSMOUTH: PORTSMOUTH AND SOUTH HANTS EYE AND EAR HOSPITAL.—Honorary Assistant Ophthalmic Surgeon.

PORTSMOUTH: ROYAL PORTSMOUTH HOSPITAL.—House-Physician. Salary, £50 per annum.

ROYAL DENTAL HOSPITAL, Leicester Square, W.C.—Honorary Curator of the Museum.

ROYAL EYE HOSPITAL, Southwark.—House-Surgeon. Salary at the rate of £52 10s. per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Clinical Assistants.

SHEFFIELD UNION HOSPITAL.—(1) Resident Medical Officer; (2) Resident Assistant Medical Officer. Salary, £100 and £80 per annum respectively, together with £20 for duties performed in connexion with workhouse.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House-Surgeon. Salary, £75 per annum.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £70 per annum.

THROAT HOSPITAL, Golden Square, W.—Assistant Surgeon.

WAKEFIELD: WEST RIDING ASYLUM.—Pathologist and Assistant Medical Officer. Salary £140 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Ophthalmic Surgeon.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Senior House-Surgeon; (2) second House-Physician. Salary, (1) £100, (2) £80 per annum.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

Bullmore.—On March 27th, at 10, North Brink, Wisbech, the wife of E. A. Bullmore, F.R.C.S.E., of a son.

MARRIAGES.

Hutton—Robertson.—At Argyll Square United Free Church, Oban, on March 26th, by Rev. D. J. Martin, M.A., assisted by Rev. J. Maccoll, M.A., of Glenlyon, uncle of the bride, Malcolm Hutton, M.A., B.Sc. M.B., to Margaret Helen Robertson, M.B., Ch.B., eldest daughter of Alex. Robertson, of Bellevue House, Oban. At home, Shaw, near Oldham, Lancashire, on June 4th and 5th.

Weekes—Murdoch.—At Parish Church, Lenzie, N.B., on March 30th, by the Rev. William Brownlie, M.A., Charles Peterson Weekes, F.R.C.S.Edin., only son of William Tucker Weekes, of Elmwood, Sutton, Surrey, to Margaret, fourth daughter of William Murdoch, of Leebank, Lenzie, N.B.

DEATHS.

Phillips.—On March 27th, at 39, Albany Villas, Hove, after a few days' illness, Lawrence Willmer Kinglake Phillips, M.D., second son of Barclay Phillips, of 7, Harpur Place, Bedford.

Roberts.—On the 25th October, at 152, Westbourne Grove, W., Thomas Roberts, L.S.A., L.M.R.C.P.I., in his 48th year.

DIARY FOR THE WEEK.

MONDAY.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 8 p.m.—Clinical meeting. Cases will be exhibited by Drs. Chapman, Porter Parkinson, Voelcker, Poynton, Parkes Weber, Clutterbuck, Mr. J. M. Donagh, and others.

TUESDAY.

Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Dr. Leonard Rogers, I.M.S.: (1) The Early Diagnosis and Cure of the Presuppurative Stage of Amoebic Hepatitis. (2) A Common Sporadic Seven-day Fever of Indian Ports Simulating Dengue.

WEDNESDAY.

British Balneological and Climatological Society, 20, Hanover Square, 8.30 p.m.—Continuation of discussion on the Present Position of the Treatment of Tuberculosis by Marine Climates, to be opened by Dr. Alfred Street (Westgate-on-Sea). Paper:—Dr. N. Hay Forbes: Church Stretton as a Health Resort.

Dermatological Society of London, 11, Chandos Street, 5.15 p.m. precisely.—Cases and specimens.

Hunterian Society, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Discussion on Epilepsy (first evening)—Dr. Fletcher Beach, Historical; Dr. Gordon Holmes, Pathology; Dr. Purves Stewart, Masked Epilepsy; Dr. Mercier, Epileptic Insanity.

THURSDAY.

British Gynaecological Society, 20, Hanover Square, W., 8 p.m.—Specimens: Mr. Bowreman Jessett and Dr. Swanton. Paper: Professor Jacobs (Brussels): The Radical Cure of Prolapsus Uteri.

FRIDAY.

Clinical Society of London, 20, Hanover Square, W., 8.30 p.m.—Papers:—Mr. G. H. Makins and Mr. Percy Sargent: A Note on the Value of Anti-Colon Bacillus Serum. Mr. Laurie McGavin: A Modification of the Method of Applying Prepared Filigrees of Silver Wire to the Cure of Large Inguinal Hernia in Males. Mr. Walter G. Spencer: Acute Solitary Suppuration in the Psoas and Iliacus Muscles.

POST-GRADUATE COURSES AND LECTURES.

Central London Throat and Ear Hospital, Gray's Inn Road, W.C.—Wednesday, 5 p.m.: External Ear

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. Monday, College reopens; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical: Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows:—Tuesday, Laennec and the Evolution of the Stethoscope: Wednesday, Some Recent Cases of Haematuria. Thursday, The Treatment of some Common Skin Affections.

North-East London Post-Graduate College, Tottenham Hospital, N.—The following are the clinics and demonstrations for next week:—Monday, 10 a.m.: Surgical 2.30 p.m.: Medical, Throat, Nose and Ear, *X* Rays. Tuesday, 10.30 a.m.: Medical, 2.30 p.m.: Operations; Surgical and Gynaecological. Wednesday, 2.30 p.m., Medical, Skin, Eye. Thursday, 2.30 p.m.: Fevers (at the North Eastern Fever Hospital, St. Ann's Road, N.); Gynaecological Operations; Medical, Surgical; *X* Rays; 3 p.m., Medical (In-patient). Friday, 9.30 a.m., Surgical: 2.30 p.m., Operations; Medical, Eye; 3 p.m., Medical (In-patient).

Post-Graduate College, West London Hospital, Hammersmith, W.—The following arrangements have been made for next week:—Daily, 2 p.m.: Medical and Surgical Clinics, *X* Rays. 2.30 p.m.: Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2 p.m.: Diseases of Throat, Nose, and Ear. 2.30 p.m.: Skin Diseases. Wednesday, 10 a.m.: Diseases of Children.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
APRIL.	
7 Sunday ...	
8 MONDAY ...	Liverpool (Western) Division, *Lancashire and Cheshire Branch*, Liverpool Medical Institution.
9 TUESDAY ...	London: Organization Committee, 11 a.m. Bradford Division, *Yorkshire Branch*, Midland Hotel, Bradford, 8.30 p.m.; Social Gathering, 9.45 p.m. East Anglian Branch, White Hart Hotel, Witham.
10 WEDNESDAY	London: Journal and Finance Committee, 3 p.m. North Wales and Lancashire and Cheshire Branches, Joint Meeting, Chester.
11 THURSDAY...	Rochdale Division, *Lancashire and Cheshire Branch*, Annual Meeting, Wellington Hotel, Rochdale, 8.30 p.m. South Wales and Monmouthshire Branch, Swansea. Norwood Division, *South-Eastern Branch*, Queen's Hotel, Upper Norwood, 4 p.m.; Dinner, 6 p.m.
12 FRIDAY ...	Hampstead Division, *Metropolitan Counties Branch*. North Cumberland Division, *Border Counties Branch*, George Hotel, Penrith, 3 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Conjoint Meeting with Wimbledon and District Medical Society, Worple Hall, Wimbledon, 9 p.m.
13 SATURDAY...	
14 Sunday ...	
15 MONDAY ...	
16 TUESDAY ...	

Date.	Meetings to be Held.
APRIL *(Continued).*	
17 WEDNESDAY	Central Council, Board Room of the Metropolitan Asylums Board, Victoria Embankment, 2 p.m. Altrincham Division, *Lancashire and Cheshire Branch*, Greenbank, Northwich, 5 p.m. Central Division, *Birmingham Branch*, Special and General Meeting, Midland Institute, 3.30 p.m. Westminster Division, *Metropolitan Counties Branch*, St. James's Vestry Hall, 195, Piccadilly, 8.30 p.m.
18 THURSDAY...	City Division, *Metropolitan Counties Branch*, Conjoint Meeting with Walthamstow Division, Brooke House, Upper Clapton, 8.30 p.m. Leigh Division, *Lancashire and Cheshire Branch*, Co-operative Offices, Ellesmere Street, Leigh, 8.30 p.m.
19 FRIDAY ...	West Somerset Branch, Taunton and Somerset Hospital, 3.30 p.m.
20 SATURDAY...	
21 Sunday ...	
22 MONDAY ...	
23 TUESDAY ...	
24 WEDNESDAY	Bath and Bristol Branch, Bath. Lancashire and Cheshire Branch, Branch Council Meeting, Liverpool Medical Institution.
25 THURSDAY...	Wandsworth Division, *Metropolitan Counties Branch*, Town Hall, Wandsworth, 3.30 p.m.
26 FRIDAY ...	
27 SATURDAY...	
28 Sunday ...	
29 MONDAY ...	
30 TUESDAY ...	
MAY.	
1 WEDNESDAY	
2 THURSDAY...	

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 13TH, 1907.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

HOSPITALS COMMITTEE.

IV.—HOSPITAL ADMINISTRATION.

REPORT TO DIVISIONS AND ANNUAL REPRESENTATIVE MEETING.

THE Hospitals Committee considers that the time has now arrived when it is desirable that the British Medical Association should declare definitely its policy concerning certain broad principles of hospital administration.

With a view to such a pronouncement, the Committee presents a report of the work of the Committee since its first appointment in July, 1903, and certain recommendations, resulting therefrom, which are submitted for the consideration of the Divisions and of the Representative Meeting.

The Committee, at its original appointment by the Council at Swansea in July, 1903, was instructed to consider how the widespread abuses of medical charities could best be removed.

In taking up its duties the Committee had regard to the history of past movements for the reform of hospital abuse, and considered that the comparative failure of some of these efforts had been due to the lack of organized co-operation between the lay representatives of hospitals and bodies representative of the medical profession.

The greatly increased facilities afforded by the British Medical Association under its new constitution for obtaining authoritative declarations of the mind of the medical profession induced the Committee to hope that organized co-operation with lay bodies might now be found practicable through the instrumentality of the British Medical Association. The Committee, therefore, during the last three and a half years has directed its efforts mainly to this object, and is glad now to report definite achievement in this respect.

The steps taken to this end have been as follows:

(*a*) Certain typical hospitals in various parts of the United Kingdom were communicated with in 1903, and upon consideration of the information thus obtained twelve propositions were drawn up which received the approval of the Council and Representative Meeting at Oxford in 1904.

(*b*) Taking these proposals as a basis, the Committee proceeded to confer both with medical and lay representatives of hospitals, at conferences held in January and March, 1905.

(*c*) At the Conference of March, 1905, lay representatives of Hospital Boards were elected by the Conference to act with the Hospitals Committee of the Association as a Joint Committee to carry on the work.

(*d*) The results of the further consideration of the matter by the Joint Committee were circulated to all hospitals in the United Kingdom in August, 1906, and each hospital was invited to send a delegate to a United Kingdom Hospitals Conference, which was held on December 6th, 1906.

(*e*) The resolutions of that Conference of December 6th, 1906, gave a permanent character to the movement of co-operation between the lay administrators of hospitals and the medical profession, inasmuch as it again elected representatives in a Joint Committee, instructed the Joint Committee to secure the further consideration of the proposals already circulated, and resolved that an annual Conference ought to be held, and that hospitals should be asked to contribute to the expenses of the work.

In estimating the importance of the resolutions under (*e*) the Committee would specially emphasize the representative authority of this Conference, as being the first on record to which every hospital in the United Kingdom had been requested to send a representative for the purpose of considering a definite programme of proposals previously circulated.

The mode of appointment of the Joint Committee gives it an authoritative position in conferring with hospitals throughout the country, and will no doubt result in the more ready acceptance by Hospital Boards of the present or any future proposals.

The Hospitals Committee considers, however, that independent action by the British Medical Association through the Divisions will also be necessary, and in preparation for this now requests the Divisions to consider and favour the Hospitals Committee with their opinions upon the Proposals contained in the appended document (see Appendix), and to instruct their representatives with a view to definite pronouncements by the Representative Meeting.

To facilitate the formulation of definite conclusions, Divisions are requested to answer categorically the following Questions. Any expression of opinion on the subject which does not appear to be covered by the

Questions 1 to 4 will be welcomed by the Committee, as indicated by 5.

Specific Questions Submitted to Divisions.

1. Should there continue to be compulsory payment by patients to hospitals other than cottage hospitals?
2. Should the production of subscribers' letters continue to be compulsory?
3. Should inquiry into a patient's circumstances invariably take place?
4. Should a certificate be required from the medical attendants of all persons attending out-patient departments?
5. Any other comments?

[APPENDIX.]

Proposals as to the Administration and Management of Hospitals and Kindred Institutions, drawn up by a Joint Committee of the British Medical Association and of Non-Medical Representatives of Boards of Management of Hospitals.

I. *Suggested Model Principles of Hospital Management.*

1. *Suitability of Patients for Admission.*—That inability to pay for adequate treatment shall be the consideration for the admission of all patients for hospital treatment. This shall not apply to Poor-law cases.

2. *Subscribers' Letters.*—That the production of subscribers' letters shall cease to be compulsory, and that, where possible, the system shall be abolished.

3. *Investigations as to Suitability.*—That some means of investigation into the circumstances of the applicants for relief, by means of an almoner or other agent, shall be employed in all medical charities.

4. *Recommendations 1, 2, 3, to apply to all Patients.*—That the foregoing recommendations apply to both in-patients and out-patients.

5. *Evidence of Suitability.*—That, except in emergencies, sufficient evidence shall be obtained on two points: (*a*) That the patient is not in a position to pay for adequate treatment; (*b*) that the case is, from a hospital point of view, suitable for treatment.

6. *Urgent Cases.* That all cases of serious accident and severe sudden illness shall be attended to on their first application, and, if deemed eligible for further treatment, shall be referred to the appropriate department of the hospital, but, if ineligible, shall then be referred for treatment elsewhere.

7. *Trivial Cases.*—That all cases of trivial accident or illness deemed ineligible for the casualty department shall, after having been seen, be referred for treatment elsewhere.

8. *Medical Inspection of all Cases.*—That, on the first visit, no patient be permitted to leave a hospital without having been seen by a registered medical practitioner.

9. *Limitation of Work of Medical Officers.*—That, where possible, the number of new cases to be seen on any one day by an honorary medical officer shall be limited.

10. *Scope of Special Hospitals.*—That special hospitals shall treat only those cases that come strictly within the scope of their work.

11. *Age Limit for Retirement.*—That in all hospitals there shall be an age limit for the retirement of the medical officers.

12. *Co-operation of Hospitals.*—That no scheme for the reform of out-patient departments can be successful without co-operation and co-ordination between hospitals themselves, especially those which operate in the same area.

13. *Pay Wards.*—That there is no objection to pay wards being connected with voluntary hospitals, provided that they are open to every member of the medical profession, who shall be paid any fee to be arranged by him and his patient.

14. *Scope of Out-patient Departments.*—That consultations should, as far as possible, be encouraged in out-patient departments.

15. *Reference elsewhere of Unsuitable Cases.*—That all cases shall be seen by an almoner, and those not suitable for hospital treatment shall be referred in general terms to a medical practitioner, to a public medical service,* an approved provident dispensary, or to the relieving officer under the Poor Law.

16. *Co-ordination of Hospitals with Public Medical Services and Provident Dispensaries.*—That there shall be a system of co-ordination between hospitals, on the one hand, and public medical services and provident dispensaries on the other, so that the hospitals shall refer to the public medical services and provident dispensaries cases unsuitable for hospital treatment (see paragraph 15 foregoing), and the public medical services and provident dispensaries shall refer to the hospitals cases for consultation, as well as those requiring hospital treatment and nursing, or specially suitable for purposes of clinical instruction.

17. *Notices to Facilitate Co-operation.*—That notices be posted in out-patient and casualty departments of hospitals calling attention to public medical services or approved provident dispensaries in the neighbourhood.

18. *Reference of Cases for Special Advice.*—That a member of a public medical service or provident dispensary, or other patient referred to a hospital for consultation, with a private note or personally, by a general practitioner in attendance, should be referred back to such medical attendant with a statement of the opinion of the hospital physician or surgeon on the condition of the patient.

19. *Relation of Hospitals to the Poor-law Medical Service.*—That cases of obvious destitution, or cases already in receipt of Poor-law relief, shall, after they have been once seen in the casualty or out-patient department, be referred to the Poor-law relieving officer, unless they should be retained for hospital treatment, and Poor-law patients may be referred to hospitals for consultation, as in the case of public medical service and provident dispensary patients. In these cases payment might be required from the Poor-law Guardians if deemed advisable.

II.—*Cottage Hospitals.*

1. *Medical Attendance.*—That, as far as possible, every patient in a cottage hospital have the right to be attended by his usual medical attendant.

2. *Scope of Cottage Hospitals.*—That, except in cases of emergency, cottage hospitals be only open to those who are unable to secure adequate treatment at home.

3. *Contributions by Patients.*—That all persons admitted to cottage hospitals contribute, where possible, towards their maintenance.

4. *Certificate of Suitability for Admission.*—That a certificate signed by a medical practitioner within the area be a sufficient recommendation for admission.

III. *Self-supporting Public Nursing Homes.*

1. *Definition and Desirability.*—That it is desirable that self-supporting public nursing homes should be established for patients who, being ineligible for the voluntary hospitals, are yet unable to pay the customary professional fees as well as the charges usually made in private nursing homes.

2. *Management.* That the management should be vested in a committee on which the medical profession is adequately represented.

3. *Certificates of Suitability for Admission.* That no patient should be admitted without first producing a certificate of suitability for admission from a medical practitioner, who should whenever possible be the patient's usual medical attendant. If the signatory be not the patient's usual medical attendant, an explanation of the fact should be appended to the certificate.

4. *Choice of Medical Attendant.* That it shall be open to a patient to select any registered medical practitioner as his attendant.

5. *Assistance to Patients unable to Pay Entire Cost.* That when the payment made by a patient is insufficient to cover the entire cost of maintenance, or when any question arises as to reduction or remission of fees for professional services, a statement of the financial circumstances necessitating such consideration shall be signed by the patient or near relative, countersigned by the usual medical attendant or some other responsible householder, and submitted to the Committee.

* The term "public medical service" has been applied in certain [illegible] to [illegible] provident dispensaries, medical attendance and medicine [illegible] on the contributory principle, in which the service is under the entire control of the medical profession. In other districts services of exactly the same general type have been established under the title of "provident medical associations", but the general designation of "public medical service" is preferable, as avoiding [illegible] with organizations under non-medical control.

MEDICO-POLITICAL COMMITTEE.

V.—MEDICAL INSPECTION OF SCHOOL CHILDREN.

SUPPLEMENTARY REPORT TO DIVISIONS.

1. Origin of Present Memorandum.

In view of the fact that Mr. W. Rea's Bill making the medical inspection of school children compulsory, was read a second time on March 5th, 1907, without a division, and referred to the Standing Committee on Trade, and that the Government Education Bill introduced by Mr. McKenna contains a provision to the same effect, and further in view of other information received since the issue of questions already circulated to the Divisions (Supplement to British Medical Journal of February 16th, 1907, page 74), it is necessary for the Association to be prepared with definite proposals earlier than was anticipated. Therefore the Committee, in order to focus discussion in the Divisions and so obtain a definite result as soon as possible, has formulated a scheme for the consideration of the Divisions.

2. General Nature of Provision Required.

For the medical inspection of school children to be properly carried out, both central and local machinery must be provided, and the organization of the latter, owing to the great difference in the conditions in large cities, medium-sized and small towns, and rural districts respectively, calls for careful consideration. The case is one in which inadequate provision will practically mean throwing away the money spent, so far as national benefits are concerned.

3. The Central Machinery.

The central machinery should consist of a medical department of the Board of Education, composed of a chief medical officer and at least one assistant medical officer, with an adequate statistical and clerical staff.

The duties of this department should be, as regards medical inspection of school children:—

(*a*) To advise the President of the Board of Education upon all matters affecting the general organization of medical supervision, and the guidance of the Local Education Authority in the organization and maintenance of such supervision.

(*b*) To collate reports of and to Local Education Authorities, to issue an annual report, and to prepare from time to time special reports on information obtained or on particular subjects.

(*c*) To advise the President of the Board of Education on the organization of the anthropometrical examination and record of school children.

(*d*) To advise the President of the Board of Education on the instruction, in hygiene and temperance, both of teachers in training colleges and of children in schools.

(The importance of the subject (*d*) as affecting public health has repeatedly been pointed out to the Government by the British Medical Association and other bodies interested in hygiene, and the necessary developments are delayed through the want of a medical bureau in the Education Department.)

4. Local Machinery.

The local machinery must vary according to (*a*) the nature of the district, and (*b*) the frequency of inspection undertaken.

As regards (*b*), much must depend upon whether the inspection provided for is to be confined to the time of entrance, or whether, as would seem to be necessary, subsequent periodical examination is to be undertaken.

5. Medical Officers.

In any case, it will probably be found that there must be two classes of local medical officers: (i) the actual medical inspectors of school children, and (ii) the medical advisers of the Local Education Authorities.

(i) *Actual Inspectors.*

Whatever the nature of the districts, it appears to the Medico-Political Committee that the actual work of inspection and anthropometry must be carried out by general practitioners dividing the work of the schools of each district between them, in such manner as may be arranged by the profession locally.

(ii) *Medical Advisers.*

In some of the largest towns special whole-time medical officers to the education committees have already been appointed. In other boroughs the appointment must be determined by local conditions, and the Medico-Political Committee invites suggestions on this subject. For the service of the rural districts, each county council should appoint a medical adviser to its Education Committee. It will be his duty to receive, collate, and report to the County Education Committee on the reports made by the practitioners who visit and inspect the several schools.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

BIRMINGHAM BRANCH:

Coventry Division.

A meeting of this Division was held at the Coventry and Warwickshire Hospital on February 19th, Mr. Faulder White being in the chair.

Case.—Mr. T. Harrison Butler, M.D.Oxon., Honorary Ophthalmic Surgeon to the Coventry and Warwickshire Hospital, read the notes of a case of chloroma, which had been shown at the previous meeting, and exhibited the *post-mortem* specimens. His paper will be published in a subsequent issue. Remarks on the case were made by the Chairman and Dr. J. Orton.

Coventry and Warwickshire Hospital.—Mr. Faulder White moved:

> That this Division of the British Medical Association is of the opinion that an almoner or inquiry officer should be appointed at the Coventry and Warwickshire Hospital.

This was seconded by Dr. Davidson and carried unanimously.

Certificates of Illness.—Mr. Faulder White proposed:

> That this Division is of the opinion that it is not advisable to state the nature of the illness on certificates of inability to work.

This was seconded by Dr. Callaghan and after some discussion it was resolved to postpone its further consideration.

The Dispensary Question.—The Division then resolved itself into a Committee to discuss the dispensary question.

LANCASHIRE AND CHESHIRE BRANCH:

Leigh Division.

On Thursday, March 21st, the usual monthly meeting of the Leigh Division was held in the Co-operative Offices, Ellesmere Street, Leigh, at 8.30 p.m., the Chairman (Dr. Jones) being in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and signed.

Candidature to Central Council.—A few subjects of the agenda having been dealt with, Dr. Renshaw, Honorary Secretary of Dr. Garstang's Election Committee, briefly introduced Dr. Garstang's candidature for the Council of the Association to the meeting, and gave the reasons which induced the Altrincham Division to put him forward as a candidate.

Address by Dr. Garstang.—Dr. Garstang then addressed the meeting, and elaborated a few points of the programme which he intended to support, in particular emphasizing the necessity for loyally carrying out the provisions of the new Constitution of the Association, and regarding the Divisions as the basis from which all efforts in progress should begin. On the motion of Dr. Wynne, seconded by Dr. King, and supported by Dr. S. Martin, it was unanimously resolved:

> That this Division cordially supports the candidature of Dr. Garstang for a seat on the Central Council.

Rochdale Division.

A quarterly meeting was held in the Wellington Hotel, Rochdale, on March 27th, at 8.30 p.m. Dr. Thorp, the President, was in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Representatives on Central Council.—Dr. Garstang (Altrincham) as a candidate addressed the meeting. He went into the finances of the Association, its organization, the Branch Councils and the Divisions, and the Royal Charter. Dr. Hitchin moved and Dr. Welsh seconded:

That a hearty vote of thanks be given to Dr. Garstang for his address.

Carried unanimously. Dr. Garstang replied.

Grouping of Division for Representatives in Representative Meeting, 1907-8.—Dr. Hitchin moved and Dr. Welsh seconded:

That we ask to be joined with Bury Division.

Carried unanimously.

Liverpool (Northern) Division.

An ordinary meeting of the Division was held at the Medical Institution on March 27th, Dr. J. A. Cooke, Chairman, presiding.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Expenses of Representatives at Annual Meeting.—In connexion therewith, the Honorary Secretary reported that the Branch Council had passed a resolution authorizing an allowance out of the fund at its disposal towards the expenses of Representatives of Divisions in this Branch attending the Annual Meeting.

Hospital Reform.—With reference to hospital reform, the Honorary Secretary reported that he had communicated with the other local Divisions, as instructed, but had only received three replies, and that the matter was in abeyance at present.

Minutes of Executive Committee.—The minutes of the Executive Committee, dated respectively October 29th, 1906, November 19th, 1906, and January 21st, 1907, with reference to the case of Dr. Fitzgerald and Jolly, the election of Direct Representatives to the General Medical Council, and the annual report for 1906 of the Division to the Branch, were approved and the actions of the Executive Committee confirmed.

Proposed Amalgamation of Local Divisions.—On the proposition of the Chairman, seconded by Dr. Matthews, it was unanimously decided to adopt the resolution of the Liverpool (Western) Division with reference to this matter, which appeared in the Supplement of December 15th last.

Medical Inspection of School Children.—In regard to the specific questions referred to the Divisions, it was proposed by Dr. Ivor Thomas, seconded by Dr. Davies, and resolved unanimously:

1. That the medical inspection of school children be distributed among those general practitioners of the district who are prepared to undertake a proportion of the duty.
2. That the Division considers the appointments would be filled by the local education authority.
4. That there is no evidence of this.

Ethical Aspects of Medical Consultation.—After discussion of this matter, it was proposed by Dr. Davies, seconded by Dr. Ivor Thomas, and resolved unanimously

That the recommendations of the Central Ethical Committee be approved.

Municipal Child Medical Insurance Society. A letter from Dr. Given, Honorary Secretary of the Committee appointed in connexion with this matter, was read considering the resolutions passed at a combined meeting of the local Divisions.

Election of Branch Representatives on Central Council.—It was proposed by Dr. Davies, seconded by the Chairman, and unanimously resolved

That this Division nominates Mr. Frederic Charles Larkin, [illegible] Rodney Street, Liverpool, as a candidate for election as Representative from the Lancashire and Cheshire Branch to the Central Council of the Association.

A letter was read from Dr. Garstang of Altrincham, also a candidate at this election, expressing his desire to meet the Division to discuss matters of medical politics in connexion therewith. The Honorary Secretary was instructed as to a reply.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

SPECIAL REPRESENTATIVE MEETING.

The Special Representative Meeting will take place in London on Wednesday, May 29th.

Particulars of place and hour of meeting will be published in due course.

BY ORDER OF THE COUNCIL.

GUY ELLISTON, *General Secretary.*

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IMPORTANT NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

COUNCIL MEETING.

A meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 17th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,

March 14th, 1907. *General Secretary.*

BRANCH AND DIVISION MEETINGS TO BE HELD.

Birmingham Branch: Central Division.—A special and general meeting of the Division will be held on Wednesday, April 17th, at 3.30 p.m., at the *Medical* Institute, *not* Midland, as previously announced. Business: (1) To consider the following resolution proposed by the Honorary Secretary: "That the Central Division expresses its great appreciation of the Post Graduate Classes at the General and Queen's Hospitals, its sincere thanks to the gentlemen who have held them, and trusts that they will be continued in the future." (2) Modification of Rule X. The Executive Committee recommends the Division to approve of a modification of this rule, as advised by the Central Ethical Committee. See the Supplement, British Medical Journal, February 9th. (3) To consider a scheme for a public medical service for Birmingham and district. (4) If the scheme is approved of, to elect five members of a Central Committee. The other members of this Committee to be at first five appointed by the Birmingham and District General Medical Practitioners' Union, and a medical representative from each local allied hospital. (5) Medical inspection of school children. To consider the questions referred to the Division on page 74 of the Supplement for February 16th. (6) Ethical aspects of consultation (Supplement, February 16th). (7) Any other business. E. D Kirby, Honorary Secretary.

Dorset and West Hants Branch. The spring meeting of this Branch will be held in Weymouth on Wednesday, May 22nd. Members wishing to read papers, exhibit cases, or show pathological specimens, should communicate at once with the Honorary Secretary, James Dayton, "Streatplace," Bath Road, Bournemouth.

Dundee Branch. The annual meeting of this Branch will be held in the Royal Infirmary, Dundee, on Friday, May 10th, at 7.30 p.m. and will be followed by a clinical meeting at 8 o'clock. Dinner will be served in the Royal Hotel, Dundee, at 6 o'clock. Members of other Branches are invited to be present and to take part in the meeting.—R. C. Bell, M.D., 105 Nethergate, Dundee; A. P. Low, M.B., Bank House, Stirling Street, Dundee, Honorary Secretaries.

Lancashire and Cheshire Branch.—Nomination of members of the Branch to serve on the *Council* of the Association. Nominations must be sent to Mr. Larkin, 54, Rodney Street, Liverpool, not later than May 1st, 1907.—T. Arthur Helme, F. Charles Larkin, Honorary Secretaries.

Lancashire and Cheshire Branch: Altrincham Division.—The next general meeting will be held at the Greenbank Hotel, Northwich, at 5 p.m. on Wednesday, April 17th. Dinner will be provided at 6.45 p.m. for those who give me notice by the 15th. Members unable to attend are requested to send word (as it facilitates arrangements), but the Committee hopes the attendance will be good, as the corresponding meeting last year was so successful. Agenda: (1) Minutes of meeting of February 13th. (2) Correspondence. (3) Report of Committee meetings of March 12th and April 4th. (4) Report on Branch Council meeting of March 13th. (5) The Charter (important; members should read the British Medical Journal of April 6th, p. 825, and the Supplement of same date, and should bring the latter with them). (6) Medical inspection of school children (see Supplement of February 16th). (7) Ethics of consultation (see Supplement of February 16th). (8) Registration of nurses, Dr. Rhodes. (9) The Central Council election, Dr. Garstang. (10) Any other business. The Committee regrets the absence of any scientific paper, but if any member will contribute, even at the last moment, he will be given priority of place on the agenda.—T. W. H. Garstang, Honorary Secretary.

Lancashire and Cheshire Branch: Leigh Division.—On Thursday, April 18th, the usual monthly meeting of this Division will be held in the Co-operative Offices, Ellesmere Street, Leigh, at 8.30 p.m. Agenda: (1) Minutes. (2) Notice of motion to rescind resolution limiting number of honorary consulting staff. (3) Letter from Dr. Garstang. (4) Medical inspection of school children (see Supplement for February 16th). (5) The ethical aspects of medical consultation (see Supplement for February 16th). (6) Any other business.—Michael J. Halton, Honorary Secretary.

Metropolitan Counties Branch.—*Nominations of Branch Officers.*—Pursuant to By-law 24, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 11th.—Fred. J. Smith, Honorary Secretary.

Metropolitan Counties Branch: City and Walthamstow Divisions.—A conjoint meeting of the City and Walthamstow Divisions will be held (by the kind invitation of Dr. J. O. Adams) at Brooke House, Upper Clapton, on Thursday, April 18th, at 8.30 p.m. (1) Nomination of candidates for offices in the Branch. (2) A demonstration of cases of diseases of the skin will be given by Dr J. H. Sequeira, physician to the skin department of the London Hospital. Visitors are cordially invited to be present. [Brooke House is close to Clapton Station on the Great Eastern Railway. Trains from Liverpool Street at 8.4, 8.15, 8.22, and 8.33; and from Wood Street at 8.2, 8.22, and 8.34. Trams and motor omnibuses to Clapton and the Lea Bridge Road pass the door.]—E. W. Goodall, Honorary Secretary.

Metropolitan Counties Branch: Hampstead Division.—*Provident Dispensaries.*—A meeting of the medical profession living within the area of the Hampstead Division will be held on Friday, April 12th, at 4.30 p.m., at St. Peter's Hall, Belsize Square, N.W., Dr. Macevoy in the chair. Agenda: (1) To consider the report of the Divisional Subcommittee on Provident Dispensaries in this Division (see British Medical Journal, Supplement, April 6th). (2) To consider the circular letter of the Medical Charities Committee of this Branch, and the replies received to the appendix of the circular (N.B.—Replies to this letter to be sent to the Honorary Secretary as soon as possible, *before* the meeting). (3) To consider the report of the Medico-Political Committee of the Association, (see British Medical Journal Supplement, February 23rd, p. 91). All medical men in the area are invited. Tea at 4.30. Chair taken at 5 p.m. St. Peter's Hall adjoins St. Peter's Church, and is about five minutes' walk from Swiss Cottage.—R. A. Yeld, 29, Platt's Lane, Hampstead; H. W. Armit, Ravenhurst, Talbot Road, Wembley, Honorary Secretaries.

Metropolitan Counties Branch: Richmond Division.—The next meeting of this Division will be held at the Royal Hospital, Richmond, on Wednesday, April 17th, at 8.30 p.m., when a paper will be read by R. Marcus Gunn, F.R.C.S., entitled, "The Value of Ophthalmic Symptoms in General Diagnosis and Prognosis." Ophthalmic cases will be shown at 8 o'clock in the New Ophthalmic Wards.—Charles Blair, Honorary Secretary.

Metropolitan Counties Branch: Wandsworth Division.—The Wimbledon and District Medical Society have invited the members of this Division to attend their meeting at the Worple Hall, Wimbledon, on Friday, April 12th, 1907, at 9 p.m., when an address will be given by Herbert Tilley, F.R.C.S., on The Diagnosis and Treatment of Certain Nasal Diseases frequently met with in General Practice. The Committee of the Division hope there will be a large acceptance of this invitation.—E. Rowland Fothergill, Honorary Secretary, Torquay House, Southfields, S.W.

Metropolitan Counties Branch: Wandsworth Division.—An additional ordinary meeting will be held at the Town Hall, Wandsworth, on Thursday, April 25th, 1907, at 3.30 p.m. Agenda: (1) Minutes; (2) correspondence; (3) questions; (4) nomination by the Division of candidates as officers of the Branch and Representatives of the Branch on the Central Council for 1907-8; (5) references *re* (*a*) medical inspection of school children, and (*b*) the ethical aspects of medical consultation (see Supplement, British Medical Journal, February 16th, 1907); (6) consideration of revised Charter (see Supplement this week). On or before May 1st proposals for officers and members of the Executive Committee of the Division for 1907-8 must be sent in to E. Rowland Fothergill, Honorary Secretary, Torquay House, Southfields, S.W.

Metropolitan Counties Branch: Westminster Division.—A meeting of this Division will be held at St. James's Vestry Hall, 195, Piccadilly, at 8.30 p.m., on Wednesday, April 17th, 1907. Agenda: (1) To consider the Medico-Political Committee's special report on Provident Dispensaries (the discussion will be opened by Dr. Hilliard; (2) to consider the Ethical Committee's memorandum on medical consultations, vide Supplement to the British Medical Journal, February 16th, 1907 (Dr. Donald Baynes will introduce the discussion). It is hoped that every practitioner residing in the Westminster Division will make an effort to attend this meeting, whether a member of the Association or not.—F. J. McCann, M.D., F.R.C.S., Curzon Street, Mayfair, W., Secretary.

Staffordshire Branch.—The third general meeting of the session will be held at the Victoria Hotel, Wolverhampton, on Thursday, April 25th. The President, Dr Charles Read, will take the chair at 5.25 p.m. Business: (1) Minutes of the last general meeting. (2) Correspondence. (3) Exhibition of living cases. (4) Paper: Angina Pectoris—Notes on a case with comments, F. J. Geoghegan, M.D. (5) Exhibition of pathological specimens, etc. Dinner at 7 p.m., charge 5s. A meeting of the Council will be held immediately before the general meeting, for the election of members.—G. Petgrave Johnson, Honorary General Secretary, Stoke-on-Trent.

Ulster Branch.—The Spring meeting of the Branch will be held in Derry, on Saturday, April 27th. Members having papers to read or communications to make, are asked to send me particulars before April 14th.—Cecil Shaw, M.D., Honorary Secretary, 18, College Square East, Belfast.

West Somerset Branch.—The spring meeting of this Branch will be held at the Taunton and Somerset Hospital, on Friday, April 19th, at 3.30 p.m., when the chair will be taken by Dr. R. Liddon Meade-King, the President. Agenda: New Charter for Association—Dr. J. A. Macdonald, Representative of the Branch, asks members to make an effort to attend the meeting, as it is very important to have as strong as possible an expression of opinion on the Charter, especially on one point—the election of the Council. Medical inspection of school children—Another matter will be discussed which is of importance to every general practioner, namely, the medical inspection of school children, for which a suggested scheme will be found in the British Medical Journal of April 6th. Discussion—Dr. H. S. Pope, of Bridgwater, has kindly consented to open a discussion on medical certificates, and will deal with all certificates required for public bodies, insurance reports, school, insurance, club and death certificates. Members wishing to bring any other matter before the Branch will kindly give me notice as soon as possible. Tea will be served after the meeting.—W. B. Winckworth, Honorary Secretary.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

Staff Surgeons E. A. Shaw, M.B., F. A. A. Clayton, M.B., F. J. A. Dalton, and E. Sutton are promoted to be Fleet Surgeons, from March 26th. Their previous commissions, are thus dated:—Fleet Surgeon Shaw Surgeon, November 3rd, 1891; Staff Surgeon, March 26th, 1899. Fleet Surgeons Clayton and Dalton: Surgeon, November 15th, 1892 Staff Surgeon March 26th, 1899. Fleet Surgeon Sutton Surgeon, May 13th, 1896. Staff Surgeon, March 26th, 1899. Fleet Surgeon Shaw has no war record. Those of the other officers cited, according to the *Royal Navy List*, are as follow: Fleet Surgeon Clayton served in the punitive expedition against King Koko, of Nimby, the chief town of Brass, on the River Niger, which was destroyed in February, 1895 (medal with clasp), present on the occasion of the bombardment and capture of the Sultan of Zanzibar's palace, on August 27th, 1896, also served in the punitive naval expedition landed from the squadron to punish the King of Benin for the massacre of the political expedition, 1897, ending in the capture of Benin City, February 18th, 1897, mentioned in dispatches, medal, with clasp. Fleet Surgeon Dalton was awarded the Stewart Prize of £[illegible] by the British Medical Association for his investigations in the tropical disease termed "beri-beri," which is considered infectious. Fleet

Surgeon Sutton served in the punitive naval expedition landed from the squadron to punish the King of Benin for the massacre of the political expedition, 1897, ending in the capture of Benin City, February 18th, 1897 (medal with clasp); formed the Base Hospital at Wei-hai-Wei, for the reception of the sick and wounded from the Naval Brigade landed under Vice-Admiral Sir E. H. Seymour, for advance to Pekin, June 10th, 1900 (medal); promoted Staff Surgeon, March 26th, 1903, for conspicuous professional merit.

The following appointments have been made at the Admiralty: JAMES O'B. WILLIAMS, M.D., Deputy-Inspector-General, to Malta Hospital, March 27th; ALEXANDER J. J. JOHNSTON, Deputy-Inspector-General, to Plymouth Hospital, March 20th; WILLIAM M. CRAIG, Fleet Surgeon, and GEORGE M. O. RICHARDS, Surgeon, to Haslar Hospital, March 28th; GEORGE A. WATERS, Fleet Surgeon, to the *Excellent*, for the *Iberia*, April 8th; FREDERICK A. BRICE, Fleet Surgeon, to the *President*, additional, for three months' course at West London Hospital, April 8th; FREDERICK J. LILLY, Fleet Surgeon, to the *President*, additional, for three months' course at Greenwich Hospital, April 4th; D'ARCY HARVEY, M.D., Fleet Surgeon, to the *Arrogant*, on recommissioning, undated. PERCY T. SUTCLIFFE, M.B., Surgeon, to the *Hermes*, March 28th. WILLIAM P. HINGSTON, Surgeon, to the *Vivid*, March 28th; NORMAN IRELAND-SMITH, Staff Surgeon, to the *President*, for three months' course at West London Hospital, April 8th; WILLIAM TAIT, Deputy Inspector-General, to Hong Kong Yard, April 20th; ARTHUR E. KELSEY, Staff Surgeon, to the *Diadem*, on recommissioning, April 9th; WILLIAM J. CODRINGTON, Staff Surgeon, to the *Iris*, on commissioning, temporary, April 20th.

Surgeon C. R. SHEWARD, M.B., whose appointment as Surgeon dates from [illegible] 1907, has been promoted to be Staff Surgeon from May 20th, 1906.

BASIL H. H. TRIPP, civil practitioner, has been appointed Surgeon and Agent at Southwold, March 27th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL A. P. O'CONNOR, C.B., has been appointed Principal Medical Officer, Northern Command, vice Colonel M. D. O'Connell, M.B.

Captain F. F. CARROLL, M.B., is seconded for service with the Egyptian Army, March 19th.

The name of Lieutenant ERNEST B. LATHBURY is as now described, and not as stated in the *Gazette* of March 5th, 1907.

INDIAN MEDICAL SERVICE.

THE undermentioned officers have been finally admitted to the Indian Medical Service, and their commissions will bear date September 1st, 1906: J. TAYLOR, M.B., A. D. STEWART, M.B., C. H. CROSS, R. A. CHAMBERS, M.B., R. H. BOTT, J. MORISON, M.B., S. G. S. HAUGHTON, M.B., F. W. C. NORMAN, M.B., N. N. G. C. M'VEAN, N. S. STEVENSON, B. T. HEBBERT, J. T. JAMES, M.B., J. SMALLEY, M.B., C. M. ROBERTS, M.B., A. S. LESLIE, M.B., W. M. THOMSON, M.B., A. P. G. LODEWYK, M.B., H. B. SCOTT, G. MCG. MILLAR, M.B., H. A. KNIGHT, M.B., F. H. SALISBURY, M.B., F. C. FRASER, M.D., H. H. THORBURN, M.B.

Captain F. P. O'CONNOR is placed on special duty in connexion with plague in Behar.

The following appointments in the Royal Army Medical Corps, to command the Station Hospitals named, have been approved for the summer season of 1907: Major G. St. C. THOM, M.B., to Solon; Major O. R. A. JULIAN, C.M.G., to Cherat; Captain J. M. H. CONWAY, to Kalabagh; Captain K. L. ARCHER, to Khyra Gali and the School of Musketry, Changla Gali; Captain R. STORRS, to Camp Barian; Lieutenant-Colonel D. M. O'CALLAGHAN, to Kuldana; Major H. W. DUNN, M.B., to Chaklala; Lieutenant M. SINCLAIR, M.B., to Khanspore and Ghoradaka combined; Captain W. D. C. KELLY, M.B., to Upper Topa; Lieutenant W. BENSON, M.B., to Lower Topa; Lieutenant J. A. TURNBULL to Bara Gali; Captain S. M. W. MEADOWS, to Chidden.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, March 30th, 3,117 births and [illegible] deaths were registered in the twenty-six of the largest English towns. The annual rate of mortality in these towns, which had been [illegible] per 1,000 in the three preceding weeks, was in the week under notice equal to 17.7 per 1,000. The rates in the several towns ranged from [illegible] in Wimbledon, 6.1 in Reading, 9.9 in [illegible], 10.1 in [illegible], 10.2 in York, 10.3 in [illegible], 10.4 in Hornsey, 10.5 in Bolton, 10.6 in [illegible], 10.7 in South Shields, 10.8 in [illegible], 10.9 in Burnley, 11.0 in Bournemouth, 11.1 in Huddersfield, 11.2 in Hastings, 11.3 in Hanley, 11.4 in Bolton, 11.5 in Brighton, 11.6 in Portsmouth, 11.7 in Sheffield, 11.8 in Leeds, 11.9 in Bradford, 12.0 in Halifax, 12.1 in Blackburn, 12.2 in Oldham, 12.3 in Preston, 12.4 in Wigan, 12.5 in Leicester, 12.6 in Nottingham, 12.7 in Sunderland, 12.8 in Gateshead, 12.9 in Newcastle-upon-Tyne, 13.0 in Birkenhead, 13.1 in Salford, 13.2 in Middlesbrough, 13.3 in Stockport, 13.4 in Rochdale, 13.5 in West Hartlepool, 13.6 in Barrow-in-Furness, 13.7 in Walsall, 13.8 in Wolverhampton, 13.9 in Bootle, 14.0 in Tynemouth, 14.1 in West Bromwich, 14.2 in St. Helens, 14.3 in Aston Manor, and 14.4 in [illegible].

[illegible] deaths were registered

BODMIN: CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £140 per annum, rising to £160.

BRADFORD ROYAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Third House-Surgeon. Salary, £50 per annum.

BRISTOL GENERAL HOSPITAL.—(1) House-Surgeon; (2) House-Physician; (3) Casualty House-Surgeon; (4) Assistant House-Physician. Salary at the rate of £50 per annum.

BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer. Salary at the rate of £50 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £80 per annum, increasing to £90

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum.

CANTERBURY: CITY ASYLUM. Assistant Medical Officer. Salary, £140 per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C. House-Surgeon. Salary at the rate of £50 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Salary, £50 per annum.

CHORLEY, LANCS: RAWCLIFFE HOSPITAL.—House Surgeon. Salary, £90 per annum first six months rising to £100.

DERBY COUNTY BOROUGH: Assistant to the Medical Officer of Health. Salary, £120 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—Assistant Surgeon.

FIFE DISTRICT ASYLUM, Cupar.—Junior Assistant Medical Officer. Salary, £120 per annum.

GLOUCESTER: GENERAL INFIRMARY.—(1) Assistant House-Surgeon Remuneration at the rate of £30 per annum. (2) Assistant Surgeon.

HUDDERSFIELD INFIRMARY.—Senior Assistant and Junior Assistant House-Surgeon. Salary, £80 and £60 per annum respectively.

LAMBETH BOARD OF GUARDIANS.—Third Resident Assistant Medical Officer of Infirmary. Salary, £125 per annum, rising to £150.

LEEDS HOSPITAL FOR WOMEN AND CHILDREN.—House Surgeon. Salary at the rate of £50 per annum.

LINCOLN COUNTY HOSPITAL.—Junior Male House Surgeon. Honorarium, £25 for six months.

LONDON THROAT HOSPITAL, Great Portland Street, W.—Third Anaesthetist.

MARGATE: ROYAL SEA-BATHING HOSPITAL.—Resident Surgeon to act as Junior and Senior for six months each. Salary at the rate of £80 and £120 per annum.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Grafton Street, W.—(1) Surgeon. (2) Assistant Surgeon: (3) Anaesthetist.

MIDDLESBROUGH: NORTH RIDING INFIRMARY.—Assistant House-Surgeon. Salary, £75 per annum.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Assistant Ophthalmic Surgeon.

NEWCASTLE-UPON-TYNE: ROYAL VICTORIA INFIRMARY.—Director for the Bacteriological Department. Salary, £100 per annum.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary, £70 per annum.

NORTHWOOD: MOUNT VERNON HOSPITAL FOR DISEASES OF THE CHEST.—Assistant Resident Medical Officer. Honorarium, £50 per annum.

PORT ELIZABETH: PROVINCIAL HOSPITAL.—Assistant House-Surgeon. Salary, £225 per annum, rising to £300.

ROYAL DENTAL HOSPITAL, Leicester Square, W.C.—(1) Honorary Curator of the Museum, (2) Lecturer on Operative Dental Surgery.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.:—(1) House-Surgeon (2) Casualty House-Surgeon. (3) Resident House-Physician. (4) Resident House-Surgeon.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House-Surgeon. Salary, £75 per annum.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Physician. Salary, £100 per annum

SUNDERLAND: MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon. Salary, £80 per annum.

SWANSEA UNION.—Assistant Medical Officer of the Workhouse. Salary, £200 per annum.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £70 per annum.

TORQUAY: TORBAY HOSPITAL.—House-Surgeon. Salary, £100 per annum, and £5 for lectures to nurses.

WAKEFIELD: WEST RIDING ASYLUM. Pathologist and Assistant Medical Officer. Salary £140 per annum

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £80 per annum

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Ophthalmic Surgeon.

CERTIFYING FACTORY SURGEON: The Chief Inspector of Factories notifies a vacancy at Chudleigh, co. Devon.

APPOINTMENTS.

ADDIS, Thomas, M.B., Ch.B., Resident Medical Officer to the Royal Edinburgh Hospital for Sick Children.

ALLAN, John, M.B., Ch.B Edin., Senior House-Surgeon at the Walsall and District Hospital, Walsall.

BLACK, Edward Hamilton, M.B., Ch.B.Edin., Assistant House and Visiting Surgeon to the Stockport Infirmary.

BOON, J. G., L.R.C.P., L.R.C.S.Irel., House-Surgeon, Lady Forester Cottage Hospital, Broseley.

BROWN, Wm., M.B., Ch.B.Edin., Parochial Medical Officer, Crathie and Braemar.

CAMERON, John, M.B., C.M.Aber., Medical Officer of the Black Isle Combination Poorhouse, vice A. R. Mackenzie, M.D.Glasg., resigned.

COUCH, J. Kynerston, M.D., M.R.C.S., L.R.C.P., Surgeon to the Children's Wards, Perth Public Hospital, Western Australia.

DRURY, W. H., L.R.C.P. and S.Edin., District Medical Officer of the West Ham Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for [illegible] inserted under the heads of Births, Marriages, and Deaths, which must be forwarded in post-free order, is 5s. for every 40 words, or part of 40 words, with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

ADAMSON.—On April 7th, at Fernieshield, Lee-on-the-Solent, Hants, the wife of J. W. W. Adamson, M.R.C.S., L.R.C.P., L.S.A., of a son.

MARRIAGES.

EDGERLEY—BLACKWOOD.—On March 21st, at Ilkley Parish Church, by the Rev. W. Stephens Muntz, B.D., LL.D. Samuel Edgerley, M.A., M.D., Medical Superintendent of the West Riding Asylum, Menston, near Leeds, to Catherine Mabel, daughter of the late William Blackwood, Edinburgh.

MAY—MITCHELL.—On April 6th, at St. Peter's and St. Paul's Church, Chingford, Essex, by the Rev. A. F. Russell, Rector, George Ernest May, M.R.C.S., L.R.C.P., of Ware, Hertfordshire, second son of the late Harry May, M.D., of Ramsgate, Dorset to Rachel Marguerite, second daughter of the late William Augustus and of Mrs. Mitchell, of Danes Hill, Bengeo, Hertford.

WALKER.—On April 8th, 1907, at Quetta, Baluchistan, the wife of Captain Norman Dunbar Walker, R.A.M.C., of a daughter. By cable.

DEATHS.

CROKER.—On April 1st, at Suva, Fiji, Edward Ussher Croker M.R.C.S., L.R.C.P., second son of the late Surgeon-Major A. Croker, aged 32 years.

LEWIS.—April 8th, at Kingscliffe, Northamptonshire, of pneumonia, Thomas White Lewis, M.D. Univ. Dub., second son of the late J. M. Aylward Lewis, J.P., of Ballinagar, co. Galway, and Mrs. Lewis, 42, Morehampton Road, Dublin, aged 32 years.

STRANGE.—On February 28th, at his residence, 2, Belsize Avenue, Hampstead, William Heath Strange, M.D., C.M., aged 69. "With Christ."

WAKLEY.—On April 5th, 1907, at 5, Queen's Gate, S.W., Thomas Henry Wakley, F.R.C.S. Eng., Joint Editor of *The Lancet*, eldest son of the late Thomas Wakley, M.P., aged 86 years.

DIARY FOR THE WEEK.

TUESDAY.

MEDICO-LEGAL SOCIETY, 22, Albemarle Street, W., 8.30 p.m.—Professor Harvey Littlejohn: (1) Three Cases of Fatal Poisoning by Strychnine. (2) A Fatal Case of Poisoning by Bichromate of Potassium. Dr. Scott Tebb: A Case of Poisoning by Oxalic Acid.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W.—(Meeting postponed).

THERAPEUTICAL SOCIETY, The Apothecaries' Hall, Blackfriars, E.C., 4.30 p.m.—Papers:—Dr. George Oliver: Some Notes on the Control of Hypernormal Blood Pressure. Dr. James Burnet: The Decline of Prescription Writing. Some of Its Dangers and Ultimate Results.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—Papers:—Mr. Jaffrey, F.R.C.S.: A Case of Ulcerative Colitis Treated by Operation, under the care of Dr. Latham and Mr. Jaffrey. Dr. Leonard G. Guthrie: Some Nervous Affections of Childhood.

FRIDAY.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN, 11, Chandos Street, Cavendish Square, W., 5 p.m.—Clinical Evening. Exhibition of Cases; followed by [illegible]. Patients in attendance at 4.30 p.m.

POST-GRADUATE COURSES AND LECTURES.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 5 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear. Lectures at 5.15 p.m. each day will be given as follows:—Monday, Observations on Treatment; Tuesday, Retention of Urine; Wednesday, Some Forms of Pneumonia; Thursday, The Fundus Oculi in Health and Disease (with lantern slides).

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the clinics and demonstrations for next week. Monday, 9 a.m., Surgical, 2.30 p.m.; Medical, Throat, Nose and Ear, *X* Rays. Tuesday, 10.30 a.m., Medical, 2.30 p.m., Operations; Surgical and Gynaecological. Wednesday, 2.30 p.m., Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynaecological Operations; Medical, Surgical, *X* Rays. 3 p.m., Medical (In-patient). Friday, 9.30 a.m., Surgical: 2.30 p.m., Operations, Medical, Eye. 3 p.m., Medical (In-patients).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following arrangements have been made for next week.—Daily, 2 p.m., Medical and Surgical Clinics, *X* Rays. 2.30 p.m.: Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. Tuesday and Thursday, 2.30 p.m., Skin Diseases. Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose and Ear. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday, 2.30 p.m.: Diseases of Women.

BOOKS, ETC., RECEIVED.

Jena: G. Fischer, 1907:
Die Bakteriologie in der Augenheilkunde. Von Dr. T. Axenfeld. M. 12.
Das Dysenterietoxin. Von D. R. Doerr. M. 2 50.

The Third Huxley Lecture. Delivered before the Medical School of Charing Cross Hospital. By Lord Lister, F.R.S., F.R.C.S. London: Harrison and Sons. 1907.

Grundzüge der Psychiatrie. Von Dr. F. C. R. Eschle. Berlin and Wien: Urban and Schwarzenberg. 1907. M.8.

Tuberculose Humaine et Tuberculoses Animales. De leur unicité par le Dr. G. Batier. Paris: F. Alcan. 1907. Fr. 6.

Makers of Modern Medicine. By J. J. Walsh, M.D., Ph.D., LL.D. New York: Fordham University Press. 1907. 2 dols.

The Roentgen Rays in Medical Work. By D. Walsh, M.D. Edin. Part I. The Electrical Apparatus. By H. Lewis Jones, M.D., F.R.C.P. Part II.: Medical and Surgical. By the Author. Fourth Edition. London: Baillière, Tindall and Cox. 1907. 15s.

Paraffin in Surgery. By W. H. Luckett, B.S., M.D., and F. J. Horn, M.D. New York: The Surgery Publishing Company. 1907. 2 dols.

The Psychic Riddle. By J. K. Funk, M.D., LL.D. New York and London: Funk and Wagnalls Co. 1907. 1 dol.

Elements of Physics for Medical Students. By F. J. M. Page, B.Sc., F.I.C. London: Cassell and Co., Limited. 1907. 5s.

Lehmann's Medizin. Handatlanten. Band XXXV. Atlas and Grundriss der Embryologie der Wilbeltiere und des Menschen. Von Dr. A. Gurwitsch. München: J. F. Lehmann. 1907. M.12.

Ties and their Treatment. By H. Meige and E. Feindel. Translated and edited by S. A. K. Wilson, M.A., M.B., B.Sc. London: S. Appleton. 1907. 9s.

State of Rhode Island and Providence Plantations. Special Bulletin of the State Board of Health. Sanitary Legislation in the United States enacted during 1906. Compiled by C. V. Chapin, M.D. Providence: E. L. Freeman Co. 1906.

Paris: G. Steinheil, 1907:—
Traité de Médecine Opératoire et de Thérapeutique Chirurgicale. Publié sous la direction de P. Berger et H. Hartmann. Les Autoplasties, Lèvres, Joues, Oreilles, Tronc, Membres. Par Ch. Nélaton et L. Ombrédanne. Fr 10.
Précis de Pathologie Interne. Par Balthazard, Cestan, H. Claude, Macaigne, Nicolas, et Verger. Tome I, II, III, and IV. Fr. 28 les quatre volumes.

Manual of Clinical Chemistry. By A. E. Austin, A.B., M.D. Boston and London: D. C. Heath and Co. 1907. 5s.

Gall Stones and Diseases of the Bile Ducts. By J. Bland-Sutton, F.R.C.S. London: J. Nisbet and Co., Limited. 1907. 3s. 6d.

Lehrbuch der inneren Medizin. Herausgegeben von Dr. J. v. Mering. Vierte Auflage, Erste und zweite Abteilung. Jena: G. Fischer. 1906-7. M.12.50 per volume.

The Nervous System of Vertebrates. By J. B. Johnston, Ph.D. London: J. Murray. 1907. 15s.

Plague Prevention in Nagpur City and District. By Major A. Buchanan, I.M.S. Allahabad: Pioneer Press. 1907.

The Royal University of Ireland: Examination Papers, 1906. A Supplement to the University Calendar for 1907. Dublin: Ponsonby and Gibbs. 1907.

Catholic Churchmen and Science. By J. J. Walsh, M.D., Ph.D., LL.D. Philadelphia: The Dolphin Press. 1906. 1 dol.

Textbook of Psychiatry. A Psychological Study of Insanity. By Dr. E. Mendel. Translation edited by W. C. Krauss, M.D. Philadelphia: F. A. Davis Co. 1907. 2 dols.

La Pleurésie purulente aiguë de l'Enfant. Traitement Chirurgical Simplifié. Par Dr. P. Vignard et G. Monod. Paris et Lyon: A. Maloine. 1907. Fr. 2.50.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
APRIL.	
12 FRIDAY ...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch*, St. Peter's Hall, Belsize Square, N.W., 4.30 p.m. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Conjoint Meeting with Wimbledon and District Medical Society, Worple Hall, Wimbledon, 9 p.m.
13 SATURDAY ...	
14 Sunday ...	
15 MONDAY ...	
16 TUESDAY ...	
17 WEDNESDAY	CENTRAL COUNCIL, Board Room of the Metropolitan Asylums Board, Victoria Embankment, 2 p.m. ALTRINCHAM DIVISION, *Lancashire and Cheshire Branch*, Greenbank Hotel, Northwich, 5 p.m.; Dinner, 6.45 p.m. CENTRAL DIVISION, *Birmingham Branch* Special and General Meeting Medical Institute, 3.30 p.m. RICHMOND DIVISION, *Metropolitan Counties Branch*, Royal Hospital, Richmond, 8.30 p.m.; Ophthalmic Cases, 8 p.m. WESTMINSTER DIVISION, *Metropolitan Counties Branch*, St. James's Vestry Hall, 195, Piccadilly, 8.30 p.m.
18 THURSDAY ...	CITY DIVISION, *Metropolitan Counties Branch*, Conjoint Meeting with Walthamstow Division, Brooke House, Upper Clapton, 8.30 p.m. LEIGH DIVISION, *Lancashire and Cheshire Branch*, Co-operative Offices, Ellesmere Street, Leigh, 8.30 p.m.
19 FRIDAY ...	WEST SOMERSET BRANCH, Taunton and Somerset Hospital, 3.30 p.m.
20 SATURDAY ...	
21 Sunday ...	
22 MONDAY ...	

Date.	Meetings to be Held.
APRIL *(Continued).*	
23 TUESDAY ...	
24 WEDNESDAY	BATH AND BRISTOL BRANCH, Bath. LANCASHIRE AND CHESHIRE BRANCH, Branch Council Meeting, Liverpool Medical Institution.
25 THURSDAY ...	STAFFORDSHIRE BRANCH, Victoria Hotel, Wolverhampton, 5.25 p.m.: Dinner, 7 p.m. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Town Hall, Wandsworth, 3.30 p.m.
26 FRIDAY ...	
27 SATURDAY ...	ULSTER BRANCH, Derry.
28 Sunday ...	
29 MONDAY ...	
30 TUESDAY ...	
MAY.	
1 WEDNESDAY	
2 THURSDAY ...	
3 FRIDAY ...	
4 SATURDAY ...	
5 Sunday ...	
6 MONDAY ...	
7 TUESDAY ...	LONDON: Organization Committee, 11 a.m.
8 WEDNESDAY	
9 THURSDAY ...	WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
10 FRIDAY ...	DUNDEE BRANCH, Annual Meeting, Royal Infirmary, Dundee, 3.30 p.m., Clinical Meeting, 4 p.m.; Dinner, Royal Hotel, Dundee, 6 p.m. HAMPSTEAD DIVISION, *Metropolitan Counties Branch*.
11 SATURDAY ...	

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 20TH, 1907.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

ANNUAL REPRESENTATIVE MEETING AT EXETER.

SATURDAY, JULY 27TH, AND FOLLOWING DAYS.

NOTICES OF MOTION.

THE following notices of motion have been received for discussion by the Annual Representative Meeting of the Association, to be held at Exeter, July 27th, 1907, and following days.

ASSOCIATION REGULATIONS.

ALTERATIONS PROPOSED BY THE COUNCIL OF THE ASSOCIATION.

A.—*PROPOSED AMENDMENTS OF BY-LAWS.*

1. Representation of the Services on the Council.

That By-law 23 be amended to read as follows:

The Council shall come into office on the first day of the Annual Meeting, and shall be composed of the Officers and ex-Officer named as Members of the Council, *ex officio*, in Article XXXVIII of the foregoing Regulations, together with the Members duly elected or appointed by the Branches and other bodies authorized by the By-laws to elect or appoint Members of the Council, and of Members annually co-opted by the Council in manner hereinafter provided. The Council may also elect, if it think fit, at any of its meetings all or any one of the following, namely: One medical officer on the active or retired list of each of the following services—the Royal Navy Medical Service, the Royal Army Medical Service, and the Indian Medical Service, provided that in each case such medical officer shall not have retired from the active list more than five years previously.

2. Mode of Election of Members of Council by Branches.

That By-law 25 be amended to read as follows:

The elective Members of Council shall be elected by voting papers sent to each elector by post. Candidates may be nominated by any Division of a Branch or by such number of members as the rules of the Branch may prescribe. Nominations shall be sent, in writing, to the Secretary of the Branch on or before an appointed day, of which not less than fourteen days' notice shall have been given by him in the BRITISH MEDICAL JOURNAL. The names of all candidates so nominated shall be placed in a list which it shall be the duty of the Secretary to circulate to every member of the Branch.

In any case in which Branches are grouped for representation on the Council, the above provisions shall be carried out as though the Branches so grouped formed one Branch, and it shall be the duty of the Secretary of the Branch having the largest membership to carry out the requirements of the By-law.

3. Naval and Military Committee.

That By-law 41, paragraph 5, be amended by the omission of the last sentence—namely, "Such Committee to include the Representative Members of these Services who are on the Council."

The By-law as amended to read as follows:

A Royal Naval and Military Committee, not exceeding nine in number (three to form a quorum) shall be appointed by the Council, to which shall be referred all matters relating to the Royal Navy Medical Service, the Army Medical Service, the Indian Medical Service, and the Medical Organization of the Auxiliary Forces.

4. Irish Committee.

That By-law 41 (12) be amended to read as follows:

An Irish Committee, consisting of the Irish members of the Central Council, one Secretary from each Irish Branch, one member elected by each Branch, who in the case of the Leinster and Ulster Branches shall be a member not resident in Dublin or Belfast, and not more than three members co-opted by the Committee to represent districts which are not otherwise represented thereon. If the Secretary of any Branch be also a member of the Central Council, the said Branch shall have power to elect an additional member of the Committee. It shall have a Secretary, resident in Ireland, and shall meet at such place and time as the Committee may itself direct, and shall report to the Council on any matters specially concerning Ireland.

B.—*PROPOSED AMENDMENT OF ARTICLES.*

Arrears of Subscription.

By the Council of the Association:

That the necessary steps be taken in due course to amend Article VIII as follows:

Insert in the last line but three, between the words "given" and "previous," the words "one calendar month's," and delete the words "on or before the 1st December in the current year."

Alterations Proposed by Divisions and Branches.

Order of Business of Annual Representative Meeting.

By the Kensington Division (Metropolitan Counties Branch):

To amend By-law 20 to read as follows:

The first daily session . . . . . Annual General Meeting. The Chairman shall be elected for a period of three years, and the first business of the session shall be (when necessary) to elect the Chairman of Representative Meetings and also one Vice-Chairman. The next business shall be to determine the order in which the various matters placed upon the Agenda shall be taken.

There shall be two Vice-Chairmen, one of whom shall be elected each year to hold office for two years. The Chairman and the two Vice Chairmen, together with a member of the Central Council, and elected by the Council, and the General Secretary, shall form a permanent Committee to arrange the business of the Representative Meetings.

The minutes of each Representative Meeting shall be forwarded to the Council by the Chairman.

Amendment of By-law 21.

Voting at Representative Meetings.

By the Kensington Division (Metropolitan Counties Branch):

To amend By-law 21 to read as follows:

The Representative of a Division or of a group of Divisions shall be entitled to vote. Voting shall be by show of hands, but when the majority is not more than 5 to 2 the vote shall be taken by card (in which case . . . he represents), provided that a motion to that effect be made immediately and supported by one-third of the members present. In voting upon . . . such Meeting, the Representative shall be under obligation to vote in accordance with . . . Resolutions. And no alteration of a By-law shall be operative until, or unless, it have received the sanction of a majority of Divisions.

Amendment of Article XXVII.

Election of the Representatives of Divisions.

By the Manchester Division (Metropolitan Counties Branch):

To amend Article XXVII. to such a manner that 100 shall be substituted for 50 as the minimum membership of a constituency.

By direction of the Chairman of Representative Meetings,

J. Scott Whitaker, *Medical Secretary.*

April 17th.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

CAPE OF GOOD HOPE, EASTERN PROVINCE, BRANCH:

East London Division.

The usual ordinary meeting was held on March 8th in the Frere Hospital. There was a good attendance.

Complimentary Member.—Dr. Hagemann, of East London, a newcomer, was elected a complimentary member.

Oddfellows.—A letter from the Oddfellows was read in which they agreed to the terms of the British Medical Association.

Dispensing of Medicines for Friendly Societies.—The East London Chemists' Association wrote requesting the British Medical Association members to leave the question of the dispensing of medicines for friendly societies and for the Harbour Board in the hands of the Chemists' Association. It was decided to acknowledge the Chemists' Association's letters, and to say that this question had already been looked into and settled in favour of the doctors taking on the contract of dispensing prescriptions, and that it was too late now to reopen the matter.

Formation of an East London Branch.—It was agreed that the forming of an East London Branch should be taken in hand at once.

Reading of Papers by Members.—At Dr. Roulston's suggestion it was decided that members should be asked to read papers at the meetings. After some discussion it was decided that each member should read a paper in turn, though it would be optional for the member to decline. The order in which members should be called on was decided by ballot.

Medical Fees.—Dr. Nangle wished to discuss medical fees. As this subject had been thoroughly talked out, and the views expressed formulated into resolutions which were formally passed some time ago, he was asked to call a special meeting, at which only would it be possible constitutionally to make alterations in the rules.

Papers, etc. Dr. Tannock then read an illuminating paper on gastro-enteritis, after which every one present joined in a discussion. Dr. Hill Aitken demonstrated the use of the stereoscope in the study of anatomy. Mr. Thin (Edinburgh) had kindly sent out specimen plates of Waterston's *Stereoscopic Atlas of Anatomy.*

Votes of Thanks.—Votes of thanks were accorded Dr. Tannock and Dr. Hill Aitken. It seemed to be the idea of some of the members that a reference copy of such a work as the *Stereoscopic Atlas of Anatomy* might be subscribed for amongst the members.

Grahamstown Division.

A regular meeting of the Grahamstown Division was held at the Albany General Hospital at 8 p.m. on Friday, March 15th, Dr. R. C. Mullins in the chair.

Confirmation of Minutes. The minutes of the meeting of November 16th were read and confirmed.

Colonial Medical Council. Arising out of the minutes the Secretary read a *precis* of the replies of the candidates for election to the Colonial Medical Council to the circular letter addressed to them by this Division on the subject of "reciprocity." The *precis* was ordered to be preserved.

Letters. Letters were read from Dr. C. E. Jones-Phillipson excusing his absence; from Dr. Henry Davy, offering hospitality to our delegates at Exeter; and from Dr. G. Thornton on the subject for discussion by the Medical Section of the South African Medical Congress to be held at Pretoria.

Specimens. The following were shown: (i) Myeloid sarcoma of head of fibula removed by excision from a patient who refused amputation—by Dr. Drury; (ii) microscopic section of the above and also a slide showing "protozoa" from a case of carcinoma by Dr. Purvis; (iii) a massive fibromyoma removed by a total hysterectomy in a native woman—by Dr. Greathead; (iv) examples of

stereoscopic anatomical photographs—lent by Dr. C. J. Hill Aitken.

Discussion.—Dr. Drury introduced a discussion on enteric fever in South Africa, with special reference to its causation and prevention, in which Drs. Mullins, Bruce-Bays, Greenlees, Greathead, and FitzGerald joined. It was resolved:

That this meeting of the Grahamstown Division of the British Medical Association strongly urges upon the Town Council the erection of properly-constructed filter-beds at the outlet of the municipal water supply at Slaai Kraal, and the cleaning of the present series of pipes by frequent flushing.

Dairy Act.—It was also resolved:

That the Dairy Act be put in force in Grahamstown, so that the methods of milk delivery may be properly supervised.

The Secretary was instructed to forward the previous resolutions to the Town Clerk.

Notice of Motion.—Dr. J. Bruce-Bays gave notice of motion:

That this Division hereby records its disapproval of the scheme for the provision of free medical attendance to members of the cadet corps of the 1st City Volunteers, it being unnecessary as regards the cadets and unfair to the members of the medical profession.

Demonstration.—Dr. FitzGerald demonstrated the heat-retaining properties of the "thermo bottle," a double-coated aluminium bottle whose coats are separated by a vacuous space, and which, after twelve hours, contained water but little cooler than when it had been placed in the bottle.

DORSET AND WEST HANTS BRANCH:
Bournemouth Division.

A special meeting of this Division was held at Bournemouth, on April 10th, to consider the dispute between the medical men of Wimborne and the guardians of that district arising from the recent resignation of the Medical Officer to the Workhouse Infirmary at Wimborne.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Wimborne Practitioners and Guardians.—The Honorary Secretary gave a detailed account of the dispute, the main facts of which were: Dr. Auld had resigned the appointment in question on the grounds of inadequate salary, namely, £30 a year, the medical officer finding all drugs and surgical appliances. The medical men of Wimborne had unanimously agreed to support Dr. Auld in asking for £40 a year, the guardians to supply all drugs and appliances. The Board having advertised the appointment at £25 and all found, and having received no applications, raised their offer to £35 and all found. Mr. Charlton from outside the district applied and was appointed. The local medical men at a special meeting drafted a letter to the Board of Guardians refusing to recognize Mr. Charlton professionally, and pointed out that one of the testimonials in his favour was used without the sanction of the donor, who had given it some years previously for a totally different purpose. Dr. Auld was then closely questioned as to the nature of his duties when holding the post, and the following facts were elicited: That there were about 110 inmates in the infirmary, of whom some 30 were bed patients. That there was a considerable amount of clerical work to be performed. That the only extra payment was 10s. maximum for confinements. That there was an abnormally large number of vagrants passing through the district (4,000 or 5,000 a year), any of whom, when ill, he might be required to examine. The Honorary Secretary then read a letter from Mr. Parkinson, one of the guardians, expressing regret at his inability to be present. The letter further contained a short history of the dispute and urged the local medical men to accept the Board's last offer—namely, £35 and all found. The letter concluded by stating that it was not the usual policy of the Association to stand out for so small a sum as £5. Dr. Fawcett then gave an account of the work during the ten years he had held the post previous to Dr. Auld. The salary had at one time been only £20, the medical officer finding everything. He laid stress on the difficult position of the medical officer when the Board adopted a hostile attitude towards him. After considerable discussion the following resolutions were unanimously carried:

That this Division considers a minimum salary of £40 a year (exclusive of drugs and appliances) a reasonable one for the post of medical officer to the Workhouse Infirmary at Wimborne.

That the Division approves of the attitude of the medical men of Wimborne towards Mr. Charlton as expressed in their letter to the guardians of March 22nd.

That a copy of these resolutions be forwarded to every member of the Branch.

DUNDEE BRANCH.

An ordinary meeting of the Branch was held in the Students' Union, Dundee, on March 21st, at 8.30 p.m., Dr. G. C. Dickson (Carnoustie) in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed.

Medical Inspection of School Children.—It was resolved:

That, as a general rule, the actual inspection of the children should be carried out by general practitioners.

It was resolved:

That there should be a single officer appointed in each area to deal with the reports of the medical inspectors, and that, as a rule, the medical officer of health be that officer.

It was agreed that there was no evidence of teachers referring children to hospitals and not to their family medical attendants.

Evidence to be laid before the Royal Commission on the Relief of the Poor.—A communication was laid before the meeting from the Poor-law Subcommittee of the Scottish Committee. Dr. R. C. Buist submitted a statement as to the local organizations and on local defects in the medical treatment of the poor. It was resolved:

That Dr. Templeman lay this before the Commission.

Report of Hospitals Committee.—A letter was read from Dr. Fraser, Superintendent of Dundee Royal Infirmary, and it was resolved to remit the report to the Council with five members for consideration and to report to the Branch.

Report on the Ethical Aspects of Medical Consultation.—It was agreed to approve generally of this report.

Scale of Fees in Dundee.—The Council submitted a minimum scale. After a long discussion the Council was instructed to prepare a detailed and classified scale based on rental and to submit to the Branch for consideration.

Vote of Thanks.—The meeting closed with a vote of thanks to the Chairman.

EAST ANGLIAN BRANCH.

The spring meeting was held at Witham on Tuesday, April 9th. Luncheon was partaken of previous to the meeting at the White Hart Hotel. At 2.30 the sessional was commenced, Dr. Clough Waters, President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Communications.—S. W. Curl, M.D., M.R.C.P., Physician to the Essex and Colchester Hospital, read notes on a case of cerebellar tumour. The paper was discussed by the President and Dr. Nicholson. Penry Rowland, M.D., read a paper on some suggestions as to the causation of chronic disease. Dr. Curl showed a specimen of gangrenous laryngitis from a case of pernicious anaemia.

Tea.—Afternoon tea was kindly provided by Dr. Gimson.

EDINBURGH BRANCH:
Southern Division.

A meeting of the Division was held in the Oddfellows Hall, Forest Road, on Thursday, March 28th, 1907, at 8.15 p.m. Dr. Matheson was in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed.

Apologies for Absence.—Apologies for absence were intimated.

Voting by Divisions.—The letter from the General Secretary directing the attention of this Division to the resolutions of the Representative Meeting held at Oxford in 1904, referring to the manner of voting in Division meetings, was read.

Medical Inspection of School Children.—The question of medical inspection of school children was then considered, and, after discussion, the meeting unanimously negatived

the three clauses of Question 1, and an alternative to Clause C was moved and seconded in the following terms:

> That the medical inspection of school children before or at the time of their admission to a public elementary school should be made by the family doctor, and in the case of poor children whose families have no regular medical adviser the certificates should be granted by the dispensary or parish doctor.

This motion was unanimously agreed to.

Question 2 did not, therefore, require consideration. Question 3: No evidence as far as is known. Question 4: Discussion necessary.

Ethical Aspects of Medical Consultation.—The recommendations were unanimously approved as a whole, with the expressed opinion that the special class designated "consultants" should not engage in general practice.

Contract Medical Practice.—As this class of practice did not exist to any extent in the Division, the members present did not feel qualified to offer an opinion on the recommendations.

Constitution of Central Council.—A letter from the Executive Committee of the Ayrshire Division was submitted, referring to the scheme for the constitution of the Council of the British Medical Association. In view of Dr. Macdonald's letter in the SUPPLEMENT of January 26th discussion was delayed till after the revised draft of the Charter was placed in the hands of members.

Scottish Poor law Subcommittee.—The circular from the Poor-law Subcommittee (Scottish Committee) was next laid before the meeting, and the questions answered. The Secretary was instructed to send the answers to Dr. Moorhouse, Secretary of the Subcommittee.

Proposed Black List.—A proposal to have a Black List for the use of members of the Division was submitted, and on a motion being made it was unanimously approved of, and remitted to the Chairman and Secretary to take the necessary steps to secure the co-operation of the members of the Division.

Vote of Thanks.—The meeting was closed with a vote of thanks to the Chairman.

SOUTH-EASTERN COUNTIES DIVISION.

THE spring meeting was held in the King's Arms Hotel, Melrose, on the afternoon of Friday, April 5th, at 3 o'clock, Dr. YOUNG, Chairman, presiding.

Poor-law Subcommittee.—The information to be supplied to the Poor-law Subcommittee was considered. It was specially remarked that paupers as heads of households can get no official Poor-law relief until they become ill, so that the public health suffers, as the working man out of work can get no assistance until he becomes an invalid. The questions asked by the Subcommittee were answered as follows:

1. What local organizations have we for medical assistance of the poor (*a*) in hospital, (*b*) as out patients, (*c*) at home?

(*a*) Not as patients in hospital or as out patients. They are attended at home by the parochial medical officer and local nursing, such as the Melrose burgh nurse, the parish council paying two guineas annually to the Burgh Nursing Fund. The technical paupers are sufficiently provided for the poorhouse and at home. There are Jubilee nurses in some places. In Galashiels there are clubs. Free Gardeners, in other towns, Foresters, dispensaries in Kelso and Jedburgh. There are cottage hospitals, some places have night shelters.

(*b*) Official. Town council, sanitary authority, Poor Law, etc.

(*c*) Voluntary. Charities, hospitals, dispensaries, nursing societies, provident societies, clubs, etc.

2. Is there any section of the poor unprovided for by your local organizations and for whom public health suffers from inadequacy in the number or in the quality of the assistance provided?

Paupers as heads of households can get no official Poor-law relief until they become ill. In this case the public health suffers, as the working man out of work gets no assistance until he becomes an invalid.

3. Is there any co-operation between your local organizations or any overlapping, and is it possible and desirable to provide or extend such co-operation?

No co-operation or overlapping in many cases from private charities and local organizations. It would be desirable to provide and extend co-operation.

4. Would it be possible or desirable to hand over to one authority the whole work and duty of the medical assistance of the poor?

The Poor-law authorities must provide medical assistance to paupers; charitable associations should be under one head, and should work in co-operation with the Poor-law authorities.

The Secretary was instructed to forward the necessary information to the Subcommittee.

Notification of Phthisis.—The SECRETARY read a communication from Dr. Logan Turner, Honorary Secretary of the Edinburgh Branch, in regard to the notification of tuberculous phthisis and measles. Dr. HAMILTON proposed, and Dr. JEFFREY seconded:

> That until local authorities can provide facilities for the treatment of phthisical cases, notification be not adopted.

This was carried, Dr. CARLYLE JOHNSTONE dissenting.

Notification of Measles.—The notification of measles was unanimously approved.

Ethical Aspects of Medical Consultation.—The ethical aspects of medical consultation were considered. Dr. HAMILTON moved:

> That we cordially approve of all the recommendations, and that it would be very desirable to have a distinct class specially designated as "consultants" as defined in the report of the Ethical Committee.

This was seconded by Dr. JOHN JEFFREY and unanimously agreed to.

Medical Inspection of Schools.—In regard to the medical inspection of schools, Dr. CARLYLE JOHNSTONE proposed that the medical officer be specially appointed. Dr. HAMILTON seconded. This was agreed to. Dr. CALVERT moved that the medical officer should be selected from among those only who have had the experience of general practice. Dr. JEFFREY seconded, and the motion was carried by 5 to 1. There was a strong feeling against the medical officers of health being given this particular work, as they appeared to the members quite unfitted by experience and practice for such work.

Annual Report.—The annual report showed a balance of £1 7s. 9d. to the credit of the Division.

LANCASHIRE AND CHESHIRE AND NORTH WALES BRANCHES.

A JOINT clinical meeting of the above Branches was held at Chester, by the kind permission of the Chairman of the Management Committee, in the Grosvenor Museum, at 2 o'clock p.m., on Wednesday, April 10th. Sir JAMES BARR, President of the Lancashire and Cheshire Branch, presided, and was assisted by Dr. RICHARD JONES, D.P.H., President of the North Wales Branch. The meeting lasted the whole afternoon. Many papers were read, cases shown, and lantern and other demonstrations given.

Communications.—The following is a list of the communications made: Dr. JOHN HILL ABRAM (Liverpool) and Dr. LEWIS OWEN (Holyhead): Cleido-cranial dysostosis. Dr. F. W. TAYLOR (Blackburn): A case of Graves's disease with unilateral exophthalmos. Dr. BRAFSHAW (Liverpool): Spontaneous fracture of urinary calculi. Dr. S. ENGLISH (Manchester): A peculiar vesical calculus removed by suprapubic cystotomy. Mr. JOHN BARK (Liverpool): Two cases of Heath's modified mastoid operation. Mr. RUSHTON PARKER (Liverpool): A case of arterial dilatation of the left side of the head, attended by epilepsy and right hemiparesis, relieved by ligature of the left common carotid artery. Mr. J. HOWELL EVANS (London): Median cysts of the neck of congenital origin. Dr. KARL GROSSMANN (Liverpool): An instrument for the subjective and objective examination of astigmatism. Dr. W. B. WARRINGTON (Liverpool): Pyopneumothorax in a boy of 7. Dr. BUCHANAN (Liverpool): Pulmonary syphilis. Mr. G. P. NEWHOLT (Liverpool): Extroversion of the mucous membrane of the intestine. Dr. GORDON GILLIES (Liverpool): Various conditions of athyroidism; a congenitally diseased heart. Dr. JOHN HAY (Liverpool): The action of the digitalis group on the heart in cases of mitral stenosis. Dr. HUBERT ARMSTRONG (Liverpool): Some notes on infant feeding. Dr. BARENDT (Liverpool): The treatment of pneumonia. Dr. FRANCIS W. BAILEY (Liverpool): An open method of ether administration. Dr. T. ARTHUR HELME (Manchester): A truss for movable kidney. The following communications, owing to lack of time, were taken as read. Sir WILLIAM SINCLAIR (Manchester): "Iona" laminaria tents. Mr. R. H. MILLS ROBERTS,

C.M.G. (Llanberis): Amputation of both upper extremities. Dr. T. Arthur Helme (Manchester): Tubal pregnancy with intraperitoneal abortion. Mr. W. Thelwall Thomas: Three cases of pulmonary cavities treated by operation; carcinoma and tubercle of colon removed by operation. Mr. Craig Dun (Liverpool): Appendicitis in children. Mr. Edgar Stevenson (Liverpool): Cases of sympathetic ophthalmitis and intraocular suppuration successfully treated. Mr. A. H. Burgess (Manchester): Three cases of hydronephrosis. Dr. Charles Macalister (Liverpool): Pseudo bulbar paralysis and rheumatoid arthritis. Mr. Larkin (Liverpool): Sprain of the wrist, with an illustrative case.

LANCASHIRE AND CHESHIRE BRANCH:

Altrincham Division.

SPECIAL NOTICES.

Scale of Fees.

The Committee begs to inform members residing in Sale (and neighbourhood) that a public meeting of the profession, at Brooklands, on February 13th, unanimously adopted the scale of minimum fees of the Manchester Medico-Ethical Association. (See British Medical Journal of October 20th, 1906, p. 1072.)

School Certificates.

The Cheshire County Council has agreed to pay direct to medical practitioners a fee for certificates of cause of absence from school in necessitous cases. The fee is 2s. 6d. if a special visit has to be made, or 1s. if the practitioner is already in attendance.

Any medical man may demand a blank form of certificate from the school attendance officer, and accounts can be sent in to Chester.

(By order),
T. W. H. Garstang, Honorary Secretary.

April 8th.

Blackburn Division.

A meeting of the Blackburn Division was held at the Old Bull Hotel, Blackburn, on Tuesday, March 26th, Dr. Ballantyne, President, in the chair.

President's Address.—Dr. Ballantyne read his presidential address, entitled, Some Points in Infantile Mortality. An interesting discussion followed, in which Drs. Nash, Barr, Cunliffe, Macklin, Garstang, and Greenwood took part. Dr. Ballantyne replied.

Central Council.—Dr. Garstang then spoke in favour of his own candidature for the Central Council as a Representative from the Lancashire and Cheshire Branch. It was moved by Dr. Ballantyne, seconded by Dr. Macklin,

That in the opinion of this meeting Dr. Garstang is a fit and proper candidate for the above position.

Moved by Dr. Aitken, seconded by Dr. Stephenson,

That the Secretary be empowered to nominate Dr. Garstang in the name of this Division at the proper time.

Rochdale Division.

The annual meeting was held in the Wellington Hotel, Rochdale, on April 11th. In the absence of the President through illness Dr. Brown of Bacup was voted to the chair.

Confirmation of Minutes.—The minutes of the last annual meeting were read and passed.

Annual Report.—The Secretary read the annual report as follows: Membership on December 31st, 1905, 50; new member, 1; losses through change of address, 2; net membership on December 31st, 1906, 49. The balance-sheet showed a balance to the good of £4 9s. 4d.

Election of Officers.—The following officers were unanimously elected for the ensuing year: *President*, Dr. John Brown (Bacup); *Vice-President*, Dr. Hitchin (Heywood); *Secretary*, James Melvin (Rochdale); *Representative on Branch Council*, Dr. Sharp (Todmorden).

Executive Committee.—It was moved by Dr. Brown and seconded by Dr. Kerr that the following, along with the officers, form the Executive Committee: Drs. Bateman, Henry, Menzies, and Standing, all of Rochdale.

Alteration of Rules.—It was moved by Dr. Kerr and seconded by Dr. Welsh that Rule 11 shall read: "Ordinary meetings of the Division shall be held as the Executive Committee may determine, and not less than three days' notice," and so on. This was passed unanimously.

METROPOLITAN COUNTIES BRANCH:

Lambeth Division.

The Chairman (Dr. Robert Capes) of the Lambeth Division entertained the members of the Division at a special meeting held at the Lambeth Carlton Club, Coldharbour Lane, S.W., on Wednesday, March 27th, at 9 p.m.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Provident Dispensaries.—A discussion took place on the report of the Medico-Political Committee of the British Medical Association on provident dispensaries. The three following questions were put to the meeting and voted upon, but the majority of those present appeared to take little or no interest in the matter, and only a few voted thereon:

1. Should the Branch Council be requested to endeavour to secure the modification of provident dispensaries within the area of the B anch, in accordance with the principles put forward in the report of the Medico-Political Committee?

This question was put to the meeting with the result that two voted in favour and three against the proposal.

2. Should the Division approach those of its members who are on the staff of provident dispensaries to gain their help in modifying their organization, in accordance with the accepted principles?

One voted for the motion and three against it.

3. Should the Division encourage practitioners resident in its area to join in the work of provident dispensaries which have been modified in accordance with the accepted principles?

Four voted for this motion, and three against it.

Paper.—Mr. H. Betham Robinson, Surgeon to St. Thomas's Hospital, then read his paper on acute intestinal obstruction, which was listened to with great interest by those present, and an instructive discussion followed, in which Drs. Keats, Leftwich, Hickley, Clatworthy, Hyslop, and Capes joined.

Votes of Thanks.—A vote of thanks to Mr. Robinson for his paper was proposed by Dr. James Scott and seconded by Dr. Denning; this was put to the meeting and carried unanimously. A vote of thanks to Dr. Capes for his hospitality was then proposed by Dr. Esler and seconded by Dr. Herbert Taylor, and carried.

Wandsworth Division.

An ordinary meeting of this Division was held on Thursday, March 21st, at Battersea Town Hall, at 8 45 p.m. Dr. Llewellyn Williams, Chairman of the Division, presided.

Confirmation of Minutes.—The minutes of the previous meeting were read and signed as correct.

Paper.—Mr. Walter G. Spencer, Surgeon to the Westminster Hospital, read a most interesting paper on Fatal Haemorrhages from Mucous and Septic Surfaces, and a good discussion followed in which Mr. Charles Ryall, Drs. Dunville Roe, Richards, Gyton, Allan Swallow, and the Chairman took part.

Vote of Thanks.—A hearty vote of thanks to Messrs. Spencer and Ryall, proposed by Dr. Gyton and seconded by Dr. Martin, was carried with acclamation.

SOUTH-EASTERN BRANCH:

Brighton Division.

An ordinary meeting was held at the Dispensary on March 20th, 1907.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Medical Inspection of School Children.—The question of medical inspection of school children was carefully considered. It was not found possible to give a categorical answer to the several questions propounded by the Medico-Political Committee. Finally, the following resolution was carried by 9 votes to 6:

That the local educational authority in conjunction with the medical officer of health should appoint medical officers as inspectors from among the medical practitioners of the district.

Ethical Aspects of Medical Consultation.—The memorandum on the ethical aspects of medical consultation was then discussed, and met with general approval. No resolution was, however, put to the meeting in reference to this subject.

Annual Meeting of South-Eastern Branch.—It was decided that the annual meeting of the South-Eastern Branch should take place at Brighton on Wednesday, June 19th.

SOUTH-EASTERN OF IRELAND BRANCH.

An ordinary meeting of this Branch was held at the Adelphi Hotel, Waterford, on April 3rd, at 2 p.m. Dr. WILLIAM SHEE, President, occupied the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Letters of Apology.—Five members sent apologies.

Medical Etiquette.—A letter was read from Dr. Edward A. Rawson (Barrowville), Carlow Division, recounting his experience of a breach of medical etiquette, which was referred to the Ethical Committee of the Branch which is to meet at Kilkenny on May 1st next at 4.45 p.m., Dr. Rawson in the meantime being requested to comply with the ethical rules for procedure in these cases.

Model Draft Rules.—The model draft rules as recommended by the Council of the Association having been discussed *seriatim*, it was proposed by Dr. MORRIS and seconded by Dr. CAREY that they be adopted as the rules of the Branch to regulate the procedure of the Branch in ethical matters relating thereto with the following alterations, namely:—"That the following be Rule I instead of that which appears in the Model Draft Rules, to wit: That all questions of medical ethics arising within the area of the Branch shall be dealt with by the Branch Council or by the Ethical Committee thereof. That the following words be deleted from Rule VII—'referred to by a Division,' and that the word 'seven' be inserted before the word 'days' in Rules IV and VI."

Nomination of Office-bearers.—Dr. P. Murphy was unanimously nominated president-elect for the year 1907-8, and all other office-bearers were renominated.

Resolution of Sympathy.—A resolution of sympathy and condolence with the family of the late Dr. Robert Stirling (Stoneyford), proposed by the PRESIDENT and seconded by Dr. QUIRKE was passed *nem. con.*

Paper.—Dr. MARY STRANGMAN read notes of a case of morphinomania of absorbing interest successfully cured by the McBride treatment, which received the highest praise.

Hours of Meeting.—It was resolved that in future Branch meetings be held in Waterford at 3.30 p.m. This brought a very successful meeting to a close.

Luncheon.—Previous to meeting the members had lunched together.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE spring meeting of the Branch was held at the General Hospital, Swansea, on Thursday, April 11th, Dr. EVAN N. DAVIES, President, in the chair.

Confirmation of Minutes.—The minutes of the autumn meeting were read and adopted.

Contract Practice Fund.—A report of the condition of the Contract Practice Fund was read and a resolution passed thereon.

Ebbw Vale Dispute.—Mr. GREER reported on the position of affairs in the Ebbw Vale dispute.

Communications.—Dr. R. B. ELSWORTH read a communication on a case of tumour of the cauda equina in a woman who had been treated for sciatica, neuritis, sacrolinc and a variety of other diseases, with no benefit. The nature and site of the lesion was diagnosed, and it was subsequently removed successfully, complete relief of the pain being at once experienced. In the discussion which followed, Messrs. LYNN THOMAS, WM. SHEEN, W. L. GRIFFITHS and J. POWELL spoke. Mr. J. LYNN THOMAS, C.B., read a paper on the treatment of complications and sequelæ of gastric and duodenal ulcers, in which he dwelt upon the great value of immediate emptying of the stomach after perforation by means of the stomach pump, the location from abdominal palpation, and from anything given by the mouth, and, once the diagnosis is made, of morphine to stop peristalsis. By this means operation may possibly be avoided, but in any case the patient's condition may be so improved, that when the surgeon is called in he finds a state of affairs suitable for operation. The paper was discussed by Messrs. WILLIAM SHEEN, T. D. GRIFFITHS, and W. L. GRIFFITHS. Dr. E. LE CRONIER LANCASTER read a paper on the Treatment of Certain Forms of Tuberculosis by the Estimation of the Opsonic Index, and the Injection of Tuberculin. Owing to the shortness of time at his disposal the paper was only read in part. The theory of opsonins was described with the method used for obtaining the opsonic index. The necessity of experience in the preparation of a suitable emulsion of the tubercle bacilli, and of the personal equation in the counting of the bacilli in the polymorphonuclear leucocytes, in order to obtain consistent results, was dwelt upon. By means of charts the effect of carefully regulated doses of tuberculin was illustrated. Experience showed that the doses formerly employed were too large, and that better results were obtained with greatly decreased amounts of the tuberculin. Dr. EDGAR DAVIES spoke of the good results that had been obtained in sycosis and acne by estimation of the opsonic index and injections. Dr. LATIMER mentioned a case of early phthisis successfully treated by Dr. Lancaster, after which the latter replied and quoted other cases.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

SPECIAL REPRESENTATIVE MEETING.

The Special Representative Meeting will take place in London on Wednesday, May 29th.

Particulars of place and hour of meeting will be published in due course.

BY ORDER OF THE COUNCIL.

April 11th, 1907. GUY ELLISTON, *General Secretary.*

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IMPORTANT NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—The sixth ordinary meeting of the session will be held at the Museum, Bath, on Wednesday evening, April 24th, at 8 o'clock, Dr. D. S. Davies, President, in the chair. The following communications are expected:—W. P. Kennedy, M.D.: Liver Abscess. R. Waterhouse, M.D.: Notes of a Case of Osteitis Deformans. Dr. Paul Franze (Nauheim) will demonstrate the Use of the Orthodiagraph in X-ray Work.—W. M. BEAUMONT and NEWMAN NEILD, Honorary Secretaries.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in Weymouth on Wednesday, May 22nd. Members wishing to read papers, exhibit cases, or show pathological specimens, should communicate at once with the Honorary Secretary, JAMES DAVISON, "Streateplace," Bath Road, Bournemouth.

DORSET AND WEST HANTS AND WEST SOMERSET BRANCHES.—Election of a representative of these grouped Branches on the Central Council. The nomination of candidates for the election must be made in accordance with By-law 29, and sent to me in writing on or before May 4th.—JAMES DAVISON, Honorary Secretary of the Dorset and West Hants Branch, "Streateplace," Bath Road, Bournemouth.

DUNDEE BRANCH.—The annual meeting of this Branch will be held in the Royal Infirmary, Dundee, on Friday, May 10th, at 1.30 p.m., and will be followed by a clinical meeting at 3 o'clock. Dinner will be served in the Royal Hotel, Dundee, at 6 o'clock. Members of other Branches are invited to be present and to take part in the meeting.—R. C. BUIST, M.D., 196, Nethergate, Dundee; A. P. LOW, M.B., Bank House, Stirling Street, Dundee, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—Nomination of members of the Branch to serve on the *Council* of the Association. Nominations must be sent to Mr. Larkin, 54, Rodney Street, Liverpool, not later than May 1st, 1907.—T. ARTHUR HELME, F. CHARLES LARKIN, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—The annual meeting will be held at Altrincham on June 6th, when officers and committee will be elected for 1907-8. Every member is eligible for every office. (Under Rule 6, Drs. Joynson, Luckman, and Cooper are not eligible for the chair, having already served within three years.) Every member is entitled to make nominations. The Committee has decided that all nominations must be in writing, signed by a proposer and seconder, and must reach me by May 15th. Offices: (1) Chairman; (2) vice-chairman; (3) honorary secretary and treasurer; (4) representative at Representative Meetings; (5) two representatives on Branch Council; (6) six other members of Committee. (By order.)—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: MANCHESTER (CENTRAL) DIVISION.—A special meeting will be held at the Queen's Hotel, Manchester, on Thursday, April 25th, at 8.30 p.m. Agenda: The election for the Central Council. All candidates are invited to be present.—HAROLD CLIFFORD, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: WIGAN DIVISION.—A general meeting of the members of this Division will be held at Wigan on May 2nd at 8.30 p.m., to hear an address by Dr. T. W. H. Garstang in support of his candidature for a seat on the Central Council.—A. E. HODDER, Park Road, Wigan, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH. — *Nominations of Branch Officers.*—Pursuant to By-law 24, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 11th.—FRED. J. SMITH, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The annual general meeting of the Lambeth Division will be held at the Bethlem Royal Hospital on Thursday, May 9th, at 4 p.m. Agenda: (1) Minutes of the last meeting. (2) The election of chairman and officers for the ensuing session. The following names have been recommended by the Committee, but other names may be sent to the Secretary not later than May 6th:—Chairman: Maurice Craig, M.D. Vice-Chairman: W. Alexander Atkinson, M.D. Secretary: Herbert S. French, M.D. Representative of Representative Meeting: Robert Esler, M.D. Representative on Branch Council: Charles Sangster, M.R.C.S. Committee: Herbert Taylor, M.B.; J. V. C. Denning, L.R.C.P.I.; A. M. Hickley, L.R.C.P.; Robert Capes, L.R.C.P.; J. W. J. Oswald, M.D.; D. Oliver Kerr, M.B. (3) W. H. B. Stoddart, M.D. (Bethlem Royal Hospital), will read a paper on Early Symptoms of Mental Disorder. It is hoped that as many members of the Division, with their medical friends, as possible will attend.—W. ALEXANDER ATKINSON, M.D., Honorary Secretary Lambeth Division, 216, Camberwell New Road, S.E.

METROPOLITAN COUNTIES BRANCH: ST. PANCRAS AND ISLINGTON DIVISION.—A meeting of this Division will be held in the Board Room of the Temperance Hospital, Hampstead Road, on Thursday, April 25th, at 4 p.m. Agenda: (1) The nomination of candidates for offices in the Branch. (2) A demonstration of interesting cases will be given by Sir William Collins, F.R.C.S., M.P. Tea at 4 p.m. A meeting of the Executive Committee will be held if required.—WALTER H. YELD, 15, Gloucester Road, N.W.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION.—An additional ordinary meeting will be held at the Town Hall, Wandsworth, on Thursday, April 25th, 1907, at 3 30 p.m. Agenda: (1) Minutes; (2) correspondence; (3) questions; (4) nomination by the Division of candidates as officers of the Branch and Representatives of the Branch on the Central Council for 1907-8; (5) references *re* (*a*) medical inspection of school children, and (*b*) the ethical aspects of medical consultation (see SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 16th, 1907); (6) consideration of revised Charter (see SUPPLEMENT this week). On or before May 1st proposals for officers and members of the Executive Committee of the Division for 1907-8 must be sent in to E. ROWLAND FOTHERGILL, Honorary Secretary, Torquay House, Southfields, S.W.

SOUTH-EASTERN OF IRELAND BRANCH.—An ordinary council meeting will be held at Victoria Hall, Kilkenny, on May 1st, at 4.45 p.m. Agenda: (1) Minutes; (2) letters of apology; (3) to elect president-elect and other office-bearers; (4) correspondence; (5) to receive annual report of Branch; (6) investigation of ethical case; (7) to discuss the ethical aspects of medical consultation; (8) Dr. Laffan's motions referred; (9) discussion on pneumonia; (10) any other business.—J. QUIRKE, Honorary Secretary, Piltown.

STAFFORDSHIRE BRANCH.—The third general meeting of the session will be held at the Victoria Hotel, Wolverhampton, on Thursday, April 25th. The President, Dr. Charles Read, will take the chair at 5.25 p.m. Business: (1) Minutes of the last general meeting. (2) Correspondence. (3) Exhibition of living cases. (4) Paper: Angina Pectoris—Notes on a case with comments, F. J. Geoghegan, M.D. (5) Exhibition of pathological specimens, etc. Dinner at 7 p.m., charge 5s. A meeting of the Council will be held immediately before the general meeting, for the election of members.—G. PETGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

ULSTER BRANCH.—The spring meeting of the Branch will be held in Derry, on Saturday, April 27th.—CECIL SHAW, M.D., Honorary Secretary, 18, College Square East, Belfast.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.

The Kilburn Provident Medical Institute.

A Correction.

SIR,—On page 183 of the SUPPLEMENT for April 6th there appears a report on certain provident dispensaries. This report is inaccurate as regards the Kilburn Provident Medical Institute; and as no correction appears in the JOURNAL for April 13th, I would be glad if you would insert the following:

Under headings 2 and (*e*), instead of "In all. 13,111 attendances at 1s. 3d. per attendance," read, "In all, 23,111 attendances at 8½d. per attendance."

Under headings 2 and (*b*), strike out, "Chronic invalids are removed from the books"; and see instead V (*b*) and VI (*a*) on this point.

Under headings 2 and (*c*) insert opposite "man and wife and one child," "1s. 4d. a month."

Under headings 2 and (*e*), for "£190 18s. 11d," read "£190 17s. 11d."

Under headings V and (*e*) (p. 185), in the percentage table, for "Medical Staff 60 9" read "61 9"; and for "Administration 25 1" read "24.1." Also, instead of "1s. 3d. at Kilburn," read "8d. at Kilburn."

Under headings V and (*g*), instead of "15 vice-presidents," read "14" and instead of "12 clergymen," read "10."

Finally, let me protest against your hasty action in publishing a report which had not been submitted to the Division concerned.

When, on April 13th, the reputed author of this report did move its adoption at a meeting of the Division, the production was referred back to the subcommittee for revision. And, when one out of the six institutions reported on can find so many mistakes, revision is surely necessary.—I am, etc.

W. WINSLOW HALL, M.D.,
Chairman of the Kilburn Provident Medical Institute.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: JOHN L. BARRINGTON, Fleet Surgeon, to the *Espiègle*, additional, for Dartmouth College, April 20th; JOHN J. DENNIS, M.D., Fleet Surgeon, to Haulbowline Hospital, temporary, April 17th; WILLIAM J. CODRINGTON, Staff Surgeon, to Haslar Hospital, May 5th; HUGH L. NORRIS, Staff Surgeon, to the *Isis*, May 5th; PERCIVAL K. NIX, Staff Surgeon to the *Vivid*, April 25th; ROBERT J. MACKEOWN, Staff Surgeon, to the *President*, for three months' course at West London Hospital, April 29th; JOHN E. COAD, Fleet Surgeon, and NOEL H. HARRIS, Surgeon, to the *Drake*, on recommissioning, May 7th; FREDERICK A. CAPPS, Staff Surgeon, to the *Black Prince*, April 30th; ROBERT F. MACMAHON, Surgeon, to the *Pembroke*, May 7th; WILLIAM A. WHITTINGHAM, Fleet Surgeon, and FRANK H. NIMMO, Staff Surgeon, to the *Essex*, on recommissioning, April 30th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL E. ECKERSLEY, M.B., and Lieutenant-Colonel C. L. JOSLING have been appointed Medical Officers in the London recruiting area.

Lieutenant-Colonel D. WARDROP, M.B., has been appointed Administrative Medical Officer, Woolwich, vice Lieutenant-Colonel W. Babtie, V.C., C.M.G., M.B.

EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

AN officer R.A.M.C., home from South Africa, went abroad December, 1903, will exchange with Field Officer to complete tour. Address "Empire," Holt and Co., 3, Whitehall Place.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL W. A. LEE (Madras) is permitted to retire, from March 12th. He was appointed Assistant-Surgeon, September 30th, 1878, and became Surgeon-Lieutenant-Colonel, September 30th, 1896.

Lieutenant A. F. HAYDEN, M.B., is appointed Specialist in Operative Surgery in the 2nd (Rawal Pindi) Division.

Lieutenant-Colonel H. B. MATHIAS, D.S.O., Royal Army Medical Corps, has been appointed to officiate as Secretary to the Principal Medical Officer of His Majesty's Forces in India, vice Captain E. B. Knox, M.D., R.A.M.C., granted combined leave.

ARMY MEDICAL RESERVE

SURGEON-LIEUTENANT J. C. HERBERTSON, M.D., to be Surgeon-Captain, March 13th.

ORDER OF ST. JOHN OF JERUSALEM.

The undermentioned have been appointed Knights of Grace of the Order of St. John of Jerusalem: Lieutenant-Colonel GEORGE FREDERICK MCWILLIAMS, M.D. (from Honorary Associate), WILLIAM ALLAN JAMIESON, Esq., M.D. (from Esquire).

THE ROYAL MILITIA OF JERSEY.

SURGEON-MAJOR W. FALLA, M.D., Principal Medical Officer, to be Surgeon-Lieutenant-Colonel, February 6th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

LIEUTENANT-COLONEL J. TURTON, the Sussex and Kent Bearer Company, Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer Sussex and Kent Volunteer Infantry Brigade, is granted the honorary rank of Colonel, February 18th.

Captain D. CHRISTIE, M.B., Glasgow Companies, Scottish Command, resigns his commission, March 14th.

DAVID SHANNON, M.B., to be Lieutenant, March 15th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

JOHN AITKEN, M.D., to be Surgeon-Lieutenant in the 1st Ayrshire and Galloway, March 16th.

VOLUNTEER RIFLES.

ALFRED H. COWMAN to be Surgeon-Lieutenant in the 1st Volunteer Battalion the Royal Sussex Regiment, February 23rd.

Surgeon-Captain J. E. MOLSON, M.B., from the 2nd Volunteer Battalion the Essex Regiment, to be Surgeon-Captain 2nd Volunteer Battalion the Royal Sussex Regiment, February 12th.

CHARLES S. CALDER to be Surgeon-Lieutenant in the 4th Volunteer Battalion the Queen's (Royal West Surrey Regiment), February 15th.

Surgeon-Captain J. G. MARTIN, M.B., 2nd Volunteer Battalion the King's (Liverpool Regiment), on ceasing to do duty with the Liverpool Bearer Company, Royal Army Medical Corps (Volunteers), is allowed to retain his present rank, February 1st.

Surgeon-Captain W. S. HANCOCK, M.B., 8th (Scottish) Volunteer Battalion the King's (Liverpool Regiment), resigns his commission, February 20th.

Surgeon-Major J. MILL, M.B., 5th Volunteer Battalion the Royal Scots Fusiliers Regiment, to be Surgeon-Lieutenant-Colonel, February 23rd.

Surgeon-Captain C. Y. PITWITT, 1st Volunteer Battalion the Royal Warwickshire Regiment, resigns his commission, March 6th.

Surgeon-Lieutenant-Colonel H. G. THOMSON, 1st Volunteer Battalion the London (Royal Fusiliers) City of London Regiment), Brigade Surgeon, Lieutenant-Colonel, Senior Medical Officer, Royal Fusilier (City of London) Infantry Brigade, is granted the honorary rank of Surgeon-Colonel, March 30th.

Surgeon-Major and Honorary Surgeon-Lieutenant-Colonel W. NETTLESHIP, 2nd Volunteer Battalion the Duke of Cornwall's Light Infantry, to be Surgeon-Lieutenant-Colonel, July 3rd, 1906.

Surgeon-Lieutenant W. J. RAE, 10th Middlesex (St. Giles's and St. George's Bloomsbury) Volunteer Rifle Corps, to be Surgeon-Captain, March 6th.

CHANGES OF STATIONS.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during March last:—

	FROM.	TO.
Colonel G. D. N. Lorke ...	Naini Tal	Lucknow.
,, J. C. Harvard ...	Darjeeling	Calcutta.
Lieut.-Col. C. F. Mc Nerce	Cork	Cheltenham
D. Wardrop, M.B.	Netley	Woolwich
,, W. Babtie, V.C., C.M.G., M.B. ...	Woolwich	London.
J. R. Todd, M.B. ...	Ramichel	Agra.
C. J. Cowlan, M.D.	Falmouth	Cork
S. Woodcock, C.M.G.	W. Coast, India	Bombay
,, S. M. Steuart, M.V.O.	London Dist.	India.
H. Marsh	Poona ...	Kirkee
T. E. Wynter	Meerut	Bareilly
F. C. O'Donnel ...	Jhansi	Sangor
W. C. Beevor, C.M.G., M.B.	Kohat	Quetta
J. R. Evatt	Ahmedabad	Meerut
C. J. Hale, D.S.O.	Kirkee ...	Karachi
W. B. Day, M.B.	Devonport ...	Crowhill.
S. F. Wise	Belfast ...	Holywood
R. C. Anderson, M.B.	Rawal Pindi ...	Dublin
L. F. Neal	Golden Hill ...	Barossa Spore
E. O'Donnell, M.B.	W. Coast, India	Ahmedabad
[illegible], M.B.	W. Coast, India	Poona
[illegible]	[illegible]	Bhadl
[illegible]	[illegible] ...	Peshawar
[illegible]	London Dist.	Ind.
[illegible]	Athlone	Bobal
[illegible]	Harrismith ...	Aldershot
[illegible]	Edinburgh ...	Fort George
[illegible]	[illegible]	Barossa
[illegible]	[illegible]	Cawnpore
[illegible]	[illegible]	Rawalpindi
[illegible]	[illegible]	Meerut
[illegible]	[illegible]	Aldershot
[illegible]	[illegible] ...	Malone
[illegible], M.B.	[illegible] ...	Shorncliffe
[illegible], M.B.	[illegible]	Londonderry
[illegible]	[illegible]	Curragh
[illegible]	N. Coast, India	Meerut

	FROM	TO
Major H. N. Dunn, M.B.	—	Ambala.
,, S. H. Withers, M.B.	Chaubuttia ...	York.
,, H. A. Hinge	Kirkee	Poona
,, R. C. Lewis	Meerut	Bareilly.
,, C. T. Samman	E. Command...	Dover
,, J. B. Anderson	Chakrata ...	Meerut.
,, M. Boyle M.B.	Shwebo ...	Bareilly.
Captain G. T. K. Maurice	Lucknow ...	Muttra.
,, M. Swabey	—	Chester.
,, J. G. Berne	Jubbulpore ...	Colaba.
,, F. J. C. Heffernan	Muttra ...	Lucknow.
,, A. E. Thorp	Devonport ...	Tregantle.
,, H. Herrick	—	York.
,, A. R. O'Flaherty ...	E. Command.	Woolwich.
,, N. J. C. Rutherford, M.B. ...	Dover	R.A.M. Coll.
,, H. E. M. Douglas, V.C., D.S.O.	Simla	Lucknow.
,, A. A. Seeds, M.D.	Wynberg, Cape Colony ...	Aldershot.
,, R. L. Argles	Jullundur ...	Multan.
,, E. G. Ford, M.B. ...	Lichfield ...	Lincoln.
,, L. M. Purser, M.B.	Sheerness ...	Woolwich.
,, J. M. Cuthbert, M.B. ...	Maryhill ...	Glencorse
,, J. Dorgan, M.B. ...	Tipperary ...	Fermoy.
,, J. P. J. Murphy, M.B.	Nowshera ...	W. Command.
,, L. L. G. Thorpe	Aden	Jubbulpore.
,, P. C. Douglass ...	S. Command ...	Devonport.
,, C. E. Fleming, M.B. ...	Dublin	Templemore.
,, P. S. Lelean	Lucknow ...	Bareilly.
,, T. B. Unwin, M.B. ...	Dublin	Cork.
,, J. C. Kennedy, M.B. ...	Colchester ...	London Dist.
,, A. R. C. Parsons ...	Bulford ...	Devizes.
,, W. M. B. Sparkes ...	Sandown ...	Portsmouth
,, S. B. Smith, M.B. ...	Kasauli ...	Ambala.
,, E. W. Powell	Queenstown ...	Bombay.
,, H. A. Bransbury	Malta	S. Command.
,, M. W. Falkner	Lucknow ...	Fatehgarh.
,, R. V. Cowey	Colchester ...	Mill Hill.
,, J. S. Bostock, M.B. ...	S. Command ...	Portland.
,, A. H. McN. Mitchell ...	Darjeeling ...	W. Command.
,, J. B. Clarke, M.B. ...	York	Bradford.
,, R. C. Wilson, M.B. ...	Egypt	Dublin.
,, P. G. Hyde, M.B.	Bareilly ...	,,
,, M. C. Beatty, M.B. ...	Colaba	Deolalee.
,, H. Rogers, M.B. ...	Lahore	Multan.
,, W. Davis	Landour ...	Bareilly.
,, W. J. S. Harvey ...	Brecon	West Africa.
,, H. W. Long	Jullundur ...	Ambala.
Lieutenant H. Harding, M.B.	Naini Tal ...	Lucknow.
,, M. D. Ahern	—	Rawal Pindi.
,, G. S. C. Hayes ...	Ambala ...	Jullundur.
,, R. C. Hallowes, M.B.	Multan	Lahore.
,, H. St. M. Carter, M.D.	Potchefstroom	Pretoria.
,, H. O. N. Beadnell	Punjab	Rawal Pindi.
,, G. H. Richard ...	Pretoria ...	Standerton.
,, J. St. A. Maughan	Dalhousie ...	Lahore
,, A. A. McNeight, M.B. ...	Mhow	Kamptee.
,, C. D. M. Holbrooke ...	Calcutta ...	Agra.
,, C. W. O'Brien	Karachi ...	Hyderabad.
,, W. G. Maydon	Ferozepore ...	Peshawar.
,, C. G. Browne ...	S. Command ...	Worcester.
,, T. Scatchard ...	Egypt	Cyprus.
,, E. L. Moss	Malta	Crete.
,, T. B. Moriarty ...	Fort Lahore ...	Ambala.
,, M. B. H. Ritchie ...	Dinapore ...	Calcutta.
,, A. E. F. Hastings ...	Crete	Malta.
,, J. S. Dunne	Lucknow ...	Allahabad.
,, G. W. W. Ware, M.B.	Belgaum ...	Kirkee.
,, W. C. Nimmo ...	Peshawar ...	Nowshera.
,, M. Keane	Lebong	Calcutta.
,, H. E. Priestley ...	—	Netley
,, A. D. O'Carroll, M.B.	Aldershot ...	Lucknow.
,, A. A. Sutcliff, M.B.	—	Agra.
,, G. De la Cour	E. L. Moss	Lucknow.
,, W. Egan, M.B.	—	Rawal Pindi
,, F. Forrest	M. B. Moriarty ...	Fyzabad.
,, A. S. Williams	M. B. H. Ritchie ...	Bareilly.
,, C. R. M. Morris, M.B. ...	E. Com., India	Lucknow.
,, E. M. W. Paine ...	E. Com., India	Fyzabad.
,, F. D. G. Howell	W. C. Nimmo ...	Meerut.
,, W. H. Gillatt, M.B.	M. Keane	Gibraltar
,, M. C. Dill, M.B.	E. Com., India	Meerut.
,, J. B. G. Mullican	Preston ...	Malta.
,, W. C. Smales	Mullingar ...	Winchester
,, A. H. Bond	Netley ...	Millbank
,, T. W. O. Sexton	London Dist	Hilsea.
,, A. C. Amy, M.B.	Netley ...	Norwich.
,, A. H. Heslop, M.B.	Ewshot	Aldershot.
,, T. B. Lethbury	Edinburgh ...	Egypt Army
,, D. M. Corbett, M.B.	Curragh	Dublin
,, M. J. Loonan	Netley	Birmingham
,, O. C. P. Cooke	Colchester ...	Norwich.
,, A. M. Benett	Dover	Chichester.
,, C. F. A. Bracken	Queenstown	Bere Island.
,, F. I. Bostock	Tidworth	Trowbridge.
,, T. A. Bennett, M.B.	Netley ...	Gosport
,, W. H. Hall, M.B.	Ewshot	Aldershot.
,, C. W. Bowle	Edinburgh ...	Egypt Army
,, T. V. Browne	Curragh	Dublin
,, J. D. Cuthbertson, M.B.	Netley	Birmingham
,, [illegible]	Millbank	Gosport
,, [illegible], M.B.	Aldershot	London Dist
		Deepcut
		Ewshot.
	E. Command	Colchester
	Dublin ...	Curragh
	...	,,
	S. Command ...	Devonport
	Portsmouth	Bulford
	Cork	Limerick
		Fermoy.
	S. Command	Portsmouth
	York	Lichfield
	W. Command	Colchester
	Dublin	Cork
	S. Command	Portsmouth
		Tidworth
	E. Command	Colchester.

Lieutenant-Colonel F. W. H. D. Harris, retired pay, has relinquished the medical charge of troops at Bodmin.

Captain H. Fox, M.B., R.A.M.C. (Militia), has been placed in medical charge of Liverpool.

Captain S. C. Barge, R.A.M.C. (Militia), has assumed medical charge at Lancaster.

Vital Statistics.

VITAL STATISTICS OF LONDON DURING THE FIRST QUARTER OF 1907.

IN the accompanying table will be found summarized the vital statistics of the metropolitan boroughs and of the City of London, based upon the Registrar-General's returns for the first, or winter, quarter of the year. The mortality figures in the table relate to the deaths of persons actually belonging to the various boroughs, and are the result of a complete system of distribution of the deaths in institutions among the several boroughs in which the deceased persons had previously resided. The 31,708 births registered in London during the three months under notice were equal to an annual rate of 26 7 per 1.000 of the population, estimated at 4,758,218 persons in the middle of the year; in the corresponding quarters of the three preceding years the rates had been 28 7, 28 5, and 27.8 per 1 000, the average rate for the first quarters of the ten years 1897–1906 being 29.9 per 1,000. The birth-rates last quarter ranged from 13 4 in the City of London, 15 6 in Hampstead, 17 1 in the City of Westminster, 18.1 in Stoke Newington, and 19 4 in Kensington to 31.5 in St. Marylebone, 31.6 in Shoreditch, 32.8 in Bermondsey, 34.4 in Bethnal Green, 34.9 in Finsbury, and 35.4 in Stepney.

The 21,968 deaths of persons belonging to London registered during last quarter were equal to an annual rate of 18.5 per 1,000, against 17.8, 16.2, and 16 0 per 1.000 in the three preceding first quarters; in the corresponding periods of the ten preceding years the rate averaged 19.0 per 1,000. The death-rate last quarter ranged from 12 1 in Hampstead, 14.2 in Stoke Newington, 14.6 in Wandsworth, 15.4 in Lewisham, 16.1 in Battersea, and 16 2 in Greenwich, to 21 9 in Holborn, in Bethnal Green and in Southwark, 23.5 in Finsbury, 23.7 in Bermondsey, and 25.5 in Shoreditch.

During last quarter 1,571 deaths were referred to the principal infectious diseases; of these, 461 resulted from measles, 104 from scarlet fever, 222 from diphtheria, 534 from whooping-cough, 56 from enteric fever, 1 from ill-defined pyrexia, and 193 from diarrhoea, but not any from small-pox or from typhus. These 1,571 deaths were equal to an annual rate of 1.32 per 1 000, against an average rate of 1.79 per 1,000 in the first quarters of the ten preceding years. The lowest death-rates last quarter from these principal infectious diseases were 0 20 in the City of London, 0.48 in Chelsea, 0 50 in St. Marylebone, 0.61 in St. Pancras, and 0.68 in the City of Westminster; the highest rates were 1.93 in Stepney, 2 05 in Bethnal Green, 2 06 in Bermondsey, 2 44 in Woolwich, and 3 02 in Shoreditch. Measles showed the highest proportional fatality in Shoreditch, Bethnal Green, Stepney, Camberwell, Greenwich, and Woolwich; scarlet fever in Shoreditch, Bethnal Green, Southwark, Bermondsey, and Camberwell; diphtheria in Fulham, Shoreditch, Stepney, Poplar, and Deptford; whooping-cough in Paddington, Fulham, Finsbury, Shoreditch, Southwark, and Lewisham; "fever" in Hampstead, Hackney, the City of London, Shoreditch, Stepney, and Bermondsey; and diarrhoea in Fulham, Hackney, Holborn, Stepney, and Southwark.

During the three months under notice 2,056 deaths from phthisis were registered, equal to an annual rate of 1.74 per 1,000; the rates in the corresponding quarters of the three preceding years were 1.77, 1.55, and 1.51 per 1000 respectively. Among the various boroughs the lowest death-rates from phthisis last quarter were recorded in Kensington, Hampstead, Stoke Newington, Wandsworth, and Lewisham; and the highest rates in St. Pancras, Holborn, Finsbury, the City of London, Shoreditch, Bethnal Green, Southwark, and Bermondsey.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births was equal to 132 per 1,000, against 133, 114, and 115 in the corresponding periods of the three preceding years; in the first quarters of the ten years 1897–190 the rate averaged 128 per 1.000. The lowest rates of infant mortality last quarter were recorded in St. Marylebone, Hampstead, St. Pancras, Holborn, Poplar, and Greenwich; and the highest rates in Kensington, Fulham, Islington, Shoreditch, Southwark, Bermondsey, and Camberwell.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,979 births and 5,196 deaths were registered during the week ending Saturday last, April 13th. The annual rate of mortality in these towns, which had been 16 8, 17.7, and 17.9 per 1,000 in the three preceding weeks, declined again to 16.9 per 1 000 last week. The rates in the several towns ranged from 6 3 in Handsworth (Staffs.), 8 1 in Hornsey, 8.5 in Leyton, 9.1 in Willesden, 9.8 in Burton-on-Trent, 10.2 in Barrow-in-Furness, 10.4 in West Hartlepool, and 11.0 in Smethwick, to 22.3 in Preston, 22 6 in West Bromwich, 22 9 in Grimsby, 23 1 in Salford and in Huddersfield, 24 8 in South Shields, 27 1 in Burnley, and 30 8 in Birkenhead. In London the rate of mortality was 16.4 per 1,000, while it averaged 17.1 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.8 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.6 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3.7 in South Shields, 3.8 in Nottingham, 3 9 in Great Yarmouth and in St Helens, 4 1 in Newport (Mon.), 4 3 in Bolton, 4 6 in Middlesbrough, 7 5 in West Bromwich, and 11 0 in Birkenhead. Measles caused a death-rate of 2 4 in Nottingham and in Wigan, 2.5 in Portsmouth, 3 4 in Bolton, 4 1 in Newport (Mon.), 6 8 in West Bromwich, and 8 8 in Birkenhead; scarlet fever of 1.5 in Grimsby; whooping-cough of 1.4 in Willesden and in West Ham, 1 8 in Bury, 2.0 in Burnley, 2.3 in East Ham, and 2 6 in Middlesbrough; and "fever" of 1.4 in South Shields and 2 0 in Great Yarmouth. The mortality from diphtheria and from diarrhoea showed no marked excess in any of the large towns. No fatal case of small-pox was registered last week in any of these towns, and there were no small-pox patients under treatment in the Metropolitan Asylums Hospitals. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2,734, 2,657, and 2,666 at the end of the three preceding weeks, had declined again to 2,637 at the end of last week; 296 new cases were admitted during the week, against 312, 330, and 352 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, April 13th, 1,037 births and 700 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 20 6, 20.3, and 19.4 per 1,000 in the three preceding weeks, rose again to 20 2 per 1,000 last week, and was 3 3 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 14 1 in Paisley and 15 2 in Aberdeen, to 21.4 in Dundee and 23 6 in Glasgow. The death-rate from the principal infectious diseases averaged 3 6 per 1,000 in these towns, the highest rates being recorded in Glasgow and Greenock. The 383 deaths registered in Glasgow included 4 which were referred to measles, 4 to diphtheria, 45 to whooping-cough, and 30 to cerebro-spinal meningitis. Three fatal cases of measles, 5 of whooping-cough, and 8 of cerebro-spinal meningitis were recorded in Edinburgh; 2 of cerebro-spinal meningitis in Dundee and 3 in Leith; 3 of whooping-cough in Leith; and 1 of typhus, 1 of cerebro-spinal meningitis and 2 of "fever" in Greenock.

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during the First Quarter of 1907.

Boroughs.	Estimated Population middle of 1907.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Ill-defined Pyrexia.	Diarrhoea.	Phthisis.	Deaths of Children Under 1 Year of Age to 1,000 Births.
				Births.	Deaths.	Principal Infectious Diseases.												
COUNTY OF LONDON	4,758,218	31,708	21,968	26.7	18.5	1.32	1,571	—	461	104	222	534	—	56	1	193	2,056	132
Paddington	149,909	791	645	21.2	17.3	1.12	42	—	2	5	4	25	—	2	—	4	51	126
Kensington	181,842	826	826	19.4	18.2	0.93	42	—	2	3	3	27	—	2	—	5	53	169
Hammersmith ...	122,337	800	569	26.2	18.3	1 02	31	—	10	3	7	8	—	1	—	2	49	139
Fulham	166,749	1,198	698	28.8	16 8	1.71	71	—	13	1	15	28	—	1	—	13	59	147
Chelsea	74,857	395	325	21.2	17.4	0.48	9	—	—	—	2	2	—	1	—	4	34	129
City of Westminster	172,219	732	760	17.1	17.7	0.68	29	—	2	5	9	4	—	2	—	7	72	141
St. Marylebone ...	127,718	1,003	632	31.5	19.8	0.50	16	—	—	3	4	6	—	1	—	2	60	92
Hampstead	91,137	354	276	15.6	12.1	0.71	16	—	2	2	3	5	—	2	—	2	23	99
St. Pancras	236,753	1,455	1,134	24.7	19.2	0.61	36	—	2	5	4	21	—	—	—	4	139	109
Islington	347,017	2,169	1,640	25 1	19.0	0.90	78	—	4	5	5	48	—	3	—	13	132	148
Stoke Newington ...	53,613	242	190	18 1	14.2	0.74	10	—	—	1	2	5	—	—	—	2	12	124
Hackney	232,993	1,500	1,044	25.8	18.0	1.55	90	—	19	4	12	35	—	6	—	14	92	140
Holborn	55,134	381	301	27.7	21 9	1.09	15	—	—	—	3	7	—	1	—	4	30	100
Finsbury	96,732	840	567	34.9	23.5	1.16	28	—	2	1	4	17	—	—	—	4	69	140
City of London ...	20,310	68	51	13.4	19.6	0.20	1	—	—	—	—	—	—	1	—	—	12	132
Shoreditch	115,662	911	734	31.6	25 5	3 02	87	—	40	5	9	26	—	3	—	4	72	179
Bethnal Green ...	130,831	1,123	715	34.4	21.9	2.05	67	—	31	6	7	19	—	—	—	4	90	131
Stepney	308,923	2,724	1,460	35.4	18.9	1.93	149	—	86	4	22	12	—	8	—	17	144	122
Poplar	171,086	1,325	802	31.1	18.8	1.38	59	—	23	4	14	8	—	3	—	7	70	105
Southwark	209,781	1,625	1,144	31.1	21 9	1 78	93	—	6	9	10	51	—	4	—	13	137	148
Bermondsey ...	128,263	1,049	758	32.8	23.7	2 05	66	—	22	11	5	20	—	3	—	5	76	154
Lambeth	318,638	2,252	1,485	28.4	18.7	1.07	85	—	9	6	13	40	—	2	—	15	144	128
Battersea	181,736	1,143	732	25.2	16.1	0 84	38	—	4	2	12	12	—	1	—	7	86	129
Wandsworth	281,419	1,732	1,025	24.7	14.6	0.90	63	—	11	2	14	22	—	1	—	13	76	111
Camberwell	277,059	1,680	1,282	24 3	18 6	1.88	130	—	55	10	8	44	—	2	—	11	105	134
Deptford	116,510	851	536	29.3	18.4	1 79	52	—	20	3	14	8	—	2	1	4	41	128
Greenwich	107,222	681	432	25.5	16.2	1 53	41	—	29	—	5	3	—	1	—	3	35	107
Lewisham	152,532	925	588	24.3	15.4	1 26	48	—	3	1	8	29	—	1	—	6	45	117
Woolwich	129,336	879	579	27.3	18.0	2.44	79	—	64	3	4	2	—	2	—	4	41	130

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, April 6th, 485 births and 467 deaths were registered in six of the principal Irish towns as against 624 births and 397 deaths in the preceding period. The annual death-rate in these towns, which had been 23.7, 24.0, and 21 4 per 1,000 in the three preceding weeks, fell to 20.1 per 1,000 in the week under notice, this figure being 2.2 per 1 000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 12.3 in Londonderry and 13 7 in Limerick, to 27.0 in Belfast and 28.3 in Dublin. The zymotic death-rate in the same six Irish towns averaged 1.3 per 1.000 or 0 4 per 1,000 higher than during the preceding period, the highest figure—2.0—being recorded in Dublin, while Limerick registered no death under this heading at all. The deaths in Belfast included 14 from cerebro-spinal fever and 6 returned as due to cerebro-spinal meningitis.

During the week ending Saturday, April 13th, 571 births and 436 deaths were registered in six of the principal Irish towns as against 485 births and 467 deaths in the preceding period. The annual death-rate in these towns, which had been 24.0, 21.4, and 20 1 per 1 000 in the three preceding weeks, rose to 22 6 per 1,000 in the week under notice, this figure being 5.7 per 1.000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 16.0 in Londonderry and 17.5 in Waterford to 26.6 in Dublin and 30 1 in Limerick. The zymotic death-rate in the same six Irish towns averaged 1 8 per 1,000, or 0.5 per 1,000 higher than during the preceding period, the highest figure—4 1—being recorded in Cork, while Londonderry and Waterford registered no deaths under this heading at all. In Belfast 16 deaths were returned as due to cerebro-spinal fever, and 7 ascribed to cerebro-spinal meningitis.

Vacancies and Appointments.

VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

ALNWICK INFIRMARY.—House-Surgeon. Salary, £120 per annum.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BRADFORD ROYAL INFIRMARY.—(1) House-Physician. Salary, £10 per annum. (2) House-Surgeon. Salary, £100 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Third House-Surgeon. Salary, £50 per annum.

BRISTOL: COSSHAM MEMORIAL HOSPITAL, Kingswood.—House-Surgeon and Resident Medical Officer. Salary, £100 per annum.

BRISTOL GENERAL HOSPITAL.—(1) House-Surgeon; (2) House-Physician; (3) Casualty House-Surgeon; (4) Assistant House-Physician. Salary at the rate of £60 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £80 per annum, increasing to £90.

CARDIFF INFIRMARY.—House-Surgeon. Salary at the rate of £60 per annum.

CHELTENHAM GENERAL HOSPITAL.—(1) Surgeon in charge of Branch Dispensary. (2) House-Physician. Salary, £90 and £70 per annum respectively.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY. Junior House Surgeon. Salary, £60 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

EDINBURGH PROVINCIAL COMMITTEE FOR THE TRAINING OF TEACHERS. Lecturer on School Hygiene and Medical Officer. Salary, £400 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—Assistant Surgeon.

GLOUCESTER: GENERAL INFIRMARY.—Assistant Surgeon.

HULL ROYAL INFIRMARY.—Honorary Surgeon.

INVERNESS DISTRICT ASYLUM.—Junior Assistant Medical Officer. Salary, £200 per annum.

JOHANNESBURG HOSPITAL.—Two House Physicians and one House-Surgeon. Salary at the rate of £300 per annum.

LEEDS GENERAL INFIRMARY.—(1) House-Physician. (2) Ophthalmic House-Surgeon.

LINCOLN COUNTY HOSPITAL.—Junior Male House-Surgeon. Honorarium £— for six months.

LONDON THROAT HOSPITAL, Great Portland Street, W.—Third Assistant.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon and Anæsthetist. Salary, £50 per annum.

MANCHESTER ARCOATS HOSPITAL.—Honorary Surgeon.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Assistant Medical Officer for [illegible]. Salary, £200 per annum.

MIDDLESEX ROYAL EAR AND THROAT HOSPITAL.—Resident Surgeon [illegible] Salary at the rate of £— per annum.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, [illegible] W.C.—Assistant Ophthalmic Surgeon.

NEWCASTLE-UPON-TYNE: ROYAL VICTORIA INFIRMARY.—[illegible] for the Bacteriological Department. Salary, £100 per annum.

NORTHWOOD: MOUNT VERNON HOSPITAL FOR DISEASES OF THE CHEST.—Assistant Resident Medical Officer. Honorarium £— per annum.

ROYAL EAR HOSPITAL, Dean Street, W.—House-Surgeon. Honorarium at the rate of £— per annum.

ROYAL FREE MASON'S OPHTHALMIC HOSPITAL, 194, Great Portland Street, W.C.—House-Surgeon. Honorarium, £— for six months.

ST. MARY'S HOSPITAL FOR SICK CHILDREN, Paddington, E.—Resident Medical Officer. Salary at the rate of £— per annum.

ST. PETER'S HOSPITAL FOR STONE, Henrietta Street, W.C.—Junior House-Surgeon. Salary at the rate of £50 per annum.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W. Clinical Assistants.

SOCIETY OF APOTHECARIES OF LONDON.—Examiners in Medicine, Surgery, Midwifery, Anatomy, and Materia Medica.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £6 per annum.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House-Surgeon. Salary, £75 per annum.

SWANSEA UNION.—Assistant Medical Officer of the Workhouse. Salary, £200 per annum.

THROAT HOSPITAL, Golden Square, W.—House-Surgeon. Salary, £50 per annum.

TOTTENHAM HOSPITAL.—(1) House-Surgeon. (2) House-Physician. (3) Junior House-Surgeon. (4) Junior House-Physician. Salaries at the rate of £75 per annum for (1) and (2), and £40 for (3) and (4).

WAKEFIELD: WEST RIDING ASYLUM.—Pathologist and Assistant Medical Officer. Salary £140 per annum.

WARRINGTON COUNTY BOROUGH.—Medical Officer of Health. Salary, £450 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £60 per annum.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W.—Honorary Assistant Physician.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Ophthalmic Surgeon.

WEST RIDING ASYLUM, Menston, near Leeds.—Fourth Assistant Medical Officer. Salary, £150 per annum, rising to £180.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—(1) House-Surgeon. Salary, £65 per annum, rising to £75. (2) Honorary Physician-in-Ordinary.

CERTIFYING FACTORY SURGEON.—The Chief Inspector of Factories announces vacancies at Fillongley co. Warwick, and Ystalyfera co. Glamorgan.

APPOINTMENTS.

CARMICHAEL, Norman S., M.B., Ch.B., Resident Medical Officer to the Edinburgh Royal Hospital for Sick Children.

DE ZILWA, L. A. E., M.D., B.Sc. Lond., Third Physician to the General Hospital, Colombo, and Lecturer in Physiology at the Ceylon Medical College.

ELDER, Edward A., M.A., B.Sc., M.B., Ch.B.Edin., Senior House-Surgeon at the Blackburn and East Lancashire Infirmary.

EVANS, H. B., L.R.C.P. and S.I., District Medical Officer of the Tamworth Union.

GALLETLY, J., M.B., C.M.Aberd., D.P.H.Camb., Certifying Factory Surgeon for the Bourne District, co. Lincoln.

GOMES, Sidney, F.R.C.S., Clinical Assistant to the Chelsea Hospital for Women.

HAMILTON, D'Arcy Irvine, L.A.H.Dub., District Medical Officer of the Parish of Portsmouth.

HANLEY, A. H., F.R.C.S.I., C.M.G., Principal Medical Officer of Sierra Leone, vice W. T. Prout, M.B., C.M.Edin., C.M.G., retired.

HIBBERT, C. H., L.R.C.P. and S.Edin., District Medical Officer of the Glossop Union.

HOSFORD, Alfred Stroud, Senior Resident Medical Officer to the Royal Hospital for Diseases of the Chest, City Road, E.C.

HUGHES, E. B. H., L.R.C.P. and S.Edin., L.F.P.S.Glasg., Resident Medical Officer of the Newport (Mon.) Union Workhouse.

JEANS, H. W., M.B., Ch.B.Aberd., Honorary Radiographer to the Royal Portsmouth Hospital.

JEPHCOTT, Charles, M.B., B.C., M.R.C.S., Visiting Surgeon to Chester General Infirmary.

LOCKETT, Geo. Vernon, M.B., F.R.C.S., Honorary Consulting Surgeon to the Public General Hospital, Kingston, Jamaica.

MARTIN, Antony Alexander, M.D.Lond., B.S., M.R.C.S., D.P.H., Honorary Assistant Medical Officer to the Princess Alice Memorial Hospital, Eastbourne.

MATTHEWSON, George D., M.B., Ch.B., Resident Medical Officer to the Royal Edinburgh Hospital for Sick Children.

MAYOU, Stephen, F.R.C.S., Assistant Surgeon to the Central London Ophthalmic Hospital.

MELLER, J. S., M.R.C.S., L.R.C.P.Lond., Certifying Factory Surgeon for the Tetbury District, co. Gloucester.

MICKLETHWAIT, C. W., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Nantwich Union.

O'KEEFFE, L., L.R.C.P.Edin., L.R.C.S.I., Medical Officer of Health, Pontey Urban District.

PARSONS, C. G., L.R.C.P.Lond., M.R.C.S.Eng., Medical Officer of the Workhouse of the Westbury and Whorwellsdown Union.

PEREIRA, J. A. Wenceslaus, M.D.Brux., M.R.C.S.Eng., L.R.C.P.Lond., Honorary Surgeon to the Exeter Dispensary.

PLOWRIGHT, Charles T. Mac L., B.A. Honours, M.B., B.C.Camb., M.R.C.S., L.R.C.P., Honorary Surgeon to the West Norfolk and Lynn Hospital, vice Mr. H. C. Allinson, resigned.

POLLITT-WALL, Joseph M., B.A.Cantab., M.R.C.S., L.R.C.P.Lond., Junior House-Surgeon at the Blackburn and East Lancashire Infirmary.

QUIRKE, J., L.R.C.P. and S.Irel., Certifying Factory Surgeon for the Inistioge District, co. Kilkenny.

RAINE, M. H., M.D.Lond., Medical Officer of Health, Shoeburyness Urban District.

RICHARDS, S. H., M.B., C.M., Clinical Assistant to the Chelsea Hospital for Women.

ROBERTS, C. H. D., B.A.Oxon., M.B.Lond., Medical Officer of Health to the Gee Hall Rural District.

ROBERTS, George A., F.R.C.S.Eng., Assistant Surgeon to the Royal Albert Hospital, Devonport.

SCOTT, Sydney R., M.S.Lond., Aural Surgeon to the Evelina Hospital for Sick Children.

SHARP, P., M.R.C.S., L.R.C.P., Medical Officer of Health, Claypole Rural District.

SHORLAND, E. T., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Westbury and Whorswellsdown Union.

TRIPP, B. H. H., M.R.C.S., L.R.C.P.Lond., Certifying Factory Surgeon for the Southwold District, co. Suffolk.

WILKIE, D. P. D., M.B., Ch.B., Resident Medical Officer to the Royal Edinburgh Hospital for Sick Children.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

GARDNER-MEDWIN.—On April 10th, at 22, High Street, Wavertree, Liverpool, the wife of Frank M. Gardner-Medwin, of a son.

WARREN.—On Tuesday, April 16th, at 15, Lansdowne Crescent, W., the wife of Alfred C. Warren, M.A., M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

PIRIE—DUNCAN.—At the West Parish Church, Aberdeen, on April 10th, by Rev. Andrew Brown, M.A., William Rattray Pirie, M.A., M.B., CM., Aberdeen, to Margaret Duncan, M.B., Ch.B.Aberd.

SWIFT—HUGO.—At the Dutch Reformed Church, Capetown, on April 11th, by the Rev. Louis Hugo, D.R., Chaplain, Robben Island, father of the bride, Eric W. D. Swift, M.B.Lond., Bloemfontein, son of Harry Swift, Esq., Sheffield, England, to Elizabeth C. Hugo.

WHITE-MASON.—April 12th, at St. Margaret Church, Stanford-le-Hope, by Rev. J. Russel, George Fawcett White, M.D., eldest son of H. Bantry White, M.A.I., Ballinguile, Donnybrook, to Nora Dorothy, second daughter of Robert Mason of Pitsea Hall, Essex.

DEATHS.

HARTLEY.—On April 13th, at Fern Cottage, Dinarth Road, Rhos-on-Sea, Colwyn Bay, Stephen Herbert Hartley, M.B., C.M., of Albany House, Pendleton, and Bradford, Yorkshire.

RAVENHILL.—On April 8th, at Bordesley, Birmingham, Thomas Holmes Ravenhill, M.R.C.S., L.S.A., eldest son of the late Rev. Thomas Holmes Ravenhill, vicar of Arlingham, Gloucestershire, aged 61.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m. Papers: (1) Mr. H. J. Waring, on Some Surgical Affections of the Right Iliac Fossa which Stimulate Appendicitis; (2) Mr. J. Lynn Thomas, on a Series of Cases of Goitres removed under Cocaine Anaesthesia.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 20, Hanover Square, W., 8 p.m. Mr. J. F. Colyer: Some Specimens recently presented to the Museum of the Society (with lantern demonstration). Mr. Harold Sims: Some Observations on the Bacteriology of Pyorrhoea Alveolaris (with lantern demonstration).

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 p.m.—Dr. Otto Grünbaum: The Diagnosis of Addison's Disease (epidiascope demonstration).

WEDNESDAY.

HUNTERIAN SOCIETY, London Institution, Finsbury Circus, E.C.—8 p.m.: Annual meeting. 8.30 p.m.: Adjourned discussion on epilepsy. Dr. Risien Russell will reopen the discussion on Epilepsy, being then followed by Dr. W. S. Colman on Epilepsy in Children, by Dr. Aldren Turner on the Treatment of Epilepsy, by Dr. Harry Campbell on Diet in Epilepsy, by Dr. C. H. Bond on Epileptic Colonies.

FRIDAY.

BRITISH ELECTRO-THERAPEUTIC SOCIETY, 11, Chandos Street, W., 8.30 p.m.—Demonstrations: Mr. C. A. Clark, "Dixio" Stereoscope: Mr. A. D. Reid, a new form of sterilizable stereoscope; Dr. G. B. Batten, (1) a simple negative viewer: (2) a simple method of epilating the whole scalp by exposure to *x* rays.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8 p.m.—Exhibition of clinical cases, followed by discussion. Patients will be in attendance from 8 p.m. to 9 p.m.

EPIDEMIOLOGICAL SOCIETY, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Paper: Dr. A. K. Chalmers. Some Recent Manifestations of Cerebro-spinal Meningitis.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C., Tuesday and Friday, 3.45 p.m.—Methods of examination.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear. Lectures at 5.15 p.m. each day will be given as follows:—Monday, Fractures and Dislocations of the Hip, especially Old and Unreduced Ones; Tuesday, Some Considerations regarding the Modern Operations for Cancer of the Breast. Wednesday, Cyto-diagnosis (with lantern slides); Thursday, The Fundus Oculi in Health and Disease (with lantern slides).

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the clinics and demonstrations for next week: Monday, 10 a.m.: Surgical, 2.30 p.m.: Medical, Throat, Nose and Ear. *X* Rays. Tuesday, 10.30 a.m.: Medical, 2.30 p.m.: Operations; Fevers (at the North-Eastern Fever Hospital, St. Ann's Road, N.): Surgical and Gynaecological. Wednesday, 2.30 p.m.: Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynaecological Operations; Fevers (at the North-Eastern Fever Hospital, St. Ann's Road, N.): Medical, Surgical; *X* Rays: 3 p.m., Medical (In patient). Friday, 9.30 a.m., Surgical; 2.30 p.m., Operations; Medical, Eye; 3 p.m., Medical (In-patient).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following arrangements have been made for next week:—Daily, 2 p.m.: Medical and Surgical Clinics, *X* Rays. 2.30 p.m.: Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2.30 p.m.: Diseases of Throat, Nose, and Ear. Diseases of the Skin. Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. 10 a.m.: Diseases of Children. Wednesday and Saturday, 2.30 p.m.: Diseases of Women.

BOOKS, ETC., RECEIVED.

Philadelphia and London: W. B. Saunders Co. 1907:

Chemical Pathology; being a Discussion of General Pathology from the Standpoint of the Chemical Processes Involved. By H. G. Wells, Ph.D., M.D. 15s.

Modern Surgery, General and Operative. By J. C. da Costa, M.D. Fifth Edition. 24s.

A Textbook of Diseases of Women. By J. C. Webster, B.A., M.D., F.R.C.P.E., F.R.S.E. 30s.

Die Bekämpfung der Tuberkulose innerhalb der Stadt. Von E. Pütter. Berlin: R. Schoetz. 1907. M. 0.60.

Traitement Chirurgical du Cancer du Colon. Par le Dr. J. Okinczyc. Paris: G. Steinheil. 1907.

A Comparative Study of the Influence of Cod-liver Oil and Cod-liver Oil Emulsion upon the Nutrition of Normal and Tuberculous Pigs. By J. W. Wells, M.D., D.P.H., F.C.S. Manchester: University Press. 1907. 2s. 6d.

Metabolism and Practical Medicine. By C. von Noorden. Vol. I. The Physiology of Metabolism. By A. Magnus-Levy. Vol. II. The Pathology of Metabolism. By C. von Noorden, Fr. Kraus, Ad. Schmidt, W. Weintraud, M. Matthes, and H. Strauss. English issue edited by I. Walker Hall. London: W. Heinemann. 1907. 3 vols. £2 12s. 6d.

The Cure of Cancer, and how Surgery Blocks the Way. By J. Shaw, M.D.Lond. London: F. S. Turney. 1907.

Zeitschrift für Krebsforschung. Herausgegeben vom Zentralkomittee für Krebsforschung zu Berlin. Redigiert von Professor Dr. D. v. Hansemann und Professor Dr. G. Meyer. Fünfter Band. Erstes und Zweites Heft. Berlin: A. Hirschwald. 1907. Mk. 8.

Psychology Applied to Medicine. By D. W. Wells, M.D. Philadelphia: F. A. Davis Co. 1907. 1.50 dols.

University of Pennsylvania. Contributions from the William Pepper Laboratory of Clinical Medicine. No. 5. Philadelphia: 1906.

Lehrbuch der Kinderheilkunde. Von Dr. med. B. Bendix. Fünfte Auflage. Berlin and Wien: Urban and Schwarzenberg. 1907. M. 12.

Weitere psychiatrische Beobachtungen an Militärgefangenen. Von E. Schultze. Jena: G. Fischer. 1907. M. 3.

Practical Physiological Chemistry. By J. A. Milroy, M.A., M.D., and T. H. Milroy, M.D., B.Sc., F.R.S.E. Second edition. Edinburgh and London: W. Green and Sons. 1907. 5s.

Eye Injuries and their Treatment. By A. Maitland Ramsay, M.D. Glasgow: J. Maclehose and Sons. 1907. 18s.

First Lines in Midwifery. By G. E. Herman, M.B.Lond., F.R.C.P. New edition. London: Cassell and Co., Limited. 1907.

The Muscles of the Eye. By L. Howe, M.A., M.D. In 2 vols. Vol. i. Anatomy and Physiology. New York and London: G. P. Putnam's Sons. 1907. 4.25 dols.

Behringwerk-Mitteilungen. Heft 2. Stuttgart and Leipzig: Deutsche Verlags-Anstalt. 1907. Mk 3.

A Textbook of the Practice of Medicine. By H. A. Hare, M.D., B.Sc. Second edition. London: H. Kimpton. 1907. 21s.

The City of London Directory for 1907. 37th annual edition. London: W. H. and L. Collingridge. 12s. 6d.

A Simple Explanation of the Workmen's Compensation Act, 1906 (6 Ed. VII. Chap. 58). By "Penetratus." London: W. Speaight and Sons. 1907. 1d.

Wiesbaden: J. F. Bergmann, and Glasgow: F. Baudemeister. 1907.

Ergebnisse der experimentellen Pathologie und Therapie einschliesslich Pharmakologie. Redigiert von Dr. med. E. Schreiber. I Band, I Abteilung. 3s.

Handbuch der Gynäkologie. Herausgegeben von J. Veit. Zweite Auflage. Erster Band. 16s. 9d.

Manual of Anatomy, Systematic and Practical, including Embryology. By A. M. Buchanan, M.A., M.D., C.M., F.F.P.S.Glas. Vol. II. London: Baillière, Tindall, and Cox. 1907. 12s. 6d.

Archives of Neurology from the Pathological Laboratory of the London County Asylums, Claybury, Essex. Edited by F. W. Mott, F.R.S., M.D., F.R.C.P. Vol. III. London: Macmillan and Co., Limited. 1907.

Worry: The Disease of the Age. By C. W. Saleeby, M.D., F.R.S.Edin. London: Cassell and Co., Limited. 1907. 6s.

Fortune's Fool. By F. E. Wynne. London: Brown, Langham, and Co. 1907. 6s.

Pulmonary Tuberculosis: its Predisposition, Environment, and Treatment. By D. Crichton, L.R.C.S.E., I.R.C.P.E., and L.F.P.S.G. Dundee: J. Leng and Co., Limited. 1907. 2s. 6d.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
APRIL.	
21 Sunday ...	
22 MONDAY ...	London: Medical Insurance Committee, 4.30 p.m.
23 TUESDAY ...	
24 WEDNESDAY	Bath and Bristol Branch, Museum, Bath, 8 p.m. Lancashire and Cheshire Branch, Branch Council Meeting, Liverpool Medical Institution.
25 THURSDAY...	Manchester (Central) Division, *Lancashire and Cheshire Branch*, Special Meeting, Queen's Hotel, Manchester, 8.30 p.m. St Pancras and Islington Division, *Metropolitan Counties Branch*, Board Room, Temperance Hospital, Hampstead Road, 4 p.m. Staffordshire Branch, Victoria Hotel, Wolverhampton, 5.25 p.m.; Dinner, 7 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Town Hall, Wandsworth, 3.30 p.m.
26 FRIDAY ...	
27 SATURDAY ...	Ulster Branch, Derry.
28 Sunday ...	
29 MONDAY ...	
30 TUESDAY ...	
MAY.	
1 WEDNESDAY	South-Eastern of Ireland Branch, Council Meeting, Victoria Hotel, Kilkenny, 4 45 p.m.
2 THURSDAY...	Wigan Division, *Lancashire and Cheshire Branch*, Wigan, 8.30 p.m.
3 FRIDAY ...	
4 SATURDAY ...	
5 Sunday ...	
6 MONDAY ...	
7 TUESDAY ...	London: Organization Committee, 11 a.m.
8 WEDNESDAY	
9 THURSDAY...	Lambeth Division, *Metropolitan Counties Branch*, Annual Meeting, Bethlem Royal Hospital, 4 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
10 FRIDAY ...	Dundee Branch, Annual Meeting, Royal Infirmary, Dundee, 3.30 p.m., Clinical Meeting, 4 p.m.; Dinner, Royal Hotel, Dundee, 6 p.m. Hampstead Division, *Metropolitan Counties Branch*.
11 SATURDAY ...	
12 Sunday ...	
13 MONDAY ...	London: Ethical Emergency Subcommittee, 2 p.m.
14 TUESDAY ...	
15 WEDNESDAY	
16 THURSDAY...	
17 FRIDAY ...	
18 SATURDAY ...	
19 Sunday ...	
20 MONDAY ...	
21 TUESDAY ...	
22 WEDNESDAY	Dorset and West Hants Branch, Weymouth.
23 THURSDAY...	
24 FRIDAY ...	Wandsworth Division, *Metropolitan Counties Branch*, Annual Meeting.
25 SATURDAY ...	
26 Sunday	
27 MONDAY ...	
28 TUESDAY ...	
29 WEDNESDAY	Special Representative Meeting, London. Bath and Bristol Branch, Annual Meeting, Bath.
30 THURSDAY...	
31 FRIDAY ...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association and the Rules of such Division and Branch to which he may at any time belong and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

[illegible] Printed at the [illegible], No. [illegible] Catherine Street, Strand, in the Parish of St. Paul, Covent Garden, in the County of Middlesex.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 27TH, 1907.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

SPECIAL REPRESENTATIVE MEETING IN LONDON.

WEDNESDAY, MAY 29TH.

NOTICE OF MOTION.

NOTICE is hereby given, in accordance with Article XXXII, of the following Notice of Motion which the Council has decided to bring before the Special Representative Meeting on Wednesday, May 29th.

ASSOCIATION REGULATIONS.

ALTERATION PROPOSED BY THE COUNCIL OF THE ASSOCIATION.

PROPOSED AMENDMENT OF BY-LAWS.

Business of the Annual Representative Meeting.

By the COUNCIL OF THE ASSOCIATION:

That By-law 20 be amended to read as follows:

The first daily session of the Annual Representative Meeting shall be held not later than two hours after the time fixed for the commencement of the Annual General Meeting. The Minutes of each Representative Meeting shall be forwarded by the Chairman thereof to the Council.

By direction of the Chairman of Representative Meetings,

J. SMITH WHITAKER, *Medical Secretary.*

April 24th, 1907.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

BIRMINGHAM BRANCH:

CENTRAL DIVISION.

A SPECIAL and general meeting of the Division was held on Wednesday, April 17th, at the Medical Institute at 3.30 p.m. In the absence of the Chairman, Mr. Milligan, the chair was taken by Professor MORRISON, Vice-Chairman.

Modification of Rule Z.—The modification of this rule, as advised by the Central Ethical Committee and published in the SUPPLEMENT of February 9th, with the accompanying Standing Order, was carried unanimously.

Public Medical Service.—Dr. BRANSON proposed and Dr. IRVINE seconded the following resolution:

That the Central Division recommends that a public medical service be formed for Birmingham and district.

This was carried by a large majority. The meeting then considered the draft laws as circulated, and they were carried in the following form:

1. The service shall be called the Birmingham and District Public Medical Service.

2. The service shall be under the control of a Central Committee, consisting of:
   (*a*) Representatives of the local Divisions, British Medical Association.
   (*b*) Representatives of the Birmingham and District General Medical Practitioners' Union.
   (*c*) Representatives of the medical staff of each branch of the Public Medical Service.
   (*d*) Medical representatives of local hospitals willing to co-operate, not to exceed five in all.

3. The service shall be open to any registered medical practitioner who has practised independently in the district for not

less than six months, or who has succeeded to a legitimately-established practice of like duration. Always provided that such medical man holds no "private medical clubs."

4. A branch of the service may be formed in any locality approved by the Central Committee. (It is suggested that where convenient the ward areas of the Union shall be accepted localities.)

5. The administration of each branch of the service shall be in the hands of the medical staff of that branch.

6. The medical staff of each branch shall annually appoint one of their number to act as Secretary and Treasurer.

7. No alteration in the laws of the service shall be made, except with the approval of the Central Committee.

8. The medical benefits of the service shall be confined to those who are deemed suitable by the medical staff of each branch.

9. Every application for admission shall be made to a member of the medical staff, who shall examine the applicant, and furnish a certificate of his fitness or otherwise to the branch secretary. The application shall be considered and decided upon at a monthly meeting of the medical staff of each Branch.

10. An admission fee of 3d. shall be charged to each individual.

11. Each member shall pay at the rate of 1d. per week. Each new member over 50 years of age shall pay at the rate of 2d. per week.

12. Each member shall be free to choose his or her own medical attendant, provided:

(*a*) That change of medical attendant shall only take place in accordance with the rules of the service.

(*b*) That it shall be open to any medical officer to decline to accept any individual patient.

13. Each member or family shall have a card of membership, to be issued at a charge of 1d.

14. A person otherwise suitable, but actually suffering from illness, can only be admitted as a member on payment to the doctor of 5s. per week in advance, so long as that illness lasts. When the doctor shall certify that recovery is complete, such person shall then pay the ordinary rate of subscription.

15. Any complaints by patients shall be made in writing to the branch secretary, who shall lay them before the next meeting of the medical staff, and immediate intimation of each complaint should be sent in writing to the practitioner concerned.

16. Any patient may be excluded from membership on four weeks' notice given by the local Committee and confirmed by the Central Committee.

17. The medical staff of each branch shall be remunerated by periodically dividing the net balance, after payment of the working expenses, in proportion to the amount collected for each medical officer.

18. The medical benefits of the service shall not relate to any of the following:

(*a*) Consultations with other practitioners at the patient's request.

(*b*) Confinements, or any illness immediately arising from pregnancy.

(*c*) Serious injuries.

(*d*) Diseases immediately arising from intemperance or misconduct.

(*e*) The performance of surgical operations, dentistry, or vaccination.

(*f*) The administration of anæsthetics.

(*g*) The supply of bottles or appliances.

19. Members must attend for consultations in the surgery, or for medicine, at specified hours.

20. Members attending out of surgery hours or on Sundays can only be treated as private patients.

21. Messages for home attendance must be delivered at the surgery before 10 a.m. in order to secure a visit the same day; otherwise a visiting fee of 2s. will be charged. Visits required between the hours of 9 p.m. and 9 a.m. will be charged 3s. 6d., payable in advance.

22. No doctor shall be required to attend a patient beyond a radius of two miles from his residence.

23. A charge of 6d. will be made for each certificate required for employer or club beyond one per week.

24. A member whose subscription is four weeks in arrears cannot receive benefit. Membership ceases if such be six weeks in arrears.

25. Each branch shall have power to appoint any collector or collectors to be paid by salary, who shall be subject to such rules as the Central Committee may lay down from time to time.

The Central Committee will at first consist of:

(*a*) Five representatives of the Central Division British Medical Association.

(*b*) Five representatives of the Birmingham District General Medical Practitioners' Union.

(*c*) Five representatives of local hospitals willing to co-operate.

The meeting then proceeded to elect five gentlemen to represent the Division on the Central Council of the service. The following were declared duly elected: Drs. Aitken, Irvine, Kirby, Jordan Lloyd, and Oakes.

Letter from the Coventry Division.—A letter was read from the Honorary Secretary of the Coventry Division asking for the assistance of the Central Division to be given to the Coventry Division in their struggle against the Coventry Provident Dispensary. It was proposed by Mr. Neal, seconded by Dr. Branson, and resolved:

> That the letter be remitted to the Executive Committee to consider and report upon and bring forward recommendations before an early meeting of the Division.

Medical Inspection of School Children.—After discussion, the following resolution was proposed by Dr. W. R. Jordan and seconded by Dr. Stanley:

> That this Division considers that the actual medical inspection of school children should be assigned (*a*) most certainly not to the medical officers of health, but (*b*) to medical officers specially appointed, who may or may not give their whole time to this work, and may or may not be general practitioners, and that no scheme of medical inspection is satisfactory which does not include (*c*) a daily visit to each school by a medical practitioner in the district, and the appointment of a medical adviser to the Education Committee to receive, collate, and report upon the reports of the inspectors.

This was carried unanimously. The meeting lasted two hours and a half.

BORDER COUNTIES BRANCH.

A special general meeting of this Branch was held at the Crown and Mitre Hotel, Carlisle, on February 15th, at the request of the Scottish Division of the Branch. All members of the medical profession within the Branch area had been individually invited, and the Medical Secretary of the Association, Mr. J. Smith Whitaker, had accepted the invitation of the Branch Council to give an address. The President of the Branch, Dr. Bowser (Penrith), was in the chair.

Apologies for Non-attendance.—Apologies for unavoidable absence were intimated from: Dr. Barnes (Carlisle), Dr. Crerar (Maryport), Dr. Lace (Frizington), Dr. Robertson (Penpont), Dr. Nicholson (Shap), Dr. Hughes (Grange-over-Sands), Dr. Goodchild (Threlkeld), Dr. McLachlan (Longtown), Drs. G. B. Muriel and G. J. Muriel (Whitehaven).

Confirmation of Minutes.—The minutes of the previous meeting were read by the Secretary, approved, and signed.

Contract Practice.—The President introduced Mr. Smith Whitaker, and referred to the experience which that gentleman had now had in connexion with this special department of his work, and called upon him to deliver his address. Mr. J. Smith Whitaker, who had a very hearty reception, addressed the meeting, and was listened to with the keenest interest and attention by all present. He began by giving a brief historical summary of the subject to show the way in which clubs and friendly societies had first come to be formed. He outlined the attitude of the contract practitioner under the varying circumstances which control such practices, and the relationship in which he stood towards the other practitioners in his district. He proceeded to point out that different localities suffered from different troubles, and that even similar troubles were not always amenable to the same treatment in different places. The alpha and omega of the remedy lay in combination whether that implied, in the case of club practice for instance, the establishment of a minimum fee, or the pooling of the subscriptions among all the doctors who were willing to take up the work, or any other remedial measure which the profession in that locality decided was necessary for their welfare. With this end in view he dwelt in some detail upon the general plan of organizing the practitioners in any particular district in such a way that they would be able to deal with all matters pertaining to contract practice as they arose, taking for his model the now famous Bradford Rules. He particularly emphasized the importance of: (1) All resolutions adopted having the approval of a sufficient majority of the local profession to give them the sanction necessary before they became binding on its members; and (2) that every resolution should, before being adopted at all, have been in the hands of every member at least fourteen days before it came up for decision. By this means all who might be affected by it would have an opportunity of expressing either their approval or their condemnation. Finally, Mr. Whitaker gave specific illustrations of the beneficial results which had

followed the adoption of such policy as he had indicated in some districts, in cases, indeed, where there had not seemed to be the slightest prospect of ever achieving professional unanimity. At the conclusion of his address Mr. Whitaker was accorded a very hearty vote of thanks, and thereafter the Chairman threw open the discussion, in which almost every one present ultimately took part. Amongst others who spoke were: Dr. Macdonald (Carlisle), who said that in considering generally the subject of contract practice the influence of locality came in, and the position of the practitioner in the city with its hospitals and dispensaries was easier than that of the country doctor. Again in estimating the fees paid for contract service it had to be kept in mind that the workman in the town gave material support to the funds of charitable institutions. He deprecated the idea of "pooling," and said that nowadays part of the reason why a doctor could afford to take up club work for what might seem to be a moderate fee lay in the fact that he was the arbitrator as to whether the case was one which the local infirmary should accept, and in this way, while doing the best possible for the patient, he also freed himself from the burden of a long attendance, and as nearly all club members would have part of their weekly wage deducted for the benefit of the infirmary they were entitled to demand that they should receive its benefits. Dr. Robson (Dumfries) advocated the establishment of chairs of medical ethics at the universities. Dr. J. S. Bell (Lockerbie) gave a detailed statement of the condition of affairs which he said existed in his neighbourhood. He showed several advertisements which regularly appeared with reference to the medical benefits accruing to subscribers to various friendly societies, no matter what might be their age, sex, or position. He bewailed the present attitude of the medical practitioner in accepting such undignified work, and advocated that all doctors should refuse to accept club appointments. He was, however, a great believer in the friendly societies, but held strongly that no medical man should have any official connexion with them as this was never originally thought of by themselves. Dr. C. C. Aitken (Carlisle) contended that the non-acceptance of a club appointment might involve the refuser in an undue amount of "charity work." Dr. Gilroy (Ecclefechan) spoke to the state of affairs existing at the time when he went to Birmingham and those of the present day. Dr. Livingston (Dumfries) explained the position of the Scottish Division of the Branch with regard to the matter under discussion. Dr. Murdoch (Annan) urged the importance of proper organization. In reply, Mr. Smith Whitaker referred to Dr. Macdonald's remarks about hospitals, and showed that as long as the hospitals were supported by charity no one could demand their aid on the ground of being a subscriber; that if donations were more or less forcibly taken it no longer remained charity; and that such a destruction of the charitable basis was the first step towards the municipalization of hospitals. Finally it was unanimously resolved, on the motion of Dr. Maclaren, seconded by Dr. C. W. Graham:

> That the Divisions of the Branch be urged to take into their early consideration the question of organizing suitable local action in the several towns and districts of each Division.

Dinner.—Subsequently those members whom the exigencies of the train services permitted dined together in the hotel.

LANCASHIRE AND CHESHIRE BRANCH:

Liverpool (Western) Division.

A meeting of this Division was held at the Liverpool Medical Institution at 5 p.m. on April 9th, Mr. Larkin in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Proposed Union of Liverpool Divisions.—A letter was read from the Honorary Secretary of the Northern Division, stating that this Division fully agreed with the proposed union of the Liverpool Divisions.

Election of Representative on Central Council.—It was unanimously resolved that this Division nominates Mr. Frederic Charles Larkin, the Secretary of the Lancashire and Cheshire Branch, as a candidate for election as Representative of this Branch on the Council of this Association. A letter was read from Dr. Garstang of Altrincham, also a candidate at this election. The Secretary was instructed to reply.

Matters Referred to Divisions.—Matters referred to the Division were then considered, with the following results: (1) Medical Inspection of School Children: The Division supports I (c). With regard to No. 3, the Division had no evidence before it, but Dr. Howard promised to investigate and to report on the matter. (2) Ethical Aspects of Medical Consultation; The Division agreed with the recommendations given on page 76 of the Supplement.

Preston Division.

The annual general meeting of the Preston Division was held on April 11th.

Election of Officers.—The following officers were elected for the ensuing year:—*President*, Dr. R. C. Brown; *Vice-President*, Dr. Garner; *Honorary Treasurer and Secretary*, Dr. F. B. Macdonald; *Committee*, Drs. Sellers, Turnbull-Smith, Petyt, and Rayner; *Representative to Branch*, Dr. Dunn; *Delegate to Association*, Dr. J. E. Garner.

METROPOLITAN COUNTIES BRANCH:

City and Walthamstow Divisions.

A conjoint meeting of these Divisions was held on Thursday, April 18th, at Brooke House, Upper Clapton, N.E., by the kind invitation by Dr. J. O. Adams. Dr. Major Greenwood, the Chairman of the City Division, presided. The Chairman of the Walthamstow Division, Dr. St. Clair Shadwell, and a number of members of both Divisions were present.

Confirmation of Minutes.—The minutes of the previous meeting of the City Division were read and confirmed.

Election of Representative on Central Council.—On the motion of the Chairman it was unanimously resolved that Dr. St. Clair B. Shadwell be nominated as a Representative of the Branch on the Central Council of the Association.

Annual Meeting.—The Honorary Secretary reported that the Executive Committee had decided to hold the annual meeting of the City Division on Thursday, May 30th, at the Great Eastern Hotel, Liverpool Street, E.C., at 9 p.m., and that the meeting would be followed by a supper. Further notice would be sent to members.

Cases.—Dr. J. H. Sequeira, Physician to the Skin Department of the London Hospital, exhibited a number of cases of diseases of the skin, and gave a short account of the history and treatment of each case.

Votes of Thanks.—Hearty votes of thanks to Dr. Sequeira for the demonstration, and to Dr. Adams for his hospitality, proposed by the Chairman, and seconded by Mr. F. Wallace and Dr. Wise, were carried with acclamation.

Hampstead Division.

A meeting of the medical profession resident within the area of the Hampstead Division was held on Friday, April 12th, at 5 p.m., at St. Peter's Hall, Belsize Square, N.W., Dr. Macevoy in the chair.

Provident Dispensaries.—The Chairman, in opening the discussion on provident dispensaries, said that the Committee of the Hampstead Division had held a preliminary conference with the medical officers of the various dispensaries in the Division (Child's Hill Dispensary not being represented) on April 6th, and resolutions had then been passed approving of the general principle of having all the medical men in the neighbourhood who so desired it on the staffs of dispensaries. The meeting of April 6th had also agreed that it was desirable that at least half of the committee of management of such dispensaries should be medical men. In order to limit discussion within reasonable limits, he suggested that the following points should be dealt with:—(1) Whether the formation and extension of these dispensaries is desirable. (2) The principle of admission of all general practitioners to the staff. (3) What constitutes an ideal management. He pointed out that the meeting had before it three documents on the subject: (1) The report of the Medico-Political Committee of the Association from the British Medical Journal Supplement of February 23rd, 1907; (2) a circular letter from the Medical Charities Committee of the Metropolitan Counties Branch Council, with an appendix of questions; (3) the report of the Subcommittee of the Hampstead Division on provident dispensaries

within the area of the Division. The Honorary Secretary, having read the resolutions of April 6th, then reported that he had received 36 replies to the 418 circulars of the Branch Medical Charities Committee sent out. Of these 36, 31 had expressed themselves in favour of Clause 1 (*b*) and 28 in favour of Clause (2), 10 having observations to make, which he also read to the meeting. Dr. Hall spoke strongly in favour of the treatment of the sick poor by provident dispensaries managed on the lines suggested in the Medico-Political Committee's report. He doubted if new dispensaries were needed in the Kilburn area. Dr. Butler (Medical Officer of Health, Willesden) said that the medical profession must grapple with the problem of medical treatment of the sick poor. If the problem were left to the laity to decide, the solution could not be so satisfactory. As a medical officer of health he had found that in Willesden 60 per cent. of cases of non-notifiable infectious diseases went absolutely untreated. In Willesden there were numbers of the sick poor who could not afford the general practitioner's fees, who would not go to the Poor Law, who were too far from the hospitals to go there. What were they to do? Obviously an organized system of dispensaries was wanted. At present whole tracts in the district were unserved by dispensaries. He agreed with the principles expressed in the papers before the meeting. Dr. Roche (Medical Officer of the Haverstock Hill and Malden Road Dispensary) thought it doubtful if the closing of out-patient departments, as suggested by Dr. Anderson on April 6th, would in practice lead to a corresponding increase in dispensary work. The hospital out-patients were altogether an improvident class. He thought that it would be very difficult to have all the local medical men on the staff of a dispensary with a central institution. With regard to an objectionable bill in connexion with his dispensary the medical staff disclaimed any connexion with it. Mr. Armit, in moving the adoption of the Contract Practice Subcommittee's report on provident dispensaries within the Division, said that the Subcommittee did not intend for a moment to suggest that the medical staff of the Malden Road Dispensary had anything to do with the advertisement in question. Dr. Pidcock seconded the adoption of the report. Dr. Hall opposed, on the ground that errors existed in at least part of the report—namely, that dealing with the Kilburn Provident Medical Institute. He proposed an amendment:

> That the report be referred back to the Subcommittee for revision.

This was seconded by Mr. Nelson Hardy. Doubts having been expressed as to whether the meeting, being not strictly a meeting of the Division, had power to adopt the report, Dr. Hall's amendment was eventually carried. Dr. Hall then moved:

> That the extension of the Provident Dispensary principle is desirable.

This was seconded by Dr. Butler and carried *nem. con.* Dr. Hall then moved and Dr. Anderson seconded,

> That all practitioners who so desire should have the opportunity of sharing in the work of provident dispensaries.

Dr. Picard suggested as an amendment that the words "so far as practicable" be added. The amendment was seconded by Dr. Goullet, put to the vote, and lost. Dr. Hall's resolution was then put and carried with one dissentient. Dr. Ford Anderson then proposed and Dr. Taylor seconded:

> That the members of the medical profession should be able to exercise complete control over the conditions of their service.

On the suggestion of Dr. Butler the proposer and seconder agreed to the following alteration:

> That while welcoming the co-operation of the lay public in the management of these dispensaries, it is desirable that the members of the medical profession should be able to exercise complete control over the conditions of their service.

The resolution, as altered, was then put and carried by 16 votes to 5. Dr. Ford Anderson urged strongly that medical men who were not on the staffs of the dispensaries should yet be represented on the committees of management. He then proposed, and Dr. Moran seconded:

> That the Honorary Secretary be directed to inform the Honorary Secretary of the Branch that this meeting approves of the following resolutions (see Medical Charities Committee, Metropolitan Counties Branch Provident Dispensary circular of February 14th, page 1, last paragraph):
>
> (*a*) That the Branch Council be requested to endeavour to secure the modification of provident dispensaries within the area of the Branch, in accordance with the principles put forward in the report of the Medico-Political Committee of the Association.
>
> (*b*) That the Hampstead Division should approach those of its members who are on the staff of provident dispensaries, to gain their help in modifying their organization in accordance with the accepted principles.
>
> (*c*) That the Hampstead Division should encourage practitioners resident in its area to join in the work of provident dispensaries which have been modified in accordance with the accepted principles.

Richmond Division.

Ophthalmic Evening.

A meeting of the above Division was held at the Royal Hospital, Richmond, on Wednesday, April 17th, at 8.30 p.m.

Confirmation of Minutes.—The minutes of the previous meeting were confirmed.

Discussion.—A paper on The Value of Ophthalmic Symptoms in General Diagnosis and Prognosis was read by R. Marcus Gunn, F.R.C.S. This most instructive paper was followed by an interesting discussion, in which Drs. Shuttleworth, Evans, Rayner Batten, Hewkley, and others took part. A vote of thanks to Mr. Marcus Gunn was proposed by Dr. Crocker and seconded by Dr. Langdon-Down, and carried with acclamation.

Cases.—The following cases were shown in the new ophthalmic wards by Dr. Blair: (1) Prolapse of the lacrymal gland, (2) congenital dislocation of the lenses with marked eccentric pupils, (3) buphthalmos in a small child, (4) coloboma of the lens, (5) pyramidal cataract, (6) posterior polar cataract, (7) opaque nerve fibres, (8) detached retina cured by scleral puncture, (9) retinitis pigmentosa, (10) unusual form of choroiditis, (11) ruptured choroid, (12) cases of disseminated and central choroiditis.

MIDLAND BRANCH:

Boston and Spalding Division.

An ordinary meeting was held at the Red Lion Hotel, Boston, on March 26th, at 3.30 p.m., Dr. Miller in the chair.

Confirmation of Minutes.—The minutes were first read and confirmed.

Paper.—Dr. W. H. Brook (Lincoln) read a paper, entitled, The Diagnosis and Treatment of Appendicitis. This was received with the keenest attention, and was most instructive. Dr. Brook showed some sections of appendix, etc., under the microscope to illustrate points in his paper. A lengthy discussion ensued, in which all the members present took part.

Vote of Thanks. A hearty vote of thanks was accorded Dr. Brook for his excellent paper and for his kindness in coming over to read it.

Alterations in the Divisions.—These were discussed, and the suggestions of the Branch Council unanimously adopted (published in Supplement of April 6th, 1907).

Future Meetings. It was proposed and seconded:

> That a medical motor meet be arranged in the summer, details to be arranged by the Committee. The annual meeting in May to be arranged by the Committee.

The members had tea in the hotel afterwards.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IMPORTANT NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

British Medical Association.—*Annual Reports of Branches* 1906–07.

[By-law 9: ". . . . every Branch shall furnish to the Council of the Association not later than March 15th, a report of its proceedings during the previous year, a statement of its numbers, and a financial statement in such form as the Council may from time to time prescribe."]

BRANCH.	MEMBERSHIP.		FINANCIAL STATEMENT.						MEETINGS.						REPORTS OF PROCEEDINGS AND REMARKS.
	On December 31st, 1905.	On December 31st, 1906.	Balance from 1905.	Deficit (if any) from 1905.	Receipts for 1906.	Expenditure, 1906.	Balance to 1907.	Deficit (if any) to 1907.	Branch.	Scientific.	Medico-Political, Ethical, etc.	Occasions when Members dined together	Average Attendance.	Branch Council.	
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.							
ABERDEEN	182	182	49 10 1	—	38 6 0	14 4 3	71 11 10	—	3	—	1	2	18	6	Meetings for scientific purposes are now held conjointly with the Aberdeen Medico-Chirurgical Society.
BIRMINGHAM	507	525	16 4 4	—	82 5 0	101 9 5	—	3 0 1	—	—	—	—	—	—	——
BORDER COUNTIES	150	153	10 13 7	—	31 6 0	20 14 1	21 5 6	—	3	3	2	2	28	6	Decided to request the amalgamation of the two existing English Divisions, and also to slightly alter the Divisional Boundaries. Composition of the proposed Central Board to supervise Education of Nurses discussed and resolutions forwarded. The taxation of motor cars used for medical practice. Appointment of an additional Branch Secretary to sit on the Scottish Committee of the B.M.A.
CAMBRIDGE AND HUNTINGDON	152	147	35 3 1	—	29 2 0	6 3 6	58 1 7	—	1	1	1	1	30	7	——
DORSET AND WEST HANTS	219	217	41 16 7	—	41 6 0	4 1 3	79 1 4	—	3	3	—	2	38	3	The Branch is in an active and thriving state.
DUNDEE	109	107	10 18 0	—	22 1 0	11 7 1	21 11 11	—	4	—	4	-	17	7	On the appointment of a Medical Officer by the Dundee School Board an effort was made to widen the scope of duties and to increase the remuneration. This was unsuccessful, although it had the support of almost all the local practitioners. A resolution was passed deprecating the custom of practitioners receiving commission in various forms from chemists for prescriptions dispensed by them.
EAST ANGLIAN	415	423	39 19 1	—	82 18 6	66 9 1	56 4 6	—	3	3	3	3	50	4	The meetings have all been successful and well attended. Many good papers have been read. Most of the Divisions have done good work. No report from the West Division of Suffolk has been received from the Secretary. Also no report from the Mid Division of Essex. It is doubtful if they have held any meetings for two years. The best way to stir them up would be for the Medical Secretary to pay them visits.
EAST YORK AND NORTH LINCOLN	140	146	22 8 0	—	26 14 0	34 6 7	14 15 5	—	1	-	—	1	26	3	The question of starting an East Riding Medical Charitable Institution is now under discussion by the Branch Council.
EDINBURGH	432	435	96 8 11	—	86 2 0	50 16 6	131 14 5	—	2	1	—	1	70	9	The question of the compulsory notification of pulmonary tuberculosis has been considered.
FIFE	76	79	26 2 5	—	17 5 6	12 3 3	31 4 8	—	2	1	1	1	18	3	The question of the compulsory notification and Sanatorium treatment of Phthisis was discussed at the Annual Meeting, and an account of this, as well as that of subsequent relative matters, has appeared in the Journal. A Special Meeting regarding the Ebbw Vale dispute was also held, and has been reported on in the Journal.

BRANCH.	MEMBERSHIP: On December 31st, 1905.	MEMBERSHIP: On December 31st, 1906.	FINANCIAL STATEMENT: Balance in hand (if any) from 1905.	FINANCIAL STATEMENT: Deficit (if any) from 1905.	FINANCIAL STATEMENT: Receipts for 1906.	FINANCIAL STATEMENT: Expenditure, 1906.	FINANCIAL STATEMENT: Balance to 1907.	FINANCIAL STATEMENT: Deficit (if any) to 1907.	MEETINGS: Branch.	MEETINGS: Scientific.	MEETINGS: Medico Political, Ethical, etc.	MEETINGS: Occasions when Members dined together.	MEETINGS: Average Attendance.	MEETINGS: Branch Council.	REPORTS OF PROCEEDINGS AND REMARKS.
GLASGOW AND WEST OF SCOTLAND	[illegible]	690	[illegible]	£ s. d.	£ s. d. 215 15 11	£ s. d. 177 1 7	£ s. d. 241 4 11	£ s. d. —	5	—	2		70	7	As will be noted from the returns, the Branch finds itself stronger in numbers this year than last, viz., from 679 to 690. Forty new members have been admitted in the year, but against that there have been an unusually large depletion from removals to other Branches, resignations and deaths. The Branch has been particularly active in medical politics in so far as two extra meetings have been convened for the sole purpose of discussing a new departure in gratuitous Dispensary Service to the poor, it being felt that there were now a sufficient number of such institutions established already in the City for such purpose. The Branch was unanimous in condemning the opening of any new Dispensary, and it is hoped that this is the beginning of a new era in combined action of the profession. The several Divisions have each been active during the year.
GLOUCESTERSHIRE ..	130	103	[illegible]	0 3 5	26 2 0	11 18 0	14 0 7	—	8	8	—	8	30	10	——
LANCASHIRE AND CHESHIRE	1401	1427	131 [illegible] 1	—	323 2 0	247 15 5	16 11 8	—	2	1	2	1		9	——
LEINSTER	340	341	[illegible]	—	[illegible]	[illegible]	34 2 7½	—	1	—	—	1	78	5	Two purely local ethical cases were dealt with.
METROPOLITAN COUNTIES	[illegible]	[illegible]	[illegible] 17 11	—	[illegible]	[illegible]	[illegible] 19 0	—	1	—	—		10	—	The Council has discussed rules of procedure in ethical matters, and the Branch has agreed to the same. The Council has established three Standing Committees—(1) Finance, (2) Medico-political, (3) Medical Charities which have held many meetings, and settled the financial relations of the Divisions to the Branch. The Medico Political Committee has approached the candidates for the London County Council in the manner and with the result enumerated in the JOURNAL Supplement of March 2nd, 1907. The Medical Charities Committee has opposed the Hospital Sunday Fund Charter and the management of the Hampstead Hospital, with results which are not yet ripe for report. The Branch Council has been very active and the attendance thereat very good, so much so as to render the proposal of reverting to Branch Council work instead of Division work very attractive.
MIDLAND	546	569	40 13 0	—	114 0 0	63 9 2	96 3 10	—	1	—	1	1	25	2	——
MUNSTER	—	—	42 17 5	—	20 0 0	12 0 3	50 17 2	—	4	—	4	—	8	2	——
NORTHERN COUNTIES OF SCOTLAND	124	121	11 5 4	—	24 16 0	15 4 6	20 16 10	—	2	2	2	2	25	4	At the Branch meetings held during the year several questions of local interest were discussed. The wide area of the Branch makes it difficult for many members in the outlying districts to attend the meetings; the Council endeavours to arrange that meetings are held in different parts of the Branch, so as to enable these members to meet and discuss matters affecting their interests.
NORTH LANCASHIRE AND SOUTH WESTMORLAND ..	122	110	32 19 3	—	20 16 0	19 2 6	40 13 2	—	2	2	—	—	24	3	The medical men in the Barrow and Lancaster Districts, on the initiative of the respective Divisions, have agreed not to examine or attend as such, members of the National Deposit Friendly Society. The Lancaster Division suggested to the Education Authority of Lancaster and Morecambe that they should pay for School Certificates. Their approaches have, so far, not been received with great cordiality.

BRANCH.	MEMBERSHIP.		FINANCIAL STATEMENT.						MEETINGS.					REPORTS OF PROCEEDINGS AND REMARKS.
	On December 31st, 1905.	On December 31st, 1906.	Balance from 1905.	Deficit (if any) from 1905.	Receipts for 1906.	Expenditure, 1906.	Balance to 1907.	Deficit (if any) to 1907.	Branch.	Scientific.	Medico-Political, Ethical, etc.	Occasions when Members dined together.	Average attendance.	Branch Council.	
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.							
NORTH OF ENGLAND	640	669	87 16 0	—	172 6 7	201 6 3	58 16 4	—	—	—	—	—	1	1	—
NORTH WALES	185	211	1 0 5	—	38 8 0	29 10 1	9 18 4	—	2	2	2	1	38	3	The Branch was during the year separated from the Shropshire and Mid Wales Branch for representation on Central Council. The position taken by the local practitioners at Bangor with respect to the vacant Medical Officership of the Bangor Workhouse, which led to such a decided victory, was warmly supported by the Branch. The Divisions have held regular meetings, at which the various matters sent down for consideration have been discussed. No capitation allowance is given to the Divisions, their working expenses being paid out of Branch funds.
OXFORD AND READING ...	285	289	83 9 3	—	59 2 0	47 15 4	95 15 11	—	1	1	—	1	—	2	—
PERTHSHIRE...	63	56	24 15 8		11 7 7	5 15 6	30 7 9	—	4	2	3	1	15	4	Ambulance Wagon Service. New Fever Hospital appointment. Notification of consumption. Contract practice.
SHROPSHIRE AND MID WALES	172	129	19 5 1	—	25 11 0	34 16 9	9 19 4	—	5	4	1	1	34	5	—
SOUTH-EASTERN	1,212	1,213	397 15 0½	-	243 18 0	123 8 6	518 4 6½	—	1	-	1	1	64	4	The question of fees for School Certificates in Kent was brought before the Council, and some correspondence with the Education Committee of the Kent County Council has ensued, but no satisfactory settlement has been arrived at. The Rochester Division is still without organization, and attempts to establish one have met with no success. Several other Divisions show serious inactivity.
SOUTH-EASTERN OF IRELAND	68	64	5 11 6	-	12 16 0	17 2 6	1 5 0	—	7	1	4	5	9	2	—
SOUTHERN	405	423	88 16 9	—	80 3 9	63 16 9	105 3 9	—	3	3	—	3	40	3	The year has been a very successful one. The Divisions have been very active and the meetings well attended. The general meetings of the whole Branch, bringing together members from the various Divisions with a dinner following the business, have been very much appreciated. In regard to the Jersey Division, the Secretary reports that it is useless to call a meeting because of the popularity of the old-standing local Medical Society. This Society is debarred from amalgamating with the Association by the terms of its Charter. It has a Royal Charter.
SOUTH MIDLAND	197	215	48 18 0		45 19 6	41 2 3	53 15 3	—	2	2		1	30	2	No special matters discussed. Branch meetings purely scientific. A capitation grant of 1s. 6d. or 2s. (if funds permit) was made to the Divisions at the Council meeting.

BRANCH.	MEMBERSHIP		FINANCIAL STATEMENT.						MEETINGS.						REPORTS OF PROCEEDINGS AND REMARKS.
	On December 31st, 1906.	On December 31st, 1907.	Balance from 1906.	Deficit (if any) from 1906.	Receipts for 1906.	Expenditure, 1906.	Balance to 1907.	Deficit (if any) to 1907.	Branch.	Scientific.	Medico-Political, Ethical, etc.	Occasions when Members dined together.	Average Attendance.	Branch Council.	
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.							
SOUTH WALES AND MONMOUTHSHIRE	443	459	83 5 4½	—	39 12 0	81 14 6	81 0 10½	—	3	2	2	—	45	5	The year 1906 has been notable by the formation of a Contract Practice Committee, formed to deal with difficulties and disputes arising in connexion with all forms of contract practice. It is composed of three representatives of each Division, five representatives of the Branch Council, and ex-officio members, viz.: Hon. Secs. of the Branch and Divisions, and the Hon. Secs. of Cardiff, Swansea, and Newport Medical Societies. Dr. D. J. Williams was appointed Chairman, and Dr. E. J. Maclean, Hon. Sec. A Contract Practice Fund has been formed by voluntary donations and subscriptions from members. The total amount raised during the year was £1,100. Ethical Rules for the Branch, on the lines of the Model Rules, were adopted by the Annual Meeting, together with a Branch Rule Z. This latter has not yet been applied to the "black listers," pending the decision of the Central Council on the mode of doing so. The capitation grants to Divisions has been increased to 3s. on 75% membership of the Divisions. The Council has, during the year, had under its consideration the conduct of two of its members whom they recommended for expulsion to the Central Council. This in each case was done by the Central Council. The Branch Council notes with satisfaction the increasing membership, there being now only 200 to 250 non-members within its area. They would represent to the Central Council the urgent need for a large Central Emergency Fund.
SOUTH WESTERN	429	441	5 4 6	—	85 3 0	106 1 5	64 11 1	—	5	4	—	1	44	10	An alteration of Division boundaries. The organization of a deputation to the Devon County Council with reference to the payment for inspection of midwives. Various steps leading up to the issuing of an invitation to the Association to hold its annual meeting at Exeter in 1907.
STAFFORDSHIRE	194	203	56 9 7	—	39 14 0	11 19 0	84 4 7	—	4	4	—	3	23	6	——
STIRLING	67	66	12 5 6	—	13 6 0	4 14 4	20 17 2	—	2	2	—	—	16	—	——
ULSTER	358	360	72 7 11	—	55 10 0	72 5 1	55 12 10	—	6	4	2	2	30	5	The Branch united with the Ulster Medical Society to raise a fund to assist Dr. Darnell in paying the legal expenses incurred in the action Tughan v. Darnell, and a sum of £349 11s. 6d. was raised.
WEST SOMERSET	71	74	34 10 2	—	14 12 0	9 6 0	39 16 2	—	4	3	4	2	19	4	——
WORCESTERSHIRE AND HEREFORDSHIRE	126	122	34 11 9	—	24 14 0	8 11 6	50 14 3	—	1	1	1	—	9	2	——
YORKSHIRE	770	736	211 16 0	—	159 4 0	94 18 4	276 1 8	—	3	—	—	3	38	3	A number of medical men in the Barnsley District having petitioned for the formation of a Barnsley Division, and having secured the necessary number of members, the Branch Council agreed to the formation of a new Division of which Barnsley is to be the centre, subject to the approval of the Sheffield Division. The Wakefield and Doncaster Division is still inactive. The Halifax Division has been re-organized. During the year the Bradford and Harrogate Divisions have held joint meetings with the local Medical Societies. The Council regret that owing apparently to a misunderstanding on the part of the General Secretary the invitation of the Bradford Division to the Association to visit Bradford in 1907 was not accepted.

COLONIAL BRANCHES.

BRANCH.	MEMBERSHIP. On December 31st, 1905.	MEMBERSHIP. On December 31st, 1906.	FINANCIAL STATEMENT. Balance from 1905.	Deficit (if any) from 1905.	Receipts for 1906.	Expenditure, 1906.	Balance to 1907.	Deficit (if any) to 1907.	MEETINGS. Branch.	Scientific.	Medico-Political, Ethical, etc.	Occasions when Members dined together.	Average Attendance.	Branch Council.	REPORTS OF PROCEEDINGS AND REMARKS.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.							
BARBADOS	35	35	15 12 3	—	5 0 0	7 0 0	13 12 3	—	—	—	—	—	—	6	The Secretary finds it very difficult to keep in touch with the members in the other Islands of the West Indies. Sir Frederick Treves was entertained at a picnic by the members of the Association on January 12th, 1907. I am sorry to report a decline in the interest and attendance in this Branch of the Association, owing to change of Secretaries and friction between several of the leading members of the Association. The dual system of payment at the Head Office and to the Branch Treasurer leads to great confusion in accounts.
BRISBANE & QUEENSLAND ...	143	147	202 13 5	—	366 16 5	434 6 7	135 3 3	—	11	11	3	—	16	12	—
BRITISH GUIANA	33	35	24 11 5	—	5 4 0	8 16 8½	20 18 8½	—	4	4	—	1	13	5	—
BURMA	41	39	81 12 8 (Rupees 1,214)	—	56 1 0 (Rupees 841)	62 19 6 (Rupees 945)	74 14 2 (Rupees 1,120)	—	—	—	—	—	—	—	—
CAPE OF GOOD HOPE, EASTERN PROVINCE.	88	98	24 5 9	—	22 12 6	44 16 5	2 1 10	—	3	2	3		7	6	The decrease in the number of meetings, which will be still more marked during the Session of 1907, is due to the fact that meetings of the Grahamstown Division have occupied the months since March, and that the Branch has now, as foreshadowed in my last report, shrunk to a body having sole power of election to membership of the B.M.A., having control of the capitation grant of 4s. per head, and offering the possibility of an intermediate Court of Appeal in interpreting the Constitution of the Association. Whether a Branch performing such functions, mainly through its Council, and meeting once a year to elect officers and pass accounts, justifies its organization and existence, is an open question. It may be that South Africa would be better served by the multiplication of Branches than by the granting of greater powers to the Divisions, but our views should be formulated before the Royal Charter fixes anew the present relation of overseas Branches and Divisions. There is good reason to hope that a Transkeian Division, with headquarters at Umtata, may shortly be organized—a proceeding which should be quite feasible, since there are already 9 members of the B.M.A. resident in those territories. It is most desirable that other Divisions should be formed, in order to extend the fundamental principle of the Association, that of Local Government, and to make membership an actual and not merely a potential advantage to residents in the outlying parts of the British area. Port Elizabeth, Graaf-Reinet and Aliwal North suggest themselves as a few out of many possible seats of a new Division. Since the Branch assisted, through the votes of its delegates, Dr. J. Bruce Bays and Dr. R. J. Roulston, at the Bloemfontein Medical Congress, in throwing out the proposal for a medical federation of British South Africa, it is our duty to make a success of the rival scheme, namely, the development of the B.M.A. under a Royal Charter, with a measure of local autonomy granted to a South African Committee.

BRANCH	MEMBERSHIP		FINANCIAL STATEMENT.						MEETINGS.						REPORTS OF PROCEEDINGS AND REMARKS.
	No. December last.	No. December 31st.	Balance (if any) from last year.	Deficit (if any) from last year.	Receipts in 1906.	Expenditure, 1906.	Balance to 1907.	Deficit (if any) to 1907.	Branch.	Scientific.	Medico-Political, Ethical, etc.	Occasions when Members combined together.	Average Attendance.	Branch Council.	
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.							
CAPE OF GOOD HOPE WESTERN PROVINCE	114	110	[illegible]	—	143 6 11	369 4 3	29 0 5	—	11	8	3	1	21	9	The Clinical and Pathological Committee arranged two interesting demonstrations, the one in the New Somerset Hospital, and the other in the Free Dispensary. As has always been the case, much interest was shown by members in general. The work of the session has fallen under three heads of Scientific, Organization and Medico Political. In reference to scientific work, an effort has been made to obtain full discussions of special subjects. Infantile Diarrhœa and Puerperal Fever were taken up in this way. The Presidential address dealt ably with the treatment of Bacterial Disease by Vaccines. Special mention should be made of the papers of Dr. Hugo, of Worcester, and Dr. Collins, of Simonstown. The Branch further fully expressed its views on the subjects of Hygiene and Temperance in their relation to schools, and forwarded to the Education Department its strong conviction of the necessity of training teachers in order that proper instructions might be given in these subjects. In reference to organization work, the session has seen the fruition of work commenced last session. Members of this Branch received a full statement of the views held by different sections of medical opinion, in the form of a printed report of the Organization Committee. At a special meeting this report was considered, and it was decided that we abide by the present constitution. This report proved of considerable value to the other Branches of the B.M.A. in South Africa. The scheme for a South African Medical Association, as drawn up by the Bloemfontein Congress Executive, received the consideration of the Branch. Though approving of a better organization for carrying on Annual Congresses, this Branch opposed the inclusion of Medical Defence and Medical Benevolence in such an organization, as these were departments of work under the new constitution of the B.M.A. These views were represented at the Bloemfontein Congress by two delegates. Adjustment of this Branch to the Central Association is also in process. The B.M.A. submitted for our consideration a scheme for a new constitution under Royal Charter. Suggested amendments suited to our requirements were in turn submitted to the Central Council by this Branch. The subscriptions of the Branch have been raised to £3 3s. 0d. for Peninsula members, £1 15s. 6d. for Branch area members outside Peninsula. No increase to attached members. The idea was to make this compulsory. At present it is done under item of Special Privileges, and is voluntary. We are in process of equipping permanent rooms as a Library.
COLOMBO, CEYLON	134	148	1 15 4	—	42 19 2	38 15 9	11 18 9	—	11	10	1	1	14	2	——
GIBRALTAR	36	33	—	—	6 10 0	0 10 9	5 19 3	—	4	3	—	2	12	3	It is somewhat difficult to keep track of members, as many are in the Army and Navy and are being constantly transferred. Re Financial Statement, the Peseta Account is not converted because exchange has varied from 33 pesetas to the pound sterling to as low as 26 pesetas. I am not quite sure of figures for capitation grant, but the balance in my hands on December 31st was as stated.
GRIQUALAND WEST	103	103	43 12 5	—	21 9 6	16 3 2	48 18 9	—	8	6	2	—	8	—	For so small a local body (18 members within possible reach) the season was very successful, and members worked well to make the scientific evenings of value.

BRANCH.	MEMBERSHIP.		FINANCIAL STATEMENT.						MEETINGS.					REPORTS OF PROCEEDINGS AND REMARKS.
	On December 31st, 1905.	On December 31st, 1906.	Balance from 1905.	Deficit (if any) from 1905.	Receipts for 1906.	Expenditure, 1906.	Balance to 1907.	Deficit (if any) to 1907.	Branch.	Scientific.	Medico Political, Ethical, etc.	Occasions when Members dined together.	Average Attendance.	Branch Council.	
HONG KONG	91	108	£ s. d. $433 17/6	£ s. d. —	£ s. d. $162 50/100	£ s. d. $54 87/100	£ s. d. $647 99/100	£ s. d. —	5	5	—	—	18	3	The question of reciprocity of practice was dealt with, and a resolution passed. However, the Medical Board of the Colony would not agree to it, so the matter has dropped.
NATAL	91	94	125 9 4	—	115 17 4	108 11 1	132 15 7	—	1	—	1	—	9	2	The Durban expenses are greater than those of the Pietermaritzburg Division. This is due principally to the fact that the Durban Division print an annual report and list of Members. This list is of considerable help in locating members, and if I may suggest it, I think would be an advantage if the Maritzburg Division also printed an annual report. The main point occupying the attention of the Branch was the question of Government District Surgeons travelling charges to private cases. The Agricultural Union moved the Government to fix a minimum rate. This the Medical Council and the Branch strongly objected to, as being wrong in principle. Government wished to make it a condition of the engagement between it and the District Surgeons that a certain rate should not be exceeded. Ultimately a referendum was made to the profession by the Branch, and the resulting verdict of what should constitute a minimum was communicated to Government and accepted by it; but the rate agreed to should not appear in the letters of appointment. Professional fees are not included in the rate—only mileage when travelling being dealt with. The reason why so few meetings were held was the advent of our native rebellion, which disorganized us.
SOUTH AUSTRALIAN	151	142	* 33 19 4	—	326 7 9	281 4 11	234 2 2	—	—	—	—	—			Several papers of a scientific nature have been read by the members of the Branch. A special meeting has been held to discuss the proposed Medical Bill. *This contains other subscriptions in excess of capitation grants.
SOUTH INDIAN AND MADRAS	142	141	94 2 0 (Rupees 1,429)	—	142 4 8 (Rupees 2,116)	231 10 4 (Rupees 3,473)	4 16 0 (Rupees 72)	—	6	6	—	—	13	1	The Branch sustained a loss of Rs. 1,627 (£109) owing to the failure of their Bankers, Messrs. Arbuthnot & Co., Madras.
SYDNEY AND NEW SOUTH WALES	501	532	*301 1 3	—	1,109 13 0	1,087 3 11	623 10 4	—	10	8	2		—	12	Copy of the Report of Council promised, together with Treasurer's Statement. * This contains other subscriptions in excess of capitation grants.
WEST AUSTRALIAN	65	65	49 8 0	—	107 3 6	92 11 2	64 0 4	—	—	—	—	—	—	—	Officers only recently appointed and are therefore unable to supply any report this year.

ATTENDANCES OF COUNCIL, COMMITTEES, AND SUBCOMMITTEES FOR 1906-7.

COUNCIL.

Members of Council.	July 24 1906.	July 25, 1906	July 26, 1906.	July 27, 1906	July 28, 1906	Oct 24, 1906	Jan. 23, 1907	April 17, 1907	Total.
Reeve, Professor R. A., M.D. Toronto (President)	–	–	–	–	–	–	–	–	–
Davy, Dr. Henry, Exeter (President-elect) ...	–	–	–	–	–	1	1	1	3
Franklin, G. C., LL.D., F.R.C.S., Leicester (Past-President)	–	–	–	–	–	1	1	1	3
Macdonald, Dr. J. A., Taunton (Chairman of Representative Meetings)	–	1	1	1	1	1	1	1	7
Browne, Dr. H. Langley, LL.D., West Bromwich (Chairman of Council)	1	1	1	1	1	1	1	1	8
Crocker, Dr. H. Radcliffe, London (Treasurer)..	1	1	1	–	–	1	1	1	6
Anderson, Dr. John Ford, London	1	–	1	1	1	1	1	1	7
Ballance, H. A., Esq., M.S., Norwich	1	1	1	1	1	1	1	1	8
Barnes, Dr. E. G., Eye	–	–		–	–	1	1	1	3
Biden, Fleet Surgeon E. J., R.N., Fareham, Representative of the Royal Navy Medical Service	1	1	1	–	–	1	1	1	6
Bradshaw, Dr. T. R., Liverpool	1	1	1	–	1	–	1	1	6
Brierley, Dr. J., Brassey, Old Trafford	1	1	1	–	–	–	–	1	4
Bruce, Colonel David, C.B., F.R.S., London (Cape of Good Hope (Eastern Province) and (Western Province) Branches)	–	–	–	–	–	–	–	1	1
Buist, Dr. R. C., Dundee	–	–	–	–	–	1	1	–	2
Byers, Professor Sir J. W., Belfast	1	1	1	–	–	–	–	–	3
Carline, Dr. W. A., Lincoln	1	1	1	1	–	1	1	1	7
*Clark, Andrew, Esq., D.Sc., F.R.C.S., London	–	1	1	–	1	1	1	1	6
Colbeck, Dr. E. H., London (New Zealand Branch)	–	–	–	–	–	–	–	–	–
*Collier, Dr. William, Oxford	–	–	–	–	–	–	1	–	1
Craig, Dr. James, Dublin	1	1	1	1	1	1	1	1	8
Cuthbert, C. F., Esq., Gloucester	–	–	–	–	–	1	1	1	3
Domville, E. J., Esq., Exeter	–	1	1	1	1	1	1	1	7
Drake-Brockman, Lieutenant-Colonel E. F., I.M.S. (retired), London (Colombo and South Indian and Madras Branches)	1	1	1	1	1	1		1	7
Eastes, George, Esq., M.B., London	–	–	1	–	1	1	1	1	5
Finlay, Professor David W., M.D., LL.D., Aberdeen	–	–	–	–	–	1	–	1	2
Fox, Dr. Edward Lawrence, Plymouth ...	1	1	1	–	–	1	1	1	6
Francis, Dr. H. A., London (Brisbane and Queensland Branch)	1	1	–	–	1	–	–	1	4
Galton, Dr. J. H., Upper Norwood	1	1	1	1	1	1	1	1	8
Giusani, Dr. Joseph J., Cork	1	1			–	–	1		3
Goff, Dr. Bruce, Bothwell, N.B.	1	1	1	1	1	1	1	1	8
Goyder, Dr. D., Bradford	1	1	1	1	1	1	1	–	7
Groves, Dr. J., Carisbrooke	1	1	1	1	1	1	1	1	8
Hamilton, Dr. James, Glasgow	1	1	1	1	1	–	1	1	7
Haslip, Dr. G. E., London	1	1	1	1	1	1	1	1	8
Helme, Dr. T. Arthur, Manchester	1		1					1	3
Horsley, Sir Victor, LL.D., F.R.S., London ...	1	1	1	1	1	1	1	–	7
Hunter, Dr. J. H., South Shields	–	1	1	–	–	1	1	–	4
Johnston, Dr. R. McKenzie, Edinburgh ...	1	1	1	–	–	1	1	1	6
Jones, Lieutenant-Colonel G. Carleton, A.M.S. (Halifax and Nova Scotia Branch)	–	–	–	–	–	–	–	–	–
Joubert de la Ferté, Colonel C. H., I.M.S. (retired), Woolridge Representative of the Indian Medical Service)	–					1	1	1	3
Kinsey, R. H., Esq., Bedford	1	1	1	1	1	1	1	1	8
Marriott, Dr. C. W., Reading	–				–	1			1
Martin, Dr. C. J., F.R.S., London (Sydney and New South Wales Branch)	–	–	–	–	–	1	–	–	1
Mercier, Dr. C. G. D., London (South Australian and West Australian Branches)						1	1		2
Morrison, Professor J. T. J., Birmingham ...	1	1	1	1		1	1		6
Murray, Dr. J., Inverness	1	1	1	1		1		1	6
Scharlieb, Dr. T. G., Cupar, Fife	1	1	1	1	1	1	1		7
*Sibley, Edmund, Esq., LL.D., F.R.C.S., London						1	1	1	3
Parkinson, C. H. W., Esq., Wimborne ...	1	1	1	1	1	1	1	1	8
Parsons, Dr. P. H., London (Victorian Branch)						1	1	1	3
Payne, Dr. F. M., Leicester	1	1	1			1	1	1	6
Rayner, Dr. Edwin, Stockport	1	1	1		1	1	1	1	7
Reid, Dr. Alex., Aberdeen (Hong Kong Branch)									
Roberts, H. Jones, Esq., Penygroes ...	1	1	1	1	1	1	1		7
Rose, Sir T. Mackenzie, Durham						1	1		2
*Sanderson, Professor Robert, M.D., LL.D., Burnham						1	1	1	3
Shepherd, Dr. St. Clair B., Williamstown ...	1	1	1		1	1	1	1	7
Shore, Dr. Cecil E., Bristol	1	1	1				1	1	6
Simpson, Dr. F. Markham, Bristol	1	1	1		1	1	1	1	7
Smith, Professor W. R., M.D., London (Malta and Mediterranean Branch)	1	1	1	–	1	1		1	6
Spanton, W. D., Esq., Hanley	1	1	1			1	1		5
Spencer, R. J., F.R.C.S., Guernsey	1	1	1	1	1	1	1	1	8
Stephens, Lieutenant-Colonel J. K., C.B., F.R.C.S., Cardiff	1		1	1		1	1	1	7
Taylor, Dr. C. E., London (Sydney and New South Wales Branch)							1		1
Thomas, Dr. S. J. F., London			1			1		1	3
Thomson, T. Jeffery, Esq., London				1			1	1	3
Tooth, Professor H. H., F.R.C.S., London ...					1	1	1	1	4
Turner, Professor W., M.B., F.R.S., Edinburgh	1	1							4
Twynam, Dr. G. E., London (Sydney and New South Wales Branch)			1	1	1	1	1	1	7
Vaughan, F. A. L., Chepstow						1	1	1	3
Wade, Dr. H., London	1	1				1	1	1	5
Walker, Dr. J. J., F.R.C.S., Lancaster ...	1	1	1	1		1		1	6
Woodhouse, Lieutenant-Colonel M. C. R., C.M.G., Royal Engineers, Representative of the Army Medical Service						1	1	1	3

* Co-opted members.

REPRESENTATIVES OF THE COLONIAL BRANCHES ON THE COUNCIL.

Members of Committee.	Oct 24 1906	Total.
Smith, Professor W. R., M.D., London (Malta and Mediterranean Branch) (Chairman)	1	1
Bruce, Colonel David, C.B., F.R.S., London (Cape of Good Hope (Eastern Province) and (Western Province) Branches	1	1
Colbeck, Dr. E. H., London (New Zealand Branch)	1	1
Drake-Brockman, Lieutenant-Colonel E. F., I.M.S. (retired), London, (Colombo, and South Indian and Madras Branches)	–	–
Francis, Dr. H. A. London (Brisbane and Queensland Branch)	1	1
Martin, Dr. C. J., F.R.S., London (Sydney and New South Wales Branch)	–	–
Morier, Dr. C. G. D., London (South Australian and West Australian Branches)	1	1
Parsons, Dr. P. H., London (Victorian Branch) ..	1	1
Rennie, Dr. Alex., Aberdeen (Hong Kong Branch) ...	–	–
Twynam, Dr. G. E. London (sydney and New South Wales Branch)	–	–

ARRANGEMENTS COMMITTEE.

Members of Committee.	Oct 24 1906	Jan. 23, 1907	Total.
Chairman of Council (*ex officio*) (Chairman)	1	–	1
President (*ex officio*)	–	–	–
Chairman of Representative Meetings (*ex officio*) ...	–	–	–
Treasurer (*ex officio*)	1	1	2
Craig, Dr. James, Dublin	–	–	–
Eastes, George, Esq., M.B., London	1	1	2
Galton, Dr. J. H., Upper Norwood	1	1	2
Johnston, Dr. R. McKenzie, Edinburgh	1	1	2
Parkinson, C. H. W., Esq., Wimborne	1	1	2
Thomas, John Lynn, Esq., C.B., F.R.C.S., Cardiff ...	–	–	–
Local Members:			
Davy, Dr. Henry, Exeter	–	1	1
Deas, Dr. P. Maury, Exeter	–	1	1
Domville, E. J., Esq., Exeter...	–	1	1
Fox, Dr. E. L., Plymouth	–	1	1
Jackson, George, Esq., F.R.C.S., Plymouth	–	1	1
Tosswill, Leonard R., Esq., Exeter	–	1	1

CHLOROFORM COMMITTEE.

Members of Committee.	Oct 24 1906	Total.
Crocker, Dr. H. Radcliffe, London (Chairman) ..	1	1
President (*ex officio*)		
Chairman of Representative Meetings (*ex officio*) ...		
Chairman of Council (*ex officio*)		
Barr, Sir James, M.D., Liverpool		
Brodie, Dr. T. G., F.R.S., London	1	1
Buxton, Dr. Dudley, London	1	1
Dunstan, Professor, F.R.S., London		
Harcourt, Professor Vernon, Ryde	1	1
Horsley, Sir Victor, LL.D., F.R.S., London		
McCardie, Dr. W. J., Birmingham		
Martin, Dr. C. J., F.R.S., London		
Rowell, George, Esq., F.R.C.S., London		
Sherrington, Professor C. S., F.R.S., Liverpool ...		

COLONIAL COMMITTEE.

Members of Committee.	Oct. 24 1906	Total.
Mercier, Dr. C. G. D., London (Chairman)	1	1
President (*ex officio*)	–	
Chairman of Representative Meetings (*ex officio*)	–	
Chairman of Council (*ex officio*)	1	1
Treasurer (*ex officio*)	–	
Armour, Donald J., F.R.C.S., London	1	1
Bruce, Colonel David, C.B., F.R.S., London		
Colbeck, Dr. E. H., London		
Scanlan, Professor W. R., M.D., London	1	1
Stratton, C. R., Esq., F.R.C.S., Salisbury	1	1
Twynam, Dr. G. E., London	1	1

ETHICAL COMMITTEE.

Members of Committee.	Oct. 12, 1906.	Jan. 11, 1907.	April 5, 1907.	Total.
Kinsey, R. H., Esq., Bedford (Chairman)	1	1	1	3
President (*ex officio*)				
Chairman of Representative Meetings (*ex officio*) ...			1	1
Chairman of Council (*ex officio*)				
Treasurer (*ex officio*)				
Anderson, Dr. John Ford, London	1	1	1	3
Armit, H. W., Esq., Wembley...	1	1	1	3
Bateman, Dr A. G., London	1	1		2
Broadbent, G. H., Esq., Manchester	1	1	1	3
Goff, Dr. Bruce, Bothwell	1	1	1	3
Langdon-Down, Dr. R. L., Hampton Wick	1	1	1	3
Maclean, Dr. E. J., Cardiff	1	1	1	3
Messiter, M. A., Esq., Dudley	1			1
Spanton, W. D., Esq., F.R.C.S., Hanley	1		1	2

ETHICAL SUBCOMMITTEE.

Members of Subcommittee.	Nov. 12, 1906	Dec. 17, 1906	Feb 11, 1907	Mar 11, 1907	Mar. 25, 1907	Total.
Kinsey, R. H., Esq., Bedford (Chairman)	1	1	1	1	1	5
Anderson, Dr. John Ford, London	1	1	1	1	1	5
Armit, H. W., Esq., Wembley...	1	1	1	1	1	5
Bateman, Dr. A. G., London	1	1	1	1	1	5
Langdon-Down, Dr. R. L., Hampton Wick	1	1	1	—	1	4

HOSPITALS COMMITTEE.

Members of Committee.	Oct. 11, 1906.	Nov. 15, 1906.	Jan. 10, 1907.	Feb 28, 1907.	Total.
†Pope, Dr. F. M., Leicester (Chairman)	1	1	1	1	4
President (*ex officio*)					
Chairman of Representative Meetings (*ex officio*) ...					
†Chairman of Council (*ex officio*)	1				1
Treasurer (*ex officio*)...					
†Anderson, Dr. John Ford, London	1	1	1	1	4
Carline, Dr. W. A., Lincoln	1	1	1	1	4
Collier, Dr. William, Oxford		1	1	1	3
Fox, Dr. E. Lawrence, Plymouth	1	1	1		3
Giusani, Dr. Joseph J., Cork	1				1
Hamilton, Dr. James, Crosshill, Glasgow	1	1	1	1	4
Hamilton, Dr. John Rogerson, Hawick	1	1	1	1	4
Hastings, Dr. E. B., London		1	1	1	3
*Horder, T. Garrett, Esq., Cardiff				1	1
White, E. F., Esq., F.R.C.S., London	1	1	1	1	4

* Added January, 1907, in place of Dr. Beverley (resigned).
†Attended Conference re Hospital Sunday Fund Charter, held on November 5th, 1906.

IRISH COMMITTEE.

Members of Committee.	Oct. 13, 1906.	Jan. 5, 1907.	Total.
Craig, Dr. James, Dublin (Chairman)	1	1	2
President (*ex officio*)			
Chairman of Representative Meetings (*ex officio*) ...			
Chairman of Council (*ex officio*)			
Treasurer (*ex officio*)			
Byers, Professor Sir J. W., M.D., Belfast	1		1
Carey, Dr. R. B. Borris, co. Carlow	1	1	2
Cooke, Dr. J. G., Londonderry	1	1	2
Darling, Dr. J. S., Lurgan	1	1	2
Giusani, Dr Joseph J., Cork	1		1
Kenny, Dr. J. M., Granard	1	1	2
Lee, Dr. Philip G., Cork	1	1	2
O'Connor, Dr. D. J., Cork	1	1	2
Quirke, Dr. James, Piltown	1	1	2
Shaw, Dr. Cecil E., Belfast	1	1	2
Walshe, Dr. Denis, Graigue	1		1
White, Professor A. H., Dublin (Honorary Secretary)	1	1	2

JOURNAL AND FINANCE COMMITTEE.

Members of Commitee.	Oct. 8, 1 0s.	Oct. 17, 1906	Jan. 16, 1907	Feb. 27, 1907	April 10, 1907.	Total.
Chairman of Council (*ex officio*) (Chairman)	1	1	1	1	1	5
President (*ex officio*)						
Chairman of Representative Meetings (*ex officio*) ..	1	1	—	—	1	3
Treasurer (*ex officio*)	1	1	1	1	1	5
Clark, Andrew, Esq., F.R.C.S., London	1	1	—	—	1	3
Eastes, George, Esq., M.B., London	1	1	1	1	1	5
Galton, Dr. J. H., Upper Norwood	1	1	1	1	1	5
Groves, Dr. J., Carisbrooke	1	1	1	1	1	5
Horsley, Sir Victor, LL.D., F.R.S., London	1	1	1	1	—	4
Johnston, Dr. R. McKenzie, Edinburgh	1	1	—	1	1	4
Kinsey, R. H., Esq., Bedford	1	1	1	1	1	5
Parkinson, C. H. W., Esq., Wimborne	1	1	1	1	1	5
Rayner, Dr. Edwin, Stockport	1	1	1	1	1	5
Skerritt, Dr. E. Markham, Bristol	1	1	—	1	1	4
Thomas, John Lynn, Esq., C.B., F.R.C.S., Cardiff ...	—	—	1	1	1	3

KING EDWARD'S HOSPITAL FUND BILL COMMITTEE.

Members of Committee.	Feb 14th 1907.	Total.
Chairman of Representative Meetings (Chairman) ...	1	1
Chairman of Council (*ex officio*)	1	1
Anderson, Dr. John Ford, London	1	1
Armit, H. W., Esq., Wembley...	1	1
Haslip, Dr. G. E., London	1	1
McManus, Dr. L. S., London	1	1
Owen, Edmund, Esq., F.R.C.S., London	1	1
Pope, Dr. F. M., Leicester	1	1
Shaw, Dr. Lauriston E., London	1	1

MEDICO-POLITICAL COMMITTEE.

Members of Committee.	Oct. 10 1906.	Jan 9, 1907	Mar 27, 1907	Total.
Chairman of Representative Meetings (Chairman) ...	1	1	1	3
President (*ex officio*)				
Chairman of Council (*ex officio*)				
Treasurer (*ex officio*)	1	1	1	3
Armit, H. W., Esq., Wembley	1	1	1	3
Haslip, Dr. G. E., London	1	1	1	3
Helme, Dr. T. Arthur, Manchester		1	—	1
Hunter, Dr. J. H., South Shields		1	—	1
Jackson, George, Esq., F.R.C.S., Plymouth	1	1	1	3
Latimer, Dr. H. A., Swansea	1	1	1	3
McManus, Dr. L. S., London				
Oldham, Dr. H. F., Morecambe				
Parkinson, C. H. W., Esq., Wimborne	1	1	1	3
Robertson, Dr. C. E., Glasgow	1	1	—	2
Shaw, Dr. Cecil E., Belfast	1	1	—	2
Straton, C. R., Esq., F.R.C.S., Salisbury	1	1	1	3

CONTRACT PRACTICE SUBCOMMITTEE.

Members of Subcommittee.	Nov 7, 1906.	Dec 19, 1906	Feb 14, 1907.	Total.
Chairman of Representative Meetings (Chairman) ...	1	1	1	3
Hunter, Dr. J. H., South Shields				
Jackson, Mr. George, F.R.C.S., Plymouth	—	—	1	1
Latimer, Dr. H. A., Swansea	1	1		2
McManus, Dr. L. S., London	1	1	1	3
Robertson, Dr. C. E., Glasgow	1	1	1	3
Straton, C. R., Esq., F.R.C.S., Salisbury With—	1	1	1	3
Ballance, H. A., Esq., M.S., Norwich...	1	1	—	2
Greer, W. J., Esq., Monmouth	1	1	—	2
MacKeith, Dr. A. A., Southampton	1	1	1	3
Nash, E. H. T., Esq., Accrington ... ... With—	1	1		2
Kinsey, R. H., Esq., Bedford	1	1	—	2
Broadbent, G. H., Esq., Manchester	1	1	1	3

ORGANIZATION COMMITTEE.

Members of Committee.	Oct. 9, 1906.	Nov. 6, 1906.	Dec. 11, 1906.	Jan. 8, 1907.	Feb. 12, 1907.	Mar. 19, 1907.	April 9, 1907.	Total.
Verrall, T. Jenner, Esq., Brighton (Chairman) ...	1	1	1	1	1	1	1	7
President (*ex officio*) ...								
Chairman of Representative Meetings (*ex officio*) ...	1	1	1	—	1	—	—	4
Chairman of Council (*ex officio*) ...	—	—	—	1	—	—	—	1
Treasurer (*ex officio*) ...								
Bellamee, H. A., Esq., Norwich ...	1	1	1	1	1	1	—	6
Clark, Andrew, Esq., F.R.C.S., London ...	1	1	—	1	—	1	1	5
Cox, Dr. Alfred, Gateshead ...	1	1	1	1	1	1	—	6
Horsley, Sir Victor, LL.D., F.R.S., London ...	—	—	—	—	1	—	—	1
Kirby, Dr. E. D., Eaglescliffe ...	1	1	1	1	1	1	1	7
Morrison, Professor J. T. J., Birmingham ...	1	1	1	1	1	1	1	7
Rayner, Dr. Edwin, Stockport ...	1	—	1	1	1	1	—	6
Webb, F. E. A., Esq., Cambridge ...	1	1	1	—	—	1	1	5
White, Professor A. H., Dublin ...	1	1	1	1	—	1	—	5

POOR-LAW SPECIAL COMMITTEE.

Members of Committee.	Jan 16, 1907.	Total.
Chairman of Representative Meetings (Chairman) ...	1	1
President (*ex officio*) ...		
Chairman of Council (*ex officio*) ...		
Treasurer (*ex officio*) ...		
Anderson, Dr. J. Ford, London ...	1	1
Brierley, Dr. J. Brassey, Old Trafford ...		
Buist, Dr. R. C., Dundee ...	1	1
Darling, Dr. J. S., Lurgan ...		
Jones, Herbert, Esq., Hereford ...	1	1
Manley, Dr. Herbert, Wednesbury ...	1	1
Morrison, Dr. J. E., Stirling ...	1	1
Muir, Dr. W. L., Glasgow ...	1	1
Oldham, Dr. H. F., Manchester ...	—	—
Parkinson, C. H. W., Wimborne ...	1	1
Shaw, Dr. Cecil E., Belfast ...	—	—
Stratton, C. R., Esq., F.R.C.S., Salisbury ...	1	1
White, Professor A. H., Dublin ...	—	—

POOR-LAW (ENGLISH) SUBCOMMITTEE.

Members of Subcommittee.	Nov. 28, 1906.	Jan 15, 1907.	Total.
Chairman of Representative Meetings (Chairman) ...	1	1	2
Anderson, Dr. J. Ford, London ...	1	1	2
Jones, Herbert, Esq., Hereford ...	1	1	2
Parkinson, C. H. W., Wimborne ...	1		1
Shaw, Dr. Cecil E., Belfast ...	1		1
Stratton, C. R., Esq., F.R.C.S., Salisbury ...	1	1	2
Manley, Dr. Herbert, Wednesbury ...		1	1

PREMISES COMMITTEE.

Members of Committee.													Total.
Cecil, Arthur, Esq., F.R.C.S., London (Chairman) ...									1	1	1	1	4
President (*ex officio*) ...													
Chairman of Representative Meetings (*ex officio*) ...													
Chairman of Council (*ex officio*) ...									1	—	1	1	3
Treasurer (*ex officio*) ...													
Anderson, Dr. J. Ford, London ...									1	1	1	1	4
Brierley, Dr. J. Brassey, Old Trafford ...													
Buist, Dr. R. C., Dundee ...									1	1	1	1	4
Darling, Dr. J. S., Lurgan ...													
Jones, Herbert, Esq., Hereford ...									1	1	1	1	4
Manley, Dr. Herbert, Wednesbury ...									1	1	1	1	4
Morrison, Dr. J. E., Stirling ...									1	1	1	1	4
Muir, Dr. W. L., Glasgow ...									1	1	1	1	4
Oldham, Dr. H. F., Manchester ...													
Parkinson, C. H. W., Wimborne ...									1	1	1	1	4
Shaw, Dr. Cecil E., Belfast ...													
Stratton, C. R., Esq., F.R.C.S., Salisbury ...									1	1	1	1	4
White, Professor A. H., Dublin ...													
Morrison, Dr. J. E., Stirling ...										1	1	1	3

PUBLIC HEALTH COMMITTEE.

Members of Committee.	Oct. 2, 1906.	Jan. 8, 1907.	Mar. 26, 1907.	Total.
Parkinson, C. H. W., Esq., Wimborne (Chairman) ...	1	1	1	3
President (*ex officio*) ...				
Chairman of Representative Meetings (*ex officio*) ...				
Chairman of Council (*ex officio*) ...		1		1
Treasurer (*ex officio*) ...				
Barnes, Dr. Edgar, Eye ...	1	1	1	3
Goyder, Dr. David, Bradford ...	1	1	1	3
Groves, Dr. J., Carisbrooke ...	—	1	1	2
Jones, Herbert, Esq., Hereford ...	1	1	1	3
Martley, Dr. F. C., Dublin ...	1	1	1	3
Nasmyth, Dr. T. G., Cupar ...	1	1	1	3

SCIENCE COMMITTEE.

Members of Committee.	Jan. 8, 1907.	Total.
Walker, Dr. Norman, Edinburgh (Chairman) ...	1	1
President (*ex officio*) ...		
Chairman of Representative Meetings (*ex officio*) ...		
Chairman of Council (*ex officio*) ...		
Treasurer (*ex officio*) ...	1	1
Barr, Sir James, M.D., Liverpool ...		
Bruce, Colonel D., C.B., F.R.S., London ...	1	1
Buist, Dr. R. C., Dundee ...	1	1
Clark, Andrew, Esq., F.R.C.S., London ...	1	1
Helme, Dr. T. Arthur, Manchester ...	1	1
Martin, Dr. C. J., F.R.S., London ...	1	1
Morrison, Professor J. T. J., M.B., Birmingham ...		
Pope, Dr. F. M., Leicester ...	1	1
Robinson, H. Betham, Esq., M.S., London ...	1	1
Shaw, Dr. Cecil E., Belfast ...	1	1
White, Dr. Sinclair, Sheffield ...	1	1

SCOTTISH COMMITTEE.

Members of Committee.	Oct. 3, 1906.	Total.
Coats, Dr. Bruce, Bothwell (Chairman) ...	1	1
President (*ex officio*) ...		
Chairman of Representative Meetings (*ex officio*) ...		
Chairman of Council (*ex officio*) ...		
Treasurer (*ex officio*) ...		
Andrew, Dr. J. Cowan, Glasgow ...		
Boyd, Dr. F. D., Edinburgh ...		
Buist, Dr. R. C., Dundee ...	1	1
Christie, Dr. J. F., Aberdeen ...		
Fleming, Professor D. W., M.D., LL.D., Aberdeen ...		
Fraser, Dr. J., Aberdeen ...		
Graham, Dr. R. Balfour, Fife ...		
Hamilton, Dr. James, Cromhall, Glasgow ...	1	1
Hill, Dr. E. F., Cupar-Fife ...		
Johnston, Dr. R. M., Edinburgh ...	1	1
Low, Dr. A. F., Dundee ...	1	1
Mann, Dr. J. Munro, Inverness ...		
Manson, Dr. J. Sterling (Honorary Secretary) ...	1	1
Murray, Dr. J., Inverness ...	1	1
Nasmyth, Dr. T. G., Cupar-Fife ...		
Ross, Dr. J. Mackay, Pennyfuir ...	1	1
Stirling, Dr. C. C., Coatbridge ...		
Taylor, Dr. W. A., Perth ...		
Tedder, Dr. A., Perth ...		
Turner, Dr. A. Logan, Edinburgh ...	1	1
Walker, Dr. Norman, Edinburgh ...	1	1

INCOME TAX SUBCOMMITTEE.

Members of Subcommittee.	Total.
Armit, H. W., Esq., Wembley	
Jackson, George, Esq., F.R.C.S., Plymouth	

JOINT SUBCOMMITTEE OF BRITISH DENTAL ASSOCIATION AND BRITISH MEDICAL ASSOCIATION.

Members of Subcommittee.	Total.
Armit, H. W., Esq., Wembley	
Haslip, Dr. G. E., London	
McManus, Dr. L. S., London	
With—	
Horsley, Sir Victor, LL.D., F.R.S., London	

JOINT SUBCOMMITTEE OF THE OPHTHALMOLOGICAL SOCIETY AND BRITISH MEDICAL ASSOCIATION.

Members of Subcommittee.	Total.
Armit, H. W., Esq., Wembley	
Haslip, Dr. G. E., London	
Shaw, Dr. Cecil E., Belfast	

LUNACY SUBCOMMITTEE.

Members of Subcommittee.	Nov. 28, 1906	Total.
Straton, C. R., Esq., F.R.C.S., Salisbury (Chairman)...	1	1
Chairman of Representative Meetings (*ex officio*) ...	1	1
McManus, Dr. L. S., London	—	—
With—		
Buist, Dr. R. C., Dundee	1	1
Douglas, Dr. W., Goudhurst	1	1
Langdon-Down, Dr. R. L., Hampton Wick	1	1
With—		
Bower, Dr. David, Bedford	1	1
Savage, Dr. G. H., London	1	1
White, Dr. Ernest W., London	1	1

MEDICAL WITNESSES SUBCOMMITTEE.

Members of Subcommittee.	Nov. 28, 1906	Jan. 9, 1907.	Total.
Straton, C. R., Esq., F.R.C.S., Salisbury (Chairman)...	1	1	2
Chairman of Representative Meetings (*ex officio*) ...	1	1	2
Parkinson, C. H. W., Esq., Wimborne	1	1	2
With—			
Barnes, Dr. Henry, LL.D., Carlisle	—	—	—
Hardy, H. Nelson, Esq., F.R.C.S., London	1	1	2
Whitehouse, Dr. W. H., Birmingham	1	1	2

MIDWIVES SUBCOMMITTEE.

Members of Subcommittee.	Oct. 24, 1906	Total.
Chairman of Representative Meetings (*ex officio*) (Chairman)	1	1
Helme, Dr. T. Arthur, Manchester	1	1
Hunter, Dr. J. H., South Shields	1	1
McManus, Dr. L. S., London...	1	1
With—		
Buist, Dr. R. C., Dundee	—	—
Fothergill, Dr. E. Rowland, Liverpool	—	—
Maclean, Dr. E. J., Cardiff	—	—

PARLIAMENTARY SUBCOMMITTEE.

Members of Subcommittee	Oct. 24, 1906	Dec. 12, 1906	Mar. 15, 1907	Total.
McManus, Dr. L. S., London (Chairman) ...	1	1	—	2
Chairman of Representative Meetings (*ex officio*) ...	1	1	1	3
Armit, H. W., Esq., Wembley	1	1	1	3
Haslip, Dr. G. E., London	1	1	1	3
Helme, Dr. T. Arthur, Manchester	—	—	—	—
Jackson, George, Esq., F.R.C.S., Plymouth	—	—	1	1
Oldham, Dr. H. F., Morecambe	—	—	—	—
Parkinson, C. H. W., Esq., Wimborne	1	1	1	3
Shaw, Dr. Cecil E., Belfast	1	1	1	3
Straton, C. R., Esq., F.R.C.S., Salisbury	1	1	1	3
With—				
Buist, Dr. R. C., Dundee	1	1	1	3
Horsley, Sir Victor, LL.D., F.R.S., London	1	1	1	3

PUBLIC MORALITY SUBCOMMITTEE.

Members of Subcommittee.	Total.
Armit, H. W., Esq., Wembley...	
Haslip, Dr. G. E., London	
With	
Horder, T. Garrett, Esq., Cardiff ...	

NAVAL AND MILITARY COMMITTEE.

Members of Committee.	Nov. 28, 1906	Feb. 6, 1907	Mar. 20, 1907.	Total.
Joubert de la Ferté, Colonel C. H., I.M.S. (ret.), Weybridge (Representative of the I.M.S.) (Chairman)	1	1	1	3
President (*ex officio*)	—			
Chairman of Representative Meetings (*ex officio*)	—			
Chairman of Council (*ex officio*)	1			1
Treasurer (*ex officio*)	—			
Biden, Fleet Surgeon E. J., R.N., Fareham (Representative of the Royal Navy Medical Service)	1	1	1	3
Bruce, Colonel D., C.B., F.R.S., London	1	1	1	3
Curme, Surgeon Lieut.-Colonel [illegible], Blandford	1	1	1	3
Elliston, Surgeon Colonel G. S., V.D., Aberdeen	1	1	1	3
Evatt, Surgeon Lieut.-General G. H., C.B., London	1	1	1	3
Wilson, Lieut.-Colonel E. M., C.B., M.S., Farnborough (Representative of the A.M.S.) ...	1	1	—	2

SCOTTISH POOR-LAW SUBCOMMITTEE.

Members of Subcommittee.	April 20, 1907.	Total.
Buist, Dr. R. C., Dundee (Chairman)	1	1
Balfour, Dr. Andrew, Portobello	—	—
Campbell, Dr. G., Partick	1	1
Core, Dr. W., Glasgow	1	1
Johnston., Dr. J. McC., Glasgow	1	1
Moorhouse, Dr. J. E., Stirling	1	1
Muir, Dr. W. L., Glasgow	1	1
Sloan, Dr. A. T., Edinburgh	—	—
Trotter, Dr. A., Perth...	1	1

SPECIAL FINANCE INQUIRY COMMITTEE.

Members of Committee.	Oct. 9, 1906.	Nov. 6, 1906.	Dec. 11, 1906.	Feb. 12, 1907.	Mar. 19, 1907.	Total.
Chairman of Representative Meetings (Chairman) ...	1	1	1	1	—	4
President (*ex officio*)	—	—	—	—	—	—
Chairman of Council (*ex officio*)	—	1	—	—	—	1
Treasurer (*ex officio*)	1	1	1	1	1	5
Armit, H. W., Esq., Wembley...	1	1	1	1	1	5
Baltance, H. A., Esq., M.S., Norwich	1	1	1	1	1	5
Cox, Dr. Alfred Gateshead	1	1	1	1	1	5
Horsley, Sir Victor, L.L.D., F.R.S., London ...	1	—	1	1	1	4
Langdon-Down, Dr. R. L., Hampton Wick	1	1	1	1	1	5
McManus, Dr. L.S., London	1	1	1	1	—	4
Wolstenholme, Dr. R. H., Salford	1		1	1	—	3

THERAPEUTIC COMMITTEE.

Members of Committee.	Oct. 13, 1906.	Feb. 2, 1907.	Mar. 27, 1907.	Total.
Tirard, Dr. Nestor, London (Chairman)	1	1	1	3
President (*ex officio*)				
Chairman of Representative Meetings (*ex officio*) ..	—	—	—	—
Chairman of Council (*ex officio*)	—	—	—	—
Treasurer (*ex officio*)				
Bradbury, Dr. J. B., Cambridge	1	—	1	2
Brunton, Dr. T. L. B., London	1	1	1	3
Cassidy, Dr. Raymond, London	1	1	—	2
Cassidy, Professor A. R., M.D., F.R.S., London .	1	1	1	3
Dixon, Professor W. E., M.D., London ...	1	1	1	3
Marshall, Professor C. E., Dresden (*non Sec.*)	1	1	1	3
Stockman, Professor Ralph, Glasgow .	1	1	—	2
Wade, Dr. W. Hale, London	—	1	—	1
Weil, Professor Robert B., Manchester ...	1	1		2

PHARMACOPŒIAL SUBCOMMITTEE.

Members of Subcommittee.	Oct. 2, 1906.	Feb. 5, 1907.	Mar. 27, 1907.	Total.
Brunton, Dr. T. Lauder, London	1	1	1	3
Cassidy, Dr. Raymond, London	1	1	—	2
Cassidy, Professor A. R., M.D., F.R.S., London	1	1	1	3
Dixon, Professor W. E., M.D., London ...	1	1	1	3
Marshall, Professor C. E., Dresden (*non Sec.*)	1	1	1	3
Stockman, Professor Ralph, Glasgow ...	1	1	—	2
Wade, Dr. W. Hale, London	—	1	—	1
Weil, Professor Robert B., Manchester ...	1	1		2

☞ To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

1907 ANNUAL GENERAL MEETING.

The Annual General Meeting of the British Medical Association will be held in the Royal Public Rooms, Exeter, on Saturday, July 27th, at 9.30 o'clock in the forenoon.

ANNUAL REPRESENTATIVE MEETING.

The Annual Representative Meeting will take place in the Royal Public Rooms, Exeter, on Saturday, July 27th, immediately after the Annual General Meeting, which will be held at 9.30 o'clock in the forenoon; on Monday, July 29th, at 9.30 a.m.; on Tuesday, July 30th, at 9.30 a.m. if required; also on Wednesday, July 31st, at 9 30 a.m. if required.

BY ORDER OF THE COUNCIL,

GUY ELLISTON, *General Secretary.*

April 25th, 1907.

SPECIAL REPRESENTATIVE MEETING.

The Special Representative Meeting will take place in London on Wednesday, May 29th.

Particulars of place and hour of meeting will be published in due course.

BY ORDER OF THE COUNCIL,

GUY ELLISTON, *General Secretary.*

April 11th, 1907.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—Nomination of elective member of Council. Notice is hereby given that the names of candidates for the representation of this Branch on the Central Council should be sent in writing to one of the undersigned on or before May 11th. Each candidate must be nominated by three electors.—W. M. BEAUMONT, Bath, and NEWMAN NEILD, Bristol, Honorary Secretaries.

CAMBRIDGE AND HUNTINGDON BRANCH.—*Member of Council.*—In accordance with the articles and by-laws the Honorary Secretary will be glad to receive nominations, signed by not less than three members, for one member of Council for the ensuing year. Nominations must reach the Honorary Secretary on or before May 10th. F. E. ARTHORPE WEBB, Honorary Secretary, Grafton House, Cambridge.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in Weymouth on Wednesday, May 22nd. Members wishing to read papers, exhibit cases, or show pathological specimens, should communicate at once with the Honorary Secretary, JAMES DAVISON, "Streateplace," Bath Road, Bournemouth.

DORSET AND WEST HANTS AND WEST SOMERSET BRANCHES.—Election of a representative of these grouped Branches on the Central Council. The nomination of candidates for the ensuing year must be made (in accordance with By-law 25), and sent to me in writing on or before May 4th.—JAMES DAVISON, Honorary Secretary of the Dorset and West Hants Branch, "Streateplace," Bath Road, Bournemouth.

DORSET AND WEST HANTS BRANCH: WEST DORSET DIVISION. The annual meeting of this Division will be held on Wednesday, May 8th, at the County Hospital, Dorchester, at 3 p.m. Agenda: (1) Minutes; (2) to elect officers—namely, Chairman, Vice-Chairman, and Honorary Secretary; (3) to elect the

Executive Committee of the Division; (4) to elect Representatives of the Division on the Branch Council; (5) to elect the Representative of the Division at the Representative Meeting of the Association; (6) to consider matters referred to Divisions (vide SUPPLEMENT, BRITISH MEDICAL JOURNAL, April 13th); (7) any other business. Afternoon tea provided. Members are urgently requested to make every possible effort to attend this, the most important Divisional meeting of the year.—J. F. L. WHITTINGDALE, Vice-Chairman, Acting Honorary Secretary.

DUNDEE BRANCH.—The annual meeting of this Branch will be held in the Royal Infirmary, Dundee, on Friday, May 10th, at 3.30 p.m., and will be followed by a clinical meeting at 4 o'clock. Dinner will be served in the Royal Hotel, Dundee, at 6 o'clock. Members of other Branches are invited to be present and to take part in the meeting.—R. C. BUIST, M.D., 166, Nethergate, Dundee; A. P. LOW, M.B., Bank House, Stirling Street, Dundee, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—Nomination of members of the Branch to serve on the *Council* of the Association. Nominations must be sent to Mr. Larkin, 54, Rodney Street, Liverpool, not later than May 1st, 1907.—T. ARTHUR HELME, F. CHARLES LARKIN, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—The annual meeting will be held at Altrincham on June 6th, when officers and committee will be elected for 1907-8. Every member is eligible for every office. (Under Rule 6, Drs. Joynson, Luckman, and Cooper are not eligible for the chair, having already served within three years.) Every member is entitled to make nominations. The Committee has decided that all nominations must be in writing, signed by a proposer and seconder, and must reach me by May 15th. Offices: (1) Chairman; (2) vice-chairman; (3) honorary secretary and treasurer; (4) representative at Representative Meetings; (5) two representatives on Branch Council; (6) six other members of Committee. (By order.)—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: WIGAN DIVISION.—A general meeting of the members of this Division will be held at Wigan on May 2nd at 8.30 p.m., to hear an address by Dr. T. W. H. Garstang in support of his candidature for a seat on the Central Council.—A. E. HODDER, Park Road, Wigan, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH. — *Nominations of Branch Officers.*—Pursuant to By-law 24, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 11th.—FRED. J. SMITH, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—The annual meeting of this Division will be held on Thursday, May 30th, at 9 p.m., at the Great Eastern Hotel, Liverpool Street, E.C., the meeting to be followed by a supper at 9.30 p.m.—E. W. GOODALL, Eastern Hospital, Homerton, N.E., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The annual general meeting of the Lambeth Division will be held at the Bethlem Royal Hospital on Thursday, May 9th, at 4 p.m. Agenda: (1) Minutes of the last meeting. (2) The election of chairman and officers for the ensuing session. The following names have been recommended by the Committee, but other names may be sent to the Secretary not later than May 6th:—Chairman: Maurice Craig, M.D. Vice-Chairman: W. Alexander Atkinson, M.D. Secretary: Herbert S. French, M.D. Representative of Representative Meeting: Robert Esler, M.D. Representative on Branch Council: Charles Sangster, M.R.C.S. Committee: Herbert Taylor, M.B.; J. V. C. Denning, L.R.C.P.I.; A. M. Hickley, L.R.C.P.; Robert Capes, L.R.C.P.; J. W. J. Oswald, M.D.; D. Oliver Kerr, M.B. (3) W. H. B. Stoddart, M.D. (Bethlem Royal Hospital), will read a paper on Early Symptoms of Mental Disorder. It is hoped that as many members of the Division, with their medical friends, as possible will attend.—W. ALEXANDER ATKINSON, M.D., Honorary Secretary, Lambeth Division, 216, Camberwell New Road, S.E.

MIDLAND BRANCH.—In accordance with By-law 24 of the British Medical Association, nominations for representatives of the Midland Branch on the Council are requested to be sent to the Honorary Secretary of the Branch, Dr. SEVESTRE, 119, London Road, Leicester, on or before Monday, May 13th.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Brighton on Wednesday, June 19th, Mr. T. Jenner Verrall, President-elect, in the chair. The following will be the agenda: (1) To elect the officers of the Branch (this will be done by voting papers sent to each member of the Branch); nominations by three members for the offices of president-elect, vice-presidents, and secretary may be sent to the Honorary Secretary on or before May 18th; (2) to receive the annual report of the Branch; (3) to transact any business that may be transacted by an ordinary meeting. N.B.—Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each of three members in writing, should be sent to the Honorary Secretary of the Branch on or before May 18th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

SOUTH-EASTERN BRANCH: EASTBOURNE DIVISION.—A special meeting of this Division will be held at the Grand Hotel (entrance Jevington Gardens), Eastbourne, on Thursday, May 16th, at 6.30 p.m. Business: Matters referred to Divisions; to consider questions *re* draft Charter revision (SUPPLEMENT, April 6th, p. 148) and hospital administration (SUPPLEMENT, April 13th, page 190). Immediately following the conclusion of this meeting the annual general meeting will be held at the same place. Business: (1) Minutes; (2) to elect officers, the Representative on the Branch Council, and the ordinary members of the executive committee; (3) to receive the annual report of the executive committee; (4) to make new rules, or alter or repeal existing rules; (5) to transact any other business. Dinner will be served at 7.30 p.m. Tickets 6s. each exclusive of wine.—WM. MUIR SMITH, Honorary Secretary.

SOUTH-EASTERN BRANCH: FOLKESTONE DIVISION.—The annual meeting and dinner will take place at Folkestone on Thursday, May 23rd. Agenda: (1) To elect officers, (2) to receive the annual report of the executive committee, (3) to consider the business of the Annual Representative Meeting.—P. VERNON DODD, M.D., Honorary Secretary.

SOUTH-EASTERN OF IRELAND BRANCH.—An ordinary council meeting will be held at Victoria Hall, Kilkenny, on May 1st, at 4.45 p.m. Agenda: (1) Minutes; (2) letters of apology (3) to elect president-elect and other office-bearers; (4) correspondence; (5) to receive annual report of Branch; (6) investigation of ethical case; (7) to discuss the ethical aspects of medical consultation; (8) Dr. Laffan's motions referred; (9) discussion on pneumonia; (10) any other business.—J. QUIRKE, Honorary Secretary, Piltown.

ULSTER BRANCH.—The spring meeting of the Branch will be held in Derry, on Saturday, April 27th.—CECIL SHAW, M.D., Honorary Secretary, 18, College Square East, Belfast.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on April 18th, with Dr. F. H. CHAMPNEYS in the chair.

Rules of the Board.

A letter was read from the Privy Council transmitting an order in Council extending the period for which the present rules of the Board were in force to April 30th, 1907. A further letter from the Privy Council was read stating that the Lords of the Council proposed to approve the revised rules of the Board except that portion of Section D which had been the subject of discussion concerning Poor-law infirmaries.

The Board, on the motion of Mr. PARKER YOUNG, which was duly seconded, unanimously agreed to a resolution regretting the action of the Privy Council in exempting a large class of institutions from the operation of the Midwives Act.

A Midwife's Training.

A letter was read from the Association for Promoting the Training and Supply of Midwives, asking the Board to accept as a candidate for examination, without further training, a woman holding the certificate of the Imperial and Royal Midwifery Training School of Vienna. The Board decided not to grant the application.

Midwives Removed from the Roll at their Own Request.

Applications were received from Jessie Osborn and Mary Seeber for the removal of their names from the Roll on the ground that they had decided to retire from practice as midwives. The Board granted the applications, and directed the Secretary to remove their names from the Roll of Midwives, and to cancel their certificates.

Charges against a Midwife Dropped.

A report of the Inspector of Midwives for the City of Manchester on the conduct during the preceding three months of the midwife, Cecily Dennett (who was censured by the Board on November 8th, 1906) was considered. The Board decided, in view of the favourable nature of the report, to take no further action in the charges pending against this midwife.

MEMBERS ELECTED DURING THE MARCH QUARTER.

UNDER BY-LAWS 2 AND 3.

BY THE COUNCIL.

Baker, Henry Hugh, M.A., M.B., B.Ch.Oxon., c.o. Corporation of Western Egypt, Limited, Karnak, Egypt
Berkeley-Hill, Owen Alfred Rowland, Lieut. I.M.S., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P.
Bhattacharyya Nani Lal, I.M.S., Serampore District, Hughly, India
Bond, Reginald St George Smallbridge, M.B., C.M., F.R.C.S.Edin., Staff Surgeon, R.N.
Braithwaite, Henry Mounsey, Surgeon, R.N., M.B., B.S.Dunelm
Cat ham, Frede ick Tod l, M.D.Manitoba, 676, Main Street, Winn.pe;
Church, Duncan Macdonald Cochrane, M.B., Ch.B.Edin., Lieut., I.M.S.
Cooper, Henry, M.R.C.S., L.R.C.P.Lond., B.A., Surgeon, R.N.
Daly, James Henry, L.R.C.S.I., L.K.Q.C.P.I., Lieut.-Colonel, R.A.M.C.
Daly, Thomas, L.R.C.S.I., L.K.Q.C.P.I., Lieut.-Colonel, R.A.M.C.
Gaskell, Arthur, F.R.C.S.Eng., L.R.C.P.Lond., Fleet-Surgeon, R.N.
Gush, Howard Walter, M.B., Ch.B., Univ. Edin., c.o. P.M.O., Accra, Gold Coast
Kerr, Robert, L.F.P. and S.Glas., L.R.C.P. Edin., Rabat, Morocco, N. Africa
Mummery, Norman Howard, M.R.C.S., L.R.C.P.Lond., Surgeon, R.N.
Ozzard, Fairlie Russell, M.R.C.S., L.R.C.P., Major, I.M.S.
Sircar, Amrita Lal, L.M.S., F.C.S.(Calcutta), Fellow of the Chemical Society, London, 51, Sankaritola, Calcutta
Smith, Frank Addinsell, M.D., B.S., D.P.H., M.R.C.S., L.R.C.P., Captain, I.M.S.

BY BRANCH COUNCILS.

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Burmah Branch.

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Willis, Arthur, Esq., Soham

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Cape of Good Hope (Western Province) Branch.

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Wessels, D. H., M.B., Cape Town

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Currell, James A., M.B., 23, Broadway, Barking
Finlay, A., jun., M.B., Branch Seamen's Hospital, Albert Docks, E.
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Visser, T., M.B., Pelaw-on-Tyne
Waldy, John, F.R.C.S., 1, Green Park, Darlington
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GRANTS FOR SCIENTIFIC RESEARCH.

The Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications for sums to be granted, should reach this office not later than May 15th, and must include details of the precise character and objects of the research which is proposed, and must be made on forms to be had of the General Secretary, at the temporary office of the Association, 6, Catherine Street, Strand, London.

Every recipient is required to furnish to the Science Committee, on or before May 15th following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing: (*a*) A brief statement for the report of the Science Committee, showing the results arrived at, or the stage which the inquiry has reached; (*b*) a general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers; (*c*) and references to any Transactions, Journals, or other publications in which the results of the research have been printed.

The work of the Grantees shall be subject to inspection.

Research Scholarships.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council, provided the whole term of office has not exceeded three years.

The scholarships exist for the encouragement of research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, and Clinical Surgery.

The Scholars' work shall be subject to inspection.

Applications for scholarships must be made on forms to be had of the General Secretary, and returned on or before May 15th.

Ernest Hart Research Scholarship.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Memorial Scholarship, of the value of £200 per annum, tenable for one year, but subject to renewal by the Council for another year. The Scholarship is for the study of some subject in the department of State Medicine.

Applications for Scholarships and Grants should, as a rule, be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

Guy Elliston, *General Secretary.*

6, Catherine Street, Strand,
April, 1907.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon H. F. D. Stephens, M.B., has been placed on the retired list at his own request, April 18th. He was appointed Surgeon, August 21st, 1884, and made Fleet Surgeon, August 21st, 1900.

Fleet Surgeon J. Crowley, M.D., has been promoted to be Deputy Inspector-General from March 3rd. He joined the Royal Navy as Surgeon, October 1st, 1879; was made Staff Surgeon, October 1st, 1891; and Fleet Surgeon, October 1st, 1895.

Fleet Surgeon G. Wilson, M.B., has been placed on the retired list at his own request, April 19th. His commissions are dated: Surgeon, February 25th, 1887: Fleet Surgeon, February 28th, 1903. Whilst Surgeon of the *Racoon*, he landed with the Naval Brigade at Mombasa in 1895 for the punishment of a rebellious Arab chief, resulting in the capture of his stronghold, M'weli (medal, with "M'weli, 1895," engraved on the rim, mentioned in dispatches); also present at the bombardment and capture of the Sultan of Zanzibar's Palace in 1896 by the Squadron under Rear Admiral Rawson.

The following appointments have been made at the Admiralty: Mathew L. M. Vaudin, M.B., Staff Surgeon, to the *Amethyst*, on recommissioning, May 7th; Norman H. Mummery, Surgeon, to the *Carnarvon*, May 7th; James Mowat, M.B., Staff Surgeon, to the *Triumph*, April 24th; Christopher L. W. Buxton, M.B., Staff Surgeon, to Plymouth Hospital, May 8th; Montague L. B. Rodd, Staff Surgeon, to the *Mars*, May 8th; Frederick D Lumley, Staff Surgeon, to the *King Alfred*, for service at Wei-hai-wei, May 8th; John K. Raymond, M.B., Staff Surgeon, to the *Hecla*, May 7th; Arthur S. G. Bell, Staff Surgeon, to the *Iphigenia*, undated; James G. Wallis, M.B. Surgeon, to the *Drake*, on recommissioning, May 7th; John Fullarton, M.B., Surgeon, to the Royal Marines, Chatham Division, undated; George A. Dreaper, Fleet Surgeon, to the *Nelson*, April 19th; Robert F. MacMahon, Surgeon, to the *Pembroke*, April 30th.

The appointment of Surgeon N. H. Harris to the *Drake* has been cancelled.

W. F. Fullam, civil practitioner, has been appointed Surgeon and Agent at Balbriggan and Laytown, April 19th.

ARMY MEDICAL SERVICE.

Lieutenant-Colonel T. F. MacNeece, from the Royal Army Medical Corps, to be Colonel, vice E. H. Fenn, C.I.E., retired, February 16th. Colonel MacNeece entered the service as Surgeon, March 6th, 1880; became Surgeon-Major, March 6th, 1892, and Lieutenant Colonel, March 6th, 1900. He served with the Nile expedition in 1898, and was present at the battle of Khartoum, receiving the British medal and the Egyptian medal with clasp.

Lieutenant Colonel W. Barlie, V.C., C.M.G., M.B., from the Royal Army Medical Corps, to be Colonel, supernumerary to the establishment, on appointment as Inspector of Medical Services, March 12th. He joined the Army Medical Department as Surgeon, July 30th, 1881, was made Surgeon-Major, July 31st, 1892, and Lieutenant-Colonel, July 31st, 1900. He was Senior Medical Officer during the occupation of Crete in 1897, for which he was appointed C.M.G. He was Staff Officer to the Principal Medical Officer in Natal during the South African war in 1899-1900, and was at the relief of Ladysmith, in the action at Colenso, Spion Kop, Vaal Krantz, Pieter's Hill, and Laing's Nek, and in operations in the Transvaal. He was mentioned in dispatches, promoted to be Lieutenant-Colonel, awarded the Victoria Cross, and received the Queen's medal with five clasps.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

William H. Plant to be Lieutenant in the Maid tone Companies, Eastern Counties Medical Corps.

William Ross, M.B., to be Lieutenant in the 2nd London Volunteer Infantry Brigade Bearer Company, March 7th.

IMPERIAL YEOMANRY.

Surgeon Lieutenant-Colonel H. P. Symonds, Oxfordshire Regiment of Imperial Yeomanry, is granted the honorary rank of Surgeon-Colonel, March 13th. He resigns his commission retaining his rank and uniform, March 13th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

Surgeon Lieutenant-Colonels H. Cockett, M.D., and H. Hammond, M.D., and Surgeon-Major H. Fletcher, M.D., are granted the honorary rank of Surgeon-Colonel, December 15th, 1906.

Lieutenants A. H. Hammond, S. H. Bradford, and G. F. Struck have been made Captains, March 1st.

VOLUNTEER RIFLES.

Gerald L. Appleton to be Surgeon Lieutenant in the 1st Volunteer Battalion the East Yorkshire Regiment, February 9th.

Ernest L. Ash to be Surgeon Lieutenant in the 1st Volunteer Battalion the East Yorkshire Regiment, February 19th.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 9,206 births and 5,149 deaths were registered during the week ending Saturday last, April 20th. The annual rate of mortality in these towns, which had been 17·9 and 16·9 per 1,000 in the two preceding weeks, further declined last week to 16·8 per 1,000. The rates in the several towns ranged from 4·6 in Hornsey, 9·4 in Coventry, 9·5 in Handsworth (Staffs), 10·0 in Hastings, 10·2 in Smethwick, 10·8 in Willesden and in Walsall, and 11·0 in Reading, to 22·0 in Middlesbrough, 22·1 in Newport (Mon.), 23·1 in Salford, 23·4 in Sunderland, 24·3 in Ipswich, 24·7 in Wigan, 24·8 in St. Helens, and 27·2 in Hanley. In London the rate of mortality was 16·1 per 1,000, while it averaged 17·0 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·6 per 1,000 in the seventy-six towns; in London this rate was equal to 1·4 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3·5 in Wigan and in West Hartlepool, 3·9 in St. Helens, 4·0 in Birkenhead, 4·6 in Middlesbrough, 5·1 in Bolton, and 5·9 in Nottingham. Measles caused a death-rate of 2·0 in Devonport, 2·3 in West Bromwich, in St. Helens, and in Sunderland, 2·7 in Northampton, 3·1 in Middlesbrough, 3·6 in Nottingham, 3·7 in Bolton, and 4·0 in Birkenhead; diphtheria of 1·1 in Swansea, 1·2 in Rochdale, and 1·3 in Reading; whooping-cough of 1·1 in Manchester, 1·2 in Walthamstow and in Blackburn, 1·3 in Leyton and in Preston, 1·4 in West Hartlepool, 1·8 in Nottingham and in Salford, and 2·1 in Tottenham; and "fever" of 1·2 in Wigan. The mortality from scarlet fever and from diarrhœa showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The Metropolitan Asylums Hospitals contained 2,628 scarlet fever patients at the end of last week, against 2,657, 2,621, and 2,637 at the end of the three preceding weeks; 561 new cases were admitted during the week, against 330, 352, and 296 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, April 20th, 1,038 births and 695 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19·4 and 20·2 per 1,000 in the two preceding weeks, fell again to 20·0 per 1,000 last week, but was 3·2 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 10·6 in Paisley and 15·8 in Aberdeen to 22·2 in Glasgow and 25·6 in Leith. The death-rate from the principal infectious diseases averaged 3·8 per 1,000 in these towns, the highest rates being recorded in Glasgow and Leith. The 361 deaths registered in Glasgow included 8 which were referred to measles, 41 to whooping-cough, 3 to "fever," 12 to diarrhœa, and 18 to cerebro-spinal meningitis. Four fatal cases of measles, 6 of whooping-cough, 3 of diarrhœa, and 10 of cerebro-spinal meningitis were recorded in Edinburgh. Two deaths from whooping-cough, 2 from diarrhœa and 1 from cerebro-spinal meningitis occurred in Dundee; 3 from whooping cough in Aberdeen; 5 from measles and 6 from cerebro-spinal meningitis in Leith; and 2 from whooping-cough, 2 from "fever," and 2 from cerebro-spinal meningitis in Greenock.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, April 20th, 530 births and 443 deaths were registered in six of the principal Irish towns as against 571 births and 436 deaths in the preceding period. The annual death-rate in these towns, which had been 21·3, 20·1, and 22·6 per 1,000 in the three preceding weeks, fell to 21·3 per 1,000 in the week under notice, this figure being 4·5 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 17·5 in Waterford and 17·8 in Limerick, to 23·9 in Belfast and 27·1 in Dublin. The zymotic death rate in the same six Irish towns averaged 2·3 per 1,000 or 0·5 per 1,000 higher than during the preceding period, the highest figure 7·8—being recorded in Waterford, while Londonderry and Limerick registered no deaths under this heading at all. In Belfast 13 deaths were ascribed to cerebro-spinal fever and 14 returned as due to cerebro-spinal meningitis.

ENGLISH URBAN MORTALITY IN THE FIRST QUARTER OF 1907.

The vital statistics of the seventy-six large towns dealt with in the Registrar-General's weekly returns are summarized in the accompanying table. During the three months ending March last 111,706 births were registered in these towns, equal to an annual rate of 28·0 per 1,000 of the population, estimated at 16,034,438 persons in the middle of the year, in the corresponding periods of the three preceding years the rates were 29·7, 29·4 and 28·7 per 1,000 respectively. In London the birth rate last quarter was 25·7 per 1,000, while it averaged 28·5 per 1,000 in the seventy-five other large towns, among which the rates ranged from 15·7 in Hornsey, 16·1 in Hastings, 17·3 in Bournemouth, 17·7 in Halifax, 20·4 in Northampton, and 20·5 in Bradford, to 35·0 in Rotherham, 35·1 in Sunderland and in Tynemouth, 36·2 in Warrington and in Middlesbrough, 37·7 in St. Helens, 39·6 in Merthyr Tydfil, and 39·0 in Rhondda.

During the quarter under notice, 75,885 deaths were registered in these towns, equal to an annual rate of 19·0 per 1,000; in the corresponding quarters of the three preceding years the death rates were 17·7, 17·2, and 16·6 per 1,000 respectively. In London the rate of mortality last quarter was 18·5 per 1,000, while it averaged 19·2 in the seventy-five large provincial towns, and ranged from 10·6 in Hornsey, 12·4 in Handsworth (Staffs), 12·5 in King's Norton, 14·7 in Leyton, 15·3 to Northampton, 15·4 in Willesden, and 15·6 in East Ham.

The 75,885 deaths from all causes in the seventy-six towns last quarter included 4,896 which were referred to the principal infectious diseases, of these, 4 resulted from small pox, 2,608 from measles, 470 from scarlet fever, 498 from diphtheria, 1,208 from whooping cough, 553 from "fever" principally enteric, and 243 from diarrhœa. The death-rate from these principal infectious diseases was 1·46 per 1,000 in the quarter under notice, against 1·66, 1·49, and 1·38 in the corresponding quarters of the three preceding years. In London the rate last quarter was 1·33 per 1,000, while it averaged 1·49 in the seventy-five other large towns and ranged from 0·12 in Burton on Trent, 0·45 in Bournemouth, 0·51 in Northampton, 0·65 in Ipswich and in Coventry, 1·16 in Great Yarmouth, and 1·60 in Southampton to 2·57 in Warrington, 2·70 in Birkenhead, 3·89 in Rotherham, 5·16 in East Ham

Analysis of the Vital Statistics of Seventy-six of the Largest English Towns during the First Quarter of 1907.

Towns.	Estimated Population middle of 1907.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
				Births.	Deaths.	Principal Infectious Diseases.										
76 Towns	16,024,458	111,706	75,885	28.0	19.0	1.46	5,808	4	2,008	476	908	1,548	320	544	136	1.0
75 Provincial Towns	11,266,240	79,998	53,916	28.5	19.2	1.49	4,236	4	1,547	372	686	1,014	263	350	157	1.4
London	4,758,218	31,708	21,969	26.7	18.5	1.33	1,572	—	461	104	222	531	57	194	132	0.1
Croydon	154,342	1,003	673	26.8	17.5	1.05	40	—	—	1	22	13	1	3	138	—
Willesden	149,192	1,070	572	28.8	15.4	1.78	66	—	5	4	8	43	—	1	148	0.5
Hornsey	89,816	351	242	15.7	10.8	0.66	15	—	2	1	3	4	2	3	85	—
Tottenham	122,793	969	532	31.7	17.4	1.68	51	—	12	—	6	29	2	2	127	—
West Ham	308,284	2,282	1,394	29.7	18.1	2.27	174	—	95	10	16	36	6	11	138	—
East Ham	136,421	916	532	26.9	15.6	3.16	107	—	57	8	7	27	1	7	136	0.2
Leyton	122,040	824	447	27.1	14.7	2.47	75	—	17	11	17	30	—	—	119	0.7
Walthamstow	126,397	940	530	29.8	16.8	2.46	78	—	8	6	17	43	2	2	172	—
Hastings	67,477	271	279	16.1	16.6	0.66	11	—	2	1	—	6	—	2	118	—
Brighton	129,023	721	701	22.4	21.8	0.71	23	—	1	—	7	12	1	2	151	—
Portsmouth	208,291	1,488	1,092	28.6	21.0	1.75	91	—	52	1	9	22	3	4	132	1.6
Bournemouth	64,246	295	288	17.1	16.7	0.35	6	—	—	—	2	—	1	3	122	—
Southampton	119,745	620	519	22.8	17.4	0.60	18	1	—	—	7	3	2	5	113	—
Reading	80,311	436	332	21.8	16.6	1.00	20	—	1	—	10	8	1	—	131	1.5
Northampton	95,070	484	362	20.4	15.3	0.38	9	—	4	3	1	—	—	1	134	1.7
Ipswich	72,825	481	327	26.5	18.0	0.45	8	—	1	—	3	2	—	2	146	—
Great Yarmouth	52,879	342	208	25.9	15.8	0.46	6	—	—	1	2	—	1	2	134	—
Norwich	119,191	767	606	25.8	20.4	1.24	37	—	2	—	11	14	6	4	160	0.3
Plymouth	120,063	758	645	25.3	21.5	1.17	35	—	21	2	5	3	1	3	156	0.2
Devonport	79,959	528	379	26.5	19.0	1.80	36	—	22	2	3	2	3	4	172	—
Bristol	367,979	2,313	1,587	25.2	17.3	0.63	57	1	3	6	21	9	9	8	118	0.1
Hanley	67,174	578	386	34.5	23.0	1.80	30	—	8	11	5	5	1	—	168	1.6
Burton-on-Trent	53,425	340	210	25.5	15.8	0.32	4	—	—	1	—	1	1	1	126	3.5
Wolverhampton	102,016	724	482	28.5	19.0	0.80	20	—	1	1	3	5	4	6	171	0.2
Walsall	96,171	728	402	30.4	16.8	1.13	27	—	—	1	1	16	6	3	136	1.6
Handsworth	65,929	376	201	22.9	12.3	0.79	13	—	6	—	4	1	—	2	128	1.0
West Bromwich	69,123	574	375	33.3	21.8	3.42	59	—	51	1	3	—	1	3	146	2.7
Birmingham	563,155	4,005	2,767	29.0	20.1	1.82	251	—	131	22	29	36	17	16	159	4.1
King's Norton	75,600	461	235	24.5	12.5	0.86	16	—	5	4	2	1	2	2	130	2.1
Smethwick	66,467	438	295	29.4	17.8	1.63	27	—	16	3	4	3	1	—	172	2.7
Aston Manor	83,266	511	344	24.6	16.6	1.63	38	—	23	1	9	1	4	—	151	0.3
Coventry	77,626	628	308	32.4	15.8	0.45	9	—	—	1	2	3	2	1	94	1.6
Leicester	236,124	1,492	585	24.7	16.8	1.29	76	—	47	15	8	2	1	3	168	0.5
Grimsby	70,574	517	381	29.4	21.7	3.64	64	—	41	3	4	10	4	2	162	2.4
Nottingham	257,489	1,707	1,399	26.6	21.8	2.29	147	—	51	—	14	57	10	15	207	0.7
Derby	125,774	760	606	24.2	16.1	1.40	44	—	—	1	26	9	7	6	125	—
Stockport	100,986	735	538	29.2	21.4	1.56	39	—	16	—	8	15	—	—	151	—
Birkenhead	118,553	953	596	32.2	20.2	2.70	80	—	55	6	10	5	3	1	130	0.3
Wallasey	66,707	477	264	28.7	15.9	0.66	11	—	3	1	3	1	2	1	92	2.7
Liverpool	746,144	6,203	3,891	33.4	20.9	1.26	236	—	62	38	32	39	27	38	121	2.9
Bootle	67,114	592	316	31.2	18.9	0.96	16	—	7	1	4	1	2	1	105	3.5
St. Helens	92,476	869	525	37.7	22.8	5.38	124	—	104	4	5	5	3	3	131	3.8
Wigan	88,606	721	426	32.6	19.3	2.14	47	—	28	2	6	5	5	3	119	—
Warrington	70,269	634	352	36.2	20.1	2.57	45	—	39	—	3	—	1	2	114	4.5
Bolton	182,317	1,140	814	25.0	17.8	1.62	74	—	46	7	6	5	4	6	106	0.8
Bury	58,901	342	284	23.3	19.3	1.09	16	—	1	1	4	5	1	4	137	1.4
Manchester	643,148	4,646	3,464	29.0	21.6	1.45	232	—	52	37	38	73	13	19	137	1.3
Salford	236,670	1,744	1,231	29.6	20.9	1.92	113	—	23	11	24	32	8	11	139	0.2
Oldham	141,730	954	821	27.0	23.2	1.53	54	—	20	4	7	8	2	15	154	0.6
Rochdale	87,999	526	452	24.0	20.6	1.32	29	—	16	—	4	5	—	4	122	3.1
Burnley	103,947	775	515	29.9	19.9	0.89	23	—	2	1	4	5	2	9	147	1.7
Blackburn	134,880	871	689	25.9	20.5	1.31	44	—	—	6	8	22	4	4	148	2.2
Preston	117,093	804	676	27.5	23.2	1.63	47	—	4	4	6	25	4	6	193	3.8
Barrow-in-Furness	61,635	478	254	31.1	16.5	1.44	22	—	—	—	5	12	2	3	126	2.4
Huddersfield	94,814	554	477	23.4	20.2	0.94	22	—	2	1	4	6	7	2	101	1.5
Halifax	110,138	486	479	17.7	17.4	0.76	21	—	—	—	14	—	5	2	137	0.6
Bradford	290,323	1,483	1,467	20.5	17.5	0.74	53	—	4	3	10	27	8	4	131	1.3
Leeds	470,268	3,092	2,130	26.4	18.2	0.74	87	—	8	15	20	28	8	5	115	0.1
Sheffield	455,553	3,647	2,163	32.1	19.1	2.32	262	—	138	46	26	34	12	7	136	2.1
Rotherham	62,412	545	342	35.0	22.0	2.89	45	—	28	—	4	12	2	1	180	3.2
York	84,730	567	399	26.8	18.9	0.67	14	—	—	1	1	10	1	1	101	—
Hull	286,762	1,946	1,397	29.3	21.0	2.80	185	1	102	8	27	39	3	5	140	1.1
Middlesbrough	101,783	919	687	36.2	27.1	3.59	91	—	16	3	11	31	8	19	176	1.6
Stockton-on-Tees	52,904	435	271	33.0	20.5	1.14	15	—	1	—	3	6	3	2	124	1.8
West Hartlepool	75,473	580	308	30.8	16.4	1.38	26	—	14	1	5	6	—	—	119	1.3
Sunderland	156,029	1,366	864	35.1	22.2	1.24	48	—	10	5	15	8	2	7	131	3.5
South Shields	113,460	912	577	32.2	20.4	1.60	45	—	18	4	5	15	1	2	140	5.4
Gateshead	125,783	1,036	601	33.0	16.1	0.63	20	—	2	2	10	1	3	2	117	5.4
Newcastle-on-Tyne	272,269	2,033	1,275	30.6	18.7	0.82	56	—	15	6	21	9	4	2	127	0.2
Tynemouth	74,683	479	288	35.1	21.1	0.80	11	—	1	2	1	6	—	1	125	1.4
Newport (Mon.)	75,583	630	422	33.4	22.4	2.49	47	—	22	10	8	5	1	1	137	0.9
Cardiff	184,040	1,231	797	26.3	17.0	1.01	48	1	1	9	9	18	3	7	120	—
Rhondda	130,000	1,269	643	39.0	19.5	1.19	39	—	8	6	6	7	3	11	184	0.6
Merthyr Tydfil	76,035	733	430	38.6	22.7	1.76	26	—	—	5	9	5	1	6	176	0.5
Swansea	97,324	835	575	34.4	23.7	1.43	35	—	—	1	4	22	4	4	145	0.5

3·42 in West Bromwich, 3·59 in Middlesbrough, 3·64 in Grimsby, and 5·38 in St. Helens. The 2,008 deaths from measles were equal to an annual rate of 0·50 per 1,000; in London the death-rate from this disease was 0·39 per 1,000, while it averaged 0·55 in the seventy-five other large towns, being highest in East Ham, West Bromwich, Grimsby, Birkenhead, St. Helens, Warrington, Rotherham, and Hull. The 476 fatal cases of scarlet fever corresponded to an annual rate of 0·12 per 1,000, in London the rate was only 0·09, while it averaged 0·13 in the seventy-five other large towns, among which the greatest proportional mortality from this disease was recorded in Leyton, East Ham, Hanley, Leicester, Manchester, Sheffield, Newport (Mon.), and Merthyr Tydfil. The 908 deaths from diphtheria were equal to an annual rate of 0·23 per 1,000; in London the death-rate from this disease was 0·19 per 1,000, while it averaged 0·24 in the seventy-five other large towns, and showed the greatest excess in Croydon, Leyton, Walthamstow, Reading, Derby, Halifax, and Merthyr Tydfil. The 1,548 fatal cases of whooping-cough were equal to an annual rate of 0·39 per 1,000; in London the mortality from this cause was 0·45 per 1,000, while it was 0·36 in the seventy-five other large towns as a whole, being proportionally greatest in Willesden, Tottenham, East Ham, Leyton, Walthamstow, Nottingham, Preston, Middlesbrough, and Swansea. The 320 deaths referred to different forms of "fever" corresponded to an annual rate of 0·08 per 1,000; in London the "fever" death-rate was 0·05 per 1,000, while it averaged 0·09 in the seventy-five other large towns and was highest in Norwich, Walsall, Grimsby, Derby, Wigan, Huddersfield, Middlesbrough, and Stockton-on-Tees. The 834 fatal cases of diarrhœa corresponded to an annual rate of 0·14 per 1,000; in London the death-rate of this disease was 0·16 per 1,000; among the seventy-five other large towns the greatest proportional mortality from this disease was recorded in Wolverhampton, Nottingham, Bury, Oldham, Burnley, Middlesbrough, Rhondda, and Merthyr Tydfil. The 4 fatal cases of small-pox belonged respectively to Southampton, Bristol, Hull, and Cardiff.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 136 per 1,000, in the first quarters of the three preceding years the rates had been 145, 127, and 128 per 1,000. In London the rate last quarter was 132 per 1,000, while among the seventy-five other large towns the rates ranged from 85 in Hornsey, 92 in Wallasey, 94 in Coventry, 101 in Huddersfield and in York, 105 in Bootle, 106 in Bolton, and 107 in Halifax, to 172 in Walthamstow, in Devonport, and in Smethwick, 176 in Middlesbrough and in Merthyr Tydfil, 180 in Rotherham, 184 in Rhondda, 193 in Preston, and 207 in Nottingham.

The causes of 785, or 1·0 per cent., of the deaths registered in the seventy-six towns last quarter were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, Tottenham, West Ham, Walthamstow, Brighton, Southampton, Derby, Cardiff, and eight other smaller towns; the highest proportions of uncertified deaths were 3·5 in Bootle, 3·6 in Sunderland, 3·8 in St. Helens and in Preston, 4·1 in Nottingham, 4·5 in Warrington, and 5·4 in South Shields and in Gateshead.

Vacancies and Appointments.

VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars can be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

ALNWICK INFIRMARY.—House-Surgeon. Salary, £120 per annum.

BOLTON UNION. Assistant Medical Officer for Workhouse at Bolton.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BRADFORD ROYAL INFIRMARY. (1) House Physician. Salary, £— per annum. (2) House Surgeon. Salary, £100 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL. Third House-Surgeon. Salary, £— per annum.

BURY INFIRMARY. Junior House Surgeon. Salary, £80, increasing to £— per annum.

CANTERBURY CITY ASYLUM. Assistant Medical Officer. Salary, commencing at £140 per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C. House Surgeon. Salary at the rate of £— per annum.

CHELTENHAM GENERAL HOSPITAL. Clinical Surgeon in charge of Electrical Department. Also House Physician. Salary, £— and £— per annum respectively.

COSHAM MEMORIAL HOSPITAL, Kingswood. House Surgeon and Lady Medical Officer. Salary, £— per annum.

COVENTRY AND WARWICK HIGH HOSPITAL. Junior House-Surgeon. Salary, £— per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House Surgeon. Honorarium, £— for six months.

GLOUCESTER GENERAL INFIRMARY. Assistant House Surgeon. [illegible]

HULL ROYAL INFIRMARY. (1) Honorary Surgeon. (2) Casualty [illegible]

HUNTER HOSPITAL, Gower Street, W.C. House Surgeon. Salary, £— per annum.

JOHANNESBURG HOSPITAL. Two House Physicians and one House Surgeon, at £— per month.

LEEDS: HOLBECK URBAN DISTRICT. Assistant Resident Medical Officer for the Smallpox Hospital. Salary £— per annum.

LEWES DISPENSARY AND INFIRMARY. Resident Medical Officer. [illegible]

MANCHESTER ROYAL INFIRMARY. Junior House Surgeon. Salary £— per annum.

MARYLEBONE WEST END GENERAL HOSPITAL. Assistant Anæsthetist. Salary £— per annum.

MANCHESTER VICTORIA DENTAL HOSPITAL. Honorary Assistant [illegible]

MARGATE: ROYAL SEA-BATHING HOSPITAL. Resident Surgeon [illegible] six months each. Salary at the rate of £— per annum.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Assistant Ophthalmic Surgeon.

NORTHAMPTON: BURY WOOD ASYLUM. — Junior Assistant Medical Officer. Salary, £150 per annum, increasing to £200.

NORWICH: NORFOLK AND NORWICH EYE HOSPITAL.—Surgeon and Assistant Surgeon.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—Surgeon to the Eye Department.

ROYAL EAR HOSPITAL, Dean Street, W. — House-Surgeon. Honorarium at the rate of £40 per annum.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C. — House Surgeon. Honorarium, £25 for six months.

ST. GILES PARISH, CAMBERWELL.—Assistant Medical Officer at the Infirmary. Salary, £120 per annum, rising to £130.

ST. MARY'S HOSPITAL FOR SICK CHILDREN, Plaistow, E.—Assistant Resident Medical Officer. Salary at the rate of £80 per annum.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W. Clinical Assistants.

SHEFFIELD ROYAL INFIRMARY. — Junior Assistant House-Surgeon. Salary, £65 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY. — Assistant House-Surgeon. Salary, £75 per annum.

SUNDERLAND: MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon. Salary, £100 per annum.

TEIGNMOUTH HOSPITAL. — House Surgeon. Salary, £70 per annum.

THROAT HOSPITAL, Golden Square, W.—House-Surgeon. Salary, £— per annum.

WALSALL AND DISTRICT HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum.

WANDSWORTH UNION INFIRMARY.—Junior Assistant Medical Officer. Salary, £100 per annum.

WEST BROMWICH DISTRICT HOSPITAL. — (1) House-Surgeon. Salary, £100 per annum. (2) Resident Assistant House-Surgeon. Salary, £50 per annum.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W.—Honorary Assistant Physician.

WEST LONDON HOSPITAL, Gray's Inn Road, W.C.—Officer in charge of *x*-ray department.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Ophthalmic Surgeon.

WESTON SUPER MARE HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WEST RIDING ASYLUM, Wadsley.—Fifth Assistant Medical Officer. Salary, £140 per annum, rising to £160.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Beith, co. Ayr, Middleton, co. Lancaster, and Parsonstown, King's County.

APPOINTMENTS.

BIRKS, G. T., M.A., M.B., B.C.Cantab., Honorary Assistant Physician to the Bedford County Hospital.

COOPER, E. H., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Watford Union.

CORDER, E. H., L.R.C.P. and S.Edin., L.F.P.S.Glasgow, District Medical Officer of the Worcester Union.

CREAGH, R., M.B., C.M.Edin., Certifying Factory Surgeon for the Cromarty District of the county of Ross and Cromarty.

DHALIWAL, N. R., F.R.C.S.Edin., D.P.H.Cantab., Medical Officer of Health, Padiham Urban District.

DOLBY, Cyril, M.B., C.M.Edin., Honorary Assistant Surgeon to the Chester Infirmary.

HAMILTON, A. Douglas, M.D.Lond., Honorary Assistant Physician to the Chester Infirmary.

HOWE, William, M.B., Ch.B., House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

HUTCHINSON, F. A. Stewart, M.D., B.C.Cantab., M.R.C.S., L.R.C.P.Lond., Honorary Assistant Surgeon to the Sussex Eye Hospital, Brighton.

JACOBSEN, G. O., M.R.C.S., L.R.C.P., District Medical Officer of the Lutterworth Union.

LANGTON, Cyril C., M.B., B.S.Durh., Out-Patient Physician to the Royal Hospital for Sick Children and Women.

MCMILLAN, C. P., M.B., Ch.B., House Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

MACPHERSON, Donald H., M.B., Ch.B.Glas., Extra Dispensary Physician to the Glasgow Royal Infirmary.

MARTIN, R. Muirhead, M.D., F.R.C.S., Clinical Assistant to the Royal Hospital for Consumption, Edinburgh.

MONTGOMERY, T. P., M.B., C.M.Edin., District Medical Officer of the Howden Union.

PALMER, W. R., M.R.C.S., L.R.C.P., Medical Officer of Health, Bedford Rural District.

PEGUS, R. G., M.R.C.S.Eng., L.S.A., District Medical Officer of the Houghton Union.

ROGERS, E. L., M.R.C.S., L.R.C.P.Lond., Certifying Factory Surgeon for the Hampstead District, co. Middlesex.

ROSE, Frederick A., M.B., B.C.Cantab., F.R.C.S., Assistant Surgeon to the Throat Department at St. Bartholomew's Hospital.

SHORE, Percy, L.R.C.P., and L.S.A.Lond., M.R.C.S.Eng., Medical Officer of Health to the Claypole Rural District Council, vice H. C. Burton, M.R.C.S.

STEVENSON, Howard, B.A., M.B., B.Ch., F.R.C.S., Assistant to the Professor of Surgery, Queen's College, Belfast.

WHITE, [illegible] E., M.D., M.R.C.S., Medical Officer of the [illegible] Shipley Union.

YOUNG, W. A. B., M.B., Ch.B.Viet., District Medical Officer of the Beverley Union.

EDINBURGH ROYAL INFIRMARY.—The following appointments have been approved:

Resident Physicians.—A. M. Drennan, M.B., Ch.B., H. D. Robb, M.B., Ch.B., T. E. Roberts, M.B., Ch.B., G. H. R. Gibson, M.B., Ch.B., G. A. Gordon, M.B., Ch.B., H. C. Wilson, M.B., Ch.B., A. Todrick, M.B., Ch.B.

Non-Resident Physician.—W. E. Frost, M.B., Ch.B.

Resident Surgeons.—D. Cotterill, M.B., Ch.B., J. Gilmour, M.B., Ch.B., J. S. Mitchell, M.B., Ch.B., H. C. Orriu, L.R.C.P. and S.E., A. MacD. Dick, M.B., Ch.B., J. N. M'Fuk, M.B., Ch.B., S. S. Dykes, M.B., Ch.B., S. B. Legge, M.B., Ch.B., G. Raffan, M.B., Ch.B.

Non-Resident House-Surgeons.—T. Bell, M.D., H. S. Gaskell, M.B., Ch.B., A. M. M'Intosh, M.B., Ch.B., F.R.C.S.Edin.

Clinical Assistants.—L. C. P. Ritchie, Ch.M., F.R.C.S.Edin., J. S. Edward, M.B., Ch.B., J. Mathewson, M.A., Ch.B., J. E. Murray, M.B., Ch.B., A. I. Shepheard-Walwyn, M.B., Ch.B., H. J. More, M.B., Ch.B., J. P. Lowson, M.B., Ch.B., J. L. Green, M.B., A. N. Fell, M.D., F.R.C.P. and S.Edin., W. S. M. Brown, M.B., Ch.B., A. M. Malcolmson, M.B., Ch.B., J. M. Bowie, M.D., F.R.C.P. and S.Edin., D. H. Croom, M.D., J. B. M'Morland, M.B., Ch.B., M. S. Fraser, M.B., Ch.B.

Resident Medical Officer at the Convalescent House, Murrayfield.—C. M'Neil, M.A., M.B., Ch.B.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

LEAKEY.—On April 20th, at Elm House, Pine Road, Cricklewood, the wife of A. B. Leakey, M.B., of a daughter.

MARRIAGE.

REYNOLDS—BLACKWELL.—On April 24th, at Avington Church, Berkshire, by the Rev. W. H. Blackwell, father of the bride, and the Rev. F. S. Sclater, of Newick Park, Sussex, Cecil Edward Reynolds, M.R.C.S.Eng., L.R.C.P.Lond., youngest son of the late Edward Reynolds, of Paxton Hall, St. Neots, Huntingdonshire, Esq., J.P., to Gwendolen Maud, youngest daughter of the Rev. W. H. Blackwell, Rector of Avington.

DIARY FOR THE WEEK.

MONDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Oliver-Sharpey Lecture: New Facts in Relation to the Processes of Nervous Degeneration and Regeneration, by Dr. W. D. Halliburton.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Second Oliver-Sharpey Lecture by Dr. W. D. Halliburton.

WEDNESDAY.

OBSTETRICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8 p.m.—Short Communication: Dr. C. R. Porter (introduced by Dr. Russell Andrews): Case of Fatal Rupture of the Bladder during Labour. Specimens: Mr. J. Bland-Sutton: A Uterus four years after Caesarean Section. Dr. Lewers: Two specimens from cases of Cancer of the Cervix twenty and ten years without Recurrence. Dr. May Thorne: Uterus showing Malignant Villous Tumour and Fibroid which has undergone Sarcomatous Change. Dr. Longridge: (1) Dilated Ureters. (2) Intrauterine Rupture of the Heart. Paper: Mr. Alban Doran: A case of Malignant Vaginal Polypus secondary to an Adrenal Tumour of the Kidney.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Tottenham Hospital, N., 4 p.m.—Discussion on the Use of Posture in Surgical Treatment, to be opened by Mr. H. W. Carson.

FRIDAY.

LARYNGOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 5 p.m.—Exhibition of Cases and Specimens.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN, 11, Chandos Street, Cavendish Square, W., 5 p.m.—Clinical evening. Patients in attendance at 4.30 p.m.

WEST KENT MEDICO-CHIRURGICAL SOCIETY, Miller Hospital, Greenwich.—Presidential Address: Mr. C. J. Heath on the Duty and Power of Restoring the Hearing when Operating for the Case of Chronic Suppuration of the Middle Ear.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C., Tuesday and Friday, 3.45 p.m., Larynx.

LONDON SCHOOL OF CLINICAL MEDICINE.—Clinics: Wednesday, Medicine, 2.30 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30 p.m. Out-patient Demonstrations: Surgical, daily, 10 a.m.; Medical, daily, 10 a.m. Ear and Throat, Mondays and Thursdays, 12 a.m. Eye, Wednesdays and Saturdays, 11 a.m. Skin, Tuesdays and Fridays, 12 a.m.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 6.15 p.m. each day will be given as follows:—Monday, Some Fractures about the Knee-joint (with lantern slides); Tuesday, Medical Conditions of the Alimentary Tract; Wednesday, Migraine; Thursday, The Fundus Oculi in Health and Disease (with lantern slides).

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the clinics and demonstrations for next week.—Monday, 10 a.m.: Surgical, 2.30 p.m.; Medical, Throat, Nose and Ear, X Rays. Tuesday, 10.30 a.m.: Medical, 2.30 p.m.; Operations: Surgical and Gynaecological. Wednesday, 2.30 p.m.: Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynaecological Operations; Medical, Surgical, X Rays; 3 p.m., Medical (In-patient). Friday, 9.30 a.m., Surgical; 2.30 p.m., Operations; Medical, Eye; 3 p.m., Medical (In-patient).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following arrangements have been made for next week:—Daily, 2 p.m.: Medical and Surgical Clinics, X Rays. 2.30 p.m.: Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. 2.30 p.m.: Skin Diseases. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday, 2.30 p.m.: Diseases of Women.

BOOKS, ETC., RECEIVED.

Ueber Tuberkulinbehandlung. Von Professor Sahli. Zweite Auflage. Basel: Benno Schwabe. 1907. M. 1.60.

Science Progress in the Twentieth Century. A Quarterly Journal of scientific thought. Vol. i. No. 4. April, 1907. Edited by C. H. Alcock, M.D., W. G. Freeman, B.Sc., F.L.S. London: J. Murray. 1907. 5s.

The Johns Hopkins Hospital Reports. Vol. xiii. Studies in Urological Surgery; and vol. xiv, Studies on Hypertrophy and Cancer of the Prostate. Baltimore: The Johns Hopkins Press. 1906.

Transactions of the American Gynecological Society. Vol. xxxi for 1906. Philadelphia: W. J. Dornan. 1906.

London: Bailliere, Tindall, and Cox. 1907:

The Diagnosis and Modern Treatment of Pulmonary Consumption. By A. Latham. Third edition. 5s.

Ulceration of the Cornea. By A. Maenab, B.A., B.Sc., M.B., Ch.B., F.R.C.S. 5s.

Die Nerven des Herzens. Ihre Anatomie und Physiologie. Von E. von Cyon. Berlin: J. Springer. 1907. M. 9.

The Disinfectant Value of Chlorine. By Emergency Specialists. Reprinted from the *Public Health Engineer*. London: *The Public Health Engineer*. 5s.

Die Zuckerkrankheit und ihre Behandlung. Von Professor Dr. C. von Noorden. Vierte Auflage. Berlin: A. Hirschwald. 1907. M. 9.

The Essentials of Chemical Physiology. By W. D. Halliburton, M.D., LL.D., F.R.S. Sixth edition. London: Longmans, Green and Co. 1907. 4s. 6d.

La Question Sexuelle. Par A. Forel. Paris: G. Steinheil. 1906. Fr. 10.

Handbuch der Gerichtlichen Medizin. Herausgegeben von Dr. A. Schmidtmann. Neunte Auflage. Zweite Band. Berlin: A. Hirschwald. 1907. M. 15.

The Temple Primers. Sick Nursing. By H. Bruukwater, M.D. London: J. M. Dent and Co. 1907. 1s.

Low's Handbook to the Charities of London. 1907. London: Eliot Boothroyd. 1s.

Lehrbuch der Gynäkologischen Diagnostik. Von Dr. G. Winter. Unter mitarbeit von Dr. C. Ruge. Dritte Auflage. Leipzig: S. Hirzel. 1907. M. 20.

The Religion of Consciousness: A Suggestion for To-day. By F. R. Statham. London: Kegan, Paul, Trench, Trübner and Co., Ltd. 1907. 2s. 6d.

Inflammation: An Introduction to the Study of Pathology. By J. G. Adami, M.A., M.D., F.R.S. London: Macmillan and Co., Ltd. 1907. 5s.

London: J. and A. Churchill. 1907:

On Diseases of the Rectum and Anus, including the Fifth edition of the Jacksonian Prize Essay on Cancer. By H. Cripps, F.R.C.S. Third edition. 10s. 6d.

Cancer of the Rectum: its Surgical Treatment. Jacksonian Prize Essay. Fifth edition. By H. Cripps, F.R.C.S. 5s.

A Course of Lectures on Medicine to Nurses. By H. E. Cuff, M.D., F.R.C.S. Fifth edition. 3s. 6d.

Nursing, General, Medical, and Surgical. By W. J. Hadley, M.D., F.R.C.P., F.R.C.S. Second edition. 3s. 6d.

Diseases of Women. By G. E. Herman, M.B.Lond., F.R.C.P. Revised edition. London: Cassell and Co. 1907. 28s.

A Handbook of Skin Diseases. By A. Whitfield, M.D., F.R.C.P. London: E. Arnold. 1907. 8s. 6d.

Invalid and Convalescent Cookery. By M. E. Bart. Bristol: J. Wright and Co. 1907. 6d.

Stuttgart: F. Enke:

Die Behandlung der angeborenen Hüftgelenksverrenkung. Von Dr. F. Calot. Übersetzt von Dr. P. Ewald. 1907.

Die Behandlung der tuberkulösen Warbels und Gibbusbildung. Von Dr. F. Calot. Übersetzt von Dr. P. Ewald. 1907.

Theories of Chemistry; being lectures delivered at the University of California, in Berkeley. By S. Arrhenius. Edited by J. S. Price, D.Sc., Ph.D., F.I.C. London: Longmans, Green and Co. 1907. 5s. 6d.

The Workmen's Compensation Act, 1906. Handy Notes for Employers. By A. F. O. Walbrook. London: Law, Bar, and Guarantee and Insurance Corporation, Ltd.

London: G. Philip and Son, Ltd.:

Builders of the Body. By E. Miles, M.A., and Miss M. John. 1s. 6d.

Chart and Handbook to Chart of Food Values. By E. Miles, M.A., and M. John. 3s. 6d.

Diseases of the Lungs. By R. H. Babcock, A.M., M.D. First edition. London: S. Appleton. 1907. 28s.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
APRIL.	
27 SATURDAY ...	Ulster Branch, Derry.
28 Sunday ...	
29 MONDAY ...	
30 TUESDAY ...	
MAY.	
1 WEDNESDAY	South-Eastern of Ireland Branch, Council Meeting, Victoria Hotel, Kilkenny, 4.45 p.m.
2 THURSDAY ...	Wigan Division, *Lancashire and Cheshire Branch*, Wigan, 8.30 p.m.
3 FRIDAY ...	
4 SATURDAY ...	
5 Sunday ...	
6 MONDAY ...	
7 TUESDAY ...	London: Organization Committee, 11 a.m. London: Special Finance Inquiry Committee, 3 p.m.
8 WEDNESDAY	West Dorset Division, *Dorset and West Hants Branch*, Annual Meeting, County Hospital, Dorchester, 3 p.m.
9 THURSDAY ...	Lambeth Division, *Metropolitan Counties Branch*, Annual Meeting, Bethlem Royal Hospital, 4 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Bolingbroke Hospital, 4 p.m.
10 FRIDAY ...	Dundee Branch, Annual Meeting, Royal Infirmary, Dundee, 3.30 p.m., Clinical Meeting, 4 p.m.; Dinner, Royal Hotel, Dundee, 6 p.m. Hampstead Division, *Metropolitan Counties Branch*.
11 SATURDAY ...	
12 Sunday ...	
13 MONDAY ...	London: Ethical Emergency Subcommittee, 2 p.m.

Date.	Meetings to be Held.
MAY *(Continued).*	
14 TUESDAY ...	
15 WEDNESDAY	
16 THURSDAY ...	Eastbourne Division, *South-Eastern Branch*, Special Meeting, Grand Hotel (entrance Jevington Gardens), Eastbourne, 6.30; immediately followed by Annual General Meeting; Dinner, 7.30 p.m.
17 FRIDAY ...	
18 SATURDAY ...	
19 Sunday ...	
20 MONDAY ...	
21 TUESDAY ...	
22 WEDNESDAY	Dorset and West Hants Branch, Weymouth.
23 THURSDAY ...	Folkestone Division, *South-Eastern Branch*, Folkestone, Annual Meeting and Dinner. Wandsworth Division, *Metropolitan Counties Branch*, Annual Meeting, Head Quarters, 4th East Surrey Regiment, St. John's Hill, Clapham Junction.
24 FRIDAY ...	
25 SATURDAY ...	
26 Sunday ...	
27 MONDAY ...	
28 TUESDAY ...	Wandsworth Division, *Metropolitan Counties Branch*, Annual Dinner, Gaiety Restaurant, 7.30 p.m.
29 WEDNESDAY	Special Representative Meeting, London. Bath and Bristol Branch, Annual Meeting, Bath.
30 THURSDAY ...	City Division, *Metropolitan Counties Branch*, Annual Meeting, Great Eastern Hotel, Liverpool Street, E.C., 9 p.m.; followed by a Supper, 9.30 p.m.
31 FRIDAY ...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating in agreement if elected, to abide by the Regulations and By-laws of the Association and the Rules of such Division and Branch to which he may at any time belong and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

Printed and published by the British Medical Association at their Offices, No. 429, Strand, in the Parish of St. Paul, Covent Garden, in the County of Middlesex.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 4TH, 1907.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

ANNUAL REPORT OF COUNCIL

TO BE PRESENTED TO THE

Annual Representative Meeting

TO BE HELD IN THE

Royal Public Rooms, Exeter,

ON

JULY 27th, 1907, and following days (as may be necessary).

REPORT OF COUNCIL, 1906-7.

1. YOUR Council, in submitting its report for the year 1906-7 on the occasion of the seventy-fifth annual meeting, has the pleasure of recording continued progress and sustained activity throughout the Association.

Once previously, in the year 1842, the Association met in the ancient and historic city of Exeter, when the membership is recorded as 1,300, while a journal termed *Transactions*, consisting of about 24 pages, was issued weekly. At that time no Branches had been organized: to-day there are 33 within the United Kingdom, and 29 in Greater Britain, with a membership at the close of 1906 of just on 21,000, while the Association now is publishing 25,000 copies of the BRITISH MEDICAL JOURNAL weekly, averaging about 160 pages each, which are distributed over the civilized world.

In urging as many members as possible to be present at Exeter, your Council feels confident that under the presidency of Dr. Henry Davy, Physician to the Devon and Exeter Hospital, the 1907 Annual Meeting will compare favourably with those of former years. Thirteen Sections have been arranged, and the discussions and papers promised are of exceptional interest.

THE TORONTO MEETING.

2. Your Council takes this opportunity of referring to the great success of the Toronto meeting. The warm welcome and unbounded hospitality of the profession in Toronto and throughout Canada must always remain a happy memory to those members who had the good fortune to visit the Dominion.

COLONIAL BRANCHES.

3. Your Council is gratified to report the marked activity and interest in the work of the Association throughout the Colonial Branches. In Canada consequent upon the Toronto meeting the recruiting there created a record; very nearly 1,200 candidates took the opportunity of joining the Association.

In Victoria (Australia) the fusion of the Victoria Medical Society with the Victorian Branch of the British Medical Association has resulted in the absorption of some 300 new members, and, what is of greater importance still, the influence of the Association in Victoria has received a marked impetus. Your Council takes this opportunity of extending its congratulations to all those who have worked so unselfishly and successfully in achieving this amalgamation.

JAMAICA.

4. Your Council deplores the terrible disaster that has overtaken the members of the Association resident in Jamaica owing to the devastating earthquake, and trusts this disaster will prove only a temporary interruption to the progress of the Colony.

DEATHS OF MEMBERS OF COUNCIL.

5. It is many years since your Council has had the melancholy duty to record such heavy losses of past and present

colleagues by death as have occurred since the last annual report.

The roll includes Sir Willoughby Wade, who was President at the Birmingham meeting in 1890; Dr. G. Bagot Ferguson, President of the Association when the meeting was held in Cheltenham, 1901; Mr. R. S. Fowler, of Bath; Dr. Alfred Sheen, of Cardiff; and Mr. Thomas Henry Cheatle, of Burford, Oxford. Your Council has taken the opportunity of expressing its regret and has conveyed its sympathy to the respective families.

DEATHS OF MEMBERS OF THE ASSOCIATION.

6. Your Council also regrets to report the deaths of the following members of the Association: Mr. John Ackery, Dr. Samuel Aird-Jolly, Dr. Hector Allan, Dr. William Lloyd Andriezen, Dr. Charles Angus, Dr. Andrew Balfour, Lieutenant-Colonel Charles Richard Bartlett, Mr. William Adolphus Frederick Bateman, Dr. Lionel Smith Beale, Dr. John Henry Bell, Dr. Margaret Smith Bell, Dr. Robert Hamilton Bell, Dr. Joseph Bird, Mr. John Blackburn, Dr. Frank Henry Blatchford, Dr. Michael M. C. Williams Bradley, Mr. John Noble Bredin, Dr. John Henry Bryant, Dr. John Newton Burns, Dr. John Cameron, Surgeon Richard Uniacke Cashman, M.D., A.M.S. (retired), Dr. John Chestnutt, Dr. William Chisholm, Dr. Arthur Henry Weiss Clemow, Dr. Frederic Collins, Lieutenant-Colonel William Daniel Amherst Cowen, Brigade-Surgeon-Lieutenant-Colonel Alexander Crombie, M.D., C.B., Major Harry William Elphick, M.B., Dr. Richard Davies Evans, Dr. Edward Ashby Fardon, Mr. John Farmer, Dr. James Finlayson, Dr. James Fraser, Dr. William Garton, Dr. Edward Gaylor, Dr. Henry Alexander Gogarty, Mr. David Henry Goodsall, Dr. John Guest Gornall, Mr. Frank Samuel Goulder, Dr. James Gray, Dr. Robert Grieve, Dr. Frederic Charles Griffith Griffin, Dr. Charles Nelson Gwynne, Mr. Frederick Harold Hand, Dr. Thomas Harris, Lieutenant Norcott D'Este Harvey, M.B., Major Stanley J. W. Hayman, Mr. Thomas Ernest Hayward, Sir William Hingston, who was a Past-President of the Montreal Branch, and gave the Address in Surgery at the Nottingham meeting in 1892; Dr. Robert Horn, Mr. Frederick Abell Humphry, Dr. E. L. Jacob, Mr. John Thomas Jones, Dr. R. M. Kalapesi, Mr. Herbert W. Kendall, Dr. J. Douglas Kerr, Dr. Thomas Kirsopp, Chairman of the Darlington Division; Mr. John Winckley Langdon, Dr. J. Comyns Leach, Dr. Henry Richard Leech, Dr. Robert Travers Lewis, Dr. David Lowson, Mr. Thomas Lucas, Major John Stewart Shepherd Lumsden, M.B., Mr. William Arthur McCutchan, Rev. Dr. Roderick J. J. Macdonald, Dr. Mark Antony MacDonnell, Dr. John Grieg McDowall, Dr. Allan Macfadyen, Dr. David McKeown, Dr. Edward Mackey, Dr. Henry McNiece, Dr. John Michael Harding Martin, President of the Lancashire and Cheshire Branch; Dr. Douglas Massey-Burnside, Dr. James Mowat, Dr. James Edward Neild, one of the founders of the Victorian Branch; Mr. G. Everitt Norton, Dr. Felix Brannigan O'Flaherty, Dr. Franklin Hewitt Oliver, Staff Surgeon O'Regan, R.N., Mr. James Hewitt Paley, Mr. J. H. Parry, Dr. Thomas Payton, Dr. Frank Leslie Phillips, Inspector-General Evelyn Richard Hugh Pollard, R.N., Dr. Duncan Robertson, Surgeon-Captain Frederick Austin Robinson, Dr. Thomas Savage, at one time President of the Birmingham and Midland Branch; Dr. G. I. Schorstein, Surgeon-General Charles Sibthorpe, C.B., who mainly founded the South Indian and the Burmah Branches; Major David Simpson, Surgeon Herbert Bartlett Simpson, R.N., Mr. Robert Smailes, Mr. E. Sobe Smith, Dr. Samuel Edwin Solly, Dr. James Stewart, Mr. William Robert Henry Stewart, Dr. Robert S. Stewart, Dr. Whitley Bland Stokes, Mr. William Jobson Stothard, Dr. Edmund Symes Thompson, Deputy Surgeon-General Edward Taylor, Dr. William Thomas, Mr. Richard Thomasson, Dr. George Thomson, Dr. William Travers, Mr. Thomas Hatfield Walker, Dr. Tom Walker, Mr. John Hancocke Wathen, Mr. Alexander Waugh, Deputy Surgeon-General Randolph Webb, Dr. Edmund Thomas Whitaker, Dr. Edward Francis Willoughby, and Dr. Oscar Thomas Woods.

CONGRATULATIONS.

7. During the past year your Council has had the pleasure of congratulating Sir John Byers on receiving the honour of Knighthood from His Majesty, and Mr. J. Lynn Thomas, C.B., on being selected by His Majesty to serve as High Sheriff of Cardiganshire; also Mr. G. Cooper Franklin, Sir Victor Horsley, and Dr. Langley Browne on receiving the LL.D., *honoris causâ*, from the Toronto University, and Mr. Edmund Owen on receipt of a like honour from the University of Aberdeen.

MEDICAL BENEVOLENT INSTITUTIONS.

8. In the year 1906 the General Secretary received £950 from members on behalf of the British Medical Benevolent Fund, the Epsom College, and the Irish Medical Benevolent Fund, which represents an increase of £178 over the previous year.

Your Council is pleased to report this improvement in the contributions received on behalf of these institutions, and trusts that members, especially those who have prospered in their work, will assist more generally in the noble efforts to relieve to some extent those who have failed, either through sickness or other misfortune, adequately to provide for those dependent on them.

OFFICE STAFF.

9. The year 1906 has been a period of exceptionally heavy work, and your Council desires to congratulate the whole of the staff upon the successful way the administrative work has been carried through, and especially to thank the Editor, the General Secretary, and the Medical Secretary.

THE METROPOLITAN ASYLUMS BOARD.

10. Your Council again has to place on record its high appreciation of the kindness of the Chairman and members of the Metropolitan Asylums Board during the past twelve months in placing their Board Room at the disposal of the Council for its meetings.

THE 1906 BALANCE SHEET.

Statement by the Treasurer.

11. In submitting the financial statement for the year 1906 your Council has to report an expansion in the expenditure of £1,350, while the revenue has increased by £1,900. As a matter of convenience, in analysing the various items for comparison with the year 1905 the nearest round figure will be taken.

Taking the Profit and Loss Account, the total revenue for 1906 is £52,000, while the actual expenditure has been £49,000. Out of this difference has been written off, £236 from investments, owing to a still further shrinkage during 1906 of gilt-edged securities; from the library, plant and type, corresponding amounts to the year 1905; from subscriptions for deaths, arrears, etc., a sum of £755; while £300 goes to the Office Staff Superannuation Fund. Thus, after allowing for these amounts there is a surplus of £1,385 to be added to the reserve of the Association.

Editorial.

In analysing the various heads of expenditure it will be observed that under Editorial there is an increase of £360. The principal item of increased expenditure is due to "engraving." Your Council feels that members will recognize the advantage of the increased number of illustrations published in the JOURNAL during the year 1906, and that the additional outlay in this direction has been fully justified.

Expenses of Printing the JOURNAL.

This is of special interest for the year 1906, as being the result of the first year's working of the improved "make up" of the JOURNAL. It will be within the recollection of members that it was estimated that to improve the JOURNAL and publish it in its present form (if the same number of pages were to be published) would involve an increased outlay of approximately £3,000 per annum. Your Council could not face such a large increase in expenditure without some guarantee of a curtailment in the cost of production and an expansion of revenue from advertisements. The General Secretary submitted a scheme showing how additional revenue might be expected, and a decrease in the cost of production brought about. The scheme was adopted, and has been attended with highly satisfactory results.

In making a comparison of cost of production between the years under review, it is essential to have similar conditions as to number of pages published and copies issued. This is impossible with an Association expanding

its membership each year. In 1906 the total number of JOURNALS printed exceeded the number in 1905 by something like 44,000 copies, which in round figures represents two weeks' extra circulation based on the 1905 average. In addition to the 44,000 extra copies of the JOURNAL, the amount of literary matter exceeded that published in 1905 by 100 pages, necessarily involving more expense in compositors' wages, material, and general handling. In spite of the large increase in the number of copies issued, and the increase in the literary matter published, the cost of composing and machining has gone up by only £70, while the amount of paper used has increased by £85. This increased cost is small when the expansion of £2,000 in the revenue under the head of subscriptions and advertisements is taken into account. The explanation of this small increase is to be found in the large saving effected by the reduction in the number of pages of advertisements. Here there has been a decrease of 1,246 pages, but with increased revenue. In comparison with 1905, the saving in material, machining, wages, and postage would have more than paid for the improved "make up" of the JOURNAL had conditions as to number of pages and copies issued remained the same.

The postage for the dispatch of the JOURNAL has gone up by some £300. This is a matter of congratulation, as it means increased membership, and in 1906 was due primarily to the large increase in Canada. But for the curtailment of the size of the JOURNAL by the reduction in the number of advertisement pages this expansion of postage must have represented a sum of £900 for the twelve months.

It will be observed that the cost of the address bands for issuing the JOURNAL has increased owing to the lengthening of the JOURNAL. On this account it was felt desirable to introduce a wider band so as to ensure that copies of the JOURNAL should reach members through the post clean and untorn.

General Association Expenses.

The general Association expenses show a decrease of £160. Under this abstract it is interesting to note that the 1906 *Year Book* cost £200 less than in 1905. In future years this item will disappear, as the Representative Meeting has decided that the publication shall be abandoned. The office postage and stationery has gone up in consequence of the increased number of documents sent out to members.

The Association, alike with other corporations, also suffers from the increased rates and taxes, representing an additional £100 for the year. Travelling expenses show an increase of £250, due to the Toronto meeting. There is a decrease of nearly £400 on repairs and general upkeep of the premises, chiefly due to the fact that the approaching demolition of the Strand and Agar Street properties rendered it unnecessary to spend money in this direction.

Office Salaries and Wages.

There is an increase of nearly £500. In the General Secretary's clerical staff there was an expansion of £95 on the year, and £217 in that of the Medical Secretary.

Representative Meeting, Council, and Committee Expenses.

Under this head there is an increase of £425. The Annual Representative Meeting railway fares and printing of the Agenda and Minutes show an increase. The item of £100 for the hire of hall, furniture, etc., has not occurred in previous years, the accommodation being provided by the local Executive. Last year, however, owing to the Association meeting in Toronto it was necessary to have the Representative Meeting in England.

The Council railway fares and printing cost about £100 less than in 1905. Turning to the Committees, of those at work in 1905, seven have disappeared, while five additional have been created. Taking these as a whole, the increase for railway fares, printing, etc., in 1906 represents some £300; the variations in expenditure of each Committee are shown under Abstract E of the Financial Statement.

New Building Account.

This is a new item in the Financial Statement, and represents the payment for adjudicating on the competitive plans of the new premises now in course of erection.

Revenue.

Turning to the revenue, there is an expansion of £1,900. From subscriptions £1,000, and from advertisements £850. This latter increase is perhaps the more remarkable when it is recollected that it has been earned in spite of the decrease of 1,246 pages of advertisements. The receipts from sundry sales of JOURNALS, reading and binding covers, and reprints, show an expansion. Under the head of Interest and Investments and Rents there is a decrease of nearly £300. This is accounted for by the tenants of the various premises belonging to the Association terminating their tenancies on learning there was a prospect of disturbance due to the rebuilding.

Surplus.

Your Council is gratified that it is able to show expansion in the revenue and a transfer of £1,385 to the reserve of the Association, which now stands at £103,644. In considering the amount transferred to the Association reserve, it must be borne in mind, when comparing the last two years, that in 1905 your Council thought it prudent to write off some £500 more on investments than has been necessary in 1906. Such being the case, while the revenue has expanded, the fact must not be lost sight of that actual expenditure has increased in a greater ratio. This fact ought and must, engage the serious attention of every thoughtful member who has the interests of the Association at heart.

ESTIMATE OF INCOME AND EXPENDITURE FOR 1907.

12. Your Treasurer, in submitting an estimate of receipts and expenditure for the year ending December 31st, 1907, is faced by grave financial responsibilities—responsibilities which deserve the closest attention of every member of the Association. The seriousness of the position is emphasized now that the rebuilding of the premises is in course of operation and the increased revenue from rents cannot be enjoyed until completion. Once the new building is erected your Council is confident the venture is financially sound, but while this is being effected the Association will be called upon during the next two years to find approximately £40,000 to defray the cost. How this £40,000 will be provided ultimately, whether by mortgage or by the issue of debentures, will have to be decided on some future occasion. In the meantime accommodation has been arranged with the bankers, but such accommodation means the finding of interest on the money borrowed, and for the year 1907 it is difficult to say what amount of interest will be required. If the bank rate remains at the present figure, the charge will represent eventually £2,000 per annum. Attention is called to this matter to remind members that for the next two years the Association has to face exceptional commitments out of its revenue.

Your Treasurer has carefully considered the prospects of possible revenue and expenditure for the year 1907, and unless there be a cessation of expenditure or an abnormal growth in the revenues, the Association will have to face a deficiency on the year's working.

Expenditure.

	1906. £	1907. £
Editorial	6,464	6,600
Printing JOURNAL	22,761	23,500
General Association expenses	7,101	6,250
Salaries and wages	5,272	5,500
Representative Meeting, Council and Committees ...	3,451	3,500
Special Representative Meeting	—	400
Library	357	350
Depreciation of plant and type	250	250
Grants to Branches	3,365	3,500
Superannuation	300	300
Loss on subscriptions	200	200
	49,521	50,350
Rent of temporary premises, rates and taxes ...	—	600
Fitting up temporary premises, cost of moving and housing library	—	600
Interest on capital for rebuilding	—	700
	£49,521	£52,300

Revenue.

	1906. £	1907. £
Subscriptions	26,000	26,200
Advertisements	21,282	21,500
Sales of JOURNAL	2,565	2,500
Interest on Investments	948	900
Discounts on paper	1,040	1,050
Sundries	92	100
	52,002	51,800
Deficit on the year	—	500
	£52,002	£52,300

Balance Sheet 31st December, 1906.

Dr. Cr.

LIABILITIES.

	£	s.	d.
To Subscriptions paid in advance	488	8	10
,, Advertisements ditto	834	17	9
,, Contributions	699	17	3
,, Reporting	53	11	0
,, Engraving	92	4	9
,, Printing Journal	463	10	10
,, Paper for Journal	1,021	0	9
,, Miscellaneous Printing	234	2	2
,, Stationery	107	5	11
,, Repairs	4	12	1
,, Legal Charges	114	7	8
,, Rates and Taxes, Insurance and Electricity	497	16	1
,, Plant and Type	28	9	8
,, Editorial Expenses	16	18	7
,, Sundries	86	3	4
,, Library, Books, etc.	20	14	8
,, Overdraft from Bankers	2,796	19	8
,, Subscriptions due to Branches December 31st, 1906	312	19	11
Total Liabilities	7,874	0	11
,, **Surplus Account**—			
Balance on January 1st, 1906	102,249	3	5
Balance of Income over Expenditure for 1906 brought from Revenue Account	1,385	8	6
,, **Balance, being total of excess of Assets over Liabilities**	**103,644**	**11**	**11**
	£111,518	12	10

ASSETS.

	£	s.	d.
By Subscriptions—Amount due	1,757	4	10
,, Advertisements—Amount due	3,028	14	5
,, Sundry Sales—Amount due	133	0	1
,, Furniture and Fixtures	1,381	9	2
,, Library	2,259	18	0
,, Plant and Type	1,870	18	9
,, Stock of Paper in hand for Printing Journal	211	10	0
,, Cash at Office	36	11	8
,, Cash at Bank, being Branch Subscriptions in hand Dec. 31st, 1906	312	19	11
,, Capital Expenditure in connection with New Premises	154	0	0
,, Investments—			
,, Accrued Rents	10	4	6
,, Freehold, 2 & 3, Harvey's Buildings, bought at Public Auction 1894	4,640	0	0
,, Freehold of 429, Strand, 2, 3, 4 & 5, Agar Street at price paid 1898	81,380	0	0
,, £3,290 Bank of England Stock @ 288	9,216	0	0
,, £6,400 Midland Railway 2½ per cent. Perpetual Guaranteed Preferential Stock @ 77¼ bought February, 1905	5,026	1	6
	14,242	1	6
(The above assets do not include the unexpended balances of Capitation Grants held by the various Branches.)			
	£111,518	12	10

Revenue or Profit and Loss Account for Year ending 31st December, 1906.

	1905. £	s.	d.	1906. £	s.	d.
Material ... ... See *Abstract A* ...	6,101	3	1	6,464	17	10
[illegible] ,, *B* ...	22,173	14	1	22,761	0	0
[illegible] ,, *C* ...	7,280	9	9	7,101	7	4
[illegible] ,, *D* ...	1,491	2	8	5,272	1	7
Representative Meeting Council and Committee Expenses ,, *K* ...	1,092	0	2	3,451	11	6
[illegible] ,, *F* ...	257	14	11	257	14	1
[illegible]	170	14	5	3,665	15	6
	40,165	12	5	48,974	7	10
[illegible] ...	256	17	6	256	17	6
[illegible] ...	100	0	0	100	0	0
[illegible]	250	0	0	250	0	0
[illegible] ...	300	0	0	300	0	0
[illegible]	795	0	1	795	0	1
	42,867	10	0	51,676	14	5
[illegible]	1,239	14	0	1,165	8	6
	£44,107	4	0	£52,842	2	11

	1905. £	s.	d.	1906. £	s.	d.
Subscriptions	24,755	0	10	25,562	3	6
do. arrears of former years	285	12	11	522	17	1
Advertisements	20,440	9	11	21,282	4	10
Sundry Sales,—Journals	2,201	8	5	2,280	0	6
,, ,, Reading and Binding Covers, &c.	168	0	3	120	18	8
,, ,, Reprints	118	6	0	154	4	4
Interest on Investments and Rents	1,138	6	10	947	13	7
Returned Scientific Grants	46	10	3	56	19	10
Sales of Waste Articles	35	10	4	35	13	9
Discount on Printing Paper, &c.	918	6	3	1,040	6	10
	£49,107	12	0	£52,842	2	11

Abstract A.]

EDITORIAL.

	1905. £ s. d.	1906. £ s. d.
Salaries:—Editor	1,000 0 0	1,000 0 0
,, Assistant Editor	750 0 0	750 0 0
,, Sub-Editor	250 0 0	250 0 0
,, Clerical Staff	390 4 6	418 19 10
Advance Slips circulated to the Press	4 14 0	27 18 9
Contributions	2,962 17 9	2,924 18 6
Reporting	241 7 9	404 5 6
Engraving	239 2 0	395 14 0
Legal Expenses	12 17 8	18 3 0
Postage	78 12 6	73 11 5
Analyses	10 10 0	37 14 6
Travelling Expenses, Papers, &c.	170 16 11	163 12 4
	£6,101 3 1	£6,464 17 10

Abstract B.]

EXPENSES OF PRINTING JOURNAL.

	1905. £ s. d.	1906. £ s. d.
Composing and Machining Journal ...	8,898 17 1	8,874 9 10
Paper for Journal	8,985 14 3	9,069 6 4
Postage for Dispatch of Journal	3,992 8 10	4,222 0 0
Address Bands for issuing Journal	562 17 5	458 5 3
Compositors' Sick Fund	10 10 0	10 10 0
Reprints	103 6 6	126 8 7
	£22,173 14 1	£22,761 0 0

Abstract C.]

GENERAL ASSOCIATION EXPENSES.

	1905. £ s. d.	1906. £ s. d.
Annual Meeting—*Daily Journal*, etc.	200 19 0	196 17 4
,, ,, Expenses of Sections ...	27 1 2	7 2 4
Auditors' Fee	105 0 0	105 0 0
Bank Charges	73 10 2	51 16 6
Cleaning Offices	167 16 6	173 8 0
Coals and Coke	58 16 0	61 7 0
Donation to Charing Cross Hospital	10 10 0	10 10 0
Legal Expenses	533 14 8	552 0 7
Miscellaneous Printing	678 5 11	514 17 3
Year Book—Printing, &c.	721 2 9	479 2 6
,, Postage...	255 5 2	265 7 6
Office—General Postage	632 8 4	670 13 7
Office Petty Cash	151 5 7	190 12 0
Pension, late General Secretary	600 0 0	600 0 0
Rates, Taxes, Insurance and Lighting	789 19 0	505 8 0
Repairs—Painting and General upkeep	406 14 8	33 0 7
Research Scholarships	600 0 0	612 10 0
Royal Commission on Vivisection—Special Grant ...	—	25 0 0
Scientific Grants	353 0 0	341 0 0
,, ,, Special Grant Chloroform Committee	—	100 0 0
Stationery	486 17 1	554 4 0
Sundries	187 13 0	185 6 2
Travelling Expenses	217 10 9	466 4 0
	£7,260 9 9	£7,101 7 4

Abstract D.]

OFFICE SALARIES AND WAGES.

	1905. £ s. d.	1906. £ s. d.
General Secretary	800 0 0	800 0 0
Assistant Secretary	275 0 0	275 0 0
Medical Secretary	709 0 0	737 10 0
Assistant Medical Secretary	208 3 0	250 0 0
Clerical Staff	2,812 13 8	3,209 11 7
	£4,791 2 8	£5,272 1 7

Abstract E.]

REPRESENTATIVE MEETING, COUNCIL AND COMMITTEE EXPENSES.

	1905. £ s. d.	1906. £ s. d.
ANNUAL REPRESENTATIVE MEETING—		
Railway Fares	177 0 7	237 2 2
Hire of Hall Furniture, &c.	—	99 17 4
Agenda and Minutes for Representative Meeting	110 11 3	161 11 10
	287 11 10	498 11 4
COUNCIL—Railway Fares, Printing, &c.	595 2 0	781 7 2
COMMITTEES—Railway Fares, Printing, &c.:—		
Alteration of Memorandum Committee ...	5 4 10	
Annual Meeting Committee	22 7 0	—
Arrangements Committee	14 2 7	35 18 10
Chairmen of Committees	82 17 9	4 14 6
Chloroform Committee	10 11 0	7 0 4
Coat of Arms Committee	2 2 0	
Colonial Committee	18 5 0	11 13 0
Co-ordination Committee	16 3 1	—
Election Returns Committee	5 10 3	12 16 8
Ethical Committee	119 0 1	144 2 [illegible]
Hospitals Committee	197 3 1	98 16 0
Irish Committee	14 10 9	116 1 9
Journal and Finance Committee	129 2 9	123 2 1
Medical Defence Committee	46 13 1	—
Medico-Political Committee	555 4 1	766 12 6
Organization Committee	217 9 2	180 2 8
Poor Law Enquiry Committee	—	39 10 5
Premises and Library Committee	123 2 2	128 15 8
Proprietary Drugs Committee	—	0 13 2
Public Health Committee	96 11 8	117 1 4
Puerperal Morbidity Committee	—	62 5 0
Royal Naval and Military Committee	5 6 1	12 17 0
Science Committee	63 4 2	92 2 7
Scottish Committee	30 10 11	53 1 11
Secretaries of Branches and Divisions Committee	28 13 5	—
Special Finance Enquiry Committee	—	12 13 1
Standing Orders Committee...	23 5 0	—
Superannuation Committee...	0 18 6	26 5 [illegible]
Therapeutic Committee	24 7 11	47 10 5
Volunteer Medical Committee	—	77 16 4
	£2,028 0 2	£3,451 11 6

Abstract F.]

LIBRARY.

	£ s. d.		£ s. d.	£ s. d.
To Balance	2,287 5 3	By Librarian's Salary	250 0 0	
,, Purchase of Books	85 1 10	,, Printing and Posting of Circulars and Insurance	7 14 1	
,, Binding Books	87 10 11			257 14 1
,, Librarian's Salary	250 0 0	,, Amount written off for Depreciation ...		100 0 0
,, Printing and Postage of Circulars and Insurance of Books ...	7 14 1	,, Balance carried to Balance Sheet		2,259 18 0
	£2,617 12 1			£2,617 12 1

NEW BUILDING ACCOUNT.

1906.	£ s. d.	1906.	£ s. d.
Dec. 31. To Balance	154 0 0	Dec. 31. By Plans for New Building:—	
		,, Assessor's Fees	101 10 0
		,, Second Prize for Plans	52 10 0
	£154 0 0		£154 0 0

TRUST FUNDS.

Stewart Fund.

Investment of £579 4 per cent. Caledonian Railway Debenture Stock, in the name of the British Medical Association.

1906.		£ s. d.	1906.		£ s. d.
Jan. 1.	To Balance brought over from 1905	12 16 10	Dec. 31.	By Balance carried down, being cash at Bank ...	34 16 10
	,, Interest	22 0 0			
		£34 16 10			£34 16 10

Middlemore Fund.

Investment of £666 13s. 4d. 3 per cent. North British Railway Debenture Stock, in the name of the British Medical Association.

1906.		£ s. d.	1906.		£ s. d.
Jan. 1.	To Balance brought over from 1905	94 19 5	Dec. 31.	By Advertising	1 3 0
	,, Interest	19 0 0		,, Balance, being cash at Bank	112 16 5
		£113 19 5			£113 19 5

We certify, in accordance with the provisions of the Companies Act, 1900, that all our requirements as Auditors have been complied with. Having examined the above Balance Sheet, dated 31st December, 1906, with the books and vouchers of the Association, and having verified the investments held on account of the Association and of the above Trust Funds, and having verified the possession by the Solicitor to the Association of the Deeds of the properties, 429, Strand, 2, 3, 4 and 5, Agar Street, and 2 and 3, Adelphi Buildings, we report that the Balance Sheet is in our opinion properly drawn up so as to exhibit a true and correct view of the state of the Association's affairs, as shown by the books of the Association.

PRICE, WATERHOUSE & CO.
3, Frederick's Place, Old Jewry, E.C.,
8th April 1907.

H. RADCLIFFE CROCKER,
Honorary Treasurer.

A. J. ELLISTON,
General Secretary.

Balance Sheet 31st December, 1906.

Dr. **Cr.**

Office Staff Superannuation Fund.

1906.		£ s. d.	1906.		£ s. d.
Jan. 1.	To Balance brought over from 1905	1,556 3 7	Dec. 31.	By Balance carried down—	
	,, Voluntary Contributions	250 0 0		,, Cash at Bank	7 17
	,, Payments by Members on Staff	91 12 2		INVESTMENTS AT COST	
	,, Interest on Investments	46 11 6		,, £560 Cape of Good Hope 3 per cent. Stock, bought at 92½, 1902	558 1
				,, £320 Bank of England Stock, bought 1903 ...	318 19
				,, £110 Bank of England Stock, bought @ 299½, 1904	330 10
				,, £100 Bristol Corporation 3½ per cent. Redeemable Stock bought 1905	100 0
				,, £100 2½ per cent. Midland Railway Consolidated Preferential Guaranteed Stock, bought 1906	313 9
				,, £140 New Zealand 4 per cent. Loan Stock, bought 1906	151 5
				,, £200 London & North Western Railway Consolidated 4 per cent. Preferential Stock, 1981, bought 1906	214 7
		£1,954 10 3			£1,991 10

We certify, in accordance with the provisions of the Companies Act, 1900, that all our requirements as Auditors have been complied with. Having examined the above Balance Sheet, dated 31st December, 1906, with the books and vouchers of the Fund, and having verified the investments held on account of the Fund, we report that the Balance Sheet is in our opinion properly drawn up so as to exhibit a true and correct view of the state of the Office Staff Superannuation Fund as shown by the books.

PRICE, WATERHOUSE & CO.
3, Frederick's Place, Old Jewry, E.C.,
8th April, 1907.

H. RADCLIFFE CROCKER,
Honorary Treasurer.

A. J. ELLISTON,
General Secretary.

THE "BRITISH MEDICAL JOURNAL."

13. With the last number for 1906 the first two volumes of the BRITISH MEDICAL JOURNAL in its new and improved form were completed, and your Council has great pleasure in congratulating the members on the success which has rewarded the efforts made to add to the usefulness of the JOURNAL, to the ease and interest with which it may be read, and to its value as one of the most important assets of the Association. The approval expressed by members has been general, and the financial results have been satisfactory. Your Council believes that it correctly interpreted your wishes when it placed on record its appreciation of the services rendered by the Editor and General Secretary in this respect; the estimate made by the General Secretary in October, 1905, of the probable financial effects of the changes has been fully justified by the first year's working, and there is reason to expect that in the future the financial results will be even more satisfactory.

The valuable series of clinical lectures and addresses published during the year has brought to the notice of readers of the JOURNAL methods of diagnosis and treatment followed in many of the chief hospitals and medical schools; and numerous other papers, many of them read before meetings of Branches and Divisions, have contained much clinical material drawn largely from general practice; reports and articles dealing with pathology, bacteriology, and other more strictly scientific departments have not been wanting; but having regard to the needs of members engaged in general practice, who form the majority, the number and length of such papers have necessarily been limited.

The amount of matter received for publication from the very successful annual meeting at Toronto was unusually great, as many of the Sections met on four instead of three days; for this reason and because the meeting was held about a month later than usual and in a distant city the printing of the reports began and terminated later than is customary. The publication of the whole of the reports, with the exception of certain papers unavoidably postponed for special reasons, was nevertheless concluded by the end of the year. About the value of these reports, both clinical and pathological, there can be little room for difference of opinion; they will have been read with great interest by those who were not fortunate enough to visit Toronto, and the Association is much indebted to those officers of Sections who took so much trouble to arrange discussions of value.

In the EPITOME and in the editorial articles and special correspondence of the JOURNAL members will have found a record of the most important medical, surgical, and pathological work done in foreign countries, while those social, political, and public-health questions in which it behoves every medical man to take a lively interest have been discussed and illustrated.

COMMITTEES.

14. Throughout the last twelve months the work the Committees have undertaken has been extensive, and your Council desires to remind members of their deep obligation to the Chairmen and members of these various Committees for the great amount of time devoted to the advancement of the common interests of the medical profession.

CHLOROFORM COMMITTEE.

15. Your Committee has to report that the following work has been carried out during the past year; details of this have appeared in the BRITISH MEDICAL JOURNAL bearing date July 14th, 1906.

Professor Brodie, F.R.S., with the assistance of Miss S. T. Widdows, B.Sc., has pursued his research into the rate of absorption of chloroform contained in inspired air during the induction of anaesthesia.

It may be pointed out that the problem which your Committee are investigating is to ascertain the minimal dose of chloroform competent to produce and maintain surgical anaesthesia. To understand the factors of this it is necessary to ascertain (*a*) the proportion of chloroform which is inhaled and that which actually enters the lungs; (*b*) what proportion of this enters the blood and tissues; and (*c*) what proportion, if any, is retained and accumulates in the tissues. Professor Brodie's research deals with the first part (*a*) of this investigation. The animals experimented upon inhaled, under test conditions, known percentages of chloroform vapour in air. In different experiments these proportions were of strengths between the extreme limits of 1.06 per cent. and 2.78 per cent. The concentration selected was maintained uniform for ten minutes—the duration of the experiment. To test the accuracy of the mixture of chloroform vapour and air, samples of both the inspired and of the expired air were taken at intervals and analysed. The alterations in the actual ventilation of the lungs also were noted. Control experiments with known strengths of chloroform vapour were pursued *pari passu* with the investigation of the respired air and chloroform mixture.

The conclusions at which Professor Brodie arrived may be summarized as follows:

After a brief interval—two minutes—respiration becomes more shallow and less frequent. This depression is dependent upon the concentration of the chloroform vapour in the mixture. It persists for six or eight minutes, when respiration gradually recovers, so that at the end of ten minutes the lung ventilation is greater than that previously observed. The rate of absorption of chloroform vapour increases up to a certain point, *pari passu* with the increase in the pulmonary ventilation, but when the latter is very extensive the proportionate absorption is less.

The experiments show, further, that the chloroform in the expired air is least during the first two minutes of induction, and is gradually increased during the later periods, although at the end of ten minutes the proportion of chloroform in the expired air is less than that in the inspired air. Equilibrium is, therefore, not established in this period of time.

The total quantity of chloroform absorbed per minute—that is, the difference between the inspired and expired amounts—is greatest in the second minute. Later the quantity lessens, the diminution being commonly associated with a decreased lung ventilation, although the diminution is always present, even when the amount of ventilation is but slightly altered. The total quantity of chloroform absorbed is found to be greater when the concentration of the inspired vapour mixture is high, but no actual proportion could be established.

Mr. A. Vernon Harcourt, F.R.S., reports upon the investigation of the amount of chloroform retained by patients during the ordinary course of chloroformization in surgical practice. The anaesthetic was given by a member of your Committee, the Vernon Harcourt regulator was employed, and the expired air was collected and analysed under Mr. Harcourt's supervision. In this report it is pointed out that the conditions in the case of patients inhaling from an apparatus differ from those which can be enforced in experiments upon the lower animals. Of these, the necessity of a facepiece and apparatus involving a "dead space" is one of importance, since it is not easy to estimate exactly how the "dead space" influences the amount of chloroform absorbed as compared with the amount drawn into the apparatus. The report deals with this question, and supplies particulars of the cases examined. It is estimated that one-third of the mixture is breathed out unchanged through the expiry valve. It is obvious, therefore, that the air-chloroform mixture collected through the expiry valve does not give an accurate value to the strength of the mixture actually leaving the alveolar cells of the patient. The report states that the method can only supply the facts of the total quantity of chloroform used and the quantity which is retained. So far the investigation has not determined whether in the course of a prolonged inhalation of chloroform the total amount retained by the patient becomes constant, the outgoing and ingoing amounts being equal. In other words, it is not decided whether accumulation, in the sense that chloroform becomes progressively stored in the tissues, actually takes place. It seems certain, however, that the quantity of chloroform which is operative—that is, which maintains unconsciousness—is quite small. Your Committee submits that the question of accumulation is one of the first importance, and one which recent work carried on outside your Committee has forced to the front. It is suggested that this investigation be pursued by the Committee, and your Committee is actually at work at the present time upon this question.

In preceding reports Professor Sherrington, F.R.S., has dealt with the action of chloroform in known percentages upon the muscular tissues of the heart, the skeletal and visceral musculature. In the present report he deals with experiments conducted by him with the assistance of Miss S. C. M. Sowton, which explain the effect of chloroform upon muscular structures when carbonic dioxide is present in excess. The investigation is of importance when it is remembered that we know clinically that the association of asphyxial phenomena with chloroform inhalation is one determining cause of deaths under this anaesthetic. The research, as far as it has advanced at present, indicates that the effect of carbonic dioxide, when acting in combination with chloroform, aggravates the effect of the anaesthetic, at least in so far as regards structures acted upon by chloroform in unoxygenated saline solution containing carbonic dioxide.

Your Committee submits that it is advisable to pursue work in the following directions:

(*a*) The investigation of the question whether chloroform becomes stored in the tissues and so accumulates, causing an increasing effect while the actual concentration of the vapour mixture inhaled remains constant.

(*b*) The effect of chloroform upon somatic structures when it is administered in media resembling pathological conditions—for example, asphyxia, various abnormal blood conditions, hydraemia, uraemia, and so on.

(*c*) The relative absorption capacities of the tissues of the body with regard to chloroform and the influence of concentration upon the rate and extent of absorption.

(*d*) The investigation of the phenomena arising when concentrations of chloroform above 2 per cent.—the minimum value established which induces surgical anaesthesia without danger—are given, and to ascertain at what concentration dangerous narcosis results.

Colonial Committee.

16. This Committee has maintained its relations with the Colonies so far as the consideration of various Acts and Ordinances transmitted from the Colonial Office and other matters are concerned. The most recent legislative matters considered by the Committee are "The Medical Registration Act, 1905, of Bermuda" and "An Ordinance to provide for the Registration of Medical Practitioners and Dentists in the Colony of Southern Nigeria, 1906."

In regard to both these Acts the Committee has proffered certain suggestions whereby they might be more uniformly brought into line with other legislative enactments having for their object the principle of registration and reciprocity—a principle which your Council has impressed upon the Colonial Office on many occasions when Colonial legislation has been contemplated. Your Council is of opinion that any person should be registered in the Colonies upon his producing satisfactory evidence that his name is on the *Register* of the General Medical Council of the United Kingdom.

As regards Southern Nigeria, your Council takes this opportunity of placing on record its appreciation at noting that that Colony offers preferential treatment to the holders of British qualifications as regards the registration fee; though the Committee has pointed out to the Colonial Office the desirability of Southern Nigeria restricting registration to only those who are possessed of qualifications granted by a country which in turn recognizes the qualifications from any authorized licensing body throughout the British Empire.

Your Council is also gratified with the efforts of the Malaya Branch in obtaining an Ordinance to provide medical registration in the Straits Settlements.

Other matters arising in Antigua, Singapore, and Tokyo also have been dealt with.

The following schedule is significant of the success or prospect of success attending the work of the Colonial Committee in establishing registration and reciprocity of medical practice.

Name of Colony.	*Title of Legislation.*
Bermuda	Medical Registration Act, 1905.
Ceylon	Ordinance to provide for the Registration of Medical Practitioners in Ceylon.
New South Wales	Act No. 33, 1900, an Act for the Registration of Medical Practitioners: the restriction of unqualified persons from practising, etc.
New Zealand...	New Zealand Medical Practitioners Act, 1905.
Nigeria, Southern	"An Ordinance to provide for the Registration of Medical Practitioners and Dentists."
Queensland Medical Board.	Have taken steps to correct the defects of their existing Act in the direction indicated by the Association.
South Australia	The Board are in sympathy with the aspirations of the Committee. By an Ordinance, No. 17, 1844, they have a system of registration by a Medical Board. Also by a later Ordinance of 1880 and 1889.
Straits Settlements	"An Ordinance to provide for the Registration of Medical Practitioners in the Colony."
Tasmania	Medical section of the Royal Society are in favour of only those medical qualifications which are available for registration in Great Britain and Ireland being registrable in Tasmania.
Victoria, Australia	A Bill virtually adopting the recommendations of the Association is now before the State Legislature.
Western Australia	The Medical Board works under the Medical Act of 1894.

Almost all these colonies either have adopted or are introducing a system of medical registration, and so amending their statutes as to bring them into line with the aspirations of your Council.

Central Ethical Committee.

17. The Central Ethical Committee has held three meetings since the Annual Representative Meeting. The reports of the proceedings of these meetings to your Council show the same tendency to increase in the work of this Committee which has been observed in previous years. A full report on the work of the Committee will as usual be submitted to the Annual Representative Meeting and your Council confines its attention in this report to the matters upon which it has been called to pass specific resolutions.

Your Council has approved, on the recommendation of the Central Ethical Committee, rules both as to procedure in ethical cases and as to the previous conduct of members of the bodies concerned, submitted by several Divisions and Branches. Your Council has also approved a modification of the Model Rule "Z" which will enable Divisions to make official communications of the character contemplated by the rule, not only to their own members but also to other Divisions and Branches.

Your Council regrets to have to report that, in discharge of its duty under Articles XLIII and XLIV of the Articles of Association, it has been called upon to expel three members on the ground that their conduct was detrimental to the honour and interests of the profession. The

decision in each case resulted from prolonged and careful inquiries, first by the Divisions to which the members belonged, and next by the Councils of the Branches concerned, who made representations to your Council in the manner prescribed by the Articles. Each case was then fully investigated by the Central Ethical Committee in accordance with the requirements of the Regulations of the Association, and a detailed report upon the investigations made and upon the facts as found by the Committee was placed before your Council.

Your Council sees with regret that a report on the Ethics of Consultation has been sent to the Divisions without having been submitted to the opinion of some body representing consultants, whose concurrence is necessary to the success of any project of reform in procedure, and the Council trusts that any decision on the matter be deferred until such conference has taken place.

HOSPITALS COMMITTEE.

18. The Hospitals Committee has met four times since the Annual Representative Meeting of 1906, in addition to two meetings of the Joint Hospitals Committee consisting of the Association's Committee together with representatives appointed by the Hospitals Conferences held in March, 1905, and December, 1906, respectively.

The proposals as to the administration and management of hospitals and kindred institutions, drawn up by the Joint Hospitals Committee, were circulated to hospitals throughout the United Kingdom in August, 1906, the Honorary Secretaries of Divisions being at the same time written to by the Hospitals Committee of the Association, inviting their co-operation to secure consideration of the proposals by the various hospitals within the Division areas. The Hospital Boards were invited to communicate to the Joint Hospitals Committee their opinions on the various proposals of that Committee, and in addition were invited to appoint each a delegate or delegates to attend the United Kingdom Hospitals Conference, to be held towards the end of the year 1906. Over 200 hospitals throughout the kingdom complied with the request of the Joint Committee, and sent replies upon some or all of the proposals, the main drift of the replies being favourable to the reforms advocated in the proposals; 150 hospitals also appointed delegates to the United Kingdom Hospitals Conference, which was convened by the Joint Hospitals Committee, and held on December 6th, 1906.

Those attending the Conference included, in addition to the delegates of hospitals throughout the country, representatives of your Council, of large donors to hospitals, of the Metropolitan Provident Medical Association, and others in various ways specially interested in the questions which the Conference was convened to consider. The Conference passed a series of important resolutions, indicating the desire of those present that the organized co-operation of the governors of hospitals and of the medical profession in the prevention of hospital abuse, which the British Medical Association had initiated, should be continued and placed on a definite basis. Thus, influential representatives were elected to co-operate with the Hospitals Committee of the Association, as a Joint Committee, in further urging upon hospitals the reforms proposed by the Joint Committee in August, 1906, and it was decided that an annual Conference should be held.

A special report on the whole subject is being placed by the Hospitals Committee before the Divisions, with a view to a definite finding by the Representative Meeting on those matters which have not yet been so considered.

Two important questions affecting the finances, and indirectly therefore the administration, of metropolitan hospitals, have received the careful consideration of the Hospitals Committee and of your Council during the year. The first was the application of the Metropolitan Hospital Sunday Fund for a Royal Charter. This was opposed by the Metropolitan Counties Branch on grounds stated in a memorial addressed to the Privy Council, the principal of these being that upon such a body the profession should be adequately represented. Your Council has expressed approval of these representations of the Metropolitan Counties Branch.

The second question of the kind was raised by the promotion in Parliament of a Bill for the statutory incorporation of the King Edward's Hospital Fund for London, concerning which your Council addressed to His Royal Highness the Prince of Wales, as President of the Fund, a memorial embodying the same principles as above stated with regard to the Hospital Sunday Fund.

The Annual Representative Meeting of 1906 constituted the Hospitals Committee a standing Committee of the Association. Your Council has approved the following standing reference to the Committee:

> It shall be the duty of the Hospitals Committee to consider and to report to the Council upon all questions concerning hospitals and other medical charities.

IRISH COMMITTEE.

19. The Irish Committee, which consists of 13 members, met four times during the year—three times in Dublin and once in Belfast. The average attendance of members was 12.

The organization of the British Medical Association in Connaught was anxiously considered by the Committee, and the Honorary Secretary circularized all the members of the Association residing in Connaught, but so far nothing practical has resulted therefrom.

A joint Poor-law Subcommittee, with representatives thereon of all associations interested in Irish Poor-law reform, was formed for the purpose of collecting evidence which the Association could place before the Royal Commission on the Poor Law. This joint Subcommittee held two meetings in Dublin, and resolved to subdivide into three sections dealing respectively with matters relating to public health, medical relief, and Poor Law generally. An honorary secretary was appointed for each section. Circulars calling for information and also requesting various Poor-law officials to keep accurate records of work done have been sent out by the secretary of each section.

The Committee suggested certain additions to the Coroners Act Amendment Bill.

A resolution seeking for power to co-opt three additional members from unrepresented districts was adopted.

An ethical complaint forwarded from the Central Ethical Committee was referred to, and satisfactorily settled by, the South-Eastern Branch Council.

A resolution drawing attention to, and deprecating in the strongest possible way, a movement to transfer the management of asylums from medical to lay hands was passed.

Resolutions in regard to the compulsory notification of infectious disease and to sanatoriums for consumptives were also passed and forwarded to the Government, and replies received that the matters would have consideration.

MEDICO-POLITICAL COMMITTEE.

20. The reports of the Medico-Political Committee placed before your Council during the session have contained the records of consideration of many important matters upon which the Committee will in the ordinary course report to the Representative Meeting. In the present report attention is confined to matters which have been the subject of special resolutions of your Council, and these have been comparatively few, as upon most of the questions dealt with the Committee had already received instructions from the Representative Meeting or from your Council.

Upon consideration of representations made by certain Branches and Divisions, your Council on the recommendation of the Committee has approved that representations should be made to the Chancellor of the Exchequer with regard to the taxation of motor cars which is understood to be contemplated, urging that there should be some abatement in respect of motor cars used by medical practitioners for purposes of their practice.

Applications from the Certifying Factory Surgeons' Association and from the Postal Medical Officers' Association for the support of the British Medical Association in representations which those bodies had in contemplation to the Home Secretary and the Postmaster-General respectively, have received very careful consideration by the Medico-Political Committee and by your Council.

Your Council has instructed the Medico-Political Committee, on behalf of the Association, to support the Certifying Factory Surgeons' Association.

With regard to the application from the Postal Medical Officers' Association, the Medico-Political Committee has advised that before the Association is committed to a definite policy the general conditions of employment of

postal medical officers should be examined and compared with other medical work of analogous character—a task in which the Postal Medical Officers' Association has promised to assist the Committee. In the meantime, your Council has approved recommendations from the Medico-Political Committee that the support of the Association should be given to Divisions in any action which they may desire to take locally for the assistance of medical officers threatened with dismissal from their employment under the new order of the Postmaster-General as to the age limit for retirement.

The question of lunacy legislation has again required the careful consideration of the Medico-Political Committee. In the autumn of 1906 the Government extended the reference of the Royal Commission on the Feeble-minded by remitting to it the general question of the constitution and powers of the Lunacy Commission. A statement on the subject was prepared by the Lunacy Subcommittee of the Medico-Political Committee for submission to the Commission, and the Chairman of the Lunacy Subcommittee, Mr. C. R. Straton, Dr. Buist, who, as Chairman of the Medico-Political Committee and of the Lunacy Subcommittee in the Session 1905-6, had given special attention to the subject, and the Medical Secretary gave evidence before the Commission. A copy of the printed statement of the evidence will be duly placed before the Representative Meeting.

Naval and Military Committee.

21. The Naval and Military Committee has met three times since the annual meeting. The Committee has been called upon to consider questions affecting the general conditions of employment of medical officers in the armed forces of the country, and also of alleged hardship primarily affecting individuals.

The representations made by the Association some years ago to Mr. Arnold-Forster as regards the desirability of the Director-General of the Army Medical Service being a member of the Army Council, have been made again to the present Secretary of State for War. Your Council has urged that this question is not one of representation of a certain department of the army on the Army Council, but of securing that medical and hygienic considerations receive due weight in all administrative decisions. Your Council is glad to be able to report that the hardship to which the attention of the War Office has repeatedly been drawn, in the non-payment of passage money for families of Army medical officers proceeding to stations abroad, has now been removed, except as regards passages to India, these being under the control of the India Office, and not of the War Office. The India Office has promised consideration of a memorial from the Association with regard to the case of medical officers ordered to India.

The attention of the Colonial Office and of the Admiralty has been drawn to cases of alleged hardship to officers, but the matters are not yet in a position for final report.

Organization Committee.

22. The duties of the Organization Committee since the Annual Representative Meeting, London, have been specially onerous, and have necessitated the holding of meetings every month from October to April inclusive.

A large proportion of the time of the Committee has necessarily been devoted to the important duty of carrying out the instructions of the Annual Representative Meeting in the revision of the draft Charter, Ordinances, and By-laws, concerning which the Representative Meeting reaffirmed, by almost exactly the same majority—namely, 3 to 1—by which it originally affirmed the desirability of applying for a Charter. The Meeting instructed the Committee to re-draft Clauses of the Charter and Ordinances in conformity with the specific resolutions of the Meeting, and to take into consideration the various proposals for amending all the draft By-laws which were before the Meeting and revise the By-laws at the Committee's discretion.

The Committee in carrying out these instructions has again had the valuable assistance of the Solicitor of the Association and of Counsel, Mr. F. R. Colquhoun Dill, who prepared the original draft in the session of 1905-6.

The report of the Committee on the matter and the revised Charter, Ordinances and By-laws were published in the Supplement to the British Medical Journal of April 6th, 1907, and will come before a Special Representative Meeting on Wednesday, May 29th.

In revising the Charter, the Committee has taken into consideration representations received from time to time from Colonial Branches as to their special requirements, and has issued a circular to these Branches in order more definitely to ascertain their views. Several Colonial Branches have already replied, indicating their wishes and stating their conviction of the advantages of obtaining a Charter, and a hope that this will be carried through as rapidly as possible.

In accordance with the Standing Orders that the Organization Committee should deal with all questions affecting the Regulations of the Association and the Standing Orders of the Representative Meeting and Council, the following matters have been referred to and considered by the Committee:

(*a*) By request of the Representative Meeting, the Chairman of Representative Meetings brought before the Council the question of the advisability of an alteration of By-laws to provide that the Chairman of Representative Meetings should be elected at the end of the Annual Representative Meeting of each year instead of at the commencement, that he should hold office until the end of the next Annual Representative Meeting, of which he should be *ex-officio* a member, and that the Division of which he is a Representative should be allowed to elect another Representative in his stead. The Organization Committee in conference with the legal advisers of the Association has submitted for the consideration of your Council an alteration of the present By-laws, suitable to carry into effect that which is desired, and this will be brought by your Council before the Special Representative Meeting. In this and all other cases in which an alteration of the present By-laws is proposed corresponding proposals have been inserted in the draft By-laws scheduled to the draft Charter.

(*b*) The Organization Committee, as the result of the consideration of a communication from the Honorary Secretary of the Metropolitan Counties Branch, referred to the Committee by your Council, has reported that the wording of the present By-law 25, as to the procedure in the election of members of Council by Branches, is ambiguous, and has suggested an amended form, which your Council is bringing before the Representative Meeting.

(*c*) As the result of the consideration of a communication from the Irish Committee, the present By-law as to the composition of that Committee has received consideration, and the Organization Committee has framed an amended form, which has been approved by your Council, and is being submitted to the Representative Meeting.

(*d*) Upon consideration, at the request of the Central Ethical Committee, of the question which arose in a case before that Committee, as to when resignation of membership of the Association becomes effective, the Organization Committee has proposed and your Council has approved that an interval should be provided, in cases where resignation is tendered, before such resignation takes effect. Your Council therefore recommends that at some convenient opportunity Article VIII be altered by substituting the provision that one month's notice of resignation should be given for the present provision that resignation must be tendered on or before December 1st of the current year. A provision to the same effect has been inserted in the draft Charter.

(*e*) A case of election of a new member by a Branch in whose area he was only temporarily resident, he having been previously refused election by the Council of the Branch in whose area he permanently resided, has brought to the attention of your Council the question of the interpretation of the word "resides" in By-law 2. After careful consideration, the Organization Committee has advised that it would not be desirable to attempt to define more strictly the term "resides," but that in the form of application for membership, words should be inserted having the effect of obtaining a declaration from the candidate in any case in which he may have previously applied for election, and your Council has altered the form of application accordingly.

(*f*) The Organization Committee has considered the following motions on the agenda of the Annual Represen-

tative Meeting, 1906, which were referred, without discussion, to the Committee for consideration and report:

(*i*) That it be an instruction to the Central Council to alter all Articles and By-laws so that "the chairman of a Division" be called "the President of the Division," and the "Executive Committee of a Division" be called "the Division Council." (*ii*) That at least one registered dental surgeon should be added to the Central Council of the Association, either by election or by co-option. (*iii*) That in order to accelerate the consideration of, and dealing with, matters of local interest that do not affect the principles or policy of the Association, and so relieve the routine work of the central office, it is desirable that there be gradually introduced the principle of District organizing medical secretaries. That it be an instruction to the Central Council to consider the matter, and to report with a scheme to the Divisions by March 31st, 1907. (*iv*) Several important notices of motion by the Wandsworth Division relative to the present system of Branch and Division finance.

Special reports upon these matters will be placed in due course before the Representative Meeting, the Committee advising, as regards the first, that it should be left to the Divisions to decide for themselves what should be the titles of their officers; as regards the second, that the question is one of policy regarding the relation of the Association to members of the dental profession, which should be decided by the Representative Meeting itself, and upon which it would be outside the province of the Committee to make any recommendation; as regards the third, that whilst it is highly desirable in the interests of the work of the Association that the paid medical organizing secretariat should be increased, the question of carrying out such an increase is essentially one of finance, and any such increase that may be found financially practicable in the near future should take the form of adding to the staff of the Medical Secretary's office another medical man, or medical men, giving their whole time to the work, and not of the appointment of officers attached to special districts or of practitioners engaged in private practice or holding other appointments; while as regards the fourth question—namely, of Branch and Division finance—the Committee, while still having under consideration its definite report on the whole subject, has come to the conclusion that a system of variable capitation grants at the discretion of the Central Council should be substituted for the fixed capitation grants at present given, and has submitted in the By-laws under the draft Charter a provision to this effect.

The Committee has considered (in accordance with Minute 333 of the Annual Representative Meeting of 1906) a question of provision for ensuring topographical representation in the election of members of Committees by the Representative Meeting, and is engaged in the revision of the Standing Orders of the Representative Meeting, both to give effect to this principle and to any other matters in respect of which amendment may appear desirable. A special report by the Committee will be laid before the Representative Meeting.

The Committee has also under consideration, by direction of the Council, the amendment of the Standing Orders of the Council as regards the presentation of Minutes and Reports of Committees, in order to facilitate the work of the Council.

The Committee has dealt in the ordinary course with several questions of alterations of boundaries of Divisions and Branches and of Rules of such bodies. The most important matters as regards Boundaries have been the formation of two new Branches—namely, St. John, New Brunswick, and Transvaal—each of which, though formed out of the nominal area of an existing Branch, promises a considerable accession of membership to the Association, and the formation of a new Barnsley Division of the Yorkshire Branch, which has resulted in doubling the membership of the Association in the area concerned. On the other hand, the former Stamford Division has ceased to exist, its area being divided among the neighbouring Leicester, Lincoln, and Boston and Spalding Divisions. As regards Rules, the Committee has been called upon to consider important Rules submitted by the Victoria Branch and the New Zealand Branch, the former presenting special difficulties on account of the requirements due to the amalgamation, now successfully carried out, with the Victoria Medical Society, which held grants of land from the Crown.

An important feature of the work of the Committee during the year has been the number of questions affecting the Colonial Branches which have been referred to it for consideration, and which, though in some cases presenting problems in organization of special difficulty, yet have afforded gratifying evidence of the appreciation throughout the Empire of the value to the medical profession of being organized in one imperial Association, and also of the necessity of organization for the maintenance of the honour and interests of the profession.

The Annual Representative Meeting, 1906, upon consideration of the Contract Practice Report passed the following resolution:

That for the purpose of deciding upon the local conditions under which contract practice should be carried on, an organized body, such as a Division or section of the British Medical Association, in conjunction with all the local profession, should be formed in each affected district.

This having been brought to the notice of the Organization Committee, steps are being taken by the Committee to call the attention of the Divisions to the question of local organization involved in equipping themselves to deal efficiently with difficulties of contract practice and kindred matters.

Special Poor Law Committee.

23. Your Council in the session of 1905-6, in view of the appointment of a Royal Commission on the Poor Laws and Relief of Distress, appointed a Special Committee to collect and submit evidence on behalf of the Association on the subject.

The Committee, after determining the general lines upon which the collection of evidence should be based, formed three Subcommittees, one to deal with the question as regards England and Wales, one as regards Scotland, and one as regards Ireland.

The English Subcommittee drew up questions which were circulated to all Poor-law medical officers in England and Wales, over 3,500 in number, in the autumn of 1906. Two thousand replies were received, and as the result of a careful analysis, a printed statement was drawn up and approved by your Council and forwarded to the Royal Commission. The Chairman of Representative Meetings, the Chairman of Council, Dr. Ford Anderson, and the Medical Secretary were appointed to give evidence in person on the basis of this statement, and gave evidence accordingly on January 28th, 1907. Your Council considers that the Association is to be congratulated on the discharge of this important work on behalf of the profession in England and Wales.

The preparation of evidence for Scotland and Ireland by the Scottish and Irish Subcommittees is still proceeding under the general direction of the Scottish and Irish Committees.

Premises Committee.

24. Last year a scheme and plans were submitted for dealing with the Strand-Agar Street, properties of the Association. The scheme was approved, and the Representative Meeting passed a resolution to the effect that it had complete confidence in the Council of the Association to deal with the matter. On this, negotiations were forthwith entered into for carrying out the scheme of rebuilding. In a large matter like this, however, there are many difficulties which have to be surmounted. At the eleventh hour, when everything was ready to start in connexion with the new building, the Civil Service Supply Association offered, through their Surveyor, to exchange No. 1 for No. 3, Harvey's Buildings. Your Council promptly recognized the great advantage such an exchange would represent, as the Harvey's Buildings property would be made contiguous to the other properties, and virtually converted from a back site to a Strand frontage, and at the same time affords a larger area for the new building. After some negotiations a bargain was struck whereby your Association gave up No. 3, and accepted in exchange No. 1, Harvey's Buildings. In addition your Association gives up a passage-way of 6 ft. 6 in., extending at the rear of 1 and 2, Harvey's Buildings, for which it receives the sum of £700.

In consequence of this, modifications had to be introduced into the scheme for dealing with the site, which your Council is firmly convinced will prove highly advantageous financially and otherwise to the Association. The rebuilding of the Strand premises is now in course of operation, and it is expected that the new premises will be ready for reoccupation in the course of eighteen months. In the

meantime your Council has arranged for temporary premises at 6, Catherine Street, where the business of the Association is now being carried on.

Public Health Committee.

25. The Public Health Committee has met three times since the annual meeting, and has been called upon to consider several important matters affecting the health of the community, as well as matters affecting the position of medical officers of health and Poor-law officers.

The subject of tenure of office of medical officers of health, so important as affecting not only those officers, but also the public interest, has received continued attention. Arising out of an informal interview which the President of the Local Government Board courteously accorded to members of the Public Health Committee in July, 1906, the question was considered whether improved conditions of tenure could be obtained by order of the Local Government Board under Section 191 of the Public Health Act of 1875. In response to the inquiries of the Committee, however, the President of the Local Government Board has replied that the Board could not deal with this subject by administrative order, but that any change required should be effected by legislation. The President intimated that the subject of such legislation was still receiving his careful consideration.

Arrangements have again been made for pressing forward the Public Health Bill, and Sir Walter Foster has introduced it into the House of Commons. Efforts were made to obtain a place for it in the ballot for Bills, but without success.

Security of tenure of medical officers of health was referred to in the report of the Select Committee of the House of Commons on the Housing of the Working Classes Bill, the Committee advising that, in the public interest, medical officers of health should be whole-time officers and should not be removable without the consent of the Local Government Board.

The Committee has carefully considered resolutions of the Representative Meeting to the effect (*a*) that all general practitioners should be public vaccinators; and (*b*) that registration under the Medical Acts should be sufficient evidence of competence to perform vaccination. As the former of these resolutions appeared to be in conflict with the carefully-formulated policy of the Association, as previously declared by the Representative Meeting in resolutions which have never been rescinded, the Committee is submitting a special report on the subject to the Representative Meeting.

With regard to the competence of registered practitioners to perform vaccination, the attention of the General Medical Council is being drawn to certain requirements of the Local Government Board which appear to throw doubt upon such competence, and which are deemed to be a matter for the General Council of Medical Education and Registration to consider as affecting the adequacy of the present conditions of medical training and examination leading to registration.

The overlying of infants is a matter which has from time to time received the consideration of the Association through the Public Health Committee, and upon which definite proposals have at length been framed as the result of a conference of representatives of the National Society for the Prevention of Cruelty to Children and of the Coroners Society with representatives of the Association. Your Council has expressed approval of the principles laid down by the conference, which have been embodied in the Prevention of Cruelty to Children Bill introduced into the House of Commons by Mr. Bramsdon. The effect of the Bill is that the fact of an infant having been overlaid when sleeping in bed with its parents should be regarded as *prima facie* evidence of neglect.

The Bill also deals on similar principles with cases of burning through the absence of fireguards.

The Public Slaughterhouses Bill for facilitating the public ownership of slaughterhouses has also received the support of your Council on the recommendation of the Public Health Committee.

With regard to the viewing of bodies at inquests, your Council has approved the following recommendation of the Public Health Committee, and the support of the Association is being given to the Bill introduced by Mr. Luke White, which has for its chief object the carrying out of this principle:

> That in the interest of public health it is undesirable that the jury and coroner should be compelled to view the body in every case.

Your Council has approved action taken by the Public Health Committee in emergency in authorizing representation of the Association on the General Committee formed to secure legislation for the exclusion of children from public-houses, and on the Joint Committee of various bodies interested in the teaching of hygiene, formed to arrange a conference in connexion with the visit of the Colonial Premiers to this country, to consider the arrangements for the teaching of hygiene and temperance in various parts of the British Empire.

Your Council has again the pleasure of reporting that the efforts of the Association through the Public Health Committee to secure proper remuneration and suitable conditions of employment in other respects for public medical officers have been attended with success in several instances, notably that of the appointment of the Poor-law Medical Officer for Nos. 3 and 4 Districts of the Lutterworth Union.

An important question, not yet decided at the time of presenting this report, is that of the proposed appointment of a Lady Assistant Medical Officer at the Halifax Union Infirmary at a much lower salary than was previously paid to a medical man for the same duties. This case was taken up at the instance of the London School of Medicine for Women. In connexion with it, the principle has been stated on behalf of the Association, that in the employment of registered medical practitioners no difference of salary should be made on the ground solely of difference of sex.

In connexion with certain questions of action by the Coventry Division in matters of contract practice, questions were raised in the Coventry Town Council as to the propriety of the medical officer of health of that borough acting as Honorary Secretary of the Coventry Division of the Association. The Sanitary Committee upholding the position of the medical officer of health, the matter was eventually referred to the Local Government Board, to whom a memorandum was addressed by the Association in defence of the private rights of public officers involved in the case. Your Council regrets that, in the reply of the Local Government Board to the inquiries addressed to it, the rights in question were not definitely maintained, and renewed representations are being made to the Board on the subject.

Science Committee.

26. In addition to its regular business of allocating grants and selecting Research Scholars, the Committee has considered the proposal to establish a Scholarship for Tropical Medicine; the conditions of the award of the Middlemore Prize; and the question of the preparation of evidence for submission to the Royal Commission on Vivisection.

With regard to the proposal to found a Scholarship in Tropical Medicine, the Committee, after long correspondence with the Colonial Office, had to abandon the question, in consequence of the final letter from the Colonial Office, which stated "that they had submitted the correspondence to the Advisory Committee of the Tropical Diseases Research Fund, but the Committee considered it unnecessary to take any further steps in the matter, as the Association were unable to allocate any of its funds towards the support of the proposed teaching appointment in the University of London." In regard to this latter remark, it should be pointed out that the Science Committee had previously offered to contribute towards the scholarship, but not to pay for the whole of it, as it considered that the subject of Tropical Research was one that might more properly be paid for out of the Imperial exchequer.

In the Psychological Section at Leicester an opinion was expressed that the Association should vote a sum of money towards undertaking an inquiry into the question of hereditary disease. Inquiries were put forward through Professor Karl Pearson, F.R.S., Dr. Bashford, and others who had originated the proposed lines of research as to the probable nature and results of such an investigation. In the end, the Science Committee was of opinion that the proposal was not one which could be satisfactorily undertaken by the Association.

The question of the mode of award of the Middlemore Prize has received careful consideration, and certain modifications have been instituted. Particulars of the prize have been brought to the notice of the medical schools, both English and Continental, and it is hoped that essays will be forthcoming worthy of the ambitions of the founder of the trust. The Committee has interested itself in the collection of evidence for submission to the Royal Commission on Vivisection, and has co-operated with the Physiological and other learned societies by appointing two representatives to serve on the Joint Committee.

The Committee voted, in varying amounts to twenty-nine grantees, a sum of £356. The Committee is much indebted to the inspectors of the work carried on by the assistance of the Association grants. The programmes of the Sections arranged for Exeter have been under the review of the Committee, and a scheme for organizing the Annual Pathological Exhibition has been prepared which should be of great assistance to honorary secretaries in future years.

During the year Mr. Major Greenwood, jun., Dr. W. H. Harvey, and Mr. T. Shirley Hele were appointed Research Scholars, while Mr. H. de Riemer Morgan was appointed Ernest Hart Memorial Scholar.

SCOTTISH COMMITTEE.

27. The Committee met in October, 1906, when the matters under discussion included the collection of evidence for the Royal Commission on the Poor Law, and the investigation of cases in Scotland referred by the Central Ethical Committee.

The Poor-law Subcommittee met in June, 1906. With a view to preparing evidence for submission to the Royal Commission on the Poor Law, a series of questions was drafted for circulation among the Scottish Poor-law Medical Officers, having reference to the present administration of the Poor Law and suggestions for its improvement.

THERAPEUTIC COMMITTEE.

28. During the past year two reports made to the Committee have been published:

1. A chemical examination of an Argentine drug (*Pharmaceutical Journal*, August 4th, 1906). The drug "insipo mil nombré" was submitted to the Committee, through the General Secretary of the Association, by Fleet Surgeon E. S. Miller, R.N.

2. The bactericidal action of compounds of silver (BRITISH MEDICAL JOURNAL, August 18th, 1906).

In connexion with this investigation, the Committee has endeavoured to obtain evidence of the therapeutic value of the various compounds investigated. A circular, containing a list of the substances—namely, silver nitrate, silver fluoride, actol, albargin, argentamin, argentol, argentum eosolicum, argonin, argyrol, collargol, icthargan, itrol, largin, nargol, protargol—concerning which information was desired, was sent to various ophthalmic surgeons, surgeons to lock hospitals, and others likely to be able to give information on the points raised. Three hundred circulars were sent out, and 59 replies were received. From these it would appear that only three of the compounds have been much used—namely, silver nitrate, argyrol, and protargol. The chief objection to silver nitrate is the amount of pain it produces, but it is reliable, and can be employed in dilute solution. The reports relating to argyrol and protargol are contradictory in many important particulars, but these drugs are generally considered to cause less pain than silver nitrate. That argyrol has been employed in relatively strong solutions over long periods is a fact of considerable significance. A report on this subject has been prepared for publication.

The Committee has also had under consideration the changes which it is desirable to make in the *British Pharmacopoeia*. It is suggested to delete a number of drugs and preparations which are of doubtful value and seldom used, or which are already represented by other and better preparations in the *Pharmacopoeia*, and to add other drugs and preparations which are largely employed in therapeutics at the present time; but as the Committee has yet to consider what alterations, if any, are advisable in the preparations still remaining, it desires to defer reporting on the subject until its deliberations are completed.

VOLUNTEER MEDICAL SERVICE COMMITTEE.

29. Your Council, after drafting its report for the year 1905-6, appointed a Special Committee, consisting of representative volunteer medical officers, selected from all parts of the kingdom, and the various arms of the service, to consider the question of the reorganization of the Volunteer Medical Service. This Committee had several long sessions, and ultimately prepared a report, which was submitted to His Majesty's Secretary of State for War, and was printed in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of July 14th, 1906. Your Council is pleased to report that when Mr. Haldane introduced his new Administrative Scheme of the Army into the House of Commons, he announced that the War Office had practically adopted the recommendations of the British Medical Association relative to the reorganization of the Volunteer Medical Service.

H. W. LANGLEY BROWNE,
Chairman of Council.

April 17th, 1907.

ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF COUNCIL

AT a meeting of the Council, held, by kind permission of the Metropolitan Asylums Board, London, in their Board Room, on Wednesday, April 17th, 1907, at 2 o'clock in the afternoon,

Present:

Dr. H. W. LANGLEY BROWNE, LL.D., Chairman of Council, in the Chair.
Dr. HENRY DAVY, President-elect.
Mr. G. C. FRANKLIN, LL.D., Past-President.
Dr. J. A. MACDONALD, Chairman of Representative Meetings.
Dr. H. RADCLIFFE CROCKER, Treasurer.

Dr. JOHN FORD ANDERSON, London
Mr. H. A. BALLANCE, M.S., Norwich
Dr. EDGAR G. BARNES, Eye
Fleet Surgeon E. J. BIDEN, R.N., Southsea (Representative of the Royal Navy Medical Service)
Dr. T. R. BRADSHAW, Liverpool
Dr. J. BRASSEY BRIERLEY, Old Trafford
Colonel DAVID BRUCE, C.B., F.R.S., London (Cape of Good Hope, Eastern and Western Provinces)
Dr. W. A. CARLINE, Lincoln
Mr. ANDREW CLARK, D.Sc., London
Dr. JAMES CRAIG, Dublin
Mr. C. F. CUTHBERT, Gloucester
Mr. E. J. DOMVILLE, Exeter
Lieut.-Colonel DRAKE-BROCKMAN, I.M.S.(ret.), London (Colombo and South Indian and Madras Branches)
Mr. GEORGE EASIES, M.B., London
Professor DAVID FINLAY, M.D., Aberdeen
Dr. E. LAWRENCE FOX, Plymouth
Dr. H. A. FRANCIS, London (Brisbane and Queensland Branch)
Dr. JOHN H. GALTON, Upper Norwood
Dr. BRUCE GOFF, Bothwell
Dr. J. GROVES, Carisbrooke
Dr. JAMES HAMILTON, Glasgow
Dr. G. E. HASLIP, London
Dr. T. ARTHUR HELME, Manchester
Dr. R. MCKENZIE JOHNSTON, Edinburgh
Colonel C. H. JOUBERT DE LA FERTÉ, I.M.S. (ret.), Weybridge (Representative of the Indian Medical Service)
Mr. R. H. KINSEY, Bedford
Dr. JAMES MURRAY, Inverness
Mr. EDMUND OWEN, LL.D., London
Mr. C. H. W. PARKINSON, Wimborne Minster
Dr. P. H. PARSONS, London (Victorian Branch)
Dr. FRANK M. POPE, Leicester
Dr. EDWIN RAYNER, Stockport
Professor ROBERT SAUNDBY, M.D., LL.D., Birmingham
Dr. ST CLAIR B. SHADWELL, Walthamstow
Dr. CECIL E. SHAW, Belfast
Dr. E. MARKHAM SKERRITT, Clifton, Bristol
Professor W. R. SMITH, M.D., London (Malta and Mediterranean Branch)
Mr. C. R. STRATON, Salisbury
Mr. J. LYNN THOMAS, C.B., Cardiff
Dr. W. J. TYSON, Folkestone
Mr. T. JENNER VERRALL, Brighton
Dr. NORMAN WALKER, Edinburgh
Dr. ARTHUR T. WEAR, Newcastle-on-Tyne
Mr. F. E. ATHORPE WILD, Cambridge
Dr. SINCLAIR WHITE, Sheffield
Mr. D. J. WILLIAMS, Llanelly
Lieut.-Colonel E. M. WILSON, C.B., C.M.G., S. Farnborough (Representative of the Army Medical Service)

Minutes.

The minutes of the last meeting (January 23rd, 1907) having been printed and circulated, were taken as read and signed as correct.

Apologies.

Read letters of apology for non-attendance from Dr. R. C.

Buist, Dr. W. Collier, Dr. J. Giusani, Dr. D. Goyder, Dr. J. H. Hunter, Dr. C. W. Marriott, Dr. C. G. D. Morier, Professor J. T. J. Morrison, Dr. T. G. Nasmyth, Mr. H. Jones Roberts, Dr. J. Maxwell Ross, and Mr. Spanton.

Acknowledgements.

The acknowledgement from Sir John Byers to the resolution of congratulation on his knighthood was read, and ordered to be entered on the minutes. Also letter from Mrs. Sheen to the resolution of condolence on the death of Dr. Sheen was read and ordered to be entered on the minutes.

Irish Poor Law.

The Chairman of Council reported that formal acknowledgements had been received to the resolution approving the Report of the Viceregal Commission on the Irish Poor Law.

Representative Meeting.

Moved by the Chairman of Representative Meetings, seconded by Mr. Ballance, and

Resolved: That the date of summoning the Annual Representative Meeting be altered to Saturday, July 27th, 1907, at 9.30 a.m.

Communications from Branches.

Communications from the Metropolitan Counties and Cambridge and Huntingdon Branches were referred to the Organization Committee for report.

The communication from the Southern Branch was referred to the Ethical Committee for report.

Exeter Meeting.

A communication from the Town Clerk of Falmouth was referred to the Exeter Executive Committee.

Candidates.

The election of candidates was then considered, and the 17 candidates whose names appeared on the circular convening the meeting were declared duly elected members of the British Medical Association.

Journal and Finance Committee Minutes.

Moved by the Treasurer, seconded by Mr. Edmund Owen, and

Resolved: That the minutes of the Journal and Finance Committee of February 27th and April 10th, 1907, be received.

Resolved: That the accounts for the quarter ending March 25rd last amounting to £9,707 7s. 4d. be received and approved, and the Treasurer be empowered to pay those remaining unpaid, amounting to £2,604 12s. 10d.

In reference to a recommendation asking the Council to support the proposed scheme for an Insurance Agency, it was

Moved by Professor Saundby, seconded by Dr. Tyson, and

Resolved: That while cordially approving of the suggestion that the medical profession should organize a plan to protect its members against the provisions of the Workmen's Compensation Acts, it is desirable that this Council should pass no resolution on the matter.

Resolved: That when the report of a meeting of a Division or Branch contains a reference to any matter under the consideration of any Committee, it shall be competent for the Editor to defer the publication of such reference until the Committee referred to has an opportunity of deciding whether it is in the interests of the Association that such reference should be published.

Resolved: That a grant of £15 be voted the Scottish Committee to complete the collection of returns regarding the Scottish Poor law Inquiry.

The 1906 Balance Sheet.

The Treasurer presented the financial statement for the year ending December 31st, 1906.

Moved by the Treasurer, seconded by Mr. Eastes, and

Resolved: That the financial statement, for the year ending December 31st, 1906, as certified by the auditors, be received and approved, and, in accordance with By-law 35 presented to the Annual General Meeting, and to the Annual Representative Meeting, together with the Financial Estimate for 1907, and a copy circulated to the Secretary of each Division and Branch.

The balance sheet will be found on page 236.

Office Staff Superannuation.

The Treasurer presented the financial statement of the Office Staff Superannuation Fund for the year ending December 31st, 1906:

Resolved: That the financial statement of the Office Staff Superannuation Fund for the year ending December 31st, 1906, be received and approved.

The balance sheet of the Office Staff Superannuation Fund will be found on page 238.

Premises Committee Minutes.

Moved by Mr. Andrew Clark, and

Resolved: That the minutes of the Premises Committee be received.

Resolved: That the action of the Premises Committee in accepting the estimate of Messrs. Prestige and Co. for rebuilding the premises, be approved.

Naval and Military Committee Minutes.

Moved by Colonel Joubert de la Ferté, seconded by Colonel Wilson, and

Resolved: That the minutes of the Naval and Military Committee of February 6th and March 20th, 1907, be received.

Moved by Colonel Joubert de la Ferté, seconded by Colonel Wilson, and

Resolved: That the Chairman of the Naval and Military Committee be empowered to invite Surgeon-General William John Macnamara, C.B., C.M.G., A.M.S., to fill the vacancy on the Committee created by the resignation of Colonel Bruce.

In reference to a recommendation of the Committee to amend By-law 23, an amendment was moved by Mr. Andrew Clark, seconded by the Chairman of Representative Meetings, and

Resolved: That the word "active" be not deleted; that the last line of By-law 23 be altered by substituting the words "five years" for "three years," and the last sentence of By-law 41 (Section 5) be deleted, namely: "Such Committee to include the Representative Members of these services who are on the Council," so that the Representatives of the Services on the Council need not be members of the Committee.

Organization Committee Minutes.

Resolved: That the minutes of the Organization Committee of February 12th, March 19th, and April 9th, 1907, be received.

Moved by Mr. Verrall, seconded by Dr. Rayner, and

Resolved: That the Rules submitted by the New Zealand Branch, except that as to special local subscriptions, be approved.

Resolved: That alteration of Rules submitted by the Cape of Good Hope (Eastern Province) Branch be approved.

Resolved: That those of the Rules submitted by the North Suffolk Division with respect to the formation of a Lowestoft Section which do not relate to questions of professional conduct be approved.

Resolved: That the Council bring before the Special Representative Meeting, convened to consider the Charter, the following alteration of By-law 20 in order that it may take effect in the ensuing Annual Representative Meeting.

That By-law 20 be amended to read as follows, namely:

Time of Holding: Minutes.

The first daily session of the Annual Representative Meeting shall be held not later than two hours after the time fixed for the commencement of the Annual General Meeting. The minutes of each Representative Meeting shall be forwarded by the Chairman thereof to the Council.

Resolved: That the Council bring before the Annual Representative Meeting the following alteration of By-law 41 (12):

That the By-law be amended to read as follows, namely

An Irish Committee, consisting of the Irish members of the Central Council, one Secretary from each Irish Branch, one member elected by each Branch, who in the case of the Leinster and Ulster Branches shall be a member not resident in Dublin or Belfast, and not more than

three members, co-opted by the Committee to represent districts which are not otherwise represented thereon. If the Secretary of any Branch be also a member of the Central Council, the said Branch shall have power to elect an additional member of the Committee. It shall have a Secretary, resident in Ireland, and shall meet at such place and time as the Committee may itself direct, and shall report to the Council on any matters specially concerning Ireland.

Resolved: That the Council make the following Division or groups of Divisions, formerly grouped with other Divisions, independent constituencies for the year 1907-8, having regard to the special difficulties in the holding of joint meetings:—Barnstaple; the three Divisions of Connaught (one constituency); Enniskillen, Omagh and Monaghan (one constituency); Exeter; Guernsey and Jersey (one constituency; Norwich; Southampton; South Suffolk; Wakefield and Doncaster; West Norfolk; West Suffolk.

Resolved: That the Council group the Boston and Spalding Division with the Lincoln Division.

Resolved: That the Council grant independent representation to the following Divisions now having fifty members: Barnsley, Dartford, and Eastbourne.

Resolved: That the Council provisionally group the other Divisions in the United Kingdom for representation in the Representative Meeting for the year 1907-8 in the same manner as for the year 1906-7.

Resolved: That the Council group the Staffordshire Branch with the Shropshire Branch, as in the year 1906-7.

Resolved: That the other Branches in the United Kingdom be provisionally granted independent representation, or grouped, as the case may be, for the year 1907-8 in the same manner as for the year 1906-7.

Resolved: That the Council authorize the Organization Committee as in previous years finally to determine the grouping of Divisions and Branches as soon as possible after the information contained in the Annual List of Members, made up to April 30th, is available.

King Edward's Hospital Fund Bill Subcommittee.

Resolved: That the minutes of King Edward's Hospital Fund Bill Subcommittee of February 14th, 1907, be received.

Hospitals Committee Minutes.

Resolved: That the minutes of the Hospitals Committee of February 28th, 1907, be received.

Public Health Committee Minutes.

Resolved: That the minutes of the Public Health Committee of March 26th, 1907, be received.

Moved by Mr. PARKINSON, and

Resolved: That Mr. Herbert Jones be appointed an additional delegate from the Association to the Conference of the Royal Sanitary Institute, to be held in Dublin.

Resolved: That the sympathy of the Association be expressed with the movement of the *Tribune* with respect to the protection of health of children by legislation excluding them from public-houses.

Medico-Political Committee Minutes.

Resolved: That the minutes of the Medico-Political Committee of March 27th, 1907, be received.

Resolved: That the Council approve forwarding to the Local Government Board the following resolution of the Public Health Committee:

That the fact of a medical man holding a public position, such as medical officer of health, should not preclude him from occupying an honorary office in connexion with the British Medical Association.

Ethical Committee Minutes.

Resolved: That the minutes of the Ethical Committee of April 5th, 1907, be received.

Moved by Mr. KINSEY, seconded by the CHAIRMAN OF REPRESENTATIVE MEETINGS, and

Resolved: That the ethical rules submitted by the Auckland Division (New Zealand Branch) be approved, subject to the alterations recommended by the Central Ethical Committee.

Resolved: That the ethical rules submitted by the Victorian Branch be approved.

With regard to a minute of the Committee relating to the right to apply for vacant appointments, it was

Moved by Mr. PARKINSON, seconded by Dr. GROVES, and

Resolved: That it be again referred back to the Central Ethical Committee with an instruction to confer on the matter with the Public Health and Medico-Political Committees.

Science Committee.

The CHAIRMAN OF THE SCIENCE COMMITTEE reported that he had sanctioned the following gentlemen being invited to take part in the deliberations of the various Sections at the Annual Meeting:

SECTION OF OBSTETRICS AND GYNÆCOLOGY.—Professor Winter, Königsberg; and Professor Strassmann, Berlin.

SECTION OF PATHOLOGY.—Professor Hektoen, Chicago.

SECTION OF DENTAL SURGERY.—Dr. Joseph von Arkony, Buda-Pesth; Dr. Matthew Cryer, Philadelphia.

ELECTRICAL SECTION.—Professor Stéphane Leduc, Nantes; Professor Wertheim Salomonson, Amsterdam; Professor J. Bergonié, Bordeaux; and Dr. Bounefay, Cannes.

SECTION OF LARYNGOLOGY, OTOLOGY, AND RHINOLOGY.—Professor Onodi, Buda-Pesth; and Dr. Chevalier Jackson, Pittsburg, U.S.A.

Resolved: That the action of the Chairman of the Science Committee be approved.

Report of Council, 1906-7.

The report of Council reviewing the work for the past twelve months was then considered paragraph by paragraph.

Resolved: That the Report of Council as amended be received and approved, and, in accordance with By-law 35, presented to the Annual Representative Meeting, to the Secretaries of each Branch and Division, and published in the JOURNAL.

The full text of this Report will be found at page 233.

Appointment of Solicitor.

Moved by the CHAIRMAN OF COUNCIL, seconded by the CHAIRMAN OF REPRESENTATIVE MEETINGS, and

Resolved: That Mr. W. E. Hempson be reappointed Solicitor to the Association for the ensuing twelve months.

REPORTS OF BRANCHES.

The annual reports of Branches for 1906-7, furnished in accordance with By-law 9, were considered, and ordered to be printed in the SUPPLEMENT.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

LANCASHIRE AND CHESHIRE BRANCH:

BLACKPOOL DIVISION.

A GENERAL meeting of the Blackpool Division was held on Wednesday, April 24th, Dr. MCINTOSH, the President, in the chair.

Draft Charter.—The draft Charter was considered and the questions referred by the Council to the Divisions answered as follows:

1. The Division is of opinion that the Central Council should be smaller than at present.

2. The Division thinks that the members of Council should be elected under system (*a*), the majority under (*b*) provided some system of cumulative voting is allowed to the Representatives choosing the Representatives on the Council for their district.

3. The Division considers that 22 members of the Council should be elected by representatives of Divisions grouped in districts according to Schedule (1) on page 182 of the SUPPLEMENT for April 6th; 9 by the Representative body as a whole (three of these would probably be the Past-President, Chairman of Council, and Chairman of Representative Body); 8 members for the Foreign and Colonial Branches; 5 *ex-officio* members (President, President-elect, and Treasurer); 3 members for the Naval and Military Services; or 45 in all.

4. The Division approve of scheme (*b*)—that is, to be left to the Branches themselves (grouped by the Council)

to decide on the method of election of their Representatives on the Central Council.

Hospital Administration.—In reply to the questions as to hospital administration, the following conclusions were agreed to unanimously:

1. There should be no compulsory payment by patients in other than cottage hospitals.
2. Subscribers' letters should not be compulsory.
3. Inquiry into a patient's circumstances should invariably be made.
4. A certificate from the medical attendant should be required from persons attending out-patient departments.
5. The Division approves generally the suggested model principles of hospital management.

Central Council Election.—Dr. Garstang, of Altrincham then gave an address in support of his candidature for the Central Council. A hearty vote of thanks was accorded to Dr. Garstang for his address, and the Honorary Secretary was instructed to nominate Dr. Garstang officially on behalf of the Division.

METROPOLITAN COUNTIES BRANCH:

Wandsworth Division.

An ordinary meeting was held at the Wandsworth Town Hall on Thursday, April 25th, 1907, Dr. Llewellyn Williams in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Nomination of Branch Officials.—The following were made: *President-elect*, Edmund Owen, F.R.C.S.; *Vice-Presidents*, Hugh R. Ker, F.R.C.S., Llewellyn Williams, M.R.C.S.; *Honorary Treasurer*, H. Betham Robinson, F.R.C.S.; *Honorary Secretaries*, Drs. E. Rowland Fothergill and F. J. McCann.

Resolution for Representatives' Meeting in July.—Resolved that the following be moved on that part of the annual report of the Central Council to which it refers:

> That in the apportionment of a member's annual subscription of 25s. fuller particulars as to the amount spent under the heading "Meetings of Council, Representatives, and Committees, Salaries, Library, etc.," are desirable.

Ethical Aspects of Medical Consultation.—The reference to the Division, previously considered by the Division Ethical Committee, was discussed, and that Committee's recommendations, with one exception, approved.

Medical Inspection of School Children.—The two references to the Division, previously considered by the Division Medico-Political Committee were discussed, and the approved recommendations were ordered to be forwarded to the Central Council.

The Division Ethical Committee.—It was resolved that the number of ordinary members be increased from three to five.

Wimbledon Cottage Hospitals: Proposed Amalgamation.—It was resolved:

> That in view of the fact that there is a proposal to amalgamate the two Cottage Hospitals in Wimbledon, the Hospital Committee be given power to deal with the question in connection with the Wimbledon and District Medical Society or otherwise in such ways as may be considered most desirable and to report to the Division.

It was also resolved:

> That as the investigation and subsequent conduct of negotiations may extend over a considerable period of time the Committee be constituted a permanent one for the above purpose.

Election of Executive Committee.—The Chairman and Honorary Secretary were proposed, seconded, and duly elected scrutineers of votes for the election of the Executive Committee.

The London County Council and Medical Referees.—It was resolved to bring before the Branch Council the present difficulty found by general practitioners in recovering fees promised in the name of the London County Council by their medical referees.

Royal Charter.—The Medico-Political Committee of the Division had previously thoroughly considered the whole reference, and their recommendations as to amendments or additions to be made as also as to queries to be forwarded to the Organization Committee were approved. On consideration of Clause 1 of Charter, Dr. Fothergill, in moving the following resolution, namely,

> That the application for a Royal Charter offers a suitable opportunity for such an alteration in the title of the Association as will most fully keep before the members its aim to be a comprehensive union for all registered British medical practitioners, formed for the protection of their honour, the advancement of their interests, and the promotion of medical and the allied sciences, as also its desire that the members through its Branches, embracing the British Empire, should come to be consulted of all Governments of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas and be allowed to co-operate in every matter appertaining to the improvement of the health of the nations under their control,

said: I do not move this resolution as a lately-thought-of idea, but as formulating as concisely as possible what has for some considerable time been in the minds of many of the members. I would first of all, as shortly as possible, wish to refer to the history of our Association. In 1832 it was formed as a Provincial Medical and Surgical Association, with a membership of 140 chiefly resident around Worcester. Dr. Hastings's aims were provincial co-operation, maintenance of the profession's honour and interests, and the obtaining for the profession of due recognition and influence in matters affecting the local public health. The Association thrived, and threw out its first Branch (East Anglian) in 1836. It first moved in matters of public health in 1837 by approaching Parliament. In 1854 the promoters, taking a wider view of the possibilities of the Association, changed its name to the British Medical Association. It was still, however, limited to the United Kingdom. It gradually developed and its membership increased and its Branches multiplied, and it was incorporated under the Companies Act in 1874. Still developing, at last in 1902 the wish became a matter of practical politics to make the Association co-extensive with the British Empire and its uses comprehensive of every wish of its members now or in the future. Just for a moment I would leave the Association, as such, and recall what used to be the feelings of England to her Colonies. We were ignorant of them beyond their name, we were indifferent to their needs or wishes, and we resented their very existence and considered them an incubus. We looked for the day of severance as the one to be devotedly prayed for. Slowly all that has changed, and what has been the means of bringing it about? When mentioning railways, steamboats, telegraphy, telephones as causes whereby our colonies, once distant, have been brought to our door, one would seem to have recounted the chief ones; but there is another. The love of the old homeland, admiration for its slowly-secured freedom, and reliance on the justice of its law, developed and made during many centuries, attracts to us those of our blood living far distant from these shores. The freer air of colonial life seems to cause to germinate some additional latent sense which all are probably born with and yet many live and die in ignorance of. We are told that our national temperament is dull to all ideas which make demand upon thought and imagination—that at last we have so exaggerated and misinterpreted our heritage of political freedom that individually each has come to think that his profession or calling exists for the sole purpose of advancing his personal interests. We do not wish to flaunt in the face of others our national aspirations, nor to bestride the world as if we had made it and parcelled it out; but we do want to realize that a man's life is bound up with that of his family and his nation—that he must no longer seek his own interests, but must be willing to bear the burdens of the community to which he belongs. In this way, we are sure, the most ordinary undertakings will be enriched and transformed by the kindling touch of patriotism—the patriotism of a family of which the individual members realize that if one suffers all suffer, the patriotism of a nation that lets individuals learn what brotherhood and fellowship in suffering and success may mean. Take two instances of this: The first an Imperial one—the Boer war. Who here in England in that dark hour of her history did not ask himself "Why" when the sister nations leapt to the assistance of their homeland. The second, a more recent instance, and one that peculiarly affects us—a special donation from Natal to help their brothers in their flight in South Wales. I wonder how long one would have had to wait to hear of such an act of "patriotism of a family" from England to, say, the gold mines in Australia? And now to return to ourselves. We want to realize when meeting here that in some small way we are helping for-

ward undertakings not for ourselves possibly, but of far-reaching benefit to others dependent on us, and who look to our profession for guidance. The application for a Royal Charter is a suitable opportunity for emphasizing our comprehensive possibilities. You will have read that there has been a move in South Africa to form a separate Medical Association, and to leave us. We must show that that is not necessary; that we intend this Association for them; that we have no desire by hide-bound clauses of the Charter to deprive them of any right to conduct their internal affairs as they think best; and that we need their support. We desire a union. Many sneer at the term, and add to it the word "trade." Such an addition is not justified. We desire no degradation of our profession and its possibilities as have come to be associated, most unfortunately, with these two words. The union we desire is for the protection of our honour, the advancement of our interests, and the promotion of science. We require liberty to pursue our profession in peace. And then we desire—and to many it is, after all, the real reason for all their present activity in developing our Association—the profession, to use Dr. Hastings's words, "to obtain for itself that rank and influence it is entitled to," both for the social and moral improvement of those we live among. We wish to be consulted in all matters affecting the public health, and to be allowed to participate in all schemes of social improvement. You will not forget that the Education Department is at this moment consulting the profession through our Divisions—a gain in the form of recognition pregnant with untold good. We want an Association co-extensive with the British Empire, and to have kept continually before us our worldwide aims and objects. Embracing then, in time, every British-born medical practitioner, we shall have an Association formed not only of those who seek its benefits for themselves, whose views are narrow and self-centred, and who welcome any move if only it may tend to relax the pinch of the shoe as it affects their own personal comfort and success, but also of those whose outlook is not obscured by their personality intervening, but who, realizing their indebtedness to those around them, desire to see their profession allowed to co-operate in the improvement of the moral and physical condition of the people among whom it may be their lot to dwell. After a short discussion the resolution was carried unanimously; when Dr. FOTHERGILL then proposed, and it was carried as a suggestion to be made to the Representative Meeting—

That the Association be called "The British Imperial Medical Association."

Vote of Thanks.—The meeting closed with the usual vote of thanks.

WESTMINSTER DIVISION.

A MEETING of this Division was held at St. James's Vestry Hall, 195, Piccadilly, at 8.30 p.m., on Wednesday, April 17th.

Provident Dispensaries.

A discussion on this subject was opened by Dr. H. HILLIARD, who said: I greatly regret that no one at present in active dispensary practice was available to open this discussion. The duty has devolved upon me, as being the only member of the Executive Committee of the Division with any experience of the practical working of a provident dispensary. I therefore proposed merely to set the ball rolling, in the hope that the true importance of the subject may be brought out in the discussion by other members more competent to express their ideas and to speak upon the subject. Let me say at once the object of this meeting is the interchange of ideas and not to listen to a dissertation from any one speaker. You are doubtless all aware that this question of provident dispensaries has been raised by the British Medical Association in the belief that it may prove to be one of the remedies for the acknowledged misuse and abuse of hospitals. We are all agreed that hospitals are misused to the detriment of the general body of the profession and the pauperization of the community. Hospital staffs complain of the abuse, and hospital managers deplore it, for in no case are their funds equal to the ever-increasing demands made upon them. But what can they do? Their hands are tied, they cannot turn the sick poor from their doors. We shall not help matters by abusing hospital staffs and hospital managers because the public misuse them. We must look to our *own* united efforts for our salvation. We have no influence on, and cannot control, hospital management, so we must provide the public with an alternative to the hospitals—with a counter attraction—and thus endeavour to wean them away. I believe that a system of properly-constituted provident dispensaries will do much to wean many of the people from the out-patient departments of the hospitals, for there are thousands of respectable and self-respecting weekly wage earners in London who do not want to accept charity from the hospitals, and who can ill afford the enormous waste of time they have to lose while waiting at hospitals for treatment; this loss of time would in many cases go far to pay for similar medical aid at a provident dispensary were such available. Generally speaking, however, it is not available, and the patient has no choice between a club doctor—whom, as a rule, he does not hold in very high regard—and the hospital, where he believes he gets from specialists the very best advice possible. The fault is, I think, ours, nearly as much as his. In treating disease we always endeavour to remove the cause, and in mundane matters also the principle holds good. Here we are faced with a grievance, and if we are to remedy the grievance we must seek what has caused it and attack that. The grievance—not only our grievance, but a grievance common to us, and also hospital managers and staffs—is that thousands of people who could pay something come to hospitals where they are treated for nothing. Why do they come? They come sometimes because they get the treatment free; but there are other reasons, and the chief is that they have no real alternative. It is this lack of a real alternative that prevents hospital managers from turning people away; but if we can provide the alternative we should be helping not only ourselves but also the hospitals and the public. The hospital managers would then have no excuse for treating for nothing those who ought to pay, and our position would be immensely strengthened in attacking them if they continued to do so. The alternative to the out-patient ordinary as distinct from special departments of hospitals, to be successful, must offer as great advantages as the hospitals. The patient must be provided with thoroughly sound advice, and the chance of several opinions in consultation if necessary. The fees must be low and payable by small instalments. Medicines and appliances must be cheap. The patient must have the option of being visited at his own home and provided with a skilled nurse if necessary. Provision must be made for midwifery. All waiting for treatment must be reduced to the irreducible minimum. Dental aid must be included. The hours of attendance must be made to suit, as far as may be, the convenience of all patients. I need not enlarge on this point further. Many other attractions will doubtless suggest themselves on consideration. I therefore propose to move, later on:

That the Westminster Divison, believing that the remedy for hospital abuse must come from outside, and not from within the hospitals themselves, urges the institution of some system of provident dispensaries throughout the metropolis, under the organization of the British Medical Association.

This being the text, let me explain what I mean. I said before that we must not blame the hospital authorities too much; at present they are to a large extent the victims of abuse, and they cannot turn away the sick poor. Now poverty is a relative term, and the vast majority of hospital patients may be divided into two classes—namely, those who can afford to pay the ordinary medical fees common to poorer neighbourhoods and those who cannot. I do not deny for a moment that hospital authorities are to blame for the blatant abuse by the former class of the charity they dispense. But if this class were dealt with—and we are not now concerned with it—there still remains the latter class, namely, those who cannot afford ordinary fees; these, again, may be divided into two, namely, those who can afford *reduced* medical fees and those who cannot. These last are practically destitute, and should, in my opinion, be dealt with by the Poor Law. I believe that the majority of all hospital patients will be found to come into the category of those who can afford to pay *reduced* medical fees, and it is to remedy the misuse of hospitals by these that the institution of provident dispensaries is proposed. I am aware that there

are already several provident dispensaries within the area of this Division, that in spite of them the out-patient departments of the neighbouring hospitals are overcrowded and abused, and that the membership of the provident funds is in many cases falling off. This, I think, merely goes to show that the attractions offered by these dispensaries are not attractive enough as against the hospitals, with all their attendant disadvantages, and that they need reorganization to be made effective. Their condition of unpopularity offers some hope that their committees, in every case composed of laymen, may consent to reorganization on lines suggested by the British Medical Association. The hope is, I fear, but a forlorn one, since the doctors at present attached to them are the servants of the committees, and have no control in the administration.

Definition.—Before proceeding further, let us understand what we mean by the term "Provident Dispensary." For the purposes of this discussion let us take it to mean "an institution which contracts for medical services, which is managed by a committee of elected members, and is not a club or friendly society." Such a dispensary, to be successful as a remedy for hospital abuse from our point of view, must offer attractions nearly as great as the hospitals in order to win from them patients who can pay, and at the same time it must be arranged that their payments are made to those who do the work. What, then, must be the constitution of these dispensaries? In order not to waste time and burden you with detail now I will just roughly sketch what I think would meet the case. Further details, I hope, will be brought out in the discussion, for I want to add to my motion some words as to the character of the dispensaries proposed, to which I hope the meeting will agree, so that the Executive may have some practical scheme to present to the Association.

Constitution.—The dispensaries should be managed by an elected committee, consisting of the medical staff, a representative of the local Division of the British Medical Association, and one from the Central Council; a representative of the Charity Organization Society or of the local clergy, and a representative of the beneficiaries. No law should be made or altered without sanction of the local Branch of the British Medical Association and Central Council.

The Staff.—All local medical practitioners desiring to serve should be eligible, provided they are members of the British Medical Association and have resided in the locality for at least twelve months. A dentist should also be attached. I do not think a resident medical officer either necessary or desirable. A dispenser would be necessary and a midwife desirable.

Appointment. By election of two-thirds majority of the committee met for the purpose.

The Members.—Eligibility would be fixed by weekly wage limit and by a medical examination. The healthy would be admitted at ordinary rates; those not physically fit at an increased rate, as also those actually sick when seeking admission. Children would be admitted. The rates of subscription would vary slightly with the locality, and would be fixed by the Committee to suit the class of patients catered for.

The Contract would be made between the Committee and the patient and not between the patient and the individual medical attendant.

The Benefits would comprise all medical attendance at the dispensary and at the patient's house, including midwifery at a special additional fee of 10s. 6d.; also dentistry, meaning extractions under anæsthetics and the supply of dentures at special additional fees. The patient would have the right of choosing his own doctor, and would have the privilege of consultation when necessary with other members of the staff. The dispensary should be open most of the day, so that the hours would thus be suitable to all; it would in consequence be necessary to have shifts of medical officers attending one or two hours each, and thus the largest number could be provided with work. The matter of the dispensary should be prompt attention, no waiting and loss of time.

Work of Staff.—Choice of attendances of staff arranged by seniority (Sunday = officer on duty) in turn.

Remuneration of Staff. Each member should be paid the same—that is, the surplus takings, after paying all ordinary expenses, should be divided equally among them, and not, as is proposed by the Association, that they be paid a percentage on the numbers of patients on their lists. This system is open to objection, and, I have heard, lends itself in some instances to the adoption of various little ways by which a given medical officer may gain popularity at the expense of his colleagues if he be not over-scrupulous and is keen on gaining a long list of patients. Midwifery fees would go to the officer attending the case, but the fee should be made up to one guinea by the Committee out of the general funds. Small operations would be paid for extra, and the fee divided equally between the operator and the officer administering the anæsthetic. The dentist would be paid in like manner, but should get the entire fee arranged by the Committee for dentures. No deduction from the general funds would be made for capital charges, these being met out of a general fund established for this purpose under the final control of the British Medical Association.

Members' Payments.—These would be fixed by the Committee, but should be more than the usual club rates, because the services rendered by the dispensary would be greater than those offered by a private club, and in order not to compete with those practitioners who prefer to run private clubs of their own. I think it is important that there should be a system of fines for messages sent for visits to patients' houses after a certain hour, for irregular payments, etc. Surgical appliances should be paid for extra, the cost being partly met by some form of Samaritan fund to be raised by other means. Except in this regard I do not think any subscriptions should be accepted from any but bona fide "members" of the dispensary, since subscription would mean representation, and we want to exclude lay control. It should be a principle of the system that no advertisement should be issued containing the names and addresses of the staff. There would be no objection to advertising the dispensary, otherwise, indeed, it would be desirable to make its existence widely known within its own area. The dispensaries under the scheme should serve only defined areas, and these might be more or less coextensive with the divisional areas of the British Medical Association. No collector should be employed, all payments being made at the dispensary in advance. No patient would be treated unless his card of membership showed that he had paid up to date. The Dispensary Committee should endeavour as far as possible to co-operate with existing hospitals and other institutions with a view to interchange of patients. My scheme is more in the nature of a public medical service, in which the doctors in a locality agree to combine and decide on what terms they will sell their services to the poorer classes of the community, but the secret of success will lie in the co-operation and combination of the whole profession, for the same system must be adopted by all, and this can only be guaranteed under central control of a body representing the whole profession. Standing alone or even in isolated little groups we are impotent; we need cohesion and organization to co-operate. The machinery of organization we already have in the British Medical Association, and I urge every member of the profession to join the Association and support it, not only by merely paying his subscription but by working for it. The system outlined will need both money and work, and can only be carried through by a large and united organization supported by fighting funds. Too long has our weakness been exploited; let us therefore take a leaf from our neighbours' book and rally to our organization as they do to their trade unions. In conclusion, gentlemen, let me say that I do not believe that any proposed remedy for hospital abuse will succeed which does not consider and cater for the public interest. If we consider our own professional interests alone we shall not only fail but shall incur hatred and scorn and become the sweated servants of a triumphant democracy. If, on the other hand, we realize and provide for the just needs of large numbers of the people, and unite to co-operate for our mutual protection, we shall become strong enough to do what we like and at the same time gain the respect of those whom we serve. I therefore beg to move:

> That the Westminster Division of the British Medical Association, believing that the remedy for hospital abuse must come from outside, and not entirely from within the hospitals themselves, urges the institution of some system of provident dispensaries throughout the metropolis, under the organization of the British Medical Association.

The resolution was seconded by Dr. ROBSON. Drs. DAUBER, CAUTLEY, and FINUCANE joined in the discussion.

SOUTH-EASTERN BRANCH:
MAIDSTONE DIVISION.

A MEETING of the above Division was held at the West Kent Hospital on Friday, April 19th, at 3.15 p.m. In the absence of the Chairman, Dr. Ground, Dr. R. T. CAESAR was voted to the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Annual Report.—The SECRETARY presented the annual report, which was duly passed.

School Certificates.—A communication from the Secretary of the Branch, Dr. H. M. Stewart, relating to school certificates, was read. The following was the resolution received:

> That the Council (Branch Council) does not recognize the right of a county education authority to demand from the members of the medical profession in the public interest a certificate of illness in the case of children absent from school and to fix a perfectly inadequate fee for such service without any regard to the distance to be travelled by the medical practitioner.

The tariff of fees for such services should be that adopted by the Sevenoaks Division—namely:

1s. if already in attendance with patient.
2s. 6d. if patient is brought to surgery for examination and report.
5s. if a visit in addition to certificate is required.

Dr. DOUGLAS proposed and Dr. FALWASSER seconded:

That the above resolution be approved by this Division.

Agreed to. It was also further proposed:

> That this Division trusts that the Council will press the matter to a satisfactory conclusion. And that the Secretary be requested to write to every medical practitioner in the Division, whether a member of the Association or not, enclosing the resolutions and requesting his support.

The Organization of the Association.—Questions affecting the organization of the Association were dealt with. These questions were laid down in the SUPPLEMENT to the JOURNAL for April 6th.

Question I: Whatever the system of election it is in the opinion of the Division desirable that the Central Council should be smaller than at present.

Proposed by Dr. OLIVER, seconded by Dr. DOUGLAS,

II: That a majority should be elected by the Representatives of Divisions—namely, two-thirds, and one-third by the Representative Body as a whole.

IV; That the Colonies are best able to come to a decision satisfactory to themselves.

Exhibit.—A portable operating table was shown by Dr. CAESAR and was much admired. Its feature was its great portability. The carrier, when suitably clothed, could easily be mistaken for one possessing and following the highest art.

Case. A case of successful operation on the sphenoidal sinus for empyema was shown by Dr. GIBB.

NORWOOD DIVISION.

A MEETING of this Division was held at the Queen's Hotel, Upper Norwood, on April 11th, at 4 p.m., HENRY J. PRANGLEY, M.R.C.S., of Anerley, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Next Meeting.—Dr. STEWART proposed, and Dr. BURGESS seconded, that the next meeting be held at Blackheath on June 13th, and that Mr. H. F. Bailey be invited to take the chair thereat. This was carried unanimously.

Papers.—The following papers were then read and discussed: Dr. HALE WHITE: The diagnosis and treatment of gall-stones. Mr. LAWRIE MCGAVIN: The use of filigrees of silver wire in the cure of herniae usually considered inoperable. Mr. F. J. STEWARD: Some cases of frontal sinus suppuration.

Dinner.—After the meeting fourteen members and visitors dined together.

YORKSHIRE BRANCH:
BRADFORD DIVISION.

A SPECIAL meeting of this Division was held at the Eye and Ear Hospital, Bradford, on Monday, April 15th, at 9 p.m. Mr. BASIL HALL, Chairman, presided.

Proposed Annual Meeting at Bradford.—The question of renewing the invitation to the British Medical Association to hold its annual general meeting in Bradford in 1908 was considered. Dr. MANNELL proposed and Dr. BEATTON seconded the following resolution:

> That in the opinion of this meeting it is not advisable at present to entertain the question of issuing an invitation to the British Medical Association to meet in this city, and that the matter be postponed for at least twelve months.

Dr. WALKER considered the motion was not in order. There was no necessity to take any action whatever; all that was necessary was not to send an invitation. Dr. HIME supported the resolution. Dr. METCALFE urged that the resolution should not be adopted. It would be of the greatest advantage to the profession in the city that the Association should hold a meeting here. There appeared to be little doubt that if another invitation were extended to the Association to meet in Bradford it would be accepted. On being put to the meeting, the resolution was adopted.

Keighley Guardians and Public Vaccinators.—The question of the action of the Keighley Board of Guardians in connexion with their public vaccinators was discussed. Notice to terminate their engagements at the end of twenty-eight days had been given to the public vaccinators under the Board. The idea was to advertise the appointments again at lower fees. Dr. WALKER proposed and Dr. HIME seconded:

> That this meeting assures the public vaccinators of Keighley of its hearty support in case of any effort of the guardians to lower the fees paid at the present time.

DRS. MANNELL, WILSON, BERRY, WALKER, and METCALFE discussed the question. On being put to the vote the resolution was unanimously adopted. The meeting then terminated.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

SPECIAL REPRESENTATIVE MEETING.

The Special Representative Meeting will take place on Wednesday, May 29th, at 9.30 a.m. in the Examination Hall, Victoria Embankment, London, W.C.

BY ORDER OF THE COUNCIL,

GUY ELLISTON, *General Secretary.*

April 11th, 1907.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IMPORTANT NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—Nomination of elective member of Council. Notice is hereby given that the names of candidates for the representation of this Branch on the Central Council should be sent in writing to one of the undersigned on or before May 11th. Each candidate must be nominated by three electors.—W. M. BEAUMONT, Bath, and NEWMAN NEILD, Bristol, Honorary Secretaries.

Bath and Bristol Branch: Trowbridge Division.—The annual meeting of this Division will be held in Trowbridge on Saturday, May 25th. The hour and place of meeting and agenda will be forwarded at a later date. This preliminary notice is sent out in accordance with No. 11 of the Rules of the Division.—John Tubb-Thomas, Honorary Secretary, Trowbridge, Wilts.

Birmingham Branch: Central Division.—A special and general meeting will be held at the Medical Institute at 4 p.m. on Friday, May 10th. Business: (1) To consider a new ethical rule; (2) to receive report *re* Coventry Provident Dispensary, and pass a resolution thereon; (3) to consider various matters received from Central Council.—E. D. Kirby, Honorary Secretary.

Birmingham Branch: Central Division.—The annual meeting of the Division will take place at the Medical Institute on Wednesday, June 5th, at 4 p.m. Nominations for offices, in writing, must reach the Honorary Secretary on or before May 15th.—E. D. Kirby, Honorary Secretary.

Border Counties Branch: West Cumberland Division.—The spring meeting of this Division will be held at Cockermouth on Tuesday, May 21st.—John Penny, Honorary Secretary, Cockermouth.

Cambridge and Huntingdon Branch.—*Member of Council.*—In accordance with the articles and by-laws the Honorary Secretary will be glad to receive nominations, signed by not less than three members, for one member of Council for the ensuing year. Nominations must reach the Honorary Secretary on or before May 10th.—F. E. Apthorpe Webb, Honorary Secretary, Grafton House, Cambridge.

Dorset and West Hants Branch.—The spring meeting of this Branch will be held in Weymouth on Wednesday, May 22nd. Members wishing to read papers, exhibit cases, or show pathological specimens, must communicate on or before Thursday, May 9th, with the Honorary Secretary, James Davison, "Streateplace," Bath Road, Bournemouth.

Dorset and West Hants and West Somerset Branches.—Election of a representative of these grouped Branches on the Central Council. The nomination of candidates for the ensuing year must be made (in accordance with By-law 25), and sent to me in writing on or before May 4th.—James Davison, Honorary Secretary of the Dorset and West Hants Branch, "Streateplace," Bath Road, Bournemouth.

Dorset and West Hants Branch: West Dorset Division.—The annual meeting of this Division will be held on Wednesday, May 8th, at the County Hospital, Dorchester, at 3 p.m. Agenda: (1) Minutes; (2) to elect officers—namely, Chairman, Vice-Chairman, and Honorary Secretary; (3) to elect the Executive Committee of the Division; (4) to elect Representatives of the Division on the Branch Council; (5) to elect the Representative of the Division at the Representative Meeting of the Association; (6) to consider matters referred to Divisions (vide Supplement, British Medical Journal, April 13th); (7) any other business. Afternoon tea provided. Members are urgently requested to make every possible effort to attend this, the most important Divisional meeting of the year.—J. F. L. Whittingdale, Vice-Chairman, Acting Honorary Secretary.

Dundee Branch. The annual meeting of this Branch will be held in the Royal Infirmary, Dundee, on Friday, May 10th, at 5.30 p.m., and will be followed by a clinical meeting at 4 o'clock. Dinner will be served in the Queen's Hotel, Dundee, at 6 o'clock. Members of other Branches are invited to be present and to take part in the meeting.—R. C. Buist, M.D., 16, Nethergate, Dundee; A. P. Low, M.B., Bank House, Stirling Street, Dundee, Honorary Secretaries.

East Anglian Branch: West Norfolk Division. The annual meeting will be held at the West Norfolk and Lynn Hospital on June 20th, at 3 p.m., when officers and Representative will be elected for 1907-8.—Arthur Gardiner, Honorary Secretary, Tuesday Market Place, King's Lynn.

Lancashire and Cheshire Branch: Altrincham Division. The annual meeting will be held at Altrincham on June 6th, when officers and committee will be elected for 1907-8. Every member is eligible for every office. (Under Rule 6, Drs. Joynson, Lockman and Cooper are not eligible for the chair, having already served within three years.) Every member is entitled to make nominations. The Committee has decided that all nominations must be in writing, signed by a proposer and seconder, and must reach me by May 15th. Offices: (1) Chairman; (2) Vice-chairman; (3) Honorary Secretary and treasurer; (4) representative at Representative Meetings; (5) two representatives on Branch Council; (6) six other members of Committee. By order.—T. W. H. Gartland, Honorary Secretary.

Metropolitan Counties Branch.—*Nominations of Branch Officers.*—Pursuant to By-law 24, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 11th.—Fred. J. Smith, Honorary Secretary.

Metropolitan Counties Branch: City Division.—A special meeting of this Division will be held on Thursday, May 23rd, at 4 p.m., at the Great Eastern Hotel, Liverpool Street, E.C. Agenda: (1) Minutes of last meeting; (2) nomination of candidates for offices in the Branch; (3) consideration of revised draft Charter, etc. (see Supplement to the British Medical Journal, April 6th); (4) notice of motion by Council (see Supplement, April 27th, p. 209); (5) Hospitals Committee's report on hospital administration (see Supplement, April 13th, p. 189); (6) Medico-Political Committee's supplementary report on the medical inspection of school children (see Supplement, April 13th, p. 191).—E. W. Goodall, Honorary Secretary, Eastern Hospital, Homerton, N.E.

Metropolitan Counties Branch: City Division.—The annual meeting of this Division will be held on Thursday, May 30th, at 9 p.m., at the Great Eastern Hotel, Liverpool Street, E.C., the meeting to be followed by a supper at 9.30 p.m.—E. W. Goodall, Eastern Hospital, Homerton, N.E., Honorary Secretary.

Metropolitan Counties Branch: Hampstead Division.—The next meeting of this Division will be held on Saturday, May 4th, at 9 p.m., at the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. Pidcock in the chair. Agenda: (1) Minutes; (2) correspondence; (3) questions; (4) to discuss the draft Charter and the proposed alteration in By-law 20 (see Supplements of April 6th and 27th). N.B.—(1) No further notices of this meeting will be sent. (2) Members are requested to bring the above-mentioned Supplements to the meeting. (3) The meeting of May 10th (see programme) will not take place, but a meeting of the local profession will be held on May 16th to discuss the Hampstead Hospital question.—R. A. Yelds, Honorary Secretary, 29, Platt's Lane, Hampstead, N.W.

Metropolitan Counties Branch: Lambeth Division.—The annual general meeting of the Lambeth Division will be held at the Bethlem Royal Hospital on Thursday, May 9th, at 4 p.m. Agenda: (1) Minutes of the last meeting. (2) The election of chairman and officers for the ensuing session. The following names have been recommended by the Committee; but other names may be sent to the Secretary not later than May 6th:—Chairman: Maurice Craig, M.D. Vice-Chairman: W. Alexander Atkinson, M.D. Secretary: Herbert S. French, M.D. Representative of Representative Meeting: Robert Esler, M.D. Representative on Branch Council: Charles Sangster, M.R.C.S. Committee: Herbert Taylor, M.B.; J. V. C. Denning, L.R.C.P.I.; A. M. Hickley, L.R.C.P.; Robert Capes, L.R.C.P.; J. W. J. Oswald, M.D.; D. Oliver Kerr, M.B. (3) W. H. B. Stoddart, M.D. (Bethlem Royal Hospital), will read a paper on Early Symptoms of Mental Disorder. It is hoped that as many members of the Division, with their medical friends, as possible will attend.—W. Alexander Atkinson, M.D., Honorary Secretary Lambeth Division, 216, Camberwell New Road, S.E.

Metropolitan Counties Branch: Wandsworth Division. An ordinary meeting will be held on Thursday, May 9th, at the Bolingbroke Hospital at 4 p.m., when a clinical demonstration of surgical cases will be given by Charles Ryall, Esq., F.R.C.S. It is hoped members will attend in large numbers and invite non-members to accompany them.—E. Rowland Fotherill, Honorary Secretary, Torquay House, Southfields, S.W.

Metropolitan Counties Branch: Wandsworth Division. The annual meeting will be held on Thursday, May 23rd, at 5.45 p.m., at the Head Quarters of the 4th Volunteer Battalion East Surrey Regiment, St. John's Hill, Clapham. Agenda: (1) Minutes; (2) correspondence; (3) questions; (4) report on conference for nomination of candidates for Central Council election; (5) report of Hospitals Committee on hospital administration (Supplement, April 13th); (6) recommendations of Ethical Committee on adoption of Bradford and other Rules; (7) report of Medico Political Committee on communication of Branch Council on dispensaries; (8) notices of motion for Representative Meeting in Supplements for April 20th and 27th; 9 report of scrutineers on election of Executive Committee for 1907-8; 10 other business.—E. Rowland Fotherill, Honorary Secretary, Torquay House, Southfields, S.W.

Midland Branch. In accordance with By-law 24 of the British Medical Association, nominations for representatives of the Midland Branch on the Council are requested to be sent to the Honorary Secretary of the Branch, Dr. Seaestrie, 119, London Road, Leicester, on or before Monday, May 13th.

MIDLAND BRANCH: LINCOLN DIVISION.—On Friday, May 24th, at 3.30 p.m., at the Guildhall, Lincoln, will be held the annual meeting of this Division. Agenda: (1) To elect a Vice-President of the Midland Branch; (2) to elect officers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee; (3) to elect the Representative of the Division in Representative Meetings of the Association; (4) further consideration of the proposed Charter (see BRITISH MEDICAL JOURNAL and SUPPLEMENT of April 6th); (5) other business. Members desiring to read papers or show cases or specimens are requested to communicate with J. S. CHATER, Honorary Secretary, Lincoln.

NORTH OF ENGLAND BRANCH.—Nominations for elective members of Central Council (two required) will be received up to May 24th.—JAMES H. HUNTER and HENRY SMURTHWAITE, Joint Honorary Secretaries.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Brighton on Wednesday, June 19th, Mr. T. Jenner Verrall, President-elect, in the chair. The following will be the agenda: (1) To elect the officers of the Branch (this will be done by voting papers sent to each member of the Branch); nominations by three members for the offices of president-elect, vice-presidents, and secretary may be sent to the Honorary Secretary on or before May 18th; (2) to receive the annual report of the Branch; (3) to transact any business that may be transacted by an ordinary meeting. N.B.—Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each of three members in writing, should be sent to the Honorary Secretary of the Branch on or before May 18th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

SOUTH-EASTERN BRANCH: CROYDON DIVISION.—The annual meeting will take place at the Croydon General Hospital on Wednesday, May 15th. Agenda: (1) Minutes of previous meeting; (2) report of the Committee; (3) election of officers. Clinical meeting: Members desirous of exhibiting cases are requested to inform the Honorary Secretary not later than May 10th. The dinner will take place at the Greyhound Hotel at 6.15 p.m. Charge 5s. exclusive of wine.—E. H. WILLOCK, Honorary Secretary, 91, London Road, Croydon.

SOUTH-EASTERN BRANCH: EASTBOURNE DIVISION.—A special meeting of this Division will be held at the Grand Hotel (entrance Jevington Gardens), Eastbourne, on Thursday, May 16th, at 6 30 p.m. Business: Matters referred to Divisions; to consider questions *re* draft Charter revision (SUPPLEMENT, April 6th, p. 148) and hospital administration (SUPPLEMENT, April 13th, page 190). Immediately following the conclusion of this meeting the annual general meeting will be held at the same place. Business: (1) Minutes; (2) to elect officers, the Representative on the Branch Council, and the ordinary members of the executive committee; (3) to receive the annual report of the executive committee; (4) to make new rules, or alter or repeal existing rules; (5) to transact any other business. Dinner will be served at 7.30 p.m. Tickets 6s. each exclusive of wine.—WM. MUIR SMITH, Honorary Secretary.

SOUTH-EASTERN BRANCH: FOLKESTONE DIVISION.—The annual meeting and dinner of the Folkestone, Ashford, and Dover constituency will be held at Hundert's Hotel, Folkestone, on Thursday, May 23rd, at 7.15 p.m. Agenda: (1) To elect officers; (2) to receive the annual report of the Executive Committee; (3) to consider matters referred to the Divisions (vide SUPPLEMENTS, February 16th and April 13th). Members wishing to stay for the dinner are requested to send their names to the Honorary Secretary before May 21st.—P. VERNON DODD, M.D., Honorary Secretary, 14, Manor Road, Folkestone.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—A meeting of the above Division will take place in the Board Room of the General Hospital, Northampton, on Tuesday, May 7th, at 2 30 p.m., under the chairmanship of Mr. H. Croply. For those members who desire it a luncheon has been arranged at Franklin's Restaurant, Guildhall Road, at 1.30. The luncheon will cost 2s. 6d. a head. The Secretary will be much obliged if members will inform him at least one day beforehand as to whether they will attend the luncheon.—P. S. HICHENS, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Notice is hereby given that the election of Branch Representatives on the Central Council will take place on June 13th at the annual meeting at Cardiff. Nominations in writing, signed by not less than three members, must be sent not later than May 23rd to FRANK G. THOMAS, M.B. 68, Walter Road, Swansea.

SOUTH-WESTERN BRANCH.—In accordance with By-law 22, the names of those candidates nominated for the Council of the Association, together with the names of three nominations for each, must be sent on or before May 20th to Mr RUSSELL COOMBE, Branch Secretary, 5, Barnfield Crescent, Exeter.

Presented by Mr. John Burns and ordered by the House of Commons to be printed on April 30th, 1907.

THE VACCINATION BILL, 1907.

A BILL to substitute a statutory declaration for the certificate required under Section 2 of the Vaccination Act, 1898, of conscientious objection.

Be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Substitution of Statutory Declaration as to Conscientious Objection for Certificate of Justices. 61 and 62 Vict., c. 49.*—The Vaccination Act, 1898, shall be read as if the following Section were substituted for Section 2 of that Act:

(1) No parent or other person shall be liable to any penalty under section twenty-nine or section thirty-one of the Vaccination Act, 1867, if within four months from the birth of the child he makes a statutory declaration that he conscientiously believes that vaccination would be prejudicial to the health of the child and within seven days thereafter delivers the declaration to the vaccination officer of the district.

(2) A statutory declaration made for the purposes of this section shall be exempt from Stamp Duty.

(3) A statutory declaration for the purposes of this section shall be made in the form set out in the schedule to this Act, or in a form to the like effect.

2. *Repeal.*—Section two of the Vaccination Act, 1898, is hereby repealed, but the repeal shall not affect the operation of any certificate obtained before *the passing of this Act.*

3. *Commencement and Short Title.*—(1) This Act shall come into operation on *the first day of January nineteen hundred and eight.*

(2) This Act may be cited as the Vaccination Act, 1907, and may be cited with the Vaccination Acts, 1867 to 1898.

SCHEDULE.

FORM OF DECLARATION.

I, *A.B.*, of in the parish of in the county of , being the parent [*or* person having the custody] of a child named *C.D.*, who was born on the day of , 19 , do hereby solemnly and sincerely declare that I conscientiously believe that vaccination would be prejudicial to the health of the child, and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Statutory Declarations Act, 1835.

Dated this day of , 19 .

Signed *A.B.*

Declared before me, at on the day of

E.F.,

a Commissioner for Oaths [*or* Justice of the Peace, *or* other officer authorised to receive a statutory declaration].

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,663 births and 4,910 deaths were registered during the week ending Saturday last, April 27th. The annual rate of mortality in these towns, which had been 17·9, 16·9, and 16·8 per 1,000 in the three preceding weeks, further declined last week to 16·0 per 1,000. The rates in the several towns ranged from 5·8 in Hornsey, 6·9 in King's Norton, 7·6 in Barrow-in-Furness, 8·0 in York, 10·1 in Willesden, 10·4 in Leicester, 10·6 in Tottenham and 10·8 in Southampton, to 20·9 in Nottingham, 21·4 in Preston, 22·1 in Bury, 23·0 in Wigan and in Swansea, 23·2 in Stockport, 23·6 in Middlesbrough, and 27·5 in Barrow-in-Furness. In London the rate of mortality was 15·6 per 1,000, while it averaged 16·1 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·7 in the seventy-six towns, the same rate being recorded in London also. The death-rates from these diseases in the other large towns ranged upwards to 3·5 in Salford, 3·6 in St. Helens, 4·1 in Nottingham and in Wigan, 4·4 in Tynemouth, 4·5 in Sheffield, 4·6 in Bolton, and 5·3 in Portsmouth. Measles caused a death-rate of 2·2 in Northampton, 2·3 in St. Helens, 2·9 in Bolton, 3·0 in West Bromwich, 3·1 in Birkenhead, 3·2 in Nottingham, and 4·0 in Portsmouth and in Sheffield; scarlet fever of 1·2 in Wigan; whooping-cough of 1·3 in Birkenhead and in Preston, 1·4 in West Hartlepool, 1·6 in Brighton, 1·7 in Tottenham, 2·1 in Stockton-on-Tees, and 2·2 in Salford; "fever" of 1·8 in Wigan; and diarrhœa of 1·2 in Rhondda, and 1·9 in Tynemouth. No fatal case of small-pox was registered in any of the large towns. 1 small-pox patient was admitted to a Metropolitan Asylums Hospital, and remained under treatment at the end of the week. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2,621, 2,715, and 2,757 at the end of the three preceding weeks, had risen

again to 2,649 at the end of last week: 369 new cases were admitted during the week, against 332, 236, and 381 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, April 27th, 943 births and 714 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19.4, 20.2, and 20.0 per 1,000 in the three preceding weeks, rose again to 20.6 per 1,000 last week, and was 3.6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scottish towns ranged from 17.0 in Aberdeen and 17.6 in Dundee to 22.5 in Leith and in Perth. The death-rate from the principal infectious diseases averaged 3.5 per 1,000, the highest rates being recorded in Glasgow and in Greenock. The 364 deaths registered in Glasgow included 5 which were referred to measles, 3 to diphtheria, 43 to whooping-cough, 6 to diarrhœa, and 26 to cerebro-spinal meningitis. Four fatal cases of measles, 2 of whooping-cough, and 8 of cerebro-spinal meningitis were recorded in Edinburgh: 2 of whooping-cough in Aberdeen and in Paisley: 2 of diphtheria and 2 of whooping-cough in Greenock: and 2 of cerebro-spinal meningitis in Leith and 1 in Dundee.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, April 27th, 495 births and 515 deaths were registered in six of the principal Irish towns as against 509 births and 435 deaths in the preceding period. The annual death-rate in these towns, which had been 20.1, 22.6, and 21.3 per 1,000 in the three preceding weeks, rose to 23.7 per 1,000 in the week under notice, this figure being 12.7 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 17.8 in Limerick and 21.9 in Cork to 34.4 in Londonderry and 43.9 in Waterford. The zymotic death-rate in the same six Irish towns averaged 1.0 per 1,000, or 1.3 per 1,000 lower than during the preceding period, the highest figure—3.9—being recorded in Dublin, while Londonderry, Limerick, and Waterford registered no deaths under this heading at all. In Dublin 10 deaths were referred to measles, 15 to whooping-cough, and 2 to cerebro-spinal fever. The deaths in Belfast included 20 returned as cerebro-spinal fever, and 1 as cerebro-spinal meningitis.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon R. E. Biddulph, M.B., is placed on the retired list, with the rank of Deputy Inspector-General, April 28th. His commissions were thus dated: Surgeon, March 31st, 1879; Staff Surgeon, March 31st, 1891; Fleet Surgeon, October 1st, 1895.

The following appointments have been made at the Admiralty: Joseph Coventry, M.D., Deputy Inspector-General, to Haslar Hospital, April 27th. Edward R. D. Fausset, Fleet Surgeon, to the *Cressy*, April 29th. William E. Home, M.D., Fleet Surgeon, to the *Excellent*, April 30th. Octavius W. Andrews, Fleet Surgeon, to the *President*, for disposal, and to the Hospital Course at St. George's Hospital, April 23rd; Edward F. Power, Surgeon, to the *Terrible*, May 3rd.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel E. P. Hehir Ingoldsby, M.D., is placed on temporary half-pay on account of ill-health, April 17th. He entered the service as Surgeon, February 5th, 1874, became Surgeon-Major, February 5th, 1886, and Lieutenant-Colonel, February 5th, 1901. His war services include the Egyptian war, 1882 (medal and Khedive's star); Nile campaign, 1884-5 (clasp); Burmese campaign, 1891-2, with the Chin-Lushai Expedition, 1892-3 (medal with clasp), and the South African war, 1899-1902, including operations in the Orange Free State and Cape Colony (queen's medal with two clasps and King's medal with two clasps).

Captain R. E. C. Fairlie retires with a gratuity, April 24th. He was appointed Surgeon-Major, January 28th, 1897; and Captain, January 28th, 1900. He served with the South African Constabulary during the operations in Cape Colony (queen's medal with four clasps and the King's medal with two clasps).

Lieutenant W. E. Brabin is promoted under the provisions of Army Order 10 of 1898, January 24th.

Major-General D. O'Connor, M.D., is placed on retired pay, April 25th. He was appointed Assistant Surgeon, April 1st, 1871, Surgeon, March 1st, 1881, Surgeon-Major, April 1st, 1886, Brigade-Surgeon, November 6th, 1895, and Colonel, April 19th, 1901. He served in the Afghan campaign, 1878-80, on the North West Frontier of India in 1897-8, receiving a medal with clasp.

Colonel T. H. Lowry, C.M.G., has been appointed to examine Militia and yeomanry candidates for commissions in the Royal Army Medical Corps at London on May 7th.

Officers of the Royal Army Medical Corps on probation are to be promoted to the rank of lieutenant after being sent to Aldershot, where the Depot Companies of the Corps are stationed.

ARMY MEDICAL RESERVE.

The undermentioned Lieutenants are promoted in that rank: A. C. Anderson, W. M. Lawrence, and C. H. Elliott.

Lieutenant-Colonel C. A. Thorp has reached the prescribed limit of age, and ceases to belong to the Army Medical Reserve, April 27th.

INDIAN MEDICAL SERVICE.

Colonel H. Harrison, M.D., C.B., Principal Medical Officer, Punjab Command, is promoted Lieutenant-General. Lieutenant A. S. Reid, C.B., M.B., Assistant Surgeon, March 1st, 1897, and Captain, March 1st, 1900. His war record is as follows: Afghan war, 1897-8 (mentioned in dispatches, two clasps); Tirah, 1897-8 (mentioned in dispatches, clasp, promoted Brigade-Surgeon-Lieutenant-Colonel); China, 1900 (medal).

The undermentioned officers, who were appointed Lieutenants January 30th, 1904, are promoted to be Captains from January 30th, 1907:—H. B. Drake, E. C. Hodgson, W. S. McGillivray, M.B., W. Gillitt, M.B., W. F. Brayne, M.B., C. H. Barber, M.B., W. Tarr, M.B., M. S. Irani, H. Watts, M.B., I. Davenport Jones, M.B., W. T. Finlayson, S. Whitworth Jones, W. T. McCowen, H. E. Stanger-Leathes, J. Anderson, M.B., E. A. Roberts, G. G. Hirst, M., J. Quirke, M.B., J. M. Holmes, M.B., M. F. White, M.B.

The retirement from the service of Lieutenant-Colonel D. W. Scotland, M.B., Bengal, which has already been announced in the British Medical Journal, has received the approval of the King.

Captain A. W. C. Young, M.B., is appointed Specialist in the Prevention of Disease, Lucknow.

Colonel R. Macrae, M.B., Bengal, is appointed Honorary Surgeon to the Viceroy of India, vice S. H. Browne, C.I.E., M.D., retired.

ROYAL ARMY MEDICAL CORPS (MILITIA).

Patrick J. Carroll, M.B., to be Lieutenant, April 3rd.

VOLUNTEER RIFLES.

Douglas C. L. Orton to be Surgeon-Lieutenant in the 2nd Volunteer Battalion the Prince of Wales's Volunteers (South Lancashire Regiment), March 15th.

Surgeon-Lieutenant-Colonel W. Wilson, M.D., 1st Volunteer Battalion the Royal Scots Fusiliers, is borne as supernumerary whilst holding the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Scottish Border Volunteer Infantry Brigade, March 13th.

Mr. Henry K. Ramsden (late Surgeon-Captain 2nd Battalion Royal Guernsey Militia, Light Infantry) to be Surgeon-Captain 2nd London Volunteer Rifle Corps, March 5th.

Surgeon-Lieutenant G. W. Coats, M.B., 2nd (Renfrewshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders), resigns his commission, March 12th.

IMPERIAL YEOMANRY.

Hamilton Drummond, M.B., to be Surgeon-Lieutenant (extra) in the Northumberland (Hussars), under the conditions of paragraph 28, Imperial Yeomanry Regulations, 1906, March 18th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

Thomas S. Worboys to be Surgeon-Lieutenant in the 1st Sussex, March 1st.

Surgeon-Lieutenant A. M. Connell, 4th West Riding of Yorkshire, to be Surgeon-Captain, March 19th.

ROYAL ENGINEERS (VOLUNTEERS).

Surgeon-Lieutenant J. W. Lloyd, the Mersey Division (Submarine Miners), to be Surgeon-Captain, October 6th, 1906.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Lieutenant C. Roberts, Manchester Companies, Western Command, to be Captain, March 19th.

Vacancies and Appointments.

VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

BRECKNOCK COUNTY AND BOROUGH INFIRMARY.—Resident House-Surgeon. Salary, £120 per annum.

BRIDGWATER HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—House-Physician. Salary, £50 per annum.

CANCER HOSPITAL, Fulham Road.—House-Surgeon.

CANTERBURY CITY ASYLUM.—Assistant Medical Officer. Salary commencing at £140 per annum.

CARMARTHEN JOINT COUNTIES LUNATIC ASYLUM.—(1) Medical Superintendent. (2) Assistant Medical Officer. Salary, £450 and £200 per annum respectively.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Physician to Out-patients.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum. (By an accident the salary was printed in this list last week as £30.)

EXETER ROYAL DEVON AND EXETER HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.

GLOUCESTER GENERAL INFIRMARY.—(1) Assistant Surgeon. (2) Assistant House-Surgeon, salary at the rate of £50 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £30 for six months, and £2 10s. washing allowance.

HOSPITAL FOR WOMEN, Soho.—Clinical Assistants.

HULL ROYAL INFIRMARY.—Casualty House-Surgeon. Salary, £80.

LEEDS GENERAL INFIRMARY.—House-Physician.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £70 per annum.

MAIDSTONE, WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon and Anæsthetist. Salary, £60 per annum.

MILLER HOSPITAL, Greenwich Road, S.E.—Junior House-Surgeon. Salary at the rate of £50 per annum.

NATIONAL DENTAL HOSPITAL AND COLLEGE, Great Portland Street, W.—Anæsthetist as deputy.

NORTHAMPTON: BURY WOOD ASYLUM.—Junior Assistant Medical Officer. Salary, £150 per annum, increasing to £200.

NORWICH: NORFOLK AND NORWICH EYE HOSPITAL.—Surgeon and Assistant Surgeon.

OLDHAM UNION. Resident Medical Officer for the Workhouse. Salary, £120 per annum.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—Surgeon to the Eye Department.

ROCHDALE INFIRMARY.—House-Surgeon. Salary, £100 per annum.

ROYAL EAR HOSPITAL, Dean Street, W.—House-Surgeon. Honorarium at the rate of £40 per annum.

ROYAL EYE HOSPITAL, Southwark, S.E.—House Surgeon. Salary, £52 10s. per annum.

ST. MARY'S HOSPITAL, Paddington, W.—Physician in charge of Out-patients.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House-Surgeon. Salary, £75 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Surgeon. Salary, £75 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Resident Assistant House-Surgeon. Salary, £80 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Officer in charge of x-ray department.

WEST RIDING ASYLUM, Wadsley.—Fifth Assistant Medical Officer. Salary, £140 per annum, rising to £160.

WEST RIDING ASYLUM, Wakefield.—Clinical Assistant. Salary, £80 per annum.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—(1) House-Surgeon: salary, £65 per annum, rising to £75. (2) Honorary Physician-in-Ordinary.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces a vacancy at Bromyard, co. Hereford.

APPOINTMENTS.

AGNEW, C. S., M.R.C.S., L.R.C.P., District Medical Officer of the Market Bosworth Union.

BURT, J. B., M.D.Lond., Resident Assistant Medical Officer, St. Marylebone Union Parish Infirmary.

CONSTABLE, J. C., M.R.C.S., L.R.C.P., District Medical Officer of the Southwark Union.

DAVIES, G. A., B.A., M.D., Ch.B., Clinical Assistant to the Edinburgh Royal Infirmary.

FINZI, Neville S., M.B.Lond., M.R.C.S., L.R.C.P., L.S.A., Medical Officer to the Electrical Department, Metropolitan Hospital, N.E.

HOLMAN, T. E., L.S.A., District Medical Officer of the Hailsham Union.

HOPWOOD, C. H., M.B., Ch.B.Vict., District Medical Officer of the Stoke-upon-Trent Union.

HOWELL, Alfred, M.D.Lond., Honorary Assistant Physician to the Cardiff Infirmary.

KELLY, C. E. M., M.D.Lond., District and Workhouse Medical Officer of the Witney Union.

MIDDLEMISS, G. W., M.B., B.S., B.Hy., D.P.H., Medical Officer to the Settle and District Post Office.

MORGAN, J. A., M.R.C.S., L.R.C.P.Lond., Certifying Factory Surgeon for the Llanwrtyd Wells District, co. Brecknock.

NEIL, W. H., M.R.C.S., L.R.C.P., District Medical Officer of the Romford Union.

PAULLEY, J., M.R.C.S., L.R.C.P., Senior House-Surgeon to County Hospital, Lincoln.

PEACOCK, E. V., M.B.Durh., District Medical Officer of the South Shields Union.

PENNY, J., M.B., C.M.Edin., Medical Officer of Health to the Cockermouth Urban District.

PERREIRA, P. H. H., M.R.C.S., L.R.C.P., Assistant Port Health Officer, Medical Department, Singapore.

SHARP, Alex. D., M.D., F.R.C.S.Edin., Consulting Surgeon for Ear, Nose, and Throat Diseases to Noble's Isle of Man Hospital.

SMITH, W. A. Wilson, M.B., Ch.B., Non-resident House-Surgeon to the Edinburgh Royal Infirmary.

TRIPP, B. H. H., M.R.C.S., L.R.C.P., District Medical Officer of the Blything Union.

WALTERS, H. B., M.R.C.S., L.R.C.P.Lond., Certifying Factory Surgeon for the Chudleigh District, co. Devon.

WELCH, C. G., M.R.C.S., L.R.C.P., Junior Assistant Medical Officer, Wandsworth Union Infirmary.

YOUNG, W. A. B., M.B., Ch.B.Vict., District Medical Officer of the Beverley Union.

GREAT NORTHERN CENTRAL HOSPITAL, N.—The following appointments have been made:
Senior House-Physician.—R. M. Gunn, M.B., B.S., Ch.B.
Senior House-Surgeon.—A. Carnarvon Brown, M.R.C.S., L.R.C.P.
Junior House-Physician.—Oscar Milburn, M.R.C.S., L.R.C.P.
Junior House-Surgeons.—James R. Briscoe, M.R.C.S., L.R.C.P.; F. Carminow Boble, M.R.C.S., L.R.C.P.

DIARY FOR THE WEEK.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 p.m.—Professor A. S. Grunbaum: A case of inoculated syphilis in the chimpanzee. Drs. F. A. Bainbridge and P. R. Parkinson: The morbid histology of the suprarenal glands. Dr. W. O. Meek: A rare variety of cardiac degeneration.

WEDNESDAY.

DERMATOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, W., 8.30 p.m.—Cases and Specimens.

THURSDAY.

BRITISH GYNÆCOLOGICAL SOCIETY, 20, Hanover Square, W., 8 p.m.—Papers: Dr. A. E. Giles, Observations on the Surgical Treatment of Inflammatory Diseases of the Uterine Appendages based on a series of 120 cases.

HARVEIAN SOCIETY OF LONDON. Hospital for Paralysed and Epileptic, Maida Vale, N.W., 8.30 p.m. Clinical Evening. Cases will be shewn by Drs. Leonard Guthrie, W. J. Harris, Charles Singer, and others.

FRIDAY.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION, 11, Chandos Street, Cavendish Square, W., 4.30 p.m.—Cases and Specimens.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 20, Hanover Square, W., 8.30 p.m.—Draft rules and Constitution and election of officers.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE.—Clinics: Monday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Ear and Throat, 4 p.m. Tuesday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Skin, 4 p.m. Wednesday, Medicine, 2.15 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30 p.m. Out-patient Demonstrations: Surgical, daily, 10 a.m.; Medical, daily, 10 a.m. Ear and Throat, Mondays and Thursdays, 12 a.m. Eye, Wednesdays and Saturdays, 11 a.m. Skin, Tuesdays and Fridays, 12 a.m. Special Lectures: Monday, 2.15 p.m., Treatment of Cardiac Dilatation: Wednesday, 2.30 p.m., Treatment of Ocular Injuries; Thursday, 3.15 p.m., Radical Cure of Hernia.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures at 5.15 p.m. each day will be given as follows:—Monday, Remarks on the Surgery of the Brachial Plexus; Tuesday, The Diagnosis and Treatment of Sudden Cerebral Lesions; Wednesday, Foreign Bodies in the Ear, Gallet, and Air Passages; Thursday, Mucous Colitis.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, Cerebro-spinal Meningitis. Friday, Acute Ataxia.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the clinics and demonstrations for next week:—Monday, 10 a.m.: Surgical, 2.30 p.m.; Medical, Throat, Nose and Ear, X Rays. Tuesday, 10.30 a.m.: Medical, 2.30 p.m.; Operations; Surgical and Gynæcological. Wednesday, 2.30 p.m.: Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynæcological Operations: Medical, Surgical: X Rays; 3 p.m., Medical (In-patient); 4.30 p.m., Special Demonstration of Medical Cases. Friday, 9.30 a.m., Surgical; 2.30 p.m., Operations; Medical, Eye; 3 p.m., Medical (In-patient).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following arrangements have been made for next week:—Daily, 2 p.m.: Medical and Surgical Clinics, X Rays. 2.30 p.m.: Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynæcological Operations. 2.30 p.m., Diseases of the Skin. Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday, 2.30 p.m.: Diseases of Women.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for insertion of advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

COX.—On April 24th, at Anderton, near Plymouth, the wife of H. P. Cox, M.R.C.S., L.R.C.P., of a daughter.

FAWCETT.—On April 25th, at 86, Wimpole Street, W., the wife of John Fawcett, M.D., of a son.

SAUNDERS.—On Sunday, April 28th, at The Beeches, Wales, Sheffield, the wife of M. B. Saunders, M.B., of a son.

SEDGWICK.—On April 23rd, at 95, Richmond Road, Kingston-on-Thames, the wife of H. R. Sedgwick, M.B., B.C., of a son.

WALKER.—On April 25th, at 8, Melling Road, Southport, the wife of G. Charles Walker, M.B., M.R.C.S., L.R.C.P., D.P.H. (West African Medical Staff), of a daughter.

MARRIAGE.

BALL—SMYTHE-WILSON.—On Thursday, April 25th, at St. Mary Abbot's Church, Kensington, C. Arthur Ball, M.D., F.R.C.S.I., eldest son of Sir Charles Ball, F.R.C.S., 24, Merrion Square, Dublin, to Elizabeth (Betty), daughter of Joseph Smythe-Wilson, Esq., of Berkeley, California.

DEATHS.

AIRD.—On April 22nd, at Tyneside, Wallington, Surrey, the beloved wife of T. W. Aird, M.D.

HUGHES.—On April 24th, at Brynwendon, Penmaenuawr, North Wales, in his 82nd year, Robert Hughes, M.D.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MAY.	
4 SATURDAY...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch*, Hampstead Conservatoire, Swiss Cottage, N.W., 9 p.m.
5 Sunday ...	
6 MONDAY ...	
7 TUESDAY ...	LONDON: Organization Committee, 11 a.m. LONDON: Special Finance Inquiry Committee, 3 p.m. NORTHAMPTONSHIRE DIVISION, *South Midland Branch*, Board Room of the General Hospital, Northampton, 2.30 p.m.; Luncheon, Franklin's Restaurant, Guildhall Road, 1.30 p.m.
8 WEDNESDAY	WEST DORSET DIVISION, *Dorset and West Hants Branch*, Annual Meeting, County Hospital, Dorchester, 3 p.m.
9 THURSDAY...	LAMBETH DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Bethlem Royal Hospital, 4 p.m. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Ordinary Meeting, Bolingbroke Hospital, 4 p.m.
10 FRIDAY ...	CENTRAL DIVISION, *Birmingham Branch*, Medical Institute, 4 p.m. DUNDEE BRANCH, Annual Meeting, Royal Infirmary, Dundee, 3.30 p.m., Clinical Meeting, 4 p.m.; Dinner, Queen's Hotel, Dundee, 6 p.m.
11 SATURDAY...	
12 Sunday ...	
13 MONDAY ...	LONDON: Ethical Emergency Subcommittee, 2 p.m.
14 TUESDAY ...	
15 WEDNESDAY	CROYDON DIVISION, *South-Eastern Branch*, Annual Meeting, Croydon General Hospital: Dinner, Greyhound Hotel, 6.15 p.m.
16 THURSDAY...	LONDON: Metropolitan Counties Branch Council, 4.45 p.m. EASTBOURNE DIVISION, *South-Eastern Branch*, Special Meeting, Grand Hotel (entrance Jevington Gardens), Eastbourne, 6.30; immediately followed by Annual General Meeting; Dinner, 7.30 p.m. HAMPSTEAD DIVISION, *Metropolitan Counties Branch*.
17 FRIDAY ...	
18 SATURDAY...	
19 Sunday ...	
20 MONDAY ...	
21 TUESDAY ...	WEST CUMBERLAND DIVISION, *Border Counties Branch*, Spring Meeting, Cockermouth.
22 WEDNESDAY	DORSET AND WEST HANTS BRANCH, Weymouth.
23 THURSDAY...	CITY DIVISION, *Metropolitan Counties Branch*, Special Meeting, Great Eastern Hotel, Liverpool Street, E.C., 4 p.m. FOLKESTONE DIVISION, *South-Eastern Branch*, Folkestone, Annual Meeting and Dinner. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Head Quarters, 4th V.B. East Surrey Regiment, St. John's Hill, Clapham Junction, 3.45 p.m.
24 FRIDAY ...	LINCOLN DIVISION, *Midland Branch*, Annual Meeting, Guildhall, Lincoln, 3.30 p.m.
25 SATURDAY...	TROWBRIDGE DIVISION, *Bath and Bristol Branch*, Annual Meeting, Trowbridge.
26 Sunday ...	
27 MONDAY ...	
28 TUESDAY ...	WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Annual Dinner, Gaiety Restaurant, 7.30 p.m.
29 WEDNESDAY	SPECIAL REPRESENTATIVE MEETING, Examination Hall, Victoria Embankment, London, W.C., 9.30 a.m. BATH AND BRISTOL BRANCH, Annual Meeting, Bath.
30 THURSDAY...	SPECIAL REPRESENTATIVE MEETING *(if necessary)*. CITY DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Great Eastern Hotel, Liverpool Street, E.C., 9 p.m.; followed by a Supper, 9.30 p.m.
31 FRIDAY ...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, London, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 11TH, 1907.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

SPECIAL REPRESENTATIVE MEETING IN LONDON.

WEDNESDAY, MAY 29TH.

NOTICES OF MOTION.

The following Notices of Motion have been received from Divisions and Branches for inclusion in the Agenda of the Special Representative Meeting to be held to consider the Charter.

By the DUBLIN DIVISION (Leinster Branch):

General Resolution:

That the Dublin Division, while heartily approving of the objects for which the Charter was originally sought, are of opinion that the consideration of the Charter should be postponed until the Representative Meeting of 1908, to give time to the Divisions to decide if it is for the good of the Association to apply for one, in a form which may lead to most strenuous opposition.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

Charter: Clause 1:

That the application for a Royal Charter offers a suitable opportunity for such an alteration in the title of the Association as will most fully keep before the members its aim to be a comprehensive union for all registered British medical practitioners, formed for the protection of their honour, the advancement of their interests, and the promotion of medical and the allied sciences, as also its desire that the members through its Branches, embracing the British Empire, should come to be consulted by all Governments of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the seas and be allowed to co-operate in every matter appertaining to the improvement of the health of the nations under their control.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That the Association be called "The British Imperial Medical Association."

By the NORTH-WEST EDINBURGH DIVISION (Edinburgh Branch):

Charter: Clause 2, (2) VI:

As it is undesirable that the British Medical Association should, as an Association, take part in Imperial Party Politics, the words in Clause 2, Section 2, No. VI, "and may promote the candidature of any member of the Association for Parliament or for any British Legislative Assembly" should be deleted.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

Charter: Clause 5 (2):

That it is desirable that Branches and Divisions within the United Kingdom do have the power to elect to certain privileges of membership those *not* eligible for election as ordinary members of the Association."

Omit, lines 5 and 6, "Not in the United Kingdom."

By the STOCKPORT, MACCLESFIELD AND EAST CHESHIRE DIVISION (Lancashire and Cheshire Branch):

Charter: Clauses 6 and 7:

That this Division is of opinion that under the Charter the powers now exercised by the Representative Body should be vested in the Council, and that Divisions, where they are retained, should be merely voluntary associations of members for local purposes.

By the Stockport, Macclesfield, and East Cheshire Division (Lancashire and Cheshire Branch):

To propose to amend Draft Ordinance 13:

1. In Clause (*a*), lines 1 and 2, by omitting the words "each Division and."
2. In Clause (*b*), line 2, by omitting the words "Division or."

By the St. Pancras and Islington Division (Metropolitan Counties Branch):

Ordinance 17. Proviso as to Referendum:

That the word "shall" be inserted in the first line of Section (*b*) instead of "may."

By the Hampstead Division (Metropolitan Counties Branch):

Ordinance 17:

That the recommendation of the Organization Committee given on p. 146 of the British Medical Journal Supplement of April 6th, 1907, paragraph 3 (*h*), be included in the 17th Ordinance.

By the Wandsworth Division (Metropolitan Counties Branch):

In Ordinance 17 (*e*) omit "If the . . . , three months," insert "If the said Referendum shall not have been issued within sixteen weeks after the date on which the resolution was passed by the Representative Body."

By the Wandsworth Division (Metropolitan Counties Branch):

Ordinance 23:

To move "That it is desirable to define in the By-laws the class of travelling expenses allowable."

In Ordinance 23 omit "the first-class travelling" in lines 1 and 8.

Insert in line 1 after "expenses," "as defined in the By-laws," or elsewhere if solicitor advises.

By the Cleveland Division (North of England Branch):

That in Ordinance 23, first line, the words, "The reasonable daily and travelling expenses within the United Kingdom of" be substituted for the words "The first-class travelling expenses within the United Kingdom of."

By the Stratford Division (Metropolitan Counties Branch):

That By-law 5 be altered so as to transfer the power of electing new members from the Branch Council to the Divisions.

By the Wandsworth Division (Metropolitan Counties Branch):

By-law 18 (1):

To move: "That it is not necessary to limit the discretion of the Central Council as to the grant to be made to any Branch, as this should depend on work done or proposed to be done."

In By-law 18 (1) omit, line 3, "not exceeding four shillings."

Omit, line 6, "not exceeding two shillings."

By the Wandsworth Division (Metropolitan Counties Branch):

By-law 19.—If amendment to By-law 18 (1) is carried this By-law is unnecessary.

By the Wandsworth Division (Metropolitan Counties Branch):

In By-law 20 omit "supplementary" if amendment to By-law 18 (1) is carried; as also all words after "profession."

By the Wandsworth Division (Metropolitan Counties Branch):

In By-law 21 omit "so far as possible."

By the Stratford Division (Metropolitan Counties Branch):

By-law 23 (2):

That the words "one hundred" be substituted for the word "fifty" in By-law 23 (2).

By the Cleveland Division (North of England Branch):

That in By-law 23 (2), first line, the words "a hundred" be substituted for the word "fifty."

By the Cleveland Division (North of England Branch):

That in By-law 23 (4), second line, the words "a hundred" be substituted for the word "fifty."

By the Cleveland Division (North of England Branch):

That in By-law 23 (4), second line, "150" be substituted for "300."

By the Cleveland Division (North of England Branch):

That in By-law 24 (1), first, second, third, and fourth lines, the words "The Representative shall be elected by voting papers not more than nine months or less than four weeks before the Annual Representative Meeting at which he takes office" be substituted for the words "The Representative shall be elected by a general meeting of the members of the constituency, held not more than nine months, nor less than four weeks, before the Annual Representative Meeting at which he takes office."

By the Cleveland Division (North of England Branch):

That in By-law 24 (2), first and second lines, the words, "The said meeting shall be convened (or where the election is by voting papers," be deleted as well as the bracket after the word "despatched."

By the Cleveland Division (North of England Branch):

That in By-law 24 (3), first line, the words, "Where the election is by voting papers," be deleted.

By the Wandsworth Division (Metropolitan Counties Branch):

In By-law 24 (4), to move "that it is not desirable to depute to any salaried officer the duty of deciding on the fulfilment of any requirement of the Charter, Ordinances, or By-laws."

For "General Secretary" read "Chairman of Representative Meetings."

Omit "issue," add "cause to be issued."

By the Wandsworth Division (Metropolitan Counties Branch):

By-law 28 (1).—Omit "at any time," and insert after "meetings" (line 3) "within eight weeks of the receipt of a."

Omit "on the" and "on the requisition."

By the Stratford Division (Metropolitan Counties Branch):

That By-law 36 be modified in such a way as to provide for the election of the whole of the Central Council, with the exception of the *ex-officio* and service members, by the Representatives of the Divisions at the Annual Representative Meeting, and that to secure proper proportional distribution the principle of the scheme proposed by the Ayrshire Division be recommended, but that the question of Colonial members on the Central Council be dealt with separately.

By the Westminster Division (Metropolitan Counties Branch):

By-law 36:

That, in the opinion of the Westminster Division, the principle of co-opting members for the Central Council, and the present number of such co-opted members, should be retained.

By the South-East Ireland Branch:

By-law 37:

That six be the least number of Representatives to which Ireland is entitled on the Central Council of the Association.

By the Wandsworth Division (Metropolitan Counties Branch):

By-law 38. (Assuming that the scheme of the election of the Central Council requires this By-law) to move "That it is desirable that the election in the United Kingdom be conducted by the Head Office and out of central funds, and the By-law be amended accordingly."

By the Hampstead Division (Metropolitan Counties Branch):

By-law 38:

That in the election of the Central Council the principle of proportional representation should be adopted.

By the Westminster Division (Metropolitan Counties Branch):

That By-law 39 should read as follows:

Each member of Council elected by a group of Branches in the United Kingdom shall hold office for three years, and at the end of that time shall be eligible

for re-election, and one-third of the members so elected shall retire annually.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

By-law 42.—Should the motion with reference to By-law 38 be approved this By-law should be deleted.

Should the motion be not approved and By-law 38 be necessary, to move omit "President or Secretary of the Branch" and insert (to coincide with By-law 38) "officer appointed by the Council."

By direction of the Chairman of Representative Meetings,

J. SMITH WHITAKER, *Medical Secretary.*

May 9th, 1907.

NOTICE OF CHANGES OF BOUNDARIES OF DIVISIONS AND BRANCHES.

THE following changes have been made in accordance with the regulations of the Association, and take effect from the date of publication of this notice:

1. That the North Cumberland and West Cumberland Divisions be amalgamated to form one Division, to be designated the "English" Division, and that the Eskdale portion of Dumfriesshire, formerly included in the Scottish Division, be included in the "English" Division.

2. That the western boundary of the North-East Edinburgh Division be altered as follows:

To follow the tramway line from Princes Street to the Bridge at Stockbridge (including both sides of the street), then westwards along the Water of Leith to Bell's Bridge and by Dean Path and Crewe Road to Granton.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

EAST ANGLIAN BRANCH:
NORTH-EAST ESSEX DIVISION.

A MEETING of this Division was held at the Red Lion Hotel, Colchester, on April 30th, at 7 p.m.

Lunacy Certificates.—A letter was read from Dr. Ryan concerning lunacy and other certificates. It was decided that it was no use taking action in regard to the clause in lunacy certificates to which Dr. Ryan objects, inasmuch as his clause is inserted by Act of Parliament. The Secretary was instructed to write to Dr. Ryan to this effect, and to state that, with regard to other objectionable certificate forms, action would be taken on copies being presented to the honorary secretary.

Medical Practitioners and Friendly Societies.—The question of a dispute between the medical practitioners and friendly societies of the Colne Valley District was brought forward, and the following resolution was carried unanimously:

That the North-East Essex Division of the British Medical Association wishes to record its entire approval of the action taken by the medical practitioners of the Colne Valley District with regard to attendance upon friendly societies. The resolutions passed by these medical practitioners are most necessary to prevent abuse of medical clubs by persons for whom clubs are not intended, and who in numerous instances could perfectly well afford to pay proper fees for medical and surgical attendance. The fees demanded in the resolutions set forth are the very lowest that any medical practitioner should accept.

The Secretary was instructed to forward a copy of this resolution to the secretary of the clubs in question and also to Dr. M. B. Wright. He was also instructed to request the Medical Secretary to include the clubs in the Warning List.

School Certificates.—Letters from the Colchester Education Committee *re* school certificates were read, and the Secretary was instructed to write to the Clerk and ask what it intended to do in the matter.

The late Dr. T. A. Clinch.—The death of Dr. T. A. Clinch of Weeley was reported, and the following resolution was carried unanimously:

The Division wishes to record its deep regret at the death of Dr. T. A. Clinch, and to express its deep sympathy with his relatives.

Fees for Club Practice.—Letters from Dr. Rowland were read relative to fees for club practice. The Secretary was instructed to write to him stating that the lowest annual payment should be 5s. per member per annum, without deduction; that when a member requires more than one certificate at a time, extra certificates should be paid for; that in the present state of things the application of a wage limit is impracticable.

Liverpool Victoria Legal Friendly Society.—In reference to a letter relative to the Liverpool Victoria Legal Friendly Society, it was decided to ask the Medical Secretary to place any appointment to this Society in this neighbourhood on the Warning List.

Letters.—A letter from the Medical Secretary, dated April 24th, was read relative to the draft Charter, hospital administration, medical inspection of school children, and ethical aspects of medical consultation. A letter from the Norwich Division relative to the draft Charter was also read.

Hospital Administration.—The Division had already considered the question of hospital administration.

Medical Inspection of School Children.—With regard to medical inspection of school children, the Division was of opinion that a special whole-time medical officer should be appointed in towns large enough to provide one, and that in other towns the appointment should be advertised for amongst the local medical men. With regard to the other matters mentioned, the Division did not feel it had any special interest therein.

Medical Practitioners and Midwives.—The question of fees in the case of midwifery emergency calls from midwives was brought up. Resolutions (SUPPLEMENT, July 22nd, 1905, p. 27) were read. The Secretary was requested to put the question down for the next meeting, and to glean what information he could on the matter.

LANCASHIRE AND CHESHIRE BRANCH:
MANCHESTER (CENTRAL) DIVISION.

Central Council Election.

A SPECIAL meeting of the members of this Division was held on April 25th to consider the election to the Central Council. Five candidates addressed the meeting.

Dr. BRADSHAW (Liverpool) said the consideration of the new Charter was one of the most important questions the Association had ever had to face. The present occasion was scarcely opportune for discussing questions of detail; he preferred to deal with the general principles which should guide them in framing a constitution. Such a constitution must be framed on lines that might be described as catholic—lines on which all the members, present and future, might be expected to agree. Among the common interests, the most prominent was the JOURNAL; and, in fact, it was hardly too much to say that three-fourths of the members of the Association were such in order that they should be able to receive the JOURNAL. They seldom or never attended a meeting, and they unfortunately took no share and manifested but little interest in the other fields of work of the Association. To retain the support of these silent members was essential to the success of the Association. Lines of action must not be entered upon merely at the bidding of a majority of votes, even though a large one, for, unless the policy was in accordance with the general sense of the numerous silent members, they would simply resign their membership. They might not take the trouble to call the tune, but if the tune was one they did not like they might decline to pay the piper. One point on which all were agreed was the maintenance of the JOURNAL at the highest point of efficiency. To this end the goodwill and co-operation of medical men in all departments of medical work was required. Free discussion of all debatable questions was essential. The provision in the draft Charter placing the entire management of the Association in the Representative Body, whose members were already pledged as delegates to vote in a certain way, was inconsistent, in his opinion,

with free discussion. He warned the members against any proposal which would involve raising the annual subscription. If that were done, the many thousands who joined for the sake of the JOURNAL would resign; their subscriptions would then be lost to the Association, which would no longer include a majority of the profession, and the income derived from advertisements in the JOURNAL would fall off greatly in consequence of its diminished circulation.

Mr. LARKIN said he placed himself at the disposal of the Association, and sought the support of the members in his candidature for the Central Council. He became a candidate because it was held by many members, and particularly by his colleagues on the Branch Council, that the Branch Secretary should be on the Central Council. The Branch Secretary is the natural intermediary between the Central Council and the Branch, as his office gives him better opportunities than those enjoyed by others of (1) being able to inform the Central Council of the views of the Branch; and (2) of using the knowledge and experience gained on the Central Council for the benefit of all the Divisions of the Branch. He said he was bred in the profession, being son and grandson of general practitioners, and he detailed his past experience as evidence of his knowledge of the wants of the profession and of his fitness to represent it. Mr. Larkin said he was a firm believer in democratic principles, and as such supported strongly the principle of the Divisions and of the Representative Meeting; but, unfortunately, their most ardent supporter must admit that so far they had been an almost complete failure. They had not been accepted by the vast majority of their members. Their Divisions could not be claimed as representative of the opinions of the Association when it was well known that but a tithe of the members took any part in them. That, he said, was the difficulty. He did not wish to see the Divisions abolished. He had great hopes for their future; but they must deal with the present. He held that the gap between the Divisions and the Representative Meeting was too great, and if the organization of the Association was ever to become a success he felt this must be bridged. He sketched a method by which, in his opinion, this might be done. He desired to see the Branch Councils reorganized for this purpose with well-defined duties. He said that while the position of Branch Councillor was sought, that of Representative went a-begging. It was seldom there was a contest for the post of Representative. He thought the Branch Council should be formed of the Representatives of the Divisions, along with the Central Councillors elected by the Branch and such other members as were elected by Divisions whose membership was over 60. In this way the Representatives would have more importance added to their posts, and would be better educated in the needs of the Association and the movements going on in the profession than was possible in the parochial schools of the Divisions. They would come into contact with the members of the Central Council and get into the habit of acting together. In this way, for example, the Lancashire and Cheshire Branch would send up to the Representative Meeting 24 Representatives and four Councillors trained in what was going on in the whole Branch and used to acting together. Other Branches would do similarly. The meeting would thereby be much strengthened and would consist of strong groups instead of isolated units assembled together for too brief a period to become organized. As regards the probabilities of the Charter being granted he could not speak, but he hoped nothing would be done hurriedly, and that if they were to have a Charter the Association would see that it got something useful and not at too great a cost. He strongly objected to the proposals that were made for altering the size and mode of election of the Council. He admitted that the smallest Council possible was the best Council; but was it possible to make it much smaller and it still be fairly representative of all parts of the country, and could a smaller Council properly man the important committees without the co-opted, that is, the unelected members, becoming too great in proportion to the elected? He felt that at present, at any rate, the Council must be elected directly by the members. If elected in any indirect way the position of the Council as the great executive, advisory, and judicial body would be weakened, and its actions and judgements would not command the same respect. He pointed out that it was the only body that was elected in a quite unfettered manner by the whole Association. The voting papers were sent to every member and had simply to be signed and put in the post. Though the Representatives of the Divisions could be elected in this way the vast majority of them, he understood, were elected at small Divisional meetings. If at any future time the majority of the members of the Association did take up with the principle of Divisional government, then would be time enough to alter the method of electing the Council. He feared for the Association if the active minority that rule the Association went too far from the path along which the great inactive majority were prepared to follow.

Dr. RAYNER, in reply to the Chairman's invitation to address the members of the Division, said he was obliged to the Honorary Secretary, Dr. Clifford, for his invitation to be present on the occasion, and he thought if the Divisions occasionally invited the Representatives of the Branch on the Central Council to visit them it would be beneficial to both parties and it might tend to dispel that apathy which was the great cause of weakness in the profession. There was no doubt about the truth of the saying "Union is Strength," but the members of the medical profession seemed loth to appreciate it. He had been for the last two years a Representative of the Branch on the Organization Committee, and, in addition to the ordinary work of that Committee, the preparation and drafting of the Charter had necessitated both frequent and lengthy meetings. He thought every member of that Committee had endeavoured to make the Charter acceptable to the majority of the members of the Association. It had, however, been freely criticized in the BRITISH MEDICAL JOURNAL, and such criticisms were welcome, but the majority of the suggestions had been considered in the Committee before the draft was finally settled, and for reasons which he gave, he hoped the Divisions would make as little alteration as possible in the draft sent down to them. One of the chief reasons for which he hoped for the support of the Branch was that, having worked at the inception of the Charter, he wished to have a hand at its completion. He then referred to the work of the Committee entrusted with the erection of the new premises. He was a member of the Committee which negotiated the purchase of the building. It was one of the best sites in London and it was freehold. It was a somewhat expensive building to maintain and had become too small for the business of the Association. The new premises would be a credit not only to the British Medical Association but also to London, and would not only be no charge on the funds of the Association but would be a source of income. He concluded by saying that he believed this was the last year for which he would be eligible for election on the Central Council, and if proof were required of his interest in the work of the Association, he thought he should be within the mark in saying he had attended 90 per cent. of the meetings of the Council and Committees of which he was a member.

Dr. GARSTANG was glad there was much in the remarks of the previous speakers with which he found himself in entire agreement. He criticized the method of carrying out the election, saying that the great majority of the electors never knew that an election was taking place until they received their voting papers; and that they were (except those who lived in Manchester and Liverpool) called upon to vote for mere paper names. He felt that candidates and electors should be brought into much closer touch. For himself, he came forward as a general practitioner, on behalf of general practitioners. He emphasized the necessity for united action in the profession, and said the British Medical Association offered the only chance of attaining it. He defended the existing organization of the Divisions, pointing out that while some had proved failures, others had been equally great successes, and that, instead of crying out for their abolition, attempts should be made to "level up" to the standard of the best. To this end he would not object to see increased powers given to Branch Councils. He would support any suggestions for the improvement of the organization of the Association, considering it to be synonymous with the benefit of the medical profession.

Dr. BRASSEY BRIERLEY ridiculed the assumption that the Central Council of 60 members was too big to do work, and contrasted the Councillors, with their training

or the work, with the odd crowd of 150 so-called Representatives who meet once a year, most of them simply epresenting themselves and voting without the least reparation of the subject before a meeting, and instanced he local Divisions, whose Representatives (?) never even roubled to meet before and arrange how to act at the nnual meeting; and yet this meeting wanted to elect a ig share of the Central Council! The Divisions were an tter failure, and the system has resulted in the affairs of he Association falling into the hands of a few busy but nimportant members of the Association. He severely riticized the financial position of the Association, nd pointed out the misleading report to be resented. Although £900 had been saved in various ems of expenditure, the balance of receipts ver expenditure for the year 1906 was only £523 nore than that year. Besides this, £1,000 more had een received in subscriptions, so that £1,900 or nore, less this £523 saved, had disappeared. Seeing, herefore, that the general Association expenses had ecreased £159, this enormous sum must have gone hrough the great additional cost of the Medical Secreary's department. Yet, as Dr. Rayner pointed out, it was roposed another highly-paid Medical Secretary should be ppointed in order that the present head official could go bout doing missionary work—to get more members. As o the Charter, it was an unnecessary undertaking—already ad cost a large sum, and before secured, if ever it was ranted, would have cost £10,000. Before the present recon-itution was adopted, he proposed a series of alterations in he By-laws to enable them to secure a fund to relieve necessi-ous dependants of the members and defence of their rights, nd proposed the Central Council should hold its meetings lternately in London and the provinces, and thus keep nore closely in touch with the whole members of the ssociation. He withdrew these proposals in favour f Mr. Horsley's suggestion that a committee be formed, ut he never anticipated the results they now saw. The old rticles could have been altered at a very slight cost, and t the worst, if they had been put under trade conditions, ney would have had a little more taxes to pay. With an ncome of £53,000 or £54,000 a year they had not a copper o relieve their widows and orphans; indeed, do nothing for heir members but give them a good JOURNAL. The *Lancet* ost between £5,000 and £6,000 a year. The surplus had ome down since the reconstitution from £5,000 a year to very doubtful £500.

After the candidates had retired it was resolved that Ir. Larkin, Dr. Bradshaw, and Dr. Brierley be nominated y the Division, and that as all the candidates had ot been present at the meeting no fourth nomination e made.

MANCHESTER (WEST) DIVISION.

A GENERAL meeting of the Manchester (West) Division as held on Tuesday, April 23rd.

Confirmation of Minutes.—The minutes of the last eeting were signed as correct.

Central Council Election.—The chief business before he meeting was the selection of candidates for the forth-oming election to the Central Council. Candidates had een invited to be present at the meeting. Communica-ions expressing regret at their inability to attend were ead from Dr. Larkin, Dr. Bradshaw, and Dr. Garstang. rs. RAYNER and BRASSEY BRIERLEY were present and ddressed the meeting. Dr. ADOLPHE K. RENSHAW, who ttended on behalf of Dr. Garstang, also spoke. The eeting afterwards passed a resolution nominating the ollowing four gentlemen: Dr. Brassey Brierley (Old rafford), Dr. T. R. Bradshaw (Liverpool), Dr. F. harles Larkin (Liverpool), and Dr. Alfred Godson Cheadle).

A Medical Practitioner and the Police.—A letter from r. Bagley of Gorton was read and considered. It had een suggested that the Division should grant a sum f money to help in defraying the legal expenses incurred y Dr. Bagley in connexion with the recent police case n which he had been concerned. It was resolved that he matter should be referred to the next meeting of the ivision.

Manchester Eye and Ear Hospital.—The official state-ent of the Board of Management of the Manchester Eye nd Ear Hospital, dealing with the present condition and new constitution of the hospital, was read. The Honorary Secretary was instructed to write a letter of thanks to the Medical Board for its communication.

WIGAN AND LEIGH DIVISIONS.

A GENERAL meeting of these Divisions was held at the Royal Hotel, Wigan, on May 2nd.

Confirmation of Minutes.—The minutes of the previous general meeting were confirmed.

Honorary Secretary's Report.—The Honorary Secretary's report was read and adopted.

Election of Officers.—The following officers were elected: *Chairman*, Mr. W. Berry; *Vice-Chairman*, Mr. W. Latham; *Representative to Branch Council*, Dr. F. Rees; *Honorary Secretary*, Dr. Hodder; *Committee*, Messrs. Blair, Cooke, Winstanley, McElligott, Benson, Wolstenholme, Chronnell, and Monks; *Representative of Joint Divisions for Representative Meeting*, Dr. J. Blair.

Representative Meeting.—Dr. Wynne's report on the Representative Meeting in London in 1906 was submitted.

Central Council Election.—An address was delivered by Dr. T. W. H. GARSTANG on medical politics, in support of his candidature for the Central Council. Dr. Garstang was thanked for his address, and was unanimously accorded the support of the Divisions in his candidature.

Proposed Grouping of Branches in the North of England.—It was resolved:

> That the joint Divisions of Wigan and Leigh are opposed to any proposal to group the Lancashire and Cheshire Branch with other Branches in the North of England for purposes of representation on the Council (vide Appendices to Report of Organization Committee in SUPPLEMENT of April 6th), and considers that the Lancashire and Cheshire Branch should return its representatives independently of any other Branches.

This terminated the business.

METROPOLITAN COUNTIES BRANCH:

CHELSEA DIVISION.

A GENERAL meeting of the Division was held at the Fulham Town Hall on April 30th, Mr. TANNER in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Nomination of Officers.—On the proposal of Dr. O'SULLIVAN, seconded by Dr. PARSONS, Mr. Edmund Owen was nominated as President elect of the new Branch Council. Drs. Fothergill and McCann were also nominated as Secretaries, on the proposal of Dr. PARSONS, seconded by Dr. BOYD. Both resolutions were carried *nem. con.*

MATTERS REFERRED TO DIVISIONS.

The following matters referred to Divisions were discussed:

Medical Inspection of School Children.

After considerable discussion, Dr. GARDNER moved and Dr. PARSONS seconded:

> That in the opinion of this Division it would be desirable that the offices suggested in the Education Bills now before Parliament be distributed amongst the general practitioners of the district who would be willing to undertake a portion of the duties.

This was carried *nem. con.* It was also felt that it was desirable that appointments to these offices should not be made by local bodies, who might be influenced by political or clerical considerations, but by the Central Education Authority. No evidence was given of the practice of teachers sending children to hospitals, but one instance was mentioned of a child having been referred to the medical officer of health.

Relations of Consultants with General Practitioners.

The opinion of the meeting was that members of the profession calling themselves consultants should be asked to observe strictly rules much on the same lines as those which are in operation and are found to work satisfactorily between barristers and solicitors—that is, that the Division supports the idea put forward by the Central Ethical Committee—the recognition of a special class designated consultants.

Hospital Administration.

In reply to the specific questions submitted by the Hospitals Committee, the Division's opinion was—

1. That compulsory payment by patients to hospitals

(other than cottage hospitals) is undesirable. Relating to this question, Dr. Parsons moved the following resolution:

That the system of payments of any kind by patients to any general or special hospital supported by public subscription is entirely immoral and wrong and ought at once to be stopped, inasmuch as funds provided by public benevolence are thereby being used to undersell the private practitioner.

This was seconded by Dr. Williams and carried *nem. con.*

2. That the production of subscribers' letters by patients was undesirable.

3 and 4. That a certificate from the medical attendant should be required of all persons attending out-patient departments, and that such medical attendant was as able as anyone to supply information as to the patient's circumstances, which information should always be obtained where possible.

The opinions expressed did not refer to cases of extreme urgency.

Kensington General (late Jubilee) Hospital.

The Executive Committee of the Division had suggested a meeting with the staff of this hospital. Dr. Parsons reported that the staff had expressed their willingness to meet the Committee, and, further, that they had suggested the idea that a member of the Division should be elected upon the Board of Management as a representative of the Chelsea Division. The meeting felt that an early conference between the two bodies was very desirable in the interests of the hospital, of its staff, and of the practitioners of the neighbourhood. It was the general feeling of the meeting that the matter of the mismanagement of hospitals generally ought to be persistently kept before all Divisions in order to obtain reform.

Hampstead Division.

A meeting of this Division took place on Saturday, May 4th, at 9 p.m., at the Hampstead Conservatoire, Swiss Cottage, N.W. In the absence of the Chairman and Vice-Chairman, Dr. Ford Anderson took the chair by request of the meeting.

Confirmation of Minutes.—The minutes of the meeting of April 12th were taken as read. Arising out of these Mr. Armit drew attention to the unusual action of a member in a letter contained in the British Medical Journal Supplement of April 20th, 1907, p. 203, referring to the Contract Practice Subcommittee's report on provident dispensaries. The Hon. Secretary explained that the reason why the report had been inserted in the Supplement before it had been confirmed was that it was possible in this way to obtain reprints for the meetings of April 6th and 12th at a moderate cost.

Letter.—A letter from the Honorary Secretary of the St. Pancras Division was ordered to be put on the agenda of the next meeting.

Meetings to be Held. It was decided to hold a meeting on May 24th to deal with the Hampstead Hospital question, and another on June 4th, for various matters referred to Divisions.

Central Council Election. Mr. Armit proposed, and Dr. Yeld seconded:

That Dr. Ford Anderson be nominated by this Division for the Central Council.

Carried unanimously. Dr. Anderson thanked the meeting and agreed to stand.

Draft Charter.

Mr. Armit, who had made a careful study of this subject, explained the reasons of the various modifications that had been introduced since last year into the Charter, Ordinances, and By-laws. The following resolutions were passed:

Draft Charter.—That this Division approves of the Draft Charter now submitted.

Ordinances.—(1) That this Division approves of the recommendation of the Organization Committee given on p. 146, British Medical Journal Supplement of April 6th, 1907, paragraph 2 (A) and would wish it included in the Title Ordinance.

That the rest of the Ordinances be accepted as they stand.

By-laws.—(1) That this Division approves of By-law 51, section viii (p. 157 of the above Supplement).

(2) That this Division approves of the by-laws as they stand, except those in Section vi.

(3) *Section vi: Method of Election of the Council.*

A. That the present method of election be retained, the number to be elected being reduced if found necessary.

B. That while this Division is not in favour of Appendix E, it recommends the adoption of the *grouping* of Branches contained therein.

C. That draft By-laws 35-38, Section vi, be remodelled in accordance with the above recommendations of the Hampstead Division.

D. That the rest of the by-laws in Section vi be approved as they stand.

For the Representative Meeting.

(1) That By-law 20 (? 19) be amended in accordance with the recommendation of the Council (set forth on the front page of the British Medical Journal Supplement of April 27th, 1907).

(2) That for the election of the Central Council the principle of proportional representation should be adopted.

Vote of Thanks.—The proceedings terminated with a vote of thanks to the Chairman, and to Mr. Armit for his exposition of the draft Charter, etc.

BORDER COUNTIES BRANCH:

North Cumberland Division.

A meeting of the Division was held at the George Hotel, Penrith, on Friday, April 12th, at 3.15 p.m., Dr. Graham of Carlisle in the chair.

Apologies for Absence.—Apologies for absence were received from Dr. Bird, Dr. Barnes, Dr. Donald, and Dr. Syme.

Confirmation of Minutes.—The minutes of last meeting were read, approved, and signed.

Amalgamation of Divisions.—The following recommendations from the Branch Council were approved: (1) That the two existing Divisions on the English side of the Border be amalgamated to form a larger and more convenient Division. (2) That the Division so formed be called the "English Division." (3) That the Eskdale portion of Dumfriesshire be included in the "English Division." (4) That these changes take place in June, 1907.

Proposed Alteration in Rules.—The following suggested alterations in rules were approved to be brought before the new Division: (1) The Branch Secretary be *ex officio* a member of the Division Committee. (2) That the Committee consist of six ordinary members instead of four, as at present. (3) Recommendation to the Branch of additional rule, "That any member of the Branch Council who has served five years consecutively shall be ineligible for election for one year."

Contract Practice.—The recommendation from the Branch on "contract practice," namely, that the Divisions of the Branch take into their early consideration the question of organizing suitable local action in various towns and districts, was referred to the next meeting to be held in Carlisle on Friday, May 24th.

National Deposit Friendly Society.—The proposal of Dr. Graham (Carlisle) that the following recommendations, proposed by the Medico-Political Committee of the Association, and approved of by the Representatives Meeting at Oxford, 1904, be adopted in this Division, was also referred to the next meeting: (1) That no member of the Association should give an undertaking to charge members of the National Deposit Friendly Society according to the scale laid down by the rules of the Society instead of the ordinary fees proper to their circumstances. (2) That in dealing with members of the Society the medical practitioners should look to the patient absolutely for his fees, and should not recognize the Society in the matter. The member of the Society should himself pay the doctor according to his circumstances, and should recover independently, from the Society, the amount due to him in respect of the attendance under the Society's scale. (3) That no member of the Association should permit his name to be used by the officers of the Society as specially acting in any honorary capacity or otherwise for the Society in any district, and that it should be left to each patient to choose his medical attendant, without bias from the Society. (4) That the Division should use their utmost endeavours to induce members of the profession within its area who do not belong to the Association to act upon these rules.

Dinner. Ten members dined together after the meeting.

GIBRALTAR BRANCH.

THE annual general meeting of this Branch was held on April 24th at 5 p.m. in the Colonial Hospital.

Annual Report.—The annual report was read.

Model Rules.—The Model Rules were adopted.

Election of Office-bearers.—The following office-bearers were elected for the year:—*President*, Deputy Inspector-General C. James, R.N.; *Vice-President*, Dr. Neil Oman; *Secretary and Treasurer*, Dr. L. D. Parsons; *Members of Council*, Lieutenant-Colonel D. V. O'Connell, M.D., Major Robinson, R.A.M.C., Dr. A. W. W. Dowding, Dr. Abrines, Colonel J. McNamara.

Annual Dinner.—The annual dinner was fixed for Thursday, May 2nd, at the Grand Hotel, when it was hoped about twenty members would dine.

LANCASHIRE AND CHESHIRE BRANCH.

CENTRAL COUNCIL ELECTION, 1907.

THE following are the nominations for the above election, to fill four places on the Council. Those marked with an asterisk (*) are retiring Councillors seeking re-election.

1. *BRADSHAW, THOMAS ROBERT, B.A., M.D.Dub., F.R.C.P. Lond., of 51, Rodney Street, Liverpool.

Nominated by: A. T. H. Waters, Vice-President of the Association; Sir James Barr, President of the Branch; Hubert Armstrong, Liverpool; Francis W. Bailey, Liverpool; Frank H. Barendt, Liverpool; J. E. Burton, Liverpool; William Carter, Liverpool; Peter Davidson, Liverpool; T. R. Glynn, Liverpool; Karl Grossmann, Liverpool; A. Gordon Gullan, Liverpool; Geo. G. Hamilton, Liverpool; W. E. Livsey, Liverpool; William McClelland, Liverpool; S. J. Palmer, Liverpool; J. Lloyd Roberts, Liverpool; Nathan Raw, Liverpool; Alexander Stookes, Liverpool; E. Malcolm Stockdale, Liverpool; Richard Sephton, Culcheth; W. Thelwall Thomas, Liverpool; Richard H. Wolstenholme, Salford; Oswald H. Woodcock, Manchester; Richard Williams, Liverpool.

2. *BRIERLEY, JAMES BRASSEY, M.D.Edin., M.R.C.S.Eng., of Alma House, Old Trafford, and 64, Deansgate, Manchester.

Nominated by: Sir James Barr, President of the Branch; Hubert Armstrong, Liverpool; Francis W. Bailey, Liverpool; Frank H. Barendt, Liverpool; J. E. Burton, Liverpool; Karl Grossmann, Liverpool; A. Gordon Gullan, Liverpool; William M'Clelland, Liverpool; S. J. Palmer, Liverpool; Nathan Raw, Liverpool; J. Lloyd Roberts, Liverpool; E. Malcolm Stockdale, Liverpool; Richard Sephton, Culcheth and Leigh, Lancashire; Richard H. Wolstenholme, Salford; Oswald H. Woodcock, Manchester.

3. BROADBENT, GEORGE HARRY, M.R.C.S.Eng., of 8, Ardwick Green, Manchester.

Nominated by: J. H. Ashworth, Manchester; H. W. Boddy, Manchester; A. B. Fulton, Manchester; John Rust, Manchester; R. G. McGowan, Manchester.

4. GARSTANG, THOMAS WALTER HARROPP, M.A.Oxon., M.R.C.S.Eng., L.S.A.Lond., D.P.H.Vict., of Edge Mount, Altrincham.

Nominated by: C. S. Ashe, Sale; P. R. Cooper, Altrincham; F. Cox, Hale; Theo. Le Fennell, Knutsford; W. Owen Jones, Altrincham; John Lyon, Bowden; Edward L. Luckman, Altrincham; C. J. Renshaw, Ashton-on-Mersey; C. Adolphe K. Renshaw, Sale; Knowles Renshaw, Ashton-on-Mersey; H. S. Renshaw, Sale; H. F. Ransome, Bowden; Arthur Riley, Sale; T. Basil Rhodes, Baguley; G. H. Smith, Knutsford; James C. Smyth, Altrincham; and by the Altrincham Division, Blackpool Division, Blackburn Division, Bury Division, Leigh Division, Liverpool (Bootle) Division, Preston Division, and the Executive Committee of the Wigan Division.

5. GODSON, ALFRED, M.A., M.B., M.C. (Cantab.), J.P., of Cheadle House, Cheadle, Cheshire.

Nominated by: Sir James Barr, President of the Branch; Hubert Armstrong, Liverpool; Francis W. Bailey, Liverpool; Frank H. Barendt, Liverpool; J. E. Burton, Liverpool; Karl Grossmann, Liverpool; A. Gordon Gullan, Liverpool; William McClelland, Liverpool; S. J. Palmer, Liverpool; Nathan Raw, Liverpool; J. Lloyd Roberts, Liverpool; E. Malcolm Stockdale, Liverpool; Richard Sephton, Culcheth and Leigh, Lancashire; Richard H. Wolstenholme, Salford; Oswald H. Woodcock, Manchester; and by the Stockport, Macclesfield, and East Cheshire Division.

6. LARKIN, FREDERICK CHARLES, F.R.C.S.Eng., Secretary of the Branch, of 54, Rodney Street, Liverpool.

Nominated by: Sir James Barr, President of the Branch; Hubert Armstrong, Liverpool; Francis W. Bailey, Liverpool; Frank H. Barendt, Liverpool; J. E. Burton, Liverpool; C. S. Brebner, Widnes; John J. Buchan, St. Helens; Robert Charles Brown, Preston; Joseph G. G. Corkhill, Southport; R. H. H. Dunderdale, Blackpool; J. A. Eatock, Widnes; Oswald H. Edwards, Widnes; F. M. Granger, Chester; Karl Grossmann, Liverpool; A. Gordan Gullan, Liverpool; A. Hamilton, Chester; C. Hutchinson, Widnes; J. Hutchinson, Widnes; R. Jackson, St. Helens; H. W. King, Chester; C. T. Mouncey, Earlstown; Louis M. McIntosh, Blackpool; William McClelland, Liverpool; D. C. Leyland Orton, St. Helens; S. J. Palmer, Liverpool; Nathan Raw, Liverpool; J. Lloyd Roberts, Liverpool; E. Malcolm Stockdale, Liverpool; Richard Sephton, Leigh, Lancashire; James Taylor, Chester; Richard H. Wolstenholme, Salford; Oswald H. Woodcock, Manchester; and by the Liverpool (Northern) Division and Liverpool (Western) Division.

7. *RAYNER, EDWIN, M.D., of Teviot Dale, Stockport.

Nominated by: Basil W. Housman, Stockport; Robert Harris, Southport; Charles Macfie, Bolton.

F. CHARLES LARKIN, Honorary Secretary.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications for sums to be granted, should reach this office not later than May 15th, and must include details of the precise character and objects of the research which is proposed, and must be made on forms to be had of the General Secretary, at the temporary office of the Association, 6, Catherine Street, Strand, London.

Every recipient is required to furnish to the Science Committee, on or before May 15th following upon the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report to be renewed at the same date in each subsequent year until a final report can be furnished) containing: (*a*) A brief statement for the report of the Science Committee, showing the results arrived at, or the stage which the inquiry has reached; (*b*) a general statement of the expenditure incurred, accompanied, so far as is possible, with vouchers; (*c*) and references to any Transactions, Journals, or other publications in which the results of the research have been printed.

The work of the Grantees shall be subject to inspection.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for three Research Scholarships, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council, provided the whole term of office has not exceeded three years.

The scholarships exist for the encouragement of research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, and Clinical Surgery.

The Scholars' work shall be subject to inspection.

Applications for scholarships must be made on forms to be had of the General Secretary, and returned on or before May 15th.

ERNEST HART RESEARCH SCHOLARSHIP.

The Council of the British Medical Association is also prepared to receive applications for the Ernest Hart Memorial Scholarship, of the value of £200 per annum, tenable for one year, but subject to renewal by the Council for another year. The Scholarship is for the study of some subject in the department of State Medicine.

Applications for Scholarships and Grants should, as a rule, be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work, and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

GUY ELLISTON, *General Secretary.*

6, Catherine Street, Strand,
April, 1907.

The Seventy-Fifth Annual Meeting

of the

BRITISH MEDICAL ASSOCIATION,

EXETER,

JULY 27th to AUGUST 2nd, 1907.

President:

Richard Andrews Reeve, B.A., M.D., LL.D., Dean of the Faculty of Medicine, University of Toronto.

President-elect:

Henry Davy, M.D., F.R.C.P., Physician, Royal Devon and Exeter Hospital.

Chairman of Representative Meetings:

James Alexander Macdonald, M.D., Physician, Taunton and Somerset Hospital.

Chairman of Council:

Henry Wm. Langley Browne, M.D., Ch.B., F.R.C.S.E., Consulting Surgeon, West Bromwich District Hospital.

Treasurer:

Henry Radcliffe Crocker, M.D., F.R.C.P., Physician, Skin Department, University College Hospital.

PROGRAMME OF BUSINESS.

An Address in Medicine will be delivered by William Hale White, M.D., F.R.C.P.Lond.

An Address in Surgery will be delivered by Henry Trentham Butlin, D.C.L., F.R.C.S.Eng.

A Popular Lecture will be delivered by Sir John William Moore, M.D., D.Sc., F.R.C.P.Irel.

THE SECTIONS.

There will be thirteen Sections as shown in the subjoined list; they will meet on Wednesday, Thursday, and Friday, July 31st, and August 1st and 2nd, from 10 a.m. to 1 p.m.

The President, Vice-Presidents, and Secretaries of each Section constitute a Committee of Reference for that Section.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the British Medical Journal *without special permission.*

No paper must exceed fifteen minutes in reading and no subsequent speech ten minutes.

It is requested that copies of any papers offered in any of the Sections should be supplied to one of the Honorary Secretaries of the Section not later than May 30th, accompanied by a short abstract, in order that such abstract may be printed and circulated before the meeting.

Pathology.

President: Robert Muir, M.D., F.R.C.P.Ed., Professor of Pathology, Glasgow.

Vice-Presidents: Henry George Plimmer, M.R.C.S., F.L.S., London; William Hunter, M.D., F.R.C.P., London; Walter Ley Pethybridge, M.D., B.Sc., Plymouth.

Honorary Secretaries: Reginald Vaughan Solly, M.D., F.R.C.S., 40, West Southernhay, Exeter; Professor William St. Clair Symmers, M.B., C.M.Aberd., Queen's College, Belfast.

The following provisional programme has been arranged:

Wednesday, July 31st.—A discussion on Pernicious Anaemia and Allied Conditions, to be opened by Dr. William Hunter, followed by Professor Lorrain Smith, Dr. Lovell Gulland, and Professor R. Muir. Dr. R. Hutchison will speak on Anaemia in Children; Professor Walker Hall on Metabolism in Anaemia; and Professor A. R. Ferguson and Dr. A. E. Boycott on Ankylostomiasis Anaemia; and others will take part.

Thursday, August 1st.—A discussion on Phagocytosis and Bactericidal Action, to be opened by Dr. George Dean. Professor R. Muir, Dr. Charlton Briscoe, Dr. T. Houston, Dr. David Lawson, Dr. J. C. Rankin, Dr. E. Turton, and others will take part.

Friday, August 2nd.—Papers on the *Spirochaeta pallida* on Bilharzia, Haematobia, on Trypanosomata, and other Animal Parasites, and on Chemical Pathology, etc., have been promised by Dr. T. Shennan, Professor St. Clair Symmers, Professor A. R. Ferguson, Dr. R. T. Leiper, Dr. Carl H. Browning, Professor Walker Hall, and others.

Arrangements will be made for the exhibition in the Pathological Museum of specimens illustrating the work of the Section. Members wishing to exhibit specimens or photographs should communicate with the Secretaries of the Pathological Museum (Drs. R. V. Solly and G. P. Hawker, 40, West Southernhay, Exeter).

Medicine.

President: William Gordon, M.D., F.R.C.P., Exeter.

Vice-Presidents: William Powell, M.B., F.R.C.S., Torquay; William Joseph Tyson, M.D., F.R.C.P., F.R.C.S., Folkestone; George Newton Pitt, M.D., F.R.C.P., London; Edward Lawrence Fox, M.D., M.R.C.P., Plymouth.

Honorary Secretaries: Frederick John Poynton, M.D., F.R.C.P., 1, Hurley Place, London, W.; Edwin Bramwell, M.B., F.R.C.P.Edin., M.R.C.P., 23, Drumsheugh Gardens, Edinburgh; Alfred Bertram Soltau, M.D., F.R.C.S., 1, Lansdowne Place, The Hoe, Plymouth.

The following subjects have been chosen for discussion:

1. The Indications for Operation in Cases of Intracranial Tumour. To be introduced by Dr. J. S. Risien Russell.

2. The Diagnosis of Acute Pancreatitis. To be introduced by Professor Osler.

3. Rheumatoid Arthritis and the Morbid Condition which simulate it, with special Reference to Pathology and Treatment. To be introduced by Dr. A. P. Luff.

DISEASES OF CHILDREN.

President: ALFRED HERBERT TUBBY, M.S., London.

Vice-Presidents: LEWIS MACKENZIE, F.R.C.S., Tiverton; FRANK HICHENS, M.D., Redruth; REGINALD HORACE LUCY, F.R.C.S., Plymouth; EDMUND CAUTLEY, M.D., London.

Honorary Secretaries: JOHN HARLEY GOUGH, M.D., Glenallon, Old Torwood Road, Torquay; EDRED MOSS CORNER, F.R.C.S., 37, Harley Street, London, W.

The following subjects have been selected for discussion:

1. The Diseases and Displacements of the Testicle in Childhood. To be opened by Mr. D'Arcy Power.

2. Acute Nephritis and its Results. To be opened by Dr. Voelcker.

3. (*a*) Lumbar Puncture: its Diagnosis and Therapeutic Value. To be opened by Dr. Farquhar Buzzard. (*b*) Precocious Development. To be opened by Dr. Reginald Langdon Down.

PSYCHOLOGICAL MEDICINE.

President: THOMAS CLAYE SHAW, M.D., London.

Vice-Presidents: ARTHUR NATHANIEL DAVIS, L.R.C.P., Exminster; ROBERT LEONARD RUTHERFORD, M.D., Exeter; GEORGE M. ROBERTSON, M.B., Larbert.

Honorary Secretaries: SAMUEL HOLLINGSWORTH AGAR, M.R.C.S., Hurst House, Henley-in-Arden; WILLIAM FRANCIS MENZIES, M.D., Staffs County Asylum, Cheddleton, Leek.

The following subjects have been selected for special discussion in this Section:

1. Alcoholism and Insanity.

2. Toxic Insanities and Bio-chemical Treatment of Insanity.

3. Hypnotism with reference to Insanity.

ELECTRICAL SECTION.

President: H. LEWIS JONES, M.D., London.

Vice-Presidents: JOHN DELPRATT HARRIS, M.D., Exeter; CECIL R. CHAWORTH LYSTER, M.R.C.S., London; WILLIAM CHEYNE WILSON, M.D., Plymouth.

Honorary Secretaries: ELLIS PEARSON, F.R.C.S.E., Strand House, Bideford; EDWARD WARREN HINE SHENTON, M.R.C.S., 126, Harley Street, London, W.

The Section will be opened on Wednesday, July 31st, by an address from Professor Stéphane Leduc.

On Thursday, August 1st, a discussion on *X* Rays and Sensitive Plates will be opened by Mr. Mackenzie Davidson.

On Friday, August 2nd, a discussion on the Dosage of *X* Rays will be opened by Dr. Sequeira.

The following papers will also be read:

JONES, Dr. Lewis (1) Osillograph Tracings of Medical Coil Currents; (2) Ionic Medication in Ringworm.
ARTHUR, Dr. D., A new Static Machine.
WALSHAM, Dr. Hugh, The Orthodiagraph.
SHENTON, Mr. E. W. H., The Examination of the Hip-joint.
REID, Mr. A. D., Ureteral Calculi.
PEARSON, Mr. E., The use of *X* Rays from the Point of View of the General Practitioner.
BRUCE, Dr. Ironside, Treatment of Graves's Disease by *X* Rays.
MORTON, Dr. R., Alternating Currents of Slow Periodicity.
GREEN, Dr. Stanley, *X* Rays and Chest Diseases.
HARRIS, Dr. Delpratt, Some Statistics of *X* Ray Therapeutics in Rodent Ulcer and Carcinoma.

Professor Wertheim Salomonson of Amsterdam has promised to contribute a paper.

It is hoped to set aside a convenient room for the exhibition and demonstration of new forms of apparatus, showing of lantern slides, etc., of members.

TROPICAL DISEASES.

President: JAMES CANTLIE, F.R.C.S., London.

Vice-Presidents: GUTHRIE RANKIN, M.D., London; Sir RICHARD HAVELOCK CHARLES, K.C.V.O., M.D., I.M.S. (ret.), London; Lieutenant-Colonel ROBERT CALDWELL, F.R.C.S., Plymouth.

Honorary Secretaries: HENRY EDWARD ANNETT, M.D., 44, Upper Parliament Street, Liverpool; WILLIAM CARNEGIE BROWN, M.D., 32, Harley Street, London, W.; Lieutenant-Colonel G. M. J. GILES, M.B., F.R.C.S., I.M.S. (ret.), 3, Elliot Terrace, The Hoe, Plymouth.

The following subjects have been selected for discussion:

Wednesday, July 31st.—The Best Methods of carrying out Antimalarial Sanitation, with special reference to such plans as may be most suitable for population in the more primitive stages of civilization. This discussion will be opened by Professor Simpson, King's College, London.

Thursday, August 1st.—Diabetes in the Tropics. To be opened by Sir Richard Havelock Charles, K.C.V.O., Lieutenant-Colonel I.M.S.

Friday, August 2nd.—Haemoflagellates and Allied Organisms. To be opened by Professor E. A. Minchin, Professor of Protozoology, University of London.

The Secretaries will be glad to receive from members unable to be present pathological specimens, photographs, drawings, or microscopical preparations illustrative of any subject of interest in Tropical Medicine.

SURGERY.

President: GEORGE A. WRIGHT, F.R.C.S., Professor of Surgery, Manchester.

Vice-Presidents: EDWARD JAMES DOMVILLE, M.R.C.S., Exeter; CHARLES EDWARD WALLACE BELL, M.R.C.S., Exeter; DAVID NEWMAN, M.D., Glasgow; WILLIAM FREDERIC HASLAM, F.R.C.S., 54, Newhall Street, Birmingham.

Honorary Secretaries: BERNARD SCOTT, M.R.C.S., Inglewood, Poole Road, Bournemouth; BRENNAN DYBALL, F.R.C.S., 47, Queen Street, Exeter; WILLIAM SAMPSON HANDLEY, M.S., 77, Wimpole Street, London, W.

The following subjects have been selected for special discussions on Wednesday, July 31st, and Thursday, August 1st:

1. The Relative Value of Inhalation and Injection Methods of inducing Anaesthesia. To be introduced by Mr. H. P. Dean, F.R.C.S.

2. The Indications for Cholecystectomy. To be introduced by Mr. J. Bland-Sutton, F.R.C.S.

Friday, August 2nd, will be devoted to the reading of papers on subjects other than the above.

OPHTHALMOLOGY.

President: LOUIS HY. TOSSWILL, M.B., Exeter.

Vice-Presidents: JOHN R. ROLSTON, M.R.C.S., Plymouth; ALEXANDER HILL GRIFFITH, M.D., Manchester; ARTHUR CHARLES ROPER, F.R.C.S.E., Exeter.

Honorary Secretaries: RANSOM PICKARD, M.S., F.R.C.S., 31, East Southernhay, Exeter; ELMORE WRIGHT BREWERTON, F.R.C.S., 84, Wimpole Street, London, W.

The following subjects have been chosen for discussion:

1. Irido-cyclitis. To be introduced by Richardson Cross.

2. Vesicular Affections of the Cornea. To be introduced by W. Holmes Spicer.

3. The Construction and Manipulation of the Principal Instruments used in Ophthalmic Surgery. To be introduced by E. Landolt, Paris.

LARYNGOLOGY, OTOLOGY, AND RHINOLOGY.

President: ROBERT MCKENZIE JOHNSTON, M.D., Edinburgh.

Vice-Presidents: GEORGE JACKSON, F.R.C.S., Plymouth; JAMES BARRY BALL, M.D., London; PATRICK WILLIAM MAXWELL, M.D., Dublin.

Honorary Secretaries: CHARLES EDWARD BEAN, F.R.C.S.E., 19, Lockyer Street, Plymouth; ARTHUR LONGLEY WHITEHEAD, M.B., 31, Park Square, Leeds.

The following subjects have been selected for special discussion:

Wednesday.—The Differential Diagnosis of Tuberculous, Syphilitic, and Malignant Disease of the Larynx. To be opened by Sir Felix Semon, K.C.V.O., and Dr. Jobson Horne.

Thursday.—The Treatment of Chronic Suppuration of the Middle Ear without resort to the Mastoid Operation. To be opened by Dr. W. Milligan and Dr. W. Hill.

Friday.—To be devoted to papers.

Members are invited to contribute any preparations, specimens, or drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, in order that the Committee of the Section may make arrangements to form a special exhibit of such objects.

Lantern demonstrations will be given by Dr. Watson Williams on the Anatomy of the Accessory Sinuses of the Nose, and by Dr. Milligan on the Surgical Treatment of Labyrinthine Suppuration.

Dental Surgery.

President: John McKno Ackland, M.R.C.S., L.D.S., Exeter.

Vice-Presidents: Peter Sidney Spokes, M.R.C.S., L.D.S., London; Thomas Arthur Goard, M.R.C.S., L.R.C.P., L.D.S., 28, Southernhay, Exeter; Kenneth Weldon Goadby, M.R.C.S., L.R.C.P., L.D.S., London.

Honorary Secretaries: Joseph Lewin Payne, M.R.C.S., L.D.S., 44, Devonshire Street, Portland Place, W.; George Arthur Peake, M.R.C.S., L.D.S., Alma House, Cheltenham.

The following subjects have been selected for special discussion on Wednesday: The Causes, Effects, and Treatment of Dental Diseases in Children. To be opened by Mr. Edmund Owen, F.R.C.S., Dr. G. F. Still, F.R.C.P., and Mr. J. G. Turner, F.R.C.S., L.D.S.

The following papers will be read on August 1st and 2nd:

Ackland, Mr. W. R., M.R.C.S., L.D.S., Notes on Some Cases of Neuralgia.

Bennett, Mr. F. J., M.R.C.S., L.D.S., Some Anatomical Results of Efficient Mastication.

Colyer, Mr. J. F., M.R.C.S., L.R.C.P., L.D.S., Irregularities of the Teeth as shown by the Jaws of Animals. A contribution to comparative pathology.

Fairbank, Mr. H. A., M.S., L.D.S., Sarcomata of the Jaws.

A special effort is being made to obtain specimens, photographs, diagrams, and microscope slides, for the annual pathological museum, which will help to illustrate the subjects under discussion at this Section.

Obstetrics and Gynaecology.

President: Ernest Hastings Tweedy, F.R.C.P.Ire., Dublin.

Vice-Presidents: William Fookes Thompson, M.D., Launceston; J. Macpherson Lawrie, M.D., Weymouth; Walter Ley Woollcombe, F.R.C.S.E., Plymouth; William Walter Hunt Tate, M.D., London.

Honorary Secretaries: George Herbert Johnson, M.R.C.S., 7, Den Crescent, Teignmouth; Hy. Russell Andrews, M.D., 7, Wimpole Street, London, W.; Edwin Josiah Toye, M.D., Bridgeland Street, Bideford.

The following is a preliminary programme of arrangements:

Wednesday.—Discussion, The Justification for Artificial Dilatation of the Cervix to Hasten Delivery at Full Time, with a discussion on the Most Appropriate Method for Procuring this Dilatation.

Thursday.—Discussion, Measures to be Recommended to Secure the Earlier Recognition of Uterine Cancer.

Dr. Robert Jardine will open the discussion on July 31st; Dr. Herbert R. Spencer that on August 1st. Dr. A. L. Galabin, Dr. W. E. Fothergill, Dr. M. Handfield-Jones, Dr. Munro Kerr, Sir William Japp Sinclair, Sir William Smyly, and Dr. Thomas Wilson will take part in the discussions.

Friday is set apart for the reading and discussion of short papers.

State Medicine.

President: Arthur Newsholme, M.D., M.O.H., Brighton.

Vice-Presidents: Edward Alexander Brash, M.R.C.S., Exeter; Frederick Mann Williams, M.R.C.S., Plymouth; Professor Henry Richard Kenwood, M.B., London.

Honorary Secretaries: Sack Noy Scott, M.R.C.S., Plymstock, Devon; Francis Charles Martley, M.D., 71, Lower Baggot Street, Dublin.

The following preliminary arrangements have been made:

Wednesday. Dr. Newsholme will speak on The Co-ordination of the Public Medical Services.

Thursday. Professor Kenwood will open a discussion on The Reduction of Infant Mortality by Better Management and Control of the Milk Supply. It is further proposed to consider the Abolition of Private Slaughter-houses and a more strict Inspection of our Meat Supplies.

Friday. It is proposed to discuss the following questions on Rural Hygiene: (*a*) The Isolation of the Infectious Sick in Rural Districts; (*b*) The Difficulties in the Operation of the Midwives Act in Rural Districts; (*c*) The Housing of the Labourer in Rural Districts; (*d*) The Economical Treatment of the Sewage of Small Communities; (*e*) What constitutes "Sufficient Supply of Wholesome Water," P. H. W. Act, 1878.

Naval and Military.

President: Inspector-General James Porter, C.B., M.D., R.N., Newport, Mon.

Vice-Presidents: Colonel George Deane Bourke, R.A.M.C., Devonport; Brigade-Surgeon-Lieutenant-Colonel J. Raglan Thomas, M.D., V.D., Exeter; Surgeon-Lieutenant-Colonel Decimus Curme, M.R.C.S., Blandford.

Honorary Secretaries: Fleet-Surgeon Horatio S. R. Sparrow, L.R.C.P., R.N., Royal Marine Barracks, Plymouth; Surgeon-Major John Robinson Harper, M.R.C.S., Bear Street, Barnstaple; Surgeon-Captain John Shirley Steele Perkins, M.B., V.M.S., 47, Southernhay West, Exeter.

The following subjects are suggested for discussion:

1. Treatment of Wounded in Fleet Actions.
2. Treatment Afloat of (*a*) Syphilis, (*b*) Burns and Scalds.
3. Male and Female Nurses: Their Duties and Positions Afloat and Ashore.
4. Post-graduate Courses for Medical Officers. Civil and Service Staff College?
5. Water Supply in Camps, on the March, and in Battle.
6. Physical Drill and Marching in Winter, Hill Climbing and Across Country.
7. Disposal of Excreta in Camp and on the March.
8. Enteric—Personal Infection, and Methods of Isolation on Active Service. The Value of Inoculation as a Preventive.
9. Visual Tests for the Services and Mercantile Marine.
10. The Position of the Volunteer Regimental Stretcher Bearer.
11. The Medical care of the Volunteer Forces.

PROVISIONAL PROGRAMME OF PROCEEDINGS.

Saturday, July 27th.

9.30 a.m.—Annual General Meeting, to be followed immediately by Representative Meeting.

Monday, July 29th.

9.30 a.m.—Adjourned Representative Meeting.
4 p.m.—Reception by the Mayor in the Guildhall.

Tuesday, July 30th.

9.30 a.m.—Adjourned Representative Meeting.
12 noon.—Service at the Cathedral.
2.30 p.m.—Adjourned General and Representative Meetings.
4 p.m.—Garden Party by Mayor in Northernhay.
8.30 p.m.—President's Address in Theatre.

Wednesday, July 31st.

10 a.m. to 1 p.m.—Sectional Meetings.
2.15 p.m. Address in Medicine.
3.15 p.m.—Adjourned Representative Meeting.
4 p.m.—Garden Party by Dr. Deas (President, South-Western Branch), Wonford House.
8.30 p.m.—Reception by Branch in the Theatre.

Thursday, August 1st.

8 a.m. Temperance Breakfast.
10 a.m. to 1 p.m.—Sectional Meetings.
2.15 p.m. Address in Surgery.
4 p.m. Garden Party at Bishop's Palace.
7.30 p.m.—Annual Dinner.
8.30 p.m.—Ladies' Entertainment at Theatre.

Friday, August 2nd.

10 a.m. to 1 p.m. Sectional Meetings.
8 p.m. Popular Lecture.
8.30 p.m.—Reception by Civic Authorities in Museum.

Saturday, August 3rd.

Excursions.

HONORARY LOCAL SECRETARIES.

Russell Coombe, M.D. (Cantab.), F.R.C.S.Eng., 5, Barnfield Crescent, Exeter.

G. T. Clapp, M.B. (Cantab.), 14, West Southernhay, Exeter.

Leonard R. Tosswill, M.R.C.S., L.R.C.P., 34, West Southernhay, Exeter.

ANNUAL MEETING, EXETER, 1907.

PATHOLOGICAL MUSEUM.

THE following are the members of the Committee:—

President: J. D. HARRIS, M.D.

Honorary Secretaries: R. V. SOLLY, M.D., 40, West Southernhay, Exeter; G. P. HAWKER, M.B., 8, St. Leonard's Road, Exeter.

MEMBERS OF COMMITTEE:

A. E. CARVER, M.D.	R. PICKARD, F.R.C.S.
B. DYBALL, F.R.C.S.	A. C. ROPER, F.R.C.S.Edin.
R. HINGSTON	H. SHARP, M.B.
H. C. JONAS, M.D.	P. H. STIRK
R. H. LUCY, F.R.C.S.	G. L. THORNTON, M.R.C.P.
H. MONTGOMERIE, M.D.	H. W. WEBBER.
W. L. PETHYBRIDGE, M.D.	

EX-OFFICIO MEMBERS:

The President-elect: H. DAVY, M.D., F.R.C.P.

The Local Honorary Treasurers: J. SOMER, M.R.C.S.; L. H. TOSSWILL, M.B.

The Local Honorary Secretaries: RUSSELL COOMBE, F.R.C.S.; G. T. CLAPP, M.B.; LEONARD R. TOSSWILL, M.R.C.S.

The Committee responsible for the organization of the Pathological Museum are anxious to secure the co-operation of the officers of the various Sections at the forthcoming annual meeting. They will be glad to take charge of, and place in the Museum for exhibition any specimens, photographs, diagrams, or microscopic slides during the time they are not required by those who are reading papers or taking part in the discussions. The Committee therefore request members who propose to bring any material to communicate direct with the Honorary Secretaries, at 40, West Southernhay, Exeter, as this will greatly facilitate the necessary arrangements.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

SPECIAL REPRESENTATIVE MEETING.

The Special Representative Meeting will take place on Wednesday, May 29th, at 9.30 a.m. in the Examination Hall, Victoria Embankment, London, W.C.

BY ORDER OF THE COUNCIL,

GUY ELLISTON, *General Secretary.*

April 11th, 1907.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IMPORTANT NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH. — Nomination of elective member of Council. Notice is hereby given that the names of candidates for the representation of this Branch on the Central Council should be sent in writing to one of the undersigned on or before May 11th. Each candidate must be nominated by three electors.—W. M. BEAUMONT, Bath, and NEWMAN NEILD, Bristol, Honorary Secretaries.

BATH AND BRISTOL BRANCH: TROWBRIDGE DIVISION.—The annual meeting of this Division will be held in Trowbridge on Saturday, May 25th. The hour and place of meeting and agenda will be forwarded at a later date. This preliminary notice is sent out in accordance with No. 11 of the Rules of the Division.—JOHN TUBB-THOMAS, Honorary Secretary, Trowbridge, Wilts.

BIRMINGHAM BRANCH.—Notice is hereby given that the annual meeting of the Branch will be held at the Medical Institute, Birmingham, on Thursday, June 13th, at 3.30. Agenda: Election of two members of the Branch to represent the Branch on the Central Council of the Association. Nominations for these offices must be sent to the undersigned not later than May 26th.—O. J. KAUFFMANN, 22, Broad Street, Birmingham.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—The annual meeting of the Division will take place at the Medical Institute on Wednesday, June 5th, at 4 p.m. Nominations for offices, in writing, must reach the Honorary Secretary on or before May 15th.—E. D. KIRBY, Honorary Secretary.

BORDER COUNTIES BRANCH AND NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—*Nomination of Elective Member of Council.*—Notice is hereby given that the names of candidates for the representation of these two Branches must be sent in to me on or before May 27th. Each candidate must be nominated by at least three electors.—FRANCIS R. HILL, Honorary Secretary, Border Counties Branch, 62, Warwick Road, Carlisle.

BORDER COUNTIES BRANCH: NORTH CUMBERLAND DIVISION.—The annual general meeting of the Division will be held in Carlisle on Friday afternoon, May 24th, at 3.30 p.m. It is proposed to hold a discussion on contract practice.—NORMAN MACLAREN, Honorary Secretary, 23, Portland Square, Carlisle.

BORDER COUNTIES BRANCH: WEST CUMBERLAND DIVISION.—The annual meeting of this Division will be held at Cockermouth on Tuesday, May 21st.—JOHN PENNY, Honorary Secretary, Cockermouth.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in Weymouth on Wednesday, May 22nd. Members wishing to read papers, exhibit cases, or show pathological specimens, must communicate on or before Thursday, May 9th, with the Honorary Secretary, JAMES DAVISON, "Streateplace," Bath Road, Bournemouth.

EAST ANGLIAN BRANCH.—*Two Members of Council.*—In accordance with the Articles and By-laws, the Honorary Secretary of the Branch will be glad to receive nominations, signed by not less than three members, for the election of two Representatives on the Central Council of the Association. Nominations must reach the Honorary Secretary of the Branch on or before Monday, June 3rd.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary of Branch.

EAST ANGLIAN BRANCH.—The annual meeting of the East Anglian Branch will be held at Ipswich on Thursday, June 20th. Members wishing to read papers or show cases or specimens should communicate at once with Dr. Gutch, Ipswich.—B. H. NICHOLSON, M.B., East Lodge, Colchester Honorary Secretary.

EAST ANGLIAN BRANCH: WEST NORFOLK DIVISION.—The annual meeting will be held at the West Norfolk and Lynn Hospital on June 20th, at 3 p.m., when officers and Representatives will be elected for 1907-8.—ARTHUR GARDINER, Honorary Secretary, Tuesday Market Place, King's Lynn.

EDINBURGH BRANCH: SOUTH-EASTERN COUNTIES DIVISION.—A special meeting of this Division will be held at The Laureis, Melrose, on May 17th, at 3.30 p.m., Dr. Young, Chairman, presiding, to consider the draft of the proposed Charter of the Association, in order that the Representative may be instructed how to act and vote at the special meeting of the Representative Body to be held in London on May 29th, and which has been called in order to decide this important matter.—W. HALL CALVERT, Honorary Secretary, The Laureis, Melrose.

GLASGOW AND WEST OF SCOTLAND BRANCH.—*Nominations of Members of Council.*—In accordance with Branch Rule 5 and Association By-law 24, nominations for Representatives on the Central Council, each signed by at least three electors, are requested to be sent to Mr. J. Grant Andrew, 12, Woodside Terrace, Glasgow, on or before Monday, May 27th. If more than two members are nominated, an election by voting papers will be necessary.—JAMES HAMILTON, J. GRANT ANDREW, Honorary Secretaries.

GLASGOW AND WEST OF SCOTLAND BRANCH.—The annual meeting of this Branch will be held at the University on the afternoon of Friday, June 7th. A dinner is also being arranged for in the St. Enoch's Hotel in the evening, at which Principal MacAlister has promised to be present. Programme giving

further particulars will be published later.—JAMES HAMILTON, J. GRANT ANDREW, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—The annual meeting will be held at Altrincham on June 6th, when officers and committee will be elected for 1907-8. Every member is eligible for every office. (Under Rule 6, Drs. Joynson, Luckman, and Cooper are not eligible for the chair, having already served within three years.) Every member is entitled to make nominations. The Committee has decided that all nominations must be in writing, signed by a proposer and seconder, and must reach me by May 15th. Offices: (1) Chairman; (2) vice-chairman; (3) honorary secretary and treasurer; (4) representative at Representative Meetings; (5) two representatives on Branch Council; (6) six other members of Committee. (By order.)—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LIVERPOOL (NORTHERN) DIVISION.—A meeting of the members of this Division will be held at the Liverpool Medical Institution on Monday, May 13th, at 4 p.m. Agenda: To consider the revised draft Charter. As this is a most important matter, it is particularly hoped that all members will be able to attend and bring with them the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of April 6th.—A. W. GERMAN, Honorary Secretary of the Division.

METROPOLITAN COUNTIES BRANCH. — *Nominations of Branch Officers.*—Pursuant to By-law 24, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 11th.—FRED. J. SMITH, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—A special meeting of this Division will be held on Thursday, May 23rd, at 4 p.m., at the Great Eastern Hotel, Liverpool Street, E.C. Agenda: (1) Minutes of last meeting; (2) nomination of candidates for offices in the Branch; (3) consideration of revised draft Charter, etc. (see SUPPLEMENT to the BRITISH MEDICAL JOURNAL, April 6th); (4) notice of motion by Council (see SUPPLEMENT, April 27th, p. 209); (5) Hospitals Committee's report on hospital administration (see SUPPLEMENT, April 13th, p. 189); (6) Medico-Political Committee's supplementary report on the medical inspection of school children (see SUPPLEMENT, April 13th, p. 191).—E. W. GOODALL, Honorary Secretary, Eastern Hospital, Homerton, N.E.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—The annual meeting of this Division will be held on Thursday, May 30th, at 9 p.m., at the Great Eastern Hotel, Liverpool Street, E.C., the meeting to be followed by a supper at 9.30 p.m.—E. W. GOODALL, Eastern Hospital, Homerton, N.E., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.—A meeting of this Division will be held on Friday, May 24th (instead of May 16th), at the Hampstead Conservatoire, Swiss Cottage, N.W., at 4.30 p.m. Subject: The Hampstead Hospital Question.—REGINALD YELD, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION.—The annual meeting will be held on Thursday, May 23rd, at 3.45 p.m., at the Head Quarters of the 4th Volunteer Battalion East Surrey Regiment, St. John's Hill, Clapham. Agenda: (1) Minutes; (2) correspondence; (3) questions; (4) report on conference for nomination of candidates for Central Council election; (5) report of Hospitals Committee on hospital administration (SUPPLEMENT, April 13th); (6) recommendations of Ethical Committee on adoption of Bradford and other Rules; (7) report of Medico-Political Committee on communication of Branch Council on dispensaries; (8) notices of motion for Representative Meeting in SUPPLEMENTS for April 20th and 27th; (9) report of scrutineers on election of Executive Committee for 1907-8; (10) other business.—E. ROLAND FOTHERGILL, Honorary Secretary, Torquay House, Southfields, S.W.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION.—The annual dinner will be held on Tuesday, May 28th, at 7 p.m. for 7.30 p.m., in the New Gaiety Restaurant, Strand, W.C. Ladies are invited. Small tables can be engaged if desired. Tickets (exclusive of wine), 7s. 6d. each, which will be collected on the evening. The toast list will be short, and a good programme for an entertainment has been arranged. Members can bring their medical friends and book seats by writing to Dr. ARTHUR J. SMALLPEICE, Honorary Secretary Dinner Committee, 61, South Side, Clapham Common, S.W.

MIDLAND BRANCH.—In accordance with By-law 24 of the British Medical Association, nominations for representatives of the Midland Branch on the Council are requested to be sent to the Honorary Secretary of the Branch, Dr. SEVESTRE, 119, London Road, Leicester, on or before Monday, May 13th.

MIDLAND BRANCH: LINCOLN DIVISION.—On Friday, May 24th, at 3.30 p.m., at the Guildhall, Lincoln, will be held the annual meeting of this Division. Agenda: (1) To elect a Vice-President of the Midland Branch; (2) to elect officers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee; (3) to elect the Representative of the Division in Representative Meetings of the Association; (4) further consideration of the proposed Charter (see BRITISH MEDICAL JOURNAL and SUPPLEMENT of April 6th); (5) other business. Members desiring to read papers or show cases or specimens are requested to communicate with J. S. CHATER, Honorary Secretary, Lincoln.

NORTH OF ENGLAND BRANCH.—Nominations for elective members of Central Council (two required) will be received up to May 24th.—JAMES H. HUNTER and HENRY SMURTHWAITE, Joint Honorary Secretaries.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Brighton on Wednesday, June 19th, Mr. T. Jenner Verrall, President-elect, in the chair. The following will be the agenda: (1) To elect the officers of the Branch (this will be done by voting papers sent to each member of the Branch); nominations by three members for the offices of president-elect, vice-presidents, and secretary may be sent to the Honorary Secretary on or before May 18th; (2) to receive the annual report of the Branch; (3) to transact any business that may be transacted by an ordinary meeting. N.B.—Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each of three members in writing, should be sent to the Honorary Secretary of the Branch on or before May 18th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

SOUTH-EASTERN BRANCH: CANTERBURY AND FAVERSHAM DIVISION.—A combined meeting of the Divisions comprised in the old East Kent District—that is, Ashford, Canterbury and Faversham, Dover, Folkestone, and Thanet—will be held at the County Hotel, Canterbury, on Thursday, June 27th, at three o'clock precisely, Dr. Whitehead Reid in the chair. Agenda: A paper will be read by W. J. Tyson, M.D., F.R.C.P., F.R.C.S., Honorary Physician, Victoria Hospital, Folkestone, on the Future Lines of Treatment: Their Effects on the Profession. An address by Alex. G. R. Foulerton, F.R.C.S., D.P.H., Director of Bacteriological Department, Middlesex Hospital, Medical Officer of Health to the County of East Sussex, on the Treatment of Infective Disease by Bacterial Vaccination. W. T. Hillier, Esq., M.R.C.S., D.P.H., Pathological Assistant, Research Laboratories, Middlesex Hospital, will (1) Show specimens of trypanosomata; (2) give a demonstration of the method of determining the opsonic index of the blood. Preliminary meetings will be held as follows: (*a*) 2.30, Canterbury and Faversham Division:—Agenda: (1) Minutes. (2) Annual report. (3) Election of officers—Chairman, Vice-Chairman, Representative at Representative Meetings, Representative on Branch Council, Honorary Secretary and Treasurer, Committee. (4) To consider the desirability of amalgamating with the Ashford Division. (5) Any other business. (*b*) 2.50, Canterbury and Faversham with Thanet Divisions:—Agenda: (1) To elect the Representative for Representative Meetings. Members will dine together at 5.45 for 6 o'clock at the County Hotel, Canterbury; charge 5s., exclusive of wines. Those who intend to stay to dinner are requested to notify Dr. Henchley not later than the morning of June 27th, and to state whether they will assist in a short musical programme.—A. R. HENCHLEY, Honorary Secretary and Treasurer, Canterbury.

SOUTH-EASTERN BRANCH: CROYDON DIVISION.—The annual meeting will take place at the Croydon General Hospital on Wednesday, May 15th. Agenda: (1) Minutes of previous meeting; (2) report of the Committee; (3) election of officers. Clinical meeting: Members desirous of exhibiting cases are requested to inform the Honorary Secretary not later than May 10th. The dinner will take place at the Greyhound Hotel at 6.15 p.m. Charge 5s. exclusive of wine. E. H. WILLOCK, Honorary Secretary, 91, London Road, Croydon.

SOUTH EASTERN BRANCH: EASTBOURNE DIVISION.—A special meeting of this Division will be held at the Grand Hotel (entrance Jevington Gardens), Eastbourne, on Thursday, May 16th, at 6.30 p.m. Business: Matters referred to Divisions; to consider questions re draft Charter revision (SUPPLEMENT, April 6th, p. 148) and hospital administration (SUPPLEMENT, April 13th, page 190). Immediately following the conclusion of this meeting the annual general meeting will be held at the same place. Business: (1) Minutes; (2) to elect officers, the Representative on the Branch Council, and the ordinary members of the executive committee; (3) to receive the annual report of the executive committee; (4) to make new rules, or alter or repeal existing rules; (5) to transact any other business. Dinner will be served at 7.30 p.m. Tickets 6s. each exclusive of wine.—WM. MUIR SMITH, Honorary Secretary.

SOUTH-EASTERN BRANCH: FOLKESTONE DIVISION.—The annual meeting and dinner of the Folkestone, Ashford, and Dover constituency will be held at Hundert's Hotel, Folkestone, on Thursday, May 23rd, at 7.15 p.m. Agenda: (1) To elect officers; (2) to receive the annual report of the Executive Committee; (3) to consider matters referred to the Divisions (vide SUPPLEMENTS, February 16th and April 13th). Members wishing to stay for the dinner are requested to send their names to the Honorary Secretary before May 21st.—P. VERNON DODD, M.D., Honorary Secretary, 14, Manor Road, Folkestone.

SOUTH-EASTERN BRANCH: GUILDFORD DIVISION.—A special meeting of this Division will be held at the Royal Surrey County Hospital, Guildford, on Wednesday, May 22nd, at 4.30 p.m. The Chairman of the Division, Dr. George Fisher, will preside. Agenda: (1) Minutes. (2) Contract Practice. The conditions of contract practice in the Division will be considered, with a view to the adoption of ethical rules for its regulation. (3) Matters referred to the Divisions: (*a*) Revision of draft Charter, (*b*) medical inspection of school children, (*c*) hospital administration, (*d*) notices of motion to be brought before Representative Meetings. (4) Any other business. Tea will be provided at 4.15. If time permits, cases will be shown by members of the hospital staff. It is particularly desirable that all members of the Division engaged in any kind of contract practice should endeavour to be present at the meeting, and the Honorary Secretary will be glad to hear from any members wishing to submit resolutions on any of the above matters.—E. J. SMYTH, Honorary Secretary, Maythorne, Epsom Road, Guildford.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Notice is hereby given that the election of Branch Representatives on the Central Council will take place on June 13th at the annual meeting at Cardiff. Nominations in writing, signed by not less than three members, must be sent not later than May 23rd to FRANK G. THOMAS, M.B., 68, Walter Road, Swansea.

SOUTH-WESTERN BRANCH.—In accordance with By-law 22, the names of those candidates nominated for the Council of the Association, together with the names of three nominations for each, must be sent on or before May 20th to Mr. RUSSELL COOMBE, Branch Secretary, 5, Barnfield Crescent, Exeter.

PRACTICE BY COMPANIES.

THE following are the texts of the Bills introduced in the House of Lords by Lord Hylton last week and referred after second reading to a Select Committee:

PROHIBITION OF MEDICAL PRACTICE BY COMPANIES BILL. [H.L.]

MEMORANDUM.

The object of this Bill is to prohibit persons, who are not by examination and registration legally qualified to practise medicine and surgery, from carrying on business as medical practitioners by means of companies formed under the Joint Stock Companies Acts, under the shelter of which they are able to evade liabilities attaching to them as individuals.

The Medical Acts of 1858 to 1886 provide, in effect, that persons who are legally qualified, by having passed prescribed qualifying examinations, and by being registered in the *Medical Register*, can lawfully practise medicine, surgery, and midwifery throughout the United Kingdom and His Majesty's Dominions elsewhere; and the Acts impose disabilities on persons who carry on medical practice without being duly qualified, and penalties on any unqualified person who falsely assumes the designation of a legally qualified medical practitioner.

It has been ascertained that for some time past unqualified persons have had recourse to the machinery established by the Companies Acts, to enable them to carry on medical practice by forming companies for that purpose, and that companies so formed have been and are carrying on medical practice on a very large scale, especially among the poorer classes.

The provisions of the existing law have been found insufficient to put a stop to such practices, inasmuch as the enactments which restrict the practice of medicine and surgery by unqualified persons are held to apply only to individual persons, and not to joint-stock companies which, legally, are corporate bodies, and the provisions of the Medical Acts are thus systematically evaded. It has even been possible under the existing law for a medical practitioner, whose name has by direction of the General Medical Council been erased from the *Medical Register* for crime or misconduct, to evade the consequences of the Council's judgement by forming a company under cover of which the practitioner may continue to practise as if he were still duly qualified. The Bill accordingly declares that whatever would be an offence under the Medical Acts when committed by an individual person shall also be an offence when committed by a number of persons formed and incorporated into a company.

The effect of the Bill is to make it unlawful for a company formed under the Companies Acts (which includes a joint stock company, or a company limited by guarantee) to practise as, or carry on the business or profession of, a physician, surgeon, or medical practitioner. The Bill applies to existing companies, but does not apply to companies formed to carry on business as manufacturers or sellers of medical, surgical, or dental appliances or preparations, pharmaceutical chemists, or chemists and druggists.

Nothing in the Bill will prevent a limited liability company from carrying on convalescent homes, hydropathic establishments, and other institutions, of which the primary object is not the actual conduct of medical practice by unqualified persons; or will interfere with friendly and other societies, established for affording mutual relief in sickness and old age, or for assisting their members to obtain the services of duly-qualified medical practitioners.

The Bill has the support of the General Medical Council. Enactments to the same effect have already become law in various parts of the British Dominions.

A BILL intituled an Act to prohibit Joint Stock Companies from acting as Physicians, Surgeons, or Medical Practitioners.

Be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Companies not to Practise or Act as Physicians, Surgeons, or Medical Practitioners.*—(1) It shall be unlawful for a company, directly or indirectly, to practise as, or carry on the profession or business of a physician, surgeon, or medical practitioner, and if any company contravenes this enactment, the company and every director, manager, and other officer of the company who knowingly and wilfully authorises or permits the contravention, shall be liable, on summary conviction, to a fine not exceeding *five pounds* for every day during which the contravention happens.

(2) This section shall apply to every company, whether formed and incorporated *before or after the passing of this Act*.

(3) Anything which would be an offence under the Medical Acts, if committed by an individual, shall be an offence if committed by a company.

(4) It shall not be deemed to be a breach of the provisions of this section for any company, in consideration of periodical payments to such company by persons being members of any friendly society duly registered under the Friendly Societies Act, 1896, or by persons being members of or insured with any collecting society or industrial or life assurance company, and paying their premiums to such society or company on assurances for an amount not exceeding two hundred pounds on any one life and at less periodical intervals than two months, to undertake the insurance and provision of medical and surgical attendance and advice for any such member or person so insured and his family: Provided that in each and every instance such attendance and advice shall be made or given by a medical practitioner duly registered under the Medical Acts.

2. *Interpretation.*—In this Act "company" means a company registered under the laws for the time being in force in relation to joint stock companies in the British Islands or any of such laws.

3. *Short Title.*—This Act may be cited as the Prohibition of Medical Practice by Companies Act, 1907.

DENTAL COMPANIES (RESTRICTIONS OF PRACTICE) BILL. [H.L.]

MEMORANDUM.

The object of this Bill is to prohibit persons, who are not legally qualified to practise dentistry or dental surgery, from carrying on business as dentists or dental surgeons by means of limited companies, formed under the Joint Stock Companies Acts.

In many cases companies have been formed by persons who have no qualifications entitling them under the Dentists Act, 1878, to practise dentistry and dental surgery, and these companies are carrying on dental practice by means of unqualified persons or assistants. Instances have repeatedly occurred in which unqualified persons who have been convicted under the Dentists Act have evaded that Act by forming a company to carry on dental practice. The provisions of the Dentists Act, 1878, for the protection of the public against unqualified and ignorant practitioners are thus systematically evaded.

The effect of this Bill is to declare it unlawful for a company to practise dentistry or dental surgery, except by means of managers, assistants, or other persons, each of whom is duly qualified to practise dentistry and dental surgery by registration under the Dentists Act, 1878. The Bill further declares that whatever would be an offence under the Dentists Act when committed by an individual person shall also be an offence when committed by a number of persons formed and incorporated into a company.

The Bill applies only to the carrying on by limited companies (including joint stock companies and companies limited by guarantee) of the professional practice of dentistry and dental surgery. It does not apply to the carrying on of the purely mechanical business of the manufacture, sale, and repair of dental appliances.

The Bill has the support of the General Medical Council. Enactments to the same effect have already become law in various parts of the British Dominions.

A Bill intituled an Act to prohibit Joint Stock Companies from carrying on practice as Dentists or Dental Surgeons except by means of duly qualified persons.

Be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Companies not to Practise as Dentists, Dental Surgeons, or Dental Practitioners except as provided in the Act.*—Subject to the provisions of this Act:

(1) It shall be unlawful for a company to carry on the business of dentist or dental surgeon, or dental practitioner, unless the business is carried on wholly by managers, assistants, or persons, each of whom is a duly registered dentist, and unless the name of each such duly registered dentist is posted in a conspicuous place outside the premises in which the business of the company is carried on; and if any company contravenes this enactment, the company, and every director, manager, and other officer, who knowingly and wilfully authorises or permits the contravention shall be liable, on summary conviction, to a fine not exceeding *twenty pounds* for every day during which the contravention happens.

(2) Anything which would be an offence under the Dentists Act, 1878, or any Act amending the same, if committed by an individual, shall be an offence if committed by a company.

(3) This section shall apply to every company, whether formed and incorporated *before or after the passing of this Act*.

2. *Interpretation.*—In this Act—

"Company" means a company registered under the laws for the time being in force in relation to joint stock companies in the British Islands or any of such laws;

"Duly registered dentist" means a dentist, or dental surgeon, or dental practitioner, registered in the Dentists' Register under the Dentists Act, 1878:

Expressions relating to dentistry and dental surgery have the same meaning and effect as the same expressions have in the Dentists Act, 1878;

3. *Short Title.*—This Act may be cited as the Dental Companies (Restrictions of Practice) Act, 1908.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In the thirty-three large towns, including London, 17,0 births and 11,4 deaths were registered during the week ending Saturday last, May 4th. The annual rate of mortality in these towns, which had been 20.2, 20.0, and 20.6 per 1,000 in the three preceding weeks, further fell last week to 15.9 per 1,000. The rates in the several towns ranged from 6.4 in Hornsey, 6.8 in Bournemouth, 7.7 in Willesden, 8.4 in East Ham and in Reading, 8.6 in Wallasey, and 9.2 in Norwich to 22.9 in Salford, 23.3 in Hanley, 23.6 in Burnley and in Preston, 23.9 in Bury, 24.6 in Middlesbrough, 25.0 in Oldham, 27.3 in Rochdale, and 30.5 in Tynemouth. In London the rate of mortality was 14.9 per 1,000, while it averaged 16.3 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.7 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.6 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3.1 in Birkenhead and in Bootle, 3.2 in Sheffield, 3.3 in Walthamstow, 3.4 in St. Helens, 3.6 in Middlesbrough, 4.5 in Portsmouth, 5.1 in Salford, and 5.4 in Hanley. Measles caused a death-rate of 2.0 in Sunderland, 2.2 in Nottingham, 2.3 in West Bromwich and in Sheffield, 2.6 in Birkenhead, in Bolton, and in Middlesbrough, 3.8 in Portsmouth, and 3.9 in Hanley; scarlet fever of 2.3 in Bootle; diphtheria of 1.2 in Walthamstow and in Rochdale; and 1.3 in Leyton and in Reading; whooping-cough of 1.8 in Rochdale, 2.1 in Tottenham, 2.2 in Grimsby, 2.3 in Hornsey, and 3.7 in Salford; and diarrhoea of 1.1 in St. Helens. The mortality from fever showed no marked excess in any of the large towns. No deaths from small-pox were registered last week; one small-pox patient was under treatment in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,637, 2,628, and 2,649 at the end of the three preceding weeks, had further risen to 2,671 at the end of last week: 346 new cases were admitted during the week, against 296, 361, and 360 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, May 4th, 984 births and 690 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 20.2, 20.0, and 20.6 per 1,000 in the three preceding weeks, declined again to 19.9 per 1,000 last week, but was 4.0 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scottish towns ranged from 10.5 in Perth and 12.0 in Aberdeen to 21.5 in Glasgow and 25.6 in Greenock. The death-rate from the principal infectious diseases averaged 3.1 per 1,000 in these towns, the highest rates being recorded in Glasgow and Leith. The 350 deaths registered in Glasgow included 4 which were referred to measles, 36 to whooping-cough, 3 to diarrhoea, and 30 to cerebro-spinal meningitis. Two fatal cases of scarlet fever, 3 of whooping-cough, and 7 of cerebro-spinal meningitis were recorded in Edinburgh. Two deaths from diarrhoea occurred in Greenock, 2 from measles in Leith, 3 from whooping-cough in Paisley; and 3 from cerebro-spinal meningitis in Dundee, 4 in Leith, and 1 in Paisley.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, May 4th, 682 births and 445 deaths were registered in six of the principal Irish towns, as against 495 births and 615 deaths in the preceding period. The annual death-rate in these towns, which had been 22.6, 21.3, and 28.7 per 1,000 in the three preceding weeks, fell to 23.7 per 1,000 in the week under notice, this figure being 7.8 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 16.0 in Londonderry and 21.2 in Cork, to 27.3 in Limerick, and the same figure in Waterford. The zymotic death-rate in the same six Irish towns averaged 1.6 per 1,000, or 0.6 per 1,000 higher than during the preceding period, the highest figure—6.8—being recorded in Waterford; while Cork and Londonderry registered no deaths under this heading at all. The deaths in Belfast included 16 ascribed to cerebro-spinal fever, and 9 returned as due to cerebro-spinal meningitis.

Naval and Military Appointments.

COLONIAL MEDICAL SERVICE.

The following appointments have been made to the West African Medical Staff, to date from April 27th:

Name.	Colony.
H. O'H. H. May, M.D., B.Ch., B.A.O.Dub.	Gold Coast.
A. W. Atkinson, M.B., Ch.B.Edin.	Gold Coast.
W. N. Alexander, L.R.C.P., L.R.C.S.Edin., L.F.P. and S.Glasg.	Sierra Leone.
J. M. O'Brien, M.R.C.S., L.R.C.P.	Gold Coast.
C. E. H. Le Fanu, M.B., C.M.Aberd.	Gold Coast.
R. W. Orpen, L.R.C.P., L.R.C.S.Irel.	Sierra Leone.
J. M. W. Pollard, M.B., B.S.Lond., M.R.C.S., L.R.C.P.	Northern Nigeria.
C. W. McLeay, M.R.C.S., L.R.C.P., M.D.Canada ...	Northern Nigeria.
T. M. R. Leonard, L.R.C.P., L.R.C.S.Edin., L.F.P. and S.Glasg.	Southern Nigeria.

PROMOTIONS.

W. H. Langley, C.M.G., Deputy Principal Medical Officer in Northern Nigeria, has been selected for appointment as Principal Medical Officer of the Gold Coast, vice W. R. Henderson, C.M.G., retired.

J. P. Fagan, Senior Medical Officer in Southern Nigeria, has been selected for promotion to Deputy Principal Medical Officer in Northern Nigeria, vice Langley.

A. H. Hanley, C.M.G., F.R.C.S.I., Principal Medical Officer in Sierra Leone, retires on pension from February 16th, 1907.

P. M. Forde, L.R.C.P., L.R.C.S.Ed., Senior Medical Officer in the Gambia is promoted to be Principal Medical Officer in Sierra Leone, vice Hanley, from February 16th, 1907.

T. Hood, M.R.C.S., L.R.C.P., Senior Medical Officer in Sierra Leone, is transferred to the Gambia, vice Forde, from February 16th, 1907.

R. E. Egman, M.D., M.Ch.Dub., F.R.C.S.I., Medical Officer in the Gold Coast, is promoted to be Senior Medical Officer in Sierra Leone, vice Hood, from April 27th.

C. R. Chichester, M.B., D.P.H., Senior Medical Officer in Southern Nigeria, has been selected for transfer to Northern Nigeria, vice Thomas, invalided.

S. G. Gray, M.B., B.Ch., Medical Officer in Sierra Leone, has been selected for promotion to Senior Medical Officer in Southern Nigeria on the transfer of C. R. Chichester.

RETIREMENTS.

A. T. Latchmore, M.R.C.S., L.R.C.P., Medical Officer in Sierra Leone, is retired from the service on the ground of ill-health, receiving a gratuity.

A. N. de Gruchey, M.B., Ch.B., Medical Officer in Southern Nigeria, is retired from the service on the ground of ill-health.

J. Tichborne, M.B., B.Ch., Senior Medical Officer in Northern Nigeria, is retired on the ground of ill-health.

DEATHS.

R. E. Little, M.B., M.S., Medical Officer in Southern Nigeria, on March 11th.

J. A. Gordon White, M.B., C.M., Medical Officer in Southern Nigeria, on March 16th.

Vacancies and Appointments.

VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

BATH: BAILBROOK HOUSE.—Assistant Medical Officer. Salary, £140 per annum.

BIRMINGHAM: GENERAL HOSPITAL.—(1) Resident Medical Officer, (2) House-Physician, (3) House-Surgeon, (4) two Assistant House-Surgeons. Salaries at the rate of for (1) £70, (2) and (3) £50, and (4) £40 per annum.

BRECKNOCK COUNTY AND BOROUGH INFIRMARY.—Resident House-Surgeon. Salary, £120 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Physician. Salary, £80 per annum.

CANCER HOSPITAL, Fulham Road.—House-Surgeon.

CARMARTHEN: JOINT COUNTIES LUNATIC ASYLUM.—(1) Medical Superintendent. (2) Assistant Medical Officer. Salary, £450 and £200 per annum respectively.

CANTERBURY CITY ASYLUM.—Assistant Medical Officer. Salary, £140 per annum.

CHELTENHAM GENERAL HOSPITAL.—(1) House-Physician, (2) Surgeon in Charge of Branch Dispensary. Salary, £65 and £90 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon. Salary for first six months at the rate of £90 per annum, increasing to £100.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon. Salary, £80 per annum.

DOUGLAS: NOBLE'S ISLE OF MAN HOSPITAL.—Resident House-Surgeon. Salary, £90 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—House-Physician and House-Surgeon. Salary, £80 per annum each. Assistant House-Surgeon. Salary, £70 per annum.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.

GLOUCESTER GENERAL INFIRMARY.—Assistant House-Surgeon. Salary at the rate of £30 per annum.

GORDON HOSPITAL, Vauxhall Bridge Road, S.W.—Resident House-Surgeon.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon, Salary, £20 for six months, and £2 10s. washing allowance.

KENSINGTON UNION.—Second Assistant Resident Medical Officer for the Workhouse and Infirmary. Salary, £100 per annum.

KILBURN DISPENSARY.—Two vacancies on Honorary Medical Staff.

LAMBETH PARISH INFIRMARY, S.E.—Clinical Assistant. Salary at the rate of £100 per annum.

LIVERPOOL: STANLEY HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum.

LONDON SCHOOL OF MEDICINE FOR WOMEN, Henrietta Street, W.C.—Second Demonstrator of Anatomy.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon and Anaesthetist. Salary, £60 per annum.

MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES.—House-Surgeon. Salary, £75 per annum.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—(1) Surgeon, (2) Assistant Surgeon.

MILLER HOSPITAL, Greenwich Road, S.E.—Junior House-Surgeon. Salary at the rate of £80 per annum.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary, £70 per annum.

NORTH-EASTERN HOSPITAL FOR CHILDREN.—Medical Officer in Charge of Electrical Department. Salary, £50 per annum.

ROYAL EAR HOSPITAL, Dean Street, W.—House-Surgeon. Honorarium at the rate of £40 per annum.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Junior Resident Medical Officer. Salary at the rate of £40 per annum.

ST. BARTHOLOMEW'S HOSPITAL, E.C.—(1) Assistant Aural Surgeon, (2) Assistant-Surgeon, (3) Assistant Physician-Accoucheur.

ST. MARY'S HOSPITAL, Paddington, W.—Physician in charge of Out-patients.

ST. THOMAS'S HOSPITAL.—Assistant Physician.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Surgeon. Salary, £75 per annum.

WARWICK COUNTY ASYLUM, Hatton.—Junior Assistant Medical Officer. Salary, £130 per annum and £5 beer money.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £75 per annum.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Resident House-Physician and Medical Registrar. Salary at the rate of 50 guineas per annum.

WORCESTER GENERAL INFIRMARY.—House-Physician. Salary, £80 per annum.

APPOINTMENTS.

ALDERSON, Wilfred E., M.D.Dur., M.S., B.Hy., D.P.H., Lecturer in Anaesthetics, Newcastle-upon-Tyne Dental School.

COX, W. J., M.B., Junior Resident Assistant Medical Officer at the Crumpsall Workhouse, Manchester.

FISHER, H. R., M.B., B.C.Camb., Certifying Factory Surgeon for the Fillongley District, co. Warwick.

FRENCH, J. Gay, M.B., B.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond., Surgeon to the Ear and Throat Department, with charge of out-patients, at the Great Northern Central Hospital.

FRITH, Walter S., M.B., B.C.Camb., Anaesthetist to the London Throat Hospital, Great Portland Street.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

DUNNETT.—On May 5th, at 7, Ascott Avenue, Ealing, Agnes Dunnett, M.B.Lond., wife of Lionel Francis Dunnett, of a daughter.

FULLER.—On May 6th, at 9, Gay Street, Bath, the wife of A. Leonard Fuller, M.R.C.S.Eng., L.R.C.P.Lond., of a daughter.

GAMAN.—On April 26th, 1907, at Caistor House, Caistor, Lincolnshire, the wife of F. R. S. Gaman, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

HARTHAN—SLATER.—On April 30th, at All Saint's Church, Evesham, Worcestershire, by the Rev. E. J. Phillips, M.A., Vicar of Coalpit Heath, Bristol, cousin of the bride, assisted by the Rev. G. H. Kaltenbach, George Ezra Harthan, M.B., B.C., only son of Ezra Harthan, of Blackacres, Sandbach, Cheshire, to Winifred May, eldest daughter of the late John Samuel Slater, M.R.C.S., of Evesham.

MIDDLEMISS—BOOTH.—On April 25th, at Holy Trinity Church, Worthing, by the Rev. J. P. B. Brierly, M.A., assisted by the Rev. C. J. Hollis, M.A., Vicar of the parish, George Whitson Middlemiss, M.B., B.S., B.Hy., D.P.H., of Settie, Yorkshire, eldest son of George Middlemiss, M.D., V.D., Darlington, to Mary Mabel, younger daughter of Lionel Booth, M.D., Haddon House, Worthing.

WOODS—PICKERING.—On April 30th, at St. George's Church, Leeds, by the Rev. C. B. Morley, J. Robert L. Woods, B.A.Camb., M.R.C.S., L.R.C.P.Eng., of Worthen, Salop, younger son of the late Dr. T. Woods, of Gillingham, Dorset, and Mrs. Woods, of 15, Cargreen Road, South Norwood, to Caroline Mary, elder daughter of George Pickering, Esq., of Leeds.

DEATH.

PATERSON.—On April 28th, at the London Hospital, from pneumonia following operation, Walter Hugh Paterson, M.D., of Elmer House, Grantham, aged 61 years.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8 p.m.—General meeting; election of officers and Council, etc. 8.30 p.m.—Papers:—Dr. H. Mackenzie: Mobility of the Kidneys. Dr. W. Broadbent: Some Heart Affections without Murmurs.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 p.m.—Mr. Edred M. Corner: Fractures of the Odontoid Process of the Axis. (Epidiascope demonstration.)

FRIDAY.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN, 11, Chandos Street, Cavendish Square, W., 5 p.m.—The Wightman Lecture, by Dr. Frederick Taylor: On Pneumonia in Children.

POST-GRADUATE COURSES AND LECTURES

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday and Friday, 3.45 p.m., Middle Ear and Labyrinth.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Hip Disease in Children.

LONDON SCHOOL OF CLINICAL MEDICINE.—Clinics: Monday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Ear and Throat, 4 p.m. Tuesday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Skin, 4 p.m. Wednesday, Medicine, 2.15 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30 p.m. Out-patient Demonstrations: Surgical, daily, 10 a.m.; Medical, daily, 10 a.m. Ear and Throat, Mondays and Thursdays, 12 a.m. Eye, Wednesdays and Saturdays, 11 a.m. Skin, Tuesdays and Fridays, 12 a.m. Special Lectures: Tuesday, 3.15 p.m. Friday, 2.15 p.m., Jaundice.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear. Lectures at 8.15 p.m. each day will be given as follows:—Monday,

———; Tuesday, The Arrest of Uterine Haemorrhage under Various Conditions; Wednesday, Injuries to the Superficies of the Eye; Thursday, Syphilis in the Ear.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Muscular Atrophy. Friday, 3.30 p.m., Bulbar Paralysis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Tottenham Hospital, N.—The following are the clinics and demonstrations for next week:—Monday, 10 a.m.: Surgical, 2.30 p.m.: Medical, Throat, Nose and Ear, *X* Rays. Tuesday, 10.30 a.m.: Medical, 2.30 p.m.; Operations; Surgical and Gynaecological; 3.30 p.m., Demonstration of Cases at Colney Hatch Asylum. Wednesday, 2.30 p.m.: Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynaecological Operations; Medical, Surgical; *X* Rays; 3 p.m., Medical (In-patient); 4.30 p.m., Special Demonstration of Surgical Cases. Friday, 9.30 a.m., Surgical; 2.30 p.m., Operations; Medical, Eye; 3 p.m., Medical (In-patient).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following arrangements have been made for next week:—Daily, 2 p.m.: Medical and Surgical Clinics, *X* Rays. 2.30 p.m.: Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Tuesday and Friday, 2.30 p.m.: Diseases of the Skin. Wednesday, 10 a.m.: Diseases of Children. Lectures—Monday, Pathological Demonstration. At 5 p.m.: The Clinical Diagnosis of Fevers in the Tropics, with lantern slides. Tuesday: Clinical Lecture. Wednesday: Haematuria. Thursday: Cases of interest in the Surgical Wards. Friday: Pneumonia.

BOOKS, ETC., RECEIVED.

The Medical Epitome Series. Diseases of the Nose and Throat. By J. B. Ferguson, M.D. Series edited by V. C. Pedersen, A.M., M.D. London: Hodder and Stoughton. 4s.

The Girls' School Year Book (Public Schools). 1907. London: Swan Sonnenschein and Co., Limited. 2s. 6d.

Die Encephalitis. Von Professor Dr. H. Oppenheim and Priv.-Doz Dr. R. Cassirer. Zweite Auflage. Wien: A. Hölder. 1907. M.4.60.

The Sense of Touch in Mammals and Birds, with special reference to the Papillary Ridges. By W. Kidd, M.D., F.Z.S. London: A. and C. Black. 1907. 5s.

Proceedings of the Society for Psychical Research. Vol. xix. 1905-7. Glasgow: R. MacLehose and Co., Limited. 1907.

Treatment by Hypnotism and Suggestion or Psycho-therapeutics. By C. L. Tuckey, M.D.Aberd. Fifth edition. London: Baillière, Tindall and Cox. 1907. 10s. 6d.

London: J. and A. Churchill. 1907:

Surgical Pathology and Morbid Anatomy. By A. A. Bowlby, C.M.G., F.R.C.S. Fifth edition. Edited with the assistance of Dr. F. W. Andrewes. 10s. 6d.

The Book of Receipts (Beasley). Rewritten by E. W. Lucas, F.I.C., F.C.S. Eleventh edition. 7s. 6d.

The Imperial Gazeteer of India. The Indian Empire. Vol. i—Descriptive. Vol. iv—Administrative. New edition. Oxford: The Clarendon Press. 1907. 6s. each volume.

Uber Form und Lage des Magens unter normalen und abnormen Bedingungen. Von Dr. M. Simmonds. Jena: G. Fischer. M.3.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MAY.	
12 Sunday ...	
13 MONDAY ...	LONDON: Ethical Emergency Sub-committee, 2 p.m. LIVERPOOL (NORTHERN) DIVISION, *Lancashire and Cheshire Branch*, Liverpool Medical Institution, 4 p.m.
14 TUESDAY ...	
15 WEDNESDAY	CROYDON DIVISION, *South-Eastern Branch*, Annual Meeting, Croydon General Hospital; Dinner, Greyhound Hotel, 6.15 p.m.
16 THURSDAY...	LONDON: Metropolitan Counties Branch Council, 4.45 p.m. EASTBOURNE DIVISION, *South-Eastern Branch*, Special Meeting, Grand Hotel (entrance Jevington Gardens), Eastbourne, 6.30; immediately followed by Annual General Meeting; Dinner, 7.30 p.m.
17 FRIDAY ...	SOUTH-EASTERN COUNTIES DIVISION, *Edinburgh Branch*, The Laurels, Melrose, 3.30 p.m.
18 SATURDAY...	
19 Sunday ...	
20 MONDAY ...	
21 TUESDAY ...	WEST CUMBERLAND DIVISION, *Border Counties Branch*, Annual Meeting, Cockermouth.
22 WEDNESDAY	DORSET AND WEST HANTS BRANCH, Weymouth. GUILDFORD DIVISION, *South Eastern Branch*, Special Meeting, Royal Surrey County Hospital, Guildford, 4.30 p.m.

Date.	Meetings to be Held.
MAY *(Continued).*	
23 THURSDAY...	CITY DIVISION, *Metropolitan Counties Branch*, Special Meeting, Great Eastern Hotel, Liverpool Street, E.C., 4 p.m. FOLKESTONE DIVISION, *South-Eastern Branch*, Folkestone, Annual Meeting and Dinner. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Head Quarters, 4th V.B. East Surrey Regiment, St. John's Hill, Clapham Junction, 3.45 p.m.
24 FRIDAY ...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch*, Hampstead Conservatoire, Swiss Cottage, N.W., 4.30 p.m. LINCOLN DIVISION, *Midland Branch*, Annual Meeting, Guildhall, Lincoln, 3.30 p.m. NORTH CUMBERLAND DIVISION, *Border Counties Branch*, Annual Meeting, Carlisle, 3.30 p.m.
25 SATURDAY...	TROWBRIDGE DIVISION, *Bath and Bristol Branch*, Annual Meeting, Trowbridge.
26 Sunday ...	
27 MONDAY ...	
28 TUESDAY ...	WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Annual Dinner, Gaiety Restaurant, Strand, W.C., 7 p.m. for 7.30 p.m.
29 WEDNESDAY	SPECIAL REPRESENTATIVE MEETING, Examination Hall, Victoria Embankment, London, W.C., 9.30 a.m. BATH AND BRISTOL BRANCH, Annual Meeting, Bath.
30 THURSDAY...	SPECIAL REPRESENTATIVE MEETING *(if necessary).* CITY DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Great Eastern Hotel, Liverpool Street, E.C., 9 p.m.; followed by a Supper, 9.30 p.m.
31 FRIDAY ...	

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 18TH, 1907.

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Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* JOURNAL.]

BIRMINGHAM BRANCH:
COVENTRY DIVISION.

A MEETING of this Division was held on April 11th at the Coventry and Warwickshire Hospital, Dr. DAVIDSON being in the chair.

Paper.—Mr. W. E. BENNETT read a paper on the treatment of tuberculous joints; a discussion followed, which was joined in by Drs. BALLANTYNE, HAWLEY, WEBSTER, SNELL, and the CHAIRMAN, and Mr. BENNETT replied.

Central Emergency Fund.—The COMMITTEE reported that they had considered the question of establishing a local emergency fund, and that in their opinion no local fund was at present called for, but they advised that the Central Emergency Fund should be supported, and that each member should subscribe 5s. yearly to the fund. After some discussion, the recommendation of the Committee was unanimously approved. Twenty-two members handed in their subscriptions, and these have been forwarded to the Medical Secretary.

The Dispensary Question.—The meeting then resolved itself into a committee to discuss the dispensary question.

DORSET AND WEST HANTS BRANCH:
WEST DORSET DIVISION.

THE annual meeting of the Division was held on May 8th.

Election of Officers.—The following officers, etc., were elected for the coming year: *Chairman*, P. W. MacDonald, M.D., Dorchester; *Vice-Chairman*, W. Rendall, Esq., Maiden Newton; *Honorary Secretary*, J. F. L. Whittingdale, M.B., Grosvenor Lodge, Sherborne; *Representative for Representative Meeting*, Surgeon-Lieutenant Colonel D. Curme, Childe Okeford; *Representatives on Branch Council*, W. B. Cosens, Surgeon-Lieutenant-Colonel Curme, G. J. W. Flower, C. J. Marsh, W. Rendall; *Executive Committee*, T. W. W. Bovey, W. B. Cosens, Surgeon Lieutenant-Colonel Curme, H. H. Du Boulay, G. J. W. Flower, W. E. Good, W. Hawkins, P. J. Kingston, C. J. Marsh, W. Rendall.

Revision of Draft Charter.—The vote was unanimously against. Other questions, therefore, were not considered.

Hospital Administration.—(1) Yes, under special circumstances. (2) All regret that it is a financial necessity. (3) Yes; most decidedly. (4) No. (5) All in favour of in-patients bringing letter from medical attendant.

Medical Inspection of School Children.—(1) All in favour of a special man being appointed to do nothing else.

The Ethical Aspects of Medical Consultation.—All in favour.

EAST ANGLIAN BRANCH:
MID-NORFOLK DIVISION.

A MEETING of this Division was held at the Medical Library, Norwich, on May 4th, Dr. MCKELVIE in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and signed.

Hospital Administration.—The subject of hospital administration, which had been referred by the Hospitals Committee to the Divisions, was considered. The four specific questions printed on page 190 of the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of April 13th were after discussion resolved to be answered as follows: No. 1, No; No. 2, No; No. 3, Yes; No. 4, Yes; although the Division is aware there may be practical difficulties in the way of accomplishing this. With regard to the suggested model rules, printed on the same page of the JOURNAL, for hospital management, the meeting unanimously agreed to each and all of these rules; and, in regard to Rule 14, resolved that consultation should as far as possible be encouraged in in-patient as well as in out-patient departments. The same unanimous approval was given of the rules for the management of cottage hospitals and also for self supporting nursing homes.

Medical Inspection of School Children. The meeting then proceeded to the consideration of the medical inspection of school children as detailed in the Supplementary Report of the Medico-Political Committee printed on page 191 of the SUPPLEMENT to the BRITISH MEDICAL JOURNAL for April 13th, 1907. They unanimously approve of the general scheme of a central and local machinery to carry out the medical inspection of school children. Under No. 4, local machinery—the frequency of inspection—if by "time of entrance" is meant that a child shall only be examined when it enters or begins school life, the

meeting considered this to be wholly inadequate; if, on the other hand, it means the daily examination of school children, as, it would appear, commends itself to the Birmingham Division, the meeting considered this quite unnecessary and impracticable. The meeting also agreed with paragraph 5; and, as regards the actual inspection, it might be done by general practitioners in the district, if feasible, or, failing this arrangement, it might be carried out by the Poor law or local district medical officers. And as regards Subsection ii, in rural districts, the county council should appoint a medical adviser to its Education Committee to perform the duties mentioned in the Subsection ii.

Special Representative Meeting.—The Honorary Secretary (Dr. D. G. Thomson) was unanimously appointed to attend the Special Representative Meeting to be held in London on May 29th, as representing the Division, in place of Dr. Skrimshire, whose son, Dr. Skrimshire of Melton Constable, wrote that his father was unable to attend owing to ill-health.

Draft Charter.—Consideration was again given to the draft Charter, more especially the scheme detailed therein for the election of the Central Council, and Dr. Thomson was instructed to vote in favour of the draft Charter in general and for Scheme "E" in the Appendix in particular.

Vote of Thanks.—After the usual vote of thanks to the Chairman for presiding had been moved and carried the meeting terminated.

EDINBURGH BRANCH:

North-West Division.

The annual meeting of the Division was held on May 3rd, Dr. T. F. S. Caverhill in the chair.

Election of Officers.—The following officers and representatives of the Division for the ensuing year were elected: *Chairman*, Dr. Norman Walker; *Vice-Chairman*, Dr. Caverhill; *Honorary Secretary and Treasurer*, Dr. Malcolm Campbell; *Representative for Representative Meeting*, Dr. Malcolm Campbell; *Representatives on Branch Council*, Drs. Norman Walker and Malcolm Campbell; *Members of Executive Committee*, Drs. James Ritchie, Gibson, Elder, Lackie, J. S. Fowler, Scott Carmichael.

Draft Charter.—After consideration of this subject the following resolution was passed unanimously:

> As it is undesirable that the British Medical Association should, as an Association, take part in imperial party politics, the words in Clause 2, Section 2, No. VI, "and may promote the candidature of any member of the Association for Parliament or for any British Legislative Assembly," should be deleted.

In connexion with the questions referred to Divisions (Supplement, April 6th, 1907) the following are the answers of the Division:

1. A *moderate* reduction in the number of members of the Central Council is desirable.

2. (4) It is desirable that members of Council elected by or on behalf of the members of the Association of the United Kingdom should be elected by the members grouped in Branches, or by groups of Branches.

Hospital Administration.—It was resolved that the circumstances mentioned in the questions which are submitted to Divisions for consideration do not lend themselves to discussion by this Division.

Medical Inspection of School Children.—The following resolution was passed unanimously:

> The Division considers it impossible to lay down conditions applicable under all circumstances.

North East Edinburgh Division.—The proposal of the North East Edinburgh Division regarding alteration of their western boundary was then considered, and no objection raised.

Vote of Thanks.—The meeting closed with a vote of thanks to the Chairman.

GLASGOW AND WEST OF SCOTLAND BRANCH:

Dunbartonshire and Argyllshire Division.

A general meeting was held at Dr. Nicoll's house, 6, Woodside Place, Glasgow, on Tuesday, April 30th, at 8 p.m.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Election of Officers.—The Honorary President and Secretary were re-elected. At the request of the Chairman (Dr. Sewell), it was agreed that Dr. Ewing Hunter be elected Representative in Representative meeting.

Glasgow North-Western Division.

An ordinary meeting of the Glasgow North-Western Division was held on Thursday, April 25th, at 8.30 p.m., in the Hillhead Burgh Hall, Dr. D. J. Mackintosh, M.V.O., presiding.

Confirmation of Minutes.—The minutes of the last meeting were confirmed.

Royal Commission on Medical Assistance of the Poor in Scotland.—Consideration of questions submitted by the Poor-Law Subcommittee:

1. Not considered, as information would be given elsewhere.

4. The answer is No.

Revision of the Draft Charter.—Consideration of the questions submitted:

1. Should be smaller.

2. Dr. Caskie moved the adoption of (*d*) scheme, seconded by Dr. Whitehouse. Dr. G. B. Buchanan moved as an amendment the adoption of (*a*) scheme. This was seconded by Dr. Hay. On a division a majority voted for the amendment, so that (*a*) became the finding of the meeting.

3. Regarding this question, Dr. Buchanan moved that (*d*) be adopted with one-sixth proportion. Dr. Hay seconded, and it was adopted unanimously.

4. Dr. A. T. Campbell moved the adoption of (*b*), seconded by Dr. Whitehouse. This was agreed to.

Hospital Administration.—Consideration of the specific questions submitted:

1. The answer is No.
2. Not compulsory.
3. Yes.
4. No.

The supplementary report on medical inspection of school children was also briefly considered.

LANCASHIRE AND CHESHIRE BRANCH:

Preston Division.

A general meeting was held on Friday, May 3rd, Dr. R. C. Brown, the President, in the chair.

Draft Charter.—The draft Charter was considered, and after lengthy discussion, mainly on the financial aspects, it was agreed that the Representative to the Special Meeting, while continuing in favour of the Charter, be allowed a free hand as to details.

Hospital Management.—The questions were answered unanimously as follows:

1. Yes, with qualification expressed in No. 5.
2. Yes.
3. Yes
4. No (see No. 5).

5. (1) In all cases where the income of patient exceeds the recognized standard of the particular hospital; (4) that production of certificates by out-patients would be feasible in only a small proportion of cases.

LEINSTER BRANCH:

Dublin Division.

The quarterly general meeting of the Dublin Division was held on April 26th.

Draft Charter.—The revised draft Charter was discussed; and, as no attempt had been made in its drafting to carry out promised alterations in the original Charter, the following resolution was passed:

> That the Dublin Division, while heartily approving of the objects for which the Charter was originally sought, are of opinion that the consideration of the Charter should be postponed until the Representative Meeting of 1908, to give time to the Divisions to decide if it is for the good of the Association to apply for one in a form which may lead to most strenuous opposition.

Central Council.—The meeting also expressed its opinion in the following terms with regard to the questions submitted for consideration: (1) It is desirable that the Central Council should not be less than 50, nor more than

60. (2) That Section D is approved of—namely, that the majority of the Council should be elected by the members grouped in Branches, and that the Representative Meeting should elect a minority. (3) That the proportion of members elected by the Representative Meeting should not be more than one-sixth of the elected members. That Ireland should have not less than 5 members on the Council, 4 to be elected by the Branches, and 1 member by the Representative Meeting, from names previously nominated by the Irish Committee.

METROPOLITAN COUNTIES BRANCH:

LAMBETH DIVISION.

A MEETING of this Division was held at Bethlem Royal Hospital, on Thursday, May 9th, at 4 p.m. Dr. ROBERT CAPES occupied the chair during the early part of the proceedings.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Representative Meeting.—Dr. DENNING proposed, and Dr. HERBERT TAYLOR seconded:

That Dr. Esler be elected to represent the Lambeth Division at the Representative Meeting.

This was put to the meeting and carried unanimously.

Election of Officers.—Dr. ESLER then proposed, and Dr. STODDART seconded, that the following officers should be elected *en bloc*: *Chairman*, Maurice Craig, M.D.; *Vice-Chairman*, W. Alexander Atkinson, M.D.; *Secretary*, Herbert S. French, M.D.; *Representatives on Branch Council*, Charles Sangster, M.R.C.S., and Herbert S. French, M.D. (*ex officio*); *Committee*, Herbert Taylor, M.B., J. V. C. Denning, L.R.C.P.I., A. M. Hickley, L.R.C.P., Robert Capes, L.R.C.P., J. W. J. Oswald, M.D., D. Oliver Kerr, M.B. This was put to the meeting and carried unanimously.

Installation of New President.—Dr. Capes then retired from the chair in favour of Dr. MAURICE CRAIG, who in a few well-chosen words, thanked those present for the honour they had conferred upon him by electing him their chairman. He proposed a vote of thanks to the retiring chairman, secretary and officers, which was briefly responded to by Drs. Capes and Atkinson. Dr. Craig then referred to the dispute between the Medical Officer of the Brixton Dispensary and the Committee of the same, and mentioned that a resolution would be moved at the next meeting in connexion with this.

Central Council Election.—The SECRETARY then read a letter from Dr. Percy Rose, of 161, Barking Road, E., *re* the conference of delegates for selection of candidates for the Central Council of the British Medical Association. The following were selected:—Northern Group: Dr. Ford Anderson; Eastern Group: Dr. Shadwell; Southern Group: Dr. Ker; Western Group: Dr. Haslip.

Paper.—Dr. W. H. B. STODDART then read a paper on The Early Symptoms of Mental Disorder, which was published in the BRITISH MEDICAL JOURNAL of May 11th, p. 1101. A discussion followed, in which Dr. BARKER SMITH and Dr. MAURICE CRAIG took part.

Votes of Thanks.—A vote of thanks to Dr. Stoddart for his interesting paper was proposed by Dr. JAMES SCOTT, and seconded by Dr. THOMAS JOHNSTONE. This was put to the meeting and carried with acclamation. A vote of thanks to the authorities of Bethlem Hospital for the use of the Board Room was proposed by Dr. CAPES and seconded by Dr. COUPER CRIPPS, and carried unanimously.

STRATFORD DIVISION.

A MEETING of this Division was held on May 2nd at the Alexandra Hotel, High Street, Stratford, E., Dr. E. B. HASTINGS in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and approved.

Central Emergency Fund.—A letter from Dr. Macdonald *re* the Central Emergency Fund was read by the HONORARY SECRETARY, and after some discussion it was resolved:

That the Representative be asked to glean what further information he could regarding the matter of subscriptions at the Annual Representative Meeting.

Draft Charter.—The report of the Organization Committee on the revision of the draft Charter was next considered. Dr. HAY proposed:

That By-law 5 be altered so as to transfer the power of electing new members from the Branch Councils to the Divisions.

This was seconded by Dr. DANIELS and carried unanimously. Dr. HAY also moved:

That By-law 36 be modified in such a way as to provide for the election of the whole of the Central Council, with the exception of the *ex-officio* and the service members, by the Representatives of the Divisions at the Annual Representative Meeting, and that to secure proper proportional distribution the principle of the scheme proposed by the Ayrshire Division be recommended, but that the question of colonial members on the Central Council be dealt with separately.

Dr. NELSON seconded this, and the meeting unanimously agreed to it. Dr. ROSE proposed, "That in By-law 23 (2) the words 'one hundred' should be inserted instead of the word 'fifty.'" This was seconded by Dr. HAY and carried.

Medical Examination of Seamen.—The medical examination of seamen was then discussed by various members, and it was ultimately resolved that further consideration of the subject be deferred.

Provident Dispensaries.—Several members spoke on the subject of provident dispensaries, and on the motion of Dr. HAY the following resolution was agreed to:

That this Division sees no scope for any scheme of provident dispensaries in its area.

Hospital Administration.—The specific questions submitted to Divisions on hospital administration were all answered in the negative.

Medical Inspection of School Children.—The Division resolved that (1) the medical inspection of school children should be distributed amongst the general practitioners of the district who are prepared to undertake a proportion of the duty; (2) no decision was arrived at as to the method of carrying this out locally; (3) there was no evidence of the abuse of hospitals by teachers sending school children to hospitals irrespective of social status.

NORTH OF ENGLAND BRANCH:

SUNDERLAND DIVISION.

A MEETING was held in the Subscription Library, Fawcett Street, Sunderland, on Thursday, April 11th, Dr. J. MODLIN, Chairman, presiding.

Pulse Pressure.—Dr. GEO. ALEX. GIBSON, of Edinburgh, gave a most interesting and instructive address, entitled, Lessons from the Study of Pulse Pressure on the Uses of Formic Acid in Heart Cases and Nuclein in Acute Febrile Conditions. The lecture was illustrated with a selection of very fine slides representing the various forms of blood pressure and cardiac disease with which Dr. Gibson dealt in his address. Dr. TODD proposed a vote of thanks to Dr. Gibson; this was seconded by Dr. W. ROBINSON and carried with acclamation.

Annual Dinner.—The annual dinner was held at the Grand Hotel in the evening at 7.15, when seventy members and friends sat down to dinner. Amongst those present, besides the guest of the evening (Dr. Gibson), were Dr. Beattie, President of the North of England Branch; Dr. Smurthwaite, Honorary Secretary; Drs. Lyle, Bolam, Clay (Newcastle Division), the Mayor of Sunderland (Sir Theodore Daxord), Captain Evans, R.A.M.C., and leading members of the medical profession in Sunderland and district. A most enjoyable evening was spent. Dr. Gibson's health was proposed by Dr. MIDDLEMASS, and drank with a bumper and three times three. Dr. GIBSON replied in a most amusing and entertaining speech, which quite sustained his reputation as a man of science and wit combined.

SOUTH-EASTERN BRANCH:

BRIGHTON DIVISION.

AN ordinary meeting of the Division was held at the Dispensary on April 25th, Dr. W. A. HOLLIS in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Draft Charter.—The draft Charter was then considered, and the following answers given to certain questions:

1. It is thought desirable that the Central Council should be smaller than at present.

2. It is thought desirable that the members of Council elected by or on behalf of the members of the Association of the United Kingdom should be appointed according to scheme (*e*)—that is, the majority by the Representatives of

Divisions in the Representative Meeting grouped in districts, and a certain number by the Representative Body as a whole.

3. The proportions proposed under Appendix E were approved of.

4. It is thought desirable that members of Council representing the Colonial Branches should be elected according to plan (*b*)—that is, it should be left to these Branches themselves, grouped as the Central Council may determine, to decide as to the mode in which they will elect these members.

The vote on all these questions was unanimous.

Annual Meeting of South-Eastern Branch.—The following members, with power to add to their number, were appointed to form a subcommittee for making arrangements for the annual meeting of the South-Eastern Branch at Brighton on Wednesday, June 19th next—namely, Dr. Henry Gervis, Dr. W. A. Hollis, Dr. R. Marsh, Dr. R. Sanderson, and Mr. T. Jenner Verrall.

This concluded the business of the meeting.

SOUTH-EASTERN OF IRELAND BRANCH.

The annual meeting of this Branch was held at the Victoria Hotel, Kilkenny, on Wednesday, May 1st, at 4.45 p.m. Dr. W. Shee (Duncannon) occupied the chair.

Confirmation of Minutes.—The minutes of last meeting were read, approved, and signed.

Letters.—Letters of apology were read from three members.

Election of Officers.—The following were declared as officers of the Branch for the year 1907-8: *President:* J. V. Ryan, M.B., Carlow. *President-elect:* P. J. Murphy, F.R.C.S.I. *Honorary Secretary:* Jas. Quirke, Piltown. *Honorary Treasurer:* R. B. Carey, Borris. *Representative on Central Council:* Denis Walshe, Graigue. *Representative at Representative Meeting:* Thos. Laffan, M.D., Cashel. *Representative on Irish Committee:* R. B. Carey, Esq.

Correspondence.—A letter of reply to a resolution of sympathy passed at the Waterford meeting was read from Mrs. Stirling, Stoneyford, and ordered to be entered on the minutes.

Installation of New President.—Dr. Shee then vacated the chair, which was taken amidst applause by Dr. J. V. Ryan.

Vote of Thanks.—On the motion of Dr. Ryan, seconded by Dr. Hackett, a hearty vote of thanks was accorded to the retiring President for his dignified conduct in the chair during the past year, and especially for the admirable manner in which he conducted the recent ethical investigation held at Clonmel, during which he exhibited a vast amount of resource and presence of mind.

Medical Inspection of School Children.—It was proposed by Dr. Morris, seconded by Dr. Walshe, and resolved:

That, whatever system of medical inspection be adopted, the examiners so employed should be adequately remunerated.

Irish Members of Council.—Proposed by Dr. James, and seconded by Dr. Mackesy:

That the present number of Councillors be the least to which Ireland shall be entitled.

Underselling.—It was proposed by Dr. Laffan, and unanimously resolved:

That all members present form a committee to consider and report at the next meeting of the Branch, to be held at Clonmel on the 5th prox., as to the best method of dealing with underselling in its various phases.

Subjects Postponed.—Hospital administration, aspects of medical consultation, and revised Charter—these subjects were also postponed for further consideration.

Lecture.—Dr. William Shea gave an interesting lecture on pneumonia and exhibited an illustrative case; this was followed by a discussion on the merits of some of the more recent drugs employed in pneumonia.

Dinner.—After the meeting fourteen members dined together at the Victoria Hotel.

SOUTH MIDLAND BRANCH:
Northampton and Bedford Division.

After luncheon, at which ten members and one visitor were present, a meeting of the Division was held in the Board Room of the Northampton General Hospital, Mr. H. Cropley in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Election of Officers.—The election of officers for the ensuing year then took place. Mr. G. H. Percival was elected Chairman; Mr. Baxter was re-elected Representative of the Division; Dr. Hichens was re-elected Honorary Secretary and Treasurer; Mr. C. Y. Evans retired by rotation from the Branch Council, and Dr. Robson was elected to fill his place.

Ethical Aspects of Medical Consultation.—The report on the ethical aspects of medical consultations was discussed at great length by Dr. Larking, Dr. Buszard, Mr. Linnell, Dr. Robson, Mr. Cropley, Dr. Maguire, Mr. Baxter, Dr. Hichens and Mr. Percival. Mr. Linnell (seconded by Mr. Terry) proposed that the report be carried as it stands. Dr. Buszard expressed the opinion that the proposals were not all practicable, and, supported by Dr. Larking, proposed as an amendment—

That the report be referred back to the Ethical Committee for further consideration.

The amendment was carried. This was adopted as the substantive proposition with the same number of votes.

Hospital Administration.—On the specific questions submitted to the Divisions as regards hospital administration the voting was as follows:

(1) Should there continue to be compulsory payment by patients to hospitals other than cottage hospitals? Answer—No (16).

(2) Should the production of subscribers' letters continue to be compulsory? Answer—No (16).

(3) Should inquiry into a patient's circumstances invariably take place? Answer—Yes (16).

(4) Should a certificate be required from the medical attendants of all persons attending out-patient departments? Answer—Yes (6), No (3), Did not vote (7).

Draft Charter.—The draft Charter was not discussed from lack of time.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:
Monmouthshire Division.

A special meeting was held at the Newport and Monmouthshire Hospital on Thursday, April 25th, Dr. S. Butler Mason in the chair.

Confirmation of Minutes.—The minutes of the meeting of February 22nd were read and confirmed.

Correspondence.—The appended letter from Dr. Gamble was read:

Leven House, Abergavenny,
April 12th, 1907.

Copy of resolution in connexion with the National Deposit Friendly Society, signed by all the practising medical men in Abergavenny.

That all the members of the medical profession in Abergavenny bind themselves not to recognize in any way the National Deposit Friendly Society, not to sign the medical form for the recovery of fees, and not to examine candidates for admission to the Society.

Proposed by Dr. Marsh, seconded by Dr. Mulligan, and carried unanimously:

That the action of the Abergavenny practitioners be approved, and that copies of the resolution be circulated with the agenda of the next meeting of the Division.

Dr. W. D. Steel returned thanks for the vote of confidence.

Letter was read from Dr. Essex resigning his post as Representative. The Executive Committee recommended that Mr. W. J. Greer be appointed to act as Representative until the annual meeting. Proposed by Dr. Mulligan, seconded by Dr. Coulter, and carried unanimously:

That the recommendation of the Executive Committee be approved.

Letter from Dr. W. D. Steel reporting that he had been deputed to examine an ambulance class, but on attending to do so found that it had been instructed by an unregistered practitioner, and therefore declined to conduct the examination. Proposed by Dr. Mulligan, seconded by Dr. Griffiths, and resolved:

That the best thanks of the Division be given to Dr. Steel for his action in the matter.

Dr. Steel acknowledged the vote.

Draft Charter.

It was proposed by Dr. GLENDINNING, seconded by Dr. J. MCGINN, and carried unanimously:

That the Representative be given plenary powers to act as he thought best at the Special Representative Meeting.

Hospital Administration.

The following answers were given to the questions submitted:

Specific questions submitted to Divisions:

1. Should there continue to be compulsory payment by patients to hospitals other than cottage hospitals?

2. Should the production of subscribers' letters continue to be compulsory?

3. Should inquiry into a patient's circumstances invariably take place?

4. Should a certificate be required from the medical attendants of all persons attending out patient departments?

5. Any other comments?

No. 1. Proposed by Dr. MARSH, seconded by Dr. GRATTE:

That the answer be "No."

Carried.

No. 2. Proposed by Dr. GRATTE, seconded by Dr. GRIFFITHS:

That the answer be "Yes."

Amendment proposed by Dr. MARSH, seconded by Dr. J. MCGINN:

That the answer be "No."

The amendment was carried, and was subsequently adopted as a substantive motion.

No. 3. Proposed by Dr. LLOYD, seconded by Dr. GLENDINNING:

That the answer be "Yes."

Carried.

No. 4. Proposed by Dr. J. MCGINN, seconded by Dr. LLOYD:

That the answer be "Yes."

Carried.

Medical Inspection of School Children.

Proposed by Dr. J. MCGINN, seconded by Dr. MULLIGAN:

That the report published in the SUPPLEMENT for April 13th be approved.

Carried.

Specific questions referred to the Divisions:

1. Does the Division consider that the medical inspection of children should be assigned:

(*a*) To the medical officers of health? or

(*b*) To medical officers specially appointed? or

(*c*) Be distributed among those general practitioners of the district who are prepared to undertake a proportion of the duty?

2. If the method (*c*) is preferred, how does the Division propose to carry this out locally?

3. Is there evidence of prevalence within the Division area of the practice of teachers sending school children found to be ill, irrespective of their social status, to hospitals, instead of referring them to their family medical attendant?

4. If so, what steps, if any, has the Division taken, or is the Division taking, to prevent this abuse?

The following replies to the questions submitted were adopted:

1 (*a*). Proposed by Dr. J. MCGINN, seconded by Dr. HAMILTON:

That it should not be the medical officer of health.

Carried.

1 (*b*). Proposed by Dr. J. MCGINN, seconded by Dr. HAMILTON:

That the answer be "No."

Amendment proposed by Dr. GLENDINNING, seconded by Dr. PATON:

That the answer be "Yes."

The amendment was defeated, and the original proposal was carried.

1 (*c*). Proposed by Dr. J. MCGINN, seconded by Dr. MARSH:

That the answer be "Yes."

Carried.

2. Proposed by Dr. MARSH, seconded by Dr. COULTER:

That one or more practitioners be appointed to examine the children in each school.

Amendment proposed by Dr. HAMILTON, seconded by Dr. LLOYD:

That the parents be allowed to select the doctor to examine their own children.

The amendment was carried, and was subsequently adopted as a substantive motion.

3. Proposed by Dr. MARSH, seconded by Dr. GLENDINNING:

That there is no such evidence.

Carried.

Ethics of Consultation.—Proposed by Dr. LLOYD, seconded by Dr. W. D. STEEL:

That the meeting adopt the recommendation of the Ethical Committee.

Carried.

Ebbw Vale Dispute.—Dr. SULLIVAN gave a report on the present position of the Ebbw Vale dispute.

Vote of Thanks.—A vote of thanks to the President was proposed by Dr. W. D. STEEL, and carried by acclamation.

ULSTER BRANCH.

THE spring meeting of this Branch was held in the Guildhall, Londonderry, on Saturday, April 27th, Dr. W. B. HUNTER, Vice-President, in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Apologies for Absence.—Apologies for absence were read from Professor Symington (President), Dr. Dempsey (Belfast), and Dr. E. C. Thompson (Omagh).

Report of Council.—The HONORARY SECRETARY (Dr. Cecil Shaw) read the report of Council which stated that Drs. E. A. Kirkwood (Belfast) and J. W. Killen (Derry) had been elected members. The payment of £5 5s. to the Ulster Medical Society for the use of the Medical Institute had been sanctioned, and a like sum as a donation to the Royal Medical Benevolent Fund for Ireland. A special meeting of Council had been arranged to meet in Belfast in May, to arrange for the invitation of the Association to Belfast in 1909. The following resolution was recommended to the Branch:

That this Branch gives notice of motion for the Representative Meeting at Exeter, that the main recommendations of the Viceregal Commission on the Irish Poor-law System be approved of, and the Council be requested to take all proper steps to press the matter to legislation.

On the motion of the HONORARY SECRETARY, seconded by Dr. THOMAS MCLAUGHLIN (Derry) the report of Council was passed.

Luncheon.—At the conclusion of the meeting the members lunched together at the Northern Counties Hotel.

PORTADOWN AND WEST DOWN DIVISION.

THE spring meeting of this Division was held in Portadown on April 10th, Dr. FERGUS in the chair.

Draft Charter.—The routine business disposed of, the proposals for revision of the draft Charter were discussed, and it was unanimously resolved:

That the Representative be left unfettered by instructions, as he understands the wishes of the Division, especially as regards the Irish representation on the Council.

Communications.—Dr. W. E. HADDEN read a short paper on the use of cocaine in rigid os, relating two cases in which rapid dilatation followed the introduction of plugs soaked in solution of cocaine. Drs. TAYLOR and FERGUS complimented Dr. Hadden and discussed the subject.—Drs. ROWLETT and DARLING related the histories of a number of cases of epidemic cerebro-spinal fever, and Dr. AGNEW gave a summary of the present state of our knowledge of the disease. Drs. DEANE, MARSHALL, and HADDEN joined in the discussion that followed.

Next Meeting.—A letter from Dr. S. E. Martin inviting the Division to meet in Newry was cordially received, and it was agreed that the next meeting be held there.

LANCASHIRE AND CHESHIRE BRANCH.

CENTRAL COUNCIL ELECTION, 1907.

WE are asked to publish the following letter addressed by Dr. Helme to the Chairman of the West Manchester Division:

3, St. Peter's Square,
Dear Dr. Redmond, Manchester.

In the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of May 11th, I find published a list of candidates nominated for the representation of our (Lancashire and Cheshire) Branch on the Council of the Association, and I beg to thank you for the further information that your Division has nominated four candidates for the four seats.

As the time for my own retirement approaches, my regrets that this step has become necessary for me become more poignant, feeling, as I do, that the present time is one of moment in the history of our Association.

As you are aware, during the past seven years I have given almost the whole of my leisure time to the work of our Branch and the Association, whose interests I have very closely at heart.

In my opinion our Association, if properly and efficiently managed, ought to be an effective means of giving our profession a standing in the country worthy of its traditions and of becoming a great and powerful influence for good, but this can only be if it is an association of the whole profession, whose opinions and acts shall reflect the combined feelings of the profession as a whole: to attain this end ought to be the aim of all of us, but I regret that my experiences have shown to me that the danger of our Association being dominated by a section of its members is a real and pressing one; if this comes about, the Association will lose all chance of becoming the great power for good which it is entitled to be; politically (externally) it will die, and professionally (internally) it will become a hotbed for the germs of dissension and strife.

With my firm belief in the possibilities for good in our Association, I am impressed with the importance of our Divisions being truly represented in the Representative Meeting, and of our Branches being truly represented in the Council—not by men who aspire to represent any class or section, but by men who would represent the profession as a whole.

In the present election I foresee dangers in the probability of cross voting owing to the number of candidates in the field.

I would urge you, therefore, to ask all members of our Branch, whether they approve the present constitution or not, whether they recognize the Divisions or not, on this occasion to carefully consider the welfare of the Association and to *record their votes*.

The present time is one when enthusiasm should be tempered by experience. The new form of constitution, which looked to me almost ideal at the time of the reform and from which we had hoped so much, has proved itself in practice not quite that which we thought: the principle of the division of the Association into smaller units and the individual representation of each unit in the government of the Association is one which has my emphatic support, but the short space of time which has elapsed since these ideas were incorporated has been sufficient to indicate some important defects in the machinery as well as the lines on which a remedy could be found; nevertheless, it is now proposed to give the stamp of practical permanency on the present imperfect model by immediate application for a Charter in which are introduced some proposals which can only produce a lessened efficiency. I personally fail to see the urgency: the financial position of the Association is unsatisfactory; we have only to look at the published balance sheet to see how we stand, we are already overstepping the bounds of our income, and were it not for the efficient management of our Secretary, Mr. Guy Elliston who deserves the Association's warmest thanks, this year would have seen us in a deplorable state. The present moment seems to me the *most inopportune* to undertake a scheme, even if it were perfected, the cost of which we cannot foretell.

Doubtless many advantages are to be gained from a Charter, which extends our powers, if we are prepared for an increase of expenditure, but in the present imperfect scheme there are many disadvantages.

1. As I have said, in the opinion of many members, the present arrangements for the Divisions are not satisfactory; no attempt is made under the Charter to remedy existing defects.

2. One unexpected result of the new constitution (which it is now sought to extend and render permanent under the Charter) has been to virtually disfranchise the Branches, a result which was not intended at the time of the reconstitution; indeed, such a proposal *was made*, but a *compromise was* effected at that time on the present lines; now the present machinery is being used to render permanent a result which the *compromise was intended* to avert, and this can be looked upon as no less than a breach of faith. Similar tactics have been seen in imperial politics, and have resulted only in the accentuation of differences and the embittering of party strife. In our Association similar results will follow.

As regards our own Branch, it is further proposed to take away our independent representation upon the Central Council, and to group us along with the adjoining districts for the purposes of representation, a policy which I am sure will be repudiated by every member of this Branch.

3. The present dual control of the Association's affairs is not satisfactory; the draft Charter retains this dual control, but renders it more cumbersome and more unsatisfactory. It is now proposed that the Central Council shall consist of a proportion of members (20 out of 30) elected by, and directly responsible to, the Branches, and a proportion of members (10 out of 30) elected by, and responsible to, the Representative Meeting—a futile arrangement—and this whilst many members of the Association take no part in the work of the Divisions as at present constituted, and by many it is held that the Representative Meeting is not even representative of the Divisions. Further, it is proposed to give the Colonies a large share of representation on the Central Council (5 out of 20 elected by Branches). At present the Colonial Branches elect 7 members, 6 of whom are London men, and may therefore be looked upon rather as London than Colonial Representatives; whilst Scotland is to have 2 and Ireland 1 Representative.

I fear such a scheme will not command "unanimous" approval.

4. Under the draft Charter it is proposed to "promote the candidature" of members of Parliament! This would place an intolerable strain upon the cohesion of our Association; the introduction of party politics would inevitably lead to undesirable friction, and might develop into wire pulling of the lowest type. Even the appearance of Sir Victor Horsley as the "Member for the Association" representing us, *inter alia*, in the matters of temperance reform or vivisection legislation, or education on Biblical lines, would not conduce to harmony!

5. Many of the "extended" objects of the Association possible under the Charter may be desirable, but have not yet received the unanimous approval of the members of the Association. Further, they cannot be undertaken whilst the finances of the Association are in their present state, and their undertaking would demand an immediate increase of the annual subscription; and what would this mean? (1) The younger men, whom it is desirable to get into the Association, could not join; (2) the less well-to-do would probably drop out; (3) a large number of members who are not interested in much of medical politics would drop out, and as a result we should see a diminution of our income from subscriptions, the circulation of our JOURNAL would fall, and our income from advertisements would correspondingly decrease.

These matters demand consideration; the "extended" objects are not within the *immediate* view of practical politics, and it is evident, therefore, that there is *no urgency* in the matter of the Charter; prudence would indicate the desirability of postponing the application until we arrive at some higher degree of perfection in the model of our machine and at some degree of equipoise in our finances.

Such being my views on some of the pressing matters

now before us, I must congratulate you on the evidence of activity in your Division.

It is important that this Branch should be represented by men of experience, who will allow their enthusiasm to be guided by their experience, and I trust that the Branch as a whole will support you in your endeavour to gain such representation in order that the affairs of the Association shall be conducted on a broad basis with efficiency and economy.

This object would, I feel sure, be attained by returning the four gentlemen nominated by your Division as Representatives of this Branch on the Council of the Association.

I am, etc.,

May 13th. T. ARTHUR HELME.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

SPECIAL REPRESENTATIVE MEETING.

The Special Representative Meeting will take place on Wednesday, May 29th, at 9.30 a.m. in the Examination Hall, Victoria Embankment, London, W.C.

BY ORDER OF THE COUNCIL,

GUY ELLISTON, *General Secretary.*

April 11th, 1907.

SPECIAL COUNCIL MEETING.

A SPECIAL meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, June 5th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board, to consider the resolutions passed by the Special Representative Meeting in regard to the proposed Royal Charter. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,

May 14th, 1907. *General Secretary.*

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: TROWBRIDGE DIVISION.—The annual meeting of this Division will be held in Trowbridge on Saturday, May 25th. The hour and place of meeting and agenda will be forwarded at a later date. This preliminary notice is sent out in accordance with No. 11 of the Rules of the Division.—JOHN TUBB-THOMAS, Honorary Secretary, Trowbridge, Wilts.

BIRMINGHAM BRANCH.—Notice is hereby given that the annual meeting of the Branch will be held at the Medical Institute, Birmingham, on Thursday, June 13th, at 3.30. Agenda: Election of two members of the Branch to represent the Branch on the Central Council of the Association. Nominations for these offices must be sent to the undersigned not later than May 26th.—O. J. KAUFFMANN, 22, Broad Street, Birmingham.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—The annual meeting of the Division will take place at the Medical Institute on Wednesday, June 5th, at 4 p.m. Nominations for offices, in writing, must reach the Honorary Secretary on or before May 15th.—E. D. KIRBY, Honorary Secretary.

BORDER COUNTIES BRANCH AND NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—*Nomination of Elective Member of Council.*—Notice is hereby given that the names of candidates for the representation of these two Branches must be sent in to me on or before May 27th. Each candidate must be nominated by at least three electors.—FRANCIS R. HILL, Honorary Secretary, Border Counties Branch, 62, Warwick Road, Carlisle.

BORDER COUNTIES BRANCH: NORTH CUMBERLAND DIVISION.—The annual general meeting of the Division will be held in Carlisle on Friday afternoon, May 24th, at 3 30 p.m. It is proposed to hold a discussion on contract practice.—NORMAN MACLAREN, Honorary Secretary, 23, Portland Square, Carlisle.

BORDER COUNTIES BRANCH: SCOTTISH DIVISION.—The annual general meeting of this Division will be held in the Board Room, Dumfries and Galloway Royal Infirmary, Dumfries, at 3 p.m., on Friday, May 24th. Business: Election of officers. Consideration of matters referred to Divisions. Further consideration of questions relating to contract practice.—GEORGE R. LIVINGSTON, Honorary Secretary.

BORDER COUNTIES BRANCH: WEST CUMBERLAND DIVISION.—The annual meeting of this Division will be held at Cockermouth on Tuesday, May 21st.—JOHN PENNY, Honorary Secretary, Cockermouth.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in the Princess Christian Hospital, Weymouth, on Wednesday, May 22nd, at 3.30 p.m., the President, Mr. William Hawkins, in the chair. Agenda: (1) Minutes of last meeting. (2) Letters, etc. (3) The President will vacate the chair and introduce his successor, Dr. J. Macpherson Lawrie, of Weymouth. (4) The Honorary Treasurer will present his financial statement for 1906. (5) Reports from the Divisions of the Branch for 1906. (6) Report of the Council of the Branch for 1906. (7) Report of the return of a Representative of the Branch on the Central Council of the Association. (8) The place for the summer meeting (9) The President will deliver an address entitled, "Gynaecology in the last twenty years." (10) The President will exhibit: (*a*) a renal calculus; (*b*) a prostate removed from a patient 73 years old. (11) Dr. Sanderson Wells will contribute notes on a case of removal of the upper limb and scapula for malignant disease. The patient will be shown. (12) Dr. Hyla Greves will read a short paper on myelopathic albumosuria. Members of the Branch will have an opportunity of inspecting the Princess Christian Hospital by invitation of the Chairman and members of the Committee. The President and Mrs. Macpherson Lawrie invite the members and their friends to tea at Greenhill, Weymouth, after the meeting. His Worship the Mayor of Weymouth, in honour of the visit of the Branch to the town, will entertain, by special invitation, the members to luncheon before the meeting, at the Gloucester Hotel at 2 p.m.—JAMES DAVISON, Honorary Secretary, Bournemouth.

EAST ANGLIAN BRANCH.—*Two Members of Council.*—In accordance with the Articles and By-laws, the Honorary Secretary of the Branch will be glad to receive nominations, signed by not less than three members, for the election of two Representatives on the Central Council of the Association. Nominations must reach the Honorary Secretary of the Branch on or before Monday, June 3rd.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary of Branch.

EAST ANGLIAN BRANCH.—The annual meeting of the East Anglian Branch will be held at Ipswich on Thursday, June 20th. Members wishing to read papers or show cases or specimens should communicate at once with Dr. Gutch, Ipswich.—B. H. NICHOLSON, M.B., East Lodge, Colchester, Honorary Secretary.

EAST ANGLIAN BRANCH: SOUTH SUFFOLK DIVISION.—A meeting of this Division, to discuss matters referred to Divisions, will be held at the Crown and Anchor Hotel, Ipswich, on Thursday, May 23rd, at 3.30 p.m.—JOHN GUTCH, Honorary Secretary.

EAST ANGLIAN BRANCH: WEST NORFOLK DIVISION.—The annual meeting will be held at the West Norfolk and Lynn Hospital on June 20th, at 3 p.m., when officers and Representatives will be elected for 1907-8.—ARTHUR GARDINER, Honorary Secretary, Tuesday Market Place, King's Lynn.

GLASGOW AND WEST OF SCOTLAND BRANCH.—*Nominations of Members of Council.*—In accordance with Branch Rule 5 and Association By-law 24, nominations for Representatives on the Central Council, each signed by at least three electors, are requested to be sent to Mr. J. Grant Andrew, 12, Woodside Terrace, Glasgow, on or before Monday, May 27th. If more than two members are nominated, an election by voting papers will be necessary.—JAMES HAMILTON, J. GRANT ANDREW, Honorary Secretaries.

GLASGOW AND WEST OF SCOTLAND BRANCH.—The statutory annual meeting of the Branch will be held in the new Medical Buildings of the University on the afternoon of Friday, June 7th, at half-past three o'clock. Professors Glaister, Stockman, and Noël Paton have courteously offered to show the members the New Laboratories, a description of which will be found in the JOURNAL of April 27th (page 1023). Dr Donald MacIntosh has also invited the Branch to visit the New Wing of the Western Infirmary. A dinner will be held in the evening (6.15), at which Principal Donald MacAlister, M.D., LL.D., will be present. Ticket, 5s. 6d. (exclusive of wines).—JAMES HAMILTON, J. GRANT ANDREW, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—The annual meeting will be held at Altrincham on June 6th, when officers and committee will be elected for 1907-8. Every member is eligible for every office. (Under Rule 6. Drs. Joynson, Luckman, and Cooper are not eligible for the chair, having already served within three years.) Every member is entitled to make nominations. The Committee has decided that all nominations must be in writing, signed by a proposer and seconder, and must reach me by May 15th. Offices: (1) Chairman; 2) vice-chairman; (3) honorary secretary and treasurer; (4) representative at Representative Meetings; (5) two representatives on Branch Council; (6) six other members of Committee. (By order.)—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: MANCHESTER (WEST) DIVISION.—The annual meeting of the Division will be held at the Hulme Dispensary, Dale Street, Stretford Road, on Monday, May 27th, at 4.15 p.m. It is hoped that all members will make a special effort to be present. Agenda: 1. Minutes and Correspondence. 2. Election of Officers: (*a*) Chairman; (*b*) Vice-Chairman; (*c*) Secretary; (*d*) Five Members of Committee: (*e*) Two Representatives on Branch Council. 3. Election of Representative in Representative Meeting. 4 Annual Report of Executive Committee. 5. Consideration of Draft Scheme for co-ordinating the Divisions in their work, prepared by the Manchester and Salford combined Committee. 6. Annual Meeting of the Branch in Manchester: Election of Five Representatives on Committee of Management. 7. Business of the Representative Meeting: Instructions to Representative: Draft Charter. 8. Rule respecting the Tenure of Office by Chairman of Division. 9. Any other business. Members are requested to forward the names of those they may wish to nominate for the vacant posts to the Honorary Secretary on or before Saturday, May 25th. Any member of the Division is eligible for election.—J. SKARDON PROWSE, B.A., 372, Moss Lane East, Manchester, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: MANCHESTER (SOUTH) DIVISION.—The annual general meeting of this Division will be held at Dr. Sawers Scott's, Wilmslow Road, Withington at 3.45 p.m., on Friday, May 31st. Agenda: (1) Minutes. (2) Reference to our former Chairman, the late Dr. Collins. (3) Letter re Rusholme Dispensary. (4) Election of officers for the ensuing year. (5) Committee's annual reports. (6) Proposed new rules: (*a*) The Past Chairman shall be an *ex-officio* member of the Committee. (*b*) Adoption of a code of ethical rules. (7) Draft scheme for Combined Committee of the Manchester Divisions, and election of four representatives Dr. J. Milson Rhodes has consented to address the meeting on the draft Charter. Tea and coffee.—M. RUSSEN RHODES, Bridge House, Didsbury, Honorary Secretary of the Division.

METROPOLITAN COUNTIES BRANCH. — *Nominations of Branch Officers.*—Pursuant to By-law 24, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 23th. Voting papers will be sent out on or before June 4th and must be returned to the Secretary on or before June 11th.—FRED. J. SMITH, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH. Notice is hereby given that the annual meeting of the Branch will take place on Thursday, June 27th. Time and place will be fixed by the Branch Council. Honorary Secretary, FRED. J. SMITH.

METROPOLITAN COUNTIES BRANCH. At the request of the Westminster Division, a special general meeting of the Branch will be held at 4.30 p.m. on Thursday, June 6th, at St. James's Vestry Hall, Piccadilly, to discuss the advisability of constituting a central hospital authority for London. Dr. Knowsley Sibley will submit, on behalf of the Westminster Division, the following resolution: "That in the opinion of this meeting of the Metropolitan Counties Branch of the British Medical Association, it is desirable, with a view of abating the present abuse of hospital charity, that a central hospital authority for London be constituted upon which the medical profession is adequately represented." If this resolution is approved by the meeting, the Branch Council will be asked by further resolutions to appoint a committee and provide the funds necessary for the promotion of this object. Those who desire to join in the discussion are requested to send their names to Dr. F. J. McCann, 5, Curzon Street, Mayfair, W., Secretary, West minster Division. Tea and coffee will be served at 4 p.m. F. J. SMITH, M.D., D'ARCY POWER, F.R.C.S., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—A special meeting of this Division will be held on Thursday, May 23rd, at 4 p.m., at the Great Eastern Hotel, Liverpool Street, E.C. Agenda: (1) Minutes of last meeting; (2) nomination of candidates for offices in the Branch; (3) consideration of revised draft Charter, etc. (see SUPPLEMENT to the British Medical Journal, April 6th); (4) notice of motion by Council (see SUPPLEMENT, April 27th, p. 209); (5) Hospitals Committee's report on hospital administration (see SUPPLEMENT, April 13th, p. 189); (6) Medico-Political Committee's supplementary report on the medical inspection of school children (see SUPPLEMENT, April 13th, p. 191).—E. W. GOODALL, Honorary Secretary, Eastern Hospital, Homerton, N.E.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—The annual meeting of this Division will be held on Thursday, May 30th, at 9 p.m., at the Great Eastern Hotel, Liverpool Street, E.C., the meeting to be followed by a supper at 9.30 p.m.—E. W. GOODALL, Eastern Hospital, Homerton, N.E., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.—A meeting of the medical profession of Hampstead and neighbourhood will be held under the auspices of the Hampstead Division of the British Medical Association, on Friday, May 24th, at 4.30 p.m., in the Lecture Room of the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. Macevoy in the chair. Agenda: 1. To receive the report of the Committee of the local profession appointed on May 5th, 1906. 2. To consider the following resolutions passed by the Committee on April 26th: (*a*) That this meeting confirm the resolutions passed by meeting of the local medical profession on May 5th, 1906, which are: (1) That an out-patient department in Hampstead is unnecessary. (2) That the casualty department be kept distinct from any other department, and that casualty patients, if not suitable for admission, be seen once, and thereon be referred to private practitioners, provident dispensaries, or Poor-law authorities. (3) That there be greater facilities for general practitioners of the neighbourhood to attend in-patients. (4) That there should be a service limit, as well as an age limit, to appointments to the medical staff. (5) That the outside medical profession be adequately represented on the Board. (6) That it is desirable, both in the interest of the district and of the hospital itself, that the Hampstead Hospital be carried on as a purely local institution, and not as a large general hospital, and that therefore an acting staff of consultants is not in accordance with the spirit of its constitution. (*b*) That this meeting does not regard the proposed amalgamation of the Hampstead and North-West London Hospitals with approval. (*c*) That the visiting staff of the Hampstead Hospital should be limited to local practitioners. 3 Other business. Tea will be provided.—REGINALD A. YELD, 29, Platt's Lane, Hampstead, Honorary Secretary of the Committee of the Local Medical Profession, appointed on May 5th, 1906.

METROPOLITAN COUNTIES BRANCH: ST. PANCRAS AND ISLINGTON DIVISION.—The annual meeting will be held in the Board Room of the London Temperance Hospital, Hampstead Road, N.W., on Tuesday, May 28th, at 4 p.m. Tea will be provided. Agenda: (1) Minutes. (2) Correspondence. (3) To receive annual report and balance-sheet. (4) To elect chairman, vice-chairman, secretary, representative, three members of the Branch Council, and Executive Committee. (5) To consider alterations of rules as follows: (*a*) That Rule 11 as here under printed shall stand amended by leaving out the words in italics, "Ordinary meetings of the Division shall be held *not less than six times a year* at such times and places as the Executive Committee shall appoint. (*b*) In Section D, Rule 11, *re* annual meeting, that seven days be the notice required instead of fourteen. (6) To consider notices of motion for the Annual Representative Meeting. (7) Such other business as may be dealt with by the annual meeting.—WALTER H. YELD, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION —The annual meeting will be held, by kind permission, at the Head Quarters of the 4th Volunteer Battalion East Surrey Regiment, St. John's Hill, S.W. (opposite Clapham Junction Station), on Thursday, May 23rd, at 3.45 p.m. (telephone 8 Putney). Agenda: (1) Minutes. (2) Correspondence. (3) Questions. (4) Dr. Fothergill will propose: (*a*) Seeing that the Annual Representative Meeting is held in July, and a considerable number of medico political questions are set down during the previous months which require prompt attention It is not desirable to annually change the *personnel* of the various standing committees before that meeting; (*b*) that the officers as also the Executive and other standing Committees do come into office annually at the end of July, and the rule be altered accordingly; (*c*) In order to provide for continuity the Chairman shall, after his year of office, be *ex officio* member of the Executive Committee for one year as Past Chairman. (5) Report of scrutineers on nominations and election of Executive Committee for 1907-8. (6) Election of the standing Committees, 1907-8. (*a*) Hospital (4 members). (*b*) Ethical (5 members). (*c*) Scientific (4 members). Dr. G. Walker will propose that there be a Medico Political Committee formed of three members elected by the Division, two elected by the Executive Committee, the Vice-Chairman and one Honorary Assistant Secretary *ex officio*. (7) Election of (*a*) Representatives of Division at Representatives' Meetings, July, 1907–July, 1908; (*b*) Deputy Representative. (8) Ethical Rules. Submitted by Dr. Danville, Chairman Ethical Committee, for the adoption of the Division. Dr. Smith Whittaker, Medical Secretary to the Association,

tend to explain and give any information asked or. (*a*) radford Rules. (*b*) Also the following: (i) When it becomes ie duty of a registered medical practitioner occupying an ficial position or otherwise to see and report upon a case of lness or injury, he shall before seeing the patient communi- ate with the practitioner in attendance so as to give him the ption of being present. The practitioner seeing the patient all scrupulously avoid interference with or remarks to the atient or his friends upon the diagnosis or treatment which as been adopted. (ii) A medical practitioner called upon in emergency to visit a patient who under the ordinary ircumstances would have been attended by another ractitioner, shall, when the emergency is provided for, etire in favour of the ordinary medical attendant, but all be entitled to charge the patient for his services. ii) When a medical practitioner is called to a case of obstetric mergency during the absence from any cause of the proper edical attendant, he shall cease his attendnce when the mergency has been provided for, or on the arrival of the roper attendant. If in the meantime he has assisted at the atient's delivery, or has been in attendance for a considerable me, he shall be entitled to one half the fee. If, however, the atient prefers that the medical practitioner called in in the mergency should continue his attendance he can do so, but ould offer to share the fee with the medical practitioner riginally engaged, and should arrange that the patient should nd a communication to that effect. (iv) A medical practi- oner called upon, without previous arrangements, to attend a atient during the sickness or absence from home of the gular medical adviser, shall cease attendance as soon as the tter is able to take charge of the case, but shall be entitled charge the patient for his services. (v) A medical practi- oner who has obtained his introduction to a patient through consultation should not supersede the attending practitioner uring that illness; and if he be asked to attend any future illness should only do so after ex- lanation with the medical attendant. (vi) When a edical practitioner is requested to attend a patient lready under the care of another practitioner (the ase—not being one of emergency) he shall decline do so except in consultation with the practitioner in attendance, or, in case a consultation is not greed to, until the practitioner in attendance has een informed that his services are no longer desired. (9) Hospital Administration (see SUPPLEMENT to the BRITISH EDICAL JOURNAL, April 13th, p. 189). Dr. M. G. Biggs, hairman of the Hospital Committee, will bring forward he report and recommendations. (10) Medico-Political. Dr. George Walker, Chairman of the Committee, will bring orward the following, which are urgent and require imme- iate consideration: (*a*) Alterations of Articles and By-laws ee SUPPLEMENT, April 20th and 27th); (*b*) Dispensary rganization: reference from Branch Council; (*c*) Annual eport of Central Council (see SUPPLEMENT, May 4th, p. 233). esolutions for the consideration of the Representative Meet- ng in July will be submitted for approval. (11) Conference f Representatives of London Divisions *re* Charter: Report of Dr. McManus. (12) Central Council Election, June, 1907: eport of Delegates at Conference. (13) Annual Report of he Division: The Chairman will submit it for the approval f the members. Annual Dinner.—This will be held in the ew Gaiety Restaurant, Strand, W.C., on Tuesday, May 28th, t 7 for 7.30 p.m. Ladies are invited. Small tables can be ngaged. Tickets (exclusive of wines), 7s. 6d. each, which will e collected on the evening. The toast-list will be short. A ood entertainment has been arranged for. Places can be ooked by addressing Dr. Allan Swallow, 61, South Side, lapham Common. Messrs. F. Davidson and Co. will have n exhibition of ophthalmic, laryngoscopic, and aural instru- ents.—E. ROWLAND FOTHERGILL, Honorary Secretary, Tor- uay House, Southfields; D. R. POWELL EVANS, CHAS. J. IARTIN, ALLAN J. SWALLOW, Honorary Assistant Secretaries.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—A meeting of this Division will be held at St. James's Vestry Hall, 195, Piccadilly, at 8 30 p.m., on Wednesday, May 22nd. Dr. Donald Baynes will open a discussion on the Ethical Aspects of Medical Consultation. As each Division has been requested to give an opinion on the scheme suggested by the Central Ethical Committee, and published in the SUPPLEMENT of February 16th, it is hoped that every member of the Divi- ion will endeavour to attend this meeting.—F. J. MCCANN, ecretary, 5, Curzon Street, Mayfair, W.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—The nnual meeting of this Division will be held on Tuesday, lay 28th, at the Red Lion Hotel at 1 o'clock. Luncheon will e provided at 2 p.m.; tickets, 3s. 6d. each, exclusive of wine. embers are requested to reply not later than May 25th as to heir intention to be present at the luncheon; those ccepting will be held responsible for the value of their ickets. Members may bring guests to the luncheon. genda: 1. Election of officers. 2. Programme for the year. Matters referred to Divisions:—(*a*) Hospital Administration SUPPLEMENT, April 13th); (*b*) Draft Charter (SUPPLEMENT, pril 6th); (*c*) the Ethical Aspects of Medical Consultation SUPPLEMENT, February 16th); (*d*) Medical Inspection of School Children (SUPPLEMENT, February 16th). 4. Any other business.—A. E. WILSON, Honorary Secretary, Boston and Spalding Division.

MIDLAND BRANCH: LINCOLN DIVISION.—On Friday, May 24th, at 3.30 p.m., at the Guildhall, Lincoln, will be held the annual meeting of this Division. Agenda: (1) To elect a Vice-President of the Midland Branch; (2) to elect officers, the Representative of the Division on the Branch Council, and the ordinary members of the Executive Committee; (3) to elect the Representative of the Division in Representative Meetings of the Association; (4) further consideration of the proposed Charter (see BRITISH MEDICAL JOURNAL and SUPPLEMENT of April 6th); (5) other business. Members desiring to read papers or show cases or specimens are requested to communicate with J. S. CHATER, Honorary Secretary, Lincoln.

NORTH OF ENGLAND BRANCH.—Nominations for elective members of Central Council (two required) will be received up to May 24th.—JAMES H. HUNTER and HENRY SMURTHWAITE, Joint Honorary Secretaries.

NORTH WALES BRANCH.—Nominations for a Representative of the Branch on the Central Council in accordance with By-law 24 will be received by the Honorary Secretary up to June 1st.—H. JONES ROBERTS, Honorary Secretary, Llywenarth, Penygroes.

NORTH WALES BRANCH: SOUTH CARNARVON AND MERIONETH DIVISION.—The annual meeting of the Division will be held at the White Lion Hotel, Bala, on Thursday, May 30th, in the afternoon. Members having papers to read or cases to show are requested to communicate with the Honorary Secretary before May 22nd.—HENRY GLADSTONE JONES, Plas Gwilym, Criccieth, Honorary Secretary.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Brighton on Wednesday, June 19th, Mr. T. Jenner Verrall, President-elect, in the chair. The following will be the agenda: (1) To elect the officers of the Branch (this will be done by voting papers sent to each member of the Branch); nominations by three members for the offices of president-elect, vice-presidents, and secretary may be sent to the Honorary Secretary on or before May 18th; (2) to receive the annual report of the Branch; (3) to transact any business that may be transacted by an ordinary meeting. N.B.—Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each of three members in writing, should be sent to the Honorary Secretary of the Branch on or before May 18th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

SOUTH-EASTERN BRANCH: CANTERBURY AND FAVERSHAM DIVISION.—A combined meeting of the Divisions comprised in the old East Kent District—that is, Ashford, Canterbury and Faversham, Dover, Folkestone, and Thanet—will be held at the County Hotel, Canterbury, on Thursday, June 27th, at three o'clock precisely, Dr. Whitehead Reid in the chair. Agenda: A paper will be read by W. J. Tyson, M.D., F.R.C.P., F.R.C.S., Honorary Physician, Victoria Hospital, Folkestone, on the Future Lines of Treatment: Their Effects on the Profession. An address by Alex. G. R. Foulerton, F.R.C.S., D.P.H., Director of Bacteriological Department, Middlesex Hospital, Medical Officer of Health to the County of East Sussex, on the Treatment of Infective Disease by Bacterial Vaccination. W. T. Hillier, Esq., M.R.C.S., D.P.H., Pathological Assistant, Research Laboratories, Middlesex Hospital, will (1) Show specimens of trypanosomata; (2) give a demonstration of the method of determining the opsonic index of the blood. Preliminary meetings will be held as follows: (*a*) 2 30, Canterbury and Faversham Division:—Agenda: (1) Minutes. (2) Annual report. (3) Election of officers—Chairman, Vice-Chairman, Representative at Representative Meetings, Representative on Branch Council, Honorary Secretary and Treasurer, Committee. (4) To consider the desirability of amalgamating with the Ashford Division. (5) Any other business. (*b*) 2.50, Canterbury and Faversham with Thanet Divisions:—Agenda: (1) To elect the Representative for Representative Meetings. Members will dine together at 5.45 for 6 o'clock at the County Hotel, Canterbury; charge 5s., exclusive of wines. Those who intend to stay to dinner are requested to notify Dr. Henchley not later than the morning of June 27th, and to state whether they will assist in a short musical programme.—A. R. HENCHLEY, Honorary Secretary and Treasurer, Canterbury.

SOUTH-EASTERN BRANCH: FOLKESTONE DIVISION.—The annual meeting and dinner of the Folkestone, Ashford, and Dover constituency will be held at Hundert's Hotel, Folkestone, on Thursday, May 23rd, at 7.15 p.m. Agenda: (1) To elect officers; (2) to receive the annual report of the Executive Committee; (3) to consider matters referred to the Divisions (vide SUPPLEMENTS, February 16th and April 13th). Members wishing to stay for the dinner are requested to send their names to the Honorary Secretary before May 21st.—P. VERNON DODD, M.D., Honorary Secretary, 14, Manor Road, Folkestone.

SOUTH-EASTERN BRANCH: GUILDFORD DIVISION.—A special meeting of this Division will be held at the Royal Surrey County Hospital, Guildford, on Wednesday, May 22nd, at 4.30 p.m. The Chairman of the Division, Dr. George Fisher, will preside. Agenda: (1) Minutes. (2) Contract Practice. The conditions of contract practice in the Division will be considered, with a view to the adoption of ethical rules for its regulation. (3) Matters referred to the Divisions: (*a*) Revision of draft Charter, (*b*) medical inspection of school children, (*c*) hospital administration, (*d*) notices of motion to be brought before Representative Meetings. (4) Any other business. Tea will be provided at 4.15. If time permits, cases will be shown by members of the hospital staff. It is particularly desirable that all members of the Division engaged in any kind of contract practice should endeavour to be present at the meeting, and the Honorary Secretary will be glad to hear from any members wishing to submit resolutions on any of the above matters.—E. J. SMYTH, Honorary Secretary, Maythorne, Epsom Road, Guildford.

SOUTH MIDLAND BRANCH.—Nominations for Representative for the above Branch on the Central Council are requested to be sent to the Honorary Secretary not later than June 10th.—E. HARRIES-JONES, Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Notice is hereby given that the election of Branch Representatives on the Central Council will take place on June 13th at the annual meeting at Cardiff. Nominations in writing, signed by not less than three members, must be sent not later than May 23rd to FRANK G. THOMAS, M.B., 68, Walter Road, Swansea.

SOUTH-WESTERN BRANCH.—In accordance with By-law 22, the names of those candidates nominated for the Council of the Association, together with the names of three nominations for each, must be sent on or before May 20th to Mr RUSSELL COOMBE, Branch Secretary, 5, Barnfield Crescent, Exeter.

SOUTH-WESTERN BRANCH.—The sixty-eighth annual meeting will be held on June 3rd, at the Royal Devon and Exeter Hospital, Exeter, at 12.30 p.m. In view of the forthcoming visit of the Association to Exeter, this meeting will be limited to the transaction of the necessary annual business of the Branch. Mr. Domville will resign the chair to Dr Deas. The report of the Branch Council and the annual financial statement will be presented to the meeting, and the officers of the Branch will be elected for the year 1907-8. A report from the Executive Committee appointed to make arrangements for the reception of the Association will be read. The Branch Council wish to call attention to the very inadequate support which the guarantee fund has in some quarters received from the members of the Branch. Less than half the members have subscribed, and although the subscriptions given average £2 per head, the average from the whole Branch is less than £1 per head. It is hoped that each member of the Branch will make it a point of honour to contribute to this fund, so that there may be a fair prospect of a return when the meeting is over. The subscriptions given will be appended to the list of members which is issued immediately after the annual meeting of the Branch. The President elect will be pleased to see any members attending either this meeting or the Executive Committee at luncheon at the Clarence Hotel at 1.30. Replies to this invitation should be sent not later than May 29th.—RUSSELL COOMBE, Honorary Secretary.

STAFFORDSHIRE AND SHROPSHIRE AND MID WALES BRANCHES.—Election of Representative on the Central Council. In accordance with By-law 22, notice is hereby given that the names of those candidates nominated for the Central Council of the Association must be sent in to the Secretary of the Staffordshire Branch or the Secretary of the Shropshire and Mid Wales Branch on or before Saturday, June 1st.—G. PETGRAVE [illegible], Stoke-on-Trent, Secretary of the Staffordshire Branch; C. E. RUSS WOOD, Shrewsbury, Honorary Secretary of the Shropshire and Mid Wales Branch.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH: WORCESTER DIVISION.—A meeting of this Division will be held at the Worcester Infirmary on Tuesday, May 21st, at 1.30 p.m. Business: (1) Draft Charter: ordinances and by-laws (see [illegible]); (2) April 25th: (*a*) hospital administration (see memorandum), April 13th, with the questions at top of page 1[illegible]; (*b*) medical inspection of school children (see SUPPLEMENT, February 16th, with the questions on page 71 at top of the second column; see also SUPPLEMENT, April 13th page [illegible]); (3) [illegible] medical consultation (see SUPPLEMENT, February 16th, pages 73 to 77; see also SUPPLEMENT, May 4th). The Division is requested by the Central Council to consider the above important matters so that the Representative of the Division may be in a position to express the views of the Special Representative Meeting to be held in London on May 30th.—MARCUS REED, Honorary Secretary.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,039 births and 4,816 deaths were registered during the week ending Saturday last, May 11th. The annual rate of mortality in these towns, which had been 16 8, 16 0, and 15.9 per 1,000 in the three preceding weeks, further declined last week to 15 7 per 1,000. The rates in the several towns ranged from 5.5 in Northampton, 7.6 in East Ham, 7.8 in Smethwick, 8.1 in Hornsey, 8.5 in Devonport, 8.7 in Handsworth (Staffs), 8.9 in Great Yarmouth, 9 0 in Leyton, 9.1 in Walthamstow, to 20 0 in Bolton, 20.1 in Blackburn, 20.6 in Wigan, 20 7 in Derby, 20 8 in Manchester, 20 9 in Preston, 21.5 in Coventry, 21.9 in West Bromwich, 22.4 in Sunderland, and 23 8 in Salford. In London the rate of mortality was 15.7 per 1,000, and it also averaged 15.7 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases in the seventy-six towns averaged 1.6 per 1,000; in London this rate was 1.5 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3.4 in Nottingham and in St. Helens, 4 0 in Birkenhead, 5.4 in Hanley and in Sheffield, 6 1 in Middlesbrough, and 6 6 in Bolton. Measles caused a death-rate of 1 3 in Tottenham, 1.5 in Warrington, 1.8 in Portsmouth, 2.0 in Nottingham, 2.3 in St. Helens, 2.6 in Middlesbrough, 4.0 in Birkenhead, 4.1 in Sheffield, 4.7 in Hanley, and 5.4 in Bolton; scarlet fever of 1 0 in Wolverhampton; diphtheria of 1 9 in Reading; whooping-cough of 1.1 in East Ham and in Manchester, 1.2 in Walthamstow and in Rochdale, 1.3 in Tottenham, 1 5 in Salford, in Oldham and in Middlesbrough, and 2 0 in Stockton-on-Tees: "fever" of 1.7 in Barrow-in-Furness: and diarrhoea of 1 5 in Middlesbrough. No fatal case of small-pox was registered in these towns, and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,628, 2,649, and 2,672 at the end of the three preceding weeks, had fallen again to 2,628 at the end of last week: 349 new cases were admitted during the week, against 361, 360, and 346 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, May 11th, 1,026 births and 671 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 20.0, 20 6, and 19 9 per 1,000 in the three preceding weeks, further fell to 19 3 per 1,000 last week, but was 3 6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 12 9 in Aberdeen and 17.6 in Edinburgh to 21.8 in Leith and 24 0 in Perth. The death-rate from the principal infectious diseases averaged 3 2 per 1,000 in these towns, the highest rates being recorded in Glasgow and Leith. The 332 deaths registered in Glasgow included 7 which were referred to measles, 2 to scarlet fever, 2 to diphtheria, 27 to whooping-cough, 4 to "fever," 8 to diarrhoea, and 18 to cerebro-spinal meningitis. Two fatal cases of measles, 4 of whooping-cough, 2 of diarrhoea, and 6 of cerebro-spinal meningitis were recorded in Edinburgh; 3 of whooping-cough, 3 of diarrhoea, and 1 of cerebro-spinal meningitis in Dundee; 8 of whooping-cough, 2 of diphtheria, and 2 of diarrhoea in Aberdeen; 2 of cerebro-spinal meningitis in Paisley; and 3 of measles and 4 of cerebro-spinal meningitis in Leith.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, May 11th, 529 births and 422 deaths were registered in six of the principal Irish towns, as against 682 births and 445 deaths in the preceding period. The annual death-rate in these towns, which had been 21.3, 28.7, and 23.7 per 1,000 in the three preceding weeks, fell to 21 2 per 1,000 in the week under notice, this figure being 5 5 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 16 0 in Londonderry and 17.8 in Limerick to 24 5 in Belfast and 25 3 in Waterford. The zymotic death-rate in the same six Irish towns averaged 1 5 per 1,000, or 0 1 per 1,000 lower than during the preceding period, the highest figure (2 3) being recorded in Dublin, while Londonderry and Limerick registered no deaths under this heading at all. In Belfast 13 deaths were returned as due to cerebro-spinal fever, and 5 as due to cerebro-spinal meningitis. In Dublin there were 6 deaths from measles, and 8 from whooping-cough.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

STAFF SURGEON A. R. BANKART, M.B., M.V.O., R.H.P., has been promoted to be Fleet Surgeon, May 5th. His previous commissions are dated Surgeon, May 15th, 1895; Staff Surgeon, May 15th, 1899. From the *Royal Navy List* we learn that whilst Surgeon of the *Osborne* he attended the Khedive on board the Royal Yacht July, 1900, and received the Order of the Osmanieh of the Fourth Class, was in attendance on King Edward VII on board H.M. Yacht *Victoria and Albert*, July, 1902, attended the late Duke of Coburg during his illness on board H.M.S. *Surprise*, in the Mediterranean in 1898 (March and April), for which he received the Fourth Class of the Royal Victorian Order from Queen Victoria, and the First Class of the Saxe Ernestine Order from the late Duke of Coburg. He was also in attendance on the late Prince Alfred of Coburg during his last illness in 1899, promoted from Surgeon to the rank of Staff Surgeon for distinguished service, May 4th, 1903.

The following appointments have been made at the Admiralty: GEORGE G. FORREST, Fleet Surgeon, to the *Royal Arthur*, May 1st. ALFRED M. EVOE, Fleet Surgeon, to the *Nile*, May 1st. ALFRED H. JEFFERIS, M.B., Staff Surgeon, to the *Caesar* on recommissioning, May 1st. HENRY B. HALL, M.B., Staff Surgeon, to the *Nile*, May 1st. ALEXANDER I. CHISHOLM, M.B., Fleet Surgeon, to the *Sapphe*, May 3rd. LOUIS W. CRAIG, M.B., Staff Surgeon, to the *Royal Arthur*, May 3rd. WILLIAM F. O'CALLAGHAN, M.B., Surgeon to the *Firm*, May 4th. BERTRAM R. ECCLES, Surgeon to the *Excellent*, for the *Gordon*, May 4th. HUGH P. DUNCAN, Staff Surgeon, to the *Sutlej*, on completing, May 14th. ARTHUR E. FRASER, M.B., Surgeon, to Haslar Hospital, May 13th. JAMES A. THOMSON, M.B., Surgeon, to the *President*, additional for survey of dock, May 13th, and to Yarmouth Hospital, June 3rd. WILLIAM L. HARRISS, Surgeon, to the *Pearl*, May 7th. JOHN H. LEARMONT, Surgeon, to the *Leda*, May 7th. FREDERICK G. WILSON, M.B., Surgeon, to the *Hussar*, on completing, May 14th.

Mr. M. O'BRIEN, M.B., civil practitioner, has been appointed Surgeon and Agent at the Isles of Arran, Galway.

ROYAL ARMY MEDICAL CORPS.

Captains S. H. FAIRRIE, M.B., G. T. K. MAURICE, F. E. GUNTER, M.B., and J. H. CAMPBELL, D.S.O., are promoted to be Majors, April 29th. Their previous commissions, which were simultaneous, are thus dated: Surgeon-Lieutenant, July 29th, 1895; Captain, July 29th, 1898. Major Campbell was in the South African war in 1899-1900, including the relief of Ladysmith, the actions at Spion Kop and Vaal Kranz, the operations on the Tugela Heights (severely wounded), and in the Transvaal (several times mentioned in dispatches, awarded the D.S.O., and granted the Queen's medal with three clasps).

The seconding for service with the Egyptian Army of Lieutenant M. G. DILL, M.B., bears date February 14th, instead of as notified in the *Gazette* of March 1st.

EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A FIELD OFFICER, R.A.M.C., due for foreign service next trooping season, desires an exchange with another officer low down on the roster. Apply F. Prince, 32, Charing Cross, S.W.

Vacancies and Appointments.

VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—Senior and Junior Medical Officers. Honorarium at the rate of £20 and £10 a year respectively.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BRADFORD ROYAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BRENTFORD UNION.—Second Assistant Medical Superintendent of the Infirmary and Second Assistant Medical Officer of the Workhouse and Schools. Salary, £125 per annum.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—Acting Physician.

CAMBERWELL: PARISH OF ST GILES.—*Locum Tenens* for the Medical Officer, Constance Road Workhouse. Remuneration, 4 guineas per week.

CANCER HOSPITAL, Fulham Road.—House-Surgeon.

CANTERBURY CITY ASYLUM.—Assistant Medical Officer. Salary, £140 per annum.

CARMARTHEN: JOINT COUNTIES LUNATIC ASYLUM.—(1) Medical Superintendent. (2) Assistant Medical Officer. Salary, £450 and £200 per annum respectively.

CHELTENHAM GENERAL HOSPITAL.—(1) House-Physician, (2) Surgeon in Charge of Branch Dispensary. Salary, £65 and £90 per annum.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon. Salary for first six months at the rate of £90 per annum, increasing to £100.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

CUCKFIELD UNION.—Medical Officers for Nos 2, 6 and 7 Districts. Salaries, £50, £40, and £100 per annum respectively.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

DOUGLAS: NOBLE'S ISLE OF MAN HOSPITAL.—Resident House-Surgeon. Salary, £90 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—House-Physician and House-Surgeon. Salary, £80 per annum each. Assistant House-Surgeon. Salary, £70 per annum

FRENCH HOSPITAL, Shaftesbury Avenue, W.C.—Second Resident Medical Officer. Salary, £50 per annum.

GLASGOW: ANDERSON'S COLLEGE MEDICAL SCHOOL.—Chair of Practice of Medicine.

GORDON HOSPITAL, Vauxhall Bridge Road, S.W.—Resident House-Surgeon.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £90 per annum, and £10 for lectures to probationer nurses.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum.

HULL: ROYAL INFIRMARY.—(1) Honorary Assistant Surgeon for Out-patient Department. (2) Casualty House-Surgeon. Salary, £50 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon Salary, £100 per annum.

LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Stipendiary Medical Officer and Assistant Pathologist. Salary, £150 per annum.

LIVERPOOL: STANLEY HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum

LONDON COUNTY ASYLUMS.—Junior Assistant Medical Officer at the Bexley and Claybury Asylums. Salary, £150 per annum each.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Resident Medical Officer. Salary, £120 per annum.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon and Anæsthetist. Salary, £60 per annum.

MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES.—House-Surgeon. Salary, £75 per annum.

MANCHESTER ROYAL INFIRMARY.—Assistant Surgical Officers. Salary, £35 per annum.

MEDICAL MISSION HOSPITAL, Canning Town.—Female qualified Assistant for Dispensary.

MIDDLESEX HOSPITAL.—Medical Officer and Registrar to the Cancer Department. Salary, £100 per annum.

NEWCASTLE-ON-TYNE DISPENSARY. Visiting Medical Assistant. Salary, £160 for first year, £180 afterwards.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) House Physician. (2) Resident Medical Officer for Maternity Department

NORTH-EASTERN HOSPITAL FOR CHILDREN.—Medical Officer in Charge of Electrical Department. Salary, £50 per annum.

NORTHAMPTON: BERRY WOOD ASYLUM.—Junior Assistant Medical Officer. Salary, £150, increasing to £200 per annum.

ROCHDALE INFIRMARY.—House-Surgeon. Salary, £100 per annum.

ROYAL EAR HOSPITAL, Dean Street, W.—House-Surgeon. Honorarium at the rate of £40 per annum.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Assistant to the Clinical Pathologist and Assistant Anæsthetists.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Junior Resident Medical Officer. Salary at the rate of £40 per annum.

ST. BARTHOLOMEW'S HOSPITAL, E.C.—Lecturer on Anatomy.

ST. THOMAS'S HOSPITAL.—Assistant Physician.

STAFFORDSHIRE GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

STIRLING ROYAL INFIRMARY.—Resident House-Surgeon. Salary, £80 per annum.

TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £50 per annum.

TEIGNMOUTH HOSPITAL, South Devon.—House-Surgeon. Salary, £70 per annum.

THROAT HOSPITAL, Golden Square, W.—House-Surgeon. Salary at the rate of £75 per annum, increasing to £100 if reappointed.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—House-Physician. Honorarium, £30 for six months.

WALSALL AND DISTRICT HOSPITAL.—Senior House-Surgeon. Salary, £100 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—(1) Senior House-Surgeon. Salary, £110 per annum. (2) Resident Assistant House-Surgeon Salary, £75 per annum.

WEST DERBY UNION.—Assistant Resident Medical Officer at the Mill Road Infirmary. Salary, £125 per annum.

WEST HAM AND EAST LONDON HOSPITAL, Stratford, E.—Junior House-Surgeon for six months, eligible for election as Senior. Salary at the rate of £75 and £100 per annum respectively.

WEST HARTLEPOOL: CAMERON HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Officer in charge of *X*-Ray Department.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Junior House-Surgeon. Salary at the rate of £80 per annum.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—(1) House-Surgeon. Salary, £65, rising to £75 per annum. (2) Honorary Physician in Ordinary.

WORCESTER GENERAL INFIRMARY.—House-Physician. Salary, £80 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Cheltenham, co. Gloucester, and Mid-Calder, co. Edinburgh.

APPOINTMENTS.

HERTZ, A. F., M.B., B.Ch Oxon., Assistant Physician to Guy's Hospital.

LEWIS, W. J., L.R.C.P. and S.Edin., L.F.P.S.Glas., Certifying Factory Surgeon for the Ystalyfera District, cos. Brecknock and Glamorgan.

PATON, D. D., M.B., Ch.B.Edin., Parochial Medical Officer for the Northern District of Barry, vice David Paton, M.D.Aberd., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

GRAHAM.—On May 1st, at Gwydir House, Cambridge, the wife of J. C. W. Graham, M.A.Cantab., M.R.C.S., L.R.C.P., of a daughter.

WATERS.—On May 12th, at "Whitegates," Southend-on-Sea, the wife of A. Clough Waters, M.B., B.S., J.P., of a son.

DEATHS.

BEST.—On the 7th inst., at his residence, 26, Strawberry Hill Road, Twickenham, George Payne Best, B.A., M.B.Cantab., M.R.C.S., aged 63.

SHENNAN.—At 95, Mayfield Road, Edinburgh, on May 12th, Eileen Ivy Theodora, aged 2½ years, only child of Dr. Theodore Shennan and Mrs. Shennan (*née* Minnie Green, L.R.C.P. and S.Ed.).

DIARY FOR THE WEEK.

FRIDAY.

BRITISH ELECTRO-THERAPEUTIC SOCIETY, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Paper: Dr. Doumer, of Lille: The Fundamental Principles of Electrotherapy.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 p.m.—Dr F. de Havilland Hall: Two Cases of Prolonged Pyrexia. Dr Gossage: A Case of Partial Heart-block. Dr. F. W. Price: Foreign Bodies in the Bronchi. 9.30 p.m., Annual General Meeting.

POST-GRADUATE COURSES AND LECTURES.

Central London Throat and Ear Hospital, Gray's Inn Road, W.C.—Tuesday and Friday, 3.45 p.m., Pharynx.

London School of Clinical Medicine.—Clinics: Monday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Ear and Throat, 4 p.m. Tuesday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Skin, 4 p.m. Wednesday, Medicine, 2.15 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30 p.m. Out-patient Demonstrations: Surgical, daily, 10 a.m.; Medical, daily, 10 a.m. Ear and Throat, Mondays and Thursdays, 12 a.m. Eye, Wednesdays and Saturdays, 11 a.m. Skin, Tuesdays and Fridays, 12 a.m. Special Lectures: Wednesday, 2.15 p.m., Bronchiectasis; Friday, 3.15 p.m., Epithelioma of Penis and Precancerous Conditions.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows:—Tuesday, Suppression of Urine and Anuria; Wednesday, The Vaccine Treatment of Acne, and Some Points in the Treatment of Some Other Common Maladies: Thursday, Diabetes.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 p.m., Vagal Attacks and Brain Faints; Friday, 3.30 p.m., Surgery of the Nervous System.

North-East London Post-Graduate College, Prince of Wales's General Hospital, Tottenham, N.—The following are the clinics and demonstrations for next week:—Monday, 10 a.m.: Surgical, 2.30 p.m.; Medical, Throat, Nose and Ear, *X* Rays. Tuesday, 10.30 a.m.: Medical, 2.30 p.m.; Operations; Surgical and Gynaecological. Wednesday, 2.30 p.m.: Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynaecological Operations; Medical, Surgical; *X* Rays; 3 p.m., Medical (In-patient); 4.30 p.m., Special Demonstration of Skin Cases. Friday, 9.30 a.m., Surgical; 2.30 p.m., Operations; Medical, Eye; 3 p.m., Medical (In-patient).

Post-Graduate College, West London Hospital, Hammersmith, W.—The following arrangements have been made for next week:—Daily (except Monday), 2 p.m.: Medical and Surgical Clinics, *X* Rays. 2.30 p.m.: Operations. Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. Tuesday and Friday, 2.30 p.m.: Diseases of the Skin. Wednesday, 10 a.m.: Diseases of Children. Lectures—5 p.m.: Tuesday, Medical; Wednesday, Practical Medicine; Thursday Surgical: Friday, *X* rays.

BOOKS, Etc., RECEIVED.

Therapeutische Technik für die ärztliche Praxis. Herausgegeben von Professor Dr. J. Schwalbe. Zweiter Halbband. Leipzig: G. Theime. M.11.20.

Rome as a Winter Resort. By A. G. Welsford, M.D. Rome: "La Speranza" Publishing Office. 1907.

Australasian Medical Congress. Transactions of the Seventh Session held at Adelaide, September, 1905. Adelaide: C. E. Bristow. 1907.

Handbuch der Pathologie des Stoffwechsels Herausgegeben von C. von Noorden. Zweite Auflage. Zweiter Band. Berlin: A. Hirschwald. 1907. M.24.

On the Evolution of Wound Treatment during the last Forty Years. By Sir H. C. Cameron. Glasgow: J. MacLehose and Sons. 1907.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
	MAY.
19 Sunday ...	
20 MONDAY ...	
21 TUESDAY ...	West Cumberland Division, *Border Counties Branch*, Annual Meeting, Cockermouth. Worcester Division, *Worcestershire and Herefordshire Branch*, Worcester Infirmary, 4.30 p.m. Dorset and West Hants Branch, Spring Meeting, Princess Christian Hospital, Weymouth, 3.30; Luncheon, Gloucester Hotel, 2 p.m.
22 WEDNESDAY	Guildford Division, *South-Eastern Branch*, Special Meeting, Royal Surrey County Hospital, Guildford, 4.30 p.m. Westminster Division, *Metropolitan Counties Branch*, St. James's Vestry Hall, 195, Piccadilly, 8.30 p.m. City Division, *Metropolitan Counties Branch*, Special Meeting, Great Eastern Hotel, Liverpool Street, E.C., 4 p.m. Folkestone Division, *South-Eastern Branch*, Folkestone, Annual Meeting and Dinner.
23 THURSDAY...	Wandsworth Division, *Metropolitan Counties Branch*, Annual Meeting, Head Quarters, 4th V.B. East Surrey Regiment, St. John's Hill, Clapham Junction, 3.45 p.m. South Suffolk Division, *East Anglian Branch*, Crown and Anchor Hotel, Ipswich, 3.30 p.m. Hampstead Division, *Metropolitan Counties Branch*, Lecture Room, Hampstead Conservatoire, Swiss Cottage, N.W., 4.30 p.m. Lincoln Division, *Midland Branch*, Annual Meeting, Guildhall, Lincoln, 3.30 p.m.
24 FRIDAY ...	North Cumberland Division, *Border Counties Branch* Annual Meeting, Carlisle, 3.30 p.m. Scottish Division, *Border Counties Branch* Annual Meeting, Board Room, Dumfries and Galloway Royal Infirmary, Dumfries, 3 p.m.

Date.	Meetings to be Held.
	MAY *(Continued).*
25 SATURDAY ...	Trowbridge Division, *Bath and Bristol Branch*, Annual Meeting, Trowbridge.
26 Sunday ...	
27 MONDAY ...	Manchester (West) Division, *Lancashire and Cheshire Branch*, Annual Meeting, Hulme Dispensary, Dale Street, Stretford Road, 4.15 p.m.
28 TUESDAY ...	Boston and Spalding Division, *Midland Branch*, Annual Meeting, Red Lion Hotel, 1 p.m.; Luncheon, 2 p.m. St. Pancras and Islington Division, *Metropolitan Counties Branch*, Annual Meeting, Board Room of the London Temperance Hospital, Hampstead Road, N.W., 4 p.m. Wandsworth Division, *Metropolitan Counties Branch*, Annual Dinner, Gaiety Restaurant, Strand, W.C., 7 p.m. for 7.30 p.m.
29 WEDNESDAY	Special Representative Meeting, Examination Hall, Victoria Embankment, London, W.C., 9.30 a.m. Bath and Bristol Branch, Annual Meeting, Bath.
30 THURSDAY...	Special Representative Meeting *(if necessary)*. City Division, *Metropolitan Counties Branch*, Annual Meeting, Great Eastern Hotel, Liverpool Street, E.C., 9 p.m.; followed by a Supper, 9.30 p.m. South Carnarvon and Merioneth Division, *North Wales Branch*, Annual Meeting, White Lion Hotel, Bala.
31 FRIDAY ...	
	JUNE.
1 SATURDAY	
2 Sunday ...	
3 MONDAY ...	South-Western Branch, Annual Meeting, Royal Devon and Exeter Hospital, Exeter; Luncheon, Clarence Hotel, 1.30 p.m.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 25TH, 1907.

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CENTRAL EMERGENCY FUND.

UNDER the present constitution of the British Medical Association as a limited liability company, registered under the Companies Acts as formed not for profit, no part of its funds can be applied centrally or by any Branch or Division for the benefit of any individual member, except by way of remuneration for services rendered to the Association.

This has been found to prevent the Association, its Branches and Divisions, from giving the financial support which it is deemed desirable or even necessary in the interests of the profession to give to members of the profession engaged in contract practice and similar disputes. The Council of the Association, therefore, with the approval of the Annual Representative Meeting of 1906, has instituted a fund called the Central Emergency Fund, to be maintained by voluntary subscriptions, and to be under the management of the Medico-Political Committee, for purposes of action in disputes of the kind referred to.

The following are the

REGULATIONS OF THE FUND.

1. The Fund is created by voluntary subscription, to assist members of the profession in various parts of the country in maintaining the interests of the profession against organized bodies of the community.

2. All members of the profession are invited to contribute. Any contribution may be earmarked for use in specified disputes, or for application to special methods of carrying out the objects of the Fund, and when not so earmarked shall be deemed to be given for disposal at the discretion of the Medico-Political Committee in carrying out the general objects defined in Clause 1. At the termination of any special dispute for which funds may have been earmarked, the balance (if any) shall be merged in the General Fund.

3. Subject to the conditions defined in this Scheme, the Fund shall be under the entire control of the Medico-Political Committee of the British Medical Association, and shall be vested in the names of the Chairman of the Committee and the Treasurer of the Association, as representing the Committee. Payments shall only be made on the authority of a resolution of the Medico-Political Committee, or of a Subcommittee of the Medico-Political Committee acting under powers specifically delegated by the Committee.

4. The Fund may be applied for the promotion of the general objects stated in Paragraph 1 in any of the following ways:

(*a*) By a grant or grants to any individual practitioner to assist him in maintaining any position in which the Association shall have decided to support him, or to compensate him for losses which he shall have incurred through taking action approved by the Association.

(*b*) By a grant or grants to any Division or Branch of the British Medical Association, for its assistance in defraying expenses incidental to the conduct of local disputes falling within the scope of the objects of the Fund.

(*c*) By expenditure under direct supervision of the Medico-Political Committee, or of a Subcommittee of that Committee, for the purpose of any action which the Medico-Political Committee may deem necessary or advisable for the promotion of the general objects of the Fund.

The Medico-Political Committee, through its Contract Practice Subcommittee, has had recently brought under its notice disputes in several parts of the country in which it may be necessary to take, for the maintenance of the interests of the profession, action requiring such financial support as the Central Emergency Fund has been instituted to provide, and members of the Association and other members of the profession are strongly urged, so far as their circumstances permit, to assist the Committee in this important work.

Contributions—whether of periodical subscriptions at such periods, yearly, quarterly, or monthly, as may be convenient to the subscribers, or of special donations—are received on behalf of the Medico-Political Committee by the Medical Secretary, 6, Catherine Street, Strand, London, W.C., to whom Cheques and Postal Orders should be made payable, crossed "London and Westminster Bank, Bloomsbury Branch."

Forms of banker's orders will be supplied on application for those regular subscribers who may prefer to pay in this way.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

BIRMINGHAM BRANCH:

CENTRAL DIVISION.

A SPECIAL and general meeting of the Division was held at the Medical Institute on Friday, May 10th.

Coventry Provident Dispensary.—The business before the meeting was to receive a report from the Executive Committee on the Coventry Provident Dispensary, and to consider a course of action thereupon. The following is the report: In accordance with the following resolution, which was passed unanimously at a general meeting of the Division held April 17th, 1907—

> That the letter of the Honorary Secretary of the Coventry Division (Dr. Snell) be referred to the Executive Committee to consider and report thereon, and recommend a course of action to an early meeting of the Division,

your Committee has carefully considered the whole matter, and begs to report that the Coventry Dispensary question has engaged the attention of your Executive for a considerable time, namely, from July 11th, 1906, when, at the instance of the Executive Committee of the Coventry Division, your Committee investigated the Institute of the Amalgamated Friendly Societies Medical Association at Dale End, Birmingham, an institution which contains many of the objectionable features of the Coventry Dispensary, and whose success in obtaining medical staff and consultants appeared to influence the Committee of the Coventry Provident Dispensary to refuse the reforms which the Coventry Division asked for. As a result of this investigation, the following resolution was proposed from the chair at a general meeting of the Division held on October 25th, 1906, and carried unanimously:

> That the Central Division expresses the opinion that the Friendly Societies Medical Alliance as at present constituted is not in accordance with the principles of medical ethics, and that the formation of additional Branches is most inadvisable and should be opposed.

The words "formation of additional Branches" refer to the proposal of the Coventry Dispensary Committee to make that institution a branch of the Friendly Societies Medical Alliance. In the meantime (October 12th, 1906) a letter was received from Dr. Snell, writing on behalf of his Committee, asking this Division to pass a resolution condemning the Coventry Dispensary as at present managed. It was pointed out that the institution had been condemned by a meeting of the Birmingham Branch some years ago; and also that the Coventry Division had on April 3rd, 1906, unanimously passed the following resolution:

> That this Division having on February 14th last approved of a scheme of panel practice which they consider appropriate for the proper management of a provident dispensary, hereby declare that no member of the profession in the area of the Division should associate himself with, or continue to be associated with any provident dispensary which is managed on lines fundamentally different from those principles and rules.

The scheme adopted by the Division was that recommended by the Medico-Political Committee in the report on contract practice, with slight modifications (page 1053, SUPPLEMENT, March 17th, 1906). Your Executive Committee thereupon asked for details as to the objections entertained to the Dispensary by the Division, and received the following official reply: (1) That there was no value limit for present or future members; (2) that the officials were paid by commission; (3) that the present constitution of the committee (twenty-four lay members and seven medical) prevented the staff having an effective voice in the management; that the outside profession ought also to be represented; (4) that appointments should be transferable to successors; (5) that appointments should be open to all medical men after a stated period of residence, provided they complied with the rules; (6) that the committee should not have the right to dismiss officers, except under properly arranged restrictions; (7) that the present distribution of the income is inequitable, as less than two-thirds now goes to the staff. There are other minor objections. Your Committee having considered these objections, recommended that the following resolution should be proposed from the chair at a meeting held on November 22nd, 1906:

> That the Division expresses its disapproval of the present methods of conducting the Coventry Provident Dispensary.

This was carried unanimously. Since that time the Coventry Division and the medical staff have been very active in attempting to secure reforms of the institution. Their efforts have been practically in vain, and in consequence the resolution of the Coventry Division passed on April 3rd, 1906, will come into force on June 24th next, when 5 out of the 7 members of the staff leave their positions. This resolution was passed at such an early date at the request of the medical staff of the Dispensary, who believed it would strengthen them in the negotiations with the Committee. Finding no material concessions were given, however, and feeling the pressure of the medical opinion, and especially local opinion, they have now resigned (March 25th). Your Committee therefore recommends that a special meeting be arranged for the passing of the following new ethical rule:

> If the Division, by a majority of three-fourths of those present and voting, pass a resolution disapproving of the terms or conditions of any medical appointment outside the area of the Division, the rules prohibiting professional recognition to the holders of such an appointment within the Division shall apply.

Your Committee further recommends the Division to pass the following resolution:

> That this Division agrees to support the Coventry Division in its resolution of April 3rd, 1906, in declaring that no member of the profession in the area of the Division should associate himself with the Coventry Provident Dispensary so long as that institution is managed on lines fundamentally different from those laid down for provident dispensaries by the recommendations of the Medico-Political Committee (p. 30 of Special Report on Contract Practice issued as a Special SUPPLEMENT to the BRITISH MEDICAL JOURNAL of July 22nd, 1905); and further declares that after June 24th next, in the event of the rules of management of the dispensary not being altered in a manner satisfactory to the Coventry Division, no member of the profession in the area of the Division shall meet in consultation or otherwise professionally recognize the members of the medical staff of the dispensary.

The first part of the report was adopted unanimously. The Ethical Rule was passed by a large majority. The resolution was, after a long and animated debate, passed *nem. con.*, with the addition of the words in the thirteenth line after "Coventry Division," " and approved by the Central Division."

CAPE OF GOOD HOPE (EASTERN PROVINCE) BRANCH:

EAST LONDON DIVISION.

A SPECIAL meeting was held on April 24th, Dr. TANNOCK, Chairman, presiding.

Royal Charter.—The proposed application for a Royal Charter was considered. The following resolutions were passed unanimously:

1. The East London Division approves the proposal to apply for a Royal Charter, the scope of which is sufficiently wide.
2. To approve of the formation of a South African Committee to which all matters concerning South African affairs be submitted, instead of, as at present, to the home authorities, due provision being made for the protection of minorities or individual members.
3. We are not in favour of the proposition in By-law 15, whereby a minority of one eighth can override a three-fourths majority, as this gives too much power to the minority.
4. We are of opinion that the amount of subscription which may be levied by any Branch or Division for its own special purposes should be limited.

Minimum Fee in Private Practice.—Dr. NANGLE then proposed that the minimum fee in private practice be 3s. 6d. He said that because of bad times many were unable to pay 5s. Dr. LOWNDS seconded this motion, and Dr. GANTZ also spoke in favour of it. The other members present, however, were of the opinion that as cases deserving of charity could be dealt with lightly in the matter of fees, it was inadvisable to give unscrupulous

persons, well able to pay 5s., the chance of demanding medical attendance at the minimum of 3s. 6d. Dr. NANGLE's resolution was lost.

GRAHAMSTOWN DIVISION.

A SPECIAL meeting of the Division was held at Steinmann's Hotel, at 8 p.m., on Friday, April 19th.

Executive Committee.—The vacancy on the Executive Committee caused by the death of Dr. Frank Murray of Graaf-Reinet was filled by the election of Dr. G. E. FitzGerald.

Proposed New Branch.—After dealing with the suggestion of the Organization Committee that the East London Division be constituted a Branch, it was resolved:

That this Council advises the Grahamstown Division to support the formation of a Branch to be called the Border Branch or other inclusive name, having the boundaries of the present East London Division together with the fiscal Divisions of the Fort Beaufort, Tarka, Albert, Steynsburg, Wodehouse, Aliwal North, Herschel, and Barkly East.

The Charter.—In answer to three letters received (1) from the Medical Secretary (January 26th), (2) from the Cape of Good Hope, Western Province Branch (March 13th), (3) from the Natal Branch (March 22nd), bearing on the position of the South African Branches under the proposed Royal Charter, it was resolved:

That this Division is in favour of the making application by the British Medical Association for a Royal Charter in order to obtain power, amongst other matters, to undertake medical defence or medical benevolence or to promote medico-political action, provided that the benefits of such increased powers are made available for every member of the Association.

That this Division is in favour of the formation of a Combined Council for the South African Branches to be called the South African Committee, and to have a delegated authority in certain matters as detailed in the letter of the Natal Branch of February 1st, 1907, always provided that the rights of individual members are suitably safeguarded in respect of rules which fix questions of ethics, discipline, or subscription.

That the Division is not in any way desirous to effect an actual or practical severance from the parent association, but merely to facilitate the business of local Branches.

DORSET AND WEST HANTS BRANCH:

BOURNEMOUTH DIVISION.

THE annual meeting of this Division was held at the Medical Society's Rooms, Bournemouth, on Wednesday, May 15th.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, Mr. C. H. Watts Parkinson; *Vice-Chairman*, Dr. W. Johnson Smyth; *Representative*, Dr. W. Johnson Smyth; *Honorary Secretary and Treasurer*, Dr. E. Kaye le Fleming; *Members of Branch Council*, Drs. Bond, Bushman, Purkiss, le Fleming, Ramsay, Snow, and Johnson Smyth; *Executive Committee*, Drs. Fowler, Ross, and Thomas.

Installation of New Chairman.—Dr. Davison then vacated the chair in favour of Mr. PARKINSON, who proposed a vote of thanks to Dr. Davison for his services during the past year, which was carried with acclamation.

Draft Charter.—The CHAIRMAN addressed the meeting on this subject, referring especially to the by-law dealing with the election of members to the Council.

Hospital Administration.—Specific questions Nos. 3 and 4 were answered in the affirmative.

Medical Inspection of School Children.—Specific question 1, clause *c*, adopted.

Ethical Aspects of Medical Consultation.—The recommendations of the Central Ethical Committee were considered in detail and approved. In addition to the same the Division recommended that—

In the event of a general practitioner considering it necessary to alter the treatment advised by a consultant, he should inform the latter and, if necessary, advise a second consultation.

EAST ANGLIAN BRANCH:

EAST NORFOLK DIVISION.

A SPECIAL meeting of the Division was held to consider the draft Charter and the various specific questions submitted for the consideration of the Division regarding Hospital Administration, Medical Inspection of School Children, and Medical Consultation.

Hospital Administration.—The following resolutions were adopted:

1. Should there continue to be compulsory payments by patients to hospitals other than cottage hospitals? No.

2. Should the production of subscribers' letters continue to be compulsory? No.

3. Should inquiry into a patient's circumstances invariably take place? Yes.

4. Should a certificate be required from the medical attendants of all persons attending out-patient departments? A certificate should be required in doubtful cases—that is, persons apparently able to afford to pay a medical practitioner—but, if required in all cases, the regulation would involve much unremunerative labour and waste of time to the private medical practitioner.

Medical Inspection of School Children.—The meeting agreed to the scheme proposed for the central machinery of medical inspection of school children, and recommended the local adoption of the scheme submitted by their own Subcommittee and forwarded to the Medical Secretary.

Medical Aspects of Medical Consultation.—The members were unanimously in support of the adoption of the report of the Ethical Committee on the ethical aspects of medical consultation (SUPPLEMENT, February 16th), and they had no amendment to add to the report.

EDINBURGH BRANCH:

SOUTH-EASTERN COUNTIES DIVISION.

A SPECIAL meeting of the Division was held at Melrose to consider the draft of the proposed Charter of the Association, in order to instruct the Representative how to act and vote at the special meeting of the Representative Body to be held in London on May 29th next; Dr. YOUNG presided.

Hospital Administration.—Dr. HAMILTON brought up a series of questions addressed to Divisions by the Hospital Committee:—(1) Should there continue to be compulsory payment by patients to hospitals other than cottage hospitals? The answer was unanimously "No." (2) Should the production of subscribers' letters continue to be compulsory? The answer was, "No." (3) Should inquiry into a patient's circumstances invariably take place? Answer, "Decidedly." (4) Should a certificate be required from the medical attendant in the case of all patients attending out-patient departments? Answer, "No."

The Charter.—In regard to the Charter, the Representative was instructed to vote for delay until the possible advantages and disadvantages of the proposal had been thoroughly considered. There was, however, a strong feeling that some change in the organization of the Association would ultimately be required.

Central Council.—The meeting also considered the question—Is it desirable that the Central Council should be smaller than at present? The answer was unanimously Yes. It was also unanimously agreed that the Council should be elected by members grouped in Branches as at present. In regard to the representation of Colonial Branches, it was agreed to leave it to their own choice as to whether they would be represented by members elected by a paper vote, or by members elected by the Central Council. Then as to whether or not the representatives should be reduced, Dr. BLAIR moved and Dr. CALVERT seconded that they be not reduced until the question of the Charter is decided. This became the finding of the meeting.

LANCASHIRE AND CHESHIRE BRANCH:

LIVERPOOL (NORTHERN) DIVISION.

A MEETING of the Division was held at the Medical Institution on May 13th, Dr. J. J. TISDALL in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Central Council Election.—It was proposed by Dr. TISDALL, seconded by Dr. A. IVOR THOMAS, and resolved unanimously to support the candidature of Dr. T. R. Bradshaw, Dr. J. Brassey Brierley, Dr. A. Godson, and Mr. F. C. Larkin. The Honorary Secretary was instructed to send a notice to that effect to all members of the Division.

Draft Charter.

It was unanimously decided to answer the questions on p. 148 of the Supplement as follows:

1. In the opinion of the Division it is not desirable that the Central Council should be smaller than at present, and also that there should not be any co-opted members.

2. It is desirable that members of Council should be elected by the system (*d*).

3. The members of Council to be elected in the following proportions:

Elected by the members of the Association in the United Kingdom grouped in Branches, 30.
Elected by the members of the Association not in the United Kingdom grouped in Branches, 10.
Members elected by the Representative Body as a whole, 20.
Ex-officio members of the Council, President, President-elect, Past-President, Chairman of Representative Meetings, Chairman of Council, Treasurer, 6.
Members elected by the Council to represent the naval and military services, 3.
Total membership, 69.

4. The Colonial Branches to be grouped according to geographical relations.

This is a modification of Scheme II, the numbers in columns A, B, and D being doubled.

Draft Ordinances.

Section IV, No. 17 (*b*) is suggested to read, "The Council at their said meeting *shall* either approve," etc., instead of "*may*."

Draft By-laws.

29. Last line, is suggested to read, "not less than *two* months" instead of "*three*."

31. (3) Second line, "within the *two* months," instead of "*three*."

44. In the event of a casual vacancy occurring in the Council amongst the members elected by the Representative Body, there does not appear to be any definite provision made for its being filled.

Notices of Motion.

By the Dublin Division (Leinster Branch). (See Supplement, May 11th, 1907, p. 257.) It was proposed by Dr. Adcock, seconded by Dr. A. Ivor Thomas, and resolved unanimously:

> That this resolution be approved of; but, if it be not carried, the Representative is instructed to support the foregoing recommendations at the special meeting.

Regret for Non-attendance.—The Honorary Secretary on behalf of Dr. Cooke, Chairman of the Division expressed that gentleman's regret at his inability to be present.

SOUTHPORT DIVISION.

The annual meeting was held at the Temperance Institute on May 15th, Dr. Ashworth in the chair.

Election of Officers. The following officers were elected: *President*, Dr. G. R. Anderson; *Vice-President*, Dr. Gill; *Honorary Secretary and Treasurer*, Dr. Harris; *Representative at Representative Meetings*, Dr. Baildon; *Deputy*, Dr. Gill; *Representative on Branch Council*, Dr. Harris; *Other Members of Executive Committee*, Drs. Ashworth, Mackay, Sykes, and Walker.

Draft Charter. The draft Charter was considered, with special reference to the most point as to the mode of election of the Council of the Association. The draft Charter was generally approved, including the official proposals as to the election of the Council, but the Representative was left to exercise his own discretion as to details.

Royal Commission on Poor Law. The reference respecting collection of evidence for submission to the Royal Commission on the Poor Law was brought under notice, but as the time when opinions were invited had passed, and none of the members present held any strong opinions on the questions asked, no discussion took place.

Medical Inspection of School Children. Respecting medical inspection of school children, it was agreed that the medical inspection should be assigned to medical officers of health, or, in case the medical officer of health cannot or will not act, to medical officers specially appointed; but that in all cases, whether the duties be general or special, as in the case of examination of eyes and teeth, that they should be properly remunerated.

Ethical Aspects of Medical Consultation.—The memorandum on the ethical aspects of medical consultation and the recommendations were considered and generally approved.

Hospital Administration.—The memorandum on hospital administration was considered, and in answer to the questions submitted it was resolved as follows:

1. Should there continue to be compulsory payments by patients to hospitals other than cottage hospitals? No.

2. Should the production of subscribers' letters continue to be compulsory? No.

3. Should inquiry into a patient's circumstances invariably take place? Yes.

4. Should a certificate be required from the medical attendants of all persons attending out-patient departments? No; impracticable.

5. Subscribers' letters should be discountenanced.

All members present remained to the end of the meeting and the decisions were unanimous.

METROPOLITAN COUNTIES BRANCH:

TOTTENHAM DIVISION.

A meeting was held at the Hospital on Wednesday, May 15th, at 4.30 p.m.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Branch Council Elections.—A letter was read from Dr. Rowland Fothergill regarding elections to the Branch Council.

Postal Medical Officers.—The following resolution, proposed by Dr. Fuller and seconded by Dr. Shoyer, was carried:

> Seeing that the chief postmaster of a district apparently has the power of appointing postal medical officers in his own hands, and that such power might possibly be abused, that the matter be referred to the Medico-Political Committee asking them to take steps to make these appointments open to competition, and vacancies advertised in the medical journals.

Draft Charter.—The draft Charter and matters referred to the Division by the Organization Committee were considered in order that Dr. Fuller might express the views of the Division in the approaching Representative Meeting.

Election of Officers.—The following officers were elected: *Chairman*, A. F. Shoyer, M.D.; *Vice-Chairman*, Leonard Grant, M.D.; *Representative*, J. R. Fuller, M.D.; *Honorary Secretary and Treasurer*, H. F. Staunton, M.B.; *Committee*, G. Chappel, M.D., D. Fogarty, M.R.C.S., A. Greenwood, M.R.C.S., C. E. Hutt, M.R.C.S., E. Hooper May, M.D., F.R.C.S., F. Tresilian, M.D.

NORTH OF ENGLAND BRANCH.

A meeting of the Northumberland Committee was held at Newcastle-upon-Tyne on Thursday, May 9th, Mr. Rutherford Morison in the chair. The chief business before the meeting was the discussion of the draft Charter. The Committee was unanimously of opinion that any reduction in the Branch representation upon the Central Council of the Association was undesirable, and it was unanimously resolved that the Divisions in the county be recommended to instruct their Representatives accordingly. It was further resolved to communicate with the Durham Committee accordingly. Concerning the capitation fees it was decided to recommend the Divisions in the county to instruct their Representatives to obtain a clear understanding that extra grants could be made to Branches in deserving cases before assenting to the change.

Hospital Treatment. It was resolved that in the opinion of this Committee all public hospitals should be free and no charge should be made to patients applying for relief.

Midwifery Fees. The question of the proper parties to be made liable for medical fees in cases where doctors were summoned to poor persons at the instance of a midwife was discussed and adjourned.

SOUTHERN BRANCH:

SALISBURY DIVISION.

THE annual meeting of the members of this Division was held at the Infirmary, Salisbury, on May 8th, at 8.15 p.m. In the absence of the Chairman at the commencement of the meeting, Dr. WILLCOX of Warminster was voted to the chair.

Dinner.—The meeting was preceded by dinner at the County Hotel.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Election of Officers.—Election of officers for the ensuing year: *Chairman*, Dr. E. A. Farr (Andover); *Vice-Chairman*, Dr. R. T. Richmond (Wilton); *Honorary Secretary and Treasurer*, J. E. Gordon (Salisbury); *Representative for Representative Meetings*, Dr. C. R. Straton (Wilton); *Representatives on Branch Council*, Mr. L. S. Luckham, Dr. E. T. Fison. *Executive Committee*, Dr. H. P. Blackmore (Salisbury), Dr. J. O. March (Amesbury), Dr. Gilbert Kempe (Salisbury), Dr. R. L. Willcox (Warminster). In the absence of Dr. Farr of Andover, the newly-elected Chairman, the chair was now taken by the newly-elected Vice-Chairman, Dr. R. T. RICHMOND.

Annual Report.—The Honorary Secretary and Treasurer's account and balance-sheet, showing a balance in hand of £15 14s. 2d., and also the Secretary's report were passed.

Draft Charter.

It was proposed by Dr. KEMPE, seconded by Dr. WILLIAMS-FREEMAN:

> That in the opinion of this Division the time has not yet come for the asking for a Royal Charter, and it is considered that the working of the reconstitution of the British Medical Association has been so far satisfactory, and further experience is desirable before making any change.

This was passed unanimously.

The Charter:

It was proposed by Dr. WILLCOX, and seconded by Dr. LUCKHAM, in reference to the following:

2. Delete all subclauses except (1). These are unnecessary, and suggest many lines of corporation trading to which many of us object as likely to injure the Association. They would also provoke opposition to the Charter from medical defence associations, medical agents, directory publishers, and others whose legitimate occupations are threatened by them.

3. Omit bracketed clause.

9. (1) *g*. The word "personal" to be deleted and the word "travelling" substituted. "Personal" would open up many chances of abuse.

Carried. For, 17; against, *nil*.

Second Schedule. By-laws:

It was proposed by Dr. LUCKHAM, and seconded by Dr. FISON, in reference to the following:

Section IV, 19. That the capitation grant should be equal, and that Branches desiring to spend more should meet their expenditure by voluntary subscriptions. In any cases of special necessity an appeal should be addressed to the Council, who may make an emergency grant not exceeding 1s. per member.

Section V, 29. That the present system of representing Branches on the Council be retained, and that the Charter embody the present Association as it at present stands.

Section VI, 37. Be deleted, and present arrangement to stand.

Carried. For, 17; against, *nil*.

Hospital Administration.

Question 1. No.

Question 2. No opinion expressed.

Question 3. That all cases should be seen by an almoner, and those not suitable for hospital treatment should be referred elsewhere.

Question 4. That it should be left to discretion of hospitals to frame their own rules on the subject.

Questions 1, 2, and 3 were passed *nem. con.*; Question 4—voted for, 1 against, 6 not voting.

Medical Inspection of School Children.

Questions 1 and 2. When there is a whole-time medical officer of health, he should undertake the duties, but otherwise arrangements should be made as in Clause (*c*), Question 1.

Question 8. A teacher should send a child home, not to hospital.

Carried unanimously.

Ethical Aspects of Medical Consultation.

On the motion of Dr. KEMPE, the Division did not express any views on the matter, no concrete case for opinion being stated.

Association Business.—Dr. WILLIAMS-FREEMAN proposed and Dr. WILLCOX seconded:

> That the Salisbury Division of the British Medical Association resolves to consider Association business only at special meetings, to be called for that purpose not oftener than twice a year, and to be held at such times as the Secretary considers convenient, and to represent to the Council the undesirability of hampering the scientific work of the Divisions, and embarrassing their Secretaries with too much medico-political business.

This was carried unanimously as an instruction to the Representative of the Division.

Communications.—Dr. L. S. LUCKHAM read an account of a case of acute tuberculosis. Dr. GILBERT KEMPE read a paper on a series of cases of hernia, and showed specimens of two extrauterine pregnancies removed by operation, both patients recovered; a blood film of *Trypanosoma hominis*; a blood film of *Filaria loa*; a larva of *Dermatobia noxalis*. This concluded the business of the meeting.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE annual meeting of the Branch was held at St. James Hall, Phillip Street, Sydney, on Friday, March 22nd, Dr. POCKLEY, President, in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The PRESIDENT announced the election of the following new members since the last meeting:—Dr. Eric Pockley, Dr. H. Stephens, Dr. Llewellyn Rees, Dr. Peet, Dr. Hagen, Dr. Poate, Dr. MacImres, Dr. Bradley, Dr. Deakin, Dr. Schlink, Dr. F. B. Craig, Dr. A. J. Mackenzie, Dr. Diethelm, Dr. Vickers.

Annual Report.—The annual report and balance sheet were taken as read. The report stated that the membership of the Branch was 532 as against 501 at the beginning of 1906. Two extraordinary general meetings and eight ordinary general meetings had been held during the year; the attendance was very satisfactory. After nearly eight years of unremitting service as honorary secretary, Dr. G. T. Hankins resigned mainly owing to his removal to Warwick, in Queensland. Resolutions expressing appreciation of his valuable services and the deepest regret at his retirement were passed by the Council. At the invitation of the Council, Dr. Crago, for many years honorary treasurer, accepted the office of honorary secretary, and Dr. G. H. Abbott succeeded Dr. Crago as honorary treasurer. The vacancy in the Council caused by the retirement of Dr. Hankins was filled by the election of Dr. R. H. Todd. Early in the year Dr. Hankins circulated a provisional scheme for the formation of Divisions in conformity with the constitution of the Association as applicable to the United Kingdom. Several communications favourable to the proposal were received, and also some expressing disapproval. The matter remained in abeyance. A conference was held on September 7th between delegates of the Council and of the Council of the Pharmaceutical Society of New South Wales in reference to questions of common interest to medical practitioners and members of the Pharmaceutical Society. A report on the matters discussed and the conclusions arrived at were published in the *Australasian Medical Gazette*.

Public Matters.—Correspondence took place during the year between the Council and the Secretary to the Railway Commissioners in reference to the methods adopted by the Railway Commissioners for testing the eyesight of employees and candidates for employment in the railway service. Further correspondence on the subject had been deferred until after the new Commissioners had entered upon their duties. The Council had been invited during the year to adjudicate in ethical disputes between members of the profession, and its attention was called to instances of advertising in newspapers by members of the profession. The Council urged members of the Branch not to resort to newspaper advertisement in any form for the extension of their practice. The desirability of acquiring suitable premises for the Branch at which the meetings of the Association might be held and provision made for a library and reading-room of real utility to members had been apparent to the Council for some years

past. The Honorary Secretary was authorized to seek for a suitable site, and had succeeded in finding land in a very convenient position that could be purchased. It was estimated that a sum of from £6,000 to £7,000 would be required for its purchase and for the erection of a suitable building. Definite proposals in reference to this matter would be submitted to members for their consideration. The successful termination of negotiations between the Medical Society of Victoria and the Victoria Branch of the British Medical Association for the amalgamation of these two bodies was a matter for hearty congratulation. This amalgamation should prove of great benefit to the profession throughout Australia, inasmuch as the field was left clear for the representation of the whole profession in Australia by one organization, and that one the British Medical Association. At the request of the delegates entrusted with the negotiations between these two bodies the editor and the manager of the *Australasian Medical Gazette* visited Melbourne in May last and conferred with them in reference to the adoption of the *Australasian Medical Gazette* as the official organ of the societies which it was proposed to unite. The matter was still receiving the attention of the newly-constituted Victorian Branch of the British Medical Association. It was possible that the New South Wales Branch might be asked to sell a share in the *Gazette* to the Victorian Branch, a procedure which was contemplated and intended to be given effect to at the time the New South Wales Branch purchased the *Gazette*, in the event of a Branch in another State desiring to acquire an interest in it. The *Australasian Medical Gazette* had continued its successful career. Dr. Rennie was reappointed editor and Dr. Crago manager of the *Gazette* at the first meeting of the Council held after the last annual meeting. The Honorary Treasurer's statement showed a balance in hand of £623 10s. 4d. on December 31st, 1906. Dr. Pockley proposed and Dr. Crago seconded the adoption of the annual report. Carried. Dr. Crago proposed and Dr. Fiaschi seconded the adoption of the balance sheet. Carried.

Australasian Medical Gazette.—Dr. Crago explained the statement of accounts for the *Gazette* account, and moved the adoption of the balance sheet of the *Australasian Medical Gazette*. Seconded by Dr. J. A. Dick, and carried.

President's Address.—Dr. Pockley read his address. Dr. Scott Skirving proposed a hearty vote of thanks to the President for his address. Seconded by Dr. Worrall and supported by Dr. Crago, and carried by acclamation. Dr. Pockley thanked the members for the vote of thanks.

Election of Office-bearers.—The President announced the result of the election of office-bearers for the ensuing year: *President*, Dr. Newmarch; *Vice-President*, Dr. Abbott; *Councillors*, Drs. Crago, Pockley, Todd, Dick, MacCormick, Rennie, Hinder, Jenkins, Maitland, Beeston, Brady, and Clarence Read. Drs. F. W. Hall and Sawkins were appointed auditors. Dr. Worrall was appointed Representative of the Branch to the Representative Annual Meeting of the Home Association; Sir Phillip Jones, Dr. Worrall, and Dr. Clubbe were appointed delegates of the Branch to the Annual Meeting of the Home Association to be held at Exeter in July and August, 1907.

Vote of Thanks.—A hearty vote of thanks was accorded to Drs. F. A. Hall, Sawkins, Stacy, and A. Palmer, the scrutineers. Carried.

Lodge Practitioners' Defence Fund.—Dr. Crago reported that the Lodge Practitioners' Defence Fund had a credit balance of £97 15s. 9d. at the end of 1906, but since that date £40 had been voted away.

Introduction of New President.—Dr. Pockley then introduced the President, Dr. F. W. Newmarch, who thanked the members for having elected him President of the Branch.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IMPORTANT NOTICE.

Owing to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

SPECIAL REPRESENTATIVE MEETING.

The Special Representative Meeting will take place on Wednesday, May 29th, at 9.30 a.m. in the Examination Hall, Victoria Embankment, London, W.C.

BY ORDER OF THE COUNCIL,

GUY ELLISTON, *General Secretary.*

April 11th, 1907.

SPECIAL COUNCIL MEETING.

A special meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, June 5th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board, to consider the resolutions passed by the Special Representative Meeting in regard to the proposed Royal Charter. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,
General Secretary.

May 14th, 1907.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Aberdeen Branch.—Nomination of elective member of Council. Notice is hereby given that the names of candidates for the representation of this Branch must be sent to me on or before June 12th. Each candidate must be nominated by at least three electors.—J. F. Christie, Honorary Secretary, 7, Alford Place, Aberdeen.

Bath and Bristol Branch.—The annual meeting of the above Branch will be held on Wednesday, May 29th, 1907, at the Museum, Bath, at 7.30 p.m., when Dr. D. S. Davies will resign the chair to Dr. E. J. Cave, President-elect, who will deliver the Presidential Address. The business of the meeting will be to receive the report of the Council and the annual financial statement; to elect the officers of the Branch; to receive the report of the election of Members of Council and of the Representatives of Divisions; to transact the necessary business; and to consider such subjects connected with the interest of the Branch and of the profession as may be brought before it. The Secretaries will be obliged if members will send them notice of any alteration in their diplomas or addresses. A supper will be held at Fortt's Restaurant, Milson Street, at 8.45 p.m. Tickets, 3s. 6d. each, including beer. The Bath Secretary particularly requests that members will inform him by Monday, May 27th, whether it is their intention to be present at the supper. The Secretary cannot undertake to provide places for members at the supper without notice beforehand. W. M. Beaumont, Honorary Secretary of the Bath District, 4, Gay Street, Bath; Newman Neild, Honorary Secretary of the Bristol District, 9, Richmond Hill, Clifton, Bristol.

Bath and Bristol Branch: Trowbridge Division.—The annual meeting of this Division will be held in the Court Room, Town Hall, Trowbridge, on Saturday, May 25th, at 3 p.m. Business: To elect Chairman, officers, and Representatives. To transact such business as may be done at an annual meeting. To consider matters referred by the Association to the Division. Other matters. If time permits there will be a discussion on the question of Contract Practice, and the possibility of establishing public medical services in the district. Members are particularly requested to bring with them the Supplements issued with the recent numbers of the British Medical Journal containing "matters referred to the Divisions," especially those of February 16th, April 6th, April 13th, etc. John Tudor Thomas, Honorary Secretary, Trowbridge, Wilts.

Birmingham Branch.—Notice is hereby given that the annual meeting of the Branch will be held at the Medical Institute, Birmingham, on Thursday, June 13th, at 3.30. Agenda: Election of two members of the Branch to represent the Branch on the Central Council of the Association. Nominations for these offices must be sent to the undersigned not later than May 30th.—O. J. Kallemann, 22, Broad Street, Birmingham.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—The annual meeting of the Division will take place at the Medical Institute on Wednesday, June 5th, at 4 p.m.—E. D. KIRBY, Honorary Secretary.

BORDER COUNTIES BRANCH AND NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—*Nomination of Elective Member of Council.*—Notice is hereby given that the names of candidates for the representation of these two Branches must be sent in to me on or before May 27th. Each candidate must be nominated by at least three electors.—FRANCIS R. HILL, Honorary Secretary, Border Counties Branch, 62, Warwick Road, Carlisle.

BORDER COUNTIES BRANCH.—The annual general meeting of this Branch will be held in the Crown and Mitre Hotel, Carlisle, on Friday, June 21st. The business will include proposals to alter the existing rules of the Branch in several particulars, details for which will be sent to every member before the meeting. Election of office-bearers, etc. The Presidential Address will be delivered by Dr. F. H. Clarke, Dumfries. The detailed agenda paper will be issued as usual before the meeting.—FRANCIS R. HILL, Honorary Secretary, Carlisle.

EAST ANGLIAN BRANCH.—*Two Members of Council.*—In accordance with the Articles and By-laws, the Honorary Secretary of the Branch will be glad to receive nominations, signed by not less than three members, for the election of two Representatives on the Central Council of the Association. Nominations must reach the Honorary Secretary of the Branch on or before Monday, June 3rd.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary of Branch.

EAST ANGLIAN BRANCH.—The annual meeting of the East Anglian Branch will be held at Ipswich on Thursday, June 20th. Members wishing to read papers or show cases or specimens should communicate at once with Dr. Gutch, Ipswich.—B. H. NICHOLSON, M.B., East Lodge, Colchester, Honorary Secretary.

EAST ANGLIAN BRANCH: WEST NORFOLK DIVISION.—The annual meeting will be held at the West Norfolk and Lynn Hospital on June 20th, at 3 p.m., when officers and Representatives will be elected for 1907-8.—ARTHUR GARDINER, Honorary Secretary, Tuesday Market Place, King's Lynn.

EDINBURGH AND FIFE BRANCHES.—The attention of members of these two Branches is drawn to the fact that nominations for the election of two members upon the Central Council of the Association should be sent in to one of the Secretaries not later than Wednesday, June 5th.—LOGAN TURNER, 27, Walker Street, Edinburgh; FRANCIS W. BOYD, 22, Manor Place, Edinburgh; BALFOUR GRAHAM, Leven, Fife, Honorary Secretaries.

GLASGOW AND WEST OF SCOTLAND BRANCH.—*Nominations of Members of Council.*—In accordance with Branch Rule 5 and Association By-law 24, nominations for Representatives on the Central Council, each signed by at least three electors, are requested to be sent to Mr. J. Grant Andrew, 12, Woodside Terrace, Glasgow, on or before Monday, May 27th. If more than two members are nominated, an election by voting papers will be necessary.—JAMES HAMILTON, J. GRANT ANDREW, Honorary Secretaries.

GLASGOW AND WEST OF SCOTLAND BRANCH.—The statutory annual meeting of the Branch will be held in the new Medical Buildings of the University on the afternoon of Friday, June 7th, at half-past three o'clock. Professors Glaister, Stockman, and Nöel Paton have courteously offered to show the members the New Laboratories, a description of which will be found in the JOURNAL of April 27th (page 1023). Dr. Donald MacIntosh has also invited the Branch to visit the New Wing of the Western Infirmary. A dinner will be held in the evening (6.15), at which Principal Donald MacAlister, M.D., LL.D., will be present. Ticket, 5s. 6d. (exclusive of wines).—JAMES HAMILTON, J. GRANT ANDREW, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—The annual meeting will be held at Altrincham on June 6th, when officers and committee will be elected for 1907-8. A paper on Some of the Disorders of Infancy will be read by Henry Ashby, M.D., of Manchester. The subsequent dinner will be held at the Brooklands Hotel at 7 o'clock. (By order.)—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: MANCHESTER (WEST) DIVISION.—The annual meeting of the Division will be held at the Hulme Dispensary, Dale Street, Stretford Road, on Monday, May 27th, at 4.15 p.m. It is hoped that all members will make a special effort to be present. Agenda: 1. Minutes and Correspondence. 2. Election of Officers: (*a*) Chairman; (*b*) Vice-Chairman; (*c*) Secretary; (*d*) Five Members of Committee; (*e*) Two Representatives on Branch Council. 3. Election of Representative in Representative Meeting. 4. Annual Report of Executive Committee. 5. Consideration of Draft Scheme for co-ordinating the Divisions in their work, prepared by the Manchester and Salford combined Committee. 6. Annual Meeting of the Branch in Manchester: Election of Five Representatives on Committee of Management. 7. Business of the Representative Meeting: Instructions to Representative; Draft Charter. 8. Rule respecting the Tenure of Office by Chairman of Division. 9. Any other business. Members are requested to forward the names of those they may wish to nominate for the vacant posts to the Honorary Secretary on or before Saturday, May 25th. Any member of the Division is eligible for election.—J. SKARDON PROWSE, B.A., 372, Moss Lane East, Manchester, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: MANCHESTER (SOUTH) DIVISION.—The annual general meeting of this Division will be held at Dr. Sawers Scott's, Wilmslow Road, Withington, at 3.45 p.m., on Friday, May 31st. Agenda: (1) Minutes. (2) Reference to our former Chairman, the late Dr. Collins. (3) Letter *re* Rusholme Dispensary. (4) Election of officers for the ensuing year. (5) Committee's annual reports. (6) Proposed new rules: (*a*) The Past Chairman shall be an *ex-officio* member of the Committee. (*b*) Adoption of a code of ethical rules. (7) Draft scheme for Combined Committee of the Manchester Divisions, and election of four representatives. Dr. J. Milson Rhodes has consented to address the meeting on the draft Charter. Tea and coffee.—M. RUSSEN RHODES, Bridge House, Didsbury, Honorary Secretary of the Division.

METROPOLITAN COUNTIES BRANCH. — *Nominations of Branch Officers.*—Pursuant to By-law 24, notice is hereby given that nominations for all the officers of the Branch, namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association, must be sent in to the Honorary Secretary of the Branch on or before May 28th. Voting papers will be sent out on or before June 4th, and must be returned to the Secretary on or before June 11th.—FRED. J. SMITH, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—Notice is hereby given that the annual meeting of the Branch will take place on Thursday, June 27th. Time and place will be fixed by the Branch Council.—Honorary Secretary, FRED. J. SMITH.

METROPOLITAN COUNTIES BRANCH.—At the request of the Westminster Division, a special general meeting of the Branch will be held at 4.30 p.m., on Thursday, June 6th, at St. James's Vestry Hall, Piccadilly, to discuss the advisability of constituting a central hospital authority for London. Dr. Knowsley Sibley will submit, on behalf of the Westminster Division, the following resolution: "That in the opinion of this meeting of the Metropolitan Counties Branch of the British Medical Association, it is desirable, with a view of abating the present abuse of hospital charity, that a central hospital authority for London be constituted upon which the medical profession is adequately represented." If this resolution is approved by the meeting, the Branch Council will be asked by further resolutions to appoint a committee and provide the funds necessary for the promotion of this object. Those who desire to join in the discussion are requested to send their names to Dr. F. J. McCann, 5, Curzon Street, Mayfair, W., Secretary, Westminster Division. Tea and coffee will be served at 4 p.m.—F. J. SMITH, M.D., D'ARCY POWER, F.R.C.S., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—The annual meeting of this Division will be held on Thursday, May 30th, at 9 p.m., at the Great Eastern Hotel, Liverpool Street, E.C., the meeting to be followed by a supper at 9.30 p.m.—E. W. GOODALL, Eastern Hospital, Homerton, N.E., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.—A meeting of the medical profession of Hampstead and neighbourhood will be held under the auspices of the Hampstead Division of the British Medical Association, on Friday, May 24th, at 4.30 p.m., in the Lecture Room of the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. Macevoy in the chair. Agenda: 1. To receive the report of the Committee of the local profession appointed on May 5th, 1906. 2. To consider the following resolutions passed by the Committee on April 26th: (*a*) That this meeting confirm the resolutions passed by meeting of the local medical profession on May 5th, 1906, which are: (1) That an out-patient department in Hampstead is unnecessary. (2) That the casualty department be kept distinct from any other department, and that casualty patients, if not suitable for admission, be seen once, and thereon be referred to private practitioners, provident dispensaries, or Poor-law authorities. (3) That there be greater facilities for general practitioners of the neighbourhood to attend in-patients. (4) That there should be a service limit, as well as an age limit, to the appointments to the medical staff. (5) That the outside medical profession be adequately represented on the Board. (6) That it is desirable, both in the interest of the district and of the

hospital itself, that the Hampstead Hospital be carried on as a purely local institution, and not as a large general hospital, and that therefore an acting staff of consultants is not in accordance with the spirit of its constitution. (*b*) That this meeting does not regard the proposed amalgamation of the Hampstead and North-West London Hospitals with approval. (*c*) That the visiting staff of the Hampstead Hospital should be limited to local practitioners. 3. Other business. Tea will be provided.—Reginald A. Yeld, 29, Platt's Lane, Hampstead, Honorary Secretary of the Committee of the Local Medical Profession appointed on May 5th, 1906.

Metropolitan Counties Branch: Marylebone Division.—The annual meeting of this Division will be held on Thursday, May 30th, 1907, at the Rooms of the Medical Society of London, 11, Chandos Street, W., at 5 p.m. (1) Minutes. (2) In accordance with the resolution passed by the Division on February 26th, 1907, to alter Rule 5 of the Division, so that it reads as follows: "The officers of the Division shall be a Chairman, Vice-Chairman, Treasurer, and Secretary" (3) To elect officers, namely, Chairman, Vice-Chairman, Treasurer, Honorary Secretary. (4) To elect the Representative of the Division at the Representative Meetings of the Association. (5) To receive the annual report of the Executive Committee. (6) To consider a memorandum and a series of questions on the Ethics of Medical Consultation framed by the Executive of the Division, and to be sent to Consultants residing in the area of the Marylebone Division, in accordance with the resolution passed at the meeting of the Division held May 14th. Questions to follow. (7) To transact any other business that may be transacted at an ordinary meeting.—Comyns Berkeley, B.A., M.B., B.C.Cantab., M.R.C.P.Lond., Wimpole Street, W., Honorary Secretary and Treasurer.

Metropolitan Counties Branch: St. Pancras and Islington Division.—The annual meeting will be held in the Board Room of the London Temperance Hospital, Hampstead Road, N.W., on Tuesday, May 28th, at 4 p.m. Tea will be provided. Agenda: (1) Minutes. (2) Correspondence. (3) To receive annual report and balance-sheet. (4) To elect chairman, vice-chairman, secretary, representative, three members of the Branch Council, and Executive Committee. (5) To consider alterations of rules as follows: (*a*) That Rule 11 as hereunder printed shall stand amended by leaving out the words in italics, "Ordinary meetings of the Division shall be held *not less than six times a year* at such times and places as the Executive Committee shall appoint. (*b*) In Section D, Rule 11, *re* annual meeting, that seven days be the notice required instead of fourteen. (6) To consider notices of motion for the Annual Representative Meeting. (7) Such other business as may be dealt with by the annual meeting.—Walter H. Yeld, Honorary Secretary.

Metropolitan Counties Branch: Wandsworth Division.—The annual dinner will be held on Tuesday, May 28th, at 7 p.m. for 7.30 p.m., in the New Gaiety Restaurant, Strand, W.C. Ladies are invited. Small tables can be engaged if desired. Tickets (exclusive of wine), 7s. 6d. each, which will be collected on the evening. The toast list will be short, and a good programme for an entertainment has been arranged. Members can bring their medical friends and book seats by writing to Dr. Allan J. Swallow, Honorary Secretary Dinner Committee, 61, South Side, Clapham Common, S.W.

Midland Branch.—The annual meeting of this Branch will be held at the Devonshire Hospital Buxton, on Thursday, June 13th, 1907, at 2.15 p.m. Agenda: Minutes; report of Council; financial statement; election of two Representatives of Branch on the Central Council. The only nominations received are Dr. Carline and Dr. Pope, who will therefore be elected. Election of Branch officers—election of President-elect, 1907-8; any other business. Address by the new President, G. Lorrimer, Esq., M.D. Clinical cases shown by members of the Honorary Staff Devonshire Hospital. The President will be glad to entertain members to lunch at the Palace Hotel, Buxton, at 1 p.m. The annual dinner will be held at the Palace Hotel, Buxton, at 6.30 p.m., tickets (exclusive of wine) 7s. 6d. each. Members attending the lunch or the dinner are requested to notify the fact to Dr. Lorrimer, Buxton, or the Honorary Secretary, before Monday, June 10th.—Robert Sylvester, Honorary Secretary and Treasurer, 119, London Road, Leicester.

Midland Branch: Bolton and Southern Division. The annual meeting of this Division will be held on Tuesday, May 28th, at the Red Lion Hotel at 7 o'clock. Luncheon will be provided at 2 p.m., tickets, 4s. 6d. each, exclusive of wine. Members are requested to reply not later than May 25th as to their intention to be present at the luncheon; those accepting will be held responsible for the value of their tickets. Members may bring guests to the luncheon. Agenda: 1. Election of officers. 2. Programme for the year. 3. Matters referred to Divisions: (*a*) Hospital Administration (Supplement, April 13th); (*b*) Draft Charter (Supplement, April 6th); (*c*) the Ethical Aspects of Medical Consultation (Supplement, February 16th); (*d*) Medical Inspection of School Children (Supplement, February 16th). 4. Any other business.—A. E. Wilson, Honorary Secretary, Boston and Spalding Division.

North Wales Branch.—Nominations for a Representative of the Branch on the Central Council in accordance with By-law 24 will be received by the Honorary Secretary up to June 1st.—H. Jones Roberts, Honorary Secretary, Llywenarth, Penygroes.

North Wales Branch: South Carnarvon and Merioneth Division.—The annual meeting of the Division will be held at the White Lion Hotel, Bala, on Thursday, May 30th, in the afternoon. Members having papers to read or cases to show are requested to communicate with the Honorary Secretary before May 22nd.—Henry Gladstone Jones, Plas Gwilym, Criccieth, Honorary Secretary.

South-Eastern Branch.—The annual meeting of this Branch will be held at Brighton on Wednesday, June 19th, Mr. T. Jenner Verrall, President-elect, in the chair. The following will be the agenda: (1) To elect the officers of the Branch (this will be done by voting papers sent to each member of the Branch); nominations by three members for the offices of president-elect, vice-presidents, and secretary may be sent to the Honorary Secretary on or before May 18th; (2) to receive the annual report of the Branch; (3) to transact any business that may be transacted by an ordinary meeting. N.B.—Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each of three members in writing, should be sent to the Honorary Secretary of the Branch on or before May 18th.—H. M. Stewart, Dyffryn, Dulwich, Honorary Secretary.

South-Eastern Branch: Canterbury and Faversham Division.—A combined meeting of the Divisions comprised in the old East Kent District—that is, Ashford, Canterbury and Faversham, Dover, Folkestone, and Thanet—will be held at the County Hotel, Canterbury, on Thursday, June 27th, at three o'clock precisely, Dr. Whitehead Reid in the chair. Agenda: A paper will be read by W. J. Tyson, M.D., F.R.C.P., F.R.C.S., Honorary Physician, Victoria Hospital, Folkestone, on the Future Lines of Treatment: Their Effects on the Profession. An address by Alex. G. R. Foulerton, F.R.C.S., D.P.H., Director of Bacteriological Department, Middlesex Hospital, Medical Officer of Health to the County of East Sussex, on the Treatment of Infective Disease by Bacterial Vaccination. W. T. Hillier, Esq., M.R.C.S., D.P.H., Pathological Assistant, Research Laboratories, Middlesex Hospital, will (1) Show specimens of trypanosomata; (2) give a demonstration of the method of determining the opsonic index of the blood. Preliminary meetings will be held as follows: (*a*) 2.30, Canterbury and Faversham Division:—Agenda: (1) Minutes. (2) Annual report. (3) Election of officers—Chairman, Vice-Chairman, Representative at Representative Meetings, Representative on Branch Council, Honorary Secretary and Treasurer, Committee. (4) To consider the desirability of amalgamating with the Ashford Division. (5) Any other business. (*b*) 2.50, Canterbury and Faversham with Thanet Divisions:—Agenda: (1) To elect the Representative for Representative Meetings. Members will dine together at 5.45 for 6 o'clock at the County Hotel, Canterbury; charge 5s., exclusive of wines. Those who intend to stay to dinner are requested to notify Dr. Henchley not later than the morning of June 27th, and to state whether they will assist in a short musical programme.—A. R. Henchley, Honorary Secretary and Treasurer, Canterbury.

South-Eastern of Ireland Branch.—A meeting of this Branch and of the Branch Council will be held at the Town Hall, Clonmel, on Wednesday, June 12th, at 12 noon. Agenda: (1) Minutes. (2) Apologies. (3) Correspondence. (4) Ethical aspects of medical consultation; revised Royal Charter and hospital administration (see Supplement to the British Medical Journal, February 16th, April 6th and 13th, and bring them to meeting). (5) To receive report of Committee relating to undersselling. (6) To elect new member. (7) Dr. Jellett will read notes on a case of retinitis proliferans, and exhibit photographs of it. (8) Dr. Quirke will introduce a discussion on parotitis and Lotchmeeh (Irish), giving differential diagnosis. (9) Any other business. Members are requested to give the Honorary Secretary at least three days' notice of their intention to read papers or bring up matters concerning the interest of the profession for discussion. J. Quirke, Honorary Secretary, Piltown.

South Midland Branch. Nominations for Representative for the above Branch on the Central Council are requested to be sent to the Honorary Secretary not later than June 10th.—E. Harries Jones, Secretary.

South Wales and Monmouthshire Branch.—Notice is hereby given that the election of Branch Representatives on the Central Council will take place on June 15th at the annual meeting at Cardiff.—Frank G. Thomas, M.B., 68, Walter Road, Swansea.

SOUTH-WESTERN BRANCH.—The sixty-eighth annual meeting will be held on June 3rd, at the Royal Devon and Exeter Hospital, Exeter, at 12.30 p.m. In view of the forthcoming visit of the Association to Exeter, this meeting will be limited to the transaction of the necessary annual business of the Branch. Mr. Domville will resign the chair to Dr. Deas. The report of the Branch Council and the annual financial statement will be presented to the meeting, and the officers of the Branch will be elected for the year 1907-8. A report from the Executive Committee appointed to make arrangements for the reception of the Association will be read. The Branch Council wish to call attention to the very inadequate support which the guarantee fund has in some quarters received from the members of the Branch. Less than half the members have subscribed, and although the subscriptions given average £2 per head, the average from the whole Branch is less than £1 per head. It is hoped that each member of the Branch will make it a point of honour to contribute to this fund, so that there may be a fair prospect of a return when the meeting is over. The subscriptions given will be appended to the list of members which is issued immediately after the annual meeting of the Branch. The President-elect will be pleased to see any members attending either this meeting or the Executive Committee at luncheon at the Clarence Hotel at 1.30. Replies to this invitation should be sent not later than May 29th.—RUSSELL COOMBE, Honorary Secretary.

STAFFORDSHIRE AND SHROPSHIRE AND MID WALES BRANCHES.—Election of Representative on the Central Council. In accordance with By-law 22, notice is hereby given that the names of those candidates nominated for the Central Council of the Association must be sent in to the Secretary of the Staffordshire Branch or the Secretary of the Shropshire and Mid Wales Branch on or before Saturday, June 1st.—G. PETGRAVE JOHNSON, Stoke-on-Trent, Secretary of the Staffordshire Branch; C. E. RUSS WOOD, Shrewsbury, Honorary Secretary of the Shropshire and Mid Wales Branch.

ULSTER BRANCH.—The annual meeting will be held in the Medical Institute, Belfast, on Saturday, June 29th, at 11.30 a.m. Members having communications to make to the meeting are requested to send particulars of the same not later than June 15th to CECIL SHAW, M.D., Honorary Secretary, College Square, Belfast.

ULSTER AND CONNAUGHT BRANCHES. — Nominations for Central Council. Two members to represent these Branches (combined) on the Central Council will be elected on June 29th. Nominations, signed by three electors, to be sent, to reach me not later than June 8th.—CECIL SHAW, M.D., Honorary Secretary, College Square, Belfast.

YORKSHIRE BRANCH: BRADFORD DIVISION.—The annual meeting of this Division will be held at the Eye and Ear Hospital, Bradford, on Tuesday, June 11th, at 8.30 p.m. The election will take place of the officers, Representatives of the Division on the Branch Council, Members of the Executive and Ethical Committees, and the Representative of the Division in Representative Meetings of the Association. The annual report of the Executive Committee will be presented. Any questions of importance on which the opinion of the Division has not yet been taken, and which are down for consideration by the Annual Representative Meeting, will be discussed.—JAMES METCALFE, ANDREW LITTLE, Honorary Secretaries.

THE MAY MEETINGS AND THE COUNCIL ELECTION.

SIR,—As a general practitioner of nearly forty years' standing, I desire to offer a few suggestions to my brethren at a time when many issues of grave interest to ourselves, and, in many instances, to our sons, will come up for consideration.

In order to effect any adequate improvement in the present status of the general practitioner three things are absolutely necessary: We must know what we want; we must have a common policy, and a united platform; we must be determined to press on our legitimate demands, without ceasing, until they are attained.

First, we demand, and must insist upon, a satisfactory reform of hospital abuse, which to a great extent depletes our incomes; and, as a potent means to this end, I suggest that we cease to call in consultation the members of any hospital staff who will not insist that their committees of management shall rigorously exclude all persons who are in a position—as fully one-half are—to employ a general practitioner.

Secondly, we want drastic reform in the management of provident dispensaries; a very large proportion of the patients attended by the staffs whereof do not belong to the poorer classes, for whose relief these institutions were established and intended; and that is a matter in which I submit that the General Medical Council should take some action. It is a matter of common knowledge that within the last twenty-five years not only have consultants and "specialists" multiplied enormously, but also that their fees have gone up 50 to 100 per cent., while those of the general practitioners have proportionately gone down. They get the cream, while we have to *wait* patiently for the "skim," and oftentimes don't even get that same! What we need is unity, combination, agitation—in plain English, we want trade-unionism applied to medical practice.

Other workers have combined and got fair play; then why not we?

Farmers have combined and got lower rents and higher profits, artisans have combined and got shorter hours of work and increased wages, while we toil day and night and often get no wages at all!

The legal profession possesses statutory protection in the shape of the "Incorporated Law Society"; why, then, should we not possess an "Incorporated Medical Society," based on similar lines, but with such modifications as would make it applicable to our profession, but with powers, like solicitors, to fix and compel the adoption of a minimum scale of fees for either private or contract practice? This would at once exterminate the 6d. man and the one-mark vaccinator. It would compel the juniors not to undersell, while permitting the seniors to charge higher fees adequate to their more mature knowledge and experience. It would prevent cutting competition in the selection of surgeons to friendly societies; while, lastly, it would protect the profession from the general public, who well know, and do not fail to take every advantage of, our want of union and *esprit de corps*, to cut down our never magnificent fees to the verge of starvation limits. We want the members of the Divisions to come together more, to get to know each other, to rub the corners off as it were, to cultivate social intercourse, to attend the general meetings in larger numbers, to put aside any petty animus or personal pique one to another, and to work harmoniously together for the mutual weal. Let no one say "I won't work with So-and-so," as is too often the case. This is but dog-in-the-manger policy, and disheartens the few who have hitherto worked loyally and harmoniously together in the interests of the many, and often have good reason to be bitterly disappointed by the apathy of the majority, who won't serve on committees or even take the trouble to attend meetings of Divisions summoned to discuss important issues. We have the numbers, but we lack the unity in our ranks essential to achieve success. Let each man keep before his mind the motto "United we stand, divided we fall," and the triumph of our cause is within measurable distance.

In conclusion, I desire to express my earnest hope that every member will give the fullest and most unbiassed consideration to the very important letter addressed to me by Dr. T. Arthur Helme, and published in the BRITISH MEDICAL JOURNAL of May 18th, with the views set forth in which I desire to express my hearty and loyal concurrence.—I am, etc.,

Manchester, May 19th. C. STENNETT REDMOND.

CENTRAL MIDWIVES BOARD.

A SPECIAL meeting of the Central Midwives Board, under the provisions of Rule 4 of the Rules of Procedure was held at the Caxton House, Westminster, on May 16th, with Dr. F. H. CHAMPNEYS in the chair.

MIDWIVES STRUCK OFF THE ROLL.

The Board considered charges as stated after their names against the following midwives, whose names were ordered to be erased from the Roll:

Ann Bamford, that being in attendance at a confinement, the patient suffering from puerperal fever, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

Eliza Bill, that being in attendance at a confinement she was intoxicated and incapable of performing her duties.

Caroline Cartledge, that being in attendance at a confinement, the patient suffering from foul-smelling discharges, from headaches, and from abdominal pains, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

Harriet Cooper, that being in attendance at a confinement, being unable to deliver the child, the labour being abnormal, she refused to have a registered medical practitioner sent for.

Caroline Emma Fisher, that she did not use or possess the appliances or antiseptics required by Rule E 2, that she did not keep a register of cases, and that she was not scrupulously clean and did not wear a dress of washable material. This midwife signed a paper requesting the Board to remove her name from the roll.

Elizabeth Ann Goodall, that being in attendance at a confinement she did not wash the patient at any time, nor did she give full directions for securing the comfort and proper dieting of the mother and child during the lying-in period, and she sent an uncertified person to act as her substitute.

Selina Hitchins, that being in attendance at a confinement, the perineum being seriously ruptured, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

Sarah Ann Homer, that being in attendance at a confinement, the patient suffering from severe abdominal pain, with swelling and signs of insufficient contraction of the uterus, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

Sarah Skitt, that being in attendance at a confinement, the patient being ill, with a temperature above 100.4° F. and a foul-smelling discharge, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

Thurza Smith, that being in attendance at a confinement, the placenta not having been expelled an hour after the birth of the child, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

Midwives Censured.

The following midwives were censured by the Board after the following charges stated after their names had been considered:

Mary Brookes, that being in attendance at a confinement, the child's eyes being inflamed at birth, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

Eliza Burgess, that being in attendance at a confinement, the patient being a primipara, and there being a breech presentation, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

Elizabeth A. Long, that being in attendance at a confinement, the child suffering from septic infection of the cord, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

Caroline Lovatt, that being in attendance at a confinement, the patient being delirious, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

Mary Morrell, that being in attendance at a confinement, the patient suffering from puerperal fever, she did not decline to attend alone and advise that a registered medical practitioner be sent for.

THE FUNCTIONS OF A PROVIDENT DISPENSARY IN LONDON.

By W. Winslow Hall, M.D.,

Chairman of the Kilburn Provident Medical Institute.

For twenty-seven years I have been working among the sick poor. In that time I have had experience of hospitals, free dispensaries, medical clubs, provident dispensaries, Government medical service, credit practice, ready-money practice, and gratuitous practice; moreover, I have been able to observe medical relief under the Poor Law, under the friendly societies, and under the municipalities. My conclusion is that the London sick poor can best be dealt with in three grades: (1) The penniless, requiring Poor law medical treatment; (2) earners of moderate wages, requiring the provident dispensary system; (3) earners of big wages, affording half-crown fees.

Thus the function of the provident dispensary is to supply the medical needs of all who are too well off to claim Poor law medical relief and yet not so well off as to afford half-crown fees. From this it follows that the provident dispensary ought to supersede the free dispensary, the private club, the open surgery, and credit practice or gratuitous practice among moderate wage-earners; further, that it ought to absorb the friendly societies and most of the hospital out patients. The Government and municipal medical services are too good to be touched; probably they will, in time, absorb the provident medical system.

Now, after nearly twenty years' work under the provident dispensary system, I would like to point out: First, its merits; secondly, its defects; thirdly, the remedies for these defects.

The Benefits.

There can be no question that the provident dispensary is a fine thing for the moderate wage-earner. For a small weekly payment he ensures that he and his family shall have medical care and pure drugs at any time of need. This is not only an economy but also a piece of preventive medicine: by securing prompt and early treatment he can ward off many severe illnesses. Further, he and his are educated in thrift and foresight; he enjoys the blessing of self-help; and he may even rise to enjoyment of the knowledge that those who remain healthy are paying for the medical relief of those who become ill.

Nor can there be any doubt that the provident dispensary is a fine thing for the medical practitioner. It solves for him the problem of attendance on the sick poor. His bookkeeping is done for him, and he gets regularly once a year a cheque proportioned to the number of members on his list. His dispensing is done for him, and he can devote himself entirely to his proper curative and preventive work. He can cultivate the kindliest relations with his poor patients, visiting them as often as the gravity of an ailment may demand, without any scruple about fees; and in this respect provident dispensary practice is even pleasanter than private practice. Through decades and generations he can educate himself in that preventive medicine of the individual which is becoming the most precious use of the family practitioner. And yet he does not become the slave of his patients; he can enforce common-sense rules as to consultation hours, and messages, and visits, so as to make his day's work methodical and easy. It is wonderful what an amount of considerateness can be evolved among the poor by persistent and kindly training of this sort. Again, the provident dispensary brings the practitioner into fraternal relations with his medical neighbours. He finds that his and their interests are, after all, identical; that each can help the other in many ways; that the joy of doing good work for our fraternity may be had by taking a share in the management of the institution. And, if he has aptitudes for a speciality, his colleagues will be willing enough to put instructive cases in his way, and so give him the extended experience that he requires.

The provident dispensaries may be just as beneficial to the hospitals. They can take over the great bulk of the out-patient work, leaving each hospital staff at leisure for the casualties and the consultation cases that form its proper province; and they can sift out, and pass on to the hospital, cases that are genuinely instructive or genuinely difficult.

Lastly, the provident dispensaries ought to be a great boon to the general public. They can lessen the death-rate and the infectious diseases rate; they can improve the health and the environment of the wage-earners; they can diminish the financial burden of the Poor-law medical service and of medical charity; they can train the poor in thrift, and self-reliance, and altruism; they can evolve experienced and kindly medical practitioners from the "qualified men" who are ground out by the examination mill.

The Defects.

But the provident dispensary, as at present constituted, has undeniable defects. Lapses are far too common; at one provident dispensary there were, last year, 977 lapses, against 934 admissions. Chronic cases are also a difficulty; either they must be treated at ordinary rates (which is an unjustifiable tax on the earnings of the medical staff), or they must be treated at increased rates (which is often impracticable or unjust from the patient's point of view), or they must be turned out (which is unjust and short-sighted from all points of view). Again, cases of sudden illness among non-members have to be reckoned with, and ought to be wisely provided for. Further, the equipment of provident dispensaries is at present inadequate, and their working expenses are usually too high. At present, also, they suffer from competition with friendly societies and private medical clubs on the one hand, and with out-patient departments and free dispensaries on the other hand. Moreover, they lack co-operation among themselves; for example, a member moving from one district to another is usually thrown out of membership at once. Then, as a rule, service on a provident medical staff is the privilege of but a few practitioners in each district; and often the management of a provident dispensary is unduly controlled by the lay members of committee.

THE REMEDIES.

The remedies for these defects are not far to seek. In the first place, the provident dispensary should be available for every practitioner of standing and repute within its area of operation. When properly conducted, its practice must commend itself to all as at once pleasanter and more remunerative than that of private clubs and open surgeries.

In the second place, the medical staff should take its rightful and preponderant share in the management of each provident dispensary. The business is their own; no laymen can look after it so well as they can; the common gibe that medical men have no heads for business is absurdly untrue. Service on subcommittees and on committee and in office ought to be expected from every member of the staff in turn; the pleasure and the moral benefit it brings can be appreciated only by those who have so served.

In the third place, the provident dispensary ought to be affiliated to its nearest general hospital, sending up instructive or puzzling cases, and receiving, in return, patients referred by the almoner as unsuitable for hospital treatment. Further, the medical schools might well utilize the skill and experience of medical men on the staff of provident dispensaries by encouraging senior students to take three months' medical practice under the supervision of approved medical officers. This would more than make up for the student's loss of out-patient experience, and would to some extent make up for the lack of the old-time apprenticeship experience.

In the fourth place, the 44 provident dispensaries in London ought to be linked together as far as possible. Each, when members move, ought to place them in touch with the provident dispensary nearest to the new abode. Each ought to study the methods of its sister institutions, and should take example from what is better done elsewhere. And while maintaining independence and individuality, all should co-operate in forming a central council to serve as a medium for their intercommunication and as a champion of their common interests.

In the fifth place, the provident dispensaries ought to be prepared to meet the friendly societies on their own ground, and absorb them wholesale. They will find it financially sound, and ethically advantageous, to admit large bodies of picked men at 4s. a head per annum. The wives and children, of course, would be taken at ordinary rates.

In the sixth place, there ought to be formed, in connexion with each provident dispensary, but distinct from its management, an Auxiliary Committee, which would appeal for funds to the charitable public, and use the money as follows:

(*a*) In paying the subscriptions of those members who are lapsing through distress; or of those who, having become liable to chronic rates, cannot pay the same; or of those non-members who, when taken suddenly ill, cannot pay the sick-admission rate. In all cases the Auxiliary Committee would be expected to sift the circumstances thoroughly, and avoid any abuse of the charitable money entrusted to it; and it should aim at training all its beneficiaries up through self-help to renewed independence.

(*b*) In so equipping the provident dispensary buildings as to make them worthy substitutes for the hospital out-patient departments and free dispensaries.

(*c*) In so financing the provident dispensary as to cover all the working expenses, and thus allow the members' subscriptions to be applied solely for the provision of drugs and dispensing, and for the remuneration of the medical staff.

Vital Statistics.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his return relating to the births and deaths in the first quarter of the year, and to the marriages during the three months ending December last. The marriage-rate during that period was equal to 17·0 per 1,000 of the population, being slightly below the average rate in the corresponding periods of the ten preceding years.

The births registered in England and Wales during the quarter ending March last numbered 230,124, and were equal to an annual rate of 26·7 per 1,000 of the population, estimated at 34,945,600 persons in the middle of the year; this rate was 1·2 per 1,000 below that in the first quarter of 1906, and 2·3 per 1,000 below the average rate in the corresponding periods of the ten years, 1897-1906. Among the several registration counties the birth-rates ranged from 22·0 in Sussex, 22·7 in Cornwall and in Carnarvonshire, 20·9 in Northamptonshire, 21·5 in Herefordshire, and 21·8 in Dorsetshire, to 29·7 in Nottinghamshire, 30·3 in Northumberland, 30·5 in Staffordshire, 33·6 in Glamorganshire, 34·5 in Durham, and 35·3 in Monmouthshire. In seventy-six of the largest English towns, including London, the birth-rate averaged 28·0 per 1,000, being 1·3 in excess of the general English birth-rate. In London the rate was 26·7 per 1,000, while it averaged 28·5 per 1,000 in the seventy-five other large towns, among which the birth rates ranged from 15·7 in Hornsey, 16·1 in Hastings, 17·1 in Bournemouth, 17·7 in Halifax, 20·4 in Northampton, and 20·5 in Bradford, to 33·1 in Sunderland and in Tynemouth, 36·2 in Warrington and in Middlesbrough, 37·7 in St. Helens, 38·6 in Merthyr Tydfil, and 39·0 in Rhondda.

The births registered during the quarter under notice were 69,419 in excess of the deaths; this represents the natural increase of the population during that period. From returns issued by the Board of Trade, it appears that the net total passenger movement to and from places outside Europe showed a net balance outward of 81,579 passengers from the various ports of the United Kingdom. There was an outward balance of 36,945 English passengers, 10,033 Scottish, 4,007 Irish, and 32,547 of foreign nationality, while there was a balance inwards of 503 persons whose nationality was not stated. The English passengers showed an increase of 21 per cent. over the number in the corresponding quarter of the preceding year; the Scottish passengers an increase of 13 per cent., and the Irish passengers an increase of 14 per cent.

During the first quarter of the year the deaths of 160,705 persons were registered, equal to an annual rate of 18·7 per 1,000; this rate was 2·2 per 1,000 above that in the preceding year, and was 0·2 above the average rate for the ten years 1897-1906. The lowest county death-rates last quarter were 15·7 in Middlesex, 16·1 in Buckinghamshire, 16·2 in Northamptonshire, 16·3 in Essex, 17·0 in Kent and 17·2 in Derbyshire; the highest rates were 20·3 in the East Riding of Yorkshire, 20·6 in Devonshire, 20·8 in Nottinghamshire, 21·2 in Cumberland, 22·4 in the North Riding of Yorkshire, and 22·9 in Monmouthshire. In seventy-six of the largest towns, with an aggregate population estimated to exceed 16 millions, the mean rate of mortality was 19·0 per 1,000; in 142 smaller towns, containing in the aggregate nearly 5 millions, the rate averaged 18·2 per 1,000, while in the remaining, and chiefly rural, parts of England and Wales, the rate was 18·4 per 1,000. In London the death-rate was 18·5 per 1,000, while it averaged 19·2 in the seventy-five large provincial towns, and ranged from 10·9 in Hornsey, 12·3 in Handsworth (Staffs), 12·5 in King's Norton, 14·9 in Leyton, and 15·4 in Northampton and in Willesden, to 22·7 in Merthyr Tydfil, 22·8 in St. Helens, 23·0 in Hanley, 23·2 in Oldham and in Preston, 23·7 in Swansea, and 27·1 in Middlesbrough.

The 160,705 deaths from all causes in England and Wales included 10,395 which were referred to the principal infectious diseases: of these, 3,351 resulted from measles, 2,775 from whooping-cough, 1,834 from diphtheria, 1,020 from diarrhoea, 790 from scarlet fever, 621 from "fever" (principally enteric) and 4 from small-pox. The mortality from these diseases in the aggregate was equal to 1·20 per 1,000 or 0·21 per 1,000 below the average rate in the corresponding period of the ten preceding years.

The rate of infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 135 per 1,000 last quarter, against an average rate of 139 per 1,000. Among the several registration counties the rates of infant mortality ranged from 94 in Dorsetshire, 107 in Hampshire, 108 in Oxfordshire and in Herefordshire, 111 in Denbighshire, and 114 in Buckinghamshire to 162 in Leicestershire, 166 in Glamorganshire, 167 in Cumberland, 174 in Monmouthshire, and 182 in Nottinghamshire. In the seventy-six largest towns the mean rate was 136 per 1,000: in London it was 132, while among the other towns it ranged from 85 in Hornsey, 92 in Wallasey, 94 in Coventry, and 101 in Huddersfield and in York to 176 in Middlesbrough and in Merthyr Tydfil, 180 in Rotherham, 184 in Rhondda, 193 in Preston, and 207 in Nottingham.

The mortality in England and Wales during the three months under notice among persons aged between 1 and 60 years was equal to an annual rate of 8·9 per 1,000, against an average rate of 9·2 per 1,000 in the corresponding periods of the ten preceding years. In the seventy-six large towns the mean death rate at this group of ages was 9·8 per 1,000: in London the rate was 9·4 per 1,000, while among the other large towns it ranged from 4·8 in Handsworth (Staffs.), 5·4 in Hornsey, 5·8 in King's Norton, 5·9 in Great Yarmouth, 6·6 in Burton-on-Trent, and 7·0 in Reading, to 12·5 in Warrington, 12·7 in Newport (Mon.) and in Swansea, 12·9 in Oldham, 14·7 in St. Helens, and 15·8 in Middlesbrough.

Among persons aged 60 years and upwards the death-rate last quarter averaged 95·2 per 1,000 living at these ages, the mean rate in the ten preceding first quarters having been 85·0 per 1,000. In the seventy-six towns the mean death-rate at this age-group was 100·6 per 1,000, in London the rate was 95·8 per 1,000, while among the other large towns it ranged from 64·6 in Leyton and in King's Norton, 71·0 in Great Yarmouth, and 74·0 in Hornsey, to 121·6 in Oldham, 123·8 in Stockton-on-Tees, 127·9 in Middlesbrough and in South Shields, and 128·0 in Preston.

The mean temperature of the air for the whole quarter differed but little from the average; considerable fluctuations of temperature were observed, but the periods of warmth and cold were fairly evenly balanced. The rainfall for the quarter was very deficient: in London only 3 in., or 60 per cent. of the average amount, was measured. The duration of bright sunshine was considerably in excess of the average, in London the aggregate being 276 hours, or 100 hours more than the average.

EPIDEMIC MORTALITY IN LONDON.

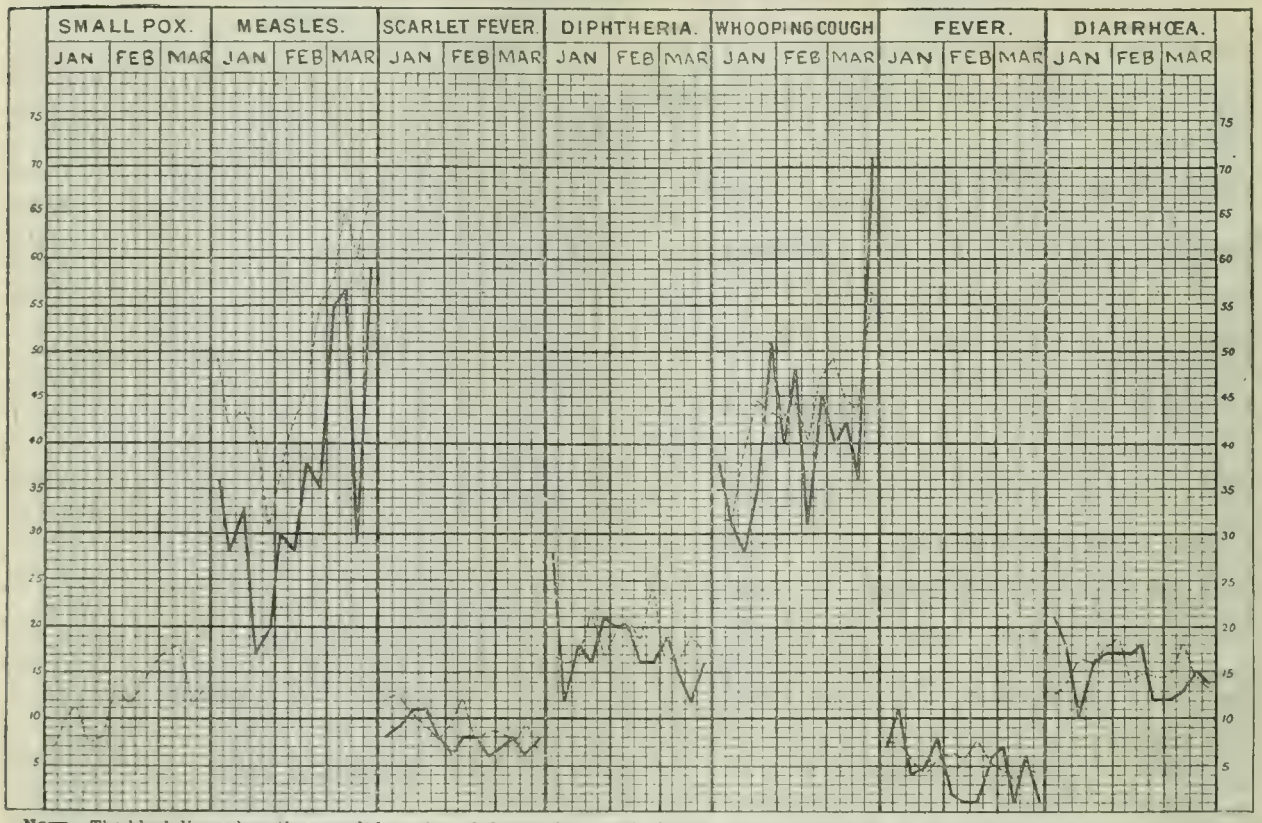
THE accompanying diagram shows the prevalence of the principal epidemic diseases during the first, or winter, quarter of the year. The fluctuations of each disease and its relative fatality compared with that in the corresponding periods of recent years can thus be readily seen.

Small-pox.—No fatal case of small-pox has been registered in London since June, 1905, and no small-pox patients have been under treatment in the Metropolitan Asylums Hospitals since the middle of last year.

Measles.—The deaths from measles, which had been 730, 206, and 213 in the three preceding quarters, rose again to 465 last quarter, but were 171 below the corrected average number in the corresponding period of the five preceding years. Among the various metropolitan boroughs this disease was proportionally most fatal in Shoreditch, Bethnal Green, Stepney, Greenwich, and Woolwich.

Scarlet Fever.—The fatal cases of this disease, which had numbered 144, 108, and 152 in the three preceding quarters, declined again last quarter to 104, and were 18 fewer than the corrected average number. Scarlet fever showed the greatest proportional mortality last quarter

Deaths from Epidemic Diseases in London during the First Quarter of 1907.



Note.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the five preceding years, 1902–6.

in Shoreditch, Bethnal Green, Southwark, Bermondsey, and Camberwell. The Metropolitan Asylums Hospitals contained 2,614 scarlet fever patients at the end of last quarter, against 2,705, 3,360, and 3,787 at the end of the three preceding quarters; 4,033 new cases were admitted during the quarter, against 4,148, 5,114, and 5,845 in the three preceding quarters.

Diphtheria.—The deaths referred to diphtheria, which had been 140, 153, and 213 in the three preceding quarters, further rose last quarter to 229, but were slightly below the average number in the corresponding periods of the five preceding years. Among the various metropolitan boroughs this disease was proportionally most fatal in Fulham, Shoreditch, Stepney, Poplar, and Deptford. There were 1,012 diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of last quarter, against 782, 844, and 996 at the end of the three preceding quarters; 1,695 new cases were admitted during the quarter, against 1,356, 1,612, and 1,995 in the three preceding quarters.

Whooping-Cough.—The fatal cases of this disease, which had been 408, 196, and 180 in the three preceding quarters, rose again last quarter to 536, but were slightly lower than the average number in the first quarters of the five preceding years. The greatest proportional mortality from this disease was recorded in Paddington, Fulham, Finsbury, Shoreditch, Southwark, and Lewisham.

"*Fever.*"—Under this heading are included deaths from typhus, from enteric fever, or from ill-defined pyrexia. No death from typhus was registered during the quarter, and only one from ill-defined pyrexia. The deaths referred to these different forms of "fever," which had been 70, 75, and 109 in the three preceding quarters, further declined last quarter to 60, and were 12 below the corrected average number. Among the various boroughs enteric fever was proportionally most fatal in Hampstead, Hackney, the City of London, Shoreditch, Stepney, and Bermondsey. The Metropolitan Asylums Hospitals contained 93 enteric fever patients at the end of last quarter, against 153 and 134 at the end of the two preceding quarters; 168 new cases were admitted during the quarter, against 184, 251 and 344 in the three preceding quarters.

Diarrhœa.—The 209 deaths from diarrhœa in London last quarter were equal to the corrected average number in the corresponding periods of the five preceding years. The disease showed the highest proportional mortality in Fulham, Hackney, Holborn, Stepney, and Southwark.

In conclusion, it may be stated that the 1,791 deaths in London attributed to these principal epidemic diseases during the quarter ending March last were 29 per cent. below the corrected average number in the corresponding periods of the five preceding years. The lowest death-rates from these diseases were recorded last quarter in Chelsea, City of Westminster, St. Marylebone, St. Pancras, and the City of London, and the highest rates in Shoreditch, Bethnal Green, Stepney, Bermondsey, and Woolwich.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 5,871 births and 3,870 deaths were registered during the week ending Saturday last, May 18th. The annual rate of mortality in these towns, which had been 16·8, 15·9, and 15·7 per 1,000 in the three preceding weeks, further declined last week to 15·1 per 1,000. The rates in the several towns ranged from 8·3 in East Ham and in Leicester, 8·7 in Croydon, 9·2 in Leyton, 9·4 in Walthamstow, and in West Bromwich, 9·7 in Rotherham, and 9·8 in Acton Manor, to 25·2 in Grimsby, 25·9 in Tynemouth, 25·4 in Bolton, 22·6 in Gateshead, 28·7 in Rochdale, 34·0 in Merthyr Tydfil, and 24·1 in Middlesbrough. In London the rate of mortality was 15·2 per 1,000, while it averaged 15·0 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·7 per 1,000 in the seventy-six towns; in London, also, this death-rate was equal to 1·7 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3·0 in West Ham, 3·1 in Middlesbrough, 3·2 in Sheffield, 3·4 in Nottingham, 3·5 in Wigan, 3·6 in Rochdale, 4·3 in Sunderland, 6·3 in Bolton, and 7·8 in Hanley. Measles caused a death-rate of 2·1 in Sheffield, 2·2 in Warrington, 2·7 in Sunderland, 3·0 in Nottingham, 3·1 in Middlesbrough, 6·0 in Bolton, and 7·0 in Hanley; whooping-cough of 1·0 in Manchester, 1·2 in West Ham and in Rochdale, and 2·4 in Wigan; "fever" of 1·2 in Rochdale; and diarrhœa of 1·0 in Wolverhampton and in Sunderland and 1·1 in Swansea. The mortality from scarlet fever and from diphtheria showed no marked excess in any of the large towns. One fatal case of small-pox was registered in Southampton, but none in any other of the large towns. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,649, 2,672, and 2,678 at the end of the three preceding weeks, had risen again to 2,678 at the end of last week; 363 new cases were admitted during the week, against 360, 346, and 349 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, May 18th, 1,060 births and 685 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 20·6, 19·9, and 19·2 per 1,000 in the three preceding weeks, rose again to 19·7 per 1,000 last week, and was 4·6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 12·0 in Perth and 16·3 in Edinburgh to 21·2 in Leith and 21·6 in Glasgow. The death-rate from the principal infectious diseases averaged 3·2 per 1,000, the highest rates being recorded in Glasgow and Leith. The 218 deaths registered in Glasgow included 40 which were referred to whooping-cough, and 23 to cerebro-spinal meningitis. Three fatal cases of measles, 5 of whooping-cough, and 5 of cerebro-spinal meningitis were recorded in Edinburgh, 3 of whooping-cough and 2 of cerebro-spinal meningitis in Dundee, 2 of whooping-cough in Aberdeen; 2 of whooping-cough and 2 of cerebro-spinal meningitis in Paisley; and 3 of measles and 2 of cerebro-spinal meningitis in Leith.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The undermentioned Surgeons have been promoted to be Staff Surgeons, dated May 19th: S. H. Woods, M.D., P. T. Sutcliffe, M.B., J. P. R. Greenshaw, M.D., L. A. Bains, C. R. Nicholson, E. T. Burton, R. Hughes, G. M. O. Richards, N. J. Roche, J. H. Jones, A. J. Laurie, P. G. Williams. Their first commissions are dated May 19th, 1904.

The following appointments have been made at the Admiralty: Percy E. Maitland, Fleet-Surgeon, and Percy T. Sutcliffe, M.B., Surgeon, to the *Lancaster*, on recommissioning, May 29th. Sheldon F. Dudley, Surgeon, to the *Donegal*, May 22nd. J. L. Bamford, Surgeon, to the *Duncan*, May 22nd. William W. D. Chilcott, Surgeon, to the *Blenheim*, May 22nd; John Jenkins, Fleet-Surgeon, and Harold G. T.

MAJOR, Surgeon, to the *Ramillies*, May 15th; ALFRED M. PAGE, Fleet Surgeon, to the *Repulse*, May 15th; ALEX. L. CHRISTIE, M.B., Fleet Surgeon, to the *Hawke*, May 15th; FRANK BRADSHAW, Fleet Surgeon, and DAVID W. HEWITT, M.B., Staff Surgeon, to the *Warrior*, on commissioning, June 1st; FREDERICK W. PARKER, Fleet Surgeon, and ROBERT H. MORNEMENT, Staff Surgeon, to the *Commonwealth*, on recommissioning, May 28th; HENRY J. HADDEN, M.B., Surgeon, and ALFRED J. PICKTHORN, Fleet Surgeon, to the *Sapphire*, for the *Sapphire II*, May 28th; HARRY SPICER, M.B., Staff Surgeon, to the *London*, May 28th; HAROLD J. CHATER, Staff Surgeon, to the *Forte*, on recommissioning, June 8th; ALEXANDER MCCLOY, M.B., Surgeon, to the *Mutine*, on commissioning, May 28th; W. F. ARCHIBALD, M.B., Surgeon, to the *Goliath*, May 28th; JOHN E. H. PHILLIPS, Staff Surgeon, to the *Glory*, May 28th.

GRENADIER GUARDS.

BRIGADE-SURGEON-LIEUTENANT-COLONEL C. E. HARRISON, M.B., Grenadier Guards, is appointed an Honorary Surgeon to the King, and to be a Brevet Colonel, vice Sir H. J. K. Innes, K.C.B., deceased. Colonel Harrison joined the Army Medical Department as Surgeon, September 30th, 1874; became Surgeon-Major, August 19th, 1889; and Brigade-Surgeon-Lieutenant-Colonel, November 4th 1891. He was first appointed to the Grenadier Guards, September 30th, 1874, and has continued with one or other of its several battalions ever since. In the Egyptian war in 1882 he was with the 2nd Battalion, and was at the actions of Tel-el-Mahuta and Tel-el-Kebir, receiving a medal with clasp, and the Khedive's star.

ARMY MEDICAL SERVICE.

LIEUTENANT-COLONEL A. P. O'CONNOR, C.B., from the Royal Army Medical Corps, to be Colonel, April 5th. He was appointed Surgeon, March 6th, 1880; Surgeon-Major, March 6th, 1892; and Lieutenant-Colonel, March 6th, 1900. He served with the Burmese expedition in 1885-6 (medal with clasp); and in the South African war in 1899-1902, being present in operations in Cape Colony, Orange River Colony, and the Transvaal (mentioned in dispatches, made C.B., Queen's medal with clasp, and King's medal with two clasps).

ARMY MEDICAL RESERVE.

SURGEON-MAJOR G. HOLLIES, M.D., to be Surgeon-Lieutenant-Colonel, April 16th.

Surgeon-Lieutenant A. MACKENZIE to be Surgeon-Captain, September 21st, 1906.

The undermentioned gentlemen are appointed Lieutenants on probation, dated May 1st: CHARLES V. NICOLL, JOHN F. MURPHY, SAMUEL K. ADAMS, M.B., MURRAY R. TAYLOR, M.B.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL O. H. CHANNER, M.B., Bombay Establishment, is permitted to retire from the service from April 15th. He joined the department as Assistant Surgeon, September 30th, 1876, and became Surgeon-Lieutenant-Colonel, September 30th, 1896. He served in Southern Afghanistan during the Afghan war in 1879-80, was mentioned in dispatches, and received a medal for the campaign.

Lieutenant-Colonel T. E. DYSON, M.B., Bombay Establishment, is appointed Sanitary Commissioner for the Government of Bombay.

The undermentioned Majors are promoted to be Lieutenant-Colonels from March 31st: C. H. L. MEYER, M.D., W. H. W. ELLIOT, M.B., D.S.O., L. F. CHILDE, M.B., W. R. CLARK, M.B., G. F. W. BRAIDE, R. J. MARKS, C. E. SUNDER, M.B., M. A. KER, H. HERBERT, F.R.C.S., T. D. C. BARRY, A. BUCHANAN, L. G. FISCHER, W. VOST, M.B., J. GARVIE, M.B., C. E. L. GILBERT, G. B. IRVINE, F. G. CRAWFORD, M.D., R. ROBERTSON, M.B. Their previous commissions are dated: Surgeon, March 31st, 1887; Major, March 31st, 1899. The war records given in the Army Lists are as follows: Lieutenant-Colonel Elliot—Hazara expedition, 1888 (medal with clasp); first Miranzai expedition, 1891; South African war, 1899-1901, including the defence of Ladysmith (mentioned in dispatches, Queen's medal with three clasps, and appointed D.S.O.). Lieutenant-Colonel Marks—Lushai expedition, 1891; campaign on the North-West Frontier of India, 1897-8, with the Tochi Force (medal with clasp). Lieutenant-Colonel Sunder—Sikkim expedition, 1888 (medal with clasp); first Miranzai expedition. Lieutenant-Colonel Ker—Hazara expeditions, 1888 and 1891 (medal with two clasps); second Miranzai expedition, 1891 (clasp); Waziristan expedition, 1894-5 (clasp); Tirah expedition, 1897-8 (medal with two clasps); North-West Frontier of India, Waziristan, 1901-2 (mentioned in dispatches, clasp). Lieutenant-Colonel Herbert—Operations of the Zaila Field Force, 1890. Lieutenant-Colonel Buchanan—Chin-Lushai Expedition, 1889-90 (medal with clasp). Lieutenant-Colonel Vost—Hazara expedition, 1888 (medal with clasp); second Miranzai Expedition, 1891 (clasp). Lieutenant-Colonel Garvie—Zhob Valley expedition, 1890. Lieutenant-Colonel Gilbert—Sikkim expedition, 1888 (medal with clasp); Manipore expedition, 1891 (clasp); Isazai expedition, 1892; Waziristan expedition, 1894-5 (clasp); Chitral Relief Force, 1895 (medal with clasp); North-West Frontier of India campaign, 1897-8, including engagement of Shabkadr and operations on the Samana and in the Kurram Valley (two clasps); and Tirah Expedition, 1897-8 (clasp). Lieutenant-Colonel Irvine—Waziristan Expedition, 1894-5 (medal with clasp); North-West Frontier of India, 1897-8, with the Tochi Force (medal with clasp). Lieutenant-Colonel Robertson—Burmah, 1888-9 (medal with clasp).

The undermentioned Captains are promoted to be Majors from January 29th: C. J. ROBERTSON-MILNE, M.B., A. F. STEVENS, C. H. BENSLEY, F. H. WATLING, M.B., S. EVANS, M.B., E. J. MORGAN, M.B., J. H. MCDONALD, M.B., F. WALL, C. M. MATHEW, J. STEPHENSON, M.B., F.R.C.S., F. N. WINDSOR, M.B., W. B. TURNBULL, M.B., E. E. WATERS, M.B., E. M. ILLINGTON, F.R.C.S.E., C. G. WEBSTER, F.R.C.S.E. The first appointment of Major Robertson-Milne to Major Mathew dates from January 29th, 1895; that of Captain from January 29th, 1898. In the case of Majors Stephenson to Webster their previous commissions are dated: Surgeon-Lieutenant, July 29th, 1895; Surgeon-Captain, July 29th, 1898. The following have war records in the Army Lists, namely: Major Watling—China, 1900 (medal). Major Windsor—North-West Frontier of India campaign, 1897-8 (medal with clasp). Major Turnbull—North-West Frontier of India campaign, 1897-8 (medal with clasp); China, 1900 (medal); and Waziristan, 1901-2 (clasp). Major Illington—North-West Frontier of India campaign, 1897-8 (medal with clasp).

The retirement from the service of Surgeon-General A. S. REID, M.B., C.B., which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the King.

Lieutenant-Colonel M. S. EYRE, M.B., Bengal Establishment, has retired from the service, from April 7th. He was appointed Assistant Surgeon, September 30th, 1876, and made Surgeon-Lieutenant-Colonel, September 30th, 1896.

Lieutenant-Colonel H. N. V. HARINGTON (Madras) is appointed Residency Surgeon and Chief Medical Officer in Rajpootana, from March 19th, and to have charge of the current duties of Residency Surgeon in the Western States of Rajpootana.

Lieutenant-Colonel D. FFRENCH-MULLEN, M.D. (Bengal), is promoted to be Colonel from March 21st. He joined the department as Assistant Surgeon, March 31st, 1877; became Surgeon-Lieutenant-Colonel, March 31st, 1897; and was selected for increased pay, March 24th, 1903.

Lieutenant-Colonel C. S. RUNDLE, M.B. (Madras), is permitted to retire from the service from May 1st. He joined the service as Assistant Surgeon, March 31st, 1880, and was made Lieutenant-Colonel March 31st, 1900.

Lieutenant-Colonel R. SHORE, M.D., Bengal Establishment, is posted as Residency Surgeon in the Western States of Rajpootana.

IMPERIAL YEOMANRY.

MAURICE W. COLEMAN, M.D., to be Surgeon-Lieutenant (extra) in the Berks Regiment, under the conditions of Paragraph 28, Imperial Yeomanry Regulations, April 15th.

JOHN R. STEINHAEUSER, M.B., to be Surgeon-Lieutenant (extra) in the Sussex Regiment, under the Imperial Yeomanry Regulations, March 27th.

ROYAL ENGINEERS (VOLUNTEERS).

SAMUEL ENGLISH, M.B., to be Surgeon-Lieutenant in the 3rd Lancashire, March 30th.

JOSEPH M. BENSON, M.B., to be Surgeon-Lieutenant in the 1st (Sheffield) Yorkshire (West Riding), March 26th.

VOLUNTEER RIFLES.

SURGEON-LIEUTENANT J. K. BROWNLEES, 4th Volunteer Battalion the Royal Fusiliers (City of London Regiment), resigns his commission, March 25th.

Surgeon-Lieutenant A. G. HAY, M.D., 1st Dumbartonshire Volunteer Rifle Corps, to be Surgeon-Captain, March 1st.

Surgeon-Lieutenant A. AULD, 2nd Volunteer Battalion the East Yorkshire Regiment, resigns his commission, January 31st.

Surgeon-Captain N. MACNAIR, M.D., 4th Volunteer Battalion the Cameronians (Scottish Rifles), resigns his commission, April 6th.

Supernumerary Surgeon-Captain H. M. BROWNFIELD, 1st Volunteer Battalion the Hampshire Regiment, is granted the honorary rank of Surgeon-Major, March 4th.

JAMES P. WILSON, M.B., to be Surgeon-Lieutenant in the 1st Dumbartonshire Volunteer Rifle Corps, February 28th.

Surgeon-Captain C. A. MARRETT, 4th Volunteer Battalion the Royal Fusiliers (City of London Regiment), resigns his commission, April 15th.

Surgeon-Lieutenant (Honorary Lieutenant in the Army) M. J. MAHONEY, M.B., 6th Volunteer Battalion the King's (Liverpool Regiment), to be Surgeon-Captain, April 10th.

WILLIAM DUNCAN, M.B., to be Surgeon-Lieutenant in the 2nd Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), March 26th.

Surgeon-Lieutenant F. B. JEFFERISS, 4th Volunteer Battalion the Queen's Own (Royal West Kent Regiment), to be Surgeon-Captain, January 11th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

CAPTAIN T. W. BARTLETT, Woolwich Companies, Eastern Command, resigns his commission, March 31st.

Captain J. P. EVINS, Cadet Corps (St. Michael's, Woolwich), attached to the Woolwich Companies, Eastern Command, resigns his commission, March 31st.

Lieutenant W. A. BURNS, Glasgow Companies, Scottish Command, to be Captain, May 1st.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SAMUEL E. RIGG to be Surgeon-Lieutenant in the 1st Cumberland, April 7th.

Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel W. CHALMERS-COWAN, 1st Forfarshire, resigns his commission, retaining his rank and uniform, April 3rd.

Surgeon-Lieutenant H. C. COLEMAN, M.B., 1st Forfarshire, to be Surgeon-Captain, April 3rd.

WILLIAM M. FERGUSSON to be Surgeon-Lieutenant in the 1st Banff, April 15th.

WILLIAM E. F. TINLEY, M.D., to be Surgeon-Lieutenant in the 1st East Riding of Yorkshire, April 1st.

CHANGES OF STATIONS.

THE following changes of stations amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during April, 1907:

		FROM	TO
Lieut.-Col.	A. P. O'Connor, C.B.	Bordon	York.
,,	F. B. Maclean	Jersey	Potchefstr'm.
,,	D. O'Sullivan	Secunderabad	Rawal Pindi.
,,	M. W. O'Keeffe, M.D.	W. Com., India	Karachi.
,,	J. L. Hall	Quetta	Nowgong.
,,	F. P. Nichols, M.B.	Norwich	India.
,,	G. W. Brazier-Creagh, C.M.G.	Woolwich	Lichfield.
,,	F. H. Treherne	Rawal Pindi	Sialkot.
,,	S. Westcott, C.M.G.	Bombay	Mhow.
,,	B. M. Skinner, M.V.O.	London Dist.	Nowshera.
,,	J. R. Stuart, M.B.	Mhow	Neemuch.
,,	R. R. H. Moore, M.D.	Aldershot	Netley.
,,	R. S. F. Henderson, M.B.	Kamptee	,,
,,	G. E. Hale, D.S.O.	Karachi	Hyderabad.
,,	F. W. C. Jones, M.B.	Nasirabad	Kamptee.
,,	W. T. Swan, M.B.	Jullundur	Ambala.
,,	C. T. Blackwell, M.D.	Hyderabad	Belgaum.
,,	R. G. Stanley, M.B.	Dublin	Londonderry.
,,	P. C. H. Gordon	Poonamallee	Rangoon.
,,	M. T. Yarr	Bombay	Colaba.
,,	A. Kennedy	Belgaum	Pachmarhi.
,,	J. J. O'Donnell, M.B.	Ahmedabad	Kirkee.
,,	H. W. Austin	Karachi	Londonderry.

		FROM	TO
Major	C. H. Hale, D.S.O.	Rangoon	Secunderabad.
,,	J. Ritchie, M.B.	E. Command	Woolwich.
,,	R. C. Thatcher	Aden	Karachi.
,,	A. B. Beech	Chatham	Woolwich.
,,	A. E. Sanderson, M.B.	Chester	Harrismith.
,,	R. J. W. Mawhinney	Ferozepore	Dublin.
,,	G. A. T. Bray	Shwebo	Chatham.
,,	C. J. Healy, M.B.	Londonderry	Dublin.
,,	H. P. Johnson	Devonport	Taunton.
,,	J. Hennessy, M.B.	Secunderabad	Poonamallee.
,,	J. F. M. Kelly, M.B.	Fermoy	Kilworth.
,,	F. G. Parkhill	Pachmarhi	Aden.
,,	C. T. Sandman	Dover	Shorncliffe.
,,	T. H. J. C. Goodwin, D.S.O.	R.M. Academy	Quetta.
,,	J. Green	Chakrata	Meerut.
,,	St. J. B. Killery	Aldershot	India.
Captain	M. P. Corkery	R.A.M. College	London Dist.
,,	F. F. Carroll, M.B.	Woolwich	Egypt. Army.
,,	E. A. Bourke	Londonderry	Bloemfontein.
,,	G. B. Carter, M.B.	Wellington	Madras.
,,	J. S. Gallie	Bordon	Ahmednagar.
,,	H. Herrick	York	Richmond.
,,	A. R. O'Flaherty	Woolwich	Hounslow.
,,	N. J. C. Rutherford, M.B.	R.A.M. College	Dover.
,,	A. Chopping	—	Peshawar.
,,	E. P. Connolly	Enniskillen	Londonderry.
,,	J. H. R. Bond	Strensall	York.
,,	E. G. Ford, M.B.	Lincoln	Lichfield.
,,	B. B. Burke	Rawal Pindi	E. Command.
,,	C. R. L. Ronayne, M.B.	York	Strensall.
,,	G. Baillie, M.B.	Quetta	Dublin.
,,	J. H. Brunskill, M.B.	Maymyo	Rangoon.
,,	H. A. Davidson, M.D.	Bangalore	Secunderabad.
,,	J. W. West, M.B.	Belfast	Ballykinder Camp.
,,	E. W. Powell	Bombay	Kirkee.
,,	A. J. W. Wells	Maymyo	Rangoon.
,,	H. A. Bransbury	S. Command	Tidworth.
,,	M. F. Fowlds	Deolalee	Aden.
,,	J. B. Clarke, M.B.	Bradford	York.
,,	R. C. Wilson, M.B.	Dublin	Belfast.
,,	P. G. Hyde, M.B.	—	Cork.
,,	T. J. Potter	Deepcut	Aldershot.
,,	D. J. F. O Donoghue	Aden	Dublin.
,,	G. A. K. H. Reed	Nowgong	Saugor.
,,	J. W. S. Seccombe	Rawal Pindi	Ambala.
,,	W. W. Browne	Rangoon	Maymyo.
,,	R. Rutherford, M.B.	Deolalee	Poona.
,,	T. S. Coates, M.B.	Mhow	Neemuch.
,,	R. C. Wilmot	Rangoon	Poona.
,,	E. M. Pennefather	Wellington	Maymyo.
,,	P. J. Hanahan	Middelburg, Transvaal	Pretoria.
,,	H. C. Hildreth	Bangalore	Wellington.
,,	T. J. Wright	Belgaum	Rangoon.
Lieutenant	F. J. Turner	Aden	Karachi.
,,	A. S. Arthur, M.B.	Peshawar	Nowshera.
,,	M. D. Ahern	—	Ferozepore.
,,	G. S. C. Hayes	Worcester	Devonport.
,,	R. J. C. Thompson	—	Pretoria.
,,	C. D. M. Holbrooke	Kirkee	Poona.
,,	C. W. O'Brien	Nowshera	Peshawar.
,,	G. Ormerod, M.B.	Delhi	Mandalay.
,,	W. Benson, M.B.	Millbank	Rawal Pindi.
,,	A. E. S. Irvine	Dublin	Middelburg, Transvaal
,,	M. J. Crombie	Dover	Poona.
,,	T. S. Blackwell	Secunderabad	Bangalore.
,,	F. A. McCammon, M.B.	Deolalee	Londonderry.
,,	R. E. U. Newenham, M.B.	Fort Island	Queenstown.
,,	E. M. White	Trowbridge	Larkhill Camp.
,,	T. W. O. Sexton	London Dist.	Dublin.
,,	[illegible]	Cork	Waterford.
,,	R. C. [illegible]	Tidworth	Bulford.

Major G. M. Dobson, M.B., retired pay, has relinquished the medical charge of troops at Lincoln.

Captain [illegible] M.B., R.A.M.C.(Militia), retired pay, has relinquished the medical charge of troops at Liverpool.

The undermentioned Captains, R.A.M.C.(Militia), retired pay, have been appointed to the charge of the Militia stations named: J. P. P. Cochran, Brecon; W. K. Steele, Devizes; C. R. Tichborne, Enniskillen.

Vacancies and Appointments.

VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars may be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

ALTRINCHAM INFIRMARY.—House-Surgeon. Salary, £70 per annum.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant. Honorarium at the rate of £5 5s. per annum.

BIRMINGHAM UNIVERSITY.—Lecturer in Dental Histology and Pathology.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

BRADFORD ROYAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BRISTOL GENERAL HOSPITAL.—Assisting Resident Medical Officer. Salary, £100 per annum.

BURY ST. EDMUNDS: WEST SUFFOLK GENERAL HOSPITAL.—House-Surgeon. Salary, £80 per annum.

CAIRO: EGYPTIAN DEPARTMENT OF PUBLIC HEALTH.—Sub-Inspector of Ophthalmic Hospitals. Salary, £400 per annum.

CARDIFF INFIRMARY.—House-Physician. Honorarium £30 for six months.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon. Salary for first six months at the rate of £90 per annum, increasing to £100.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—(1) Resident Medical Officer. Salary, £120 per annum. (2) Surgeon. (3) Physician to Out-patients.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £90 per annum, and £10 for lectures to probationer nurses.

HAMMERSMITH PARISH INFIRMARY, Ducane Road, W.—Male Junior Assistant Medical Officer. Salary, £40 for six months.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House Surgeon, salary £20 for six months, and £2 10s. washing allowance. (2) Anæsthetist, honorarium 15 guineas for one year.

HULL ROYAL INFIRMARY.—Honorary Assistant Surgeon for Out-patient Department.

LEEDS UNION.—Assistant Medical Officer. Salary, £100 per annum.

LISCARD: VICTORIA CENTRAL HOSPITAL.—Honorary Aurist and Laryngologist.

LIVERPOOL: STANLEY HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Resident Medical Officer. Salary, £120 per annum.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon and Anæsthetist. Salary, £60 per annum.

MANCHESTER EYE AND EAR HOSPITAL.—Honorary Assistant Aural Surgeon.

MIDDLESBROUGH AND NORTH ORMESBY HOSPITAL.—House-Surgeon. Salary, £120 per annum.

NEWCASTLE-UPON-TYNE CORPORATION.—Assistant Medical Officer of Health. Salary, £300 per annum.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary, £160 for first year, £180 afterwards.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary, £70 per annum.

ROCHDALE INFIRMARY.—House-Surgeon. Salary, £100 per annum.

ROYAL EAR HOSPITAL, Dean Street, W.—House-Surgeon. Honorarium at the rate of £40 per annum.

ST. BARTHOLOMEW'S HOSPITAL, E.C.—Lecturer on Anatomy.

ST. THOMAS'S HOSPITAL.—Assistant Physician.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon. Salary, £70 per annum.

THROAT HOSPITAL, Golden Square, W.—House-Surgeon. Salary at the rate of £75 per annum, increasing to £100 if reappointed.

WALSALL AND DISTRICT HOSPITAL.—Senior House-Surgeon. Salary, £100 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—(1) Senior House-Surgeon. Salary, £110 per annum. (2) Resident Assistant House-Surgeon. Salary, £75 per annum.

WEST HAM AND EAST LONDON HOSPITAL, Stratford, E.—Junior House Surgeon for six months, eligible for election as Senior. Salary at the rate of £75 and £100 per annum respectively.

WORCESTER GENERAL INFIRMARY.—House-Physician. Salary, £80 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Wolston, co. Warwick; Stornoway, co. Ross; Stafford, co. Stafford; Grantham, co. Lincoln; and Tenbury, co. Worcester.

APPOINTMENTS.

ALLERY, F. H., M.B., B.C.Cantab., District Medical Officer of the Steyning Union.

CHUP, F. J., M.D.Camb., District Medical Officer of the Winchester Union.

CROOM, H. M., M.B., C.M.Edin., Honorary Surgeon to the General Hospital, Stroud, Glos.

DIXS, G., M.R.C.S., L.R.C.P., Medical Officer of Health, Ringwood Rural District.

GRIFFITH, Arthur, M.A., M.D.Dubl., Assistant Surgeon to Norfolk and Norwich Eye Infirmary.

HERBERT, Charles, M.R.C.S., L.R.C.P., Assistant Anæsthetist to Middlesex Hospital.

HUGHES, T. C., M.R.C.S., L.R.C.P., Second Resident Assistant Medical Officer at the Lewisham Union Infirmary.

JAMES, V. M. A., M.R.C.S., L.R.C.P., District Medical Officer of the Cardiff Union.

LONGRIDGE, L. C., M.B.Lond., Ch.B.Vict., District Medical Officer of the Leeds Union.

LOVIS, W. A., F.R.C.S., L.R.C.P., Clinical Assistant to the Chelsea Hospital for Women.

MACKENZIE, T. C., M.B., C.M.Edin., District Medical Officer of the Dundee Union.

MORGAN, H. Lewis, M.D.Aberd., Joint Pathologist to the David Lewis Northern Hospital, Liverpool.

PARSONS, Leslie, B.A., M.B., B.C.Camb., F.R.C.S., Assistant Ophthalmic Surgeon to the National Hospital for the Paralysed and Epileptic, Queen Square, W.C.

REID, W. R., M.D.Aberd., Certifying Factory Surgeon for the Leamington District of Warwick.

ROSE, C. H. D., M.R.C.S., L.R.C.P., Medical Officer of Health, Grantham Rural District.

SAMUEL, R. H., M.R.C.S., B.Ch.Oxon., Anæsthetist to the Oxford Eye Hospital.

SHAW, Dawnston E., M.D., F.R.C.P.Lond., Physician to Guy's Hospital.

SPENCER, Lilian, M.B., L.R.C.P., L.R.C.S.Edin., Medical Electrician to the Royal Edinburgh Hospital for Sick Children, vice Harry Reay, M.D., F.R.C.P.E., resigned.

STEWART, J., M.B., C.M.Glas., Certifying Factory Surgeon for the Beith District, co. Ayr.

SYMES, J. O., M.D., D.P.H., M.R.C.S., L.R.C.P., Consulting Physician to the Cossham Memorial Hospital, Kingswood, Bristol.

TAYLOR, Frederick, M.D., F.R.C.P.Lond., Consulting Physician to Guy's Hospital.

TRAILL-THOMSON, William, M.R.C.S., L.R.C.P., Medical Officer to Provident Dispensary, Leamington Spa.

WHITEHOUSE, A. Landon, M.R.C.S., L.R.C.P., L.D.S.Eng., Honorary Curator of the Museum, Royal Dental Hospital, Leicester Square, W.C.

WOODHOUSE, W. M., M.R.C.S., L.R.C.P., Medical Officer of Health, Wantage Urban District.

WYNNE, J. Darley, M.B., B.Ch., M.R.C.S., D.P.H., Medical Attendant to the Royal Irish Constabulary, Clonmel.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 5s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

SIMPSON.—On May 16th, at "The Old Chestnuts," Tottenham Lane, Hornsey, N., the wife of J. Edward Simpson, M.B., of a son.

MARRIAGES.

CLATWORTHY—GOODING.—On May 15th, at St. Margaret's, Lee, by the Rev. E. Louis C Clapton, M.A., Rector of the Parish, assisted by the Rev. Canon Rowsell, M.A., Rector of Beccles and Rural Dean, Ethel Maud Cotton Pemberton Gooding, younger daughter of Ralph Gooding, M.D., D.L., J.P., of 13, Church Terrace, Blackheath, S.E., to John Hunter Clatworthy, M.D.Lond., of 145, Denmark Hill, S.E., younger son of Augustine R. Clatworthy, of Beccles.

WASHBOURN—SINCLAIR.—On March 25th, at the Pro-Cathedral, Nelson, New Zealand, Henry Everly Arthur Washbourn, M.B., Ch.B.Edin., to Sydney Laing Sinclair, of Mid Clyth, Wick, Caithness, N.B.

DEATHS.

BALDING.—On May 15th, at his residence, Barkway, Herts, Albert Balding, of 57, Coleman Street, E.C., aged 67, third son of the late Susan and James Balding, M.R.C.S.

MILSOME.—On May 14th, at St. Ann's Lodge, Addlestone, John Ruddle Milsome, M.D., aged 68 years.

OWEN.—On May 18th, of post-influenzal disease of the heart, Annie Laura, wife of Edmund Owen, F.R.C.S., in her 45th year. Cremated at Golder's Green, May 21st.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Annual Conversazione. 9 p.m., Oration by Dr. J. A. Gibson of Edinburgh on the Cause of the Heart Beat.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 20, Hanover Square, W., 8 p.m.—Casual communications: W. Sampson Handley, Lymphoid Degeneration of Salivary Glands. Paper: Mr. J. H. Badcock, Interim Notes on Orthodontia.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 p.m.—Sir William R. Gowers: A Case of Cervical Myelopathic Trichosis. Major M. P. Holt, R.A.M.C., Ligature of the Renal Vessels for the Cure of Persistent Urinary Renal Fistula, with one Successful Case. With Epidiascope Demonstrations.

FRIDAY.

EPIDEMIOLOGICAL SOCIETY, 11, Chandos Street, Cavendish Square, 8.30 p.m.—Papers: Professor Axel Holst, Studies Concerning Ship Beri-beri: Professor Holst and Dr. Theodor Frolich, Polyneuritis in Poultry (Polyneuritis Gallinarium Eijkman), and Scurvy in Guinea-pigs.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday, 3.45 p.m., External Ear; Friday, 3.45 p.m., Thyroid and Cervical Region.

LONDON SCHOOL OF CLINICAL MEDICINE.—Clinics: Monday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Ear and Throat, 4 p.m. Tuesday, Medicine, 2.15 p.m.: Surgery, 3.15 p.m.; Skin, 4 p.m. Wednesday, Medicine, 2.15 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30 p.m. Out-patient Demonstrations: Surgical, daily, 10 a.m.; Medical, daily, 10 a.m. Ear and Throat, Mondays and Thursdays, 12 a.m. Eye, Wednesdays and Saturdays, 11 a.m. Skin, Tuesdays and Fridays, 12 a.m. Special Lectures: Monday, 4 p.m., Surgical Anatomy of the Nose and its Accessory Cavities; Friday, 3.15 p.m., Hemiplegia.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat Lectures at 5.15 p.m. each day will be given as follows:—Monday, Infantile Eczema: Its Management and Treatment; Tuesday, the Treatment of Gonorrhœal Infection in the Female; Wednesday, the Diagnosis of Disseminated Sclerosis: Thursday, Cerebro-spinal Fever.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the clinics and demonstrations for next week:—Monday, 10 a.m.: Surgical, 2.30 p.m.; Medical, Throat, Nose and Ear, X Rays. Tuesday, 10.30 a.m.: Medical, 2.30 p.m.; Operations; Surgical and Gynaecological. Wednesday, 2.30 p.m.: Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynaecological Operations; Medical, Surgical; X Rays; 3 p.m., Medical (In-patient); 4.30 p.m., Special Demonstration of Medical Cases. Friday, 9.30 a.m., Surgical; 2.30 p.m., Operations; Medical, Eye; 3 p.m., Medical (In-patient).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Clinical Cases; Friday, 3.30 p.m., Sclerotic Diseases of Cord.

WEST LONDON HOSPITAL, Hammersmith, W.—The following arrangements have been made for next week: Daily, 2 p.m., Medical and Surgical Clinics. X-rays, 2.30 p.m., Operations. Monday and Thursday, 2 p.m., Disease of Eye. Tuesday and Friday, 10 a.m., Gynaecological Operations. Wednesday and Saturday, 10 a.m., Diseases of the Throat, Nose and Ear. Tuesday and Friday, 2.30 p.m., Diseases of the Skin. Lectures: Monday, 12 noon, Pathological Demonstration. Monday, 5 p.m., Insects as Carriers of Disease in Tropical Medicine. Tuesday, What is Insanity? Wednesday, Practical Medicine. Thursday, Cases of Interest in the Surgical Wards, Friday, Anaesthetics.

BOOKS, ETC., RECEIVED.

London: F. S. Turney. 1907:

Cancer: A Working Theory for its Prevention and Cure. By J. Shaw, M.D.

Medical Priestcraft, a National Peril. By J. Shaw, M.D.

London: H. K. Lewis. 1907:

Modern Methods of Diagnosis in Urinary Surgery. By E. Deaneely, M.D., B.Sc., F.R.C.S. 3s.

The Practitioner's Medical Dictionary. By G. M. Gould, A.M., M.D. 21s.

International Clinics. A quarterly. Edited by W. T. Longcope, M.D. Vol. I. Seventeenth series, 1907. Philadelphia and London: J. B. Lippincott Co. 1907. 35s.

Bibliothèque de "La Province Médicale." Les Formes Postérieures de l'Appendicite. Par MM. P. Vignard, P. Cavaillon, et Chabanon. Paris: A. Poinat. 1907. Fr. 1.

Jena: G. Fischer. 1907:

Die blutsaugenden Dipteren. Von Dr. K. Grünberg. M. 4.50.

Praktikum der Bakteriologie und Protozoologie. Von Dr. K. Kisskalt and Dr. M. Hartmann. M. 4.50.

University of London. Francis Galton Laboratory for National Eugenics. Eugenics Laboratory Memoirs I. The Inheritance of Ability. By E. Schuster, M.A., and E. M. Elderton. London: Dulau and Co. 1907. 4s.

Roger Dinwiddie, Soul Doctor. By A. M. Irvine. London: T. Werner Laurie. 6s.

A Synopsis of the British Pharmacopoeia (1898). By H. W. Gadd, F.C.S. Sixth edition. London: Baillière, Tindall and Cox. 1907. 1s.

The Practical Medicine Series. Edited by G. P. Head, M.D. Vol. I. General Medicine. Edited by F. Billings, M.S., M.D., and J. H. Salisbury, A.M., M.D. Series 1907. Chicago: The Year Book Publishers; and Glasgow: G. Gillies and Co. 6s.

A Study of the Human Blood Vessels in Health and Disease. A Supplement to "The Origin of Disease." By A. V. Meigs, M.D. Philadelphia and London: J. B. Lippincott Co. 21s.

The Annual Charities Register and Digest. 16th edition. London: Longmans, Green and Co. 1907. 5s.

Our Sons, Their Start in Life. Second edition. London: "The Guardian" office. 1907. 1s.

The Birds of the British Islands. By C. Stonham, C.M.G., F.R.C.S., F.Z.S. Part V. London: E. Grant Richards. 1907. 7s. 6d.

London: Rebman Ltd. 1907:

Medical Diagnosis. By C. L. Greene, M.D. 13s. 6d.

Marriage and Disease. Abridged edition of "Health and Disease in Relation to Marriage and the Marriage State." Edited by Professor H. Senator and Dr. S. Kaminer. Translated from German by J. Dulberg, M.D. 10s. 6d.

Tropical Medicine, with special reference to the West Indies, Central America, Hawaii, and the Philippines. By T. W. Jackson, M.D. 17s.

The Cause and Prevention of Beri-beri. By W. L. Braddon, M.R., B.S., F.R.C.S. 21s.

London: The Health Resorts Association. 1907:

Tenby. By D. A. Reid, M.D.

Weymouth. Edited by G. W. May: and

Bournemouth. Edited by G. W. May. Free on application to Town Clerk.

Les Venins, les Animaux Venimeux et la Sérotherapie antivenimeuse. Par A. Calmette. Paris: Masson et Cie. 1907. Fr. 12

Green's Encyclopædia and Dictionary of Medicine and Surgery. Vol IV. Gum resins to Intussusception. Edinburgh and London: W. Green and Sons.

The Laws of Health, a Handbook on School Hygiene. By C. G. Douglas, M.D., D.Sc., F.R.S.E. London: Blackie and Son, Limited. 1907.

Eléments d'Obstétrique. Par le Dr. V. Wallich. Paris: G. Steinheil. 1907. Fr. 8.

Funktionelle Behandlung der Skoliose. Von Professor Dr. Klapp. Jena: G. Fischer. Mk 3.

Nouveau Traité de Chirurgie, publié en Fascicules sous la direction de A. le Dentu et P. Delbet. I. Grands Processus Morbides. Traumatismes, Infections, Troubles Vasculaires et Trophiques Cicatrices. Par P. Delbet, M. Chevassu, A. Schwartz, et V. Veau. Paris: J. B. Baillière et Fils. 1907. Fr. 10.

The Way of War. By Hew Scot. London: John Long.

***** In forwarding books the publishers are requested to state the selling price.**

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MAY.	
24 FRIDAY ...	HAMPSTEAD DIVISION, *Metropolitan Counties Branch*, Lecture Room, Hampstead Conservatoire, Swiss Cottage, N.W., 4.30 p.m.
25 SATURDAY ...	TROWBRIDGE DIVISION, *Bath and Bristol Branch*, Annual Meeting, Court Room, Town Hall, Trowbridge, 3 p.m.
26 Sunday ...	
27 MONDAY ...	LANCASHIRE AND CHESHIRE BRANCH, Council Meeting, Royal Infirmary, Manchester, 4.30 p.m. MANCHESTER (WEST) DIVISION, *Lancashire and Cheshire Branch*, Annual Meeting, Hulme Dispensary, Dale Street, Stretford Road, 4.15 p.m.
28 TUESDAY ...	LONDON: Finance Inquiry Committee, 12 noon. BOSTON AND SPALDING DIVISION, *Midland Branch*, Annual Meeting, Red Lion Hotel, 1 p.m.; Luncheon, 2 p.m. ST. PANCRAS AND ISLINGTON DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Board Room of the London Temperance Hospital, Hampstead Road, N.W., 4 p.m. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Annual Dinner, Gaiety Restaurant, Strand, W.C., 7 p.m. for 7.30 p.m.
29 WEDNESDAY	SPECIAL REPRESENTATIVE MEETING, Examination Hall, Victoria Embankment, London, W.C., 9.30 a.m. BATH AND BRISTOL BRANCH, Annual Meeting, Museum, Bath, 7.30 p.m.; Supper, Fortt's Restaurant, Milsom Street, 8.45 p.m.
30 THURSDAY ...	SPECIAL REPRESENTATIVE MEETING *(if necessary)*. CITY DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Great Eastern Hotel, Liverpool Street, E.C., 9 p.m.; followed by a Supper, 9.30 p.m. MARYLEBONE DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Rooms of Medical Society of London, 11, Chandos Street, W., 5 p.m. SOUTH CARNARVON AND MERIONETH DIVISION, *North Wales Branch*, Annual Meeting, White Lion Hotel, Bala.
31 FRIDAY ...	
JUNE.	
1 SATURDAY ...	
2 Sunday ...	
3 MONDAY ...	SOUTH-WESTERN BRANCH, Annual Meeting, Royal Devon and Exeter Hospital, Exeter; Luncheon, Clarence Hotel, 1.30 p.m.
4 TUESDAY ...	LONDON: Naval and Military Committee, 3.30 p.m.
5 WEDNESDAY	CENTRAL COUNCIL, *Special Meeting*, Metropolitan Asylums Board, 2 p.m. CENTRAL DIVISION, *Birmingham Branch*, Annual Meeting, Medical Institute, 4 p.m.
6 THURSDAY ...	ALTRINCHAM DIVISION, *Lancashire and Cheshire Branch*, Annual Meeting, Board Room of the Hospital, Altrincham, 5 p.m. METROPOLITAN COUNTIES BRANCH, Special General Meeting, St. James's Vestry Hall, Piccadilly, 4.30 p.m.
7 FRIDAY ...	GLASGOW AND WEST OF SCOTLAND BRANCH, Annual Meeting, New Medical Buildings of the University, 3.30 p.m.; Dinner in the evening.
8 SATURDAY ...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 1ST, 1907.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

EDINBURGH BRANCH:

NORTH-EAST EDINBURGH DIVISION.

THE annual meeting of this Division was held in the Royal College of Physicians on May 13th, at 8.15 p.m., Dr. JAMES CARMICHAEL in the chair.

Alteration of Boundary.—The approval of the Council was intimated to the alteration of the Western Boundary as published in the SUPPLEMENT of May 11th.

Election of Office-bearers.—The following were elected for the ensuing year: *Chairman*, Dr. Jas. Carmichael; *Vice-Chairman*, Dr. W. Leslie McKenzie; *Honorary Secretary and Treasurer*, Dr. G. Keppie Paterson; *Representative to the Representative Meeting*, The Chairman; *Representative on the Branch Council*, The Secretary; *Executive Committee*, Drs. H. L. Calder, G. M. Johnston, Jas. Cameron, Jas. Smith, Geo. Donald, and A. T. Sloan.

Draft Charter.—After consideration the members resolved to advise delay; to oppose the promoting or support of the candidature of any member of the Association for Parliament or any British Legislative Assembly; to support the election of members of Council by groups of Branches; and that the number of members of Council be moderately reduced—to, in all, about 50.

Ethical Aspects of Consultation.—No definite opinion could be arrived at.

Medical Inspection of School Children.—The opinion was that this should be assigned to medical officers specially appointed; that there was evidence of teachers sending school children to hospital, and that this subject was included in the general subject of the abuse of hospitals which is engaging the attention of the Division.

Hospital Administration.—It was considered that there should be no compulsory payment by patients to hospitals other than cottage hospitals; that the production of subscribers' letters should not be compulsory; that inquiry into a patient's circumstances should invariably take place; and that it was not practicable that a certificate from a medical practitioner should be required of all persons attending the out-patient departments of hospitals.

SOUTHERN DIVISION.

THE annual meeting of the Division was held on May 16th, Dr. A. A. MATHESON in the chair.

Confirmation of Minutes.—The minutes of the last meeting were confirmed.

Election of Officers.—The following officers and Representatives of the Division were elected: *Chairman*, Dr. A. A. Matheson; *Vice-Chairman*, Dr. Cullen; *Honorary Secretary and Treasurer*, Dr. Dewar; *Representative for Representative Meetings*, Dr. A. Walker, Lygon Road; *Representatives on Branch Council*, the Chairman and Secretary; *Members of Executive Committee*, Drs. Salt, Kennedy, Lundie, Proudfoot, Webster, Johnston, Jamieson, Scott, and Gordon Price.

Draft Charter.

The questions were answered as follows:

1. It was the unanimous opinion that the present number of members of the Central Council should not be altered, qualified by the expression that if the number must be reduced in the interests of economy, it should not be below 60.

2. It was the unanimous opinion of the meeting that the members of Council representing the members of the Association resident in the United Kingdom should be elected by the members grouped in Branches.

3. No answer necessary.

4. As regards Colonial Representatives, it was unanimously agreed that Clause B should be adopted. The Representative was specially instructed to support the resolution of the North-West Edinburgh and the Dublin Divisions.

Annual Representative Meeting.

Instructions were also given to the Representative on matters to be brought up at the annual meeting.

Hospital Administration.

The questions were answered as follows:

1. No; unanimous.
2. No; unanimous.
3. Not invariably; unanimous.
4. No; unanimous.

Vote of Thanks.—A vote of thanks to the Chairman closed the meeting.

GLASGOW AND WEST OF SCOTLAND BRANCH:

GLASGOW SOUTHERN DIVISION.

A GENERAL meeting of the Division was held in the Medical Club on May 15th. Dr. BROWN presided.

Confirmation of Minutes.—The minutes of the last meeting were read and approved of.

Anderston and District Health Association Dispensary. Report of Ethical Committee.—The meeting endorsed the report of the Ethical Committee of the Branch, which was to the effect that Dr. X., in accepting the post of Medical Officer to the Anderston and District Health Association, has acted in an unwise and unbecoming manner in disregarding the opinion of his medical brethren, more especially in view of the declared opposition of the Branch to the establishment of a medical dispensary in the Anderston District, and of the resignation of the medical officers first appointed.

Draft Charter.—Agreed to support the motion of Dublin Division for postponement of consideration of Charter.

Central Council Election.—Resolutions were passed to the following effect: (1) Agreed that it is not desirable than the Council should be smaller than at present. (2) Agreed that election should be by members grouped in Branches, or failing this, by Representatives in Representative Meeting grouped in districts, provided Representatives are elected by postal vote.

Special Representative Meeting.—Remitted to Executive Committee to consider other matters on agenda for special Representative Meeting.

GLOUCESTERSHIRE BRANCH.

At the general meeting of this Branch held on May 16th, the following officers were elected: *President*, G. Wayland Ancrum, M.B., C.M.; *Council*, H. Bramwell, M.D., C. Braine Hartnell, W. R. Buckell, E. C. Carter, M.D., O. W. Clark, M.B., C. J. Cuthbert, E. C. Cripps, T. S. Ellis, J. Howell, M.B., R. Kirkland, M.B., C.M.; S. T. Pruen, M.D.; J. G. Soutar, M.B., C.M.; *Scrutineers*, G. Wayland Ancrum, M.B., C.M., J. S. Ellis; *Auditors*, C. Braine Hartnell, G. A. Cardew; *Ethical Committee*, J. G. Soutar, M.B., C.M., R. W. Batten, M.D., E. T. Wilson, M.B., D. H. Fowler, J. S. Ellis; *Representative on Council of Association*, C. Firmin Cuthbert (re-elected); *Representative at Annual Meeting*, Dr. H. Bramwell (re-elected); *Honorary Secretary*, Douglas E. Finlay.

LANCASHIRE AND CHESHIRE BRANCH:

Blackpool Division.

An adjourned general meeting of the Blackpool Division was held at Jenkinson's Café, Blackpool, on Wednesday, May 8th, Dr. McIntosh, President, in the chair.

Confirmation of Minutes.—The minutes of the general meeting of April 24th were read and confirmed.

Special Representative Meeting.—It was resolved that Dr. Coutts be appointed deputy for Dr. Heaney for the special meeting of Representatives on May 29th.

Proposed Alteration of Rule.—Dr. Dunderdale gave notice that at the annual general meeting he would propose an alteration to Rule 11, so that only fourteen days' notice need be given of the annual meeting instead of four weeks. (To be seconded by Dr. Johnson.)

Central Council Election.—Mr. F. C. Larkin (Liverpool) then gave an address in support of his candidature for the Central Council. On the proposition of Dr. Dunderdale, seconded by Dr. Johnson, it was resolved:

> That the thanks of the Division be offered to Mr. Larkin for his kindness in coming to give this address.

Ethics of Medical Consultation.—The meeting then proceeded to consider the recommendations as to medical consultation, and approved of these generally, although there were some points which might be modified. In regard to Section 3, there might be exceptional cases in which circumstances might justify refusal to meet another in consultation. In Section 6 ("*i*" and "*j*") it was considered that the words "as a rule" should be omitted. In Section 10, also, the words "unless the circumstances are exceptional" should be omitted.

Medical Inspection of School Children.—The question of the medical inspection of school children was next considered. The meeting was unanimously of opinion that for medium sized districts a combination of methods "*a*" and "*c*" was to be preferred—that is, the actual work of inspection and anthropometry should be carried out by the general practitioners of the district who care to undertake the work; but the medical officer of health should be appointed medical adviser to the education authority, and he would co-ordinate the work of the whole department of medical inspection of schools. In very large towns it might be found advisable to appoint special officers giving their whole time to school inspection; such officers should not be engaged in general practice.

Bury Division.

The annual meeting was held at the Dispensary, Knowsley Street, on May 16th, at which several of the members of the Rochdale Division were present.

Election of Officers.—The following officers were appointed: *President*, Dr. Cook; *Vice-President*, Dr. Greenhalgh; *Honorary Secretary*, Dr. Jelly; *Executive Committee*, Drs. Kerr, Brindley, Deans, and Nuttall; *Representative on the Branch Council*, Dr. Jelly.

Central Council.—The following resolutions were proposed and seconded:

1. The Division is of the opinion that the Central Council should be smaller than at present.
2. That a deputy for each Representative be appointed.
3. That nominations for new members should come through the Division in which they reside to the Branch Council.
4. That Section 4 of Clause 6 be moved from the Charter to the By-laws.
5. In Clause 23, Section 9, of the Ordinances, add: "reasonable out-of-pocket expenses."
6. By law 41. Add: "Those restrictions shall not apply to any deputy who may be appointed."

Chester and Crewe Division.

A meeting of the Division was held on May 17th, at 4 p.m., at the Chester General Infirmary, Dr. Parry in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Warning Notice.—The Honorary Secretary then read the various letters about the Audlem "Warning Notice," and the action of the Secretary was approved.

Draft Charter.—The draft Charter was considered and instructions were given to the Representative as to voting at the Representative Meeting, but the matter would be further considered at the annual meeting on May 28th.

Special Reports.—The consideration of the three special reports was then deferred to a meeting to be held in Crewe on Friday, June 14th.

Quarterly Meetings.—A resolution authorizing the holding of quarterly meetings alternately in Chester and at Crewe was proposed by Dr. Laird and seconded by Dr. Mann, and was unanimously adopted.

Division Ethical Rules.—The question of the adoption of Division Ethical Rules was deferred. Dr. Laird promised to call a meeting of the doctors in Crewe to consider remuneration, terms, etc., for friendly societies and other clubs, and to communicate with the Honorary Secretary before the next meeting. This concluded the business.

METROPOLITAN COUNTIES BRANCH:

City Division.

A special meeting of this Division was held on Thursday, May 23rd, at the Great Eastern Hotel, Liverpool Street, E.C. The chairman of the Division, Dr. Major Greenwood, presided.

Confirmation of Minutes. The minutes of the meeting held on April 18th, having been read and confirmed, were signed by the Chairman.

Nominations by the Division for Offices in the Branch.—The following members of the Branch were duly nominated: *President-elect*, Edmund Owen, Esq.; *Honorary Secretaries*, F. J. McCann, M.D., and Atwood Thorne, M.B.; *Treasurer*, H. Betham Robinson, Esq.; *Vice-Presidents*, E. W. Goodall, M.D., and F. J. Smith, M.D.; *Representatives on the Central Council*, J. Ford Anderson, M.D., G. E. Haslip, M.D., Hugh R. Ker, Esq., and St. Clair B. Shadwell, M.D.

Draft Charter. This was considered, together with the Organization Committee's report and the various notices of motion. Certain instructions were given to the Representative of the Division.

Notice of Motion by the Council. This was unanimously approved.

Hospitals Committee's Report on Hospital Administration. The four specific questions were answered as follows: (1) No, (2) No, (3) Yes, (4) No. As to (5) the following resolution was carried unanimously:

> That cases accepted by the almoner on account of emer-

gency, etc., and trivial cases that have evaded the almoner, should be sent back by the medical officer who sees them at the hospital for a certificate from an outside practitioner before they are seen a second time.

Medico-Political Committee's Supplementary Report on the Medical Inspection of School Children.—This was approved unanimously.

KENSINGTON DIVISION.

A MEETING of the Kensington Division was held on May 23rd.

Draft Charter.—It was proposed and carried by a large majority:

That the consideration of the proposed Charter should be postponed for one year.

In the event of the above not being carried the following amendments were proposed and carried unanimously:

Clause 2 (2) vi.—Delete "and may promote . . . Legislative Assembly."

Ordinance 10 (*a*). Expulsion.—After "prescribed by the By-laws" insert "to suspend from certain privileges and."

Ordinance 17, Clause (*b*).—Add "or if they shall receive a petition from not less than 100 members of the Association, desiring the said referendum."

Clause (*c*).—Delete all after "send by post," and replace by "to each member of the Association a voting paper on which to state whether he agrees or disagrees with the resolution."

Clause (*d*).—Delete, and substitute "The resolution shall not come into force unless a clear majority of those voting are in its favour."

Clause (*e*).—Omit all before "the resolution shall have no operation unless. . . ."

RICHMOND DIVISION.

THE annual meeting of this Division was held at the Sun Hotel, Kingston, on Wednesday, May 15th, at 7 p.m., Dr. F. G. CROOKSHANK in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The following officers for the ensuing year were elected: *Chairman*, Dr. J. R. Johnson; *Vice-Chairman*, Dr. F. G. Crookshank; *Representative at Representative Meetings*, Dr. R. L. Langdon-Down; *Representative on Branch Council*, Dr. R. W. Wilson; *Honorary Secretary and Treasurer*, Dr. C. Blair; *Honorary Assistant Secretary*, Dr. A. E. Evans; *Other Members of Executive Committee*, Dr. G. J. Maguire, Dr. G. C. Still, Dr. M. O. Coleman, Dr. H. E. Crook, and Dr. R. R. Mowll.

Financial Report.—This was read and adopted.

Annual Representative Meeting.—Dr. LANGDON-DOWN, the Representative of the Division, applied for instructions from the meeting with regard to the question of the Charter, and in particular with regard to the proposed constitution of the Central Council. He reviewed the history of the question, and gave an account of the attitude of the last Representative Meeting and the various arguments brought forward on both sides. He referred to the feeling of many members on the question, as shown in recent correspondence in the JOURNAL, and described the practical working and difficulties of the present system, and explained the various proposals now under consideration. After a discussion, the meeting resolved:

1. That it was undesirable that the Council should be elected by a mixed electorate, and further
2. That it was desirable that the Central Council should be elected by the Representative Meeting, but not necessarily from among its own members.

SOUTH-EASTERN BRANCH:

FOLKESTONE DIVISION.

THE annual meeting of the Folkestone Division and of the Folkestone, Ashford, and Dover Constituency was held at Hundert's Hotel, Folkestone, on Thursday, May 23rd, at 7.15 p.m., W. P. BARRETT, Esq., being in the chair.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Medical Inspection of School Children.

The following questions referred to the Divisions were answered:

1. Does the Division consider that the medical inspection of school children should be assigned—

(*a*) To the medical officer of health?—No.
(*b*) To medical officers specially appointed?—No.
(*c*) Be distributed among those practitioners of the district who are prepared to undertake a proportion of the duty?—Yes.

2. If the method (*c*) is preferred, how does the Division propose to carry it out locally?—That the reports should be sent to the proper authority on the Education Committee by the individual inspectors.

3. Is there evidence of prevalence within the Division area of the practice of teachers sending school children found to be ill, irrespective of their social status, to hospitals instead of referring them to their family medical attendant?—No.

Ethical Aspects of Medical Consultation.

The proposals were approved generally.

Hospital Administration.

Specific questions:

1. Should there continue to be compulsory payment by patients to hospitals other than cottage hospitals?—Yes.

2. Should the production of subscribers' letters continue to be compulsory?—No.

3. Should inquiry into a patient's circumstances invariably take place?—Yes.

4. Should a certificate be required from the medical attendants of all persons attending out-patient departments?—No.

Report of Executive Committee.—The annual report of the Executive Committee was received and adopted.

Election of Officers.—The following officers were elected: *Chairman*, A. R. Davis, Esq.; *Vice-Chairman*, E. D. Fitzgerald, Esq.; *Representative on Branch Council*, Dr. T. Eastes; *Representative for Representative Meeting*, Dr. P. Vernon Dodd; *Deputy Representative*, W. J. Best, Esq.; *Executive Committee*, T. Streatfeild, M.D., J. W. T. Gilbert, Esq., J. H. F. Wilgress, M.D.; *Honorary Secretary*, Dr. P. Vernon Dodd.

Vote of Thanks.—A cordial vote of thanks was accorded to W. P. Barrett, Esq., the outgoing President.

Dinner.—Eleven members dined together after the meeting.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:

CARDIFF DIVISION.

THE annual meeting of the Cardiff Division was held at the Cardiff Infirmary on Thursday, May 16th.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, Dr. W. B. Crawford Treasure; *Vice-Chairman*, T. Garrett Horder, Esq.; *Honorary Divisional Secretaries*, R. Russell Thomas, Esq., and Dr. Cyril Lewis. *Representatives of the Division on the Branch Council.*—The following were elected: Drs. E. E. Brierley, J. Powell, W. Kirkby, D. R. Paterson, and W. W. Leigh. *Executive Committee.*—The following were elected members: Drs. Herbert Vachell, E. Goodall, W. Mitchell Stevens, and P. Rhys Griffiths. *Representative for Representative Meeting.*—Dr. Ewen J. Maclean was elected Representative of the Division in the Representative meetings of the Association.

Annual Report of the Executive Committee.—The annual report of the Executive Committee was received and adopted.

Vote of Thanks.—A hearty vote of thanks was proposed to the retiring Chairman, Dr. D. R. Paterson, and unanimously carried.

STIRLING BRANCH.

THE annual general meeting of the Branch for 1907 was held in the Station Hotel, Larbert, on Thursday, May 16th, at 4.30 p.m.

Apology for Absence.—Apology for absence was intimated from Dr. Buist of Dundee.

Confirmation of Minutes.—The minutes of the autumn meeting were taken as read, and signed by the President.

Election of Office-Bearers.—The following office-bearers were elected for the ensuing year: *President*, Dr. McGowan (Grangemouth); *Vice-President*, Dr. Robertson (Clackmannan); *Representative*, Dr. Gardner (Falkirk); *Secretaries*, Drs. Moorhouse and Stewart; *Council*, Dr. Alexander, Dr. Mackintosh (Bridge of Allan), Dr. McCracken, Dr. Mitchell.

Report of Council.—It was reported that two meetings of the Branch had been held during 1906. Average attendance, 16; membership of Branch, 67. The balance of funds at the end of 1905 was £12 5s. 6d.; at the end of 1906, £20 17s. 2d.

Draft Charter.—Dr. Moorhouse moved:

That the Branch approve of the Draft Charter generally, and that the Representative be instructed to vote at the Representative Meeting as seemed best to him.

This was seconded by the President, and agreed to unanimously.

Lecture.—Dr. Brown Kelly (Glasgow) gave a lecture, illustrated by a lantern demonstration, on Certain Varieties of Pharyngeal Irritation. The lecture proved very interesting and instructive, and on the motion of Dr. Alexander, the President, a vote of thanks to Dr. Brown Kelly was carried by acclamation.

ST. JOHN, NEW BRUNSWICK, BRANCH.

The annual meeting of this Branch was held on Thursday, May 2nd.

Election of Officers.—The election of officers resulted as follows: *President:* Thomas Walker, M.D., St. John, N.B. *President-elect:* James Christie, M.D., St. John, N.B. *Vice-President:* J. R. McIntosh, M.D., St. John, N.B. *Honorary Secretary:* J. H. Scammell, M.D., St. John, N.B. *Financial Secretary:* Wm. Warwick, M.D., St. John, N.B. *Honorary Treasurer:* G. A. B. Addy, M.D., St. John, N.B. *Representative on Council of Association:* P. R. Inches, M.D., St. John, N.B. *Representative:* A. P. Atherton, M.D., Fredericton, N.B. *Branch Council:* L. A. McAlpine, M.D.; S. Skinner, M.B.; J. B. Travers, M.D.; F. J. White, M.D.; F. H. Wetmore, M.D.; W. C. Crockett, M.D.; M. McLaren, M.D.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

SPECIAL COUNCIL MEETING.

A special meeting of the Council will be held at 2 o'clock in the afternoon of Wednesday, June 5th, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board, to consider the resolutions passed by the Special Representative Meeting in regard to the proposed Royal Charter. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

Guy Elliston,
General Secretary.

May 14th, 1907.

BRANCH AND DIVISION MEETINGS TO BE HELD.

Aberdeen Branch.—Nomination of elective member of Council.—Notice is hereby given that the names of candidates for the representation of this Branch must be sent to me on or before June 13th. Each candidate must be nominated by at least three members.—A. F. Christie, Honorary Secretary, 7, Alford Place, Aberdeen.

Birmingham Branch.—Notice is hereby given that the annual meeting of the Branch will be held at the Medical Institute, Birmingham, on Thursday, June 13th, at 8.30 p.m. Election of two members of the Branch to represent the Branch on the Central Council of the Association.—O. J. Harverian, 2, Broad Street, Birmingham.

Birmingham Branch: Central Division.—The annual meeting of the Division will take place at the Medical Institute on Wednesday, June 5th, at 4 p.m.—E. D. Kelly, Honorary Secretary.

Border Counties Branch.—The annual general meeting of this Branch will be held in the Crown and Mitre Hotel, Carlisle, on Friday, June 21st. The business will include proposals to alter the existing rules of the Branch in several particulars, details for which will be sent to every member before the meeting. Election of office-bearers, etc. The Presidential Address will be delivered by Dr. F. H. Clarke, Dumfries. The detailed agenda paper will be issued as usual before the meeting.—Francis R. Hill, Honorary Secretary, Carlisle.

Cambridge and Huntingdon Branch.—*Preliminary Notice.*—The annual meeting of the Branch will be held on Thursday, June 13th, at Cambridge. Any member desirous of bringing any communication before the meeting should communicate at once with the Honorary Secretary.—F. E. Apthorpe Webb, Honorary Secretary, Cambridge.

Dundee, Perth, and Stirling Branches.—The nomination of candidates for the office of Elective Member of Council for the ensuing year must be made in writing on or before June 17th to Dr. J. E. Moorhouse, 6, Melville Terrace, Stirling.—A. P. Low, Honorary Secretary, Dundee Branch; W. A. Taylor, Honorary Secretary, Perth Branch; J. E. Moorhouse, Honorary Secretary, Stirling Branch.

East Anglian Branch.—*Two Members of Council.*—In accordance with the Articles and By-laws, the Honorary Secretary of the Branch will be glad to receive nominations, signed by not less than three members, for the election of two Representatives on the Central Council of the Association. Nominations must reach the Honorary Secretary of the Branch on or before Monday, June 3rd.—B. H. Nicholson, East Lodge, Colchester, Honorary Secretary of Branch.

East Anglian Branch.—The annual meeting of the East Anglian Branch will be held at Ipswich on Thursday, June 20th. Members wishing to read papers or show cases or specimens should communicate at once with Dr. Gutch, Ipswich.—B. H. Nicholson, M.B., East Lodge, Colchester, Honorary Secretary.

East Anglian Branch: West Norfolk Division.—The annual meeting will be held at the West Norfolk and Lynn Hospital on June 20th, at 3 p.m., when officers and Representatives will be elected for 1907-8.—Arthur Gardiner, Honorary Secretary, Tuesday Market Place, King's Lynn.

Edinburgh and Fife Branches.—The attention of members of these two Branches is drawn to the fact that nominations for the election of two members upon the Central Council of the Association should be sent in to one of the Secretaries not later than Wednesday, June 5th.—Logan Turner, 27, Walker Street, Edinburgh; Francis W. Boyd, 22, Manor Place, Edinburgh; Balfour Graham, Leven, Fife, Honorary Secretaries.

Glasgow and West of Scotland Branch.—The statutory annual meeting of the Branch will be held in the new Medical Buildings of the University on the afternoon of Friday, June 7th, at half-past three o'clock. Professors Glaister, Stockman and Nöel Paton have courteously offered to show the members the New Laboratories, a description of which will be found in the Journal of April 27th (page 1023). Dr. Donald MacIntosh has also invited the Branch to visit the New Wing of the Western Infirmary. A dinner will be held in the evening (6.15) at which Principal Donald MacAlister, M.D., LL.D., will be present. Ticket, 5s. 6d. (exclusive of wines).—James Hamilton, J. Grant Andrew, Honorary Secretaries.

Lancashire and Cheshire Branch: Altrincham Division.—The annual meeting will be held at Altrincham on June 6th, when officers and committee will be elected for 1907-8. A paper on Some of the Disorders of Infancy will be read by Henry Ashby, M.D., of Manchester. The subsequent dinner will be held at the Brooklands Hotel at 7 o'clock. (By order.) T. W. H. Garstang, Honorary Secretary.

Metropolitan Counties Branch.—Notice is hereby given that the annual meeting of the Branch will take place on Thursday, June 27th. Time and place will be fixed by the Branch Council.—Honorary Secretary, Fred. J. Smith.

Metropolitan Counties Branch.—At the request of the Westminster Division, a special general meeting of the Branch will be held at 4.30 p.m., on Thursday, June 6th, at St. James's Vestry Hall, Piccadilly, to discuss the advisability of constituting a central hospital authority for London. D. Knowsley Sibley will submit, on behalf of the Westminster Division, the following resolution: "That in

the opinion of this meeting of the Metropolitan Counties Branch of the British Medical Association, it is desirable, with a view of abating the present abuse of hospital charity, that a central hospital authority for London be constituted upon which the medical profession is adequately represented." If this resolution is approved by the meeting, the Branch Council will be asked by further resolutions to appoint a committee and provide the funds necessary for the promotion of this object. Those who desire to join in the discussion are requested to send their names to Dr. F. J. McCann, 5, Curzon Street, Mayfair, W., Secretary, Westminster Division. Tea and coffee will be served at 4 p.m.—F. J. SMITH, M.D., D'ARCY POWER, F.R.C.S., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.—A meeting of this Division will be held on Tuesday, June 4th, at 8.30 p.m., at the Hampstead Conservatoire. The annual meeting will be held on Friday, June 14th, at 4.30 p.m., at St. Peter's Hall, Belsize Square, N.W.—R. A. YELD, Honorary Secretary, 29, Platt's Lane, N.W.

MIDLAND BRANCH.—The annual meeting of this Branch will be held at the Devonshire Hospital, Buxton, on Thursday, June 13th, 1907, at 2.15 p.m. Agenda: Minutes; report of Council; financial statement; election of two Representatives of Branch on the Central Council. The only nominations received are Dr. Carline and Dr. Pope, who will therefore be elected. Election of Branch officers; election of President-elect, 1907-8; any other business. Address by the new President, G. Lorrimer, Esq., M.D. Clinical cases shown by members of the Honorary Staff Devonshire Hospital. The President will be glad to entertain members to lunch at the Palace Hotel, Buxton, at 1 p.m. The annual dinner will be held at the Palace Hotel, Buxton, at 6.30 p.m.; tickets (exclusive of wine) 7s. 6d. each. Members attending the lunch or the dinner are requested to notify the fact to Dr. Lorrimer, Buxton, or the Honorary Secretary, before Monday, June 10th.—ROBERT SEVESTRE, Honorary Secretary and Treasurer, 119, London Road, Leicester.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of the Branch will be held at Fort Augustus in the last week of June. Further particulars will be sent to each member by circular.—J. MUNRO MOIR, M.D., Honorary Secretary.

NORTH WALES BRANCH.—Nominations for a Representative of the Branch on the Central Council in accordance with By-law 24 will be received by the Honorary Secretary up to June 1st.—H. JONES ROBERTS, Honorary Secretary, Llywenarth, Penygroes.

SOUTH-EASTERN BRANCH.—The sixty-third annual meeting of the Branch will be held at the Hôtel Métropole, Brighton, on Wednesday, June 19th, at 2.15 p.m. Mr. T. Jenner Verrall, President-elect, kindly invites members to lunch at the Hôtel Métropole from 1 to 2 p.m. Agenda, in addition to the business of an ordinary meeting: (1) To receive the report of the election of new officers, who shall thereupon take office; (2) to receive the report of the Council on the affairs of the Branch and the annual financial statement; (3) Dr. Douglas will move: "That no alteration of, or addition to, existing rules, or repeal of any rule, be made unless notice of the same be printed and circulated with the agenda for the meeting at which any alteration, etc., should be brought forward." After the meeting there will be a reception at the Royal Pavilion by his Worship the Mayor of Brighton (Councillor Gervis, M.A., M.B.). The following expeditions have been arranged to take place afterwards: A short sea trip, visit to the Grand Aquarium and trip on Volk's Electric Railway, visit to Booth's Museum of British Birds. Dinner at the Hôtel Métropole at 6.15 p.m.; charge, 7s. 6d. Wine will be provided by the members of the Brighton Division. Those who propose to be present at lunch or dinner, or both, are requested to signify their intention to Dr. Ryding Marsh, 49, Sackville Road, Hove, Sussex, not later than Saturday, June 15th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

SOUTH-EASTERN BRANCH: CANTERBURY AND FAVERSHAM DIVISION.—A combined meeting of the Divisions comprised in the old East Kent District—that is, Ashford, Canterbury and Faversham, Dover, Folkestone, and Thanet—will be held at the County Hotel, Canterbury, on Thursday, June 27th, at three o'clock precisely, Dr. Whitehead Reid in the chair. Agenda: A paper will be read by W. J. Tyson, M.D., F.R.C.P., F.R.C.S., Honorary Physician, Victoria Hospital, Folkestone, on the Future Lines of Treatment: Their Effects on the Profession. An address by Alex. G. R. Foulerton, F.R.C.S., D.P.H., Director of Bacteriological Department, Middlesex Hospital, Medical Officer of Health to the County of East Sussex, on the Treatment of Infective Disease by Bacterial Vaccination. W. T. Hillier, Esq., M.R.C.S., D.P.H., Pathological Assistant, Research Laboratories, Middlesex Hospital, will (1) Show specimens of trypanosomata; (2) give a demonstration of the method of determining the opsonic index of the blood. Preliminary meetings will be held as follows: (*a*) 2.30, Canterbury and Faversham Division:—Agenda: (1) Minutes. (2) Annual report. (3) Election of officers—Chairman, Vice-Chairman, Representative at Representative Meetings, Representative on Branch Council, Honorary Secretary and Treasurer, Committee. (4) To consider the desirability of amalgamating with the Ashford Division. (5) Any other business. (*b*) 2.50, Canterbury and Faversham with Thanet Divisions:—Agenda: (1) To elect the Representative for Representative Meetings. Members will dine together at 5.45 for 6 o'clock at the County Hotel, Canterbury; charge 5s., exclusive of wines. Those who intend to stay to dinner are requested to notify Dr. Henchley not later than the morning of June 27th, and to state whether they will assist in a short musical programme.—A. R. HENCHLEY, Honorary Secretary and Treasurer, Canterbury.

SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch and of the Branch Council will be held at the Town Hall, Clonmel, on Wednesday, June 5th, at 12 noon. Agenda: (1) Minutes. (2) Apologies. (3) Correspondence. (4) Ethical aspects of medical consultation; revised Royal Charter and hospital administration (see SUPPLEMENT to the BRITISH MEDICAL JOURNAL, February 16th, April 6th and 13th, and bring them to meeting). (5) To receive report of Committee relating to underselling. (6) To elect new member. (7) Dr. Jellett will read notes on a case of retinitis proliferans, and exhibit photographs of it. (8) Dr. Quirke will introduce a discussion on parotitis and Leitchnech (Irish), giving differential diagnosis. (9) Any other business. Members are requested to give the Honorary Secretary at least three days' notice of their intention to read papers or bring up matters concerning the interest of the profession for discussion.—J. QUIRKE, Honorary Secretary, Piltown.

SOUTH MIDLAND BRANCH.—Nominations for Representative for the above Branch on the Central Council are requested to be sent to the Honorary Secretary not later than June 10th.—E. HARRIES-JONES, Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Notice is hereby given that the election of Branch Representatives on the Central Council will take place on June 13th at the annual meeting at Cardiff.—FRANK G. THOMAS, M.B., 68, Walter Road, Swansea.

SOUTH-WESTERN BRANCH.—The sixty-eighth annual meeting will be held on June 3rd, at the Royal Devon and Exeter Hospital, Exeter, at 12.30 p.m. In view of the forthcoming visit of the Association to Exeter, this meeting will be limited to the transaction of the necessary annual business of the Branch. Mr. Domville will resign the chair to Dr. Deas. The report of the Branch Council and the annual financial statement will be presented to the meeting, and the officers of the Branch will be elected for the year 1907-8. A report from the Executive Committee appointed to make arrangements for the reception of the Association will be read. The Branch Council wish to call attention to the very inadequate support which the guarantee fund has in some quarters received from the members of the Branch. Less than half the members have subscribed, and although the subscriptions given average £2 per head, the average from the whole Branch is less than £1 per head. It is hoped that each member of the Branch will make it a point of honour to contribute to this fund, so that there may be a fair prospect of a return when the meeting is over. The subscriptions given will be appended to the list of members which is issued immediately after the annual meeting of the Branch. The President-elect will be pleased to see any members attending either this meeting or the Executive Committee at luncheon at the Clarence Hotel at 1.30.—RUSSELL COOMBE, Honorary Secretary.

STAFFORDSHIRE AND SHROPSHIRE AND MID WALES BRANCHES.—Election of Representative on the Central Council. In accordance with By-law 22, notice is hereby given that the names of those candidates nominated for the Central Council of the Association must be sent in to the Secretary of the Staffordshire Branch or the Secretary of the Shropshire and Mid Wales Branch on or before Saturday, June 1st.—G. PETGRAVE JOHNSON, Stoke-on-Trent, Secretary of the Staffordshire Branch; C. E. RUSS WOOD, Shrewsbury, Honorary Secretary of the Shropshire and Mid Wales Branch.

ULSTER BRANCH.—The annual meeting will be held in the Medical Institute, Belfast, on Saturday, June 29th, at 11.30 a.m. Members having communications to make to the meeting are requested to send particulars of the same not later than June 15th to CECIL SHAW, M.D., Honorary Secretary, College Square, Belfast.

ULSTER AND CONNAUGHT BRANCHES.—Nominations for Central Council. Two members to represent these Branches (combined) on the Central Council will be elected on June 29th. Nominations, signed by three electors, to be sent, to reach me not later than June 8th.—CECIL SHAW, M.D., Honorary Secretary, College Square, Belfast.

Yorkshire Branch.—*Two Members of Council.*—In accordance with the Articles and By-laws, the Honorary Secretary of the Branch will be glad to receive nominations, signed by not less than three members, for the election of two Representatives on the Central Council of the Association. Nominations must reach the Honorary Secretary of the Branch not later than Saturday, June 15th.—Adolph Bronner, 33, Manor Row, Bradford, Honorary Secretary.

Yorkshire Branch.—The annual meeting of the Yorkshire Branch will be held at Dewsbury on Wednesday, June 26th. Members wishing to read papers, or show cases or specimens, should communicate at once with the Honorary Secretary.—Adolph Bronner, 33, Manor Row, Bradford, Honorary Secretary.

Yorkshire Branch: Bradford Division.—The annual meeting of this Division will be held at the Eye and Ear Hospital, Bradford, on Tuesday, June 11th, at 8.30 p.m. The election will take place of the officers, Representatives of the Division on the Branch Council, Members of the Executive and Ethical Committees, and the Representative of the Division in Representative Meetings of the Association. The annual report of the Executive Committee will be presented. Any questions of importance on which the opinion of the Division has not yet been taken, and which are down for consideration by the Annual Representative Meeting, will be discussed.—James Metcalfe, Andrew Little, Honorary Secretaries.

HAMPSTEAD GENERAL HOSPITAL.

A meeting of the medical profession of Hampstead and neighbourhood was held under the auspices of the Hampstead Division of the British Medical Association in the Lecture Hall, Hampstead Conservatoire, Swiss Cottage, on Friday afternoon, May 24th, Dr. Macevoy presiding.

The Chairman pointed out that the first item on the agenda was to receive the report of the Committee of the local profession appointed on May 5th, 1906, and he called upon the Secretary to read the report.

Dr. Reginald A. Yeld then read the report as follows:

Report of the Joint Hampstead Hospital Committee appointed by the local medical profession on May 5th, 1906, to take all steps deemed advisable to carry into effect the resolutions of that meeting:

Your Committee has met nine times, and in addition has arranged two deputations to the hospital, and has held two conferences with medical men interested.

June 5th, 1906. Eight members (Mr. Humphreys, Dr. Anderson, Mr. Armit, Dr. Claude Taylor, Dr. Pidcock, Dr. Walter Smith, Dr. Parsons, Dr. Yeld) were appointed to go on a deputation to the Hospital Council, and arrangements were made for this.

June 21st. The Council of the Hospital, who had been duly informed of the results of the meeting of May 5th, received the deputation, who gave their views on the first five resolutions. Mr. Humphreys introduced the deputation and gave a general survey of the situation. Dr. Ford Anderson spoke against the out-patient department. Dr. Claude Taylor urged the necessity for preventing abuse in the casualty department. Dr. Pidcock spoke in favour of the admission of local practitioners other than those on the staff to the free beds. Mr. Armit spoke in favour of a service limit to appointments to the medical staff. Dr. Yeld urged direct and adequate representation of the outside local medical profession on the Board. Dr. Walter Smith also spoke against the out-patient department. A brief discussion followed, and a full account of the deputation was subsequently drawn up by the hospital for private circulation.

A report was also published in the British Medical Journal Supplement for September 8th, 1906.

July 17th. The same deputation (Dr. Walter Smith absent) waited on a Special Committee of the Council to discuss the sixth resolution, dealing with the constitution of the staff.

Mr. Collins stated that in reply to a circular sent out in March, 1906, he had received thirty-seven replies from local medical men in favour of a staff of consultants; he disavowed any dissatisfaction with the present staff and said that the difficulty was a financial one. The King's Fund was in favour of a consultant staff, and they held the purse.

He disavowed any intention of making the hospital a teaching hospital on the lines of one of the great general hospitals.

After a suggestion had been made by Dr. Pidcock that there might be an increase in the *consulting* staff of the hospital, the members of the deputation said they would oppose by every means in their power an *acting* staff of consultants.

From this time onwards no action was taken by the Hospital Council, but at meetings on October 26th and November 30th a letter was carefully drafted asking what action the hospital was taking to initiate the reforms desired, re-enclosing all the resolutions and also a resolution of the Representative Meeting of the British Medical Association. Resolved to appeal to the Branch Council to approach King's Fund.

December 28th. A letter from the Hospital Secretary was considered, giving no definite answer except the statement that an out-patient department was in course of erection.

An appeal to the subscribers was suggested.

January 15th, 1907. Question of appeal to subscribers postponed. Decided to appeal to individual members of the medical staff of the Hampstead General Hospital to aid the Committee in carrying out the resolutions of May 5th to join the British Medical Association.

January 25th. Announcement was made that Branch Council has agreed to approach King's Fund on the subject of the resolutions of May 5th, 1906.

February 22nd. Announcement that Dr. Collingwood Andrews has agreed to join the British Medical Association. A scheme for amalgamating the Hampstead and North-West London Hospitals, and staffing the former with consultants from the latter, was considered.

Resolved to send a letter to the hospital reiterating the opinions already expressed urging the immediate adoption of all the reforms indicated in the resolutions of May 5th, 1906.

Dr. Glover urged that only the sixth resolution should be pressed, but this suggestion was not favourably received by the Committee.

March 12th. Resolved to send resolutions of May 5th, 1906, to the local papers, and to hold a conference with the Hampstead General and North-West London Hospital medical staffs.

Dr. Glover's resignation announced.

March 26th. The Committee held its first conference with the medical staffs of the Hampstead and North-West London Hospitals. The only decision arrived at was that a Subcommittee of nine (9) should be appointed (3 from your Committee, 3 from the staff of the North-West London, and 3 from the Hampstead Hospital staff).

April 10th. The second conference was held to consider the report of the Subcommittee, which was eventually passed with some emendations. This report approved of the amalgamation of the Hampstead and North-West London Hospitals on certain conditions, of which one was "that there should always be a certain proportion of general practitioners on the staff."

April 26th. Your Committee repudiated the report passed by the conference on April 10th, and resolved that amalgamation was *not* desirable, and that the staff should consist of local practitioners only. It was further resolved to report to the local profession to that effect.

Dr. C. N. Cunnington said they would note that a conference was held between the Committee of the local medical profession and the medical staffs of the two hospitals, and that certain resolutions were brought forward subsequently and practically agreed to. Those resolutions were in the nature of a compromise. As far as he could judge the Committee felt that, as the Hampstead Hospital was already built, there was practically sure to be an amalgamation between the two hospitals, and that in the interests of the profession generally the best thing would be to make some kind of compromise. The result was a number of resolutions bearing a close resemblance to those on the agenda paper before them, the resolutions differing in one or two particulars only. As a member of that Committee he considered that the matter was practically settled, and that there was simply the final meeting to be arranged. Hence he and one or two others did not go to that meeting. The Secretary was so sure that his (Dr. Cunnington's) view was right that he got the resolutions printed, and had them now in his possession. The speaker concluded by moving that the resolutions should be circulated in order that the gentlemen present might see the nature of the compromise which had been come to. He did not think there could be any objection to that.

Dr. J. C. Wilson, in seconding the motion, said he stayed away for the same reason as that given by the last speaker. He thought that as the resolutions in the report were agreed to after a great deal of talking and much preliminary consultation, it was a little summary to reject them without giving them an opportunity of hearing and seeing exactly what those proposals were on which the Subcommittee of the three bodies agreed.

Mr. Nelson Hardy suggested that it would be better in the first place to receive the report, and he re-moved a resolution to that effect.

Dr. Cunnington said he would defer his resolution until the report had been received.

Dr. H. Sharman, having seconded the resolution that the report read by Dr. Yeld be received, it was carried unanimously.

Dr. Claude Taylor, referring to the motion for the circulation of the resolutions passed at the conference between the Committee of the local profession and the

medical staffs of the two hospitals, said he thought it would help them if they had copies of those resolutions passed round.

Dr. H. OPPENHEIMER asked if it was not agreed that the resolutions were private.

Dr. R. A. YELD said that no decision was arrived at to that effect.

Dr. J. FORD ANDERSON remarked that the resolutions were withdrawn from circulation.

The CHAIRMAN said it was obvious that many members of the meeting were in opposition to the resolutions. He thought the best plan would be to leave the meeting to decide whether the resolutions should be made public at that meeting. The original meeting was private, but he did not know that the resolutions were not to be circulated.

Dr. CUNNINGTON held that if it were decided that the resolutions should not be circulated he at least had a right to read them as a member of the Committee.

Mr. H. W. ARMIT asked that the question now be put as to whether the resolutions be circulated or not.

On a division the meeting decided unanimously on the resolutions being circulated.

The following is a copy of the resolutions circulated:

HAMPSTEAD GENERAL HOSPITAL.

Resolutions passed at a Conference between the Committee of the Local Medical Profession (appointed on May 5th, 1906) and the Medical Staffs of the Hampstead and North-West London Hospitals, held on Wednesday, April 10th, at 4.30 p.m., at the Hampstead Conservatoire, Swiss Cottage. Dr. Macevoy in the chair.

In principle, there is no objection to the amalgamation of the Hampstead and North-West London Hospitals, and from the public point of view it is desirable; but on the following conditions:—

1. That there should be no out-patient department at the Hampstead Hospital.
2. That the out-patient department be in Kentish Town and be consultative in character.
3. That the casualty department be kept distinct from any other department, and that casualty patients, after being seen by a registered medical practitioner, if not suitable for admission, be referred to private practitioners, provident dispensaries, or Poor-law authorities.
4. That there should always be a certain proportion of general practitioners on the staff.
5. That the claims of the present staffs of the Hampstead and North-West London Hospitals be respected.
6. That there should be an age limit, and a service limit, to the appointments on the staff.
7. That in view of the enlargement of the hospital there should be a due proportion of free and paying beds for patients of small or moderate means, who can be treated by their own medical men (for example, 12s. beds).
8. That the medical profession—both the staff and outside local practitioners—should be adequately represented on the Board of Management, and that medical questions should be referred to the medical staff.

PRESENT:

Committee of Local Profession: J. Ford Anderson, A. M. Browne, F. R. Humphreys, H. J. Macevoy, W. B. Parsons, Walter Smith, R. A. Yeld.

Hampstead Hospital Staff: E. C. Andrews, A. H. Cook, C. J. R. MacFadden, F. E. Scrase, E. E. Ware.

North-West London Hospital Staff: Harry Campbell, Mayo Collier, C. O. Hawthorne, J. H. Stowers, G. A. Sutherland, F. E. Taylor.

Mr. ARMIT said that if they turned their attention to No. 4 of the resolutions passed at the Conference and the sixth resolution on the agenda before them that day they would see a practical difference of opinion. As a member of the Committee of the Hampstead Division, and therefore a member of the Joint Committee, he was unfortunately not present at the second meeting of the Conference when the resolutions were passed; otherwise he certainly would have opposed them tooth and nail, and he believed he was right in saying that the majority of the members of the Divisional Committee were opposed to the question of compromise. It simply meant that there had sprung up amongst them in Hampstead places where the population was obviously not a poor one.

The CHAIRMAN then read the following motion, proposed by Mr. ARMIT:

A. That this meeting confirm the resolutions passed by the meeting of the local profession on May 5th, 1906, which are:

1. That an out-patient department in Hampstead is unnecessary.
2. That the casualty department be kept distinct from any other department, and that casualty patients, if not suitable for admission, be seen once, and thereon be referred to private practitioners, provident dispensaries, or Poor-law authorities.
3. That there be greater facilities for general practitioners of the neighbourhood to attend in-patients.
4. That there should be a service limit, as well as an age limit, to appointments to the medical staff.
5. That the outside medical profession be adequately represented on the Board.
6. That it is desirable, both in the interest of the district and of the hospital itself, that the Hampstead Hospital be carried on as a purely local institution, and not as a large general hospital, and that therefore an acting staff of consultants is not in accordance with the spirit of its constitution.

Dr. SHARMAN said he wished to point out that if the resolutions under A in the agenda were put *en bloc* to the meeting all discussion on B, disapproving of the proposed amalgamation, became absolutely futile. If the meeting first confirmed the first five resolutions and next disapproved, as they wished, of the amalgamation and finally reconfirmed Resolution 6, in that way they could get a discussion on the matter. The meeting was really called to register the decision of the Committee or the dominant portion of the Committee. He moved that discussion on the sixth resolution be postponed until Resolution B had been considered.

Mr. ARMIT (resuming) said he thought the whole matter turned on whether they were going to stick to their guns, whether they were going to hold out on principle or accept a compromise. It was an exceedingly important thing to realize that the question before them was not only a Hampstead Hospital question. It was a question of struggle between the British Medical Association and the hospital authorities who tried to ride roughshod over their heads. It was beyond question that they had to deal with it not only in London but, practically speaking, all over the United Kingdom. On the one hand there were the lay persons on the committees of the hospitals, and also, unfortunately, the funds of the metropolitan hospitals and to a certain extent the subscribers of the metropolitan hospitals and similar institutions in the provinces, and on the other hand there was the medical profession. Unfortunately both in Hampstead and occasionally elsewhere differences seemed to arise, when the hospital question was raised, between the local profession and the staffs of the hospitals. Those differences were, on the whole, imaginary differences arising out of a feeling of insecurity on the part of gentlemen holding posts of surgeons or physicians on the hospital staffs. If the staff of the Hampstead Hospital had joined issues with the Committee of the Hampstead Division of the British Medical Association, he had not the least doubt that the Council would have given way by this time and granted everything which was just and in accordance with the wishes of the profession and for the good of the public as well as of the profession. But unfortunately the staff of the Hampstead Hospital regarded the work of the Committee with a certain amount of suspicion—he did not say that with any idea of blaming individual members of the staff. The out-patient question was challenged by one or two members of the staff, but on the whole he believed they agreed with the six resolutions passed in May, 1906. But he could assure them that at one of the recent meetings of the Committee one of the members of the staff wished to throw the decision of the whole question on resolution No. 6, namely, the question of consultants or no consultants. When they really came to discuss the matter, he did not know that between May 5th, 1906, and May 24th, 1907, there could be any possibility that they had changed their opinion with regard to resolutions (on the agenda) 1, 2, 3, 4 and 5, because it was a question of sticking up for the same principle which underlay the struggle last year. The British Medical Association, at its Representative Meeting last year, assured him, as Representative for Hampstead, that the Hampstead Division had the support and good wishes of the whole of the British Medical Association in their struggle against the Hampstead Hospital, and the Association was keen on seeing a signal victory on the part of the Hampstead Division. He did not want to go back to the next Representative Meeting of the British Medical Association and tell them that the Hampstead Division had been ignominiously beaten. That was what would happen if they accepted a com-

promise. Let them not say that they would accept half a loaf because they could not get a whole one. He asked them to show their confidence in their Committee by carrying the whole of the resolutions *en bloc*, including the one which dealt with the question of consultants on the staff.

After some remarks from Dr. Cunnington,

Dr. Oppenheimer formally seconded Mr. Armit's proposal, and said he thought it was perfectly clear that on the principle of the matter they were all agreed. Not only the Hampstead Division but the local profession had practically unanimously declared that the hospital, as a local institution, should remain a local institution. At the present time the differences that existed were merely strategical differences, and the question appeared to be one of taking half a loaf if they could not get the whole. Anybody who wanted to accept a compromise thereby necessarily implied that the hospital was a purely local one. If they could not get all that they wanted they were asked to get peace with honour. But to those of them who really stuck to their original guns the question was one of principle. The whole of the British Medical Association and perhaps the whole of the medical profession were sympathizing with them in the struggle, and it meant a great loss if they gave away an inch of the ground which they had up till then held, after the many necessary conferences they had had to consider the matter. It was far more honourable, he thought, for the present to fall under their banners than to accept any compromise, which in his opinion could not at present be honourable.

Dr. Sharman moved an amendment that discussion of the sixth resolution be postponed until B had been considered. He might point out that the first five resolutions were already passed as a separate entity in April, 1906, and repeated in May, 1906, and then the sixth resolution was added to them. He would be asked why should he have voted for that resolution in May, 1906, and now propose to modify it? His answer was that those six resolutions were not laws of the Medes and Persians that could not be altered. Certain new facts had arisen which justified a reconsideration of the resolutions. After two years of continuous agitation, of which most of the medical men in Hampstead were heartily sick, absolutely nothing of any description had been done. That big hospital had been built with its 110 beds; its out-patient department was in working order. It was asserted that the sixth resolution embodied a great principle which the whole of the British Medical Association desired they should support, but he could not see that there was any great principle in maintaining that there should be no acting staff of consultants. On the other hand, he believed there were a great many men who felt that, considering the great size of the hospital, it was better that there should be a certain number of consultants on the staff who were not limited to local practitioners. If that meeting took up the position of putting the question of amalgamation absolutely aside, then they might just as well shut up the whole hospital. By carrying that sixth resolution they would decide that any possible scheme for amalgamation was out of court as far as they were concerned. If the Hampstead Hospital and the North-West London Hospital as a portion of it were staffed by existing consultants on the staff, and another portion of it called the Hampstead Home or the Hampstead Cottage Hospital were entirely staffed by local practitioners on the lines of the work which had been so ably done by Dr. Ford Anderson, he wanted to know what men in Hampstead would be damaged if that were done? Another reason for the position he was now taking up was the proposal of amalgamation put forward by the King Edward Hospital Fund. They had in Hampstead a big hospital which all of them considered unnecessary for the place, they had an out-patient department which almost all of them considered unnecessary. In Kentish Town they had a hospital that had been doing a great work, and that had lost one of its subscribers by death. What could be more sensible than that a great charitable fund like the King Edward Hospital Fund should say to those two institutions: "Amalgamation will meet your troubles. The profession in Hampstead object to an out patient department. Well, do away with it and keep the out patient department in Kentish Town." That was a proposition which would appeal to the vast bulk of public opinion. He thought they would be most unwise if they repudiated any such suggestion as that. Supposing that the five resolutions were put and the sixth postponed, he would then move:

> That, should amalgamation of the Hampstead and North-West London Hospitals commend itself to those Institutions, this meeting would not oppose such amalgamation, provided that it be carried out on lines consistent with the first five resolutions (already confirmed), and that an adequate proportion of the beds be under the control of local practitioners.

He hoped they would insist on postponing that sixth resolution, because the supporters of Dr. Armit's and Dr. Oppenheimer's motion had only to convince the meeting first to pass the five resolutions and then, if they could persuade the meeting against his (Dr. Sharman's) wish, they had only to ask it to reconfirm the six resolutions, and they would have everything they wanted. It was a matter of procedure which was life or death to any question of B whatever. He moved the consideration of B and the postponement of resolution 6.

Dr. Walter Smith seconded the amendment.

The Chairman explained the meaning of the amendment to be that the meeting would consider B and subsequently the sixth resolution. He then put the amendment in the form proposed by Dr. Sharman, and the amendment was carried.

Dr. Cunnington moved that the first five resolutions be confirmed, and the motion was carried with only one dissentient.

The Chairman having remarked that their next business was to consider B, namely:

> B. That this meeting does not regard the proposed amalgamation of the Hampstead and North-West London Hospitals with approval.

Mr. E. Jessop moved a resolution to that effect.

Dr. Ford Anderson, in seconding the resolution, said he quite agreed with Mr. Armit that it would be a calamity to introduce the element of compromise into the Hampstead Hospital. The whole country—the provinces as well as London—was with great interest watching the result of their deliberations, because the grievance was universally felt that a limited class of local practitioners should get all the prestige attached to the hospital. As to the proposal to bring up a staff from the North-West London Hospital, he would point out that, according to the resolution which they had just opposed, an out-patient department in Hampstead was held to be unnecessary. But Kentish Town was so near to Hampstead that they might consider it as Hampstead, and patients from Hampstead would simply have to go down to Kentish Town to get there. He maintained that they would simply stultify themselves if they said that there was to be an out-patient department in Kentish Town instead of Hampstead. Furthermore, it had never yet, so far as he knew, been stated that the out-patient department was to be given up in Hampstead if the amalgamation took place. The hospital authorities in Hampstead had cornered them, they had not sought their interests. The local medical profession took the trouble to go to those authorities, and there had been no official communication from them since, and it was not known whether they were going to get an out-patient department or not at Hampstead. But whether the out-patient department would remain at Kentish Town or otherwise the principle was the same that they would be supporting an institution which they had at that meeting considered derogatory, which was pauperizing for the working classes, and for which they proposed the remedy of a provident dispensary. He therefore hoped that they would vote against such a proposal as the importation of those gentlemen from Kentish Town. He did not object to their coming as consultants. Dr. Sharman had mentioned his name, and in doing so seemed to refer to a proposal that he (Dr. Ford Anderson) previously made, that the acting staff of the Hampstead Hospital should be the local practitioners.

Dr. Sharman explained that what he said was that a portion of the hospital might be run as "The Hampstead Cottage Hospital."

Dr. Ford Anderson said that gentlemen who came up to the conference would have nothing to do with such a proposition as that. It was their idea that the Hampstead Hospital must be conducted like a general hospital in London. It was extracted from them, it was grudgingly conceded by them, that they would allow a certain

number of the local profession to be in it, but there was no indication of how that could be arranged. For his part he did not see how it could be arranged—how they could have a joint staff, one set calling themselves physicians and surgeons and the other calling themselves medical officers. The proposal, as it stood at present, from those gentlemen in the North-West London Hospital, was that they should come up to Hampstead and do the work of a visiting staff at the hospital. The result of that scheme would be that Hampstead, which could not at present pay the hospital's way, would be saddled with an enormous out-patient department in Kentish Town. The number of out-patients there ran into hundreds of thousands. How Hampstead was to benefit from that he failed to see. Then along with that they would import into Hampstead a number of gentlemen who were to all intents and purposes medical practitioners just as they themselves were. Those gentlemen called themselves consultants, but it was necessary to have a definition of the term "consultant." If they were really consultants the case might be altered, but in the absence of such a definition he looked upon them as medical practitioners. He hoped, therefore, that the meeting would pass the resolution.

Mr. JESSOP pointed out that the resolution did not state that they should not have a consulting staff to their hospital. In his opinion it was necessary that they should have more consultants.

Dr. OPPENHEIMER said that as the sixth resolution on the agenda had been postponed, what they had to discuss at present was not the question of consultants.

The CHAIRMAN remarked that the question to consider was that of the amalgamation of the two hospitals.

Mr. JESSOP said he was decidedly opposed to the amalgamation taking place.

Dr. SHARMAN having read the terms of his amendment:

> That, should amalgamation of the Hampstead and North-West London Hospitals commend itself to those institutions, this meeting would not oppose such amalgamation, provided that it be carried out on lines consistent with the first five resolutions (already confirmed), and that an adequate proportion of the beds be under the control of local practitioners.

said he wished to point out that it did not commit the meeting to any particular scheme of amalgamation, but to a scheme which was sternly conditional. Further, it did not commit the meeting to the amalgamation of two unwilling institutions. It merely saved the meeting from taking up an attitude of *non possumus* with regard to the question. It was quite true that his amendment, if passed, would mean that some of the patients in Hampstead Hospital would be non-resident, and it might be asked, "Why should the Hampstead people support patients not living in the place?" But at present the Hampstead Hospital contained many patients who were non-resident in Hampstead. Moreover, if the two hospitals were united, the present subscribers of the North-West London Hospital would support the Hampstead Hospital. Therefore, the hospital would not be a purely local institution. He could not for the life of him see that there was a very great principle involved in allowing the hospital to have consultants on its staff. It was largely a local matter whether or not, for a hospital of the size of the Hampstead Hospital, they did not think it wise to admit a consultant element on the acting staff. His amendment assumed that they would not oppose a scheme for amalgamation provided it was consistent with their first five resolutions. If they could get better treatment from amalgamation of the two hospitals, then by all means let them have it. He moved the amendment.

Mr. W. B. PARSONS said he had great pleasure in seconding the amendment. He would like to point out the uncomfortable position they would find themselves in if they decided to confirm the sixth resolution. A year ago they sent him amongst several others to do what they could to get from the Hampstead Hospital authorities their agreement with those resolutions that they had passed. They knew how far the Hampstead Hospital affected their private interests and the interests of their brother practitioners, and they knew how very desirable it would be if they could convert the Hampstead Hospital back to its old position as a local cottage hospital. But the hospital had been rebuilt with every convenience that a general hospital in London could desire, and it was utterly impossible to keep it as a purely local institution. A scheme by which they might keep a portion of the Hampstead Hospital had been put before them by Dr. Sharman which he (Dr. Parsons) emphasized. If they would take the attitude of non-committal, there might be some hope that the committees of the two institutions which would work the amalgamation would give them what they wanted. The amalgamation was probably favoured by both Hospital Committees as being eminently desirable from a public point of view. The question of amalgamation was initiated by the King Edward Hospital Fund, and was being forwarded by them. The amalgamation was absolutely inevitable; nothing that they could do would stop it. But what they at that meeting wanted was to mould an amalgamation that would suit themselves and give them everything they desired. They were requested in that paper (the agenda) to adopt a certain course. It was part of a larger policy which the British Medical Association had in view, a policy which they at that meeting did not know or understand. They were dealing with a local question, and they knew how a local question affected them. He would ask them to take an attitude of non-committal, as by that means they were likely to arrive at a result more suitable to themselves. He violated no confidence when he told them that the Committee that considered this question was composed of fifteen members, and that those of them who recommended the amendment, those who were looked upon as conspirators and as being prejudiced, were seven out of the fifteen. He would attempt to explain to them what they really wanted. They wanted about four things. They did not want their patients who could pay to go to the Hampstead Hospital and get free medical attendance. If by any way their patients did get to the hospital, they did not want them to feel that they could get better medical attendance than the local medical profession could give them. The profession would like to get their patients back when they came out of the hospital, and they would like occasionally to put a case of their own in the hospital. That was the sum and substance of their demands. It was the occurrence in the Hampstead Hospital of what they did not want and the withholding from them of what they would like which had caused the bitter feeling that they had towards that hospital. They had not the same feeling towards the North-West London Hospital. What was more desirable than that a portion of the Hampstead Hospital should revert to its old uses, so that they could utilize it as they had occasion? If they voted for the resolution they would disapprove of amalgamation, and then they could do nothing. He asked them, therefore, to adopt an attitude of non-committal by voting for the amendment.

Dr. OPPENHEIMER, speaking against the amendment, said he would like to repudiate the statement of Mr. Parsons that there was a bitter feeling against the Hampstead Hospital. He thought he might say that the majority of the members of the Committee had no bitter feeling against the Hampstead Hospital. They were fighting for principles, not for individuals and institutions. The question that they were discussing was whether they wanted a large hospital in their midst with all its abuses, or a local hospital. He might say that one of the members of the staff of the Hampstead Hospital, who was a member of their Committee, urged upon them to make it absolutely clear that they wanted the Hampstead Hospital to remain as a local institution. That same gentleman pointed out that as far as the present staff was concerned they were quite able to take care of themselves and they were quite willing to fight the battle of the local profession. Dr. Glover assured them that the medical staff of the hospital were quite willing to fight their battle. They had just passed the first five resolutions, and if they converted the hospital into a general London hospital what guarantee had they that those five resolutions would be carried out? The local practitioners were men with local sympathies and feelings and interests, and were therefore specially fitted to deal with patients from the locality. But if there was created in Hampstead a large central hospital there was not the slightest chance those five resolutions would ever be carried into effect. With regard to the out-patient department in the Hampstead Hospital, he did not know that it had ever yet been proposed that it should be closed.

Dr. E. CLAUDE TAYLOR said that he rose to support B

and to oppose the amendment. He felt that it was a question of the medical profession, so to speak, standing together and refusing to be made the tools of the public. The whole hospital question had arisen because what was called the charitable public had engineered those huge institutions, and then introduced certain medical men who had not realized their various positions of responsibility connected with the hospitals. Herein was presented an opportunity for the medical profession to stand together and assert itself and see that proper justice was done. There were so-called charitable people. He would not make any remarks as to where all the money came from that was given by those people for those huge institutions, but if those persons were influenced solely by designs of charity and love for the sick poor, why did they have their names posted up on the outside of buildings, so that an institution practically became a monument to their fame and their great generosity rather than something that might be called more disinterested? Dr. Claude Taylor went on to say that there had been no official suggestion of the amalgamation of the two hospitals. They had only heard rumours, and therefore it was not a question for them to rush in and say, "Oh, yes, we hear you are talking about amalgamation, and we have got these observations to make." They had to say that they believed amalgamation was not advisable. That huge building in Hampstead was not actually in working order at the present time, and if they were opposed to the building, why should they give in because it was now erected and before it was occupied? He believed that they would have far greater weight as a profession if they stuck to one another and to their principles in the matter. If they held to that position he believed they would strengthen the position of the medical profession, and do something to help it in other parts of the country besides their own.

Mr. Armit said he did not think it had occurred to most of them what the necessary outcome of amalgamation would be. The policy that the British Medical Association had agreed upon, the policy of resolutions 1, 2, 3, 4, and 5, naturally very largely turned on the first, namely, "That an out-patient department in Hampstead is unnecessary." If they imposed a condition and said that an amalgamation between the two hospitals might take place, provided they had no out-patient department in Hampstead, when at the same time they had a big hospital with a large number of beds and a special building for out-patients, did they mean to say that the people who had been asking that hospital if they were going to accept the question of amalgamation, were not going also to use that out-patient building? The thing was absurd. They might possibly close the out-patient department for a short time while working the North-West London Hospital out-patient department, but in five years' time there would be no general practitioners on the staff of the hospital, there would be an out-patient department in Hampstead as well as in Kentish Town, and they would have far worse conditions than those existing at present. The trouble with the Hampstead Hospital began before the big building was put up. The big building had been put up in spite of them. Certainly the people responsible for that big building must know that the medical profession, the men who had worked in hospitals, the men without whom hospitals were absolutely useless that those men disapproved of that building. It was not absolutely necessary to pull down a big building to get into favour with the medical profession, it could be utilized as a nursing home for a hospital. But, according to their views, that that big building must be utilized in some other way than as a general London hospital was fairly obvious. If they approved of the amalgamation it simply meant that they approved of the hospital becoming a general hospital instead of a cottage hospital as it was when they first started their campaign against the Hampstead General Hospital. The seconder of the amendment seemed rather to have been limited in his knowledge of the struggle that had been going on. If he had really taken a little more interest in the whole subject and read a little more about that struggle he would not have held the opinion that the objections in regard to the Hampstead Hospital were local ones. They necessarily must be very general. It was not a question of satisfying men on the staff or living in the neighbourhood; it was a question of establishing principles which would hold good not to-day or to-morrow but for all time. So long as Hampstead had its present condition of population and of prosperity it ought not to have a general hospital. He thought they could safely say that for a long time hence Hampstead would not be a poor suburb, and therefore there was no present need for a big general hospital, and they ought not to approve of or contribute to any scheme of amalgamation between the two hospitals. He asked them to vote against amalgamation as a matter of principle, and even if amalgamation did eventually take place it would be recorded that it was not with their consent.

Dr. Ford Anderson said Dr. Sharman had spoken as if it were possible to divide the staff of the hospital between the so-called consultants and the local profession. Now the scheme of the King Edward Hospital Fund was that the staff should become entirely consultant. He believed that Dr. Cook stated at one of the meetings that each medical officer of the hospital is allowed to complete his term of fifteen years. That would be a loss to the local profession, and it was to prevent that happening that he certainly hoped the meeting would vote for the original resolution.

Dr. G. D. Pidcock said it appeared to him that they had to look facts in the face. They must be practical. There was a big hospital already built. Was it going to be turned into a granary or what was going to be done with it? It was all very well for men to get up and say it must not be used as a hospital. It would be used as a hospital, it was used as a hospital now, most of it, and in a very short time there would be beds in the wards, and things would go on in spite of what they said. They could not pull the building down, and they must accept the hospital as a fact. Mr. Armit had said it would be impossible to prevent an out-patient department. But Mount Vernon Hospital used to have an out-patient department and it had been stopped. He thought, therefore, that they could stop the out-patient department in the Hampstead Hospital. As a matter of fact, he believed the Council was willing to abolish the out-patient department. In his opinion, one-third of the hospital should be used as a cottage hospital and the other two-thirds as a general hospital. Anyhow, there was a hospital and they could not get rid of it.

It having been decided by 18 votes for and 2 against that the question be now put, the Secretary, Dr. R. A. Yeld, read the amendment to the meeting. The Chairman then put the amendment, and on a show of hands it was found that 13 voted for it and 13 against. Another similar count resulted in 14 being for and 14 against. A further vote was taken by those in favour of the amendment and those against standing up, and a count once more showed 14 for and 14 against.

The Chairman turned the scale by voting for Dr. Sharman's amendment. He said that though he voted there he did not vote on the Committee. The Chairman having further pointed out that the amendment now became a substantive resolution,

Dr. Oppenheimer moved that the question be referred back to the Committee for further consideration.

Mr. Nelson Hardy said there was a very good reason for referring it back to the Committee, because as a matter of fact the Committee had passed a provision which distinctly stated that the matter was not one of principle at all. It seemed very curious that the question should have been brought before them in the manner that it had been that day, when a resolution was passed in Committee to the effect that in principle there was no objection to amalgamation between the Hampstead and the North-West London hospitals.

The Chairman said that was simply a suggestion of the joint conference—a suggestion of the Committee of the conference and not of the Committee of the Division at all.

The Secretary remarked that it simply repeated the opinions of a joint meeting of the Committee of the North-West London Hospital and the Hampstead Hospital staff.

Mr. Hardy said he thought that made it the more necessary that the question should be referred back to the Committee.

Dr. Walcher Smith was also in favour of the question being referred to the Committee for further consideration. It would, he thought, be very unwise to pass a

resolution against amalgamation until they knew what the terms of amalgamation were. He was informed that the lay Committee of the Hampstead Hospital were unanimously in favour of amalgamation, that the Committee of the North-West London Hospital and the respective staffs of the two hospitals were chiefly in favour of amalgamation, also that the King Edward Hospital Fund was in favour of amalgamation. What, then, he asked, was the use of standing against that? The amalgamation would take place. He was in favour of amalgamation because if they got rid of one hospital they would have one instead of two. There was one point which he thought the Committee had been rather lax about. They had not quite pressed enough the point that they should do away with the out-patient department at the Hampstead Hospital. If they could get rid of that they would do a great deal. As many as 17 per cent. of the patients at Hampstead went to St. Pancras; that showed that a general hospital was not wanted at Hampstead. He thought it was a great mistake that it had been built. At the same time it was there, and it was certain to remain. Then, of course, it was probable that Hampstead would very much alter when the new tube was opened from what it was at the present time. Anyhow, as a matter of fact the amalgamation was really and actually going to take place. He was informed that it had been practically decided upon for some time. Even before the profession had taken any steps in the matter negotiations had gone on to a very great extent. He hoped the question would go back to the Committee for further consideration.

Dr. SHARMAN said that as the proposer of the amendment he had no objection to the question being referred back to the Committee, as long as it was allowed to rest for the present until the new Committee were elected next month. He did not want to have any more rushing of the matter. It was perfectly clear that the matter had been rushed a great deal too fast. They had had half their Committee against them and a member of the profession in Hampstead against them. He thought, therefore, it would be a good thing for the Committee to consider the matter further.

Mr. PARSONS said his views were entirely in accord with those of Dr. Sharman, that the matter be referred back to the Committee. He thought that a proper and deliberate discussion of the question was necessary to their well-being.

Mr. JESSOP said he understood that the question would be referred back to a Committee of the Hampstead Division of the British Medical Association *plus* a certain number of general practitioners. Who would the practitioners be?

Dr. YELD explained that the Committee of the Division would consist of eighteen members *plus* other members if they chose.

Dr. CUNNINGTON said he would like to suggest that Dr. Sharman's name be added to the Committee for that purpose.

Dr. OPPENHEIMER moved and Mr. NELSON HARDY seconded a resolution to the effect that the question be referred back for the time being to the Committee of the Division appointed last year, with power to add to their numbers. It was left as a rider that Dr. Sharman's name be added to the Committee.

The resolution was carried.

On the motion of Dr. OPPENHEIMER, seconded by Mr. ARMIT, it was agreed that resolution No. 6 be also referred to the Committee.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IMPORTANT NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SUMMER SESSION 1907.

Tuesday, May 28th.

Dr. DONALD MACALISTER, President, in the Chair.

THE eighty-fifth Session of the General Council of Medical Education and Registration was commenced on Tuesday, May 28th, 1907, at 299, Oxford Street.

NEW MEMBERS.

The REGISTRAR read the official notification of the election of Dr. Henry Langley Browne as Direct Representative for England for five years from December 12th, 1906, and the election of Dr. Leonard Strong McManus and Dr. Henry Arthur Latimer as Direct Representatives from January 1st, 1907. He also reported that Dr. Norman Purvis Walker had been elected as Direct Representative for Scotland for five years from January 1st, 1907.

Dr. SAUNDBY then introduced Dr. Langley Browne,

Sir JOHN WILLIAMS introduced Dr. McManus and Dr. Latimer, and

Mr. HODSDON introduced Dr. Norman Purvis Walker to the President and the Council.

PRESIDENT'S ADDRESS.

GENTLEMEN,—During the recess a general election has taken place in England and Scotland, with the result that four new members have been returned to the Council in the places of Sir Victor Horsley, Mr. George Brown, Mr. Jackson, and Dr. Bruce. Sir Victor Horsley retired before the beginning of our last session, in order to spare the English constituency the trouble of a by-election. His seat has now been filled by the election of Dr. Langley Browne, whose energy and capacity for business have already been recognized by large bodies of his professional colleagues. Mr. George Brown, for ten years, had freely given to the Council the benefit of his large experience in general practice. He was always ready to take a full share in our deliberative and forensic proceedings. There were few questions on which he did not endeavour to assist us with counsel or criticism, and his strenuous manner of advocating his views imparted a touch of animation to our soberest debates. Mr. Jackson, during his five years' tenure of office, had approved himself a courteous and thoughtful colleague, who was capable of seeing both sides of a question and of giving to each its due weight before he formed his judgement. His personal character and his work for the profession justified the confidence placed in him by the electors, and particularly by those of the West of England, where he was best known.

In Dr. Bruce the Council loses a member who for twenty years has done much to enhance its reputation for steadfast and careful attention to duty. His knowledge of Scottish conditions was wide and varied. It comprehended the manifold complexities of medical practice, the details of public health administration, and the outstanding problems of professional education; and it enabled him to approach the consideration of the Council's relations to these and like questions with sympathy and insight. His sagacity, his loyalty, and his grave and deliberate habit of mind, which impressed the Council from the first, have procured for him its lasting respect. Few members have heard less and felt more than Dr. Bruce, and those who were brought into closest touch with him, on the Public Health and other important Committees, are those who most appreciate his value and regret his withdrawal.

While we thus speed the parting, we welcome the coming. In your name I have now given the right hand of fellowship to Dr. Langley Browne, Dr. Latimer, and Dr. McManus, the elect of the practitioners of England; and to Dr. Norman Walker, who is sent to the Council by the practitioners of Scotland. To them we look with confidence for that willing co-operation in the fulfilment of our responsible tasks which was rendered by their predecessors. We are well assured, by their past record, that they will in addition contribute to our deliberations something that is fresh and individual.

Before proceeding to deal with the matters on the pro-

gramme, may I interpose a word on another change, which is personal to myself? As you are probably aware, I have been unexpectedly called by His Majesty to be the resident head of the University of Glasgow. The authorities of the University of Cambridge, to whom I owe my seat in the Council, and accordingly in this chair, have kindly expressed a desire that I should complete the term of five years for which I was last re-elected by the Senate. As the Senate is not limited in its choice to persons in continuous residence at Cambridge, and as I shall maintain a close connexion with that University, I have agreed to retain my membership of the Council as its representative. I have made such arrangements for the conduct of office business during the intervals of our sessions as will ensure that the commonwealth shall take no detriment on account of my greater distance from London. It may even be that some advantage will accrue from the opportunity afforded to your President of studying at first hand the position of medical education and practice in Scotland as well as in England.

The University of Edinburgh.

The Lord President of the Privy Council has just furnished us with an illustration. The University of Edinburgh has framed an Ordinance making certain changes in the course of study and examinations for medical degrees. On this Ordinance two of the three other Scottish Universities have offered to the Privy Council, as they are entitled by law to do, various criticisms, of which some refer to inter-university relations rather than to general principles, others perhaps to matters of substance. In regard to such general principles and matters of substance the Lord President invites an expression of opinion on the part of the Medical Council. The Executive Committee have resolved to refer the Ordinance to the Education Committee and the Examination Committee, with the request that they will respectively report to the Council whether the provisions of the Ordinance are in conformity with its existing resolutions and recommendations on the subjects of professional education and professional examination.

Reciprocity with Nova Scotia.

It is with special satisfaction that I record the completion of the negotiations for medical reciprocity with the Province of Nova Scotia, to which, as you will remember, His Majesty in Council was pleased last year to apply Part II of the Medical Act, 1886. The negotiations with the Executive Committee, to which the Council has delegated the duty of carrying into effect this part of the Act, have been conducted by the Provincial authorities with the utmost goodwill and with the fullest desire to meet the requirements of the Council. As a result, the Committee have felt justified in granting recognition to Nova Scotian degrees and diplomas on terms which, while they fulfil the conditions of the Medical Act as regards sufficiency, are at the same time satisfactory to the Provincial Medical Board. The Board has, moreover, voluntarily undertaken to initiate legislation which will tend to raise still higher the efficiency of the medical curriculum of the Province. The correspondence which has led to this gratifying result has been printed and published in the Minutes of the Executive Committee.

Colonial Qualifications and the Crown Services.

The admission of Nova Scotian qualifications to the British *Register* has already, as I understand, had the incidental consequence that Canadian medical graduates who have fulfilled the conditions applicable to the Maritime Province are now declared to be eligible for commissions in the Royal Army Medical Corps. The Australian States, which long ago entered into reciprocal relations with this country, are already in a position to offer similar advantages to their medical graduates. It is to be regretted that graduates of provincial universities in Canada, other than those of Nova Scotia are still ineligible for appointments in the medical services of the Crown. It now rests with the Canadian provinces themselves to remove the disability. The Council, which has always taken a broad view of its responsibilities to the empire in general, will doubtless give the most favourable consideration to any overtures the provincial Governments may make to this end.

His Majesty has not yet been pleased to apply the Act to the Province of Quebec, as it is first necessary that the Privy Council should be more fully informed of the actual provisions of the local law affecting the admission to the provincial *Register* of practitioners registered in the United Kingdom. We are told that the requisite inquiries are being made through the proper channels. Until His Majesty in Council is satisfied regarding the provisions in question, the Executive Committee is unable to take further steps towards the recognition of Quebec degrees.

Unification of Pharmacopoeia Formulae.

The Foreign Office has forwarded to the Council copies of the International Agreement respecting the Unification of the Pharmacopoeial Formulas for Potent Drugs, which was signed at Brussels on November 29th, 1906, by the diplomatic representatives of eighteen States on behalf of the respective contracting Governments. This agreement embodies, with slight amendments, the resolutions of the Brussels Conference of 1902. It includes the following reservation, which, as Chairman of the Pharmacopoeia Committee, I ventured to suggest should be made on behalf of this country: "The Government of His Britannic Majesty declares that it reserves the right of introducing into the stipulations of the present agreement such modifications in detail as the progress of medical and pharmaceutical science may render necessary from time to time." In drawing up the next *Pharmacopoeia* it will accordingly be incumbent on the Council, in the paramount interest of international uniformity and of public safety, to make certain changes in the formulas for a few poisonous drugs and preparations. The changes involved may not in all cases be deemed improvements, and if our own insular convenience only were in question might not at once be approved; but they are probably fewer and less important than other countries will be constrained under the agreement to make in the common interest of all. The reservation above mentioned, moreover, enables the Council, as the authority statutably responsible for the *British Pharmacopoeia*, to modify the letter while observing the spirit of the agreement, so as to keep pace with the progress of medical and pharmaceutical science. The Committee of Reference in Pharmacy have had the agreement under consideration, and have presented to the Pharmacopoeia Committee a valuable report on the changes required to give it effect.

Amendment of the Medical Acts.

Two Bills, proposing amendments in the law relating to the practice of medicine and of dental surgery by joint-stock companies, which have already received the approval of the Council, have been introduced in the Upper House by Lord Hylton and have passed the second reading without opposition. They were supported in principle by Lord Halsbury, late Lord Chancellor, and by the Lord President of the Council on behalf of the Government. By consent they have been referred to a Select Committee, which will shortly sit to receive evidence from this Council, and from other bodies interested, respecting the abuses against which the Bills are directed, and the sufficiency of the proposals therein contained for the purpose contemplated. The Registrar and your legal advisers are actively engaged in preparing for submission to the Select Committee a statement of the evidence in the possession of your Companies Bills Committee.

The Society of Apothecaries.

A Bill to empower the Society of Apothecaries of London to confer on those who have passed its qualifying examination the title of "Licentiate in Medicine and Surgery" has passed through several of its stages in Parliament. Certain amendments in its terms, suggested by the Executive Committee in the interest of the Council, have been readily adopted by the promoters.

The Council and the British Medical Association.

A question seriously affecting the position of members of the Council as a judicial body has been raised by a communication from the Chairman of the Central Ethical Committee of the British Medical Association. The communication informs us that the Annual Representative Meeting has decided that the Association should act as complainant in cases which might require to be brought before the Medical Council; and that the Central Ethical Committee is the body whose duty it would be to consider

whether a given case should be so brought, and to prepare the case for our consideration.

As many members of the Council (and of the Penal Cases Committee) are members of the British Medical Association, it appeared desirable that their position in regard to complaints made by the Association, if such were brought for inquiry before the Council (or the Committee), should be made clear. I accordingly consulted our legal advisers, who are familiar with the *dicta* of the Lords Justices in cases (such as Leeson's and Allinson's) where the suspicion of bias or prejudice on the part of members of the Council has been alleged as a ground of appeal against its decisions. Their advice is that the proper course to be taken by a member of the Council, who belongs to the Association, is not merely to withdraw from the decision of a case in which the Association acts as complainant, but to withdraw from membership of the Association altogether.

The question of acting on this advice became urgent in my own case, when, at the beginning of this month, the Registrar reported that a formal complaint against a practitioner had been lodged at the office by a Branch of the Association, and that the documents awaited my consideration in pursuance of the Standing Orders. As your President, I could not take even the first step towards a judicial inquiry so long as I remained a member of the British Medical Association. I therefore, without delay, sent in my resignation to the General Secretary. So soon as my resignation takes effect I shall be able to look at the complaint; but I shall not be able to take the advice of the Penal Cases Committee upon the matter until the other members have also ceased to be connected with the Association.

I have made the foregoing statement, after careful reflection, because it seems to me of the highest importance that members of the Council should be cognizant of the position resulting from the decision of the Representative Meeting of the Association. If that decision becomes operative, as regards either the central body or its branches, we who take any part in judicial inquiries have, in my opinion, no choice but to sever our connexion with the Association. However slight our connexion may be, circumstances might at any moment arise in relation to an inquiry wherein the Association was interested, which might be held to affect the impartiality of our judgement, and so to invalidate our decision.

Notification of Convictions.

The Secretary for Scotland has been pleased to give directions, similar to those already given in England and Ireland, which will result in the notification to the Council of all cases in which registered practitioners are convicted in Scotland of crimes or offences punishable by fines. The thanks of the Council are due to the Government authorities for this aid to the performance of its disciplinary function.

Penal Cases.

It happens, perhaps as the result of the better information at our disposal, that most of the penal cases to be brought before you this session have reference, not to allegations of "infamous conduct," but to convictions before the ordinary tribunals for crimes or other offences of various kinds. As in these cases the evidence of conviction is clear, it is probable that you will have no great difficulty in arriving at a decision upon them. The striking diminution in the number of complaints concerning misconduct in a professional respect is a satisfactory feature of the present year.

"Infamous Conduct in a Professional Respect."

Certain decisions given recently in the Chancery Division of the High Court, in connexion with our judgement in our inquiry held by the Council last year, have raised legal questions of interest regarding the scope and meaning of the statutory phrase "infamous or disgraceful conduct in a professional respect." The Chancery decisions do not in form impugn the judgement of the Council, or call in question its jurisdiction; but some of the points involved concern us so closely that I have asked the Council's solicitor to prepare a memorandum on the subject for our information. As we are advised that an appeal against the judgements is in progress, and as the cases are therefore *sub judice*, I propose that the memorandum should be communicated to the Council *in camerâ*.

Standing Orders.

At our last meeting you empowered the Executive Committee to adjust and to issue to the Council a new print of the Standing Orders, embodying therein such alterations, particularly with reference to our penal procedure and to the inspection and visitation of examinations, as the Council had by its resolutions directed or were consequential upon such resolutions. The Committee have accordingly had prepared, and have approved, a complete edition of the Standing Orders, in which such verbal amendments have been made as seemed necessary to give effect to the Council's intentions. Copies will be laid on the table, and are now available for the use of members and of the public.

The Medical Curriculum.

For the Education Committee elaborate tables of statistics have been drawn up by the Registrar and Mr. King, with the assistance of the Branch Registrars, showing the ages at which practitioners registered during the year 1906 began and ended their curriculum. The Committee will probably lay before you an analysis of these statistics, and a report explaining what light they throw on the average length of the curriculum, and on the question of subdividing it into definite stages, which was referred to them last November. You will, doubtless, be of opinion that further statistical data, such as can be furnished only by the licensing bodies, are necessary in order to complete the information on which alone the Committee can base a reasoned and reasonable solution of the question.

Practical Midwifery Committee.

The Practical Midwifery Committee, whose recommendations were presented but not discussed during the winter session, have now received further replies and suggestions from licensing bodies. These will be duly communicated to the Council, and it will then be in a position to adopt suitable resolutions on this important branch of professional education and examination.

Apothecaries' Hall, Dublin.

In accordance with the resolution of November 30th, 1906, I communicated to Sir Henry Howse and Mr. Alexis Thomson your acknowledgements of the valuable services they had rendered to the Council during their lon gtenure of office as Assistant Examiners in Surgery at the Apothecaries' Hall, Dublin, and your desire to establish a system of rotation in the appointment of such examiners in future. From both have come letters expressing appreciation of the Council's consideration, and concurring in the suggestion that rotation is desirable. Proposals will be made to you for the appointment of two Dublin surgeons, one to act for two years and one for four, as Assistant Examiners (and on occasion Inspectors) for the Apothecaries' Hall. Their function is an important one, for through them the Council has to perform its statutory duty of maintaining the present standard of efficiency, and that not in surgery alone, at the examinations of this licensing body.

Finance.

In conclusion, I have to congratulate the Council on finishing another financial year with a surplus instead of a deficit. But for the heavy expenses connected with the general election—expenses which are considerably increased by the introduction of the ballot system—the surplus would have amounted to £910, or a little more than last year. Of this sum, however, £870 was expended over the election, leaving a net balance of only £40. The actual expenditure on the enlargement of our chamber, and the improvement of our property, has for the time been met by means of the surplus in hand from last year. But it will next year have in whole or in part to be brought into ordinary account, and it therefore still behoves the Finance Committee to keep a watchful eye upon our outgoings, and especially on those connected with our ordinary sessions. There is good reason to expect that at the present meeting we shall easily be able within the limits of this week to overtake all the business in hand.

CENTRAL MIDWIVES BOARD.

A special meeting of the Central Midwives Board was held on May 17th at Caxton House, Westminster, with Dr. F. H. Champneys in the chair.

Midwives Struck off the Roll.

The Board considered charges as stated after their names against the following midwives whose names were ordered to be erased:

Sarah Scott, that at a confinement she did not send for a doctor, the patient being ill with a high temperature.

Mary Broxson, that at a confinement she did not send for a doctor on the occurrence of rigor.

Ellen Lang, that at a confinement, the perineum being ruptured she did not send for a doctor.

Mary Lewin, that at a confinement she did not send for a doctor, the patient suffering from puerperal fever.

Emma Appleyate, that at a confinement the child when born being apparently in a dying condition she did not send for a doctor.

Bridget Duffy, that at a confinement, the child being stillborn and no registered medical practitioner being in attendance, she failed to notify the occurrence to the local supervising authority.

Mary Elliott, that at a confinement she was intoxicated.

Mary Dunn, that she had been convicted of keeping a disorderly house.

Martha Ann Lawrance, that at a confinement she was guilty of negligence and misconduct.

Elizabeth Jane Brennand, *Charlotte Hales*, and *Emma Page*, that they persistently refused to provide themselves with the appliances and antiseptics required by Rule E 2.

Midwives Censured.

After charges had been considered against the following midwives, they were censured by the Board: Ellen Pomfret, Catherine Johnson Waugh, and Louisa Wood.

Midwives Cautioned.

After charges against the following midwives had been considered, they were cautioned by the Board: Hannah Rhodes, Mary Ann Smith, and Mary Upton.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 7,471 births and 4,578 deaths were registered during the week ending Saturday last, May 25th. The annual rate of mortality in these towns, which had been 16·8, 15·7, and 15·1 per 1,000 in the three preceding weeks, further declined last week to 14·9 per 1,000. The rates in the several towns ranged from 7·5 in Hornsey, 7·8 in Smethwick, 8·1 in Tottenham, 8·7 in Willesden, and 8·8 in East Ham, to 19·8 in Salford, 20·6 in Bolton, 20·1 in Stockport, 22·7 in Sunderland, 23·9 in Oldham, and 24·8 in Hanley. In London the rate of mortality was 14·4 per 1,000, while it averaged 15·1 per 1,000 in the seventy-five other large towns. The deaths from the principal infectious diseases averaged 1·5 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1·4 per 1,000, while among the seventy-five other towns the rates ranged upwards to 5·5 in Portsmouth and in Walsall, 4·7 in Middlesbrough, 3·6 in Derby, 3·3 in Bolton, and 3·0 in Hanley. Measles caused a death-rate of 1·7 in Sheffield and in Sunderland, 1·3 in Portsmouth, 2·1 in Derby, 2·6 in Middlesbrough, 2·7 in Bury, 2·8 in Nottingham, 5·1 in Bolton, and 7·0 in Hanley. Diphtheria of 2·1 in Derby, and whooping-cough of 1·1 in St. Helens and in Sunderland, 1·2 in Hornsey, 1·3 in Norwich, and 1·8 in Preston. The mortality from scarlet fever, from enteric fever, and from diarrhœa showed no marked excess in any of the large towns. One fatal case of small-pox was registered in Cardiff, but none in any other of the large towns, and no small-pox patients were under treatment in the Metropolitan Asylums Hospitals at the end of last week. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2,672, 2,658, and 2,678 at the end of the three preceding weeks, had further risen to 2,732 at the end of last week. 382 new cases were admitted during the week, against 361, 423, and 423 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In the week ending Saturday last, May 25th, 930 births and 607 deaths were registered in eight Scottish towns. The annual rate of mortality in these towns, which had been 19·3 and 19·7 per 1,000 in the two preceding weeks, declined to 17·5 per 1,000 last week. It was 16·2 per 1,000 in London. The mean rate during the same period in the thirty-six large English towns was 15·1. The rates in the eight Scottish towns ranged from 12·9 in Paisley and 14·4 in Aberdeen to 19·8 in Greenock and 20·5 in Perth. The death-rate from the principal infectious diseases averaged 2·6 per 1,000, the highest rates being recorded in Glasgow and Leith. The 20 deaths registered in Glasgow included 4 which were referred to measles, 2 to scarlet fever, 3 to whooping-cough, 3 to diarrhœa, and 1 to cerebro-spinal meningitis. Four fatal cases of enteric fever, 4 of diphtheria, 2 of whooping-cough, and 1 of cerebro-spinal meningitis were recorded in Edinburgh. 2 of whooping-cough and 1 of diarrhœa, and 2 of cerebro-spinal meningitis in Dundee, 2 of scarlet fever in Paisley, and 5 of cerebro-spinal meningitis in Leith and 1 in Greenock.

HEALTH OF IRISH TOWNS.

In Belfast, the week ending Saturday, May 25th, 344 births and 271 deaths were registered. The annual death-rate in the city, which had been 19·3 and 18·9 per 1,000 in the two preceding weeks, was 19·6 per 1,000. This annual death-rate was equal during the week under notice to 19·6 per 1,000, and in Dublin and the remaining towns it averaged 22·3 per 1,000. The zymotic death-rate in Belfast, which had been 1·9 and 1·8 per 1,000 in the two preceding weeks, was 1·9 per 1,000 during the week under notice, and in Dublin and the remaining towns it averaged 2·1 per 1,000. The deaths from the principal infectious diseases in Belfast, which had been 4 and 5 in the two preceding weeks, were 5 last week, and included 2 from measles, 2 from whooping-cough, and 1 from diarrhœa. In Dublin and the remaining towns the deaths from these diseases were 39, 41, and 39 in the three preceding weeks, and included 15 from measles, 5 from scarlet fever, 6 from whooping-cough, 3 from diphtheria, 4 from diarrhœa, and 1 from enteric fever. The deaths from the principal infectious diseases in Belfast, which had been 4 and 5 in the three preceding weeks, fell to 19·6 per 1,000 in the week under notice, this figure being 4·5 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 13·5 in Londonderry and 13·7 in Limerick to 22·3 in Belfast and 26·7 in Dublin. The zymotic death-rate in the same six Irish towns averaged 0·7 per 1,000, or 0·8 per 1,000 lower than during the preceding period, the highest figure—1·9—being recorded in Waterford, while Londonderry and Limerick registered no deaths under this heading at all. In Belfast 14 deaths were returned as due to cerebro-spinal fever, and 7 as cerebro-spinal meningitis.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Cornelius Bradley, M.D., Fleet Surgeon, and Henry R. Gardner, M.B., Staff Surgeon, to the *Caesar*, on recommissioning, May 28th; John C. Ferguson, M.D., Fleet Surgeon, and Arthur R. Thomas, Surgeon, to the *Ariadne*, on recommissioning, June 11th; Sidney T. Reid, Staff Surgeon, and William H. Hastings, M.B., Surgeon, to the *Antrim*, on recommissioning, June 11th.

ROYAL NAVAL VOLUNTEER RESERVE.

Robert J. Willan, M.B., to be Surgeon, May 24th. He has been attached to the Tyneside Division.

ROYAL ARMY MEDICAL CORPS.

Major David Stiell, M.D., retires on retired pay, May 25th. His commissions were dated: Surgeon, February 5th, 1887; Surgeon-Major, February 5th, 1899. He was in the South African war in 1900-2, taking part in operations in Orange Free State, the Transvaal, and Cape Colony, and receiving the Queen's medal with three clasps, and the King's medal with two clasps.

Lieutenant-Colonel J. S. Green, M.B., is placed on temporary half-pay on account of ill-health, May 22nd. His commissions are dated: Surgeon, August 1st, 1885; Surgeon-Major, August 1st, 1897; Lieutenant-Colonel, August 1st, 1905. He served with the Manipore expedition, 1891 (medal with clasp); with the Irrawaddy column in Burmah, 1891-2 (clasp); and in the South African war in 1899-1902, being present in operations in Natal, including the actions at Elandslaagte, Reitfontein, and Lombard's Kop, and the defence of Ladysmith, in operations in the Transvaal, Orange River Colony, and Cape Colony (Queen's medal with five clasps, and King's medal with two clasps).

INDIAN MEDICAL SERVICE.

The date of the promotion of Lieutenant-Colonel D. French-Mullen, M.D. (Bengal), to be Colonel, is March 25th, and not as stated in the British Medical Journal of May 25th. He is appointed Principal Medical Officer, Sirhind and Jullundur Brigades.

Major C. L. Williams, M.D. (Madras), is permitted to retire from the service, from March 19th. He was appointed Assistant-Surgeon, September 30th, 1889, and became Major, September 30th, 1901. He took part in the operations on the North-East Frontier of Burmah in 1891-2.

Lieutenant J. H. Gill, M.B., is transferred to the permanent half-pay list, from March 27th. He joined the department as Lieutenant, July 26th, 1902, and was placed on temporary half-pay, March 27th, 1905.

Captain H. B. Meakin, M.D., has been transferred to the temporary half-pay list, from March 23rd. His first commission bears date July 27th, 1898; that of Captain, July 27th, 1901.

VOLUNTEER OFFICERS' DECORATION.

The Volunteer Officers' Decoration has been conferred upon the following officers: Surgeon-Major A. A. Abraham, 5th Volunteer Battalion the Durham Light Infantry; Surgeon-Major R. B. Graham, 1st Fifeshire Royal Garrison Artillery (Volunteers); Surgeon-Lieutenant-Colonel J. Mill, M.B., 5th Volunteer Battalion the Royal Scots (Lothian Regiment).

Vacancies and Appointments.

VACANCIES.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

AYR DISTRICT ASYLUM.—Junior Assistant Physician. Salary, £110 per annum.

BETHLEM HOSPITAL.—Two Resident House-Physicians. Honorarium, £25 each per quarter.

BIDEFORD UNION.—Medical Officer and Public Vaccinator, for the Hartland District. Salary, £65 per annum.

BRADFORD ROYAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BRECKNOCK COUNTY AND BOROUGH INFIRMARY.—Resident House-Surgeon. Salary, £120 per annum.

BRIXTON DISPENSARY.—Resident Medical Officer. Salary, £110 per annum.

BURY ST. EDMUNDS, WEST SUFFOLK GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

CAIRO DEPARTMENT OF PUBLIC HEALTH.—Sub-Inspector of Ophthalmic Hospitals. Salary, £300 per annum.

CHELTENHAM GENERAL HOSPITAL.—Surgeon in Charge of Private Department. Salary, £90 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

CHORLEY, RAWCLIFFE HOSPITAL.—House-Surgeon. Salary for first six months at the rate of £80 per annum, increasing to £100.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—(1) Resident Medical Officer. Salary, £120 per annum. (2) Surgeon. (3) Physician to Out-patients.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum.

HER MAJESTY'S HOSPITAL, Stepney Causeway, E.—House-Surgeon and Resident Medical Officer. Salary, £60 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House Surgeon, salary £20 for six months, and £2 10s. washing allowance. (2) Anaesthetist, honorarium 15 guineas for one year.

LEICESTER INFIRMARY.—Assistant House-Physician. Salary at the rate of £50 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon and Anaesthetist. Salary, £60 per annum.

MANCHESTER: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Fourth House-Surgeon. Honorarium, £25 for six months.

MANCHESTER UNIVERSITY.—Junior Demonstrator of Physiology. Stipend, £100, rising to £150 per annum.

NEWCASTLE-UPON-TYNE CORPORATION.—Assistant Medical Officer of Health. Salary, £300 per annum.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary, £70 per annum.

NORWICH CITY ASYLUM.—Assistant Medical Officer. Salary, £125 per annum, rising to £150.

NORTH-EASTERN HOSPITAL FOR SICK CHILDREN, Hackney Road, E.—(1) House-Physician; (2) House-Surgeon. Salary at the rate of £60 per annum each.

ST. BARTHOLOMEW'S HOSPITAL, E.C.—Lecturer on Anatomy.

SALFORD ROYAL HOSPITAL.—Junior House-Surgeon. Salary at the rate of £50 per annum.

TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £50 per annum.

THROAT HOSPITAL, Golden Square, W.—House-Surgeon. Salary at the rate of £75 per annum, increasing to £100 if reappointed.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—Honorary Anaesthetist.

WEST BROMWICH DISTRICT HOSPITAL.—(1) Senior House-Surgeon; salary, £110 per annum. (2) Resident Assistant House-Surgeon; salary, £75 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician, for six months.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Withnell, co. Lancaster, Hemsworth, co. York; Horsmorden, co. Kent.

APPOINTMENTS.

AGNEW, C. S., M.R.C.S., L.R.C.P., District Medical Officer of the Market Bosworth Union.

ANNAND, W. Fraser, M.D., B.S.Lond., M.R.C.S., L.R.C.P., Physician to the Staffordshire General Infirmary, Stafford.

BECK, E. A. A., M.B., B.C.Cantab., Certifying Factory Surgeon for the Bromyard District, co. Hereford.

BEVERLEY, K. H., M.R.C.S., L.R.C.P., Medical Officer of Health, Newbold and Dunstan Urban District.

BULLEN, H. J. L., M.R.C.S., L.S.A., District Medical Officer of the Rugby Union.

CLEARY, M., L.R.C.P., L.R.C.S., Certifying Factory Surgeon for the Newport District, co. Mayo.

COLLINGRIDGE, W. R., M.R.C.S., L.R.C.P., District Medical Officer of the West Ward Union.

COSTOUROS, J., M.D., L.M., Clinical Assistant to the Chelsea Hospital for Women.

FALCONER, J. F., M.B., Ch.B.Edin., District Medical Officer of the Middlesbrough Union.

FINDLAY, W. D., M.B., C.M.Glasg., Certifying Factory Surgeon for the Middleton District, co. Lancaster.

HIBBERT, J. Coote, M.D.Lond., D.P.H., Medical Officer of Health for the Borough of Warrington, vice J. Guest Gornall, M.B., D.P.H.Camb., deceased.

ROYAL DENTAL HOSPITAL, Leicester Square, W.C.—The following appointments have been made:
House-Surgeons.—H. C. Colyer, M.R.C.S., L.R.C.P., L.D.S.; R. W. C. Cooper, L.D.S.; F. E. Sprawson, M.R.C.S., L.R.C.P., L.D.S.; P. E. Sutcliffe, L.D.S.; W. A. Cuttriss, L.D.S.
Lecturer on Operative Dental Surgery.—W. H. Dolamore, M.R.C.S., L.R.C.P., L.D.S.Eng.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

SCHOFIELD.—On May 29th, at 1, Phillimore Gardens, Kensington, the wife of S. Robert Schofield, M.B.Lond., a daughter.

DEATHS.

COGHILL.—On May 24th, at 16, Clareville Grove, S.W., Agnes, wife of the late J. G. Sinclair Coghill, M.D., F.R.C.P.Edin., of Ventnor, I.W., formerly of Edinburgh, and last surviving child of the late Peter Darling, Esq., of Sydenham, Kelso. Interment, Dean Cemetery, Edinburgh, Tuesday.

GROVES.—On May 21st, at his residence, Carisbrooke, Isle of Wight, Joseph Groves, B.A., M.B.Lond., in his 68th year.

MACDONALD.—At Stornoway, Lewis, on May 3rd, from an acute illness, and after seventeen years' devoted service to his native island, Donald J. Macdonald, M.B., C.M., D.P.H.Aberd., J.P. for the county of Ross and Cromarty; Medical Officer to the Post Office, the School Board, and the Oddfellows' Society; and recently appointed Medical Officer to the Landward Division of Stornoway. Deeply mourned by his widow, eldest daughter of J. Galloway Weir, Esq., M.P., and by his fellow-Lewismen.

WOOD.—At Margaret Street, Cavendish Square, W., on May 25th, Caroline Augusta Charlotte, the wife of T. Outterson Wood, M.D.

DIARY FOR THE WEEK.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, 8.30 p.m.—Dr. Sambon: A communication. Dr. Bayon: The Histogenesis of Goitre. Dr. Parkes Weber and Dr. Bafer: Osteolipoma of Brain. President, Dr. Pye-Smith: Valedictory Address.

WEDNESDAY.

OBSTETRICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8 p.m.—The following short communications will be read:—Dr. H. Russell Andrews: Two Cases of Pregnancy in a Rudimentary Uterine Horn. The following specimens will be shown:—Dr. Longridge: (1) Drawing of Dilated Ureters; (2) Rupture of the Heart. Mrs. Scharlieb: A Uterine Tumour (with description by Dr. Lockyer). President (Dr. H. R. Spencer): Myomatous Uterus, weighing 7 lb., in a patient aged 22. Dr. McCann: Two Specimens of Chorion-epithelioma of the Uterus. The following papers will be read:—Mr. H. T. Hicks: Primary Vaginal Embolic Chorion-epithelioma. Drs. Griffith and Williamson: A Case of Chorion-epithelioma Complicated by Haematometra.

THURSDAY.

NEUROLOGICAL SOCIETY, 11, Chandos Street, W., 8.30 p.m.—Dr. F. E. Batten will open a discussion on Posterior Basal Meningitis and its Relation to Epidemic Cerebro-Spinal Meningitis.

NORTH-EAST LONDON CLINICAL SOCIETY, Tottenham Hospital, N., 4 p.m.—Clinical Meeting.

FRIDAY.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8.30 p.m.—Papers:—Dr. A. W. Addinsell: Chronic Metritis. Dr. David Arthur: The Diagnosis of Chest Diseases by the X Rays.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday and Friday, 3.45 p.m., Clinical Pathology.

LONDON SCHOOL OF CLINICAL MEDICINE.—Clinics: Monday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Ear and Throat, 4 p.m. Tuesday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Skin, 4 p.m. Wednesday, Medicine, 2.15 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30 p.m. Out-patient Demonstrations: Surgical, daily, 10 a.m.; Medical, daily, 10 a.m. Ear and Throat, Mondays and Thursdays, 12 noon. Eye, Wednesdays and Saturdays, 11 a.m. Skin, Tuesdays and Fridays, 12 noon. The Special Lectures will be as follows: Tuesday, 4 p.m., Rare Skin Affections; Wednesday, 3.30 p.m., Optic Neuritis; Thursday, 2.30 p.m., Angina Pectoris.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear. Lectures at 5.15 p.m. each day will be given as follows:—Monday, How to Examine the Heart (with illustrative cases); Tuesday, Lantern Demonstration of the Methods of Estimating the Renal Function; Wednesday and Thursday, The Causes of Insanity.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Cases in the Wards; Friday, 3.30 p.m., Surgical Treatment of Infantile Paralysis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the clinics and demonstrations for next week:—Monday, 10 a.m.: Surgical; 2.30 p.m.: Medical, Throat, Nose and Ear, X Rays. Tuesday, 10.30 a.m.: Medical; 2.30 p.m.: Operations—Surgical and Gynaecological; Demonstration of Cases at the Northwood Sanatorium. Wednesday, 2.30 p.m.: Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynaecological Operations—Medical, Surgical; X Rays; 3 p.m., Medical (In-patient). Friday, 9.30 a.m., Surgical; 2.30 p.m., Operations—Medical, Eye; 3 p.m., Medical (In-patient).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week:—Daily, 2 p.m.: Medical and Surgical Clinics and X Rays. 2.30 p.m.: Operations. Monday and Thursday: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2 p.m.: Diseases of Throat, Nose, and Ear. 2.30 p.m.: Diseases of the Skin. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. 2 p.m.: Diseases of the Eye. Lectures—Monday, noon: Pathological Demonstration. 5 p.m.: Insects as Carriers of Disease in Tropical Countries. Tuesday: Clinical. Wednesday: Gynaecological. Thursday: Clinical. Friday: Clinical.

BOOKS, ETC., RECEIVED.

Recherches sur l'Involution Utérine. Par le Dr. M. Camacho. Paris: G. Steinheil. 1906.

Medical Examination Questions set by the University of Edinburgh, the Educational Institute of Scotland, etc. Edinburgh: Livingstone and Logan. 2s.

Manual of Midwifery. By W. E. Fothergill, M.A., B.Sc., M.D. Fourth edition. Edinburgh and London: W. Green and Sons. 1907.

Lists of Muscles for Electrical Testing (for use in private and hospital practice). London: H. K. Lewis. 2s. 6d.

"*" In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JUNE.	
2 Sunday ...	
3 MONDAY ...	South-Western Branch, Annual Meeting, Royal Devon and Exeter Hospital, Exeter; Luncheon, Clarence Hotel, 1.30 p.m.
4 TUESDAY ...	Hampstead Division, *Metropolitan Counties Branch*, Hampstead Conservatoire, 8.30 p.m.
5 WEDNESDAY	Central Council, *Special Meeting*, Metropolitan Asylums Board, 2 p.m. Central Division, *Birmingham Branch*, Annual Meeting, Medical Institute, 4 p.m. South-Eastern of Ireland Branch, Town Hall, Clonmel, 12 noon; also meeting of Branch Council.
6 THURSDAY...	Altrincham Division, *Lancashire and Cheshire Branch*, Annual Meeting, Board Room of the Hospital, Altrincham, 5 p.m. Metropolitan Counties Branch, Special General Meeting, St. James's Vestry Hall, Piccadilly, 4.30 p.m.
7 FRIDAY ...	Glasgow and West of Scotland Branch, Annual Meeting, New Medical Buildings of the University, 3.30 p.m.; Dinner in the evening.
8 SATURDAY ...	
9 Sunday ...	
10 MONDAY ...	London: Ethical Emergency Subcommittee, 2 p.m.
11 TUESDAY ...	London: Organization Committee, 11 a.m. Bradford Division, *Yorkshire Branch*, Annual Meeting, Eye and Ear Hospital, Bradford, 8.30 p.m.
12 WEDNESDAY	

Date.	Meetings to be Held.
JUNE *(Continued).*	
13 THURSDAY...	Birmingham Branch, Annual Meeting, Medical Institute, Birmingham, 3.30 p.m. Cambridge and Huntingdon Branch, Annual Meeting, Cambridge. Midland Branch, Annual Meeting, Devonshire Hospital, Buxton, 2.15 p.m.; Luncheon, Palace Hotel, Buxton, 1 p.m.; Dinner, 6.30 p.m. South Wales and Monmouthshire Branch, Annual Meeting, Cardiff.
14 FRIDAY ...	Hampstead Division, *Metropolitan Counties Branch*, Annual Meeting, St. Peter's Hall, Belsize Square, N.W., 4.30 p.m.
15 SATURDAY...	Harrogate: Science Committee, Hotel Majestic, 4 p.m.
16 Sunday ...	
17 MONDAY ...	
18 TUESDAY ...	London: Public Health Committee, 3.15 p.m.
19 WEDNESDAY	London: Medico-Political Committee, 2.30 p.m. South-Eastern Branch, Annual Meeting, Hotel Metropole, Brighton, 2.15 p.m.; Luncheon, 1 to 2 p.m.; after meeting, Reception at the Royal Pavilion by His Worship the Mayor; Dinner, Hotel Metropole, 6.15 p.m.
20 THURSDAY...	London: Hospitals Committee, 2 p.m. East Anglian Branch, Annual Meeting, Ipswich. West Norfolk Division. *East Anglian Branch*, Annual Meeting, West Norfolk and Lynn Hospital, 3 p.m.
21 FRIDAY ...	Border Counties Branch, Annual Meeting, Crown and Mitre Hotel, Carlisle.
22 SATURDAY...	
23 Sunday ...	
24 MONDAY ...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

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British Medical Association.

SPECIAL REPRESENTATIVE MEETING.

A SPECIAL Representative Meeting was held at the Examination Hall, Victoria Embankment, London, on Wednesday, May 29th, 1907, Dr. J. A. MACDONALD (Chairman of Representative Meetings) in the chair.

The SECRETARY read the notice convening the meeting.

The CHAIRMAN reported that pursuant to resolution of Council he had fixed that day, Wednesday, May 29th, 1907, for the Representative Meeting.

APOLOGIES FOR NON-ATTENDANCE.

The SECRETARY announced apologies for inability to attend from Dr. John Aitken (Fife), Dr. F. S. Genney (Lincoln), Sir Victor Horsley (Marylebone), Dr. G. R. Livingston (Scottish), Mr. J. Tubb-Thomas (Bath, Trowbridge), Dr. A. T. Wear (Newcastle-on-Tyne, Hexham), Divisional Representatives, and Dr. Parry (Chester and Crewe); and also from the following members of the Central Council: The President-elect (Dr. Davy), Dr. Collier, Dr. Franklin, Dr. Galton, Lieutenant-Colonel Drake-Brockman, Dr. Edgar Barnes, Mr. Andrew Clark, Dr. James Hamilton, and Dr. J. Murray.

DEPUTIES FOR REPRESENTATIVES.

He then announced the absence of the following Representatives, and the names of those acting for them:

Constituency.	Representative Unable to Attend.	Deputy Acting.
Natal	Dr. Booth Clarkson	Dr. W. R. Strapp.
Oldham	Mr. T. Fawsitt	Dr. A. H. Godson.
Ashford, Dover, and Folkestone	Mr. B. W. Ord	Dr. P. V. Dodd.
Mid Norfolk	Dr. J. T. Skrimshire (illness)	Dr. D. G. Thomson.
Nottingham	Dr. W. T. Rowe	Mr. G. A. Ferraby.
Blackpool	Dr. F. J. S. Heaney	Dr. F. J. H. Coutts.
Cardiff	Dr. Tatham Thompson	Dr. E. J. Macleau
Cape of Good Hope (W. Province Branch)	Dr. Jane E. Waterston	Dr. B. J. Guillemard.
South Edinburgh	Dr. G. W. S. Paterson	Dr. Michael Dewar.
Southampton, Guernsey and Alderney	Dr. A. A. MacKeith	Dr. Samuel Hughes.
Birmingham (Central)	Dr. T. Wilson	Dr. E. D. Kirby.
Ayrshire	Dr. W. F. Brown	Dr. E. D. Gairdner.
Monmouth	Mr. J. R. Essex	Mr. W. J. Greer
Bromsgrove, Dudley, and West Bromwich	Dr. H. W. Langley Browne	Dr. Herbert Manley.
Cleveland	Mr. W. S. Dickie	Dr. R. E. Howell
Wandsworth	Dr. L. S. McManus	Dr. E. R. Fothergill.
Leicester	Dr. R. Sevestre	Dr. F. M. Pope.
East Norfolk and North Suffolk	Dr. H. Blake	Mr. E. H. T. Nash.
Chichester and Worthing	Dr. F. Hinds	Mr. H. Elliot-Blake.
Birkenhead	Dr. J. Lambert	Mr. J. H. Fardon.
Blyth	Dr. R. Laing	Dr. James Anderson.
Winchester	Dr. H. J. Godwin	Dr. W. M. Harman.
Isle of Wight	Dr. P. D. Turner	Dr. G. B. Wood
Halifax	Dr. A. Mantle	Dr. Arthur Drury
Bath and Trowbridge	Dr. H. Pearse	Dr. J. Tubb-Thomas.
Swansea	Dr. H. A. Latimer	Dr. D. A. Davies.
North-West Edinburgh	Dr. F. T. S. Caverhill	Dr. R. McKenzie Johnston.
Shropshire and Mid Wales	Dr. H. W. Gardner	Dr. G. W. Sidebotham.
Sheffield	Dr. A. C. Turner	Dr. Sinclair White.
Marylebone	Sir Victor Horsley	Dr. Lauriston E. Shaw.
Scottish	Dr. J. Maxwell Ross	Dr. G. B. Livingston.

Lieutenant-Colonel D. CURME (West Dorset) said he was attending not as deputy but as elected.

The CHAIRMAN moved:

That the foregoing deputies be received in the place of those elected.

The motion was agreed to. Addressing Lieutenant-Colonel D. Curme, he pointed out that the present meeting was a continuation of the meeting held at Caxton Hall in July last, and therefore no fresh member could be elected. Lieutenant-Colonel Curme could only be elected as deputy; he was therefore present at the meeting as deputy for Dr. Comyns Leach.

DECEASED MEMBERS.

Proceeding, the CHAIRMAN regretted the loss of one of their members, Dr. J. C. Leach. He felt sure he was only expressing the opinion of the meeting in saying how much they regretted his death, and he was also sure they ought to express their sorrowful appreciation of the work he had done for the Association and their sense of the loss they had sustained by his death. He also had to announce the death during the preceding year of two other gentlemen, not members of that particular meeting, but members of the Council who had constantly attended their meetings as members of the Council. They were two men whom the Association could ill afford to lose; they had done a great deal of work, not only as members of the Council, but they had worked hard to give assistance at meetings. Dr. Markham Skerritt had acted as Treasurer of the Association during a term, and was always exceedingly keen with regard to any work in connexion therewith. By the death of Dr. Groves, also, the Association had suffered a great loss. He was certain it would be wrong of the meeting not to express their deep regret at the death of those gentlemen, and to say how much they in the Association would miss their services.

Dr. SHADWELL (Walthamstow) said that the Representative of his Division would not be present at the meeting till 1 o'clock, and inquired whether he might act until the Representative of his Division arrived.

The CHAIRMAN said that was a matter for his ruling. He believed that on former occasions such a course had been adopted; therefore, Dr. Shadwell could act in the absence of his Representative.

ORDER OF BUSINESS.

The CHAIRMAN moved:

That the meeting consider, first, the proposed alteration of existing By-laws in reference to the mode of election of the Chairman of Representative Meetings; and, next, the report of the Organization Committee submitting the draft Charter.

The motion was agreed to without discussion. He further moved that the adjournment for lunch be from 1 to 2 o'clock, and the tea adjournment from 4.30 to 5 o'clock, which was agreed to without discussion.

AMENDMENT OF BY-LAW 20.

Mr. T. JENNER VERRALL (Brighton) moved:

That By-law 20 be amended to read as follows: Time of holding: Minutes: The first daily session of the Annual Representative Meeting shall be held not later than two hours after the time fixed for the commencement of the annual general meeting. The minutes of each Representative Meeting shall be forwarded by the Chairman thereof to the Council.

A show of hands was taken, and the motion was declared carried:

REPORT OF ORGANIZATION COMMITTEE.

The CHAIRMAN moved:

That the Report of the Organization Committee on its action pursuant to the instruction of the Annual Representative Meeting, 1906, be received and approved.

Dr. MARTLEY (Dublin) moved:

That the report be referred back to the Organization Committee to embody in the Charter provisions in virtue of which geographical distribution may be ensured amongst the members of Council to be elected by the Representative Meeting in accordance with the instructions given by the Representative Meeting of 1906.

The motion was seconded by Dr. MILLER (Exeter and Barnstaple).

The CHAIRMAN stated that the report of the Organization Committee was simply a narrative of the procedure adopted by the Committee, and not of the results which were embodied in the draft Charter. Perhaps Dr. Martley would withdraw his motion.

Dr. MARTLEY accordingly withdrew his proposal.

The motion proposed by the Chairman was then agreed to.

THE PROPOSED CHARTER.

The Dublin Amendment.

The CHAIRMAN then moved:

That the draft Charter, Ordinances and By-laws, as revised by the Organization Committee, be received and considered by the meeting.

He stated that it was not necessary that this motion should be seconded.

Dr. MARTLEY (Dublin) moved as an amendment:

That the Dublin Division, while heartily approving of the objects for which the Charter was originally sought, proposes that the consideration of the Charter be postponed until the Representative Meeting of 1908, to give time for the Divisions to decide if it is for the good of the Association to apply for one in a form which may lead to most strenuous opposition.

He said that the Dublin Division was distinctly in favour of what the Charter was intended to obtain namely, enlarged powers to help widows and orphans, and large powers for other things, and last year his Division was prepared to support it and did support it as far as they could, until some energetic reformers improved the Charter, till, in the opinion of his Division, it would have a disastrous effect upon the wellbeing of the Association. The great point was the composition of the Council and its method of election. At Caxton Hall last year it was agreed that the elected members of the Council should consist of 30 members, 20 to be elected by the Branches and groups and 10 by the Representative Meeting, due regard being had to geographical distribution. He did not think that that was a well considered scheme at the time. He was when he took up the Supplement that was published with the draft Charter, that there were half a dozen other schemes put at the tail of it. It was whispered in Dublin—he did not know how far it was true, and he spoke subject to correction—that one of these was brought forward by Mr. Ballance. If that was the case, what struck him as very curious was that it was Mr. Ballance himself who moved that the Council consist of 30. Apparently, after mature consideration, he found that 30 was an unworkable number, and so introduced a scheme which wanted certainly more than 30. If there were 20 members elected by the grouped Branches, that would leave 2 members for Ireland.

Dr. WOLSTENHOLME (Salford), on a point of order, asked whether the members were right in discussing the Charter. He understood that the motion was for postponement.

Dr. MARTLEY said that if there was one thing that was emphatically declared by the meeting in the Caxton Hall, it was that geographical representation should be given with regard to the ten members elected by the Representative Meeting. One reason for postponement was in order that there might be a proper scheme of geographical representation laid before the respective Divisions. The Dublin Division had waited patiently, and it was still waiting for such a scheme to come. If such a scheme was not brought forward, absolutely no one would be elected from the outlying parts of the kingdom, such as Ireland, Scotland, and Wales, and the further districts of England. They had had evidence of that before, and they did not want to be left completely out in the cold. He would probably be answered that they did not want this. The whole point came to this: this was an ill-conceived, ill-considered hash up of the Charter which they were not last time prepared to take, and which had been amended in the Representative Meeting without due thought, amendments being carried very lightly and cheerfully which probably would not work. They would now be told that amendments would be put into this Charter to settle all these points; but these would probably be equally unworkable. What they wanted was that the Charter should go before the Divisions and be a proper Charter, and not such a Charter as might be amended by this meeting. He saw by the BRITISH MEDICAL JOURNAL that whatever decision they might come to to-day was to be binding; he did not, however, know on what ground. The BRITISH MEDICAL JOURNAL of April 6th said (p. 826):

The new draft is a very carefully-worded document, and great care and much thought have been expended on its preparation. The Divisions will have to consider the various points, and it is very much desired that each should express a clear opinion as to whether it can extend its approval or not to each item. When the matter is discussed at the Special Representative Meeting it should be borne in mind that the decisions arrived at will be binding, so that any criticism offered should be deliberate and carefully considered.

Apparently, therefore, the decision come to to-day, whether or not they were to go on with the Charter, would be binding. He did not know by what authority that statement was published. He called most strongly upon members to vote for postponement, so that they might form a proper idea of a Charter which was to be binding. The Dublin Division had written round their opinions to all the Divisions in the kingdom, and he hoped all the Divisions would support Dublin in its postponement resolution. He also appealed to what he might consider the large body who came here with no instructions, whose Divisions had not taken the trouble to give them instructions on the point, to vote most strongly for delay in order that they might see what they were doing, and not to wreck the Association by rushing into a Charter of this sort.

Mr. C. R. STRATON (Salisbury) said he had received an instruction very similar to that which had just been moved, so that in seconding this motion he was really proposing the instruction of his own Division, in whose opinion the time for asking for a Royal Charter had not yet come. The working of the constitution of the British Medical Association had so far been satisfactory, and further experience was desirable before making any change. That was the instruction which was given to him at a very fully attended meeting. There was no particular scheme in the Charter to which they objected, although they objected to many. The objection was on general grounds. The Association was not in a position at the present moment to indulge in any additional expense. Take the

position four years ago, when the Association was reconstituted. They were then saving something like £4,000 or £5,000 a year. Now they were as much on the wrong side. ["No."] Let him put it a little more plainly. Last year even they had in the Strand property between £80,000 and £90,000. At the present moment that property was levelled. They had dividends coming in of about £1,000, and at the present time all that was gone. Not only that; the whole of their capital being in abeyance for building purposes, they were obliged to go to the bank for £30,000, whatever the state of the money market might be, and they must take that up upon loan. Further, they were then paying no rent, but now they were paying not only rent for their premises in Catherine Street, but for the storage of the whole of their books. That being the position, was it necessary to indulge at the present moment in what he might call voluntary additional expense? That, shortly, was the position taken up by his Division on those grounds.

The CHAIRMAN pointed out that, the motion being by a Division, it did not require a seconder.

Mr. VERRALL observed that, this being a perfectly bona-fide and well-thought-out attack upon the matter they were discussing to-day, he would like to say a few words on the general proposition.

Dr. POPE, rising to a point of order, asked if it would not be better that everybody who had an amendment should state it.

The CHAIRMAN: Yes; Mr. Verrall was quite in order with his speech.

Mr. VERRALL observed that the positions taken up in the two speeches to which they had listened were of a very different character. The objection of the first speaker was on the ground that a sufficiently satisfactory Charter had not been prepared, and did not include certain things which his Division would like to have included, and probably included some things which some of the Divisions would like to have left out. He also complained that time had not been given for the proper consideration of the Charter, and thought time should be given for the Divisions to decide if it was for the good of the Association to apply for one in a form which might lead to most strenuous opposition. Dr. Straton opposed the Charter on the ground that it would involve considerable expense. The expense that had been gone to was one that could not be postponed indefinitely, as the improvement of the premises must have been taken in hand at some time or other, and it was a mere accident that it should have coincided with the time that it was proposed to apply for a Charter. He would like to point out that there was no necessary sequential expense arising from obtaining a Charter, and therefore he thought Mr. Straton was not justified in saying that the application for a Charter would necessarily involve additional expense. With a Charter they might go on spending no more money than they were doing at present. When he read these words as to the Charter being "in a form which may lead to most strenuous opposition," he did not understand that the people resident in Dublin objected to the form of the Charter, but objected to having a Charter at all, and objected to a constitution based upon a form of Charter containing ordinances, by-laws, and so on, and preferred that the Association should remain under the present constitution. They had by-laws and ordinances which regulated how members should be elected, and the principal objection of the Dublin Division seemed to be that provision did not exist for geographical distribution, and that, he thought, was the gravamen that was brought against the Charter. Under the Charter they would be able by means of by-laws at very short notice to make alteration in respect of matters which were considered objectionable, and it would be possible in the same way to provide for the machinery of geographical distribution. So far from hoping, with Dr. Martley, that the meeting would adopt the Dublin resolution by a very large majority, he hoped they would throw it out by a very large majority, and he would like to say that it was not an ill-considered or ill-conceived scheme. As a matter of fact, two whole years nearly had been given in various ways to the consideration of the Charter by various bodies. This was no local and parochial matter, but an Imperial matter. Unless they had been behind the scenes they could have no idea how strongly the Colonies were interested in obtaining this Charter. The Colonies, like the members at home, wished very much to have a power of action in certain matters, such as that of medical defence, and this they would be able to do if this Charter was taken in hand. Although they might think that was not a sufficient reason for involving the home government in what they considered an unfortunate departure, yet he was bound to tell them that they would run very serious risk of shedding a very considerable portion of their Association in various parts of the Colonial Empire if they did not give them permission to do certain things which they might or might not wish to do at home. They had heard before of medical independence; and, in conclusion, he urged them not to be led away by the red herring drawn across the trail by the Dublin Division.

Dr. C. E. ROBERTSON (Glasgow, Southern), while supporting the Dublin proposal, said there were some words which he would like to have left out, and they were: "while heartily approving of the objects for which the Charter was originally sought." That seemed to be an invidious thing, because the objects had never been put down in black and white. He, the speaker, had been commanded by his constituents to support the Dublin proposal, and the main ground for that was no one could deny the importance of the Charter, and no one could deny the Divisions were entitled to consider the Charter quite as much as were the Organization Committee or any other Committee connected with the Association. Yet the Charter was sent down to them on April 6th last. That was the only date from which they had been able to consider the Charter. How could Divisions, meeting perhaps once a fortnight, in that time go through the whole thirty-eight pages of the Charter and consider it carefully? His constituents had not even had time to read the Charter carefully, much less discuss it. The last speaker had said that they must take it for granted that the discussion had been going on for two years. That was correct; but the draft Charter had only been before them since April 6th last. It was the most important subject which had ever come before them, and were the Divisions to be overlooked? Was that fair? Were they to be told that they must accept the Charter? Once they had had the opportunity of thoroughly considering its provisions, they would know whether they agreed with the objects for which it was sought. On those grounds he supported the resolution of the Dublin Division.

Dr. T. R. BRALSHAW (Lancashire and Cheshire), before making the remarks which he had to make on behalf of his Division, desired to put two or three questions to the legal adviser. They were: First, what would be the probable cost of the winding-up of the old Association, which, he took it, was necessary before they could apply for a Charter; secondly, what was the minimum cost if the Charter were not opposed; and, thirdly, what the cost was likely to be if the Charter were opposed. Speaking on the resolution, he considered there was a great deal of misunderstanding about the opportunities their great Association had had for considering the Charter. He maintained that it had not, as they had constantly read in the JOURNAL, been before the Association for three years; and he asserted that it had only been before the Association for six weeks. The Charter as it came down to them then contained an entirely novel provision which, so far as he could remember, had never been hinted at in any of the former draft charters; and that was, that the Council, which hitherto had guided the affairs of the Association under their present constitution for about nineteen years, more or less, was to be entirely superseded, and become merely a Committee of the Representative Body. Be that right or wrong—for his part, he had strong opinion it was wrong—it was an entirely new provision and a new proposal. He looked upon that as a vital point in the Charter; and to say that the Charter had been before the Association for three years, when that final provision had only been before them for six weeks, was an entire misconception. With regard to the question of cost, he had looked carefully over their balance sheet for the year, and he found that the funds in their possession amounted to about £14,000 invested in gilt-edged securities; and it was not necessary for him to say that if they sold out their securities in the present state of the Funds, it would be a ruinous procedure. With regard to the advisability of proceeding with the consideration of the Charter at that moment, if they did so it would be done in the teeth of a determined

opposition; and he ventured to say further that the opposition would not rest within the walls of that building. [Hear, hear.] He was confident that he and his friends would, within the course of a couple of months, produce a petition signed by not less than 500 members from Lancashire and Cheshire alone—[Shame!]; and he put it to them: Would the Privy Council entertain an application for a Charter to a society in which there was such an enormous number, although a minority, opposed to the Charter? For his part he was certain the Privy Council would not.

The Chairman reminded the speaker that his time for speaking was up.

Dr. Bradshaw was glad to hear what the Chairman said [Laughter], because he did not wish to weaken his argument by saying anything further.

Dr. K. A. Grossmann (Liverpool) informed the meeting that his Division desired to postpone the consideration of the question of the Charter chiefly on the ground of expense. They had heard at Leicester from Mr. Armit, in a very able and long speech, that the probable cost of an unopposed charter would be £600; and it was understood that the probable cost, if opposed, would be at least £10,000. Dealing with the members of the Association taking an active part, their number was barely 10 per cent. of the membership; the others were silent members, who liked to get a good medical journal cheaply. If they took those members they represented about 6 per cent. And, when they remembered that the British Medical Association represented about half those in the medical profession, altogether they had a little more than 3 per cent. It was absolutely certain that candid friends of theirs would inform the Privy Council that it was only 3 per cent. who desired the Charter. Under those conditions was the Charter likely to be granted? He would leave the answer to them; but he thought it would be a unanimous No. That was why his Division wished to avoid proceeding at present, because they were really in favour of a Charter, and wanted a Charter, but they thought it wiser to wait two or three, or even four years if necessary in order to get their Charter thoroughly considered, granted unopposed and cheaply. As they had heard, their finances were not so brilliant as they might be. He was waiting for the answer of the solicitor to the Association to Dr. Bradshaw's questions. That was the particular ground upon which he was in favour of postponing the consideration of the Charter.

The Solicitor (Mr. Hempson) said that the last speaker had referred to the sum of £10,000 as representing the possible cost if the Charter were opposed. He did not know where he got that figure from, and he (Mr Hempson) was not going to father it. One would have to consider what the nature of the opposition would be and what form it would take. There seemed to be in the meeting a misconception of the position, and perhaps he might just straighten things, because he thought that it would help matters if he did that. The last speaker had said that possibly only one-third would be in favour of the Charter. Those present at the meeting were considering the Charter to-day only from the point of view as to whether they, as representing the Association, approved of the idea and approved of the general form of it. They could not pass the Charter. The Charter would have to be adopted by a statutory meeting of the Association, which would resolve that the Association should depart from its present constitution and should apply to the Privy Council for the grant of the Royal Charter, and should wind up the Association. The feeling of the Association must be got not only through its Representatives but through every one who liked to attend. The majority at the first meeting would have to be three-fourths of the members present and voting. Therefore, in order to pass the Charter they must get an absolute consensus from the whole of the Association to the extent of three-fourths as against one-fourth. That point did not seem to be clearly appreciated at the present meeting. One of the Representatives present had handed a note to him to know whether a short cut might be taken by passing the Charter to-day. That could not be done. He had heard the Representative of the Dublin Division say that there was some binding force in what the meeting was doing, but there was no such absolute binding force in it. The present meeting could not control the statutory meetings. The figures given as the estimate of the probable cost of obtaining the Charter up to March 24th, 1906, were as follows:

Legal expenses, counsel's fees	£75
Other charges	115
Other expenses	200
Making a total of	£390

actually incurred up to that date. Then came the estimate. If the application was not opposed, it was estimated the cost would be approximately as follows:

Government stamps and fees	£130
Further legal expenses	200
Other expenses, printing, Council meetings, etc.	200
Cost of winding up the Association, about	100
Making a total of	£630

The winding-up of the Association would be merely a domestic matter. The Association would continue as it had continued hitherto. The ascertaining of the liabilities and the assets of the Association would be more a matter of what he might call paper work than actual realization.

Dr. Bradshaw (Lancashire and Cheshire) asked what would be the cost if the application for the Charter was opposed.

The Solicitor said that he should have to know more clearly and definitely what was meant by "opposition." He could not take a leap in the dark, and it would not be fair to the Association for him to do so.

Dr. William Ewart (Westminster) said that his Division felt very keenly that the work in connexion with this matter had been done by the Council and by the Organization Committee, and that they both deserved an expression on the part of the Representative Meeting of its gratitude and appreciation. Further, no man could read through the report of the Organization Committee without feeling that it was the outcome of enormous consideration and great wisdom and fertility. Something had been said as to the danger of the opposition that might come. Doubtless it might come if they were inconsiderate or too rapid in their action, and therefore his Division was in favour of hastening slowly. Then something had been said as to the opposition being a danger. It appeared to his Division that the danger lay in the lack of opposition. Those present were returned by their Divisions. Many of the Divisions represented themselves mainly, and did not represent the feeling of the whole profession. In the big political world there was always an organized opposition, but in the Representative Meeting they were all like sheep, and there was no strong opposition outside anxious to tear them to pieces.

Dr. Pope (Leicester) said that he should not have intervened in the discussion were it not for a definite resolution which had been passed by his Division. When it was passed he was hundreds of miles away from the meeting and knew nothing of it. It was as follows:

> That the decision by the Representative Meeting shall not be binding on the Council.

He was not in the position of being able to state what was in the minds of the Division when they passed the resolution, but he supposed that he must maintain it, and it seemed to him that it obliged him to vote for the amendment of the Dublin Division. He could not see any way out of that. The resolution was crudely expressed, and it was not a resolution which he should have voted for himself, but it did put its finger on what seemed to him to be the blot of the draft Charter, namely, that sufficient care had not been exercised in bringing together and harmonizing the proceedings of the Representative Meeting and the Central Council. He could not help thinking that more might be done in this direction.

Dr. Guillemard (Cape of Good Hope) said that there was in South Africa the prospect of the federation of a large number of important States—the Transvaal, the Cape of Good Hope, the Orange River Colony, Natal, and Rhodesia. There was a large number of medical men in those Colonies. Those of them who were transplanted years ago, and who had been for a long time members of the Association, felt an intense loyalty to the British Medical Association. Were they going to keep up that loyalty, were they going to increase it, and what measures were they to take for that purpose? If any postponement of the consideration of the matters now before the Association took place, the interest in the British Medical Association in Great Britain, which was already

waning, would probably be extinguished. He could speak most strongly about this from the feeling displayed in his own Branch. He had travelled about South Africa a good deal in different directions and in the interior, and he had also worked in the Western Province in the neighbourhood of his Branch, and there was a very strong feeling that the Charter should be passed with as little delay as possible. If it were not passed he was quite certain that the feeling displayed at the Bloemfontein Congress last year would become intensified. That feeling was in favour of a South African Medical Association, quite independent of and entirely separate from the Mother Country in every detail. Some people might think that a very excellent thing. At Bloemfontein the proposition for a South African Medical Association was barely defeated. He was quite sure that on the issue of to-day's proceedings and the proceedings that took place during the summer months in England a very great deal would depend with regard to the vital interests of the Association abroad. He would earnestly press upon those present at the meeting the wishes of their brethren beyond the seas. They might be small in number, but they had a large influence in proportion to their numbers, and the Federated Colonies of South Africa were very possibly going to be very important indeed.

Mr. ARMIT (Hampstead) moved that the resolution be now put.

The CHAIRMAN declined to accept the resolution.

Dr. W. DOUGLAS (Dartford, Maidstone, Rochester and Chatham) wished to bring forward some considerations which had not been present in some of the speeches they had just heard. Did they realize that the passing of this amendment would mean that they were not to consider the Charter at all at this meeting? [Hear, hear.] That, he thought, was a very important consideration, and surely the meeting would not pass any such amendment. It had been said that this Charter had been before the Association for some two or three years. That, on the other hand, had been denied, and the period stated was some six weeks. He would like to recall that the present Charter was simply a modification of the old Charter, and that what the Divisions would have to consider was not an entirely new Charter, but such modifications as had been introduced by request of the Representatives and the Organization Committee; and if all the members had had time to consider the matter, surely those who had the honour of being Representatives of Divisions should also have considered it, and placed the matter clearly before them. The matter had been referred to by the Representative from Dublin as though this meeting was to be bound by the form in which the Charter had been presented to them, but his own understanding of the matter was that it was for this meeting to mould the Charter into the form that seemed to them best in the interests of the Association. There were other points which their Solicitor had cleared away, but he wished to emphasize these few points, which he regarded as of the utmost importance.

Dr. E. J. MACLEAN (Cardiff) thought they ought to get back to the original position, and ask themselves whether the objects which this Charter covered were really needed by the Association. In his own Division there was absolutely no doubt or question on that point. The question which was put to officials of the Association in that Division was, What are you going to do for your members? Cannot you do more for your members? It appeared to be admitted in the terms of the amendment that the objects which the Charter would cover were desirable ones, and, that being so, he thought the meeting should have much more forcible reasons than had as yet been presented as to why the matter should be postponed. The fact should be recollected that they needed to do certain things for their members. The objects included in the Charter being desirable ones, they ought to get them as soon as possible. In South Wales they were being refined by tribulation, and knew what it was to go through struggle and trial in the face of organized opposition. Down there they knew what organized opposition meant, and they wanted to have such an organization as would include every single member within the area of the Branch under the conviction that he was belonging to an Association which would do everything it possibly could for him in his individual and in his professional capacity. The fact had to be recollected that a postponement of the application for the Charter meant further opportunity for organized opposition, and he was confident as an official of the Association that the mere postponement, the mere sending down again, of a draft Charter to the Divisions would not result in any further consideration of it by the members. [Hear, hear.] The position was well expressed to him by a member of the Branch the other day: "Here comes this draft Charter again; why in heaven's name do not you get the thing through?" They admitted that it was a good object, and they wanted to get it through. He wished to emphasize that they were simply courting the development of opposition in certain directions by postponing the question of the application for a Charter.

The CHAIRMAN said, with regard to the question which arose upon the remark of a previous speaker, he wished them to be settled in their minds that if this amendment was carried this meeting would cease, and there would be no further consideration of the Charter that day.

Dr. WALTER SMITH (St. Pancras) wished to call attention to the Standing Orders, and to ask whether, on a motion that the debate be adjourned, there could be any discussion? Did not that stop any further discussion?

The CHAIRMAN: No, sir.

Dr. MUNRO MOIR (Northern Counties of Scotland) said he represented nearly a third of Scotland, and this draft Charter had not been considered so well as the members of the Branch would like. He did not agree with the last speaker that delay would foster opposition. The members of his own Branch did take an interest in the Association, and he was glad to say that the membership in the scattered area that he represented was increasing year by year. The members of his Branch had been trying to understand the Charter in the short time it had been placed at their disposal, and they felt, while supporting the Organization Committee in their application, that if a little more time was given they would understand the Charter better, and certainly would give it their loyal support if the matter came up again.

Dr. WORRALL (New South Wales) wished to thank Mr. Verrall for his very sympathetic remarks regarding the Colonies, and he would like to endorse all he had said with regard to the keen desire there was in New South Wales, at all events—and he thought he might say throughout all the Australasian Colonies—that they should have this Charter at the earliest possible date. Up to a few years ago there was a strong feeling amongst the Australian graduates in favour of an Australasian Medical Association and cutting adrift from the British Medical Association; but in the last three or four years there had been a change in the attitude of the authorities of the Association in England towards the Colonies, and in consequence of that this feeling in favour of an Australasian Medical Association was now quite dormant, and that feeling had been helped by the recognition on the part of medical men in Australia that no one section of the medical profession in any part of the British Empire could hold itself independent of other sections. There had been striking proofs of that, and they had had very great help within the last few years from the parent Association. So much had that been felt that the Victorian Medical Society, which comprised a large majority of the profession in Victoria, within the last three months had decided to merge itself in the Victorian Branch of the British Medical Association and had made over its library buildings and all its goods to that Branch. To this Charter the profession in Australia was looking forward with the greatest interest and anticipation, and if it was indefinitely postponed it would give rise to a keen sense of disappointment in the Colonies. Their idea was that the heads of the Association could not have too much power to keep in the closest possible touch with the rank and file. He had listened patiently to the arguments of the various speakers who had spoken against the Charter that day, and it had seemed to him that they were excellent arguments against a cast iron charter, but not in any way against such a Charter as they had here, which was elastic, and so far as he had been able to understand it, would allow an alteration of the by-laws and even of the ordinances with greater facility than at present. While his fellow-countrymen were disposed to speak very strongly against certain provisions, they were in favour of the Charter as a whole. It was incomprehensible to him that the profession should refuse to clothe itself with power which might be of the

utmost importance to the profession. It did not necessarily follow that the possession of power would imply the exercise of it. It seemed to him that if they waited until they had a constitution which was acceptable to everybody and embodied the ideas of all the members of the Branches and all the Divisions they would wait indefinitely. They knew on the highest authority that delays were dangerous, and it seemed to him that if they let pass this opportunity which now presented itself they might have to wait indefinitely. He would like to see the various members from all parts of the country take a broad view of the question and seek to divest themselves of local prejudices and personal feelings, and come to a decision to-day. He heartily supported the constitution as now presented. ("Vote.")

Dr. W. ODELL (Torquay) simply wished to state his position. The Dublin Division had sent their resolution to his Division for consideration, and the result of the meeting was this: that he was the only one in opposition to the Dublin Division resolution. Now, if he voted to-day he must vote, he supposed, in accordance with his Division, and therefore he would be voting against his own conscience. He had listened with the greatest pleasure to the speeches of the two gentlemen from the Colonies; he had not been to Australia or the Cape of Good Hope, but he had been in Canada; and he must say that he did not know what loyalty was till he went to Canada; and he hoped that to-day they would not do anything to estrange the Colonies.

Mr. ARMIT (Hampstead) moved that the question be now put, which was carried.

Dr. F. C. MARTLEY (Dublin) asked if he had a right to reply.

The CHAIRMAN: No.

Dr. MARTLEY: I claim a vote by card. And twenty members rising in their places to support the application, a vote was accordingly taken.

The CHAIRMAN explained that the question before the meeting was the Dublin Division resolution as to the postponement of the consideration of the Charter until next year. Those who voted Yes would vote in favour of the Dublin Division resolution being carried, and those who voted No would be voting against the Dublin Division resolution. He stated that Mr. Elliston would take round the box labelled "Yes," and Mr. Whitaker the box labelled "No."

The cards were then collected, and Dr. Cox (Gateshead and Consett), Dr. Wolstenholme (Salford), Dr. Martley (Dublin), and Dr. Douglas (Dartford, Maidstone, and Rochester and Chatham) were appointed scrutineers.

The result of the voting on the Dublin amendment was: For, 54 constituencies—3,784 votes; against, 81 constituencies—8,502 votes. Majority against, 47 constituencies—4,718 votes.

The motion was then put and carried.

DRAFT CHARTER.

CLAUSE 1.

The CHAIRMAN proposed:

That the Draft Charter and Ordinances and By-laws be considered clause by clause.

This was agreed to without discussion.

Mr. VERRALL moved the first clause of the Charter.

Dr. FOTHERGILL (Wandsworth) moved as an amendment

That the Association be called the Imperial Association.

He regretted Dr. McManus was not present to introduce the amendment. His Division considered the amendment a logical consequence in the life history of their Association. He reminded them that the Association was formed in 1832 as a purely provincial Association in the district of Worcester, with the same objects as obtained at the present time, namely, co-operation, maintenance of the interests of the profession, and recognition by local Councils. At that time the idea was favourably considered by the medical profession, and it was not long before other Branches in the United Kingdom were formed. Since that time Branches had been formed throughout the British Empire, and it was for them to consider whether they should not now incorporate in their title some word which would convey to their colleagues beyond the seas the fact that they were in touch and in sympathy with their local interests. Without wishing to appeal to sentiment, there did seem to be a want of patriotism and cordial support of Imperial ideas. It was their duty to realize the wishes of their Colonial Branches, and to meet them half way in everything they wished to do. Pointing out what the Colonial Branches had done, Dr. Fothergill instanced that when they went to Canada for their meeting, in a few days twelve hundred men joined the Association. If it had been a Canadian Association meeting in England, would the same thing have happened? South Africa had lately passed a resolution that they were not in favour of severance from the parent Association, but wanted local government and local federation. Australia likewise had followed and come into the fold and handed themselves over to the Association, root and branch. From Gibraltar he had had a telegram to say they desired closer co-operation and sympathy with the Association in their aims and objects. With regard to Natal the Representative Meeting would appreciate that when South Wales made a claim for financial support Natal sent a donation to that fund. It was an act of sympathy not to be measured by money. How were they to reply from home to the Colonies abroad? They wanted to give them in the Charter local government and local federation of Branches, following the lines of the Imperial idea. They wanted to assist them with their home government and to incorporate them in one world-wide federation. The significance of the name was that it should incorporate unity, that it should be national, and that it should appeal to members. It should be understood that they were going to help their Colonies, and not only that, but that the Colonies would help them. They wanted to impress the Government and they wanted to impress the laity—to make them understand that behind their Association was the whole medical profession. Dealing with three or four matters of Imperial importance, Dr. Fothergill mentioned, first, national temperance. It had been said that wherever they went to colonize they went with the Bible in one hand and a gin bottle in the other. As members of the medical profession he would like to see them united in developing temperance in the Colonies. Another matter of Imperial importance was the teaching of hygiene in the home, the army, and the navy. There should be a medical examination of children, which was a matter affecting not only the home country but all the Colonies. Further, there was medical registration. Until they had one system, not only in England but throughout the British Empire, they would never be able to obtain progress in the medical profession or have their wishes carried out. In conclusion, he desired those who might oppose to stay their hand and listen to the voice coming from the Colonies, and to show by the name of the Association that its members recognized the existence of the Colonies and desired their co-operation.

Dr. JOHN BROWN (Rochdale and Bury) opposed the amendment. He said the Colonies and dependencies were British Colonies and British dependencies. Why tack on another letter and make it "B.I.M.A."? "B.M.A." was known everywhere: it meant the British Medical Association; and to add the word "Imperial" would not add force, unity, or strength.

Mr. G. WESTBY invited the Colonial Representatives to express their views on the amendment.

Dr. WORKMAN (New South Wales), in reply, preferred to have no change made in the title. [Hear, hear.]

The amendment was then put, and on a show of hands declared to be lost, 5 voting in favour of it.

Clause 1, which runs as follows, was then carried.

1. For the purposes hereinafter set forth and all other purposes of this Our Charter the above named petitioners and all other persons who shall pursuant to this Our Charter and the ordinances made thereunder be members of the Corporation hereby constituted are hereby created and henceforth for ever shall be one body politic and corporate by the name of the "British Medical Association" (hereinafter called "the Association"), and by the name aforesaid shall have perpetual succession and a common seal with full power and authority to alter, vary, break, renew the same at their discretion and by the name may sue and be sued in every court of Us, Our heirs and successors, and We do hereby grant to the Association full licence, right, authority, power and capacity (notwithstanding the statutes of mortmain), from time to time and at all times hereafter to take and hold all such lands, tenements, hereditaments and property as are now vested in or held by the existing Association hereinbefore referred to, or any trustees or trustee for that Association,

and, secondly, to take, acquire, purchase and hold in perpetuity or otherwise any lands, tenements, hereditaments and property whatsoever, situate within Our United Kingdom of Great Britain and Ireland or in any part of Our dominions; and (subject to such consent if any as may be required by law) to grant, demise, alien, mortgage, charge or otherwise dispose of all or any of the lands, tenements, hereditaments and property for the time being of the Association, and also to do all other matters incidental or appertaining to a body corporate.

CLAUSE 2.

Subclauses.

The following subclause was then proposed by Mr. VERRALL, and adopted without discussion:

2.—(1) We do hereby declare the objects of the Association to be the promotion of the medical and allied sciences, the maintenance of the honour and interests of the medical profession and of the members thereof collectively and individually, and the co-operation of the members of the Association for their mutual assistance and support in all matters affecting them in their professional capacity, including the encouragement, promotion or provision of means for protecting members and their families against the exigencies of age, sickness, death, or misfortune.

Mr. VERRALL next moved the following subclause:

(2) Without prejudice to the generality of the foregoing objects and to the other powers conferred by these presents, and so that the said objects and powers shall be in no wise restricted by the powers next hereinafter specified, We do hereby expressly declare that for the attainment of the aforesaid objects the Association may adopt any or all of the following means, that is to say:

Mr. C. R. STRATON (Salisbury) moved an amendment. He said he objected to that subclause and to all the subclauses following it. His Division considered them unnecessary and likely to injure the Association, because they would provoke opposition from medical defence associations, from medical agents, and medical directory publishers—those whose legitimate occupations were threatened by the subclauses in question. Such people would certainly combine and employ counsel to object to the granting of a Charter. He suggested it was unnecessary to mention the matters contained in the subclauses.

Mr. VERRALL pointed out that they had been distinctly told by counsel that these things must be mentioned if they wanted to get their Charter: they could not get out of it, and they must take the risk of raising opposition.

The CHAIRMAN said counsel's opinion had been given in the matter over and over again, and it was necessary to get the subclauses definitely mentioned, or the Charter would not be granted.

Dr. W. JOHNSON SMYTH (Bournemouth) pointed out that the clauses were merely permissive, and it did not at all follow that the Association would avail itself of those liberties; but if they were excluded now, they would be excluding themselves and their descendants for all time from carrying out certain things. They should avail themselves of the opportunity of having wide liberty, and if there was opposition to be met it must be overcome.

On the amendment being put, it was declared lost, voting in favour of it.

Mr. VERRALL then moved the following subclauses, which were agreed to without discussion:

(i) May hold meetings and conferences at any place in the United Kingdom or in any part of Our dominions or elsewhere for the discussion of the affairs, interests, and duties of the medical profession, and for promoting personal and friendly intercourse between members of the Association and between members of the medical profession in general.

(ii) May provide, equip, manage, and carry on circulating and other libraries and rooms and buildings for social intercourse for the benefit of members of the Association and of the medical profession in general.

(iii) May compile, revise, publish and distribute, or sell lists and registers of medical practitioners, and records of events, transactions, and proceedings of interest to the members of the medical profession.

(iv) May publish periodically and sell the BRITISH MEDICAL JOURNAL, or any other journal of a character specially adapted to the needs of the medical profession.

(v) May encourage research in the medical and allied sciences by grants from the funds of the Association, by the establishment of scholarships, prizes, or rewards, and in such other manner as the Association may determine upon.

The Association and Politics.

Subclause (vi.), as follows, was then put to the meeting by Mr. VERRALL:

(vi.) May originate, support, promote, and oppose alterations in the law of the United Kingdom or any British colony or dependency affecting the public health or the medical profession, and may promote the candidature of any member of the Association for Parliament or for any British legislative assembly.

Dr. MCKENZIE JOHNSTON (North-West Edinburgh) moved as an amendment:

That as it is undesirable that the British Medical Association should, as an Association, take part in Imperial Party Politics, the words in Clause 2 (2) (vi) "and may promote the candidature of any member of the Association for Parliament or for any British Legislative Assembly" be deleted.

He said his Division held very strongly the opinion that the possible introduction of political matters inside the Association would be most disastrous. [Hear, hear.] Such a proposal as was contained in Subclause (vi) would involve that they might contribute towards the expenses, or the living expenses, of an M.P. tied to the Association; and that he, the speaker, held would introduce the worst kind of wire-pulling into the Association. It was hardly possible to suppose that they could get any one to accept such a position. Unless the Association was able to obtain a man who was able by his own force of character to show that he was a power in the House of Commons, they would be very much better without him. Personally he entirely agreed with what his Division said, and the other Divisions of Edinburgh coincided in it. There were various reasons which would occur to them which would make it inadvisable to interfere in political matters in a country governed by party politics, and he pressed that point very strongly upon the meeting. Although the amendment he proposed was the only one his Division had sent, he might mention that that was not the only part of the Charter to which his Division objected: but they had decided to send up that amendment for the consideration of the meeting and to leave the other matters to which they objected to be dealt with by other representatives. He held that the position of the Association should be to guide the Government; the Government should be free to come to the Association for advice on matters affecting public health or the interests of the profession. The Government ought to come to them for advice: and they were much more likely to do so, and much more likely to be guided by the Association, if it were entirely free from party politics. He wished to lay great stress upon that point, and thought it would be a great pity to have anyone representing them in Parliament. Such a gentleman would in all probability be a nominee of some extremely active Division or Divisions of the Association. It might be even that they would find themselves with a member of Parliament who would be more properly known as the M.P. for Wandsworth—one of the most active Divisions, but at the same time not necessarily in accord with the views of the Association as a whole. [Laughter and applause.] He would press very strongly upon those present that they should keep perfectly clear of politics, and that at the same time they ought to exercise the influence they had and the great influence which they ought to have if they spoke in a unanimous voice.

Dr. LAFFAN (Carlow, Kilkenny, and Waterford) said that he was entirely in favour of retaining the clause. Let them look at the position which the lawyers occupied. Did their profession suffer through their being in the House? On the contrary, they picked up every plum that could possibly be picked up. The Association would have nothing to say about a candidate's politics, but they would support him as a practical man.

Dr. H. E. DIXEY (Worcester) said that he should like to support the amendment of the Edinburgh Division. He was in the happy position of not only feeling very strongly himself on the question, but of also representing the feelings of the Division of which he was a delegate. He felt most strongly that if they once introduced politics into the British Medical Association, that would be the end of the Association as a power. It was all very well to say that the trades unions had their own members, but that was only in districts where they had sufficient members to return a member of Parliament. He would say advisedly that, much as he wished to act for the benefit of the

British Medical Association, he could not and would not sink his political ideas, which were strong, and vote for, say, a Radical member of Parliament; and his friends, the Radicals, would have exactly the same view, and would not vote for a Conservative member of Parliament. That being so, he felt sure that it would be a lasting mistake if they ever took to themselves the power conferred in the clause.

Dr. W. L. MUIR (Glasgow Eastern) said that he had the greatest sympathy with the Edinburgh resolution. Those members of the Representative Meeting who had been present at the meetings during the last two or three years would remember that he had fought against the introduction of politics, and spoken against it on several occasions. Such Scottish members as were present knew that there were few members of the profession who had taken such an active part in politics as he had done in the West of Scotland. He knew what it meant to bring party politics into an association of any kind, and he felt that to bring party politics into the Association would be one of the very first things to disrupt it to a very large extent. He therefore trusted that the Representatives present would support the resolution of the Edinburgh Division to the utmost.

Mr. E. H. T. NASH (East Norfolk) felt very strongly that the amendment should be opposed. There had been a great deal of croaking as to what was going to happen to the Association if the element of politics was introduced. He was one of the Committee who had the drawing up of the scheme by which it was hoped to work when the idea was brought about. Their idea was based largely on that of the National Union of Teachers. He knew of no body which had carried out its political ideas with such harmony as that Union. They were undoubtedly the most powerfully-educated trade union of the day. He thought it was perfectly possible for the Association without producing strife or dissension to carry out the same plan of campaign. What was the position at the present time? There were several medical members in the House, but they were to a certain extent voices crying in the wilderness. They were the representatives of nobody except themselves and their political constituents. When it came to a great fight on a matter on public health, or anything of the sort, their ideas, one generally found, were absolutely at variance with everything which was up-to-date, and they were very often entirely in opposition to the general run of professional ideas. What was needed was somebody who would mould the opinions of the members of the House of Commons in the direction of public health and as to the things which were best in medical matters. With regard to the representatives of the National Union of Teachers, every one who had followed matters in the House of Commons could not fail to see the way in which they had gradually educated the whole House up to what the educationalists of the country considered best for the children of the kingdom. If the Association carried the matter out on the same careful principles as the National Union of Teachers had worked, they would also be able to speak with some authority in the House.

Dr. WORRALL (New South Wales) said he looked upon it as of most vital importance that they should retain the clause. If any Branch or Division thought that the exercise of the power in the clause was wrong, it would not exercise the power; but why should others be deprived of the privilege of exercising the powers conferred by the clause? In Australia it was of the greatest importance that they should have the power. He trusted that the members would remember that fact, and not act in a way that would prevent others possessing a power which they considered of very vital consequence.

Dr. C. E. ROBERTSON (Glasgow Southern) asked whether "promote the candidature" meant paying the expenses of the candidate in full.

The CHAIRMAN replied that it might or might not. The words admitted the possibility referred to undoubtedly.

Dr. ELLIOT-BLAKE (Chichester and Worthing) asked whether the clause meant that the Association could support a member entirely for the Association, or whether it meant that they could simply support a candidate in a constituency.

The CHAIRMAN replied that the clause was permissive, and that it left members to do what they wished in that respect. At the present time the Association had no power to do anything of the sort. The Charter included power to permit the Association to do it or not, as it pleased.

Dr. BRADSHAW (Lancashire and Cheshire) pointed out that they had to bear in mind the fact that the Government of this country was conducted on strictly party lines; that party Government was the very essence of the constitution as embodied in the House of Commons, and that they were all more or less interested in politics. He ventured to say that it was quite impossible to expect that the members of the Association would sink their party politics for the sake of supporting some individual who happened to embody the opinions of the majority of the Association. It was perfectly certain that if anything of the kind contained in the draft Charter was agreed to, and an attempt was made to put it into force, it would lead to a wholesale resignation of members of the Association. That was his opinion, and he had carefully thought the question out. One gentleman had referred to lawyers in the House. He, the speaker, was not aware of any legal society which supported lawyers as such. Barristers sought a position in the House in order to practise speaking, and bring themselves into note; they did that for their own personal advantage, and it was perfectly proper. But he took it that no man who had a practice could go into Parliament with the object of advancing his practice. It had been said that under the present conditions the British Medical Association had no weight in legislation; but he should like to remind those present that the great Medical Acts Amendment Bill of 1886 was admitted on all hands to be the Bill of the British Medical Association; and that what the British Medical Association had done before it could do again. He believed they would be only showing up the nakedness of the land if, with all their power, at the end of a great election they succeeded, perhaps, in introducing one member to represent the British Medical Association. He believed it was absolutely impossible, even with all their membership of 20,000, scattered over the country, that they could ever introduce more than one member; and he thought they would do themselves far more harm than good if they attempted to return a medical man as such.

A REPRESENTATIVE then moved that the question be now put.

The motion was carried. The proposed amendment was then put to the meeting, and lost by 61 to 44.

Dr. R. H. WOLSTENHOLME (Salford) moved that instead of the word "promote," in the fourth line, there should be inserted the word "support." If it came to the knowledge of the Association that some well-known member of the British Medical Association, and perhaps a member of the Representative Meeting, was about to be asked, or had been asked, to stand for a constituency, and if it was thought that he would be a desirable man to have in Parliament, they ought to have the power to support him by a money grant.

The motion was seconded by Mr. E. H. T. NASH (East Norfolk, North Suffolk).

Dr. H. E. DIXEY (Worcester) asked whether the clause would authorize giving a member £300 a year.

Dr. WOLSTENHOLME observed that the word used was "candidature," not "candidate."

Dr. JOHNSON SMYTH (Bournemouth) asked whether Subclause (vi) limited the Association to the support of one candidate, or, was the Association liable to be asked to support, say, a dozen?

The CHAIRMAN replied that the meaning of the clause in that respect seemed to him to be very plain: "any" was multiple; any candidate who was a member of the British Medical Association could be supported.

Dr. WILLIAM EWART (Westminster) said that the medical profession stood in the foremost rank, and there was no body which approached their profession in wisdom, in a knowledge of the world, and in a knowledge of high politics. The way to make people understand that was not to fight an election in the vulgar way in which they saw elections carried on in politics. If Subclause (vi) were acted upon the profession would be brought down to the level of ordinary politics. With regard to the deletion of the word "promote," and the substitution of the word "support," he should like to support the milder word.

Dr. ALFRED COX (Gateshead and Consett) asked the opinion of the Solicitor as to whether "promote" or "support" was the better term.

The SOLICITOR (Mr. Hempson) said he had just been debating that very question with the Chairman. It seemed to him that by the lawyers in the House "support" might be interpreted in a wider sense than "promote." Under this clause they could only do such things as were permitted in the promotion of a candidature, and "promote" was a limited expression; but when they came to "support," the interpretation was somewhat wider.

Dr. H. E. DIXEY (Worcester), in respect of the expression "promote the candidature of any candidate," asked if it would be for the Council to decide between twenty or thirty applicants. It seemed to him they might get into a most awful mess so far as their finances were concerned.

The CHAIRMAN thought that a matter that must be left to the discretion of the governing body of the Association. As it seemed to have escaped notice, he wished to bring to their notice that this was only giving power to do this thing if they liked. They need not do it; there was no compulsion.

Dr. J. J. MACAN (Croydon): Am I in order in moving a further amendment?

The CHAIRMAN: No; there is one before the meeting at present. I do not think we are going to get much light from speeches on this question.

Dr. J. YOUNG (Bolton) wanted to know what was meant in order that he might give an intelligent vote. Did "promote" only mean financial aid during candidature? He gathered from what the Solicitor had said that "support" might mean financial aid during the candidature and also maintenance after the candidature.

The CHAIRMAN said the Solicitor certainly never made any such statement. The power was limited by the word "candidature." They might promote a candidature or support it, but there was no power to do anything after the candidature was over.

The amendment was lost.

The CHAIRMAN observed that the next amendment was one by Mr. G. A. Ferraby of Nottingham, to add after "any member of the Association" the words, "specially qualified to represent the interests of the medical profession." [A Member: "Of course."]

Mr. FERRABY (Nottingham) said that he was himself a constituent of one of the gentlemen who had been referred to—Mr. J. H. Yoxall—who was chosen by the National Union of Teachers as specially qualified to represent their interests in Parliament, it being left to him to find a constituency for himself according to his ability to do so and according to his political belief. It seemed to him that the members of the British Medical Association might easily follow the same course. As medical men they had nothing to do with party politics, although as citizens they had. As medical men they might choose a medical man specially qualified to represent their interests and the interests of the public at large in relation to public health. He was instructed by his Division to oppose the resolution as it stood, but he was inclined to think his Division would accept such a view as he was putting before them. He thought they might sink their political differences so far as to have an expert in Parliament whose political colour they might forgive even if they did not agree with him.

Mr. E. H. T. NASH (East Norfolk) seconded the resolution for the reason he had given before, that it was of no use to promote the candidature of members who were only amateurs at this kind of work. If they were to have a man to represent them in Parliament they must have an expert such as had been mentioned in the case of Mr. Yoxall and Mr. Gray.

Dr. H. E. DIXEY (Worcester) opposed the amendment, and said he rather thought this part of the clause was copied from the National Union of Teachers, who, they knew, were unfortunately becoming a very strong political factor in this country. It was all very well to say they ought to sink their party politics, but when it should come to be a crucial question in imperial politics in this country a member, however great an expert in medicine he might be, would be bound to go into the lobby of his party, and he personally thought it would be a most dangerous thing and he would never do it. He believed the effect of passing the clause would be that there would be an enormous number of resignations of the British Medical Association.

Dr. PERCY ROSE (Stratford) thought the last words of the amendment quite unnecessary. The clause was merely permissive, and the Council, having to decide whether to promote or support a candidate, would inquire and find out whether the man was specially qualified. Therefore he would vote against the amendment.

The amendment was lost.

The CHAIRMAN said that the next amendment was Dr. Johnson Smyth's to elide the word "promote"—this word "promote" seemed to be creating some difficulty—and substitute the word "encourage" [Laughter.] It really was hardly worth while, was it?

Dr. JOHNSON SMYTH (Bournemouth) thought members were only beginning to realize that this clause would land them in a shocking morass before many years were over. If the members thought the thing was a joke rather than a serious matter, their views were not the same as his own. He apprehended that the difficulties would be very considerable.

The CHAIRMAN said what he wanted to know was how these words were going to get them out of the difficulty.

Dr. JOHNSON SMYTH said he moved the amendment with reference to the financial embarrassments they were in.

The CHAIRMAN: I want to emphasize again and again that we are tying ourselves to nothing, or rather we are not tying ourselves to anything. [Laughter.]

Dr. JOHNSON SMYTH said his main intention was to make the position clear. If they accepted Subclause (vi) the governing body of the Association would be in a position of the greatest difficulty. They might have to discriminate between the claims of twenty members of the profession who might write to them for financial support. The thing was a sheer impossibility. It would require the wisdom of a Solon to weigh the merits of one man against nineteen.

The CHAIRMAN said the argument applied as much to the word "encourage" as to the word "promote," so he did not think it was getting them out of the difficulty at all.

Dr. JOHNSON SMYTH begged to differ. His idea of the word "encourage" was merely to congratulate a man.

The CHAIRMAN said he was merely suggesting that the difficulty about selecting a man was as great with regard to the word "encourage" as to the word "promote." Whatever difficulty there was in selecting one out of twenty men for the purpose of promoting his candidature would be exactly the same as selecting a man to encourage his candidature.

Dr. WILLIAM EWART (Westminster) seconded the amendment, and pointed out that "encourage" was different *in toto coelo* from "promote" for this reason—that it uncommitted the Association, whereas the other word committed it. The Association would simply be saying, "We will give our encouragement to a certain man."

Mr. J. YOUNG (Bolton) wished to know if the word "encourage" carried any financial help with it?

The amendment was lost.

The CHAIRMAN said the next amendment was one by Dr. Fothergill to add these words:

> And subsequently support an elected candidate in Parliament or in any legislative assembly during the tenancy of his office.

That was a very important addition indeed.

Dr. FOTHERGILL (Wandsworth) said he would like to explain that the Charter simply gave power to help a man to get into the House, but when he should be once there the Association would have no power to give him any funds to help to keep him there. It seemed to him most desirable that the Association should have that power.

Dr. E. D. KIRBY (Birmingham Central) seconded the amendment. If it was only permissive it was highly desirable that the Association should have the power.

Dr. Cox (Gateshead and Consett) supported the amendment. He thought if the power was to be permissive it would give the Association a free hand in the future; and he thought that if once they got into the position of desiring to support the candidature of a member of Parliament, the Association would be no less backward than the National Union of Teachers in keeping him there.

Mr. NASH thought Dr. Fothergill had raised a most important point, and it was one which the Committee who at one time had investigated the matter considered very fully. As Dr. Cox had very rightly put it: when they were educated up to the point of sending a member whom they would expect to work for them heart and soul and to give up his time and practice to look after their interests in the House

of Commons, he must have some means of livelihood, and if they were going to support his candidature they must go further and support a member when he was in. Although it was strictly permissive, this clause was most important, and the attitude which the Committee took upon the matter was that the funds and the present position of the Association did not warrant any action being taken at present. The Committee had no desire to rush the Association into anything.

Dr. H. E. Dinly (Worcester) said he was a little bit doubtful at first about the word "promote," and he was not at all surprised to find a resolution proposing that they would have to support a member; and he wished again to very strongly urge against this growing tendency to create paid politicians. If they were simply to send a man to Parliament as a delegate, and he knew he was going to get his £300 or £400 a year to vote upon any subject according to the lights of the body that sent him, they would have no independence of members in the House.

The amendment was lost.

The Chairman said the next amendment was one by Dr. Pope to insert after the word "promote" these words—"otherwise than by providing pecuniary assistance."

Dr. F. M. Pope (Leicester) said he was sure that half the members in that room had not contemplated having to support a man, and a good many of them thought they were not committing themselves to "pecuniary assistance." He had put this amendment forward in order that they might have a clear issue, and understand that they were committing themselves possibly to supporting people in Parliament from whose general views and general attitude they might possibly disagree.

Dr. Sinclair White seconded the amendment.

The amendment was lost.

Dr. C. H. Robertson (Glasgow Southern) suggested that they should have powers to oppose as well as to support. Supposing there was a man whom the Association would like not to get in, a man likely to do harm to the profession, should not they have power to oppose him?

The Chairman said that might be effected by promoting the candidature of his opponent.

Dr. Robertson proposed that the words "or to oppose" should be inserted after the word "promote."

There being no seconder, the amendment fell to the ground, and Subclause (vi) was carried.

Further Subclauses.

Mr. Verrall moved Subclause (vii).

Dr. John Miller (Barnstaple, Exeter) moved that the whole subclause be deleted.

Mr. George Jackson (Plymouth and Truro) supported, and pointed out that it was proposed to take proceedings before the General Medical Council. It was well known that members of the Council were members of the Association, and, in consequence of the proposed subclause, many had taken alarm, and were resigning membership of the Association. He thought it a very serious matter if they were to put themselves in such a position as that a large number of members of the Council would have to resign their membership of the Association.

Mr. Nash (East Norfolk) suggested the difficulty was got over by members of the Association not sitting on the Council when a case was brought up by the Association. He thought it very important that the Association should take up cases as suggested by the subclause.

Mr. Verrall pointed out that the subclauses were merely permissive. The power to take up medical defence was one of the main reasons why the Charter had been proposed, and to drop out the subclauses would be to put the clock back in a most absurd way. Further than that, the subclauses were one of the things which the Colonial Branches were particularly desirous of having.

Dr. James Carmichael (North East Edinburgh) inquired whether it was the fact that the President of the General Medical Council and several of the members or all the members who were also members of the British Medical Association had tendered their resignations as the result of the communication which had come to the General Medical Council from the Association.

The Chairman said the only information he had was that the President of the General Medical Council had tendered his resignation, but whether other members had resigned he could not tell. Even if it were so, however, it only meant the temporary loss of about twenty members to the Association.

Dr. McKenzie Johnston (North-West Edinburgh) stated he had seen a letter from the Solicitor of the General Medical Council saying that the proper procedure was not to retire when a particular case was being considered, but to retire from the Association.

The Chairman replied that that was what he meant by a temporary loss—that those members of the Association who became members of the General Medical Council might have to retire from the Association so long as they held that position.

Dr. J. S. Darling (Portadown and West Down) said in Ireland they felt very strongly that they wanted the powers proposed by the subclause.

The Chairman then put the amendment, which was lost.

Mr. G. Jackson (Plymouth and Truro) moved to omit the words "including proceedings before the General Medical Council." There was no reason why they should not take up medical defence. A great part of the work done was to defend members before courts of law, and by advice and so on to prevent them being blackmailed.

The amendment, being seconded, was then put and lost.

Subclause (vii) was then put by Mr. Verrall as it stood, and agreed to without further discussion.

He then moved Subclause (viii):

(viii) May provide facilities for sales or transfers of medical practices, for the arrangement of medical partnerships and for the engagement of qualified assistants and temporary substitutes for medical practitioners being members of the Association.

Dr. John Miller (Barnstaple, Exeter) moved the deletion of the clause.

The amendment on being put was lost, and Subclause (viii) was carried as it stood

Benevolent Funds.

Mr. Verrall moved Subclause (ix):

(ix) May establish, endow, contribute to, organize and manage provident or benevolent funds for the benefit or assistance of members of the Association or of the medical profession and their families or dependents, and of the staff employed by the Association.

Dr. Wolstenholme (Salford) moved to delete the words "or of the medical profession." He thought they ought to encourage thrift and not lack of thrift. It was their duty as an Association to provide first of all for the members of the Association.

Dr. Guillemard (Cape Town), as a Colonial Representative, had a doubt whether the subclause applied to foreign Branches. He asked the question because he had been one of the first members of the Medical Sickness and Accident Society when in practice in England many years ago. When he went to the Colonies he had to give up the whole thing without his premiums being commuted. If one joined a society at home and on going abroad got no commutation, there was not very much likelihood of men joining. All ordinary sickness and insurance societies allowed people to reside anywhere practically. His own sickness society allowed him to go abroad, but the Medical Sickness and Accident Society would not.

The Solicitor (Mr. Hempson) said the Association was not restricted in the sense indicated by the last speaker. They might establish, endow, contribute to and provide the things proposed for members of the Association or members of the medical profession. It was not restricted to the United Kingdom, and his view was that it could be done wherever the Association had members.

Mr. Nash (East Norfolk) seconded Dr. Wolstenholme's amendment for the reason that it would be a weapon to increase their membership. He wanted every one in the Association to feel that it was something to him, and if they made their Association such that no one could afford to stop out, it would be a great thing. He wanted to limit the funds of the Association to the benefit of its members.

Mr. H. A. Ballance (Norwich and West Norfolk) remembered the proposition coming up the previous year at Caxton Hall, when he had the pleasure of moving its rejection. He did not think they should restrict the powers in regard to Benevolent Funds to the members of their Association. It was not worthy of the Association, and he hoped the meeting would not pass the amendment.

Dr. J. Brown agreed that the amendment was unworthy of a medical association. It was not right to bind the

ands so as not to be able to help a medical brother—one f their own profession—simply for the reason that he as not a member of their Association. Their coffers ight be running over, and they would not be able to elp their medical brethren. He asked whether such a roposition was worthy of a medical man, or any man, nd he hoped they would not put that blot or stain on heir Charter.

Mr. Geo. Brown (Devonport) inquired whether the assing of the amendment would prevent their subscribing o such institutions as the British Medical Benevolent und. At the present moment they were doing excellent ork in supporting that Fund, and he would be very sorry o place a barrier in the way of their assisting an organiation which had for its principal object the relief of embers of the medical profession.

The Chairman replied that the passing of the amendent would preclude the Association from subscribing a enny to anything outside the Association.

After some further discussion the amendment was put the meeting and lost.

Dr. Guillemard moved to insert after the word Association" the words "at home or abroad." He plained that he had been a member of the Medical ckness and Insurance Association for some years before oing to reside abroad. Directly he left the country the ssociation said it could not administer funds abroad, and s premiums were thrown away. It was a rule of the ciety and was not unjust in that way, but the principle as unjust, and he thought they ought to put in the words t home or abroad" explicitly.

Dr. R. Esler (Lambeth) seconded.

Mr. P. Rose inquired if the words were really necessary.

The Chairman said the Solicitor had expressed the inion that they were not really necessary, but Dr. uillemard wanted to have them put in so that it might left to counsel to decide afterwards.

n the amendment being put the Chairman declared it ried.

Dr. E. D. Kirby moved an amendment (seconded by . Fothergill) to insert in the third line of Subclause (ix) r dental," and alter the word "profession" to "prosions." He hoped the meeting would remember the use was only permissive, and thought the wider the erties they had the better. If they wished to amalmate with the Medical Sickness and Accident Society, ich had been already alluded to, they would not be e to do it unless the words "or dental" were inserted.

On the amendment being put the Chairman declared it t by 1 vote.

Subclause (ix) was then put by Mr. Verrall and agreed without further discussion.

Further Subclauses.

Mr. Verrall then moved the following subclause:

(x) May undertake and carry out the execution of any trusts which the Association may deem to be directly or indirectly conducive to the interests of the Association or of the medical profession or any branch thereof.

Dr. John Miller moved an amendment that the words of the medical profession or any branch thereof" be eted.

The amendment was put to the meeting and lost.

Subclause (x) was then put and carried.

Mr. Verrall moved the following subclause:

(xi) May take such other means (whether of the same nature as the means hereinbefore stated or not) as may seem to the Association incidental or conducive to the promotion or carrying out of the foregoing objects or any of them.

The resolution was carried without discussion.

At this juncture the Representative Meeting adjourned an hour.)

Clause 3.

Mr. Verrall moved that the following stand part of the rter:

The Association shall not carry on any trade or business (except so far as the same may be involved in the exercise of their powers with respect to any of the matters mentioned in paragraphs (ii), (iii), (iv) and (viii) of the last preceding clause) nor engage in any transaction with a view to the pecuniary profit or gain of the individual members thereof, provided that this shall not preclude the Association from applying its funds in any manner within the contemplation and intention of the last preceding clause of these Presents, or in the remuneration of members of the Association for services actually rendered.

The Chairman stated that there was an amendment to this by the Salisbury Division; but on the strength of the other part which that Division had proposed being rejected they withdrew their amendment.

Clause 3 was agreed to.

Clause 4.

Mr. Verrall then moved Clause 4:

4. The first members of the Association shall be the persons named in the Register of the members of the existing Association which has been certified by

(the Secretary of the existing Association)

as complete and correct and bears even date with the Order in Council for the preparation of the Warrant for passing this Our Charter under the Great Seal of the United Kingdom. Ordinary members of the Association shall hereafter be elected in such manner as may be from time to time prescribed by the Ordinances and By-laws of the Association.

This was agreed to.

Clause 5.

The following was then moved by Mr. Verrall and agreed to:

5.—(1) The Association shall have power to elect as honorary members such persons, and in such manner as the By-laws of the Association may provide, and to admit members so elected to such privileges other than that of voting as members of the Association, as may from time to time be conferred on them by or under the By-laws.

Mr. Verrall then moved:

(2) Each Division or Branch hereinafter mentioned of the Association shall have power to admit to certain of the privileges of membership of such Division or Branch, other than that of voting, members of the Association who are not entitled to be ordinary members of such Division or Branch and each Division or Branch of the Association not in the United Kingdom shall have power to admit to certain of the privileges of membership of such Division or Branch, other than that of voting, members of the medical profession, or persons distinguished in other sciences, who are not eligible for election as ordinary members of the Association. The By-laws of the Association may prescribe the designation under which persons shall be admitted to such privileges, the nature of the privileges to be conferred upon them, and the conditions of admission thereto.

Dr. Fothergill said that the clause gave Divisions and Branches outside the United Kingdom power to admit, without the power to vote, certain people who could not become members of the Association. He would suggest that Divisions and Branches inside the United Kingdom should have the same privilege.

Mr. Verrall said that so far as the Organization Committee went they accepted the suggestion. They thought that it was sound.

The proposal of Dr. Fothergill was agreed to.

Clause 5 as a whole was then put and agreed to.

Clause 6.

Mr. Verrall then moved the following:

6.—(1) For the better attainment of the objects of the Association the members thereof shall be formed into local bodies styled Divisions and Branches.

(2) A Division shall comprise such body of Members as the Association shall in the manner prescribed by the Ordinances of the Association declare to be a Division, and a Branch shall be such Division, or such group of Divisions, as the Association shall in like manner declare to be a Branch.

(3) Each Division shall have a local area to be fixed from time to time by or in accordance with the provisions contained in the Ordinances.

(4) Every Member whose address as registered for the time being in the books of the Association is at a place situate within the area of any Division shall *ipso facto* be an Ordinary Member of that Division and of no other, and every Ordinary Member of a Division shall *ipso facto* be an Ordinary Member of the Branch which comprises that Division and of no other.

(5) In all other respects the Divisions and Branches shall be so constituted, managed, and governed, and shall have such powers, rights, and privileges and shall be under such obligations, as shall be prescribed by or under the Ordinances and By-laws for the time being, and the By-laws may provide for contributions, grants and subscriptions out of the general funds of the Association to Divisions or Branches, and may impose on the Members of any Division or Branch such obligations towards the Association, and the Division and Branch respectively, as may seem to the Association to be expedient, and

may empower any Division or Branch to make (subject or not subject to the approval of the Association) any rules in relation to the affairs thereof and to vary and repeal any such rules.

Mr. B. W. Housman (Stockport, Macclesfield, and East Cheshire) said that he had been instructed by the Stockport Division to move the following amendment to Clauses 6 and 7:

That this Division is of opinion that under the Charter the powers now exercised by the Representative Body should be vested in the Council, and that Divisions, where they are retained, should be merely voluntary associations of members for local purposes.

He stood in the same difficulty as another member stood earlier in the day, because the wishes of the Division which he represented did not happen to coincide with his own views. It was somewhat unfortunate that since the passing of the amendment those gentlemen who were instrumental in passing it had not, for one reason or another, acquainted him with the reasons which had prompted them to pass it. Therefore he felt that he could not very well bring forth any arguments in favour of the proposal. It had been suggested by the Chairman that he should divide the resolution into two parts, and so he would move first:

That under the Charter, Divisions, where they are retained, should be merely voluntary associations of members for local purposes.

He understood that the object of his Division was to restore to the Branches the powers which had been taken away under the new constitution, and to make the Divisions simply voluntary organizations.

Dr. Bradshaw supported the amendment. He believed that it had been framed exactly in the terms used by him in a letter which appeared in the British Medical Journal on April 27th. There was one thing which he was pleased to see, and that was that the Representatives of the Divisions were most thoroughly loyal. He thought that that was a most admirable quality, and he only wished that they were in a position where their loyalty would be of more practical value. He should like to see those enthusiastic gentlemen who came up year after year and gave their valuable time to the Association, members of the Council. There, he thought, they would find a still larger field for the exercise of their abilities. He proposed that the Divisions should be voluntary bodies within a Branch and that they should be used for local purposes. The weak point in the present constitution was that the members throughout the country, whether they liked it or not, must be united into so called Divisions; and he found that the effect of the Divisions was not to unite, but to divide. ["No."] He was not speaking for the experience of gentlemen where the local conditions were different. In his own city of Liverpool those who lived on the east side of Rodney Street were in a different Division from those living on the west side. That was a most unfortunate thing; but he maintained that under the present constitution, under which every Division was entitled to send a member to the Representative Meeting, it was only natural that they should wish to have as many Divisions as the constitution would allow. Suppose that the whole of Liverpool was one Division. Would the meetings be as well attended as those of the Lancashire and Cheshire Branch? He was perfectly certain that they would not. They already had a very influential Medical Society in Liverpool, and they did not require another; but they did want, and he hoped they would always have, a great society including the whole of Lancashire and Cheshire, where men who had not the advantage of large societies, such as the Liverpool Medical Institution, could all meet together as friends and as colleagues for the interchange of views. Time after time members of the Association had said to him, "When you have given up holding your Divisional meetings I will come to your Branch." They said, "We cannot understand it, they are not worth attending." As a matter of fact, he did know that as a rule they considered it a very good Divisional meeting if they had a dozen members present, but, as a general rule, they had to be content with six or seven. The tendency of the times seemed to be to exalt the Divisions at the expense of the Branches. The Branches had an historical interest, and it was the Branches who were the making of the great British Medical Association.

Mr. C. H. Bickersteth (Manchester, North) said that the Divisions, if properly worked out, would, in course of time, redound to the benefit of the Association. It depended entirely on how they were worked out. If gentlemen did not want to work them out they did not. He found that Dr. Bradshaw and his friends, when they wanted support at election time, were very pleased to talk very nicely about the Divisions.

Dr. Alfred Cox (Gateshead and Consett) did not think it was necessary for him or anybody else to undertake in that meeting the defence of the Division system. The meeting itself was the best possible defence of that system to be found. Those who had taken an interest in the annual meetings of the British Medical Association for years could remember what they called the Annual General Meeting, and how resolutions were carried and treated as pious resolutions, and were taken no further notice of. When one contrasted that state of things with the present, where they had a large number of men picked from various localities in the country coming together, many of them with a direct mandate, there could be no question at all that Dr. Bradshaw's view of the present state of the Association was a distorted one. Dr. Bradshaw was asking the meeting to make a revolutionary change merely because the Liverpool people had made a mistake in dividing their areas. What reason was that why other Branches, which had been more successful and more far-seeing, should go back to the old state of things? However badly some of the Divisions did their work, it was a matter of absolute knowledge that a great deal more interest was taken collectively in the election of Representatives than was taken collectively in the election of the men on the Central Council. It would be absolutely ridiculous to attempt to go back to a state of things which had been tried and found decidedly wanting.

Mr. Verrall thought it would be a thousand pities if, after the amount of trial they had had, they were to abolish the Divisions and at the same time abolish the Representative Meeting. He did not think anybody who had the history of the Association before him could have any doubt whatever that, no matter what the shortcomings of the system might be, and whatever its failures and limitations might be, the amount of interest collectively in the Association at the present moment was vastly in excess of anything shown in former times.

Mr. W. H. Horrocks (Bradford) said that although he could not go fully to the extent that Dr. Bradshaw had gone, he still felt it was very bad policy indeed to set the Divisions against the Branches in the way this amendment proposed to do. Each of the Divisions having Representatives ought to have a fair share in the government of the Association, and the Branches who represented a different set of men ought to have more veto than was given by some of the proposed constitutions. He thought it was a very great mistake to shout down and to listen with such impatience to the expressions of opinion by the Council. The Council, having concentrative power, ought to have more vetoing power than they have at present. It was idle to put them up as a Council and then to say they were merely executive.

The Chairman called the attention of the speaker to the fact that the question before the meeting was whether the Divisions should remain simply as local bodies for local purposes.

Dr. Horrocks said he could not support the proposition to the extent suggested.

The Stockport resolution was then put and lost.

Mr. Verrall moved Clause 6, which, there being no amendment thereto, stood part of the Charter.

Clause 7.

Mr. Verrall moved Clause 7 giving control to the body of Representatives.

7. The general control and direction of the policy and affairs of the Association shall be vested in a body of Representatives (hereinafter called the "Representative Body") elected by the Divisions in accordance with the provisions of the Ordinances and the By-laws. The Representative Body shall hold an annual meeting (hereinafter called the "Annual Representative Meeting") and may hold other meetings (hereinafter called "Special Representative Meetings").

Mr. B. W. Housman (Stockport, Macclesfield, and East Cheshire) moved, under the same circumstances, that the powers now vested in the Representative Body should be vested in the Council.

The amendment was lost.

Dr. JOHN MILLER (Barnstaple, Exeter) expressed the opinion that the control should not be left altogether to the body of Representatives, and moved the insertion of the words "with the consent of the Council" after "body of Representatives."

The amendment was lost, and Clause 7 was agreed to.

CLAUSE 8.

Clause 8, which runs as follows, was agreed to:

8. There shall be a Central Council (hereinafter called "the Council") which shall, save as otherwise provided by the Ordinances, carry into execution resolutions passed by the Representative Body, and administer the affairs of the Association in accordance with this Our Charter and the Ordinances and the By-laws, and shall exercise such powers and do such acts and things as may be exercised or done by the Association, and are not by the Provisions of this Our Charter or the Ordinances or By-laws directed to be exercised or done by the Representative Body.

CLAUSE 9.

Clause 9, which runs as follows, was next discussed:

9.—(1) The Ordinances of the Association may (subject to the provisions of this Our Charter)

(*a*) Prescribe the qualifications for membership of the Association and the other terms of such membership and prescribe or limit the amount of the subscriptions to be paid by members.

(*b*) Provide for the resignation of membership and for the removal from or other modes of termination of membership of the Association.

(*c*) Provide for the formation of Divisions and Branches and other local bodies.

(*d*) Provide for and prescribe the constitution and powers of the Representative Body and the Council and the mode of election of the members thereof respectively.

(*e*) Provide for the holding of meetings of the Association and of the Representative Body and of the Council.

(*f*) Provide for the appointment of officers of the Association.

(*g*) Provide for the payment of the personal expenses incurred by members in connexion with their attendance at meetings of the Representative Body or of the Council or of any Committee of either of the said bodies or at any Conference authorized by the Representative Body or by the Council.

(*h*) Provide for the audit of the accounts of the Association.

(*i*) Empower the Representative Body (subject or not subject to the consent of the Council or other restrictions) to make and from time to time to add to, amend, alter or repeal By-laws for regulating (subject to this Our Charter and the Ordinances of the Association) the proceedings of the Representative Body and the Council and any Committee thereof respectively and the conduct of the business and affairs of the Association and any other matters which require to be so regulated.

(*j*) Provide for the government of the Association in all respects not otherwise provided for by this Our Charter.

(2) The first Ordinances of the Association shall be those set forth in the 1st Schedule hereto and the same are hereby declared to be valid and effectual to all intents and purposes whatsoever. The Ordinances (including the first Ordinances) may be added to, amended, altered or repealed, and new Ordinances made from time to time by the Representative Body subject to such restrictions (if any) as may be prescribed by the Ordinances. Provided that no such addition, amendment, alteration, repeal or new Ordinance shall have any force or effect until allowed by The Lords of Our Privy Council, of which allowance a certificate under the hand of the Clerk of Our Privy Council shall be conclusive evidence. Any addition, amendment, alteration, repeal or new Ordinance so allowed shall be conclusively deemed to have been in all respects duly made and to be valid and effectual for all purposes.

Clause 9 (1), (*a*) to (*f*) inclusive, was approved.

Mr. C. R. STRATON (Salisbury) said he was instructed to move that in Subclause (*g*) the word "personal" be deleted, and the word "travelling" substituted. The word "personal" raised an extremely delicate point as to how much a man ought to have for his personal expenses. Another thing, the funds of the Association were unfit for such an expenditure as that would involve.

Mr. VERRALL thought that once more it was necessary for him to explain that this was not the machinery for carrying out the work of the Association, but a series of permissive resolutions for adopting the working machinery. It would be found that the By-laws did not provide for anything beyond travelling expenses, and he hoped that the contest they had had on this first part of the draft Charter would clear the ground when they came to discuss the machinery. If they would insist, while discussing these permissive resolutions, upon also discussing the machinery, he hoped they would not discuss them again when they came to deal with the machinery.

Mr. C. R. STRATON (Salisbury) said the resolution he had to propose was that it should not be permissive.

Dr. ROBERTSON suggested after the word "expenses" the addition of "as defined by the By-laws."

The SOLICITOR said it did not seem to him that these words would be necessary. They must define somewhere what they were going to pay, and whether it was defined in the Ordinances or in the By-laws was perfectly immaterial. This was merely a permissive power to do it, and they would not be able to do it unless they took power to do it. If they took that power, either in the Ordinances or in the By-laws, there that power would be, and they could exercise it when they wanted to do so.

Dr. ROBERTSON suggested that the word "personal" should be left out.

The SOLICITOR said if they left out the word "personal" they would not have power to do it. It had been the crying wish of the Association that this should be in, and if this was cut out they would have to go for a revision of the Charter in the future, which would be a difficult thing to get.

Dr. W. MUIR SMITH (Eastbourne, Hastings) asked if it would not be wise to postpone the discussion of this until they came to 23.

The CHAIRMAN said he could see no reason for that. As the Solicitor had explained, the governing and dominant note of the whole of this Charter was that it did not compel them to do anything. What they wanted to keep in mind was that it gave them permission to do anything, but did not force them to do it. The governing part, the by-laws, was a different thing.

On a division being taken, two voted for Mr. Straton's amendment, which was therefore lost. The subclause and the remainder of Clause 9 were then approved.

CLAUSE 10.

Mr. VERRALL proceeded to move Clause 10 as follows:

10. The first By-laws shall be those set forth in the Second Schedule hereto, and the same are hereby declared to be valid and effectual to all intents and purposes whatsoever until the same shall be amended, altered, or repealed in pursuance of the powers conferred by the Ordinances,

which was agreed to without discussion.

The CHAIRMAN observed that with regard to these resolutions the question had been asked whether two-thirds majority was necessary. These were purely academical discussions, and the resolutions only required a simple majority. It would be a different thing when they came to the question of applying for the Charter.

CLAUSES 11, 12, 13, 14.

Mr. VERRALL moved Clauses 11, 12, 13, and 14, upon which no discussion arose, and they were approved by the meeting:

11. The Representatives of Divisions of the existing Association, who shall be holding office as such at the date when this Our Charter comes into operation, shall be deemed to be the first Representatives of the Divisions of the Association, and shall continue to hold office as such until their successors are appointed in pursuance of this Our Charter and members of the Council of the existing Association holding office at the date when this Our Charter comes into operation shall be deemed to be the members of and to form the first Council of the Association, and shall continue to act as such until the new Council is elected in pursuance of this Our Charter, and the several officers and Committees of the existing Association shall continue to hold their respective offices and discharge their respective duties and receive such emoluments, if any, as pertain to the offices which they fill until it shall be otherwise determined in pursuance of this Our Charter, and the Divisions and Branches of the existing Association, with their Officers, Councils, and Committees existing and holding office respectively at the date of the grant of this Charter shall be deemed to be Divisions and Branches, Officers, Councils, and Committees constituted or appointed in pursuance of this Our Charter, and shall continue until otherwise determined in pursuance of this Our Charter.

12. It shall be lawful for Us, Our Heirs and Successors by

supplemental Charter to add to, amend, or repeal the provisions of this Our Charter or any of them provided that a resolution to accept and approve such supplemental Charter shall have been passed by a majority of not less than two-thirds of the votes given thereon in the manner prescribed by the By-laws for the time being at a Representative Meeting specially summoned for the purpose. Any such resolution shall have effect subject to such approval or confirmation (if any) as may from time to time be required by the Ordinances with respect to the amendment of an Ordinance.

13. It shall be lawful for the Association by a resolution of the Representative Body passed at a Representative Meeting specially summoned for the purpose by such majority as mentioned in the last preceding clause hereof and subject to such approval or confirmation as therein mentioned to surrender this Our Charter and to wind up the affairs of the Association, but if on the winding up or dissolution of the Association there shall remain after the satisfaction of all its debts and liabilities any property whatsoever, the same shall not be paid to or distributed among the members of the Association or any of them, but shall, subject to any special trusts affecting the same, be given and transferred to some other institution or institutions having objects similar to the objects of the Association to be determined by the Representative Body at or before the time of dissolution, or in default thereof by a judge of the Chancery Division of Our High Court of Justice.

14. Lastly, We do hereby for Us, Our Heirs and Successors, grant that these Our Letters Patent shall be in and by all things good, firm, valid, sufficient, and effectual in law, notwithstanding any omission, imperfection, defect, matter, cause, or thing whatsoever to the contrary thereof in these Our Letters Patent contained, and shall be taken, construed, and adjudged in the most favourable and beneficial sense, and to the best advantage of and for the Association, as well as in Our Courts of Record as elsewhere, notwithstanding any recital, mis-recital, uncertainty, or imperfection in these Our Letters Patent.

ORDINANCES.

The meeting then proceeded to the consideration of the First Schedule.

SECTION I.

Preliminary.

Mr. VERRALL moved Section I, which defined the meaning of Ordinances, By-laws, etc.

The section was agreed to without discussion.

1. (1) In these Ordinances (where not repugnant to the context)

(*a*) "The Charter" means and includes the Royal Charter granted in the year 1907, and incorporating the British Medical Association and any amendment thereof, and any supplemental Charter for the time being held by that Association.

(*b*) "The Ordinances" means the Ordinances for the time being of the Association.

(*c*) "The By-laws" means the By-laws for the time being of the Association.

(*d*) "The JOURNAL" means the BRITISH MEDICAL JOURNAL or other the professional journal for the time being published by the Association.

(2) Words occurring in these Ordinances and also occurring in the Charter shall bear the same respective meanings in these Ordinances as they bear in the Charter.

2. The Interpretation Act, 1889, shall apply for the purpose of the interpretation of these Ordinances as it applies for the interpretation of an Act of Parliament.

3. These Ordinances shall be construed so as not to conflict with the Charter.

SECTION II.

Mr. VERRALL next moved, clause by clause, Section II, dealing with eligibility and membership as follows:

Membership. Eligibility.

4. Any medical practitioner registered in the United Kingdom under the Medical Acts, and any medical practitioner residing within the area assigned to any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is registered or licensed in such manner as shall from time to time be prescribed by the rules of the said Branch, shall be eligible for election as a member of the Association, subject to the provisions of the Charter and these Ordinances. The fees and conditions of admission to membership shall from time to time be determined by or in accordance with the By-laws.

Subscriptions.

5. Every member shall pay to the Association a subscription of one guinea or such other sum as may for the time being be prescribed by the By-laws. The said subscription shall be considered to be in advance on the first of January of each year, except in the case of members elected during the year in question.

6. Each year's subscription shall entitle the member to all privileges of membership of the Association, including that of receiving the JOURNAL for the current year, and to the ordinary privileges of membership of that Division and of that Branch of which he is an ordinary member.

Re-eligibility.

7. No person who shall have been a member of the Association and ceased to be such shall be eligible for re-election until he shall have paid all arrears of subscription (if any) due from him to the Association at the date when his former membership ceased, and no person whose former membership shall have been terminated by reason of his conviction or expulsion as hereinafter provided shall be eligible for re-election by any Branch Council without the sanction previously obtained of the Central Council.

Duration of Membership.

8. Every member whether one of the first members or a subsequently elected member shall remain a member until his membership is terminated in accordance with the provisions hereinafter contained.

Termination of Membership.

9. Membership of the Association may be terminated in any of the following ways—namely:

(*a*) By resignation subject to such notice as may be provided for by the By-laws and subject to the provisions of the next succeeding Ordinance.

(*b*) *Ipso facto* by default in the payment of subscriptions to the Association for such period as may be prescribed by the By-laws.

(*c*) *Ipso facto* upon sentence (after conviction in a court of justice of any crime) to imprisonment with hard labour without the option of a fine or to any greater punishment, or upon erasure from the *Medical Register* under Section 29 of the Medical Act of 1858, or upon forfeiture through misconduct of the medical qualification by virtue of which the member shall have been eligible for membership.

(*d*) By expulsion (after the inquiry and in the manner prescribed in the next succeeding Ordinance) on the ground that the conduct of the member is detrimental to the honour and interests of the medical profession or Association or calculated to bring the profession into disrepute, or on the ground that the member has wilfully and persistently refused to comply with the regulations of the Association or the rules of any Division or Branch of which he may be a member.

Expulsion.

10. (*a*) The Council shall have power, on the representation of any Division or Branch, and after due inquiry, of which not less than fourteen days' notice, specifying a time and place at which he may be heard in his defence, shall have been served on the member in the manner prescribed by the By-laws, finally to expel from membership of the Association any member of such Division or Branch whose conduct shall be held by the Council to be such as renders him liable to expulsion under paragraph (*d*) of the last preceding Ordinance.

(*b*) The Council of each Branch out of the United Kingdom having a membership of not less than thirty shall have power, on the representation of any two members of such Branch, and at a Special Meeting convened at not less than one month's notice, and after due inquiry, of which not less than twenty-eight days' notice in writing specifying a time and place at which he may be heard in his defence shall have been given to the member, to expel from membership of the Association any member of such Branch whose conduct shall be held by the Council of the Branch to be such as renders him liable to expulsion under paragraph (*d*) of the last preceding Ordinance.

(*c*) A majority of two thirds of those present and voting at a meeting, whether of the Council or of a Branch Council, shall be required for the purpose of exercising the powers conferred by the last two preceding clauses.

(*d*) When a member is expelled he shall, notwithstanding that he has ceased to be a member, be liable to pay all sums due from him to the Association, or any Division or Branch thereof, at the time of his expulsion.

(*e*) No member in regard to whom a representation as aforesaid has been made, or whose conduct is under investigation, or is the subject of inquiry by the Council or by a Branch Council, or by any Council or Committee of a Division, or by any Committee authorized in that behalf by any such Council as aforesaid, shall be capable of effectively resigning his membership of the Association until the investigation or inquiry is completed, and the decision thereunder is made known. An inquiry or investigation shall, for the purpose of this clause, be deemed to commence at the time when the matter of such investigation or inquiry is first brought officially under the notice of the body authorized by, or in pursuance of, the Ordinance to make such investigation or inquiry.

On Clause 4 Dr. FOTHERGILL moved:

That Ordinance 4 be so altered as to allow any medical practitioners registered in the United Kingdom, or in any Colony having a statutory Medical Register, and having a qualification mentioned in a Schedule to be attached to the By-laws, to be eligible for election either by the Council of the Branch within the area of which he resides, or by the Central Council if he does not reside within the area of any Branch.

He said a Branch abroad could settle the qualifications necessary for its members. For instance, a man living at the Cape, if the local Branch did not approve of the qualification he had obtained in Australia, could not become a member of the Association. Supposing he moved to the West Indies, and that there they approved that qualification and had got it on their list, in that case he could become a member of the Association. Now, he felt that that was a disfranchisement that they did not desire, and it seemed to him that it was the duty of the Central Council, or even the Representative Meeting, to settle a list of qualifications to render a man eligible for membership; he was not to be at the mercy of any Branch who might like to disfranchise any particular qualification, and that was a weakness in the Ordinance that he thought ought to be altered.

Dr. R. L. LANGDON-DOWN (Richmond) seconded the amendment, with the object of securing uniformity throughout the Association.

A REPRESENTATIVE asked whether if a member of the Association went to reside on territory not belonging to the Empire—say, the South of France—he would be immediately expelled from the Association.

The CHAIRMAN: Oh no, sir.

Dr. MUIR (Glasgow) asked if a member who was on the *Register* of the General Medical Council was entitled to be a member of the Association, no matter where he lived, provided he was otherwise eligible.

The CHAIRMAN: Quite so.

Dr. MUIR (Glasgow) did not see the necessity for anything else than the Ordinance contained. If a registered qualification was possessed by any man, and if his moral and other conduct was correct, he could not be kept out of the Association, no matter where he lived.

Colonel JOUBERT DE LA FERTÉ (Indian Medical Service) wished to know what was understood by "medical practitioner."

The CHAIRMAN said he understood a medical practitioner to be one who was registerable.

Colonel JOUBERT DE LA FERTÉ said that in a dependency or colony where there was no registration a question arose which he had dealt with before. He spoke with reference to rather a meritorious body of men who desired to become members of the British Medical Association. These men were members of what was called the Indian Subordinate Medical Service. They were educated to pass a preliminary examination, a general examination, and had about four years' training in the colleges of India. As it was at the expense of Government they did not obtain any qualification that could be registered in this country. They passed into the services of hospitals and eventually the best men among them were put into what was called civil employment, and these performed all the duties and functions of medical practitioners. They gave evidence in courts, they signed certificates, they visited patients, and from his own personal experience amongst them he could say that they were an extremely meritorious body of men, and were in his opinion just as well qualified men as many of those in the British Islands who held minor qualifications. These men, however, were not eligible for the British Medical Association, and he would like, if it were possible, that they should come in under the appellation of medical practitioners, and it was for that reason he had asked "What is a medical practitioner?"

The CHAIRMAN said he was afraid "medical practitioner" must be defined as being a qualified medical practitioner, and these men spoken of by Colonel Joubert de la Ferté were not qualified, and were therefore ineligible.

Mr. G. R. STRATON (Salisbury) thought the Ordinance meant that in any Colonial Branch or in any foreign Branch, a Branch out of the United Kingdom, only those who were on the local register would be eligible for membership of this Association. On the local registers in many of these Colonies there were men who held no British qualification at all, and the policy of the Colonial Committee of this Association had been during the past year to endeavour to get reciprocity in the treatment of medical practitioners, and that those who got on to the *Colonial Register* should only be those from countries that admitted British qualifications. He thought it important that the Ordinance should remain as it was.

Dr. W. R. STRAPP (Natal) observed that in Natal they had practically the same treatment of medical practitioners and the same Register as here. The only country with which they had any reciprocity was Italy. They were protected from men coming from other parts, or from the Cape, or from the Transvaal. The German *Staatsexamen* and the American degrees were in some parts accepted. They were protected by the local Council in Natal, which laid down regulations under which a man might practise, and unless he accepted those regulations he was unable to practise.

Mr. G. W. SIDEBOTHAM (Shropshire and Mid-Wales) asked whether the question would not be met by the omission in the draft Charter, Section 5, Subsection ii, on page 8: "Members of the Association who are not entitled to be ordinary members of such Division or Branch, and each Division or Branch of the Association not in the United Kingdom shall have power to admit to certain of the privileges of membership of such Division or Branch."

Mr. VERRALL said he understood the object of Dr. Fothergill's amendment was to widen the portal of entry, but he did not quite see what people would come in under Dr. Fothergill's proposition.

The CHAIRMAN observed that the reference of Mr. Sidebotham did not apply to the same point. This Ordinance applied to the full membership.

Dr. E. R. FOTHERGILL (Wandsworth) asked what was to happen in the case of a man in Australia elected as a member by reason of possessing a necessary qualification—call it the A qualification—and then went to South Africa; the South African Branch would look down their list, and, if the A qualification was not on the list, he would not be eligible for election there. He contended that the eligibility should be determined by the Association, and not by the Branches as they thought fit. He proposed that the Central Association should make out the list, and not the Branches.

The CHAIRMAN thought the whole point was proper qualification. It might be that in Australia or New Zealand or Canada a qualification was accepted which would not be accepted in England, and yet the man might become a member of the Association. Dr. Fothergill's contention was that the Central Association should draw up a list of qualifications which would admit to membership of the Association after consultation with the Branches. He would like to hear what the Colonial Representatives had to say.

Dr. GUILLEMARD (Cape Town) said that in Cape Town they accepted as eligible to membership in their Branch such members as were registered in accordance with the Rules of the General Medical Council of the Cape. The General Medical Council was extremely careful; and there was a strong feeling in that Colony that the General Medical Council might be left to safeguard the interests of the profession in that respect. There had been several Parliamentary fights about it. The Dutch side were in favour of opening the door very wide indeed; but the General Medical Council at the Cape were not; and he thought they might be left to safeguard the Association.

The CHAIRMAN asked Dr. Guillemard if he would rather that the list of possible qualifications should be in the hands purely of the Colonial Division itself.

Dr. GUILLEMARD replied that it should be left in the hands of the General Medical Council in that Colony.

Mr. VERRALL said if they adopted Dr. Fothergill's suggestion and drew up the list at home they would include all the means of entry which the different Branches considered as likely to entitle a man to come in. Then they might insist upon Australia, for instance, electing a man because he had the qualifications upon the list, but whom the Branches in Australia would not elect if left to themselves. They could not get rid of the grievances altogether. As things stood, a man might be elected in Natal and move to Australia; but once a member of the Association he would always be a member of the Association, and he might be transferred to a new Branch, although originally they would not have elected him. If they were told the Colonial Branches preferred to make their own portal of

entry, and not to be made to elect a man whom they would not otherwise have elected, it had better be left to them.

A Representative pointed out that no member could be excluded from the Association until the By-law had come into operation.

Dr. G. Parker (Bristol) thought there was a possibility of looking more lightly at the subject than they ought. Personally he was in sympathy with Dr. Fothergill in the matter, but he thought the Colonies would be the best judges, and that the matter ought to be left to the Colonial Branches.

Dr. W. Odell (Torquay) said that in the Canadian Branch there were a number of men who had a Canadian qualification; he himself held a Canadian qualification, but that qualification was not registered in England. There might be a danger of excluding all Canadian members.

Dr. Fothergill pointed out that Mr. Verrall had hardly put the case fairly according to his point of view. He did not want to dictate to the Colonies; but what they did wish to know was this: that when a man left his native land and went elsewhere, and then thought he would like to join the Association, it should not be subject to the approval of the district where he moved to. If he were ethically qualified in his own country, why should he not be able to become a member of the Association in another country? His Division asked that the Colonies should send their lists to the head office, and that they should be put on the By-laws. He could not see why one Colony was to set their back up against another country. There was no compulsion in election, and they could consider each case on its merits.

Mr. G. H. Broadbent (Manchester, N.) thought they might approve the amendment, and by so doing it would be submitted to the different Branches in the different Colonies, and they would form their opinion upon it. He thought it a step in the right direction, and he thought they might pass it, as it were, tentatively.

Dr. Fothergill's amendment was put, and, on a show of hands, declared to be lost.

Ordinance 4 was then approved.

Mr. Verrall then moved Clause 5 as follows:

> 5. Every member shall pay to the Association a subscription of such amount as may for the time being be prescribed by the By-laws The said subscription shall be considered due in advance on the first of January of each year, or in the case of members elected during the year at the time of election,

which was agreed to without discussion.

Mr. Verrall then put Clause 6:

> Each year's subscription shall entitle the member to all privileges of membership of the Association, including that of receiving the Journal for the current year, and to the ordinary privileges of membership of that Division and of that Branch of which he is an ordinary member.

Dr. Wolstenholme had an amendment to the following effect:

> After the words "receiving the Journal for the current year" to add the words "on payment of the postage."

He desired to raise the question of the postage between home and Colonial members. In some cases the difference of postage between Colonial and home members was the difference between 2s. 1d. and 7s. or 8s. a year. If all the Colonial members were home members, and the postage were not different, it would mean a saving of £1 500 or £1 600 a year; whereas if the words he suggested were included it would mean a slight increase in the subscription, but it would bring in an increased sum of £3,000 or £4,000.

Mr. Broadbent seconded.

Mr. Verrall pointed out that the Colonies were treated more favourably *qua* postage than the home members, but the home members had advantages in which the Colonial members could not share; that rather balanced the difference in postage.

Dr. Gullstead was opposed to the amendment; and on it being put to the meeting it was declared lost, there being only 1 vote for it.

Clause 6 was then put and carried.

Clauses 7 and 8, as follows, were agreed to without discussion.

Re-eligibility.

> 7. No person who shall have been a member of the Association and ceased to be such shall be eligible for re-election until he shall have paid all arrears of subscription (if any) due from him to the Association at the date when his former membership ceased, and no person whose former membership shall have been terminated by reason of his conviction or expulsion as hereinafter provided shall be eligible for re-election by any Branch Council without the sanction previously obtained of the Central Council.

Duration of Membership.

> 8. Every member whether one of the first members or a subsequently elected member, shall remain a member until his membership is terminated in accordance with the provisions hereinafter contained.

Upon Clause 9, as follows, coming before the meeting, Subclauses (*a*) and (*b*) were adopted without discussion:

Termination of Membership.

> 9. Membership of the Association may be terminated in any of the following ways, namely:
> (*a*) By resignation subject to such notice as may be provided for by the By-laws and subject to the provisions of the next succeeding Ordinance.
> (*b*) *Ipso facto* by default in the payment of subscriptions to the Association for such period as may be prescribed by the By-laws.
> (*c*) *Ipso facto* upon sentence (after conviction in a court of justice of any crime) to imprisonment with hard labour without the option of a fine or to any greater punishment, or upon erasure from the *Medical Register* under Section 29 of the Medical Act of 1858, or upon forfeiture through misconduct of the medical qualification by virtue of which the member shall have been eligible for membership.

Dr. Laffan moved an amendment to Subclause (*c*) to the effect that where a conviction was for a political offence no expulsion should take place.

Dr. Alfred Cox (Gateshead) seconded the amendment, which was supported by Mr. W. G. Booth (Manchester Central). The latter thought the first part of Subclause (*c*) might be omitted altogether.

On the amendment being put it was declared lost by 40 votes to 28.

A further amendment by Dr. John Brown (Bury) was moved—namely, that the whole of Subclause (*c*) be deleted. He thought (*d*) covered everything they could possibly require, and the simpler the regulations the better.

The Solicitor (Mr. Hempson) advised the meeting to retain the clause.

The Chairman pointed out that expulsion followed only after a sentence of imprisonment with hard labour.

The Solicitor further drew attention to the fact that even in case of membership terminating by reason of a conviction it did not preclude re-election. After a little further discussion, the Chairman ruled that the matter was out of order, Dr. John Brown's amendment being before the meeting.

This was seconded by Mr. G. Jackson (Plymouth).

Mr. G. Brown (Devonport) called attention to what he believed to be a redundancy in regard to the regulations as to the termination of membership. It followed that if any person had been convicted and sentenced to imprisonment with hard labour for any offence he would automatically have his name removed from the *Medical Register*. Therefore, if the clause were not deleted altogether, the first four lines should be deleted. He would therefore move that the clause read as follows: "*Ipso facto* upon erasure from the *Medical Register*," and so on. In the case of a medical man convicted of any offence punishable by imprisonment, even if there was no hard labour, the conviction was sent to the General Medical Council, and the General Medical Council had no discretion in the matter.

Dr. Fothergill (Wandsworth) asked whether the clause touched the Registers of the Colonies.

The Solicitor (Mr. Hempson) thought that the meeting would be acting very unwisely in depending upon the vigilance of the General Medical Council, or on the courts where the conviction was obtained sending that conviction to the General Medical Council. He did not speak without knowledge of the facts which he was bringing before the meeting. He had in his mind a most notorious case in which he personally was concerned in the conviction of a medical man, where sentence of imprisonment with hard labour for a certain period was inflicted, and in which, for some reason or other which it was not his duty to define at that meeting, the conviction was never sent to the General Medical Council. That man's name was never erased from the

Medical Register, and it stood to this day. He was not going to give the name even if he were asked. That was a case in point, which showed the necessity of having in the Association's own regulations something to remedy a slip of the nature to which he had referred.

In answer to Dr. Fothergill's question, the CHAIRMAN stated that the Colonial Registers were not included in the clause.

The amendment of Mr. G. Brown was then put to the meeting and declared to be lost.

Dr. JOHNSON SMYTH (Bournemouth) proposed the insertion of the word "British" before the words "court of justice." He pointed out that Dr. Jameson had been brought before a court of justice under the Kruger régime.

This was seconded by Dr. JOHN BROWN, put to the meeting, and declared to be lost.

Dr. FOTHERGILL proposed:

> That provision be made, in Ordinance 9 (*c*), for the termination of membership of the Association *ipso facto* upon erasure from the Medical Register of any British Colony for professional misconduct, as from the Register of the United Kingdom.

He said that in Natal, for instance, they had a Register, and if a medical man was taken off the Register he should cease, *ipso facto*, to be a member of the Association as he would in England. The Natal Branch would have full power under Clause 7 to re-elect him, but they should go through the same process in the Colonies as was gone through in England.

This was seconded by Mr. H. W. ARMIT (Hampstead).

Dr. W. R. STRAPP (Natal) took it that under Clause 7 a man could not be re-elected by any Branch Council without the sanction previously obtained of the Central Council in England.

The CHAIRMAN asked the last speaker whether those whom he represented wanted the extra power of expulsion.

Dr. STRAPP replied that they did, and it was his mandate from his Colony to say that they would like it if it were possible for them to have it.

Dr. FOTHERGILL suggested that the meeting should approve of the principle, and leave the Solicitor to draft the clause.

This was agreed to.

It was then agreed that Subclause (*c*), as amended, should stand part of the Charter.

Mr. VERRALL then moved Subclause (*d*):

> (*d*) By expulsion (after the inquiry and in the manner prescribed in the next succeeding Ordinance) on the ground that the conduct of the member is detrimental to the honour and interests of the medical profession or Association, or calculated to bring the profession into disrepute, or on the ground that the member has wilfully and persistently refused to comply with the regulations of the Association or the rules of any Division or Branch of which he may be a member.

This was agreed to.

Clause 9 was then put to the meeting as a whole and carried.

Mr. VERRALL then moved Subclause (*a*) of Clause 10.

Dr. C. BUTTAR (Kensington) said that a contingency might arise in which expulsion would be too severe a punishment, and yet in which some note ought to be taken of the offence. His Division therefore proposed that before the word "finally" the words "to suspend from certain privileges and" should be inserted.

Dr. JOHN BROWN said that he would second the amendment if the mover of the amendment would let the subclause read, "Censure and suspend or expel." There were cases where censure would be quite sufficient without suspension. If there were suspension, it should be suspension for a limited period. There were offences in connexion with which he believed that censure or suspension for twelve months would do a great deal of good. Members hesitated sometimes to bring before a Branch matters where expulsion might be the only result, but if they could have the power to censure or suspend for twelve or six months it would be of great advantage.

Dr. BUTTAR accepted the suggestion of the last speaker.

Dr. FOTHERGILL pointed out that the subclause provided "the Council should have power," and it did not say that they had to expel. The censure could come from the Branch or the Division. He wished to ask the Solicitor a question. Supposing that the Association had taken a man's subscription for medical defence or anything else, were they not legally liable to him if they did not allow him the full benefit?

The SOLICITOR said that, speaking in the light of his experience as the solicitor of the Association, in the few expulsion cases which they had had it had seemed to him that they had always a means of dealing with the matter short of finally expelling the man from the Association. The Branch or the Division made certain requirements upon a man, and if he had fulfilled them he would have purged the offence he had committed. He (the Solicitor) had been present at the investigations by the Committee to whom the matters were delegated by the Association, and it was only in default of the man doing that which was reasonably required of him that he had had to go out of the Association. Coming to the wider issue involved in connexion with the power of suspension, he did not know how it was going to be employed. Was it to be said that the man during the period of suspension was still to remain a member of the Association? If he remained a member of the Association and was suspended from all the privileges, how was the Association going to continue to get the subscription? That was one point. There was another point. He did not know at what period of the existence of the Association the point might arise, but the Association might have taken all the powers under the Charter, and a member would have a great many more privileges than members had at the present time. Yea or Nay, was the man a member of the Association? All the privileges would be suspended. What was going to be the position so far as the man was concerned in the event of the Association having taken up medical defence, and an action being brought against him? It seemed to him that such a state of things would lead to endless difficulty, and he would certainly advise the Committee not to import the power of suspension. It seemed to him that there was power under the Charter to deal with the matter by something short of final expulsion.

Dr. E. J. MACLEAN (Cardiff) said that the proposer and seconder rather overlooked various ethical rules of procedure which would be adopted, he took it, by the majority of Divisions and Branches. Under the rules adopted in South Wales certain lines of investigation were pursued with regard to ethical offences, and if a man was found guilty of certain ethical offences he was made to apologize to the members of the Division and was made aware of the opinion of the Division upon his conduct, whatever it might be. Censure as censure could be made sufficient under the ordinary ethical rules of procedure.

The proposal was put to the meeting and lost.

Dr. W. GOSSE (Canterbury and Faversham, Isle of Thanet) stated that he did not wish to proceed with the resolution of his Division.

Dr. GUILLEMARD (Cape of Good Hope, Western) asked whether, in the case of a member being expelled by the Colonial Medical Council of the Colony in which he resided, that would be final. Those whom he represented wished it to be final. They did not want the man to come to England and say, "Will not you let me on again?"

The CHAIRMAN referred the speaker to Subclause (*b*). The member did not have an appeal to the Central Council.

Subclause (*a*) was then agreed to. It was as follows:

> (*a*) The Council shall have power, on the representation of any Division or Branch and after due inquiry, of which not less than fourteen days' notice specifying a time and place at which he may be heard in his defence shall have been served on the member in the manner prescribed by the By-laws, finally to expel from membership of the Association any member of such Division or Branch whose conduct shall be held by the Council to be such as renders him liable to expulsion under paragraph (*d*) of the last preceding Ordinance.

Mr. VERRALL then moved Subclause (*b*):

> (*b*) The Council of each Branch out of the United Kingdom having a membership of not less than thirty shall have power, on the representation of any two members of such Branch and at a special meeting convened at not less than one month's notice, and after due inquiry of which not less than twenty-eight days' notice in writing specifying a time and place at which he may be heard in his defence shall have been given to the member, to expel from membership of the Association any member of such Branch whose conduct shall be held by the Council of the Branch to be such as renders him liable to expulsion under paragraph (*d*) of the last preceding Ordinance.

This was agreed to.

Mr. VERRALL then moved Subclause (*c*):

(*c*) A majority of two-thirds of those present and voting at a meeting, whether of the Council or of a Branch Council, shall be required for the purpose of exercising the powers conferred by the last two preceding clauses.

It was agreed to.

Subclause (*d*) was then moved by Mr. VERRALL:

(*d*) When a member is expelled he shall notwithstanding that he has ceased to be a member be liable to pay all sums due from him to the Association, or any Division or Branch thereof, at the time of his expulsion.

A REPRESENTATIVE asked whether the Association had power to enforce Subclause (*d*).

The SOLICITOR said that most certainly it had.

Mr. VERRALL moved Subclause (*e*), which was as follows:

(*e*) No member in regard to whom a representation as aforesaid has been made or whose conduct is under investigation, or is the subject of inquiry by the Council, or by a Branch Council, or by any Council or Committee of a Division, or by any Committee authorized in that behalf by any such Council as aforesaid, shall be capable of effectively resigning his membership of the Association until the investigation or inquiry is completed and the decision thereunder is made known. An inquiry or investigation shall, for the purpose of this clause, be deemed to commence at the time when the matter of such investigation or inquiry is first brought officially under the notice of the body authorized by or in pursuance of this Ordinance to make such investigation or inquiry.

This was agreed to.

Clause 10 was then put as a whole and agreed to.

Dr. W. H. HORROCKS (Bradford) asked whether there was any limit to the time of inquiry.

Mr. VERRALL said that he did not think that there was any limit; but, after all, they must trust the local Branches to exhibit a certain reasonable limited amount of common sense. He then moved the following:

12. It shall rest with the Council from time to time to determine, recognize, and declare by resolution published in the JOURNAL, what bodies of members shall be Divisions, and what Divisions and groups of Divisions shall be Branches of the Association, and what shall be the local area of each Division, and accordingly the Council shall have full power from time to time to amalgamate, subdivide, and modify Divisions and Branches and the local areas thereof. Nevertheless, not less than one calendar month's notice in all cases shall be given (in the manner prescribed by the By-laws) to any existing Division or Branch in whose boundaries or area any change is proposed.

This was agreed to.

Clause 12 was then moved by Mr. VERRALL:

Boundaries.

In determining the boundaries or area of Divisions and Branches, the Council shall have regard to the expressed wishes of the existing local bodies concerned, and to the facilities of communication in each district by railway and otherwise, and the opportunities thus afforded to members of local bodies for meeting to transact the business thereof and to the expediency of making the boundaries of such bodies coincide with those of Parliamentary constituencies, counties, or other public administrative divisions of the country.

This was agreed to.

Section 13 (*a*) was then proposed by Mr. VERRALL:

(*a*) Subject to the Charter and the Ordinances and By-laws, each Division and each Branch shall be free to govern itself in such manner as it shall think fit, and for that purpose to make from time to time such rules as it may think fit, and to repeal or alter the same at and when it shall consider it expedient.

The CHAIRMAN stated that on this subclause there was a proposal by the Stockport Division which he must rule out of order.

Subclause 13 (*a*) was then approved.

Subclause (*b*) was as follows:

(*b*) The rules so made for the time being in force shall be binding on the members constituting the Division or Branch in reference to which they are made. Provided that such rules shall be submitted for approval to the Council and shall not come into operation unless and until they are approved by the Council.

Mr. VERRALL said that with regard to this subclause he would like to move an amendment which dealt with general matters. He would propose that in line 3, after the word "that," there should be inserted the words "except in the cases specified in By-law (——)." Members would see in the Report which accompanied the draft Charter allusions to the Colonies, and they would see that the Committee spoke of certain things as to which the Colonies had given indications of a desire for greater liberty than there was at home—namely, liberty to make their own rules irrespective of supervision by the home Council. At page 3 of the Report members would see "the Charter as affecting the Colonial Branches." Then there were Subclauses (*a*), (*b*), (*c*), (*d*); (*a*) was

That Colonial Branches should enjoy greater freedom as regards alteration of their local Rules in matters of detail without incurring the delays necessary for obtaining the approval of the Central Council.

The information tabulated under (*a*) to (*d*) inclusive was the result of the information which had been conveyed by replies from the Colonial Branches to a circular letter issued to them some time back. The Committee had got the idea on general lines that those were the kinds of ways in which the Colonies would like to have special treatment. Certain definite replies had been received from Natal, Griqualand, the Cape of Good Hope, and so on. The ways in which the Colonies would like greater freedom and the kind of line which they would like to adopt had been indicated by some of them, and more especially by Natal. The Committee thought that it would be advisable that the thing should be dealt with positively and not negatively, and that if they were given greater freedom they should be asked to specify the kind of rules which they would wish to make, and not to have the matter taken the other way. It was thought that they should not be allowed to make rules independently of the Central Body unless the contrary was said. If the present proposal was passed, he should ask the members subsequently to pass a resolution defining the ways in which the Colonies should be asked to specify the rules which they wanted passed without supervision from home. The By-law (——) would specify the cases in regard to which the Colonies would define the sort of rules which they wanted to pass for themselves. That final subsection would have to come under a re-review by the meeting and by the Colonies eventually. The meeting would not be doing anything binding for all time. He would move the adoption of (*b*) with the amendment which he had suggested.

Dr. G. E. TWYNAM said that it was extremely difficult for many of the Colonies to represent the kind of rules which they wanted in beforehand.

Mr. VERRALL said that he could only judge from the *pourparlers* that had gone on between the Colonies and the Committee, but he did not think that there would be any great difficulty in drawing up some definite scheme. He would ask the meeting to agree with him that it would be necessary and advisable to ask the Colonies to specify. At least that was the view which the Organization Committee took.

The amendment was adopted, and Ordinance 13 (*b*), as amended, was approved.

Mr. VERRALL moved:

That it be an instruction to the Council to insert a By-law to the following effect: That a Branch or Division not in the United Kingdom shall have power to adopt, without reference to the Central Council, rules dealing with all or any of the following matters, which rule shall be binding upon the members to whom they relate. (The list of the matters to be specified to be drawn up and inserted by the Council in the draft By-law.)

Dr. GUILLEMARD asked who was to decide the list. Was it to be decided in consultation between the Colonies and the Council?

The CHAIRMAN: Yes.

Dr. GUILLEMARD said it still admitted of discussion with the central authority. The Council would decide upon what they would give the Colonies and let them know what they wanted.

The CHAIRMAN: Precisely.

Dr. GUILLEMARD observed that as far as the matter had gone the Council had practically coincided with the Colonial requirements.

Mr. VERRALL said it was a little difficult to discuss in public, in a meeting like this, negotiations which were still under the process of being carried out. The Colonies and themselves had been in communication upon what

was, if he might so put it, a somewhat tender point. He could speak quite plainly in the presence of the Colonial Representatives. The Colonies believed it was for their good that they should remain in the British Medical Association, but they asked that they should be outside it for certain purposes. The Council felt with them that they could not be bound by what the Colonies might decide. Negotiations were pending between the Colonies and themselves as to what the Colonies should be specifically allowed to do. Natal had entered into this arrangement, and Griqualand and, he thought, many other Colonies would do so. The Council would find no difficulty in safeguarding themselves while meeting the wishes of the Colonies. In spite of what had been said, he did not think there would be any difficulties in the Colonies specifying their requirements, which would be subject to confirmation. He would not go further than to say that they were in process of negotiation, and he did not think there would be any difficulty about it.

Dr. GUILLEMARD said they wanted to have something akin to the relation of the Colonial Government to the Home Government, and they wanted to have power on the spot to deal with local questions and at the same time remain loyal to the Association.

Mr. VERRALL did not think there would be any difficulty about that.

Dr. STRAPP (Natal), speaking for Natal, said the members would be very pleased to hear the pronouncement which they had heard from Mr. Verrall. It was the first time they had been able to hear it, and he should be very pleased to write that out to his Branch, who were anxiously expecting that pronouncement.

Mr. VERRALL said that all he had said had been, if he might use the term, without prejudice. The Colonies wished to legislate for themselves in certain matters, and the Council would meet them as far as they possibly could.

Dr. STRAPP said they had not been aware how they would be met by the Council in this matter.

The insertion of the new By-law was then approved.

Mr. VERRALL moved Clause 14:

14. The Representative Body shall be composed of the Representatives elected by the Divisions in the manner prescribed by the By-laws and of the members of the Council in office for the time being. No member of the Association who is not a member of the Representative Body shall be entitled to take part in any Representative Meeting.

Mr. GEO. EASTES (Kensington) said, with reference to the proposal that the Representative Body should be composed of the Representatives elected by the Divisions and the members of the Council in office for the time being, he would like some words put in providing for the attendance of members of Council who should be in office during the next twelve months. They, of course, would not vote.

Mr. VERRALL read the following Minute No. 292 of the last meeting of the Organization Committee:

Resolved: That it be recommended to the Representative Meeting that Ordinance 14 be amended by the insertion of a sentence providing that members of Council entering upon office at the close of any Annual Representative Meeting shall be *ex-officio* members of that meeting, and that the Solicitor be instructed to redraft the Ordinance accordingly.

The CHAIRMAN observed that By-law 27 provided for the inclusion of those members of the Council.

Mr. VERRALL said that By-law 27 would be moved in due time. At present they had only carried the matter as far as the Ordinances. Would that meet the views of Mr. Eastes?

Mr. GEORGE EASTES: Certainly.

Clause 14 was then agreed to.

Mr. VERRALL then moved Clause 15 as follows:

15. Subject as hereinafter provided a resolution of the Representative Body which affects the funds of the Association, or relates to the Ordinances or By-laws or to the policy of the Association in matters affecting the honour or interests of the medical profession, and is carried by a majority of not less than two-thirds of the members present and voting thereon, or which relates to any other business within the powers of the Representative Body, and is carried by a simple majority, shall be deemed to be a decision of the Association,

which was agreed to.

Mr. VERRALL then moved Clause 16 as follows:

16. Provided that no resolution to make any addition to or any amendment, alteration, or repeal of any Ordinances or By-laws, or to make any new Ordinance or By-law, shall have any operation unless a proposal to make the same shall have been previously approved and submitted to the Representative Body either by the Council, or by a Branch, or by a Division, and shall have been published in the JOURNAL, not less than two months before the Annual Representative Meeting or one month before the Special Representative Meeting at which such resolution was passed.

Dr. MARTLEY (Dublin) called attention to the fact that the period had been put at two months, whereas in the present Articles of Association it was three months. And he would be glad to know whether there was any special reason for that change?

Dr. FOTHERGILL said he believed that was carried at the last Representative Meeting.

The CHAIRMAN: You do not move any amendment?

Dr. MARTLEY: No.

Clause 16 was then agreed to.

Referendum.

Mr. VERRALL moved Clause 17 as follows:

Proviso as to Referendum.

17. Provided also that in respect of every resolution of the Representative Body the following provisions shall have effect:

(*a*) Within three months after the date on which the resolution was passed, the Council shall hold a meeting for the purpose of considering the resolution. Such meeting may be convened by a notice given either before or after or during the progress of the Representative Meeting at which the resolution was passed.

(*b*) The Council at their said meeting may either approve the resolution or determine on a Referendum, and they shall determine on a Referendum if in their opinion the resolution does not truly represent the wishes of the Association.

(*c*) If the Council at their said meeting determine on a Referendum, then the Secretary of the Association shall as soon as may be after the said meeting, but within eight weeks from the date thereof, send by post to the Secretary of each Division of the Association a requisition requiring him within four weeks to convene a meeting of the members of his Division (hereinafter called "the Division Meeting") for the purpose of considering the resolution, and shall with such requisition transmit such observations on the subject of the resolution as the Council may direct, and the Secretary of each Division shall, immediately after the holding of the Division meeting (if any), certify in writing to the Council the number of the votes given at the Division meeting for and against the resolution.

(*d*) If the aggregate number of votes given for the resolution at all the Division meetings shall exceed the aggregate number of votes given against the resolution at all the Division meetings or if no vote shall be given at any Division meeting against the resolution the same shall be deemed to have been approved on a Referendum, provided that for the purpose of this provision no votes shall be reckoned unless the same shall be included in such certificate as aforesaid and such certificate shall have been received by the Secretary of the Association within four months after the date of the said meeting of the Council.

(*e*) If the said meeting of the Council shall not be held within the said period of three months then the resolution shall come into operation immediately upon the expiration of that period. But save as aforesaid the resolution shall have no operation unless and until it shall have been approved either by the Council or on a Referendum as hereinbefore provided and if and when so approved the same shall come into operation as a valid and effectual decision of the Association.

(*f*) The fact of the resolution having been so approved shall be forthwith published in the JOURNAL.

The CHAIRMAN said on Clause 17 there were several proposed amendments, and he would like to appeal to those gentlemen who had got amendments to consider whether the amendment of the Organization Committee did not cover the majority of them. He thought the amendment by the Organization Committee would meet the difficulty better than the others. There was one amendment, he noticed, that the word "shall" should be substituted for the word "may." He did not think that such an amendment would meet the difficulty—it still left the possibility of an *impasse* like they had a little time ago that the Council might determine on a Referendum; but that did not compel them to take it; they still might determine on it as they had done before. The amendment of the Organization Committee was that if they did not take it inside a limited term the resolution of the Representative

Meeting should stand as an Order of the Association. He would take the Organization Committee's amendment first.

Dr. Pope raised the question whether, in accordance with Article XXXV of the Articles of Association, it was not necessary for all the resolutions before the meeting to be carried by two-thirds majorities.

The Chairman said that he had some time previously drawn attention to the fact that all these resolutions with regard to the Charter only required to be carried by a simple majority. He did so after due consideration of the matter and after consultation with the Solicitor, whose opinion also was that anything having reference to the Charter need only be carried by a small majority.

Dr. Pope observed that Article XXXV not only said that this sort of resolution, but that any resolution which related to the policy of the Association, should be passed by a two-thirds majority, and he did not see how they could go behind that. All the resolutions they had passed that day must be said to relate to the policy of the Association; and if anything had not been carried by a two-thirds majority, it need not be regarded as binding on the Association. That, he thought, was clear, and he did not see how either the Chairman or the Solicitor could get behind it.

The Chairman objected to the suggestion of Dr. Pope that either he or the Solicitor had been going behind the Article.

Dr. Pope: I mean it is *ultra vires*.

The Chairman: That is quite a different thing. This matter was threshed out by the Solicitor carefully. Perhaps he will again express his opinion.

The Solicitor observed that Dr. Pope had broken off at a rather important point when he said that these matters related to the policy of the Association; that sentence was not complete. The reference in the Article was only to matters which related to the policy of the Association in matters affecting the honour or the interests of the medical profession. That seemed to him to have a very different and important bearing. The only way in which they could bring this matter under the necessity for a two-thirds majority was to say that it was a matter which affected the funds of the Association. He agreed that what they were doing that day did affect the funds of the Association to a limited extent, just as anything which was done by a committee, body, or individual of the Association affected the funds in so far as it might cause expense in point of notepaper or postage stamps. Beyond that, they were not going to do anything. The discussions upon this Charter appeared to him to be a mere expression of opinion, to guide the efforts of those who were framing it for the benefit of the Association, and trying to mould it into such a form as would best suit the requirements of the Association preparatory to going to the statutory meetings by which it would be passed. For that reason he advised the Chairman that these resolutions, apart from the one dealing with the present By-laws, did not fall under Article XXXV, requiring a two-thirds majority.

Dr. Pope: Can that be applied to the use of the funds for the election of Parliamentary candidates? Was that decision of the Association within the meaning of Article XXXV or not?

The Solicitor said probably and emphatically it was not a decision of the Association. No Charter, Ordinance, or By-law could come into being until it had been before the Statutory Meeting. This was a mere academic discussion for the purpose of getting the best opinion that could be arrived at.

Dr. W. Smith (St. Pancras and Islington) observed that there had been a motion upon a word "shall" and "may"; but he understood it was proposed to refer that to the Organization Committee, and therefore he proposed to withdraw it.

Dr. C. Bullar (Hertfordshire) said his Division did not think the Referendum very sufficiently wide; it seemed to them it did not give enough power to individual members of the Association. The amendment he had to move to Ordinance 17 was at the end of section (*b*) to add, "Or if they shall receive the petition of not less than 100 members of the Association desiring the said Referendum." At the present moment the question of the Referendum was entirely in the hands of the Representative Meeting. There was no provision at all as to how any members of the Association could obtain any Referendum; it was left practically to the Representatives.

Mr. H. A. Ballance (Norwich and West Norfolk) could not conceive that it would be to the interest of the members of this Association that a small body of 100 members should have power to determine upon the Referendum, and put the whole Association to the expense of the Referendum, and for that reason he opposed the suggestion of the Kensington Division.

Mr. George Eastes (Kensington) said at present it was the Council which had the power of having a Referendum, and the general members of the Association were out of it altogether. He thought that if 100 members sent in a petition for a Referendum, it would be fair and right to the members generally.

Mr. H. A. Ballance suggested that the members of the Association generally had their opportunity at the Representative Meeting.

Mr. J. Young (Bolton) thought this amendment entirely unnecessary, inasmuch as the resolutions which the Council would deal with were the very resolutions which the Representative Body had sent up to the Council. It seemed ridiculous to have a Referendum when they had already sent the matter up to the Council and the Council had not agreed with them. Every member should have a voice in it. Each one of them would have a paper from the Council asking him to say Yes or No to a resolution which his Representative Body had sent to the Council. From his Division he came with 80 votes and perhaps only six had sent them; but probably the six were worth more than the 74, and he believed it was so, because the members who did not come were, as a rule, Journal members. But still, if the Council sent them a question and said: This is a Referendum of the Council, and we want every member of the Association to say Yes or No, he thought they would attend to it. To his mind, the amendment was certainly not needed.

Dr. Johnson Smyth thought the principle of a Referendum an excellent one, but it was a principle which might be abused most thoroughly; and to give 100 members of the Association power to carry out a Referendum was, he thought, not necessary. Besides, the carrying out of a Referendum was a very expensive proceeding, bearing in mind that their funds were none too large to give them the luxury of a Referendum half a dozen times a year. He dared to say that he could get 100 names if he wanted to back him up to-morrow. He suggested that the figure should be made 1,000, and not 100. He did not like to say that the figure of 100 was absurd.

Dr. C. E. Robertson (Glasgow Southern) thought the suggestion of the Kensington Division a reasonable one. The provision here was that the Council might determine upon a Referendum if in their opinion a resolution did not truly represent the wishes of the Association. A requisition from 100 members of the Association was too small, but a requisition from a definite number of members would, he thought, give some colourable reason for deciding upon the Referendum, and therefore he trusted that this Representative Meeting would accept the amendment. The last part of this subclause confined the power of the Council, it seemed to him, in regard to the Referendum to one point namely, that they could only determine upon a Referendum if, in their opinion, a resolution did not represent the wishes of the Association. He thought it a pity that the last sentence was in.

Dr. Walter Smith (St. Pancras and Islington) asked if they could have the cost.

The Chairman: I am afraid I cannot give it to you, even approximately; it has never been tried.

Dr. W. L. Muir (Glasgow Eastern) had the greatest pleasure in supporting the proposition upon the agenda as against the proposal to have a Referendum on the requisition of 100 members of the Association. What was the use of their having a Council at all if they were not going to put some confidence in them? If in the opinion of the Council something was going to be done that would be detrimental to the Association, could not they believe that they would send it to the members as a Referendum? Why should there be thrown in their teeth the power of any 100 members at all? The Association numbered 20,000 members, and were they going to give power to any 100 members to upset things? He believed that any one of them could get 100 members to-morrow to call a Referendum. He believed he could get 50 himself in Glasgow, where he was known. They would do it from personal feeling. He was really astonished at such a pro-

position being put forward. Why could not they have confidence in the Council they elected.

The question was then put, and the amendment was lost.

Ordinance 17 (*a*) and (*b*) was approved.

Mr. VERRALL moved Subclause (*c*) as follows:

(*c*) If the Council at their said meeting determine on a Referendum then the Secretary of the Association shall as soon as may be after the said meeting, but within eight weeks from the date thereof, send by post to the Secretary of each Division of the Association a requisition requiring him within four weeks to convene a meeting of the members of his Division (hereinafter called the Division Meeting) for the purpose of considering the resolution and shall with such requisition transmit such observations on the subject of the resolution as the Council may direct, and the Secretary of each Division shall immediately after the holding of the Division meeting (if any) certify in writing to the Council the number of the votes given at the Division meeting for and against the resolution.

Dr. C. BUTTAR (Kensington) moved: That everything in the clause after "send by post" be deleted and replaced by the following: "Send by post to each member of the Association a voting paper on which to state whether he agrees or disagrees with the resolution." It was proposed by the clause that the Secretary of the Association should send a requisition to the Secretary of the Division to call a Divisional Meeting. It seemed from that that it was extremely difficult to get together on any business question a sufficiently large meeting to represent the members of the Association. Not only that, but on the occasion of a meeting a large number of men might be kept away by professional duties or otherwise, but if the subject was one of sufficient importance to merit a Referendum it would appear to Kensington far better that it should be a Referendum to members of the Association individually.

Dr. H. A. BALLANCE (Norwich and West Norfolk) wished to oppose this resolution. As far as he could make out, if this Referendum was sent by post to every member of the Association it would do away entirely with the discussion of the question, and in considering the subject of the Referendum he must say it would be a great advantage to the members to discuss the subject with each other in the Division. He opposed the amendment because it did away with the Divisional meeting and the discussion of the subject by individual members, and he hoped the meeting would not agree to the proposition.

Dr. WYNNE (Leigh and Wigan) said he was just going to mention the same thing. It was a fact that the people who would not go to Divisional meetings to discuss such things as these were the people who threw all circulars from the Central Council into the waste-paper basket. If a man would not go to a Divisional meeting he would not read his circular and would not reply to it, and the Association would be involving itself in a tremendous deal of expense in the matter of postage.

Dr. JOHN BROWN (Rochdale and Bury) very heartily supported the amendment moved by the Kensington Representative. If a matter were of such great importance that the Council demanded that it be referred to all the Divisions, they wanted to get the votes of as many members as they possibly could, and if the question was sent by post every member would get it, and he could say Yes or No with regard to the resolution. With regard to what Dr. Wynne had said, it was perfectly true that not a great number came to Divisional meetings. They had just had their election for Representatives of the Lancashire and Cheshire Branch. Twelve months ago, when they had their annual meeting at Blackpool, they had not 100 members at the annual Branch meeting, but what had they to-day? They had an enormous return of votes because the papers had been sent by post to each member of the Lancashire and Cheshire Branch when the resolution was brought up. They had probably had one-half of the members of the Lancashire and Cheshire Branch voting for their Representatives. If a question was referred by the Council to all the Divisions in the present state of things, no matter how important it was, they could not get the members together, but when the postman brought the Referendum and the member only had to say Yes or No, to vote Yes or No, and post it, that was a different thing.

Dr. E. O. PRICE (North Carnarvon and Anglesea) had great pleasure in supporting the amendment of the Kensington Division, and he did so because he could not see how this so-called Referendum could be called a Referendum. It was not what an ordinary individual understood by a Referendum in the least. He asked a member of this meeting last night what he understood by a Referendum, and he said it was an appeal to the members of the Association, and that he should have thought was what everybody understood. As the matter stood at present it was nothing more than referring a matter for discussion and for decision by the Divisions. There was not a particle of difference between the great Referendum and the smaller Referendum which happened every month; they had shoals of them. He might say that his Division was up to its neck in circulars of various kinds, and circulars of the greatest importance might very easily be overlooked. It was only intended to apply the Referendum, he took it, in cases of very grave importance. It was true it would cost some money, but the money, he would say, would be well spent when the matter was of sufficient importance. Besides that they would be matters that had been already discussed by the Divisions and had been sent down to the Divisions probably time after time, and he thought if a Referendum was required in such a case as that it should be sent to a wider constituency than the constituency which consisted in the Divisions, because the number of people who attended the Divisional meetings was very often so small and the amount of consideration given to matters even of the very gravest importance was sometimes very inadequate. He had, therefore, very great pleasure in supporting the proposition that when the Referendum was taken up it should be taken in the manner suggested by the Kensington Division.

Mr. GEORGE EASTES (Kensington), with reference to the point of poor attendance at Divisional meetings, pointed out that the absence might be due to the performance of special duties, and he thought those who were unable to attend the meetings should have an opportunity also of expressing their opinion.

Mr. VERRALL was very far from thinking it would be a good thing that the Referendum should go out of force. He hoped it would remain where it was possible to take it, as it was desirable that every member of the Association who really was concerned should take an interest in the matter under discussion. It was not asking much of individual members that they should express their opinion after discussion of the matter with their neighbours. He agreed that they would get a larger vote if they sent notice to every member and asked him to put simply Yes or No as his reply, but not so much larger as in the Lancashire and Cheshire Branch, though he could not controvert what had been said as to that by the Representative of the Division. There were two classes of Divisions in the Association as elsewhere—Divisions where they took a real interest in the matter, and waste-paper basket constituencies where they put everything straight away. In a constituency where a real interest was taken the members would, as far as possible, attend the Divisional meetings. They all wanted to save money at the present time, and he did not think they ought to spend money unnecessarily, but if he thought they could get at the real opinion of the Association on grave matters by post-cards or circularizing the members, he would not himself advise them to stick at the expense; but he did not believe that if they were dealing with people who were really concerned in what they were talking about they would get a better vote than by asking the opinion of the Divisional meetings. He very much supported what Dr. Ballance had said as to the advantage to people of being able to form an opinion after discussion. His own Division, he might say, would be glad to hear what he had to say on any subject. They could not do that by buttonholing a man in the street; they must have Divisional meetings to which men interested would go.

The amendment was lost.

Mr. GEO. BROWN (Devonport) suggested that if a Referendum was called and Divisional meetings held, members of the Divisions should be allowed to vote by proxy, but did not press an amendment.

Ordinance 17 (*c*) was then approved.

The CHAIRMAN pointed out, it being the hour of adjournment, that they had all come there at considerable difficulty and expenditure, and after a tremendous lot of labour by the Organization Committee in getting up the draft Charter, and he hoped it would not all be nullified by members going away and leaving them without a quorum. There was a subject that they might have seen

agitated the JOURNAL for some time past which he wished to take the opportunity of saying a word about. The South Wales Division had been making a tremendous fight for the advantage of the Association, and spending a lot of money and trouble over the business. They had been very successful, and were likely to be very successful, and an appeal had appeared in the JOURNAL to form a Central Emergency Fund. He would appeal to those present to help as much as they could themselves and in their districts by getting people to subscribe.

Mr. J. SINGLETON DARLING (Portadown and West Down) asked if it could be done through Branches or Divisions.

The CHAIRMAN said No; the subscriptions must be individual, and if any subscriptions were sent to him he would be glad to receive them.

Mr. VERRALL moved Subclause (*d*) as follows:

(*d*) If the aggregate number of votes given for the resolution at all the Division meetings shall exceed the aggregate number of votes given against the resolution at all the Division meetings, or, if no vote shall be given at any Division meetings against the resolution, the same shall be deemed to have been approved on a Referendum, provided that for the purpose of this provision no votes shall be reckoned unless the same shall be included in such certificate as aforesaid, and such certificate shall have been received by the Secretary of the Association within four months after the date of the said meeting of the Council.

Dr. F. C. MARTLEY (Dublin) observed that the subclause provided for what happened where the Referendum went one way, but said nothing as to what happened when it went the other. He inquired whether it would not be as well to have words put in to make that point clear.

The CHAIRMAN said it was simply a positive and negative. If the resolution were not approved in the Referendum it fell to the ground.

Dr. C. BUTTAR (Kensington) proposed:

That the words "The Resolution shall not come into force unless a clear majority of those voting are in its favour," be substituted for Ordinance 17 (*d*).

The proposal was negatived.

Subclause (*d*) was then agreed to without further discussion.

Mr. VERRALL informed the meeting that the Organization Committee suggested an alteration in Subclause (*e*):

(*e*) If the said meeting of the Council shall not be held within the said period of three months then the resolution shall come into operation immediately upon the expiration of that period. But save as afore-said the resolution shall have no operation unless and until it shall have been approved either by the Council or on a Referendum as hereinbefore provided and if and when so approved the same shall come into operation as a valid and effectual decision of the Association.

Namely:

That for the words "If . . . period" inclusive, in the first four lines of the clause, there be substituted the following words:

"If the said meeting of the Council shall not be held within the said period of three months, or if the resolution prescribed by paragraph (*c*) of this Ordinance shall not have been issued within the period therein prescribed, then the resolution shall come into operation immediately upon the expiration of such respective period."

After a short discussion, the amendment was agreed to, and then adopted as a substantive resolution.

Subclause (f).

(*f*) The decision of the Association having been so approved shall be forthwith published in the Journals,

was accepted without discussion.

With the consent of the meeting Mr. VERRALL was allowed to revert to Section IX (11). He pointed out that the fifth line read "and is carried by a majority of not less than two-thirds of the members present and voting, thereon." At the Caxton Hall it had been pointed out that these words did not correctly express what was intended. Two-thirds of the members present might carry the thing one way if they voted as individual members, and if a card vote was taken the result might go the other way. It should read "two-thirds of the votes given thereon." Dr. Langdon-Down had asked why the Caxton Hall resolution had been altered. He (Mr. Verrall) thought that Council did not quite understand about the card vote and had altered the clause. He asked them to let the clause read as they had decided at Caxton Hall, namely, "two-thirds of the votes given thereon."

Dr. LANGDON-DOWN thought there was an inaccuracy to be seen when p. 19, resolution 149, was referred to.

Mr. VERRALL read the resolution as follows:

Resolved: That in Clause 12, fifth line, for the words "the members present and voting" there be substituted the words "the votes given thereon in the manner prescribed by the regulations."

He moved, with the Chairman's permission, that that alteration be made; and the motion was accepted without further discussion.

SECTION V.

The following clauses, proposed by Mr. VERRALL, were adopted without discussion:

ANNUAL SCIENTIFIC MEETINGS.

18. The Council shall at least once a year arrange meetings or Conferences, alone or in conjunction with other bodies, which it shall be open to every member of the Association to attend, for the purpose of receiving addresses or other communications relating to the medical or allied sciences, and discussing such subjects pertaining thereto as the Council may think proper, and the Council may arrange to hold such meetings or conferences in the United Kingdom or abroad. When held in the United Kingdom, one such meeting shall be convened at the same place as the Annual Representative Meeting and in connexion, but so as not to conflict, therewith. For the more convenient consideration of the matters to be discussed, the Council may provide that they shall be considered in Sectional Meetings, and the Council shall appoint a President and other officers of such Sections as well as readers of any addresses that may be given.

SECTION VI.

COUNCIL.

19. The Council shall be composed of the President of the Association, the President-elect, the Past-President, the Chairman of the Representative Meetings, the Chairman of Council and Treasurer *ex officio*, and of members elected by the bodies, and in the manner prescribed in that behalf by the By-laws.

SECTION VII.

COMMITTEES.

20. Committees may be appointed in such manner and having such powers as may be prescribed by the By-laws, or as the Representative Body or the Council, subject to the provisions of the By-laws, may think proper.

SECTION VIII.

OFFICERS.

21. There shall be the following executive officers of the Association, namely, a President, a President-elect, a Past-President, a Chairman of Representative Meetings, a Chairman of Council, and a Treasurer. The officers aforesaid for the time being, other than the Chairman of Council, shall hold office for such term, and shall have and enjoy such duties, powers, and privileges as shall be determined from time to time by the By-laws. The Chairman of Council shall be elected by the Council from its own number, and shall hold office for such term and discharge such duties as shall be determined by the Council. During his term of office and for one year thereafter he shall be an *ex officio* member of the Council, and for that period any Branch of which at the time of his election he was a Representative shall be entitled to elect another in his stead.

22. The Council may from time to time appoint and dismiss such salaried and other officers and servants as it may think fit.

To the next clause the Wandsworth Division moved an amendment. The clause was:

SECTION IX.

TRAVELLING EXPENSES.

23. The first class travelling expenses within the United Kingdom of members of Council and Representatives of Divisions attending any Representative Meeting shall be defrayed out of the general funds of the Association. Attendance of Representatives of Divisions for this purpose shall be construed to mean attendance at each session of the Representative Meeting, unless the Council shall be satisfied that good cause existed for absence from any particular session or sessions. The first class travelling expenses within the United Kingdom of all members attending meetings of Council or of Committees and of all members authorized by the Representative Body or by the Council to attend and attending any conference shall be defrayed in like manner. The Council shall (subject as hereinbefore provided) determine what shall be considered an attendance for the purpose of this clause.

Dr. LEGGE-MOORE (Wandsworth), moving the amendment, said there were two points to consider: first, whether they should give first-class travelling expenses, or be content with third class; and, secondly, whether in time to come the Association would not be in a position to pay their

members for attendance at Committees and Representative Meetings. If they passed the foregoing clause of the Ordinance it became part of the Charter, and they would have to go to the Privy Council to effect an alteration. The Wandsworth Division desired them to settle the question of travelling expenses, and say whether the matter of expenses should not be dealt with by the By-laws, which could be altered at any time. He therefore moved that the words "The first-class travelling" be omitted, and that the words "as defined by the By-laws," after the word "expenses," be inserted.

The motion was adopted.

Dr. LANGDON-DOWN (Richmond) pointed out that the title of the Ordinance would therefore have to be "Expenses," instead of "Travelling Expenses."

The CHAIRMAN said the clause would be re-drafted in accordance with the amendment.

Mr. VERRALL then moved Clause 24 (Section X) as follows:

SECTION X.

FINANCIAL AND OTHER REPORTS AND AUDIT.

24. The Council shall annually prepare a balance sheet and financial statement of the Association for the past year, an estimate of the probable income and expenditure of the Association for the coming year, and a report of the general state and proceedings of the Association for the past year to be presented to the Annual Representative Meeting. Such balance sheet and statement shall be audited by a professional accountant and a copy of the same as audited and also a copy of such estimate and report shall be sent to the Secretary of every Branch and Division, and published in the JOURNAL not less than two months before the said Meeting,

to which the meeting agreed.

Dr. WOLSTENHOLME inquired whether a suggestion might be made as to the form of the balance-sheet if thought desirable. He thought that the future balance-sheets should show the expenses of the JOURNAL separate from the expenses of the Association, and suggested that in future the division should be made.

The CHAIRMAN thought no amendment could be made to the Ordinance, but an instruction might be given by the meeting.

The meeting then accepted the following clauses without discussion:

25. In addition to the above-mentioned Report, the Council shall have power to present to any Representative Meeting such further report or reports as it may deem advisable, and the same shall be published in the JOURNAL if time permits.

SECTION XI.

BY-LAWS.

26. Save so far as determined by the Charter, or by the Ordinances, the constitution and mode of government of the Association, the rights and obligations of every member and separate body of members thereof, the duties, powers, and privileges of all Officers, and of all Councils, Committees, and governing and administrative bodies, both of the Association and of every Division and Branch, shall be such as may from time to time be prescribed and determined by or in accordance with the By-laws, and the By-laws (including the first By-laws) may from time to time be added to, amended, altered, or repealed by the Representative Body, subject to the provisions hereinbefore contained with respect to a resolution of that Body for the purposes aforesaid.

BY-LAWS.

Mr. VERRALL, introducing the By-laws, said they were the real machinery with which the Association was governed, and they ought to pay great attention to them. They should also realize they were laws which could be altered at any Representative Meeting without reference to the Privy Council. He moved the adoption of the following:

SECTION I.

PRELIMINARY.

1.—(1) In these By-laws (where not repugnant to the context) the expression "The Ordinances" means and includes the Ordinances of the British Medical Association contained in the First Schedule to the Royal Charter granted in the year 1907, and incorporating that Association and any amendment of those Ordinances.

(2) Words occurring in these By-laws and also occurring in the Ordinances shall bear the same respective meanings in these By-laws as they bear in the Ordinances.

2. The Interpretation Act, 1889, shall apply for the purpose of the interpretation of these By-laws, as it applies for the interpretation of an Act of Parliament.

3. These By-laws shall be construed so as not to conflict with the Charter or the Ordinances.

This was agreed to without discussion.

By-law No. 4 was also passed without remark, as follows:

SECTION II.

MEMBERSHIP.

Application.

4. Every candidate for membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Ordinances and By-laws, and the Rules of the Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

Mr. VERRALL moved that the words "In the case of a Branch in the United Kingdom the mode of election of new members shall be as follows" be prefixed to the following By-law:

Election by a Branch Council.

5. Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association and to every member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its rules prescribe) after the date of the said notice. A Branch may require that each candidate for election shall furnish a certificate signed by two members (either of the Association, or of the Branch, as the Rules of the Branch may prescribe), stating that from personal knowledge they consider him a suitable person for election.

He also proposed to insert a further By-law between Nos. 5 and 6:

In the case of a Branch not in the United Kingdom the mode of election of new members shall be such as may be prescribed by Rules of the Branch, with the consent of the Central Council.

That was in order to give the Colonies power to elect in a different way to that in which they themselves elected. They proposed to have Branch rules for election to be approved by the Central Council.

Mr. PERCY ROSE (Stratford) moved:

That By-law 5 be altered so as to transfer the power of electing new members from the Branch Council to the Divisions.

His Division were under the impression that at present new members were elected by the Council with very little knowledge as to the suitability of the various candidates, and they thought that there ought to be knowledge as to their suitability before their election, and that the election would be better in the hands of men who knew the candidates. The Divisions very likely knew nothing about the man, or heard nothing about the matter, until one day they suddenly found that a man had been elected without their having had a voice in the matter. It seemed rather absurd that a Branch, say, of 50 members was allowed the power of electing, while a Division of, say, 500 had not that power.

Dr. COX (Gateshead) hoped that the amendment would not be carried. In his opinion it was dangerous to entrust the power to some Divisions, because there would certainly be some local jealousies coming in which should not influence the election of a man to a large association like the British Medical Association. They had had instances in their own Branch where, if a man had had to be put up before his own Division only, he would have been rejected, whereas when he came under the Branch Council, which had full knowledge of the whole of the facts, he was, after careful consideration, elected. In addition, now that a Branch might require that each candidate for election should furnish a certificate signed by two members, that effectually killed off one of the arguments used by Mr. Rose, that the Branch Council knew nothing about the man. On his Branch Council notices, after a recital of the names of the candidates, there was put on, always in very bold type, "The Representatives for the Divisions are responsible for the bona fides of each candidate." And that had always had the effect of seeing that the election was done carefully. He thought that it would be a pity, from many points of view, to alter the present method of election by the Branch Councils.

Dr. R. E. Howell (Cleveland) said that Dr. Cox had said exactly what he had intended to say himself.

Dr. Nash (East Norfolk) opposed the amendment of the Stratford Division for precisely the same reason as Dr. Cox had mentioned — namely, because of the petty jealousies. He thought that if the power of electing new members was given to the Divisions it might be abused. There was another thing. Let them get into the Association these rather doubtful members, and educate them up to a better style of life, and then, if they did not conform to the decencies of life, there was always the power to put them out.

Dr. W. Muir Smith (Hastings and Eastbourne) supported the amendment proposed by the Stratford Division, and in reply to what had been said by Dr. Cox and Dr. Nash, he could give a concrete instance which had happened in his Division. A certain member was put up for the local medical society, but his conduct in the past and at the time had been such that it did not commend itself to the members of the local medical society, and they refused to elect him, and out of bravado he said that if the medical society refused to elect him he could get elected to the British Medical Association. He was duly nominated and elected by the Branch, and they all felt that a certain amount of discredit had been thrown upon their action in the medical society by his being admitted into the British Medical Association. So the law did not work satisfactorily in all cases. That was one concrete instance, and there were others which he had heard of. He was absolutely certain that it would be a great benefit, and that it would stimulate members in the Divisions to exercise their influence in getting new members if the power and privilege of conferring election were transferred from the Branches to the Divisions.

Dr. J. Singleton Darling (Portadown and West Down) said that he thought that the proposal would be absolutely unworkable. In small scattered Divisions it would make an election of a member nearly impossible. The Representatives of a Division on the Branch Council were extraordinarily slack if they allowed a man to be elected whom they objected to. He had been for many years a member of his Council, and they had never yet passed a man whom they had even a hint of an objection to.

Dr. G. Westby (Liverpool) said that it was a very important thing to get into the Association some of those men who did misbehave themselves in the profession and then make them behave themselves.

It was proposed and seconded that the question be now put. This proposal was carried.

The amendment was then put to the meeting and lost.

Dr. Fothergill proposed the insertion of the words "or of the Division" after the words "or of the Branch" in Clause 5. He said that the proposal would probably meet the views of several of those who had spoken, and it would be advisable in the case of a big Branch like the Metropolitan Counties Branch. They had at the present moment men put up for election nominated by men who did not live in their area. Some thought that a man should be nominated by a man living in his own district. The ultimate judgement as to whether he would be elected would then come before the Branch Council. His proposal gave a choice of three things.

The Chairman suggested that the proposal should read, "of the Division in which he resides."

Dr. H. Jones (Hereford) objected to the amendment. A man might be settled in some part of the country where he was quite well known and then move to some part where he was not known, and he could not belong to the British Medical Association because he knew none of the men.

Mr. Verrall said that they might decide to take away from the Branches all power of demanding from candidates any certificates at all, but so long as they left the Branches the power to incorporate in their rules a demand from any intending candidate for two certificates, he did not see why they should not leave to the Branch the power of declaring what those certificates should be, and if the Branch, in its wisdom, thought that the candidate ought to have a certificate from the Division in which he resided, he did not see why they should not be allowed to say so.

Dr. John Brown said that the Bury and Rochdale Division were opposed to the Branch Council having the sole right to elect a new member. At present his Division believed that whilst the Branch Council should elect new members the Division should first of all have had the name before them, and that they should recommend to the Branch Council any new member.

The amendment was carried.

Dr. John Brown moved:

> That in the case of every new member, it should be necessary to have a recommendation from the Division to the Branch Council.

Dr. Fothergill, on a point of order, asked whether, if a candidate had to be recommended by the Division in which he resided, that was not a prima facie proof of the election first of all.

The Chairman ruled that Dr. Brown was in order.

The motion was seconded by Dr. Muir Smith.

Dr. W. O'Dell (Torquay) asked whether the carrying out of the proposal would not give rise to the ill-feeling which had been referred to by Dr. Cox.

Dr. Grossmann said that in such small Divisions as, for instance, the Glossop Division, where a majority was 5 members, there being only 8 members altogether, it would be absolutely impossible for any one to get in if he was objectionable to any member. He did not say that such a thing would occur in the Glossop Division.

The amendment proposed by Dr. Brown was put to the meeting and lost.

Dr. William Harman (Winchester) proposed that the clause should read "a Branch shall require" instead of "may require."

The motion was seconded by Dr. Gosse.

Mr. Verrall said that he hoped that the meeting would not agree with this proposal. To say "shall" would be, he thought, a pity. Those Branches that did not want certificates would not ask for them.

With the consent of the seconder and of the meeting the amendment was withdrawn.

Clause 5 was then agreed to.

Mr. Verrall proposed that the following new By-law should come between By-laws 5 and 6:

> In the case of a Branch not in the United Kingdom, the mode of election of new members shall be such as may be prescribed by the rules of the Branch, with the consent of the Central Council.

This was agreed to.

Mr. Verrall then moved Clause 6:

Election by the Council of the Association.

6. Every candidate who does not reside within the area of any Branch shall forward his application to the General Secretary of the Association, together with a certificate signed by three members of the Association stating that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every member of the Council, and the candidate, if not disqualified by any regulation of the Association, may be elected a member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

Agreed to.

Clause 7 was then moved by Mr. Verrall:

Election of Officers of Services.

7. Notwithstanding anything contained in either of the two last preceding By laws, officers of the navy, army, and Indian Medical Service on the Active List, are eligible for election through the Council or a Branch without any such certificate as therein mentioned.

Agreed to. He then moved Clause 8.

Honorary Members.

8. The election of honorary members shall be by the Representative Body, on the recommendation of the Council. Honorary members shall have none of the liabilities of members as regards subscriptions, and shall not be entitled to any vote, but shall have such privileges as may be conferred upon them by resolution of the Representative Body. Every honorary member shall cease to be such member upon a resolution of the Council to that effect passed by a majority of not less than two thirds of those present and voting, and confirmed by the Representative Body.

Dr. John Muller (Exeter Division) stated that his Division considered that the election of an honorary member was an honour and that it should come from the Council only and not from the Representative Body, and he moved an amendment to that effect.

The motion was put the meeting and lost.

Clause 8 was then agreed to.

Mr. VERRALL moved Clause 9:

Extraordinary Members—"Associate." "Complimentary."

9. Extraordinary Members shall be either Associate or Complimentary Members. Any Division or Branch may elect any ordinary Member of any other Division or Branch as an Associate Member, and any Division or Branch not in the United Kingdom may elect as a Complimentary Member any qualified medical practitioner or person distinguished in science resident within the area thereof, but not eligible for ordinary membership of the Association. Divisions or Branches may by their local rules confer on Extraordinary Members such privileges other than that of voting, and impose such conditions of election as they may think desirable, subject to the sanction of the Council.

He said that he had a note arising out of what had been decided with regard to the Ordinances. It was to the effect that the Organization Committee concurred in the proposal of Wandsworth about the election of honorary members and suggested a consequential change of By-law 9, namely, the deletion of the words "not in the United Kingdom" in line four. This was simply to allow other Branches to have the same election of honorary members as Colonial Branches had.

The amendment was agreed to, and Clause 9 was carried.

Mr. VERRALL then moved Clause 10:

Annual List of Members.

10. In the month of May in each year a List of Members of the Association shall be prepared and published stating the names and addresses of the Ordinary Members of each Division and Branch as shown by the Register (to be kept by the Secretary of the Association) of Members of the Association on April 30th of that year, and those named in the said List as Members of any Division or Branch and no others shall be deemed to be the Ordinary Members of such Division and Branch at the date of the publication of such list for all the purposes of the Ordinances and the By-laws. Such list is hereinafter referred to as the "Annual List."

This was agreed to.

Mr. VERRALL then moved Clause 11:

SECTION III.

SUBSCRIPTIONS.

Amount.

11. Except in the case of Members elected on or after the first of July in any year, the subscription to the Association shall be twenty-five shillings. A Member admitted on or after the first of July in any year shall pay half the current subscription for that year.

This was agreed to.

Mr. VERRALL then moved Clause 12:

To whom Paid.

12. Subscriptions shall be paid by all Members to the General Secretary at the registered office of the Association, or in the case of Members residing out of the United Kingdom, to such persons (if any) as the General Secretary may authorize to receive subscriptions on his behalf, of which authorization notice shall be given to all Members concerned.

This was agreed to.

Clause 13 was then moved by Mr. VERRALL:

Arrears of Subscription: Cessation of Membership.

13. Any Member whose subscription shall not have been paid on or before the 31st December of the current year shall, without prejudice to his liability to the Association, be suspended from all privileges of membership, and at the end of the succeeding year, if the arrears be still unpaid, he shall, *ipso facto*, cease to be a Member. No Member shall (except in case of his death or expulsion, or of his ceasing to be a Member under the provisions of Ordinance 9 (*c*) or under the previous provision of this By-law) cease to be a Member without having given one month's previous notice, in writing, of his intention in that behalf to the Secretary of the Association, and having paid all arrears of subscription (if any) due from him.

Dr. TODD asked whether, if a man ceased to pay his subscription, there were any means of recovering the arrears.

The CHAIRMAN stated that it was quite possible to sue a member for his subscriptions. Members could not rejoin the Association without paying all their arrears.

The clause was then agreed to.

Mr. VERRALL then moved Clause 14:

Extra Subscription to Divisions and Branches.

14. It shall be competent for any Division or Branch offering special privileges to its Members to require a special subscription from those Members who desire to avail themselves of such special privileges, and it shall likewise be competent for any Division or Branch to charge such special subscription as it may think proper to its Extraordinary Members; but no Ordinary Member of any Division or Branch in the United Kingdom shall be called upon to pay any further subscription than that paid to the Association as a condition of enjoying any ordinary privilege of membership of such Division or Branch.

This clause was agreed to. He then moved Clause 15:

Special Subscriptions to Branches not in the United Kingdom.

15. (1) It shall also be competent for any Branch not in the United Kingdom by Rule (approved as hereinafter mentioned) to require each member of such Branch to pay (in addition to his subscription to the Association and to any such special subscription) an annual subscription of such amount as may be deemed by such Branch to be necessary for defraying expenses occasioned by the special circumstances of such Branch, and not capable of being defrayed out of any grant from the funds of the Association made in pursuance of the By-laws.

(2) No such Rule shall have effect unless and until it shall have been approved by the Branch or by the Council in accordance with the following provisions.

(3) Approval by the Branch may be given either (*a*) by a majority of not less than three-fourths of the Members of the Branch, voting by means of voting papers sent to all such Members (in such manner as the rules of the Branch may prescribe) not less than two months before the result of such voting is ascertained; or (*b*) by a majority of not less than three-fourths of the Members present and voting at a General Meeting of the Branch specially convened to consider the proposed Rule, of which Meeting not less than twenty-one days' notice shall have been given to all the Members of the Branch.

(4) In the event of such Rule being approved at a General Meeting of the Branch under paragraph (3) (*b*) hereof, a copy of such Rule, together with a copy of this By-law, shall be sent to every Member of the Branch, and the Secretary or other responsible officer of the Branch shall certify to the Council that such copies have been so sent, and such Rule shall not be approved by the Council (*a*) until the expiration of six months from the date of such Certificate, or (*b*) if the Council shall, within the said period of six months, have received a representation in writing purporting to be signed by not less than one-eighth of the total number of Members of the Branch (as appearing in the annual list for the time being in force), praying that the said Rule be not approved.

He said that on page 3 of the Report of the Organization Committee there was an allusion to the special ways in which the Colonial Branches wanted greater freedom. Members would see under (*b*):

(*b*) That Colonial Branches should have certain freedom as regards levying compulsory local subscriptions (provisions for this purpose are already incorporated in the draft By-laws).

One Colonial member had spoken to him about the matter, and asked him whether it was quite certain that the Colonial Branches were given power to levy additional compulsory local subscriptions. He (Mr. Verrall) told him that they were. If any Colonial members were not satisfied that the particular clause gave them that power he hoped they would say so. The Committee had safeguarded the rights of minorities by making it necessary for a very definite power to be obtained. There were all sorts of protection given. These had been put in because the Committee had been told by counsel that they would have to do it, and that the Privy Council would insist on minorities being protected in this matter, and that they would have to show that a regular bona fide demand, obtained with some deliberation and difficulty, had been shown by the particular Branch which wanted additional money.

Dr. STRAPP (Natal), speaking for his own Branch, said that they would be perfectly satisfied with the By-law as amended. The matter of the Capitation Grant was rather a burning question with them. They got their 4s. returned to them, but as a matter of fact their expenses were nearly double that amount.

Dr. G. E. TWYNAM said that those whom he represented were very well satisfied with the wording of the By-law.

The clause was agreed to.

The CHAIRMAN stated that By-law 16 to some extent depended upon the manner of the election of the Council, and he proposed to leave No. 16 out and not deal with it until the meeting had decided on the manner of the election of the Council, which would come in the later By-laws.

Mr. VERRALL then moved Clause 17:

Local Management: Divisions.

17. Any Executive Committee or Council appointed to manage the affairs of any Division shall include *ex officio* the Member who for the time being represents the Division on the Representative Body, and any Executive Committee or Council of any Division which is not in itself a Branch shall also include, as *ex officio* Members thereof, the Members of the Branch Council elected by such Division.

This was agreed to.

Mr. VERRALL then moved Clause 18:

Grants to Branches: Ordinary.

18. (1) The Treasurer of the Association shall annually pay, or allow out of the funds of the Association, to the Treasurer of each Branch such sum, not exceeding four shillings, as the Council shall order to be paid, for each Member of the said Branch who has paid to the Association the full current annual subscription for that year, and such sum, not exceeding two shillings, as the Council shall order to be paid, for each Member elected after the 1st July, who has paid to the Association half the current annual subscription.

(2) The grants made under this clause shall be applied to the expenses of the bodies to which they are made at the discretion of those bodies and within the limits of the objects of the Association as defined in the Charter.

(3) For the purposes of this By-law, those named in the annual list for the time being in force, as Members of any Branch, shall be deemed to be members of the said Branch for the year in which such Annual List is published, and those elected by any Branch Council, whose membership dates from July 1st in any year and has been notified to the Council, shall be deemed to be Members of the said Branch for the ensuing half-year.

(4) Provided that it shall be competent for the Treasurer in any year to make grants on account to any Branch prior to the publication of the Annual List for that year.

Dr. FOTHERGILL (Wandsworth) moved:

That [illegible] the discretion of the Central Council as to the grant to be made to any Branch, as this would do away with the power proposed to be done [illegible] not exceeding four shillings" [illegible] two shillings.

He said that the matter of finance was one of great consequence in some districts. If they had the Council reconstituted with an efficient Finance Committee which looked after the finance and nothing else it would in a very short time come into touch with the need of every Division or Branch, and be able to allocate to them such funds as would keep the organization in a satisfactory condition. They ought to trust the Central Council. He also thought that they should not limit the grant to "not exceeding 4s." If they investigated the medical societies all over the kingdom they would see that if they had an efficient medical society they could not get the work done at 4s. a head. The Division to which he belonged was supposed to be exceedingly extravagant, but they had done everything up to the top notch of efficiency and it had cost them about 6s. 6d. per head. He would ask them not to limit the discretion of the Central Council in this matter. If the Council saw any Divisions which were doing good work they should let them have the money which was necessary, and it would redound to the credit of the Association in all parts of the United Kingdom and in the Colonies.

Dr. G. [illegible] (East Norfolk) thought this opened up a rather large question, and that the only way was to get a fair limit fixed.

Dr. H. A. BALLANCE (Norfolk and West Norwich) thought Mr. Fothergill's difficulty was entirely done away with by the supplemental grants which the Council were able to make. The Division should have some sort of limit settled by the Council—a sum of 4s. per head; and if other expense was incurred which the Council considered a reasonable expense over and above the 4s. the Council was in a position to make a supplemental grant to defray the expense, and that, he thought, was the best way out of it.

Dr. COX said that was the suggestion he had been about to make.

Dr. FOTHERGILL said he did not think they should have to subscribe locally any extra money spent for the Association. If anything was to be done it should be done with the Association money.

Dr. FOTHERGILL's amendment was withdrawn.

Dr. C. E. ROBERTSON (Glasgow Southern) moved to omit the words "not exceeding" and to insert "of."

The amendment was not seconded, and consequently fell to the ground.

Subsection (1) of By-law 18 was then agreed to, and the following were agreed to without discussion:

(2) The grants made under this clause shall be applied to the expenses of the bodies to which they are made at the discretion of those bodies and within the limits of the objects of the Association as defined in the Charter.

(3) For the purposes of this By-law, those named in the Annual List for the time being in force, as Members of any Branch, shall be deemed to be Members of the said Branch for the year in which such Annual List is published, and those elected by any Branch Council, whose membership dates from July 1st in any year and has been notified to the Council, shall be deemed to be Members of the said Branch for the ensuing half-year.

(4) Provided that it shall be competent for the Treasurer in any year to make grants on account to any Branch prior to the publication of the Annual List for that year.

Mr. VERRALL moved the following:

19. In addition to the grants made in pursuance of the last preceding By-law, the Council, on the application of any Division or Branch, shall have power to make a supplementary grant of such amount as the Council may deem proper. Every application by a Division, not itself a Branch, shall be forwarded through the Branch Council, whose duty it shall be to transmit the same to the Central Council, with such comment (if any) as the Branch Council may deem expedient.

Mr. C. R. STRATON (Salisbury) moved the following amendment:

That the capitation grant should be equal, and that Branches desiring to spend more should meet their expenditure by voluntary subscriptions. In any cases of special necessity an appeal should be addressed to the Council, who may make an emergency grant not exceeding 1s. per member.

Salisbury was quite pleased that they were to make voluntary calls in the same way as the Branches. If any Branch wanted to spend any money they made a supplementary call.

The amendment was lost and the clause was agreed to.

Mr. VERRALL moved:

20. All applications for supplementary grants shall be referred by the Council to the Organization Committee for report thereon, and, in considering the same, the said Committee and Council shall have regard to the evidence of work done by or through the agency of such Division or Branch for the Association or the medical profession, and also to the amount which may have been voluntarily subscribed locally for any purpose for which such a grant may be desired.

Dr. FOTHERGILL said he would like to get to know the meaning of the last clause. He had said, and still stood to it, that no district should have to pay out of their own pockets to carry on the work of the Association, and that such expenditure should be paid out of the central funds.

Dr. A. COX (Gateshead and Consett) thought if the application was to go through the Branch Council, and if the Organization Committee had to examine the application and consider the work done by the Division or Branch, that was sufficient guarantee that the work was necessary, without demanding of the Division that it should put its hand into its private pocket, and he hoped the last few words would be deleted.

Mr. VERRALL said that personally he had no objection to cutting those words out.

The Section was then agreed to as amended.

Mr. VERRALL moved 21 as follows:

Application of Grants.

21. Out of the moneys received by way of grant from the Association as aforesaid each Branch shall (so far as possible) defray all its expenses, and shall also pay to

each Division of the Branch such sum as the Branch Council may consider necessary to enable the Division to defray its expenses.

Dr. LANGDON-DOWN (Richmond) proposed the following addition to the clause:

And the Branch Council shall have power to require that the Division shall, before incurring any extraordinary expenditure, present an estimate and obtain its sanction for the same.

He said the point of that was that they were tending to get into a position where the Branch Council would have difficulty in controlling the expenditure of the Divisions, and some Divisions would take the bit between their teeth and incur large expenditure which was within their rights, but to an extreme degree. The difficulty was that under the present arrangement the expenditure was incurred first and the bill had to be paid afterwards. It appeared to him that they could exercise no control over the expenditure of the Divisions unless they had some such clause as this by which the Branch Council should require that the Divisions should let the Council know in advance what sort of expenditure they were going to incur. Then, if there was any dispute between a Division and the Branch Council, the Division would be in the position of having taken the Branch Council into consultation in advance.

Dr. WOLSTENHOLME had much pleasure in seconding this proposition. He had made reference to the subject before the Finance Committee. It was an example that had occurred and might recur, and he agreed with Dr. Langdon-Down that it was a conceivable one, and he hoped that the amendment would be passed.

Mr. VERRALL said it had been the custom for the Branches to give a grant at the end of the year on an estimate of money that would be required during the coming year. Then they had to cut their coat according to their cloth. If he were on a Branch Council, and their custom had been to give a grant for a certain sum to run the Division for the year, and if the Division spent something else, he would be inclined not to pay it. He did not think they should be allowed to run over their expenses, and then present the bill. But if that was the custom, he could see that some control would be necessary. If, on the other hand, the Division told them what they had spent, and properly spent, in the previous year, and the Branch Council formed an estimate of what the respective Divisions would require for the coming year, and told them what they were to run the year on, he did not think the Divisions ought to have the spending of their money in any way they thought fit, and then come to the Council *in forma pauperis*.

Dr. J. BROWN (Rochdale, Bury) moved the adjournment for the night.

The CHAIRMAN hoped they would finish that section before adjourning.

Dr. FOTHERGILL thought this question raised a tremendous issue which they were not in a mood to discuss at that moment. They had had the whole thing threshed out and had spent several days on it in his own Division. It was a question how they were going to define what was extraordinary, and they must have the Organization Committee's decision first what was ordinary and what was extraordinary. Things might crop up, such as hospital trouble, Poor-law trouble, or contract practice trouble, and if the Divisions were not able to deal with them promptly, they might lose their chance. If they would take his advice they would adjourn the debate, and consider it when they were fresh in the morning.

Mr. A. FULLERTON (Belfast) seconded the motion for adjournment.

A show of hands was taken, and the CHAIRMAN announced the numbers to be equal, and gave the casting vote in favour of the adjournment.

The meeting then adjourned till 9.30 the next morning.

Thursday, May 30th, 1907.

Dr. J. A. MACDONALD in the Chair.

THE SOUTH WALES DISPUTE.

Before the minutes of the previous day's proceedings were confirmed,

Dr. E. J. MACLEAN (Cardiff) asked whether the balance of funds remaining from the old Branches before the new constitution was formed were available for contribution by a Branch to the Emergency Fund.

The CHAIRMAN took advantage of the question to refer again to the South Wales dispute, which was a matter of urgent importance to the Association. He said the men in South Wales had been fighting for a year, and fighting in the interests of the profession. The members of the South Wales Branch had subscribed £1,100 to carry on the contest with the Ebbw Vale Collieries; and the Association ought to support them.

Dr. FOTHERGILL (Wandsworth) said his Branch had taken up the matter, and proposed to make a donation at their next meeting.

THE EMERGENCY FUND.

Mr. E. H. T. NASH (East Norfolk and North Suffolk) inquired what the rest of the profession had subscribed to the Emergency Fund since it was opened some considerable time ago. He was under the impression that it was under £3, and he thought such a thing was a disgrace to the Association, to allow their brothers in a dispute of that sort to pay £1,100 out of their own pockets, when they themselves had subscribed almost nothing.

The CHAIRMAN replied that the sum subscribed, so far as he knew, was about £80, that was, apart from one subscription of £50 given by Sir Victor Horsley. A good deal of that had come from the London members in response to an appeal which he, the Chairman, made personally. They intended as soon as they got a fair start in the matter to publish the list; but it was no use publishing a list unless they had something to start with. He hoped that every member of the Representative Meeting when going back to their districts would do their best to get support for the Emergency Fund.

Dr. W. A. CASKIE (Glasgow North-Western) inquired whether it was within the power of the Branches to grant donations to the Fund.

The CHAIRMAN replied that the funds acquired under the new organization could not be so utilized; but there were some Branches which had funds remaining from the time before the change was made, and he appealed to such Branches to subscribe from those funds.

Dr. J. SINGLETON DARLING (Portadown and West Down) remarked that he was Treasurer of a Branch; at the time the new constitution came in he had money in hand, but that money had become merged with the new funds. Would that hinder his Branch from using the money?

The CHAIRMAN replied that the Branch could subscribe all the balance they had at the bank before the new organization came into force.

Dr. WALTER SMITH (St. Pancras and Islington) suggested that a subscription should be made at that meeting for the Emergency Fund. Without desiring to tax members present who had many expenses to meet, he thought if they gave a small amount it would create a little interest in the matter, and that they would go back and carry that interest with them.

Dr. C. J. RENSHAW (Altrincham) said that some of the Lancashire and Cheshire members had already subscribed.

Mr. H. A. BALLANCE (Norwich and West Norfolk) desired to emphasize the importance of what was put forward. The East Anglian Branch had already, out of the funds in its possession at the time the new constitution was adopted, made a grant to the South Wales funds. Therefore that was a precedent for the other Branches doing the same.

The CHAIRMAN intimated that the Dundee Branch had also subscribed.

At this point the minutes, verbal emendations having been made, were confirmed by the meeting.

THE CHARTER.

BY-LAWS.

The meeting then resumed the discussion of By-law 21.

Dr. M. MOORE (Coventry, Nuneaton and Tamworth) considered the method of financing the Divisions as proposed in the By-laws was as good as any that could be had. With regard to the expenses of his Division, he mentioned that Coventry had been put to a greater expense than usual in consequence of the Dispensary controversy. They had had meetings and circularized medical men in Birmingham, Leicester, Coventry, Tamworth, and Leamington. Irrespective of that, he would like members present to know that four medical men had

resigned from the Coventry Dispensary, but three others had been elected. The speaker read the names to the meeting. With regard to the Emergency Fund, Coventry had already sent a subscription, and his Division had agreed to do so annually.

A REPRESENTATIVE inquired what the extraordinary expenditure might be. Were they to go to their Branch every time they wanted to spend £2 or £3?

The CHAIRMAN said Dr. Langdon-Down would answer the question when replying on his amendment.

Mr. BRUNSKILL (Manchester, North) was not in favour of hampering the Divisions with the Branches. The Divisions certainly ought to have a free hand as much as possible.

Dr. WALTER SMITH (St. Pancras and Islington) did not think it possible in the case of extra grants to make an estimate of what might be spent months ahead. The extra grants were for sudden emergencies, and it was impossible to make an estimate under the circumstances.

Mr. GEORGE BROWN (Devonport) thought they ought to be very cautious. Some Divisions were very active and did a lot of work which was no doubt gratifying to the Divisions themselves, and he did not wish to damp their enthusiasm, but if every Division were as active as some in making amendments, the meeting would not be able to get through their work till midsummer. The previous day they had had amendments, no doubt important locally, debated, and only two hands held up in their favour. That was not the kind of thing to be encouraged. If these Divisions chose to meet and pass resolutions and enjoy themselves, let them do it at their own expense. He said they ought not to be dragged up from the country 200 or 300 miles to discuss those things day after day—motions and amendments which were wholly inconsequent, and which did not commend themselves to any one in the room.

The speaker was proceeding to refer to the spending of money in promoting the candidature of certain members of the Association in regard to the General Medical Council when he was called to order by the CHAIRMAN, who requested him not to make assertions of that kind.

Mr. GEO. BROWN said he had read a printed circular with regard to the election, and as they came from the Divisions he supposed that they were paid for out of the Divisional funds.

The CHAIRMAN: I must ask you not to make insinuations of that sort, it is not conducive to the peace of the meeting, and I do not think it contributes to the debate.

Mr. GEO. BROWN: At the same time it is possible that money may be spent in this way.

The CHAIRMAN: Again I say you must not make these insinuations.

Mr. GEO. BROWN: I have a perfect right to point out how moneys may be spent, and not only in regard to that matter alone, but in matters of personal interest.

Mr. MOORE (Coventry and Nuneaton and Tamworth): I do not think we can harp upon these personal matters.

The CHAIRMAN: Order!

Mr. GEO. BROWN contended that the Council should keep a very strict hand indeed upon extraordinary expenditure.

Dr. J. D. LIGHT (Birmingham, C.) trusted that the meeting would reject the amendment, thinking that the rule as it stood was perfectly satisfactory.

The amendment was lost.

Dr. FOTHERGILL (Wandsworth) moved to delete the words "so far as possible."

The CHAIRMAN observed that the Solicitor would explain that it was a matter of drafting.

The SOLICITOR (Mr. Hempson) thought these words ought to be retained. It was intended to provide that each Branch should, so far as it possibly could, meet the wishes of its members in expenditures out of this money, and if they exceeded they could come to the Council and ask for the supplemental grant.

Mr. VERRALL was glad that that expression should have come from the Solicitor because it was a legal matter. It would be seen that the words had been deliberately retained, because they thought that the expenditure ought as far as possible to be kept within the estimates.

The CHAIRMAN appealed to Dr. Fothergill to withdraw the amendment, which was done, and the Clause was agreed to.

Mr. VERRALL moved Clause 22:

Annual Reports.

22. Every Division shall furnish annually to the Branch Council during the month of January, and every Branch shall furnish to the Council of the Association not later than March 15th in every year, a report of its proceedings during the previous year, a statement of its numbers and a financial statement in such form as the Council may from time to time prescribe.

Dr. WOLSTENHOLME (Salford) asked whether arising out of that there was any penalty if the Divisions did not do it.

Mr. VERRALL said of course they could not, so to speak, ask for the head of the Secretary on a charger, but they could refuse to give him any more money next year.

The clause was agreed to.

Mr. VERRALL moved Clause 23, clause by clause:

SECTION V.

Formation of Constituencies.

23. (1) Representatives of Divisions shall be elected by Constituencies formed as follows, each such Constituency being entitled to elect one Representative.

(2) Any Division having not less than fifty members may form one Constituency, and except as hereinafter provided every Division having less than fifty members shall be grouped by the Council with another Division, or with other Divisions, to form a Constituency having not less than fifty members.

(3) Provided that the Council shall have power to give separate representation to Divisions having fewer than fifty members in those cases in which it appears to the Council that special difficulties exist as to the holding of joint meetings with neighbouring Divisions.

(4) In no case shall the total number of Constituencies formed throughout the Association exceed 300.

(5) Subject as aforesaid the Constituencies shall be formed and may be from time to time altered by the Council, and the Council shall publish lists of the Constituencies as and when they may think expedient.

Subsection (1) was agreed to without discussion.

On Subsection (2), Mr. PERCY ROSE (Stratford) expressed the opinion that 50 was rather a small number to form a separate constituency, and suggested 100 as a more suitable number. He would ask the meeting to bear in mind that as they were now committed to travelling expenses, and there was a strong feeling in favour of the payment of personal expenses as well, they ought not to create an undue number of constituencies. He therefore moved the following amendment:

That the words "one hundred" be substituted for the word "fifty" in By-law 23.

Dr. M. MOORE (Coventry and Nuneaton and Tamworth) protested against this attempt of the larger Divisions to make a meal out of the smaller ones, which required as much consideration from this meeting as the larger ones.

Dr. ROBERTSON (Glasgow, South) hoped the amendment would be withdrawn. They must select in which of the two ways they were going to settle the number of Representatives.

Dr. COX (Gateshead) drew attention to the fact that in the vote by card the previous day there were 47 Divisions voting, representing 4 718 votes. That was equivalent to about 100 members as it stood at present.

Dr. DOUGLAS (Dartford, Maidstone, Rochester and Chatham) opposed the amendment. In some parts of the country the means of communication were so difficult that to increase the numbers would be to increase their difficulties.

Dr. DARLING (Portadown and West Down), on being called upon, said the amendment had been received with such a chorus of disapprobation that he would not speak upon it.

Dr. J. SINCLAIR HOLDEN (West and South Suffolk) pointed out that the 300 as a maximum did not refer to the number of members but to the number of constituencies.

Mr. VERRALL said the Council had felt it right to avail themselves of their power to give representation to less than 50 members in order to give reasonable representation to small areas.

The CHAIRMAN pointed out that the amendment would not have the effect intended, but would have the effect of reducing the possible total. As a matter of fact, the Representative Meeting scarcely ever reached 150.

The amendment was lost, and Subsection (2) was agreed to.

Dr. ROBERTSON considered that Subsection (4) should be deleted. With Subclause (2) standing Subclause (4) was nonsense. It was definitely settled that every Division consisting of 50 members was to have a Representative, and that, therefore, settled the number of Representatives.

The CHAIRMAN said 50 was the minimum limit, but there were some Divisions of 500 or 600 members which had only one Representative. It was possible that every constituency of 50 might claim representation but many might not.

The CHAIRMAN said there was an amendment of the Cleveland Division to the same effect. Would Cleveland withdraw that?

The amendment was withdrawn, and Subclause (2) and Subclause (3) were agreed to as part of the Charter.

Dr. R. E. HOWELL (Cleveland) moved:

That in By-law 23 (4), second line, 150 be substituted for 300.

The amendment was on the same lines. His Division was anxious to have the number of the Representative Body reduced. A smaller number would do the work much more efficiently and in a shorter time. There were members of the Representative Body who never would be missed. In view of the proposition,

Dr. ROBERTSON (Glasgow) observed that they had been told by the Chairman that, whether a constituency numbered 500 or 50, they would have one Representative, and in that way the number of constituencies would be settled. He did not want them to have two subclauses, one absolutely contradictory of the other.

Dr. TODD (Sunderland) asked how many constituencies there were.

Dr. LANGDON-DOWN (Richmond) asked what authority arranged the constituencies of the Association. Was it not the Central Council?

The CHAIRMAN replied in the affirmative.

Mr. PERCY ROSE (Stratford) asked how many Divisions and how many constituencies there were? They were two very different things.

Mr. VERRALL said there were 208 Divisions and 148 constituencies. In reference to what had been said by Dr. Robertson, if the members looked at the word in the subclause they would see that it was "may" and not "shall." It was not compulsory that every Division of 50 members should have a Representative. If the Council were unable to keep within the number of 300 or 200, or whatever number was fixed, they would group constituencies that were groupable in order that that number might be kept within.

It was moved, seconded, and agreed that the question be now put.

Dr. ROBERTSON then, with the permission of the meeting, withdrew his amendment.

Subclause (4) was then agreed to.

Mr. VERRALL moved Subclause (5):

(5) Subject as aforesaid the Constituencies shall be formed and may be from time to time altered by the Council, and the Council shall publish lists of the Constituencies as and when they may think expedient.

This was agreed to.

Clause 23 as a whole was then agreed to.

Mr. VERRALL then moved the following:

Election of Representatives.

24. (1) The Representative shall be elected by a general meeting of the Members of the Constituency, held not more than nine months, nor less than four weeks, before the Annual Representative Meeting at which he takes office, or by Voting Papers sent to each Member of the Constituency, as the said Constituency may decide.

Dr. R. E. HOWELL (Cleveland) said that his Division had sent him to the meeting to lay before it the advisability of having the election of Representatives by voting papers only. There was great difficulty in getting members to come to any business meeting of the Divisions, and when there was simply an election of a Representative they found that meetings of the Divisions were very poorly attended. By voting papers the opinions of the men would be got at very much better. He moved that the words "The Representative shall be elected by voting papers not more than nine months nor less than four weeks before the Annual Representative Meeting at which he takes office" should be inserted for the words "The Representative shall be elected by a general meeting of the members of the constituency held not more than nine months nor less than four weeks before the Annual Representative Meeting at which he takes office."

Mr. VERRALL said that the Committee entirely disagreed with the proposal in the amendment. They thought it very much better to leave each constituency to decide its own mode.

Dr. WILLIAM EWART (Westminster) said it seemed as though the elections were by a very small number in many parts of the country. It would be very much more just to the profession that the majority should be represented and if possible, also the minority; but at the present time very often neither the one nor the other was represented. If one Division was represented by a handful of men out of a large number and if another Division had taken the trouble to get a proportionate representation or a fair representation by enabling every member to give his vote, there was inequality when it came to a vote on an equal footing, and therefore it was a matter which affected the whole profession.

Dr. ROBERTSON (Glasgow) said that he had been asked by his constituents to support the amendment. He dared to say that his Division was probably as well attended as any other Division; but he did not think that he was a fair representative to speak for the body which he represented. He heard yesterday of a Representative appointing himself at a meeting. That was to say, one man was present, and he appointed himself Representative. He would urgently lay before the meeting the necessity of providing that the election of Representatives should be by voting papers alone.

In answer to a question by Dr. MACLEAN,

The CHAIRMAN said that he thought the Cleveland resolution raised the point more definitely than the Cardiff one.

Dr. MUIR SMITH (Hastings and Eastbourne) hoped that the meeting would reject the amendment of the Cleveland Division simply for the reasons that it would introduce an element of coercion into the administration of the Divisions. Hitherto the Association had granted home rule to all the Divisions, so that they should manage their own affairs in their own way as seemed best to them. The difficulty seemed to him to be not so much getting members together to elect a Representative as getting members together to instruct the Representative.

Mr. TODD (Sunderland) hoped that the Representative Meeting would throw the amendment out by a large majority. He believed that it was not practical in any sense whatever. If a Division were properly organized and managed there would be no trouble whatever in getting a Representative properly elected. The wording suggested by the Organization Committee was a proper wording because it left freedom to the Divisions to rule their affairs in their own way.

It was moved, seconded, and agreed that the question be now put.

On Mr. VERRALL explaining that the wording in the By-law was "not less than four," the amendment was put to the meeting and lost.

The CHAIRMAN asked Dr. Maclean (Cardiff) if he desired to put his amendment.

Dr. MACLEAN (Cardiff) replied that he only wished to assure his Division that the meeting was against what was proposed thereby.

Dr. HUGHES (Southampton, Guernsey and Jersey) had been instructed by his Division to move that the figure "4" in the subclause be changed to "8," in order that there might be a longer time given for the Representatives to be instructed. His Division, embracing, as it did, Jersey and the other Channel Islands a long distance from Southampton, was so scattered that it was difficult to get a meeting at short notice to consider the agenda.

The amendment was put to the meeting and lost.

Dr. C. E. ROBERTSON (Glasgow Southern) moved to add at the end of the subclause, "Always providing that should there be less than twenty members present at such General Meeting the election shall take place by voting papers." He regretted that he had been accused of making flippant remarks with regard to such a serious matter as the present. He assured the meeting that he had the subject very much at heart, and that anything he

said from his point of view was said in the best interests of the Representative Body. [Hear, hear.] He did not see how the meeting could refuse to give them the satisfaction of knowing that at least twenty men were present when a Representative was elected. He objected to the wording of the proposed subclause: and he thought that in the interests of the dignity of the Representatives the attendance of twenty members should be guaranteed when voting for a Representative.

Mr. VERRALL asked what Dr. Robertson proposed if his amendment were adopted, and voting papers were sent out but twenty answers were not received.

Mr. E. H. T. NASH (East Norfolk and North Suffolk) inquired whether Dr. Robertson thought the dignity of the Representatives would be enhanced by a vote where perhaps there were five members who knew something about the work and the remaining fifteen might know absolutely nothing about it.

Dr. WILLIAM EWART (Westminster) said the Representatives had other duties than knowing about the affairs of the society; they had the duty of representing the opinions of their constituencies. Although a man might be versed in particular knowledge which might lead to action, yet it might be a one-sided direction of action. That was not fair. There was also the duty of educating their Divisions to take professional action; and, unless the Divisions were constantly reminded and brought up to scratch, it seemed they would not be furthering the ends which the meeting had at heart, and which the British Medical Association was supposed to further.

Dr. W. ODELL (Torquay) opposed the resolution. He came from a scattered Division, and found that members would drive five or six or seven miles to a meeting—members who took an interest in the work and who knew the work. It was sent by men who knew what the work of the Association was. If voting papers were sent out, they would get men appointed who knew nothing of the work of the Association.

Dr. WALTER SMITH opposed the resolution also.

Dr. ROBERTSON, replying to Mr. VERRALL, who had asked what would be done if a fewer number than twenty replied to the voting papers, said they would have the satisfaction of knowing that they had done their duty, and had done everything possible to give members an opportunity of voting.

The amendment was then put to the meeting and lost.

Dr. LANGDON-DOWN moved an amendment that the end of the clause should be altered. The clause did not state the period within which the voting by papers should be accomplished. He thought they ought to fix the period of time and suggested the words: "The Representative shall be elected not more than nine months nor less than four months before the Annual Representative Meeting at which he is to take office."

The CHAIRMAN stated that the Organization Committee's Chairman had accepted the verbal amendment, and it was then agreed to by the meeting.

Subclause (2) was then agreed to as part of the Charter.

Mr. VERRALL moved Subclause (3) as follows:

> The Secretary of a Division or where the election [illegible] papers shall be dated and addressed to the Secretary of such Constituency, [illegible] every practicable means Divisions [illegible] one of those Divisions to [illegible] the Secretaries of those Divisions, and if [illegible] election.

The amendment was then put to the meeting and lost.

Subclause (3) was then agreed to as part of the Charter.

Mr. VERRALL moved Subclause (4):

> The person acting under Clause 2 of this By-law shall, not less than fourteen days before the Annual Representative Meeting, inform the General Secretary of the name and address and mode of election of the Representative elected by the constituency, and, if the election was by voting papers, shall satisfy him as to the holding of the subsequent meeting of the Members of the constituency, and the General Secretary, on being so informed and satisfied, shall issue to such Representative a ticket of admission to the meeting.

Dr. FOTHERGILL (Wandsworth) moved an amendment:

> That it is not desirable to depute to any salaried officer the duty of deciding on the fulfilment of any requirement of the Charter, Ordinances, or By-laws.

He suggested the subclause put the General Secretary in a very invidious position, and perhaps Mr. Verrall would accept the amendment. He had to receive the returns of the elections and to satisfy himself as to the holding of subsequent meetings, and if he were not satisfied he could tell the constituency that they could not send their Representative. He did not think that any salaried official should be in such an invidious position. He would amend the actual phraseology suggested by the Wandsworth Division. It was no doubt necessary that the returns should be sent in to the General Secretary, as it said in the third line, but in the fifth line he would like to put "and satisfy the Chairman of the Representative Meeting as to holding the subsequent meetings, and the Chairman of Representative Meetings being so informed and satisfied shall issue to such Representative a ticket of admission to the meeting."

Dr. W. SMITH (St. Pancras and Islington) questioned whether they were not putting too much work on the Chairman of Representative Meetings.

Dr. F. H. WOLSTENHOLME (Salford) pointed out that they had a salaried official who was perfectly competent to do this work.

Mr. VERRALL said the Organization Committee had looked into this point and they did not agree with the Wandsworth proposal.

Mr. W. G. BOOTH (Manchester Central) said if this was only a question of a by-law, when the difficulty arose they would meet it.

Mr. D. J. WILLIAMS (South Wales) pointed out that the General Secretary had all the machinery at his disposal, and would not find this at all an onerous duty.

Mr. H. W. ARMIT (Hampstead) said this was not a question of a duty but one of responsibility, and he agreed most strongly with the Wandsworth Division in not wishing to place a responsibility on a salaried official if it could be accepted by the Chairman.

Mr. PERCY ROSE (Stratford) regarded this a question of privilege which should be jealously guarded and kept in their own hands, and not deputed to a salaried official.

Dr. NASH asked why, with the experience they had had of their salaried officials, they should want to constantly watch over them.

Dr. LANGDON-DOWN pointed out that the amendment would not alter the way in which the work would be done.

Dr. BRADSHAW (Lancashire and Cheshire) also expressed confidence in the officials of the Association.

Mr. J. YOUNG (Bolton) opposed the amendment. This was not a matter for the decision of the Chairman of Representative Meetings or the decision of the General Secretary. If the election was not according to the By-laws it was quite clear it must fall to the ground. If the Secretary of the Division decided that the election was according to the By-laws, he had no choice but to send the card to the Representative Meeting. If the Secretary of the Division did not send it, neither the Chairman nor General Secretary would have the right to do so. It seemed to him to be purely clerical work, and it was not fair to put it on the Chairman of the meeting. The matter should be left to the General Secretary.

Dr. COX saw that under this clause some very unpleasant difficulties might arise. It was quite likely that some slack Divisions might desire to send up a Representative without going through the proper formula. It was not a question of trusting or not trusting the General Secretary at all, and he thought on a question like this, if an unpleasant situation arose, they might place it

on the broad back of the Chairman of Representative Meetings, to whom they could talk more freely than they could to a salaried official.

Dr. ROBERTSON put the case of the Secretary of Division omitting for any reason to send the intimation to the General Secretary. In what position would the Representative be who had been elected? Perhaps the Secretary of Division might be away on his holidays, and not come back till the whole thing was over. There, again, in what position would the Representative be? What arrangement had been made for such a position?

Dr. G. WESTBY (Liverpool, South) took this to be part of the clerical work in connexion with the Association, and pointed out that much greater responsibilities than those rested on the General Secretary.

Dr. JOHNSON SMYTH regarded the fact of the General Secretary being a paid official as all the more reason why his work should be carefully done. He thought they should go on as they were at the present time.

The amendment was lost.

The CHAIRMAN said that before proceeding with any other business he wished to deprecate the introduction of a thing which he was sure was never intended by anybody proposing this resolution, and that was the question of trusting or not trusting in the General Secretary. They did most absolutely trust the General Secretary, and he was very sorry that question had been raised.

Dr. DOUGLAS (Dartford, Maidstone, Rochester and Chatham) moved to add the words: "Provided that in case of doubt the matter be referred to the Chairman of the Representatives." That would leave the general routine work to the General Secretary, and in a doubtful case the responsibility would rest with the Chairman of this meeting.

Dr. LOW seconded the amendment.

Mr. PERCY ROSE (Stratford), in supporting the amendment, pointed out that a like procedure had already been adopted by Sir Victor Horsley.

The amendment was carried.

Dr. FOTHERGILL thought the meeting for the moment, and probably the Organization Committee, had overlooked what this Representative Meeting decided a year or two ago, that for the purposes of this Representative Body the Secretary should be the Medical Secretary. In saying that he wished to draw no invidious distinction between the two men who were working for them. He moved to substitute the word "Medical" for "General."

Dr. WOLSTENHOLME (Manchester, Salford) strenuously opposed the amendment on the ground that the Medical Secretary was already overworked, and had not the time to spare from his proper duties to deal with such a matter of routine.

Mr. W. G. BOOTH (Manchester, Central) opposed the amendment on similar grounds, and pointed out that they were already contemplating having an Assistant Medical Secretary.

The amendment was lost, and it was agreed that Subclause (4) should stand part of the Charter.

Mr. VERRALL moved Clause 25 as follows:

Term of Office.

25. The Representative of a constituency shall come into office at the commencement of the Annual Representative Meeting next succeeding the date of his election, and shall continue in office until the commencement of the Annual Representative Meeting in the following year, and shall be re-eligible.

Dr. S. HUGHES (Southampton, Guernsey and Alderney, Jersey) moved as an amendment that the clause should read: "The Representative of a constituency shall come into office immediately he is elected."

Dr. FOTHERGILL (Wandsworth) said that they had power to elect their Representatives up to nine months before the Annual Meeting. Was the idea of the amendment that the Representative should come into office then?

The CHAIRMAN stated that that was the idea of the amendment.

The amendment was put to the meeting and lost.

Dr. J. MCNIDDER (East York and North Lincoln) moved that:

The Representative shall not hold office for more than six years consecutively, and shall then be for one year ineligible for re-election.

He said that continuity of office was a bad thing. In the case of members of Council they could not hold office for more than six years, and he thought that the Representatives ought to be in the same position as members of Council.

Dr. COX (Gateshead and Consett) seconded the amendment.

Dr. WOLSTENHOLME (Manchester, Salford) suggested that it would be better to leave the matter to the Divisions, and let each Division please itself.

Dr. Cox said that the proposal in the amendment would be a means of introducing new blood from time to time, and it would be a convenient means of getting rid of men who had done good work. They could be got rid of gracefully. It was sometimes a very invidious thing to introduce new blood and at the same time not offend a man who had done good work.

Dr. J. SINGLETON DARLING (Portadown and West Down) said that the matter was in the hands of the constituencies at present. There was no reason why they should elect a man for longer than they liked. There were many districts in which it would be extremely difficult to get as efficient a man as the present Representative, and there were many constituencies where the carrying out of the proposal would very seriously hamper the work. Men who had attended the Representative Meeting for a number of times were far more valuable than new men, and almost necessarily so.

Dr. JOHNSON SMYTH (Bournemouth) said that if the proposal was accepted, in six years' time there would be a Representative Meeting consisting entirely of new men who knew nothing of the work. He hoped that the amendment would not be carried without very careful consideration.

Dr. E. R. KIRBY (Birmingham Central) said that in the model rules sent down to the Divisions when they organized themselves the term of years suggested by the Council was five, after which the Representative should be ineligible for office for a period of one year. In his Division they adopted those model rules, and he believed that a great many other Divisions adopted them.

Dr. FOTHERGILL said in his Division they had adopted a rule that their Representative was not to act for more than three years, and he was ineligible for a year afterwards. They were getting a tremendous influx of new blood.

Dr. W. ODELL (Torquay) asked the Solicitor whether he thought it better that the matter should be dealt with in the rules or that it should be left to the Divisions. He would vote according to what the Solicitor said.

The SOLICITOR (Mr. Hempson) said that the difficulty which he had in the matter was perhaps illustrated by the oft-recurring question with regard to the Branch funds, on which he had advised so frequently. Branch funds could not be applied in excess of the objects of the Association, and if they got the By-laws of the Association in conflict with the By-laws of the Divisions, the By-laws of the Association must prevail. If the By-laws of the Association did not create disability in a man being returned as a Representative after a period of years, he did not see how by subsidiary By-laws the disability could be created so as to be legally enforceable. He thought that the best way, if they were going to have a limit, would be to make the limit coextensive throughout the whole of the Divisions, and work on a basis of uniformity.

Mr. NASH (East Norfolk, North Suffolk) said that Dr. Cox had put his finger on a very vital point in this matter. There was a great tendency in certain Divisions to get into rather a rut. Some Divisions had a trusted Representative, and they got into the way of letting him go on year after year, and no fresh enthusiasm was created.

Dr. K. A. GROSSMANN (Liverpool, West) considered the proposal inexpedient. He did not think that the susceptibilities of Representatives would be very much hurt if they were not re-elected. His Division had passed a rule, with regard to their Representative to the Branch Council, to choose the man twelve months beforehand, so that he might be trained for the work he had to do. They considered that continuity in office was very important.

Mr. PERCY ROSE (Stratford) said they were a kind of legislative body, but there were other legislative bodies far larger than they were, and in what bodies did they find such an absurd restriction as was now proposed? It was not found in Parliament. They ought to keep the men as

long as they were willing to place their services at the disposal of the Divisions.

It was then moved, seconded, and agreed to that the question be put.

Dr. Langdon-Down (Richmond) inquired whether the proposal would be retrospective.

The Chairman stated that he should say that it could not be retrospective.

The amendment was then put to the meeting and lost.

Clause 25 was then agreed to.

Mr. Verrall then moved Clause 26:

Substitutes for Representatives.

26. In the event of a Representative of any constituency being unable or unwilling to attend a Representative Meeting, the said constituency shall have power to select a Representative to act at the said Meeting in his stead, and such selection may be made by the constituency in General Meeting, or by such Officer or Member of the Division or Divisions composing the constituency as may have been authorized by the Rules of the Division or Divisions or by a Resolution of the constituency to make such selection.

Dr. Fothergill (Wandsworth) asked the Solicitor whether a Division was bound to elect a Representative from its own constituency or not. When they originally started the Representative Meeting they were told "No," and they found it exceedingly difficult to get men to go down to Swansea. He believed that several men sent men in the district to represent them, but he understood that the other day an edict was given out that a man must get a Representative from his own home.

Lieutenant-Colonel Decimus Curme (West Dorset) asked, in the case of a Representative being ill, who would have the power of appointing his deputy.

The Chairman pointed out that that was already settled; according to the rule, it was the Secretary and the Chairman of the Division; there was no further power.

The Solicitor, dealing with the strict legal construction of the regulations, referred the meeting to the Articles 26, 27, and 30, and said his view was that it was not necessary that the Representative sent up should be a member of that particular Division; it was not so limited, and he thought in that respect the regulations would be construed with the greatest strictness. If they desired to bar a man, they would have to show that legally he was wrongly sent.

Dr. Pope moved as an amendment that it should be made compulsory that both Representatives and substitutes should be members of the Divisions they represented.

Dr. R. H. Wolstenholme (Salford) seconded.

The Chairman asked Dr. Pope if he would take it in the form of an instruction from the meeting to draft a By-law to the effect of the suggested amendment; to which Dr. Pope assented.

Dr. Fothergill inquired if Dr. Pope would take it in two sections. For his part, he agreed the Representative should be the Representative of the Division; but it might occur that the Representative could not go a long distance to attend a meeting, and it was desirable that the Representative who could attend should have the views of the Division explained to him. Hence, for his part he would like to take a vote on the two matters separately.

Mr. Verrall inquired why they should tie the hands of people unnecessarily. If a constituency did not want to elect a man who was not a member of that Division, they would not elect him. On the other hand, if they found it easier to get a man who was not a member of the Division, why should they not? These Regulations did not say that Representatives should be members of the Association even if they could not first that laid down. He thought the Divisions should be left to work out their own salvation in the way they thought best.

Dr. Warrick Carter thought in the case of the Colonies they might depute some one in this country if they were unable to send a Representative from the Colony. The same thing applied to the North of Ireland and other remote parts of the United Kingdom.

Dr. Jones Evans hoped the amendment would not be carried. If, for instance, Divisions in Scotland and Ireland were unable to send Representatives, there were Irishmen and Scotsmen in London who could represent them. Why limit themselves? The Divisions would make their choice. Let them have liberty to roam all over England for a Representative if they wanted to.

Dr. W. Douglas (Dartford, Maidstone, Rochester and Chatham) instanced the case of a Representative who, having lived in the district of his constituency, moved away to another district, but still continued to represent his old constituency. It would be most unwise to tie the hands of the Division and prevent his continuing so to act.

It having been moved that the question be now put, the amendment:

That the Representative or his substitute must be a member of the Division which he represents,

was then put and lost.

Dr. H. Cox (Gateshead and Consett) moved:

That no person shall represent more than one constituency.

In the event of a constituency at a distance not able to get a man to come, and who appointed a substitute, he thought it very undesirable to have a Representative with three or four lots of votes. He could imagine the unfortunate effect in the case of a Representative instructed in two different ways. If a Division wanted a substitute, they should get one not instructed by another Division.

The amendment was put to the meeting and lost, 32 voting for and 44 against.

Mr. George Brown (Devonport) thought there ought to be some limit to the number of Divisions a man should represent, and moved an amendment that no Representative should represent more than three constituencies at any one Representative Meeting. Three Divisions were as much as any one man could represent. There had been canvassing for representation of Divisions, and it was possible a Representative might attend on behalf of half a dozen Divisions. That would be an abuse of the power given by the By-laws.

Dr. Langdon-Down (Richmond) inquired whether it had been the practice for one Representative to represent more than one Division.

The Chairman replied that he did not think that it had ever occurred for a man to represent two Divisions.

Mr. Ballance (Norwich and West Norfolk) desired to know the opinion of the Colonial Representatives.

Dr. Stawell (Victoria), in reply, reiterated what the Chairman of the Organization Committee had put so definitely. In throwing out the amendment to limit the number of constituencies to be represented by one Representative they showed they were not going to hamper the various Divisions in what was put down for their guidance. Of course they would all desire that one Representative should only represent one constituency, but at the same time they did not want to be hampered as to whether he should represent two or three or more. He thought they could leave it, as the Chairman of the Organization Committee put it, to the good sense of the various Divisions.

The amendment was then put to the meeting and lost.

Mr. Verrall introduced By-law 27:

Convening of Annual Representative Meetings.

27. The Annual Representative Meeting shall be convened in every year by the Council, and shall be held at such time and place as shall have been prescribed by the Association in the previous Annual Representative Meeting, and if no time or place shall have been so prescribed, the same shall be determined by the Council.

The Chairman ruled the Exeter Division amendment out of order.

Mr. Verrall moved as an amendment to the By-law that there be added the following:

All those who shall have been elected to take office at the close of an Annual Representative Meeting as Members of Council shall be entitled to take part in such Meeting.

The By-law as amended was agreed to by the meeting.

Mr. Verrall then moved By-law 28 (1):

Special Representative Meetings.

28. (1) Representative Meetings, other than the Annual Representative Meeting, shall be styled Special Representative Meetings, and shall be convened at any time by the Chairman of Representative Meetings on the requisition of the Council or on the requisition of not less than seven Constituencies.

Dr. Fothergill (Wandsworth) moved as an amendment:

Omit "at any time," and insert after "meetings" (line 3) "within eight weeks of the receipt of a."
Omit "on the" and "on the requisition."

He said the matter had been discussed in Committee, and it was thought only fair if they tied the hands of the Council with regard to a Referendum on other points they should also deal with their Chairman of Representative Meetings. They did not think he would be cantankerous, but at the same time it was as well to leave out the words "at any time." At any time meant no time, and his Division desired to insert "within eight weeks of the receipt of a requisition."

Mr. BALLANCE hoped the matter would be left in the hands of the Chairman of Representative Meetings. Eight weeks might not be a convenient time within which to convene a meeting, and he thought they could trust their Chairman to summon the meeting within the proper time.

The amendment of the Wandsworth Division was then put to the meeting and lost, and By-law 28 (1) was adopted.

Mr. VERRALL then moved the following By-laws 28 (2) and 28 (3):

(2) At least 14 days' notice of such Meeting shall be given in the JOURNAL, and such notice shall indicate the object for which such meeting is convened.
(3) No business shall be dealt with by a Special Representative Meeting other than that for which it is specifically convened,

which were agreed to without discussion.

By-law 29 was then put to the meeting:

Business of Annual Representative Meeting.

29. The business of the Annual Representative Meeting shall be to elect a Representative of a Division as the Chairman of Representative Meetings, and also a Representative of a Division as Deputy-Chairman; to elect a President of the Association; to elect ten Members of the Council, and such other Officers and such Members of Committees as by the Ordinances or By-laws be required to be so elected; to consider the election of Honorary Members when recommended by the Council; to appoint a place at which the next Annual Representative Meeting shall be held; to consider the Annual Financial Statement and Balance Sheet presented by the Council; to appoint an Auditor or Auditors (who shall be a professional Accountant or professional Accountants) and fix his or their remuneration; to consider Reports of the Council, Reports of Committees instructed to report to such Meeting and Reports of Branches and motions relating to the adoption of such reports in whole or in part; to make new Ordinances or By-laws and alter and repeal existing Ordinances and By-laws and to consider any resolution relating to the honour and interests of the medical profession or of the Association which shall have been adopted by any Division or Branch, provided that any such Resolution proposing material alteration of the Constitution or policy of the Association shall have been submitted through the JOURNAL for the consideration of all the Divisions not less than three months previously;

but consideration thereof was postponed.

Clause 30 was agreed to as follows:

Chairman.

30. At every Representative Meeting the Chairman of Representative Meetings, when present, and in his absence the Deputy Chairman of Representative Meetings, when present, shall preside. In the absence of both the said officers the meeting shall appoint a Chairman from its own number.

Mr. VERRALL moved Clause 31, clause by clause, as follows:

Voting.

31. (1) In any Representative Meeting Representatives of Divisions only shall be entitled to vote.
(2) Voting shall be, as a rule, by show of hands, unless before such vote is taken twenty Representatives present request that the vote shall be taken by card, in which case every Representative shall record as many votes as there are Members in the constituency which he represents according to the annual list then in force.
(3) In voting upon any matter upon which a constituency has passed a Resolution within the three months immediately preceding such Meeting, the Representative of that constituency shall be under obligation to vote in accordance with such resolution.
(4) The Chairman shall in the case of an equality of votes have a second or casting vote.

Lieutenant-Colonel WILSON moved the following amendment:

By-law 31 (1) and (2):

That By-law 31 (Sections (1) and (2)) be amended as follows:
(1) To read, "In any Representative Meeting only Representatives of Divisions and Members of Council representing the Naval, Army, and Indian Medical Services shall be entitled to vote."
(2) At end of Section (2) add, "Power to vote by card shall not apply to Members of Council representing the Naval, Army, and Indian Medical Services."

He said the amendment would have the effect of allowing members entering public services—the Navy, Army, and the Indian—to have a vote at these Representative Meetings. All members of Council had a right to speak at this meeting, but were not allowed to vote. They were in a very peculiar position as regards the public services. Members of Council were represented by their Divisions who could vote, of course, and exercise influence on behalf of the Division to which they belonged, but all members of the public services who were on full pay, by the mere fact of their position, were almost entirely prevented from belonging to any Divisions at all by reason of the constant changes of officers on full pay, with the exception of a few signal stations, such as Malta, where perhaps they might belong to their Branch. In addition to that the meeting decided on the previous day, by the decision on the Referendum, that the votes were to be taken by Divisions, and not by individual members. That was a decision which, of course, he thoroughly agreed with, but the effect of it was that it practically disfranchised over 2,000 men in the public services. If they sent round, no doubt at vast expense, a personal notice to all members of the Association, officers of the Army, Navy, and Indian Medical Services could record their votes, but not belonging to any Division they were of course debarred from expressing any opinion on any matter of Referendum. Under these exceptional circumstances he thought the meeting might be disposed to allow the By-laws to be altered so as to allow members of Council representing the public services to vote. He did not suggest that they should have a card vote, but an individual vote on matters affecting the public services.

Dr. E. D. KIRBY (Birmingham Central) seconded the amendment.

Mr. W. G. BOOTH (Manchester, Central) said he believed there were not more than three or four members of the public services on the Council.

The CHAIRMAN: Three.

Dr. E. D. KIRBY said if there was to be representation of the army and navy, why should not they take into account the volunteers as well.

The CHAIRMAN pointed out that the volunteer medical officers were not at all on the same footing, as they were represented by their Divisions at home.

The amendment was agreed to.

The CHAIRMAN, in the absence of the Representative of the Liverpool (Northern) Division (Lancashire and Cheshire Branch), moved:

That By-law 31 (3), second line, read, "Within *two* months," instead of *three*.

Dr. K. A. GROSSMANN (Liverpool, Western) opposed the amendment, thinking that four months would be even better than three. Two months he regarded as inadequate.

Dr. FOTHERGILL also said he would like to see the time increased rather than reduced.

The amendment was lost.

Dr. ROBERTSON asked whether if a Representative voted otherwise than according to his instructions, his vote would be invalidated.

The CHAIRMAN said it did not invalidate it; but that was a matter between him and his Division to fight out afterwards.

It was then agreed that Clause 31, as amended, stand part of the Charter.

Mr. VERRALL proposed Clause 32, as follows:

Quorum.

32. No business shall be transacted at any Representative Meeting unless there be present at least one-half of the number of Representatives appointed to attend such Meeting.

The clause was agreed to.

Mr. VERRALL proposed Clause 33, as follows:

Adjournment.

33. Any Representative Meeting may be adjourned from day to day until the completion of its business.

The clause was agreed to.

Mr. VERRALL proposed Clause 34, as follows:

Minutes.

34. The Minutes of every Representative Meeting shall, after confirmation, be transmitted by the Chairman thereof to the Council for presentation to its next meeting.

The clause was agreed to.

Mr. VERRALL proposed Clause 35, as follows:

SECTION VI.

COUNCIL.

Commencement of Office.

35. The Council shall come into office at the close of the Annual Representative Meeting of each year.

The clause was agreed to.

The CHAIRMAN on Clause 36, which was as follows:

Composition.

36. The Council shall be composed of the *ex-officio* Members mentioned in the ordinances, and of Members duly elected by the following bodies, namely (*a*) by the Branches of the Association, which shall be grouped for the purpose of electing twenty Members of the Council in the manner prescribed by By-law 37; (*b*) by the Representative Body, which shall elect annually ten members of the Council, and (*c*) by the Council itself, which shall have power to add to its numbers at any of its Meetings all or any one or more of the following, namely: One Medical Officer on the active or retired list of each of the following services:—The Royal Navy Medical Service, the Army Medical Service, and the Indian Medical Service, provided that in each case such Medical Officer shall not have retired from the active list more than three years previously,

said they came to the most crucial part of the work of the Representative Meeting. The difficulty was that there were so many cross-propositions with regard to the manner of electing the Council, and he would suggest a way in which he thought the difficulty would be best met. In the constitution of the Council there were practically two parts, the *ex-officio* part, which must come by ordinance, and there were the service members, to whom nobody objected. He would ask Mr. Verrall to propose these two and get rid of those first.

Mr. VERRALL, in accordance with the Chairman's suggestion, said he would propose Clause 36 from the commencement down to "ordinances," and the portion relating to the members belonging to the services.

Dr. FOTHERGILL understood that the Council was to elect representatives of the services.

The CHAIRMAN: That is so.

Dr. FOTHERGILL said his Division wished to oppose that. The logical idea was that this Representative Meeting should elect the Central Council, and they had a mandate to that effect, and following that out logically they said that the services should be elected by the Representative Meeting, on the recommendation of the Central Council. In other words, they wanted to elect the Central Council, lock, stock, and barrel. He would therefore like Mr. Verrall to leave that second clause out.

The CHAIRMAN said Mr. Verrall was willing to leave the question of the service people open at present. There was a proposition on the agenda from the Norwich and West Norfolk Divisions which he thought would get at this matter better than any other. That amendment was:

> That By-law 36 be so modified as to provide for the election of the whole of the Central Council, with the exception of the *ex officio* and Colonial members, by the Representatives of Divisions at the Annual Representative Meeting, and in such manner as to secure due topographical representation of the various districts of the United Kingdom.

That resolution would be proposed by Mr. Ballance.

Mr. H. A. BALLANCE (Norwich and West Norfolk) agreed with the Chairman that this was the most important matter before the meeting. His Division was very firmly of opinion that the right way to elect the Council of the future was by this Representative Meeting. He would remind them that at the meeting at Caxton Hall last resolution, that there should be a large representation of the Representative Bodies on the Council of the future, was accepted. He thought it better to bring this matter before them in the form of a broad, comprehensive, but perfectly direct, resolution which would focus the attention of the meeting on the principle involved. It might, of course, be modified to suit the Ayrshire Division Representative, according as the meeting thought best to carry out the intention of the resolution; and, therefore, it was not necessary in proposing the resolution to go in any detail into the schemes contained in the appendix to the report of the Organization Committee. How far did they get at the Representative Meeting last year? There was no doubt that that meeting was practically unanimously in favour of the reduction of the Central Council on the ground of economy, and he thought the Representative Meeting firmly held the opinion that it would not decrease the efficiency of the Council to be reduced in numbers, and it also went so far as to approve a very considerable representation by the Representative Meeting in electing that Council. The resolution moved last year that the whole of the Council should be elected by the Representative Meeting was lost for the reason, he believed, that the meeting was not satisfied that true topographical representation would be secured, but in various schemes before them topographical representation had been absolutely secured and the more remote parts of the country would be over-represented, and he hoped that would meet the approval of all members of the Representative Meeting. For instance, in the various schemes, Ireland was nearly four times as well represented as parts of England and Wales. Scotland was about twice as well represented, and that, he thought, must commend itself to the meeting because of the difficulty of access from those distant parts of the kingdom. Last year they came to a compromise. The meeting decided that it would not agree to the Council being wholly elected by the Representative Meeting, and a resolution was passed, moved by himself, that the Council should be partly elected by the Branches and partly by the Representative Meeting in the proportion of two to one. Therefore the principle that the Representative Meeting should take part in the election of the Council was conceded. But was this proposal that the Council should be partly elected by the Branches and partly by Representative Meeting an altogether satisfactory one? Would it altogether conduce to harmony in the working of the Association? For himself he could not see that it would, nor did the Divisions he represented think so, and therefore in the interests of smooth and harmonious working he wished to commend the resolution which stood in his name. If they could secure this harmonious working there was no doubt the Association would meet with the greatest possible success, and one of the means of securing that harmonious working, it seemed to him, was that the constitution should be founded on a logical basis. At one end of the Association they should have the single member, represented at the Representative Meeting by the Representative of his Division, and there would be groups of Representatives representing larger districts or areas composed of groups of Branches four or more in number, so that there would be a logical sequence from the single member at one end up to the Representative Council at the other end. These grouped Branches would be just as efficiently represented under one of these schemes as they had been in the past, but they would not be represented by the same number of Councillors as in the past, because it was wished to reduce the number of the Council, but they would be represented quite as efficiently; there would be the same number electing them as at present, but the machinery would be different. There was no suggestion in the proposal to oust the members of the present Council. All recognized the admirable work done in the old days by the Council elected under the present Branch system of representation. He believed that the Councillors at the present meeting would come back to the future Council in a very large proportion, but elected by different machinery. If there was any suggestion in the present proposal that the members of the Council whom he had referred to should be replaced, he should give no support to the proposal. That proposal was conceived in the interests of the Association, and he most earnestly commended it to the favourable acceptance of the meeting.

Dr. WYNNE (Leigh and Wigan) wished to support very strongly every word which Mr. Ballance had said. In his Division, in considering this matter, they had realized that the present was a very crucial moment in the evolution of

the Association, and they felt that the result of the vote meant the decision of the question whether the Council was to be an Executive Committee of the Representative Body, or was to be in effect a Second Chamber. In his Division they had come to the conclusion that there had been in the past undeniably a certain amount of friction and a certain amount of detriment to the Association from a want of complete understanding between the Representative Body and the Council. They were conscious of all that had been done by the Council in the past, and they hoped that its *personnel* would remain almost unchanged; but he was instructed to vote and to speak on behalf of the election of the Council entirely by the Representative Body.

Dr. LAFFAN (Carlow) opposed Mr. Ballance's proposition. Mr. Ballance had said that the present Council had done its business admirably. If the Council had done its business admirably, why get rid of it? Furthermore, the Council by its existing members had allowed representation on a scale which had more or less satisfied the Association at large. If numbers were cut down, people and districts in his own country, for instance, would be left without adequate representation. He did not consider the representation which would be left to Ireland at all adequate, and that was the view of the members of the Association in Ireland. The expenses of the Council were, comparatively speaking, insignificant and well within the means of the Association, and he did not think that the trifle saved would at all counterbalance the mischief done.

Dr. MARTLEY (Dublin) opposed Mr. Ballance's proposition. Practically the suggestion of Mr. Ballance came down to one single point. The Council was to be elected really by the Representative Meeting. The main idea of the proposition, it seemed to him, was to imitate the Parliamentary situation, and to provide that the Council should be, as it were, a Cabinet of the Representative Meeting. That would be a most excellent arrangement if they were more like Parliament, and if they were continuously sitting or sitting for a large part of the year, and were well able to keep their eyes upon their Cabinet. The point that would upset his part of the world most was due to the fact that they had in Ireland a feeling that possibly they were not very well understood over here. They might be wrong; but they had the feeling that no representative body would elect the man for Ireland that Ireland wanted. They wanted to have their own men elected by Irishmen and elected in Ireland. They felt that a person elected by the Representative Meeting to represent Ireland would only represent the meeting's idea of what Ireland wanted.

Mr. BALLANCE pointed out that that was entirely provided for in the scheme under Appendix E, by which the Irish Representatives would elect the Irish members of the Council.

Dr. WM. EWART (Westminster) said that he was desired by his Division to put forward certain views which they held, and he was glad to say that those views were of a nature to support the existing state of affairs as far as supporting the Council, the management of the affairs of the Association by the Council, and the co-option by the Council of a certain number of members. He believed that the point before the meeting at present was as to whether the meeting was to be the supreme authoritative and autocratic power in the British Medical Association—that was to say, whether the Representatives of the Divisions were to be the absolute masters of the situation and the real governors, whether they should put upon themselves the crown of autocracy, and whether they should decide by their own will that they would be the governing body. This was a very big undertaking. In the Government of this country there were two Chambers, and there was a kind of check, because there was perpetual opposition and perpetual criticism. Seeing that they met only at intervals and for so short a time, were they well advised in rushing into so big a change as was proposed by cutting away that which they had as a sheet anchor—namely, the Council, which was composed of men of probity and sense, devoted to the interests of the Association, inured to its work, and full of experience, and able constantly to meet and discuss? Were they going to make nothing of them?

Dr. R. H. WOLSTENHOLME (Salford) said that perhaps, as the Chairman of the Committee which originally led to the alteration of the old constitution, he might be allowed to say a few words. It was always in the mind of that Committee that the time would come when the Representative Meeting would be supreme, and when the Representative Meeting, being supreme, would select the Council to carry out its injunctions. He hoped that that time had come. It seemed to him that that was the only logical position to take up. Those members of the Council who had done good work would be quite able to continue that good work, because they would have every opportunity of being nominated by the Representative Body and elected. It would not be quite true to say that the Council at the present moment consisted only of members who were most anxious to do the work of the Association, for only the other day he was told that there were members on the Council who absolutely refused to sit on committees. He hoped that the meeting would pass the motion proposed by Mr. Ballance.

Mr. J. WARD COUSINS (Portsmouth) knew that a great many of his friends would look on him as a very old-fashioned Conservative, but he could assure them that in every sense of the word he was a Liberal of the Liberals. He did not wish the meeting to gather the impression from the remarks he was going to make that he held strictly that there should be no change; but he felt very certain that in deciding the question they had the Association in the balance. He was very pleased to hear what Mr. Ballance said in reference to the old Council, and he fully endorsed every word of it. But he had attended all four Representative Meetings, and he thought there had been a little friction; there had been a little loss of that balance which ought to exist between the Representative Body and the Council. Therefore it struck him that they should do their utmost to correct that tendency. As regards the question of electing the Council from the Representative Body, to his mind there was a very great difficulty at once, by reason of the fact that they met only once a year. How many of the members of the Representative Body were thoroughly in touch with the intricacies of the administration of the Association? His own impression was that there were a large number of Representatives who came to the meetings who really had no thought whatever of the difficulties in connexion with the administration of the Association. They came, and they sat, and heard; but were they sufficiently in touch with all the secret difficulties which the organization brought about? It seemed to him that the election of the Council from the body of the Representatives, as he saw them and felt them to be, would really be going back to the old-fashioned conservative business by locking up the Association in the hands of a few again. He did not believe that they could have a thoroughly liberal administration of the Association if the dual control was in the hands of the Representative Body, for the simple reason that all associations tended to more or less fall into the hands of a more or less select number of hard workers. There was no doubt that it was a very great protection that they should have the two heads of the Association—the Representative Body and the Council—each elected by a democratic vote; and there ought most certainly to be between those bodies a real balance. That was the great thing, and that alone would sustain and help the Association to carry on its great work throughout the world. He believed that between the Council and the Representative Body there ought to be co-operation—and there ought to be combination, but not too much affection. That could only be obtained by having two heads—a dual control properly balanced in the way he had spoken of.

Dr. E. D. KIRBY (Birmingham, Central) had very definite instructions from his Branch to oppose the scheme put forward by Mr. Ballance. He admired Mr. Ballance's logic and the admirable way in which the scheme fitted together, but they had to consider other things besides logic in making a constitution. They had to consider sentiment, and his Division felt very strongly that it was a scheme for disfranchisement, and said in the very strongest possible manner that they would not delegate their franchise to any Representative, whoever he might be.

Dr. O'DELL (Torquay) supported the admirable proposition of Mr. Ballance, because, to his mind, it was the best

thought-out scheme which had been put before the meeting. It was not that the meeting was not going to elect their Representative Council, but it was that they, as Representatives of certain Divisions in groups, should from those Divisions elect members to represent them on the Council. No one could go back to the old times of the meeting at Carlisle and recollect what sort of a meeting that was—simply a bear garden, with the Council of one frame of mind and the meeting of another, and no business done—and compare that with the business done at the present time, without feeling that they had gone forward many steps. Such a scheme as Mr. Ballance proposed was admirable, and he supported it heartily.

Mr. G. H. BROADBENT (Manchester, North) reminded the meeting that a year or two ago he obtained the first vote in favour of the Representative Meeting having the power to elect six members on the Council. That was passed, but it was never carried out. Why, he could never make out entirely, but at any rate it seemed to give confidence to the Representative Meeting to make greater claims. He thought if the amendment were carried it would cause a very great deal of dissatisfaction. It was all very well for them to pass anything at that meeting, but what would be the effect on the Association in general? It seemed a revolutionary proceeding. [Hear, hear.] They got on very nicely among themselves at the meeting as a rule, but they had to consider what outsiders would think. Not only that, they had to have consideration for the Council. It was all very well to speak very nicely of the Council, but it was something like speaking nicely of some one they employed, and whom they were just getting rid of. He said, let them have the Council as proposed in the first Charter. Let them have twenty members or more, if found desirable with regard to the convenience of geographical distribution and so on, elected by the constituencies or by the Branches, and ten by that body. He thought that would be a very fair mode of proceeding, and would not cause so much dissatisfaction with the members of the old Council as the revolutionary proposal of Mr. Ballance.

Dr. G. PARKER (Bristol) was instructed by his Division to vote against any alteration in the present constitution of the Council. While recognizing the difficulties which had existed in the past they did not think they would necessarily remain so great in the future. Under Mr. Ballance's scheme they were practically doing away with the Referendum. In most forms of constitutional government there was a Second Chamber or Referendum. All representative bodies were occasionally liable to what he might call pathological aberration, and unless they had some healthy balance to oppose to that they would be landed in difficulties.

Mr. C. R. STRATON (Salisbury) opposed any alteration in the present method of electing the Council. The scheme proposed by Mr. Ballance took away the election of the Council from the Branches, and deputed it not even to the districts, but to five or six men who had not been elected by the districts as Representatives. The Council was a most important body sitting the whole year round, with a large number of Committees, and it was known to those who served on the Council how difficult it was to get a man to serve on the Committees. Mr. Ballance had spoken of the old days, but the old days were not more than four or five years ago, and that was not time enough to gain full experience of the difficulties of working.

Dr. MARTLEY (Bromsgrove, Dudley, and West Bromwich), acting as a substitute, felt he ought to speak on the subject in order to his Representative. The question of the various schemes had been discussed at considerable length by the Division, and while there was a strong feeling that they should go with their neighbours in Birmingham, whose opinion they had heard from Dr. Kirby, yet it was felt to attempt to do anything of the kind would be to put back the clock. They had committed themselves in the Association to a democratic body—they had become a free democracy, and it was, as Mr. Ballance said, the legitimate sequence of having created the democracy to trust the democracy. If they did not trust themselves, whom were they to trust? He was instructed to support the democratic view that that body should elect the future Council—that it should be elected by the Representative Body and not from the Representative Body.

Mr. W. H. HORROCKS (Bradford) inquired if Mr. Ballance's amendment had been before the Divisions—it had not been before the speaker's Division.

The CHAIRMAN replied that in the draft Charter the principle undoubtedly had been before the Divisions. All the schemes had been before them.

Dr. A. COX (Gateshead and Consett) had been instructed by his Division to support the principle of the election of the Council by the Representative Meeting, because they felt, as he believed was also generally felt in the Association, that the time had come when the Council ought to be reduced in size. He thought many members agreed on that point who were not agreed on the principle under debate. His Division felt that if they were going to commence to alter the present arrangements and to reduce the size of the Council they would inevitably get friction, and probably get as much friction by taking off a member from a small Branch here or there or a member away from a Branch that had two members as they were likely to get by making the change proposed. In addition to that, they felt the force of the logical sequence of events, which was to get down to something like a sensible constitution. They had been told by one or two speakers of the horrible things that might happen by reason of a Council elected by the Representative Body. He would like to know what particular virtue the present method conferred upon the men elected. As he had pointed out when dealing with another matter, the election of many members of the Council was a perfect farce. In conversation with a member he learned that the latter had put to the members of his Division the question, Did they know who was representing their Branch on the Central Council? And not one of them did. That was a very striking thing; but he was quite certain that they might go into parts of their Branches and find many members who did not know who represented them on the Central Council. That could not be said of the Representatives of Divisions at any rate, who were to a large extent more representative than the men on the Central Council. He, the speaker, had been a member of the Central Council, and he thought the time had come when they should reduce the size of the Council from 73, which was far too big. Those who had sat as members of it knew the horrible state of confusion that body got into, rushing through its business in the last hour or two in a way which was simply phenomenal. A smaller Council would not do that sort of thing, and he thought there was a general consensus of opinion that they should have a smaller Council; and, if they were going to proceed upon the principle of having a smaller Council, they might as well go the whole hog.

Mr. G. H. BROADBENT (Manchester, North), on a point of order, thought the Chairman was wrong with regard to notice of the amendment having been sent to the Divisions.

The CHAIRMAN pointed out that he had not stated that notice of the Norwich Division amendment had been sent to the Divisions; but had stated that the principle was included in the Norwich scheme which had been sent to the Divisions some time ago. The Norwich Division proposition only came to hand the night before last, so that it could not go to the Divisions.

Dr. POPE was instructed by his Division to support the proposition not to reduce the Council in point of numbers, and further to support the principle that it was preferable that the majority should be elected by the members of the Branches and a certain number by the Representative Body. Some body had to govern the Association, and he considered the proposal to elect a smaller Council in the way suggested unsound. If it were necessary that directly-elected Representatives should manage the Association, let the Representatives do it and do away with the Council altogether, but to have a hybrid body as was proposed would take away the interest which many members took in the Association. It might be all right for London they could get up a certain interest in London and the big towns, but in large country districts he was certain the feeling that there were not directly-elected Representatives managing the business of the Association would lead to a gradual loss of interest in the Association altogether. He knew the rôle that Cassandra played, and with the feeling that his remarks might make no impression, he would say nothing further.

Dr. YOUNG (Bolton) was instructed by the unanimous decision of his Division to oppose the resolution before the meeting. His Division did not want to go back to the old state of affairs. One speaker had said if they were not to trust themselves whom were they to trust. Of course they trusted themselves naturally, but they would not always have the same gentlemen forming the same body, and he believed it would be a pity and a mistake if they formed what was called a Council from the Representative Body. It would not be a Council in any shape or form, but it would be simply a Committee of the Representative Body. [No, no.] He liked a little opposition, but that was his opinion. He thought they ought to be satisfied with the present method of election.

Dr. BRUCE GOFF (Lanarkshire) supported the recommendation of the Committee.

Dr. MCKENZIE JOHNSTON, while accepting the ruling of the Chairman that the principle of the matter had been before the Divisions, thought his Division had not had an opportunity of giving him definite instructions as to the motion of Mr. Ballance, but he was confident he knew what their opinion would be. He thought the Council should be either elected directly by the members through their Branches, or else by the Representative Body, but that some should be elected by one body and some by another body was not a logical proposition. However, he felt he must vote against Mr. Ballance's proposal.

Dr. FOTHERGILL said he would like to say a word to the meeting as to the way in which they came to a decision in his own Division, because it seemed to him, if he might suggest such a thing, a tremendous number of members were very hazy as to the logical discussion of events. When they started discussing it on the basis of Mr. Ballance's resolution, they took it they would be grouped in the metropolis with 16 others, and they could in that Division nominate four men to represent the group. Then the 17 Representatives would have to meet among themselves, and, having all the nominations before them, would elect four men to represent the group on the Central Council. That was the basis on which they decided the thing. The present system seemed to him to be similar. The members in their Divisions could nominate men to the Central Council. They then submitted their nominations to every man in the Branch. He would suggest to them the consideration whether they would get more competent opinion from the whole of the members and the Branches on those nominations than they would at a special meeting when the virtues or otherwise of the candidates were discussed in conclave. He suggested they would not. Nine-tenths of the members of the Branch were simply belonging to that Branch because of the JOURNAL. They took no interest in their Representatives or in anything that they did. They would get their ballot paper and put it in the waste-paper basket, and some of them had told him they had never even opened the envelope; but if they had to consider these 17 men, and on their merits make a final selection, he maintained that representation on the Central Council would be much more effective. Then with regard to the Branch question of Referendum, it had been suggested that the men going on to the Central Council would never take a Referendum because they were the nominees of the Representative Meeting. With that he absolutely disagreed. It did not follow that because they had, say, in the metropolitan area, four men, that they would think they were not to use their private judgement as to what was best for the Association. They must give men some credit for being honest, and not being simply nominated candidates to do what they were told, and he would suggest that the question of Referendum would be adequately dealt with. Then, again, as to the cause of friction—they all knew there had been friction—he could not say much positively on that matter, not having been on the Central Council, but he understood there were questions coming up before the annual meeting with reference to why that Central Council had not carried out the wishes of the meeting. It seemed that members of the Representative Meeting made their own mandate, and declined to deal with the mandate given them by their constituents. Did not they think that a sort of state which should be put an end to, and that they should have on their Central Committee representatives who would respect a mandate? If in their superior judgement that mandate was not satisfactory, they would cause a Memorandum to be sent out, but not reject the whole of it, as had recently been done by the Chairman. He did not know what happened at other Branches, but in his own Branch they had sent five men on to the Central Council. He had never heard anything from them. Papers went round. They got elected in some form or another. They went on to the Central Council, and they were never heard of until the necessity for a re-election. They made no report and were answerable to nobody. Such an arrangement as that was absolute chaos. Under the proposed scheme every Division would have the power of nominating its own group of candidates to represent that group. Take Ireland, which seemed to cause trouble. Each district of Ireland would select four men, and from the whole number would be selected the four men who it was thought would represent Ireland best, and they would be sent to the Council.

Mr. HOUSMAN (Stockport) said that, in common with other Representatives, he had come there with definite instructions as to how his vote was to go. His Division had considered these various points; and though many of the speeches that were being made might elucidate many points that had been in dispute, he thought there was a great deal of that discussion that was being thrown away, as it would not affect the voting eventually, and he thought a great deal of it might be dispensed with.

On a motion for adjournment the question was put, and the adjournment was carried by 48 to 34.

The CHAIRMAN appealed to members not to go away, as they had only a bare quorum.

Dr. JOHNSON SMYTH (Bournemouth) said that he was instructed by his constituency to oppose as far as he could anything in the way of revolution in regard to the reconstruction of the Council. He thought that if they went as far as Mr. Ballance's proposal would have them go, they would really strike at the very roots of the confidence which was at present reposed in the Council. His Division did not mind a slight reform, such a reform as was indicated in Clause 36. He hoped that nothing would be done in a hurry.

Dr. F. J. H. COUTTS (Blackpool and Isle of Man) said that there had been a good deal of confusion in the minds of many of the Divisions by whom the matter had been discussed. In his Division they felt very strongly that in every way the system of election should be democratic, but they thought that the democratic method of voting could be carried out very well indeed by the scheme proposed by the Norwich Division.

Mr. WESTBY (Liverpool, Southern) said that his Division was of opinion that the election of the Council should be entirely in the hands of the Representative Body.

It was proposed, seconded, and agreed that the question be now put.

Mr. PERCY ROSE (Stratford) asked that there might be a card vote, and the requisite twenty members rose in their places to support the proposal.

A card vote was accordingly taken.

The following gentlemen were appointed scrutineers: Mr. Straton, Dr. Wolstenholme, Dr. Fothergill, and Mr Muir.

(At a later stage of the meeting it was announced that the numbers were as follows: For Mr. Ballance's proposal, 3,683, representing 35 constituencies; against 5,707, representing 52 constituencies.)

The CHAIRMAN stated that the first By-law which they could deal with during the counting was By-law 49.

This By-law was agreed to. It was as follows:

JOURNAL.

The JOURNAL shall be conducted by a paid Editor, who shall be responsible for all that appears therein except such matters as are inserted therein in accordance with the Ordinances or By-laws, or by the direction of the Council. The Editor shall be appointed by and shall be subject to the control of the Council.

The CHAIRMAN then moved By-law 50:

OFFICERS.

The President of the Association shall be elected annually at the Annual Representative Meeting and shall enter upon the duties of his office at the next Annual Representative Meeting, and until then shall bear the title of President-Elect. At the expiration of his year of office as President he shall be designated Past-President, and shall hold office as such for one year.

Dr. MILLER withdrew the amendment of his Division to this By-law.

By-law 50 was then carried.

The CHAIRMAN then moved By-law 51:

The Chairman of Representative Meetings shall be elected annually at the Annual Representative Meeting. He shall enter upon the duties of his office at the close of the Meeting.

This was agreed to.

By-law 52 was then proposed by the CHAIRMAN:

The Treasurer shall be elected at an Annual Representative Meeting and shall hold office for three years. He shall receive all moneys payable to the Association, and discharge all accounts which have been ordered by the Council to be paid.

Agreed to.

The CHAIRMAN stated that the Organization Committee proposed the following new By-law, to be inserted between draft By-laws 52 and 53:

In the event of the death during his term of office, or the resignation of the President, the President-Elect, the Chairman of Representative Meetings, or the Treasurer, the vacancy thus created shall be filled, until the next Annual Representative Meeting, in the manner following, namely:

In the case of the President, the Past President shall discharge the duties of the office.

In the case of the President Elect, the Council shall appoint a President-Elect in his stead.

In the case of the Chairman of Representative Meetings, the Deputy Chairman shall discharge the duties of the office.

In the case of the Treasurer, the Council shall appoint a Treasurer in his stead.

In the event of a vacancy occurring in any of the executive offices above mentioned through circumstances not provided for in this By-law, it shall rest with the Council to make such appointment or other provision as it may deem expedient for the discharge of the duties of the said office until the next Annual Representative Meeting.

This was agreed to.

By-law 53 was then moved by the CHAIRMAN. It was as follows:

The Council shall have power to nominate for election at the Annual Representative Meeting those members who by their services to the Association are in the opinion of the Council worthy of election as Vice-Presidents. Such election shall be for life unless any appointment shall be subsequently cancelled by a vote of the Association in Representative Meeting assembled on a motion brought forward by the Council. No special privilege shall attach to the office of Vice-President.

This was agreed to.

The CHAIRMAN then moved By-law 54:

54. All salaried officers shall be appointed and may be dismissed by the Council and shall hold office for such period and perform such duties and receive such remuneration as the Council may from time to time determine.

Agreed to.

By-law 55 was then moved by the CHAIRMAN:

Committees.

55. The Representative Body and the Council shall respectively have power to appoint Committees, with such powers as may to them seem necessary or convenient and to fix the quorum thereof, and lay down rules for regulating the proceedings of such Committees.

Agreed to.

The CHAIRMAN then moved By-law 56:

56. The President of the Association, the Chairman of Representative Meetings, the Chairman of Council, and the Treasurer shall be *ex officio* Members of all Committees.

Dr. J. MILLER (Essex and Hampshire) moved that the President-elect should be an *ex officio* member.

Mr. ARMIT (Hampstead) hoped that the meeting would reject the proposal. The expenses of the Committees must be taken into consideration. There would be five members apart from those members specially chosen for the work of the Committees. The only reason the Exeter Division could possibly have had for introducing the proposal was because of the elective principle; but surely the President-elect would be chosen President-elect because he had knowledge, and therefore he would not need any special education on Committees.

The motion was put to the meeting and lost.

By-law 56 was then agreed to.

The CHAIRMAN then pointed out that By-law 57 was probably more important than had been noticed, and he did not want it passed without their appreciating what it meant.

A REPRESENTATIVE suggested that they surely had power to alter the scheme.

The CHAIRMAN replied in the negative. If they passed the By-law as it stood, they could not discuss the Schedule afterwards. He would leave the matter until the meeting had settled the question of the Central Council. The vote on Mr. Ballance's resolution had disposed of the idea that the Council was to be elected by the Representative Meeting, and he (the Chairman) asked Mr. Armit to move the amendment of the Hampstead Division to By-law 36.

Mr. ARMIT (Hampstead) moved:

That the present method of election to the Council be retained,

and said the Hampstead Division, in considering the best method of election of the Council, came to the conclusion that all the proposals as included in the appendices attached to the Charter, and any other modifications which might be thought out, were not so good as the present method of election by the Branches. The reason for that was, in the first place, that an application by the Representative Body was the same thing as an election by an electoral college—a method which had been long known, and wherever practised, deplored. He instanced the case of the Landtag in Germany, where the election took place by an electoral college, and the members of which, even when returned, recognized the method as one working very unsatisfactorily indeed. In the next place, the Council elected by the Branches as at present was able to perform not only administrative duties but checking duties. If the election were to take place even partly from the Representative Meeting there would be very little control. It would be a matter of Committee work, and not a matter of the Second Chamber. His Division further objected to the principles that the Representatives returned from Divisions should have the power of nominating or electing members for the Central Council. While they did not wish to suggest that the judgement of the individual Representatives would be found wanting, they considered every individual of the Association should have a voice in the returning of a member for the Central Council. He therefore urged the meeting to accept his amendment.

Mr. C. R. STRATON (Salisbury) said the Division he represented had an exactly similar motion which had been deferred from p. 6 of the agenda to the present time, in order that it might follow Mr. Armit's amendment. It was that the present system of representing Branches on the Council be retained, and that the Charter embody the present Association as it stands, making it a chartered body instead of a joint-stock company.

Dr. F. W. BAILEY (Liverpool, Central) said his Division had considered the questions on p. 4 of the SUPPLEMENT for April 6th. The second question asked was: Whether the Council should remain elected by members grouped in Branches as at present? They had come to the conclusion that that would be the best form of electing the Council. By electing the Council by voting papers every member of the Association had an individual interest, and he thought that a strong point in favour of retaining the present system.

Dr. COX (Gateshead) was in favour of leaving the present system alone until they were prepared to adopt a really logical method, which they were evidently not prepared to do at the present time, and, instead of raising friction by reducing the Council, to leave things as they were.

Mr. H. A. BALLANCE (Norwich and West Norfolk) said the expressions of opinion of the previous speakers were reactionary in the sense that they went back on the steps taken at the last Representative Meeting, where it was decided that the Council should be elected in the proportion of two thirds by the Branches and one-third by the Representative Meeting. As his proposal had been rejected, he thought, on the principle of half a loaf being better than no bread, it would be better to stick to the scheme passed at the meeting at Caxton Hall and be able to elect ten Representatives on the Council, if they were not allowed to elect the whole Council.

Lieutenant-Colonel D. CRAWFORD was sent by his Division to oppose any change in the mode of election, as they felt

that the mode of election by Branches gave each individual member an interest in the Association. Also, they considered the present number of the Council to be not excessive.

Dr. E. J. MACLEAN (Cardiff) was instructed to insist upon a diminution in the size of the Council, and to say that the method of election set forth in the By-law should be adhered to.

Dr. J. BROWN said he was instructed by his Division to vote in favour of the reduction of members of the Council. He agreed with Mr. Ballance that if they could not have the whole loaf, they had better take a seventh part, and have 10 out of 70. They were told that at present their resolutions were ignored by the Central body. Now they would have ten men they could talk to at this meeting, and who would be responsible to them.

Dr. FOTHERGILL wished to know if these ten men would be elected from topographical areas.

The CHAIRMAN said they must ignore the questions of numbers altogether.

Dr. NASH thought they had the pick of the men there who had been topographically elected, and it was for this Representative Meeting to pick the brains of those men and send them on to the Council irrespective of district.

On a motion that the question be now put,

The CHAIRMAN put the amendment proposed by Mr. Armit and seconded by Mr. Straton, that the present method of election be retained; in other words, that the members of the Council be elected entirely by the Branches of the Association.

The amendment was lost, 31 voting for and 57 against.

Mr. BALLANCE then moved, and it was carried *nem. con.*, that the mode of election of the Council be as proposed in the report of the Committee, namely, partly by the Branches and partly by the Representative Body.

The CHAIRMAN said the next question was as to the ratio between the proportion elected by the Branches and the proportion elected by the Representative Body.

Mr. BALLANCE proposed, on behalf of the Organization Committee, that the ratio be 2 elected by the Branches in the United Kingdom to 1 elected by the Representative Body.

Dr. T. LAFFAN (Carlow, Kilkenny and Waterford) proposed a ratio of 1 in 4.

Dr. LANGDON-DOWN pointed out that if they proposed to reduce the number of the Council they would find their hands were considerably hampered unless the local Representatives were brought out in comparison with those elected by the Representative Body. If they were only a small number it would be difficult to distribute them over the whole country. From that point of view it was desirable to keep the Representatives of the Branches fairly numerous in proportion to the total number.

Dr. J. J. MACAN (Croydon) remembered that this matter was fully discussed last year, and thought they ought to adhere to the resolution come to at the last Representative Meeting that the proportion should be two elected by the Branches to one elected by the Council.

The CHAIRMAN reminded the meeting that the proposal was only for members in the United Kingdom.

Dr. Laffan's amendment was lost, 25 voting for and 60 against.

Dr. E. D. KIRBY (Birmingham, Central) proposed Scheme 3 as an alternative, which provided for 22 elected by the Branches in the United Kingdom and 9 by the Representative Body.

Dr. J. J. MACAN (Croydon) thought it desirable that they should have a multiple of 3 to provide for retirement by rotation.

Dr. MACLEAN (Cardiff) said they could hardly settle the proportions until they could settle the size of the Council.

The CHAIRMAN said it would no doubt be a difficult thing to work out.

Dr. J. H. FARDON (Birkenhead) seconded the amendment, which was rejected—14 voting for and 59 against.

It was subsequently agreed to adopt Mr. Ballance's ratio of 2 to 1.

Mr. KINSEY asked whether this limited the number to 29 or more.

The CHAIRMAN replied that it did not limit it at all.

Dr. W. HORROCKS (Bradford) inquired if the 2 to 1 ratio included the Colonial Representatives.

The CHAIRMAN replied that it did not touch the Colonial members at all.

Dr. WALTER SMITH asked for the numbers in favour of the ratio of 2 to 1.

The CHAIRMAN replied that there was only one vote against the ratio.

Mr. BALLANCE said they had now got to the time when they could deal with the question of the numbers of the Council. The question arose what to do about the Colonial members. The Home members were to the Colonial members in the proportion of 3 to 1, and he would propose to leave the numbers 30—20 elected by the Branches and 10 by the Representative Meeting—to apply to the United Kingdom alone, and in addition to have 10 members from the Colonial Branches—that, with the *ex-officio* and Service members, would bring the total membership of the Council up to 49.

Dr. JOHNSON SMYTH (Bournemouth) seconded the proposal.

Dr. WOLSTENHOLME (Salford) said that some of the Colonial Branches were practically autonomous. Did he understand that they would be able to vote on all questions that came before the Council?

Dr. FOTHERGILL (Wandsworth) did not think so many Colonial Representatives as 10 were necessary. One of the Colonial Representatives, speaking to him, had said distinctly that they did not want 10, but they did want federation of the Colonies with their own local Councils to do their own work; and he said also that one gentleman from Africa was ample to represent the Imperial interests of the Colonies. He proposed to reduce the number to 7.

Dr. D. G. THOMSON (Mid-Norfolk) seconded the amendment.

Dr. STAWELL, as the Representative of the Victorian Branch of the Association, agreed with the remarks of Dr. Fothergill. He did not quite know why the number of 7 was chosen. He would like himself, being also a South African Representative, to reduce it to a workable minimum, and he would suggest that if possible the number might not be definitely settled now, and that some provision should be made that, if desirable, the number should be altered. He would not say 4, but he would say that 5 would be fully sufficient.

Mr. ARMIT (Hampstead) suggested that in all probability what was running in Dr. Fothergill's mind in proposing the figure 7 was that amongst the various Colonial districts an allotment might be made as follows:

Australia.
New Zealand.
Canada.
West Indies.
India and the Far East.
South Africa.
Mediterranean and Continental.

It was very difficult indeed to divide up the Colonies topographically. It was impossible to put the Far East and India in with Canada or with New Zealand, and in the same way it would be quite impossible to put Gibraltar with Australia. He thought the topographical division of the Colonies in the appendix to the Norwich scheme a good one.

Dr. W. GOSSE (Isle of Thanet, Canterbury and Faversham) thought the Mediterranean and Continental section, which included Gibraltar and Malta, seemed to have rather a large representation on the Council.

Dr. BRUCE GOFF (Lanarkshire) had been directed by his Division to state that they were of opinion that the number of the Council should not be less than 50, and also that there should be proportionate representation of Scotland. It must be borne in mind that some of the Divisions or Branches were situated 600 miles from London, others 500 miles, and his own was over 400 miles, and representatives would have a good deal of difficulty in coming to the various meetings. [Hear, hear.] It had been said that 22 members of the Council should be elected by the Branches, 16 by the Representative Meeting, and 8 by the Colonial Branches, and that there should be 3 Service members; that brought the number up to 49, or rather under what he had been instructed to hold out for, but he was quite willing to forego the one member.

Mr. BALLANCE thought they must be guided by their Colonial Representatives; and if their Colonial Representatives thought a number not exceeding 7 would be sufficient for their needs, he would certainly in his resolution

accept that number instead of 10. But he thought it should be recorded that that was done on the advice of Colonial Representatives, because if they gave them only 7 they would be a little under-represented, numerically considered.

Dr. J. S. Darling was instructed to oppose the reduction of the number of members elected by the Branches to so low a number as 20, because it was not possible with such a number that adequate representation to Ireland could be given.

The Chairman said Dr. Darling must confine himself to the Colonial question.

Mr. D. F. Todd (Sunderland) pointed out that with regard to the Mediterranean and Continental Branch, most of those members were Service members, and they would be represented on the Council by the gentlemen selected by the Representative Meeting.

The meeting then adopted Dr. Fothergill's amendment that the Colonial members should be a number not exceeding 7.

Dr. R. H. Wolstenholme (Manchester) proposed that the number should be 5, thinking that Mr. Ballance had overestimated the Colonial members in proportion to the Home members. He did not think there were as many as 5,000 Colonial members; he believed it was less than 4,000; but if it was found in subsequent years that the number of Colonial Representatives was not ample, the by-law could be altered.

Mr. W. G. Booth (Manchester Central) supported the amendment on the ground that the members of the Council had to meet every month; and could they expect seven members representing the Colonies to meet every month in London? Where could they get representatives that could be staying here all the year round? A Representative of the Colonies had expressed the opinion that five members was ample.

The amendment was lost.

The Chairman said he had another amendment by Dr. Fothergill:

> That the Members of the Central Council representative of the Colonies should be directly or indirectly elected by federations of Colonial Branches,

but he was afraid that he must ask Dr. Fothergill not to move it. There was no federation at present existing of the Colonial Branches.

Dr. J. S. Darling (Portadown and West Down) proposed that the numbers suggested by Dr. Bruce Goff should be adopted; he thought it would be impossible with smaller numbers to get adequate representation of the distant parts of the Empire.

Dr. T. Laffan (Carlow, Kilkenny, and Waterford) seconded the proposal.

Dr. K. A. Grossmann (Liverpool, West) asked whether the numbers were absolute numbers or only proportional.

The Chairman stated that they were absolute numbers.

Dr. Grossmann said in that case he would support the proposal. The Committees would have to be stocked, and the same members would have to serve on many Committees, and their expenses would be exactly the same. The only trouble would be that individual members would be so hard-worked that difficulty would arise with regard to their attending the Committees.

Mr. Atwell (Hampstead) said the Committees were stocked partly from the Representative Meeting, partly from the Council, and partly from the co-opted members. Furthermore, the fact that the Council was a large body certainly must necessitate increased expenditure, because it had to meet at least four times a year.

Mr. Ballance (Norwich and West Norfolk) said that under the scheme, as he understood it, there were thirty-two members proposed from the Home Branches and sixteen from the Representative Meeting. The Colonial, the Service, and the *ex-officio* members brought the total up to sixty-four; and the reduction from seventy-three to sixty-four was not very much worth having.

Dr. Alfred Cox (Consulting Medical Officer to the Local Government Board) thought that for once Ireland really had a grievance. He believed that under the scheme Ireland would get only one Representative. Did the meeting thoroughly realize that Ireland was getting only one? This thing must not be rushed. Some arrangement ought to be come to to satisfy all reasonable aspirations, and he did not think that it was reasonable to expect Ireland to be satisfied with only one member.

Dr. W. Odell (Torquay) said that he did not believe in their coming to a meeting in May of this year and undoing what they had done at Caxton Hall only last year.

Mr. A. Fullerton (Belfast) said the proposal would disfranchise Ireland to a large extent. If they in Ireland got representation according to their members they would have two Representatives instead of having five as they had at present. It would be impossible under those conditions that the Irish Branches of the British Medical Association should take any interest in the affairs of the Association. Also it would be quite impossible that two members for the whole of Ireland would be able to spend their time coming to and fro to attend enough meetings of the Council to have any adequate idea of what was being carried on. If the meeting reduced the number of Representives for Ireland it would practically cut the Irish members adrift from the Association.

Mr. Wolstenholme said that the best way in which reductions could be made was in reducing the numbers of the Council. Some meetings cost £20 and some £30 and he believed even £40. As to the remarks with reference to the representation of Ireland, unless he was very much mistaken Ireland had a very large Committee of its own and Scotland had a Scottish Committee, and he thought that those countries were fairly well represented.

The Chairman said that it was not intended that the proportion given to Ireland should be exactly in proportion to the numbers of its members. That question would be in the hands of the Council to some extent to decide.

Dr. William Ewart (Westminster) said that the question was one with regard to which those who had not had experience of the working of the thing had a difficulty in forming any valuable opinion, and he personally felt that he should like to be guided to a certain extent by those who had the handling of those questions. His Division considered that the reduction ought not to bring the numbers below 59. The figures which his Division suggested were 30, 15, and 14.

The amendment that the Council should consist of 64 members was then put to the meeting and lost, there being 37 for it and 52 against.

Dr. Macan (Croydon) proposed that the constitution of the Council should be 24 members from the Home Branches, 12 members from the Representative Meeting, not more than 7 Colonial members, 6 *ex-officio* members, and 3 Service members.

Mr. Ballance accepted this proposal, and it was put to the meeting as a substantive motion and carried.

Mr. Ballance said that under the scheme which had just been accepted it was very easy to suggest the grouping of members. On page 37 of the report members would see Scheme E, and a long list of Home Branches. In the last column of that scheme the number of Councillors to be elected totalled up to 24. That was the same as the number which had just been agreed to. There were six groups of 4 there. The meeting had agreed to have 12 members from the Representative Meeting, and if they took 2 Representatives from the Representative Meeting from each district of those six, they would get the 12 Representatives from the Representative Meeting to the Council. He thought that had planned out very well.

The Chairman said that of course they had to add two to each of the groups for those elected by the Representative Meeting.

In answer to a question by Mr. Todd (Sunderland), Mr. Ballance said that he proposed that there should be certain topographical representation in the members elected by the Representative Meeting to the Council. He could not see any objection to that. There were 12 to be elected and there were six districts in the column, and he thought that it would be best to put 2 to each district. Therefore, with those elected by the Branches forming those districts, there would be 6 to each district. Ireland would have 6 members.

Dr. W. Gossip (Canterbury) said there were about 1,800 members in Scotland, and they got four members; there were over 3,000 members in the Midlands and over 3,000 in the metropolis, and they each got four members; but in Ireland there were only 908 members in all, and yet they got as many members of Council as Scotland.

Mr. C. R. Straton (Salisbury) said that the grouping seemed to him to be so extremely unfair that he thought it was a matter that ought to go before the Divisions.

Dr. E. O. PRICE said that they had a saying in this country "Every man has his finger on his sore point." Their sore point in Wales was that they were being rather overlooked in this matter of the grouping. He thought, seeing that Ireland got four Representatives for 908 members that they in Wales might have two Representatives for 706 members. He asked that of the meeting as a boon. He knew that it was rather stretching a point. He protested against the idea that distance from the centre was the only consideration which ought to weigh with the meeting in arranging the groups topographically. He thought that consideration must be given to the fact that the meeting was dealing with a distinct entity, separate in the sense that the conditions of practice were different. They in Wales knew that they were asking for more than they were entitled to, having regard to their numbers, but they were not asking for any more than was already being given to Ireland; and what was being given to Ireland was given not merely because Ireland was on the other side of St. George's Channel, but because there were certain difficulties in the arrangement of the representation of Ireland which were being taken into consideration. He thought they might easily make similar difficulties in Wales if they chose.

A REPRESENTATIVE asked, as a point of order, whether the present discussion would not come more properly under By-law 37?

The CHAIRMAN said that the speaker was quite correct in raising the point of order. The method of grouping was a matter which did come under By-law 37.

Colonel JOUBERT DE LA FERTÉ proposed, as an amendment, to insert the word "five" instead of the word "three" in the last line of By-law 36. He said it would be within the recollection of those present that some months ago the Naval and Military Committee brought to the notice of the Council the fact that there was a difficulty in making the selection of officers to be elected to the Council if the limit of three years was retained. He believed the Council considered the matter, and he understood that the Council accepted the suggestion at the last meeting and changed the period from three years to five years. If three years was fixed certain difficulties would arise owing to the fact that after retirement very often a year or two elapsed before officers settled down anywhere.

The motion was seconded by Fleet Surgeon E. BIDEN, and carried.

Dr. WILLIAM EWART (Westminster) proposed:

> That, in the opinion of the Westminster Division, the principle of co-opting members for the Central Council, and the present number of such co-opted members, should be retained.

He said that his Division considered that the Council might desire to add to its numbers men who knew what the wants of the Council were.

Mr. C. R. STRATON (Salisbury) said that it would be an extremely valuable thing for the Council to be able to co-opt. For example, a man's term of office in his own Branch might expire and the Council might be in the middle of something which perhaps he had been the leading man in; perhaps he had been Chairman of the Committee or something of the kind and had the whole subject at his fingers' ends, and it was extremely desirable that the Council should have an opportunity of co-opting such men as he within a reasonable number. Five, he should think, would be quite reasonable.

Dr. FOTHERGILL (Wandsworth) suggested that the meeting should not approve of the idea. The Committees could co-opt, and if there were any gentlemen who were specially serviceable they could come on the special Committees and give them the benefit of their experience in that way.

The amendment was put to the meeting and lost.

Dr. ARTHUR DRURY (Halifax and Huddersfield) moved that after the word "Council" the words "from lists of nominations made by Branch Councils, Divisions, or by at least ten members of the district" be inserted. That would give, he suggested, to all members of the Association the idea that they were within the franchise, and he thought it an acceptable means of getting a perfectly satisfactory election.

After a short discussion it was agreed that the amendment should be "that each Branch Council, or ten members of the district, should have power to nominate," and this amendment was duly carried.

Dr. COX (Gateshead and Consett) desired to give power of nomination to the Irish and Scottish Committees. Those Committees knew the best men in their district, and they might have the power to nominate.

The CHAIRMAN, in answer to an inquiry, said the election must be from the list of nominations. The amendment was to add to the list of bodies allowed to nominate "Irish Committee and Scottish Committee."

The amendment was agreed to by the meeting.

By-law 36, as amended, was then carried *nem. con.*

By-law 37 was then put to the meeting, as follows:

Grouping of Branches.

37. The Branches shall be grouped for the purpose of the election of 20 Members of the Council in such manner as the Council may from time to time direct, but so that each group shall elect not less that one such Member nor more than four such Members.

Mr. BALLANCE moved as an amendment:

> That the grouping of home Branches for election of the Council be generally as shown in Appendix E. That each such group elect four members of Council, and that the members elected by the Representatives be topographically distributed among the same districts and in the same proportion.

That was to say, each of the districts would elect four members through the Branches and two members through the Representative Meeting. Under the scheme, of course Ireland and Scotland were over-represented; but it was absolutely necessary to do what he suggested, and he appealed to the meeting to let that over-representation stand. As regards Wales, Wales as an entity was not mentioned in the scheme; but if it were possible to over-represent Wales or give it a separate representation in the same way, he was sure it would meet with the approval of the meeting and of the Organization Committee. He was not quite sure how it was to be done as regards Wales, but as regards Scotland and Ireland he hoped they would let the over-representation stand.

Dr. HERBERT MANLEY (Bromsgrove, Dudley, West Bromwich) seconded.

Dr. J. BROWN (Rochdale and Bury) inquired how the present representatives from the Branches in Scotland and Ireland and extreme parts of England attended Council meetings. He had been looking up the list of attendances, and he noticed one of the Central Council had not attended all last year—probably on account of the distance. He inquired whether those members of Council living in Scotland and Ireland attended the monthly Council meetings. If not, they would have to alter the qualifications for a representative, and not bind him to be a resident in the Branch, otherwise they would not have sufficient members coming from Ireland and Scotland.

The CHAIRMAN pointed out that there was no such thing as a monthly Council meeting; it was a quarterly meeting, although there was power to hold more.

Dr. MACLEAN (Cardiff) gladly supported the proposal of Mr. Ballance, particularly as assurance had been given that regard would be had to the separate representation of Wales if it could be carried through.

Mr. C. R. STRATON (Salisbury) desired it to be an instruction to the Organization Committee that the proportion should be as near as possible one representative for 628 members. That was the proportion that existed if they divided the 24 members of the Council among the total number of members in the United Kingdom. It did not work out quite fairly in practice, because it gave one representative to 227 members in Ireland, and only one to 800 in the North of England. Therefore he thought there must be something wrong with the scheme, and that it would be better to have a general instruction to make the proportion as near as possible the figure which he suggested.

The CHAIRMAN was unable to accept Mr. Straton's proposition as an amendment.

Dr. E. O. PRICE (North Carnarvon and Anglesey) inquired whether in the distribution of the 12 members elected by the Representative Meeting it was intended to allocate 2 for each group.

The CHAIRMAN replied in the affirmative.

Dr. PRICE further inquired whether it would not be possible under those circumstances, seeing that England was under-represented, for Wales and Scotland and Ireland to be left out of the addition to the representation, so that the 12 additional Representatives

would be distributed through Northern England, the Metropolitan and Southern and South-West groups. In that case each group would have 3 additional members, and he did not think other parts of the kingdom could complain if that were done.

Mr. BALLANCE declined to accept such a modification of the scheme, because the distant parts of the kingdom required a good deal of over-representation in order to cope with the difficulties of attendance on the part of the Irish and Scotch members.

Mr. ANDREW FULLERTON (Belfast) said that the Council meetings pressed very heavily on Councillors coming from Ireland, and if they did not get the representation it would increase the difficulty. He instanced the case of one of their Ulster Councillors being eleven or twelve times in London in the course of the year at Council meetings and Subcommittee meetings. If they reduced the numbers it would mean practically living in London all the time, which was impossible.

Dr. FOTHERGILL (Wandsworth) suggested that Bromley, Norwood, and Croydon should be dropped into the next group. London groaned because they had only five, and under what was proposed they would only be getting four. They were giving a lot to Ireland, Scotland, and Wales which ought to be given to London.

Dr. A. P. LOW (Dundee) did not think the meeting the proper place for a thorough discussion of the scheme. He thought the By-law as it stood was sufficient for them to-day. He would suggest substituting 24 for 20 in the proposed By-law.

The CHAIRMAN pointed out that they would have to make it 31, there being 24 members elected by the Home Branches and 7 by the Colonial Branches. They would have to make it for the purpose of electing 31 members.

Dr. LOW said he would accept that.

Dr. STAWELL (Victorian) did not think the question of election by Colonial Branches could apply to By-law 37, because By-law 39, Subsection (2), made a special provision.

Dr. LANGTON-DAWES (Richmond) inquired whether it would not be possible to leave the actual figure out altogether and simply say that the Branches should be grouped for the purposes of election of those members of the Council who were elected by the Branches.

The CHAIRMAN pointed out that Mr. Ballance's amendment was before the meeting.

Dr. T. J. BARLOW (Southport) suggested that if the meeting agreed and adopted Mr. Ballance's resolution it would become a substantive motion, and they could deal with it by other amendments if necessary.

Mr. BALLANCE said that they had discovered that his proposed amendment rather conflicted with By-law 37. Therefore it was proposed that the amendment should go to the Organization Committee, with instructions to redraft By-law 37 in accordance with it.

Mr. GEO. [illegible] (Devonport) inquired whether it was in order to move any instruction to the Organization Committee to group Wales in a separate group, and to give it two or [illegible] members.

The CHAIRMAN replied that that was not in order, and inquired whether the meeting was willing to pass the following:

That it be an instruction to the Organization Committee to redraft By-law [illegible] to meet the proposition of Mr. Ballance.

To this the meeting agreed.

Dr. [illegible] (Wandsworth) moved:

That the [illegible] Branches Bye-law be taken out of the Metropolitan Counties Group and put into the Metropolitan Group.

Dr. [illegible] (Paddington and Islington) seconded the amendment.

Mr. [illegible] thought it was a purely domestic affair which ought to be left to the South-Eastern Branch themselves. They did not want representatives from Wales or from Ireland to deal with matters from Bromley and Croydon.

Dr. H. E. [illegible] (Worcestershire) observed that it certainly seemed absurd if they were to have any idea of topographical distribution to put those London Divisions with West Somerset, Bath, and Bristol. Moreover, it would bring up the numbers for those Divisions to 5,317.

Mr. BALLANCE explained that those three Divisions were put into the Metropolitan Counties Group in order that the numbers should as far as possible be equalized, and also for the reason that the three Divisions in question were really metropolitan and not in connexion with the Southern and South-Western Group. But if the meeting wished it, the matter could be referred to the Organization Committee to see what they could do.

Dr. FOTHERGILL intimated that he would accept that proposal.

Dr. C. J. RENSHAW (Altrincham) called attention to the Lancashire and Cheshire Branch, which was grouped in the Northern Division. That Branch numbered 1,600 members, and the other Branch had about an equal number. Would it not be better that Lancashire and Cheshire should be notified how many votes it had?

Mr. BALLANCE: The suggestion was that all the groups should vote as groups, and that the Branches should be collected together for the purpose of group voting. Then each group would have a certain number of Councillors on the Central Council, and that it was found easier to do than to split them up into small sections.

The CHAIRMAN observed that the matter was a very difficult one.

Mr. BALLANCE said that if the meeting desired to remit the whole matter to the Organization Committee with authority to consider the grouping as proposed in the United Kingdom that would not be objected to; and then the Organization Committee would consider any objections sent in by any of the Branches in England or Wales.

Dr. C. J. RENSHAW (Altrincham) having suggested that it should be remitted,

Dr. J. S. DARLING (Portadown and West Down) said there was nothing to prevent Ireland selecting its four representatives as it chose. He would prefer Mr. Ballance's proposal that the whole matter be referred to the Organization Committee.

Mr. Ballance's amendment, being now the substantive motion, namely:

> That By-law 37 be redrafted to provide that the grouping of the Home Branches for the election of the Council be generally as shown in Appendix E to the Committee's report; that each such group elect four members of Council, that the members elected by the Representatives be topographically distributed among the same districts and in the same proportion; and that for this purpose By-law 37 be referred back to the Organization Committee with the instruction that they reconsider also the details of the grouping, and circulate the redrafted By-law to the Divisions,

was adopted.

Dr. E. D. KIRBY (Birmingham Central) understood that after the Organization Committee had dealt with it the whole question would come before the Divisions.

The CHAIRMAN said it would have to come before the Divisions again; it was impossible to get it into any definite shape at present.

Mr. BALLANCE, on behalf of the Organization Committee, moved By-law 38 as follows:

> 38. The election of Members of Council by the groups of Branches shall be by means of voting papers sent by post to each member of every Branch comprised in the group. The said voting papers shall contain the names of those candidates who have been nominated, either (*a*) by a Division, or (*b*) in writing, signed by not less than three Members of any such Branch, and sent to such Officer as the Council may appoint for the purpose on or before an appointed day of which not less than fourteen days' notice has been given in the JOURNAL. The said voting papers shall contain such other particulars (if any) and shall be sent to the said officer within such time as the Council may from time to time prescribe by notice given as aforesaid.

Dr. FOTHERGILL (Wandsworth) moved the following amendment:

> That the election in the United Kingdom be conducted by the head office and out of central funds, and the By-law be amended accordingly.

He observed that an election was an expensive matter and he did not think it was a thing which should be done out of the Divisional funds. For many reasons, it was desirable that this work should be done by the head office: first of all, there had to be a notice put into the JOURNAL giving due notice of nominees; that notice was in some cases incorrect, and it totally ignored the fact that Divisions could make a nomination. If the notice was

put in as one applying to the whole Association it would be properly drawn up, and nominations would be sent to the head office. The head office would put them in the various groups, send out the voting papers, bear the whole of the expense, and report in the JOURNAL the result of the election. That seemed to him to be a business-like way of dealing with the matter, and he hoped the meeting would approve of that principle.

Dr. R. H. WOLSTENHOLME (Salford) asked if the columns of the JOURNAL were to be used by the various candidates for the purpose of heckling one another. In the Lancashire and Cheshire Branch there had been a little excitement with regard to an election to the Council, and one of the candidates did not get his letter in the JOURNAL, whilst others did. If the whole of the elections were to be conducted from the head office he thought it would cause some trouble.

Dr. E. J. MACLEAN (Cardiff) observed that they knew from experience that funds were apt to accumulate in the Branches, and he thought on that ground the elections should be run as before by the Branches.

Dr. J. S. DARLING (Portadown and West Down) thought the elections would be very much better conducted by the Branches than they would be by the head office.

Dr. COX (Gateshead and Consett) pointed out that a difficulty would arise where there were several Branches concerned in allocating the expenditure.

Mr. BALLANCE did not think they could compare the present methods of election by the Branches with the method of election proposed in this scheme, by reason of the matter which had just been mentioned. The elections were conducted by single Branches in almost every case now, but in future there would be elections by groups of Branches; and for that purpose he thought Dr. Fothergill's suggestion a good one—namely, that the elections should be conducted in future from the central office.

Mr. W. G. BOOTH (Manchester Central) supported the Wandsworth amendment.

The amendment was carried.

Mr. H. W. ARMIT (Hampstead) moved the following amendment:

> That in the election of the Central Council the principle of proportional representation should be adopted.

He did not know that it was necessary for him to go into a description of the single transferable vote, as it was a very intricate subject, and it might not be fully appreciated by some Representatives. He then called attention to an error in the printing of "proportional representation" in small letters instead of capitals. The method of the single transferable vote had been such an eminently successful one that it must appeal to any member who knew anything at all about it.

The motion was withdrawn, and By-law 38, subject to amendment as directed, was approved.

Mr. BALLANCE moved By-law 39, as follows:

Term of Office of Members of Council elected by Branches.

39.—(1) Each Member of Council elected by a group of Branches in the United Kingdom shall hold office for one year, and at the end of that time shall be eligible for re-election, unless he have served as the Representative on the Council of one and the same Branch or group for six years successively, in which case he shall for one year be incapable of being elected as such Representative.

(2) Each Member of Council elected by a Branch or group not in the United Kingdom, or elected by the Council to represent the Royal Naval Medical Service, the Army Medical Service, or the Indian Medical Service, shall hold office for such period, not exceeding three years, as the electing body may determine, and at the expiration of such period shall be eligible for re-election, provided that no such Member shall be re-elected so as to make his period of continuous service as the Representative on the Council of one and the same group exceed six years.

Dr. WILLIAM EWART (Westminster) moved the following amendment:

> That By-law 39 read as follows:
>
> Each Member of Council elected by a group of Branches in the United Kingdom shall hold office for three years, and at the end of that time shall be eligible for re-election, and one-third of the members so elected shall retire annually.

Mr. W. L. MUIR (Glasgow Eastern) seconded the amendment.

Mr. BALLANCE spoke against the amendment, saying that he did not agree with the principle of electing a member of the Council for three years. At the present time the members of the Council were elected to serve for six years, when they must go off for a year; and he thought that a far preferable plan. Each year the working of the Council could be considered, and if their work had not been satisfactory the members would not be elected for the succeeding year.

The amendment was lost.

Mr. PERCY ROSE (Stratford) asked whether the meeting would be willing to remove the present disqualification after the six years' service? That restriction had been remitted in the case of the Representative Meeting, and he would propose that it should be remitted also in the case of the Councillors.

Dr. W. JOHNSON SMYTH (Bournemouth) seconded.

Dr. FOTHERGILL said he should vote against the Stratford Division's suggestion, as he thought the present method afforded a comfortable way of getting rid of a man; and he hoped the meeting would stick to that.

The amendment was lost.

Subclauses (1) and (2) were then agreed to; and it was agreed that By-law 39 should stand part of the Charter.

The CHAIRMAN moved By-law 40, as follows:

Term of Office of Members Elected by the Representative Body.

40. Each Member of Council elected by the Representative Body shall hold office for one year, and at the end of that time shall be eligible for re-election, unless he have served as a Member of Council elected by the Representative Body for six years successively in which case he shall for one year be incapable of being so elected.

There being no amendment, the By-law was agreed to.

The CHAIRMAN moved By-law 41, as follows:

Qualification.

41. No person shall be eligible for election as a Member of Council by a group of Branches in the United Kingdom unless at the time of his election he shall be a member of a Branch comprised in such group. The eligibility for election as a Member of Council by a group of Branches not in the United Kingdom, shall be such as may be agreed upon by the Branches forming the said group, and if no such agreement shall be made, the regulations as to eligibility shall be the same as for the groups in the United Kingdom.

Dr. JOHN BROWN (Bury and Rochdale) said that he thought each Branch should have power to choose a member for their Branch from any part of the United Kingdom. He thought it should be open to every Branch to choose the very best man they knew, and so long as he was a member of the British Medical Association. He moved as an amendment to omit the words "member of Branch" and to substitute "member of the Association."

Dr. E. D. KIRBY (Birmingham, Central) called attention to the fact that there was another amendment to the same effect.

Dr. DARLING (Portadown and West Down) said he was prepared to accept the one that had been proposed.

Dr. JOHN MILLER (Exeter, Barnstaple) seconded the amendment.

Mr. NASH said he hoped the meeting would have nothing whatever to do with the amendment, because it would be taking away the sense of responsibility which they had tried to get in all the different parts of the kingdom.

Mr. PERCY ROSE (Stratford) said this was going back on the very principle accepted a short time ago. The meeting had already accepted the principle that a Representative need not reside in the district. Now they were dealing with the Council they refused to allow the same principle to apply, which was absolutely illogical.

Mr. BALLANCE said he really could not see that this was illogical at all. The two questions were quite different. They allowed a Representative of a Division in a small constituency to possibly reside outside the Division, but where they had a big group composed of three or more Branches containing perhaps 3,000 members, surely it was possible to get a suitable member of the Council out of those 3,000 members.

Dr. FOTHERGILL (Wandsworth) thought the meeting ought to consider this. It had been constantly said that districts far away from London could not easily get their members to attend. It might occur that people from Ireland and Scotland might come to live in London, and they should not be shut out from representation.

The amendment was lost.

Dr. DARLING said there was no object in going on with the amendment in his name, and it was accordingly withdrawn.

It was then agreed that By-law 41 stand part of the Charter.

The CHAIRMAN moved By-law 42, as follows:

Election Return.

42. The return of the election of each Member of Council elected by a group shall be communicated in writing to the Secretary of the Association by the President or Secretary of the Branch of which he is a Member, not less than twenty-eight days prior to the Annual Representative Meeting of the Association.

Dr. FOTHERGILL moved as an amendment that the By-law be deleted. They had already passed an alteration of By-law 38, providing for the election from the Central Office.

The CHAIRMAN agreed that, according to the decision with regard to By-law 38, the By-law was not required, and the meeting would agree that it should be deleted.

The By-law was accordingly deleted.

The CHAIRMAN moved By-law 43, as follows:

Powers of incomplete Council.

43. In default of and until election of a Member or Members by any body authorised to elect, or so far as such election shall not be complete, all the powers conferred on the Council shall belong to and be exercised by the *ex officio* Members thereof alone and such other Members (if any) of the Council as may have been duly elected by bodies authorised to elect.

The By-law was agreed to.

The CHAIRMAN moved By-law 44, as follows:

Casual Vacancies.

44. Any casual vacancy occurring in the Council not less than four months before the Annual Representative Meeting may be filled up by any body the representation of which may have so become vacant, and the election to fill such vacancy shall be conducted in the same manner as the Annual Election. Any person so chosen shall retain his office so long only as the Member in whose office such casual vacancy shall have occurred would have retained the same if such vacancy had not occurred. The provisions of this clause shall apply as well to the members forming the first Council of the Association in pursuance of Clause 11 of the Charter as to members subsequently taking office.

Mr. BALLANCE, on behalf of the Organization Committee, moved the following amendment:

By-law 44:

That for the words "Any . . . Annual Election" inclusive (first five lines), there be substituted the following:

Any Casual Vacancy occurring in the Council not less than four months before the Annual Representative Meeting amongst the Members of Council elected by the Representative Meeting shall be filled up by the Chairman of Representative Meetings. Any other vacancy which may so occur shall be filled up by the body which appointed the Member of Council whose place shall have so become vacant, and the election to fill such last mentioned vacancy shall be conducted in the same manner as the annual election.

The amendment was agreed to.

The CHAIRMAN moved By-law 45, as follows:

Proceedings.

45. The Council shall meet not less than four times a year, and shall be presided over by the Chairman of the Council or in his absence by a Chairman to be appointed by the Meeting from its own number.

The By-law was agreed to.

The CHAIRMAN moved By-law 46, as follows:

46. Meetings of the Council shall be held at such time and place and upon such notice as the Council shall appoint.

The By-law was agreed to.

The CHAIRMAN moved By-law 47, as follows:

47. No business shall be transacted at any Meeting of the Council until at least 15 Members be present.

The By-law was agreed to.

The CHAIRMAN moved By-law 48, as follows:

48. The Chairman of Council may, if he think fit, and shall, upon receiving a requisition signed by not less than fifteen Members of the Council, and specifying the business for which a Special Meeting is required, call together a Special Meeting thereof. No business shall be transacted at a Special Meeting other than that for which such Meeting is called.

The By-law was agreed to.

The CHAIRMAN observed that there were one or two points reserved which could not be dealt with until the manner of the election of the Council had been decided. The first had reference to By-law 16.

Mr. GREER (Monmouthshire) proposed that after the word "Branch" in the third line the following words should be inserted, "and the members who for the time being represent on the Representative Body the Divisions composing the Branch."

The motion was seconded by Mr. BALLANCE.

Dr. FOTHERGILL (Wandsworth) said that they were taking four men and giving them power to elect two others, and each man would be representing about six or eight Branches extending from the East Coast to the West Coast, from Hastings right over to Bath. He had better be a member of the Council in the area in which he resided. He thought that the amendment ought to be altered in some way.

Dr. WOLSTENHOLME (Salford) said that the Representative would only be a member of the Branch Council *ex officio*, and he would not be compelled to be present at the meetings.

Dr. KIRBY (Birmingham Central) pointed out that the words "elected by the Branch," in the third line, would have to be crossed out.

By-law 16 was then agreed to as amended.

The CHAIRMAN said, with regard to By-law 29, that the only point was the matter of numbers. The By-law as it stood said, "to elect ten members of the Council." "Twelve" would have to be substituted for "ten."

This was agreed to.

Mr. C. R. STRATON (Salisbury) asked whether they had the power of repealing Ordinances. The By-law said, "and repeal existing Ordinances."

The CHAIRMAN said that they had, subject to the Privy Council's approval.

Mr. STRATON asked whether it was necessary to put those words in.

The SOLICITOR said that they must take some power to have the machinery by which to express their wishes, and the Association would make a representation under the By-law to the Privy Council that they wished to repeal or alter such-and-such an Ordinance, and get their assent to it.

The CHAIRMAN stated that there was an amendment by the Liverpool Northern Division to substitute in the last line of the by-law the word "two" for the word "three." The Representative of that Division was not present, and he would formally move the amendment in his name.

The amendment was lost.

By-law 29 was then agreed to.

The CHAIRMAN said it was decided when they were dealing with travelling expenses in the Ordinance that a new By-law should be drafted to meet the difficulty. He had two forms before him; one was "That the first-class travelling expenses within the United Kingdom of Members of Council and Representatives of Divisions attending any Representative Meeting shall be defrayed out of the general funds of the Association." That had been moved by Dr. Kirby (Birmingham Central) and seconded by Dr. J. S. Darling (Portadown and West Down). That would be a new By-law. Then there was an amendment proposed by Dr. Howell (Cleveland) and seconded by Mr. Todd (Sunderland): "That it be an instruction to Counsel in redrafting the By-law as to travelling expenses to provide that the reasonable daily and travelling expenses within the United Kingdom of members of Council and Representatives of Divisions attending any Representative Meeting shall be defrayed out of the general funds of the Association." He would put the amendment first.

Dr. LANGDON-DOWN (Richmond) said that it would be a pity that any such sweeping alterations in expenditure as proposed should take place before the special Finance Committee which had been appointed by the meeting had

reported. He thought that it would be a wise step to refer the matter to the Finance Committee.

Dr. FOTHERGILL said that the word "reasonable" was very vague.

Dr. J. S. DARLING (Portadown and West Down) said that the present system of giving Representatives their first-class travelling expenses was sufficient. They all had cleaner hands from being a little out of pocket than they would have if they came at the expense of the Association.

Mr. NASH (East Norfolk and North Suffolk) said that he noticed that on the new card there was a voucher for getting a return first-class ticket at a fare and a quarter. In the older ones there used to be no such voucher as far as he remembered, and the first-class return fare was paid in full. He took it that most of the members travelled third-class, and it just about came out square when lunch and that sort of thing was paid for *en route*. Now that it was cut down it did not cover anything of that kind at all. He thought that to give only first-class railway expenses was hardly fair to men coming long distances. In some cases it meant practically a loss of three days and in many cases it meant not only a loss of three days but it meant a loss of patients. He calculated that in the year in which he was on the Medico-Political Committee he was £42 out of pocket. He did not think it was fair to ask members to give up that amount or anything like it for the benefit of their fellow practitioners.

Dr. JOHN BROWN (Bury and Rochdale) said that those whom he represented were in favour of reasonable expenses being paid. If the amendment were altered to "may" it would leave the matter open till the time when they were in a position financially to pay.

The CHAIRMAN said that the amendment was simply an instruction to the Council to draft a by-law providing that the reasonable expenses might be paid.

Dr. COX (Consett and Gateshead) appealed to the meeting to leave the thing alone at present.

Mr. TODD (Sunderland) said that in the absence of Dr. Howell he should be very pleased to withdraw the amendment.

With the permission of the meeting the amendment was accordingly withdrawn.

The CHAIRMAN asked Dr. Kirby whether he would allow his proposal to be altered to make it agree with Ordinance 23.

Dr. KIRBY (Birmingham) agreed to the suggestion of the Chairman.

Dr. Kirby's proposal was then put to the meeting and carried.

Dr. MCKENZIE JOHNSTON moved an amendment to By-law 57:

> Without prejudice to the foregoing By-laws, there shall be Standing Committees called by the names, composed in the manner, and having the powers and duties set forth in the Schedule to these By-laws.

Namely:

> That By-law 57 be approved subject to any adjustment or alteration of the Schedule decided by this meeting.

To this the meeting agreed without discussion.

The following By-laws were also agreed to without discussion:

Chairman.

58. Each Standing Committee shall appoint from its own number a Member of Council as Chairman.

SECTION X.

SEAL.

59. The Council shall provide for the safe custody of the seal of the Association, and the seal shall not be used except in pursuance of a resolution of the Council and in the presence of at least one member of the Council and of the Secretary of the Association who shall sign every instrument to which the seal is affixed.

SECTION XI.

GENERAL.

Notices.

60.—1) A notice may be served by the Association upon any member either personally or by sending it through the post, in a prepaid letter, addressed to such member at his last known address or by publication of such notice in the JOURNAL and sending a copy of the JOURNAL containing such notice to such member, prepaid and addressed as above mentioned.

(2) A notice may be served on any Division or Branch, by serving the same as aforesaid on the Secretary of such Division or Branch, and if there be none, then on any two members of such Division or Branch.

(3) Any notice, if served by post, shall be deemed to have been served on the day following that on which the letter, or a copy of the JOURNAL containing the same is posted, and in proving such service it shall be sufficient to prove that the letter, or a copy of the JOURNAL containing the notice, was properly addressed and put into the Post Office.

Validity of Proceedings.

61. The proceedings of the Representative Body or of the Council or of any Branch Council or Committee or other Body acting under the Charter or the Ordinances or the By-laws shall not be invalidated by any accidental omission to give any notice required by the By-laws or by any vacancy among their members or by any defect in the election or qualification of any of the members thereof.

SCHEDULE TO BY-LAWS.

The meeting then proceeded to the discussion of the Schedule to the By-laws, which appeared in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL of April 6th, p. 30.

Dr. MCKENZIE JOHNSTON moved that the Journal Committee and Finance Commitee be merged into one Committee, which Dr. BRUCE GOFF seconded.

The CHAIRMAN read a statement of the Treasurer on the subject, as follows:

> The affairs and policy of the JOURNAL are so closely mixed up with those of finance that separation into two Committees is inexpedient. The great majority of matters which would come before the Journal Committee would probably involve expenditure, and whenever that is the case the matter would be hung up until the Finance Committee had decided the question. Thus the same subject would be considered twice over, and much time and money would be wasted, and the delay would in some instances prevent the affair being taken up at all.

Dr. MCKENZIE JOHNSTON, while he entirely appreciated the Treasurer's statement, pressed his amendment, and was sure the duties could be better performed by one Committee and with greater economy.

The CHAIRMAN, speaking as a Representative, said when the business of the Association was the JOURNAL pure and simple, what was proposed by the amendment might have been excellent, but since their reorganization many more interests had come into being, and he could not see why the Finance Committee should be attached to one particular part of the Association's work. The JOURNAL could be as well managed by its own Committee quite apart from the Finance Committee, which ought to be perfectly independent of any particular interest in the Association. He appreciated the difficulty there was in getting rid of the idea that the JOURNAL was the "be all" and "end all" of the Association. It was not, and it was not right that the finance side should be tied to one particular part of the Association's work.

Dr. F. W. BAILEY (Liverpool, Central) thought there ought to be a Finance Committee apart from everything else connected with the Association.

Dr. FOTHERGILL (Wandsworth) thought, in supporting the Chairman, that the Finance Committee had quite enough work to do in determining the way the funds of the Association should be spent.

The amendment was put to the meeting, when 5 voted for it and 68 against. It was therefore declared lost.

There being no further amendment to the proposition that the Finance Committee should stand as in the Schedule, it was agreed to without discussion.

The Organization Committee, Journal Committee, and Premises Committee were agreed to as stated in the Schedule.

Mr. ARMIT (Hampstead) thought the money to be spent by the Science Committee should be increased, and moved that the number of elected members be increased from 10 to 14.

Dr. W. MUIR SMITH (Hastings and Eastbourne) pointed out that there was power to add to the members.

Dr. W. R. STRAPP seconded.

Dr. WOLSTENHOLME opposed, pointing out that the total number was too large.

The amendment was put and lost.

Dr. Cox (Gateshead) thought that, with all their good qualities, the Representative Meeting were not the people to select the members of the Science Committee. He moved that the whole of the Committee be selected by the Council, and not half by the Council and half by the Representative Meeting.

Dr. JOHNSON SMYTH (Bournemouth) seconded.

On a show of hands, 44 voted for the amendment and 12 against, which was declared carried.

On the amendment being put as a substantive motion, it was agreed to by the meeting.

Dr. LANGDON-DOWN (Richmond) thought the number for the Ethical Committee was very small, and moved that the total number be increased to 12.

The amendment being seconded, it was agreed to by the meeting and adopted as a substantive resolution.

It was also agreed that the Medico-Political and Public Health Committees be as stated in the Schedule.

Dr. FOTHERGILL (Wandsworth) moved, with regard to the Hospitals Committee, that the number of elected members be 12, 6 by each body.

The amendment being seconded, it was put and carried and adopted as a substantive resolution.

It was also agreed that the Naval and Military and Colonial Committees be as stated in the Schedule.

Dr. FOTHERGILL (Wandsworth) thought the word "Honorary" should come before the word "Secretary" in the Schedule, with regard to the Scottish Committee and the Irish Committee.

His amendment was adopted by the meeting.

The power of co-option was granted to the Irish Committee.

The Scottish and Irish Committees, as recommended by the Schedule and amended, were adopted.

The CHAIRMAN announced a rider to the scheme by Dr. Cox, seconded by Dr. Kirby, that each Standing Committee have power to co-opt not more than four members, and to form Subcommittees with power to co-opt.

Dr. Cox said he moved the amendment because power had already been given that four of their Committees should have power to co-opt, and he did not see why it should not be made a general thing.

Dr. KIRBY seconded without further remarks.

Dr. WOLSTENHOLME said if they granted Committees and subcommittees power to co-opt they would undo the whole of the work of the Finance Inquiry Committee which had taken place during the year, and they would increase the expense enormously.

Dr. FOTHERGILL (Wandsworth) pointed out that they had [illegible] in the Committee.

The CHAIRMAN remarked that when subcommittees were appointed from a Committee the Committee had [illegible] approve them if they liked, although the [illegible] generally given to their constitution.

Mr. ANDREW (Hampstead) suggested that power should only be given to co-opt for [illegible] purposes.

Mr. COX (Gateshead) said if the power of co-option were restricted in subcommittees he would suppose [illegible] would be in order.

Dr. SAUNDBY said he thought it would not [illegible] of the meeting to [illegible] to [illegible] number.

The CHAIRMAN said he was informed by the Solicitor [illegible] Committee should be [illegible] as a matter of law unless it was [illegible] in the Schedule [illegible] Charter was [illegible].

Dr. C. O. CAMERON (Glasgow) thought the meeting would [illegible] the Council [illegible] question. He said, we [illegible] to refer to Council matters [illegible] by their committees to [illegible] Council the meeting would [illegible] and [illegible].

Dr. [illegible] (Bournemouth) suggested that the words to [illegible] with power to co-opt be omitted.

The CHAIRMAN said they wished to get rid of the word "co opt." All Standing Committees had power to form subcommittees with power to include members who were not members of the Committee.

Mr. J. J. MACAN (Croydon) suggested the use of the words, "or other members of the Association," which Dr. Cox accepted.

The CHAIRMAN then put the resolution as follows:

That the Standing Committees shall have power to form Subcommittees from their own members or from other members of the Association.

The voting was 40 for and 18 against. The resolution was declared carried.

Mr. BALLANCE (Norwich and West Norfolk) moved:

That the Council be authorized to provide for the formation of Committees representative of the Colonial Branches which are geographically associated.

This was agreed to without discussion.

The CHAIRMAN said that concluded the business of the draft Charter, except a motion which appeared at the end of the agenda paper:

That the draft Charter, Ordinances and By-laws, as drafted by the Organisation Committee and amended by the Meeting, subject to such alterations, if any, as may be required as the result of a Referendum, if such be taken by the Council, and subject to such changes, if any, as the Council may make, in order to meet the special requirements of the Colonial Branches, be referred to Counsel for final revision and placed before a Representative Meeting for final confirmation at the earliest possible date.

He moved that; and the resolution was adopted without discussion.

At this juncture the meeting adjourned till 6 o'clock.

CONFIRMATION OF THE MINUTES.

The CHAIRMAN said the only way of confirming the minutes was by having them read out, and for members to call attention to any inaccuracies. Before calling upon the Secretary to read the minutes, he wished to say that he had been asked by the Secretary of the South Wales Branch to express his thanks to the meeting for the generous response made to his request, he having obtained either in cash or promises £50. He wished also to impress upon the Representatives that it would be a great advantage if they would make this case known to their constituents, and try to get this Emergency Fund increased.

The MEDICAL SECRETARY proceeded to read the minutes.

The CHAIRMAN, before proceeding with the minutes, thanked the Secretary and clerical staff for having been able to prepare them in so short a time.

The meeting having signified assent, the CHAIRMAN proceeded to sign the minutes as correct.

Dr. LANGDON-DOWN (Richmond) asked to be allowed to voice what he felt sure was the feeling of all present at the meeting by proposing a very hearty vote of thanks to the Chairman for his uniformly kind, courteous, and firm conduct in the chair. They knew the Chairman before they came to that meeting, from their experience last year, as a most [illegible] and most experienced chauffeur. He had piloted their car, which was a very complicated car, through a very difficult course with very great speed safely to the end of their journey, and they had had no accidents and no punctured tyres. The Chairman had had a very firm grip and a very firm head, and a thorough knowledge of the road, and he, the speaker, was sure that the members would feel that they owed to him their very [illegible] thanks. [Loud applause.]

The CHAIRMAN said that he was very much obliged to the meeting for the vote of thanks, but he was perfectly certain [illegible] no man could have conducted a meeting such as [illegible] had unless he had had to deal with gentlemen who were perfectly amenable to discipline.

Dr. CLARK (Torquay) proposed a very hearty vote of thanks to Mr. Worrall for his able work as Chairman of the Organisation Committee. The way in which he had [illegible] the meeting during the two days was most creditable. [Loud applause.]

The proceedings then terminated.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SUMMER SESSION 1907.

REPORT OF PROCEEDINGS.

Tuesday, May 28th, 1907.

Dr. DONALD MACALISTER, President, in the Chair.

PRESIDENT'S ADDRESS.

THE PRESIDENT delivered the address, published in the SUPPLEMENT of June 1st, p. 311.

Dr. NORMAN MOORE moved, Mr. MORRIS seconded, and it was agreed that the thanks of the Council be given to the President for his address, and that it be printed in the minutes.

BUSINESS COMMITTEE.

The PRESIDENT, from the chair, proposed the reappointment of the Business Committee, consisting of Dr. Norman Moore (Chairman), the President, Mr. Young, and Sir Christopher Nixon. This was agreed to.

Dr. NORMAN MOORE moved, and it was agreed to, that the Council should adjourn at about 4 o'clock to enable the various Committees to meet for the completion of their Reports.

RESULTS OF PROFESSIONAL EXAMINATIONS.

The REGISTRAR stated that the next business was to receive the tables relating to examinations:

(*a*) For ordinary medical and surgical diplomas and degrees.
(*b*) For qualifications in sanitary science.
(*c*) Dental diplomas.
(*d*) Preliminary subjects.
(*e*) Answers sent by the medical authorities as to the exemptions granted by them in any part of their examinations during the year 1906, and those relating to the competitions for admission to the three services of which an analysis appears on page 364.

Dr. MCVAIL moved that these tables be received and entered on the minutes. This was duly seconded and agreed to.

Dr. MCVAIL moved, Mr. YOUNG seconded, and it was agreed to:

That the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy, the Director-General of the Army Medical Service, and the Under-Secretary of State for India, respectively, for the returns which they have again furnished to the Council, with the request that these returns may in the future continue to be furnished to the General Medical Council.

APOTHECARIES' HALL, DUBLIN.

Sir JOHN MOORE, in introducing the motion which appeared in his name, said he would have to make a statement on the subject which he did not make last November, and the absence of which he thought was misinterpreted by some members of the Council. The General Medical Council had been ordered by the Privy Council to keep the examination of the Apothecaries' Hall going. The Council itself had refused to keep the Apothecaries' Hall going, and had reported the Apothecaries' Hall to the Privy Council as having an insufficient examination in medicine.

Dr. F. G. ADYE-CURRAN rose to a point of order, but

The PRESIDENT replied that Sir John Moore was not out of order; it was a question of taste.

Sir JOHN MOORE, proceeding, said that the examiners under the Act had very important duties to perform. They had to report on the sufficiency of the examination not only in their own department, surgery, but also in the department of medicine and midwifery. He had analysed the result of the final examinations since July, 1901, and during the last six years 32 candidates had been examined for the licence of the Apothecaries' Hall, Dublin, and 7 had passed; that was 21.9 per cent. The members of the Council could imagine the machinery which had had to be employed to license those seven men. In the documents which were before the Council, Table 1, page 8, a very significant fact appeared; the members would find that in the year 1906 4 candidates presented themselves in Chemistry at the Apothecaries' Hall, all of whom passed. The passes were 100 per cent. in the difficult subject of chemistry. In Physics there were only two candidates, both of whom passed; in Biology there were four candidates, three of whom passed; in Anatomy there were seven candidates, of whom three passed; and in Physiology there were three candidates, all of whom passed. In bringing this motion forward he had no intention of injuring the Apothecaries' Hall. If it ceased licensing medical men to-morrow it would have a useful future by returning to its original position of licensing pharmacists and preparers of medicines. He was quite aware that the General Medical Council could not make representation to the Privy Council on the ground of the insufficiency of examination, but it might on the ground that the Hall as a body was so small in importance as not to require representation for this purpose. He therefore moved:

That the Governor and Court of the Apothecaries' Hall, Dublin, be requested to furnish, for the information of the Council, a statement showing, in reference to the Final or Qualifying Examination of that body:

1. The number of candidates who have presented themselves for the said Examination in each year since the appointment of Assistant Examiners in Surgery by the Council in May, 1897.
2. The number of candidates who have been successful at the said Examination in each year since 1897.
3. The subjects in which the respective candidates presented themselves at each Final Examination during the said ten years.
4. The number of candidates rejected in each of the subjects of Medicine, Surgery, and Midwifery.
5. The number of times each rejected candidate has been re-examined during the past ten years.

Dr. LITTLE seconded.

Dr. ADYE-CURRAN confessed his surprise that this matter should be brought forward after having been rejected at the last session of the Council.

In reply to Dr. PYE-SMITH, the CHAIRMAN said it was only rejected on a technicality, Section 13 of the Act of 1858 requiring that the majority must be of those present, and not merely those voting.

Dr. ADYE-CURRAN (continuing) assured the Council that everything was being done to maintain the standard of the examination of the Hall, which was now thoroughly up to date, although some ten years ago it was found deficient in one or two instances.

Dr. MCVAIL, as a member of the Examination Committee, had read the reports of the assistant examiners, which were entirely favourable to the methods of the examination adopted by the Apothecaries' Hall. The resolution could be justified only if there were reasonable grounds for thinking that the body was not doing what it could for examinations, but not a single complaint regarding the examination had been laid before the Examination Committee, and therefore he could not vote for the resolution.

Mr. MORRIS endorsed the statement of Dr. McVail, and he thought the motion peculiarly inappropriate and inopportune.

Sir JOHN MOORE, in reply, said he merely moved in the matter because he had the honour of the profession at heart, and also because it was a deplorable thing for the community at large that there should be a body which was apparently not wanted, and the Council, as entrusted with the management of the licences, ought to consider its position.

The motion was then put and declared lost.

On the motion of Dr. LINDSAY STEVEN, the names and numbers were taken down, when 10 voted for, 15 against, 9 did not vote, and 2 were absent.

Dr. ADYE-CURRAN moved, Sir CHRISTOPHER NIXON seconded, and it was resolved:

That Sir Lambert Ormsby, late President, R.C.S., Ireland, and Mr. F. Conway Dwyer, Fellow and Examiner in Surgery, R.C.S., Ireland, be appointed Assistant Examiners in Surgery to the Apothecaries' Hall, Dublin, the former for a period of two years and the latter for a period of four years, vice Sir Henry Howse and Mr. Alexis Thomson, retired.

APOTHECARIES' SOCIETY, LONDON.

Sir HUGH BEEVOR moved, Mr. MORRIS seconded, and it was resolved:

That Mr. Henry Percy Dean, L.S.A., M.B., M.S. Univ. Lond., F.R.C.S. Eng., be appointed Assistant Examiner in Surgery to the Apothecaries' Society of London for a period of four years, vice Mr. Peyton Beale, who retires by rotation.

Results of Examinations.

The following tables represent an analysis of all examinations for the Services since last session—namely, one for the Indian Medical Service, two for the Royal Navy, and one for the Royal Army Medical Corps:

Table I.

Showing the Extent of the Competition for each Service.

Services.	No. of Candidates.	No. of Vacancies.	Proportion of Candidates to Vacancies.
Royal Navy Medical Service.	29	17	5 to 2.9
Royal Army Medical Corps...	60	30	5 to 2.5
Indian Medical Service ...	30	23	5 to 3.8
Total or average ...	119	70	—

Table II.

Showing whence the Candidates received their Qualifications.

Licensing Body.	Number of Candidates.	Proportion of Entire Number.
English Colleges and Universities ...	45	37.5 per cent.
Scottish ,, ,, ...	28	23.5 ,,
Irish ,, ,, ...	39	32.8 ,,
Colonial ,, ,, ...	0	—
Mixed	8	—
Total or average	119	—

Table III.

Showing the Proportion of Commissions Gained by the Candidates of each Country.

Country.	Number of Commissions Won.	Proportion of all Commissions Offered.
England	31	44.3 per cent.
Scotland	17	24.3 ,,
Ireland	16	22.8 ,,
Colonies	0	—
Mixed	6	
	70	—

Table IV.

Showing the Relative Success of the Candidates of each Country in Proportion to their Respective Numbers.

Country.	Number of Candidates.	Number who gained Commissions.	Proportion of Successful Candidates.
England	45	31	68.8 per cent.
Scotland	28	17	60.7 ,,
Ireland	38	16	42.1 ,,
Colonies	0	0	—
Mixed	8	6	—
Total or average ...	119	70	58.8 per cent.

Table V.

Showing the Percentage of Candidates who Passed the Qualifying Standard, including those who Gained Commissions.

Countries.	Number who Entered.	Number who Passed the Standard.	Proportion to the Total.
English candidates ...	45	42	93.3 per cent.
Scottish ,, ...	28	24	85.7 ,,
Irish ,, ...	38	30	78.9 ,,
Colonial ,, ...	0	0	—
Mixed ,, ...	8	6	—
Total or average ...	119	102	85.7 per cent.

Table VI.

Showing the Proportion of those who Failed Totally among the Candidates of Each Country.

Country.	Number of Candidates.	Number Rejected.	Proportion of Total Failures.
English candidates...	45	3	6.6 per cent.
Scottish ,, ...	28	4	14.3 ,,
Irish ,, ...	38	8	21.0 ,,
Colonial ,, ...	0	0	—
Mixed ,, ...	8	2	—
Total or average ...	119	17	14.3 per cent.

Table VII.

Showing Details of the Performance of each Class of Candidate.

Qualifications.	Number of Candidates.	Commissions Gained.	Qualified but Unsuccessful.	Rejected.	Percentage Rejected.
English Conjoint Board alone	34	24	8	2	5.9
,, ,, and Oxford degree	1	1	0	0	—
,, ,, and Cambridge ,,	4	4	0	0	—
,, ,, and London ,,	0	0	0	0	—
,, ,, and Durham ,,	0	0	0	0	—
,, ,, and Manchester ,,	1	1	0	0	—
,, ,, and L.S.A. ,,	0	0	0	0	—
English Apothecaries' Society alone ..	1	0	1	0	—
,, ,, ,, and London degree	0	0	0	0	—
London degree alone	0	0	0	0	—
Liverpool ,, ...	1	1	0	0	—
Cambridge degree alone	1	0	0	1	—
Durham ,, ...	2	0	2	0	—
Manchester ,, ...	0	0	0	0	—
Victoria ,, ...	0	0	0	0	—
Scottish Conjoint Board alone	5	1	1	3	60.0
Aberdeen degree alone	4	3	1	0	00.0
Edinburgh ,, ...	15	10	4	1	6.6
Glasgow ,, ...	4	3	1	0	0.0
Irish Conjoint Board alone	15	2	6	7	40.7
,, ,, and Irish degree ..	2	1	1	0	—
Dublin degree alone	17	10	6	1	5.9
Royal Colleges of Ireland	4	3	1	0	—
Queen's Colleges	0	0	0	0	—
Mixed	8	6	0	2	—
Total or average	119	70	32	17	14.3

Table VIII.

Percentage Comparison of the Work of certain Classes of Candidates.

[illegible]	Number of Candidates.	Gained Commissions.	Qualified but Unsuccessful.	Total Qualified.	Number rejected.	Percentage of Winners.	Percentage qualified	Percentage rejected.	Order.
[illegible]	34	24	8	32	2	70.6	94.1	5.9	4
[illegible] glish degree ...	1	1	0	1	0	100.0	100.0	0.0	1
[illegible]	4	1	2	3	1	25.0	75.0	25.0	5
[illegible]	13	9	3	12	1	69.2	92.2	7.8	3
[illegible]	5	3	1	4	1	60.0	80.0	20.0	2
[illegible]	2	0	2	2	0	0.0	100.0	100.0	1
[illegible] alone ...	15	10	4	14	1	66.6	93.3	6.6	3
[illegible]	11	7	2	9	2	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	119	70	32	102	17	58.8	85.7	14.3	—

REGISTRATION OF FOREIGN AND COLONIAL DIPLOMAS.

The CHAIRMAN then brought forward the following report by the Executive Committee pursuant to the following Standing Order:

"The Executive Committee shall be empowered to take the necessary steps for carrying into effect the clauses of the Medical Act (1886) relating to the registration of the diplomas of colonial and foreign practitioners, and shall report to the Council from time to time their proceedings thereon. (1887: XXIV, 270.)"

Report.

The Executive Committee report that Part II of the Medical Act (1886) having been extended by an Order in Council to Nova Scotia (see Minutes, vol. xliii, pp. 195-196), they have considered the conditions under which medical qualifications granted in the Province of Nova Scotia shall be recognized for registration in the *Colonial List* of the *Medical Register* of the United Kingdom, and on February 27th, 1907, adopted the following resolution:

"That any person who holds—

"(1) The Diploma or Licence in Medicine, Surgery, and Midwifery granted after examination by the Provincial Medical Board of Nova Scotia, together with the Licence to practise in that Province; or

"(2) The Degrees of Doctor of Medicine and Master of Surgery of the Dalhousie University, together with the aforesaid Licence to practise; or

"(3) The Degrees of Doctor of Medicine and Master of Surgery of the Halifax Medical College, together with the aforesaid Licence to practise,

shall be entitled to be registered in the *Colonial List* of the *Medical Register*, provided he satisfies the Registrar of the General Medical Council regarding the other particulars set forth in Part II. of the Medical Act, 1886."

He formally moved from the Chair, and it was resolved:

That the Report of the Executive Committee on the recognition of Nova Scotian degrees and diplomas be received and entered in the minutes; that the Registrar be directed to give effect to the resolutions therein contained; and that the Council record its satisfaction at the establishment of reciprocal relations with the Province of Nova Scotia.

DENTAL BUSINESS.

On the motion from the Chair, the following report by the Executive Committee was received and entered on the minutes:

Report.

On February 25th, 1907, the Executive Committee resolved to report to the Council that, in carrying out the provisions of this Standing Order, namely—"The Executive Committee shall be empowered to receive and consider all applications and communications relating to dental business (other than matters pertaining to the Dental Committee), and to report thereupon to the Council (1898: XXXV, 118)"—they propose in future to report to the Council from time to time only such matters of dental business as may seem of sufficient importance.

RESTORATION OF NAME TO "REGISTER."

The Council then proceeded to consider *in camerâ* a report by the Executive Committee on the restoration of a name removed from the *Medical Register* under Section 29 of the Medical Act, 1858.

Strangers were directed to withdraw; on readmission,

The CHAIRMAN said: I have to announce that the Council has resolved to direct the Registrar to restore the name of Hugh Stanley Riddell (?)

CLINICAL TEACHING IN THE UNITED KINGDOM.

Dr. LINDSAY STEVEN moved:

That a Committee of this Council be instructed to obtain information as to the methods of clinical teaching in medicine and surgery in operation at the various teaching centres of the United Kingdom, with special reference to the numbers of students attending the individual courses, the relationship of the number of beds at the command of the teacher to the number of students attending his course, and the probable influence of the teacher being at the same time the examiner upon the size of his class, and to report to the next session of Council.

He said there were two statements he desired to make in support of the motion. First, that in his opinion clinical teaching, both in medicine and surgery, in order to be efficient in the matter of instruction afforded, should bear a different relationship, as regards numbers of students attending the course, to the amount of material attainable at the hospital beds which were at the disposal of the clinical teacher; and, secondly, on general principle, it was desirable that a clinical class should be relatively a small class, and, in order to have that individual inspection which it should be the aim of a clinical teacher to impart, the size of the class should not be too great. He thought within the last few years there had been placed upon the minutes of the Council opinions which quite justified the raising of this question now; and he referred particularly to the report of the visitors and inspectors with regard to the Scottish University, 1904, whose opinions had tacitly been approved of by the Council. It was so important a matter that he felt it to be his duty to bring the matter forward.

Dr. MACKAY thought Dr. Lindsay Steven had rendered valuable service to the Council in bringing forward the subject of clinical teaching, but thought it premature. He formally seconded the motion, in order that the matter might, by leave of the Council, be withdrawn and the discussion postponed to a future date.

Dr. LINDSAY STEVEN said his chief aim was to air the subject, and if it was the feeling of the Council that the motion was premature he asked leave to withdraw, which was given.

The Council then adjourned.

Wednesday, May 29th, 1907.

Dr. DONALD MACALISTER, President, in the Chair.

The minutes of the previous day's proceedings were read and confirmed.

PENAL CASES.

During the hearing of these cases, Mr. Lushington (as Legal Assessor) and Mr. Winterbotham (as Solicitor to the Council) were present.

The first case was that of George Covey, registered as of 1, Heathcote Street, Mecklenburgh Square, London, W.C., Mem. R. Coll. Surg. Eng. 1864, Lic. Soc. Apoth. Lond. 1865, who had been summoned to appear before the Council on the following charge:

That you were on the 23rd day of April, 1907, convicted of the following misdemeanours at the North London Sessions, namely, of obtaining money by false pretences and of obtaining money by fraud while being an undischarged bankrupt.

Mr. George Covey did not appear.

The SOLICITOR read the notice which had been served upon Mr. Covey, and he also put in the certificate of conviction. He also read a letter from Mr. Covey in which he expressed his regret, and hoped that the Council would deal with his case as leniently as possible. He (Mr. Covey) added that he had been over forty years in the profession, and no professional complaint had been previously brought against him.

Strangers were directed to withdraw; upon their readmission,

The PRESIDENT said: I have to announce the decision of the Council as follows:

That George Covey having been proved to have been convicted of divers misdemeanours, the Registrar has been directed to erase his name from the *Medical Register*.

The case of Andrew Dunn Turner was next taken. He was registered as of 71, Marina, St. Leonards-on-Sea, M.B., Mast. Surg., 1882, Univ.Glasg., and had been summoned to appear before the Council on the following charge:

That you were on the 21st day of November, 1906, convicted of the following misdemeanour at Lewes Assizes: namely, of unlawfully, maliciously, and scandalously writing and publishing an obscene letter at Hastings on 25th June, 1906.

Mr. Turner appeared in person.

The SOLICITOR read the notice which had been served on Mr. Turner. He put in the certificate of conviction. He next read a report of the trial from a certain paper, and asked Mr. Turner if the report were fairly accurate.

Mr. TURNER replied that it was.

The SOLICITOR read a letter from Mr. Turner, in which he expressed the hope that the Council would deal leniently with him and not remove his name. Nothing had been brought against him for twenty-five years.

In reply to the PRESIDENT, Mr. TURNER said he did not wish to address the Council.

Strangers were directed to withdraw; on their readmission,

The PRESIDENT said:

Mr. Andrew Dunn Turner, I have to inform you that it having been proved that you have been convicted of a misdemeanour the Council has directed the Registrar to erase your name from the *Medical Register*.

The next case was that of Edward John Havens, registered as of East Donyland, Colchester, M.R.C.S.Eng.,

1879, L.S.A.Lond., 1879 who had been summoned to appear before the Council on the following charge

That you were on November 5th, 1906, convicted of the following misdemeanour at Thorpe Petty Sessions, Thorpe-le-Soken, Essex: namely, of obstructing the highway; also that you were on December 17th, 1906, convicted at the like session of disorderly behaviour whilst drunk; and also that you were on April 8th, 1907, convicted of the following misdemeanour at Mistley Petty Session, namely, of common assault.

Mr. Havens appeared in person.

The SOLICITOR read the notice which had been served on Mr. Havens, and also the three certificates of conviction. He also read reports from various newspapers of the three trials, and asked Mr. Havens if they were fairly accurate. Mr. Havens replied in the affirmative.

Mr. HAVENS, in answer to the PRESIDENT, deeply regretted the circumstances which had caused the Council the trouble of considering his case. He had not practised his profession for ten or twelve years, as he had property to attend to.

Strangers were directed to withdraw; on their readmission,

The PRESIDENT said:

Mr. Edward John Havens, the Council have deliberated on the convictions which have been proved against you, but they have adjourned the further consideration of your case till the November session, when you should be present to hear the result of their final deliberations.

The Council proceeded to the consideration of the report of the Dental Committee on the charge against James Marston, in regard to whom the Dental Committee had found the following facts established by the evidence:

a) The said James Marston is on the *Dentists' Register* as in practice before July 22nd, 1878, and of the address: The shrubbery, East Howe, Kinson, Bournemouth.

b) The said James Marston was convicted of bigamy on January 16th, 1906 at the Dorset Assizes, and was sentenced to twelve months' imprisonment with hard labour.

Mr. Marston did not appear.

Strangers were directed to withdraw. On their readmission, the PRESIDENT announced the judgement of the Council as follows:

That James Marston, having been proved to have been convicted of a felony, the Registrar has been directed to erase his name from the *Dentists' Register*.

The next matter considered by the Council was the report of the Dental Committee on the charge against Thomas William Frederick Stewart, in regard to whom the Dental Committee had found the following facts established by the evidence:

That Mr. Stewart was on November 21st, 1906, convicted at Lewes Assizes of feloniously embezzling the several sums of 19*s.* on July 15th £1 3*s.*, on September 23rd, and £5 5*s.* on October 7th, 1906 moneys of Frederick Charles Proctor, his master.

Mr. Stewart appeared in person, and addressed the Council in mitigation.

Strangers were directed to withdraw; on their readmission,

The PRESIDENT announced the decision of the Council as follows:

Thomas William Frederick Stewart, it having been proved that you have been convicted of a felony, the Registrar has been directed to erase your name from the *Dentists' Register*.

The Council then proceeded to the consideration, which had been adjourned from November 29th, 1906, of the facts proved against William Henry Moseley and James Parkinson, whose names appear on the *Dentists' Register* as in practice before July 22nd, 1878, and who were connected with the Company of "Foley's Limited. The Dental Committee on May 27th, 1907, made a report, which was read by the Registrar.

The Committee find that the following facts were established by the evidence. Both Mr. Moseley and Mr. Parkinson have, since the hearing of the case by the Council in November last, done their best to sever their connexion with the company, and they have both parted with their shares in the company, and they have respectively practised at Ipswich and at Uxbridge Road independently of the company, and there is no evidence that their professional conduct in the interval has been otherwise than satisfactory.

Mr. James Parkinson appeared in person.

The PRESIDENT stated that Mr. Moseley appeared before the Committee on May 27th, but was not well and he (the President) then informed Mr. Moseley that if he was no better when his case came before the Council he might be excused. The President further stated that he was authorized by the Dental Committee to say that a certificate had now been received, stating that Mr. Parkinson had entirely severed his connexion with the company by transferring the shares he formerly held in it.

In answer to the PRESIDENT, Mr. PARKINSON said he had nothing to say.

Strangers were directed to withdraw; on their readmission, the PRESIDENT announced the decision of the Council as follows:

That the Council having further considered the charges brought (proved) against James Parkinson and William Henry Moseley and the reports of the Dental Committee thereon does not judge them guilty of infamous or disgraceful conduct in a professional respect.

Mr. PARKINSON: I thank you, gentlemen. I can assure you it shall not occur again.

This concluded the penal cases.

The Council then adjourned for tea, and immediately went *in camera*.

THE COUNCIL AND THE BRITISH MEDICAL ASSOCIATION.

On the public being readmitted,

Dr. NORMAN MOORE proposed, Sir JOHN MOORE seconded, and it was agreed, that a report by the Executive Committee on a communication received from the British Medical Association be received and entered on the minutes.

The following is the text of the report:

The Executive Committee reports that at its meeting on Monday, May 27th, 1907, it considered the following communication from the British Medical Association:

"British Medical Association,
"Medical Secretary's Office,
"429, Strand, London, W.C.

"Temporary Address:
"6, Catherine Street,
"Strand, W.C.,
"April 16th, 1907.

"Dear Sir, The Annual Representative Meeting, in July last, decided that the British Medical Association should act as complainant in cases which, in the judgement of the Association, might require to be brought before the General Medical Council.

"The Central Ethical Committee of the Association is the body whose duty it would be, on behalf of the Association, to consider whether a given case should be brought before the General Medical Council and prepare the case for the consideration of that Council.

"The attention of the Central Ethical Committee has been drawn to certain decisions of the Courts, which make it clear that no member of the General Medical Council who has acted in such a position, for example, as member of Council of a Medical Defence or Protection Society, could take part in the hearing by the General Medical Council of a case presented by the Council of which he was a member. From one at least of the recorded cases, it would appear doubtful whether a person who was merely an ordinary member of a body, such as the Medical Defence Union, engaged in the presentation of cases on behalf of individual medical practitioners, could sit as a member of the Council in hearing a case presented by such a body.

"The Committee finds that a large majority of members of the General Medical Council are members of the British Medical Association, and some members of the General Medical Council are members of the Central Council of the British Medical Association or of Central Committees.

"Having regard to these facts, but recognizing at the same time that the position of the British Medical Association is somewhat different from that of bodies whose sole object is the defence of their own members, it appears to the Committee advisable that the attention of the General Medical Council should be called to the position created by the decision of the Association to act as complainant in cases which may be thought to require the consideration of the General Medical Council, in order that the position of the various classes of members of the Association, who might be concerned, may be considered without reference to any particular case.

"The Committee conceives that some distinction might possibly be recognized at law in the position of the following different classes of persons, and their respective degrees of responsibility for the action of the Association in bringing individual cases before the General Medical Council:

"(*a*) Members of the Central Ethical Committee of the Association which has been entrusted with the general duty of bringing cases before the General Medical Council, without reference to a special authority in each case;

"(*b*) The Central Council, to which the Central Ethical Committee reports, and under whose direction it acts in each instance which has given a general authority in others;

"(*c*) Members of Central Committees, other than the

Central Ethical Committee, who are not members of the Central Council:

"(*d*) Members of the Annual Representative Meeting, a body annually elected, which appoints some members of and receives an annual report from the Committee, and gives general instructions to it, but would not have any direct responsibility for the presentation of a specific case;

"(*e*) Ordinary members of the Association, who are not directly engaged in its central administration.

"In considering the position of these various classes, it is suggested that regard may also be had to the wide range of objects of the Association and its large membership, extending throughout the British Empire, which may, it is submitted, be held to make the responsibility of an individual member of the Association, who is not a member of the Central Ethical Committee, merely nominal. At all events, such a member could not, it is submitted, reasonably be held to have prejudged a case of which he had no previous knowledge.

"I am,
"Yours faithfully,
"R. H. KINSEY,
"Chairman of the Central Ethical Committee.
"Donald MacAlister, Esq., M.D.,
"President of the General Medical Council,
"299, Oxford Street, W."

The foregoing letter had, by direction of the President, been forwarded by the Registrar to the Council's Solicitor for his remarks. The following reply which has been received was read to the Committee:

"1, New Court,
"Carey Street,
"Lincoln's Inn, W.C.:
"April 24, 1907.

"Dear Mr. Allen,—In reply to your letter of the 23rd with regard to membership of the British Medical Association, I don't think anyone reading Lord Justice Fry's judgment in Leeson's case, pages 55 to 58 of the Cases, could say that it is at all desirable that members and subscribers to the funds of the British Medical Association should sit in judgment on cases in which that body are prosecutors. Lord Justice Fry was in a minority, but both the other learned judges treated the matter as a very serious one, while coming to the conclusion that there was no sufficient proof of bias to justify them in setting aside the judgment of the Council. Lord Justice Fry held that a subscriber to an association of this kind is virtually a prosecutor, that by subscribing to the Society he indicates his sympathy with the general proceedings of the body in carrying on those transactions, and that such subscribers cannot be said to be free from suspicion of bias or prejudice in the cases of prosecutions instituted by the association to which they subscribe.

"I think Lord Justice Fry's judgment covers this case, the only difference being that *this* Association has many objects, and this is a new object which they are now undertaking, but I really don't think this makes any material difference.

"As Lord Justice Fry says, it is a matter of public policy that the proceedings of the Council should not only be free from bias or prejudice of the judges, but that they should be free from the *suspicion* of bias or prejudice, and clearly the proper course is not for a member of the Council to withdraw from the decision of a case in which the B.M.A. are prosecutors, but to withdraw from membership of that body.

"Faithfully yours,
"WM. H. WINTERBOTHAM.
"H. E. Allen, Esq., Registrar,
"299, Oxford Street, W."

Mr. Lushington, at the request of the Committee, also advised them in regard to the legal aspects of the question raised by the action of the British Medical Association.

It was resolved:

"That the Executive Committee, being advised that no member of the British Medical Association should act as a member of the Penal Cases Committee or take part in adjudicating as a member of the Council in cases in which the British Medical Association or any branch of it acts as complainants, are unanimously of opinion that it is under the circumstances undesirable that a member of the Council should during his tenure of office be a member of the British Medical Association or any other body which may submit complaints to the Council for inquiry."

May 27th, 1907.

Dr. SAUNDBY moved that a copy of the report be sent to the General Secretary of the British Medical Association for the information of that body, and in order that the attention of the members of the Association might be drawn to it. The letter of the Secretary of the Fife Branch was written without any proper authority from the British Medical Association, for at the present time that body did not possess the power to prosecute cases before the General Medical Council, and it appeared also that the letter of the Chairman of the Ethical Committee was written in anticipation of those powers which it was being sought by the Charter now under discussion, to claim for the Association, but which at present it did not possess. It seemed to him most desirable that the position of the British Medical Association towards the General Medical Council should be made clear, so that those who were members of the Association, or like himself a Vice-President (and he believed there were other Vice-Presidents present besides himself), might have an opportunity of considering their position, for it was quite evident that no member of that Council could sit and decide upon cases brought before it by the British Medical Association, so long as he remained a member of that body.

Sir T. MCCALL ANDERSON seconded, and the motion was agreed to.

Dr. SAUNDBY then moved that the report be adopted by the Council.

Sir JOHN MOORE seconded.

The PRESIDENT stated that the resolution in the report had been drawn up by Mr. Lushington, their legal assessor.

Dr. LANGLEY BROWNE strongly approved of the resolution.

The PRESIDENT then put the motion that the report of the Executive Committee which was now on the minutes be approved by the Council as a whole. This was agreed to.

DENTAL CASES.

The REGISTRAR stated that the next business was to receive *in camera* a communication from the Solicitor in regard to certain dental cases.

The Council then deliberated *in camera*, and, upon the public being admitted, no announcement was made.

PRACTICAL MIDWIFERY COMMITTEE.

Sir JOHN WILLIAMS moved that the reports by the Students' Practical Midwifery Committee be received and entered on the minutes.

The PRESIDENT inquired whether Sir John was prepared to move the adoption of the recommendations, when

Dr. NORMAN MOORE proposed that, as the matter was an important one, it should be postponed until the next day, and that it should come on as the first business. This was agreed to.

PUBLIC HEALTH COMMITTEE.

Sir JOHN MOORE, in the absence of Mr. Power, proposed that the report of the Public Health Committee be received, entered on the minutes, and approved.

Dr. LINDSAY STEVEN seconded, and this was agreed to.

The Council then adjourned.

Thursday, May 30th, 1907.

Dr. DONALD MACALISTER, President, in the Chair.

The minutes of yesterday's proceedings were read and confirmed.

PRACTICAL MIDWIFERY COMMITTEE.

Sir JOHN WILLIAMS, in moving the adoption of the Recommendations contained in the report by the Students' Practical Midwifery Committee on the Teaching and Practice of Midwifery, said it was unnecessary to say that the Committee came to the conclusions to which it did in May last year, because they were more or less fully stated in the report of that date. He moved the Recommendations contained in the present report one by one. The first Recommendation made by the Committee was:

1. That the following be substituted for the existing *Recommendations* of the Council in regard to instruction in Midwifery:

(1) Every Student before commencing the study of Practical Midwifery shall be required to have held the offices of Clinical Medical Clerk and Surgical Dresser, and to have attended a course of lectures on Surgery and Midwifery.

Mr. YOUNG seconded.

Sir JOHN MOORE moved as an amendment that the word "medicine" should be inserted before the words "surgery and midwifery." He thought the Council should know the reasons which had influenced the Committee in striking out the word "medicine."

Dr. PYE-SMITH seconded.

Mr. HODSDON supported the Recommendations.

Professor SAUNDBY thought there was not very serious difference between the two propositions.

Dr. MCVAIL said the reasons which influenced the members of the Committee in adopting the words they

did were that, although with one single exception every member of the Committee thought the word "medicine" should be included, yet some of the replies which were received by the Committee were opposed to it. It was no use putting in restrictions which licensing bodies did not adopt. There was a consensus of opinion in the Committee in favour of including surgery, and the Committee regarded that as absolutely essential; but, as regards medicine, there was so much opposition on the part of important bodies that the Committee thought they would not be justified in including that in their Recommendation.

The President put the amendment that the word "medicine" be inserted before the words "surgery and midwifery," and declared the amendment lost.

Sir John Moore then moved that the word "surgery" be omitted from the Recommendation, because he thought, strictly speaking, both the words "medicine and surgery" were unnecessary.

Sir T. McCall Anderson seconded the amendment.

Dr. Norman Moore supported the amendment.

After some discussion the President put the amendment that the word "surgery" be omitted, and declared the amendment lost.

Dr. Mackay then moved as an amendment that the words "Clinical Medical Clerk" should be left out, and that the clause should read, "Every student before commencing the study of practical midwifery shall be required to have attended a course of clinical instruction in medicine, and to have held the office of Surgical Dresser and to have attended a course of lectures on surgery and midwifery."

Dr. Finlay seconded.

Dr. Norman Moore hoped the Council would not accept the amendment.

Dr. Caton said the Committee had considered this question for two years, and he hoped the Recommendation of the Committee would be accepted by the Council.

Sir John Williams replied.

The President then put Dr. Mackay's amendment and declared the amendment lost.

There being no other amendment, the President then put the Recommendation as printed and declared it carried *nem. con.*

Sir John Williams then put the second Recommendation:

(2) Every Student shall be required either

(*a*) To have regularly attended the indoor practice of a Lying-in Hospital, or the lying-in wards of a General Hospital, for a period of three months; and after having received therein practical instruction in the conduct of Labour, under the personal supervision of a Medical Officer, to have conducted twenty cases of Labour under official Medical supervision; or

(*b*) To have conducted not less than twenty cases of Labour, subject to the following conditions—

That he has, during one month, given regular daily attendance upon the indoor practice of a Lying-in Hospital or the lying-in wards of a General Hospital; and that he has therein conducted cases of Labour under the personal supervision of a Medical Officer of the Hospital, who shall, when satisfied of the Student's competence, authorize him to conduct outdoor cases under official Medical supervision.

He thought it was not necessary to make any remark on that because it was a resolution that had been passed by the Council.

Mr. Young seconded.

Mr. Morris suggested that they should discuss (*a*) and (*b*) together as a scheme before either was put.

Professor Sanderson suggested that as a prefix to the whole Recommendation (*a*) and (*b*) they should add the words "where the necessary hospital facilities exist it is desirable that every student shall" and so on.

Mr. Morris seconded.

Sir Charles Hall suggested that in (2) (*a*) for "20" read "10," and in (2) (*b*) for "20" read "15."

Dr. Langley Browne suggested that after the words in (*b*) "general hospital" they should insert the words "or of a Poor-law infirmary having a resident medical officer recognized for the purpose by the Licensing Bodies."

Dr. Langley Browne seconded.

Sir John Williams stated that he was prepared to accept Dr Langley Browne's amendment.

Dr Latham said that from the point of view of a general practitioner he believed the whole profession would welcome any increase of the systematic teaching of medicine, but it must be remembered that by the action of the Legislature there had been created a fresh body of practitioners in the United Kingdom, namely, midwives, and it was obvious that it was essential that their students should be more fully qualified to conduct cases. He thought a good deal of the general routine of the practice of midwifery which prevailed in the country would cease and that a good deal of fresh consultant work would arise.

The President said there were three amendments before the meeting, and he thought the best way was to take the amendment by Dr. Saundby first.

Dr. McVail thought it was not open to the Council to accept the amendment. The Council were required by the Act to see that there was sufficient instruction in medicine, surgery, and midwifery. The Act did not say "where the necessary facilities exist."

Dr. Saundby pointed out that most of the members of the Council approved of the Recommendations of the Committee if they could be carried out, but there were difficulties in the way of carrying them out. He did not think it was fair to the Council to pass this resolution if they knew that a good many of the teaching bodies could not carry out the Recommendations; and unless they had some preamble of the sort that he had suggested it was, in his opinion, useless to accept the proposal. If the Council knew the Recommendations could be carried out, they should be put in strong language, and if there were conditions that made that difficult, then they should modify the Recommendations. But it was because he thought they were impracticable at present (he did not want to throw cold water upon them, and should like, of course, to see them carried out) that he did not think it right to accept them without some such preamble as he had suggested in order to show that they knew they could not be effective in particular parts of the country.

Mr. Morris, in seconding the amendment, stated that Dr. Saundby had so fully expressed his views that he would not add anything.

Dr. McVail held that it was not open to the Council to accept any qualification of the kind suggested by Dr. Saundby. There was a great scientific school of medicine at Cambridge and he asked how the Council or the Government would have regarded the University of Cambridge if they had said: You must not expect our men, or only a few of them, to know anything about clinical surgery because our hospital is a very small one." The University would have been told in answer to such a statement, "Then let your men go elsewhere for clinical surgery." He pointed out that the Committee had sat for two years and he did not think any other Committee had given more particular attention to any matter than the Committee over which Sir John Williams had presided. The information they had was that twenty was a minimum number, and he thought a man should not be certified as qualified in midwifery in the sense in which midwifery was used, until he had attended 20 cases. If any teaching body said they could not provide 20 cases for a student it was not part of the General Medical Council's work to help them in passing men into the medical profession who had not been sufficiently taught. It simply, therefore, amounted to this: if there was any town where students could not get the necessary material they must go elsewhere. He entirely objected to the proposal of Dr. Saundby. What the General Medical Council had to do was to secure the efficient teaching of midwifery, and to insist on the licensing bodies and the schools getting it. This matter was taken up by the Council on the motion of Sir John Williams because certain professors in the country had been saying that while the practice of midwifery in hospitals had improved, the general death rate from obstetric cases all over the country was no better than it was forty years ago. It was those statements that caused Sir John Williams and the other members of the Committee to inquire into the matter, and the Committee held that the Council must take such steps as would ensure that the progress made in midwifery as well as in surgery should be abreast of the strides of the present day.

Dr. Latham supported what Dr. McVail had said. He thought, in this as in every other matter connected with medical education, the General Medical Council should only exact what was reasonable and what could be obtained at most medical schools, but they should, as far as they had the power, make that operative. He thought the amendment of Dr. Saundby would have no good effect. He should

support the resolution of Sir Charles Ball, that a smaller number than 20 should be required.

Sir HUGH BEEVOR agreed thoroughly with the Report of the Committee. But he felt it was not at present practicable to carry the Recommendations out in some of the large hospitals; the Committee should have told them how it would be practicable to carry out their Recommendations, and he thought it was a pity they had not done so.

Sir CHRISTOPHER NIXON wished to say a word or two in confirmation of what Dr. McVail had said with regard to the immense amount of time which had been given to the report by Sir John Williams and Mr. Young. It was to be borne in mind what really started the Committee. It was not a question of the recognition of certain bodies for giving instruction in certain portions of the curriculum; it was a Committee appointed to meet the statements made to the effect that the practice of midwifery throughout the country had led to a considerable amount of mortality. That was a question which went far beyond mere education; it was a question that affected the community generally. He thought that the Committee ought not to hesitate about making a recommendation which, although it might not possibly be carried out just yet, would be carried out in the near future. The Recommendations were exactly what he considered necessary to prevent a loss of human life; and, although it might not be possible in the various towns and other places throughout the country to have the Recommendations carried out at once, still, if the Recommendations were made, and were made upon reasonably good grounds, there was not the slightest doubt the provisions would make for the sufficiency of the teaching of midwifery. He earnestly asked the Council to pass the Recommendations.

Dr. KIDD supported what Dr. McVail and Sir Christopher Nixon had said, and he thought the number of cases should not be reduced.

The PRESIDENT put Professor Saundby's amendment, and declared it lost. He then put Dr. Langley Browne's amendment, when

Sir JOHN WILLIAMS said he was prepared to accept that amendment.

The PRESIDENT then declared the amendment carried, and called on Sir Charles Ball to propose his amendment.

Sir CHARLES BALL proposed that in Recommendation (2)(*a*) for "20" read "10," and in (2) (*b*) for "20" read "15." He said the reason why he introduced that difference was, that in the wards of lying in hospitals and in the wards of hospitals having lying-in beds, it was presumable that much more careful teaching would be given than was possible in a maternity. The proof of that was that which had been alluded to as one of the reasons why this inquiry took place, namely, that while it was shown that mortality was decreasing in hospitals, mortality in midwifery outside was not decreasing in the same proportion. He thought that was the clearest indication that the teaching in hospitals was very superior to any teaching that could be had in a maternity.

Sir T. MCCALL ANDERSON seconded.

Dr. NORMAN WALKER said he was in sympathy largely with the proposals in so far as they laid stress on the importance of proper instruction in midwifery, and he thought in that matter they were going the right way. It was notorious that certain schools could not obtain twenty individual cases for each individual student; and he should like to say, as a teacher, that he did not believe it was necessary for a student to have twenty cases. If a student was resident in a maternity hospital for one month, which was what he understood (*b*) to mean, he would know a great deal more about midwifery when he left at the end of the month than if he had attended 200 cases under the other conditions.

Dr. LITTLE supported the amendment.

Sir THOMAS FRASER suggested that they should take (*a*) separately from (*b*), and the Council agreed to this.

The PRESIDENT then put the amendment that "10" should be substituted for "20" in Subsection (2)(*a*), and declared it lost. He next put the amendment that "15" should be substituted for "20" in Subsection (2) (*b*), and declared it lost.

He then inquired if there were any other amendments, and, receiving no reply, put the adoption of (2) (*a*), which was carried. He then put the adoption of (2) (*b*), and this was also carried.

Sir JOHN WILLIAMS brought forward Recommendation No. (3):

(3) No certificate that the Student has conducted the above-mentioned twenty cases of Labour should be accepted unless it is given by a member of the staff of a Lying-in Hospital or of the Maternity Charity of a General Hospital or of a Dispensary having an obstetric staff recognized for that purpose by any of the Licensing Bodies.

The PRESIDENT inquired if the Council agreed to No. (3) being amended in the same way as No. (2) had been by the insertion of the words "or of a Poor-law infirmary having a resident medical officer so recognized."

This was agreed to.

Dr. LATIMER seconded the Recommendation.

The PRESIDENT put the Recommendation as amended, and it was agreed to.

Sir JOHN WILLIAMS moved:

That the attention of the Licensing Bodies be called to the necessity, in the public interest, of instituting Clinical and Practical Examinations in Midwifery and Gynaecology in connexion with each of the Qualifying Examinations.

After some discussion,

The PRESIDENT put the motion to the meeting, and declared it carried.

Dr. FINLAY requested that the names and numbers of those who voted for and against the motion should be taken down. This was done, when it was found that 16 voted for, 11 against; 4 did not vote, and 3 were absent.

Sir JOHN WILLIAMS moved, Dr. LINDSAY STEVEN seconded, and it was agreed:

That copies of these Resolutions and of the Reports of the Students' Practical Midwifery Committee be sent to the Licensing Bodies and Teaching Institutions of the United Kingdom for their information.

REPORT OF EDUCATION COMMITTEE.

Dr. MACKAY moved, Dr. LINDSAY STEVEN seconded, and it was agreed:

That the interim Report of the Education Committee on various matters submitted to it by the General Council be received and entered on the minutes.

Dr. MACKAY then moved that the Recommendation contained in the report should be adopted. The Recommendation was:

That the President be authorized to apply to the Licensing Bodies for information regarding the dates at which the various professional examinations were entered for and completed in the cases of those of their Licentiates the statistics of whose educational career are included in the table upon which the foregoing Report is founded.

There was a resolution before the Committee with regard to the curriculum pursued. That motion had been considered by the Committee, and the Committee were presenting a report on the question. There were three motions with regard to the desirability of instituting a block system with the object of securing in the later subjects of the curriculum an adequate share of the time for study. The Council had not been able to bring forward any full report upon the motion yet. An interesting motion was brought forward by Dr. Kidd and Professor Saundby with regard to the ages at which students should be allowed to enter for study. They had brought up a full report on the question. Then, finally, there was the motion that the requirements of the Council should be revised, and a new edition had been prepared. In view of the fact of the important changes that matter had not been dealt with in this report, but would probably be brought up at the next meeting of the Council.

Dr. FINLAY then proceeded to deal with the matters in the report. He said the registration of a student was a voluntary act. The General Medical Council had no power to compel it and no power to impose a preliminary examination of any kind, and in the great effort which the Council had made for a considerable number of years to improve the standard of preliminary examination it had been careful to carry with it at every step the goodwill and support of all the licensing bodies. Any sudden raising of the standard would defeat the object of the Council and would irritate the licensing bodies. The more active work of the Council with regard to examinations began in 1891. In the year 1900 a most important step was taken: A report on the whole system of education and preliminary examination was obtained from three experts specially appointed by the Council, and their

report was one of the most educational documents ever drawn up, because it went carefully into the educational conditions at the time. It showed the Council what they could with safety demand, and it also showed the Council the lines upon which it should proceed. The Council had had since that time the ideal and definite purpose that, while the examinations are divided, the senior examination should be made the sole portal of entrance to the medical profession. The effect of that would be seen in the statistics which appeared in the report. It ought, however, to be recognized that in taking this action the Council had played, with success, a most important part in the educational question, and the efforts of the Council had had a great effect in raising the standard of preliminary instruction. The conditions had now become so stringent that the educational institutions of the country had not been able to meet them fully. As bearing upon this subject, he would like to refer to the reply of the Council to a communication from the British Medical Association in 1902, which was written with the object of trying to secure that the senior standard of examination should at once be adopted. That communication said:

The Committee believe that the end will be better attained by the policy of steady and gradual advance than by attempting an abrupt change in mere examination requirements which is not supported by the Teaching and Examining Bodies of the profession and which is unaccompanied by any genuine advance in secondary education itself.

With regard to the length of the curriculum, there had been various proposals laid before the Council which had been referred to the Education Committee. One was to add a year to the course of study, making a sixth year. Another was to cut out medical science in the medical curriculum. Those proposals involved considerations which he need not dwell upon. The third suggestion was to institute a system of blocks. Whether any of those proposals should be adopted was a matter which required most serious and careful consideration, because whatever was adopted they must be sure that they were carrying with them the concurrence of all the licensing bodies. Then, dealing with the block system, the speaker said it would become exceedingly important to know why there should be such a marked difference between the course pursued in Scotland and the course pursued in England. They had on the Conjoint Board of the University of London, in full operation, the block system, that was to say, candidates were forced to give at least two years to a study of subjects belonging to the Final Examination. The Education Committee thought it would not be necessary to inquire into those cases where students had spent some eight years, but the Committee ought to be authorized to apply to the licensing bodies for details with regard to the course of study actually pursued by those who qualified under seven years. That was why the Committee brought forward the recommendation contained in their report.

Dr. NORMAN MOORE, in seconding the motion, said that after the thorough explanatory and lucid statement which had been made it was unnecessary that he should make any further remark, except to emphasize that this was an important report, and was, in fact, the first volume containing a collection of information which might be of the greatest service to the Council in regard to its regulations.

Professor SARGENT wished to congratulate the Committee on the admirable report which had been presented by Dr. Morkay. He had hoped that they might have been able to find out why men who did not enter nearly passed their examination within a more reasonable time. He had not had time to study the report, but it was very striking in the case of individuals how much better men had done in medical studies who entered comparatively late.

The PRESIDENT remarked that statistics had always a certain fascination for him, but seldom had he seen statistics which promised to yield more definite results than those contained in this report. He hoped the Council would agree with the recommendations which would provide the Council with knowledge instead of guesswork. In answer to what Professor Sargent had said he would like to point to page 16 of the report, which showed that a difference of two months at the entrance made a difference of eighteen months at the end.

Dr. MACKAY pointed out that in England only 5 per cent. of the men entering were under 17, and he thought the time had come when 17 or 17½ should be the age for the senior examination.

The PRESIDENT then put the motion that the Council ask for the necessary statistics to complete their research.

The motion was agreed to.

FINANCE COMMITTEE.

Dr. PYE-SMITH proposed:

That the Report by the Finance Committee on Income and Expenditure for the year 1906 be received, entered in the Minutes, and adopted.

He stated that the sales of the *Pharmacopoeia* were steady, being a little over 1,000 a year. When the issue of the new *Pharmacopoeia* appeared the funds in hand should be sufficient to meet the cost; and after that the Council might expect to receive an income of about £200 a year from this source. It was hoped that the Irish Branch would be able to pay its way during the present year; but, to meet emergencies, it would be well to place a sum of, say £100, at its disposal in case it should be required. He then dealt with other matters contained in the report, which concluded as follows:

The Council is again to be congratulated on the expedition with which it carried out its business; the number of days occupied by the sessions was the same as in 1905, for, though the summer session was a day longer, a day was saved at the winter session. This is the only way in which any large economy can be effected, and the Committee desire to ask the Council to continue to bear in mind the great importance of carrying on its deliberations with business-like brevity.

With regard to the coming year, so far as can be seen, no large expenditure is to be looked for, with the exception of the cost of the enlargement of the Council chamber referred to above; on the other hand, there is no greater probability of any increase in the receipts. Probably, therefore, the accounts will show a deficit, but this will be more apparent than real, because it is represented by an improvement in the capital value of the Council's property, and the Committee think they are justified in hoping that, for the next few years at least, the balance will continue to be on the right side.

Mr. TOMES seconded the motion. It would be seen that a part of the report dealt with the cost of the enlargement of the Council chamber. Those members who were curious enough to look minutely into the balance-sheet would see that the Council had credited themselves with increased assets, and it was not obvious at first sight how they had got those. The matter was one which it was a little difficult to explain, because of the Gilbertian arrangement which the Act of Parliament had imposed upon the Council with regard to its finance; but what had happened was that the General Medical Council drew upon the Branches for its expenditure, and it drew upon them for sums collected beforehand in their proportions, which were calculated on an average of five years. It so happened that last year the proportions which the Branches had to pay, calculated in that way on an average of five years, was very considerably larger than the actual cash payments which the Council had to make out of them. Consequently there was left in the hands of the General Medical Council and drawn away from the Branch Councils, a considerable sum of money. That sum of money was used to pay for the alterations in the building. Their auditors thought it well to postpone putting on the side of expenditure the cost of the building until all the bills had been paid, therefore members would not find the cost of the addition to the building on the expenditure side. In the next year's accounts they would find it.

The PRESIDENT then put the motion:

That the Report be received and entered on the Minutes, and that the Recommendations contained therein be adopted.

This was agreed to.

DENTAL EDUCATION AND EXAMINATION COMMITTEE.

Mr. TOMES moved:

That the Report by the Dental Education and Examination Committee be received and entered on the Minutes.

Dr. LINDSAY GIBSON seconded.

Mr. TOMES, in presenting the report, said that it contained one or two recommendations, and therefore it was necessary to say a word or two upon them. The first recommendation related to the application of the University of Sydney for the recognition of its degree of Bachelor of Dental Surgery. At first it was not quite clear what the practice was of the

University of Sydney; but a letter which was printed in the Report cleared that up completely. The other point was that they were in doubt whether there was reciprocity, and whether English registration was recognized in New South Wales. That also had been answered satisfactorily, so that the two reasons which they had for suspending action had both been removed. He moved:

That the application of the University of Sydney for the recognition of its degree of Bachelor of Dental Surgery be acceded to.

Mr. MORRIS seconded, and this was agreed to.

Mr. TOMES said the next point had relation to an ordinance controlling the practice of dental surgery in Mauritius. That matter was interesting, because the Colonies were in complete uniformity for adopting an absolute prohibition of unqualified practitioners—a thing which they hoped for in this country, but which was, at the moment, in the future. In the present case Mauritius prohibited unqualified dental practitioners; but in their Ordinance they had accorded recognition to foreign dental diplomas which ran in their own country. The Dental Committee did not think that was quite proper, because some of those diplomas were of the very flimsiest description; and although the Ordinance had been passed as a thing already done, the Committee thought it would be as well that the attention of the Secretary of State should be drawn to the matter. The Committee therefore recommended:

II. That it be represented to the Secretary of State for the Colonies that it is desirable that recognition of foreign Dental Diplomas shall be granted only in the case of those countries which give reciprocal recognition to British Diplomas in Dental Surgery.

He thought that would afford a check, because they could not give reciprocal recognition unless they were completely satisfied as to the nature of the diplomas; and that which applied to dental diplomas might be borne in mind with regard to medical diplomas.

Mr. MORRIS seconded.

The PRESIDENT put the Recommendation, which was agreed to.

EXAMINATION COMMITTEE (RETURNS).

Dr. MCVAIL moved, Mr. YOUNG seconded, and it was agreed:

That the report by the Examination Committee on the Returns as to Examinations for the Services received by the Council on Tuesday, May 28th, 1907, be received and entered on the minutes.

Dr. MCVAIL said there was no motion consequent on the report.

STUDENTS' REGISTRATION COMMITTEE.

Sir HUGH BEEVOR moved, Mr. MOORE seconded, and it was agreed:

That the Report by the Students' Registration Committee be received, entered on the Minutes, and approved.

ELECTION OF COMMITTEES.

The following Committees were appointed:

EXAMINATION COMMITTEE.

English Branch Council: Dr. Pye-Smith, Mr. Young, Dr. Caton.
Scottish Branch Council: Sir Thomas Fraser, Dr. Finlay, Dr. McVail.
Irish Branch Council: Sir Thomas Myles, Dr. Little, Sir Charles Ball.

EDUCATION COMMITTEE.

English Branch Council: Dr. Norman Moore, Sir G. Philipson, Sir John Williams.
Scottish Branch Council: Dr. Mackay, Sir John Tuke, Sir T. McCall Anderson.
Irish Branch Council: Dr. Little, Sir C. Nixon, Sir John Moore.

PUBLIC HEALTH COMMITTEE.

English Branch Council: Dr. Cocking, Mr. Power, Dr. Langley Browne.
Scottish Branch Council: Dr. Norman Walker, Dr. Lindsay Steven, Dr. McVail.
Irish Branch Council: Sir John Moore, Sir T. Myles, Dr. Adye-Curran.

PHARMACOPŒIA COMMITTEE.

English Branch Council: The President (Chairman), Dr. Norman Moore, Sir George Philipson, Dr. Caton, Dr. Barrs.
Scottish Branch Council: Sir Thos. Fraser, Dr. McVail.
Irish Branch Council: Sir John Moore, Dr. Little.

FINANCE COMMITTEE.

Dr. Pye-Smith (Chairman), Mr. Tomes, Sir John Tuke and Dr. Little.

DENTAL COMMITTEE.

The President (Chairman), Mr. Morris, Mr. Tomes, Mr. Hodsdon and Sir Thos. Myles.

DENTAL EDUCATION AND EXAMINATION COMMITTEE.

Mr. Tomes (Chairman), Mr. Morris, Sir Thos. Myles, Dr. Lindsay Steven, Sir Charles Ball and Dr. Finlay.

The Council then proceeded to ballot for the election of the Executive Committee, and the President nominated Dr. Latimer and Dr. Norman Walker as scrutineers.

The Council subsequently proceeded to ballot for the Penal Cases Committee, and the President nominated Dr. Langley Browne and Dr. MacManus as scrutineers.

Dr. NORMAN MOORE moved, Dr. LINDSAY STEVEN seconded, and it was agreed that the Council should meet to-morrow at 12 o'clock in order to finish the business.

The PRESIDENT announced the result of elections as follows:

EXECUTIVE COMMITTEE.

English Branch Council: Sir Hugh Beevor, Dr. Pye-Smith, Mr. Young, Mr. Tomes.
Scottish Branch Council: Sir John Batty Tuke, Dr. McVail.
Irish Branch Council: Sir John Moore, Sir Charles Ball.

PENAL CASES COMMITTEE.

Dr. Saundby, Mr. Tomes, Dr. Finlay, Sir Christopher Nixon.

The Council then adjourned.

Friday, May 31st, 1907.

Dr. DONALD MACALISTER, President, in the Chair.

The minutes of yesterday's proceedings were read and, as amended, confirmed.

PHARMACOPŒIA COMMITTEE.

Dr. NORMAN MOORE said that the report of the Pharmacopœia Committee had been circulated, reporting the number that had been sold, and the Committee appended to the report a print of the official copy supplied to them by the Foreign Office of the International Agreement with regard to the unification of the pharmacopœial formulas for potent drugs. The rest of the report dealt with the commencement of the preparations for the new *Pharmacopœia*. He moved:

That the report of the Pharmacopœia Committee be received, entered in the minutes, and approved.

Sir JOHN MOORE seconded, and the motion was agreed to.

REPORT OF EXAMINATION COMMITTEE.

The REGISTRAR stated the next business was to receive a report of the Education Committee.

Dr. MACKAY proposed that the report by the Education Committee be received and entered in the minutes. He said that the Education Committee reported that the changes embodied in the proposed new Ordinance of the University of Edinburgh were in accordance with the requirements of the Council in regard to professional education.

Dr. NORMAN MOORE seconded, and the motion was agreed to.

Dr. MCVAIL moved:

That the Report by the Examination Committee be received and entered on the minutes.

Sir JOHN MOORE seconded.

The PRESIDENT wished to say a word or two before that course was adopted, inasmuch as the report contained a mistake as to the resolutions which had been arrived at by the Council. Towards the end of the report, at the end of the parallel columns, there was a statement as to what the Examination Committee resolved, but it only dealt with a portion of what had taken place. If it had quoted the whole it would have been apparent that it did not apply to the case for which it was cited. Nobody reading the conclusion of the report would think it referred to the three subjects—medicine, surgery, and midwifery. He was a member of the Council on the occasion on which the recommendations or resolutions were originally passed by the Council. He then referred to various passages in the minutes of the Council, and proceeded to say that in the report of the Examination Committee which was now presented, owing to the fact that the preamble was left out, it was made to appear that the Council had definitely resolved that these propositions should apply to all subjects. There was nothing to

justify that, and he thought this report should not go on the minutes while a reference, which in itself was misleading, and which as a matter of fact was historically inaccurate, remained attaching to it.

Dr. McVail pointed out that there was a motion before the Council which had been proposed and seconded. Did he understand that the President proposed an amendment from the chair?

The President replied that this was not his province. He had stated that he thought the record which was given in the report was a mistake of the actual proceedings of the Council, and he had called the attention of the Council to that. He thought that it was for the Chairman of the Examination Committee and the members of the Examination Committee to consider whether they would withdraw that part of the report, which he was bound to say was a mistake.

Dr. McVail inquired whether he would be in order in moving all the report down to the part where the comparisons ended.

The President thought that would be a useful record to have on the minutes.

Dr. McVail said he would do it in that way.

Sir John Moore seconded.

The President believed it was for the Chairman of the Examination Committee to move the motion as to what the Examination Committee desired the Council to adopt.

Dr. McVail thought the proper course would be, acting upon the President's ruling, that he should move that the Council should take into consideration the proposed changes of Ordinances seriatim. He thought that was the only way to proceed. The President had brushed aside the recommendations of the Examination Committee, which course practically wiped out their work, except in so far as the Examination Committee put the information before the Council. He moved that the Council proceed to consider the proposed new Ordinances in the form in which they were enumerated, comparing the new with the old.

Dr. Norman Moore pointed out that in the Programme of Business the first clause of the report referred to the Education Committee, and he inquired whether it would not be proper, now that they had both reports before them, that the Chairman of the Education Committee should move the adoption of his report. That would be seconded, and the points which Dr. McVail had mentioned would be natural events.

Dr. McVail agreed, but pointed out that the Chairman had ruled him out of order.

The President said he had pointed out that there was a gross mistake in the report, and he thought the Council was convinced that he was right in that. It was for the Chairman of the Examination Committee to say whether, with that gross mistake in it, the report should go on the minutes.

Professor Saundby said he understood the proposition was to proceed with the Education Committee's report and not the report of the Examination Committee.

Dr. McVail said he would deal with the proposed changes seriatim.

The President pointed out that, in order to save time, the Council had referred this matter to two Committees, and those Committees had reported. He inquired whether the Council were to do all the work over again. He himself could not help protesting against it.

Dr. Mackay said he would take the Education Committee's report, and he moved the adoption of that report. They had been told there were proposed changes in the Ordinances. Had it been necessary, it might have been his duty to detail to the members of the Council those changes; but the members had them before them in print in the report of the Examination Committee, and therefore he would not go over them again. He would like to call attention to a statement in the requirements of the General Medical Council: "And it is to be understood that as regards the above-mentioned subjects" which were the subjects of surgery and medicine—"the Council offer no objection as to the manner in which the subjects should be combined or distributed for the purposes of teaching or examination.' All the changes in the proposed new Ordinance dealt with the group of subjects for examination except one, and there was nothing in any of the changes which contravened any requirements of the Council.

Dr. Norman Moore seconded.

The President inquired whether there were any further remarks.

Dr. McVail did not quite understand what Dr. Mackay's resolution was.

The President replied that the resolution was:

That the Education Committee's Report be adopted.

Dr. McVail said he had no objection to that.

The President then put that resolution, and declared it carried. He then stated that a specific motion with regard to the Examination Committee's Report could now be made; but he did not think a specific motion could be made that the Council should do the work of the Examination Committee.

Dr. McVail said he would move a specific resolution. He then moved:

That the Medical Council is of opinion that where subjects which are usually taken together are entered on singly, the pass standard shall be at least 60 per cent.

Sir John Moore seconded.

The President stated that, in order to avoid any difficulty on the matter, he should like to point out what it was proposed to do. They had been asked by the Privy Council to state whether this Ordinance was contrary to their present Regulations; and they were now asked to pass *ad hoc* a resolution which was not now on their books. He could not help thinking that that would be a very dangerous course for the prestige of the Council, and it would be contrary to an actual existing resolution. The resolution with regard to their curriculum ended with the statement which Dr. Mackay had read, and the Council was now asked to rescind that.

Dr. McVail said the Examination Committee at its meeting did not interpret No. 13 of the Ordinances as the President had done. He thought that in all probability the references which the President had made to the past volumes showed that practically that was the intention of the Council at the time; but that had not been so understood by the Bodies generally. In his opinion, what had been proposed was going to open a wider door for the students; and he held that, as the Privy Council had submitted this Ordinance for their opinion, they should make some representation. He thought this Ordinance was a most important affair, and would at once lead to changes in many of the other Bodies; it certainly would lead to changes in all the Scottish universities; and he thought it would lead to changes in other Bodies. If the change was for the better, it was all well and good. For his part, he thought the change was for the worse; and he thought it would hinder the inspection work of the Council. When he acted as a Visitor, he thought the proper method of hastening the work was to take a group of men, and follow the particular courses through the whole of the medical examination, the whole of the surgical examination, and the midwifery examination. He and his fellow Visitor did that, with the result that they were able, by having the same men all through, much more thoroughly to understand the scope and the standard of their examinations. If Inspectors were to go down now, they would never see the same men in more than one or two subjects at the most. He thought it would interfere greatly with the work which Parliament had laid upon the Council if, when they were officially asked for their opinion regarding this Ordinance, they should adopt any resolution, or assume any attitude of the nature of that which had been adopted. He himself thought there was no objection to any educational change that had been made, but he thought there was the very greatest objection to the Ordinance. He thought it was very bad for the student, and that it was for the Council to express that opinion. If a man excelled in a subject and could get 20 more marks he would not stand in his way, and they had provided for such a case, but he did not think the Ordinance should pass without that opinion, expressed in that way, being laid before the President of the Privy Council as being the opinion of the General Medical Council.

Sir John Moore suggested that it might meet the case if they quoted what had been done by the University of Edinburgh on that point, which was that the question of permitting candidates appearing for examination in one subject at a time had been discussed by the Aberdeen Faculty, and they stated that they had no objection, provided the examination was accompanied by a tighten-

ing of the standard. He thought that if they embodied that in some resolution, and sent it forward to the Privy Council, it would back up the obvious intention of the University of Edinburgh.

Dr. MACKAY thought that what Sir John Moore had said had brought the discussion to an end, because all the members were of opinion, probably, that a higher standard should be insisted upon, and the University of Edinburgh had informed them that a higher standard would be insisted upon.

Sir THOMAS FRASER said there was no doubt that Dr. McVail was quite right in saying that this provision passed the Committee after full discussion, but he thought it was due greatly to Dr. McVail that it was passed in the form it was, and he thought that if that which the President had explained had been present to the minds of the Committee the recommendation might not have been passed in the form in which it was. The passing of this resolution would be a very serious matter to the Edinburgh University. It had taken them more than five years to prepare this change of Ordinance. If the proposition of Dr. McVail went to the Privy Council then the University of Edinburgh could not make any change in the Ordinance, and if the Privy Council accepted the suggestion of the Committee the only course open to the Privy Council was to throw out the Ordinance. He thought that was an important step to ask the Council to take upon a matter which was in his opinion of very secondary importance.

Dr. PYE-SMITH said that as a member of the Examination Committee it was his duty to support its report.

Dr. LITTLE inquired what the motion exactly was that was before the Council.

The PRESIDENT read the motion. For himself, he might say that he had determined, and he hoped he had succeeded in carrying out the determination, that while sitting in that chair he must be absolutely neutral, and merely guide the Council so that it might come to a decision which was universal in its operation and not particular. It was for that reason that he pointed out that, whatever they might feel with regard to what Dr. McVail had said as to the principles which he advocated, what the members were asked to do was to pass a resolution which, although meant to be general in form, was applicable to a particular case.

Dr. MCVAIL said it was unfortunate that he happened to be on the governing body of a university which opposed this resolution. They opposed it on broad grounds, and on exactly the same grounds as he opposed it. He would rather have had nothing to do with the matter in the Council; but, being Chairman of the Examination Committee, it fell officially to him to deal with it. Could he, in that position, advocate an opinion which he did not believe in? He did not desire in any way to reflect on the University of Edinburgh. That University thought that by splitting up the subjects into single ones they would obtain a higher standard. He believed that, on the contrary, the standard would be lowered, that the influence on other institutions would be bad, and also that it would make the work of inspection on the part of the Council extremely difficult and far less valuable than it should be. It was for those reasons that he adhered to the resolution.

The PRESIDENT then put the resolution, and asked those in favour to vote, and those on the contrary.

He then declared that the motion was lost.

Dr. MCVAIL asked that the names and numbers should be taken.

This was done, when it was found that 7 voted for, 17 against, 5 did not vote, and 5 were absent.

Mr. THOMSON proposed that the following resolution should be sent to the Privy Council:

> That the Council have considered the proposed Ordinance of the University of Edinburgh, and find nothing therein which is contrary to the Council's resolutions on professional education and examination.

Dr. MACKAY seconded, and the PRESIDENT having put this to the Council, it was agreed to.

Dr. MCVAIL asked that the names and numbers should again be taken. This was done, when it was found that 15 voted for, 3 against, 9 did not vote, and 7 were absent.

THE APPOINTMENT OF REGISTRAR.

Dr. NORMAN MOORE moved:

> That Mr. Allen be appointed Registrar of the Council till the end of the summer meeting, 1908.

This was seconded by Sir JOHN TUKE and agreed to.

The PRESIDENT congratulated Mr. Allen on his reappointment, and desired, in public, to thank him for the help he had continually afforded him in the discharge of his duties, and also for the willingness with which he was ever ready to take any fresh duties which were imposed upon him by the Council.

VOTE OF THANKS TO PRESIDENT.

Dr. NORMAN MOORE then proposed a vote of thanks to the President, which was seconded by Dr. LITTLE.

The PRESIDENT replied, and added that from a private point of view he sympathized with Dr. McVail on the question which had been before them that day, but from a public point of view he felt he could not allow that Council to follow his own bent or Dr. McVail's, when it was leading the Council perhaps beyond its proper position.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.*]*

BORDER COUNTIES BRANCH:

NORTH CUMBERLAND DIVISION.

A MEETING of the Division was held at the Crown and Mitre Hotel, Carlisle, on Friday, May 24th, at 3.30 p.m. The Committee met at 3.15 p.m.; Dr. BIRD was in the chair.

Apologies for Absence.—Apologies for absence were received from Dr. Barnes, Dr. Edington, Dr. Donald, and Dr. Doughty.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed as correct.

Medical Inspection of School Children.—The reports in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of February 16th, 1907, and also the Supplementary Report in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of April 13th, 1907, were then considered and discussed. It was resolved that on account of the many and various difficulties that beset this matter, the Division for the present give no definite decision.

Other Matters Referred to Divisions.—The following matters were then brought before the Division, but no action taken: The Ethical Aspects of Medical Consultation (SUPPLEMENT to the BRITISH MEDICAL JOURNAL, February 16th, 1907); Hospital Administration (SUPPLEMENT to the BRITISH MEDICAL JOURNAL, April 13th, 1907); Annual Report of Council (SUPPLEMENT to the BRITISH MEDICAL JOURNAL, May 4th, 1907).

The Draft Charter.—The revision of the draft Charter (SUPPLEMENT to the BRITISH MEDICAL JOURNAL of April 6th, 1907) was then discussed and approved of.

National Deposit Friendly Society.—The recommendations of the Medico-Political Committee, referred from the last meeting and printed in the report of the meeting in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL, May 11th, 1907, were approved.

Contract Practice.—A discussion then took place on Contract Practice (SUPPLEMENT of the BRITISH MEDICAL JOURNAL, February 23rd, 1907, and copy of rules as to appointments, etc., as adopted by the Bradford Division), and it was finally resolved:

1. That this Division adopt rules in its various towns and districts in regard to Contract Practice.
2. That a Committee be appointed to draw up and submit rules for Carlisle.

Vote of Thanks to Office-bearers.—As this was the last meeting of the North Cumberland Division, Dr. MACDONALD proposed a vote of thanks to the retiring office-bearers and wishing all success for the new "English Division." This was carried unanimously, and the office-bearers returned thanks.

Dinner.—Eight members dined together after the meeting.

GLASGOW AND WEST OF SCOTLAND BRANCH: LANARKSHIRE DIVISION.

THE annual meeting of this Division was held on Friday, May 17th, in the Black Bull Hotel, Hamilton. Dr. BRUCE GOFF, Chairman of the Division, presided.

Confirmation of Minutes.—The minutes of last meeting, having been read and approved, were signed by the Chairman.

Annual Report.—The SECRETARY submitted the annual report for 1906, which showed the membership to be 77. The balance in hand at December 31st, 1906, was £4 18s. 6d., which had been remitted to the Branch Secretary. The report, on the motion of Dr. ROGERSON, seconded by Dr. M'PHERSON, was unanimously adopted.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, Dr. Bruce Goff, Bothwell; *Vice-Chairman*, Dr. Miller, Uddingston; *Representative to Representative Meeting*, Dr. Goff; *Representatives to Branch Council*, Drs. Loudon and Service; *Secretary and Treasurer*, Dr. Livingstone Loudon (Hamilton); *Council*, Messrs. Kirkland (Airdrie), Crawford (Hamilton), Jack (Motherwell), Kerr (Hartwood), and Lindsay (Lesmahagow).

Draft Charter, Ordinances, and By-laws.—The Division went over the leading features in these, and instructed their Representative, Dr. Bruce Goff, accordingly. In instructing their Representative, the feeling of those present was that the Charter should be postponed for another year, that they disapproved of promoting candidature of Parliamentary candidates, and looked with doubt upon the advisability of undertaking medical defence, or making provision for undertaking the transfer of medical practices or arrangement of partnerships, etc. The Division were emphatically of opinion that the Council should remain as it is at present, that if the number is reduced it should not be below 50, and that Scotland should have at least six Representatives. Dr. GOFF said that he would keep the Division's opinions in view when he attended the meeting.

Hospital Administration.—On this subject the Division were of opinion that compulsory payments by patients were not advisable; that the system of subscribers' lines should remain as it is; that inquiry should be made into all cases as to whether they are eligible and deserving, except when these requirements are already met by a certificate from a medical practitioner. The Division approved of the cottage hospital regulations submitted to them.

Medical Inspection of School Children.—The Division do not yet feel in a position to give a definite opinion on this matter, the whole question being still under consideration. The general feeling, however, is that the examination should not be done by the medical officer of health, but by a specially-appointed official having jurisdiction over large areas. The Division would certainly approve of the work of inspection being done as much as possible by local medical men; but the Division felt that although many medical men would express their willingness to undertake the work, still something more was required than mere willingness, as such examinations would no doubt in some cases require special ability, as, for example, in estimating correctly errors of refraction.

Ethical Aspects of Medical Consultation.

The Division meanwhile do not feel in a position to express an opinion on this matter.

RENFREWSHIRE DIVISION.

THE annual meeting of the Renfrewshire Division was held in the Rothesay Cottage Hospital on Friday, May 24th.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The following office-bearers were elected: *Chairman*, Dr. Marshall (Rothesay); *Vice-Chairman*, Dr. Cecil Bartley; *Representative in Representative Meeting*, Dr. Lloyd (East Glasgow); *Representatives on Branch Council*, Dr. Cook and Dr. Penman; *Honorary Secretary and Treasurer*, Dr. Penman; *Other Members of the Executive Committee*, Dr. Munro, Dr. Stewart, Dr. Devine, and Dr. Parker.

Report of Executive Committee.—The annual report of the Executive Committee was read and approved.

Draft Charter.—The provisions of the draft Charter were considered. It was decided that the present system of election was desirable both in the United Kingdom and in the Colonies.

Hospital Administration.—The Hospitals Committee's report on hospital administration was discussed at some length. It was decided that compulsory payment by patients to hospitals other than cottage hospitals should not be continued. That production of subscribers' letters should be abolished. That inquiry into a patient's circumstances should invariably take place. That it would be impracticable to require all outdoor patients to produce a medical certificate. The model principles for hospital management were, with one or two alterations, approved. The probable establishment of nursing homes in connexion with hospitals was the subject of conversation. It was decided that in the event of any such home being instituted that there should be medical representatives on the committee of management.

Medical Inspection of School Children.—It was decided that the work should be distributed among the general practitioners of the district acting under the Medical Officer of Health. The distribution of the work would depend on the special circumstances of each district. The practice of teachers sending children to hospitals is unknown in the Division.

Ethical Aspects of Medical Consultation.—The report of the General Ethical Committee on the Ethical Aspects of Medical Consultation was approved.

Notices of Motion.—Other notices of motion were left to the discretion of the Representative.

Vote of Thanks to Chairman.—The Chairman was accorded a vote of thanks.

Visit to Hospital Wards.—The members then visited the wards of the hospital and were shown some interesting cases of tuberculous joints treated in various ways by Dr. Hall and Dr. Lawson.

Tea.—The members were entertained to afternoon tea by the hospital staff.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION.

THE annual meeting was held, by kind permission, at the Head Quarters 4th V.B. East Surrey Regiment, 27, St. John's Hill, S.W., on Thursday, May 23rd. The chair was taken by Dr. LLEWELLYN WILLIAMS, Chairman.

Confirmation of Minutes.—The minutes of the meetings of April 25th and May 9th were read and approved.

Correspondence.—Various communications from the Medical Secretary were read acknowledging letters received.

Charter.—A communication from the Organization Committee explaining certain points that had been referred for information was read, and their tenor approved.

Alteration of Division Rules. It was duly proposed, seconded, and resolved:

1. Seeing that the Annual Representatives' Meeting is held in July, and a considerable number of Medico-Political questions are sent down during the previous months which require prompt attention, it is not desirable to annually change the *personnel* of the various Standing Committees before that meeting.
2. That the officers, as also the Executive and other Standing Committees, do come into office annually at the end of July, and the Rules be altered accordingly.
3. In order to provide for continuity, the Chairman shall, after his year of office, be *ex officio* a member of the Executive Committee for one year as Past Chairman.

Executive Committee, 1907-8.—The CHAIRMAN reported that the following was the result of the election: *Chairman*, Gilbert Richardson, M.R.C.P.; *Chairman-Elect*, Allan J. Swallow, M.B.; *Vice Chairman*, M. Mackintosh, M.D.; *Representatives on the Branch Council*, M. G. Figgs, M.D., Geo. Walker, M.R.C.S.; *Honorary Secretary and Treasurer*, Chas. J. Martin, M.B.; *Assistant Honorary Secretaries*, D. R. Powell Evans, M.R.C.S., P. F. Spurgin, M.R.C.S., S. Verdon Roe, M.B.; *Ordinary Members of Committee*, R. C. Crosse, M.R.C.S. (Balham), W. G. Gyton, M.R.C.S. (Battersea), E. Stocks, M.R.C.S. (Clapham), J. Cay, M.R.C.S. (Putney), E. J. Pritchard, M.R.C.S. (Wandsworth), D. A. Bellfios, M.R.C.S. (Wimbledon), H. J. Barron, M.D. (Tooting). It was resolved that the Executive Committee and Standing Committees for 1907-8 come into office at the end of the Annual Representative Meeting in July next.

Election of Standing Committees.—Hospital: Chairman and Honorary Secretary (*ex officio*), Drs. Biggs, Gay, Mackintosh, and Verdon Roe; *Ethical:* Chairman and Honorary Secretary (*ex officio*), Drs. Fothergill, Mackintosh, Ker, Dunville Roe, and G. Walker: *Scientific:* Chairman elect and Honorary Assistant Secretary (Dr. Verdon Roe) (*ex officio*), Drs. Burrows, Lambert, and Lyster.

Proposed Divisional Medico-Political Committee.—Dr. WALKER proposed, and it was duly seconded and resolved:

That there be a *Medico-Political* Committee of the Division, as a standing Committee, and it do consist of the Vice-Chairman and one Assistant Honorary Secretary (*ex officio*), three members elected by the Division, and two elected by the Executive Committee.

The following were then elected: Dr. Mackintosh (Vice-Chairman), Dr. Powell Evans (Honorary Secretary) (*ex officio*), and Drs. Fothergill, Pickett Turner, and Wallace.

Representative at Representative Meetings (1907-8).—L. S. McManus, M.D., was elected, with E. Rowland Fothergill, M.B., as deputy.

Ethical Rules.—The Medical Secretary attended to explain and give any information asked for. The Bradford Rules were submitted and accepted with two modifications—Rule 5, for "shall" in sixth line read "may"; Rule 2, subject to a clause being inserted by Central Ethical Committee by which a defaulting member of the profession could recover his status. Other rules submitted by the Ethical Committee of the Division and adopted were:

A medical practitioner called upon in an emergency to visit a patient who under the ordinary circumstances would have been attended by another practitioner shall, when the emergency is provided for, retire in favour of the ordinary medical attendant, but shall be entitled to charge the patient for his services.

When a medical practitioner is called to a case of obstetric emergency during the absence from any cause of the proper medical attendant, he shall cease his attendance when the emergency has been provided for, or on the arrival of the proper attendant. If in the meantime he has assisted at the patient's delivery, or has been in attendance for a considerable time, he shall be entitled to one-half the fee.

A medical practitioner called upon, without previous arrangements, to attend a patient during the sickness or absence from home of the regular medical adviser, shall cease attendance as soon as the latter is able to take charge of the case, but shall be entitled to charge the patient for his services.

A medical practitioner who has obtained his introduction to a patient through a consultation should not supersede the attending practitioner during that illness; and if he be asked to attend in any future illness should only do so after explanation with the medical attendant.

When a medical practitioner is requested to attend a patient already under the care of another practitioner (the case not being one of emergency), he shall decline to do so except in consultation with the practitioner in attendance, or in case a consultation is not agreed to, until the practitioner in attendance has been informed that his services are no longer desired.

Hospital Administration.—The report of the Central Hospitals Committee was considered, and the replies and recommendations were ordered to be sent up to the head office.

Alterations of Articles and By-laws.—SUPPLEMENTS for April 20th and 27th. They were considered, and amendments to be moved were ordered to be sent up to the head office.

Dispensary Organization in London.—The fundamental principles submitted by the Branch Council were considered and the replies ordered to be sent to the Chairman of the Branch Medical Charities Committee.

Annual Report of Central Council.—This was considered, and resolutions to be moved by the Representative were approved and ordered to be sent to the head office.

Conference of Metropolitan Representatives.—The report of the Representative was considered, and he was authorized to associate himself with the resolutions of the conference, with reference to the Charter.

Central Council Election.—The report of delegates was approved and the recommendations agreed to.

Annual Report of the Division.—This was approved.

Vote of Thanks.—The meeting closed with a hearty vote of thanks to the Medical Secretary, as also to the Chairman and to Dr. Mackintosh (Vice-Chairman), who took the chair for the last part of the meeting.

MIDLAND BRANCH:

BOSTON AND SPALDING DIVISION.

THE fifth annual meeting of this Division was held at the Red Lion Hotel, Boston, at 1 p.m., on May 28th, Dr. W. H. SMITH in the chair.

Apologies for Non-Attendance.—Letters of apology for non-attendance were read from Dr. Rosson (Alford), Dr. Steil (Colsterworth), and Dr. Burdwood (Bourne).

Confirmation of Minutes.—The minutes were read and confirmed.

Election of Officers.—The following were elected: *Chairman*, Dr. W. H. Smith; *Vice-Chairman*, Dr. Miller: *Representative in Representative Meetings*, Dr. H. G. White: *Representative on Branch Council*, Dr. A. E. Wilson: *Secretary and Treasurer*, Dr. A. E. Wilson; *Executive Committee*, Drs. Allan, Galloway, Husband, Mann, Mason, Moxham, Pilcher, Slocock, Spilsbury, South, Taylor, White and Wrinch; *Auditors*, Drs. Mason and Taylor.

Programme for the Year.—It was decided that the motor meet be held on June 25th (Tuesday), at 4 o'clock, at Bourne, particulars to be issued later. It was also decided that the next meeting to discuss scientific subjects be held after the summer holidays. Dr. MILLER proposed, and Dr. SOUTH seconded, that clinical cases be shown on this occasion. The Committee was asked to arrange any others, Dr. PILCHER suggesting that a paper be read in the same way as during the previous year at one of the meetings.

Proposed Meeting at Spalding.—Dr. PILCHER proposed, and Dr. MILLER seconded:

That Dr. Galloway, of Spalding, be approached as to the advisability of holding a meeting at Spalding during the coming year for the benefit of the members residing to the south of that town.

Carried unanimously.

Hospital Administration.

The question of hospital administration was discussed. To the specific questions the replies were as follows:

1. Yes. Unanimously.
2. Certainly not. Unanimously.
3. Yes, emphatically. Unanimously.
4. No. Unanimously.

Proposals of Joint Committees.

Hospitals.—It was decided unanimously to adopt them with the following exceptions:

8. Medical inspection of all cases—only where there is a resident house-surgeon.

11. Age-limit for retirement—not in small hospitals.

13. Pay wards—to be open to every member of the staff, not of the medical profession.

Cottage Hospitals.—These proposals were unanimously adopted.

Draft Charter.

It was proposed by Dr. MASON, and seconded by Dr. MILLER:

That no change be made in the numbers or method of election of the Central Council and no change in the constitution of the Committees.

Carried *nem. con.*

Ethical Aspects of Medical Consultation.

These were discussed and the recommendations of the Central Ethical Committee unanimously adopted.

Medical Inspection of School Children.

The consideration of this question was deferred.

Luncheon.—The members had lunch in the hotel afterwards.

LINCOLN DIVISION.

ON May 24th was held the annual meeting of the Lincoln Division at the Guildhall, Lincoln, Dr. MANSEL SYMPSON in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The officers for the ensuing year were then elected.

Paper.—Dr. FARRAR (Gainsborough) read a paper, entitled, Serumtherapy in a case of Puerperal Fever, and a short discussion followed.

Draft Charter.

Certain points in connexion with the proposed Royal

Charter were then gone into, and the following resolutions carried *nem. con.* :

1. That the Council be not reduced in number.
2. That the present system of representing Branches on the Council be retained.
3. That the present constitution of Committees of the Council be retained.

The proceedings then terminated.

SOUTH-EASTERN BRANCH:
GUILDFORD DIVISION.

A SPECIAL meeting of this Division was held at the Royal Surrey County Hospital on May 22nd, at 4 30 p.m., Dr. A. ARTHUR NAPPER being in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Contract Practice.

It was unanimously resolved that the Ethical Rules for contract practice (as adopted by the Bradford Division) should be adopted for the regulation of contract practice by members in the Division.

Draft Charter.

No discussion took place in regard to this matter.

Medical Inspection of School Children.

The supplementary report of the Medico-Political Committee on this matter was not regarded as calling for any special discussion by the Division at present.

Hospital Administration.

The specific questions submitted to Divisions in regard to hospital administration were considered and answered as follows :

1. Should there continue to be compulsory payment by patients to hospitals other than cottage hospitals?—No.
2. Should the production of subscribers' letters continue to be compulsory?—No.
3. Should inquiry into a patient's circumstances invariably take place?—Yes (unanimously).
4. Should a certificate be required from the medical attendants of all persons attending out-patient departments?—Yes.

It was also resolved :

That this Division considers that wherever possible in medical charities, an almoner or inquiry officer should be employed to investigate the suitability of the applicants for relief, this being especially desirable in the case of out-patients.

Cases.—Dr. PARKER showed a case of fractured patella with some comminution of the fragments, successfully treated by wiring. Dr. BUSHNELL (for Dr. LEVICK) showed a case of tuberculous disease of knee-joint in a child, associated with facial paralysis of obscure origin.

Vote of Thanks.—The meeting closed with a vote of thanks to the Committee of the hospital for the use of the Board Room and for kindly providing tea.

YORKSHIRE BRANCH:
BRADFORD DIVISION.

A special general meeting of this Division was held at the Eye and Ear Hospital, Bradford, on Monday, May 27th, at 8 30 p.m. Mr. BASIL HALL, Chairman, presided.

Confirmation of Minutes.—Dr. METCALFE, Honorary Secretary, read the minutes of four different meetings of the Division which were adopted.

The New Vaccination Order. Dr. CAMPBELL, on the minutes, raised the question of the proposed serious diminution in public vaccinators' fees through the new Order of the Local Government Board.

Nomination of Officers. The nominations took place of the officers Representative at Representative Meetings, Representative of the Division on the Branch Council, and the members of the Executive and Ethical Committees.

Draft Charter. The question of the revised Charter was then considered. Drs. GOYDER, HORROCKS, BATESON, A. EDMUNDS, CAMPBELL, MITCHELL, CROWLEY, and METCALFE, joined in the discussion. It was generally felt that as the constitution of the Association had been established so recently it would be better to postpone any further consideration of it at present. The scheme now before the Division was radically different from the previous one. There was considerable opposition to the diminished Council being made up largely of Representatives. And it could not be shown that the Council as at present elected had ever refused to act in accordance with the instructions of the Representative Meeting. Dr. METCALFE eventually proposed :

That the Representative of the Division be asked to vote for the Resolution of the Dublin Division in favour of postponement.

Dr. BATESON seconded, and it was carried *nem. con.*

Police Surgeonship for Bradford.—By the favour of the Chairman, Dr. MITCHELL was allowed to propose that a special meeting of the Division, to which all practitioners in the city should be invited, should be called together on Friday, May 31st, at the Great Northern Hotel, Bradford, at 8.30, to consider the question of the proposed Police Surgeonship for Bradford. Dr. BATESON seconded, Dr. GOYDER supported, and the proposition was carried unanimously.

Medical Inspection of School Children.—The SECRETARY read the report of the Special Divisional Committee appointed to consider the question of the Medical Inspection of School Children. Dr. CROWLEY raised some points in connexion with the report, which he considered required some alteration. The meeting decided that the CHAIRMAN should be allowed to make these, and that the report should be then sent on to the central authority for publication, if thought desirable.

The meeting then terminated.

☛ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.
IMPORTANT NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

ABERDEEN BRANCH. — Nomination of elective member of Council. Notice is hereby given that the names of candidates for the representation of this Branch must be sent to me on or before June 12th. Each candidate must be nominated by at least three electors.—J. F. CHRISTIE, Honorary Secretary, 7, Alford Place, Aberdeen.

BIRMINGHAM BRANCH.—Notice is hereby given that the annual meeting of the Branch will be held at the Medical Institute, Birmingham, on Thursday, June 13th, at 3.30. Agenda : Election of two members of the Branch to represent the Branch on the Central Council of the Association.—O. J. KAUFFMANN, 22, Broad Street Birmingham.

BIRMINGHAM BRANCH : WEST BROMWICH DIVISION.—The annual meeting of this Division will be held in the Board Room of the District Hospital, on Friday, June 14th, at 4 p.m. Business : (1) To elect officers. (2) To elect Executive Committee. (3) To elect Representative on Branch Council. (4) To receive report of Executive Committee. (5) To consider report on hospital administration (SUPPLEMENT, April 13th). (6) To consider report on medical inspection of school children (SUPPLEMENT, April 13th). (7) To consider report on the ethical aspect of medical consultation (SUPPLEMENT, February 16th). Other business. The Executive Committee will meet at 3.45 p.m. H. B. W. PULLEINE, Honorary Secretary, 54, Birmingham Road, West Bromwich.

BORDER COUNTIES BRANCH.—The annual general meeting of this Branch will be held in the Crown and Mitre Hotel, Carlisle, on Friday, June 21st. The business will include proposals to alter the existing rules of the Branch in several particulars, details for which will be sent to every member before the meeting. Election of office-bearers, etc. The Presidential

Address will be delivered by Dr. F. H. Clarke, Dumfries. The detailed agenda paper will be issued as usual before the meeting.—FRANCIS R. HILL, Honorary Secretary, Carlisle.

CAMBRIDGE AND HUNTINGDON BRANCH.—*Preliminary Notice.*—The annual meeting of the Branch will be held on Thursday, June 13th, at Cambridge. Any member desirous of bringing any communication before the meeting should communicate at once with the Honorary Secretary.—F. E. APTHORPE WEBB, Honorary Secretary, Cambridge.

DUNDEE, PERTH, AND STIRLING BRANCHES.—The nomination of candidates for the office of Elective Member of Council for the ensuing year must be made in writing on or before June 17th to Dr. J. E. Moorhouse, 6, Melville Terrace, Stirling.—A. P. LOW, Honorary Secretary, Dundee Branch; W. A. TAYLOR, Honorary Secretary, Perth Branch; J. E. MOORHOUSE, Honorary Secretary, Stirling Branch.

EAST ANGLIAN BRANCH.—The annual meeting of the East Anglian Branch will be held at Ipswich on Thursday, June 20th. Members wishing to read papers or show cases or specimens should communicate at once with Dr. Gutch, Ipswich.—B. H. NICHOLSON, M.B., East Lodge, Colchester, Honorary Secretary.

EAST ANGLIAN BRANCH: WEST NORFOLK DIVISION.—The annual meeting will be held at the West Norfolk and Lynn Hospital on June 20th, at 3 p.m., when officers and Representatives will be elected for 1907-8.—ARTHUR GARDINER, Honorary Secretary, Tuesday Market Place, King's Lynn.

METROPOLITAN COUNTIES BRANCH.—Notice is hereby given that the annual meeting of the Branch will take place on Thursday, June 27th. Time and place will be fixed by the Branch Council.—Honorary Secretary, FRED. J. SMITH.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.—The fifth annual meeting of this Division will be held at St. Peter's Hall, Belsize Square, N.W., on Friday, June 14th, at 4.30 p.m., Dr. Macevoy in the chair. Agenda: (1) Minutes of the annual meeting of June 8th, 1906. (2) Correspondence. (3) Questions. (4) To receive the annual report of the Committee. (5) To elect officers and ordinary members of Committee for the session 1907-8. Members are reminded that by resolution of a special meeting held on July 12th, 1906, the number of the ordinary members of Committee was raised to eleven (instead of seven as in the rules), the election of the four additional members being adjourned to this annual meeting. In accordance with a resolution of the last annual meeting, the Committee herewith issues to all members of the Division the following nominations agreed to on May 17th, 1907:—Officers (six): Chairman, Dr. Pidcock; Vice-Chairman, Dr. Oppenheimer; Representative to the Representative Meeting, Mr. H. W. Armit; Representatives to the Branch Council, Dr. Macevoy and Dr. Clark Wilson (elected May 24th, 1907), the Honorary Secretary is also an *ex-officio* Representative to the Branch Council; Honorary Secretary and Treasurer, Dr. R. A. Yeld; Honorary co-Secretary, Mr. H. W. Armit. Ordinary Members (eleven): Dr. Ford Anderson, Dr. Collingwood Andrews, Miss Ada Browne, Dr. W. Butler, Mr. C. W. Cunnington, Miss Dobbie, Dr. Gaster, Mr. Nelson Hardy, Mr. F. R. Humphreys, Mr. E. Jessop, Mr. Vincent Moxey. (6) To instruct the Representative to the Representative Meeting. (7) The Honorary Secretary will read a letter from the Chairman of the Representative Meeting. (8) Other business.—R. A. YELD, M.D., Honorary Secretary, 29, Platt's Lane, Hampstead, N.W.

MIDLAND BRANCH.—The annual meeting of this Branch will be held at the Devonshire Hospital, Buxton, on Thursday, June 13th, 1907, at 2.15 p.m. Agenda: Minutes; report of Council; financial statement; election of two Representatives of Branch on the Central Council. The only nominations received are Dr. Carline and Dr. Pope, who will therefore be elected. Election of Branch officers; election of President-elect, 1907-8; any other business. Address by the new President, G. Lorrimer, Esq., M.D. Clinical cases shown by members of the Honorary Staff Devonshire Hospital. The President will be glad to entertain members to lunch at the Palace Hotel, Buxton, at 1 p.m. The annual dinner will be held at the Palace Hotel, Buxton, at 6.30 p.m.; tickets (exclusive of wine) 7s. 6d. each. Members attending the lunch or the dinner are requested to notify the fact to Dr. Lorrimer, Buxton, or the Honorary Secretary, before Monday, June 10th.—ROBERT SEVESTRE, Honorary Secretary and Treasurer, 119, London Road, Leicester.

MUNSTER BRANCH.—Election of Representative Member on the Council of the British Medical Association. Nominations will be received by me up to and including Saturday, June 22nd.—PHILIP G. LEE, 26, Patrick Hill, Cork.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of the Branch will be held at Fort Augustus in the last week of June. Further particulars will be sent to each member by circular.—J. MUNRO MOIR, M.D., Honorary Secretary.

PERTHSHIRE BRANCH.—The summer meeting will be held in the Club House, Moncrieffe Island, Perth, on Friday, June 14th, at 1.15 prompt. Business: (1) Election of Council. (2) Election of Branch Representative. (3) Any other business. Council Meeting at 1 p.m. Lunch in the Club House will be ready about 2 p.m., on arrival of the golfing members from Dundee. Members intending to play and lunch are requested to be good enough to notify Dr. Taylor as soon as possible.—WILLIAM A. TAYLOR, ALEXANDER TROTTER, Joint Honorary Secretaries, 10, Marshall Place, Perth.

SOUTH-EASTERN BRANCH.—The sixty-third annual meeting of the Branch will be held at the Hôtel Métropole, Brighton, on Wednesday, June 19th, at 2.15 p.m. Mr. T. Jenner Verrall, President-elect, kindly invites members to lunch at the Hôtel Métropole from 1 to 2 p.m. Agenda, in addition to the business of an ordinary meeting: (1) To receive the report of the election of new officers, who shall thereupon take office; (2) to receive the report of the Council on the affairs of the Branch and the annual financial statement; (3) Dr. Douglas will move: "That no alteration of, or addition to, existing rules, or repeal of any rule, be made unless notice of the same be printed and circulated with the agenda for the meeting at which any alteration, etc., should be brought forward." After the meeting there will be a reception at the Royal Pavilion by his Worship the Mayor of Brighton (Councillor Gervis, M.A., M.B.). The following expeditions have been arranged to take place afterwards: A short sea trip, visit to the Grand Aquarium and trip on Volk's Electric Railway, visit to Booth's Museum of British Birds. Dinner at the Hôtel Métropole at 6.15 p.m.; charge, 7s. 6d. Wine will be provided by the members of the Brighton Division. Those who propose to be present at lunch or dinner, or both, are requested to signify their intention to Dr. Ryding Marsh, 49, Sackville Road, Hove, Sussex, not later than Saturday, June 15th.—H. M. STEWART, Dyffryn, Dulwich, Honorary Secretary.

SOUTH-EASTERN BRANCH: CANTERBURY AND FAVERSHAM DIVISION.—A combined meeting of the Divisions comprised in the old East Kent District—that is, Ashford, Canterbury and Faversham, Dover, Folkestone, and Thanet—will be held at the County Hotel, Canterbury, on Thursday, June 27th, at three o'clock precisely, Dr. Whitehead Reid in the chair. Agenda: A paper will be read by W. J. Tyson, M.D., F.R.C.P., F.R.C.S., Honorary Physician, Victoria Hospital, Folkestone, on the Future Lines of Treatment: Their Effects on the Profession. An address by Alex. G. R. Foulerton, F.R.C.S., D.P.H., Director of Bacteriological Department, Middlesex Hospital, Medical Officer of Health to the County of East Sussex, on the Treatment of Infective Disease by Bacterial Vaccination. W. T. Hillier, Esq., M.R.C.S., D.P.H., Pathological Assistant, Research Laboratories, Middlesex Hospital, will (1) Show specimens of trypanosomata; (2) give a demonstration of the method of determining the opsonic index of the blood. Preliminary meetings will be held as follows: (*a*) 2.30, Canterbury and Faversham Division:—Agenda: (1) Minutes. (2) Annual report. (3) Election of officers—Chairman, Vice-Chairman, Representative at Representative Meetings, Representative on Branch Council, Honorary Secretary and Treasurer, Committee. (4) To consider the desirability of amalgamating with the Ashford Division. (5) Any other business. (*b*) 2.50, Canterbury and Faversham with Thanet Divisions:—Agenda: (1) To elect the Representative for Representative Meetings. Members will dine together at 5.45 for 6 o'clock at the County Hotel, Canterbury; charge 5s., exclusive of wines. Those who intend to stay to dinner are requested to notify Dr. Henchley not later than the morning of June 27th, and to state whether they will assist in a short musical programme.—A. R. HENCHLEY, Honorary Secretary and Treasurer, Canterbury

SOUTH-EASTERN OF IRELAND BRANCH.—The meeting of this Branch will be held at Clonmel on Wednesday, June 19th, instead of June 5th, as previously announced.—J. QUIRKE, Honorary Secretary, Piltown.

SOUTH MIDLAND BRANCH.—Nominations for Representative for the above Branch on the Central Council are requested to be sent to the Honorary Secretary not later than June 10th.—E. HARRIES JONES, Secretary.

SOUTH MIDLAND BRANCH.—The annual meeting will be held at Bedford Hospital on Thursday, June 20th, and 2.30 p.m. The President-elect (Dr. Chillingworth) invites members to luncheon at the Grafton Rooms, 145, Midland Road, at 1.15 p.m. Members who intend to accept the President's invitation must communicate with the Secretary not later than June 17th. The meeting will be addressed by Mr. C. B. Lockwood, F.R.C.S., Surgeon to St. Bartholomew's Hospital, the subject being "Some Interesting Points Concerning Wound Infection."

Any member wishing to read a paper, or show specimens or cases should communicate at once with E. HARRIES JONES, Honorary Secretary, 16, Castilian Street, Northampton.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Notice is hereby given that the election of Branch Representatives on the Central Council will take place on June 15th at the annual meeting at Cardiff.—FRANK G. THOMAS, M.B., 68, Walter Road, Swansea.

STAFFORDSHIRE BRANCH.—The thirty-fourth annual meeting of the Branch will be held at the Victoria Hotel, Wolverhampton, on Thursday, June 27th, at 5.25 p.m., when an address will be delivered by the President elect, Mr. J. T. Hartill. Agenda: (1) Introduction of the new President. (2) Minutes of the last annual meeting. (3) Correspondence. (4) Address by the President. (5) Report of the Council. (6) The financial statement. (7) To decide the place of holding the next annual meeting. (8) Election of officers for the ensuing year—President-elect, Secretary, and Treasurer. (9) Report on the election of the Representative of the Branch on the Council of the Association. Members have the privilege of introducing friends. Dinner at 7.15 p.m.; charge 5s. A meeting of the Council will be held before the annual meeting for the election of members. The first general meeting of the session will be held at Stoke on Thursday, November 28th. Members desiring to read papers are requested to communicate the titles to the General Secretary as soon as possible.—G. PERCIVAL JOHNSON, Honorary General Secretary, Stoke-on-Trent.

ULSTER AND CONNAUGHT BRANCHES.—Nominations for Central Council. Two members to represent these Branches (combined) on the Central Council will be elected on June 29th. Nominations, signed by three electors, should be sent, to reach me not later than June 8th.—CECIL SHAW, M.D., Honorary Secretary, College Square, Belfast.

ULSTER BRANCH.—The annual meeting will be held in the Medical Institute, Belfast, on Saturday, June 29th, at 11.30 a.m. Members having communications to make to the meeting are requested to send particulars of the same not later than June 15th to CECIL SHAW, M.D., Honorary Secretary, College Square, Belfast.

YORKSHIRE BRANCH.—*Two Members of Council.*—In accordance with the Articles and By-laws, the Honorary Secretary of the Branch will be glad to receive nominations, signed by not less than three members, for the election of two Representatives on the Central Council of the Association. Nominations must reach the Honorary Secretary of the Branch not later than Saturday, June 15th.—ADOLPH BRONNER, 33, Manor Row, Bradford, Honorary Secretary.

YORKSHIRE BRANCH.—The annual meeting of the Yorkshire Branch will be held at Dewsbury on Wednesday, June 26th. Members wishing to read papers, or show cases or specimens, should communicate at once with the Honorary Secretary.—ADOLPH BRONNER, 33, Manor Row, Bradford, Honorary Secretary.

YORKSHIRE BRANCH: BRADFORD DIVISION.—The annual meeting of this Division will be held at the Eye and Ear Hospital, Bradford, on Tuesday, June 11th, at 8.30 p.m. The election will take place of the officers, Representatives of the Division on the Branch Council, Members of the Executive and Ethical Committees and the Representatives of the Division in Representative Meetings of the Association. The annual report of the Executive Committee will be presented. Any questions of importance on which the opinion of the Division has not yet been taken, and which are down for consideration by the Annual Representative Meeting, will be discussed.—JAMES MELVILLE, ANDREW LITTLE, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.

ELECTION TO CENTRAL COUNCIL.

I am instructed by the Council to ask you to publish in the next issue of the JOURNAL the result of the election of members of the Central Council of the Association by the Lancashire and Cheshire Branch, which is as follows:

[illegible] Alfred	653
Larkin, Frederick [illegible]	606
[illegible]	575
Bradshaw, Thomas Reed	527
[illegible] Walter Harrop	125
Rayner, Edwin	101
[illegible] George Carry	107

The [illegible], Drs. Gordon Larkin, Brierley, and Bradshaw are therefore duly elected.—I am, etc.,

[illegible] T. ANDREW HARRIS, Hon. Sec.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON H. J. HADDEN, M.B., has been placed on the retired list at his own request, June 2nd. He was appointed Surgeon, February 16th, 1888, and made Fleet Surgeon, February 16th, 1902. Whilst Surgeon of the *Dolphin* he took part in the operations at Tokar, in the Eastern Soudan, in February, 1891, receiving the Khedive's bronze star.

The following appointments have been made at the Admiralty: JOHN C. F. D. VAUGHAN, Surgeon, to the *Hebe*, May 24th; WILLIAM HACKETT, M.D., Fleet Surgeon, and W. F. ARCHIBALD, M.B., Surgeon, to the *Goliath*, on recommissioning, June 11th; ALEXANDER G. W. BOWEN, M.B., Fleet Surgeon, and THOMAS A. SMYTH, M.B., Surgeon, to the *Canopus*, on recommissioning, June 11th; EVAN ST. M. NEHEAN, Fleet Surgeon, to the *Vigo*, June 17th; MONTAGUE L. S. ROOD and AUGUSTUS J. J. AURIE, Staff Surgeons, to the *Mars*, on recommissioning, June 18th; HARRY SPICER, M.B., Staff Surgeon, and HARRY A. KELLOND-KNIGHT, Surgeon, to the *London*, on recommissioning, June 18th; JOHN K. ROBINSON, M.B., Fleet Surgeon, and ALEXANDER C. RENWICK, M.B., Surgeon, to the *New Zealand*, on recommissioning, June 18th; EDWARD B. KENNY, M.B., Surgeon, to the *Indus*, June 18th; JOHN O'HEA, Surgeon, to the Royal Marine Artillery Head Quarters at Eastney, June 3rd.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,940 births and 5,442 deaths were registered during the week ending Saturday last, June 1st. The annual rate of mortality in these towns, which had been 15.7, 15.1, and 14.9 per 1,000 in the three preceding weeks, further declined last week to 14.5 per 1,000. The rates in the several towns ranged from 3.5 in Hornsey, 6.8 in Rotherham, 7.1 in Handsworth (Staffs), 7.6 in East Ham, 7.8 in Croydon, and 8.3 in Walthamstow and in Bournemouth, to 18.6 in Nottingham, 18.8 in Wigan, 20.2 in Oldham, 20.4 in Sunderland, 22.0 in St. Helens, 25.7 in Bolton, and 35.3 in Middlesbrough. In London the rate of mortality was 13.3 per 1,000, while it averaged 15.0 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.5 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.4 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3.0 in Tottenham, 3.5 in Portsmouth, 3.9 in Hanley, 4.3 in Sunderland, 5.2 in Grimsby, 9.1 in Bolton, and 9.2 in Middlesbrough. Measles caused a death-rate of 2.7 in Sunderland, 3.0 in Portsmouth, 3.1 in Hanley, and 7.7 in Bolton; and in Middlesbrough, scarlet fever of 1.4 in King's Norton; whooping-cough of 1.1 in Huddersfield, 1.2 in West Ham, in Walthamstow and in Wigan, 1.3 in Salford, and 2.2 in Grimsby; "fever" of 1.1 in Grimsby; and diarrhœa of 1.1 in Walsall and in St. Helens. The mortality from diphtheria showed no material excess in any of the large towns. No case of small-pox was registered last week, and no small-pox patients were under treatment in the Metropolitan Asylums Hospitals. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2,536, 2,604, and 2,752 at the end of the three preceding weeks, had further risen to 2,824 at the end of last week; 837 new cases were admitted during the week, against 349, 381, and 382 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, June 1st, 902 births and 580 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19.7 and 17.5 per 1,000 in the two preceding weeks, further fell to 16.7 per 1,000 last week, but was 2.2 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 9.5 in Aberdeen and 12.0 in Dundee to 19.6 in Glasgow and 20.5 in Greenock. The death-rate from the principal infectious diseases in these towns averaged 2.6 per 1,000, the highest rate being recorded in Glasgow and in Leith. The 202 deaths registered in Glasgow included 2 which were referred to measles, 2 to scarlet fever, 3 to diphtheria, 26 to whooping-cough, 3 to "fever," 7 to diarrhœa, and 17 to cerebro-spinal meningitis. Four fatal cases of measles, 2 of diphtheria, 7 of whooping-cough, and 2 of diarrhœa were recorded in Edinburgh, 2 of diarrhœa in Dundee; 2 of whooping-cough in Paisley and in Greenock, and 2 of cerebro-spinal meningitis in Leith.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, May 25th, 456 births and 405 deaths were registered in six of the principal Irish towns. As against 386 and 332 deaths in the preceding period. The annual death-rate in these towns, which had been 21.2, 21.2, and 18.6 per 1,000 in the three preceding weeks, fell to 18.4 per 1,000 in the week under notice, but was 4.1 per 1,000 higher than the mean annual rate for the same period in the Irish towns for the corresponding period. The highest rates were recorded in Waterford and Limerick, and the lowest in Londonderry and Belfast, being 11.1 and 13.1 per 1,000. The zymotic death-rate in the same six Irish towns averaged 1.7 per 1,000, or 1.0 per 1,000 higher than during the preceding period. The highest rate, 3.9, being recorded in Waterford, while fatal cases considered to be under the heading at all belonged to Belfast and Limerick, due to cerebro-spinal fever, of which three cases proved fatal.

Vacancies and Appointments.

VACANCIES.

The list of vacancies is compiled from our Advertisement columns, where the full particulars may be found. No separate notice of this column, other than those would be received not later than the first post on Wednesday morning.

ARDWICK ASYLUM, Junior Assistant Physician. Salary, £[illegible] per annum.

BRADFORD CHILDREN'S HOSPITAL, House Surgeon. Salary, £[illegible] per annum.

BRECKNOCK COUNTY AND BOROUGH INFIRMARY.—Resident House-Surgeon. Salary, £120 per annum.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—Honorary Medical Officer for Western Branch.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Second House-Surgeon. Salary, £60 per annum.

BRISTOL GENERAL HOSPITAL.—(1) Physician; (2) Assistant Physician.

BRIXTON DISPENSARY.—Resident Medical Officer. Salary, £150 per annum.

CAIRO: DEPARTMENT OF PUBLIC HEALTH.—Sub-Inspector of Ophthalmic Hospitals. Salary, £500 per annum.

CANTERBURY CITY ASYLUM.—Assistant Medical Officer. Commencing salary, £140 per annum.

CHELTENHAM GENERAL HOSPITAL.—Surgeon in Charge of Branch Dispensary. Salary, £90 per annum.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon. Salary for first six months at the rate of £90 per annum, increasing to £100.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

DUBLIN: DR. STEEVENS'S HOSPITAL.—Anaesthetist.

EAST LONDON HOSPITAL FOR CHILDREN.—(1) Surgeon; (2) Assistant Surgeon.

GLAMORGAN COUNTY ASYLUM, Bridgend.—(1) Junior Assistant Medical Officer. Salary, £150 per annum. (2) *Locum tenens*. Terms, 3 guineas a week.

HEREFORDSHIRE GENERAL HOSPITAL.—Honorary Surgeon.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Anaesthetist. Honorarium, 15 guineas for one year.

HULL ROYAL INFIRMARY.—Casualty House-Surgeon. Salary, £50.

LEEDS TUBERCULOSIS ASSOCIATIONS.—Resident Medical Officer for the Sanatorium at Gateforth. Salary at the rate of £100 per annum.

LEICESTER INFIRMARY.—Assistant House-Physician. Salary at the rate of £50 per annum.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, and £5 for washing.

MANCHESTER UNIVERSITY.—Junior Demonstrator of Physiology. Stipend, £100, rising to £150 per annum.

MEDICAL MISSION HOSPITAL, Canning Town.—Qualified Female Assistant Doctor for Dispensary.

NEWCASTLE-UPON-TYNE CORPORATION.—Assistant Medical Officer of Health. Salary, £300 per annum.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary, £70 per annum.

NORTH-EASTERN HOSPITAL FOR SICK CHILDREN, Hackney Road, E.—(1) House-Physician; (2) House-Surgeon. Salary at the rate of £60 per annum each.

NORWICH CITY ASYLUM.—Assistant Medical Officer. Salary, £125 per annum, rising to £150.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Male Assistant House-Surgeon. Honorarium, £20 for six months.

OLDHAM UNION.—Resident Medical Officer of the Workhouse. Salary, £150 per annum.

ROTHERHAM HOSPITAL AND DISPENSARY.—Senior House-Surgeon. Salary, £110 per annum.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Junior Resident Medical Officer. Salary at the rate of £40 per annum.

ST. BARTHOLOMEW'S HOSPITAL, E.C.—Lecturer on Anatomy.

SALFORD ROYAL HOSPITAL.—Junior House-Surgeon. Salary at the rate of £50 per annum.

SALISBURY INFIRMARY.—Assistant House Surgeon. Salary, £50 per annum.

SUNDERLAND: MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon. Salary, £100 per annum.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £50 per annum.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—Honorary Anaesthetist.

WEST BROMWICH DISTRICT HOSPITAL. 1, Senior House-Surgeon: (2) Assistant House-Surgeon. Salary, £110 and £75 per annum respectively.

WEST HARTLEPOOL: CAMERON HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Officer in charge of *X*-ray Department.

APPOINTMENTS.

HOLLICK, B. S., M.R.C.S., L.R.C.P., Medical Officer of Health, Sturminster Rural District.

LLOYD, J. T., M.B., Resident Medical Officer, Sheffield Union Hospital.

MARTIN, Mary Edith, L.R.C.P. and S.Edin., L.F.P.S.Glasg., L.S.A.Lond., Assistant Medical Officer to Fenstanton Private Asylum, Christchurch Road, Streatham Hill.

MORRIS, W. D. J., L.R.C.P.Edin., M.R.C.S.Eng., Medical Officer for the Eastern Division of the Cardiff Post Office.

DIARY FOR THE WEEK.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 p.m. Mr. P. Lockhart Mummery: The Causes of Colitis, with special reference to its Surgical Treatment, with an account of 38 cases. Dr. David Forsyth: Experiments on Prolonged Protein Feeding, with special reference to the Thyroid Glands and the Production of Osseous Tissue. Drs. Noel Bardswell and J. E. Chapman: The Changes occurring in the Number of Red Corpuscles and their Haemoglobin Contents in Pulmonary Tuberculosis. (Epidiascope demonstration.)

THURSDAY.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W., 8 p.m.—Card specimens. 8.30: Papers—Mr. Nettleship: A History of Night Blindness in Nine Consecutive Generations. Mr. L. Werner: A Peculiar Case of Subretinal Cysticercus. Mr. A. L. Whitehead: (*a*) A Metastatic Tumour of the Choroid; (*b*) Multiple Cysts of Retina.

SATURDAY.

SOCIETY FOR THE STUDY OF DISEASES IN CHILDREN.—Provincial Meeting at the County Hospital, Bedford, 3 p.m.: Discussion—Acute Rheumatism, opened by Dr. C. O. Hawthorne. Papers by Dr. E. Cautley and Mr. Tubby.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday and Friday, 3.45 p.m., Methods of Examination.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Enlarged Abdomens.

LONDON SCHOOL OF CLINICAL MEDICINE.—**Clinics: Monday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Ear and Throat, 4 p.m. Tuesday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Skin, 4 p.m. Wednesday, Medicine, 2.15 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30 p.m. Out-patient Demonstrations: Surgical, daily, 10 a.m.; Medical, daily, 10 a.m. Ear and Throat, Mondays and Thursdays, 12 noon. Eye, Wednesdays and Saturdays, 11 a.m. Skin, Tuesdays and Fridays, 12 noon. Special Lectures: Monday, 3.15 p.m., Empyema: Wednesday, 2.15 p.m., Diagnosis of Typhoid Fever.**

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—**The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear. Lectures at 5.15 p.m. each day will be given as follows:—Monday, The Early Treatment of Puerperal Infection; Tuesday, The Treatment, especially Conservative, of Chronic Suppuration of the Middle Ear; Wednesday, Paget's Disease of the Nipple and its Treatment (with lantern slides); Thursday, Empyema: Its Recognition and Treatment.**

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—**Tuesday, 3.30 p.m., Friedreich's Disease; Friday, 3.30 p.m., Optic Neuritis.**

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—**The following are the clinics and demonstrations for next week:—Monday, 10 a.m.: Surgical; 2.30 p.m.: Medical, Throat, Nose and Ear, *X* Rays. Tuesday, 10.30 a.m.: Medical; 2.30 p.m.: Operations—Surgical and Gynaecological; 4.30 p.m.: Demonstration of Surgical Cases; Wednesday, 2.30 p.m.: Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynaecological Operations—Medical, Surgical; *X* Rays; 3 p.m., Medical (In-patient). Friday, 9.30 a.m., Surgical; 2.30 p.m., Operations—Medical, Eye; 3 p.m., Medical (In-patient); 4.30 p.m., Demonstration of Eye Cases.**

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—**The following arrangements have been made for next week:—Daily, 2 p.m.: Medical and Surgical Clinics and *X* Rays. 2.30 p.m.: Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2 p.m.: Diseases of Throat, Nose, and Ear. 2.30 p.m.: Diseases of the Skin. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. 2 p.m.: Diseases of the Eye. Lectures—Monday, noon: Pathological Demonstration. 5 p.m.: Practical Surgery. Tuesday: Ankylostomiasis. Wednesday: Practical Medicine. Thursday: Clinical. Friday: Clinical.**

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BILLINGTON.—On May 21st, at 9, Easy Row, Birmingham, the wife of William Billington, M.B., M.S. (Lond.), F.R.C.S. (Eng.), of a son.

FORSYTH.—On May 11th, at 138, St. Alban's Avenue, Bedford Park, W., the wife of Charles E. P. Forsyth, M.B., Ch.B., of a son (Austin James Esslemont).

SIKES.—On May 24th, at 8, Manor House, Marylebone Road, Mary Maitland (*née* Somerville), wife of Alfred W. Sikes, M.D., D.Sc., F.R.C.S., 57, Wimpole Street, of a son.

MARRIAGE.

WYNN—ASHFORD.—On June 4th, at the Church of the Redeemer, Edgbaston, William Henry Wynn, M.D., M.R.C.P., of Birmingham, to Florence, younger daughter of George Bright Ashford, Harborne Road, Edgbaston.

DEATHS.

ALLINGHAM.—On May 30th, Daisy Alice Wynne, the wife of William Allingham, F.R.C.S., of Kingsdene, Worthing.

MAULE.—On June 2nd, at The Tower, Liverpool Road, Birkdale, William Maule, M.B., C.M., L.R.C.S. and L.M., aged 58 years.

PRICE.—On May 22nd, Edwin Price, M.R.C.S., L.R.C.P., of Dudley Port House, Tipton, after an operation for appendicitis, aged 38 years.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JUNE.	
9 Sunday ...	
10 MONDAY ...	London: Ethical Emergency Sub-committee, 2 p.m.
11 TUESDAY ...	London: Organization Committee, 11 a.m. Bradford Division, *Yorkshire Branch*, Annual Meeting, Eye and Ear Hospital, Bradford, 8.30 p.m.
12 WEDNESDAY	Lancashire and Cheshire Branch, Branch Council Meeting, Liverpool Medical Institution, 4.30 p.m.
13 THURSDAY...	Birmingham Branch, Annual Meeting, Medical Institute, Birmingham, 3.30 p.m. Cambridge and Huntingdon Branch, Annual Meeting, Cambridge. Midland Branch, Annual Meeting, Devonshire Hospital, Buxton, 2.15 p.m.; Luncheon, Palace Hotel, Buxton, 1 p.m.; Dinner, 6.30 p.m. South Wales and Monmouthshire Branch, Annual Meeting, Cardiff.
14 FRIDAY ...	Hampstead Division, *Metropolitan Counties Branch*, Annual Meeting, St. Peter's Hall, Belsize Square, N.W., 4.30 p.m. Perthshire Branch, Summer Meeting, Club House, Moncrieffe Island, Perth, 1.15: Council Meeting, 1 p.m.; Lunch, Club House, 2 p.m. West Bromwich Division, *Birmingham Branch*, Annual Meeting, Board Room of District Hospital, 4 p.m.; Executive Committee, 3.45 p.m.
15 SATURDAY...	Harrogate: Science Committee, Hotel Majestic, 4 p.m.
16 Sunday ...	
17 MONDAY ...	
18 TUESDAY ...	London: Public Health Committee, 3.15 p.m.

Date.	Meetings to be Held.
JUNE *(Continued).*	
19 WEDNESDAY	London: Medico-Political Committee, 2.30 p.m. South-Eastern Branch, Annual Meeting, Hotel Metropole, Brighton, 2.15 p.m.; Luncheon, 1 to 2 p.m.; after meeting, Reception at the Royal Pavilion by His Worship the Mayor; Dinner, Hotel Metropole, 6.15 p.m. South-Eastern of Ireland Branch, Clonmel (*postponed from June 5th*).
20 THURSDAY...	London: Hospitals Committee, 2 p.m. East Anglian Branch, Annual Meeting, Ipswich. Lancashire and Cheshire Branch, Annual Meeting, Manchester. South Midland Branch, Annual Meeting, Bedford Hospital, 2.30 p.m.; Luncheon, Grafton Rooms, 145, Midland Road, 1.15 p.m. West Norfolk Division, *East Anglian Branch*, Annual Meeting, West Norfolk and Lynn Hospital, 3 p.m.
21 FRIDAY ...	London: Ethical Committee, 2 p.m. Border Counties Branch, Annual Meeting, Crown and Mitre Hotel, Carlisle.
22 SATURDAY...	
23 Sunday ...	
24 MONDAY ...	
25 TUESDAY ...	City Division, *Metropolitan Counties Branch*.
26 WEDNESDAY	Yorkshire Branch, Annual Meeting, Dewsbury.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the British Medical Journal is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the Regulations, be prescribed by the Rules of the said Branch shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every Candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the British Medical Journal for non-members is £1 8s. 0d. for the United Kingdom, and £1 16s. 0d for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 15TH, 1907.

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THE SEVENTY-FIFTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION,

EXETER,

JULY 27TH TO AUGUST 2ND, 1907.

President:

RICHARD ANDREWS REEVE, B.A., M.D., LL.D., Dean of the Faculty of Medicine, University of Toronto.

President-elect:

HENRY DAVY, M.D., F.R.C.P., Physician, Royal Devon and Exeter Hospital.

Chairman of Representative Meetings:

JAMES ALEXANDER MACDONALD, M.D., Physician, Taunton and Somerset Hospital.

Chairman of Council:

HENRY WM. LANGLEY BROWNE, M.D., Ch.B., F.R.C.S.E., Consulting Surgeon, West Bromwich District Hospital.

Treasurer:

HENRY RADCLIFFE CROCKER, M.D., F.R.C.P., Physician, Skin Department, University College Hospital.

PROGRAMME OF BUSINESS.

An Address in Medicine will be delivered by WILLIAM HALE WHITE, M.D., F.R.C.P.Lond.

An Address in Surgery will be delivered by HENRY TRENTHAM BUTLIN, D.C.L., F.R.C.S.Eng.

A Popular Lecture will be delivered by Sir JOHN WILLIAM MOORE, M.D., D.Sc., F.R.C.P.Irel.

THE SECTIONS.

THERE will be thirteen Sections as shown in the subjoined list; they will meet on Wednesday, Thursday, and Friday, July 31st, and August 1st and 2nd, from 10 a.m. to 1 p.m.

The President, Vice-Presidents, and Secretaries of each Section constitute a Committee of Reference for that Section.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL *without special permission.*

No paper must exceed fifteen minutes in reading and no subsequent speech ten minutes.

It is requested that copies of any papers offered in any of the Sections should be supplied to one of the Honorary

Secretaries of the Section not later than May 30th, accompanied by a short abstract, in order that such abstract may be printed and circulated before the meeting.

PATHOLOGY.

President: ROBERT MUIR, M.D., F.R.C.P.Ed., Professor of Pathology, Glasgow.

Vice-Presidents: HENRY GEORGE PLIMMER, M.R.C.S., F.L.S., London; WILLIAM HUNTER, M.D., F.R.C.P., London; WALTER LEY PETHYBRIDGE, M.D., B.Sc., Plymouth.

Honorary Secretaries: REGINALD VAUGHAN SOLLY, M.D., F.R.C.S., 40, West Southernhay, Exeter; Professor WILLIAM ST. CLAIR SYMMERS, M.B., C.M.Aberd., Queen's College, Belfast.

The following provisional programme has been arranged:

Wednesday, July 31st.—A discussion on Pernicious Anaemia and Allied Conditions, to be opened by Dr. William Hunter, followed by Professor Lorrain Smith, Dr. Lovell Gulland, and Professor R. Muir. Dr. R. Hutchison will speak on Anaemia in Children; Professor Walker Hall on Metabolism in Anaemia; and Professor A. R. Ferguson and Dr. A. E. Boycott on Ankylostomiasis Anaemia; and others will take part.

Thursday, August 1st.—A discussion on Phagocytosis and Bactericidal Action, to be opened by Dr. George Dean. Professor R. Muir, Dr. Charlton Briscoe, Dr. T. Houston, Dr. David Lawson, Dr. J. C. Rankin, Dr. E. Turton, and others will take part.

Friday, August 2nd.—Papers on the *Spirochaeta pallida*, on Bilharzia, Haematobia, on Trypanosomata, and other Animal Parasites, and on Chemical Pathology, etc., have been promised by Dr. T. Shennan, Professor St. Clair Symmers, Professor A. R. Ferguson, Dr. R. T. Leiper, Dr. Carl H. Browning, Professor Walker Hall, and others.

Arrangements will be made for the exhibition in the Pathological Museum of specimens illustrating the work of the Section. Members wishing to exhibit specimens or photographs should communicate with the Secretaries of the Pathological Museum (Drs. R. V. Solly and G. P. Hawker, 40, West Southernhay, Exeter).

MEDICINE.

President: WILLIAM GORDON, M.D., F.R.C.P., Exeter.

Vice-Presidents: WILLIAM POWELL, M.B., F.R.C.S., Torquay; WILLIAM JOSEPH TYSON, M.D., F.R.C.P., F.R.C.S., Folkestone; GEORGE NEWTON PITT, M.D., F.R.C.P., London; EDWARD LAWRENCE FOX, M.D., M.R.C.P., Plymouth.

Honorary Secretaries: FREDERICK JOHN POYNTON, M.D., F.R.C.P., 1, Harley Place, London, W.; EDWIN BRAMWELL, M.B., F.R.C.P.Edin., M.R.C.P., 23, Drumsheugh Gardens, Edinburgh; ALFRED BERTRAM SOLTAU, M.D., F.R.C.S., 1, Lansdowne Place, The Hoe, Plymouth.

The following subjects have been chosen for discussion:

1. The Indications for Operation in Cases of Intracranial Tumour. To be introduced by Dr. J. S. Risien Russell.

2. The Diagnosis of Acute Pancreatitis. To be introduced by Professor Osler.

3. Rheumatoid Arthritis and the Morbid Conditions which simulate it, with special Reference to Pathology and Treatment. To be introduced by Dr. A. P. Luff.

DISEASES OF CHILDREN.

President: ALFRED HERBERT TUBBY, M.S., London.

Vice-Presidents: LEWIS MACKENZIE, F.R.C.S., Tiverton; EMILY HOPKINS, M.D., Richmond; REGINALD HORACE LECK, F.R.C.S., Plymouth; EDMUND CAUTLEY, M.D., London.

Honorary Secretaries: JOHN HARLEY GOODALL, M.D., Chelmsford, Old Town Road, Torquay; EDRED MOSS CORNER, L.R.C.P., 57, Harley street, London, W.

The following subjects have been selected for discussion:

1. The Descent and Displacements of the Testicle in Children. To be opened by Mr. D'Arcy Power.

2. Acute Nephritis and its Results. To be opened by Dr. Voelcker.

3. (a) Lumbar Puncture: its Diagnosis and Therapeutic Value. To be opened by Dr. Farquhar Buzzard. (b) Precocious Development. To be opened by Dr. Reginald Langdon Down.

PSYCHOLOGICAL MEDICINE.

President: THOMAS CLAYE SHAW, M.D., London.

Vice-Presidents: ARTHUR NATHANIEL DAVIS, L.R.C.P., Exminster; ROBERT LEONARD RUTHERFORD, M.D., Exeter; GEORGE M. ROBERTSON, M.B., Larbert.

Honorary Secretaries: SAMUEL HOLLINGSWORTH AGAR, M.R.C.S., Hurst House, Henley-in-Arden; WILLIAM FRANCIS MENZIES, M.D., Staffs County Asylum, Cheddleton, Leek.

The following subjects have been selected for special discussion in this Section:

1. Alcoholism and Insanity.
2. Toxic Insanities and Bio-chemical Treatment of Insanity.
3. Hypnotism with reference to Insanity.

ELECTRICAL SECTION.

President: H. LEWIS JONES, M.D., London.

Vice-Presidents: JOHN DELPRATT HARRIS, M.D., Exeter; CECIL R. CHAWORTH LYSTER, M.R.C.S., London; WILLIAM CHEYNE WILSON, M.D., Plymouth.

Honorary Secretaries: ELLIS PEARSON, F.R.C.S.E., Strand House, Bideford; EDWARD WARREN HINE SHENTON, M.R.C.S., 126, Harley Street, London, W.

The Section will be opened on Wednesday, July 31st, by an address from Professor Stéphane Leduc.

On Thursday, August 1st, a discussion on *X* Rays and Sensitive Plates will be opened by Mr. Mackenzie Davidson.

On Friday, August 2nd, a discussion on the Dosage of *X* Rays will be opened by Dr. Sequeira.

The following papers will also be read:

WERTHEIM SALOMONSON, Professor J. K.: (1) The Electrodiagnosis of Oculo-motor Paralysis; (2) The Einthoven Galvanometer.
JONES, Dr. Lewis: (1) Oscillograph Tracings of Medical Coil Currents; (2) Ionic Medication in Ringworm.
ARTHUR, Dr. D.: A new Static Machine.
WALSHAM, Dr. Hugh: The Orthodiagraph.
SHENTON, Mr. E. W. H.: The Examination of the Hip-joint.
REID, Mr. A. D.: Ureteral Calculi.
PEARSON, Mr. E.: The use of *X* Rays from the Point of View of the General Practitioner.
BRUCE, Dr. Ironside: Treatment of Graves's Disease by *X* Rays.
MORTON, Dr. R.: Alternating Currents of Slow Periodicity.
GREEN, Dr. Stanley: *X* Rays and Chest Diseases.
HARRIS, Dr. Delpratt: Some Statistics of *X* Ray Therapeutics in Rodent Ulcer and Carcinoma.

It is hoped to provide a convenient room for the demonstration of new forms of apparatus and the showing of lantern slides by members.

TROPICAL DISEASES.

President: JAMES CANTLIE, F.R.C.S., London.

Vice-Presidents: GUTHRIE RANKIN, M.D., London; Sir RICHARD HAVELOCK CHARLES, K.C.V.O., M.D., I.M.S. (ret.), London; Lieutenant-Colonel ROBERT CALDWELL, F.R.C.S., Plymouth.

Honorary Secretaries: WILLIAM CARNEGIE BROWN, M.D., 32, Harley Street, London, W.; Lieutenant-Colonel G. M. J. GILES, M.B., F.R.C.S., I.M.S. (ret.), 3, Elliot Terrace, The Hoe, Plymouth.

The following subjects have been selected for discussion:

Wednesday, July 31st.—The Best Methods of carrying out Antimalarial Sanitation, with special reference to such plans as may be most suitable for population in the more primitive stages of civilization. This discussion will be opened by Professor Simpson, King's College, London.

Thursday, August 1st.—Diabetes in the Tropics. To be opened by Sir Richard Havelock Charles, K.C.V.O., Lieutenant Colonel I.M.S.

Friday, August 2nd. Haemoflagellates and Allied Organisms. To be opened by Professor E. A. Minchin, Professor of Protozoology, University of London.

The Secretaries will be glad to receive from members unable to be present pathological specimens, photographs, drawings, or microscopical preparations illustrative of any subject of interest in Tropical Medicine.

SURGERY.

President: GEORGE A. WRIGHT, F.R.C.S., Professor of Surgery, Manchester.

Vice-Presidents: EDWARD JAMES DOMVILLE, M.R.C.S., Exeter; CHARLES EDWARD WALLACE BELL, M.R.C.S.,

Exeter; DAVID NEWMAN, M.D., Glasgow: WILLIAM FREDERIC HASLAM, F.R.C.S., 54, Newhall Street, Birmingham.

Honorary Secretaries: BERNARD SCOTT, M.R.C.S., Inglewood, Poole Road, Bournemouth; BRENNAN DYBALL, F.R.C.S., 47, Queen Street, Exeter; WILLIAM SAMPSON HANDLEY, M.S., 77, Wimpole Street, London, W.

The following subjects have been selected for special discussions on Wednesday, July 31st, and Thursday, August 1st:

1. The Relative Value of Inhalation and Injection Methods of inducing Anaesthesia. To be introduced by Mr. H. P. Dean, F.R.C.S.

2. The Indications for Cholecystectomy. To be introduced by Mr. J. Bland-Sutton, F.R.C.S.

Friday, August 2nd, will be devoted to the reading of papers on subjects other than the above.

OPHTHALMOLOGY.

President: LOUIS HY. TOSSWILL, M.B., Exeter.

Vice-Presidents: JOHN R. ROLSTON, M.R.C.S., Plymouth; ALEXANDER HILL GRIFFITH, M.D., Manchester; ARTHUR CHARLES ROPER, F.R.C.S.E., Exeter.

Honorary Secretaries: RANSOM PICKARD, M.S., F.R.C.S., 31, East Southernhay, Exeter; ELMORE WRIGHT BREWERTON, F.R.C.S., 84, Wimpole Street, London, W.

The following subjects have been chosen for discussion:

1. Irido-cyclitis. To be introduced by Richardson Cross.

2. Vesicular Affections of the Cornea. To be introduced by W. Holmes Spicer.

3. The Construction and Manipulation of the Principal Instruments used in Ophthalmic Surgery. To be introduced by E. Landolt, Paris.

LARYNGOLOGY, OTOLOGY, AND RHINOLOGY.

President: ROBERT MCKENZIE JOHNSTON, M.D., Edinburgh.

Vice-Presidents: GEORGE JACKSON, F.R.C.S., Plymouth; JAMES BARRY BALL, M.D., London; PATRICK WILLIAM MAXWELL, M.D., Dublin.

Honorary Secretaries: CHARLES EDWARD BEAN, F.R.C.S.E., 19, Lockyer Street, Plymouth; ARTHUR LONGLEY WHITEHEAD, M.B., 31, Park Square, Leeds.

The following subjects have been selected for special discussion:

Wednesday.—The Differential Diagnosis of Tuberculous, Syphilitic, and Malignant Disease of the Larynx. To be opened by Sir Felix Semon, K.C.V.O., and Dr. Jobson Horne.

Thursday.—The Treatment of Chronic Suppuration of the Middle Ear without resort to the Radical (Complete) Mastoid Operation. To be opened by Dr. W. Milligan and Dr. W. Hill.

Friday.—To be devoted to papers.

Members are invited to contribute any preparations, specimens, or drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, in order that the Committee of the Section may make arrangements to form a special exhibit of such objects.

Lantern demonstrations will be given by Dr. Watson Williams on the Anatomy of the Accessory Sinuses of the Nose, and by Dr. Milligan on the Surgical Treatment of Labyrinthine Suppuration.

DENTAL SURGERY.

President: JOHN MCKNO ACKLAND, M.R.C.S., L.D.S., Exeter.

Vice-Presidents: PETER SIDNEY SPOKES, M.R.C.S., L.D.S., London; THOMAS ARTHUR GOARD, M.R.C.S., L.R.C.P., L.D.S., 28, Southernhay, Exeter; KENNETH WELDON GOADBY, M.R.C.S., L.R.C.P., L.D.S., London.

Honorary Secretaries: JOSEPH LEWIN PAYNE, M.R.C.S., L.D.S., 44, Devonshire Street, Portland Place, W.; GEORGE ARTHUR PEAKE, M.R.C.S., L.D.S., Alma House, Cheltenham.

The following subjects have been selected for special discussion on Wednesday: The Causes, Effects, and Treatment of Dental Diseases in Children. To be opened by Mr. Edmund Owen, F.R.C.S., Dr. G. F. Still, F.R.C.P., and Mr. J. G. Turner, F.R.C.S., L.D.S.

The following papers will be read on August 1st and 2nd:

ACKLAND, Mr. W. R., M.R.C.S., L.D.S.: Notes on Some Cases of Neuralgia.

BENNETT, Mr. F. J., M.R.C.S., L.D.S.: Some Anatomical Results of Efficient Mastication.

COLYER, Mr. J. F., M.R.C.S., L.R.C.P., L.D.S.: Irregularities of the Teeth as shown by the Jaws of Animals. A contribution to comparative pathology.

FAIRBANK, Mr. H. A., M.S., L.D.S.: Sarcomata of the Jaws.

A special effort is being made to obtain specimens, photographs, diagrams, and microscope slides, for the annual pathological museum, which will help to illustrate the subjects under discussion at this Section.

OBSTETRICS AND GYNAECOLOGY.

President: ERNEST HASTINGS TWEEDY, F.R.C.P.Ire., Dublin.

Vice-Presidents: WILLIAM FOOKES THOMPSON, M.D., Launceston; J. MACPHERSON LAWRIE, M.D., Weymouth; WALTER LEY WOOLLCOMBE, F.R.C.S.E., Plymouth; WILLIAM WALTER HUNT TATE, M.D., London.

Honorary Secretaries: GEORGE HERBERT JOHNSON, M.R.C.S., 7, Den Crescent, Teignmouth; HY. RUSSELL ANDREWS, M.D., 7, Wimpole Street, London, W.; EDWIN JOSIAH TOYE, M.D., Bridgeland Street, Bideford.

The following is a preliminary programme of arrangements:

Wednesday.—Discussion, The Justification for Artificial Dilatation of the Cervix to Hasten Delivery at Full Time, with a discussion on the Most Appropriate Method for Procuring this Dilatation.

Thursday.—Discussion, Measures to be Recommended to Secure the Earlier Recognition of Uterine Cancer.

Dr. Robert Jardine will open the discussion on July 31st; Dr. Herbert R. Spencer that on August 1st. Dr. A. L. Galabin, Dr. W. E. Fothergill, Dr. M. Handfield-Jones, Dr. Munro Kerr, Sir William Japp Sinclair, Sir William Smyly, and Dr. Thomas Wilson will take part in the discussions.

Friday is set apart for the reading and discussion of short papers.

STATE MEDICINE.

President: ARTHUR NEWSHOLME, M.D., M.O.H., Brighton.

Vice-Presidents: EDWARD ALEXANDER BRASH, M.R.C.S., Exeter; FREDERICK MANN WILLIAMS, M.R.C.S., Plymouth; Professor HENRY RICHARD KENWOOD, M.B., London.

Honorary Secretaries: SACK NOY SCOTT, M.R.C.S., Plymstock, Devon; FRANCIS CHARLES MARTLEY, M.D., 71, Lower Baggot Street, Dublin.

The following preliminary arrangements have been made:

Wednesday.—Dr. Newsholme will introduce a discussion on The Co-ordination of the Public Medical Services by reading a paper on The Prevention of Disease by the Co-ordination of Medical Service.

Thursday.—Professor Kenwood will open a discussion on The Reduction of Infant Mortality by Better Management and Control of the Milk Supply. It is further proposed to consider the Abolition of Private Slaughter-houses and a more strict Inspection of our Meat Supplies.

Friday.—It is proposed to discuss the following questions on Rural Hygiene: (*a*) The Isolation of the Infectious Sick in Rural Districts; (*b*) The Difficulties in the Operation of the Midwives Act in Rural Districts; (*c*) The Housing of the Labourer in Rural Districts; (*d*) The Economical Treatment of the Sewage of Small Communities; (*e*) What constitutes "Sufficient Supply of Wholesome Water," P. H. W. Act, 1878?

NAVAL AND MILITARY.

President: Inspector-General JAMES PORTER, C.B., M.D., R.N., Newport, Mon.

Vice-Presidents: Colonel GEORGE DEANE BOURKE, R.A.M.C., Devonport; Brigade-Surgeon-Lieutenant-Colonel J. RAGLAN THOMAS, M.D., V.D., Exeter; Surgeon-Lieutenant-Colonel DECIMUS CURME, M.R.C.S., Blandford.

Honorary Secretaries: Fleet-Surgeon HORATIO S. R. SPARROW, L.R.C.P., R.N., Royal Marine Barracks, Plymouth; Surgeon-Major JOHN ROBINSON HARPER, M.R.C.S., Bear Street, Barnstaple; Surgeon-Captain

John Shirley Steele Perkins, M.B., V.M.S., 47, Southernhay West, Exeter.

The following subjects are suggested for discussion:

1. Treatment of Wounded in Fleet Actions.
2. Treatment Afloat of (*a*) Syphilis, (*b*) Burns and Scalds.
3. Male and Female Nurses: Their Duties and Positions Afloat and Ashore.
4. Post-graduate Courses for Medical Officers. Civil and Service Staff College?
5. Water Supply in Camps, on the March, and in Battle.
6. Physical Drill and Marching in Winter, Hill Climbing and Across Country.
7. Disposal of Excreta in Camp and on the March.
8. Enteric—Personal Infection, and Methods of Isolation on Active Service. The Value of Inoculation as a Preventive.
9. Visual Tests for the Services and Mercantile Marine.
10. The Position of the Volunteer Regimental Stretcher Bearer.
11. The Medical care of the Volunteer Forces.

PROVISIONAL PROGRAMME OF PROCEEDINGS.

Saturday, July 27th.

9.30 a.m.—Annual General Meeting, to be followed immediately by Representative Meeting.

Monday, July 29th.

9.30 a.m.—Adjourned Representative Meeting.
4 p.m.—Reception by the R.W. the Mayor in the Guildhall.

Tuesday, July 30th.

9.30 a.m.—Adjourned Representative Meeting.
11 noon.—Service at the Cathedral.
2.30 p.m.—Adjourned General and Representative Meetings.
4 p.m.—Garden Party by Mayor in Northernhay.
8.30 p.m.—President's Address in Theatre.

Wednesday, July 31st.

10 a.m. to 1 p.m. Sectional Meetings.
2.30 p.m.—Address in Medicine.
5.15 p.m.—Adjourned Representative Meeting.
4 p.m.—Garden Party by Dr. Deas (President, South-Western Branch), Wonford House.
8.30 p.m.—Reception by Branch in the Theatre.

Thursday, August 1st.

9 a.m. Temperance Breakfast.
10 a.m. to 1 p.m. Sectional Meetings.
2.30 p.m.—Address in Surgery.
4 p.m. Garden Party at Bishop's Palace.
7.30 p.m.—Annual Dinner.
8.30 p.m. Ladies' Entertainment at Theatre.

Friday, August 2nd.

10 a.m. to 1 p.m. Sectional Meetings.
4 p.m. Popular Lecture.
8.30 p.m. Reception by Civic Authorities in Royal Albert Memorial.

Saturday, August 3rd.

Excursion.

HONORARY LOCAL SECRETARIES:

Russell Coombe, M.D. (Cantab.), F.R.C.S.Eng., 5, Richmond Crescent, Exeter.
G. T. Clapp, M.B. (Cantab.), 14, West Southernhay, Exeter.
Leonard R. Tosswill, M.R.C.S., L.R.C.P., 38, West Southernhay, Exeter.

ANNUAL MEETING, EXETER, 1907.

PATHOLOGICAL MUSEUM.

The following are the members of the Committee:—

President: J. D. Harris, M.D.

Honorary Secretaries: P. V. Solly, M.D., 6, West Southernhay, Exeter; G. F. Harris, M.B., 2, Victoria Road, Exeter.

Members of Committee:

A. E. Carver, M.D.	R. Pickard, F.R.C.S.
B. Dyball, F.R.C.S.	A. C. Roper, F.R.C.S.Edin.
R. Hingston	H. Sharp, M.B.
H. C. Jonas, M.D.	P. H. Stirk
R. H. Lucy, F.R.C.S.	G. L. Thornton, M.R.C.P.
H. Montgomerie, M.D.	H. W. Webber.
W. L. Pethybridge, M.D.	

Ex-Officio Members:

The President-elect: H. Davy, M.D., F.R.C.P.

The Local Honorary Treasurers: J. Somer, M.R.C.S.; L. H. Tosswill, M.B.

The Local Honorary Secretaries: Russell Coombe, F.R.C.S.; G. T. Clapp, M.B.; Leonard R. Tosswill, M.R.C.S.

The Committee responsible for the organization of the Pathological Museum are anxious to secure the co-operation of the officers of the various Sections at the forthcoming annual meeting. They will be glad to take charge of, and place in the Museum for exhibition any specimens, photographs, diagrams, or microscopic slides during the time they are not required by those who are reading papers or taking part in the discussions. The Committee therefore request members who propose to bring any material to communicate direct with the Honorary Secretaries, at 40, West Southernhay, Exeter, as this will greatly facilitate the necessary arrangements.

Meetings of Branches & Divisions.

[*The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the* Journal.]

BATH AND BRISTOL BRANCH.

The annual meeting was held at Bath on May 29th.

Installation of New President.—Dr. D. S. Davies resigned the chair to Dr. J. E. Cave, the incoming President.

Annual Report.—The Council reported with much satisfaction that the Branch continued in a flourishing condition. During the past year the papers had been interesting, and the discussion at the meeting held in Bath on February 27th was very ably opened by Professor Osler of Oxford, and was followed by a well-sustained discussion. The subject chosen was the early diagnosis of cancer of the stomach. A most interesting meeting at Bristol was devoted to clinical cases, and the scientific work of the session showed no falling off from the standard of previous years. The number of members had decreased from 386 to 379, chiefly in consequence of the losses the Branch had sustained through death. No fewer than four past presidents had died within a short period of each other. Dr. H. F. A. Goodridge was a graduate of London and F.R.C.P. For many years he was physician to the Royal United Hospital, Bath. His love of the practical side of his profession was very great, and he would spend many hours in the elucidation of the symptoms of his cases. In the wards no one was held in higher respect by house physicians, nurses, and patients than Dr. Goodridge. In 1870 he was president of our Branch, and his inaugural address was on The Progress of Fever Pathology. In 1878, at the annual meeting of the Association, he delivered the Address in Medicine. In private Dr. Goodridge's opinion was very highly appreciated by his professional brethren, and we remember him as one who was thorough and modest, honourable as a physician, revered as a teacher, and respected as a consultant. Mr. R. S. Fowler has also been lost to us by death. He was an enthusiastic worker both for the Branch and for the Association, and held office as secretary and Representative on the Central Council. The Branch was also the poorer by the death of Mr. Alex. Wauch, their genial friend and president. The death of Dr. E. Markham Skerritt is fresh in the memories of all. Obituary notices of all these gentlemen had recently appeared in the British Medical Journal. Of Dr. Skerritt a colleague at the Bristol General Hospital had written as follows: Dr. E. Markham Skerritt was appointed Physician to the Bristol General Hospital in 1875, and became Senior Physician in 1881. This position

he still held at the time of his death, and the mere fact of his holding the senior post at the hospital for so many years would of itself tend to give him the chief share in the counsels of the medical staff. But apart from this, Dr. Skerritt possessed faculties of sound judgement, clear mental vision, and lucidity of expression which in any body of men would mark him out as a leader. He was always a good and loyal colleague, and his opinion in all matters connected with the management of the hospital which came before the medical staff carried great weight, and almost invariably proved to be well founded. No one laboured more earnestly to uphold the honour and dignity of the medical profession, or had its best interests more truly at heart. For many years after he first came to Bristol, Dr. Skerritt spent much of his time at the hospital, and gave great attention to clinical teaching. He was an excellent clinical teacher, clear, precise and dogmatic; perhaps he especially excelled in the training of students in careful observation, and in the teaching of physical signs. Many old students will have a grateful remembrance of the training in clinical work which they received from him, and to which their present success is largely due. As a clinical physician Dr. Skerritt deservedly gained a high place: he was a very shrewd and careful clinical observer, quick and exact in seizing upon the important points in a case; his diagnosis was sound. He was never led away by fanciful methods of treatment, nor by any fads that might be current at the time, but based his plan of treatment on a well-reasoned study of each case. To the sick his devotion and kindness knew no bounds, and many a patient, both rich and poor, must have found an unexpected wealth of kindness and sympathy behind his somewhat reserved demeanour. In addition the Branch had lost Dr. Kerr, a prominent practitioner in Bath, and Mr. E. Skeate, who was born in November, 1811, and was probably the oldest member of the Branch. His name appeared in the minutes as having been present at the seventh annual meeting of the Bath and Bristol Branch of the Provincial Medical Association, held on June 22nd, 1848. The Council had also to record the deaths of Mr. Herbert W. Kendall, Dr. Gubbin, Dr. John Hancocke Wathen. Coming to Bristol in the first place as assistant house-surgeon to the Bristol General Hospital, Dr. Wathen went to the West London Hospital as house-surgeon. In 1867 he joined his father in practice at Fishguard, where he gained a large and valuable experience. In 1880 he came to Clifton, and entered into partnership with Dr. Charles Steele, with whom he was associated for twelve years. At this time he undertook the duties of Medical Officer to the Clifton Wood Industrial School, and, turning his attention to skin diseases, he began a skin dispensary of his own in Park Row. But Dr. Wathen was even better known as a prominent Conservative, in whose interest he entered the Town Council in 1893, becoming an Alderman in 1897. For fifteen years he was medical officer in the 1st Gloucester Artillery Volunteers, retiring with the rank of Surgeon-Major. Dr. Wathen took an active part in the annual meeting of the British Medical Association held in Bristol in 1894, and was President of the Grateful Society in the same year. He died, aged 61, on October 5th, 1906, at Sea Walls, Stoke Bishop, to which place he had only recently removed from Clifton. Mr. Herbert William Kendall was a student of Middlesex Hospital, and qualified in 1892, taking the diplomas of the Royal College of Surgeons of England and the Royal College of Physicians of London. He held the posts of House-Surgeon and Obstetric Officer to his hospital, and also held the appointment of House-Surgeon to the Great Northern Hospital. For many years previous to his death he was Honorary Surgeon to the Bristol Royal Hospital for Women and Sick Children, where his skill as a surgeon and his kindly personality commanded the great esteem of his colleagues and of all those with whom he was brought in contact. He was, in addition, the Medical Officer to the Maternity Home and to the Surgical Aid Society. During the past few years his practice as a general practitioner had been rapidly increasing. Mr. Kendall died suddenly after a short illness at his residence in Clifton on December 23rd, 1906, aged 39.

Finance.—The financial condition of the Branch was satisfactory, and showed a balance of £133 13s. 1d.

Additions to Branch Council.—The following additions to the Branch Council have been made to replace those members whose period of service has expired: To represent the Bristol Division, Dr. Michell Clarke and Dr. Edgeworth; to represent the Bath Division, no return has yet been received; to represent the Trowbridge Division, Dr. Herbert Tayler and Dr. Rattray; for the representation of the Branch on the Central Council the only nomination that has been received is one for Mr. C. E. S. Flemming, consequently no ballot becomes necessary.

BORDER COUNTIES BRANCH:
SCOTTISH DIVISION.

THE annual general meeting of this Division was held on Friday, May 24th, at the Dumfries and Galloway Royal Infirmary, Dumfries, Dr. CLARKE (Dumfries) in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and approved.

Report of Executive Committee.—The annual report of the Executive Committee was read and approved.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, Dr. Murdoch (Annan); *Vice-Chairman*, Dr. Monro (Stranraer); *Four Members of Committee*, Dr. Robertson (Penpont), Dr. Kerr (Dumfries), Dr. Bryson (Thornhill), Dr. Robson (Maxwelltown); *Members of Branch Council*, Dr. Logan (Ecclefechan), Dr. Bell (Lockerbie); *Representative at Annual Meeting*, Dr. Maxwell Ross; *Secretary and Treasurer*, Dr. Livingston.

Contract Practice.—The subject of contract practice was then considered, and it was resolved to refer the "Bradford Rules" as modified at the previous meeting to the Executive Committee, to be redrafted in accordance with the suggestions made; the new draft rules to be printed and circulated to all members of the medical profession practising in the Division area.

DORSET AND WEST HANTS BRANCH.

THE annual meeting of this Branch was held at Weymouth on Wednesday, May 22nd.

Entertainment by the Mayor.—For the first time in the history of the Branch a civic welcome was extended to the members. Previous to the transaction of business the Mayor of Weymouth (Alderman Templeman) entertained the assembled medical men and their friends, numbering over 100, to luncheon in a marquee that had been erected in the Alexandra Gardens, the catering being well done by the manager of the Gloucester Hotel. The Mayor presided, and was supported by the retiring President (Mr. William Hawkins) and the President-elect (Dr. J. Macpherson Lawrie, D.L., J.P.). After the luncheon the loyal toasts were honoured, and the MAYOR then proposed "The Dorset and West Hants Branch of the British Medical Association." In doing so he said that during his term of office he had had the privilege of entertaining many associations, but he had never entertained an association so important in its character or so useful to the community as the Association he had the pleasure to entertain that day. He welcomed the Association to Weymouth, and hoped that they would have a successful scientific meeting. Dr. SNOW, of Bournemouth, responded. He said it was customary in all ages to entertain great leaders of men, politicians, warriors, and naval heroes, a goodly number of whom had been entertained by that ancient borough, but it was not a very common thing for the public to pay much attention to the medical profession, a profession to which they owed so much. Honours were showered on other heroes, but those who were saviours of mankind were little noticed. Happily the example of the Mayor of Weymouth, in entertaining that Branch of the Association, was inaugurating a new era, and the medical profession were grateful for this recognition. Dr. Snow drew attention, among other things, to the great debt the community at large owed to medical men for the application of the scientific discoveries of M. Pasteur and others to the treatment of diseases and surgical injuries whereby thousands of human lives were now saved annually which would otherwise have been lost.

The members afterwards adjourned to the Princess Christian Hospital, where the business meeting was held. Dr. J. MACPHERSON LAWRIE presided.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Apologies for Non-attendance.—Apologies for absence

were announced from Fleet Surgeon Home, Fleet Surgeon Doyne, Dr. Benson Cooke, and others.

New Members.—The following were afterwards elected members of the Association: Dr. Gerald Russell Rickett (Sherborne), Dr. Arthur Norman Haig (Yeovil), Mr. Alfred G. Whitaker (Evershot), Lieutenant-Colonel Edward Swan Marden (Lyme Regis), Dr. Mary Ethel Jeremy (Bournemouth), and Mr. Charles Braxton Mooring Aldridge (Bournemouth).

Votes of Condolence.—The following were passed: 1. Dr. J. Comyns Leach: 2. Dr. Griffin; 3. Dr. Joseph Groves.

President's Address.—The PRESIDENT afterwards delivered an address on the progress and development of gynaecology during the last twenty years. He also exhibited some interesting clinical cases from the wards of the Princess Christian Hospital, and showed some pathological specimens.

Vote of Thanks.—A hearty vote of thanks was afterwards awarded to the President for his able address, on the motion of Dr. T. FRED. GARDNER, seconded by Dr. HYLA GREEVES.

Reports.—The HONORARY TREASURER presented his financial statement for 1906. The Reports from the Divisions for 1906 were read. The Report of the Council of the Branch for 1906 was presented.

Representative on Central Council.—The return of Mr. E. H. W. Parkinson, of Wimborne Minster, as Representative of the Branch on the Central Council was reported.

Next Meeting.—It was decided to hold the next meeting of the Branch on July 3rd at Ringwood.

Reception.—At the conclusion of the meeting Dr. and Mrs. Macpherson Lawrie held a reception at their residence, Greenhill, which was largely attended by the members of the Branch with their wives and friends, and many visitors from the county and elsewhere.

EAST ANGLIAN BRANCH:

NORTH SUFFOLK DIVISION.

THE annual meeting of the North Suffolk Division was held at the Lowestoft Hospital on Thursday, June 6th, at 4.30 p.m., Dr. BAYLIE in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The election of officers for the ensuing year was proceeded with, and resulted as follows: *Chairman*, W. Berry; *Vice-Chairman*, W. E. Baylie; *Honorary Secretary and Treasurer*, W. Tyson: *Representative for Representative Meeting*, E. H. T. Nash; *Representative on Branch Council*, E. H. T. Nash; *Executive Committee*, W. A. Shann, H. P. Helsham, W. L. Bell, E. H. T. Nash.

Cases and Specimens.—Cases and specimens were then shown by the following members: Messrs. Bell, Worthington, Nash, and Tyson.

GLASGOW AND WEST OF SCOTLAND BRANCH:

GLASGOW CENTRAL DIVISION.

THE annual meeting of the Division was held in the County Hall, 242, St. Vincent Street, Glasgow, on Tuesday, May 28th, at 4 p.m., Dr. J. W. ALLAN presiding.

Confirmation of Minutes.—The minutes of the previous meeting were read and approved.

Communications.—The SECRETARY intimated various communications which had been received, and these were considered.

Election of Officers.—The following office bearers were elected for the ensuing year: *President*, Professor R. Stockman, M.D.; *Vice-President*, Robert Jardine, M.D.; *Secretary and Treasurer*, Wm. D. Macfarlane, jun., M.B.; *Representative to the Representative Meeting*, Mr. J. Grant Andrew, M.D., 12, Woodside Terrace, Glasgow; *Representatives to Branch Council*, Professor Stockman, M.D., Wm. D. Macfarlane, jun., M.B.; *Executive Committee*, George H. Edington, M.D., A. S. Macgregor, M.D., J. Paterson, M.B., W. F. Hunter, M.D., C. Napier Grant, M.B., W. S. Syme, M.D.

This was all the business.

LANCASHIRE AND CHESHIRE BRANCH:

MANCHESTER DIVISION.

THE annual meeting was held in the Board Room of the Royal Infirmary on Thursday, June 6th.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The following officers and Committee were elected for 1907-8: *Chairman*, Dr. G. H. Smith; *Vice-Chairman*, Dr. F. Cox; *Honorary Secretary*, Dr. T. W. H. Garstang; *Honorary Assistant Secretary*, Dr. T. Ll. Fennell; *Representative to Representative Meeting*, Dr. C. J. Renshaw; *Members of Branch Council*, Dr. T. W. H. Garstang and Dr. Luckman; *Members of Executive Committee*, Drs. P. R. Cooper, W. Owen Jones, F. Basil Rhodes, J. C. Smyth, Oliver Withers, and W. H. Tattersall.

Vote of Thanks to Retiring Officers.—A hearty vote of thanks to the retiring office-bearers and Committee for their services during the past year was carried.

Address by new Chairman.—Dr. G. H. SMITH addressed the meeting.

Paper.—Dr. HENRY ASHBY read an interesting and instructive paper on Some Disorders of Infancy. A discussion followed in which the following took part: Drs. C. J. RENSHAW, C. A. K. RENSHAW, T. A. ROTHWELL, T. W. H. GARSTANG, AGAR RENSHAW, T. Ll. FENNELL, H. R. HUTTON, and P. R. COOPER. Dr. Ashby was heartily thanked for his kindness in addressing the meeting.

Dinner.—Sixteen members dined together after the meeting, at the Brooklands Hotel.

BLACKBURN DIVISION.

THE annual meeting of this Division was held on Tuesday, May 28th, at the Old Bull Hotel, Blackburn, Dr. BALLANTYNE, President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were confirmed.

Letter.—The SECRETARY read a letter from Dr. Wallers, the Vice President, stating that he could not take office next year.

Annual Report.—The SECRETARY then read his Annual Report.

Election of Officers.—The following officers were then elected for the ensuing year: *President*, Dr. Aitken; *Vice-President*, Dr. Macklin; *Secretary*, Dr. Greenwood; *Representative for Representative Meetings*, Dr. Baxter; *Members of Branch Council*, Drs. Prebble and Craig; *Members of Executive Committee*, Drs. Moir, Taylor, Bannister and Jones.

Invitation to Medical Secretary.—It was resolved that Dr. Smith Whitaker be asked to address the Division on the benefits of British Medical Association membership, and that all medical men in the district be invited.

Proposed Amalgamation with District Medical Society.—It was resolved that the Executive Committee meet the first week in October to consider amalgamation with the Blackburn and District Medical Society.

Vote of Thanks.—It was resolved that a hearty vote of thanks be given to Dr. Ballantyne for his services as President during the past year.

CHESTER DIVISION.

A MEETING was held on May 27th, Dr. GRANGER in the the chair.

Confirmation of Minutes.—Minutes of the last annual meeting were read and confirmed.

Report of Executive Committee.—The annual report of the Executive Committee was read and approved.

Election of Officers.—The following officers for the ensuing year were then elected. It was proposed by Dr. PARRY, seconded by Dr. DUFF, that Dr. Mann be elected Chairman. It was proposed by Dr. PARRY and seconded by Dr. MANN that Dr. Gray be elected Vice-Chairman. It was proposed by Dr. MANN and seconded by Dr. GRAY, that Dr. King be re-elected Hon. Secretary and Treasurer. It was proposed by Dr. MANN and seconded by Dr. DUFF, that Dr. Parry be re-elected the Representative at Representative Meetings of the Association. It was proposed by Dr. TAYLOR and seconded by Dr. DUFF, that Drs. Mann and King be the Representatives on the Branch Council. It was proposed by Dr. MANN and seconded by Dr. KING, that Dr. Duff be elected on the Executive Committee. It was proposed by Dr. GRAY and seconded by Dr. KING, that Dr. Laird be elected on the Executive Committee. It was proposed by Dr. TAYLOR and seconded by Dr. PARRY, that Dr. J. G. Taylor be on the Executive Committee. It was proposed by Dr. DUFF and seconded by Dr. GRAY, that Dr. S. H. Munro be also elected on the Executive Committee.

Representative Meetings.—It was proposed by Dr. TAYLOR and seconded by Dr. MANN, that the Representative of the Division should be empowered to appoint a Deputy to

act for him in representing the Division (if necessary). This was carried unanimously. It was proposed by Dr. MANN and seconded by Dr. KING, that Dr. Parry, the Representative of the Division, be requested to vote for the postponement of the Charter, instead of his having a quite free hand when voting in all matters which might come before the Representative Meetings of the Association. When this was put to the meeting it was negatived. The latter part of the motion was then confirmed.

Forthcoming Meeting at Crewe.—The forthcoming meeting of the Division at Crewe was then considered, and the Hon. Secretary was requested to make arrangements for holding the meeting at the Crewe Arms Hotel, at 5 p.m. on June 7th.

Votes of Thanks.—A vote of thanks proposed by Dr. TAYLOR and seconded by Dr. MANN, and carried unanimously, was then accorded to the Chairman, Dr. Granger, for his two years' services in the chair. A vote of thanks was also unanimously passed to Dr. King, Hon. Secretary, proposed by Dr. PARRY and seconded by Dr. DUFF.

This concluded the business of the meeting.

MANCHESTER (NORTH) DIVISION.

THE annual meeting was held on Thusday, May 30th, Dr. BODDY in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

The SECRETARY reported the action taken accordingly.

Manchester Eye and Ear Hospital.—It was unanimously resolved:

That this Division considers the establishment of a new eye and ear hospital in Manchester totally unnecessary.

Details of Voting requested by the Annual Representative Meeting.—It was unanimously resolved:

That this Division does not see its way to comply with the request made.

Election of Officers.—The following were duly elected for the ensuing year: *Chairman*, Dr. Hargreaves; *Vice Chairman*, Dr. E. Lee; *Secretary and Treasurer*, R. G. McGowan; *Representatives on Branch Council*, Drs. Broadbent and McGowan; *Representative to Annual Representative Meeting*, Dr. Broadbent; *Executive Committee*, Drs. Boddy, Fraser, Palanque, Wardman, and Walker.

Draft Scheme for Co-ordinating Local Divisions.—This was unanimously approved, and the following elected to represent the Division on the combined Committee: Drs. Hargreaves, Broadbent, Frazer, Walker, and McGowan. These same gentlemen were also elected to the Committee formed to deal with the annual meeting of the Branch.

MANCHESTER (SOUTH) DIVISION.

THE fourth annual general meeting of this Division was held at Dr. Sawers Scott's, Withington, at 3.45 p.m. on Friday, May 31st. The CHAIRMAN (Dr. Sawers Scott) was in the chair.

Apology for Non-attendance.—Dr. E. Vipont Brown wrote regretting his inability to be present.

Confirmation of Minutes.—The minutes were read and confirmed.

The late Dr. Collins.—Feeling reference was made by the CHAIRMAN to the first Chairman of the Division, the late Dr. F. H. Collins, and the following resolution was unanimously carried by the meeting:

That the members of the Manchester (South) Division have heard with regret of the death of Dr. Collins, and that, being met in general meeting, desire to place on record their appreciation of the work he has done for the Division and for the practitioners of medicine in Manchester, and their deep sense of the loss they and the medical profession have sustained by the death of Dr. Collins.

It was resolved also to forward a copy of the resolution to Mrs. Collins.

Rusholme Dispensary.—A letter was read from the Medical Secretary, Mr. Smith Whitaker, *re* the Rusholme Dispensary, and it was resolved that the letter should be handed to the Chairman of the Combined Committee.

Election of Officers.—The officers nominated by the retiring Committee were elected, Drs. Ashton and Chevers acting as scrutineers, viz.: *Chairman*, Dr. E. Vipont Brown; *Vice-Chairman*, Dr. Percy McDougall; *Honorary Secretary and Treasurer*, Dr. M. Russen Rhodes; *Representatives on Council*, Drs. F. W. Jordan and Percy McDougall; *Representative for Representative Meeting*, Dr. M. Russen Rhodes; *Committee*, Dr. G. H. Grant Davie (Fallowfield), Dr. A. E. Finney (Wilmslow), Dr. Albert Hopkinson (Withington), Dr. A. W. Senior (Levenshulme), Dr. F. J. Webb (Gorton). Both the retiring Representative, Dr. Bagley, and the honorary secretary, Dr. M. Russen Rhodes, were nominated by the meeting for the office of Representative for the Representative Meeting. Dr. Bagley received three votes and Dr. M. Russen Rhodes nine votes. The Past-Chairman, Dr. Sawers Scott, became also an *ex officio* member of the Committee by the adoption of the following new rule: "The Past-Chairman shall be an *ex-officio* member of the Committee."

Ethical Rules.—The question of the adoption of a code of ethical rules was referred to a special meeting of the Committee.

Annual Reports.—The Executive Committee's and the Honorary Treasurer's reports were read and confirmed.

Draft Scheme for Combined Committee.—The draft scheme for a combined Committee of the Manchester Divisions was passed by the meeting, though with a protest at the limited powers given under the scheme to such Committee. Four Representatives were elected to the combined Committee—the Chairman (Dr. Vipont Brown), the Past-Chairman (Dr. Sawers Scott), the Representatives on Council (Drs. F. W. Jordan and Percy McDougall). The Honorary Secretary is an *ex officio* member of that Committee under the regulations of the draft scheme.

Draft Charter. Dr. J. MILSON RHODES made a few remarks on the draft Charter. It was decided, however, to postpone his address to the first meeting of the Division.

REPORT OF EXECUTIVE COMMITTEE.

The fourth annual report of the Executive Committee, which was confirmed by the meeting, was as follows:

Number of Meetings.—Your Executive Committee have to report that during the year three ordinary meetings of the Division were held, at which there was an average attendance of twelve. The Committee itself met twice.

Social Character of Meetings.—Your Committee wishes to draw your attention to the success of the social character of the meetings, which have been held at the houses of members of the Committee. Though the numbers present have not been increased, the enthusiasm shown and the greater amount of work done at the meetings has been very marked. Further, your Committee points out that the social character of the meetings was greatly increased by the presence of representatives of other Manchester Divisions at our meetings. The presence also of such representatives has much increased the value of the discussions at the meetings. In fact, the chief work of the past year was greatly due to such concentration of the active workers of the various Divisions at our first ordinary meeting, at which there were 18 present.

Necessity of Combination of Manchester Divisions.—At this meeting the necessity of the combination of all the Manchester Divisions for any effective work to be accomplished was clearly shown, and the propositions put forward at that meeting were generally agreed to—namely, that to enable the Association effectually, easily, and with the united force of its whole membership to carry out any policy, it is necessary:

1. To group the Divisions into workable areas—for example, the five Divisions of Manchester into one Manchester area.
2. To transmit the resolutions of such grouped Divisions or areas (as Manchester) to the Branches.
3. To transmit the resolutions of the Branches to Council (that is, to one Central Representative Council).
4. The resolutions of Council when approved by general meeting of the Association to be the policy of the Association, and it then to be the duty of this Central Council to carry out this policy, which thus becomes the policy of the whole of the members of the Association.

Your Committee wishes to direct your attention to the fact that the past year has been marked by signal success, in that the necessity for combination as set forward in the

above first resolution has been the cause of united action among the Manchester Divisions, and that they are agreed in seeking some permanent effective scheme of combination. At the same time your Committee recognizes the fact that this first proposition is the only one that has been effectively touched upon during the year, and that the further propositions brought forward at that meeting would have to wait until some satisfactory combination of the Divisions has been brought about.

Rusholme Dispensary.—Your Committee further has to report that the Rusholme Dispensary has not yet been suppressed, though its power for evil has been much limited by the vigilance of the Subcommittee for that branch of your Committee's duties.

Medical Benevolent Schemes.—Medical benevolent schemes have been several times brought forward, and much evidence has been given with regard to existing institutions and the necessity for united action in the matter has been abundantly made clear. It has been considered, however, that further progress in the problems involved could only be effectively made when the combination of the Manchester Divisions enabled a more influential body to take the matter up and carry it forward into some practical issue.

Poor-Law Reforms.—Your Committee wishes further to report that many proposed or suggested Poor-law reforms brought up at the second ordinary meeting and carried unanimously were embodied in the report of the Association's Committee which appeared before the Royal Poor-law Commission. Notably may be mentioned the second resolution adopted by the Division at that meeting—namely:

> That every registered practitioner should be entitled to attend Poor-law cases, unless he expresses his wish not to be on the list.

Similarly with regard to vaccination, it was suggested that the Scottish system ought to be adopted, "that is, every practitioner should be entitled to act as public vaccinator."

Authority of the Profession.—Along with the other Divisions and medical societies the decided action of the members of our Division resulted in the re-establishment in this city of the authority of the medical practitioners in attendance in all cases of accident or injury, even if suicidal or homicidal.

W. Sawers Scott, *Chairman.*
M. Russen Rhodes, *Honorary Secretary.*

METROPOLITAN COUNTIES BRANCH:

City Division.

The annual general meeting was held at 9 p.m. on Thursday, May 30th, at the Great Eastern Hotel, Liverpool Street, E.C. Dr. Major Greenwood, Chairman, presided.

Confirmation of Minutes.—The minutes of the meeting held on May 23rd, having been read and confirmed, were signed by the Chairman.

Report of Executive Committee.—This report, which had been printed and circulated, was received and adopted.

Representative in Representative Meetings of the Association.—Mr. Frederick Wallace was elected as Representative, and Dr. A. G. Southcombe as his deputy.

Election of Officers and Executive Committee.—The following members were elected:—*Chairman*, Dr. A. G. Southcombe; *Vice-Chairman*, Dr. E. W. Goodall; *Representatives on the Branch Council*, Dr. J. W. Hunt and Mr. Frederick Wallace; *Honorary Secretary and Treasurer*, Mr. C. R. Salisbury; *Assistant Honorary Secretary*, Mr. F. Herbert Wallace; *Other Members of Executive Committee*, Dr. A. J. Beveridge, Mr. J. Beddow, Mr. Reginald Brown, Mr. F. J. P. Daly, Mr. H. Cuthbert Dixon, Mr. G. E. Gask, Mr. A. Withers Green, Dr. Major Greenwood, Dr. E. A. Lermitte, Dr. J. W. Oliver, Mr. J. H. Porter, Mr. H. E. Powell, Mr. J. Scott Supple, and Mr. H. Crisholm Will.

Adjournment of Meeting.—It was resolved that the meeting be adjourned till Tuesday, June 25th, at 4 p.m. at the Great Eastern Hotel, to consider the agenda paper of the Annual Representative Meeting.

Supper.—After the meeting a number of members and their guests had supper together in the hotel. The retiring Chairman (Dr. Major Greenwood) and Secretary (Dr. E. W. Goodall) were thanked for the services they had rendered during their time of office.

Hampstead Division.

A meeting of this Division was held on Tuesday, June 4th, at the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. Macevoy in the chair.

Minutes.—The minutes of the meeting of May 4th were taken as read.

Ethical Aspects of Medical Consultation.—A discussion took place on this subject (see British Medical Journal Supplement, February 16th, 1907). The following resolutions were carried:

(*a*) That a class to be styled "Consultants" shall be recognized who shall undertake not to treat patients, either at their own consulting rooms or at the houses of patients or elsewhere, except in co-operation throughout the treatment of any case, either personally or by correspondence, with practitioners usually in charge of such patients. *Rider.*—This does not refer, under present circumstances, to patients seen at the charitable institutions to whose staff consultants are attached.

(*b*) That the rules laid down for consultation apply equally to practitioners who specialize in pathology, radiography, medical electricity, and light.

(*c*) That Paragraph 6 (*f*) of the Recommendations (p. 77, British Medical Journal Supplement, February 16th) be amended to read, "It is the duty of the medical attendant jointly with the consultant." [With regard to Resolution (*c*), it was pointed out that Paragraph 6 (*f*) (British Medical Journal Supplement, February 16th, 1907) as it stood was in opposition to a by-law of the Royal College of Physicians, but if amended as above it would be in conformity with it.]

(*d*) That on p. 75, under the heading "Objections to Proposed Consultants on Ethical Grounds," the words "is deemed" be substituted for "has been pronounced." The same amendment to apply to Paragraph 4 (*c*) of the Recommendations on p. 76.

(*e*) That on p. 76, under the heading "Cases Seen at Consultant's House," the fourth sentence should read, "He should do so, explaining the circumstances immediately after to such ordinary attendant, and stating."

Hospital Administration.

A discussion then took place on the report of the Hospitals Committee (see British Medical Journal Supplement, April 13th, 1907).

Specific questions submitted to Divisions:

1. Should there continue to be compulsory payment by patients to hospitals other than cottage hospitals?
2. Should the production of subscribers' letters continue to be compulsory?
3. Should inquiry into a patient's circumstances invariably take place?
4. Should a certificate be required from the medical attendants of all persons attending out-patient departments?
5. Any other comments.

The following resolutions were passed in answer to these questions:

Answer to questions 1 and 2: "No."
Answer to question 3: "Yes, except in emergency cases."
Answer to question 4: "That a recommendation should be required from the medical attendants of all persons attending out patient departments, except in emergency cases."
Answer to 5: "That model principle No. 12 (British Medical Journal Supplement, April 13th, p. 190) be amended to read as follows:

> "That there shall be co-operation and co-ordination between hospitals themselves, especially those which operate in the same area."

Medical Inspection of School Children.—The report of the Medico-Political Committee given on p. 191 of the British Medical Journal for April 13th, 1907, was next dealt with, and the following resolution was passed:

> That, as regards Hampstead, the Medical Adviser should be a full time medical officer.

Advanced Phthisis.—The following resolution of the St. Pancras Division was then considered and approved, though it was pointed out that a year ago the Metropolitan Asylums Board had declined absolutely to take any such action:

> That this Division is of opinion that it is desirable that the Metropolitan Asylums Board should provide accommodation for far advanced cases of consumption, in order to prevent the spread of infection.

Contract Practice Subcommittee.—Mr. H. W. Armit reported on the corrections required to the subcommittee's report on provident dispensaries, which was published in

the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of April 6th, 1907, pages 183 to 186, and was also circulated in pamphlet form to members.

Kilburn Provident Medical Institute.

1. On page 3 of the pamphlet under 2 (*b*) (page 183, right-hand column, of the SUPPLEMENT of April 6th, 1907, under 2 (*b*)) "chronic invalids are removed from the books" should read "may be removed."

2. On the same page under 2 (*e*) the sum £190 18s. 11d. should read "£190 17s. 11d." Under the same heading 2 (*e*) instead of "13,111 attendances at 1s. 3d." read "23,111 attendances at 8½d. per attendance."

3. On p. 8 of the pamphlet (p. 185, left-hand column, of the SUPPLEMENT) under (*e*) for Kilburn, instead of the figures in the table "14, 60.9, 25.1" read "14, 61.9, 24.1." Under the same heading instead of "1s. 3d." read "8½d."

4. On p. 9 of the pamphlet, for "Kilburn . . . has 15 vice-presidents, of whom 12 are clergymen," read "14 vice-presidents, 10 clergymen" (p. 185, left-hand column, of the SUPPLEMENT, under *g*).

St. John's Wood and Portland Town Dispensary.

The Secretary of the Dispensary having worked out the attendances finds that these differ from the figures given in the annual report of 1905.

On p. 5 of the pamphlet under 4 (*e*) (or p. 184 of the SUPPLEMENT, left-hand column, under 4 (*e*)), instead of "this works out at 6d. per case attended" read "in 1906 there were 19,980 attendances and 5,945 home visits, which works out at 3d. per attendance."

Hampstead Provident Dispensary.

On page 8 of the pamphlet under (*e*) (or page 185 of the SUPPLEMENT, left-hand column, under (*e*)), instead of the figures in the table "27 8, 56, 16.2," read "28.33, 57.16, 14.51."

The annual reports of the dispensaries worked on by the Subcommittee were as follows:

Hampstead, 1904.
Kilburn, 1905.
Haverstock Hill, 1904.
St. John's Wood, 1905.
Finchley, 1905.
Child's Hill, 1905.

It was finally resolved by the meeting:

1. That no further steps be taken as regards republication of the Subcommittee's report on provident dispensaries, but that in any future circulation of this report the errata shall be added to it.
2. That the errata be published in the minutes.
3. That the provident dispensary question be referred to the Executive Committee of the Division to take such future action as may be considered advisable.

MARYLEBONE DIVISION.

A GENERAL meeting of the Division was held at 11, Chandos Street, on May 14th at 5 p.m., Dr. LAURISTON SHAW in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Draft Charter.—The draft Charter and Special Report of the Organization Committee thereon, as published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of April 6th, were considered. The meeting passed the following resolution:

The Division does not approve of the present methods of election of the Council by Branches.

—Sir VICTOR HORSLEY, the Representative of the Division in Representative Meetings, was directed to take what action he thought best with respect to the draft Charter at the forthcoming Special Representative Meeting.

Hospital Administration.—The Division returned the following answers to the special questions submitted to Divisions: 1. No. 2. No. 3. Yes. 4. Yes; and added as a rider to 3:

That where the King's Fund grants help to hospitals, almoners should be provided by the hospital authorities at their own cost or with the help of the King's Fund.

Medical Inspection of School Children.—The Division approved of the scheme of medical inspection of school children as outlined, and added the following riders:

1. That the Board of Education should require the appointment of a special local medical officer where the size of the area and distribution of population allows.
2. That the dental inspection and treatment of children be undertaken by dental surgeons specially appointed.
3. Provided that opposition is offered to any attempt of the education authorities to enter into arrangements with hospitals for the treatment of children.

Ethical Aspects of Medical Consultation.—The Executive Committee was directed to draw up a memorandum and series of questions to be submitted to the consultants in the Marylebone area.

Nomination of Officers.—The following were recommended as officers for the Branch: *President-elect*, Mr. Edmund Owen; *Vice-Presidents*, Dr. Buckle, Dr. Lauriston Shaw, Dr. F. J. Smith, Mr. Ernest Clarke; *Honorary Treasurer*, Mr. Betham Robinson; *Honorary Secretaries*, Mr. Atwood Thorne, Dr. F. J. McCann; *Representative on Central Council*, Dr. Lauriston Shaw.

The annual meeting of this Division was held on May 30th, at the Medical Society's Rooms, Chandos Street, W.

Election of Officers.—The following officers were elected for the ensuing year:—*Chairman*, A. Pearce Gould, M.S., F.R.C.S.; *Vice-Chairman*, F. J. Smith, M.D., F.R.C.P.; *Honorary Treasurer*, Comyns Berkeley, M.B., B.C.Cantab.; *Honorary Secretary*, Donald Armour, M.B., F.R.C.S.; *Representative at the Representative Meetings of the Association*, Sir Victor Horsley, M.B., F.R.C.S., F.R.S.; *Representatives on the Branch Council*, Comyns Berkeley, M.B., B.C., Thomas Dutton, M.D., C. A. Hawthorne, M.D., Mrs. Scharlieb, M.D., M.S., Lauriston Shaw, M.D., Atwood Thorne, M.B., and the Honorary Secretary.

STRATFORD DIVISION.

THE annual meeting of the Stratford Division was held on June 6th at the Alexandra Hotel, High Street, Stratford, Dr. HASTINGS presiding.

Confirmation of Minutes.—The minutes of the previous meeting were read and approved.

Report of Recent Representative Meeting.—Dr. PERCY ROSE, the Representative of the Division, in giving his report of the Special Representative Meeting recently held in London, emphasized the importance of the proposed Charter. He said they were engaged in trying to formulate the best scheme for the working of the Association, and in addition their attention was being directed to obtaining increased powers by which they could enlarge the benefits and advantages of the Association, and thus endeavour to induce every member of the profession to join. He pointed out that in three successive years there had been three decisive votes given by the Representatives in favour of proceeding with the application for a Charter. At Leicester in 1905 the figures were 87 to 25, at London in 1906 there were 89 to 25, and this year 81 representatives to 34 wished to go on with the Charter. The Colonies he understood, were in favour of the Charter, and further delay would savour of wilful obstruction. The draft Charter as presented to the meeting was a triumph for the Organization Committee, who had so successfully embodied the wishes of previous Representative Meetings and the views of the Association generally, that only a very small proportion of the suggested amendments were carried, the larger number being defeated by huge majorities. In refusing to allow the deletion of powers to take proceedings before the General Medical Council, the meeting only confirmed the policy of the Association as laid down and accepted last year. The meeting decided to have defined in the By-laws what expenses, not merely for travelling, should be allowed to members of the Council or Committees and to Representatives. It would be important therefore from the financial side to have as few Councillors, Committees, and Representatives as would be compatible with the efficient working of the Association. The request of the Stratford Division that new members should be elected by Divisions was refused on the ground that personal feeling might enter too largely in the election. He still thought election of new members by their Division was the best plan if safeguarded by allowing an appeal to the Branch or Central Council by the nominators of a rejected candidate. The idea that no constituency should have less than 100 members was also negatived, but he thought that for financial or other reasons the Association would eventually adopt this alteration. The method of electing the Central Council was very properly subjected to a long and important debate. The resolution on the subject sent up officially by the Stratford Division was superseded

by one from the Norwich Division of a later date expressing the same ideas. By this procedure the meeting had the advantage of discussing the matter with the aid of a carefully worked out scheme put forward by the Norwich Division. The suggestion that the Representatives should elect the whole of the Council was first brought before a Representative Meeting by the Stratford Division at Caxton Hall last year. It was there, although seconded by Sir Victor Horsley, defeated by so large a majority that the numbers were not worth counting. This year the same idea secured 35 supporters, against 52 opponents. It was evident that definite progress had been made with this important reform, and if a reference should be made to the report of the debate published in the SUPPLEMENT of June 8th it would be found that this idea had secured the adherence of so many well-known medical reformers that its eventual adoption by the Association would be only a matter of time. The Stratford Division did not claim to be the originators of the idea. It formed part of a scheme formulated by the Manchester Conference before the Division existed, and the whole scheme, for simplicity and practical utility, had not and could not be beaten. At the risk of wearying his auditors he would reiterate the essentials of that scheme of organization of the medical profession. There should be (1) local Divisions, (2) an annual conference of delegates from those Divisions, and (3) a Council or Executive Committee appointed by the annual conference. This was the whole scheme, and he was sure that when once the members of the Association had grasped the idea they would adopt the scheme in its entirety. The Representative Meeting, however, decided on a Council elected two-thirds by Branches and one-third by the representatives in addition to Colonial, service, and *ex-officio* members, the voters in each case being grouped geographically. He still thought the Central Council too large; but as this and most of the other contentious points were regulated by the by-laws, alterations that experience proved advisable could easily be made.

Ethical Aspects of Medical Consultation. The ethical aspects of medical consultation were then briefly discussed, and it was decided that the Representative should have a free hand in the matter at the Annual Representative Meeting.

Election of Branch Officers. In connexion with the election of Branch officers several members expressed their lack of knowledge of many of the candidates, and from the brief discussion which took place useful information was obtained about the gentlemen nominated for the offices.

Central Emergency Fund.—The meeting next considered the question of the Central Emergency Fund. Dr. Rose gave a short account of various points in connexion with the Fund which had come under his notice at the Special Representative Meeting. He especially called the attention of the Division to the Ealing Vale dispute, emphasizing the fact that the cause of the aggrieved doctors was supported by their local Branch not only with their sympathy but with monetary assistance. After a long discussion it was unanimously resolved to call a special meeting of the members of the Division on June 26th to further consider this important subject.

Election of Division Officers.—The meeting next proceeded to elect office-bearers for the ensuing year, with the following result: *Chairman*, Dr. C. Spurrell; *Vice-Chairman*, Dr. F. E. Hastings; *Honorary Secretary*, Dr. P. J. S. Nicoll; *Assistant Honorary Secretary*, Dr. G. A. Troup; *Representative at Annual Representative Meeting*, Dr. Percy Rose; *Representative on Branch Council*, Dr. C. Spurrell; *Members of Executive Committee*, Drs. Beadles, Black, E. H. Collins, A. J. Conerns, Dale, Frederick, Hay, and Dayus.

Vote of Thanks.—The office-bearers for the past year were thanked for their services.

WESTMINSTER DIVISION.

A meeting of this Division was held at St. James's Vestry Hall, 145, Piccadilly, at 3.30 p.m., on Wednesday, May 22nd, Dr. G. E. Hastie, Chairman.

The Ethical Aspect of Medical Consultation.

Dr. DONALD BAYNES opened a discussion on this subject. He said:

The notice paper gives the subject for this evening's discussion, namely, "The Ethical Aspect of Medical Consultation," and also that I am to lead this discussion. The more I have considered the question the less I like my task, and regret that in a weak moment I agreed to take the place of the gentleman who was originally chosen and who accepted the position I now occupy. This gentleman on thinking the matter over, wrote and said he was unable to read the paper and our Secretary persuaded me to step into the breach. I am the more sorry, because this gentleman having made this subject a speciality, would have given you something worth hearing, whereas all I can do is to throw myself on your good nature and apologize for my deficiencies.

The SUPPLEMENT of the BRITISH MEDICAL JOURNAL for April 16th deals very fully with this subject, and I suppose most, if not all here present, agree in the main with the recommendations of the Ethical Committee. There are, however, points in these recommendations which require explanation, and subjects of a controversial nature on which, if we may judge from letters in the JOURNAL, opinions differ very considerably. Now, the object of this meeting is to see if these diverse opinions after discussion and consideration cannot be brought more or less into harmony, so that we can meet the public as a solid phalanx with one settled policy, and showing a united front. Of one thing we may be certain: that if we do not put our house in order on such points as these, on hospital reform, and other kindred subjects, the public will step in and settle the matter for us. There is every indication that the public is getting restless, trouble is brewing, and our want of union will make us easy victims to the coming storm.

After considering the recommendations of the SUPPLEMENT of April 16th, and having read many of the letters on the subject, I am of the opinion that three points stand specially out for discussion—namely:

1. Should there be a special class of men set apart who would only see patients in consultation with a medical man?

2. What are called second visits?

3. Those with whom consultation is inadvisable or impossible to meet.

Again on p. 76, SUPPLEMENT, April 16th, column 2:

Recommendations. I suppose we all agree to No. 1.

No. 2. Cases in which consultation is specially required. Here again, I suppose, most, if not all, agree with sections (*a*), (*b*), (*c*), with its subsections (i), (ii), and (iii).

On subsections (*c*) and (*d*) I presume fuller information will be required, and differences of opinion will arise.

No. 3 seems to be non-contentious.

No. 4 is a debatable question.

No. 5 does not seem to call for discussion.

No. 6. This also will, I surmise, meet with general consent unless, perhaps, subsection (*f*) may require a little consideration.

The only remaining recommendation that may require examination is No. 10. Nos. 7, 8, and 9 seem to be non-controversial, and I expect will be passed without discussion.

Returning now to these three questions, which will probably form the resolutions to be returned to the British Medical Association Ethical Committee, let us look for a minute at No. 1, with which I propose to incorporate No. 3, as they closely interlace one with another. Should there be a special class designated consultants, the question now arises—what is a consultant? I have failed to find in any dictionary any such word. The SUPPLEMENT, April 16th, as far as I understand it, defines the position thus: The term "consultant" is used as the designation of *any* practitioner who in any given case is called in to advise thereon, but is not in general or continuous attendance.

This definition seems simple and easy to grasp, but when compared with the paragraph at the bottom of column 1 and top of column 2, page 76 of the SUPPLEMENT, one does not seem to be on a very sure foundation, and one is led to inquire whether an alternative division of the profession may not be into specialists and non-specialists. Personally I think eventually the profession will be divided into two groups—specialists and non-specialists (that is, the general practitioners). This I leave for discussion. As to the ethical position of consultants or specialists in regard to their brethren the class of general practitioners, I may say at once that a man with the mind and feelings of a gentleman requires no ethical rules to guide him as to what is right or wrong,

and no ethical rules, however framed, will prevent those whose instincts are not those of a gentleman from doing unprofessional things. In a word, a gentleman will "play the game" but a "rotter" will not. This whole controversy puts me in mind of a remark a young Scottish journalist made at a dinner, in reply to some rather unethical remarks made about Scotsmen by one of the guests. He said: "This gentleman seems to be unaware that there are two classes of Scotsmen—Scotsmen and damned Scotsmen—and I am sorry to say his experience is confined to the latter." So with the class of consultants or specialists; they naturally drop into two classes, consultants and damned consultants, and, judging from the letters in the BRITISH MEDICAL JOURNAL, the latter class seem well to the fore. The eccentricities, to put it mildly, of some men are very marked, especially if their position is sufficiently high and unassailable to enable them to ignore the rules of ethics laid down by the General Medical Council. They do with impunity things that, in the case of smaller men, would certainly ensure their names being removed off the roll of registered practitioners by the General Medical Council. Take, for example, the rule which makes the meeting with an unqualified practitioner or employing an unqualified assistant infamous conduct, with the result that the delinquent is struck off the roll.

Now this rule is just and good; but why should it only be enforced against a small man who is hard put to it to earn his daily bread, while the rich consultant, who holds important hospital appointments, can do the same thing with impunity? I maintain and can prove that such is the case. I will give but two or three examples of what I mean.

The other day a lady, who had been treated successfully by a medical man for rheumatism with electricity and light baths, went to one of our leading neurologists for some nervous affection, was advised by him to go to Mr. —— (an unqualified man) for electrical treatment. She told this consultant that she knew Dr. —— very well, and that she had been under his care for this kind of treatment. The consultant, however, insisted that she should go to the unqualified man, and gave her a letter to him. The patient, however, went to the doctor who had treated her before, showed him the letter, and expressed her surprise that this consultant should have insisted that she should leave her own doctor to go to a man who was not qualified.

Another case, this time in a provincial town. Here a doctor was asked by a good patient of his to go with her to her dentist, as she was going to have gas for the removal of a tooth. He did so without making sufficient inquiries as to the dentist's standing. The dentist was unqualified, and the unfortunate doctor was haled before the local Division. His defence was a very simple one. In the first place he did not know the dentist was unqualified, and secondly and *chiefly*, he desired to follow in the footsteps of the leading practitioners who were on the hospital staff, and he noticed that for all their electrical work they employed the local chemist to the detriment of a local practitioner, who was an expert in *x*-rays and other methods of electrotherapeutics.

Truly, one man may steal a horse when another is sent to gaol for looking through the stable door. I know of another case where a leading surgeon advised a patient to go to a quack bucket shop, and was told by the patient and her friends: "Oh, we know Dr. —— very well. He gives the kind of treatment you mention, and as we know him, we would rather be under his care." This leading surgeon, however, preferred the unqualified man to a regular practitioner, and insisted on the patient going to this outsider to the detriment of his professional brother! This sort of thing makes one wonder if there may not be the question of a secret commission at the back of this unprofessional conduct.

Now, I have often gone to these electrical institutes run by unqualified men. I posed as a doctor who knew nothing about electricity, and listened to absurd jargon about watts, volts, ampères, etc. On asking what I should do if I sent patients to them, as it was difficult for me to say what treatment was required, I was quickly answered "Oh, that does not matter: we know what to do and what to give: all our doctors write and say, 'We leave the treatment in your hands, as you understand the subject and we do not.'" On asking if many doctors sent patients, I would get in reply the names of many hospital men, and some with titles. What think you of men who send their patients to ignorant charlatans, and take their advice as to treatment? Is it not worse than having an unqualified assistant? Yet the one is looked up to as the embodiment of medical ethics and the exponent of high professional principles, while the other is struck off the roll. Truly this is a queer world. I have now said all I intend to say on Questions 1 and 3.

Question 2 (the second visit, as it is called). This will require your careful consideration and criticism.

These three questions seem to me to be the crucial ones. The other points I have mentioned as being worthy of discussion, such as Subsections (*c*) and (*d*) of Recommendation 2 and Subsection (*f*), would soon be regulated if the main questions can be satisfactorily settled.

Recommendation 10 is most important and cannot be too securely safeguarded.

In conclusion, I would suggest that the Ethical Committee be requested to more clearly explain and define the term "consultant," also to redraft their paragraph dealing with "those with whom consultation is inadvisable or impossible to meet," and in connexion with this to give their opinion as to the ethical position of those sending patients to unqualified men for treatment.

Drs. EWART, SIBLEY, DAUBER and Messrs. HILLIARD and WOODHOUSE joined in the discussion. It was finally agreed that the recommendations of the Central Ethical Committee should be referred back for further consideration.

NORTH OF ENGLAND BRANCH.

THE spring meeting of this Branch was held at the Star and Garter Hotel, Blyth, on May 14th, Dr. BEATTIE, the President, in the chair.

Hospital Administration.—Dr. TODD moved:

> That the members of the North of England Branch disapprove of any charge being made to patients applying for hospital relief, and that all public hospitals should be free.

After general discussion Dr. COX moved the following amendment:

> That the resolution is inopportune at present, as it is included in the referendum to the Divisions.

This was carried unanimously.

Paper.—Mr. CLAY read a paper on the method and uses of ureter catheterization.

SOUTH-EASTERN BRANCH:

EASTBOURNE DIVISION.

A SPECIAL meeting of this Division was held at the Grand Hotel, Eastbourne, on Thursday, May 16th, at 6.30 p.m., Dr. J. ADAMS, Chairman, presiding.

Apologies for Non-attendance. — Apologies for non-attendance were received from Drs. H. Colgate, Leonard Crane, and H. S. Gabbett.

Matters referred to Divisions.—The numerous items of business referred to Divisions as announced in the SUPPLEMENT of April 6th, 13th, 20th, and 27th, and May 11th, were considered seriatim, together with the recommendations of the Executive Committee bearing thereon as set forth in the Minutes of their proceedings of May 13th. The whole of these recommendations, with one or two unimportant alterations, were adopted.

Annual General Meeting.

Immediately following the conclusion of the special meeting, the fifth annual general meeting was held at the same place.

Confirmation of Minutes. The minutes of the last annual meeting were read and confirmed.

Election of Officers.—The following officers, representatives, and members of the Executive Committee were duly elected: *Chairman*, Mr. C. O'Brien Harding; *Vice-Chairman*, Dr. C. N. Hayman; *Honorary Secretary and Treasurer*, Dr. William Muir Smith; *Representative on Branch Council*, Mr. J. H. Ewart; *Representative for Representative Meeting*, Dr. William Muir Smith; *Executive Committee*, Dr. J. Adams, Mr. H. D. Farnell, Dr. H. S. Gabbett, Dr. W. J. C. Merry, and Dr. H. D. Williams.

Vote of Thanks to Retiring Chairman.—A vote of thanks was passed to the retiring Chairman—Dr. J. Adams—for his services during the past year.

Annual Report.—The annual report and financial statement of the Executive Committee was received and adopted.

The late Dr. Robert Barnes.—The Chairman (Mr. O'Brien Harding) having feelingly alluded to the loss the profession had sustained through the death of Dr. Robert Barnes, proposed, and it was unanimously resolved:

That a vote of condolence be forwarded to Mrs. Barnes and family.

Dinner.—The members then adjourned for dinner, to which sixteen sat down. After dinner the Chairman proposed the toast of "The King," which was duly honoured. Dr. K. Frazer proposed the health of the Chairman, to which Mr. O'Brien Harding suitably responded. The members thereafter adjourned to the library for tobacco, coffee, and conversation.

Hastings Division.

The annual meeting of the Hastings Division was held at the East Sussex Hospital, Hastings, on Wednesday, May 29th, at 4.30 p.m. Dr. E. W. Skinner received the members and entertained them to tea.

Confirmation of Minutes. The minutes of the last meeting were read and confirmed.

Election of Officers.—The officers for the ensuing year were elected: *Chairman*, E. R. Mansell, Esq., 44, Wellington Square, Hastings; *Vice-Chairman*, E. Kaye Smith, Esq., St. Leonards-on-Sea; *Honorary Secretary*, G. Vickerman Hewland, M.D., 4, Eversfield Place, St. Leonards-on-Sea; *Representative for Representative Meetings*, J. Farrant Fry, Esq., 13, Dane Road, St. Leonards-on-Sea; *Representative on Branch Council*, J. W. Batterham, Esq., M.B., Grand Parade, St. Leonards-on-Sea; *Executive Committee*, G. A. Ballingall, M.D., F. W. S. Culhane, Esq., Peter Paget, Esq., Thos. Redmayne, M.B., J. P. Wills, M.D.

Draft Charter.—Dr. Batterham proposed, and Dr. Allfrey seconded, the following resolution, which was carried:

That this meeting of the Hastings Division disapproves of the Association taking any part in promoting the candidature of members of Parliament, believing it to be contrary to the interest of the Association (Charter 2 (2) (v)), and would, therefore, like to see the last two lines on page 7 of draft Charter omitted.

(Quotation.—"And may promote the candidature of any member of the Association for Parliament or for any British Legislative Assembly.")

Tunbridge Wells Division.

The annual meeting was held on May 28th at the General Hospital, Tunbridge Wells.

Election of Officers. The following were elected officers for the ensuing year: *Chairman*, Dr. Pardington; *Vice-Chairman*, Mr. Footner; *Representative on Branch Council*, Dr. Adeney; *Representative to Representative Meeting*, Dr. W. E. Warde; *Executive Committee*, Drs. Aylward Davies, Guthrie, E. Rix, Crawford, and W. Wallis; *Honorary Secretaries*, Drs. E. A. Starling and W. E. Warde.

Hospital Administration. The following answers to questions submitted were carried unanimously, in each case nine members voting affirmative, none voting negative, and fifty five members absent:

1. No, except in special cases such as may occur under the new Workmen's Compensation Act.
2. No.
3. Yes.
4. No.

Medical Inspection of School Children. The report of the Central Council was generally approved, with the proviso that medical inspectors of schools should be appointed by the County Education Authority or the Education Board and not by the local authorities.

South Wales and Monmouthshire Branch. Cardiff Division.

At the annual meeting held on May 16th, the following office-bearers were elected: *Chairman*, W. B. Crawford Thomas, M.D., J.P.; *Vice-Chairman*, T. Garrett Horder; *Honorary Secretaries*, R. Russell Thomas, 36, Windsor Place, Cardiff; Cyril Lewis, M.D., 36, Windsor Place, Cardiff; *Representative for Representative Meeting*, Ewen J. Maclean, M.D., 12, Park Place, Cardiff; *Representatives on Branch Council*, E. E. Brierley, M.B., W. Kirkby, J. Powell, D. R. Paterson, M.D., W. W. Leigh; *Executive Committee*, Herbert Vachell, M.D., E. Goodall, M.D., F.R.C.P., W. Mitchell Stevens, M.D., P. Rhys Griffiths, M.B.

Swansea Division.

The annual meeting of the Swansea Division was held at the General Hospital, Swansea, on Monday, May 27th.

Confirmation of Minutes.—The minutes of the last annual meeting were read and signed by the Chairman as correct.

Executive Committee.—The annual report of the Executive Committee, which had been printed and sent to each member, was taken as read. It stated that the number of members on December 31st, 1905, was eighty-three. During 1906 three new members had been elected, one member had died, and one had moved out of the Division. The net membership therefore, at the end of the year, was eighty-four. The expenditure for the year is again below the previous one, consequently the Division is in the happy position of having a useful balance on the right side. In addition to the annual and one special meeting, six ordinary meetings have been held by the Division, making a total of eight for the year. Medico-political, ethical, and kindred matters were dealt with at six, and scientific matters—papers read and cases shown—at six also. There had again been an increase in the scientific side of the meetings. The average attendance of members at the meetings had been sixteen, an increase of two. The Executive Committee had held six meetings during the year, with an average attendance of six members. In addition to the routine work of the Division, the following have been some of the matters dealt with satisfactorily: The employment of an unqualified assistant; the question of the reappointment of a member holding a public appointment; an increase of payment in a colliery appointment—this, after somewhat protracted negotiations, had been obtained. Resolved:

That the report of the Executive Committee be and hereby is adopted.

Alteration of Rule.—Rule 11 was altered, so that the annual meeting should be held in June instead of May, and that seven days' notice should be given instead of fourteen.

Special Representative Meeting.—Dr. D. Arthur Davies was elected to act as Deputy Representative for the Division at the Special Representative Meeting to take place in London on May 29th.

Election of Officers.—The following were then elected to act as officers, etc., for the following year: *Chairman*, J. Arnallt Jones, M.D.; *Vice-Chairman*, A. Hanson; *Honorary Secretary and Treasurer*, D. E. Evans, M.B., B.S., Brunswick Villas, St. Helen's Road, Swansea; *Representatives on Branch Council*, E. le Cronier Lancaster, M.B., R. C. Elsworth, M.D., F.R.C.S., F. G. Thomas, M.B.; *Representative in Representative Meeting*, H. A. Latimer, M.D. (re-elected); *Executive Members*, D. Arthur Davies, M.B., W. F. Brook, F.R.C.S., J. H. S. Roberts, J. M. Morris, M.B. (Neath); F. J. de C. Veale, M.D.; L. F. Marks, M.B.

South-Western Branch.

The sixty-eighth annual meeting of the South-Western Branch was held at the Royal Devon and Exeter Hospital, Exeter, on June 3rd. The retiring President (Mr. E. J. Domville) resigned the chair to Dr. P. Maury Deas.

Report of Branch Council.—The Branch Council report was read; it showed a net increase of membership of twenty-eight, and alluded to the meetings held during the past year. It pointed out that the chief questions that had occupied the attention of the Branch Council during the year had been the arrangements for the meeting of the Association in Exeter in 1907, and the arrangement with the Devon County Council of a proper scale of fees for inspection and supervision of midwives by medical officers of health. A balance of £64 11s. 1d. to the credit of the Branch was reported.

Annual Meeting, 1908.—The 1908 annual meeting of the Branch was arranged to be held at Falmouth under the presidency of Mr. William Banks. The election of Mr. Domville and Mr. Eales as Representatives of the Branch on the Council of the Association was reported.

Report of Executive Committee.—A report from the Executive Committee of the Branch detailing the arrangements so far made for receiving the Association was read and approved.

PLYMOUTH DIVISION.

A MEETING of the Division was held on May 24th, at the Rooms of the Plymouth Medical Society, Dr. E. L. FOX in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Annual Representative Meeting.—Mr. GEORGE JACKSON was elected Divisional Representative at the Annual Representative Meeting. He then submitted various questions on certain topics which would come up at the Representative Meeting, and these were discussed and directions for voting given.

Draft Charter.—This was approved.

Hospital Administration.—The following questions were considered and answered:

1. Should there continue to be compulsory payment by patients to hospitals other than cottage hospitals?—No; in this Division there are no compulsory payments.
2. Should the production of subscribers' letters continue to be compulsory?—Not compulsory, but desirable.
3. Should inquiry into a patient's circumstances invariably take place?—Yes.
4. Should a certificate be required from the medical attendants of all persons attending the out-patient departments?—This is impracticable.
5. Any other comments?—The meeting considers that every charitable institution should have an official investigation.

TORQUAY DIVISION.

THE annual meeting of this Division was held on May 31st at the Torbay Hospital, at 4.30 p.m., W. ODELL, M.D., in the chair.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Honorary Secretary's Report.—The following report was read: Mr. Chairman and Gentlemen,—As in my last report, I have to say that the meetings being purely business ones, the attendance does not in the least represent the strength of the Division. It is obvious that the Division Government of the Association is hopeless unless medical men will show themselves equal to seize the wonderful opportunity of self-government that is being placed in their hands. Judging, however, from the reports of other Divisions, which occasionally come out, coupled with our own experience, it is to be feared that the old ingrained habit of working for the individual will prove the ruin of the scheme. The present membership of the Torquay Division is 85. In the past year there have been seven meetings of the Division, the average attendance at which has been six. Besides matters of local interest only, such subjects as the Central Emergency Fund and the medical inspection of school children should have given much larger attendances.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, Mr. Young Eales; *Vice-Chairman*, Mr. A. Nisbet; *Honorary Secretary*, Mr. G. C. Wilkin; *Representative for Representative Meeting*, Dr. Odell; *Representatives on Branch Council*, Drs. J. H. Gough, A. E. Hayward, C. W. Vickers, G. C. Wilkin; *Executive Committee*, Drs. Carver, Culross, Dunlop, McKenzie, and Powell.

SOUTHERN BRANCH:

WINCHESTER DIVISION.

THE spring meeting of the Winchester Division (Southern Branch) was held at the Royal Hants County Hospital, Winchester, on Wednesday, March 13th. The chair was occupied by Dr. JOLLYE, of Alresford.

Apologies for Non-attendance.—Letters of apology for inability to attend were read from Dr. Maturin and Dr. Joseph Groves, of Carisbrook, Isle of Wight.

Address by Professor Osler.—The CHAIRMAN, referring to the order of the business before the meeting, said the recommendations of the Executive Committee would be taken last, in order that they might have the full advantage of an address by Professor Osler, of Oxford University, who had to return at a somewhat early hour. He was pleased to welcome the Professor, and would ask him now to give his address. A case was brought in from the wards of a man with thoracic aneurysm. Professor Osler gave a clinical address on the case for some considerable time, pointing out most graphically with the patient before him every detail connected with thoracic aneurysm. He particularly used the word "lues" instead of "syphilis" in the hearing of the patient.

Stokes-Adams Syndrome in an Insane Patient.—Mr. J. F. BRISCOE, of Alton, read some notes on the Stokes-Adams syndrome in an insane patient. He said that those members of the Division and other professional brethren who had seen the case in question were agreed with him that it was worthy of their consideration in its present clinical aspect. Hence his excuse for bringing it forward that day on the visit of Professor Osler; but since that leader of British medicine had specially studied similar cases, he thought it appropriate to do so. He hoped they would be able to confirm the diagnosis when the patient was dead, by a *post mortem* examination. A gentleman who was a widower, and who was now 77 years of age, had been under his immediate eye for thirteen years as a chronic lunatic. Melancholia had been his form of mental disease during those years, and now, of course, he had arrived at an age when the mental faculties—sane or not sane previously—invariably gave way. At the age of 20 he showed signs of mental instability, and at some period during his life he had contracted syphilis, because he had had to treat him with the usual potassium iodide and mercury, and the patient responded to it. For many years past his life and habits had been those of an ordinary retired gentleman wrapped up in his own mental errors, for at one time he believed that he had solved the mystery of things. Curiously enough, when insane people had a severe impending physical infirmity, their insane views seemed to remain in abeyance, and certainly at the present moment the patient was not giving them any trouble in that direction. Till the year 1899 he seemed to have enjoyed good physical health as a certified lunatic, beyond having tertiary syphilitic affections, such as cracked tongue, patches of psoriasis on the hands, and an extensive varicose condition of the lower extremities from the ankle to the groins, and these had for many years past been protected by bandages. He did not know how long these veins had been in this condition, and until 1899 he had no reason to suspect any special affection beyond the fact that he was a subject who had acquired the micro-organism of syphilis, and its results. Mr. Briscoe handed round carefully-prepared charts of the patient's temperature and chest observations, and proceeded to speak of the symptoms from which the man suffered, adding that he was now lying comfortably in bed in a warm room; that he got out daily for walking exercise, and then reclined on a chair by the fire. The symptoms were as follows: Vertiginous attacks; epileptic or apoplectic seizures of short duration, without any paralysis; angina; constipation; bradycardia (for seventeen days between 20 and 30 beats per minute); Cheyne-Stokes respiration; precordial dullness, increased considerably to the right; no bruit; all the signs of fatty or fibroid degeneration of the heart; extensive varicose condition of the veins of the lower extremities, involving the epigastric veins and the terminal branches of the internal mammary veins; sudden attacks and apparent death, recovered from by continuous massage of the extremities, sal volatile, whisky, and warmth. These conditions had led him to diagnose the case as one of Adams-Cheyne-Stokes syndrome. Dr. Briscoe proceeded to quote the published facts concerning the earliest records of the disease, as instanced in the cases of Adams, Cheyne, and Stokes, and compared the circumstances in those cases with the one now under consideration, reading notes which he had made as to the seizures and symptoms developed by his patient in 1899 and the succeeding years. When the man succumbed he believed they would find he had the same fatty, flabby heart, with extensive degeneration, that was found in the first case on record, which he had read and studied with interest.—Professor OSLER said there could be no doubt the case was a Stokes-Adams case, and he agreed with a remark made by Dr. Briscoe that Adams should precede Stokes, as he reported the first case. The disease was one of extraordinary interest from a great many standpoints.

Having dealt with the origin and symptoms of the complaint, the Professor said the cases were much more numerous than had been supposed, and added that when Dr. Briscoe had finished with his patient's heart he should like to look at it.

Vote of Thanks to Professor Osler.—On the motion of the CHAIRMAN, a hearty vote of thanks was passed to Professor Osler for his attendance and the interesting lecture he had given.

Vote for Election of Officers.—It was agreed that voting for the election of officers at the annual meeting should be by ballot.

Medical Inspection of School Children.

The Executive Committee submitted the following recommendation:

That medical inspection of school children be distributed amongst those general practitioners of the district who are prepared to undertake a proportion of the duty. (See SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 16th, 1907.)

The CHAIRMAN said he had better define what the Committee meant by the medical inspection of children, and save any discussion on the point. By it they meant that all children should be inspected on first admission to school life, and that a history of them should then be taken, and a record afterwards kept, so that in after years there should be at any rate a record of the school life of the child. If any symptoms of disorder were found, such as of the eyes, ears, or teeth, a notice should be sent to the parents to have such disorder attended to. All children should be periodically inspected. The medical inspector should make regular visits to schools, and inquire carefully into any cases selected by the teacher to come before him. Any history of infectious disease given him by the teacher should of course be investigated, and the children kept away from school. Some children might be found on inspection to be unfit to go through the whole routine of school life, and for these a modified course of lessons would have to be suggested by the medical inspector. On leaving school the medical inspector would be able to advise and make suggestions to the parent as to the kind of business a boy or girl should go into. In the case of a lad with weak lungs being apprenticed to a baker, for instance, the medical officer would be able to strongly advise against his being put to a business of that kind. He had written to Dr. Robinson asking him questions as to the method of carrying out school inspection, and he had replied that the general practitioner had no time for the work, if it was to be properly done. As to the method of informing the parents of the result of the medical inspection, a printed form should be supplied to be filled in. This should be returned to the Education Committee, upon whom the responsibility would then rest. To appoint one man for a large district would be to place upon him an utterly impossible task; he would need a staff of six men at least, and his salary would not be commensurate with the upkeep of such a staff. The great objection to making the appointment a one-man office was the utter impossibility of visiting every school every day.

A gentleman asked whether this had been adopted anywhere.

The CHAIRMAN said that medical inspection of children was not yet a matter of law, but there was a Bill before Parliament which had passed the second reading, and no doubt compulsory medical examination of children would come into the House this year.

Dr. GIBSON (Aldershot) asked who was going to pay the inspectors. He mentioned that in Aldershot a medical man was appointed to attend to certain cases among the children, and received £25 a year; the number of children was from 5,000 to 6,000.

The CHAIRMAN said he did not consider that inspection of the children, and, if it was going to be started, it would either succeed or not according to the thoroughness with which it was carried out. They had to determine how it could be carried out in a thorough way, and not handed with in burlesque of the kind mentioned. What they wanted to get at was the proper form of medical inspection and nothing less would do.

Dr. HOWE said he thought the true method lay somewhere between the two systems. One difficulty to be overcome would be the apathy and the carelessness of the parent. He thought there were three agents necessary to the successful grappling of the problem—namely, the school teacher, the general practitioner, and the special officer. He had thought the matter out very carefully, and he did not see how they could do without either of these three agents. They could rely upon the school teachers to do a certain amount of the work, such as rough eye testing and difficulties of respiration, and bringing to light what he might call the grown abnormalities. He thought the general practitioner's examination was very necessary, because, especially in a country village or small town, a medical man who had, perhaps twenty-five years ago, treated the father for syphilis, looked to find the taint in the children. It was the same with other complaints. He certainly thought that for the correlation of the scheme and its due working out they might reasonably expect it to be entrusted to a special officer.

Dr. BEVAN (Alton) said the great difficulty he foresaw, if this work was to be done by the general practitioner, was as to whether he would have the time necessary for it. Their time was so taken up that they were almost always in a hurry. This work appeared to be a special branch which ought to be done very thoroughly indeed, and he was rather inclined to think that it would be much better done by men who devoted their time entirely to it in the special district to which they were appointed. They would not come into contact with the general practitioner except in a friendly way. The medical officer of health did not want too many irons in the fire, and his duties were so varied and his time so limited that he was inclined to think the inspection of the children would suffer much if left to them alone. In a conversation which he had with the Medical Inspector of Children for Bradford, that gentleman most clearly pointed out to him that it was a special branch of work, and if a man was to do it thoroughly his mind must be devoted to that particular line almost entirely. He did not agree with the medical officer of health taking it up, and thought it could only be done thoroughly if done by a man who devoted himself entirely to the work and did it separately from the practitioner.

Dr. GIBSON (Aldershot) foresaw that there would be difficulty in avoiding friction if, say, ten medical practitioners were each to examine one-tenth of the children of Aldershot irrespective of their own medical practitioner. There was also the question of payment. If these ten medical practitioners were each to receive something which would be worth having, the total amount would come to a very large sum, and he did not think the ratepayers would stand it. There was another thing which would affect him personally rather seriously, and he daresay it would also seriously affect some others present. He could see that the parish patients would increase by something like 1,000 a year, which would be a serious matter. If these patients were to be treated properly, he should want at least three partners to cope with his work. The whole matter did not lie just in one's hands, but it was a very large and serious question, and personally he did not feel inclined to express an opinion one way or the other that day. It seemed to be a very far-reaching proposition, and he should like to know more about it.

Dr. SANDILANDS (Medical Officer of Health for the City of Winchester) said that any system of day visiting was absolutely impossible, and always would be. It would not be possible to get away to go to the schools any and every day of the week for the maximum sum which any education authority would ever dream of paying. The most important thing of all was that the work should be done for the very smallest sum that any work of the kind could be done. In the debate on the Bill in the House of Commons apparently the only member who realized where it was going to lead was Mr. Balfour, who gave voice to a very solemn warning about the cost which the proposal was going to make the ratepayer liable for. The speaker went on to refer to what had happened in London and throughout the country where inspection of children had been adopted, and said that the primary inspection was the least important part of the work. It was the treatment of children found to need treatment which was so serious, and it would have to be met by payment out of the rates or by special arrangement with hospitals. He did not think there was any question of a rise in the number of parish patients without any remuneration being paid for it. The inspections should be undertaken by those medical men who already had duties imposed upon them by the Local Government Board. Medical officers

ad to report upon any circumstance likely to be detrimental to the health of the public, and their duties included inquiry as to the sanitary condition and ventilation f the schools and anything else affecting the welfare of he children. It seemed to him it would be a simple step o add to those duties the examination of the children for omplaints which were of an infectious nature, and for his the cost need not be great. It had been undertaken y some officers for nothing at all. Where the money ould be required was for attendance, and this would ome to the general practitioner. The treatment would be eparate from the inspection of the children.

Dr. GIBSON said they all knew what happened when a arish doctor asked for a rise of salary. He was at once sked to show cause for his application, and if he could how a very considerable increase of work he might, ossibly, be granted a rise of 10 per cent. The increase of ork would be quite 50 per cent. As for any board of uardians paying adequate remuneration for treating rge numbers of children be absolutely refused to believe t.

Dr. HOYLE said he was afraid the suggestion that the edical officer should do anything more than examine as the sanitation of the schools would lead to friction with he general practitioners.

After a little further discussion the Committee's recommendation was put to the vote, and was supported by leven of those present. No votes were given against it.

Ethical Aspects of Medical Consultations.—The recommendation referred to in SUPPLEMENT, February 16th, 907, *re* Consultations, was considered and agreed to *em. con.*

The Regeneration of the Profession.—The following resolution was passed:

That while agreeing with Sir Victor Horsley's address at Sheffield, published in the BRITISH MEDICAL JOURNAL, December 22nd, 1906, as to the necessity for the regeneration and unionism of the profession, and its due and just recognition by the State, yet we entirely and emphatically object to the use of the word "trade" or anything that savours of its methods in connexion with our medical profession.

Dr. HARMAN, Dr. SANDILANDS, Dr. GIBSON, Mr. J. F. BRISCOE, Dr. HOYLE and others discussed the question, nd finally the feeling expressed was that the words trade" and "trade unionism" were inapplicable to the edical profession, and that hours of labour could not be rranged in medicine. It was also agreed that there was omething more noble in medicine, wrapped up in better aterial than brown paper, and of more value than the urrent coin of the realm.

Inspection of Hospital.—The meeting terminated with ea. The opportunity of inspecting the hospital was fforded to members.

TRANSVAAL BRANCH.

HE inaugural meeting of the Transvaal Branch was held n the Red Room, Grand Hotel, Pretoria, on Wednesday, fay 1st, at 8 p.m. There were present: Drs. J. J. Boyd, . McD. Troup, S. Schapiro, Montgomery, G. Thornton, . Michie, H. B. Willoughby-Smith, H. P. Veale, W. B. Voodhouse, and D. C. Henry, Acting Honorary Secretary.

Installation of Chairman.—On the motion of Dr. G. THORNTON, seconded by Dr. MONTGOMERY, Dr. J. J. Boyd as voted to the chair.

Chairman's Address.—The CHAIRMAN then thanked the embers present for the honour they had done him, and fterwards proceeded to explain what had been done to rganize the Branch, and concluded his remarks by reading the letter from the Assistant Medical Secretary of the ssociation conveying the Council's decision that the ransvaal Branch should be formed.

Offices.—It was then proposed by Dr. H. B. WILLOUGHBY-MITH and seconded by Dr. J. McD. TROUP, and carried:

That the following should be the offices to be held in the Branch: President, Vice-President, Honorary Secretary, Honorary Treasurer, and four members of Council.

Mode of Election of Officers.—It was proposed by Dr. G. THORNTON and seconded by Dr. H. P. VEALE, and carried:

That the election of office-bearers be conducted through the post, so that all members resident in the Transvaal should have an opportunity of voting.

Nominations. — It was further proposed by Dr. G. THORNTON and seconded by Dr. H. P. VEALE:

That the Acting Honorary Secretary call for nominations by circulars to those members whose names and addresses are known to him, and by notice in the *Transvaal Medical Journal* that the remaining members might receive notice. All nominations to be returned on or before June 15th, 1907, to Dr. D. C. Henry, Acting Honorary Secretary, 188, Skinner Street, Pretoria.

The ACTING HONORARY SECRETARY said he would be glad to have names and addresses of all members who do not receive circulars in order that all may receive ballot papers and any further notices. The ballot for office-bearers will take place almost immediately after nominations have been received. Members were therefore invited to send in their names and addresses, that they might receive due notice and be enabled to participate in the ballot.

YORKSHIRE BRANCH:

BRADFORD DIVISION.

A SPECIAL meeting of this Division, to which all medical practitioners in the city were invited, was held at the Great Northern Hotel, Bradford, on Friday, May 31st, at 8.30 p.m. A large and representative gathering took place.

Bradford Police Surgeonship.

The meeting was called to consider the new scheme of the Bradford Watch Committee for the police surgeonship of the city. Mr. BASIL HALL (Chairman) presided, and in introducing the subject mentioned that he had had a communication from the Chairman of the Watch Committee offering to receive a deputation from the Division to consider the subject on Monday, June 3rd, at 5 p.m.

Dr. METCALFE (Honorary Secretary) read the printed list of duties allotted to the various posts. One chief surgeon, three divisional surgeons, and four subdivisional surgeons were to be appointed to carry out the duties formerly discharged by one surgeon. The salary for the chief surgeon was to be £120 per annum, for the divisional surgeons £50 per annum, and for the subdivisional surgeons calculated on a fee of 10s. per annum for attendance on the police constables in the subdivisional area. No extra fees for attendances on accidents, street casualties, certificates, or anything else were to be paid; the surgeons could retain the fees paid by the magistrates and coroner for evidence in their respective courts, but these were all. The printed list of "duties" in each case was a long and most exacting one.

Dr. MITCHELL discussed the scheme as a whole, and took strong exception to several points connected with it. "Appliances" ought not to be included in drugs, as splints, trusses, etc., might be required. The appointments ought to be for five years at least, instead of one year as advertised. The remuneration was most inadequate. The salaries proposed ought to be paid simply as retaining fees, and all attendances at the Town Hall for street accidents, etc., paid for as extras. This was the method adopted when the late Dr. Lodge was Police Surgeon. The Committee were trying to obtain the services of eight surgeons at £150 to £200 a year less than was formerly paid to one man, and were making the duties much more exacting.

Drs. CAMPBELL, BECKTON, HORROCKS, BATESON, WALKER, PARKINSON, GOLDIE, RABAGLIATI, SHACKLETON, CAMPBELL, BURNIE, MUNRO, and CARROLL discussed the question. There was a general unanimity in considering the work as excessive for the remuneration offered, and that a good many verbal alterations ought to be made in the printed list of duties.

Dr. MUNRO thought the whole scheme wrong, and that it should be suggested to the Watch Committee that one police surgeon should be appointed, and that he be allowed to carry on some speciality, and that the constables be attended by general practitioners.

Dr. MITCHELL proposed and Dr. CAMPBELL seconded that a deputation of seven be appointed to interview the Watch Committee in connexion with the subject. The names submitted were Drs. Campbell, A. E. Walker, Horrocks, Mitchell, Shackleton, and the Chairman and Honorary Secretary. Carried *nem. con.*

Mr. BURNIE proposed and Dr. MITCHELL seconded:

That we all pledge ourselves not to make any application for the posts offered until after the next meeting.

This was carried unanimously.

Mr. Horrocks proposed that the question of the horse ambulance should also be submitted to the Watch Committee. The notice required for its use (twenty-four hours) was absurd; the question of fee ought to be considered, and the generally bad state of the ambulance itself.

Dr. Shackleton seconded: Drs. Wherry Willson, and Waddington supported. Carried unanimously.

The meeting then adjourned.

A special meeting of the Division, to which all medical practitioners in the city were invited was held at the Great Northern Hotel, Bradford, on Wednesday, June 5th, 1907, at 8.30 p.m. In the unavoidable absence of Mr. Basil Hall, Dr. Campbell, Vice-Chairman, took the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and adopted.

Deputation to Watch Committee.—The Chairman asked the Honorary Secretary to announce the result of the interview of the deputation, which had been appointed at the last meeting, with the Watch Committee.

Dr. Metcalfe stated that all the members of the deputation were present and were received at the Town Hall by the Chairman of the Watch Committee, Mr. H. B. Priestman, who had along with him Mr. Farndale, Chief Constable. The deputation was cordially received and the interview lasted for about an hour and a half. The questions submitted by the meeting were discussed seriatim in connexion with the duties for each office. The chief surgeon would probably have to examine about sixty candidates for entrance to the force yearly. He would have to attend whenever required at the Town Hall (especially on Saturday nights and Sunday mornings) casualties, etc. He would attend to street accidents and similar duties for a radius of about a mile from the Town Hall. Attendance in the middle of the night would only be required in serious cases. The word "appliances" in the duties would be changed to "dressings." In Section 7 "Chief Constable" would be changed to "Watch Committee." The section requiring a certificate every forty-eight hours when attending sick constables would be changed to "twice in first forty-eight hours and at other times as required by the Chief Constable." These remarks were supplemented by Drs. Horrocks, Shackleton, and Mitchell. All agreed that no promise of better remuneration could be obtained. The Chairman of the Watch Committee wished to try for a year how the system worked and offered to then reconsider the question if not satisfactory.

Drs. Parkinson, Campbell, Horrocks, Percy Lodge, Mitchell, Brereton, Bateson, Shackleton, Mankell, Clay, Martin, and Peck discussed the points raised. All appeared to consider the terms offered inadequate. The amounts suggested as salaries should be paid as retaining fees and all extra work paid for by special fees.

The following resolutions were unanimously adopted:

1. That this meeting strongly disapproves of the terms offered, and requests that the appointments be deferred.

(Proposed by Dr. Mulvaney, seconded by Dr. Percy Lodge.)

2. That the members of this meeting pledge themselves not to accept any of these appointments until the profession come to an agreement with the Watch Committee.

(Proposed by Dr. Horrocks, seconded by Dr. Bateson.)

3. That those gentlemen who, not being at this meeting, have already applied should be asked not to accept an appointment until terms are agreed upon with the Watch Committee.

(Proposed by Dr. Mitchell, seconded by Dr. Wheatley.)

4. That a copy of the resolutions be sent to the Chairman of the Watch Committee and Town Clerk, and 1, 2 and 3, with the names of the gentlemen present, to every member of the profession in the city.

(Proposed by Dr. Shackleton, seconded by Dr. Mitchell.)

5. That the deputation appointed at the last meeting be appointed as a committee to carry on any further negotiations with the Watch Committee or take any other action necessary.

(Proposed by Dr. Dyson, seconded by Dr. Mulvaney.)

The meeting then terminated.

Sheffield Division.

A meeting was held on May 27th, 1907.

Annual Report.—The annual report was read and adopted. It stated that the number of members of the Division in May, 1906, was 179, and in May, 1907, 182.

Election of Officers.—The following were elected officers for 1907-8: *Chairman*, Dr. Rowthorn; *Vice-Chairman*, Dr. Sinclair White; *Honorary Secretary*, Dr. W. Dakin Mart; *Representative for Representative Meetings*, Dr. Sinclair White; *Representatives on Branch Council*, Drs. Pye-Smith, Sinclair White, Garrard, and Dearden; *Executive Committee*, Drs. Cheesewright, Lyth, Picken, Johnston, Stokes, Kilham, Longbottom, Morton, Mylan, Forrest, Branson, Sheahan, Hudson, Gordon, Barber, Young, Hall, and Turner.

Annual Report of Council.—It was proposed by Dr. Martin, seconded by Dr. Dyson:

That the consideration of the annual report of the Council stand over for the present.

Draft Charter.—It was proposed by Dr. Turner, seconded by Dr. Rowthorn:

That the question be left to the discretion of the Representative of the Division at the Representative Meeting.

Election of Members for Central Council.

Dr. Turner considered that the present Council was too large and too expensive, and suggested that Schemes 3 and 5 (Supplement, April 6th) should be carefully considered, as they appeared more suitable.

Dr. Sinclair White considered that the present method was a fairly satisfactory one.

It was proposed by Dr. Turner, seconded by Dr. Rowthorn:

That the method of election of members for the Central Council be left to the discretion of the Representative of the Division.

This was adopted.

Medical Inspection of School Children.

It was proposed by Dr. Sorley and seconded by Dr. White:

That the medical inspection of school children in towns should be in the hands of medical officers specially appointed.

It was proposed by Dr. Forrest and seconded by Dr. Turner:

That as an amendment to the above the words "and that he be not engaged in general practice" be added.

The amendment was carried.

It was also suggested that in *rural districts* it would be better for the medical examination to be distributed among those general practitioners of the district who were prepared to undertake a portion of the duty.

It was thought that a division of the work among general practitioners resident in *towns* might possibly lead to jealousy between those so engaged and the rest of the general practitioners resident in the neighbourhood.

There appeared to be no evidence within the Division area of the practice of teachers sending school children, found to be ill, irrespective of their social status to hospitals, instead of referring them to their family medical attendant.

Registering Clubs.

It was proposed by Dr. Forrest, seconded by Dr. Turner:

That a Register of Clubs be kept, and that it be in the hands of the Honorary Secretary of each section of the Sheffield Division.

This was adopted.

Executive Committee.

It was proposed by Dr. Stokes, seconded by Dr. Martin:

That the Executive Committee of the Division meet at least once a quarter.

This was adopted.

Payment of Medical Men Called in to Help Midwives.

Dr. Turner read a letter from Liverpool relating to this matter; also the following resolution passed by the Health Committee, September 1st, 1904, and confirmed by the Liverpool City Council:

That it be recommended that in cases of urgency in which medical practitioners have been called in by certified midwives, as contemplated by Rule 17 of the Rules issued by the Central Midwives Board, pursuant to Section 5, Subsection 1, of the Midwives Act, 1902, a fee of not exceeding 1 guinea be paid, on the certificate of the medical officer of health, to each medical practitioner, in the event of his failing to obtain payment of his fee from the patient or from the Poor-law authorities.

It was proposed by Dr. SORLEY and seconded by Dr. FORREST:

That a deputation be appointed to meet the Health Committee of the Sheffield City Council in order to discuss the payment of medical men called in to assist certified midwives, with a view to the passing by the Sheffield City Council of a resolution similar to the above; and that the Deputation give a report to the Division of the results of the above-mentioned meeting.

This was adopted.

The meeting decided that the deputation consist of the Chairman and Honorary Secretary of the Division together with the Chairman of each section of the Division.

Great Central Railway Club.

The terms of this club are: 8s. per annum per individual member or family; 4s. per annum per some individual members. The Great Central Railway Mutual Provident Society desired to appoint an additional medical officer for Sheffield at the above terms. The Sheffield Contract Practice Rules do not permit of any new medical officer in Sheffield accepting 8s. per annum per family. No medical man in Sheffield could accept any such appointment. The Great Central Railway have been informed of this matter, and the additional medical officer whom they appointed has resigned. It was proposed by Dr. ROWTHORN, seconded by Dr. MARTIN:

That further discussion be left over until the Great Central Railway have decided what action they intend to take in the matter.

This was adopted.

Proposed Annual Dinner.—It was proposed by Dr. TURNER and seconded by Dr. SORLEY:

That an annual dinner of the Sheffield Division be held.

This was adopted.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

1907 ANNUAL GENERAL MEETING.

The Annual General Meeting of the British Medical Association will be held in the Royal Public Rooms, Exeter, on Saturday, July 27th, at 9.30 o'clock in the forenoon.

ANNUAL REPRESENTATIVE MEETING.

The Annual Representative Meeting will take place in the Royal Public Rooms, Exeter, on Saturday, July 27th, immediately after the Annual General Meeting, which will be held at 9.30 o'clock in the forenoon; on Monday, July 29th, at 9.30 a.m.; on Tuesday, July 30th, at 9.30 a.m. if required; also on Wednesday, July 31st, at 3.15 p.m. if required.

BY ORDER OF THE COUNCIL,

GUY ELLISTON, *General Secretary.*

April 25th, 1907.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IMPORTANT NOTICE.

OWING to the rebuilding of the Association premises in the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 1 p.m.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, July 3rd, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,

June 13th, 1907. *General Secretary.*

BRANCH AND DIVISION MEETINGS TO BE HELD.

BORDER COUNTIES BRANCH.—The annual general meeting of this Branch will be held in the Crown and Mitre Hotel, Carlisle, on Friday, June 21st. The business will include proposals to alter the existing rules of the Branch in several particulars, details for which will be sent to every member before the meeting. Election of office-bearers, etc. The Presidential Address will be delivered by Dr. F. H. Clarke, Dumfries. The detailed agenda paper will be issued as usual before the meeting.—FRANCIS R. HILL, Honorary Secretary, Carlisle.

DORSET AND WEST HANTS BRANCH.—The next meeting of this Branch will be held on Wednesday, July 3rd. Members wishing to read papers, exhibit or show pathological specimens, should communicate at once with the Honorary Secretary. *This is the only intimation of this meeting.*—JAMES DAVISON, "Streateplace," Bath Road, Bournemouth.

DUNDEE, PERTH, AND STIRLING BRANCHES.—The nomination of candidates for the office of Elective Member of Council for the ensuing year must be made in writing on or before June 17th to Dr. J. E. Moorhouse, 6, Melville Terrace, Stirling.—A. P. Low, Honorary Secretary, Dundee Branch; W. A. TAYLOR, Honorary Secretary, Perth Branch; J. E. MOORHOUSE, Honorary Secretary, Stirling Branch.

EAST ANGLIAN BRANCH.—The annual meeting will be held at the Town Hall, Ipswich, on Thursday, June 20th: 12 o'clock, Council meeting; 12 30, general meeting; 1, luncheon, by kind invitation of Dr. R. W. Brogden; 2 o'clock, resumed general meeting—clinical cases; 4 o'clock, afternoon tea, by kind invitation of Dr. and Mrs. Brogden and Dr. and Mrs. Gutch, at 12, Lower Brook Street.

EAST ANGLIAN BRANCH: WEST NORFOLK DIVISION.—The annual meeting will be held at the West Norfolk and Lynn Hospital on June 19th (not June 20th as previously announced), at 3 p.m., when officers and Representatives will be elected for 1907-8.—ARTHUR GARDINER, Honorary Secretary, Tuesday Market Place, King's Lynn.

EDINBURGH BRANCH: SOUTH-EASTERN COUNTIES DIVISION.—The annual meeting will be held in the house of Dr. Young, Earlston, on the afternoon of Saturday, June 22nd, at 4 o'clock. Business: (1) Minutes. (2) Report of Representative of the special meeting recently held in London in regard to the Charter. (3) Election of office-bearers for the ensuing year.—W. HALL CALVERT, Honorary Secretary.

FIFE BRANCH.—The annual meeting will be held in the Hotel, Thornton, on Friday, June 28th, at 3 p.m., as already notified.—R. BALFOUR GRAHAM, Honorary Secretary, Leven.

LEINSTER AND SOUTH-EASTERN OF IRELAND BRANCHES.—The names of candidates, each nominated by three members, for the representation of these Branches on the Central Council should be received by the undersigned on or before June 24th.—ARTHUR H. WHITE, Honorary Secretary, Leinster Branch, Malvern, Terenure Road, Dublin.

METROPOLITAN COUNTIES BRANCH.—Notice is hereby given that the annual meeting of the Branch will take place on Thursday, June 27th. Time and place will be fixed by the Branch Council.—Honorary Secretary, FRED. J. SMITH.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.—The fifth annual meeting of this Division will be held at St. Peter's Hall, Belsize Square, N.W., on Friday, June 14th, at 4.30 p.m., Dr. Macevoy in the chair. Agenda: (1) Minutes of the annual meeting of June 8th, 1906. (2) Correspondence. (3) Questions. (4) To receive the annual report of the Committee. (5) To elect officers and ordinary members of Committee for the session 1907-8. Members are reminded that by resolution of a special meeting held on July 12th, 1906, the number of the ordinary members of Committee was raised to eleven (instead of seven as in the rules), the election of the four additional members being adjourned to this annual meeting. In accordance with a resolution of the last annual meeting, the Committee herewith issues to all members of the

Division the following nominations agreed to on May 17th' 1907:—Officers six): Chairman, Dr. Pidcock; Vice-Chairman Dr. Oppenheimer: Representative to the Representative Meeting, Mr H. W. Armit; Representatives to the Branch Council, Dr. Macevoy and Dr. Clark Wilson (elected May 24th, 1907), the Honorary Secretary is also an *ex-officio* Representative to the Branch Council; Honorary Secretary and Treasurer, Dr. R. A Yeld; Honorary co-Secretary, Mr. H. W. Armit. Ordinary Members (eleven): Dr. Ford Anderson, Dr. Collingwood Andrews. Miss Ada Browne. Dr. W. Butler. Mr. C. W. Cunnington. Miss Dobbie, Dr. Gaster, Mr. Nelson Hardy. Mr. F. R Humphreys, Mr. E. Jessop. Mr. Vincent Moxey. (6) To instruct the Representative to the Representative Meeting. (7) The Honorary Secretary will read a letter from the Chairman of the Representative Meeting. (8) Other business.—R. A. Yeld M.D., Honorary Secretary, 29, Platt's Lane, Hampstead, N.W.

Metropolitan Counties Branch: Kensington Division.—The annual general meeting of the Division will be held at the Kensington Town Hall on Tuesday, June 25th, at 5 p.m. Agenda: (1) Minutes of the last ordinary meeting. (2) Annual report of the Executive Committee. (3) Consideration of any matters referred to Divisions. (4) Election of officers for 1907-8. (5) Any other business.—Charles Buttar, Honorary Secretary, 10, Kensington Gardens Square, W.

Midland Branch: Boston and Spalding Division.—A motor meet of the above Society will be held at the Bull Hotel, Bourne, on Tuesday, June 25th, at 4 o'clock in the afternoon, when tea will be provided (the expense to be defrayed by members individually). Members are cordially invited to bring friends, including ladies. After tea, by kind permission of Lord Ancaster, members will proceed to view Grimthorpe Castle. Members are requested to reply before June 20th whether it is their intention to be present.—A. E. Wilson, Honorary Secretary, Boston.

Munster Branch.—Election of Representative Member on the Council of the British Medical Association. Nominations will be received by me up to and including Saturday, June 22nd. —Philip G. Lee, 26, Patrick Hill, Cork.

North Lancashire and South Westmorland Branch.—The annual meeting will be held at the Furness Abbey Hotel on Wednesday, June 26th, at 3.30 p.m. The President-elect, A. J. Cross, M.D. (Dalton-in-Furness), will deliver an address on "The Medical Aspect of Elementary Schools." Will members wishful to show cases or specimens kindly send particulars to the Honorary Secretary, A. S. Barling, 2, Queen Square, Lancaster?

Northern Counties of Scotland Branch.—Nominations for a Representative of the Branch on the Central Council of the Association in accordance with By-law 24 nominations duly signed by three electors must be sent to me not later than June 29th.—Munro Moir, Honorary Secretary.

Northern Counties of Scotland Branch.—The annual meeting of the Branch will be held at Fort Augustus in the last week of June. Further particulars will be sent to each member by circular.—J. Munro Moir, M.D., Honorary Secretary.

Sussex Branch.—The sixty-third annual meeting of the Branch will be held at the Hôtel Métropole, Brighton, on Wednesday, June 19th at 2.15 p.m. Mr. T. Jenner Verrall, President-elect, kindly invites members to lunch at the Hôtel Métropole from 1 to 2 p.m. Agenda, in addition to the business of an ordinary meeting: (1) To receive the report of the election of new officers, who shall thereupon take office; (2) to receive the report of the council on the affairs of the Branch and the annual financial statement; (3) Dr. Douglas will move: "That no alteration of or addition to, existing rules, or repeal of any, be made unless notice of the same be printed and circulated with the agenda for the meeting at which any alteration, etc., should be brought forward." After the meeting there will be a reception at the Royal Pavilion by his Worship the Mayor of Brighton (Councillor Gervis, M.A., J.P.). The following excursions have been arranged to take place afterwards: A motor-car trip, visit to the Grand Aquarium, Volk's Electric Railway, visit to Booth's Museum of Sussex Birds. Dinner at the Hôtel Métropole at 6.15 p.m.: charge 7s. 6d. Wine will be provided by the members of the Brighton Division. Ladies who propose to be present at lunch or dinner on June 19th, are requested to signify their intention to Dr. Bowlby Maple, 49, Sackville Road, Hove, Sussex, not later than Saturday, June 15th.—H. M. Stewart, Dyffryn, Dulwich, Honorary Secretary.

South Eastern Branch: Canterbury and Faversham Divisions.—A combined meeting of the Divisions comprised in the old east Kent District (not in Ashford, Canterbury and Faversham Union, Folkestone, and Dumpet) will be held at the County Hotel, Canterbury, on Thursday, June 27th, at three o'clock precisely, Dr. Whitehead Reed in the chair. Agenda: A paper will be read by W. J. Tyson, M.D., F.R.C.P., F.R.C.S., Honorary Physician, Victoria Hospital, Folkestone, on the Future Lines of Treatment: Their Effects on the Profession. An address by Alex. G. R. Foulerton, F.R.C.S., D.P.H., Director of Bacteriological Department, Middlesex Hospital, Medical Officer of Health to the County of East Sussex, on the Treatment of Infective Disease by Bacterial Vaccination. W. T. Hillier, Esq., M.R.C.S., D.P.H., Pathological Assistant, Research Laboratories, Middlesex Hospital, will (1) Show specimens of trypanosomata; (2) give a demonstration of the method of determining the opsonic index of the blood. Preliminary meetings will be held as follows: (*a*) 2.30, Canterbury and Faversham Division:—Agenda: (1) Minutes. (2) Annual report. (3) Election of officers—Chairman, Vice-Chairman, Representative at Representative Meetings, Representative on Branch Council, Honorary Secretary and Treasurer, Committee. (4) To consider the desirability of amalgamating with the Ashford Division. (5) Any other business. (*b*) 2.50, Canterbury and Faversham with Thanet Divisions:—Agenda: (1) To elect the Representative for Representative Meetings. Members will dine together at 5.45 for 6 o'clock at the County Hotel, Canterbury; charge 5s., exclusive of wines. Those who intend to stay to dinner are requested to notify Dr. Henchley not later than the morning of June 27th, and to state whether they will assist in a short musical programme.—A. R. Henchley, Honorary Secretary and Treasurer, Canterbury

South Eastern of Ireland Branch.—A meeting of this Branch and of the Branch Council will be held at the Town Hall, Clonmel, on Wednesday June 19th, at 12 o'clock noon. Agenda: (1) Minutes. (2) Apologies. (3) Correspondence. (4) Ethical aspects of medical consultation; revised Royal Charter and hospital administration (see Supplement to the British Medical Journal, February 16th, April 6th, and 13th, and bring them to meeting). (5) To receive report of Committee relative to underselling. (6) Dr. Jellett will read notes on a case of retinitis proliferans and exhibit photographs of same. (7) Dr. Quirke will introduce discussion on Parotitis and Leitchnech, giving differential diagnosis. (8) Dr. Hewetson will read a paper on whooping-cough. (9) Dr. Laffan will move for a fixed day of meeting at Clonmel. (10) Any other business. Members are requested to read papers of clinical and scientific interest and to give the Honorary Secretary fourteen days' notice in order to have them included on the agenda. Branch Council Agenda: (1) To elect new member. (2) To investigate ethical case: Supersession.—J. Quirke, Honorary Secretary, Piltown.

South Midland Branch.—The annual meeting will be held at Bedford Hospital on Thursday, June 20th, at 3 p.m. The President-elect (Dr. Chillingworth) invites members to luncheon at the Grafton Rooms, 145, Midland Road, at 1.30 p.m. Members who intend to accept the President's invitation must communicate with the Secretary not later than June 17th. The meeting will be addressed by Mr. C. B. Lockwood F.R.C.S., Surgeon to St. Bartholomew's Hospital the subject being "Some Remarks on Clinical Pathology (Surgical) in its Relation to Diagnosis and Treatment." Any member wishing to read a paper, or show specimens or cases should communicate at once with E. Harries Jones, Honorary Secretary, 16, Castilian Street, Northampton.

Staffordshire Branch.—The thirty-fourth annual meeting of the Branch will be held at the Victoria Hotel, Wolverhampton, on Thursday, June 27th, at 5.25 p.m., when an address will be delivered by the President elect, Mr. J. T. Hartill. Agenda: (1) Introduction of the new President. (2) Minutes of the last annual meeting. (3) Correspondence. (4) Address by the President. (5) Report of the Council. (6) The financial statement. (7) To decide the place of holding the next annual meeting. (8) Election of officers for the ensuing year—President elect, Secretary, and Treasurer. (9) Report on the election of the Representative of the Branch on the Council of the Association. Members have the privilege of introducing friends. Dinner at 7.15 p.m.; charge 5s. A meeting of the Council will be held before the annual meeting for the election of members. The first general meeting of the session will be held at Stoke on Thursday, November 28th. Members desiring to read papers are requested to communicate the titles to the General Secretary as soon as possible.—G. Percival Johnson, Honorary General Secretary, Stoke-on-Trent.

Ulster and Connaught Branches.—Nominations for Central Council. Two members to represent these Branches combined on the Central Council will be elected on June 29th. Nominations, signed by three electors, should be sent, to reach me not later than June 20th.—Cecil Shaw, M.D., Honorary Secretary, College Square, Belfast.

Ulster Branch.—The annual meeting will be held in the Medical Institute, Belfast, on Saturday, June 29th, at 11.30 a.m. Cecil Shaw, M.D., Honorary Secretary, College Square, Belfast.

WEST SOMERSET BRANCH.—The 64th annual meeting of this Branch will be held at the Royal Clarence Hotel, Bridgwater, on Friday, June 28th, at 12.15, when the chair will be taken by Dr. G. W. Harvey Bird, the President-elect. Agenda: Minutes of last meeting. Report of Subcommittee on fees from coroners. Report of Subcommittee on certificates. Annual report. Balance sheet. Election of officers. Election of honorary members. President's address: Notes on Influenza. Lunch will be served after the meeting, which will be paid for out of the funds of the Branch in the case of members: for guests and others a charge of 3s. per head will be made, exclusive of wines, etc., in all cases. During the afternoon a cricket match will be played between teams representing the Bridgwater and Taunton Districts of the Branch, on the Bridgwater Cricket Ground, and those present will be entertained to tea by the President and Mrs. Bird. Members are requested to let Dr. Bird or the Honorary Secretary know before Monday, June 24th, whether they will be present at the meeting and lunch, and whether they will be willing to take part in the cricket match.—W. B. WINCKWORTH, Honorary Secretary.

YORKSHIRE BRANCH.—*Two Members of Council.*—In accordance with the Articles and By-laws, the Honorary Secretary of the Branch will be glad to receive nominations, signed by not less than three members, for the election of two Representatives on the Central Council of the Association. Nominations must reach the Honorary Secretary of the Branch not later than Saturday, June 15th.—ADOLPH BRONNER, 33, Manor Row, Bradford, Honorary Secretary.

YORKSHIRE BRANCH.—The annual meeting of the Yorkshire Branch will be held at Dewsbury on Wednesday, June 26th. Members wishing to read papers, or show cases or specimens, should communicate at once with the Honorary Secretary.—ADOLPH BRONNER, 33, Manor Row, Bradford, Honorary Secretary.

ADDENDUM TO REPORT OF COUNCIL.

THE following schedule shows how a member's subscription of 25s. per annum is apportioned for defraying the expenses of the Association during the past year:

	£	s.	d.
General Association expenses, Representative Meeting, Council, Committees, Library, salaries, and wages ...	16,182	14	0
Capitation to Branches	3,665	4	0
Type and plant depreciation	250	0	2
Written off investments	236	0	2
Clerical staff superannuation	300	0	3
Written off subscriptions	755	0	7
Carried to capital account	1,389	1	4
Net cost of printing JOURNAL, postage, editorial etc., after deducting receipts for advertisements, sales, etc.	5,389	4	6
	£28,162		
Receipts from advertisements, sales of JOURNAL, etc.	23,836		
	£51,998	1	5 0

THE COVENTRY DISPENSARY.

SIR,—We the undersigned, members of the medical profession practising in the city of Coventry think it necessary that the attitude of the medical profession towards the Coventry Dispensary question should be clearly understood. We therefore ask you to publish the following explanation of the position:

The resignation of five members of the medical staff has been brought about by the local adoption of certain rules for the conduct of contract practice recommended by a special committee of the whole profession in this country appointed for the purpose of consideration of contract practice generally. These five members of the profession have consequently the support of the whole of the medical men of this city and surrounding district. The profession of Coventry are also supported by the unanimous vote of a meeting of the Central (Birmingham) Division of the British Medical Association, which includes in its numbers the consultants, specialists, and other leading members of the profession in that city, and is assured also of the support of the profession in other neighbouring cities.

We wish it to be clearly understood that neither we nor the British Medical Association are opposed, as has been so frequently misrepresented, to contract medical practice in principle, nor do we desire, as has also been wrongfully suggested, to obtain any control of funds of the Provident Dispensary or of the friendly societies associated with it. Many of the members of the profession in this district are prepared to enter into contract medical practice upon suitable conditions, and our objection to the Coventry Provident Dispensary is based upon the evidence of long experience as to the abuses inevitably associated with the present system of management.

We have not entertained the idea of altering the present scale of payment, but we are of the opinion that when a patient's means have reached beyond the wage limit he should cease to be attended upon contract terms.

We resent most emphatically the suggestion that any member of our Division is either so short-sighted or so unscrupulous as to attempt to derive any pecuniary benefit by the use of inferior drugs at the expense of a patient who entrusts his well-being to him upon contract terms.

T. FAULDER WHITE, F.R.C.S.
CHARLES DAVIDSON, M.D.
ARTHUR HAWLEY, M.B.
W. J. PICKUP, M.D.
W. W. FENTON, M.D.
F. L. HARMAN BROWN, M.B.
S. A. BALLANTYNE, F.R.C.S.Ed.
ERNEST H. KENDERDINE.
THOMAS A. B. SODEN, M.R.C.S.Eng.
VAUGHAN PENDRED, M.D., F.R.C.S.
EDWARD PHILLIPS.
T. F. COLLINGTON.
JNO. ORTON, M.D.
WEBB FOWLER, M.D., F.R.C.S.Ed.
HAROLD G. WEBSTER, M.R.C.S., L.R.C.P.
J. T. H. CROFT, M.R.C.S.
N. J. L. ROLLASON, M.B.
ROBERT RUDLAND, L.R.C.P., etc.
WM. E. HEAL.
H. H. KENDRICK.
PERCY E. OVERTON.
W. RICHARDSON RICE, M.D.
T. A. HIRD, M.D.
W. H. LOWMAN, M.B., B.S., F.R.C.S.
J. LESLIE CALLAGHAN, L.R.C.P.Ed.
MILNER MOORE, M.D.
CHAS. HARRIS, M.B.
JOHN BRADLEY.
T. HARRISON BUTLER.
EDWD. LYNES, M.D.
W. EDWD. BENNETT, M.B., F.R.C.S.
A. J. ARCH.
CHARLES WEBB ILIFFE, M.R.C.S., L.R.C.P.

THE HAMPSTEAD GENERAL HOSPITAL.

DR. LEWIS G. GLOVER (Hampstead) writes: May I, though no longer a member of your Association, crave the hospitality of your columns for a few remarks on the above question? I do so because I was unable to be present at the meeting of the local profession held in Hampstead on May 24th and reported in your issue for June 1st and because I find myself referred to there on more than one occasion. May I commence by saying that the Hampstead Hospital has for years past (before I joined it nine years ago) served a larger district than the mere Borough of Hampstead; the formula used in the hospital documents has been "the poor of Hampstead, Highgate, Hendon, and the adjoining neighbourhood"; so that it is a misunderstanding entirely for your readers to suppose that the hospital has in the past catered only for those residing within the confines of the Hampstead Borough, and to any one at all conversant with the growth of the metropolis it is obvious that in years to come (and not so far ahead as some of us apparently think) the need for more beds for the sick poor in the north-west district will be much greater than it is at this moment. That is to my mind a reason which more than justified the Council of the hospital in completing the hospital premises forthwith when the money to do so was offered them by an anonymous donor. Had it not been for the generosity of that donor the present building would not have been completed for years to come.

For the last two years an agitation has been kept going with regard to certain points connected with the hospital administration. I should like, as briefly as possible, to state my own personal position on some of these. Having worked in the out-patient department (as well as those of other hospitals) for some years, and having—I think it was in 1897—started an inquiry into the means of the

patients myself, I firmly hold that there are poor people in this city who from one cause or another are suitable for treatment as hospital out-patients, and the districts served by this charity are no exception to the rest of the metropolis. At the commencement of the agitation it was glibly stated that all out-patient departments in hospitals were to be done away with, and that a beginning was to be made with the Hampstead Hospital. Why with Hampstead I never could quite make out; the latest figures available (1905) for comparison for this purpose show that "the number of out-patients reckoned against each occupied bed in the 15 large general hospitals for 1905 was 212; in 8 other small general hospitals, 338; and in the Hampstead General Hospital only 91" (*Hampstead Hospital Report* for 1906), so that in comparison the Hampstead Hospital is a very small sinner, if sinner at all. But, sir, I venture to submit that neither the public, nor the members of the profession when they come from their study armchairs into practical grip with the out-patient question, will see that it is possible to abolish out-patient departments; to my mind, in the present state of society in these islands the four divisions of private practice—dispensaries, hospital, out-patient department, and Poor Law—are each a necessity for sick and suffering people, and will continue, though there may be modifications in methods of working in all of them which are needed more or less urgently. I believe that the true solution of out-patient abuse—the amount of which has been much overrated by some—is in the stern application of the almoner, and it is in the personality of the particular person who makes the inquiries that the crux of the whole matter lies; if the almoner is too easy to the patients, abuse enters at once, though the mere making of inquiry is a check to a certain extent. This system has been in vogue at the Hampstead for nearly ten years, and it is to that that I attribute the small number of out-patients we have had in comparison with other hospitals.

Respecting the casualty department, it has been the custom to refer the patients either to the out-patient department or to outside practitioners, etc., for some time past. In the former case inquiry is made, and they are then dealt with. Any one conversant with the duties of a resident medical officer will know that it is impossible for him to spend time in making inquiries of little boys who have fallen and bitten their tongues, or laundry girls who have run needles into their hands.

The medical profession in Hampstead is not aware of its blessings. Our hospital is the only hospital in the county of London north of the river into which a general practitioner has any entry at all, and he can get it there for his tradesmen patients and such like who can contribute from 12s. upwards towards their maintenance, in addition to any fees arranged between the doctor and patient. The number of beds available for that purpose will be increased shortly. For my part I should like to see them increased by double what is proposed, always providing that proper inquiry is made as to the means of the people admitted to them.

A service limit is a perfectly right method to adopt in hospital administration, but when a man has to begin with out-patients, and work his way up, it becomes at once apparent that anything much short of fifteen years would not be for the weal of the patients, seeing that if a surgeon came on at, say, 27 or 28 years of age, he would only get beds in probably five or six years, and just at the time he was getting to be of value to the patients he would be retired were the limit any lower.

I can myself see no reason why the outside medical profession should be represented on the Boards of hospitals, but it is not a point I consider worth differing from anybody about.

On the question of the staffing of the hospital, it has been a dream of mine to see this institution developed much on the lines (but much improved ones) of provincial hospitals. Up till recently, I have preached the singular doctrine that, given the opportunity, the general practitioners in this twentieth century are as capable of administering hospitals in the London suburbs as they are in the provinces, regard being had to all branches of medical and surgical work; and I had hoped that developed on this basis, the Hampstead Hospital would have been the forerunner in London of many imitations. Such an arrangement would lead to prompt attention to the patients of the institutions, to an enlargement of their income through the increased interest taken in them by the profession and through them the public, and to the benefit of the latter by the greater familiarity with medical and surgical work which their medical attendants would acquire. Knowing, as I have done for many a month past, that this question of the staff was the most urgent, and would be decided in the near future by the council of our hospital, I have on every opportunity, in debate and out of it, impressed on my medical brethren that they should devote their energies to securing in perpetuity that general practitioners should not be debarred from serving on it. At more than one meeting before Christmas last I urged it upon the Joint Committee, and at the eleventh hour, on February 22nd again, I asked that at this point should be pressed to the temporary exclusion of all others. I have, however, to admit that I am not capable of judging what is the best policy for the general practitioners to adopt, at least on the assumption that they know what is best for themselves.

They have had full information on this matter, and they have deliberately thrown away their opportunity by adopting a mixed programme, and one doomed to failure from the first. With my colleagues I still fought that battle for them, but, as I expected, was outvoted on the Hospital Council; and hereafter there will be no more general practitioners elected to the staff of the Hampstead General Hospital. My dream of an active and well-staffed by relays of energetic practitioners, with a few consultants for help in case of need, is over. Perhaps the larger the better—equipped suburban hospital with keen, and capable young older consultants for help a subsequent generation may see it, but I have my doubts if I shall do so.

Feeling that my views are too practical for my friends on the Association who are striving after Utopian ideals, and who glory in sticking to what they call principles, I came to the conclusion that I could not be of any further assistance in their deliberations, and so I sent in my resignation. I now view the struggle with interest from outside.

P.S. For obvious reasons it would be unbecoming on my part to discuss the amalgamation scheme, but I might correct what I presume was a hyperbole on the part of one speaker, who referred to "hundreds of thousands" of out-patients at Kentish Town. I am informed that the latest figures available (those for the year 1905) show the number of out-patients to be 23 234; the number of attendances, 44,699.

METROPOLITAN COUNTIES BRANCH.

Sir, I hereby give you notice that:

Dr. Ford Anderson, 41, Belsize Park, N.W., Hyde Park
Dr. Geo. Eastes, 35, Gloucester Terrace, W.,
Dr. G. E. Haslip, 8, Suffolk Place, Pall Mall, S.W.,
Dr. Hugh R. Ker, "Tintern," 2, Balham Hill, S.W.,
Dr. L. E. Shaw, 64, Harley Street, W.,

have been appointed Representatives of the Metropolitan Counties Branch on the Council for 1907-8.—I am, etc.,

Fred. J. Smith, Secretary.
London W., June 12th. Honorary Treasurer.

An analysis of the voting, which, in accordance with the decision of the Branch Council, was carried out by the Registration Committee to the proportional system, reached us too late for publication in this issue. It will appear in the Supplement of the British Medical Journal of June 22nd.]

CENTRAL MIDWIVES BOARD.

A meeting of the Central Midwives Board was held at 11.30 a.m. on May 30th, with Dr. F. H. Champneys in the chair.

Revised Rules.

A letter was received from the Privy Council transmitting an order in Council approving the revised rules, to the period ending September 30th, 1909.

Proposed Additional Rule.

A letter was considered from the Privy Council transmitting a copy of a letter from the Medical Officer of Health for the City of Manchester with regard to a proposed additional rule that midwives should be compelled to take the temperature of patients at every visit

Board decided that the Privy Council be informed that the proposal will receive the careful consideration of the Board on the next revision of the rules.

Signing of Certificates of Instruction.

A letter was read from Dr. Fram Gotla, inquiring whether a teacher, who has instructed a pupil by correspondence only, is entitled to sign the certificate of instruction on the pupil's behalf. The Board decided that Dr. Gotla be informed that the terms of the certificate of instruction, and in particular the words "attended" and "lectures" appear to preclude the possibility of the signature of the certificate by a teacher whose three months' course of instruction has been given wholly or partly by correspondence.

Payment to Medical Practitioners Sent for in Emergency Cases.

The following item in the report of the Midwives Act Amendment Committee was not reached before the adjournment of the Board; the Committee recommend the Board to resolve that it is desirable to amend the Act so as to provide among others for the following alteration:

"Local supervising authorities and Boards of Guardians to be enabled to pay reasonable fees to medical practitioners sent for in emergencies in accordance with the rules of the Board with power to recover the fee from the patient or her husband in suitable cases."

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: WILLIAM H. DAW, Staff Surgeon, to Gibraltar Hospital, June 6th; EDGAR F. MORTIMER, Staff Surgeon, to the *Vindictive*, June 6th; ALEXANDER G. WILDEY, Fleet Surgeon, to the *Vivid*, June 15th; RICHARD A. FITCH, Fleet Surgeon, to the *Indus*, June 15th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL G. E. TWISS retires on retired pay, June 8th. His commissions are dated: Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1893; and Lieutenant-Colonel, February 5th, 1901. His war record is as follows: Zulu war in 1879 as a Civil Surgeon (medal with clasp); Egyptian war, 1882, including the surrender of Tafr Dowar (medal, and Khedive's star); Nile expedition, 1884-5 (clasp); South African war, 1899-1902, as Principal Medical Officer of a General Hospital, and including operations in the Orange Free State, the Transvaal, and Cape Colony (mentioned in dispatches, Queen's medal with three clasps, King's medal with two clasps).

Lieutenant-Colonel J. L. HALL also retires on retired pay, June 8th. He was appointed Surgeon, March 6th, 1880; Surgeon-Major, March 6th, 1892; and Lieutenant-Colonel, March 6th, 1900. During the South African war in 1899-1901 he was Principal Medical Officer of a General Hospital, and was present in operations in the Transvaal, receiving the Queen's medal with three clasps.

ARMY MEDICAL RESERVE OF OFFICERS.

SURGEON-MAJOR C. A. MACMUNN, M.D., to be Surgeon-Lieutenant-Colonel, May 28th.

Surgeon-Major C. G. GRANT to be Surgeon-Lieutenant Colonel, May 28th.

INDIAN MEDICAL SERVICE

CAPTAIN S. R. DOUGLAS has been transferred to the temporary half-pay list, from September 15th, 1900. He joined the department as Surgeon-Lieutenant, January 25th, 1898, and was made Captain, January 28th, 1901.

The transfer to the temporary half-pay list of Captain H. B. MEAKIN, M.D., dated March 23rd, which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the King.

His Majesty has also sanctioned the retirement from the service of Lieutenant-Colonel O. H. CHANNER, M.B., which has been already announced in the BRITISH MEDICAL JOURNAL.

Major W. E. A. ARMSTRONG, Madras Establishment, has retired from the service from March 12th. He entered the service as Surgeon-Captain, January 30th, 1895, and became Major January 30th, 1904.

The retirement from the service is also announced of Lieutenant H. GILL, dated March 27th. His commission as Lieutenant bears date July 26th, 1902; he was placed on half-pay, May 27th, 1905.

Lieutenant-Colonel H. M. MORRIS, Bengal Establishment, has retired from the service, from May 14th. He was appointed Surgeon, September 30th, 1886, and became Lieutenant-Colonel, September 30th, 1900.

Major B. R. CHATTERTON, M.D. (Bengal), is appointed to officiate as Professor of Materia Medica, Calcutta Medical College, and *ex officio* Civil Physician, College Hospital, vice Lieutenant-Colonel C. P. Lukis, M.D., granted leave.

Lieutenant-Colonel F. J. DRURY, M.B. (Bengal), is appointed to officiate as Principal and Professor of Medicine, Calcutta Medical College, and 1st Physician, College Hospital.

VOLUNTEER RIFLES.

ARTHUR J. DE SPIGANOVICZ, M.B., to be Surgeon-Lieutenant in the 6th Volunteer Battalion the Royal Scots (Lothian Regiment), March 1st.

Surgeon-Lieutenant D. J. THOMAS, 3rd Volunteer Battalion the South Wales Borderers, resigns his commission, April 26th.

Surgeon-Major W. DEANS, 2nd Volunteer Battalion the East Lancashire Regiment, is granted the honorary rank of Surgeon-Lieutenant-Colonel, February 28th: he resigns his commission, retaining his rank and uniform, March 1st.

Acting Surgeon J. H. REYNOLDS, V.C., M.B. (Lieutenant-Colonel retired pay), 1st Cadet Battalion the King's Royal Rifle Corps, resigns his appointment, April 22nd.

Surgeon-Lieutenant F. GRACIE, M.B., 1st Dumbartonshire Volunteer Rifle Corps, to be Surgeon-Captain, April 22nd.

Vital Statistics.

HEALTH OF ENGLISH TOWNS

IN seventy-six of the largest English towns, including London, 8,846 births and 4,213 deaths were registered during the week ending Saturday last, June 8th. The annual rate of mortality in these towns, which had been 15·1, 14·9, and 14·5 per 1,000 in the three preceding weeks, further fell to 13·7 per 1,000 last week. The rates in the several towns ranged from 4·9 in Burton-on-Trent, 5·9 in Barrow-in-Furness, 7·0 in Walthamstow, 7·5 in Hornsey, and 7·7 in Brighton to 18·8 in Wigan, 19·2 in Merthyr Tydfil, 20·5 in Middlesbrough, 21·1 in Sunderland, 23·1 in St. Helens, 23·6 in Huddersfield, and 23·8 in Tynemouth. In London the rate of mortality was 13·2 per 1,000, while it averaged 13·9 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1·5 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1·6 per 1,000, while among the seventy-five other towns the rates ranged upwards to 3·0 in Portsmouth, 3·1 in Hanley, 3·7 in Bolton, 4·1 in Wigan, 4·2 in Tottenham, and 5·6 in Middlesbrough. Measles caused a death-rate of 1·7 in Tottenham, 1·8 in Wigan and in Bury, 1·9 in Blackburn, 2·1 in Gateshead, 3·1 in Hanley and in Bolton, and 5·1 in Middlesbrough; diphtheria of 1·3 in Portsmouth, in Reading, and in Norwich; whooping-cough of 1·3 in Tottenham and Newcastle-on-Tyne, 1·4 in South Shields, 1·6 in Walsall and in Wallasey, and 1·9 in Tynemouth; and diarrhoea of 1·1 in St. Helens and in Huddersfield. The mortality from scarlet fever and from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,679, 2,732, and 2,824 at the end of the three preceding weeks, had further risen to 2,861 at the end of last week; 368 new cases were admitted during the week, against 363, 382, and 437 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS

DURING the week ending Saturday last, June 8th, 1,032 births and 660 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19·7, 17·5, and 16·7 per 1,000 in the three preceding weeks, rose again to 19·0 per 1,000 last week, and was 5·3 above the rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 17·2 in Edinburgh and 18·4 in Glasgow to 21·1 in Dundee and 29·9 in Perth. The death-rate from the principal infectious diseases in these towns averaged 3·1 per 1,000, the highest rates being recorded in Glasgow and Leith. The 299 deaths registered in Glasgow included 5 which were referred to measles, 2 to diphtheria, 37 from whooping-cough, 8 from diarrhoea, and 15 from cerebro-spinal meningitis. Four fatal cases of whooping-cough and 5 of cerebro-spinal meningitis were recorded in Edinburgh; 7 of whooping-cough and 3 of diarrhoea in Dundee; 2 of whooping-cough and 2 of diarrhoea in Aberdeen; 4 of whooping-cough and 1 of cerebro-spinal meningitis in Paisley; 2 of measles and 3 of cerebro-spinal meningitis in Leith; and 2 of whooping-cough in Greenock.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, June 1st, 593 births and 398 deaths were registered in six of the principal Irish towns, as against 526 births and 432 deaths in the preceding period. The annual death-rate in these towns, which had been 21·2, 19·6, and 18·0 per 1,000 in the three preceding weeks, rose to 20·3 per 1,000 in the week under notice, this figure being 5·8 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 14·7 in Londonderry and 19·1 in Limerick, to 22·0 in Belfast and 23·1 in Dublin. The zymotic death-rate in the same six Irish towns averaged 0·7 per 1,000, or 1·0 per 1,000 lower than during the preceding period, the highest figure—2·1—being recorded in Cork, while Londonderry, Limerick, and Waterford registered no deaths under this heading at all. The deaths in Belfast included 10 recorded as due to cerebro-spinal fever, and 4 as due to cerebro-spinal meningitis.

Vacancies and Appointments.

VACANCIES.

This list of vacancies is compiled from our advertisement columns, wher full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

AYR DISTRICT ASYLUM.—Junior Assistant Physician. Salary, £120 per annum.

BIRMINGHAM GENERAL HOSPITAL.—(1) House-Physician; (2) three Receiving-Room Officers. Salary at the rate of £80 and £150 per annum respectively.

BOLTON INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

BRADFORD POOR-LAW UNION.—Resident Assistant Medical Officer for the Hospital and Workhouse. Salary, £100 per annum.

BRADFORD ROYAL INFIRMARY.—Resident Surgical Officer. Salary, £150 per annum.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Second House-Surgeon. Salary, £80 per annum.

BRISTOL GENERAL HOSPITAL.—(1) Physician; (2) Assistant Physician.

CAIRO. DEPARTMENT OF PUBLIC HEALTH.—Sub-Inspector of Ophthalmic Hospitals. Salary, £500 per annum.

CALCUTTA. LADY DUFFERIN VICTORIA HOSPITAL.—Lady Doctor. Salary, Rs. 500 per month.

CANTERBURY CITY ASYLUM.—Assistant Medical Officer. Commencing salary, £140 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House-Surgeon. Salary at the rate of £80 per annum.

DARTFORD CITY OF LONDON ASYLUM.—Locum Tenens. Terms, £3 3s. per week.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) Assistant Surgeon. (2) House Physician, Honorarium, £25 for six months.

EDINBURGH ROYAL HOSPITAL FOR SICK CHILDREN.—Four Resident Medical Officers.

GENERAL POST OFFICE.—Male Assistant to the Medical Officers at the Headquarters. Salary, £200 per annum, rising to £300.

GLOUCESTER GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

GUILDFORD ROYAL SURREY COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

HER MAJESTY'S HOSPITAL FOR CHILDREN, Stepney Causeway, E.—House-Surgeon and Resident Medical Officer. Salary, £80 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £20 for six months, and £2 10s. washing allowance.

HULL ROYAL INFIRMARY.—Casualty House-Surgeon. Salary, £80.

LINCOLN COUNTY HOSPITAL.—Junior Male House-Surgeon. Salary, £8 for six months.

LIVERPOOL EYE AND EAR INFIRMARY.—Male House-Surgeon. Salary, £80 per annum.

LONDON COUNTY ASYLUM, Horton, Epsom.—Fifth Assistant Medical Officer. Salary, £150 per annum.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Salary, £100 per annum.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £80 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House Surgeon. Salary, £50 per annum, and £5 for washing.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich, S.E.—Honorary Dentist Medical Officer.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Senior and Junior House-Physicians. Salary, £50 per annum each.

NEWCASTLE-UPON-TYNE CORPORATION.—Assistant Medical Officer of Health. Salary, £500 per annum.

NEWCASTLE-UPON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary, £20 per annum.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary, £70 per annum.

OLDHAM UNION.—Resident Medical Officer of the Workhouse. Salary, £150 per annum.

OXFORD UNIVERSITY.—Readership of Pathology. Income, £300 per annum.

PENRHYNDEUDRAETH HOSPITAL AND DISPENSARY.—Senior House-Surgeon. Salary, £100 per annum.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Junior Obstetric Assistant. (2) Clinical Assistant.

ROYAL ALBERT EDWARD HOSPITAL FOR CHILDREN AND WOMEN, Stockport.—Resident Medical Officer. Salary at the rate of £140 per annum.

SALISBURY INFIRMARY.—Assistant House Surgeon. Salary, £50 per annum.

SAMARITAN FREE HOSPITAL.—Assistant Ophthalmic Surgeon.

SHEFFIELD UNIVERSITY.—Demonstrator in Physiology. Salary, £100 per annum.

SOUTH SHIELDS: ELDON LITERARY AND SOUTH SHIELDS DISPENSARY.—House-Surgeon.

WEST BROMWICH: DARTMOUTH HOSPITAL.—Senior House-Surgeon. Salary, £110 and £70 per annum.

WEST HAMPSTEAD: CAMBRIDGE HOSPITAL.—House Surgeon. Salary, £100 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Officer in Electrical Department.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Assistant Physician.

WOOLWICH: ROYAL CHEMICAL LABORATORY.—Shorthand Writer. Salary, £100 per annum.

CHIEF INSPECTORSHIP OF FACTORIES.—The Chief Inspector of Factories for the Counties of Lincoln, Leicester, Loughborough, Nottingham, Derby, and York.

APPOINTMENTS.

CALTHROP, Lionel C. E., M.B., M.R.C.S., L.R.C.P., Medical Superintendent of Woodhall Spa, Lincolnshire.

FRENCH, J. J., M.D.Durh., District Medical Officer of the Newcastle-upon-Tyne Union.

HORAN, H. W., M.B., B.S.Durh., Medical Officer of Health, Warsop Urban District.

KEMP, W., M.B., District Medical Officer of the Pontefract Union.

LLEWELLYN, T. L., M.D., B.S.Lond., M.R.C.S.Eng., Medical Officer to the Powell Duffryn and Rhymney Iron Companies in the Rhymney Valley.

MELVILLE, Stanley, M.D., M.R.C.S., L.R.C.P., Clinical Assistant to the Chelsea Hospital for Women.

MOWLL, R. Rothwell, M.D., B.S.Lond., Medical Officer to the Southern and Western District Metropolitan Water Board.

MOUD, R. J., M.R.C.S., L.R.C.P., Assistant Medical Officer, Camberwell Parish Infirmary.

NEVIN, R. W., M.B., B.S.Durh., District Medical Officer of the Newcastle-upon-Tyne Union.

PORTEOUS, H. L., M.R.C.S., L.R.C.P., District Medical Officer of the Stroud Union.

PURDY, J. S., M.D., C.M. (Aberd.), D.P.H. (Camb.), District Health Officer, Auckland, New Zealand, late Egyptian Sanitary and Quarantine Service (resigned).

REY, Jules F., M.R.C.S., L.R.C.P.Lond., L.D.S.Eng., Medical Officer for the Dinas Powis, Wenvae, and Llandough Post Offices.

ROGERS, J. W., M.B., District Medical Officer of the Dorking Union.

SMITH, William Alex., M.B., Ch.B.Aberd., Assistant House-Surgeon, North Riding Infirmary, Middlesbrough.

SPAIGHT, H. W., L.R.C.P. and S.Irel., District Medical Officer of the Helston Union.

TREASURE, W. B. Crawford, M.D., J.P., Medical Officer to the Post Office for the Western Division of Cardiff.

VINCENS, Louis, M.D.Durh., Director of the French Convalescent Home at Brighton and of the Annexe for the Preventive Treatment of Tuberculosis.

WATERS, D. B., M.D.Edin., District Medical Officer of the parish of Alston-with-Garrigill.

WRIGHT, Garrett, M.B., Ch.B.Ed., F.R.C.S.Eng., Honorary Surgeon to the Ancoats Hospital, Manchester.

YEARSLEY, John H., B.A.Oxon., M.R.C.P.Edin., F.R.C.S.Edin., Assistant Ophthalmic Surgeon to the Royal Victoria Hospital, Bournemouth.

ST. THOMAS'S HOSPITAL.—The following gentlemen have been selected as House Officers:

Casualty Officers: (Senior) A. B. Howitt, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.; (Junior) W. O. Sankey, M.B., B.S.Lond., M.R.C.S., L.R.C.P.

Resident House-Physicians: C. E. Whitehead, B.A.Cantab., M.R.C.S., L.R.C.P.; H. G. Bennett, M.B., B.S.Lond., M.R.C.S., L.R.C.P.

House Physicians to Out-patients: W. H. R. Sutton, B.A., B.C.Cantab., M.R.C.S., L.R.C.P.; S. Churchill, B.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.

Obstetric House-Physicians: (Senior) A. C. D. Firth, M.A.Cantab., M.R.C.S., L.R.C.P.; (Junior) F. S. Howett, B.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.

Ophthalmic House-Surgeon: (Junior) A. S. Burgess, M.A.Cantab., M.R.C.S., L.R.C.P.

Special Departments: (Throat) R. E. Todd, M.B., B.S.Lond., M.R.C.S., L.R.C.P. (Skin) A. J. S. Pinchin, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; E. A. Sparrow, B.A.Cantab., M.R.C.S., L.R.C.P. (Ear) A. J. S. Pinchin, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; H. E. T. Dawes, B.A.Cantab., M.R.C.S., L.R.C.P.

Children's Surgical: R. E. Todd, M.B., B.S.Lond., M.R.C.S., L.R.C.P.

Electrical Department (X-ray Department): A. J. H. Iles, M.R.C.S., L.R.C.P.

Several other gentlemen have received an extension of their appointments.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 5s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

MARRIAGES.

COLE-WHITE.—On June 11th, at the Church of the Annunciation, Bryanston Street, W., by the Rev. Prebendary C. M. Harvey, Vicar of Hillingdon, assisted by the Rev. Canon E. B. Otiley, Vicar of the parish, Robert Henry Cole, M.D., of 25, Upper Berkeley Street, Portman Square, to Mabel Ellis, widow of Arthur Thomas White, M.R.C.S., of the Egyptian Public Health Service.

JOWETT—HANNAH.—On June 8th, at the Parish Church, Ashton-in-Makerfield, by the Rev. H. Siddall, Vicar, assisted by the Rev. F. [illegible], Junior Curate of West Derby Parish Church, Dr. Oswald Wynne Jowett, of William Jones, Balliol Road, Bootle, to Martha [illegible], fourth daughter of Dr. Hannah, Rock House, Ashton-in-Makerfield.

TURNER—PARKER.—On the 5th inst., at Holy Trinity Church, Scarborough, by Rev. Canon Watson, York, William Turner, M.B., Hull, Chirurgeon to Ruby Kathleen, second daughter of Reginald H. Parker, Grosvenor Bank, Scarborough.

DIARY FOR THE WEEK.

TUESDAY.

MEDICO-LEGAL SOCIETY, 22, Albemarle Street, W., 8.30 p.m.—(1) Exhibitions of Medico-Legal Specimens. (2) Discussion: Opinion and Fact in Medical Matters; introduced by C. H. Wise, M.D., J.P.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W.—5 p.m., First Croonian Lecture by Dr. W. J. R. Simpson on the Plague.

WEDNESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 5.30 p.m.—Mr. D'Arcy Power, F.S.A.: Dr. Walter Bailey and his Works, 1589-1592. (There will also be a number of exhibits of medical and antiquarian interest.)

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W.—5 p.m., Second Croonian Lecture by Dr. W. J. R. Simpson.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday and Friday, 3.45 p.m., Larynx.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Affections at or about the Umbilicus.

LONDON SCHOOL OF CLINICAL MEDICINE.—Clinics: Monday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Ear and Throat, 4 p.m. Tuesday, Medicine, 2.15 p.m.: Surgery, 3.15 p.m.: Skin, 4 p.m. Wednesday, Medicine, 2.15 p.m.: Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30 p.m. Out-patient Demonstrations: Surgical, daily, 10 a.m.; Medical, daily, 10 a.m. Ear and Throat, Mondays and Thursdays, 12 noon. Eye, Wednesdays and Saturdays, 11 a.m. Skin, Tuesdays and Fridays, 12 noon. Special Lectures: Monday, 4 p.m., Paralysis of the Vocal Cords; Tuesday, 2.15 p.m., Diagnosis of the Nature of Pathological Exudates; Thursday, 3.15 p.m.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows:—Monday, Blood Pressure and the Nervous System; Tuesday, Some Medico-Legal Reminiscences: Wednesday, Irregularity of the Cardiac Rhythm; Thursday, Ditto.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Multiple Neuritis; Friday, 3.30 p.m., Paralysis Agitans.

NORTH-EAST LONDON POST-GRADUATE COLLEGE. Prince of Wales's General Hospital, Tottenham, N.—The following are the clinics and demonstrations for next week:—Monday, 10 a.m.: Surgical; 2.30 p.m.: Medical, Throat, Nose and Ear, *X* Rays. Tuesday, 10.30 a.m.: Medical; 2.30 p.m.: Operations—Surgical and Gynaecological; 4.30 p.m.: Demonstration of *X*-ray Cases; Wednesday, 2.30 p.m.: Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynaecological Operations—Medical. Surgical: *X* Rays: 3 p.m., Medical (In-patient): 4.30 p.m., Demonstration of Cases of Children's Disease. Friday, 9.30 a.m., Surgical; 2.30 p.m., Operations—Medical, Eye; 3 p.m., Medical (In-patient).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following arrangements have been made for next week:—Daily, 2 p.m.: Medical and Surgical Clinics and *X* Rays. 2.30 p.m.: Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2 p.m.: Diseases of Throat, Nose, and Ear. 2.30 p.m.: Diseases of the Skin. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. 2 p.m.: Diseases of the Eye. Lectures—Monday, noon: Pathological Demonstration. 5 p.m.: Clinical. Wednesday: Practical Medicine. Thursday: Practical Surgery. Friday: Cases of Skin Disease.

BOOKS, ETC., RECEIVED.

The Early Bird. Why to Rise Early and How. London: P. Nutt. 1907. 1s.

Medical Philosophy. Man's Peculiarities, Weaknesses, Diseases, Degeneration, and Remedies. By W. Russell. London: H. Kimpton; and Glasgow: A. Stenhouse. 1907. 21s.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. H. White, M.D., F.R.C.P. Tenth edition. London: J. and A. Churchill. 1907. 6s. 6d.

Dictionary of Medical Diagnosis. By H. L. McKisack, M.D., M.R.C.P.Lond. London: Baillière, Tindall, and Cox. 1907. 10s. 6d.

The Briton's First Duty. The Case for Universal Military Training. Fourth edition. London: The National Service League.

London: The Health Resorts Association:

Deal, and Royal Leamington Spa. Edited by G. W. May; and Southwold. By E. R. Cooper. Free on application to Town Clerk.

Lehrbuch der Gynäkologie. Von M. Runge. Dritte Auflage. Berlin: J. Springer. M. 10.

Cambridge Physical Series. Edited by F. H. Neville, M.A., F.R.S., and W. C. D. Whetham, M.A., F.R.S. Air Currents and the Laws of Ventilation. Lectures delivered in the Lent Term, 1903. By W. N. Shaw, Sc.D., F.R.S. Cambridge: University Press. 1907. 3s.

Uber Beri-Beri. Von Dr. A. Plehn. Berlin: K. Curtius. 1907. M. 0.60.

The Practical Medicine Series. Edited by G. P. Head, M.D. Vol. II. General Surgery. Edited by J. B. Murphy, A.M., M.D., LL.D. Vol. III. The Eye, Ear, Nose, and Throat. Edited by C. A. Wood, C.M., M.D., D.C.L., A. H. Andrews, M.D., and G. P. Head, M.D. Series 1907. Chicago: The Year-Book Publishers; and Glasgow: G. Gulnes and Co. Vol. II., 8s.; Vol. III., 6s.

Stanford's Geological Atlas of Great Britain and Ireland. By H. B. Woodward, F.R.S., F.G.S. Second edition. London: E. Stanford. 1907. 12s. 6d.

The Probable Origin of Syphilis in Europe. By L. Bousfield, M.A., M.D. London: S. F. Hodsall. 2s.

Rational and Effective Treatment of Hip Disease. By P. B. Bennie, M.A., M.D., B.S.Melb. Compiled by A. B. Bennie, M.A., M.B., B.S.Melb. London: Baillière, Tindall, and Cox. 1907. 5s.

The Licensed Trade: An Independent Survey. By E. A. Pratt. London: J. Murray. 1907. 5s.

Saint Thomas's Hospital Reports. New Series. Edited by Dr. H. G. Turney and Mr. W. H. Battle. Vol. xxxiv. London: J. and A. Churchill. 1906. 8s. 6d.

Medical Examination Questions set by the University of Edinburgh, and Royal Colleges of Physicians and Surgeons of Edinburgh, and Faculty of Physicians and Surgeons of Glasgow for several years. Edinburgh: J. Currie. 1907. 2s.

Diseases of the Eye. By J. H. Parsons, D.Sc., M.B., B.S., F.R.C.S. London: J. and A. Churchill. 1907. 10s. 6d.

The Psycho-Physical Aspect of Climate, with a Theory concerning Intensities of Sensation. By W. F. Tyler, F.R.Met.S., A.I.C.E. London: J. Bale, Sons, and Danielsson. 5s.

Alcohol and the Human Body. By Sir V. Horsley and M. D. Sturge, M.D.Lond. London: Macmillan and Co. 1907. 5s.

The Efficient Life. By L. H. Gulick, M.D. London: W. Heinemann. 1907. 3s. 6d.

The London Manual for 1907. Edited by R. Donald. London: E. Lloyd, Ltd. 1907. 1s. 6d.

Transactions of the American Climatological Association for the Year 1906. Vol. xxii. Philadelphia: The American Climatological Association. 1906.

The Ophthalmoscope. By G. Hartridge, F.R.C.S. Fifth edition. London: J. and A. Churchill. 1907. 4s.

Cremation: The Planning of Crematoria and Columbaria. By A. C. Freeman. London: A. C. Freeman. 1s.

On Treatment. By H. Campbell, M.D., B.S., F.R.C.P. London: Baillière, Tindall, and Cox. 1907. 8s.

The International Genealogical Directory, 1907. Compiled by C. A. Bernau. 10s. 6d.

Elements of Human Physiology. By E. H. Starling, M.D.Lond., F.R.C.P., F.R.S. Eighth edition. London: J. and A. Churchill. 1907. 12s. 6d.

Lehrbuch der Arzneimittellehre. Von Professor R. Heinz. Jena: G. Fischer. 1907. M. 9.

Travaux et Mémoires de Montpellier. Série Scientifique I. Le Travail Intellectuel et les Fonctions de l'Organisme. Par A. Mairet et J. E. Florence. Montpellier: Coulet et Fils; et Paris: Masson et Cie. 1907. Fr. 3.

Medizinal-Berichte über die Deutschen Schutzgebiete Deutsch-Ostafrika, Kamerun, Togo, Deutsch Südwestafrika, Neu Guinea, Karolinen, Marianen, Marshall Inseln, und Samoa für das Jahr 1904-5. Herausgegeben von der Kolonial Abteilung des Auswärtigen Amts. Berlin: E. S. Mittler und Sohn. 1907. M. 7.50.

Traité d'Hygiène, publié sous la direction de MM. A. Chantemesse et E. Mosny. II. Hygiène Coloniale. Par les Drs. Alliot, Clarac, Fontoynont, Kermorgant, Marchoux, F. Noc. Ed. et Et. Sergent, Simond et R. Wurtz. Paris: J. B. Baillière et Fils. 1907. Fr. 12.

Alcohol: a Drawing-room Address. Delivered by H. E. Jones, M.B., C.M. Glasgow: A. Macintyre. 1907. 2s.

The Life-Work of Animals including Mammals, Birds, Reptiles, and Amphibians. By A. A. Gray, M.D.Glasg., F.R.S.E. Vol. I. London: J. and A. Churchill. 1907. 21s.

A Course of Lectures to Midwives and Maternity Nurses. By W. E. Fothergill, M.A., B.Sc., M.D. Edinburgh and London: W. Green and Sons. 1907. 4s. 6d.

Labour and Childhood. By M. McMillan. London: Swan, Sonnenschein and Co., Limited. 1907. 3s. 6d.

The Construction and Reconstruction of the Human Body. By F. Sandow. London: J. Bale, Sons, and Danielsson, Limited. 1907. 12s. 6d.

The Nutrition of Man. By R. W. Chittenden, Ph.D., LL.D., Sc.D. London: W. Heinemann. 1907. 14s.

A Descriptive Catalogue of the Pathological Museum of the Hospital for Sick Children, Great Ormond Street. Edited by Dr. G. F. Still. London: Bradbury, Agnew and Co., Limited. 1907. 6s.

The Destruction of Daylight. By J. W. Graham, M.A. London: G. Allen. 1907. 2s. 6d.

Physical Diagnosis. By H. S. Anders, A.M., M.D. London: D. Appleton. 1907. 12s. 6d.

A Health Reader. By C. E. Smiley, M.A., M.D., M.R.C.P., and F. Stenhouse, B.Sc. Book II. London: Macmillan and Co., Limited. 1907. 1s. 4d.

*** In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JUNE.	
14 FRIDAY ...	HAMPSTEAD DIVISION. *Metropolitan Counties Branch.* Annual Meeting, St. Peter's Hall, Belsize Square, N.W., 4.30 p.m.
15 SATURDAY...	HARROGATE: Science Committee, Hotel Majestic, 4 p.m.
16 Sunday ...	
17 MONDAY ...	
18 TUESDAY ...	LONDON: Public Health Committee, 3.15 p.m.
19 WEDNESDAY	LONDON: Medico-Political Committee, 2.30 p.m. SOUTH-EASTERN BRANCH, Annual Meeting, Hotel Metropole, Brighton, 2.15 p.m.; Luncheon, 1 to 2 p.m.; after meeting, Reception at the Royal Pavilion by His Worship the Mayor; Dinner, Hotel Metropole, 6.15 p.m. SOUTH-EASTERN OF IRELAND BRANCH, Town Hall, Clonmel, 12 noon; also meeting of Branch Council. WEST NORFOLK DIVISION. *East Anglian Branch.* Annual Meeting, West Norfolk and Lynn Hospital, 3 p.m. (*not June 20th as previously announced.*)
20 THURSDAY...	LONDON: Hospitals Committee, 2 p.m. LONDON: Premises Committee, 3 p.m. EAST ANGLIAN BRANCH, Annual Meeting, Town Hall, Ipswich: Council Meeting, 12 noon; General Meeting, 12.30 p.m.; Luncheon, 1 p.m.; Proposed General Meeting, 2 p.m.; Tea, 4 p.m. LANCASHIRE AND CHESHIRE BRANCH, Annual Meeting, Manchester. SOUTH MIDLAND BRANCH, Annual Meeting, Bedford Hospital, 3 p.m.; Luncheon, Grafton Rooms, 145, Midland Road, 1.30 p.m.
21 FRIDAY ...	LONDON: Ethical Committee, 2 p.m. BORDER COUNTIES BRANCH, Annual Meeting, Crown and Mitre Hotel, Carlisle.
22 SATURDAY...	SOUTH-EASTERN COUNTIES DIVISION, *Edinburgh Branch*, Annual Meeting, at Dr. Young's house, Earlston, 4 p.m.
23 Sunday ...	
24 MONDAY ...	
25 TUESDAY ...	CITY DIVISION, *Metropolitan Counties Branch.* BOSTON AND SPALDING DIVISION, *Midland Branch*, Motor Meet, Bull Hotel, Bourne, 4 p.m. KENSINGTON DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Kensington Town Hall, 5 p.m.
26 WEDNESDAY	NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH, Annual Meeting, Furness Abbey Hotel, 3.30 p.m. YORKSHIRE BRANCH, Annual Meeting, Dewsbury.
27 THURSDAY...	CANTERBURY AND FAVERSHAM DIVISION, *South-Eastern Branch*, Combined Meeting of Divisions comprised in the old East Kent District, County Hotel, Canterbury, 3 p.m.; Dinner, 5.45 for 6 p.m. METROPOLITAN COUNTIES BRANCH, Annual Meeting. STAFFORDSHIRE BRANCH. Annual Meeting, Victoria Hotel, Wolverhampton, 5.25 p.m.; Dinner 7.15 p.m.; Council Meeting to precede Annual Meeting. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Battersea Town Hall, 4 p.m.
28 FRIDAY ...	FIFE BRANCH, Annual Meeting, Hotel, Thornton, 3 p.m. WEST SOMERSET BRANCH, Annual Meeting, Royal Clarence Hotel, Bridgwater, 12.15 p.m.; Luncheon served after the Meeting.
29 SATURDAY..	ULSTER BRANCH, Annual Meeting, Medical Institute, Belfast, 11.30 a.m.
30 Sunday ...	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 6, Catherine Street, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is an registered or possesses such medical qualifications as shall, subject to the Regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association and the Rules of such Division and Branch in which he may at any time belong and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement, signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d for the United Kingdom, and £1 15s. 0d. for abroad.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 22ND, 1907.

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ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF COUNCIL.

AT a meeting of the Council, held, by kind permission of the Metropolitan Asylums Board, London, in their Board Room, on Wednesday, June 5th, 1907, at 2 o'clock in the afternoon,

Present:

Dr. H. W. LANGLEY BROWNE, LL.D., Chairman of Council, in the Chair.

Dr. J. A. MACDONALD, Chairman of Representative Meetings.

Dr. H. RADCLIFFE CROCKER, Treasurer.

Dr. JOHN FORD ANDERSON, London
Mr. H. A. BALLANCE, M.S., Norwich
Dr. T. R. BRADSHAW, Liverpool
Dr. J. BRASSEY BRIERLEY, Old Trafford
Dr. R. COCHRANE BUIST, Dundee
Dr. W. A. CARLINE, Lincoln
Dr. WILLIAM COLLIER, Oxford
Mr. C. F. CUTHBERT, Gloucester
Mr. E. J. DOMVILLE, Exeter
Lieut.-Colonel DRAKE-BROCKMAN, I.M.S. (ret.), London (Colombo and South Indian and Madras Branches)
Mr. GEORGE EASTES, M.B., London
Dr. BRUCE GOFF, Bothwell
Dr. D. GOYDER, Bradford
Dr. JAMES HAMILTON, Glasgow
Dr. G. E. HASLIP, London
Dr. T. ARTHUR HELME, Manchester
Sir VICTOR HORSLEY, LL.D., F.R.S., London
Dr. R. MCKENZIE JOHNSTON, Edinburgh
Colonel C. H. JOUBERT DE LA FERTÉ, I.M.S. (ret.), Weybridge (Representative of the Indian Medical Service)
Mr. R. H. KINSEY, Bedford
Dr. C. J. MARTIN, F.R.S., London (Sydney and New South Wales Branch)
Dr. C. G. DRUMMOND MORIER, London (South Australian and West Australian Branches)
Professor J. T. J. MORRISON, Birmingham
Dr. T. G. NASMYTH, Edinburgh
Mr. EDMUND OWEN, LL.D., London
Mr. C. H. W. PARKINSON, Wimborne Minster
Dr. EDWIN RAYNER, Stockport
Mr. H. JONES ROBERTS, Penygroes
Dr. J. MAXWELL ROSS, Dumfries
Dr. ST CLAIR B. SHADWELL, Walthamstow
Dr. CECIL E. SHAW, Belfast
Mr. C. R. STRATON, Salisbury
Mr. T. JENNER VERRALL, Brighton
Dr. NORMAN WALKER, Edinburgh
Mr. F. E. APTHORPE WEBB, Cambridge
Dr. SINCLAIR WHITE, Sheffield
Lieut.-Colonel E. M. WILSON, C.B., C.M.G., S. Farnborough (Representative of the Army Medical Service)

Apologies.

Read letters of apology for non-attendance from the President-elect, the Past President, Dr. Edgar Barnes, Fleet Surgeon Biden, R.N., Mr. Andrew Clark, Dr. James Craig, Professor D. W. Finlay, Dr. J. H. Galton, Dr. J. J. Giusani, Dr. J. Murray, Dr. F. M. Pope, Professor Saundby, Mr. W. D. Spanton, Mr. J. Lynn Thomas, C.B., and Dr. Denis Walshe.

Minutes.

The minutes of the last meeting (April 17th, 1907) having been printed and circulated, were taken as read and signed as correct.

Notice of Special Meeting.

Read notice convening meeting, of which the following is a copy:

British Medical Association,
6, Catherine Street, Strand,
London, W.C.
May 16th, 1907.

DEAR SIR,

A Special Meeting of the Council will be held on Wednesday, the 5th day of June, at 2 p.m., in the Board Room of the Metropolitan Asylums Board, Victoria Embankment.

The meeting is called in pursuance of Article XXII for the purpose of considering the resolutions passed by the Special Representative Meeting convened for May 29th. A copy of these resolutions will be forwarded, if possible, before the meeting of Council.

I am,
Yours faithfully,
H. LANGLEY BROWNE,
Chairman of Council.

Deaths of Members of Council.

The CHAIRMAN OF COUNCIL reported the deaths since the last meeting of Dr. E. Markham Skerritt and Dr. Joseph Groves.

Moved by the CHAIRMAN OF COUNCIL, seconded by the CHAIRMAN OF REPRESENTATIVE MEETINGS, and

Resolved: That this Council desires to place on record its profound regret at the loss of their valued colleague, Dr. E. Markham Skerritt, and to convey their sincere sympathy to his widow. Dr. Skerritt was a member of the Association for thirty-five years, and from the very first actively concerned himself in the welfare and advancement of the highest interests of the Association, both through the Bath and Bristol Branch and on the Central Council. Dr. Skerritt during his career occupied with conspicuous success the various offices in his Branch; from 1902 to 1905 he was Treasurer to the Association, and at the time

of his death a Vice-President. His shrewd abilities and wise counsels will long be remembered by all those who had the pleasure of working with him.

Moved by the CHAIRMAN OF COUNCIL, seconded by Mr. PARKINSON, and

Resolved: That the Council learns with profound regret of the death of Dr. Joseph Groves. Dr. Groves had been a member of the Association for thirty-three years, for the last ten of which he had assiduously represented the Southern Branch on the Central Council. By the death of Dr. Groves the Association loses a valued member and the Council a fearless critic.

The General Medical Council and the Association.

The CHAIRMAN reported that a communication had been received from the Registrar of the General Medical Council which raised an important question—a question that could be best explained by quoting the following passage from the Presidential Address of the last session of the General Medical Council:

"A question seriously affecting the position of members of the Council as a judicial body has been raised by a communication from the Chairman of the Central Ethical Committee of the British Medical Association. The communication informs us that the annual representative meeting has decided that the Association should act as complainant in cases which might require to be brought before the General Medical Council; and that the Central Ethical Committee is the body whose duty it would be to consider whether a given case should be so brought and to prepare the case for our consideration. As many members of the Council (and of the Penal Cases Committee) are members of the British Medical Association, it appeared desirable that their position in regard to complaints made by the Association, if such were brought for inquiry before the Council (or the Committee), should be made clear. I accordingly consulted our legal advisers, who are familiar with the *dicta* of the Lords Justices in cases (such as Leeson's and Allinson's) where the suspicion of bias or prejudice on the part of members of the Council has been alleged as a ground of appeal against its decisions. Their advice is that the proper course to be taken by a member of the Council who belongs to the Association is not merely to withdraw from the decision of a case in which the Association acts as complainant, but to withdraw from membership of the Association altogether. The question of acting on this advice became urgent in my own case, when at the beginning of this month the Registrar reported that a formal complaint against a practitioner had been lodged at the office by a Branch of the Association, and that the documents awaited my consideration in pursuance of the Standing Orders. As your President, I could not take even the first step towards a judicial inquiry so long as I remained a member of the British Medical Association. I therefore, without delay, sent in my resignation to the General Secretary. So soon as my resignation takes effect I shall be able to look at the complaint; but I shall not be able to take the advice of the Penal Cases Committee upon the matter until the other members have also ceased to be connected with the Association. I have made the foregoing statement, after careful reflection, because it seems to me of the highest importance that members of the Council should be cognizant of the position resulting from the decision of the representative meeting of the Association. If that decision becomes operative as regards either the central body or its branches, we who take any part in judicial inquiries have, in my opinion, no choice but to sever our connexion with the Association. However slight our connexion may be, circumstances might at any moment arise in relation to an inquiry where in the Association was interested which might be held to affect the impartiality of our judgement and so to invalidate our decision."

After a long discussion no action was taken.

Draft Charter.

The Council then proceeded to consider seriatim the minutes of the Representative Meeting of May 29th and 30th, together with the relative clauses contained in the draft Charter.

Moved by the CHAIRMAN OF COUNCIL, seconded by Sir VICTOR HORSLEY, and

Resolved: That the draft Charter, Ordinances, and By-laws as amended by the Representative Meeting be considered.

Minute 17: Clause 1.

On Minute 17 of the Representative Meeting:

That Clause 1 stand part of the draft Charter.

Moved by Dr. HELME, seconded by Dr. HASLIP:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with the Resolution 17 of the Representative Meeting, on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put to the meeting, the CHAIRMAN announced that *16 voted for, and 14 against.*

Whereupon in accordance with the Standing Orders 5 members rose and demanded that the names of those voting for and against should be taken.

For: Messrs. Anderson, Bradshaw, Carline, Collier, Goyder, Hamilton, Haslip, Helme, Nasmyth, Parkinson, Roberts, Ross, Shadwell, Shaw, and Straton.

Against: Messrs. the Chairman of Representative Meetings, the Treasurer, Ballance, Buist, Cuthbert, Drake-Brockman, Eastes, Goff, Horsley, Joubert de la Ferté, Kinsey, Martin, Morier, Rayner, Verrall Webb, and Wilson.

This having been done, the CHAIRMAN announced that the motion was *lost—15 to 17.*

Minute 32a: Clause 2.

Minute 32a: That Subclause 2 (2) (vi) be approved.

Moved by Mr. STRATON, seconded by Dr. MCKENZIE JOHNSTON:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 32a of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair, the voting was declared to be *15 for and 15 against.*

On the demand of five members the names were ordered to be taken as follows:

For: Messrs. Bradshaw, Brierley, Carline, Eastes, Goff, Goyder, Hamilton, Helme, Johnston, Nasmyth, Parkinson, Roberts, Ross, Straton, and Walker.

Against: Messrs. the Chairman of Representative Meetings, the Treasurer, Anderson, Ballance, Buist, Cuthbert, Haslip, Horsley, Joubert de la Ferté, Kinsey, Martin, Rayner, Shadwell, Shaw, Verrall, and Wilson.

The CHAIRMAN then declared the motion lost, the voting being *15 for and 16 against.*

Minute 37: Clause 2.

Minute 37: That subclause 2 (2) (vii) be approved.

Moved by Dr. HAMILTON, seconded by Dr. CARLINE:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 37 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *lost.*

Minute 40: Clause 2.

Minute 40: That subclause 2 (2) (viii) be approved.

Moved by Dr. BRASSEY BRIERLEY, seconded by Mr. STRATON:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 40 of the Representative Meeting on the ground that the resolution in question does not represent the wishes of the Association.

The motion having been put from the Chair was declared to be *lost 12 to 14.*

Minute 71: Clause 9.

Minute 71: That subclause 9 (1) (g) be approved.

Moved by Mr. EASTES, seconded by Mr. STRATON:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolu-

tion 71 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *lost.*

Minute 123: Ordinance 17.

Minute 123: That Ordinance 17 (b) be approved.

Moved by Dr. NORMAN WALKER, seconded by Dr. HAMILTON:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 123 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *carried—14 for, 9 against.*

Minute 126: Ordinance 17.

Minute 126: That Ordinance 17 (c) be approved.

Moved by Mr. EASTES:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 126 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *lost—7 to 11.*

Minute 176: By-law 18.

Minute 176: That By-law 18 (1) be approved.

Moved by Dr. HAMILTON, seconded by Mr. EASTES:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 176 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *lost.*

Minute 183: By-law 20.

Minute 183: That By-law 20 be approved.

Moved by Mr. PARKINSON, seconded by Mr. STRATON:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolu ion 183 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *lost.*

Minute 283: By-law 36.

Minute 283: Resolved, *nem. con.:* That the principle of the election of the Council be that the Council be elected partly by the Branches and partly by the Representative Body.

Moved by Dr. MCKENZIE JOHNSTON, seconded by Mr. PARKINSON:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 283 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *carried—15 to 8.*

On a demand that the names should be taken the record was as follows:

For: (15) Messrs. the Treasurer, Eastes, Goff, Goyder, Hamilton, Haslip, Johnston, Nasmyth, Parkinson, Roberts, Ross, Shadwell, Shaw Straton, and Walker.

Against: (8) Messrs. the Chairman of Representative Meetings, Ballance, Buist, Horsley, Kinsey, Martin, Rayner, and Verrall.

Minute 287: By-law 36.

Minute 287: Resolved, with 1 dissentient: That the ratio be 2 to 1.

Moved by Mr. PARKINSON, seconded by Dr. HAMILTON:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 287 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *carried—14 to 8.*

Minute 293: By-law 36.

Minute 293: Resolved, with 5 dissentients: That the Council include 24 members elected by the Branches in the United Kingdom; members, not exceeding 7 in number, elected by the Branches not in the United Kingdom; 12 members elected by the Representative Body; 6 *ex-officio* members and 3 members representing the Navy, Army, and Indian Medical Services.

Moved by Mr. PARKINSON, seconded by Dr. HAMILTON;

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 293 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *carried—15 to 8.*

Minute 298: By law 36.

Minute 298: Resolved *nem. con.:* That By-law 36, as amended, be approved, as follows:

The Council shall be composed of the *ex-officio* members mentioned in the Ordinances and of members duly elected by the following bodies—namely, (*a*) By the Branches of the Association in the United Kingdom which shall be grouped for the purpose of electing 24 members of the Council in the manner prescribed by By-law 37; (*b*) by the Branches of the Association not in the United Kingdom which shall be grouped for the purpose of electing members of the Council not exceeding 7 in number; (*c*) by the Representative Body, which shall elect annually 12 members of the Council from lists of candidates nominated by (i) Branch Councils, (ii) by Divisions, (iii) by the Scottish Committee, (iv) by the Irish Committee, or (v) by at least 10 members resident in the district of the United Kingdom to which the candidate nominated belongs; and (*d*) by the Council itself which shall have power to add to its numbers at any of its meetings all or any one or more of the following, namely:—One Medical Officer on the active or retired list of each of the following Services:—The Royal Navy Medical Service, the Army Medical Service, and the Indian Medical Service, provided that in each case such medical officer shall not have retired from the active list more than five years previously.

Moved by Dr. HAMILTON, seconded by Dr. CECIL SHAW:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 298 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *carried—15 to 8.*

Minute 299: By-law 37.

Minute 299: That By-law 37 be redrafted to provide that the groupings of the Branches in the United Kingdom for the election of the Council be generally as shown in Appendix E to the Committee's Report; that each such group elect four members of Council; that the members elected by the Representative Body be topographically distributed among the same districts and in the same proportion; and that for this purpose By-law 37 be referred back to the Organization Committee, with the instruction that they reconsider also the details of the grouping and circulate the redrafted By-law to the Divisions.

The motion was carried.

Moved by Mr. STRATON, seconded by Mr. PARKINSON:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 299 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *carried—11 to 4.*

Minute 303: By-law 38.

Minute 303: That By-law 38, subject to amendment as directed, be approved.

Moved by Mr. PARKINSON, seconded by Dr. HAMILTON:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 303 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *carried—12 to 5.*

Minute 328: By-law 29.

Minute 328: That By-law 29 be amended by substituting for the word "ten" in the fourth line the word "twelve."

Moved by Dr. Hamilton, seconded by Dr. Shadwell:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 328 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *carried—11 to 8.*

Minute 330: By-law 29.

Minute 330: That By-law 29, as amended, be approved, as follows:

29. The business of the Annual Representative Meeting shall be to elect a Representative of a Division as the Chairman of Representative Meetings, and also a Representative of a Division as Deputy-Chairman; to elect a President of the Association; to elect twelve Members of the Council, and such other Officers and such Members of Committees as by the Ordinances or By-laws be required to be so elected; to consider the election of Honorary Members when recommended by the Council; to appoint a place at which the next Annual Representative Meeting shall be held; to consider the Annual Financial Statement and Balance Sheet presented by the Council; to appoint an Auditor or Auditors (who shall be a professional Accountant or professional Accountants) and fix his or their remuneration; to consider Reports of the Council, Reports of Committees instructed to report to such Meeting, and Reports of Branches and motions relating to the adoption of such Reports in whole or in part; to make new Ordinances or By-laws and alter and repeal existing Ordinances or By-laws, and to consider any Resolution relating to the honour and interests of the Medical Profession or of the Association which shall have been adopted by any Division or Branch, provided that any such Resolution proposing material alteration of the Constitution or policy of the Association shall have been submitted through the Journal for the consideration of all the Divisions not less than three months previously.

Moved by Mr. Parkinson, seconded by Dr. Hamilton:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 330 of the Representative Meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *carried—12 to 5.*

Minute 342: Schedule to By-laws.

Minute 342: That the composition, duties, and powers of the Finance Committee, as stated in the Schedule to the By-laws, be approved.

Moved by Dr. McKenzie Johnston, seconded by Dr. Norman Walker:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 342 of the Representative Meetings on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *carried—11 to 8.*

Minute 345: Schedule to By-laws.

Minute 345: That the composition, duties, and powers of the Journal Committee, as stated in the Schedule to the By-laws, be approved.

Moved by Mr. Eastes, seconded by Dr. McKenzie Johnston:

That the Council determine upon a Referendum under Articles XXII and XXXV in connexion with Resolution 345 of the Representative meeting on the ground that the resolution in question does not properly represent the wishes of the Association.

The motion having been put from the Chair was declared to be *carried—13 to 7.*

Moved by the Chairman of Representative Meetings, seconded by Sir Victor Horsley, and resolved:

That the Organization Committee be instructed to consider and report to Council to carry out the amendments in the draft Charter, Ordinances and By-laws which are required to carry into effect the resolutions of the Special Representative Meeting other than those which have been made the subject of a Referendum by the Council, together with such consequential drafting changes as the Council may deem advisable, and report to the Council as soon as possible.

In reply to Sir Victor Horsley, the Chairman undertook to insert a notice in the Journal to explain that the Charter could not be considered at Exeter, on account of there not being sufficient time to receive the comments from the Colonial Branches.

Moved by Mr. Straton, seconded by Mr. Eastes, and

Resolved: That a Committee be appointed to prepare a draft of the observations which the Council may think desirable to submit to the Divisions.

That the Committee consist of: Dr. W. Collier, Mr. George Eastes, Dr. McKenzie Johnston, Mr. C. H. W. Parkinson, and Dr. Cecil Shaw.

Dr. McKenzie Johnston handed in the following motion, which the Chairman ruled could be properly considered when the time came for preparing such observations as the Council think desirable to remit to the Divisions on the whole question of the Referendum:

That while not approving of all the provisions in the draft Charter considered by the Special Representative Meeting in May, this Council is of opinion that the present time is not the most suitable opportunity of calling the attention of members of the Association to those points which it considers do not properly represent the wishes of the Association.

The Council therefore decides to postpone consideration of the question of exercising its power of Referendum until the final draft of the proposed Charter has been before a Representative Meeting as provided in Resolution 368 of the Special Representative Meeting.

The Council having completed its business, rose at 7.50.

The Science Committee

of the

British Medical Association.

REPORTS ON PROGRESS OF RESEARCHES.

The Science Committee has received the following reports from the Research Scholars and the recipients of grants upon the investigations carried out by them:

REPORTS FROM THE RESEARCH SCHOLARS.

Major Greenwood, jun., M.R.C.S., L.R.C.P.

Influence of Increased Barometric Pressure.

In Mr. Greenwood's report for last year it was stated that Dr. Hill and himself were then investigating the rate at which the body fluids are saturated with dissolved nitrogen when exposed to high-air pressures. A complete account of these experiments was published in the *Proceedings of the Royal Society* (B, vol. lxxix, p. 21, etc.), and he has recently summarized the results in the British Medical Journal.

A third paper was communicated by them to the Royal Society on February 7th. In this they show that under normal conditions oxygen cannot be a factor in decompression symptoms because of the avidity with which the tissue elements combine with this gas, yet if the cells be poisoned by a sufficiently long exposure to high-tension oxygen, then, on sudden decompression, oxygen bubbles are liberated just as is the case with nitrogen. These conclusions appeared to hold both for frogs and rats.

Another subject they have investigated is the influence of age and body weight in caisson disease, and they intend to publish a paper on this in the course of a few weeks. As a result of about 100 experiments on rats, mice, rabbits, and cats, they have been able to prove that, comparing animals of the same species, the young are far less susceptible to decompression effects than the old, and comparing different species, small animals escape much more easily than large ones. These experiments confirm and extend the conclusions to be drawn from statistics of caisson works. To estimate the relative

importance of age and weight is, for obvious reasons, not easy, but it may be remarked that mice appear distinctly more susceptible to oxygen *poisoning* than larger animals. They have also carried out some experiments of interest on lepidopterous larvae. If the ordinarily received pathology of caisson disease be correct, then animals whose respiratory exchange is effected without the intervention of a circulating fluid should be immune from decompression symptoms. Mr. Greenwood finds this to be the case in several species of Lepidoptera tested. Instantaneous decompression from + 25 atmospheres was quite innocuous. Some of these experiments have been described in the *Proceedings of the Physiological Society*[1]; they afford further proof, readily capable of demonstration to a lay audience, that the embolic theory of caisson disease is correct.

Mr. Greenwood and Dr. Hill have also shown that the desaturation of colloidal solutions such as the body fluids is a relatively slow process. Colloidal solutions exposed to high pressures of air or oxygen retain an excess of gas, are supersaturated for some time after the external pressure has been lowered. These results help to explain the length of time which elapsed before equilibrium was established between the amount of nitrogen dissolved in urine and the external pressure as noted in their second paper; they also throw light on the late onset of caisson disease, a peculiarity often mentioned in clinical reports. Mr. Greenwood has made several more observations on the accumulation of CO_2 with varying ventilation rates, and believes the formula given in his last report will serve as a first approximation; but it is less easily tested on dogs than cats, owing to the greater restlessness of the former animal and its consequently more irregular CO_2 output. He finds that very high percentages—5 to 6 per cent.—of CO_2 do not increase the liability to decompression symptoms of the animals he has used, but many more experiments must be done to fix the exact limit. They have, at least, shown that an abnormal sensibility to CO_2 does not exist under high air pressures. In this connexion he might say that they have thought it well to investigate more fully the effect on the respiratory rhythm of injecting blood saturated with CO_2 into the carotid artery and of making the animal breathe nearly pure CO_2 before and after section of the vagi. These experiments are being carried out by themselves and Mr. M. Flack, and they expect to publish an account shortly.

They also propose to extend their researches dealing with the rate of saturation of the body fluids; and certain disputed points in the actual management of decompression—whether it should be uniform or in stages—are to be the subjects of further inquiry.

W. H. HARVEY, M.B.

The research work upon which Dr. Harvey has been engaged during the past year has been (1) the investigation of the origin of the lymphocytosis known to follow the exhibition of certain drugs, (2) the origin of bone formation within the walls of diseased blood vessels, (3) the influence of increased blood pressure upon the production of pathological changes in the walls of arteries, and (4) upon hepatic metabolism, especially in connexion with alteration of the glycogen content.

Lymphocytosis Produced by Certain Drugs.

The first subject has been completed, and his results incorporated in a paper under the title of Experimental Lymphocytosis which appeared in the *Journal of Physiology*, 1906, vol. xxxv, pages 115 to 118, a reprint of which he encloses. Certain drugs (pilocarpine, muscarine, adrenaline, etc.) were injected into the ear veins of healthy normal rabbits; a very decided leucocytosis was obtained, which was found to be principally due to a remarkable increase in number of the lymphocytes. The same drugs were administered to other healthy rabbits, previously atropinized; these gave negative results. Concordant positive results were likewise obtained by direct stimulation of the splenic nerve by the induction coil and concordant negative results by ligation of the splenic vessels, followed by the exhibition of the drugs above named. Barium chloride, which acts directly on plain muscle and not on the nerve endings, produced, even in the presence of atropine, a very marked lymphocytosis.

[1] *Journal of Physiology*, vol. xxxv.

Bone Formation in Blood Vessels.

The second investigation has also been completed and the MS. has been forwarded to the *Journal of Medical Research* (Boston). The method of observation consisted in the production of extreme calcareous degeneration in the aortic wall, in rabbits, by the direct application of an irritant (silver nitrate or copper sulphate solution) to the tunica adventitia. In eight out of ten experiments he has succeeded in causing the formation of true bone with, at times, red marrow, within the tunica media. Further, it has been possible to trace step by step the gradual formation of osseous tissue from young fibroblasts. This series of experiments throws light upon this heteroplasia, which is peculiarly interesting, as it occurs not infrequently in man as well as in the lower animals.

Increased Blood Pressure and Arterial Disease.

The third subject, though not yet completed, has shown some valuable results. The experiments consist of daily compression, with the fingers, of the aorta in rabbits for short intervals (about three minutes), through the abdominal wall. By this means a transitory increase in blood pressure obtains, and he has thus produced extensive calcareous degeneration in the middle coat of the aorta, above the level of compression. These experiments are nearly completed.

Hepatic Metabolism and Glycogen Formation.

The work upon glycogen has consisted of a large number of experiments which were performed with the object of determining the effect of pancreatic extract upon the formation of this substance in the liver. In 6 cases the liver was perfused for one hour at body temperature with Locke's saline containing glucose. Samples of this solution were taken at intervals of ten minutes, and the amount of sugar contained in each sample was estimated. Before commencing the perfusion, a lobe of the liver was ligatured off to serve as a control. The amount of sugar and glycogen in the liver substance were estimated from both the isolated and the perfused lobes, the variation showing the results of the perfusion. In the remaining experiments an alcoholic extract of fresh pancreas was evaporated to dryness and taken up with saline; this was then added to the perfusing fluid. The results of these experiments are not easy to understand, and further investigation is proceeding.

H. DE R. MORGAN, M.R.C.S, L.R.C.P., D.P.H.

Upon the Bacteriology of the Summer Diarrhoea of Infants: Resumé of Second Communication.

During last summer (1906), 54 cases from the ward set apart for diarrhoea at the Hospital for Sick Children, Great Ormond Street, were examined bacteriologically in the same manner as during the previous year, except that on this occasion the spleens and mesenteric glands of the fatal cases were examined as well as the stools and small and large intestines.

It was thought advisable to continue the use of the lactose agar plates this year, in order to isolate as many of the non-lactose fermenters as possible, so as to compare the relative frequency of each species.

Of the 54 cases, 34 were diagnosed clinically as summer diarrhoea, 2 as infection by the Gaertner bacillus, and the remaining 18 to various ailments complicated with diarrhoea.

The bacillus described by Mr. Morgan last year, and which was designated as No. 1, was found in 15 out of the 34 cases of summer diarrhoea, whereas no other non-lactose fermenter was found in more than 5 cases of the total 54.

Bacillus No. 1 was also found in 4 out of the 18 other cases complicated with diarrhoea.

The *Bacillus enteritidis* of Gaertner was found in both cases clinically diagnosed as due to this infection.

Bacillus No. 1, it will be remembered, is a motile rod about the size of the *Bacillus enteritidis* of Gaertner, gives acid and gas when grown on glucose broth, but causes no reaction when grown on broths containing lactose, mannite, dulcite, or cane sugar. It produces indol abundantly when grown for five days at 37° C. on peptone beef broth, and produces a slight alkaline reaction when grown on litmus milk.

The virulence of Bacillus No. 1 was again tested similarly to last year by feeding experiments on young rats; the bacilli isolated from each of the 19 cases were each

tested in this manner, and were found to cause diarrhoea and death in all except two instances, the bacillus being recovered from the animals' spleens in about half the cases. One of the strains of No. 1 which proved non-virulent for young rats after three feeding experiments with different animals, was proved to be virulent for a monkey, causing diarrhoea in twelve days and death at the end of a fortnight. Three other monkeys were also fed on three different strains of Bacillus No. 1, with the result that all three animals died with severe diarrhoea in a few days.

Conclusions.

It appears from these investigations that Bacillus No. 1 should be regarded as a factor—perhaps the most important factor—in the causation of summer diarrhoea in infants.

The reasons on which this conclusion is based are as follows:

It has never been isolated in any other morbid condition, nor has it been observed in water, milk, sewage, or human faeces.

In all the cases of the disease examined during two consecutive summers it was found to preponderate in frequency over all other non-lactose fermenting bacilli—for example, out of 58 cases examined during the summer of 1905 it was isolated from 28, and out of 34 cases in 1906 it was isolated from 15 cases.

Finally, it is pathogenic for animals, producing diarrhoea and death in young rabbits and rats and full grown monkeys when these animals are experimentally fed on cultures.

T. SHIRLEY HELE, M.R.C.S., L.R.C.P.

Cystinuria.

For the first two months of his tenure of the Research Scholarship Mr. Shirley Hele was occupied in making himself familiar with various quantitative processes, and in preparing materials for future use. From the beginning of April a case of cystinuria has been under investigation. The output of the chief urinary constituents, total nitrogen, urea nitrogen, cystin, total sulphur, sulphate, etc., has been followed from day to day, and examinations have been made for monamino acids, glycocol, etc., and for diamines. As yet, however, no diamines have been obtained. During periods of constant diet, cystin obtained from horsehair, tyrosin and arginin has been administered by the mouth. It may be stated provisionally that cystin was oxidized to sulphate, arginin gave rise to no diamine, while on the tyrosin days there appeared in the urine a small quantity of the body described previously by Drs. Garrod and Hurtley,[2] whose benzoyl derivative melts at 253° C. The nature of this body is under consideration. Much work yet remains to be done before a full report can be submitted.

REPORTS OF GRANTEES.

PHYSIOLOGY.

CECIL PRICE-JONES, M.B.

Comparative Cytology.

Work in connexion with his research has consisted of:

(*a*) Observations of the embryology of the blood cells in the chick.

(*b*) Cytological examination of the blood and bone marrow of the monkey, horse, goat, dog, cat, rabbit, guinea-pig, rat, mouse, fowl, pigeon, tortoise, lizard, and also of newly-born and fetal animals. This section being chiefly concerned with the estimation of standards of healthy blood cells and bone marrow in laboratory animals, and incidentally noting the various morphology of blood cells in different vertebrate groups. Many observations have also been made of the appearance of the blood and bone marrow in animals inoculated with certain pathogenic germs.

(*c*) The examination of blood and bone marrow of human subjects suffering from various diseases.

The subject is comprehensive, and although much is now nearing completion, there is yet a considerable amount unfinished. As stated last year, the progress of the work was hindered by Malta fever which Dr Price-Jones contracted in this laboratory. It is also further hindered by the difficulty of obtaining monkeys and the great cost of these animals.

LEONARD S. DUDGEON, M.R.C.P.

Functions of the Spleen.

A series of experiments have been undertaken to obtain from the rabbit (by the inoculation of emulsions of the spleen from guinea-pigs) a serum that shall be cytotoxic for the guinea pig.

The investigation is an attempt to throw some light upon—

1. The function of the spleen and the relation of the spleen to the lymphocytes and lymphoid tissue in general.

2. The part played by this organ in acute infective processes.

3. To make further observations on the substances which are present in the immune serums of the rabbits and guinea-pigs which are being treated in the above manner.

Five rabbits have received (at intervals of ten days) an injection of splenic emulsion from a guinea-pig, under strict aseptic precautions. After eight intraperitoneal inoculations of the above nature have been administered the rabbit is killed, and as much serum as possible obtained. This is then injected in various doses into guinea-pigs intraperitoneally. The rabbit's serum is very toxic for the guinea-pigs, and the animals immediately become very ill and die.

Very interesting results were obtained at the autopsy of these latter guinea-pigs.

Numerous control rabbits have been used in conjunction with the above experiments. In addition, control injections of heated toxic serum have been made into guinea-pigs. Experiments have been made to determine the action of the substances contained in the serum of the immunized rabbits upon the red cells and leucocytes of the guinea pig.

M. S. PEMBREY, M.D.

Dyspnoea in Muscular Work.

The research upon the causes of dyspnoea during severe muscular work and in different diseases is not yet complete, but some of the results will be published probably during this summer. The relation of "muscular" dyspnoea to the heart, circulation, respiration, and temperature has been investigated with the aid of ten medical students; the dyspnoea due to disease has been investigated in cases of cardiac disease, pneumonia, and anaemia, in conjunction with Dr. Beddard.

MISS WINIFRED C. CULLIS.

Gaseous Metabolism of Mammalian Heart.

The grant has been expended in meeting some of the expenses of a research into the gaseous metabolism of the mammalian heart when perfused with oxygenated Ringer's solution. For this purpose a method of determining the gaseous content of small quantities (10 c.cm.) of saline solution, originally worked out by Mr. Barcroft, has been further elaborated and tested, until a form of apparatus capable of determining them with sufficient accuracy has been devised. The results obtained for the mammalian heart closely agree with those obtained by Barcroft and Dixon working by a different method. The preliminary experiments are now completed, and will shortly be published. The method has a special advantage in that it will allow a study of the gaseous exchanges under the simplest possible conditions, and thus enable the actions of drugs or simple foodstuffs to be determined under conditions in which the only fresh variable introduced is the addition of the substance in question.

ANNIE LOUISE MCILROY, M.D.

The Origin of the Follicular Cells of the Ovary and the Germinal Epithelium.

Owing to the difficulty of finding a suitable place for the keeping of rabbits Dr. McIlroy has been unable to begin working until February of this year. She is now working in the Physiology Laboratory of Glasgow University, under the supervision of Professor Noël Paton, and as the time has been so short she wishes to continue her investigations for another year, as it has been difficult to obtain ovaries at all stages of fetal growth. Dr. McIlroy is at present investigating the rabbit embryo at about 18 to 26 days by means of serial sections, and also the pig embryo at the same stage of growth, and cannot therefore give any description of the results of the investigation until some months later.

NEUROLOGY.

PROFESSOR C. S. SHERRINGTON, M.D., F.R.S.

Interim Report on Investigation into the Mechanism of Locked-jaw.

Professor Sherrington reports on the work undertaken by aid of the grant allowed him by the Science Committee and Council of the Association, as follows:

The work is an investigation into the more exact mode of action of strychnine and of the toxin of the tetanus bacillus, especially in regard to the phenomenon of lock-jaw. The investigation finds that the muscles which in the normal act of opening the jaw in order to take food are relaxed, are by the influence of these poisons thrown into contraction, instead of being relaxed. This is due to these poisons converting the process of nervous inhibition into the opposite process of excitation. We are at present ignorant of what the exact nature of the excitatory process in nerve centres may be; but it is probable that the process of inhibition must be in its nature the direct opposite of that of excitation. Both strychnine and tetanus toxin seem, from this investigation, to so alter the processes in the lower nervous centres that the process of inhibition, whatever its nature may be, becomes altered into the directly converse process of excitation. Although both the poisons produce this effect, the investigation indicates that they do not produce this alteration in one and the same way. Strychnine seems to act from the afferent side and upon the afferent part of the nerve centre; on the other hand, tetanus toxin appears to act from the motor side, and to produce exalted excitability of the efferent elements of the nervous centre. The practical result of both amounts, however, to the same thing. The muscles which should relax, instead of relaxing contract. The examination of the muscles acting on the jaw shows that the closing muscles are very much more powerful than the opening muscles. Since, therefore, the opening muscles, instead of being unopposed, or indeed helped, by the concurrent relaxation of the more powerful closers, are under the action of the poisons opposed by the simultaneous contraction of their more powerful antagonists: a complete inco-ordination results, so that the mouth, instead of being opened for taking food, etc., is clenched more tightly than before. The investigation finds that this is not due to any action of the poisons on the muscles themselves, nor on the higher—for example, cerebral nerve-centres working the muscles. The inquiry traces the change to lie in the lower or medullary motor centres working the muscles. This has been made out both in the monkey and in the cat; also for strychnine in the dog; but it has been found, in accord with previous observations on tetanus bacilli and the dog, that no effect could be produced by the tetanus toxin on the jaw of the dog; and this in spite of attempts with doses relatively enormous.

The investigation has also ascertained that the lock-jaw produced by tetanus bacilli or by tetanus toxin is at first confined to the nerve centres of one-half of the jaw, and remains so restricted for some time. In this stage, if the two halves of the lower jaw are freed one from another by incision through the symphysis, relief is for the period obtained and the animal can still feed itself, one-half of the jaw still working normally.

The research has also made it clear that the reactions of the motor cortex of the brain are altered by strychnine and by tetanus toxin as was reported in an earlier stage of the investigation. And it is now further found that the alteration which occurs, by which the action of the cortical centre for opening the mouth is converted into a closing of the mouth, is not referable to the action of strychnine and tetanus toxin respectively on the cortical centre itself. The reversal of the normal action of the cortical centre is found to have its cause in the change these agents produce, not in the cerebral cortex, but in the lower motor nervous centres through which the cortical centres exert their influence on the motor nerves passing to the muscles employed in mastication and the prehension of food by the mouth.

J. G. SLADE, M.B.

Action of Muscle Extract.

Mr. Slade finds that muscle extract has no stimulant action on the central nervous system, and that it does not increase man's power of doing physical work. In moderate doses it increases the rate and activity of the heart and slightly constricts the internal vessels. It also augments the movements of plain muscle throughout the body, this action being probably due to the ornithin and novain. One important action of the extract, when applied locally to muscle as a 0.5 per cent. solution, is to increase the efficiency of the muscle in the performance of work. Xanthin has a similar effect, but kreatin is inactive. It was shown, further, that the effect of fatiguing a muscle before preparing an extract from it is to increase its extractives and increase the activity of the extract. If injected into animals in large amounts muscle extract causes great languor, prostration, and all the symptoms characteristic of fatigue.

DR. DAVID ORR AND DR. ROWS.

Lesions of Spinal and Cranial Nerves Experimentally Produced by Toxins.

Since the publication of their last report Dr. Orr and Dr. Rows have continued the investigation of the possibility of toxic infection of the central nervous system via the ascending lymph stream in peripheral nerves. The experimental method they employed consisted in placing a sealed celloidin capsule containing a broth culture of an organism in contact with the sciatic nerve of a rabbit or dog, choosing this method on the assumption that the toxins diffusing out through the celloidin would ascend in the perineural lymph stream to the cord and there induce degeneration. On examining the cord by Marchi's osmic acid method they found ample evidence of the correctness of this supposition. In the posterior columns the degeneration commenced where the fibres lost the neurilemma sheath, spread into the root entry zones and affected the collaterals, passing into the grey matter.

To determine whether the cranial nerves could be affected in like manner they placed capsules under the skin of a rabbit's cheek, and found that in cranial nerves also toxins spread upwards, and caused degeneration from the point where the neurilemma sheath is lost inwards along their intramedullary course. In this series of experiments they raised the virulence of the organism before use, and demonstrated degeneration of a more acute type. The degeneration of the motor cranial nerves could be traced as far inwards as the nuclei of origin, and consisted, in some instances, in an acute necrosis of the myelin sheath, which stained deeply with osmic acid and assumed various morphological alterations, for example, short and long oval masses, elongated slender threads with scattered moniliform swellings. The degeneration was less marked towards the nuclei of origin. One degenerated fifth cranial nerve showed Wallerian degeneration of its descending root as far as the lower end of the medulla. There was no degeneration of the extramedullary portion of the nerves.

Conclusions: (1) Toxins readily travel up spinal and cranial nerves to the central nervous system. (2) While these nerves in their extramedullary part possess a neurilemma sheath they are protected against toxins by its vital action; the intramedullary portion—devoid of neurilemma—readily undergoes degeneration. (3) The first change is a primary degeneration of the myelin; axis cylinders and nerve cells are affected later. The results of the investigations suggest the possible lymphogenous origin of some nervous affections.

PROFESSOR W. D. HALLIBURTON, M.D., F.R.S.

The Relation of Structure to Function in the Brain.

Professor Halliburton has carried out a research on localization of function in brain of lemur. The work on this subject, which is being carried out by Professor Halliburton and Dr. Mott, is not yet completed. A preliminary account of their results was given at a recent meeting of the Physiological Society, and these promise to be of great interest. It has been found that histological structure is correlated to the results of experimental methods.

BASIL KILVINGTON, M.D., of Melbourne University.

Regeneration of Nerves.

Dr. Kilvington has not supplied the usual short paragraph descriptive of his research, but has forwarded a full report of his investigation on the Regeneration of Nerves, with Regard to Surgical Treatment of Certain Paralyses, printed in the BRITISH MEDICAL JOURNAL of April 27th, 1907, p. 988.

PATHOLOGY.

David Forsyth, M.D.

Parathyroid Glands.

The research on the parathyroid glands has been carried on during the past year, and has included investigations on the glands in man, mammals generally, and birds. A considerable amount of evidence bearing on the relation between the parathyroids and the thyroid gland has been collected, and the results will shortly be ready for publication. Communications, preliminary and otherwise, have already appeared in the British Medical Journal and the *Journal of Physiology*.

H. Bayon, M.D.

The Histogenesis of Goître.

Since Dr. Bayon received the grant he has carefully weighed and examined all the thyroids at the autopsies he has made, over 80 *in toto*. Of all these he has prepared specimens for microscopical examination of right and left lobe, and in some cases also of the isthmus. About thirty specimens were stained for intracellular fat by means of osmium tetroxide (osmic acid). For the remainder Sudan III has been made use of.

Experiments have been made on three cats and two rabbits at the Lister Institute. They are still living, as late stages (twelve months and more) are needed of thyroid degeneration after ligature of the vessels.

Over 700 slides have been made and stained, with the help of C. E. Forsyth, M.B., who has helped him in the work, and the remainder are still in hand.

The results of the work are very satisfactory, but not sufficiently complete for immediate publication. A paper on the subject was read before the Pathological Society on May 21st, and a comprehensive review of the results obtained will be handed to the British Medical Journal in July.

In view of the limited means at his disposal, he was not able to undertake researches in goitrous districts; nor carry out as many experiments on animals as he should have liked.

He begs to return his sincere thanks to the Science Committee for having enabled him to continue these researches, which he believes will amply repay careful study.

Leonard Findlay, M.D.

Experimental Rickets.

Dr. Findlay has carried out a research on experimental rickets. During last summer he experimented with in all eight young animals, but was only successful in inducing rickets in three of them. He made weekly blood examinations, and after death investigated the histology of the haematopoietic organs. As controls he used two apparently healthy animals of the same age. So far he cannot say much about his results. During life the blood picture showed very little alteration, except a slight lymphocytosis from the normal, even though the animals had been rachitic for a matter of four weeks. *Post mortem* a slight hypertrophy of the lymphatic glands was detected, but otherwise no differences between the haematopoietic organs of the diseased and healthy animals were noted.

E. Ivens Sprigge, M.D.

Metabolism in Diabetes.

(1) Observations have been made on the metabolism in diabetes, with special reference to methods of treatment.

The Urine in Diseases of Muscles.

(2) An investigation has been begun into the distribution of the nitrogenous constituents of the urine in diseases involving the muscles, especially dealing with creatin and uric acid. The following have been investigated: Muscular dystrophy (4 cases), myasthenia gravis, amyotonia congenita, and tetanus. He is now engaged in working at some other affections of a similar nature. These results will shortly be ready for publication. (3) Arising out of the consideration of the diabetic diet, a number of feeding experiments are being made upon animals, and these will not be concluded for some months.

C. Slatter, F.R.C.S.

Effects of Oophorectomy.

The object of this research is to ascertain if double ovariotomy in the calf will check the growth of the pelvis. The calf was spayed in March, 1906, and it is proposed to have it killed in March, 1908, when the animal will be fully mature.

BACTERIOLOGY.

H. E. Annett, M.D., D.P.H.

Negative Chemiotaxis.

Professor H. E. Annett has carried out a research on negative chemiotaxis.

The researches proposed follow closely those of Bail and others on bacterial "aggressins"—those specific substances elaborated by certain "truly parasitic" bacteria in tissue juices at the site of infection, and which exhibit a markedly "negatively chemiotactic" action towards phagocytes.

These "aggressins" are described by their discoverer, Bail, to have the following properties, as far as has been up to the present ascertained:

1. They are present and can be obtained in the sterilized fluid which can be prepared by suitable technique from the exudation fluid at the site of the bacterial infection.

2. Such fluid so prepared, containing the specific substances, when introduced into an animal converts a sublethal dose of the infective agent into a fatal dose; and the simultaneous injection of such fluid and a simple fatal dose of the living virus not only accelerates death, but produces, according to *post-mortem* appearances, a much severer infection; this greater severity being especially indicated by the complete *absence*, or at least *scarcity*, of leucocytes (which are to be regarded as the chief defensive agents of the organism) at the site of infection.

3. Treatment of animals with such "aggressin" fluid endows them with a protective and specific immunity towards the infection.

4. The serum of animals "immunized," in the ordinary way, with this "aggressin" fluid confers on normal animals an immunity to the infection, and has positively chemiotactic properties.

Researches Undertaken and in Progress.

A. All the statements above mentioned of the properties of "aggressins" have been completely confirmed in the case of the bacillus of anthrax.

The experiments involved in this confirmation necessitated the following animal operations:

(*a*) Several passages of the anthrax bacillus through guinea-pigs and rabbits to increase its virulence.

(*b*) Inoculations intraperitoneally and intrapleurally into rabbits (guinea-pigs proved unsuitable) for the production of an exudate containing "aggressin."

(*c*) Centrifugalization and sterilization (in various ways) of such aggressin exudate.

(*d*) Inoculations of such material into animals (1) with anthrax first and second vaccines (attenuated cultures), to test the "aggressivity" of such fluid, and (2) for the purpose of immunization (several injections).

(*e*) Tests of the degree of immunity produced in the immunized animals.

(*f*) Tests of the degree of immunity against anthrax induced by injections of the serum of immunized animals.

(*g*) The experiments had to be repeated with larger animals with the object of (1) obtaining larger quantities of "aggressin" fluid (rabbit yields from 5 to 30 c.cm. only), and (2) also of producing more antiserum. Goats were employed with success, and the test animals were rabbits and guinea-pigs.

(*h*) A pony was also employed, but failed to produce more fluid.

It is necessary to use larger animals, such as donkeys and horses, both for production of "aggressin" fluid and of antiserum, for production of immunity in such animals as sheep, pigs, and cattle. It is proposed to continue in this direction.

B. An attempt was made to carry out experiments on similar lines with the micrococcus of cerebro-spinal meningitis of Weichselbaum, but failed for several reasons.

C. Experiments are in progress also on the same subject with the *Bacillus pestis* and the *Streptococcus pyogenes*

and others, and results, as far as they go, also confirm those obtained in the case of anthrax.

D. Fluids from a pony artificially infected with a virulent trypanosome were also tested, but no such "aggressin" properties could be demonstrated.

HERBERT FRENCH, M.D.

Widal's Reaction.

Dr. French has carried out an investigation in connexion with repeating the Widal serum test in patients who had given a positive reaction when they were suffering from typhoid fever in Guy's Hospital. The chief difficulty lay in tracing the patients, as the length of time since they had been discharged from the hospital varied from ten years down to a few months. Letters were sent to 271, and in many cases several letters were required before the patient could be found, owing to changed address. He was fortunate in finding and personally seeing 128. The results of his investigation are completed, and they are embodied in a paper which has been accepted by the Clinical Society of London, and which has been read before that Society. When printed a copy will be sent to the British Medical Association Library. The conclusions arrived at are, briefly:

1. That in most cases the Widal reaction disappears very rapidly after the typhoid fever.
2. That in 7.5 per cent. of the cases, nevertheless, it remains positive, and may remain so for over eight years, and it is not known how much longer.
3. That the age of the patient at the time of the typhoid fever has little or no influence on the likelihood of this persistence of the Widal reaction.
4. That the Widal reaction is apparently more liable to persist in males than in females.
5. That the presence of post-typhoidal suppuration increases the likelihood of this persistence, but is not its only cause.
6. That the cause of the persistence is not known in most cases, and that it is not possible, clinically, to say which patient will and which will not give a positive Widal reaction for years after typhoid fever.
7. That, nevertheless, in any given patient in whom the present symptoms might be due to typhoid fever, and in whom there is a possibility of a previous attack, the presence of a complete positive Widal reaction will leave only a 7.5 per cent. doubt as to whether this reaction is due to former enterica rather than to the present illness. The great probability is that a complete positive Widal reaction indicates present typhoid fever.

KENNETH W. GOADBY, M.R.C.S., L.R.C.P., L.D.S.

Bacteriology of Diseases of the Nasal Sinuses.

The investigation has been carried out in the following way:—Cases of (*a*) chronic disease of the nasal sinus; (*b*) acute (suppurative) disease of the nasal sinuses, were examined bacteriologically—10 cases in all, 3 acute, 7 chronic. The bacteria found have been isolated, and as far as possible identified by the use of Gordon and Andrew's methods. *Staphylococcus aureus* and *albus* and *Staphylococcus viscosus* have occurred in all the acute cases. In the chronic cases gas-forming organisms are present as well. The cases have been tested opsonically to the various organisms isolated, and in each instance curative vaccines have been tried, in four instances with complete success, in three with partial success, and in three with no apparent result. The investigation is proceeding.

DAVID NABARRO, M.D.

During the past year Dr. Nabarro has continued his investigations upon the occurrence of acid-fast organisms in butter and margarine. A further large number of samples has been examined, with the result that acid-fast bacilli have been found in many of the butters tested. He has not yet fully worked out the morphological, cultural, and pathogenic properties of these organisms, and is therefore unable at present to compare them with the organisms previously described by other observers. When these investigations are completed he hopes to publish a full paper upon the subject. Hitherto he has failed to find any acid-fast organisms in margarine, and intraperitoneal injections of melted margarine have never produced any lesions in the guinea-pigs experimented upon by him.

PHARMACOLOGY AND THERAPEUTICS.

ARTHUR R. CUSHNY, M.D., F.R.S.

Movements of the Uterus.

Dr. Cushny has extended and completed his researches: (1) On the movements of the uterus, which were published in the BRITISH MEDICAL JOURNAL, November 24th, 1906, p. 1460, and in full in the *Journal of Physiology*, vol. xxxv, p. 1. In connexion with this research, opportunities presented themselves of investigating the nutrition of the fetus by perfusion of the placenta through the umbilical arteries with Ringer's solution. The solution returning through the umbilical vein was examined for content of proteins and for the possible presence of amino-acids, as it had been suggested that nitrogen was supplied to the fetus in the latter form. The whole of the nitrogen, however, was found to leave the placenta in the form of proteins, no amino-acids being found in the fluid circulating in the umbilical vein.

Movements of the Jugular Vein.

(2) A number of experiments were performed on dogs in which the movements of the jugular vein were recorded along with those of the carotid and of the auricle and ventricle, in order to find whether the interpretation of the venous pulse wave made by Mackenzie and others could be confirmed by animal experiments. The results have not yet been published, but they confirm in the main the clinical observations. In this work Dr. Cushny was assisted by Dr. L. C. Ghosh, who will publish the results in the near future.

Effect of Chlorides and Bromides on the Urine.

(3) The urine was examined in several dogs under a diet with reduced saline content, in order to explain an observation made by several observers that the addition of chlorides or bromides in this condition causes alkalinity of the urine. The experiments are not yet completed, but it appears that the phenomenon is associated with a reduction in the phosphates excreted.

W. E. DIXON, M.D.

Action of Drugs on Skin Vessels.

Dr. Dixon reports on the innervation and action of drugs on skin vessels. Since his last report about twenty-two further experiments have been made with special reference to vascular reflexes. Besides the plethysmographic method of observation a number of experiments have been performed in which the pressure in the facial artery and vein was measured. He hopes to be in a position to publish his results very shortly.

F. H. THIELE, M.D.

Adrenalin.

Dr. F. H. Thiele has, with Dr. Bolton, conducted experiments on the production of arterial disease in animals. Further experiments have been made with adrenalin, nicotine, piperidine, barium chloride, and with digitalis and apocodeine. Attention has been chiefly directed to obtaining a drug which will neutralize adrenalin, but so far none has been found which will effectually do this without producing fatal results. Further experiments are being done in this direction; also in the direction of increasing the viscosity of the blood.

Further experiments on blood pressure, control of basal ganglia, have been carried out, especially with reference to the stimulation of the deep-seated nuclei of the basal ganglia. Sufficient results have not yet been obtained to enable any accurate conclusion to be drawn. The subject is still being investigated.

J. C. W. GRAHAM, M.R.C.S., L.R.C.P.

The Pharmacological Action of Apocynum Cannabinum.

Forty-four experiments have been performed up to the present, demonstrating the action of the drug on—

1. Muscle.
   a. Striated.
   b. Unstriated.
2. Heart (batrachian and mammalian).
3. Blood vessels.
4. Stomach with intestines (tracings and *post-mortem* results).
5. Kidneys.

A few more experiments remain to be performed. When these have been done, the matter will shortly be ready for publication.

W. Webster, M.D.

Atropine and its Allies.

Dr. Webster has finished a paper on the physiological action of atropine and its allies, hyoscine, etc., which he has sent to the *Journal of Physiology* (American). He has not received notice of its acceptance for publication, but immediately on doing so will forward a copy to the British Medical Journal for simultaneous publication, as required by rules relating to grants.

Administration of Ether.

He also did some work on the closed and semi-open method of administering ether, but is not satisfied with his results so far, and has not decided whether to publish the few notes already made or continue the work next winter.

RETURN OF GRANTS.

The following gentlemen have for various reasons been unable to carry out their proposed researches, and have returned the money voted to them: Professor Waymouth Reid, F.R.S., Dr. John Wishart, N. Bishop Harman, M.B., F.R.C.S., and Dr. W. B. Warrington.

THERAPEUTIC COMMITTEE.

REPORT ON

RETURNS OF CIRCULAR ASKING FOR INFORMATION REGARDING

THE THERAPEUTIC VALUE OF CERTAIN SILVER COMPOUNDS.

With a view to ascertain the clinical value of different silver compounds, the Therapeutic Committee sent nearly 300 circulars to various members of the profession, mostly to ophthalmic surgeons, surgeons to lock hospitals, and similar institutions. Fifty-nine replies were received. Of these, 5 gave no information on the points raised, silver compounds being either not used by the practitioner, or to such a slight extent that his experience did not warrant the expression of a definite opinion. Thus, in the treatment of conjunctival affections 1 practitioner states that he relies mainly on chloride of zinc, and another that he employs irrigation with normal saline solution. Of the remaining 54, 47 give information regarding silver nitrate, 46 of argyrol, 42 of protargol, 7 of ichthargan, 5 of nargol, 4 of largin, 3 of collargol, 3 of argentamin, and 1 of argonin. No expression of opinion is given of silver fluoride, actol, itrol, albargin, argentol, or novargan.

Silver Nitrate.

Silver nitrate is stated by most correspondents to be the most reliable of all the silver compounds, but it is also said to be the most painful, and to cause argyrosis most readily. The pain, according to two of the returns, can be prevented by the judicious use of cocaine, and argyrosis, according to others, can be avoided or diminished by the use of sodium chloride solution after the silver nitrate solution.

Protargol.

Protargol, although generally admitted to be efficacious in most conjunctival affections, appears to be painful in strong solution, and several cases of argyrosis are mentioned as having been caused by it. One observer states that it is very active for twenty-four hours when freshly made up. Another reports orbital cellulitis and loss of sight when 5 per cent. of a fresh preparation was injected into the lacrymal sac in a case of dacryocystitis. One correspondent used it (0·15 grains to 0·5) in "bacteriuria" with temporary benefit. Another finds it most useful in throat and laryngeal troubles. Wide differences of opinion are, however, expressed regarding this substance. An ophthalmic surgeon remarks that it is "inert and quite useless," while another observer states that in his experience it is by far the most reliable salt for injecting or irrigating in cases of chronic gonorrhoea, for which he uses solutions of 2 to 10 per cent. strength.

Argyrol.

Argyrol has been employed in strengths ranging from 5 to 50 per cent.; in most cases the solutions have been of 20 to 25 per cent. strength. According to the majority it has been used with satisfaction in catarrhal and gonorrhoeal conjunctivitis, and its application produces no pain. But there is a want of unanimity regarding its value. One observer speaks of it as "an inert and apparently harmless compound," another regards it as "our sheet anchor in most purulent diseases of the eyes." A third states that he uses it more as a placebo than a cure in severe attacks, but that it does well in slight conjunctivitis. A fourth asserts that when rapid bactericidal action is urgent neither argyrol nor protargol can take the place of silver nitrate. In chronic cases of bacillary origin it is said to fail often, and one surgeon mentions that some patients suffering from a trachoma prefer silver nitrate, as they say it gives them more relief. Another states that a 3 per cent. solution of silver nitrate is decidedly more efficacious than a 25 per cent. solution of argyrol. One practitioner states that occasionally it produces a feeling of dryness, and five say that it may stain the conjunctiva after prolonged use, although others deny that it causes argyrosis. A 5 per cent. solution has been used in chronic gonorrhoea with good results, but it is liable to stain the linen. It has also been employed (1 in 8) in weeping eczema of the leg with benefit. One observer mentions that in purulent cases it must be used every hour, while another speaks of the results of "several months' continuous use" in one case.

Ichthargan.

Ichthargan is mentioned in only seven of the reports, and the observations are difficult to reconcile. Thus, while one practitioner who has used a 5 per cent. solution states that it is "no good" in conjunctivitis and may do harm, another has found it to be very useful and to produce no ill-effects in 5 to 10 per cent. solution in conjunctival affections. In 1 in 500 to 1 in 1,000 solution it is stated not to produce much pain, and to be generally satisfactory in gonorrhoea; others, however, have found that it causes much pain and irritation in 1 per cent. or less, and possesses no advantages over other similar compounds.

Nargol.

Nargol in one return is said to be the most efficient gonococcide and to be almost painless in 1 to 5 per cent. solutions. Another return, however, states that it is inferior to argyrol. One practitioner employs a 4 per cent. solution as a routine method of treating muco-purulent ophthalmia.

Largin.

Largin in 5 to 10 per cent. solution is said by one surgeon to cause very slight pain in conjunctivitis and dacryocystitis, and to have a marked effect in checking purulent discharge. For the same conditions another says that its action is not so good as argyrol, and that he does not now use it. A third finds it of less value than argyrol in gonorrhoea; and a fourth says it causes pain in gonorrhoeal ophthalmia, and that it is not so good as silver nitrate.

Argentamin.

Argentamin as a 1 in 1,000 to 1 in 4,000 injection in gonorrhoea is said to cause little pain. Two observers who have used it for forms of conjunctival inflammation have abandoned it as useless.

Argonin.

Argonin in 2 to 10 per cent. solution is said to cause slight pain, to stain linen, and not to be so serviceable as many other preparations in gonorrhoea.

Collargol.

Collargol has been used occasionally by one ophthalmologist with good results. A surgeon who has used it for gonorrhoea states that it is not so useful as argyrol. A physician gives brief notes of some experiments made upon himself to test its power of producing leucocytosis, and states that the effects were too severe to justify its use for this purpose.

Summary.

From the foregoing account of the information received it would appear that only three of the compounds have been much used, namely, silver nitrate, argyrol, and protargol. The chief objection to silver nitrate is the amount of pain it produces, but it is reliable, and is employed in dilute solutions. The reports relating to argyrol and protargol are contradictory in many important particulars, but these drugs are generally considered to cause

less pain than silver nitrate. That argyrol has been employed in relatively strong solutions over long periods is a fact of considerable significance.

Meetings of Branches & Divisions.

GLASGOW AND WEST OF SCOTLAND BRANCH.

THE statutory annual meeting of the Branch was held in the University (Professor Stockman's class-room) on the afternoon of Friday, June 7th. There was a very large attendance of members present. Dr. JOHN LINDSAY, the President, occupied the chair.

Confirmation of Minutes.—The minutes of previous meetings were read and confirmed.

Secretary's Report.—The SECRETARY read the annual report, which showed that all the Divisions of the Branch were in a most active and satisfactory condition. Forty new members had been admitted throughout the past year, but as against that there had been an unusually large depletion from removals to other Branches, resignations, and death, making a total additional strength of only eleven new members. The report was adopted.

Treasurer's Report.—The TREASURER read his annual report, which showed an actual balance at the end of the financial year of £241 4s. 11d.

Inquiry as to Abuse of Medical Charities.—A motion was proposed by Professor GLAISTER, seconded by Dr. RICHMOND, and it was resolved:

> That it be remitted to the Branch Council to devote a substantial portion of the balance of funds presently in possession of the Branch towards an inquiry into the question whether or not there exists in this city and neighbourhood any abuse of medical charities, and to report to an early meeting of the Branch.

Medico-Ethical Committee's Report.—The Medico-Ethical Committee's report was read and adopted.

Election of Office-Bearers.—The following office-bearers were elected for the ensuing year, namely:—*President*, James H. Nicoll, M.B., Glasgow; *President-elect*, A. Campbell Munro, M.B., Paisley; *Vice-Presidents*, J. Lindsay, M.D., Kirkmuirhill; John Macintyre, M.B., Glasgow; *Secretaries*, James Hamilton, M.B., Glasgow; James Grant Andrew, M.S., Glasgow.

Visit to New Medical Buildings.—By the kindness of Professor Stockman afternoon tea was immediately afterwards served, after which the members were shown over the new medical buildings and laboratories under the guidance of Professors Glaister, Stockman, and Noel Paton.

Votes of Thanks.—Votes of thanks were passed and freely given to the retiring President and to the university authorities, more especially to the Professors of Forensic Medicine, Materia Medica, and Physiology, who had so generously assisted in the afternoon's enjoyment.

Dinner.—A dinner took place in the evening at St. Enoch's Hotel, for which over eighty covers were laid. Dr. Jas. H Nicoll, the new president, occupied the chair. The croupiers were Dr. John Macintyre and Dr. John Lindsay. There was a large and representative attendance of the profession, amongst others present being Professors Cleland, Ferguson, Stockman, Samson Gemmell, Murdoch Cameron, Glaister, and Graham Kerr; Dr. D. C. M'Vail, Dr. Renton, Dr. A. K. Chalmers, Dr. Brownlee, Dr. Oswald, Dr. Don. J. Mackintosh, Dr. John M. Munro Kerr, Dr. James Hamilton, Dr. Moorhouse, and Dr. Bruce Goff. Dr. MacAlister, Principal of the University, was the guest. The CHAIRMAN, after submitting "The King," proposed "The University of Glasgow." He referred specially to the recent additions to the Medical School, and remarked that in this department the University was fully equipped to maintain its place. These were times of change, but the University of Glasgow was fortunate in having as their Principal Dr. MacAlister. Principal MacAlister, who was cordially received, responded. He touched on his long connexion with the British Medical Association, and explained that owing to their resolution to become the prosecuting body before the General Medical Council he had most reluctantly to resign his membership. He had taken that step through no lack of interest in the Association, but simply from the exigencies of his position. It gave him very great pleasure to respond to the toast in Glasgow, because it was his first opportunity of meeting his brethren of the medical profession there. When a short time ago it pleased the King to ask him to come to Glasgow, His Majesty took an unprecedented step, because up to that time the Principalship had been filled by a clergyman. Nothing had astonished him more than the heartfelt way in which he had been welcomed to his new office. He need not say how delighted he was to assist the Prince and Princess of Wales in opening the large addition to the medical schools. His Royal Highness had remarked, "Why this is the biggest medical school I have seen yet." "Well," he replied, "the buildings are big, but the school is bigger." Dr. JOHN MACINTYRE gave "The Scottish Branches of the British Medical Association." Dr. MOORHOUSE, in replying, said that if every Branch were as enthusiastic as the Glasgow and West of Scotland one, they would have a better tale to tell. The Scottish Branches were in a fair way, but it had always struck him as curious that, do what they would, they could not get more than half the members of the profession into the Association. As to the work of the Association, they ought to concentrate their energies upon special subjects. They had far too many irons in the fire, and there had been too much tinkering with the constitution of the Association. Dr. RENTON proposed "The Representatives of the Branch on the Council of the Association." He referred to the work of Dr. Bruce Goff and Dr. James Hamilton, remarking that as the former had been for nearly a quarter of a century their representative on the Council they should give him some tangible proof of their appreciation of his labours. Dr. BRUCE GOFF, in acknowledging, pointed out that by the resolution of the Association in regard to prosecutions they had lost thirty-two members who were members of the General Medical Council. Criticizing some of the points in the proposed Charter, he said it would be a degradation to the Association if they kept a registry office. He also spoke against the Association seeking to influence Parliamentary elections. The concluding toast was "The Chairman," submitted by Dr. JOHN LINDSAY.

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, July 3rd, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,
General Secretary.

June 13th, 1907.

BRANCH AND DIVISION MEETINGS TO BE HELD.

DORSET AND WEST HANTS BRANCH.—The summer meeting of this Branch will be held in Ringwood on Wednesday, July 3rd. A paper will be read by Dr. E. Hyla Greves on Myelopathic Albumosuria. Dr. Marriner (Vice-President) will introduce a discussion on Chronic Otitis Media. *This* JOURNAL *notice is the only intimation of the meeting*: therefore members wishing to read papers, exhibit cases, or show pathological specimens must communicate on or before the 23rd inst. with the Honorary Secretary, JAMES DAVISON, "Streateplace," Bath Road, Bournemouth.

EDINBURGH BRANCH.—The annual meeting of this Branch will be held in the Hall of the Royal College of Physicians, Queen Street, on Friday, June 28th, at 4.15 p.m.—A. LOGAN TURNER, 27, Walker Street; FRANCIS D. BOYD, 22, Manor Place, Edinburgh (Honorary Secretaries).

EDINBURGH BRANCH: SOUTH EASTERN COUNTIES DIVISION.—The annual meeting will be held in the house of Dr. Young, Earlston, on the afternoon of Saturday, June 22nd, at 4 o'clock. Business: (1) Minutes. (2) Report of Representative of the special meeting recently held in London in regard to the Charter. (3) Election of office-bearers for the ensuing year.—W. HALL CALVERT, Honorary Secretary.

FIFE BRANCH.—The annual meeting will be held in the Hotel, Thornton, on Friday, June 28th, at 3 p.m., as already notified.—R. BALFOUR GRAHAM, Honorary Secretary, Leven.

GLASGOW AND WEST OF SCOTLAND BRANCH: GLASGOW NORTH WESTERN DIVISION.—The annual meeting will be held in the Western Infirmary on Tuesday, June 25th, at 8.45 p.m. Business: Election of office-bearers and Representative to

Representative Meeting. Representative's report. Provisional agenda for meeting at Exeter.

LEINSTER AND SOUTH-EASTERN OF IRELAND BRANCHES.—The names of candidates, each nominated by three members, for the representation of these Branches on the Central Council should be received by the undersigned on or before June 24th.—ARTHUR H. WHITE, Honorary Secretary, Leinster Branch, Malvern, Terenure Road, Dublin.

METROPOLITAN COUNTIES BRANCH.—Notice is hereby given that the annual meeting of the Branch will take place on Thursday, June 27th. Time and place will be fixed by the Branch Council.—Honorary Secretary, FRED. J. SMITH.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—The annual general meeting of the Division will be held at the Kensington Town Hall on Tuesday, June 25th, at 5 p.m. Agenda: (1) Minutes of the last ordinary meeting. (2) Annual report of the Executive Committee. (3) Consideration of any matters referred to Divisions. (4) Election of officers for 1907–8. (5) Any other business.—CHARLES BUTTAR, Honorary Secretary, 10, Kensington Gardens Square, W.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—A motor meet of the above Society will be held at the Bull Hotel, Bourne, on Tuesday, June 25th, at 4 o'clock in the afternoon, when tea will be provided (the expense to be defrayed by members individually). Members are cordially invited to bring friends, including ladies. After tea, by kind permission of Lord Ancaster, members will proceed to view Grimthorpe Castle. Members are requested to reply before June 20th whether it is their intention to be present.—A. E. WILSON, Honorary Secretary, Boston.

MUNSTER BRANCH.—Election of Representative Member on the Council of the British Medical Association. Nominations will be received by me up to and including Saturday, June 22nd.—PHILIP G. LEE, 26, Patrick Hill, Cork.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—The annual meeting will be held at the Furness Abbey Hotel on Wednesday, June 26th, at 3.30 p.m. The President-elect, A. J. Cross, M.D. (Dalton-in-Furness), will deliver an address on "The Medical Aspect of Elementary Schools." Will members wishful to show cases or specimens kindly send particulars to the Honorary Secretary, A. S. BARLING 2, Queen Square, Lancaster.

NORTH OF ENGLAND BRANCH.—The annual meeting of this Branch will be held at the Town Hall, Gateshead-on-Tyne, at 2.30 p.m. on Wednesday, July 3rd. The President-elect (Dr. Alfred Cox) and the members of the Gateshead Division offer a very hearty welcome to the members of the Branch, and will be delighted to see as many of them as possible.—HENRY SMURTHWAITE, Honorary Secretary, 8, St. Mary's Place, Newcastle-on-Tyne.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—Nominations for a Representative of the Branch on the Central Council of the Association. In accordance with By-law 24 nominations duly signed by three electors must be sent to me not later than June 29th.—M. NEIL MOIR, Honorary Secretary.

SOUTH-EASTERN BRANCH: CANTERBURY AND FAVERSHAM DIVISIONS.—A combined meeting of the Divisions comprised in the old East Kent District—that is, Ashford, Canterbury and Faversham, Dover, Folkestone, and Thanet—will be held at the County Hotel, Canterbury, on Thursday, June 27th, at three o'clock precisely, Dr. Whitehead Reid in the chair. Agenda: A paper will be read by W. J. Tyson, M.D., F.R.C.P., F.R.C.S., Honorary Physician, Victoria Hospital, Folkestone, on the Future Lines of Treatment: Their Effects on the Profession. An address by Alex. C. R. Fowlerton, F.R.C.S., D.P.H., Director of Bacteriological Department, Middlesex Hospital, Medical Officer of Health to the County of East Sussex, on the Treatment of Infective Disease by Bacterial Vaccination. W. T. Hillier, Esq., M.R.C.S., D.P.H., Pathological Assistant, Research Laboratories, Middlesex Hospital, will (1) Show specimens of typical counts; (2) give a demonstration of the method of determining the opsonic index of the blood. Preliminary meetings will be held as follows: (a) 2.30, Canterbury and Faversham Division:—Agenda: (1) Minutes. (2) Annual report. (3) Election of officers—Chairman, Vice-Chairman, Representative at Representative Meetings, Representative on Branch Council, Honorary Secretary and Treasurer, Committee. (4) To consider the desirability of amalgamating with the Ashford Division. (5) Any other business. (b) 2.30, Canterbury and Faversham with Thanet Divisions:—Agenda: (1) To elect two Representatives for Representative Meetings. Meeting will commence at 5.45 for 6 o'clock at the County Hotel, Canterbury, cause for, exclusive of wines. Those who intend to stay to dinner are requested to notify Dr. Hardcastle not later than the morning of June 27th, and to state whether they will assist in a short musical programme.—A. E. HARDCASTLE, Honorary Secretary and Treasurer, Canterbury.

SOUTH-EASTERN BRANCH: CROYDON DIVISION.—The annual meeting will be held at the Royal Surrey County Hospital (Lodge), on Wednesday, June 26th, at 4.30 p.m. Dr. George Fisher in the chair. Tea will be provided at 4.15 p.m. Agenda: (1) Minutes. (2) Election of officers, Representative on the Branch Council and at Representative Meetings, and other members of the Executive Committee. (3) Annual report. (4) Dr. H. F. Parker will read notes on a case of tumour of the neck containing fetal remains. (5) Dr. Anderson Morshead will show some photographs of interest. (6) Any other business. The Honorary Secretary will be glad to receive nominations for any of the above offices, and to hear from any members willing to show cases or specimens.—E. J. SMYTH, Honorary Secretary, Maythorne, Guildford.

SOUTH-EASTERN BRANCH: ISLE OF THANET DIVISION.—The annual meeting of this Division will be held at the Royal Sea Bathing Infirmary, Margate, on Tuesday, June 25th, at 4 p.m., W. G. Sutcliffe, F.R.C.S., in the chair. Tea will be served before the meeting. Agenda: Election of officers (Chairman, Honorary Secretary and Treasurer, members of Executive Committee, Representative on Branch Council). (N.B.—Election of Representative of Thanet, Faversham and Canterbury Divisions takes place at a meeting at Canterbury on Thursday, June 27th.) To receive the report of the Executive Committee. To consider the business of the Representative Meeting (see SUPPLEMENT, BRITISH MEDICAL JOURNAL, April 20th). To consider matters referred to Division: (1) Hospital administration; (2) medical inspection of school children (see SUPPLEMENT, April 13th); (3) ethics of medical consultation (see SUPPLEMENT, February 16th). Dr. Halstead will read a paper entitled Miscellanies. Dr. Raven will introduce a discussion in connexion with club practice. Any other business. All members of the South-Eastern Branch are invited to attend these meetings and to introduce professional friends, but they are not entitled to vote on Divisional questions.—HUGH M. RAVEN, Acting Honorary Divisional Secretary, Broadstairs.

STAFFORDSHIRE BRANCH.—The thirty-fourth annual meeting of the Branch will be held at the Victoria Hotel, Wolverhampton, on Thursday, June 27th, at 5.25 p.m., when an address will be delivered by the President-elect, Mr. J. T. Hartill. Agenda: (1) Introduction of the new President. (2) Minutes of the last annual meeting. (3) Correspondence. (4) Address by the President. (5) Report of the Council. (6) The financial statement. (7) To decide the place of holding the next annual meeting. (8) Election of officers for the ensuing year—President-elect, Secretary, and Treasurer. (9) Report on the election of the Representative of the Branch on the Council of the Association. Members have the privilege of introducing friends. Dinner at 7.15 p.m.; charge 5s. A meeting of the Council will be held before the annual meeting for the election of members. The first general meeting of the session will be held at Stoke on Thursday, November 28th. Members desiring to read papers are requested to communicate the titles to the General Secretary as soon as possible.—G. PETGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

ULSTER AND CONNAUGHT BRANCHES.—Nominations for Central Council. Two members to represent these Branches (combined) on the Central Council will be elected on June 29th.—CECIL SHAW, M.D., Honorary Secretary, College Square, Belfast.

ULSTER BRANCH.—The annual meeting will be held in the Medical Institute, Belfast, on Saturday, June 29th, at 11.30 a.m.—CECIL SHAW, M.D., Honorary Secretary, College Square, Belfast.

WEST SOMERSET BRANCH.—The 64th annual meeting of this Branch will be held at the Royal Clarence Hotel, Bridgwater, on Friday, June 28th, at 12.15, when the chair will be taken by Dr. G. W. Harvey Bird, the President-elect. Agenda: Minutes of last meeting. Report of Subcommittee on fees from coroners. Report of Subcommittee on certificates. Annual report. Balance sheet. Election of officers. Election of honorary members. President's address: Notes on Influenza. Lunch will be served after the meeting, which will be paid for out of the funds of the Branch in the case of members; for guests and others a charge of 3s. per head will be made, exclusive of wines, etc., in all cases. During the afternoon a cricket match will be played between teams representing the Bridgwater and Taunton Districts of the Branch, on the Bridgwater Cricket Ground, and those present will be entertained to tea by the President and Mrs. Bird. Members are requested to let Dr. Bird or the Honorary Secretary know before Monday, June 24th, whether they will be present at the meeting and lunch, and whether they will be willing to take part in the cricket match. W. B. WINCKWORTH, Honorary Secretary.

YORKSHIRE BRANCH.—The annual meeting of the Yorkshire Branch will be held at Dewsbury on Wednesday, June 26th. Members wishing to read papers, or show cases or specimens, should communicate at once with the Honorary Secretary.—ADOLPH BRONNER, 35, Manor Row, Bradford, Honorary Secretary.

YORKSHIRE BRANCH: BARNSLEY DIVISION.—The first annual meeting of this Division will be held at the Beckett Hospital on Friday, June 28th at 8 p.m. Agenda: (1) Election of officers. (2) Election of Representatives. (3) Levying of subscription for expenses of Division as per Section 15 of By-laws. (4) Con-

sideration of new rule proposed by Dr. Macphail: "No member shall take over a salaried, club, or other contract appointment when the present holder shall have been dismissed or be threatened with dismissal on account of his demand for higher fees, provided such demand be approved by the Division." (5) Adjourned discussion on Hospital Abuse and other matters referred for consideration by Divisions.—J. HY. FRYER, Honorary Secretary. Eastgate, Barnsley

THE METROPOLITAN COUNTIES BRANCH ELECTION.

PROPORTIONAL VOTING.

IN accordance with the decision of the Branch Council a system of proportional representation was employed, for the first time, in the recent election of four Vice-Presidents of the Branch and of five representatives of the Branch on the Central Council. The counting of the votes took place on June 11th at the offices of the British Medical Association, and the rules observed were those embodied in the Schedule to the Municipal Representation Bill, which is at present being examined by a Select Committee of the House of Lords. The Chairman, Lord Belper, and several members of this Committee—Lord Courtney of Penwith, the Earl of Hardwicke, Lord Monteagle, and Lord Colchester—watched the operations.

The following directions to voters had been issued with each ballot paper:

Place the figure 1 against the name of the candidate who is your first choice. You need do no more, but, in order to secure in the fullest measure the proportionate representation of the several Divisions of the Branch, which is the object of this method of voting, you should also place the figures 2, 3, 4, 5, 6, 7, etc., so far as you care to go, against the names of the remaining candidates in the order of your preference.

Do not place the same figure against more than one name.

The scrutinies were conducted simultaneously, and a description in detail of one election only, that of the four Vice-Presidents, will suffice to elucidate the method of counting. This description will be the more readily understood if the two main principles of the new system of voting are borne in mind. The first principle is that each elector has one vote only, which is recorded by placing the figure 1 against the name of the candidate who is his first choice. The purpose served by the indication of subsequent preferences will be explained at a later stage. The second principle is that a candidate, to ensure his election, must poll a certain proportion of the votes cast. This proportion is called the "quota," and is arrived at in the following way: In a constituency returning only one representative a candidate who polls more than half the votes is necessarily elected, for no other candidate can possibly obtain so many. The quota in this case, therefore, is one more than a half. In a two-member constituency the quota is one more than a third, because not more than two candidates can poll that number; in a three-member constituency, one more than a fourth; and so on. In general terms, the quota is ascertained by dividing the votes polled by one more than the number of seats to be filled and adding one to the result.

The first operation in the election for Vice-Presidents was to ascertain the number of votes obtained by each candidate. The ballot papers were sorted into groups according to the candidates marked 1 and the number of papers in each group counted. These processes were checked, and the result declared as follows:

Result of First Count.

	No. of Votes.
Smith, Fred J.	329
Shaw, L. E.	145
Ker, Hugh R.	119
Goodall, E. W.	90
Clarke, E.	57
Buckell, F. J.	53
Armit, H. W.	46
Williams, L.	19
Total votes	858

The next operation was the ascertainment of the "quota." There were four vacancies, and the quota, therefore (one more than a fifth of the total votes), was 172. It should be noted that in all operations fractions were disregarded.

It will be seen that Dr. Smith had obtained more than the necessary quota of votes, and he was therefore declared elected. Indeed Dr. Smith had obtained no less than 157 votes more than the quota, and, in the absence of any provision for the use of these votes, his supporters might not have obtained the full share of representation to which they were entitled. The object of marking the additional preferences now appears, for the next step was to transfer Dr. Smith's surplus votes in accordance with the wishes of his supporters, and these had indicated their second preferences on the ballot papers. For this purpose the whole of Dr. Smith's papers were re-sorted according to the second preferences, a separate heap being made for each candidate, and a further heap being made for those papers on which no second preferences were shown. The papers in these groups were counted, and from each group a number of votes equal to his share of the surplus was transferred to the respective candidate. The details are set forth in the following table:

	Second Preferences shown on Dr. Smith's Papers.	Votes Transferred to Second Preferences.	Votes Retained for Dr. Smith's Quota.
Armit	22	13	9
Buckell	30	18	12
Clarke	38	23	15
Goodall	51	31	20
Ker	32	19	13
Shaw	74	45	29
Williams	10	6	4
Preferences exhausted	72		72
	329	155	174

This table may perhaps need a word or two of explanation. There were 72 papers on which no second preferences were shown, and the total number of papers to be taken into consideration in transferring the surplus was therefore only 257 (that is, 72 less than the total, 329). The surplus was 157, and Mr. Armit's proportionate share of this surplus was determined by multiplying his second preferences, 22, by $\frac{157}{257}$. The result was 13. The share for each candidate was ascertained in the same way, the papers actually transferred from each bundle being those last filed. Fractions were again ignored, and this explains why, although the surplus was 157, the total of the votes transferred was only 155. As a result of the transfer of votes the poll stood as follows:

	No. of Votes.
Smith, F. J.	174 (already elected)
Shaw, L. E.	190
Ker, Hugh R.	138
Goodall E. W.	121
Clarke, E.	80
Buckell, F. J.	71
Armit, H. W.	59
Williams, L.	25
	858

At this stage Dr. Shaw had obtained the necessary quota of votes, and was declared elected, his surplus being transferred subsequently. There were still two vacancies remaining unfilled, and the next operation was the distribution of the votes of the candidates lowest on the poll, beginning from the bottom and working upwards. The candidates in question could not possibly secure election, and their supporters had indicated by their second preferences to whom, in that event, their votes were to be transferred. The actual distribution was effected in each case by sorting the voting papers of the candidate in accordance with the next preferences, those papers which showed no further preference being set aside as exhausted. In this manner the votes of Drs. Williams, Armit, and Buckell were dealt with in the order named, the details of the distribution being as follows:

Distribution of Dr. Williams's Votes.		Distribution of Mr. Armit's Votes.	
Armit	2		
Buckell	2	Buckell	17
Clarke	1	Clarke	8
Goodall	4	Goodall	10
Ker	16	Ker	14
Preferences exhausted	*nil*		12
	25		61

Distribution of Dr. Buckell's Votes.

Clarke	21
Goodall	19
Ker	25
Preferences exhausted	26
	91

The final result of the poll was as follows:

	No. of votes.	
Smith, F. J.	... 174	Elected on first count.
Shaw, L. E.	... 175	Elected on second count.
Ker, Hugh R.	... 195	Elected on final count.
Goodall, E. W.	... 160	Elected on final count.
Clarke, E.	... 116	Not elected.

¶ In order to make the statement of the election complete it should be added that Dr. Shaw's surplus was distributed as follows: Buckell, 1; Clarke, 6; Goodall, 6; Ker, 2. As a rule all surpluses are distributed before any candidate is excluded from the poll. When, as in this case, the surplus is so small as to be less than the difference between the two candidates lowest on the poll it remains undistributed so long as this condition obtains. Dr. Williams's votes were only 25, and this explains why his votes were transferred before the distribution of Dr. Shaw's surplus.

Scrutiny of Votes.

The scrutiny of the votes recorded in the election of representatives to serve on the Central Council was conducted in the same manner, and the result of the first count was as follows:

	No. of Votes.
Horsley, Sir V.	247
Anderson, J. F.	160
Shaw, L. E.	124
Eastes, George	114
Ker, Hugh R.	91
Shadwell, St. C. B	62
Haslip, G. E.	38
Smith, Walter	23
Total	859

In this election there were five vacancies, and the quota was therefore 144, that is, one more than a sixth of the total votes. Both Sir V. Horsley and Dr. Anderson had obtained more than a quota of votes, and, in ordinary circumstances, both would have been declared elected. Sir Victor Horsley had, however, intimated his intention to withdraw from the contest, and, in order to give effect to the wishes of his supporters, all his votes were transferred to the second preferences marked upon his papers. After the completion of this operation it was found that Dr. Eastes and Dr. Shaw had each obtained more than a quota of votes, and accordingly both were declared elected. Dr. Ker was the next successful candidate, and a close struggle for the last vacancy then took place between Dr. Haslip and Dr. Shadwell, ending finally in a victory for the former by one vote. At the conclusion of the fifth

ELECTION OF FIVE MEMBERS OF CENTRAL COUNCIL.—*Result Sheet.*

$$\text{Quota} = \frac{859}{6} + 1 = 144.$$

Names of Candidates.	First Count.	Distribution of Sir Victor Horsley's votes.	Result.	Distribution of Dr. Eastes's Surplus.	Result.	Distribution of Dr. Smith's Votes.	Result.	Distribution of Dr. Anderson's Surplus.	Result.	Distribution of Dr. Shaw's Surplus.	Result.	Distribution of Dr. Ker's Surplus.	Final Result.
Anderson, J. F.	160	—	160	—	160	—	160	— 15	145	—	145	—	145 (elected)
Eastes, George	114	+ 81	195	50	145	—	145	—	145	—	145	—	145 (elected)
Haslip, G. E.	38	+ 20	58	+ 18	76	+ 10	86	+ 12	98	+ 12	110	+ 3	113 (elected)
Horsley, Sir V.	247	- 247	—	—	—	—	—	—	—	—	—	—	—
Ker, Hugh R.	91	+ 33	124	+ 14	138	+ 12	150	—	150	—	150	— 5	145 (elected)
Shadwell, St. C. B. ...	62	+ 24	86	+ 9	95	+ 6	101	+ 3	104	+ 6	110	+ 2	112
Shaw, L. E.	124	+ 42	166	—	166	—	166	—	144	— 22	144	—	144 (elected)
Smith, Walter	23	+ 14	37	+ 9	46	— 46	—	—	—	—	—	—	—
Preferences exhausted	—	+ 33	33	—	33	+ 18	51	—	51	+ 4	55	—	55
Total	859		859	—	859	—	859	—	859	—	859	—	859

ELECTION OF FOUR VICE-PRESIDENTS.—*Result Sheet.*

$$\text{Quota} = \frac{858}{5} + 1 = 172.$$

Names of Candidates.	First Count.	Distribution of Dr. Smith's Surplus.	Result.	Distribution of Dr. Williams's Votes.	Result.	Distribution of Dr. Buckell's Surplus.	Result.	Distribution of Mr. Arnit's Votes.	Result.	Distribution of Dr. Buckell's Votes.	Final Result.
Arnit, H. S.	61	+ 11	72	+ 2	74	—	74	61	—	—	—
Buckell, F. J.	73	+ 18	91	+ 2	93	+ 1	74	+ 17	91	- 91	-
Clarke, E.	95	+ 25	120	+ 1	121	+ 6	127	+ 8	135	+ 21	116
Goodall, E. W.	80	+ 51	131	+ 3	134	+ 6	131	+ 10	141	+ 19	160 (elected)
Ker, Hugh R.	110	+ 14	124	+ 10	134	+ 7	141	+ 14	170	+ 25	195 (elected)
Shaw, L. E.	124	+ 42	166	—	166	— 15	151	—	175	—	175 (elected)
Smith, F. J.	120	+ 54	174	—	174	—	174	—	174	—	174 (elected)
Williams, E.	25	+ 6	31	— 25	6	—	—	—	—	—	—
Preferences exhausted ...	—	—	—	—	—	—	—	+ 12	12	+ 26	38
Totals	858	—	858	—	858	—	858	—	858	—	858

transfer these two candidates had the same number of votes, but in the final distribution, that of Dr. Ker's surplus Dr. Haslip obtained the slight advantage to which he owed his election. The final result of the poll was as follows:

Anderson, J. F. ...	145	Elected on first count.
Eastes, G.	145	Elected on second count.
Shaw, L. E.	144	Elected on second count.
Ker, Hugh R.	145	Elected on fourth count.
Haslip, G. E.	113	Elected on final count.
Shadwell, St. C. B. ...	112	Not elected.

In the instructions issued with the ballot papers it was stated that the object of this method of voting was to secure the proportionate representation of the several Divisions of the Branch, and it is interesting to note that no two candidates elected to serve on the Central Council belong to the same Division. This result would not necessarily always accrue, because if two candidates belonging to the same Division were generally popular throughout the Branch, doubtless they would both be elected. The distinctive value of the new method of voting is that any section of the Branch which contains a quota of voters can secure the particular representative it desires, and that section cannot be deprived of its influence through the action of a larger section of the Branch. With the method of voting previously in force the largest division or section of the Branch could, if it so desired, by running and voting for a full list of candidates, have monopolized the representation.

A word should be added as to the number of spoilt papers. In the election for the Vice-Presidents no less than forty-five ballot papers, although correctly marked, were not signed, and were declared by the scrutineers to be invalid. There were six papers on which the electors had voted by placing crosses instead of figures against the names of the candidates, and their votes, therefore, could not be included in the count. In the election for Representatives on the Central Council the figures were similar.

Although the scrutineers were quite unaccustomed to the new method, the operations were carried out without a hitch. The new method, indeed, presents no difficulty as soon as its details are mastered, and on a future occasion the work will doubtless be carried out even more smoothly. The whole operations were completed in about two hours, and, as this is the first occasion on which this system has been used in England for practical purposes, the result sheets, containing full details of both elections, are given on page 418.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8 771 births and 4,026 deaths were registered during the week ending Saturday last, June 15th. The annual rate of mortality in these towns, which had been 14 9, 14.5, and 13 7 per 1,000 in the three preceding weeks, further declined last week to 13.1 per 1,000. The rates in the several towns ranged from 3.9 in Smethwick, 4 4 in Aston Manor, 5 3 in Bournemouth, 7.0 in Hastings, 7 3 in East Ham, and 7.5 in Hornsey, to 18 7 in Stockton-on-Tees, 18.8 in Wigan, 19.6 in West Bromwich, 20.0 in Tynemouth, 20.4 in Sunderland, 22 0 in Middlesbrough, and 22 3 in Preston. In London the rate of mortality was 12.8 per 1,000, while it averaged 13.2 in the seventy-five other large towns. The death-rate from the principal infectious diseases in the seventy-six towns averaged 1.4 per 1,000; in London this death-rate was equal to 1.7 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 3 0 in Leyton, in Warrington, and in Stockton-on-Tees, 3.6 in Middlesbrough, 3 7 in Walthamstow and in Gateshead, and 4.7 in Hanley Measles caused a death-rate of 2.1 in Derby, 2.2 in Walsall, 2.3 in Bolton, 2.5 in Walthamstow, 2 6 in Middlesbrough, and 3 9 in Hanley; diphtheria of 1.3 in Leyton; whooping-cough of 1 1 in Oldham, in Huddersfield, and in Swansea, 1.2 in Wigan, 1.3 in Leyton, 1 7 in St Helens, and 2 0 in Stockton on-Tees; "fever" of 1.0 in Stockport: and diarrhoea of 1 1 in Oldham The mortality from scarlet fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,732, 2 824, and 2 862 at the end of the three preceding weeks, had further risen to 2 937 at the end of last week: 389 new cases were admitted during the week, against 382, 437 and 368 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, June 15th, 984 births and 599 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 16.7 and 19 0 per 1,000 in the two preceding weeks, declined again to 17 2 per 1,000 last week, but was 4 1 per 1,000 above the mean r te during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 11 0 in Greenock and 12 6 in Aberdeen to 18 5 in Glasgow and 22 0 in Dundee The death rate from the principal infectious diseases averaged 2 4 per 1,000 in these towns, the highest rates being recorded in Glasgow and Edinburgh The 360 deaths registered in Glasgow included 30 which were referred to whooping-cough, 4 to diarrhoea, and 14 to cerebro-spinal meningitis. Four fatal cases of measles, 7 of whooping-cough, and 7 of cerebro-spinal meningitis were recorded in Edinburgh; 3 of whooping-cough and 2 of diarrhoea in Dundee; 2 of whooping cough in Aberdeen; and 2 of cerebro-spinal meningitis in Leith.

Vacancies and Appointments.

VACANCIES

ABERDEEN UNIVERSITY.—Additional Examiner.

BIRMINGHAM LYING-IN CHARITY.—Two Physicians for In-patients and two for Out-patients.

BOLTON INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £100 per annum.

BRADFORD POOR LAW UNION.—Resident Assistant Medical Officer for the Hospital and Workhouse. Salary, £100 per annum.

BRADFORD ROYAL INFIRMARY.—Resident Surgical Officer. Salary, £150 per annum

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Second House-Surgeon. Salary, £60 per annum.

BURNLEY: VICTORIA HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

CAIRO: DEPARTMENT OF PUBLIC HEALTH.—Sub-Inspector of Ophthalmic Hospitals. Salary, £500 per annum

CALCUTTA: LADY DUFFERIN VICTORIA HOSPITAL.—Lady Doctor. Salary, Rs. 550 per month.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £50 per annum

CANCER HOSPITAL, Fulham Road, S.W.—Medical Officer in Charge of Electrical Department. Honorarium, £26 5s.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—(1) Assistant Surgeon. (2) Second Medical Officer for Casualty Department; salary at the rate of £40 per annum

EDINBURGH ROYAL HOSPITAL FOR SICK CHILDREN.—Four Resident Medical Officers.

EDMONTON UNION.—Assistant Medical Officer to the Workhouse. Salary, £180 per annum.

ENNISKILLEN: FERMANAGH COUNTY HOSPITAL.—House-Surgeon. Salary, £52 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Eight Qualified Clinical Assistants.

GLOUCESTER GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary, £50 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House Surgeon. Salary, £20 for six months, and £2 10s. washing allowance.

HULL ROYAL INFIRMARY.—Casualty House-Surgeon. Salary, £50

KIRKBURTON: STORTHES HALL ASYLUM.—Locum tenens. Salary, £3 3s. per week.

LEEDS UNION.—Assistant Medical Officer for Indoor Institutions. Salary, £100 per annum

LEICESTER: LEICESTERSHIRE AND RUTLAND ASYLUM.—Senior Assistant Medical Officer. Salary, £150, rising to £200 per annum.

LINCOLN COUNTY HOSPITAL.—Junior Male House-Surgeon. Honorarium, £25 for six months.

LIVERPOOL EYE AND EAR INFIRMARY.—Male House-Surgeon. Salary, £80 per annum.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Salary, £100 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, and £5 for washing.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Senior and Junior House-Physicians. Salary, £50 per annum each.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary, £160, rising to £180 per annum.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary, £80 per annum

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Male Assistant House-Surgeon. Honorarium, £20 for six months.

OLDHAM UNION.—Resident Medical Officer of the Workhouse. Salary, £150 per annum.

ST. MARY'S HOSPITAL, Paddington.—Curator of Museum and Assistant Pathologist. Salary, £100 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

SHEFFIELD CORPORATION FEVER HOSPITALS.—Junior Assistant Medical Officer. Salary, £130 per annum.

SHEFFIELD UNIVERSITY.—Demonstrator in Physiology. Salary, £150 per annum.

STOCKPORT UNION.—Resident Assistant Medical Officer for the Hospital, Stepping Hill. Salary, £130, rising to £150, per annum.

TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Salary at the rate of £50 per annum.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WALLASEY DISPENSARY AND VICTORIA CENTRAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—(1) Senior House-Surgeon; (2) Assistant House-Surgeon. Salary, £110 and £75 per annum respectively.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Officer in charge of *X*-ray Department

WORCESTER COUNTY CHEMICAL LABORATORY, Shirehall.—Assistant Bacteriologist. Salary, £150 per annum.

WORCESTER GENERAL INFIRMARY.—House-Physician. Salary, £60 per annum

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Whitchurch, co. Hants; Henley-in-Arden, co. Warwick; Stratton, co. Cornwall, and Penarth, co. Glamorgan.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

ALCOCK.—On the 15th June, at 22, Downshire Hill, Hampstead, N.W., the wife of N. H. Alcock, M.D., of a daughter.

MARRIAGES.

BARRADELL-SMITH—REYNOLDS.—June 12th, at Elwick Hall, by the father of the bride, assisted by the father of the bridegroom and Rev. R. H. Reilly, Vicar of Bishopton, Sydney Barradell-Smith, M.B., B.C., elder son of Canon S. Barradell-Smith, Master of Greatham, to Edith Lucy, youngest daughter of Rev. G. W. Reynolds, Rector of Elwick Hall.

BRADDON—JOSLING.—On the 6th June, at Holy Trinity Church, Upper Tooting, by the Rev. Canon Roberts, assisted by the Rev. Dr Lindesay, Vicar of the parish, William Vaudrey Braddon, M.B.Cantab., of 283, London Road, Thornton Heath, youngest son of the late Charles Hitchman Braddon, M.D., Cheetham Hill, Manchester, to Beatrice, second daughter of the late George Frederick Josling, Great Thurlow, Suffolk, and Mrs. Josling, of Kinnoull, Tooting Common, S.W.

MILWARD—TILLEY.—On the 11th inst., at St. Augustine's Church, Edgbaston (by the Venerable Archdeacon of Birmingham, assisted by the Rev. H. R. Hall, Rector of Boothby, Lincoln), Frederic Victor Milward, B.A., M.B., B.C.Cantab., F.R.C.S.Eng., son of the late Colonel Victor Milward, formerly M.P. for the S.W. Division of Warwickshire, and of Mrs. Milward, Tiddington, Stratford-on-Avon, to Elinor Mary (Nora) Tilley, eldest daughter of Ben. B. Tilley, of Cromartie, Edgbaston.

DEATH.

ALEXANDER.—At Eastbourne House, Forfar, suddenly, on 11th inst., [illegible] Paton Alexander, F.R.C.S.Ed., in his 72nd year.

DIARY FOR THE WEEK.

MONDAY.

OBSTETRICAL SOCIETY OF GREAT BRITAIN, 20, Hanover Square, W., 8 p.m.: Valedictory Address, by the President. 2, Cases and Communications. Mr. M. F. Hopson, L.D.S.Eng.: An Impacted Mandibular Third Molar. 3, Resolutions [illegible] to amalgamation with the Royal Society of Medicine.

ROYAL SOCIETY OF MEDICINE, 20, Hanover Square, W., 5.30 p.m.—First General Meeting of the Medical and Surgical Sections. Election of Officers and Council.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m., Third Croonian Lecture by Dr. W. J. R. Simpson on Plague.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W., 5 p.m., Fourth Croonian Lecture by Dr. W. J. R. Simpson.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday and Friday, 3.45 p.m., Nose and Accessory Sinuses.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Diabetes in Children.

LONDON SCHOOL OF CLINICAL MEDICINE.—Clinics: Monday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Ear and Throat, 4 p.m. Tuesday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Skin, 4 p.m. Wednesday, Medicine, 2.15 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30 p.m. Out-patient Demonstrations: Surgical, daily, 10 a.m.; Medical, daily, 10 a.m. Ear and Throat, Mondays and Thursdays, 12 noon. Eye, Wednesdays and Saturdays, 11 a.m. Skin, Tuesdays and Fridays, 12 noon. Special Lectures: Monday, 2.15 p.m., Treatment of Rheumatic Fever; Tuesday, 3.15 p.m., Cancer of the Stomach.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical: Thursday, Surgical; Friday, Ear. Lectures at 5.15 p.m. each day will be given as follows:—Monday, Malignant Disease of the Caecum and Colon; Tuesday, Endometritis: Wednesday, Surgical Diseases of Children; Thursday, The Treatment of Hip Disease.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Syphilis of the Nervous System: Friday, 3.30 p.m., Acute Poliomyelitis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—The following are the clinics and demonstrations for next week:—Monday 10 a.m.: Surgical; 2.30 p.m.: Medical, Throat, Nose and Ear, X Rays. Tuesday, 10.30 a.m.: Medical; 2.30 p.m.: Operations—Surgical and Gynaecological; 4.30 p.m.: Special Demonstration of Surgical Cases; Wednesday, 2.30 p.m.: Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynaecological Operations—Medical, Surgical; X Rays; 3 p.m., Medical (In-patient); 4.30 p.m., Special Demonstration of Medical Cases. Friday, 9.30 a.m., Surgical. 2.30 p.m. Operations—Medical, Eye; 3 p.m., Medical (In-patient).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following arrangements have been made for next week:—Daily, 2 p.m.: Medical and Surgical Clinics and X Rays. 2.30 p.m.: Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2.30 p.m.: Skin Diseases. 2 p.m.: Diseases of Throat, Nose, and Ear, and also on Wednesday and Saturday, 10 a.m. Wednesday, 10 a.m.: Diseases of Children. Lectures—Monday, 12 noon: Pathological Demonstration. Monday, 5 p.m.: Clinical. Tuesday: The Graver Forms of Valvular Disease of the Heart. Wednesday: Gynaecology. Thursday: Clinical. Friday: Bilharzial Disease.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JUNE.	
21 FRIDAY ...	LONDON: Ethical Committee, 2 p.m.
22 SATURDAY...	SOUTH EASTERN COUNTIES DIVISION, *Edinburgh Branch*, Annual Meeting, at Dr. Young's house, Earlston, 4 p.m.
23 Sunday ...	
24 MONDAY ...	CITY DIVISION, *Metropolitan Counties Branch* EASTON AND SPALDING DIVISION, *Midland Branch*, Motor Meet, Bull Hotel, Bourne, 4 p.m. GLASGOW NORTH-WESTERN DIVISION, *Glasgow and West of Scotland Branch*, Annual Meeting, Western Infirmary, 8.15 p.m.
25 TUESDAY ...	ISLE OF THANET DIVISION, *South-Eastern Branch*, Annual Meeting, Royal Sea Bathing Infirmary, Margate, 4 p.m. EDMONTON DIVISION, *Metropolitan Counties Branch*, Annual Meeting, Edmonton Town Hall, 5 p.m. [illegible] Council and Finance Committee, 5 p.m. GUILDFORD DIVISION, *South-Eastern Branch*, Annual Meeting, Royal Surrey County Hospital, Guildford, 4 p.m. Tea, 4.15 p.m.
26 WEDNESDAY ...	SOUTH LANCASHIRE AND SOUTH WEST CUMBERLAND BRANCH, Annual Meeting, Grosvenor Hotel, Chester, 3.30 p.m. YORKSHIRE BRANCH, Annual Meeting, Dewsbury.

Date.	Meetings to be Held.
JUNE *(Continued).*	
27 THURSDAY...	CANTERBURY AND FAVERSHAM DIVISION, *South-Eastern Branch*, Combined Meeting of Divisions comprised in the old East Kent District, County Hotel, Canterbury, 3 p.m.; Dinner, 5.45 for 6 p.m. METROPOLITAN COUNTIES BRANCH, Annual Meeting. STAFFORDSHIRE BRANCH, Annual Meeting, Victoria Hotel, Wolverhampton, 5.25 p.m.; Dinner, 7.15 p.m.; Council Meeting to precede Annual Meeting. WANDSWORTH DIVISION, *Metropolitan Counties Branch*, Battersea Town Hall, 4 p.m.
28 FRIDAY ...	BARNSLEY DIVISION, *Yorkshire Branch*, Annual Meeting, Beckett Hospital, 8 p.m. EDINBURGH BRANCH, Annual Meeting, Royal College of Physicians, Queen Street, 4.15 p.m. FIFE BRANCH, Annual Meeting, Hotel, Thornton, 3 p.m. WEST SOMERSET BRANCH, Annual Meeting, Royal Clarence Hotel, Bridgwater, 12.15 p.m.; Luncheon served after the Meeting.
29 SATURDAY...	ULSTER BRANCH, Annual Meeting, Medical Institute, Belfast, 11.30 a.m.
30 Sunday	

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 29TH, 1907.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

British Medical Association.

ANNUAL REPRESENTATIVE MEETING AT EXETER,

July 27th and 29th, 1907, and following days, if necessary.

Motions by the Waterford Division (South-Eastern of Ireland Branch). Consideration of which was postponed by the Annual Representative Meeting, 1906, until the Annual Representative Meeting, 1907.

1.—SEPARATE REPRESENTATION OF SMALL BRANCHES.

That provision should be made for the separate representation of small Branches, such as the South-Eastern of Ireland Branch, which represents interests different from and antagonistic to those of the predominant and associated Branch.

2.—MEDICAL TEACHING.

That it is contrary to the interests of the profession that the mass of the profession, and even the majority of members of hospital staffs, should be excluded, as at present, from all share of medical teaching.

3.—MEDICAL EXAMINATIONS.

That all medical examinations ought to be duly advertised, and open to the presence of every registered medical practitioner.

4.—APPOINTMENT OF A MATERIA MEDICA COMMITTEE OF THE ASSOCIATION.

That the Council be requested to appoint a Materia Medica Committee, whose duty it will be, with such professional aid as they can summon to their assistance, to investigate and pronounce on the uses and properties of all drugs which shall be used by the profession, and that in view of the grave injury inflicted on the public and on the profession alike by the present wholesale introduction of drugs by mere commercial firms, whereby the ground is being cut from under our feet, and the gullible public are induced to accept nostrums on the sole strength of mere assertions, that the hospitality of our museum and the pages of our JOURNAL shall be both shut out from giving any further aid to the wholesale advertisements of drugs and preparations, the sole virtues of which have too often no existence save in the mendacity of their introducers.

5.—HOSPITAL ADMINISTRATION.

That the Council be instructed to take steps to give practical effect to the Oxford resolutions on the subject of the gratuitous or semi-gratuitous hospital treatment of the well-to-do.

6. BRITISH MEDICAL JOURNAL.

That the British Medical Journal should more largely advocate the rights, interests and claims of the medical masses in the future than it has done in the past

By direction of the Chairman of Representative Meetings,

J. SMITH WHITAKER, *Medical Secretary.*

June 26th, 1907.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the Journal.*]*

BATH AND BRISTOL BRANCH:

Trowbridge Division.

The annual meeting of the members of this Division was held on Saturday, May 25th, at 3 p.m., at the Town Hall, Trowbridge, Dr. J. Ireland Bowes, Chairman, in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Election of Officers.—The following members were elected officers for the ensuing year: *Chairman*, Dr. W. I. Keir (Melksham); *Honorary Secretary and Treasurer*, Dr. J. Tubb-Thomas; *Representatives on Branch Council*, Dr. Pearse (Trowbridge), Dr. H. P. Tayler (Bradford-on-Avon), Dr. J. M. Rattray (Frome); *Executive Committee*, Dr. H. P. Tayler, Dr. T. W. Lockett, Dr. G. S. A. Waylen.

Draft Charter.—This was discussed, and it was unanimously agreed that the Representative at the Representative Meeting be instructed to support the resolution of the Dublin Division (Leinster Branch). All present were in favour of the resolution.

Hospital Administration.—Question 1, No; Question 2, No; Question 3, Yes; Question 4, Yes. Carried—for, 12; against, 0.

Medical Inspection of School Children.—It was proposed:

> That the question of medical inspection of school children be postponed until some knowledge be obtained as to what will be required by the Legislature.

Carried unanimously.

Contract Practice.—Dr. James Pearse read a paper upon contract practice, and a general discussion followed. The thanks of the meeting were tendered to Dr. Pearse for his paper, and it was proposed that a Committee consisting of Drs. Pearse, Rattray, Adye, Herbert Tayler, and Shorland be appointed to prepare a report on contract practice, and to suggest a means of mending or ending the present unsatisfactory state of affairs with regard to contract practice, and that Dr. Pearse act as convener of the Committee.

BIRMINGHAM BRANCH:

Coventry Division.

The annual meeting of this Division was held on Tuesday, June 18th, at the Coventry and Warwickshire Hospital, Mr. Faulder White being in the chair.

Election of Officers and Committee.—The following officers were elected: *Chairman*, Dr. Pickup; *Vice-Chairman*, Dr. Harman Brown; *Secretary and Treasurer*, Dr. J. Orton; *Representative on Branch Council*, Dr. Milner Moore; *Representative on the Committee of Management of the Public Medical Service*, Dr. Hird; *Representative on the Committee of Management of the New Dispensary Service*, Mr. Faulder White; *Executive Committee*, Mr. F. White and Drs. Snell, Hawley, Hird, Rice, and Callaghan.

Report of Executive Committee.—The following annual report of the Executive Committee was received and unanimously approved: The Committee have to report that in January last they presented a report of the proceedings of the Division during 1906 to the Branch Council, which included the following financial statement:

Dr.	£ s. d.	Cr.	£ s. d.
Grant (special) received		Local Secretarial Expenses	3 0 0
[illegible]	7 0 0	Secretarial Expenses	
Overdrawn at [illegible] per [illegible]	[illegible]	Printing	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Postage	[illegible]
		Cheque Book	0 7 6
	£6 3		£6 3

A special grant has since been received from the Branch Council of £1 11s. 11d., covering the deficit for last year. In relation to the five ordinary meetings of the Division, one special meeting was called by the Committee; the average attendance at these has been 27·3, the largest average attendance yet recorded, also the Division has met four times in Committee. The Committee has held nineteen meetings; one of these was a joint meeting with the members of the P.M.S., and five with some of the members of the staff of the Dispensary. The attendance at these meetings of members of the Committee has been as follows:

Elected Members: Davidson, 14; Brown, 12; J. Orton, 15; Hawley, 15; Callaghan, 13; Fenton, 18.

Ex-officio Members: White, 17; Pickup, 19; Moore, 15; Snell, 19.

(Dr. Brown was elected during the year, and was summoned to 15 meetings.)

The most important matter before the Division during the year has been the Dispensary question, and it has been this which has necessitated a larger number of Committee meetings than is usual; the circumstances in relation to this matter are so well known to the members of the Division that the Committee does not think that they need be here recorded. It may be hoped that the recent resignation of five of the members of the staff may herald either the reform or the extinction of that institution, since in its present constitution it cannot be described otherwise than as a gigantic organized robbery of the medical profession. That its continuance should have been countenanced so long must be taken as evidence of the admittedly unbusiness-like methods of a profession which allows itself to be exploited by unscrupulous so-called "philanthropists." During the year several papers on medical subjects have been read and specimens shown. A very successful annual dinner was held. The voluntary book section has been continued; the Committee regret to report that this has a diminished membership, but they think that a more permanent library, rather than a floating set of books, is more worthy of the ambition of the Division.

Hospital Administration.—On the questions put by the Hospitals Committee the following answers were adopted: (1) Should there continue to be compulsory payment by patients to hospitals other than cottage hospitals?—No. (2) Should the production of subscribers' letters continue to be compulsory?—No. (3) Should inquiry into a patient's circumstances invariably take place?—Yes. (4) Should a certificate be required from the medical attendants of all persons attending out-patients departments? In reply to this last question Dr. Moore proposed, and it was seconded, that no reply be given. Mr. Faulder White proposed as an amendment, and Dr. Davidson seconded, that the reply be "No." The amendment was carried, and was then put and carried as the substantive resolution.

Medical Inspection of School Children.—Dr. Rice proposed, and Dr. Hawley seconded, that the recommendation of the Committee on this matter be adopted; this was:

> That the Division reply that, as far as possible, the medical inspection of school children should be carried out by medical men not in practice.

Ethical Aspects of Consultation.—It was resolved that the recommendations of the Central Ethical Committee be approved.

Coventry Dispensary.—The Chairman proposed, and Dr. Moore seconded, that the Division affirm the fact, and it is herewith affirmed, that the resolution of the Division passed on April 3rd, 1906, relating to the Coventry Dispensary, should be brought into effective operation on and after June 30th next.

Votes of Thanks.—The Chairman proposed, and Dr. Moore seconded, a hearty vote of thanks to the Committee of the Coventry and Warwickshire Hospital for the continued use of their Board Room for the meetings of the Division. A vote of thanks was accorded to the retiring chairman.

West Bromwich Division.

The annual meeting of this Division was held in the Board Room of the District Hospital on June 14th, at 4 p.m.

Election of Officers.—The following officers were elected for the year: *Chairman*, J. F. Atkins, M.B.; *Vice-Chairman*, T. Sansome; *Honorary Secretary*, H. B. W. Plummer, M.D.; *Representatives on Branch Council*, H. Manley, M.D. and H. B. W. Plummer, M.D.; *Joint Representative in Representative Meeting*, Mr. Messiter; *Executive Committee*, C. E. Buttery, W. Carman, M.D., T. Sansome, Jun., W. H. Stephens, M.D., W. D. Urquhart, M.D., S. T. D. Weston.

CAMBRIDGE AND HUNTINGDON BRANCH.

THE annual meeting of the Cambridge and Huntingdon Branch was held in the Medical Schools, Cambridge, on Thursday, June 13th, the PRESIDENT, Mr. Deighton, in the chair.

Confirmation of Minutes.—The minutes of the previous annual meeting were read and confirmed.

Balance Sheet.—The balance sheet to December 31st, 1906, was read and adopted.

Election of Officers.—The following officers were elected: *President-elect*, Dr. Newton (Alconbury Hill); *Representative*, Dr. Roderick; *Honorary Secretary and Treasurer*, Mr. F. E. Apthorpe Webb; *Branch Council*, Dr. Griffiths, Dr. Giles, Dr. Fordyce; *Member of Council*, Mr. Apthorpe Webb was declared elected.

Luncheon.—After the meeting over seventy members and friends lunched at St. Peter's College by invitation of the President. After lunch the CHAIRMAN proposed the toast of "The King." The PRESIDENT then proposed the health of the outgoing President, Dr. Kirkwood. The latter replied, and proposed the health of the President, thanking him for his hospitality. Mr. DEIGHTON suitably responded, and proposed the health of the Master and Fellows of St. Peter's College. This was acknowledged in an interesting speech by Mr. DICKSON.

Papers.—After lunch the following papers were read: (1) The surgical treatment of chronic middle-ear suppuration and some of its complications, with lantern slide illustrations, Mr. DEIGHTON; (2) (*a*) Congenital hypertrophic stenosis of the pylorus; (*b*) Congenital dextrocardia, with complete transposition of viscera (patients shown), Dr. LLOYD JONES; (3) Microscopic demonstration, Professor WOODHEAD.

Tea.—The members then partook of tea, and a very successful and interesting meeting was brought to a close.

CAPE OF GOOD HOPE (EASTERN PROVINCE) BRANCH:

GRAHAMSTOWN DIVISION.

A REGULAR meeting of the Grahamstown Division was held at the Grahamstown Asylum at 8 p.m. on Friday, May 17th, Dr. R. C. MULLINS in the chair.

Confirmation of Minutes.—The minutes of the meetings of March 15th and April 19th were read and confirmed.

Reciprocity.—It was resolved that the answers of the recently-elected members of the Colonial Medical Council on the subject of "reciprocity" be offered to the *South African Medical Record* for publication, in accordance with the letter of Dr. L. A. W. Beck, subject to the consent of the writers.

Communications.—Dr. T. D. GREENLEES read notes of clinical cases of insanity, with a commentary and demonstration. The states of mind dealt with were: Acute mania, adolescent and chronic mania, alcoholic and delusional insanity, acute and chronic melancholia, dementia praecox, stuporose melancholia, epileptic insanity and imbecility, general paralysis of the insane, and, lastly, dementia. In the resulting discussion Drs. FITZGERALD, BRUCE-BAYS, DRURY, PURVIS, and MULLINS joined, and a vote of thanks to Dr. Greenlees was passed. Dr. Bruce-Bays's notice of motion was deferred to the next meeting.

EAST LONDON DIVISION.

AN ordinary meeting was held on May 10th, in the Senior Club (where the meetings in future will be held), Dr. TANNOCK, Chairman, presiding.

Confirmation of Minutes.—The minutes of March 8th and April 24th were read and approved.

Advice to Lay Authorities as to Duties of Medical Officers.—Dr. ROULSTON moved:

> That while no objection can be raised to legitimate individual or collective criticism legitimately and publicly exercised, we the East London Division agree with the Transvaal Medical Society that it is undesirable that medical men, either individually or collectively, should tender or accord advice to any lay government or municipal or other official or body in reference to the duties and responsibilities of any medical officer in the service of such official or body, unless with the knowledge of and after consultation with such medical officer, or unless such medical officer is the official subordinate of the medical officer whose duty it may be to tender or accord such advice.

Dr. GREY seconded the motion, which had been sent down by the Transvaal Medical Society. This motion was carried unanimously.

South African Medical Congress.—A letter was read from the Western Province Branch in reference to their Representatives at home, and also one from Dr. Thornton, honorary secretary of the South African Medical Congress about papers for the Congress.

Communications.—Dr. R. C. WORSLEY brought in a patient from whom he had excised half the tongue for cancer. The patient was a man aged 48. When first seen he had noticed a sore on the tongue for two or three months, but had not paid much attention to it. An ulcer was situated at the junction of the middle and posterior thirds of the right side of the tongue, with deep craggy edges of irregular outline; the floor was bathed in purulent discharge. The anterior pillar of fauces on the same side, the alveolar margin of the gums of the lower jaw, and the floor of mouth appeared infiltrated by the growth, which had the appearance of epithelioma. No enlarged glands were felt. Pain was not very severe. Three days later half the tongue was removed by Whitehead's method, as well as part of the soft palate and gum, and the portion of the floor of the mouth involved. A preliminary tracheotomy and sponge in the pharynx greatly facilitated the operation. (The tube was left out after the operation.) Three weeks later the patient was feeling pretty well, and swallowing soft food with ease. The anterior triangle was then cleared out, and some hard lymphatic glands along the inferior ramus removed, together with the submaxillary of same side. The wound was soundly healed and stitches removed on the sixth day. The patient was now putting on flesh, spoke and swallowed well, but there were some unhealthy-looking granulations in the palatal scar, and recurrence in that situation is to be feared. The specimen was laid out for inspection. According to the rule laid down that members read papers in rotation, Dr. HAGEMANN and Dr. HILL AITKEN were then called upon. The first related how he had had a case of cysto-sarcoma of the mesentery under his care, and the latter urged on the profession the advisability of recommending mothers to demand fresh cow's milk for their children, so as to help on the country in its present depressed state. Dr. Worsley's case and the two papers gave occasion for discussion, and it was unanimously agreed that a pleasant and profitable evening had been spent.

EAST ANGLIAN BRANCH:

NORTH-EAST ESSEX DIVISION.

A MEETING of this Division was held at the Red Lion Hotel, Colchester, on Tuesday, May 28th, at 7 p.m., Dr. NICHOLSON in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Letters.—Arising out of the minutes, letters were read from Dr. Ryan, Dr. Wright, Dr. Rowland, the Secretary of the Halstead Neighbourhood Friendly Societies, and the Colchester Education Committee.

Midwifery Emergency Orders.—The question of recovery of fees in midwifery emergency orders was considered, and the Honorary Secretary was requested to draft letters to the Town Council and County Council, and to submit them to the next meeting.

Contract Practice.—The Honorary Secretary was instructed to forward a copy of the resolution passed at the last meeting concerning fees for contract practice to one of the members of the Division. It was unanimously decided to call a meeting early in June to consider the question of contract practice.

M.O.H. and Education Authorities.—The Honorary Secretary was requested to write to the Medical Officer of Health and ask him to attend the next meeting and state his position with regard to the education authorities, in order that the Division may know how to proceed in the matter.

Annual Representative Meeting. The HONORARY SECRETARY reported that Dr. Atthill was obliged to resign the post of Representative at the annual meeting. The Honorary Secretary was instructed to endeavour to obtain some one else to undertake the post.

A MEETING of the Division was held on Friday, June 14th, at 8.30 p.m., twelve members being present. The meeting was preceded by a dinner at which eight members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Medical Practitioners and Midwives.—The HONORARY SECRETARY presented for approval a draft letter requesting the Town and County Councils to arrange for the payment of medical men summoned under the Midwives Act. The letter was approved, and the Honorary Secretary was instructed to forward copies to the necessary quarters.

Election of Officers.—The following officers were unanimously elected: *Chairman*, E. Chichester, M.B.; *Vice-Chairman*, Sydney Curl, M.D., M.R.C.P.; *Honorary Secretary*, Leigh Day, M.D.; *Representative*, Sydney Curl, M.D.; *Representatives on Branch Council*, C. E. Addison, Sydney Curl, M.D.; *Executive Committee*, Sydney Curl, M.D., C. E. Addison *(ex-officio)*, E. Chichester, M.B., Leigh Day, M.D., H. J. Flanegan, B. H. Nicholson, M.B., F. Syrett, M.D., Penry Rowland, M.D., W. F. A. Clowes, E. P. Dickin, M.D., B. Hall, M.B.

Contract Practice.—Much discussion took place on this subject. A letter was read from the Medical Secretary suggesting that the Division should deal with the matter in sections, so that each section could deal with its own troubles. It was unanimously agreed that the Colchester section should cover an area of three and a half miles radius from the town hall. It was agreed that the Honorary Secretary should send a list of questions to all medical men in this section, and ask them to reply to the questions within a week. It was decided that the questions should be:

1. Do you agree that the minimum fee for all club patients, irrespective of age and sex, should be 5s. per member per annum?
2. Are you in favour of a wage limit? If so, what should it be?
3. Do you agree that the following rules should apply to all clubs?
   (a) The medical man shall give such medical and surgical attendance as he considers fit.
   (b) All messages, except in case of urgency, shall be left before 10 a.m.
4. Do you consider it desirable that medical men should be entitled to be present at, and to vote at, the meetings of those clubs with which they are connected?

It was agreed that the Honorary Secretary should inform medical men outside the Colchester area of the steps that were being taken in Colchester, and should report to them the opinion of the Division that they should form themselves into sections, and deal locally with the question. Suggestions were made as to what sections there should be. Other points concerning contract practice were raised, but it was considered advisable to commence action in as simple a manner as possible.

Club Patients and the Compensation Act.—The recovery of fees from club patients insured under the new Compensation Act. It was unanimously agreed than an effort should be made to induce the Committee of the hospital to allow no certificates to be given to an out-patient who met with an accident in the course of his employment. It was pointed out that there was no possibility of a certificate issued to a club patient for club purposes being used by the employer for insurance purposes, as all club certificates are filed by the secretary of the club. It was unanimously agreed that two forms of certificate should be in use, one for a club certificate and one for the employer's certificate, such forms to be approved later. It was unanimously agreed that the fee for any written statement issued for an employer should be at least half a guinea.

School Certificates.—The action of the Colchester Education Committee. It was made clear by the medical officer of health that the Council had agreed to pay for school certificates, and that they had, after much effort on his part, removed from his duties as medical adviser to the Education Committee any duties likely to bring him into conflict with general practitioners. For the duties remaining to him the Council had offered him a very inadequate fee, but he did not wish the Division to take up the matter, as it seemed to be more a question for the Local Government Board. The Division, however, placed on the minutes a record of its extreme disapproval at the inadequate salary offered to the medical officer of health for acting as medical adviser to the Education Committee.

EDINBURGH BRANCH:
SOUTH-EASTERN COUNTIES DIVISION.

THE annual meeting was held in the house of Dr. YOUNG (Earlston), Chairman of the Division, on the afternoon of Saturday, June 22nd, at 4 p.m.

Confirmation of Minutes.—The minutes of the two previous meetings were read, approved, and signed by the Chairman.

Election of Officers.—The office-bearers for the ensuing year were elected as follows: *Chairman*, Dr. Bannerman; *Vice-Chairman*, Dr. Rutherford; *Honorary Secretary and Treasurer*, Dr. Calvert; *Representative at Representative Meetings*, Dr. Blair; *Representative in Branch Council*, Dr. Carlyle Johnstone; *Executive Committee*, Dr. Cullen, Dr. Fleming, Dr. Jeffrey, Dr. Henderson, Dr. Murray, Dr. Tyrell. Drs. Murray and Tyrell were elected to take the place of Drs. Barrie and Dixon, who retire by rotation.

Special Representative Meeting.—Dr. BLAIR, the Representative, then gave his report of the special meeting of Representatives held in London in the end of May, concerning the proposed Charter of the Association. He dealt with various matters, such as the composition of the Council and the reduction of the number of members, the number to be allocated to Scotland, the fact that the Representatives were to remain as at present. He mentioned that, on account of the fact that the Colonial Divisions cannot send in their replies to the various matters referred to them by the Council in time for the annual meeting of Representatives at Exeter, there can be no final decision of the question of the Charter for another year.

Votes of Thanks.—Dr. HAMILTON moved a vote of thanks to Dr. Blair for the trouble he had taken in giving such an excellent report of the Special Representative Meeting. Dr. BANNERMAN seconded, and the vote was unanimously accorded. Dr. BANNERMAN then proposed a very cordial vote of thanks to Dr. Young for the very able manner in which he had filled the chair during the past year. This was heartily agreed to, and Dr. YOUNG replied and prophesied for Dr. Bannerman an equally successful tenure of office. Dr. CULLEN expressed the thanks of the members to both Dr. and Mrs. Young for the very kind hospitality which they had received.

GLASGOW AND WEST OF SCOTLAND BRANCH:
GLASGOW SOUTHERN DIVISION.

THE annual meeting of this Division was held in the Medical Club on June 12th. Dr. JOHN BROWN presided.

Confirmation of Minutes.—The minutes of the last annual meeting were read and approved of.

Report of Committee.—The annual report of the Committee was submitted and adopted.

Election of Office-bearers.—The following gentlemen were elected office-bearers and members of Committee for the ensuing year: *Chairman*, Dr. Jas. Weir; *Vice-Chairman*, Dr. W. J. Richard; *Secretary and Treasurer*, Dr. John Stewart; *Representative for Representative Meeting*, Dr. Alex. Miller; *Representatives on Branch Council*, Dr. John Stewart and Dr. John Brown; *Executive Committee*, Drs. Hamilton, Wauchope, Dunlop, Hansen, Leask, Robertson, Yuill Anderson, Paton, Wilson Cameron, Dunning, Leitch, Shaw, McLeod Watson, and J. P. Duncan.

LANCASHIRE AND CHESHIRE BRANCH:
BLACKPOOL DIVISION.

THE annual general meeting of the Blackpool Division was held in Jenkinson's Café, Talbot Square, Blackpool, on Wednesday, May 29th, Dr. MCINTOSH, President, in the chair.

Confirmation of Minutes.—The minutes of the general meeting held on May 8th were read and confirmed.

Report of Executive Committee.—The annual report of the Executive Committee was read and approved.

Election of Officers.—The election of officers and Committee for the session 1907-8 then took place, resulting as follows: *President*, Dr. Dunderdale, proposed by Dr. MCINTOSH and seconded by Dr. JOHNSON; *Vice-President*, Dr. Booth, proposed by Dr. MCINTOSH and seconded by Dr. STEWART; *Honorary Secretary*, Dr. Coutts, proposed by Dr. JOHNSON and seconded by Dr. SAMERTON; *Representative on Branch Council*, Dr. Coutts, proposed by Dr. RHODES and seconded by Dr. JOHNSON; *Executive Com-*

ittee, Dr. McIntosh (Blackpool), Dr. Eason (Lytham), r. Johnson (Blackpool), Dr. Lawton (Blackpool), Dr. hodes (Thornton), Dr. Stewart (Blackpool), Dr. Iredale Blackpool), and Dr. Jeffrey (Blackpool).

Alteration of Rule.—It was then proposed by Dr. UNDERDALE, seconded by Dr. SABERTON, and resolved:

That Rule 2 of the Blackpool Division be so altered that only two weeks' notice need be given to each member in calling the annual general meeting instead of four weeks, as in the present rule, and to effect this the words "two weeks" be substituted for "four weeks" on the top line of p. 4 of the printed rules.

Notices of Motion at Annual Representative Meeting.—The neeting then considered the notices of motion in the UPPLEMENT of the BRITISH MEDICAL JOURNAL for April 0th, and resolved:

That unless the Division have another opportunity to consider these notices of motion the Representative be instructed to vote thereon according to his own judgement.

JOINT MEETING OF BLACKPOOL AND ISLE OF MAN DIVISIONS.

A JOINT meeting of the Blackpool and Isle of Man Divisions was held at Jenkinson's Café, Talbot Square, Blackpool, on Wednesday, May 29th, to elect a Representative. Dr. MCINTOSH was in the chair. It was proposed by Dr. IREDALE, and seconded by Dr. RHODES, and resolved:

That Dr. F. J. H. Coutts, of Blackpool, be elected the Representative for the joint Blackpool and Isle of Man Divisions to Representative Meetings of the Association.

BOOTLE DIVISION.

THE annual meeting of the members of this Division was held in the Masonic Hall, Merton Road, Bootle, on May 31st.

Election of Officers.—The following were elected office-bearers for the ensuing year: *Chairman*, J. Dunn, F.R.C.S.Edin.; *Vice-Chairman*, R. Turner, M.D.; *Honorary Secretary*, H. Waters, M.B.Camb.; *Representatives on the Branch Council*, F. M. Wills, F.R.C.S.I., B. Sumner, M.D.; *Executive Committee*, J. Dunn, F.R.C.S.Edin., W. J. Fleetwood, M.D., B. Sumner, M.D., R. Stevenson, M.D., R. Turner, M.D., H. Waters, M.B.Camb., J. Walker, M.R.C.S., F. M. Wills, F.R.C.S.I., Dr. Daley; *Representative at Annual Meeting in London*, J. Walker.

CHESTER AND CREWE DIVISION.

A MEETING of this Division was held at the Crewe Arms Hotel, Crewe, on June 7th, at 5 p.m., Dr. MANN in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Letter.—A letter was read from Mr. Larkin, Honorary Secretary of the Branch, questioning whether Dr. Hardy, of Buckley, should be a member of the Division. It had been shown that Buckley was not properly in the Division area; but one member, Dr. Fraser, of Buckley, had already been elected a member of the Division. The matter was referred to the Branch Council for decision.

Ethical Rules.—The model ethical rules of the Bradford Division were then considered seriatim.

(*a*) Regulation of terms for appointments. Dr. HODGSON proposed, and Dr. GRAY seconded, and it was unanimously agreed to.

(*b*) Adoption throughout the Division's area. Proposed by Dr. LIDDLE, seconded by Dr. GRAY, and unanimously agreed to.

(*c*) Adoption for a *part* only of the Division. Proposed by Dr. GRAY, and seconded by Dr. KING.

(*d*) Appointments under existing contracts. After a good deal of discussion, and the withdrawal of a negative proposition by Drs. BRIERLEY and PARRY, it was finally unanimously agreed to, on the proposal of Drs. STAIN and KING.

(*e*) Notice to Branch Council as to unprofessional conduct of members. This also was unanimously agreed to, on the proposal of Drs. GRAY and BRIERLEY.

(*f*) Refusal of professional recognition. Unanimously agreed to, on the proposal of Drs. BRIERLEY and LINNELL.

(*g*) Consultation in cases of emergency. Unanimously agreed to, on the proposal of Drs. HODGSON and MOODY.

(*h*) Canvassing. Unanimously agreed to, on the proposal of Drs. HODGSON and KING.

It was finally proposed and seconded by Drs. HODGSON and PARRY, and unanimously decided, that with the view to the adoption of the ethical rules, the Executive Committee be requested to draw up a circular letter to be sent to every medical man resident in the Division area, with the request that he would express his approval or not of the various points touched upon, and that a report be presented to the Division at a future meeting.

Vote of Thanks to the Chairman.—A vote of thanks to the Chairman terminated the proceedings.

LIVERPOOL (NORTHERN) DIVISION.

THE annual meeting of this Division was held at the Medical Institution on May 31st, Dr. J. A. COOKE, Chairman, presiding.

Minutes.—The minutes of the last annual meeting were taken as read. The minutes of the last ordinary meeting were read and confirmed.

Proposed Joint Committee for Local Divisions.—It was proposed by Dr. A. IVOR THOMAS, seconded by the CHAIRMAN, and resolved unanimously:

That the resolutions drawn up by a Committee consisting of the Chairman and Secretaries of the Liverpool and Birkenhead Divisions, with a view to promoting combined action by the said Divisions, and a copy of which has been sent to each member, be adopted.

Election of Officers.—The following members were elected officers for the ensuing year: *Chairman*, R. S. Archer, M.D.; *Vice-Chairman*, A. Ivor Thomas; *Secretary and Treasurer*, A. W. German; *Representative at Representative Meetings*, E. T. Davies, M.D.; *Representative on Branch Council*, A. W. German; *Executive Committee*, H. Adcock, W. T. Blackledge, M.B., J. A. Cooke, S. H. House, M.B., S. Mathews, M.D., J. J. Tisdall; *Representatives on Joint Committee*, Honorary Secretary and Representative *ex officio*, Vice-Chairman, S. Mathews, M.D., J. J. Tisdall.

Hospital Administration.—It was unanimously decided to answer the specific questions submitted (see SUPPLEMENT, April 13th, p. 190) as follows:

1. No.
2. No.
3. Yes, except in urgent cases, when inquiry could be made after the first attendance.
4. No, as this is not practicable.

Notices of Motion (see SUPPLEMENT, April 20th, April 27th, and May 11th).—It was unanimously decided that these should be left to the discretion of the Representative at the Representative Meeting.

Resolution of Condolence.—It was resolved unanimously:

That this Division desires to express its deep sympathy with Dr. R. S. Archer in his present illness, and offers him its sincere wishes for his speedy recovery.

Votes of Thanks.—Votes of thanks to the retiring Chairman and to the Honorary Secretary for their services during the past year terminated the proceedings.

LIVERPOOL (WESTERN) DIVISION.

THE annual meeting of the Division was held on May 24th at the Liverpool Medical Institution, Mr. F. C. LARKIN in the chair.

Reports.—The annual report of the Executive Meeting was read and adopted, and the financial statement was also read and adopted.

Combined Action by Divisions.—The resolutions drawn up by a specially appointed committee consisting of the Chairmen and Secretaries of the Liverpool and Birkenhead Divisions with a view to promoting combined action by the said Divisions, were adopted, as follows:

That this Division approves of, and will co-operate in, the formation of a Joint Committee of the six Divisions of the Liverpool and Birkenhead district and the holding of combined meetings of the members of these Divisions in accordance with the following provisions:

1. That the Joint Committee shall consist of five members of each Division, appointed by each Division at its Annual General Meeting; the Honorary Secretary and the Representative of each Division shall be among the five appointed.
2. That the Committee coming into office immediately after the holding of the Annual General Meetings of the six Divisions in each year, and that all members

of the Committee of each year, hold office until the next Committee comes into office. Casual vacancies occurring in the Committee may be filled up by the Division whose representation is affected. Further, that at the first meeting of each year the Joint Committee shall elect a Chairman and an Honorary Secretary for the year, and shall arrange the dates of its Meetings.

3. That the duties of the Joint Committee shall be as follows:

(*a*) To convene at its discretion combined meetings of the members of the six Divisions for the consideration of any matter with which such Meetings are for the time being authorized by the said Divisions to deal.

(*b*) To carry into execution resolutions of combined meetings upon matters with which they are authorized to deal.

(*c*) To act on behalf of any of the six constituent Divisions in any matter affecting the local interests of the profession with regard to which the said Division and the Committee shall be of opinion that the interests of the profession will be better served by action through the Committee than through the Division.

(*d*) To consider all such matters with a view to the promotion of co-ordination of the work of the Divisions.

4. That combined meetings of the six Divisions convened by the Joint Committee be authorized to deal on behalf of the six Divisions, subject to the proviso stated in paragraph 5, with any question affecting the general interests of the medical profession in the area of the six Divisions, or of any particular class or classes of the profession in the said area; also to deal with any question affecting the interests of the profession in any one Division upon which the said Division shall seek the opinion or support of the combined Divisions.

5. That the authority conferred by paragraph 4 upon the combined meetings be subject to the following provisions:

(*a*) That combined meetings shall not deal with questions of medical ethics, except by way of expressing collective opinion when desired for the information of the Divisions; no resolution of a combined meeting on an ethical matter shall be binding upon any individual member of a Division.

(*b*) That combined meetings shall not deal with any question affecting the internal affairs of the Association, or the policy of the Association, in other than local matters, nor interfere in any way with the autonomy of the Divisions in respect of such matters, except by way of expression of collective opinion for the information of the Divisions, with a view to affording the Divisions the opportunity of arriving at uniform decisions.

Alteration of Rules.—A number of alterations of the rules of the Division were then adopted.

Election of Officers. The following were elected officers for the ensuing year: *Chairman*, Sir James Barr; *Vice-Chairman*, Dr. G. Stoplford Taylor; *Honorary Secretary*, Dr. K. Grossmann; *Representative to Representative Meetings*, Dr. K. Grossmann; *Representatives on Branch Council*, Dr. Grossmann and Dr. Durham; *Ordinary Members of Executive Committee*, Dr. Allen, Dr. H. Jones, Mr. F. C. Jordan, Dr. Lloyd Roberts, Dr. D. J. Morgan.

Draft Charter.—The draft Charter was then considered, and the Representative directed accordingly.

MANCHESTER (CLARENDON) DIVISION.

The annual meeting of this Division was held on May 24th.

Election of Officers.—The following members were elected officers for the year 1907-8: *Chairman*, Dr. Bruce Bell; *Vice-Chairman*, Dr. Scanes; *Honorary Secretary and Treasurer*, Dr. Dalton; *Representative to Annual Representative Meeting*, Dr. Wolstenholme; *Representatives on Branch Council*, Dr. Taylor and Dr. Wolstenholme; *Executive Committee*, Mr. W. C. Brown, Dr. Hall, Dr. McNair, Wolstenholme.

MANCHESTER AND SALFORD DIVISION.

At the annual meeting of this Division, held on May 27th last, the following officers were elected: *Chairman*, Dr. Wallace Eales (Stretford Road, Old Trafford); *Vice-Chairman*, Dr. E. W. Floyd (Wood Street, Moss Side); *Honorary Secretary*, Dr. Stanley Worsnop, B.A., M.B. (Moss Lane East, Moss Side); *Honorary Treasurer*, Dr. Wallace Eales (ex officio). The Honorary Secretary (ex officio), Dr. Jex Blackmore (Alexandra Road, Moss Side), Dr. C. Stennett Redmond (Edgerton Villa, Stretford Road, Hulme), Dr. Worswick (Chorlton Road, Brooks Bar), Dr. J. Brassey Brierley (Old Trafford), Dr. Oswald Woodcock (Old Trafford): *Representatives on Branch Council*, Dr. J. Brassey Brierley, Dr. J. Skardon Prowse; *Representative in Annual Representative Meeting* (no appointment at present); *Members of Combined Committees of Manchester and Salford Divisions*, Dr. Wallace Eales, Dr. E. W. Floyd, Dr. C. Stennett Redmond, Dr. John Broadbent, Dr. J. Skardon Prowse.

STOCKPORT, MACCLESFIELD AND EAST CHESHIRE DIVISION.

THE annual meeting of this Division was held on June 13th.

Election of Officers.—The following members were elected officers for the ensuing year: *President*, Dr. J. H. Goulden (Stockport); *Vice-President and President-Elect*, Dr. J. Somerville (Macclesfield); *Representatives on Branch Council*, Drs. E. A. Goulden (Stockport), and James B. Hughes (Macclesfield); *Honorary Secretary*, Mr. B. W. Housman, F.R.C.S. (Stockport); *Executive Committee*, Dr. Averill (Macclesfield), Dr. Proudfoot (Macclesfield), Dr. Rayner (Stockport), and Dr. Godson (Cheadle); *Representative at Annual Representative Meeting*, Mr. B. W. Housman, Lygon House, Stockport; *Deputy Representative*, Dr. E. Rayner, Tiviot Dale, Stockport.

Medical Inspection of School Children (SUPPLEMENT BRITISH MEDICAL JOURNAL, p. 74).—Answers to specific questions.

1. (*a*) No.
   (*b*) Yes.
2. Requires no answer.
3. No.
4. Requires no answer.

The members present all represented populous urban or semiurban districts in the Division, though several also work in rural districts.

Ethical Aspects of Consultation (SUPPLEMENT, BRITISH MEDICAL JOURNAL, pp. 74-77).—It was resolved:

That the suggestions of the Ethical Committee be approved.

Hospital Administration (SUPPLEMENT, BRITISH MEDICAL JOURNAL, pp. 189-190).—A discussion on the local hospital administration ensued and occupied the remainder of the time of the meeting, which stood adjourned.

Great Central Railway Mutual Provident Association.—It had been previously resolved:

To accept the report of the Subcommittee appointed to consider the report on the rules of the Great Central Railway Mutual Provident Association; also to continue the Subcommittee with power to take the necessary steps to bring the report before the Medical Officers of the Great Central Railway, and the Divisions in which they severally reside, with a request for the expression of their views on the matter, and that the Subcommittee report again to the Division.

The Great Central Railway Mutual Provident Association is the name of an association for the provision of medical attendance on its members, at contract rates, which has recently come into conflict with the medical profession in various parts of the country, but notably in Sheffield and Stockport.

The Association is divided into Districts, with Medical Officers, extending from York to Southampton and from Grimsby to North Wales. There are 203 Medical Officers according to the list for 1906, of which 114 are members of the British Medical Association, and the latter are distributed among nine Branches and thirty-six Divisions, of which the Lancashire and Cheshire, the Yorkshire and the Midland claim a large proportion. At the latter end of last year a disagreement arose in Stockport between the local Medical Society and the Railway Association on the question of the dismissal and appointment of the medical officer for that district. The result has been that the Medical Society has taken such steps as will leave the railway employees without any medical officer after June 24th; and the Society, considering that, apart from the treatment of the discharged medical officer, the rules, rates of payment, and conditions of employ, required amending, referred the whole matter to the local Division of the British Medical Association, in order that concerted action may be taken to remedy the shortcomings of the system adopted by the Great Central Railway's Association.

It may be mentioned that at the recent annual meeting of the Railway Association in Sheffield certain resolutions

were passed which plainly indicate how concerted action in "disaffected districts" is making itself felt, for district executives were instructed to make the "best terms they could with the doctors," and the committee were instructed to propound a new scheme to the members before October 1st, at a cost not to exceed 8s. per adult male member, and this to include attendance on the man, *his wife, and all children under 14 years.* The Stockport, Macclesfield, and East Cheshire Division then appointed a subcommittee to consider and report on the rules in question. Their report is appended for the information of the members of this Association.

REPORT ON THE RULES OF THE GREAT CENTRAL RAILWAY MUTUAL PROVIDENT SOCIETY.

To the Members of the Stockport, Macclesfield, and East Cheshire Division of the British Medical Association.

WE the undersigned, being the Subcommittee appointed to draw up a Report on the rules of the Great Central Railway Mutual Provident Society, beg to submit the following for the consideration of this Division:

We have in this Report only mentioned such rules or parts of rules as, in our opinion, injuriously affect the medical officers of this Society, and have in such case quoted the rules, and where necessary added our comments; we have made no suggestions as to reform, being convinced that the first step is to get other Divisions where this Provident Society has Medical Officers to agree that the Rules as now existing are unworkable, and having got that opinion, the time for concerted action would arrive and the suggestions as to reform could be made by a joint Committee to be afterwards appointed.

We understand that this Society was first formed to provide Medical and Sick Benefits for men only.

Rule 2 provides:

. . . for the provision of Medical attendance upon Members, their wives, and those of their children who are under 14 years of age. . . .

Rule 12 provides:

A qualified Medical Officer shall be appointed by election by the members in each district every three years, but shall be eligible for re-election, to render sufficient medical aid to any of the members (as well as their wives, and those of their children who are under 14 years of age) suffering from illness or disability, and who are receiving wages or are resident for the time being in such district, and shall be remunerated according to a scale of fees to be agreed upon by the Executive Committee (See page 51). These fees shall meet the expense of attendance, medicine, bottles, and appliances, except trusses and elastic stockings, which shall be paid for by the Society to the value of Two Guineas, but any member who has received appliance or appliances for himself, wife, or children, amounting to the said value, and shall continue to be a member for a further period of three years after receiving the last appliance, he shall be again entitled to the benefit of this rule, and which will be provided on application to the Secretary, and on the recommendation of the Medical Officer.

The Committee shall be empowered, if they think fit, on any charge of incapacity or neglect being proved against a Medical Officer, to discontinue their engagement with him upon fourteen days' notice, and to give notice to the members to proceed to the election of a successor.

Comments.

1. We consider the appointment should not be for a term of years, but should be determinable by a proper notice an either side, because we know the terms have been broken, and advantage taken in subsequent years to try to get rid of a Medical Officer on the whims and spite of members.

2. There is no provision made for hours of attendance at the Surgery, time for messages to be left, special visits, or night visits; we further consider that the provision of bottles and appliances ought to be made by the Society or paid for by the members.

3. We consider the Committee should not have the power to terminate the appointment of the Medical Officer on a case being proved by fourteen days' notice unless he has a right to appeal.

Rule 13 provides:

Every person applying under these Rules to become a member of this Society shall be required to undergo a medical examination by the District Medical Officer to the Society, and the latter will certify whether or not the applicant for admission is in a sound state of bodily health. If the applicant be married or shall marry after joining the Society, he shall fill up a form of declaration as to the health of his wife, and if such declaration be not satisfactory, the Executive Committee shall exclude the wife from all benefits.

Comment.

Although provision is made for the examination of the man, the wife is admitted without any medical examination whatever.

Rule 15 provides:

Any person having been a member of the Society seven years, and who shall quit the service of the said Companies, may continue a member of this Society on payment of one penny per week additional to the maximum rate of contribution; and provided also, that in the event of his residing beyond a distance of three miles from the residence of the Society's Medical Officer, or any of the Company's Stations, he shall not be entitled to medical attendance at the expense of the Society for either himself or his family, but shall be entitled to the return of the Medical Officer's fee yearly.

If the trade or profession taken up is considered by the Committee to be peculiarly hazardous, the rate of contribution shall be proportionately increased, subject, nevertheless, in all cases to the discretion of the Committee.

Comments.

1. We consider that members ought not to be entitled to Medical Benefits after leaving the Service of the Railway Company, but under this rule a man may continue in medical benefit for himself, his wife, and family, no matter how much his position in life may have improved.

Furthermore, we consider it is impossible for the Society to exercise the same control over members after they have left the services of the Company.

2. We consider a three miles limit from the medical officer's residence or the nearest Station is too far for Urban Districts.

3. We consider that though the Society has protected itself against "peculiarly hazardous risks," there is no protection for the Medical Officer.

Rule 18 provides:

. . . That in the event of a member or any of his family being taken ill away from home and having to call in medical aid, the charges for the same be paid in full by the Society, but should the Society's Medical Officer reside in the District his services shall be obtained.

Rule 18 (continued) provides:

. . . Any member who shall have a limb accidentally fractured or dislocated shall be allowed to employ a practical bonesetter, or any member first placing himself under the care of his Medical Officer and considering that he is not making satisfactory progress, shall, with the consent of the Secretary, be allowed to consult a bonesetter, the fees to be paid by the Society.

Comments.

1. The first paragraph speaks for itself, comment is unnecessary.

2. Any Medical Officer working under this rule is liable to be struck off the *Medical Register* for "infamous conduct," and it is absolutely against all ethics of the profession.

APPENDIX.

Scale of fees, etc., payable to the Medical Officers appointed by the Society, on the conditions specified under Rule 12.

Ordinary fees:

8s. per head per annum for Members paying 8d. or more per week contribution

4s. per head per annum for Members paying 4d. per week contribution.

2s. 6d. for each examination of an applicant for admission to the Society.

"The Medical Officer is liable if called in, to attend free of charge any member who may, to suit the Company's convenience, be temporarily residing in his district, though receiving wages in another district."

Comments.

1. These fees, which include, according to Rule 2, attendance on members, their wives, and children under 14 years of age, are proved by experience to be absolutely inadequate.

2. We also consider that women and children ought not to be included in contract practice.

3. We also note no provision is made for consultations in cases where required.

4. We also object to the provision in the above paragraph that members, to suit the Company's convenience, tem-

porarily residing in a Medical Officer's District, are to be attended free of charge by the Medical Officer whose district they happen to be in.

(Signed) E. A. Goulden.
Basil W. Housman.
John B. Hughes.
A. B. McMaster.
H. G. Smeeth.

METROPOLITAN COUNTIES BRANCH:

Hampstead Division.

The annual meeting of this Division was held on Friday, June 14th, at 4 30 p.m., at St. Peter's Hall, Belsize Square, N.W., Dr. Macevoy in the chair.

Minutes.—The minutes of the previous annual meeting of June 8th, 1906, which by an oversight had never been confirmed, were taken as read and signed. The minutes of the meeting of June 4th, 1907, were then read and confirmed.

Letter.—A letter was then read from the General Secretary reminding Divisions that the Representative Meeting and the Council recommended that in the election of a Representative the numbers voting for and against and those absent should be noted. The meeting agreed to take this course.

Questions.—Mr. Jessop referred to a letter in the British Medical Journal Supplement for June 15th, 1907, with reference to the Hampstead Hospital to which he thought an official answer should be sent as soon as possible. Mr. Hardy proposed and Dr. Oppenheimer seconded:

> That the letter be referred to the Joint Hampstead Hospital Committee for consideration.

Carried *nem. con.*

Annual Report.—The Honorary Secretary read the annual report for the session 1906-7. The report was the fourth report of the Division. The total number of Divisional meetings held was 13; the average attendance 16 5. The total number of individual members who attended meetings was only 56. No fewer than 126 members failed to attend a single meeting. These figures compared unfavourably with last year. The total number of members in June was 181, showing a net loss of 10 as compared with June, 1906. There had been eight new members in the course of the session; two deaths (Dr. Heath Strange and Dr. Macfadyen); and six resignations. The total expenses up to date for 1907 were £33 19s. 4d. A list of members who attended meetings, and a list of committee attendances was handed round. The death of Dr. Heath Strange was again referred to, and it was pointed out that an obituary notice appeared in the British Medical Journal for June 15th, 1907. The Committee had met 15 times, and in addition had held three conferences, and twice sent deputations. The average attendance was 7.8 out of a Committee of 13 (originally). At no less than ten out of eighteen meetings the subject of the Hampstead Hospital was dealt with, and at four of those ten it constituted the sole subject of discussion. The Committee had had ethical cases to deal with, and had been very active in making known the views of the Association on Provident Dispensary Reform. The Division had discussed the following:

1. Cottage hospitals, and the question of subscribers' letters (at Finchley).
2. Divisional library.
3. The Poor Law as affecting the medical profession.
4. Provident dispensaries.
5. The Royal Charter.
6. The Hampstead General Hospital.
7. Ethical aspects of medical consultation.
8. Certain points in hospital administration.
9. Medical inspection of school children.

Scientific papers had been read by Mr. Cheatle on Cancer of the Tongue; Dr. D'Este Emery on Opsonic Indices; Dr. Montague Murray on Pneumonia in Children. An annual dinner had been held.

The report was adopted, and a hearty vote of thanks was passed to Dr. Yeld for the compilation of it.

Special Representative Meeting.—Mr. Armit referred briefly to the results of this meeting, and a hearty vote of thanks was passed to him for his work on behalf of the Division during the session.

Vote of Thanks to Retiring Chairman.—A hearty vote of thanks to the retiring chairman (Dr. Macevoy) was then proposed by Dr. Oppenheimer, seconded by Mr. Armit. The proposer commended the skill and judgement shown by the chairman throughout an unprecedentedly arduous session. The vote of thanks was carried with acclamation. —Dr. Macevoy, in reply, thanked the Honorary Secretary for his valuable assistance.

Election of Officers.—The following members were elected officers for the ensuing year: *Chairman*, Dr. Pidcock; *Vice-Chairman*, Dr. Oppenheimer; *Representatives to the Branch Council*, Drs. Macevoy and Clark Wilson, Dr. Yeld (*ex officio*); *Representative to the Representative Meeting*, Mr. H. W. Armit (14 voted for, 1 did not vote, absent 166). *Honorary Secretary*, Dr. R. A. Yeld; *Co-Secretary*, Mr. Armit; *Ordinary Members*, Dr. Ford Anderson, Dr. Collingwood Andrews, Miss Ada Browne, Dr. W. Butler, Mr. C. W. Cunnington, Miss Dobbie, Dr. Gaster, Mr. Nelson Hardy, Mr. F. R. Humphreys, Mr. E. Jessop, Mr. W. B. Parsons; *Co-opted Members for the Joint Hampstead Hospital Committee*, Drs. Sharman, James Stewart, Walter Smith, and Claude Taylor.

Instructions to Representative.—No special instructions were given.

Central Emergency Fund.—The Honorary Secretary read a letter from Dr. J. A. Macdonald, Chairman of the Representative Meeting, on this subject, inviting subscriptions and donations. It was decided to notify the members of the Division in the agenda for the next meeting.

Other Business.—A vote of congratulation was passed to Dr. Ford Anderson on his election as Representative of the Branch to the Central Council.

Next Meeting.—The next meeting of the Joint Hampstead Hospital Committee was fixed for June 24th.

Stratford Division.

A meeting of the Stratford Division was held on June 20th at the Alexandra Hotel, High Street, at which Dr. Charles Spurrell presided.

Deputy Representative.—It was unanimously agreed that Dr. W. A. Grogono should be appointed Deputy Representative at the Annual Representative Meeting.

The Truck Acts.—A memorandum regarding the working of the Truck Acts in reference to medical attendance was submitted from the Medico-Political Committee of the Association. The Honorary Secretary was instructed as to the replies to be given to the questions contained in the communication.

Fees in certain Cases of Consultation.—The meeting considered a resolution regarding fees in cases of consultation requested by employers, companies, or public bodies, forwarded by the Honorary Secretary of the Medico-Political Committee of the Metropolitan Counties Branch for the opinion of the Division. It was pointed out that the circumstances of the case which occasioned the reference were covered by the resolution sent up by the Stratford Division, and passed at the Leicester meeting in 1905, to the effect:

> That the fee of the patient's medical attendant should be paid at the time by the party asking for the consultation or examination.

The opinion of the meeting was (1) that such fees were generally offered at the time and (2) that any difficulty in obtaining the fee was overcome by the practitioner refusing to take part in the consultation unless the fee was paid at the time.

Central Emergency Fund.—The subject of the Central Emergency Fund referred from last meeting was then brought forward by Dr. Rose, who moved:

> That in the opinion of this Division a satisfactory Central Emergency Fund would be formed by each member of the Association voluntarily subscribing 5s. a year.

Dr. Rose gave the history of the Fund since it started in 1906, and he thought that the foundation of such a fund would be an inducement for medical men to join the Association. Dr. Hastings seconded the motion. Dr. Beadles questioned the legality of a Committee of the Association proceeding to administer a fund which they had no legal powers of raising. He instanced medical defence as a power which could not be used by the Association under its present constitution, and he thought there would be a similar objection to the administration of an Emergency Fund. Dr. Biernacki thought that a fund founded on voluntary

subscription was foredoomed to failure, and he considered that it was inexpedient to invite subscriptions, inasmuch as many men, though not approving of the Fund, would not like to refuse. He pointed out, too, that under the new Charter such a fund could be legally raised, and it would be well to wait till the Charter was granted. He also thought there was insufficient information of the objects of the Fund and its methods of administration. Dr. HAY said that in his opinion the Stratford Division should have nothing to do with the Emergency Fund at present. It ought to be remembered that the Association had a large number of members who were merely JOURNAL readers, and who were not interested in the political aspects of the Association. The necessity of such a fund had not been brought home to the members, and a fund necessitating an increase of subscription, instead of proving an inducement to join, might end by drawing members out of the Association. Dr. GROGONO, in supporting the resolution, said that as the Association was becoming a means of mutual help and support it was absolutely necessary to have such a fund. The resolution was carried by a small majority. Dr. ROSE then moved:

> That this meeting invites every member of the Stratford Division to forward by the end of this month the sum of 5s. to the Honorary Secretary of the Division, and to follow this with a subscription of 5s. in January each year, unless the Association has decided that further subscriptions are not required.

On the amendment of Dr. HAY, the further consideration of this motion was postponed till a future meeting.

MUNSTER BRANCH.

THE annual general meeting was held on Saturday, June 22nd, Dr. J. J. CURRAN in the chair.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Apology for Non-Attendance.—Letter of apology for non-attendance from Colonel Hunt, R.A.M.C. (Limerick), read.

Election of Representative on Central Council.—Dr. GIUSANI having been duly nominated in accordance with By-law 27 of the Association was elected representative to Council, British Medical Association, for 1907-8.

Representative to Representative Meetings.—Dr. J. J. Curran (Killeagh, co. Cork) was unanimously elected.

Election of Representative to Irish Committee, British Medical Association.—Dr. D. J. O'Connor, F.R.C.P.I., was unanimously elected for 1907-8.

Election of Officers.—The following members were elected officers and members of Council for the Branch for ensuing year:—*President*, Dr. J. Cotter, F.R.C.S.I. (Cork); *Vice-President*, Dr. Lucy Smith; *Retiring President*, Dr. P. T. O'Sullivan; *Honorary Secretary*, Dr. Philip G. Lee, 26, Patrick's Hill, Cork. The following *Council* was elected: Drs. Professor W. Ashley Cummins, Professor Corby, H. R. Townsend, P. J. Cremen, D. J. O'Connor, J. T. O'Connor, T. B. Moriarty, E. J. Coffey (Queenstown), P. J. Macnamara (Kilmallock), H. N. Hubert O'Meara (Skibbereen), M. Cagney.

Draft Charter, etc.—After some discussion on the subjects of the Royal Charter and the reports of the Hospitals Committee, the meeting adjourned.

NORTH OF ENGLAND BRANCH:

GATESHEAD DIVISION.

THE annual meeting of this Division was held on June 18th, Dr. J. W. MCKAY (Chairman) presiding.

Ethical Aspects of Medical Consultation.—The HONORARY SECRETARY read letters which had been received from various local consultants in reply to a circular letter sent by the Division, calling their attention to the report on consultations and consultants issued by the Ethical Committee, with particular reference to the grievance felt by the Division, inasmuch as men who posed as consultants and were called in as such by the members, were every now and then found acting as general practitioners in regular attendance. Many of the replies were formal, but one suggested the desirability of the Division meeting the consultants and talking the matter over. It was decided to defer further action until the October meeting.

Truck Act.—The HONORARY SECRETARY read a circular from the Medical Secretary requesting evidence on the working of the Truck Act. As many of the questions could be best answered by individuals with much experience in the matter, the papers were handed over to the Chairman and Dr. Jaques, of Washington, with the request that they should fill in the answers. On the general principle of how large works and colliery appointments should be worked to the best advantage of the profession and public, it was resolved unanimously to approve of (*b*)—namely, "Liberty to each workman to select his own doctor from among all in the district who are willing to act."

Insurance of Locum Tenents.—Dr. GILBERT reported on this matter, quoting opinions he had received from an insurance company, and also the leading article in the BRITISH MEDICAL JOURNAL. Dr. COX also read a letter from the General Secretary on the question, and some discussion took place.

Arrangements for Annual Meeting of Branch at Gateshead.—Dr. KIMPSTER announced that 37 out of 49 members had contributed to the voluntary hospitality fund, and detailed the arrangements he and the Executive had made.

Election of Officers.—The following officers were elected for 1907-8: *Chairman*, Dr. A. S. Jaques; *Honorary Secretary*, Dr. Alfred Cox; *Representatives on Branch Council*, Drs. Mearns, Green, and Gilbert; *Executive of Division*, the above with the addition of Dr. W. Jaques (Washington).

Vote of Thanks to Retiring Chairman.—On the motion of Dr. GREEN, seconded by Dr. GILBERT, a hearty vote of thanks was given to the retiring Chairman for his assiduous services during an exceptionally heavy year. Dr. MCKAY responded, and Dr. JAQUES also thanked the meeting for his election as Chairman.

COMBINED MEETING OF GATESHEAD AND CONSETT DIVISIONS.

THIS meeting was held at Gateshead on June 18th. Dr. J. W. MCKAY was voted to the chair.

Apology for Non-attendance.—A letter of apology was read from Dr. E. W. Diver, of Shotley Bridge, whose absence was unavoidable.

Report of Special Representative Meeting re *Charter.*—Dr. COX referred to the fact that with few and unimportant amendments, the Charter had been passed as it was when last under the consideration of the meeting. The meeting received with considerable satisfaction the news that the Representatives had by a decisive majority refused to postpone the consideration of the Charter. Dr. GILBERT moved, and Dr. KIMPSTER seconded, a vote of thanks to the Representative for his services, and the mover said that the Association seemed now within measurable distance of really getting on with its work, and no longer spending the bulk of its time in tinkering with the machine.

Representative for 1907-8.—On the motion of Dr. S. V. ROBINSON, seconded by Dr. SMITH, Dr. Cox was re elected unanimously. In accepting the post, Dr. Cox said that only those who had attended the meetings of the Representative Body had any conception of the energy and enthusiasm that was now being put into the work of the Association. He was proud of his membership of such a body, but he hoped when the Charter was safely out of the way that some other member would be elected in order that one more of the Division should be inspired, as he was, with the greatness of the future of the Association and the capacity of its workers to fulfil its mission.

Substitute for the Representative.—Dr. W. Smith was unanimously elected, on the motion of Dr. GREEN, seconded by Dr. KIMPSTER.

Instructions to Representative.—Other matters having been discussed at other meetings, the Representative was instructed in the opinion of the meeting on the hospitals question. On matters of detail, knowing as he did the general opinion of the constituency, he was left to his discretion.

NORTH WALES BRANCH:

SOUTH CARNARVON AND MERIONETH DIVISION.

THE annual meeting of this Division was held at the White Lion Hotel, Bala, on Thursday, May 30th. The chair was taken by Dr. O. WYNN GRIFFITH, Chairman.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Correspondence.—Letters of apology for non-attendance

were read from Dr. Samuel Griffith (Portmadoc), Dr. Jones (Isallt), Dr. Williams (Machynlleth), and a letter from Dr. Evans, Secretary, North Carnarvon and Anglesey Division.

Election of Officers.—Chairman, Dr. Hugh Jones, M.B. (Dolgelly) (Dr. Wynn Griffith vacating the chair, Dr. Hugh Jones was installed chairman of the meeting); *Vice-Chairman*, Dr. R. D. Evans (Festiniog); *Honorary Secretary*, Dr. Gladstone Jones (Criccieth) re-elected; *Representative to Representative Meeting*, Dr. Hugh Jones (Dolgelly); *Representatives on Branch Council*, Drs. Wynn Griffith (Pwllheli), Dr. Howel White (Corwen), and the Honorary Secretary; *Executive Committee*, Dr. Walter Williams (Portmadoc), Dr. White-Jones (Bala); *Representative of the North Wales Branch on the Central Council*, Dr. H. Jones Roberts (Penygroes), re-elected unanimously.

Annual Report.—The annual report of the Executive Committee for 1906 was read and adopted.

Hospital Administration.—On this subject the Division meanwhile do not feel in a position to express an opinion.

Medical Inspection of School Children.—This matter was referred until the next meeting.

Ethical Aspects of Medical Consultation.—The recommendations of the Central Ethical Committee were discussed and adopted, but this Division suggests that, in all cases sent for consultations, any recommendations, prescriptions, etc., relating to the case be communicated direct to the medical attendant.

Paper.—J. Hill Abram, M.D., F.R.C.P. (Liverpool), read a note on dropsy, which was followed by a discussion, Dr. Hugh Jones, Dr. Williams (Bala), Dr. Wynn Griffith, Dr. Bristow, and others taking part. A hearty vote of thanks was unanimously accorded to Dr. Abram for his interesting paper.

Next Meeting. The next meeting of the Division will be held at Criccieth in August.

PERTHSHIRE BRANCH.

A Council meeting was held in the Golf Club House, Moncrieffe Island, Perth, on Friday, June 14th, at 1 p.m., Dr. Borrowman in the chair.

New Member.—Charles Stuart, M.B., C.M., was duly elected a member of the Association and Branch.

The summer meeting was held at 1.15 p.m. Dr. Borrowman in the chair.

Apologies for Non-attendance. The Secretary intimated apologies from Dr. McEwen (Crieff), Dr. D. H. Stirling, Dr. R. Stirling, and Dr. Temple.

Confirmation of Minutes.—The minutes of previous meetings were read, approved, and signed by the Chairman.

Election of Office-bearers.—The office-bearers for the ensuing year were elected as follows: *President*, Dr. McEwen (Crieff) on the motion of Dr. Borrowman, seconded by Dr. Buchanan; *Vice-President*, Dr. D. H. Stirling (Perth); *Secretaries*, Drs. Taylor and Trotter; *Treasurer*, Dr. Hume. *Council*, Drs. Borrowman, Govan, Lyell, Urquhart, and Haig. *Branch Representative*, Dr. Alexander (retiring member) re-elected Branch Representative to the annual meeting.

Branch New Rules.—On the motion of Dr. Urquhart it was unanimously agreed to postpone consideration of new Branch rules till autumn.

This was all the business.

Luncheon and Golf Match.—Thereafter the members entertained golfing members from the Dundee Branch to lunch in the Club House and later played the annual golf match, which resulted as follows:

Perth		Dundee	
Dr. Wyness	0	Dr. Govan	1
Dr. Haig	0	Dr. Mitchell	1
Dr. Rogers	1	Dr. Alcock	0
Dr. Young	1	Dr. Haig	0
Dr. Duncan	0	Dr. Watson	1
Dr. Dewar	0	Dr. Buchanan	1
Dr. Field	0	Dr. Burnett	0
Dr. Lyell	0	Dr. Taylor	0
Dr. Govan	1	Dr. Stuart	1
Dr. McEwen	0	Dr. Grant	1
Matches	3	Matches	6

Perth defeated by three matches.

SOUTH MIDLAND BRANCH.

The fifty-second annual meeting of this Branch was held at Bedford County Hospital on Thursday, June 20th, at 3 p.m.

Luncheon.—Previous to the meeting the President-elect, Dr. Chillingworth, entertained forty-six members and visitors to luncheon at the Grafton Rooms, Bedford.

Confirmation of Minutes.—The minutes of the autumnal meeting were read and confirmed.

President's Address.—Dr. Chillingworth delivered an address on the evolution of the general practitioner and the passing of the unqualified assistant, insisting that the young practitioner should avail himself of every means to become equipped in medical knowledge and professional manner before starting practice on his own account.

Clinical Pathology in Relation to Diagnosis and Treatment.—Mr. C. B. Lockwood, Surgeon, St. Bartholomew's Hospital, gave an address on some remarks on clinical pathology in its relation to diagnosis and treatment. He asserted strongly that when a disease was once properly diagnosed, the treatment was usually quite simple. He referred to the various forms of general surgical infection, such as those caused by the diphtheria bacillus, streptococcus, *Staphylococcus aureus*, and the colon bacillus, as well as the more chronic forms due to the tubercle bacillus. In all cases of infection the blood should be examined and a culture taken on the proper media. He usually practised the use of therapeutic serums in the cases of diphtheria and streptococcus, and in the case of *aureus* he vaccinated with a sterilized solution of the organisms, which, he said, raised the opsonic index and diminished the length of the period of illness. He advocated also the freezing and microscopical examination of tumours, particularly of the breast, before operation.

Specimens. Mr. Gifford Nash showed two specimens: (1) A case of removal of hydronephrotic half of horse-shoe kidney in child of 16 months; (2) pregnant myomatous uterus.

Bedford and Herts Division.

The annual meeting of this Division was held at Holly Lodge, Luton, Beds, at 3 p.m. on Tuesday, June 4th.

Luncheon.—The members were previously entertained to luncheon by the Chairman (Dr. Horace Sworder).

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The following officers for the ensuing year were elected: *Chairman*, Dr. A. C. Hartley; *Vice-Chairman*, Dr. G. F. Dixon; *Honorary Secretary and Treasurer*, Dr. E. H. Cobb; *Representative for Representative Meetings*, Dr. R. H. Coombs; *Members of Branch Council*, Drs. Bower, Parbury, Spence, and Cobb; *Members of Executive Committee*, Drs. Blake, Bone, Holmes, Ross, W. A. Sharpin, and Skelding.

Paper.—Dr. James Stansfield Collier, of St. George's and Queen Square Hospitals, London, read a paper on the treatment of cerebral vascular lesions. This was followed by a most interesting discussion.

Votes of Thanks.—A vote of thanks was passed to Dr. Collier for his paper, and a vote of thanks was also passed to Dr. Horace Sworder for his kindness in entertaining the members.

SOUTHERN BRANCH:

Winchester Division.

The annual meeting of this Division was held at the Royal Hampshire County Hospital, Winchester, on June 6th, at 3.30 p.m.

The late Dr. Groves.—Before the business was proceeded with the following resolution was proposed by Dr. Harman:

> That this Division greatly deplores the irreparable loss of their esteemed member, Dr. Joseph Groves, of Carisbrooke, I. of W., who for so many years was the able and valued Representative of their Branch on the Central Council, and they beg to offer their deepest sympathy and condolence to his relatives.

This was seconded by Dr. Andrews, and carried unanimously, the members standing.

Election of Officers.—Proposed, seconded, and carried unanimously that Lieutenant-Colonel R. H. Firth, F.R.C.S., R.A.M.C., be elected *Chairman* for the ensuing year. The following officers were also unanimously elected: *Vice-Chairman*, F. J. Child, M.D. (Winchester); *Honorary*

Secretary and Treasurer, H. J. Godwin, M.B., F.R.C.S. (Winchester); *Representative for Representative Meetings*, J. H. Gibson, Esq. (Aldershot); *Representatives on Branch Council*, H. A. Ahrens, Esq. (Basingstoke), W. A. S. Royds, Esq. (Andover), J. C. Hoyle, M.B. (Upham); *Executive Committee*, F. W. Jollye, M.D., F.R.C.S. (Alresford), E. D. Ritchie, M.D. (Chandler's Ford), G. F. A. England, M.D. (Winchester), J. F. Briscoe, Esq. (Alton), W. M. Harman, M.D., F.R.C.S. (Winchester), S. Andrews, Esq. (Basingstoke).

Annual Report.—The HONORARY SECRETARY read the annual report. Resolved:

That the report be adopted and entered on the minutes.

The New Vaccination Order.—Dr. LIVINGSTONE (Hursley) brought forward some remarks on the recent Vaccination Order of the Local Government Board and the position of the public vaccinator. A very interesting discussion followed, in which the following members took part: Colonel FIRTH, Drs. JOLLYE, HOYLE, GIBSON, ANDREWS. The following resolution was carried *nem. con.*:

That, after hearing Dr. Livingstone's description of changes by the new Vaccination Order, the members of this Division express their sympathy with public vaccinators, and will support them to the best of their ability.

Scale of Fees.—It was proposed by Dr. AHRENS:

That the scale of fees passed at the last annual meeting be rescinded, and that the Executive Committee be instructed to draw up a scale of fees for the Division to be circulated throughout the Division.

This was seconded by Dr. BRISCOE, and carried unanimously.

Ebbw Vale Dispute.—Dr. HARMAN (Winchester) appealed for a subscription on behalf of the Ebbw Vale dispute fund (Monmouth). A collection was made in the room amounting to £2 3s. 6d. The Honorary Secretary was instructed to forward this amount to the Honorary Secretary of the Monmouth Division.

The "Supplement."—Dr. HARMAN proposed:

That this Division would gladly welcome an arrangement of the BRITISH MEDICAL JOURNAL which would provide for its SUPPLEMENT being exclusively devoted to the business of the Association, and thus be more available for reference.

This was seconded by Dr. JOLLYE, and carried unanimously.

Vote of Thanks.—A hearty vote of thanks was given to Dr. Jollye, the retiring Chairman, for the excellent way in which he had carried out his duties during the past year. Dr. JOLLYE replied.

YORKSHIRE BRANCH:

BRADFORD DIVISION.

THE annual meeting of this Division was held at the Eye and Ear Hospital, Bradford, on Tuesday, June 11th, at 8.30 p.m.; Mr. BASIL HALL, Chairman, presided.

Confirmation of Minutes.—The HONORARY SECRETARY read the minutes of the last meeting of the Division, which were approved and adopted. Drs. MANKNELL, HORROCKS, and the CHAIRMAN discussed some points arising out of the minutes.

Election of Officers.—Dr. MANKNELL proposed and Dr. BECKTON seconded that the following officers and members of committees as nominated at the last meeting be duly elected: *Chairman*, Dr. H. J. Campbell; *Vice-Chairman*, Mr. Horrocks; *Honorary Secretaries*, Drs. J. Metcalfe and J. W. Willson (to act as *Treasurer*); *Representatives on the Branch Council*, Drs. Bampton, Campbell, Hall, and Metcalfe; *Executive Committee*, Drs. and Messrs. Althorp, Bronner, Clow, Craig (Bingley), Crowley, Eames, Goyder, Little, Mercer, Mitchell, Mossop, Oliver, Peck (Queensbury), Shaw (Liversedge), Sykes (Cleckheaton), Tunstall, Waugh (Skipton); *Ethical Committee*, The Chairman and Secretaries and Drs. and Messrs. Althorp, Horrocks, Manknell, H. E. Taylor, Shackleton. On being put to the vote the proposal was carried unanimously.

Report of Executive Committee.—The HONORARY SECRETARY then read the report of the Executive Committee for the year ending June 11th, 1907: Your Committee has much pleasure in submitting its fourth annual report on the work of the Bradford Division. At the time when the last annual report was presented it was considered probable that the annual general meeting of the Association would be held here during the present summer. This would have been a source of great pleasure to your Committee and have given considerable gratification to the medical profession of Bradford. But the Council of the Association decided in favour of Exeter. The year has been one of considerable general Divisional activity. No less than twelve meetings of one kind or another have taken place under the aegis of the Division. At the opening meeting held on October 9th, 1906, an address was given by the Chairman on Self-restraint in the Practice of Surgery. This excellent paper was listened to with the greatest interest by the members and was published in extenso in the JOURNAL. Dr. Dawson Williams (Editor of the BRITISH MEDICAL JOURNAL) very kindly came down to Bradford, and gave an admirable address to the Division on "Medical Journals," at a meeting held on November 23rd, 1906. Your Committee cannot do less than heartily thank Dr. Dawson Williams for the great literary treat given to the members of the Division on this occasion. The address was followed by a dinner at the Midland Hotel, at which nearly fifty members of the profession were delighted to entertain Dr. Williams as the guest of the evening. The profession was also honoured by the presence at the dinner of the Mayor of Bradford (Alderman Godwin) and the member for Central Bradford, Sir George Scott Robertson, K.C.S.I. A meeting was held on December 18th, 1906, in conjunction with the Bradford Medico-Chirurgical Society, entirely devoted to the exhibition of clinical cases and pathological specimens. A general meeting, to which all medical practitioners in the Bradford Division were invited, was held on January 8th, 1907. This meeting was called to consider suggestions of a committee of the Bradford Royal Infirmary in connexion with the working of the home patient department of that hospital. A special general meeting was convened on March 12th, 1907, to consider a resolution in connexion with the payment of medical practitioners called in to attend cases of illness occurring in children attending the elementary schools of the city, and some of the questions referred to the Division from the Council of the Association. A meeting, held conjointly with Bradford Medico-Chirurgical Society, was held on March 19th, 1907, at the Royal Infirmary for the discussion of modern midwifery. The discussion was opened by a remarkably able professional and oratorical address by Mr. J. Wherry Willson. A special meeting of great interest and importance was held at the Midland Hotel on April 9th, at which an address on states of acute mental excitement, with remarks on prognosis and treatment, was given by Dr. Bedford Pierce, Medical Superintendent of the Retreat, York. Your Committee feel sure that it expresses the feelings of the Division in again heartily thanking Dr. Pierce for his exhaustive and instructive paper. This address was followed by a most enjoyable hour spent in general social meeting. A special meeting was held on April 15th to consider the question of renewing an invitation to the Association to meet in Bradford in 1908, and also the treatment of the public vaccinators of Keighley by their Board of Guardians. The decision of the Division in the first question has already been mentioned, and your Committee is pleased to state that the Keighley guardians determined to forego the action contemplated in regard to their public vaccinators. The special meeting on May 28th considered various questions referred from the central office. Two meetings of very great importance to the medical profession have recently been held under the auspices of the Bradford Division. All the medical practitioners in the city were invited to both meetings, and large and representative gatherings resulted. They have been held to consider the questions that have arisen in connexion with the new scheme of police surgeonship in the city. Many of the duties enumerated were subjected to criticism and suggestions made for altering them. A deputation was appointed to interview the Watch Committee in connexion with the matter, and some concessions were obtained; but the main objection to the scheme has remained unaltered—the method of remuneration and its inadequacy. This has been a source of some anxiety to the Committee, and active steps have been taken to bring the whole of the profession into line on the subject. Time alone will show if they have been successful, but at any rate a strong stand has been made against the attempt, which appears to be but too general, to take advantage of

the peculiar position of medical men in matters affecting their pecuniary interests. To-day we have our annual meeting, in which some more of the questions referred from the central office are to be discussed. Seven meetings of your Executive Committee and one of your Ethical Committee have been held during the past session. Your Committees have been actuated by the desire to promote in every way the interests of the profession in general and those of the Bradford Division in particular, and to present in as little a discursive form as possible the numerous questions submitted for your consideration. The average attendance at the meetings of the Division has been 34.4, and at the meetings of the committees 8.75. The number of members of the Division at the present moment is 155. Your Committee would again like to impress on every member the importance of increasing the membership of the Division. We can only speak with that power and unanimity with which we ought if we contain the great bulk of the members of the medical profession in the district. Every member of the Division ought to make it his business to bring another new member into the Association during the coming year. Our own interests, and the large extent in which medical questions now enter into imperial and municipal politics, make it necessary for the medical profession to speak with no uncertain or halting voice. Your Treasurer will shortly submit his statement of accounts, from which it is apparent that the Division is in a sound financial position. The Branch Council has again allocated a capitation grant of 3s. per member for the working expenses of the Division. Your Committee would wish to express its thanks to the Board of Management of the Eye and Ear Hospital for its great kindness in allowing the use of its rooms for meetings during the past year. It would also suggest that some donation should be made to the hospital as an expression of your gratitude. Dr. Little, who has acted as one of the Honorary Secretaries and Treasurer ever since the formation of the Division, has, to the great regret of the Committee, found it necessary to resign his position. The time and labour given by Dr. Little to the duties he has so willingly given to the Division have been much appreciated, and your Committee is very pleased to think that he has allowed his name to remain as a member of the Executive Committee. His advice and influence will consequently be, as before, at the service of the Committee. In conclusion, your Committee wishes to express its indebtedness to the Chairman of the Division (Mr. Basil Hall) for the admirable way in which he has carried out his duties during the past year. The interest he has shown in the working of the Division, and the ability he has exhibited in guiding its debates have been evident to every member. The report was unanimously adopted.

Financial Statement.—Dr. Little (Secretary and Treasurer) read the following financial statement:

1906		£ s. d.	1906		£ s. d.
June 29	Balance	17 9 0	Aug. 9.	Fox	3 3 0
	Interest	0 2 6		Field and Sons, printers ...	5 7 6
Feb. 1.	Dr Bronner's [illegible]	24 12 0	1907. Feb. 2.	Ditto	7 5 1
June 5	Dr Bronner's [illegible]	25 5 2	Feb. 10	Rooms in hotel for meetings	0 10 6
	Profit on Dr Dawson Wil[illegible]		April 9.	Secretaries' expenses ...	1 0 0
	[illegible]	1 15 10		Room in hotel for meeting ...	1 1 0
			June 11	Field and Sons, printers ...	2 18 9
				Treasurer's expenses ...	0 7 6
				Balance	46 17 0
	Total ...	£67 3 4		Total ...	£67 3 4

The balance in hand, £46 17s., which is the amount left to the [illegible] Ethical Union for special purposes.

Dr. Horrocks suggested that the moneys belonging to the old Medico-Ethical Union should be kept as an absolutely separate account to that of the general Divisional funds. Dr. Mansell strongly supported this suggestion. Dr. Shackleton agreed with the last two speakers. Dr. Little explained that the moneys of the Medico Ethical Union were kept as a separate account already in the Divisional books. The financial statement was then adopted *nem. con.*

Vote of Thanks to Honorary Secretary.—The Chairman said there was one person who was not thanked in the report for the great amount of work he had done for the Division, and that was the Honorary Secretary, Dr. Metcalfe. The large amount of time and labour he had given to the Division could only be considered a labour of love. He wished to propose that a hearty vote of thanks should be given to Dr. Metcalfe for his great services to the Division. Mr. Wherry Willson, in seconding, said that the Bradford medical profession had been accustomed for so many years to seeing Dr. Metcalfe's name appended to circulars that they thought it the natural thing, but they had little idea of the labour involved. Dr. Mitchell wished to support the proposal. As an honorary secretary himself, he could testify to the enormous amount of work done by Dr. Metcalfe. On being put to the meeting, the motion was carried unanimously. Dr. Metcalfe, in returning thanks, said that he was only too anxious to see the medical profession working unitedly for the aims they had in view. It was his greatest wish to bring as many new members as possible into the British Medical Association.

Place of Meeting.—Dr. Metcalfe proposed, and Dr. Beckton seconded:

> That a donation of two guineas be given to the Eye and Ear Hospital for the use of the rooms for meetings.

Drs. Munro and Mitchell discussed the question. Dr. Shackleton thought that all the meetings ought to be again held at the Great Northern Hotel, as in the old Medico-Ethical Union days. The proposition was carried.

Hospital Administration.—The specific questions on hospital administration were then discussed. (1) Mr. Horrocks proposed, and Mr. W. Willson seconded, that "'No' should be the reply to this question." Carried *nem. con.* (2) Dr. Mitchell considered that this question would be coming up again shortly in connexion with the Bradford Royal Infirmary. He considered that subscribers' letters should be entirely abolished, and an officer appointed to investigate all cases carefully. The Chairman remarked that if recommendations were strictly limited many people would not be able to obtain them. The Infirmary would probably give them up, but Bradford subscribers expected some *quid pro quo*. In Leeds recommendations were given if desired, but were not necessary. Mr. Horrocks remarked that a doctor's note or card was always received as a recommendation. Subscribers' letters would probably die out in time. Dr. Manknell thought that Leeds and Bradford could not be compared. One was an infirmary and one an infirmary and dispensary. Subscribers' letters were perhaps necessary for dispensary patients, but were a farce for hospital patients proper. Dr. Clow thought recommendations an abuse, and that they should be abolished. The Chairman explained that recommendations were not at present compulsory in Bradford. Dr. Campbell suggested that recommendations were more or less of a guarantee of the subscriber that the patient was suitable for hospital treatment. In this way a recommendation ought to be an advantage. But the method had been much abused. Eventually Dr. Metcalfe proposed, and Dr. Horrocks seconded, that the reply to question 2 be "No." Carried *nem. con.* (3) Dr. Horrocks considered that it was sometimes very difficult to make full inquiry into a patient's circumstances. He proposed that inquiry should be made when possible. Dr. Mitchell seconded. Carried *nem. con.* (4) Dr. Horrocks proposed, and Dr. Mitchell seconded, that "No" be the answer to this question. Carried *nem. con.* Dr. Beatton knew of cases unsuitable from a pecuniary point of view being treated at the Bradford Eye and Ear Hospital. Dr. Bronner suggested that all patients with a doctor's recommendation should be seen first.

Ethical Aspects of Medical Consultation.—The Honorary Secretary read the headings of the various questions and remarked that nearly all the matters suggested had been part of their rules since the foundation of the Division and had been taken over from the Medico-Ethical Union. The Chairman thought it impossible to go through all the questions seriatim. Dr. Mitchell wished to raise the question of consultations at the consultant's house. The number of these ought to be limited. Dr. Bronner thought that the general practitioner too often forgot that it was the greatest desire of the consultant to keep on friendly terms with him. Consequently if he occasionally did things the general practitioner did not appreciate they were unintentional. Dr. Mitchell said what he particularly wished to draw attention to was the supersession of the general practitioner by the consultant. Dr. Campbell

thought there was no way out of the difficulty without altering the present system to one in which no patient should be seen without a letter from his doctor. But patients sometimes said they were not under treatment, or were changing their doctor. Dr. MUNRO then proposed and Dr. METCALFE seconded that the recommendations be adopted as suggested. This was carried *nem. con.* The meeting then terminated.

HARROGATE DIVISION.

THE annual meeting of this Division was held at the Hotel Majestic, Harrogate, on Saturday, June 15th, at 5.45 p.m., Dr. MOUILLOT in the chair.

Confirmation of Minutes.—The minutes were read and confirmed.

Associates.—Members attending were elected associates for the day.

Election of Officers.—The following officers were elected: *Chairman*, Dr. Edgecombe; *Vice-Chairman*, Dr. Green; *Honorary Secretary*, Dr. Gibson; *Representative for Representative Meeting*, Dr. Daggett; *Representative for Branch Meeting*, Dr. Solly: *Executive Committee*, Drs. Chamberlain, Collier, Daggett, Garrad, Holroyd, Lever, Mackay, Rutherford, Solly, W. B. Watson, W. M. C. Watson.

Paper.—Dr. GIBSON then read a paper on the advisability of planting the now disused sewage farm in Ripon Road as Pine Woods, and making the Oak Beck into ornamental water. The proposition was cordially supported.

Draft Charter.—The draft Charter was considered.

Hydropathic Institutions.—The ethics of the hydropathic institutions were discussed.

Dinner.—The members and friends of the Division dined together, and were joined by the members of the Science Committee of the British Medical Association, a number of ladies being guests on the occasion; forty-six sat down. After dinner an entertainment was provided by the Chairman.

☞ *To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.*

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, July 3rd, in the Board Room of the Metropolitan Asylums Board, by kind permission of the Board. The offices of the Metropolitan Asylums Board are situate on the Victoria Embankment at the corner of Carmelite Street and near Blackfriars Bridge.

GUY ELLISTON,

June 13th, 1907. *General Secretary.*

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

IMPORTANT NOTICE.

OWING to the rebuilding of the Association premises the Strand the Library is closed, but at the Temporary Offices of the Association, 6, Catherine Street, Strand (adjoining Drury Lane Theatre), a Reading and Writing Room is provided. The Room will be open from 10 a.m. to 5 p.m., except on Saturdays, when it will be closed at 2 p.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

DORSET AND WEST HANTS BRANCH.—The summer meeting of this Branch will be held in Ringwood on Wednesday, July 3rd. A paper will be read by Dr. E. Hyla Greves on Myelopathic Albumosuria. Dr. Marriner (Vice-President) will introduce a discussion on Chronic Otitis Media. *This* JOURNAL *notice is the only intimation of the meeting.*—JAMES DAVISON, "Streateplace," Bath Road, Bournemouth, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION. —*Hampstead General Hospital.* In view of important developments which have arisen since the last meeting of the local profession on this subject (May 24th), and which threaten to bring about the extinction of the Hampstead Hospital as a local institution, the Committee of the local profession appointed on May 24th, 1907, have decided to call a special meeting to consider the resolution given below. As the matter has now reached a crisis, it is essential that medical men of the neighbourhood should attend in large numbers, so that a definite line of action may be taken. The meeting will be held, under the auspices of the Hampstead Division, on Wednesday, July 3rd, at 4.30 p.m., in the Lecture Room of the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. Pidcock, Chairman of the Hampstead Division, in the chair. Agenda: To consider the following resolution: "That this meeting considers that the Hampstead Hospital should always have a visiting staff of local practitioners; and, in consideration of this opinion, calls upon the members of the medical profession to refuse to accept any office on the staff on terms which are not considered satisfactory by the local profession." [N.B.—*The meeting of the Hampstead Division announced for July 12th will not take place.*]—R. A. YELD, 29, Platt's Lane, Hampstead, Honorary Secretary.

NORTH OF ENGLAND BRANCH.—The annual meeting of this Branch will be held at the Town Hall, Gateshead-on-Tyne, at 2.30 p.m. on Wednesday, July 3rd. The President-elect (Dr. Alfred Cox) and the members of the Gateshead Division offer a very hearty welcome to the members of the Branch, and will be delighted to see as many of them as possible.—HENRY SMURTHWAITE, Honorary Secretary, 8, St. Mary's Place, Newcastle-on-Tyne.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—Nominations for a Representative of the Branch on the Central Council of the Association. In accordance with By-law 24 nominations duly signed by three electors must be sent to me not later than June 29th.—MUNRO MOIR, Honorary Secretary.

NORTH WALES BRANCH.—The annual meeting of this Branch will be held at Machynlleth on Tuesday, July 16th. Members having papers to read, specimens or cases to show, are requested to notify the Honorary Secretary before July 4th.—H. JONES ROBERTS, Llywenarth, Penygroes, Honorary Secretary.

SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch will be held at the Club House, Carlow, on July 3rd, at 5.30 p.m. Agenda: (1) Minutes. (2) Correspondence. (3) Any other business.—J. QUIRKE, Honorary Secretary.

ULSTER AND CONNAUGHT BRANCHES. — Nominations for Central Council. Two members to represent these Branches (combined) on the Central Council will be elected on June 29th.—CECIL SHAW, M.D., Honorary Secretary, College Square, Belfast.

ULSTER BRANCH.—The annual meeting will be held in the Medical Institute, Belfast, on Saturday, June 29th, at 11.30 a.m. —CECIL SHAW, M.D., Honorary Secretary, College Square, Belfast.

Vital Statistics.

HEALTH OF ENGLISH TOWNS

IN seventy-six of the largest English towns, including London, 8,733 births and 3,915 deaths were registered during the week ending Saturday last, June 22nd. The annual rate of mortality in these towns, which had been 14.5, 13.7, and 13.1 per 1,000 in the three preceding weeks, further declined to 12.7 per 1,000 last week. The rates in the several towns ranged from 5.7 in Croydon, 7.0 in Hastings, 7.5 in Hornsey, 7.6 in East Ham and in King's Norton and 7.8 in Southampton, to 17.1 in Bolton and in Merthyr Tydfil, 18.5 in Grimsby, 20.5 in Middlesbrough, 20.6 in Oldham, 20.9 in Huddersfield, and 24.1 in Wigan. In London the rate of mortality was 12.7 per 1,000, while it also averaged 12.7 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.2 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.3 per 1,000, while it ranged upwards to 2.5 in Derby and in Rotherham, 4.5 in Bolton, 5.9 in Wigan, and 6.1 in Middlesbrough. Measles caused a death-rate of 1.7 in Sunderland, 2.5 in Derby, 2.9 in Bolton, 4.1 in Middlesbrough, and 4.7 in Wigan; scarlet fever of 1.4 in Newport (Mon.), and whooping-cough of 1.1 in St Helens, 1.2 in Wigan, and 1.4 in Bolton. The mortality from diphtheria, from "fever," and from diarrhœa showed no marked excess in any of the large towns. No fatal case of small-pox was registered during the week, and no small-pox patients were under treatment in the Metropolitan Asylums Hospitals. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2,824, 2,862, and 2,977 at the end of the three preceding weeks, had further increased to 2,986 at the end of last week: 414 new cases were admitted during the week, against 437, 368, and 389 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, June 22nd, 1,021 births and 600 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 16.7, 19.0, and 17.2 per 1,000 in the three preceding weeks, was 17.3 per 1,000 last week, and was 4.6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 10.5 in Perth and 13.2 in Greenock to 18.1 in Leith and 21.7 in Dundee. The death-rate from the principal infectious diseases averaged 2.4 per 1,000 in these towns, the highest rates being recorded in Dundee and Leith. The 289 deaths registered

in Glasgow included 4 which were referred to measles, 19 to whooping-cough, 2 to "fever," 12 to diarrhœa, and 5 to cerebro-spinal meningitis. Two fatal cases of measles, 4 of whooping-cough, 3 of diarrhœa, and 5 of cerebro-spinal meningitis were recorded in Edinburgh; 4 of whooping-cough and 5 of diarrhœa in Dundee; 5 of whooping-cough in Aberdeen, and 3 in Paisley; and 2 of diarrhœa in Leith.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, June 8th, 540 births and 416 deaths were registered in six of the principal Irish towns, as against 583 births and 396 deaths in the preceding period. The annual death-rate in these towns, which had been 19.6, 16.0, and 20.3 per 1,000 in the three preceding weeks, rose to 23.7 per 1,000 in the week under notice, this figure being 10.0 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 16.4 in Limerick and 17.1 in Cork to 23.9 in Dublin and 39.0 in Waterford. The zymotic death-rate in the same six Irish towns averaged 0.9 per 1,000, or 0.2 per 1,000 higher than during the preceding period, the highest figure—2.3—being recorded in Belfast, while Cork, Londonderry, and Limerick registered no deaths under this heading at all. In Belfast 9 deaths were returned as due to cerebro-spinal fever and 1 as due to cerebro-spinal meningitis.

During the week ending Saturday, June 15th, 517 births and 379 deaths were registered in six of the principal Irish towns as against 540 births and 416 deaths in the preceding period. The annual death-rate in these towns, which had been 16.0, 20.3, and 23.7 per 1,000 in the three preceding weeks, fell to 18.0 per 1,000 in the week under notice, this figure being 4.9 per 1,000 higher than the mean annual rate for the seventy-six English towns for the corresponding period. The figures ranged from 10.9 in Limerick and 12.5 in Londonderry, to 21.4 in Waterford and 24.3 in Dublin. The zymotic death-rate in the same six Irish towns averaged 0.8 per 1,000, or 0.1 per 1,000 lower than during the preceding period, the highest figure—1.9—being recorded in Waterford, while Cork, Londonderry and Waterford registered no deaths under this heading at all. In Belfast 12 deaths were ascribed to cerebro-spinal fever, and 3 to cerebro-spinal meningitis. In Dublin 5 deaths were returned as due to the former disease.

BILL FOR THE EARLY NOTIFICATION OF BIRTHS.

The Bill for the Early Notification of Births introduced into the House of Commons by Lord Robert Cecil on April 23rd was amended by the Standing Committee. The following is the text of the Bill in its present form; further particulars with regard to the parliamentary position of the Bill will be found in the Medical Notes in Parliament this week.

A Bill [as Amended by Standing Committee A] to Provide for Early Notification of Births.

Be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Provisions for the Earlier Notification of Births.* The provisions of this section shall have effect in the area of any local authority in which this Act is adopted by that authority in accordance with the provisions of this Act:

(1) In the case of every child born in an area in which this Act is adopted it shall be the duty of the father of the child, if he is actually residing in the house where the birth takes place at the time of its occurrence, and of any person in attendance upon the mother at the time of, or within six hours after, the birth, to give notice in writing of the birth to the medical officer of health of the district in which the child is born, in manner provided by this section.

(2) Notice under this section shall be given by posting a prepaid letter or postcard addressed to the medical officer of health at his office or residence, giving the necessary information of the birth within thirty-six hours after the birth, or by delivering a written notice of the birth at the office or residence of the medical officer within the same time; and the local authority shall supply without charge addressed and stamped postcards containing the form of notice to any medical practitioner or midwife residing or practising in their area who applies for the same.

(3) Any person who fails to give notice of a birth in accordance with this section shall be liable on summary conviction to a penalty not exceeding twenty shillings. Provided that a person shall not be liable to a penalty under this provision if he satisfies the court that he had reasonable grounds to believe that notice had been duly given by some other person.

(4) The notification required to be made under this Act shall be in addition to and not in substitution for the requirements of any Act relating to the registration of births, and any registrar of births and deaths whose subdistrict or any part thereof is situate within any area in which this Act is adopted shall at all reasonable times have access to notices of births received by the medical officer of health under this Act, or to any book in which those notices may be recorded, for the purpose of obtaining information concerning births which may have occurred in his subdistrict.

(5) This section shall apply to stillborn children as well as to children born alive.

(6) Any expenses incurred by a local authority in the execution of this Act shall be paid as part of the expenses of that authority in the execution of the Acts relating to public health, and in the case of a rural district council shall be paid as general expenses.

2. *Adoption of Act, and Definition of Local Authority.*—(1) A local authority may by resolution adopt this Act in their area, and the provisions set out in the schedule to this Act shall have effect with respect to the resolution of adoption.

(2) A resolution of adoption shall not take effect until the consent of the Local Government Board has been obtained thereto.

(3) It shall be the duty of any local authority by whom this Act is adopted, as soon as the consent of the Local Government Board is given to the resolution of adoption, to bring the provisions of this Act to the attention of all medical practitioners and midwives practising in their area.

(4) In this Act, the expression "local authority" means the council of a borough (including the council of a metropolitan borough and the mayor, aldermen, and commons of the City of London in common council assembled), and the council of an urban or a rural district.

3. *Power of Local Government Board to put Act in Force in the Area of any Local Authority.*—The Local Government Board may by order declare that this Act shall be in force in the area of any local authority who have power to adopt the Act, although it has not been so adopted, if they think it expedient, having regard to the circumstances of the area, and in that case the order of the Local Government Board shall have the same effect for the purpose as a resolution of adoption duly passed by the local authority of the area and assented to by the Local Government Board.

4. *Application to Scotland.*—In the application of this Act to Scotland—

(1) The expression "Local Government Board" means the Local Government Board for Scotland.

(2) The expression "subdistrict" means parish or district.

(3) The expression "local authority" and the expression "council" mean the local authority under the Public Health (Scotland) Act, 1897.

(4) An offence may be tried before the sheriff or before any magistrate of a royal, parliamentary, or police burgh officiating under the provisions of any local or general Police Act; and an offender failing to make payment of a penalty shall be liable to imprisonment in terms of the Summary Jurisdiction Acts.

5. *Application to Ireland.* In the application of this Act to Ireland, the Local Government Board for Ireland shall be substituted for the Local Government Board.

6. *Short Title.* This Act may be cited as the Notification of Births Act, 1907.

SCHEDULE.

RESOLUTION OF ADOPTION.

1. A resolution of adoption must be passed at a meeting of the council.

2. One calendar month at least before the meeting of the council special notice of the meeting and of the intention to propose the resolution shall be given to every member of the council.

A resolution of adoption after being passed shall be published by advertisement in some one or more newspapers circulating within the area of the council by whom the resolution is passed and otherwise in such manner as the council think sufficient for giving notice thereof to all persons interested.

4. A copy of the resolution of adoption shall be sent to the Local Government Board.

5. The resolution of adoption shall come into operation at such time not less than one month after the first publication of the advertisement, as may be fixed by the Local Government Board.

To be Stamped with a Penny Stamp and Posted.

BRITISH MEDICAL ASSOCIATION.

SEVENTY-FIFTH ANNUAL MEETING.

JULY 30th, 31st, and August 1st, and 2nd, 1907.

Members of the British Medical Association who intend to visit EXETER during the Annual Meeting will greatly facilitate the labours of the Local Committee if they will fill up the following form and forward it by post as addressed on the other side. This will eventually be sent to the General Secretary of the Association, who will then send a certificate to enable members to obtain Railway Tickets at reduced fares.

MEMBERS DESIRING ACCOMMODATION ARE REFERRED TO NEXT PAGES.

The Forms are intended for the use of Members of the British Medical Association exclusively.

It is my intention to be present at the ANNUAL MEETING in EXETER

*and I expect to be accompanied by**.....

Name.....

Address.....

* Here indicate whether accompanied by a lady, as separate vouchers are required to enable Members to obtain Railway Tickets at reduced fares.

It is my intention to be present at the ANNUAL DINNER of the Association on Thursday Evening, August 1st, and I herewith enclose Cheque (or P.O.O.).†

Signature.....

† DINNER TICKET, with Wine inclusive, £1 1s. DINNER TICKET without Wine, but inclusive of Aerated Waters, 15s.

Cheques and Postal Orders should be made payable to the Secretary of the Dinner Committee, C. E. STOKES, Esq., M.D., and enclosed in an envelope, together with this form, directed as on the reverse.

Early application for Tickets is requested by the Committee, to enable them to provide accommodation and allot seats.

SEVENTY-FIFTH ANNUAL MEETING, EXETER, July 30th, 31st, and August 1st and 2nd, 1907.

LIST OF LODGING HOUSES WITH SCALE OF CHARGES.

EXETER.

Name and Address.	No. of Bedrooms.	Charge for Bed & Breakfast.
Dix's Field. (Continued.)		
2 Mrs. [illegible]	4	
8 Mrs. [illegible]	1	
10 Mrs. [illegible]	1	
16 Miss [illegible]	1	
20 Mrs. [illegible]	10	
24 Mrs. [illegible]	2	
27 Mrs. [illegible]	2	
Southernhay. [illegible]		
2 [illegible]	8	
3 [illegible]	7	
4 [illegible]	6	
42 [illegible]	5	
57 [illegible]		10/6
7 [illegible]		
Haldon Road. [illegible]		
[illegible]	2	
Richmond Road. [illegible]		
[illegible]	4	
[illegible]		
[illegible]		
[illegible]		
11 [illegible]	4	
17 [illegible]	2	
25 [illegible]	3	
[illegible]		
Silver Terrace. [illegible]		
1 [illegible]	2	
3 [illegible]		

Name and Address.	No. of Bedrooms.	Charge for Bed & Breakfast.
Queen's Terrace. (5 minutes.)		
7 Mrs. Collins		
15 Miss Shapland		
Howell Road. (7 minutes.)		
82 Mrs. Gear		
Elm Grove Terrace. (5 minutes.)		
4 Mrs. Salter	2	
1 Mrs. Tucker	4	
Elm Grove Road. (5 minutes.)		
5 Miss Maynard		
Verney Place, Sidwells St. (10 minutes.)		
4 Mrs. Pitman		
5 Mrs. Johnson		
Belmont Place. (15 minutes.)		
9. Miss Peatse		
Belmont Road. (15 minutes.)		
6 Mrs. Ruppert	1	
8 Mrs. Pyle	1	
11 Mrs. Bartlett	1	
16 Miss Berry	2	
23 Mrs. Wyatt	2	
26 Mrs. Ashford	1	
25 Mrs. Browne	4	
29 Mrs. Shambrook	3	
30 Miss Parkes	3	
Bath Road. (15 minutes.)		
89 Mrs. Hawker	1	
110 Mr. [illegible]	2	

Where not stated the charge for Bed and Breakfast in most cases is 5/- or less, but Visitors are requested to make their own terms.

Penny Stamp.

C. E. STOKES, Esq., M.D.,
Warkworth House,
St. Thomas,
EXETER.

LIST OF LODGING HOUSES WITH SCALE OF CHARGES—*Continued.*

Name and Address.	No. of Bedrooms.	Charge for Bed & Breakfast.
svenor Place, Bath Road. (15 minutes.)		
1 Miss Stidwell	2	
2 Mrs. Payne	2	
3 Mrs. Sylvester	2	
nford Road. (20 minutes.)		
1 Miss Polstead	4	
Tiverton Road. (15 minutes.)		
Mrs. Lockyear	2	
Mrs. Coomb...	3	
Miss Salter	3	
7 Mrs. Saunders	2	
ke Villas, Old Tiverton Road.		
1 Mrs. Tom...	2	
2 Mrs. Nicholls	4	
kside, Bonhay Road. (20 minutes.)		
2 Mr. McWilliam	1	
nsylvania Road. (15 minutes.)		
Miss H. Ridler	5	
ghton Terrace. (15 minutes.)		
Mrs. Phillipps	1	
's Court, Pennsylvania. (12 minutes.)		
Mrs. Lake		
Mrs. Beer		
Mrs. Ellis		
wbray Avenue. (10 minutes.)		
Miss Woodbridge	2	
v North Road. (5 minutes.)		
Miss Griffey		
t View Estate. (25 minutes.)		
Ladysmith Terrace—Mrs. Sims	2	
Barrack Road—Mrs. Andrews	2	
Port View—Mrs. Willis		
ikswell Road. (15 minutes.)		
Mrs. Milford	2	
ory Road. (15 minutes.)		
Mrs. Stroud	1	
Miss Brathwaite	3	
Pleasant Road. (15 minutes.)		
Mrs. Hewitt	6	
Mrs. Clarke	1	
sloe Road. (15 minutes.)		
Miss Foale		
ilee Road, Polsloe Road. (15 minutes.)		
Mrs. Clapham		
ckall Road. (7 minutes.)		
Redna Miss Pemberton		
ord Road. (12 minutes.)		
Miss Bealey	1	
Mrs. Symons	3	
2 Mrs. Henderson	1	
0 Mrs. Lilley	1	
ege Avenue. (17 minutes.)		
Miss Pearse	2	
2 Mrs. Amplett	1	
eigh Road. (15 minutes.)		
Miss Coombes	2	
2 Mrs. Clarke	1	
6 Mrs. Brewer...	2	
int Vernon. (15 minutes.)		
Mrs. R. A. Turton	3	
on Place. (15 minutes.)		
2 Mrs. Giles	1	
3 Mrs. Clemmett	4	
her Eaton Place. (15 minutes.)		
1 Mrs. Stephens	3	
ver Summerland. (15 minutes.)		
Elmfield Mrs. Stone	5	
gdalen Street. (15 minutes.)		
5 Miss Wiscard	3	
ronshire Place. (15 minutes.)		
5 Miss Gitsham	2	
Leonards Road. (25 minutes.) (1½ miles).		
7 Mrs. Cook	2	
1 Mrs. Stone	1	
3 Miss Maddicks	2	
1 Mrs. Judge	1	
.on Road. (15 minutes.)		
Marlow Villa—Mrs. Leibrandt...	4	

Where not stated the charge for Bed and Breakfast in most cases is 5/- or less, but Visitors are requested to make their own terms.

Name and Address.	No. of Persons.	Charge for Bed & Breakfast.
HEAVITREE DISTRICT. (1¼ miles—Tram).		
Church Terrace.		
Mrs. Wood	1	
Mrs. Lee	1	
Haldon View Terrace.		
Mrs. [illegible]	1	
Hunsdon Lodge.		
Mrs. Wood		
Prospect Villas.		
2 Mrs. Coombes	1	
Cross Park.		
12 Mrs. Chapman	1	
ST. THOMAS DISTRICT. (Frequent Trams. 1½ miles.)		
Church Road.		
Mrs. Sandcott	1	
17 Mrs. Morrod	3	
Sidney Road.		
Mrs. Tucker	1	
2 Mrs. Sandcott	1	
Princes Street North.		
Mrs. Pinsent	1	
Alplington Road.		
Mrs. Marshall	1	
1 The Retreat—Mrs. Meade	1	
2 Pennington Terrace—Nurse Moore .. .	2	
4 Waverley Road—Mrs. Rowland	1	
EXMOUTH. (Half hour by train; good service.)		
The Beacon.		
1 Mrs. Williams	7	
5 Mrs. Reynolds		
11 Miss Treloar	6	
12 Miss Towse	7	
Alexandra Terrace.		
1 Miss Weaver		
8 Miss Peck	7	
7 Mrs. Bone	7	
10 Mrs. Esmet		
Morton Crescent.		
1 Mrs. Wheaton	6	
2 Mrs. Coston...	8	
7 Mrs. Tucker	3	
11 Miss Wooddon	3	
20 Mrs. Durham		
Morton Road.		
1 Miss Hayne	4	
Imperial Terrace.		
3 Mrs. Coombs		
4 Mrs. Vanstone		
Esplanade.		
Sea View—Miss Horton	6	
Hartsmead—Miss Williams	7	
Fernleigh—Miss Bayne	7	
Ashcombland—Mrs. Riley		
9 Marlborough View—Mrs. Hawkins		
Homecroft.		
Miss Crescott		
Manor View House.		
Mrs. Creasy	4	
Bicton Place.		
2 Mrs. Ash	2	
7 Mrs. Davidson	7	
Bystock Terrace.		
4 Mrs. E. Moore	2	
Waverley Road.		
Mrs. Pawley	3	
Brougham Terrace.		
Mrs. Lympany	3	
Victoria Road.		
Clarence—Miss Warren	3	
Tor Grange—Mrs. Grigg	4	
Twyford—Mrs. Crotts	4	
22 Mrs. Lane	2	
St. Andrew's Road.		
86 Miss Bassett	2	
80 Mrs. Bater		

Where not stated the charge for Bed and Breakfast in most cases is 5/- or less, but Visitors are requested to make their own terms

LIST OF LODGING HOUSES WITH SCALE OF CHARGES—*Continued.*

Name and Address.	No. of Bedrooms.	Charge for Bed & Breakfast.
LYMPSTONE.		
(Twenty minutes by train; good service.)		
Bridgthorpe.		
[illegible]	3	Where not stated the charge for Bed and Breakfast in most cases is 5/- or less, but Visitors are requested to make their own terms.
DAWLISH.		
(Half an hour by train; good service.)		
Marine Parade.		
2 Mrs. [illegible]	7	
5 Mrs. [illegible]	6	
6 Mrs. [illegible]	6	
Blenheim House.		
[illegible]	11	
Redlands.		
[illegible]	7	
Brookdale Terrace.		
Mrs. Partridge	7	
4 Mrs. Buck	4	
Hampton House—Mrs. Wallington	4	
Stanley House—Mrs. Knight	6	
Kempsey House—Mrs. Evans	1	
Grosvenor House—Mrs. Willmut	2	
Springfield House—Mrs. Way	2	
Piermont Place.		
5 Mrs. Curtis		
Victoria House—Mrs. Jeffrey	7	
Strand.		
South Villa—Mrs. Moore	4	
9 Mrs. Reynolds		
TEIGNMOUTH.		
(Thirty-five minutes by train; good service.)		
Barnpark.		
Mrs. Henson	20	

LIST OF HOTELS WITH SCALE OF CHARGES.

	No. of Bedrooms.	Charge for Bed and Breakfast.
EXETER.		
GLOBE HOTEL, The Close	6	6 -
ROYAL CLARENCE, The Close	—	—
HALF MOON, High Street	12	7/6
FRANKLIN (TEMPERANCE), Fore Street	14	3/6
BACK'S TEMPERANCE, Exe Bridge	10	4/-
QUEEN'S HOTEL, Queen Street	12	—
CITY TEMPERANCE HOTEL, Queen Street	8-12	—
ROUGEMONT, Queen Street	—	—
OSBORNE FAMILY HOTEL, Queen Street	—	—
BUDE, Sidwell Street	—	—
WHITE LION, Sidwell Street	—	—
NEW LONDON, London Inn Square	—	—
NORTHERNHAY HOTEL, Northernhay Place	—	—
COFFEE TAVERN, Eastgate	5	2/6
BLACK HORSE, Longbrook Street	—	—
ELMFIELD, St. David's Hill	—	—
LION HOUSE, Alphington Road	—	—
L. & S.W. HOTEL, Paul Street	4	4/6
[illegible] Every few minutes.		
EXMOUTH.		
IMPERIAL HOTEL	—	—
THE BEACON	—	—
ATLANTIC (PRIVATE) Morton Crescent	8	
DOLFORGAN (PRIVATE) Beacon Hill		
SUMMER'S PRIVATE HOTEL	—	7/6
DAWLISH.		
LONDON	33	—
ROYAL HOTEL	—	—
DULVERTON.		
CARNARVON ARMS	—	—
BUDLEIGH SALTERTON.		
ROLLE ARMS	—	—

METROPOLITAN COUNTIES BRANCH.

the request of the Westminster Division, a special neral meeting of the Metropolitan Counties Branch was ld at St. James's Vestry Hall, Piccadilly, on Thursday, ne 6th, 1907, to discuss the advisability of constituting entral hospital authority for London. Dr. FREDERICK YLOR occupied the chair.

A CENTRAL HOSPITAL AUTHORITY FOR LONDON.

The CHAIRMAN, in opening the proceedings, said the ragraph on the agenda—

f this resolution is approved by the meeting, the Branch uncil will be asked by further resolutions to appoint a Comttee and provide the funds necessary for the promotion of is object—

s not quite in accordance with Rule 13 of the Metrolitan Counties Branch, which stated that at least seven ys' notice was to be given of the meeting, and the exact ms of the resolution were to be stated. The terms of e resolutions had not been stated, and therefore no such solutions could be submitted. He did not think it was serious matter, because it was quite obvious that if the solution for which the meeting was summoned was ssed, it would have to come before the Council of the anch, and they would be bound to consider it. He d not say they would agree to it; but of course they uld not give any instructions to make the Council do actly what they wished. The management of the anch was in the hands of the Council, and it would be them to consider what it was desirable to do upon ceiving the recommendation of that meeting. Of course, they sent a strong recommendation that they wished a rticular course adopted, the Council must take it to proper consideration and deal with it as they ought fit.

Dr. HASLIP said he thought it only right that the eeting should know that when the Westminster Division ve notice under Rule 13 they withdrew their applicaon, so as to enable the Branch to give legal notice of the eeting, and that was why the wording of the resolution id been omitted from the notice. But he would like to now, if the resolution was carried, whether it would be ssible for them to make a request to the Branch that rtain funds should be granted.

The CHAIRMAN said it was quite open for them to make request which was not in the form of a resolution.

Dr. KNOWSLEY SIBLEY said that a meeting of the Westinster Division was held on March 13th, at which a long scussion on the suggested formation of a Central Hospital oard for London took place. The Division unanimously cided to request the Council to call a meeting of the hole Branch to determine what practical steps should e taken towards this object. With this aim in view he ad again been asked to introduce the discussion. At the eeting referred to, a lay speaker said that he considered ne present unsatisfactory position of our hospitals and neir encouragement of abuse was largely due to the edical profession, and therefore he looked to it to find a medy. It was proposed, in the first place, to take a pid glance into a few of the more prominent points in ne present uncontrolled hospital system, and then to see n what way these could be improved upon under an fficient central and guiding organization. It must be learly understood it was not in any way intended to ttack hospitals individually, but the systems under hich they were to-day administered in this country. he defects pointed out were largely the result of comaring the methods on the Continent with those of Great Britain.

HOSPITAL ABUSE.

Until there was some central control it was pure waste f time speaking of hospital abuse, for with the present ompetition among hospitals, how could they exist without encouraging most flagrant abuse? If one hospital nade any attempt at inquiry into its patients by a roperly educated almoner, those rejected at once went to he next hospital, where they were received with open rms. The former institution lost its subscriptions because t could no longer appeal to a deluded public that it had elieved so many thousands of suffering humanity. What upport the better-conducted reformed institution lost the nore abused one gained.

The subject of a central control might be considered from three points of view:

1. The hospitals and their subscribers.
2. The patients.
3. The medical profession.

I. THE HOSPITALS.

Each hospital was practically a private body of individuals or small company, with unlimited liability; the committees, or boards of management, elected themselves from the governors—that is, ordinary subscribers of a guinea a year upwards. These well-meaning persons became a board of irresponsible directors, each board believing its administrative powers to be vastly superior to any of its neighbours, and naturally resisting any attempt at outside inquiry or suggestions. Each institution had to compete with all others, especially in the way of advertisements, to attract public attention to its wants, the two chief recommendations being that the hospital was so mismanaged as to be many thousands of pounds in debt, and that, being quite unable to afford to do so, it had treated large numbers of out-patients with drugs. Generally speaking, all those who could not have paid a private doctor required food and nourishment rather than medicine for the alleviation of their symptoms, and were cases for the Poor-law administration. The deplorable ignorance of many hospital committees over business matters had of late been pointed out by capable city men, who, after years of service on boards, had resigned in disgust at the hopelessness of the whole situation.

There had recently been considerable correspondence in the BRITISH MEDICAL JOURNAL on the decadence of the London Medical Schools, revealed by the fact of the rapid and persistent decrease in the number of students entering each year. These figures had, according to Dr. Hunter, come down from 476 in 1880 and 477 in 1881 to only 253 in 1906. In other words, the entries in London schools have fallen continuously from 38 per cent. in 1866 to 22 per cent. in 1906. During that period Cambridge University had risen from 2 per cent. in 1866 to over 4 per cent. in 1880 and to nearly 10 per cent. in 1906, and Edinburgh from 8 per cent. in 1866 to over 17 per cent. in 1880, and still stood at 15 per cent.

As long as there was no combination among hospitals and their medical schools this state of things must continue, until there would not be enough London students to fill the various hospital appointments, and then, perhaps too late, the eyes of the authorities would be opened.

The crowding of hospitals into wealthier districts where they were not wanted, and their absence from the poorer parts, where they were sadly required, was another glaring error.

So also the incessant springing up of so-called "mushroom hospitals" all over the metropolis, usually of a distinctly proprietary nature in the first instance. Provided the scheme was idiotic enough the happy promoter has no difficulty in gulling society to push him into prominence.

Each hospital, however small, had its own complement of paid officials, secretaries, clerks, collectors, stewards, chaplains, etc., whereas one staff of these functionaries could very well administer several institutions.

The only economical department was the unpaid medical and surgical staff, but for the work of whose brains the hospitals could not be carried on at all.

Again, each hospital bought its own commissariat and other necessities, such as drugs, surgical dressings, and instruments, from its own small tradesmen, whereas, if these were bought in bulk, considerable saving would be effected.

The daily papers at this season of the year were full of reports of the after-dinner speeches delivered at hospital festivals and bazaars, and they were nauseated with the plausible humbug spoken by many of the chairmen on these occasions. One and all hid themselves in clouds of oblivious contentment as to their own particular administration, and attempted to delude their supporters as to the total absence of abuse at their individual institutions. A few weeks ago the euphemistic chairman of one of the hospitals had the misfortune to write a letter to the BRITISH MEDICAL JOURNAL, in which he said with reference to the specific recommendations of their Hospital Committee, "that every one of the model principles is in

force at his hospital, and was so before the meeting of the Committee."

How any one, except in total ignorance of the facts, could have made such a statement was beyond comprehension.

Hospitals had ceased to be charitable institutions. Many of the annual subscriptions received by the hospitals were paid by business houses as a form of insurance, in order to provide for the unlimited free treatment of their employees in case of accident or illness; and so with some private individuals, who gave their few guineas a year to the nearest hospital to ensure the free treatment of any of their servants. The profession was asking, Where was the charity in these subscriptions? No; they were good business investments, and the medical profession had always been a willing tool to be exploited by a grasping public. This pursuit of business under the cloak of charity was daily becoming a more and more common feature of our age.

With the new Employers' Liability Act just coming into operation the insurance companies would doubtless become subscribers to hospitals, in order to obtain free treatment for the cases thrown on their hands.

II. The Patients.

Hospitals were intended and were still supported for the relief of the necessitous poor. This was, however, the very class whose attendances might be numbered by hundreds, compared to the thousands of well-to-do people who crowded every out-patient department, and whose keen business propensities superseded their sense of honour, who spent their lives imposing on the charitable public and the hospital authorities. At some, especially the special departments, this idle class crowded out the hard-working, deserving poor, who had not the time at their disposal to spend half the day waiting for a hurried consultation by the visiting physician or surgeon. So, again, the beds were largely occupied by patients quite able to afford to pay for their treatment, a large percentage of whom came long distances, and did not live in the district from which the hospital should be receiving its clientele.

III. The Medical Profession.

(a) *The Hospital Staff.*

Of recent years hospital after hospital had instituted the obnoxious principle of payments by patients.

Staff after staff had met and unanimously condemned the system, but this was as far as their moral courage permitted them to go. They pocketed their pride, stifled their consciences, and blindly submitted and obeyed the dictation of the lay Committees, as to the terms on which they should tender their gratuitous services to the public.

Objections had been raised to the payment of hospital staffs, because they might then become the paid servants of a public or Government department. Many, however, would prefer to be the servants of a State department, with its red tapeism, than to be the slaves of lay committees as at present constituted.

The hospital staff was usually overworked through having to see an unlimited number of trivial cases, the majority of which could be as well attended to by the outside practitioners, and required no special skill either for their diagnosis or treatment.

(b) *General Practitioners.*

The hospitals by charging small fees to out-patients entered into unfair competition with the local general practitioners, who in many instances could not afford to attend patients for a smaller fee than 1s. including medicine, whereas the hospitals often only charge 6d.

Central Hospital Board.

In the year 1892 a Select Committee of the House of Lords recommended the formation of a Central Board. It did not consider that such a Central Board should be given any statutory powers as regards the formal licensing of any hospital built or about to be built. It recommended that the proposed Central Board should be granted a charter to entitle it to receive endowments, legacies, bequests and contributions for distribution to medical charities and to meet its own necessary expenses. It suggested it should consist of 49 representatives, and that it should assist and work with the managers of the Hospital Saturday and Sunday Funds.

In 1895 and 1896 Colonel Montefiore, of the Chari Organization Society, read papers at special meetings the Council of that body on the need of a Central Hospit Board for London, the result of which was that in 18 and 1897 the Charity Organization Society brought forwa its scheme for the formation of a Central Hospital Boar A large General Committee was formed, largely compos of prominent medical men, and from this a small Executive Committee was elected.

Several meetings were held during this period, and workable scheme was evolved, whose chief points were follows:

It gave to each hospital definite representation on t General Board.

It suggested reliance, not on legal compulsion but co-operation and publicity.

It proposed the formation of a fund for the large a liberal aid of hospitals for special purposes, rebuildi etc

The Hospital Sunday Fund was started in 1873, and h now done something towards improving hospital a ministration, for after twenty years' hard work it intr duced a uniform system of accounts. The Fund had al done a good deal to improve the methods of publishi and auditing of accounts, had established economy management in certain cases, and of course had assist the financing of many institutions. The Distributi Committee in awarding its grants took into considerati the amount of work done, and so unfortunately encourag the hospitals to make as large a show as possible of t number of out-patients and casualties.

The Fund had attempted to do good by encouragi the appointment of almoners for the out patient depa ment, but as no limit was usually placed on the numb of patients seeking advice, the impracticability of to a extent checking abuse was at once obvious. So also t impossibility of inquiring into the better-class patie bringing subscribers' letters made even this attempt many cases useless.

The following year, 1874, notwithstanding the opposit of the medical press, the *Hospital Saturday Fund* w established.

This fund differed from the others in that it was purely business corporation with no pretence at chari and openly exacted its *quid pro quo* in the way of hospi letters, and thus deterred the better members of the artis class from joining provident dispensaries and medi clubs, by presenting them with hospital letters a encouraging them to seek advice at the hospital.

In February, 1897, the *Prince of Wales* announced intention of opening a Hospital Fund for London commemoration of the Queen's Jubilee

King Edward's Fund, although the last to be formed, h already outstripped the other two, not only in the mat of capital, but in its attempts to control the administ tion of hospitals by practical pressure, owing to its pow of the purse.

It had instituted visitors who went personally to all t hospitals receiving grants at its hands, who, after insp tion on the spot, drew up reports and recommendatio In some cases it had been remarked that its advice a recommendations were repeated year after year, but w no result.

It insisted on a uniform system of accounts, h brought about the amalgamation of several hospitals a groups of hospitals, opened many beds which were clo for want of funds, vetoed the building of new hospit where they were not wanted, assisted the migration some to more necessary situations, and in many ways l made its voice heard for the better administration numerous institutions.

He had already dealt with the unnecessary and ext vagant expenditure of hospitals competing one agai the other, and showed how, if they were to combine, enormous saving would result. Much the same mi be said of the three chief hospital funds King Edward Hospital Saturday, and Hospital Sunday Funds. Ea has to keep up its separate administration, and to intents and purposes advertise for support in competit with the other Funds.

If these three large bodies were to amalgamate or some way combine, there would be a large saving expense, and united they would have a much gre power to control and supervise hospital expenditure.

Of recent years the *British Medical Association* had taken up the hospital question, and had done much useful, solid work through its Hospitals Committee.

This had drafted a number of propositions and rules for the guidance of those hospitals whose Boards were obliging enough to adopt them, especially with regard to the out-patient department. The Metropolitan Counties Branch formed its Medical Charities Subcommittee to deal with the same subject.

The Association, therefore, had now collected a large number of facts, and should be in a position to be of great assistance in any proposed scheme for the formation of a Central Hospital Board for London.

A great central body once formed could stop the abuse and misuse into which our hospitals have allowed themselves to drift, and would restore them to the proper place they should hold in our social organization, and rescue them from their lamentable present position of pauperizing agents. King Edward's Fund had done much towards uniting the hospitals under one system of administration. It should now take the lead by uniting or, if necessary, by absorbing the other competing Funds, and so strengthening still further its financial position. It would then be a force whose recommendations no self-respecting institution could refuse to obey, and whose power for good would be increased enormously, and it would then, indeed, have proved itself worthy of its founder.

Should it be found that there were practical difficulties which formed an insuperable obstacle to the amalgamation of the bodies already existing, a new association should be formed composed of representatives from each of the Funds; this would get over the possible objections, and would have the same result in the end.

The public and the profession were tired of the everlasting special appeal for funds, and the hospitals must now be rescued from the hands of competing groups of irresponsible individuals, and from the narrow cliques of many of the medical and lay committees, and placed under proper control of a central and responsible authority.

If the resolution for the formation of a central authority to be brought forward to-day were carried, it was proposed to ask the Branch Council to form a small committee for the purpose of drawing up a practical scheme. He therefore did not elaborate one, but obviously for any council to be workable it must be representative, and not be too large; for this purpose he would propose giving a representative for each of the larger hospitals; and all the smaller, both those with and those without schools, and all the special hospitals, would be placed together in groups, and each group would select a representative to serve on a central council. They looked forward to the day when, through the influence of a central authority, the present unfortunate and demoralized competition would be replaced by a system of mutual aid among hospitals. He therefore moved the following resolution:

> That in the opinion of this meeting of the Metropolitan Counties Branch of the British Medical Association, it is desirable, with a view of abating the present abuse of hospital charity, that a central hospital authority for London be constituted upon which the medical profession is adequately represented.

Dr. LAURISTON SHAW, in seconding the resolution, said he felt it was his duty to take what part he could in furthering the objects which the meeting had in view. As the Chairman of the Marylebone Division during the last twelve months, it had been his pleasure to preside over what for them was a rather large meeting, which expressed a very competent opinion that concerted action should be taken to check the flow of unnecessary charity. As a co-opted member of the Hospitals Committee of the Association, it had been his duty in the last two years to take some part in drawing up regulations for the administration of hospitals in all parts of the kingdom. He believed it was Richard Cobden who said that action should follow swiftly upon conviction. No one could blame the British Medical Association or the medical profession for acting too hastily upon that precept. Seventy years ago Queen Victoria came to the throne. In that year the Committee of what was then the infantile British Medical Association presented a very important report drawing attention to the injustice to the medical profession that they should be expected not only to take their part in paying the rates for the Poor Law and in subscribing to charities, but should also be expected, either as private practitioners or as members of hospitals, to give their services to the sick poor whenever they were asked. He could not help thinking that if any of the members of that Committee were to return to-day they would feel that the condition of things in London demanded even more stringent remarks than it did in 1837. If they were now to take active measures, after considering the question for over seventy years, they ought carefully to consider how their action should be effective. It seemed to him that there were only two possible ways. One was through professional union. It might possibly be that the majority of the profession would ultimately be able to exercise so much control over its individual members that they would prevent an individual member giving his services upon terms which they thought were bad for the profession and not good for the public. That was a possible way of being effective in their attempt to stop abuses, and he had no doubt that ultimately that would come. He thought that the reorganization of the British Medical Association five years ago had been the first step towards professional union. But there was another way, and while that was only quietly and rather slowly coming into effect, they must not neglect other means. Another means would be by the establishment of some central authority with power to control the lay administration of hospitals. It was such an authority as that that they were hoping to take some steps towards establishing; a central authority was no new idea. But there were just three points that he would like to make with regard to that central authority. In the first instance, if they did have any central authority, it must be an authority; it would not be enough that it should simply be a central board or a central advisory committee. It was absolutely essential that power should be given to that body to control the administration of hospitals. He would not go quite so far as the mover of the resolution had gone, perhaps, in seeing such desperately evil things taking place at hospitals, but however well they were managed it could not be expected that individual hospitals could co-ordinate their actions unless there was some central authority to secure such co-ordination. The central authority must have money. He did not think it was at all likely they could get any central authority set up by the State except a central authority that had the power of the purse. It would be for the Committee to consider how to secure that power of the purse. The next point he would like to make was that the central authority must have on it representatives of the medical profession. If the desire of the Committee which reported seventy years ago had been secured and the medical profession had given their services to medical charities on proper terms, if they had demanded that they should be paid for their services, which he thought would be a most admirable thing and was an end to which they ought ultimately to attain, then it would have been quite right for the lay authority to manage them; but under existing conditions, when every guinea subscribed by the charitable public was capped by two or three guineas of work given by the medical profession, it was only reasonable that the medical profession should have a very substantial voice in the administration of medical charity. The last thing that he wished to point out was that they must have that central authority now; they had waited long enough for it. Not only must they have it because they wanted it to organize the administration of medical charity, but they ought to have it now as an indication to the public that the profession was really a powerful body. After talking so long about it, if they failed to get that authority, they would admittedly be a feeble body of fortuitous atoms that the public could do what they liked with. They had said they desired it, and they must have it, or their position in regard to the public would be a very feeble one indeed. He therefore hoped that they would pass the resolution, not only with an overwhelming majority, but that they would individually take such steps as they could to forward the idea which the resolution put before them, in order to show that the medical profession had the power of united action, and to encourage the British Medical Association to go forward in making itself a united organ for the benefit of the profession, and therefore of the public.

Dr. F. W. Forbes Ross moved as an amendment:

That the words "by a proportionate number of general practitioners" be added to the original motion.

He said the addition of those words would secure the interests of the general practitioners in London who did not belong to the "hospital clique," as the latter never at any time represented anything else but themselves. In London, "medical representation" in the main meant having matters manœuvred by the hospital consultants purely in their own selfish interests. The chairman and lay committees of the various hospitals and funds, might, if entrusted with sole power, represent the medical interests of the entire profession, perhaps foolishly at times, yet on the whole far more honestly and fairly than had been the case in the past at the hands of the medical committees of hospitals. He had already poured contempt on the cry that the hospital practitioners were doing "charity" because they worked on the hospitals. His words were to be found in the Supplement to the British Medical Journal of December 22nd, 1906. No one had ventured to contradict him then or since. They had the present system of leaving the hospitals in the hands of the medical committees to thank for all their troubles; not the least of them was hospital abuse.

Dr. Southcombe seconded the amendment, and said he was quite in sympathy with the idea, if not entirely with the utterances, of the amender. He thought the whole value of the original resolution depended on what was meant by the word "adequately."

Dr. Fothergill said if the intention of the amendment was that the whole of the medical profession was to be represented by an adequate representation of general practitioners, he felt sure a good many of them did not wish it. They wanted every branch represented.

Dr. Forbes Ross said representation in London nearly always meant manœuvring of private interests. He wanted to see a proportionate number of general practitioners who were not on any hospital staff.

Dr. Fothergill said he thought the amendment absolutely unnecessary. Surely the "medical profession" included "general practitioners."

The Chairman: Perhaps it would be better to have a clear understanding of what the amendment does mean. I presume the intention of the mover is that there shall be a proportionate number of medical practitioners.

Dr. Forbes Ross: I include everybody.

Dr. Bruce Porter suggested that if they introduced the words "general practitioner" it would start a discussion that would last from now to the end of the year to define what a general practitioner was.

Dr. Tanner said first of all he would like to congratulate the Westminster Division, or whoever drew up the resolution, on the fact that at last they had called a spade a spade. They had spoken of hospital charity, and he thought that was a thing that should be kept constantly before the public, that the hospitals of London were a charity, and, further, that they were a professional charity. Surely the profession should have the control of the whole matter, more especially the selection and admission of patients for treatment. If an artist were going to paint a picture, he would not allow an outsider to select the pigments for him, and he suggested if this charity were controlled by the profession, the profession's charity could be painted into a very splendid picture, a picture which could be held up to the world and its criticism invited with no fear as to the result. Hospitals could not be run without money, and certainly they could not be run without skilled hands and educated brains, and those skilled hands and educated brains represented the most important part of the hospital system. Surely if they were going to paint a picture, they ought to be allowed to select their own pigments. The men on the hospital staffs were the men who wielded the brush in painting the picture, and they had there toward that they gained skill and knowledge which they could use for their own advancement, for the good of the profession at large and the benefit of the world, suffering humanity especially. Let them look the whole world in the face and say that they claimed no return for their gratuitous services, that they should have this reward. The public nowadays made the remark with a cynical smile, "Oh, hospital charity you!" When there was a hospital vacancy to be filled he thought a good reply was to say, These men wish to hold these offices in order that they may give of their own skill for the benefit of the world. He believed the Association should still hammer away on this point and induce the profession to show to the world that it was a profession made up almost entirely of gentlemen with charitable ideas, and that the profession was still a working body; they ought to do anything they could to put grit into the profession and give every opportunity to the profession to show its grit. By so doing he believed they would not only be doing something for themselves, but something for the world at large and something for suffering humanity. If the hospital staff would act on the suggestion, he believed that they would be doing a great deal to fill the gap, the void, the "rift in the lute" that existed between the hospital practitioners and private practitioners at large.

Brigade-Surgeon-Lieutenant-Colonel Myers said it was great pain to him to hear any member of the profession speaking in such opprobrious terms as the mover of the amendment had. He had not thought it possible for any medical man to abuse his colleagues in such a way. He believed all in the room were practically in sympathy with the movement, but considering the importance of the question he was somewhat surprised to see only representatives of the Metropolitan Counties Branch present. He had noticed the same thing at previous meetings—that scarcely any of the leaders of the profession took part in the discussion. When the Charity Commissioners started the question they decided that to have a board representing all the various interests it would require 169 members; and if Dr. Ross wanted all the members of the medical profession added, they would be a body larger than the House of Commons. But they all knew large committees were of no use and could not do the work; the best committees were those of three members, or sometimes even of one. In this case the committee for working would be reduced to a few earnest and possibly interested men and women who would rule the whole of the business, and if they showed, as very likely they would, more enthusiasm than judgement, they might be a source of very great danger to our institutions. Again, it would not be possible for the heads of hospitals to join a board of that kind; it would take too much of their time, and few surgeons and physicians could attend the meetings, therefore they would not be representative. But he believed if the leaders of the profession fully studied the question that they would not support the amalgamation. The power of the central body, if formed, would be the power of the purse, and if they were going to interfere in every little detail of the work of the various hospitals the whole of the interest of the hospitals would be lost. The boards of management consisted of men who were deeply interested in their respective hospitals, men who spent time and money over them, and who knew better than any central board could know the wants of the various institutions. Some little time ago a stranger at a public meeting told him that he had left a large legacy to a hospital, and he said if a central board were formed he should withdraw that legacy. Another gentleman told him that he subscribed largely to four different hospitals, and he very much objected to a central authority, and if it were formed he should only give one subscription to the central board and withdraw the other three. Personally he could not help thinking that if that central body absorbed the legacies and subscriptions there would very likely be a great loss of money, because men who were interested in individual hospitals would withdraw their support. Another point was, if the central hospital board was formed they would be bound to have inspectors. Who would be those inspectors? Were they to be ladies and gentlemen, volunteers. They all knew what volunteer work was with regard to committees; it was very uncertain indeed, and practically it could not be carried out. The central board would have to appoint paid inspectors, and to have men of probity and men who could afford the time to give to it they would have to pay them very heavily, and it would be a very disagreeable duty. King Edward's Hospital Fund had done a great work; it had made the leaders of the profession feel that something had to be done with regard to studying the expenditure of the various hospitals, and he personally believed a great deal had been done at the present time in that way. They ought to study one another, and compare notes and endeavour to reduce the expenditure of the hospitals

generally. The principle that they were being asked to adopt was a very dangerous one, because they were placing in the hands of a few the complete control of all these general hospitals. What would be the end of it? The end would be that they would become State-aided. That was the desire of a great many men in the profession; but so sure as they became State-aided, so sure would the public cease to subscribe, and they would come on to the rates and would be little better than the workhouse infirmaries. He felt very strongly on the subject, and, although he felt he almost stood alone there, he knew that behind him there was a vast body of men who did agree with him, but they did not come forward.

Dr. HASLIP said he thought the Westminster Division might congratulate themselves on the fact that the last speaker commenced his remarks by saying that the resolution had his sympathy. The last time he spoke upon the question it did not really receive that. He had certainly grown much kinder in his remarks, so he (the speaker) hoped in the process of time they would have his entire sympathy and support. If he might say so, he had really killed his own argument. He had finished by recognizing the good King Edward's Fund had done for the administration of hospitals. King Edward's Fund had a central control of the most autocratic character, and it gave money without giving any reason. They really did not know what constituted King Edward's Fund. Recently King Edward's Fund was applying to Parliament for a Bill to become an incorporated society, and the Association asked that the medical profession should be adequately represented on the Board, which request, he believed, was absolutely refused. It was because they wished to prevent the hospitals being State-aided that the medical profession asked for a central control. He felt certain that unless the medical profession recognized the advantage of a central control, the whole thing would be taken out of their hands and a Royal Commission would be appointed, and the end would be State-aided hospitals. He believed with a central control there would be more economy, there would be co-ordination between hospitals instead of costly competition, and valuable sites and hospitals which were not entirely used could be used for the advantage of the poorer middle classes which were not catered for at all. Speaking as one whose patients were of various classes, he maintained that they did not cater for the better-class artizan or for the poorer-class practitioners. There could be a scheme under a central control for increasing the number of paying hospitals where the practitioner could go and see patients. Such hospitals already existed on the Continent and in our own Colonies. Only recently he had a young doctor who was down with appendicitis. He came from Canada and had been travelling for the benefit of his health, and he was absolutely staggered to think he would either have to be a pauper in a hospital or to pay excessive fees in a nursing home and ask the charity of a surgeon to operate upon him. He also believed in a central control because it would be to the advantage of the medical profession. Injustice was done in London to medical students as against provincial students. He believed it was owing to the constant competition of one school against another that there was no combination and no university. For all these reasons he supported the resolution.

Dr. SNAPE said he was fully in sympathy with the resolution, and hoped that at last the idea was going to bear fruit. He thought it was necessary for the meeting to emphasize the desirability of general practitioners being represented. They could not obtain what they all so much desired without the help of others, and they ought to remember the old adage that the person who paid the piper called the tune. They wanted to get hold of the people who paid the money to support the hospitals and convince them. Some people gave money simply for the sake of seeing their names in print; what they desired was an entry into smart society; those people they would never touch. The people they could touch were the great respectable middle classes who paid two or three guineas a year, and who would be very much upset if they were to find out that they were paying for medical attendance for people who were well able to pay for themselves. The great middle class were getting sick of paying all sorts of things for other people. They were sick of elementary education, they were sick of free meals, and paying for them. If they could bring it home to them that they were not getting what they were paying for, and that they were paying for medical advice for those who could well afford to pay for themselves, they would get the general public on their side, and would be able to achieve what they so much desired.

Dr. ROCHE said he was in sympathy with the amendment so far as the principle embodied in it was concerned, though he wished to dissociate himself from the tone of the mover of it, and also from the words of that amendment. He would propose as a further amendment:

> That the last part of the sentence of the original resolution should run as follows: "be constituted upon which all branches of the medical profession are adequately represented."

The CHAIRMAN said he could not take a further amendment until the other was disposed of.

Dr. F. J. MCCANN said he would like to point out that the Committee which drafted the original resolution drafted it in general terms. They felt that at the first meeting it would be obviously inexpedient to introduce too many details into it. The members of the Committee all felt that general practitioners should, and ought to be, represented on the central authority, but all those points would be dealt with by the committee which he hoped would be appointed to draw up a scheme, and then it would be quite possible for them all to pull that scheme to pieces if they were not satisfied with it.

After some further discussion, Dr. FORBES ROSS agreed to withdraw his amendment.

Dr. ROCHE then moved that the last sentence in the original resolution should read as follows:

> Upon which all branches of the medical profession are adequately represented.

and said the terms of the resolution implied that all branches were to be represented, but it was not explicitly stated, and he thought the idea of himself and others was that general practitioners should be represented: and in order that they might be secure he thought it would be well to introduce such words into the resolution as would call attention to the fact that there were branches of the medical profession which ought not to be ignored in the selection of a committee.

Dr. CARTER seconded the amendment, and said that as a matter of fact they all knew that in committees of that sort the consultants, as a rule, were the ones who were elected in preference to the general practitioner. He thought it should be specifically stated that the general practitioner was to be represented, otherwise the general practitioners themselves often elected consultants to represent them, and some of them thought that the consultants did not do that.

Colonel MYERS thought the amendment was a great mistake. It would involve great difficulty in deciding who were the proper representatives of the medical profession. He pitied any board who would endeavour to satisfy everybody. Surely the resolution as it stood was perfectly clear—"adequate representation"; what did they want more than that?

Dr. FORBES ROSS said that "adequate representation" did not express the point. Everybody would admit that for years the British Medical Association, or the Branches, were not adequately represented. That was why they formed the Association, because they were inadequately represented.

Dr. KNOWSLEY SIBLEY accepted the amendment, and the CHAIRMAN then put the resolution as amended, and it was carried with three dissentients.

A vote of thanks to the Chairman terminated the proceedings.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON A. PATERSON has been placed on the retired list, with the rank of Deputy Inspector-General, June 12th. His commissions are thus dated: Surgeon, March 31st, 1875; Staff Surgeon, March 31st, 1886; Fleet Surgeon, October 28th, 1896.

The following appointments have been made at the Admiralty: JOHN W. CRAIG, M.B., to the *Sutlej*, on recommissioning, June 12th; HENRY W. HULL, Surgeon, to the *Britannia*, on recommissioning, June 15th.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL J. T. CARTY, M.B., retired pay, has been appointed Medical Officer in the Manchester recruiting area.

ARMY MEDICAL STAFF.

Surgeon-General S. R. W. D. Wilson, M.B., K.C.M.G. (retired), has been granted a reward for distinguished service. He was appointed Assistant Surgeon, October 1st, 1867; Surgeon, March 1st, 1873; Surgeon-Major, October 1st, 1879; granted the rank of Lieutenant-Colonel, May 22nd, 1884; made Brigade Surgeon-Lieutenant-Colonel, October 2nd, 1888; Surgeon-Colonel, July 18th, 1894; and Surgeon-General, October 3rd, 1898. His war record includes: The Afghan war, 1878-80 (two clasps); the Egyptian expedition, 1882 (medal and Khedive's star); the Soudan expedition, 1884, including the battles of El Teb and Tamai (mentioned in dispatches, promoted to be Surgeon-Major, medal with two clasps); and the South African war in 1899-1902, as Principal Medical Officer in South Africa, including the advance on Kimberley, and numerous operations in the Orange Free State, the Transvaal, and Cape Colony (several times mentioned in dispatches, appointed K.C.M.G., and granted the King's medal with two clasps). Although not so stated in the Army Lists, Sir William should evidently be credited with the Queen's medal with clasps.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major J. Drummond, M.D., having been appointed to the command of the 3rd Durham Royal Garrison Artillery (Volunteers), ceases to belong to the Army Medical Reserve of Officers.

ROYAL ARMY MEDICAL CORPS (MILITIA).

Captain Honorary Captain in the Army H. E. Mortis to be Major, April 24th.

Captain (Honorary Lieutenant in the Army) H. Fox, M.B., resigns his commission, April 8th.

CHANNEL ISLANDS MILITIA.

Henry J. Shone to be Surgeon-Lieutenant in the Medical Company of the Royal Militia of the Island of Jersey, May 25th.

VOLUNTEER RIFLES.

Surgeon-Lieutenant D. O. Kerr, M.B., 1st Surrey (South London) Volunteer Rifle Corps, to be Surgeon-Captain, May 1st.

Surgeon-Lieutenant W. H. Harland, 4th (Isle of Wight, Princess Beatrice's) Volunteer Battalion the Hampshire Regiment, to be Surgeon-Captain, May 15th.

Supernumerary Lieutenant W. J. Woodman, 4th Volunteer Battalion the Queen's Own Royal West Kent Regiment, to be Surgeon-Captain, remaining supernumerary, May 2nd.

Surgeon-Lieutenant-Colonel W. H. Packer, M.D., 1st Volunteer Battalion the King's Shropshire Light Infantry, is granted the honorary rank of Surgeon-Colonel, April 30th.

Surgeon-Lieutenant J. W. Macmullan, 1st Herefordshire Volunteer Rifle Corps, to be Surgeon-Captain, November 1st, 1906.

Frederick K. Smith to be Surgeon-Lieutenant in the 1st Volunteer Battalion the Gordon Highlanders, May 1st.

Surgeon-Lieutenant W. F. M'Allister-Hewlings, 1st Volunteer Battalion the Leicestershire Regiment, resigns his commission, May 4th.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Lewis D. Cruickshank, M.B., to be Lieutenant in the Aberdeen Companies, Scottish Command, May 7th.

Lieutenant-Colonel and Honorary Colonel F. L. Stephenson, M.B., Woolwich Companies, Eastern Command, is retired, on completion of his period of service in command, retaining his rank and uniform, April 30th.

Major and Honorary Lieutenant-Colonel C. H. Hartt, Woolwich Companies, Eastern Command, to be Lieutenant-Colonel and to command under the conditions of Para. 47, Volunteer Regulations, April 16th.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

AYR DISTRICT ASYLUM.—Junior Assistant Physician. Salary, £[illegible] per annum.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary, £[illegible] per annum.

BURNLEY VICTORIA HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

CAIRO.—DEPARTMENT OF PUBLIC HEALTH.—Sub Inspector of Ophthalmic Hospitals. Salary, £250 per annum.

CALCUTTA.—LADY DUFFERIN VICTORIA HOSPITAL.—Lady Doctor. Salary, Rs. [illegible] per month.

CAMBRIDGE.—ADDENBROOKE'S HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £[illegible] per annum.

CANCER HOSPITAL, Fulham Road, S.W.—Medical Officer in Charge of Electrical Department. Honorarium £[illegible].

DERBYSHIRE ROYAL INFIRMARY.—Assistant House Surgeon. Salary at the rate of £[illegible] per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Second Medical Officer for Casualty Department. Salary at the rate of £[illegible] per annum.

ENNISKILLEN.—FERMANAGH COUNTY HOSPITAL.—House-Surgeon. Salary, £[illegible] per Annum.

GLASGOW SAMARITAN HOSPITAL FOR WOMEN.—House Surgeon.

GREAT NORTHERN CENTRAL HOSPITAL.—Honorary Medical Officer in Charge of Electrical Department.

GUILDFORD.—ROYAL SURREY COUNTY HOSPITAL.—(1) House-Surgeon; (2) Assistant House Surgeon. Salary, £100 and £40 per annum respectively.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians. Honorarium, £25 each for [illegible] months.

HULL ROYAL INFIRMARY.—Casualty House Surgeon. Salary, £[illegible].

LAMBETH PARISH.—District Medical Officer. Salary, £90 per annum.

LIVERPOOL STANLEY HOSPITAL.—Assistant Honorary Ophthalmic Surgeon.

LONDON COUNTY ASYLUM, Claybury.—Junior Assistant Medical Officer. Salary, £150 per annum.

LONDON COUNTY COUNCIL.—Two Local Assistant Medical Officers (Education) in Public Health Department.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant Resident Medical Officer. Salary, £120 per annum.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

MAIDSTONE: WEST KENT GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, and £5 for washing.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary, £80 per annum.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Male Assistant House-Surgeon. Honorarium, £20 for six months.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Resident Medical Officer for Out-patient Department. Salary at the rate of £60 per annum.

ST. MARY'S HOSPITAL, Paddington.—Curator of Museum and Assistant Pathologist. Salary, £100 per annum.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Senior House Surgeon (male). Salary, £100 per annum.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary, £80 per annum.

STOCKPORT UNION.—Resident Assistant Medical Officer for the Hospital, Stepping Hill. Salary, £130, rising to £150, per annum.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—Surgeon to Out-patients.

WARWICK COUNTY ASYLUM.—Assistant Medical Officer. Salary: £135, rising to to £155, per annum.

WEST BROMWICH DISTRICT HOSPITAL.—(1) Senior House-Surgeon; (2) Assistant House-Surgeon. Salary, £110 and £75 per annum respectively.

WORCESTER GENERAL INFIRMARY.—House-Physician. Salary, £80 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Blackpool, co. Lancaster; Knaresborough, co. York.

APPOINTMENTS.

Bigg, E., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Bingham Union.

Cheatle, G. Lenthal, C.B., F.R.C.S., Surgeon to the City of London Hospital for Diseases of the Chest, Victoria Park, E.

Chiles-Evans, D. B., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer of the Swansea Union Workhouse.

Cunning, Joseph, M.B., B.S.Melb., F.R.C.S.Eng., Surgeon to In-patients, Victoria Hospital for Children.

David, J., M.B., District Medical Officer of the Neath Union.

Devereux, N., M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Tewkesbury Union.

Elrington, —, M.R.C.S., L.R.C.P.Lond., District Medical Officer of the Braintree Union.

Richards, John, M.B., F.R.C.S.Edin., Medical Superintendent of the Joint Counties Asylum, Carmarthen.

Richards, Morgan, M.B., B.S.Durh., Clinical Assistant to the Chelsea Hospital for Women.

Smith, Wm., L.R.C.P., L.R.C.S.E., L.F.P.S.G., Medical Officer and Public Vaccinator of the Barton District of the Luton Union.

Smyth, P. J., L.R.C.P.Edin., L.R.C.S.Irel., Certifying Factory Surgeon for the Duleek District, co. Meath.

Willcox, W. H., M.D.Lond., M.R.C.P.Lond., Physician to Out-patients, St. Mary's Hospital, W.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting advertisements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

Patten.—On June 22nd, at 9, Summerfield, Broomhill, Sheffield, the wife of Professor C. J. Patten, M.D., Sc.D., of a daughter.

MARRIAGE.

Robertson—Frame.—On June 26th, at the Tontine Hotel, Greenock, by the Rev. Thomas Angus Fraser, M.A., and Rev. John Young, of Trinity United Free Church, Greenock, Keith Robertson, M.D., third son of John Keith Robertson, M.D., Greenock, to Susan, only child of James Frame, Solicitor, Greenock.

DEATH.

Odell.—On June 22nd, at Queen's Road, Hertford, Georgie, wife of Robert Odell, aged 30 years.

DIARY FOR THE WEEK.

WEDNESDAY.

Obstetrical Society of London, 20, Hanover Square, W., 8.0 p.m.—Short communication: Dr. F. E. Taylor: Typhoid Infection of Ovarian Cysts. Specimens: Dr. Eden: Case of Vesicular Degeneration of the Placenta. Miss Aldrich-Blake: (1) Skeleton of an Extrauterine Fetus from a woman in whom there was no history suggestive of such a gestation; (2) Carcinoma of Cervix in a uterus one horn of which was undeveloped.

(3) Specimen and Section of a Uterus in which Fibrosis round vessels is very marked. Dr. Lewers: Two Specimens of Fibroid associated with bleeding after the menopause. Other specimens will be shown by Mrs. Boyd, M.D., Dr. Longridge and Dr. R. D. Maxwell, and Mr. Targett.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday and Friday, 3.45 p.m.: Middle Ear and Labyrinth.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday: Bilious Attacks in Children.

LONDON SCHOOL OF CLINICAL MEDICINE.—Clinics: **Monday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Ear and Throat, 4 p.m. Tuesday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m.; Skin, 4 p.m. Wednesday, Medicine, 2.15 p.m.; Ophthalmology, 3.30 p.m. Thursday, Medicine, 2.30 p.m.; Surgery, 3.15 p.m.; Radiography, 4 p.m. Friday, Medicine, 2.15 p.m.; Surgery, 3.15 p.m. Operations each day at 2.30 p.m. Out-patient Demonstrations: Surgical, daily, 10 a.m.; Medical, daily, 10 a.m. Ear and Throat, Mondays and Thursdays, 12 noon. Eye, Wednesdays and Saturdays, 11 a.m. Skin, Tuesdays and Fridays, 12 noon. Special Lecture: Tuesday,** 4.0 p.m., Treatment of Chronic Eczema.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day:—Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, Some Surgical Considerations; Tuesday, Deformities of the Foot associated with Adduction; Wednesday, Some Points concerning Albuminuria, Phosphaturia, and Oxaluria; Thursday, Deformities of the Foot associated with Adduction.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Treatment of Epilepsy. Friday, 3.30 p.m.: Treatment of Torticollis.

NORTH EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—**The following are the clinics and demonstrations for next week:—Monday 10 a.m.: Surgical; 2.30 p.m.: Medical, Throat, Nose and Ear, *X* Rays. Tuesday, 10.30 a.m.: Medical: 2.30 p.m.: Operations—Surgical and Gynaecological; 4.30 p.m.: Special Demonstration on Clinical Pathology, Wednesday, 2.30 p.m.: Medical, Skin, Eye. Thursday, 2.30 p.m.: Gynaecological Operations—Medical, Surgical; *X* Rays; 3 p.m., Medical (In-patient). Friday, 9.30 a.m., Surgical: 2.30 p.m., Operations—Medical, Eye: 3 p.m., Medical (In-patient).**

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following arrangements have been made for next week: Daily, 2 p.m., Medical and Surgical Clinics and *X* Rays; 2.30 p.m., Operations. Monday and Thursday, 2 p.m.: Diseases of the Eye. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2 p.m.: Diseases of Throat, Nose, and Ear. 2.30 p.m.: Diseases of Skin. Wednesday, 10 a.m.: Diseases of Children. Wednesday and Saturday: Diseases of Throat, Nose, and Ear; and Saturday, 2 p.m.: Diseases of Eye. Lectures—Monday, 12 noon: Pathological Demonstration. Monday, 5 p.m.: Clinical. Wednesday: Practical Medicine. Thursday: Practical Surgery. Friday: Cases of Skin Disease. Tuesday, at 3 p.m. (at the London County Asylum, Claybury, Essex): Types of Insanity.

BOOKS, ETC., RECEIVED.

American Medical Directory. Vol. I. Chicago: American Medical Association Press. London: W. B. Saunders Co. 1906. 35s.

Chirurgische Operationslehre. Von Dr. Th. Kocher. Fünfte Auflage. Jena: G. Fischer. 1907. M. 20

Population and Progress. By M. Crackanthorpe, K.C. London: Chapman and Hall, Ltd. 1907. 2s. 6d.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
JUNE.	
29 SATURDAY...	ULSTER BRANCH, Annual Meeting, Medical Institute, Belfast, 11.30 a.m.
30 Sunday ...	
JULY.	
1 MONDAY ...	
2 TUESDAY ...	
3 WEDNESDAY	CENTRAL COUNCIL, Board Room of the Metropolitan Asylums Board, Victoria Embankment, 2 p.m. DORSET AND WEST HANTS BRANCH, Summer Meeting, Ringwood. HAMPSTEAD DIVISION, *Metropolitan Counties Branch*, Special Meeting, Lecture Room, Hampstead Conservatoire, Swiss Cottage, N.W., 4.30 p.m. NORTH OF ENGLAND BRANCH, Annual Meeting, Town Hall, Gateshead-on-Tyne, 2.30 p.m. SOUTH-EASTERN OF IRELAND BRANCH, Club House, Carlow, 5.30 p.m.
4 THURSDAY...	
5 FRIDAY ...	
6 SATURDAY...	
7 Sunday ...	
8 MONDAY ...	
9 TUESDAY ...	LONDON: Organization Committee, 11 a.m.
10 WEDNESDAY	
11 THURSDAY...	
12 FRIDAY ...	LONDON: Central Ethical Committee, 1.45 p.m.
13 SATURDAY...	
14 Sunday ...	
15 MONDAY ...	LONDON: Central Ethical Emergency Subcommittee, 2 p.m.
16 TUESDAY ...	NORTH WALES BRANCH, Annual Meeting, Machynlleth.

Date.	Meetings to be Held.
JULY *(Continued).*	
17 WEDNESDAY	
18 THURSDAY...	
19 FRIDAY ...	
20 SATURDAY...	
21 Sunday ...	
22 MONDAY ...	
23 TUESDAY ...	
24 WEDNESDAY	
25 THURSDAY...	
26 FRIDAY ...	
27 SATURDAY...	ANNUAL GENERAL MEETING, Royal Public Rooms, Exeter, 10 a.m. ANNUAL REPRESENTATIVE MEETING, immediately after the Annual General Meeting.
28 Sunday ...	
29 MONDAY ...	ANNUAL REPRESENTATIVE MEETING, Royal Public Rooms, Exeter, 10 a.m.
30 TUESDAY ...	ANNUAL REPRESENTATIVE MEETING, 10 a.m. (*if required*).
31 WEDNESDAY	ANNUAL REPRESENTATIVE MEETING, 9.30 a.m. (*if required*).
AUGUST.	
1 THURSDAY...	
2 FRIDAY ...	
3 SATURDAY...	
4 Sunday ...	
5 MONDAY ...	
6 TUESDAY ...	
7 WEDNESDAY	
8 THURSDAY...	
9 FRIDAY ...	

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AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

1. The Influence of Fat on the Excretion of Sugar.

SONDI AND RUDINGER (*Wien. klin. Woch.*, August 23rd, 1906) have investigated the influence of a diet rich in fat on the excretion of sugar. Geelmuyden claimed that fats taken as food normally combine with carbohydrates or their derivatives. In support of this theory may be cited the fact that acetonuria is aggravated by the administration of fat. This indicates that at least a considerable proportion of the acetone is derived from fat. Conversely, the quantity of acetone in the urine is diminished if carbohydrates are administered. The suppression of acetone by carbohydrates is, on Geelmuyden's theory, due to the substance from which acetone is derived—namely, fat—meeting and combining with the substance—namely, carbohydrate—with which it normally undergoes destructive metabolism. Geelmuyden also supposed that the synthesis of fats and carbohydrates resulted in the formation of conjugated glycuronic acid. But this view has been disproved by the fact that alcoholic hydronyls, such as glycerine and pentose, which under no circumstances form glycuronic acid, also have the power to inhibit acetonuria. If the first part of Geelmuyden's theory is correct, carbohydrates and fats must within the body mutually attract one another. If carbohydrates diminish the formation of acetone by fixing fats, fats should equally diminish the excretion of sugar by attracting and fixing carbohydrates. J. Schmid produced glycosuria in dogs by giving phloridzin, and found that the administration of fatty acids diminished the excretion of sugar. Mohr excised the pancreas of dogs, and inhibited the resulting glycosuria by the administration of butter. Both these experimenters showed that substances, such as fatty acids and butter, which aggravate acetonuria may diminish glycosuria. In both series of experiments the nitrogenous output was diminished. From this Mohr argued that the diminution of sugar was due to the retention—that is, diminished katabolism—of albumen, and considered that his experiments supported the theory of the origin of sugar from albumen. But another explanation is possible. The diminished excretion of nitrogen may have been secondary to the fixation and oxidation of carbohydrates which otherwise would have been lost to the organism and excreted as sugar; and Satta and others have observed marked retention of nitrogen when acetonuria was reduced by carbohydrates. In this case the fats from which acetone is derived are oxidized instead of being lost and excreted as acetone. It has frequently been observed in diabetes that the administration of fat diminishes glycosuria. This, according to Naunyn and von Noorden, is due to the action of the fat in sparing albuminous metabolism. In most cases, however, the acetone excreted was not estimated, and there were other factors which invalidated the conclusions. In 3 of the writers' cases in which the ingesta and egesta were analysed, the effect of fat in reducing the amount of sugar was marked. Thus, in the first case, as the fat in the food was gradually increased from 153 grams to 240 grams daily, the daily quantity of sugar excreted in the urine fell from 27.6 grams to 6.4 grams. That this was not due to the acquisition of tolerance was shown by an immediate increase of the sugar to 46.1 grams when the quantity of carbohydrate in the food was raised from 18.5 to 44.7 grams. During the period of increased consumption of fat there was considerable retention of nitrogen and no marked increase in the excretion of acetone. The case was a severe one, sugar never disappearing from the urine. In slight cases, after the excretion of sugar has been rendered more or less constant by the administration of a fixed daily quantity of carbohydrate, it is possible to show not only that the addition of fat reduces the amount of sugar, but that subsequent reduction of the amount of fat in the diet is followed by a rise in the glycosuria. The excretion of nitrogen is not necessarily altered, so that the disturbing factor of the origin of sugar from albumen is eliminated. If carbohydrates and fats combine chemically within the body an amount of fat, which does not exceed that required to reduce the excretion of sugar, should not increase the excretion of acetone; and, conversely, an amount of carbohydrates sufficient to inhibit acetonuria should not increase the glycosuria. That these laws hold in slight cases of diabetes the writers' second and third cases show. In severe cases diet may fail to influence either glycosuria or acetonuria. In other cases fat may fail to reduce glycosuria because it is badly assimilated. Schmid's phloridzin experiments led Borchard to the opinion that fats, and especially fatty acids, increase acetonuria through withdrawing glycerine, which itself inhibits the excretion of acetone from the body. This view is rendered improbable by the fact that butter, which is extremely active in increasing acetonuria, contains, compared with other fats, a high percentage of glycerin, and scarcely any free fatty acids. The value of fats in diabetes has long been recognized. The writers' experiments show that in estimating the limit of tolerance for carbohydrates, a knowledge of the amount of fat ingested is essential.

2. Haematuria in Children.

MÉRY (*Journ. de Méd. et de Chir. Prat.*, August 10th, 1906) insists on the importance of recognizing that many cases of haematuria in children are simple in character and do not point to pathological changes in the kidney. He quotes in illustration the case of a child, aged 5, who was admitted into hospital on account of copious haematuria. Eight days before admission he complained of sudden pain in the loins, followed by copious haematuria. The pain, at first severe, gradually diminished, and all symptoms disappeared at the end of a few days. The general condition was good throughout; there was no pyrexia; physical examination revealed no signs; the only feature in the history was a recent attack of acute tonsillitis. Méry mentions the occurrence of haematuria in association with rheumatism, and suggests this explanation of the case. He further states that haematuria may be the chief symptom of a rheumatic infection in children causing renal congestion. Influenza is another disease in which haematuria not infrequently occurs. Glandular fever is also mentioned. Therefore renal congestion without nephritis is not rare. Méry further quotes the case of a young boy who continued daily school notwithstanding considerable haematuria. He was confined to his room, and at the end of twelve days all symptoms had disappeared. On the other hand, haematuria of apparently simple character may be an early symptom of tuberculosis, constituting, in fact, renal haemoptysis. A child showed haematuria for several months, but without any other symptom to explain its occurrence. Finally, tubercle bacilli were found in the urine. A distinctive feature of simple haematuria in children is the absence of albuminuria after the disappearance of the blood. Should albumen persist the case must be considered to be nephritis, even should there be reason to suppose that the lesion is merely congestive. A child 5 years old suffered from oedema and anasarca in the course of an ordinary attack of whooping-cough. The urine contained albumen and blood. The patient was dieted on milk only, and at the end of a week the oedema had disappeared and the urine ceased to contain blood. On the other hand, albuminuria persisted, and the general characters of the case showed that the lesion was nephritis. Méry insists on the importance of careful examination of the liver, as this organ is frequently enlarged in cases of acute nephritis. He states in conclusion that many cases of haematuria in childhood are simply congestive, but at the same time it is necessary to remember that children easily contract nephritis, and therefore all cases should be most carefully examined before the diagnosis of simple congestion is made. Simple haematuria responds readily to treatment. Wet cupping, calcium chloride, milk diet, and rest are the chief points in the treatment.

3. The Erect Posture and Urinary Secretion.

JACQUES CHARLES draws attention to an interesting point in renal physiology (*Prov. Med.*, No. 35). He has carried out numerous experiments on healthy individuals and others affected with Bright's disease. Under the influence of recumbency the amount of urine is greatly augmented: in 14 or 15 cases the quantity was doubled or trebled. The amount of urea was increased 10 times, of chlorides 13, of phosphates 5. In 5 cases there was no alteration, but in 4 there was diminution of the quantity. The amount of albumen was decreased. From these conclusions it follows

that samples should be examined which have been voided in the recumbent as well as in the erect posture. The upright condition, it is declared, has considerable influence on the renal secretion; and, judging by the examination of a great number of specimens, it seems that the chances of recovery in patients affected by nephritis are greatly increased, and the method has in the hands of the writer afforded valuable information.

SURGERY.

4. Nerve-stretching for Perforating Ulcer of Foot.

G. BETAGH (*Il Policlin.*, August, 1906) ascribes perforating ulcer of the foot to alterations in the central or peripheral nervous system, and recalls the researches of Duplay and Morat, who noted in the fibres of nerves running to such ulcers disappearance of cylinders and of myelin, with thickening of perineurium and increase of interfascicular connective tissue—a true interstitial neuritis, sometimes limited to the position of the ulcer, sometimes extending to the nerve trunks in the leg. Other authors have described vascular lesions, and some recognize both vascular and neural lesions, but consider that one set of lesions causes the other and the ulcer. Betagh's patient was a man of 53, of neuropathic family, and infected early in life with syphilis. For a year he complained of tingling and numbness in the left leg and foot, and during this time there formed on the sole, near the head of the first metatarsal bone, a small excoriation, which continually extended its limits, deeply as well as superficially. The ulcer was deep, with irregular slate-coloured border, and covered with a sero-turbid secretion, beneath which the surface had a yellowish necrotic aspect. Round the edges of the ulcer there was no obvious inflammatory redness, but some thickening of the horny layer of the skin. There was complete anaesthesia in and around the ulcer, and a notable diminution of all forms of cutaneous sensibility, painful, tactile, and thermal, throughout the foot and leg. In the neighbourhood of the hip this hypaesthesia gradually disappeared. The left leg was rather hypotrophic, with flaccid muscles. There was no other disturbance of the nervous system. The internal organs were healthy, except for a decided arterio-sclerosis. With cocaine anaesthesia, after the application of Esmarch's bandage, the posterior tibial nerve was stretched just above its division. The nerve trunk was of a greyish white, with occasional yellowish zones. After the wound was closed the ulcer was excised without the need for any artificial anaesthesia. The edges of the wound were brought together and most of it healed by first intention. The patient left the hospital cured fifteen days after operation. The cure lasted three months. Then the ulceration reappeared, starting in the middle of the cicatrix left by the first operation. A second excision was performed, again accompanied by a stretching of the posterior tibial nerve. Again the operation was completely successful at the time, but another ulcer came in the same spot four months later. Five months later still appeared an ulcer on the inner side of the right big toe. Thus the final result of the operations was failure. At the first operation a few fibrils were accidentally torn from the nerve. They belonged to one of the yellow zones, where the normal translucency of nerve tissue was lost. The whole nerve trunk appeared to have a diminished tension and elasticity. The torn fibrils were stained and cut into transverse sections. The section showed along with normal nerve fibres many others four or five times as large as normal, with a granular appearance, the granules turning black when treated with osmic acid. Schwann's sheaths were swollen and broken up often into drops of fat. There was some invasion of the nerve by connective tissue, and the perineurium was thickened. Sections were also made from the excised ulcers. The skin at the edge of the ulcer showed thickening of the horny and Malpighian layers of the epidermis. The ulcerated surface was covered with a fibrinous network containing in its meshes besides many degenerate elements, many red corpuscles and leucocytes whose nuclei stained well. Beyond this layer the tissues showed slight signs of chronic inflammation with numerous mast cells. The small vessels showed endarteritis and mesarteritis, and many of them were thrombosed. No evident nerve fibres appeared in the sections.

5. Acute Wandering Phlebitis.

J. PANISSET (*Wien. med. Woch.*, October 27th, 1906) was summoned to a peasant, aged 23, who a few days previously had been suddenly seized, while digging, with pain in the left foot. Since then he had frequently shivered, and could not bear weight on the foot. The temperature was 99.5° F., and the pulse 80. The joints of the left lower limbs moved freely, and there was no oedema. Between the two heads of the gastrocnemius was a hard, painful subcutaneous cord of the thickness of a quill pen. The whole of the soft parts of the leg was swollen, and the muscles were hard and tender. The overlying skin was normal. The general condition was bad, and there were complete anorexia and insomnia. Phlebitis of the external saphenous vein was diagnosed. Within four or five days the swelling in the calf subsided, but another painful cord of the thickness of a pencil appeared in the left popliteal space. The knee was flexed, and, owing to pain, could not be moved actively or passively. This second swelling subsided in a few days, but was followed by a third in the course of the femoral vein near the groin. The vein was felt as a hard, thick, tender cord. The whole process lasted about fourteen days, and, though the temperature never exceeded 100.4° F., the patient was evidently exceedingly ill. After an interval of two days the process was repeated in the same order from below upwards in the right leg. Convalescence was not established until January 6th, and was extremely tedious. The sequelae were a wide-meshed, anastomosing network of cutaneous phlebectases and oedema of the legs, especially on walking. Antirheumatic treatment was useless, and the application of mercurial ointment in the line of the inflamed veins produced stomatitis. For the pain morphine was frequently necessary. The writer considered the condition to be one of subacute sepsis of undiscovered origin, to which the wandering phlebitis was secondary. Neisser reported a case of multiple wandering phlebitis in the cutaneous veins of the upper limbs. But in this the course was eminently chronic, and the nodosities were of the nature of gummata. They were cured by mercury and iodide of potassium.

6. Inguinal Interstitial Hernia.

GALZIN (*Rev. de Chir.*, No. 10, 1906) publishes a case of strangulated interstitial hernia in a man aged 26, which presented some rare features which are opposed to the generally accepted views on the pathogenic conditions of this form of intestinal protrusion. According to classical theories, he states, an inguinal interstitial hernia is produced in the following manner: The migration of the testis into the scrotum having been arrested, the external inguinal ring remains closed, and so a hernia protrusion, when it has arrived at this level, can no longer follow a downward course, but, if its development be still continued, insinuates itself by cleavage into one of the cellular interstices existing between the muscular layers of the abdominal wall. This theory, the author points out, is not applicable to his own case, in which the migration of the testis into the scrotum had been completely effected, and the external ring presented normal dimensions. There was no tight constriction of the inguinal canal at any point, as during the operation it was found that its whole length could be readily traversed by a probe. The author finds it difficult to explain why under these circumstances, the hernia, instead of taking the usual course, extended between the abdominal muscles, where it would under normal conditions have met with greater resistance. It is suggested that this resistance might in the case in question have been reduced in consequence of some decided weakness in the abdominal wall and its cellular interspaces, due to an idiosyncrasy; but this view, the author acknowledges, is opposed by the fact that the hernial tumour had developed very slowly notwithstanding the active muscular exercise practised by the patient in the discharge of his duties as a soldier.

OBSTETRICS.

7. Diabetes and Pregnancy.

RUDAUX (*La Clin.*, October 19th, 1906) discusses the action of diabetes upon pregnancy. He finds that diabetes retards the progress of pregnancy equally, whether it has been present before or has supervened upon conception. Authorities are unanimous in asserting that the diabetic woman seldom reaches full term; premature birth is more frequent than abortion before the child is viable. The amount of sugar secreted increases about the sixth month and during the last days of the ninth month, and there is a definite relation between the amount of sugar and the death of the child. The fetus may die in the uterus an

be subsequently expelled, or when it approaches term it may die during labour or soon after birth. Death occurs during or after parturition in 41 per cent. of the cases. The most common complications are hydramnios and hydrocephalus; to these we may add excessive size of the infant, which is regarded by Pinard as pathological. The effect of diabetes upon labour is unimportant, but it is noted that the uterine contractions are less energetic, and therefore the period of parturition is prolonged. It is possible that the uterine muscle shares in the general weakness and asthenia of the muscular system. Diabetic patients are specially prone to septic infections, since their tissues furnish a favourable medium for the growth of pathogenic organisms. Lactation is well maintained, and is accompanied by a diminution of the ordinary symptoms of thirst and polyuria. Part of the glucose is converted by the mammary gland into lactose, and a large proportion of the sugar found in the urine is lactose. On the other hand, pregnancy aggravates diabetes considerably, although this does not appear during the first four or five months. Towards the end of the fifth or sixth month the symptoms reassert themselves with special intensity; the patient complains of thirst, polyuria, glycosuria, and emaciation, or of such complications as coma, loss of vision, paralysis, or syncope. The symptoms may have been so slight as to escape detection until aggravated by the pregnancy, or in cases which had been diagnosed before the pregnancy they may have lain dormant till the sixth month; in both cases the disease makes rapid strides. In the latter days of pregnancy, supposing the patient goes to term, the disease is greatly intensified; but after delivery some alleviation may be expected. Slight symptoms appearing towards the end of a pregnancy, and held in check by suitable treatment after delivery, will be increased by a subsequent pregnancy, so that women who are certainly diabetic should be warned against becoming pregnant again. It must not be overlooked that glycosuria is only a single symptom, and does not constitute diabetes. The average duration of diabetes is about three or four years, but when complicated by pregnancies this is reduced to twenty months. The termination is usually due to coma, cachexia, phthisis, or exhaustion, and is often hastened by parturition. For an exhausted woman labour is a serious trauma, and sudden death, or death within a few days after delivery, will occur as the result of the shock. As regards lactation, its effect can only be regarded as harmful, since it is a process which prolongs the parturient period and lowers the resistance of the organism. When a pregnancy occurs in a diabetic woman the prognosis is always serious for both the mother and the child.

8. Toxaemic Vomiting of Pregnancy.

WILLIAMS (*Amer. Journ. of Med. Sciences*, September, 1906) distinguishes three forms of vomiting of pregnancy—namely, reflex, neurotic, and toxaemic. While the first two are more easily remediable, the latter is a very serious condition, being a manifestation of some profound disturbance of metabolism. Usually ending fatally, often within a few days, the patient shows signs of an intense intoxication, and may die in coma without any evidence of starvation. Towards the end the vomit presents a coffee-ground appearance, and is expelled without effort. Although the urine may not contain albumen or casts, and may apparently present a normal amount of urea, a more detailed examination shows a decided decrease in the amount of nitrogen excreted as urea and a marked increase in the amount put out as ammonia. Thus, while the total nitrogen output may be normal, the percentage of nitrogen eliminated as ammonia is increased, and this ammonia coefficient, from being 4 or 5 per cent., as in normal pregnancy, may rise to 20 or 40 per cent. If this ammonia coefficient exceeds 10 per cent. a diagnosis of toxaemic vomiting is justified, and the pregnancy should be terminated, as it is unlikely that therapeutic measures will avail if the characteristic hepatic lesions, allied to those found in acute yellow atrophy, result. Notes of three cases are given, in two of which serious vomiting occurred in two consecutive pregnancies, the vomiting being in both cases toxaemic in the first pregnancy and neurotic in the second, thus showing that toxaemic vomiting does not necessarily recur in subsequent pregnancies, and that the hepatic lesions do not always lead to serious impairment of function provided the pregnancy is promptly terminated. It is the author's opinion that the hepatic lesions are not the primary factor, but result from the presence in the blood of some substance which has already caused the metabolic disturbance.

GYNAECOLOGY.

9. Vaginal Laparotomy.

DUEHRSSEN, writing in the *Muench. med. Woch.* of September 18th, 1906, says that since he introduced his operation of conservative vaginal coeliotomy he has performed it 1,600 times, and has obtained a total mortality of 2 per cent. Further, he has been able to so improve his methods that he can operate on 80 per cent. of all his gynaecological cases vaginally, and that only in 20 per cent. is he forced to open the abdominal walls. The advantages of this are that the patients have not got to fear having their bellies opened, and that no scar is left which will always remind them of the operation. Hernia after the vaginal coeliotomy is impossible, and it is also impossible for the omentum to become adherent to the scar. The power of working after the vaginal operation is incomparably greater than after ventral laparotomy. His method is to open the anterior vaginal wall and thus obtain a free view of the abdomen and pelvic organs. Posterior vaginal operations are only advisable for the extirpation of ovarian cysts during pregnancy. Vaginofixation of the retroflexed uterus has led to some disturbances of labour, and this has been accepted by some as a blow to the vaginal method altogether. But there is no reason why one should not treat retroflexion by vaginal operations, and fix the uterus to the bladder (vesicofixation). Modifications which he has introduced for this procedure have proved that no disturbances during labour are produced, and that the uterus keeps its corrected position. He still retains the name of vagino-fixation for the second of these modifications, although it is actually a bladder fixation. He considers that no woman should be submitted to an Alexander-Adam operation or to a ventral laparotomy for retroflexion of the uterus, because the former is not likely to be successful and the latter is much too big an operation. In order to show what can be done by his anterior vaginal coeliotomy, he cites a case of double septic salpingo-oöphoritis, in which he found the appendages adherent to the vermiform appendix, and generally much matted together. He was able to free the adhesions of the broad ligament, to extirpate the left ligament and ovary, while the right ligament and only a cyst of the ovary was removed. The appendix was then removed, a flap of mesentery dissected out and covered over the stump, and the uterus fixed again in its proper place. The whole operation was conducted under clear view of the eye. The patient did well. Recently the author has been to America, and has there demonstrated his method, performing conservative operations in various towns. He claims to have convinced his spectators that an excellent view can be obtained of the pelvic organs. In twelve operations he removed the uterus and the appendages vaginally for various morbid conditions. It has long been said jokingly in America that he (Duehrssen) even extracted teeth through the vagina, and this reputation he claims now to have verified by removing a dermoid cyst containing teeth. Details of many other operations are also given.

10. Caustics in Uterine Cavity: Subsequent Haematometra.

KWIATKIEWICZ (*Ginekologia*, 1905, Part 3: *Monats. f. Geb. u. Gyn.*, September, 1906) reports a case of acquired atresia of the cervix where the uterus was the seat of fibroid disease, and palliative treatment had been adopted, the patient refusing operation. An attack of bleeding occurred on one occasion, and she sent for her doctor, who detected an interstitial myoma. As he was not permitted to undertake any radical procedure, he passed a strip of gauze soaked in zinc chloride into the uterine cavity. The temperature rose to 104°, but soon fell, and the bleeding ceased entirely. Then the uterus began to increase in size until it reached four fingerbreadths above the pubes, and was found to fluctuate. The cervical canal was closed, but as haematometra was diagnosed on fairly reliable grounds, Kwiatkiewicz carefully passed a probe until the uterine cavity was reached. About three-quarters of a pint of dark thick blood escaped. Three months later there was still some pink discharge

THERAPEUTICS.

11. Proponal.

FISCHER AND MERING discovered in 1903 that a new class of hypnotic drugs might be gained from the derivatives of urea, and in their experiments found that di-propyl-

malonyl urea was the most active of this class. But they thought at first that the di-ethyl compound was more suitable for human beings, and introduced this compound under the name of veronal. More recently they have found that the di-propyl-malonyl urea which they had prepared was not chemically pure, and on succeeding in preparing the substance quite pure they found that it was well suited as a hypnotic. P. Schirbach (*Deut. med. Woch.*, September 27th, 1906) now gives his clinical experience with this substance, which is known as proponal. It is a colourless crystalline powder, having scarcely any taste. It is not very soluble in water. He gave the preparation in the form of tablets, each containing 0.1 gr. Forty-three patients were given it, and the dose varied between 0.1 and 0.8 gr. The drug was only given when the patients could not sleep or were restless without a hypnotic, while suggestive action was excluded by interposing some inert drug from time to time. The patients were suffering from melancholia (12), mania (5), idiocy (2), dementia praecox (6), senile dementia (4), acute delirium (1), impulsion (1), hysteria (1), epilepsy (4), paralytic dementia (5), cerebro-spinal syphilis (1), and paralysis agitans (1). 0.12 to 0.2 gr. only succeeded in producing sleep in one patient, a hysteric; 0.5 gr. failed partly or wholly after other drugs had also failed in 3 cases of senile dementia. The same dose failed in one of the general paralytics; 0.6 gr. failed in 2 excited cases, but produced good sleep in 3 cases; 0.7 gr. succeeded in 2 cases of mania and melancholia; 0.8 gr. gave sleep in a case of excitation in melancholia. In 28 cases 0.3 to 0.5 gr. gave sleep lasting for from five to nine hours. The sleep set in after from a quarter to one hour. He gave small doses (0.2 gr.), repeated several times, to achieve a sedative action in noisy cases, but without effect. After the third or fourth week he noticed that the drug was losing its effect in most of the cases. No other undesirable side effects were noted. It was well stood by patients with severe cardiac disease, in which chloral hydrate had produced alarming signs of collapse. The suggestion that this preparation may be alternated with veronal in chronic forms of sleeplessness is a good one. One disadvantage is its high price: 1 gr. is sold at 1s. 4d., while the manufacturer's price for 10 gr. is 6s. 8d.

12. Digitalin in Angina Pectoris.

FIESSINGER (*Journ. des Prat.*, July 14th, 1906), from a consideration of the possibility of there being cardiac distension in cases of true angina pectoris, has treated patients affected with this trouble with small doses of digitalin, and in many cases with very great benefit. Since in these patients arterial tension is frequently high, and is still further heightened during the paroxysms, only small doses of digitalin should be given; and to combat the high arterial tension theobromine may simultaneously be given. The author advises that five drops of a 1 in 1,000 solution of crystallized digitalin be given daily, and that 0.5 gr. of theobromine be administered before the mid-day and evening meals. After ten days the digitalin should be stopped, to be resumed after ten to fifteen days. This treatment is not always successful, but appears to have its best effects in those cases of angina in which between the attacks the patient suffers from dyspnoea on exertion. Patients should be very abstemious as regards eating and drinking. If fat, suitable treatment should be carried out to reduce the excess of adipose tissue; and by these means the author has been able to obtain "cures" in men of 70 years or upwards.

13. The Treatment of Trachoma by Radium.

A. S. DUNCAN (*Berl. klin. Woch.*, October 1st, 1906) has been induced to test the therapeutic effect of radium in trachoma, after Cohn published his good results. The author used 5 mg. of radium bromide enclosed in a glass capsule of about 5 mm. diameter, which was attached to a vulcanite pencil of about 15 cm. length. The trachomatous nodules, especially in the fold of the upper lid, were exposed to the illumination. At first he tried an exposure of two minutes' duration, repeated twice a week; then he tried longer periods, and so on till he reached five minutes. When the patients were exposed to the radium rays twice a week for five minutes a distinct diminution was noticed. Prolonged observations show that no deleterious effects of the treatment followed this dosage, some cases being watched for six months. It has been found that 20 mg. of radium bromide brought into proximity with a rabbit's eye for four hours in six hours destroyed the organ, but this dosage is very much greater than the highest employed on men. A series of 17 cases show that of 11 patients, 7 were cured. In a few cases the patient the quicker and more complete the recovery appeared. In old-standing cases com-

plicated with pannus, the healing goes on very slowly, but both the nodules and the pannus ultimately disappear. The treatment is preferable to the caustic treatment or to the mechanical treatment, since it is not only quicker, but is also quite painless. Many of the patients broke off the treatment as soon as an improvement had set in, so that the number of cures appears rather small.

14. Dangers of Nasal Irrigation.

BONLAI (*Prov. Méd.*, September 8th, 1906) writes condemning the prevalent practice of daily douching the nasal cavities without sufficient reason. He considers the only cases suitable are those of ozaena characterized by crusts, or, occasionally, when foreign bodies are known to be present and to be of a conformation easily expelled. Ordinary nasal discharges and obstructions other than those mentioned should not be treated by douching, on account of the danger of setting up middle-ear inflammation by way of the Eustachian tube, or injuring the frontal sinuses.

15. Cold Affusion for Inflamed Haemorrhoids.

HALBHUBER (*La Clinique*, July 13th, 1906) recommends a very simple treatment for inflamed haemorrhoids—namely, repeated applications of cold tap water, conducted, if necessary, through a flexible tube directly on to the parts, for three minutes at a time, at intervals of fifteen minutes. This procedure, carried out night and morning for several days, has given very satisfactory results, even in cases previously recommended for surgical interference.

PATHOLOGY.

16. Urinary Sulpho-Ethers.

LABBÉ AND KITRY (*Rev. de Méd.*, August 10th, 1906) have carried out researches on the nature, production, and significance of these bodies in the urine. Sulpho-ethers are products formed by the combination of sulphuric acid and various aromatic substances; they occur normally in the urine in certain quantities. In the authors' experiments a man with perfect gastro-intestinal functions was given various forms of food elements, each of these being continued for four consecutive days. The quantities of sulpho-ethers excreted in the urine on the second, third, and fourth days, and on the one day following each of these periods, were estimated, and from these an average daily excretion was calculated. As a result of these researches, it appears that the quantity of sulpho-ethers eliminated daily is proportional to the quantity of albumen ingested; this rule, however, holds good to a certain extent only, for if more than 100 grams of albumen be given per diem not only does the amount of sulpho-ether excreted cease to be proportional to the amount of albumen ingested, but an actual diminution of excretion of these aromatic compounds takes place. This exception is to be explained in the following way: In a healthy person taking a normal quantity of nitrogenous food, about one-tenth part of this is not assimilated; if the nitrogenous food taken daily be increased beyond 100 grams, the non-assimilated portion increases to 20, 30, or even 70 per cent. of the total nitrogenous food ingested. As the sulpho-ethers are derived from the decomposition of proteids, when less of these are available for decomposition less sulpho-ethers will be produced. As regards the influence of the quality of the ingested albumen on the quantity of sulpho-ethers excreted, the authors find that 1 gram of the albumen of bread gives rise to more sulpho-ethers than a similar weight of the albumen of meat, fish, milk, or macaroni. Variations in the amount of fat absorbed have little influence on the excretion of sulpho-ethers so long as the quantity of albumen ingested remains constant. The authors further find that when the amount of fat ingested remains constant but the amount of albumen varies, the excretion of sulpho-ethers varies as the latter. Milk and its derivatives and farinaceous foods, when added to a diet, cause a diminution of the excretion of sulpho-ethers, according to some authors. If this were so, the sulpho-ethers should diminish as the hydrocarbons in the food increase. The authors' results do not support this; they find that by adding farinaceous food to a known diet an actual increase in the excretion of sulpho-ethers occurs, this increase being proportional to the quantity of albuminoid matter contained normally in the farinaceous food. The addition of fresh cheese to a given diet, the authors find gives rise to an increased excretion of these aromatic bodies thus differing from the results obtained by Schmitz.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

7. General Paralysis.

GENERAL paralysis of the insane necessarily tends to end fatally sooner or later, so that an early diagnosis does not imply a better chance of cure. K. Heilbronner, however, says that by timely interference the doctor may do much good in postponing the fatal termination and in alleviating the symptoms of the unfortunate patients (*Deut. med. Woch.*, October 4th, 1906). As a rule, the diagnosis of "beginning" general paralysis is made when the disease is already far advanced, and it is therefore useful to deal with the means of really early diagnosis. The very earliest stages are rarely recognized, because the onset is so insidious; but if one gains a clear knowledge of the disease, many signs and symptoms will cause the physician to "think of" G.P.I., and this will often put him in the way of making an early diagnosis. The nature of the disease is characterized by a dementia and a paralysis, both of which progress. Remissions may occur, but these only interrupt the course temporarily. It attacks persons in the prime of life, as a rule, but at times children, too, are affected: the patient is more frequently a male than a female, and it generally occurs in persons who have had syphilis. One must not regard all forms of dementia with paralytic signs as general paralysis. It may be present in typical multiple sclerosis, tumour of the brain, idiocy, post-apoplectic dementia of the old, or even in certain intoxications; in cysticercus affecting the brain, in syphilitic meningitis, or in pachymeningitis. Some of these diseases cannot be distinguished from general paralysis, and even may offer some difficulty when the brains are studied histologically. In speaking of dementia in the early stages, he wishes to convey the impression of a very slight, mild intellectual defect, which will not be recognized as such by lay people at all, and which will only be noted by the physician who pays close attention to the past and present mental capabilities. By paralytic symptoms he means fine disturbances of innervation and not gross paralyses. Anomalies of mood, delusions, and hallucinations form the so-called "psychotic" symptoms, and may be present quite early, although they are not necessary symptoms. Next he turns to the somatic symptoms. These he divides into cerebral and spinal. The latter are again subdivided into lateral column symptoms (spastic) and posterior column symptoms (tabetic). The former are evidenced by increased reflexes, hypertonus, and possibly paresis. They are not very uncommon in early cases. Increased patellar reflexes should only make one suspicious of early general paralysis, and care should be exercised when this is met with not to come to false conclusions. Patellar and ankle clonus are more valuable as diagnostic signs: Babinski's reflex, occurring as a typical slow dorsal flexion of the great toe and plantal flexion of the other toes, and Oppenheim's leg phenomenon are also important signs. Even if these signs are uncertain as a rule, they gain in importance when they occur on one side only and remain constant after several examinations. The tabetic signs occur either when the tabes precedes the mental symptoms, forming the true tabo-paralysis (in this case the patient is already aware of the diagnosis of the spinal disease, and it remains for the physician to discover the cerebral lesion), or, as is more common, when the disturbance in the posterior columns develops at about the same time as the other symptoms. Here one learns of complaints of a spinal character, such as the well-known "rheumatism," bladder troubles, or a falling off of the sexual power: and at times one has to question closely to find out all about them. Disturbances of sensation are of little value; ataxy, Romberg's symptoms, and the like may be absent. One must pay all the more attention to the loss of the knee-jerks, hypotonus, and changes in the pupil. The knee-jerks may be absent in pseudo-tabes of drunkards, diabetes, in circumscribed spinal affections, and at times even in healthy persons. But in the vast majority of cases the loss of the jerk is due to disturbance in the posterior columns, and one has only to be careful that it is really absent. This may be difficult, and is best tested by distracting the patient's attention. Loss of the tendo Achillis reflex, especially if one-sided, should be taken as significant. When the pupils fail to act to light, but act to accommodation and convergence, one is justified in being highly suspicious of tabes or general paralysis. Less importance should be attached to pupils which do not react to either. One-sided fixation is serious, and notice should be taken of marked difference of size of the two pupils. Turning to cerebral signs, he regards migraine in non-epileptics as warranting suspicion of general paralysis. The same may be said of alteration of the expression of the face, loss of power of mimicry, clumsiness in carrying out suggested movements, and facial pareses. Alteration in the sound of the voice and in the speed of speech, trembling of the lips, of the vocal cords, stuttering, repeating words, and slurring over words are all important. Seizures of an epileptic or apoplectic nature, especially the latter, are of great diagnostic import. The intellectual defects, chiefly of an ethical nature, may be very little marked, but should be closely watched. Difficulty in understanding, in fixing the attention, and forgetfulness are important. It is, however, not easy to discover if the patient has become less intelligent in his special line of work, unless one has the assistance of someone else in the same line. Several other signs are also mentioned which should put the physician on his guard and make him think of general paralysis. In dealing with the treatment of early cases, he does not approve of giving mercury unless there is real reason to assume the presence of true syphilitic (not metasyphilitic) lesions. Medicines, on the whole, do but little good. The lines on which one should proceed to give the patient the best chance may be summed up under the heading of the taking care of the patient. The proper amount of freedom, the proper amount of rest and exercise, and the general regulation of the life require to be prescribed according to each individual case.

18. Aortic Aneurysm of Rheumatic Origin.

So much attention has been paid to syphilis as a cause of aortic aneurysm that other factors have been overlooked. The influence of rheumatism is one of great importance, especially in young patients. Feytaud (*Thèse de Paris*, 1906), working with Rénon, has recently published some important observations relative to this subject. According to the cases collected by this author, the average age is from 10 to 16, when the patients have usually had several attacks of acute rheumatism. Repetition of the disease is regarded as an essential factor. The appearance of aneurysm is preceded for some time by the signs of aortic incompetence and hypertrophy of the heart. After a period of considerable latency, the symptoms and signs of aneurysm appear rapidly. They are dyspnoea, especially marked after effort, and characterized by forced inspiration without actual oppression. After a short time this dyspnoea becomes permanent, though occasionally varied by pseudo-asthmatic crises, sometimes attacks of pain resembling angina pectoris. The attacks usually appear during the first sleep. The patient retires to rest in his ordinary condition, but suddenly awakes in great agony, complaining of a feeling of constriction in front of the chest, air hunger, desire to cry out, and violent inspiratory efforts are made. The crisis may last from a quarter to one hour, and then gradually disappear. Occasionally the crises are entirely painful without respiratory trouble. They may, therefore, be pseudo-asthmatic or pseudo-anginal. Considerable intervals may elapse between them, for in one case quoted by Feytaud they numbered two or three during the year; in others they are more frequent, occurring once a month, or even daily. The diagnosis is confirmed by the rapid appearance of physical signs. These aneurysms, as a rule, affect the upper right costal area, and do not differ from those usually observed in other cases. Aortic aneurysm in young rheumatic subjects may develop fully in the course of a few weeks, sometimes in succeeding stages corresponding to the rheumatic crisis. After each crisis there may be temporary improvement, due to retrocession of the tumour. This improvement is reversed by a fresh crisis of articular inflammation. The condition is, therefore, progressive, and there is little hope of obliteration taking place in the sac. Prognosis is usually fatal, death often occurring suddenly either from haemorrhage or as the result of an anginal seizure. A rare event is progressive cachexia. Treatment can only be directed towards symptoms, nitrites being given for dyspnoea and pain, and salicylates should not be omitted in view of the rheumatic nature of the disease.

SURGERY.

19. Movable Kidney and Nephropexy.

P. Fiori (*Il Policlin.*, July, 1906) publishes a study of movable kidney and the conditions accompanying it, based on 35 cases selected for operative treatment. The patients were almost all women, two-thirds of them married and with children. A history of traumatism was obtained in half the cases of unmarried women, but the author does not attach much importance to it, preferring to explain the disease as the result of an abnormal configuration of the parietal fossa. The existence of such a congenital anomaly explains the inherited predisposition to the disease described by some authors. Numerous complications are mentioned and classified. Amongst these atonic gastrectasis and intestinal atony are probably symptoms of the general nervous condition and are not exclusively caused by pressure. One case came to the hospital with a diagnosis of icterus probably due to a calculus. The gall bladder could be felt, swollen and painful under the costal arch. The right kidney was prolapsed, palpable and enlarged, with its inferior end rotated forwards. It was fixed and the jaundice and all other symptoms disappeared. Two of the patients showed ptosis of the transverse colon, in one case accompanied by decided dilatation of the ascending colon. Here the kidney adhered to the posterior surface of the transverse colon, and dragged it down to four finger-breadths below the level of the umbilicus. In another case a prolapsed right kidney pressed on the upper end of the ascending colon, caused faecal stagnation in the caecum and ascending colon, and gave rise to a suspicion of subacute appendicitis. At one operation the kidney was fixed and a healthy appendix was removed. The complications most frequently met with were those of the female genital organs, which were found abnormal in more than 40 per cent. of all cases. But the most common diseases were retroflexion of the uterus and membranous dysmenorrhoea—affections not very likely to be caused by nephroptosis. Probably multiparity is the real cause of the numerous cases of disease of the female genital organs in nephroptosis. In one case the renal condition seemed to be the cause of leucorrhoea and menorrhagia which afflicted a girl of 16 years until the kidney was fixed when all the symptoms disappeared. Two cases of irritable bladder with vesical neuralgia were cured by nephropexy in about a week after resisting many years of treatment and lasting a long time. Several cases had gastric symptoms, wasting, with pain and vomiting after food, etc., which raised a reasonable suspicion of organic pyloric stenosis. In such cases nephropexy effected complete cure. Another apparently grave case cured in the same manner was one of extreme filthy in which the symptoms were so severe that the removal of a part of the colon had been recommended. Lapidus finds a connexion between movable kidney and chronic appendicitis in 90 per cent. of cases. He found a connexion with symptoms of [illegible] in only 4 per cent. of his cases, and in most of these nephropexy turned out to be due to some other cause. The displaced kidney is usually congested and enlarged and often compressed by a thickened capsule. It is often [illegible] and the pain caused by pressure on the nerve plexus in the erect position often radiates to the external genitals, and the lower limbs. Sciatica is sometimes aggravated after nephropexy, probably due to dragging, compression, or [illegible] of these lumbo-genital nerves. Difficulties in diagnosis are increased by the very great tendency of [illegible] to present neuropsychical symptoms, which vary from simple irritability to [illegible] from slight depression to severe [illegible] Pain, tenderness, tremor, nervous vomiting, and different forms of paraesthesia, are all found in these cases and may be due either to [illegible] or to a variation from the normal quantity of the internal secretions. The author states that his operations were performed by Bergin's method, and healing was in every case by first intention. The patients were kept in bed for twenty days, and then got [illegible] an apparatus to keep the kidney in its proper position. This was worn for one or two months, after which a simple abdominal belt was worn for three months. In twelve after treatment the following results had been noted: [illegible] had completely disappeared, and all general, hepatic, and [illegible] symptoms also were greatly relieved or removed. The only exception is in those [illegible] referred to the organs of generation. These were cured in a quarter of the cases, relieved in a quarter, and unchanged in half. The author therefore considers that operation is indicated: (1) In all cases of movable kidney complicated with albuminuria, uronephrosis, cylindruria, haematuria, renal strangulation, etc.; (2) in all cases of severe gastro-entero-hepatic complications, demonstrably caused by renal prolapse; (3) in painful nervous disturbances depending on renal prolapse and not yielding to instrumental treatment. Nephropexy is contraindicated in splanchnoptosis without intrinsic renal complications. In nephroptosis with genital associations it is often difficult to determine which of the symptoms are curable by operation, exact diagnosis depending finally on minute consideration of the pain in each case. In an appendix Fiori refers to a further series of eight successful cases.

20. The Indigo-carmine Test for Occlusion of the Ureter.

E. Beer (*Ann. of Surg.*, October, 1906) describes three cases of obstruction of the ureter where, in addition to cystoscopic examination and catheterization of the ureter, he made hypodermic injections of indigo-carmine in order to determine if the ureter was patent. Thirty minims of this dye, in concentrated aqueous solution, were injected half an hour before examination of the bladder. In the first case a diagnosis of complete obstruction of the right ureter had previously been made, on the ground that absolutely no urine escaped on catheterization. But when a subsequent cystoscopic examination was made, after the injection of indigo-carmine, a minute and very feeble jet of blue urine was observed to flow from the orifice of this ureter. It was therefore made clear that the ureter was only partially occluded, and by the size of the stained stream some idea could be obtained as to the calibre of the constricted channel. In the second case the complete absence of any sign of blue urine confirmed the diagnosis that the ureter in question was completely obstructed. The third case was that of a woman, six months pregnant, who came into hospital for bladder trouble. Attempts at catheterization failed completely to obtain any urine from the left ureter, and it was only with difficulty that a flow of urine was obtained from the right ureter. Subsequently, indigo-carmine was injected and another cystoscopic examination was made. To the surprise of the surgeon a copious, regular, and forceful blue stream appeared at the mouth of the left ureter. From the right ureter the discharge was voluminous but irregular, being quiescent for many minutes at a time and then abundant. In this case, therefore, the use of the indigo-carmine test made the diagnosis clear. It showed that the left ureter was absolutely patent and that the kidney was working well. On the right side it indicated that there might be some distension of the ureter, as manifested by the enormous blue jet which was poured into the bladder, and it also showed that the obstruction was dynamic rather than organic. The author does not suggest that the indigo-carmine test can replace catheterization, but regards it as a valuable supplementary aid to diagnosis.

21. Rupture of Tunica Vaginalis in Hydroceles.

Hutchinson (*Arch. of the Middlesex Hospital*, vol. viii), in a paper on Rupture of the Tunica Vaginalis in Hydroceles, directs attention to a rare lesion which does not appear to have attracted much attention in England and Germany, and gives a full report of a case of this kind which, it is believed, is unique in the clinical records of the Middlesex Hospital. In describing the symptoms of this lesion, the author states that a sudden feeling of something tearing or giving way is followed at first by severe pain and by an increase of the swelling of the affected side of the scrotum. After the next twelve hours ecchymoses appear over the scrotum, and the oedema, with more or less discoloration, slowly spreads to the penis, to the opposite side of the scrotum, and at times to the lower part of the abdominal wall. When there is but slight scrotal effusion the condition may closely resemble a haematocele; and it is probable that not a few cases diagnosed as vaginal or parietal haematoceles arise in this manner. The oedema generally begins to subside after a few days, and has entirely disappeared in two or three weeks, but as a rule the hydrocele soon refills. In apparently every case of ruptured tunica vaginalis in which this membrane has been carefully examined it has been found diseased. The usual cause of the rupture is some form of injury, as a knock or a blow, or a forcible muscular effort; but so-called spontaneous cases undoubtedly occur, in which rupture takes place without any apparent cause. In discussing the treatment of this lesion, the author expresses the opinion that when antiseptic precautions can be taken

the best plan in most cases is to cut down on the hydrocele and perform a radical cure, turning out the blood clot and removing the greater part of the degenerated tunica vaginalis. Early intervention is advocated, since when there is considerable oedema it is advisable to relieve the severe pain that is often caused by the extreme distension, and with limited effusions there can be no reason to postpone operation.

OBSTETRICS.

22. Decidual Hydrorrhoea and Metrorrhagia of Pregnancy not Followed by Abortion.

SOMETIMES, in a woman pregnant several months, there escapes from the vagina a watery or blood-stained liquid, accompanied by slight pains in the loins. Abortion, however, does not occur. This watery fluid, Budin (*Journ. des Prat.*, July 14th, 1906) shows, is derived from the decidua, and collects between this membrane and the uterine walls; he calls the condition "decidual hydrorrhoea." In a case of suicidal death of a young woman who had a short time before death exhibited this kind of watery discharge from the vagina, Duclos found two small cystic cavities between the uterine wall and the chorion, and a third pocket lower down, which had ruptured and had given rise to the watery discharge. Such a watery discharge occurring in a pregnant woman has to be differentiated from urine and from amniotic fluid. From the former it is distinguished by the absence of a urinary smell. From amniotic fluid it differs in causing the linen, which it soils, to be sticky, and it is rarely so great in amount and rarely continues for so long a time as an amniotic discharge; further, amniotic fluid contains hair and sebaceous matters. Sometimes slight or profuse haemorrhage occurs from the uterus during pregnancy, but no abortion takes place. To say whether or no such haemorrhages will be followed by abortion is very difficult; but in the absence of severe pains radiating from the loins to the lower part of the abdomen, retention of the uterus high up in the pelvic cavity, absence of hardening of its body and of effacement of the cervical canal, the probability is that abortion will not occur. The rest of the author's paper refers to the treatment of these haemorrhages occurring during pregnancy, and consists of that which is adopted for the treatment of threatened abortion.

GYNAECOLOGY.

23. Faecal Concretion in Appendix Simulated by Tubal Calculus.

A WOMAN, suffering from pelvic and hypogastric pain, recently came under the care of Strassmann of Berlin. (Report of Meeting of the Gesellschaft für Geburtshülfe und Gynäkologie zu Berlin, June 15th, 1906. *Zeitschr. f. Geb. u. Gyn.*, vol. lviii, p. 351.) Inflammation originating in the region of the vermiform appendix was suspected, and a hard mass was detected on palpation. The mass felt like a faecal concretion. At the operation a tubo-ovarian cyst was discovered, and removed after the setting free of extremely dense adhesions to surrounding intestine. The cyst had developed in the left appendages; the right Fallopian tube was obstructed, and close to its outer extremity the hard mass could be felt. The tube was removed and laid open, when a large calculus with spiky processes was discovered. There was no evidence of an old tubal sac, but Strassmann believed that the calculus might represent deposits indicating tuberculous disease of the tube. The very dense intestinal adhesions in the pelvis also appeared to indicate local tuberculous peritonitis latent for many years. Tubal calculus must be taken into account. According to the article on "Diseases of the Fallopian Tubes," in Allbutt and Eden's *System of Gynaecology* (2nd edition, 1906, p. 497), Ballantyne and J. L. Green have reported a large tubal calculus weighing a little over half an ounce, discovered by chance at a necropsy on a woman aged 80, who died of senile degeneration of the heart. It lay inside the canal of the left Fallopian tube, and there was no indication of any disease of the pelvic organs. As in Strassmann's case, the surface was not smooth, but bore rough projections. Cullen of Baltimore's well-known case, where an S-shaped calculus, nearly 1 in. long, was found in the canal of an inflamed and distended tube, has been noted in more than one textbook. A tubal calculus in the right Fallopian tube may, as Strassmann's experience has proved, simulate a concretion in the vermiform appendix. We must further bear in mind the fact that the appendix may be drawn down into the pelvis to the left of the uterus, and that it may also become adherent to the left tube, drawing it up above the level of the right tube. Hence the location and nature of a small hard body in the pelvis or lower part of the abdomen in a female subject may prove very difficult to decide.

24. Retention of Carneous Mole.

NASSAUER (*Monats. f. Geb. u. Gyn.*, September, 1906) recently related a case of this kind, where an intelligent lady consulted him on account of irregular uterine haemorrhages. She declared that eight months had elapsed since the last period, the bleedings beginning two months and a half after the cessation of menstruation. She had borne several children, and felt confident that she was normally pregnant and would shortly be delivered, being certain that she had quickened and that her breasts continued to enlarge. Yet Nassauer could detect only a trifling increase in the size of the uterus. The patient and her husband were incredulous when he informed them that the pregnancy had certainly terminated, and they could not be convinced until he, a few days later, introduced the sound and showed that the uterine cavity was under 3½ in. in length. Next day smart haemorrhage set in, and shortly afterwards strong expulsive pains. Within twelve hours a stony, hard body of the size of a chestnut was expelled, and it proved to be a mole. The pregnancy had ceased at an early stage owing to death of the fetus. The subsequent haemorrhages were, in Nassauer's opinion, irregular catamenia. The mole would have been retained yet longer had not the sound been passed. Mirabeau had come across several similar cases; in one instance the mole was retained for eleven months. In his experience the expulsion of a carneous mole was attended with very little haemorrhage. Seitz, whose experience was quite different, believed that it was only the entirely unadherent moles that did not set up bleeding; when one end adhered much haemorrhage occurred. Infected moles came away piecemeal. Nassauer noted that in his case the losses were trifling until he passed the sound. Stumpf recorded two cases apparently of similar etiology. In the first instance a woman's health was greatly reduced by a puerperal parametritic abscess. She became pregnant again. Death of the mole was diagnosed very early; it was not expelled until the eleventh month. In the second case the patient had scarlatina; the fetus died before the third month.

THERAPEUTICS.

25. Protection Against X Rays.

IN writing on the damage produced by Roentgen rays on the internal organs and the methods of protection against these injuries, P. Krause (*Muench. med. Woch.*, September 4th, 1906) points out that the French authors were the first to direct our attention to clinical symptoms, such as headache, palpitation, sleeplessness, disturbances of digestion, and the like, which are noticed in persons subjected to the influence of the rays for diagnostic or therapeutic purposes. They observed that *x* rays were capable of damaging the internal organs. Symptoms of the nature of intestinal crises, of disturbances of menstruation, of urination, and of pregnancy were referred to the effect on the sympathetic. It was next found that the temperature of rabbits was first lowered and then raised by the action of the rays. Paralyses and convulsions were observed in guinea-pigs after exposure. Symptoms similar to those of sunstroke were reported by English observers, but the German authors scarcely accepted these as evidence of the damaging power of Roentgen rays. However, the whole subject was illuminated from a scientific point of view by the experimental work of Albers-Schoenberg, who found that the testes of rabbits and guinea-pigs could be affected by the rays. Sterility could be produced by exposure for 370 minutes, while an exposure of 195 minutes was followed by an incomplete azoospermia. The skin of the scrotum was not affected. The testes of man were found to be damaged by exposure to Roentgen rays similarly. In the case of the attendants in a Roentgen laboratory, who had been employed for more than three years, azoospermia, and in some cases oligonecrospermia, were noted. The scrotum here also was unaffected, and there was no sexual impotence or other subjective or objective sign. In a patient treated for pruritus and by *x* rays, after two exposures of from ten to fifteen minutes'

duration at a distance of 15 cm., the spermatozoa were found to be entirely necrotic; after twenty days he was again exposed, and he was found to be completely azoospermic. After a further five months living spermatozoa were found. Disappearance of the Graafian follicles and diminution of the size of the whole organ were seen after exposing the ovaries of rabbits to the rays. Next it was found that the red marrow of guinea-pigs suffered degenerative changes. The lymphocytes and the non-granular myelocytes were first affected, and later also the eosinophile cells and mast cells. Regeneration took place. The effect of the rays on the white cells of the blood has long been known in connexion with the treatment of leukaemia. Among the further disturbances produced by the rays, he mentions those affecting the kidneys, those affecting the spleen, lymphatic glands, intestines, and metabolism, and those producing autolytic disturbances affecting the blood corpuscles. It therefore appears that there is no reasonable doubt now that Roentgen rays are capable of exerting an extensive damaging process on the various organs and tissues of the body. In order to protect the medical man working with the rays and his assistant from these harmful influences, certain precautionary arrangements have been introduced. First he mentions the "protection chamber," which is made of wood, for the person managing the apparatus. This is roomy enough to admit of all the necessary parts of the apparatus to work the same. It is lined with lead, and carries on the lead wall a layer of oilcloth or oilskin to prevent a contact with the lead. Two small windows of lead glass allow the operator to look at the tubes. Next he describes the protection case for the Roentgen tubes. This is also lined with thick lead sheets, and its one side is composed of a lead glass window, for the observation of the operator. So much for the assistant managing the apparatus. To protect the examiner he describes a cloak made of rubber impregnated with lead, which has proved itself resistant to the rays. Gloves of the same material also serve as a perfect protection to the hands. Lead glasses protect the eyes, but Krause says that the fluorescence of these glasses try the eyes considerably. The glasses and spectacles are rendered unnecessary if one has a fluorescent screen which is covered with a layer of lead glass. Caps to protect the head have also been suggested. An apron of lead is advisable, in order to protect the testes of the observers. Rubber protectors to exclude the action of the rays on parts of the patients other than the affected areas, or a protective arrangement can be made of lead foil covered with oilskin. These and a few other means are capable of protecting every one concerned from all the noxious effects of the rays.

26. The Treatment of Erysipelas by Antidiphtheritic Serum.

Carbasso (*Gazz. degli Osped.*, October 28th, 1906) reports a few cases of idiopathic erysipelas treated with success by comparatively large doses of antidiphtheritic serum injected subcutaneously. In one case an obstinate recurrent form of facial erysipelas the serum was merely painted on the face (six times in all), and apparently with excellent results. Nor was there any extraneous substance for example, phenol in the serum to which the cure could be attributed. It may have been a mere coincidence, and, as it is only a single case, does not count for much. The serum from an erysipelatous convalescent might perhaps answer better than antidiphtheritic serum, but, inasmuch as both appear to act in the same way namely, by inducing a polynuclear leucocytosis and the latter serum is much more easily obtained than the former; the antidiphtheritic serum is more to be recommended. In a disease such as erysipelas, where the simplest placebos have been claimed as cures as well as the most heroic remedies, it is permissible to draw attention to this use of antidiphtheritic serum, although, as the author points out, it is neither new nor likely to succeed.

27. The Treatment of Infantile Gastro-enteritis.

Fritz Cassel states that in the majority of cases of gastro-enteritis in children from 6 months to 2 years the cause is overfeeding, especially with milk. *D. M. Med.*, No. 6a. If at the same time purgatives are employed in excess, collapse is very soon to supervene. He finds that a dry diet is sufficient to restore the alimentary canal to a healthy condition. Usually artificial children, who as a rule are wholly liquid. He suggests the following method. Every third hour the patient is given a cream consisting of a dessertspoonful of the fresh cheese called "quarg." This is beaten up with a spoonful of milk and sugar added. Babies of 3 months old take it with relish. He finds that after two days the gastro-intestinal trouble subsides; the diet may then be gradually reduced to plain milk in quantity suitable to the age of the patient. The method was first tried on children suffering from simple gastro-enteritis without pyrexia, but since beginning his experiments he has extended the method to ordinary cases in which there is fever. He points to one great advantage in this method of feeding—namely, the possibility of a speedy return to a milk diet without those relapses which are so common. Cheese diet seems, notwithstanding its bad reputation, to be of great use in gastro-enteritis. Always regarded as an article undergoing advanced degeneration, if not actual putrefaction, cheese as a matter of fact contains a large amount of peptone the result of bacterial influence. Cheese diet, in his opinion, might well be employed in diseases of the kidneys, especially if combined with fat in the form of butter.

28. Powdered Cinchona Instead of Quinine.

Zilgien (*Journ. des Prat.*, September 8th, 1906) recommends cinchona in cases where quinine fails to act. He has cured several malarious patients by substituting the entire drug for the abstracted alkaloid, 2 gr. of cinchona being equivalent to 25 cg. of quinine—that is, the dose must be eight times as large.

PATHOLOGY.

29. Epilepsy and Eosinophilia.

A. Morselli and A. Pastore (*Riv. Sperim. di Freniatric*, vol. xxxii, fasc. 1-2, 1906), following up the known fact that epileptics often exhibit an excess of eosinophile cells in their blood, have endeavoured to find some connexion between the occurrence of the epileptic fit and the numbers of the eosinophile cells in the circulating blood. The blood films were stained with eosine in phenolized glycerine, and then with watery methylene blue. The authors find that between the attacks epileptics show a more or less marked excess of eosinophile cells, and hold that such cells indicate the presence of toxins in the blood. These cells often show definite signs of necrobiosis (cytolysis, rupture or fragmentation of the protoplasm or nuclei, or both), that are apparently not connected directly with the toxins. The percentage of eosinophile cells diminishes progressively during the three days preceding a fit; during the fit the percentage is absolutely subnormal; after the fit it rises, reaching its previous maximum in from ten hours to about three days. The authors attribute the disappearance of the eosinophile white cells to the chemiotactic action of the circulating toxins, and partly also to cytolysis. They examined the blood of twelve epileptics. The eosinophile cells were mainly multinuclear, about one-quarter of them being uninuclear; they formed from 12 per cent. to 3 per cent. of the white cells present, averaging 6 per cent.

30. Virulence of the Salivary Glands in Rabies.

Daniel W. Poor, in a study of the infectivity of tissues at different stages of hydrophobia (*Proc. of the New York Path. Soc.*, vol. vi, 1906, p. 38), has found that out of sixteen dogs infected with rabies which he examined, the submaxillary gland was virulent in twelve and non-virulent in four. All of the non-virulent cases were experimental animals in which the incubation was unusually short. Of the twelve found to be virulent, ten were taken from cases of street rabies and two were experimental cases. The parotid gland was tested in five cases of street rabies and found to be infective in only one. In all these five cases the corresponding submaxillary gland was infective. He concludes that the submaxillary gland rather than the parotid is responsible for the virulence of the saliva, and thinks that possibly a short incubation may tend to lessen the virulence of the saliva. The virus may be extracted from the glands by simply allowing them to stand for a time immersed in glycerine. The extract which is pipetted off may, if kept in ice, retain its virulence for a long time. In one instance material of this nature was found to kill guinea-pigs with rabies in twelve days, after it had been kept for 191 days. When a gland is well infected with the virus, the glycerine extract, as well as the salt solution extract, appears to infect animals more readily than the nerve tissue when inoculated peripherally. By using an attenuated extract of the submaxillary gland the author has been able to lengthen the incubation in experimental animals, and in one instance found that the period amounted to five and a half months. These observations support the histories of very long incubation periods for hydrophobia which are sometimes recorded.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

31. **Phlegmonous Enteritis.**

[MACCALLUM (*Johns Hopkins Hosp. Bull.*, August, 1906) reports a case of this rare condition, of which only seven cases are on record. A negro, aged 75, was admitted to hospital complaining of pain in the abdomen and vomiting. Three weeks before he had been struck by a street car, and became unconscious. The only injury seemed to be a scalp wound, but during the following week he complained of severe abdominal pain. He returned home and seemed quite well until the day before his second admission, when he woke in the early morning with pain in the abdomen. The pain was situated over the right lower ribs, the epigastrium, and the left flank. Shortly after the onset of pain he began to vomit, and every few minutes afterwards regurgitated without effort a mouthful of yellowish bile-stained fluid of a foul, faintly faecal odour. He looked ill, the tongue was moist, lips dry. The abdomen was full, but not distended, with slight bulging in the flanks. On deep palpation there was general tenderness, which was slightly greater below the umbilicus. The left flank was relatively dull. Neither the liver nor spleen could be felt. Peristalsis was visible. The temperature was 100°, the leucocytes were 24,000, and the urine contained albumen and numerous granular casts. Laparotomy was performed, because of the signs of obstruction. No general peritonitis was found, but in the left side of the abdomen there was a slight excess of turbid fluid. The beginning of the jejunum was thickened, brawny, and a little darker than the surrounding bowel. On palpation the much-enlarged rugae could be felt. The serous coat was slightly injected, and had lost some of its gloss. Death occurred on the following morning. At the necropsy the stomach was not dilated, but the mucosa was everywhere thickened and studded with prominent mushroom-like polypoid masses, about thirty in number. Just below the pylorus were one or two small, irregular, punched-out ulcers in the mucosa. The intestine was greatly enlarged from a point about 5 cm. below the pylorus for a distance of about 30 to 35 cm. It was not only distended, but its walls greatly thickened, so that it stood out as a stout, rigid tube, which gave place abruptly lower down to the normal collapsed intestine. The serous coat over this part was somewhat dulled, but there was no conspicuous deposit of fibrin upon it. The lumen of the intestine was patent and filled with a soft, yellowish-white, pasty, granular material. The mucosa beneath was very pale greyish-white, and without visible ulcerations or defects in its surface. The transverse plicae stood up as thick, opaque swollen, and rigid folds, sometimes reaching a height of 1 cm. or more. On section the mucosa appeared practically normal, but the submucosa was greatly thickened, grey, translucent, and moist. On pressure a slightly turbid fluid oozed out, and the tissue collapsed into a soft, spongy mass. The mesentery was not thickened or grossly altered. The blood vessels were patent and contained fluid blood. On microscopic examination the mucosa showed nothing beyond extensive desquamation of epithelium, but the submucosa was extensively infiltrated. The tissue elements were widely separated and isolated by an accumulation of fluid and cells with a delicate network of fibrin. The cells were so abundant as to form a homogeneous mass. The muscular and subserous coats showed a similar condition. The cells were chiefly of the polymorphonuclear neutrophile type, with a limited number of mononuclear cells. The lymphatic channels were packed with these cells. Myriads of micrococci in chains were present, there being little doubt that the organism was the *Streptococcus pyogenes*. A similar case was described by Askanazy, who suggested that traumatism to the abdomen may affect the upper part of the intestine most readily, on account of its relatively fixed position. It is possible that the bacteria invade directly from the intestine; but since the upper part of the intestine is relatively free from bacteria, it is possible that the trauma produces a point of lowered resistance into which streptococci are carried by the blood from elsewhere.

32. **Barberio's Spermatic Reaction.**

FORENSIC studies have led to the introduction of methods which render it possible to differentiate the various sources of blood, but the biological detection of spermatic fluid has not yet been discovered. J. B. Levinson considers that this is a reason why one should pay especial attention to a new microchemical reaction for this fluid, described by Barberio (*Berl. klin. Woch.*, October 8th, 1906). The reaction is described as follows: Spermatic fluid, or a concentrated solution of it, is added to picric acid, either in the form of a saturated aqueous or saturated alcoholic solution, peculiar needle-shaped rhombic crystals of a yellow colour, like Charcot's crystals, being formed. Barberio's reaction appears to be specific for human sperma, unlike the old Florence's test. Tests with the former and the milk of the sturgeon, whiting, pike, etc., all proved negative. Decomposition of human spermatic material does not destroy the reaction as long as the decomposition is not far advanced. When the fluid is preserved for a year with formalin or chloroform, the reaction with the picric acid solution still takes place. Levinson has tested the reaction more closely, in order to determine whether the formation of the crystals depended on the presence of spermatozoa. Eleven samples of semen were dealt with. In one case the amount of fluid was extremely small, and the microscope revealed only a few flattened, horny cells. No crystals were formed. Pus cells were present in three samples, of which one gave very small, ill-formed crystals. In two cases of azoospermia a negative result was obtained. The absence of sperm threads, however, in other cases was associated with a positive result. In two cases, in which secretion was expressed by massage of the prostate (two other cases only yielded a little mucus), the crystals formed well. The secretion under the microscope was found to contain characteristic amyloid concrement, lecithin substances, as well as columnar epithelium, but no spermatozoa. It therefore seems likely that the substance giving rise to the reaction is contained in the prostatic fluid; this probability was strengthened by a negative result with the fluid expressed from a corpse from the testes, vesiculae seminales, and Cowper's glands, as well as from the prostate. But the bodies had been much emaciated by prolonged illness, and the glands were free from normal secretion. This question requires further elucidation.

SURGERY.

33. **"Trypsin for the Cure of Cancer."**

UNDER this title W. J. Morton (*Med. Record*, December 8th, 1906) reports the results of a series of experiments instituted by him in April, 1906, with a view to testing Beard's statements as to the value of trypsin in cancer. He used the substance consecutively in a series of about thirty cases, hospital and private. They arose in connexion with a series of cases he had under treatment by other measures, mainly *x* ray, radium, and fluorescence. Without expressing a definite opinion, which at this moment he thinks would be premature, Morton states, as a salient fact, that the cancerous tumour itself exhibits very frequently a definite reaction to the trypsin treatment. In some instances this reaction is accompanied by great amelioration of the disease. General and constitutional reaction also frequently ensues. Most of the cases were far advanced and practically hopeless, as well as inoperable. For this reason, says Morton, benefit derived has greater weight and would lead to the conclusion that if such cases could have been treated earlier, the results would have been more favourable. He adds that he has gathered most of his initial information as to preparations of pancreatic juice and method of treatment from Beard and B. T. Fairchild. "The preparations are: injectio trypsini, injectio amylopsini, lotio pancreatis, trypsin powder, holadin, lotio pancreatis, etc., etc." (*sic*). The trypsin injection has been used in varying strengths and over varying periods of time, "so that no very exact procedure can be given." Morton begins with 5 minims, the dose being increased by 5 minims daily up to 20 minims. In certain cases where tolerance is fully established more may safely be given. Beard, it is pointed out, assumes that after a certain time the cancer cells of the tumour die, and that their removal must be promoted by the use of the injectio amylopsini, a pancreatic diastase devoid of the proteolytic (trypsin) and

fat-splitting (lipase) ferments. "Much clinical experience is yet needed to establish a dosage of these ferments alone or relatively to one another. The reactions are in some cases by no means minimal in character." Morton has seen a dose of 5 minims produce rigor, pain in the back, drowsiness, high arterial tension, etc. This, however, is exceptional, and tolerance is soon established. As to the local reaction, the tumour itself, when upon the surface, in some instances may be seen within six hours to become red or purple, turgid and hot to the touch, while the patient complains of pain or of a "gnawing" sensation. In cases where reactions occur, both constitutional and local symptoms subside in a few hours and the patient is ready for another treatment. No detriment to health ensues; on the contrary, in most instances improvement of the general nutrition is noticeable, at least in cases not subject to profound and final cancer cachexia. The following is a summary of the cases:

"(1) A woman, unmarried, age not stated, came under observation on July 3rd, 1905. Had noticed a small lump in the breast about a year previously: permitted only the lump to be removed. Within three months noticed another lump. Carcinoma determined by microscopic examination of the first tumour. When seen by Morton there was a massive involvement of the entire gland, with chains of infected lymphatics extending to axilla and enlarged axillary glands. Patient declined operation. She received thirty-two *x*-ray treatments extending over seven weeks. The gland was reduced in size by one-third, the tumour was freer, and "absolutely every sign of lymphatic infection had disappeared." Operation again urged but declined, and patient ceased treatment. About eight months later the disease had involved the entire skin over the gland and the neighbouring skin lymphatics. It was exceedingly hard and of a scarlet-red colour. Operation was again declined. On April 27th, 1906, 5 minims of trypsin diluted with 10 minims of sterilized water were injected into the tumour; the next day the breast was redder and sorer. This, Morton mentions, was the only time the injection was made into the tumour itself; this method is not advised by Beard. "In all subsequent treatments the trypsin was inserted into the thigh well beneath the skin, great care being taken to sterilize the needle." Tenderness at the point of insertion generally ensues, as well as heat and swelling. These symptoms subside without abscess, but each locality is to some extent re-excited by each new injection though made in new locality. Gradually the little swellings disappear. On May 4th, 5 minims of trypsin were injected into the thigh. Within six hours a severe rigor occurred, "which continued off and on for four hours, and was succeeded by fever and then comparative comfort, but the malaise lasting throughout the next day. Within twenty-four hours intense pain developed in the breast tumour, and it was violently inflamed. It was dusky red, hot, and swollen. Within forty-eight hours the tumour showed signs of shrinkage. The injections of 5 minims were continued three a week, followed each time by rigor, fever, and profound feeling of weariness, which soon wore off." On May 14th the injection was given at noon; at 7 rigors began and continued off and on about every fifteen minutes for about two hours. "Then severe febrile reaction. No headache. Pulse slow and weak. About 10 o'clock experienced excruciating pain upon urination, with frequent and intense necessity to void the urine during the entire night. She also had frequent diarrhoea. The urine was yellow, like mustard water, and likewise the faeces." This, says Morton, was due to some action of the trypsin unknown to him. The next day she "felt sick all over." Intense pain, with heat, redness, and swelling developed in the tumour. It felt as "if it was all drawing up." This pain lasted all day, and the breast ached all the next night. Two days later the breast was decidedly shrunken. "The nipple, which had been intensely hard, was soft and not so much retracted. Nests and chains of swollen lymphatic glands, leading to axilla and enlarged axillary glands, had disappeared." On May 22nd it is recorded that the patient "had received about nine injections by this time, suffering after each one about as above described." Injectio amylopsini (5 minims) was now given to absorb destroyed material and combat untoward symptoms. This caused intense pain in the breast for about twenty-four hours, as well as pretty much the same through less severe, symptoms as the trypsin. The trypsin was continued three times a week, the dose being increased up to 10 minims. Both trypsin and amylopsin were used through June, July, August, September, and October, "and often without a reaction of chill and fever." About October 15th the patient proceeded to operation. The breast had become drawn up into a cheesy mass, hard cores of darkly red colour, but showed no signs of breaking down. The operation was performed by W. S. Baldwin on November 3rd. Cancer nodules were found running along the lymphatic system beneath both the pectoralis major and minor, and overlying the edge of the latissimus dorsi. A cancerous mass surrounded the subclavian vein which was with difficulty dissected out. In fact cancer was diagnosticated over a wide and deep area of the adducted side of the thorax. Morton says: "This case is quoted somewhat in detail in order to point out the sort of reaction which at the worst and at the most may be expected. Of my 30 cases treated decided reaction of this nature has been exhibited in quite a number." The microscopic examination of the tumour, which was made by H. T. Brooks, pathologist to the New York Post-graduate Medical School and Hospital, showed that the greater portion of it was composed of extremely dense fibrous connective tissue, highly refractive and glistening, strongly resembling the fibrous connective tissue change noted in breast tumours subjected to the *x* ray. The carcinomatous (epithelial) elements were but scantily present in this tissue, and more in the form of a diffuse infiltrate than in alveolar arrangement. The cells seemed to have undergone some degeneration, and the connective tissue seemed to be encroaching upon them. This character of tissue was confined chiefly to the peripheral portions of the tumour. In the central parts and at the base of attachment to the chest the alveolar arrangement of the cells was very distinct. Here also epithelial cells were degenerated, but much more markedly, especially in the centres of the larger alveolar nests, where large areas had undergone coagulation necrosis. "The great density of the tissue throughout and the decided degenerative changes in the epithelial cells gave the impression that atrophy of the carcinoma elements had occurred and been followed by great contraction and condensation of the fibrous connective tissue stroma." Brooks assured Morton that had the process outlined in his report continued, the result would have been such marked condensation of the fibrous connective tissue as to have made it very difficult to determine the carcinomatous nature of the growth. "In fact," says Morton, "the tumour at the time of the operation was progressing to a point where its pathological nature would be considered simply as scar tissue." He adds: "The above case is a remarkable one clinically on account of the decisive action of the trypsin upon the cancer, and pathologically on account of the opportunity which the operation presented of making a microscopical examination of the actual changes produced by trypsin in cancerous tissue. If by the judicious management of trypsin and amylopsin such changes as this can be repeated in the cancerous tumour, we shall be obliged to admit that a new era has opened in cancer treatment and a great boon offered to the cancer sufferer." (2) Man, aged 48 seen December 27th, 1905. "Beginning December 27th, 1904, noticed a small, hard lump growing in the upper portion of the parotid gland close to the ear." Soon afterwards another small lump appeared on the other side on the chin. In May, 1905, laparotomy was performed for "inflammation of the gall bladder"; it is thought probable that malignancy existed at that time at the site of this operation. In October, 1905, the parotid tumour was removed. On December 4th, 1905, Adami of Montreal reported that the tumour removed was a sarcoma. When he came under Morton the patient had a small tumour at the site of the former operation on the parotid and two sarcomatous nodules beneath the skin on the abdomen and back. These rapidly diminished under *x* rays, and were removed by Stimson on January 6th, 1906. On April 14th he came back for treatment; the parotid tumour persisted, and during his absence nine nodules had been cut out from different parts of the skin. There was a single sarcomatous nodule on the dorsum of the foot. Treatment with trypsin was begun on April 16th with a dose of 5 minims, afterwards increased. On the 21st the tumour of the foot had entirely disappeared; after each injection the cicatrices in various parts of the body were greatly inflamed. On the 22nd patient had a severe epileptiform seizure. Morton thinks this was due to reaction caused by the trypsin in an intracranial tumour. The trypsin was discontinued or reduced in amount for some time. New nodules now appeared on different parts of the body, and again subsided under trypsin, but the cerebral condition became worse, and after the development of new nodules in different parts, death took place on July 4th. Morton says that while the patient's life was not saved, it is evident that trypsin acted decisively, "that a sarcomatous nodule was caused entirely to disappear, and that other nodules were markedly reduced in size." (3) Woman, aged 47. Seen May 1st, 1906. In the previous January laparotomy had been performed by a surgeon, "who removed a large abdominal cancerous mass involving all neighbouring tissues." The wound did not heal entirely, and recurrence took place, a growth as large as the closed hand being discoverable on palpation. Submitted to *x*-ray and thyroid treatment, also given boladin, 8 gr. t. d. On May 4th injections of trypsin (5 minims) begun. She received *x* ray and thirty-seven injections of trypsin. The tumour showed local reaction. The patient died on August 6th. (4) Woman aged 40. Seen February 13th, 1906. Entire breast thickened and infiltrated with carcinoma; enlarged glands in axilla; several nodules in skin. Extensive retraction of nipple and surrounding tissue. Under *x* ray and fluorescence retraction diminished, induration of breast cleared up, axillary glands and nodules disappeared, and disease reduced to a single small tumour, perhaps 1 in. in diameter. On May 21st trypsin treatment was begun with a view of "helping along if possible the splendid progress." The injections (trypsin and amylopsin) were continued throughout May, June, July, August, September, October, and November. The trypsin caused general reaction, but after the first few the remaining injections, even when increased up to 20 minims, were well borne. *X*-ray and

fluorescent treatment continued. Finally, an operation for the removal of the tumour was advised. Result not stated. (5) Man, aged 54. April 18th, 1906. Extensive epithelioma of lower jaw and base of tongue; inoperable. Great comfort and improvement under *x* rays. On April 21st trypsin treatment begun, 8 minims, increased at times to 20—in all, eleven injections. On June 1st, severe haemorrhage; all treatment ceased. Death August 5th. (6) Woman, aged 57. Seen October 18th, 1904. Extensive epithelioma of lower eyelid, with cicatrices from frequent operations. Under *x*-ray treatment for three months; patient entirely cured, but at end of four months four new cancerous nodules appeared on cheek. Nine months later patient returned for treatment; cicatrix from *x*-ray treatment remained entirely sound, and exhibited no sign of recurrence. *X* ray could not be used again, as each application set up acute inflammatory reaction. On October 1st, 1906, trypsin and amylopsin treatment begun, eighteen injections given over period of six weeks. No change in the growth. Morton proposes to try trypsin again in the light of further experience. (7) Man, aged 65. April 10th, 1906. Advanced cancer of bladder. Treatment: *x* ray, fluorescin and radio-active water. April 25th, commenced use of boladin, 8-gr. capsules, one three hours after meals. Improved very decisively during next month. On May 4th, trypsin (5 minims) begun. Treatment had to be given up after six weeks and the patient died in July. (8) Woman, unmarried, aged 61, with slow-growing cancer of both breasts, commencing in 1892. Refused operation. *X*-ray treatment for a year and remained well till September, 1904, when she returned with "an eruptive condition on the thorax which was evidently disseminated carcinoma of the skin." On May 14th she presented typical appearance of *cancer en cuirasse*. Cancer nodules were scattered almost everywhere over the body. Trypsin, with amylopsin at due intervals, was given as a last resource; "the effect of the treatment was a decided amelioration in the progress of the disease. A great number of cancer nodules disappeared entirely, and even confluent areas cleared up of induration and coloration, and present a condition of normal skin." (9) Woman, aged 66. October 25th, 1906. In April, 1905, symptoms of rectal cancer; in August tumour about the size of an orange found. Trypsin injections quickly increased to 20 minims and afterwards to 30—thirteen in all up to November 22nd. At the date of report amylopsin just begun. The patient feels better, the passage is freer, and the health is improved. (10) Woman, aged 48. May 14th, 1906. Epithelioma of nose; one year induration. Tissue involved about 1 in. in diameter. Received twenty-five trypsin injections, 10 minims, increasing rapidly up to 20. Ceased treatment August 15th, 1906 "Completely cured to date." (11) Man, aged 36. April 27th, 1906. Epithelioma of nose, thirty years' standing. Extensive destruction; disease rapidly progressing. Operated on five times without success. Trypsin injections up to 20 minims; in all fifty-one, with fifteen of amylopsin up to November 9th. "The disease is now progressing steadily towards a cure." (12) Woman, aged 46; cancer of uterus, two years; inoperable. Alternating doses of trypsin and amylopsin, 20 minims of each at a dose; at the same time ten minutes of *x* ray. Eighteen injections up to November 9th. On November 21st report by Sweeny states: "Local condition not improved as to size and extent of growth, parts little less indurated: bladder is fairly continent. General condition of patient greatly improved, cachexia gone, colour in face again, increase of weight, appetite better. Patient was bedridden when treatment began. Patient can walk about streets at present. She could hardly have lived five months more at the time of beginning treatment." (13) Woman, aged 42. September 21st, 1906. Carcinoma of uterus; had been operated on. Disease had existed in aggravated form two months. Debilitated by frequent bleeding; much pain. Sixteen injections of trypsin, alternating with amylopsin, up to November 12th. In one month very great improvement in strength and in general appearance. Could walk well and do hard work without fatigue. On November 22nd it is reported that the local disease had not made further progress. (14) Man, aged 49. September 19th, 1906. Epithelioma of cheek of five years' duration. Ulceration of size of the end of the finger, but very deep and surrounded by extensive induration. Had been operated on several times, with recurrence. Received twenty injections of trypsin and amylopsin alternately up to November 12th. After third injection improvement set in, and "disease has progressively healed up to date. No ulcer now exists and no induration remains. The resulting scar is excellent, but shows a deep depression. Cured to date." (15) Woman, aged 36. June 16th, 1906. Epithelioma of face; ulceration extensive and deep; had existed three years. Had had variety of treatments. Twenty-one injections to September 10th. No constitutional reaction. Treatment had to be discontinued owing to intercurrent illness. Not very much improved. (16) Man, aged 66. May 23rd, 1905. Epitheliomatous ulcer below eyelid. No operation. *X* ray off and on for four months, with little benefit. Twenty-four trypsin injections and about three of amylopsin up to October 14th. On November 23rd it is reported: "Patient almost well. Ulcer one-third of former size. Flat and even with the cheek, and induration all disappeared." (17) Woman, aged 36. May 21st, 1906. Scirrhus of right breast, four years' duration. Refused operation. Under *x* rays for seven months; tumour decreased nearly two-thirds in size, and had reached stationary stage. Nineteen injections of trypsin. On November 14th patient had become pregnant, and removal urged. (18) Woman, aged 48. September 24th, 1906. Ulcerating epithelioma of inner canthus of eye. No operation. Three injections of trypsin, alternating with three of amylopsin, over a period of about a month. "Ulcers almost healed when last seen." (19) Woman, unmarried, aged 46. May 14th, 1906. Carcinoma of uterus involving bladder; nephritis; great oedema of both legs. Nine injections. Remarkable improvement in oedematous condition; general condition improved during four weeks she was under treatment. Died of kidney disease. (20) Man, aged 73. Epithelioma of face, eight years' duration; frequent haemorrhages. Had improved slowly under *x* rays. Trypsin begun May 21st. Immediately on beginning treatment the character of the sore changed. Glandular swelling in submaxillary space disappeared almost entirely. Fifteen injections of trypsin up to July 2nd, when he disappeared. When last seen the general health was improved, and ulceration smaller, but "by no means cured." (21) Man, aged 44. June 1st, 1906. Osteosarcoma of lower jaw, three years' duration. Great enlargement of submaxillary glands. Eighteen injections (10 minims) of trypsin, up to July 13th, when great improvement manifest. Tumour reduced. Trypsin increased to 20 minims; tumour progressively smaller. Patient disappeared. (22) Woman, aged 54. May 23rd, 1906. Sarcoma of shoulder. Frequent and profuse bleeding. Began 10 minims of trypsin May 23rd. Profuse haemorrhages ceased entirely for a time. In all eleven injections. Effect on disease discernible by diminution of pain and lessening of bleeding. Death June 22nd. (23) Man, aged 80. October 12th, 1906. Epithelioma of nose; five years; large and deep ulcer; "desperate case." From October 12th to 24th six injections of trypsin and amylopsin "with evident improvement, especially in his general health." Patient disappeared. (24) Man, aged 48. May 18th, 1906. Epithelioma of nose; three years; open ulcer. Twenty injections up to August 20th. Improvement manifested early and maintained, but an abscess from the trypsin injections caused patient to discontinue. He returned November 20th, when it is reported that diseased area no longer caused pain, and was reduced in size. Said to be improving. (25) Woman, aged 57. June 21st, 1906. Extensive cancer of uterus; six months. Severe bleeding. Up to November 19th sixty-two injections of trypsin, alternating frequently with amylopsin. Good deal of improvement in general health. Examined on November 26th by West, who reported that while very great improvement had taken place earlier during the previous three weeks, the disease again showed signs of activity. Trypsin to be pushed to a larger dosage. (26) Man, aged 56, May 23rd, 1906. Epithelioma of inner canthus extending down on nose. *X* rays and radium had done some good. Trypsin begun May 23rd. Up to September 27th twenty-five injections. Little progress. (27) Woman, aged 38. May 21st, 1906. Lupus of upper lip and cheek and nasal septum and upper maxillary bone, including hard palate. Had been operated on. Trypsin injections, 20 minims, three times a week. Reduction gradual, and at fourth month no evidence of tumour discoverable. Seems "as if another month would complete the cure!" (28) Woman, aged 24, May 1st, 1906 Cancer of rectum; two years. Inoperable. Twenty-four injections, 20 minims, trypsin and amylopsin till October 15th. Pain ceased after few injections. Patient continued treatment off and on up to November 18th, with continued improvement in general health. (29) Woman, aged 42. Lupus vulgaris of eye and nose; four years. Eyeball had been removed, and entire socket was a mass of disease extending down on nose. Twenty-one injections. On September 21st ceased treatment owing to intercurrent illness. At beginning injections caused severe inflammatory reaction in the ulceration, followed by profuse discharge and sloughing. Wound became healthier and ulcerated area closed with normal tissue to about half original size. Patient says she will return.

Morton's comments on his cases may be given in full: (1) Two of them—Cases 10 and 14 severe cases of face cancer, are cured to date by the use of trypsin. (2) A remarkable process of retrogression by degeneration and atrophy of a carcinomatous breast gland to final and curative obliteration has been microscopically demonstrated in Case 1. (3) In all cases signs of amelioration in the progress of the disease have been observed. (4) Cases 1, 2, 3, and 11, among others, demonstrate beyond question that trypsin may produce local reaction in a cancerous tumour, indicated by swelling, heat, pain, or increased discharge. (5) Cases 1, 2, 3, 4, and 8, as well as others not especially recorded among the hospital cases, demonstrate that trypsin produced constitutional reaction characterized by rigors, fever, pain in the back, sense of weakness, drowsiness, etc., but of temporary duration. (6) Cases 20 and 21 demonstrate that enlarged glands associated with cancer have rapidly diminished in size under the influence of trypsin. (7) It has already been pointed out that these cases were mostly absolutely hopeless at the time of beginning treatment. (8) Rigors and increased temperature following within a few hours

the injection of trypsin are an encouraging sign, since they indicate that the cancer has been attacked by the trypsin. The symptoms are due to the toxic action of absorbed and destroyed cancer products. (9) Trypsin has a decided effect in reducing cancer cachexia and in improving the general health. (10) The result of the trypsin treatment in many instances—notably in Cases 12, 13, and others—demonstrates that even in severe cancer of uterus involving the associated pelvic organs the disease may be brought to a halt, so to speak, even if the patients do not eventually recover. (11) The use of trypsin has caused haemorrhages to cease and has alleviated pain. (12) It is a fact that the patients frequently refer their greatest feeling of improvement to the period of time when they are taking amylopsin following trypsin. An important, as well as a difficult, feature of the treatment, therefore, is reasonably to determine the proper time to administer the diastatic ferment as well as the requisite amount, following or during the use of trypsin. It has seemed to me that the pure diastase (injectio amylopsini) had much to do with favourable results. (13) Weighing carefully the above cases, I have come to the conclusion that trypsin, if possible, should be used in larger doses than I have yet used it in most of them. Feeling one's way, for instance, from 20 to 30 minims daily for from four to six weeks, as advised by Dr. Beard, and then resorting to amylopsin. It is only lately (November 23rd) that I have been able to get a microscopical report (Case 1) of the actual effect of trypsin upon a cancerous tumour. This report has lent another aspect to the work, and encourages me as it will others. (14) In all fairness trypsin deserves further trial, but I reserve an opinion as to its actual therapeutic value until I can speak from a larger experience.

GYNAECOLOGY.

34. **Double Uterus.**

G. S. MACGREGOR (*Journ. of Obst. and Gyn. of the Brit. Emp.*, May, 1906) describes 3 cases of so-called double uterus which have come under his observation, and gives a tabulated description of 100 other cases. In the first case, which occurred when the author was assistant to Sir Halliday Croom, a patient was admitted to the hospital complaining of swelling in the abdomen and constant bleeding. She had had two attacks of severe haemorrhage without apparent cause, and without any evidence of abortion; she then began to have irregular haemorrhage, and for fourteen weeks before admission had been constantly losing. The patient had had seven children, the youngest being 2 years old. On vaginal examination a fairly hard, resistant tumour could be made out continuous with the uterus, and lying over to the right side, about the size of a four or five months pregnancy. The sound passed 5½ in. An operation was decided upon, but on the day before it was to be performed the author, while auscultating the abdomen, made out the faint beat of a fetal heart. Pregnancy in a bicornuate uterus was then diagnosed, and this was fully corroborated at the confinement a few months later. The next case was that of an unmarried girl, aged 17, who had never menstruated and who complained of abdominal pain. On examination of the abdomen a large sausage-shaped tumour could be palpated below and to the left of the umbilicus, and a smaller but somewhat similar tumour intimately connected with the former could be felt passing to the right side. Per rectum a large soft swelling was felt bulging the rectum inwards. The imperforate hymen was incised, and about 2 pints of thick coffee-coloured menstrual fluid drawn off; afterwards on examination per vaginam a double-horned uterus was felt bimanually. The third case was that of a woman, aged 30, who had been married nine months and was in good health. She had some leucorrhoea, complained of a slight pain sometimes on the right side, and experienced a bruised feeling after coitus; otherwise she had no pelvic symptoms. Her doctor had already diagnosed the presence of Uterus didelphys. She was examined under an anaesthetic and it was found that the vagina was divided into two compartments by a septum, and two separate and distinct uterine bodies could be demonstrated, which were independently movable, only a fold of peritoneum seemed to link the two cervices. The author has collected and tabulated records of 100 cases in order to arrive at a conclusion as to whether such conditions predispose to sterility and what are the risks of pregnancy. He finds that the presence of such malformations does not materially lessen the chance of impregnation unless the genital canal is completely occluded at some point; delivery usually occurs without special danger or difficulty, except where the fetus is held in the rudimentary horn of a markedly double uterus, where there may be danger of rupture of the uterine wall, or there may be no dilatation of the imperfectly-developed cervical canal, or there may be lack of sufficient contractile power in the uterus itself. Any of these conditions may demand surgical interference.

THERAPEUTICS.

35. **The Modern Treatment of Tetanus.**

JACOBSON AND PEASE (*Annals of Surgery*, September 3rd, 1906) consider the therapeutic value of the antitoxin treatment of tetanus, which they regard as a strictly traumatic affection, its essential cause being the entrance of the bacillus or its toxin into the tissues of the body through some wound of skin or mucous membrane. In their study of this subject the authors have made use of two tables: one representing the experiences gathered from many of the large hospitals of the United States, the other covering all the cases treated in New York State by antitoxin obtained from the State Department of Health. Of the 203 tabulated cases, 108 were treated by subcutaneous injections, 64 by injection of the serum into various internal structures, 12 by intraspinal injection, 16 by intramuscular injections, 2 by intracerebral, and 1 by intravenous injection. From the facts presented by these tables, it is apparent, the authors believe, that after tetanus is fully established serum therapy, however administered, promises but little as a curative agent. The method of intracerebral injection has nothing particularly to commend itself as a means of reaching either the free toxin or that fixed to cells of the nervous system. Moreover, it is not devoid of danger, as one case has been recorded in which frequent repetition of the injection was followed by cerebral abscess. The injection of antitoxin into the subdural space offers but little prospect of reaching the affected nerve cells, because of the protection afforded by the pia mater. The injection of antitoxin into the cord or the cauda equina in the small number of cases in which it has been tried resulted in three recoveries, but in one of these there was an incubation period of sixteen days, and the disease ran a mild course. Attempts to neutralize the toxin present in large nerve trunks by the intraneural injection of antitoxin have not been satisfactory, as such injection can be of no benefit except when tetanus is localized. Only the toxin—and, according to some surgeons, only a portion of this in a given nerve—can be thus neutralized. In concluding their paper the authors, while acknowledging the failure of serum therapy in tetanus, point out that as a prophylactic measure the injection of antitoxin merits the fullest confidence. In the same number of this review Blake deals with the treatment of tetanus by magnesium sulphate, and describes the indefinite results obtained in four cases of repeated lumbar injections of solutions of this drug into the subdural space. The author's impression of such treatment is that though we cannot be certain of the effect, yet it is reasonably safe, and affords a means of modifying the convulsions and relieving pain to an extent not hitherto reached by any other drug. It is not a specific treatment, but it produces anaesthesia, which may be taken advantage of for intraneural or other injections of antitoxin, and for cleansing the site of the infection.

PATHOLOGY.

36. **Congenital Dystrophy of Elastic Tissue.**

LE MOIGNE has recently investigated congenital defects of elastic tissue (*Thèse de Paris*, 1906). As a result of his observations he concludes that in some persons the elastic tissue is defective. There result from this hernia varices, pulmonary emphysema, visceral ptosis, myoceles, articular distension, synovial cysts, etc. The lesion is congenital, and often hereditary. Its manifestations are varied, and may exist from prenatal times, or else appear a certain time after birth. Treatment at present is merely palliative. It is important to recognize the lesion, as the subjects are unfavourable for surgical operation of any kind.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

37. Diagnosis of Pleural Effusions.

SIMON AND AMENILLE (*Arch. Gén. de Méd.*, October 9th, 1906) point out some of the stumbling-blocks in the diagnosis of pleural effusions. An extensive area of dullness with resistance to the finger, absent vocal vibrations, absent vesicular murmur, soft distant muffled expiratory souffle will generally be taken to denote the presence of a pleural effusion. All these signs are very rarely met with together. They may often be misleading, and no one of them singly can make a diagnosis sure. Percussion is the readiest and least uncertain means of detecting pleural effusions; but even a fairly large effusion may not give a dull note, and emphysema can hide a large effusion. M. R., aged 68, entered hospital November 14th, 1904, suffering from paroxysmal dyspnoea. He was a large man, emphysematous, with slight albuminuria, with high-tension pulse, and a ringing second aortic sound. After a few days he showed well-marked oedema of the ankles. The loud râles which were heard in the chest were accentuated at the right base, where could be heard, too, very close subcrepitant râles. On the left side no râles were heard, the vesicular murmur was very faint, and the vibrations were hard to feel. On percussion the note was not impaired, but an exploratory puncture drew off some lemon-coloured fluid, slightly fibrinous, which showed under the microscope endothelial cells. R. died two days after, and the left pleura contained 800 grams of fluid, while a small quantity was found in the right pleura. Suppression of vocal vibrations is the sign which is most reliable in differentiating an effusion from pulmonary consolidations. But this sign is very variable. Sometimes it is met with in pulmonary congestion without any effusion, and sometimes the vocal vibrations are neither absent nor diminished even in the presence of a large purulent effusion. There occur pleural effusions which do not obliterate the vesicular murmur; and crepitant and subcrepitant râles can sometimes be heard through a layer of pleuritic fluid. C. H., aged 46, entered hospital October 5th, complaining of pain in the left side, which was made worse by coughing. The trouble began four or five days before admission. There were signs of chronic alcoholism. Physical examination revealed in the lower two-thirds of the left lung a loud superficial souffle, ending in several fine subcrepitant râles. At this spot were noted dullness and complete suppression of the vocal vibrations. An exploratory puncture quickly revealed some clear, yellow, sero-fibrinous fluid. Egophony, a good sign of effusion, can be wanting. Whispering pectoriloquy is less constant. The displacement of organs is of diagnostic value, especially when the effusion is left-sided. Considerable displacement of the heart to the right side indicates a large effusion. But this displacement may be due to other causes, such as pneumothorax or even pneumonia. Displacement of the liver is of less value in diagnosing right-sided effusions, as pathological enlargements of the liver may be mistaken for depression. Radioscopic examination combined with exploration gives the best and surest results. Finally, the writers conclude, there is no sign by itself pathognomonic of pleural effusion. The clinician, to be convinced, must rely upon a number of signs, and can only be sure at the completion of a carefully and methodically performed puncture. No aspiration must be attempted without a preliminary exploratory puncture.

38. The Heart in Graves's Disease.

DERNINI (*Rif. Med.*, October 27th, 1906), as the result of a study of 14 cases of Graves's disease reported in detail by him, comes to the following conclusions: The most striking feature about the heart in Graves's disease is its extreme sensibility to the effects of muscular fatigue. On the least extra exertion it gives way, and this is shown most markedly in the increase in the transverse clinical diameter of the heart. The increase may only be slight and very transient, but never fails. The right side of the heart is the more readily affected, the auricle being involved in the more severe cases. The degree to which this dilatation proceeds is in direct relation to the general tone of the muscular system; the weaker this is the more likely the heart will be affected. This ready response of the heart muscle to signs of fatigue, characteristic of Graves's disease, may be used in differential diagnosis in abortive or masked cases. Accessional dilatation of the ascending aorta and tumultuous pulsation of the peripheral arteries are also useful aids in diagnosis as pointing to Graves's disease. The heart after this temporary dilatation almost always returns to its original dimensions. Functional murmurs may appear and last for a time as the result of this cardiac dilatation.

39. Organic Heart Diseases and Immunity from Pulmonary Tuberculosis.

STOW (*Amer. Journ. of Med. Sci.*, October, 1906) considers that the fact or otherwise of organic heart diseases causing immunity from pulmonary tuberculosis depends upon the presence or absence of a co-existing long-standing passive hyperaemia in the pulmonary circulation. He shows how even slight disturbances of the cardiac action exert a direct influence on the pulmonary circulation, and that cardiac lesions accompanied by well-marked pulmonary stasis (thus concentrating in the lungs the immunizing agents of the blood) are rarely followed by phthisis, while if such was already existent a salutary effect resulted. Organic valvular lesions of the right side of the heart producing pulmonary anaemia set up conditions favourable to the growth of the tubercle bacillus, and such lesions are most frequently associated with pulmonary tuberculosis. On the other hand, organic valvular lesions of the left side of the heart, when accompanied by well-marked secondary changes of hypertrophy and dilatation producing long-standing passive hyperaemia of the lungs, are rarely followed by tuberculosis, and often effect a cure of a previously existing tuberculous condition. Exceptional cases may be accounted for by altered bactericidal properties of the blood, thus reducing its immunizing powers. This production of a constant passive congestion of the lungs suggests the treatment in phthisis, especially in incipient stages, by physical exercise in the open air several times daily sufficient to produce severe congestion; not merely gentle walking, but running until the induced congestion of the lesser circulation interferes with the free action of the right ventricle and forces temporary rest. The character and amount of physical exercise prescribed must depend upon the individual case, and, since the danger of haemoptysis must always be borne in mind, even in incipient cases, this should be explained to the patient. In addition, good germ-free air and plenty of nourishment are necessary. Notes of two cases typical of the effect organic cardiac disease has upon phthisis are appended.

SURGERY.

40. Surgery of Large Venous Trunks.

LEJARS (*Rev. de Chir.*, No. 11, 1906), in a report to the French Congress of Surgery at the session held in October, 1906, points out that modern methods of surgical work have, by preventing the danger of infection, revolutionized the treatment of wounds of large veins, and led to the creation and development of a conservative venous surgery. The successful results of ligature of large veins have favoured the subsequent practice of lateral suture of a venous wound, the breach in the wall being closed and the lumen remaining free, and led to the further developments of end-to-end suture of divided or resected veins, and of anterio-venous anastomosis. In discussing in the first place the prognosis of ligature of a large vein, the author states that such practice, while inevitably fatal in the case of the portal vein, and very dangerous when applied to a wounded mesaraic vein, has been tolerated by the inferior vena cava, the innominate, and other venous trunks. Ligature of the internal jugular in its middle third is not, as a rule, followed by any serious results, so long as the ligatured vessel is not much larger than its fellow on the other side of the neck; and the femoral vein also may be tied with equal immunity. The surgeon, however, should not ignore the possibility of grave results under such conditions as a feeble heart due to cardiac disease, to haemorrhagic anaemia, to post-traumatic or post-operative shock, and to

advanced arterio-sclerosis; and as any failure of aseptic methods. Simultaneous ligature of a large vein and its accompanying arterial trunk ought always to be regarded as a serious operation. The venous suture is practised with the objects of maintaining the permeability of the vessel and the circulation through it, and of restoring at the same time the wounded wall. The former object will not be attained except on the conditions of perfect asepsis and of absence of thrombosis. The author states that it has now been practically demonstrated that the lateral suture is applicable to all veins, including the sinuses of the dura mater; that it is most suitable in cases in which the wounded vessel is a very large one; and that when fractured aseptically and with proper performance of simple technical details it assures normal cicatrization of the wound and a regular circulation through the injured vein. Venous suture is exclusively indicated in cases of wound of the portal vein and of the inferior vena cava above the renal pedicles. These very rare injuries being excepted, a laceration of a large venous trunk can, the author states, be as well treated, as a rule by double circular ligature as lateral reunion. It would be useless, the author declares, to attempt to close by suture any venous wound that is contused and ragged, or one opening on a suppurating or ulcerated surface. A wound in the long axis of a vein, even though of considerable extent, is much more suitable for suture than a transverse wound, which when it involves more than half the circumference of the vessel contra-indicates this method of closure. The following rule is proposed in regard to lateral venous suture; as it is not a necessary practice but an improvement in technique it should not be applied unless the surgeon is sure of rendering it absolutely correct: if he be in the least doubt as to the result he should have recourse to ligature. End-to-end suturing, the practice of which on the human subject has not yet been sufficient to afford any definite indications, may, the author thinks, be applied in certain wounds in preference to double ligature; and also when in the removal of a tumour it has been found necessary to resect an included or degenerated portion of a large vein. In a full description of the technique the author insists on the necessity of maintaining in the course of the operation complete haemostasis by compression of the vein above and below the wound, either by the finger of an assistant, by guarded forceps, or by provisional ligatures. This having been effected, the margins of the lateral wound or the two ends of the completely-divided vein are closely brought together by a suture of very fine silk or catgut carried on a small curved and round needle through all the coats of the injured vessel. Lejars proceeds to discuss the application of the vascular suture, and particularly the venous suture, in the treatment of arterio-venous aneurysm. In a recent case in which the sac is very limited and the arterio-venous orifices are small, it is possible to substitute for total extirpation combined with quadruple ligature, removal of the sac alone and suture of the two vesicular orifices, the continuity of both vessels being thus restored and their permeability maintained. Such treatment, however, is applicable only in certain cases, particularly in those in which the lesion is recent and a distinct sac has not yet been formed. In conclusion, the author refers to the treatment of utero-pelvic phlebitis of puerperal origin by ligature and excision of the thrombosed veins. This is regarded as a doubtful and serious intervention, the results of which have hitherto been far from satisfactory. It has almost invariably failed in acute cases, and in chronic infection the surgeon ought not to intervene until sufficient time has been allowed for spontaneous cure. However, it cannot be denied that these venous operations may do some good in certain chronic forms of infection; and when the type of the symptoms, the repetition of severe rigors, and the results of local examination point to the suspicion of a venous localization, the surgeon, it is contended, may be justified in resorting to active measures and in meeting by direct intervention the formidable complication of utero-phlebitis.

41. Surgical Interference in Intermediate Stage of Acute Appendicitis.

Most surgeons, if they do not operate early (before the third day) in appendicitis advise waiting until the acute stage is over, seeing the great mortality in operations undertaken in the intermediate stage. Fiori (*Riv. Med.*, October 15th, 1906) after an experience of ten cases with one death operated upon in the intermediate stage follows Bastianelli in recommending surgical treatment at this stage. His cases were all grave and varied from the first to the seventeenth day of the disease. One case (with a fluctuating and painful tumour on the right side) was operated on on the third day; two (one with perforated appendix) on the fourth day; two (one with gangrene of the appendix) on the fifth day; two on the sixth day; one on the ninth day (this one died five days later, and at the autopsy the parts were found in good condition, the peritoneum normal, the bowel affected with meteorism and congested; probably death was due to progressive toxaemia); one on the eleventh; and one on the seventeenth day. In these last two cases perforation had occurred in one or two places, and in one of the cases a considerable mass of oxyurides escaped. The impossibility of estimating the amount and degree of mischief from merely clinical observation is well shown in some of the author's cases, where grave lesions were found in spite of the fact that clinically the symptoms were not so alarming. After operation Fiori considers the wound should never be closed up straight away, no matter how completely one may have removed the diseased parts, but good drainage should always be made.

42. Modern Methods in Thoracic Surgery.

Willems (*Sem. Méd.*, No. 41, 1906), in a paper contributed to the recent French Congress of Surgery, discusses the ways and means of access to the thoracic cavity from the point of view of operative intervention. After considering the rival methods of Sauerbruch and Brauer for prevention of pneumothorax, and the relative advantages of positive and negative air pressure in thoracic surgery, he concludes that in the majority of intrapleural operations infection is a more serious danger than pneumothorax, and that the latter may be prevented by ordinary surgical means. Among tumours of the wall of the thorax, those of the sternum, Willems states, certainly present a good indication for the employment of physical methods, although in resection of the sternum the danger of opening both pleural cavities has probably been exaggerated. But the use of either apparatus would not facilitate suturing of pulmonary wounds, and Sauerbruch's pneumatic chamber would decidedly be contraindicated in wound of the diaphragm, and in any operation in which both thorax and abdomen are opened. The physical methods, it is asserted, can hardly be of any service in cases of pulmonary suppuration in which there is an absence of adhesions, and also in cases of hydatid cyst of the lung. In regard to transpleural resection of the oesophagus, it is necessary to discover effectual means of reducing the danger of infection before one can expect any amelioration of results. In cardiac surgery, infection is to be regarded as a much more formidable foe than pneumothorax. Sauerbruch's method, the author believes, finds its most favourable indications in mediastinal operations, as in such cases it prevents not only pneumothorax but also effusion of air into the mediastinum, which latter complication increases to a considerable extent the risk of infection, and, consequently, renders it necessary to practise post-operative aspiratory drainage.

OBSTETRICS.

43. The Care of the Perineum during Childbirth.

In the early part of last century opinions were divided as to whether the perineum should be supported or not during the birth of the fetal head. This controversy has long since been settled, and the support is practised by every obstetrician as a minor matter. Blame is often given to the midwife when a rupture of the perineum takes place, especially on the part of the lay people. K. Apfelstedt states that this is unjust, and that even a complete rupture of the perineum may be caused by various external influences (*Berl. klin. Woch.*, November 26th, 1906). One of these causes is the want of a rational method of supporting the perineum. The author proceeds in describing the anatomy and physiology of the pelvic floor. He shows that it forms a sort of musculo-tunnel, which has particular functions during labour. The muscular apparatus not only acts passively, by its elasticity but it exercises an active function. When the head impinges on the outlet of the pelvis, the funnel shape directs the sagittal suture in the antero-posterior diameter. It further prevents an excessive protrusion and stretching of the muscular floor of the pelvis, and thus prevents central rupture. Lastly, its own muscular activity presses the head forwards and upwards, while the uterine contractions press it downwards and backwards. A parallelogram of forces can be made up of two forces, but not of one force and an elastic resistance. In this way the head is directed through the normal outlet of the soft parts of the pelvis. Various methods of securing the normal directing of the head have been devised,

and the author decribes the one which he has employed for seven years as medical officer of an institute for primiparae, which is the modification of Fritsch's and Ritgen's method. It is useless, and even dangerous to the perineum, to push the head backwards or upwards. As soon as the fetal head begins to distend the perineum and the anus is dilated he places the patient on her back, with her legs drawn up and kept widely apart. The obstetrician's left hand supports the perineum with the four fingers, while the forearm rests on the bed. Two fingers, which should be nearly extended, touch the one side of the coccyx with the tips, and the other two the opposite side. The flexed fingers of the right hand are pressed as far in between the back of the fetal head and the pubes as possible. As the head descends the fingers can be adapted exactly to the curvature of it by flexing the fingers more or less. Both thumbs are kept free. During a pain the right hand attempts to reach the neck of the fetus, and the left hand tries to obtain a hold of the anterior surface of the frontal bone. As soon as this can be reached the head is assisted in the direction of the vulvar opening. At each pain both hands repeat this procedure. As soon as the head begins to stretch the vulva the patient is told to perform from 150 to 170 respiratory movements in the minute. This must be done with exaggerated chest movements and with open mouth. In this way one can prevent the patient from bearing down without telling her not to do so. She does not realize that she is not accelerating the birth. The left finger tips then feel for the orbital ridges and the right hand secures the neck. Balanced between the two hands the direction of the head can be guided at will. In this way the perineum glides over the face of the fetus without difficulty, and either the chin may be guided by the left hand, or the rotation may be assisted by the right hand holding on to the back of the head. By means of this method he has obtained very excellent results in several hundred cases. Next he turns to the treatment of rupture of the perineum when it is found impossible to avoid this accident. He describes the method which he has used successfully in some detail, and which appears to be similar to a method recommended by Fritsch without his cognizance. This consists in stretching the wound as far as possible, and then passing a curved needle deeply into the muscular tissue from the centre of the wound, bringing it out very close to the edge of the skin. The needle carries a silkworm-gut suture, and the same suture has a second needle for the opposite side. This needle also enters in the centre, and passes deeply into the tissues and emerges close to the skin. While the wound is held open the suture thus applied has a heart shape. No trace of it may be seen in the wound. After sufficient sutures have been applied the wound is cleaned well, and the middle sutures are drawn tightly and tied. Then the upper and lower sutures are tied with a moderate amount of tension. No superficial sutures are employed. He points out that the suture can be applied by one man without assistance, and that it is far less painful than the ordinary method of suturing. It always leads to complete union, and even at first increases the thickness of the perineum. He advises the method very strongly.

GYNAECOLOGY.

44. The Passage of Anaesthetics from Mother to Fetus and Suckling.

A DISCUSSION on this subject recently took place at a meeting of the Société d'Obstétrique de Paris (Séance du 17 Mai, 1906. *L'Obstétrique*, November, 1906, p. 528). M. Nicloux, as the result of numerous experiments on guinea-pigs, found that chloroform travels freely from the mother to the fetus. Indeed, he discovered that the liver of the fetus held more than was to be detected in the liver of the mother. This phenomenon was attributed to the fact that the fetal hepatic tissue held more lecithin, but M. Nicloux asked for further evidence from chemical research. The natural diffusibility of chloroform readily accounted for its rapid passage into the fetal blood and tissues. Turning to the influence of chloroform on milk, M. Nicloux examined the blood and milk of goats and noted that the anaesthetic may be found in a higher proportion in the milk than in the blood. This fact is chemically quite explicable, as chloroform has a strong affinity for fats. M. Nicloux detected about 10 mg. of chloroform to 100 grams of human milk in two patients under his personal observation. M. Budin believed that whatever might be the chemical proportions of chloroform in the fetus and in human milk, clinical experience showed that the matter was of little importance. He and M. Serret published some researches five years ago relative to the use of the curette in the puerperium. The patients were put under chloroform, but the infants which they suckled were quite unaffected. Budin, however, advised Nicloux to continue his researches. M. Schwab reported a case where a woman was kept under ether during an obstetrical operation. The child when delivered required insufflation. Then, as the respiratory movements set in the expired air smelt very strongly of ether. M. Tissier had turned his attention to the question, and had found that the fetus and the suckling suffered but little if at all from chloroform administered to the mother or nurse. He appeared to think that, owing to its diffusibility, although it readily entered the fetus, it was rapidly eliminated; yet, whilst giving his opinion that Nicloux's researches proved that the anaesthetic did little harm in the fetal liver, it might enter the heart and arterial circulation and fix on nerve elements. Thus all agreed that the danger of even temporary disturbance of the fetal and infantile economy when the mother or nurse took an anaesthetic was trifling; no clear distinction between ether and chloroform was drawn, but only M. Schwab spoke of experiences with the former anaesthetic.

45. Teratoma: Malignant Dermoid.

ROSENSTEIN (*Zentralbl. f. Gynäk.*, No. 48, 1906) observed this grave condition in a woman, aged 22, the mother of two children, of which the youngest was over a year old; menstruation was regular. She had complained of mucous discharge for five months and noticed that it had become sanious. Pains of the labour type ultimately set in and emaciation became marked, the temperature rose to over 101°. A soft, round tumour of the size of a man's head occupied the middle of the abdomen. It appeared to be an enlarged uterus, and not until anaesthesia was given was it found that the uterus was small and perfectly separate. At the operation a great quantity of bloody serum was found in the peritoneal cavity. The tumour, which had developed in the left ovary, was universally adherent. It was mostly solid, made up of tissues from all the three germinal layers, mixed up in the usual anomalous manner. There was one cystic cavity with incisors, premolars and hair springing from its inner wall. At the end of three weeks the patient left hospital in good condition, but distinct resistance could be felt on the right side of the uterus. Two months later the patient returned extremely cachectic, with severe ascites and a tumour as big as that which had already been removed. She refused any further operation. Schiller, in a discussion on Rosenstein's case, observed that he had removed a teratoma from a girl aged 14, the operation was easy but recurrence very rapid. [Herbert Williamson publishes an original report of a similar case in a girl, aged 16, in Allbutt and Playfair's *System of Gynaecology*, second edition, 1906, p. 438.]

THERAPEUTICS.

46. The Treatment of Epilepsy.

IN a clinical lecture published in the *Deut. med. Woch.* of September 13th, 1906, E. Redlich admits that the treatment of epilepsy is far from satisfactory. He deals with this subject under two headings: (1) The etiological or prophylactic treatment, and (2) the symptomatic. Under the first heading he discusses the question whether epileptics should be allowed to marry. He is firmly of opinion that they should not be allowed to do so. The idea that certain milder forms in young girls may be cured by marriage is wrong, and the most that one ever sees in such cases is that the fits may cease temporarily during a pregnancy. But the medical man is not always asked his advice in this respect, and often one is only consulted as to how one should try to prevent the epilepsy from manifesting itself in the offspring of epileptics. All that one can do in such cases is to advise a very careful bringing up. The life should be regulated on the lines which guide our treatment of patients in whom the disease has already shown itself. Beyond this one can only attempt to avoid bodily and mental conditions which might act harmfully. Turning to the causal therapy, he states that this usually is impossible or useless, since either the cause of the disease is unknown, or when it is known nothing can be done to remove it. The so-called reflex epilepsy offers a somewhat better chance in this respect. When the fits are produced by a scar on the head, or on the extremities, or by nasal or aural disturbances, some good may be done by

removing the cause, but in the first place these cases are not common, and secondly, the brilliant results of which we read from time to time are often only apparent, and not lasting. In alcohol epilepsy, when the fits are only produced by abuse or excess of alcohol, a good chance is offered for permanent cure if the cases are not far advanced, and this is done by insisting on permanent and total abstinence. In rare cases of syphilitic lesions of the nature of a gumma, endarteritic softening, and the like, an energetic antisyphilitic treatment may cure; but the large majority of the cases cannot be treated on these lines. He therefore turns on to the symptomatic treatment. First he mentions the hygienic dietetic treatment. There is no doubt that this may do a considerable amount of good. With regard to young patients, he discusses the question of school. When the attacks are frequent there can be no question as to this. But when the fits are seldom and the mental capabilities intact the child should undoubtedly go to school, and later follow some calling which may be fitted to him or her. Overexertion must be avoided, and one should not place a heavy tax on the bodily or mental capabilities of an epileptic. In choosing a calling, one must further remember that all those in which a dangerous position for a fit might be met with and those in which great heat may have to be stood are not to be considered. Mild games have recently been recommended for epileptic children, but it is too early as yet to say whether this is wise or not. The diet should be carefully chosen. Some authorities advise a strict vegetable diet, while a diet largely vegetarian is advised by a larger number. Toulouse and Richet have offered a diet which is bland, consists largely of carbohydrates and milk, and in which the sodium chloride is reduced to a minimum. The bromide medication is supposed to act more energetically in the absence of chlorides. Bread made with bromide instead of common salt has also been introduced, and one of these goes by the name of brompan. All forms of alcohol, even in very small quantities, must be forbidden. After saying a few words on physical means and on sanatorium treatment for suitable cases, he turns to the question of drugs. Bromide naturally is mentioned first, as being the most useful medicament, in spite of all the objections which have been raised against it. It should not be regarded as a specific against epilepsy; it only acts indirectly by depressing the irritability of the brain centres. The most usual form of prescribing this is to give the sodium and potassium salts in equal quantities, and combine this with the ammonium salt in half quantities. The quantity given must be determined in each case, and one should not give more than is actually necessary to diminish or stop the fits. It is wise to begin with a medium dose, say 4 grams a day for an adult, and then increase the dose to 6 or 8 grams. Children usually do well on 3 grams a day. Bromopin and bromalin, and also bromocoll have been offered as substitutes for bromides, as these preparations are said not to produce bromism. Neuronal has recently also been introduced, and is useful for temporary treatment. Digitalis and adonis vernalis may be added to bromides for cases in which excitement and delirium are seen. Flechsig's opium-bromide treatment is deserving of careful consideration, but should never be undertaken in a patient's private house. Opium without bromide is first given in increasing doses for about six weeks, and then suddenly it is left off, and large doses of bromides are given. Gradually these are decreased until the ordinary doses are reached, and so on. Valerian is recommended by some French authors, but has scarcely any effect. Belladonna is more active, and may still be regarded as an alternative to bromides. Zinc salts are of use at times, as is also borax. Cerebrin and spongiocerebrin have recently been recommended. In conclusion, he deals with the operative treatment, he believes that simple trephining is more likely to be of avail than the newer operations of extirpating the cramp areas. He also believes that epilepsy will soon be forgotten.

47. **Vanadic Acid.**

In [illegible] and Dixon (*Practitioner*, July 14th, 1906) [illegible] to detail the results of their researches on the therapeutic properties of vanadic acid, which they have carried out during the last four years. The most important property this acid possesses is that of oxidizing organic matters. It is able to take up and to give up oxygen, and its action appears to be almost infinite. The salts of vanadium possess this oxidizing power only in so [illegible] vanadic acid. In the authors' experiments [illegible] were given either by the mouth or were used for local application to diseased surfaces. The [illegible] administration of vanadic acid in solution of a strength of 0.015 mg. in 1 litre of water has given very good results in the treatment of anaemia and cachectic states. Good results have followed from its administration in chlorosis and neurasthenia. Two drachms of this solution given in soup once a day to patients suffering from pulmonary tuberculosis have been followed by a rapid increase in weight and strength, and by an increase of appetite. For local application, a solution containing 0.5 cg. of vanadic acid to the litre of water may be used, but the authors have obtained better results by diluting this with three, or even ten, times its volume of glycerine for application to a mucous surface, and with the same quantities of water for application to the skin. The application is made by placing on the affected parts swabs or compresses soaked in the solution. Raw surfaces, when treated thus, soon show a line of epidermis spreading from the periphery towards the centre, granulations appear on the denuded surface, and cicatrization goes on rapidly. As a local application, the authors have used it in cases of simple wounds, anthrax wounds, tuberculous lesions, lupus, ulcerated cold abscesses, condylomata, mucous patches, ulcerating gummata, soft chancres, eczema, and perforating ulcers of the foot, and in almost all such cases healing has quickly followed. In the treatment of these conditions the authors advise that from time to time a stronger solution should be used —for example, one containing 0.5 cg. of the acid in a litre—by this means the healing process is better promoted. Ill-effects from this method of treatment appear to be almost unknown. The treatment of vaginitis, urethritis, and endometritis by local applications of solutions of vanadic acid has been very successful in the hands of the authors. In cases of vaginitis the walls of the vagina are carefully cleansed, and thoroughly dried with wool tampons; a tampon soaked in the solution of vanadic acid is used to swab every part of the vaginal mucous membrane with, and a tampon soaked as before is left in for twenty-four hours; this treatment should be continued every day until cure results, omitting it, of course, during menstruation. In all cases of this disease treated by the authors a cure was obtained after a period varying from sixteen days to two months. In urethritis the whole extent of the urethra is swabbed out with swabs mounted on a flexible metal bougie and soaked in the vanadic acid solution. This should be done once or twice daily, but success has not been so marked as in cases of vaginitis. In the treatment of endometritis the vagina is first carefully cleansed and the interior of the uterus swabbed out with a tampon mounted on a suitable bougie and soaked in a solution which may with advantage be gradually reduced in strength from 0.5 to 0.05 cg. per litre. At the end of the operation a tampon soaked in the same solution should be left in the vagina. This treatment should be carried out every second day, and in the majority of cases a cure results. If, however, the mucosa of the cervix is "fungous" in appearance, a preliminary swabbing with nitric acid renders subsequent treatment with vanadic acid solutions more efficacious.

PATHOLOGY.

48. **Intestinal Origin of Pulmonary Tubercul[illegible]osis.**

Calmette and Guérin, in a second communication on this subject (*Ann. de l'Inst. Pasteur*, May, 1906) record the results of some feeding experiments on adult bovines with bovine tubercle bacilli introduced by means of an oesophageal tube, and then summarizes as follows the main conclusions which they deduce from these and from previous experiments: (1) Animals readily contract tuberculosis by the intestinal route, not only in early but also in adult life, without exhibiting in the walls of the digestive tube visible lesions in evidence of the passage of the bacilli; (2) with young animals the bacilli are usually arrested in the mesenteric glands; in some cases the infection remains localized here for a longer or shorter period, and may terminate by healing; in other cases it leads to the formation of caseous tubercles, and travels by the efferent lymphatics to the main lymphatic circulation; (3) in adult animals the defensive action of the lymphatic glands is much less active; the bacilli are more frequently carried along, with the leucocytes which engulobe them, into the main lymph stream, and thence by the pulmonary artery into the lung; (4) the so called primary pulmonary tuberculosis of the adult is not frequently of intestinal origin; (5) of all the modes of infection, infection by the digestive tube is the most effective, and corresponds the best with the normal conditions of natural infection.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

49. Syphilitic Bradycardia.

Boinet and Rouslaroux (*Arch. Gén. de Méd.*, October 2nd, 1906) record the case of a patient, aged 38, who was admitted to hospital suffering from sudden attacks of vertigo. With the exception of syphilis, which was of long standing, there was no history of previous disease. The pulse of the radial, femoral, and carotid arteries was from 35 to 36, and was constantly maintained at this rate; but in the large veins of the neck there was a pulsation of 70. No arteries could be felt which were either tortuous or indurated. The heart showed no evidence of hypertrophy or dilatation. Over the apex three sounds were heard; there was a sharp, somewhat harsh systolic sound, followed by a normal, clear second sound. The diastolic pause was about twice as long as normal, and during the last third of this pause a dull sound was heard. Over the aorta the only abnormality heard was a distant echo of this third sound. The urine was excessive in amount (2 to 3 litres), and contained albumen, but no sugar; the amount of urea per litre was 5 grams. The patient's sight was poor, and his pupils completely failed to react either to light or accommodation. The authors explain their case as follows. They regard the superadded third cardiac sound as due to a contraction of the auricles which is not followed by a ventricular contraction. This cardiac irregularity they consider to be the direct consequence of a lesion in the central nervous system involving the "moderator" nucleus of the pneumogastric nerve. To this lesion (as also to the lesions of the ocular apparatus) they attribute a syphilitic origin (syphilitic endarteritis), and consider that the disturbed action of the central nervous system is intensified by the auto-intoxication due to renal disease.

50. Value of the Apical Outline in the Diagnosis of Early Phthisis.

Minor (*Amer. Jour. of Med. Sciences*, October, 1906) has during the past six years marked the outline of the apices of the lungs in all his cases of phthisis. The patient should sit erect or stand directly facing, or with his back to the examiner; care must be taken that the head is held exactly in an antero-posterior plane. Percussion must be very lightly made, and the little finger is the best pleximeter. In early tuberculosis, especially of the apex, but also of lower portions of the lungs, careful percussion will show a dislocation of the inner border outwards. The inner border, both anteriorly and posteriorly, is generally the first to be affected. The posterior inner border changes chiefly or only in its upper two-thirds. The dislocation of the outer border inwards generally occurs later, and a change of both inner and outer borders is less common than of either alone. In early cases the lines do not approximate at the top, but join their fellows from the rear; in old cases with marked fibroid shrinkage they often run together to an apex before they reach the trapezius border. Dislocation of the outlines without marked flattening or hollowing of the supraclavicular fossa would seem to depend upon lessening of the volume from lessened function, while that accompanied by such hollowing or flattening would point to the existence of fibrosis. One often finds in a case wherein one apex shows a burnt-out fibroid process and the other an incipient trouble, that the former will give marked dislocation and a hollowed supraclavicular fossa, while the latter will often show little or no hollowing at all, but a slight unilateral or bilateral dislocation. Bilateral dislocation speaks almost certainly for a fairly advanced or arrested process, and since the signs of an arrested process are often equivocal the determination of such an alteration is valuable. Apical shrinkage can be entirely compensated or obliterated by compensatory emphysema, and it is common in a recovering case to see the alteration in outline gradually disappear, and at the same time to note a filling out of a flattened fossa and a return to more normal resonance.

51. Recurrent Sensation.

Pansini (*Rif. Med.*, September 15th and 22nd, 1906), under the above title, discusses cases of return of sensation after nerve injury, the nerve being apparently still divided, and paralysis being still present. He publishes two cases in full (the first case affecting the radial nerve and the second the ulnar and median), and refers incidentally to others. In his opinion the evidence in these cases goes to support the view that after these nerve injuries some sort of compensatory nerve anastomosis takes place, just as is the case in the circulation after ligature of a vessel. When sensation does return it appears to observe a concentric course from the periphery to the centre. At the edge of the anaesthetic area it is common to get a hyperaesthetic strip—for example, in injuries to the spine. The author endeavours to see how far these observations can be explained on the current hypotheses as to the neurone or whether they could not be explained in other ways. The extraordinary immediate return of sensation when the divided ends of nerves are reunited has been often discussed, but still remains unexplained, and the author has no adequate explanation to offer. The absolute independence of the neurones has been somewhat shaken on the embryological side, and more recently Apathy and Bethe have pleaded for the existence of a network of fimbriae connecting the various nervous elements amongst themselves. The existence of a hyperaesthetic zone at the border of anaesthetic areas is, in the author's opinion, explained more satisfactorily by the existence of a terminal nervous rete in the sense of a true anastomosis than by simple interlacing from contiguity. On this anastomotic theory relapses of neuralgia after neurotomy can be explained without much difficulty; also the comparative rarity of anaesthesia in mixed polyneuritis and the intermittent character of the zones of anaesthesia, the sphincter troubles, etc., in tabes.

52. Lumbar Puncture in Epidemic Cerebro-spinal Meningitis.

A. Primavera (*Giorn. internaz. d. Sci. med.*, No. 19, 1906) discusses the diagnostic and therapeutic value of lumbar puncture in epidemic cerebro-spinal meningitis. He performs the operation while the patient sits up and bends forward with rounded back. The needle is made to enter ½ cm. from the middle line, at the level of a line joining the two iliac crests behind; it is passed steadily inwards and slightly upwards. Primavera states that lumbar puncture is of great therapeutic value in this disease; it should be performed as early as possible, for it is something more than merely palliative or symptomatic treatment. Examination of the cells contained in the fluid drawn off may be of considerable diagnostic value; if the fluid contains an excess of polymorphonuclear leucocytes the case is probably one of epidemic cerebro-spinal meningitis rather than of chronic meningitis due to some other microbic infection.

SURGERY.

53. Treatment of Cancer of the Larynx.

Von Bruns shows the important advance which has been made in the treatment of cancer of the larynx during the past thirty years or more. (*Deut. med. Woch.*, September 20th, 1906.) Tracing the history of the operative treatment of cancer of the larynx, he finds that in 1851 Buck opened up the larynx in a case twice and attempted to remove the growth, but without success. Equally bad results followed all attempts to deal with the disease by thyreotomy up to 1878, all of the 19 patients save 1 dying either of the operation or of recurrences during one and a half years. In 1875 Billroth performed the first total extirpation, and in 1880 it had to be admitted that the patient's position was perfectly hopeless. As far as the last-mentioned operation is concerned, Sendziak published the statistics from 1873 to 1894, including 188 cases, of which the primary mortality was 44 per cent.; recurrences occurred in 32 per cent., and in only 12 per cent. had no recurrence taken place within one year. Partial extirpation yielded better results. From 110 operations we learn that the mortality of the operation itself had sunk to 26 per cent., the recurrence frequency to 30 per cent., and 22 per cent. of the patients were free from recurrence after one year. The lesson taught by these statistics was that the chances of the patient depended primarily on the early time of operative interference. The possibility of an early operation depends naturally on an early

diagnosis, and laryngoscopical examination has led to a possibility of this. Fraenkel and Semon have done much in showing what the early laryngoscopical appearances of laryngeal carcinoma are like. The differentiation between external and internal cancer has assisted also in improving the situation. The internal form is much more common, attacks the vocal cords and the superior thyro-arytenoid ligaments, and, as the disease is localized in these situations for a comparatively long time without affecting the lymphatic vessels or glands, the chances for radical operation are much better than in the external form. Modern surgery, after trying total extirpation, gave it up in favour of partial extirpation, and the removal of half of the larynx was not infrequently carried out. Butlin and Semon, however, soon showed that thyreotomy performed as a preliminary to the removal of the carcinoma itself yielded the best results, and in suitable cases this method has proved itself to be the saving means of many lives. Thyreotomy is naturally only suitable for early cases of internal cancer of the larynx, in which the disease is limited to the soft parts of the interior of the larynx, and in which it is not extensive. The functional results of the operation are excellent; the respiration is usually not impeded, and the voice may be more or less retained. In a few cases the voice has scarcely been altered. Von Bruns has collected the results of some 114 cases. The primary mortality was 9 per cent., 22 per cent. of the cases were subjected to recurrence, while 48 per cent. of them were well after one year or longer. Good as these results are, they do not represent the best possible results, since a few operators have obtained extremely bad results, probably owing to faulty technique or want of careful selection of cases. Semon, on the other hand, has been able to cure 17 patients out of 20, that is, they are well after from one to thirteen years' observation; 1 died of the operation, and in 2 cases only recurrence took place. The details of the operation are briefly described. Von Bruns prefers to use scopolamine-morphine injections from half to one hour before, and then infiltrating the soft parts with novocaine and painting the mucous surface of the larynx with novocaine-adrenalin solution in preference to general anaesthesia. Local anaesthesia has advantages over general anaesthesia in that the field of operation is too small for both the surgeon and anaesthetist to avoid getting into each other's way, the haemorrhage from the laryngeal mucosa is limited or prevented, and reflex coughing is also avoided. As a rule he does not find it necessary to introduce a tampon cannula into the trachea. After some remarks on endolaryngeal methods, which he does not recognize as a wise procedure for malignant disease, he expresses his entire satisfaction with the modern thyreotomy with removal of the cancerous growth.

54. Tumour of the Carotid Body.

DA COSTA (*Ann. of Surg.*, September, 1906), in a record of a case of tumour of the carotid body on the right side in a man aged 52, points out the difficulty and danger attending the operative treatment of such growths. The swelling in this instance had slowly increased in size over a period of twenty years, and when first examined by the author had attained the volume of a small hen's egg. In the removal of the tumour, which presented marked indications of malignancy, the author, who was greatly embarrassed by profuse bleeding, found it necessary to ligature the common and internal carotid arteries and the internal jugular vein, and accidentally divided the superior laryngeal nerve. The operation was immediately followed by intense shock, and subsequently, after an interval of eight days, by complete hemiplegia on the left side. One day later the patient's life was seriously threatened by the effects of collapse of the right lung, which was attributed to laryngeal anaesthesia. The lung, however, speedily regained its normal condition, and eight weeks after the operation there were signs of progressive improvement in the paralytic condition, the man being able to move the left lower limb, and, with the support of a cane or crutch, to stand on both legs. He could also move the upper limb, which, however, at this time was still very weak. On histological examination, the removed growth was diagnosed as an endothelioma—a type of tumour to which most writers on the neoplasms of the carotid body apply the term "perithelioma." From the fact that the growth had invaded the vessels and the surrounding tissues, it was regarded as malignant. The author, in discussing the danger attending operative removal of an enlarged carotid body, states that in as many as 11 out of 17 records of such operations mention is made of ligature of all the carotid [illegible]. In regard to the associated danger of nerve injury, Dake found that in 5 of 15 collected cases one or other of the following nerves had been divided—the sympathetic, the pneumogastric, the hypoglossal, the facial, and the recurrent laryngeal. In 2 of this group of cases the operation was followed by unilateral paralysis of the vocal cord. It is evident, the author holds, that removal of a carotid tumour is an extremely dangerous operation, and one not to be lightly undertaken. He agrees with Reclus that the surgeon should not touch a growth of this kind unless it is productive of danger to life. So long as it progresses slowly it had better be left alone, but if, as in the case recorded in this paper, it has taken on rapid growth and is infiltrating the surrounding structures, it should, in spite of the danger, be removed. Surgeons, it is held, must be aware of the existence of such growths, the diagnosis of which is possible in many cases.

OBSTETRICS.

55. The Diagnosis of Pregnancy in the Second Month.

RUDAUX (*La Clin.*, December, 1906) discusses the importance of recognizing early pregnancy, since patients may require to know where conception has occurred, or it may be necessary to diagnose a pregnancy which the patient would desire to hide. Such diagnosis is not always easy, based as it is upon objective symptoms, or complicated by nervousness or obesity. The information obtained from a patient is not always reliable, and the main importance lies in the physical examination. A history of suppression of the menses, of digestive or nervous troubles, and of increase of the mammae or of the abdomen, is of little value unless confirmed by changes in the uterus. Palpation in the suprapubic region when successful will discover a tumour lying in the middle line and rising above the margin of the symphysis at the end of the second month. In the third month the tumour is about 7 cm. above this point. The only really reliable method of examination is per vaginam. The index, or, where possible, the index and middle fingers, are introduced into the vagina, and the cervix is reached; it is generally softened, which is not definitely diagnostic. When bimanual examination is made with one hand in the vagina and one over the symphysis it is possible to distinguish the tumour. If this is then moved by the external hand from side to side the movement can be felt by the hand in the vagina. With a little external pressure the uterus can be palpated between the two hands, and the globular form and increase in size are felt; it is also soft, and the surrounding tissues are infiltrated and oedematous. If in addition to these physical signs the patient has missed two monthly periods and experienced some of the early symptoms of pregnancy it is safe to consider that conception has occurred. Objective signs are only useful as corroboration of the examination. A loss at every menstrual period does not exclude pregnancy, but calls for particular inquiry into the nature and character of such losses. Occasionally one is misled by finding the uterus retroflexed.

56. Interstitial Tubal Gestation.

STROBACH (*Zentralbl. f. Gynak.*, No. 47, 1906) reports a case where the symptoms were relatively chronic. The patient was a strong woman, 30 years of age, who had been married five years, and had within that space of time been four times pregnant. After January 26th last the period ceased. The patient remained in good health until the beginning of March, when attacks of crampy pains in the left side set in, with vomiting and syncope. The pain and sickness continued and made the patient very miserable and quite unfit for her duties. For three weeks this condition went on, till, when Strobach attended her on March 26th, she was reduced to extreme debility, with a very rapid pulse and normal temperature. The abdominal walls were very thin, so that the outline of a tumour of the size of a fist could clearly be defined in the left iliac fossa. The uterus was connected with the swelling; it was enlarged and firm. Tubal pregnancy was diagnosed, and the curette was used, in order to make sure about the contents of the uterine cavity and to avoid the possibility of haemorrhage from separation of a decidua. As suspected, the instrument brought away decidual tissue in considerable quantities. On opening the abdominal cavity no adhesions were found, and only a moderate amount of free clot. A two months embryo, enclosed in unruptured membranes, was seen projecting from a rupture in the sac, which proved to be interstitial the round ligament lying external to the sac, whence proceeded the left Fallopian tube entire. During manipulation the fetal sac was delivered, the chorion following spontaneously, as though expelled from the sac

by pains. The sac was extirpated, the wound in the uterus closed by deep and superficial catgut sutures, and the left tube sewed on to the line of suture on the uterus. The right tube was normal, but Strobach removed it, as he wished to avoid the chances of uterine pregnancy, which would be associated with great risk of rupture of the uterus. At the same time, an incipient inguinal hernia was closed by Bassini's operation. Recovery was free from complication.

GYNAECOLOGY.

57. Sixteen Inches of Gut Torn Away during Curetting of Uterus.

An interesting monograph on abdominal section for trauma of the uterus, by Charles E. Congdon, has recently appeared in the pages of an American contemporary (*Amer. Journ. Obstet.*, November, 1906, p. 618). An original case under his own observation should be widely known, as it will act as a warning to all who use the curette, and will also show, as has been shown before in midwifery cases, that it is not always easy to recognize small intestine prolapsed into the cavity of a lacerated uterus. A doctor was called in to a woman aged 39, who had been confined five months previously of her second child. Certain vague symptoms induced him to dilate the uterine cavity for diagnostic purposes. He then made use of the curette, and, feeling some growth or body in the uterus, he grasped it with the placental forceps, made traction, and twisted it off. He now discovered that he had torn away 16 in. of small intestine. Then, we are informed, he fully realized the seriousness of the situation and immediately brought his patient to the Buffalo City Hospital, where she arrived in a condition of shock, with a subnormal temperature, the pulse 140. Dr. Congdon found the abdominal cavity full of blood. There was a laceration running across the fundus from tube to tube, and another extending through the uterine wall and right broad ligament; both bled freely, and were at once closed with catgut sutures. Sixteen inches of ileum were missing from the ileo-caecal valve upward. Haemorrhage from the mesentery had ceased, although some of its large vessels had been lacerated. The mesentery was ligatured with stout silk and trimmed, and the ileum was also trimmed. The opening at the ileo-caecal valve was closed, because the tissues around it were badly damaged, so that anastomosis could not have been safely made at that point. An opening was made further up in the caecum, and the ileum connected with it by means of a Murphy button. The peritoneal cavity was flushed, dried, and closed without drainage. There was no pyrexia during recovery; the button was passed on the thirty-first day, and the patient was discharged from the hospital in perfect health at the end of five weeks. Ninety-six cases of laparotomy for trauma of the uterus are tabulated by Dr. Congdon, and an instructive discussion followed the recording of his case at a meeting of a society. Much was said about perforation of the uterus and prolapse of gut; the former accident is commoner than can be judged from reports, nor is the latter so rare as is supposed.

58. Haematometra.

Mendel (*Zentralbl. f. Gyn.*, No. 52, 1906) has collected 41 cases of haematometra in a rudimentary cornu, adding 1 unpublished case which was under Zweifel's care. The patient was a young woman who had menstruated regularly, and had given birth to her first child three months before she came under observation. Since the first period after delivery sharp pains in the right side of the uterus set in. After examination tumour of the right ovary was diagnosed. When the abdominal cavity was opened the uterus was found to be of the size of a hen's egg, and attached to it was a tumour as big as an apple. The round and ovarian ligaments and the Fallopian tube proceeded from the tumour, which when tapped was found to contain old blood. Its inner surface was lined with normal mucous membrane; its cavity did not communicate with that of the normally developed part of the uterus.

59. Mucus in Vagina of Newborn Child causing Retention of Urine.

Rudaux (*Annales de Gyn. et d'Obst.*, December, 1906) writes of a female infant which was seized with spasmodic attacks on the day after its birth. It was well nourished, weighing at birth 7¾ lb. No urine had been passed, and the attacks were complicated by dyspnoea, lividity of the face, and great restlessness. There was oedema in the integuments of the hypogastrium and the hymen bulged forwards, a soft body as big as a pea projecting from its orifice. On pressure being applied by one finger on the vulva forwards, and another on the perineum, the soft body proved to be solid, pulpy mucus. Rudaux bent in two a stout piece of silkworm gut and used the loop for the complete extraction of the mucus through the narrow hymeneal orifice. Another loop was passed into the urethra, it brought away a little mucus, and immediately a jet of urine followed. Thenceforward micturition was spontaneous.

THERAPEUTICS.

60. Spinal Analgesia.

Pochhammer (*Deut. med. Woch.*, June 14th, 1906) says that since the introduction of stovaine in the place of cocaine, the position of spinal analgesia has been materially improved. The unpleasant and uncertain side-actions of the latter are practically not met with with the former, and at present he believes that the method of Bier's spinal anaesthesia is simple and free from danger, and is not more difficult to learn than the administration of general narcosis. The method which he employs is as follows: The patient is told to arch his back as much as possible while he is sitting on the edge of the operating table with his legs hanging down. The patient leans forward on the shoulders of a nurse, who stands in front of him. In the case of hysterical women and some anaemic young girls, it is better to be prepared to lay them down on their sides if there is any tendency to fainting, in which case a sudden cessation of the trickling of cerebro-spinal fluid will be seen. A large area of the back must be carefully disinfected, and one chooses the space between the processes of the second and third lumbar vertebrae, exactly in the middle line. It is usually easy to detect the first lumbar spinal process, when the back is well bent, by its prominence, but if one is not quite sure of this point it is better to count, feeling the individual vertebrae from below upwards. The site having been found, this is rendered insensitive by aethyl chloride, and the needle is driven directly inwards between the two processes. The back must be held straight. After one has passed the needle in a certain distance, one meets with a resistance, of an elastic character. This is the wall of the lumbar sac, which is held tense by the position. A slight short push forward, and the point of the needle is in the lumbar canal. This can be recognized by the sudden escape of fluid, which in a well-developed man streams forth in a powerful gush. Under all circumstances the fluid must escape fast or slowly on entering the canal. The author justifies his choice of puncturing in the middle line by stating that the canal is always hit off, that the puncture being at right angles to the lumbar sac is only a very small opening, and cannot tear, which may occur when the needle enters it obliquely. Further, wounding of a nerve or nerve root is practically excluded if one enters in the middle line, and the wounding of vessels is also extremely unlikely. He describes the methods which may be used when there is any difficulty in getting the needle properly in. The puncture should be carried out slowly and finely in order that the operator may be sure where the point of the needle is. The needle is guarded with a style. The quantity of fluid (stovaine solution) to be injected is sucked into the syringe, and may not completely fill it. The syringe must fit hermetically on the needle. Then the piston is withdrawn a little, in order to insure that the needle is in the canal, which is seen by the entrance of spinal fluid into the syringe. Of course, great care must be exercised to exclude air from the syringe, but should a little have got in, one can avoid injecting it by allowing the base of the syringe to be at a higher level than the rest. The fluid is then injected into the canal, and the needle and syringe rapidly withdrawn at the same time, and the puncture covered with collodion. If one wishes to produce anaesthesia higher up in the body, one can obtain a greater diffusion and a higher mixture by sucking out spinal fluid after injecting, reinjecting it, and repeating this. This is done while the syringe is still *in situ*. The results may be assisted by raising the patient's pelvis, so that the mixture of spinal fluid and stovaine tends to diffuse towards the patient's head. In order to avoid any taking off of the syringe he has devised a double syringe which allows of a 2 c.cm. syringe and a 5 c.cm. syringe to fit on a nozzle,

connected with the needle. The stovaine is made up in a 5 per cent. solution and sterilized by boiling. As a rule 1 c.cm. of this solution suffices, but slightly larger doses are advisable for strong young persons, for example, 0.06 or even 0.07 gram. Side-effects of stovaine, as compared with cocaine, are comparatively rare and slight. Collapse was not met with in over 100 cases, while an additional advantageous result is that the patient becomes mentally indifferent. Nausea and vomiting were met with not infrequently, but rapidly passed off. He thinks that the advent of vomiting indicates a high distribution of the analgesia. A disadvantage is at times met with by respiratory hindrance during laparotomies, but this was mostly overcome by a small dose of morphine or even passed away by itself. As a rule the analgesia lasts for about one to one and a half hours, but after from twenty to thirty minutes the upper limit begins to sink. Operations on the lower extremities, on the perineum and buttocks are extremely well adapted to this form of anaesthesia, but when one wishes to operate on the body between the level of the inguinal region and the umbilicus, the length of the procedure plays an important part. Radical cure of hernia and operations for appendicitis, if uncomplicated, as well as most bladder operations, can be carried out with its help, but when much pulling on the mesentery is unavoidable, general anaesthesia is mostly required. Epigastric hernia, gastrotomy and gastro-enterostomy may be performed under stovaine lumbar analgesia, but the bigger laparotomy operations are not so suited. After-effects were rare and slight, and he found that in over half of the cases neither side-effects nor after-effects were met with. Headache and backache were met with, but these were mostly of short duration. Very rarely was vomiting seen. In conclusion, he finds that as several points are still doubtful with regard to the mode of application and safety of the method, further trials should still be limited to hospital practice until more publications on the subject have appeared.

61. Kuhn's Intubation.

A. Dräs speaks to the good results which he has obtained by the employment of Kuhn's method of per-oral intubation anaesthesia in extensive operations on the head. In all he reports on 7 cases (*Deut. med. Wock.*, October 4th, 1906). These cases were: Resection of the upper jaw after tying the external carotid for cancer of the right upper maxilla; extirpation of a carcinoma of the tongue after tying the right external carotid; attempt to resect a practically inoperable carcinomatous tumour of the upper jaw; ligature of the external carotid and subsequent grafting a flap of skin from the forehead according to Thiersch; radical removal of a carcinoma of the right side of the neck, which had started in the maxillary duct; atypical resection of the upper jaw for a malignant tumour; extirpation of a cancerous growth of the tongue and floor of the mouth after ligature of the external carotid; and uranoplasty for cleft palate, during which the tamponage of the air passages rendered it easier to control the haemorrhage. The patients were all chloroformed in the usual manner, and a mild degree of asphyxia was produced. The tube was then introduced in the manner prescribed by Kuhn, the mouth being opened by Heister's or O'Dwyer's instruments and the tongue being held forward by forceps. The anaesthetist stands on a raised platform to the right of the patient. Passing his left index finger into the fauces he feels for the epiglottis, turns this upwards, and then feels for the opening of the larynx. Then he passes the tube in with his right hand. One should take care that the fastening joint of the mandarin tube looks upwards, and that the mandarin is quite straight when the tube is in it. One recognizes if the tube is in the larynx by the stridulous breathing, which immediately ceases when the mandarin is withdrawn. This is done by fixing the tube with the left index finger and firmly pulling out the mandarin. The fastener or joint for the rubber tube must then be turned toward the side opposite to that on which the operation is to take place, and the rubber tube may be brought out of the mouth at the angle. Then after the tube is fixed, the forceps are applied and partly the packing of gauze is carried out round the tube in the larynx. The anaesthetist can assist in the preparation well by auscultating through the funnel and tube. One point is insisted on, and that is that the mandarin should have a proper curve, if not one-third of a circle. With regard to the anaesthetic, chloroform was given at first, and continued also by inhalation until the anaesthesia was satisfactory, and Schleich's solution was substituted, care being taken to use the proper dose. When ether is used when it is applied drop by drop through the funnel, the quantity used is reduced considerably from the quantity usually employed. In conclusion he states that the method is of special advantage, because the operator and anaesthetist are entirely independent of one another; because the latter is able to keep up an equable anaesthesia with a minimum quantity of anaesthetic; because in these operations that terrible condition of half-anaesthesia is avoided; and, lastly, because no blood can get into the larynx. No bad effects from the intubation were seen after the operations. He therefore recommends this method.

PATHOLOGY.

62. Spirochaeta Pallida.

E. Hoffman and A. Halle describe an improved method for fixing *Spirochaeta pallida* (*Muench. med. Woch.*, July 31st, 1906). They state that up to the present the staining by Giemsa's method produces the best results, but the fixation of the preparations has offered some difficulty. In thin streaks one can dispense altogether with fixation, but the attempt to obtain thin smears at times leads to the mechanical destruction of cells and nuclei, and in this way all sorts of threads, granules, and other detritus are formed and may give rise to difficulty in seeking for the spirochaetes. When these micro-organisms are sparse in any secretion, it is an advantage to be able to use somewhat thicker smears. The authors have therefore adapted Weidenreich's blood method. The details are as follows: One places 5 c.cm. of a 1 per cent. osmic acid solution in a small watchglass and adds 10 drops of glacial acetic acid to it. The watchglass is placed in a Petri capsule, and some clean coverslips are exposed to the osmic acid vapour over the watchglass for two minutes. The secretion to be examined is then applied to the coverslips on the side which has been exposed to the vapour by rapidly passing a platinum loop or other convenient instrument dipped in the secretion once across it. The coverslip is then returned to the osmic acid vapour for one or two minutes. Prolonged exposure to the vapour damages the staining characters. If necessary the specimen is then dried over a flame, or, better, by gentle warming, and is then placed for one minute in a very dilute solution of potassium permanganate, after which it is well washed in water and dried on blotting paper. Then one stains in Giemsa's eosin azur solution. The spirochaetes are tinted a deep red, while the background in bluish-red and the cells are well preserved. The spirochaetes can be found quite readily even in the thickest parts of the preparations. Formalin can also be used and is considerably cheaper than osmic acid, but the results are not so good. Pyridin gives quite useful preparations also. The authors, however, state that experienced observers will find fresh preparations the most useful and best, and they advise adding a little physiological saline solution to a drop of serous secretion, which is then simply placed between the slide and coverslip, and the evaporation is prevented by edging the coverslip with vaseline. Such preparations last for a considerable time, and the spirochaetes may be watched alive in this way.

63. Acute Gastro-Intestinal Infections.

G. Rocchi (*Bull. d. Sci. Méd.*, Bologna, No. 8, 1906) gives an extensive summary of the bacteriological work that has been done upon a number of acute infective gastro-intestinal infections. Many of the bacteria concerned belong or are analogous to those of the *Bacillus coli* and *Bacillus typhosus* groups, but differ from them in numerous minor cultural characteristics. It is not possible to give in detail all the conclusions to which the author is led. His paper deals with the various symptoms produced by and the inter-relations of *Bacillus paratyphosus* (A and B), Gärtner's *Bacillus enteritidis*, *Bacillus botulinus*, *Bacillus coli communis*, *Bacillus proteus vulgaris*, *Bacillus paracolon*, *Bacillus pyocyaneus*, *Bacillus typhi murium*, *Bacillus icteroides*, the bacillus of hog-cholera, and the numerous sub-varieties of many of these bacteria. Rocchi finally concludes that Gärtner's bacillus and *Bacillus paratyphosus* are widely diffused in nature, and may become very pathogenic to both man and domestic animals. They may produce suppurative or toxic disorders, either sporadically or in epidemics; typhoid fever may be produced by any one of a large variety of microbes, and yet run a typical course. As some of these microbes may be found infecting meat, the possibility that typhoid fever may be due to infection from animals, directly or by way of their flesh, must not be overlooked. Some 200 references to the literature are given.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

64. **Heart-block.**

Huchard and Bergonignan (*Journ. des Prat.*, December 22nd and 29th, 1906) in two papers review the present state of our knowledge of this condition. They point out that in the normal condition the auricular systole precedes the ventricular by one fifth of a second, and that any increase of the interval of time elapsing between the auricular and ventricular beats is pathological, indicating as it does a tendency to the dissociation of auricular and ventricular contractions. The result of this pathological change may be either a disappearance of a ventricular contraction, or a ventricular systole may occur only every second, third, or fourth cardiac revolution; or, lastly, there may be an absolute dissociation of the auricular and ventricular beats, the auricles and ventricles beating independently of one another. These forms of altered normal heart rhythm constitute the various types of "heart-block." As the authors point out, the notion of "heart-block" throws fresh light on the pathology of allorrhythmias in general, and especially on that form of cardiac disturbance associated with the names of Stokes and Adams, tending to place the cause of this affection rather in the heart than in the medulla oblongata. Gaskell, Kent, and His have shown that the auricles and ventricles are intimately connected with one another by muscular fasciculi, by means of which stimuli for contraction can pass over from auricle to ventricle. The recent researches of Tawara show that this band of muscle fibres connecting auricle with ventricle arises in the wall of the right auricle, near the anterior angle of the coronary vein; it descends beneath the foramen ovale, and crosses obliquely the auriculo-ventricular septum; from here it passes into the fibrous portion of the interventricular septum, and, on reaching the muscular part of the septum, divides into two branches, right and left, which pass down beneath the endocardium on each side of the ventricular septum; at the lower fourth of the septum they divide into numerous branches, some passing into the papillary muscles, others into the musculi papillares of the second and third order, and finally losing themselves amongst the ordinary cardiac muscle fibres. Histologically, these fibres are much less rich in sarcoplasm than the ordinary cardiac muscle fibres; they have a marked tendency to interlace, and lastly, they are relatively pale. Erlanger found that by lightly compressing this conducting sheath of muscle fibres the interval of time existing between auricular and ventricular contractions became lengthened, and soon the ventricle ceased to contract about once in every eight or ten cardiac cycles. Further, the intersystolic interval becomes especially prolonged immediately before the last effective ventricular systole, and becomes very short after the ventricular intermittence. On still further compression ventricular systole failed every second, third, or fourth cardiac cycle—that is to say, a partial heart-block results; if this condition of partial heart-block be allowed to continue too long complete heart-block follows, the ventricle beating quite independently of the auricle. From the results obtained by Erlanger by stimulating the vagi in an animal suffering from heart-block it appears probable that normally the vagus has only an indirect action on the ventricle; it acts on the auricles, which in turn govern the ventricles by means of the conducting band of muscle fibres previously referred to. Since attention has been directed to the phenomenon of heart-block, one has frequently been able to demonstrate characteristic and isolated lesions of the conducting band of muscle fibres in subjects who during life had presented allorrhythmias, and especially the Stokes-Adams syndrome. It appears that not only lesions of the principal trunks of the conducting band of fibres, but also lesions involving the terminal portion of this band, are sufficient to give rise to marked cardiac disturbances. Such lesions may be nodules of rheumatic myocarditis situated under the endocardium and involving the fibres of the conducting bands, or gummata and tubercles situated at the lower angle of the membranous ventricular septum, by breaking the continuity of the conducting band, may give rise to disturbed cardiac action. In cases of Stokes-Adams syndrome many observers have found characteristic lesions of the conducting band of fibres. Since anatomy, experiments, and pathological anatomy seem to prove conclusively that the phenomenon of heart-block is protracted by a disturbance of the function of the conducting bundle of fibres, what therapeutic indications are we led to deduce? In a patient affected with rheumatic endocarditis, Mackenzie found that the interval of time elapsing between the auricular and ventricular beats was markedly prolonged; on giving digitalin to the patient, regular intermittence was produced (partial heart-block); this phenomenon disappeared when the digitalin was stopped. Mackenzie concludes that digitalin has a special tendency to affect the already altered functions of the cardiac muscle. These results explain why digitalin is useless or even dangerous in cases of arrhythmias of myocardial origin.

65. **A New "Organic" Reflex Sign.**

W. Bechterew of St. Petersburg has described (*Neurol. Centralbl.*, No. 7, 1906, p. 290) a peculiar reflex phenomenon, consisting of plantar flexion of the foot and toes, in cases of affection of the central motor neurons, ranking in significance with true ankle clonus, the extensor plantar reflex, and other indications of structural interference with the pyramidal tracts. The phenomenon in question is as follows: If one takes hold of the patient's foot and causes the toes to be in strong plantar flexion, there follows immediately dorsiflexion of the foot and toes. In advanced cases and with stronger plantar flexion there ensues, closely after the dorsiflexion of the foot and toes, a flexion movement of the knee and hip-joint. This he considers a distinct reflex phenomenon produced by putting on the stretch the tendons of the dorsiflexors of the foot and those of the extensors, which leads to a contraction of the corresponding muscles and a consequent dorsiflexion of the foot and toes. In the case of stronger plantar-flexion of foot and toes the reflex spreads not only over the muscles whose tendons were stretched, but also to the flexors of the knee and hip. This reflex he has observed in traumatic lesions of the spine, in spinal syphilis, in myelitis, and in intracranial lesions of the motor tracts. It is to be looked upon as an expression of a general increase of reflex excitability. The phenomenon is of special value because it can be elicited in the presence of organic lesions when ankle clonus and Babinski's extensor reflex cannot be obtained.

66. **A Gastric Reflex.**

Michelazzi (*Clin. Mod.*, An. 12, N. 89), working on the lines of those who have observed a reflex contraction of certain viscera—for example, the heart and the diaphragm—after stimulation of the skin overlying them, has carried out a series of researches on similar lines in relation to the stomach. He first determined the exact area of the stomach by the Quiesoto-Landi method, and then, after a short interval, vigorously sprayed the skin over this area with ether and again determined the gastric area. In 3 healthy persons there was a decided gastric reflex under these conditions, as shown by a diminution (as much as 2 cm.) in the gastric area, demonstrating the motor power of the stomach in these cases. In 9 other cases (3 with old-standing gastric catarrh but with normal gastric juice, 4 with anaemia, and 2 convalescents from pneumonia and pleurisy) this reaction was either absent (in the first 5) or diminished (in the 2 convalescents). The author suggests that some of the cases of pretuberculous dyspepsia (in 2 of his cases of anaemia there was some tuberculous mischief at the apex) may be due to diminished motor power in the stomach due to partial paresis of the motor nerves from tuberculous toxins.

SURGERY.

67. **Surgical Treatment of Gastric Ulcer.**

L. R. Rydygier, in discussing a paper at the German Congress of Surgery, states that, although the fact has been forgotten by some, twenty-five years ago he regarded gastric ulcer as an indication of resection, and that he was the first to perform this operation (*Zentr. f. Chir. Bloch*, September 16th, 1906). In discussing the operative treatment, he finds that the choice lies between resection and gastro-enterostomy. A definite decision as to which of these is the better will only be available when a large

collection of cases will allow one to estimate how often perforation and haemorrhage occur after each. Theoretically, one may say that the procedure which offers the best chance of complete and permanent cure, and which leaves the parts most nearly to a normal condition, is resection. An objection has been raised to resection that when the ulcers are multiple the operation can only deal with one or two. This is true; but, as a rule, there is only one ulcer, and, when there are more than one, one certainly deals with the one which is threatening to do the most damage. Gastro-enterostomy aims at improving the drainage of the stomach and leaves the ulcer severely alone. When the ulcer has callous edges and callous base, it cannot be a matter of indifference whether one leaves it or not. Besides, the resection improves the drainage of the stomach by removing the ulcer and its obstructing edges and allows of a normal mixing of the gastric juices with the pancreatic secretion and with the bile at the proper place. Callous ulcers can heal after gastro-enterostomy; but, on the other hand, while the healing process is being waited for, perforation and haemorrhage may lead to the death of the patient. Statistics show that of 33 patients only 9 were cured by this operation. In many cases an attempt has been made to exclude cases of gastro-enterostomy for gastric ulcer where the death takes place from carcinoma at a later date. This is not fair, in the author's opinion, since it is accepted that a simple ulcer may undergo malignant degeneration, and therefore resection could have stepped in to prevent this unhappy after-result. With regard to the risk of operation, he points out that the mortality from resection is only about 5 per cent. when performed for simple ulcer, as against 32 per cent. for malignant ulcer. Resection is a technically difficult operation, but experience will undoubtedly simplify the procedure. He gives some details of modifications which he has carried out, and which render the operation more simple. After the operation it is wise to warn the patient to be careful as to diet, as the secretory function of the stomach does not always return to a normal value. He therefore regards resection as the rational operation for gastric ulcer.

68. Large Cysts of the Suprarenal Capsule.

Terrier and Lecène (*Rev. de Chir.*, No. 9, 1906) publish an original case of large cyst of the suprarenal capsule, and with the object of elucidating the pathological and clinical characters, and also the proper treatment of this rare form of tumour, give the results of a careful study of this and nine previously recorded instances. Although several varieties of suprarenal cyst are recognized by pathologists, the only two forms of any surgical interest are, it is stated, the serous cyst and the haemorrhagic pseudo-cyst. Hydatid cyst of the suprarenal capsule is extremely rare, two authentic cases only having been recorded. The above-mentioned varieties of cystic growth alone are relatively frequent, and capable of attaining such dimensions as to become clinically recognizable, and to claim the title of large tumours of the suprarenal capsule. The symptoms of these cysts are very vague, and their diagnosis is always very difficult and often impossible. As the tumour is always unilateral, it does not give rise to any signs of Addison's disease, and consequently the surgeon is not likely to be assisted in his diagnosis by any general symptoms. As a result very probably of pressure on the abdominal sympathetic, the growth of a suprarenal cyst, which is always very slow though steadily progressive, is associated with occasional attacks of intense pain with vomiting. In the differential diagnosis of suprarenal cysts of large size, one has to bear in mind that the pathological conditions with which such tumours may be most readily confounded are: Hydatid cysts of the liver or spleen; cysts of the mesentery or mesocolon; pancreatic cysts; serous cysts of the spleen; and, finally, renal or perirenal cystic tumours, the former including especially hydronephroses. In doubtful cases the presence of biliary pigments in the urine would suggest a hydatid cyst of the liver, and free mobility of the tumour, if on the left side, would indicate a cyst of the spleen. An association of glycosuria, steatorrhœa, and faulty digestion of albuminoids and fatty food would point to a pancreatic cyst; and, finally, separation of the ureteral currents of urine would enable the surgeon to make sure of the functional capacity of the kidney on the side of the tumour, and thus to eliminate hydronephrosis. Exploratory puncture is altogether condemned as being often useless and always dangerous. The exact nature of the swelling in a case of suprarenal cyst cannot be made out after its exposure by laparotomy, and even then a partial dissection of the rest of the tumour will often remain necessary. In the operative treatment of these cystic growths the transperitoneal method by median or lateral laparotomy is always to be preferred to the lumbar method, which does not, as in cases of renal tumour, afford enough room for efficient exploration of the connexions of the growth. Complete extirpation of the cyst should be practised if possible; but if the sac cannot be readily and gently detached from the surrounding parts, the surgeon should rest content with partial resection of the wall of the cyst, and with the method of marsupialization in which the margins of the sac are attached to the external wound and the cavity is packed and drained. The results of the operative treatment of large suprarenal cyst have not up to the present time been satisfactory. Five cases only have been thus dealt with, of which three were fatal. The authors anticipate that in the future improvement in the results of surgical treatment of these rare retroperitoneal cysts will be effected by further progress in technique and by a better knowledge of the pathological anatomy of such growths.

69. Phalanx Replaced by Decalcified Bone.

Gaignerot (*Sem. Méd.*, July 14th, 1906) exhibited to the Anatomical and Physiological Society of Bordeaux a patient in whom one of the phalanges of the right hand, destroyed by suppuration, had been replaced by a piece of decalcified bone. A radiograph of the hand showed the new bone in good position, slightly thickened, but otherwise normal in appearance, and only gymnastic exercises were needed to restore all the movements of the finger.

OBSTETRICS.

70. Ectopic Gestation.

The issue of the *Journal of Obstetrics and Gynaecology of the British Empire* for June, 1906, is devoted to a series of articles on extrauterine pregnancy. The first article, by J. K. Kelly and A. L. McIlroy, discusses ovarian pregnancy and describes a case. The authors suggest that, while the occurrence of blood cysts of the ovary is common, the specimens are not often carefully examined for products of pregnancy, and that the frequency of occurrence of ovarian pregnancy could be easily determined if a few pathologists were each to examine a series of cases of blood cysts of the ovary. In their own case the pregnancy was a very early one, and haemorrhage sufficient to destroy the ovum might occur at even an earlier period, and give rise to only a small follicular collection of blood suggestive merely of a haemorrhagic follicle. After briefly describing the cases previously recorded, the authors describe in some detail their own case. Here the patient was a woman 33 years of age, who had been married twelve years, and given birth to five children, the youngest 2½ years old. The patient's last menstrual period had been about thirteen weeks before admission, and six weeks after the period she had been suddenly seized with severe pain in both iliac regions, and had had a shivering fit. On the following day menstruation began and lasted four days, and haemorrhages had continued after this to occur at irregular intervals. On admission to hospital the diagnosis made on the physical condition and on the history was of extrauterine gestation. At the operation a blood cyst was found in connexion with the left ovary of about the size of a large victoria plum. The adnexa of the right side were normal. Some months later a minute examination of the specimen was made in order to decide whether it should be kept for the museum. Upon a microscopical examination chorionic villi were found in the blood clot, and a complete investigation of the whole ovary was entered upon. The following points were made clear by the investigation: (1) The whole ovisac was completely composed of ovarian tissue. (2) The pregnancy had occurred within a Graafian follicle, as was proved by the presence of lutein cell tissue almost directly adjoining the fetal epiblastic structures but separated from it by a layer of fibrin and connective tissue, thus showing the connective tissue as the normal tissue for the embedding of the ovum, whether intrauterine or extrauterine. (3) No rupture had taken place in the blood mass, but the point of least resistance was found at the lower thinned out portion, where the pressure of the blood mass had been greatest. (4) The fact that no decidual cell elements were found negatives the statement that pregnancy can take place only on tissue which has undergone some previous genetic influence. (5) The Fallopian tube was normal. (6) It was apparent that the pregnancy had originated within the ovary. Ovarian tissue entirely surrounded the fetal structures, and the

fact that there had been no break in the continuity of the walls and the lutein-cell envelope showed that the ovum had become fertilized while within its Graafian follicle. In the next article F. W. N. Haultain brings out the following points: (1) The difficulty of diagnosis of extrauterine gestation from the irregularity of the signs and symptoms; (2) the frequency with which ectopic pregnancy is simulated by other conditions; (3) the ease with which it may be mistaken for an ordinary abortion and the necessity for thorough pelvic examination in all such cases; (4) lastly, but most urgently, the absolute necessity for removal as soon as even a probable diagnosis has been made. The irregularity of occurrence of the typical signs and symptoms of the condition is shown by the fact that in the 23 cases under the author's observation amenorrhoea was absent in 5 cases, irregular haemorrhage was absent in 4, pelvic pain or discomfort was absent in 4, shedding of the decidua was absent in 16. As regards differential diagnosis, the author considers only the record of mistakes in his own experience. Cases operated upon on a mistaken diagnosis of ectopic gestation were a case of dermoid ovarian cyst with a ruptured vein in the pedicle, one of simple unilocular ovarian cyst associated with pregnancy, and one of ovarian abscess with salpingitis, while a fourth case described is one diagnosed as incarcerated fibromyoma, in which at the operation a large blood sac enclosing an atrophied ovum was found; two other cases which were at one period mistaken for ectopic gestation but which were not operated upon have also come under the author's notice, one which proved to be a bicornuate uterus with intrauterine pregnancy, the other an intrauterine pregnancy combined with intestinal obstruction due to accumulated faeces. In support of the necessity of removal of the gestation sac it is pointed out that early operation is usually easy and safe and removes all chance of further trouble, while to temporize is to expose the patient to definite risks of suppuration, continued growth of the gestation, and recurrent severe haemorrhage. Should an operation be finally necessary, it has frequently become one of the utmost difficulty. F. E. Tayler discusses the association of extrauterine gestation with uterine fibromyomata. Uterine myomata are of interest in connexion with extrauterine gestation first, because the two conditions may simulate one another and the diagnosis be a matter of great importance as well as of difficulty, and, secondly, because myomata occurring in the cornu, fundus, or upper part of the body of the uterus seem to have a special tendency to obstruct the lumen of the interstitial part of the tube and so to conduce to the production of tubal gestation; it is possible that the rarity of the combination of the two abnormalities is due to the fact that myomata are usually conducive to sterility. The author gives accounts of the cases of extrauterine gestation combined with the presence of myomata described in the literature, and in addition gives the clinical history of a case which came under his own observation. The points of special interest in his case are that the symmetrical enlargement of the uterus due to the presence of the myoma suggested the diagnosis of simultaneous intrauterine and extrauterine pregnancy, and that the position of the myoma, which was mesially situated in the fundus, was such as to cause obstruction to the uterine end of each tube. In some of the other recorded cases the position of the myoma is definitely shown to be such that it obstructed the uterine end of the pregnant tube. W. A. Milligan contributes an article on the diagnosis of early extrauterine pregnancy. The subject is divided under the following heads: (1) What the patient tells (*a*) in her own words, (*b*) in answer to more minute inquiry; (2) what may be expected to be found on examination; (3) the most likely things that may be confused with an extrauterine pregnancy. The symptom for which advice is sought is almost certain to be pain; an interesting point is that the pain may possibly be referred entirely to the act of micturition. In addition to the history of pain the patient frequently reports an irregularity in menstruation. The more minute inquiries with respect to the pain are important, as a correct interpretation of the symptoms often leads to a right diagnosis. Haemorrhage may often be differentiated from that of an ordinary period by the colour of the blood, which in ectopic gestation is often dark, almost blackish, by the persistence of the haemorrhage and by the presence of membrane or pieces of membrane. A history of having "never missed a period" is not to be taken as excluding the diagnosis of ectopic gestation. If no period has been missed the point to elicit is whether the bleeding that has come on with the pain is like that of an ordinary period, and, if not, in what the difference lies. Among the conditions which may be confused with extrauterine pregnancy are: (1) Intrauterine pregnancy; in one of the author's cases a patient with all the symptoms of extrauterine gestation, and with, on examination, the feeling of a soft swelling not apparently incorporated with the uterus, yet proved to have an intrauterine pregnancy, and gave birth to a healthy child after a normal labour. (2) Retroversion of the gravid uterus; here the chief points to be relied upon for diagnosis are the urinary symptoms and the bimanual examination. (3) Inflammatory and other acute abdominal processes: (*a*) Cases of pyosalpinx often present difficulties of diagnosis, but the temperature chart, the pulse, and the pain generally afford pretty definite evidence; (*b*) cases of cellulitis, more especially when there has recently been an incomplete abortion; in such cases there are in favour of the diagnosis of an inflammatory condition, the temperature changes, the pulse-rate, and the tenderness on examination; (*c*) appendicitis; (*d*) rupture of any abdominal viscus into the peritoneal cavity; (*e*) intestinal obstruction. Among tumours, (*a*) ovarian tumours, especially small ovarian tumours with twisted pedicles, ovarian tumours accompanied by intrauterine pregnancy, and ovarian tumours occurring along with an incomplete intrauterine abortion; (*b*) fibromyoma and fibrocystic tumours; (*c*) haematocele; (*d*) haematoma; (*e*) haematosalpinx. In addition to these papers, the number contains reports of cases by different authors, and a critical review of recent work on tubal pregnancy by H. R. Andrews, and a review of current literature on ectopic gestation.

GYNAECOLOGY.

71. Ureteral Fistula after Labour.

Küstner (*Zentralbl. f. Gynäk.*, No. 48, 1906) reports a case of a woman, aged 30, who had passed through two labours. The forceps was applied at the first labour, and there was a rise of temperature during the puerperium. The second labour lasted for twenty-four hours, but ended spontaneously. High temperature was observed for a month. The patient five months after the labour complained that although she could pass urine voluntarily some more constantly came away involuntarily. Uretero-cervical fistula on the right side was diagnosed, and removal of the right kidney recommended. Küstner preferred a plastic operation. He adopted the method of intraperitoneal implantation of the right ureter into the bladder. The separation of the bladder from the cervix being effected without dividing the round ligaments, it was found that the ureter communicated laterally with the canal of the cervix. By catheterization from the bladder it was proved that the right ureter was impervious for two centimetres, or over three-quarters of an inch. Küstner for that reason did not attempt ureterorrhaphy, but divided the ureter above the fistula, and implanted it into the bladder. The right appendages were removed and the left Fallopian tube resected, its stump being pushed into the parametrium and covered over by sutures in the broad ligament. This resection was done to sterilize the patient. The operation proved successful.

72. Fibroma and Fibromyoma of Mesentery.

Bowers (*Ann. of Surg.*, December, 1906) reports a case where the patient was a girl, aged 15. After attacks of nausea, which came on late in the day, she noticed an enlargement on the left side of the abdomen on a level with the umbilicus. On two occasions when the patient was under the anaesthetic the tumour disappeared, slipping up under the ribs; when the effects of the anaesthetic passed off it could easily be defined again. The patient had lost flesh and the catamenia had ceased. The tumour was removed; it lay in the lesser omental cavity, attached by a pedicle to the transverse mesocolon and adherent to the posterior aspect of the stomach. It was a pure fibroma, of the size of an orange. There was much bleeding, and the cavity whence it was enucleated was packed with gauze; transfusion was necessary on account of shock. The patient recovered. Bowers adds reports of twenty-three other cases. No less than eighteen out of the entire twenty-four occurred in female subjects.

THERAPEUTICS.

73. Tuberculin in Phthisis.

H. Lüdke speaks of his observations on 100 cases of phthisis treated with Koch's old tuberculin (*Zeit. f. Tuberculosis*, vol. ix, No. 2, 1906). After tuberculin had been introduced it was applied without skill in all sorts of

unsuitable cases, and thereupon earned a bad name, and within a short time of its introduction dropped into discredit. During the last five years, however, it has again been employed, and in the sanatoriums and other places has gained a reputation of being very useful in treating phthisis. Its diagnostic value has been recognized for some time. The difficulties of applying it in practice with good results lay in the recognition of an individualizing method; neither clinical experience nor experimental examination appeared to be able to supply this. One is only justified in speaking of a relative cure of cases treated with tuberculin, since the proof of an absolute cure can only be obtained after controlling the cases frequently and for a very long time—even until the death of the patient occurs. No clinical, biological, or other method of determination can definitely prove whether a patient is improved or cured. Besides, the dietetic-hygienic treatment of the sanatorium gives such good results that it is, further, difficult to determine how much tuberculin has done. To begin with, the author injected from $\frac{1}{10000}$ to $\frac{1}{1000}$ mg. of tuberculin, and the dose was then increased in suitable cases to $\frac{1}{10}$ mg., according to the general condition and the physical signs. The maximum dose given was 0.1 gram of tuberculin, but the number of patients who received between 0.01 and 0.1 gram without showing bad results was very small. The temperature was first observed for from three to five days, while the patient was kept in bed. No patient who had marked fever, or who had a pulmonary haemorrhage should be injected. In 8 cases of patients in the first stage, with mild fever, the tuberculin treatment did no good. In 4 cases of fresh haemorrhage in which tuberculin was given no harm was done, although the bleeding returned mildly in three of the cases. No harm resulted in giving tuberculin in mitral disease, although this has been given as a contraindication. Epilepsy and hysteria are also said to be contraindications. Beginning with 0.01 mg., and ending with 0.1 gram, the course of treatment usually occupied from four to five months, and consisted of about forty injections. In the course of four years the author has gained experience of some 4,000 to 5,000 injections in this way. Only cases in which the diagnosis was confirmed by finding the bacillus were included in the series. The majority of cases were in the second or third stage of disease, since all the early cases were sent on to a sanatorium as soon as possible. The material at his disposal was such that there was no question of obtaining perfect cures or of permanent cures, nor could he judge the results from the standpoint of the patient being able to work for a living (*Erwerbsfaehigskeit*). As many of the patients could only be watched for a short time after discharge, he restricts himself to the condition at discharge. Thirty-six patients were in the third stage of phthisis, that is, had signs of cavity without or with complications of a tuberculous character in the larynx, intestine pleura, or kidney. Of these, 30 per cent. that is, 11—died in hospital, 16 were discharged at their own request subjectively but not objectively improved, and the remaining 9 did not show any improvement; 64 patients were in the second stage, that is, with well-marked physical signs without cavity, with tubercle bacilli in copious sputum and at times with early tuberculosis of other organs. In 14 cases objective and subjective improvement was noted, in 23 only subjective improvement, in 17 no improvement was noted, and in the remaining 10 the condition had become worse. The subjective improvement in the cases was very marked, and he found that with care, no harm is done by using tuberculin. After discussing the treatment and its effects minutely, he passes on to the question of tuberculin immunity. He arrives at the conclusion that an individualizing tuberculin therapy may lead to a tuberculin immunity. The tuberculin immunity is not always identical with a tuberculosis immunity. In the course of a tuberculin immunity, a histogenic immunity against the tuberculous processes may be achieved, and then the pathological process will be arrested and even healed. The tuberculin treatment depends on an attempt to hasten the absorption of the inflammatory products by increasing the acute inflammation, and by encapsuling the affected tissue. He believes that tuberculin can lessen the subjective symptoms, and thus lead to an improvement in the general strength, and for this reason he gives tuberculin the preference to all other forms of specific treatment for tuberculosis.

74. **Borovertin.**

In spite of long years of searching, no satisfactory urinary [illegible] until Voegtlen introduced [illegible] to Sidney Ringer and Hale White. He confirms and [illegible] that the [illegible] on micro-organisms establish its inhibitory action on micro-organisms at body temperature, its power of dissolving uric acid without altering the acid reaction of the urine, and its mild diuretic effect. It is, therefore, indicated in all bacterial affections of the urinary apparatus and also in the uric acid diathesis. But notwithstanding this, there are limits to the therapeutic capabilities of urotropine, and it has its objectionable side effects. Large doses may produce irritation of the bladder and may upset the gastro-intestinal canal. Substitutes for urotropine have therefore been introduced. The salicylate of urotropine has been tried but is not satisfactory. Hetralin, a dioxy-benzol-hexamethyl tetramin is said to yield good results. Helmitol and neu-urotropin (new urotropine) failed to give sufficiently good results to justify either in being accepted in the place of urotropine. The author thought that as boric acid has the capability of rendering the urine acid, if it could be combined with urotropine it would allow the latter to act in every case, and he therefore had some experiments carried out, with the result that four compounds were formed. These were borates of urotropine, the first being a mono-borate of hexamethyl tetramin, the second being the deutero-borate, the third the tri-borate, and the fourth the tetra-borate. They are firm combinations, and no free boric acid is obtained by dissolving the salts in alcohol in the cold. Formaldehyde can be obtained from the compound by heating with acids or ammonia and by oversaturating acid solutions with alkali. The borates are crystalline powders, and are soluble in water; they are bitter to taste and form slightly acid solutions. He has employed the tri-borate, as being the most suitable. The dose used was from 1 to 4 grams, with or after meals. He calls the compound "borovertin." The excretion begins rapidly after taking the preparation. Hexamethyl tetramin can be detected fifteen minutes after in the urine. Urine of a patient who has been taking borovertin only shows a little mould and opacity after standing open at 30° C. for nine days. The urine of patients taking borovertin becomes clear and acid in a few days. He has employed it in a large number of cases, and has found it act when urotropine had failed. It failed in pyelitis, in renal calculus, in tuberculous cystitis, and in gonorrhoeal cystitis. In one case of phosphaturia it failed, while in a second it acted well. It proved especially valuable in cases of hypertrophied prostate and weakness of the bladder, and also after operations, when it was necessary to catheterize frequently. In a few cases it produced loss of appetite and sometimes even vomiting in large doses, and he therefore regards it advisable to give 1 or 2 grams to start with, and only to increase it when one finds that it is well tolerated. Diarrhoea has not been met with.

PATHOLOGY.

75. **Non-Specific Antiopsonins.**

LUDVIG HEKTOEN, in the course of a lecture on phagocytosis (*Proceedings of the New York Pathological Society*, Vol. vi, February 23rd, 1906), points out that the production of specific antiopsonins does not seem to have received much attention as yet, but in mixtures of bacteria, leucocytes, and normal serum phagocytosis may be diminished or inhibited by solutions, isotonic with serum, of many different substances. Amongst these are calcium and barium chloride and many other inorganic salts, and also formalin, lactic acid, chloroform, and alcohol. Experiments conducted by the author in conjunction with Dr. Ruediger indicate that the substances mentioned act essentially on the opsonin, which they prevent from acting on the bacteria. They have found that, when tested in suitable dilutions, the so-called antiphagocytic substances have no appreciably detrimental effect on leucocytes with respect to previously sensitized bacteria. Amongst other substances, they have tested lactic acid, and find that here also the property which is generally attributed to negative chemotaxis appears to depend on neutralization or destruction of opsonin. This observation throws fresh light on the diminution of resistance to various infections which is found to be caused by lactic acid. Hektoen suggests that non-specific antiopsonins may be important factors in the establishment and spread of various infections, and thinks that substances with antiopsonic action may arise in consequence of local and general metabolic disturbances. Hence may be explained what is generally termed a lowering of vital resistance. It therefore [illegible] into the tissues and vessels [illegible] formalin possess antiopsonic properties.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

76. Carbon Monoxide and Illuminating Gas Poisoning.

In discussing poisoning by coal gases and illuminating gases, T. A. Maass (*Berl. klin. Woch.*, December 10th, 1906) points out that the gases evolved in the combustion of coal contain varying quantities of carbon monoxide, which has been given by certain observers at from 0.34 per cent. to 2.5 per cent.; while the remainder consists of carbon dioxide, oxygen, nitrogen, and traces of hydrocarbons. As a rule, the percentage is about 0.54 per cent. of carbon monoxide. Illuminating gas contains somewhat higher percentages of carbon monoxide. When made from coal, it contains from 5 to 10 per cent. of carbon monoxide. The lungs are capable of taking up carbon monoxide very rapidly, and the whole body is soon affected by the absorbed gas. He divides the course of carbon monoxide poisoning roughly into four stages. The first stage is met with almost immediately after inhaling air containing considerable quantities of this gas, and is evidenced by extremely severe headache, lacrymation, buzzing in the ears and throbbing in the temples, sleepiness, feeling of languor, and incapability of standing up or moving about. The first sign is frequently nausea and vomiting, while the respiration is rapid and irregular at first, and becomes rattling and slower in a short time. Apart from these symptoms, the psychical condition undergoes a change, and a close resemblance to alcoholic drunkenness is noticed. The mental condition accounts for the failure to get out of the poisonous atmosphere, which is so often remarked. The person realizes to a certain degree the danger surrounding him, but, having lost the capability of thinking clearly, often neglects to open the window, or to get out of the room. The author gives an example of this in the case of a medical man who was overcome by the effects of coal gas, and describes his own symptoms. The second stage chiefly attacks the motor apparatus. The muscular irritability is increased, and even convulsions may occur, or there may be clonic contractions and trismus. The symptoms of the first stage continue, and there may be increased salivation in addition in this stage. The third stage is characterized, first by anaesthesia of the skin and next by the failure of the voluntary muscles and by asphyxia. Consciousness is most retained during this stage. The last stage follows when death does not occur during the third stage and when recovery does not take place directly. This stage consists of an extraordinary variety of sequelae, many of which often end fatally. Maass believes that no other poison leads to such a variety of late effects. Before dealing with these late symptoms, he discusses the pathology of carbon monoxide poisoning briefly. The gas has a peculiar affinity for the haemoglobin of the blood, and it is not surprising that all organs are rapidly affected. Of all the theories on this poisoning, the one which appeals to him as being the most plausible is that which assumes that the oxygen is replaced by the carbon monoxide, and the blood charged with this gas circulating through the organs interferes with the local nutrition, and thus produces changes. That the central nervous system should be most severely affected is not to be wondered at, if one remembers the delicate way which nervous tissue reacts to changed conditions of nutrition. He then deals shortly with some of the typical *post-mortem* changes. Turning to the diagnosis, the symptoms may give rise to confusion with drunkenness and even to the early stages of enteric fever, but the blood offers a certain differential diagnosis. He describes Reetz's modification of Wachholz and Sieratzki's test: 4 c.cm. of blood is dissolved in a test tube by shaking gently; 40 drops of a 1 in 9 solution of the ferricyanide of potassium are then added. After this has been carefully mixed, one half is carefully poured off into a second test tube, and this is corked and put aside. The remaining half is well shaken by pouring into a dish and back into the test tube several times for ten minutes, and then to both parts 5 drops of ammonium sulphide and 10 c.cm. of a 20 per cent. solution of tannin are added. If carbon monoxide is present, the shaken tube will be found to contain a greyish-green precipitate, and the unshaken tube a more or less distinctly pink precipitate, while if no carbon monoxide is present, both will show the greyish-green precipitate. This test can be carried out with blood which has stood for years, and is therefore of great forensic importance. The test, however, is only of use when the doctor is called too late for treatment. If he arrives in time, he must devote all his attention to the patient. He describes the usual methods of treatment, including artificial respiration, inhalation of oxygen, electricity, etc. He also deals with the differences between pure carbon monoxide poisoning and poisoning by illuminating gas. The lethal dose is sufficient to prove that the carbon monoxide element of the latter is not the only toxic agent. Sachs has compared the differences, and shows very marked variations of symptoms in two forms. The latter is about two and a half times more poisonous than pure carbon monoxide.

77. Dosage of Tuberculin.

LÖWENSTEIN AND KAUFFMANN (*Zeit. f. Tuberk. und Heilstatt.*, Bd. X, Heft 1, 1906) recommend that for purposes of diagnosis the dose of the "old tuberculin" should not, as Koch advised, be increased when no reaction follows the first dose, but that in order to obtain a reaction the same amount of 0.2 mg. should be injected if necessary four times over within from twelve to sixteen days, and only when these injections have caused no reaction should larger doses be employed. The method recommended by the authors is especially suitable for cases of recent tuberculosis with doubtful physical signs—that is, just for those cases in which a correct diagnosis is of the greatest importance. The method is based upon the fact that the first injection, even if no obvious reaction occurs, yet temporarily increases the sensitiveness of the organism towards a second injection, and the second again towards a third. This increase of susceptibility is best seen when the amount of tuberculin used is small, and it is so well marked that the reaction after the fourth injection of 0.2 mg. may be little less in intensity than that after a single dose of 10 mg. After the first four injections, if no reaction has been obtained, the dose is increased to 2 mg., then to 5 mg., and finally to 10 mg. The injections are made in the morning; the patient is kept at rest in bed, and the temperature is taken every three hours. The reaction, according to Koch's rule, is considered positive if the temperature rises at least 5° higher than the mean temperature and there are at the same time marked subjective symptoms. A three days' interval at least is left between each injection. A tendency to haemorrhages and heart affections, when they are not too advanced and occur in young people do not contraindicate the use of tuberculin, but the injection should not be made in cases where kidney disease or pregnancy is present. The following are the important points in determining the value for diagnostic purposes of any new method of injection: (1) That tuberculous patients react to the injections; (2) that sound persons fail to react; and (3) the effect upon healed tuberculosis. In 62 cases of undoubted tuberculosis with bacilli in the sputum, 51 reacted to one of the four initial injections. In 10 of the remaining cases, 8 of which reacted at the fifth injection, that of 2 mg., the explanation that in cases of old tuberculosis with a strong tendency to recovery the resistance of the organism to tuberculin is greatly increased, was a satisfactory one. The remaining case, which reacted at the second injection of 10 mg., is inexplicable to the authors. The second question, as to the possibility of a sound person reacting to the injections, needs no great consideration. If reaction under the old method of quickly-increasing doses is held to be decisive as to the presence of tuberculosis, much more must this be the case when injections of small quantities only are employed. As to the reaction of persons with healed tuberculosis, while it is certain that resistance in such cases may be increased, it is not possible to fix upon a dose of tuberculin such that absence of reaction to it shall definitely occasion a diagnosis of healed tuberculosis; the authors incline to the view of Bandaliers, who would choose the dose of 10 mg. Of 300 cases treated by the method of repeated injections of 12 mg., 69, or 23 per cent., reacted at the first injection; 73, or 24.3 per cent., at the second; 107, or 35.7 per cent., at the third; and 51, or 17 per cent., at the fourth. The greatest number of reactions thus followed the third injection; 242 of the cases were in the first stage of phthisis, and of these 99, or 40 per cent., reacted at the third injection. The reaction obtained was not very different from that obtained by the older method, and the

temperature frequently rose above 39° C. The general subjective symptoms were, however, decidedly mild as compared with those caused by other methods. The reaction usually set in in from five to twelve hours, and reached its highest point in from sixteen to twenty hours. The characteristic local reaction was the same with the smaller as with the larger doses; after the injections râles could often be heard for the first time, or were increased, and in 46 cases tubercle bacilli could be demonstrated in the sputum, although before the injection they had not been present. When the smaller injections are used a protracted reaction is seen less often than with the older method. As a result of their observations the authors conclude that in the greatest number of cases it is not necessary to increase the dose, but that it is enough to inject the same dose four times within from ten to twelve days; that 10 mg. as a limit is arbitrarily chosen, and that by the repeated injection of the same dose the qualitative character of the biological phenomenon becomes apparent.

SURGERY.

78. Substitution of the Great Toe for the Thumb.

F. Krause (*Berl. klin. Woch.*, November 26th, 1906) describes an operation which he performed on a young man of 21 years of age, who had lost part of his thumb of the right hand at the age of 5. Only half of the second phalanx remained, and the stump was practically useless. Krause first excised the scar and exposed the bone, taking care not to disturb the firm scar tissue covering it, as he proposed to utilize the same for an artificial joint. Next he made an incision across the great toe, a little higher than the interphalangeal joint, dividing skin, extensor tendon, and the upper surface of the capsule of the joint. After resecting the peripheral end of the basal part of the thumb to gain in room, he laid the stump of the thumb into the wound, and fixed the hand and foot together with plaster-of-paris. The extensor tendon of the great toe was then sutured to the stump of the extensor tendon of the thumb by means of buried sutures; then the fascia was sutured, and lastly the skin was sutured. After seventeen days the plaster-of-paris was removed, and the plantar surface of the toe was cut through. This incision also included tendon capsule of the joint and skin. Bleeding took place from the peripheral skin flap, showing that the healing had advanced far enough. The tendons of toe and thumb were united and the skin sutured. The wounds healed by first intention. He anticipated that the toe would be much fatter than a normal thumb, and was prepared to lessen its diameter, but Nature helped him by attaining this end by the occurrence of a localized necrosis of some skin. The new thumb then was reduced in circumference by about one-quarter. A radiograph shows that the new thumb has the shape and general appearance of a normal thumb. With regard to function, he states that after three months and a half the patient can use the thumb fairly well; that the movements in the metacarpo-phalangeal joint are free, and the movements in the basal and interphalangeal joint are returning. The anæsthesia is also disappearing.

79. Sensibility of Abdominal Organs.

L. Kausch and J. Meltzer (*Med. Rec.*, December 29th, 1906) present a preliminary communication based on animal experimentation on the subject of abdominal pain. The prevailing view, based upon exact surgical observations, is that the abdominal organs, whether normal or inflamed, possess no sensation of pain. The writers, on the other hand, have found that the sense of pain is present in normal organs, and that it is considerably augmented in inflamed organs, and that a subcutaneous or intramuscular injection of cocaine is capable of completely abolishing this sensation in normal as well as in inflamed organs. They suggest that the anæsthesia of the internal abdominal organs observed by certain surgeons was due to the use of cocaine. These investigators have also found that the injection of a small dose of cocaine has a calming influence upon the excitation of the narcotized and operated animals.

80. Metallic Sutures in the Treatment of Fractured Ribs.

[illegible] (*Bull. et Mem. de la Soc. de Chir.*, No. 49, 1906) reports a case of [illegible] in a boy, aged 12, who was run over by a vehicle. These injuries consisted in complete rupture of the posterior part of the urethra, dislocation of the pubic symphysis, and depressed fracture of the left side of the chest in the mammary region. Eight days after the date of the injury, the urethral lesion having in the interval been successfully treated, the author, with the object of restoring the normal conditions of respiratory amplitude, exposed the deeply-depressed fractures of three ribs—the third, fourth, and fifth—by raising a U-shaped flap. The fractured ribs having been elevated, the ends of the third and fourth were brought together, and fixed in their normal positions by sutures of silver wire. The two fragments of the fifth rib, as their ends remained in contact after reduction, were not sutured. The margins of the torn periosteum were brought together over each fracture and united by catgut sutures. This operation proved successful, and when the patient had recovered from the effects of his severe accident, a radiograph of the chest showed that the ribs had perfectly united, and that the thoracic wall at the seat of injury had regained its normal contour. In a report on this case communicated to the Société de Chirurgie, Lejars states that though this method of dealing with fractured ribs is rarely indicated, cases certainly occur from time to time in which it might be advisable to extend beyond its usual limits the reparative surgery of the thoracic wall.

OBSTETRICS.

81. Hypodermic Injection of Paraganglin in Puerperal Eclampsia.

Bellotti (*Gaz. degli Osped.*, January 20th, 1907) reports a severe case of eclampsia occurring in a woman, aged 24, and eight months pregnant, which seemed to respond "like magic" to a hypodermic injection of 2 c.cm. of paraganglin (Vassall). The woman had been very well during her pregnancy until the end of October, when she had an attack of tonsillitis; three days after she was convalescent, that is, on October 23rd, she was seized with severe headache and intense vomiting prolonged later by an eclamptic fit. Morphine was injected (the injection inducing another fit), and rectal injections of KBr and chloral, followed later by chloroform inhalation and abdominal friction with guaiacol oil. The convulsions went on all night, and more chloroform, bromide, and chloral were given in the morning and ice applied to the head. As no relief was obtained (induced labour was not considered advisable) and the patient was getting feebler, 2 c.cm. of paraganglin were injected subcutaneously; half an hour later the patient passed copious urine and faeces, sweated profusely and complained of great thirst. The os was now somewhat dilated and the patient mentally clearer; 2 c.cm. more were given, and labour, followed by the birth of a living eight months fetus at 11 p.m., pursued its normal course. There were no more fits. The author believes that the good results were due to the paraganglin, which he believes has an action somewhat analogous to that of parathyroidin. Paraganglin may be given hypodermically, without fear, every three hours in doses of 2 c.cm. In addition to its antidotal action against the eclamptic poison it increases the functions of the emunctory organs, and provokes uterine contraction.

82. The Bag of a Country Accoucheur.

Pevsonnie (*La Clin.*, January, 1907) points out the difficulties under which country doctors work when attending confinements without the resources of a town or hospital, and often without the assistance of a midwife. The practitioner must be well provided with the necessary materials, but his chief trouble will lie in obtaining a sufficiency of boiling water in clean vessels, and of sheets and towels. He advises that the bag of the accoucheur be furnished with a small oval flat dish, a douche can to contain 2 litres with a long rubber tube, a glass nozzle in a cardboard box, an intrauterine sound of glass enclosed in a metal case and packed with cotton-wool, some boricated vaseline, two packets of cotton wool, and some ether, ergot, and tabloids of corrosive sublimate. In addition he takes a rubber catheter, nailbrush, stethoscope, and one pair of Tarnier's forceps wrapped in a towel. A little case is also required with a few curved needles, some silkworm gut and carbolized silk, as well as scissors and forceps. The ether with the aid of a flame is used for sterilizing the forceps and other instruments, and the little dish is useful for making up the disinfectant lotions in. He considers that lacerations should always receive immediate attention, as wounds of the vagina and perineum are frequent sources of infection, and many grave complications arise from them.

GYNAECOLOGY.

83. Appendicitis Simulated by Torsion of Fallopian Tube.

Ross of Toronto and Baldwin of Toledo, Ohio (*Amer. Journ. Obstet.*, November, 1906) report cases where acute tubal disease assumed many of the characters of appendicitis. Ross's patient was a young woman who had been a trained nurse. One night, when staying in a house twenty miles from Toronto, she was seized with violent abdominal pain. The local doctor diagnosed indigestion, but the patient felt certain that her case was much more serious, and telephoned for Ross, who reported rigidity of the right rectus abdominis, tenderness on pressure over the region of the appendix, vomiting, and rise of temperature. He diagnosed appendicitis, but the physician did not agree with him. An abdominal operation was performed, an incision being made to the right of the right rectus, but the caecum and appendix were normal. A black mass was drawn out of the pelvis, which proved to be the right Fallopian tube twisted on itself one turn and a half, black and gangrenous. It was tuberculous, as was the left tube. Ross amputated the right tube, leaving the ovary, and the patient recovered. She had first felt abdominal pain when turning the crank of a motor car. Baldwin's patient was a woman aged 43. She had been married twenty-three years, yet had not been pregnant more than once—namely, two years before her illness—when she had a fall at the fifth month and aborted. After suffering for about a week from a little feeling of discomfort in the pelvis, the patient, when about to sit down, missed her chair, striking her nates heavily. In the night she had an attack of violent pelvic pain and vomiting. All through the next day the vomiting continued and the bowels could not be opened. On the third day Baldwin saw the patient. She looked very ill, the abdomen was greatly distended, and she referred the pain to McBurney's point. At the operation, when the patient came under the influence of the anaesthetic and could be properly examined for the first time, a cystic mass could be defined to the right and behind the uterus. When the abdomen was opened by a median incision bloody serum escaped and much distended intestine protruded. On pushing the intestine aside a gangrenous cyst was drawn out of the pelvis; it was a hydrosalpinx, of about the size of a large fist, twisted on its pedicle; blood had mingled with its serous contents in consequence of the torsion. The vermiform appendix, adherent to the tube, was removed, as it was found to be the seat of chronic inflammation. The left tube was also dropsical and was amputated. The ovaries were saved; the patient made a good recovery.

84. Radical Hysterectomy for Cancer.

Burghele (*Monatsschr. f. Geb. u. Gyn.*, August, 1906; *Revista de Chir.*, Bucharest, 1905) reports complications after two hysterectomies of the Kelly-Segond type. The first patient was 43 years of age. On the fourth day haemoptysis set in and proved fatal within an hour. The lungs were examined after death and found to be perfectly normal. Burghele feels uncertain whether the haemorrhage was of a vicarious type, due to the removal of the internal genitals and ligature of their vessels, or represented some reflex phenomenon. In the second case haematuria, incontinence of urine, and diarrhoea set in on the third day. The urinary complications ceased on the seventh, the diarrhoea on the eleventh day. The bladder might have suffered from prolonged pressure of instruments during the operation, which of necessity took up much time. The diarrhoea was less easy to explain. Burghele has noted similar complications more or less inexplicable, after radical hysterectomies, such as gastro-intestinal haemorrhages, suppression of urine, intestinal atony and occlusion, and sudden death without objective symptoms.

THERAPEUTICS.

85. The Trypsin Treatment of Cancer.

W. P. Graves (*Boston Med. and Surg. Journ.*, January 31st, 1907) reports that in September, 1906, he instituted a series of observations in order to test the efficacy of the treatment. He has applied it to practically all inoperable cases of cancer which have been under his care since then in the Boston Free Hospital for Women, but he limits his reports to four cases, as in these the treatment was most systematically carried out and the results were most typical and instructive. In all four cases the disease was recurrent cancer of the breast, and the patients had been under his observation since their first application for treatment. Three of the cases were operated on by himself, the remaining one by W. H. Baker. The cases chosen seemed to be especially valuable to test the efficacy of this remedy, first, because all that was possible to be done in the way of surgery had been done; secondly, because, being in comparatively good general health, they were not beyond the point where Nature could assist artificial remedies; thirdly, because the carcinomatous growths appearing in small nodules immediately beneath the skin offered an excellent opportunity to study in gross the various changes which the injection of trypsin might cause in their size and consistency; fourthly, because on account of these nodules it might be possible at any time to excise them under cocaine to study their changes microscopically. He had used the injectio trypsini of Fairchild, which is put up sterilized in glass bulbs that hold 20 mm. of a glycerin solution. He usually began with 10 mm. of the undiluted trypsin solution, and after two or three treatments increased this to 40 mm. three times each week. This dosage may be increased to 60 mm. or more, if the injections be given in divided doses, and in different areas. After continued treatment, the tissues acquire a certain amount of tolerance, and the dosage can be much increased. The amount of the injection, and the frequency of treatment must be determined by the amount and severity of the local or constitutional reaction. He noticed severe constitutional reaction only once; a certain amount of local reaction is more or less constant. The claims that have been made that carcinomatous masses treated with trypsin diminish in size, are to a certain extent supported by Graves's observations. This seems to be the case when isolated nodules are treated by direct injection. No particular influence, however, seems to be exerted on neighbouring nodules; nor does the treatment prevent the later appearance of a carcinomatous nodule in close proximity to one previously treated and aborted. In one case undoubted relief to pain was given. This result, however, is by no means constant in deep-seated cancer. No particular effect on the nutrition seemed to be produced by the use of trypsin alone, but the effect of the internal administration of holadin, a combination of the pancreatic ferments, is, says Graves, unquestionably attended with an increase of appetite and weight and a general improvement in the well-being of the patient in cases that are not too far advanced. This result is so evident that he makes it a routine practice to give holadin at once in all cases of carcinoma. The microscopic examination of a nodule apparently cured is strikingly similar to the findings in Morton's case (*Med. Record*, December 8th, 1906; Epitome, January 19th, 1907). Graves's experience of the treatment practically substantiates that of other writers. There has been nothing in the results to guarantee an expectation as to its ability ever to cure a deep-seated cancer; but 2 of the 4 cases reported lead him to think that the progress of the disease may in favourable instances be retarded. There is no positive evidence in his experience to show that the local effect of direct injections of trypsin into carcinomatous masses exerts a greater destructive influence than certain other remedies that have been used in times past. Graves can only say that he has not yet decided that the treatment is entirely without benefit to the patient, and for that reason he considers it not only justifiable, but due to the patients to employ it in all inoperable cases, in the hope that greater experience and improvement in technique may possibly prove a greater usefulness. Graves sums up his conclusions as follows: (1) A discrete cancerous node systematically attacked by injections of trypsin shrinks and becomes hard and fibrous, or disappears. (2) Neighbouring nodes are little if at all affected, and are probably influenced only when the trypsin comes into actual contact with the growing cells. (3) The treatment of a given node causing it to shrink or disappear does not prevent the appearance later of another node in immediate proximity to it. (4) There is no evidence in these cases to show that trypsin affects cancer cells by circulating in the blood, or that it affects them in any way excepting by direct contact. (5) The internal administration of the various ferments of the pancreas is of benefit to cachectic patients; but from his experience there is nothing to show that this benefit is due to anything else than the assistance given to the intestinal digestive secretions of the individual patient. (6) The direct action of trypsin on growing cancer cells, as shown clinically and microscopically, is sufficient warrant to continue the treatment in inoperable cases, especially in view of the fact that there are apparently no serious results that can occur from its use.

86. Pancreatic Extract in "Supposed" Cancer.

Clarence C. Rice reports (*Med. Record*, November 24th, 1906) a case of laryngeal growth, "supposed to be carcinoma," which was cured by the subcutaneous injection of pancreatic extract. He says that the hypodermic solution which he used contains the trypsin enzyme in its natural association with the other gland constituents, notably the amylopsin. This solution was obtained from the fresh gland under rigid aseptic methods. It was a 60 per cent. glycerine extract, sterilized by filtration under pressure, and taken up in vacuum into glass ampoules and then immediately sealed. The patient, whose history the writer reports, was a man 70 years old. He was treated by injections of pancreatic extract, together with the internal use of a similar preparation. This was administered in 3-gr. capsules three times a day. There was evidently a distinct ameliorating effect by this treatment on the growth, which was considered to be carcinoma. As the patient was obliged to leave this country for a short time, the more permanent results cannot yet be reported. Four other cases have been treated in the same manner by Rice. One of these was successful.

87. Grape Cure in Atrophic Cirrhosis of the Liver.

In 1902 A. Cavazzani (*Ric. crit. di clin. med.*, 1907, Nos. 2 and 3) had under his care a patient with hepatic cirrhosis, enlarged spleen, haematemesis, oliguria, and ascites recurring rapidly after abdominal puncture. Other methods of treatment having been tried and found wanting, the grape cure was employed. Ripe grapes were given up to 5 lb. per diem, and the patient improved much in every way until a sudden gastric haemorrhage carried him off. Since then the author has tried the grape cure on five more patients with atrophic cirrhosis of the liver due to marked and prolonged alcoholism, aged 41, 61, 50, 30 (a woman), and 61 respectively. Details of these cases are given, and they were very much improved by the treatment, the ascites disappearing rapidly and without the use of the trocar. Further, these patients have all continued to enjoy good health since the treatment was first given—that is, for periods of from 4 to 1½ years. But the author has tried the grape cure, and also the ferment cure, in other cases of hepatic cirrhosis, where the good effect has been but transitory, or even inappreciable; he is not able to give any exact statistics of the grape cure in cirrhosis, but believes that the cure does represent a real advance in treatment. He discusses the diagnosis in each of the 5 cases recorded above, and shows that hepatic cirrhosis really was the condition from which the patients were suffering, and gives several pages to the significance and mode of action of the cure. He thinks that it is the grape sugar—aided, perhaps, by the ferments in the grape juice—that effects the cure. The volume of the liver does not return to the normal; the spleen and the subcutaneous veins of the abdomen remain enlarged.

88. Maximum Doses of Drugs not Contained in the "Pharmacopoeia."

Lewin (*Deut. med. Woch.*, May 31st, 1906) gives some valuable data with regard to the maximum doses of certain non-official drugs. He states that the maximum dose for an adult is determined from toxicological and clinical experience, and applies for a variety of methods of exhibition of the drug. The daily maximum dose is generally taken as three times the single dose, but cases occur when two and a half times is the limit, while in other instances the single dose may be given four times in twenty-four hours. At least two hours should always elapse between the first and the second maximum dose. The estimation for a child's dose is obtained by the old method of dividing the age by the age plus 12. Among the drugs which he mentions the following may be cited:

	Grams.		Grams.
Acetum colchici	2.0	Acetum digitalis	2.0
Acid. hydrocyan.	0.1	Acid. oxalic.	0.01
Aconitine (cryst.)	0.0005	Analgenum	1.0
Apocein	0.3	Bael	0.03
Cadmium	0.03	Actol	0.03
Ceriumiodate	0.02	Atropin	0.001
Atropin valerianic.	0.001	Caffeinesodium benz.	1.0
Cerium	0.005	Digitoxin	0.002
Lawsone	0.5	Hydrarg. oxydat.	0.02
Hydrarg. succinimid.	0.05	Physostigmin	0.01
Physostigmin salicyl.	0.02	Pyramidon	0.1
Migrenin	2.0	Tetronalum	2.0
Veronal	1.0	Tinct. strychn. aetherea	1.0
Urethanum	1.0	Zinc. bacticum	0.1

The above doses are given in grams, and it will be noticed that fluid as well as solid substances are given by weight. The gram may be taken as being equivalent to about 15½ gr., while 0.1 would be equal to about 1½ gr., 0.01 gram to about ⅙ gr., and 0.001 gram to about $\frac{1}{70}$ gr.

89. The X-ray Treatment of Syphilitic Adenitis.

M. Nencioni and A. Paoli (*Lo Sperimentale*, 1906, lx, 822) have treated 37 cases of glandular enlargement due to Hunterian chancre with the *x* rays. The subacute cases (14) recovered a little faster and had less pain than similar cases not treated by the *x* rays. The chronic cases (16) obtained great benefit from the treatment; they were relieved of all pain, the glands diminished rapidly in size, and the glands which had been opened by the surgeon healed up with great speed. The acute cases (7) also benefited considerably by the *x*-ray treatment. The authors conclude that the treatment is of considerable value, and in particular accelerates the healing of indolent wounds and ulcers.

PATHOLOGY.

90. Tumour of Anterior Mediastinum, derived from Thymus.

G. Tarozzi (*Arch. p. l. Sci. Med.*, vol. xxx, No. 21, 1906) describes the microscopic and macroscopic appearance of a large substernal tumour found in a girl of 18, who was taken into hospital on account of the sudden appearance of fever and pulmonary symptoms, and died suddenly two days later. He also discusses and gives references to the literature of the subject. At the autopsy there was no general enlargement of the lymphatic glands; the thyroid was a little hypertrophied. In front the heart and lungs were concealed by a very large tumour, measuring in height 9 in. on the right side and 6½ in. on the left; in breadth 8 in.; in thickness 5½ in. and 4½ in. on the right and left sides; and in circumference at the level of the tracheal bifurcation 20 in. The lungs were, of course, compressed, but were free from adhesions; there was a little area of pneumonic consolidation at the left base. The pleura was smooth (except at the left base), and there was no excess of pleural fluid. The peribronchial and peritracheal glands were not enlarged. The trachea, aorta, and oesophagus showed no signs of compression, nor did the heart. The great veins were surrounded by the tumour, but could be easily separated from it, and were not obviously compressed by it. The diaphragm was not depressed; the abdominal viscera were normal, and the mesenteric glands were not enlarged. The blood was not examined *intra vitam*; perhaps a slight leucocytosis was present. The tumour had a distinct fibrous capsule, and could be shelled out from it readily; it was irregularly lobulated by fibrous septa, but could be separated into two distinct portions, that on the left hand side being twice as large as that on the right. Squeezed and scraped, the cut surface of the tumour exuded a milky fluid very rich in lymphocytes. Microscopically, the tumour consisted of lymphatic tissue interspersed with zones of cells arranged in large meshes, and containing much fat. The lymphatic tissue was in every way like that of the lymphatic glands. The meshed tissue contained no Hassal's corpuscles, and in some places seemed to be made up of the endothelium of obliterated capillaries, in others of fibrous tissue continuous with that of the capsule of the tumour. The tumour was well supplied with arteries, veins, and capillaries; in places the capillaries were so large in comparison with the thinness of their endothelium as to appear like lacunae; also the venous system was very large in comparison with the arterial. The Hassal's corpuscles were present in every part of the tumour which contained lymphatic tissue, and were of the normal structure. In addition, there were many rounded or oval amorphous masses 40 to 50 μ in diameter surrounded by a thin capsule of cells with elongated nuclei, concentrically arranged, epithelioid in character; these cells appeared to be derived from, and to pass into, the epithelioid cells found in the surrounding lymphatic tissue. The amorphous masses stained red with eosin, yellow with van Gieson's stain, and might also contain basophile granules derived no doubt from nuclear degeneration. The author brings forward reasons for supposing that Hassal's corpuscles are generally absent from true tumours of the thymus—lymphomas, lymphosarcomas, sarcomas, and carcinomas. The whole subject is discussed at length. He believes that Hassal's corpuscles are probably not representatives of hypothetical "epithelial rests" but are more probably derived from anomalous developments of the normal connective and epithelioid elements of the thymus that occur in the processes of involution.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

91. Epidemic Cerebro-spinal Meningitis.

M. Westenhoeffer gives an account of the present position of our knowledge of epidemic cerebro-spinal meningitis, and offers a suggestion for the prevention and treatment (*Berl. klin. Woch.*, September 24th, and October 1st, 1906). The doubt expressed as to the real epidemic nature of this disease was definitely settled in 1905, when in Upper Silesia 3,102 persons were attacked by it and 1,789 died. The determination of the etiology of the affection is rendered difficult by the fact that various bacteria are found in certain meningitis cases and also that it is not always easy to distinguish between epidemic and ordinary meningitis. The two micro-organisms which were supposed to play an etiological part up till recently were Fraenkel-Weichselbaum's pneumococcus and Weichselbaum's *Diplococcus intracellularis*. In 1887, Weichselbaum expressed doubt as to which was the causal organism, but he ultimately came to the conclusion that the pneumococcus does cause the disease. The matter was energetically challenged, and at last the Upper Silesian epidemic offered excellent chances to study the question on a large scale. Here it was found that the *Diplococcus intracellularis*, or meningococcus as it is often called, is the most common micro-organism in epidemic cerebro-spinal meningitis, but that mixed infections occur very frequently. The most common mixed infection was that with the *Diplococcus crassus*. No conclusive proof could be produced that the meningococcus was the actual causal organism. The pathology and morbid anatomy of the affection are next discussed. In examining a number of cases in the above-mentioned epidemic, the author found that in every case of acute disease, an inflammatory reaction in the fauces, especially in the tonsil, was to be found. This inflammation spread over the whole fauces on to the posterior nares, into the cavities of the nose and also downwards on to the posterior pharyngeal wall. When the reaction is mild, there may be no trace of it after the course of from one to two weeks, but when pus forms in the nose, a late complication remains. The discharge in these situations was subjected to bacteriological examination, and it was found that the meningococcus and the *Diplococcus crassus* were found, sometimes in pure culture, and sometimes in mixed culture. The micro-organisms corresponded in the several cases with those found in the spinal fluid. The results of this investigation were that one was able to say that at the beginning of the attack a meningococcus pharyngitis is always present. The epidemiology of the disease is still shrouded in uncertainty. The belief which Jehle has expressed that the epidemic spread of this disease always takes place from the mines, and the miners, becoming infected by the cocci, carry these home to their children is plausible. Further investigations on this point are required. In all probability the infection takes place ultimately by the respired air. In this case, the most probable method would be by a sort of droplet infection. How the infective material reaches the meninges is a question which has received a good deal of attention, and much has been said and speculated about it. At present one may say that while a lymphatic infection is by no means excluded, the haematogenous path is the more likely. Direct infection through the ethmoid cells does not take place. Experience has taught that the disease is essentially a children's disease. In Upper Silesia 90 per cent. of the patients were under 15 years of age. The individual disposition appears to depend on the intactness of the lymphatic system and the size of the receptacles of infection. In the present case the latter is represented by the tonsil. The larger the tonsil the greater the risk of infection. The mortality varies between 50 and 70 per cent. A few suggestions are offered with regard to the production of the hydrocephalus. In conclusion the author turns to the subject of treatment. The tasks set in treating this disease are: (1) To attack the infection (the cocci and their toxins); (2) to remove the pus from the meninges and cavities of the brain; and (3) to prevent or cure the hydrocephalus. The points (1) and (2) may fall together, since if one removes the infection one produces a condition for the easy resorption of the pus. As a rule, baths and lumbar puncture have been carried out as a routine treatment, and a very large number of drugs have been tried. Not a single method has been able to really cure the disease. The author makes the suggestion that during the acute stage the atlanto-occipital ligament should be incised and a permanent drainage be carried out from this situation. This situation is the only one which permits of a simultaneous opening of the subarachnoid space and the cranial cavity in such a way that the third and fourth ventricles can be drained directly through the foramen of Magendie. To prevent hydrocephalus this incision should be made about the middle or end of the second week of illness, since when once hydrocephalus has set in the patient either dies or becomes completely idiotic. The incision has been carried out on 4 cases so far, and the results are such that it seems worth while testing the method further; 2 of the patients were already moribund and died; the third was cured, and the fourth lived for two months, but eventually died of hydrocephalus. The author gives some further interesting details in connexion with this subject.

92. Intermittent Claudication of the Cord.

Dejerine, records some cases showing a symptom-complex which he ascribed to intermittent claudication of the spinal cord comparable with the cases of paroxysmal limping ascribed to intermittent claudication of the arteries of the muscles of the legs, the pathological cause being in each case arteritis (*Revue Neurologique*, No. 8, 1906, p. 341). The clinical picture is as follows: A vigorous person in the prime of life or even in youth notices that his lower limbs, one or both, become tired more quickly than usual while walking; perhaps after walking 1 or 2 kilometres the legs became rather heavy, and there is a feeling of tension or cramp in them, sensations that quickly disappear when he stops walking. After weeks, a month, or a year or two, the symptoms are found to be increasing, and they come on after walking much shorter distances; eventually after 30 or 40 paces they necessitate a halt and rest. Objectively, when the patient is at rest, there is no evidence of paresis or loss of sensibility, and the tendon-reflexes merely show a slight exaggeration. There is no atrophy and no contracture or ataxy. But after walking, the legs are found less supple, the patellar and Achilles reflexes are exaggerated, there is a true ankle clonus and a slight plantar extensor reflex. The reflexes of the upper limbs are not affected, and the pupils react normally. As regards the organic reflexes, the only abnormality is imperious micturition, and sometimes a degree of genital super-excitability. The arteries of the lower limbs pulsate naturally, and the skin shows no change in colour during walking. The only condition that could well be confused with it is the intermittent claudication of the muscles due to arteritis, but in that the arterial pulsation in the lower limbs is found to be interfered with, and there is cyanosis and coldness of the skin surface; and further, in the claudication of the cord there is the increase of the deep reflexes, and the transitory extensor plantar reflex and some disturbance of micturition. If the intermittent claudication of the cord be not recognized and not treated, it ultimately ends fatally by spasmodic paraplegia. There is probably invariably a syphilitic infection in these cases, and the cause of the condition is an insufficient irrigation of the lower spinal cord with blood owing to a syphilitic arteritis. The treatment is the intensive mercurial method. Even if untreated many years may elapse in one case fifteen before a definite spastic paraplegia develops. The author attributes a similar pathology to the symptom-complex of angina pectoris, in this case also an ischaemia due to endarteritis.

93. Detection of Semen.

Gaeto (*Rif. Med.*, November 3rd, 1906) has carried out a series of experiments in the detection of semen and seminal stains by the method introduced by Barberio. This depends on the fact that when a saturated solution of picric acid is mixed with semen (whether fresh, or dried, or in solution) and then examined under the microscope, certain crystals can be seen. These crystals are very slender, and have an average size of 10 to 15 mcr.; they present themselves as rhomboid needles, with obtuse angles often crossed longitudinally by a refringent line. They may appear as round or oval corpuscles when the angles have been much rounded off. The author has tried many other

fluids besides human semen (for example, saliva, urine, blood, pus, milk, and many others), and the results were always negative, whilst with semen (even in stains 22 years old) the characteristic crystals were always present. Semen from the horse, rabbit, dog, and ox, did not give the reaction, nor could it be obtained from fluid taken from the seminal vesicles, epididymis, testes, or prostate. The exact method or substance from which the crystals are produced is uncertain; the author suggests that in the ejaculation of semen some process not altogether unlike that of the formation of fibrin in the blood, may occur, for apparently the crystals are not present when testicular fluid is mixed with the picric acid. It has been suggested that the substance may be of the nature of a protamin, but there are some objections to this.

SURGERY.

94. Indications of Prostatectomy.

Cathelin (*Journ. des Prat.*, October 24th, 1906) considers that prostatectomy should be carried out in the following cases: (1) In patients suffering from enlarged prostate and complicated with urinary troubles: (2) when in a patient with enlarged prostate repeated attacks of acute retention of urine occur; (3) in those cases of chronic retention of urine where the contractility of the bladder remains good; (4) in cases of enlarged prostate with prostatic calculi, single or multiple, primary or secondary. Prostatectomy may be carried out in three different ways, but in the large majority of cases it is advisable to remove the gland by the perineal route: by doing so there is no risk of severe haemorrhage and drainage may be most effectually carried out. Further, this mode of procedure is to be advised for the obese, for the cachectic and the very old, and for those in whom the urine is infected. The transvesical method the author does not consider advisable, in spite of the statistics of Freyer. Although this method can be easily and rapidly carried out, there is a danger of alarming haemorrhage occurring: further, drainage is very unsatisfactory and the wound requires much greater care than the perineal; there is also the danger of infection of the neighbouring parts and of a fistula remaining. In the author's opinion the transvesical method should only be employed in those cases where very marked haematuria exists, and where one is in doubt as to whether a simple enlarged prostate is present, or whether there be a tumour of the bladder. The combined operation (perineo-suprapubic) the author reserves for cases of very large prostates. As regards the reasons why prostatectomy should be advised, the author points out that some patients, especially those comparatively young, may be so tormented by the necessity of carrying out catheterizations that they demand radical relief for their troubles. The danger of making false passages with the catheter, and the difficulties arising in carrying out catheterization, together with the likelihood of complications, such as orchitis, cystitis, etc., arising, are some of the strongest reasons for advising prostatectomy. In cases of enlarged prostate with prostatic calculi, the base of the bladder behind the enlarged lateral lobes of the prostate becomes depressed, cuplike, and may later become the source of grave troubles; by removing the prostate the base of the bladder is put on the same level as the prostatic urethra and the source of danger done away with. Diseases of the heart and lungs, cancerous disease of the prostate, or cases in which the prostate has lost its vesical contractility, are contraindications for operation, as also are those cases where the kidneys are diseased.

95. Cervical Rib from a Surgical Point of View.

Mocquot (*Surg., Gyn., and Obstet.*, October, 1906) discusses the clinical appearance of cervical ribs. Until recent times little notice was paid by the surgeon to this abnormality; but, owing to advances in surgical diagnosis and the clinical use of the Roentgen rays, he is now enabled to diagnose a cervical rib before the development of the trophic changes or paralyses, or, better, as an etiological factor in neuralgia and ischaemia of the upper limb. A cervical rib, it is pointed out, develops on the transverse process of the sixth or seventh cervical vertebra from a special centre of ossification and articulates with the body and transverse process of the vertebra in the same manner as a thoracic rib. If it be long enough the interval between it and the first rib is occupied by the scalenus medius muscle and nerves. According to Berk, this abnormality is found in 1 per cent. and an internal projection of the rib in 0·5 per cent. of the human skeleton examined. Both sides are affected equally often, but the left side is more frequently on the left than on the right side. This, though contrary to the general impression, is, in the author's opinion, correct: but, as the right arm is more frequently and widely used, it has presented symptoms more frequently than the left. The supernumerary rib usually becomes conspicuous for the first time about the age of puberty, and, for reasons that are not known, seems to occur more frequently in women than in men. The symptoms, which become noticeable between the ages of 12 and 18 years, are arranged as (1) vascular and (2) nervous. There is decided ischaemia of the upper limb from arterial compression, but no venous stasis, the venous trunk being protected by the scalenus anticus muscle. In some cases the radial pulse on the corresponding side cannot be felt. The hand is usually pale and cold. In some few cases an aneurysm of the subclavian artery has been developed. Such aneurysm has, in the author's opinion, often been caused by injury. In long-standing cases a gradual endarteritis obliterans takes place, which may lead to thrombosis. Some few instances have been recorded of gangrene of the fingers in connexion with cervical rib. The main nervous symptoms are sensory disturbances of various degrees and also motor derangements. Hyperaesthesia and neuralgia are followed by anaesthesia, and in some cases there is marked ataxia of the limb; the muscular tonus being considerably diminished, so that some patients commence to use the left hand if the right happens to be affected. In cases of bilateral cervical rib complete inability to work is not uncommon. Another fairly constant factor in unilateral cervical rib is scoliosis, the cause of which is disputed, some holding that it is due to the fact that the cervical portion of the spinal column does not move freely on the side of the supernumerary rib, others that it is produced by the over-action of the muscles on the non-affected side. In his remarks on the diagnosis of cervical rib the author states that the elevating and pulsating subclavian artery is the most striking deviation from normal anatomical conditions in the supraclavicular space. Skiagraphy, it is pointed out, may sometimes be misleading, as the lateral process of the seventh cervical vertebra may be very conspicuous and so lead to the faulty diagnosis of a cervical rib. In cases in which this condition causes serious symptoms removal of the rib is indicated, as the prognosis is otherwise very unfavourable, and the results of the operation are uniformly good. The most convenient incision the author has found is one parallel and just anterior to the roots of the brachial plexus, beginning 3 in. above the clavicle and extending downwards to this bone. After the subclavian artery has been set free by blunt dissection and gently elevated, the rib is exposed by displacing the brachial plexus backwards, and divided near its spinal attachment. The bone is then gently lifted upwards and outwards and torn from its attachments to the first thoracic rib, the subclavian artery being protected by a flat retractor. Free exposure of the rib before division is regarded as the most essential factor in rendering the operation safe and easy.

OBSTETRICS.

96. Delivery of Triplets.

Boquel (*Prov. Méd.*, December, 1906) reports a case of a woman who gave birth to triplets, all of which were breech presentations delivered without difficulty; recovery was good; there were no complications, and the three children survived. A triple pregnancy is generally accompanied by an excessive functional activity, which may promote urinary, respiratory, or circulatory troubles. Preliminary examinations at intervals would aid in the diagnosis of such cases and ensure the necessary rest and hygienic precautions. The question of inducing labour would also be considered in relation to each case. In triple pregnancies there is prolonged labour, owing to the abnormal distension of the uterus, which produces a false inertia, which can be relieved by rupturing the membranes, although the os is not altogether fully dilated. When one has reason to fear eclamptic attacks or syncope, or when the pains are excessive and yet the patient makes no progress, rupturing the membranes will have more effect than narcotics and hot applications. In the interests of the mother or child, it may be required to terminate the labour by intervention, either by version or the use of forceps; in the former case great care must be exercised to prevent inspection. As soon as the last babe is born a double ligature should be secured round the cord, lest the fetal circulation should be unduly disturbed. As a rule, there are three placentae, but the practice has its value. The first delivery should be followed by a vaginal examination to ascertain the con-

tents of the uterus, and, if need be, to rupture the membranes containing the second fetus—an act which should not be delayed beyond two hours after the first birth. If there be a third fetus in a separate and intact membrane, the interval until this ruptures may be lengthy. When the patient is fatigued and depressed, there is a temptation to intervene and hasten the third birth; the risk of thus causing serious trouble is considerable, and it is wiser to wait for some time before interfering. In triple births delivery of the placenta is usually easy and uncomplicated. The uterus is distended and inert, and must be allowed time for contracting, unless indications for haste are obvious. It is advisable to wait till the placenta is in the vagina before attempting to extract it. Further difficulties are a tendency of the uterus to relax and give rise to haemorrhage or syncopal attacks on the part of the patient. Involution is slower, and it requires a longer period of rest and care to re-establish the health.

97. **Cornual Gestation.**

LOCKYER (*Journ. Obstet. and Gyn. Brit. Emp.*, December, 1906) has published a full report of a minute histological examination of an atresic uterine cornu removed for rupture and internal haemorrhage, a fetus 4 in. long being found in the peritoneal cavity. The clinical details of the case were reported in the same journal, June, 1906. It has been assumed that a uterine cornu of necessity bears a mucous membrane identical with the normal uterine mucosa otherwise known as the endometrium; and that, therefore, when an ovum becomes implanted on the crural mucosa, changes homologous, or rather identical, to those observed in the normal endometrium take place for the benefit of the ovum and the protection of the uterine walls. It has further been assumed that, although the gravid Fallopian tube usually ruptures through the undermining of its muscular coat by the eroding action of the placental tissues, a gravid cornu bursts simply because pressure from within causes the walls of the cornu to yield; the same explanation was once given for the rupture of a tubal sac, before the effects of chorionic villi insinuating themselves into the tubal muscularis were understood. Lockyer confutes all the above *a priori* assumptions on evidence derived from a careful examination of the fissures of the cornu in this case. It happened that the walls were thicker than those of a gravid tube at the same stage of pregnancy. Yet the microscope revealed a total absence of anything which could be called a uterine mucosa or decidua basalis. It further revealed well-developed chorionic villi directly implanted on the uterine muscle by proliferating masses of Langhans's cells. Lastly, it revealed very marked destructive action of these elements on the tubal muscularis. From the mucous membrane of the normal uterus the decidua compacta is derived, and that structure protects the muscularis from erosion by the chorionic villi; but in a closed cornu there is no uterine mucosa, and therefore when pregnancy occurs there can be no decidua compacta. In consequence, cornual pregnancy is histologically homologous with tubal, not with normal uterine, gestation. In a well-developed horn pregnancy may, it is true, go on to term, but in a feebly developed horn rupture will result in consequence of the destructive effects of the fetal tissues on its walls. The phenomenon known as tubal abortion, we must bear in mind, cannot occur in cornual pregnancy. The seat of rupture in the cornual sac examined by Lockyer lay in the upper pole, which is always the thinnest in an atresic cornu, and therefore the part most quickly undermined by the villi, etc. In a normal gravid uterus the upper retracting segment has the power during labour of drawing up and thinning out the lower yielding segment. This polarity must, in Lockyer's opinion, be a late development in the normal uterus, since no such arrangement exists in a rudimentary horn, even when it is canalized.

GYNAECOLOGY.

98. **Large Uterine Fibroid in Woman aged 23.**

MAUCLAIRE (*Comptes rendus de la Soc. d'Obst. de Gynéc. et de Péd. de Paris*, October-November, 1906) recently had under his care a woman, aged 23, married two years. For several years she had been subject to metrorrhagia. She had aborted in the middle of the fourth month nearly eight months before she was admitted into hospital. The temperature rose after the abortion, and the patient's doctor then discovered a swelling which reached to the navel and had all the characters of a uterine fibroid. Mauclaire confirmed the diagnosis, and as the patient was very anaemic, and the haemorrhages had increased since the miscarriage, he decided upon operation. He performed supravaginal hysterectomy, and saved both ovaries, covering them by the layers of the broad ligament. Convalescence was uncomplicated. The tumour was an interstitial fibromyoma developed in the posterior wall on the right. The uterine cavity was elongated, but not much widened. Mauclaire objected to myomectomy as the tumour was bulky and spherical, and the uterine cavity unhealthy. Hamel could find no trace of sarcoma tissue. Mauclaire has collected 4 cases of large fibroids in women under 30: (1) Cavaillon, patient 13, tumour 6½ lb.: (2) Russell Andrews, patient 20, tumour 4 lb. 5 oz. (BRITISH MEDICAL JOURNAL, vol. i, 1905, pp. 716. 826); (3) Laboulbène, "*fibrome énorme*" in a patient aged 28, death (in 1867) from haemorrhages; (4) Mouchet, patient 28, tumour observed for about six years. In a discussion on the case, Segond spoke of another where a woman aged 23, a qualified lady doctor of Sclavonic race, suffered from a large bleeding fibroid which he removed by *morcellement*, saving the uterus. The patient was in good health, but Segond could not guarantee that the uterus would ever bear a fetus. Richelot and Pozzi had observed large fibroids in Spanish-American women: it had long been known that the negro race was very subject to fibroid disease. Pinard declared that in the only two cases under his care the patients were of creole origin (that is, white French West Indians). Early puberty—the rule in warm climates—seems to predispose to fibroid disease, and to its relatively early development.

99. **Lipoma of Uterus.**

A. G. ELLIS, Philadelphia (*Surgery, Gynaec., and Obstet.*, November, 1906), dwells on the fact that the uterus is so favourite a seat of new growths. Williams's statistics, based on cases under treatment for primary neoplasms in four London hospitals, show the relative proportion of tumours, classified pathologically, to be: Cancer, 1,571; myoma, 883; non-myomatous polypus, 191; sarcoma, 2; and cystoma, 2. In this series lipoma is not mentioned. Several cases reported by older writers were clearly instances of fatty degeneration of pre-existing tumours, usually myomata. Seydel is doubtful about several recently-recorded cases, as they were not examined microscopically. Ellis adds an authentic case. It is noteworthy that it was discovered in the course of a *post-mortem* examination on a woman, aged 60, subject to chronic endocarditis, arterio-sclerosis, and renal disease. Her death was caused by cerebral apoplexy. There was no history of pelvic or abdominal tumour. The uterus was the seat of a globular swelling occupying the fundus and anterior part of the body, much softer than an average fibromyoma. It was completely encapsuled by a layer of vascular connective tissue, without muscle cells, and measured a little over 3 in. in vertical and 2½ in. in transverse diameter. On section it appeared as a mass of yellow fat, showing clearly the lamellar arrangement common in lipoma. The microscope proved that it was made up of almost pure adipose tissue, without a trace of white fibrous or muscular tissue. Ellis concludes that lipoma of the uterus is of pathological rather than clinical interest, being found accidentally at operation. A myoma never degenerates completely into a lipoma.

THERAPEUTICS.

100. **A Chloride-free Diet in Scarlatina and Nephritis.**

DELÉARDE (*L'Echo Méd. du Nord*, January 20th, 1907) says that in all infectious diseases it is of the highest importance to ensure free renal activity, and not to embarrass the kidneys in the elimination of toxic products by the untimely absorption of deleterious drugs. Salt is indispensable to the human organism; it aids intracellular changes, and is found in most foodstuffs. The salt that is contained naturally in our foods is sufficient to carry on the body economy. The human body is, as it were, saturated with sodium chloride, and all the additional salts taken in to suit the taste of individuals is eliminated *in toto* by the kidneys. An egg contains 7 centigrams of salt: 1 kilogram of fresh meat contains ½ to 1 gram. There is less salt in farinaceous foods: 1 kilogram of potato has 0.08 gram; rice, beans, and peas all contain very small quantities. Milk contains nearly 5 grams per litre, and so a patient who is living on an absolutely milk diet is absorbing daily a large dose of chlorides, which must be eliminated by means of the kidneys. Dufour in 1905 first advocated a chloride-free diet in scarlatina, and gave his results from the observation of 268 cases treated thus.

He was followed by Guinon and Pater in 1906, who had excellent results. The complications of scarlatina are due to microbes, which accompany the yet unknown specific agent of the disease. Rigorous antisepsis of the upper air and food passages may go far in preventing these complications. But the renal complications are the most serious; and by an entirely milk diet an excess of chlorides is ingested, which throws more work on the already-injured kidneys, and thus we get the oedema, albuminuria, haematuria, and urinary casts so well known and so constantly found in scarlatinal nephritis. Thus we see a contraindication to the milk diet. The treatment by a chloride-free diet aims at curing the patient by resting his kidneys. And this treatment is beneficial in acute nephritis of any cause. The author quotes cases of scarlatinal nephritis, with oedema, haematuria, albuminuria, and casts, in which all the symptoms were quickly made to disappear simply by a chloride-free diet. Pater found his cases gain weight on a saltless diet which contained meat, cakes, and eggs. The author could observe no gain in weight, but his patients were having no nitrogenous foods. There is a large selection of foodstuffs poor in chlorides which give one a diet which is really nourishing and not toxic, especially if one has recourse to the hydrocarbons. Another advantage attaching to the chloride-free diet is that the nausea, diarrhoea, and constipation which so often accompany a prolonged period of absolute milk diet are entirely avoided. The chloride-free dietary contains soups, eggs, cream, purées of dried or fresh vegetable, nuts, sweetmeats, fats, and bread made without salt. The drinks are mainly diuretic, such as uva ursi, Evian water, drinks of dog's grass and cherry stalks. The author gives general hygienic instructions for the care of scarlatinal patients. The urine must be examined daily, and should albumen appear the nitrogenous foods must be cut down and the hydrocarbons substituted for them. The treatment must be continued some weeks to be effective.

101. Feeding of Cancer Patients.

E. v. Leyden (*Zentralblatt für die gesamte Therap.*, January, 1907) deals with the question of the effect of systematic feeding in cases of cancer. The terminal cachexia of cancer is usually considered to differ essentially from the terminal cachexias of other diseases, and is distinguished from that of phthisis, for example, by its accompanying hopeless mental depression and by the complete absence of desire for food. It has still to be decided whether the cachexia is due to toxins which act upon the blood and upon the organism as a whole or whether there is a continuous falling away of the bodily substance, leading to death, and also whether, and to what extent by therapeutic measures, the process can be kept at bay. According to F. Müller and G. Klemperer, it is not possible by administering larger quantities of food to put a stop to the tissue loss in cases of cancer, and, as in fever, nitrogenous equilibrium is not attainable. F. Kraus has shown that, as in fever, there is retention of sodium chloride. V. Noorden (*loc. cit.*) allows that there is increased metabolism, but this is not found in all cases to the same extent. According to him, the loss of flesh in cancer, as in fever, is usually increased by the underfeeding and loss of appetite. It must, however, be allowed that these changes of metabolism do not become obvious in the early stages of cancer, but only when they can be explained by the duration of the disease, the growth of the tumour, the increasing pain, and the characteristic distaste for food. The amount of tissue loss reported in Müller's cases in some instances small enough to suggest the possibility of its being overcome. V. Leyden himself has reported a case of stricture of the oesophagus in which he was able by feeding through an oesophageal tube to cause temporarily a great increase of weight. Riegel, Ewald, and Boas all agree as to the possibility of obtaining temporary improvement by means of suitable feeding. Boas emphasizes, however, the impossibility in nine cases out of ten of restoring appetite when this has once become lost. Blumenthal and Braunstein have shown that in certain cases the tissue loss appears somewhat late in the course of a cancer. It is only often such cases have begun to ulcerate or secondary infections have occurred that the cancer cachexia sets rapidly in. Blumenthal gives four causes of cancer cachexia: (1) the hindrance to the ingestion of food as seen in carcinoma of the digestive tract; (2) secondary infections; (3) the injury to vital functions as in cases of the pancreas or liver; and (4) the presence in the circulation of a predigesting ferment. This ferment, according to Blumenthal, is formed within the cancer cells and is only set free if the cells become disintegrated, a fact which would explain the late onset of cachexia in some cases of necrotic tumour with quick contraction. It appears, therefore, that by adequate feeding the appearance of the symptom of loss of flesh can be delayed and it is to be remembered that by keeping up the general condition the resisting power of the healthy cells to the disease will be increased. The great difficulty is the psychical depression which leads to persistent loss of appetite, and unless this depression can be overcome no substantial results can be expected; it is thus only cases in which the cancer is almost at a standstill for which the prognosis as regards the results of careful feeding is good. The more recent methods of treatment by serum, trypsin, Roentgen rays, and radium may supply the patients with the necessary conditions of slow progress or retrogression of the cancer and a consequent increase of hopefulness; but even if disappearance of the cancer can be brought about by these more recent methods, the process is necessarily a slow one, and the keeping up of the patient's strength during the treatment is of the utmost importance. In all cases the treatment by careful feeding must be accompanied by psychical treatment. The author reports 2 cases of increase of weight and improvement of general condition during the apparently successful treatment of inoperable cancer—in one instance by injections of serum; in another by trypsin and serum injections. The first patient had been operated upon for hourglass contraction of the stomach caused by chronic gastric ulcer, and a tumour of the pancreas invading the stomach had been found. This patient put on 23 lb. in weight while under treatment. The second case was one of carcinoma ventriculi occurring in a woman 54 years of age. This patient was put on a mixed, easily-digestible diet, and from ½ to 1 litre of milk was given per day; treatment was by lactalbumin and trypsin. After between four and five weeks' treatment she left the hospital by her own wish, having improved, and having increased in weight by 6 lb. The patient came back in two months; in the interval she had lost weight and appetite and had again begun to suffer from severe pain and repeated vomiting; the stomach tumour had increased in size, and reached down to the umbilicus. Injections of serum were now begun and continued on every alternate day from September 15th, 1906, to November 6th; the weight went down from October 11th to 15th from 110 lb. to 108 lb., and the appetite showed no signs of reappearance. Systematic feeding was carried out, and pepsins administered. The local condition improved greatly, and the tumour became no longer palpable except after sodium bicarbonate had been given. In spite of this improvement, the weight on November 6th, and, later, on November 15th, after the injections had been discontinued, was still only 108 lb. On November 22nd, however, the weight was 111¾ lb., and on December 9th was 115 lb. The patient was discharged from the hospital on December 11th, the case being one of great improvement or perhaps of recovery.

PATHOLOGY.

102. Regeneration of the Arterial Intima after Trauma.

E. Vitale (*Giorn. internaz. d. Sci. med.*, Nos. 16 and 17, 1906) has studied the processes whereby the inner coats of the arteries are repaired after injury. He describes the methods employed by previous workers, and describes his own. The artery was first laid more or less bare by dissection, ligatures were passed under it at two points a few centimetres apart, and by pulling these ligatures upwards the intervening stretch of artery was rendered anaemic. The vessel thus emptied was then opened by a longitudinal incision less than 1 cm. long, and the intima or intima and media could then be scratched to any required extent and depth by means of a small and sharp Volkmann's spoon. The incision was then closed by a fine curved needle and fine silk, using the special stitch recommended by Cuneo (the whip stitch). Vitale finds that the arterial endothelium shows signs of repair in sixty hours, the muscular and elastic layers in ten days; if the trauma has gone very deeply repair may not be complete in one, two, or even three months. At first only connective tissue fills in the lesions; the new muscular and endothelial cells grow out from the adjoining uninjured endothelium and muscle, while the elastic tissue is deposited *in situ* in the scar from the peripheral zone of the cellular protoplasm. The intercellular matter and the nuclei of the cells have no share in producing the elastic fibres. The area of regeneration contains more elastic tissue than is present in the wall of the normal vessel; this is perhaps a compensatory hypertrophy to make up for the delayed restoration of the muscular layer. Hence no permanent dilatation of the vessel follows injury to its wall.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

103. Ocular Symptoms of General Paralysis.

Raviart, Privat de Fortunié, and Lorthiois (*Revue de Médecine* (October, November, December, 1906), in three papers have made a most exhaustive analysis of the various ocular symptoms found in cases of general paralysis, both by themselves and by various other observers. The first paper is devoted to the findings of other observers; the second and third consist of an analysis of the cases which the authors themselves have personally had under observation, together with a discussion of the value of ocular symptoms in general paresis as a means of distinguishing it from many other organic nervous diseases, and a few functional ones. The authors cite, under each subsection devoted to differential diagnosis, numerous examples which illustrate the difficulties arising in differentiating various other nervous diseases from general paralysis, and point out the great help which a careful investigation of ocular troubles may give in making an accurate diagnosis. The observations of the authors were carried out on 268 cases; these included male and female patients suffering from general paralysis in its various stages, from various forms of dementia, imbecility, idiocy, cerebral syphilis, tabes, epilepsy; a few of the observations were from patients in various stages of debility without any definite organic nerve lesion. In all these cases careful ocular examinations were undertaken: these consisted of: (1) Examination of the iris for discoloration, for pupillary inequalities or irregularities, for miosis or mydriasis; (2) examination of the pupillary reflexes for light, for accommodation, for palpebral reaction (dilatation or contraction); (3) ophthalmoscopic examination, for changes in retina, choroid, optic papilla: (4) examination of the movements of the eyeball to detect weakness or paralysis of the various external eye muscles, including those of the lids. As a result of a most exhaustive examination of the ocular signs found in the cases which they have investigated the authors give a summary of their results and the conclusions to be drawn from them. From their own observations and from those arrived at by other observers, they consider that ocular troubles form an integral part of the clinical picture of progressive paresis, no case of this disease progressing to its fatal termination without some abnormal ocular trouble manifesting itself. Ocular troubles in general paresis may exist without being dependent upon the disease itself; thus exophthalmos, ptosis, nystagmus, strabismus, and even pupillary inequality, may be of congenital origin and may arise quite independently of the general paralysis. Some ocular troubles arise accidentally during the disease: such are corneal lesions, extrinsic oculo-motor troubles, hippus, and scintillating scotoma. Lastly, there are the eye disturbances which constitute the characteristic manifestations of the disease; these consist of disturbances of the internal musculature of the eye, leading to pupillary changes (irregularities, miosis, mydriasis), inequalities and reflex disturbances (light and accommodation), and, lastly, changes in the depths of the eye. Discoloration of the iris is very frequent in general paralysis, and although found in numerous other affections, is important as an indication of grave alterations of the nervous system. Irregularity of pupil contour is extremely commonly found, more so in general paralysis than in the other nervous affections, and therefore has a certain diagnostic value. Miosis and mydriasis are of not much diagnostic importance, neither is pupillary inequality. Abolition of pupil reflex to light is a sign extremely common, and the frequency with which it is found increases with the progress of the disease, in other diseases it is much less commonly and constantly present, and therefore is a sign of the greatest diagnostic value. The reaction of the pupil to accommodation is much less frequently altered than is the light reflex, but, like this, the more advanced the disease, the more frequently is it found altered; its diagnostic value is much less than the following the Argyll-Robertson pupil; this existed in 50 per cent. of the authors' cases, and is much commoner in progressive paresis than in other nervous diseases; it is present with equal frequency in the first, second, and third stages of the disease. Alteration of light and accommodation reflexes simultaneously is very rarely found, but when present is a valuable diagnostic sign of progressive paresis. Changes in the palpebral pupillary reaction are equally common in the three stages of the disease; but, appearing later than the changes in the pupillary light reaction, their value is not marked. The other most important eye troubles from a diagnostic point of view are changes found in the depth of the eye, especially optic atrophy although, as frequently found in organic and senile dementia, in these affections the ophthalmoscopic lesions are slight and optic atrophy is very rare. Of all the ocular signs to be met with the authors consider that internal ophthalmoplegia, particularly alteration of the light reflex, is the most important diagnostic sign, from its frequency, its early appearance, its constancy, and its progressive march—in other affections it is not nearly so constant. The authors point out that the diagnostic value of these ocular signs depends not only on their characters and frequency of occurrence, but also on their early appearance and on the number of more or less characteristic symptoms which accompany them; further, the fact that during the remissions which may occur during the course of general paralysis these signs persist, offers us a valuable means of diagnosis, since they may be the only remaining indications of the irreparable character of the nervous lesions.

104. Visceral Pupil Reflexes.

Signorelli (*Rif. Med.*, October 6th, 1906) has made a study of the pupillary reflexes which may be observed in association with disease of the internal viscera, more particularly in relation to the spleen. Pupil changes may result from stimuli starting from any one of the various viscera; these changes are usually in the form of anisocoria or inequality in size, and the pupil affected is on the same side as the organ which is diseased—for example, in the case of the spleen, the inequality (generally a dilatation) is seen in the left pupil. The inequality is not permanent, but transitory, and hence functional in nature. It may be a static reflex—that is, lasting for a comparatively long period and being more or less continuous; or dynamic—that is, only present when the pupils are in active movement. These pupillary changes have been noticed by the author in tonsillitis (acute and chronic), cervical adenitis, pulmonary tuberculosis (especially in the incipient stages), pneumonia, pleurisy, heart disease, and affections of the spleen.

105. Paravertebral Triangle of Dullness in Pleural Effusion (Grocco's Sign).

Thayer and Fabyan (*Amer. Journ. of Med. Sci.*, January, 1907), from observation in 32 cases of pleural effusion, found in all but 2 instances a paravertebral triangle of dullness at the base of the opposite chest. Since of these exceptions 1 was imperfectly examined and the other was an interlobar empyema, this triangle may be considered as a constant physical sign in cases where there is free fluid in the pleural cavity, or in which an encapsulated effusion impinges on the spine. It consists of an area of relative dullness, the vertical side being represented by the line of the apophyses of the vertebrae, the apex reaching a little above the level of flatness of the effusion, the dullness becoming more marked towards the spine. The respiratory murmur is often suppressed, and oegophony and the coin sound may be present. When the patient lies on the affected side the sign disappears, but returns when the patient assumes the erect posture or lies on the other side. In 3 cases of encapsulated effusion this sign proved of marked diagnostic value. As to its causation, its presence is explained by the fact that the fluid lying against and in front of the bodies of the vertebrae acts as a mute in suppressing the vibrations of the spine.

SURGERY.

106. Suprahyoid Pharyngotomy.

Von Hacker (*Zentralbl. f. Chir.*, No. 45, 1906) publishes a case of transverse pharyngotomy above the hyoid bone practised for the removal of a round-celled sarcoma of the root of the tongue. In his comment on this case, in which, it is asserted, the pharynx was for the first time exposed

in this way on the living subject for the removal of disease, the author states that in 1895 Feremitsch of Moscow was led by his observation of the very favourable course of a suicidal cut-throat, in which the wound had been made above the hyoid bone, to recommend suprahyoid pharyngotomy in place of the usual infrahyoid method. The advantages claimed for the former method are increased space and freer access to the root of the tongue, and, above all, safety from injury during the operation of the laryngeal nerves and the epiglottis. In the author's case, after tracheotomy had been practised, a transverse incision was made between the anterior borders of the sterno-mastoid muscles; both lingual arteries were ligatured outside the cornua of the hyoid bone, and the muscles at the floor of the mouth were divided. The access to the root of the tongue and the posterior and upper parts of the pharynx was found to be very free, and the tumour, which, it is stated, was a fairly large one, was, with a portion of the epiglottis involved in the disease, removed without difficulty by the thermo-cautery. The wound healed by primary intention, and the immediate results of the operation were favourable, but on the tenth day the patient, who was a weak and emaciated man aged 63, died from hypostatic pneumonia and cardiac failure. The prognosis of this method of pharyngotomy, which is recommended as simple and easy in regard to its technique, and as promising speedy healing, would, the author thinks, be improved in future by rejecting tracheotomy and by trusting solely to local anaesthesia.

107. Elimination of Cavities in Operative Wounds.

Von Mosetig-Moorhoff (*Surg., Gynec. and Obst.*, October, 1906) insists on the importance of eliminating so-called "dead spaces" in operative wounds with the object of preventing suppuration and its sequelae, as well as of promoting more rapid healing. In this paper the author discusses the filling of bone cavities by absorbable material which is removed wholly or partially in course of time by vital phenomena, to be replaced by a permanent organized cellular filling. The use of autoplastic material such as the blood, skin, and muscular tissue of the patient, and also the use of heteroplastic material such as pieces of fresh bones of young animals, have both failed, the filling being badly tolerated, and compelling removal on account of local septic symptoms. It is held that the organism will tolerate only a complete hermetic closure of an aseptic cavity by an antiseptic filling. A hermetic filling can, however, be accomplished only by a mass capable of being poured in a liquid form into the bone cavity, and of solidifying there. The filling mixture now used by the author consists exclusively of iodoform, spermaceti and sesame oil. This filling, called by the author "iodoform-plombe," has been found very suitable, and in its use in more than a thousand cases, has always been well tolerated. It is, however, only a *locum tenens* remaining in the cavity until either entirely absorbed by granulations, or partially absorbed and partially expelled. The gradual disappearance of the "plombe" keeps pace with the progress of cicatrization and may be observed radiographically. Iodoform poisoning is not to be feared, owing to the extremely slow absorption of the drug into the general circulation. The course of healing after the use of this filling material is, with correct technique, always aseptic. With complete closure of the wound healing by primary intention is the rule. The final results are the best possible, also, from a cosmetic point of view, because, owing to the actively organized substitute, deeply retracted scars do not result.

108. Irrigation in Skin-grafting.

Wiesinger (*Sem. Méd.*, June 27th, 1906) removes exuberant granulations with a razor held on the flat, and arrests the haemorrhage by continuous irrigation of hot normal solution. After the application of the grafts and a covering of gauze, the surface is dressed with compresses soaked in warm normal solution, and kept wetted with the same for four days. By this means he has saved all his grafts in three-fourths of his cases, and 90 to 30 per cent. in the remaining fourth.

OBSTETRICS.

109. Post-partum Embolism.

Tarnier (*La Clin.*, November, 1906) says the size of an embolus ranges from that of the large clot which obliterates the internal saphenous artery and possibly also the iliac, and which is liable to be detached suddenly, to a fine dust of thrombi which circulates in the blood stream more often than is supposed, and which, if it is aseptic or of minimum toxicity, does not disturb the course of the circulation. Capillary emboli are anatomical but have no clinical significance. With regard to the large emboli, their diagnosis, risks, and treatment are well known, and the presence of phlebitis makes it possible to give timely warning; but there is another clinical form of embolus which cannot be foreseen, and which has the character of being relatively harmless. He quotes two cases: one had been confined ten days and the other twenty days previously. Both of them were perfectly quiet, when, either spontaneously or as the result of a sudden movement, they experienced a sudden pain in the right side with a sensation of tearing and the symptoms of syncope. There was extreme pallor, orthopnoea, working of the alae nasi, and dryness of the mouth and lips. The pallor and dyspnoea persisted for some hours. Auscultation revealed a little weakness or irregularity of the vesicular murmur, followed on the next day by some friction or râles; there was some oedema or congestion, and a blood-stained expectoration demonstrated that a pulmonary haemorrhage had occurred. The first patient was confined for the third time. Her progress was normal until the attack supervened without any warning. It was diagnosed as pleurodynia until the appearance of blood in the sputum. In the second case the attack occurred on the twenty-second day, the patient having been up for two days; at the moment, however, she was quietly in bed. In neither case was there any phlebitis, any infection, or any failure in *post-partum* treatment and care; but the first was markedly anaemic, and it is possible that thrombus existed before the confinement and the consequent uterine lesions. For treatment rest should be ordered, and a sedative or injection of morphine be given where the mother is not nursing her infant. In all cases it is well to restrict the movements involved by toilet and hygienic cares, and to reduce the diet and give a small dose of castor oil. Lactation need not be discontinued; in favourable cases convalescence is established in a few days.

110. The Influence of Paternal Lead Poisoning on Pregnancy and Conception.

Oui (*Echo Méd. du Nord*, January 27th, 1907) gives the history of a case which had recently come under his notice. A woman, aged 38, finisher by occupation, consulted him on August 23rd, 1906, because, being six and a half to seven months pregnant, she had not for the last three months felt the child. She gave the following history: She commenced to menstruate at 16 years of age, and had always been quite regular. Her first child was born on March 23rd, 1890, and she nursed it for six months, when an attack of typhoid fever compelled her to wean it. October, 1891, a living child was born, which she nursed for eight months, and which then died of meningitis. At the end of 1892 a living child was born, which she nursed until its death (cause unknown) at four months. Her fourth child was born in 1894, and only lived thirteen days. In 1898 she had a premature labour; child dead and macerated. Retention of membranes, fever, and curetting followed. April, 1901, labour nearly at full time; child dead and macerated. January, 1902, at six and a half months, labour, with dead and macerated child. In November, 1902, a dead and macerated fetus was expelled. October, 1903, labour at six and a half months; child dead and macerated. October 27th, 1904, labour at term; fetus dead and macerated. Her present pregnancy dated from January 27th to 30th, 1906; she first felt the fetus on May 2nd, and never again after August 2nd. Since then her abdomen had decreased in size. Between August 6th and 8th her breasts had been actively discharging. Palpation revealed a soft, mobile uterus reaching to two finger-breaths below the umbilicus; no fetal parts could be felt. Examination disclosed a soft, badly-torn uterine neck, with dilated external os. The history given by the patient produced no adequate explanation of the long list of deaths. There was no evidence of past or present syphilis. Her husband is aged 41. Since his military service he has lived some months in Cochin-China. Since then he has worked at a large printing office. From 1890 he has worked actively at stereotyping; and since 1896 he has had several attacks of bad colic. He has a child by a former wife, still living. He is sober and regular in his habits, and except for the lead colic has had no illness. The man was not examined by the author, who therefore cannot say that he has or has not had syphilis. But the influence of syphilis on conception tends to wear itself out, and here, on the contrary, the first four children were born living (the first two surviving), and all the others were born dead. Looking at the man's history we see that

his first two children, each by a different wife, were born before he began working as a stereotypist. After 1890, when he began that work, all his children died in infancy, until 1896, when his attacks of lead colic commenced. From that date on no other living child was born. It seems conclusively proved that plumbism was in this case the cause of the fetal deaths. According to Verharge, 22.91 per cent. of the children born to working painters either are born dead or die in infancy.

GYNAECOLOGY.

111. Uterine Haemorrhage at Puberty.

Fischer (*Zentralbl. f. Gynäk.*, No. 4, 1907) recently reported before a medical society two cases of dangerous haemorrhages, and some less severe instances of metrorrhagia at puberty. The first patient was 12 years old, and the first period lasted for a week, at the end of which time Fischer was consulted. Drugs proved useless, so the uterine mucosa was scraped off. Under the microscope it appeared normal, but poor in glandular structure. The child had nearly bled to death during an attack of epistaxis when 5 years old, and large ecchymoses developed after slight injuries. Bleeding from the gums had been noted for two years before the metrorrhagia. Fischer considered that in this case, still under his observation, haemophilia accounted for the bleeding. The second patient was 15 years old. She had suffered from metrorrhagia for six weeks, and the skin of the trunk and extremities was covered with petechiae. The curette was applied, but the girl died a fortnight later from epistaxis. Fischer attributed her death to purpura. He further reported 12 cases of severe metrorrhagia in girls between 12 and 17 years of age. In all there was no other evidence of pelvic disease, in 11 there was no constitutional disease, but one girl, aged 14, was diabetic. In 3 cases the girls' mothers gave a history of menorrhagia in themselves or their sisters. All the 12 girls were subject to constipation, and 2 at least masturbated. Professor Schauta, in discussing Dr. Fischer's paper, stated that he had treated many cases of severe haemorrhage at puberty. He did not consider that this affection was a form of haemophilia. Menorrhagia early in puberty was very common; chlorosis, anaemia, and tuberculosis, causes of local haemorrhage, and also epistaxis itself, attacked a countless number of children and girls, yet the great majority were cured spontaneously, or at least did not succumb to the bleeding; on the other hand, Shauta observed, haemophilia was a very rare disease, and most intractable.

112. Total Procidentia in a Girl aged 16.

Sutter (*Monatsschr. f. Geb. u. Gyn.*, October and November, 1906) reports this condition in a patient whom he examined when she was over 18 years of age, subject to procidentia complicated by gonorrhoea. Three years previously she had strained herself moving furniture, and noticed a projection in front of the anus. One year later all the parts seemed to come out of the vulvar orifice. The prolapse ultimately became irreducible. When examined by Sutter the patient, then in domestic service, was anaemic and somewhat emaciated. There were evident signs of chronic gonorrhoea. A mass bearing all the characters of a total procidentia protruded from the vulva; the cervix had become ulcerated, as usual. The round ligaments and ovaries could readily be defined through the prolapsed vaginal walls. The entire mass was easily reduced, but immediately the pressure was removed it descended again, the posterior vaginal wall coming first. The uterus was very small, and there was but little pubic hair. Sutter amputated the hypertrophied portio and performed anterior colporrhaphy, and also shortened the round ligaments to the extent of nearly 6 in. by Alexander's operation, opening the peritoneum. Yet the posterior wall began to descend a month later, although the patient had been carefully nursed and undergone an operation for strumous cervical glands in the meanwhile. Sutter undertook a posterior colporrhaphy, and strengthened the perineum by a plastic operation. The patient was discharged cured, but no after-history is reported. Sutter refers to O'Callaghan's case, and Mirabeau, in a discussion on Sutter's report, mentioned an operation on a girl between 17 and 18, recently delivered. She had been pregnant, and was employed in a butcher's shop, often lifting heavy pieces of meat. During labour the os presented in front of the prolapsed vagina. Believing that in the course of involution the procidentia might be spontaneously cured, Mirabeau applied a pessary on the seventh day of the puerperium, but it could not be retained, as there was marked cystocele. He performed a plastic operation to cure the prolapse of the bladder without removing much of the vaginal wall. There was no congenital anomaly in that instance; on the contrary, the patient was strong and well-developed, and the labour had been normal, notwithstanding the prolapse. That condition, in Mirabeau's opinion, was of purely traumatic origin, due in part to lifting weights. Wiener observed that, when an assistant in country practice, he saw a good long series of cases of prolapse in girls. The patients were in every instance of the peasant class, accustomed to hard manual labour. He always performed anterior and posterior colporrhaphy, and declared that he had never seen a failure. Stumpf remarked that, as prolapse has been observed in the newborn child, it certainly might have been of congenital origin in some of the reported cases which occurred in girls.

THERAPEUTICS.

113. Marmorek's Antituberculous Serum.

Emanuel Ullmann (*Zeit. für Tuberk.*, December, 1906) has during the last eight months treated 30 cases of tuberculosis with Marmorek's antitubercle serum. In each case daily injections of the serum were made, 5 c.cm., or in a few cases in which progress was slow 10 c.cm., being injected into the rectum. The temperatures were taken twice a day in the rectum, and the weight before the treatment was begun and later after every ten injections. The patients were on ordinary sanatorium diet, and received in addition ¼ litre of milk twice a day, and at night slices of sausage and half a roll or some black bread. The adults were given also ½ litre of a light home-grown wine at mid-day. In addition to the serum treatment daily injections of a guaiacol-iodoform emulsion were made in tuberculous joints or cavities in glandular and bone tuberculosis. Eight of the cases treated by the author have already been reported, but 3 of them are again described in this article, 1 because it suggested a helpful method of treatment of severe scrofulous disease of the cornea in children, and the other 2 because of the exceedingly favourable results obtained. Of the remaining 22 cases, 1 was of tuberculous disease of the testicle, 1 of the knee-joint, 5 of glands, 1 of bone, 2 of the lungs, and 12 scrofulous disease of the cornea. Most of the cases were treated in hospital, and the favourable results were obtained in spite of the fact that the hospital was always overfilled. The author feels that there can be no doubt as to the great value of the treatment in the cases he describes. One case was of severe acute tuberculosis of the lung occurring in a working man. The patient received two series of injections, the second being started when it was found that bronchial breathing persisted over the lower lobe of the right lung after the other signs and symptoms had yielded to treatment. The patient first became ill in January, and the serum treatment was continued, except for one interval of about three weeks, until the end of July. He was able to resume his work in May, and has continued in steady work since then. At the present time he has no sign of disease, he feels well, and his weight keeps up. In another case of tuberculosis of the shoulder-joint with a certain amount of destruction of bones, occurring in a young girl, the patient left the hospital completely recovered, except that the arm could not be raised above the horizontal; at the present time she looks well and can work all day without fatigue. Amongst other cases deserving special mention is one in which the right testicle of a man whose left had been previously removed, was preserved apparently as a result of the serum treatment; and another of tuberculosis of the knee-joint in which complete recovery with the preservation of a useful joint was obtained in three months. Cases of phthisis were greatly improved and there was a second case of a working man able to return to his work. Enough time has not elapsed in these cases to ensure that recovery is permanent, but in the cases of scrofulous disease of the cornea permanent recovery has without doubt occurred. In the 12 cases of this nature reported in the article the results of the treatment were marvellous, and 7 cases would give an impression of the beginning of improvement after even the first or second injection had been made. In 1 case of lymphatic inflammation of the cornea which might have been expected to run a course of three to four months, to have very possibly attacked the other eye also and to have left behind it permanent injury, recovery occurred in three weeks, after ten injections of the serum and with no trace of permanent mischief. Another case of deep ulceration of the cornea recovered absolutely after ten injections and a case of hypopyon after thirteen injections.

In all the cases of disease of the cornea in which treatment by the serum was begun early, the symptoms disappeared quickly and left no permanent injury either in a physiological or cosmetic sense. The treatment by the serum has the additional advantages of simplicity, cheapness, and convenience. The author would wish it to be tried in every case.

114. The Tuberculin Treatment of Phthisis.

Hammer (*Munch. med. Woch.*, November 27th, 1906) says that the reason of the total failure of tuberculin at first is to be found in the excess of dose and in the want of method in applying it. In such a disease as pulmonary tuberculosis it is almost impossible to gauge the exact extent of the pathological changes from the clinical signs and symptoms, and for this reason a certain prognosis cannot always be formed. One should be satisfied if the remedy can by itself effect a cure in early and favourable cases. Hammer has employed tuberculin for six years in the treatment of phthisis. For the most part he used old tuberculin, and only in a few cases did he apply T.R. and new tuberculin. The injections were made in the suprascapular and interscapular spaces, alternately on the right and left side. The skin was disinfected with alcohol, or alcohol and ether, as well as by thorough mechanical cleaning. Not a single abscess or infection was noted after any of the injections. The site of the injection was protected by sterile cotton-wool for twenty-four hours, and the injection was made with a syringe having a glass or metal piston. Local reactionary changes do not follow therapeutic injections, but occasionally the injection is followed by mild pains extending from the site of injection. The neighbouring lymphatic glands swell, and a mild erythema may be seen after the first few injections. The dose has to be carefully chosen for each individual case. The object is just to avoid a reaction. The limit of dose which produces a reaction varies considerably, and a marked reaction has been noticed after $\frac{1}{500}$ mg. A dose of $\frac{1}{250}$ mg. is often followed by a very severe reaction, with prolonged fever and haemoptysis. Again, care has to be taken on account of a cumulative action which undoubtedly takes place. As a general rule, he starts with a dose of 0.01 mg. in mild afebrile cases, but in less favourable cases he begins with 0.001 mg. He has quite given up beginning with higher doses, such as 0.1 mg., which have been recommended. The doses are very gradually increased, according to a scale. Hammer finds that, as a rule, 0.01 mg. can be given, then 0.02 mg., then 0.03 mg., and so on; so that 75 injections are required to reach 1 gram. If any traces of reaction appear, caution must be exercised. As a rule, the dose is raised every third day, and if any rise of temperature takes place it is immediately reduced again. The patients were all attending as out-patients, and their mode of life was not altered during the treatment. They took their own temperatures every four hours, recording it on a special chart. Uncomplicated cases without fever proved to be best suited for the treatment, but he found that with great care every case could be injected without risk even in advanced stages of the disease. The chief requirement is to adapt the dosage to the case. As far as his cases are concerned the diagnosis was confirmed either by the tuberculin test or by the discovery of tubercle bacilli in the sputum. All the prognostically favourable cases did well, notwithstanding the fact that the patients lived at home in a very undesirable environment. These cases cannot be spoken of as cured, as some of them still showed slight physical signs, but in a number of them all signs disappeared and had not returned up to a recent date, when an examination was made. Hammer, therefore, concludes that in tuberculin we possess a valuable remedy for phthisis, which, even if it is not a certain cure, at all events does much more than any other remedy. Its use should be combined with hygienic dietetic treatment.

115. Menthol in Gastropathies.

Lucas Augier (*Journ. des Prat.*, December 1st, 1906) has for the past three years systematically employed menthol in the treatment of various gastric disorders, especially those accompanied by pain. He finds that its effect is not limited to the relief of gastric pain, but that it can check vomiting. In virtue of its powerful antiseptic properties, and its analgesic action on the mucous membrane of the stomach, it has proved of the greatest use in the cases where pain and vomiting have been troublesome features. In all cases of dyspepsia characterized by pain, vomiting, sensation of fullness after eating and distension, especially in those cases where there is no organic disease of the stomach, and in which these symptoms are the result of disturbance in the innervation or secretion of the stomach, menthol causes a marked amelioration of these symptoms; thus in chlorosis, in the dyspepsia of early phthisis, and in gastric neurasthenia, a marked improvement soon occurs. In the gastric crises of tabes menthol has proved most valuable in rapidly cutting short the attacks and allaying the pains. In several cases of intractable vomiting in pregnancy menthol has proved most satisfactory in checking this troublesome symptom after most of the other methods of treatment had been employed in vain. Even in some cases of simple ulcer or cancer of the stomach, where vomiting and pain have been marked features, menthol has given relief to these symptoms, and its use has never provoked haematemesis. In those cases of ulcer of the stomach where haemorrhage frequently occurs the drug has not proved of service either in allaying the vomiting or in checking the haemorrhage. In prescribing the drug only small doses are to be given, from 0.1 to 0.2 gram being usually sufficient; the drug is best given in the form of a cachet with sugar of milk once a day, and followed by a draught of water.

PATHOLOGY.

116. The Exudates of Meningitis.

Sironi (*Arbeiten aus dem Path. Instit. zu Berlin*, 1906, p. 160) has made a study of the exudates in different types of meningitis, and arrives at the following conclusions: (1) *Meningitis cerebrospinalis epidemica:* In this disease the amount of exudate is generally considerable, and is not infrequently greater in the membranes of the spinal cord than in those of the brain. The exudate consists of a seroalbuminous fluid, and contains cells which, in the acute forms of the disease, belong to the neutrophile leucocytes of the blood. In all the cases which the author investigated the *Diplococcus intracellularis meningitidis* was found to be the causal agent of the disease. The diplococci were generally found within vacuoles in the protoplasm of the neutrophile leucocytes. The leucocytes showed degenerative changes both of their nuclei and of their protoplasm. With regard to the former, pyknosis, chromatolysis, and karyolysis were met with, and, less frequently, hyperchromatosis, karyorrhexis, shrinkage, and vacuolization. In the protoplasm the usual changes were fatty degeneration, diminution of the granules, shrinkage, and vacuolization. The neutrophile leucocytes travel by diapedesis into the subarachnoid spaces, owing to the chemiotactic influence of the diplococci. Lymphocytes and mononuclear cells are also present in the exudate, but in much smaller numbers than the polynuclear leucocytes. The mononuclear cells exhibit a phagocytic action upon the cells and cell débris contained in the exudate, but only to a slight extent upon the bacteria. The cells of the adventitia of the blood vessels show proliferative changes; they increase greatly in number, become larger, detach themselves from their site of origin, assume a rounded form, and acquire phagocytic properties. The above-mentioned features are characteristic of acute cases of from three to six days' duration. When the disease runs a chronic course polymorphonuclear leucocytes are rare and lymphocytes and mononuclear cells predominate. These results agree with the observations made on the liquid obtained by lumbar puncture. (2) *Pneumococcal meningitis:* In a meningitis of this type of from two to three days' duration the exudate is rich in fibrin. The cells entangled in its meshes are neutrophile leucocytes and mononuclear cells. Karyorrhexis, pyknosis, and vacuolization of the nuclei are the degenerative forms most frequently met with amongst the multinuclear leucocytes. (3) *Streptococcal meningitis:* The exudate in this type of meningitis is very like that of the pneumococcal disease, being characterized by an abundance of fibrin and the presence of multinuclear leucocytes, which far outnumber the mononuclear cells. (4) *Meningitis tuberculosa:* This disease is characterized by an exudate in the presence of tubercles. The latter arise as a circumscribed cellular infiltration of the adventitia and the entire walls of the vessel. This infiltration is set up by the tubercle bacillus in from three to four days. The mononuclear cells which form the young tubercles are for the most part lymphocytes; amongst these only a few mononuclear leucocytes are to be found. All these cells are derived by migration from the blood and lymph vessels. The epithelioid cells are nothing more than lymphocytes at the commencement of caseous degeneration; they make their first appearance in from the eighth to the tenth day of the tuberculous infiltration. The caseating process also attacks the structural elements of the vessel walls. The free exudate consists of a coagulable fluid which generally contains fibrin; the fibrin is abundant in the acute cases, but in the more chronic forms of the disease it is scanty or may be entirely absent. The cells present are mostly mononuclears.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

117. Inflammatory Tuberculosis and Arthritism.

ANTONIN PONCET (*Bull. de l'Acad. de Méd.*, January 14th, 1907) discusses the probability of the tuberculous origin of many of the lesions of so-called "arthritic" subjects. Arthritism, he says, is one of those vast questions of general pathology which one approaches warily—the word is of such age and of so general an acceptance, and yet so ill-defined and uncertain in meaning. Though almost exclusively medical the matter has yet been on occasions considered by the surgeons. Verneuil has attempted to make it a factor in post-operative results: Richelot would give it a pathogenic rôle in gynaecology. Before stating the line of thought to which his work has led him, it seems necessary to establish definitely what one means by "arthritism." Under this name, says Chatin, it has been sought to sum up in a word a number of allied morbid conditions with the idea of applying to a whole group of diseases the same causes and the same symptoms. For generations the diseases which affected the joints have been called arthritic; in the forefront of them all are rheumatism and gout. According to Bazin, arthritism was not only a collection of joint lesions, but was also a constitutional complaint, showing itself in very many ways and laying hold on all the systems of the body. In fact, it reached far and wide in its effects. Next, Bouchard overturned Bazin's theories, and replaced arthritism in a fresh category. The diathesis reappeared, modified but triumphant. Diathesis is the predisposition to disease, a permanent condition due to faulty metabolism, preparing the ground for different diseases, fostering and preserving them. There are two diatheses—the arthritic and the scrofulous, which sometimes meet on the confines of their respective territories. Both arise from failure of nutrition, and Bouchard has established a whole group of arthritic affections, the best known being obesity, diabetes, stone, and gravel. To these are added the indefinite digestive disorders, muco-membranous enterocolitis, recurrent bronchitis, asthma, etc., and not a few of Bazin's cutaneous affections. At this stage arthritism, the diathesis consequent upon slow nutrition, dominates all pathology. Lancereaux likens herpes to a tree, whose roots are in the nervous system, and from which springs a whole series of unhealthy branches, such as pruritus, migraine, haemorrhages, trophic disturbances of scalp, nails, and skin. Other branches are chronic rheumatism, contractions of fasciae and tendons, varix, and arteriosclerosis. But Bouchard's theory was only short-lived. Under the growing influence of bacteriological research, the arthritic diathesis wanes. Tuberculous rheumatism has hit it a hard blow. Diabetes has been removed from the arthritic group; every day proves more clearly that gall stones are of infective origin, and that the arthritic skin diseases are parasitic or toxi-microbial by nature. In fact, there seems to be nothing left to arthritism. The essence of arthritism is a formation of fibrous tissue. The immunity of arthritics in regard to tuberculosis has been proved to be a fallacy. Guyot ascribes arthritism to a microbe, the *Diplococcus rheumaticus*. Gilbert, on the analogy of gall infections, considers arthritism to be the result of an intestinal auto-infection. Arthritism, says the author, is a syndrome, which every cause acting for a long time can slowly produce and transmit by heredity. Little by little the modified humours will prepare the soil and cause to become arthritic those previously whole. One frequently finds tuberculosis among the forbears of the so-called arthritic. Teissier and Roque have found tubercle in 50 per cent. of their rheumatic subjects. It is well known that tubercle and diabetes go hand in hand, as also tubercle and obesity. Tuberculosis can claim very many of the skin diseases formerly attributed to arthritism. Bouygnes has called Dupuytren's contraction paratuberculous. In fact, scrofula is often found in the presence of arthritism. Le Gendre has said: "The sons of the gouty and the diabetic—that is, of the most typically arthritic—are, often scrofulous." Inflammatory tuberculosis has the same anatomical structure as arthritis: first, hyperaemia: secondly, inflammation; finally, thickening. The history of a tuberculous subject is not only that of the attack of phthisis which kills him: it begins often at his birth, with scrofula over which he triumphs. A lesion, which is called arthritic, is often only the expression of slight local tuberculosis. There are the *grands tuberculeux* and the *petits tuberculeux*. The former are quickly killed by their disease: the latter present a mild form of tubercle, which quickly becomes fibrous, or, if the term is preferred, arthritic. The former are examples of specific tuberculosis, the latter of a specific tuberculosis which only causes an ordinary inflammatory reaction in the tissues.

118. The Early Diagnosis of Cancer of the Stomach.

IN using the term "early diagnosis" in connexion with cancer of the stomach, A. Albu (*Deut. med. Woch.*, December 27th, 1906) means the recognition of the disease by ascertaining the existence of a palpable tumour. Treatment by surgical means with a prospect of cure is only possible when the tumour can be detected before any clinical symptoms have made themselves apparent. The fact that few patients are offered this chance of cure is dependent on the faultiness of our diagnostic capabilities. The test of the functional activity of the organ does not give us a certain index of early disease, but the author believes, on the basis of a considerable experience, that it is possible to make the diagnosis early enough in the small number of cases which the physician or surgeon is fortunate enough to see at this stage. The diagnosis is made from the consideration of the functional activity together with certain peculiarities of the course of the disease. One of the most important of these peculiarities is the rapid loss of weight. The patient loses weight from the first, and Albu considers that when the surgeon notices a loss of weight which is continuous, in spite of sufficient nourishment, one should always think of cancer of the stomach. This loss of weight may be very slight. The symptom itself only points to a disease connected with a rapid destruction of tissue, but this practically means cancer. The disease may be situated in the fundus or in the pylorus. In the former case, the motility will be found to be normal or only very slightly diminished, while free hydrochloric acid is either absent or much diminished, and the contents badly chymified. In other words, the functional test reveals the characteristics of an atrophic chronic gastritis. In the case of pyloric cancer, the motility is disturbed early, at times to a great extent. The free hydrochloric acid is often increased in quantity or is normal, while the contents are well chymified. This find corresponds with that of pyloric stenosis; but one difference exists between malignant and benign stenosis—that is, that as time goes on the free acid diminishes in the malignant form. He says that if one observes suspicious patients carefully from this point of view one will be able to arrive at an early diagnosis. He quotes some cases as examples. In one of these gastric symptoms had been present for about two months. These consisted of pain, which was independent of food. The appetite was good, and eating often relieved the pains. The test breakfast returned in the form of about 20 c.cm. of a coarse-fibred mucous emulsion, without free hydrochloric acid, and with a total acidity of 7. On repeating the test the chymification appeared to be getting worse. The patient was put on a bland but ample diet while in hospital, and was kept in bed. In four and a half weeks he lost 6¼ lb. He began to go downhill somewhat rapidly. An operation was performed on the grounds of the diagnosis of carcinoma of the fundus of the stomach, and a tumour of the size of a crown-piece was found in the posterior wall. Unfortunately, the patient died a few days after the removal of the growth. The second case fared better, and is at present feeling quite well. The tumour removed is probably one of the smallest ever diagnosed during life. The diagnosis requires the most careful watching and investigation.

119. Pulsus Alternans.

G. GALLI (*Riv. crit. di Clin. Med.*, 1906, No. 51) criticises the classification of alternating pulses made by Wenckebach, 1903, who puts such pulses into two classes: (*a*) those in which a small pulsation immediately precedes the large one, and (*b*) those in which the larger pulsation is immediately followed by a small one. Wenckebach states that in the true pulsus alternans the large and small cardiac systoles occur at equal intervals of time, but that the smaller pulse-wave travels along the vessels faster than

the large, so that pulse (*a*) appears: pulse (*b*) occurs when the cardiac systoles occur as in type (*a*), but when the weaker pulsation travels along the vessels more slowly than the stronger one. Galli believes that he has proved that pulses of type (*a*) are not alternating pulses at all, but are arrhythmic pulses due to extra-cardiac systole; and that Wenckebach's type (*b*) is the only real pulsus alternans, and that it owes nothing to any alterations in the speed with which waves pass along the vessels. Galli gives cardiograms and sphygmograms taken simultaneously from a patient of his who exhibited a constant alternating pulse for months together; these show that the pulsations due to the weaker cardiac systoles do travel more slowly along the arteries than the more forcible systoles. At other times this patient's pulse consists of rapid but equal pulsations. Galli therefore agrees with Hering that pulse (*a*) is a pseudo-alternating pulse, and that (*b*) is the true pulsus alternans.

SURGERY.

120. Vaso-vesiculectomy.

Baudet and Kendirdjy (*Rev. de Chir.*, Nos. 10 and 11, 1906), in concluding a paper in which they describe at length the different methods of vesiculectomy and vasectomy, discuss the indications for these operations in cases of genital tuberculosis. The combined operation is necessary, the authors hold, when the tuberculous disease has produced a urinary fistula; when there is rectal obstruction; in the presence of urinary troubles caused by vesiculitis and not dependent on cystitis; when in a patient who is undergoing treatment for genital tuberculosis, or who has already undergone castration, the vesiculae seminales continue to increase in size; finally, when there are well-marked lesions along the whole extent of the vas deferens. Moreover, vesiculectomy, the authors think, should be regarded as the elective treatment when one or both vesicles are much enlarged. In cases of genital tuberculosis, when there are but very slight lesions of the vas and the vesicule, the authors would reject vaso-vesiculectomy, although this operation under such circumstances is indicated, according to Roux, for the prevention of frequent relapse of epididymitis and the consequent necessity of castration, and of extension of the disease to the other testis and general tuberculous infection. These indications, the authors hold, are quite theoretical, and cannot always be met by this method of operative treatment. It would, in their opinion, be preferable in such cases to rest content with conservative interventions on the testis and epididymis or with strictly medical treatment.

121. Cardiospasm.

Sippy (*Surg., Gyn., and Obst.*, October, 1906), in an editorial article on spasmodic contraction of the muscular fibres of the oesophagus, states that attention has recently been directed to an oftentimes extremely serious set of symptoms due to this condition, which is termed cardiospasm. Though a spasmodic constriction of the oesophageal muscles may take place at any point in this tube, serious difficulty in swallowing does not arise except when the spasm is located at the pharyngeal or cardiac orifices. Spasm at the pharyngeal end seldom causes prolonged symptoms, but when it occurs at the cardiac end is often more persistent, and the cause of obstruction and of actual retention of food in the oesophagus. Prolonged retention results in fusiform dilatation of the oesophagus and hypertrophy of its muscular fibres. Cardiospasm, which is most frequently observed in individuals of nervous temperament, and may occur suddenly after mental or physical shock, or gradually and without apparent cause, presents certain definite symptoms, discomfort or actual pain, usually felt behind the sternum, comes on during a meal. The patient has a sensation of the food being arrested before it reaches the stomach. An attempt to eat rapidly is likely to be followed by regurgitation, which is frequently mistaken for vomiting. The obstruction is rarely such as at first to interfere seriously with nutrition. There may be little or no obstruction to the passage of a bougie, but, as a rule, the instrument meets with resistance at the cardiac orifice, which is usually overcome by slight pressure. The symptoms at first are transient, and may subside for weeks or months at a time. After the oesophagus has become dilated, and its muscular tissue hypertrophied, the symptoms are likely to persist. Unless the condition is recognized and properly treated in good time, the regurgitation tends to become constant, and death from starvation is likely to result. In mild cases of cardiospasm, soft and non-irritating food, sedatives, and physical and mental rest may be found to constitute sufficient treatment. In severe and well-marked cases, forcible dilatation or overstretching of the cardiac orifice will prove the best method of overcoming the spasm. Such stretching cannot, it is pointed out, be effected by bougies. The author, modifying Rosenheim's method of treatment, uses a rubber bag dilator, by means of which it is possible to accomplish any degree of dilatation that may be desired without the use of an anaesthetic. The degree of dilatation is accurately controlled by means of a cloth sack which covers the rubber bag. In this way, the author states, nine serious cases have been treated with complete relief.

122. Fetid Suppurative Otitis.

Simionescu (*Arch. Gén. de Méd.*, August 7th, 1906) first reviews the history of the bacteriology of suppurative otitis from 1881, when Loewenberg discovered micro-organisms in the ear, up to the present time. In order to elucidate the question as to the causation of the fetid character of the discharge in cases of otorrhoea the author has examined bacteriologically the pus obtained from the ears in 15 cases of chronic otorrhoea, in four of which the disease was bilateral, and his results are as follows: In 12 cases the *Bacillus proteus vulgaris* has been found. *Bacillus zopfi* and *Bacillus fluorescens liquefaciens* have also been detected. In addition to these the author has found three other organisms which have not previously been found in cases of otorrhoea; these are—*Bacillus irisatus*, an organism 1.8 μ long and 0.8 μ wide, very motile, staining with the ordinary aniline dyes, but not with Gram. On gelatin plates it forms yellow, opaque colonies with festooned borders, diffusing rapidly towards the periphery, and forming rainbow colours; no liquefaction of the gelatin takes place. On agar the culture takes the form of a nail, the head of which is formed by the shining and diffusible colony. On potato the growth forms a yellow pulp. Bouillon is rendered turbid. Milk is not curdled, and no indol reaction can be obtained; this organism the author has observed once in the otorrhoeal discharge. *Micrococcus odorus* γ: The size of this organism varies somewhat, its greatest diameter being 1.8 μ. It is motile, and stains with the usual aniline dyes and by Gram's method. On gelatin plates it forms round, yellow, opaque, superficial colonies, the edges of which are indented; deep colonies are also formed, and these are rounded or oval in shape with smooth borders, forming small cup-like depressions in the gelatin. On sloped gelatin, yellow or whitish-yellow colonies are formed, these rapidly enlarge to form pretty designs with a central nucleus. Bouillon is rendered turbid. On potato the growth of this organism is very abundant. Milk is not coagulated. *Micrococcus X*: This organism is really a diplo-micrococcus, somewhat like the pneumococcus; it is very motile and stains with the usual aniline dyes. On agar the superficial colonies are round, opaque and greyish-white and become transparent with age; the deepest colonies are yellowish in colour and round or oval in shape. No liquefaction of solid media is produced by this organism. On sloped agar a translucent yellowish-white film forms. On potato growth is abundant and of a reddish colour. Bouillon is rendered turbid and a deposit forms; milk is curdled in three days. As a preface to the treatment of purulent otorrhoea the author states that he has found that all those organisms causing putridity of the otorrhoeal discharge are effectually destroyed by a 2 per cent. solution of lysol, and that dermatol will prohibit their growth when added to their cultures. In the treatment of these cases the ear and auditory canal are first carefully cleansed by syringing with warm water and by swabbing out; if the fetid character of the discharge is slight, the whole auditory canal is swabbed out with a 2 per cent. solution of lysol and a pledget of wool soaked in the same solution is left in for a few minutes. If the fetidity is marked the canal is syringed out with a 1 per cent. solution of lysol and then filled with the same solution (warmed); after some minutes the canal is cleaned out and dried and insufflated with dermatol; if all the microbes causing the fetid character of the discharge have been destroyed, the dermatol will retain its yellow colour; if some are still active it becomes of a black colour and indicates the necessity for a repetition of the treatment. Of twenty-three cases of fetid suppurative otitis treated by this means, fifteen permanent cures have been attained. In five cases three séances were necessary; in four, seven séances; and in seven, twelve to eighteen séances. In five cases the discharge continued, but the fetid character disappeared. According to the author even cases with caries or necrosis have been cured by this method of treatment.

OBSTETRICS.

123. Puerperal Eclampsia and Parathyroid Insufficiency.

G. VASSALE (*Soc. Med.-Chir. di Modena*, meeting of July 4th, 1906) has recently made a further communication regarding the results of his experimental investigation of this subject. The parathyroid theory of puerperal eclampsia, formulated last year by the author on the ground of experimental and clinical observations, has since received confirmation (1) from pathological observations which have served to demonstrate in persons who have died from eclampsia morbid changes in, or congenital absence of, one or two parathyroid glands (Pepere, Zanfrognini); (2) from additional clinical observations showing the beneficial effects of parathyroid treatment in eclamptic convulsions (Zanfrognini, Stradivari); and (3) from new experimental researches carried out upon gravid cats and rats (Zanfrognini, Erdheim, Thaler, and Adler), which have confirmed the conclusion that in latent parathyroid insufficiency there constantly occur in the last third of pregnancy severe parathyreoprival convulsive phenomena (experimental eclampsia). The author gives an account of the history of three gravid bitches from each of which in 1906 he removed three parathyroid glands. The animals remained well until the last few days of pregnancy. In two of them experimental eclampsia developed about two days before parturition. To one of these animals parathyroidin was given by mouth in very large doses. The convulsions ceased, and under the influence of parathyroidin, the administration of which by mouth was continued after the cessation of the first convulsive seizure, the bitch, without suffering from any further convulsion, gave birth to three pups, which died within three days owing to want of milk in the breasts of the mother. The second bitch was not given parathyroid treatment, and about forty hours after the onset of the first slight attack of tetania parathyreopriva it died in a violent convulsive seizure without having expelled the fetuses, although these had reached their full term. In the case of the third bitch convulsions occurred only a few moments before parturition. A large dose of parathyroidin was administered and the animal succeeded in giving birth to six pups, four of which it suckled and reared. In the course of lactation it again had a violent seizure of tetania parathyreopriva which was combated by large doses of parathyroidin. Subsequent to this it remained, like the first bitch, in good health. The urine of these animals contained albumen (0.05 to 0.1 per cent.), the amount of which kept increasing during the last days of pregnancy. The albumen disappeared fairly rapidly after parturition. The onset of experimental eclampsia in these animals was preceded by a period of oliguria and anuria. The author also points out the clinical analogy that exists between the disorders of the renal functions in these animals and those that are to be observed in eclamptic women. Concerned with the pathogenesis of the renal disorders of pregnancy, which are of chief importance as determining causes of the manifestation of a latent parathyroid insufficiency and therefore of the onset of eclamptic convulsions, there are not only autotoxic causes, but also mechanical causes (compression by the gravid uterus), which induce disturbances in the renal blood circulation and urinary stasis. The author has found that partial occlusion of the ureters of dogs upon which a partial parathyroidectomy has been performed determines the rapid development of severe parathyreoprival convulsions, which result in the death of the animal in from fifteen to twenty hours. It is known that muscular fatigue and nervous exhaustion are also capable of determining the occurrence of symptoms of parathyroid insufficiency. It is thus easy to understand how in primiparae, in whom the mechanical causes, dependent upon compression by the gravid uterus, are undoubtedly of greater importance, and in whom also the duration of the labour is longer, eclampsia occurs more commonly than in multiparae.

GYNAECOLOGY.

124. Amputation of Hypertrophied Cervix during Pregnancy.

POTOCKI (*Ann. de Gyn. et d'Obst.*, December, 1906) performed this operation on a woman in the fourth month of pregnancy. She had been pregnant once, ten years earlier, and the labour was perfectly normal. For two years she had been troubled with a protrusion of a mass at the vulvar cleft. Hypertrophic elongation of the vaginal portion of the cervix was detected, but she declined surgical assistance until she became pregnant again. Potocki amputated the cervix ⅝ in. below the reflexion of the vagina in the anterior fornix. He fashioned two flaps, and took especial care not to make any traction on the cervix at any stage of the operation. The amputated portion measured 2¾ in. in length. Hardly any haemorrhage occurred. The vaginal and the uterine mucosa were united, with as much accuracy as was possible, by means of catgut sutures. The vagina was tamponed with iodoform gauze. One centigram of morphine was injected morning and evening for the first three days. The patient was delivered at term of a male child weighing 7 lb.; it was reared and became a strong child. Quite recently, six years after the operation, Potocki examined the patient. The uterus was not hypertrophied, the cervix projected only to a normal extent into the upper part of the vagina. Potocki discusses at full length the arguments and evidence in favour of operations on the hypertrophied cervix during pregnancy. When the amputation is performed aseptically and the mucosa of uterus and vagina carefully united there will be no obstacle to normal dilatation of the cervix during labour.

125. Vaginal Cysts.

HEYMANN AND GLOCKNER (*Zent. f. Gynäk.*, No. 5, 1907) report two cases of this rare condition. In the first, the patient was but 12 years of age, and the cyst suppurated; in the second the patient was a parous woman, aged 28, in whom a large vaginal cyst was associated with malformation. Heymann's patient was free from constitutional disease; she began to menstruate when 10 years of age, and was quite regular. An attack of pelvic pain, with high temperature and hypogastric swelling, occurred, quite independently of any acute general ailment. The uterus was fixed, and a tense, elastic, immovable tumour projected under the right vaginal fornix. Fetid sanious pus escaped from the cervix. The tumour proved to be a cyst, and its lining was microscopically identical with that of the vagina. Glockner describes minutely the relations of the tumour, and discusses its origin. The association of this cyst with acute suppurative pelvic inflammation in a child was remarkable; there was distinct paracentesis and discharge from the uterus, but the significance of the latter symptom was not made clear. Glockner's patient came under his care within four months after spontaneous delivery; prolapse had already been noted during the pregnancy, and a swelling as big as a goose's egg protruded from the vulva. It was not a cystocele, but a large independent cyst of vaginal origin. A remarkable diverticulum ran from close to the posterior commissure under the vaginal mucosa for over 1 in. upwards along the left side of the posterior vaginal column; it was clearly not an imperfectly-healed laceration. The big cyst was dissected out; its inner lining membrane bore at points ciliated epithelium, and at others distinct papillomatous growths. The wound healed well, and, according to the after-history, there was no tendency to recurrence.

THERAPEUTICS.

126. Treatment of Status Epilepticus.

PÖKELMANN (*Therap. Monats.*, November, 1906) discusses the treatment of status epilepticus. The causes of this form of epilepsy cannot in most cases be distinguished from the causes of an ordinary epileptic fit; frequently a sudden withdrawal of bromides after they have been administered for a long period may determine an attack. The slighter cases in which an approach to the status epilepticus is seen are characterized by the absence of fever and some return of consciousness between the fits. In these cases bromine in larger doses—4 to 6 grams—has a beneficial action; and narcotics, such as dormiol, chloral, veronal, and trional, are also useful. In children, in cases in which bromine has not the desired effect rest is soon obtained by the use of dormiol in doses of 2 to 3 grams, or of chloral hydrate, 0.5 to 1 gram. At the same time, such factors as constipation, errors of diet, and psychical irritants of all kinds are removed. In severe cases of status epilepticus vigorous measures are needed in order, if possible, to cut short the attack. If the necessary drugs are not at hand, a cold bath may be given whenever there is high fever: mustard plasters may be applied, and the bowel emptied and washed out; hard faeces must, if necessary, be broken up diligently and removed. Isolation and absence of irritation is, as far as possible, to be ensured. Among the effectual remedies in these cases are chloroform, dormiol,

chloral, and amyl nitrates. Chloroform, although it has no permanent effect is useful in cutting short a convulsion and prepares the way for the action of remedies administered per rectum; with regard to the other remedies the more energetically they are administered the greater the hope of success. To an adult an injection may be made of dormiol 3 grams, or of chloral hydrate 2 grams, and the dose repeated if after an interval the fits begin to return, as much as 30 gr. of dormiol or 9 gr. of chloral may be given within twenty-four hours. Signs of cardiac or respiratory weakness are to be met by subcutaneous injection of camphor, rectal administration of digitalis and strophanthus or oxygen inhalations. The effect of narcotics needs careful watching because the heart and respirations are especially liable to be affected. As soon as the convulsions have been stayed the question of feeding becomes important. In cases in which coma or stupor persists, the heart weakness is to be energetically combated by means of camphor injection and the pharyngeal tube employed for administering food—several litres of milk per day with eggs, and a certain quantity of wine can be well borne. As soon as consciousness returns careful feeding by means of a cup can be begun. The danger of bedsores is not to be forgotten. In the case of patients with heart disease, arterio-sclerosis or obesity, dormiol is to be preferred to chloral as being of less danger to the heart. The author has seen 29 instances of the severer form of status epilepticus occurring in 23 patients during seven years. Of these 8 ended fatally, 21 in recovery. The patients had all suffered severely from epilepsy for years; in 3 cases there was a manifest organic basis to the disease, and in the majority there was more or less considerable bodily and mental disablement. In 2 cases the attack was so rapidly fatal as to give no opportunity of effectual treatment; 2 patients died in the recovery stage from aspiration pneumonia, the remainder from heart or respiratory failure.

127. Physiological Limitations of Rectal Feeding.

Edsall (*Amer. Journ. of Med. Sci.*, November, 1906) considers that the limitations of rectal feeding are much narrower than is generally thought. The belief that patients can maintain a nutritive equilibrium or even gain tissue by such means is erroneous, and careful observations show a loss in general nutrition and weight, the amount of actual absorption being very small. That patients often feel and are better for a time upon exclusive rectal feeding is due to the fact that the local disease which caused most of the suffering has improved now that food is stopped by the mouth. To this may be added the definite physical effects resulting from psychical factors in the treatment, and a further important reason for the improvement is the fact that patients requiring such treatment almost always suffer from lack of fluid as well as lack of food. The large proportion of fluid in nutritive enemata is readily absorbed and tends greatly to the well-being of the patient, and the absorption of the salts contained in them also helps in this direction. Of the foods, however—the protein, fats, and carbohydrates—very little becomes actually absorbed when the needs of the organism in this respect are considered, and rectal feeding from this point of view cannot be regarded as better than a modified starvation. While of great value as a temporary measure in combating some transitory cause, it is important to recognise that nutrition cannot be well maintained, much less improved, and any operative treatment for the original disease should not be delayed longer than is possible with any false hope of building up the patient's condition. Observation and experiment prove that protein and fats show a very poor percentage of absorption. At best the value of all food so absorbed is less than one-sixth of the absolute requirements even of sick persons. In regard to the carbohydrates a very considerable portion is broken up by bacteria and rendered unavailable for nutrition. In very rare instances reflex through the ileo-cæcal valve into the small intestine may result in increased absorption and nutritive value. Experiments aimed at attaining greater absorption of fats showed slightly better results with artificial emulsions, and pointed to the possibility of increasing the value of fats as a rectal food, and the suggestion has been made that the ultimate digestive products of protein (the various amino-acids) may be better absorbed than native protein or albumoses and peptones. As regards carbohydrates the dextrins appear to be better absorbed than others, and to be less likely to undergo decomposition by bacterial action.

128. Formysol.

Impressed with Western's do not consider that the question of the disinfection of hands is solved satisfactorily (*Brit. med. Woch.*, November 8th, 1906). The hot-water-alcohol method introduced by Ahlfeld and the soap spirit method of Mikulicz both have the disadvantage that a deep action is not present, and the suggestion to overcome the difficulty by a thorough mechanical cleansing with perchloride of mercury, sand soap, nail brush, alcoholic potash soap solution, alcohol, and lastly a second washing in perchloride of mercury, although theoretically a good one, is impracticable, since it requires at least 30 minutes to carry out, and uses up about two pints of a 50 per cent. alcohol. The literature on the subject shows clearly that alcohol and potassium soap are indispensable for the purpose of sterilizing the hands, as they both form an emulsion with the fat of the skin, and by opening the pores, allow the deep-seated bacteria to be killed. It was desirable to combine these substances with some efficacious disinfectant, but all attempts to combine them with formaldehyde proved unavailing, as the preparations were all found to contain too little of the disinfectant. However, a new preparation has been introduced by a German firm under the name of formysol, which combines a fluid potassium soap with formalin and alcohol. It further contains some other disinfecting and deodorant substances. It is an oily, yellowish fluid, possessing a pleasant odour. It is soluble in alcohol and water. Ten per cent. formysol contains about the same quantity of formaldehyde as lysoform and septoform, while the 25 per cent. preparation, containing 10 per cent. formaldehyde, is considerably richer in the disinfectant than the two named preparations. The bacteriological tests which have been carried out elsewhere show that formysol is a very active antiseptic. Thus a 50 per cent. solution of the 25 per cent. preparation killed anthrax spores in twenty-five minutes, while 3 per cent. carbolic acid takes twenty-five days to do the same, and septoform takes from four to seven hours. It was thought that if it were possible to apply the stronger solutions to the hands the problem of the disinfection of hands would be solved, and the authors tested this by washing their hands with hot water, brush, and 10 per cent. formysol for five minutes and then rinsing the hands in 25 per cent. formysol for a further five minutes. This procedure repeated, several times a day, did not affect the skin or produce any inconvenience. Slight roughness can be felt after using 25 per cent. formysol for some days when one has a tender skin. It has been found that this preparation, besides effecting an antiseptic action, closes the sweat and sebaceous glands temporarily, and thus it appears to be particularly suited for the practical disinfection of hands.

PATHOLOGY.

129. Amyloid Degeneration caused by Bacillus Pestis.

Schokewitsch (*Arch. des Sci. Biol.*, St. Petersburg, 1906, vol. xii, p. 190) has studied the amyloid changes in the organs of six horses which had been used for the preparation of antiplague serum, and had received enormous doses of plague bacilli. The bacilli had been inoculated intravenously, and sometimes also subcutaneously, at intervals of ten days, and the process of immunization had been continued for periods varying from fourteen to twenty-six months. In all six animals both liver and spleen showed well-marked amyloid degeneration. Five of the spleens showed the miliary form of the disease, the deposits of amyloid being found in the Malpighian corpuscles; the process commenced at the periphery of these areas, and in one case had completely transformed the corpuscles into masses of amyloid. In the sixth spleen the degeneration was of the diffuse type, and was only slightly marked. The most advanced amyloid changes were found in the livers, and were accompanied by marked softening of the tissue, which, in extreme cases, was found to be quite friable. This extreme softening is a common cause of rupture of the liver, and leads to death by internal haemorrhage. The death of two of the six animals investigated was brought about in this way. The author points out that whereas in man it is the arterial system of the liver which is first affected by amyloid change, in the horse the amyloid is deposited in the venous system. In only two cases was amyloid found in the kidneys; in one of these a very small number of renal arterioles were affected; in the other, the capillaries of almost all the glomeruli showed a patchy degeneration. The small intestine was affected in two instances, the pancreas once, and the parotid gland once. In the walls of the large veins, particularly the jugular and the vena cava, advanced amyloid degeneration was often present.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

130. **Professional Neuritis.**

L. Parola (*Il Morgagni*, October and November, 1906) states that professional neuritis has been in the fact confounded with the professional neuroses of which scrivener's palsy is the best known type. In the neuroses the cause is an exhaustion of the central nervous system causing incoordination when an attempt is made to perform the action which is most commonly required, but the muscles and nerves concerned are uninjured and able to perform other voluntary movements as well as ever. In professional neuritis the disease is in the nerve itself or in the nerve and muscle, the neuro-muscular system is incapacitated for the performance of other actions as well as those which have given rise to the disease, and there may be both wasting of muscle and changed electrical reactions. The principal cause is either fatigue or pressure on a nerve trunk or nerve plexus, or sometimes a sudden stretching of a nerve trunk, as in the case of a man falling from a ladder who attempted to save himself by catching at a rung with one hand. Other predisposing causes are very frequently found, especially alcoholism, anaemia, deficient nutrition, tuberculosis, diabetes, immaturity, and lack of previous experience of the work excess in which is the prime cause of the disease. Among the occupations giving rise to the disease Parola quotes those of masons, carpenters, watchmakers, gold polishers, brassworkers, miners, drummers, milkmen, smiths, tailors, sempstresses, domestic servants, agricultural labourers, shoemakers, varnishers, ropemakers, tobacco workers, asphalters, and others. The course of the disease is usually a matter of several weeks or months, and depends very much on whether the patient has abandoned his occupation as soon as movements became difficult, or has continued to work until atrophy of muscles, reaction of degeneration, and objective sensory symptoms are present, though a favourable result is possible in the presence of all these unfavourable indications. The prognosis is best in the cases due to momentary compression of a nerve. Parola estimates the whole number of cases, hitherto reported at less than 200, and adds 9 cases of his own. Sometimes the uncompensated contraction of the muscles, antagonistic to those paralysed, causes a condition of apparent spasm, but Parola admits the existence of a state of spasm based on neuritis, which is a link between professional neurosis and professional neuritis. It is doubtful whether professional neuritis ever involves cranial nerves, but any of the nerves of the limbs may be attacked. A gradual onset is characteristic of the disease. The first symptoms are usually paraesthesiae, such as tingling, itching, and burning sensations. They come on in paroxysms, especially at night, and may often be temporarily relieved by movement. From day to day they become more frequent and troublesome. Then pain is added, at first slight, afterwards severe and diffused, over the whole limb. Sometimes there is no subjective disturbance, and paresis is the first symptom noticed. Occasionally the onset is quite sudden after pressure or stretching of a nerve trunk, so that one might be said to be dealing simply with a traumatic neuritis. But a neuritis from fatigue alone may very rarely be developed with complete suddenness. In some cases where there has been complete paralysis and muscular atrophy there has been no change in the electrical reactions, or even an increase of electrical excitability has been noted. The nerve trunks affected may be swollen and tender, or these symptoms may be absent. The influence of predisposition on the course of the disease is shown by the fact that some patients after recovery and change of occupation have suffered a second attack affecting a different nerve trunk. In very rare cases professional neuritis appears to have been the starting-point of progressive muscular atrophy. Oppenheim describes as a separate disease cases of myositis from fatigue and the pressure of tools, running a similar course to that of professional neuritis. In discussing the diagnosis of his own cases, Parola constantly refers to the difficulty, and at first the impossibility, of distinguishing some of them from syringomyelia. The possibility of professional neuritis should be borne in mind in every case of atrophy of the small muscles of the hand in working men and women. Parola adopts Remak's suggestion that cases which have been reported as cured or stationary "progressive muscular atrophy" have really been cases of professional neuritis. The author's nine cases are reported with much detail, including the results of electrical examination. The treatment consisted of rest, massage, light baths, galvanic and faradic stimulation.

131. **Lesion of Broca's Convolution without Aphasia.**

Pierre Marie and François Moutier have recorded (*Bull. et Mém. de la Soc. Méd. des Hôpitaux de Paris*, December 4th, 1906) another case of a cortical lesion of the foot of the third left frontal convolution (Broca's convolution) without any speech defect. It was that of a man, aged 74, who was admitted into the Bicêtre for bronchitis and heart failure associated with mitral incompetence. He died there, so that he was under supervision until the last, and no aphasic indication was at any time observed, although records as to his speech function were made. He was and always had been right-handed. Some nine days before death he developed a degree of paralysis of the right upper limb. At the necropsy the foot of the third left frontal convolution was found to be markedly atrophied, the cortex itself being clearly implicated. This lesion was obviously of some standing, but there were other cortical lesions in the same hemisphere of more recent date. This case was the second the authors had met with in the course of the preceding six months, in which a lesion of Broca's convolution had been found *post mortem* without there having been any aphasia. From these, and apparently from other observations, they throw doubt on the localization of the motor speech centre in this convolution. Nothing is known, they say, of the rôle which the foot of the third left frontal convolution plays, and they assert that the isolated lesions of this region are almost always lucky finds of autopsy.

132. **The Risk of Inhaling Tubercle Bacilli.**

Two years ago Sangman declared that to be coughed upon by persons suffering from pulmonary or laryngeal tuberculosis involved little or no risk to the healthy adult. Of 174 previously healthy lung specialists only 2 developed tuberculosis during three and a half years, and of 64 laryngologists all remained healthy. Yet all of these 238 persons must have been regularly exposed to infection from tubercle bacilli contained in the drops of fluid coughed out by their patients. Flügge, however, at the Hague Tuberculosis Conference last year, denied the validity of Sangman's conclusion, on the ground that such drops were really after all few in number and contained a quite insignificant number of bacilli. Sangman now (*Zeitschr. für Tuberkulose*, January, 1907, Bd. 10, Heft 3) maintains his former statement. Quoting the work of Flügge's own pupils, he shows that in cases of tuberculosis of the lungs even a slight cough may throw out large numbers of droplets containing the bacilli. These may be carried even behind the patient, so that during no part of the examination of a chest, even with a flexible stethoscope, is the physician beyond the range of the infective material. This is still more marked in the case of laryngeal phthisis. Moeller and also Sangman himself have shown that the face of the operator, the mirror and instruments, even the instrument table and chair, are constantly bespattered with small drops in which tubercle bacilli can be regularly demonstrated. It is also pointed out that it is just in the more frequent minor manipulations, such as insufflations, injections, brushings, etc., where cocaine is not used, that violent coughing most often occurs. The laryngologist and lung specialist must therefore be continually receiving and inhaling large numbers of tubercle bacilli in the course of their practice. In spite of this fact, however, they scarcely ever develop tuberculosis. Sangman, therefore, insists that his previous conclusion was justified, and that the "inhalation by healthy adults of droplets containing tubercle bacilli has no or almost no significance in the dissemination of tuberculosis."

SURGERY.

133. **Appendicular Surgery.**

Veillet (*Sém. Méd.*, No. xliii, 1906), in a critical review on "Surgeons and the Vermiform Appendix," opposes what

he considers to be a too frequent and unnecessary recourse to operative dealing with this structure. In discussing the relative claims of surgical and of medical or expectant methods in the treatment of the different stages of acute appendicitis, the author considers the indications and prognosis of, first, the early operation performed on the first or second day of the attack; secondly, the intermediary and radical operation performed on the third, fourth, or fifth day; and, thirdly, the delayed operation—incision of abscess—practised after the fifth day. The early operation, if it could be relied on to suppress appendicitis in the course of the first twenty-four hours, and to prevent subsequent complications, would, it is acknowledged, be an ideal procedure; but, in order to establish its claim to be a necessary resource or an urgency operation comparable with kelotomy, the surgeon must be in a position to assert that all difficulties in the diagnosis of early appendicitis have been overcome, and that the clinical means at his disposal permit him to distinguish not merely the local lesions, but also the virulence of the infection and, above all, the defence presented by the peritoneum. Though in a large majority of cases of early appendicitis cure has been effected without surgical intervention, there are, it is granted, some cases in which an operation is absolutely necessary. The difficulty in distinguishing the one class from the other is regarded as a very serious one, for, as the author points out, though an operation at the beginning of an attack of appendicitis has certainly saved the life of some patients, it cannot be denied that it has accelerated the death of others. The early operation is regarded by the author as being at the present time an exceptional treatment which, when clearly indicated, demands an experienced surgeon and favourable operative conditions. In the second stage of acute appendicitis—that lasting over the third and two following days—a routine recourse to operation is in the author's opinion much more dangerous than a judicious regard to expectant treatment. He goes so far as to assert that even in cases of general peritonitis spontaneous cure may result. We are, it is held, as yet incapable of recognizing with precision those cases of peritonitis in which an operation is necessary, and this uncertainty, the author urges, should impress on surgeons the necessity of extreme reserve. It is believed that, whatever may be the future part played by the surgeon in the treatment of appendicular peritonitis, extensive laparotomy with evisceration and general lavage of the abdominal cavity will, as a rule, give way to less formidable methods of surgical intervention, and that the practice of making just simple and small incisions for the discharge of effused fluids will prevent undue exhaustion of the scanty strength left to the patient at this stage of the disease. In discussing the treatment of the third stage—appendicitis, in which circumscribed suppuration has been established—the author still favours reserve in the use of the knife. The presence of pus, while formally contraindicating a radical operation, ought not, he asserts, to necessitate in every instance even a simple excision. Yet though such operation is held to be rarely indicated at this stage, the author acknowledges that it would be absurd to push expectancy too far, and to wait until the abscess has spread throughout and beyond the pelvic cavity and the patient is threatened with pyaemia and general degeneration. The author criticizes also at some length the so-called "operation *a froid*," or removal of the appendix during an interval of rest. This he believes to be an excellent operation, which, in cases of genuine appendicitis, results in radical cure and effectually guards the patient against subsequent pain and discomfort in the caecal region. It is likely, however, he thinks, to be brought into discredit by its present abuse. With Brentano, he asserts it is often practised in cases in which the appendix is quite free from disease, and that in the subjects of spasmodic colic and gastro-intestinal disturbances it is not only unnecessary, but likely to do harm rather than good. The operation, though in regard to its immediate consequences fairly safe, may be the cause not only of much discomfort but of really serious trouble, necessitating further operative treatment. The incision in the abdominal wall results in more or less weakening of its muscular layers and has a frequent tendency to hernial protrusion, and experience, observed by the author, appendicectomy, like other varieties of laparotomy, may be followed by intestinal obstruction. The operation, it is pointed out, will not remove all the bad results of appendicitis, and adhesive bands and ends, which may cause future trouble, are often left intact. In conclusion, the author points out that the practice of preventive appendicectomy—i.e., the removal of a free and healthy appendix in the course of a laparotomy performed for the disease of some other abdominal organ, and he also criticizes very unfavourably the operation of appendicectomy in which an appendicular fistula is established for evacuation or irrigation of the intestinal canal, or for the introduction of medicinal or alimentary fluids.

134. Traumatic Thrombosis of the Axillary Vein.

C. Ceni (*Riv. crit. di Clin. Med.*, Florence, Nos. 46 and 47, 1906) describes a case of thrombosis of the left axillary vein due to muscular over-exertion. The patient, a healthy, well-made man of 39, accustomed to regular physical exercises and fencing, after a long bout of fencing one day exercised his left arm vigorously by swinging a club. The club weighed 6½ lb., and was swept vigorously about in every direction in turn. The joints of the arm and clavicle and the shoulder blade were thus moved as freely and extensively as possible in all directions successively. Next day these exercises were repeated until the arm was completely exhausted. On the following day the left arm and axilla were a little painful and stiff, but the patient was able to dance all that night and also all the next night. On the next day he got up at about noon and found that the left arm was still stiff when he moved it, and he could not close the hand; the limb felt heavy and rigid, and the fingers were numb. He then looked at his arm and found that it was swollen and blue, and that the front of the left chest was oedematous. On examining him, Ceni discovered nothing abnormal about the patient with the exception of his left arm. Its superficial veins were distended, and it was bluish, especially distally. There was considerable oedema, the arm measuring 6 to 7 cm. more in circumference than the right arm. The muscular force of the left arm was not diminished, and its movements were impaired only by the oedema. The brachial and radial pulses on the two sides were equal; the nerve trunks were not tender; sensation was impaired in the fingers of the left hand. Ceni diagnosed a thrombosis of the left axillary vein near its passage into the axillary vein; there was no oedema of the face, neck, or of the back of the chest, and the entry of the lateral thoracic veins into the uppermost part of the axillary vein could not have been interfered with. He believes that the only similar case hitherto recorded is that detailed by Schrötter in Nothnagel's *Handbuch*. The patient carried his left arm in a sling for thirty-two days, when the oedema had entirely disappeared. The sling was then discontinued, and for a week the hand and forearm became a little oedematous. For another two months the shoulder-joint was a little stiff, probably in consequence of the immobilization in the sling. The patient finally recovered completely, though the superficial veins of the left arm and left chest remain enlarged and tortuous.

OBSTETRICS.

135. Eclampsia.

A. Sippel makes a new suggestion with regard to the treatment of severe forms of eclampsia (*Berl. klin. Woch.*, December 3rd, 1906). Eclampsia is a condition of which we know little. There are, however, a few facts which are certain. It must be caused by a poison which is produced in the body of the pregnant woman, since if it were an exogenous poison, either derived from some substance introduced directly from without, or from some bacterium, the clinical course would be quite different. Then one can be sure that the poison depends on the pregnancy. It is not known what the nature of the poison is, nor whether it is normally formed in every pregnancy, and is only prevented from being excreted by some means or other in certain cases, or whether it is produced pathologically in eclamptics. Treatment apart from purely symptomatic treatment must be directed toward the removal of the causal agent, that is, terminating the pregnancy, and in removing the causal agent in the secondary sense, that is, getting rid of the poison, which is being accumulated in the body and circulating in the blood. The termination of the pregnancy is gaining ground rapidly, and he does not deal with the methods in this place. But at times this either does not succeed in saving the patient alone, because there is too much poison still in the body, or because it cannot be carried out rapidly enough. By increasing the activity of the skin, intestine and kidneys, and by supplying fluid in large quantities in various ways, the poison can be diluted and got rid of. Sippel is convinced that many patients can be saved in this way. Still, some will not react to even this form of treatment. He believes that in these cases, in which death occurs in spite of all endeavours, if the renal activity can be raised that matter will have a different complexion. The changes found in the kidneys of such patients suggest that either

a retention of urine has taken place, or that increased arterial supply has caused the swelling. The retention may be due either to blockage in the ureters or an obstruction of the veins. Stasis in the ureters and veins no doubt play an etiological part in the disease. Apart from this, a direct toxic action on the organ may assist in producing the congestive enlargement of the kidney. The enormous dilatation of the veins during a convulsion may be regarded as an index of the stasis in the renal veins. It may be accepted that the anuria is caused by a venous or ureteral distension with consequent stasis, and the condition is kept up by pressure on these tubes, either by the pelvic contents or by the convulsive contractions. As a result, a rise of intracapsular pressure is produced. It has been shown that division of the capsule of the kidney in nephritis and other renal conditions leads to improved circulation, and consequently to increased output of urine. His suggestion is, therefore, to divide the capsule of the kidneys of patients who continue to have convulsions after delivery. The operation appears to have been carried out four times for eclampsia. The first operation was performed before he made the suggestion, but he was unaware of the case. The others were performed subsequently. All four did well. He objects to the attempt to treat the disease by the operation without delivery, since the anuria might recur. He regards the reasoning as logical, and hopes that it will be carried out in bad cases after delivery.

136. **Ovarian Pregnancy: Rupture.**

Herrenschmidt and Rigallot-Simamot (*Ann. de Gyn. et d'Obst.*, November, 1906) report a case from M. Routier's wards. The patient was 25, and had never been pregnant nor subject to any disease of the genito-urinary tract. In November, 1905, she suffered from abdominal pains with vomiting for a week, and there was a discharge of blood between periods, which had never occurred before. The pains and irregular show disappeared and the catamenia returned regularly, the last being seen on January 27th, 1906. On February 10th the patient felt a little pain in the hypogastrium. Next morning, when at work, the pain returned, with cold sweats, vertigo, and faintness, and, as all the symptoms grew worse, in the course of a few hours she was sent to hospital. The physical and clinical symptoms of internal haemorrhage were evident, and right tubal pregnancy was diagnosed, as there was very marked tenderness in the right fornix. On opening the abdominal cavity nearly 2 pints of liquid blood with some clots was discovered. The right Fallopian tube was quite normal. The right ovary was not enlarged, but a small area of ulceration was detected on its surface, and from that area blood issued drop by drop without intermission. In drawing up the ovary a certain amount of pressure on its surface was unavoidable; unfortunately the pressure caused a small body of the size of a pea to be shot out of the ovary at the point of ulceration and lost. The right ovary was removed with its tube. Saline injections and stimulants were needed for two days, but the patient recovered. The period recurred forty days after the operation. The ovary was carefully examined and the appearances are described in full by the authors. Chorionic villi and syncytial masses were detected in the ovarian tissues around the ulcerated, or more correctly speaking the lacerated, points on its surface. An organized clot adherent to the laceration contained cells of decidual and chorio-ectodermic origin. Thus, the ovary was the primary seat of an ectopic gestation.

GYNAECOLOGY.

137. **Primary Cancer of Fallopian Tube.**

Orthmann (*Zeitschr. f. Geb. u. Gyn.*, vol. lviii, pt. 3, 1906) has succeeded in collecting 84 authentic cases, adding 2 hitherto unreported. Besides, he notes that at least 11, if not more, instances of chorion-epithelioma of the tube have been recorded, mostly by Ritsel. There appear to be only 5 satisfactory instances of sarcoma. Amongst the 84 cases of true primary cancer 2 were probably, and 2 more possibly, "mixed," bearing sarcomatous elements. In 10 cases, including 1 described for the first time in this monograph, the cancer developed within the tubal portion of a tubo-ovarian cyst, and in only 1 of these cases was the disease bilateral. Primary cancer in a sactosalpinx is relatively common. The development of cancer in a tubo-ovarian cyst or in a sactosalpinx, both being products of chronic inflammation, supports Sänger's theory that the cancer originated from mucosa already damaged by inflammatory changes. Secondary malignant diseases are much more frequently derived from ovarian than from uterine cancer. The presence of a tubo-ovarian cyst certainly favours invasion of the tube by cancer when the ovary is the seat of primary disease, but, as a rule, its seat is in the tube. Orthmann shows, on direct evidence, that cancerous elements from the ovary may either reach the tube through its serous coat (this is the rule), through its muscular wall, advancing along the mesosalpinx, or through the mucosa at the ostium.

138. **Drainage in Uterine Surgery.**

Pauchet (*Arch. Prov. de Chir.*, No. 10, 1906), in considering how the surgeon should drain the lower pelvic cavity after operations on the uterus and its annexes, lays down the following rules: (1) After septic laparotomies and hysterectomies for cancer, it is possible and necessary to drain by the vagina; (2) after aseptic or but slightly septic laparotomies, the surgeon should always establish suprapubic drainage; (3) wicks or gauze should be employed as draining agents in cases of threatening or declared infection, or when the wounded soft parts of the pelvic cavity cannot be completely protected by peritoneum; (4) in all other cases the stiff rubber tube should be preferred; (5) drainage should not be effected at the line of suture of the external wound but by a small counter opening; (6) aspiration should always be combined with drainage.

THERAPEUTICS.

139. **Digitalis and Crystallized Digitalin.**

Huchard (*Journ. des Prat.*, December 1st, 1906) strongly advises that in the employment of preparations of digitalis the crystallized digitalin should be used. Infusions made from the leaves of the digitalis plant contain such varying quantities of the active principles that the effects of employing these preparations are liable to lead to false deductions, or may in some cases give rise to dangerous symptoms. The disadvantages arising from the use of digitalis are commonly said to be its slow action, its slow elimination, and its accumulation in the body. These so-called disadvantages need, however, some modification; thus, the cardiac action of digitalis is rapid—ten to fifteen minutes after administration by the mouth its tonic effect on the heart may be noticed; its diuretic action is certainly slow, from twelve to forty-eight hours elapsing before its effect as a diuretic is evident. The slowness of elimination of the drug may be neglected, since in those cases in which it is administered for long periods of time it is given in such small doses—$\frac{1}{20}$ to $\frac{1}{10}$ mg.—and these small doses are gradually destroyed in the body; there is, therefore, very little danger of it accumulating. These so-called disadvantages of digitalis, the author considers are real advantages, as they ensure a continued action of the drug on the heart. The digitoxin of Schmiedeberg, and that of Cloetta, are not products of definite and constant composition, and their employment may give rise to dangerous symptoms, or at least to inconstant effects. From these and other considerations the author concludes that the only real active principle of digitalis is the crystallized digitalin. Digitalis appears to act differently according as it is given to a healthy or a sick patient; in the former it has a very feeble cardiac action, and has no action whatever on renal elimination; when given, however, to a patient who is ill and suffering from dropsy, it has considerable cardiac and diuretic effect. From these considerations the author concludes that in studying the physiological action of a drug, its effect not only on animals but also on healthy and sick patients should be investigated. There are three ways in which crystallized digitalin may be prescribed. First, in massive doses. Fifty drops of a 1 in 1,000 solution should be given once or twice in one day in those cases where asystole is threatening, and where there are oedema, visceral congestions, deficient urinary elimination, etc. After thirty-six to forty-eight hours abundant diuresis sets in, and the cardiac contractions increase in strength, with a resulting disappearance of visceral congestions and oedema. If the action of these doses be insufficient, after an interval of eight to ten days, the same quantities may be again administered. Should the cardiac contractions still remain feeble after the disappearance of the oedema, 2 to 4 drops of the same solution may be given daily for one to three weeks after a fortnight's interval. Secondly, in small doses; these are indicated in cases of palpitation, cardiac erythism, and for the dyspnoea of mitral stenosis (during compensation). From 5 to 10 drops of the same strength of solution should be given daily for five consecutive days, and then omitted for three or four weeks, when these doses may be recommenced. Thirdly, in very small doses as a cardiac tonic. From 2 to 4 drops of the solution may be given daily for

weeks or months, omitting the doses every two or three weeks for one or two weeks. When a rapid action is required, crystallized digitalin dissolved in oil may be injected under the skin, without any subcutaneous irritation; from ¼ to ½ mg. may be so injected. The author finally concludes his paper with the remark that, just as there are no substitutes for digitalis, so there are none for digitalin.

140. Lumbar Anaesthesia.

Linlenstein (*Deut. med. Woch.*, November 8th, 1906) says that since the introduction of stovaine and novocaine, the results obtained in medullary or lumbar anaesthesia have been so promising that a trial was given to this method in Nuremberg. The first case in which it was used yielded so brilliant a result that the trial was extended, and the writer now reports on the first 100 cases. The first patient was a man of 64 years, who had to be subjected to the operation of amputation of the leg through the thigh, on account of tuberculous disease of the knee-joint. The man was suffering from advanced arterio-sclerosis, and the condition of his heart and arteries rendered it doubtful whether a general anaesthetic should be risked. The patient remained undisturbed during the whole operation, and did not feel the least pain. No bad after-effects presented themselves, and the wound healed perfectly. Naturally this ideal result was not obtained in all the cases. In 13 no anaesthesia could be got. In 5 of these patients the needle could not be introduced into the dural sac at all, so that no injection could be carried out. The injection may only be made after the spinal fluid has escaped in a free stream, indicating that the point of the needle lies inside the sac. In the other cases, either no anaesthesia or insufficient anaesthesia was obtained. Errors of these failures were met with in successive cases, and it was then found that the needle had been sterilized in a solution of soda, and the excess of soda had not been washed away. Soda renders stovaine inactive, and in all probability this accounted for the failures. The author therefore comes to the conclusion that all the failures were due to faulty technique. The dosage employed was from 1 c.cm. to 1½ c.cm. of a 4 per cent. solution of stovaine, or from 2 c.cm. to 2½ c.cm. of a 5 per cent. solution of novocaine. The former drug was only employed in 42 cases, and later this drug was given up in favour of novocaine because it has become evident that if stovaine is accidentally injected into the tissue of the cauda equina, or into the cord itself, the nerve tissue may become materially damaged, and one case on record refers paralysis and death of a person to this occurrence. Novocaine, on the other hand, does not damage the tissue, even if it is injected into the cord. Among the 100 cases the author states that no serious after-effects of the material injected were noted. Headache and vomiting were seen in a few cases, but these symptoms were neither of long duration nor of an alarming character. In one case the signs of collapse of short duration took place, but these signs were quickly removed by a subcutaneous injection of morphine. The oldest patient was 82 years of age, and in two cases operation for strangulated hernia went off very smoothly under this form of anaesthesia. The youngest patient was only 9. The anaesthesia lasted, as a rule, for from one to one and a half hours, and once it lasted for three and a half hours. The only contraindication to the employment of this method is considered to be the existence of suppuration. He also thinks that it would be risky to apply it in a patient in the primary or early secondary stage of syphilis, since the puncturing of the spinal sheath might possibly lead to meningeal infection later on.

141. Sclavo's Iodo-Gelatine in Actinomycosis.

[illegible] describes the case of a [illegible], who began to suffer in the [illegible] cheek, neck, temple, and [illegible]. Iodide of potash was administered, but the disease continued to spread on the right side, but the left escaped. In January, 1904, a hard tumour appeared [illegible] the lower jaw on the right side. It softened and [illegible], and in the wound [illegible] were found. The [illegible] increased towards the temple and [illegible] the parts contained. In February, 1904, the [illegible] was [illegible] a healthy woman, [illegible] hard swelling occupying the whole of the [illegible] and part of the neck. [illegible] were enlarged on the right side. [illegible] could not be opened well, and the [illegible] were [illegible]. The temperature was not raised. [illegible] pus [illegible] actinomycosis having been [illegible] the [illegible] was taken but the patient

was intolerant of KI, and the treatment had to be stopped. Ten days lat r injections of Sclavo's iodo-gelatine were tried and given every three days. In three weeks the tumour began to soften, and between March, 1904, and July, 1905, ten operations were performed upon abscesses developing in connexion with the tumour. Sanious pus, containing sulphur-yellow or grey granules, was evacuated from these abscesses; growths of *Actinomyces* or of *Staphylococcus aureus* or *S. albus* were obtained from the pus. During these seventeen months the patient was in and out of the hospital several times, and the iodo-gelatine treatment was applied on several occasions. Putzu states that the iodo-gelatine did much to accelerate the cure; he dose not say what dose he gave. Between September and December, 1904, the right orbit was invaded, and in December, 1904, the vision of the right eye was almost nil, the pupil was dilated, exophthalmos was marked, the papilla was oedematous, and the field of vision was much reduced. The patient's temperature was never raised much above the normal. In January, 1906, there was no abscess, and vision was once more normal; but the patient could not open her mouth. Accordingly the right temporo-maxillary joint was excised; it was found to be entirely disorganized. The wound healed by first intention, and the result of the operation was completely satisfactory. Putzu concludes that injections of Sclavo's iodo-gelatine may be a useful substitute for other forms of administering iodine to patients with actinomycosis.

PATHOLOGY.

142. Spirochaetes in Syphilis and Carcinoma.

W. Schulze (*Berl. klin. Woch.*, September 10th, 1906) brings forward evidence on which he builds up the thesis that there is no ground for regarding *Spirochaeta pallida* as the causal parasite of syphilis. The chief argument which he uses is that until Levaditi introduced his silver impregnation method, the finds of the spirochaetes were too small to justify drawing conclusions. Now the silver method depends on the application of Ramon y Cajal's nerve fibre method, only Levaditi uses a 96 per cent. alcohol, into which he places his tissue after having been fixed in 10 per cent. formalin for a few days. The tissues then are put into distilled water, and then into the silver nitrate solution (2 per cent.), and lastly the developing is carried out in pyrogallic acid, formol and water. He considers that the employment of strong alcohol without preliminary dilutions is liable to contract the tissues and to tear the nerve fibres. The staining follows irregularly. He carried out some experiments with the cornea of a healthy rabbit (albino), and when he injected some street mud, which produced an inflammatory reaction, he was able to find a large number of silver spirals which were extremely like spirochaetes. He claims that the spirochaetes demonstrated in tissues are not spirochaetes at all, but are only broken-off nerve fibres, fibres of connective tissue, etc., which have been impregnated with silver. In the same journal, H. Friedenthal takes up the same argument. He, too, regards the use of strong undiluted alcohol for the fixing of the tissue as being likely to tear the fibres, and after silver nitrate staining the broken off fibres of nerve plexus appear as silver impregnated spirals. Elastic fibres also take on this appearance, but he claims that the so-called spirochaetes when seen in silver preparations are not necessarily nerve, elastic or other fibres; they can also be simply metallic deposits. Under all conditions he states that they are not parasites.

143. Action of Extracts of Taenia Saginata upon Animals.

V. Ewerlsen (*La Sperimentale*, Florence, September to October, 1906) discusses the various effects that have been attributed to extracts of the proglottides of *Taenia saginata* by a number of observers. Several have found toxins or virus in these extracts, which were made by pounding or macerating the proglottides in saline or glycerinated solutions. It is probable that many of the curious results obtained have been due to sepsis, or to the action of the glycerine mixed together with the supposed toxins. Ewerlsen has made experiments by feeding guinea-pigs with fresh saline or watery extracts of *T. saginata*, and also with water in which proglottides had been kept, and which should, therefore, have contained products of their metabolism. He finds that these extracts are harmless when given to the guinea-pig in its food, or when injected into the intestine, even after concentration at 50° C. Similarly negative results were obtained by inoculation with fluid in which the proglottides had been kept alive.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

144. The Heart in Chronic Pulmonary Tuberculosis.

Ernest Barié (*Journ. des Prat.*, January 12th, 1907), in considering the variations which the heart undergoes in chronic pulmonary tuberculosis, divides these into two main varieties according to the condition of the lungs, whether of the cavitation form or of the chronic fibrotic form. When the cavitation form of chronic pulmonary tuberculosis is present the heart shows very few abnormal variations; in a large number of cases the size of the organ is about normal, in others its volume and weight are diminished although its shape is natural. In some cases one finds a true atrophy of the heart, in others its walls are remarkably soft and flabby, or its surface is covered with a thick layer of adipose tissue, chiefly at the level of the right ventricle, about the auriculo-ventricular groove, at the apex, and where the large vessels arise from the base of the heart. In rare cases fatty degeneration, and, still rarer, hypertrophic sclerosis of the cardiac muscle have been found. When the lung disease is of the chronic fibroid variety, an increase in the size of the heart is frequently found, if not the rule. The author agrees with the explanation, now generally accepted, that dilatation of the right side of the heart in phthisis is mainly the result of the pulmonary sclerosis, the emphysema, and, in a less degree, to the pleural adhesions and the dilatation of the bronchi. To explain those cases of the cavitation form of phthisis in which the right side of the heart is hypertrophied and dilated, the author advances the following explanations: (1) The lung disease is associated with cardiac disease (valvular disease, pericarditis, adherent pericardium); this association of phthisis and heart disease is far from being rare; the association of phthisis and mitral disease is commoner than phthisis and aortic disease (Gunsberg). (2) In addition to the lung disease there is pulmonary stenosis. (3) The lung disease is complicated with digestive troubles. The author explains the cardiac hypertrophy resulting from irritation of the digestive tract by assuming that irritation of the digestive tract causes reflexly a spasmodic contraction of the vessels in the pulmonary circulation, which secondarily gives rise to hypertrophy and dilatation of the walls of the right side of the heart; in some cases this dilatation may be so marked as to allow of tricuspid regurgitation, which, however, in most cases disappears under suitable treatment for cardiac dilatation.

145. The Blister Test in Tubercle.

Mirano (*Rif. Med.*, February 2nd, 1907), as the result of certain experiments on this subject, concludes that the test is of little value clinically whether for diagnosis or prognosis. The experiments were carried out on 15 persons (7 tuberculous, 7 suffering from different affections, and 1 healthy). A blister 4 cm. square was put below the clavicle and left on for about twelve hours, and the contained fluid then collected and examined. The lowering of the eosinophile index which was said to be a sign of early tubercle was, the author found, by no means confined to tuberculous subjects. Again, the dropsical state of some of the cellular elements which is also said to be diagnostic of tubercle, depends merely on the irritant action of the blister on the leucocytes and is a purely local action having no relation to the bone medulla. Possibly this local action—as in the case of the bullae of herpes—may be due not so much to the cantharides as to some principles derived from the degenerative transformation of the epidermoidal cells. The author found that the number of eosinophiles varied according to the time at which the fluid was examined. The greater the time between the appearance of the exudate and its examination the greater the percentage of neutrophiles—the less the time, the greater the number of eosinophiles. On the whole the author believes much more reliable results can be obtained by direct examination of the blood than by examination of the fluid raised by blister.

146. Differential Diagnosis of Rheumatoid Arthritis.

Nathan (*Amer. Journ. of Med. Sci.*, December, 1906) divides all the diseases associated as rheumatoid arthritis, etc., into two great classes: (1) Those which begin acutely, with a more or less definite onset, a rise in temperature, general constitutional reaction, local signs of inflammation, followed by remission or intermission, with perhaps permanent but not progressive joint disability; and (2) those which come on insidiously with no rise of temperature, a slowly progressive course with no intermissions, leading gradually and progressively to more or less complete joint disability. The first he terms inflammatory or infectious forms, the second trophic forms. Of the inflammatory forms he distinguishes a number of subvarieties according to the onset and etiology where known. Type A: The onset and early joint symptoms are mild. The temperature is never very high, and as these cases are usually not seen very early, the temperature and initial disturbances may be overlooked. There is not much pain, and only moderate swelling, redness, and effusion of the joints. Proper treatment leads to complete recovery. Too early use of the affected joint, however, causes more or less complete permanent disability. Type B: The temperature and initial disturbances are more marked, and there is greater liability to permanent disability. In some cases the glands near the affected joints are swollen. These cases have been considered a separate variety and called Still's disease. It is not, however, confined to children. Remissions and exacerbations are common in both the above types. Type C: The onset is stormy; the temperature is high and the constitutional reaction severe; visceral complications are common; usually a number of joints are red, swollen, and very painful; after a severe illness, which is usually considered an attack of rheumatism, the joints are much deformed and stiff; recurrences in the affected or previously normal joints are common. Within this type two distinct classes can be distinguished after the subsidence of the acute attack, according to the joint condition. In one, the capsule is much thickened and there is marked contraction of the soft parts, whilst the bones retain their normal contour. In the second class, though there is occasionally effusion, there is little or no swelling of the soft parts, but the articular ends of the bones have lost their normal contour. The first of these the author terms infectious arthritis, the second infectious osteo-arthritis. The *x* rays are very useful in the differential diagnosis. Type D: The joint affection is associated with definite and well-known infectious diseases, and the causative germs have been found in the joints. The most common are pneumococcic, typhoid, and gonococcic joint diseases. They may be of arthritic or osteo-arthritic type. The chief characteristic of the trophic joint disease is the insidious onset. Swelling, stiffness, and deformity come on gradually and progressively, and pain, though present, is never acute or very severe. Here, again, two forms can be distinguished—the synovial and the osseous. The synovial show effusion and swelling of the soft parts. They come on at any age, and the peripheral joints are usually attacked first. Some are associated with marked auto-intoxication. It is similar to the joint changes in chronic toxaemias, such as bronchiectasis, pulmonary tuberculosis, etc. Of the osseous form several types can be recognized. The first, a very characteristic condition, in which there is swelling and the joints have a nodular appearance. It proceeds gradually but persistently from joint to joint toward the trunk and may involve every joint in the body. There is well-marked cachexia with emaciation, and it leads to complete disability. The articular ends of the bones undergo absorption and the joints may become dislocated. The *x* rays show decided rarefaction of the articular ends and sometimes of the shaft. Bony ankylosis is never present. A second type is senile arthritis, which occurs in the hip as malum coxae senilis. It comes on after middle-life, is very insidious, has characteristic bony changes, but no definite cachexia. It is generally, but not necessarily, monoarticular. The affected limb is shortened and adducted. A third form is that associated with organic nervous disease, especially tabes and syringomyelia. These various types of the disease have no direct connexion, except that they all affect the joints. Each is a definite clinical entity, corresponding exactly with distinct pathological conditions. The term "rheumatoid" should be dropped from the nomenclature.

147. Pseudo-Ascites in Infants.

Allaria (*Rif. Med.*, October 13th, 1906) reports two cases of young children (11 months and 2 years) the subjects of

chronic gastro-enteritis, who presented symptoms of ascites, and yet when a laparotomy was performed upon them no fluid was found in the peritoneal cavity. Both children were much emaciated, and had suffered from chronic diarrhœa; in one case there was a well-marked tuberculous history. There was no cardiac or renal mischief in either case. Each case presented the classical signs of ascites, flank dullness with the concavity upwards, flattened umbilicus, thrill, and definite sense of fluctuation. As they did not improve under medical treatment, and as tuberculous peritonitis was suspected, laparotomy was performed. It was then found that there was no fluid, nor any sign of tubercle or peritonitis; but the small intestine was seen to have an unusually long omentum, and it seemed probable that the sense of fluctuation was really due to fluid contained in the weakened small intestine (weakened from persistent chronic enteritis), which owing to its long omentum had prolapsed into the flanks. The dullness was usually more marked on the left side. Such cases are rare, and have not often been mentioned in medical literature, but the author refers to some other cases described by Toller.

SURGERY.

143. Surgical Treatment of Prostatic Hypertrophy.

Freudenberg (*Wiener Klin.*, I Heft, 1907), in a report which was communicated by special request to the International Medical Congress at Lisbon, discusses the indications and the results of the different surgical methods of treating prostatic hypertrophy, and directs particular attention to Bottini's operation, which, a wide experience in urological work has led him to regard with much favour. A full description is given of the technical details of galvano-diaeresis of the enlarged prostate, and the scope and limitations of this method are clearly stated. The author, who has done much statistical work relating to this subject, and collected from all available sources data of the results of Bottini's operation, presents a table of 152 instances of this treatment in his own practice, showing cure in 93 cases, great relief in 35, failure in 12, and in the remaining 11 cases a fatal result. In regard to the high death-rate of 7·2 per cent. in subjects of the average age of 65 years, the author shows that with improved methods and increased experience the mortality has been reduced from 12 per cent. in his first series to 3·8 per cent. in his last series of 50 cases. The proportion of failures in the more recent periods shows a reduction to little more than one-half. Permanency of cure, it is evident, can be urged in favour of the galvano-caustic operation. In a table of 20 cases, many of which have been under observation for a considerable time, it is shown that in 17 of these a radical cure was within the first twelve months effected. Briefly stated, the author holds, presents the following advantages over other radical methods of dealing with prostatic hypertrophy: (1) It is an operation which the patient is more ready to submit to, and for the surgeon is often in a position to set before relatives of the aged sufferer. Since this operation has been developed, which, with the exception of the urinary [illegible] with the employment of this method, [illegible] practically any, and can be performed with local anæsthesia. It may, on the other hand, be necessary [illegible] operation is necessary. (2) [illegible] urological work, while prostatectomy is open to the general as well as to the special surgeon; (2) the galvano-caustic operation is a much less serious procedure than prostatectomy, and more suitable for feeble and very old subjects; (3) with the younger subjects of prostatic disease, prostatectomy is likely to meet with refusal on the score of its probable interference with potency; (4) Bottini's operation is indicated in cases of both relatively small and medium size as well as of large prostates, but in the latter class of cases the operation is more formidable and the risk of relapse is perhaps greater; (5) in cases in which the urinary obstruction is due exclusively to a prostatic barrier, and which can be readily cured by a properly-performed galvano-caustic operation, prostatectomy, especially any complete method, would be an unnecessarily severe treatment; (6) Bottini's operation is not applicable to cases of globular and pedunculer middle lobe; here prostatectomy is indicated, the latter operation being only a partial one if the lateral lobes of the prostate are not enlarged; (7) if it is impossible before any operation to determine by cystoscopic examination or otherwise the condition of the bladder and prostate, suprapubic prostatectomy is generally to be preferred to Bottini's operation; (8) complicating vesical calculi, though presenting no direct contraindication to Bottini's operation, should always tend to favour the choice of prostatectomy; (9) Bottini's operation is barred by persistent fever, which, on the other hand, is lowered after prostatectomy through rest and drainage of the bladder. In considering the rival claims of perineal and suprapubic prostatectomy, Freudenberg states that the information at our disposal is at present too small to permit of any definite conclusion. The perineal method, he states, seems to have a somewhat smaller mortality, but is less certain in its results. Moreover, it is more difficult in its performance, is apt to result in troublesome local lesions, especially rectal fistula, and is more frequently followed by obstinate incontinence. The suprapubic operation of all the radical methods of dealing with enlarged prostate has given the best results, but has hitherto shown a higher death-rate.

149. Resection of Ten Feet of Small Intestine.

Strachan (*Ann. of Surg.*, January, 1907) reports a case of strangulation of a very large inguinal hernia on the right side in a man, aged 47. Kelotomy was performed on February 25th, 1906, within a few hours after the sudden descent of the rupture. On exposure of the gut the coils brought immediately to view were found to be gangrenous, and the underlying coils were highly congested and gangrenous here and there throughout their entire extent. The whole of the corresponding portion of the mesentery had turned a deep mahogany colour; the veins were thrombosed, and the arteries had ceased to pulsate. The entire length of gut which contained gangrenous areas was securely clamped off and removed. The mesentery was ligatured and resected near its upper attachment, and the ends of the gut were brought together and reunited by end-to-end anastomosis. The patient was discharged cured at the end of the seventh week. The patient's convalescence was watched with apprehension that the stools might become permanently liquid and so cause gradual inanition. The author reports that this was not the case, and that the man eats and drinks as before and has regained his former weight. The entire length of gut removed was, it is stated, 10 ft. 3 in., and it was taken as nearly as could be made out from the middle of the small intestine.

150. Aesthetic Removal of Benign Tumours of Breast.

Hartmann (*Journ. de Chir. et Ann. de la Soc. Belge de Chir.*, No. 1, 1907), with the aid of half a dozen clear illustrations, describes a method of removing benign tumours of the breast without leaving any apparent trace of surgical intervention. In this method, which the author has practised in 6 cases with good results, the growth is extirpated through a small incision made in the highest part of the areola [illegible] the middle of the axillary region. Between this [illegible] the growth a passage is made by undermining the skin and dividing the subcutaneous cellular tissue by scissors. The growth being fixed by the left hand, its capsule is incised and all its connexions with the breast divided, after introducing a finger into the subcutaneous tunnel the surgeon will be enabled to make out the nature of the growth and its degree of mobility, and, if it be necessary, to improve the work of [illegible] breaking down any connecting cellular bands. The growth, which is [illegible] has been [illegible] by subcutaneous dissection, is [illegible] by

long traction forceps and removed. This method, the author states, is more painful than removal by direct incision, but, from an aesthetic point of view, gives an absolutely satisfactory result.

OBSTETRICS.

151. Intractable Vomiting of Pregnancy.

PERSISTENT and rebellious vomiting occurring during the pregnant state may depend upon gross pathological states of the stomach such as ulcer or cancer, or a toxic state of the blood such as occurs in uraemia may also give rise to this dangerous symptom. Apart from these conditions, however, intractable vomiting may occur in pregnant women and lead to a fatal termination. The cause of this pernicious vomiting is at present unknown, but Boissard (*Journ. des Prat.*, September 29th, 1906) has, in a short paper, discussed the means by which one may recognize this type of vomiting, and the best means of dealing with it. Leaving out of consideration the pallor or leaden tint of the skin, the author thinks the earliest indications of the occurrence of this type of vomiting are to be found in (1) changes in the pulse, (2) alteration of the body weight, (3) diminution in the quantity of urine passed in the twenty-four hours. In most of these cases the pulse-rate oscillates about 100 beats per minute; if the pulse-rate exceeds this and remains so a critical state of affairs is present. At the same time, the body weight decreases daily, sometimes 300 to 500 grams of weight being lost daily. Lastly, the quantity of urine passed by these patients in the twenty-four hours diminishes considerably, and its normal composition becomes profoundly altered. The author advises that in all these cases, besides testing the urine for abnormal ingredients, such as albumen, the quantity of chlorides and urea excreted should be estimated and the azoturic coefficient determined. In those cases which die, death usually comes on gradually, and is generally preceded by hallucinations, delirium, or coma; before these latter symptoms set in, however, the vomiting may cease; but the gravity of the case can then scarcely be misunderstood, as there are other indications which clearly indicate its serious nature—for example, an extremely rapid pulse, parched tongue, diminished quantity of urine, and repulsive odour of the breath. Once the nature of the case is recognized, careful daily records of changes in the pulse, body weight, and urinary excretion should be made. If on examination the uterus be found retroverted, an attempt should be made to replace it. The stomach should be washed out with Vichy water, and the diet be restricted to milk, water, and iced drinks containing a little alcohol. If the stomach will not tolerate any of these aliments, rectal or subcutaneous alimentation should be employed, 500 grams of serum or boiled water being injected into the rectum twice daily, or 400 grams of serum injected under the skin every other day; in addition to these measures one or two irrigations of the large bowel with a solution of peptone containing a little laudanum should be given. If these methods of treatment are not successful in relieving the symptoms, abortion should be artificially induced after consultation with another doctor. The author points out the necessity of endeavouring to decide whether there be any hysterical manifestations, as this form of rebellious vomiting may result from hysteria pure and simple. Such cases as these, however, are often cured by introducing methods of treatment which act strongly on the imagination of the patient, such as inhalations of oxygen, electricity, etc.

152. Hyoscine in Obstetric Practice.

WOODBRIDGE HALL BIRCHMORE (*Med. Rec.*, January 17th, 1907) believes that hyoscine is for the accoucheur the ideal anaesthetic. He knows of no experience with an excessive dose. The importance of the hyoscine sleep in obstetric practice is amply demonstrated. It gives all the aid in quieting the patient that any narcotic can give, while, in addition, it affords a practical anaesthesia of prolonged duration without risk to either mother or child. This anaesthetic sleep is without danger. Hyoscine is a drug sedative to the cerebrospinal axis, but not to the ganglia connected with the reflexes of common life.

GYNAECOLOGY.

153. Myomectomy and Future Pregnancies.

GLOCKNER (*Zentralbl. f. Gyn.*, No. 5, 1907) recently related before a medical society a case which led to an instructive discussion. A woman, aged 28, married in January, 1904; in the following June Menge performed myomectomy, removing not only a broad-based tumour of considerable size from the fundus, but also a number of smaller myomata. In January, 1906, the patient consulted Glockner. The last period had occurred on September 22nd, 1905. Pregnancy, under his observation, was free from complications. Delivery, quite spontaneous, took place on July 2nd. The pains were strong and continuous. The child was a male, over 7 lb. in weight. Aided by gentle pressure, the placenta followed half an hour later. The puerperium was uncomplicated; involution was normal, and no cicatrices could be defined on palpation of the uterus. Glockner laid stress on the fact that gestation so soon followed the removal of the tumours; but he also observed that in pregnancy after Caesarean section the uterine cicatrix often gave trouble, and that the same would probably be found to be the case when myomectomy in young subjects became more frequent. The myomectomy wound at the best was far less likely to make a good cicatrix than the clean, direct incision made, without any enucleating manœuvres, through the normal uterus in Caesarean section. Littauer stoutly denied this theory. He had enucleated a myoma 3½ in. long and 2½ in. in depth and in breadth; 308 days later the patient was safely delivered at term by Thies; at that date she was 31 years old. Labour lasted over twenty hours; the pains were distressing, so the forceps was about to be applied, when some sharp contractions set in after rupture of the membranes, and the child was delivered. Much flooding followed, and the placenta was expelled by Credé's method: it adhered strongly to the uterine walls at the left of the fundus, at which point cicatricial tissue could be felt on careful palpation. The flooding ceased after hot douching and doses of ergot, and the puerperium was uncomplicated. Thus, although the labour was complicated, the cicatrix did not yield. The patient became pregnant once more, and a subserous myoma of the size of a hen's egg developed, but Thies could not trace a further history. Abel related a case where a myoma as big as an apple was enucleated from the anterior wall of the uterus. The patient had twice aborted at the second month. After the myomectomy she bore two children to term, then a small myoma developed and grew in the anterior wall, and a third abortion ensued. Abel did not believe that there was much fear of rupture of an old myomectomy scar during labour.

154. Placenta Praevia Simulated by Obstruction of Pelvis by Non-pregnant Half of Bicornate Uterus.

BROWN of Birmingham, Alabama (*Surgery, Gynecology, and Obstetrics*, September, 1906), was consulted about a woman, aged 30, in the eighth month of her fourth pregnancy, on account of several severe haemorrhages. All her three previous pregnancies had been lingering. A soft, boggy mass filled the pelvis. The haemorrhages did not recur, and a fortnight later labour came on. The os admitted two fingers, and no placenta could be felt; the boggy mass was clearly in or outside the uterine wall. The gravid uterus lay much to the left of the middle line, and the mass was now taken for a senile or intraligamentous fibroid. The patient was placed in the genu-pectoral position, but the tumour could not be made to rise above the brim. Next day Caesarean section was performed, as the head was not engaged, and the child was living. It was delivered and saved, not without difficulty, owing to the position of the placenta. The tumour was entirely independent of the uterine wall from about the level of the os internum upwards; its true nature was revealed when the right tube and ovary were seen to be attached to its right side. The incision in the left cornu, whence the fetus had been extracted, was closed, and an opening made in the tumour, that is to say, in the right uterine cornu. No fetus was found, but a considerable amount of decidua was cleared away, the opening closed, and the abdominal incision united by suture without drainage. Convalescence was retarded by pneumonia and phlebitis.

THERAPEUTICS.

155. Morphine-Scopolamine Narcosis.

KORFF (*Berl. klin. Woch.*, December 17th, 1906) again defends the method of inducing surgical narcosis by subcutaneous injections of morphine and scopolamine which Schneiderlin and he first advocated. Failure and even accidents led to several authors writing against the method, and even Schneiderlin appears to have been

disappointed to a certain extent. Korff, however, finds that the failures and accidents are explainable, and claims that his results are excellent as long as the dosage is strongly adhered to. He has found that 1 mg. of scopolamine and 2½ cg. of morphine represents the best doses for the purpose. Larger doses are certainly dangerous, and are responsible for many of the unfavourable experiences which others have had. However, a large number of eminent surgeons and obstetricians have spoken highly in favour of the method during recent times. Korff's *modus operandi* is to give the patient a large cup of coffee to drink one hour before the first injection. He then injects one-third of the dose 2½ hours before the time for operating, the second third 1½ hours before, and the last third ½ hour before. Old persons sometimes are narcotized with two-thirds of the full dose. He has given the injections to over 400 patients, and has not met with a single bad result. The patient is kept in a darkened room, and all sensory impressions are removed. As a rule, he falls to sleep quite quickly, and the anaesthesia gradually increases. The pupils are dilated or contracted, according to the susceptibility to morphine or scopolamine, the reflexes diminish, and the pulse and respiration sometimes become slower and sometimes more rapid. At times there is a marked reaction to the first incision, but if one waits for a minute or two the patient falls asleep again, and one can proceed uninterrupted. In this way 40 out of his 50 goitre operations were performed without chloroform. When the action is not sufficient to continue the operation without a general anaesthetic, it is found that much smaller quantities of the latter are required than would be used without the injections. The chief advantages of the method are that there is not distressing vomiting during and after the operation, that there is psychical tranquillity and freedom from pain after the operation, and no excitement immediately before. He states that he finds a preparation which has recently been introduced for the purpose of 12 mg. of scopolamine and 3 cg. of morphine sealed up in a glass tube, particularly handy and reliable, and recommends this means of keeping the drugs for future use. He considers that his method is able to replace the ordinary general inhalation anaesthesia.

156. Cumulative Action of Digitalis.

The cumulative action of digitalis is well recognized clinically, and forms one of the great dangers of employing this drug in medicine. Experimental evidence has been forthcoming which illuminates this point. Fraenkel performed experiments on cats with crystalline digitoxin and found that while a single subcutaneous injection did not produce any appreciable changes, the same dose repeated produced slowing of the pulse, vomiting, which often terminated in death. He further found that a very slight increase of therapeutic doses induced this cumulative action. Clinical experience has taught that the amorphous digitoxin does not act cumulatively. Cloetta, writing in the *Munch. med. Woch.*, November 20th, 1906, records his experiments with this last-named preparation, which he has introduced, and which is usually known as digalen. First of all he applied Fraenkel's experiments to digalen. The cats did not show any cumulative symptoms with much larger doses than were used of the crystalline digitoxin. He found that 0.1 mg. (pro kilo body weight) of the crystalline form was at times tolerated when given once only, while 0.3 mg. of the soluble amorphous form pro kilo body weight could be repeated without any reaction. After repeating the experiments with slight variations but always with the same result, he attempted to discover why it was that the amorphous form was so much better tolerated than the crystalline form. At first he thought that the size of the molecule might be responsible. The formula of crystalline digitoxin is believed to be $C_{34}H_{54}O_{11} + 3H_2O$. This would imply a molecular weight of 767. The freezing point depression of the substances dissolved in glacial acetic acid gave a molecular weight of the crystalline form as 783 and of the amorphous form as 751. This did not appear to be reliable, so he tested the molecular weight from the boiling point. In this case the former gave the value of 552 and the latter of 556, so that he thought he could accept the formula of $C_{34}H_{54}O_{11}$ for digitoxin. Now, if the difference depended on a difference of the molecular weight, he argued that a crystalline preparation should be workable to pass from the amorphous form which has the molecular weight of 751 must not be the case with digalen. But this crystalline preparation, however, showed considerable cumulative action. His hypothesis was therefore wrong. Clinically one realizes that a cumulative action with digitalis leaves rarely takes place when fresh leaves are used. He believes that digalen is a digitoxin in the condition in which it exists in fresh leaves. It is possible to produce a cumulative action by large doses both of digitalis leaves and of digalen, but this does not occur so regularly as with crystalline digitoxin. The cumulative action, therefore, probably depends on certain changes which take place in the leaves.

157. Calcium Salts in Epilepsy.

D. Linguerri (*Bull. d. Sci. Med.*, Bologna, December, 1906), after trying various salts of calcium administered to epileptics in different ways, concludes that calcium carbonate, given twice daily in the form of a cachet containing 11 gr., is of real service in the treatment of epilepsy. His experiments deal with 5 epileptics, and extended over two years; his object was to determine (1) how far the treatment diminished the number of fits occurring per diem, and (2) how far it improved the mental condition of the patients. He alternated periods of two to four months during which calcium carbonate was given with similar periods during which expectant treatment was adopted. He finds that the daily average of fits is considerably lessened while the salt is taken, and that a very great improvement is to be observed in the mental and psychical conditions of the patients; they are less confused, irritable, and excitable while taking calcium carbonate.

158. Sea Sickness treated with Paraganglin (Vassale).

Massaglia (*Gazz. degli Osped.*, February 10th, 1907), considering two out of the many hypotheses submitted to account for sea sickness—namely, cerebral anaemia and splanchnic anaemia from disturbance of the abdominal viscera—thought that paraganglin would probably be of service. He accordingly gave the drug in 25 to 30 minim doses, and found that in the small number of cases (only three are mentioned) available for treatment it gave much relief. The preparation used was that known as paraganglin (Vassale).

PATHOLOGY.

159. The Spirochaeta Pallida in Congenital Syphilis.

Hueberschmann (*Berl. klin. Woch.*, June 11th, 1906), in the course of a research on the histology of syphilitic infants, found no spirochaetes in the spleen or lung, but they were present in moderate quantity in the kidneys, suprarenals, liver, placenta, and umbilical cord. They were abundant in the pancreas and thyroid, the latter organ being especially rich in organisms. They were, as a rule, distributed between the connective tissue cells; sometimes they penetrated into the cells, but were never found with certainty in epithelial cells. The kidneys, which showed a slight degree of nephritis, contained no spirochaetes in the neighbourhood of the glomeruli, but large numbers around and in the walls of the capillaries and tubules. This proves that spirochaetes can be eliminated in the urine. The placenta, membranes, and the blood of the umbilical vein sometimes contained the organisms.—Schlimpert (*Berl. klin. Woch.*, June 28th, 1906) found the spirochaetes in the organs of a suckling infant. They were present in the stomach, the mesentery, mesenteric glands, gall bladder, bile duct, peripheral nerves, thyroid, thymus, tonsils, tongue, and the pharyngeal mucosa. The organism can penetrate between squamous or columnar epithelium. The secretions and excretions of the congenitally syphilitic child must be regarded as infectious. Ravaut and Ponselle (*Gaz. des Hop.*, July 13th, 1906) detected spirochaetes in the blood of a child aged two months suffering from severe congenital syphilis. The blood was obtained from the pulp of the great toe twenty-four hours before death. Ten films were prepared in the usual way, but the organism could only be found in three, in which, however, it was abundant either singly, in pairs, or in masses. Their method was as follows: To 30 c.cm. of distilled water in a test tube 30 drops of blood are added drop by drop. The haemoglobin becomes diffused through the water, and after three hours a fibrinous clot forms; this clot contains white corpuscles and micro-organisms entangled in the meshes of fibrin. The clot is withdrawn, washed several times to free it from red corpuscles, blotted to remove superfluous water, cut into sections, and stained by Levaditi's method. In this way numerous spirochaetes were found uniformly distributed in every section. There was no skin lesion near the spot from which the blood was drawn, and sections examined after death showed spirochaetes only within the vessels, none being seen at or near the surface of the skin.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

160. **Exophthalmic Goitre.**

Gilman Thompson (*Amer. Journ. of Med. Sci.*, December, 1906) gives the result of a clinical study of 80 cases, special attention being paid to the acute exacerbations and such important symptoms as the eruption, the oedema, sweating, acute cardiac dilatation, and the fever, which are often overlooked. All the cases showed the so-called cardinal symptoms, namely, a goitre, muscular tremor, general nervousness, and tachycardia; exophthalmos was present in 51. The most important facts elicited were: (1) The frequency of serious acute febrile exacerbations, with dilatation of the heart; (2) the common association of these exacerbations with tonsillitis; and (3) the possibility of mistaking the toxaemic clinical picture for malignant endocarditis and septicaemia. Of the 80 cases 43 were studied in hospital, and of these 14 showed a temperature between 101° and 104°, in 7 it rose above 104°, and in all but 4 it rose above 99°. The temperature was of distinctly septic type, most often remittent, but sometimes intermittent, and always irregular. The duration of the fever varied from a few days to several weeks. In the entire series of 80 cases 20 suffered from simple tonsillitis or quinsy, and 10 more had repeated attacks of bronchitis, influenza, or pneumonia. Very often the tonsillitis coincided with the febrile exacerbation. The author thinks that the thyroid gland may be stimulated to toxic activity by a mild acute infection. The fully-developed goitrous toxaemia very closely resembles septicaemia. The temperature, the dilated over-acting heart, with a variety of murmurs, the sweating, the eruptions, oedema, dyspnoea, with perhaps delirium, make the analogy almost complete. Of the 80 cases 71 were females, and 43 were between the ages of 25 and 40 inclusive. The youngest patients were 17 and the oldest was 54 years. The onset was frequently assigned to fright or shock. There was no special order in which the symptoms presented themselves. In most cases tachycardia, palpitation, and nervousness were first complained of. The thyroid gland was more or less enlarged in all cases, in most moderately and bilaterally. In 37 the heart's apex extended 4 in. or more to the left of the midsternal line, in 10 of these 5 in., and in 3, 6 in. In one-half the cases murmurs were heard, which generally disappeared under treatment. Dyspnoea was present in half the cases, and the rate of respiration in many reached 44, and in one case 72. Disagreeable sensations of fullness and throbbing pulsation in the throat were often complained of, and in some the voice became hoarse. Prominent among a variety of nervous and mental symptoms were loss of memory, difficulty of mental concentration, extreme irritability of temper, fear of death, sensation of dysphagia, of suffocation, of flushing of the face and body, and of throbbing in the back of the head and neck, vertigo, twitching of the voluntary muscles during sleep, a tendency suddenly to drop objects held in the hand, or for the support of the legs suddenly to give way. In one case there were visual hallucinations, and in another suicidal and homicidal impulses. Another patient developed acute mania. Pain over the praecordium or pseudo-angina accompanied many cases. The hypochondrium on either side was a frequent site of pain. Insomnia usually accompanied the acute exacerbations, and often appeared to be due to the tachycardia. Gastro-intestinal symptoms were present in one-fourth of the cases. They consisted of irregular attacks of vomiting and diarrhoea, with abdominal cramps and sensations of distension. Loss of weight, often considerable, was present in one-third. Oedema was seen in 23; it was usually in the legs, but sometimes in the hands. Sweating was noticed in 20 cases, usually as an accompaniment of the acute febrile exacerbations. Erythema was present in 10 cases. It was seen chiefly in the acute toxic cases, and was generally localized often with oedema. Slight haemorrhages were occasionally seen. One patient had epistaxis, and three others blood-stained sputum, although the lungs were normal. Pregnancy, instead of increasing the nervousness, either exerted no special influence or the patient was better during gestation. Many patients suffered from amenorrhoea. Three of the cases had diabetes. The duration of the cases varied from six weeks to twenty-five years. Of the 80 cases 8 were fatal. The duration was interesting, in showing how often highly toxic symptoms develop early in the disease; it was in the 8 fatal cases, respectively, five months, eleven months, one year, two, three, five, six, and ten years. Acute dilatation of the heart, apparently caused by the toxaemia, was a common cause of death.

161. **Carcinoma of the Ampulla of Vater arising in the Termination of Wirsung's Duct.**

Carnot and Harvier (*Bull. et Mém. Soc. Méd. d'Hop., Paris*, 1906, p. 296) describe the case of a woman, aged 66 years, who had attacks of severe abdominal pain of a progressive character for nearly a year before her death. Eight months before death she was admitted to hospital, but her symptoms were too vague to allow of any diagnosis. She lost flesh, jaundice came on three months before death, and there was pruritus. A month before death she came into the Hospital Saint Antoine with complete obstructive jaundice, emaciation, a large liver, and a distended gall bladder. Salol given by the mouth was not followed by any salicyluric acid in the urine (Sahli's test), and iodide of potassium given in pills coated with wax did not lead to iodine in the urine; these tests proved obstruction of the pancreatic duct. A diagnosis of malignant disease of the head of the pancreas or of the ampulla of Vater was made. The palpable gall bladder was aspirated, and clear fluid like water or hydatid fluid removed, which gave a trace of bile acids and did not contain any hooklets. Death from peritonitis occurred some days after the puncture. At the necropsy there was a hard white growth arising from the termination of Wirsung's duct of the pancreas; it was about the size of a pea, with some villosities on the surface and infiltrating the underlying tissues. Microscopically it was a carcinoma of a transitional type. Wirsung's duct and the accessory pancreatic duct were dilated; the pancreas showed perilobular fibrosis, the islands of Langerhans being preserved. The growth did not infiltrate the common bile duct, but it compressed and obstructed it. The common bile and hepatic ducts were dilated to the size of the forefinger. The cystic duct was compressed by two glands enlarged from adenitis, not from carcinoma. The liver showed fibrosis around the ducts.

162. **Renal Permeability in Hepatic Affections.**

Ignazio (*Rif. Med.*, November 17th, 1906), following on the lines of certain researches made by Chauffard, has treated the permeability of the kidneys in 6 cases of hepatic disease (various types of cirrhosis). The drugs used were iodide of potassium, salicylate of soda, and methylene blue. Speaking generally his experiments confirm the results of Chauffard, and tend to show that an examination of the permeability of the kidneys is of use in the prognosis of hepatic disease. The more serious the hepatic disease the more the flow of urine becomes intermittent or remittent in type, and not cyclical as in health. In renal disease the flow remains cyclical and not intermittent. This seems to show that the flow of urine is in some sense regulated and controlled by the liver, and, at any rate in hepatic disease, not rhythmically altered by the condition of the renal tubules. Since in the experiments the drugs were injected subcutaneously, they would have to pass through the liver for the most part, and this organ arrest them in passage, much as it does in the case of metallic poisons, and so interfere irregularly with their appearance in the urine. Further research would be needed to ascertain how much is retained in the liver, and what possible slight alterations might occur in the renal epithelium. Full details as to the mode of experiment and the means of avoiding difficulties (for example, bile in urine) in estimating the amount and degree of blue coloration in the urine are given.

SURGERY.

163. **Contusions of the Abdomen.**

As the correct interpretation of the signs following contusions of the abdomen frequently taxes the capabilities of the practitioner to the utmost, O. Hildebrand (*Berl. klin. Woch.*, January 7th, 1907) discusses the various injuries which are met with. He divides his subject into

injuries to the gastro-intestinal canal and injuries to the parenchymatous organs. He does not deal in detail with haematomata of the abdominal walls. First he speaks of contusions which lead to a crushing or tearing of the serous and muscular coats of the canal. In these cases the continuity of the canal is not broken, and thus no perforation signs follow. A haematoma may develop, but as a rule at first no ill effects are marked. It is especially the late effects to which he wishes to draw attention. He instances a case of a man who complained of symptoms pointing to stenosis of the stomach. His age corresponded to the common age for carcinoma, but no tumour could be felt. He stated that six months previously he had been struck by an iron grating falling on his abdomen. On opening his abdomen Hildebrand found adhesions between the stomach and liver, and also with the intestines. The signs of stenosis depending on these adhesions were removed by a gastro-enterostomy. Other cases are also cited which show analogous conditions. The mucous coat is sometimes ruptured by external violence, and the serous coat remains intact. This may lead to ulceration, necrosis of the muscular coat, and later on to perforation. Next he turns to perforating injuries affecting the gastro-intestinal canal. The serous, muscular, and mucous coats are all ruptured. Sometimes one finds a minute opening, sometimes several holes, and sometimes the gut is torn right across. The smaller the opening is the less dangerous is the injury, but in any case the chances for the patient depend primarily on the promptness of the correct diagnosis. One symptom is very important. This is unilateral rigidity of the abdominal muscles. The patient generally looks very ill and pale, his pulse is rapid, there is much pain, and he is mostly excited. Although he does not regard the rigidity of the muscles as a pathognomonic sign, he certainly believes that it may often put the physician on the right tack. Whenever the muscular wall is rigid, one should lose no time before operating, or at all events seeking the assistance of the surgeon. He believes that the rigidity is due to beginning peritonitis, which he has seen well marked within two and a half hours of the injury. If one operates in severe cases early one can obtain much more favourable results than one used to get when one waited for the signs of peritonitis to develop. Out of 12 cases of intestinal injury, he was able to save 5 by operation. Next, he says a few words on tears in the mesentery. The dangers of this injury are at first haemorrhage, and later gangrene of the corresponding part of the intestine. It is extremely difficult to make rules when one ought to operate and when it is not necessary. Each experienced surgeon learns to judge each case on its own merits. In speaking of the parenchymatous organs, he says that injuries like tears in the spleen or liver cause haemorrhage. This may be slight and cease spontaneously. But it may go on until the patient has become dangerously anaemic. At times one operates on such cases, and finds that the bleeding from a tear in the spleen has stopped, or at most requires a small plugging with iodoform gauze. In other cases, the tear may be so large that no other means are left than removal of the organ. This must be done without hesitation. In the case of the liver, however, one cannot remove the organ, and compression or suture are frequently extremely difficult to apply successfully. In past times it was suggested that steam applied to a bleeding liver should check the haemorrhage. Hildebrand tried this on animals, and found that the steam boiled the liver and the animal died. At times the bile ducts are injured. These cases are very rare, but he has experienced one, and was able to save the patient's life by laparotomy. The bile was escaping freely into the abdominal cavity, and would certainly have killed the patient after a time. Injury to the pancreas is extremely rare. As a rule, when this organ is damaged other organs are also injured. The signs are similar to those of haemorrhagic pancreatitis. The fat necrosis strikes one on opening the abdomen. Comparatively common are the injuries to the kidneys. At times, one to two small tears may be seen on the surface, or the tear may be deep and, again, the whole organ may be crushed into two parts. The kidney is usually crushed against the first lumbar vertebra. The first class of case causes a short lasting haematuria, but no anaemia, while if the tears are deeper the haemorrhage may last for some time. In the case of a completely torn organ one finds very extreme anaemia, great pallor, cold clammy skin, and restlessness. The abdomen is excessively tender, the pulse is thready, and one obtains the impression that the patient is dying rapidly from loss of blood. If one opens the abdomen one finds large effusions of blood, and in the midst of the blood the kidney has burrled. One only has a short time during which one can still save the patient. For the first two classes one waits for matters to develop, but in the third class one must operate and remove the kidney at once. The author makes some very interesting remarks on injuries to the ureters, and cites cases in which he was able to operate, once with good result, and once (in a very complicated case) with fatal result. The bladder also receives attention; and, in conclusion, he sums up all his operations performed for the results of contusions of the abdomen. These number 31 fresh operations and 6 late operations; 9 of the former died, while all the latter recovered.

164. Congenital Dislocation of the Hip.

Salaghi (*Archiv di Ortoped.*, An. 23, f. 5, 6) describes four stages of dislocation, according to the position of the head of the femur along the arch of a circle concentric with the acetabulum, starting from before backwards. In the first three stages, the patient being horizontal, the head of the bone in extension is in front of the superior anterior spine, whilst in the fourth it always remains behind on the iliac fossa, whether the hip is flexed or extended. In the first three stages external rotation is common, whilst in the fourth there is often internal rotation. Congenital dislocations are usually classified into anterior and posterior, according to the position of the head in relation to Nélaton's line, but the author thinks it would be better to call the first two degrees of dislocation superior, and the last two posterior and postero-superior. Prognosis on the whole is worse in the posterior luxations, as there is greater shortening here. But in the later stages of the second degree (where the head is displaced upwards but internal to the superior anterior spine) the functional disability is marked owing to the external rotation. Dislocations of the third degree give rise to less functional disability than those of the second. In reduction the best method, where possible, is by the posterior margin of the acetabulum, bending the thigh at a right angle, making vertical traction, and abducting to 90 degrees. In the first stage the leg is fixed in that position, and then later an abduction of 45 degrees, with complete extension and strong rotation inwards. The abduction in the limb should not be carried beyond 90 degrees, and the rotation inwards should be lessened later in the course of treatment. No walking should be allowed until quite the end of the treatment.

OBSTETRICS.

165. Bloodless Methods of Artificial Dilatation of the Cervix.

Lewis (*Surg., Gyn. and Obst.*, December, 1906) discusses the methods of bloodless dilatation of the cervix uteri at term, and gives an extensive review of the literature of this subject. He considers in turn (1) the manual method; (2) the introduction into the lower uterine segment or into the cervix, of bags to be filled with fluid; and (3) the use of metallic dilators. Dilatation of the os by tents, it is stated, has never been extensively practised at full term, and as a method of assisting delivery need not be mentioned. The author holds that the classical manual method, in which the fingers and hand are pushed as a cone from below, should be practically discarded as unphysiological, difficult, and dangerous. On the other hand, the bimanual method originally introduced by Edgar and recently revived by Bonnaire, when performed under proper precautions with educated fingers, and without undue roughness or haste, is most useful in the great majority of cases in which as quick a delivery as can safely be accomplished is demanded. With the experienced and educated hand of the trained obstetrician, this is as quick as any mechanical method which depends on force for dilating rigid tissues; and it has the further advantage that when practised by the expert, less harm is likely to be done than by the use of complicated instruments. In the method of Champetier de Ribes and of Vorhees we have, the author states, a method of fairly rapid dilatation which fulfils physiological conditions, and is the least dangerous of any. In placenta praevia it is held to be the method *par excellence*. In studying recent literature on bloodless dilatation of the cervix the author has come to the conclusion that the advocates of the branching metallic dilators, especially those of the Bossi type, have failed to make out a case. All the branching instruments are complicated and composed of a very large number of parts, and as they are difficult to clean, are dangerous as

carriers of infection. The great fault of all is the difficulty in controlling their action on the tissues of the os and cervix. There is, it is stated, much evidence, especially in Germany, that the Bossi method not only fails in many instances, but often causes serious laceration. In his concluding remarks Lewis asserts that the rigid os, of which so much is heard, is extremely rare. When it does exist it cannot be dilated by any bloodless method. The consistent and careful use of some suitable form of bag, or, if haste be demanded, the bimanual method, will overcome the cases of loose os about as quickly as the Bossi method, and always more safely.

166. **Missed Abortion: Twin Pregnancy.**

For obvious reasons "missed abortion" is a subject of some importance. Dr. Wirtz has recently reported an authentic case, watched through its whole course from the abortion to the delivery of the ovum, which proved to be of the true or one-yolk, twin type (Ein an sich seltenes Zwillingsei von einer Missed Abortion stammend. Report of meeting of Gesellsch. für Geb. u. Gyn. zu Cöln a. Rh. *Monatsschr. f. Geb. u. Gyn.*, November, 1906, p. 684). A woman of 25, already twice pregnant, became so for a third time, the last period appearing at the beginning of May, 1904. On September 10th slight haemorrhage set in, with labour-like pains, which were severe. The symptoms subsided after a week's rest in bed, when morphine was administered; it was then suspected that labour had not really been interrupted. By December, however, the distension of the abdomen was hardly perceptible. On February 15th, 1905, haemorrhage and pains set in suddenly during the night, and at the end of an hour an ovum was expelled entire, simultaneously with the placenta. There was much liquor amnii, so that the ovum was tense. On laying open the membranes a pair of twins were discovered in separate amniotic cavities, both somewhat shrunken, though otherwise well developed and free from malformations. They were males, of about 4¾ in. in length. The placenta was rather big and tough. Very little blood was lost during the expulsion of the ovum, and involution followed speedily. Wirtz at the same time reported a case of fleshy mole retained in the uterus for five months.

GYNAECOLOGY.

167. **The Appendix and Pelvic Disease.**

A. W. W. Lea (*Journ. of Obst. and Gyn. of the Brit. Emp.*, August, 1906) discusses the relation of the vermiform appendix to pelvic inflammation. Statistics showed both that the appendix is often a pelvic organ, and also that disease of the appendix often exists along with disease of one or other of the pelvic organs. Dührssen found the appendix involved in 3 per cent. of laparotomies for pelvic disease. Robb found appendicitis to be present in 16.8 per cent. of 148 cases of inflammatory disease of the tubes and ovaries, and in 17 per cent. of 64 cases of purulent disease of the tubes. Peterson, who advocates the removal of the appendix in every gynaecological operation, examined the state of the appendix in 200 consecutive cases, and found there were histological lesions in 47 per cent., while the appendix was adherent in 18.5 per cent. The association of lesions of the appendix with pelvic disease may arise in any of three ways: (1) Appendicitis may be the primary lesion; (2) the appendix may be involved as a secondary result of tubo-ovarian disease or of a new growth in the pelvis; (3) the two affections may coexist independently. (1) Primary pelvic appendicitis. Acute pelvic inflammation terminating in abscess is not uncommon as a result of appendicitis; the pelvic abscess may simulate an ovarian cyst which has undergone acute torsion or become infected. Rarely acute pelvic appendicitis may directly infect the uterine appendages and cause a pyosalpinx or ovarian abscess; an example has recently been recorded by Bland-Sutton in which the acutely-inflamed appendix burst into the abdominal ostium of the adherent Fallopian tube. Chronic pelvic appendicitis may develop without the formation of pus, and may cause dense adhesions round the uterus and its appendages; the existence of a unilateral tubo-ovarian mass without evidence of uterine infection suggests the appendix as a seat of disease. In two out of the author's eight cases of tubo-ovarian disease with disease of the appendix, the appendix appeared to be primary and the tubo-ovarian disease secondary. (2) Changes in the appendix secondary to tubo-ovarian disease. The appendix readily becomes adherent to an enlarged or inflamed Fallopian tube and ovary on the right side; the appendix may remain healthy in spite of the adhesions, but more often secondary changes ensue either by interference with its nutrition by traction or kinking, or by direct bacterial invasion from the tube and ovary. Out of the 8 cases which the author has observed, three were cases in which the appendix was involved secondarily; the primary lesion was in one case hydrosalpinx and haematoma of right ovary, the infection having been probably gonorrhoeal in origin; in another sclerocystic adherent ovary and Fallopian tube; in the third the uterus was covered by fibrinous adhesions, and the right tube and ovary were adherent to the floor of the pelvis. In two of the 8 cases lesions of the appendix were found together with prolapsed and enlarged ovaries, the two affections having apparently had independent origins. Appendicitis has a marked tendency to follow pelvic operations. Exudation about the pedicle and subsequent adhesions may involve the appendix, or it may become adherent to raw surfaces about the brim or in the cavity of the pelvis. There is especial liability to appendicitis after operation if the appendix is pelvic in position. The author has had 4 cases operated upon for gynaecological symptoms without complete success, in which the subsequent removal of the appendix was followed by complete recovery, and this in spite of the fact that there had been no symptoms referable to the appendix before the primary operation. In one of the 4 cases it appeared possible that the appendix had been the primary cause of the pelvic peritonitis; in two others the appendix had become adherent at the pelvic brim, and in the fourth it was adherent to the operation scar of the vaginal roof. The following are the author's conclusions as to the desirability of removing the appendix when abdominal operations are undertaken for pelvic disease: (1) The appendix should be examined as a routine precaution in all cases of abdominal section for pelvic disease. (2) The appendix should be removed (*a*) if it lies at the brim of the pelvis or lies in the pelvis; (*b*) if it shows any peri-appendical adhesions or contains a concretion; (*c*) if it is adherent to any pelvic inflammatory swelling or tumour; (*d*) if it lies in close relation to the pedicle or raw surface left after the removal of any pelvic organ.

THERAPEUTICS.

163. **Bier's Method (Aspiration) in Oto-Rhinology.**

Guyot (*Rev. méd. de la Suisse rom.*, May 20th, 1906) describes the interesting development of Bier's method of treatment of acute inflammation by hyperaemia initiated by Sondermann. The apparatus is devised to produce hyperaemia by aspiration. In the treatment of otitis media, injections into the external meatus are incapable of cleansing the middle ear unless there is a large perforation. The most satisfactory treatment hitherto has been that by Politzer's air douche. Methods have previously been devised with the object of withdrawing the pus from the middle ear by rarefaction of the air. Siegle's speculum acts on this principle; but the constant introduction of a tightly-fitting nozzle into the external meatus is painful, and liable to produce otitis externa. These disadvantages are avoided with Sondermann's apparatus, which has the further advantage that it may be entrusted to the patient and used by him two to four times daily. The apparatus consists of a metal mask having the shape of half an eggshell divided longitudinally. The edges are provided with an indiarubber cushion, which can be inflated similarly to that round the edge of an ether mask. The shell fits over the entire external ear, and is airtight when compressed against the side of the head. The shell is connected by an indiarubber tube to a bag resembling Politzer's, but provided with a valve, so that when compressed a vacuum is produced in the shell. The results are especially good in acute otitis media after myringotomy. Pus is evacuated and retention is prevented. Probably the hyperaemia produced is inconsiderable, unless the perforation in the drum is large. In rhinology a somewhat similar apparatus is of service both in diagnosis and treatment. The mask fits over the nose and resembles the mask of an ether apparatus, but does not cover the mouth. It is made in three sizes. The bag is compressed to drive out all air and as it expands the patient pronounces a prolonged "e," or swallows a sip of water. The soft palate thus shuts off all communication between the mouth and the nose and its accessory cavities. After several aspirations the mucous membrane of the nose becomes red, turgid, and covered with mucus. This apparatus is most suitable for home treatment, but is somewhat difficult to sterilize. It may be replaced by an olive-shaped nozzle which fits into the nostril and contains a pledget of cotton-wool to absorb pus. If pus is present in the nose or sinuses it is aspirated. If after thorough

cleansing of the nostrils a quantity of pus escapes, the presence of purulent sinusitis is assured. Honneth claims that if no pus appears it is because the sinus contains none. As regards treatment, excellent results are obtained in acute or subacute sinusitis, both of the maxillary and frontal sinuses. If the orifice is obstructed by swollen mucous membrane a spray of cocaine and adrenalin should be applied first. In chronic sinusitis the method cannot replace operation if there is degeneration of the lining mucous membrane. Good results are also obtained in the purulent rhinitis of infants and, probably owing to the hyperaemia produced, in ozaena.

169. **Alypin.**

Maestro (*Clin. Mod.*, An. xii, No. 44) gives the results of some experiments on alypin—a drug prepared from stovaine, and possessing many of the properties of cocaine, with a lessened toxicity. Chemically, it is a primary tetra-methyl - diamino-ethyl - dimethyl - benzoyl - carbinol-hydrochloride. It is a non-hygroscopic white crystalline powder, easily soluble in water and alcohol. The solutions can be boiled without losing their anaesthetic action. Complete anaesthesia of the eye can be produced by a 1 per cent. to 2 per cent. solution in about a minute. It is nearly the equal of cocaine in anaesthetic action, and, moreover, can be given in neutral solutions, which is an advantage for infiltration purposes. Orthoform and nirvanin, which the author has also tried, are less toxic, but do not give such good anaesthesia. With frogs the toxic dose of alypin is about 1 cg., and death occurs from cardiac paralysis; in rabbits it is from 5 cg. to 6 cg. per kilo of weight. Its action on respiration is to accelerate inspiration and increase the duration of expiration. In small doses it has a very slight action on the heart; in larger doses it stops the heart in systole, and lowers the blood pressure, inducing severe respiratory disturbances and convulsions.

170. **Mercury in Sclerodermia.**

P. Chirone (*Giorn. Internaz. d. Sci. Med.*, Naples, November, 1906) reports a case of sclerodermia cured by mercury. The patient, a woman of 60, who had probably been infected with syphilis by her husband many years previously, began to suffer from a general itching of the skin, fainting fits, headache, loss of appetite, and constipation. Two months later her hands were often cold, with formication and pricking sensations; then the legs were similarly affected. The skin of the right hand grew tight, and involuntary closing of the hand followed: there was also a feeling of constriction about the chest which even embarrassed respiration; sclerodermia was then diagnosed and a bad prognosis was given. Intestinal colic supervened and the sclerodermia progressed. At this time two and a half months after the onset of the coldness and formication—Chirone found that the skin of the face was a little thickened and hardened; that on the front of the chest was very stiff and fixed to the subcutaneous tissues, so that a deep inspiration could not be made. The skin of the neck was rather tense. The skin of the fingers was hard and tense, the fingers could not be moved freely, and were fixed in a claw-like position. Over the rest of the body the skin was not abnormal. The ocular reflexes, the urine, and the superficial and deep reflexes were normal. Treatment with iron, arsenic, and the glycerophosphates did no good. Then mercurial inunctions were tried, with immediate improvement; later, iodide was given as well. In about a year the cure was complete; four years later no relapse had occurred. Chirone discusses the causation of sclerodermia at some length. He is not certain whether his patient was a syphilitic in whom sclerodermia also occurred, or whether her sclerodermia was merely a syphilitic manifestation closely resembling but not identical with true sclerodermia.

PATHOLOGY.

171. **Relation between Sensitizing Substances and Alexine.**

Bordet (*Ann. de l'Inst. Pasteur*, June, 1906) criticizes the views of Ehrlich and his school on this subject and formulates the following conclusions: (1) In conformity with the data of Ehrlich and Sachs, experimental observations show that the corpuscles of the guinea-pig are dissolved in a mixture of fresh horse serum and bovine serum previously heated to 56° whilst they resist hemolysis if they are submitted in succession first to the bovine serum and afterwards to the horse serum. But the interpretation formulated by Ehrlich and Sachs, according to which the sensitizing substance (furnished by the bovine serum) can only unite with the corpuscles if it is first combined with the alexine (provided by the fresh horse serum), is inaccurate. In the first place, the sensitizing substance which plays the dominant and most essential part is contained not in the bovine serum but in the horse serum. Secondly, these sensitizing substances behave like all similar bodies in the sense that they do not require the presence of alexine in order to unite with the corpuscles. Finally, this interpretation completely overlooks an essential factor which, for the case of haemolysis in question, has a remarkable and special significance. (2) This factor consists in the intervention of a special substance, peculiar to bovine serum, which withstands a temperature of 56° and is of a colloidal and albuminoid nature. This substance possesses the special property of being absorbed by corpuscles charged with sensitizing substance and alexine, whilst it remains free in the presence of corpuscles which are normal or are simply sensitized. The absorption of this colloid by the blood corpuscles so prepared results in their being strongly agglutinated, and renders them, except in certain special conditions, more susceptible to haemolysis. That is why the corpuscles of the guinea-pig are not only disintegrated (Ehrlich and Sachs) in the mixture of horse and bovine serum, but exhibit marked agglutination. (3) The absorption of the colloid by the corpuscles charged with sensitizing substance and alexine is very probably due to molecular adhesion, the corpuscules being modified, in respect of their adhesive properties, by their preliminary treatment. Under these conditions this absorption may be effected whatever the species of animal which provides the corpuscles, and may be obtained with the same animal (bovine) as that which furnishes the colloid. (4) The intervention of the colloid explains the various special features noted by Ehrlich and Sachs. It is also exhibited most clearly in numerous experiments devised by Bordet and Gay with the special object of demonstrating the rôle which it plays. (5) When it is recognized that the interpretation of Ehrlich and Sachs is erroneous, there disappears the sole argument which appears to seriously support the thesis maintained by Ehrlich and his school, according to which the sensitizing substance possesses an atomic grouping which is complementophil—that is, combines directly with alexine. Consequently we must abandon the terms "amboceptor" and "complement," which are the expression of erroneous conceptions.

172. **Leucocytosis of Hydatid Disease.**

Welsh (*Austral. Med. Gaz.*, August 20th, 1906) has examined 20 cases of hydatid disease, all before operation, and many after operation also. The eosinophilia before operation was in 2 instances excessive (over 2,500), in 3 marked (1,000 to 2,500), in 5 moderate (500 to 1,000), and in 2 slight (250 to 500). Of the remaining 8 cases, 3 showed a high normal count (over 200), 4 a normal count (100 to 200), and 1 a low count (under 100). In at least half the cases a well-developed eosinophilia was present. It is thus an inconstant characteristic of the blood in these cases. It is independent of the age and sex of the patient, of the temperature, and of the reputed duration of the invasion. Spontaneous rupture occurred in 1 case, and probably in 3 others. All these cases had over 250 eosinophiles per c.mm. While, therefore, eosinophilia is not necessarily associated with rupture, yet in the author's experience rupture was always associated with some degree of eosinophilia. It appears to be independent of the nature of the cyst contents, whether these be clear or turbid fluid, or whether the cyst be single or packed with daughter cysts. Eosinophilia is independent of the hydatid rash, as this was only present in 1 case. A marked fall in the number of eosinophiles after operation was noted in almost all the cases examined. In a few instances no eosinophiles were found after operation (in 1,000 leucocytes), even when a considerable number were present before. The diminution may be extremely rapid. Within two hours the fall was as marked as in twenty hours or within a few days. There is frequently a post-operative rise, the secondary eosinophilia, probably due to the absorption of hydatid fluid. A marked basophilia was present in 5 cases before operation, and a slight count in 3. There was no correspondence between the degree of eosinophilia and basophilia. After operation the behaviour of the basophiles was capricious and unrelated to the eosinophiles. A neutrophile count exceeding 10,000 was only found in 2 cases before operation, but was seen in 6 cases after operation associated with a moderate pyrexia.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

173. The After-History of Tracheotomy.

Dhomont, in a paper read to the Société de Médecine de Paris, reported in *Le Progrès Médical* of February 16th, 1907, said that many authorities, and especially Landouzy, think that the lot of children who have undergone tracheotomy is extremely precarious, and that they pay a large tribute to tuberculosis and pulmonary affections, and that few of them grow up. Grancher and Comby, on the other hand, believe the gravity of the prognosis has been exaggerated, and quote the Examining Board for the Army, who see many conscripts bearing the characteristic scar on the front of the neck. The question is difficult to solve, because the surgeon so soon loses sight of his patients. Between the years 1884 and 1895 the author performed 30 tracheotomies on children. After 1895, when Roux and Behring simultaneously discovered the antidiphtheria serum, he had no occasion to operate. Of the 30 cases operated on, 9 were entirely cured. He twice operated for spasm of the glottis. He soon lost sight of 5 of his cases. The following 4 cases he was able to follow up. H. F., aged 5, was operated on for stridulous laryngitis in 1887. The tube was taken out on the third day after operation. The patient is now 25 years old, has done his military service, and is now working in a bank, and is perfectly healthy. L. M. contracted diphtheria, and was operated on in 1890 when 2 years old. The tube was removed four days after operation. The patient is now 18 years old, is a joiner by trade, and perfectly well. H. T., 7 years old, operated on for diphtheria in 1892. The tube was removed six days after operation. She was delicate as a child, but is now 22 and perfectly healthy. She was married last year. G. was operated on in 1893 for severe diphtheria when 7 years old. The child remained well for two years after the operation, and was then lost sight of: but she has been recently seen again, and is in perfect health and well developed. Tissier has followed up 10 cases of tracheotomy; 2 have died of tuberculosis, 1 of whom was operated on at 3 years of age, lived to 25, and then died: the other died at 16. There was no tubercle in the families of these cases. A third has laryngeal phthisis, and a fourth is in the last stages of phthisis. The others are all well.

174. Tallqvist's Haemoglobin Scale.

L. de Vendictis (*Giorn. Internat. d. Sci. med.*, December, 1906) has made careful comparisons between the readings obtained with Fleischl's haemoglobinometer and with T. W. Tallqvist's haemoglobin scale in a number of cases. He finds only small differences between the two, and holds that Tallqvist's scale is quite satisfactory from a clinical point of view. The readings should be made rapidly and under uniform conditions. The drop of blood taken on the bibulous paper should not be too large or too small; and if much time elapses before its tint is compared with the standard colours the blood will change in tint, partly from oxygenation and partly in consequence of drying up. De Vendictis therefore strongly recommends Tallqvist's haemoglobin scale to all clinicians.

175. Sudden Death in Typhoid in the Child.

Brelet (*Arch. Gén. de Méd.*, September 18th, 1906) has collected 30 cases of typhoid fever in children in which sudden death occurred. From an analysis of these cases he finds that in some the symptoms of enteric have been latent, and that previous to the occurrence of a sudden fatal ending of life there have been no indications leading one to suspect the presence of typhoid fever. In other cases there have been symptoms of illness for a few hours before death. In still other cases the patients had been ill for some days, and a definite diagnosis of enteric fever had been made previous to the sudden death. The author finds that most often sudden death occurs as a late accident in the third week of the disease, and that it generally takes the form of a syncope. In some cases there may be no symptoms or signs leading one to suspect a sudden fatal termination of life by this means, in others there have been feeble and rapid pulse, feeble heart sounds, and transitory attacks of collapse alternating with attacks of syncope. In most of the cases the sudden death seems to have been precipitated by movements of the patient. As to the pathology of these cases, not very much is known—in many, however, there have been found lesions of some organ (for example, bronchopneumonia, haemorrhage into the meninges, myocardial lesions, etc.); in some, however, no obvious morbid changes sufficient to account for sudden death have been found, and in these cases one has to conclude that there has been some gastric or intestinal reflex irritation, cerebral anaemia, or a toxic action on the vagus.

176. Perinephritis Simulating Stone in the Kidney.

Tyson (*Univ. of Penn. Med. Bull.*, November, 1906) records 4 cases of perinephritis in which symptoms occurred simulating nephrolithiasis, and suggesting an explanation of similar cases occasionally met with in which relief follows operation, even though no stone is found. By perinephritis is meant an inflammation of the capsule and other tissues surrounding the kidney, producing contraction or cicatricial markings in the capsule, with more or less invasion of the cortex. The first case presented symptoms of stone in the left kidney, but no stone was found on operation. The organ was fixed beneath the diaphragm by dense adhesions, and on splitting the fibrous capsule it appeared normal except at the upper part, where it was lobulated and adherent to its capsule, and presented a number of cicatricial-like markings. Recovery was good, and there was no return of the painful symptoms. In the second case, with symptoms of stone there were firm adhesions between the colon and perirenal fat of the left kidney, and considerable force was required to separate the fat from the capsule. Relief of symptoms followed decapsulation of both kidneys. The third case presented typical left nephritic colic, but no stone was found either in the kidney or ureter. The kidney was enlarged and very adherent to its fatty capsule. Complete relief followed operation. The symptoms of stone in the fourth case followed a fall from a horse in the preceding year and a fall from the top of a house six years earlier. At the operation the kidney was found to be surrounded by very dense adhesions which prevented its delivery without splitting the capsule and decapsulating. Both the kidney and ureter were explored, with negative results. In view of these cases it is possible that other pathological lesions of the kidney and ureter—for example, tuberculosis, tumours, pyelitis, and hydronephrosis—may at times cause similar symptoms. The relief of tension and pressure obtained by thus splitting the capsule and by section of the kidney is explanatory of the good results.

SURGERY.

177. The Treatment of Chronic Pancreatitis.

Villar (*Arch. Prov. de Chir.*, No. 10, 1906), in discussing the indications of surgical intervention in the treatment of chronic pancreatitis, points out in the first place, that in the rare event of such disease being strictly localized in the tail of the gland, the symptoms are usually mild and insignificant. On the other hand, chronic inflammation of the head of the pancreas causes compression and deviation of the common duct, and consequent chronic icterus and dilatation of the gall bladder; and, moreover, sets up further lesions and complications, such as glycosuria, pancreatic and hepatic suppuration, compression and thrombosis of the splenic vein, and thrombosis also of the portal vein and the vena cava, resulting in ascites and dropsy of the lower limbs. Eventually progressive exhaustion and haemorrhagic symptoms place the patient in an alarming condition. Chronic pancreatitis, it is urged, if left to itself, inevitably ends in death. In a review of the different surgical methods of treating this disease when it affects the head of the gland, the author expresses the opinion that cholecysto-enterostomy ought to be rejected; that cholecystotomy with biliary drainage is impracticable, except when the gall bladder is free from firm adhesions and in a normal condition. Cholecystectomy with biliary drainage constitutes, it is held, the most logical and least uncertain method. After removal of the gall bladder, which is facilitated by first freeing the duodenum and thus exposing the common and cystic ducts, the biliary canals are drained. By the orifice of the hepatic duct,

where in the removal of the gall bladder it was divided at its junction with the cystic duct, a small drainage tube with intact wall is inserted as far as the bifurcation. The orifice of the hepatic duct is then surrounded by flaps of the gastro-hepatic and of the great omentum, and of parietal peritoneum. The duodenum is now replaced, and the peritoneal incision made for freeing the intestine is carefully sutured, a small gap being left for the passage of the drainage tube. The discharge of bile through the tube usually begins to diminish on the third day, and when the patient has progressed favourably the external wound is completely cicatrized by the end of the fourth week.

178. **Marmorek's Serum in Surgical Tuberculosis.**

A. Hoffa gives the results which he has obtained in the treatment of surgical tuberculosis, and especially of tuberculous disease of bones and joints, with Marmorek's antituberculous serum (*Berl. klin. Woch.*, October 29th, 1906). To start with, he states most emphatically that the serum did not cause any harmful effect worth speaking about in a single case. When subcutaneous injections were employed, characteristic serum reaction appeared, such as urticaria, local oedema, etc., but no permanent bad results followed. Since he has given the serum per rectum, he has not met with a single side action. The doses of the serum given subcutaneously lay between 2 and 10 c.cm., and the total quantity which each patient received varied between 50 and 200 c.cm. After from eight to ten daily injections, he made a pause of about one week. Since he was by no means convinced of the specific action of the serum at this time, he applied other forms of treatment as well. Thus of the 11 patients treated with subcutaneous injections, he believes that 2 were cured by the serum, that 1 was very materially improved by it, and that the general condition, appetite, etc., was benefited in the remaining 8 cases. In far-advanced cases, he admits that no benefit was derived from the treatment. He gives some details of the cases. Next he passes on to the cases treated by rectal application of the serum. At first he gave 5 c.cm. daily, but later he gave 10 c.cm. daily for three or four weeks. Among the 11 cases, 2 were definitely cured, 3 were materially improved, 4 were benefited, and 2 were uninfluenced. The first case of cure, however, was treated both by subcutaneous and rectal application. The patient was suffering from tuberculosis of the ankle, and had had discharging fistula for over two years. This closed after the third injection. Later on it broke out again, but closed once more when the treatment by rectal injection was commenced again. He therefore believes that Marmorek's serum exercises a specific action on a certain number of cases of surgical tuberculosis. He points out that the harmlessness of the preparation and the ease with which it can be applied (per rectum) make it especially desirable that it should be tried on a much larger scale.

179. **Perforated Gastric and Duodenal Ulcers.**

Without touching on the technique of operations for perforated gastric and duodenal ulcers, von Eiselsberg (*Deut. med. Woch.*, December 13th, 1907) discusses the treatment of this accident, and details his own experience. He does not consider that one is justified in excluding from the accounts and statistics cases which were operated on in a moribund condition, since these cases undoubtedly turn up among every series of cases. His own cases number 12, and of these he was successful in 5; 4 of the patients were moribund on admission. Of the 5 patients who recovered, 2 were operated on within the first twelve hours; 2 were operated on twenty four hours after the perforation had taken place, and 1 was operated on two days after the perforation had taken place. Of the 7 fatal cases, 2 were operated on during the first day, 3 during the second day, and 1 each during the third and fourth days. The prognostic importance of operating as early as possible is, therefore, plain fairly well in his cases. He has carried out gastrostomy for the purpose of feeding the patient after the operation through the fistula in 7 cases, and has observed the improvement that this procedure improves the chances of recovery. Even in 2 fatal cases he believes that it would be to the benefit of the procedure, and he recites the histories of these cases, in which it appeared that marked improvement took place after gastrostomy had been performed in a patient of 67 years, who was suffering from the perforation of a gastric carcinoma, but who died of renewed peritonitic symptoms, which a second laparotomy was unable to relieve. The second case was that of a man with varicose veins of the œsophagus and perforated gastric ulcer, and in whom gangrene of the bowel had already set in. The operation was only performed in order to make a last desperate attempt to save a lost life. He improved considerably for a couple of days, to every one's astonishment, under artificial feeding through the fistula, but then relapsed and died. As soon as the fistula is no longer required, one can take out the tube and it heals up spontaneously. He then discusses the question of employing a tampon or drain, or of closing up the abdomen at once. In two cases the latter method was followed; of these one died of suppuration in the neighbourhood of the suture in the stomach wall on the eleventh day, and the other recovered. He believes now that the use of a tampon is required in cases of diffuse peritonitis. The tampon which he finds best is Gersuny's wick or strands of closely-woven cotton threads. The advantages are that it is unnecessary to reintroduce the tampons after they have once been removed. The tampon is gradually withdrawn, and in this way the patient is saved pain and the wound is not torn open again. Without wishing to draw conclusions from the fact, he mentions that of his five successful cases, the three which were treated with jejunostomy remained well without any recurrence of gastric symptoms, while one of the other two had a return of them. The numbers are naturally too small to form any conclusions. The duty of the general practitioner is therefore to send his perforated gastric ulcer patients as early as possible for operation into a hospital or home.

OBSTETRICS.

180. **Retroversion of Pregnant Uterus.**

Rudaux (*La Clinique*, December, 1906) finds that it is not uncommon to be consulted during the third or fourth month of pregnancy by patients on account of an inability to micturate, or for painful micturition, or a continual involuntary loss of urine, which causes irritation or even excoriation of the external parts. This is not incontinence, but an overflow micturition due to retention. An examination will show a large regular fluctuating tumour lying over the pubes and bearing no relation to the period of the pregnancy; the tumour will also disappear upon catheterization. In such cases it is often difficult to pass a catheter, since the meatus is drawn back into the vagina. When the bladder has been emptied it is possible to define the uterine tumour with the cervix lying behind the symphysis pubis and the fundus retroverted. Spontaneous reduction may result from the maintenance of the dorsal decubitus and the careful emptying of the bladder and relief of the bowels daily, but if general symptoms supervene or haematuria or cystitis occurs, intervention is necessary. Manual reduction is usually possible; with the patient in the obstetrical position the right hand is introduced in the form of a cone into the vagina, the palmar surface is directed forwards, and the fingers spread out so as to grasp the lowest part of the uterus. If the fundus is movable it should be directed towards the left side so as to avoid the sacral promontory, and pressure is then exerted upon the whole available uterine surface in a direction from below upwards, at the same time the left hand over the pubes brings pressure to bear upon the cervix and vagina. After reduction, rest in bed is required with a subcutaneous injection of morphine and subsequent care during the next fortnight. When reduction is not obtained, another attempt should be made upon the next day, with the patient either in the genu-pectoral position or under the influence of a general anaesthetic. When one is repeatedly unsuccessful and unfavourable symptoms manifest themselves, recourse must be made to laparotomy, in the Trendelenburg position. It is easy to see where the obstruction lies, and to bring the uterus into position again. It is well to assure the position by shortening the round ligaments according to the method of Doléris. Before intervention the patient should be given an injection of morphine, which should be repeated daily for some days. When a woman has suffered from retroversion during pregnancy, measures should be taken to avoid a similar deviation occurring at the time when the uterus falls back into the pelvic cavity. A Hodge pessary is therefore inserted and left in position during the whole period of involution—that is to say, for about six weeks. It is more prudent to leave it in until three months have elapsed, and until one is sure that the retrodeviation is perfectly reduced.

131. **Twin Ectopic Pregnancy.**

Cullen (*Amer. Journ. Obstet.*, January, 1907) publishes a very distinct case of this interesting condition, where rupture occurred in the sixth week, the patient having already passed through a normal twin pregnancy. She was 35 years old, and had borne six children; the last confinement took place four years before the abnormal

pregnancy, and was gemellar without puerperal complications. There had been no abortions. Menstruation was regular and scanty. On May 20th, 1906, it ceased earlier than usual; but scanty and irregular haemorrhages set in a few days later, continuing until June 10th, when violent spasmodic pains in the hypogastrium were complained of by the patient; they lasted for several days. The curette was applied on June 30th without benefit, and on July 3rd symptoms of acute internal haemorrhages were observed. On July 5th Child operated, after diagnosing ruptured left tubal gestation. The peritoneal cavity was filled with fluid blood and clots. The left Fallopian tube was found to be ruptured in two places, and bleeding at the proximal end. A fetus was discovered attached by its umbilical cord to the distal end of the tube, and a second lay free on the infundibulo-pelvic ligament. The right tube showed signs of chronic obliterative salpingitis, but both ovaries were normal. The patient died twelve hours after the operation.

182. **Accessory Mammae Simulated by Free Secretion from Sudoriparous and Sebaceous Glands.**

Seitz (*Archiv f. Gynäk.*, vol. lxxx, Part 3, 1906) has carefully investigated cases of free secretion of milky fluid from swellings in the axilla during the puerperium. It has too often been concluded that this phenomenon is a proof that the swellings must necessarily be accessory mammae. Seitz, taking nothing for granted, examined the secretion in order to make sure that it was really milk. On pressing a swelling he was able to collect the milky fluid, and found that it was simply an emulsion of sweat and sebaceous material. The truth is, "polymastia" is rare in the axilla, and no alleged cases are to be trusted where the secretion has not been carefully examined. Even a microscopic examination of the secreting structure is, in Seitz's opinion, less convincing. A patient free from any axillary secreting swelling died on the eighteenth day after delivery from puerperal fever. Seitz made sections of normal mammary tissue and of normal sebaceous glands from the axilla of this subject, and noted an extreme resemblance between the two glandular structures.

THERAPEUTICS.

183. **Novocaine.**

R. Henking, writing from Kuester's surgical clinic in Marburg, gives his experiences of lumbar anaesthesia with novocaine (*Münch. med. Woch.*, December 11th, 1906). He states that with regard to the technique of the injections he followed Bier's directions closely; the puncture was made in the middle line, either between the third and fourth, or at times between the second and third, or between the fourth and fifth lumbar vertebrae. The solution was never injected until the cerebro-spinal fluid flowed through the cannula, and if this was blood-stained he waited until the blood disappeared, or in the case of pure blood flowing he chose another site for the injection. The dose injected varied according to the situation which he wished to render anaesthetic. For laparotomies, 2.25 c.cm. of a 5 per cent. solution sufficed, while for operations on the perineum and anal region 1 c.cm. was enough. Lately he has been trying to still further diminish the dose, and has found that 1.5 c.cm. is sufficient for a laparotomy if the patient's pelvis is raised after the injection. After a few minutes the anaesthesia is tested with some sharp instrument, and as soon as possible the head is again raised, or the patient is put in a horizontal position. The upper limit of the anaesthesia did not extend higher than the nipples on any occasion. It was not always possible to induce a perfect anaesthesia, and some of the patients complained of mild, easily-supported pain, or of an unpleasant sensation. In 26 cases it became necessary to give a few drops of ether, because the anaesthesia was incomplete. The anaesthesia set in at times immediately after the injection, while on the average it appeared after from three to four minutes. Barely twenty minutes elapsed before it was satisfactory. The tactile sense was preserved in a few cases. In 3 cases the anaesthesia was unequal on the two sides of the body. Among 160 patients only 1 proved entirely refractory to the method. On the whole, he is satisfied with his results. He believes that the operations can be performed with less shock and harmful effect to the organism than under inhalation anaesthesia, and that old, feeble persons and children, as well as weakly subjects, are especially suitable for it. The late effects of the lumbar anaesthesia with novocaine are rare, and are not more severe than those following inhalation of anaesthetics. One advantage is that the surgeon can obtain the patient's consent to extend the operation during the time. The injections may not be carried out in septic persons, nor on highly nervous and fearful individuals. He is so satisfied with novocaine that he sees no reason why he should experiment with other lumbar anaesthetics. Martin Dietze also deals with the same subject in the same journal. In giving his experience he states that he has applied novocaine in 120 cases as a local anaesthetic. According to Braun, novocaine is a local anaesthetic of medium activity, and it is only when combined with suprarenin that its action is materially enhanced. The fluid injected consisted of solutions of novocaine and suprarenin tablets in 0.9 per cent. saline solution, 0.125 gram of novocaine, and 0.00016 suprarenin were used for ordinary purposes, while 0.1 gram of the former and 0.00045 of the latter were used for tooth extraction. Conduction anaesthesia (after Braun and others) was induced by 2 per cent. solutions, while infiltration (after Schleich) was induced by from ½ to 1 per cent. solutions. The anaesthesia in all his cases was a perfect one, and when the fluid was injected slowly it set in almost immediately. He speaks very highly of this method for carbuncles and for operations on the penis. Piles can be cauterized completely with the actual cautery quite painlessly. Turning to the question of extraction of teeth, he says that painless extraction cannot always be attained when the periosteum is separated from the alveolar process by pus, when the submucosa is purulently infiltrated, and when there is extensive periostitis of the fangs. In all other cases one may promise a perfectly painless operation. In applying the injection for incisors and canines the tissue is often very resistant, and unless the piston of the syringe is a well-fitting one the fluid may escape back into the syringe behind the piston. The needle should be short and the opening only slightly oblique, so that it becomes unnecessary to impinge on the periosteum when injecting the fluid. At times, especially when a number of teeth have to be extracted, it is better to employ conduction anaesthesia, the solution being injected into the sheath of the alveolar nerve. He has not experienced any secondary haemorrhage after extractions save in one case, in which he believes that the adrenalin only masked the immediate bleeding and did not cause it. He concludes by giving high praise to novocaine as a local anaesthetic, and believes that Braun's method of conduction anaesthesia, once the difficulties have been overcome by sufficient practice, leads to ideal results. O. Steim also gives his experience with novocaine in the same journal. He employed it for lumbar anaesthesia, and also for infiltration and conduction anaesthesia. Fifty-nine cases of operation were injected with novocaine into the lumbar sac. In 53 cases it was successful, in 4 it was incomplete, and in 2 it failed. Nausea and vomiting occurred three times during the operation, and vomiting took place twice afterwards. Headache was complained of in a few cases, but was only of short duration, while raising of temperature above 100.4° F. was registered twice. With regard to the technique he adds nothing new. The doses employed varied between 0.1 and 0.15 gram as a rule. The anaesthesia lasted on an average for three hours. For infiltration anaesthesia he employed a 0.75 per cent. solution, while for conduction anaesthesia 1.5 per cent. solutions were required. He is extremely pleased with his results, although he acknowledges that the number of his cases is not sufficiently large to speak with much authority.

184. **Treatment of Bright's Disease.**

Albert Robin (*Journ. des Prat.*, December 1st, 1906) points out the chief factors to be attended to in the treatment of the various forms of chronic Bright's disease. As regards the dietetic treatment of patients with chronic Bright's disease, he points out that patients do best on a diet which consists partly at least of milk; the amount of albumen in the urine is increased by the use of wine; eggs give rise to less albumen than meats; eggs and milk are better than a purely milk diet. Of meat foods, veal and beef are better than chicken or mutton. Fresh fish is for these patients very good, and of the fresh-water fish those that live in clear water—such as the trout—are better than those living in muddy. Of vegetables, potatoes and carrots give rise to the least albumen. Bread added to milk does not increase the amount of albumen in the urine. Although, as the author points out, the quantity of albumen in the urine of these patients is not of primary importance, yet an increase in its amount generally indicates an accentuation of the disease. Before placing the patient on a special dietetic régime, it is necessary to know the con-

dition of the heart; if this be dilated, a purely milk diet, in which from 3 to 4 litres would be required per diem, would be badly tolerated; in such cases the best form of diet is a mixed milk and vegetarian. If the heart is equal to its work, a milk diet may be ordered and continued until the quantity of albumen in the urine has been reduced to as small a quantity as possible. When this object has been attained, vegetables, eggs, and even a little meat may be added to the diet. If there be oedema, salt should be prohibited. The author points out that in chronic Bright's disease oedema may exist in two forms, for example, cutaneous oedema and oedema of the deep tissues. To estimate the latter form the patient should be weighed every day. With a lessening of interstitial oedema the weight of the patient diminishes, and when the weight no longer diminishes one may conclude that all oedema has disappeared; when this result has been obtained salt may be allowed in the diet provided that the patient is weighed every day; if his weight increases, the quantity of salt allowed must be reduced. The authors point out, however, that the results obtained by weighing the patient every day are not always sufficient to enable one to judge whether the salt in the diet is harmful or not; in chronic Bright's disease, particularly in the interstitial variety, there is frequently a retention of chlorides without any accompanying oedema. This can be shown by a daily estimation of the quantity of chlorides eliminated in the urine. These patients when placed on a diet free from salt continue to eliminate for days or weeks large quantities of urinary chlorides and their general health greatly improves. The treatment by a salt-free diet should not, however, be carried beyond the necessities of the case lest it cause an increase of the albuminuria, impairment of nutrition, or clotting of the blood. As a seasoning for the food in those cases where salt is not allowable, one may employ onions, parsley, or the juice of lemons. Of the other methods of treatment which may be employed the author refers to the use of warm baths after the method of Bartels, in which the patient takes a warm bath (36° C.) first twice a week and later every day, gradually raising the temperature of the bath and prolonging the stay in the water. After each bath the patient is covered with a dressing gown, placed in a warm bed, and thoroughly [illegible]. This method of treatment should be adopted in those cases only in which the heart is healthy. The use of pilocarpin for the purpose of causing abundant sweating the author considers contraindicated, causing, as it does, great exhaustion of the patient. To act on the kidneys the tincture of cantharides may be used, but only minute doses should be given. A far better and less dangerous drug is theobromine, which acts not only as an efficient diuretic, but also as a powerful dechloridizing agent. Of drugs and preparations which are supposed to have a special action on the morbid process itself the author refers to lactate of strontium, tannin, and soup prepared from pig's kidneys. For the anaemia the perchloride of iron may be given, and for a flagging heart small doses of digitalis. Digestive troubles must be treated on general principles, as must other complications, such as pruritus, bronchial catarrh, etc. A season at Evian and residence in a warm, dry climate may be advised for the well-to-do patients.

PATHOLOGY.

185. Allergy.

[illegible] in the *Munch. med. Woch.* of July 24th, 1906, [illegible] that during the last few years [illegible] to light which show that a hyper-sensibility can exist in an immunized organism. The term appears to be [illegible] contradictory, and [illegible] a phenomenon as the paradoxical reaction. One has therefore to inquire whether the real [illegible] with the occurrence of hyper-sensitiveness, or whether the processes which lead to immunity are [illegible] those which lead to the over-sensitiveness. [illegible] with tetanus, antitetanic person, [illegible] with horse serum, etc., speak strongly [illegible] of the two phenomena. In [illegible] the phenomenon is clear. A person who has been [illegible] some time before reacts more energetically to [illegible] than a person who has never been [illegible]. But this hypersensitiveness only extends to the [illegible] reaction and the person or animal [illegible] the condition is not [illegible] hypersensitive. Immunity and hypersensitiveness are therefore [illegible] connected with [illegible]. The [illegible] person [illegible] behaves very differently toward the poison than will a person who has never come in contact with the poison before. The former is not insensitive to it, but he reacts to it in a different way. Von Pirquet calls this altered reaction capability "allergy" (*allergie*), because *allos* means the departing from the original behaviour. The vaccinated person, who reacts differently towards vaccine is said to be allergic toward it, and the material which leads to this altered reaction is called the "allergen." The latter are very numerous, and among them he quotes antigens, various albuminous bodies, the poisons of bees, mosquitos, etc., the pollen of hay fever, the substances in strawberries and lobsters which produce urticaria, and a whole series of organic substances which lead to idiosyncrasies. Immunity should, in his opinion, only be employed for the process in which the organism does not react at all clinically to a foreign substance which is introduced—that is, in which a perfect insensibility is produced. Immunity is therefore produced by alexins, antitoxins, and by a sort of adaptation of the toxin. The new term is not supposed to interfere with other existing terms, such as antitoxins, haemolysins, etc., which deal with quite separable matter.

186. Typhoid Bacillus and Pulmonary Complications of Enteric Fever.

G. C. Robinson (*Bulletin of the Ayr Clinical Laboratory of the Pennsylvania Hospital*, June, 1906) has recorded the results of bacteriological examination of fluid obtained from the lungs of six cases of typhoid fever in which pulmonary complications existed. In one of these cases there existed a large abscess cavity in the lower lobe of the right lung and the artery supplying this part of the lung was thrombosed; from both lungs of this patient and from the abscess cavity a pure culture of the typhoid bacillus was obtained. Only one other case of pulmonary abscess or gangrene occurring during the course of enteric fever in which a full bacteriological report of the material from the affected lung has been published. This was a case reported by Flexner and Harris. In this case the typhoid bacillus was found in the lungs. The lower lobe of the right lung was here gangrenous, and the pulmonary artery supplying this lobe was thrombosed. From a consideration of these two cases the author concludes the *Bacillus typhosus* is capable of causing pulmonary abscess or gangrene in lung tissue which is already the seat of haemorrhagic infarction, allowing, however, that the bacilli may be present in a pulmonary infarction without necessarily causing abscess formation. The typhoid bacillus appears to be rarely present in the broncho-pneumonic areas of the lungs found during the course of enteric fever, and of six cases in only one was this organism found. In three cases of lobar pneumonia occurring in enteric fever, in one the typhoid bacillus was cultivated from the affected lung (associated with the pneumococcus) and in one the paratyphoid bacillus was found. In this last case the pneumonic portion of lung was of a markedly haemorrhagic type. The conclusions the author draws from his cases are: That the typhoid bacillus not uncommonly enters the lung during enteric fever; that it may cause broncho-pneumonia; whilst it is probable that the pneumococcus is the usual cause of the lobar pneumonia occurring in the course of enteric fever, yet it seems likely that both the typhoid and the paratyphoid bacilli can give rise in the lung to the production of a massive lobar pneumonia, and in such cases the affected portion of lung assumes a markedly haemorrhagic type.

187. A New Enzyme in the Urine of Nephritics.

Porcher (*Rif. Med.*, November 17th, 1906) draws attention to the presence of an enzyme which he has found in the urine of nephritics. This may be found apart from the presence of albumen or casts. The enzyme in question belongs to the group of katalases and has the following characters: (1) It is a soluble ferment; (2) it has a katalytic action of a specific type, that is, it acts on oxygenated water, setting the oxygen free; in the case of the katalase in question the oxygen so freed is inactive and will not blue tincture of guaiacum; (3) it is insoluble in alcohol; (4) it gives a positive reaction to Millon's test; (5) it is destroyed by temperature 70° C. and acts most freely at 37° C.; (6) it is almost non dialyzable. To detect katalase in urine add 30 c.cm. of 6 per cent. oxygen solution to 10 c.cm. fresh urine, thoroughly mix, and after about twenty minutes read off the amount of O developed. Boiling destroys the katalase, so that if any O is developed after boiling it cannot be due to katalase. Further, there appears to be an antikatalase, for which the author gives the necessary details as to estimation, etc. Further researches are necessary in order to see whether this enzyme is present in other diseases as well as nephritis.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

188. **Estimation of Sugar in Urine.**

Ivar Bang describes a new method of estimating sugar in urine which he considers more exact than the ordinary methods, and to be so easily carried out that the practitioner would have no trouble in using it (*Berl. klin. Woch.*, February 25th, 1907). The estimation by the polarimeter is much too complicated and the apparatus too expensive for general use, while it is necessary to have an incubator for the fermentation test. There are therefore only the usual titrimetric methods, which are all inexact and more or less difficult to carry out. The new method is carried out with copper sulphate solution to which the carbonate of potassium is added instead of caustic postash. Sulphocyanide of potassium in excess is further added to keep the copper oxide in colourless combination in solution. One could titrate until the solution is colourless, as one does by Pavy's method, but he finds it much more exact and more convenient always to keep the copper oxide in excess. The excess, which is independent of the sugar, is determined by a solution of hydroxylamine after cooling. The solutions required are as follows:—Potassium carbonate, 500 grams; potassium sulphocyanide, 400 grams; potassium bicarbonate, 100 grams, dissolved in water, with heat, up to 1,200 c.cm. After cooling, one adds a solution containing exactly 25 grams of copper sulphate in 150 c.cm. of water, and makes the whole up to 2 litres. Next 6.55 grams of hydroxylamine sulphate and 200 grams of potassium sulphocyanide are dissolved in water and made up to 2 litres. Both solutions keep well; 1 c.cm. of the hydroxylamine solution decolorizes 1 c.cm. of the copper sulphate solution. The test is carried out by taking 10 c.cm. of urine (if there is much sugar present one should take less urine, and dilute it up to 10 c.cm. with water) in a pipette, and placing it in a 200 c.cm. flask, to which one adds 50 c.cm. of the copper sulphate solution. The fluid in the flask is then boiled on a gauze. After three minutes the flask is cooled under a cold water tap. The solution must be blue after boiling. One then titrates with the hydroxylamine solution until it becomes colourless. The method is capable of determining quantities of sugar down to 0.1 mg. The fluid after titration is not quite colourless on account of the yellow colour of the urine itself, but with a little practice this slight inconvenience does not disturb the end result. Even in the hands of the beginner the error does not exceed 0.5 c.cm. of the hydroxylamine solution. The determination is made by registering the quantity of hydroxylamine solution used. A table which is appended shows the quantity of sugar corresponding to the varying quantities of hydroxylamine solution used. Blind tests show that the calculated quantities correspond to the actual amounts of sugar very closely. Albumen does not interfere with the delicacy of the reaction, and need not be removed first, as is the case with Fehling's and other quantitative tests. Bang thought that it would be interesting to determine what the reducing power of normal urine is, with especial reference to kreatinin and uric acid. He found that 10 c.cm. of a solution of uric acid containing 1.932 per cent. corresponds to 6.7 mg. of dextrose. Since normal urine rarely contains more than 0.1 per cent. of uric acid, the error introduced is negligible. He further found that kreatinin behaves differently to grape sugar inasmuch as approximately the same quantity of copper oxide is required when little or much kreatinin is used. A not inconsiderable part of the normal reduction is produced by the kreatinin. He proposes to deal with this small source of reduction error in a later communication. For practical purposes the practitioner has in his new method a simple and exact quantitative method of estimating sugar in urine.

189. **Motor Aphasia not Due to Lesion of Broca's Convolution.**

Pierre Marie describes (*Bull. et Mém. de la Soc. Méd. des Hôpitaux de Paris*, December 14th, 1906) a case of motor aphasia in which Broca's convolution was intact, but in which there was a haemorrhagic lesion in the region of the lenticular nucleus and the external capsule. It was that of a man, aged 54, who acquired syphilis at the age of 20, and developed a right hemiplegia at the age of 26, after which he was quite unable to speak for six months, and then re-educated himself in speech. He never lost the power of reading, and in two years became able to express his thought in writing, with his left hand. At the necropsy the haemorrhage was found to occupy the external capsule, to extend inside the external segment of the lenticular nucleus, and in its posterior part had destroyed the posterior angle of the lenticular nucleus. It was separated from the internal capsule by a thin partition of brain substance, consisting of the lenticular nucleus, and it had caused some narrowing of the internal capsule. The anterior extremity of the focus commenced 3 mm. behind the anterior angle of the lenticular nucleus, and its posterior end ceased at a line which would pass through the middle of the ascending frontal convolution. The external wall of the focus consisted of the convolution of the island of Reil. During the whole of the aphasic period the patient affirmed that "internal speech" was preserved; he knew the words he wanted to say, and he could read his newspaper every day. The third left frontal convolution was intact. Marie objects to the use of the term "motor aphasia," and because the affection was essentially a loss of articulate speech he prefers the term "anarthria," a term meant to be devoid of physiological significance, but clinically to signify loss of articulate speech with more or less complete preservation of "internal speech." Marie, in short, denies that Broca's convolution is concerned in what is usually called "pure motor aphasia," and maintains that the lesion is situated in a quadrilateral area bounded in front by a transverse line leading from the anterior end of the insula to the lateral ventricle, internally by the ventricle and the internal edge of the hemisphere, behind by a transverse line leading from the posterior end of the insula to the internal edge of the hemisphere. Without being dogmatic, he would be inclined to limit the localization still more to a "lenticular zone" situated between the convolutions of the island of Reil and the lenticular nucleus, and in the white matter between the external portions of the lenticular nucleus.

190. **Metabolism in Phthisis.**

G. Vannini and M. Collina (*Riv. crit. di Clin. Med.*, 1906, Nos. 24 and 25) have investigated the metabolism in three cases of well-marked pulmonary tuberculosis, apparently in the second stage. The patients, two men aged 18 and 24, and a woman of 22, all had fever ranging up to 102° F. The authors conclude that intestinal absorption of foods in phthisical persons commonly proceeds satisfactorily, if no special alteration in the digestive tract is present; in some cases the N lost in the faeces is above the normal amount. The fat in the faeces contains more fatty glyceride and less decomposed fat than is normal. If fever is present, there is usually (but not always) a steady loss of N from the body proteids. The urine contains more N as NH_3 and less N as urea than normal, while the N as uric acid is unchanged in amount. Numerous references to the literature are added.

SURGERY.

191. **Fracture Dislocation of the Spine.**

Samuel Lloyd (*Med. Rec.*, March 23rd, 1907) says that 60 per cent. of fractures of the spine are fracture dislocations; 20 per cent. are simple fractures; 20 per cent. are simple dislocations. Fracture of the sternum should lead to a suspicion of injury to the vertebral column. Simple fractures of the posterior portion of the spine generally involve the laminae, and compressing bone should be removed. When the spinal cord is not injured, operation is not indicated unless spinal cord symptoms come on, due to later compression. The symptoms are those of simple fracture combined with others that are characteristic. The patient cannot walk, there is marked shock, tenderness over the spine, localized pain, with or without irregularity of the spine. The author does not favour the application of a plaster jacket, but advises that the patient be placed in a horizontal position on a springless bed, with extension and counter extension, unless the fragments are very movable, or pressure symptoms come on. When the spinal cord is completely crushed there is

immediate relaxed motor paralysis, involving the parts below the lesion, and absence of rigidity and spasm. Partial injury is indicated by slower onset of paralysis, unilateral or irregular distribution of it, comparative preservation of reflexes, and rapid improvement. The area of anaesthesia is sharply marked and at a level corresponding to the segment of the cord that is crushed, and this is materially below the seat of fracture. Above this is a strip of hyperaesthesia, pointing to irritation of nerve roots, and below this a strip of thermal anaesthesia and analgesia. Incomplete anaesthesia points to incomplete lesion of the cord. The author favours waiting before operating, until shock is recovered from, and operating as soon as symptoms of compression are evident. When we feel sure that the cord is not crushed we may operate, early if there is no improvement, later as soon as there is evidence of compression from clot, inflammatory thickening, or callus, improvement having at first occurred. In general it seems best to give the patient the benefit of the doubt by operating, and to do so earlier than is usually done. It is not probable that any true regeneration of the cord occurs when it has been crushed, but that some uninjured or partially injured fibres that are left undergo repair and take up function to a certain extent.

192. Treatment of Fracture Dislocations of the Spine.

IRVING S. HAYNES (*Med. Rec.*, March 23rd, 1907) includes fracture and dislocation of the spine, with or without injury of the cord, under one head. Treatment under the expectant plan consists of extension and immobilization with a plaster jacket. If there is no evidence of cord injury and the injury is not in the thoracic region, replacement may be done without cutting. But if the injury is in the thoracic region, or the cord is involved, it will be necessary to cut down on the laminae and spinous processes, open the canal, remove detached pieces of bone, or clots, arrest haemorrhage, and give drainage. Even if the cord is not involved at first, unless an immobilizing apparatus is used, slipping of the vertebrae may cause or increase the injury of the spinal cord. Assistance in getting extension while applying the jacket is obtained by a bandage about the head, on which traction is made by an assistant, or by suspending the patient on a sort of hammock constructed across a single bed with bandages. The author believes that, even if we cannot diagnose the exact injury to the cord, we should promptly open the canal and give the patient the benefit of the doubt, since pressure for some days will make permanent an injury that might be relieved by early operation. Even when the cord has been entirely severed, a sort of repair goes on which improves the condition of the patient and enables him to live, while without repair death ensues under a year. The incision for laminectomy should be in the middle line. Spinous processes and laminae should be removed with rongeurs, pieces of bones and clots taken away, the dura opened and the cord inspected, before closing with drainage and putting on a plaster jacket.

193. Pathological Changes in Fracture Dislocations of the Spine.

PEARCE BAILEY (*Med. Rec.*, March 23rd, 1907) says that in one third of the fracture dislocations the cord escapes all injury. This is especially so in the cervical region. The type of lesion neurologically, in whatever location, is of two types: the cervical and the lumbar, since most dorsal injuries are at the lower part of the dorsal region. The membranes of the cord are never injured alone. There is contusion, laceration, or severing of the cord. This may be shown by external signs of injury, or the cord may appear to be normal and be severely injured within the membranes. Microscopically, there is degeneration of the spinal cord elements, large round cells, myelin drops, blood cells and pigment, nerve cells, and fibres in state of degeneration. In old cases these elements are replaced by connective tissue. There are haemorrhages of all sizes and extending in all directions. Partial lesions occur in the cervical region and the lower spinal cord, and there are almost one or more of the constituent paralyses, of motion, sensibility, or sphincter. Cases that appear just after the accident as total destruction of the cord may recover entirely after a time. Abolition of the reflexes does not necessarily indicate destruction of the cord. The damage to the cord is that which takes place at once, and the author does not think that long continued pressure has much to do with it, since if severely injured the cord shrinks, and there is left space in the canal to hold it. He believes that repair of nerve fibres may occur when injured, but that when destroyed they do not regenerate so as to regain new function.

OBSTETRICS.

194. Quinine and Labour Pains.

A. MAEURER traces the use of quinine in labour to forty years ago, when it was noticed that uterine contractions became more active after quinine had been given for malaria in certain districts (*Deut. med. Woch.*, January 31st, 1907). The malaria patients mostly aborted after being treated with the drug. Various communications on the subject, both from clinical and experimental standpoints, have appeared since that time. Differences of opinion have been expressed both as to the action and as to the dosage. The author has employed quinine in 78 cases, of which 63 were labour cases and 15 abortions. In 61—that is, 78.2 per cent.—of these cases a definite action of quinine was seen. He has come to the conclusion that the preparation of quinine does not make any difference to the result. For subcutaneous injection he employed quinine bisulphate, 2 grams of which were dissolved in 30 grams of water. At first he injected 0.2 gram, but as this dose had no effect he then gave twice the quantity to 7 patients and obtained a satisfactory result in 5 of them. But the injections proved to be painful and inconvenient, and he now only gives subcutaneous injections when quinine is not tolerated by the mouth. He finds that when given by the mouth the following dosage acts well: 1 gram —that is, about 15 gr.—of the sulphate of quinine is given as a first dose; if no action results, he gives 0.5 gram at the end of one hour, and if this, too, fails to stimulate the contractions, he gives a further ½ gram after a further half-hour. Should no effect result, he regards the patient as not subject to the influence of quinine. Under all circumstances, he regards it inadvisable to give more than 3 grams in twenty-four hours. He found that in most cases, after about half an hour, weak pains recurring at long intervals set in. If the labour had already begun, the pains became stronger and more frequent. After from three-quarters to one hour the pains became normal both with regard to strength and frequency. In many cases they persisted every three to five minutes until the end of labour, but in a few cases they weakened again later on, but were readily stimulated by a repeated dose of quinine. Of 50 cases in which it was given to increase the pains *intra partum*, 44 were cases of vertex presentations, 4 those of breech presentations, and 2 were transverse cases. The quinine acted well in 42 of them. He gives the details of one case as an example. The membranes had ruptured three days previously, and yet no pains had set in. Twenty-four hours after giving the quinine the infant was born. Whenever he found it necessary to dilate the os by means of a bag, he found a simultaneous exhibition of quinine of marked assistance. The results which he obtained in his abortion cases were also satisfactory. Out of the 14 cases, the quinine worked well in 10. He considers that an energetic action of quinine renders curetting afterwards unnecessary, and therefore he welcomes it in the treatment of inevitable abortion as a safe means of steering the woman over her difficulties. In 7 cases he noted the occurrence of singing in the ears, and in 2 headache. The latter, however, may not be due to the drug, as it disappeared after the second dose in 1 case. In 3 cases *post-partum* haemorrhage was met with, but he is not inclined to regard this as being produced by the quinine, although some authors have stated that quinine in large doses leads to atonic paralysis of the uterine muscle. Quinine does not influence the infants in his opinion.

195. Palpation of Umbilical Cord in Utero.

LE LORIER (*Comptes Rendus de la Soc. d'Obstet. de Gyn. et de Pédiat. de Paris*, February, 1907) recently had under his observation a midwife in her second pregnancy. When labour began the first stage was somewhat prolonged; at the end of a few hours Le Lorier arrived, and examined the parts. It happened that the abdominal walls were thin, and so was the muscular coat of the uterus, whilst, at the same time, the intervals between the pains were long. Hence, palpation of the uterine contents was unusually easy. The presentation was left transverse vertex, not completely engaged in the pelvis. Near the fundus a cord-like structure was defined crossing a fetal limb, which, from its form, consistence, and position at first appeared to be the right round ligament. But rapid pulsations were visible to the naked eye, and they amounted to 148 per minute, the mother's pulse being 72. The fetal heart was audible on auscultation, and its pulsations corresponded to those in the cord-like structure. Two trained midwives and the patient herself, their colleague, confirmed the opinion of Le Lorier, who, in conclusion, states that he

has never come across, in any classical textbook or treatise of obstetrics, a report of an instance where the umbilical cord was both to be seen and felt in utero.

GYNAECOLOGY.

196. **Ovarian Grafting.**

E. Scott Carmichael (*Journ. of Obst. and Gyn. of the Brit. Emp.*, March, 1907) has carried out a series of experiments in order to determine (1) whether grafted ovaries degenerate; (2) if they do degenerate, to what extent? (3) what part of the ovary is most affected? (4) if ovarian tissue lives whether it has the power of performing its functions? The subjects of the experiments were for the most part rabbits, which were all full grown but varied in age. The sites of transplantation were the uterus, parietal peritoneum, between the layers of muscles of the abdominal wall, and under the mammae. In all twenty-one ovaries were transplanted, and there was complete failure in 6 cases; the tendency to degeneration and final absorption did not, however, seem to be a rapid one, and the author does not support Arendt's view that degeneration occurs in from six to twelve weeks. In two out of the twenty-one experiments the transplanted ovary remained undegenerated, showing the germinal epithelium, primordial Graafian follicles and ovarian stroma in a good state of preservation, while in thirteen there was almost complete success, inasmuch as Graafian follicles were present in 10 cases, and in 4 of these had matured and contained healthy ova with all the contents of the follicle intact. In the ovaries which partially degenerated the most extensive degeneration was in most cases of the central portion of the ovary in the cells of the ovarian stroma; the lutein tissue when present was surrounded by a zone of infiltration, in which the ovarian tissue underwent partial change but was capable, as was pointed out by Limar, of regeneration; a peripheral zone of practically normal ovarian stroma persisted, but in this zone the primordial follicles usually showed evidences of degeneration. In some of the cases the Graafian follicles enlarged and formed small cysts; the stroma between the cysts gradually disappeared, and the ovary became represented by a multilocular cyst. The tendency to degenerate was found in the different experiments to be most marked in the case of the germ epithelium next the ova and next the Graafian follicles. The age of the animals experimented on appeared to affect the result, the most successful cases being in animals which were scarcely full grown. In each of two animals, which were pregnant at the time of the operation, abortion occurred a week later. It is doubtful to what extent transplanted ovarian tissue retains the power of its internal secretory function. Cases in which pregnancy has occurred after transplantation are always open to the obvious criticism that a portion of the ovary may have been left behind. The author finds that the experiments show:—(1) That in the rabbit the whole ovary may be transplanted with success; (2) that in about 80 per cent. of the cases there is partial degeneration of the ovary; (3) that the degeneration may be either fibrous or cystic; (4) that Graafian follicles and ova persist and mature some months after grafting but ultimately tend to become cystic; (5) that the germinal epithelium persists in a small percentage of cases. These experimental results justify the following conclusions with respect to grafting in the human subject:—(1) That it is unlikely that the whole human ovary can be grafted with success; (2) that part of the ovary may ovulate and preserve its function of internal secretion; (3) that partial grafting is more likely to succeed—that is, more especially the grafting of the cortical portions of the ovary.

197. **Solid Teratoma of Ovary.**

Frank (*Amer. Journ. Obstet.*, March, 1907) and Herbert Williamson (*St. Bartholomew's Hospital Reports*, vol. xlii, for 1906) both publish original cases with analysis of the literature of the subject. Frank makes the total number of instances of this form of new growth 49; including his own with 2 of Williamson's, the total exceed 50. Frank excludes 4 cases published by Knowsley Thornton, Wilms, Kroemer, and Jung as doubtful. The relative degree of malignancy in dermoids and in solid teratomata is the question which is of the most general interest. Dermoid cysts are very common, representing from 7 to 18 per cent. of all ovarian new growths. Yet, as Frank observes, when we consider the frequency of dermoids, malignant changes are very uncommon, not more than about 30 being on record. Solid teratoma is decidedly rare, yet a majority of the cases which have been followed up after operation have ended fatally. Indeed malignancy seems to be one of the inherent qualities of this growth, and it is independent of any transformation or degeneration as in dermoids. It occurs chiefly in young adult life, the average age being 20 years. The youngest patient was 44 months, the oldest 40 years; it is noteworthy that whilst several had not attained the age of puberty, none had reached their menopause. The average duration of life after operation in 15 carefully reported cases was six months and a half. Secondary operations proved useless in every instance, as the recurrences were always too disseminated to be successfully removed.

THERAPEUTICS.

198. **Treatment of the Anaemias.**

G. Sittmann (*Deut. med. Woch.*, December 27th, 1906) deals with the manifestations of the various forms of anaemia and with the best forms of treatment. All anaemic conditions have one factor in common—that is, a diminution of the total quantity of blood. This statement is made with one reservation—namely, that this is accepted, although we have no means of measuring the total quantity of the blood. This is most marked in acute and chronic post-haemorrhagic anaemia. In this form, and also in progressive pernicious forms, it is necessary to make good this diminution in quantity. Transfusion of foreign blood (that is, animal) has long since been discarded, since the dangers attendant are very great. Transfusion of human blood does not offer any great difficulty or danger if one succeeds in carrying it out properly and in preventing coagulation. Ziemssen's method is to extract blood from the vein of a healthy person into a sterile syringe having a capacity of 25 c.cm. and slowly injecting it into an arm vein of the anaemic person. The syringe is then washed out with sterile warm saline fluid, and the process is repeated. The needle is connected to the syringe by means of a short rubber tube, so that there is room for movement of the needle on the syringe and less chance of wounding the inside of the vein. Three syringes are required. One is being cleaned out while the second is being filled and the third is being emptied. This method has yielded good results in oligaemia after acute bleeding, in anaemia after prolonged chronic bleeding, but in chlorosis and pernicious anaemia it is of less avail, and it is quite useless in leukaemia. The injection of defibrinated human blood is too dangerous to be employed. Next, one can inject sterile physiological saline fluid subcutaneously. This method does not only increase the amount of circulating fluid, but inasmuch as it washes out of the haematopoetic organs the reserve stock of red blood cells it supplies a certain increase of the oxygen carriers. One can get from 1½ to 2 litres of fluid to be taken up in an hour by applying a large glass irrigator and allowing the fluid to run in continuously, while massage is applied to the site of injection. With regard to the replacing of the lost haemoglobin he finds that iron in some form is the sovereign remedy. In all the diseases of the blood attended with diminution of the amount of haemoglobin iron should be employed. After haemorrhage the total quantity of haemoglobin is diminished; in chlorosis the quantity of haemoglobin is more diminished than is represented by the decrease in the number of red cells; while in pernicious anaemia the loss is less as far as haemoglobin is concerned than as far as cells are concerned. In leukaemia the haemoglobin diminution corresponds to the diminution in the number of red cells. Only in the cachectic stages of pernicious anaemia does iron do harm. Iron therapy is of greatest value in diseases which depend most on the diminution of haemoglobin, and it is therefore most useful in chlorosis. It is of less value in secondary anaemias or in essential anaemia. With regard to the form of iron the author states that much difference of opinion exists as to the best combinations. It has been shown that both organic and inorganic combinations of iron are absorbed from the intestines. Sittmann considers that all the elaborate organic preparations of iron are unnecessary, and that excellent results are obtainable by means of the old-fashioned Blaud pills or the solution of the albuminate of iron. It is, however, of great importance to give iron in such a form and way that the digestion is not disturbed, and that the nutrition is not interfered with during medication. He believes that the iron is less responsible for gastric symptoms than is the alcoholic content of many of the preparations. He does not approve of increasing doses of pills or other forms of iron, but gives large doses from the first, and has never seen them do any harm.

Arsenic has a distinct influence on the blood-forming organs. It is said to act by stimulating these organs, and thus indirectly producing a larger manufacture of blood cells. Fowler's solution, either combined with iron or without, is of use in the pernicious form. It is too painful to be employed in subcutaneous injection, but the sodium arsenate can be given in this way. For prolonged medication subcutaneous injections are to be preferred. Sodium cacodylate may be given by mouth or hypodermically, and arsenic-containing mineral waters also offer a means of employing this element. After saying a few words on the *x*-ray treatment of leukaemia, which he thinks does considerable good, although it cannot be said to cure the disease, the author passes on to the dietetic and nursing treatment of anaemias. Overfeeding, or at least very plentiful feeding with easily-assimilated forms of food, do much good. The best results are obtained when one can keep the patient in bed, but this is often very difficult to carry out. The haemoglobin amount improves steadily as long as the person is lying, and he should not be allowed to get up until the blood has shown a very marked improvement. Alcohol should be avoided in all forms of anaemia, while coffee and tea should only be given in small quantities as taste correctives.

199. Plasmon in Nutrient Enemata.

Goliner (*Zeit. f. Phys. und Diät. Therap.*, February, 1907) has found that plasmon dissolved in hot water forms a very satisfactory nutrient enema. Plasmon is obtained from the proteids of milk, and is a yellowish powder without taste or smell, easily soluble in hot water: it is never found to give rise to digestive disturbance, and it forms an excellent substitute for the animal proteids. The first cases in which the author gave plasmon in the form of nutrient enemata were cases of cancer of the stomach and of gastric ulcer. The enema of plasmon and water was given at a temperature of 35° C., it was retained in the different cases from ten to twelve hours. The patients did well for three to four days on this feeding, and later, if if there was no return of vomiting or haemorrhage, plasmon was given by mouth, with the addition of milk, cocoa, butter, and yolk of egg, and this, also, was well borne. Great success was also obtained in feeding by rectal injections of plasmon two cases of hyperemesis of pregnancy. After a preliminary washing-out of the stomach and intestine injections were made per rectum twice a day of a litre of plasmon in solution and of one egg. The women took these injections well for several days, and, as in the cases described above, plasmon was able later to be administered by the mouth. There can be no doubt that the plasmon is almost wholly absorbed, and can replace meat in the diet. In a case of scanty milk supply in a nursing mother who was ill and anaemic, plasmon milk taken by the mouth three times a day, in addition to other food, appeared to lead to an increase in the amount of milk, and the child was fed at the breast for several months. The low price of plasmon makes it especially suitable for poorer patients.

200. A Warmed Bed as a Sleep-producing Agency.

P. Fürbringer (*Zeit. für Physik. und Diät. Therap.*, February, 1907) bases his trust in a warmed bed as a means of inducing sleep, first on the widespread use of hot water bottles and similar means for warming the bed for children who sleep badly, secondly, on the known relative action of warm baths; and, thirdly, on observations made on himself and many other people as to the effect of warmth in inducing a sensation of lassitude and sleepiness. The author carried out a series of experiments on the subject under certain difficulties. There was, in the first place, a difficulty in regulating the heat, which was applied by steaming sponges over copper; there was, again, a difficulty in making the bed comfortable over the metal; the time of day during which the experiments could be conducted was only from 9 to 11 o'clock, and it was impossible to carry out on each person an adequate number of investigations as to the effect of the presence or the absence of the heat. The special points observed were (1) When sleep did occur, (2) what was the length of time before the patient fell asleep, (3) how long the sleep lasted, and (4) what were the subjective sensations of the patient on waking up. The time of going to sleep and waking up could not be estimated with perfect certainty, but the author was accustomed to visit the patient ten to fifteen minutes after the latter had just gone to bed, and later every half hour, and afterwards special notice was taken of the bell and the clock strike or noted the entry of the doctor. In his experiments on himself the author could only observe the time when he began to feel sleep approaching and the time of waking. He investigated the effect of the warmed bed upon himself on twenty-five occasions; on the first three he had not mastered the difficulties of the regulation of heat, etc., and on none of these occasions did he fall asleep. In the last twenty-two observations four times sleep did not come, but only a sense of sleepiness, eighteen times he fell asleep after lengths of time varying from fifteen minutes to three-quarters of an hour, and slept for from half to two and a-half hours. Usually he woke up feeling well and with a pleasant sense of weariness. The experiments on seven patients were almost always successful, and on only two occasions did a patient not fall asleep, although in all the cases there had been no habit of sleep in the day time. Psychical influence was avoided and there was no suggestion to the patient that the bed was warmed for the purpose of inducing sleep. The following points are worthy of attention: (1) Too high a temperature has an unfavourable effect; in most of the experiments the temperature was from 40° C. to 45° C. in the beginning, and later, after the patient was asleep, this was reduced to about 35° C. (2) Usually the experiment was most successful if the bed was made noticeably warm by the time the patient went to bed, the amount of heat was then at first gradually diminished, and afterwards if the sleep was deep, was again gradually raised. (3) The skin felt cool even when uncomfortable heat was complained of, and the artificial heat, as long as it did not go beyond a certain grade, was always found pleasant. (4) Patients who were convalescent after severe illnesses felt very well in health as a result of the daily sleep treatment. These investigations, while they do not supply an absolute proof as to the value of the treatment, yet suggest that it is very probably an efficient method of inducing sleep.

PATHOLOGY.

201. Distribution of Eosinophiles in Hodgkin's Disease.

W. T. Longcope (*Bull. of the Ayr Clin. Lab. of the Pennsylvania Hosp.*, June, 1906) has recorded the results of his observations on a fatal case of Hodgkin's disease, paying especial attention to the distribution of the eosinophile leucocytes in the body. He points out that as the patient's death was brought about by an accident, the *post-mortem* distribution of the white corpuscles probably represents the actual distribution of these during life. A blood count made a few weeks before death revealed the presence of an excessive number of eosinophile cells, namely, 13.2 per cent., although there were neither intestinal parasites found in the stools nor was there any skin affection. A section of a gland removed during life for diagnostic purposes, showed the changes characteristic of Hodgkin's disease and a peculiar distribution of the eosinophile cells, which were present in the gland in excessive numbers. In the central parts of the gland these cells stained badly, some contained few and others many granules; towards the periphery of the gland the eosinophiles were well stained. In the connective tissue capsule of the gland the eosinophiles were in places almost as numerous as in the central parts of the gland, and they were present in excessive numbers in the blood vessels of the gland capsule. Sections of the lymphatic glands removed at the autopsy showed a similar distribution of the eosinophile cells, with the exception that the blood vessels of the gland capsules contained none. In the spleen the eosinophiles were present in comparatively small numbers, a few being found among the pulp cells and in the venous sinuses. In the thymus a few large mononuclear eosinophiles were found, and in the tumour nodules which involved this organ the eosinophiles were as numerous as in the lymphatic glands. Smears made from the bone marrow of the femur and ribs showed about 12 per cent. of eosinophile myelocytes, a considerable increase above the normal percentage. Sections from the bone marrow showed a great relative increase of eosinophile myelocytes over the neutrophilic myelocytes. In none of the sections examined could any transition be found between cells without eosinophile granulations and cells containing this type of granule, nor was there any evidence of proliferation of the eosinophiles themselves; no mitotic figures could be seen. The author concludes that, from the appearance of the sections taken from the gland removed during life, it seems probable that the eosinophile cells were not produced in the glands themselves, but were carried to them by the blood, and were formed from the eosinophile myelocytes which the bone marrow contained in excessive numbers.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

202. **Gland Fever.**

Lublinski (*Zeit. f. klin. Med.*, Bd. 62, 1907) publishes a summary of twenty-one cases of gland fever. Under this name Pfeiffer described a condition occurring in children where, with a temperature of 102° to 104° F. and the general symptoms of fever, the glands along the upper third of the posterior margin of the sterno-mastoid are enlarged and tender. Other symptoms, such as pain on swallowing and on moving the head, are present, but the characteristic features are the swelling of these glands and the high temperature without any obvious cause. In mild cases the fever is gone in a couple of days, but in the more severe forms it may continue for several days, the glands swelling first on one side and then on the other. Pfeiffer also described a subacute form, in which obstinate diarrhoea, albuminuria, and some fluid in the peritoneum accompany the glandular enlargement. Lublinski's cases are all of the acute variety, and all occurred in patients of lymphatic constitution. Both sexes were affected alike, and on three occasions two members of the same household developed the symptoms. In some cases measles, scarlet fever, or, more often, influenza had preceded the gland fever, but frequently the condition arose in patients who had been in their usual health. The fever lasted two to seven days, the temperature rising to 104°, usually with morning remissions and falling by lysis. On the second day from the onset of fever, the glands began to swell, and might reach the size of a walnut, but always remained discrete. They showed some degree of softening, but suppuration never occurred, and the enlargement invariably disappeared in the course of a week after the temperature came down. Complications occurred, the most serious being an acute nephritis, but in nearly all cases these cleared up rapidly without leaving any ill effects. The prognosis is excellent. The localization of the glandular enlargement suggests that the primary lesion must be in the nose or upper part of the pharynx, and examination showed that this was the case. The posterior nares and the lymphoid tissue in the roof of the pharynx exhibited an acute inflammation, occasionally with plugging of the follicles or even membranous formation, while the pharynx proper as a rule remained unaffected. The inflammation sometimes spread to the posterior surface of the soft palate, and down the sides of the upper pharynx, and in these cases pain in the ear was present, and the pain on swallowing was considerable. Very frequently the obstruction to the nasal passages produced snuffling, but there was no discharge from the nose until the condition began to clear up, as the secretion found its way along the walls of the pharynx. Cases with typical symptoms, however, occurred in which there was no affection of the nares. In these instances the site of the infection is in the lateral walls of the pharynx, where it is not easy to detect it in young children. Lublinski considers that there is no reason to follow Pfeiffer in making the condition a disease *sui generis*. The glandular enlargement is purely secondary to a local infection of the upper air passages, probably by streptococci, and evidence of this can usually be found on careful examination.

203. **Caisson Disease.**

Amongst the sponge-divers on the coast of Africa this disease is very common. For six months at a time these men live on board small vessels under the worst conditions as to food and rest. During the whole of that period they go down three or four times every day, except Sundays, to depths of 120 ft. to 230 ft., returning rapidly to the surface after a spell of work which lasts 45 to 60 minutes at the smaller depths and less at the greater. Exhausted by hard work and bad food they become increasingly less fit to reabsorb the gases liberated in their blood after the rapid ascents, with the inevitable result that accidents constantly occur. Actually 34 per cent. of the divers suffer from a chronic spastic paraplegia. Zografidi (*Rev. de Méd.*, 1907, No. 2, February 10th) gives some results of 260 cases which came under his observation, including the examination of the spinal cord in six autopsies. They vary from the fulminating type, where death is immediate with general emphysema and multiple haemorrhages, to mild cases in which there are only slight symptoms, soon passing off without subsequent ill-effects. The great majority of the cases fall into a group intermediate between these extremes. These are all more or less acute, and terminate either in death within a period varying from a few days to several weeks, or in a permanent condition of chronic spastic paraplegia. The diver on coming to the surface complains of pains in the whole body, especially the trunk, disturbance of vision and hearing, and tingling in the lower limbs, which rapidly become paralysed. After some hours a general improvement occurs, and for fifteen to forty-five minutes the patient feels well, and may be able even to walk about. Then the tingling returns, and paraplegia finally and definitely establishes itself. In the milder cases recovery ensues with permanent paraplegia; in the more severe the condition becomes progressively worse, until death supervenes. The details of the symptoms are similar to those which have been frequently described. No treatment is of any avail. Oxygen, which has been described as specific in this disease, did not prove of the least use in Zografidi's hands. Strict prophylaxis, by decompressing very gradually, is the only means of checking the disease; and it is perfectly effectual if carefully carried out. Of the histological examination of the spinal cord in these acute cases, the author gives a provisional summary of his results, which are to be published subsequently in more elaborate form. He considers the condition to be a typical myelitis. As the result of the liberation of gases in the blood, numerous emboli occur in the arteries of the cord, and these produce ischaemic foci, which undergo speedy softening and necrosis. In some attacks haemorrhages also occur in the cord, but it is unnecessary to suppose that these always occur. Under the influence of toxins either produced by the previous over-exhaustion or derived from the alimentary canal, these foci become inflamed, and a true myelitis develops, which follows a typical course. This view he supports by a number of illustrations of lesions found in the sections, but the reproductions are not very satisfactory. The early symptoms are complicated by cerebral disturbances caused by bubbles of air in the cerebral vessels, and much of the early pain is due to direct tearing of nerves by distension of the vessels with air. These bubbles are again absorbed, and with their absorption comes the interval of apparent recovery, which is cut short by the congestion arising as the first stage of the developing myelitis. In one of his autopsies the cerebral vessels were found thirty-six days after the onset of the disease to be full of air bubbles, which could be moved along the vessels with the finger.

SURGERY.

204. **Catgut Suture for Fractured Patella.**

The experience of modern surgery with regard to the suture of fractured patellae with silver wire has recently led to an almost unanimous rejection of this method. In its place suture by means of catgut is now chosen. Riedel (*Deut. med. Woch.*, December 15th, 1906) reports on eleven operations which he has carried out in this way. Three of the cases were old-standing fractures and eight were fresh ones. The three former cases included the case of a woman who fell down in January, 1900, fracturing her patella transversely. The fragments remained 1 cm. apart, in spite of strapping. In September, 1901, the leg had wasted considerably; the knee-joint could only be extended passively out of its fixed position of 1 cm.; it could not be flexed further, and could not be extended actively. The upper patella fragment was adherent to the femur. On September 17th Riedel incised on each side of the joint longitudinally, chiselled the upper fragment from the femur, excised the scar tissue between the fragments, freshened up the fractured surfaces, and united them by means of three strong catgut sutures in a sagittal direction. The skin wound was left open. Bony union took place, the wasting was reduced, but complete extension and flexion could not be carried out actively. The patient was able to walk well for hours without tiring. In the second case the union was also bony and in good position, and the functional result was good; while in the third case, although the bony union was present, the fragments had

healed at a slight angle, and the functional result was correspondingly not quite perfect. The patient could, however, flex and extend the leg completely. Riedel believes that the incisions should never be made over the patella, and that all forms of transverse incisions should also be avoided. The reason for this is that the patient should afterwards be able to flex his leg to an acute angle, and should be able to kneel easily. This result can be attained by making the incisions longitudinally at each side of the joint, and leaving the skin in front and below the patella untouched. These cases demonstrate that practically perfect anatomical and functional results can be obtained by this method. For some years past he has been endeavouring to obtain satisfactory results by means of subcutaneous operations. This has the disadvantage that as the fragments cannot be freshened up, the anatomical results are not nearly so ideal as those gained in the open method. Bony union mostly takes place after subcutaneous catgut suture, but in one case some tissue got interposed between the fragments and prevented the union. The advantages of the subcutaneous method are that the scar is small, and that the patient can walk about again after six weeks. The eight fresh fractures were dealt with by this method. Three of these cases gained full power of flexion and extension. In one the union was bony, in the second the fragments were lying together, and Riedel believes that bony union will take place in time, while in the third the fragments lie apart. In two further cases he experienced a peculiar condition of perforation of the upper recess and haematoma between the skin and bone. Bony union took place in the first case, and in the second case the effect of the haematoma had not passed off sufficiently to determine the ultimate condition. In the last case he undertook the operation without having a proper needle to work with, and although full flexion and extension was regained, no bony union was achieved. The subcutaneous operation is carried out by making a small incision 2 cm. above the upper fragment. A long curved needle with a large eye is then passed behind the fragments, that is, between these and the femur, and after perforating the ligamentum patellae is brought out through the skin. At this situation a small incision is then made. The needle thus lying *in situ* is threaded with four thin catgut threads of about 50 cm. length. The sutures are then drawn through. A less curved needle is then passed from the upper wound in front of the fragments, and this needle is threaded below with the four catgut ends, which are hanging out of the lower wound. The needle is then withdrawn, and the sutures are tightly drawn upon and knotted with surgical knots. The knots thus lie above the patella and are sunken. It is especially advisable to make the upper incision high up. He considers that it would be easier to draw the upper fragment downwards, but he does not like to make the knots in the substance of the ligamentum patellae. The whole operation only takes ten minutes to perform.

205. **Prognosis of Bimalleolar Fractures.**

Cunéo (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 34, 1906), who has recently studied the results of fractures of the lower ends of the tibia and fibula, insists on the frequent occurrence of deformity and impaired capacity of the limb after certain forms of such injuries, in spite of careful and apparently successful efforts at reduction, and of prolonged immobilization of the injured extremity. After proper treatment, which, the surgeon believes, has resulted in removal of deformity and consolidation of the osseous fragments, deviation of the foot from its normal relations will often follow. Permanent incapacity of the injured limb is the author states, a very frequent result of fractures involving both malleoli. The external appearance of the seat of a fracture near the ankle, after removal of a plaster splint, is often misleading, as in many cases of what may have been regarded as a complete cure, partial luxation of the astragalus will be demonstrated by the X rays. The prognosis of bimalleolar fracture is regarded as quite unfavourable in cases in which there is well-marked primary displacement, in which there is a free diastasis of the inferior tibio-peroneal articulation, and also when the injury is one of oblique supramalleolar fracture. In the discussion of this paper Tuffier concurred as to the frequent occurrence of secondary displacement of the fragments after apparent cure of a fracture near the ankle, and held that such displacement, which has very serious results in regard to the functional capacity of the limb, and in most instances is quite remediable, is due to faulty reduction and indicates in the treatment of the fracture a much longer period of rest and retention than is usually allowed. Delbet also agreed in these views, and insisted on the necessity of extending the retentive treatment of the fractures in question over a period of forty days, and of keeping the patient in bed for ten or fifteen days after the removal of the splint.

206. **Syphilitic Arthropathies.**

L. Dominici (*Il Policlin.*, September, 1906) describes two cases of syphilitic arthritis, and discusses the different forms which the disease takes. The two patients, a man aged 54 and a woman aged 35, both suffered from a polyarthritis of long duration and constantly varying course, with symmetrical localization in the larger joints, and involving also in the younger patient a phalangophalangeal joint. The affected joints were distinctly swollen, of a soft fluctuating consistence, with very slight inflammatory symptoms, with exacerbation of spontaneous pain at night. In each case the integrity of the bones concerned in the articulation was shown by radiograms. The fluid extracted from the joints showed some red corpuscles and an excess of polynuclear leucocytes. Neither the *Spirochaeta pallida* nor any other microorganism could be demonstrated. Inoculations and culture experiments alike showed the liquid to be sterile. Inoculations of 2 mg. of tuberculin produced no reaction. In the first patient the evening temperatures reached 37°C., in the second 38.5°. In the first the disease was chronic from the first, in the second it was at first acute or subacute. Dominici establishes his diagnosis by a process of exclusion applied to all the other causes of chronic inflammation of joints. Apart from the method of exclusion, a diagnosis of syphilitic arthritis may be supported by the existence of other signs of syphilis, oscillation and intermittence of the symptoms, absolute or relative absence of pain, and reaction to antisyphilitic remedies, both mercury and iodides. Syphilis may cause vague pains in the joints as early as the appearance of the initial sore. In secondary syphilis, from a very early date there may be an acute polyarthritis of the large joints especially. Later on in the second period there may be a syphilitic hydrarthrosis, usually affecting the knees, but sometimes other joints also, painless, and often attaining considerable dimensions before the patient notices it, but yielding readily to specific treatment. Arthropathy is most common in the tertiary period, and may occur as long as twenty years after infection. This takes two forms. The less frequent affects the articulation primarily, and begins with a gummatous inflammation of the outer layer of the synovial membrane. The more severe and more frequent form begins with gummata in the bones forming the joint. These begin in the juxtaepiphysial zone, and spread towards the cartilage, destroying the bone like tuberculous myelitis. The process may be chronic at first, but may suddenly become acute. Active movements are painful from the first, passive movements only after the cartilage is attacked. The bone is thickened, and its articular surface may become irregular.

OBSTETRICS.

207. **Treatment of Puerperal Eclampsia.**

Budin (*Journ. des Prat.*, February 16th, 1907) gives the histories of 3 cases of eclampsia which he has recently treated and cured in hospital. In many women, he says, suffering from puerperal eclampsia the bowels act badly, the liver, already affected by the pregnancy, does not get rid of the toxic matters which come to it from the bowel. These toxic waste products are thrown upon the kidney to eliminate, and albuminuria arises. So the first thing necessary, in the treatment of eclampsia, is to empty the bowel. Dupaul, who practised repeated bleedings for eclampsia, recognized a mortality of 32 per cent. Under Budin's treatment that number has been reduced to 8 or 10 per cent. The first patient had been quite well throughout her pregnancy except for obstinate constipation; her labour was normal. Ten hours after labour the first fit occurred, in which she bit her tongue; this was followed by coma. The fits returned hourly; the temperature remained normal. On the occasion of the eighth fit respiration ceased, and the patient became cyanosed, but was brought round. Patient was given a rectal wash of 10 litres of boiled water, followed by a wash containing 4 grams chloral, and as the fits persisted she was bled to 500 grams of blood. She then regained consciousness. A purgative injection and a dose of castor oil with a drop of croton oil completed the cure by causing large and fetid evacuations. The second patient was well up to the eighth month of pregnancy, when she was delivered of a dead child. The first fit occurred at the birth, and they were repeated hourly, accompanied by coma and slight fever. There

was no albuminuria. Bleeding to 300 grams was performed, and a chloral and bromide injection given. The bowel was washed out and relieved of much faecal matter. The wash was repeated in a few hours. Albumen, absent at first, appeared in the urine in the evening in large quantities. Liquid diet and purgation completed the cure. In the third case, a primipara, the first fit came on towards the end of pregnancy. She had oedema of lower limbs with much albuminuria. Albuminuric amaurosis supervened. She was delivered of a child weighing 2,600 grams. When it was thought a fit was coming on, 4 grams chloral were given by injection; no more fits took place and the patient got rapidly well. In eclampsia the prognosis is good so long as there is no fever, the fever has appeared with the fit, or the fever does not increase. But if there is high fever, bleeding must be resorted to early. The bowels must invariably be emptied. The author has found that by this means he can in nearly every case prevent albuminuria. Chloroform can avert an impending fit. But this drug must be used with great caution. Chloral, too, must be used only sparingly; 8 grams in twenty-four hours should be the maximum dose. To dilate the os and bring on labour is merely courting continued fits, besides being uncalled for. For many women have the fits only after labour; and at most, if the labour has begun and dilatation is complete, the doctor need only end a lingering labour by the forceps. Generally under the influence of the violent uterine contractions labour quickly ends. Caesarean section or decapsulating the kidney need not be thought of. Prophylaxis is the important thing. Every pregnant woman must keep her bowels regularly open, and on the least sign of albuminuria must adopt an exclusively milk diet. During the fit itself the tongue must be protected and false teeth removed.

GYNAECOLOGY.

208. Rupture of Abdominal Laparotomy Wound.

STONE (*Amer. Journ. Obstet.*, March, 1907) recently reported an instructive instance of this complication, which gave rise to a discussion. Stone's patient was a multiparous married woman, aged 30, anaemic owing to a bleeding fibroid. Total abdominal hysterectomy was performed. The abdominal incision was 5 inches in length. It was closed by three interrupted silkworm gut sutures, which were passed through all the layers, and reinforced by the necessary catgut. A double strand of No. 2 plain Van Horn gut was used as a continuous suture for the fascia. On the eighth day, up to which date the patient had done well, she felt some pain in the wound after sneezing, and a few hours later it was found to have yielded entirely. The protruding intestines were covered by omentum; they were replaced without causing serious infection of the peritoneum. The catgut suture in the fascia had caused necrosis from pressure, without infection; the low condition of the patient was a factor in the bad result. The wound was hastily closed in the same manner as at first, but five in place of three silkworm gut sutures were inserted. The patient recovered without any further complication. Miller related a case where interrupted catgut was employed, post-operative pneumonia set in, and the wound burst open on the second or beginning of the third day. In one class of case the rupture was due to slow and weak union from anaemia, cachexia, syphilis, or diabetes. The wound parted when the sutures were removed. In the other class its edges separated from coughing, vomiting, or distension, the sutures coming untied; catgut, kangaroo tendon, or silver wire were specially liable to yield. Miller knew of a dozen such cases; in consequence, when closing an abdominal wound of any length, he employed interrupted silkworm gut through all the layers except the peritoneum, which he closed with a running catgut suture. The fascia was approximated with strong interrupted catgut sutures. Abbe showed, on experience when a house-surgeon, that interrupted sutures clamped with shot were unreliable. Vaughan declared that the sutures should not be removed until the tenth day. In spite of all precautions, however, wounds would occasionally break open; suturing in layers invited such accidents. Sprigg insisted that the fascia must be united with interrupted sutures, for when a running suture broke the whole incision gave way. White had observed the accident twice in 400 abdominal sections, and in both continuous catgut sutures had been inserted. Stone, in replying, stated that the continuous catgut suture in his case was practised in the Mayo clinic, but he intended to return to interrupted sutures for the fascia.

THERAPEUTICS.

209. Roentgen-Ray Treatment of Syringomyelia.

G. RONZONI (*Gazz. Med. Ital.*, November 15th, 1906) describes a case of syringomyelia apparently arrested by a six weeks' course of radiotherapeutic treatment. When he reached the age for military service, the patient was discovered to be suffering from kyphoscoliosis. His later illness began gradually and without pain a few months after an attack of influenza at the age of 22. He first noticed an inability to continue working. Then came tingling and other paraesthesiae in the upper limbs, which felt hot and weak. He was unable to walk far without sweating and pains in the legs. He suffered from repeated crops of boils, which healed slowly and left notable scars. At a later stage he noticed a loss of thermal sensation, but he was not conscious of any diminished sensibility to pain. He came for treatment in 1904, being then aged 30. He had well-marked kyphoscoliosis, with the convexity to the right from the seventh cervical to the eighth dorsal vertebra. No part of the vertebral column was painful, tender, or enlarged. The articulations of the hand showed the lesions of arthritis deformans. The nails showed trophic lesions. The hand was claw-shaped and oedematous. The muscles of the upper limb were wasted, especially on the right side, and on each side especially in the distal portion of the limb. There was muscular paresis, with fibrillar tremors. The deep reflexes were exaggerated; the plantar reflex replaced by Babinski's phenomenon. Tactile sensibility was normal throughout. There was absolute analgesia and thermo-anaesthesia on the inner side of the upper limbs from the axilla to the roots of the fingers, on the front of the trunk from the angle of Louis almost to the groins and at the back from the seventh cervical vertebra to the sacrum. In the lower limbs, on the outer surface of the upper limbs, and on the upper part of the chest there was a diffuse and variable hypoaesthesia both to heat and pain. Electrical examination showed inexcitability to both direct and induced currents of the muscles of the thenar and hypothenar eminences, the interossei and the lumbricales on both sides. In the other muscular groups of the upper limb there was no reaction of degeneration, but an evident diminution of excitability, especially on the right side. On these signs was based a diagnosis of syringomyelia vera with anatomical lesions of the medulla and the cervical and upper dorsal regions of the cord, affecting especially the crossed fibres for the conduction of specific sensibility, and the spinal cells of origin of the brachial plexus. In February, 1906, after reading of Raymond's two cases of syringomyelia treated in a similar manner, the author began treatment with the Roentgen rays. There were 15 sittings, at first 2, then 3 a week. Each application lasted at first five minutes, but the time was gradually increased to twelve minutes. The rays were directed to the spine generally but especially to the cervical portion of the column. The tube was kept from 10 to 15 cm. from the skin. The patient also underwent daily massage and on alternate days galvanic and faradic stimulation of the motor joints of the upper limb. Iodipin was also injected on fifteen consecutive days. The patient left hospital in April, feeling better. The circumference of the middle third of the right forearm had increased from 15½ cm. to 18½ cm., that of the left forearm from 16½ cm. to 19½ cm., that of the right arm from 24½ cm. to 26 cm., that of the left arm from 26½ cm. to 27 cm. Before treatment the patient could make no impression on the dynamometer; after treatment it registered 15 for the left hand and 10 for the right. Babinski's symptom was now much less distinctly shown. The regions of absolute analgesia and thermo-anaesthesia remained practically unchanged, but the hypoaesthesia in other parts was very much diminished. The condition of inexcitability of the small hand muscles persisted unchanged, but the other groups of muscles gave a much more prompt and decided response to electrical stimulation than they had done before treatment. Reviewing all the facts of the case, and comparing it with the two cases similarly treated by Raymond, one cured and the other much relieved, Ronzoni claims that the arrest and partial cure of the disease in his patient were due to the Roentgen-ray treatment. The result is explicable by the modern theory of syringomyelia as a disease due to new growth. The result of treatment must, even in the most favourable cases, depend to a great extent on early diagnosis. Ronzoni draws special attention to the brevity of the sittings and to the other precautions employed. With longer sittings, shorter intervals, and stronger currents there would be danger of injury to normal as well as newly-formed tissues.

210. **Sajodin.**

Sajodin, the new iodine preparation, is a white powder absolutely free from smell or taste, and containing 26 per cent. of iodine and 4.1 per cent. of calcium; it was first introduced by Fischer and Mering, and has since been widely tried and recommended. J. Gussman (*Die Heilk.*, December, 1906) describes the investigations he has himself made in order to determine whether sajodin can be given in effective doses without causing iodism, and, secondly, whether its action in syphilis is powerful enough to make it a reliable remedy. In order to arrive at a conclusion as to the first point, he administered the preparation to 15 patients who had previously shown an intolerance of potassium or sodium iodide; the amount of sajodin taken was on the average from 2 to 3 grams daily in doses of 1 gram or 0.5 gram. In none of these cases were there side-effects unpleasant enough to necessitate giving up the drug, and in none was there any sign of acne. In two cases running at the nose, of no great severity, appeared, and lasted in each case for five days before disappearing. One patient, who had many times found that after taking even a few teaspoonfuls of sodium iodide he suffered from severe iodism, took altogether 35 grams of sajodin without the slightest unpleasant result, and another patient with a similar experience of potassium iodide took 40 grams of sajodin with no sign of iodism. In order to decide the second point, sajodin was given to 14 late cases of syphilis—3 of them cases of gummata of the skin, 4 of gummata of bone, 2 of syphilitic orchitis, 5 of papular syphilides; except in 2 cases, no local mercurial treatment was given; the ordinary amount of sajodin taken was 3 grams per day, but in case of need as much as 5 grams. The patients bore the drug well; in 3 cases running at the nose appeared, but in no case to such a degree as to call for any change of treatment. The results obtained were very good, even severe and deep lesions being substantially improved and brought to recovery after 30 to 80 grams had been given. A case illustrative of the benefit received was that of a woman aged 43, with cutaneous gummata covered by rupia-like scabs on the left thigh; in this case healing of the gummata made rapid progress for the first ten days, and complete recovery was attained at the end of the third week; on the tenth day of the treatment some sharply-defined spots, bright red in colour, appeared in the neighbourhood of the gummata and gave rise to a certain amount of itching, but these disappeared in five or six days under treatment with indifferent ointments. A still more striking case was that of a woman 32 years of age suffering from an ulcerated gumma over the frontal bone, at whose base a sequestrum of the external lamina could be seen; there was severe pain in the neighbourhood of the gumma. In this case mercurial ointment was applied externally in addition to the administration of sajodin, and healing of the ulcer was obtained on the fifteenth day. In 2 cases sajodin gave no result; these were both cases of tertiary syphilis with a dry papular eruption, situated in one case on the hand, in the other on the back. An ordinary treatment by inunction was substituted and recovery soon followed; it is probable that if in these cases local treatment had been tried in addition to that by sajodin the result would have been satisfactory. Sajodin possesses a great advantage over the ordinary iodides, in that it is not decomposed by the stomach juices, and therefore gives rise to no symptoms of stomach disorder. The author as a result of his investigations finds that sajodin fulfils as a rule the requirement of a satisfactory substitute for the potassium and sodium iodides.

211. **Spinal Anæsthesia.**

E. Payr (*Deut. med. Woch.*, July 12th, 1906) reports on 209 cases of Bier spinal anæsthesia which he has carried out in Halle. The patients were operated on gynæcologically during the period from May 14th, 1905, to June 2nd, 1906. He states that failures in the anæsthesia do not depend on peculiarities of the patients but on mechanical and anatomical conditions. The site of the injection should be exactly in the middle line, as high as possible, and at all events not lower than between the second and third lumbar vertebræ. The needle must be applied as vertically as possible. For gynæcological operations, as soon as the injection has been carried out, the pelvis is raised to a high extent in order to render the area of anæsthesia as high as is desirable. As a rule he only withdraws about 4 c.cm. of cerebro-spinal fluid, but this has to be varied according to the case, and when the intra-spinal pressure is great a larger quantity must be withdrawn. The fluid which he injects is either stovaine and suprarenin or novocaine and suprarenin. He uses at least 0.07 gram of stovaine, and mostly 0.08 gram, which quantity is contained in one tube prepared by Billon; 0.1 gram of novocaine (contained in 2 c.cm. of the mixture) is required for a satisfactory anæsthesia. The latter was found less adapted for laparotomy, but quite satisfactory for vaginal operations. He does not worry the patient by testing whether the anæsthesia is developing by pricking with a needle and the like, but leaves her absolutely quiet. He does not like the idea of giving a preliminary injection of morphine and scopolamine, as has been suggested, since one multiplies the toxic substances which the patient's body is to receive unjustifiably. The 209 cases include all sorts of gynæcological operations and one obstetrical operation (Cæsarean section). One patient died before the operation, during the early stages before the technique had been improved. He believes that by using a stylet in the needle, which is removed immediately one has pierced the skin and the first layer of ligaments, one can ensure not injuring the motor nerve roots, which might be the cause of the accident. Of the remaining 208 cases, he finds that 86.6 per cent. gave good results, while 13.4 failed to show satisfactory anæsthesia. The percentages are also given according to the class of operation. The unsatisfactory cases include all those in which the whole operation could not be completed without pain and without chloroform. The quantity of chloroform, however, which was required to put the patient asleep was in all cases of this category very small. In about one-fourth of all cases, after about twenty to thirty minutes, retching or a slight tendency to vomiting was noticed, but this symptom passed off rapidly. Mild signs of collapse were seen less frequently, and also passed off rapidly without trouble. The headache on the following day, which was noted in four cases, yielded to antipyrin once, and three times passed off spontaneously in a few hours. Taking his results in all, he comes to the conclusion that the spinal anæsthesia is a most useful procedure in the hands of those who have studied the technique, and that it will undoubtedly take up an important place if not the first place in the anæsthetic metho is of the future. He cannot speak too highly of the method.

PATHOLOGY.

212. **Maternal Transmission of Immunity to Diphtheria Toxin.**

J. F. Anderson (*Bulletin No. 30*, Hygienic Laboratory, U.S.A., Washington, 1906) points out that in the standardization of diphtheria antitoxin it may be dangerous to use guinea-pigs which have been bred from animals previously used for test inoculations. In two laboratories known to the author it was the custom to use such animals, and it was suggested by him that this practice might be one explanation of irregularities they encountered in the testing of antitoxin. In both laboratories these used animals were then eliminated from the breeding pens, and there was subsequently a decided diminution in the number of irregular results. In order to throw further light on this question Anderson has tested the young of female guinea-pigs which had recovered from the effects of an injection of toxin alone or of the toxin-antitoxin mixture. These animals were put aside for breeding after having been under observation thirty-five days after injection. In one set of experiments the young guinea-pigs were tested against an L_+ dose. The result was that seven out of fourteen mothers were found to have transmitted to their young an immunity sufficient to withstand this dose. All these seven mothers had received the toxin antitoxin mixture; in no case did a mother which had received toxin alone transmit immunity. In another set of experiments the young guinea-pigs were tested against a minimum lethal dose. The result was that six out of twelve mothers were found to have transmitted immunity to their young. These six constituted 75 per cent. of the mothers which had received toxin-antitoxin mixture; it was again found that no mother which had received toxin alone transmitted immunity. In both sets of experiments it was noticed that, where an immunity was transmitted, all the litter were immune to about the same degree. Anderson cannot give a positive answer to the question why this immunity is transmitted by some mothers but not by others; he suggests that it may be because some of the guinea-pigs produce more antitoxin than others. This explanation is supported by the fact that horses differ considerably in the amount of antitoxin they are capable of producing. Some horses have been found to produce little or no antitoxin, even after prolonged treatment.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

213. Echinococcal Cyst of Lateral Ventricle.

O. Federici (*Riv. di Pat. nervosa e ment.*, Florence, November, 1906) describes the case of a child of 5 who exhibited signs suggestive of cerebellar tumour, and was found to have a large echinococcal cyst in the lateral ventricle. In December, 1903, the child began to complain of occipital headache; this continued till August, 1904, when epileptiform attacks involving all four limbs began to occur. Consciousness was not completely lost, relaxation of the sphincters and vomiting occurred, the right side was more convulsed than the left, and the attacks lasted for half a day, and occurred at long intervals. The child always tended to be constipated, but its general health seemed otherwise to be good. There was never any otorrhoea. In January, 1905, the child was well nourished, and showed slight signs of rickets; the head, particularly in the occipital region, was said to be increasing in size. The head and eyes were generally turned to the left; squint and nystagmus were absent. The arms trembled a little, and were held flexed; the legs exhibited similar but slighter tremors. The abdomen was scaphoid. No facial paralysis was seen; something resembling an intention tremor was observed about the arms; the child walked badly and tended to fall down soon, but Romberg's sign could not be obtained, while the knee-jerks and Babinski's sign were absent. The pupils reacted to accommodation but not to light, and the optic discs were congested. The sphincters acted normally, and the child was obstinately constipated. No particular tenderness could be elicited over any area of the cranium; mentally, the patient was dull and emotional. Dermographism and general cutaneous hyperaesthesia were present. Lumbar puncture was performed, but the fluid withdrawn yielded no definite information. One day the child complained much of headache in the right occipital region, and presently had an epileptiform fit; the convulsions were more marked on the right than on the left side, and the child remained in a comatose condition for some hours after it was over. Between January and June, 1905, the general condition grew steadily worse; the fits ceased, all reflexes disappeared, the sphincters were relaxed, the pulse became thready and irregular, the temperature was subnormal, the mental faculties were slowly lost. The head swelled considerably (circumference 22 in.), and the cranial bones became disjoined from one another; the child died in June. At the autopsy the dura was thickened and adherent to the cranium. The right cerebral hemisphere was much smaller than the left, its convolutions were flattened and compressed, and there was great dilatation of the lateral ventricle. The left hemisphere showed greater evidences of compression; except in the frontal lobe, the convolutions could no longer be distinguished from one another; the lateral ventricle was occupied by a melon-shaped, thin-walled sac containing half a litre of clear yellow fluid in which NaCl, succinic acid, scolices, and hooklets were subsequently recognized. The cyst wall was composed of an outer hyaline and an inner germinative layer. The right cerebellar hemisphere and its middle peduncle were distinctly smaller than those on the left side. The basal ganglia, small on the right side, had entirely disappeared on the left; the corpus callosum was thinned; the fourth ventricle was normal. Federici discusses the diagnosis and symptomatology of the case, and also the literature of echinococcal cysts of the brain. Operation on such cysts seems to have a mortality of from 40 per cent. to 60 per cent. In children complete cure by operation is not infrequent.

214. Haemochromatosis with Diabetes Mellitus.

Futcher (*Amer. Journ. Med. Sci.*, January, 1907) record two cases of haemochromatosis presenting the cardinal symptoms of skin pigmentation, hypertrophic cirrhosis of the liver, and diabetes mellitus. Unfortunately, autopsies were refused in both instances; but the first case presented moderate pigmentation of the face, neck, and hands, considerable enlargement of the liver, and the presence of iron in the epithelial cells of the sweat glands. Death occurred from coma twenty months after the onset of the diabetic symptoms. In the second case there was intense pigmentation of many years' standing, iron in the cells of the sweat glands, an enormous liver, and, six months prior to death, symptoms of diabetes, though the patient actually died from bronchopneumonia and not from coma. It appears that diabetes develops in haemochromatosis only when the pancreatic tissue becomes so diseased that there is considerable destruction of the islands of Langerhans, the glycolytic ferment being no longer produced, with the result that glucose accumulates and gives rise to permanent diabetes. From reports of other cases there is always visceral pigmentation, which may be present long before any bronzing of the skin occurs. It is generally held that this pigmentation of the viscera is primary and precedes the diabetes, being due to some unknown toxic agent giving rise to an increased destruction of red blood corpuscles, with deposition of haemosiderin and haemofuscin in the tissues.

215. Inequality of Pupils an Early Sign of Tuberculosis.

Naegeli (*Rev. méd. de la Suisse romande*, December 20th, 1906) observed inequality of pupils in 4 of 27 cases (14.8 per cent.) of incipient tuberculosis. (1) A previously healthy woman, aged 45, became emaciated and was steadily losing strength. The evening temperature was usually about 98.7° F. She suffered from articular and muscular pain, sweats, and frequent attacks of left trigeminal neuralgia. There was harsh respiration with prolongation of expiration at the left apex. A few days later she was seized with a typical attack of tuberculous articular rheumatism. Salicylate of sodium failed to relieve. Before the onset of this attack the right pupil was dilated and the left contracted. Both pupils reacted to light and accommodation. If the left pupil was dilated with atropine, the mydriasis persisted longer than usual. Vision was normal. (2) A boy, aged 10, had a year before coming under the writer's observation had an attack of left tuberculous pleurisy. There were no abnormal physical signs except an indistinct pleural rub on the left side. The pupils were unequal, there being left mydriasis. Vision was normal. (3) A girl, aged 5, had bronchopneumonia at 3. She had since been delicate, was constantly contracting colds, and was anaemic. There were anorexia, sweats, and frequent attacks of trigeminal neuralgia. The pulse was 85 to 95. Growth was retarded. The pupils were unequal, the left being dilated. (4) A man, aged 28, whose parents had both died of tuberculosis, had tuberculous teno-synovitis of the flexors of the foot, for which an operation was performed. Subsequently he suffered from febrile gastric attacks, and the pulse was permanently frequent. Auscultation revealed nothing abnormal in the lungs. When seen five years later there was right mydriasis and left myosis. Though inequality of pupils is of little importance compared with some of the other signs of incipient latent tuberculosis, it may when combined with one or more of these symptoms clinch the diagnosis. Absolute proof of the tuberculous nature of the disease was wanting in Case 3, but in the others the diagnosis was indisputable. The sign has previously been described.

216. Cerebellar Symptoms in Malaria.

D'Allocco (*Rif. Med.*, January 5th, 1907) reports the case of a woman, aged 41, suffering from malaria with cerebellar symptoms. The first attack of malaria came on when she was 14 years old, and was accompanied by symptoms somewhat like those now observed—namely, difficulty in speaking (dysarthria) and disturbances of voluntary movement, which passed off after a course of quinine. Until the end of July, 1906, the woman had no attacks, but on the 25th she was seized with malaria, and on admission to hospital on August 2nd presented the following symptoms: Speech slow, difficult, and scanning in character, anxious expression, marked tremor, deliberation and inco-ordination on attempting voluntary movements, whether of upper or lower limbs. This intention tremor is more marked on attempting delicate movements. On the other hand, when once the patient got over the fear of standing alone, she could stand for a long time without fatigue, and similarly with other muscles, so that she could remain in a semi-cataleptic state. The cutaneous and tendon reflexes were practically normal, no Babinski reflex, no nystagmus, and no fundus changes and no hysterical stigmata. There were slight headache, and the spleen was moderately

enlarged. The contrast between the disturbance in voluntary kinetic equilibrium and the preservation of voluntary static equilibrium was very marked. No cause could be detected other than malaria.

SURGERY.

217. Transplantation of the Cornea.

Zirm (*Wien. klin. Woch.*, January 17th, 1907) has performed the first successful operation of cornea-grafting (keratoplasty). His patient could distinguish light and darkness, but was otherwise completely blind owing to opacities which resulted from a severe burn caused by lime. Both corneae were opaque and white. On December 7th, 1905, grafts were taken from the cornea of a boy, aged 11, whose eye was removed after injury by a splinter of iron. Eight days after the operation both the transplanted grafts were completely transparent, but on the eighteenth day the right eye became painful and the cornea bulged. The tension was increased. Sclerotomy was performed without relief. The apex of the bulging cornea, which included the fairly transparent graft, was excised and the pain and tension subsided. At this time the condition of the left eye was most satisfactory. Fingers could be counted at 3½ metres. In June, 1906, V = $\frac{5}{5}$, Jaeger type No. 16; and more than a year after the operation $\frac{5}{5}$, Jaeger No. 15, at 8 cm. With + 8 lenses Jaeger No. 10 type could be clearly read; with a stenopaic slit V = $\frac{5}{5}$, and with other lenses Jaeger type No. 6 was easily read. The visual field was of normal extent. The man could perform all the duties of a peasant—such as cutting grass and attending to his cow—as well as before the accident, and could travel about by himself both in town and country. The graft appeared as a black transparent substance in the midst of completely opaque cornea. It had retained its original diameter of 5 mm. Its upper half was entirely transparent. By focal illumination a faint superficial haziness of the lower part of the graft could be distinguished. This, which was stationary, was due to the ingrowth over the surface of the graft of vessels, so minute that they could be recognized as such only with the corneal microscope. Through the grafted cornea the bluish-grey iris, the upper internal border of which was apparently adherent to the posterior surface of the graft, and the normal optic disc were plainly visible. The graft also possessed tactile sensibility. The junction between the graft and the leucomatous cornea was indicated by an extremely narrow white circular line. Though keratoplasty was proposed by Reisinger in 1824, and has been repeatedly performed, the operation has always failed owing to the transplanted flap rapidly becoming opaque. The causes of failure were probably inattention to the following points: (1) The graft should be taken from a healthy human cornea, preferably that of a young person, and not as in previous cases from animals. In a large clinic it is only a question of time before a suitable case is found. (2) The graft should be removed and the opening into which it is to be placed should be made with von Hippel's corneal trephine, which is driven by clockwork. If the anterior chamber has not become obliterated eserine should be instilled before the operation. (3) General and deep anæsthesia is requisite. The slightest movement of the patient may imperil success. (4) Antisepsis is essential, but no antiseptics are admissible. The graft should be placed between two layers of gauze moistened with sterile normal saline solution until required. It should then be fitted into the trephine opening with the gauze and should not be touched by any instrument or applied on the finger. The corneal layers on the anterior and posterior surfaces of the graft are thus preserved and imbibition of the aqueous humour [provided the edges fit accurately] is prevented. (5) The graft should be held in its new position by two fine sutures crossing each other in the middle and attached laterally to the ocular conjunctiva. (6) Keratoplasty is likely to succeed only if the deeper parts of the cornea have escaped destruction. The corneal tissue [except at the extreme outer edge] is avascular and is nourished by diffusion. If sufficient of the deeper layers of the cornea remains the transplanted graft may be nourished as is the normal cornea. But if the whole thickness of the cornea is cicatricial the graft can be nourished only by the ingrowth of vessels, which ultimately invariably produces opacity. In the present case the central part of the graft, which completely occluded the trephine opening, corresponded with a part of the cornea which was originally opaque. The leucoma, over which the epithelium passed, was in contact with the densest part of the leucoma. Thus, careful selection of cases is essential. Keratoplasty should also be successful in cases of small central corneal cicatrices due to septic ulcers, as the graft would be implanted in healthy corneal tissue. The results—both cosmetic and optical—would be greatly superior to those obtained by iridectomy.

218. Resection of the Stomach for Cancer.

Lariche (*Rev. de Méd.*, February 10th, 1907) gives the results of operations for cancer of the stomach. Patients are too often allowed to wait for an exploratory laparotomy until the disease and the accompanying cachexia have progressed to such an extent that a clean removal of the whole growth is impossible. Few visceral cancers, the author thinks, give such hopes of a lasting cure if attacked early. Although Jordan has reported a case of tongue cancer in which recurrence took place nineteen years after excision, the author thinks that the word "cure" may be used when the patient remains free from recurrence three years after operation. He has collected 95 cases operated on for gastric cancer. Of these, 35 remained free for three years, 17 for four years, 15 for five years, 6 for six years, 10 for seven years, 5 for eight years, 1 for nine years, 2 for ten years, 3 for eleven years, and 1 for sixteen years after operation. Amongst these cases there was 1 who had a recurrence during the third year after operation, 2 after four and a half years, and 1 at five and a third years. These results were obtained by English, French, and German surgeons, and from every kind of gastric cancer, though pyloric cancer claimed the largest number of cases. From this list it may be concluded that every stomach cancer, at whatever point it is situated, can be cured by operation, and that there is no form which, if taken early enough, is outside the reach of surgery. The lasting cures number about 20 per cent. The condition of these patients after operation is very good, and they are able to resume work and can eat all kinds of food, though in some cases the diminished stomachic space causes slight discomfort after a hearty meal. All cases show an absence of hydrochloric acid, and some have lactic acid present in the stomach. A test meal has disappeared from the stomach in three-quarters of an hour. The intestinal functions remain normal. There is no nausea or vomiting. Such benefit is gained by early operation that every patient of about 50 years of age who, not having had previous indigestion, suffers from his stomach, without any visible cause being found on examination, should be suspected of having gastric cancer, and should, on the appearance of cachexia, undergo an exploratory laparotomy. Vomiting should not be waited for. This is quite a late symptom in many cases, especially in those very common cases of cancer of the antrum pylori. The apparent fixity or mobility of a gastric tumour, as felt by the hand from without, is often very different from the real condition. No patient should be allowed to reach a stage of advanced cachexia; but when that stage has been reached it should not be taken as a contraindication to operation.

OBSTETRICS.

219. Irreducible Shoulder Presentation.

Bar thinks that the name of "irreducible shoulder presentation" is preferable to the old one, "neglected shoulder," which cast a slur on the accoucheur. In *Le Nord Médical*, February 1st, 1907, he outlines the best methods of procedure when an irreducible shoulder presentation is met with. The gravid uterus near term is composed of the thick-walled body and the thin-walled lower segment; the line of junction of these two parts is called Bandl's ring. Two eventualities are possible in a shoulder presentation. In one case the fetus is situated below Bandl's ring, in the lower segment, which is stretched nearly to rupturing; this condition is called the "subannular shoulder presentation." In the other case the uterine body is firmly contracted upon the fetus, which, with the exception of a limb or two, is above Bandl's ring; this is called the "supra-annular shoulder presentation." In the former case the patient's pulse is quickened and her face expresses extreme fatigue. The abdomen has a bilobed appearance, with a horizontal furrow in the lower part, corresponding to Bandl's ring; the uterus is ready to rupture in its lower thin part. The finger in the vagina can easily reach the descended shoulder. In the second case the uterus is in tetanic contraction causing the woman great pain. The abdomen is nearly oval, the uterus is movable and "flouts" above the lower segment. On examination the lower segment is

discovered, flaccid and hanging, and above it an orifice with hard, stretched, wooden edges, beyond which the finger touches some part of the fetus. In most cases, when internal version is contraindicated owing to the uterine retraction, the fetus is already dead, and so embryotomy is the evident course to be adopted. In the subannular presentation embryotomy is relatively easy, the site of operation being within easy reach. Dubois's scissors and Tarnier's vertebral embryotome are the instruments recommended. The accoucheur must be on his guard against the threatening uterine rupture. All technique likely to put an excess of tension on the already over-distended lower segment must be discarded. In the supra-annular presentation the difficulties are greater. No fetal section must be attempted until the hand is within the cavity of the body shut off by the ring of contraction. The technique then differs according as the fetal neck is accessible or no. When the neck is accessible, two fingers slightly parted are to be placed on the neck, and Dubois's scissors applied between them. Démelin's subcutaneous process is recommended. In one case of the author's an upper limb was very troublesome, and tracheotomy was first performed, and the embryotomy then proceeded with. In the supra-annular incarceration the neck is often not accessible, and the thorax often presents. There are several courses open to the accoucheur. Spondylotomy with complete fetal section through the thorax, with Dubois's scissors or Tarnier's embryotome; but this is a difficult and long proceeding, for the scissors do not bite, and the thorax slips away. Forcible turning or forcible evolution may be attempted when the fetus has been reduced in size by evisceration with or without urachiotomy. This method has the advantage of preserving the natural handle offered by the trunk for the extraction of the head. Forcible evolution differs little from forcible turning. This method was adopted by the author in the second of his cases after urachiotomy and evisceration had been performed.

220. Mechanical Dilatation of the Cervix in Labour.

J. C. Holdich Leicester (*Journ. of Obst. and Gyn. of the Brit. Emp.*, March, 1907) gives notes of 16 cases in which mechanical dilatation of the cervix was performed, in 7 of the cases because of eclampsia, in 6 of rigid cervix, and in 1 each of hydatid mole, placenta praevia, and in 1 for the induction of labour. There was some laceration of the cervix in 4 of the cases, but in only 1 was the laceration severe enough to need immediate treatment, and even in this case it did not extend beyond the vaginal part of the cervix; in the other cases there was no untoward effect which could be attributed to the method of dilatation. In the first 6 cases the instrument used was Bossi's dilator; in the remainder Preiss's modification of the same instrument. Theoretically the author believes de Seigneux's dilator to be the best, and he proposes to employ it the next time he has occasion to use a dilator. From his own experience the author decides that the mechanical dilators have a distinct place in obstetrical practice. The danger of laceration is, however, so great, that they should be employed only by those who are accustomed to major obstetrical operations. Great care is needed in the insertion of the dilator, and the dilatation should be performed very slowly, the operator keeping a finger on the cervix in order to assure himself that it is not being unduly stretched. The risk of an extensive laceration is greatest when dilatation is begun before the cervix has been taken up, and this should only be done in exceptional cases. It is exceedingly doubtful whether mechanical dilatation should be employed in cases of placenta praevia, except in those which require treatment comparatively early in pregnancy; owing to the friable nature of the lower uterine segment in such cases, there is especial danger of a laceration leading to serious haemorrhage.

GYNAECOLOGY.

221. Maternal Gonorrhoea and the Nutrition of the Child.

Drs. Lobenstine and Harrar (*Bull. of the Lying-in Hosp., City New York*, December, 1906) have made investigations to determine the truth or fallacy of the idea that gonorrhoea, as opposed to syphilis, has no harmful effect upon the offspring, beyond a possible ophthalmia. Their work is based upon comparisons made between 50 babies of gonorrhoeal mothers, 150 babies of normal mothers, and 50 babies of non-gonorrhoeal mothers, all having a *post-partum* temperature due to some other cause than gonorrhoea. The babies were all breast-fed, and the period of observation extended over the first ten days of life. In the 50 cases of gonorrhoeal mothers the gonococcus was demonstrated in the genital tract in every case. Prematurity in gonorrhoeal mothers amounts to 22 per cent., and in normal mothers to less than 3 per cent., while the weight of infants born of gonorrhoeal mothers is less than that of the infants of normal mothers, the former weighing on an average 297 grams less than the latter. These facts apparently show that the diseased endometrium exerts a baneful influence on the growth and maturity of the embryo. The average initial loss during the first few days of life is more pronounced in the gonorrhoeal babies, and the amount of loss regained on the tenth day is less in them than in normal babies. The gonorrhoeal babies show both more temperature disturbance and more intestinal disturbance than the normal babies. The babies of non gonorrhoeal febrile mothers show a greater average initial loss than the normal babies, and do not regain at the end of ten days but 5.3 per cent. of their loss as against 49 per cent. in normal babies. It is evident that gonorrhoea in the mother in the later months of pregnancy is not only a cause of a greater number of premature births, but that it has a decided influence in lowering the average birth weight at term. And this low average birth weight is largely due to the effects of the disease vitiating the normal nutrition of the fetus. The apparent inability of the gonorrhoeal baby to regain by the tenth day any appreciable percentage of the birth-weight is probably due to the lowered standard of nutrition at birth as well as to the temperature of the mothers, and probably not to gonorrhoeal toxins excreted in the milk.

THERAPEUTICS.

222. The Treatment of Cutaneous Epithelioma.

Bizard (*Progrès Méd.*, February 9th, 1907) reviews the various methods employed in the treatment of epithelioma of the skin. There is no possible comparison to be drawn between a visceral cancer and a cutaneous epithelioma. The latter is not malignant; in its early stages it is like a small button, an ulceration of little account, which will take years to become serious, if it ever does so. The pomades and plasters used by the last generation of medical men often stirred up the neoplasm to energetic growth. Of the methods of treatment in vogue to-day, surgical treatment must come first, as it gives the greatest measure of security for the future. Radiotherapy is quite new, the first cases treated in this way being reported in 1900. Many failures have since been recorded, chiefly due to faulty technique. The treatment by *x* rays must be begun by an application of feeble intensity. Belot thinks that if the growth is not ulcerated the dose should be small, but should be increased when the growth has ulcerated. There is, however, no fixed rule, and each case must be its own indication. The treatment must not be stopped too soon, but must be continued even after the lesion has disappeared. The *x* rays are contraindicated when the growth is deep, or quick growing, or of long standing, or if it be situated on a mucous surface. All forms of internal medication are useless. Some external local applications are beneficial, especially preparations containing arsenious acid, which act by causing a slough. The pain with this method is inappreciable, and the only danger attending it is that of intoxication. Another method of treating cutaneous epitheliomata is by the cautery. The thermo-cautery or the galvano-cautery may be used, and have many advantages over the chemical caustics. When the growth is deep the thermo-cautery will act best, while the galvano-cautery will be found serviceable when the growth is superficial and crust-like. Finally, the author thinks, the first place must be given to surgical intervention in the cure of cutaneous epitheliomata, and the other methods mentioned must be looked upon as useful but not indispensable auxiliaries.

223. Phototherapy in Nervous Diseases.

A. D. Rockwell (*Med. Record*, March 23rd, 1907) defines phototherapy as light treatment, the rays of higher vibration being utilized. The combined luminous, calorific, and actinic rays of sunlight are more powerful than any other sort of light, but for office use they are not the most convenient. Incandescent light has powerful heat and light rays, and is the most convenient to use, and has chemical power as well, due to the blue, indigo, and violet frequencies, though the violet rays will not penetrate glass. The arc light is deficient in heat rays; its action is superficial, and on the surface may be powerfully curative.

The heat power of the incandescent light is of great value in relieving pain. The ultra violet rays penetrate the body only under pressure and superficially, while the combined rays enter the body to a great depth. The incandescent light bath differs from the hot-air bath in many ways. The heat of the incandescent rays does not affect the surrounding air, as the hot-air bath does, but the radiant energy penetrates the body. The hot-air bath is more depressing and inferior in physiological and therapeutic effects. Incandescent light produces dilatation of the vessels that can be maintained for a long period, and alterative and reconstructive effects result, due to increased metabolism. Perspiration is rapidly induced, in five minutes or less, from the stimulation of the peripheral nerve endings. There is increased elimination of carbon dioxide; the haemoglobin carrying power of the blood is increased; the light is bactericidal; and it is a nerve stimulant or sedative according to the degree of intensity of the light. The profound changes in the circulation produced greatly relieve congested parts, as well as nerve pressure due to poor circulation. There is a secondary contraction of the arterioles. It gives temporary or permanent relief to pain, is a powerful tonic and aid to nutrition, and is of value in toxaemias and neuroses.

224. **Auto-Serumtherapy in Pleural Effusion.**

Fede (*Rif. Med.*, December 1st, 1906) in five cases of pleural effusion has tried a mode of treatment first suggested by Gilbert in 1894. This consists in the intracellular injection of some of the pleural fluid withdrawn from the patient. About 1 c.cm. of the fluid is drawn into the syringe, and without removing the syringe completely the same fluid is injected into the cellular tissue. The author's experience was favourable. It appears to be innocuous, and does not give rise to any reaction except in the case of tuberculous pleurisy; in these cases some rise of temperature follows the operation, and the author suggests that if this reaction is universal in tuberculous cases, and in those only, it may serve to differentiate tuberculous from non-tuberculous effusions. In acute early cases two injections of 1 c.cm. each are sufficient; in chronic cases four or five injections may be necessary. By this method early cases may, it is said, be cured in twelve to fifteen days. The improvement is not due to the mere mechanical removal of a small quantity of fluid, for in one of the author's cases, after complete removal of 1 c.cm. of fluid from the pleura no change was noticed, but when the same amount was interdrawn and then subcutaneously injected, augmented diuresis and lowering in the level of the pleural fluid followed within twenty-four hours. Of the author's five cases one only was tuberculous; all left the hospital cured.

225. **Autan, a new Formalin Preparation.**

The qualities of a practical disinfectant should include (1) that it can be easily and accurately prepared and that it is capable of killing pathogenic micro-organisms within a definite time (for example, a night or a day); (2) that it is able to penetrate to a certain depth, through such substances as fresh or dried sputum, diphtheritic membrane, clothing etc.; (3) that it does not damage furniture and articles which are to be exposed and that it does not corrode or tarnish; and (4) that it is not too dear. Trillat (*Munch. med. Woch.*, December 11th, 1906) claims that these conditions are fulfilled by autan, which was introduced by him in 1903. It consists of a mixture of paraform, permanganate and metallic peroxides, in definite proportions, and has the property that, when mixed with water, after a time, heat and evolution of gas are developed. The gas consists of formalin and aqueous vapour. The evolution is so sudden that it becomes necessary to close all the openings of the room to be disinfected. One need only close windows and doors while the disinfection is in progress. The powder is placed in a pail and water is added. To get rid of the formalin after the process is finished, one adds some carbonate of ammon or milk of lime. The alkaline fluid will then liberate such ammonia to neutralize the formalin. Trillat tested the efficacy of this method by means of pieces of filter paper moistened with various micro-organisms, and more rarely portions of linen and woollen stuffs artificially infected. After the disinfection was completed these objects were exposed to air for varying times, to get rid of the last traces of formalin, and then were placed on nutrient agar and the latter incubated for 48 hours. He watched these plates for a month, and if no growth had then shown itself reported a complete result. For all he applied the vapour of a mixture of 10 cubic metres capacity 1 kilogram of autan and 900 c.cm. of water were used, and the experiment lasted for six hours. The various infected pieces of filter paper, etc., were placed about the room, some under more or less thick coverings and some open to the air. Practically all the pieces proved to be sterile. Next he tested the disinfection of larger rooms. A room of 110 cubic metres capacity was treated with four pails containing 1 kilogram of autan each, two containing 450 grams, and one containing 50 grams, for six hours. The control experiment showed that the agar plates made from the pieces of filter paper without disinfection grew 80,000 colonies of staphylococci and 50,000 colonies of anthrax spores. A few of the pieces of paper were capable of giving rise to a few colonies up to 200, but the large majority proved to be sterile. He also carried out some other experiments of a similar nature. He concludes that the process is extremely simple, and can be applied to cupboards and other positions in which the ordinary methods cannot be applied. Since the formalin is developed so suddenly, the process takes a shorter time than the ordinary formalin disinfection methods, and the whole process may be satisfactorily carried out in four hours. During this short time there is no need to hermetically seal up the cracks and crevices. The substance is easily obtained and portable. And, lastly, the apparatus can be obtained in every household. This consists of a pail, or several, according to the size of room, and a basin of corrosive sublimate solution for washing any visible spots or stains. For cabs, ambulances, etc., the material can be used with advantage, and one can calculate the amount of autan required by allowing 50 grams for each cubic metre. Autan also possesses deodorizing qualities.

226. **Olivenol-iodate.**

Mirano (*Giazz. degli Osped.*, March 10th, 1907) gives his experiences with olivenol-iodate, which is a chemical combination of iodine with olive oil, somewhat allied to iodipin. It has the appearance, density, and smell of ordinary olive oil, and contains 7.6 per cent. of iodine. When given hypodermically in doses of 10 c.cm. and of 2 c.cm., absorption was slow, and elimination, as a rule, did not occur to any degree before thirty-six hours, but continued slowly for some time afterwards—for example, in one syphilitic case where the drug had been given daily by hypodermic injection, iodine could still be detected in the urine fifteen days after the drug had ceased being administered. On the contrary, when given by the mouth it was rapidly absorbed, and could be detected in the urine forty-five minutes later. Toleration was well marked, and no iodism—or, at least, no bad iodism—observed. This is owing to the gradual way in which the iodine is set free. The author never saw nausea, headache, dyspepsia, or coryza after its use. Some stomachs rather resented the amount of oil, and in one case a slight erythema developed. The hypodermics did not give pain nor set up irritation. No albuminuria was noted.

PATHOLOGY.

227. **The Renal Plexus in Nephritis.**

C. Lugoni (*Riv. crit. di Clin. Med.*, Florence, 1907, Nos. 9-11) has made careful anatomical and histological studies of the renal plexus, the renal and coeliac ganglia, the cervical sympathetic, and other nerve bundles in 12 cases of acute and chronic nephritis. These nervous elements were examined separately on the two sides of the body, but Lugoni has hitherto found no unilateral changes worth mentioning. Details of the fixing and staining methods he used are given, as well as of the changes found in the kidneys and nerves examined. From what he has found in the presumably normal nerves and ganglia of other patients coming to abduction, the author believes that many of the minor changes seen (alterations in the shape, staining reactions, distribution of cromatin, etc.) are due to *post mortem* alterations alone. He believes that in parenchymatous nephritis various secondary changes, such as simple atrophy of numerous ganglion cells and slight inflammation or atrophy of nerve fibres and slight amounts of small-celled infiltration, are often to be found in the renal plexus, though not in proportion to the renal lesion. In chronic interstitial nephritis the renal plexus is but little affected. No characteristic changes were found in the coeliac plexus in either form of nephritis, as a rule, and Lugoni concludes that the kidney and renal plexus are not affected of the coeliac plexus and semilunar ganglia.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

228. **Pancreatic Diabetes by Autoinfection.**

Gilbert and Lereboullet (*Rev. de Méd.*, November 10th, 1906) have convinced themselves that cirrhosis of the pancreas and resulting diabetes often arise from a primary autoinfection of the pancreas, and in support of their contention they quote several cases which came to autopsy, and in which careful macroscopic and microscopic examinations of the pancreas were made. The first case was a woman of 60 who had been diabetic for about twelve months, and who also suffered from a very large and tender liver. On coming to autopsy it was found that the liver was fatty, but there was no cirrhosis and no cellular degeneration. The pancreas was surrounded by a large amount of peripancreatic fat, the glandular tissue itself in great part having disappeared. At the tail end of the gland a small coral-shaped calculus blocked the canal of Wirsung. On histological examination there was found very advanced sclerosis of the whole of the gland, interlobular and interacinous, and accompanied by a transformation of small islets of glandular tissue into pseudo-canaliculi; in parts there were found true angiomatous canaliculi; the islands of Langerhans were in many parts of the gland quite normal. The authors give the clinical histories and pathological findings in two other cases of diabetes, in both of which, in addition to changes in the pancreas, there was found enlargement of the liver. In both these cases also pathological changes in the pancreas were very marked, consisting of an advanced state of cirrhosis, inflammation of the pancreatic canals, with dilatation and tendency to obliteration of the terminal canals; in both the cirrhosis was most marked around and in the neighbourhood of the small pancreatic canaliculi. These changes, the authors maintain, indicate that in pancreatic diabetes the lesions of the pancreas are the result of an ascending infection of the pancreatic ducts, and that the changes found in the pancreas—for example, proliferation and desquamation of the epithelium of the excretory canals, thickening of their walls, sclerosis, chiefly around the canals—are comparable to the changes in the liver resulting from a chronic inflammation of the intrahepatic bile ducts. In some cases of pancreatic diabetes there are found, in addition to pancreatic lesions, changes in the liver (angiocholitis); in fact, pancreatic canaliculitis is most often associated with inflammation of other glandular canaliculi, and these are all the result of an autoinfection. In favour of the theory of autoinfection in the production of the pancreatic lesions in diabetes, the authors point out that in many of these patients there can be obtained a history of previous autoinfections, such as jaundice, hepatic colic, enteritis, appendicitis, etc., and the ancestors of some of these diabetic patients or their family relations may have suffered from symptoms indicative of autoinfective diseases, thus showing the tendency of diabetes to occur on a soil subject to autoinfective processes. In the clinical histories of the cases the authors describe there was evidence of a hyperfunctioning of the liver—for example, the quantity of sugar excreted in the urine remaining more or less constant, whether the urine be examined in periods of fasting or after food; by an increased excretion of urea; by enlargement of and pain over the liver; and, on microscopical examination, by an absence of definite fundamental changes in the liver cells. The authors think that this hyperfunctioning of the liver is a secondary result of the pancreatic lesion, and from this excessive liver functioning the diabetes results.

229. **An Epidemic of Botulism.**

N. Tiberti (*Lo Sperimentale*, 1906, lx, 679) describes a small epidemic of poisoning by pork sausage meat that occurred during January, 1906, in Bologna, and gives a general discussion of the subject. Twelve persons were affected; they exhibited the signs of acute enteritis—fever, abdominal pains, and marked nervous depression. One of them, a girl of 19, ate about 2 oz. of the raw sausage at 8.30 a.m. An hour later she complained of nausea and burning pains in the epigastrium; soon she began to vomit freely. That evening she had a prolonged, violent rigor, followed by fever, headache, vertigo, precordial pains, cramps in the limbs, and dyspnoea. Diarrhoea set in during the night; next morning the patient was collapsed, with dilated pupils, thready pulse, and unable to pass water. She died 40 hours after eating the sausage. The *Bacillus paratyphosus B.* was found in the motions of four of the other eleven patients, who all recovered; they had eaten the sausage cooked. The author states that he was able to examine other sausages of the same batch as those that caused this epidemic, and he found that they were not putrefied and appeared well preserved. He found, however, that Gärtner's *Bacillus enteritidis* (type Aertryck) in a virulent form was present in all the samples of the sausage meat he examined, and that it produced a toxin able to resist heating; he thinks that this microbe may have been the cause of an epidemic of swine fever which was prevalent at Bologna at that time.

230. **Acute Cardiac Dilatation.**

Cheinisse deals (*Sem. Méd.*, February 27th, 1907) with the causation of acute cardiac dilatation. Schultess noted that after 1889 the number of men rejected for the Swiss military service on account of the state of their hearts constantly increased, and in 1904 was three times as great as in 1875. Among many causes Cheinisse gives the first place to the abuse of athletics. But he asks the question, Does acute cardiac dilatation exist? There is no doubt that transitory cardiac dilatations of weak hearts exist, and are seen in the course of many diseases. Schott produced arrhythmic pulse, tachycardia, and enlarged area of cardiac dullness in healthy boys by overexertion, and proved the enlarged cardiac dullness by radiography. Albu showed similar dilatation in cyclists after a race, and in soldiers after forced marches. Hoffmann insisted upon the necessity of ascertaining the position of the diaphragm before diagnosing a dilatation, and in normal subjects could never detect by radiography any cardiac dilatation after muscular exertion. Latterly Moritz's method of orthodiagraphy has lent to these researches a precision which had been till now lacking. De la Camp, making use of this method, could not convince himself that muscular effort is sufficient to cause dilatation of the ventricular cavities so long as the heart muscle is sound. Lennhoff and Levy-Dorn have examined wrestlers immediately after the contest, and have found by percussion an increased area of precordial dullness, which orthodiagraphy failed to show. Selig, too, has concluded, from his examination of footballers and wrestlers, that physical exertion alone cannot produce dilatation of a healthy heart. Displacement of the apex and increased precordial dullness only proved to him, as to Hoffmann, elevation of the diaphragm and an increased diastole. In Selig's cases the heart was in every way normal at the end of five minutes. Doubtless the functional power of the heart has its limits, but by a wonderful degree of adaptation which it possesses, even the most violent muscular exertion is insufficient to cause acute dilatation of the cavities of a healthy heart. But moral emotions, and especially violent and sudden shock, have a decided influence on the heart. Pokrychkine and Capitan have shown that while, in normal people, running has no power to alter either the form or volume of the heart, in nervous subjects both may be considerably changed. Starck has related the case of a healthy student, aged 20, who could undergo severe bodily exertion without any consequent cardiac changes, but who, under the mental excitation caused by a duel in which he was engaged, showed enormous dilatation of the heart, which, however, completely disappeared in a week. Marmorstein, too, has seen a similar condition in two cases during the Jewish pogrom at Odessa. But in these cases the dilatation only persisted for a few hours. Jacob has noted in several nervous women attacks of angiospastic dilatation accompanied by distress, dyspnoea, palpitations, and a transverse increase of the precordial dullness. Emotion acts through the vasomotor nerves, arterial spasm causing high tension, which strains the heart muscle. It is certain that the very suddenness of the moral shock is such as to stop the power of accommodation, which protects the heart against physical strain.

231. **Acute Pulmonary Oedema.**

Ribsman (*Amer. Journ. of Med. Sciences*, January, 1907) records 6 cases of acute pulmonary oedema, sudden in onset, dangerous in character, and with a tendency to recurrence. He considers the condition of sufficient importance to warrant a special reference in textbooks.

Arising suddenly without apparent cause, the disease may prove fatal in a short time; and though recovery from an attack is frequent, there is a marked tendency to recurrence. Among associated conditions which may be considered causative are: Arterio-sclerosis, Bright's disease, cardiac disease, asthma, acute infections, pregnancy, paracentesis of thorax and abdomen, angioneurotic oedema, etc. One of the most striking features is its suddenness of onset, usually at night, and at a time when the patient appears to be in good health. There is a sensation of oppression and suffocation accompanied by a fear of dissolution, and the breathing is laboured, and the dyspnoea or orthopnoea and cyanosis are intense. A copious frothy albuminous expectoration, which may be expelled in gushes from the mouth and nose, occurs, and this is frequently blood-tinged. On auscultation moist râles are present, especially over the upper lobes of the lungs. Vasomotor disturbances and a disproportionate activity of the two ventricles, in which the right predominates, are the chief pathological features to account for the condition. The best results in treatment are obtained by venesection, even though only a small amount of blood be abstracted. Failing this, dry cupping, freely applied over the back and front of the chest, should be tried, and if nervous symptoms are prominent, morphine hypodermically should be administered. If the pulse is feeble diffusible stimulants should be given, and if there is much cyanosis this will be relieved by inhalations of oxygen.

SURGERY.

232. Cardiac Massage.

GROSS AND SENCERT (*Arch. Prov. de Chir.*, No. 12, 1906) publish three fresh cases of intense chloroformic syncope treated by massage of the heart. In the first of these the conditions of success were quite hopeless, as infra-diaphragmatic massage was found to be impossible, and, after incision of the diaphragm, prompt and free access to the heart was hindered by a collection of fibrino-purulent fluid in the pericardial sac, and by recent cardiac adhesions. In the second case animation was finally restored after prolonged syncope and unsuccessful application of ordinary methods by massage practised through the intact diaphragm. The details of the third case, given in a footnote, indicate that infra-diaphragmatic massage was rendered difficult by enlargement of the liver, and that the fatal result was due to cardiac lesions and to the presence of a retrosternal tumour formed by a persistent and much-enlarged thymus. These three records extend the list of the published cases of cardiac massage to the number of thirty-four. In seventeen of these cases massage after opening the chest was successful in only one; the trans-diaphragmatic method practised in five cases invariably failed; and in seven out of twelve instances of infra-diaphragmatic massage animation was definitely restored. The authors conclude that cardiac massage claims consideration as a very valuable resource in cases of chloroformic syncope. Clinical facts, they point out, clearly demonstrate that, certainly in cases of chloroformic syncope, both the thoracic and the transdiaphragmatic method of massage ought to be proscribed. Infra-diaphragmatic massage through a small median wound in the epigastric region is regarded as a simple, easy, and safe procedure, and one meriting a prominent place among important therapeutical methods.

233. The Cracked-Pot Sound in Abdominal Surgery.

MANNAERTS (*Zentralbl. für Chir.*, No. 24, 1906) states that the *bruit de pot fêlé*, though usually regarded as of service only in the physical examination of pulmonary disease, has also a distinct importance in the diagnosis of abdominal affections. This sound can be readily elicited by percussion of an exposed portion of intestine fully distended by fluid and gas, but is very rarely to be made out under similar conditions in the living subject, except in cases of enormous dilatation by fluid and gaseous contents, due to intestinal occlusion. The author has heard the metallic sound in a case of appendicitis in which, after intervals of from [illegible] weeks from the beginning of the attack, suppuration in the ileo-caecal region was indicated by fever. At first he assumed that the physical signs in question indicated an abscess-cavity containing fluid and air within and situated in front of the caecum. On operating for the incision and emptying of such abscess, however, it was found, normally, lying not in front of but behind the large intestine. On the other hand, in cases in which the [illegible] was in free contact with the anterior abdominal wall the author failed to hear the sound. The presence or absence of this sign may thus, it is suggested, be useful in establishing the differential diagnosis between an abscess behind and one in front of the caecum. The cracked-pot sound in cases of retrocaecal suppuration is thus explained: The abscess compresses the caecum and ascending colon against the anterior abdominal wall, and these portions of large intestine being mechanically obstructed or paralysed by inflammation, become distended by gas and fluid exudation, and so present very favourable conditions for the production of this sign. It is held that when, in the course of the second or third week of an attack of appendicitis, this sound can be readily made out on percussion over the outer margin of the right rectus muscle opposite to the antero-superior iliac spine, the surgeon may venture with fair probability of success to diagnose an abscess situated behind the caecum and the ascending colon. This sound the author has heard also in cases of intestinal occlusion due to obdurate hernia, to tumour, and to cicatricial stenosis, and will, he anticipates, be found on clinical diagnosis a reliable indication of the existence of intestinal obstruction and, moreover, of the seat of the same.

234. Surgery of Tuberculous Cervical Glands.

L. S. D'ESTE (*Il Morgagni*, August and September, 1906) discusses the different ways of treating tuberculous cervical glands, especially excision and the injection of iodine. Since many cases recover completely with no other than dietetic and hygienic treatment, it seems unreasonable to advise free excision for cases with infection of only a few small glands. The advocates of iodine as the best treatment for all cases advise that intractable cases shall be finally submitted to more radical operations. D'Este considers that both schools have exaggerated somewhat. He does not deny the existence of great benefit to be derived from the hypodermic or parenchymatous injection of iodine preparations, but he decides that when the glands are large or numerous or painful or matted together, and still more when they are caseous or suppurating, treatment should begin with excision of the affected glands, unless there is any formal contraindication of operation. Recognizing a special rather than specific action of iodine in increasing the general organic resistance to tuberculosis, he considers that the two forms of treatment should be used together in all suitable cases, and he records a number of cases chosen to test his opinion. He does not regard an apical catarrh as a reason for not operating, and quotes Bles's record of 16 cases operated on while suffering from incipient phthisis, and afterwards found to have recovered completely. The contraindications which he does admit are miliary tuberculosis of the lung, multiple visceral and articular lesions, and an extremely bad general condition. In some cases operation was refused or complete extirpation was considered to be unsafe. An unsatisfactory scar is much more common after partial operations than after complete dissection of the infected glands. Relapse is due to incomplete removal of the diseased area, and is therefore to be attributed to the operator rather than to the operation. D'Este divides his own cases into three groups: (1) Eleven cases of radical treatment in its widest sense, all the glands which could be reached by minute and patient dissection being removed. (2) Twelve cases in which similar radical treatment was reinforced by distant intramuscular iodine injections as described below: 7 of these patients were in the same condition as those in the first group and the remaining 5 were in a much worse state. (3) Seventeen cases for different reasons could only be treated by incision and scraping or shelling out the glands, in addition to iodine treatment. The first group of patients recovered with only one relapse, and that in a very severe case more than a year after the first operation. The second group recovered without any relapse during the two years that the patients have been under observation. In the third group there were 4 cases of relapse, or rather of a continuation of the original disease, which could not be entirely removed by the defective method employed. The author attaches great importance to removing all the diseased skin, so that the scar is the line of union of two pieces of healthy skin. After the first incision he uses chiefly a pair of scissors with blunt ends. The different planes of tissue are finally sutured separately with fine catgut, so as to leave no empty spaces, and so that there may be no unnecessary tension of the skin. When in the course of operation the jugular vein is wounded he treats it by lateral suture or ligature, but he describes the operation of tying the vein as free from danger. The iodine preparation contains: pure iodine, 1 part; iodide of potassium, 10 parts; [illegible] guaiacol, 5 or 10 parts; glycerine,

100 parts. Of this 1 cg. was injected at first, and the amount subsequently increased to 7 cg. or less, from ten to thirty-nine injections being made altogether. In some cases injections were made for some days before operation; in others they were begun directly after operation. Some account is given of each case belonging to the first two groups. The cases of the third group are not reported in detail. The less satisfactory results in the third group show that the success obtained with the second group was not simply the result of the iodine treatment. D'Este considers that the method of injection of iodine into the gluteal or lumbar muscles is the best of all means of introducing iodine into the system, and may be safely employed at all ages.

OBSTETRICS.

235. Hydrostatic Dilator in Placenta Praevia.

MENDE (*Therap. Monats.*, December, 1906) has during the last five years employed a uterine hydrostatic dilator in cases of placenta praevia; the dilator he has not, as in Dührssen's method, placed within the amniotic cavity, but has left the membranes unruptured. He claims that the introduction of the dilator is a comparatively easy matter, and that results as good as those he has himself obtained may be obtained by an unpractised operator. After carefully carried out antiseptic preliminaries the left hand is introduced into the vagina and is not again withdrawn until the dilator has been introduced and dilated to such an extent as to prevent further haemorrhage. The anterior lip of the cervix is held and steadied by forceps, and an attempt is made to determine which is the best point for the introduction of the dilator; the dilator, however, tends to find for itself the path of least resistance, so that this examination is not of paramount importance. An assistant now holds the forceps while the operator introduces the empty dilator by means of forceps, and, guided by the hand within the uterus, passes it up over the internal os. The forceps are then withdrawn, the dilator being kept in position by the fingers, and dilatation is carried out. If the patient is exhausted by loss of blood she is allowed to rest with the dilator in position, and it is found that there is no great tendency to the speedy onset of labour; if, however, the patient is in good condition, extension is exercised on the dilator by means of a weight fastened to the end of the tube of the dilator, the weight being hung over the foot of the bed, and under this extension the onset of labour is prompt and sometimes almost instantaneous. The power thus given to the operator of bringing on labour at the time of his own choice is of the utmost value for cases exhausted by haemorrhage and needing time for recuperation. The bleeding is under absolute control as long as the dilator is within the uterus. On this system the author has treated in all 16 cases; of the mothers, none died at the time, but one died of atonic haemorrhage during the puerperium; of the children, 10 were born alive and the remaining 6 were dead before the beginning of the treatment. The mortality among the babies of 37.5 per cent. is relatively low; Olshausen's mortality on Dührssen's method is the only one known by the author to be lower, and is 35 per cent., but the number of cases described by the author is so small that any accident might more than account for the difference. The author prefers his treatment to that of Dührssen, and believes that Dührssen's method has the following disadvantages: The pressure of the dilator within the amniotic cavity tends to prevent the receding of the placenta, and may lead to intrauterine haemorrhage which may be overlooked; there is comparatively greater danger of asphyxiation of the child owing to the pressure of the dilator; the introduction of the dilator is difficult, and, if in difficult cases a separation of the margin of the placenta is carried out, much haemorrhage results; as the waters flow away there is danger of prolapse of the cord; labour sets in immediately, when the woman is often not in a condition to support it. On the other hand, the method here recommended of intrauterine dilatation is preferable to the classical method of treatment by version. In the treatment of version, as in Dührssen's method, the time of onset of labour is not under the operator's control; and, moreover, where immediate extraction is needed after version, the operation is one of considerable difficulty; in version there is not the same power of immediate and complete arrest of haemorrhage.

236. Puerperal Eclampsia.

ENGELMANN (*Zentralbl. f. Gynäk.*, No. 11, 1907) publishes a full report and analysis of an unusually severe case of puerperal convulsions. The patient was a primipara 22 years of age. The fits came on shortly before labour at term. Nearly thirty occurred before and shortly after delivery. Five hundred c.cm. of blood were removed by venesection and 1,000 c.cm. of saline fluid transfused. The fits ceased for over four days, then followed a restless night succeeded by 155 attacks in twenty-eight hours, the pulse ranging during that time between 180 and 200. Venesection after the thirty-second fit gave no result, but after the hundred and fifty-fifth, when the patient seemed moribund, the attacks recurring almost every five minutes, 2,000 c.cm. of blood were removed and 1,500 c.cm. of saline solution infused. No more convulsions occurred, but within a few hours after the last attack violent mental excitement set in, puerperal mania developing. This was further complicated by bronchopneumonia. Yet at the end of twenty-two days after the first fit the patient was discharged convalescent from hospital.

GYNAECOLOGY.

237. Stricture of Female Urethra from Tubercle.

HARTMANN (*Ann. de Gyn. et d'Obstét.*, January, 1907) observes that stricture of the urethra, save that form purely due to cicatrices, is very rare in women. Recent authorities distrust the alleged cases of true stricture due to gonorrhoea, the precise homologue of a very common type in the male. In such cases close inspection usually showed that chronic proliferating urethritis was present, the free vegetations diminishing the calibre of the urethra, a condition which might cause retention of urine, but was not pathologically stricture at all. Hartmann publishes a case, hitherto unique, where stenosis of the urethra was undoubtedly caused by tuberculous deposit. Ahrens, Bérard and Trillat, and Perge have recently written on tubercle in and around the urethra. Hartmann's case represented a condition not previously noted—namely, tuberculous hypertrophic stenosing disease of the urethra. This patient was a woman aged 57 subject to dysuria and continual desire to make water, of six years' duration. It transpired that her father had died of phthisis and that her brother suffered from angular curvature, whilst a few years previously she herself had been laid up with cough and emaciation. At the beginning of the present illness a "polypus" was removed under cocaine anaesthesia without benefit to the patient. The meatus was surrounded by an elevated fold shaped like the mouth of a trumpet. It led to a very tight stricture. The whole, including the strictured area, was dissected away, the mucosa of the urethra above the stricture being united by suture to the healthy tissues of the vestibule. Relief from the symptoms was complete. The microscopic appearances were characteristic.

THERAPEUTICS.

238. The Ultimate Results of Tuberculin Treatment.

V. ROEMISCH (*Münch. med. Woch.*, January 15th, 1907) believes that a carefully carried out tuberculin treatment, according to the method recommended by Goetsch, is capable of yielding better results for certain classes of phthisical patients than any other form of treatment. The cases which are best adapted for the treatment are chronic, mostly advanced cases, which for some time show no tendency of improvement, but which previously showed a diminution of the limits of disease and an absence of local reaction. In one patient whom he treated in 1900, and again in 1902, a permanent cure was attained in spite of extensive disease of the right lung. The patient is now objectively and subjectively well. A second case reports of himself that he is quite well, and of this patient Roemisch states that the result has surprised him not a little. Four other cases are quoted to show definite lasting cures of phthisis by means of tuberculin. In all these six cases the conditions for cure were unfavourable. He also reports of seven less severe cases, treated before 1902, all of which have lost all signs of disease. One of these cases, however, offers an anatomical confirmation for the cure of the disease. The patient committed suicide, and the *post-mortem* examination, which was performed by Turban at Davos, revealed firmly-scarred tissue, without any signs of active tuberculosis. In treating his cases, he aims at obtaining a mild local reaction without any severe general disturbance. If one injects doses which are too small, the whole treatment does no good, while if one exceeds a dose which is just sufficient to produce the mild reaction, and especially if one repeats this dose several times; one runs the risk of producing great damage. The signs that the limit is nearly reached include feeling languid, loss of

appetite, disturbance of sleep, various forms of pain, and increased quantity of sputum. Slight elevation of temperature, even if this is only one or two tenths of a degree centigrade, must be taken note of if the temperature has previously been steady. When such symptoms occur, Roemisch repeats the same dose instead of increasing it, or if the signs are unmistakably present he gives a smaller dose. He believes that the therapeutic effects gained when small doses produce a slight increase of râles are highly important. He quotes cases in support of this. He has come to the conclusion that a certain number of cases which resist all other forms of treatment often do well under the tuberculin treatment, and regards improvement up to a certain point, and then persistence of the signs of disease, as an indication for the treatment. Tuberculin does not render open-air treatment and other means superfluous, but must be regarded as a very valuable addition to the therapeutic agents which we have at our disposal against pulmonary tuberculosis.

239. **The Action of Protargol.**

C. Stern (*Deut. med. Woch.*, February 7th, 1907), having had very variable results from protargol in the treatment of gonorrhoea, has investigated the irritant action of this remedy. He first of all induced Bruening to obtain samples from various parts of Germany and to test them chemically. There were ten samples, and he was careful in making up the solutions from these samples exactly according to the directions. The solutions were not used older than two or three days. In all, he treated 55 men and 116 women with protargol during his investigations. The men were treated with injections beginning with from ¼ to ½ per cent., and increasing in strength to 1 per cent. As a rule, he advised the patients to wash the urethra out with warm water before injecting the protargol, and believes that he obtained a hyperaemizing effect by this procedure. In the same way, he ascribes the beneficial results which one obtains with Janet's permanganate of potassium injections to the effect of the temperature of the injected fluid. The protargol injections are carried out at first for ten minutes, and later the fluid is retained up to thirty minutes. Of the 55 male patients, only 2 showed signs of irritation. The same solution of protargol did not produce irritant effects in other patients, but in the one, after discontinuing the injections for some days, a fresh attempt with another sample freshly dissolved was well tolerated. It thus appears that in 54 out of 55 patients protargol was tolerated without producing any subjective unpleasant symptoms. The average time occupied in causing the gonococci to disappear finally from the discharge was 16.3 days. He does not regard a case as definitely cured until the urethral mucosa stands a provocative injection of silver nitrate without any fresh discharge appearing. As many of the patients broke off the treatment before this was achieved, he does not record the length of time which is required for definite cure to take place. As far as the male patients are concerned, he feels himself justified in saying that when protargol is properly prepared and used, it does not induce any irritant symptoms. In turning to the 116 female cases, he first speaks of two children who were suffering from vulvo-vaginitis (gonorrhoeal). These as well as all the other cases were controlled through the whole clinical observation by microscopical examination of the discharge. He treated the children with 2 per cent. solutions for the acute stages and 1 per cent. for the subacute stages. The parts were carefully cleaned and the solution injected into the vagina and kept there for ten minutes, the pelvis being raised the while. None of the children complained of any subjective irritation. Sitz baths were employed as a supplementary treatment, and the cases healed up in from two to four weeks. It took on an average three months, however, before the last cocci were removed from the glairy secretion of the vagina and cervix. He regards this as very important, for if one relied on clinical signs and symptoms, one would have discharged the little patients after four weeks, and yet they would have still been able to spread the infection. With regard to the rest of the female patients, he says that after having treated about 1,500 females, chiefly prostitutes, for gonorrhoea during the past ten years, he has never been very satisfied with the results of treatment, and considers that one should be very cautious with regard to the prognosis of the ultimate cure. One obtains superficial results in most cases, but it is extremely difficult to exterminate the gonococci entirely in cervical and other cases. Besides, he mentions that physicians are often very skilful in removing cocci from the urethra, but a careful one will pass a case as cured when the discharge was only temporarily got rid of. He uses a platinum loop or spoon, and, if possible, takes his specimens at a time when the patient was not prepared for the visit. Taken all in all, he believes that protargol yields as good, if not better, results in female gonorrhoea than other means. He employed this substance in solutions of from 5 to 10 per cent., and has not met with the irritating effect. He is inclined to believe that the irritant effect which he has previously seen and which has disturbed others is at times due to worthless imitations of protargol and at times to the solutions not being made up freshly and with cold water. The chemical examination of the samples showed that the ten samples obtained were practically uniform, but that light and air certainly have a chemical action on solutions.

240. **Treatment of Erysipelas.**

A. Hecht (*Therap. Monats.*, January, 1907) recommends a series of remedies for erysipelas. The first is absolute alcohol, which is that one of the older remedies in which most confidence can be placed in cases in which the occlusive bandage can be applied with exactitude, as, for instance, in erysipelas of the extremities. It is more difficult to apply where the face is the part affected, but Hecht was able by its use to bring to a standstill after twenty-four hours erysipelas of the face in an old woman 82 years of age. For erysipelas of the scalp absolute alcohol is especially useful. When the patient objects to alcohol, salocreol and mesotan are recommended. The former was tested by Gnezda at the first medicinal clinic at Berlin, the latter was found by Pautz to favourably influence the course of the disease in each of six consecutive cases. More recently the use of phenol camphor has been warmly recommended. This mixture is made up of acidi carbolici liquefacti 30.0, camphorae tritae 60.0, spiritus vini 10.0, and forms a clear fluid, which in recent erysipelas may be painted several times a day over the skin, and in cases of longer duration may be applied on lint. The author saw one case of erysipelas of both sides of the face, which had already lasted four days, which recovered after the application for twenty-four hours of phenol camphor. Hecht also employs a lotion the prescription for which is ichthyoli, guaiacoli, ol. terebinthinae āā 10.0, spiritus vini 20.0. He finds this combination useful for its antiphlogistic, antipyretic, and pain-relieving action. The intravenous treatment by collargol has not proved reliable, although in a number of cases it appears to have had a certain influence upon the temperature and the genera and local conditions. The treatment by quinine may be mentioned, and has, at any rate, the advantage of being easily combined with other methods of treatment.

PATHOLOGY.

241. **The Study of Cancer.**

At a recent meeting of the Académie de Médecine (*Rev. de Chir.*, No. 1, 1907), Cornil insisted on the importance in a general study of cancer of taking note of the situation as well as of histological and clinical characters in any tabulated series of growths conforming to the definition of this disease in regard to local progressive extension, to recurrence, to glandular invasion, and to metastatic growths. In studying the clinical gravity in relation to each anatomically-defined variety of cancerous growths, it will be found that neoplasms histologically identical present great differences in their course and gravity in accordance with the part of the body and the tissue attacked by the disease. A statistical table giving the relations of the histology and the malignancy of morbid growths ought therefore to show their situation. While certain sarcomata of the skin are benigns, the forms of this disease met with in the skeleton and periosteum of the limbs are characterized by recurrence and generalization. Tubular or lobular epithelioma with squamous cells of a malignant type, which is so formidable when involving the tongue, the lips, the anal margin, and the mucous membrane of the cervix uteri and oesophagus, is not to be regarded with much alarm when it attacks the skin of the face, although in both cases the histological changes are, Cornil states, exactly the same. Cylindrical epithelioma, which takes so rapid and so fatal a course when it attacks the stomach or the rectum, is regarded as an intermediate form between benign and malignant growths when met with in the breast. Some tumours usually classified as benign chondroma for instance often invade veins, and give rise to remote metastases. Chondroma, even in its cystic form, when attacking a salivary gland, may grow slowly and without presenting any decided malignant character, while an analogous disease of the testicle—the so-called cystic disease of the testis—is characterized by its rapid progress and fatal termination.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

242. The Clinical Forms of General Paralysis.

SÉRIEUX AND DUCOSTÉ (*Prog. Méd.*, March 16th, 1907) give a short historical sketch of general paralysis. In 1822 Bayle described chronic arachnitis as developing in three successive stages. The first stage was one of monomania; this was followed by a stage of general mania, which ended in the third stage—dementia. In his later works Bayle recognized the clinical importance of "exaggerated ideas." Calmeil, in 1826, described three forms of general paralysis—dementia or weak intellect, dementia with monomania, and dementia with mania. Baillarger (1857-60) distinguished a hypochondriac variety of general paralysis. Farlet, in 1878, described five varieties: (1) With exaggerated ideas; (2) without delirium; (3) congestive; (4) epileptic; (5) melancholic. The authors suggest a sixth variety, the sensory, in which the important factor is hallucinations. Weygandt gives the following figures: Exaggerated ideas type, 15 to 20 per cent.; maniacal type, 10 per cent.; dementia, 40 to 50 per cent.; melancholia, 20 to 25 per cent. Clinically, general paralysis is one disease; it is characterized by the association of a condition of general mental weakness with an equally general motor inco-ordination. These are the essential symptoms, but they may vary in intensity. There are accessory symptoms, which by their presence or absence constitute the various clinical forms of general paralysis. The authors' statistics are founded on 150 cases, most of which remained under observation right up to the time of death. The following proportions were found: Dementia, 24 per cent.; mania, 6 per cent.; megalomania, 27 per cent.; depression, 2 per cent.; ideas of persecution, 3 per cent.; circular, 7 per cent.; hypochondriac, 7 per cent.; sensory, 24 per cent. The maniacal type is characterized by excitement; it is accompanied by sleeplessness and a wild flight of ideas, the more amazing when one takes into consideration the mental weakness of the patient. These cases sometimes utter ceaseless cries, and may continue in this excited condition up to the end without developing any exaggerated ideas. Cases that are usually quiet may become suddenly and violently excited under the influence of their hallucinations. The sensory type is, as a rule, very noisy. Excitement is present in 59 per cent. of all cases of general paralysis. The megalomaniacal type, so called because of the patient's exaggerated idea of his wealth, greatness and power, has been styled the classic type. The authors only met with two instances of the depressed type. Hallucinations are sometimes of one sense only, and sometimes of several senses. When one sense alone is affected, the sense of hearing is that one most frequently subject to hallucinations. Fits and hallucinations occur in half of all cases. Alcoholism was a factor in only 7 out of 58 cases of general paralysis who had hallucinations, though some authors maintain that hallucinations in general paralysis are always of alcoholic origin.

243. Dosage of Tuberculin in Diagnosis.

THE value of tuberculin as a means of diagnosis is very widely recognized to-day, and in Germany, at least, it is constantly employed for this purpose. But there is considerable difference of opinion as to the best method of regulating the dosage. Thus one group of writers considers that it is unnecessary to raise the dose above 0.2 mg. of old tuberculin, and that, if no reaction has been obtained after four injections of this amount, tuberculosis may be definitely excluded. Another group, on the other hand, believes that not until 10 mg. have been given at one time without reaction can any reliance be placed on the result. Roepke (*Zeitschr. für Tuberkulose*, x, 5, 1907) has conducted a series of observations for the purpose of determining which of these methods is the best. An absolute rule can hardly be expected. Every tuberculous patient has what may be called his "tuberculin optimum." When the proper amount has been given, he will react, but not before; and it does not matter whether this amount be given at once or in two or three injections. It is possible, however, to find a limiting dose to which a tuberculous person will react, while a non-tuberculous will not. He finds that the fourfold repetition of 0.2 mg. is quite insufficient to give a reliable indication. On the other hand, there is no advantage in pushing the dose so high as 10 mg. Of 445 suspected persons injected with successive doses of 1 mg., 5 mg., and 10 mg., negative results were obtained with 6.3 per cent.; while of 273 injected with 1 mg., 3 mg., and 6 mg., 6.6 per cent. gave no reaction; that is, the smaller doses gave as reliable an indication as the larger. Further, the reaction is as strong with 6 mg. as with 10 mg., and shows itself by local signs as regularly. He considers, however, that the 1-3-6 mg. method is unsatisfactory, in that the doses are too nearly alike. Better results are obtained when the differences between successive doses are made larger, and he recommends three doses in succession of 0.2 mg., 1 mg., and 5 mg. respectively. Kohler (ibid., x, 4, 1907) finds that administration by the mouth, which has been recommended by Freymuth and others, is too irregular in its results to be of any diagnostic value, and that as a therapeutic method it has no claims to be considered. Lüdke (*Beiträge zur Klinik der Tuberculose*, vii, 1, 1907) claims to have demonstrated antituberculin in the serum of 11 out of 19 tuberculous patients. Of these 11, 9 had been treated therapeutically with old tuberculin, while two had received no specific treatment.

244. Cystinuria.

CARACCIOLO (*Rif. Med.*, February 16th, 1907) reports a case of chronic cystinuria in a man aged 28. It is doubtful whether cystin ever appears in the urine in normal health; if so, it is in such minute quantities as to be practically negligible. When appreciable it is decidedly pathological. Often no symptoms are associated with cystinuria, and it is only an accidental examination of the urine which reveals the presence of cystin. Usually it is chronic in character, but may be more sudden and is sometimes hereditary. One theory supposes that it is due to the direct or indirect action of bacteria, inducing intestinal fermentation in association with certain diamines—for example, putrescein. But perhaps the theory which finds most support is that which attributes the cystinuria to a dilatoriness in tissue change. In the author's case the cystinuria was hereditary, and there was no evidence to show that it had any connexion with changes in the intestinal canal; on the other hand, analysis of the urine showed evidence of defective oxidation. The mean daily elimination of urea was less than 15 grams, and the total sulphur above the average. Although the liver is largely concerned in the genesis of cystinuria, it may not be the only organ at fault, and in the author's case there was never any urobilinuria nor evidence of hepatic disease. The patient had typhoid at 10, followed by severe gastro-intestinal trouble for about eight years. After that the dyspeptic symptoms completely disappeared. At 19 he had an attack of renal colic, and passed a small cystin and uric acid calculus, and again in May, 1904, and September, 1906. No cystin had been observed in the urine during the early part of his history. There was cystin in the mother's urine, but not in that of other members of the family.

SURGERY.

245. Operative Treatment of Tumours of Brain and Spinal Cord.

AT a recent Congress of German Naturalists and Medical Practitioners, held at Stuttgart, Krause (*Zentralbl. f. Chir.*, No. 47, 1906) gave the results of his personal work in cranial and spinal surgery. In discussing, in the first place, the removal of growths from the Rolandic area, this surgeon insisted on the importance of large osteoplastic flaps, and, as an aid to localization in cases of subcortical tumour, of a weak faradic current. Surgical intervention is indicated, the author holds, in cases not only of tumour in the pathological meaning of the term, but also of gummata, solitary tubercle, and cystic growths. An instance is given of successful removal of a large hydatid cyst from the precentral convolution. The motor area, however, though it may be regarded as the classical region of cerebral surgery, now takes but a minor share in the range of intracranial parts that are accessible to operative intervention. Reference is made to removal of a tumour from the occipital lobe, and also to one in which a

revolver bullet, the pressure of which caused grave symptoms, was extracted from the region of the chiasma. In both these cases the surgical treatment resulted in complete recovery. A tumour situated in the middle cranial fossa can, it is stated, be removed by an operation analogous to that practised by the author for extirpation of the Gasserian ganglion. The latter operation he has performed on fifty-one occasions with seven deaths, and in the surviving subjects has never observed a recurrence of the trigeminal neuralgia within an interval of fourteen years. This radical method Krause practises only in the most severe cases, in which the milder treatment of resection of the peripheral nerve branches has failed. In operations on the posterior cranial fossa and the cerebellum, a distinction in regard to technique is made according to the indications for bilateral or for unilateral exposure. It is practicable, by making an opening on one side of the cranium, and by careful displacement of the corresponding cerebellar hemisphere inwards and upwards, to expose the nerves of the posterior fossa (auditory, facial, glosso-pharyngeal, vagus, and accessorius), and to remove any tumour lying in this region, provided it be encapsuled and capable of being readily detached. In considering the prognosis of the intracranial operations described in this paper the author states that the actual cure of cerebral tumour is rarely effected by such treatment. Surgical intervention in cases of this kind is justifiable mainly on the assumption that the patient, unless afforded this last chance, must be regarded as doomed, and that death under the circumstances is preceded by intense suffering. Though the attempt at radical removal of the growth may fail, trephining with division of the dura may, by relieving compression, afford alleviation, and frequently prolong life. Operative intervention, though only palliative in its aims, is as justly indicated, the author holds, in cases of cerebral tumour, as is gastrostomy in cases of oesophageal cancer. The chief risks of intracranial operation are haemorrhage and shock, while that of infection is, with proper precautions, extremely improbable. Though it is always advisable to complete the operation at once if possible, the surgeon, when the choice is an open one, may justifiably practise it in two stages, and thus distribute and diminish the dangers of his intervention. In the removal of tumour from the spinal meninges the operation should be completed in one stage. The vertebral arches should be freely resected, as they take no part in maintaining the stability of the column, and the seat of the disease is thus rendered more accessible. The author has performed 19 of these operations with 5 deaths. One of these was a case of psammoma at the level of the seventh dorsal vertebra. The patient, a man aged 72 years, who was thus treated six years ago, recovered, and is still living. The most formidable operations of this kind are those practised on the cervical portion of the cord. In 2 of 3 such cases death resulted from shock. In the third case, in which the arches of the second and two following vertebrae were resected, and, after incision of the dura, the lower part of the medulla oblongata was exposed, the patient recovered, and after an interval of two years was in good health. Although unexpected difficulties may be met with in the course of any operation on the spine, the diagnosis in this branch of surgical work is much easier and less uncertain than it is in cerebral surgery, and for this reason the operative prognosis is more favourable in cases of tumours of the cord. The great advance in recent years in neurological diagnosis, especially in relation to tumours situated in the posterior cranial fossa, leads the author to entertain confident hopes of the future of cerebral surgery. In another paper, on the surgical treatment of morbid growth within the cranium and the spinal canal, Oppenheim agrees with Krause as to the much more favourable prognosis of operations practised in the latter region. He points out that, notwithstanding recent improvement in diagnosis, difficulty will sometimes occur in determining the precise nature of a lesion known to exist at a high level of the spine, and it is held that for this reason laminectomy may be profitably performed in such cases as an exploratory procedure. Sänger, in a third paper, takes an unfavourable view of the prognosis of operations for the removal of cerebral tumour, as in a large majority of cases it is either difficult to localize the growth or impossible to reach it when correctly diagnosed. This surgeon is an advocate of palliative trephining, which he holds may be commended in cases of inoperable cerebral tumour as a fairly safe and beneficent means of relieving suffering and averting blindness.

248. **Extirpation of Carotid Aneurysm.**

Lexer (*Beit. z. klin. Chir.*, No. 1, 1907) reports a case of supposed secondary aneurysm of the carotid, which he treated with excellent results by complete extirpation of the large sac, after ligature of the common trunk, of the internal carotid, and of the external carotid with several of its branches. The substitution of resection for proximal ligature in the treatment of aneurysm, though made at a later date in the neck than in the limbs, has in the case of the common carotid met with good results in nine out of ten recorded instances, and in the absence of certain general and local indications, and when the sac involves the upper end of the vessel, the direct and radical attack may, it is held, be regarded as the method of election. Extirpation, the author states, affords an absolute cure, and is not followed by relapse or by varied troubles, due mainly to compression of nerves. Moreover, there is less risk with this method of grave disturbance, more immediate and late, of the intracranial circulation, and of consequent hemiplegia. When successful it gives, the author believes, a cure of a better quality than that resulting from any other method of surgical treatment.

247. **End-to-End Arterio-venous Angeiorrhaphy.**

Lilienthal (*Ann. of Surg.*, January, 1907) publishes a case in which he put in practice on the human subject an idea suggested by the experimental work of Carrel and Guthrie, that it might be possible to arrest gangrene of an extremity by diverting the arterial current into the veins. The subject of this case was a man, aged 20, suffering from arteriosclerotic gangrene of the left foot. The femoral vessels were exposed at the upper part of Scarpa's triangle, and after the circulation had been controlled by a tape ligature clamped around the external iliac artery, and a permanent ligature of the vein at the same level, the femoral artery was severed about 1 cm. below the seat of the intended anastomosis, and the vein about the same distance above it. The end of the proximal portion of the divided artery was sutured to the end of the distal portion of the divided vein, each stitch being passed directly through all the coats of the vessels in such a manner as to avoid turning in of the walls. After the final knot had been tied, the tape compressing the external iliac artery was removed, and at once the pulsating current was established from artery to vein without any signs of leakage. As the femoral artery was found to be obliterated up to the seat of operation, there was no risk of haemorrhage from the lower end of this vessel. Death occurred from intense shock thirty-one hours after this operation. The extensive range of the arterial obliteration in this case is regarded as the cause of the failure of the operation. The author thinks that in threatened gangrene due to embolism of arteries below the main trunk, the promise of success would be good. For example, in embolism of the popliteal artery end-to-end anastomosis of the superficial femoral artery with the saphenous vein might re-establish the circulation in the affected part and avert necrosis. The work in angeiosclerotic gangrene should, the author holds, be continued, but more favourable cases should in future be selected.

OBSTETRICS.

248. **The Urine in Pregnancy.**

Sonders (*Bull. Lying in Hosp., New York*, December, 1906) considers that the recent advances in the chemical investigation of urine in pregnancy are of high value to the obstetrician in his work. It is now a recognized fact that intestinal autointoxication, intestinal toxaemia, or faulty intestinal metabolism, is the cause of a distinct train of symptoms and often explains other obscure manifestations. When it is recalled with what facility gastro-intestinal disturbances are occasioned in pregnancy and that intestinal autointoxication frequently seems to be the forerunner of the toxaemia in pregnancy, if not more closely allied in the etiology, the necessity for early diagnosis of the condition is apparent. The diagnosis is assisted by the recognition in the laboratory of a relative excess of ethereal sulphates in the urine. Every examination of urine in pregnancy should include a test for indoxyl sulphate and skatoxyl sulphate. A quantitative estimation of the mineral and ethereal sulphates is more accurate, but too laborious for the clinician. A depression in the ratio of mineral and ethereal sulphates, or an excess of indoxyl sulphates in the urine, being accompanying factors only, and not directly concerned in the causative element of the symptoms, may be brought about by other causes, and do not necessarily indicate a specific pathological process. Their corroborative value in the diagnosis of intestinal autointoxication is undeniable. It

is now admitted that the appearance of albumen and casts in the urine does not necessarily indicate an inflammatory lesion of the kidney. A normal kidney with normal circulation, innervation, and blood, does not excrete albumen, but slight disturbances of the circulation, or innervation, or in the quality of the blood may cause the kidney to pass albumen with or without casts, thus indicating disturbed function, not necessarily an inflammation of the parenchyma. Faulty body chemistry, chemical changes, or toxins in the blood may result in albuminuria with casts; about 50 per cent. of pregnant women show it at some time during their pregnancy. The special causes are to be found in circulatory disturbance, faulty innervation, irritating excretory products, and increased functional activity. The numerous possible causes complicate diagnosis, and the apparent physiological retention of nitrogen towards the end of pregnancy adds another difficulty. The pyelitis of pregnancy resembles typical pyelitis generally; there is almost invariably a bacteriuria, generally due to bacilli of the colon group. Transitory glycosuria is not uncommon and accompanies other faulty metabolism. Diabetus mellitus takes the same course in the pregnant as in the non-pregnant, and exacerbations are as liable to occur in the one as in the other; when parturition is approaching, the attention should be directed towards avoiding an acidosis. Discussion on this part of the subject centres on which element of the faulty metabolism is most constantly found in the urine and if the degree of its presence is a true indicator of the degree of toxaemia it accompanies. One observer laid stress upon the relative amount of amido-acids, another upon the relative amount of ammonia, while others consider the degree of acidosis a guide to the severity. When the toxaemia of pregnancy occasions symptoms other than hyperemesis, there may be neither starvation nor inanition, but there is invariably acidosis. Partial starvation, inanition, and many other causes may occasion the same changes in metabolism noted in the toxaemia of pregnancy; these changes must therefore be considered an aid in diagnosis and a positive indicator. Proof is lacking that the degree of fault in the nitrogen partition or the type and degree of acidosis is always in direct ratio to the degree of toxic infection, and patients vary in susceptibility to this as to other toxins. The routine examination of the urine of pregnant women should include a search for evidences of faulty metabolism; on the occurrence of any of the clinical signs of toxaemia the degree of acidosis should be determined, and should this increase, then a repeated nitrogen partition will help to determine the point beyond which it is not safe to allow the patient to go.

GYNAECOLOGY.

249. **Pyometra in a Girl aged 16: Uterus Duplex.**

VON HOLST (*Zentralbl. f. Gynäk.*, No. 9, 1907), after mentioning that cases of pyometra in congenitally malformed uteri are not unknown, relates an instance in his own experience. A girl aged 16 had been subject, from the beginning of the menstrual function a year previously, to colicky pains and occasional purulent discharge. The signs of puberty were well developed. A fluctuating tumour occupied the right iliac region, and bulged downwards into the right fornix. On its left was a mass definable on palpation as a half-uterus. A normal cervix, pushed towards the left by the tumour, projected into the upper part of the vagina. The temperature was high. A puncture was made, through the cervical canal, into the septum between the uterus and the tumour, pus escaped, and when the puncture was enlarged by the knife a great quantity came away; it was thick and fetid. As the patient's condition did not improve, and as the left uterus was infected, total hysterectomy was performed, the ovaries being spared. The patient made a good recovery. As diagnosed, the morbid condition proved to be uterus duplex, with the cavity of the right cornu not in communication with the cervical canal, and pyometra of recent origin.

250. **Ovarian Cyst and Pregnancy.**

MARTIN (*Arch. Prov. de Chir.*, No. 2, 1907) reports a case in which a primipara, aged 17 years, in the seventh month of pregnancy presented decided symptoms of a suppurating dermoid cyst of the right ovary. In consequence of abdominal tenderness with rigors and fever, and as these grave symptoms were evidently due to the ovarian tumour and delivery was impossible under such conditions, Caesarean section was practised, followed first by removal of the suppurating and ruptured cyst, and finally by total abdominal hysterectomy. The laparotomy wound was completely closed by sutures, and drainage established by the vagina. Both mother and infant recovered after the operation. In this case, the author states, laparotomy for removal of the ovarian tumour was the only possible plan of treatment. The operation was performed with the view of simply extirpating the cyst and of allowing the uterus to remain and pregnancy to take its course, but the presence of a large centre of infection in the pelvis threatened the life of both mother and child, and as both ovaries were diseased, the uterus, if it could have been retained, would have been useless, and probably a source of danger. The author refers to other cases in his practice in which he successfully removed ovarian growths during pregnancy, and states that his personal experience of such complication has led him to support the view that every ovarian cyst diagnosed in the course of pregnancy demands operative intervention. The surgeon, it is held, should act with the object of preventing a double danger—that of torsion, or rupture of the cyst, caused by pregnancy, the other of abortion, or grave dystochia due to the presence of the cyst.

THERAPEUTICS.

251. **Sedatives and Narcotics.**

THE therapeutic means of inducing sleep in practice belong either to drugs which act directly on the central nervous system or indirectly through the circulatory organs. The latter means, which include local anaesthetics and physico-dietetic procedures, produce sleep indirectly by either easing pain or by causing anaemia of the brain, by attracting the mass of blood to some distant part. H. Krieger and R. v. d. Velden (*Deut. med. Woch.*, February 7th, 1907) say that, as a rule, one has to utilize the direct agents, such as bromides or some other narcotics or hypnotics. These drugs mostly exercise a more or less narcotic action, and therefore do not actually induce, physiologically speaking, a true sleep. While the authors realize the value of such drugs as sulphonal, trional, neuronal, isopral, chloral hydrate, amyl hydrate, paraldehyde, etc., they find that one would often prefer not to use such strong remedies, but would wish to have some quite harmless preparation at hand. Saam has introduced a substance, called "bromural," which is said to be a harmless substitute for some of these hypnotics. Bromural is a mono-bromine iso-valerianate of urea, and possesses the formula of $(CH_3)_2$-CH-CHBr-CONH-$CONH_2$. It occurs in white platelets, which are soluble in hot water, ether, alcohol, and alkalies, and which have a slightly bitter taste. The iso-propyl group contained in the valerianic acid of the preparation is probably responsible for the therapeutic action. Animal experiments with this substance have shown that it produced good sleep in rabbits in doses of from 0.2 to 0.25 gram per kilo body weight, that 0.1 gram per kilo body weight could be given daily for fourteen days without producing any toxic effects, and that the lethal dose for rabbits lay above 1 gram per kilo body weight. The danger zone was entered upon in dogs with doses of 0.5 gram per kilo, but the experiments showed that the hypnotic action was induced without damage to the circulation and respiration. The authors have tested the action in 90 cases, and report on their experience in three groups. In the first group they include cases with the milder degrees of sleeplessness. A patient suffering from leukaemia with high fever and sleeplessness slept well after 0.3 gram; the same dose acted well in many other conditions, while in a case of phthisis the desired result was obtained with from 0.5 to 0.7 gram. All the patients in this group slept well after from five to twenty-five minutes, and awakened the next morning without any ill effects. In the second group they include those patients who fell asleep with doses of from 0.3 to 0.6 gram, but who awakened after from three to five hours on account of cough or pain. The action in this group was prompt, but the intensity appeared to lessen materially after some hours, so that the patients awakened in response to some disagreable symptom. In the third group the substance did not exercise any sedative or hypnotic effect. The patients, numbering 20, were suffering from conditions which offered severe resistance to sleep. In all the cases in which the bromural acted, no unpleasant side-effects were noticed. Even when continued for some time no accustoming to the drug appeared. They therefore conclude that bromural is a drug which can be recommended for sleeplessness in cases in which no severe peripheral or central disturbance of sleep is present.

252. **Phenyform.**

A. Stephan (*Therap. Monats.*, November, 1906) has carried out a series of tests of the antiseptic and deodorizing properties of phenyform. Phenyform, a combination of carbolic acid and formaldehyde, is a greyish-white, odourless powder, of very low specific gravity, which is insoluble in water, ether, and benzine, but soluble in alkalies. The bactericidal effect of phenyform is due to the fact that when the powder is applied to wounds the enzymatic action of the secretions gradually sets free formaldehyde. Clinical reports on phenyform have been favourable throughout, especially as regards its action in drying up wounds and aiding the formation of granulations. There has been no instance in which its use has caused any symptoms of poisoning. Schuftan, who tested on animals the harmlessness of the preparation, found that guinea-pigs took 3 grams by mouth or subcutaneously, cats up to 10 grams, and dogs up to 15 grams by the mouth without any symptoms of poisoning. Stephan first tested the sterility of phenyform and phenyform gauze; the powder was perfectly sterile; the gauze was not sterile, but it was found possible to sterilize the gauze by an exposure of fifteen minutes to damp heat at 108° C. without any decomposition of phenyform, and with only a slight loss of free formaldehyde. To test the bactericidal action of phenyform, glycerine agar in Petri's dishes was infected with bacteria, and then covered with the powder; control experiments were carried out with iodoform. The plates were kept at a temperature of 37° C. There was no growth upon the agar plates infected with streptococcus or anthrax; on those infected with *B. coli* there was a moderate growth with both phenyform and iodoform and a certain amount of visible decomposition of the powders, but by the fourth day in each case the colonies had died; the initial development of the *B. coli* must depend on their quick rate of growth. The next experiments were for the purpose of determining at what distance from the antiseptic powder growth of bacteria was prevented. Petri's dishes were again used filled with glycerine agar, which was infected with bacteria at the circumference of the dish, while the disinfectant was placed at the centre; control experiments were undertaken as before. There was no growth under the powder with either the streptococcal or anthrax infection, with the anthrax infection there was a sterile zone 1 cm. broad round either antiseptic powder, with the streptococcal infection the sterile zone was ½ cm. broad when phenyform was used and ¼ cm. when iodoform was used. With *Bacillus coli* there was no sterile zone, and under phenyform, although not under the iodoform, development of the bacteria had occurred. As a deodorant 5 grams of phenyform, intimately mixed with ten drops of foul blood, was found to lessen the smell very considerably in twenty-four hours and to completely remove it in forty-eight hours. Stephan, as a result of these tests, finds phenyform to be as effective as iodoform in its bactericidal action. Phenyform is much cheaper in use than is iodoform.

253. **The Treatment of Pleurisies.**

Rodet (*Jour. des Prat.*, January 5th, 1907) considers that thoracocentesis is only necessary when: (1) The amount of the effusion or its seat places the life of the patient in danger; that is to say, in cases of left pleural effusion, when the heart is pushed to the right and in which cases sudden death may occur unless the fluid is withdrawn. In right-sided effusions, aspiration is indicated when the liver extends below the costal border. (2) When the reabsorption of the fluid occurs slowly. The author considers that if a suitable aspirator be used (such as Dernet's) one may withdraw much larger quantities of fluid than is usually advised, and without any risk. During the acute stage the patient should be on a milk diet. He advises calomel in 1/15 gr. doses every hour for the first day, four doses being taken. This will produce liquid stools without causing diminished diuresis. On the next day he prescribes salicylate of soda which he finds calms the dyspnœa and favours absorption of the fluid. This he prescribes in 1 gram doses morning and evening for six or eight days. Infusion of pilocarpin may be given to vigorous patients in whom there is no displacement of the heart, but to the debilitated or to those in whom the heart is displaced this drug should not be given. Blistering he finds useful in the early stages and when the effusion is at a standstill. If there be scanty fever he prescribes a cachet containing 0·10 gram of antipyrine hydrochlorate combined with 0·50 gram of pyramidon every evening. For the pain in the side, wet cupping and blistering or morphine injections may be used. To assist absorption he orders infusion of broom with 4 grams of equal parts of potash and acetate of potash to each litre. When membranes have formed the patient may get up, and at this time a tonic medicine and a mixture containing arsenate of soda and potassium iodide may with advantage be given. The author is also in favour of the application of the cautery to the skin and of the free use of the tincture of iodine externally to the affected side. In the period of convalescence respiratory gymnastics are valuable, as is also massage of the chest muscles, and residence at a high altitude is advisable if pleural friction persists.

254. **Benzosalin.**

Ciuffini (*Rif. Med.*, December 8th, 1906) gives his experience in the use of this drug, which is a combination of benzoic and salicylic acid. Chemically it is a methylic ether of benzoyl salicic acid, and presents itself under the form of white needle-like crystals, slightly aromatic and almost tasteless; slightly soluble in alcohol and ether, and more soluble in chloroform; almost insoluble in cold water. It is used medicinally in tabloid form, and the dose is 5 to 15 gr. It is not decomposed in the stomach, hence is much less likely to cause gastric irritation than the ordinary salicylic preparations; in the intestine it splits up into benzoic and salicylic acid. It may be used externally as a 20 per cent. ointment, and generally for all the cases where the salicylates would be presented. It induces diuresis and diaphoresis, reduces temperature (if raised) and blood pressure. From a comparatively small number of cases the author feels justified in confidently recommending the use of benzosalin in those cases where the salicylates would be used but were contraindicated owing to some intolerance—in other words, as a substitute for the salicylates where these cause unpleasant symptoms.

PATHOLOGY.

255. **Biological Action of the Roentgen and Becquerel Rays.**

Lossen (*Wien. Klin.*, February-April, 1907) has collected the results of recent researches on the physiological action of these rays on the various tissues and organs of the body. Great differences in the susceptibility of different cells have been observed, and hence the rays have been spoken of as exercising a selective action upon certain tissues—for example, new growths. The highest degree of susceptibility is found in the haematogenous wandering cells, particularly the lymphocytes; both in the circulating blood and in the blood-forming organs they are more liable than any other type of cell to be injuriously affected, and even such difficultly penetrable substances as the compact layer of the hollow bones permit the entrance of a sufficiens amount of the rays to destroy these cells. Amongst epithelial cells those of the testis and ovary are exceptionally susceptible, and so also are the cells of carcinomata—though the susceptibility of these may be equalled or even, surpassed by that of malignant tumours belonging to the connective tissue order. Other cells, too, derived from the mesenchyma are readily damaged, notably those forming the endothelial lining of blood vessels. In the epidermis it is particularly the deeper layers which suffer most. On the question as to the reason why some cells suffer more than others, the author is of opinion that the important factors are the age of the cells and their capacity for reproduction, those cells being most destructible which are young, labile, and undergoing active metabolism, or rapid multiplication.

256. **Autoinoculation of Carcinomatous Tissue.**

Senn (*Journ. of the Amer. Med. Association*, April 28th, 1906) states that on May 4th, 1901, he inoculated himself with carcinomatous tissue immediately after he had completed a radical operation for advanced carcinoma of the lower lip, involving the submental and submaxillary glands. The excised glands were immersed in warm saline solution, and from one of them a fragment, the size of a split pea, was used for implantation, a small incision was made about the middle of the forearm, over the supinator muscles, under strict aseptic precautions. One of the margins of the skin wound was undermined sufficiently to make a pocket large enough to receive the graft, and the wound was then closed with a horsehair suture and iodoform collodium. In the course of a week a subcutaneous nodule, the size of a pea, made its appearance; after remaining stationary for two weeks it gradually disappeared. At the present time a faint scar remains, indicating the site of the operation. The author considers that this, as well as a few similar experiments made by Alibert, afford strong, if not convincing, proof of the non parasitic nature of carcinoma.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

257. Lumbar Puncture and Cyto-diagnosis.

Cantineau (*Jour. Méd. de Brux.*, March 14th, 1907) records that lumbar puncture, for the purpose of collecting cerebro-spinal fluid, was first practised by Quincke. As a therapeutic means it has not come up to expectations; but it is most useful for diagnostic purposes. The puncture can be made either between the fourth and fifth lumbar vertebrae, or between the fifth lumbar and the first sacral vertebrae. In the latter position there is less chance of injury to the nerves of the canda equina. The patient should, if circumstances allow, be seated, with the vertebral column flexed, and the lumbar vertebrae separated to the greatest possible extent. Lumbar puncture must only be performed on a patient who is in bed; and the patient must remain in bed for at least some hours after the operation. Otherwise vomiting, headache, convulsions, or vertigo may supervene. Lumbar puncture is chiefly of use in diagnosing the nervous manifestations of syphilis. Babinsky believes that the Argyll-Robertson sign is diagnostic of syphilis; but it is safer to do a lumbar puncture in order to substantiate the diagnosis. Lymphocytosis of the cerebro-spinal fluid is, according to the author, absolutely diagnostic of syphilis. He quotes some cases. A patient complained of gastric pains, difficulty in deglutition, and general weakness. He had syphilis some years previously, but had not been under treatment. He has Argyll-Robertson pupils, and mucous tubercles, and is put on specific treatment. The patient had previously undergone a lumbar puncture at a consultation, and had suffered much pain in consequence. The second case is that of a man aged 40, who has severe headache, buzzing in the ears, pains in the calf, and numbness of the fingers. His patellar and Achilles reflexes are normal. Lumbar puncture is performed, and the cerebeo-spinal fluid spurts out under great pressure. There is lymphocytosis of the fluid. He is put on specific treatment, and his symptoms disappear. Another case, reported by Leimière, is that of an old syphilitic patient, whose only symptom is the Argyll-Robertson sign. Lumbar puncture reveals a lymphocytosis. Mercurial treatment is adopted, and the patient is cured. It is probable that many cases of syphilis have cerebro-spinal lymphocytosis, and go no further; but our knowledge of what may happen in this disease leads us to adopt a mercurial treatment, which converts a probability into a quasi-certainty. A fourth case was a man who had loss of memory, altered character, and now and then difficulty of speech. Lumbar puncture decided the diagnosis, by revealing lymphocytosis of the cerebro-spinal fluid. A fifth case confessed to having had a chancre fifteen years ago. This was followed by diplopia and ptosis. The patellar reflex was exaggerated. But in this case there was no lymphocytosis. So, the author concludes, that while cerebro-spinal lymphocytosis clinches a diagnosis of syphilis, its absence does not necessarily prove the absence of syphilis. In tuberculous meningitis the cerebro-spinal fluid contains many lymphocytes and a few polynuclear leucocytes, while one finds almost exclusively polynuclear leucocytes in cases of pneumococcal, meningococcal, and streptococcal meningitis.

258. Chloroform and Latent Cirrhosis of the Liver.

M. Foà (*Gazz. Med. Ital.*, January 31st, 1907) considers that the condition of the liver is not usually sufficiently investigated before the administration of chloroform. The admitted importance of the action of the liver in the accumulation and destruction of poisons in the system, its capacity for arresting metals and alkaloids, and its sensibility to alcohol and other poisons, all suggest the likelihood that the organ may be specially vulnerable to chloroform. Foà has observed numerous cases in which patients either distinctly alcoholic or at least self-indulgent in the matter of drink, have died a few days after operation with symptoms of hepatic insufficiency. These cases present a uniform and typical clinical picture. Out of four such cases recently met with he has been able to make a *post-mortem* examination in two, and in each has found early cirrhosis of the liver giving no symptoms during life. Even in the earliest case of cirrhosis the cells are affected and it is questionable whether cell degeneration does not precede the stage of connective tissue production. The first patient was a carpenter, aged 45, a considerable drinker, but never ill until a few months before admission to hospital, when he began to suffer from digestive disturbances. He was operated on for double inguinal hernia under chloroform. The next day he suffered from slight jaundice, and this went on increasing from day to day. A fortnight later he was transferred to the medical side of the hospital. The heart and lungs were normal, the liver much enlarged, hard, and knobby, the spleen just palpable during inspiration. There was some oedema of the malleoli, slight delirium, somnolency, and his symptoms rapidly got worse and he became unconscious and died comatose. The urine was acid, with slight traces of albumen. The liver became smaller during the last few days of life. Histological examination showed early cirrhosis, a small-celled infiltration round the interlobular branches of the vena porta, a fibrillar connective tissue surrounding and penetrating the hepatic lobules, and grave alterations in the hepatic cells of almost all the lobules. The cells were disordered and many of them had disappeared; the protoplasm was vacuolated and granular; the nuclei stained badly. Having regard to the history and the absence of symptoms before operation, Foà contends that the cellular changes and perhaps a part of the small-celled infiltration were due to the chloroform administered three weeks before death. The second patient was a man of 53 who was put under chloroform for operation on a hernia. He remained well until three nights after the operation, when he became much agitated, with hurried respiration but no fever. In the morning he was jaundiced and comatose, with pupils widely dilated, hepatic area reduced, spleen palpable on inspiration, subcutaneous venous circle evident, no ascites. There was a trace of albuminuria. The patient died on the fourth day after the operation. The microscopical examination of a piece of the liver gave similar results to those obtained in the last case, except that there was a larger deposition of connective tissue, evidently of somewhat longer standing, while the hepatic cells were not so much changed. Possibly the more advanced cirrhosis led to more speedy death without sufficient time for destruction of the hepatic cells.

259. Itching without Skin Lesion.

Mitchell and Allen (*Amer. Journ. of Med. Sci.*, March, 1907) record a case of universal itching of the skin without any skin lesion, which symptom, together with all the haemic and urinary changes, were accounted for by a distinctive erythrocytolysis set up by twenty-five years' chronic malarial poisoning. The patient, a man aged 50, had resided for twenty-six years in a malarial district, for eight years of which time he had suffered from ill-defined attacks of malarial origin, and these were eventually followed by a mild form of Raynaud's disease. About five years ago he first suffered from an attack of indigestion, with severe epigastric pain, accompanied by intolerable itching of the whole body. No lesion or discoloration of the skin was ever present. Lavage for the digestive trouble temporarily relieved the itching, but this recurred again more intensely without any of the digestive symptoms. Loss of sleep and nervous breakdown followed, the itching relapsing from time to time after short periods of improvement. Urobilin was present in the urine, and all evidence from analysis pointed to its derivation directly from haemoglobin rather than through bilirubin. A very pronounced degeneration of the red cells existed, and the eosinophile count was nearly 10 per cent. above the normal. It was concluded that the itching was caused by the urobilin originating in the breaking down of the red blood cells. Local measures gave no relief, but partial success followed treatment directed towards the improvement of the blood-making functions, together with hot-air baths and stimulating douches, and a lengthy course of iodides, mercury, and arsenic.

SURGERY.

260. The Mechanism of Caecal Hernias.

Cavaillon and Leriche (*Sem. Méd.*, March 20th, 1907) treat of this subject in an article in which they point out that at the bottom of all descriptions of hernias of the

caecum there is a strange error. Two mechanisms are admitted: sliding and pulling. Three great anatomical types are described: (1) With complete sac, (2) with incomplete sac, (3) without a sac. To explain these different varieties, all start alike with an anatomical description. "The caecum is entirely surrounded by peritoneum, it is free in the iliac fossa; the hand can encircle it. It is only attached to the abdominal wall by the mesentery of the ascending colon, and the termination of the mesentery proper." "Sometimes the caecum has a short meso-caecum. This is only the continuation of the mesentery of the ascending colon. The caecum is not free, and cannot be encircled by the hand." "Very rarely the caecum has its postero-external surface directly in contact with the cellular tissue of the iliac fossa." This being so, in order to get into a hernial passage, the caecum, by slipping, would descend with its serous covering; there would be transposition into the inguinal region of the contents of the iliac fossa; the three recognized dispositions of the hernial sac would correspond to the three anatomical dispositions of the caecal peritoneum; the free caecum without a mesentery would give the hernia with complete sac; the caecum with a mesentery the hernia with incomplete sac; the retroperitoneal caecum the hernia without a sac. This latter type could occur in another manner: if the sliding commences with the colon, that organ will bring in its train the caecum. Pulled by its upper extremity, the caecum, in order to follow, will fall head first, the body resting in the air above the hernial passage. In other cases, owing to prolonged distension, the caecal ligaments stretch, give way, and allow the caecum to be acted on by the unrestricted action of its inferior attachment. Briefly, the intestine rids itself of its peritoneal covering and slides into the cellular subperitoneal tissue. But in reality this cannot occur. For the peritoneal coat is that which carries the vessels of supply of the gut, and in consequence the gut, stripped of its peritoneum, cannot live. And if the caecum could be freed from its serous coat, it could not make its way beneath the peritoneum towards the inguinal canal. It would have to follow a course embryologically mapped out for it. The caecum is never in the subperitoneal tissue, beneath a peritoneal layer which fixes it to the iliac wall. So the caecum, originally an intraperitoneal organ, remains so in the adult, whatever may be the appearance of its peritoneal covering. The operator cannot reach the caecum without traversing the two layers, the parietal and visceral peritoneum, embryologically fused, which always cover the muscular coat. Anatomically speaking, the hernia which appears to have an incomplete sac always has an entire peritoneal covering. And neither can a caecal hernia occur without a sac, for an intraperitoneal organ cannot reach a hernial passage without pushing before it a complete sac; only a subperitoneal organ, such as the bladder or the uterus, can do that. When surgeons speak of a caecal hernia without a sac they are right from an operative point of view, but pathologically wrong. When a caecum floats at the end of a mesentery, it can be carried into a hernial passage. The sac will be found to consist of visceral and parietal peritoneal layers separated. The fixed caecum, having descended into a hernia, will give the impression that it has an incomplete sac. This term "incomplete sac" should, pathogenically speaking, be dismissed from the terminology. On the other hand, the operator must never lose sight of the danger of suddenly coming upon the intestine at the point of attachment of the layers, and the necessity of preserving intact the natural adherence.

261. **Dietetic Treatment of Pancreatic Fistula.**

Heinecke (*Zentralbl. für Chir.*, No. 10, 1907) points out that a persistent fistula resulting from an operation for pancreatic cyst or from a rupture of the organ is generally recognized as a very troublesome complication. The patient is afflicted by the macerating action of the pancreatic secretion on the skin, and the fistulous opening often persists for a very long time. Maceration may be controlled, and in some cases permanent closure of the fistula may be effected by frequent artificial removal of the secretion, but in spite of such treatment complete closure of the fistula is long delayed. Recent investigations made by Wohlgemuth on a patient suffering from fistula after rupture of the pancreas, indicate, it is stated, the best means of dealing with this serious lesion. This observer found that the amount of the fluid discharged from the pancreas depended on the composition of the food taken by the patient. With a fatty diet the secretion was very scanty, with an albuminous diet it increased, and on the addition of hydrocarbons became very abundant. Further, the secretion was increased by acids and diminished by alkalies. At Wohlgemuth's suggestion the patient was put on a diabetic diet, with bicarbonate of soda in small and frequently-administered doses, which treatment was speedily followed by complete recovery. Heineke strongly recommends this method, as he also has recently applied the same with very speedy and completely effectual results in a case in which the fistula had persisted for several weeks, and discharged a large quantity of pancreatic fluid.

262. **Enlarged Prostate.**

Li Virghi (*Gazz. degli Osped.*, January 6th, 1907) believes that enlarged prostate is the final result of chronic prostatitis, which is due to a prolonged slight toxinfection by the *Bacillus coli*. The enlargement of the prostate is simply the last stage of a chronic prostatitis, so that the subjects of a chronic prostatitis may consider themselves doomed to suffer from enlarged prostate in later times. In the author's view every prostatitis is of neurotic origin; an aseptic prostatitis does not exist. As a result of this slow toxinfection a slow process of sclerosis of the muscular tissue is set up, which extends from the prostate to the circular fibres at the neck of the bladder. It is this sclerotic process which causes the functional disturbances of micturition and retention. In the early stages of the prostatitis, the author says, cases can be cured by massage of the prostate and adjacent parts per rectum. Catheterism induces a mild form of massage, but the only effectual massage must be per rectum.

263. **Climatic Bubos.**

P. G. Woolley (*Archiv für Schiffs und Trop. Hyg.*, Bd. xi, Heft 2) reports on two cases of climatic bubos occurring in the Philippine Islands. The clinical history, the histological changes, the results of culture experiments and of animal experiments were similar in the two cases. In the clinical examination no evidence was given of malaria, syphilis, or gonorrhoea, nor was there any visible lesion on the lower extremity drained by the glands. The bacteriologist reported that stained smears made from the fresh glands showed nothing resembling bacteria, protozoa, yeasts, or moulds; no growth took place when cultures were made on I agar slants, and kept under aërobic conditions for two weeks. An emulsion was made from one of the softened glands and injected subcutaneously into a guinea-pig. Two months later the animal was killed, and nothing abnormal was noted at the autopsy. The glands themselves were enlarged and in most cases firm. Upon section they were seen to be pale and looking as if they were more or less simply hyperplastic. Some of them showed areas of necrosis, with little tendency to softening, but rather to caseation. Some had undergone softening, and these showed no bacteria and no protozoal intracellular or extracellular bodies. The chief change in the tissue of the affected glands was an endothelial hyperplasia with areas of fibrino-purulent exudation and coagulation necrosis. These latter areas contained, in addition to polymorphonuclear leucocytes and fibrin, a considerable number of macrophages. Within these cells were remnants of ingested cellular material, much of it in the shape of round bodies of sizes varying from 0.5 to 1.5 microns, which stained intensely with magenta. These bodies were only found in necrobiotic areas. The author, after careful consideration, decided that the intracellular bodies did not show constant enough characteristics in the various cells to be considered organisms, and that they were partially degenerated cellular material; certainly they had no constant likeness to the bodies of Leishman. A brief review of the different theories of causation of the disease is made in the article. The two cases described add to the evidence against an immediate microbic origin, and do not in any respect justify the pestis minor hypothesis.

OBSTETRICS.

264. **When to Get Up after Delivery.**

Pierra (*Prov. Méd.*, March, 1907) discusses the important subject of how many days after her confinement a woman may begin to get up. Most of the authorities have advised that the rest in bed be as prolonged as possible, giving as a reason that the involution of the uterus is not complete until eighteen or twenty days after delivery. In the leisured class it is not unusual to find that twenty five to thirty days is the period prescribed. It is, however, conclusively shown that involution is complete by the fourteenth day after the confinement at the very latest.

Pichevin has pointed out the disadvantages of prolonging the dorsal decubitus; it favours congestion and blood stasis in the pelvis, and a large uterus which is weighty, and of which the ligaments are relaxed, may undergo a more or less serious retrodeviation, also it exposes the patient to the inconvenience of subinvolution. The dorsal position will induce a hypostatic congestion of the uterus, especially if it be retroflexed, which is analogous to the hypostasis of the pulmonary parenchyma, and which may be termed uterine hypostatic oedema. Women of the more leisured class suffer specially from neuro-arthritic affections and the tendency to congestion is met with only too frequently. It is possible to exaggerate the length of time in bed necessary after parturition, and unless contraindicated it is the author's custom to allow patients to get up towards the end of the second week with beneficial results.

265. **Diagnosis of Early Pregnancy.**

LOUIS J. LADINSKI (*Med. Record*, April 13th, 1907) holds that it is always possible to make a positive diagnosis of pregnancy as early as the fifth or sixth week when intrauterine. The diagnosis is made by a single sign. This is the appearance of a spot of a peculiar softness and elasticity just above the junction of the body and cervix in the anterior wall of the uterus, in the fifth or six week. When the uterus is retroverted or retroflexed it appears in the posterior wall, and at the sixth or seventh week of pregnancy. In incomplete abortion or subinvolution this area of softening appears, but is much more doughy and less elastic. With a hard fibroid in the upper portion of the uterus there is a similar spot, but the softness is only relative. With a soft myoma in the front of the uterus the feeling is exactly that of pregnancy. The sign must be sought by bimanual palpation. Absence of this sign absolutely excludes uterine pregnancy. The sign aids in making a positive diagnosis of extrauterine pregnancy by excluding uterine pregnancy. It is in all probability due to extreme vascularity of the uterine wall at the point where it is felt.

GYNAECOLOGY.

266. **Vaginal Cyst.**

DE BEULE (*Journ. Méd. de Brux.*, March 21st, 1907) describes a case of vaginal cyst on which he operated successfully. The patient was a healthy peasant, aged 40, married for about three years, and the mother of one child. The history was uneventful until about the age of 34, when, on lifting a heavy weight one day, she experienced a sudden, tearing pain in the lower part of the abdomen, nearly turning her faint, and obliging her to take to bed. Several days of retention of urine, necessitating the use of the catheter, followed, but in three weeks she was again up and about her usual employments. Menstrual troubles, present already to a small extent, became more accentuated after this, with some dysuria and retention of urine and constipation. A tumour appeared at the vulva a few months after marriage, disappearing in the horizontal position; but at the end of the fourth month of pregnancy it disappeared altogether until after delivery. Then, however, the swelling recurred and gradually increased; but this time, instead of being soft and easily replaced inside the vagina, it was hard, elastic, and absolutely irreducible. When it came under the notice of the surgeon it filled the whole vaginal cavity, being about the size of an adult fist, with a very broad pedicle, inserted into the anterior superior cul-de-sac. Per rectum, it was felt projecting into the rectal ampulla, and rising higher than the fundus uteri, which was retroverted. The withdrawal by syringe of a citron-coloured fluid proved it to be a cyst, and operation was agreed upon. The tumour was adherent to the posterior wall of the bladder in front, and behind it was so intimately in relation with the peritoneum that a laceration occurred during separation of the adhesions, and a loop of the sigmoid flexure prolapsed into the wound. It was returned, and the operation satisfactorily completed, the resulting urinary disturbances gradually passing off. The case had been brought to De Beule as one of uterine polypus, and, after ascertaining its cystic nature, the next problem was to determine its origin. A Wolffian and an embryonic starting-point seemed both to be contraindicated, as also the occlusion of separate glands. From the history of the case and the anatomical relation of the parts, De Beule inclines to the view that the strain at the age of 34 produced a vaginal hernia, with all its characteristics, disappearing when the pregnant uterus began to rise out of the pelvis. The second tumour he regards as a hydrocele developed in the empty hernial sac, its characteristics being analogous to those of a hydrocele of the testicle and a cyst of the cord. De Beule represents himself as being the first who has ever suggested this hypothesis in a case of such great rarity.

THERAPEUTICS.

267. **Serumtherapy of Dysentery.**

SHIGA, the discoverer of the dysentery bacillus, was the first to apply serotherapeutics to this disease. His results, affecting some 298 patients, are not quite reliable, as he treated the majority with the usual medicaments as well. Shiga believed that the serum exercised a beneficial action on the course of the disease, that the number of stools was rapidly diminished, that the blood and mucus soon disappeared from the stools, and that the duration of the disease was shortened from forty days to twenty-five. Kruse also believed that he could influence the course of the disease for the better. Rosenthal was able to show still better results with his serum and especially claimed to be able to reduce the mortality by one-half. Korentschewsky used Rosenthal's serum, and employed much larger doses, with which he obtained very satisfactory results. Other authors have also been able to satisfy themselves of the value of the various dysenteric serums. Lastly, Vaillard and Dopter introduced a new serum and described the utility of the same at the Lisbon International Medical Congress. T. Skschivan and W. Stefansky (*Berl. klin. Woch.*, February 11th, 1907), reporting from Odessa, describe their observations and investigations on this subject. The serum was obtained from a horse which had been immunized for one year with dysentery toxin, obtained by filtration from 3-weeks old cultures of Shiga's bacillus. The serum proved to be purely antitoxic. The patients treated with this serum varied in age from 19 to 46 years, save one child of 8 years. The remedy was applied during the acute stages, usually between the second and tenth days of illness. In one case the injection was carried out on the twenty-first day. All the cases were typical dysentery cases, and all doubtful illnesses were excluded. In a certain number the bacillus was found in the stools. The patients were first watched in hospital without any special treatment, in order to determine what influence rest, dieting, etc., had on the course of illness. Eight of the patients were suffering from moderately severe dysentery, and seven from a severe form. Extremely severe cases did not occur. No other treatment was employed save in one case, in which an enema of water was given. The serum was injected subcutaneously in the chest or abdomen in doses varying from 20 to 40 c.cm. for the moderately bad forms, and from 50 or 60 to 100 c.cm. for the severe cases. The authors give a few clinical histories to exemplify the effect of the treatment. They regard the serum as a specific one, of equal potency to that of diphtheria. After two or three days the clinical symptoms begin to give way. The pain and tenesmus rapidly diminish, the fever falls almost critically, and the blood disappears almost concomitantly from the stools. After from three to four days the characters of the motions change. At first diarrhoeic, they become semi-solid and then formed. Sleeplessness and loss of appetite soon disappear. The only side-effects of the serum seen consisted of erythema, urticaria, and pains in the limbs in four cases, in two of whom fever was also noted. It is claimed that in spite of the small number of cases the antitoxic serum acted extremely well.

268. **Novaspirin.**

ASPIRIN has gained for itself a world-wide reputation, and is regarded as a harmless medicament. K. Witthauer (*Berl. klin. Woch.*, January 27th, 1907) finds, however, that some people cannot tolerate it on account of its deleterious action on the stomach. Bayer and Co., of Elberfeld, have attempted to overcome this disadvantage, and have introduced a new preparation which they call "novaspirin." This preparation is the di-salicylate ester of methylene citric acid. It contains 62 per cent. of salicylic acid, and is a white crystalline powder possessing a slightly acid taste but no smell. Its melting point lies between 150° and 152° C. It is practically insoluble in water. In order to test its action on the stomach, Witthauer gave it in doses of 2 grams *pro die* to persons suffering from marked hyperacidity. Three of these persons tolerated the drug well, while the fourth complained of slight pressure, which, however, rapidly disappeared on discontinuing the preparation. This patient had suffered from pain and vomiting and from chlorosis six days before novaspirin had been given. Witthauer then tried it on patients with rheumatic pains and with fever, and found that it acted in a manner similar

to aspirin. He then employed it in some cases in which aspirin could not be tolerated. In these cases novaspirin did not produce any of the unpleasant gastric symptoms which aspirin did. He noted, however, that the sudorific action of the new preparation is not so strong as that of aspirin. The antineuralgic effect is also less powerful, while the antipyretic action is exceedingly good. It is not so strong as aspirin, and therefore can be given for longer periods and in larger doses than aspirin.

269. **Cold Bath Treatment of Typhoid.**

Marchand and Olivier (*Arch. Gén. de Méd.*, February, 1907) have found that the cold bath treatment of typhoid fever caused a marked lowering of the peripheral temperature in those patients who died, whilst in those who recovered, the baths caused only a slight variation in the axillary temperature. In giving the cold baths, the temperature of the water was always 26° F., and the patient's temperature was taken twenty minutes after the bath. The temperature of the patient was always taken in the axilla. The baths lasted fifteen minutes, and following the bath the patient was wrapped in a blanket, a hot-water bottle was placed near his feet, and he was given a little hot drink. Of 7 typhoid patients treated by cold baths, 3 died and 4 recovered. Of the 3 cases that died, the average lowering of the temperature after the baths was 1.21° F., whilst in the 4 cases that recovered the average lowering of body temperature after the baths was only 0.4° F. The authors also found that sometimes the body temperature was found to be higher after the bath than before it, but that this only occurred in those cases that recovered. Sometimes the temperature before and after the bath remained the same: this also was found chiefly in those cases that recovered. The authors conclude that, contrary to the generally-accepted opinion, if, as a result of the baths, the body temperature falls considerably and remains persistently low, the prognosis of the case is bad. In the 3 fatal cases death was the result of heart weakness without there being any pathological lesion of the cardiac valves or walls, and the marked lowering of the body temperature in these subjects produced by the baths was the result of cardiac weakness present before the disease commenced or produced by the action of microbic toxins on the cardiac muscle. The authors further conclude that if the temperature of the body is much lowered after a bath at 26° F., and if, half an hour after the bath, it has not risen to a height approximately equal to that before the bath was given, one ought to consider that the patient's heart is weak and that he ought to be carefully watched, even in the absence of any cardiac bruit.

270. **X Rays in Unresolved Pneumonia.**

Kinnicutt and Pemberton (*Amer. Journ. Med. Sci.*, February, 1907) record notes of three cases of unresolved pneumonia treated by x rays, in which marked improvement took place. No results must be expected unless the condition has been of only a few weeks' duration, since organization of the exudate precludes the possibility of resolution. In selecting cases it is important to choose those in which the condition is chiefly a lack of resolution and not a continued inflammation, and the possibility of tubercle must be eliminated. Treatment should be begun tentatively with brief exposures and small doses, since a sudden digestion of the exudate and absorption of its products during a severe toxæmia might be harmful. In the three cases so treated there was a rapid clearing up of all signs of solidification, which had previously persisted for one month, a fortnight, and thirteen days respectively. The effect upon metabolism was most remarkable, there being an increased metabolic output through the urine, while the exudate became moist and rapidly cleared up. Theoretically the rays in their action upon normally present ferments excite or accelerate the processes that digest the exudate.

PATHOLOGY.

271. **Immunization against Tuberculosis.**

Ehrlich (*Veröffentlichungen, Heft 3*) reports the following observations on the degree of immunity established by the inoculation of bovines with his "bovovaccine." Three months after receiving their protective inoculations certain animals were submitted to one or other of the following tests. Two "protected" animals and two fresh control animals were kept together with cattle suffering from manifest tuberculosis. Six "protected" and six control animals were inoculated intravenously each with 4 mgs. of a highly virulent bovine bacillus. Seven "protected" and seven control animals were inoculated subcutaneously with tuberculous bovine tissues. The results of these experiments, 170 days after the control infection, are recorded. A (subcutaneous experiments): (1) Massive lesions of the prescapular glands of the seven controls and one of the "protected" animals; (2) extension of the infection to the lungs in five of the controls, whilst the internal organs of all the "protected" animals were free from tuberculosis. B (intravenous experiments): (1) Death of three of the six controls twenty-nine, thirty-four, and thirty-seven days after the test, with very extensive miliary tuberculosis; (2) the three remaining controls, which were killed when very ill, showed general tuberculosis: (3) the "protected" animals appeared at the time of slaughter to be, clinically, in perfectly good health, and had on no occasion showed a rise of temperature during the period following the control infection; in two of them there were found not more than from two to four quite small tubercles in the bronchial glands, and in every animal the lung tissue was entirely free from tuberculosis. C (exposure to natural infection): (1) With the inoculated animals, which were not killed, there was obtained a quite insignificant reaction with tuberculin; (2) with the control animals there was a vigorous tuberculin reaction, and on section severe tuberculous lesions were found in the abdominal organs and the lungs.

272. **Experimental and Human Arterial Disease.**

Since Josué first produced arterial changes in rabbits by means of adrenalin, many experimenters have confirmed and developed his work. The latest of these is Klotz (*Journ. Exper. Med.*, vol. viii, Nos. 2 and 4, March and August, 1906) who has studied the relation of the diseases so produced to arterio-sclerosis as it occurs in man. In the rabbit, as the result of injections of adrenalin, a deposit of lime salts occurs in the descending arch of the aorta, which may vary in degree from tiny plates barely visible to the naked eye to conversion of the vessel into a fragile rigid tube. The change is essentially a change in the middle coat. The muscle cells of the median zone of this coat undergo fatty degeneration, which advances with great rapidity from the earliest stage, where only tiny droplets of fat are seen around the nucleus, to the final stage, where the cells are completely replaced by granules of fat which do not coalesce. The fat droplets, originally composed of neutral fat, are converted into fatty acid and thence to soaps, with which the calcium carried in the blood and lymph unites to form an insoluble combination. Calcification thus follows secondarily upon fatty degeneration of the muscle cells, and the next step is a similar series of changes in the elastic fibres of the same coat. The calcified masses coalesce to form large plaques, and the structure of the media becomes for the most part obliterated. The lesion is entirely a degenerative lesion of the media, and the intima is not affected by any degenerative process. It is not comparable, therefore, to syphilitic arteritis. In this we certainly have a change in the media, but it is of the nature of an inflammatory reaction with eventual production of connective tissue and not a degenerative change ending in calcification. In man, however, we do have a similar change occurring in the familiar "pipe-stem" or annular arterio-sclerosis of the clinician. Here the arteries of the extremities, that is, vessels of pronounced muscular type, undergo a perfectly parallel series of changes, ending in a calcification with thinning of the middle coat; while the intima is not affected by the degenerative process, at least not primarily. In both the experimental lesion and this form of human arterio-sclerosis the change is due, according to Klotz, to increased blood pressure, produced artificially in the one case, in the other produced by strain and localized accordingly. It is recognized that this form of arterial disease is quite distinct from ordinary arterio-sclerosis of the aorta in man. Here primary calcification of the intima is well known to occur, usually secondary to atheromatous change. Even in an elastic-walled large artery like the aorta, however, primary calcareous change in the media occurs very frequently. This is constantly overlooked, because it may produce no macroscopic signs. The aorta remains elastic, smooth, pliable, and only after careful microscopic investigation is it discovered that the muscles of the middle third of the median coat are extensively converted into a granular calcareous deposit. The change differs from that described as occurring in the arteries of the extremities in the fact that calcification rarely extends to the elastic fibres, but it is essentially similar. Klotz believes this to be a senile change occurring regularly after 65 years of age, and demonstrable in most elderly persons.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

273. Heredity in Cerebral Haemorrhage.

RAYMOND (*Prog. Méd.*, March 30th, 1907) recounts the family history of a man who had consulted him. The patient's grandfather died at the age of 56 from a cerebral haemorrhage after a fall into some water. An uncle of the patient had a first haemorrhage at 52 years of age, and died of a second at 59. An aunt died from haemorrhage on the brain at 57, having had a first haemorrhage at 51. A sister of the patient, who is still alive, had a stroke at 39. Out of five cousins, three have died from cerebral haemorrhages at the ages of 56 and 49, the age of the third being uncertain at the time of death. Two are still alive; one of them had a haemorrhage at 52, the other at 57. The patient himself is 43 years old. He had epistaxis twice between the ages of 8 and 18; he is arthritic and nervous. When 35 he had migraine. He has anal eczema, varicose veins, and facial and cervical neuralgia. He has endarteritis, with an aortic systolic murmur and high arterial tension. Dieulafoy in 1876 first brought into prominence the importance of heredity in the pathogenesis of cerebral haemorrhage. He collected a number of cases, and pointed out from a consideration of them that a cerebral arteritis was not rarely found running through a family, and that it was very likely to progress to an actual haemorrhage in a few generations.

274. Early Diagnosis of Chronic Lead Poisoning.

ALTHOUGH new regulations and improved methods have diminished the number of cases of lead intoxication in zinc and lead works, Frey says that a large number of cases of anaemia, nephritis, gastric and intestinal catarrh and rheumatism among the workmen suggest the diagnosis of chronic lead poisoning (*Deut. med. Woch.*, February 7th, 1907). The difficulties of making a diagnosis in the early stages, that is, during the first few years, in these cases are very apparent. The symptoms are nearly all those met with in other forms of disease, and even the lead line on the gums cannot be taken as an index, since practically all workers in the zinc works show this. Apart from this, the frequent occurrence of alcoholism makes the differential diagnosis only more difficult. It would be highly desirable if one could base the diagnosis on the presence of lead in the urine, but it has been supposed by many authors that lead is rarely to be found in the urine of cases of lead intoxication. In early cases of chronic intoxication it is said that lead is regularly present in the urine, but there seems to be some doubt whether such cases are sufficiently ill to justify the hope that the patients would seek medical relief. Frey has been enabled to report on the results of the analysis of urine in 73 cases showing various forms of disease or intoxication, occurring in workmen engaged in zinc works. In 15.6 per cent. of these cases lead was found, but this find is so irregular that the diagnosis cannot be made to depend on the result of the examination. Frey, therefore, turns to another means of diagnosis, namely, the detection of granular red blood corpuscles. Normal red blood cells are homogeneous and take up acid dyes. Occasionally they show fine punctate granules, which are highly susceptible toward basic dyes. Basophile granules are never present in simple chlorosis, or in advanced phthisis, syphilis, or renal disease. In lead poisoning, the condition is present. It is, however, not specific of lead intoxication, for it is at times met with in cancer, pernicious anaemia, intestinal decomposition, septic infections, and intermittent fevers. Our knowledge of this basophilic granule formation has been enormously extended by Grawitz. Since the change occurs in every case of lead poisoning from the first, it can be utilized as a differential diagnostic means, for it only occurs in the other diseases mentioned above at an advanced stage. The granules disappear with the lead, and when a patient is successfully treated for lead intoxication, his blood again becomes normal. Frey examined a number of patients at the works, including both cases of lead intoxication and divers diseases. The results of this investigation were to confirm the statement that the find of basophile granulated red cells (save when cancer, etc., is present) indicates lead intoxication. In conclusion, he discusses briefly the advisability of keeping a constant control over the condition of the blood of all apparently healthy workers in lead who show the least pallor, and points out that while the duties of the works' doctor would be greatly increased, the gain to the employers would be correspondingly great in preventing tedious medical treatment and early pensions.

275. Motor Aphasia and Broca's Convolution.

G. PIERACCINI (*Riv. Crit. di Clin. Med.*, Florence, 1907, Nos. 5 and 6), after discussing Marie's recent dictum that motor aphasia is not caused by destruction of Broca's convolution, details the case of a man who received a blow from a hatchet on the head at the age of 47, and suffered from aphasia afterwards. The blow caused loss of consciousness; a depressed fracture of the skull was produced, running vertically upwards and a little forwards for 4 in. from just above and in front of the left ear. Several long fragments of bone that had lacerated the cortex were removed; the wound healed by first intention. This was in 1891; a few months later the patient exhibited a moderate amount of right facial paresis and a little weakness of the right arm and hand, and typical motor aphasia. Since that date the patient has been periodically examined again, and has shown continuous improvement in his pronunciation and vocabulary. Thus, in 1893 he had difficulty in counting aloud up to 10, and could talk but little; in 1895 he could count up to 100 and more with ease, and could express his ideas well, although his pronunciation of certain words was bad probably for want of better education. A table of the patient's pronunciation of numerous words and of his answers to certain questions on various dates up to 1906 is given, and conveys a clear idea of the progress he made in his speech. He was at all times able to understand spoken words. Pieraccini argues that this case supports the older view, and that there is such a thing as motor aphasia due to injury of the posterior part of the third left frontal convolution.

SURGERY.

276. Operative Treatment of Muscular Torticollis.

GERDES (*Zentralbl. f. Chir.*, No. 6, 1907) points out that in addition to the sterno-mastoid other muscles of the neck are more or less affected in cases of muscular torticollis. Of these accessory muscles the most active are the scaleni, the levator scapulae, and the acromial portion of the platysma. Next to the sterno-mastoid the scalenus anticus takes the major share in the persistent contraction. The author, who believes that he was the first to practise division of the scalenus anticus, and has applied this operation with excellent results in eleven cases, gives a full description of his method. The skin incision, which begins over the sternal portion of the origin of the sterno-mastoid, about 1 in. above the clavicle, is carried directly outwards along an extent of about 2½ in. After complete division of both tendons of the sterno-mastoid, the subjacent fascia is opened up, and the jugular vein and the inferior belly of the omo-hyoid muscle are drawn far apart by blunt hooks. The scalenus anticus, which is now freely exposed at the bottom of the wound, is elevated on a director and divided just above the subclavian artery, care being taken to avoid any injury of the phrenic, of the jugular vein, and of the brachial plexus. The author has not yet found it necessary to attack the scalenus medius, which is much less accessible than the scalenus anticus, and the exposure of which would necessitate a larger wound. In the operation for section of the scalenus anticus the scar is not much more conspicuous than that caused by open tenotomy of the sterno-mastoid. Its results, the author asserts, are thoroughly satisfactory, even in cases in which the torticollis has been of long standing. As a result of removal of the cervical scoliosis, which is mainly due to the contraction of the scalenus anticus, the patient's head can be readily raised, rotated, and held in the middle line. This addition to open division of the sterno-mastoid, as it ensures better results, and also is just as satisfactory from a cosmetic point of view, is held by the author to be indicated in slight as well as in severe and very obstinate cases of torticollis.

277. Temporary Ischaemia of the Liver.

IN resections of the liver a method of shutting off the blood supply without risk of injuring the organ operated upon

would make it much easier to distinguish the limits of new growths, and would diminish the great risk of death from hæmorrhage during operation. A. Cosentino (*Il Policlin.*, October and November, 1906) reviews the history of previous attempts in this direction, and describes experiments on animals to determine whether it was possible to stop the blood supply during half an hour without permanent damage to the liver. He states that the hepatic artery has been tied in five human patients, all but one dying. The operation of tying the portal vein has been performed once on the human subject, and was followed by death in half an hour. Experiments on animals have given varying results in the hands of different investigators, but apparently tying the hepatic artery or all those branches which go to one lobe of the liver is extremely dangerous. On the other hand, the temporary compression of the artery in animals has given good results in the hands of D'Alessandro and other operators. Cosentino proposed to himself to study the safety of the operation and the nature and extent of the subsequent changes in structure and function which the liver and its vessels underwent in successful cases. At first he obtained closure of the vessels by a loop of silk held tight with haemostatic forceps. The subjects died within forty-eight hours, and are not further referred to. Digital compression was rejected because of the impossibility of keeping it up evenly throughout an operation. The author recommends a pair of forceps devised by himself, and applied close to the point where the vessels enter the liver. This arrests both arterial and venous blood supply. If the forceps are not applied as high as possible, there is danger (in dogs) of missing the pancreatic veins, and so spoiling the experiment. Forty-two rabbits and dogs were operated on. Two were killed at the end of the operation. Five died from accidental causes described, and are not further referred to. The rest were killed by various methods after intervals of 12, 24, 36, 48, 60, 72 hours, or 4, 5, 8, 10, 12, 13, 16, 19, 22, 26, 28, 31, 45 days. During life they showed no ill-effects from operation, ate well, and in some cases put on flesh. Apparently, therefore, the method of compression adds no serious risk to those which necessarily attend a resection of the liver. The tissues constricted by the forceps showed hyperaemia, gradually fading after the operation, and sometimes a few punctiform haemorrhages. Animals killed within a few days of operation had their livers hyperaemic, with signs of slight necrosis of many of the cells, and after about five days some fatty degeneration. These changes disappeared gradually, until at the end of thirty days it was difficult, and after forty-five days impossible, to find any deviation from normal structure. During the first week after operation there was a marked deficiency both of glycogen and of the fuchsinophil secretion granules in the liver cells. This condition was followed by one in which the glycogen was in excess, and the secretion granules were present in normal quantities. Later both substances were observed to be normal. In no case was thrombosis observed in the vessels constricted. The changes in them were slight in intensity and of varying nature. Cosentino concludes that by the use of his elastic forceps sufficient pressure may safely be applied to the vascular peduncle of the liver to produce a temporary ischæmia prolonged during half an hour. Such a procedure involves changes in the structure and function of the liver which are completely repaired in the next four weeks.

278. Coxa Valga.

Tixier (*Rev. d'Orthopédie*, No. 2, 1907) states that coxa valga, although it has attracted much less attention than coxa vara, is not a very rare affection. It has by the few authors who have described it been regarded rather as a complication of other deformities than as a primary and idiopathic condition. The author points out that while the normal angle formed by the axis of the femoral shaft with that of the cervix femoris, the angle of inclination is about 125 degrees, and the same angle is diminished in coxa vara to 90 degrees, in cases of coxa valga it is increased to about 150 degrees. Adams, in his measurements of the angle formed by the neck and the shaft of the femur, took as starting point the plane of the base of the head at the limit of the articular cartilage. The diameter of this line cuts the longitudinal axis of the femur forms the so-called angle of direction, which in the normal condition is one of about 45 degrees, and in coxa valga becomes greater than 45 degrees. The symptoms of coxa valga are accentuated abduction and outward rotation, and restricted adduction. In cases of bilateral deformity there is an awkward gait, and in those in which one limb only is affected a slight limping. The top of the great trochanter descends but very little below Nélaton's line. To attain an exact diagnosis recourse should be made to radiography, which reveals the condition of the interior of the joint, and enables the observer to determine the anomalies of the angles of inclination and direction. The deformity in some few instances is primary, but is usually the result of injury, or of local or general disease. It was met with by Albert in association with (1) paralysis of the leg; (2) diminished activity of the leg without paralysis; (3) osteomyelitis of the ilium; (4) rickets; (5) osteomalacia; (6) luxation of the opposite hip; (7) multiple exostoses; and (8) genu valgum. The treatment should, in complicated and traumatic cases, be applied to the condition that has given rise to the deformity, and in primary cases consist in gymnastic exercises, massage, and the internal administration of phosphorus.

OBSTETRICS.

279. Indications for Rupture of the Membranes.

Rudaux (*La Clinique*, March, 1907) points out that the bag of waters is the most important agent in the dilatation of the cervix uteri, and should be kept intact, whether the head is engaged or not, so long as the contractions are normal and the dilatation incomplete. Therefore when making a vaginal examination during a uterine contraction, the finger must not be allowed to press upon the membranes whilst they are tense, as there is a risk of causing premature rupture. Further, it is to be noticed that this tension of the membranes is apparent before the patient experiences the pain of the contraction, and calls attention to it. There are a variety of cases in which a rupture should be effected before the completion of dilatation. When the uterus is abnormally developed, either by excess of amniotic fluid, or by a multiple pregnancy, or by a very large fetus, it may happen that dilatation which has been progressing favourably becomes stationary, whilst the contractions continue or cease altogether. Under these circumstances, rupture of the membranes will cause the labour to resume its usual course. When permanent tension of the membranes is diagnosed, the same indication exists, and the same result follows. In such cases there is no protrusion of the sac, the presenting part is well engaged in the pelvis, and the membranes are often very adherent to the lower uterine wall. The sac does not fulfil its physiological function, and prevents the fetal head, for the presentation is nearly always a vertex, from supplying its place. Early rupture is advisable when the presentation has a tendency to displacement and is liable to become transverse, also after version by external manipulation when it is difficult to keep the fetus in the desired position. Unless the membranes are ruptured a prolapse of the cord can hardly be successfully dealt with, the funis must be carefully replaced behind the presenting part, which then descends, and further danger is avoided. The most immediate indication for rupture is haemorrhage due to a placenta praevia. If a large rent is made in the membranes they will cease to pull upon the placenta, and the additional pressure of the descending part will stop the bleeding. There should be no hesitation in rupturing when the condition of the mother or child calls for a speedy termination of the labour. Intervention is often required in twin pregnancies, since the second ovum may remain intact, the uterus being too much exhausted to overcome the resistance of sac. When the sac does not rupture with strong contractions and after the completion of dilatation, there is no reason to wait. It is in the interest of both mother and child to bring labour to an end as soon as possible. Waiting favours a dissociation of the amnion and chorion, and may produce retention of the membranes during delivery.

280. Attempted Induction of Abortion by Intrauterine Injection of Fehling's Solution.

Tanner (*Zentralbl. f. inn. Med.*, January 5th, 1907) states that a nurse, after missing two menstrual periods, attempted to induce abortion by the intrauterine injection of Fehling's solution. The syringe used was of 1-gram capacity, and was fitted with a nozzle suitable for urethral injections of cocaine. Shortly after the injection she was seized with severe abdominal pain and repeated vomiting. About midnight, fifteen minutes after the injection, the pulse was 92 and irregular. The pain became worse, and the patient was in constant dread. The cardiac sounds were faint and separated by distinct intervals but were otherwise normal. Respiration was unaffected. The skin was cool. The pulse became more regular after hypodermic injections of camphor and morphine but remained

infrequent—48 to 52. The temperature was subnormal. At 1 a.m. undigested, slimy, brownish masses of rice were vomited. There was no uterine haemorrhage. At 3 a.m. the pulse had almost regained its normal regularity but was still infrequent. At 3.30 it was 64, at 5.30 86; the temperature had risen to 97.7° F. Later in the morning a slight haemorrhagic discharge from the vagina occurred. The urine contained red and white blood corpuscles, and renal, ureteral, and vesical epithelium. There was slight smarting on micturition; no casts were present. The quantity of urine was at first normal, but on the fourth day was reduced to 10½ oz. Later the amount again became normal, and on the fifth day the previously haemorrhagic urine regained its normal appearance. There were then a few leucocytes and some renal and ureteral epithelium but no red corpuscles. A number of hyaline casts were found. On the tenth day the urine was normal in every respect. The acuteness of the onset of symptoms was somewhat alarming, but otherwise the patient was never in danger, and recovered rapidly. Nothing but a few clots were found in the vaginal discharge, and it could not be determined whether pregnancy had been interrupted. When the patient was discharged from hospital the size of the uterus corresponded to that of a two months pregnancy. The symptoms of poisoning by solutions of salts of copper are said to be cauterization of the buccal mucosa, salivation, tympanites, green vomit, and brownish-red watery stools. The pulse is small and the skin cold. In severe cases these symptoms may be followed by jaundice, paresis of the limbs, and collapse. Most of the copper is excreted by the liver, but, according to v. Jaksch, the kidneys almost always present signs of toxic nephritis. The fatal dose of copper, when taken per os, is said to be 154 grains to 184 grains of the acetate and 154 grains to 308 grains of the sulphate, though Hoffmann states that less than 10 grains of the sulphate may produce symptoms of poisoning. In this case less than one-twentieth of this amount produced alarming symptoms, 1 gram (about 17 minims) of Fehling's solution containing 0.034 gram, or slightly more than ½ grain, of copper. Evidently intra-uterine injection had an effect comparable to that of hypodermic injections in animals, which are followed by toxic nephritis. The urine becomes scanty, and usually contains albumen, and frequently blood. In animals paresis of the limbs is one of the most prominent symptoms. Whether this was present in this case could not be determined.

GYNAECOLOGY.

281. Sloughing Cancerous Uterine Fibroid.

PERAIRE AND CORNIL (*Bull. et Mém. de la Soc. Anat. de Paris*, November, 1906) relate a case where a woman aged 55 consulted Peraire for free metrorrhagia which had lasted for nine months, beginning just ten years after the menopause. The discharge, at first red, had become brown, though not fetid. Severe attacks of pain set in. The patient had twice been pregnant. The cervix was fixed. Subtotal hysterectomy was performed; it was difficult on account of strong and extensive adhesions to the intestines, bladder, and omentum. The stump was covered over with peritoneum, together with the pedicles of the appendages, both of which had been removed on account of extensive inflammatory changes. The uterus contained several myomas. In the fundus, under the mucosa, lay one of the smallest of these new growths; it was as big as a walnut and entirely sloughy. The mucosa on the surface was entirely converted into an exuberant growth, the source of the sanious discharge. Cornil pronounced it to be an alveolar epithelioma with polyhedral cells, and not probably primary. He advised the speedy removal of the cervix.

282. Acute Torsion of Both Fallopian Tubes.

MICHEL (*Comptes rendus de la Soc. d'Obstét. de Gyn. et de Pédiatr. de Paris*, February, 1907), reports that a married woman, aged 35, twice pregnant, and without any history of pelvic disease, was seized with violent hypogastric pains a few days after a regular period. They remained very intense for a few hours, and the patient felt faint. Acute appendicitis was diagnosed, the pains subsided, and the patient was able to attend to housework, when a second attack of acute pain occurred within six weeks. Michel detected a swelling in the right iliac fossa, and another occupying the left and posterior fornix. He was inclined to believe that the masses represented retrouterine haematocele, recurrent, as is often the case, and it happened that profuse menorrhagia accompanied the second attack, increasing his suspicions. Abdominal section was undertaken in preference to colpotomy. The swellings proved to be dilated and obstructed tubes—the right, twisted four turns, was thin-walled and contained clear fluid; the left, twisted three turns, was thicker and contained blood. There was no evidence of tubal gestation; the primary condition was, without doubt, salpingitis. The right ovary was involved in the torsion of the corresponding tube. Michel amputated the uterus above the cervix, taking away the diseased appendages without detaching them from the cornua. The patient, when convalescent, declared that the pains had completely passed away.

THERAPEUTICS.

283. The Treatment of Presclerosis.

IN the *Bulletin de l'Académie de Médecine* for January 21st, 1907, is reported a discussion on presclerosis which was opened by Huchard. He maintains that high arterial tension often precedes and produces the vascular lesions of arterio-sclerosis; and to this period of high blood pressure without any arterial change Huchard gave the name of presclerosis. In 1708 Boerhaave noticed the same fact. In 1749 Sénac elaborated the theory. In 1874 Mohaméd, while studying the prealbuminuric stage of Bright's disease, admitted a functional period characterized by increased blood pressure without any vascular change. In 1883 Sir W. Broadbent attributed the lesions of arterio-sclerosis to a heightened blood pressure; Clifford Allbutt said the same in 1895, and Leonard Williams in 1906 said that high tension is original in this sense, that it exists independently of every organic lesion. Josué produced atheroma in animals by injections of adrenalin. The rational line of treatment is one which will lower the blood pressure. The arterial system regulates the work of the heart, and it is through that system we must hope to relieve the latter organ. This lowering of the blood pressure may be achieved by many means—physical, hygienic, and medicinal. Diet, physical exercises, massage, Bourbon-Lancy baths, and high-frequency currents are some of the methods employed. Lacto-serum, amyl-nitrite, nitroglycerine, sodium nitrite, tetranitrite of erythrol, potassium nitrate, and theobromine by its action on the kidneys, are also serviceable. Renal impermeability caused by excess and errors in eating is a frequent cause of presclerosis, and attention must be paid to this if the cure of presclerosis is wished and not only its temporary relief. The condition commences with an intoxication; it continues and ends with an intoxication. So to resist from the first high arterial tension by prescribing a diet; to resist it again in its effects by a vaso-dilator and pressure-lowering treatment; to reduce to a minimum the intake of foods which act as poisons, and to hasten the elimination of the poisons by diuretics; and lastly, to strengthen the heart in its constant fight against peripheral obstruction, is the problem of treatment. To recognize early the first functional stage—presclerosis—this is the work of the clinician. And the importance of this is great, for it is in the stage of presclerosis that the disease can be cured; when arterio-sclerosis is established with anatomical lesions of the vessels the cure can only be functional. Treatment by iodides, which has been so much abused—and still is abused in the presclerosis stage, when it is absolutely contraindicated—is productive of good results when arterio-sclerosis is established. In the advanced stages of the disease digitalis is useful as a cardiac tonic. Such is the line of treatment by which presclerosis can be cured and arterio-sclerosis prevented. It is the regimen, and not any individual part of it, that is curative. In the diagnosis of the condition, too, mistakes may occur, and the sphygmomanometer is a fruitful source of error, especially in inexperienced hands. The author does not claim to have found an absolute cure for, but a prevention against, arterio-sclerosis. Albert Robin had noticed that some dyspeptic patients at their crises showed a high tension, which progressed to arterio-sclerosis, but which was cured by small doses of sodium nitrite. Lancereaux maintained that arterio-sclerosis is not the consequence of high tension, but is found in the gouty, the sufferers from chronic rheumatism, and those who have suffered from plumbism—all those, in fact, predisposed to trophic changes in cartilage, fibrous tissues, or the nails. Hayem thought that the anatomo-pathological lesions of arterio-sclerosis precede the phenomena of high tension. Chantemesse had found the subjects of high tension to always have a certain degree of hyaline degeneration of

the internal coat of their arteries, and thought that the anatomical signs of arterio-sclerosis precede the clinical symptoms. Huchard replied that he had seen patients with signs of high arterial tension lasting three or four years previous to the establishment of arterio-sclerosis proper. He firmly maintained that continued high tension was the cause of arterio-sclerosis, and quoted a simile. For months and years a current of liquid may be passed through a caoutchouc tube without doing any damage; one day the pressure of the liquid is increased (representing the high tension), and under this influence the tube alters and breaks. So in the human mechanism the increased pressure causes changes in the arteries. The notion of presclerosis has a great clinical importance; it divides arterio-sclerosis into two stages—the one curable, before, as the author thinks, any lesion is present; the other remediable, when the arterio-sclerotic lesions have become established.

284. Air Baths.

W. D. Lenkei (*Zeit. f. phys. u. diat. Therap.*, March, 1907), after a series of observations, has arrived at the following conclusions as to the general action of air baths: (1) In lukewarm and cool air baths the skin becomes somewhat hyperaemic and transpiration is favoured. This is seldom observed at the beginning of the cool or during the cold baths, because in the latter the skin remains cool and pale. (2) Congestions disappear somewhat rapidly and distended veins visibly diminish, especially in cool and cold air baths. (3) The mental condition improves. (4) The appetite and the activity of the intestinal tract are increased. The following are some of the results of the more specialized observations: (1) Changes were discovered in all the functions investigated, the changes being in the first place dependent upon the temperature of the air, but also upon the light rays, the relative dampness of the air, and the action of the wind. (2) The baths are described as cold, cool, lukewarm, and warm, according to the temperature of the air. The temperature in the cold bath is below 14° C., in the cool bath is from 14° C. to 20° C., in the lukewarm bath that which corresponds in its action to a lukewarm water bath is from 26° C. to 36° C.; the warm bath in northern climates is often a sun bath, because it is only in sun baths that the high temperature is obtainable. (3) The pulse-rate in the lukewarm bath usually increases about 4 in the minute, in the cool bath falls about 3 in the minute, in the cold bath falls 2.5. The bodily temperature does not change in the lukewarm bath if the air is above 25° C., but below this it falls by about an average of 0.25° C.; in the cool bath the temperature falls on an average 0.5° C., the fall being most marked if the air is in motion, in the cold bath the internal bodily temperature rises about 0.16° C. on an average. The rate of breathing always diminishes, in the lukewarm bath about 3 in the minute, in the cool bath 1.3, in the cold 2.4. The depth of the inspirations increase in the lukewarm bath on an average by 4.7 mm., in the cool bath by 2.8 mm., in the cold bath by 5.5 mm. The blood pressure in the lukewarm bath falls by about 12.7 mm. in the arteries and 1.8 mm. in the veins; at temperatures between 25° and 23° C. the blood pressure remains unaltered for the first quarter of an hour. In the cool baths in the majority of cases the arterial pressure rises about 5.4 mm. in the first quarter of an hour, but then falls to much as 14.4 mm. lower; the venous blood pressure falls on an average 5.85 mm. In the cold baths at temperatures below 15° C. the arterial pressure rises and remains about 14 mm. higher than before, at a temperature of 14° C. the arterial pressure rises at first and then falls but not to its initial point, while at temperatures of the air between 15° C. and 14° C. the blood pressure remains unchanged at any rate after the first quarter of an hour. (4) The action of light rays is in general similar to that of cold air, but the action on the bodily temperature is like that of warm air. (5) The effect of wind upon the bodily temperature and the arterial pressure is similar to that of cold, but wind increases the pulse rate and rate of breathing and has less action upon the depth of the inspirations. (6) Increase of moisture in the air strengthens the effect of cold air. (7) The changes of function in the air baths were found to be almost the same whether the bath was taken after a meal or fasting. (8) Except with regard to the arterial blood pressure in the cool air bath, the length of any air bath acted only to increase the changes of function already described, the changes being most active in the first quarter of an hour of the bath after that time the change proceeded more slowly, but in the same direction as in the first half-hour, and then as a rule remained stationary. (9) The effect of exercise showed itself only with more correct regulation of heat, and those who had often had the baths felt better and less easily tired in cool baths. (10) The after-effects of the baths lasted from half an hour to one hour; the lowering of the venous blood pressure was the change which was slowest to disappear. (11) The output of urine increased and often doubled itself in the cold and cool air bath. (12) The air baths had a marked influence on the vascular system. In the lukewarm bath the amount of blood in the cutaneous vessels was increased, while in the cold baths that in the internal organs. In the cool baths at first the blood supply of the deep-lying vessels, but later of the superficial area was increased. (13) In all probability metabolism is increased during an air bath, the increase being most marked in the cold air bath carried out in conjunction with the action of light.

285. Cold Packs in Infantile Pneumonia.

Hekimoglou (*La Clin.*, February, 1907) deals with infantile pneumonia; he points out that drugs are practically useless, and that the physician can only recommend a diet of milk, plenty to drink, and a perfectly free ventilation round the patient. Meanwhile he watches for the appearance of cerebral or typhoidal symptoms, which are apt to supervene in young children. He has obtained excellent results from the use of cold balneation in severe cases with nervous symptoms; he finds it easier and more profitable to give cold packs rather than cold baths. The immediate effect is to lower the temperature, relieve dyspnoea, lessen convulsions, and promote a general improvement. He adopts the following method: A blanket is laid upon the bed and upon it a sheet which has been soaked in cold water; the child is placed upon this and wrapped up in it, folding the sheet well round it and laying it between its legs and arms so that the whole body is in contact with it; the blanket is then folded over the sheet. The child is left in the sheet, which is periodically moistened again, until it is cured or until the unfavourable symptoms, such as convulsions, trismus, or opisthotonos have disappeared. Some favourable cases have remained in the pack for six and ten days, the wet sheet being renewed at first every half-hour and then every hour. A child of 9 months old with opisthotonos and convulsions received no other treatment except the cold wet pack; it was enveloped in the sheet for ninety-six hours, at the end of which time the temperature fell, the nervous symptoms disappeared, and it made a good recovery. He recommends the treatment as one which gives unexpectedly good results in cases which are not improved by ordinary treatment.

PATHOLOGY.

286. The Action of Eosin and Erythrosin on Snake Venom.

Hideyo Noguchi (*Proceedings of the New York Pathological Society*, vol. vi, 1906, p. 19) has tested the action of two active photodynamic chemicals—eosin and erythrosin—upon the venoms of (1) the cobra; (2) *Crotalus adamanteus*; and (3) *Daboia russellii*. He finds that haemorrhagin, the predominant principle of crotalus venom, is only slightly resistant; the coagulin of daboia venom is more resistant; and neurotoxin, as represented in cobra venom, is very resistant to photodynamic action. The two dyes have no marked effect in diminishing the toxic activity of cobra venom for guinea-pigs. On the other hand, for rabbits a reduction in toxicity of about one-third is apparent after the eosin treatment. In testing guinea-pigs with crotalus venom the action of the dyes, after exposure to sunlight, takes place chiefly upon the haemorrhagic principle, and to a less degree upon the neurotoxic principle of the venom. The action of eosin in light upon this venom is rapid; in eight hours about 9.6 minimal lethal doses and about 16 minimal haemorrhagic doses were completely destroyed. On the other hand, thirty hours were found insufficient to reduce markedly the toxicity of cobra venom. It was found in experiments upon rabbits with vesicated daboia venom that the toxicity was considerably reduced, and the thrombokinase completely destroyed, whilst 76 minimal lethal doses did not contain one minimal lethal dose of the blood-clotting principle. The author concludes that venom neurotoxins are highly resistant to photodynamic action, venom haemolysins are less resistant, and the haemorrhagin and thrombokinase of crotalus and daboia venoms are only feebly resistant. Hence it follows that, whilst cobra venom remains almost unaltered, rattlesnake and daboia venoms are greatly reduced in toxicity.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

287. Phlebosclerosis.

A. CARDUCCI (*Il Policlin.*, January, 1907) describes 18 cases of this disease. He has hitherto failed to connect its presence with the existence of any definite clinical syndrome. Unlike Yuzbachian, who attached great importance to malaria as a precedent condition, Carducci could not learn that any of his patients had suffered from malaria, and after examining large numbers of malarial patients found none of them suffering from phlebosclerosis. The disease consists in a transformation of the vein walls into a sclerotic tissue, and differs from varicosity by involving a diminution rather than an increase in the calibre of the vein, and by not being associated with the presence of coagula. Carducci's patients suffered also in seven cases from arterio-sclerosis, in three from tuberculosis, and in three from malignant tumour, while the remaining cases were associated with diabetes, chronic nephritis, chronic uraemia, syphilitic hepatitis, or cirrhosis of the liver. These are in the main the causes assigned by other authors. In no case was phlebosclerosis discovered accidentally in a healthy person or in a patient convalescent from acute disease and otherwise normal. The thickening of the vein wall is palpable rather than visible. There is excessive development of the vasa vasorum. The veins when empty are of the same colour as when full of blood instead of the normal milky-white colour of an empty vein. Small inequalities can be felt in the thickness of the wall. The inner surface of a sclerotic vein is granular and red with yellowish joints. The veins most commonly affected are the anterior tibial, popliteal, femoral, external iliac, brachial, ulnar, radial, and the great saphena. The chief microscopical change is a proliferation of connective tissue unevenly distributed through the tunica intima of the vein, with numerous nuclei in the more recent cases and few in those of long standing. The pathogenesis of the disease is still purely theoretical, and Carducci does not adopt any of the hypotheses which he mentions. Symptoms are usually absent or belong rather to the disease causing phlebosclerosis. In emaciated patients the condition of the superficial veins can be both seen and felt. There is no oedema or cyanosis, no disturbance of objective sensibility or of the tendon reactions. The condition may be simulated by spasm of the musculature of the vein, but such spasm will always relax if the vein be rubbed with a sponge and hot water. More difficult, and sometimes almost impossible, is the diagnosis from thrombosis. The prognosis is good, since the disease does not threaten life, but it has never been observed to undergo cure, and there is no treatment for it.

288. Acute Dilatation of Stomach.

CONNER (*Amer. Journ. of Med. Sci.*, March, 1907) considers that the sudden incarceration of the lower end of the duodenum between the root of the mesentery in front and the vertebral column behind is a very important cause of acute dilatation of the stomach. He records a case arising suddenly, without vomiting, with enormous dilatation of the stomach and complete obstruction of the duodenum, which latter was relieved *post mortem* by raising the band of mesentery crossing it. A finger introduced into the duodenum felt the superior mesenteric artery as a tense firm cord in this constricting band. By far the largest number of cases followed operation with general anaesthesia. A few occurred during convalescence from severe and wasting diseases, while some were due to errors in diet and others to disease and deformity of the spine. Of symptoms, vomiting is the most constant, being present in 90 per cent. of the cases, while the next most striking feature is the rapid development of collapse. Pain, abdominal distension and tenderness, with constipation, thirst, and scanty urine, are the other principal symptoms. The dilatation is not confined to the stomach, but involves a part or the whole of the duodenum as far as the point where this passes behind the root of the mesentery, and here it is that definite obstruction occurs, the gut being pinched between the tense mesentery, with its contained superior mesenteric artery in front and the aorta and vertebral column behind. Below the obstruction the intestines are usually empty and collapsed. Even in some normal individuals a pull upon the mesentery, approximating that which might be exerted by the empty small intestines hanging in the true pelvis, might produce a complete temporary obstruction of this portion of the duodenum; and the added presence of an enormously dilated stomach would render the condition permanent by tending to crowd the intestines more into the pelvis and at the same time diminishing any muscular efforts to overcome the obstruction. Intestinal obstruction and perforative peritonitis are the conditions most likely to simulate it, but the sudden onset of severe vomiting of large amounts of bilious non-faecal fluid is suggestive of acute gastric dilatation. Prompt and complete emptying of the stomach with the stomach tube is the first indication in treatment, and this should be repeated several times a day. All food or drink by the mouth must be stopped and everything must be given rectally, while the excessive loss of fluid may be met by saline enemata or by hypodermoclysis. In addition, the patient should lie face downwards, or assume the knee-elbow position for short intervals, in order to displace the intestine from the pelvis and thus relieve the pull upon the mesentery and consequent constriction of the duodenum.

289. Early Diagnosis of Thoracic Aneurysm.

CLÉMENT (*Lyon Méd.*, March 31st, 1907) has recently confirmed by radioscopy a diagnosis of small aneurysm of the descending thoracic aorta, and he insists that although there is no one pathognomonic sign of this condition, there are certain symptoms and signs taken together which make its existence practically certain. The pain, often slight and not complained of except after particular inquiry, is continuous, is situated near and to the left of the vertebral column, and tends to radiate to the shoulder, the left arm, and the neck. Examination of the chest shows no loss of resonance on the left side, but the resonance is not increased as in pneumothorax. At the same time the breath sounds are diminished over the left lung—this being due to partial compression of the left bronchus. The inspiratory sound is shorter over the left side, the first period of inspiration being inaudible and the air then entering with a rush, as though a valve had been opened. On inspection, there is relative immobility of the left side of the chest, or in some cases there may even be definite retraction. If the above signs be present, together with dyspnoea on effort, in a patient whose general health is fairly good and who has no sign of malignant disease, the presumption of the existence of aneurysm is strong. Inequality of the pupils is often an early symptom, and of course its occurrence is strong additional evidence.

SURGERY.

290. Treatment of Affections of the Conjunctiva.

IN a clinical lecture Horstmann details in rough outline the treatment of various affections of the conjunctiva (*Deut. med. Woch.*, September 27th, 1906). *Hyperaemia of the conjunctiva* is an affection of the palpabral conjunctiva, and is caused by local irritation, foreign bodies, misplaced eyelashes, calcareous infarcts of the Meibomian glands, smoke, dust, bad air, and overstraining of the eyes. There is increased secretion of tears, but not of mucus. The treatment consists in removing the cause and in applying cooling, mildly-astringent lotions: the latter may be employed as an external application of lead lotion, or in the form of washing the eyes out with 2 or 3 per cent. solutions of boric acid, or 0.2 per cent. of lead acetate, and also dropping ¼ per cent. solutions of zinc sulphate in. Boric ointment may further be used. *Acute catarrhal conjunctivitis* usually affects the lids and the upper folds of the conjunctiva chiefly. In severe cases the bulb is also affected. There is increased mucus secretion. Uncomplicated cases generally get well spontaneously in one or two weeks, but at times it is more obstinate, and may even terminate in a chronic stage. Corneal ulcers are the most common complications. Beginning as small grey points, a crescent ulcer is formed, and this after healing leaves a curved opacity. The affection may be due to the Koch-Weeks bacillus, or the Morax-Axenfeld diplobacillus, or even Fraenkel's pneumococcus. In hay fever the

poisonous substance contained in the pollen of certain gramina produce this form. *Chronic catarrhal conjunctivitis* is one of the most common eye troubles in adult and old persons. It may follow the acute form or be produced by smoke, dust, heat, and like noxes. In treating the acute form, one must attempt to prevent the affection becoming chronic. The cause when possible must be removed; applications of lead acetate, boric acid or chlorine (1 tablespoonful of chlorine water to the half litre, that is, 17½ oz.) do good. Drops of zinc sulphate (¼ to ½ per cent.), tannin (1 per cent.), lead acetate (neutral ½ per cent.), or the use of the alum point, silver nitrate solutions (¼ per cent.), or corrosive sublimate (0.03 per cent.) are more energetic. If these means do not bring the desired result quickly, the lid should be ectropionized and the conjunctiva palpebrarum painted with 1 or 2 per cent. zinc sulphate or lead acetate solutions. Silver nitrate applied in the same way is exceedingly useful, but one may not continue this for a long time. Protargol, argonin, argentamin, and largin have been introduced to replace silver nitrate, but are not so active. Adrenalin may be used and will do good at times. At times in chronic cases the use of copper sulphate caustic is admissible. Some eyes do not stand lotions well, and then it is wise to apply ointments containing the same drugs. Red or white precipitate ointment is useful for preventing the discharge drying on the lids and sticking the eyelashes together after the night. *Follicular conjunctivitis*, including *Atropin conjunctivitis*, is dealt with by astringents like those mentioned above, and plenty of fresh air is essential. *Trachoma* (*granular conjunctivitis*) should be dealt with chiefly on hygienic lines. All efforts should be directed to prevent a further spread of the infection. At first one applies cooling applications, but as the papillary exuberations increase, astringents should be resorted to. Lead, silver salts, zinc, and tannin do well. In chronic trachoma, copper sulphate caustic, or if this irritates the mucous membrane too much, solutions of this salt (1 per cent.), or copper citrate ointment (10 per cent.), may be substituted. Corrosive sublimate (1 in 3,000) rubbed on the conjunctiva with a wad of cotton-wool has been spoken highly of; x rays and radium have also been recommended in recent times. Jequirity, the seed of *Abrus precatorius* of Brazil, is used to produce a suppurative conjunctivitis, which is then easier to deal with, and the trachoma is said to heal with the other conjunctivitis. The action depends on the presence of abrin in the seed. The trachoma nodules may be dealt with operatively. When keratitis pannosa occurs, spraying the eye with 1 per cent. copper sulphate solution by means of a pulverisor is extremely useful. It may be necessary first to apply atropin. *Parinaud's conjunctivitis* is to be distinguished from trachoma. This is best treated by washing the eye out with weak solutions of permanganate of potassium or boric acid. *Blennorrhoea neonatorum* may be prevented by a prophylactic washing out of the eyes of the newborn infant with water and then dropping a 2 per cent. solution of silver nitrate in. Should this produce too much irritation, one may be satisfied with a 1 per cent. solution. Corrosive sublimate does not yield anything like as good results. When once the affection has shown itself, cold, in the form of ice applications, should be used. The discharge must be washed away with weak solutions or with physiological salt solution. In the second stage, silver nitrate should be employed. At first a 1 per cent. solution is used, and if this is well tolerated the strength is increased to 2 per cent. Airol powder strewn on the turned-up lid also is said to do good. *Acute general conjunctivitis* of adults is treated like the neonatorum. *Croupous and diphtheritic conjunctivitis* are affections of the conjunctiva caused by the diphtheria bacillus. The treatment naturally consists in injecting antitoxin; locally one washes out the eyes with weak solutions, applies cold, and drops in lemon juice. *Phlyctenular conjunctivitis* is a disease affecting children. Besides the general treatment, tuberculin dusting is of great value. When there is much hyperæmia one may plunge the child's head into cold water, or, better still, drop atropin into the eyes. Yellow oxide ointment (1 per cent. of red oxide of mercury) applied once a day serves well in many cases. Ulcers should be touched up with the lunar caustic. *Keratitis* is very little accessible to treatment; various drugs have been recommended, such as arsenic internally, adrenalin and other drugs locally. Dark glasses should be worn to protect the eyes. *Tuberculosis of the eye* requires scraping or radical excision. *Syphilitic and gonorrhœal affections* are next mentioned, and then *Pemphigus* does not yield to treatment. Arsenic should be given and later transplantation of pieces of mucous membrane on to the conjunctiva may be necessary. *Trachoma* and *Phlyctenosis* require operative treatment. Several other affections are also briefly mentioned.

291. **Dislocations of the Metatarsus.**

S. Rindone (*Gazz. Internat. di Med.*, September, 1906) discusses the ways in which the various dislocations of the metatarsal bones take place, and illustrates his views with ten plates. His observations and experiments go to prove that only direct violence can produce luxations below the metatarsus, and that in any other complete dislocation violent plantar flexion along Lisfranc's line must first occur. Lateral dislocation inwards may be due to hyperflexion combined with movement of the metatarsus inwards. Complete dislocation of all the metatarsal bones upwards is very rare—these are generally cases of subluxation; when they occur they are due to forced flexion and driving either of the metatarsus from below upwards and before backwards, or of the tarsus from above downwards and behind forwards; luxations at the base of the metatarsus, if not occasioned by direct violence, may result from forced plantar flexion together with propulsion either of the calcaneum upwards and forwards or of the fore part of the foot downwards and backwards. In all cases where the dislocation is complete, the internal interosseous ligament may tear off a large or small fragment from the second metatarsal bone in adults; but in the young, the first cuneiform, though entirely dislocated, may remain united to the metatarsus by this ligament. Rindone concludes by saying that partial dislocations of the metatarsus may be due to the causes already mentioned, to the mechanism known as that of the "cherry-stone," and to other causes at present ill understood.

OBSTETRICS.

292. **Statistics of Placenta Praevia.**

Bürger and Graf (*Monats. f. Geb. u. Gyn.*, January, 1907) have issued some important statistics of cases in Schauta's University Maternity. The authors give copious summaries of other statistical records. Between the years 1892 and 1905, inclusive of both, 44,676 labours occurred in Schauta's Maternity. The number of cases of placenta praevia in this series was 342. Two more cases of placenta praevia admitted into the maternity were discharged before delivery. The proportion of cases of this complication varied during the fourteen years between 0.51 per cent. of all labours (1 in 196) in 1892 and 1.27 per cent. (1 in 77) in 1900. It was only in 1900 and in 1895 (1.10 per cent.) that the cases exceeded 1 per cent. According to statistics drawn up by over a score of earlier authorities, the proportion of placenta praevia cases to the total number of labours in lying-in establishments showed yet greater variation. The lowest proportion was Beckmann's (1 in 58 cases) and Nordmann's (1 in 88). In all the remainder it fell under 1 per cent.; three authorities—Müller, von Winkel, and Schwartz—registering it under 1 in 1,000, indeed in Schwartz's statistics it was as low as 1 in 1,564. Bürger and Graf found that placenta praevia was usually associated with a history of previous bad labours. There were clear histories in 167 cases, amongst which the former complication was placenta praevia itself in 14, adherent placenta in 15, and premature detachment of the placenta in 2; the other complications were very varied. As to age, Bürger and Graf, after some deliberation, concluded that placenta praevia is relatively most frequent in women from the age of 31 to 35, though the absolute number is highest between 26 and 30, the range of age which included the largest number of patients in the maternity. Several other features in relation to placenta praevia are discussed, and noted as not lending themselves to calculation, owing to evident sources of fallacy. In regard to the fertility of the patient, the proportion of placenta praevia cases came out in these statistics as highest in 2-parae (16 per cent.), whilst in primiparae and 3-parae the percentage (11.7) was identical. In 4-parae it was 9 per cent., in 5-parae 10.3 per cent., in 6-parae 7.5 per cent., in 7-parae 4.7 per cent., in 8-parae 5.6 per cent., in 9-parae 6.1 per cent., in 10-parae 4.7 per cent., as in 7-parae. Beyond 10-parae, percentages are of little value. The presentation of the fetus was carefully recorded. The 342 cases included 350 presentations, as there were 8 twins in the entire series. They were vertex presentations in 242 instances (69.2 per cent.), transverse 74 (21.1 per cent.), breech and footling 33 (9.4 per cent.), one case out of the 350 is not accounted for. Bürger and Graf note that many labours were premature before the usual presentation was established, but they ascribe the high percentage of unfavourable presentations in part to the relaxed condition of the uterine walls, also a cause of malpresentation in multiparae. The maternal mortality was 30 in a total of 342, or 5.4% per cent. In 10, half the fatal

cases, the malpresentation of the placenta was central. Full clinical notes are given of the 20 deaths. The infantile mortality was represented by 192 stillborn children out of 350, or 54.9 per cent., but 98 were not born at full term and 41 were delivered before the eighth month. Of the stillborn children, 9 were in an advanced state of maceration, 1 syphilitic, and 1 anencephalous. As for treatment, Braxton Hicks's combined version gave very good results.

293. **Conglutination of Vagina and Os in Pregnancy.**

BERCZELLER (*Monats. f. Gynäk.*, No. 12, 1907) reports a case of conglutination of the vagina observed during pregnancy and another of conglutination of the os externum observed during labour. A woman, aged 21, consulted him for haemorrhages when in the third month of her first pregnancy. He found an apparently complete obstruction at the junction of the middle and upper third of the vagina, which felt like fairly firm cicatricial tissue. On inspection the opposite sides of the vaginal mucosa were seen to be adherent by a row of very thin bands of lymph separated by open gaps of about the size of pins' heads, as though the mucous membrane had been clumsily and loosely sewn up. Three weeks later the conglutination was much looser, it yielded on gentle pressure, and the cervix could easily be defined. Abortion followed, presumably as the result of the second examination, but the patient bore several children to term afterwards. The second patient was seen by Berczeller when in labour in the eighth month of her first pregnancy. The first stage had been unaccountably prolonged. He found a mass of the size of a Tangerine orange presenting; it was the cervix itself; the os appeared as a shallow pit. It was dilated with dressing forceps to a certain extent. The chorion was felt higher up strongly adherent to the cervical mucosa. It was detached, an incision about ¼ in. long was then made on each side of the os externum, and the membranes were ruptured. Within three hours spontaneous delivery occurred.

GYNAECOLOGY.

294. **Hydronephrosis and Pyelitis Associated with Malformations of Uterus.**

THE following reports demonstrate how malformations of the uterus may cause renal obstruction, or at least be associated with other arrests of development involving pressure on the ureters or kidney. Dionis du Ségour (*Bull. et Mém. de la Soc. Anat. de Paris*, November, 1906) writes observations on a case where hydronephrosis simulated ovarian cyst. The patient was 23 years old, and had been repeatedly pregnant, but there was no history of any puerperal or other pelvic disorder; the fluctuating tumour which filled the abdomen had been detected nearly five years previously. The urine contained no morbid elements. At the operation the tumour proved to be a hydronephrotic left kidney; the lower pole was partly invested by the broad ligament. It was removed; its contents consisted of about 13 pints of a clear, frothy, odourless, lemon-coloured fluid. In searching the right lumbar region after the removal of the tumour, the operator to his great horror failed to find anything like a kidney. The uterus was of the unicorn type, the left cornu (which had been the seat of several pregnancies), tube, and ovary were well formed, as was the right ovary. The right Fallopian tube was absent, but in its place was a flattened cord, which ran from the lower part of the ovary down into the uterus at its junction with the cervix; the right round ligament was present. The cervix was single and not malformed. The patient died of anuria on the ninth day; not a drop of urine was passed or drawn off after the operation. No necropsy was permitted, so that it could not be ascertained whether any trace of a right ureter existed. Chirié and Fourmestraux (*L'Obstétrique*, March, 1907) published a case of gravid uterus bicornis with pyelitis on the non-gravid side, and icterus gravis associated with pregnancy. A woman in labour, delirious, and deeply jaundiced, was admitted into hospital. The urine was turbid, dark-coloured, scanty, and purulent. The cervix was already effaced and the membranes were intact; the breech presented. On the left of the gravid uterus was a firm tumour of the size of a fist connected with the uterus by a thick pedicle; it felt something like a fibromyoma. Notwithstanding the patient's desperate condition the fetus was expelled spontaneously. The hand could be passed through the cervical canal: towards the left was an empty cavity, whilst on the right was a cavity containing the placenta, which was forthwith extracted without flooding. Two days later the patient died comatose. The uterus was found to be of the bicornis unicollis type. The left cornu was lined by a decidua. Both ureters were dilated, especially the left, which was as thick as a man's forefinger. The kidneys were the seat of chronic tubal nephritis, and the left renal pelvis was much distended with pus. The liver was greatly hypertrophied and the seat of advanced fatty necrosis. The immediate cause of the fatal result was compression of the left ureter by the non-gravid cornu, which lay chiefly in the pelvis, dilatation of the renal pelvis and ascending infection. Kidney disease being already present the fatal result was not surprising.

THERAPEUTICS.

295. **Heroin and Heromania.**

DUHEM (*Progrès Méd.*, February 23rd, 1907) reviews the subject of heroin and its indications and disadvantages. Heroin, he says, is one of a series of bodies constituted by the bi-acid derivatives of morphine. It is obtained by substituting for the two acid radicals of morphine two hydrogen atoms. Morphine has a formula, $C_{17}H_{19}AzO_3$. In this formula there are only two OH radicals capable of being replaced by acid radicals, the one (CHOH), the other (COH). In each of these the hydrogen atom is in heroin replaced by the acetic radical (C_2H_3O), making the formula for heroin $C_{21}H_{23}O_5$. Heroin is, then, diacetylmorphine; in the natural state it is very slightly soluble in water. The hydrochlorate of heroin is more soluble, and is generally used. Saint-Martin has studied heroin physiologically and found that certain animals are narcotized by it, while in others a tendency to convulsions is engendered. Heroin is more toxic than morphine, especially for those animals on whom it has an exciting effect. The substitution of the acetyl radicals for the OH radicals of morphine has given heroin a diminished effect on the cerebral sphere, while it has increased the convulsing and paralysing effect on the bulbo-medullary centres. Heroin is fifteen times more toxic than morphine for the rabbit, four and a half times more toxic for the dog, and thirty times more toxic for the donkey; while the goat, so resistant to morphine, is killed by one-seventh of the dose of heroin. Pouchet was the first to warn the profession against the use of heroin, and Rodet in 1892 described the dangers of heroin when used for the cure of the morphine habit. He pointed out that the heroin habit is more easily contracted and less readily cured than the morphine habit, on account of the respiratory syncope so often set up when the drug is stopped. In spite of all, heroin has continued to be widely administered, and is especially extolled as a respiratory sedative. The author quotes many opinions both favourable and unfavourable to the use of heroin. He gives his own decision against the use of it, and bases it upon the observation of 16 cases of the heroin habit, which he had seen in a sanatorium. Of his 16 cases, 3 began taking the drug for asthma, 4 substituted it for morphine in the hope of curing the morphine habit, 3 used it as an analgesic, and the other 6 cases began to take the drug for a variety of reasons. The dose varied according to the reason for which the drug was taken. The asthmatics were taking between 20 and 50 centigrams; the compensating dose for the morphine habit was as large as 90 centigrams in one case; while as an analgesic it was used in smaller doses, 3, 4, or 5 centigrams. For the cure of the heroin habit the author regularly adopted the following course: He isolated the patient, paid attention to the general hygiene, diminished the dose of heroin rapidly, and stopped it entirely after six or seven days, and finally he fed the patient up. By these means he found that subjects of the morphine habit usually were easily cured. But with heromaniacs a variety of unpleasant surprises had to be guarded against, and especially respiratory syncope. It was found that a syncope coming on in the course of a cure for the morphine or heroin habit could always be stopped by a small injection of morphine, while heroin was quite useless. It is the respiration that fails when heroin is being eliminated. For the first few days of the treatment for heroin habit the patient reacts much as a morphomaniac would, with the exception that feebleness and prostration are more intense, there is abundant perspiration, and the face is often livid. When the dose is first diminished intellectual torpor comes on, the circulation and respiration are slowed, and fits of suffocation supervene, ending frequently in respiratory syncope. The organism seems to be much more deeply intoxicated by heroin than by morphine, and it is, perhaps, because the

former drug forms more stable compounds with the organic tissues than the latter. Patients who have undergone a cure for the morphine habit have a comparatively short convalescence, lasting at most six or eight weeks; but the subjects of heroin poisoning have a long and painful period of convalescence, and not for four or five months after the stopping of the drug do they regain their normal weight or begin to have undisturbed nights.

296. Treatment of Tuberculosis.

The Paris authorities recently have been devoting much serious study to considering how best to check the spread of tuberculosis; and M. Leon Bourgeois (*Beiträge zur Klinik der Tuberculose*, vii, 1, 1907) publishes the substance of a report made to the Assistance Publique, in which definite proposals are formulated. In essence these are simply the development and organization of existing resources, but proper organization has been the difficulty in the way of all such schemes. Briefly, it is proposed that Paris be divided into areas, each presided over by a hospital, which shall act as the centre of its own system. To the hospital the patients come for examination and are then divided into three groups, according to the stage of the disease from which they are suffering. The first group consists of out-patients, those whose condition is such that they may live at home. These are handed over to the care of dispensary officers, who attend to their wants, supply their necessities, visit them in their homes and bring them to the hospital. The duties of the dispensary officers are manifold and of the first importance; in fact, the whole scheme depends on the success of the dispensary. The second group of patients is made up of those who must be taken into hospital, but whose condition or social relations make it unnecessary or inconvenient to send them out of the city. For these are provided stations in Paris, wards or separate hospitals, in which they are completely isolated from every other class of patient. Each of these wards is to contain only a limited number of patients, and accommodation is provided for rest-cures, air-cures, and so forth. The third group consists of those whom it is desirable to send into the country for a more protracted course of treatment, where fresher air and more sunlight than are available in a large city can be given them. For them rural hospitals are provided, situated in suitable localities at convenient distances from Paris. The Paris stations and the rural hospitals are alike under the control of the central hospital department, and obtain patients only from it. The equipment throughout is to be of the best that modern science can suggest. The cost of inaugurating and maintaining such a system is very great; but it is proposed to begin with one area, in which the Hospital Laennec shall be the centre, and gradually extend as wealth permits. It is hoped by this means to protect the healthy by isolation of the already sick, and to provide the best possible treatment of the tuberculous patient himself in association with others not worse than himself. If thoroughly carried out, much good may certainly be done by such a system. But it deals only with the already infected, whose disease is sufficiently advanced to bring them to the hospital. It does not detect the beginnings of the disease nor disinfect infected localities. M. Bourgeois recognizes this, and hopes by developing the dispensary system to do much to meet the difficulty. The officials must visit the patients in their homes and educate not only the patients but their relatives in the principles of hygiene and prophylaxis. They must be constantly on the lookout for the earliest manifestations of the disease, and make plain everywhere the symptoms to watch for. For the out patients themselves a very elaborate system of disinfection of sputum, linen, etc., is provided at the hospital, together with a bathing establishment in which they may receive a diet suitable to their condition, and a laundry where their clothes may be washed. Everything that the rules of hygiene or therapeutics suggest is provided for them. Thus the force of example will combine with precept gradually to develop habits of cleanliness and make them protect themselves. In this way it is hoped to attack the disease in its most vulnerable point, and limit its power of propagating itself throughout the city.

297. Light Treatment of Ozæna.

Jacques Bircher (*Corr. Bl. f. Schweiz. Aerzte*, February 21st, 1907) has previously published accounts of his treatment of ozæna by a combination of Lennox's method with Moure's (*Ann. de Mal. de l'Oreille*, 1904), recently reviewed in this Journal, and presented two old patients before the Royal Academy of Paris. Two of the patients, a boy and girl, were shown to the Academy

as cured in 1904. The nasal secretion is almost normal in quantity and quality. The respiratory function is very good. The atrophy of the mucosa has disappeared. In one patient the sense of smell has returned. The cures, therefore, have been permanent. The cases were originally typical cases of ozaena, with atrophy of the mucosa, crusty secretion, and fetor in spite of frequently repeated douching. In each case the treatment was carried on for many months, and included more than 200 sittings of two hours each. The other two patients, a girl of 9 years and a man aged 22 years, were shown to the Academy in December, 1905, to exhibit the gravity of the disease before treatment began. They now have no disturbance of any sort. The man has given up douching altogether, and the girl washes her nose out once or twice a week with salt and water. Treatment in each case lasted three months, and involved 120 sittings of one hour each. The shorter period of treatment necessary is not due to the less intense nature of the disease, but to the professor's improved technique. Since treatment was begun in 1901, it has been applied to 54 severe cases. Not all of these underwent a complete course. Three of the patients obtained no benefit, the others were very greatly improved or were completely cured. In some cases counted as cured, and enabled for a long time to do without the douche, it occasionally happened that a severe coryza caused very free discharge, with some fetor, which disappeared rapidly with douching and the disappearance of the coryza. In a few cases there was true relapse, quickly cured by a few radiotherapeutic sittings. The improvement in methods has been so great that 100 hours suffice to produce the effects which a few years ago needed 600 hours.

298. Antipyretic Action of Maretin.

D'Ottone (*Rif. Med.*, January 12th, 1907) reports favourably of maretin as an antipyretic. He has tried it almost entirely in cases of phthisis. Maretin is a compound of carbamidic acid, and presents itself as a light greyish powder, insipid and insoluble in cold water, but soluble in warm water and in alcohol and ether. The average daily dose is 1 gram, given in two doses. In the author's experience, extending over ten months, no ill results, no collapse, nor other inconvenience has followed its use. It invariably lowered the temperature, and was not followed by a secondary rise of temperature, as is often the case with antipyrin. Its action seemed to be somewhat cumulative, for the temperature kept lower for some time afterwards. Possibly, even, the drug may have some beneficial action on tuberculous disease. From his experience, the author is disposed to recommend it strongly as an antipyretic in phthisis.

PATHOLOGY.

299. Intestinal Origin of Pulmonary Tuberculosis.

Calmette and Guérin (*Ann. de l'Instit. Pasteur*, August, 1906) contribute a third article in support of their view that pulmonary tuberculosis is not usually an inhalation infection, but is due to bacilli which have gained their entrance into the body by the intestinal tract. With goats, calves, and adult bovines they have found that when the bacilli are introduced at the end of an œsophageal sound and the possibility of contaminating the air passages is rigorously excluded, a single feeding with tubercle bacilli of bovine origin produces in every case tuberculosis of the thorax. The tubercles are found, in from thirty to forty five days, beneath the pleura and particularly at the upper and anterior borders of both lungs; peribronchial tubercles are also found surrounding the finer ramifications of the bronchioles. The tuberculous granulations never develop primarily in the alveoli; sometimes they form projections into the interior of alveoli and bronchioles, which they finally occlude; and sometimes they ramify along the distended alveolar walls. The process always commences in the lung capillaries, and the involvement of the alveoli and bronchioles is a secondary event. Criticizing inhalation experiments which have led to positive results, they point out that the animals swallow, as well as inhale, the infective material administered, and they wish to regard the lesions produced as attributable to bacilli absorbed by the intestinal tract. Direct infection of the lungs by way of the air passages is, they maintain, a rare event. The authors are now endeavouring to produce immunity against tuberculosis by introducing into the alimentary tract bacilli which have been attenuated, modified, or deprived of virulence.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

300. Mediastinal Lymphosarcoma Simulating Aneurysm.

A. D'AMBROSIO (*Giorn. Internaz. d. Sci. Med.*, February, 1907) describes the case of a healthy labourer who caught cold at the age of 35, and suffered from cough, shortness of breath, hoarseness, and pains under the sternum for a short time, and recovered. Two months later a tumour the size of a hen's egg appeared in the left side of his neck, which grew smaller when treated with liniment, and was said to pulsate. The pains under the sternum persisted for a few months, when the patient thought himself cured and returned to his work, but he was never quite free from pains in the chest. Eighteen months after the onset of these pains the patient became more short of breath, and the pains in the middle and the left side of the chest grew worse, and a few months later a lump appeared on the manubrium sterni and exhibited non-expansile pulsation, the pains increased, and work had to be given up. The patient came into hospital; he was fairly well nourished, cyanosed, short of breath, troubled with a barking cough, and with pains in the thorax and down the left arm, and preferred to sit up or to lie on his left side. Syphilis was denied. The temperature was normal; the left side of the neck was enlarged, and swollen lymph glands could be felt in it; enlarged glands were also felt in the left axilla, but nowhere else in the body. The larynx was pushed over to the right, and tracheal tugging could be observed; the chest was asymmetrical, the left side being enlarged, and moving less well than the right on respiration, and being dull on percussion in front. A blood count showed 5,000,000 red and 14,000 white cells, with 114 per cent. haemoglobin. Abductor paralysis of the left vocal cord was also found, and the trachea was seen to be stenosed by inversion of its left-hand wall. The tumour and secondary deposits increased in size, and the patient died of heart failure a month later. At the necropsy the diagnosis of mediastinal lymphosarcoma was confirmed; the upper part of the left lung showed early purulent bronchiectasis; the tumour caused some stenosis of the trachea and of the arch of the aorta, and could not be separated from the trachea, left lung, or heart. The pericardium and auricles were invaded by the tumour, and a pedunculated mass of new growth projected into the cavity of the right auricle. The left pleura contained a pint of blood-stained effusion. The tumour was softish, grey-white in colour, with streaks of red. The author concludes with a long discussion of the diagnosis between aneurysm and mediastinal tumour.

301. Sigmoiditis and Perisigmoiditis.

CAPASSO (*Rif. Med.*, March 16th, 1907) says this condition is probably much more common than is generally supposed. Not a few iliac abscesses attributed to obscure bone disease, necrosis, etc., are really due to a suppurative perisigmoiditis, and, vice versa, attacks of sigmoiditis are passed over as faecal retention. He refers to several cases, and then describes in detail a case coming under his own care. Owing to the length of the ileo-colic mesocolon, this part of the intestine is freely movable and liable to exaggerated curves and bends with consequent faecal retention. The walls are more delicate than in other parts of the intestine. Constipation is one of the most important predisposing causes, and acts all the more deleteriously on account of the length and curvature of the bowel in this situation. Age (mostly young adults) and sex (male as a rule) also play a part. The symptoms are not unlike those of colitis with localizing signs. In severe cases haemorrhage is liable to occur, and is often profuse. The prognosis varies with the severity of the attack. In slight cases all that is necessary is a regulation of the diet, purgatives, and rest. In severe cases an ice bladder over the lower abdomen and astringent injections are useful. If perisigmoiditis occurs it is common to get a very acute pain near the anus, making one suspect a fissure. According to the author, this anal pain is almost pathognomonic of the onset of perisigmoiditis. The spread of the inflammation into the surrounding tissue is due as a rule to the *B. coli*, which either gains access through the damaged intestinal wall or through the mesenteric glands.

302. A New Sign in Facial Contracture.

C. MONDINO (*Riv. di Patol. nerv. e ment.*, Florence, 1907, xii, 49) finds that in patients suffering from facial contracture due to nuclear or infranuclear lesion of the facial nerve the sudden mechanical stimulation (by a gentle tap with a hammer) of the supraorbital branch of the trigeminal causes a reflex twitch of the spastic muscles about the chin and angle of the mouth. This reflex is obtained, when the supraorbital nerve is thus stimulated, on either the sound or the affected side of the face. It is not obtained by the mechanical stimulation of the infraorbital or mental branches of the fifth nerve, probably because these branches are much less accessible, for anatomical reasons, to the tap of the hammer. The reflex can be obtained in health, but only by means of the frequently repeated stimulation of the supraorbital nerve. It is not obtained in supranuclear facial paralysis, which, in Mondino's experience, is not ever followed by contracture unless complicated with a peripheral lesion of the nerve.

SURGERY.

303. Impermeable Non-malignant Strictures of the Oesophagus.

GROSS AND SENCERT (*Rev. de Chir.*, No. 1, 1907) have been led by much study and wide personal observation to the conclusion that the oesophagoscope is a valuable aid to both the diagnosis and the treatment of non-malignant stenoses of the oesophagus. The use of this instrument, which enables the surgeon to inspect the interior of the oesophagus, presents decided advantages over blind catheterism, and its systematic use will, in the authors' opinion, lead to a great advance in the future treatment of stricture of the oesophagus. In the final section of this paper some propositions are laid down with respect to the surgical therapeutics of the non-cancerous forms of this affection. It is stated, in the first place, that in every case of simple stricture in which many attempts have been made, without success, to pass a bougie through the stricture, an oesophagoscopic examination should be made. This, which is regarded as a simple and easy method, and one which, the authors assert, surgeons must learn to appreciate unless they wish oesophageal surgery to pass into the hands of the specialist, will, in many cases, help to overcome the above difficulty by exposing to direct observation the situation often an eccentric one of the entrance to the stricture. The orifice having been thus exposed to sight, it will, in a large majority of instances, be found an easy matter to pass a fine bougie into the stomach, and subsequently, without any further use of the oesophagoscope, to complete the treatment by gradual dilatation. In cases in which the stricture is of long standing and much indurated and does not yield readily to the contact of an ordinary bougie, the authors would recommend the introduction, with the aid of the oesophagoscope, of a very fine laminaria tent, to be followed, if necessary, by the use of a second and even larger tent. The oesophagus is thus rendered freely permeable, and can now be fully dilated by the ordinary method of progressive catheterism. This use of laminaria tents, the authors state, is not painful, and is very readily tolerated by the patient. In the exceptional cases in which the indurated tissue does not yield to this treatment it would become advisable, it is stated, to divide the stricture, either by electrolysis or by a cutting instrument, with the direct control of the eye afforded by oesophageal endoscopy, by which the surgeon is in a position to determine the best place for making the section and the extent to which this can be safely carried. The whole length of the stricture, it is stated, should be incised, but the section ought not to be carried deeply into the indurated tissues, as this method is only a part of the surgical treatment, and a prelude to gradual dilatation. The authors proceed to consider the treatment of cases in which the oesophagoscope has revealed certain conditions, such, for instance, as a diverticulum, a pre-strictural pouch, and inflammatory softening of the mucous membrane, which would render any intra-oesophageal manœuvres dangerous. In such cases it usually becomes necessary to practise gastrostomy sooner or later.

Attempts might afterwards be made to attack the stricture by way of the stomach, with the view of practising gradual or continuous dilation, but the endeavour to reach the cardiac orifice is often attended with both difficulty and danger. For the treatment of cases of this kind the authors suggest that an operation practised by one of them on the cadaver might not, the success of direct oesophagoscopy being considered, be found illogical. In this experimental operation the stomach, after it has been exposed by a median supra-umbilical laparotomy, is taken up by the fingers at a point on its anterior surface close to the small curvature and about 2 centimetres below the cardiac orifice. At this part of the stomach is applied a purse-string suture passed between the muscular and the mucous coats, which encloses an area from ½ to ¾ in. in diameter. In the middle of this enclosed portion of stomach wall a small incision is made through all the coats, and by this incision the extremity of an oesophagoscopic tube is inserted into the gastric cavity. The purse-string suture having been drawn tightly around the tube, the cardiac orifice of the oesophagus is sought for, and is, it is stated, in most cases readily found, the interior of the tube being brightly illuminated by a photophore. The lower part of the oesophagus can now be explored as far as the stricture, which may be treated either by some method of gradual dilatation or by prompt section by electrolysis or by a cutting instrument. In the very rare instances in which the above-described methods of dealing with non-malignant stricture of the oesophagus have failed it will be necessary, the authors conclude, to consider the indications for one or other such major surgical interventions as external oesophagotomy, oesophagectomy, and oesophago-gastrostomy.

304. Multilocular Cystadamantinoma of the Lower Jaw.

Cignozzi (*Rif. Med.*, September 29th, October 6th, October 20th, 1906) under the above title reports a case of dental tumour in a woman, aged 34, and takes the opportunity to discuss the subject in general. Altogether he has been able to collect 45 cases (which he briefly reports) of tumours affecting the jaws (excluding malignant disease); 22 affected women and 23 men. The commonest age at which they attack patients is from 20 to 30 years. They are very rarely congenital. In early age these paradental epithelial neoplasms are more commonly solid, in middle age they are more likely to be more or less cystic. The fact that they appear most commonly at a time when there is no dental development going on, shows that they have no close connexion with tooth formation. It seems more probable that they are due to the growth of aberrant residues of epithelial origin, at first associated with the development of the enamel. Both the solid and cystic forms are of slow growth; the solid is, however, the more rapid in its growth (about 3 years as an average); the cystic forms have an average of 10 to 14 years. The more rapid growth of the solid forms is due to the embryonal type of the cells in this group. The tumours are by preference endomaxillary, and in their growth the external wall of the jaw slowly yields. The skin and mucous-membrane covering remain healthy. In the progress of development a characteristic and almost pathognomonic parchment crepitus can be felt, a crepitus which is never felt in sarcomatous growths. Sarcomatous growths, moreover, are more often fusiform in shape, and do not push out the external wall of the jaw as do those dental tumours. Pain is not often complained of, at any rate until the tumour has reached a considerable size. The lymphatic glands are not enlarged and there is no cachexia. In treatment, excision of the growths followed by scraping may in some cases be successful, but relapse is not uncommon, especially in the solid forms of tumour, and a good deal depends on how freely the growth can be removed. Semicystic tumours required more radical treatment than the unilocular cysts, but practically each case must be considered on its merits.

OBSTETRICS.

305. Prophylaxis of Eclampsia.

Fiorani (*Journ. of Obst. and Gyn. of the Brit. Emp.*, November, 1906) deals with the preventive treatment of eclampsia, and would have the urine of every pregnant woman examined regularly during the latter months of pregnancy. He (Fiorani) has been his own practice during the last seven years in which he has specially watched the condition of the urine in pregnancy. (1) Up to the eighth month in nearly all cases no special precautions are taken, but attention is given to the need for daily movements of the bowels. (2) From the beginning of the eighth month onwards the urine is examined at stated periods, and the diet regulated according to the condition. (3) Even if the urine be normal and the patient well, butcher's meat is allowed only once a day during the eighth month. (4) According to the author's experience albumen is present in about 12 per cent. of pregnant women, but he has not estimated in what proportion of the cases casts are present in the urine; albuminuria is held to be an indication of toxaemia, and treatment is begun without waiting for the development of active degeneration of the renal epithelium. (5) Should a trace of albumen be found during the eighth month, fish and fowl are substituted for butcher's meat and eggs, the farinaceous foods are reduced, and a glass of water is given four times a day between meals. The urine is now examined with greater frequency, and in many cases under this diet the amount of albumen is found not to increase. During the last two weeks of pregnancy, if albumen is still present, skimmed milk is the only food allowed. (6) If on a diet which includes fish and fowl the amount of albumen increases, these are discontinued, and skimmed milk, farinaceous foods, fresh fruit, and vegetables are given. It is now found that there is generally a decided reduction in the amount of albumen, and that in many cases the albumen altogether disappears. (7) If the amount of albumen still increases skimmed milk is given alone, except that fruit and vegetables are allowed for lunch. (8) Should albumen be late in appearing and be accompanied by oedema, a diet of milk alone is at once adopted. (9) Should the symptoms be those of impending convulsions, the patient is kept warm in bed, and all food, including milk, is withdrawn for thirty-six hours. If the oedema is great, only sips of hot water are allowed; but if there is not much oedema, water is given in abundance to drink, and saline rectal injections are administered. The bowels are freely opened by means of Epsom salts in repeated doses, and the citrate and acetate of potash are given as diuretics. At the end of the thirty-six hours labour is induced or not according to the condition of the patient. (10) In every case in which the urine has been carefully watched and the diet regulated, the albumen and oedema have been under control, and no advanced symptoms, such as oedema of the face, persistent headache, or epigastric pain, have developed. In two cases occurring in the author's practice during the last seven years in which such advanced symptoms developed, the precautions described above had not been taken. (11) The plan of treatment is not objected to by the patients, and does not involve serious hardship to the doctor.

306. Renal Decapsulation in the Treatment of Eclampsia.

De Bovis (*Sem. Méd.*, March 6th, 1907) discusses this method of treating eclampsia. Edebohls was the first to practise it. He has done 3 cases. The first was a primipara, who had uraemic symptoms towards the eighth month of pregnancy, followed two days afterwards by a fit. The fits continued at short intervals, and the labour terminated during one of them. The fits then ceased, only to commence again in forty-six hours. The patient was prepared for operation, and decapsulation of both kidneys was performed. Patient made rapid recovery. His second case was a primipara, who towards the end of pregnancy had uraemia for three days, followed by fits, which were ushered in by complete amaurosis. At the time of operation there was practically complete anuria. The fits did not bring on labour. Double decapsulation was performed. The patient recovered, and forty-eight hours after gave birth to twins. The third case was also a primipara, who had a fit eight hours after labour. Her pulse was 110; urine contained albumen and casts. She had eight fits in seven hours. Decapsulation was performed. Patient had two fits after the operation, remained comatose for two days, and then recovered. Chambrelent and Pausson have added nephrotomy to double decapsulation. They practised it on a primipara aged 21 years, in whom a fit came on with labour. For twenty-four hours after delivery she was comatose, and only passed 200 c.cm. of urine. After the operation the urinary function was re-established and the patient made a good recovery. Polano's case was a multipara, who had albuminuria. A fit came on thirteen hours after delivery, and was followed by coma, which lasted six days. The amount of urine decreased, and the pulse-rate rose to 130. Double decapsulation was performed, but the patient succumbed to pulmonary oedema. The author operated on one case, a primipara of 19 years. Labour lasted 16 hours, and the first fit occurred four hours after. Fits followed in frequent succession for the next twenty four hours and then ceased for three hours, only to reappear again. Single decapsulation was performed. Patient

improved slowly, and the albumen gradually disappeared from her urine. There is a difference of opinion among authorities as to the relative seriousness of eclampsia occurring during pregnancy, during labour, and after labour. The author thinks the last most serious. Of the 6 cases quoted in which decapsulation was performed 5 were cured. In 4 of these there had been such grave symptoms as uraemia, anasarca, amaurosis and anuria. Eclampsia is not only a disease of the kidneys; it is probable that the kidneys become affected by means of an overloading of the blood with toxic waste-products during pregnancy. As to the method to be adopted, the author favours double decapsulation, with nephrotomy in very severe cases of anuria.

GYNAECOLOGY.

307. Nephrectomy for Hypernephroma in a Child 20 Months of Age.

CHEESMAN (*Annals of Surgery*, January, 1907) operated on a boy aged 1 year and 8 months for a large abdominal tumour which had first been noticed four months earlier, when the child's mother observed that the veins of the right testis were swollen. The swelling gradually increased without any local or general complications. The child became emaciated but not cachectic. Cheesman found the abdomen enormously distended by a soft, solid growth, smoothly rounded everywhere except in the right flank, where a knotty mass was perceptible. There was dullness on percussion all over its surface, but no tenderness. The urine was normal. The transperitoneal operation was performed through the right rectus muscle, then the peritoneum passing from the ascending colon on to the parietes was incised and stripped, together with the bowel, from the surface of the tumour, which was attached to the upper pole of the right kidney. The mass was delivered, exposing the pedicle, which consisted of the renal vessels and ureter. An infected gland was disentangled from their midst, and then the pedicle was ligatured and divided. The ascending mesocolon had been torn from the intestine for 4 in. during the enucleation; it was fixed to the gut by suture. There was much shock, successfully met by irrigation with saline fluids, etc. Recovery was uncomplicated, and four months later the patient had gained weight and was rosy. The tumour was a true adrenal growth or hypernephroma, almost spherical, and 4¼ lb. in weight.

THERAPEUTICS.

308. Light Treatment of Skin Diseases.

KROMAYER says that a new form of treatment, of which much is expected at first, is easily exaggerated in importance (*Berl. klin. Woch.*, Nos. 3, 4, and 5, 1907). After Finsen succeeded in curing lupus with his light treatment, almost every disease was supposed to be curable by the same means; but in reality only a few diseases yielded better results to light treatment than to other means. He therefore discusses the diseases in which light can be applied with benefit. Light treatment may be carried out by means of the Finsen apparatus, or by means of the quartz water lamp. The latter has the advantage over the former in that it is much less expensive and much more easily managed without any assistance. First, he deals with naevi. Fairly good results have been obtained in some naevi by means of the iron light and also the uviol lamp, and Lassar mentions a case of cure by means of Finsen light briefly. Kromayer divides naevi into three groups: First, those consisting of dilated subepidermoid capillary networks, which show a bluish-red colour and no raising of the epidermis; secondly, consisting of dilated capillaries and of the afferent arteries, in which there is some hypertrophy of the connective tissue, thus producing a slightly uneven and irregular surface; and, thirdly, those consisting of dilated and proliferated veins chiefly. The second variety can be made to disappear only by heavy pressure of the lens, and that not always completely; while the last variety cannot be obliterated by glass pressure. Since light is largely absorbed by blood, the chances of success depend on the possibility of pressing all the blood out of the naevi during the exposure. Thus, only the first and the second group offer any chance of successful light treatment. While a cure may be attained in the second group, when the arteries affected are deeply situated these would not be influenced, and recurrences would appear to take place readily. He quotes six cases to show the results which he has obtained. Two cases belong to the second group; one was cured without recurrence; the second promised a very good result at first, which was marred by a recurrence after three months. Two cases of the third group did not improve perceptibly under the treatment, while the remaining two cases belonging to the first group did excellently. It is necessary to apply an intense light action, in order to produce a sufficiently violent reactionary inflammation to cure the naevus. The quartz lamp applied for from half to one hour yields this result, while at least two and a half to three hours of Finsen light would be required for the same purpose, and the iron light or uviol lamp have proved themselves to be too weak for the cure of naevi. Next he turns to lupus vulgaris. There is no doubt that cures are obtainable by means of light treatment. It was supposed that the light acted by killing the tubercle bacilli in the tissues. It has, however, been proved that this assumption is incorrect, and that the beneficial results depend on the effect on the tissues themselves. Iron arc light has proved itself to be less efficacious than the carbon arc light (Finsen). The fact that light from the quartz lamp is richer than that of the two mentioned sources in ultra-violet and violet rays, makes it probable that this lamp would give better results in lupus. The author found that if he allowed the light to pass through a weak solution of methylene blue, the heat rays are absorbed and the light is able to penetrate deep into the tissues without producing much inflammation. In practice, however, he does not find much difference between the curative action of the white and blue light. He cites cases of lupus which were treated by Finsen and also by quartz light, which show the curative properties of both forms, but he points out that the light treatment, although it is the best form of treatment for lupus, is not a panacea, and that one occasionally meets with cases in which no good can be obtained by the treatment. Lupus erythematodes is at times only rendered worse by external influences, including light. In the torpid chronic forms light, however, may do good, and he quotes cases in substantiation of this. Alopecia areata and pityrodes have also yielded satisfactory results. The idea that proliferation and pigmentation of the epithelium caused by the action of the light might stimulate the growth of hair and improve the colour, induced him to test the light in these cases. In areata mild cases improved greatly, and he found that the growing hair darkened in colour, but grey hair was uninfluenced. In pityrodes the light is not able to influence the process when atrophy of the skin and roots of the hair has set in, but the growth of those long hairs which remained was strengthened. During the early stages the process can be benefited materially. Eczema, he says, is such a wide term that no one remedy could possibly be of use in all cases. In certain forms of chronic eczema the beneficial action of light treatment is marked. This is not surprising when one remembers the way in which some cases improve in sunny climates and in fresh air. While the usual methods of treating acne vulgaris and carbuncles are mostly more convenient than light treatment, the latter yields good results at times. In sycosis excellent results were obtained when other forms of treatment had failed, but, as a rule, *x* rays offer a better chance than the quartz or Finsen light. The action of the light in teleangiectasis, acne rosacea, and rhinophyma may be regarded as nearly specific in many cases. The acute forms of rosacea are not suited for light treatment, and harm may even be done by applying it in this stage. Some difficulty may be met with in treating these cases, in which a cosmetic effect is aimed at, inasmuch as the inflammatory reaction which may last for some weeks or months may cause unpleasantness to the patient. The indications for light treatment in dermatology will probably be considerably extended as time goes on and one gains more experience.

309. Drugs in Relation to Tuberculous Infection.

LIVIERATO (*Gazz. degli Osped.*, March 31st, 1907) has carried out a series of experiments on rabbits with a view to determine the effect of certain drugs on tuberculous infection. The substances used were creosote, cacodylate of soda, turpentine, and iodine. And the experiments consisted in determining the antitoxic power, the bactericidal power both *in vitro* and *in vivo*, and the agglutinating power of the serum before and after treatment with the various drugs. It was found that the first group of three drugs did not attenuate the effects of tuberculin infection; with iodine, on the contrary, a certain weak defensive power was conferred on the animal against tubercle bacilli and their

toxins. It is doubtful how far these experimental results on animals can be safely applied for practical therapeutics in man; many difficulties arise. As far as they go, it looks as if iodine alone exercised any definite influence on the bacilli. The turpentine, and especially the creosote, may have a beneficial influence against the bacteria of the secondary infections which are associated with tuberculosis, and the cacodylate of soda would do some good by improving the general nutrition, and in that way tending to strengthen the defensive powers of the organism.

PATHOLOGY.

310. Latent Tubercle Bacilli.

Lydia Rabinowitsch (*Berl. klin. Woch.*, January 14th, 1907) says that thirty years ago Orth pointed out that lymphatic glands which were apparently natural at times showed tuberculous changes when examined microscopically, and that this followed feeding with material infected by bovine bacilli in rabbits. In recent times many observers have found that tubercle bacilli may lie latent; Macfadyen and MacConkey especially having shown that the mesenteric glands of children in which no tuberculous signs were found, produced tuberculosis in guinea-pigs. Latent bacilli have been found in apparently non-tuberculous children (Weber). Many other experimenters have studied the latency from numerous points of view. Rabinowitsch considers that the frequency of virulent tubercle bacilli remaining latent in lymphatic glands has long since been established, and does not require further investigation. How long bacilli can remain latent is not known, and it would be extremely difficult to determine. A second point of importance is to determine what degree of virulence such latent bacilli possess and what form of bacillus they belong to. Rabinowitsch has been able to study 5 cases of latent tuberculosis. She says that in 4 of these cases in which the bacilli were found in calcareous glands, and in which, save in one case, no other traces of tuberculosis could be found, it would really be more correct to speak of persistence of tubercle bacilli than of latency, although it is difficult to draw a sharp line of demarcation between the two conditions when one is dealing with virulent bacilli living in a living organism without producing disease. The material used in the 5 cases consisted of bronchial, mesenteric, and cervical glands. No tubercle bacilli were discovered in the tissue microscopically. Guinea-pigs and rabbits were injected subcutaneously with these glands. The animals died of tuberculosis after from three weeks to five months, and showed more or less well-marked tuberculous changes, some of which reached a general miliary tuberculosis. In 1 case even cavities were found after death. In order to determine the virulence of the various cases it was necessary to grow the bacilli in pure culture and to determine what the origin of the bacilli was. In 3 cases the bacilli proved to be derived from bovine tubercle, in 2 other cases the bacilli are described as being human bacilli of moderate virulence, while those obtained from the last 2 cases were human tubercle bacilli of considerable virulence. It therefore appears that the bacilli which were remaining latent in the human organism were not less virulent than the average bacilli which one obtains from the sputum, lungs, and other organs of persons suffering from the various forms of tuberculosis. The bacilli are present in extremely small numbers in these cases, and to this fact the failure of producing specific lesions must be ascribed. Rabinowitsch regards the fact that caseated lymphatic glands may harbour virulent tubercle bacilli as a very important one, since it is certain that such a focus would be a great source of danger, and that any active form of tuberculosis could be started at any time from these glands. The significance of this latency of tubercle bacilli has not yet been solved.

311. Syphilitic Antibodies.

Marie von Lenhartt (*Ann. de l'Inst. Pasteur*, February, 1907) has tested the cerebro-spinal fluid in cases of general paralysis and tabes dorsalis for the presence of syphilitic antibodies, employing for that purpose the reaction of Wassermann and Plaut. Out of a total number of 39 cases of general paralysis which they investigated they obtained positive reactions in 30, giving a percentage of 77. This percentage is lower than that obtained by Wassermann and Plaut (83), but the authors explain this circumstance on the ground that their cases were very varied in type, ranging from slight to very advanced forms of the disease. In analysing their results they find it convenient to group their cases into the following three categories: (1) Atypical cases and cases of long standing, slow development, and subject to remissions; (2) cases of more advanced disease, but where the patients were still capable of doing some work; (3) very advanced cases. Following this classification, they point out that (1) gave only 10 per cent. of positive results, whereas the percentage was 77 with (2) and 95 with (3). This shows the intimate relationship between the frequency of positive results and the stage to which the disease has advanced. Nine cases of tabes, not accompanied by general paralysis, have also been examined, and it was found that the percentage of positive results was lower than with general paralysis (66 per cent. as compared with 73 per cent.). As a control to the above experiments 17 cases were tested, comprising melancholics, epileptics, idiots, and others. In every instance a negative result was obtained. The authors answer in the negative the question whether this method of investigation can facilitate the diagnosis of general paralysis in cases where the clinician is doubtful. It is just in those instances where the clinical picture is doubtful that the test reaction for antibodies is most uncertain.

312. The Pathological Anatomy of Psoriasis.

Bonnet (*Lyon Méd.*, February 24th, 1907) from the careful microscopic examination of small early patches of psoriasis in three patients has been able to demonstrate the miliary abscesses of the epidermis, described by Sabouraud and Munro, who regard the scales of psoriasis as a multitude of desiccated leucocytes among exfoliated horny epidermis. These abscesses, which are amicrobic, are formed each by the collection of twenty to a hundred leucocytes in the bed of the epidermis and tend to work their way through the epidermis to the surface, where they become dried and unrecognizable. The abscesses may be very few in number, so that even in early patches of the eruption it may be necessary before finding one to examine several sections. There are many reasons for regarding the miliary abscesses as an integral part of psoriasis rather than as secondary infections. (1) They are most easily found in early patches, which would be least liable to secondary infection. (2) According to Munro they are invariably amicrobic. (3) They differ very much from the known intraepidermic microbic abscesses, for example, the staphylococcic impetigo of Bockardt. (4) Sabouraud points out that secondary infection would not explain the rhythmical production of the abscesses. Bonnet believes not only that the micro-abscess is special to psoriasis, but that a case should only be considered as psoriasis if the micro-abscess can be found.

313. The Effect upon the Blood and Tissues of Varnishing the Skin.

P. Ricciardi (*Giorn. internaz. d. Sci. Med.*, No. 18, 1906) discusses the known fact that rabbits, horses, and other animals, if much of their bodies be varnished, may die rapidly (in six to twelve hours) with symptoms of heart and lung failure, and a subnormal temperature. Further symptoms suggestive of an acute poisoning, such as the occurrence of tonic and clonic spasms, diarrhœa, or albuminuria, have also been described as consequences of such varnishing. While Cl. Bernard found that death did not occur if quite a small area of skin were left unvarnished, Edenhuizen stated that death was caused if only one-sixth of the body area was varnished. Ricciardi assumes that some poisonous body is either newly formed or else unduly retained in the body after such varnishing, adding that nobody has yet succeeded in identifying any such body. He makes no mention of the ill effects that may follow the loss of animal heat and consequent lowering of the temperature of the varnished animal. Various changes congestion, hyperæmia, haemorrhages, ecchymoses have been found *post mortem* in the organs and tissues of animals dying after varnishing; Ricciardi, using rabbits and guinea-pigs, showed and sterilized various areas of their bodies, and then varnished these areas with gum elastic dissolved in benzene, with an additional layer of collodion. He found that these animals presented symptoms of subacute or chronic poisoning, dying in seven days, eleven days, or after several weeks. None seem to have died in less than a week; the author does not state the areas varnished. In the more chronic cases he found haemorrhages and parenchymatous changes in the various organs and tissues, renal and pulmonary haemorrhages and infarcts, and he remarks that the more slowly the animals died, the greater the degree of parenchymatous degeneration observed. The changes in the blood were not marked or in any way characteristic.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

314. "Masque Ecchymotique" of the Face.

Two cases of this condition are quoted in *L'Echo Médical du Nord*, January 13th, 1907, by Colle and Arquembourg. Not many cases of the condition have been seen; and these two differ from the majority of those published in that they were not preceded by any violent compression of the trunk. The first case was a female aged 26, who was to be operated on for fixation of the uterus. While taking chloroform she stopped breathing, after having struggled for a few moments. When respiration was re-established, the anaesthetist noticed that the face and neck as low as the cricoid cartilage were violet-coloured, spread all over with punctiform ecchymoses. This condition completely disappeared in a fortnight. The second case was a man aged 49, who was the subject of increasingly severe epileptiform attacks. While under observation his arteries were hard, his liver became enlarged, albuminuria appeared, and he finally died with progressive signs of venous engorgement. After the first of his epileptiform attacks it was noted that his face was covered with small violet-blackish spots, extending as far down as the clavicles. The authors quote a case in which a patient who was the subject of epileptiform attacks woke up one morning to find himself out of his bed, with his face coloured dark and covered with innumerable punctiform haemorrhages, which were seen also on the palate, pharynx, larynx, and extending on the neck as low down as the collar of his nightgown. From this case and their two cases the authors consider that violent compression of the abdomen or thorax is not essential to the causation of "masque ecchymotique." As a rule, they think the condition extends as far down as a horizontal line round the neck, just above the clavicles. There have, however, been three exceptions to this rule; in one case, quoted by Neck, the infiltration spread over all the right side of the thorax, and over a portion of the left side too. In a case of Braun's the ecchymoses have been seen on the abdomen, the left breast, and the upper limbs. And in another case, seen by Milner, the ecchymoses spread over the head, the neck, the thorax, the abdomen as far down as the umbilicus; while the back, which had been the seat of the injury, was free. In this last case, too, on the right shoulder was a band of healthy skin corresponding with the position of the brace. The prognosis in cases of "masque ecchymotique" is good, when the condition is not consequent upon any trauma. But where violence has been the cause, the prognosis must be reserved, and depends upon the extent of the accompanying injuries. No treatment is required, the ecchymoses disappearing spontaneously.

315. The Value of Leucopenia in the Diagnosis of Typhoid.

GENNARI (*Rif. Med.*, March 16th, 1907) has examined the blood in 106 cases of typhoid, with the object of seeing how far leucopenia (diminution of the leucocytes below 5,000 per mm.) was prevalent in typhoid, especially in the early stages. Of the 106 cases 66 were in the early stage—that is, from the second to the sixth day of the disease. Of these 66, 47 showed leucopenia, whilst only 23 of these gave the Widal secretion at this stage. None of the cases presented an increase in the number of leucocytes. From this experience the author concludes that, in the early stage of typhoid, leucopenia if present is a valuable aid to diagnosis, and all the more so because at the beginning the Widal reaction is often negative. Of the 30 cases examined after the sixth day, and all giving a positive Widal reaction, 33 showed leucopenia. In one case of chlorosis which contracted typhoid whilst in hospital, the leucocytes were 6,000 per mm. before the fever set in, and fell to 4,600 on the second day of the enteric. Leucopenia may be met with in miliary tuberculosis, but it is rarer in these cases. If any complications occur in the course of the typhoid a comparative leucocytosis may occur, but apart from that leucopenia or a normal leucocyte count is the rule. Leucopenia seems more often present in bad cases. For example, out of 26 severe cases 24 showed leucopenia, whereas in 35 light cases it was only present in 18. It is most marked in the second and third week of the disease. A differential count of the various kinds of leucocyte in 55 cases showed no departure from the normal in 19, diminution of the polynucleated cells, increase of the lymphocytes, absence of eosinophile cells and increase in the mononucleated in 36.

SURGERY.

316. Gastro-Enterostomy.

L. CAPPELLI (*Il Morgagni*, March and April, 1906) gives an account of twenty-four operations of his own and discusses the indications for operation, and the method of performing it. The main objects sought by the different methods of operation are the avoidance of peritoneal infection, and the attainment of perfect function in the new pylorus. The immediate dangers are peritonitis and the establishment of a vicious circle. A vicious circle is probably present whenever vomiting persists beyond the third day. Occasionally the symptoms pass off without operation, especially after lavage or vomiting, but usually the condition is one of great danger because it necessitates a second operation on a patient whose strength is much reduced. A great deal depends on the individual resisting power of the patient. The author quotes one case in which on the eleventh day he reopened without general anaesthesia the abdomen of a patient who was apparently moribund. The result was successful. As many as twelve different methods of causation of vicious circle are assigned by different writers. For the most part Cappelli follows Hacker's method of posterior gastro-enterostomy, which gives the easiest and most natural passage for the gastric contents when the patient is in the recumbent position. Access to the posterior surface of the stomach is not usually difficult. When necessary an aperture may be made in the gastro-colic ligament to permit of more complete visual examination. Cappelli uses the suture and not Murphy's button. He holds that the functional results of the operation depend very much on the method of the operator. The anastomosis must be at the lowest point of the pyloric end of the stomach, and must be parallel to its vertical axis. It is desirable to leave a spur which may project into the afferent branch, and help to prevent regurgitation. Cappelli always washes out the stomach before operating, and considers that this tends to prevent pneumonia, a complication not always depending on the anaesthetic, since cases have been collected occurring after operation done under local anaesthesia alone. None of his cases have developed pulmonary complications, a result attributed to the fact that he gives no injections of morphine and atropine, disinfects the mouth as much as possible, gives purgatives, and in cases of intestinal torpor orders abdominal massage. He applies to the skin a sublimate compress the day before operation, carefully avoiding any such chemical or mechanical irritation as might produce fistulas and subsequent infection of the wound. His abdominal incision is 12 to 15 cm. long, and is carefully prevented from reaching too high. The peritoneum is fixed to the sides of the wound with peritoneal forceps, and throughout the operation care is taken not to contaminate the hands by touching needles which have been in contact with the gastric mucosa. Of the 24 operations referred to 15 were for pyloric stenosis from cicatricial and fibrous peripyloritis and pericholecystitis, 1 for tuberculous inflammation of the pylorus and duodenum, 2 for gastric ulcer, 3 for cancer, 3 for gastroptosiectasis with excess of hydrochloric acid, and 1 for atonic gastrectasis. Cappelli discusses at some length the different indications for gastro-enterostomy in cases of gastric ulcer. Excess of hydrochloric acid in the stomach he attributes to the action of the central nervous system, making it a concomitant phenomenon of gastric ulcer and not the cause of the disease. It is not reasonable to expect a cure from simply draining away the excess of acid, and gastro-enterostomy should not be a routine treatment for gastric ulcer. Operation is not needed when the stomach is emptied regularly and completely through a pylorus which is anatomically and physiologically normal; but when an ulcer causes pyloric stenosis, or repeated and injurious haemorrhages, or has ruptured or threatens to rupture, or causes severe pain, or is not much improved by medical treatment, operation is called for. In those cases in which it is possible to excise the ulcer, a gastro-

enterostomy should be done at the same time. There is great, and sometimes insuperable, difficulty about the diagnosis of pyloric stenosis, since all its symptoms may appear in cases of ulcer in any part of the stomach or even in duodenal ulcer without any real stenosis. After operation the stomach empties itself at least as quickly as in the normal condition, sometimes more quickly, but after a few months the new sphincter becomes practically as good as normal. The stomach, usually much enlarged at the time of operation, diminishes afterwards, and even where it retains its size for a few months diminution is only delayed. Albuminous metabolism is diminished at first after operation, and there is increased intestinal putrefaction, a possible cause of auto-intoxication and infective disorders. Cappelli has been able to follow only 17 out of his 24 cases. The remote effects of the operation have been invariably satisfactory. The reflux of bile and succus pancreaticus is not uncommon, but seems to do no harm.

317. Operative Treatment of Pancreatic Cysts.

WÖLFLER (*Prager med. Wosh.*, No. 2, 1907) holds that though it may be considered advisable to extirpate a pancreatic cyst when such course is possible, such a measure is often contraindicated, as being either impracticable or very dangerous. The cyst is often adherent to important abdominal organs, such, for instance, as the stomach, intestine, and liver, and also to large vessels, as the portal vein, the vena cava, and even the aorta. If the cyst be attached to the tail of the pancreas it can in many instances be removed early and without danger. On the other hand, the approach of the cyst to the head of the gland is attended with increasing risk. The close neighbourhood of the head of the pancreas with the duodenum and the superior mesenteric vessels would render this a dangerous region for any radical operation. By the necessarily scanty records of the extirpation of the cyst, it is shown that in one-third of the attempts it was found impossible to complete the operation. This radical method has hitherto been practised in 18 cases, with a mortality of 25 per cent. During the period in which these attempts at extirpation have been made, the simpler operation of incision and drainage of the sac has been practised 131 times, with the much-reduced mortality of 5.3 per cent. In discussing the objections to the treatment by incision the author states that recurrence of the cyst has been noted in only 2 per cent. of the cases, and that complete cure follows more frequently than an incomplete result and the formation of a persistent and troublesome fistula.

OBSTETRICS.

318. Pregnancy after Operation for Chronic Inversion of Uterus.

BORN (*Zentralbl. f. Gynäk.*, No. 4, 1907) and Keilmann (*ib.*, No. 13) have followed up some cases where, after the failure of manual methods, colpeurynters and repositors, chronic inversion of the uterus has been reduced by one of the cutting operations practised and advocated by Küstner and others. When first introduced two questions were raised which it was admitted could only be answered by the study of after-histories. Could the patient ever become pregnant again? If so, could she be delivered at term without complications? Born himself was for a time doubtful on both points in respect to his own case where the uterus had remained inverted for five years. He followed up his case, and found that menstruation, represented by irregular haemorrhages before the operation, became quite regular. Pregnancy occurred within five years; delivery took place at term, but the placenta was adherent and had to be detached manually. The child weighed 7 lb. and the puerperium was normal. Keilmann traced Küstner's first case. The operation was performed in 1895. The patient became pregnant and was delivered in April, 1906, at term. She died, however, four days later, but the cause of death could not be ascertained. Keilmann himself operated on a woman, aged 23, two months after a mismanaged labour. He made a free vertical incision down the entire posterior surface of the inverted uterus and cervix joining a transverse incision in the vagina which opened up Douglas's pouch. Reduction was then effected with ease. The body of the uterus being next turned back into the incision through the peritoneum, the long vertical wound in the uterine wall was closed with sutures, and, lastly, the incision opening Douglas's pouch was sutured. Pregnancy developed within four years after the operation, and the patient was delivered at term. The presentation was vertex in first position, the first stage was not prolonged, and the child—a female—was delivered spontaneously three minutes after the rupture of the membranes. But the placenta was adherent—not, however, on the posterior surface of the uterus, where the cicatrix lay. Bad flooding ensued, which could not be stopped until the placenta was manually detached. The puerperium was not quite normal, but the patient recovered. The child weighed 9 lb., and was well nourished. Keilmann notes that in all three cases there was trouble with the placenta; on the other hand, all were attended by midwives, two not receiving any assistance from an obstetric physician until the uterus had been freely pressed and handled, whilst in Küstner's case nothing could be ascertained except through the Protestant minister in the patient's village, who knew the midwife, as the doctor who had endeavoured to keep the patient under observation was not called in. The bare fact of labour at term was authenticated; the woman certainly died, but what caused death remains unknown.

319. Fetid Liquor Amnii.

M. HANDFIELD JONES (*Journ. of Obst. and Gyn. of the Brit. Emp.*, April, 1907) deals with a condition which is occasionally encountered in which the liquor amnii is peculiarly offensive, brownish in colour, muddy in consistence, having a faecal odour and being in fact comparable to an ordinary typhoid stool. Notes of 5 cases are given. In one of them a bacteriological examination was made and the amniotic fluid was found to contain numerous bacilli, chiefly coliform bacilli and staphylococci. A point for consideration is the rate by which the *Bacillus coli communis* reached the amniotic fluid. It may have been derived from the anus of the mother and have passed up the vaginal canal, but it has been stated that the bacillus may pass through the uterine wall from the neighbouring intestine, or travel down the Fallopian tube to gain access to the uterine cavity, and Hellendahl claims to have proved experimentally that bacteria can penetrate the intact amnion and infect the amniotic fluid. Another point of interest is the period at which infection of the amniotic fluid took place. In several of the cases described liquor amnii was thought to have been escaping for many hours, and to have been at first clear and without odour; but in 1 case the fluid seems to have been muddy and offensive even when the membranes first ruptured. The first stage in most of these cases was long, in 1 case extending over two or three days. It is, however, difficult to believe that if infection took place after the rupture of the membranes the morbid changes could have developed rapidly enough to give rise during the progress of labour to the horribly foul condition of the fluid, and it is possible that in the cases in which a clear fluid was supposed to have escaped at first the fluid was not liquor amnii but had been pent up between the chorion and the amnion. In the cases described the lochial discharge was not constantly foul during the puerperium, the uterus was not tender to pressure, and the process of involution appeared to go on satisfactorily—facts which go to show that there was no deep infection of the uterine muscle. The subject of infection before delivery is one of intense interest, because it raises the question whether sapraemia and septicaemia may not arise even when there has been no failure of antiseptic precautions on the part of the medical attendant.

GYNAECOLOGY.

320. Torsion of a Gravid Fibroid Uterus.

IVANOFF (*Comptes rendus de la Soc. de Obstét. de Gynec. et de Pédiat. de Paris*, March, 1907) reports that a nulliparous woman, aged 34, and married seven months, was admitted into hospital for acute abdominal pains. She had noted the existence of a tumour for seven years, but for three weeks before admission the increase had been rapid and accompanied by acute pains, so that the patient could neither work nor find comfort from rest. The period was two months overdue. The patient was thin; the tumour, which caused dyspnoea as well as pain, reached as high as the epigastrium and downwards into Douglas's pouch. Torsion of the pedicle of an ovarian cyst in early pregnancy was diagnosed. At the operation it was seen that both ovaries were quite separate, except by normal anatomical connexions, from the tumour, which consisted of the uterus, twisted 180° on its vertical axis, the pedicle being the cervix. On the lower part of the mass, to the left, was a prominence representing the uterine cavity, which, when opened, was found to contain a three months fetus. The

remainder of the uterus was occupied by a bulky fibromyoma. The entire mass weighed over 15 lb.; one ovary was saved. The patient suffered greatly from shock, and died on the fifth day. The fibromyoma, let it be noted, must have been developing before the patient had attained her seventeenth year.

321. Stricture of Rectum caused by Calcified Uterine Fibroid.

PAGE (*Deut. Zeit. f. Chir.*, vol. lxxxi, Parts 5 and 6, 1906) writes of a woman, 70 years of age, subject for several years to obstruction, painful defaecation and colic, occasionally varied by attacks of profuse diarrhoea. Emaciation became very marked. On rectal exploration a hard tuberous tumour could be felt in front of the bowel, the mucous membrane of which was intact. It was diagnosed as a cancer. As the patient's general condition was unfavourable for a prolonged abdominal operation, it was decided that the symptoms should be relieved by colotomy. In the course of that procedure it was found that the mass which had caused the obstruction was a calcified uterine fibromyoma expelled from its capsule; it occupied Douglas's pouch and was strongly adherent to the rectum and other adjacent parts. It was detached from its adhesions and removed, the patient recovering.

THERAPEUTICS.

322. Arhovin in Gonorrhoea.

IN discussing the limits of possibility of any internal treatment of gonorrhoea, R. W. Frank (*Berl. klin. Woch.*, July 30th, 1906) points out that the peculiar structure of the urethral mucous membrane, with its manifold lacunae and crypts, explains how most bactericidal substances, when excreted in the urine, can only reach the surface, and since the gonococci often find a most favourable culture ground in the crypts, it is just these dangerous points which are unaffected by internal treatment. They can only be got at by locally-applied antiseptics. Ricord's celebrated observations of patients with fistulae in the scrotal end of the penile urethra also prove this. The disastrous failure of the internal treatment of gonorrhoea with sandal-wood oil or copaiva, however, partly depend on the fact that the bactericidal action is not sufficient. He recites a striking case illustrative of the failure of such treatment. Having been asked to test a new antigonorrhoeic remedy, arhovin, he undertook some bacteriological tests. Arhovin is not a balsam, but is an addition product of diphenylamin and esterified thymyl-benzoic acid. It is an aromatically-smelling fluid, having a specific gravity of 1055, and a mild burning taste. It has proved to be absolutely non-poisonous, but is said to be strongly bactericidal. It is absorbed and excreted in from fifteen to twenty minutes, and can be detected in the urine by a green coloration with a 1 per cent. solution of ferric chloride. In his experiments, persons who had never had gonorrhoea were given arhovin capsules (six to eight a day, each containing 0.25 gram) and the urine of these persons was used. Gonococci were grown on agar ascites fluid; both normal urine and arhovin urine, when collected sterile and poured over the surface of the cultures, prevented the growth of the gonococci, but some diplococci grew in both tubes. Gonococci in ascites bouillon were prevented from growing by normal and also by arhovin urine. Arhovin urine collected with all aseptic precautions showed a slight growth of rods and cocci after forty-eight hours in the incubator, while normal urine remained sterile. Arhovin urine inoculated with staphylococci showed plentiful growth after twenty-four hours and normal urine did the same. While arhovin does not render the urine strongly bactericidal, arhovin urine inhibits the growth of gonococci, but normal urine does the same. The author therefore comes to the conclusion that arhovin does not render local treatment unnecessary in gonorrhoea. But since it appears to have a very marked action in allaying irritation and relieving pain, since it does not disturb the digestion, and since it is quite harmless, he feels justified in recommending arhovin as an auxiliary means in inflammatory and especially gonorrhoeic affections of the urinary passages.

323. Treatment of Acne.

JOSEF KAPP (*Therap. Monat.*, March, 1907) suggests that the tendency to acne at about the time of puberty may be of intestinal origin, and in 94.9 per cent. of a series of 33 cases of acne occurring at this age he has found clear evidence of abnormal putrefactive changes in the intestine, as shown by the presence of an excess of indican, phenol-cresol, etc., in the urine; this intestinal putrefaction may, he considers, be due to the peristaltic inertia common at about the time of puberty. Although further investigations are needed to demonstrate the causal connexion between acne and excessive intestinal putrefaction, the author has on the strength of his observations tried the effect in cases of acne of drugs which have an antifermentative action and which aid peristalsis, and with this object has administered a combination of 1 gram of sulphur precipitate and 0.25 gram of menthol, given two or three times a day over a period of several months. In the 33 cases of acne mentioned above, which included cases of acne simplex, acne pustulosa, and acne indurata, treatment on these lines was very successful, substantial improvement being seen in all the cases and recovery in many. In 1 case the medicine gave rise to diarrhoea with colic-like pains, but in the others there were no unpleasant side-effects. The first result of the treatment was that the stools became pultaceous, and the output of phenol sank to 0.01, or at the highest to 0.07, as opposed to an average output of 0.101 grams which had been previously observed. With this fall in the output of phenol improvement began, and often in the first three or four weeks the acne papules were observed to more quickly disappear; during the next four to eight weeks, in all but 1 obstinate case, new papules appeared with much less frequency; and in 9 cases, after three months' treatment, no new papules formed. Some of the cases have now been as long as eighteen months without relapse, and may be considered to have completely recovered. During the internal treatment local treatment, although it was not altogether discontinued, was reduced to a minimum.

324. Thyrotoxic Serum in Basedow's Disease.

G. STRADIOTTI (*Riv. Crit. di Clin. Med.*, Florence, 1907, Nos. 7 and 8), after discussing the unsatisfactory results hitherto obtained in the treatment of exophthalmic goitre by specific antithyroid serums, describes his own experiments in this direction. He immunized a robust sheep for five months with subcutaneous injections of a chloroform-water and glycerine extract of fresh-pounded normal human thyroid gland. The serum of this sheep, prepared aseptically, was then employed for the treatment of three patients suffering from exophthalmic goitre, being given subcutaneously. Other medical treatment and rest were prescribed at the same time, but Stradiotti feels justified in concluding that his serum produced: (1) A definite subjective feeling of improvement; (2) a tendency to put on weight; (3) no change in the cardio-vascular signs, the exophthalmos, or the goitre; (4) a marked lessening in the tremor. The serum was given in doses up to 5 c.cm., from 30 to 45 c.cm. in all being received by each case. No ill effects, excepting the appearance of urticaria, were observed.

PATHOLOGY.

325. The Poisons of the Digestive Tube in a Normal State.

ROGER AND GARNIER (*Rev. de Méd.*, August 10th, 1906) have carried out a series of experiments with a view of determining the toxicity of the contents of the different parts of the alimentary tract. Extracts were made from the stomach and intestinal contents of rabbits, dogs, and rams by first diluting them (if necessary) with a 0.7 per cent. salt solution, expressing the liquid, centrifugalizing, and then filtering; the resulting solution was then injected into the vein of the ear of a rabbit and the effects watched. It was found that such an extract made from the stomach contents of a rabbit, if injected slowly into the vein of another rabbit, gave rise to no immediate symptoms, but that after twelve or fifteen hours the rabbit died; in one case 45 c.cm. of the extract were injected. *Post mortem* there were found haemorrhages throughout the mucosa of the digestive tract, especially marked in the caecum, appendix, and the small intestine; in some cases Peyer's patches were much congested. In only two cases was the mucous membrane of the stomach markedly affected: in one it was sprinkled with blood, and in the other very vascular. The authors conclude that the death of the rabbits was due to an infection with gastric bacteria, but that the gastro-intestinal lesions were due to the poisons present in the stomach extract rather than to the bacteria themselves. After injecting rabbits with an extract of the stomach contents of dogs the animals appeared to be ill, but soon recovered; death, however, occurred in a few hours. *Post mortem* there were found slight con-

gestion of Peyer's patches and some ecchymoses on the duodenal mucous membrane. These results were obtained after quantities varying from 10 to 62 c.cm. of the stomach contents had been injected. In two cases, however, death ensued quickly, both animals dying in violent convulsions. Even when the dog's diet had been only milk, and after death the contents of the stomach had been neutralized with bicarbonate of soda, an injection of this neutralized stomach contents caused death in a few hours. If the stomach contents of dogs be treated with alcohol, a precipitate forms which is non-toxic, but the solution remaining is highly toxic. The contents of the small intestine of the rabbit are found to be highly toxic; 4 c.cm. per kilogram of weight is a mortal dose for a rabbit, and in a majority of cases the introduction of the poison causes a violent reaction. Respiration quickens, and there are jerking movements of the legs; respiration soon becomes superficial, and exophthalmos and a narrowing of the pupils takes place. If injection be now stopped and the animal be released, he remains immobile for a short time, and then a violent convulsion ensues, the legs are extended quickly, he bounds forward, falls on to the head, and quickly dies. At other times he recovers himself partially, but remains flaccid and paralysed, respiration becomes superficial, and in a few minutes death takes place. If the contents of the small intestine of rabbits be treated with alcohol, and the liquid portion be injected into the veins of a rabbit, nothing very marked occurs beyond a slight elevation of the body temperature. If the matters precipitated by alcohol be dissolved in water and injected intravenously the animals waste to a certain extent, but usually completely recover. A rabbit which received intravenously per kilogram of weight 32.7 c.cm. of the extract of the contents of the ram's small intestine showed no violent reaction; it remained quiet and died in half an hour from progressive weakness; it also showed a very marked miosis. Another rabbit, which received 15 c.cm. per kilogram of weight, showed marked miosis and died thirty-six hours after the injection. The authors dialysed the intestinal contents of the ram and found that the remaining liquid was very much more toxic than the original extract. The contents of the small intestine of the dog are also highly toxic. Injection of these into a rabbit cause rapid respiration, convulsive movements, and death in a few seconds. From 0.41 to 1.3 c.cm. per kilogram of weight is found to be a mortal dose for a rabbit. Further, it appears that this toxicity diminishes as the contents pass down the small intestine. If these intestinal extracts be injected into an intestinal vein, the same results follow as when they are injected into the vein of the ear; if, however, the extracts be diluted five or ten times, the liver destroys part of the poisonous products, and it is necessary to inject three times as much of the extract as when a peripheral cutaneous vein is employed for the seat of injection. Further, the lungs exercise a similar protective power to that of the liver, for it is found that a much smaller quantity of the extract injected by a long cannula into the central end of the common carotid artery suffices to produce the same results as when it is injected into a peripheral vein. If injection of these extracts be made into the intestinal arteries, large quantities can be tolerated, probably owing to the fact that blood clots form in the vessels and thus protect the animal against immediate intoxication. The toxic substances present in the small intestine are very unstable, if the extracts be allowed to remain for twenty-four hours in a cool place the toxicity is much reduced; boiling also destroys to a large extent the toxic properties. Treated with alcohol a precipitate and a solution form; the latter is very toxic and causes death of a rabbit in convulsions when injected into the peripheral veins. The former when injected causes an intense diarrhœa and rapid wasting with death from progressive weakness in a few hours. From results obtained by the authors it appears probable that the principal toxic substance present in the contents of the small intestine is one which is destroyed by heat and coagulated by alcohol, and is therefore probably of an albuminoid nature. Besides this, however, there are other toxic substances present: (1) A convulsive poison found in the dog and rabbit; (2) a convulsive poison soluble in alcohol and found in the dog only; (3) a poison causing diarrhœa, this is precipitated by alcohol; (4) a poison paralysing the nerve cells and which causes boiling. The authors find that by feeding dogs on milk only they could reduce the toxicity of the contents of the small intestine, this being due to a diminution of the toxic substances by the cells; the same bodies themselves are contained in the matters produced by alkaline itself and do not derive these properties from the food. The toxicity of the contents of the large intestine is generally less marked than that of the contents of the small intestine. In the ram, however, the contents of the caecum are far more toxic than are those of the small intestine.

326. The Specific Organism of Beri-beri.

J. TSUZUKI (*Archiv für Schiffs und Trop. Hyg.*, Bd. x, Heft 13) was able during the recent war to investigate many cases of beri-beri, and claims to have succeeded in discovering a diplococcus called by him the beri-beri or kakke coccus, which is the specific cause of the disease. The diplococcus is from 0.7 to 0.8 μ in length, and from 0.4 to 0.5 μ in breadth. Sometimes a single coccus or a short chain of three or four are seen. The organism takes all the aniline stains or can be stained by Gram's method. There is no individual movement, but a lively molecular movement. There is no formation of spores. The organisms are facultative anaërobes. The optimum temperature is 37° C., but the organism will grow at the ordinary room temperature; it is resistant of heat, and is destroyed only after exposure for one hour to a temperature of 60°, of fifty minutes to 65° C., and of ten minutes to 70°; it can live for thirteen days in ice, and for two hours at a temperature of −18° C. The organism grows on the ordinary culture medium; grown on gelatine it does not cause liquefaction, and there is no formation of gas when grown on sugar agar. The author gives details of his work, and has arrived at the following results: (1) Beri-beri is an infectious disease which is caused by the kakke coccus; (2) the kakke coccus is demonstrated to be the cause of beri-beri, because (*a*) it is contained in the urine of patients suffering from beri-beri, but not in the urine of sound persons or of those suffering from some other disease; (*b*) it becomes specifically agglutinized by the serums of beri-beri patients diluted fifty times, but is not agglutinized by the serums of sound persons or patients suffering from other diseases; (*c*) it is found in the stools of beri-beri patients and in the intestine, from where it attacks the nerve cells and causes the symptoms of the disease; (*d*) in experiments on animals it gives rise both to symptoms and to appearances on section which agree with those found in the beri-beri disease in man; (*e*) it contains and produces a poison which gives rise in animals to appearances on section identical with those found in man. (3) Beri-beri disease can be diagnosed bacteriologically by the agglutinization test, either by means of the author's reagent or of a bouillon culture of the kakke coccus.

327. Leucocytosis in Hydatid Disease.

WELSH AND BARLING (*Scottish Med. and Surg. Journ.*, January, 1907) report the results of the examination of the leucocytes in 20 consecutive unselected cases of echinococcus invasion which have come under their observation in Sydney, where the disease is of frequent occurrence. All these cases were operated upon, and blood examinations were made both before and after the operation. In three-fourths of the cases the count before operation showed an increase of the eosinophiles above the normal number, and in one-half of the cases the increase was very considerable (over 500 per c.mm.). The number, however, may vary greatly from time to time in the same case, and no explanation of this variation can be offered. No relation was established between the degree of eosinophilia and any other factor. Neither the age, sex, nor temperature of the patient, duration of the disease, presence or absence of rash, site of the cyst, nor condition of its contents, whether clear or turbid, could be shown to have any influence on the leucocyte reaction. The most that can be said is that in all the cases where recent rupture of the cyst had occurred some degree of eosinophilia was present. The basophile leucocytes also showed before operation some increase in about half the cases. There was, however, no correspondence whatever between the degree of basophilia and the degree of eosinophilia. Indeed, the authors consider that this want of correspondence may have some diagnostic significance, "since the association of basophilia with slight eosinophilia, or marked basophilia without eosinophilia, may afford an indication of hydatid invasion." In 2 cases the neutrophiles were found increased before the operation, and in 1 case the non-granular leucocytes. After operation the number of eosinophiles fell in almost every case and this diminution may be extreme and may be exceedingly rapid. This fall is succeeded by a secondary post-operative rise, which may reach or even exceed the initial eosinophilia. The basophiles show no such regularity. They may appear after the operation when they were absent before, or may disappear after having been previously in excess.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

328. Sudden Death in Infants.

CHEINISSE (*Sem. Méd.*, April 17th, 1907) has collected the views on this subject that have been expressed by various authorities. For some years, he says, a theory has been growing that sudden death in young children is due to hypertrophy of the thymus. Targhetta says that if the thymus is atrophied one may conclude that the child has died of insufficient nutrition; if the thymus is hypertrophied, that gland must then be accounted the cause of death. Hérard in 1847 showed that the thymus undergoes considerable variations in weight and size in children that are well, but that these variations merely depend upon the child's constitution, and that there is no relation of cause and effect between the size of the thymus and sudden death in young children. Friedleben, too, wrote that the thymus, whether normal or hypertrophied, is incapable of impeding the respiration or of stopping the circulation or affecting the nerves that preside over the respiratory functions. Grawitz in 1888 revived the importance of the thymus as a cause of sudden death in infants. He laid great stress on the fact that in nurslings the distance between the first part of the sternum and the vertebral column is only 2 to 2½ cm., while a hypertrophic thymus can reach a depth of 1 to 1½ cm. Since then a large number of cases have been published of sudden death in infants in whom the thymus was hypertrophied. Poltauf puts forward a theory that hypertrophy of the thymus is merely of import as a sign of the status lymphaticus, which, by affecting the cardiac centres, is the real cause of death. But Taillens and Leubuscher have reported cases of sudden death in children in whom autopsy revealed no status lymphaticus. The majority of authors now ascribe this accident to a direct mechanical action of the hypertrophied thymus on the neighbouring organs, either by compression of the trachea, of the cardiac nerves, or the large vessels of the neck. Some, too, have ascribed death to increased function of the thymus; but this theory, again, is met by the objection that the inhibitory mechanism, which is its essential factor, can come into play even when the thymus is not hypertrophied. Segadelli and Distefano consider sudden death in infants to be caused by a nervous reflex, while Lancereaux attributes it to a reflex inhibition of the respiratory and circulatory centres. Hedinger, Ducrot, Perrin, and Morquio ascribe this accident to a variety of causes—parental consanguinity, paternal alcoholism; and Cullerre describes it as a manifestation of an inherited nervous taint. Bernheim-Karrer and Rehn have recently published cases of sudden death in infants, in which the heart, though macroscopically normal, showed under the microscope severe myocardial changes. Parental syphilis, tuberculosis, or other chronic intoxications may also be causes.

329. A Typhoid Bacillus Carrier.

E. LEVY AND H. KAYSER (*Münch. med. Woch.*, December 11th, 1906) record the results of the bacteriological examination of the body of a person who was known to have been a typhoid fever "carrier" during life. The patient had been in a lunatic asylum in Strassburg for over thirteen years, and in 1903 had been attacked with enteric fever, from which she recovered without any serious complications. After she was allowed to mix with the other patients occasional small epidemics of typhoid fever broke out, and in 1905 (October) a careful investigation traced the infection to the patient. Her stools were then examined, and were found to contain the *Bacillus typhosus*. After she was isolated no further cases took place. During the following year she continued to pass motions containing bacilli. Early in October of 1906 she was taken ill. The symptoms were fever and gastric disturbances, and during the second week of illness she was attacked with hypostatic pneumonia, and died on the eleventh day. The *post-mortem* examination revealed a hypostatic pneumonia of the right lower lobe and a very flaccid heart. The spleen was slightly enlarged. There was a gall stone of about the size of two beans. Cultures were made from the spleen, liver, bile, wall of the gall bladder, and from the inside of the aseptically-cut gall stone. Typhoid bacilli were found in each culture. They claim that this is the first definite case of a chronic typhoid-bacillus carrier. The patient had carried the bacilli in her body for several years, and, as she was isolated for a whole year, she must have reinfected herself from the gall bladder or bile ducts. She undoubtedly died of typhoid sepsis.

330. Epilepsy and Calcium Salts.

SILVESTRI (*Gazz. degli Osped.*, January 6th, 1907), who has in previous papers taught that eclampsia is due to a diminished percentage of calcium salts in the blood, is now convinced that many cases of epilepsy are due to the same cause. He is further confirmed in this opinion by the researches of Besta, who found that out of 45 epileptics 37 showed a blood serum of a coagulating power inferior to the normal. The worse the epileptic the more marked was this diminution in coagulating power. In 3 cases of traumatic epilepsy there was no change in the blood serum as far as coagulation was concerned. The author does not appear to have given the treatment any large clinical test, but as far as he has experience of it he is convinced that calcium chloride is as valuable as the bromides, and in some cases has answered where bromides failed. Moreover, he says it can be given for long periods of time without the disadvantages which pertain to a long course of bromide. The success which has followed thyroid treatment in certain cases of epilepsy is attributed by the author to the influence of thyroidin on calcification; he would explain in a similar manner the cases which have benefited by hepatic drug treatment. Calcium chloride, for the author, seems to play much the same part in epilepsy and convulsive seizures that uric acid does for certain writers in another field of pathology; further clinical experience will be required before the real value of this new departure can be estimated.

SURGERY.

331. Surgical Treatment of Penetrating Wound of the Heart.

QUÉNU (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 1, 1907) in a report on a communication from Baudet, describing a case of successful suturing of a penetrating wound in the right cardiac ventricle, discusses some points of interest in regard to the latest experiences in the surgical treatment of this injury. He alludes in the first place to the increasing number of good results from such treatment, and points out that the surgeon can no longer confirm the statement made by Legouest that a case of wound of the heart has almost always a fatal ending. Exception being made of those cases in which great loss of blood renders the prognosis very unfavourable, the primary danger in an operation on a wounded heart is haemorrhage into the plural cavity, and the chief secondary danger, pleural infection. The latter has frequently occurred in successful as well as in fatal cases, the infection, though sometimes set up by the wounding instrument, being in most instances the result of the necessity for hasty and irregular intervention. Later statistics, Quénu states, have modified the impression that wounds of the left ventricle are more dangerous than those of the right side of the heart, but the number of observations is at present too small to permit an exact conclusion on this point. Quénu states that the immediate danger of a penetrating wound consists not only in haemorrhage causing either sudden emptying of the organ by a free flow of blood through a large opening nor in arrest of the heart's action by an accumulation of blood in the pericardial cavity. Kronecker and Schmey have, it is pointed out, directed attention to the existence of a co-ordinating nerve centre of the cardiac movements, situated in the anterior interventricular furrow at the junction of the lower and the middle thirds. The conclusions of these observers have not been confirmed by later researches; but clinical facts in Quénu's opinion show that an injury of the heart is capable of producing, quite independently of haemorrhage or compression, grave disturbance of the cardiac function, which may extend to complete cessation of the beating of the organ. In an instance of this kind the muscular contractions may be revived by cardiac massage. A case is reported, however, in which after failure to restore

the action of a wounded heart by massage, success, though only temporary, followed an intracardiac injection of physiological serum, in accordance with the opinion held by Taffe that so long as the inactive heart is capable of being restored to life, an injection of serum into the left ventricle will suffice to set up muscular contraction. A case is referred to which indicates that in the intracardiac injection of serum we have an additional means of reanimating the ceased cardiac pulsations. It is very probable, however, that stimulation of the endocardium is capable of causing inhibition as well as excitation. In the case quoted by the author permanent cessation of the cardiac movements was almost immediately preceded by a second injection of serum which had not been warmed. It is very necessary, he states, to take care that the injected serum be at a temperature of 38° C., so as not to differ in this respect from the blood, which, according to Barnard, has a temperature of 38.8° C. in the left cavities, and that of 38.6° C. in the right cavities of the heart.

332. Oesophago-jejuno-gastrostomy.

Roux (*Sem. Méd.*, January 23rd, 1907) has devised and carried out a new operation for those patients suffering from impassable stricture of the oesophagus. His method of procedure is as follows: The abdomen having been opened in the median line above the umbilicus, the coil of jejunum usually chosen when perforating anterior gastro-enterostomy is seized, and a length of it sufficient to extend from the stomach to the mouth isolated between two pairs of forceps. This segment of jejunum having been isolated, the continuity of the divided ends of the jejunum is re-established by means of a Murphy button. Four or five of the arteries leading to the vascular loops from which arise the vasa recta supplying the separated loop of jejunum are then tied and divided between two ligatures, leaving one large vessel to supply, by means of the vascular loops, nourishment to the isolated jejunum. The lower end of the jejunum, which has been isolated, is then implanted in the stomach as near as possible to the smaller curvature. With a Richelot's forceps one makes under the skin of the median line of the chest a canal, the upper end of which emerges over the manubrium; by opening the forceps and by making a to-and-fro movement, this canal can be enlarged sufficiently to admit the jejunum. Through this canal the upper end of the divided jejunum is drawn. This operation the author carried out on a child suffering from an almost impassable stricture of the oesophagus. In this patient, after the upper end of the jejunum had been drawn through the canal overlying the sternum, an oesophageal tube was placed in it, and the opening of the upper end of jejunum tied round it; the walls of the jejunum, where it emerged from the upper part of the canal, were also fixed to the edges of the skin wound. Lastly, the fascia and muscles at the abdominal wound were separated a little to prevent compression of the pedicle, and the skin wound was then closed. At the time of writing, the wounds are healed, the child has gained greatly in strength, and one can see beneath the skin covering the sternum the active contractions of the jejunal loop. From the upper orifice of the transplanted jejunum only a little mucus escapes, and there is no regurgitation of the contents of the stomach.

333. Bronchotomy for Removal of Impacted Foreign Body.

Goetz (*Annals of Surgery*, March, 1907) reports a case of successful anterior thoraco bronchotomy for a foreign body impacted in the right bronchus. The operation of choice, as appears from the very scanty literature of this subject, has been the more complicated posterior bronchotomy, the reason for which has been the diminished risk of pneumothorax. The subject of the author's case was a boy aged nearly 7 years, who while playing inspired a small metal button which he had in his mouth. This accident was soon followed by several fits of coughing, with dyspnœa and cyanosis. Two days after the date of this accident the parents during the interval having objected to any operative treatment, low tracheotomy was performed, when an obstruction could be felt in the right primary bronchus by means of a large silver probe introduced by the wound. As it was found impossible to dislodge the button and to remove it by forceps, silver wire loops, and a curette, the author decided to open the thorax. A curved incision was made, beginning over the second rib just beneath the middle of the clavicle, and carried downwards and inwards to within an inch of the right margin of the sternum, and thence outwards to the level of the fifth rib, 1 in. to the inner side of the nipple. The third and fourth costal cartilages were cut through about half an inch from their sternal attachments, and an osteoplastic flap made by breaking the corresponding ribs. The button could now be easily felt through the collapsed lung. As it was found impossible to roll back the overlying lung, an incision about half an inch in length was made through the pulmonary tissue and into the obstructed bronchus. The exposed button was then grasped by artery forceps and removed. No sutures were applied either to the wounded lung or to the orifice in the bronchus. The flap in the thoracic wall was replaced and retained by silkworm-gut sutures passed through the muscular structures. No steps were taken to drain any part of the wound. The young patient made an almost uninterrupted recovery, and on the nineteenth day after the operation did not need any further treatment. The author advocates tracheotomy in cases of impaction of a foreign body below the bifurcation of the trachea, but would perform this operation rather with the hope of being thus able to ascertain the situation of the obstruction than with the expectation of removing the obstructing body through the wound in the trachea. Greater injury, he thinks, is likely to be done by forcible attempts at dislodgement than by bronchotomy.

OBSTETRICS.

334. Antisepsis in Midwifery.

In 1899 Theopold reported on his experience of calomel as a disinfectant for the hands and instruments in obstetrics, but as he only had the results of a small number of cases, the method did not attract much attention. Since then calomel has been employed by several medical men, and also by midwives in a large number of cases; he now brings before the readers of the *Deut. med. Woch.* (February 14th, 1907) an account of the results. Before calomel was introduced, every year the district in which he is practising as medical officer of health yielded several cases of puerperal infection, of which a fair number ended fatally. No case has occurred in the practice of any doctor or midwife since they have taken up the use of calomel. Since 1899 only two fatal cases have been reported, both in the country, and both in the practices of midwives who had not adopted this form of antisepsis. The harmlessness of calomel depends on its small solubility. It is absolutely insoluble in water when kept in the dark. When exposed to light, calomel gives off some of its chlorine to the water, and is transformed into corrosive sublimate. With albuminous substances it is soluble in alkaline solutions. The action of calomel depends on the power of coagulating albumin, and on the fact that a sufficient quantity is dissolved in the secretions to act as an antiseptic. He has performed a number of experiments which he believes are capable of demonstrating the antiseptic effect of calomel in the presence of albuminous fluids. When used by midwives, he thinks that the quantity of the powder employed at each case should be small—for example, 1 gram, and when manipulations are made inside the uterus it is wise to oil the hands well and to apply as little calomel as possible, since symptoms of mild hydrargism have been noticed twice from the use of calomel in obstetrics. Based on the experience of between 4,000 and 5 000 cases, his opinion is that calomel is a safe and efficacious disinfectant, which is especially suitable for midwives, and he states that if any medical man is dissatisfied with his ordinary methods of disinfecting for labour cases, he can strongly recommend the calomel procedure.

335. Labour after Loss of One Kidney.

J. Hall Edgerton (*Journ. of Obst. and Gyn. of the British Empire*, March, 1907) discusses the advisability of marriage of women who have undergone a nephrectomy, and gives notes of a case of complicated labour in a woman who had had a tuberculous kidney removed about nine years before the time of the labour. The patient was admitted to the Edinburgh Maternity Hospital during the last month of pregnancy with a history of having suffered during the two preceding months from swelling of the legs and a liability to occasional severe headaches. On admission the urine was scanty, and contained 2 grains of albumen and 4 grains of urea per fluid ounce. The patient was thin and pale; there was considerable dropsy of the lower limbs, of the abdominal wall, and of the vulva. The patient had suffered as a child from scarlet fever followed by nephritis. Examination of the pelvis showed it to be of a kyphotic type, much contracted transversely; the fetal head was freely movable above the pelvic brim. The patient's general condition improved under milk diet and rest in bed, the urine increased in quantity, the albumen diminished to

0.4 grain per fluid ounce and the urea varied from 2½ grains to 4 grains per ounce. It was decided to induce labour, as the pelvis was contracted and the head had not entered the pelvis, and with this end a bougie was introduced. A series of complications ensued. There was some haemorrhage after the introduction of the bougie, and this haemorrhage was at first put down to the presence of a small polypus which projected inwards from one side of the cervical canal; twelve hours later, when the os had become patent, there was found to be a lateral placenta praevia. The membranes ruptured prematurely, but in spite of this labour pains almost disappeared during the next twenty-four hours, at the end of which the os was found to be about the size of a florin and very rigid. A Champetier de Ribes's bag was now inserted and strong pains came on, but after full dilatation of the os and the removal of the bag, it was found that delivery of the head by forceps was not possible because of a disproportion in size between the head and the pelvic brim, and craniotomy had to be performed. Finally, an adherent placenta was removed normally. The puerperium was uneventful, the albumen steadily diminished in amount and ultimately disappeared, the patient being discharged well on the twelfth day. This case shows that in a patient with one kidney only, but that kidney a healthy one and one which has had time to hypertrophy enough to perform the work of two, the strain of pregnancy can be fairly well borne, for although the patient developed albuminuria, yet the condition yielded fairly satisfactorily to appropriate remedies, and the kidney irritation tended to subside. It would, perhaps, be on the whole preferable for patients with only one kidney, if they marry at all, to put off marriage until after the menopause; but such uncompromising advice could not be given, and each case would require to be considered on its merits. The author would strongly advise that marriage should not take place until at least three years from the time of operation, in order that the single kidney should have had time for the development of the compensatory changes which enable it under ordinary circumstances to do the work of two. In cases in which the remaining kidney is diseased, marriage, while there is any possibility of child-bearing, should be out of the question.

GYNAECOLOGY.

336. Uterine Fibroids.

C. P. NOBLE (*Journ. of Obstet. and Gyn. of the Brit. Emp.*, November, 1906) has been convinced for several years of the advisability of early operation in cases of fibroid tumour of the uterus. In 1901 he read a paper on the subject before the British Gynaecological Society, and from that time different operators have published papers each containing a study of a consecutive series of fibroid tumours treated by operation. As a result Noble is now able to tabulate the degenerations and complications which have been found in 2,274 cases of fibromyoma, each case being one of a consecutive series of not less than 100 cases. Complications and degenerations are divided into conditions relative (*a*) to the tumour and uterus, (*b*) to the uterus, (*c*) to the ovary, (*d*) to the uterine ligaments, (*e*) to the Fallopian tubes, (*f*) to the pelvis outside the tumour, uterus, or its appendages, (*g*) to pressure from the tumour, (*h*) to complications outside the pelvis. Complications or degenerations occurred in 1,550 of the cases, that is, in 68 per cent., and this number is under rather than over the correct figure, because in three of the lists the cases operated upon by the vaginal route, which are especially cases in which necrosis has occurred, were omitted, on the ground that in these cases the necessity for operation was not in doubt. The number of cases in which conditions existed relative to the tumour and the uterus which must have been fatal without operation was 275, or 12 per cent. of the 2,274 cases. These conditions were: Carcinoma of the corpus uteri, epitheliomatous infiltration of a fibroid tumour arising from adeno-carcinoma of the corpus uteri by metaplasia, carcinoma of the cervix uteri, sarcoma, chorion-epithelioma, necrosis of tumour, cystic degeneration, twisted pedicle of pedunculated tumour. The corresponding number of cases in the 337 cases which have occurred in the author's practice is 48, or 14 per cent., and in his last 100 cases there have been 15. In addition to these cases which must have ended fatally, there were also in 11 per cent. of the whole series, and in 15 per cent. of the author's own cases complications—or, if the term be preferred, associated conditions—outside the tumour and the uterus which would have been fatal without operation. Examination of the cases in which cancer has occurred in association with fibromyomata brings out a causal connexion between the conditions; because whereas in cases of uterine cancer without fibroids the incidence of cancer of the body of the uterus is to that of cancer of the cervix in a proportion of 1 to 10 only, in the series of cases under consideration there were 43 cases of cancer of the body of the uterus as compared with 16 of the cervix, and in the author's own series there were 9 to 5. Special consideration is next given to other complications found, such as sarcoma, thrombosis, embolism, and phlebitis, the latter three conditions being encountered more frequently in connexion with fibroid tumours than with any other conditions, fibrocysts of the uterus, anaemia, and pressure upon the urinary organs. The author finds that the danger from fibromyomata increases instead of diminishes with the menopause, and he is inclined to believe from his own experience that cancer of the body of the uterus is as apt to occur in the small, partly atrophied tumours found after the menopause as in tumours of larger size. The relative dangers of the expectant and the operative forms of treatment cannot be estimated without a knowledge of the mortality from operation, and this mortality is at the present day 2·26 per cent. In favour of early operation are the following points: (1) It saves years of invalidism or semi-invalidism. (2) It avoids the risks to life from the development of malignant growths of the uterus. (3) It avoids the risks to life from degeneration in the tumour, from such accidents as twisted pedicle, from pressure on the urinary organs, etc., and from the greater liability to intercurrent diseases arising from lowered vitality due to anaemia or malnutrition. (4) It greatly lessens the risk of operation. The author's opinion is that "the principle of early operation which is now generally accepted with reference to ovarian tumours is equally applicable to the treatment of fibroid tumours."

THERAPEUTICS.

337. The Treatment of Diabetic Phthisis.

THE fact that diabetics are often greatly predisposed to tuberculosis has been long recognized. In explanation of this fact, the bacteriological experience that tubercle bacilli grow well in sugar-containing media and that the sugar-containing lung mostly shows a mixed infection has been quoted, and it has further been pointed out that the disturbance to nutrition must play a part in the determination of an infection. Thorspecken (*Münch. med. Woch.*, February 12th, 1907) says that it is usually regarded necessary to attempt to improve the general condition of such patients, without having regard to the diabetes, although Naunyn has pointed out that in mild cases one need not take a hopeless view of the prognosis if one carries out an antidiabetic treatment. The author has had the opportunity of treating a number of cases of diabetic phthisis, and has proved to his satisfaction that it is certainly worth while to carry out a scientifically-planned antidiabetic treatment. This opinion is based on the results which he had obtained in the case of a man, aged 58, who had suffered in 1876 from a right-sided catarrh of the lung connected with fever, which healed up spontaneously. In 1897 he was attacked several times with slight haemoptysis. At this time it was found that he had sugar in his urine; and although this was got rid of at first by dieting, later on fresh diabetic symptoms appeared. In 1900 he had a severe haemoptysis. In the autumn of 1903 he was twelve weeks in hospital with catarrh of the lung, associated with sputum and fever. In 1904 he came under Thorspecken's treatment. The lungs showed signs of tuberculosis situated in the apex of the right organ. There was absolute dullness in front and behind extending over the whole upper lobe. Bronchial breathing and moist rhonchi were heard over this area. There was fever. The sputum contained tubercle bacilli. The urine measured 2,600 c.cm. in twenty-four hours, and contained 0.1 per cent. albumen and 1·4 per cent. sugar. He was treated with a certain amount of exercise, in spite of the fever, on account of the diabetes, and the limits of assimilation were determined. He was rendered sugar-free, and it was found that he could take 50 grams of bread, or the equivalent of this, without excreting any sugar. The fever fell by lysis, and he gained about 1½ lb. in four weeks. The catarrhal signs diminished. Later on he was found to be able to tolerate 150 grams of bread. The quantity of urine sank to 2,100 c.cm., with a specific gravity of 1016. In August no rhonchi could be heard, and the tubercle bacilli had disappeared from the sputum. He regards the process in the lung as scarred,

and points out that the proper treatment in such cases is to pay attention to the diabetes. In his case it can be seen that the tuberculosis yielded to treatment rapidly after the urine was rendered sugar-free.

338. **Vioform.**

Vioform is a derivative of quinoleine; chemically considered, it is a substitution product of oxyquinoleine in which one of the atoms of hydrogen has been replaced by an atom of chlorine. It is a greyish-yellow powder, possessing neither smell nor taste and neutral in reaction. It is very slightly soluble in both water and alcohol, but dissolves readily in glacial acetic acid. Piquand (*Arch. Gén. de Méd.*, October 30th, 1906) has employed this new preparation as a dressing for wounds, etc., and finds it superior to most of the other antiseptics. It may be used in the form of a powder, a pomade, or strips of gauze may be impregnated with a solution of the drug in glycerine and water. When used as a pomade a strength of 1 in 40 is found to be the most serviceable. As a dressing for cases of ulcers of the legs it has been found most useful, and the best results have been obtained by the following method. The ulcerated surface is covered every second day with a layer of the pomade (strength 1 in 40) and each time the dressing is renewed compresses soaked in hot water are applied for ten or fifteen minutes to the surface of the ulcer; when the surface of the ulcer has been thoroughly disinfected by this means a powder of vioform is dusted on every five or six days. If these methods be adopted it is found that any unpleasant smell arising from the ulcer soon disappears; sanious discharges cease; the surface dries and the infiltration of neighbouring parts diminishes; a crust soon forms on the surface beneath which healthy granulations arise, and healing rapidly sets in. Where the surface of the ulcer is fungating, under this method of treatment this soon disappears, and is replaced by the formation of healthy granulation tissue. In contused wounds, bites, burns, soft chancres and fistulae, haemorrhoids, operations about the perineum, osteomyelitis, bedsores, and as dressings after operations on the nose, larynx, and ear, vioform has been employed, and with marked success. Amongst the advantages claimed for vioform as an antiseptic may be mentioned the following: (1) It possesses as energetic bactericidal properties as iodoform, whilst its deodorizing power is much greater; (2) it is much less toxic than iodoform and the majority of its substitutes, and may be employed in large quantities without danger; (3) it causes no irritation of the tissues, and never causes eczema; further, it gives rise to no disagreeable smell; (4) it may be sterilized by heat without decomposition, or without losing any of its therapeutic properties.

339. **The Treatment of Delirium Tremens.**

In spite of the frequency of delirium tremens, S. Ganser says that much difference of opinion exists as to the best form of treatment, and that new experience at the bedside is still of value (*Munch. med. Woch.*, January 15th, 1907). Some clinicians believe in withholding alcohol entirely under all conditions, while others regard that half the battle is won if one can obtain sleep for the patient. Chloral hydrate has especially been recommended for this purpose, and large doses are fearlessly given. The author regards this drug as being far too dangerous to give to patients with weak hearts and believes that the treatment (even when the chloral is given in usual doses) not infrequently kills the patient. Warm baths are often given with the object of quieting the patient, and prolonged baths undoubtedly do have this effect at times. But the author has seen sudden collapse with rapid fatal termination set in after the bath, and has given it up in consequence. He thinks that there is no danger in withholding alcohol from the first, and regards this as a necessary step in the treatment. Rest in bed, if possible in a general ward, is to be recommended. In order to judge the effect of any treatment it is necessary to have some idea of the mortality of the disease when treated by ordinary means and when treated by the special method. The mortality of delirium tremens has been given at very varying figures, ranging between 1 and 40 per cent. Ganser has treated 1,611 cases of delirium tremens during a period of 16 years. He divides this material into two halves. In the first half, consisting of 745 patients, 74 died (9·9 per cent.). The second half consisted of 866 patients, of whom only 5 died (0·6 per cent.). The two periods represent the same treatment in every respect save one. In both absolute [illegible] complete rest in bed and careful nursing was practised under practically similar conditions. Having noticed that delirium tremens patients usually die from cardiac failure, save when suicide, accident, sepsis, or an intercurrent disease ends the scene, he sought to anticipate sudden collapse in every case. This he did by giving digitalis to each patient during the second period from the first. He gives the digitalis in infusion for two or three days, using 1½ grams of leaves as the daily dose. When difficulty is experienced in giving it by mouth, he gives it per rectum every two hours. Whenever he meets with the least indication of cardiac weakness, in spite of this treatment, he injects 1 gram of camphorated oil subcutaneously. In one extremely bad case he departed from his rule, and gave iced champagne in tablespoonful doses every half-hour with excellent result. Regarding delirium tremens as a poisoning by abnormal metabolic products, he considers that it is wise to wash the body out as completely as possible by giving a great quantity of fluid and by increasing diuresis. For this purpose he gives his patients a 1 per cent. solution of sodium acetate to which a little syrup is added, which they appear to enjoy as a drink. While the treatment by these means seems to have materially reduced the mortality, he finds that it does not shorten the course of the disease, at all events as far as it is possible to determine.

PATHOLOGY.

340. **Spontaneous Tuberculosis in Apes.**

Lydia Rabinowitsch recites the results of her valuable experiments on tuberculosis in monkeys in the *Deut. med. Woch.* of May 31st, 1906. She points out that, although many experiments were carried out after Koch made his startling statement in London in 1901 on the supposed non-identity of human and bovine tubercle bacilli on monkeys, no one seems to have investigated the source of spontaneous tuberculosis in apes. Rabinowitsch was able to study the disease of 45 tuberculous apes in the Berlin Zoological Gardens, affecting 1 orang-outang, 1 chimpanzee, 1 dschelada, and specimens of 10 other varieties. These monkeys were kept partly in separate cages and partly in common cages. She further examined a large number of other monkeys, and failed to find traces of tuberculosis. From this she deduces that, like man, the monkey requires a special disposition to the disease beside being exposed to the bacillus. Koch, in describing the pathological appearances of tuberculosis in monkeys, pointed out that as a rule the disease did not remain long limited to one organ, but rapidly disseminated to various parts of the body, and took on a type like that of human miliary type. He believed that the lung was most commonly the first organ affected. The author, however, states that while in 5 of her cases the organs of the thorax alone were affected, in 9 cases the abdominal organs were alone affected, and in 31 cases both the thorax and abdominal organs revealed disease. She says that it would almost seem as if the intestinal origin played a greater part in monkey tuberculosis than the inhalation origin. The monkeys mostly died comparatively quickly, and she made her closer examination from the *post-mortem* material. As a rule she found tubercle bacilli without any accompanying micro-organisms. She made cultures from 33 monkeys, and in some cases grew the microbe from various organs. Of these 33 monkeys, she examined 27 animals (34 cultures) culturally and by animal experiment, while 9 cultures from 6 animals were only subjected to cultural test. The results were as follows:

In 19 cases	the bacilli were	derived	from	human bacilli.
,, 3	,,	,,	,,	bovine bacilli.
,, 1	,,	,,	,,	human (lung) and bovine (spleen) bacilli.
,, 2	,,	,,	,,	transition forms from human and bovine sources.
,, 1	,,	,,	,,	avian bacilli.
,, 1	,,	,,	,,	transition forms from human and avian sources.

She does not feel disposed to accept a predilection for any of the various forms of tubercle bacilli, and she does not believe that the bovine bacilli have more affinity to the intestinal track of the monkey than to the respiratory organs. On the other hand, her investigations show that monkeys in captivity are attacked by any form of tuberculosis to which they are exposed, provided that they are otherwise susceptible. She claims that her views which she expressed in connexion with her work on avian tuberculosis, that the various forms of tubercle bacilli are only varieties of the same original stock adapted to various animals, have found support in the present work.

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